

Masterfilter LCMZ Lenticular Filter Modules

Single or Double Layer – High Purity Lignocellulose and Inorganic Agent



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The Masterfilter LCMZ lenticular filter modules are composed of high purity lignocellulose and inorganic filter aid agent. The inner three-dimensional structure allows it to be a depth filter medium while providing excellent filtration efficiency, high dirt holding capacity and longer life. Due to the small amount of synthetic resin in the filter paper which can not only improve the wet strength, but also provides a positive charge to ensure the adsorb efficiency.

Using a high purity cellulose reducing the level of ion precipitation and endotoxin makes the LCMZ suitable for biopharmaceutical and other high purity applications. The filter aid agent in the filter paper creates an inner three-dimensional structure which ensures a higher dirt holding capacity and longer lifetime.

Applications

- Fermentation broth and cell culture media clarification
- Serums and blood products
- Enzyme preparation
- Particle removal
- Colloidal and viscous materials

Features and Benefits

- Excellent filtration efficiency
- High dirt holding capacity
- Single and double layer version
- Longer lifetime
- Available diameter: 12 and 16 inches
- Available number of discs: 2 to 16

Materials of Construction

- Filter media: Cellulose, diatomite filter aid and ionic wet-strength resin, positive or negative charged
- Core / cage: Polypropylene
- O-rings: Silicone, EPDM, Viton, FEP/PFA encapsulated

Operating Parameters

- Max. Temperature: 80 °C
- Max. Differential Pressure: 2.4 bar at 80 °C
- Filtration Area 12" diameter: 0.11 m² per disc
- Filtration Area 16" diameter: 0.23 m² per disc
- Pure Water Volume before use:
Single layer: 50 l/m², double layer: 100 l/m²
- Flow rate: 10 l/min/m²



Biological Standards

- Bacterial Endotoxin: Aqueous extraction of autoclaved filter contains < 0.25 EU/mL as determined by Limulus Amebocyte Lysate (LAL), USP <85>
- Meet the requirement of USP<87> In Vitro Cytotoxicity Test
- Meet the criteria of the USP<88> Biological Reactivity Test for Class VI-121°C plastics

Extractable Metal Ions

Ion	ppb	Ion	ppb
Mg	5.201	Ni	0.334
Al	34.540	Cu	0.770
Ca	63.447	As	0.532
Cr	0.047	Pb	0.040
Fe	27.287		

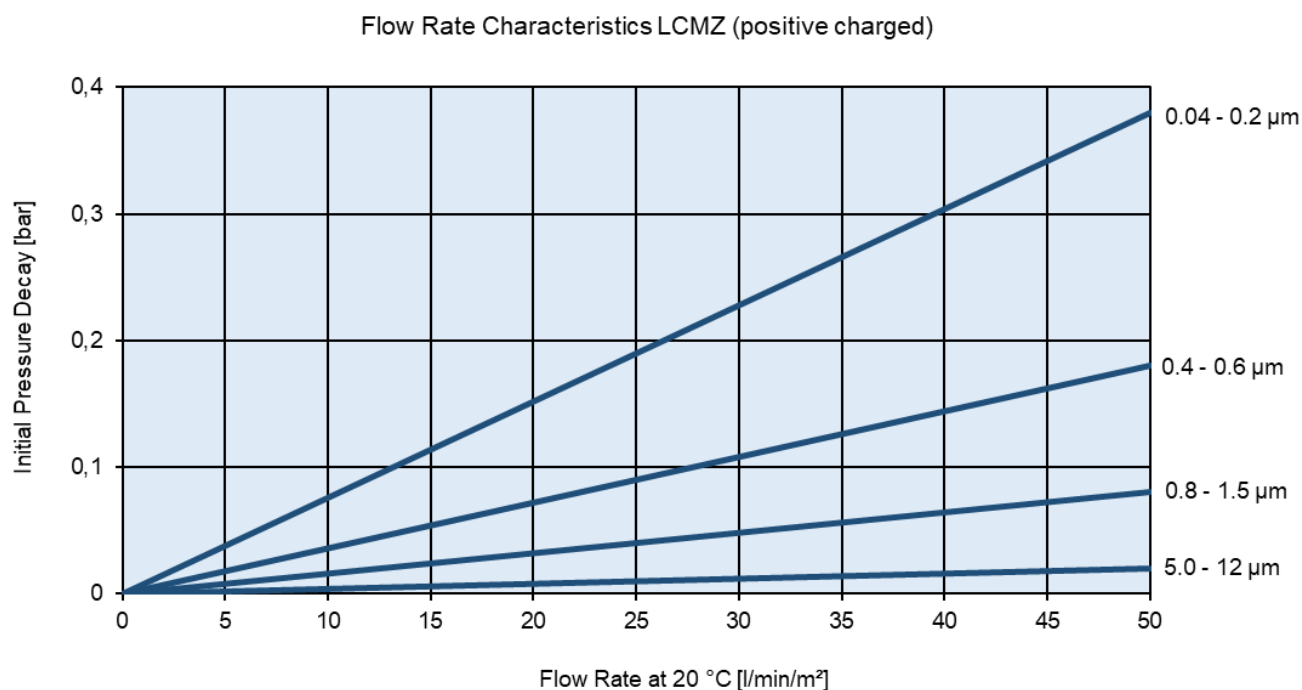
Filter medium positive charged

Chemical Compatibility

Chemical	Concentration	at 20°C	at 80°C
NaOH	2 %	R	N
HCl	5 %	R	N
HNO ₃	5 %	R	N
H ₂ SO ₄	10 %	R	N
Acetic acid	38 %	R	R
Citric acid	10 %	R	R
Acetic Peracid	0.1 %	R	R
Butanol	80 %	R	R
Ethanol	80 %	R	R

R = recommended, N = not recommended

Flow Rate Characteristics (Single-Layer)



Part Numbers Single Layer

LCMZ **080** - **P** - **DOE** - **12** - **08** - **S**

Rating [µm]	Charge	End caps	Diameter [inch]	No. of Discs	O-Ring
002 = 0.02-0.2	P = Positive N = Negative	DOE = Double open end	12 16	02 = 2 discs	S = Silicone
004 = 0.04-0.2		HTC = 222 O-ring/flat cap		03 = 3 discs	E = EPDM
020 = 0.2-0.4				04 = 4 discs	V = Viton
040 = 0.4-0.6				05 = 5 discs	P = FEP/PFA encapsulated
050 = 0.5-0.8				08 = 8 discs	
060 = 0.6-0.8				09 = 9 discs	
080 = 0.8-1.5				10 = 10 discs	
150 = 1.5-3.0				11 = 11 discs	
300 = 3.0-6.0				12 = 12 discs	
400 = 4.0-9.0				14 = 14 discs	
500 = 5.0-12				15 = 15 discs	
600 = 6.0-15				16 = 16 discs	
700 = 7.0-18					
800 = 8.0-20					
900 = 9.0-30					

e.g. part number: LCMZ080-P-DOE-12-08-S

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Single or Double Layer – High Purity Lignocellulose and Inorganic Agent



Part Numbers Double Layer

LCMZ	080	700	-	P	-	DOE	-	16	-	08	-	S
	1st layer	2nd layer										
	Ratings [μm]		Charge		End caps		Diameter [inch]		No. of Discs		O-Ring	
	001 = 0.01-0.2		P = Positive		DOE = Double open end		12		01 = 1 disc		S = Silicone	
	002 = 0.02-0.2		N =Negative		HTC = 222 O-ring/flat cap		16		02 = 2 discs		E = EPDM	
	004 = 0.04-0.2								03 = 3 discs		V = Viton	
	010 = 0.1-0.2								04 = 4 discs		P = FEP/PFA	
	020 = 0.2-0.4								05 = 5 discs		encapsulated	
	040 = 0.4-0.6								08 = 8 discs			
	060 = 0.6-0.8								09 = 9 discs			
080 = 0.8-1.5								10 = 10 discs				
150 = 1.5-3.0												
300 = 3.0-6.0												
400 = 4.0-9.0												
500 = 5.0-12												
600 = 6.0-15												
700 = 7.0-18												
701 = 7.0-30												
800 = 8.0-20												

e.g. part number: LCMZ080700-P-DOE-16-08-S