Parker domnick hunter commitments

Bottled Water collection

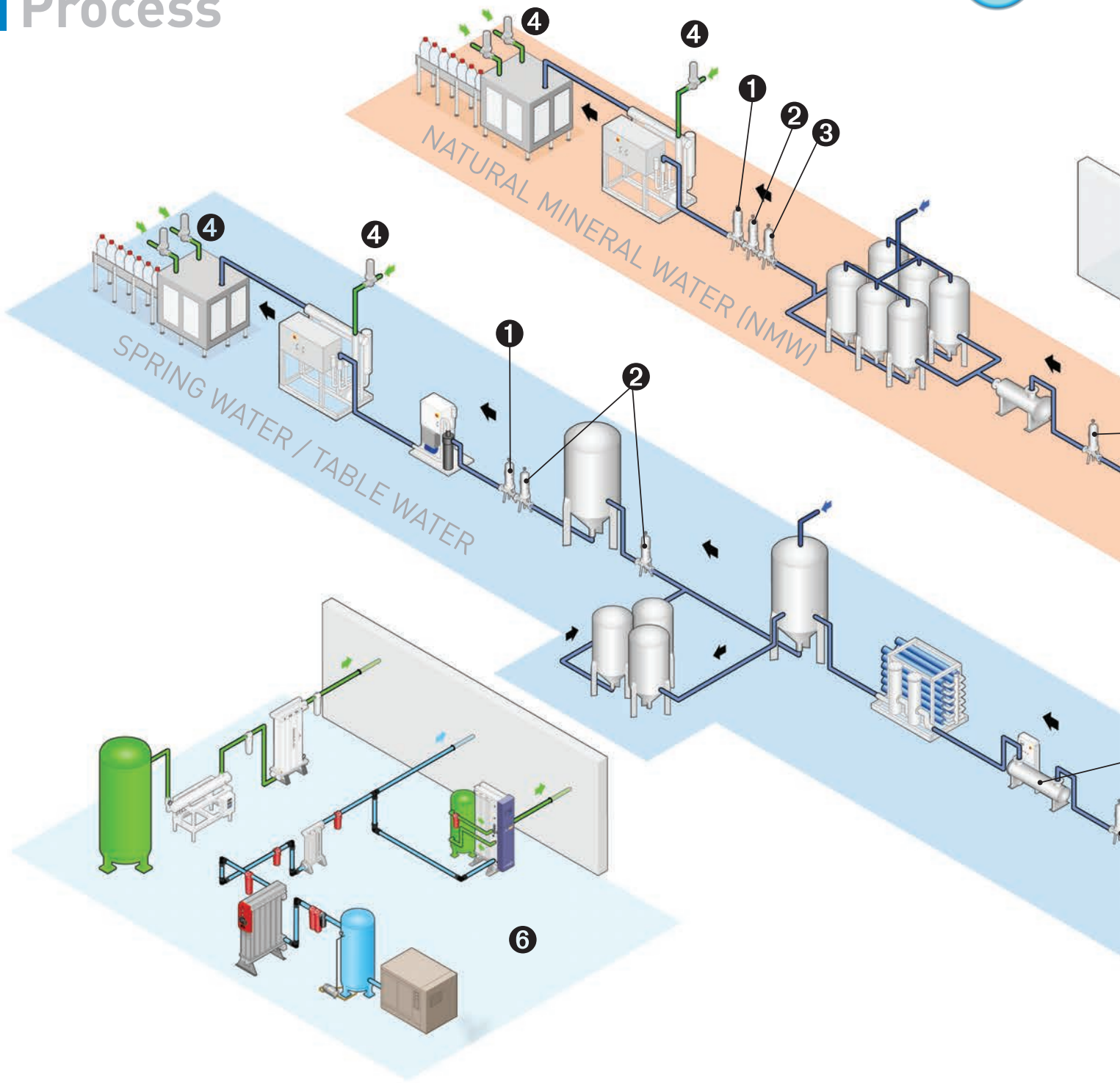
Multinational corporations and boutique producers of bottled water brands across the globe have partnered with Parker domnick hunter to successfully reach their quality and production requirements.

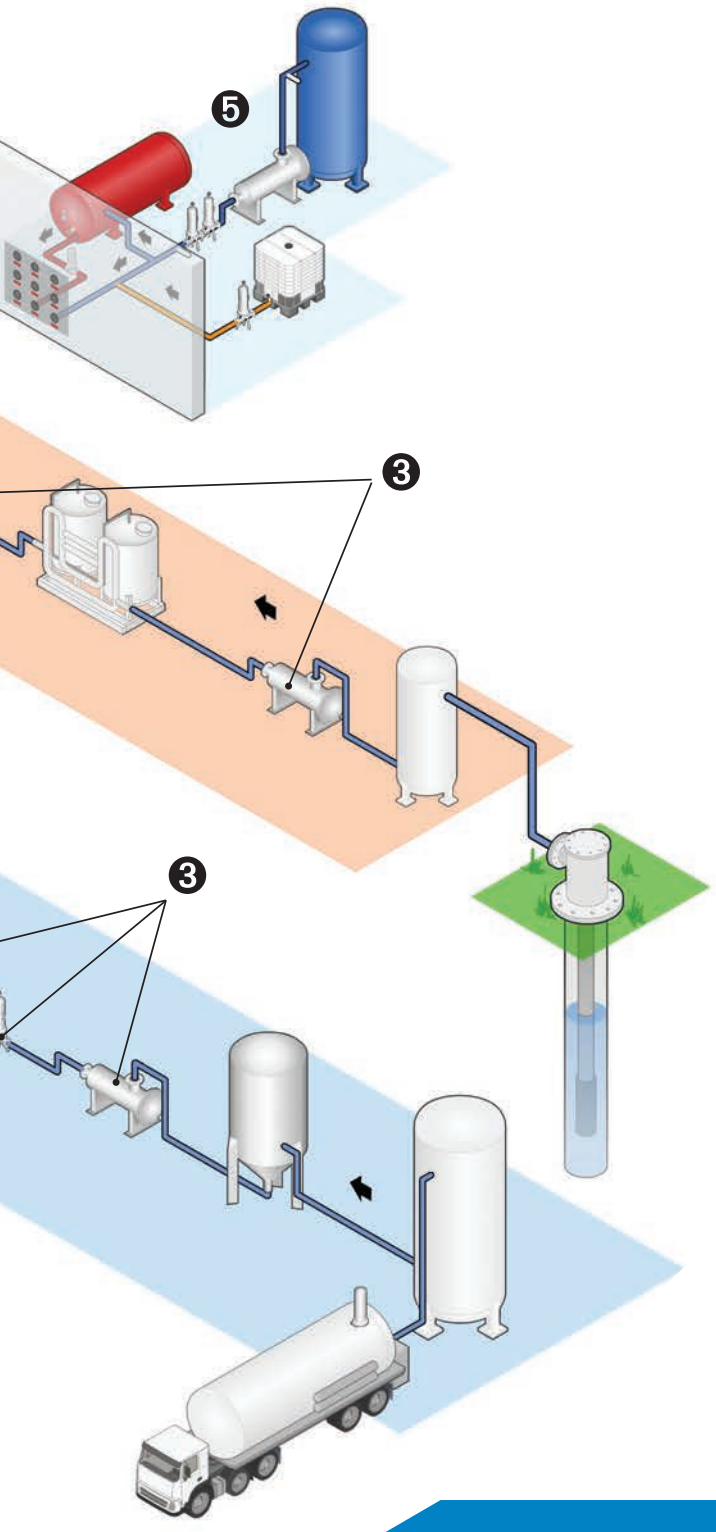
From plant to plant, every bottled water process is different depending upon; the category and branding of the finished bottled product, the local legislation of the intended market and the source of the water itself. These differences influence the performance expectations of the filtration systems and generate a wide degree of choice in approach to filtration. By understanding the specific requirements for each stage of the bottled water production process, Parker domnick hunter offer value added filtration solutions which deliver our commitments of; protecting water quality, reducing bottling costs and consumer and brand protection.

Parker domnick hunter provides tailored filtration solutions which meet the performance criteria required by a given process. Through a structured program of technical analysis available from a network of international support hubs, we work with end users to achieve their goals. Continued process optimization is our duty.

www.parker.com/dhbottledwater

Typical Process





Specialized Water Applications

1. Final Stabilization
2. Pre-stabilization
3. Clarification
4. Sterilization of Gases
5. Water Utilities
6. Gas Utilities

Specific filtration requirements within the water bottling process dictate different design criteria for the filter systems. Parker domnick hunter have a range of specialized filtration systems designed to add value at each stage of the water bottling process.

BEVPOR MS Bottled Water

Filter Cartridges

BEVPOR MS filters provide full retention to industry regulated, water contaminating organisms to ensure the micro-biological safety of bottled water.

The inert and highly asymmetric PES membrane provides validated microbial retention to regulated, contaminating organisms. The 0.2µm grade provides complete sterility in accordance to ASTM F838-05 requirements. Combined with hydrophilic properties for easy integrity testing, BEVPOR MS filters provide assured performance throughout their service life.

BEVPOR MS filters have been designed to provide a cost-effective solution to the microbial sterilization and stabilization of bottled water by providing increased process control with increased operational efficiency.

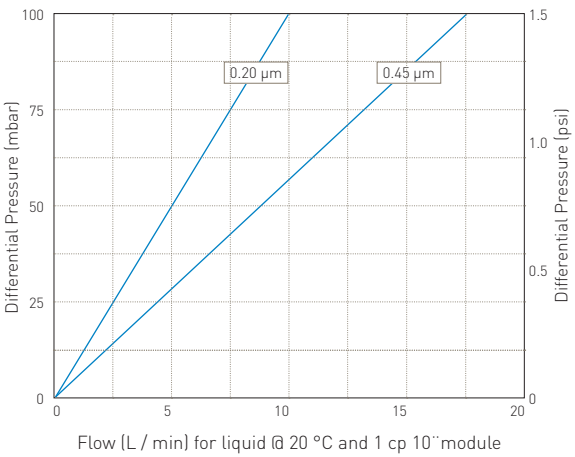
Features

- Validated retention to industry regulated organisms
- Inert materials of construction
- Easily integrity tested in-situ

Benefits

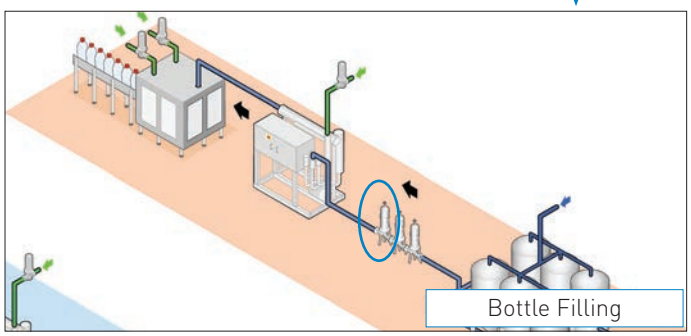
- Ensures the safety of the water prior to bottling
- Protects the purity and essential characteristics of the source water
- Assured filtration performance

Performance Characteristics



Filtration Stage

Clarification | Pre-stabilization | Final Stabilization



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
O-rings:	Silicone / EPDM

Food Contact Compliance

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

Recommended Operating Conditions

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	1.0	14.5
>100 (steam)	>212 (steam)	0.3	4.0

Effective Filtration Area (EFA)

10˝ (250mm) Up to 0.6m² (6.45ft²)

Cleaning and Sterilization

BEVPOR MS cartridges can be repeatedly steam sterilized in-situ or autoclaved at up to 130°C (266°F). They can be sanitized with hot water at up to 90°C (194°F) and are compatible with a wide range of chemicals. Please refer to our Clean-in-Place support guide or contact your local Parker representative for more information.

Retention Characteristics

0.2µm BEVPOR MS filters have been validated to provide sterile effluent after bacterial challenge testing following ASTM F838-05 methodology on 10˝ cartridges with more than 10^7cfu per cm² using *Brevundimonas diminuta*.

In addition, challenges with the following EU regulated organisms have been performed.

Organism	LRV when challenged with a minimum of 10^7 cfu per cm²	
	0.20	0.45
Serratia marcescens	FR	FR
Escherichia coli	FR	FR
Enterococcus faecalis	FR	FR
Clostridium perfringens	FR	FR
Pseudomonas aeruginosa	FR	FR
Brevundimonas diminuta	FR	5

**FR - Fully retentive during challenge*

When expressed as titre reduction "FR" equates to >10⁷ per 10˝module.

Integrity Test Data

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

Diffusional Flow Test Parameters	Micron Rating 0.20	0.45
Test Pressure (barg)	2.4	1.7
Test Pressure (psig)	35.0	25.0
Max Diffusional Flow per 10˝ (ml /min)	16.0	16.0

Manufacturing Traceability

Each filter cartridge displays the product name, product code and lot number. Additionally, each module displays a unique serial number providing full manufacturing traceability.

Ordering information

BMS - [ ] [ ] - [ ] A [ ]

Code	Length (Nominal)	
1	10˝	(250 mm)
2	20˝	(500 mm)
3	30˝	(750 mm)
4	40˝	(1000 mm)

Code	Micron	
02	0.20	µm
04	0.45	µm

Code	End Cap (10 inch)
C	Fin / 226 Bayonet
D	Fin / 222
E	Flat Top / 222
G	Recess 222
R	BF / 222 Bayonet

Code	O-rings
S	Silicone
E	EPDM

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BEVPOR MW Bottled Water

Filter Cartridges

BEVPOR MW filters provide full retention to industry regulated, water contaminating organisms to ensure the microbiological safety of bottled water.

The inert and highly asymmetric PES membrane provides validated microbial retention to regulated, contaminating organisms. The 0.2µm grade provides complete sterility in accordance to ASTM F838-05 requirements. Combined with hydrophilic properties for easy integrity testing, BEVPOR MW filters provide assured performance throughout their service life.

The incorporation of an integral prefilter layer allows graded retention throughout the depth of the filter to resist blockage, resulting in increased capacity and long service lifetimes. BEVPOR MW filters have been designed to provide a cost-effective solution to the microbial sterilization and stabilization of bottled water by providing increased process control with increased operational efficiency.

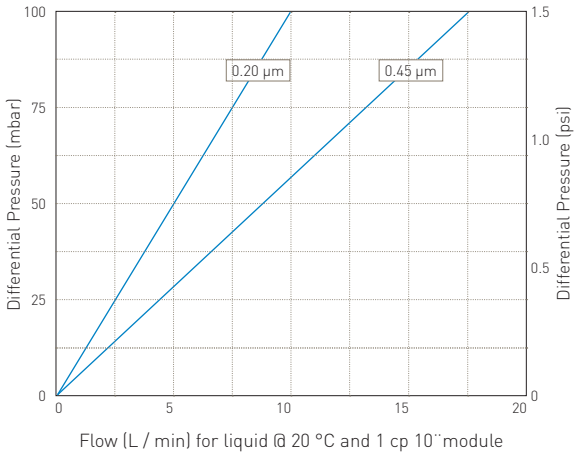
Features

- Validated retention to industry regulated organisms
- Inert materials of construction
- Easily integrity tested in-situ
- Integral depth prefiltration layer

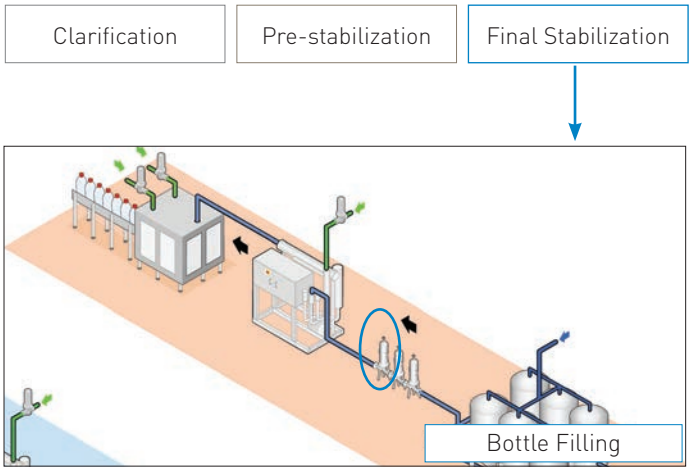
Benefits

- Ensures the safety of the water prior to bottling
- Protects the purity and essential characteristics of the source water
- Assured filtration performance
- Increased throughput to blockage

Performance Characteristics



Filtration Stage



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:	316L Stainless Steel
O-rings:	Silicone / EPDM

Food Contact Compliance

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

Recommended Operating Conditions

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	1.0	14.5
>100 (steam)	>212 (steam)	0.3	4.0

Effective Filtration Area (EFA)

10" (250 mm) Up to 0.6 m^2 (6.45 ft^2)

Cleaning and Sterilization

BEVPOR MW cartridges can be repeatedly steam sterilized in-situ or autoclaved at up to 130 °C (266 °F). They can be sanitized with hot water at up to 90 °C (194 °F) and are compatible with a wide range of chemicals. Please refer to our Clean-in-Place support guide or contact your local Parker representative for more information.

Retention Characteristics

0.2µm BEVPOR MW filters have been validated to provide sterile effluent after bacterial challenge testing following ASTM F838-05 methodology on 10" cartridges with more than 10^7cfu per cm^2 using *Brevundimonas diminuta*.

In addition, challenges with the following EU regulated organisms have been performed.

Organism	LRV when challenged with a minimum of 10^7 cfu per cm^2	
	0.20	0.45
Serratia marcescens	FR	FR
Escherichia coli	FR	FR
Enterococcus faecalis	FR	FR
Clostridium perfringens	FR	FR
Pseudomonas aeruginosa	FR	FR
Brevundimonas diminuta	FR	5

**FR - Fully retentive during challenge*

When expressed as titre reduction "FR" equates to >10⁷ per 10" module.

Integrity Test Data

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

Diffusional Flow Test Parameters	Micron Rating 0.20	0.45
Test Pressure (barg)	2.4	1.7
Test Pressure (psig)	35.0	25.0
Max Diffusional Flow per 10" (ml /min)	16.0	16.0

Manufacturing Traceability

Each filter cartridge displays the product name, product code and lot number. Additionally, each module displays a unique serial number providing full manufacturing traceability.

Ordering information

BMW - [ ] [ ] - [ ] A [ ]

Code	Length (Nominal)	
1	10"	(250 mm)
2	20"	(500 mm)
3	30"	(750 mm)
4	40"	(1000 mm)

Code	Micron	
02	0.20	µm
04	0.45	µm

Code	End Cap (10 inch)
C	Fin / 226 Bayonet
D	Fin / 222
E	Flat Top / 222
G	Recess / 222
R	BF / 222 Bayonet

Code	O-rings
S	Silicone
E	EPDM

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BEVPOR MH Bottled Water

Filter Cartridges

BEVPOR MH filters provide full retention to industry regulated, water contaminating organisms to ensure the microbiological safety of bottled water.

The inert and highly asymmetric PES membrane provides validated microbial retention to regulated, contaminating organisms. The 0.2µm grade provides complete sterility in accordance to ASTM F838-05 requirements. Combined with hydrophilic properties for easy integrity testing, BEVPOR MH filters provide assured performance throughout their service life. The incorporation of an active prefilter layer, combined with an increased filtration area provides high water flow rates, greater resistance to blockage and maximized service lifetimes.

BEVPOR MH filters have been designed to provide the optimum solution to the microbial sterilization and stabilization of bottled water by providing increased process control with increased operational efficiency.

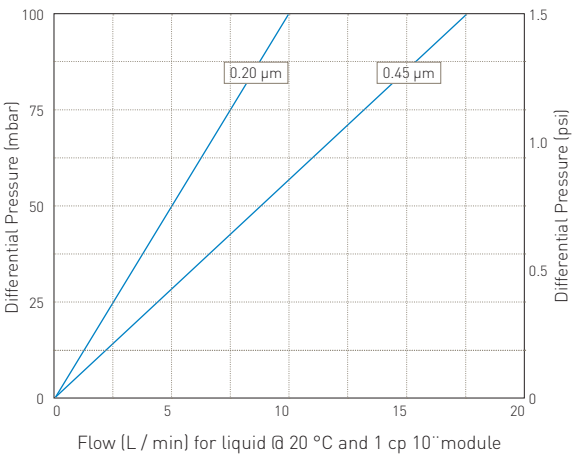
Features

- Validated retention to industry regulated organisms
- Inert materials of construction
- Easily integrity tested in-situ
- Integral depth prefiltration layer
- High filtration area

Benefits

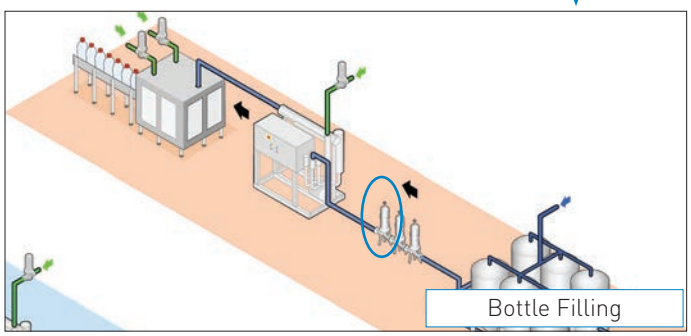
- Ensures the safety of the water prior to bottling
- Protects the purity and essential characteristics of the source water
- Assured filtration performance
- Increased throughput to blockage

Performance Characteristics



Filtration Stage

Clarification | Pre-stabilization | Final Stabilization



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:	316L Stainless Steel
O-rings:	Silicone / EPDM

Food Contact Compliance

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

Recommended Operating Conditions

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	1.0	14.5
>100 (steam)	>212 (steam)	0.3	4.0

Effective Filtration Area (EFA)

10" (250 mm) Up to 0.8 m^2 (8.61 ft^2)

Cleaning and Sterilization

BEVPOR MH cartridges can be repeatedly steam sterilized in-situ or autoclaved at up to 130 °C (266 °F). They can be sanitized with hot water at up to 90 °C (194 °F) and are compatible with a wide range of chemicals. Please refer to our Clean-in-Place support guide or contact your local Parker representative for more information.

Retention Characteristics

0.2µm BEVPOR MH filters have been validated to provide sterile effluent after bacterial challenge testing following ASTM F838-05 methodology on 10" cartridges with more than 10^7cfu per cm^2 using *Brevundimonas diminuta*.

In addition, challenges with the following EU regulated organisms have been performed.

Organism	LRV when challenged with a minimum of 10^7 cfu per cm^2	
	0.20	0.45
Serratia marcescens	FR	FR
Escherichia coli	FR	FR
Enterococcus faecalis	FR	FR
Clostridium perfringens	FR	FR
Pseudomonas aeruginosa	FR	FR
Brevundimonas diminuta	FR	5

**FR - Fully retentive during challenge*

When expressed as titre reduction "FR" equates to >10" per 10" module.

Integrity Test Data

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

Diffusional Flow Test Parameters	Micron Rating 0.20	0.45
Test Pressure (barg)	2.4	1.7
Test Pressure (psig)	35.0	25.0
Max Diffusional Flow per 10" (ml /min)	21.0	21.0

Manufacturing Traceability

Each filter cartridge displays the product name, product code and lot number. Additionally, each module displays a unique serial number providing full manufacturing traceability.

Ordering information

BMH - [ ] [ ] - [ ] A [ ]

Code	Length (Nominal)	
1	10"	(250 mm)
2	20"	(500 mm)
3	30"	(750 mm)
4	40"	(1000 mm)

Code	Micron	
02	0.20	µm
04	0.45	µm

Code	End Cap (10 inch)
C	Fin / 226 Bayonet
D	Fin / 222
E	Flat Top / 222
G	Recess / 222
R	BF / 222 Bayonet

Code	O-rings
S	Silicone
E	EPDM

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BEVPOR PS Bottled Water

Filter Cartridges

BEVPOR PS filters ensure the microbiological safety of bottled water whilst protecting the purity and essential characteristics of the source water.

The inert and highly asymmetric PES membrane provides validated microbial retention to industry regulated contaminating organisms. Combined with hydrophilic properties for easy integrity testing, BEVPOR PS filters provide assured performance throughout their service life.

BEVPOR PS filters have been designed to provide a cost-effective solution to the microbial stabilization of bottled water by providing increased process control with increased operational efficiency.

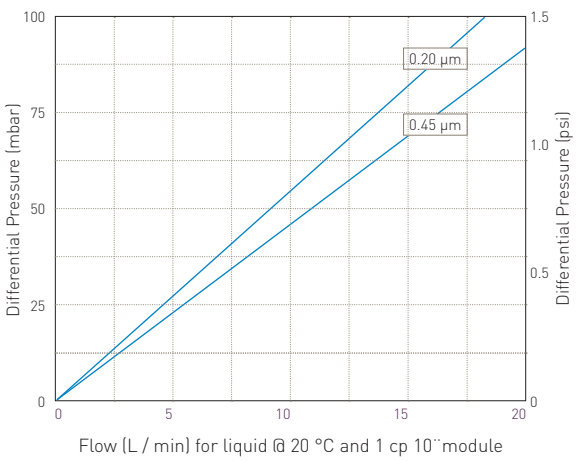
Features

- Validated retention to industry regulated micro-organisms
- Inert material of construction
- Easily integrity tested in-situ

Benefits

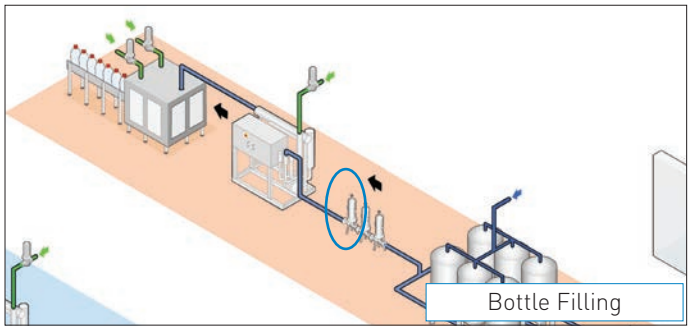
- Ensures the safety of the water prior to bottling
- Protects the purity and essential characteristics of the source water
- Assured filtration performance

Performance Characteristics



Filtration Stage

Clarification | Pre-stabilization | **Final Stabilization**



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
O-rings:	Silicone / EPDM

Food Contact Compliance

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

Recommended Operating Conditions

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	1.0	14.5
>100 (steam)	>212 (steam)	0.3	4.0

Effective Filtration Area (EFA)

10˝ (250 mm) Up to 0.6 m^2 (6.45 ft^2)

Cleaning and Sterilization

BEVPOR PS cartridges can be repeatedly steam sterilized in-situ or autoclaved at up to 130 °C (266 °F). They can be sanitized with hot water at up to 90 °C (194 °F) and are compatible with a wide range of chemicals. Please refer to our Clean-in-Place support guide or contact your local Parker representative for more information.

Retention Characteristics

0.2µm BEVPOR PS filters have been validated to provide sterile effluent after bacterial challenge testing following ASTM F838-05 methodology on 10˝ cartridges with more than 10^7cfu per 10˝ cartridge using *Brevundimonas diminuta*.

In addition, challenges with the following EU regulated organisms have been performed.

Organism	LRV when challenged with a minimum of 10^7 cfu per cm^2	
	0.20	0.45
Serratia marcescens	FR	FR
Escherichia coli	FR	FR
Enterococcus faecalis	FR	FR
Clostridium perfringens	FR	FR
Pseudomonas aeruginosa	FR	9.1
Brevundimonas diminuta	5	-

**FR - Fully retentive during challenge*

When expressed as titre reduction "FR" equates to >10˝ per 10˝module.

Integrity Test Data

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

Diffusional Flow Test Parameters	Micron Rating 0.20	0.45
Test Pressure (barg)	1.7	1.4
Test Pressure (psig)	25.0	20.0
Max Diffusional Flow per 10˝ (ml /min)	16.0	16.0

Manufacturing Traceability

Each filter cartridge displays the product name, product code and lot number. Additionally, each module displays a unique serial number providing full manufacturing traceability.

Ordering information

BPS - [ ] [ ] - [ ] A [ ]

Code	Length (Nominal)	
1	10˝	(250 mm)
2	20˝	(500 mm)
3	30˝	(750 mm)
4	40˝	(1000 mm)

Code	Micron
02	0.20 µm
04	0.45 µm

Code	End Cap (10 inch)
C	Fin / 226 Bayonet
D	Fin / 222
E	Flat Top / 222
G	Recess 222
R	BF / 222 Bayonet

Code	O-rings
S	Silicone
E	EPDM

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BEVPOR PW Bottled Water

Filter Cartridges

BEVPOR PW filters ensure the microbiological safety of bottled water whilst protecting the purity and essential characteristics of the source water.

The inert and highly asymmetric PES membrane provides validated microbial retention to industry regulated contaminating organisms. Combined with hydrophilic properties for easy integrity testing, BEVPOR PW filters provide assured performance throughout their service life.

The incorporation of an integral prefilter layer allows graded retention throughout the depth of the filter to resist blockage, resulting in increased capacity and long service lifetime.

BEVPOR PW filters have been designed to provide a cost-effective solution to the microbial stabilization of bottled water by providing increased process control with increased operational efficiency.

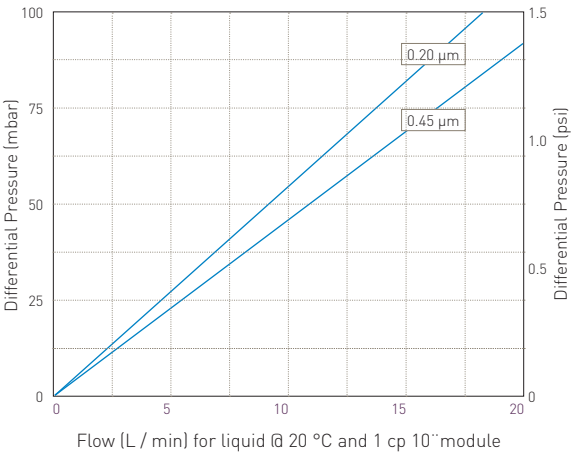
Features

- Validated retention to industry regulated micro-organisms
- Inert materials of construction
- Easily integrity tested in-situ
- Integral depth prefiltration layer

Benefits

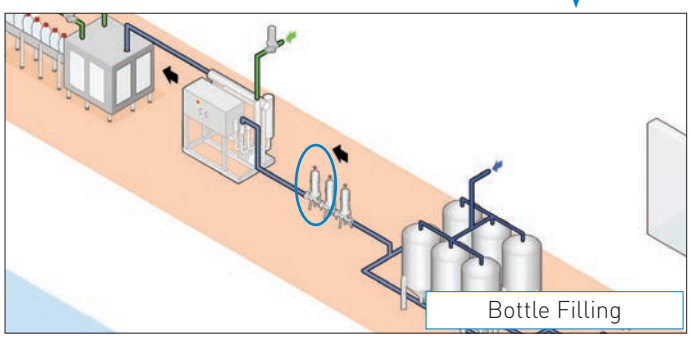
- Ensures the safety of the water prior to bottling
- Protects the purity and essential characteristics of the source water
- Assured filtration performance
- Increased throughput to blockage

Performance Characteristics



Filtration Stage

Clarification | Pre-stabilization | Final Stabilization



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:	316L Stainless Steel
O-rings:	Silicone / EPDM

Food Contact Compliance

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

Recommended Operating Conditions

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	1.0	14.5
>100 (steam)	>212 (steam)	0.3	4.0

Effective Filtration Area (EFA)

10¨ (250 mm) Up to 0.6 m^2 (6.45 ft^2)

Cleaning and Sterilization

BEVPOR PW cartridges can be repeatedly steam sterilized in-situ or autoclaved at up to 130 °C (266 °F). They can be sanitized with hot water at up to 90 °C (194 °F) and are compatible with a wide range of chemicals. Please refer to our Clean-in-Place support guide or contact your local Parker representative for more information.

Retention Characteristics

0.2µm BEVPOR PW filters have been validated to provide sterile effluent after bacterial challenge testing following ASTM F838-05 methodology on 10" cartridges with more than 10^7cfu per 10" cartridge using *Brevundimonas diminuta*.

In addition, challenges with the following EU regulated organisms have been performed.

Organism	LRV when challenged with a minimum of 10^7 cfu per cm^2	
	0.20	0.45
Serratia marcescens	FR	FR
Escherichia coli	FR	FR
Enterococcus faecalis	FR	FR
Clostridium perfringens	FR	FR
Pseudomonas aeruginosa	FR	9.1
Brevundimonas diminuta	5	-

**FR - Fully retentive during challenge*

When expressed as titre reduction "FR" equates to >10^7 per 10¨module.

Integrity Test Data

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

Diffusional Flow Test Parameters	Micron Rating 0.20	0.45
Test Pressure (barg)	1.7	1.4
Test Pressure (psig)	25.0	20.0
Max Diffusional Flow per 10¨ (ml /min)	16.0	16.0

Manufacturing Traceability

Each filter cartridge displays the product name, product code and lot number. Additionally, each module displays a unique serial number providing full manufacturing traceability.

Ordering information

BPW - [ ] [ ] - [ ] A [ ]

Code	Length (Nominal)
1	10¨ (250 mm)
2	20¨ (500 mm)
3	30¨ (750 mm)
4	40¨ (1000 mm)

Code	Micron
02	0.20 µm
04	0.45 µm

Code	End Cap (10 inch)
C	Fin / 226 Bayonet
D	Fin / 222
E	Flat Top / 222
G	Recess / 222
R	BF / 222 Bayonet

Code	O-rings
S*	Silicone
E	EPDM

*Silicone O-rings supplied as standard

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BEVPOR PH Bottled Water

Filter Cartridges

BEVPOR PH filters ensure the microbiological safety of bottled water whilst protecting the purity and essential characteristics of the source water.

The inert and highly asymmetric PES membrane provides validated microbial retention to industry regulated contaminating organisms. Combined with hydrophilic properties for easy integrity testing, BEVPOR PH filters provide assured performance throughout their service life.

The incorporation of an integral prefilter layer, combined with an increased filtration area, provides high water flow rates, greater resistance to blockage and maximized service lifetime.

BEVPOR PH filters have been designed to provide the optimum solution to the microbial stabilization of bottled water by providing increased process control with increased operational efficiency.

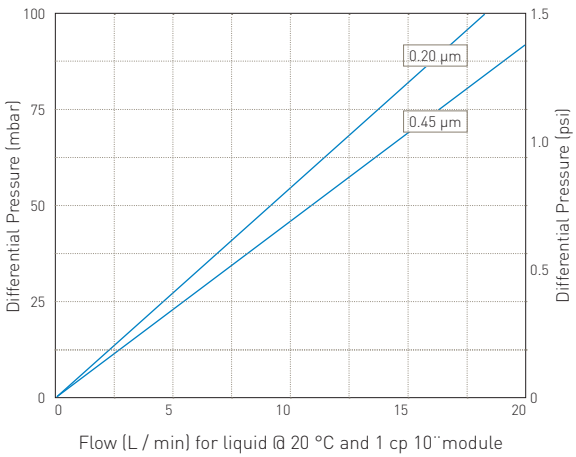
Features

- Validated retention to industry regulated micro-organisms
- Inert materials of construction
- Easily integrity tested in-situ
- Integral depth prefiltration layer
- High filtration area

Benefits

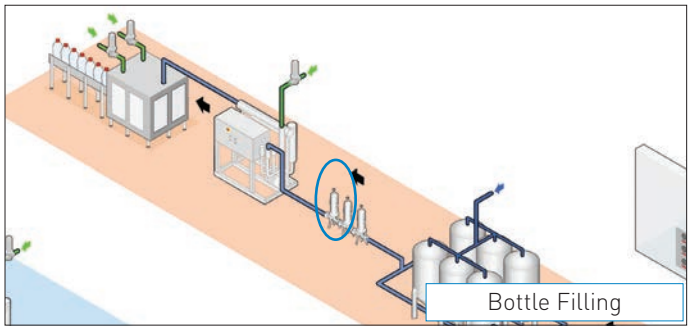
- Ensures the safety of the water prior to bottling
- Protects the purity and essential characteristics of the source water
- Assured filtration performance
- Increased throughput to blockage
- High water flow and maximized operational efficiency

Performance Characteristics



Filtration Stage

Clarification | Pre-stabilization | **Final Stabilization**



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:	316L Stainless Steel
O-rings:	Silicone / EPDM

Food Contact Compliance

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

Recommended Operating Conditions

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	1.0	14.5
>100 (steam)	>212 (steam)	0.3	4.0

Effective Filtration Area (EFA)

10¨ (250 mm) Up to 0.8 m^2 (8.61 ft^2)

Cleaning and Sterilization

BEVPOR PH cartridges can be repeatedly steam sterilized in-situ or autoclaved at up to 130 °C (266 °F). They can be sanitized with hot water at up to 90 °C (194 °F) and are compatible with a wide range of chemicals. Please refer to our Clean-in-Place support guide or contact your local Parker representative for more information.

Retention Characteristics

0.2µm BEVPOR PH filters have been validated to provide sterile effluent after bacterial challenge testing following ASTM F838-05 methodology on 10¨ cartridges with more than 10^7cfu per 10¨ cartridge using *Brevundimonas diminuta*.

In addition, challenges with the following EU regulated organisms have been performed.

Organism	LRV when challenged with a minimum of 10^7 cfu per cm^2	
	0.20	0.45
Serratia marcescens	FR	FR
Escherichia coli	FR	FR
Enterococcus faecalis	FR	FR
Clostridium perfringens	FR	FR
Pseudomonas aeruginosa	FR	9.1

**FR - Fully retentive during challenge*

When expressed as titre reduction "FR" equates to >10^7 per 10¨module.

Integrity Test Data

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

Diffusional Flow Test Parameters	Micron Rating 0.20	0.45
Test Pressure (barg)	1.7	1.4
Test Pressure (psig)	25.0	20.0
Max Diffusional Flow per 10¨ (ml /min)	21.0	21.0

Manufacturing Traceability

Each filter cartridge displays the product name, product code and lot number. Additionally, each module displays a unique serial number providing full manufacturing traceability.

Ordering information

BPH - [ ] [ ] - [ ] A [ ]

Code	Length (Nominal)	
1	10¨	(250 mm)
2	20¨	(500 mm)
3	30¨	(750 mm)
4	40¨	(1000 mm)

Code	Micron
02	0.20 µm
04	0.45 µm

Code	End Cap (10 inch)
C	Fin / 226 Bayonet
D	Fin / 222
E	Flat Top / 222
G	Reccess / 222
R	BF / 222 Bayonet

Code	O-rings
S	Silicone
E	EPDM

VSH & HSL
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PREPOR NG Bottled Water

Filter Cartridges

Parker domnick hunter's continued focus on process optimization has led to the development of a new range of prefilters which offer superior levels of membrane filter protection and reduced running costs for bottling plants worldwide.

Throughout the bottling process it is important to protect the water from external contamination. The PREPOR NG filter has been carefully designed and constructed to protect the purity and essential characteristics of the source water whilst reducing colloidal particulate and regulated micro-organisms over extended periods of use. This in turn reduces the potential for biofilm formation in downstream systems and significantly improves the operating lifetime of membrane final filters.

Increased resistance to frequent SIP / CIP cycles combined with the inherent strength and robust construction provides stable retention through the filter's lifetime.

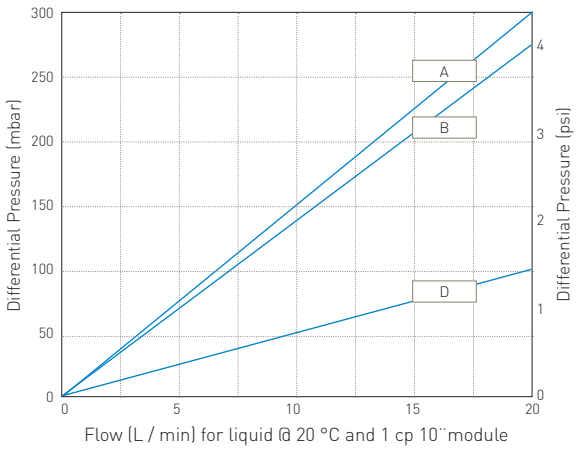
Features

- Fully validated microbial reduction
- Truly optimized graded density using unique Optimized Depth Construction Technology
- Mechanically strong and chemically resistant polypropylene construction

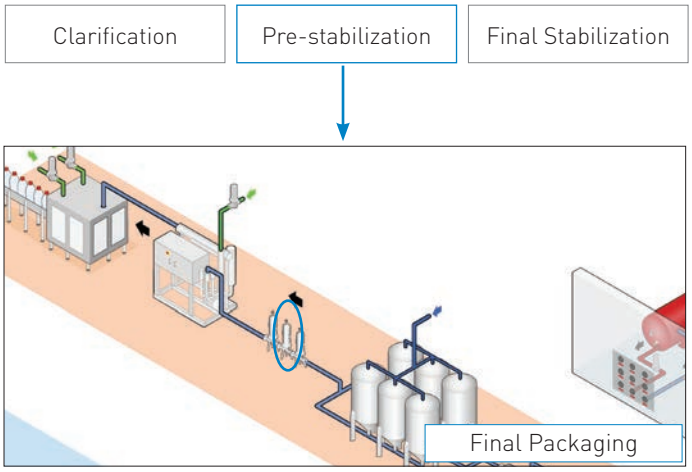
Benefits

- Reduced risk of microbial contamination during intermediate storage
- Improved retention efficiency and dirt holding capacity
- Stable, reliable retention efficiency throughout the service life

Performance Characteristics



Filtration Stage



Specifications

Materials of Construction

Filtration Media:	Polypropylene
Upstream Support:	Polypropylene
Downstream Support:	Polypropylene
Inner Support Core:	Polypropylene
Outer Protection Cage:	Polypropylene
End Caps:	Polypropylene
End Cap Insert:	316L Stainless Steel
O-rings:	Silicone / EPDM

Food Contact Compliance

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

Recommended Operating Conditions

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	1.0	14.5
>100 (steam)	>212 (steam)	0.3	4.0

Effective Filtration Area (EFA)

10˝ (250 mm) Up to 0.5 m² (5.38 ft²)

Cleaning and Sterilization

PREPOR NG cartridges can be repeatedly steam sterilized in-situ or autoclaved up to 135 °C (275 °F). They can be sanitized with hot water up to 90 °C (194 °F), are compatible with a wide range of chemicals and can be backwashed. Please refer to our Clean-in-Place Support Guide or contact your local Parker representative for more information.

Retention Characteristics

The absolute retention characteristics of PREPOR NG filters have been validated by challenges performed with the following organisms.

Organism	LRV when challenged with a minimum of 10^7 cfu per cm²		
	A	B	D
Pseudomonas aeruginosa	3.0	2.8	0.5
Clostridium perfringens	5.0	2.2	2.2
Serratia marcescens	3.9	3.4	1.9

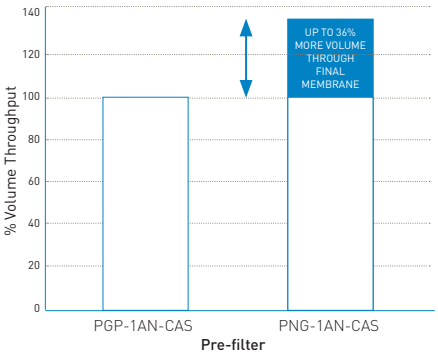
Manufacturing Traceability

Each filter cartridge displays the product name, product code and lot number. Additionally, each module displays a unique serial number providing full manufacturing traceability.

ODC Technology

Optimized Depth Construction (ODC) provides a unique graded density combining longer service life with absolute filtration efficiency.

Performance Benefits



ODC technology combines fine particle retention with increased strength and stability to enhance the performance offered by the PREPOR range.

Ordering information

PNG - [ ] [ ] N - [ ] A [ ]

Code	Length (Nominal)	
1	10˝	(250 mm)
2	20˝	(500 mm)
3	30˝	(750 mm)
4	40˝	(1000 mm)

Code	Micron
A	0.5
B	0.6
D	1.0

Code	End Cap (10 inch)
C	BF / 226 Bayonet
D	Fin / 222
E	Flat Top / 222
G	Recess / 222
R	BF / 222 Bayonet

Code	O-rings
S	Silicone
E	EPDM

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