

EMBB Filter Cartridges

■ Polypropylene

Econo-MB Depth Series

High Purity Filtration With Low Cost Econo Melt Blown Depth Cartridges

Clark-Reliance Filtration Group Econo-MB Cartridges are the most economical high purity filter cartridges available. Featuring a graded density matrix of uniform polypropylene fibers, the Econo-MB provides consistent filtration for a wide variety of fluids. No fiber finish or surfactants are present to generate extractables leading to foaming or other undesirable effects on the filtrate.

Econo-MB Cartridges are available in nominal ratings of 1µm, 5µm, 10µm, 25µm and 50 µm.

Applications

- Photographics Chemicals
- DI Water
- Plating Solutions
- R.O. Prefiltration
- Organic Solvents
- Oilfield Fluids
- Food & Beverages
- Membrane Prefiltration
- Chemical Processing Fluids
- Potable Water
- Bleach



Features and Benefits

- Fixed pore structure provides efficiency integrity and optimum particle retention.
- Thermally bonded melt blown fiber matrix provides dimensionally stable construction.
- Continuous fiber matrix prevents media migration and ensures consistent quality filtration performance.
- Finish-free construction provides optimum fluid purity and eliminates foaming condition.
- Superior inter-layer bonding eliminates contaminant unloading and channeling.
- FDA grade polypropylene (DOE only) certified to ANSI/NSF61 standard for contact with drinking water components.
- Narrow range fiber size optimizes consistency of filtration performance.
- Polypropylene construction provides broad chemical compatibility for a variety of applications.
- All materials of construction are FDA listed as acceptable for potable and edible liquid contact according to CFR Title 21.
- Single component construction simplifies compatibility options and provides easy disposal.



WARNING! FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS AND/OR SYSTEMS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.
This document and other information from Clark-Reliance Corporation, its subsidiaries and authorized distributors provide product and/or system options for further investigation by users having technical expertise. It is important that you analyze all aspects of your application and review the information concerning the product or system in the current product catalog. Due to the variety of operating conditions and applications for these products or systems, the user, through its own analysis and testing, is solely responsible for making the final selection for the products and systems and assuring that all performance, safety and warning requirements of the application are met.

Econo-MB Depth Series

Specifications

Nominal Filtration Ratings: (90%)

- 1µm, 5µm, 10µm 25µm and 50µm.

Materials of Construction:

- Filter Medium: 100% melt blown polypropylene
- End Caps/Adapters (optional): polyolefin copolymer
- Seal Options: Various; refer to Ordering Information

Maximum Recommended Operating Conditions:

- Temperature:
 - @ 40 psid (2.7 bar): 80°F (27°C)
 - @ 20 psid (1.4 bar): 140°F (60°C)
- Flow Rate: 10 gpm (38 lpm) per 10 in length
- Change Out ΔP: 30 psi (2.1 bar)
- Operating Differential Pressure @ Ambient Temperature: 40 psi (2.7 bar)

Dimensions:

- 1-1/16 in ID x 2-7/16 in OD (max)
- 10, 20, 30, 40 and 50 in continuous nominal lengths

EMBB Flow Factors

Rating (µm)	Aqueous Service PSI/ GPM per 10 in Cartridge
EMBB1	0.10
EMBB5	0.08
EMBB10	0.07
EMBB25	0.06
EMBB50	0.05

EMBB Length Factors

Length (in)	Length Factor
9.75	1.0
10.00	1.0
19.50	2.0
20.00	2.0
29.25	3.0
30.00	3.0
39.00	4.0
40.00	4.0
50.00	5.0

Flow Rate and Pressure Drop Formulae:

$$\text{Flow Rate (gpm)} = \frac{\text{Clean } \Delta P \times \text{Length Factor}}{\text{Viscosity} \times \text{Flow Factor}}$$

$$\text{Clean } \Delta P = \frac{\text{Flow Rate} \times \text{Viscosity} \times \text{Flow Factor}}{\text{Length Factor}}$$

Notes:

- Clean ΔP** is PSI differential at start.
- Viscosity** is centistokes. Use Conversion Tables for other units.
- Flow Factor** is ΔP/GPM at 1 cks for 10 in (or single).
- Length Factors** convert flow or ΔP from 10 in (single length) to required cartridge length.

Ordering Information

EMBB Cartridge Code	10 Micron Rating	M Filter Medium	10 Nominal Length			XA End Cap Options	N Seal Material
EMBB = ECONO-HB Cartridges	1µm	M = FDA Grade Polypropylene	9-4	9-3/4"	248mm	None = DOE (w/o gasket)	A = Polyethylene gasket
	5µm		10	10"	254mm	DO = DOE (w/gasket)	E = EPR
	10µm		19-4	19-1/2"	496mm	AR = 020 O-Ring/Recessed	N = Buna-N
	25µm		20	20"	508mm	LL = 120 O-Ring (Both Ends)**	S = Silicone
	50µm		29-4	29-1/4"	743mm	LR = 120 O-Ring/Recessed**	T = PFA
			30	30"	762mm	OB = Std. Open End/Polypro Spring Closed End	Encapsulated Viton (222, 226 O-Ring only)
			39-4	39"	992mm	PR = 213 O-Ring/Recessed**	V = Viton
			40	40"	1016mm	SC = 226 O-Ring/Flat Cap	W = Spun welded polyethylene gasket
			50	50"	1270mm	SF = 226 O-Ring/Fin	
						TC = 222 O-Ring/Flat Cap	
						TF = 222 O-Ring/Fin	
						TX = 222 O-Ring/Flex Fin	
						XA = DOE with Core Extender	
						XB = Ext. Core Open End/Polypro Spring Closed End	

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