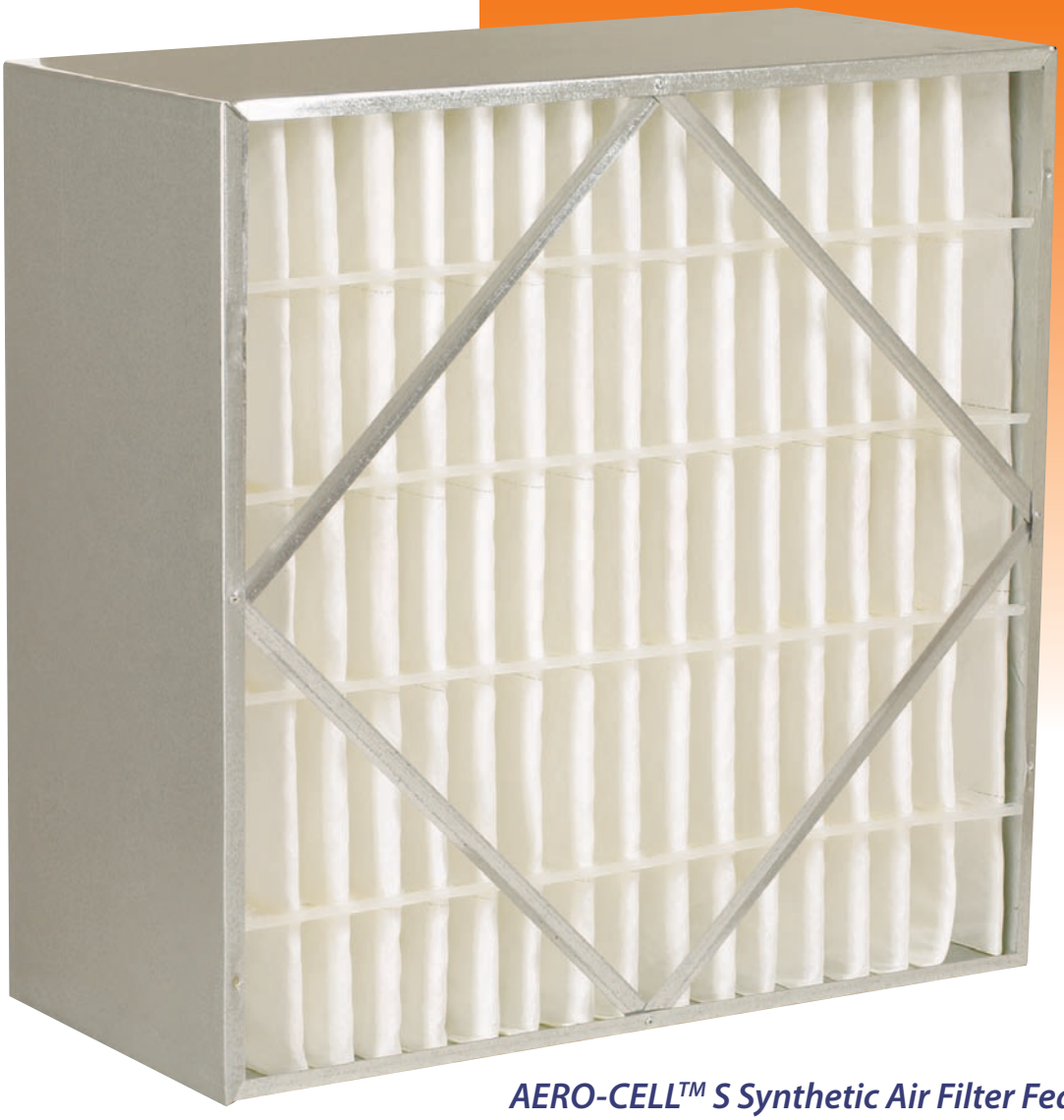
Purolator

AERO-CELL™ S

High-Efficiency Synthetic Rigid Air Filter



AERO-CELL™ S Synthetic Air Filter Features:

- **Dual-Stage 100% Synthetic Fibers**
- **Classified Per UL Standard 900**
- **Up To MERV 14 Performance**
- **Corrosion-Resistant Galvanized Steel**
- **Rigid Internal Support**

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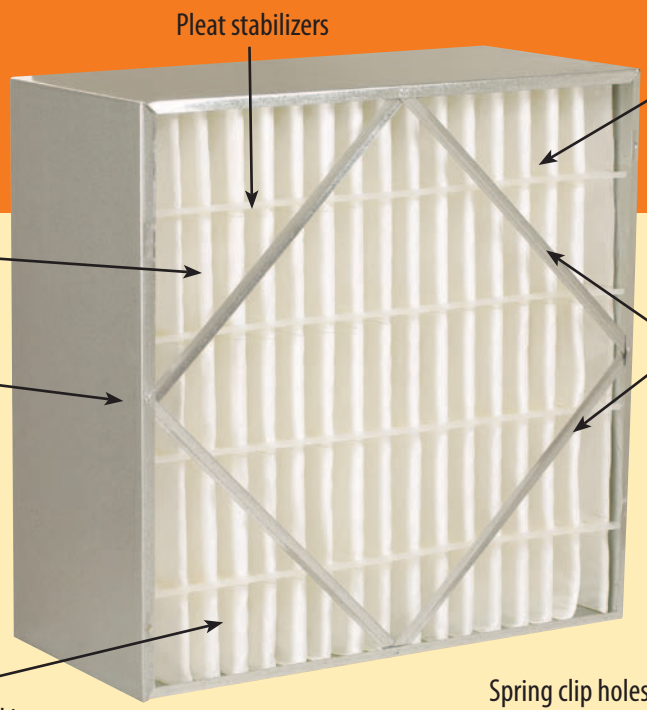

In an effort to respond to the increasing synthetic media requirements of the air filtration industry, Purolator offers the AERO-CELL™ S rigid box filter, a rigid air filter engineered to provide medium and high-efficiency filtration combined with a prolonged life cycle. Its box filter construction eliminates 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 pre-filter. The Purolator Defiant 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 polypropylene 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	MERV	Average Arrestance	Media Color
AC50S	10	96%	White
AC65S	11	97%	Orange
AC85S	13	98%	Pink
AC95S	14	99%	Yellow

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 ensures 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.

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 Performance of ___ when tested in accordance with ASHRAE 52.2-2007. Data based on a 24x24x12 filter tested at 492 FPM.

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 as manner as to produce a rigid, durable filter. The filter shall be the AERO-CELL™ S as manufactured by Purolator. Filters shall be Classified per UL Standard 900.

Pre-filters

Pre-filters 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 Defiant® Mark 80-D® or Hi-E® 40 type as manufactured by CLARCOR 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 suplied 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 CLARCOR 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" pre-filter 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. Testing is performed in accordance with UL Standard 900.

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Model Number	Nominal Size (Inches) (H x W x D)	Media Area (Sq. Ft.)	Air Flow Capacity (CFM) 12" @ 500 FPM 6" @ 250 FPM	Synthetic	
				Box Style	Header Style (PH)
MERV 14: E1 (0.3-1.0m) ≥75%, E2 (1.0-3.0m), ≥ 90%, E3 (3.0-10.0m) ≥ 95%					
AC95S	24 x24 x 12	58	2000	.61	.65
AC95S	24 x 12 x 12	28	1000	.61	.65
AC95S	24 x 20 x 12	47	1650	.61	.65
AC95S	20 x 20 x 12	39	1400	.61	.65
AC95S	24 x24 x 6	30	1000	.44	.48
AC95S	24 x 12 x 6	15	500	.44	.48
AC95S	24 x 20 x 6	20	700	.44	.48
MERV 13: E1 (0.3-1.0m) ≥50%, E2 (1.0-3.0m), ≥ 85%, E3 (3.0-10.0m) ≥ 90%					
AC85S	24 x24 x 12	58	2000	.49	.54
AC85S	24 x 12 x 12	28	1000	.49	.54
AC85S	24 x 20 x 12	47	1650	.49	.54
AC85S	20 x 20 x 12	39	1400	.49	.54
AC85S	24 x24 x 6	30	1000	.26	.36
AC85S	24 x 12 x 6	15	500	.26	.36
AC85S	24 x 20 x 6	20	700	.26	.36
MERV 11: E1 (0.3-1.0m) ≥20%, E2 (1.0-3.0m), ≥ 65%, E3 (3.0-10.0m) ≥ 85%					
AC60S	24 x24 x 12	58	2000	.26	.31
AC60S	24 x 12 x 12	28	1000	.26	.31
AC60S	24 x 20 x 12	47	1650	.26	.31
AC60S	20 x 20 x 12	39	1400	.26	.31
AC60S	24 x24 x 6	30	1000	.20	.25
AC60S	24 x 12 x 6	15	500	.20	.25
AC60S	24 x 20 x 6	20	700	.20	.25
MERV 10: E1 (0.3-1.0m) N /A, E2 (1.0-3.0m), ≥ 75%, E3 (3.0-10.0m) ≥ 80%					
AC50S	24 x24 x 12	58	2000	.18	.22
AC50S	24 x 12 x 12	28	1000	.18	.22
AC50S	24 x 20 x 12	47	1650	.18	.22
AC50S	20 x 20 x 12	39	1400	.18	.22
AC50S	24 x24 x 6	30	1000	.11	.13
AC50S	24 x 12 x 6	15	500	.11	.13
AC50S	24 x 20 x 6	20	700	.11	.13

* Standard Header is ¾"; a 1⅛" header is available.

Dimensions: Standard or Headered Filter Models

Size	Width	Height	Depth
12" x 24"	11⅜"	23⅜"	5⅞" or 11½"
20" x 24"	19⅜"	23⅜"	5⅞" or 11½"
24" x 24"	23⅜"	23⅜"	5⅞" or 11½"

*Optional 1⅛" header is available upon request

3/4" header is standard

P-AEROS-1116

Purolator™

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NAFA National Air Filtration Association

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