

Masterfilter DPES series

The Masterfilter *OptiPes* DPES series double layer polyethersulphone (PES) cartridges are designed to meet the highest requirements for removal of micro-organisms. The DPES cartridge combines an asymmetric prefiltration membrane followed by a final symmetric layer both PES membrane.

The double layer PES provides a graded filtration throughout their depth facilitating long life, improved flux rates and optimized sterilization of liquids. They are designed for the filtration of a broad range of pharmaceutical products and the removal of particle and bacteria in aqueous filtration application.

Applications

- Vaccines
- Monoclonal Antibodies
- API
- Antibiotics
- PW and UP Water
- Blood derivatives
- SVP/LVP

Features and Benefits

- Double layer membrane ensures extended service life and so reduced operating costs
- Constructed using asymmetric & symmetric membrane provides optimised microbial retention
- Unique thermal and mechanical resistance
- Hydrophilic membrane ensures low protein binding and colour stripping
- Broad chemical compatibility
- Easy to wet membrane for Integrity testing

Materials of Construction

- Membrane: Dual layer asymmetric/ symmetric PES
- Support layers: Polypropylene
- Inner core: Polypropylene
- Adaptor insert: PBT
- Outer cage: Polypropylene
- End caps: Polypropylene
- O-rings: Silicone, EPDM, Viton, PFA



Operating Parameters

- Maximum differential pressure:
Forward: 6.9 bar at 25 °C, 4.0 bar at 60 °C, 2.4 bar at 80 °C
Reverse: 3.0 bar at 25 °C for 30 min., 1.0 bar at 80 °C for 30 min. Note: Reverse filtration is not recommended

- Recommended SIP/Autoclave cycles: 100 cycles of 30 min at 135 °C, differential pressure \leq 0.3bar
- Filtration Area 10" Module: 0.60 m²

Quality Assurance

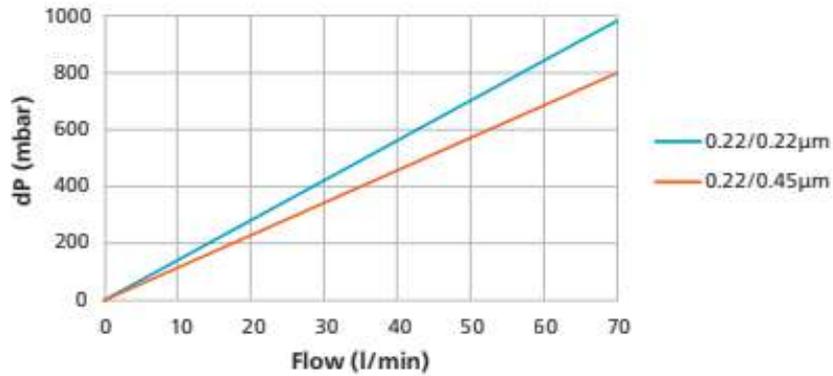
- Tested with *Brevundimonas Diminuta* (ATCC 19146) $\geq 10^7$ CFU/cm²
- Cartridge is marked with unique serial number for identification and traceability
- 100% Integrity testing in manufacturing
- Manufactured under ISO 9001:2015 certified quality management system and cGMP

Biological Standards

- Component materials toxicity meets the USP <88> tests for Class VI-121 °C and ISO 10993 equivalents
- Bacterial Endotoxin testing as per LAL test determined by USP <85> < 0.25 EU/ml
- Component materials meet criteria for Non-fibre releasing filter as defined in 21 CFR,3 (b) (6)
- Comply with EC food compliance requirements of EU 1935/2004 and EU directive EU10/2011

Flow Rate Characteristics

Flow rate



Note: 10" cartridge tested with water @20°C, 1,005 cP (typical flow rate)

Part Numbers

DPES 045020 - 10 - HSF - S

Code	Removal rating [µm]	Code	Length [mm] [inch]		Code	End caps	Code	O-rings
020010	0.2 + 0.1	02	50,8	2	STC	Satorius code 28	S	Silicone
020020	0.2 + 0.2	05	127	5	HTC	222 O-ring/flat (Code 3)	E	EPDM
045020	0.45 + 0.2	10	254	10	HTF	222 O-ring/fin (Code 8)	V	Viton
045045	0.45 + 0.45	20	508	20	HSF	226 O-ring/fin (Code 7)	P	PFA
065020	0.65 + 0.20	30	762	30	HSH	UF retrofit plug in		
065045	0.65 + 0.45	40	1016	40	HSC	226 O-ring/flat (Code 2)		
					STT	126 O-ring T-code		
					HST	MCY 4463 / code 18		
					SLV	MCY 4440		
					SLK	Sealkleen		
					DOE	MCY 1001		
					HSM	Optiseal		

e.g, part number: DPES045020-10-HSF-S

Dual layers PES filter, 0.45/0.2 µm, 10" Length, Code 7 End caps, Silicone O-rings