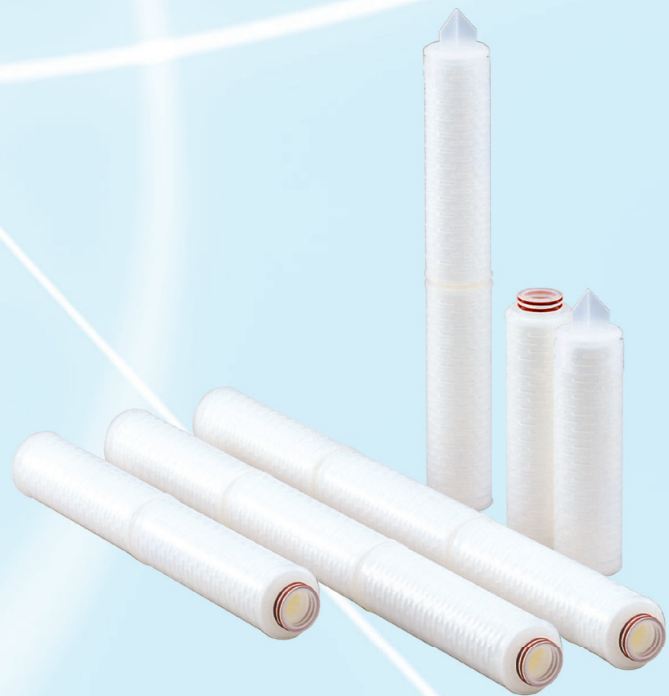


ADVANTEC®

PTFE MEMBRANE CARTRIDGE FILTERS  
FOR AIR AND GAS STERILIZATION

TCF-G020A Type



ADVANTEC TOYO KAISHA, LTD.

# PTFE MEMBRANE CARTRIDGE FILTERS FOR AIR AND GAS STERILIZATION

TCF-G020A Type

ADVANTEC®

## PTFE MEMBRANE CARTRIDGE FILTER

### Food and Beverage Applications

- ▶ Sterilization of processing air and gases
- ▶ Tank Vent Filters

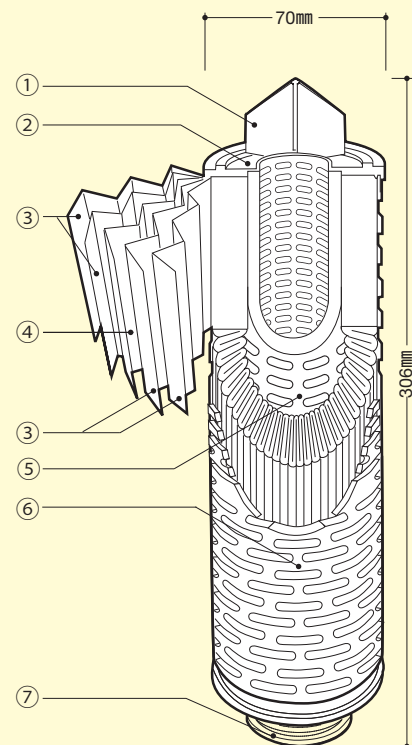


### Features

- A cartridge filter consisting of hydrophobic PTFE membrane and polypropylene hardware with high heat resistances.
- Sterilizing performance was validated by bacterial challenge tests conducted in liquid (at the level of " $\geq 10^7$ cfu/250mm") with *Pseudomonas diminuta*.
- Passed SIP operation repeated 100 times, each time lasting 1 hour at 126°C.
- Applicable for use in food and beverage plants. Conforms to compositional standards for food, food additives, etc. specified by the Ministry of Health and Welfare Notification No.370, 1959, and specification tests for apparatus or packaging. Conforms to Positive List System for Food Utensils, Containers, and Packaging in Japan.
- High reliability proven by validation through integrity test for all lots and enhanced by ensured traceability systems.

### Applications

- Sterilization of various gases used in the manufacturing process of food and beverages
  - Pushing air for the tank filling
  - Compressed air for steam replacement after SIP process
  - CO<sub>2</sub> gas for filler
  - CO<sub>2</sub> gas for seamers/ cappers
  - Sterile air for rinser
  - Sterile air for integrity testing of filters
  - N<sub>2</sub> for food containers and packaging
- Air vent for the pressure vessel



### Materials

- ① Fin/ Lid Parts: Polypropylene
- ② Endcap: Polypropylene
- ③ Support Media: Polypropylene
- ④ Membrane Filter: PTFE
- ⑤ Core: Polypropylene
- ⑥ Protector: Polypropylene
- ⑦ O-ring Parts: Polypropylene/ PSU

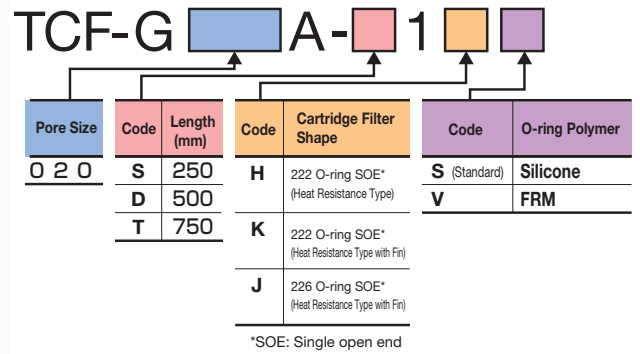
## Specifications

Product Name		TCF-G020A
Pore Size		0.2 μm
Effective Filter Area		7,000cm <sup>2</sup> /250mm Type
Log Reduction Value (LRV)*1 (Challenge Organism)		≥ LRV7 ( <i>P. diminuta</i> )
Maximum Differential Pressure*2	25°C	0.39MPa
	80°C	0.20MPa
Maximum Operating Temperature*2		80°C
Integrity Test Diffusion Flow Rate 60vol% IPA at 23°C per 250mm		≥ 17mL/min (at 0.106MPa)
Sterilization Method		In-line Steam Sterilization at 126°C for 1 hour repeated 100 times (100 cumulative hours) Autoclave Sterilization at 121°C for 90 minutes repeated 20 times (30 cumulative hours)

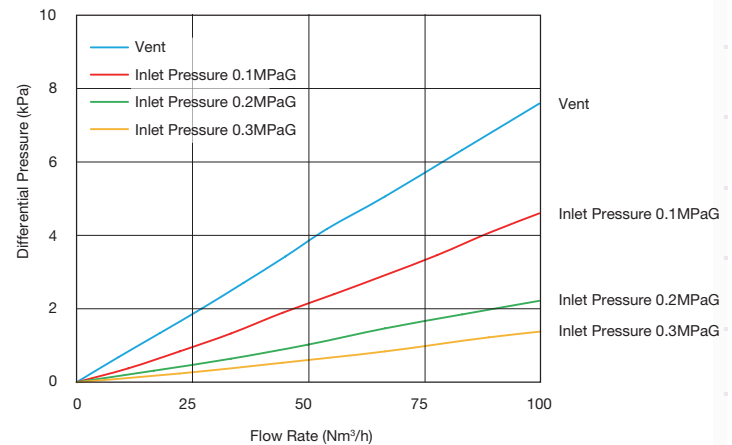
\*1: LRV (Logarithmic Reduction Value) =  $\text{Log}_{10} \frac{\text{Number of colonies in challenge fluid}}{\text{Number of colonies in the filtrate fluid}}$   
 Number of colonies in challenge fluid:  $\geq 10^7$ cfu/250mm type

\*2: Maximum differential pressure and maximum operating temperature are set based on the results of tests conducted with water. These may differ depending on the combination of chemicals, differential pressure, temperature, and time; therefore, we recommend testing before use.

- This product is made of plastic and may deteriorate over time. In particular, long-time exposure to gases with oxidizing properties, such as chlorine gas and ozone, may cause oxidative aging of filters and support media, resulting in degradation in strength. The level of aging may differ depending on the conditions of temperature and pressure, and type of gases. Please ensure the periodic replacement of filters when using the product under severe conditions.



## Typical Flow Rate (AIR)



<Testing Conditions>  
 Sample: 10-inch Cartridge  
 Test Gas: Air (20°C)

- Specifications listed in this brochure are subject to change without notice.
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**ADVANTEC TOYO KAISHA, LTD.**

Overseas Trade Division  
 Hibiya-Kokusai BLDG, 2-2-3, Uchisaiwaicho,  
 Chiyoda-ku, Tokyo, 100-0011 Japan  
 Phone +81-3-5521-2181  
 Fax +81-3-5521-2182  
 E-mail atk-otd@ADVANTEC.cp.jp  
 URL <https://www.ADVANTEC.co.jp/en/>

**ADVANTEC**<sup>®</sup> **MFS, Inc.**

**ADVANTEC MFS, INC.**

6723 Sierra Court, Suite A  
 Dublin, California 94568 U.S.A.  
 Phone (800)334-7132  
 +1-925-479-0625  
 Fax +1-925-479-0630  
 E-mail [sales@advantecmfs.com](mailto:sales@advantecmfs.com)  
 URL <https://www.advantecmfs.com>