

Whatman eButler Membrane Dispenser

Operating Instructions

Original instructions

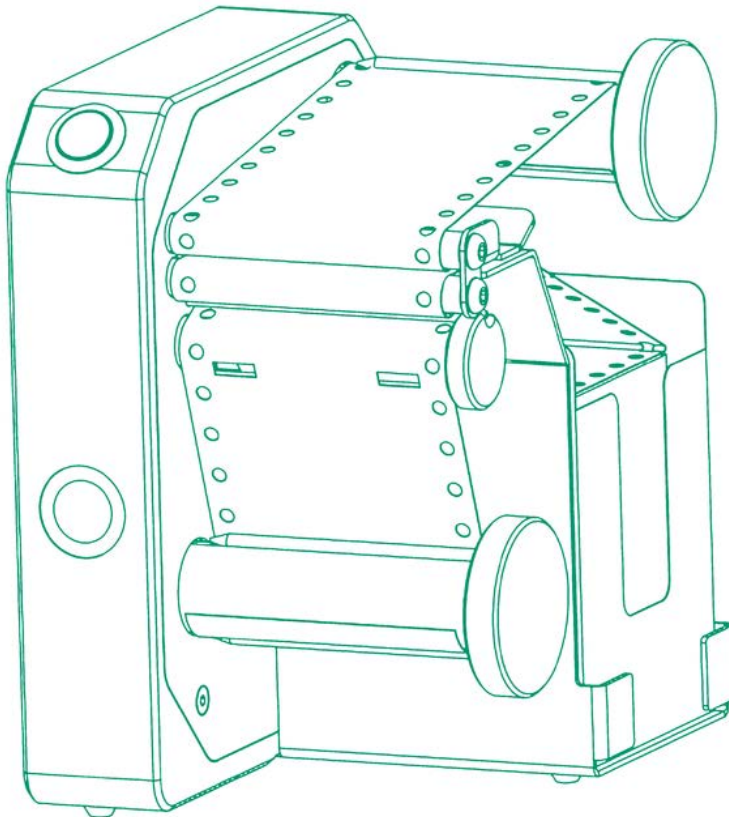


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1 Introduction

About this chapter

This chapter contains information about this manual, important user information and intended use of the product.

In this chapter

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1.1 Important user information

Read this before operating the product



All users must read the entire *Operating Instructions* before installing, operating or maintaining the product.

Always keep the *Operating Instructions* at hand when operating the product.

Do not install, operate, or perform maintenance on the product in any other way than described in the user documentation. If you do, you may be exposed or expose others to hazards that can lead to personal injury and you may cause damage to the equipment.

Intended use of the product

Whatman™ eButler Membrane Dispenser is intended for the mechanised supply (dispensing) of sterile filter membranes.

The instrument is not intended or suitable for any other purpose. If the instrument is nevertheless used for purposes that do not correspond to its intended use, this is considered improper use.

Non-intended use

The instrument and its accessories are not intended for any use other than that specified in these *Operating Instructions* or in the separate documentation.

Any use that deviates from the intended use and any use that goes beyond the specifications made in the *Operating Instructions* or in separate documentation is considered improper and therefore inappropriate.

The user (owner, operator as well as operating, maintenance, and repair personnel) uses the instrument improperly and not in accordance with its intended purpose if any of the following actions is performed.

- Using other sterile packaging than specified.
- Using of other stock sizes of membrane packaging than specified.
- Using under other environmental conditions than described.
- Operation with electrical power of other parameters than described.
- Operation with dismantled instrument cover.
- Operation in damaged condition.
- Operation with defective or otherwise non-functional sensor for detecting the punched windows in the backing paper.

- Failure to comply with requirements regarding cleaning, maintenance, servicing and inspection.
- Carrying out work with the stack of membrane packaging or in the area of the driven take-up rollers without switching off the instrument and disconnecting the main power.

Prerequisites

In order to operate Whatman eButler Membrane Dispenser in the way it is intended:

- The user must read and understand the Safety Instructions chapter in the *Operating Instructions*.
- Whatman eButler Membrane Dispenser must be installed in accordance with the site requirements and instructions in the *Operating Instructions*.

1.2 About this manual

Purpose of this manual

The Operating Instructions manual provides information needed to install, operate and maintain the product in a safe way.

Scope of this manual

This Operating Instruction manual is valid for Whatman eButler Membrane Dispenser.

Typographical conventions

Hardware items are identified in the text by **bold** text.

In electronic format, references in *italics* are clickable hyperlinks.

Notes

Note: *A note is used to indicate information that is important for trouble-free and optimal use of the product.*

1.3 Abbreviations and definitions

Abbreviations

Abbreviation	Description
STL	Sterile packed leporello folded format membranes

Definitions

Name	Definition
Manufacturer	Cytiva Sweden AB is subsequently referred to as the "Manufacturer" in these operating instructions.
Operator	An operator is a person who operates the product for trade or commercial purposes or allows a third party to use it, and has legal responsibility for the product with regard to protecting users, staff or third parties during operation. The operator or their agent must make sure that the items described in Chapter 2 Safety instructions, on page 8 are complied with.
Instrument	The Whatman eButler Membrane Dispenser is subsequently referred to as the "instrument".

2 Safety instructions

About this chapter

This chapter describes safety precautions, labels and symbols that are attached to the instrument. In addition, the chapter describes risk assessment and emergency procedures.

In this chapter

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2.1 Safety precautions	9
2.2 Labels and symbols	11
2.3 Using the product	12
2.4 Emergency procedures	13

Important



WARNING

Before installing, operating or maintaining the product, all users must read and understand the entire contents of this chapter to become aware of the hazards involved.

2.1 Safety precautions

Introduction

Whatman eButler Membrane Dispenser is powered by mains voltage.

Before installing, operating, or maintaining the instrument, you must be aware of the hazards described in this manual.

Definitions

This user documentation contains safety notices (WARNING, CAUTION, and NOTICE) concerning the safe use of the product. See definitions below.



WARNING

WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury. It is important not to proceed until all stated conditions are met and clearly understood.



CAUTION

CAUTION indicates a hazardous situation which, if not avoided, could result in minor or moderate injury. It is important not to proceed until all stated conditions are met and clearly understood.



NOTICE

NOTICE indicates instructions that must be followed to avoid damage to the product or other equipment.

General precautions

The following general precautions must be considered at all times. There are also context related precautions, which are written in their respective chapters.



WARNING

Do not operate the product in any other way than described in the user documentation.

2 Safety instructions

2.1 Safety precautions



WARNING

Only properly trained personnel may operate and maintain the product.



WARNING

Accessories. Use only accessories supplied or recommended by Cytiva.



WARNING

Do not use the product if it is not working properly, or if it has suffered any damage, for example:

- damage to the power cord or its plug
- damage caused by dropping the product
- damage caused by splashing liquid onto it



WARNING

Always use appropriate Personal Protective Equipment (PPE) during operation and maintenance of this product.



WARNING

Access to power switch and power cord with plug. Do not block access to the power switch and power cord. The power switch must always be easy to access. The power cord with plug must always be easy to disconnect.



WARNING

Explosive environment. The product is **not approved** for use in a potentially explosive atmosphere.

2.2 Labels and symbols

Nameplate

The nameplate provides information about the model, manufacturer and technical data.

Description of symbols and text

The following symbols and text may be present on the nameplate:

Symbol / text	Description
REF	Product number
LOT	Serial number
12 V, 2500 mA, DC, 30 W	Electrical current and voltage data

2.3 Using the product

Risk assessment

Perform a risk assessment for any risks due to the process or process environment before initial use of the product. Evaluate the effects the use of the product and the operational processes may have on the classification of the hazardous area.

The process might cause the area to increase or the zone classification to change. Implement the risk reduction measures needed, including use of personal protective equipment.

Qualified personnel

Work on or with the instrument is to be carried out by instructed operators during normal operation and by specialists during all other phases of life.

2.4 Emergency procedures

Emergency shutdown

In an emergency situation, press the power switch in the **0** position to completely turn off power of the instrument.

Power failure

The following table describes the consequences of a power failure.

Event	Result
Power failure to Whatman eButler Membrane Dispenser	The instrument stops and will not dispense a filter disc.

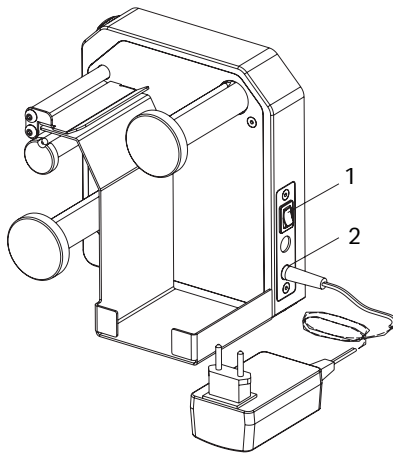
3 Product description

Description

Whatman eButler Membrane Dispenser is an instrument for the mechanized supply (dispensing) of sterile filter membranes using an electric motor.

The filter membranes are on continuous sheets between a layer of backing paper and a layer of cover film (sterile packaging). The filter membranes are dispensed individually. The continuous sheets are supplied to the instrument in a leporello folded format. The backing paper of the sterile packaging is equipped with a switching window to detect the correct feed.

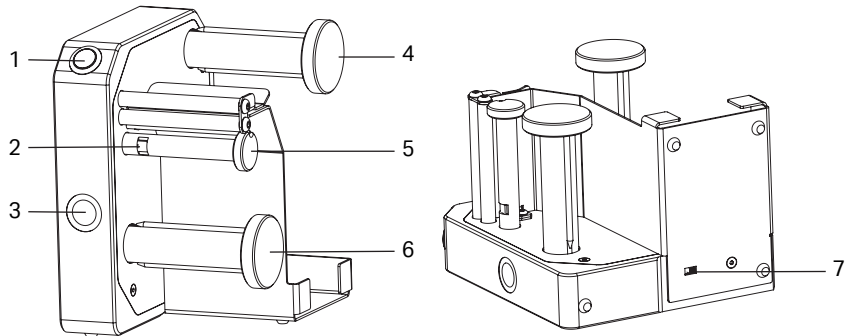
Instrument back



Part	Name	Function
1	Power switch	The power switch is used to control the flow of electricity between the power supply unit and the instrument. In the I position, the instrument is active (On) and filter membranes can be dispensed. In the O position, the power supply is inactive (Off) and filter membranes cannot be dispensed.

Part	Name	Function
2	Power supply unit connection	Power is supplied via the external power supply unit.

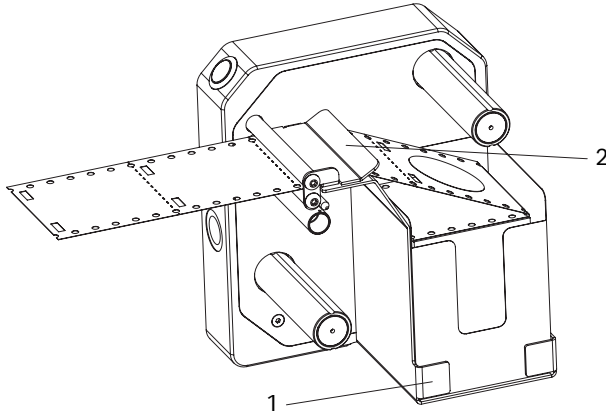
Instrument front and base



Part	Name	Function
1	Push-button	The button starts the dispensing process for one membrane at the touch of a button.
2	Sensor eye	The sensor eye detects the rectangular window punched in the carrier paper of the membrane packaging. This rectangular window marks the end of the dispensing process for a single filter membrane.
3	Optical sensor	The sensor starts the dispensing process for one membrane without touching the instrument.
4	Retaining clip	The retaining clip fixes the film to the winding rollers. The clip is removed by pulling it away from the instrument.
5	Cap	The cap controls the lateral alignment of the carrier paper. The cap is removed by pulling it away from the instrument.
6	Retaining clip	The retaining clip fixes the carrier paper to the winding rollers. The clip is removed by pulling it away from the instrument.
7	Slide switch	The slide switch allows the operator to switch between push-button dispense and optical sensor dispense.

3 Product description

Instrument side



Part	Name	Function
1	Holder	Compartment for the membrane packaging.
2	Dispensing slot	Dispenses the membranes.

4 Installation

About this chapter

This chapter provides required information to enable users and service personnel to unpack, install, and move Whatman eButler Membrane Dispenser.

In this chapter

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4 Installation

4.1 Site preparation

4.1 Site preparation

Introduction

This section describes the site planning and preparation that should be performed before the product is installed.

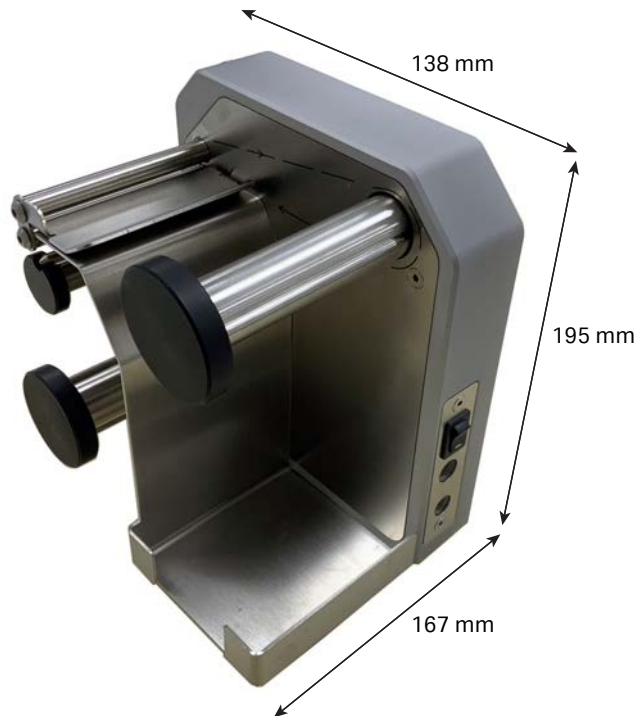
In this section

Section	See page
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4.1.1 Room requirements

Dimensions and weight

The following illustration shows the dimensions of the Whatman eButler Membrane Dispenser instrument.



Parameter	Value
Weight	3.2 kg

Space requirements

Parameter	Specification
Minimum bench area for operating Whatman eButler Membrane Dispenser (Depth x Width)	30 × 30 cm

4 Installation

4.1 Site preparation

4.1.1 Room requirements

Parameter	Specification
Free space required around the Whatman eButler Membrane Dispenser instrument	10 cm of free space on all sides
Inclination of bench surface	Horizontal $\pm 2^\circ$

4.1.2 Site environmental requirements

Environmental requirements



CAUTION

Do not use the product in a dusty atmosphere or close to spraying water.



CAUTION

The product is designed for indoor use only.

The installation site must comply with the following specifications.

Parameter	Requirement
Allowed location	Indoor use only
Ambient temperature, operating	10°C to 40°C
Ambient temperature, storage	-10°C to 60°C
Relative humidity	20% to 80% (non-condensing)
Altitude, operating	Up to 2000 m
Pollution degree of the intended environment	Pollution degree 2

4 Installation

4.1 Site preparation

4.1.3 Power requirements

4.1.3 Power requirements

Electrical power requirements

The following table specifies the power requirements for Whatman eButler Membrane Dispenser.

Parameter	Requirement
External Power Supply	
Output voltage	12 V
Output current	2500 mA
Stand-by power consumption at U_{in}	230 V AC \leq 0.100 W
Input voltage	100 to 240 V
Input frequency	50 to 60 Hz
Input current consumption	0.6 to 0.3 A

4.2 Electrical connections

Connect power



WARNING

Power cord. Only use power cords with approved plugs delivered or approved by Cytiva.

Follow the instructions below to connect power to the Whatman eButler Membrane Dispenser.

Step	Action
1	Connect the external power supply unit to a grounded wall outlet with a voltage according to the site requirements in Environmental requirements, on page 21 .
2	Connect the power output cord of the external power supply unit to the power input on Whatman eButler Membrane Dispenser.

Note:
If the product is moved within the lab or to another building, the product has to be reconnected to electrical power.

4 Installation

4.3 Unpacking, installing and moving

4.3 Unpacking, installing and moving

Unpacking and installing

Follow the steps below to unpack the instrument.

Step	Action
1	Take the instrument out of the box carefully.
2	Remove the plastic covering.
3	Set up the instrument at the workplace. Note: <i>Check the packaging for any visible external damage.</i>
4	Place the instrument on the bench, see Space requirements, on page 19 .

Moving the product

For moving over longer distances, pack the instrument securely in a protective box. Use the original packing material if possible.

5 Operation

About this chapter

This chapter gives instructions on how to operate Whatman eButler Membrane Dispenser in safe way.

In this chapter

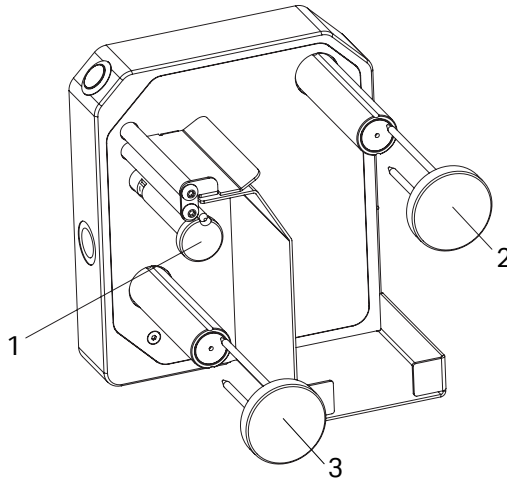
Section		See page
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5.1 Insert the membrane packaging

Insert the packaging

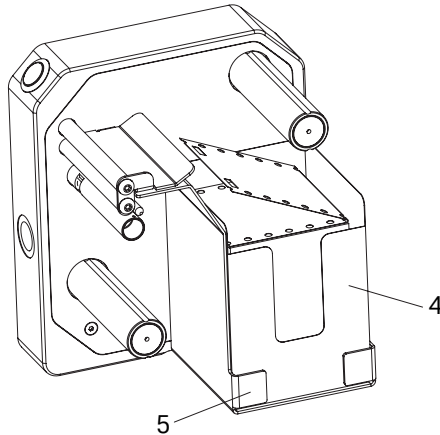
Follow the steps below to insert a new membrane packaging in the instrument.

Step	Action
1	Make sure that the instrument is switched off before inserting a new membrane packaging.
2	Completely remove the cap (1) and the retaining clips (2,3).

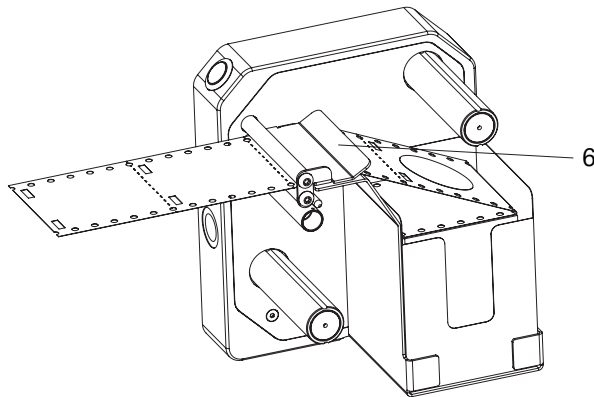


3	Remove the cover from the membrane packaging.
---	---

- | Step | Action |
|------|---|
| 4 | Insert the packaging (4) into the holder (5) so that the packaging cutout faces outward and is open at the top. |



- | | |
|---|---|
| 5 | Insert the sterile packaging through the dispensing slot (6). |
|---|---|



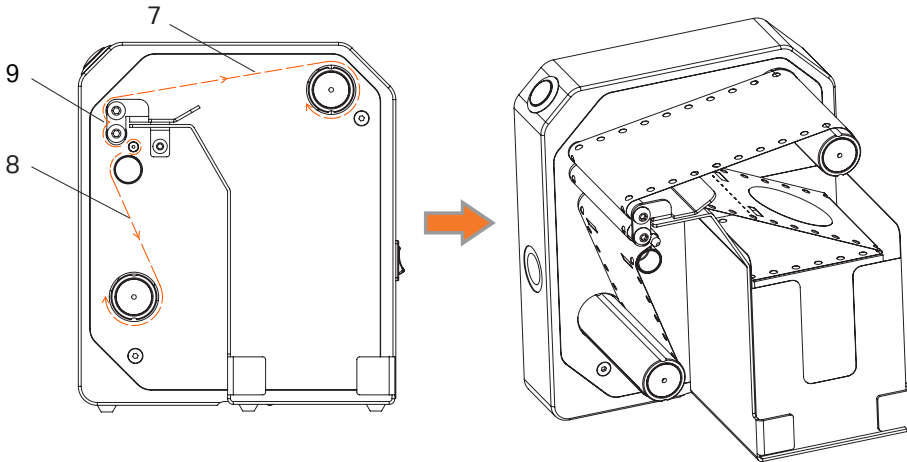
- | | |
|---|--|
| 6 | Pull the sterile packaging through the dispensing slot, so that two filter sections extend from the dispensing slot. The plastic film should face upward and the paper carrier should face downward. |
| 7 | Manually separate (tear apart) the plastic film and the paper carrier paper. |

5 Operation

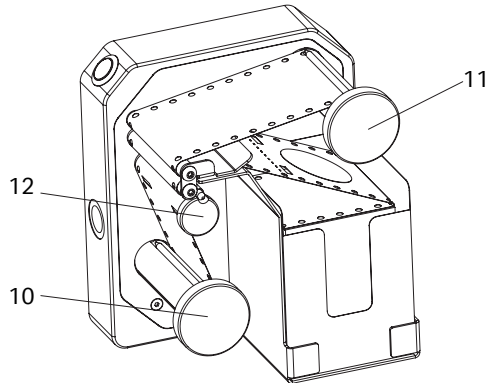
5.1 Insert the membrane packaging

Step	Action
------	--------

- | | |
|---|---|
| 8 | Install the film and the paper along the markings (7, 8) on the instrument to the winding rollers. The separation point of the film and paper should be at the centre of the dispensing edge (9). |
|---|---|



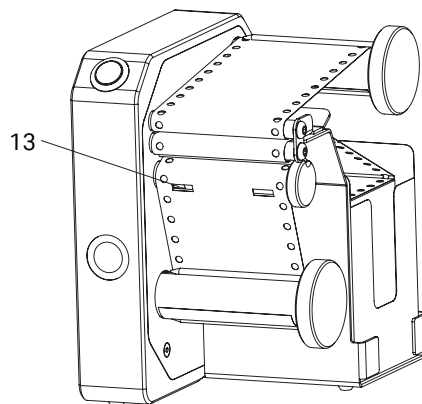
Step	Action
9	Using the retaining clips (10, 11), fasten the film and carrier paper on the winding rollers. Place the cap (12) on the sensor tube.

**NOTICE**

It is important to push the retaining clips and cap until they are firmly seated in place and flush against the rollers.

Note:

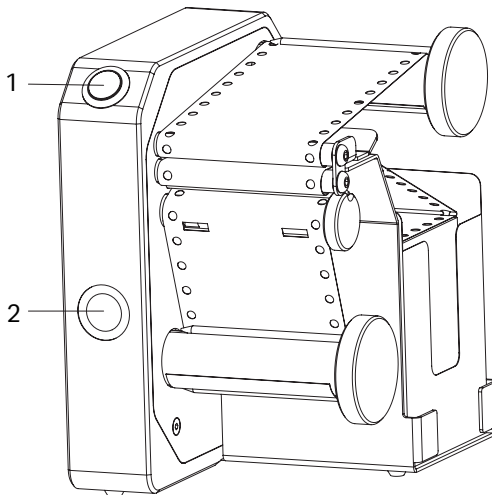
When inserting the carrier paper, you must always make sure that the window punched in the carrier paper for detection of the spacing between the membranes is within range of the sensor eye (13). This window marks the stop position of the membrane dispensing and prevents the filter membrane from extending too far from the dispensing edge.



5.2 Select the dispensing mode

Select the mode

The instrument provides two different triggers for dispensing the membranes:

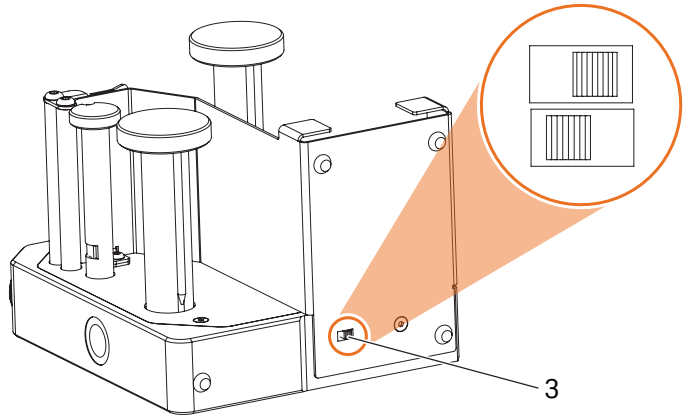


- Push-button dispense (1)
- Optical sensor dispense (2)

Follow the steps below to select the dispensing mode.

Step	Action
1	Set the power switch to the ● position.
2	Disconnect the power supply unit from the electrical socket.
3	Place the instrument on the side on a level table surface so that the winding rolls face vertically upward, and the base of the instrument faces you.
4	Locate the slide switch (3) on the base of the instrument. <ol style="list-style-type: none">If you want to dispense the membranes by pressing a button, move the slide switch to the right.If you want to dispense the membranes using the optical sensor, move the slide switch to the left.

Step **Action**



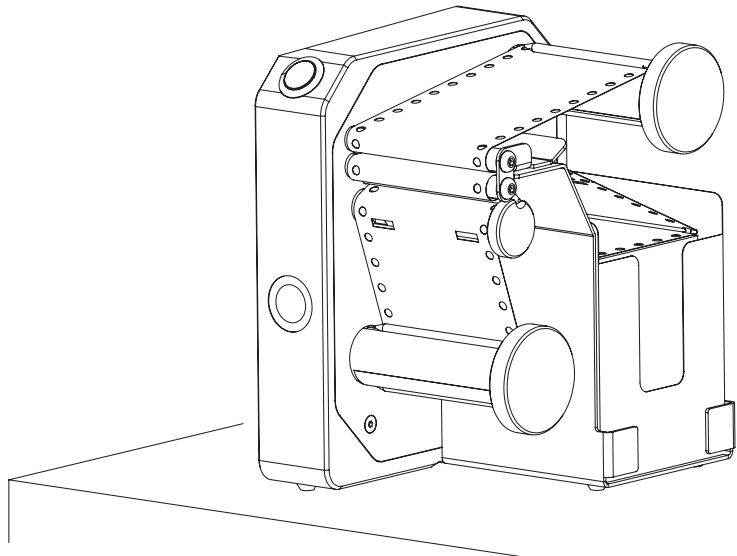
5 Return the instrument to the upright position.

5.3 Dispense the membranes

Dispense using the push-button

Follow the steps below to dispense the membranes.

Step	Action
1	Set up the instrument with the winding rollers parallel to the edge of the table, to allow the user to remove the membrane from the front.

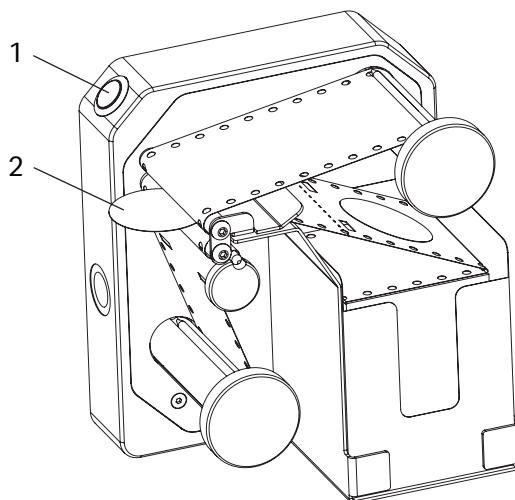


- 2 Plug the power supply unit into the electrical socket.
- 3 Set the power switch to the **I** position.
- 4 Press the push-button (1).

Note:

The first cells of each new membrane packaging are empty.

Step	Action
------	--------



- 5 Repeat step 4 until a cell with membrane is released.

Result:

The membrane (2) is dispensed and held in the partially open cell.

- 6 Pull the membrane straight out of the cell using tweezers.

- 7 Switch off the instrument when not in use to avoid unwanted dispensing.

Note:

One dispensing process is performed each time you trigger a dispense.

Dispense using the optical sensor

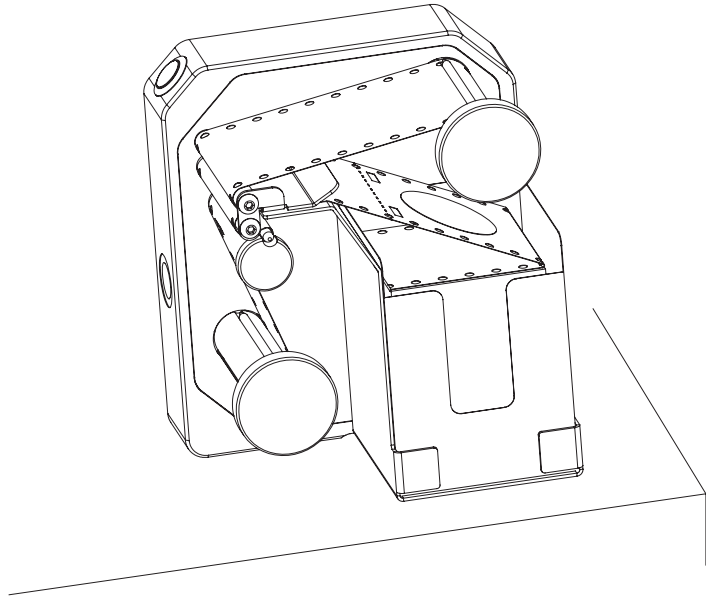
Follow the steps below to dispense the membranes.

5 Operation

5.3 Dispense the membranes

Step	Action
------	--------

- | | |
|---|--|
| 1 | Set up the instrument with the holder facing towards the user, to allow the user to remove the membrane from the side. |
|---|--|

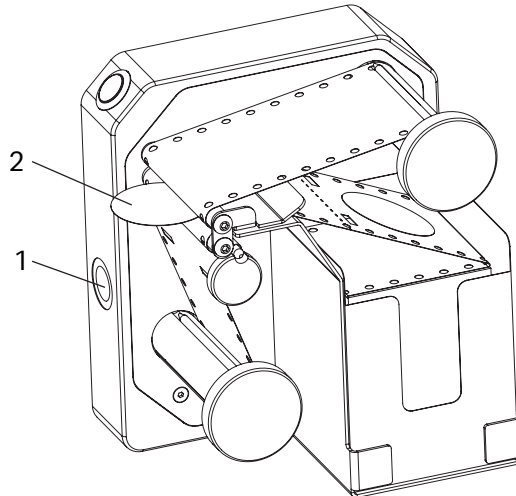


- | | |
|---|--|
| 2 | Plug the power supply unit into the electrical socket. |
| 3 | Set the power switch to the I position. |
| 4 | Move your hand in front of the optical sensor (1) at a distance of approximately 4-5 cm. |

Note:

The first cells of each new membrane packaging are empty.

Step	Action
------	--------



- 5 Repeat step 4 until a cell with membrane is released.

Result:

The membrane (2) is dispensed and held in the partially open cell.

- 6 Pull the membrane straight out of the cell using tweezers.
7 Switch off the instrument when not in use to avoid unwanted dispensing.

Note:

One dispensing process is performed each time you trigger a dispense.

Remove the empty packaging

Follow the steps below to remove the packaging.

Step	Action
------	--------

- 1 Pull out the retaining clips and cap when the last membrane of the packaging is dispensed.
2 Remove the carrier paper and film rolls.
3 Remove the empty membrane packaging.
-

6 Maintenance

Instrument maintenance

The instrument does not need any maintenance.

Cleaning

Follow the steps below to clean the instrument.

Step	Action
1	Clean with a soft, absorbent pad, slightly moistened (not dripping) with one of the cleaning solutions listed in the table below. Note: <i>Do not use any aggressive cleaning agents (solvents etc.).</i>
2	Make sure that no liquid gets into the instrument and wipe with a soft, dry cloth.

Cleaning solutions

Cleaning the instrument depends primarily on the use and the environmental conditions in which the instrument is operated.

Cleaning agents	Validated dilution
Ethanol (<30%)	Ready to use
Ethanol (<50%)	Ready to use
Ethanol (70%)	Ready to use
Didecyltrimethylammonium chloride (<1)%	Ready to use
Propanol (<1%)	Ready to use
N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine (< 1.5%)	Ready to use
Isopropyl alcohol (1% to 70%)	Ready to use
Acetic acid (5% to 15%)	2.5%

7 Troubleshooting

About this chapter

This chapter provides information to assist users and service personnel to identify and correct problems that may occur when operating the product.

Only qualified personnel should do troubleshooting.

Troubleshooting guide

Error description	Cause	Corrective action
The instrument does not dispense when the push-button is pressed.	The power supply unit is disconnected.	Connect the power supply unit to the instrument and plug it into a power socket.
	The instrument is not switched on.	Switch on the instrument
	The slide switch is not set to the position for dispensing via the push-button.	Push the slide switch to the right-hand position (see Instrument front and base, on page 15 and Select the mode, on page 30).
The instrument does not dispense when you hold your hand in front of the optical sensor.	The power supply unit is disconnected.	Connect the power supply unit to the instrument and plug it into a power socket.
	The instrument is not switched on.	Switch on the instrument.
	The slide switch is not set to the position for dispensing via the optical sensor.	Push the slide switch to the left-hand position (see Instrument front and base, on page 15 and Select the mode, on page 30).
	The optical sensor is dirty.	<ul style="list-style-type: none"> • Switch off the instrument. • Clean the sensor using a soft cloth dampened with water.
The dispensing process starts after the push-button is pressed or when the optical sensor is activated, but no membranes are dispensed.	There is no membrane packaging in the instrument.	<ul style="list-style-type: none"> • Switch off the instrument. • Disconnect the electrical plug.

Error description	Cause	Corrective action
	The inserted packaging is empty.	<ul style="list-style-type: none"> Remove the empty packaging (see Remove the empty packaging, on page 35 and insert a new membrane packaging Section 5.1 Insert the membrane packaging, on page 26).
More than one membrane is dispensed after pressing the push-button or after triggering the optical sensor.	The optical sensor for membrane detection is dirty.	<ul style="list-style-type: none"> Switch off the instrument. Disconnect the electrical plug. Clean the sensor using a soft cloth dampened with water.
	The window in the carrier paper does not run over the optical sensor for position detection.	<ul style="list-style-type: none"> Switch off the instrument. Disconnect the electrical plug. Realign the carrier paper.

8 Reference information

About this chapter

This chapter lists the technical specifications of Whatman eButler Membrane Dispenser. The chapter also includes a chemical resistance guide, recycling information, regulatory information and ordering information.

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8.1 Specifications

Technical specification

Parameter	Specification
Dimensions (Width × Height × Depth)	138 × 195 × 167 mm (5.4 × 7.7 × 6.6 inches)
Weight	3.2 kg (70.5 lb)
External Power Supply	
Input	100 to 240 V AC ± 10%
Max power consumption	2500 mA
Output	12 V DC

Membrane specifications

Parameter	Specification
Brand	Whatman sterile packaged membrane
Type	STL microbiology membranes
Diameter	47 or 50 mm
Quantity per box	100 filter membranes
Sterilized	Ethylene oxide
Box dimensions	84 × 92 × 108 mm (3.3 × 3.6 × 4.3 inches)

8.2 Recycling information

Introduction

This section contains information about the decommissioning of the product.



CAUTION

Always use appropriate personal protective equipment when decommissioning the equipment.

Decontamination

The product must be decontaminated before decommissioning. All local regulations must be followed with regard to scrapping of the equipment.

Disposal of the product

When taking the product out of service, the different materials must be separated and recycled according to national and local environmental regulations.

Recycling of hazardous substances

The product contains hazardous substances. Detailed information is available from your Cytiva representative.

Disposal of electrical components



Waste electrical and electronic equipment must not be disposed of as unsorted municipal waste and must be collected separately. Please contact an authorized representative of the manufacturer for information concerning the decommissioning of the equipment.

8.3 Regulatory information

Introduction

This section lists the regulations and standards that apply to the product.

In this section

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8.3.1 Contact information

Contact information for support

To find local contact information for support and sending troubleshooting reports, visit cytiva.com/contact.

Manufacturing information

The table below summarizes the required manufacturing information.

Requirement	Information
Name and address of manufacturer	Cytiva Sweden AB Björkgatan 30 SE 751 84 Uppsala Sweden
Telephone number of manufacturer	+ 46 771 400 600

8 Reference information

8.3 Regulatory information

8.3.2 European Union and European Economic Area

8.3.2 European Union and European Economic Area

Introduction

This section describes regulatory information for the European Union and European Economic Area that applies to the equipment.

Conformity with EU Directives

See the EU Declaration of Conformity for the directives and regulations that apply for the CE marking.

If not included with the product, a copy of the EU Declaration of Conformity is available on request.

CE marking



The CE marking and the corresponding EU Declaration of Conformity is valid for the instrument when it is:

- used according to the *Operating Instructions* or user manuals, and
- used in the same state as it was delivered, except for alterations described in the *Operating Instructions* or user manuals.

8.3.3 Great Britain

Introduction

This section describes regulatory information for Great Britain that applies to the equipment.

Conformity with UK Regulations

See the UK Declaration of Conformity for the regulations that apply for the UKCA marking.

If not included with the product, a copy of the UK Declaration of Conformity is available on request.

UKCA marking



The UKCA marking and the corresponding UK Declaration of Conformity is valid for the instrument when it is:

- used according to the *Operating Instructions* or user manuals, and
- used in the same state as it was delivered, except for alterations described in the *Operating Instructions* or user manuals.

8 Reference information

8.3 Regulatory information

8.3.4 Declaration of Hazardous Substances (DoHS)

8.3.4 Declaration of Hazardous Substances (DoHS)

This section describes the information that applies to the product in China.

根据 SJ/T11364-2014 《电子电气产品有害物质限制使用标识要求》特提供如下有关污染控制方面的信息。

The following product pollution control information is provided according to SJ/T11364-2014 Marking for Restriction of Hazardous Substances caused by electrical and electronic products.

电子信息产品污染控制标志说明 Explanation of Pollution Control Label



该标志表明本产品不含有超过中国标准 GB/T 26572 《电子信息产品中有毒有害物质的限量要求》中限量的有毒有害物质,报废后可以进行回收处理,不能随意丢弃。

This symbol indicates that this electrical and electronic product does not contain any hazardous substances above the maximum concentration value established by the Chinese standard GB/T 26572, and can be recycled after being discarded, and should not be casually discarded.

8.4 Legal information

Legal consequences of improper use

If the instrument is not used as intended, Cytiva Global Life Sciences Solutions USA LLC does not guarantee safe operation of the instrument.

All major conversions and modifications are not permitted.

Exclusion of liability:

The user (owner, operator as well as operating, maintenance and repair personnel) is exclusively liable for personal injury and damage to property resulting directly or indirectly from improper use.

Warranty and liability claims for personal injury, property damage and environmental damage are excluded if they are attributable to one or more of the following causes:

- Improper transport, installation, commissioning, operation or maintenance of the instrument.
- Using the instrument with defective instrument cover.
- Failure to observe the instructions in the *Operating Instructions* regarding commissioning, operation and maintenance.
- Unauthorised intervention or unauthorised structural changes.

Exclusion of warranty:

If the instrument is not used for its intended purpose, all warranty claims are voided.

Product liability:

We expressly point out that, in accordance with the Product Liability Act, we are not liable for damage caused by our devices if this damage is caused by improper repair or if, when replacing parts, our original parts or parts approved by us are not used and the repair is not carried out by the manufacturer.

The same applies to accessories.

8.5 Ordering information

Available STL membrane

This section lists the STL membranes that are compatible for Whatman eButler Membrane Dispenser.

Visit cytiva.com/whatman-laboratory-filtration to find the latest information.

Product number	Description	Pore size	Diameter	Color	Grid	Pack
10408712	ME24/21 STL 0.2uM 47MM 400/PK	0.2 µm	47 mm	white	black	400
10408714	ME24/21 STL 0.2uM 50MM 400/PK	0.2 µm	50 mm	white	black	400
10407312	ME25/21 STL 0.45µm 47MM 400/PK	0.45 µm	47 mm	white	black	400
10407314	ME25/21 STL 0.45uM 50MM 400/PK	0.45 µm	50 mm	white	black	400
10407370	ME25/41 STL 0.45uM 47MM 400/PK	0.45 µm	47 mm	green	black	400
10407372	ME25/41 STL 0.45uM 50MM 400/PK	0.45 µm	50 mm	green	black	400
10407332	ME25/31 STL 0.45uM 47MM 400/PK	0.45 µm	47 mm	black	white	400
10407334	ME25/31 STL 0.45uM 50MM 400/PK	0.45 µm	50 mm	black	white	400
10408915	ME27/21 STL 0.8uM 50MM 400/PK	0.8 µm	50 mm	white	black	400
10407615	ME27/41 STL 0.8uM 50MM 400/PK	0.8 µm	50 mm	green	black	400
10407342	ME27/31 STL 0.8uM 47MM 400/PK	0.8 µm	47 mm	black	white	400

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