



Better Air is Our Business®

AmericanAirFilter®

PerfectPleat® PerfectPleat® M8 PerfectPleat® ULTRA

4" Extended Surface Pleated Filters

- Mechanical efficiency — does not rely on electret charge technology
- Form and fit unlike any other 4" pleat
- Patented media with controlled fiber size and blend
- MERV 7 - available in Standard model
- MERV 8 - available in M8 and ULTRA models
- ULTRA made with antimicrobial
- Covered under one or more of the following patents:
US 6398839 B2; US 6254653 B1; US6159318; US 6165242;
US6387140 B1

AAF International® proudly offers the 4" PerfectPleat® - the best 4" pleated filter in the industry. The 4" PerfectPleat offers the same consistent pleat spacing and rugged durability characteristic of the highly successful 2" models, with advancements that add even more strength resulting in one very tough filter.

Design and Construction

AAF engineers drew upon years of experience in filter manufacturing to design a 4" filter worthy of the PerfectPleat name. Each model places a DuraFlex® media pack inside of a two piece frame. Straps are added to the air-entering side of the filter to help maintain pleat spacing, while specially designed pleat spacers are inserted in multiple rows on the air-leaving side. The pleat spacers also assist in keeping the pleats open during use, maximizing filter life. The two-piece frame is then assembled around the rigid media pack and is bonded at all contact points with adhesives that ensure resistance to moisture.

The result is fit and finish unlike anything available in a 4" pleat coupled with excellent strength and durability. All frame components, straps, and pleat spacers are constructed of .028 beverage containerboard with the highest wet-strength available.



All PerfectPleat models have a die-cut frame on the air-entering side.



DuraFlex® - AAF's Patented Media

Uniform size virgin fibers are assembled in closely controlled blends to create a media that is both self-supporting and consistent in performance. The self-supporting characteristics allow a pleating pattern that promotes excellent dust holding and low initial resistance. DuraFlex media requires no wire support to maintain its shape. No wire means that the all 4" PerfectPleats are totally incinerable.

Efficiency and Performance

PerfectPleat 4" offers the efficiency and low initial resistance that you expect and require. PerfectPleat is rated MERV 7 and has 9 pleats per foot (PPF). PerfectPleat M8 and ULTRA are rated MERV 8 and have 11 PPF. (See chart on page 2 for additional performance data.)

Applications

The 4" PerfectPleats are ideal for any application where pleated filters are in use. These filters are an excellent choice when upgrading to higher efficiencies where 2" pleated filters are used, particularly in front loading frames. The 4" PerfectPleats can be used as final filters in single bank housings.

Every PerfectPleat will provide excellent performance and durability when properly installed and maintained.

PerfectPleat®, PerfectPleat® M8, PerfectPleat® ULTRA

Product Information (Standard Sizes)

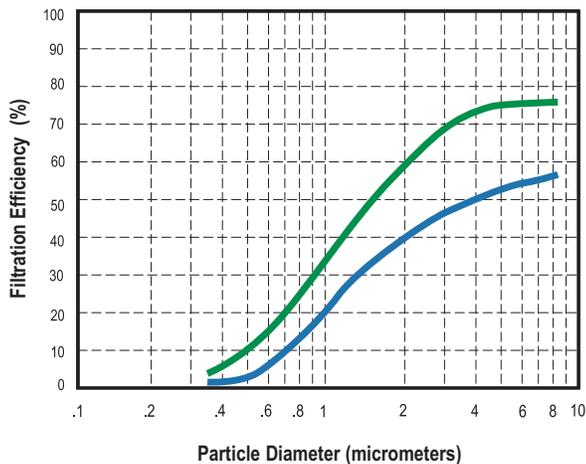
Nominal Sizes* (Inches) (W x H x D)	Actual Sizes (Inches) (W x H x D)	Rated Airflow Capacity (SCFM)		Pleats Per Filter			Media Area (sq. ft.)		
		500 FPM	625 FPM	PerfectPleat	PerfectPleat M8	PerfectPleat ULTRA	PerfectPleat	PerfectPleat M8	PerfectPleat ULTRA
12 x 24 x 4	11 3/8 x 23 3/8 x 3 3/4	1000	1250	8	11	11	10.4	14.2	14.2
16 x 20 x 4	15 3/8 x 19 3/8 x 3 3/4	1100	1400	11	13	13	11.8	13.9	13.9
16 x 25 x 4	15 3/8 x 24 3/8 x 3 3/4	1400	1750	11	13	13	14.8	17.5	17.5
18 x 24 x 4	17 3/8 x 23 3/8 x 3 3/4	1500	1875	13	15	15	16.8	19.4	19.4
20 x 20 x 4	19 3/8 x 19 3/8 x 3 3/4	1400	1750	14	17	17	15.0	18.2	18.2
20 x 25 x 4	19 3/8 x 24 3/8 x 3 3/4	1750	2150	14	17	17	18.9	22.9	22.9
24 x 20 x 4	23 3/8 x 19 3/8 x 3 3/4	1650	2100	14	17	17	18.1	22.0	22.0
24 x 24 x 4	23 3/8 x 23 3/8 x 3 3/4	2000	2500	17	21	21	22.0	27.2	27.2
25 x 29 x 4	24 3/8 x 28 3/8 x 3 3/4	2500	3150	-	26	26	-	35.0	35.0

PerfectPleat filters are classified UL Class 2. Testing was performed according to UL Standard 900 and CAN 4-S111.

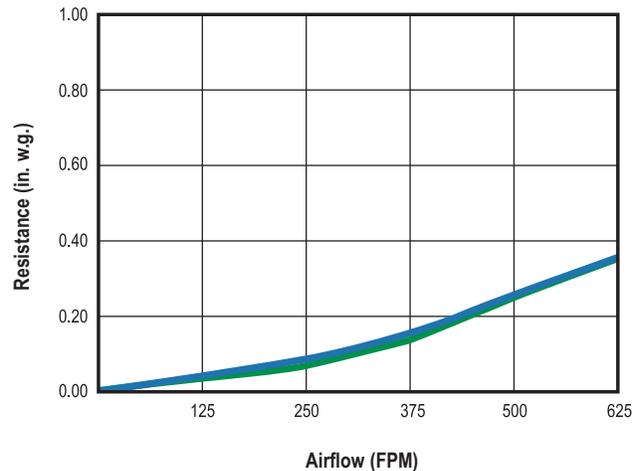
Performance Data

Filter	Pleats Per Lineal Foot	Rated Initial Resistance (in. w.g.)		Recommended Final Resistance (in. w.g.)	ASHRAE 52.2 MERV	Continuous Operating Temperature Limits	
		500 FPM	625 FPM			°F	°C
PerfectPleat 4"	9	.27	.37	1.0	7	200°	93°
PerfectPleat M8 4"	11	.26	.37	1.0	8	200°	93°
PerfectPleat ULTRA 4"	11	.26	.37	1.0	8	200°	93°

Composite Minimum Efficiency
Efficiency vs. Particle Size



Resistance to Airflow



— PerfectPleat
— PerfectPleat M8 and ULTRA



Better Air is Our Business®

AmericanAirFilter® DriPak®

Extended Surface Pocket Filters Fiberglass Media

- Patented pocket design lengthens filter life
- Low resistance and high dust holding capacity
- Engineered for performance reliability
- Available in two efficiencies: **MERV 15 (90-95%)** and **MERV 13 (80-85%)**

DriPak®

Designed for high performance in demanding operating conditions, the DriPak extended surface pocket filters are perfect as prefilters and final filters for particulate removal where clean air is required. DriPak filters are an excellent choice for healthcare facilities, automotive paint booths, commercial buildings, and various industrial applications. Manufactured by AAF International, the original developers of the extended surface pocket filter, DriPak has set the industry standard for over 40 years.

IAQ Engineered

DriPak is available in a wide range of sizes and two efficiencies – MERV 15 (90-95%) and MERV 13 (80-85%). Micro-fine fiberglass fibers protected by a thin layer of scrim, offer low resistance at a high level of cleaning efficiency. Smaller sized fibers are used to produce high efficiency medias such as MERV 15 (90-95%) and MERV 13 (80-85%).

Designed for Performance

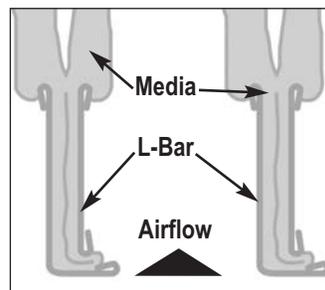
DriPak employs a sturdy, leak-free pocket design to prevent collected particulate from escaping. The design includes span stitching covered with a thermoplastic sealant to hold the stitches in place and seal the needle holes. Interlocked support frames attached to the pockets prevent flexing and buckling during full inflation. The double U-shaped reinforced header forms a solid container for the pocket support frames. To ensure quality performance, DriPak filters are tested in an AAF approved, state-of-the-art laboratory, governed by ISO-9001 procedures.



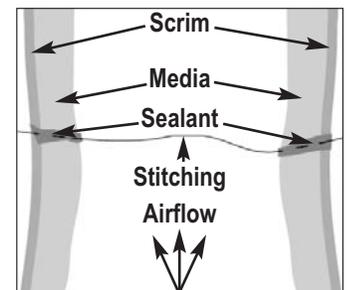
DriPak® filters meet efficiency requirements established for LEED® Project Certification.

Aerodynamically Balanced Pockets

The DriPak pocket design has been aerodynamically balanced (U.S. Patent 4,356,011) to achieve optimum pocket configuration for minimum resistance and maximum dust holding capacity. This balancing significantly lengthens the life of the filter. Our contoured pockets allow full inflation without crowding or restriction of airflow.



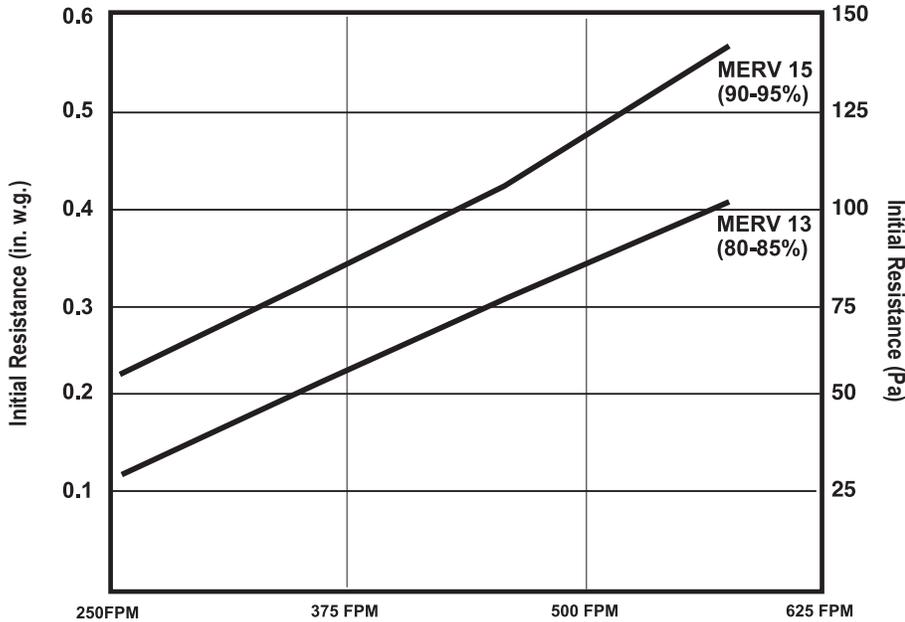
Interlocked Pocket Support Frames



Leak-free Span Stitching

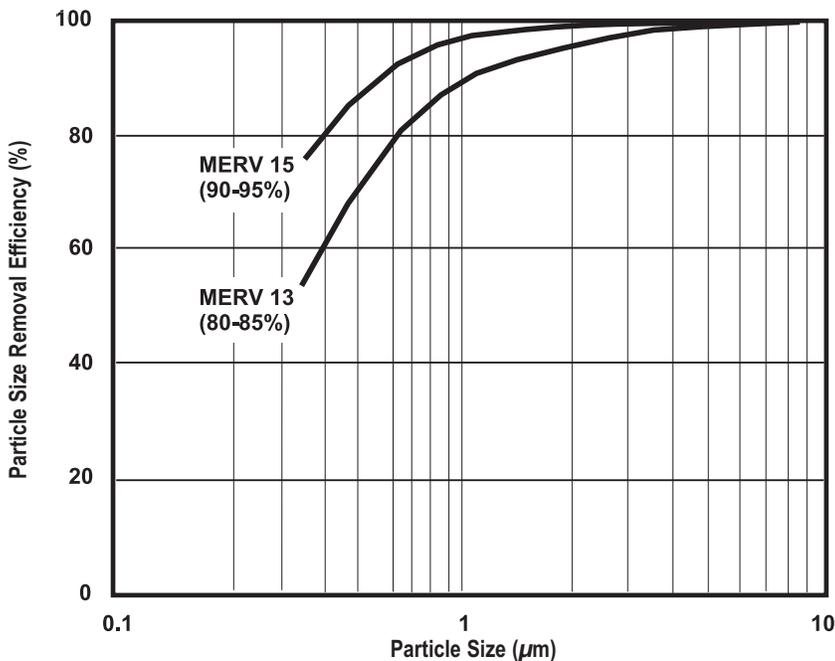
Performance Information

Initial Resistance vs. Airflow



Airflow Velocity
Curves based on 24"x24"x30", 8 pocket filter.

Composite Minimum Efficiency Curve



Particle Diameter (μm)
Tested in accordance with ASHRAE Standard 52.2.
This chart shows the minimum efficiency the filter will provide throughout its service life. Dust-spot efficiency established using ASHRAE Test Standard 52.1



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AAF has a policy of continuous product research and improvement and reserves the right to change design and specifications without notice.

ISO Certified 9001:2000

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Better Air is Our Business®

AmericanAirFilter®

BioCel I®

High Efficiency Extended Surface Air Filter

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.

High Efficiency - Low Resistance

The air cleaning efficiency of the BioCel I is significantly higher than that of 90-95% ASHRAE efficiency filters. BioCel I exceeds the maximum efficiency of 98% which can be measured by ASHRAE 52.1 test method.

Rated at 95% efficiency on 0.3 micrometer challenge aerosol and MERV 16 by ASHRAE Standard 52.2, BioCel I 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 fills 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 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.



BioCel I® filters meet efficiency requirements established for LEED® Project Certification.

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™ M-Pak – A New Alternative

BioCel™ M-Pak offers the same media area and pressure drop as the BioCel I in a 6" deep, high-impact polystyrene cell side.

BioCel M-Pak offers several advantages in comparison to BioCel I.

- Lighter – 1/2 the weight
- Requires less storage space
- Reduces disposal costs
- Easier handling
- Fully Incinerable



For more information on BioCel M-Pak see brochure AFP-1-117.

Product Information

Nominal Size (Inches) (W x H x D)	Actual Size (Inches) (W x H x D)	Rated Airflow Capacity (CFM)			Rated Initial Resistance (in. w.g.)			Gross Media Area (sq. ft.)	Filters Per Carton	Shipping Weight (lbs.)
		125 FPM	250 FPM	500 FPM	125 FPM	250 FPM	500 FPM			
95% Initial Efficiency (0.3µm Particles)										
24 x 24 x 12	23 ³ / ₈ x 23 ³ / ₈ x 11 ¹ / ₂	500	1000	2000	.19	.40	.95	156	1	20.0
^(a) 24 x 24 x 12	24 x 24 x 11 ¹ / ₂	500	1000	2000	.19	.40	.95	165	1	21.5
24 x 20 x 12	23 ³ / ₈ x 19 ³ / ₈ x 11 ¹ / ₂	413	825	1650	.19	.40	.95	127	1	17.0
^(a) 20 x 24 x 12	19 ³ / ₈ x 23 ³ / ₈ x 11 ¹ / ₂	413	825	1650	.19	.40	.95	127	1	18.5
12 x 24 x 12	11 ³ / ₈ x 23 ³ / ₈ x 11 ¹ / ₂	250	500	1000	.19	.40	.95	72	1	12.0
Recommended Final Resistance 2.0 in. w.g.										
24 x 24 x 6	23 ³ / ₈ x 23 ³ / ₈ x 5 ⁷ / ₈	500	1000	—	.30	.60	—	93	2	22.0
^(a) 24 x 24 x 6	24 x 24 x 5 ⁷ / ₈	500	1000	—	.30	.60	—	98	2	24.0
24 x 20 x 6	23 ³ / ₈ x 19 ³ / ₈ x 5 ⁷ / ₈	413	825	—	.30	.60	—	93	2	22.0
^(a) 20 x 24 x 6	19 ³ / ₈ x 23 ³ / ₈ x 5 ⁷ / ₈	413	825	—	.30	.60	—	96	2	21.5
12 x 24 x 6	11 ³ / ₈ x 23 ³ / ₈ x 5 ⁷ / ₈	250	500	—	.30	.60	—	42	2	14.0
Recommended Final Resistance 1.5 in. w.g.										

(a) Available in double header construction only.

Metric Conversion Info	
1.0 in. = 2.54 cm	1 CFM = 1.7 m ³ /hr
1 ft ² = .09 m ²	1.0 in. w.g. = 249 Pa
1 FPM = .005 m/sec.	

Options

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

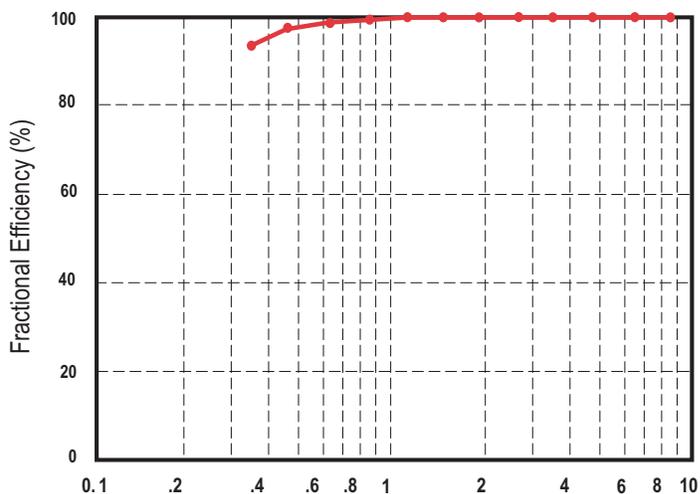
Performance Data

Initial Efficiency vs. Particle Diameter

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

Underwriters Laboratories, Inc. Classification

BioCel I filters are classified Class 1. Testing was performed according to UL Standard 900.



ASHRAE 52.2 Composite Minimum Efficiency Curve

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