

# Product Specification

## AIRGUARD® DP® HD HEAVY DUTY PLEATED FILTERS

### 1.0 Scope

This specification covers pleated panel filters that are a component of heating, ventilating and air conditioning systems.

### 2.0 Construction

The filters shall consist of a pleated media pack contained in a die cut beverage board frame.

#### 2.1 Media

The media shall consist of a 100% synthetic, hydrophobic media, shall be white in color and un-dyed.

#### 2.2 Media Pack

The media shall be formed into uniformly shaped pleats with equal height measured from pleat apex to apex.

The media shall have a heavy weight expanded metal grid with 95% open area bonded to the air leaving side to shape the pleats and prevent fluttering in operation. The expanded metal grid shall be made of electroplate galvanized steel to inhibit rust, with a weight of 0.042 lbs. / ft<sup>2</sup> and 0.042" wire thickness.

The media shall be a minimum of 1/4" larger than the inside dimension of the die cut frame to completely seal the pack inside the filter.

The filters shall contain no less than the number of pleats per linear foot as specified in the following schedule:

Filter Depth	Pleats per Linear Foot
1"	14
2"	15
4"	11



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## 2.3 Filter Frame

The pleated media pack shall be contained in a frame made from two pieces of 27-point heavy duty die cut beverage board with high wet strength characteristics.

The die-cut shall use a 7-strap diagonal support pattern based on a 24x24 face size to increase adhesion points between the media pack and frame. Diagonal support members shall be an integral part of both die cut pieces, providing support for the media pack on both sides.

The two mating pieces of the die cut frame shall fully overlap around the entire perimeter of the filter.

Frame corners shall include interlocking flaps to provide additional strength and eliminate bypass in corners.

## 2.4 Pleat Support Fingers (4" Depth Only)

Two (2) sets of pleat stabilizers (fingers) shall be inserted into the filters to maintain proper pleat separation and reduce fluttering in operation.

## 2.5 Frame Adhesive

The entire inside surface of both die cut frame pieces shall be coated with a water repellent adhesive to bond the pack inside the frame on all four edges. The pleat tips shall be bonded to the diagonal support members at all points of contact.

The adhesive shall be water repellent and maintain its bonding characteristics when wet. The adhesive shall not soften or dissolve when the filter is wet.



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## 3.0 Performance

The filters shall meet the following minimum performance requirements per ASHRAE Standard 52.2-2012. Tests conducted at 295 FPM on 1" Depth and 492 FPM on 2" and 4" Depth face velocity on 24x24 size filters shall be representative of the performance of all sizes manufactured.

Depth	1"	2"	4"
Nominal Size	24 x 24 x 1	24 x 24 x 2	24 x 24 x 4
Rated Face Velocity (FPM)	300	500	500
Rated Air Flow Capacity (CFM)	1200	2000	2000
Initial Resistance (In. W.G.)	0.16	0.28	0.23
Final Resistance (In. W.G.)	1.0	1.0	1.0
MERV	9	9	9
MERV-A per 52.2 Appendix J	9-A	9-A	9-A

## 4.0 Underwriters Laboratories Classification

The filters shall be classified per UL Standard 900 for flammability.

## 5.0 Operating Temperature Limits

The filter shall operate at temperatures up to 225 °F (107 °C) without materially affecting filter integrity or performance.

