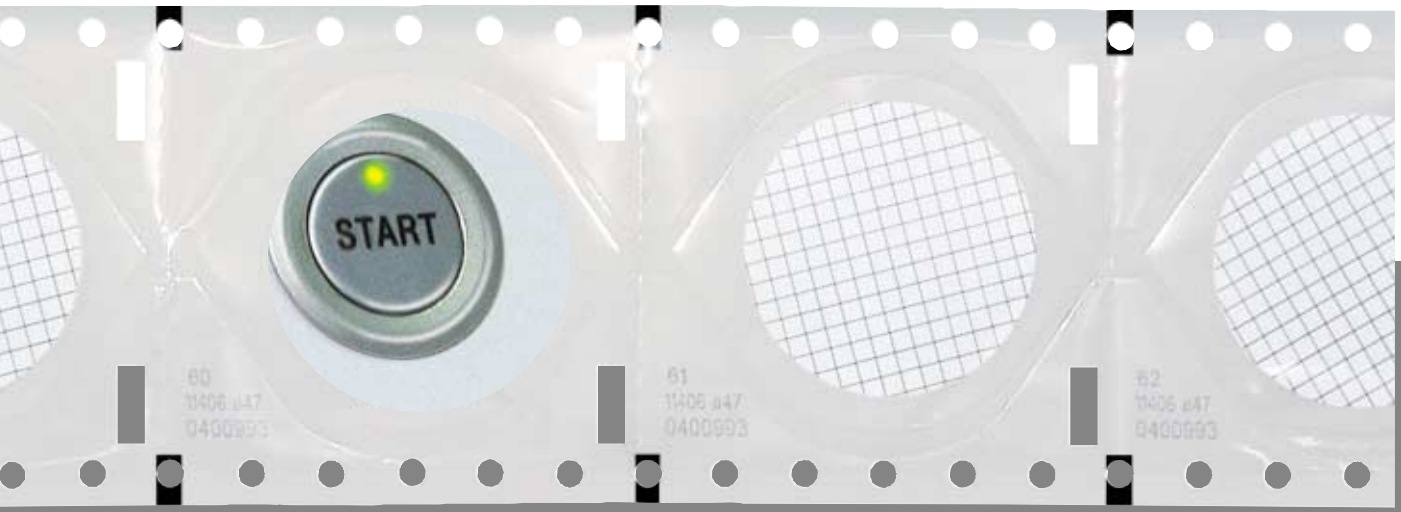
sartorius



Microsart™ e.motion Filter Dispensers

Make Membranes Move

Microsart™ e.motion Dispenser

Microsart – Innovative Products for Microbiological Analysis
Microbiological analysis of water, beverages, foods and pharmaceuticals at public institutes and in the biotechnology, pharmaceutical and food and beverage industries is gaining ever-increasing importance.

In addition, the growing requirements on systems for microbiological testing make it essential to use high-quality technical equipment and consumables that meet the currently valid international legal requirements, directives and guidelines, such as ISO standards, pharmacopeias, Standard Methods and the directives and guidelines of the food and beverage industry.

Microsart is a product family that complies with these standards, and thus keeps pace with the continuously growing requirements of the market. This family covers filtration systems and culture media for microbiological analysis as well as reusable systems, sterile disposables and ready-to-connect single- or multi-fold packaged sterile units.

Microsart™ e.motion Dispensers – Membrane Filters on Demand
The completely new membrane filter dispenser meets all requirements placed on advanced laboratory equipment.

The membrane filters are released from their sterile packaging fully automatically at the touch of a button or hands-free – a dispensing operation is triggered when the optical sensor detects approaching tweezers. A pedal switch can be optionally connected to the dispenser. Thanks to the dispenser's sprocket feed roll technology, each filter is quickly and reliably made accessible. Thus, filter band slippage or even damaged membranes are problems of the past.

The controller specially developed for the Microsart™ e.motion prevents unwanted dispensing of several membrane filters at a time – it's simple, "fail-safe," and fast.
The clear, compact design of the dispenser allows quick and easy cleaning. The Microsart™ e.motion has an interface port available so that other sensor systems can be connected to control the dispenser. The dispenser's low weight makes it easy to transport. Both its functions and design are ideal, giving you the versatility and flexibility you need in your lab.

Consumables
The membrane filter band specially designed for the Microsart™ e.motion can be conveniently inserted, and changed easily and rapidly as needed, even without having to completely use up a complete package quantity. Each box contains 100 membrane filters individually sealed on a special pleated band, and is designed so that it is easy to open and seal for storage. Microsart™ e.motion – reliable help in your lab.

Microsart™ e.motion Membrane Filters

The membrane filters suitable for use in the Microsart™ e.motion are sterile-sealed, without protective paper on top of each filter, in a specially designed individual package on a band.

The special pleating of the band of membrane filter units ensures that they are perfectly flat when dispensed. The shape of the sealed band guarantees uniform dispensing of the individual membrane filters.

The membranes consist of cellulose nitrate (cellulose ester) and have various colors to ensure a high-contrast background suited to the particular application. Sartorius membrane filters not only feature the widest selection, three different filter colors, three pore size types and two different diameters. The decades of experience and the continuous enhancement that have gone into their making are also reflected in the results they deliver: outstanding performance specifications, such as exceptionally high recovery rates of microorganisms, whose morphology and color can be clearly identified; extremely fast filtration rates; and compliance with the currently valid international standards, regulations and guidelines.

For complete traceability, the membrane filter type, diameter, lot number and a unique serial number are printed on the package of each membrane filter unit. In addition, data, such as sterilization and expiration date, pore size and bar code, make handling of these membranes easy and flexible in the lab. The membrane filters' 100% quality and compliance with current standards and regulations, such as ISO 7704 for all 0.45 µm membrane filters, are confirmed in a certificate.

Specially developed pore structures of the 0.45 µm High Flow membrane filters permit faster filtration based on their high flow rates and throughputs. All Microsart membrane filters are "multi-fit"; i.e., because they are designed as "one size fits all," they can be used in all standard dispensers.

Technical Specifications

Microsart™ e.motion Membrane Filter Design
The membrane filters have a diameter of 47 or 50 mm, and are white, green or gray, and gridded. The grid divides the filter area into 130 squares; each measures 3.1 × 3.1 mm.

Sterilization
Gamma irradiation

Growth Test acc. to ISO 7704
Bacteria recovery tests performed with Sartorius membrane filters have shown that the growth and development of sensitive bacteria are not adversely affected or inhibited by the grid lines, the sterilization process or any extractable substances in the membrane.

Sterility Test
No growth

pH of the Filter Extract
< 8.3

Thermal Resistance
130°C max.

Chemical Compatibility
Aqueous solutions (pH 4-8), hydrocarbons and various other organic solvents.

In addition, the certificate included in each package of Sartorius membrane filters confirms that they have been manufactured by applying the latest GMP standards. The development, production and distribution of these filters are subject to our stringent quality management system that has been certified for compliance with DIN|ISO 9001.

Typical Performance Data of Various Membrane Filter Types:

Pore size		0.2 µm[1])	0.45 µm[2])	0.45 µm[2]) High Flow	0.65 µm
Water flow rate per cm^2 at 1 bar acc. to DIN 58355	in ml/min	20	70	100	130
Retention of coliforms	in %	100	100	100	n. a.
Recovery rate acc. to ISO 7704 as a batch release criterion	in %	≥ 90	≥ 90	≥ 90	≥ 90

[1]) The pore size was determined by quantitative retention of Brevundimonas diminuta according to the ASTM Document F 838-83 (1993) "Standard test method for determining bacterial retention of membrane filters utilized for liquid filtration."
[2]) The pore size was determined by quantitative retention of Serratia marcescens according to the current "Standard Methods for "Water and Waste Water."

Technical Specifications and Order Numbers

Technical Specifications

Dimensions L/H/W	204 mm × 213 mm × 165 mm
Effective depth	250 mm (incl. clamps)
Weight	2.9 kg
Operating voltage	110 V/230 V optional
Frequency	50–60 Hz
Max. power consumption	10 W
Dispensing speed	0.5 sec.
Dispensing delay	5 sec.
Certificates	CE mark and EMC directive; European Standards EN 50081-1 and -2 EN 50082-1 and -2 EN 61010

Order Numbers

16712 Microsart™ e.motion Dispenser Fully automated filter dispenser provides membranes at the touch of a button or hands-free by sensor once it detects approaching tweezers.

1ZE---0028 Pedal switch for Microsart™ e.motion Dispenser. Continuous adjustment, single-pole, 6.0 (2.5) A/250 V, with built-in strip terminal and VDE* seal of approval. Pedal plate and housing made of thermoplastic material; antiskid thanks to 4 rubber feet. Protection rating: IP 22 according to DIN 40050

*VDE = Association of German Engineers

Order Numbers for Membrane Filters

Order No.	Pore Size	Color|Grid	Diameter
114H6Z-47----SCM*	0.45 µm High Flow	White|Black	47 mm
139H6Z-47----SCM*	0.45 µm High Flow	White|Green	47 mm
11406Z-47----SCM*	0.45 µm	White|Black	47 mm
11406Z-50----SCM*	0.45 µm	White|Black	50 mm
13006Z-47----SCM*	0.45 µm	Gray|White	47 mm
13006Z-50----SCM*	0.45 µm	Gray|White	50 mm
13806Z-47----SCM*	0.45 µm	Green|Dark green	47 mm
13806Z-50----SCM*	0.45 µm	Green|Dark green	50 mm
13906Z-47----SCM*	0.45 µm	White|Green	47 mm
13906Z-50----SCM*	0.45 µm	White|Green	50 mm
13005Z-47----SCM*	0.65 µm	Gray|White	47 mm
13005Z-50----SCM*	0.65 µm	Gray|White	50 mm
13004Z-47----SCM*	0.8 µm	Gray|White	47 mm
13004Z-50----SCM*	0.8 µm	Gray|White	50 mm

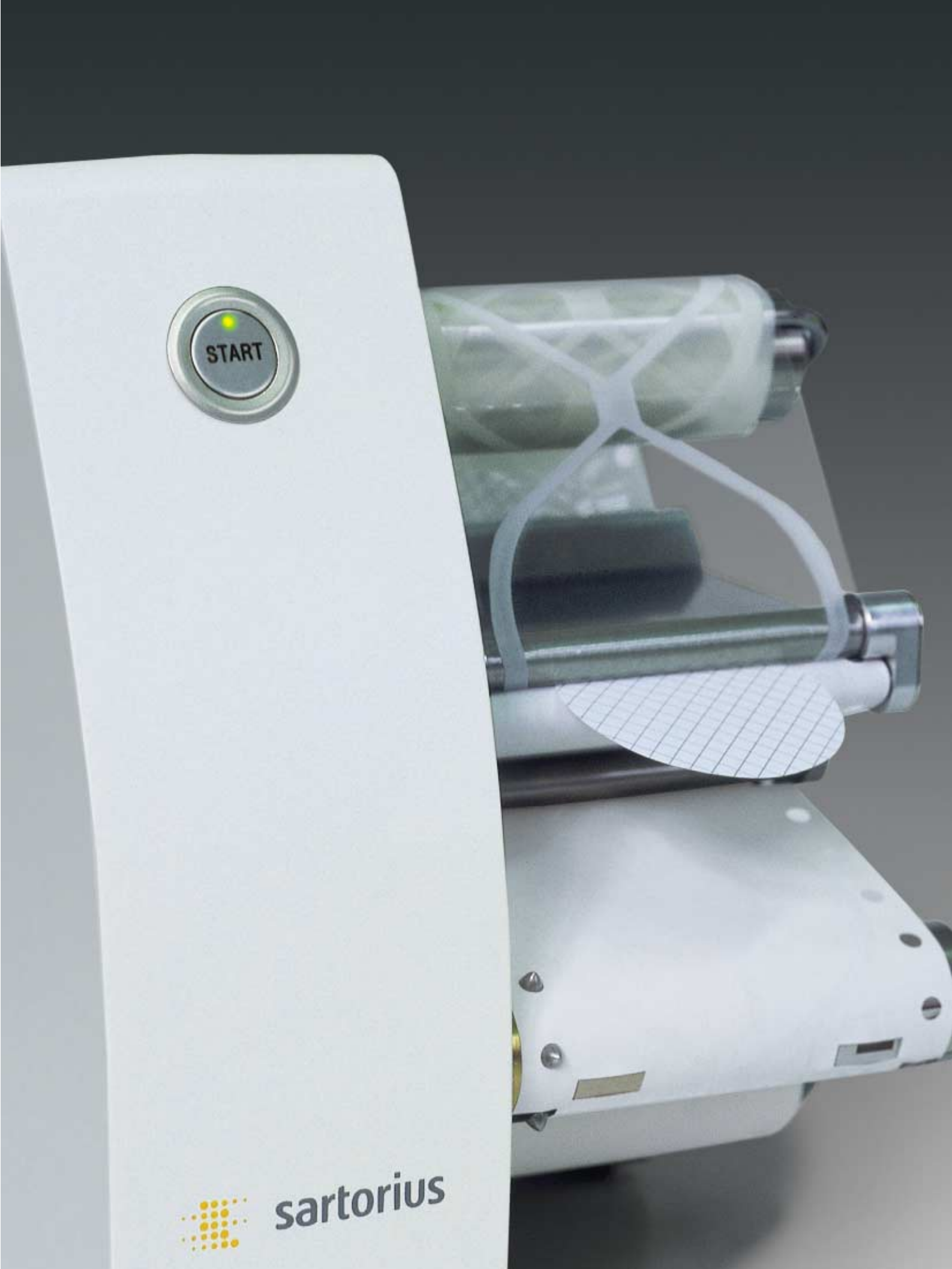
* Materials supplied: Package with 3 boxes, each containing 100 membranes individually sealed on a band

Recommended Accessories

Biosart 250
Sterile disposable funnels
To combine with Microsart e.motion membranes for even more reliable results

Combisart filter holders
One-, three- or six- branch filter holders
The ideal hardware for fast and easy use of Microsart e.motion membranes

Nutrient Pad Sets
Dehydrated culture media
The easiest way to grow microbes in your laboratory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