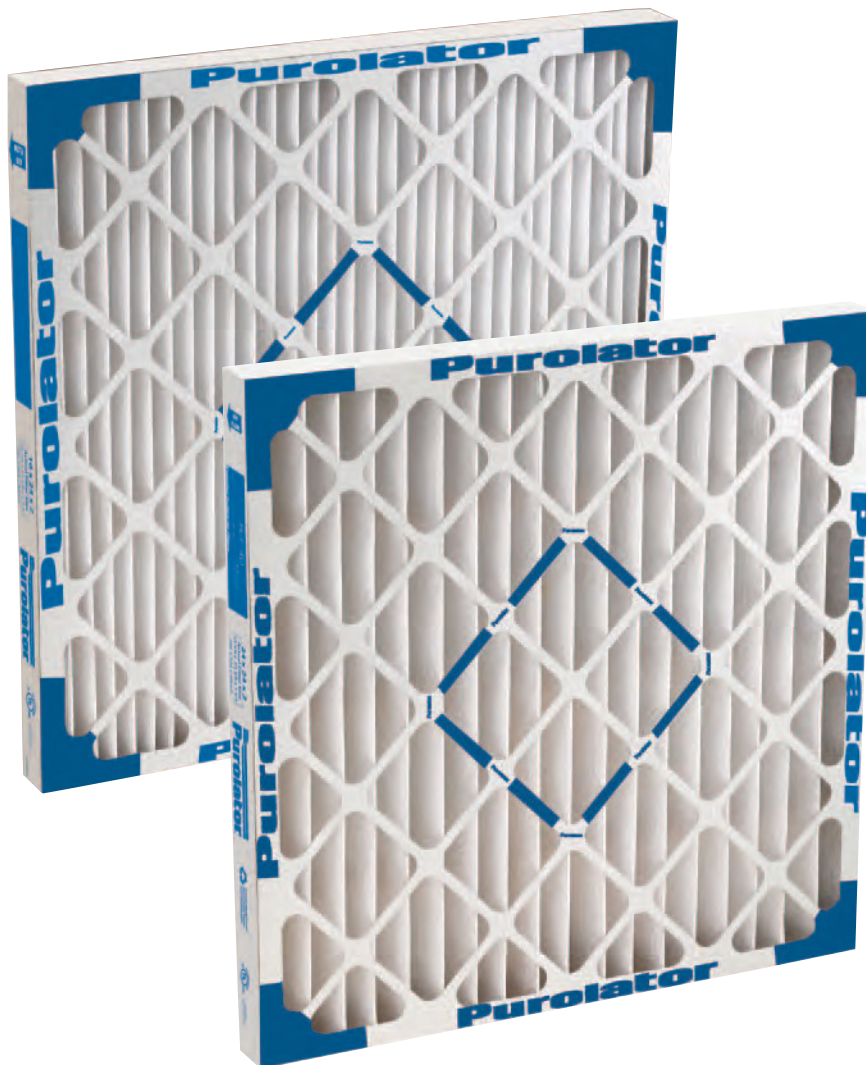




MERV 8 Efficiency	
Hi-E 40:	.21 Initial Resistance (In. W.G.)
Defiant Mark80-D:	.19 Initial Resistance (In. W.G.)

## DEFiANT® Mark80-D® and Hi-E® 40

Extended Surface Pleated Filters



- Standard and high capacity MERV 8, MERV-A 8-A
- Low initial resistance for energy savings
- Extremely high dust-loading
- Quality engineered for consistent production
- Industry's largest Inventory
- Proudly made in the U.S.A.



ENGINEERING YOUR SUCCESS.

# DEFiANT® Mark80-D® and Hi-E® 40

Extended Surface Pleated Filters

*Exceeds ASHRAE Standard 52.2  
air cleaning specifications for  
filters installed upstream of  
cooling coils.*

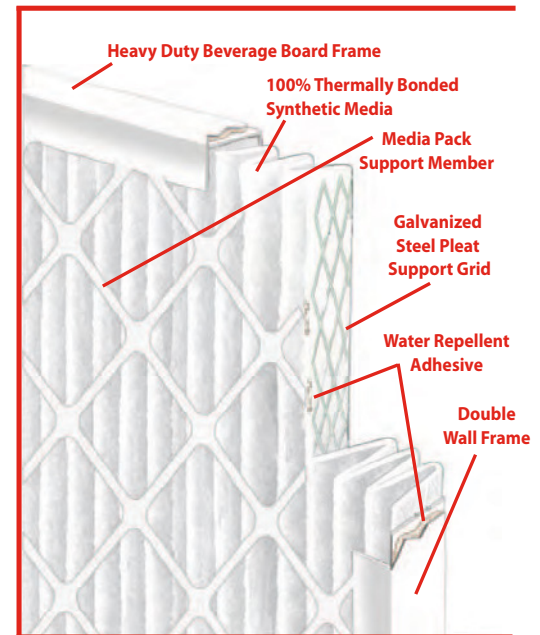
For over 40 years, Purolator™ has been providing high-performance wire backed filters at competitive prices. Using groundbreaking R&D to provide a lower pressure drop and higher dust holding, the high capacity Defiant® Mark80-D® and standard capacity Hi-E® 40 filters are better than ever. And with the largest inventory of pleats in the industry, availability is never an issue. Contact a Purolator representative for a quote today.

## Media:

- 100% thermally bonded synthetic, proprietary media resists moisture and damage
- Mechanical efficiency – achieves MERV 8 rating before and after a conditioning step
- Independently tested and verified for quality control
- Extremely low pressure drop and high dust holding capacity

## Construction:

- Heavy duty, moisture resistant beverage board frame
- Two-piece frame provides rigidity with double-wall thickness around outer edge
- Die-cut pattern provides 50% more contact points between media pack and frame
- Integral die-cut cross members provide strength and rigidity
- 4" models use die-cut finger separators to stabilize each pleat
- Water repellent adhesive used to bond frame with media pack
- Rust-resistant, expanded metal support grid made of galvanized steel
- 100% water repellent, high-strength adhesive coats entire interior of frame
- Pleat tips of media pack bonded to diagonal support members



*All Mark80-D and Hi-E 40 filters are designed with a consistent pleat shape on predetermined centers causing dirt to collect evenly over the entire surface of the media. Fully utilizing every square inch of media results in a slow, steady rise in resistance for maximum dust holding capacity.*

## Pleat Consistency:

Purolator uses sophisticated production control techniques to ensure consistent pleat count, height, shape, and spacing. This uniform spacing contributes to a better-performing pleat with low pressure drop, full depth dust loading, and longer service life.

## Durability:

Because of moisture resistant media and construction, the pleats hold together even when wet, preventing delaminating, excessive buckling, collapsing, racking, warping, and bending. Additionally, the galvanized steel metal grid resists rust, maintains pleat shape, and prevents fluttering in even the most rugged conditions.

## Compare:

Compare the performance and value of Purolator pleats to other types of filters, including disposable panels, ring panels, pads and frames, and permanent filters. The Defiant Mark80-D and Hi-E 40 have significantly lower initial resistance levels to aid in your energy savings initiatives, and they also outperform the alternatives in efficiency, dust holding capacity, durability, and price.

# DEFIANT® Mark80-D® and Hi-E® 40

## Extended Surface Pleated Filters

NOMINAL SIZE (2)	ACTUAL SIZE	AIRFLOW 300 FPM	AIRFLOW 500 FPM	AIRFLOW 625 FPM	INITIAL RESISTANCE Mark80-D	INITIAL RESISTANCE Hi-E 40	MEDIA AREA Mark80-D	MEDIA AREA Hi-E 40
10x10x1	9-1/2 x 9-1/2 x 3/4	210	350	N/R	0.14	0.16	1.6	1.5
10x20x1	9-1/2 x 19-1/2 x 3/4	415	700	N/R	0.14	0.16	2.6	2.4
10x24x1	9-3/8 x 23-3/8 x 3/4	500	830	N/R	0.14	0.16	3.1	2.9
12x12x1	11-3/4 x 11-3/4 x 3/4	300	500	N/R	0.14	0.16	1.9	1.8
12x16x1	11-1/2 x 15-3/4 x 3/4	400	670	N/R	0.14	0.16	2.5	2.3
12x20x1	11-1/2 x 19-1/2 x 3/4	500	830	N/R	0.14	0.16	3.1	2.9
12x24x1	11-3/8 x 23-3/8 x 3/4	600	1000	N/R	0.14	0.16	3.7	3.4
14x14x1	13-3/4 x 13-3/4 x 3/4	410	680	N/R	0.14	0.16	2.7	2.4
14x20x1	13-1/2 x 19-1/2 x 3/4	585	980	N/R	0.14	0.16	3.8	3.4
14x24x1	13-3/8 x 23-3/8 x 3/4	700	1170	N/R	0.14	0.16	4.6	4.0
14x25x1	13-1/2 x 24-1/2 x 3/4	730	1220	N/R	0.14	0.16	4.8	4.2
14x30x1*	13-3/4 x 29-3/4 x 3/4	875	1460	N/R	0.14	0.16	5.7	5.0
15x20x1	14-1/2 x 19-1/2 x 3/4	625	1050	N/R	0.14	0.16	4.0	3.6
15x30x1*	14-3/4 x 29-3/4 x 3/4	935	1560	N/R	0.14	0.16	6.1	5.4
16x16x1	15-1/2 x 15-1/2 x 3/4	530	890	N/R	0.14	0.16	4.0	3.1
16x20x1	15-1/2 x 19-1/2 x 3/4	665	1110	N/R	0.14	0.16	4.3	3.8
16x24x1	15-3/4 x 23-3/8 x 3/4	800	1330	N/R	0.14	0.16	5.1	4.6
16x25x1	15-1/2 x 24-1/2 x 3/4	835	1400	N/R	0.14	0.16	5.3	4.8
16x30x1*	15-3/4 x 29-3/4 x 3/4	1000	1670	N/R	0.14	0.16	6.5	5.8
18x18x1	17-3/4 x 17-3/4 x 3/4	675	1125	N/R	0.14	0.16	4.3	3.7
18x20x1	17-3/8 x 19-1/2 x 3/4	750	1250	N/R	0.14	0.16	4.8	4.0
18x22x1	17-3/8 x 21-1/2 x 3/4	825	1375	N/R	0.14	0.16	5.7	4.8
18x24x1	17-3/8 x 23-3/8 x 3/4	900	1500	N/R	0.14	0.16	5.7	4.8
18x25x1	17-1/2 x 24-1/2 x 3/4	935	1560	N/R	0.14	0.16	6.0	5.1
20x20x1	19-1/2 x 19-1/2 x 3/4	830	1400	N/R	0.14	0.16	5.5	4.8
20x22x1	19-3/4 x 21-3/4 x 3/4	915	1525	N/R	0.14	0.16	6.6	5.7
20x24x1	19-3/8 x 23-3/8 x 3/4	1000	1670	N/R	0.14	0.16	6.6	5.7
20x25x1	19-1/2 x 24-1/2 x 3/4	1040	1730	N/R	0.14	0.16	6.9	6.0
20x30x1*	19-1/2 x 29-1/2 x 3/4	1250	2170	N/R	0.14	0.16	8.1	7.2
22x22x1	21-3/4 x 21-3/4 x 3/4	1005	2080	N/R	0.14	0.16	7.1	5.0
24x24x1	23-3/8 x 23-3/8 x 3/4	1200	2000	N/R	0.14	0.16	7.7	6.6
24x30x1	23-3/4 x 29-3/4 x 3/4	1500	2500	N/R	0.14	0.16	9.7	8.5
25x25x1	24-1/2 x 24-1/2 x 3/4	1300	2170	N/R	0.14	0.16	8.7	7.5
10x20x2	9-1/2 x 19-1/2 x 1-3/4	415	700	870	0.19	0.21	6.2	4.1
12x12x2	11-3/4 x 11-3/4 x 1-3/4	300	500	625	0.19	0.21	4.4	3.1
12x20x2	11-1/2 x 19-1/2 x 1-3/4	500	840	1040	0.19	0.21	7.2	5.2
12x24x2	11-3/8 x 23-3/8 x 1-3/4	600	1000	1250	0.19	0.21	8.6	6.2
14x20x2	13-1/2 x 19-1/2 x 1-3/4	585	980	1220	0.19	0.21	8.8	5.7
14x25x2	13-1/2 x 24-1/2 x 1-3/4	730	1220	1520	0.19	0.21	11.0	7.1
15x20x2	14-1/2 x 19-1/2 x 1-3/4	625	1050	1300	0.19	0.21	9.3	6.2
16x16x2	15-3/4 x 15-3/4 x 1-3/4	530	890	1110	0.19	0.21	9.8	6.7
16x20x2	15-1/2 x 19-1/2 x 1-3/4	665	1120	1400	0.19	0.21	9.8	6.7
16x24x2	15-3/8 x 23-3/8 x 1-3/4	800	1340	1670	0.19	0.21	11.7	8.0
16x25x2	15-1/2 x 24-1/2 x 1-3/4	835	1400	1740	0.19	0.21	11.7	8.0
18x18x2	17-3/4 x 17-3/4 x 1-3/4	675	1125	1410	0.19	0.21	10.3	7.0
18x20x2	17-1/2 x 19-1/2 x 1-3/4	750	1250	1560	0.19	0.21	11.3	7.7
18x22x2	17-1/2 x 21-1/2 x 1-3/4	825	1375	1720	0.19	0.21	13.6	9.3
18x24x2	17-3/8 x 23-3/8 x 1-3/4	900	1500	1875	0.19	0.21	13.6	9.3
18x25x2	17-1/2 x 24-1/2 x 1-3/4	935	1570	1950	0.19	0.21	14.2	9.7
20x20x2	19-1/2 x 19-1/2 x 1-3/4	830	1400	1740	0.19	0.21	12.4	8.3
20x24x2	19-3/8 x 23-3/8 x 1-3/4	1000	1670	2080	0.19	0.21	14.8	9.9
20x25x2	19-1/2 x 24-1/2 x 1-3/4	1040	1750	2170	0.19	0.21	15.5	10.3
20x30x2*	19-1/2 x 29-1/2 x 1-3/4	1250	2085	2600	0.19	0.21	18.6	12.9
24x24x2	23-3/8 x 23-3/8 x 1-3/4	1200	2000	2500	0.19	0.21	17.9	11.7
25x25x2	24-1/2 x 24-1/2 x 1-3/4	1300	2170	2710	0.19	0.21	20.0	12.9
12x24x4	11 3/8 x 23 3/8 x 3-3/4	600	1000	1250	0.17	0.19	12.4	11.2
16x20x4	15 1/2 x 19 1/2 x 3-3/4	665	1120	1400	0.17	0.19	14.5	12.5
16x25x4	15 1/2 x 24 1/2 x 3-3/4	835	1400	1740	0.17	0.19	18.3	15.6
18x24x4	17 3/8 x 23 3/8 x 3-3/4	900	1500	1875	0.17	0.19	19.9	16.2
20x20x4	19 1/2 x 19 1/2 x 3-3/4	830	1400	1740	0.17	0.19	18.7	15.6
20x24x4	19 3/8 x 23 3/8 x 3-3/4	1000	1670	2080	0.17	0.19	22.4	18.7
20x25x4	19 1/2 x 24 1/2 x 3-3/4	1040	1750	2170	0.17	0.19	23.5	19.6
24x24x4	23 3/8 x 23 3/8 x 3-3/4	1200	2000	2500	0.17	0.19	27.4	22.4
25x29x4*	24-1/2 x 28-1/2 x 3-3/4	1280	2430	2660	0.17	0.19	32.6	26.1
28x30x4*	27-1/2 x 29-1/2 x 3-3/4	1750	2920	3640	0.17	0.19	38.5	31.1
12x24x6	11 3/8 x 23 3/8 x 5 7/8	600	1000	1250	-	0.18	-	16.9
16x20x6	15 1/2 x 19 1/2 x 5 7/8	665	1120	1400	-	0.18	-	18.9
16x25x6	15 1/2 x 24 1/2 x 5 7/8	835	1400	1740	-	0.18	-	23.6
18x24x6	17 3/8 x 23 3/8 x 5 7/8	900	1500	1875	-	0.18	-	26.3
20x20x6	19 1/2 x 19 1/2 x 5 7/8	830	1400	1740	-	0.18	-	23.7
20x24x6	19 3/8 x 23 3/8 x 5 7/8	1000	1670	2080	-	0.18	-	28.2
20x25x6	19 1/2 x 24 1/2 x 5 7/8	1040	1750	2170	-	0.18	-	29.5
24x24x6	23 3/8 x 23 3/8 x 5 7/8	1200	2000	2500	-	0.18	-	33.8

\* Reverse Pleat

1. Mark80-D and Hi-E 40 are MERV 8-A, tested per ASHRAE standard 52.2-2012 Appendix J. Test data based on 295 FPM for 24x24x1 and 492 FPM for 24x24x2 and 24x24x4 nominal sizes.
2. Filters may be installed with the pleats either vertical (preferred) or horizontal.
3. 6" deep sizes are available in Hi-E 40 models only.

# DEFiANT® Mark80-D® and Hi-E® 40

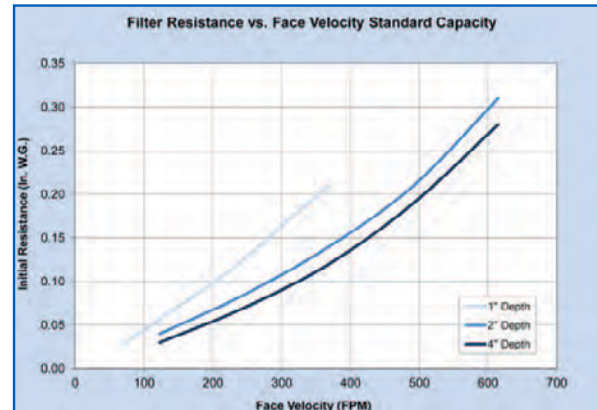
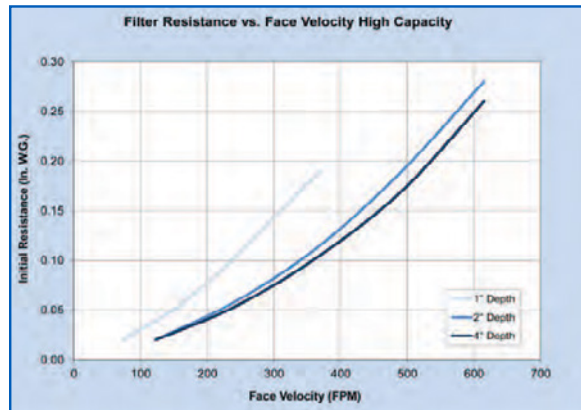
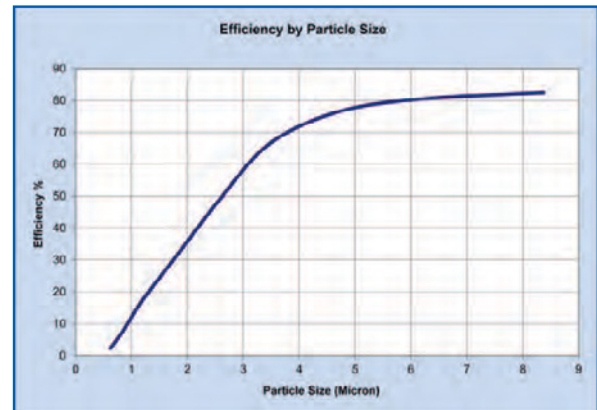
## Extended Surface Pleated Filters

### Value-Added Summary:

- Synthetic media does not support microbial growth
- Low pressure drop with high dust holding
- Mechanical efficiency
- Durable and damage resistant construction
- Engineered and designed for high strength and rigidity
- Pleat consistency maximizes performance
- Water and moisture resistant media, frame, and adhesive
- Proudly made in the USA

### Applications:

- Virtually any application or air handling system
- Built-up filter banks, central station air handlers, rooftop units, side access housings
- Final filters for MERV 8 requirements
- Pre-filters in multi-stage systems



Pleat Count -	1"	2"	4"	6"
	(Pleats per foot)			
Defiant Mark80-D-	14.0	15.0	11.0	
Hi-E40-	12.0	10.0	9.0	9.0

### Underwriters Laboratories, Inc. Classification:

Filters are classified per UL Standard 900 for flammability.

**Operating Temperature Limit:** Maximum operating temperature is 225°F (107°C).



**WARNING:** This product can expose you to chemicals, including acetaldehyde, antimony oxide, which are known to the State of California to cause cancer, and lead, methanol, which are known to the State of California to cause birth defects or other reproductive harm. For more information, go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

