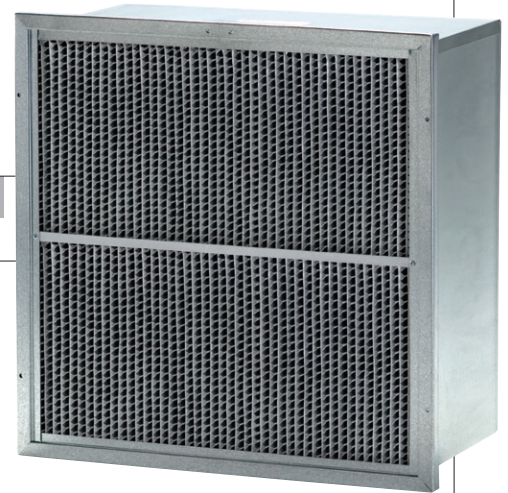


# BioCel® I

## HIGH-EFFICIENCY EXTENDED SURFACE AIR FILTERS



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.

### BioCel® M-Pak Filter— 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.



### High Efficiency— Low Resistance

Rated at 95% efficiency on 0.3 micrometer challenge aerosol and a MERV 16 per 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 HEPAs 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.

### 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® I Filters

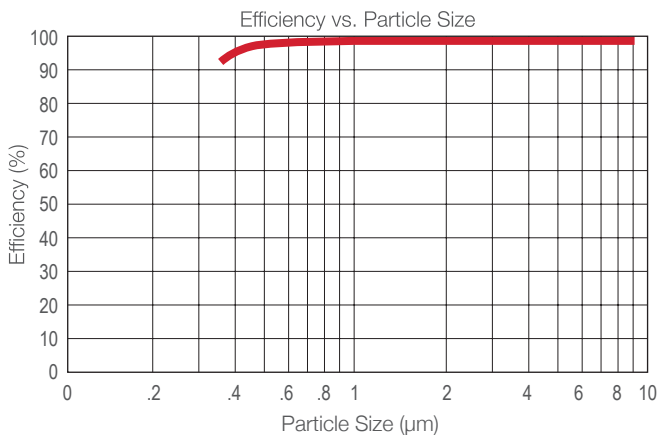
## Product Information

| Nominal Size<br>(Inches)<br>(W x H x D)         | Actual Size<br>(Inches)<br>(W x H x D)   | Rated<br>Airflow Capacity<br>(CFM) |         |         | Rated<br>Initial Resistance<br>(in. w.g.) |         |         | Media<br>Area<br>(sq. ft.) | Gross<br>Filters<br>Per<br>Carton | Shipping<br>Weight<br>(lbs.) |
|---|--|------------------------------------|---------|---------|---|---------|---------|----------------------------|-----------------------------------|------------------------------|
|   |  | 125 FPM                            | 250 FPM | 500 FPM | 125 FPM                                   | 250 FPM | 500 FPM |                            |                                   |                              |
| <b>95% Initial Efficiency (0.3µm Particles)</b> |  |                                    |         |         |   |         |         |                            |                                   |                              |
| 24 x 24 x 12                                    | 23 <sup>3</sup> / <sub>8</sub> x 23 <sup>3</sup> / <sub>8</sub> x 11 <sup>1</sup> / <sub>2</sub> | 500                                | 1000    | 2000    | .26                                       | .44     | 1.0     | 156                        | 1                                 | 20.0                         |
| <sup>(a)</sup> 24 x 24 x 12                     | 24 x 24 x 11 <sup>1</sup> / <sub>2</sub>   | 500                                | 1000    | 2000    | .26                                       | .44     | 1.0     | 165                        | 1                                 | 21.5                         |
| 24 x 20 x 12                                    | 23 <sup>3</sup> / <sub>8</sub> x 19 <sup>3</sup> / <sub>8</sub> x 11 <sup>1</sup> / <sub>2</sub> | 413                                | 825     | 1650    | .26                                       | .44     | 1.0     | 127                        | 1                                 | 17.0                         |
| <sup>(a)</sup> 20 x 24 x 12                     | 19 <sup>3</sup> / <sub>8</sub> x 23 <sup>3</sup> / <sub>8</sub> x 11 <sup>1</sup> / <sub>2</sub> | 413                                | 825     | 1650    | .26                                       | .44     | 1.0     | 127                        | 1                                 | 18.5                         |
| 12 x 24 x 12                                    | 11 <sup>1</sup> / <sub>8</sub> x 23 <sup>3</sup> / <sub>8</sub> x 11 <sup>1</sup> / <sub>2</sub> | 250                                | 500     | 1000    | .26                                       | .44     | 1.0     | 72                         | 1                                 | 12.0                         |
| Recommended Final Resistance 2.0 in. w.g.       |  |                                    |         |         |   |         |         |                            |                                   |                              |
| 24 x 24 x 6                                     | 23 <sup>3</sup> / <sub>8</sub> x 23 <sup>3</sup> / <sub>8</sub> x 5 <sup>7</sup> / <sub>8</sub>  | 500                                | 1000    | –       | .30                                       | .60     | –       | 93                         | 2                                 | 22.0                         |
| <sup>(a)</sup> 24 x 24 x 6                      | 24 x 24 x 5 <sup>7</sup> / <sub>8</sub>  | 500                                | 1000    | –       | .30                                       | .60     | –       | 98                         | 2                                 | 24.0                         |
| 24 x 20 x 6                                     | 23 <sup>3</sup> / <sub>8</sub> x 19 <sup>3</sup> / <sub>8</sub> x 5 <sup>7</sup> / <sub>8</sub>  | 413                                | 825     | –       | .30                                       | .60     | –       | 93                         | 2                                 | 22.0                         |
| <sup>(a)</sup> 20 x 24 x 6                      | 19 <sup>3</sup> / <sub>8</sub> x 23 <sup>3</sup> / <sub>8</sub> x 5 <sup>7</sup> / <sub>8</sub>  | 413                                | 825     | –       | .30                                       | .60     | –       | 96                         | 2                                 | 21.5                         |
| 12 x 24 x 6                                     | 11 <sup>1</sup> / <sub>8</sub> x 23 <sup>3</sup> / <sub>8</sub> x 5 <sup>7</sup> / <sub>8</sub>  | 250                                | 500     | –       | .30                                       | .60     | –       | 42                         | 2                                 | 14.0                         |
| Recommended Final Resistance 1.5 in. w.g.       |  |                                    |         |         |   |         |         |                            |                                   |                              |

(a) Available in double header construction only.

## Performance Data

### Composite Minimum Efficiency Curve



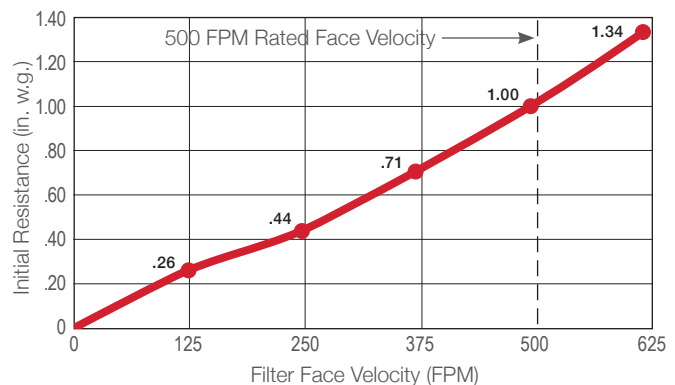
### Initial Efficiency vs. Particle Diameter

At rated airflow, the BioCel I filter has an efficiency of 95% on 0.3 micron particles and is a MERV 16 in accordance with ASHRAE Standard 52.2.

### Underwriters Laboratories Classification

BioCel I filters are UL Classified. Testing was performed in accordance with UL Standard 900.

### Initial Resistance vs. Filter Face Velocity



### Options

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

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