

## Fluorodyne® II Filter Cartridges For Secure Microbial Retention

**Fluorodyne II** filter cartridges are hydrophilic membrane filters designed for reliable retention of bacteria in the final filtration of critical fluids in the food and beverage industry.

### Description

The **Fluorodyne II** filter was developed and validated to provide a secure and reliable removal of microorganisms.

The cartridge is constructed from two layers of 0.2 micron polyvinylidene fluoride (PVDF) membrane. The single open ended (SOE) configuration is designed to fit into sanitary housings to ensure effective microbial removal and assembly integrity.

**Fluorodyne II** filter cartridges are suitable for exposure to repeated hot water and *in situ* steam sanitization cycles for longer service life.

Features	Benefits
Cartridges resistant to numerous sanitization cycles	<ul style="list-style-type: none"> <li>• Process reliability</li> <li>• Economical operation</li> <li>• Consistent filtrate quality</li> </ul>
Hydrophilic PVDF media	<ul style="list-style-type: none"> <li>• Microbial stabilization of beverages and dosed ingredients</li> <li>• Easy to wet and integrity test</li> </ul>
Individually serialized modules	<ul style="list-style-type: none"> <li>• Full traceability</li> </ul>
Multiple adaptor options	<ul style="list-style-type: none"> <li>• Easy installation into sanitary housings</li> </ul>

### Microbial Removal Rating

**Fluorodyne II** filter cartridges, passing an appropriate integrity test, provide a sterile effluent when challenged with *Brevundimonas diminuta* at  $\geq 1 \times 10^7$  CFU per cm<sup>2</sup> of effective filtration area.



Fluorodyne II W code filter in AB Style

### Materials of Construction

Filter Medium	PVDF (hydrophilic)
Support and Drainage	Polypropylene
Core, Cage, End Cap and Fin End	Polypropylene
Adaptor	Polypropylene with internal stainless steel reinforcing ring
O-ring Seal	Ethylene propylene rubber or Silicone elastomer

### Quality

- Cartridges produced in a controlled environment
- Manufactured according to ISO 9001:2008 certified Quality Management System

### Food Contact Compliance

Please refer to the Pall website [www.pall.com/foodandbev](http://www.pall.com/foodandbev) for a Declaration of Compliance to specific National Legislation and/or Regional Regulatory requirements for food contact use.

## Technical Information

### Operating Characteristics in Compatible Fluids<sup>1</sup>

Maximum Differential Pressure	Operating Temperature
5.3 bard (76.9 psid) (forward pressure)	50 °C (122 °F)
3.4 bard (49.3 psid) (forward pressure)	90 °C (194 °F)
300 mbard (4.4 psid) (forward and reverse pressure)	<i>in-situ</i> steam sterilization at 125 °C (257 °F)

<sup>1</sup> Compatible fluids are defined as those which do not swell, soften or attack any of the filter components.

### Sterilization and Sanitization

Media	Temperature	Cumulative Time/Cycles <sup>2</sup>
Steam	140 °C (284 °F)	10 hours / 30 x 20 minute cycles
Steam	125 °C (257 °F)	30 hours / 90 x 20 minute cycles
Hot water	85 °C (185 °F)	100 hours / 200 x 30 minute cycles

<sup>2</sup> Measured under laboratory test conditions. The actual cumulative time depends on the process conditions. For applications requiring Sterilization or Sanitization Pall recommends the use of Code 7 adaptors to ensure filter sealing after cooling. Cartridges should be cooled to system operating temperature prior to use. Contact Pall for recommended procedures.

### Pressure Drop vs. Liquid Flow Rate<sup>3</sup>

5.5 liters per minute @ 100 mbar (~1 US gpm @ 1 psi)

<sup>3</sup> Typical initial clean media differential pressure ( $\Delta P$ ) per 250 mm (10") cartridge for water at 20 °C (68 °F); viscosity 1 centipoise. For 508, 762 mm and 1016 mm configurations divide the differential pressure by 2, 3, and 4 respectively.

## Ordering Information

This is a guide to the Part Numbering structure only. For specific options, please contact Pall.

Part Number: AB  FSD  W   
Table 1      Table 2      Table 3

**Table 1: Nominal Length**

Code	Description
05*	5 in (127 mm)
1	10 in (254 mm)
2	20 in (508 mm)
3	30 in (762 mm)
4	40 in (1016 mm)

**Table 2: Adaptor**

Code	Description
2	SOE – single open end with flat closed end and external 226 O-rings
3	SOE – single open end with flat closed end and external 222 O-rings
7	SOE – single open end with fin end and external 226 O-rings
8	SOE – single open end with fin end and external 222 O-rings
28	SOE – single open end with fin end and external 222 O-rings, 3 locking tabs

\* 5 in cartridges are available only in codes 2 and 7. (Confirm code availability with your Pall representative.)

**Table 3: O-ring Seal Material**

Code	Description
H4	Silicone Elastomer
J	Ethylene Propylene Rubber



Pall Food and Beverage

New York – USA  
 +1 516 484 3600      telephone  
 +1 866 905 7255      toll free

foodandbeverage@pall.com

**Visit us on the Web at [www.pall.com/foodandbev](http://www.pall.com/foodandbev)**

Pall Corporation has offices and plants throughout the world. For Pall representatives in your area, please go to [www.pall.com/corporate\\_contact.asp](http://www.pall.com/corporate_contact.asp)

Please contact Pall Corporation to verify that the product conforms to your national legislation and/or regional regulatory requirements for water and food contact use.

Because of technological developments related to the products, systems, and/or services described herein, the data and procedures are subject to change without notice. Please consult your Pall representative or visit [www.pall.com](http://www.pall.com) to verify that this information remains valid.

© Copyright 2013, Pall Corporation. Pall, and are trademarks of Pall Corporation. ® Indicates a trademark registered in the USA. *Filtration. Separation. Solution.sm* is a service mark of Pall Corporation.