

**Operating Instructions**  
Original Operating Instructions

# Sartolab<sup>®</sup> Multistation

Support Manifold for Vacuum Filtration Units



1000067791



**SARTORIUS**



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# 1 About these Instructions

## 1.1 Validity

These instructions are part of the product. These instructions apply to the product in the following versions:

Product	Type
Sartolab® Multistation	SDLC01

## 1.2 Accompanying Documents

- ▶ In addition to these instructions, observe the following documentation:
  - Operating instructions for vacuum source or vacuum pump, e.g. Microsart® e.jet fluid pump
  - Operating Instructions for the Sartolab® RF | BT vacuum filtration units

## 1.3 Target Groups

These instructions are addressed to the following target groups. The target groups must possess the specified knowledge:

<b>Target group</b>	<b>Knowledge and qualifications</b>
User	The user is familiar with the operation of the product and the associated work processes. They understand the hazards which may arise when working with the product and know how to prevent them. The user has been trained in the operation of the product.
Operator	The product operator is responsible for compliance with safety requirements and workplace safety regulations. The operator must ensure that all persons who work with the product have access to the relevant information and are trained in working with the product.

## 2 Safety Instructions

### 2.1 Intended Use

The product is a support manifold for vacuum filtration units. Several vacuum filtration units may be connected to the product. The product must be operated under negative pressure. To do this, a vacuum pump or vacuum source must be used. The vacuum pump or vacuum source must be suitable for the product.

The product is intended exclusively for use in accordance with these instructions. Any further use is considered **improper**.

If the product is **not** used properly: The protective systems of the product may be impaired. This can lead to unforeseeable personal injury or property damage.

#### Operating Conditions for the Product

Do **not** use the product in potentially explosive environments. The product may only be used indoors.

The product may only be used with the equipment and under the operating conditions described in the technical data section of these instructions.

#### Modifications to the Product

The product must **not** be adapted, technically modified or repaired without authorization. Any retrofitting or technical changes to the product are only permitted with prior written permission from Sartorius.

## 2.2 Personnel Qualification

If persons who do **not** possess sufficient knowledge about safely handling the product are working on the product: Those persons may injure themselves or others nearby.

- ▶ Ensure that all persons working on the product possess the necessary skills and qualifications.
- ▶ If a particular qualification is required for the actions described: Allow these activities to be carried out by the required target group.
- ▶ If **no** qualification is required for the actions described: Allow the activities described to be carried out by the “user” target group.

## 2.3 Significance of these Instructions

Failure to follow the instructions may have serious consequences, e.g. danger to individuals.

- ▶ Read the instructions carefully and in full.
- ▶ Ensure that the information contained in these instructions is available to all individuals working with the product.
- ▶ Retain the instructions.
- ▶ If these instructions are lost, request a replacement or download the latest version from the Sartorius website ([www.sartorius.com](http://www.sartorius.com)).

## 2.4 Proper Working Order of the Product

A damaged product or worn parts may lead to malfunctions.

- ▶ Only operate the product when it is safe and in perfect working order.
- ▶ Allow any damage to be repaired immediately by Sartorius Service.



## 2.5 Action in the Event of an Emergency

In an emergency situation, the product must be decommissioned immediately:

- ▶ Switch off the vacuum pump | source.
- ▶ Remove the vacuum filtration unit(s) from the Sartolab® Multistation.
- ▶ Ensure that the product is **not** reused.

## 2.6 Accessories, Consumables, and Spare Parts

Unsuitable accessories, consumables, and spare parts can adversely affect functionality and safety, and have the following consequences:

- Risk of injury to persons
  - Damage to the product
  - Malfunctioning of the product
  - Failure of the product
- 
- ▶ Only use approved accessories, consumables, and spare parts supplied by Sartorius.
  - ▶ Only use accessories, consumables, and spare parts that are in proper working order.

## 2.7 Personal Protective Equipment

Personal protective equipment protects against risks arising from the material being processed. If the personal protective equipment is missing or unsuitable: People may be injured.

- ▶ If the workplace or the process in which the product is being used requires personal protective equipment: Wear personal protective equipment.

# 3 Product Description

## 3.1 Product Overview



Fig.1: Sartolab® Multistation

Pos.	Designation	Description
1	Rotating head	Can be rotated by 360°
2	Position number	Numbering for vacuum filtration unit
3	Bracket	The bracket is used to hold and fix the vacuum filtration unit.
4	Stand	
5	Base	

Pos.	Designation	Description
6	Manufacturer's ID label	Affixed to the underside of the product.
7	Vacuum connection	Holds the vacuum tube of the vacuum pump or vacuum source.

## 3.2 Vacuum Filtration

The product must be connected to a vacuum source or vacuum pump. Negative pressure is generated in the product channel system. The vacuum filtration units are connected to the negative pressure channel system. This enables vacuum filtration to be carried out in the vacuum filtration units.

# 4 Installation

## 4.1 Scope of Delivery

Item	Quantity
Sartolab® Multistation	1
Operating Instructions	1

## 4.2 Selecting an Installation Site

### Procedure

► Ensure that the following conditions are met at the installation site:

Condition	Features
Ambient conditions	Suitability tested (for ambient conditions, see chapter “13.2 Ambient Conditions at the Installation Site”, page 27).
Setup surface	<ul style="list-style-type: none"> <li>– Stable, even surface with little vibration</li> <li>– Sufficient load-bearing capacity for the product and the peripheral devices, e.g. the vacuum pump (product weight, see chapter “13.1 Dimensions and Weights”, page 27; weight of the peripheral devices see instructions for the peripheral devices).</li> </ul>
Access to parts relevant to operation	Convenient and safe

## 4.3 Unpacking

### Procedure

- ▶ Unpack the product.
- ▶ Install the product at the intended installation site.
- ▶ Keep all parts of the original packaging, e.g. to return the product.

# 5 Getting Started

## 5.1 Connecting the Vacuum Pump or Vacuum Source

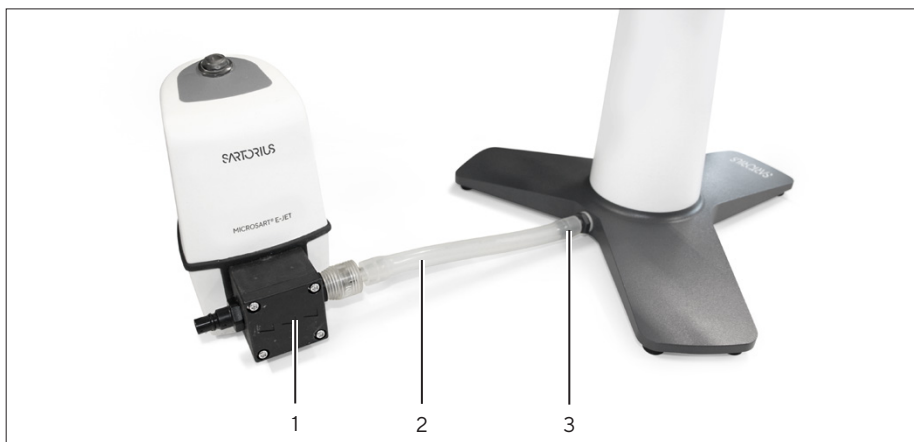


Fig.2: Connection to the “Microsart® e.jet” vacuum pump (example)

Pos.	Designation
1	Vacuum pump
2	Vacuum tube
3	Vacuum connection

### Procedure

- ▶ Check the suitability of the vacuum pump or vacuum source and vacuum tube (see chapter “13.3 Pressures, Vacuum Source, and Vacuum Pump”, page 28).
- ▶ Connect the vacuum tube of the vacuum pump or vacuum source to the vacuum connection on the product.

## 6 Operation

### 6.1 Preparing and Starting Filtration

All vacuum filtration units connected to the brackets are supplied with negative pressure. Filtrations can be carried out simultaneously on all vacuum filtration units.

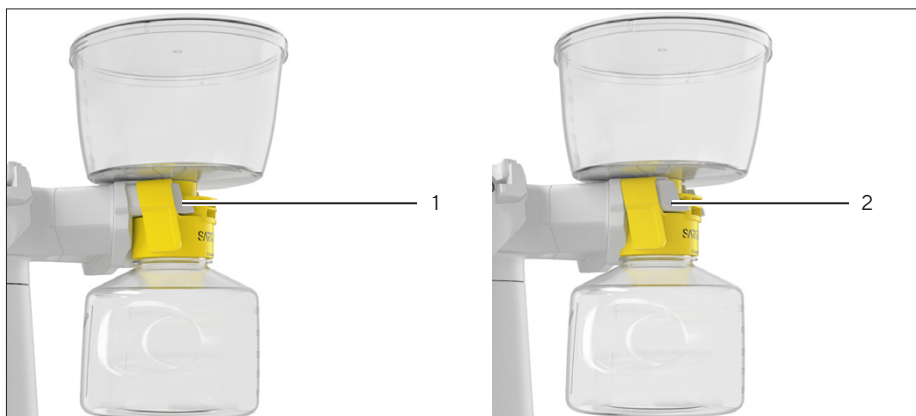


Fig. 3: Vacuum filtration unit adapted and fixed (example)

Pos.	Description
1	First locking level: The vacuum filtration unit is inserted into the bracket and fixed in place
2	Second locking level: The vacuum filtration unit is connected to the product's negative pressure channel.

### Requirements

The vacuum pump or vacuum source is switched on.

### Procedure



- ▶ Insert the vacuum filtration unit horizontally in the bracket (first locking level).
- ▶ Pour the liquid medium into the vacuum filtration unit (see vacuum filtration unit Operating Instructions for volume).

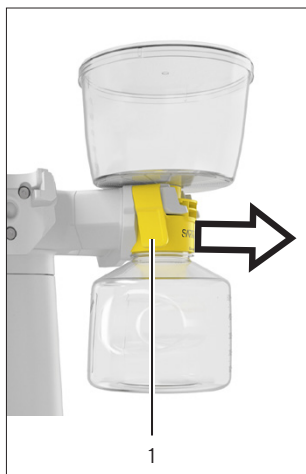


- ▶ Push the vacuum filtration unit into the second locking level.
- ▷ This automatically starts filtration.

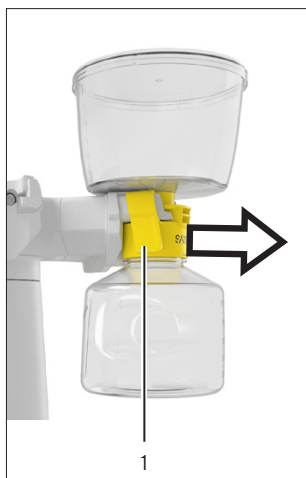


## 6.2 Ending Filtration

### Procedure



- ▶ To end filtration: Press and hold the mounting bracket of the vacuum filtration unit (1) and remove the vacuum filtration unit from the second locking level.
- ▷ The vacuum filtration unit is separated from the negative pressure channel.



- ▶ To remove the vacuum filtration unit: Press and hold the mounting bracket of the vacuum filtration unit (1) and remove the vacuum filtration unit from the first locking level.

# 7 Cleaning

## 7.1 Cleaning

### Requirements

The product has been decommissioned (see chapter “9.1 Decommissioning”, page 23).

### Procedure

- ▶ **NOTICE** Corrosion or damage to the product due to unsuitable cleaning agents and cleaning methods!
  - ▶ Do **not** use corrosive, chloride-containing, or aggressive cleaning agents.
  - ▶ Do **not** use cleaning agents that contain abrasive ingredients, e.g. scouring agents, steel wool.
  - ▶ Only use permitted cleaning agents (see chapter “13.6 Cleaning and Disinfection”, page 29) and observe the product information for the cleaning agent used.
  - ▶ Do **not** autoclave the product.
- ▶ Wipe off the housing with a slightly damp cloth. Use a mild soapy solution or a suitable cleaning agent for more severe contamination.

# 8 Malfunctions

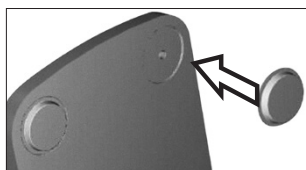
## 8.1 Malfunctions

Fault	Cause	Remedy	Chapter, page
The product is instable.	The rubber pad is faulty.	Replace the rubber pad.	8.2, 20
Filtration performance is reduced.	The O rings are damaged.	Dismantle the bracket. Install a new bracket.	8.3, 21 8.4, 22
	The vacuum tube is <b>not</b> correctly connected.	Check the vacuum tube connection and reconnect if necessary.	5.1, 14
	The pump is <b>not</b> working correctly.	Check the pump for faults (see instructions for pump).	
The vacuum filtration unit cannot be installed on the bracket.	The bracket is damaged.	Dismantle the bracket.	8.3, 21
		Install a new bracket.	8.4, 22
The rotating head cannot be clicked into place.	The rotating head is damaged.	Contact Sartorius Service.	

## 8.2 Replacing the Rubber Pad

### Procedure

- ▶ Remove the product from service. To do so, proceed as follows:
  - ▶ Switch off the vacuum source or vacuum pump.
  - ▶ Remove the vacuum tube from the product.
  - ▶ Remove all vacuum filtration units from the product.
- ▶ Place the product on the side. The rotating head (1) must **not** be damaged.
- ▶ Remove any rubber pad residues.
- ▶ Remove any adhesive residues from the base (permitted cleaning agent see chapter "13.6 Cleaning and Disinfection", page 29).
- ▶ Leave the recesses for the rubber pads to dry.
- ▶ Remove the rubber pad from the carrier film. The rubber pad is self-adhesive.
- ▶ Place the rubber pad with the adhesive surface in the stand recess.
- ▶ Manually press on the rubber pad for 5 seconds.



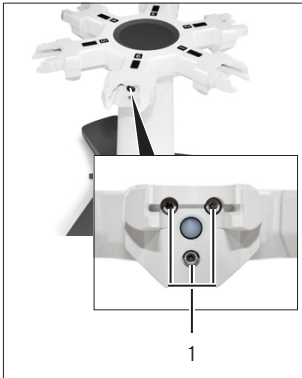
## 8.3 Dismantling the Bracket

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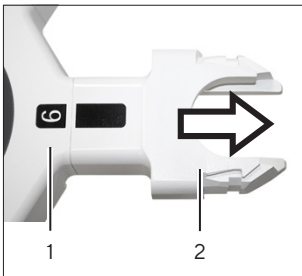
Material: Plug, 1 unit (suitability see chapter "13.5 Plug", page 29)

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### Procedure



- ▶ Unscrew the 3 cylinder head screws (1) from the bracket using a 3 mm Allen key.



- ▶ Remove the bracket (2) from the rotating head (1).
- ▶ Close the aperture thus created with a plug.

## 8.4 Assembling the Bracket

### NOTICE

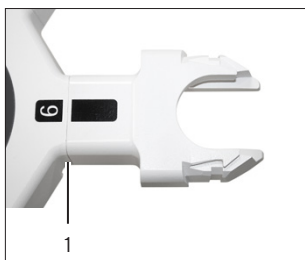
#### Damage to the screw fitting by installation errors!

The fixing thread on the rotating head can be damaged by an improper installation sequence.

- ▶ The afore-mentioned installation sequence must be followed.

### Procedure

- ▶ Remove the plug from the aperture in the rotating head.
- ▶ Place the bracket on the rotating head holder.
- ▶ Insert the 3 cylinder head screws.
- ▶ Using the Allen key, initially turn counterclockwise until a clicking sound is heard (maximum 360°).



- ▶ Tighten the 3 cylinder head screws in the clockwise direction.

- ▶ If there is **no** longer any gap (1) to the rotating head: The bracket is mounted correctly.

# 9 Decommissioning

## 9.1 Decommissioning

### Requirements

Filtration has ended.

### Procedure

- ▶ Switch off the vacuum source or vacuum pump.
- ▶ Remove the vacuum tube from the product.
- ▶ Remove all vacuum filtration units from the product.

# 10 Transport

## 10.1 Transporting

### Procedure

- ▶ Decommission the product (see chapter “9.1 Decommissioning”, page 23).
- ▶ Take the product to the desired installation site, while ensuring the product is held fast to the base and stand.

# 11 Storage and Shipping

## 11.1 Storage

### Procedure

- ▶ If the product is in operation:
  - ▶ Decommission the product (see chapter “9.1 Decommissioning”, page 23).
- ▶ Store the product according to the ambient conditions (see chapter “13.2 Ambient Conditions at the Installation Site”, page 27).

## 11.2 Returning the Product and Parts

Defective products or parts can be sent back to Sartorius. Returned devices must be clean, decontaminated, and packed in their original packaging.

Transport damage as well as measures for subsequent cleaning and disinfection of the product or parts by Sartorius shall be charged to the sender.



## Procedure

- ▶ Decommission the product (see chapter “9.1 Decommissioning”, page 23).
- ▶ Contact Sartorius Service for instructions on how to return the product or parts (please refer to our website at [www.sartorius.com](http://www.sartorius.com) for return instructions).
- ▶ Pack the product and its parts in their original packaging for return.

# 12 Disposal

## 12.1 Information on Decontamination

The product does **not** contain any hazardous materials that would necessitate special disposal actions.

The cultures and media used during the process are potentially hazardous materials that could cause biological or chemical hazards.

If the product has come into contact with hazardous substances: Steps must be taken to ensure proper decontamination and declaration. The operator is responsible for adhering to local government regulations on the proper declaration for transport and disposal and the proper disposal of the product.

## 12.2 Disposing of Product and Parts

### 12.2.1 Information on Disposal

**The product and its accessories must be disposed of properly by disposal facilities.**

The packaging is made of environmentally friendly materials that can be used as secondary raw materials.

## 12.2.2 Disposing

### Requirements

The product has been decommissioned (see chapter “9.1 Decommissioning”, page 23) and is decontaminated.

### Procedure

- ▶ Dispose of the product. Follow the disposal instructions on our website ([www.sartorius.com](http://www.sartorius.com)).
- ▶ Dispose of the packaging in accordance with local government regulations.
- ▶ Dispose of the vacuum filtration units in accordance with local government regulations.

# 13 Technical Data

## 13.1 Dimensions and Weights

	Unit	Value
Dimensions (L x W x H)	mm	307 x 348 x 281
Weight	kg	4.6

## 13.2 Ambient Conditions at the Installation Site

	Unit	Value
Conventional laboratory rooms, max. height above sea level	m	2000
Temperature	°C	+5 - +30
<b>No vibrations</b>		
<b>No potentially explosive atmospheres</b>		

### 13.3 Pressures, Vacuum Source, and Vacuum Pump

	Unit	Value
Permitted operating pressure, relative	mbar	-350 – -750
Permitted pressures, vacuum source or vacuum pump		
Suitable for permitted operating pressure, e.g. Microsart® e.jet fluid pump		
Permitted vacuum tube		
Type: Sartorius vacuum tube, item number 1ZA---0007		
Outer diameter	mm	15
Interior diameter	mm	7
Length	mm	200

### 13.4 Permitted Vacuum Filtration Units

	Unit	Value
Type: Sartolab® vacuum filtration unit RF 50   150   250   500   1000		
Type: Sartolab® vacuum filtration unit BT 150   250   500   1000		
Quantity		1–6

## 13.5 Plug

	Unit	Value
Dimensions		
Diameter, lower, maximum	mm	6
Diameter, upper, minimum	mm	8
Conicity	°	5–6
Material: Silicone	Shore A	50–60

## 13.6 Cleaning and Disinfection

### Permitted cleaning agents

Solution 70% isopropanol

Solution 70% ethanol

### Cleaning and disinfection procedures:

Wipe off the product with a permitted cleaning agent.

**No autoclaving**

# 14 Accessories, Consumables, and Spare Parts

## 14.1 Accessories

This table contains an excerpt of the accessories that can be ordered. For information on other items, contact Sartorius.

Item	Quantity	Order number
Vacuum tube	1	1ZA---0007
Microsart® e.jet pump	1	166MP-4

## 14.2 Consumables

This table contains an excerpt of the vacuum filtration units that can be ordered. For information on other products, contact Sartorius.

Item	Quantity	Order number
Vacuum filtration unit		
Sartolab® RF 50, 0.22 µm, PES	24	180E01-----2
Sartolab® RF 50, 0.45 µm, PES	24	180F01-----2
Sartolab® RF 50, 0.22 µm, PES, not sterile	96	180E01-----E8
Sartolab® RF 50, 0.45 µm, PES, not sterile	96	180F01-----E8
Sartolab® RF 150, 0.22 µm, PES	12	180E02-----E
Sartolab® RF 150, 0.45 µm, PES	12	180F02-----E
Sartolab® RF 250, 0.1 µm, PES	12	180D03-----E

Item	Quantity	Order number
Sartolab® RF 250, 0.22 µm, PES	12	180E03-----E
Sartolab® RF 250, 0.45 µm, PES	12	180F03-----E
Sartolab® RF 500, 0.22 µm, PES	12	180E04-----E
Sartolab® RF 500, 0.45 µm, PES	12	180F04-----E
Sartolab® RF 1000, 0.1 µm, PES	12	180D05-----E
Sartolab® RF 1000, 0.22 µm, PES	12	180E05-----E
Sartolab® RF 1000, 0.45 µm, PES	12	180F05-----E
Sartolab® BT 150, 0.22 µm, PES	12	180E12-----E
Sartolab® BT 250, 0.22 µm, PES	12	180E13-----E
Sartolab® BT 500, 0.22 µm, PES	12	180E14-----E
Sartolab® BT 1000, 0.22 µm, PES	12	180E15-----E
Sartolab® BT 1000, 0.45 µm, PES	12	180F15-----E

### 14.3 Spare Parts

This table contains an excerpt of spare parts that can be ordered.  
For information on other products, contact Sartorius.

Item	Quantity	Order number
Rubber pad	6	69MB0008
Bracket (including O ring)	1	69MB0005

# 15 Sartorius Service

Sartorius Service is available for queries regarding the device. For information about the service addresses, services provided, or to contact a local representative, please visit the Sartorius website ([www.sartorius.com](http://www.sartorius.com)).

When contacting Sartorius Service with questions about the system or in the event of malfunctions, be sure to have the device information, e.g. serial number, close at hand. This information can be found on the manufacturer's ID label.



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The information and figures contained in these instructions correspond to the version date specified below.

Sartorius reserves the right to make changes to the technology, features, specifications and design of the equipment without notice.

Masculine or feminine forms are used to facilitate legibility in these instructions and always simultaneously denote all genders.

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