

Masterfilter DFSB Depth Filtration Modules

The Masterfilter DFSB series filter modules are available with filter media of high-purity lignocellulose and inorganic filter aid agent and high-purity cross-weaved lignocellulose and activated carbon powder. The internal porous three-dimensional structure with large internal surface area delivers excellent filtration performance and high dirt holding capacity for depth filtration applications. The filter sheets are manufactured with our highly automated proprietary process. All raw materials are controlled through our world-class quality system to ensure robust product quality and consistent filtration performance.

Applications

- Fermentation broth and cell culture media clarification
- Serums and blood products
- Enzyme preparation
- Particle removal
- Colloidal and viscous materials
- Decolorization of API
- Endotoxin removal
- Filtration of blood products
- Clarification of biochemical products

Features and Benefits

- Excellent filtration efficiency
- High dirt holding capacity
- Single- and double-layer versions
- Longer lifetime

Materials of Construction

- Filter media: Cellulose, diatomite filter aid and ionic wet-strength resin (positive or negative charged) or Cellulose, activated carbon powder, ionic wet-strength resin (positive charged)
- Out shell: Polypropylene
- Sealing: Thermal bonding

Operating Parameters

- Max. Temperature: 40 °C
- Max. Differential Pressure: 3.0 bar at 40 °C
- Flush Volume before use:
Single layer: 50 l/m², double layer: 100 l/m²
- Flow rate: 10 l/min/m²
- Effective Filtration Area: Single-layer: 1.15 m²,
Double-layer: 0.92 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

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

Extractable Metal Ions (Cellulose, diatomite filter aid and ionic wet-strength resin – LCMZ)

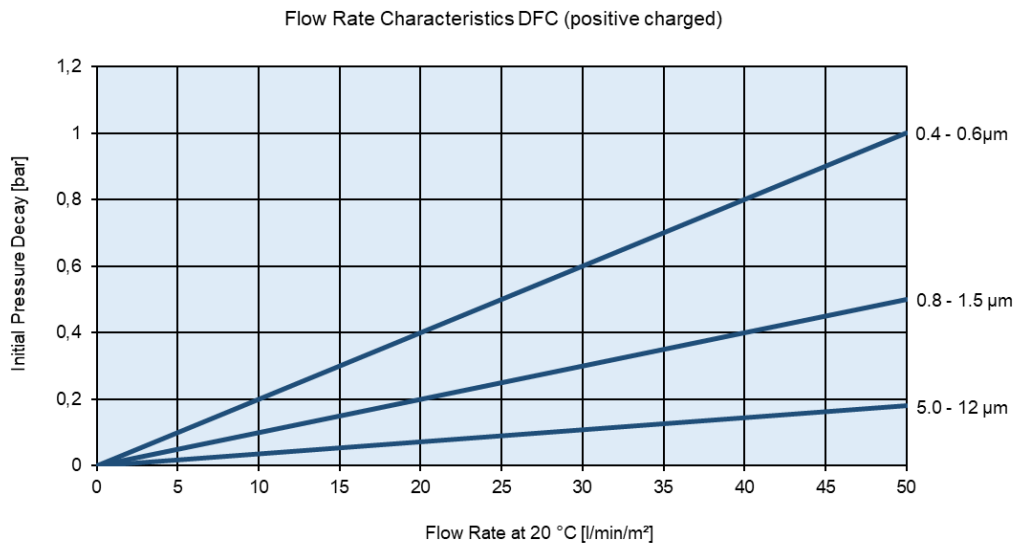
Ion	ppb	Ion	ppb
Mg	5.201	Ni	0.334
Al	34.540	Cu	0.770
Ca	63.447	As	0.532
Cr	0.047	Pb	0.040
Fe	27.287		

Filter medium positive charged

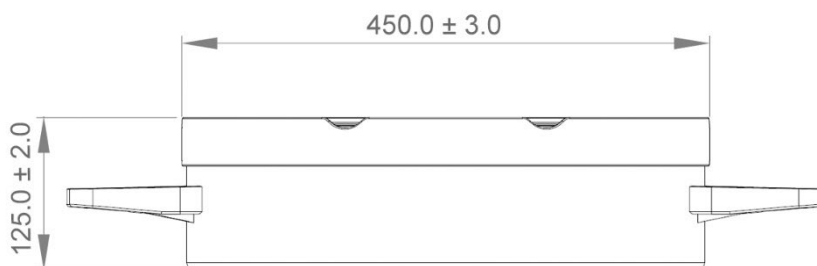
Extractable Metal Ions (Cellulose, activated carbon powder, ionic wet-strength resin - LCMK)

Ion	ppb	Ion	ppb
Mg	3.242	Ni	0.389
Al	1.468	Cu	0.019
Ca	15.514	As	0.004
Cr	0.069	Pb	0.004
Fe	1.526	Co	0.011
Mn	0.526	Zn	0.157
Cd	0.001	K	0.646
Na	81.223	Ti	0.046

Flow Rate Characteristics Single-Layer – LCMZ (Cellulose, diatomite filter aid and ionic wet-strength resin)



Dimensional Drawing



Part Numbers Single Layer – LCMZ (Cellulose, diatomite filter aid and ionic wet-strength resin)

DFSB-LCMZ	080	-	P
Removal Rating [µm]		Charge	
002 = 0.02-0.2		P = Positive	
004 = 0.04-0.2		N = Negative	
020 = 0.2-0.4			
040 = 0.4-0.6			
060 = 0.6-0.8			
080 = 0.8-1.5			
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			
900 = 9.0-30			

e.g. part number: DFCA-LCMZ080-P

Part Numbers Double Layer – LCMZ (Cellulose, diatomite filter aid and ionic wet-strength resin)

DFSB-LCMZ	004004	-	P
Removal Rating [µm]		Charge	
001001 = 0.01-0.1*		P = Positive	
001002 = 0.01-0.2*		N = Negative	
002002 = 0.02-0.2*			
004004 = 0.04-0.4			
004008 = 0.04-0.8			
004090 = 0.04-9.0			
010090 = 0.1-9.0*			
010180 = 0.1-18*			
400180 = 4.0-18			
400300 = 4.0-30			
600300 = 6.0-30			

* only available in Positive charge version

e.g. part number: DFCA-LCMZ004004-P

Part Numbers Single Layer – LCMK (Cellulose, activated carbon powder, ionic wet-strength resin)

DFSB-LCMZ	050	-	P
Rating [µm]		Charge	
030 = 0.3-1.0		P = Positive	
050 = 0.5-1.0			
100 = 1.0-2.0			
200 = 2.0-4.0			

e.g. part number: DFCA-LCMK050-P