



Self-Supported Pleated Filters



- Standard-Capacity MERV 8, MERV-A 8-A
- New automated process delivers consistency and durability

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- Durable, self-supporting synthetic media
- No metal, fully incinerable
- Die cut frame with interlocking corners for added strength

# Key 🕻 Pleat

MERV 8 Standard-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**<sup>™</sup> MERV 8, standard-capacity. 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-supporting 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 140 points on a 24"x24"x2", Key Pleat MERV 8 standard-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 costeffective, 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 Standard-Capacity Self-Supported Pleated Filters

# **Technical Data:**

Model	Nominal Size <sup>2</sup>	Actual Size	Rated Air Flow Capacity (CFM)	Initial Resistance	Gross Media
Number	(WxHxD)	(WxHxD)	1" 300 FPM 2" 500 FPM	(In. W.G)	Standard
KP-STD1-1001 KP-STD1-2001 KP-STD1-2001 KP-STD1-2001 KP-STD1-2401 KP-STD1-4001 KP-STD1-4001 KP-STD1-4001 KP-STD1-4001 KP-STD1-5001 KP-STD1-5001 KP-STD1-6001 KP-STD1-6001 KP-STD1-6001 KP-STD1-6001 KP-STD1-6001 KP-STD1-6001 KP-STD1-8001 KP-STD1-8001 KP-STD1-8001 KP-STD1-8001 KP-STD1-9001 KP-STD1-9001 KP-STD1-9001 KP-STD1-9001 KP-STD1-9001 KP-STD1-9001 KP-STD1-9001 KP-STD1-9001 KP-STD1-9001 KP-STD1-9001 KP-STD1-9001 KP-STD1-9001 KP-STD1-501	10X20X1 10X24X1 12X12X1 12X20X1 12X24X1 14X14X1 14X20X1 14X20X1 14X25X1 14X30X1 15X20X1 16X16X1 16X24X1 16X24X1 16X24X1 16X24X1 16X25X1 16X30X1 18X18X1 18X24X1 18X24X1 18X24X1 20X22X1 20X22X1 20X22X1 20X25X1 20X25X1	$\begin{array}{c} 9-1/2\times19-1/2\times3/4\\ 9-3/8\times23-3/8\times3/4\\ 11-3/4\times21-3/4\times3/4\\ 11-3/2\times19-1/2\times3/4\\ 11-3/8\times23-3/8\times3/4\\ 13-3/4\times23-3/8\times3/4\\ 13-1/2\times19-1/2\times3/4\\ 13-1/2\times24-1/2\times3/4\\ 13-1/2\times24-1/2\times3/4\\ 13-1/2\times24-1/2\times3/4\\ 13-1/2\times24-1/2\times3/4\\ 15-1/2\times19-1/2\times3/4\\ 15-1/2\times19-1/2\times3/4\\ 15-1/2\times19-1/2\times3/4\\ 15-1/2\times29-3/4\times3/4\\ 15-1/2\times29-3/4\times3/4\\ 15-1/2\times29-3/4\times3/4\\ 17-3/8\times23-3/8\times3/4\\ 17-3/8\times23-3/8\times3/4\\ 17-3/8\times23-3/8\times3/4\\ 17-1/2\times24-1/2\times3/4\\ 17-3/8\times23-3/8\times3/4\\ 17-1/2\times24-1/2\times3/4\\ 19-1/2\times23-1/2\times3/4\\ 19-1/2\times23-3/4\times3/4\\ 19-1/2\times24-1/2\times3/4\\ 19-1/2\times23-3/8\times3/4\\ 19-1/2\times24-1/2\times3/4\\ 19-1/2\times24-1/2\times3/4\\ 19-1/2\times24-1/2\times3/4\\ 19-1/2\times23-3/8\times3/4\\ 19-1/2\times29-1/2\times3/4\\ 19-1/2\times29-1/2\times3/4\\ 19-1/2\times29-1/2\times3/4\\ 23-3/8\times23-3/8\times3/4\\ 23-3/4\times29-3/4\times3/4\\ 23-3/4\times3/4\\ 23-3/4\\ 23-3/4\\ 23-3/4\\ 23-3/4\\ 23-3/4\\ 23-3/4\\ 23-3/4\\ 23-3/4\\ 23-3/4\\ 23-3/4\\ 23-3/4\\ 23-3/4\\ 23-3/4\\ 2$	415 500 300 500 600 410 585 700 730 875 625 530 665 800 835 1000 675 750 900 936 830 915 1000 1040 1250 1200 1500	0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27	2.3 2.8 3.4 2.4 3.3 4.0 4.2 5.2 3.6 3.0 4.6 4.8 6.0 4.1 4.3 5.2 5.4 4.8 5.5 9 6.1 7.3 7.0 9.1 7.7
KP-STD2-1002 KP-STD2-2002 KP-STD2-4002 KP-STD2-4002 KP-STD2-4502 KP-STD2-6002 KP-STD2-6002 KP-STD2-602 KP-STD2-6402 KP-STD2-6402 KP-STD2-6402 KP-STD2-8002 KP-STD2-8002 KP-STD2-8002 KP-STD2-0002 KP-STD2-0002 KP-STD2-0002 KP-STD2-0502 KP-STD2-0502	10X20X2 12X20X2 12X24X2 14X20X2 14X25X2 15X20X2 16X16X2 16X20X2 16X26X2 16X25X2 18X18X2 18X24X2 18X24X2 18X24X2 18X24X2 20X20X2 20X20X2 20X20X2 20X25X2 20X30X2 24X24X2 25X25X2	$\begin{array}{c} 9-1/2 \times 19-1/2 \times 1-3/4 \\ 11-1/2 \times 19-1/2 \times 1-3/4 \\ 11-3/8 \times 23-3/8 \times 1-3/4 \\ 13-1/2 \times 19-1/2 \times 1-3/4 \\ 13-1/2 \times 19-1/2 \times 1-3/4 \\ 13-1/2 \times 24-1/2 \times 1-3/4 \\ 15-3/4 \times 15-3/4 \times 1-3/4 \\ 15-3/4 \times 15-3/4 \times 1-3/4 \\ 15-1/2 \times 24-1/2 \times 1-3/4 \\ 17-3/4 \times 17-3/4 \times 1-3/4 \\ 17-1/2 \times 19-1/2 \times 1-3/4 \\ 19-1/2 \times 12-1/2 \times 1-3/4 \\ 19-1/2 \times 12-1/2 \times 1-3/4 \\ 19-1/2 \times 12-1/2 \times 1-3/4 \\ 19-1/2 \times 29-1/2 \times 1-3/4 \\ 12-3/8 \times 23-3/8 \times 1-3/4 \\ 12-3/8 \times 29-1/2 \times 1-3/4 \\ 12-3/8 \times 29-1/2 \times 1-3/4 \\ 12-3/8 \times 24-1/2 \times 1-3/4 \\ 12-3/8 \times 24-$	700 840 1000 980 1220 1050 890 1120 1340 1400 1125 1250 1500 1570 1570 1400 1670 1750 2085 2000 2170	0.30 0.30	4.0 4.8 5.7 5.5 6.9 6.0 5.3 6.5 7.5 8.2 6.6 7.3 8.7 9.2 8.0 9.6 10.1 12.2 11.8 12.9

### 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 Frame

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.

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 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).

#### 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" 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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