



270 Haven Hill Road      Shelbyville, KY 40065  
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## ASHRAE Air Filter Test Report

Report No.

**GLT 276**

Date:

**16-Apr-10**

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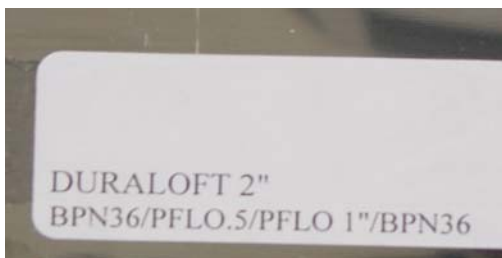
### Initial 52.2-2007 ASHRAE Test -- MERV 5 - 16 Procedure

Filter Description	Test Conditions												
Manufacturer: PERMATRON Product Name: DuraLoft 2" Model/Style Code: BPN36/PFLO.5/PFLO1"/BPN36 Nominal Dimensions: (inches) 24w x 24h x 2d Product Description: Stainless Steel frame, front and rear polymer grids, multi-layer polymer mesh media Number of Filter Panels: 1 Pleat Quantity (visible): not applicable Pocket Quantity: not applicable Media Type: polymer Media Color: blue Est. Gross Media Area: 4 sq. ft. Type of Dust Adhesive: None Amount of Dust Adhesive: N/A Filter Procurement Method: Supplied by manufacturer	Air Flow (CFM) 1180 Face Velocity (FPM) 295 Air Temperature (°F) 71 Relative Humidity (%) 43 Barometric Pressure (In. HG) 29.41 Type of Test Aerosol: KCl Particle Counter: S3I Filter Loading Dust: None												
	Test Results												
	Initial Resistance: 0.12 In. wg Final Resistance: n/a In. wg Dust Holding Capacity: n/a Grams												
	Filter Resistance vs Air Flow												
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>Air Flow - CFM</td> <td>295</td> <td>590</td> <td>885</td> <td>1180</td> <td>1475</td> </tr> <tr> <td>Resistance - In. WG</td> <td>0.01</td> <td>0.04</td> <td>0.07</td> <td>0.12</td> <td>0.19</td> </tr> </table>	Air Flow - CFM	295	590	885	1180	1475	Resistance - In. WG	0.01	0.04	0.07	0.12	0.19
Air Flow - CFM	295	590	885	1180	1475								
Resistance - In. WG	0.01	0.04	0.07	0.12	0.19								
Additional Information:	KCl Particle Size Efficiency												
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>Avg Minimum Efficiency 0.30 to 1.0 Microns -- E1</td> <td>0</td> <td>%</td> </tr> <tr> <td>Avg Minimum Efficiency 1.00 to 3.0 Microns -- E2</td> <td>8</td> <td>%</td> </tr> <tr> <td>Avg Minimum Efficiency 3.0 to 10.0 Microns -- E3</td> <td>23</td> <td>%</td> </tr> </table>	Avg Minimum Efficiency 0.30 to 1.0 Microns -- E1	0	%	Avg Minimum Efficiency 1.00 to 3.0 Microns -- E2	8	%	Avg Minimum Efficiency 3.0 to 10.0 Microns -- E3	23	%			
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Avg Minimum Efficiency 3.0 to 10.0 Microns -- E3	23	%											
	Minimum Efficiency Reporting Value - MERV												
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">MERV</td> <td style="text-align: center;">5</td> <td style="text-align: center;">@</td> <td style="text-align: center;">1180</td> <td style="text-align: center;">CFM</td> </tr> </table>	MERV	5	@	1180	CFM							
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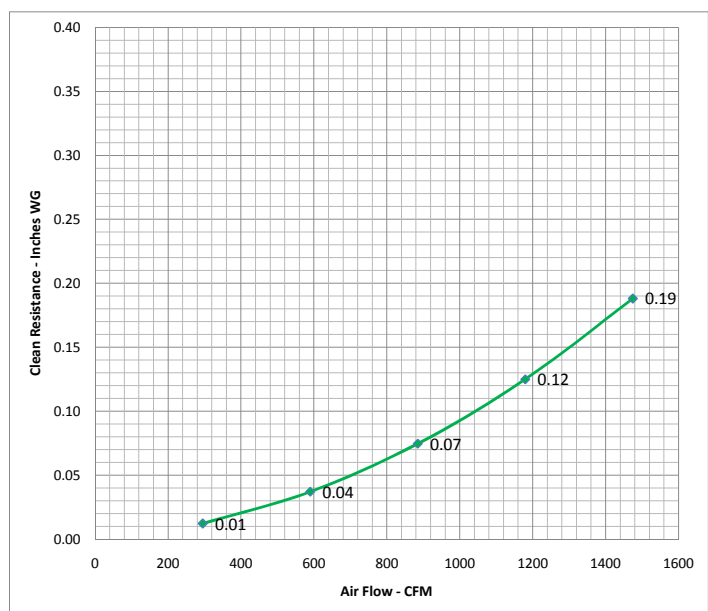
Photograph of Air Entering Side of Filter



Photograph of Label/Markings



Filter Resistance vs Air Flow



**Comments:**

**Approval:** Monroe A. Britt  
16-Apr-10



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## ASHRAE Air Filter

### Test Report

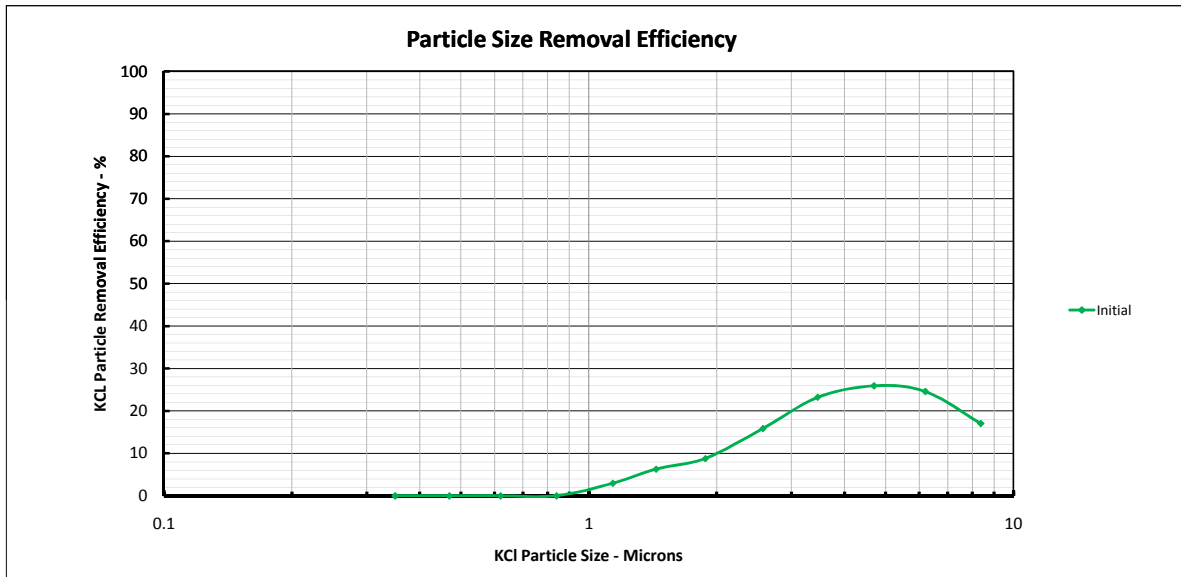
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### Initial 52.2-2007 ASHRAE Test -- MERV 5 - 16 Procedure

Filter Description		Test Conditions	
Manufacturer:	PERMATRON	Air Flow Capacity (CFM)	1180
Product Name:		Face Velocity (FPM)	295
Model/Style Code:	DuraLoft 2 "	Air Temperature (°F)	71
Nominal Dimensions: (inches)	24w x 24h x 2d	Relative Humidity (%)	43
Media Type:	polymer	Barometric Pressure (In. HG)	29.41
Media Color:	blue	Type of Test Aerosol:	KCl
Effective Media Area:	4 sq. ft.	Particle Counter:	S3I
Filter Procurement Method:	Supplied by manufacturer	Filter Loading Dust:	None



KCL Particle Range - Microns	0.30 - 0.40	0.4 - 0.55	0.55 - 0.70	0.70 - 1.00	1.00 - 1.30	1.30 - 1.60	1.60 - 2.20	2.20 - 3.00	3.00 - 4.00	4.00 - 5.50	5.50 - 7.00	7.00 - 10.0	Resistance after Load - In. WG	Accumulative Dust Load - Grams
Mean Diameter - Microns	0.35	0.47	0.62	0.84	1.14	1.44	1.88	2.57	3.46	4.69	6.2	8.37		
KCL Particle Size Efficiency - %														
Initial	0.00	0.00	0.00	0.00	2.97	6.30	8.80	15.85	23.21	25.90	24.55	17.03	n/a	0
Load 1														
Load 2														
Load 3														
Load 4														
Load 5														
Minimum PSE	0.00	0.00	0.00	0.00	2.97	6.30	8.80	15.85	23.21	25.90	24.55	17.03		
E1, E2, E3 - %	0.00			8.48				22.67					Dust Holding Capacity to	
Minimum Efficiency Reporting Value (MERV) =														
5 @ 1180 CFM      Face Velocity 295 FPM														
													n/a	Inches WG
													n/a	Grams

**Comments:**

**Approval:** Monroe A. Britt  
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