



Koch Filter Corporation
Filtration Products Crafted with Pride



DuraMAX™ 4vS

High Efficiency Synthetic Media Minipleat Filters

The DuraMAX™ 4vS is a rigid, extended surface air filter engineered to provide maximum performance and prolonged filter lifecycles.

- Synthetic filter media
- Low pressure drop reduces energy costs
- Extended filter life
- All-plastic frame construction
- MERV 15, 95% efficiency
- UL Class 2
- Incinerable
- Engineered versatility—*excellent filtration in any application*

Low resistance to airflow and lower energy costs

DuraMAX provides an unequalled combination of low pressure drop and high efficiency through the use of our unique minipleat design. The DuraMAX 4vS contains 194 square feet of synthetic filter media in a standard 24x24x12" frame to help insure a low pressure drop, which in turn helps to lower energy costs to the user.

Synthetic filter media

DuraMAX 4vS is constructed with durable, dual-layer synthetic air filter media* designed specifically for high efficiency air filtration applications.

The rugged composition of the synthetic media makes the DuraMAX 4vS an ideal choice for high velocity or high moisture systems, such as Gas Turbines Air Intakes.

DuraMAX filters offer extended filter life

The high capacity minipleat design of the DuraMAX 4vS insures high dust holding capacity and extended filter lifecycles. Fewer filter changes means reduced disposal costs and lower overall cost of ownership.

DuraMAX filters offer engineered versatility

The DuraMAX 4vS is designed to meet the wide range of requirements found in today's position of complex air filtration systems. The 4vS is constructed with a durable all-plastic frame that can be completely incinerated. Standard DuraMAX 4vS filters are UL Class 2. The DuraMAX 4vS can be reverse-installed in applications with space limitations.

DuraMAX 4vS Technical Data

| Size HxWxD | Initial Pressure Drop @ 500 FPM (in. w.g.) | Recommended Final Pressure Drop | Media Area (Sq. Ft.) | MERV Rating |
|---------------|--------------------------------------------------|---------------------------------------|----------------------------|----------------|
| 24x24x12" | .28 | 2.0 | 194 | 15 |
| 20x24x12 | .28 | 2.0 | 162 | 15 |
| 12x24x12 | .28 | 2.0 | 98 | 15 |

*Performance and MERV data is based on ASHRAE Test Standard 52.2 -2007

*Please see Bulletin No. K-996B for information on our popular original DuraMAX 4v, constructed with microfiberglass.



Corporate Offices

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Look for the Koch Green icon! Whenever you see the Koch Green icon, we are identifying a product that meets or exceeds our criteria in one or more of the following categories: Earns LEED Points, Reduces Energy Costs, Extends Filter Lifecycles, Conserves Resources, and Improves Indoor Environmental Quality.

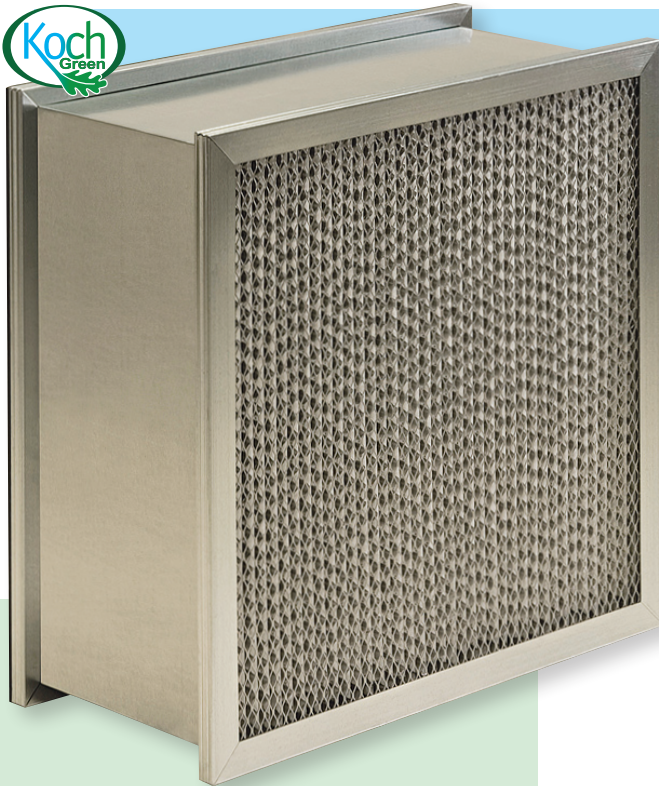
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Koch Filter Corporation...Durable. Reliable. Versatile.

Bulletin No. PB-906B



Koch Filter Corporation
Filtration Products Crafted with Pride



Maxi-Cell™

*High Efficiency Barrier Filter Engineered
for Turbomachinery Air Inlet Systems*

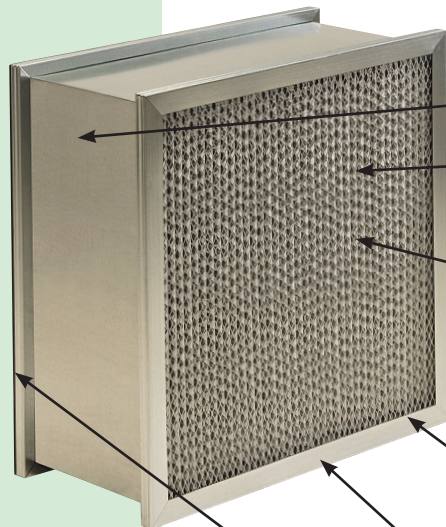
The Koch Maxi-Cell is an extended surface, high efficiency barrier filter designed for maximum performance in even the most extreme applications. Durable metal construction and specially designed filter media make the Maxi-Cell an ideal product for applications such as gas turbines, centrifugal compressors and other rotating machinery systems where pulsations and air turbulence are present.

Durable. Reliable. Versatile.

- Superior filtration for gas turbines air inlets and other high velocity rotating equipment.
- Reliable performance in any climate, from arid desert environments to salty coastal locations to icy arctic installations.
- Performs in systems with airflow as high as 2500 cfm.
- Widely used by OEM's around the world.

Features

- MERV 11 and 14 performance rating
- High efficiency barrier filter designed for use in gas turbine air inlets and other rotating machinery
- Durable metal frame
- Faceguards upstream and downstream
- Progressive-density filter media extends filter lifecycles
- Double-Edge™ aluminum separators



Maxi-Cell™ Construction

Metal Frame Construction. The Maxi-Cell is constructed with heavy-duty metal cell sides to create a durable and reliable filter.

Faceguards. Each filter is furnished with faceguards, constructed of galvanized hardware cloth, permanently secured on both the upstream and downstream sides of the filter. These faceguards protect the media during shipping, handling, and actual operation.

Media and Separator Construction. Koch offers two media styles, KM60 (MERV 11) and KM90 (MERV 14), to meet the various requirements found in different applications. Both media types are composed of progressively dense microfiberglass to ensure extended service life. The media is folded between layers of corrugated aluminum separators to form a pleated, extended surface design. The leading edge of each Double-Edge™ separator is folded over to prevent damage to the media. Vinyl-coated separators are available for applications with corrosive environments.

Media-to-Frame Sealant. The entire media pack, consisting of media and separators, is secured within the metal frame with a glass fiber mat and thermoplastic adhesive. This construction method fully protects against air by-pass between the media and frame. The sealant also protects the filter media from damage during handling.

Header Construction. Standard Maxi-Cell filters are constructed with peripheral headers located on the air-entry and air-exit sides of the filter. The headers are furnished with pre-drilled holes for holding clips. Units with a single upstream header for side-access installations are available upon request.

Gaskets. Standard units are equipped with a neoprene gasket on the air-exit side. Other gasket configurations are available upon request.

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Bulletin No. K-386-B



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Filtration Products Crafted with Pride

Maxi-Cell™ Performance Data

| Model No. | KM601 | KM601HC | KM901 | KM901HC |
|-------------------------------------------------------------|--------------------------------------------------------------------------|--------------------------------------------------------------------------|--------------------------------------------------------------------------|--------------------------------------------------------------------------|
| Nominal Size | 24x24x12 | 24x24x12 | 24x24x12 | 24x24x12 |
| Actual size | 23 ³ / ₈ x 23 ³ / ₈ x 11 1/2 | 23 ³ / ₈ x 23 ³ / ₈ x 11 1/2 | 23 ³ / ₈ x 23 ³ / ₈ x 11 1/2 | 23 ³ / ₈ x 23 ³ / ₈ x 11 1/2 |
| Initial Resistance (@2000 CFM)¹ | 0.42" w.g. | 0.44" w.g. | 0.54" w.g. | 0.59" w.g. |
| Initial Resistance (@2500 CFM)¹ | 0.58" w.g. | 0.6" w.g. | 0.75" w.g. | 0.79" w.g. |
| Recommended Final Resistance | 2.5" w.g. | 2.5" w.g. | 2.5" w.g. | 2.5" w.g. |
| Average Atmospheric Dust Spot Efficiency¹ | 70 | 80 | 93 | 93 |
| MERV Rating² | 11 | 11 | 14 | 14 |
| Dust Holding Capacity (@2000 CFM)³ | 1200 | 1550 | 960 | 1060 |
| Dust Holding Capacity (@2500 CFM)³ | 1020 | 1325 | 820 | 910 |
| Maximum Pressure⁴ | 25" w.g. | 25" w.g. | 25" w.g. | 25" w.g. |

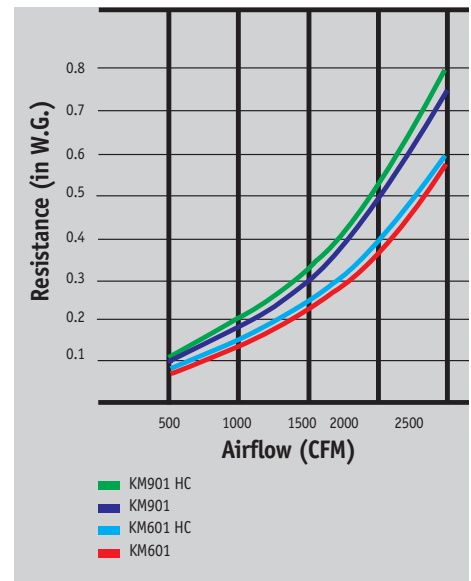
¹ ASHRAE Test Standard 52.1 - 1999

² ASHRAE Test Standard 52.2 - 2007

³ AC Fine Test Dust

⁴ Pressure at which structural damage to the Maxi-Cell will occur

Resistance vs. Airflow



Additional Maxi-Cell Product Information

- Maxi-Cells should be installed with the pleats in vertical position. Each filter is labeled with filter size, safety codes, and airflow indicators to insure proper installation.
- Data listed above concerning dust holding does not account for the use of prefilters. Proper use of prefilters will often result in higher overall dust holding and extend the lifecycle of the Maxi-Cell final filter.
- Maxi-Cell filters are U.L. Class 1 listed.
- Product design and specification are subject to change without notice.



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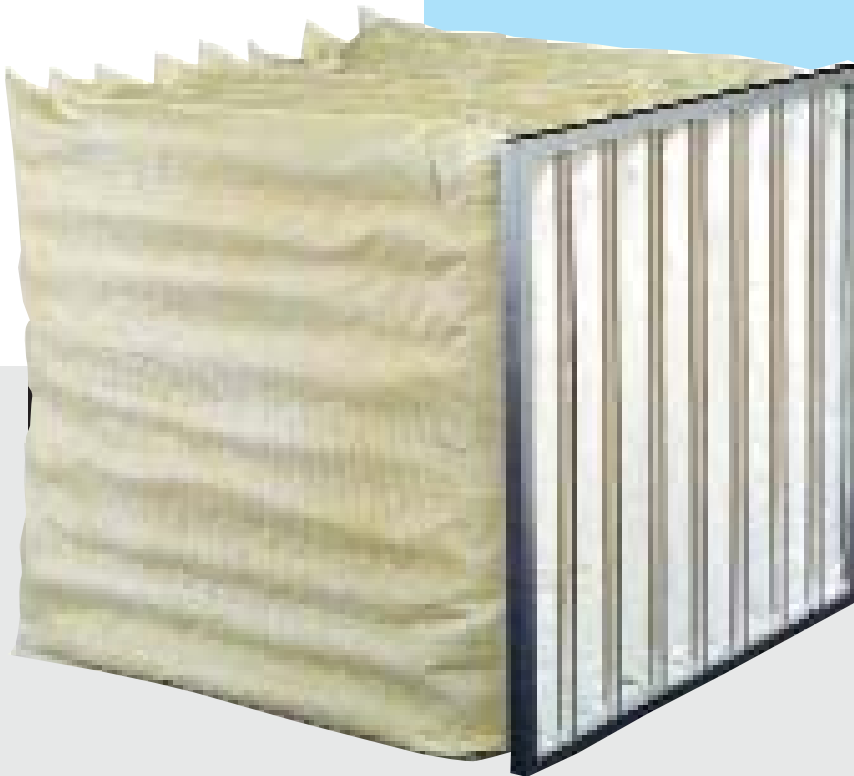
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Filtration Products Crafted with Pride

Multi-SakTM

*Medium and High Efficiency
Extended Surface Air Filters*



- **Synthetic or Microfiberglass Media**
- **Low Pressure Drop/Extended Service Life**
- **Five Efficiency Ranges**

Multi-Sak Extended Surface Air Filters



The **Koch Multi-Sak** is an extended surface air filter designed for most medium and high efficiency air filtration systems.

The Multi-Sak is capable of operating in systems with rated face velocities of 500 CFM to 3000 CFM. Available efficiencies range from 20% to 95%, and seven standard face sizes are offered.

This broad spectrum of styles and models makes the Multi-Sak extremely versatile and suitable for almost any commercial or industrial air handling system. Multi-Sak filters are presently in use in over 20,000 applications, including hospitals, automotive plants, office buildings, universities, pharmaceutical facilities, and sports arenas around the world.

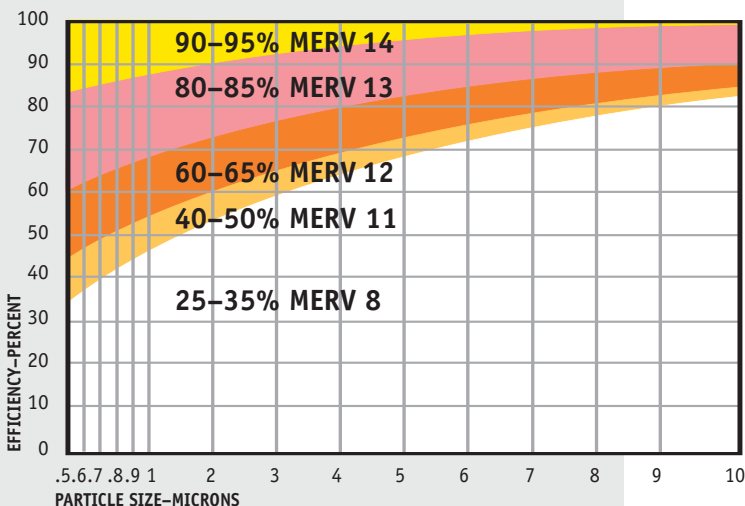
Two Media Options

In order to meet the strict Indoor Air Quality specifications found in today's complex air filtration systems, Koch offers the Multi-Sak with two distinct types of air filter media. With two media choices, the end-user is assured of finding the correct product for every type of air handling system.

Series S Synthetic Media

- 100% dual-layered synthetic fibers.
- Low pressure drop
- Unaffected by moisture or humidity
- Available in 5 efficiency ranges
 - 90–95% (MERV 14)
 - 80–85% (MERV 13)
 - 60–65% (MERV 12)
 - 40–50% (MERV 11)
 - 25–35% (MERV 8)
- Media color-coded by efficiency (see chart below)

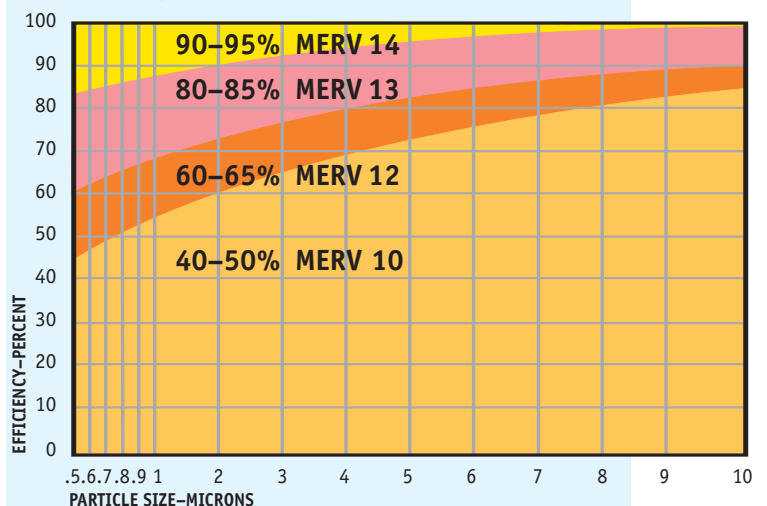
Efficiency vs. Particle Size



Series G Microfiberglass Media

- Progressively dense microfiberglass media
- Long record of proven reliability
- Unaffected by moisture and humidity
- Available in 4 efficiency ranges
 - 90–95% (MERV 14)
 - 80–85% (MERV 13)
 - 60–65% (MERV 12)
 - 40–50% (MERV 10)
- Media color-coded by efficiency (see chart below)

Efficiency vs. Particle Size



Multi-Sak Performance Data

Multi-Sak High Efficiency 90–95%, 80–85%, 60–65%

| MODEL NUMBER | NOMINAL SIZE (WxHxD) | MEDIA AREA (SQ. FT.) | NUMBER POCKETS | AIR FLOW CAPACITIES (CFM) | | | SERIES "S" INITIAL PRESSURE DROP (IN. W.G.) @ 500 FPM | | |
|--------------|----------------------|----------------------|----------------|---------------------------|------|------|-------------------------------------------------------|----------------|----------------|
| | | | | | | | MERV 14 90-95% | MERV 13 80-85% | MERV 11 60-65% |
| 10FZ36 * | 24x24x36 | 135 | 10 | 2000 | 2500 | 3000 | .42 | .33 | .27 |
| 8FZ36 * | 24x24x36 | 108 | 8 | 2000 | 2500 | 3000 | .44 | .35 | .29 |
| 6FZ36 * | 24x24x36 | 81 | 6 | 1500 | 2000 | 2500 | .49 | .40 | .33 |
| 10FZ30 * | 24x24x30 | 113 | 10 | 1500 | 2000 | 2500 | .47 | .38 | .32 |
| 8FZ30 * | 24x24x30 | 90 | 8 | 1500 | 2000 | 2500 | .45 | .36 | .30 |
| 6FZ30 * | 24x24x30 | 68 | 6 | 1500 | 2000 | 2500 | .49 | .40 | .34 |
| 8FZ22 * | 24x24x22 | 67 | 8 | 1000 | 1500 | 2000 | .50 | .44 | .35 |
| 6FZ22 * | 24x24x22 | 51 | 6 | 1000 | 1500 | 2000 | .52 | .46 | .37 |
| 8FZ18 * | 24x24x18 | 56 | 8 | 1000 | 1500 | 2000 | .59 | .52 | .42 |
| 6FZ18 * | 24x24x18 | 42 | 6 | 1000 | 1500 | 2000 | .61 | .54 | .44 |
| 5BZ36 * | 12x24x36 | 68 | 5 | 1000 | 1250 | 1500 | .45 | .36 | .29 |
| 4BZ36 * | 12x24x36 | 54 | 4 | 1000 | 1250 | 1500 | .47 | .38 | .31 |
| 3BZ36 * | 12x24x36 | 42 | 3 | 1000 | 1250 | 1500 | .49 | .40 | .33 |
| 5BZ30 * | 12x24x30 | 57 | 5 | 1000 | 1250 | 1500 | .43 | .34 | .28 |
| 4BZ30 * | 12x24x30 | 46 | 4 | 750 | 1000 | 1250 | .45 | .36 | .30 |
| 3BZ30 * | 12x24x30 | 35 | 3 | 750 | 1000 | 1250 | .49 | .40 | .34 |
| 4BZ22 * | 12x24x22 | 34 | 4 | 500 | 750 | 1000 | .50 | .46 | .35 |
| 3BZ22 * | 12x24x22 | 25 | 3 | 500 | 750 | 1000 | .52 | .48 | .37 |
| 4BZ18 * | 12x24x18 | 28 | 4 | 500 | 750 | 1000 | .52 | .48 | .37 |
| 3BZ18 * | 12x24x18 | 21 | 3 | 500 | 750 | 1000 | .54 | .50 | .39 |
| 5EZ36 * | 20x24x36 | 68 | 5 | 1600 | 2000 | 2400 | .51 | .42 | .36 |
| 5EZ30 * | 20x24x30 | 58 | 5 | 1200 | 1600 | 1800 | .49 | .40 | .34 |
| 5EZ22 * | 20x24x22 | 40 | 5 | 1000 | 1200 | 1400 | .54 | .48 | .39 |
| 5EZ33 * | 20x24x33 | 59 | 5 | 800 | 1200 | 1600 | .51 | .42 | .37 |
| 5EY22 * | 20x20x22 | 38 | 5 | 600 | 800 | 1000 | .54 | .48 | .39 |

Multi-Sak Medium Efficiency 40–50%, 25–35%

| MODEL NUMBER | NOMINAL SIZE (WxHxD) | MEDIA AREA (SQ. FT.) | NUMBER POCKETS | AIR FLOW CAPACITIES (CFM) | | | SERIES "S" INITIAL PRESSURE DROP (IN. W.G.) @ 500 FPM | |
|--------------|----------------------|----------------------|----------------|---------------------------|------|------|-------------------------------------------------------|---------------|
| | | | | | | | MERV 11 40-50% | MERV 8 25-35% |
| 6FZ22 * | 24x24x22 | 51 | 6 | 1000 | 1500 | 2000 | .32 | .30 |
| 6FZ15 * | 24x24x15 | 35 | 6 | 1000 | 1500 | 2000 | .34 | .35 |
| 6FZ12 * | 24x24x12 | 28 | 6 | 1000 | 1500 | 2000 | .35 | .40 |
| 3BZ22 * | 12x24x22 | 25 | 3 | 500 | 750 | 1000 | .32 | .30 |
| 3BZ15 * | 12x24x15 | 18 | 3 | 500 | 750 | 1000 | .32 | .35 |
| 3BZ12 * | 12x24x12 | 14 | 3 | 500 | 750 | 1000 | .35 | .40 |
| 5EZ22 * | 20x24x22 | 40 | 5 | 1000 | 1200 | 1400 | .32 | .35 |
| 5EZ15 * | 20x24x15 | 26 | 5 | 1000 | 1200 | 1400 | .32 | .40 |
| 5EZ12 * | 20x24x12 | 22 | 5 | 1000 | 1200 | 1400 | .34 | .40 |

Multi-Sak Performance Data

Multi-Sak High Efficiency 90–95%, 80–85%, 60–65%

| MODEL NUMBER | NOMINAL SIZE (WxHxD) | SERIES "G" INITIAL PRESSURE DROP (IN. W.G.)@ 500 FPM | | | RECOMMENDED FINAL PRESSURE DROP (IN. W.G.) |
|--------------|----------------------|------------------------------------------------------|----------------|---------------|--------------------------------------------|
| | | MERV 14 90–95% | MERV 13 80–85% | MERV12 60–65% | |
| 10FZ36 * | 24x24x36 | .44 | .35 | .29 | 1.50 |
| 8FZ36 * | 24x24x36 | .46 | .37 | .31 | 1.50 |
| 6FZ36 * | 24x24x36 | .51 | .42 | .35 | 1.50 |
| 10FZ30 * | 24x24x30 | .49 | .40 | .34 | 1.50 |
| 8FZ30 * | 24x24x30 | .47 | .38 | .32 | 1.50 |
| 6FZ30 * | 24x24x30 | .51 | .42 | .36 | 1.50 |
| 8FZ22 * | 24x24x22 | .52 | .46 | .37 | 1.50 |
| 6FZ22 * | 24x24x22 | .54 | .48 | .39 | 1.50 |
| 8FZ18 * | 24x24x18 | .61 | .54 | .44 | 1.50 |
| 6FZ18 * | 24x24x18 | .63 | .56 | .46 | 1.50 |
| 5BZ36 * | 12x24x36 | .47 | .38 | .31 | 1.50 |
| 4BZ36 * | 12x24x36 | .49 | .40 | .33 | 1.50 |
| 3BZ36 * | 12x24x36 | .51 | .42 | .35 | 1.50 |
| 5BZ30 * | 12x24x30 | .45 | .36 | .30 | 1.50 |
| 4BZ30 * | 12x24x30 | .47 | .38 | .32 | 1.50 |
| 3BZ30 * | 12x24x30 | .51 | .42 | .36 | 1.50 |
| 4BZ22 * | 12x24x22 | .52 | .48 | .37 | 1.50 |
| 3BZ22 * | 12x24x22 | .54 | .50 | .39 | 1.50 |
| 4BZ18 * | 12x24x18 | .54 | .50 | .39 | 1.50 |
| 3BZ18 * | 12x24x18 | .56 | .52 | .41 | 1.50 |
| 5EZ36 * | 20x24x36 | .53 | .44 | .38 | 1.50 |
| 5EZ30 * | 20x24x30 | .51 | .42 | .36 | 1.50 |
| 5EZ22 * | 20x24x22 | .56 | .50 | .41 | 1.50 |
| 5EZ33 * | 20x24x33 | .53 | .44 | .39 | 1.50 |
| 5EY22 * | 20x20x22 | .56 | .50 | .41 | 1.50 |

Multi-Sak Medium Efficiency 40–50%

| MODEL NUMBER | NOMINAL SIZE (WxHxD) | SERIES "G" INITIAL PRESSURE DROP (IN. W.G.)@ 500 FPM | RECOMMENDED FINAL PRESSURE DROP (IN. W.G.) |
|--------------|----------------------|------------------------------------------------------|--------------------------------------------|
| | | MERV 10 40–50% | |
| 6FZ22 * | 24x24x22 | .33 | 1.20 |
| 6FZ15 * | 24x24x15 | .35 | 1.20 |
| 6FZ12 * | 24x24x12 | .36 | 1.20 |
| 3BZ22 * | 12x24x22 | .33 | 1.20 |
| 3BZ15 * | 12x24x15 | .35 | 1.20 |
| 3BZ12 * | 12x24x12 | .36 | 1.20 |
| 5EZ22 * | 20x24x22 | .34 | 1.20 |
| 5EZ15 * | 20x24x15 | .35 | 1.20 |
| 5EZ12 * | 20x24x12 | .36 | 1.20 |

* **Insert Efficiency / Media Style Code** to complete Model Number:

Series "S" Synthetic

9S= 90–95% MERV 14

8S= 80–85% MERV 13

6S= 60–65% MERV 12

4S= 40–50% MERV 11

3S= 25–35% MERV 8

*Example: 8FZ36**9S** is a Multi-Sak Series S, 24x24x36, 8 Pocket, 90-95%.*

Series "G" Microfiberglass

9G= 90–95% MERV 14

8G= 80–85% MERV 13

6G= 60–65% MERV 12

4G= 40–50% MERV 10

*Example: 8FZ36**9G** is a Multi-Sak Series G, 24x24x36, 8 Pocket, 90-95%.*

Note:

Series "G" filters are **not** available in the 25–35% efficiency range.

Additional Information

- Performance Data listed is based on tests conducted in accordance with current ASHRAE Test Standards. Test reports on most popular sizes are available.
- Model numbers listed apply to U.L. Class 2 filters. For U.L. Class 1, indicate with CL1 following model number. Many models of Multi-Sak are U.L. 1 rated, please contact factory for current U.L. information.
- Standard Multi-Sak header thickness is 13/16". For 1 1/8" header, indicate with C following model number (Ex. 8FZ369S-C).
- Support loops are available on all models. Indicate by stating with loops following model number (Ex. 8FZ369S with loops).
- Multi-Sak filters are available with gasketing for side-access systems. Indicate with SA following model number (Ex. 8FZ369S-SA).
- Multi-Sak filters are available with components for oil mist applications. Indicate with OM following model number (Ex. 8FZ369G-OM).
- Size information listed is nominal. Actual face dimensions are -5/8" on length and width. Depth tolerance is ±1".

Multi-Sak Construction



1. Triple Lock® Step One

Rigid header is filled with a waterproof adhesive which secures the filter media in place.

2. Triple Lock® Step Two

Aluminum cross supports are also filled with a waterproof adhesive to further seal the individual pockets within the frame.

3. Triple Lock® Step Three

Each aluminum cross support is pneumatically crimped in place, providing the final protection against air bypass and filter degradation.

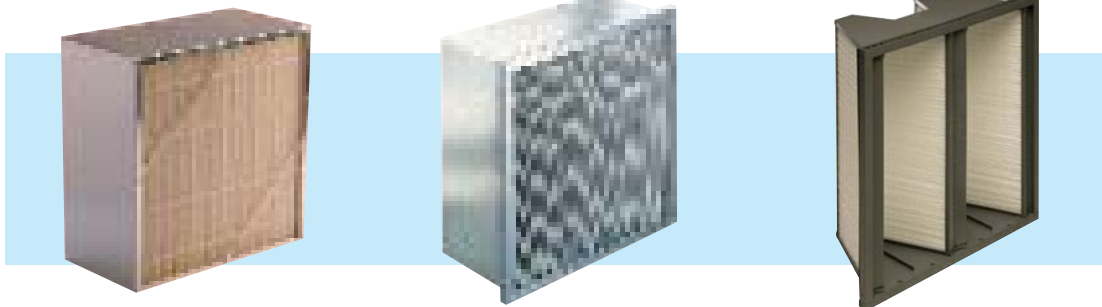


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High Efficiency Options

In addition to the Multi-Sak, Koch offers a wide range of other high efficiency air filters to meet the requirements of any air filtration system.



Multi-Flo
*Synthetic and Microfiberglass
Extended Surface Rigid Filters*

Multi-Cell
*High Efficiency
Extended Surface Rigid Filters*

DuraMax 2v
*High Efficiency
Gas Turbine Inlet Filters*

Quality Assurance Process

Koch Filter Corporation maintains an ongoing Quality Assurance Process to insure customer satisfaction with every filter we ship. This Process encompasses the entire manufacturing procedure, beginning with our selection of only the finest raw materials. Once a component passes a rigid initial review, a process of continuing documentation and examination occurs throughout every step of our manufacturing process. As the final step in Koch's Quality Assurance Process, in-house tests are regularly verified by independent test laboratories. These independent tests are conducted according to current ASHRAE standards.

The Quality Assurance Process is a primary reason for Koch Filter Corporation's ability to provide the industry's most complete line of competitive, high performance air filtration products.

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