Purolator

Key Pleat

MERV 8 **High-Capacity** Self-Supported Pleated Filters





- High-Capacity MERV 8, MERV-A 8-A
- New automated process delivers consistency and durability
- Durable, self-supporting synthetic media
- No metal, fully incinerable
- Die cut frame with interlocking corners for added strength

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MERV 8 High-Capacity Self-Supported Pleated Filters

Purolator Introduces Key Pleat MERV 8 ...

Purolator is very pleased to announce the latest improvement in self-supported pleated filters – the **Key Pleat**™ MERV 8, high-capacity filter. The new **Key Pleat** is the result of the on-going commitment and investment Purolator is making to improve the science of air filtration and the quality and performance of its air filter products.

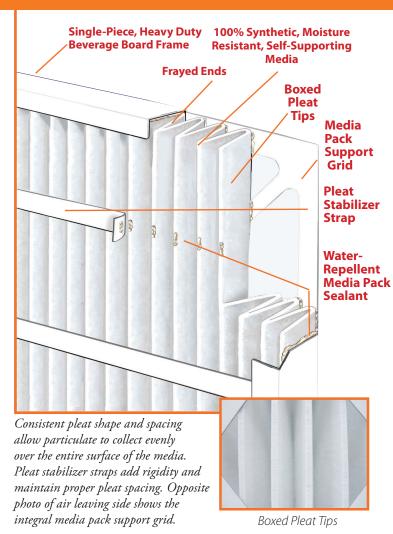


Process Innovation, Design Excellence and Improved Media

Purolator's self-supported media and innovative automated manufacturing process produces consistent pleat shape and spacing in each Key Pleat. This state-of-the-art media pack is surrounded by a single-piece, beverage board die cut frame, with structural integrity unlike any self-supported filter available today. The Key Pleat MERV 8 can endure impact and deformation and return to its original shape, ready for installation. That means you avoid the time and cost that are often wasted replacing damaged wire-backed filters.

Seven-strap Die Cut

A seven strap die cut is located on the air-leaving side of the **Key Pleat** MERV 8 providing additional



strength and durability to each filter. In combination, the boxed pleat tips provide more surface area and points of contact for the die cut to be securely glued to the media pack. As an example, the pleat tips are glued to the die cut at more than 250 points on a 24"x24"x2", Key Pleat MERV 8 high-capacity filter.

100% Adhesive Application Ensures Filter Strength

The inside of the die cut frame is completely coated with adhesive to ensure a solid bond at all points of contact with the media pack. The pack is sealed inside the frame and pleat tips are bonded to the stabilizers and diagonal support members.

Water Repellent Adhesive

The sealant used to bond the frame to the media pack is highly water-repellent. That means that the filters

maintain structural integrity even when wet; no delaminating, excessive buckling, or collapsing.

Uniformity of Pleats

The uniformity of pleat height and spacing ensures optimal performance throughout the useful life of every **Key Pleat** MERV 8 filter. The combination of the self-supporting media and the innovative, automated construction also means low resistance to airflow and cost-effective, environmentally responsible use of energy resources. Additionally, the consistent pleat spacing supports balanced loading, which maximizes the dust-holding capacity of the filter and promotes longer service life. Pleats will not bunch or collapse which can cause an increase in pressure drop and potential failure of the filter.

100% Synthetic Media Resists Moisture and Damage

Key Pleat MERV 8 media is a unique blend of synthetic fibers formed into a mat with high strength and stiffness characteristics. The inherent strength provides rugged durability in operation. The media stiffness, when matched to our automated process, allows totally consistent

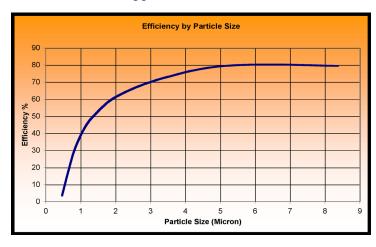


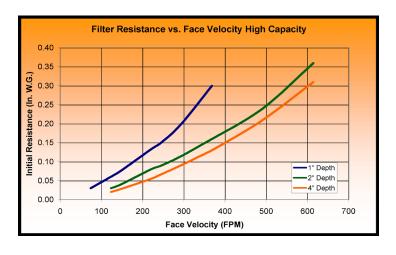
spacing of the pleats. Blended fiber construction allows full depth loading which enhances dust-holding capacity. Media performance is not impacted by high humidity or moisture and the synthetic fibers do not support microbial growth.

Key Pleat MERV 8 media operates on mechanical filtration principles which cause particulate efficiency to increase as the media loads. No enhanced electrostatic charge is intentionally applied to the media.

Applications

The Key Pleat MERV 8 is ideal for standard applications with normal airflows of 500 FPM or lower and medium dust-loading conditions. It is not recommended for applications with very high and/or turbulent airflows, higher operating temperatures or excessive dust-loading conditions. Contact your Purolator Sales Representative for assistance with application or technical issues.





Key Pleat

MERV 8 High-Capacity
Self-Supported Pleated Filters

Technical Data:

Model Number	Nominal Size ² Inches (WxHxD)	Actual Size Inches (WxHxD)	Rated Air Flow Capacity (CFM) 1" 300 FPM 2" & 4" 500 FPM	Initial Resistance (In. W.G)	Gross Media Area (Sq. Ft.) Standard
KPH-STD1-1001 KPH-STD1-1401 KPH-STD1-1401 KPH-STD1-1401 KPH-STD1-2001 KPH-STD1-2001 KPH-STD1-2001 KPH-STD1-2001 KPH-STD1-4001 KPH-STD1-4001 KPH-STD1-4001 KPH-STD1-4001 KPH-STD1-5001 KPH-STD2-5002 KPH-STD2-6002 KPH-STD2-6004 KPH-STD4-6004 KP	10X20X1 10X24X1 10X24X1 12X12X1 12X12X1 12X20X1 12X24X1 14X14X1 14X20X1 14X20X1 14X20X1 16X20X1 16X16X1 16X26X1 16X25X1 16X30X1 18X18X1 18X20X1 18X25X1 20X20X1 20X22X1 20X24X1 20X25X1 20X24X1 20X25X1 20X24X1 20X25X1 20X26X1 20X26X2 20X26X4 20X26X	9-1/2 x 19-1/2 x 3/4 9-3/8 x 23-3/8 x 3/4 11-3/4 x 11-3/4 x 3/4 11-3/4 x 11-3/4 x 3/4 11-3/8 x 23-3/8 x 3/4 11-3/8 x 23-3/8 x 3/4 13-3/8 x 23-3/8 x 3/4 15-1/2 x 19-1/2 x 3/4 15-1/2 x 19-1/2 x 3/4 15-3/8 x 23-3/8 x 3/4 17-3/8 x 19-1/2 x 3/4 17-3/8 x 19-1/2 x 3/4 19-3/8 x 23-3/8 x 3/4 19-1/2 x 19-1/2 x 3/4 11-1/2 x 19-1/2 x 3/4 11-1/2 x 19-1/2 x 1-3/4 13-1/2 x 29-1/2 x 1-3/4	415 500 FPIVI 415 500 500 500 500 600 410 585 700 730 875 625 530 665 665 800 835 1000 675 750 900 936 830 915 10000 1040 1250 1200 1500 1300 700 840 1000 980 1120 1340 1400 1125 1250 1500 1500 1750 1750 1750 1750 1750 17	0.20 0.20 0.20 0.20 0.20 0.20 0.20 0.20	3.1 3.5 2.3 3.7 4.4 3.1 4.3 5.1 5.4 6.7 4.7 4.0 5.0 5.9 6.3 7.7 5.2 5.6 6.8 7.1 7.5 7.8 9.4 9.1 11.8 10.0 6.1 7.5 7.8 9.4 9.1 11.8 10.0 6.1 7.5 9.0 8.8 8.8 11.0 9.5 11.0 9.5 11.0
KPH-STD4-0504 KPH-STD4-4404	20X25X4 24X24X4	19-1/2 x 24-1/2 x 3-3/4 23-3/8 x 23-3/8 x 3-3/4	1750 2000	0.21 0.21	22.3 26.5

NOTES:

- 1. MERV 8, MERV-A 8-A
- 2. All performance data is based on the ASHRAE 52.2-2007 Test Standard. Tested at 492 FPM for a 24x24x2 or 24x24x4 size filter.
- 3. Maximum final resistance 1.0" W.G.
- 4. Filters may be installed with the pleats either vertical (preferred) or horizontal.

Underwriters Laboratories, Inc. Classification: *Key Pleat* filters are classified per U.L. 900 for flammability only.

Operating Temperature Limits: Maximum operating temperature is 150°F (65°C).

SPECIFICATIONS

1.0 Scope

This specification covers self-supported pleated panel filters that are a component of heating, ventilating and air conditioning systems.

2.0 Construction

The filters shall consist of a self-supporting pleated media pack contained in a die cut beverage board frame.

2.1 Media

The media shall consist of 100% synthetic fibers.

2.2 Media Pack

The media shall be formed into uniformly shaped pleats with equal height measured from pleat apex to apex. The media pack shall be self-supporting, without the use of metal backing. The media pack shall maximize surface area to ensure adhesion with the stabilizer support straps and die cut diagonal support straps.

The media pack and die cut frame dimensions shall be equal to completely seal the pack inside the filter. The edges of the pack shall be roughed to allow complete adhesion to the frame.

2.3 Filter Fram

The pleated media pack shall be contained in a frame made from a single-piece of die cut beverage board

with high wet-strength characteristics. The die cut frame shall fully overlap around the entire perimeter of the filter. Diagonal support members shall provide support for the media pack on the air-leaving side.

The die cut frame shall interlock in the corners, providing additional strength and rigidity.

2.4 Media Pack Adhesive

The entire inside surface of the die cut frame shall be coated with a water-repellent adhesive to bond the pack inside the frame on all four edges. The pleat tips shall be bonded to the diagonal support members at all points of contact on the air-leaving side.

The adhesive shall be water-repellent and maintain its bonding characteristics when wet. The adhesive shall not soften or dissolve when the filter is wet.

3.0 Performance

3.1 Filter Performance

The filters shall meet the following minimum performance requirements based on the ASHRAE 52.2-2007 test standard. Testing shall be performed at 295 FPM on 1" filters and 492 FPM on 2" and 4" filters.

3.2 Maximum Operating Temperature

The maximum operating temperature for the filter shall be 150°F (65°C).

3.3 Underwriters Laboratories Classification

The filters shall be classified per U.L. Standard 900 for flammability only.

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