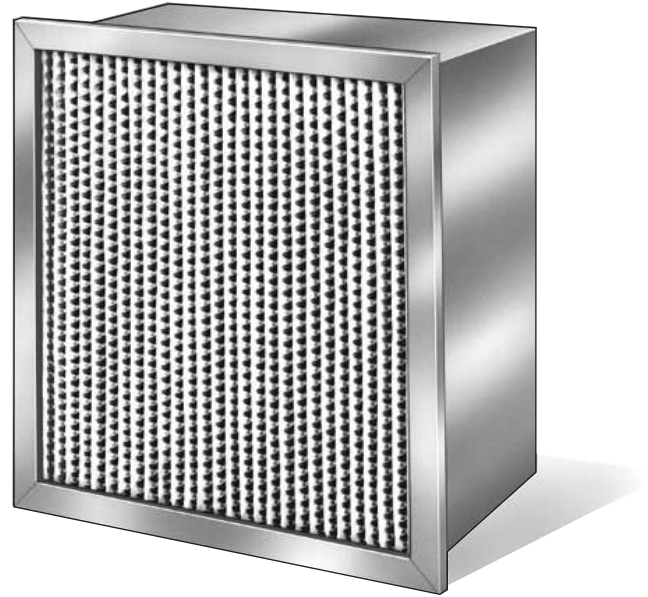


## Variflow® Type SC

High and Medium Efficiency Extended Surface Air Filters

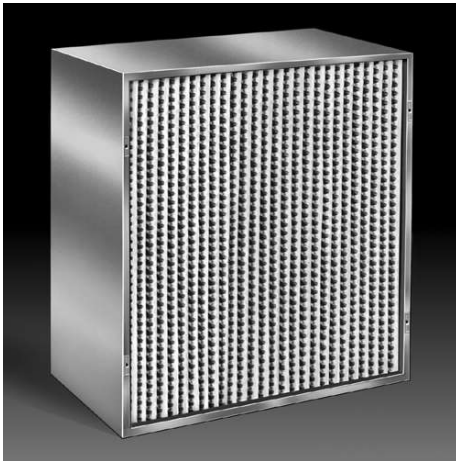
SC Variflow filters are designed for high and medium efficiency air filtration in all types of commercial, industrial and institutional HVAC installations.

- Three efficiencies -  
90 - 95% (MERV 14)  
80 - 85% (MERV 13)  
60 - 65% (MERV 11)
- Six styles of construction
- Eight sizes
- Two depths - 6" and 12"
- Compact design saves valuable in-line duct space
- Ideal for variable volume systems and difficult operating conditions
- Water resistant microglass paper media
- Available with antimicrobial treated media

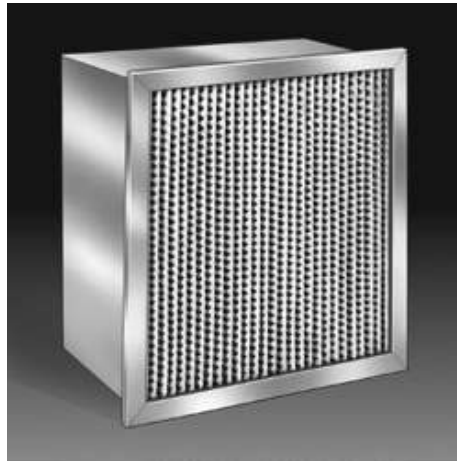


### Select from Six Styles of Construction

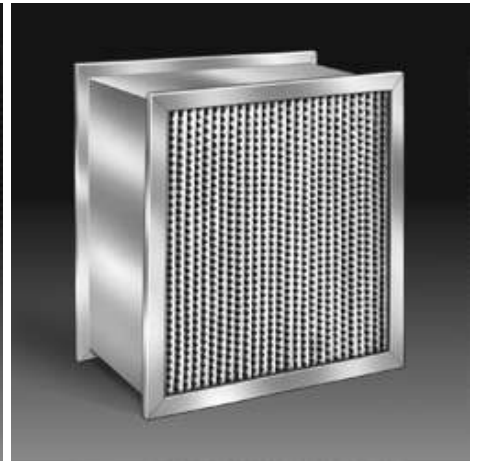
Metal Construction - U.L. Class I



Style VSC-MA - Box Construction (No header)

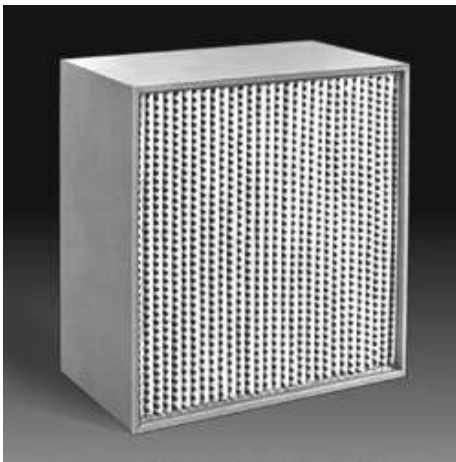


Style VSC-MB - Single Header

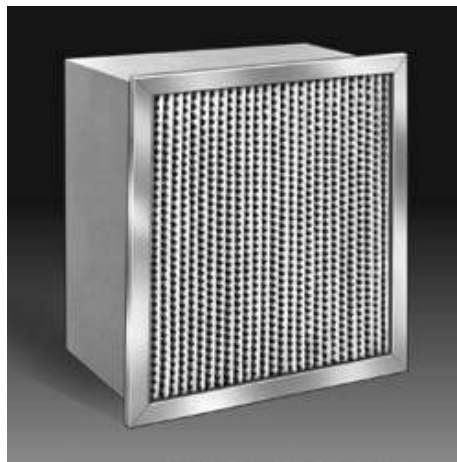


Style VSC-MC - Double Header

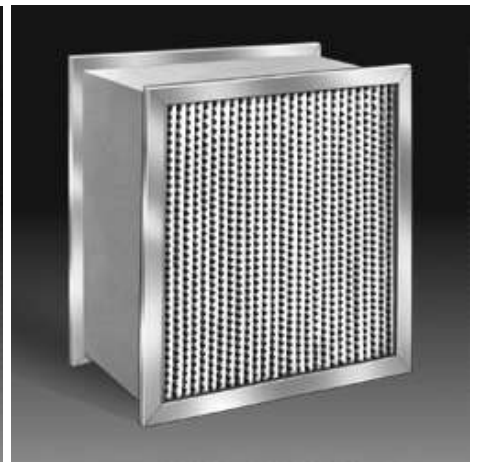
Particle Board Construction - U.L. Class 2 (Optional U.L. Class 1 available)



Style VSC-FA - Box Construction (No header)



Style VSC-FB - Single Header



Style VSC-FC - Double Header

# Rigid Cell Design Handles Difficult Operating Conditions

Designed for VAV Systems, Turbulent Conditions

The media pack, consisting of pleated microglass paper media and corrugated aluminum separators, is sealed inside the cell sides forming a totally rigid filter assembly.

Rigid cell construction is recommended for variable volume systems. Fluctuations in filter face velocity, turbulent air flow or repeated fan shutdown have no effect on filter integrity or performance.

## Ultra Fine Water Resistant Media

SC Variflow media is made from ultra fine fiber microglass paper. Each efficiency has its own formulation for fiber size and density. Paper mat media is unaffected by humidity or intermittent exposure to water. Water does not pass through the media, but causes a temporary rise in resistance, which quickly falls back to normal levels as the moisture evaporates.

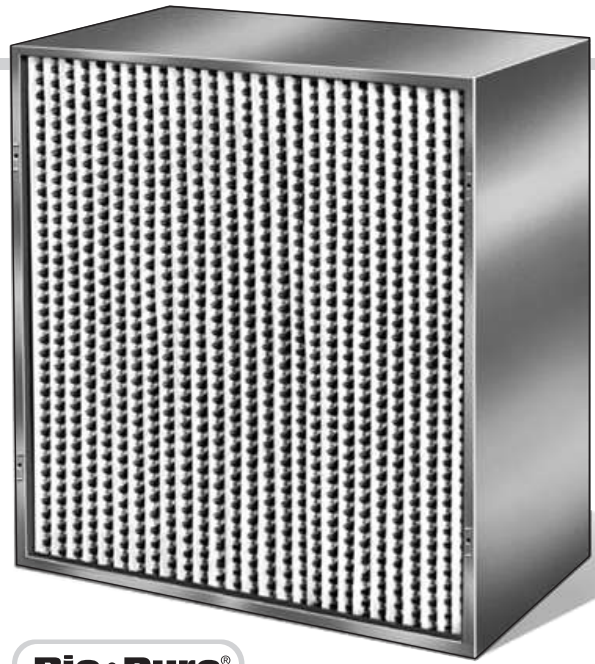
Variflow filters are widely used in areas with high humidity or in systems where sensible moisture is likely to reach the filter.

## Minimum Filter Depth Saves Space

SC Variflow filters are only 6" deep (250 fpm) or 12" deep (500 fpm), saving valuable space in designing the air filter section of the HVAC system.

## High Temperature Applications

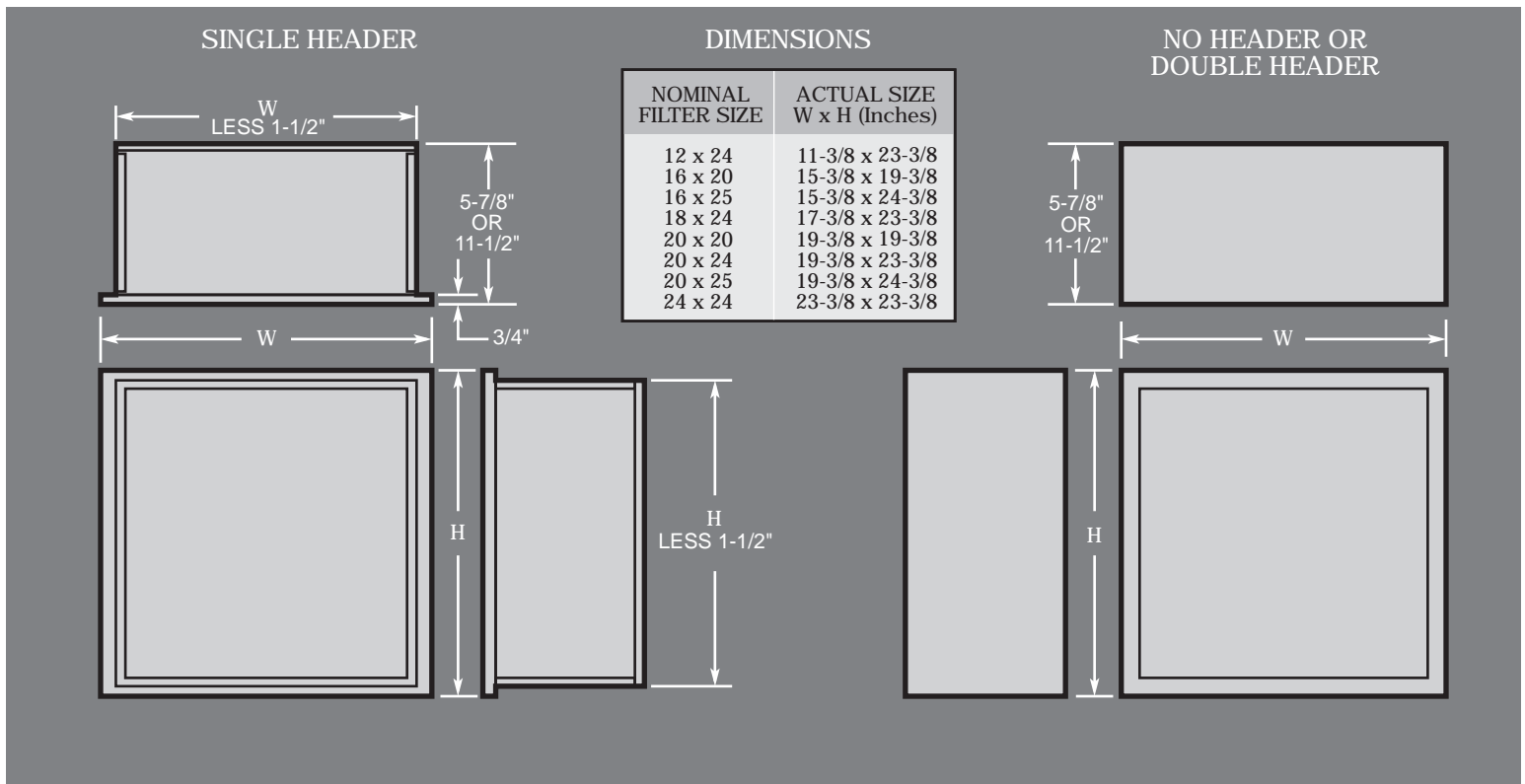
All metal construction and microglass paper media also make SC Variflow filters suitable for high temperature applications up to 350° F. (Above 200° F, the recommended final resistance of 1.2" w.g. should not be exceeded.) For higher temperatures (up to 900° F), High Temperature Variflow filters made of aluminized steel are available. (See Bulletin KA-446.)



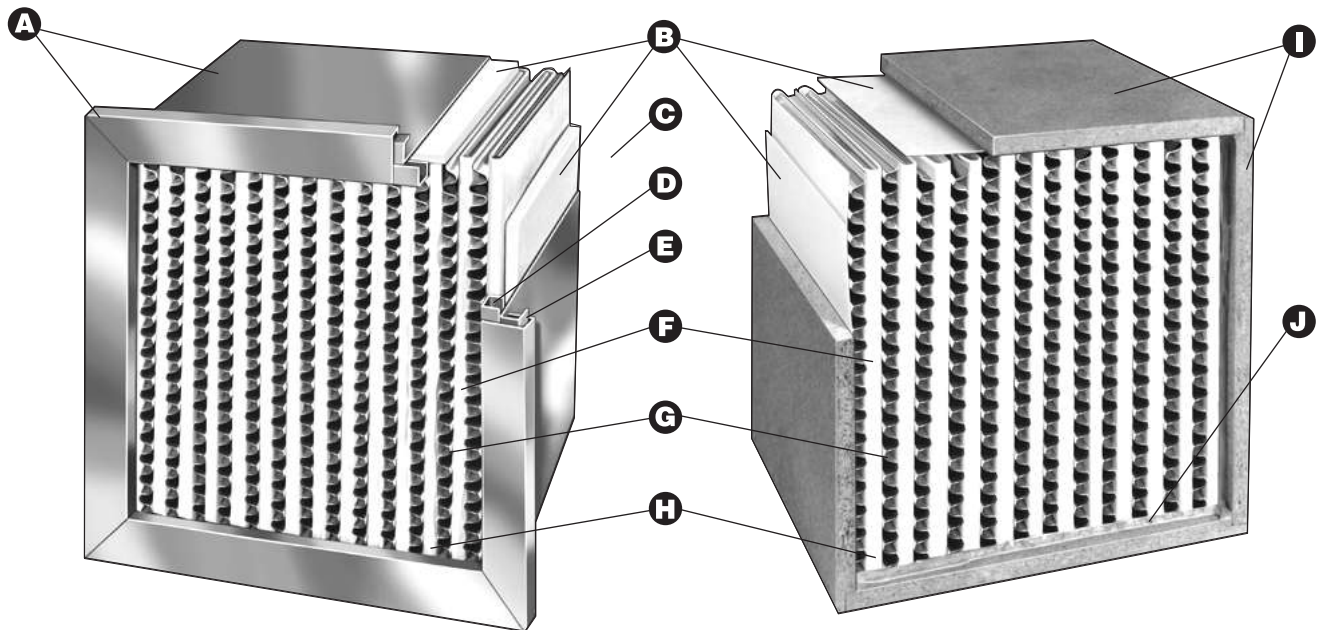
**Bio•Pure®**  
Antimicrobial  
Treated Filters

Available with Antimicrobial Treatment

90 - 95% Bio•Pure® SC Variflow filters are treated with an EPA registered antimicrobial agent to inhibit growth of bacteria, mold, mildew and fungi on the media.



## Superior Construction Dependable Operation



Metal Construction VSC-M Series

Wood Construction VSC-F Series

**A** Galvanized Steel Cell Sides and Header Constructed of 24 gauge steel. Rigid design. 350°F operating temperature limit.

**B** Glass Fiber Media Pack Sealant  
The media pack in metal SC Variflows is sealed on all four sides with a layer of high loft microglass fiber media. The sealant prevents bypass leakage around the pack and also cushions the pack against damage during shipping and handling. Wood SC Variflows are sealed with a liner of microglass paper media.

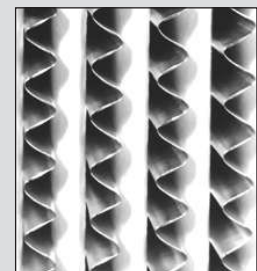
**C** Faceguard - Air leaving Side (not shown)  
An expanded metal screen is installed on the downstream side of all metal Variflows to reinforce and protect the media pack.

**D** Spacer  
A U-shaped spacer is inserted inside the header to firmly seat the media pack against the cell sides. The spacer prevents movement of the pack and adds rigidity to the filter assembly.

**E** Snap Lock Assembly  
Metal SC Variflows are assembled with a Snap Lock design using no rivets. The cell sides are mechanically fastened to the header providing rigid construction and no leakage. The filters are supplied with an expanded metal faceguard on the air leaving side (not shown). An upstream faceguard is optional. Factory applied gaskets are also available.

**F** Ultrafine Microglass Paper Media  
The media is produced from glass microfibers which are processed into a paper like mat.

**G** Safety Edge  
Aluminum Separators  
Corrugated aluminum separators maintain proper spacing between pleats for minimum resistance and allow full utilization of the media. The edges of the separators are rolled (hemmed) to prevent damage to the media and reduce risk of injury to maintenance personnel. For corrosive conditions, vinyl coated separators are available.



Safety edge corrugated separators maintain pleat spacing.

**H** Recessed Media Pack  
To protect the media and separators from shipping and handling damage, the media pack is recessed from the outer edges of the cell sides or header.

**I** Particle Board Cell Sides  
Wood Variflows are made with fire retardant particle board. Maximum operating temperature is 200°F. When headers are required (Style VSC-FB or VSC-FC) galvanized steel headers are installed. Special size Variflows are made with particle board construction.

**J** Rubber Base Media Pack Sealant  
The media pack in wood SC Variflows is sealed to the inside of the cell sides with a rubber base sealant applied around the perimeter of the pack on both sides of the filter. The sealant prevents bypass leakage around the media pack.



# Variflow Type SC Product Information

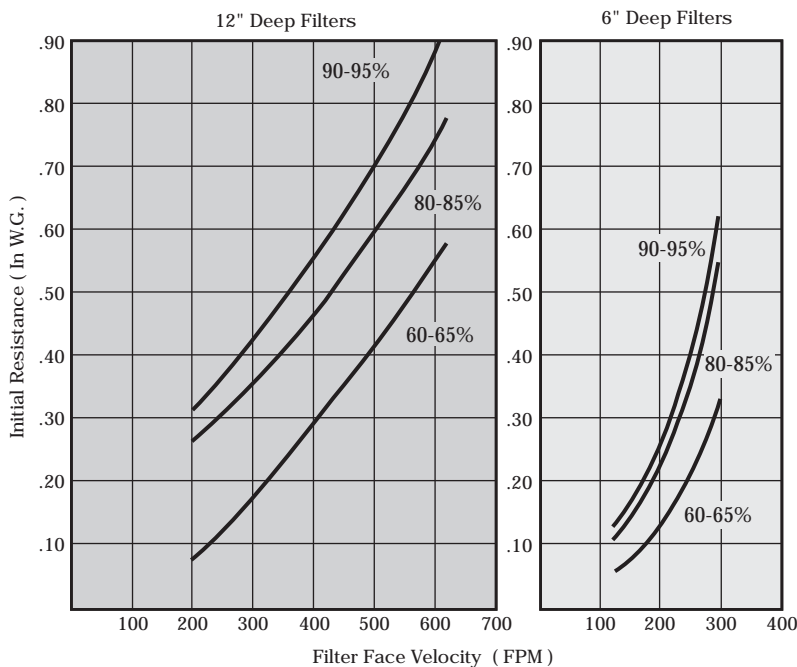
Size / Air Flow Capacity / Resistance

| (1,2) NOMINAL SIZE (INCHES) (W x H x D) | (3) AIR FLOW CAPACITY (CFM) @ 500 FPM - 12" @ 250 FPM - 6" | (4) RATED INITIAL RESISTANCE (IN. W.G.) @ 500 FPM - 12" @ 250 FPM - 6" |          |          | RECOMMENDED FINAL RESISTANCE (IN. W.G.) | MEDIA AREA (SQ. FT.) |                                   |
|---|--|--|----------|----------|---|----------------------|-----------------------------------|
|   |  | 90 - 95%   | 80 - 85% | 60 - 65% |   | VSC-MA / VSC-FA      | VSC-MB / VSC-FB / VSC-MC / VSC-FC |
|   |  |  |          |          |   |                      |                                   |
| 24 x 24 x 12                            | 2000   | .70  | .60      | .43      | 1.5                                     | 121                  | 103                               |
| 20 x 25 x 12                            | 1750   | .70  | .60      | .43      | 1.5                                     | 105                  | 88                                |
| 20 x 24 x 12                            | 1650   | .70  | .60      | .43      | 1.5                                     | 101                  | 84                                |
| 20 x 20 x 12                            | 1400   | .70  | .60      | .43      | 1.5                                     | 83                   | 69                                |
| 18 x 24 x 12                            | 1500   | .70  | .60      | .43      | 1.5                                     | 91                   | 75                                |
| 16 x 25 x 12                            | 1400   | .70  | .60      | .43      | 1.5                                     | 84                   | 69                                |
| 16 x 20 x 12                            | 1100   | .70  | .60      | .43      | 1.5                                     | 67                   | 53                                |
| 12 x 24 x 12                            | 1000   | .70  | .60      | .43      | 1.5                                     | 57                   | 47                                |
| 24 x 24 x 6                             | 1000   | .40  | .38      | .23      | 1.5                                     | 55                   | 47                                |
| 20 x 25 x 6                             | 875  | .40  | .38      | .23      | 1.5                                     | 48                   | 40                                |
| 20 x 24 x 6                             | 825  | .40  | .38      | .23      | 1.5                                     | 46                   | 38                                |
| 20 x 20 x 6                             | 700  | .40  | .38      | .23      | 1.5                                     | 38                   | 32                                |
| 18 x 24 x 6                             | 750  | .40  | .38      | .23      | 1.5                                     | 42                   | 34                                |
| 16 x 25 x 6                             | 700  | .40  | .38      | .23      | 1.5                                     | 38                   | 31                                |
| 16 x 20 x 6                             | 550  | .40  | .38      | .23      | 1.5                                     | 31                   | 24                                |
| 12 x 24 x 6                             | 500  | .40  | .38      | .23      | 1.5                                     | 26                   | 21                                |

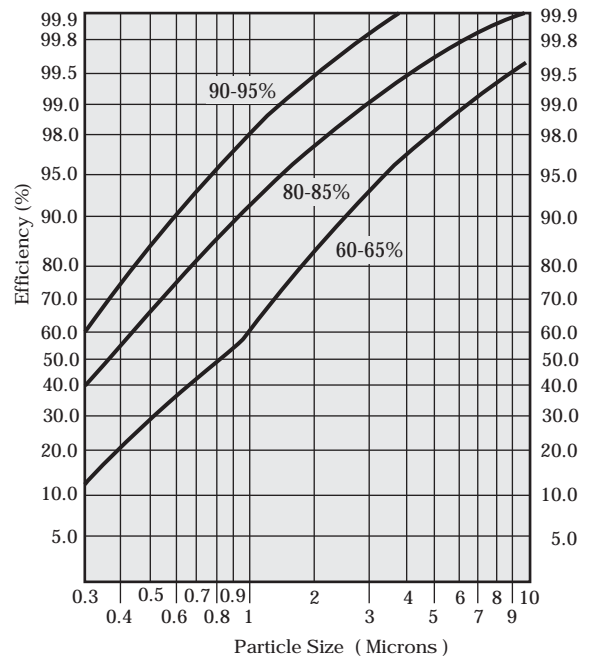
- Actual face dimensions are 5/8" less than nominal (24" x 24" is 23-3/8" x 23-3/8"). Actual depth 6" is 5-7/8" ; 12" is 11-1/2".
- Width and height dimensions are interchangeable. Variflow filters can be installed with the pleats either vertical or horizontal.
- All performance data is based on the ASHRAE 52.1 and 52.2 test methods. Performance tolerances conform to section 7.4 of ARI Standard 850-93.

Underwriter's Laboratories, Inc. Classification  
 SC Variflow filters made with all metal construction (VSC-MA, VSC-MB, VSC-MC) are classified U.L. Class 1.  
 Particle board Variflow filters (VSC-FA, VSC-FB, VSC-FC) are classified U.L. Class 2. (Optional U.L. Class 1 available)  
 Operating Temperature Limits (Continuous)  
 Metal Construction - 350°F (177°C)  
 Wood Construction - 200°F (93°C)

## Initial Resistance vs. Filter Face Velocity



## Efficiency by Particle Size



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