

The *BioPro KSO* is designed for protecting your critical and high value downstream systems.

It helps in significant reduction of bioburden and complete removal of particulate contamination. It is ideal for applications which do not require sterilization but where reduction in bio load in the process fluid is the objective.

It improves the process efficiency by reducing filter sizing and prolonging life of expensive sterilizing filters.

These filters provide easy scalability from process development labs to actual manufacturing processes.

Special Features

- Validated for high bio-burden reduction
- High flow rates
- High throughput
- Low protein binding
- No media migration
- Biologically inert
- Easy installation

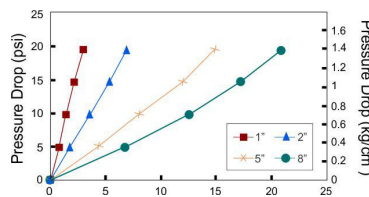
Applications

- Clarification of cell harvest
- Buffer filtration
- In process protein filtration
- Prefiltration to sterile filtration
- Prefiltration to virus filtration

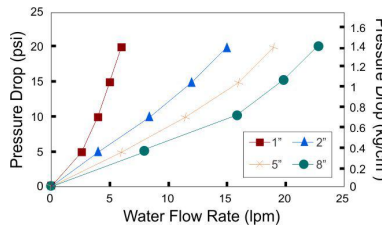


Typical Water Flow Rates

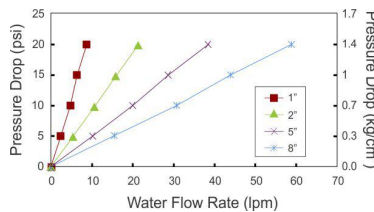
0.1µm BioPro KSO



0.2µm BioPro KSO



0.45µm BioPro KSO



Specifications

Integrity Test (Bubble Point) Specifications (water wetted)
0.1µm: ≥ 40psi, **0.2µm:** ≥ 30psi

Bacterial Retention

0.1µm: LRV > 6 for *B.diminuta* ATCC 19146 per cm² of filter area

0.2µm: LRV > 5 for *B.diminuta* ATCC 19146 per cm² of filter area

Material of Construction

Housing – Polypropylene

Filter – Polyethersulfone

Drainage Layer–Polypropylene

Maximum Differential Pressure

≤ 4 Kg/cm² @ 30° C

Maximum Operating Temperature

80° C @ < 2 Kg/cm²

Sterilization

Autoclave	Autoclavable at 125° C for 30 minutes for 25 cycles. Cannot be in-line steam sterilized.
Gas	Sterilization by Ethylene Oxide

Oxidizable Matter

Passes test as per USP <1231>

Extractables

Passes NVR test as per USP <661>

Bacterial Endotoxin

Aqueous extracts exhibit < 0.25 EU/ml as established by LAL Test as per USP <85>

Fiber Release:

Complies with USFDA CFR Title 21, 210.3 (b) (6)

Particle Release:

The filtrate complies with USP <788> test for particulate matter in injections

Biosafety

Toxicity: Passes Bioreactivity test, *In-vivo*, as per USP <88> for Class VI plastics

Indirect Food Additives:

Passes as per USFDA 21 CFR 177.1520

pH Compatibility:

Compatible with 1-14 pH

Ordering Information

Type	Size	Pore Size	I/O Connection	X	X	Sterility	Pack Size			
Code	Code	Code	Code			Code	Qty	Code		
<i>BioPro KSO</i>	DBKO	1"	51	0.1µm	36	¼" SHB	A			
		2"	52	0.2µm	01	½" Hose Barb	D	Non Sterile 1 1 01		
		5"	53	0.45µm	02	1½" Sanitary Flange	E	EO Sterile 2		
		8"	57			¾" Sanitary Flange	S			
						Quick Connector	J			
						Single Step ½" Hose Barb*	Q			
						Female Luer Lock	U			
						Male Luer Slip**	W			
						3/16" Hose Barb***	N			
						3/8" Hose Barb*	I			
Example:	DBKO	57	01			EE	X	X	1	01

*Single Step ½" Hose Barb and 3/8" hose barb end connections are not available in 1" capsule filters
 **Male luer slip is available only in 1" capsule filter as outlet
 ***3/16" hose barb end connection is available in:
 - 1" and 2" capsule filters as inlet and outlet
 - 5" as outlet only