

aspire[®] Depth-Clear P-Series & LE-Series

Depth Filter Modules for Biopharmaceutical Applications



Depth-Clear P-Series depth filter modules are specifically formulated to meet the performance requirements of the pharmaceutical and biotech industry applications. The filter media utilize mechanical and electrokinetic adsorptive capture mechanisms to remove particles, microorganisms, colloids, and pyrogens from critical process streams. A leader in depth filter media development, we have invested years of research and development to create a range of filter grades to meet stringent application requirements.

The Depth-Clear proprietary formulation process produces filter media with exceptionally high, effective filtration area that provides superior particle retention, contaminant holding capacity, and long on-stream filter life. Manufacturing by means of an advanced, highly automated production process results in consistent product quality and filtration performance. CLARCOR Industrial Air can provide technical assistance to validate the performance of Depth-Clear filters in new processes and applications.

The filter media is non-toxic in accordance with systemic injection testing. An alternate low extractable (LE Series) grade is available. The Depth-Clear P & LE grades have complete product control and traceability.

Features & Benefits

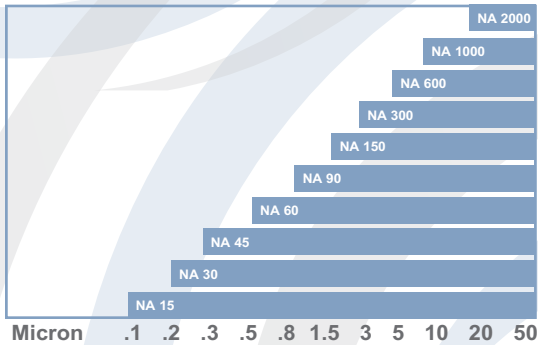
- High surface area filter modules provide superior filtration performance and long on-stream life cycles.
- Proprietary formulation process results in depth media with exceptional particle retention via mechanical and electrokinetic capture.
- The advanced manufacturing process controls result in very uniform filtration media and consistent lot-to-lot performance.
- Lenticular filters are easy to handle and install, allowing for quick and easy change outs.
- Special low extractable formulation (LE Series) available for sensitive applications.
- Manufactured in an ISO 9001: 2008 Certified Quality System Environment.

Applications

- Antibiotics
- Blood Products
- Cell Separation
- Chromatography Column Protection
- Post Fermentation Clarification
- Small and Large Volume Parenterals

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Nominal Retention Ratings



Performance Specifications

Maximum Pressure	Maximum Temperature	Recommended Flow Rate
35 psid @ 140°F / 60°C	180°F / 82°C	0.5 to 1 gpm/ft² / 20.4 L/min/m²

Nominal Dimensions

Cartridge Size	C9	C16	D14	D14B
Diameter in (cm)	11 1/8 (28.3)	11 1/8 (28.3)	16 3/4 (42.6)	16 3/4 (42.6)
Height in (cm)	7 11/16 (29.7)	10 7/8 (27.6)	10 7/8 (27.6)	13 (33.0)
Filter Area ft² (m²)	11 (1.0)	19 (1.8)	38 (3.5)	38 (3.5)
# Cells	9	16	14	14

Consult Factory if 12" Diameter is Required.

Materials of Construction

Media	Cellulose Fibers with Inorganic Filter Aids and Resin Binders
Flat Adapter	Polypropylene
Core Straps	Stainless Steel
O-Rings/Gaskets	EPR, Silicone, Neoprene, Nitrile, Viton®, Expanded Teflon®
Bayonet Adapter	Polypropylene
Support Material	Polypropylene

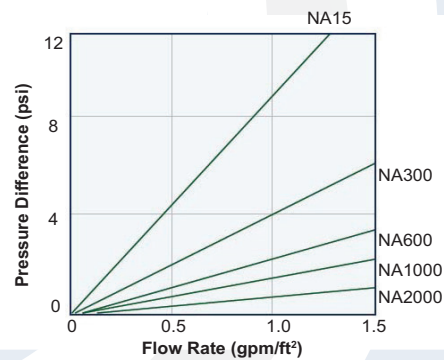
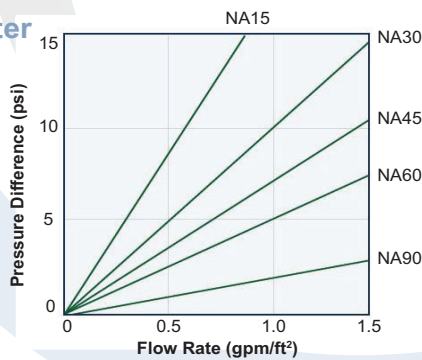
Sterilization

In-situ Steam: 20 min. @ 134°C (273°F)
1 hr. @ 126°C (258°F)
Autoclave: 30 min. @ 121°C (249°F)

FDA Conformity: All materials conform to FDA standards regarding material contact during food and beverage processing.

Toxicity: Depth-Clear Series filter components comply with USP XXII standards for Class VI plastics at 121° C.

Flow Curve in Water



Lenticular Filter Selection Guide

Media	Micron Rating	Formulation	Series	Number of Cells	Gasket Material	Adapter
NA	1000	K	P	C16	01	B
NA = Depth-Clear	15 = 0.15 µm	K Grade	P = Pharmaceutical	C9*	01 = EPR	Bayonet = B
	30 = 0.3 µm		PLE = Pharmaceutical with Low Extractables	C16	02 = Neoprene	Flat = Blank
	45 = 0.45 µm			D14	03 = Silicone	
	60 = 0.6 µm				04 = Nitrile	
	90 = 0.9 µm				08 = Viton®	
	150 = 1.5 µm				09 = Teflon®	
	300 = 3.0 µm				15 = Expanded Teflon®	
	600 = 6.0 µm					
	1000 = 10.0 µm					
	2000 = 20.0 µm					

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*Not Available in Bayonet Style

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