



NanoCeram-PACB[™] Series

Powder Activated Carbon + Carbon Block Filter Cartridges

Features and Benefits

Pleated filter cartridges with a carbon block centercore combine high efficiency particulate filtration with a high efficiency (powdered) activated carbon (PAC) plus the carbon block for increased chlorine adsorption. NanoCeram-PACB[™] is a further advancement in Argonide's series of filters and is a major breakthrough in activated carbon filtration. The addition of a carbon block provides a greater chlorine adsorption curve than a NanoCeram-PAC[™] filter cartridge for applications requiring greater reduction of such contaminants. The line of NanoCeram-PACB cartridges offers a unique combination of efficiency & capacity for both particulate and chemical adsorption and soluble contaminants such as soluble organics and chlorine. Their best use is in those applications where a combination of fouling-resistant soluble contaminant removal and particulate reduction is desired.

- Chlorine Reduction Efficiency: 2ppm to less than 1ppm for > 30,000 gallons (Part No. PACB4.5-20)
- Silt Density Index (SDI): $\leq 1.0 \pm 0.1$
- Cyst Retention: > 4 LRV
- Temp. Range: 39 - 135° F (4 - 57°C)
- Turbidity Reduction: < 0.01 NTU until terminal pressure drop (35psi)
- Low Initial ΔP : < 5psi @ 7gpm (Part No. PACB4.5-20)
- Efficiency: > 99.9% reduction of 0.2 μ particulate (monodispersed latex spheres)
- Dirt Holding Capacity (DHC): 925g (A2 Fine Test Dust)
- Effective pH Range: 5 - 10
- Bacteria (*E coli*) Retention: > 6 LRV
- Max. Pressure: 70 psi (4.83 bar)

Applications

- ◆ Waste Water - VOC's, disinfection by-products (DBP's), trace toxic organics (i.e., organic pesticides, endocrine disruptors, soluble & particulate dyes, etc.)
- ◆ POE & POU - Residual chlorine, toxic organic pollutants and particulate
- ◆ Polishing Filter - downstream of large granular carbon beds, coagulation processes, and filtration water purification systems
- ◆ Removal of particulate sorbents downstream of filter beds (e.g., arsenic sorbents or IX resins)
- ◆ Prefilter for protecting RO membranes for both fresh water and sea water (reduces chlorine that can damage membranes as well as sub-micron particles that tend to foul RO membranes)
- ◆ Iron removal in cooling towers & chill water systems
- ◆ Chemical-Biological Filters - protection against terrorist contamination of water supplies

Industries

Food, Beverage & Bottled Water	Automobile Manufacturing
Pharmaceutical & Biomedical	Power Generation
Cosmetics & Personal Care	Machining (including EDM)
Microelectronics & Semiconductors	Paints & Coatings



NanoCeram-PACB™ Series:

Part No.		PACB2.5-10 2.5" x 10"	PACB4.5-10 4.5" x 10"	PACB4.5-20 4.5" x 20"
Filter Surface Area (NanoCeram-PAC Media Only)	(in ²)	420	780	1,620
	(ft ²)	2.9	5.4	11.2
	(cm ²)	2,700	5,030	10,400
	(m ²)	0.27	0.503	1.04
Electroadsorptive (active) Surface Area	(in ²)	1.85 x 10 ⁷	3.44 x 10 ⁷	7.14 x 10 ⁷
	(ft ²)	128,500	240,000	496,000
	(cm ²)	1.19 x 10 ⁸	2.22 x 10 ⁸	4.61 x 10 ⁸
	(m ²)	11,900	22,200	46,100
Diameter x Length	(in)	2.75 x 9.75	4.45 x 9.75	4.45 x 20
	(cm)	7 x 24.8	11.3 x 24.8	11.3 x 50.8
Suggested Flow Rate	(GPM)	1	3.5	7
	(LPM)	4	13	27
Peak Flow Rate *	(GPM)	4	12	24
	(LPM)	15	45	90

*Peak Flow Rate based on initial flow using new filter cartridge and clean water during laboratory testing.

NanoCeram-PACB™ Chlorine Adsorption:

