

ZetaPRO Series

High-Capacity Enclosed Lenticular Depth Filter Modules

Dual Action Mechanical & Electrokinetic Adsorption • Pure Cellulose 3D Matrix •
Zero Product Loss Enclosed Design • 100% Reliable Thermal Injection Edge Seals



Advanced Electrokinetic Adsorption for Critical Fluid Polishing



The ZetaPRO Series stacked disc modules represent a revolutionary concept in high-turbidity bulk fluid clarification. By combining premium-grade raw cellulose depth filter fibers within an injection-molded, completely enclosed structural assembly, these modules overcome the bypass leaks and product losses associated with traditional open filter presses.

The cornerstone of ZetaPRO engineering lies in its dual-retention mechanism. Fluid contaminants are intercepted not only mechanically through a complex 3D tortuous spatial network but also electrokinetically. The filter media utilizes a stable positive Zeta Potential charge to attract and securely bind negatively charged sub-micron impurities—such as amorphous colloids, haze precursors, bacteria, and endotoxins—that are far smaller than the physical pore rating.

Advanced Engineering Advantages

Enclosed Leak-Proof Assembly

Vertical, completely sealed vessel configuration ensures 100% containment, eliminating ambient emissions, cross-contamination risks, and valuable product evaporation or dripping.

Downstream Membrane Protection

Acts as an exceptional high-capacity police filter, absorbing bulk colloidal loading and bioburden to exponentially increase the runtime of expensive sterile membrane filters downstream.

Pre-Compressed Rigid Cells

Individual lenticular cells are edge-sealed via high-precision thermal polypropylene injection molding. Up to 21 cells compressed onto a heavy-duty tubular core—zero hardware retightening after water wetting cycles.

Thermal & Chemical Resilience

Built with robust internal hardware components, fully qualifying for rigorous sanitization via hot water flushing, chemical regeneration, or continuous inline steam-sterilization (SIP).

SPECIALIZED MEDIA RANGES & APPLICATIONS



To precisely match the chemical demands and viscosity variables of your process, the ZetaPRO family is available in six distinct application-targeted media series:

01

Grade ZP-SD (Standard Range)

the heavy-duty industrial workhorse optimized for bulk solids loading, clarifying technical water loops, and chemical intermediates.



02

Grade ZP-SDP (Pharma Range)

formulated with an ultra-low endotoxin profile and rigorous validation testing, custom-tailored for pharmaceutical washing, APIs, and biotechnology processing.



03

Grade ZP-BIO (Kieselguhr-Free)

composed of ultra-pure natural and modified cellulose, free of diatomaceous earth, ensuring minimal metal ion extraction and low target protein adsorption profiles.



04

Grade ZP-SDT (High-Flow Range)

engineered with a reduced layer profile and open matrix construction, delivering exceptionally low filtration resistance and high volumetric throughput for high-viscosity liquids and gel particle removal.



05

Grade ZP-SH (High-Temp API)

specially ruggedized to maintain total structural pore stability and physical strength during constant high-temperature operations up to 160°C (320°F).



06

Grade ZP-AKS (Activated Carbon)

integrates pure activated carbon straight into the cellulose matrix, delivering unparalleled surface adsorption capacity for inline bleaching, deodorization, and lipid/odor removal.



TYPICAL REFINING & CLARIFICATION APPLICATIONS



Beverages

Cold polishing of premium wines, yeast reduction in alcohol beers, spirit decolorization, and fruit juice fragrance stabilization.



Biopharma

Final sterile and blended plasma, serum clarification, cell culture filtration, and media/atch residue filtration.



Fine Chemicals

Purification of aromatic base oils, technical resins, organic solvents, and silicone solutions.

Specifications & Configurator



Technical Working Characteristics

Maximum Service Operating Temperature: 80 °C (Standard PP core) / 160 °C (Polyamide core)

Maximum Allowed Differential Pressure: 2.5 bar at 23 °C (36 psi) / 1.0 bar at 80 °C (14 psi)

Effective Filtration Area & Sizing Data

Outer Diameter (OD)	Cells Configuration	Filtration Area (m²)
8 Inch (φ 284 mm)	Layer 8 Cell Stack	0.45 m²
12 Inch (φ 284 mm)	Layer 8 Cell Stack	0.89 m²
12 Inch (φ 284 mm)	Layer 12 Cell Stack	1.33 m²
12 Inch (φ 284 mm)	Layer 16 Cell Stack	1.78 m²
16 Inch (φ 410 mm)	Layer 8 Cell Stack	1.80 m²
16 Inch (φ 410 mm)	Layer 12 Cell Stack	2.70 m²
16 Inch (φ 410 mm)	Layer 15 Cell Stack	3.38 m²
16 Inch (φ 410 mm)	Layer 16 Cell Stack	3.60 m²

Table standardized based on filtration area in square meters according to module diameter and number of cells.



Part Number / Selection Configurator

Build your custom Mikropore ZetaPRO part number using the matrix below:

Field	Code Options
Series & Media	ZPM (ZetaPRO Module)
Nominal Retention (µm)	002 = 0.2 – 0.4 µm 005 = 0.5 – 0.8 µm 008 = 0.8 – 1.5 µm 012 = 1.2 – 5.0 µm 030 = 3.0 – 6.0 µm
Module Diameter	08 = 8 Inch 12 = 12 Inch 16 = 16 Inch
Cell Stack Qty	08 = 8 Cells 12 = 12 Cells 15 = 15 Cells 16 = 16 Cells
Adapter Type	DOE = Flat / Double Open End C7 = Double O-Ring Bayonet
Seal Material	S = Silicone E = EPDM V = Viton

Ordering Example:
ZPM-005-12-16-C7-S = ZetaPRO Depth Module, 0.5 – 0.8 µm retention, 12-inch diameter, 16-cell stack, C7 Double O-Ring adapter, Silicone seals.

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Engineered Filtration.
Trusted Performance.