

PROPOR PES

Liquid Filters

0.1, 0.2 and 0.45 micron polyethersulphone membrane

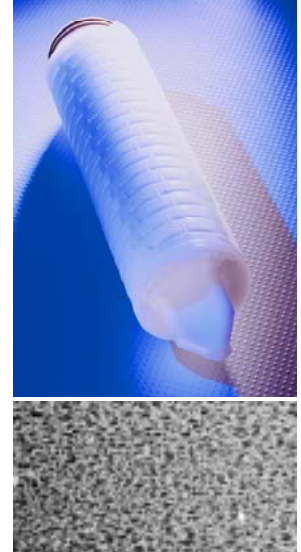
Microbially retentive and validated to ASTM F838-83 methodology

High throughputs and flow rates

Low adsorption of chemicals and proteins

Wide range of chemical compatibility

Inherently hydrophilic membrane



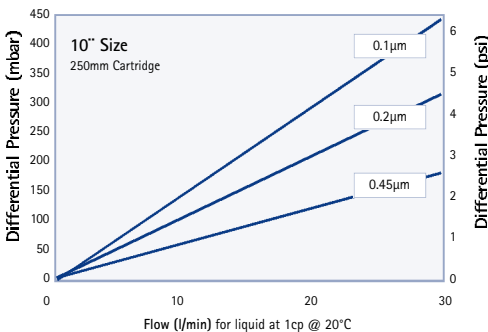
Product Information

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.

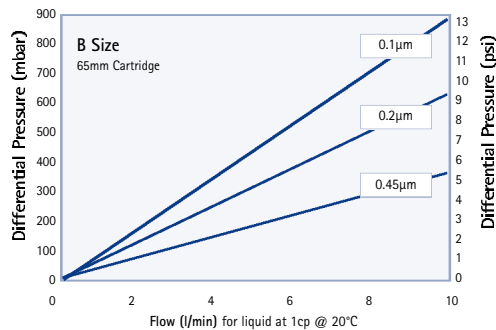
PROPOR PES membrane has an asymmetrical pore structure with a high voids volume, which offers high dirt holding capacity, resulting in higher throughputs and higher flow rates than symmetrical membranes.

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.

Cartridge Flow Rates



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



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

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	:	316 Stainless Steel
Standard 'O'rings/gaskets	:	Silicone
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 and current USP Plastics Class VI - 121°C and ISO10993 equivalents.

Effective Filtration Area

Up to 0.57m² (6.1ft²) per 250mm (10" module)

Retention Characteristics

PROPOR PES Sterilising Grade filters are validated by bacterial challenge testing to methods specified in ASTM F838-83 (10⁷ organisms/cm² minimum) with typical in-house challenge levels being 10¹¹ per 10 inch module.

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)	Maximum Forward dp (bar)	Maximum Forward dp (psi)	Maximum Reverse dp ⁽¹⁾ (bar)	Maximum Reverse dp ⁽¹⁾ (psi)
20	5.0	73	2.0	29
40	4.0	58	1.5	22
60	3.0	44	1.0	15
80	2.0	29	0.5	7
90	1.0	15	not recommended	
>100 (steam)	0.3	4	not recommended	

Capsules may be operated up to a temperature of 40°C (104°F) at line pressures up to 5.0 bar (72 psig) for liquids and 4.0 bar (58 psi) in air/gas.

Cleaning and Sterilisation

PROPOR PES cartridges can be repeatedly in-situ steam sterilised or autoclaved 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).

Integrity Test Data

All filters are flushed with pharmaceutical grade purified water prior to despatch. They are integrity testable to the following limits.

Micron Rating		0.1	0.2	0.45
Diffusional Flow	(barg)	4.80	2.80	1.70
Test Pressure	(psig)	69.6	40.6	24.9
Max. Diffusional Flow	(ml/min)			
	(10 ³)	27.0	16.0	16.0
	(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

⁺polypropylene option tested in IPA/Water 60/40 at reduced test pressure

Recommended Rinse Volume

Prior to use - 3 litres per 10" cartridge

Pharmaceutical Validation

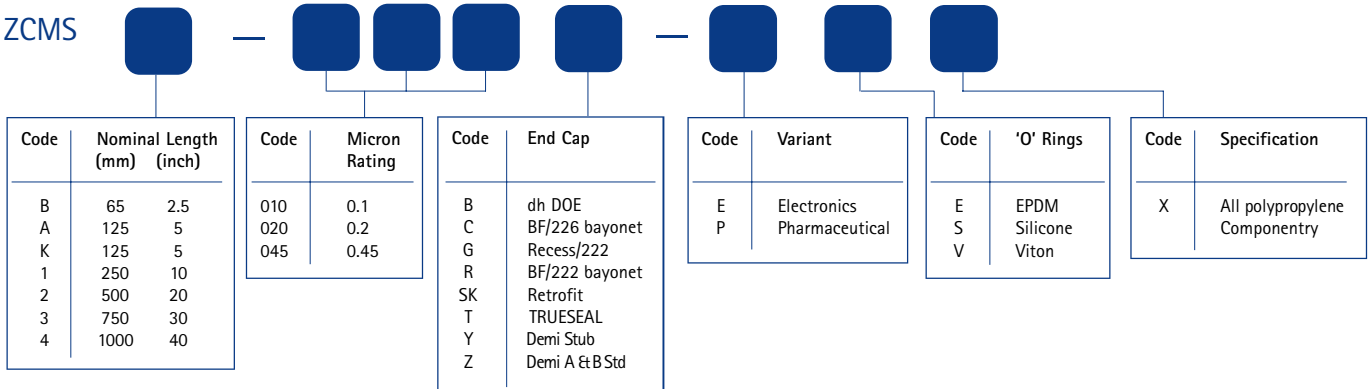
A full validation guide is available upon request with Lab Services Group (LSG) support for specific individual requirements.



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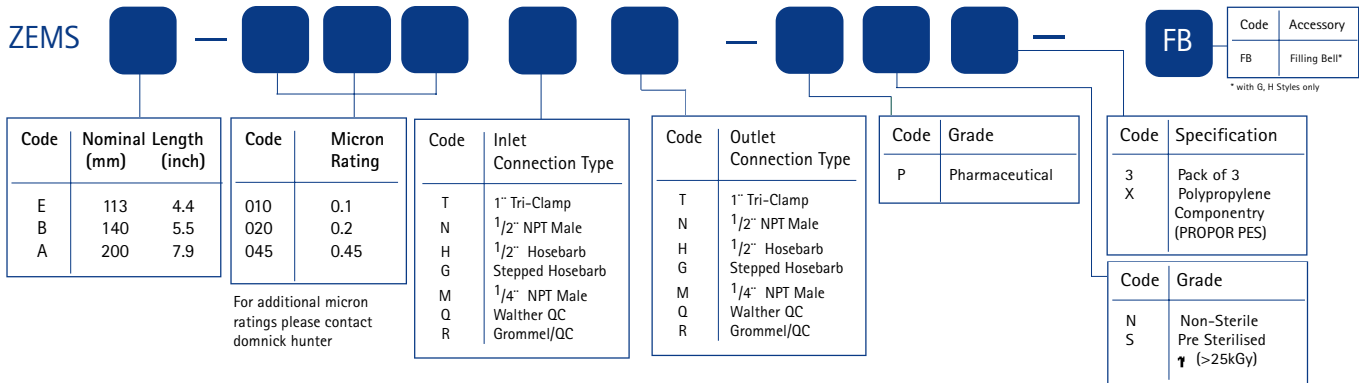
Selection

ZCMS



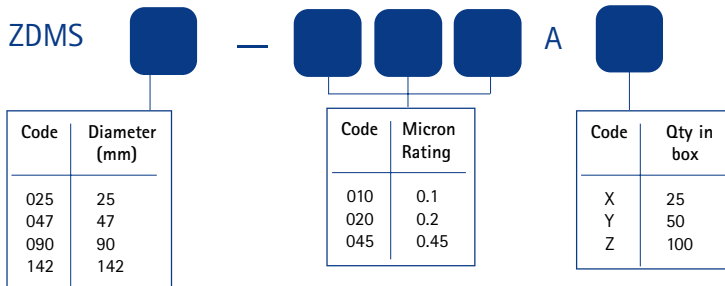
PROPOR PES CAPSULES

ZEMS



PROPOR PES DISCS

ZDMS



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Publication Reference: PD13/04/04 Rev 1A

Stock No.: 17 950 1113