



- *Vacuum Pump*
- *Vacuum Solvent Recovery System*
- *Vacuum Meter and Controller*
- *Vacuum Filtration*
- *Liquid Handling Equipment*

About WIGGENS

What Does Wiggins Stand for?

- W**ide Product Range
- I**nternational Orientation
- G**reat Quality
- G**reat Service
- E**nergetic Team
- N**ew Technology
- S**olutions

Wiggins was established in 2005 with the goal of delivering the best laboratory equipment and service for reliable results. Since then Wiggins has been producing top-quality general laboratory equipment, analysis apparatus and chemical reaction and purification solutions. Our brand Wiggins stands for high quality, durability and remarkable performance.

Wiggins is your reliable laboratory companion and provides products that can be used in different kinds of laboratory environments. The Wiggins product range includes:

ChemVak Pumps
Wiggins General Lab Equipment
Life Science Equipment

ChemTron Gas
H₂ Generators
N₂ Generators
O₂ Generators
Zero Air Generators

ChemTron Reaction & Purification System

Reactor
Rotary Evaporator
Thin film evaporator
Molecular distillation device

ChemTron Analytics

Viscometer
Titrator
Density

ChemVak®

ChemVak, a brand of Wiggins, is specialized in pump technology offering an extensive range of vacuum pumps, vacuum filtrat and liquid pumps for various applications, including chemical-resistant diaphragm pumps, oil-free pumps and rotary vane vacuum pumps, vacuum filtration equipment for a wide range of different applications. In addition, peristaltic pumps, piston Liquid pumps, solvent recovery systems and bio-suction systems are part of the product range.



ChemTron is our product brand focusing on analysis apparatus, gas generators, chemical reaction solutions, chemical process separation and purification solutions, including efficient chemical separation tools-rotary evaporator, thin film evaporator, molecular distillation device, automatic distillation system, crystallization system etc...



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Vacuum Pump
Vacuum Solvent Recovery System
Vacuum Meter and Controller
Vacuum Filtration

Vacuum Pump

The ability to handle difficult and different vacuum challenges quickly.

Wiggins is your general laboratory companion and provides products that can be used in all kinds of laboratory environments. ChemVak is a product line in vacuum technology offering an extensive range of vacuum pumps for all applications, including :



Chemical-resistant diaphragm vacuum pump which can be used in the chemical, pharmaceutical, petrochemical and other industries

Chemical-resistant diaphragm pump
Frequency conversion chemical-resistant vacuum pump



Chemical-resistant diaphragm pump

Vacuum solvent recovery, which can be utilized to achieve the correct vacuum conditions for diverse applications



Vacuum solvent recovery system



Oil-free piston vacuum pump, no pollution, no need for oil changes

Oil-free piston vacuum pump

Oil-sealed rotary vane vacuum pumps are a proven and widely used vacuum solution for research and production applications.



Rotary vane vacuum pump



Vacuum pump selection guide

Before selecting a vacuum pump, please let us introduce a few basic concepts about vacuum.



▶ Vacuum

Vacuum level refers to the pressure inside a system relative to atmospheric pressure or absolute zero, depending on the measurement basis. The value shown on the vacuum gauge represents the degree of vacuum, which indicates how much lower the system pressure is compared to atmospheric pressure. This value is also called gauge pressure or ultimate relative pressure.

In other words:

Vacuum = Atmospheric Pressure - Absolute Pressure

(Note: Atmospheric pressure is generally taken as 1013.25 mbar.)

The ultimate vacuum of an oil-free piston pump can reach approximately 30 mbar.

The ultimate vacuum of a chemical-resistant diaphragm pump can reach 1 mbar.

The ultimate vacuum of a rotary vane oil pump can reach about 0.0004 mbar.



▶ Ultimate relative pressure

Relative pressure refers to how much lower the measured internal pressure is compared to atmospheric pressure, indicating that the internal pressure of the system is lower than the atmospheric pressure. As the air inside the container is evacuated, the pressure inside the container remains lower than the pressure outside the container. Therefore, when expressing relative pressure or gauge pressure, a negative sign is typically used to indicate that the internal pressure is lower than the external pressure.



▶ Ultimate absolute pressure

Absolute pressure refers to how much higher the measured internal pressure is compared to the theoretical vacuum, where the theoretical vacuum pressure value is 0 Pa. The comparison is made with the absolute vacuum pressure value in the theoretical state. Due to technological limitations, it is impossible to reduce the internal pressure to an absolute vacuum of 0 Pa. As a result, the vacuum level achieved by the vacuum pump will always be higher than the theoretical vacuum value. Therefore, when expressed in terms of absolute pressure, the value is always positive, and no negative sign is used.



▶ Pumping speed

The pumping speed is a measure of the vacuum pump's ability to evacuate air from a container, typically expressed in units of liters per minute (L/min) or cubic meters per hour (m³/h). It serves as a parameter to compensate for air leakage. To understand this concept, consider that when evacuating a container of the same volume, a vacuum pump with a higher pumping capacity can achieve the desired vacuum more easily, while a pump with a lower pumping capacity may be slow or even unable to reach the required vacuum level. This is because it is impossible for the pipeline or container to be completely air-free. The larger pumping capacity compensates for the loss of vacuum caused by air leakage, allowing the pump to reach the ideal vacuum level more efficiently. Therefore, it is recommended to select a vacuum pump with a higher pumping capacity when calculating theoretical pumping requirements. The specific formula for calculating pumping volume will be introduced below.



After understanding the basic parameters of vacuum pumps such as vacuum degree, absolute pressure and relative pressure, we can enter the formal selection of vacuum pumps.



The required vacuum of the experimental process

The operating pressure of the vacuum pump should meet the pressure requirements of the process.



The required pumping speed of the experimental process

The required pumping speed of the vacuum pump refers to its capacity to evacuate gas, vapor, or entrained media from the system under operating pressure. Common units include m^3/h , L/min , and L/s . The required pumping speed can be estimated using the following formula to assist in pump selection. In practice, however, vacuum pump selection is a comprehensive process that also depends on application experience and other operating factors.

$$S = (V/t) \times \ln (P1/P2)$$

Where:

S = required pumping speed of the vacuum pump (L/s)

V = volume of the vacuum chamber (L)

t = time required to reach the target vacuum level (s)

P1 = initial pressure (Pa)

P2 = target pressure (Pa)



Determine the composition of the gas being pumped

1. Gas, Liquid, or Particulate Matter:

If the pumped substance is a gas, liquid, or contains particles (e.g., dust), and the gas includes water vapor or impurities such as dust and small particles, a rotary vane vacuum pump should be carefully considered. If high vacuum levels are required, a filter device must be added. The rotary vane vacuum pump can only be used effectively as a vacuum generation device if the impurities are properly filtered.

2. Corrosive Properties of the Gas:

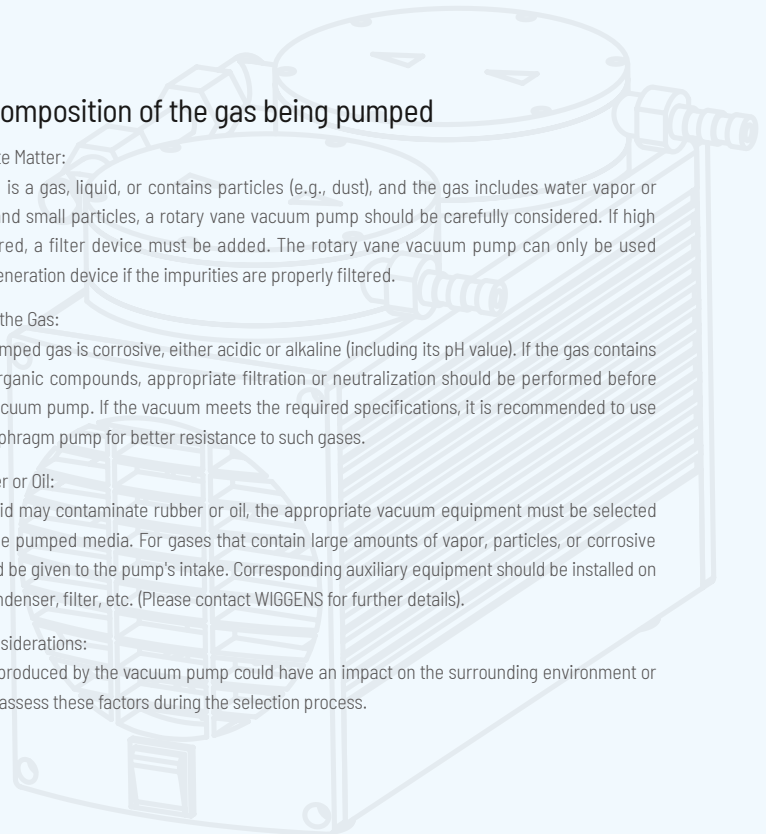
Please inform us if the pumped gas is corrosive, either acidic or alkaline (including its pH value). If the gas contains corrosive acid-base or organic compounds, appropriate filtration or neutralization should be performed before selecting a rotary vane vacuum pump. If the vacuum meets the required specifications, it is recommended to use an chemical-resistant diaphragm pump for better resistance to such gases.

3. Contamination of Rubber or Oil:

If the pumped gas or liquid may contaminate rubber or oil, the appropriate vacuum equipment must be selected based on the nature of the pumped media. For gases that contain large amounts of vapor, particles, or corrosive elements, attention should be given to the pump's intake. Corresponding auxiliary equipment should be installed on the pipeline, such as a condenser, filter, etc. (Please contact WIGGENS for further details).

4. Noise and Vibration Considerations:

If the noise and vibration produced by the vacuum pump could have an impact on the surrounding environment or equipment, it is crucial to assess these factors during the selection process.



Application Guide

Application	Picture	Description	Pump speed / Vacuum	Recommended vacuum pump
Conventional vacuum requirements		Compact, portable, with certain corrosion resistance	25 L/min 13 mbar	C410 
Vacuum filtration		The filtered sample is non-corrosive	34 L/min 100 mbar	V400 
		The filtered sample is corrosive and requires high corrosion resistance of the vacuum pump	34 L/min 120 mbar	C400 
Vacuum drying		It is recommended to use a chemical resistant diaphragm vacuum pump. In addition, a vacuum gauge and a vacuum regulating valve are also required	35 L/min 13 mbar	C420 
		The samples are usually aqueous, acidic or alkaline solutions, so chemical resistant diaphragm vacuum pumps are often recommended	75 L/min < 8 mbar	C920Z 
Vacuum centrifugal concentration		The vacuum centrifugal concentrator is paired with a vacuum pump, which creates a vacuum to lower the boiling point of the solvent. This, combined with heating and centrifugation, accelerates the concentration of the solvent. This method is typically used for handling volatile and potentially hazardous chemicals, so a chemically resistant diaphragm pump is recommended.	60 L/min < 2 mbar	C960T 
		For extremely low vacuum levels, a rotary vane oil pump is used due to its ability to achieve deeper vacuums. However, it must be paired with a cold trap to prevent vapors from entering and damaging the pump.	180 L/min 4×10^{-4} mbar	R-8D 
Freeze-drying		Rotary vane oil pump is usually used, equipped with oil mist filter and cold trap	180 L/min 4×10^{-4} mbar	R-8D 

Application	Picture	Description	Pump speed / Vacuum	Recommended vacuum pump	
Rotary evaporation		A 0.5-3 L evaporating flask requires a vacuum pump with high corrosion resistance and is usually used in conjunction with a vacuum controller.	35 L/min 15 mbar	C420	
		A 6-20 L evaporating flask requires a vacuum pump with high corrosion resistance and is typically used in conjunction with a vacuum controller.	60 L/min < 2 mbar	C960T	
Multi-channel vacuum applications		The rotary vane oil pump can provide a sufficiently high pumping rate, but it requires a matching cold trap.	360 L/min 4×10^{-4} mbar	R-24D	
Liquid suction		After biochemical culture, it is used to separate tissues from the culture medium.	25~40 L/min 100 mbar	BioVac series	
vacuum control		Sets and controls the system vacuum level	Vacuum control range: 0.1~1000 mbar	DVR series	
Vacuum monitoring		Displays the system vacuum level in real time.	Vacuum measurement range: 0.1~1000 mbar	DVM series	



Chemical-Resistant Diaphragm Pump (C Series)

C series construction with PTFE makes them very resistant to chemical vapors from inlet to exhaust and very tolerant to condensates. The pumping chambers are hermetically sealed, ensuring a long service life for the mechanical components.

Most importantly, diaphragm pumps are oil-free, with vastly reduced service demands compared with oil sealed pumps. They eliminate the cost of water and its contamination well-known from water-jet aspirators, and the waste-oil disposal of rotary vane pumps.

They are chemical resistant diaphragm vacuum pumps which can be widely used for aggressive acidic, alkaline, and solvent vapors by utilizing corrosion proof PTFE on all the wetted surfaces. Through innovative mechanical technology and human considerations, The C series is designed to be quiet, safe, low-maintenance, and cost-effective.

Features

High chemical resistant

All wetted parts of C series pump are made of PTFE which is ideal for extremely aggressive / corrosive gases and vapors.

Long-term durable

Head cover and diaphragm made of PTFE/PTFE-coated with stability core for unsurpassed long-term performance

No air pollution, maintenance free

Chemvak C series pumps are driven by diaphragm, without the need of lubricant, regular oil changes and maintenance; with no oil pollution.

Practical

- > smooth surfaces for easy cleaning
- > sealing system provides reduced leakage rates for improved ultimate vacuum

Quiet and low vibration

Direct motor drive with no additional belt transmission with no additional belt-driven transmission; the quality vibration-proof assembly makes Chemvak C series run at the lowest noise level among all other equivalent pumps.

Thermal protection device

Every motor of Chemvak C series pumps has a built-in thermal protection device to shut off the pump automatically when overheated and then resume working when the temperature cools down.

The stability core principle: for unprecedented long-term performance

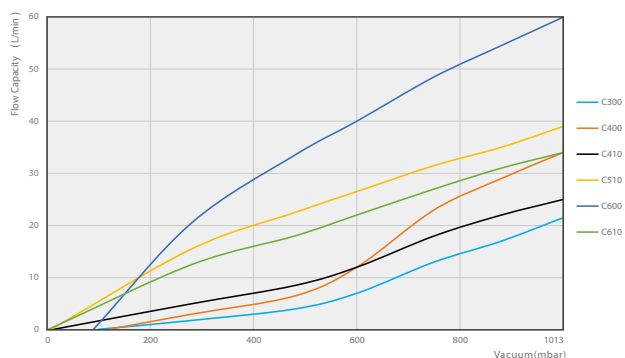
Chemical-Resistant Diaphragm Pumps provide optimum performance and unsurpassed service intervals even in harsh chemical applications. We achieve this unmatched reliability by manufacturing the most highly stressed components - the head cover and clamping disk.

- > high quality PTFE coated EPDM provides long term chemical resistance
- > this thick-walled, diffusion resistant, molded fluoroplastic is supported by a stable metallic core for durability
- > mechanical precision finishing ensures reproducible WIGGENS quality

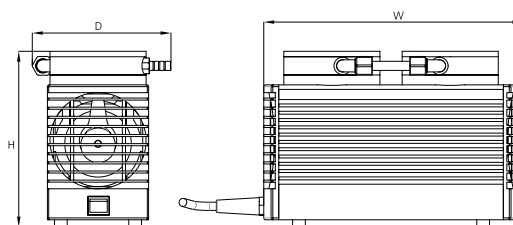
Application

- > Chemical and petrochemical Industry
- > Pharma Industry
- > Filtration processes
- > Vacuum distillation
- > Rotary evaporation
- > Vacuum and centrifugal concentration
- > Solid phase extraction
- > Conventional drying and gel drying
- > Advanced substitute for water-jet pumps

Chemical-Resistant Diaphragm Pumps Flow curve



Note: Above data is based on the 220V/50Hz instrument



Vacuum display and control



Model / Specifications	C300	C400	C410	C510	C600	C610
Order No.	169300	169400	169410	169510	169600	169610
Flow rate [m ³ /h] at atm. pressure	1.32	2.04	1.5	2.04	3.6	2.22
Flow rate [L/min] at atm. pressure	22	34	25	34	60	37
Ultimate vacuum [mbar]	100	120	13	8	90	2-4
Power [W]	60	95	95	245	270	270
Motor speed [rpm]	1450	1450	1450	1450	1450	1450
Number of stages	Single stage	Single stage	Double stage	Double stage	Single stage	Double stage
Hose connection [mm]	10	10	10	10	10	10
IP code	IP20	IP20	IP20	IP20	IP20	IP20
Sound pressure level [dB]	50	50	50	60	60	60
Dimensions [W x D x H (mm)]	239×111×192	291×151×190	284×158×193	391×170×218	405×156×219	391×175×226
Weight [kg]	6	8.5	8.5	13.2	13.2	13.8
Power supply	220V/50Hz	220V/50Hz	220V/50Hz	220V/50Hz	220V/50Hz	220V/50Hz

A 60 Hz version is available.

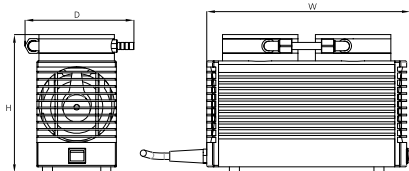
Chemical-Resistant Diaphragm Pump

This series of chemical-resistant diaphragm vacuum pumps incorporates a special diaphragm technology characterized by a split diaphragm and base design. This configuration not only preserves the essential features of traditional vacuum pumps but also delivers higher flow rates, enhancing overall performance.

A significant benefit of this diaphragm technology is the ease of maintenance. With this design, only the diaphragm needs to be replaced during servicing, eliminating the need to replace the entire base. This results in a more convenient maintenance process, reducing downtime and operational costs for users while ensuring consistent and reliable pump performance.

Features

- > High chemical resistant
- > Quiet and low vibration
- > Thermal protection
- > Convenient membrane replacement
- > Separate membrane and base design



Vacuum display and control

Set 1

Order No. :169311-06
Included vacuum trap, regulator and vacuum gauge

Set 2

Order No.: 169312-06
Included vacuum trap, regulator and digital meter DVM150C

Set 3

Order No. : 169314-06
Included vacuum trap, regulator, chemical resistant vacuum controller DVR480

Specifications

Model / Specifications	C420	C520	C602
Order No.	169420	169520	169602
Flow rate [m ³ /h] at atm. pressure	1.5	3.0	4.2
Flow rate [L/min] at atm. pressure	35	50	70
Ultimate vacuum [mbar]	15	10	80
Power [W]	95	245	270
Motor speed [rpm]	1450	1450	1450
Pump head	Double stage	Double stage	Single stage
Hose connections [mm]	10	10	10
IP code	IP20	IP20	IP20
Sound pressure level [dB]	50	55	60
Dimensions W x D x H [mm]	294×156×195	380×156×226	380×171×226
Weight [kg]	8.5	14.5	14.5
Power supply	220V/50Hz	220V/50Hz	220V/50Hz

A 60 Hz version is available.

Chemical-resistant diaphragm pump

Fast pumping speed

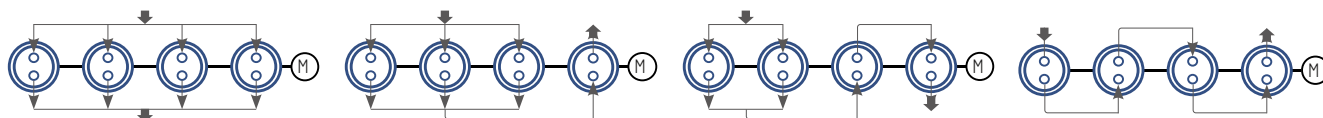
The C900 series Chemical-Resistant Diaphragm Pumps are specifically designed for handling aggressive gases and vapors.

Features

- > All wetted parts are made of chemical resistant materials
- > Fast pumping speed
- > Low noise
- > Overheat protection
- > Vacuum can be controlled by manual valve, vacuum controller
- > Easy and convenient for maintenance



The motor drives the pump head to vacuum



C900E with a single stage of pump head

C920Z with a double stage of pump head

C960T with a triple stage of pump head

C980V with a quadruple stage of pump head

Order No. :169311-06

Included vacuum trap, regulator and vacuum gauge

Set 1



Order No.: 169312-06

Included vacuum trap, regulator and digital meter DVM150C

Set 2



Order No. : 169314-06

Included vacuum trap, regulator, chemical resistant vacuum controller DVR480

Set 3



Model / Specifications	C900E	C920Z	C960T	C980V
Order No.	169900	169920	169960	169980
Flow rate [m ³ /h] at atm. pressure	5.7	4.5	3.6	2.4
Flow rate [L/min] at atm. pressure	95	75	60	40
Ultimate vacuum [mbar]	< 30	< 8	< 2	< 1
Power [W]	370	370	370	370
Motor speed [rpm]	1425	1425	1425	1425
Number of stages	Single stage	Double stage	Triple stage	Quadruple stage
Hose connection [mm]	10	10	10	10
IP code	IP20	IP20	IP20	IP20
Sound pressure level [dB]	50	50	50	50
Dimensions [W x D x H (mm)]	506×277×197	506×277×197	506×277×197	522×268×197
Weight [kg]	21.5	21.5	21.5	21.5
Power supply	220V/50Hz	220V/50Hz	220V/50Hz	220V/50Hz

Chemical-resistant diaphragm pump

Variable-frequency vacuum pump with high pumping speed

The Chemical-Resistant Diaphragm Pumps are specifically designed for handling aggressive gases and vapors.

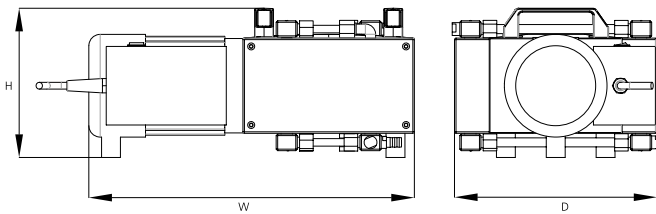
The variable-frequency pump must be connected to a variable-frequency controller to regulate the vacuum by adjusting the motor speed. This setup is particularly suitable for vacuum control in large-capacity systems, ensuring both faster pumping speeds and stable vacuum levels.

Features

- > All wetted parts are made of chemical resistant materials
- > Variable frequency motor for fast pumping speed
- > Low noise
- > Overheat protection
- > Vacuum can be controlled by manual valve, vacuum controller or variable frequency controller
- > Easy and convenient for maintenance

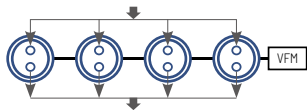


Variable-frequency vacuum pump without frequency controller

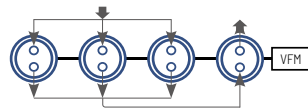


Variable-frequency vacuum pump with frequency controller

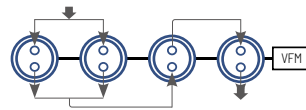
The motor drives the pump head to vacuum



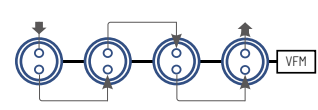
C900EF with variable frequency motor and single stage of pump head



C920ZF with variable frequency motor and double stage of pump head



C960TF with variable frequency motor and triple stage of pump head



C980VF with variable frequency motor and quadruple stage of pump head

Model / Specifications	C900EF	C920ZF	C960TF	C980VF
Order No. [w/o frequency controller]	169900B	169920B	169960B	169980B
Order No. [w/ frequency controller]	169901B	169921B	169961B	169981B
Flow rate [m ³ /h] at atm. pressure	5.7	4.5	3.6	2.4
Flow rate [L/min] at atm. pressure	95	75	60	40
Ultimate vacuum [mbar]	< 30	< 8	< 2	< 1
Power [W]	370	370	370	370
Motor speed [rpm]	0~1380	0~1380	0~1380	0~1380
Number of stages	Single stage	Double stage	Triple stage	Quadruple stage
Hose connection [mm]	10	10	10	10
IP code	IP20	IP20	IP20	IP20
Sound pressure level [dB]	50	50	50	50
Dimensions [W x D x H (mm)]	506×277×197	506×277×197	506×277×197	522×268×197
Weight [kg]	21.5	21.5	21.5	21.5
Power supply	200 - 240V, 50Hz	200 - 240V, 50Hz	200 - 240V, 50Hz	200 - 240V, 50Hz

60Hz version is available

Frequency Conversion Chemical Resistant Vacuum Systems

Integrated variable frequency controller

- > A new generation of intelligent vacuum technology features a modular design with integrated variable-frequency pumps and control units. Its compact and lightweight structure makes it highly efficient. The system adjusts the diaphragm pump's speed using a frequency conversion motor and controller, enabling more precise vacuum pressure control.
- > PID self-tuning for vacuum control, the controller automatically changes the PID value according to the artificial intelligence logic algorithm, accurately adjusting the motor speed and stabilizing the precise vacuum degree.
- > The systems in this series are suitable for handling corrosive gases in the chemical, pharmaceutical, petrochemical and other industries, such as extraction, vacuum distillation, rotary evaporator, vacuum concentration, centrifugal concentration, solid phase extraction and other uses.
- > All parts in contact with gas and condensate are made of high-quality PTFE. The gas chamber and drive chamber are separated and sealed to ensure a long life of the mechanical parts.
- > Overheat protection, automatic shutdown when the temperature is too high, and automatic start when it goes back to the normal temperature, to ensure the security and stability of the system.

Features

- > Vacuum stability, easy to control, high control precision
- > Excellent chemical and vapour resistance
- > In the high vacuum degree, the performance is still very good
- > Long life, simple and convenient for maintenance
- > Easy to operate with stable, long-term performance
- > Small structural size, energy conservation and environmental protection
- > High level of protection for motor, suitable for various environments

Application

- > Vacuum distillation for large volume
- > Large capacity reaction kettle
- > Large capacity vacuum filtration
- > Vacuum enrichment
- > Vacuum drying
- > Various applications in the semiconductor industry



Standard Configuration:

The vacuum system integrates a variable-frequency controller and also includes a vacuum trap, regulator, and vacuum gauge (Order No. 169311-06)

Model / Specifications	C900EEF	C920ZEF	C960TEF	C980VEF
Order No.	169900C	169920C	169960C	169980C
Pump flow rate [m ³ /h] at atm. pressure	5.7	4.5	3.6	2.4
Pump flow rate [L/min] at atm. pressure	95	75	60	40
Ultimate vacuum [mbar]	< 30	< 8	< 2	< 1
Vacuum setting range [mbar]	0.1-1000	0.1-1000	0.1-1000	0.1-1000
Power [W]	400	400	400	400
Motor speed [rpm] @50Hz	0-1380	0-1380	0-1380	0-1380
Number of stages	Single stage	Double stage	Triple stage	Quadruple stage
Hose connection [mm]	10	10	10	10
IP code	IP20	IP20	IP20	IP20
Sound pressure level [dB]	50	50	50	50
Dimensions [W x D x H (mm)]	224×493×498	224×493×498	224×493×498	224×493×498
Weight [kg]	21.5	21.5	21.5	21.5
Power supply	200 - 240V, 50Hz	200 - 240V, 50Hz	200 - 240V, 50Hz	200 - 240V, 50Hz

A 60 Hz version is available.

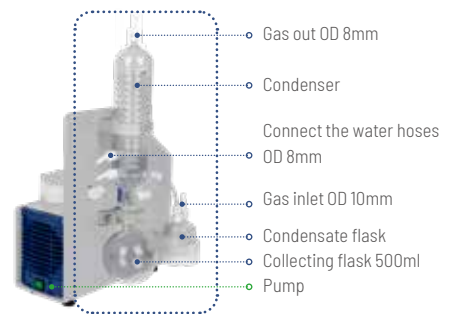
Vacuum Solvent Recovery System

This chemical vacuum system offers a wide range of applications, including evacuation, evaporation, and the handling of gases and vapors in chemical, biological, and pharmaceutical laboratories. It is particularly suited for high vacuum requirements involving high-boiling-point solvents. Typical applications include rotary evaporators and drying ovens.

The inlet separator, made of glass with a protective coating, effectively retains particles and liquid droplets, ensuring system efficiency and reliability. At the outlet, the waste vapor condenser is both highly efficient and compact. It enables effective solvent recycling and provides active environmental protection. Additionally, the system features exceptional chemical resistance and superior vapor tolerance.

Features

- > Sealed system to enable a good distillation environment
- > Precise control of the evaporation process
- > Compact and environmentally friendly design
- > Low noise
- > Buffer bottle prevents particles from damaging the pump



CSH System

The inlet of the CSH System is connected to a separation bottle to trap the solid particles and sticky fluid, while the outlet is connected to a condenser designed to condense and recover the solvent at atmospheric pressure.

Model	CSH410	CSH510	CSH520	CSH610
Power [W]	95	245	150	245
Ultimate Vacuum [mbar]	13	8	10	2
Pump max. Flow Rate [L/min]	25	34	50	34
Outlet Size [outer diameter in mm]	10	10	10	10
IP code	IP20	IP20	IP20	IP20
Dimensions [W x D x H (mm)]	341 x 255 x 545	341 x 255 x 545	341 x 255 x 545	341 x 255 x 545
Weight [kg]	12.5	15.8	17.1	16.6
Order No.	900512	900513	900515	900514



CSH System

Standard package includes the Chemical-Resistant Diaphragm Pump, separator, condenser

CSC System

The inlet of the CSC System is connected to a segregation flask, while the outlet is connected to a condenser that condenses and recovers solvents. Additionally, the system includes a vacuum controller to set, display, and regulate the vacuum.

This fully automated vacuum generation system features a chemical-resistant diaphragm vacuum pump, a base plate, a high-performance condenser, a segregation flask, a vacuum control device, and integrated valves.

Model	CSC410	CSC510	CSC520	CSC610
Power [W]	95	245	150	245
Ultimate Vacuum [mbar]	13	8	10	2
Pump max. Flow Rate [L/min]	25	34	50	34
Outlet Size [outer diameter in mm]	10	10	10	10
IP code	IP20	IP20	IP20	IP20
Dimensions [W x D x H (mm)]	304x280x517	363x288x516	396x338x535	359x304x524
Weight [kg]	16	19.3	20.6	20.1
Order No.	900522	900523	900525	900524



CSC System

Standard package includes the Chemical-Resistant Diaphragm Pump, vacuum controller, separator, condenser

CSP System

The inlet of the CSP System is connected to a segregation bottle, while the outlet is connected to a condenser designed to condense and recover solvents. Additionally, the system is equipped with a vacuum controller to set, monitor, and regulate the vacuum.

Model	CSP410	CSP510	CSP520	CSP610
Power [W]	95	245	150	245
Ultimate Vacuum [mbar]	13	8	10	2
Pump max. Flow Rate [L/min]	25	34	50	34
Outlet Size [outer diameter in mm]	10	10	10	10
IP code	IP20	IP20	IP20	IP20
Dimensions [W x D x H (mm)]	317 x 429 x 525	317 x 429 x 525	317 x 429 x 525	317 x 429 x 525
Weight [kg]	16	19.3	20.6	20.1
Order No.	900542	900543	900545	900544



CSP System
Standard package includes the Chemical-Resistant Diaphragm Pump, vacuum controller, separator, condenser

CSC Systems (Frequency conversion model)

A new generation of intelligent vacuum technology featuring a modular design with integrated variable-frequency pumps and control units, offering a compact and lightweight structure.

- > PID self-tuning for vacuum control, the controller automatically changes the PID value according to the artificial intelligence logic algorithm, accurately adjusting the motor speed to get the precise vacuum value.
- > All parts in contact with gas and condensate are made of high-quality PTFE. The gas chamber and drive chamber are separated and sealed to ensure a long life of the mechanical parts
- > It can be directly connected to the power supply and process system.
- > A recovery flask is installed at the air inlet to prevent solid particles and liquid water from entering the pump chamber.

Model	CSC900E	CSC920Z	CSC960T	CSC980V
Power [W]	400	400	400	400
Resolution [mbar]	0.1	0.1	0.1	0.1
Setting range [mbar]	0.1-1000	0.1-1000	0.1-1000	0.1-1000
Max. vacuum [mbar]	< 30	< 8	< 2	< 1
Pump max. Flow Rate [L/min]	95	75	60	40
Outlet [mm]	10	10	10	10
IP code	IP20	IP20	IP20	IP20
Dimensions [W x D x H (mm)]	334x380x568	334x380x568	334x380x568	334x380x568
Weight [kg]	25	25	25	25
Sound pressure level [dB]	50	50	50	50
Order No.	900532	900533	900534	900535



CSC System (Frequency conversion)
Standard package includes the Chemical-Resistant Diaphragm Pump, variable frequency controller, separator, condenser

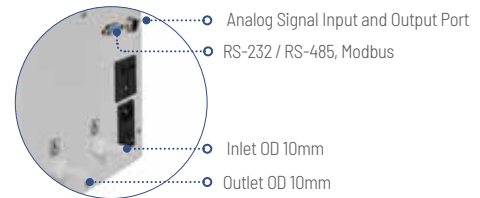
Chemical Resistant Vacuum Controller

- > Wide measurement and control range
- > Control the vacuum down to 0.1 mbar
- > Up to 5-step program control
- > All parts that come into contact with gases and vapors are made of PTFE or highly durable ceramic to ensure high chemical resistance
- > Bright LED display and convenient on-touch control
- > RS-232 and analog connection available
- > Pressure release feature for easy vacuum system installation
- > Direct electric control of the vacuum pump
- > Energy-saving and environmentally friendly
- > Suitable for continuous operation



DVR480

Model	DVR480	DVR480-Pro
Order No.	900414-1	900414-2
Voltage	100-240V, 50/60Hz	100-240V, 50/60Hz
Displayed Vacuum Accuracy [mbar]	0.1	0.1
Controllable Range [mbar]	0.1...1000	0.1...1000
Measurement Accuracy	0.25%F.S	0.1%F.S
Display	LED	LED
Control Mode	On-Touch	On-Touch
Timer / Program	Yes / Up to 5 Steps	Yes / Up to 5 Steps
Pressure Release Feature	Yes	Yes
Electrical Control of the Pump	Yes	Yes
Protection Category	IP40	IP40
Corrosion resistance	All parts that come into contact with gases are made of PTFE or highly durable ceramic to ensure the resistance to various acid, base, or organic solvent gases.	
Dimensions [W x D x H (mm)]	153x179x220	153x179x220

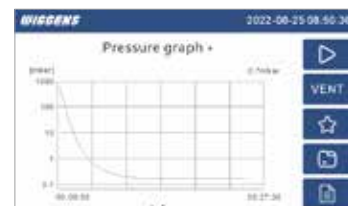


Chemical Resistant Vacuum Controller

Wiggins introduces the DVR580, a new-generation vacuum controller featuring innovative vacuum control technology. Designed for demanding vacuum applications, it simplifies the management of complex processes with precision and ease. The DVR580 is the ideal solution for laboratories requiring precise, reliable, and user-friendly vacuum control. Its advanced design and innovative technology make it perfect for a wide range of applications.

- > Continuously adjustable
- > Large, high-resolution TFT touch display with multilingual user interface
- > Parts being in contact with the medium made of chemical resistant material
- > Integrated programmer
- > USB connection
- > RS232 / RS485 interface for communication
- > Integrates two vacuum control modes, valve control and frequency-conversion control

Model	DVR580
Order No.	900580
Voltage	100-240V / 50Hz
Hose connections of inlet / outlet [mm]	OD 10
Displayed Vacuum Accuracy [mbar]	0.1
Controllable Range [mbar]	0.1-1010
Measurement Accuracy	0.25%F.S
Display	Touch screen
Control Mode	Turning knob
Timer / Program	Yes, Max. 6 steps
Pressure Release Feature	Continuous / intermittent pressure relief
Protection Category	IP40
Communication interfaces	RS232, RS485, USB
Corrosion resistance	All parts that come into contact with gases are made of PTFE or highly durable ceramic to ensure the resistance to various acid, base, or organic solvent gases.
Dimensions [W x D x H (mm)]	170x218x207



Accessories for Chemical-Resistant Diaphragm Pumps

General purpose valves

A range of plug valves for applications requiring pressure and temperature resistance, with a maximum operating pressure of 1 bar and a maximum vacuum of 7 mbar.

Note: Rapid changes in temperature in excess of 25 °C /min may cause these valves to leak due to the expansion properties of PTFE. It can be sterilized at 135 °C .

Straight Through Bayonet

Order No.	Outer Diameter [mm]	Inner Diameter [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
016.706.2	16	10



Straight Through Screw

Order No.	Outer Diameter [mm]	Inner Diameter [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]	Inner Diameter [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



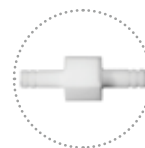
T-Shape Screw

Order No.	Outer Diameter [mm]	Inner Diameter [mm]
016.1302.6.2	6	2
016.1303.2	8	3
016.1304.2	8	4



Straight Through Connector

Order No.	Outer Diameter [mm]	Inner Diameter [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
016.907.2	16	10



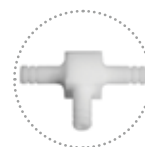
L-Shape Connector

Order No.	Outer Diameter [mm]	Inner Diameter [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
016.1006.2	16	10



T-Shape Connector

Order No.	Outer Diameter [mm]	Inner Diameter [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
016.1106.2	16	10



4-Way Connector

Order No.	Outer Diameter [mm]	Inner Diameter [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
016.1116.2	16	10



Accessories For Chemical-Resistant Diaphragm Pumps

PTFE Connector

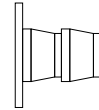
Order No.	Description
C410015	Barbed fitting for tubing 10 mm ID, M10x1, suitable for C300 / 400 / 500 / 600 / 900 series



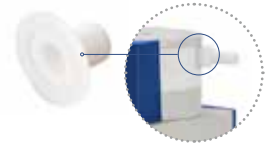
PTFE Connector with O-ring

Adapter

Order No.	Description
C410055	Barbed fitting for tubing 10 mm to KF25 adapter, suitable for C300 / 400 / 510 / 600 / 900 series
C410056	Barbed fitting for tubing 12 mm ID, KF25, suitable for C1200 / 2000 series
C410057	Barbed fitting for tubing 19 mm ID, KF25, suitable for C1200 / 2000 series
C410058	Barbed fitting for tubing 25 mm ID, KF25, suitable for C1200 / 2000 series



C410056

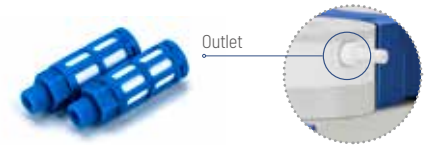


C410055

Silencer

Order No.	Description
C900E030	Suitable for Chemical-Resistant Diaphragm Pumps

Note: Use of a silencer will have a slight impact on the flow rate



Silencer

Diaphragm and Valve Plate Sets

Suitable for	diaphragm	valve plates	Number of pump heads *
C300	C410005	C510013	1
C400/410	C410005	C510013	2
C510/600/610/	C510011	C510013	2
C420	C2000005	C2000013	2
C520/602	C2000006	C2000013	2
C 900E/Z/T/V	C510011	C510013	4
C1200 E/Z/T/V	C2000005	C2000013	4
C2000 E/Z/T/V	C2000005	C2000013	8

*Notes. Replacement of consumables for one pump head requires replacement of one diaphragm and two valve plates



Diaphragm



Valve Plate

Diaphragm and valve plates set

Order No.	Description
410001	Diaphragm and valve plates set, 1 diaphragm and 2 valve plate, Suitable for C300/400/410
510001	Diaphragm and valve plates set, 1 diaphragm and 2 valve plates, Suitable for C500/510/600/610/900
1200001	Diaphragm and valve plates set, 1 diaphragm and 2 valve plate. Suitable for C402/420/520/602/1200/2000 series



Diaphragm and valve plates set

Tubing

Order No.	Outer Diameter, mm	Inner Diameter, mm	Thickness, mm	Length, m
PTFE Tubing				
016.1706.01	6	4	1	1
016.1708.01	8	6	1	1
016.1712.01	12	10	1	1
016.1714.01	14	12	1	1
016.1716.01	20	18	1	1
016.1718.01	28	25	1.5	1
Viton Tubing				
168000-01	12	6	3	1
168001-01	14	8	3	1
168002-01	16	10	3	1
168003-01	18	12	3	1
168004-01	25	19	3	1
168005-01	31	25	3	1
Length upon request (min. 1 m)				



PTFE Tubing

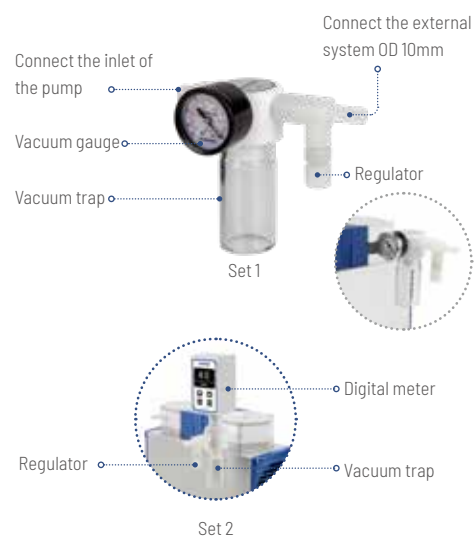


Viton Tubing

Chemical Resistant Vacuum Regulator / Filter Equipment

Order No.	Description
169311-06	Set 1 (Includes vacuum trap, regulator and vacuum gauge)
169312-06	Set 2 (Includes vacuum trap, regulator and digital meter DVM150C)
169313-06	Basic model without vacuum gauge, includes vacuum trap and regulator

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



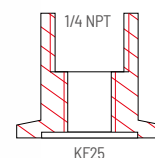
Digital Vacuum Meter

- > Designed for Chemical-Resistant Diaphragm Pumps
- > Compact design, flange connector, strong tightness
- > TFT high brightness screen, easy to read from multiple angles and at long distances
- > Can be directly connected to a vacuum pump via a flange connection

Models	DVM150C
Voltage	100-240V, 50/60Hz
Display screen	High brightness TFT
Display resolution	0.1 mbar
Testing range	0.1-1000 mbar
Material of sensor	Ceramic
Material for contact parts of the gas	PTFE and Ceramic
Connection	KF25 or 1/4NPT female
Dimensions [W x D x H (mm)]	72x65x141
Order No.	15060-01



DVM150C



KF25

Oil-free piston vacuum pump

The Chemvak V Series vacuum pump is a piston-powered, oil-free pump. It combines innovative electronic and mechanical technology with a user-friendly design concept, offering a compact, lightweight structure that is clean, maintenance-free, safe, and comfortable to use.

Features

No air pollution, maintenance-free

The Chemvak V Series pumps are piston-driven, requiring no lubrication or oil changes, ensuring maintenance-free operation and no risk of oil contamination.

Moisture trap with filter cartridge

The Chemvak V Series pumps are equipped with a filter cartridge at the air inlet to remove particles and moisture, effectively extending the pump's lifespan.

Oil-free

The oil-free piston vacuum pump provides continuous, reliable, high flow vacuum for your container.

Vacuum regulator

The Chemvak V Series pumps are equipped with a vacuum regulator to adjust vacuum.

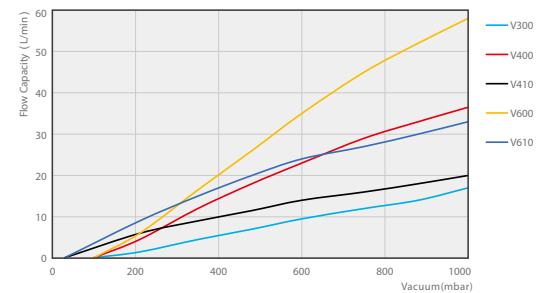
Thermal protection device

Each motor in the Chemvak V Series pumps features built-in thermal protection, which automatically shuts off the pump when it overheats and resumes operation once the temperature cools down.

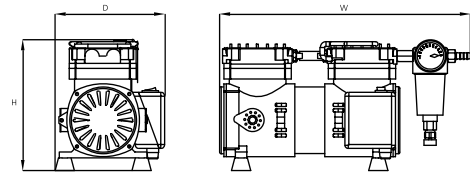
Application

- > Biology laboratories
- > Food industry
- > Microbiological detection
- > Vacuum extraction
- > Liquid filtration
- > Vacuum drying
- > Suspended solids measurement

Oil-Free Piston Vacuum Pumps flow curve



Note: Above data is based on the 220V/50Hz instrument



Model / Specifications	V300DC	V300	V400	V410	V600	V610	V800	V810
Order No.	167330	167300	167400	167410	167600	167610	167800	167810
Flow rate [m ³ /h] at atm. pressure	1.02	1.02	2.04	1.14	3.6	2.4	4.8	3
Flow rate [L/min] at atm. pressure	17	17	34	19	60	40	80	50
Ultimate vacuum [mbar]	150	100	100	30	120	30	100	30
Power [W]	35	60	80	80	190	210	220	220
Max. current [A]	3	0.3	0.4	0.4	1	1	1	1
Motor speed [rpm]	1450	1450	1450	1450	1450	1450	1450	1450
Hose connections OD [mm]	9	9	9	9	9	9	9	9
IP code	IP20	IP20	IP20	IP20	IP20	IP20	IP20	IP20
Sound pressure level [dB]	50	50	60	50	52	65	75	75
Dimensions [W x D x H (mm)]	294x120x171	274x120x167	308x140x167	308x140x167	350x170x197	350x170x197	336x170x197	336x170x197
Weight [kg]	4.4	4.4	5.4	5.4	8.6	8.6	8.6	8.6
Power supply	DC12	220V/50Hz	220V/50Hz	220V/50Hz	220V/50Hz	220V/50Hz	220V/50Hz	220V/50Hz

Oil-free Portable Vacuum/Pressure Pump

The vacuum/pressure dual-purpose pump is piston-driven and is equipped with independent vacuum and pressure gauges. The vacuum level and pressure can be easily adjusted through a control valve. It also features a filter to prevent liquid backflow into the pump body.

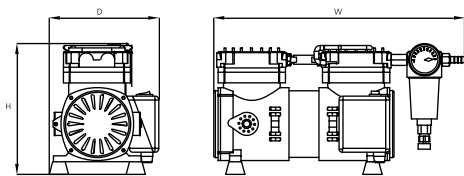
The pump is suitable for applications in various fields, including life sciences, environmental testing, and industrial production.

Features

- > Easy-to-adjust vacuum and pressure regulators with individual gauges
- > Includes traps and filter unit to protect pump
- > Thermal protection
- > Efficient and compact, saving space

Application

- > Vacuum adsorption/handling
- > Printing and packaging (paper adhesion, positioning)
- > Product inspection (leak testing)



Specifications

Model	V430
Order No.	167430
Flow rate [m ³ /h] at atm. pressure	1.68
Flow rate [L/min] at atm. pressure	28
Ultimate vacuum / pressure [mbar]	150/5500
Power [W]	125
Max. current [A]	0.6
Motor speed [rpm]	1450
Hose connections OD [mm]	9
IP code	IP20
Sound pressure level [dB]	50
Dimensions [W x D x H (mm)]	247x235x200
Weight [kg]	5.5
Power supply	220 V / 50 Hz

Accessories for Oil-Free Piston Pumps

Connector

Replace the inlet port on the pump

Description	Suitable for	Order No.
Connectors		
Outlet Diameter 9.5 mm	Oil-Free Piston Pumps	167300-20
Outlet Diameter 8 mm	Oil-Free Piston Pumps	167300-21
Outlet Diameter 6.4 mm	Oil-Free Piston Pumps	167300-26
Outlet Diameter 4.8 mm	Oil-Free Piston Pumps	167300-23
Outlet Diameter 3.2 mm	Oil-Free Piston Pumps	167300-24
L-Shape Connector		
Outlet Diameter 8 mm	Oil-Free Piston Pumps	167300-25
Quick Connection Outlet		
Outlet Diameter 12 mm	Oil-Free Piston Pumps	168100-12
Outlet Diameter 10 mm	Oil-Free Piston Pumps	168100-10
Outlet Diameter 8 mm	Oil-Free Piston Pumps	168100-08
Outlet Diameter 6 mm	Oil-Free Piston Pumps	168100-06
Outlet Diameter 4 mm	Oil-Free Piston Pumps	168100-04



Silencer

Replace the outlet silencer on the pump

Description	Suitable for	Order No.
Silencer	V300/400/410/V430	167300-42
Silencer	V600/610/V800/V810	167600-42



Tubing

Outer Diameter mm	Inner Diameter mm	Thickness mm	Length m	Suitable for	Order No.
PER Tubes					
6	4	1	1	A,C,V Pumps	168010-01
8	6	1	1	A,C,V Pumps	168011-01
10	8	1	1	A,C,V Pumps	168012-01
12	10	1	1	A,C,V Pumps	168013-01
Silicon Tubes					
12	6	3	1	V Pumps	168020-01
14	8	3	1	V Pumps	168021-01
16	10	3	1	V Pumps	168022-01

Length upon request (min. 1 m)



Foot switch

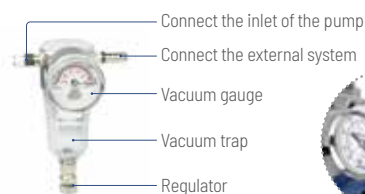
Description	Suitable for	Order No.
Foot switch*	Applicable to C and V Series Vacuum Pumps	167200-41

*Factory installation



Non-Chemical-Resistant Filtration Device

Description	Suitable for	Order No.
Non-Chemical-Resistant Filtration Device Set 1 (including pressure gauge)	V300/400/410/V430	167300-05
Non-Chemical-Resistant Filtration Device Set 1 (including pressure gauge)	V600/610	167300-06
Non-Chemical-Resistant Filtration Device Set 1 (including pressure gauge)	V800/V810	167300-09



167300-05/06



167300-09

Rotary Vane Vacuum Pump

Oil-sealed rotary vane vacuum pumps are widely used in research and production, which can be used independently, they can be used independently or as backing pumps for molecular pumps or diffusion pumps. WIGGENS direct-driven rotary vane pumps are available as one and two-stage versions, covering the range from desktop lab pumps to production line pumps, featuring low noise, stable operating temperature under common voltages and frequencies, and a long service life. Various application areas may include vacuum distillation, vacuum filtration, vacuum testing, vacuum freeze drying, vacuum coating, vacuum leak detection, vacuum packaging, vacuum adsorption, etc.



R-4SN



R-8SN



R-16SN



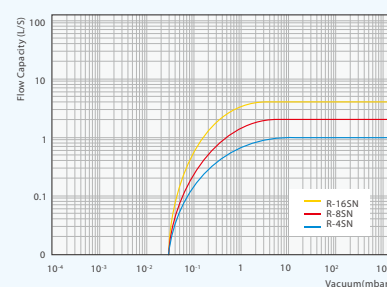
Oil level indication



Connector and adapter



Pumping rate curve



Note: The above data is based on a 220 V / 50 Hz unit

Model / Specifications	R-4SN	R-8SN	R-16SN
Order No.	900101*	900102*	900104**
Flow rate [m ³ /h] at atm. pressure	3	7.2	14.4
Flow rate [L/min] at atm. pressure	50	120	240
Ultimate vacuum [mbar]	2.5 x10 ⁻²	2.5 x10 ⁻²	2.5 x10 ⁻²
Power [W]	180	250	550
Motor speed [rpm]	1400	1400	1400
Inlet connection	SAE 3/8" / UNF 7/16-20	SAE 3/8" / UNF 7/16-20	DN25KF
Outlet connection	DN25KF	DN25KF	DN25KF
Oil filling volume [L]	0.25	0.33	1
IP code	IP20	IP20	IP20
Sound pressure level [dB]	54	54	54
Dimensions [W x D x H (mm)]	314x280x122	314x288x142	512x300x158
Weight [kg]	9	11	22
Power supply	220 V / 50 Hz	220 V / 50 Hz	220V/50Hz

*Standard package includes the pump only. Pump oil must be purchased separately

**Standard package includes the pump, a barbed fitting adapter for tubing ID 12 mm, and two KF25 flange clamps with sealing rings. Pump oil must be purchased separately



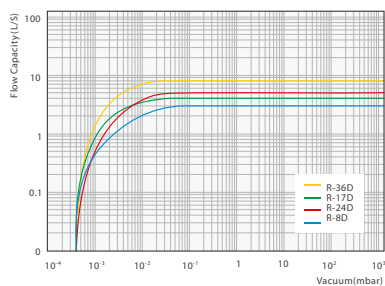
Features

- > Compact structure
- > Very good sealing
- > No backflow
- > Prevents oil spillage
- > Low noise
- > Oil inspection window
- > Handle for easy transportation
- > Long service life
- > Low and stable ultimate vacuum
- > High evaporation resistance
- > Comparatively high chemical resistance
- > High longevity
- > Low maintenance requirements
- > Low oil mist
- > Gas ballast valve
- > Overcurrent protection

Application

- > Vacuum distillation
- > Vacuum filtration
- > Vacuum testing
- > Vacuum freeze drying
- > Vacuum coating
- > Leak detection
- > Vacuum packaging
- > Vacuum adsorption
- > As a backing pump for turbo-molecular pumps or diffusion pumps

Pumping rate curve



Note: Above data is based on the 220V/50Hz instrument

Model / Specifications	R-8D	R-17D	R-24D	R-36D
Order No.	900111	900112	900025	900035
Flow rate [m ³ /h] at atm. pressure	10.8	16.8	21.6	32.4
Flow rate [L/min] at atm. pressure	180	280	360	540
Ultimate vacuum [mbar]	4.0 x 10 ⁻⁴	4.0 x 10 ⁻⁴	4.0 x 10 ⁻⁴	4.0 x 10 ⁻⁴
Power [W]	550	750	750	1100
Motor speed [rpm]	1400	1400	1400	1400
Hose connections of inlet	DN25KF	DN25KF	DN25KF	DN25KF
Hose connections of outlet	DN25KF	DN25KF	DN25KF	DN25KF
Oil filling volume [L]	1.1	1.4	1.9	2.1
IP code	IP20	IP20	IP20	IP20
Sound pressure level [dB]	54	54	56	56
Dimensions [W x D x H (mm)]	485 x 252 x 165	510 x 252 x 165	570 x 288 x 205	600 x 288 x 205
Weight [kg]	29	31	37	39
Power supply	220V/50Hz	220V/50Hz	220V/50Hz	220V/50Hz

Standard package includes the pump, a barbed fitting adapter for tubing ID 12 mm, and two KF25 flange clamps with sealing rings. Pump oil must be purchased separately.

Chemical Hybrid Vacuum Pump

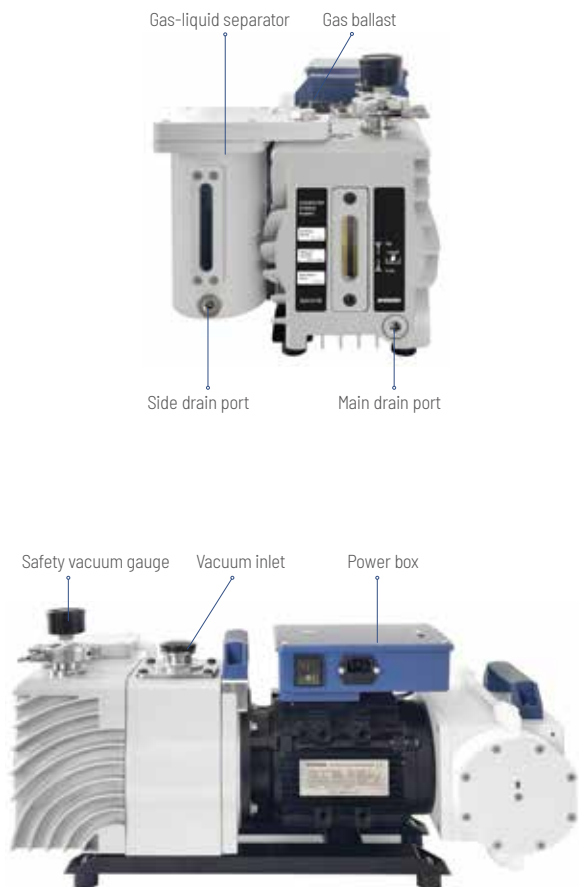
The Wiggins chemical hybrid vacuum pump is an optimized, corrosion-resistant combination of a two-stage rotary vane pump and a chemistry diaphragm pump. The diaphragm pump continuously maintains the oil reservoir of the rotary vane pump under vacuum, preventing condensation in the oil-sealed components under defined pressure and temperature conditions. This design significantly reduces oxidation and the condensation of corrosive gases, thereby extending the overall service life of the pump while retaining the high vacuum performance characteristic of rotary vane pumps.

The chemical hybrid vacuum pump is ideal for high-vacuum applications involving chemical reagents. Typical applications include lyophilization, distillation, vacuum drying ovens, and concentrators.

Features

- > High vacuum and chemical-resistant design
- > Integrated gas-liquid separator to collect oil mist condensation
- > Sight glass for easy monitoring of oil level and quality
- > The cost-effective design may eliminate the need for a separate cold trap in certain applications
- > KF25 vacuum inlet with multiple adapter options
- > Integrated safety vacuum gauge for real-time oil chamber monitoring
- > Available accessories: vacuum tubes, adapters, valves, and digital vacuum meter

Structure Overview



Model / Specifications	Hybrid-6D	Hybrid-8D
Order No.	W1062010	W1062020
Pump head	2 + 2	2 + 2
Flow rate [m ³ /h] at atm. pressure	4.5	10.8
Flow rate [L/min] at atm. pressure	75	180
Ultimate vacuum [mbar]	4 x 10 ⁻⁴	4 x 10 ⁻⁴
Ultimate vacuum with gas ballast [mbar]	4 x 10 ⁻²	4 x 10 ⁻²
Water vapor tolerance with gas ballast [mbar]	50	50
Oil filling volume [L]	0.65-0.85	0.65-0.9
Max. outlet pressure [bar]	1.1	1.1
Inlet connection	KF DN 25	KF DN 25
Outlet connection [mm]	12	12
Power [kW]	0.55	0.75
Motor speed [rpm]	1400	1400
IP code	IP 40	IP 40
Dimensions [W x D x H (mm)]	599 x 307 x 305	678 x 311 x 295
Weight [kg]	37.5	45.5
Sound pressure level [dB]	55	60
Power supply	AC230V 50Hz	AC230V 50Hz

Standard includes the pump, adapter barbed fitting for tubing ID 12mm, one KF25 flange clamp with sealing rings, one vacuum gauge. Pump oil must be purchased separately

Accessories for Rotary Vane Vacuum Pumps

Oil Mist Filter

The gas discharged from the outlet often contains oil mist, which can affect the surrounding environment and may also pose potential health risks. ChemVak's exhaust filter effectively captures nearly all oil mist, redirecting it back into the pump to minimize environmental impact. Additionally, it helps to reduce operational noise for a quieter working environment.

Name	Suitable for	Order No.
Oil mist trap	R-4SN, R-8SN (Direct connection, outlet DN25KF)	900101-1
Oil mist trap	R-16SN, R-8D, R-17D, R-24D, R-36D (Direct connection, outlet DN25KF)	900111-1

Condensate Separator, Dust Filter

Name	Suitable for	Order No.
Filter element for oil mist trap	Replacement for 900111-1 oil mist trap	900111-2
Dust Filter	R-16SN, R-8D, R-17D, R-24D, R-36D	900111-4

Adapter

Name	Description	Order No.
Adapter	Barbed fitting for tubing ID 8 mm, 3/8 SAE. Suitable for R-4SN / R-8SN	168900-82
Adapter	Barbed fitting for tubing ID 10 mm, 3/8 SAE. Suitable for R-4SN / R-8SN	168900-83
Adapter	Barbed fitting for tubing ID 12 mm, 3/8 SAE. Suitable for R-4SN / R-8SN	168900-84

Flange adapter

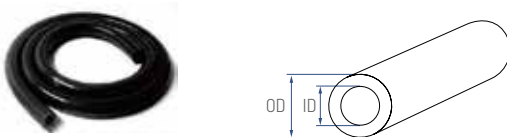
Name	Description	Order No.
Flange adapter	Barbed fitting for tubing ID 8 mm, KF25. Suitable for R-16SN, R-8D, R-17D, R-24D, R-36D	168900-08
Flange adapter	Barbed fitting for tubing ID 10 mm, KF25. Suitable for R-16SN, R-8D, R-17D, R-24D, R-36D	168900-10
Flange adapter	Barbed fitting for tubing ID 12 mm, KF25. Suitable for R-16SN, R-8D, R-17D, R-24D, R-36D	168900-12
Flange adapter	Barbed fitting for tubing ID 19 mm, KF25. Suitable for R-16SN, R-8D, R-17D, R-24D, R-36D	168900-19
Flange adapter	Barbed fitting for tubing ID 25 mm, KF25. Suitable for R-16SN, R-8D, R-17D, R-24D, R-36D	168900-25

Adapter

No.	Description	Order No.
①	Connector, KF16 to KF25, suitable for R-16SN, R-8D, R-17D, R-24D, R-36D	DVM150BJFL001
②	Connector, KF16 to threaded fitting, suitable for R-4SN, R-8SN	DVM150BJFL002
③	KF16 flange clamp, with sealing ring	BJFL003
④	KF25 flange clamp, with sealing ring	BJFL004

Thick Vacuum Tubing

Thick rubber tubing designed for high-vacuum applications, offering excellent durability, flexibility, and airtight performance to ensure reliable operation under extreme conditions.



Inner Diameter (mm)	Thickness (mm)	Length (m)	Order No.
8	5	1	22690-06
10	9.5	1	22690-11
12	9.5	1	22690-13
19	9.5	1	22690-21
25	9.5	1	22690-26

Digital Vacuum Meter

- > Designed for rotary vane pumps
- > Compact design with flange connection, ensuring strong sealing performance
- > High-brightness TFT screen for easy viewing from multiple angles and at long distances
- > Direct flange connection to vacuum pumps, with stainless steel materials for gas-contacting parts
- > Standard KF16 connection



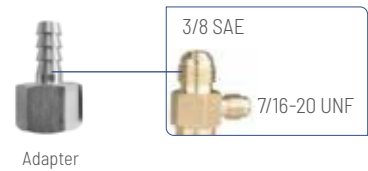
Model	Display resolution	Testing range	Material of sensor	Dimensions [W x D x H (mm)]	Order No.
DVM150Pro	0.001 mbar	0.001-9.999 mbar	PIRANI	100x65x55	15060-02



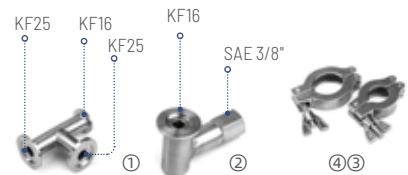
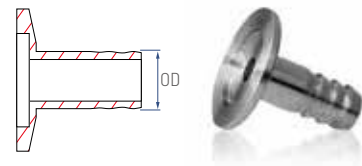
900111-1 900101-1



Dust Filter



Adapter



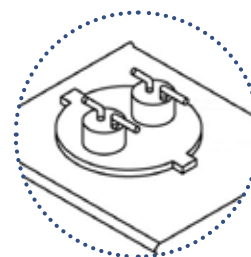
Cold Trap with Refrigerated System

Cold traps are designed to capture condensation from humidity or solvents by providing a low-temperature surface where vapors condense into liquids or solids. Commonly used alongside vacuum pumps, they play a critical role in protecting pumps and maintaining system integrity.

These devices are essential in applications involving vacuum distillation, freeze-drying, and volatile compound separation. They are particularly effective in high-vacuum setups, such as those using oil diffusion or turbo-molecular pumps, where they prevent contamination and reduce pump load. Cold traps are also widely employed in systems with rotating evaporators to efficiently collect solvent vapors.

Features

- > Compact design with a small footprint
- > State-of-the-art control technology for fast and precise results
- > User-friendly and intuitive operation
- > Extra-bright display, easy to read from a distance
- > Removable venting grid for quick and easy cleaning
- > Two glass cold traps can be configured in series or parallel



Bath lid

Additional advantages of CTB-40C

Protective functions, adjustable high temperature cut-off or dry-running protection

With just three keys, the CTB-40C allows for easy temperature settings.



Specifications

Model	CTB-40	CTB-40C
Working temperature	-40 °C	-40 °C ~+20 °C
Temperature display resolution	0.1 °C	0.1 °C
Temperature control mode	Without control	PID control
Bath volume	4.8 L	4.8 L
Dimensions [W x D x H (mm)]	340x446x562	340x446x561
Power supply	220V/50Hz, 3A	220V/50Hz, 3A
Tube connection	Barbed fittings for tubing 10mm inner dia	Barbed fittings for tubing 10mm inner dia

Standard includes the refrigerator, two glass cold traps

Optional natural refrigerant version available

For ordering, please add "N" after the ordering number

Order Information

Order No.	Part	Description
W8603040	CTB-40	Refrigerated system with cold trap, without temperature control
W8603041	CTB-40C	Refrigerated system with cold trap, with temperature control
W01110	Glass cold trap	Borosilicate glass material, 2 each barbed fittings for tubing 10mm inner dia

Electrical aspirator pump

Portable dual-channel, water-jet aspirator pump.

VE-11 creates a vacuum using an aspirator pump that is dependent on the vapor pressure of water. Ideal for rotary vacuum evaporators, decompressing distillatories, vacuum dryers, and vacuum filtering units.

Features

- > Economic use of resources
- > Vacuum can be regulated between 20 mmHg and 74 mmHg
- > Employs two water flow and gas suction devices, a check valve, and an upstream prevention device
- > Housing is made of PP to enhance longevity
- > Small amounts of liquid in the machine don't harm the system. Built-in circulating pump and water tank makes this unit portable and eliminates water waste.
- > Circulating pump continuously forces water quietly across a set of aspirators, and therefore clean and efficient.
- > Included (2) metal aspirators to create a vacuum with a built-in check valve to prevent backflow of water into the aspirator pump.
- > Submerged parts: 304 stainless steel, polypropylene silicone, and nickel-coated brass.
- > Tank features a drain port and spigot for easy water changes.
- > Unlike other vacuum pumps the VE-11 can suck a little bit of solvent. (water)

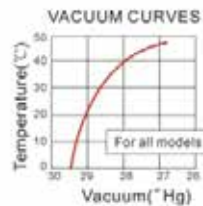


VE-11

Vacuum gauge / regulator are optional

Standard

- > Tank / Aspirating pump / Tank closure.
- > Two aspirators.
- > Two ø6mm (0.02") silicone rubber tube 20cm (0.7 ft) in length and an additional ø6mm (0.02") silicone rubber tube 100cm (3.3 ft) in length.



Specifications & Ordering Information

Model	VE-11	
Max. Flow Rate	36 L/min (18 L/min*2)	
Water Tank Capacity [L]	9.5	
Ultimate vacuum [mbar]	100	
Motor Power [W]	150	
Material (Water Tank)	Polypropylene	
Dimensions	Water Tank [W x D x H (mm)]	298 x 210 x 227
	Case [W x D x H (mm)]	330 x 265 x 390
	Absorption nozzle [mm]	Ø9.5 x 2
	Overflow nozzle [mm]	Ø17
Safety Devices	Fuse, check valve, overheat protection	
IP code	IP20	
Weight [kg]	5.7	
Order No.	900701	

Optional Accessories

- > Vacuum gauge / regulator: to monitor and control the vacuum pressure. (between 0.0267~0.0998MPa / 7.9~29.5" Hg)
- > Cooling coil: to prevent vacuum from decreasing due to temperature increase.

Accessories

Description	Order No.
Vacuum Gauge / Regulator	900701-1
VC-10 Cooling Coil	900701-2

Application Area

- > Filtration
- > Distillation
- > Rotary evaporation



Vacuum Gauge / Regulator (Option)



VC-10 Cooling Coil



Vacuum Filtration

Single position vacuum filtration system

Bench-top vacuum filtration system



Vacuum pump and filtration sets



Multi-position vacuum filtration system

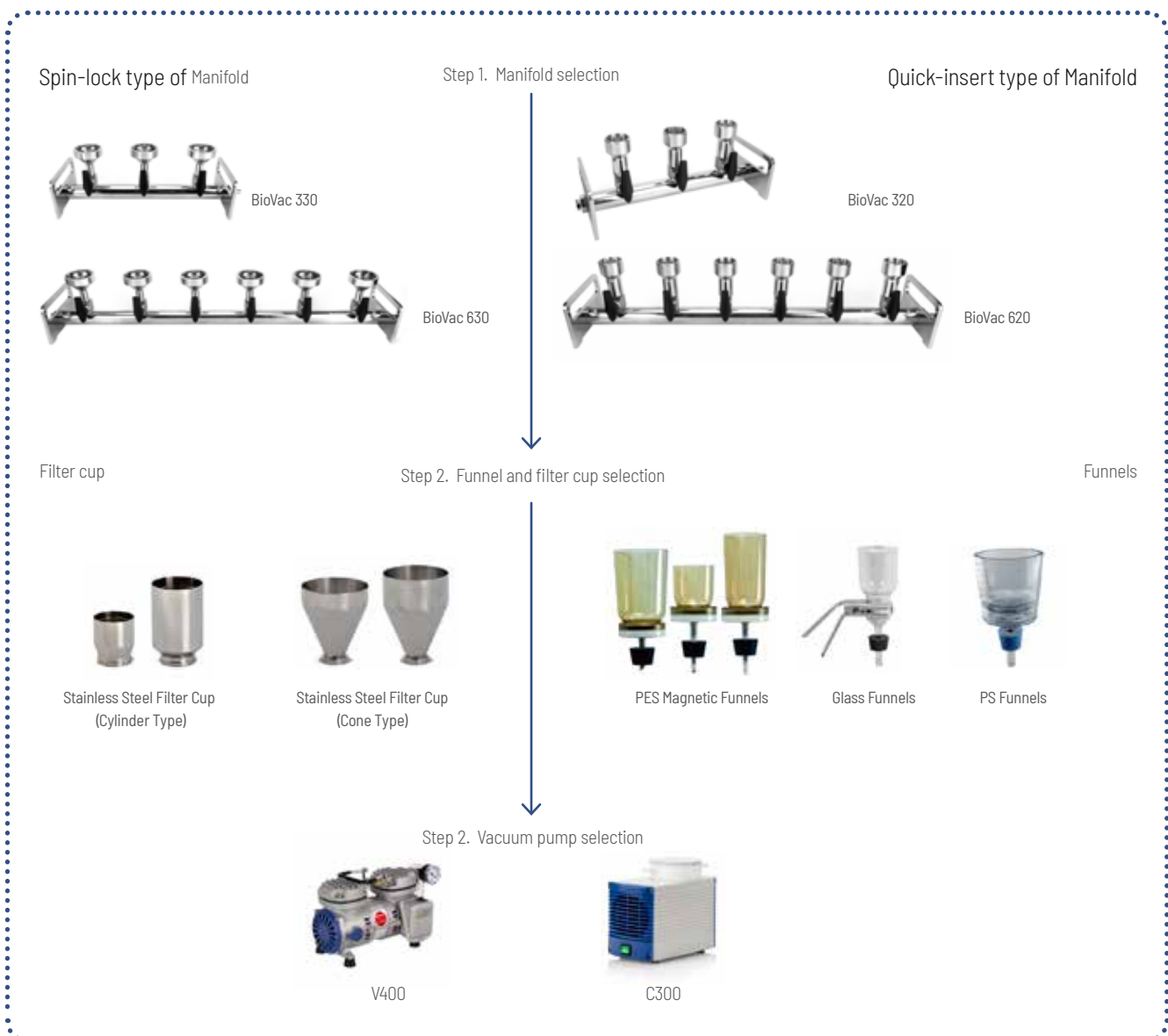
Spin-lock type



Quick-insert type



Vacuum pump and filtration sets



Bench-top vacuum filtration system

Features

- > Wide range of pumps and filtration flasks
- > High quality components
- > Quick filtration results
- > Easily exchangeable elements

Application

- > Suspended solids measurement
- > HPLC
- > Gas chromatography
- > AA micro-analysis
- > Mobile phase decontamination
- > Food and beverages industry
- > Pharma industry



V300A



V300B



V300SS



C300A

Product	Features	Standard content	Application
V300A	<ul style="list-style-type: none"> > Modular design > Environmentally friendly > Maintenance-free > Low noise > Additional filters for extended pump life 	<ul style="list-style-type: none"> > Oil-free vacuum pump > VF6 filtration flask set > Silicone tube > Fiberglass filter membranes (47mm / 1 µm) > PTFE disc filter 	<ul style="list-style-type: none"> Water quality measurement Normal liquid filtration
V300B	<ul style="list-style-type: none"> > Modular design > Magnetic Stability Cup > Environmentally friendly > Maintenance-free > Low noise > Additional filters for extended pump life 	<ul style="list-style-type: none"> > Oil-free vacuum pump > VF1 magnetic filtration flask set > Silicone tube > Fiberglass filter membranes (47mm / 1 µm) > PTFE disc filter 	<ul style="list-style-type: none"> Suspended solids measurement Normal liquid filtration
V300SS	<ul style="list-style-type: none"> > Modular design > Flame-sterilizable > Spin-Lock system > Environmentally friendly > Maintenance-free > Low noise > Additional filters for extended pump life 	<ul style="list-style-type: none"> > Oil-free vacuum pump > VF2 filtration flask set > Dragon 100 lab burner > Silicone tube > Fiberglass filter membranes (47mm / 1 µm) > PTFE disc filter 	<ul style="list-style-type: none"> Microbiological detection All kinds of liquid filtration
C300A	<ul style="list-style-type: none"> > Chemical-resistant design > Modular design > Environmentally friendly > Low maintenance > Low noise > Additional filters for extended pump life 	<ul style="list-style-type: none"> > Chemical resistant vacuum pump > VF3 filtration flask set > High-pressure resistant tube > PTFE disc filter 	<ul style="list-style-type: none"> Sample pretreatment for HPLC, GC, and AA analysis Purification of various solvents (mobile phases)

Specifications

Model	V300A	V300B	V300SS	C300A
Pump Flow Rate [L/min]	17	17	17	22
Ultimate Vacuum [mbar]	150	150	150	210
Filtration Glass Set	VF6	VF1	VF2	VF3
Suction Bottle Capacity [mL]	1000	1000	1000	1000
Filter Diameter [mm]	47/50	47/50	47/50	47/50
Filter Flask Capacity [mL]	300	300	100	300
Filter Flask Material	(Glass Filter Cup)	(Magnetic Filter Cup)	(Stainless Steel Filter Cup)	(Glass Filter Cup)
Effective Filtration Area [cm ²]	8	9.6	9.6	8
Tube I.D. [mm]	8	8	8	8
Order No.	167301	167302	167303	169301

Filtration set

- > Vacuum filtration technique is widely used in liquid filtration in microbiological detection, suspended solid detection, sample pre-process or solvent purification, mostly for microanalysis of HPLC, GC, or AA in food, medicine, beverage, drinking water, etc.
- > This unique design combines a filtration funnel with a receiver flask with drain, together with magnetic weighted base, guaranteeing the efficiency and stability.

Model	VF1	VF2	VF3	VF5	VF6	VF7	VF8
Funnel	PES	SUS316	Borosilicate Glass	Borosilicate Glass	Borosilicate Glass	Borosilicate Glass	Borosilicate Glass
Funnel Base	PES	SUS316	Borosilicate Glass	Borosilicate Glass	Borosilicate Glass	Borosilicate Glass	Borosilicate Glass
Material							
Membrane Support	PP	SUS316	Borosilicate Glass	Borosilicate Glass	Borosilicate Glass	Stainless Steel Micro-Strainer	Stainless Steel Micro-Strainer
Stopper	Silicon	Silicon	—	Silicon	Silicon	Silicon	Silicon
Receiver Flask with Drain	Borosilicate Glass	Borosilicate Glass	Borosilicate Glass	Borosilicate Glass	Borosilicate Glass	Borosilicate Glass	Borosilicate Glass
Funnel Capacity [mL]	300	100	250	15	250	250	15
Filtration Flask Capacity [mL]	1000	1000	1000	125	1000	1000	125
Filter Diameter [mm]	47	47	47	25	47	47	25
Effective Filtration Area [cm ²]	9.6	9.6	8	2.2	8	8	2.2
Tube I.D. [mm]	8	8	8	8	8	8	8





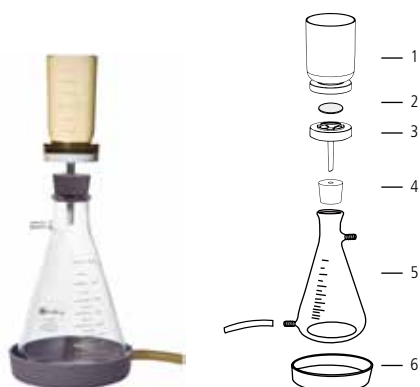
Model	VF9	VF10	VF11	VF12	VF30	VF32	VF33
Funnel	SUS316	Borosilicate Glass	SUS316	Borosilicate Glass	PES	SUS316	SUS316
Funnel Base	SUS316	Borosilicate Glass	SUS316	Borosilicate Glass	PES	SUS316	SUS316
Membrane Support	SUS316	Borosilicate Glass	SUS316	Borosilicate Glass	PP	SUS316	SUS316
Stopper	Silicon	—	Silicon	Silicon	Silicon	Silicon	Silicon
Receiver Flask with Drain	Borosilicate Glass	Borosilicate Glass	Borosilicate Glass	Borosilicate Glass	Borosilicate Glass	Borosilicate Glass	Borosilicate Glass
Funnel Capacity [mL]	300	1000	500	250	300	100	300
Filtration Flask Capacity [mL]	1000	4000	2000	1000	1000	1000	1000
Filter Diameter [mm]	47	47	47	47	47	47	47
Effective Filtration Area [cm ²]	9.6	9.6	9.6	9.6	9.6	9.6	9.6
Tube I.D. [mm]	8	8	8	8	8	8	8

Order Information

300ml Magnetic Filtration set

47mm, PP membrane support

For solvent purification, general filtration and waste inhalation



VF1

167200-01

Magnetic filter funnel 300 ml (1+2+3+4)	167100-18
1 300 ml Magnetic filter cup	167000-34
2 PP Membrane support	167000-37
3 PES Filtration base	167000-35
4 Silicone stopper	167110-17
5 Receiver flask with drain, 1000 ml	167300-08
6 Weighted base	167200-04

100ml Stainless Steel Filtration Set

47mm, Stainless steel membrane support

For filtration requiring the sterilization such as microbiology test or use for purification of corrosive liquid, solvent etc.



VF2

167200-02

100ml Stainless steel filter set (1+2+3+4)	167103-10
1 Stainless steel funnel, 100 ml	167103-61
2 Stainless steel support screen	167100-31
3 Stainless steel support base	167103-60
4 Silicone stopper	167110-17
5 Receiver flask with drain, 1000 ml	167300-08
6 Weighted base	167200-04

300ml Stainless Steel Filtration Set

47mm, Stainless steel membrane support

For filtration requiring the sterilization such as microbiology test or use for purification of corrosive liquid, solvent etc.



VF9	167200-09
300ml Stainless steel filter set (1+2+3+4)	167103-30
1 Stainless steel funnel, 300 ml	167103-63
2 Stainless steel membrane support	167100-31
3 Stainless steel support base	167103-60
4 Silicone stopper	167110-17
5 Receiver flask with drain, 1000 ml	167300-08
6 Weighted base	167200-04

500ml Stainless Steel Filtration Set

47mm, Stainless steel membrane support

For filtration requiring the sterilization such as microbiology test or use for purification of corrosive liquid, solvent etc.

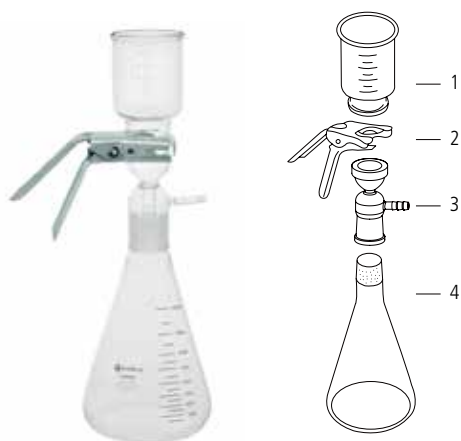


VF11	167200-11
500ml Stainless steel filter set (1+2+3+4)	167103-50
1 Stainless steel funnel, 500 ml	167103-65
2 Stainless steel membrane support	167100-31
3 Stainless steel support base	167103-60
4 Silicone stopper	167110-17
5 Receiver flask with drain, 2000 ml	167200-13

250ml Glass Filtration Set

47mm, Sintered glass membrane support

Ideal for the purification of organic, corrosive liquid such as solvent (mobile phase) for HPLC analysis.

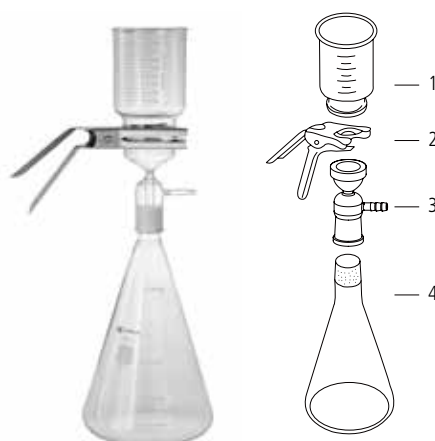


VF3	167200-03
250ml Glass filter set (1+2+3)	167120-30
1 Glass funnel, 250 ml	167210-03
2 Aluminum magnesium alloy clamp	167240-01
3 Glass support base & tubulated cap	167230-01
4 Ground joint flask, 1000 ml	167250-01

1000ml Glass Filtration Set

47mm, Sintered glass membrane support

Ideal for the purification of organic, corrosive liquid such as solvent (mobile phase) for HPLC analysis.



VF10	167200-10
1000ml Glass filter set (1+2+3)	167210-35
1 Glass funnel, 1000 ml	167210-10
2 Anodized aluminum clamp	167240-01
3 Glass support base & tubulated cap	167230-01
4 Ground joint flask, 4000 ml	167250-06

15ml Small Volume Glass Filtration Set

25mm, Sintered glass membrane support

Ideal for small volume vacuum filtration for biological analysis or particulate contamination analysis.



VF5	167200-05
15 ml Glass filter set (1+2+3+4)	167120-32
1 Glass funnel, 15 ml	167220-15
2 Anodized aluminum clamp	167240-05
3 Glass support base	167230-04
4 Silicone stopper	167110-18
5 125 ml Receiver flask	167250-05

15ml Small Volume Glass Filtration Set

25mm, Stainless steel membrane support

Ideal for small volume vacuum filtration for biological analysis or particulate contamination analysis.

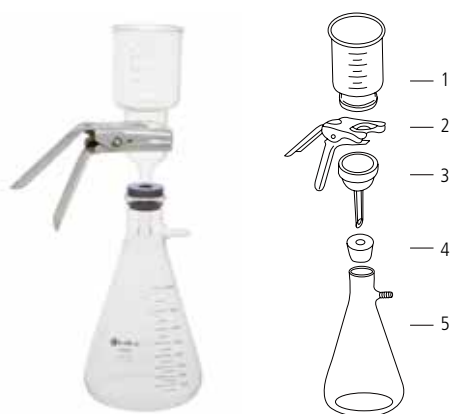


VF8	167200-08
15 ml Glass filter set (1+2+3+4+5)	167120-40
1 Glass funnel, 15 ml	167220-15
2 Anodized aluminum clamp	167240-05
3 Stainless steel support screen	167230-32
4 Glass support base	167230-08
5 Silicone stopper	167110-18
6 125 ml Receiver flask	167250-05

250ml Glass Filtration Set

47mm, Sintered glass membrane support

Ideal for solvent purification and general filtration for microbiology, suspended solid analysis etc.



VF6	167200-06
250ml Glass filter set (1+2+3+4)	167120-31
1 Glass funnel, 250 ml	167210-03
2 Anodized aluminum clamp	167240-01
3 Glass support base	167230-03
4 Silicon stopper	167110-17
5 Receiver flask, 1000 ml	167250-03

250ml Glass Filtration Set

47mm, Stainless steel membrane support

Ideal for solvent purification and general filtration for microbiology, suspended solid analysis etc.

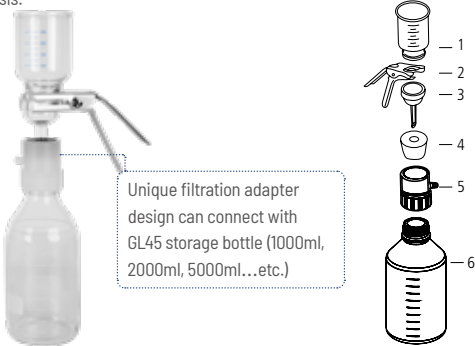


VF7	167200-07
250ml Glass filter set (1+2+3+4+5)	167120-33
1 250 ml Glass Filter Cup	167210-03
2 Anodized aluminum clamp	167240-01
3 Stainless steel support screen	167230-31
4 Glass support base	167230-07
5 Silicon stopper	167110-17
6 Receiver flask, 1000 ml	167250-03

250ml Glass Filtration Set

47mm, Sintered glass membrane support

Ideal for the purification of organic, corrosive liquid such as solvent (mobile phase) for HPLC analysis.



VF12	167200-12
250ml Glass filter set (1+2+3+4)	167120-31
1 Glass funnel, 250 ml	167210-03
2 Anodized aluminum clamp	167240-01
3 Glass support base	167230-03
4 Silicone stopper	167110-16
5 Filtration adapter	167000-65
6 1000ml Glass storage bottle (Duran)	21801545

300ml PES Magnetic Filtration set

47mm, PP membrane support, float to prevent overflow

For general filtration and waste inhalation



VF30	197010-30
Magnetic filter funnel 300 ml (2+3+4+5)	167100-18
1 PP Funnel Lid	167130-32
2 Magnetic filter cup, 300ml	167000-34
3 PP Membrane support	167000-37
4 PES support base	167000-35
5 Silicone stopper	167110-17
PC waste bottle with cover,1000 ml (6+7+8)	197000-11-PC
6 PC cover	197000-32-PC
7 Overflow protection	197000-39
8 PC bottle, 1000 ml	197000-31-PC

100ml Stainless Steel Filtration Set

47mm, Stainless steel membrane support, float to prevent overflow

For filtration requiring the sterilization such as microbiology test or use for purification of corrosive liquid, solvent etc.



VF32	197010-32
100ml Stainless steel filter set (1+2+3+4)	167103-10
1 Stainless steel funnel, 100 ml	167103-61
2 Stainless steel membrane support	167100-31
3 Stainless steel support base	167103-60
4 Silicone stopper	167110-17
PC waste bottle with cover,1000 ml (5+6+7)	197000-11-PC
5 PC cover	197000-32-PC
6 Overflow protection	197000-39
7 PC bottle, 1000 ml	197000-31-PC

300ml Stainless Steel Filtration Set

47mm, Stainless steel membrane support, float to prevent overflow

For filtration requiring the sterilization such as microbiology test or use for purification of corrosive liquid, solvent etc.



VF33	197010-33
300ml Stainless steel filter set (1+2+3+4)	167103-30
1 Stainless steel funnel, 300 ml	167103-63
2 Stainless steel membrane support	167100-31
3 Stainless steel support base	167103-60
4 Silicone stopper	167110-17
PC waste bottle with cover,1000 ml (5+6+7)	197000-11-PC
5 PC cover	197000-32-PC
6 Overflow protection	197000-39
7 PC bottle, 1000 ml	197000-31-PC

Multi-position filtration system

Features

Construction

The entire manifold is made of SS316 stainless steel, providing excellent chemical resistance and compatibility with autoclave sterilization.

Spin-lock design

Features a spin-lock connection for quick, stable installation without the need for clamps.

Individual control valves

Each branch is equipped with an individual control valve for precise operation.

Versatile funnel compatibility

Supports 100 mL, 300 mL, and 500 mL funnels, offering flexibility for various applications.

Magnetic filter set

Allows one-handed operation, ensuring reliable and efficient performance while preventing potential twisting or tearing of the membrane.

Application

- > Biological laboratories
- > Chemical industry
- > Microbiological detection
- > All kinds of liquid filtration



Specifications

Model	BioVac330B	BioVac630B	BioVac320A	BioVac320B
Max. Flow Rate [L/min]	34	58	34	34
Ultimate Vacuum [mbar]	150	150	150	150
Waste Bottle (Capacity in mL / Material)	3000, PC	3000, PC	3000, PC	3000, PC
Number of Branches	3	6	3	3
Manifold Material	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
Filter Diameter [mm]	47 / 50	47 / 50	47 / 50	47 / 50
IP code	IP20	IP20	IP20	IP20
Filter Cup (Capacity in mL / Material)	100 / Stainless Steel	100 / Stainless Steel	300 / Magnetic	250 / Glass
Effective Filtration Area [cm ²]	9.6	9.6	9.6	9.6
Tube I.D. [mm]	8	8	8	8

Configuration

	Model	Order No.	Model	Order No.	Model	Order No.	Model	Order No.
Model	BioVac330B	167403	BioVac630B	167601	BioVac320A	167405	BioVac320B	167406
Contains								
Pump	V400	167400	V600	167600	V400	167400	V400	167400
Manifold	BioVac330 3-branch Stainless steel	167103-23	BioVac630 6-branch Stainless steel	167103-26	BioVac320 3-branch Stainless steel	167110-23	BioVac320 3-branch Stainless steel	167110-23
Filter Cups	3 x 100 mL Stainless steel	167103-61	6 x 100 mL Stainless steel	167103-61	3 x 300 mL PES (magnetic base)	167100-18	3 x 250 mL Glass	167120-31
Waste Bottle	3000 mL / PC	167200-33	3000 mL / PC	167200-33	3000 mL / PC	167200-33	3000 mL / PC	167200-33
Bunsen Burner	Dragon 100	177100-00	Dragon 100	177100-00	Without	Without	Without	Without
Filter Membranes	Pall GN-6 MCE *	167100-52	Pall GN-6 MCE *	167100-52	Pall GN-6 MCE *	167100-52	Pall GN-6 MCE *	167100-52
Silicon Tube	2 x 1m	168021-01	2 x 1m	168021-01	2 x 1m	168021-01	2 x 1m	168021-01

* Pall GN-6 MCE / 0.45µm, 200 pcs

Multi-position manifolds

Vacuum filtration is widely used in laboratory for various tests such as microorganism test in food, pharmacy, beverage, drinking water industries and suspended solid test in environment protection field, sample or solution pretreatment before HPLC, GC, AA analysis etc.

WIGGENS is one of the leading suppliers of vacuum filtration apparatuses in the world. WIGGENS manufactures quality and cost effective vacuum pumps, compressors, manifolds as well as funnels and filters for different applications, WIGGENS provides you with filtration solutions.

Features

Manifold made of SS316

The BioVac 330 and 630 manifolds are constructed entirely from SS316 stainless steel, ensuring excellent chemical resistance. They are also designed for quick sterilization using either flame or steam.

Spin-Lock Design

The innovative spin-lock connection enables fast and secure installation without the need for clamps, enhancing ease of use and efficiency.

Individual control Valves

Each branch features an individual control valve, allowing for precise and independent operation.

Compatible with various funnel sizes

The BioVac 330 and 630 manifolds are compatible with 100 ml, 300 mL, and 500 ml funnels, offering flexibility to suit your application needs.



3-Branch stainless steel manifold BioVac330
Order No.: 167103-23



Stainless steel filter cup (Cylinder type)



3-Branch stainless steel manifold set (100ml, 300ml, 500ml)
Order No.: 167103-24, 167101-23, 167101-24

3-Branch stainless steel manifold set

Model	BioVac330	BioVac331	BioVac333	BioVac335
Order No.	167103-23	167103-24	167101-23	167101-24
Number of Branches	3	3	3	3
Filter Diameter [mm]	47/50	47/50	47/50	47/50
Effective Filtration Area [cm ²]	9.6	9.6	9.6	9.6
Tube I.D. [mm]	8	8	8	8
Dimensions [LxWxH (cm)]	50x15x15	80x15x20	50x15x23	50x15x26
Filter Cup Material	/	Stainless steel	Stainless steel	Stainless steel
Filter Cup Capacity [mL]	/	100	300	500
Product Description	3-Branch stainless steel manifold BioVac 330	3-Branch stainless steel manifold BioVac 330 + 3 x 100 ml stainless steel filter cups	3-Branch stainless steel manifold BioVac 330 + 3 x 300 ml stainless steel filter cups	3-Branch stainless steel manifold BioVac 330 + 3 x 500 ml stainless steel filter cups



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



Stainless steel filter cup (Cylinder type)



6-Branch stainless steel manifold set BioVac 631
Order No.: 167103-27

6-Branch stainless steel manifold set

Model	BioVac630	BioVac631	BioVac633	BioVac635
Order No.	167103-26	167103-27	167101-26	167101-27
Number of Branches	6	6	6	6
Filter Diameter [mm]	47/50	47/50	47/50	47/50
Effective Filtration Area [cm ²]	9.6	9.6	9.6	9.6
Tube I.D. [mm]	8	8	8	8
Dimensions [LxWxH (cm)]	80x15x15	80x15x20	80x15x23	80x15x26
Filter Cup Material	/	Stainless steel	Stainless steel	Stainless steel
Filter Cup Capacity [mL]	/	100	300	500
Product Description	6-Branch stainless steel manifold BioVac 630	6-Branch stainless steel manifold BioVac 630 + 6 x 100 ml stainless steel filter cups	6-Branch stainless steel manifold BioVac 630 + 6 x 300 ml stainless steel filter cups	6-Branch stainless steel manifold BioVac 630 + 6 x 500 ml stainless steel filter cups

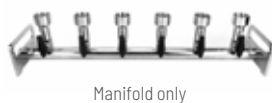
Multi-position filtration manifolds

3-branch stainless steel manifold set



Model	BioVac320	BioVac341	BioVac343	BioVac345	BioVac351	BioVac353	BioVac355	BioVac363	BioVac364
Order No.	167110-23	167111-31	167111-33	167111-35	167112-31	167112-33	167112-35	167113-33	167113-34
Number of Branches	3	3	3	3	3	3	3	3	3
Filter Diameter [mm]	47/50	47/50	47/50	47/50	47/50	47/50	47/50	47/50	47/50
Effective Filtration Area [cm ²]	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6
Tube I.D. [mm]	8	8	8	8	8	8	8	8	8
Dimensions [LxWxH (cm)]	50x15x12	50x15x23	50x15x27	50x15x30	50x15x30	50x15x30	50x15x33	50x15x30	50x15x30
Filter Cup Material	Without	Stainless Steel	Stainless Steel	Stainless Steel	Magnetic	Magnetic	Magnetic	Borosilicate Glass	Glass funnel with Micro-Strainer
Filter Cup Capacity [mL]	Without	100	300	500	150	300	500	250	250

6-branch stainless steel manifold set



Model	BioVac620	BioVac641	BioVac643	BioVac645	BioVac651	BioVac653	BioVac655	BioVac663	BioVac664
Order No.	167110-26	167111-61	167111-63	167111-65	167112-61	167112-63	167112-65	167113-63	167113-64
Number of Branches	6	6	6	6	6	6	6	6	6
Filter Diameter [mm]	47/50	47/50	47/50	47/50	47/50	47/50	47/50	47/50	47/50
Effective Filtration Area [cm ²]	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6
Tube I.D. [mm]	8	8	8	8	8	8	8	8	8
Dimensions [LxWxH (cm)]	80x15x12	80x15x23	80x15x27	80x15x30	80x15x30	80x15x30	80x15x33	80x15x30	80x15x30
Filter Cup Material	Without	Stainless Steel	Stainless Steel	Stainless Steel	Magnetic	Magnetic	Magnetic	Borosilicate Glass	Glass funnel with Micro-Strainer
Filter Cup Capacity [mL]	Without	100	300	500	150	300	500	250	250

Customized assembling options for multi-position filtration system

WIGGENS provides you with filtration solutions, allowing customers to design their own filtration system based on different application requirements.

Filtration System Components Package I

Vacuum pump ①、PP/PC Waste Bottle ②、Filter Membranes ④、Silicon Tubing ⑤、Filtration combination ⑥



Multi-Position Filtration System

Configuration table for multi-position filtration system

No.	Name				
1	Vacuum pump	V400	V600	V410	V610
	Order No.	167400	167600	167410	167610
2	Suction bottle	1000 ml	2000 ml	3000 ml	-
	Order No.	167200-31	167200-32	167200-33	-
4	Filter Membranes	Fiberglass Filter Membranes	MCE Filter Paper	-	-
	Order No.	167100-20	167100-52	-	-
5	Silicon Tubing	Outer Diameter 14 mm, Inner Diameter 8 mm, Length 1 m			-
	Order No.	167021-01			-
6	Combination	BioVac351, BioVac353, BioVac355, BioVac363, BioVac364, BioVac651, BioVac653, BioVac655, BioVac663, BioVac664, BioVac311, BioVac313, BioVac315, BioVac301, BioVac303, BioVac305, BioVac323, BioVac324,			

Filtration System Components Package II

Vacuum pump ①、PP/PC Waste Bottle ②、Lab Burners ③、Filter Membranes ④、Silicon Tubing ⑤、Filtration combination ⑥



Multi-Position Filtration System

Configuration table for multi-position filtration system

No.	Name				
1	Vacuum pump	V400	V600	V410	V610
	Order No.	167400	167600	167410	167610
2	Suction bottle	1000 ml	2000 ml	3000 ml	-
	Order No.	167200-31	167200-32	167200-33	-
3	Lab Burners	Dragon 100	Dragon 220	-	-
	Order No.	177100-00	177220-00	-	-
4	Filter Membranes	Fiberglass Filter Membranes	MCE Filter Paper	-	-
	Order No.	167100-20	167100-52	-	-
5	Silicon Tubing	Outer Diameter 14 mm, Inner Diameter 8 mm, Length 1 m			-
	Order No.	167021-01			-
6	Combination	BioVac331, BioVac333, BioVac335, BioVac631, BioVac633, BioVac635, BioVac341, BioVac343, BioVac345, BioVac641, BioVac643, BioVac645			

Accessories for filtration system

47mm glass funnel holder

Features

- > Made of chemical-resistant borosilicate glass
- > High temperature resistant
- > Autoclavable

Specifications

Name	Glass Funnel	Glass funnel with support screen
Funnel	Borosilicate Glass	Borosilicate Glass
Funnel Base	Borosilicate Glass	Borosilicate Glass
Membrane Support	Sintered Glass	Stainless Steel Support Screen + PTFE Gasket
Clamp	Aluminum	Aluminum

Type		
Funnel Capacity (ml)	250	250
Filter Diameter (mm)	47	47
Effective Filtration Area (cm ²)	9.6	9.6

Ordering information

47mm Glass Funnel	167120-31
250ml Glass Filter Cup ①	167210-03
Aluminum Clamp ②	167240-01
Glass Filter Base ③	167230-03
Silicon Stopper ④	167110-16

47mm glass funnel with micro strainer	167120-33
250ml Glass Filter Cup ①	167210-03
Aluminum Clamp ②	167240-01
Stainless Steel Support Screen ③	167230-31
47mm Glass Filter Base ④	167230-07
Silicon Stopper ⑤	167110-16



Glass Funnel



Glass funnel with support screen



PES funnels with magnetic base

- > Unique magnetic connection design
- > No clamps needed
- > High temperature sterilization possible

Name	Material
Filter Cup	PES
Membrane Support	PP
Filter Base	PES
Rubber	Silicon

Specifications	
Magnetic filter funnel 150 ml	167130-15
Magnetic filter funnel 300 ml	167100-18
Magnetic filter funnel 500 ml	167130-50



47mm Stainless steel funnel

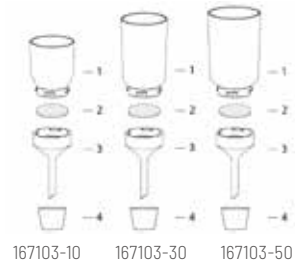
- > Quick and effective spin-lock system
- > No clamp needed
- > SUS316 stainless steel
- > Heat sterilization can be applied



167103-10 167103-30 167103-50

Specification

Name	100 ml	300 ml	500 ml
Funnel	SUS316	SUS316	SUS316
Funnel base	SUS316	SUS316	SUS316
Membrane support	SUS316	SUS316	SUS316
Funnel lid	SUS316	SUS316	SUS316
Specifications			
Funnel capacity (ml)	100	300	500
Filter diameter (mm)	47 / 50	47 / 50	47 / 50
Effective filtration area (cm ²)	9.6	9.6	9.6



167103-10 167103-30 167103-50

Ordering Information

100 ml Stainless steel funnel	167103-10
100ml stainless steel filter cup ①	167103-61
Stainless steel support screen ②	167100-31
47mm stainless steel filter base ③	167103-60
Silicon stopper ④	167110-17
300 ml Stainless steel funnel	167103-30
300 ml ①	167103-63
Stainless steel support screen ②	167100-31
47mm stainless steel filter base ③	167103-60
Silicon stopper ④	167110-17
500 ml Stainless steel funnel	167103-50
500ml stainless steel filter base ①	167103-65
Stainless steel support screen ②	167100-31
47mm stainless steel filter base ③	167103-60
Silicon stopper ④	167110-17

Stainless steel filter cup (Cylinder type)



Order No.	167103-61	167103-63	167103-65
Filter cup	SUS316	SUS316	SUS316
Funnel capacity (ml)	100	300	500
Filter diameter (mm)	47 / 50	47 / 50	47 / 50
Effective filtration area (cm ²)	9.6	9.6	9.6
Suitable for	BioVac 330/630	BioVac 330/630	BioVac 330/630

Stainless steel filter cup (Cone type)



Order No.	167102-50	167102-75	167102-99
Filter cup	SUS316	SUS316	SUS316
Funnel capacity(ml)	500	700	1000
Filter diameter(mm)	47 / 50	47 / 50	47 / 50
Effective filtration area(cm ²)	9.6	9.6	9.6
Suitable for	BioVac 330/630	BioVac 330/630	BioVac 330/630



Stainless steel funnel lid

Description	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
Specification	Material
Suitable for funnel	Pall 4242 / 167100-18
Number of inlets	3
Inlet type	Female luer slip
Filter diameter	25 mm
Package	1
	Main body
	PP
	Cover
	Silicon
	Filter material
	PTFE
	Pore size
	0.2 μm

Filtration flask for liquid

Order No.	167100-13	167100-14
Includes		
Glass bottle	167300-08	167300-08
Rubber stopper	167110-16	167110-17
Weighted base	167200-04	167200-04
Specification		
Capacity [mL]	1000	1000
Inlet / outlet diameter [mm]	8	8
Water outlet	Yes	Yes
The diameter of hole in center of rubber stopper [mm]	Ø15	Ø9.5



Weighted base

Description	Order No.
1000ml Filtration flask base with a unique stabilization design	167200-04



Disc filter

Name	Pinhead filter	Small disc filter
Order no.	194225-01	167200-35-02
Brand	Pall	Pall
Filter diameter / pore size	25 mm / 0.2 µm	50 mm / 0.2 µm
Outer diameter [mm]	30	63
Material	PTFE	PTFE
Outer material	PP	PP
Number of filters per package	1	1
Suitable for	PP Funnel Lid	BioVac 225 / 235series



Filter membrane

Name	Fiberglass filter membranes	MCE filter paper
Order no.	167100-20	167100-52
Brand	Pall	Pall
Filter diameter [mm]	47	47
Filter pore size [µm]	1	0.45
Material	Fiberglass	MCE
Number of filters per package	100	200



PP/PC Waste bottle

Order no.	167200-31	167200-32	167200-33	167120-34
Bottle	PC	PC	PC	PC
Bottle cover	PC	PC	PC	PC
Spill-proof buoy	PP	PP	PP	PP
Capacity (ml)	1000	2000	3000	4000
Outlet (mm)	8	8	8	8
Spill-proof buoy	Yes	Yes	Yes	Yes
Autoclavability (121 °C)	Yes	Yes	Yes	Yes



Stand for Suction Bottle

Order No.	Description	
167200-39-1	Stand for suction bottles, designed for stabilizing the bottle in filtration work	1000ml
167200-39-2		1500ml
167200-39-3		3000ml



Foot switch

Description	Order No.
Suitable for c series and v series vacuum pumps*	167200-41

*Factory installation



Silicon tubing

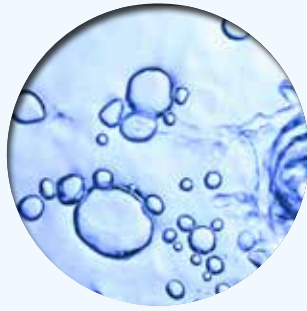
Order No.	Outer diameter (mm)	Inner diameter (mm)	Thickness (mm)	Length (m)
168020-01	12	6	3	1
168021-01	14	8	3	1
168022-01	16	10	3	1

Length upon request (min. 1 m)

Silicon drainage tubing

Order No.	Outer diameter (mm)	Inner diameter (mm)	Thickness (mm)	Length (m)
168030-01	12	8	2	1

Length upon request (min. 1 m)



Liquid Handling Equipment



Peristaltic Pump

Advancing the Science of Liquid Handling



Advanced Control Features

- > Icon Driven User Interface allows for easy setup and operation
- > Large Backlit LCD Display is easy to view from a distance
- > Durable Front Overlay is resistant to chemicals
- > Polarized and Angled Screen allows for glare free viewing
- > "Trouble-Free" Calibration Screen allows for accurate and quick calibration
- > Ultra High Precision Stepper Motor ensures repeatability and accuracy

User-Friendly Design Features

- > Low-profile design minimizes the space required on the bench or in a hood
- > Pump settings can be saved and recalled, saving time in multi-use environments. Nine preset configurations are stored for rapid retrieval
- > Multi-language help screens support English, Chinese, German, French, Japanese, Korean, and Spanish

Vdose® ELITE Additional Features

- > Multiple stacking pump heads enable higher volumes and facilitate various filling applications with a single pump
- > Compatible with 2, 3, 6, and 8 mm tubing
- > The pump allows for different ramping profiles to prevent splashing and foaming
- > Suitable for a wide range of dispensing and process applications

Suggested Application

Research, Development, and Quality Control

Transfer and distribution of fluids into smaller containers, serial dilutions, sample preparation, and media dispensing.

Pharmaceutical and Biotechnology

Dispensing microbiological media, pill coating, dilutions, transferring live cells, additions and harvests to and from bioreactors, packaging and filling.

Food and Beverage

Common uses include dispensing flavorings, colorings, vitamins, and other additives in processing applications, and simple dispensing of end products on production lines or into shelf packages.

Waste Water and Sample Collection

Industrial and QC applications, environmental compliance hazardous/toxic materials evaluation and site sampling for liquids, sludge, earth/soil, water, etc. Ideal for sampling from barrels and drums.

International

The Icon Driven display and multi-language help screen work well in laboratories abroad.

Functionality	Vdose® PRO	Vdose® ELITE
Modes	Dispense Mode	Dispense Mode and Flow Mode
Motor	Dual Speed 75 and 150 rpm	Variable Speed 0.5 to 400 rpm
Direction	Unidirectional; Clockwise	Bidirectional; Clockwise and Counterclockwise
Ramp	Not Offered	User Ramp Control for Dispense and Flow Modes 5 Profiles
Drawback	Not Offered	For Filling into a Closed Container
Pump Heads	Single	Single, Dual
Overall dimension [W x D x H (mm)]	223x331x180	223x331x180
Order No.	W1100100	W1100200

Standard package includes the Peristaltic pump, Single pump head (2.3mm wall thickness), Silicone tube(ID 3mm, with built-in delivery nozzle and glass sinker, length 1.5m (Order NO. 374311), Silicone tube(ID 6mm, with built-in delivery nozzle and glass sinker, length 1.5m (Order NO. 374313).

Technical Specification

Model Pump	Power supply [V]	Capacity [W]	Operating Speed [rpm]	Tubing Sizes Available [mm ID]	Dispense Ranges for Tubing [ml]	Flow Rate Ranges for Tubing [mL/min]	Accuracy Midrange	Delay Time [S]	Weight [kg]	Optional Pump Head Support
Vdose® ELITE	100-240	37	0.5-400	2	0.01-9999.99	20.4-174	≤±1%	0.5-99.9	5.4	<ul style="list-style-type: none"> > Stack up to 2 Pump Heads > Stacking Pump Head for 2.3mm Wall Tubing > Pump Head for 1.6mm Wall Tubing > Stacking Pump Head for 1.6mm Wall Tubing
				3	0.01-9999.99	60-330	≤±1%			
				6	0.01-9999.99	270-1080	≤±2.5%			
				8	0.01-9999.99	200-1746	≤±2.5%			
Vdose® PRO	100-240	37	75&150	2	0.01-9999.99	30&60	≤±1%	0.5-99.9	5.4	<ul style="list-style-type: none"> Pump Head for 1.6mm Wall Tubing Pump Head for 2.3mm Wall Tubing
				3	0.01-9999.99	60&120	≤±2%			
				6	0.01-9999.99	210&426	≤±2%			
				8	0.01-9999.99	540&1080	≤±2.5%			



Home Screen



Calibration Screen



Dispensing Screen



Single Pump

Optional Pump Heads

Order No.	Description	Qty/Case
W1100101	Single Pump Head for 2.3mm Wall Tubing	1
W1100102	Optional Pump Head for 1.6mm Wall Tubing	1

Peristaltic Pumps Accessories

Order No.	Description	Qty/Case
Tubing Accessories		
W1100103	Hose Barb/Luer Adapter (fits 2 and 3mm)	1
W1100104	Footswitch	1
W1100111	2 and 3mm Polypropylene Nozzle	6
W1100112	6mm Polypropylene Nozzle	6
W1100113	8mm Polypropylene Nozzle	6
W1100121	Small Glass Sinkers (fits 2 and 3mm ID tubing)	6
W1100122	Large Glass Sinkers (fits 6 and 8mm ID tubing)	6
Tubing Support Stand		
W1100105	Tubing Support Stand	1
Silicone Tubing Assembly, 2.3 mm wall thickness		
W1100151	2mm ID, 5 ft Section (1.5m)	1
W1100152	3mm ID, 5 ft Section (1.5m)	1
W1100153	6mm ID, 5 ft Section (1.5m)	1
W1100154	8mm ID, 5 ft Section (1.5m)	1
Silicone Tubing, 2.3mm wall thickness		
W1100155	2mm ID, 25 ft Section (7.62m)	1
W1100156	3mm ID, 25 ft Section (7.62m)	1
W1100157	6mm ID, 25 ft Section (7.62m)	1
W1100158	8mm ID, 25 ft Section (7.62m)	1
Microtest Manifolds		
W1100141	4 Position, Straight, 24 Well	1
W1100142	8 Position, Straight, 96 Well	1
W1100143	4 Position, Angular, 24 Well	1
W1100144	8 Position, Angular, 96 Well	1
W1100145	12 Position, Straight, 96 Well	1
W1100146	12 Position, Angular, 96 Well	1
Dispensing Cannulas w/Luer Lock		
W1100131	18 Gauge x 2 in	1
W1100132	14 Gauge x 4 in	1

Hose Barb/Luer Adapter

The luer adapter enables connectivity with devices featuring a female luer lock connector.



Tubing Support Stand

The optional tubing support stand is designed to secure the tubing in position during filling operations.



Footswitch

Utilize the convenience of a handsfree pump by installing the optional footswitch.



Silicone Tubing

Assembly consists of 1.5m (5-foot) section of silicone tubing with a wall thickness of 2.3mm, a borosilicate glass sinker, and a polypropylene delivery nozzle. Bulk tubing is also available.



Polypropylene Nozzle & Glass Sinker

The nozzle connects to the pump tubing for liquid dispensing. The glass sinker is used to secure the tubing when drawing from a container.



Microtest Manifolds & Dispensing Cannulas

Compatible with 24- and 96-well microplates. This dispensing system facilitates rapid sample inoculation and cell feeding under sterile conditions.



Portable Suction Unit (Aspirator)

Adopts oil-free vacuum pump

No lubricant is required; the unit is maintenance-free, low-noise, and durable.

Double Overflow Protection

A built-in float switch, along with a 0.2 µm PTFE hydrophobic disc filter situated between the suction bottle and the pump, prevents liquids and bacteria from entering the pump

Autoclavable

Only the waste bottles, disk filters, and the interconnecting tubing are autoclavable; the suction tubing and suction head are not autoclavable.

- > The entire unit is constructed from ABS plastic and aluminum alloy
- > Various precision components are developed and assembled through extensive testing
- > The piston pump operates quietly, is wear-resistant, pollution-free, and requires no maintenance

High-Temperature Sterilization
The waste bottle and disc filter are autoclavable

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

Vacuum Regulator

Delivers the correct vacuum level for various applications

Stable and Durable Casing

The casing is constructed from lightweight ABS material, making it easy to clean

Wire Storage Box

The system includes storage space for the foot switch cable, which makes it easy and convenient to use



Employment of an Oil-Free Vacuum Pump
The oil-free vacuum pump is maintenance-free and operates at low noise levels

Application

- > Biochemical cultivation
- > Separation of culture fluids
- > Waste liquid suction in cell cultivation
- > All kinds of waste liquid suction in laboratory environments



BioVac 225



BioVac 235



BioVac 240

Single-branch suction head



1

Handheld controller



2

8-branch "tip" plastic suction head



3

Single-branch stainless steel suction head



4

Specifications

Order No.	Model series	Power [W]	Ultimate Vacuum [mbar]	Max. Flow Rate [L/min]	Foot Switch	Dimensions [WxDxH(cm)]	Suction bottle	Weight [kg]	Accessories included
W1080225	BioVac 225	60	100	25	-	37x15x25	1000mL x 1	4.3	4
W1080226	BioVac 225 PLUS	60	100	25	-	37x15x25	1000mL x 1	4.3	1, 2, 3, 4
W1080235	BioVac 235	60	100	35	-	27x30x28	1500mL x 2	6.9	4
W1080236	BioVac 235 PLUS	60	100	35	-	27x30x28	1500mL x 2	6.9	1, 2, 3, 4
W1080240	BioVac 240	80	80	40	yes	54x26x35	3000mL x 1	12	4
W1080241	BioVac 240 PLUS	80	80	40	yes	54x26x35	3000mL x 1	12	1, 2, 3, 4

Accessories

Bio-Suction Kit

Successful removal of supernatants using a vacuum aspiration system requires precise vacuum control and an aspirator tip matched to the specific container. The WIGGENS vacuum aspiration tool is engineered to accommodate a wide variety of laboratory vessels. Various adapters can be fitted to the manual handpiece, converting a standard vacuum source into a versatile system for aspirating liquids from tubes, dishes, bottles, T-flasks, as well as 24-well and 96-well plates.

Quick-lock design

The ergonomic handle with a lock switch enables continuous suction without the need to hold down a button.

Single-handed tip ejection

The tip ejection design facilitates one-handed operation.

Quick fitting change

The quick-connect coupling between the handle and fittings allows for quick replacement of any fitting.

Vapor sterilization can be applied

The complete kit, except for the rack, is made of autoclavable POM and stainless steel.



Specifications

No.	Order No.	Name	Quantity
1	167200-42	Single-branch suction head	1
2-1	167200-44	Single-branch stainless steel suction head, needle length 5cm	1
2-2	167200-44L	Suction Head Single-branch stainless steel suction head, needle length 11cm (Option)	1
3	167200-45	Single-branch "tip" plastic suction head	1
4	167200-46	Handheld controller	1
5	167200-47	8-branch stainless steel suction head	1
6	167200-48	8-branch "tip" plastic suction head	1
7	167200-49	ABS Depositing rack	1

Name	Bio-Suction Kit
Order No.	167200-37
Operation Form	Vacuum Suction
Outlet Diameter(mm)	5 mm



Disc Filter

Name	Disc Filter
Order No.	167200-35-02
Filter Diameter / Pore Size	50 mm / 0.2 μm
Outer Diameter	63 mm
Material	PTFE
Outer Material	PP
Number of Filters per Package	1
Suitable for	BioVac225 / BioVac235 series

Silicon Tube



Order No.	Outer Diameter mm	Inner Diameter mm	Thickness mm	Length m
168021-01	14	8	3	1
168022-01	16	10	3	1



167200-50



167200-51

Order No.	Name	Description
167200-50	Manual suction tube	The outer diameter of the connector is 8mm, The outer diameter of the PP tube is 5mm
167200-51	High pressure silicone tube	For the tube, the outer diameter is 10mm, and the inner diameter is 6mm, with hose joints at both ends



167200-52

Order No.	Name	Description
167200-52	Plastic stoppers	Suitable for the tube of which the outer diameter is 10mm or 12mm



Spill-Proof Buoy

PP/PC Waste Bottle

Material	167200-31	167201-35	167201-36	167200-34
Order No.	167200-31	167201-35	167201-36	167200-34
Bottle	PC	PC	PC	PC
Bottle Cover	PC	PC	PC	PC
Spill-Proof Buoy	PP	PP	PP	PP
Description				
Capacity (ml)	1000	1500	1500	3000
Outlet (mm)	8	8	8	8
Spill-Proof Buoy	With	Without	With	With
Autoclavable	Yes	Yes	Yes	Yes
Suitable for	BioVac225	BioVac235	BioVac235	BioVac240 / 350 / 650

If you need other bottles of different volumes, please choose 167200-39 below



Stand for Suction Bottle

Order No.	Description	Capacity
167200-39-1	Stand for suction bottles, designed for stabilizing	1000ml
167200-39-2	the bottle in filtration work	1500ml
167200-39-3		3000ml



Foot switch

Order No.	Description
167200-40	Foot switch, Suitable for BioVac240
167200-54	Foot switch, Suitable for BioVac225 / BioVac235

Vdose Syringe Pump

The standard syringe pump comprises a dispensing unit and a controller, with options for single-channel or dual-channel configurations. The Vdose series syringe pump enables precise liquid transfer automatically. In addition, the system can be programmed via a PC for complex liquid dosing operations.

Features

- > The bright TFT display clearly presents dosing parameters on a single screen
- > Nine syringe sizes are available, ranging from 50 µL to 25 mL, and syringes can be changed easily
- > Dosing speed ranges from 1.25 µL/min to 375 mL/min
- > All components in contact with liquids are made of glass or PTFE, ensuring chemical resistance
- > The three-port valve automatically switches to facilitate repeated withdrawal and dosing
- > Valve ports can be configured for convenient liquid recovery without disassembling the tubing
- > RS-232/485 digital communication ports are provided for remote PC or PLC control

Specifications

Model	Vdose4200	Vdose4400	
Number of dosing channel	Single-channel	Dual-channel	
Flow rate	1.25 µL/min-375 mL/min	1.25 µL/min-375 mL/min	
Precision	≤ 5 ‰	≤ 5 ‰	
Weight [kg]	5.5	9.1	
Outer Dimensions [W x D x H (mm)]	305 x 89 x 330	305 x 178 x 330	
Syringe	Size	50µL-25 mL	50µL-25mL
	Material	Glass and PTFE wetted	Glass and PTFE wetted
	Dispense Resolution	1/6000 of the syringe size in use	1/6000 of the syringe size in use
	Feature	Easily interchangeable	Easily interchangeable
Valve	Material	PTFE	PTFE
Interface Port	RS232 / 485	RS232 / 485	
Power supply	110-240 V, 50/60 Hz	110-240 V, 50/60 Hz	
Order No.	V900705	V900704	

Standard package includes the syringe pump only. The glass syringe with PTFE plunger and the start-up kit must be ordered separately.

Order Information

Order No.	Description
V900705	Single-channel Syringe pump, with dosing unit and controller (need to specify the valve ports and glass syringe volume)
V900704	Dual-channel Syringe pump, with dosing unit and controller (need to specify the valve ports and glass syringe volume)
Accessories	
V900700-5	50µL glass syringe with Teflon plunger
V900700-6	100µL glass syringe with Teflon plunger
V900700-7	250µL glass syringe with Teflon plunger
V900700-8	500µL glass syringe with Teflon plunger
V900700-9	1ml glass syringe with Teflon plunger
V900700-10	2.5ml glass syringe with Teflon plunger
V900700-11	5ml glass syringe with Teflon plunger
V900700-12	10ml glass syringe with Teflon plunger
V900700-13	25ml glass syringe with Teflon plunger
Start up kit	
V900700-19	Tubing Length: 6m; Outer Diameter: 1/8" ; Includes: 12 nuts and 6 ferrules
V900700-20	Tubing Length: 30m; Outer Diameter: 1/8" ; Includes: 24 nuts and 6 ferrules
V900700-21	Tubing Length: 6m; Outer Diameter: 1/16" ; Includes: 12 nuts and 6 ferrules
V900700-22	Tubing Length: 30m; Outer Diameter: 1/16" ; Includes: 24 nuts and 6 ferrules



Vdose4200



Vdose4400



Glass syringe with PTFE plunger



Tube

WI-control software

WI-control is software designed for controlling devices, automating processes, and documenting measurements and results. It integrates WIGGENS laboratory devices and supports devices from other manufacturers. The software can network up to 128 devices simultaneously via a single PC, enhancing the efficiency and ease of automating laboratory experiments and processes.

Save time and improve efficiency

On the PC, you can automate laboratory processes, store custom recipes and data, manage workflows, and perform calculations during experiments. All connected devices can operate in cascade mode, allowing machines to automatically function when specified conditions are met.

Increase safety

Safety conditions can be configured to trigger alarms or shutdowns when activated, triggering alarms or shutdowns when activated. In remote operation, you can control complex reactions from a safe distance. The numerous automation options for recipes and processes enhance process reliability, improve user safety, and increase the reproducibility of all procedures.

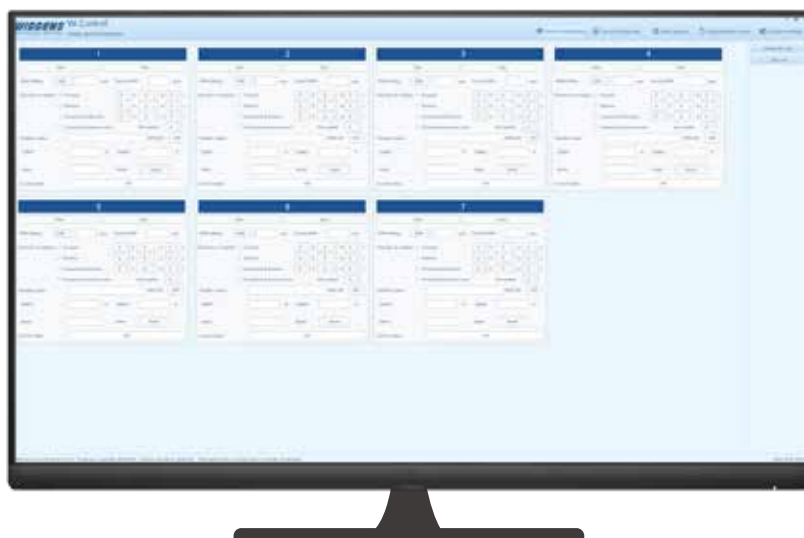
Real-time data recording and secure storage

Measurement data generated during a process can be exported in XLS and PDF formats for documentation and further analysis. All operations and changes to settings are recorded, facilitating the repetition of the experimental process.

System requirements

The WI-control software can be installed on any PC that meets the following system requirements.

System requirement	Minimum	Recommended
Operating system	Windows®7 or later, 32-bit	Windows®7 or later, 64-bit
Memory	2 GB	4 GB
Processor	2.5 GHz dual-core processor	2.5 GHz 4-core processor
Interfaces	1 x USB or 1 x RS232	depending on the number of units controlled
Display	6,500 colors	16 million colors
Screen resolution	1,400 x 1,050 pixels	1,680 x 1,050 pixels



GAS GENERATORS

- Hz, N₂, O₂, Compressor, Purified Air, and Zero Air
- > Hydrogen generator (PEM technology)
- > Hydrogen and Zero Air Generator (Two-in-One)
- > Nitrogen Generator (PSA Technology or Hollow Fiber Membrane)
- > Nitrogen and Zero air generator (Two-in-one)
- > Compressor and purified air system
- > Zero air generator / Ultra zero air generator



H₂ GENERATOR

Purity: 99.9996% or 99.99996%
Flow rate: 100mL/min-20 L/min
General Version, Flat Version, Tower Version, and 19" Rack Version



N₂ GENERATOR

Flow rate: 100 mL/min-20 L/min
Purity: 95-99.9999%



O₂ GENERATOR

Flow rate: 6 L/min, 10 L/min
Density: 95%



ZERO AIR GENERATOR

Flow rate: 1.5-30 L/min
HC & CO Content: < 0.05 ppm
CO₂ Content: < 1 ppm
NO, SO_x Content: < 0.1 ppm

COMPRESSED AIR SYSTEM / PURIFIED AIR SYSTEM

Flow rate: 20-900 L/min
Pressure: 5 - 10 bar



Product brochure
online at
www.wiggins.com

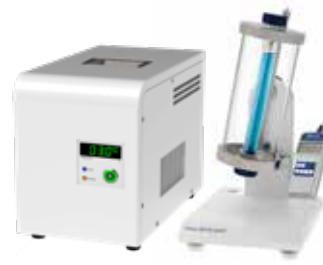
Rotational Viscometer

Provides professional and accurate viscosity measurements tailored to your specific requirements.



Falling Ball Viscometer

The Viscoball precisely measures the viscosity of transparent Newtonian liquids and gases using a specialized ball.



Automatic Viscosity Measurement System (Capillary viscometer)

Semi-automatic or automatic viscosity measurement system.



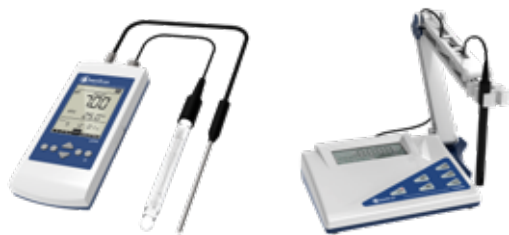
Density Meter

Portable Density / Specific Gravity / Concentration Meter



pH / Cond. / DO Meter

Precise, reliable, and selective in the lab and in the field



Refractometer

Scale Handheld Refractometer | Digital Refractometer



Titration, Auto Sampler, Software and Electrodes

With its broad performance range, the Chemtron titrator is well suited for potentiometric titration and offers extensive possibilities for expansion and automation. Its high-resolution, precise pH/mV, and "dead-stop" measurement interface enable swift, reliable, and accurate determinations of a multitude of parameters. Chemtron titrators are typically known for their precision, ease of use, and capability to handle a wide range of titration applications.

- > Burettes and Titrators
- > Burettes and Titrators with interchangeable unit
- > Karl Fischer Titration
- > Sample changers and accessories
- > Titration software
- > Electrodes for Titration
- > Related reagent



CHEMTRON REACTION & PURIFICATION SYSTEM

Featuring Reactors from Lab to Production Scale

Energy | Petrochemical | Life Sciences | Cosmetics | Pharmaceutical | Environmental

Glass Reactor and Peripheral Units

These systems are essential tools for research, scale-up, and production across a wide range of scientific disciplines. Designed for maximum diversity and ease of use, we have developed a simple base system building platform that allows each reactor system to be customized.

- > Bench-top glass reactor (250 mL-5 L)
- > Pilot plant glass reactor (10-100 L)
- > Glass spherical reactor (up to 200 L)
- > Glass industrial production equipment
- > Glass filter reactor (150 mL-150 L)
- > Glass pressure reactor (up to 6 L)
- > Homogenization reactor
- > Ultrasonic, photochemical and hydrogenation reactor
- > Parallel reaction station
- > Stirrer & Pump
- > Dosing unit
- > pH measurement and control
- > Auto reaction software



ChemTron
A brand of Wiggins

Stainless Steel Reactor and Peripheral Units

The requirements of our customers for the reaction vessels are as varied as the respective processes which are carried out in them. In recent decades, we have developed a modular system with standardized connection components, in order to economically implement individual solutions. This greatly simplifies the design and construction of our custom-made products.

- > High-pressure reactor, up to 200 bar
- > Low pressure reactor, up to 25 bar
- > Stainless steel reactor for atmospheric pressure or vacuum
- > Nutch filter reactor
- > Temperature control system
- > Stirrer unit: mechanical or magnetic coupling
- > Dosing unit
- > Ball valve, needle valve, solenoid valve, pneumatic valve
- > Auto reaction software



ChemTron
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WIGGENS
THE MAGIC MOTION



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