



CRYPTOCLEAR PES Filter Cartridges

- liquid filters
- polyethersulphone

CRYPTOCLEAR PES utilises the unique properties of a microbially retentive polyethersulphone membrane that provides absolute retention of *Cryptosporidium parvum* oocysts to meet the specific needs of the food, beverage and portable water industries.

CRYPTOCLEAR PES membrane has an asymmetrical pore structure with a high voids volume which offers unrivalled retention capacity resulting in higher throughputs and higher flow rates than symmetrical membranes.

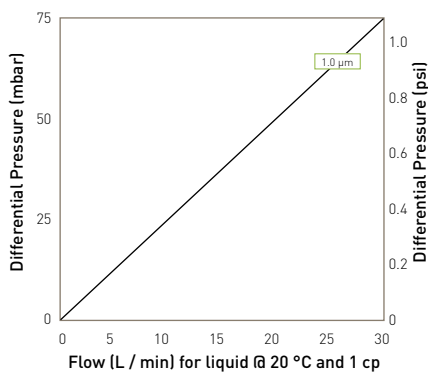
The microporous membrane is inherently hydrophilic and can be integrity tested repeatedly, providing a valuable quality assurance tool that fits well into a HACCP framework.

Features and Benefits

- Specifically developed for the removal of *Cryptosporidium parvum* oocysts
- 1.0 micron absolute rated polyethersulphone membrane
- High throughputs and flow rates
- Can be repeatedly steam sterilised or chemically sanitised
- Repeatedly integrity testable
- 100% retention of oocysts



Performance Characteristics



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

10" Size (250 mm) Cartridge

Specifications

Materials of Construction

- Filtration Membrane: Polyethersulphone
- Prefilter Layer: Polyester
- Upstream Support: Polyester
- Downstream Support: Polyester
- Inner Support Core: Polypropylene
- Outer Protection Cage: Polypropylene
- End Caps: Nylon
- End Cap Insert (if applicable): 316L Stainless Steel
- Standard o-rings/gaskets: Silicone / EPDM
- Capsule Body: Nylon
- Capsule Vent Seals: Silicone

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. CRYPTOCLEAR PES is listed in the Water Fittings and Materials Directive Part II as a WRAS Approved Product.

WRAS - Water Regulations Advisory Scheme BS6920 Test of Effect on Water Quality

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 (psil)
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

Capsules may be operated up to a temperature of 40 °C (104 °F) at line pressures up to 5.0 barg (72.51 psig) for liquids and 4.0 barg (58.01 psig) in air / gas.

Effective Filtration Area (EFA)

10" (250 mm) 0.8 m² (8.61 ft²)

Cleaning and Sterilisation

CRYPTOCLEAR 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

The removal efficiencies of CRYPTOCLEAR PES cartridges have been determined from tests conducted by Thames Water Utilities Limited on live *Cryptosporidium* oocysts.

Product	Micron	Retention
CRYPTOCLEAR PES	1.0	100%

Integrity Test Data

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

Micron Rating	1.0
Diffusional Flow (barg)	0.6
Test Pressure (psig)	9.0
Max. Diffusional Flow (10 ⁻¹)	21.0
(ml / min)	(K) 9.8
	(A) 8.0
	(B) 3.9
	(E) 1.8

Recommended Rinse Volume

Prior to use - 5 litres per 10" (250 mm) filter cartridge.

Ordering Information

Cartridges

ZCCS	-		
Code Length (Nominal)	Code Micron	Code Endcap (10")	
B 2.5" (65 mm)	100 1.0 µm	C BF / 226 Bayonet	
A 5" (125 mm)		D Fin / 222	
K 5" (125 mm)		E Flat / 222	
1 10" (250 mm)		G Recess / 222	
2 20" (500 mm)		R S-28	
3 30" (750 mm)			
4 40" (1000 mm)			
		Code Endcap (Demi)	
		T TRUESEAL	
		Y Demi Stub	
		Z Demi A & B Std	

Capsules

ZECS	-			-			
Code Length (Nominal)	Code Micron	Code Inlet Connection	Code Outlet Connection	Code Variant	Code Grade	Code Pack N°	
E 4.4" (113 mm)	100 1.0 µm	T 1" Tri-Clamp	T 1" Tri-Clamp	B Beverage	N Non-Sterile	3 Pack of 3	
B 5.5" (140 mm)		N 1/2" NPT Male	N 1/2" NPT Male				
A 7.9" (200 mm)		H 1/2" Hosebarb	H 1/2" Hosebarb				
		G Stepped Hosebarb	G Stepped Hosebarb				
		M 1/4" NPT Male	M 1/4" NPT Male				

Parker domnick hunter has a continuous policy of product development and although the Company reserves the right to change specifications, it attempts to keep customers informed of any alterations. This publication is for general information only and customers are requested to contact our Process Filtration Sales Department for detailed information and advice on a products suitability for specific applications. All products are sold subject to the company's Standard conditions of sale.

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