



PROCLEAR PP Filters

- liquid filters
- polypropylene

PROCLEAR PP filters are designed for a wide range of prefiltration duties within the production of pharmaceuticals and are particularly suited to applications where chemical compatibility is an issue.

The optimum pleat configuration and graded density polypropylene media used in PROCLEAR PP filters ensure the filters have the highest possible throughput to blockage resulting in long service life.

The PROCLEAR PP range of filters are fully supported by a comprehensive validation guide to simplify its specification into new and existing processes.

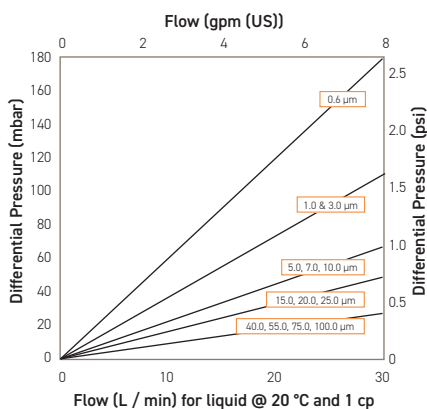
Features and Benefits

- Graded density polypropylene media for high capacity
- All polypropylene construction
- Extremely robust to withstand aggressive conditions
- MURUS and DEMICAPs can be gamma-irradiated and autoclaved



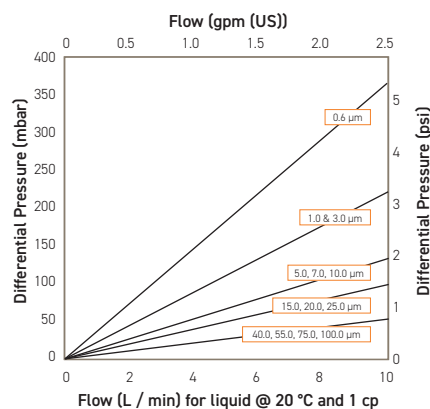
Note: PROCLEAR and DEMICAP are registered trademarks of Parker Hannifin Corporation.

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 and Capsule

Specifications

Materials of Construction

- Filtration Media: Polypropylene
- Upstream Support: Polypropylene
- Downstream Support: Polypropylene

Filter Cartridges

- Inner Support Core: Polypropylene
- Outer Protection Cage: Polypropylene
- End Caps: Polypropylene
- End Caps Insert: 316L Stainless Steel

**Not available in B & L endcap variants*

MURUS Disposable Filter Capsules

- Core: Polypropylene
- Sleeve: Polypropylene
- End Caps Insert: 316L Stainless Steel
- Standard o-rings/gaskets: Silicone
- Capsule Body: Polypropylene
- Capsules Vent Seals: Silicone

DEMICAP Filter Capsules

- Core: Polypropylene
- Sleeve: Polypropylene
- Capsule Body: Polypropylene
- Capsules Vent Seals: Silicone
- Filling Bell: Polycarbonate

Syringe Filters

- Body: Polypropylene

Recommended Operating Conditions

Filter Cartridges

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

Temperature		Max. Forward dP	
°C	°F	(bar)	(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	1.5	21.7

MURUS Disposable Filter Capsules

Up to 25 °C (77 °F) @ 5.5 barg (79.7 psig)

Up to 60 °C (140 °F) @ 2.8 barg (40.6 psig)

Parker Hannifin certify that this product complies with the current European Council Pressure Equipment Directive (PED) - Sound Engineering Practice (SEP). This product is intended for use with Group 1 & 2 Dangerous and Harmless Liquids and Group 2 Harmless Gases at the operating conditions stated in this document. The Pressure Equipment Directive mandates that category SEP product cannot bear the CE mark.

DEMICAP Filter Capsules

Up to 40 °C (104 °F) at line pressures up to 5.0 barg (72 psig).

Effective Filtration Area (EFA)

10" (250 mm) up to 0.79m² (8.5 ft²)

Sterilization

PROCLEAR PP filter cartridges can be sanitized with hot water at up to 90 °C (194 °F) and are compatible with a wide range of chemicals.

	Autoclave		Steam-in-Place	
	Cycles	Temp	Cycles	Temp
			(30 min.)	
Cartridges	10	130 °C (266 °F)	30	135 °C (275 °F)
MURUS	5	130 °C (266 °F)	-	-
DEMICAP10130 °C (266 °F)	-	-	-	-
Syringe	1	130 °C (266 °F)	-	-

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

Biological Safety

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

Quality Standards

Pharmaceutical grade products are manufactured in accordance with cGMP, 100% flushed with pharmaceutical grade purified water.

Gamma-Irradiation

PROCLEAR PP MURUS & DEMICAP disposable filters can be gamma-irradiated up to a maximum dosage of 40 kGy.

Performance Characteristics

TOC / Conductivity

The filtrate quality from a 10" (250 mm) PROCLEAR PP conforms to the requirements of current USP <643> (TOC) and USP <645> (conductivity) within the first 200 ml flush of purified water.

Oxidizable Substances

PROCLEAR PP filter cartridges meet current USP and EP quality standards for sterile purified water for oxidizable substances following a <1 litre water flush.

Endotoxins

Aqueous extracts from the 10" (250 mm) PROCLEAR PP contain < 0.25 EU / ml when tested in accordance with the Limulus Amoebocyte Lysate test.

Non-Volatile Extractables (NVE)

Total NVEs extracted in the first 5 litre flush of purified water for a 10" (250 mm) cartridge are <10 mg.

Total NVEs extracted in the first 5 litre flush of purified water for an A size 7.9" (200 mm) DEMICAP capsule are <5 mg.

Pharmaceutical Validation

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

Ordering Information

Cartridges

PCPP

Code	Length (Nominal)	Code	Micron	Code	Endcap (10")	Code	Variant	Code	O-rings
B*	2.5" (65 mm)	96	0.6 µm	B*	dh DOE	P	Pharmaceutical	E	EPDM
A*	5" (125 mm)	01	1.0 µm	C	BF / 226 Bayonet	N	Pharmaceutical, no stainless steel insert in open end-cap	P	FEP Encapsulated Silicone
K	5" (125 mm)	03	3.0 µm	D	Fin / 222			S	Silicone
1	10" (250 mm)	05	5.0 µm	E	Flat Top / 222			V	Viton
2	20" (500 mm)	10	10.0 µm	G	Recess / 222				
3	30" (750 mm)	20	20.0 µm						
4	40" (1000 mm)	40	40.0 µm						
		75	75.0 µm						

* Supplied in packs of 3.

Code	Endcap (Demi)
T	TRUESEAL
Z	Demi A & B Std

* EPDM gaskets supplied as standard

MURUS Capsules

PLPP																							
Code Length (Nominal)			Code Micron			Code Inlet Connection			Code Outlet Connection			Code Variant			Code Grade			Code Design			Code O-rings		
K	5"	(125 mm)	96	0.6	µm	A	3/4"	Tri-Clamp	A	3/4"	Tri-Clamp	P	Pharmaceutical	N	Non-sterile	L	In-Line	E	EPDM				
1	10"	(250 mm)	01	1.0	µm	B	1 1/2"	Tri-Clamp	B	1 1/2"	Tri-Clamp			S	Pre-sterilized	T*	T-Port	S	Silicone				
2	20"	(500 mm)	03	3.0	µm	D	1"	Hosebarb	D	1"	Hosebarb				γ (>25 kGy)			V	Viton				
3	30"	(750 mm)	05	5.0	µm	T	1"	Tri-Clamp	T	1"	Tri-Clamp												
			10	10.0	µm	H	1/2"	Hosebarb	H	1/2"	Hosebarb												
			20	20.0	µm																		
			40	40.0	µm																		
			75	75.0	µm																		
																*Only available with a 1" Tri-Clamp							

DEMICAP Capsules

PEPP																
Code Length (Nominal)			Code Micron		Code Inlet Connection		Code Outlet Connection		Code Variant		Code Grade		Code Pack N°		Code Accessory	
E	4.4"	(113 mm)	96	0.6 µm	T	1" Tri-Clamp	T	1" Tri-Clamp	P	Pharmaceutical	N	Non-sterile	3	Pack of 3	FB	Filling Bell
B	5.5"	(140 mm)	01	1.0 µm	N	1/2" NPT Male	N	1/2" NPT Male			S	Pre-sterilized				
A	7.9"	(200 mm)	03	3.0 µm	H	1/2" Hosebarb	H	1/2" Hosebarb				γ (>25 kGy)				
			05	5.0 µm	G	Stepped Hosebarb	G	Stepped Hosebarb								
			10	10.0 µm												
			20	20.0 µm												
			40	40.0 µm												
			75	75.0 µm												
E & B-Size G & H connections only																

Syringe Filters

PSPP															
Code Diameter		Code Micron		Code Inlet Connection		Code Outlet Connection		Code Variant		Code Grade		Code Options		Code Pack N°	
050 50 mm		96 0.6 µm		F Female Luer Lock		F Female Luer Lock		P Pharmaceutical		N Non-sterile		S Standard		025 25 per box	
		01 1.0 µm		G Stepped Hosebarb		G Stepped Hosebarb									
		03 3.0 µm													
		05 5.0 µm													
		10 10.0 µm													
		15 15.0 µm													
		20 20.0 µm													
		40 40.0 µm													
		75 75.0 µm													