



**DEFIANT™ Cell**  
*Extended Surface Rigid Box Filters*



# DEFIANT™ Cell

Extended Surface Rigid Box Filters

## Introduction

The Purolator DEFIANT™ Cell 70/85/95 media meets today's ASHRAE challenges in process control and contaminant reduction. The unique, patented non-woven process used to manufacture DEFIANT™ Cell filters creates a media which outperforms similar products with respect to initial efficiency, average efficiency, and dust holding capacity.

The continuous hydrophobic fibers which make up DEFIANT™ Cell media, do not absorb moisture and are thermally bonded to eliminate the need for chemical containing binders that could promote microbial growth or generate VOC's. Both characteristics create a durable media able to withstand turbulent, high velocity conditions, even when high humidity is a factor.

## Fire Resistance

All DEFIANT™ Cell rigid box filters are listed Class 2 by Underwriters Laboratories, Inc. Testing is performed in accordance with UL Standard 900. The recommended operating temperature for these filters is <200°F.

## Improved Efficiency

DEFIANT™ media utilizes a dual-stage electrostatic enhancement, and continuous fiber structure to initially capture an increased amount of smaller particulate than conventional glass media—thereby improving overall particle size efficiency (see chart below).

## Applications

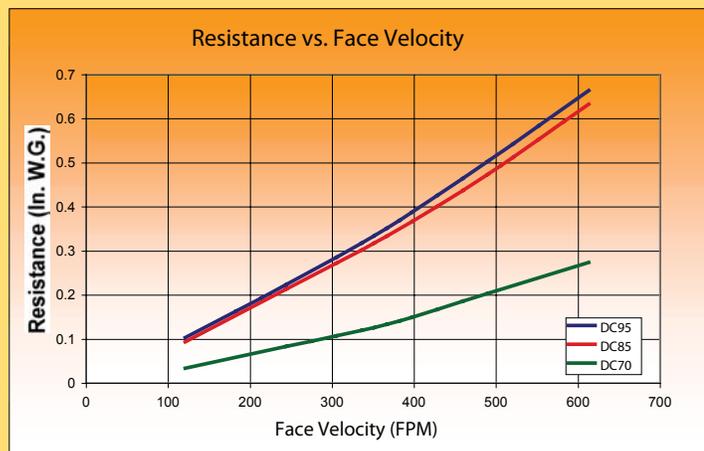
DEFIANT™ Cell 70/85/95 media box filters are specifically manufactured for industrial/commercial HVAC system applications requiring constant or Variable Air Volume (VAV) systems. This product provides 20 - 30% improved dust holding capacity and efficiency beyond that of competitive products.

The DEFIANT™ Cell 70/85/95 media has multiple performance characteristics which combine to provide optimum filter service life, and lower maintenance and energy costs.

## DEFIANT™ Cell Rigid Box Filters Performance Information Charts

### MERV Chart

Model Number	ASHRAE 52.2 MERV
DC70	13
DC85	14
DC95	15



## Product Specification

Air filters shall be the high-efficiency, deep-pleated, disposable, rigid-cell type.

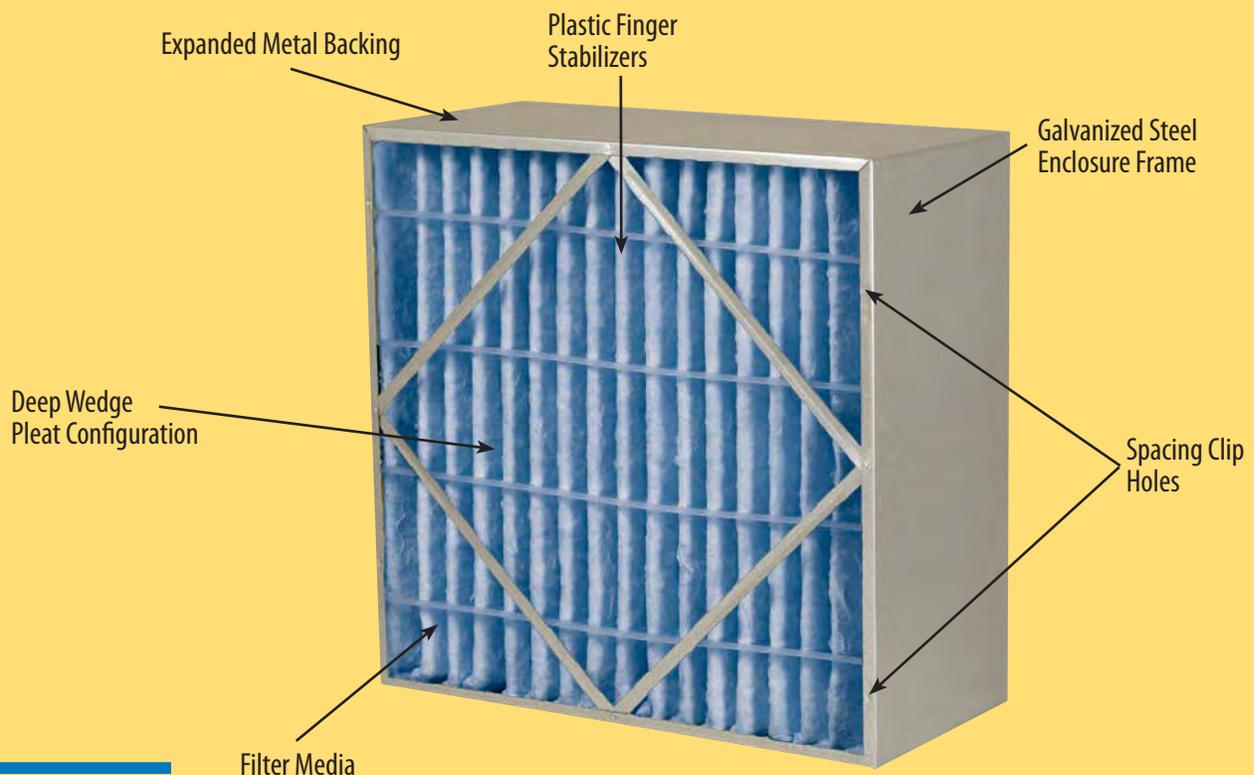
The filter media shall be made of continuous, synthetic and hydrophobic fiber that is thermally bonded and absent of any chemical binders.

The filter shall be MERV\_\_\_\_ when tested in accordance with ASHRAE Standard 52.2-2007. The dust holding capacity of the filter shall not be less than \_\_\_\_ grams. Each filter shall have a rated airflow of 2000 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 perimeter frame is constructed of high strength, corrosion resistant, galvanized steel to which the filter pack is sealed on all sides. Filter integrity is maintained by diagonal metal strapping on the air exit side of the pack.

The DEFIANT™ media is continuously bonded to expand, corrosion resistant, electrogalvanized steel which allows a 95% open face area. To achieve a maximum dust holding capacity while minimizing pressure loss and replacement frequencies, each DEFIANT™ rigid box filter incorporates aerodynamically wedge shaped pleats into its design.

The filter shall be rated Class 2 by Underwriters laboratories, Inc.



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## Suggested Product Specifications

1. The filter shall be the DEFIANT™ cell filter as manufactured by Purolator Air Filtration.
2. Air filters shall be high efficiency, deep pleated, disposable, rigid cell type.
3. The filter media shall be synthetic DEFIANT™ media as brand named to Purolator Air Filtration.
4. Tested in accordance with ASHRAE standard 52.2-2007. Tests performed at 492 FPM on 24x24x12 Nominal size filters.
5. The filter media shall be continuously bonded to a heavy duty, 28-gauge, corrosion resistant, electro-galvanized steel, expanded metal grid with an open face area of not less than 96%.
6. To inhibit dirty air bypass, the media grid assembly shall be bonded to all interior surfaces of the enclosure frame.
7. The support grid shall be formed into a wedge configuration to optimize usage of the filter media. Plastic die cut pleat spacers shall be permanently installed.
8. The enclosure frame shall be constructed of corrosion resistant galvanized steel in such a manner as to produce a rigid durable filter.
9. Filters shall be listed and rated by Underwriters laboratories, Inc. as Class 2.

Standard Models						Headered Models*		
MERV	DEFIANT™ Model Number	Nominal Size W x H x D	CFM Capacity	Resist in w.g.	Media Area Sq. Ft.	DEFIANT™ Model Num	Resist in w.g.	Media area Sq. Ft.
<b>MERV 13</b>	DC70	24x24x12	2000	.20	58	DHC70	.24	50
	DC70	20x24x12	1700	.20	47	DHC70	.24	40
	DC70	12x24x12	1000	.20	29	DHC70	.24	25
	DC70	24x24x6	1000	.20	29	DHC70	.24	26
	DC70	20x24x6	850	.20	24	DHC70	.24	21
	DC70	12x24x6	500	.20	15	DHC70	.24	13
<b>MERV 14</b>	DC85	24x24x12	2000	.47	58	DHC85	.51	50
	DC85	20x24x12	1700	.47	47	DHC85	.51	40
	DC85	12x24x12	1000	.47	29	DHC85	.51	25
	DC85	24x24x6	1000	.47	29	DHC85	.51	26
	DC85	20x24x6	850	.47	24	DHC85	.51	21
	DC85	12x24x6	500	.47	15	DHC85	.51	13
<b>MERV 15</b>	DC95	24x24x12	2000	.50	58	DHC95	.54	50
	DC95	20x24x12	1700	.50	47	DHC95	.54	40
	DC95	12x24x12	1000	.50	29	DHC95	.54	25
	DC95	24x24x6	1000	.50	29	DHC95	.54	26
	DC95	20x24x6	850	.50	24	DHC95	.54	21
	DC95	12x24x6	500	.50	15	DHC95	.54	13

\* Standards header is 3/4" ; a 1-1/8" header is available.  
The following additional sizes are available upon request: 20x20x12, 16x20x12, 20x25x12, and 16x25x12.

\* Filters tested per ASHRAE standard 52.2-2007. Data based on 24x24x12 filters tested at 492 FPM.

P-DEFCELL-409



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