

INSTRUCTION MANUAL

Vacuum Filtration System

Model No.

WaterVac 100 / 200

WaterVac 100 / 200 - MS

WaterVac 100 / 200 - MB

WaterVac 101 / 201 - MB



WaterVac 100
Instruction Video



WaterVac 200
Instruction Video



ROCKER

Please read this instruction manual before using this product.

Important Notice

This instrument is designed for laboratory usage only. Please read this manual carefully before installing and operating. The instrument shall not be modified in any way. Any modification will void the warranty and may result in potential hazard. We are not responsible for any injury or damage caused by any non-intended purposes and modifying the instrument without authorization.

1. Check the voltage specified on the name plate and ensure it matches the line voltage in your location.
2. Install the instrument in a clean, dust-less and ventilated area under 40°C.
3. Never use the instrument with any corrosive, chemical, flammable or toxic material.
4. Do not pump any solution without filtration, please use this instrument with filter holder, funnel and membrane to prevent clogging.
5. Ensure silicone tube is not bent, plugged, or squeezed to avoid poor drainage.
6. Never operate this instrument in a circulated, closed system.
7. Please clean and maintain this instrument according to this manual after every use to ensure maximum efficiency.
8. For more product details, please refer to the latest catalog and website.
9. Please discard packing material according to local related regulations.
10. Operating condition
 - (a) Ambient temperature: 5~ 40 °C
 - (b) Relative humidity: 80% RH Max.
 - (c) Power supply: 100~240V, 50/60Hz
 - (d) Altitude: up to 2000 m
 - (e) Pollution degree: II
 - (f) IP41 (WaterVac 200 series)
 - (g) Overvoltage category: I
 - (h) Indoor use

Unpacking

Please check if the package is complete without any damage before unpacking. When unpacking, please make sure you have all accessories that indicated on the list. If there is any problem, please keep the serial number along with packing case and contact your local distributor immediately for assistance.

I. WaterVac 100



WaterVac 100



WaterVac 100 - MS



WaterVac 100 - MB



WaterVac 101 - MB

Model	Main Unit	Stopper Adaptor	SF Adaptor	Funnel
WaterVac 100	WaterVac 100	-	-	-
WaterVac 100 - MS		V	-	-
WaterVac 100 - MB		-	V	-
WaterVac 101 - MB		-	V	100 ml * 1

Model	Standard Package Includes:
WaterVac 100	WaterVac 100, Vacuum Filtration System
	Power Adaptor
	Accessory Kit (L-Type hex key, O-ring, Silicone tube)
	Instruction Manual

II. WaterVac 200



WaterVac 200



WaterVac 200 - MS



WaterVac 200 - MB

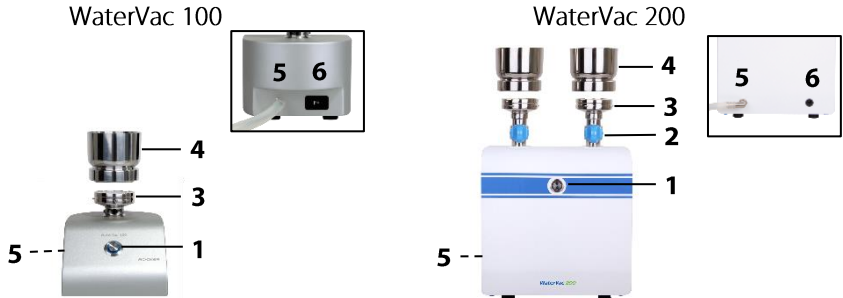


WaterVac 201 - MB

Model	Main Unit	Stopper Adaptor	SF Adaptor	Funnel
WaterVac 200	WaterVac 200	-	-	-
WaterVac 200 - MS		V	-	-
WaterVac 200 - MB		-	V	-
WaterVac 201 - MB		-	V	100 ml * 2

Model	Standard Package Includes:
WaterVac 200	WaterVac 200, Vacuum Filtration System
	Power Adaptor
	Accessory Kit (L-Type hex key, O-ring, Silicone tube)
	Instruction Manual

Main Part Diagram



Position	Designation	Position	Designation
1	Power Switch	4	SF Stainless Steel Funnel*
2	Control Valve	5	Liquid Outlet
3	Funnel Adaptor	6	DC socket

Installation and Operation

• Preparation and Installation (Take WaterVac 200 as example)





- The filter holder(s), funnel(s) and membrane(s) are not included.

• Operation

- A. Make sure that desired funnel adaptor (3) is screwed into main unit properly. Tighten fixing screw with L-Type hex key (2mm) to prevent support base from rotation.
- Various kind of funnel adaptors are available for various applications. (Refer to next page)
- B. Connect a long tube to liquid outlet (5) and put the other side of tube into sink or a container to drain and collect the waste liquid.
- Make sure the diameter of silicone tube is in accordance with main unit.

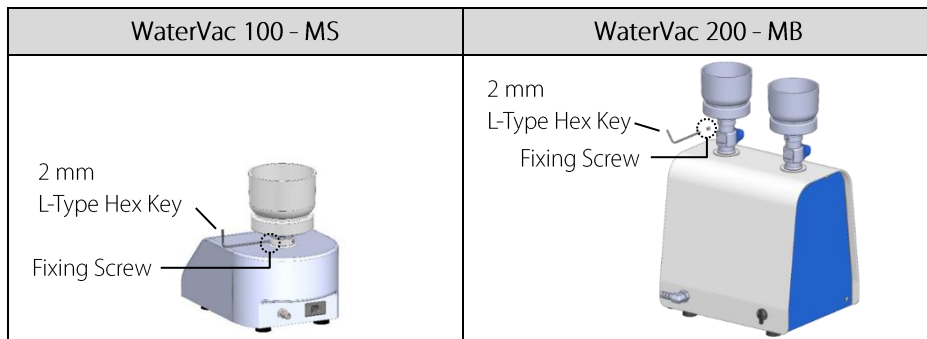
Model Series	Hose Barb Diameter	Recommended Silicone Tube
WaterVac 100	ID6 (6 mm)	φ 4 x 8 mm (199100-68)
WaterVac 200	ID8 (8 mm)	φ 8 x 14 mm (180300-68)

- C. Connect the power adaptor to both power source and DC socket (6) of main unit.
- D. Connect the desired filter holder to funnel adaptor (3) and install the appropriate membrane in filter holder or funnel.
- Various filter holders, such as glass and plastic filter holder, could be connected to WaterVac 100 / 200 - MS by No.8 silicone stopper.
- E. Switch on the pump by pressing the power switch (1) to start the filtration.
- WaterVac 200: Make sure all control valves (2) are off  fore use, rotate them counterclockwise to vertical position for filtration. 
- F. Switch off the pump by pressing the power switch (1) again once filtration is finished.
- WaterVac 200: Stop filtration by either switch off the pump or close the control valves (2).
- G. Please pump the pure water to clean the tubing after every use to prevent any dirty is left over. Keep pumping the air for at least 2 minutes to eliminate the liquid.


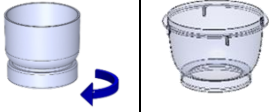


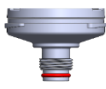
* Warning:







- (1) Do not bend silicone tube or squeeze it with heavy objects to avoid poor drainage.
- (2) Do not pump dirty or impure solution without filtration to avoid clogging or damaging.

• How to change the funnel adaptor(s)



1. Loosen the fixing screw on the rear of control valve by L-Type hex key (2 mm).
2. Unscrew the funnel adaptor and change to the desired one.
3. Tighten the fixing screw to prevent new funnel adaptor from rotation.

Installation of Various Filter Holder and Funnel					
		1		2	
Compatible Filter Holder & Funnel					
Funnel Adaptor					
		190100-10	190200-10	190200-20	
Compatible Models	WaterVac 100	V	N/A	V	
	WaterVac 200	N/A	V	V	
Description		<p>1. No. 8 Stopper Funnel Adaptor - Compatible with various kinds of filter holders with No. 8 silicone stopper, such as glass, plastic filter holder.</p> <p>2. Rocker SF Funnel Adaptor - Left: Fitting to Rocker SF 100 / 300 / 500 ml funnel - Right: Fitting to Pall, Sentino® 4870 (100 ml), 4871 (250 ml) disposable plastic funnel.</p>			

Installation of Various Filter Holder and Funnel				
		3	4	5
Compatible Filter Holder & Funnel				
Funnel Adaptor				
		190100-73	190100-74	190100-76
Compatible Models	WaterVac 100	V	V	V
	WaterVac 200	V	V	V
Description		<p>3. SS316 Adaptor for Millipore Disposable Funnel - Fitting to Millipore, Microfil® disposable funnel 100 / 250 ml.</p> <p>4. SS316 Adaptor for Sartorius Disposable Funnel - Fitting to Sartorius, Microsart® disposable funnel 16A07.</p> <p>5. SS316 Hose Barb Adaptor - Fitting to ID4~8 silicone tube.</p>		

Maintenance

1. The main unit is not autoclavable. Please clean the surface by pure water or 75% ethanol.
2. Please pump the pure water to clean the tubing after every use to prevent any dirty is left over.
Keep pumping the air for at least 2 minutes to eliminate the liquid.
3. Stainless steel funnels, support base and membrane support can be fast sterilized by flame or autoclaved.
4. Valve plate(s), O-ring(s), silicone tube(s) and diaphragm are consumables, it is recommended to replace it on a yearly basis or as needed to ensure good operation.

Troubleshooting

Problem	Reason and Solution
Failed to start	<ul style="list-style-type: none">• Loose plug → Reconnect plug to power supply.• Switch is broken → Contact distributor for assistance.
Poor vacuum	<ul style="list-style-type: none">• Outlet is blocked → Clean or stretch the outlet tube.• Internal wiring loose → Contact distributor for assistance.
Low filtration speed	<ul style="list-style-type: none">• Connection between filtration apparatus is not sealed → Reconnect to ensure they're tightly sealed.• Control valve(s) is not open → Open it properly.• Unsuitable membrane → Change an appropriate membrane.• Membrane is blocked → Replace a new membrane.• Silicone tube is bent too much → Replace silicone tube• Internal wiring loose → Contact distributor for assistance.

Ordering Information

190100-01(02)	WaterVac 100, Vacuum Filtration System, AC100~240V Adaptor, US Plug (EU Plug)
190110-01(02)	WaterVac 100 - MS, Vacuum Filtration System with No. 8 Stopper Funnel Adaptor, AC100~ 240V Adaptor, US Plug (EU Plug)
190120-01(02)	WaterVac 100 - MB, Vacuum Filtration System with Rocker SF Funnel Adaptor, AC100~240V Adaptor, US Plug (EU Plug)
190121-01(02)	WaterVac 101 - MB, Vacuum Filtration System with Rocker SF Funnel Adaptor, SF Funnel 100 ml x 1 pc, AC100~240V Adaptor, US Plug (EU Plug)
190200-01(02)	WaterVac 200, Vacuum Filtration System, AC100~240V Adaptor, US Plug (EU Plug)
190210-01(02)	WaterVac 200 - MS, Vacuum Filtration System with No. 8 Stopper Funnel Adaptor, AC100~240V Adaptor, US Plug (EU Plug)
190220-01(02)	WaterVac 200 - MB, Vacuum Filtration System with Rocker SF Funnel Adaptor, AC100~240V Adaptor, US Plug (EU Plug)
190221-01(02)	WaterVac 201 - MB, Vacuum Filtration System with Rocker SF Funnel Adaptor, SF Funnel 100 ml x 2 pcs, AC100~240V Adaptor, US Plug (EU Plug)
190100-62	WaterVac 100 Repair Kit
181200-62	60W Diaphragm Liquid Pump Repair Kit
190100-10	Silicone Stopper Funnel Adaptor_Short for WaterVac 100
190200-10	Silicone Stopper Funnel Adaptor_Middle for WaterVac 200
180300-30	SS316 Adaptor for Rocker SF funnel and Pall 4870 / 4871 plastic funnel
190100-73	SS316 Adaptor for Millipore 100 ml / 250 ml plastic funnel
190100-74	SS316 Adaptor for Sartorius 16A07 plastic funnel
190100-76	SS316 Hose Barb Adaptor for silicone tube, ID4~ID8
180100-31	Stainless Steel Support Screen for SF funnel adaptor
167100-31	Stainless Steel Support Screen for Millipore / Sartorius funnel adaptor
180100-01/03/05	SF Stainless Steel Funnel 100 ml / 300 ml / 500 ml
180100-11	Stainless Steel Cover for SF 100 ml funnel
180100-13	Stainless Steel Cover for SF 300 ml / 500 ml funnel
200300-01	MF 3, Magnetic Filter Holder (300 ml)
200300-01-P	MF 3 Pro, Magnetic Filter Holder (300 ml)

200500-01	MF 5, Magnetic Filter Holder (500 ml)
200500-01-P	MF 5 Pro, Magnetic Filter Holder (500 ml)
167120-31	300 ml Glass Filter Holder for VF 6/ VF 12
167100-20	PALL, Type A/ E Glass Fiber Discs, 1 um, 100/PK
167100-52	PALL, GN-6 Metrical Membrane Disc Filter, grid, 0.45 um, 200/PK
180300-68	Silicone Tube, Ø 8 x 14 mm, 2 m
167200-38	Silicone Tube, Ø 6 x 12 mm, 1 m
199100-68	Silicone Tube, Ø 4.2 x 8 mm, 2 m
177100-00	Dragon 100, Torch Burner

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