



## Hi-E 40™ CB PLEATED FILTER

*MERV 8 Carbon-loaded Pleated Media*

### Product features

The goal of a Purolator Hi-E 40™ CB pleated filter is to promote improved indoor air quality through odor control. These carbon-loaded pleated filters clean the air by removing airborne molecular contaminants present at levels less than one particle per million.

- Hi efficiency MERV 8: Small (20 x 50 mesh) carbon particles and pleated configuration maximize adsorbent surface area
- Low pressure drop: Uniform dispersion of carbon throughout media, not just on surface, lets air flow freely
- Longer filter life, minimal shedding/dusting: thermal bonding of media to carbon exposes maximum adsorbent surface area
- More adsorbent: pound for pound, our carbon media is six times more effective than competitive GAC carbons

### Applications

The Purolator Hi-E 40 CB filter is recommended for typical IAQ settings of 1ppm or less. Specific applications include air conditioning filters, furnace filters, heating vents, air intakes, air purification devices, and ozone removal devices.

Appropriate end users are those involved with filtration of hospital facilities, chemical plant offices/labs, pollution control areas, sewage disposal and waste management plant offices, airports, kitchens and restaurants, or commercial offices.

### Media

A non-woven dual layer pleated filter media composed of synthetic fibers makes up the Hi-E 40 CB media. The media of the Hi-E 40 CB filter is so stiff with carbon that it is actually self-supporting, and requires no external wire reinforcements. The prefilter layer is MERV 8, allowing for particulate and odor removal in one package

Each Hi-E 40 CB filter is loaded with 200 grams/sq. meter (GSM) of superior, 60% active, 20 x 50 mesh-size carbon particles. Our top-grade carbon provides six times the adsorbent surface area of standard GAC carbon, making it vastly more effective, efficient, and long-lasting.



No adhesive is used in the media: Fine mesh carbon granules are bonded to the synthetic fibers by a unique thermal process that requires no adhesive, and blinds less than 1.5% of each carbon particle's effective surface area. As a result, more than 98.5% of the carbon's surface is exposed to contaminated air, resulting in maximum gas adsorbing capacity and efficiency. This bonding method also features minimal dust release.

The pleated configuration of the Hi-E 40 CB media also increases the filter's exposed surface area, thereby providing a higher overall efficiency by expanding its capability to adsorb contaminants.

### Frame

The Hi-E 40 CB filter elements are enclosed in a two-piece heavy duty, high-wet-strength beverage board frame. When assembled, the fully bonded double-wall frame combines with the integral corner flaps and forms a rugged, durable filter which will not rack, warp, or leak under normal operating conditions.

# Hi-E 40™ CB PLEATED FILTER

Carbon-loaded Pleated Media

## Performance Data: Hi-E 40™ CB

Series	Hi-E 40 CB Model Number	Nominal <sup>1</sup> Size W x H x D	Actual Size W x H x D	CFM <sup>2</sup> Capacity	Resistance			Media Area Sq.ft.	Carbon Weight (g)
					Inches W.G.	Inches Final <sup>3</sup>	Inches W.G.		
1 12 pleats per lineal foot of face area	HE40CB-STD1	12x24x1	11 <sup>3</sup> / <sub>8</sub> x 23 <sup>3</sup> / <sub>8</sub> x 3 <sup>3</sup> / <sub>4</sub>	600	.40	1.00	2.6	48	
	HE40CB-STD1	16x20x1	15 <sup>1</sup> / <sub>2</sub> x 19 <sup>1</sup> / <sub>2</sub> x 3 <sup>3</sup> / <sub>4</sub>	665	.40	1.00	3.4	63	
	HE40CB-STD1	16x25x1	15 <sup>1</sup> / <sub>2</sub> x 24 <sup>1</sup> / <sub>2</sub> x 3 <sup>3</sup> / <sub>4</sub>	850	.40	1.00	4.3	80	
	HE40CB-STD1	18x24x1	17 <sup>3</sup> / <sub>8</sub> x 23 <sup>3</sup> / <sub>8</sub> x 3 <sup>3</sup> / <sub>4</sub>	900	.40	1.00	4.4	81	
	HE40CB-STD1	20x20x1	19 <sup>1</sup> / <sub>2</sub> x 19 <sup>1</sup> / <sub>2</sub> x 3 <sup>3</sup> / <sub>4</sub>	850	.40	1.00	4.3	80	
	HE40CB-STD1	20x25x1	19 <sup>1</sup> / <sub>2</sub> x 24 <sup>1</sup> / <sub>2</sub> x 3 <sup>3</sup> / <sub>4</sub>	1050	.40	1.00	5.3	98	
2 11 pleats per lineal foot of face area	HE40CB-STD2	12x24x2	11 <sup>3</sup> / <sub>8</sub> x 23 <sup>3</sup> / <sub>8</sub> x 1 <sup>3</sup> / <sub>4</sub>	1000	.55	1.00	5.9	109	
	HE40CB-STD2	16x20x2	15 <sup>1</sup> / <sub>2</sub> x 19 <sup>1</sup> / <sub>2</sub> x 1 <sup>3</sup> / <sub>4</sub>	1100	.55	1.00	6.9	128	
	HE40CB-STD2	16x25x2	15 <sup>1</sup> / <sub>2</sub> x 24 <sup>1</sup> / <sub>2</sub> x 1 <sup>3</sup> / <sub>4</sub>	1400	.55	1.00	8.7	162	
	HE40CB-STD2	18x24x2	17 <sup>3</sup> / <sub>8</sub> x 23 <sup>3</sup> / <sub>8</sub> x 1 <sup>3</sup> / <sub>4</sub>	1500	.55	1.00	9.3	172	
	HE40CB-STD2	20x20x2	19 <sup>1</sup> / <sub>2</sub> x 19 <sup>1</sup> / <sub>2</sub> x 1 <sup>3</sup> / <sub>4</sub>	1400	.55	1.00	8.9	165	
	HE40CB-STD2	20x25x2	19 <sup>1</sup> / <sub>2</sub> x 24 <sup>1</sup> / <sub>2</sub> x 1 <sup>3</sup> / <sub>4</sub>	1750	.55	1.00	11.2	208	
4 11 pleats per lineal foot of face area	HE40CB-STD4	12x24x4	11 <sup>3</sup> / <sub>8</sub> x 23 <sup>3</sup> / <sub>8</sub> x 3 <sup>3</sup> / <sub>4</sub>	1250	.51	1.00	12.7	235	
	HE40CB-STD4	16x20x4	15 <sup>3</sup> / <sub>8</sub> x 19 <sup>3</sup> / <sub>8</sub> x 3 <sup>3</sup> / <sub>4</sub>	1400	.51	1.00	14.9	277	
	HE40CB-STD4	16x25x4	15 <sup>3</sup> / <sub>8</sub> x 24 <sup>3</sup> / <sub>8</sub> x 3 <sup>3</sup> / <sub>4</sub>	1750	.51	1.00	18.7	348	
	HE40CB-STD4	18x24x4	17 <sup>3</sup> / <sub>8</sub> x 23 <sup>3</sup> / <sub>8</sub> x 1 <sup>3</sup> / <sub>4</sub>	1875	.51	1.00	18.8	349	
	HE40CB-STD4	20x20x4	19 <sup>3</sup> / <sub>8</sub> x 19 <sup>3</sup> / <sub>8</sub> x 3 <sup>3</sup> / <sub>4</sub>	1750	.51	1.00	19.1	355	
	HE40CB-STD4	20x25x4	19 <sup>3</sup> / <sub>8</sub> x 24 <sup>3</sup> / <sub>8</sub> x 3 <sup>3</sup> / <sub>4</sub>	2170	.51	1.00	24.1	448	
	HE40CB-STD4	24x24x4	23 <sup>3</sup> / <sub>8</sub> x 23 <sup>3</sup> / <sub>8</sub> x 3 <sup>3</sup> / <sub>4</sub>	2500	.51	1.00	26.8	498	

(1) Width and height dimensions are interchangeable. The Hi-E 40 CB may be installed with pleats running vertical or horizontal.

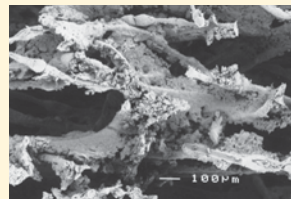
(2) Capacity ratings are recommended levels. Resistance to airflow data is based on ASHRAE 52.2-2007 Test Method. Data based on a 24x24 at a test velocity of 492 FPM.

(3) The recommended final operating resistance is typical of systems currently in operation. The Hi-E 40 CB can be operated to higher or lower final resistance levels without materially affecting filter efficiency.

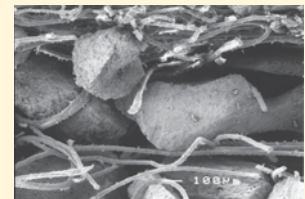
## Suggested Product Specifications

1. The filter shall be the Hi-E 40 CB as manufactured by Purolator Air Filtration.
2. The filter shall have a MERV 8 prefilter layer.
3. Air filters shall be (1"), (2"), and (4") deep pleated media, disposable panel type.
4. Pleat element shall be made with carbon element containing 200 grams/sq. meter (GSM).
5. To assure no dirty air bypass, the media grid assembly shall be bonded to all interior surfaces of the water resistant, die-cut frame with solvent-free water based glue.
6. The support grid shall be formed into a wedge configuration to optimize use of the filter media.
7. To maintain accurate pleat alignment on 4" depth filters, die-cut diagonal frame members shall be bonded to the media pack upstream and downstream.
8. Suggested operating temperatures are not to exceed 200°F (93°C).

## Don't Cover Up the Carbon



The photo above shows how the carbon is stuck to the media with glue in regular slurry process carbon filters. Look at all that glue!



The photo above shows the carbon media used in the Purolator Hi-E 40 CB pleated filter. See how much more surface area of each carbon particle is exposed? That exposed surface area is available to adsorb airborne molecular contaminants from the air.

P-HIE40CB-209

**Purolator**

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