

# **FILTER SELECTION DATA SHEET** **hi-E 40I CLASS 1 PLEAT**

**Standard capacity, medium efficiency pleat**

# **Purolator** **Filtration** **Systems**

## **Introduction**

Purolator Products Air Filtration Company's hi-E 40I Class 1 filter is a medium efficiency pleated filter specially constructed for use in systems requiring U.L. Class 1 listed products.

## **Media and Support**

- The filter media is a special 1/8" thick, high density ultra-fine fiberglass reinforced by a woven fiberglass mesh.
- The wedge shaped pleats on Purolator's hi-E 40I Class 1 filter are formed and supported using corrosion resistant, electro-galvanized, expanded steel.
- The filter media is bonded to the expanded metal to prevent media sagging or oscillation during operation.
- The fiberglass media gives the hi-E 40I Class 1 filter a 30-35% average efficiency and a 90-93% average arrestance when tested in accordance with the ASHRAE 52.1-1992 test method.
- As indicated by its name, the hi-E 40I Class 1 filter is U.L. approved and tested. Testing on this product was performed in accordance with U.L. Standard 900 for Class 1 filters.
- Unless otherwise approved and stated, all Class 1 odd sized filters are produced with Hovoguard board.

## **Construction features**

- The perimeter frame on the Purolator hi-E 40I Class 1 filter is constructed of Underwriters Laboratory approved non-flammable board.
- The pleated media is bonded upstream and downstream to diagonal support elements to increase filter stability.
- The filter media pack is bonded to the inside of the perimeter frame thereby eliminating air bypass.



## **Suggested Product Specifications**

1. The filter shall be the hi-E 40I Class 1 as manufactured by Purolator Products Air Filtration Company.
2. Air filters shall be (2") and (4") deep, medium efficiency, pleated media, disposable panel type.
3. The filter media shall be 1/8" thick, high density ultra-fine fiberglass reinforced by a woven fiberglass mesh.
4. The filter media shall be bonded to a corrosion resistant, expanded metal support grid with a 95% open face area.
5. To assure no dirty air bypass, the media grid assembly shall be bonded to all interior surfaces of the 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. The filter shall be U.L. approved and tested. Testing shall be performed in accordance with U.L. Standard 900 for Class 1 filters.



## Performance data: hi-E 40I Class 1

Series	Nominal (1) Size WxHxD	Actual Size WxHxD	hi-E 40I Model number	CFM (2) capacity med.	CFM (2) capacity high	Resist. " W.G. med.	Resist. " W.G. high	Resist. " W.G. final (3)	Sq. ft.	Media area/sq. ft. face area
<b>2</b> <i>10 pleats per lineal foot of face area</i>	12x24x2	11 <sup>3</sup> / <sub>8</sub> x 23 <sup>3</sup> / <sub>8</sub> x 1 <sup>3</sup> / <sub>4</sub>	HE40I-2402	750	1000	.28	.36	1.00	5.5	3.1
	16x20x2	15 <sup>1</sup> / <sub>2</sub> x 19 <sup>1</sup> / <sub>2</sub> x 1 <sup>3</sup> / <sub>4</sub>	HE40I-6002	825	1100	.28	.36	1.00	6.7	3.1
	16x25x2	15 <sup>1</sup> / <sub>2</sub> x 24 <sup>1</sup> / <sub>2</sub> x 1 <sup>3</sup> / <sub>4</sub>	HE40I-6502	1050	1400	.28	.36	1.00	8.4	3.1
	20x20x2	19 <sup>1</sup> / <sub>2</sub> x 19 <sup>1</sup> / <sub>2</sub> x 1 <sup>3</sup> / <sub>4</sub>	HE40I-0002	1050	1400	.28	.36	1.00	8.2	3.1
	20x25x2	19 <sup>1</sup> / <sub>2</sub> x 24 <sup>1</sup> / <sub>2</sub> x 1 <sup>3</sup> / <sub>4</sub>	HE40I-0502	1300	1750	.28	.36	1.00	10.3	3.1
	24x24x2	23 <sup>3</sup> / <sub>8</sub> x 23 <sup>3</sup> / <sub>8</sub> x 1 <sup>3</sup> / <sub>4</sub>	HE40I-4402	1500	2000	.28	.36	1.00	12.0	3.1
<b>4</b> <i>10 pleats per lineal foot of face area</i>	12x24x4	11 <sup>3</sup> / <sub>8</sub> x 23 <sup>3</sup> / <sub>8</sub> x 3 <sup>3</sup> / <sub>4</sub>	HE40I-2404	1000	1250	.31	.40	1.00	10.2	5.8
	16x20x4	15 <sup>3</sup> / <sub>8</sub> x 19 <sup>3</sup> / <sub>8</sub> x 3 <sup>3</sup> / <sub>4</sub>	HE40I-6004	1100	1400	.31	.40	1.00	13.7	5.8
	16x25x4	15 <sup>3</sup> / <sub>8</sub> x 24 <sup>3</sup> / <sub>8</sub> x 3 <sup>3</sup> / <sub>4</sub>	HE40I-6504	1400	1750	.31	.40	1.00	17.2	5.8
	20x20x4	19 <sup>3</sup> / <sub>8</sub> x 19 <sup>3</sup> / <sub>8</sub> x 3 <sup>3</sup> / <sub>4</sub>	HE40I-0004	1400	1750	.31	.40	1.00	16.9	5.8
	20x25x4	19 <sup>3</sup> / <sub>8</sub> x 24 <sup>3</sup> / <sub>8</sub> x 3 <sup>3</sup> / <sub>4</sub>	HE40I-0504	1750	2170	.31	.40	1.00	21.2	5.8
	24x24x4	23 <sup>3</sup> / <sub>8</sub> x 23 <sup>3</sup> / <sub>8</sub> x 3 <sup>3</sup> / <sub>4</sub>	HE40I-4404	2000	2500	.31	.40	1.00	24.0	5.8

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

(2) Capacity ratings are recommended levels. Resistance to airflow data is based on ASHRAE 52.1-1992 Test Method. Performance tolerances conform to Section 7.4 of ARI Standard 850.93.

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

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