



Better Air is Our Business®

AmericanAirFilter® BioCel I®

High Efficiency Extended Surface Air Filter

The BioCel I filter was designed primarily to remove airborne biological contaminants in hospital critical areas and food and pharmaceutical processing plants. It has also been engineered to meet the exacting requirements of precision manufacturing operations and laboratories, where very high efficiency filtration of fine particulate matter is necessary.

High Efficiency - Low Resistance

The air cleaning efficiency of the BioCel I filter is significantly higher than that of 90-95% ASHRAE efficiency filters. BioCel I filters exceed the maximum efficiency of 98% which can be measured by ASHRAE 52.1 test method.

Rated at 95% efficiency on 0.3 micrometer challenge aerosol and MERV 16 by ASHRAE Standard 52.2, the BioCel I filter has the advantage of much lower pressure drop than a typical HEPA filter (0.4" versus 1.0" w.g. at 250 FPM). BioCel I filters fill the gap between ASHRAE grade high efficiency filters and ultra-high efficiency HEPA's at half the weight and pressure drop.

This compact, lightweight filter will withstand operating temperatures to 350°F, if recommended final resistance is not exceeded.

To maximize filter life, use BioCel I filters with high quality AAF prefilters.

Construction

BioCel I filters consist of a pleated media pack enclosed in a galvanized steel frame assembly. The media is made of ultra-fine fiberglass formed into a series of pleats. Corrugated aluminum separators maintain uniform spacing between each pleat to allow unrestricted airflow through the filter. Bar braces are installed on both sides of the filter for extra reinforcement of the media pack. A flattened, expanded metal faceguard installed on both sides of the filter is available as an option.

BioCel I filters have a single piece galvanized steel header on the air entering side that is interlocked to the cell sides in a patented fashion that prevents leakage and forms a totally rigid construction.



BioCel I® filters meet efficiency requirements established for LEED® Project Certification.

Ideal for Variable Volume Systems

Due to the rigid all metal construction and water resistant media in a supported pleat type configuration, BioCel I filters can be used in systems with difficult operating conditions:

- Variable air volume
- Turbulent airflow
- Repeated fan shutdown
- High temperature
- High humidity
- Intermittent exposure to water such as sea coast installations

BioCel® M-Pak – A New Alternative

The BioCel M-Pak filter offers the same media area and pressure drop as the BioCel I filter in a 6" deep, high-impact polystyrene cell side.

The BioCel M-Pak filter offers several advantages in comparison to the BioCel I filter.

- Lighter – half the weight
- Requires less storage space
- Reduces disposal costs
- Easier handling
- Fully Incinerable



For more information on the BioCel® M-Pak filter, see brochure AFP-1-117.

Product Information

Nominal Size (Inches) (W x H x D)	Actual Size (Inches) (W x H x D)	Rated Airflow Capacity (CFM)			Rated Initial Resistance (in. w.g.)			Gross Media Area (sq. ft.)	Filters Per Carton	Shipping Weight (lbs.)
		125 FPM	250 FPM	500 FPM	125 FPM	250 FPM	500 FPM			
95% Initial Efficiency (0.3µm Particles)										
24 x 24 x 12	23 ³ / ₈ x 23 ³ / ₈ x 11 ¹ / ₂	500	1000	2000	.19	.40	.95	156	1	20.0
^(a) 24 x 24 x 12	24 x 24 x 11 ¹ / ₂	500	1000	2000	.19	.40	.95	165	1	21.5
24 x 20 x 12	23 ³ / ₈ x 19 ³ / ₈ x 11 ¹ / ₂	413	825	1650	.19	.40	.95	127	1	17.0
^(a) 20 x 24 x 12	19 ³ / ₈ x 23 ³ / ₈ x 11 ¹ / ₂	413	825	1650	.19	.40	.95	127	1	18.5
12 x 24 x 12	11 ³ / ₈ x 23 ³ / ₈ x 11 ¹ / ₂	250	500	1000	.19	.40	.95	72	1	12.0
Recommended Final Resistance 2.0 in. w.g.										
24 x 24 x 6	23 ³ / ₈ x 23 ³ / ₈ x 5 ⁷ / ₈	500	1000	—	.30	.60	—	93	2	22.0
^(a) 24 x 24 x 6	24 x 24 x 5 ⁷ / ₈	500	1000	—	.30	.60	—	98	2	24.0
24 x 20 x 6	23 ³ / ₈ x 19 ³ / ₈ x 5 ⁷ / ₈	413	825	—	.30	.60	—	93	2	22.0
^(a) 20 x 24 x 6	19 ³ / ₈ x 23 ³ / ₈ x 5 ⁷ / ₈	413	825	—	.30	.60	—	96	2	21.5
12 x 24 x 6	11 ³ / ₈ x 23 ³ / ₈ x 5 ⁷ / ₈	250	500	—	.30	.60	—	42	2	14.0
Recommended Final Resistance 1.5 in. w.g.										

(a) Available in double header construction only.

Metric Conversion Info	
1.0 in. = 2.54 cm	1 CFM = 1.7 m ³ /hr
1 ft ² = .09 m ²	1.0 in. w.g. = 249 Pa
1 FPM = .005 m/sec.	

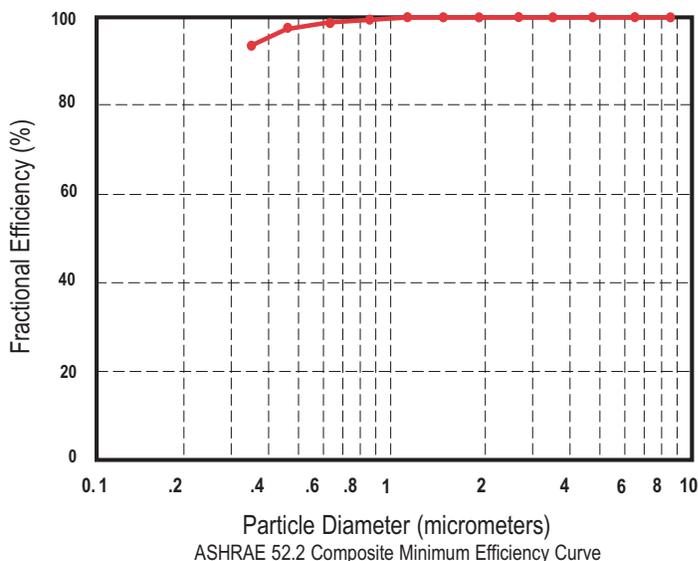
Options

- Double header construction is available for installation into other manufacturers' framing systems.
- 6" or 12" depths available.
- HEPA filter construction available. See Bulletin AFP-1-110.

Performance Data

Initial Efficiency vs. Particle Diameter
At rated airflow, the BioCel I filter has efficiency of 95% on 0.3 micron particles and is classified **MERV 16** in accordance with ASHRAE Standard 52.2.

Underwriters Laboratories, Inc. Classification
BioCel I filters are classified **Class 1**. Testing was performed according to UL Standard 900.



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AAF has a policy of continuous product research and improvement and reserves the right to change design and specifications without notice.

ISO Certified Firm

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