

PEA Type (Adsorption) (Diatomaceous Earth)

The PEA cartridges, manufactured with polyolefin non-woven media composed of diatomaceous earth and extra-fine glass fibers, are unprecedented pleated filters. The PEA cartridges are capable of removing turbid and colloidal substances effectively by synergy effect of diatomaceous earth and glass fibers.

Features

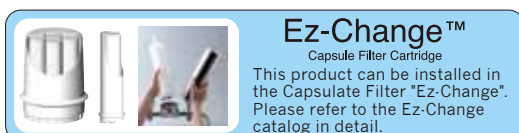
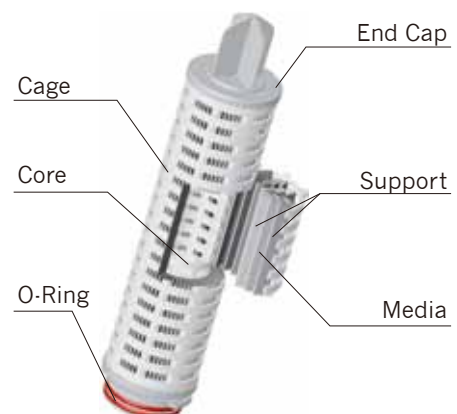
- Using a fine glass fibers and diatomaceous earth as a filter medium, the PEA cartridge filters can efficiently remove the suspended colloidal solid such as the cause of turbidity that could not be removed by conventional filters.
- The PEA cartridge filters can be the most suitable filter as a clarification filter for mainly tea-based beverage, distilled liquor, and wine, due to adsorption effect on the causative agent of sediments, such as organic fatty acids and polyphenols, as well as suspended solids.
- Using the PEA cartridge filters as a prefilter to membrane filters, the service life of membrane filters can be prolonged, resulting in running cost reduction.
- Compared to filtration equipment with diatomaceous earth pre-coating or disk filter of diatomaceous earth, the PEA cartridge filters can save filter replacement time and waste disposal cost as they are just cartridge filters.
- The PEA cartridge filters can be used safely for food and beverage application as they comply with FDA 21 CFR.
- By properly adjusting the contents of diatomaceous earth, extra-fine glass fiber and polyolefin non-woven media and controlling the thickness and density, the PEA cartridge filters can reduce the Thermotolerant Acidophilic Bacteria (TAB) which is the cause of product deterioration in beverage industry in recent years.



Major Applications

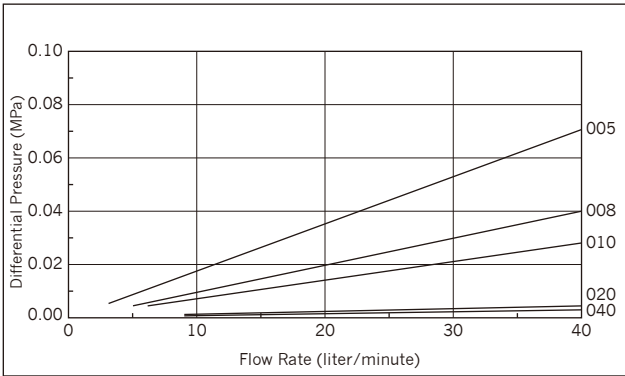
- Clarification filtration for soft drink such as tea-based beverage
- Clarification filtration for liquor such as distilled liquor and wine
- Clarification filtration for liquid sugar such as isomerized sugar
- Prefilter for membrane filters
- Others

Materials of Construction



Differential Pressure vs Flow Rate

Fluid: Water (20°C)
Cartridge Length: 250mm



* The data do not include piping pressure drop.

Particle Removal Efficiency

Particle Size (μm)	Particle Removal Efficiency (%)				
	005	008	010	020	040
0.8	>99.9	>99.5	>99.5	>99.0	>97.5
1.0		>99.9	>99.5	>99.5	>99.5
2.0			>99.9	>99.9	>99.5
4.0					>99.9

<Test Condition>

Equipment: Particle Counter in Liquid Flow Rate : 10 liter/minute
Filtration : Single Pass Dust : ACFTD+Latex Beads
Fluid : Refined Water

Bacteria Challenge Test

PEA Filter Cartridge (LRV)

Grade	005	008
Biological Indicator	Alicyclobacillus acidoterrestris	
LRV	≥5	≥4

*The above data are based on our test condition, and are not guaranteed value.

Ordering Information

250	L - PEA -	010	S	7	F
↓	↓	↓	↓	↓	↓
[Nominal Length] 125 = 125mm 250 = 250mm 500 = 500mm 750 = 750mm	[Product Type]	[Micron Rating] 005 = 0.5μm 008 = 0.8μm 010 = 1.0μm 020 = 2.0μm 040 = 4.0μm	[Gasket/O-Ring] S = Silicone E = EPDM N = NBR V = FKM T = FEP Encapsulated FKM (for 0, 5, 7) PTFE (for F)	[End Cap Code] F = Flat Gaskets 0 = 2-222 O-Ring 5 = 2-222 O-Ring+Fin 7 = 2-226 O-Ring+Fin	[Packaging Code] A = 1pc B = 6pcs C = 10pcs F = 25pcs

Specification

Product Type	PEA					
Grade	005	008	010	020	040	
Micron Rating (μm)	0.5	0.8	1.0	2.0	4.0	
E.F.A. (m ³ /250L)	0.2	0.22	0.3	0.48	0.64	
Dimensions	Length (mm)	125 / 250 / 500 / 750				
	O.D. (mm)	70.0				
	I. D. (mm)	26.1 (for F) / 25.6 (for 0, 5) / 30.0 (for 7)				
Materials Media	Media	Polyolefin / Diatomaceous Earth / Glass Fiber				
	Support	Polypropylene				
	Core	Polypropylene				
	Cage	Polypropylene				
	End Cap	Polypropylene				
	Gasket/O-Ring	NBR / EPDM / Silicone / FKM / FEP Encapsulated FKM (for 0, 5, 7) / PTFE (for F)				
	Maximum ΔP (MPa)at 20°C	0.49				
	Maximum Operating Temp.(°C)	80				
	Adaptable Food Sanitation Standard	All raw materials meet the requirement of FDA 21 CFR ※1				

The products are manufactured under control by the quality management system registered as conforming to the ISO9001 standard.



Scope: Manufacture of Filter cartridges

※If you need further information on specifications (length, end cap type, etc.), please contact us.

※1 Applicable to only Silicone Gasket and O-Ring for sealant.

End Cap Code



*The contents of the catalog is subject to change without notice.