PROPOR PES Filter Cartridges

- liquid filters
- polyethersulphone membrane

PROPOR PES utilises the unique properties of a patented microbially retentive polyethersulphone membrane to provide sterile filtration to meet the specific needs of the pharmaceutical industry.

PROPOR PES membrane has an asymmetrical pore structure with a high voids volume, which offers high dirt holding capacity, resulting in higher throughputs and higher flow rates than symmetrical membranes.

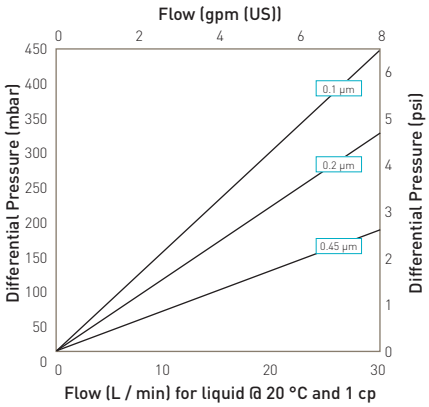
PROPOR PES filters have low chemical and protein binding characteristics which results in minimal levels of material lost to adsorption. They can handle a wide range of liquids across the full pH range including many organic solvents. The filter cartridges have low extractable levels. The membrane is inherently hydrophilic and the filters can be easily and repeatedly integrity tested.

Note: PROPOR is a registered trademark of Parker domnick hunter

Features and Benefits

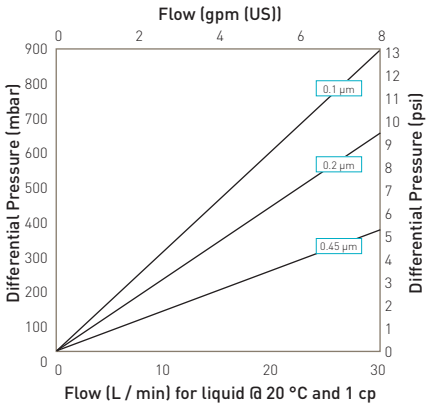
- 0.1, 0.2 and 0.45 micron polyethersulphone membrane
- Microbially retentive and validated to ASTM F838-05 methodology
- High throughputs and flow rates
- Low adsorption of chemicals and proteins
- Wide range of chemical compatibility
- Inherently hydrophilic membrane

Performance Characteristics



For K size for a given flow rate multiply 10¨ size differential pressure by 2

10¨ Size (250 mm) Cartridge



For A size for a given flow rate divide B size differential pressure by 2
For E size for a given flow rate multiply B size differential pressure by 2

B Size (65 mm) Cartridge

Specifications

Materials of Construction

- Filtration Membrane: Polyethersulphone
- Upstream Support: Polyester+
- Downstream Support: Polyester+
- Inner Support Core: Polypropylene
- Outer Protection Cage: Polypropylene
- End Caps: Nylon+
- End Cap Insert: 316L Stainless Steel
- Capsule Body: Nylon+
- Capsule Vent Seals: Silicone
- Filling Bell: Polycarbonate

+ Polypropylene option available for solvent filtration

Food and Biological Safety

Materials conform to the relevant requirements of 21CFR Part 177, EC1935 / 2004 and current USP Plastics Class VI - 121 °C and ISO10993 equivalents.

Recommended Operating Conditions

Up to 70 °C (158 °F) continuous operating temperature and higher short-term temperatures during CIP to the following limits:

Temperature °C	Temperature °F	Max. Forward dP (bar)	Max. Forward dP (psi)
20	68	5.0	72.5
40	104	4.0	58.0
60	140	3.0	43.5
80	176	2.0	29.0
90	194	1.0	14.5
>100 (steam)	>212 (steam)	0.3	4.0

Effective Filtration Area (EFA)

10" (250 mm) 0.57 m^2 (6.1 ft^2)

Cleaning and Sterilisation

PROPOR PES cartridges can be repeatedly steam sterilised in situ or autoclaved at up to 130 °C (266 °F). They can be sanitised with hot water at up to 90 °C (194 °F) and are compatible with a wide range of chemicals. Capsules can be repeatedly autoclaved up to 130 °C (266 °F).

For detailed operational procedures and advice on cleaning and sterilisation, please contact the Technical Support Group through your usual Parker domnick hunter contact.

Retention Characteristics

PROPOR PES sterilising grade filters are validated by bacterial challenge testing to methods specified in ASTM F838-05 (10^7 organisms / cm^2 EFA minimum) with typical in-house challenge levels being 10^{11} organisms per 10" module.

Integrity Test Data

All filters are integrity testable to the following limits when wet with water and using air as the test gas.

Micron Rating		0.1	0.2	0.45
Diffusional Flow	(barg)	4.8	2.8	1.7
Test Pressure	(psig)	69.6	40.6	24.9
Max. Diffusional Flow	(10")	27.0	16.0	16.0
(ml / min)	(K)	12.7	7.5	7.5
	(A)	10.3	6.1	6.1
	(B)	5.1	3.0	3.0
	(E)	2.4	1.4	1.4

Note: Polypropylene option tested in IPA / Water 60 / 40 at reduced test pressure.

Recommended Rinse Volume

Prior to use - 3 litres per 10" (250 mm) filter cartridge.

Pharmaceutical Validation

A full validation guide is available upon request from Laboratory Services Group (LSG).

Ordering Information

Cartridges

ZCMS □ - □ □ □ □ □

Code	Length (Nominal)	
B	2.5"	(65 mm)
A	5"	(125 mm)
K	5"	(125 mm)
1	10"	(250 mm)
2	20"	(500 mm)
3	30"	(750 mm)
4	40"	(1000 mm)

Code	Micron	
010	0.1	µm
020	0.2	µm
045	0.45	µm
065	0.65	µm
080	0.80	µm
120	1.20	µm

Code	Endcap (10")
B	dh DOE
C	BF / 226 Bayonet
G	Recess / 222
N	Internal 213
R	BF / 222 Bayonet

Code	Endcap (Demi)
SK	Retrofit
T	TRUESEAL
Y	Demi Stub
Z	Demi A & B Std

Code	Variant
E	Electronics
P	Pharmaceutical

Code	O-rings
E	EPDM
S	Silicone
V	Viton

Code	Specification
X	All Polypropylene Componentry

DEMICAP Capsules

ZEMS □ - □ □ □ - □ □ □ - □

Code	Length (Nominal)	
E	4.4"	(113 mm)
B	5.5"	(140 mm)
A	7.9"	(200 mm)

Code	Micron	
010	0.1	µm
020	0.2	µm
045	0.45	µm
065	0.65	µm
080	0.80	µm
120	1.20	µm

Code	Inlet Connection
T	1" Tri-Clamp
N	1/2" NPT Male
H	1/2" Hosebarb
G	Stepped Hosebarb
M	1/4" NPT Male
Q	Walther QC
R	Grommel / QC

Code	Outlet Connection
T	1" Tri-Clamp
N	1/2" NPT Male
H	1/2" Hosebarb
G	Stepped Hosebarb
M	1/4" NPT Male
Q	Walther QC
R	Grommel / QC

Code	Variant
P	Pharmaceutical

Code	Grade	
N	Non-sterile	
S	Pre-sterilised	γ (>25 kGy)

Code	Pack N°	
3	Pack of 3	
X	All Polypropylene	Componentry

Code	Accessory	
FB	Filling Bell	

G & H styles only

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