

**SERVA-PAK™ S**  
**Synthetic Bag Filters**

  
**Purolator®**  
*Air Filtration*  
a CLARCOR company

# SERVA-PAK™ S

## Synthetic Bag Filters

In an effort to respond to the increasing synthetic media requirements in the air filtration industry, Purolator offers the SERVA-PAK S extended surface bag type filter. Highlighted below are design and function characteristics which make the SERVA-PAK S stand out from its competitors.

### Applications

Purolator's SERVA-PAK S synthetic bag air filter provides medium to high efficiency air filtration capability for a number of distinct applications. It is specifically designed for situations requiring strict adherence to filter media specifications, such as pharmaceutical, food processing, health care, and paint spray booth applications.

The SERVA-PAK S filter can also be incorporated into industrial applications where high static pressure conditions exist. Its durable design and construction features allow the SERVA-PAK S to perform at elevated air flow rates and endure turbulent conditions.

### Filter Construction

Each SERVA-PAK S filter provides extended surface filtration efficiency through media formed into individual dust-holding pockets. These pockets are created by a multi-row stitching process which promotes uniform spacing between each pocket, ensuring optimum dirty-air-to-media contact.

In addition, each pocket is bonded and sealed to its own J-channel support frame, which is fastened mechanically to a heavy duty, corrosion resistant, 28-gauge galvanized enclosure frame.

### Dual Stage Media

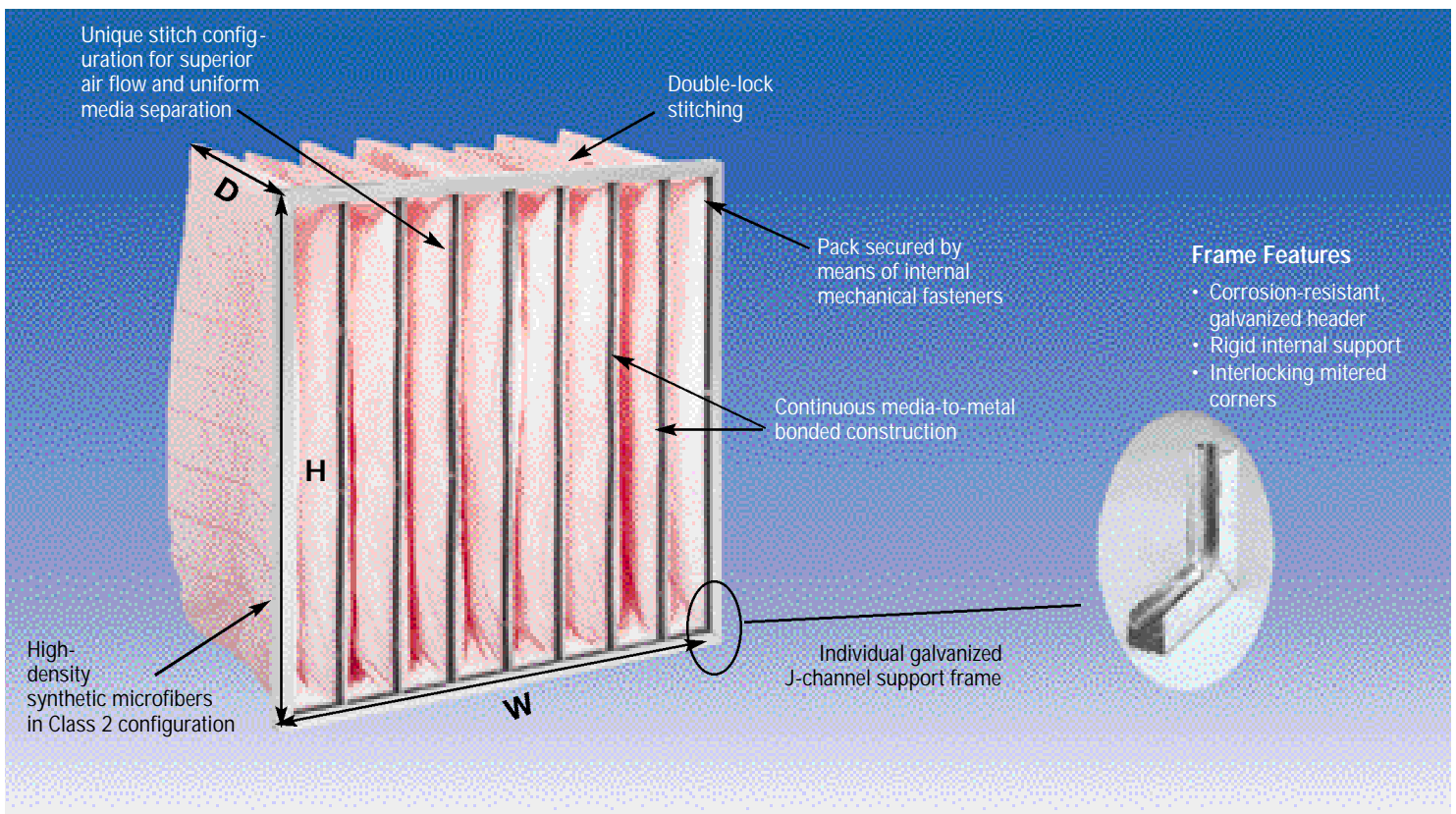
Purolator uses a dual stage media in each SERVA-PAK S filter. The first stage media is a prefilter consisting of coarse polyester fibers designed to arrest larger particulate in the airstream and enhance dirt loading capacity. The second stage media is a layer of microfine polypropylene fibers, spun-bonded and fastened to a polypropylene backing which captures the remaining smaller particles. This dual stage media configuration increases the overall efficiency and dust-holding capacity of the SERVA-PAK S filter.

For industrial/commercial applications where upgrading from a microfiberglass product is recommended, the SERVA-PAK S will provide the following advantages:

- Increased initial efficiency
- Decreased initial resistance

It is also important to note that synthetic fibers are inherently stronger than microfiberglass fibers, decreasing the chance of media damage from handling or moisture. Also, 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.



## Underwriters Laboratory Approved

The Purolator SERVA-PAK S filter is UL Class 2 listed by Underwriters Laboratories, Inc. Testing is performed in accordance with UL Standard 900.

## Suggested Product Specifications

Air filters shall be replaceable, factory assembled filters consisting of multiple dust holding pockets assembled in a corrosion-resistant galvanized steel frame.

Filter media shall be of dual-stage, 100% synthetic fibers formed into a .25" thick filter blanket and reinforced by an integral polypropylene backing. The filter shall have a minimum MERV rating of \_\_\_\_ when tested in accordance with ASHRAE 52.2.

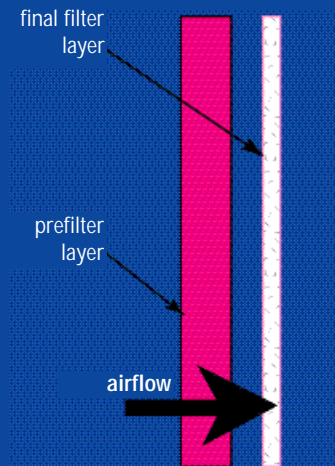
A multi-row stitching process shall produce individual self-supporting dust holding pockets to achieve uniform media spacing thereby extending filter life and optimizing performance. The multiple rows of stitching shall be sealed with a hot-melt adhesive. Dust holding pockets shall be bonded to their own metal support frame and assembled into a heavy gauge galvanized steel enclosure frame. Side-by-side pockets shall be mechanically fastened to the adjacent frames using a non-piercing clinch. The open area of the filter shall be greater than 85% of the total face area.

The filter shall be rated Class 2 by Underwriters Laboratories, Inc. Each filter shall have a rating of \_\_\_\_\_ CFM at an initial resistance not to exceed \_\_\_\_\_ inches w.g. Each filter shall have no less than \_\_\_\_\_ sq. ft. of media area.

## The SERVA-PAK S Advantage: Dual Stage Media for Twice the Filtration

As shown in the diagram below, Purolator uses dual stage media in every SERVA-PAK S Filter. The pre-filter layer is composed of coarser media (18-micron polyester fiber), and stops the larger particles before they reach the second layer. The final filter layer is made of 2-micron spun-bonded polypropylene fiber fastened to a polypropylene backing. The spun-bonded fiber is a continuous filament that eliminates fiber shedding and enhances the integrity of the filter mat.

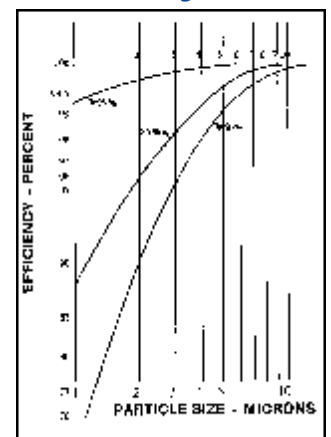
This unique dual-stage media configuration increases the SERVA-PAK S filters' dust holding capacity and overall efficiency.



## Media efficiency

SERVA-PAK S Series	Efficiency Rating	Media Color	Average Efficiency	Average Arrestance	MERV
SP40S	45%	white	40-45%	95%	--
SP65S	65%	orange	60-65%	97%	11
SP85S	85%	pink	80-85%	98%	12
SP95S	95%	yellow	90-95%	99%	15

## Efficiency curve



# Performance Data: SERVA-PAK 40-S

Series Type 40S: 40-45% ASHRAE efficient

Nominal size WxHxD	Actual size WxHxD	# of pockets	Media area sq. ft.	model no.	CFM capacity			Resist. in. W.G.		
					low	med	high	low	med	high
24x24x11	23-5/16x23-5/16x11	6	24	SP40S06 4411	1500	2000	2500	.14	.21	.30
20x24x11	19-5/16x23-5/16x11	5	20	SP40S05 0411	1250	1600	2000	.14	.20	.29
20x20x11	19-5/16x19-5/16x11	5	17	SP40S05 0011	1150	1500	1750	.17	.25	.32
12x24x11	11-5/16x23-5/16x11	3	12	SP40S03 2411	750	1000	1250	.13	.20	.29
24x24x19	23-5/16x23-5/16x19	6	42	SP40S06 4419	2000	2500	3000	.14	.20	.30
20x24x19	19-5/16x23-5/16x19	5	35	SP40S05 0419	1600	2000	2500	.13	.20	.30
20x20x19	19-5/16x19-5/16x19	5	30	SP40S05 0019	1500	1750	2000	.18	.23	.30
12x24x19	11-5/16x23-5/16x19	3	21	SP40S03 2419	1000	1250	1500	.16	.23	.33

# Performance Data: SERVA-PAK 65S/85S/95S

Nominal size WxHxD	# of pockets	Media area sq. ft.	CFM capacity			65S model no.	Resist. in. W.G.			85S model no.	Resist. in. W.G.			95S model no.	Resist. in. W.G.		
			low	med	high		low	med	high		low	med	high		low	med	high
24x24x22	8	62	1000	1500	2000	SP65S08 4422	.09	.25	.21	SP85S08 4422	.12	.20	.30	SP95S08 4422	.16	.26	.38
24x24x22	6	48	800	1250	1500	SP65S06 4422	.07	.13	.16	SP85S06 4422	.12	.20	.24	SP95S06 4422	.15	.26	.34
20x24x22	5	40	750	1000	1250	SP65S05 0422	.09	.15	.21	SP85S05 0422	.12	.20	.30	SP95S05 0422	.16	.26	.38
20x20x22	5	33	--	750	1000	SP65S05 0022	.09	.15	.21	SP85S05 0022	.12	.20	.30	SP95S05 0022	.16	.26	.38
12x24x22	4	31	500	750	1000	SP65S04 2422	.09	.15	.21	SP85S04 2422	.12	.20	.30	SP95S04 2422	.16	.26	.38
12x24x22	3	24	500	625	750	SP65S03 2422	.07	.13	.16	SP85S03 2422	.12	.20	.24	SP95S03 2422	.15	.26	.34
24x24x26	8	73	1000	1500	2000	SP65S08 4426	.08	.14	.23	SP85S08 4426	.14	.23	.34	SP95S08 4426	.16	.27	.39
24x24x26	6	56	1000	1500	2000	SP65S06 4426	.06	.12	.20	SP85S06 4426	.18	.26	.39	SP95S06 4426	.16	.26	.38
20x24x26	5	47	800	1200	1600	SP65S05 0426	.08	.14	.23	SP85S05 0426	.14	.23	.34	SP95S05 0426	.16	.27	.39
20x20x26	5	39	800	1200	1600	SP65S05 0026	.08	.14	.23	SP85S05 0026	.14	.23	.34	SP95S05 0026	.16	.27	.39
12x24x26	4	33	750	1000	1250	SP65S04 2426	.08	.14	.23	SP85S04 2426	.14	.23	.34	SP95S04 2426	.16	.27	.39
12x24x26	3	28	--	750	1000	SP65S03 2426	.06	.12	.20	SP85S03 2426	.18	.26	.39	SP95S03 2426	.16	.26	.38
24x24x30	8	84	1500	2000	2500	SP65S08 4430	.09	.15	.24	SP85S08 4430	.18	.32	.43	SP95S08 4430	.20	.31	.45
24x24x30	6	65	--	1500	2000	SP65S06 4430	.10	.18	.28	SP85S06 4430	.15	.25	.38	SP95S06 4430	.17	.26	.39
20x24x30	5	54	--	1200	1600	SP65S05 0430	.09	.15	.24	SP85S05 0430	.18	.32	.43	SP95S05 0430	.20	.31	.45
20x20x30	5	45	--	1200	1600	SP65S05 0030	.09	.15	.24	SP85S05 0030	.18	.32	.43	SP95S05 0030	.20	.31	.45
12x24x30	4	42	750	1000	1200	SP65S04 2430	.09	.15	.24	SP85S04 2430	.18	.32	.43	SP95S04 2430	.20	.31	.45
12x24x30	3	33	--	750	1000	SP65S03 2430	.10	.18	.28	SP85S03 2430	.15	.25	.38	SP95S03 2430	.17	.26	.39

To calculate Gross media required use the following formula:

$$\text{Gross media area (sq. foot.)} = \{2 \times [(\# \text{ of pockets}) \times (\text{pocket width}^*) \times (\text{pocket depth})]\} \div 144$$

Example:  $SP95S084422 = \{2 \times [(8 \times 25 \times 22)]\} \div 144 = 61.1 \text{ Square feet}$

\*Pocket widths: 6- or 7-pocket = 26"; 8- or 9-pocket = 25"; 10-pocket=24.75"; 12-pocket=24"

**Nominal Size**

W x H  
24" x 24"  
20" x 24"  
20" x 20"  
12" x 24"

**Actual Size**

W x H  
23-5/16" x 23-5/16"  
19-5/16" x 23 5/16"  
19-5/16" x 19-5/16"  
11-5/16" x 23-5/16"

Nominal and Actual Depths are 11", 19", 22", 26", and 30"



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