

# Bacteria Removal Filter Hollow Fiber Element

## SFDA Series

RoHS

### How to Order

**SFDA 203-02**

**Bacteria Removal Filter**  
(Bacteria removal performance LRV ≥ 9)

**Size**

Symbol	Max. flow rate
2	500 L/min

**Case material**

Symbol	Case material
3	Stainless steel

**Port size**

Symbol	Size
02	1/4
03	3/8

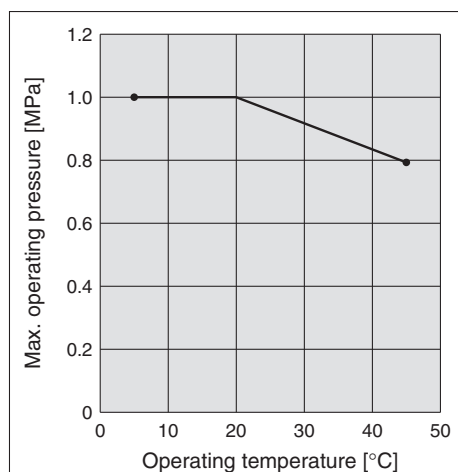
\* The bracket is equipped as standard.  
(Single unit: SFD-BR200)

**Thread type**

Symbol	Type
Nil	Rc
F	G
N	NPT



### Relationship between Operating Temperature and Max. Operating Pressure



### Specifications

Model		SFDA203
Port size		Rc1/4, NPT1/4, G1/4, Rc3/8, NPT3/8, G3/8
Fluid		Air (Nitrogen)
Rated flow		500 L/min (ANR)*1
Nominal filtration rating*2		0.01 μm (99.99 %)*5
Operating pressure range*3		-100 kPa to 1.0 MPa (For nitrogen: 0.99 MPa)
Operating temperature		5 to 45 °C
Initial pressure drop		0.03 MPa (Inlet pressure 0.7 MPa, at max. flow rate)
Element proof differential pressure*4		0.5 MPa
Proof pressure		1.5 MPa
Element life		1 year, or when the pressure drop reaches 0.1 MPa
Materials of parts in contact with fluid	Metal parts	Stainless steel
	Resin/Rubber parts	Materials compliant with FDA/Food Sanitation Law
	Lubrication oil	NSF-H1 grade
Weight	Port size 1/4	450 g
	Port size 3/8	430 g

\*1 Maximum flow rate at inlet pressure 0.7 MPa and pressure drop 0.03 MPa

\*2 Measured under SMC's specified conditions

\*3 The maximum operating pressure varies depending on temperature. Refer to the graph that shows the relationship between the operating temperature and maximum operating pressure on the left.

\*4 This means that the element does not break at 0.5 MPa. See "Specific Product Precautions."

\*5 The bacteria removal filter is intended to filter solid particles. It is not suitable for the separation of water and oil.

#### Bacteria removal performance (bacteria capture performance of filter element) LRV ≥ 9

For example, this value indicates that 4 billion pieces of bacteria are reduced to 0 after passing through the filter. Refer to the equation below for details.

LRV (Log Reduction Value) indicates the bacteria capture performance.

$$LRV = \log_{10} \frac{A}{B} = \log_{10} \frac{4.7 \times 10^9}{1} = 9.7$$

A: Total number of test bacteria applied upstream of the filter  
B: Total number of test bacteria after passing through the filter (downstream)

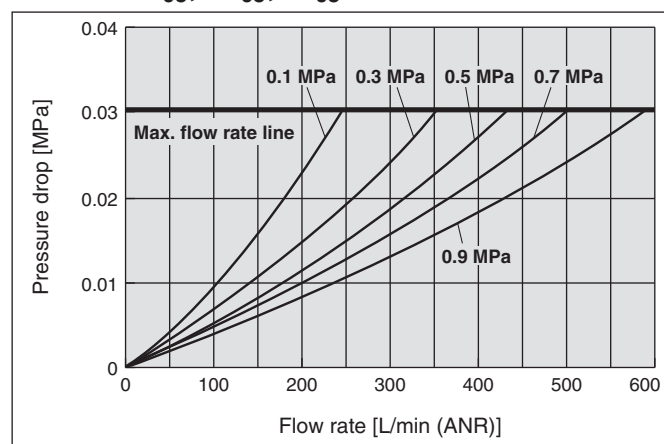
\*1 When the number of bacteria contained in the filtrate is 0, substitute 1.

[Demonstrated by a third-party research institution (Test reference report No.: 2019D-BT-548)]

\* This does not guarantee that all bacteria will be removed. Not for eliminating the virus. This is the data evaluated based on JIS K 3835.

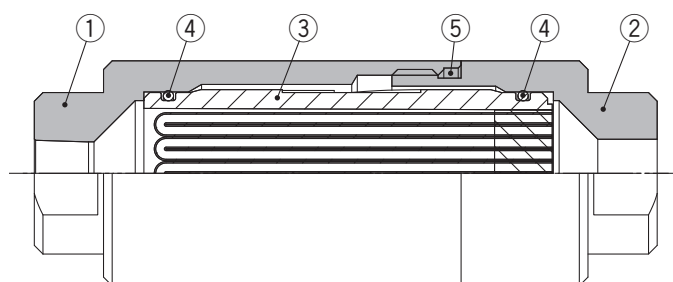
## Flow Rate Characteristics

SFDA203-02, -N03, -F03



## Construction

SFDA203-02/03



### Component Parts

No.	Description	Material
1	Case	Stainless steel
2	Cover	Stainless steel
3	Element	PC, Polyolefin, PU
4	O-ring	FKM
5	O-ring	FKM

### Replacement Parts

Description	Part no.	Set description
<b>Element set</b>	SFDA-EL200	③④⑤ (With 3 O-rings)
<b>Bracket</b>	SFD-BR200	Material: Stainless steel 304

## Dimensions

SFDA203-02/03

