



## **AERO-CELL™ S**

*High-Efficiency Synthetic Rigid Air Filter*

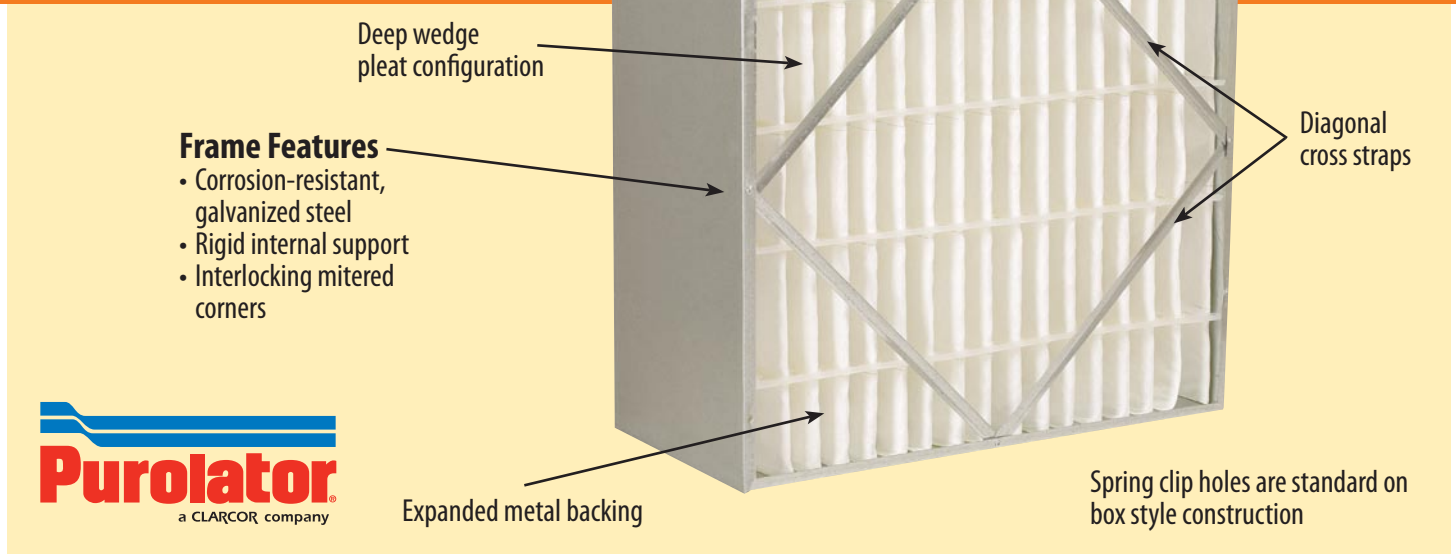


### ***AERO-CELL S Synthetic Air Filter Features:***

- **Dual-Stage 100% Synthetic Fibers**
- **Class 2 U.L. Standard 900**
- **Rating Up To MERV 14**
- **Corrosion-Resistant Galvanized Steel**
- **Rigid Internal Support**

# AERO-CELL™ S

High-Efficiency Synthetic Rigid Air Filter



In an effort to respond to the increasing synthetic media requirements of the air filtration industry, Purolator offers the AERO-CELL S rigid box filter, a rigid air filter engineered to provide medium and high-efficiency filtration combined with a prolonged life cycle. Its box filter construction eliminates the need for retainers and special external wire media supports.

A high surface area-to-depth ratio provides the maximum amount of effective filter media in areas of minimum in-line duct space. The result: A rigid, stable filter with consistent performance in a variety of operating conditions.

## Applications

Each AERO-CELL S filter provides medium to high-efficiency air filtration capability for a number of distinct applications. These filters are specifically designed for situations requiring strict adherence to filter media specifications, including the pharmaceutical, food processing, health care, paint spray, and commercial property industries.

The AERO-CELL S filter will operate to a final resistance of 1.5" w.g. Available in a variety of filtering efficiencies and sizes, the AERO-CELL S filter will satisfy and effectively service most applications.

In Variable Air Volume (VAV) applications, the AERO-CELL S filter maintains consistent filtering performance throughout a full range of velocities.

## Interchangeable

The AERO-CELL S filter is designed to be completely interchangeable with all makes and types of medium to high-efficiency rigid cell filters. When used with Purolator conversion filter clips, existing side access and built up filter banks are easily converted to support the AERO-CELL S filter. In high dust concentration applications, the life of an AERO-CELL S is extended by the use of a prefilter. The Purolator MARK 80-D® and hi-E 40™ pleated filters have proven effective in such situations.

## Dual Stage Media

Purolator utilizes a dual stage media in each AERO-CELL S filter. The first stage is a prefilter which consists of coarse synthetic fibers designed to arrest larger particulate in the airstream and enhance dirt loading ability.

The second stage is a layer of micro-fine poly-propylene fibers spun-bonded and fastened to a polypropylene backing which captures the remaining smaller particles. This dual stage media configuration increases the filter's overall efficiency and dust holding capacity.

The media is continuously bonded with solvent-free, water-based glue to expanded, corrosion-resistant, 28-gauge electro-galvanized steel which allows a 95% open face area.

It is important to note, as well, that synthetic fibers are inherently stronger than microfiberglass fibers,

## Filtering Efficiencies

Model	Average Efficiency	Average Arrestance	Media Color	MERV Rating
AC50S	50-55%	96%	yellow	11
AC65S	60-65%	97%	orange	12
AC85S	80-85%	98%	pink	13
AC95S	90-95%	99%	yellow	14

decreasing the chance of media damage due to handling or high moisture conditions. In addition, the synthetic fibers are more resistant to the shearing stresses encountered at high air flow rates. The continuous filament associated with the spun-bonded process further insures the integrity of the filter mat and eliminates fiber shedding.

### Pleat Configuration

To achieve a maximum dust holding capacity while minimizing pressure loss and replacement frequencies, the AERO-CELL S incorporates aerodynamically wedge-shaped pleats into its design. The expanded metal backing and stationary pleat spacers allow consistent pleat configuration.

### Frame Construction

The AERO-CELL S perimeter frame is constructed of high strength, corrosion resistant galvanized steel. To prevent air bypass, the filter pak is sealed to the frame on all sides.

### Product Specification

Air filters shall be the high-efficiency, deep-pleated, disposable, rigid-cell type. Filter media shall be of dual stage, 100% synthetic fibers formed into a .25" thick filter blanket reinforced by an integral polypropylene backing.

The filter media shall have an average efficiency of \_\_\_\_\_% and an arrestance of not less than \_\_\_\_% when tested in accordance with ASHRAE Test Standard 52.1. The dust holding capacity of the filter shall not be less than \_\_\_\_\_ grams. Each filter shall have a rated airflow of \_\_\_\_\_ cfm, and initial resistance not to exceed \_\_\_\_\_, and a final resistance of \_\_\_\_\_ w.g. Each filter shall have no less than \_\_\_\_\_ square feet of media area. The filter shall have MERV Rating of \_\_\_\_ when tested in accordance with ASHRAE 52.2.

The filter media shall be continuously bonded to a heavy-duty, 28-gauge, corrosion-resistant, electrogalvanized steel, expanded metal grid with an open face area of not less than 95%.

To inhibit dirty air bypass, the media grid assembly shall be bonded to all interior surfaces of the enclosure

frame. The support grid shall be formed into a wedge configuration to optimize usage of the filter media. Pleat spacers shall be permanently installed.

The enclosure frame shall be constructed of corrosion-resistant galvanized steel in such a manner as to produce a rigid, durable filter. The filter shall be the AERO-CELL as manufactured by Purolator Air Filtration. Filters shall be listed and rated by Underwriters Laboratories, Inc. as Class 2.

### Prefilters

Prefilters shall be the 2" or 4" medium efficiency (25 - 30%) pleated, disposable type, constructed with a non-woven cotton media supported by an expanded metal support backing and enclosed in a heavy duty, high wet strength board frame. The filter shall be the MARK 80-D® or hi-E 40™ type as manufactured by Purolator Air Filtration.

### Holding Frames

Holding frames shall be constructed of heavy duty, 16-gauge galvanized steel with flush-mitered, welded corners. The frame shall be supplied with closed cell eps/polyethyl/butyl gasket secured to the rear seating flanges of the frame. Each frame shall be supplied with positive sealing filter locks. The holding frames shall be the PURO® Frame type manufactured by Purolator Air Filtration.

### Side Access Housings

Housing shall be side-servicing from either end through access doors fitted with positive pressure trip lock latches and gasketed inside doors, parallel to the filter track. Housings shall be constructed of heavy duty 16-gauge galvanized steel.

The housing shall be equipped with both a 2" prefilter track and a 1" final filter track. Each track shall be constructed of extruded aluminum combined with reinforced nylon pile air seals to create a corrosion-resistant, air-tight seal.

Each AERO-CELL S filter is constructed to meet Underwriters Laboratories, Inc. requirements for Class 2 air filters. Testing is performed in accordance with U.L. Standard 900.

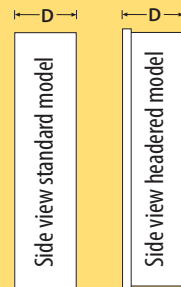
Series	Nominal size WxHxD	Standard Models					Headered Models*				
		AERO-CELL S Model number	CFM capacity		Resist. in. w.g.		Media area sq. ft.	AERO-CELL S Model number	Resist. in. w.g.		Media area sq. ft.
			med	high	med	high			med	high	
<b>50%</b>	24x24x12	AC50S-4412	1000	2000	.08	.24	58	HAC50S-4412	.09	.29	50
	20x24x12	AC50S-0412	850	1700	.06	.22	43	HAC50S-0412	.08	.26	39
	12x24x12	AC50S-2412	500	1000	.09	.24	25	HAC50S-2412	.11	.37	22
	24x24x6	AC50S-4406	500	1000	.03	.08	29	HAC50S-4406	.04	.10	26
	20x24x6	AC50S-0406	425	850	.04	.08	20	HAC50S-0406	.04	.08	18
	12x24x6	AC50S-2406	250	500	--	.10	11	HAC50S-2406	--	.13	10
<b>65%</b>	24x24x12	AC60S-4412	1000	2000	.10	.26	58	HAC60S-4412	.12	.33	50
	20x24x12	AC60S-0412	850	1700	.10	.26	47	HAC60S-0412	.12	.33	40
	12x24x12	AC60S-2412	500	1000	.10	.26	29	HAC60S-2412	.12	.33	25
	24x24x6	AC60S-4406	500	1000	.06	.15	29	HAC60S-4406	.07	.15	26
	20x24x6	AC60S-0406	425	850	.06	.15	24	HAC60S-0406	.07	.15	21
	12x24x6	AC60S-2406	250	500	.06	.15	15	HAC60S-2406	.07	.15	13
<b>85%</b>	24x24x12	AC85S-4412	1000	2000	.14	.38	58	HAC85S-4412	.26	.59	50
	20x24x12	AC85S-0412	850	1700	.14	.38	47	HAC85S-0412	.26	.59	40
	12x24x12	AC85S-2412	500	1000	.14	.38	29	HAC85S-2412	.26	.59	25
	24x24x6	AC85S-4406	500	1000	.11	.23	29	HAC85S-4406	.20	.40	26
	20x24x6	AC85S-0406	425	850	.11	.23	24	HAC85S-0406	.20	.40	21
	12x24x6	AC85S-2406	250	500	.11	.23	15	HAC85S-2406	.20	.40	13
<b>95%</b>	24x24x12	AC95S-4412	1000	2000	.30	.65	58	HAC95S-4412	.24	.60	50
	20x24x12	AC95S-0412	850	1700	.30	.65	47	HAC95S-0412	.24	.60	40
	12x24x12	AC95S-2412	500	1000	.30	.65	29	HAC95S-2412	.24	.60	25
	24x24x6	AC95S-4406	500	1000	.25	.50	29	HAC95S-4406	.20	.45	26
	20x24x6	AC95S-0406	425	850	.25	.50	24	HAC95S-0406	.20	.45	21
	12x24x6	AC95S-2406	250	500	.25	.50	15	HAC95S-2406	.20	.45	13

\* Standard Header is 3/4"; a 1 1/8" header is available. The following non-standard sizes are available upon request: 20x20x12, 16x20x12, 20x25x12, and 16x25x12.

### Dimensions: Standard or Headered Filter Models

Size	Width	Height	Depth
12" x 24"	11 3/8"	23 3/8"	5 7/8" or 11 1/2"
20" x 24"	19 3/8"	23 3/8"	5 7/8" or 11 1/2"
24" x 24"	23 3/8"	23 3/8"	5 7/8" or 11 1/2"

\*Optional 1 1/8" header is available upon request 3/4" header is standard



P-AEROS-407



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