

NanoCeram-DP™ Series Double Layer Pleated Filter Cartridges

Argonide's NanoCeram-DP™ Series Pleated Filter Cartridges offer two pleated layers of our patented electropositively-charged filter media, providing a unique combination of high efficiency, capacity, flow rate for particulate adsorption while maintaining a low pressure drop.

A combination of a thermally-bonded blend of microglas fibers & cellulose infused with nanoalumina fibers in a non-woven matrix creates an electropositively-charged depth filter media. When assembled into a pleated cartridge, the NanoCeram-DP™ filter offers an ultra-high level of filtration efficiency because of the extra bed-depth of the two layers of electropositive filter media.

These cartridges are available in four (4) versions: standard, powder activated carbon (PAC w/ Agion), and two hybrid filters both of which incorporate an activated carbon block as the center core with one using standard NanoCeram media and the other using NanoCeram PAC-AG media as a pleated layer surrounding the carbon block.

Features

- NSF/ANSI 42 & 53 Certified
- Effective at high & low pH and in the presence of salt
- Pleated construction yields high flow rates
- Available in standard DOE configurations
- Provides optical clarification to fluids
- Manufactured with strict quality control
- All DP Components are manufactured with materials that meet FDA requirements 21CFR177.1520 for direct food contact applications.



Media Retention Characteristics

- >99.99% Efficiency at 0.2 microns (latex spheres)
- >3 LRV Cyst Retention
- >6 LRV Virus Retention
- >7.5 LRV E. coli Retention
- >99.95% Endotoxin Removal (235 to <0.12 EU/ml @ 10 mL/cm²/min)
- <0.01 NTU until Terminal ΔP (35 psid) using A2 Fine Test Dust

Applications

- Food & Beverage and Drinking Water
- Make Up Water (particulate, microbial control)
- Polishing Filters (carbon fines, emulsified oil removal)
- RO Prefiltration (SDI reduction)
- Process Water (turbidity, particulate, colloidal suspensions)
- Waste Water (biologicals, proteins, dyes)
- Cooling Towers, Chill Water Loops (iron removal)
- Clarifying Filtration of Cell Cultures



All NanoCeram® Standard products have been tested and certified by IAPMO R & T to meet NSF/ANSI std. 53 for Material Safety only.

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NanoCeram-DP™ Series



Specifications

Part No	P2.5-5DPAG / PAC2.5-5DPAG	P2.5-10DP / PAC2.5-10DPAG	P2.5-20DP / PAC2.5- 20DPAG	P4.5-10DP / PAC4.5-10DPAG	P4.5-20DP / PAC4.5-20DPAG
Dimensions	2.8 x 4.85" 7.1 x 12.32 cm	2.8 x 9.75" 7.1 x 24.77 cm	2.8 x 20" 7.1 x 50.8 cm	4.5 x 9.75" 11.43 x 24.77 cm	4.5 x 20" 11.43 x 50.8 cm
Suggested Flow Rate	1 gpm 3.8 lpm	2 gpm 7.5 lpm	4 gpm 15 lpm	4.6 gpm 17 lpm	10 gpm 38 lpm
Maximum Flow Rate	2.5 gpm 10 lpm	5 gpm 19 lpm	10 gpm 38 lpm	12 gpm 45 lpm	25 gpm 45 lpm



Materials of Construction

Media :

NanoCeram® Media
NanoCeram® PAC-AG Media

Support:

Polypropylene, Hot Melt

Gaskets:

EPDM

Operating Conditions

Temperature:

39-180°F (4-82°C)

pH Range:

5.0 to 10

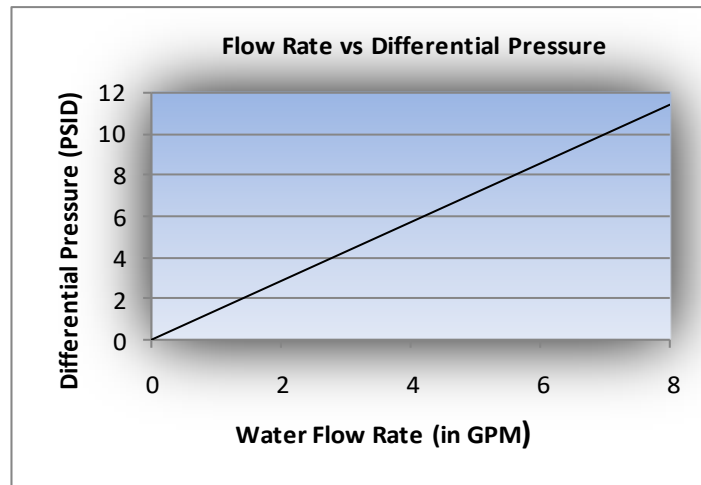
Maximum Operating Pressure:

Ordering Information

Part No:

P2.5-5DPAG	PAC2.5-5DPAG
P2.5-10DP	PAC2.5-10DPAG
P2.5-20DP	PAC2.5-20DPAG
P4.5-10DP	PAC4.5-10DPAG
P4.5-20DP	PAC4.5-20DPAG

WATER FLOW RATE P2.5-10DP



Virus (MS2) and Bacterial (E. coli) Retention Testing

Testing was conducted on NanoCeram-DP cartridges for the purpose of the determining the retention of the MS2 Virus and E. coli bacteria.

Twenty five liters of the MS2 or the E. coli suspension were passed through a cartridge at 4 gpm @ 7 psid.

Test	Flow Rate GPM	MS2 inlet Concentration PFU/mL ¹	MS2 Removal LRV ²	E. Coli input Concentration CFU/mL ³	E. Coli Removal LRV ²
1	4	1.1x10 ⁶	>6	1.8 x 10 ⁶	7.6
2	4	1.1x10 ⁶	>6	1.8 x 10 ⁶	7.6
3	4	1.1x10 ⁶	>6	1.8 x 10 ⁶	7.4
Avg.	4	1.1x10 ⁶	>6	1.8 x 10 ⁶	7.5

1) Plaque Forming Units 2) Log Reduction Value 3) Colony Forming Units