

### Masterfilter PVDN series

Masterfilter *DuoFluor* PVDN series filter cartridges are manufactured from an inherently hydrophilic PVDF membrane that offers a broad chemical and temperature resistance. Characterised by its low protein binding properties, the PVDN series is ideal for bioburden reduction, clarification and sterilisation of pharmaceutical and biological solutions.

The PVDN cartridges are available in multiple pore sizes with single-layer PVDF membrane. The membranes are easily wettable and fully integrity testable to meet the pharmaceuticals levels for sterility assurance.

### Applications

- Vaccines
- Chemicals and APIs
- Ophthalmic solutions
- Cold and hot WFI
- Biotech
- Sanitising agents
- Blood derivatives

### Features and Benefits

- Inherently hydrophilic membrane
- Low in protein binding, extractables and non-fibre releasing
- Easily wettable
- High flowrate with low pressure drop

### Materials of Construction

- Membrane: Hydrophilic polyvinylidene fluoride (PVDF)
- Support layers: Polypropylene
- Inner core: Polypropylene
- Outer cage: Polypropylene
- End caps: Polypropylene
- O-rings: EPDM, Silicone, Viton, PTFE encapsulated Viton

### Operating Parameters

- Maximum operating pressure: 6.9 bar at 25 °C, 4.0 bar at 60 °C, 2.4 bar at 80 °C
- Maximum differential pressure forward: 6.9 bar at 25 °C, 4.0 bar at 60 °C, 2.4 bar at 80 °C
- Maximum differential pressure reverse: 3.0 bar at 25 °C, 1.0 bar at 80 °C
- Steam sterilisation: 20 cycles for 30 minutes at 135 °C (< 0.3 bar, 5 psi) forward
- Autoclave: 30 cycles for 30 minutes at 130 °C
- Effective Filtration Area: 0.58 m<sup>2</sup> 10" module



### Quality Assurance

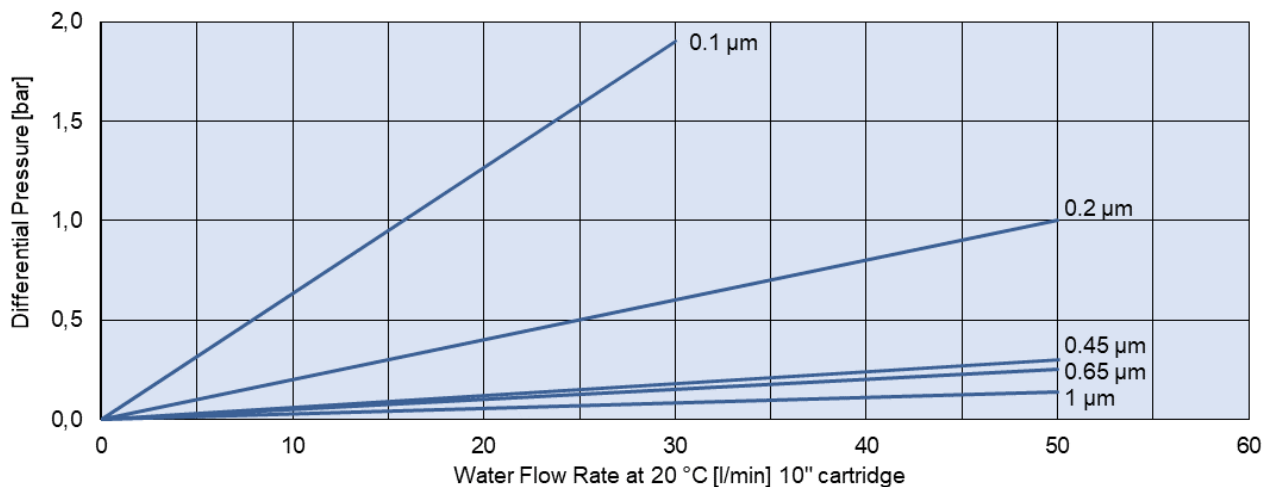
- Retention of 10<sup>7</sup> cfu/cm<sup>2</sup> *Brevundimonas diminuta* (ATCC 19146) according to ASTM F838
- Cartridge is marked with unique serial number for identification and traceability
- All components meet the criteria for non-fibre releasing as defined in 21 CFR 210.3 (b) (6)
- PVDN is manufactured under ISO 9001:2015 GMP

### Biological Standards

- Aqueous extraction less than 0.25 EU/ml as determined by Limulus Amebocyte Lysate (LAL), meeting requirements of USP <85>
- Meets the USP <88> Biological Toxicity Reactivity Test in vivo for Class VI-121°C plastics
- Meets USP <87> in vitro cytotoxicity test and autoclaved filter effluent meets the USP <788> for LVP
- All component materials meet the FDA indirect Food Additive requirements cited in 21 CFR 177-182

**Flow Rate Characteristics**

Flow Rate Characteristics PVDN 0.1 µm | 0.2 µm | 0.45 µm | 0.65 µm | 1 µm



**Part Numbers**

PVDN 020 - 10 - HSF - S

Code	Removal rating [µm]
010	0.1
020	0.2
045	0.45
065	0.65
100	1

Code	Length	
	[mm]	[inch]
05	127	5
10	254	10
20	508	20
30	762	30
40	1016	40

Code	End caps*
STC	Sartorius Code 28
HTC	222 O-ring/flat (Code 3)
HTF	222 O-ring/fin (Code 8)
HSF	226 O-ring/fin (Code 7)
HSC	226 O-ring/flat (Code 2)
HSM	Millipore LAGB
HST	MCY 4463 (Code 18)
SLV	MCY 4440
SLK	Sealkleen retrofit

Code	O-rings
S	Silicone
E	EPDM
V	Viton
P	PTFE encapsulated Viton

\*Other end caps on request

e.g. part number: PVDN020-10-HSF-S  
Membrane PVDF filter cartridge, 0.2 µm, 10" Length, Code 7 end caps, Silicone O-ring