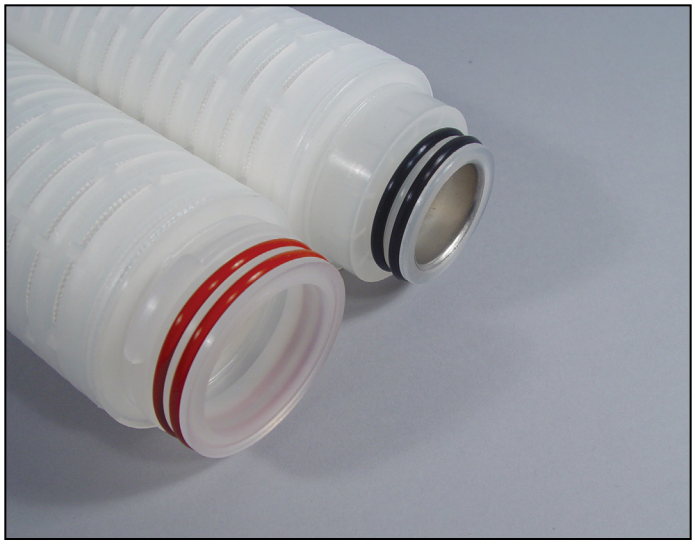
BBC Cartridge Filters

Blended Cellulose Membrane

CRITICAL PROCESS FILTRATION, INC.



BBC cartridge filters are hydrophilic and manufactured with blended cellulose membrane. The process creates a thick membrane with very high loading capacity and high flow rates. The blended cellulose material is very low protein binding and allows protein rich solutions to pass with little impact on protein content.

BBC filters are used for prefiltration and clarification applications in biopharmaceutical processing. Applications include bacteria and particulate removal in cell culture media, plasma products, serum, SVPs, LVPs and other biological products. The filter elements are 100% integrity tested during production.

Blended cellulose membranes are particularly suited for the filtration of products that contain elements that can adsorb to the media, such as preservatives and proteins. The lower binding characteristics of the membranes make them a good choice for filtration of valuable protein solutions such as MAb solutions, serum and other biologicals.

Construction Materials

Filtration Media	Blended Cellulose Membrane
Media Support	Polypropylene
End Caps	Polypropylene
Center Core	Polypropylene
Outer Support Cage	Polypropylene
Sealing Method	Thermal Bonding
O-rings	Buna, Viton® (or FKM), EP, Silicone, FEP Encapsulated Silicone, FEP Encapsulated Viton (or FKM)

Applications

- Pre-filtration to increase the life of expensive final filters
- Final filtration — reduce bacteria counts and particle levels
- Typical Fluid Streams:
  - Reagents/Standards
  - Animal Serums
  - Human Serums/Albumin
  - Culture Media
  - Fermentation Products

Dimensions

Length	5 to 40 in. (12.7 to 101.6 cm) nominal
Outside Diameter	2.75 in. (7.0 cm) nominal
Filtration Area	7.0 ft^2 (0.65 m^2) per 10 in. length

Maximum Operating Parameters

Differential Pressure	
• **Forward**	50 psid (3.4 bard) at 20 °C (68 °F)
• **Reverse**	40 psid (2.7 bard) at 20 °C (68 °F)
Operating Temperature	82 °C (180 °F) at 10 psid (0.69 bard) in water
Recommended Changeout Pressure	35 psid (2.4 bard)

Sanitization/Sterilization

Filtered Hot Water	90 °C (194 °F), 30 minutes, multiple cycles, max 3 psid forward flow
Autoclave	121 °C (250 °F), 30 min, multiple cycles
In-line Steam	135 °C (275 °F), 30 min, multiple cycles

For all elevated temperature procedures above, a stainless steel support ring is required.

Chemical Sanitization

Performed using industry standard concentrations of hydrogen peroxide, paracetic acid, and other selected chemicals.

Total Performance

Critical Process Filtration, Inc. is a vertically integrated manufacturer of filtration products to industries in which filtration is considered a critical part of the manufacturing process. We supply a complete line of products and services to help you cost effectively satisfy all your filtration requirements from a single source.

Biopharmaceutical Grade

USP Biosafety and FDA Compliance

The materials used to construct biopharmaceutical grade filters are non-toxic and meet the requirements for the MEM Elution Cytotoxicity Test and the requirements for Biological Reactivity Tests in the current version of the United States Pharmacopeia (USP) for Class VI - 121 °C Plastics. In addition, the materials meet the requirements listed by the FDA as appropriate for use in articles intended for repeated food contact as specified in Title 21 CFR sections 174.5, 177.1500, 177.1520, 177.1630, 177.2440, and 177.2600 as appropriate. BBC filters comply with Title 21 CFR sections 210.3 (b)(6) and 211.72, for non-fiber releasing filters. The levels of bacterial endotoxins in aqueous extracts from biopharmaceutical grade filters are below current USP limits as specified for water for injection.

Quality Assurance and Standards

Our goal is to ensure our customers the greatest possible value for their filtration dollar. Our state of the art manufacturing facility and quality management system both meet ISO 9001:2008 standards. Each operation from assembly and test to cleaning, drying, and packaging is done in appropriately rated clean rooms. A sophisticated MRP system collects and processes real time data from manufacturing centers and inspection points. This allows variable and attribute data to be quickly and easily analyzed driving constant improvements in both quality and cost.

Ordering Information

Cartridge order numbers have several variables from pore size to end cap type. For example, Biopharmaceutical Grade Blended Cellulose Membrane, 0.22 Micron Rating, With SS Support Ring, 20" Length, Silicone O-Rings, 2-226/Spear End Cap Configuration = BBC-20S00002S9

Extractables

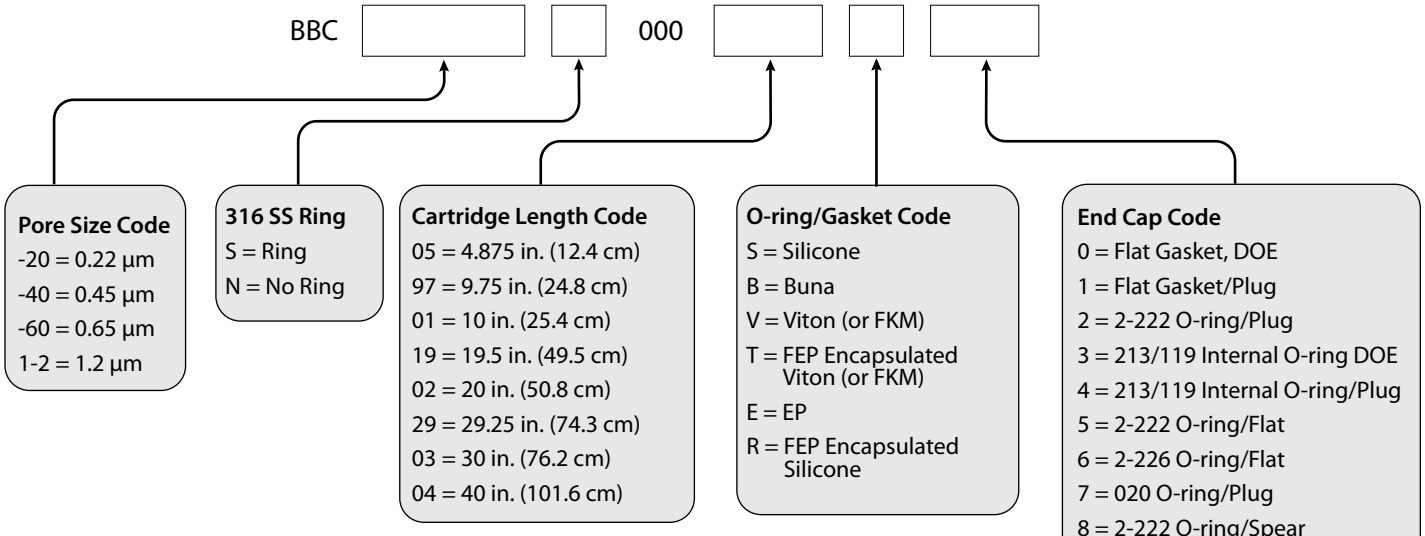
BBC filters are rinsed with high purity water to remove manufacturing debris and extractable substances. Biopharmaceutical grade filters typically exhibit low levels of non-volatile residues.

Flow Rate

The Typical Flow Rates table represents typical water flow at a 1 psid (69 mbard) pressure differential across a single 10 in. cartridge element. The test fluid is water at ambient temperature. Extrapolation for housings with multiple elements and higher pressure drops is acceptable, but as flows increase the pressure drop of the housing becomes more apparent

Typical Flow Rates

Pore Size	0.22 µm	0.45 µm	0.65 µm	1.2 µm
GPM	1.2	1.5	5.0	8.0
LPM	4.54	5.68	18.93	30.28



Request a **QUOTE** from your area representative

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