

# Sartofluor<sup>®</sup>

Cartridges GA,  
Cartridges LG,  
Mini Cartridges,  
Junior, MaxiCaps<sup>®</sup>,  
MidiCaps<sup>®</sup> & Capsules



## Product Information

Sartofluor<sup>®</sup> is especially suited to demanding venting applications with high volume gas streams, extreme humidity, and stringent Steam In Place regimes. The hydrophobic PTFE membranes used in Sartofluor<sup>®</sup> filters offer reliability, process security, and a long service life.

### Introduction

The Sartofluor<sup>®</sup> family of filters has been on the market for over three decades and has improved over time in response to changing customer needs. Today, experience and filtration expertise are combined in our best sterile venting device ever.

Sartofluor<sup>®</sup> contains PTFE membrane making it the most hydrophobic vent filter available. The inherent hydrophobicity of the PTFE membrane is unaffected by repeated autoclaving or steaming and guarantees sterile filtration of both dry and moist gases. Sartofluor<sup>®</sup> filters show superior air flow rates throughout all sizes and formats.

## Applications

- Bioreactors (Inlet | Outlet)
- Storage Tank Venting
- Filling Equipment Venting
- Freeze Dryer
- Autoclave Venting

Sartofluor® GA: Filtration of Air & Gas

Sartofluor® LG\*: Filtration of Air & Liquids (Solvents)

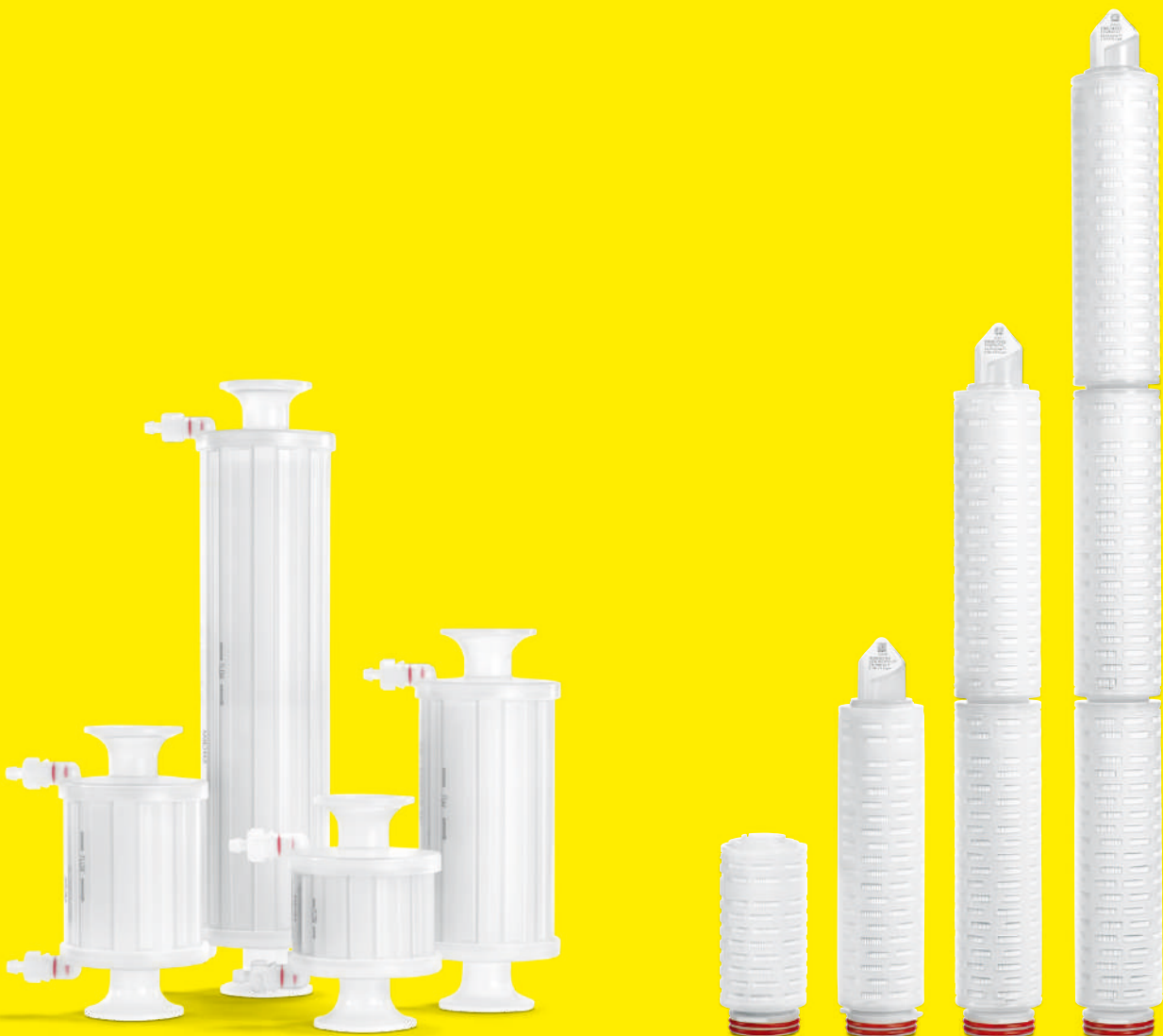
\*Filtration Area of Sartofluor® LG is developed in order to optimize liquid filtration of solvents.  
Membrane and material composition of LG and GA is identical.

## The most reliable sterile venting device

The 0.2 µm single-layer hydrophobic PTFE membrane offers superior moisture repellence and the highest gas flow rates at low differential pressures.

All components were developed and are produced under the full control of Sartorius. In addition, the following critical requirements are met:

- Retention of  $\geq 10^7$  B. diminuta/cm<sup>2</sup> in aerosol and liquid
- Retention of  $\geq 10^7$  MS2 coliphage/cm<sup>2</sup> in aerosol
- Retention of particles sizes 0.005 µm | 0.3 µm
- Bi-directional sterility proven by worst case liquid Bacterial Challenge Test in forward and reverse direction
- 100% integrity tested prior to release
- Clear labelling with Lot. number and individual unit number.  
All information laser marked on each filter housing.



# Technical Data

| Available Sizes        | Filtration Area<br>[m <sup>2</sup>   ft <sup>2</sup> ] | WIT Test Pressure<br>[bar psi] | Sartochek® 4+ and older |                  | Sartochek® 5 & Sartochek® 5+                        | Test Pressure<br>[bar psi] | Max. Diffusion<br>@ 0.7 bar  <br>10.2 psi<br>[ml/min] | Min. Bubble Point<br>[bar   psi] |
|------------------------|--|--------------------------------|-------------------------|------------------|---|----------------------------|---|----------------------------------|
|                        |  |                                | WIT<br>[mL/10 min]      | WFT<br>[mL/ min] | Water Intrusion<br>(Water Flow Rate based) [mL/min] |                            |   |                                  |
| <b>Cartridges GA</b>   |  |                                |                         |                  |   |                            |   |                                  |
| Size 0                 | 0.375   4.05   | 2.5   36                       | 7.0                     | 0.2              | 0.200   | 0.7   10.2                 | 6.0   | 1.0   14.5                       |
| Size 1                 | 0.75   8.1   | 2.5   36                       | 13.0                    | 0.37             | 0.371   | 0.7   10.2                 | 11.0  | 1.0   14.5                       |
| Size 2                 | 1.5   16.1   | 2.5   36                       | 26.0                    | 0.74             | 0.743   | 0.7   10.2                 | 22.0  | 1.0   14.5                       |
| Size 3                 | 2.25   24.2  | 2.5   36                       | 39.0                    | 1.11             | 1.114   | 0.7   10.2                 | 33.0  | 1.0   14.5                       |
| <b>Cartridges LG</b>   |  |                                |                         |                  |   |                            |   |                                  |
| Size 1                 | 0.5   5.4  | 2.5   36                       | 8.0                     | 0.23             | 0.229   | 0.7   10                   | 7.0   | 1.0   14.5                       |
| Size 2                 | 1.0   10.8   | 2.5   36                       | 16.0                    | 0.46             | 0.457   | 0.7   10                   | 14.0  | 1.0   14.5                       |
| Size 3                 | 1.5   16.1   | 2.5   36                       | 24.0                    | 0.69             | 0.686   | 0.7   10                   | 21.0  | 1.0   14.5                       |
| <b>Mini Cartridges</b> |  |                                |                         |                  |   |                            |   |                                  |
| Size 7                 | 0.05   0.54  | 2.5   36                       | -                       | -                | -   | 0.7   10                   | 2.0   | 1.0   14.5                       |
| Size 8                 | 0.1   1.1  | 2.5   36                       | 3.0                     | 0.09             | 0.086   | 0.7   10                   | 3.0   | 1.0   14.5                       |
| Size 9                 | 0.2   2.2  | 2.5   36                       | 4.0                     | 0.114            | 0.114   | 0.7   10                   | 4.0   | 1.0   14.5                       |
| <b>Junior</b>          |  |                                |                         |                  |   |                            |   |                                  |
| Size 7                 | 0.05   0.54  | 2.5   36                       | -                       | -                | -   | 0.7   10                   | 2.0   | 1.0   14.5                       |
| <b>MaxiCaps®</b>       |  |                                |                         |                  |   |                            |   |                                  |
| Size 1                 | 0.5   5.4  | 2.5   36                       | 8.0                     | 0.23             | 0.229   | 0.7   10                   | 7.0   | 1.0   14.5                       |
| Size 2                 | 1.0   10.8   | 2.5   36                       | 16.0                    | 0.46             | 0.457   | 0.7   10                   | 14.0  | 1.0   14.5                       |
| <b>MidiCaps®</b>       |  |                                |                         |                  |   |                            |   |                                  |
| Size 7                 | 0.05   0.54  | 2.5   36                       | -                       | -                | -   | 0.7   10                   | 2.0   | 1.0   14.5                       |
| Size 8                 | 0.1   1.1  | 2.5   36                       | 3.0                     | 0.09             | 0.086   | 0.7   10                   | 3.0   | 1.0   14.5                       |
| Size 9                 | 0.2   2.2  | 2.5   36                       | 4.0                     | 0.114            | 0.114   | 0.7   10                   | 4.0   | 1.0   14.5                       |
| Size 0                 | 0.45   4.8   | 2.5   36                       | 8.0                     | 0.23             | 0.228   | 0.7   10                   | 8.0   | 1.0   14.5                       |
| <b>Capsules</b>        |  |                                |                         |                  |   |                            |   |                                  |
| Size 4                 | 0.015   0.16   | -                              | -                       | -                | -   | -                          | -   | 1.0   14.5                       |
| Size 5                 | 0.03   0.32  | -                              | -                       | -                | -   | -                          | -   | 1.0   14.5                       |

## Regulatory Compliance

- Each individual element is tested for integrity by Bubble Point and Diffusion test
- Fully validated as sterilizing grade filters according to current ASTM F-838 guidelines
- Designed, developed and manufactured in accordance with an ISO 9001 certified Quality Management System
- USP Plastic Class VI Test
- Non-fiber releasing: This product was manufactured with a membrane which meets the criteria for a “non-fiber releasing” filter as defined in 21 CFR 210.3 (b) (6) and 211.72.
- Oxidizable Substances: The filtrate of these filter elements shows a negative reaction when tested according to the current USP

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### Available Pore Size

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0.2 µm

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### Materials

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#### Filter Membrane

ePTFE

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#### Support Fleece

Polypropylene

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#### Core

Polypropylene

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#### End Caps

Polypropylene

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#### O-Rings

Cartridges (GA & LG) | Mini Cartridges | Junior: Silicone  
(optional EPDM or Fluoroelastomer)

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MaxiCaps® | MidiCaps® | Capsules: EPDM

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#### Capsule Housing

MidiCaps® | Capsules: Polypropylene

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### Max. Differential Pressure (in Direction of Flow)

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#### Cartridges (GA & LG) | Mini Cartridges | Junior

5 bar | 72.5 psi at 20°C

2 bar | 29 psi at 80°C

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#### MaxiCaps®

5 bar | 72.5 psi at 20°C

3 bar | 43.5 psi at 50°C

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#### MidiCaps®

5 bar | 72.5 psi at 20°C

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#### Capsules

4 bar | 58 psi at 20°C

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### Max. Back Pressure (in Reverse Direction of Flow)

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#### Cartridges GA | Mini Cartridges | Junior

3 bar | 43.5 psi at 20°C

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#### Cartridges LG | MaxiCaps® | MidiCaps® | Capsules

2 bar | 29 psi at 20°C

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### Sterilization

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#### Cartridges (GA & LG) | Mini Cartridges | Junior

- Autoclaving  
134°C, 2 bar | 29 psi, 30 min  
Sterilization Cycles:  
Min. 25
  - In-Line Steam Sterilization  
134 °C, 20 min. at max differential pressure of 0.5 bar | 7.25 psi  
Sterilization Cycles:  
Max. 150  
Min. 25 (Mini Cartridges)
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#### MaxiCaps® | MidiCaps® | Capsules

- Autoclaving  
134°C, 2 bar | 29 psi, 30 min  
Sterilization Cycles:  
Min. 25 (MaxiCaps® | MidiCaps®)  
Min. 5 (Capsules)
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**Note:** No In-Line Steam Sterilization for MaxiCaps® |  
MidiCaps® | Capsules

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### Technical References

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Cartridges (GA & LG) | Mini Cartridges | Junior |

MaxiCaps® | MidiCaps® | Capsules

Validation Guide: 1000054589

Extractable Guide: SPK5749-e

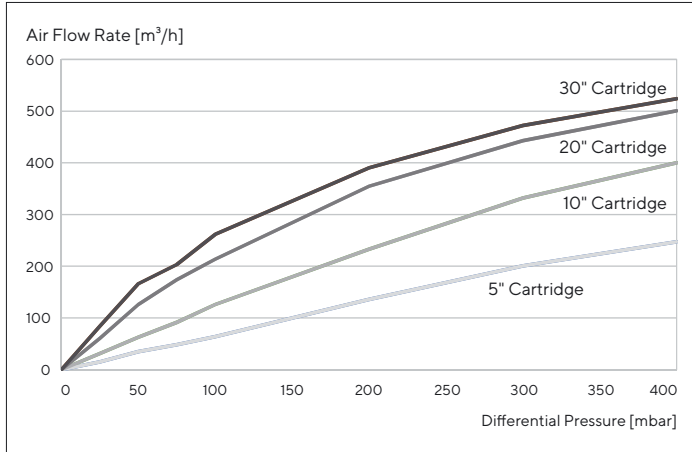
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**Performance**

**Air Flow Rates for Sartofluor® Cartridges GA | Mini Cartridges | Junior | MidiCaps® | Capsules**

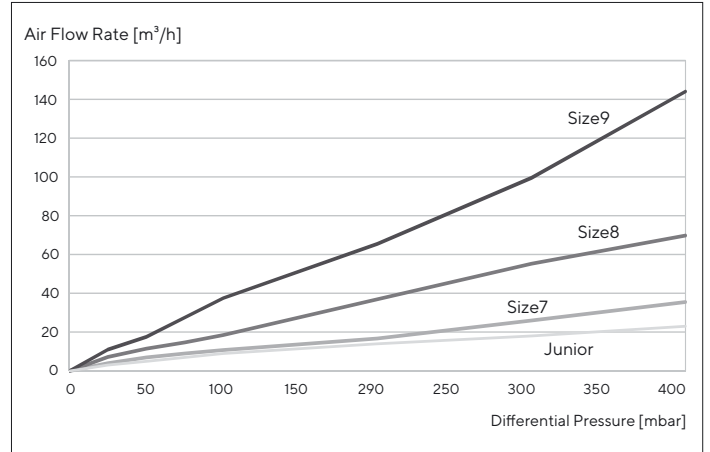
**Cartridges GA**

Under atmospheric pressure conditions



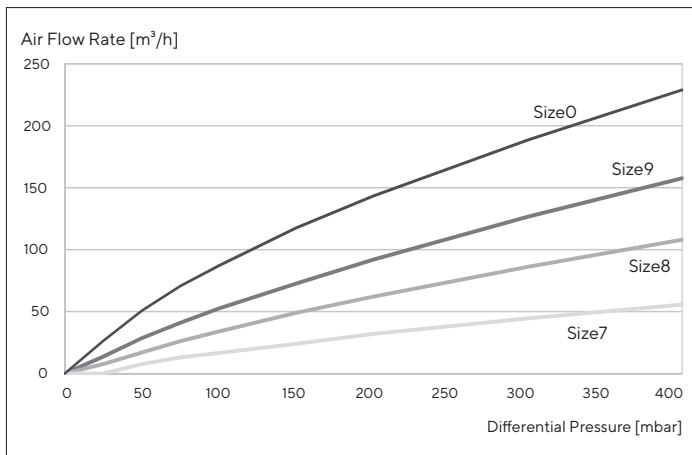
**Mini Cartridges**

Under atmospheric pressure conditions



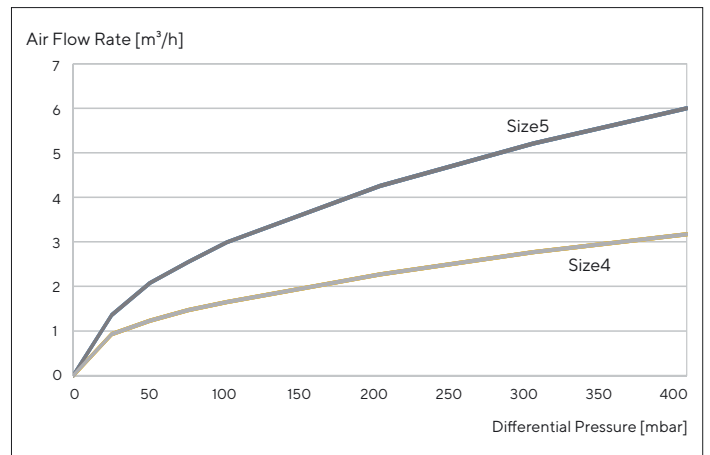
**MidiCaps®**

Valid for SS-Connector



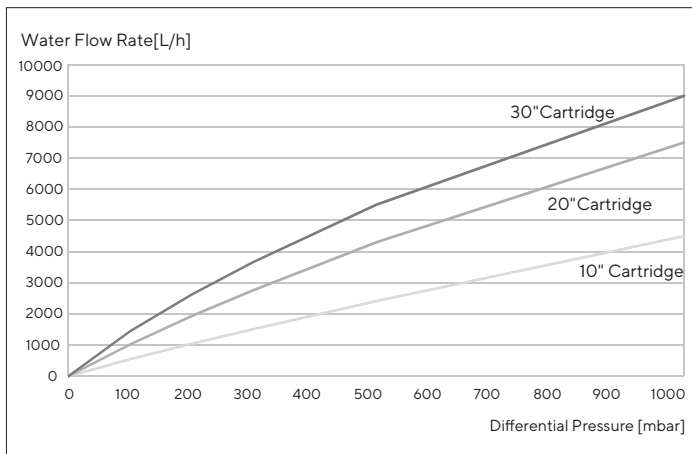
**Capsules**

Valid for OO-Connector

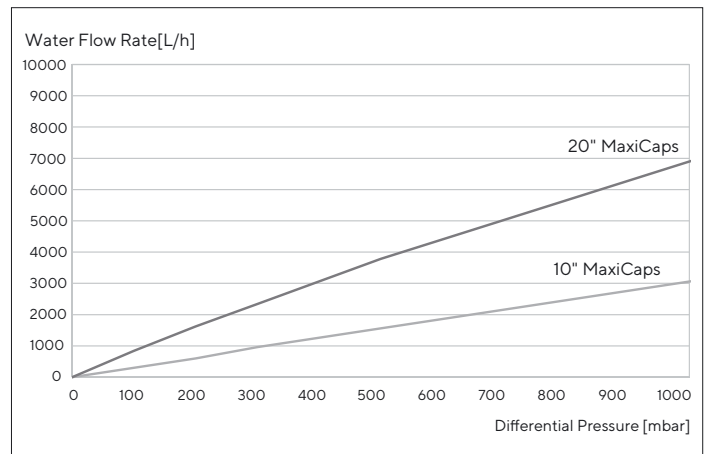


**Liquid Flow Rates for Sartofluor® Cartridges LG | MaxiCaps®**

**Cartridges LG**



**MaxiCaps®**



# Ordering Information



## Cartridges GA

518 25 07 T ■ - - GA

### Filter Size

0: 0.375 m<sup>2</sup> | 4.05 ft<sup>2</sup>

1: 0.75 m<sup>2</sup> | 8.1 ft<sup>2</sup>

2: 1.5 m<sup>2</sup> | 16.1 ft<sup>2</sup>

3: 2.25 m<sup>2</sup> | 24.2 m<sup>2</sup>



## Cartridges LG

518 25 07 T ■ - - LG

### Filter Size

1: 0.5 m<sup>2</sup> | 5.4 ft<sup>2</sup>

2: 1.0 m<sup>2</sup> | 10.8 ft<sup>2</sup>

3: 1.5 m<sup>2</sup> | 16.1 m<sup>2</sup>



## Mini Cartridges

518 15 07 T ■ - - - B

### Filter Size

7: 0.05 m<sup>2</sup> | 0.5 ft<sup>2</sup>

8: 0.1 m<sup>2</sup> | 1.1 ft<sup>2</sup>

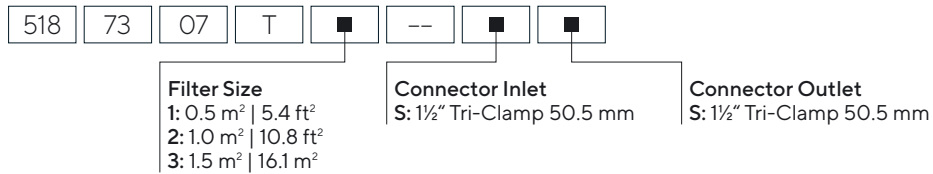
9: 0.2 m<sup>2</sup> | 2.2 ft<sup>2</sup>



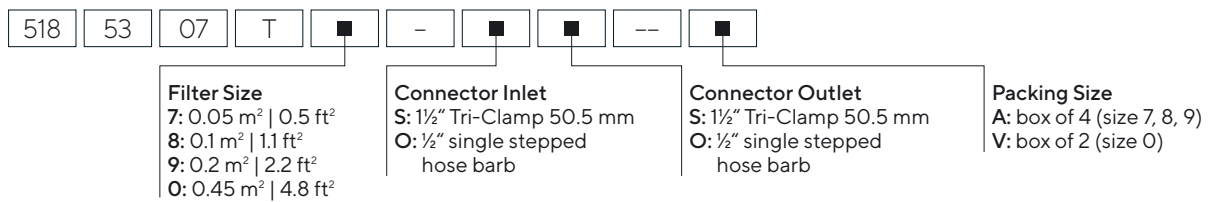
## Junior

518 14 07 T 7 - - - B

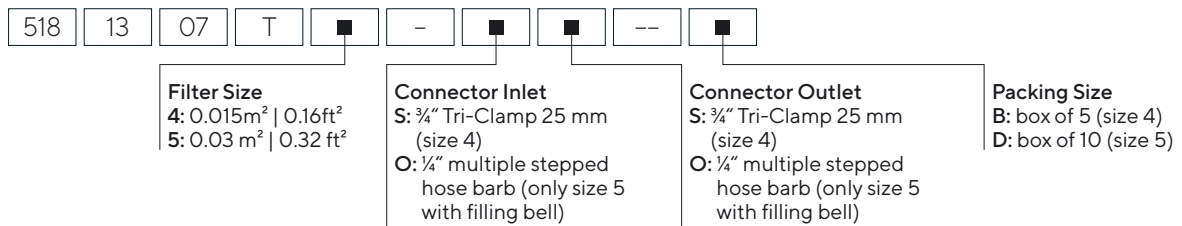
### MaxiCaps®



### MidiCaps®



### Capsules



# Sales and Service Contacts

For further contacts, visit  
[sartorius.com](http://sartorius.com)

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