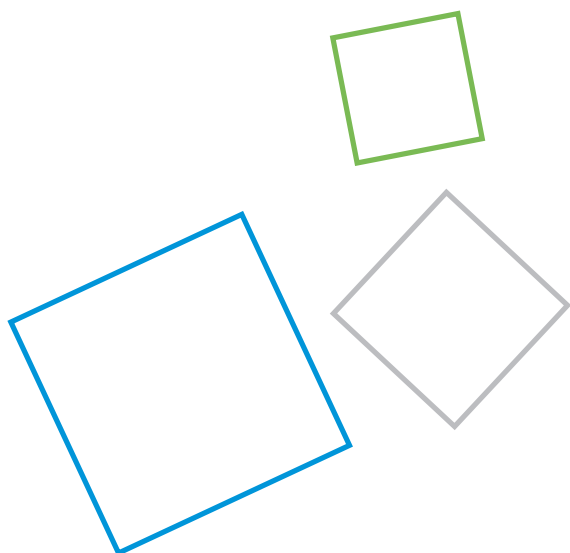
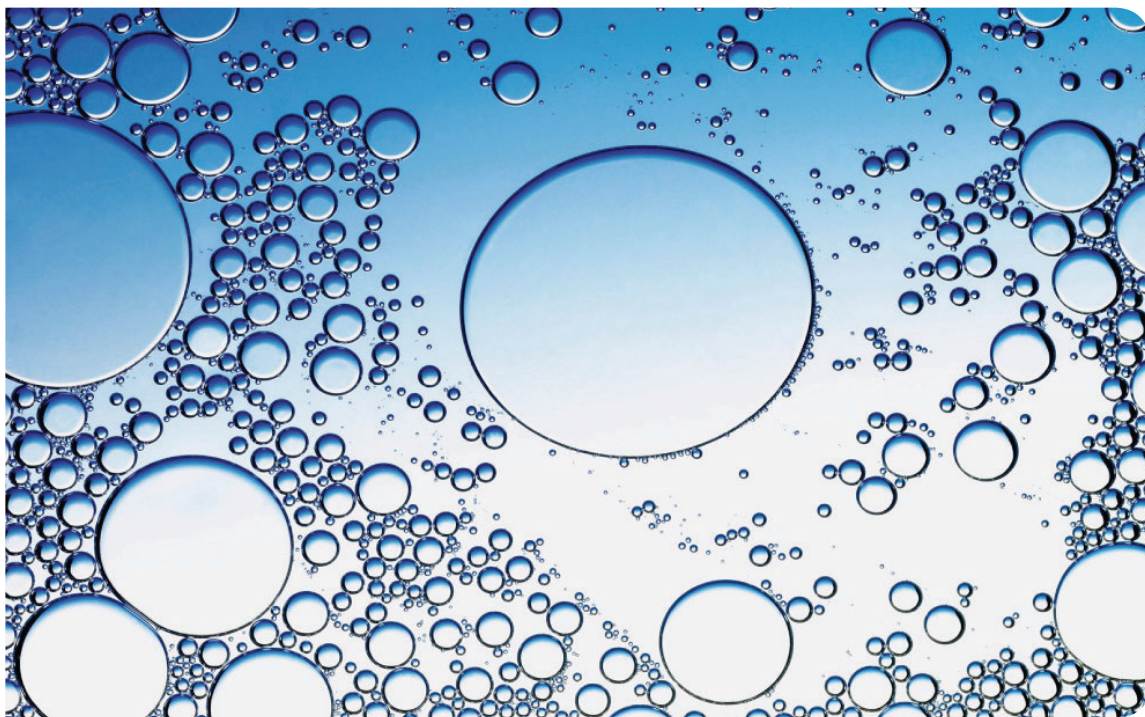


WIGGENS
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2015 Catalog

General Laboratory Equipment
Laboratory Vacuum Equipment

Diaphragm Vacuum Pumps and Systems

Chemical Resistant Diaphragm Pumps

All material of the ChemVak Chemical Resistant Diaphragm Pumps which has direct contact with gases is made of PTFE. It can be used in the chemical and petrochemical industry, the pharmacy industry and all industries that make use of chemical resistant vacuum processes, such as filtration, vacuum distillation, rotary evaporation, vacuum and centrifugal concentration, solid phase extraction, etc.

High price-performance ratio, reliable quality, special design, and low noise of 50 dB

Huge product range can fulfill every need in the laboratory work

An ultimate vacuum of 2 mbar can be created

All pumps employ an overheating protection system, which shuts down the pump when the inner temperature is too hot and automatically starts the pump again when cooled down to a safe temperature. This guarantees a stable work of the pump and the safety of the user. You can integrate the chemical resistant diaphragm pumps into vacuum filtration systems and purchase a diverse variety of accessories for your pumps (see P.6 for further information). The special design prevents solid impurities from accessing the pump head and thus guarantees the longevity of the pump. The pressure level can easily be controlled and adjusted



Chemvak

Technical Data

Model	C300	C400	C410
Mains Requirements	220-240V / 50Hz	220-240V / 50Hz	220-240V / 50Hz
Power (W)	60	95	95
Work Mode	Single	Parallel	In Successions
Ultimate Vacuum (mbar)	100	100	13
Flow Rate	1000 mbar	22 L/min	25 L/min
	880 mbar	17 L/min	22 L/min
	750 mbar	13 L/min	20 L/min
	600 mbar	7 L/min	12 L/min
	480 mbar	4 L/min	7.5 L/min
	280 mbar	2 L/min	3 L/min
Outlet (mm)	8	8	8
Motor Speed (rpm)	1450	1450	1450
Weight (kg)	5	7	5
Noise Level (dB)	50	50	50
Order No. for EU/US/UK-Plug	169300-22-E/U/UK	169400-22-E/U/UK	169410-22-E/U/UK

Diaphragm Vacuum Pumps and Systems

Chemical Resistant Diaphragm Pumps



Application:

- Vacuum filtration, rotary evaporation, conventional drying, gel drying, etc.
- Advanced substitute for water-circulation pumps

Technical specifications:

- Environmental friendly medium transmission and vacuum extraction
- Resists high and low temperatures
- Resists chemical corrosion
- Can be used in aggressive gas media
- Extremely well sealed
- Equipped with a fuse against electrical override and an overheating protection system

Technical Data

Model	C510	C600	C610
Mains Requirements	220-240V / 50Hz	220-240V / 50Hz	220-240V / 50Hz
Power (W)	245	270	245
Work Mode	In Successions	Parallel	In Succession
Ultimate Vacuum (mbar)	8	90	2
Flow Rate	1000 mbar	34 L/min	34 L/min
	880 mbar	31 L/min	31 L/min
	750 mbar	29 L/min	29 L/min
	600 mbar	21 L/min	21 L/min
	480 mbar	16 L/min	16 L/min
	280 mbar	14 L/min	29 L/min
Outlet (mm)	10	10	10
Motor Speed (rpm)	1450	1450	1450
Weight (kg)	7	12.6	13.4
Noise Level (dB)	60	60	60
Order No. for EU/US/UK-Plug	169510-22-E/U/UK	169600-22-E/U/UK	169610-22-E/U/UK

Diaphragm Vacuum Pumps and Systems

Laboratory Vacuum Systems

Information on Accessories

Name	Order No.
CSC/CSR/CSH Receiving bottle	CS001
CSC/CSR/CSH Condensation hose	CS002
CSC/CSR/CSH Segregation bottle	CS013

- The sealed system enables a good distillation environment
- Precise control of the evaporation process
- Maintenance-free
- Environmental friendly design
- Very low noise
- Buffer bottle attached at the air inlet prevents solid and liquid particles from flowing into the pump chamber
- Direct electrical connection to the work system
- Ultimate vacuum range: 2-13 mbar
- Range of the flow rate: 10-34 L/min
- The systems mainly consist of chemical resistant vacuum pumps, base plates, condensers, separators, and digital vacuum controller
- The CSC system contains a digital vacuum controller, which can display and control the vacuum automatically. You can precisely set the pressure degree. After the set pressure has been achieved, the vacuum pump turns off automatically, which saves energy and helps prolonging the life of the diaphragm and the pump



CSH System

- The inlet of the ChemVak CSH System is connected to a segregation bottle, whereas the outlet is connected to a condenser, which can condensate and recover the solvent

Model	CSH 410	CSH 510	CSH 610
Build in PumpType	C410	C510	C610
Power (W)	95	245	245
Ultimate Vacuum (mbar)	13	8	2
Max. Flow Rate (l/min)	25	34	34
Outlet Size (outer diameter in mm)	8	10	10
Weight (kg)	12.5	15.8	16.6
Order No. for EU/US/UK-Plug	900512-E/U/UK	900513-E/U/UK	900514-E/U/UK

The ChemVak CSH vacuum system includes: 1 chemical resistant diaphragm pump, 1 separator, 1 condenser, 1 base plate, and a set of hoses.



CSC System

- The inlet of the ChemVak CSC System is connected to a segregation bottle, whereas the outlet is connected to a condenser for solvent recovery. Moreover, the system contains a vacuum controller which can set, display, and control the vacuum degree.

Model	CSC 410	CSC 510	CSC 610
Build in Pump Type	C410	C510	C610
Power (W)	95	245	245
Ultimate Vacuum (mbar)	13	8	2
Max. Flow Rate (l/min)	25	34	34
Outlet Size (outer diameter in mm)	8	10	10
Weight (kg)	16	19.3	20.1
Order No. for EU/US/UK-Plug	900522-E/U/UK	900523-E/U/UK	900524-E/U/UK

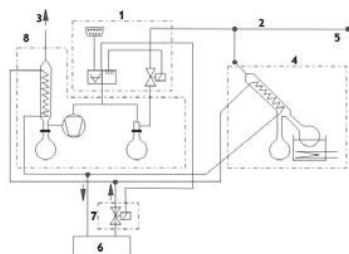
The ChemVak CSC vacuum system includes: 1 chemical resistant diaphragm pump, 1 DVR380 vacuum controller, 1 separator, 1 condenser, 1 base plate, and a set of hoses.

Diaphragm Vacuum Pumps and Systems

Application Guide and Accessories

Application Guide

- Vacuum distillation (e.g. rotary evaporation)
- Liquid ring pump replacement
- Vacuum filtration
- Vacuum waste suction
- Vacuum drying, centrifugation
- Solid phase extraction
- Reaction kettle
- Vacuum inspection, measurement, and detection



Schematic Diagram

1. Vacuum controller
2. Hose
3. Gas outlet
4. Rotary evaporator
5. Possible extension for multiple rotary evaporators
6. Cooling device
7. Cooling water control valve
8. Vacuum pump

Model selection guide for rotary evaporators

Vacuum Pump Model	Ultimate Vacuum (mbar)	Flow Rate	Applicable Rotary Evaporator
C410	13	25 L/min	1L / 2.5L
C510	8	34 L/min	5L
C600	90	60 L/min	10L
C610	2	34 L/min	5L



Chemvak



Model selection guide for vacuum ovens

Vacuum Pump Model	Ultimate Vacuum (mbar)	Flow Rate	Applicable Vacuum oven
C410	13	25 L/min	15L
C510	8	34 L/min	45L
C600	90	60 L/min	60L
C610	2	34 L/min	30L

Accessories

Chemical Resistant Connector

Description	Order No.
8mm Diameter	169300-20



Diaphragm and Valve Plate Sets

Description	Order No.
Diaphragm and Valve Plate Set 1 (1 diaphragm, 1 valve plate; applicable for C300 / C400 / C410)	410001
Diaphragm and Valve Plate Set 1 (1 diaphragm, 1 valve plate; applicable for C510 / 600 / 610)	510001



Chemical Resistant Vacuum Regulator / Filter Equipment

Description	Order No.
Set 1 (includes vacuum trap and regulator)	169311-06
Set 2 (includes vacuum trap only)	169312-06
Set 3 (neither include vacuum trap nor regulator)	169313-06

Part	Material	Part	Material
Pressure Regulating Valve	PVDF	Filter Bottle	Borosilicate Glass
Filter	PTFE	Adapter	PTFE
Filter Bracket	ABS	Vacuum Sensor	Stainless Steel

Diaphragm Vacuum Pumps and Systems

Accessories For Chemical Resistant Diaphragm Pumps

Tubes and Connectors



PTFE Tubing

Order No.	Outer Diameter mm	Inner Diameter mm	Thickness mm	Length m
016.1706.01	6	4	1	1
016.1706.02	6	4	1	2
016.1706.05	6	4	1	5
016.1708.01	8	6	1	1
016.1708.02	8	6	1	2
016.1708.05	8	6	1	5
016.1712.01	12	10	1	1
016.1712.02	12	10	1	2
016.1712.05	12	10	1	5
016.1714.01	14	12	1	1
016.1714.02	14	12	1	2
016.1714.05	14	12	1	5



Viton Tubing

Order No.	Outer Diameter mm	Inner Diameter mm	Thickness mm	Length m
168000-01	12	6	3	1
168000-01	12	6	3	2
168000-01	12	6	3	5
168001-01	14	8	3	1
168001-01	14	8	3	2
168001-01	14	8	3	5
168002-01	16	10	3	1
168002-01	16	10	3	2
168002-01	16	10	3	5



Straight Through Connector

Order No.	Outer Diameter (mm)	Bore(mm)
016.902.5.2	4.5	2
016.902.2	6.0	2
016.903.7.2	6.8	3
016.903.2	8.0	3
016.904.9.2	9.0	4
016.904.2	10.0	4
016.905.2	11.0	5



L-Shape Connector

Order No.	Outer Diameter (mm)	Bore(mm)
016.1002.5.2	4.5	2
016.1002.2	6.0	2
016.1003.7.2	6.8	3
016.1003.2	8.0	3
016.1004.9.2	9.0	4
016.1004.2	10.0	4
016.1005.2	11.0	5



T-Shape Connector

Order No.	Outer Diameter (mm)	Bore(mm)
016.1102.5.2	4.5	2
016.1102.2	6.0	2
016.1103.7.2	6.8	3
016.1103.2	8.0	3
016.1104.9.2	9.0	4
016.1104.2	10.0	4
016.1105.2	11.0	5



4-Way Connector

Order No.	Outer Diameter (mm)	Bore (mm)
016.1112.5.2	4.5	2
016.1112.2	6.0	2
016.1113.7.2	6.8	3
016.1113.2	8.0	3
016.1114.9.2	9.0	4
016.1114.2	10.0	4
016.1115.2	11.0	5

Chemvak

Diaphragm Vacuum Pumps and Systems

Accessories For Chemical Resistant Diaphragm Pumps

General Purpose Valves

General Purpose Valves

A range of plug valves for applications with less demand towards pressure and temperature

Max. pressure: 1 bar

Max. Vacuum: 7 mbar

Note: Rapid changes in temperature in excess of 25°C may cause these valves to leak due to the expansion properties of PTFE. Can be sterilised at 135°C.



Straight Through Bayonet

Order No.	Outer Diameter/mm	Bore (mm)
016.702.5.2	4.5	2
016.702.2	6.0	2
016.703.7.2	6.8	3
016.703.2	8.0	3
016.704.9.2	9.0	4
016.704.2	10.0	4
016.705.2	11.0	5

Straight Through Screw

Order No.	Outer Diameter/mm	Bore (mm)
016.1202.6.2	6	2
016.1203.2	8	3
016.1204.2	8	4



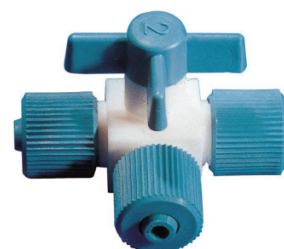
T-Shape Bayonet

Order No.	Outer Diameter/mm	Bore (mm)
016.802.5.2	4.5	2
016.802.2	6.0	2
016.803.7.2	6.8	3
016.803.2	8.0	3
016.804.9.2	9.0	4
016.804.2	10.0	4
016.805.2	11.0	5



T-Shape Screw

Order No.	Outer Diameter/mm	Bore (mm)
016.1302.6.2	6	2
016.1303.2	8	3
016.1304.2	8	4



Oil-Free Piston Pumps

Oil-Free Piston Vacuum Pumps

The ChemVak V series pumps use piston motion to produce a vacuum and are of such design that no oil has to be used to lubricate the pump. They are very easy to maintain, and can not only be used for vacuum creation but also for pressure supply. Because of the unique structure and advanced technology, the noise level of the pumps lies at comparatively low 48.7 to 60.0 dB. Thus, silent and effective work in the laboratory can be maintained.

- The basic ChemVak V pump is suitable for non-corrosive materials, as used e.g. in the biological and food industry
- All pumps simply need the vacuum / pressure transformation set in order to convert the pump from a vacuum pump into a pressure pump. Thus, the ChemVak V series can be used for a large variety of purposes in the laboratory environment.
- According to your needs you can choose from a large range of accessories

Application Range:

- Microbiological detection
- Vacuum extraction
- Liquid filtration
- Vacuum drying
- Suspended solids measurement
- Underwater Air Supply
- Air sampling



Technical Data

Model	V300	V400	V600	V410	V610	V300DC
Mains Requirements	220-240V / 50Hz	220-240V / 50Hz	220-240V / 50Hz	220-240V / 50Hz	220-240V / 50Hz	DC 12V
Power (W)	80	80	190	80	210	35
Current (A)	0.3	0.4	1	0.4	1	3
Ultimate Vacuum (mbar)	150	150	150	13	13	150
Flow Rate						
1000 mbar	17 L/min	34 L/min	52 L/min	19 L/min	33 L/min	24 L/min
880 mbar	14 L/min	31 L/min	46 L/min	18 L/min	30 L/min	24 L/min
750 mbar	12 L/min	29 L/min	40 L/min	16 L/min	27 L/min	24 L/min
600 mbar	9.5 L/min	23 L/min	30 L/min	14 L/min	25 L/min	24 L/min
480 mbar	7 L/min	19 L/min	30 L/min	11 L/min	20 L/min	24 L/min
350 mbar	4.5 L/min	13 L/min	16 L/min	9 L/min	14 L/min	24 L/min
210 mbar	1.5 L/min	4 L/min	6 L/min	6 L/min	12 L/min	24 L/min
Outlet (mm)	8	10	8	8	8	8
Motor Speed (rpm)	1450	1450	1450	1450	1800	1800
Weight (kg)	4.1	5.2	8.6	4.1	3.5	3.5
Noise Level (dB)	50	60	52	50	52	50
Order No. for EU/UK-Plug	167300-22-E/UK	167400-22-E/UK	167600-22-E/UK	167410-22-E/UK	167610-22-E/UK	167330-22-E/UK

Oil-Free Piston Pumps

Accessories For Oil-Free Piston Pumps



Connectors

Description	Order No.
Outlet Diameter 9.5 mm	167300-20
Outlet Diameter 8 mm	167300-21
Outlet Diameter 6.4 mm	167300-26
Outlet Diameter 4.8 mm	167300-23
Outlet Diameter 3.2 mm	167300-24



L-Shape Connector

Description	Order No.
Outlet Diameter 8 mm	167300-25



Quick Connection Outlets

Description	Order No.
Outlet Diameter 12 mm	168100-12
Outlet Diameter 10 mm	168100-10
Outlet Diameter 8 mm	168100-08
Outlet Diameter 6 mm	168100-06
Outlet Diameter 4 mm	168100-04



Silencer

Description	Order No.
Applicable to the ChemVak V300 / V400 / V410	167300-42
Applicable to the ChemVak V600 / V610	167600-42



Non-Chemical-Resistant Filtration Device

Description	Order No.
Non-Chemical-Resistant Filtration Device Set 1 (incl. pressure gauge)	167300-05
Non-Chemical-Resistant Filtration Device Set 2 (does not incl. pressure gauge)	167300-06



Foot Pedal

Description	Order No.
Applicable to ChemVak C and V Series Vacuum Pumps	167200-41



Heat Shrink Tubes

Order No.	Outer Diameter mm	Inner Diameter mm	Thickness mm	Length mm
168010-01	6	4	1	1
168010-02	6	4	1	2
168010-05	6	4	1	5
168011-01	8	6	1	1
168011-02	8	6	1	2
168011-05	8	6	1	5
168012-01	10	8	1	1
168012-02	10	8	1	2
168012-05	10	8	1	5
168013-01	12	10	1	1
168013-02	12	10	1	2
168013-05	12	10	1	5



Silicon Tubes

Order No.	Outer Diameter mm	Inner Diameter mm	Thickness mm	Length mm
168020-01	12	6	3	1
168020-02	12	6	3	2
168020-05	12	6	3	5
168021-01	14	8	3	1
168021-02	14	8	3	2
168021-05	14	8	3	5
168022-01	16	10	3	1
168022-02	16	10	3	2
168022-05	16	10	3	5

Oil-Free Piston Pumps

Vacuum Filtration Systems

- ChemVak Filtration Systems are unique vacuum filtration devices. They combine all the necessary steps needed in vacuum filtration in one smart system. This saves precious time and simplifies the process of vacuum filtration enormously
- The here installed vacuum pumps have a very low noise level
- The systems are easy to maintain.
- The basic vacuum filtration system can be applied in environments, where no chemical resistant devices are necessary, like e.g. biology and food science laboratories
- ChemVak also offers chemical resistant vacuum filtration systems, which are e.g. applied in the chemical, petrochemical, and pharmaceutical industry. All parts that come in contact with gases are made of PTFE, which can resist acid-based, and organic gases
- The outer filtration device can prevent solid impurities from entering the system
- The pressure can be controlled manually
- The all-in-one system consists of: a 1L suction bottle, a filtration flask, a funnel, and a bracket
- ChemVak offers you 2 different types of all-in-one vacuum filtration systems:
 1. Basic vacuum filtration system
 2. Chemical resistant vacuum filtration system, which entails an additional filter bottle for the further safety of the vacuum pump when using highly corrosive substances



VF203A /205A

The basic edition contains a VF6 filtration flask; the filtration flask can be changed to the VF1 model on request; for further information on filtration glass sets please refer to pp. 17 - 20



VF203B /205B

The basic edition contains a VF2 filtration flask; the filtration flask can be changed to the VF1 model on request; for further information on filtration glass sets please refer to pp. 17 - 20

Available Accessories

ChemVak can offer you different installation methods and funnels of different materials and sizes. Moreover, we can offer different filter membranes as well as Bunsen burners, in order to fulfill all your needs with regard to vacuum filtration.

Technical Data

Model	VF 203A	VF 203B	VF 205A	VF 205B
Product Type	All-In-One Filtration System		All-In-One Filtration System	
Mains Requirements	220-240V / 50Hz	220-240V / 50Hz	220-240V / 50Hz	220-240V / 50Hz
Power (W)	60	60	80	80
Current (A)	0.3	0.3	0.4	0.4
Ultimate vacuum (mbar)	150	150	150	150
Flow Rate	1000 mbar	17 L/min	34 L/min	34 L/min
	880 mbar	14 L/min	31 L/min	31 L/min
	750 mbar	12 L/min	29 L/min	29 L/min
	600 mbar	9.5 L/min	23 L/min	23 L/min
	480 mbar	7 L/min	19 L/min	19 L/min
	350 mbar	4.5 L/min	13 L/min	13 L/min
	210 mbar	1.5 L/min	4 L/min	4 L/min
Outlet (mm)	8mm	8mm	8mm	8mm
Motor Speed (rpm)	1450	1450	1450	1450
Weight (kg)	7.1	7.1	7.5	7.5
Noise Level (dB)	50	50	50	50
Contained Filtration Glass Set	VF6	VF62	VF6	VF2
Order No. for EU/UK-Plug	167203A-22-E/UK	167203B-22-E/UK	167205A-22-E/UK	167205B-22-E/UK

Oil-Free Piston Pumps

Vacuum Filtration Systems

VF203A

This vacuum filtration system contains a VF6 filtration flask set, a VF203 vacuum pump, a high pressure resistant tube, a 0.2 µm water-blocking device, as well as a 0.1 µm fiberglass filter membrane. This system can be used for normal vacuum filtration. It fits especially well for the measurement of suspended solids.

VF203B

This vacuum filtration system contains a VF2 filtration flask set, a VF203 vacuum pump, a Dragon 100 Bunsen burner, a high pressure resistant tube, a 0.2 µm water-blocking device, as well as a 0.1 µm fiberglass filter membrane. This system can be used for normal vacuum filtration. It fits especially well for microorganism determination.

VF205A

This vacuum filtration system contains a VF6 filtration flask set, a VF205 vacuum pump, a high pressure resistant tube, a 0.2 µm water-blocking device, as well as a 0.1 µm fiberglass filter membrane. This system can be used for normal vacuum filtration. It fits especially well for the measurement of suspended solids.

VF205B

This vacuum filtration system contains a VF2 filtration flask set, a VF205 vacuum pump, a Dragon 100 Bunsen burner, a high pressure resistant tube, a 0.2 µm water-blocking device, as well as a 0.1 µm fiberglass filter membrane. This system can be used for normal vacuum filtration. It fits especially well for microorganism determination.

VF204

This vacuum filtration system contains a VF3 filtration flask set, a VF204 vacuum pump, a high pressure resistant tube, and a 0.2 µm water-blocking device. It can be used for HPLC, GC, and AA micro-analysis or for mobile phase decontamination.

VF214

This vacuum filtration system contains a VF3 filtration flask set, a VF214 vacuum pump, a high pressure resistant tube, and a 0.2 µm water-blocking device. It can be used for HPLC, GC, and AA micro-analysis or for mobile phase decontamination.

VF204/214

The basic edition contains a VF3 filtration flask; the filtration flask can be changed to the VF10 model on request; for further information on filtration glass sets please refer to pp. 17 - 20



Technical Data

Model	VF 204	VF 214
Product Type	Chemical Resistant Vacuum Filtration System	Chemical Resistant Vacuum Filtration System
Mains Requirements	220-240V / 50Hz	220-240V / 50Hz
Power (W)	60	95
Current (A)	0.32	0.6
Ultimate Vacuum (mbar)	210	13
1000 mbar	22 L/min	25 L/min
880 mbar	17 L/min	22 L/min
Flow 750 mbar	13 L/min	20 L/min
Rate 600 mbar	7 L/min	12 L/min
480 mbar	4 L/min	7.5 L/min
280 mbar	2 L/min	5 L/min
Outlet (mm)	8 mm	8 mm
Motor Speed (rpm)	1450	1450
Weight (kg)	7.1	8.3
Noise Level (dB)	50	50
Contained Filtration Glass Set	VF3	VF3
Order No. for EU/US/UK-Plug	169204-22-E/U/UK	169214-22-E/U/UK

Oil-Free Piston Pumps

Filtration Collocations

- Vacuum filtration is used in laboratories in a wide range of fields, including the food, pharmaceutical, beverages, and drinking-water industry. Environmental-friendly suspended solids measurement, HPLC, GC, and AA analysis, as well as mobile phase decontamination are common applications of vacuum filtration
- ChemVak is one of the leading suppliers of laboratory vacuum filtration equipment and can provide vacuum pumps, filtration funnels, as well as all kinds of filtration equipments, which all undergo the highest quality standards
- ChemVak provides you with the ideal vacuum filtration system for your specific application

V300A Features

Basic Filtration Design

The ChemVak V300A is an economic set designed for basic vacuum filtration purposes. The set entails an oil-free piston pump, a VF6 filtration glass set, filter membranes, and a high-pressure resistant silicon tube.

Environmental Friendly and Maintenance Free

The ChemVak V series uses the piston-movement technique for vacuum creation, and thus does not need any oil for lubrication. Therefore, oil change and pollution both are not an issue.

Low Noise, Low Vibration

The ChemVak vacuum pumps use direct motor transmission, so that no belt is needed. In addition, other devices to lower noise and vibration can be provided in order to guarantee a silent operation.

Air Supply Filtration Applicable

All ChemVak vacuum pumps employ a filter element at the inlet, which can filter out dust and moisture. Thus, the inlet can be kept uncontaminated, which enhances the longevity of the vacuum pump.



V300A Product Application

- Water quality measurement
- Normal liquids filtration

V300A Ordering Information

Order No.: 167301-22-E/UK

The V300A vacuum filtration set includes the following:

- 167300-22 V300 oil-free piston pump
- 167200-01 VF6 filtration glass set
- 167100-20 Fiberglass filter membranes (47 mm / 1 μm)
- 168021-01 High-pressure resistant silicon tube (1m)
- 167200-35 PTFE disc filter

V300B Features

Designed for Suspended Solids Measurement

The V300B vacuum system is especially designed for suspended solid measurement. The set includes an oil-free piston pump, a VF1 filtration glass set, filter membranes, a high-pressure resistant tube, as well as a 1 μm fiberglass filter.

Magnetic Stability Design

For the filtration funnels a magnetic stability design is used, and thus no clamp is needed to ensure a smooth filtration process.



V300B Product Application

- Suspended solid measurement
- Normal liquids filtration

V300B Ordering Information

Order No.:167302-22-E/UK

The V300B vacuum filtration set includes the following:

- 167300-22 V300 oil-free piston pump
- 167200-01 VF1 magnetic filtration glass set
- 167100-20 Fiberglass filter membranes (47 mm / 1 μm)
- 168021-01 High-pressure resistant silicon tube (1m)
- 167200-35 Disc filter made of PTFE material

Model	V300A	V300B
Flow Rate of the Pump	17 l/min	17 l/min
Ultimate Vacuum	150 mbar	150 mbar
Filtration Glass Set	VF6	VF1
Suction Bottle Capacity	1000 ml	1000 ml
Filter Diameter	47/50 mm	47/50 mm
Filter Flask Capacity	300 ml	300 ml
Filter Flask Material	(Glass Filter Cup)	(Magnetic Filter Cup)
Effective Filtration Area	9.6 cm ²	9.6 cm ²
Outlet	8 mm	8 mm

Filtration Collocations

V300SS Features

Designed for Microbiological Detection

The V300SS is an economic set especially designed for microbiological detection. A set contains an oil-free piston pump, a VF2 filtration glass set, a Bunsen burner, disc filters, a high-pressure resistant silicon tube, and a 0.45 µm filter membrane especially designed for microbiological detection.

Spin-lock Connection

Fast and stable installation of the filter cup which makes a clamp unnecessary.

Quick Sterilization

The filtration funnels are made of SUS316 stainless steel, and with the included Bunsen burner a quick and effective sterilization can be achieved, which enhances the microbiological detection process significantly.

Environmental Friendly and Maintenance Free

The ChemVak V series uses piston-movement for vacuum creation, and thus does not need any oil for lubrication. Therefore, oil change and pollution both are not an issue.

C300A Features

Special Design for Solvent Purification

The ChemVak C300A series is especially designed for sample pretreatment and solvent purification. It includes a chemical resistant diaphragm pump, a VF3 filtration glass set, disc filters, and a high-pressure resistant silicon tube.

Chemical-Resistant Diaphragm Pump

The ChemVak C series pumps are chemical-resistant diaphragm vacuum pumps, where all parts that come into contact with gases are made of PTFE. In addition, the case and switch are also made of chemical-resistant material, so that all sorts of organic and acid gases can be used.

Environmental Friendly and Maintenance Free

The ChemVak C series uses the diaphragm movement technique for vacuum creation, and thus does not need any oil for lubrication. Therefore, oil change and pollution both are not an issue.



V300SS Product Application

- Microbiological detection
- All kind of liquid filtrations

V300SS Ordering Information

Order No.: 167303-22-E/UK

The V300SS vacuum filtration set includes the following:

167300-22	V300 oil-free piston pump
167200-02	VF2 filtration glass set
177100-00	Dragon 100 Bunsen burner
167100-52	Filter membrane (47 mm / 0.45 µm)
168021-01	High-pressure resistant silicon tube (1m)
167200-35	PTFE disc filter (25 mm / 0.2 µm)

C300A Product Application

- Sample pretreatment HPLC, GC, and AA analysis
- All kinds of solvent purification (mobile phase)

C300A Ordering Information

Order No.: 169301-22-E/U/UK

The C300A vacuum filtration set includes the following:

169300-22	C300 chemical resistant diaphragm pump
167200-03	VF3 magnetic filtration glass set
167200-35	PTFE disc filter
168021-01	High-pressure resistant silicon tube (1m)

Model	V300SS	C300A
Flow Rate of the Pump	17 l/min	22 l/min
Ultimate Vacuum	150 mbar	210 mbar
Filtration Glass Set	VF2	VF3
Suction Bottle Capacity	1000 ml	1000 ml
Filter Diameter	47/50 mm	47/50 mm
Filter Flask Capacity	100 ml	300 ml
Filter Flask Material	(Stainless Steel Filter Cup)	(Glass Filter Cup)
Effective Filtration Area	9.6 cm ²	9.6 cm ²
Outlet	8 mm	8 mm

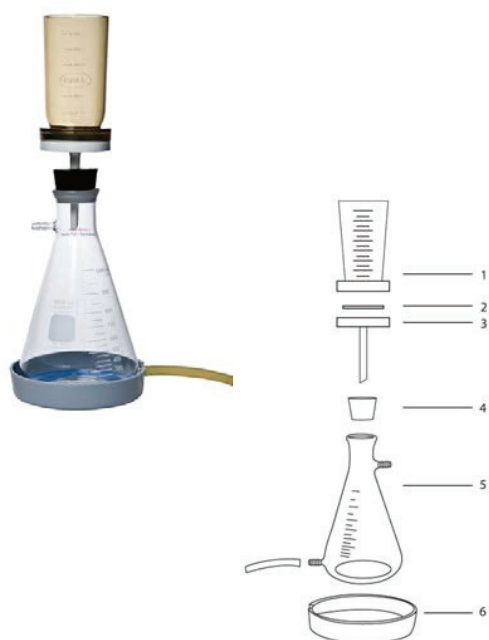
Oil-Free Piston Pumps

Filtration Glass Sets

- Vacuum filtration can be applied in a wide range of fields for all kinds of liquid filtration, including microbiological detection in food, pharmaceuticals, beverages, or drinking water, suspended solid measurement, sample pretreatment like HPLC, GC, and AA analysis, and solvent purification
- This set is of a unique design, which consists of a filtration funnel linked to a fast draining filtration flask and seated in a magnetic stand. The design makes it easy to discharge and empty out the filtration flask

VF1 (167200-01)

Suitable for basic liquid vacuum filtration, like suspended solids filtration.



VF9 (167200-09)

Suitable for flame sterilization, microbiological detection, or corrosive sample purification.



Chemvak

Technical Data

Set	VF1	VF9
Funnel	PES	SUS316
Funnel Base	PES	SUS316
Membrane Support	PP	SUS316
Stopper	Silicon	Silicon
Receiver Flask with Drain	Borosilicate Glass	Borosilicate Glass
Specifications		
Funnel Capacity	300 ml	300 ml
Filtration Flask Capacity	1000 ml	1000 ml
Filter Diameter	47 mm	47 mm
Effective Filtration Area	9.6 cm ²	9.6 cm ²
Outlet	8 mm	8 mm

Ordering Information

VF1 47mm Magnetic Filtering Set	167200-01
300ml Magnetic Funnel	167100-18
1 300ml Magnetic Filter Cup	167000-34
2 PP Membrane Support	167000-37
3 PES Filter Base	167000-35
4 Silicon Rubber	167110-17
5 1000ml Receiver Flask with Drain	167300-08
6 Weighted Base	167200-04
VF9 47mm Stainless Steel Filtration Set	
300ml Stainless Steel Funnel	167103-30
1 300ml Stainless Steel Filter Cup	167103-63
2 Membrane Support	167100-31
3 47mm Stainless Steel Funnel Base	167103-60
4 Silicon Rubber	167110-17
5 1000ml Receiver Flask with Drain	167300-08
6 Weighted Base	167200-04

Oil-Free Piston Pumps

47mm Stainless Steel Filtration Glass Sets

Suitable for flame sterilization, microbiological detection, or corrosive sample purification.

VF2 (167200-02)



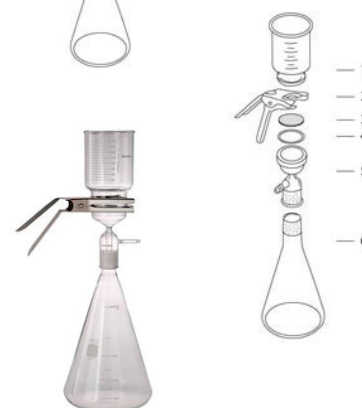
VF11 (167200-11)



VF3 (167200-03)



VF10 (167200-10)



Technical Data

Set	VF2	VF11
Funnel	SUS316	SUS316
Funnel Base	SUS316	SUS316
Membrane Support	SUS316	SUS316
Stopper	Silicon	Silicon
Receiver Flask with Drain	Borosilicate Glass	Borosilicate Glass
Specifications		
Funnel Capacity	100 ml	500 ml
Filtration Flask Capacity	1000 ml	2000 ml
Filter Diameter	47 mm	47 mm
Effective Filtration Area	9.6 cm ²	9.6 cm ²
Outlet	8 mm	8 mm

Ordering Information

VF2 47mm Stainless Steel Filtration Set	167200-02
100ml Stainless Steel Funnel	167103-10
1 100ml Stainless Steel Filtration Cup	167103-61
2 Membrane Support	167100-31
3 47mm Stainless Steel Funnel Base	167103-60
4 Silicon Rubber	167110-17
5 1000ml Receiver Flask with Drain	167300-08
6 Weighted Base	167200-04
VF11 47mm Stainless Steel Filtration Set	167200-11
500ml Stainless Steel Funnel	167103-50
1 500ml Stainless Steel Filtration Cup	167103-65
2 Membrane Support	167100-31
3 47mm Stainless Steel Funnel Base	167103-60
4 Silicon Rubber	167110-17
5 2000 ml Receiver Flask with Drain	167300-13

Technical Data

Set	VF3	VF10
Funnel	Borosilicate Glass	Borosilicate Glass
Funnel Base	Borosilicate Glass	Borosilicate Glass
Membrane Support	Borosilicate Glass	Stainless Steel Micro-Strainer + PTFE Gasket
Clamp	Aluminum Magnesium Alloy	Aluminum Magnesium Alloy
Filtration Flask	Borosilicate Glass	Borosilicate Glass
Specifications		
Funnel Capacity	300 ml	1000 ml
Filtration Flask Capacity	1000 ml	4000 ml
Filter Diameter	47 mm	90 mm
Effective Filtration Area	9.6 cm ²	40.6 cm ²
Outlet	8 mm	8 mm

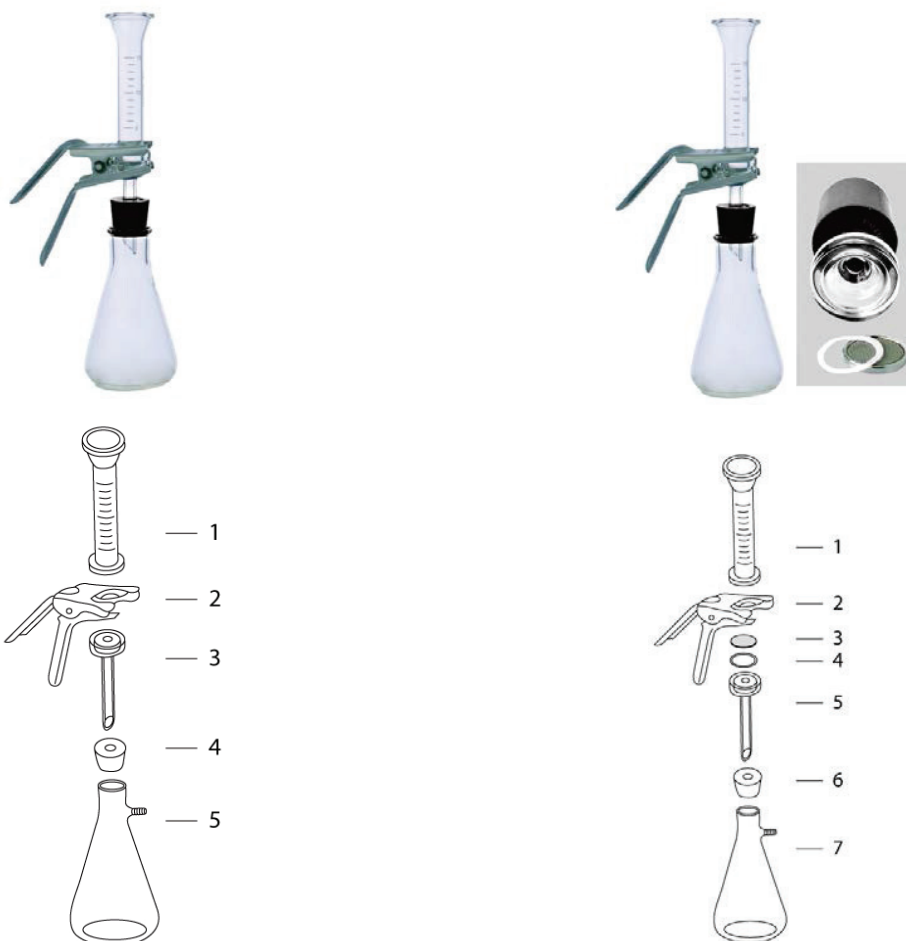
Ordering Information

VF3 47mm Filtration Glass Set	167200-03
300ml Glass Funnel	167120-30
1 300ml Glass Filter Cup	167210-03
2 Aluminum Magnesium Alloy Clamp	167240-01
3 47mm Glass Support Base	167230-01
4 1000ml Receiver Flask	167250-01
VF10 90mm Filtration Glass Set	167200-10
1000 ml Frosted Glass Funnel	167120-35
1 1000 ml Glass Filter Cup	167210-10
2 Aluminum Magnesium Alloy Bracket	167240-02
3 Stainless Steel Support Screen	167230-33
4 PTFE Gasket	167230-43
5 90mm Glass Support Base	167230-09
6 4000ml Receiver Flask	167250-06

Oil-Free Piston Pumps

25mm Filtration Glass Sets For Microanalysis

Suitable for filtration processes as used in pollution analysis or microbiology, like e.g. DNA / RNA hybridization.



Technical Data

Set	VF5	VF8
Funnel	Borosilicate Glass	Borosilicate Glass
Funnel Base	Borosilicate Glass	Borosilicate Glass
Membrane Support	Borosilicate Glass	Stainless Steel Support Screen + PTFE Gasket
Clamp	Aluminum Magnesium Alloy	Aluminum Magnesium Alloy
Stopper	Silicon	Silicon
Receiver Flask	Borosilicate Glass	Borosilicate glass

Specifications		
Funnel Capacity	15 ml	15 ml
Filtration Flask Capacity	125 ml	125 ml
Filter Diameter	25 mm	25 mm
Effective Filtration Area	2.2 cm ²	2.2 cm ²
Outlet	8 mm	8 mm

Ordering Information

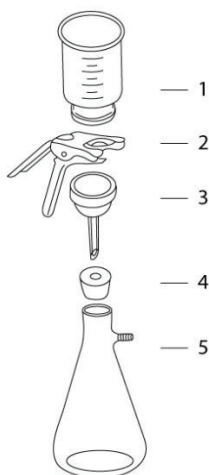
VF5 25mm Glass Filtration Set for Microanalysis	167200-05
15 ml Glass Funnel	167120-32
1 15 ml Glass Filter Cup	167220-15
2 Aluminum Magnesium Alloy Clamp	167240-05
3 25 mm Glass Filter Base	167230-04
4 Silicon Rubber	167110-18
5 125 ml Receiver Flask	167250-05

VF8 25 mm Glass Filtration Set for Microanalysis	167200-08
15ml Glass Funnel	167120-34
1 15ml Glass Filter Cup	167220-15
2 Aluminum Magnesium Alloy Bracket	167240-05
3 Stainless Steel Support Screen	167230-32
4 PTFE Gasket	167230-42
5 25mm Glass Filter Base	167230-08
6 Silicon Rubber	167110-18
7 125ml Receiver Flask	167250-05

Oil-Free Piston Pumps

47mm Filtration Glass Sets

Suitable for solvent purification and normal filtration, like microbiological and suspended solids filtration.



Chemvak

Technical Data

Set	VF6	VF7
Funnel	Borosilicate Glass	Borosilicate Glass
Funnel Base	Borosilicate Glass	Borosilicate Glass
Membrane Support	Borosilicate Glass	Stainless Steel Micro-Strainer + PTFE Gasket
Clamp	Aluminum Magnesium Alloy	Aluminum Magnesium Alloy
Stopper	Silicon	Silicon
Receiver Flask	Borosilicate Glass	Borosilicate Glass

Specifications		
Funnel Capacity	300 ml	300 ml
Filtration Flask Capacity	1000 ml	1000 ml
Filter Diameter	47 mm	47 mm
Effective Filtration Area	9.6 cm ²	9.6 cm ²
Outlet	8 mm	8 mm

Ordering Information

VF6 47mm Filtration Glass Set	167200-06
300ml Glass Funnel	167120-31
1 300ml Glass Filter Cup	167210-03
2 Aluminum Magnesium Alloy Clamp	167240-01
3 47mm Glass Filter Base	167230-03
4 Silicon Rubber	167110-16
5 1000ml Receiver Flask	167250-03

VF7 47mm Filtration Glass Set	167200-07
300ml Glass Funnel	167120-31
1 300ml Glass Filter Cup	167210-03
2 Aluminum Magnesium Alloy Clamp	167240-01
3 Stainless Steel Support Screen	167230-31
4 PTFE Gasket	167230-41
5 47mm Glass Filter Base	167230-03
6 Silicon Rubber	167110-16
7 1000ml Receiver Flask	167250-03

Oil-Free Piston Pumps

Multi-Branch Manifolds

SUS316 Stainless Steel

Every branch of the BioVac 330 and the BioVac 630 multi-branch manifolds is made of SUS316 stainless steel, so that heat sterilization can be applied.

Spin-Lock Connection

Fast and stable installation without a clamp.

Independent Valve Control

Each branch of the BioVac 330 / 630 can be independently controlled.

Different Filter Cups Available

The BioVac 330 / 630 multi-branch manifold can be combined with 100 ml, 300 ml, and 500 ml filtration cups for all kinds of filtration experiments.

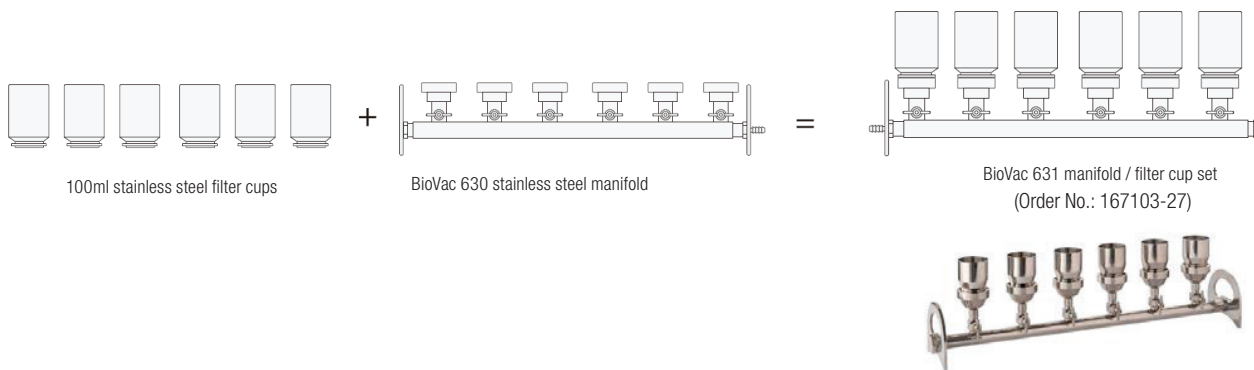


The 3-branch stainless steel manifold BioVac 330
(Order No.: 167103-23)



The 6-branch stainless steel manifold BioVac 630
(Order No.: 167103-26)

BioVac 630 Application Diagram



Ordering Information

- 167103-23 BioVac 330 3-branch stainless steel manifold (filter cups are not included)
- 167103-26 BioVac 630 6-branch stainless steel manifold (filter cups are not included)
- 167103-24 BioVac 331 3-branch manifold set (incl. three 100 ml stainless steel filter cups)
- 167103-27 BioVac 631 6-branch manifold set (incl. six 100 ml stainless steel filter cups)

Eligible Filter Cups

- 167103-61 100 ml stainless steel filter cup
- 167103-63 300 ml stainless steel filter cup
- 167103-65 500 ml stainless steel filter cup

Product Application

- Microbiological detection
- Chemical experiments
- All kinds of liquid filtration
- Air sampling

Product Specifications

Type	BioVac330	BioVac630
Number of Branches	3	6
Filter Diameter	47 / 50 mm	47 / 50 mm
Filter Cup Capacity	100 /300 /500 ml	100 /300 /500 ml
Effective Filtration Area	9.6 cm ²	9.6 cm ²
Outlet	8 mm	8 mm
Dimensions (L x W x H)	44.5 x 12.9 x 12.5 cm	68.5 x 12.9 x 12.5 cm

Multi-Branch Manifolds

SUS316 Stainless Steel

Every branch of the BioVac 300 and the BioVac 600 multi-branch manifolds is made of SUS316 stainless steel, so that heat sterilization can be applied.

Spin-Lock Connection

Fast and stable installation without a clamp.

Independent Valve Control

Each branch of the BioVac 300 / 600 can be independently controlled.

Different Filter Cups Available

The BioVac 300 / 600 multi-branch manifold can be combined with 500 ml, 750 ml, and 1000 ml filtration cups for all kinds of filtration experiments.

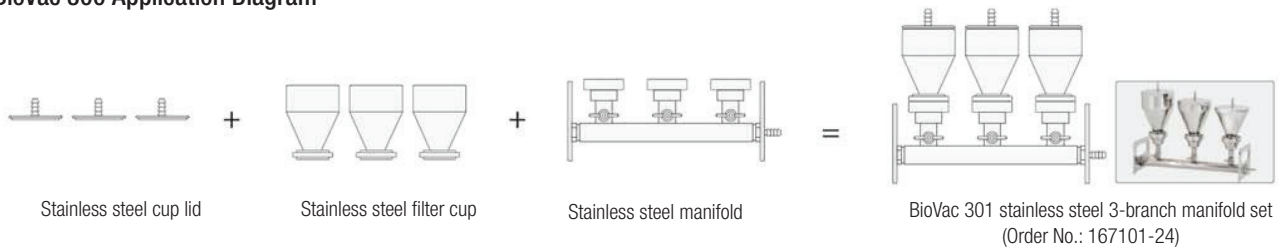


The 3-branch stainless steel manifold BioVac 300
(Order No.: 167101-23)



The 6-branch stainless steel manifold BioVac 600
(Order No.: 167101-26)

BioVac 300 Application Diagram



Ordering Information

- 167101-23 BioVac 300 3-branch stainless steel manifold (filter cups are not included)
- 167101-26 BioVac 600 6-branch stainless steel manifold (filter cups are not included)
- 167101-24 BioVac 301 3-branch manifold set (incl. three 500 ml stainless steel filter cups)
- 167101-27 BioVac 601 6-branch manifold set (incl. six 500 ml stainless steel filter cups)

Eligible Filter Cups

- 167102-50 500 ml stainless steel filter cup
- 167102-75 750 ml stainless steel filter cup
- 167102-99 1000 ml stainless steel filter cup
- 167110-20 Stainless steel cup covers (fit to the above mentioned cups)

Product Application

- Microbiological detection
- Chemical experiments
- All kinds of liquid filtration

Product Specifications

Type	BioVac300	BioVac600
Number of Branches	3	6
Filter Diameter	47 / 50 mm	47 / 50 mm
Filter Cup Capacity	500 / 750 / 1000 ml	500 / 750 / 1000 ml
Effective Filtration Area	9.6 cm ²	9.6 cm ²
Outlet	8 mm	8 mm
Dimensions (L x W x H)	43.5 x 15 x 14.5 cm	67.5 x 15 x 14.5 cm

Oil-Free Piston Pumps

Multi-Branch Manifolds

SUS316 Stainless Steel

Every branch of the BioVac 320 / 620 multi-branch manifolds is made of SUS316 stainless steel, so that heat sterilization can be applied.

Light Aluminum Design

The BioVac 321 manifold is made of anodized aluminum and copper electroplating, resulting in a very light weight, whereas steam sterilization can still be applied.

Independent Valve Control

Each branch of the BioVac 320 / 620 / 321 can be independently controlled.

Different Filter Cups Available

The BioVac 320 / 620 / 321 multi-branch manifolds can be combined with 100 ml, 300 ml, and 500 ml filtration cups for all kinds of filtration experiments.



The BioVac 321 3-branch aluminum manifold
(Order No.: 167200-43)



The BioVac 320 3-branch stainless steel manifold
(Order No.: 167110-23)



The BioVac 620 6-branch stainless steel manifold
(Order No.: 167110-26)

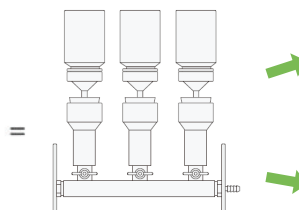
BioVac 320 Application Diagram



Glass / magnetic / stainless steel filter cup



Aluminium manifold



BioVac321 3-branch manifold set

Ordering Information

- 167110-23 BioVac 320 3-branch stainless steel manifold
(filter cups are not included)
- 167110-26 BioVac 620 6-branch stainless steel manifold
(filter cups are not included)
- 167200-43 BioVac 321 3-branch aluminum manifold
(filter cups are not included)
- 167110-17 Silicon Rubber

Eligible filtration cups

- 167103-10/30/50 100 ml, 300 ml, 500 ml stainless steel filter cup
- 167120-31/33 300 ml glass filter cup
- 167100-18 300 ml magnetic filter cup
- 167130-15 150 ml magnetic filter cup
- 167130-50 500 ml magnetic filter cup

Product Application

- Microbiological detection
- Chemical experiments
- All kinds of liquid filtration

Product Specifications

Type	BioVac320	BioVac620	BioVac321
Number of Branches	3	6	3
Filter Diameter	Dependent on Filter Cup Diameter	Dependent on Filter Cup Diameter	Dependent on Filter Cup Diameter
Effective Filtration Area	Dependent on Filter Cup Area	Dependent on Filter Cup Area	Dependent on Filter Cup Area
Outlet	8 mm	8 mm	8 mm
Dimensions (L x W x H)	44.5 x 12.9 x 15 cm	68.5 x 12.9 x 15 cm	39.5 x 15 x 13.7 cm

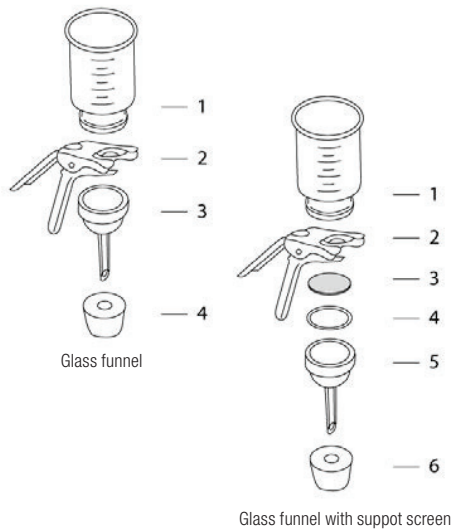
Chemvak

Accessories For Filtration Systems

47mm Glass Funnels

Product Features

- Made of chemical-resistant borosilicate glass
- Resistant against high temperatures
- steam sterilization can be applied



Product Specifications

Type	Glass Funnel	Glass Funnel with Micro-Strainer
Funnel	Borosilicate Glass	Borosilicate Glass
Funnel base	Borosilicate Glass	Borosilicate Glass
Membrane Support	Borosilicate Glass	Stainless Steel Support Screen + PTFE Gasket
Clamp	Aluminum Magnesium Alloy	Aluminum Magnesium Alloy

Specifications		
Funnel Capacity	300 ml	300 ml
Filter Diameter	47 mm	47 mm
Effective Filtration Area	9.6 cm ²	9.6 cm ²

Ordering Information

47 mm Glass Funnel		167120-31
1	300 ml Glass Filter Cup	167210-03
2	Aluminum Magnesium Alloy Clamp	167240-01
3	47 mm Glass Filter Base	167230-03
4	Silicon Rubber	167110-16

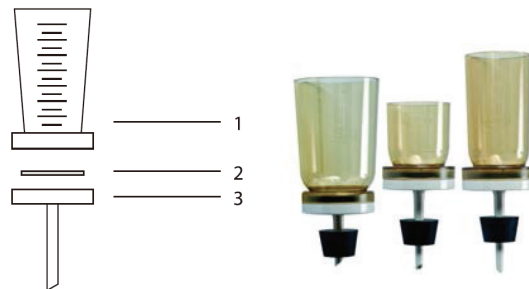
47 mm Glass Funnel with Micro-Strainer		167120-33
1	300 ml Glass Filter Cup	167210-03
2	Aluminum Magnesium Alloy Clamp	167240-01
3	Stainless Steel Support Screen	167230-31
4	PTFE Gasket	167230-41
5	47 mm Glass Filter Base	167230-07
6	Silicon Rubber	167110-16

Magnetic Funnels

- Unique magnetic base
- no bracket needed anymore
- high temperature sterilization possible

Type		
1	Filter Cup	PES
2	Membrane Support	PP
3	Filter Base	PES
4	Rubber	Silicon

Specifications	
Pall 4242 Funnel (Capacity: 300 ml)	167100-18
Pall 4247 Funnel (Capacity: 150 ml)	167130-15
Pall 4238 Funnel (Capacity: 500 ml)	167130-50

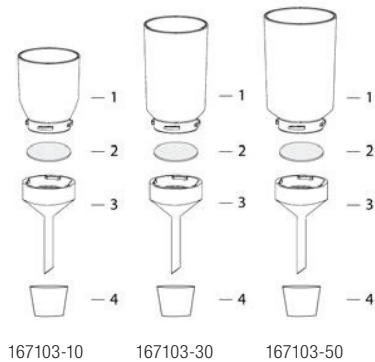


Oil-Free Piston Pumps

Accessories For Filtration Systems

47mm Stainless Steel Funnels

- Quick and effective spin-lock system, which makes a clamp redundant
- Made of SUS316 stainless steel material
- Can be used for heat sterilization



Product Specifications

Type	100 ml	300 ml	500 ml
Funnel	SUS316	SUS316	SUS316
Funnel Base	SUS316	SUS316	SUS316
Membrane Support	SUS316	SUS316	SUS316
Funnel Cover	SUS316	SUS316	SUS316

Specifications	100 ml	300 ml	500 ml
Funnel Capacity	100 ml	300 ml	500 ml
Filter Diameter	47 / 50 mm	47 / 50 mm	47 / 50 mm
Effective Filtration Area	9.6 cm ²	9.6 cm ²	9.6 cm ²



Stainless Steel Filter Cup (Cylinder Type)

Type	100 ml	300 ml	500 ml
Filter Cup	SUS316	SUS316	SUS316

Specifications	100 ml	300 ml	500 ml
Funnel Capacity	100 ml	300 ml	500 ml
Filter Diameter	47 / 50 mm	47 / 50 mm	47 / 50 mm
Effective Filtration Area	9.6 cm ²	9.6 cm ²	9.6 cm ²

Stainless Steel Filter Cup	Order No.
100ml Stainless Steel Filter Cup, Suitable for BioVac 330 / 630 Filtration Systems	167103-61
300ml Stainless Steel Filter Cup, Suitable for BioVac 330 / 630 Filtration Systems	167103-63
500ml Stainless Steel Filter Cup, Suitable for BioVac 330 / 630 Filtration Systems	167103-65

Ordering Information

100 ml Stainless Steel Funnel		167103-10
1	100 ml Stainless Steel Filter Cup	167103-61
2	Support Screen	167100-31
3	47 mm Stainless Steel Filter Base	167103-60
4	Silicon Rubber	167110-17

300 ml Stainless Steel Funnel		167103-30
1	300 ml Stainless Steel Filter Cup	167103-63
2	Support Screen	167100-31
3	47 mm Stainless Steel Filter Base	167103-60
4	Silicon Rubber	167110-17

500 ml Stainless Steel Funnel		167103-50
1	500 ml Stainless Steel Filter Cup	167103-65
2	Support Screen	167100-31
3	47 mm Stainless Steel Filter Base	167103-60
4	Silicon Rubber	167110-17



Stainless Steel Filter Cup (Cone Type)

Type	500 ml	750 ml	1000 ml
Filter Cup	SUS316	SUS316	SUS316

Specifications	500 ml	750 ml	1000 ml
Funnel Capacity	500 ml	700 ml	1000 ml
Filter Diameter	47 / 50 mm	47 / 50 mm	47 / 50 mm
Effective Filtration Area	9.6 cm ²	9.6 cm ²	9.6 cm ²

Stainless Steel Filter Cup (Cone Type)	Order No.
500ml Stainless Steel Filter Cup, Suitable for BioVac 300 / 600 Filtration Systems	167102-50
750ml Stainless Steel Filter Cup, Suitable for BioVac 300 / 600 Filtration Systems	167102-75
1000ml Stainless Steel Filter Cup, Suitable for BioVac 300 / 600 Filtration Systems	167102-99

Oil-Free Piston Pumps

Accessories For Filtration Systems



Stainless Steel Funnel Lid

Specifications	Order No.
100 ml Stainless Steel Funnel Lid, Suitable for 100 ml Stainless Steel Filter Cup (Cylinder Type)	167103-11
300 ml Stainless Steel Funnel Lid, Suitable for 300 ml Stainless Steel Filter Cup (Cylinder Type)	167103-13
500 ml Stainless Steel Funnel Lid, Suitable for 500 ml Stainless Steel Filter Cup (Cylinder Type)	167103-15
Stainless Steel Funnel Lid, Suitable for 500 ml / 750 ml / 1000 ml Stainless Steel Filter Cups (Cone Type)	167110-20



PP Funnel Lid

Order No.: 167130-32

Specifications	Material		
Suitable for Funnel	Pall 4242	Main Body	PP
Number of Inlets	3	Cover	Silicon
Inlet Type	Female luer slip	Filter Material	PTFE
Filter Diameter	25 mm	Pore Size	0.2 µm
Package	1		



Filtration Flask for Liquids

Order No.: 167100-13

Specifications	Material		
Capacity	1000 ml	Bottle	Borosilicate Glass
Inlet / Outlet Diameter	8 mm	Stopper	Silicon
Water Outlet	Yes		
Bottle Cork	Yes		
Magnetic Base	Yes		



PP/PC Waste Bottle

Material			
Order No.	167200-31	167200-32	167200-33
Bottle	PC	PC	PC
Bottle Cover	PC	PC	PC
Spill-Proof Buoy	PP	PP	PP
Specifications			
Capacity	1000 ml	2000 ml	3000 ml
Outlet	8 mm	8 mm	8 mm
Spill-Proof Buoy	Yes	Yes	Yes
Autoclavability (121°C)	Possible	Possible	Possible



Glass Waste Bottle

Order No.: 167120-34

Specifications	Material		
Capacity	4000 ml	Bottle	Glass
Outlet	8 mm	Bottle Lid	Stainless Steel
Spill-Proof Buoy	Yes	Float Switch	PP
Autoclavability (121°C)	Possible		Possible

Oil-Free Piston Pumps

Accessories For Filtration Systems



Weighted Base

Specifications	Order No.
1000 ml Filtration Flask Base with a Unique Stabilization Design	167200-04



Stand for Suction Bottles

Specifications	Order No.
Stand for Suction Bottles Designed for Stabilizing the Bottle in Filtration Work	167200-39



Filter Membranes

Type	Fiberglass Filter Membranes	MCE Filter Paper
Order No.	167100-20	167100-52
Brand	Pall	Pall
Filter Diameter	47 mm	47 mm
Filter Pore Size	1 µm	0.45 µm
Material	Fiberglass	MCE
Number of Filters per Package	200	200



Disc Filter

Type	Pinhead Filter	Small Disc Filter	Big Disc Filter
Order No.	194225-01	167200-35	167200-36
Brand	Pall	Pall	Pall
Filter Diameter / Pore Size	25 mm / 0.2 µm	35 mm / 0.2 µm	50 mm / 0.2 µm
Outer Diameter	30 mm	45 mm	72 mm
Material	PTFE	PTFE	PTFE
Outer Material	PP	PP	PP
Number of Filters per Package	1	1	1



Silicon Tubing

Order No.	Outer Diameter mm	Inner Diameter mm	Thickness mm	Length m
168020-01	12	6	3	1
168020-02	12	6	3	2
168020-05	12	6	3	5
168021-01	14	8	3	1
168021-02	14	8	3	2
168021-05	14	8	3	5
168022-01	16	10	3	1
168022-02	16	10	3	2
168022-05	16	10	3	5



Silicon Drainage Tubing

Order No.	Outer Diameter mm	Inner Diameter mm	Thickness mm	Length m
168030-01	12	8	2	1
168030-02	12	8	2	2
168030-05	12	8	2	5

Foot Pedal

Specifications	Order No.
Suitable for C Series and V Series Vacuum Pumps	167200-41

Oil-Free Piston Pumps

Multi-Branch Filtration Systems

Special Design for Microbiological Filtration

The BioVac 330B and 630B are especially designed for large capacity microbiological inspections. Each system entails a vacuum pump, a stainless steel manifold, a Bunsen burner, a filtration flask, and filter membranes.

SUS316 Stainless Steel Manifold

Every part of the manifold is made of SUS316 stainless steel for enhanced corrosion and heat resistance.

Patented Spin-Lock Design

The patented spin-lock technique is used for the stainless steel multi-branch manifolds. This assures a quick assembly and tightness of the system, and inconvenient clamps are no longer needed.

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BioVac 330B

Order No.: 167403-22-E/UK

The BioVac 330B vacuum filtration system includes the following:

- 167400-22 V400 oil-free piston pump
- 167103-24 BioVac 331 3-branch stainless steel manifold
- 167200-33 3000 ml PC waste bottle
- 177100-00 Dragon 100 Bunsen burner
- 167100-52 Pall GN-6 MCE filter membranes (0.45µm), 200 pcs
- 168021-01 High-pressure resistant silicon tube (1m) x 2

Product Application

- Microbiological detection
- Chemical experiments
- All kinds of liquid filtration

BioVac 630B

Order No.: 167601-22-E/UK

The BioVac 630B vacuum filtration system includes the following:

- 167600-22 V600 oil-free piston pump
- 167103-27 BioVac 631 6-branch stainless steel manifold
- 167200-33 3000 ml PC waste bottle
- 177100-00 Dragon 100 Bunsen burner
- 167100-52 Pall GN-6 MCE filter membranes (0.45µm), 200 pcs
- 168021-01 High-pressure resistant silicon tube (1m) x 2

Product Specifications

Model	BioVac330B	BioVac630B
Flow Rate of the Pump	34 l/min	58 l/min
Ultimate Vacuum	150 mbar	150 mbar
Waste Bottle	3000 ml, PC	3000 ml, PC
Number of Branches	3	3
Filter Diameter	47 / 50 mm	47 / 50 mm
Filter Cup Capacity	100 ml	100 ml
Effective Filtration Area	9.6 cm ²	9.6 cm ²
Outlet	8 mm	8 mm

Oil-Free Piston Pumps

Multi-Branch Filtration Systems

Designed for Large-Sample Filtration

The BioVac 321A is an economic set designed for large-sample vacuum filtration. Each set includes a vacuum pump, an aluminum manifold, magnetic funnels, and a waste bottle.

Professional Design for Microbiology

The BioVac 321B is especially designed for the purpose of large-sample vacuum filtration in microbiology. Each set includes a vacuum pump, an aluminum manifold, stainless steel funnels, a Bunsen burner, a waste bottle, and filter membranes.

Light Aluminum Design

The manifolds of the BioVac 321A and 321B filtration systems are made of aluminum and steel material, resulting in a very light weight, whereas steam sterilization can still be applied.

Magnetic Base

The funnels in the BioVac 321A filtration system are set in a magnetic funnel base so that no clamps are needed for a consistent connection between funnels and funnel bases.

Patented Spin-Lock Design

The patented spin-lock technique is used for the BioVac 321B filtration system. This assures a quick assembly and tightness of the system, and makes the use of inconvenient clamps redundant.



BioVac 321A



BioVac 321B

BioVac 321A

Order No.: 167401-22-E/UK

The BioVac 321A vacuum filtration system includes the following:

- 167400-22 V400 oil-free piston pump
- 167200-43 BioVac 321 3-branch aluminum steel manifold
- 167100-18 3 magnetic funnels (300 ml)
- 167200-33 3000 ml waste bottle made of PC material
- 167100-52 Pall GN-6 MCE filter membranes (0.45 µm), 200 pcs
- 168021-01 High-pressure resistant silicon tube (1m) x 2

BioVac 321B

Order No.: 167402-22-E/UK

The BioVac 321B vacuum filtration system includes the following:

- 167400-22 V400 oil-free piston pump
- 167200-43 BioVac 321 3-branch aluminum manifold
- 167103-10 3 stainless steel funnels (100 ml)
- 167200-33 3000 ml waste bottle made of PC material
- 177100-00 Dragon 100 Bunsen burner
- 167100-52 Pall GN-6 MCE filter membranes (0.45 µm), 200 pcs
- 168021-01 High-pressure resistant silicon tube (1m) x 2

Product Application

- Microbiological detection
- Chemical experiments
- All kinds of liquid filtration

Product Specifications

Model	BioVac321A	BioVac321B
Flow Rate of the Pump	34 l/min	34 l/min
Ultimate Vacuum	150 mbar	150 mbar
Waste Bottle	3000 ml, PC	3000 ml, PC
Number of Branches	3	3
Filter Diameter	47/50 mm	47/50 mm
Filter Cup Capacity	300 ml	100 ml
	Magnetic Filter Cup	Stainless Steel Filter Cup
Effective Filtration Area	9.6 cm ²	9.6 cm ²
Outlet	8 mm	8 mm

Rotary Vane Vacuum Pumps

Rotary Vane Vacuum Pumps

Rotary vane pumps are traditional vacuum pumps, which can be used in a wide area including research and production. The WH series rotary vane pumps are ChemVak's standard vacuum pumps, which can be used individually or as a backing pump in combination with molecular pumps or diffusion pumps in order to create an extremely high vacuum. They are widely used in vacuum distillation, vacuum filtration, vacuum testing, vacuum freeze drying, vacuum plating, leak detection, vacuum packaging, vacuum sorption, and the like.



WH-8D/17D

Product Features

- Compact structure and very good sealing. Even after shut-off there is no returning throughput.
- Oil spout prevention
- Low noise
- Small casing
- Easy to transport
- High flow rate, which quickly leads to a stable ultimate vacuum
- High evaporation resistance
- Comparatively high chemical resistance
- High longevity and very low maintenance rate
- Low oil mist
- Oil-observation window for convenient oil inspection
- Gas ballast valve, which enables the user to let out a certain amount of gas
- Fuse for overcurrent protection
- Fulfills IP54 standards.

Product Specifications

Type	WH-4SN	WH-12SN	WH-24SN	WH-36SN	WH-8D	WH-17D
Pump Heads	Single	Single	Single	Single	Double	Double
Flow Rate (L/min)	50	170	400	600	135	283
Ultimate Vacuum (mbar)	2.5×10^{-2}	2.5×10^{-2}	6.7×10^{-2}	6.7×10^{-2}	4×10^{-4}	4×10^{-4}
Power (W)	180	370	400	600	550	750
Noise Level (dB)	< 68	< 70	< 70	< 70	< 54	< 56
Oil Capacity (L)	0.3	0.65	1.3	1.5	1.1	1.5
Weight (kg)	7	12	24	28	27	31
Outlet Specifications	1/4" SAE Male	3/8" SAE Male; 1/4" SAE Male; 5/16" SAE Male	DN25KF	DN25KF	DN25KF	DN25KF
Order No. for EU/US/UK-Plug	900101-E/U/UK	900103-E/U/UK	900025-E/U/UK	900035-E/U/UK	900111-E/U/UK	900112-E/U/UK

Rotary Vane Vacuum Pumps

Accessories for Rotary Vane Vacuum Pumps

Filters



Order No.	Name	Description
73502	Exhaust filter	Noise reduction; WH-24SN / 36SN application
900101-1	Exhaust filter	Noise reduction; WH-8SN / 12SN application
900111-1	Water filter	Noise reduction; DN25KF, WH-8D / 17D application
900111-1	Filter element	WH-8D / 17D application
900111-1	Condensate separator	DN25KF, WH-8D / 17D application
900111-1	Dust filter	WH-8D / 17D application

Flanged Joint



Specifications	Order No.
DN25KF with 8 mm diameter	168900-08
DN25KF with 10 mm diameter	168900-10
DN25KF with 12 mm diameter	168900-12
DN25KF with 19 mm diameter	168900-19
DN25KF with 25 mm diameter	168900-25

Highspeed Pump Oil

ChemVak highspeed oil employs a very good lubricant function, and has a high emulsion and oxidation resistance. It helps to maintain the longevity of the system and to reach a stable ultimate vacuum.



Specifications	Order No.
450 mL	900100-01
5 L	900100-02
10 L	900100-03

Thick Vacuum Tubing

Thick rubber hose, which can be used in vacuum systems and usable for low evaporation pressure. Each hose has a length of 15 m.



Inner Diameter (mm)	Thickness (mm)	Order No.
8	5	22690-06
10	9.5	22690-11
12	9.5	22690-13
19	9.5	22690-21
25	9.5	22690-26

Chemvak

Krytox High-Performance Vacuum Pump Oil

The Krytox isoflorane oil has a very high performance in comparison to other hydrocarbon or silicon based pump oils. It is very suitable for industrial purposes. Krytox vacuum pump oil provides absolutely strict control over the viscosity and steam pressure indicator and fulfills strict cleanliness requirements.

- Excellent anti-oxidation and temperature stabilization properties
- Very high chemical inertia (can only react with carbon, oxygen, and fluorine)
- Optimal radiation-resistance; no sludge formation
- Low steam pressure (10^{-7} at 20°C)
- Wide viscosity range
- High lubrication properties for up to 200°C
- High chemical compatibility with metals, plastics, and rubber.
- Availability of different capacities



Krytox LVP High-Vacuum Grease

Very stable, incombustible silicon grease, which is suitable for high-vacuum systems. In high-vacuum environments or high personal risk environments it can be used as a lubricant or sealing compound for plugs, valves, and connecting pieces. It can be used in laboratory or pilot equipment.



Specifications	Order No.
2 oz.	9116-11
2 oz.	9116-09

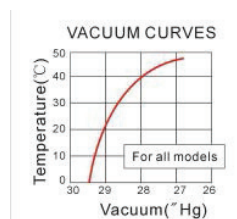
Dow Corning High Vacuum Grease (Order No.: 9230)

Dow Corning high vacuum grease provides excellent sealing properties. It can also be used as a lubricant for plugs, inlets, and glass pieces. It entails a high chemical and heat resistance. One tube contains 150g of grease.

Dual-Channel Liquid Ring Pump

Dual-Channel Liquid Ring Pump

- Water gets recycled, which enables an economic use of resources
- Dual-channel action for a high flow rate of up to 36 L/min, can be applied for filtration, distillation, rotary evaporation, etc.
- Employs two water flow and gas suction devices as well as a check valve, and has an upstream prevention device
- In order to prevent the raised water temperature from influencing the vacuum level, a cooling pipe can be installed
- Vacuum can be regulated between 20 mmHg and 74 mmHg on the vacuum gauge
- Drain valve installed
- The case is made of polypropylene material, which enhances the longevity of the aspirator
- In contrast to other vacuum pumps, small amounts of liquid remaining in the machine do not harm the system



Accessories

Description	Order No.
Vacuum Gauge / Regulator	900701-1
VC-10 Cooling Coil	900701-2
ET-02 Aspirator	900701-3
Filter Pack	900701-4



Vacuum Gauge / Regulator



VC-10 Cooling Coil



ET-02 Aspirator



Filter Pack

Technical Data

Model	VE-11	
Flow Rate	18 L/min x 2	
Water Tank Capacity	9.5 L	
Motor Power	150 W	
Material (Water Tank)	Polypropylene	
Dimensions	Water Tank (W x D x H in mm)	298 x 210 x 227
	Case (W x D x H in mm)	330 x 265 x 390
	Absorption Nozzle	9.5 Ø x 2
	Overflow Nozzle	17 Ø
Safety Devices	Fuse, check valve, overheat protection	
Mains Requirements and Current	220V AC, 60Hz, 0.7A	
Weight (kg)	5.7	
Order No. for EU/US/UK-Plug	900701-E/U/UK	

Hand-Operated Vacuum Pump (Order No.: 167030-00)



Features

- This pump is designed for simple laboratory applications and can be used in a wide range of fields
- Pump entails a vacuum gauge
- Pump entails a 60 cm long transparent vinyl hose, which has an inner diameter of 6 mm
- Pump entails a valve which enables the user to easily add pressure without releasing the hose from the pump

Specifications

- Material: PVC
- Outlet pressure: approx. 21 kPa
- Included: 60 cm hose



Please prevent liquid from accessing the pump!
Please avoid suction of solvents and acid vapors!

Pressure Pumps & Compressed Air Supply Systems

Pressure Pumps & Compressed Air Supply Systems

- Piston motion for pressure creation
- Oil-free technology
- Low noise level
- The P440 entails a gas tank, which enables long term gas provision.



P320
Pressure Pump



P420
Pressure Pump



P440
Compressed Air Supply System

ChemVak P440 Accessories

- Control valve
- Pressure gauge
- Stainless steel filter
- Stainless steel gas tank

Technical Data

Model	P 320	P 420	P 440	
Mains Requirements	220-240V / 50Hz	220-240V / 50Hz	220-240V / 50Hz	
Power (W)	85	125	125	
Current (A)	0.4	0.6	0.6	
Ultimate Pressure (without the use of a filter cup)	6.9	6.9	4.1	
Ultimate Pressure (with the use of a filter cup)	5.5	5.5	4.1	
	0 bar	12 L/min	25 L/min	25 L/min
Max. Flow Rate	1.4 bar	9.5 L/min	23 L/min	23 L/min
	2.0 bar	8 L/min	18 L/min	18 L/min
	2.8 bar	8 L/min	16 L/min	16 L/min
	4.2 bar	3 L/min	8 L/min	11 L/min
Outlet (mm)	8	10	8	
Motor Speed (rpm)	1400	1400	1400	
Weight (kg)	4.1	5.2	8.4	
Noise Level (dB)	50	60	50	
Order No. for EU/UK-Plug	167320-22-E/UK	167420-22-E/UK	167440-22-E/UK	

Air Supply System – Pressure Pumps

Air Supply System – Pressure Pumps

Product Features:

- Small scale pressure pump with remarkably high pressure and flow rates
- Easy to transport
- Applicable for the supply of compressed air
- Long-term laboratory operations possible
- Low noise level
- Maintenance free
- Environmentally friendly
- Direct drive transmission
- Temperature protection for the motor
- Filter for dust and liquid particles
- Pressure gauge and controller
- CSA, CE, UL, PSE, FDA & TUV GS approved

Product application:

- Widely used in laboratory environments with high standards on purity levels, such as:
- Fermentation tanks and bioreactors
- Gas chromatography
- Gas purging devices
- Driving compressed air sources



Technical Data

Model	P520	P640
Power	92W × 2 AC	180W
Mains Requirements	220-240V/50Hz	220-240V/50Hz
Motion Type	Automatic Motion, Preset Pressure 2.8bar (on) / 4.1 bar (off)	Automatic Motion, Preset Pressure (adjustable) 4.1bar (on) / 5.5bar (off)
Max. Flow Rate (L/min)	50	50
Ultimate Pressure (bar)	4.1	5.5
Motor Speed (rpm)	1400	1400
Weight (kg)	9.5	15.0
Gas Tank Volume (L)	--	5.5
Dimensions (L×W×H in mm)	265 × 265 × 225	370 × 335 × 315
Accessories	Straight air hoses (3 m)	
Gas nozzle holder	Gas container, pressure gauge, Pressure regulation valve, Liquids and dust filter, Straight air hoses (3 m)	
Outlet	1/8" PS	1/8" PS
Noise Level (dB)	50	50
Order No. for EU/UK-Plug	167520-22-E/UK	167640-22-E/UK

Portable Bio-Suction Systems

BioVac Bio-Suction Systems

Bio-suction systems are especially designed for biochemical cultivation and the separation of culture fluids. It is an indispensable partner for a sterile laboratory bench and entails the following features.

Oil-Free Vacuum Pump

The System employs an oil-free vacuum pump, where no lubricant is needed and which is maintenance free. Moreover its noise level is very low.

Convenience

Suction of various liquids and a foot switch makes the system very convenient to use.

Double Overflow Protection

The waste bottle contains a floating ball and between the waste bottle and the vacuum pump a 0.2 μm PTFE disc filter is installed. These two safety measures can protect the system from liquid overflow and the liquid from entering the vacuum pump.

High-Temperature and High-Pressure Sterilization

Waste bottle and disc filter are resistant against high pressure steam sterilization.

Product Application

- Waste liquid suction in cell cultivation
- All kinds of waste liquid suction in laboratory environments

1. Double Protection Against Liquid Overflow

- Waste bottle, floating ball.
- 0.2 μm PTFE disc filter
- Protection against liquid overflow
- Keeps liquid from entering the pump.

Portable Bio-Suction System BioVac 240

2. High-Temperature Sterilization

- Waste bottle and disc filter can resist high-temperature and high-pressure sterilization

3. Employment of an Oil-Free Vacuum Pump

- The oil-free vacuum pump is maintenance-free and has a very low noise level and works stable

4. Stable and Durable Casing

- The casing is made of ABS material, which is light, and easy to clean

5. Wire Storage Box

- The system provides a storage for the foot switch wire, which makes it easy and convenient to use

6. CE Certified

- Safe and high quality product



Portable Bio-Suction Systems

BioVac Bio-Suction Systems

Portable
Bio-Suction System
BioVac 225



Portable
Bio-Suction System
BioVac 235



Time-saving 8-branch suction head

Applicable for all kinds of Petri dishes

Environmental friendly waste treatment

Chemvak

Technical Data

Type	BioVac 225	BioVac 235	BioVac 240
Vacuum Creation Method	Diaphragm Pump	Diaphragm Pump	Piston Pump
Power (W)	25	25	200
Ultimate Vacuum (mbar)	100	100	80
Max. Flow Rate (l/min)	25	35	40
Foot Switch	No	Yes	Yes
Weight (kg)	4.3	6.9	12
Dimensions (cm)	37 × 15 × 25	27 × 30 × 28	54 × 26 × 35
Order No. for EU/UK-Plug	167225-22-E/UK	167235-22-E/UK	167240-22-E/UK

Ordering Information

Order No.	Description
167225-22	BioVac225 Bio-Suction System, AC220V / 50Hz
167235-22	BioVac235 Bio-Suction System, AC220V / 50Hz
167240-22	BioVac240 Bio-Suction System, AC220V / 50Hz
167200-31	1000 ml waste bottle, floating ball, sterilization
167200-32	2000 ml waste bottle, floating ball, sterilization
167200-33	3000 ml waste bottle, floating ball, sterilization
167200-35	PTFE disc filter with 37 mm diameter, 0.2 µm pore size, applicable for BioVac 225 / 235
167200-36	PTFE disc filter with 73 mm diameter, 0.2 µm pore size, applicable for BioVac 240
167200-37	Liquid filtration set
168021-01	1 m silicon tube
167200-39	Waste bottle clamp
167200-40	Foot switch for the BioVac 240
167200-41	Universal foot switch
167200-42	Single-branch suction head

Portable Bio-Suction Systems

Accessories for the BioVac Systems

Quick-Lock Design

The handheld controller of the bio-suction kit needs a skilled and stable hand, but the hermetic lock design makes it easy and labor-saving to operate the controller.

One Hand "Tip" Operation

The innovative 8-branch tip outlet design enables the user to conveniently operate the controller with only one hand.

Convenient Accessory Change

Accessories and the handheld controller are installed via quick-plug, which enables the user to quickly and conveniently change accessories.

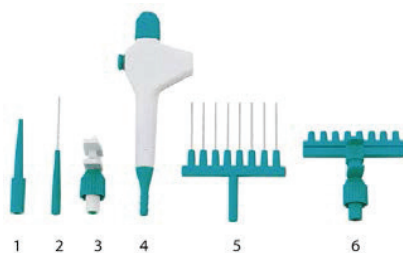
Vapor Sterilization Can Be Applied

All parts except the stand are made of POM or stainless steel, so that vapor sterilization can be applied without damaging the material.



Product Application

- Bio-liquid suction in cell cultivation
- All kinds of bio-liquid suction in laboratory environments

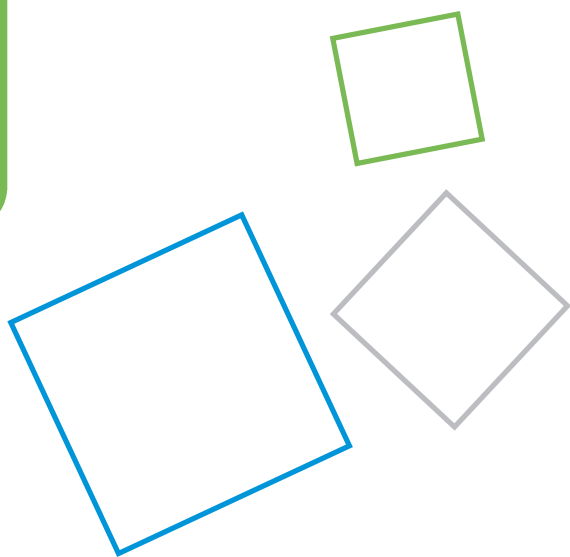


Product Specifications

Bio-Suction	167200-37
Operation Form	Vacuum Suction
Outlet Diameter	5 mm

Used Accessories	Material	Quantity
1. Single-branch suction head	POM	1
2. Single-branch stainless steel suction head	Main component: POM Tip: SUS304	1
3. Single-branch "tip" plastic suction head	POM	1
4. Handheld controller	POM	1
5. 8-Branch stainless steel suction head	Main component: POM Tip: SUS304	1
6. 8-Branch "tip" plastic suction head	POM	1
7. ABS Depositing rack		1

Chemvak



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