

## **FILTER SELECTION DATA SHEET**

# **DEFIANT® cell 70/85/95** Extended surface synthetic media filter

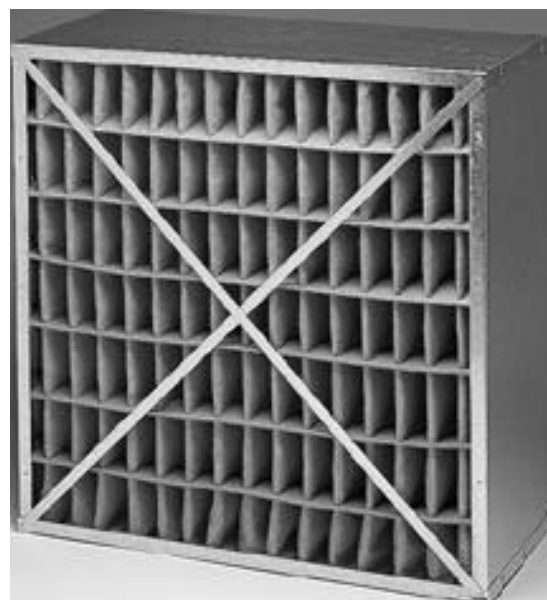
# **Purolator** **Filtration** **Systems**

### **Introduction**

- Purolator's DEFIANT® cell filters are engineered to provide medium and high efficiency filtration combined with a prolonged life cycle.
- Specifically manufactured for system applications requiring constant or variable air volume (VAV) systems.
- Outperforms similar products with respect to initial efficiency, average efficiency, and dust holding capacity providing optimum filter service life, and lower maintenance and energy costs.
- The box filter construction eliminates the need for retainers and special external wire media supports.
- A high surface area to depth ratio provides the maximum amount of effective filter media in areas of minimum in-line duct space.
- Industry applications: Hospitals, health care facilities, food processing plants, pharmaceutical manufacturing, telecommunications, and other HVAC applications.
- Average efficiency range: 70-95%
- Average arrestance: 97-99%
- Available in three filter face sizes: 12x24, 20x24, 24x24, and two depth sizes—6", 12"
- Recorded airflow rate: 500 FPM (625 FPM Max.)

### **Media and Support**

- Media: Synthetic media made up of continuous hydrophobic fibers do not absorb moisture, and can withstand turbulent, high velocity conditions.
- Fibers are thermally bonded to eliminate the need for chemical containing binders that could promote microbial growth or generate VOCs.



- Improved overall particle size efficiency due to continuous fiber structure and dual stage electrostatic enhancement which captures an increased amount of smaller particulate than conventional glass media.
- Media support: Continuously bonded to a corrosion resistant, 28-gauge, expanded metal grid allowing a 95% open face area.
- Pleat configuration: Formed into aerodynamic, semi-tapered, wedge-shaped pleats.
- Pleat support: Stationary die cut pleat spacers promote consistent pleat configuration.
- Media area/square foot: See Performance data chart on back.

## Construction features

- Frame and assembly: High strength, corrosion resistant, galvanized steel to which the filter pack is sealed on all sides.
- Beverage board die cut face plates are bonded to the air entry and exit sides of the pack.
- Filter integrity is maintained by vertical metal strapping on the air exit side of the pack.
- U.L. Classification: Class 2 approved and listed.
- Tested in accordance with U.L. Standard 900 and ASHRAE 52.1-1992.
- Recommended operating temperature: 200°F

## Suggested product specifications

1. The filter shall be the DEFIANT® cell filter as manufactured by Purolator Products Air Filtration Company.
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 Products Air Filtration Company.
4. When tested in accordance with ASHRAE std. 52.1-1992, the filter shall have an average efficiency of: \_\_\_\_% and an average arrestance of not less than \_\_\_\_% - \_\_\_\_%.
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 95%.
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. 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.

## Performance data: DEFIANT® cell 70/85/95

STANDARD MODELS							HEADER MODELS				
Series	Nominal size WxHxD	CFM capacity med high		DEFIANT® Model number	Resist. in. w.g. med high		Media area Sq. ft.	DEFIANT® Model number	Resist. in. w.g. med high		Media area Sq. ft.
<b>70</b>	24 x 24 x 12	1000	2000	DC70-4412	.08	.22	58	DHC70-4412	.10	.30	50
	20 x 24 x 12	850	1700	DC70-0412	.08	.22	47	DHC70-0412	.10	.30	40
	12 x 24 x 12	500	1000	DC70-2412	.08	.22	29	DHC70-2412	.10	.30	25
	24 x 24 x 6	500	1000	DC70-4406	.10	.24	29	DHC70-4406	.12	.32	26
	20 x 24 x 6	425	850	DC70-0406	.10	.24	24	DHC70-0406	.12	.32	21
	12 x 24 x 6	250	500	DC70-2406	.10	.24	15	DHC70-2412	.12	.32	13
<b>85</b>	24 x 24 x 12	1000	2000	DC85-4412	.14	.34	58	DHC85-4412	.16	.39	50
	20 x 24 x 12	850	1700	DC85-0412	.14	.34	47	DHC85-0412	.16	.39	40
	12 x 24 x 12	500	1000	DC85-2412	.14	.34	29	DHC85-2412	.16	.39	25
	24 x 24 x 6	500	1000	DC85-4406	.14	.34	29	DHC85-4406	.16	.39	26
	20 x 24 x 6	425	850	DC85-0406	.14	.34	24	DHC85-0406	.16	.39	21
	12 x 24 x 6	250	500	DC85-2406	.14	.34	15	DHC85-2412	.16	.39	13
<b>95</b>	24 x 24 x 12	1000	2000	DC95-4412	.17	.44	58	DHC95-4412	.19	.48	50
	20 x 24 x 12	850	1700	DC95-0412	.17	.44	47	DHC95-0412	.19	.48	40
	12 x 24 x 12	500	1000	DC95-2412	.17	.44	29	DHC95-2412	.19	.48	25
	24 x 24 x 6	500	1000	DC95-4406	.17	.44	29	DHC95-4406	.19	.48	26
	20 x 24 x 6	425	850	DC95-0406	.17	.44	24	DHC95-0406	.19	.48	21
	12 x 24 x 6	250	500	DC95-2406	.17	.44	15	DHC95-2412	.19	.48	13

\*Standard header is 34"; a 1-1/8" header is available.

The following sub-standard sizes are available upon request: 20 x 20 x 12, 16 x 20 x 12, 20 x 25 x 12, and 16 x 25 x 12.



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