

**ASHRAE Std. 52.2 Air Cleaner Performance Report Summary**

This report applies to the tested device only.

**Laboratory Data**

Report No. 03230001 Date 03/23/00  
 Test Laboratory Research Triangle Institute  
 Operator Bellamy Supervisor Owen/Hanley  
 Particle Counter(s): Brand Climet Model 500

**Device Manufacturer's Data**

Product Name 80-85% Synthetic Mini Pleat V-Cell

Catalog rating: Airflow rate 2000 Initial dP (in. wg) NA  
 Specified test conditions: Airflow (cfm) 1968 Final dP (in. wg) 1.50  
 Face Velocity (fpm) 492

**Device Description**

Nominal Dimensions (in.): 24 X 24 X 12 (height x width x depth)  
 Generic name Mini Pleat V-Cell Media color white/red  
 Amount and type of adhesive NA  
 Other attributes 8 panels in 4 Vs enclosed in an injection molded frame

**Test Conditions**

Airflow (cfm) 1968 Temperature (F) 76 RH (%) 42  
 Face Velocity (fpm) 492 Final Pressure Drop (in. wg) 1.50  
 Test aerosol type: KCI

Remarks Non-woven synthetic media, 153 sq. ft. gross media area  
147 sq. ft. effective area

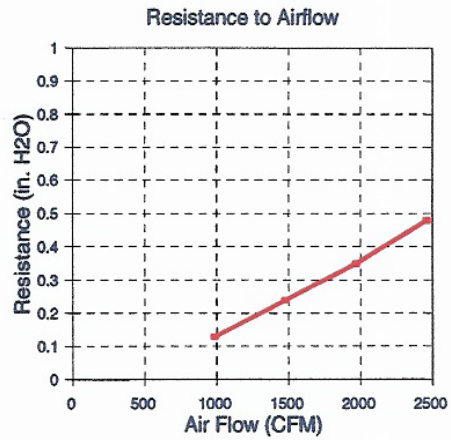
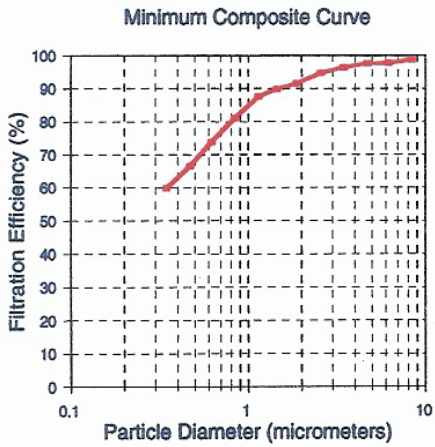
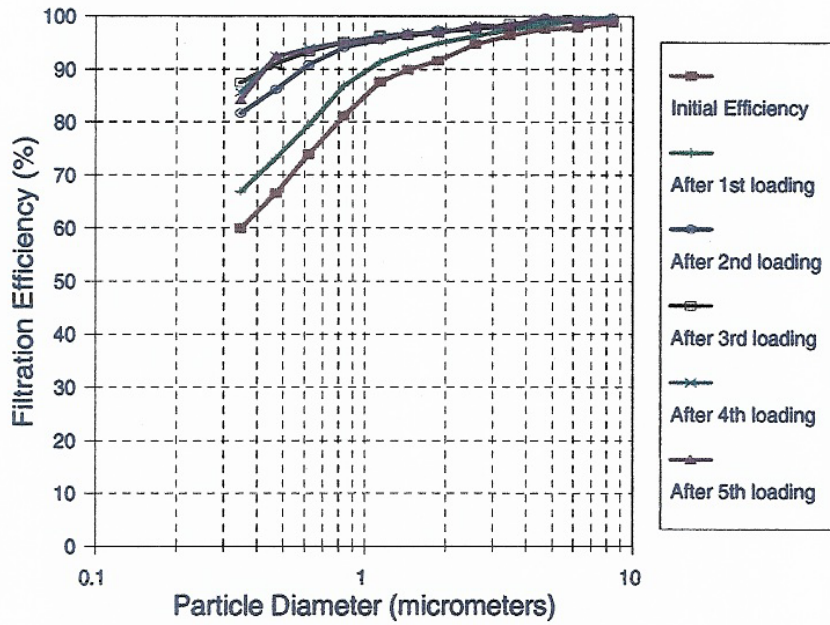
**Resistance Test Results**

Initial resistance (in. wg) 0.35 Final resistance (in. wg) 1.50

**Minimum Efficiency Reporting Data**

Composite average efficiencies E1 71 E2 91 E3 98  
 Air cleaner average Arrestance per Std 52.1: NA  
 Minimum efficiency reporting value (MERV) for the device: 13 @ 1968 cfm

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TABULATED DATA SUMMARY  
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Summary of Test Conditions:

Product Name	80-85% Synthetic Mini Pleat V-Cell
Nominal Dimensions (in)	24 X 24 X 12
Airflow (cfm)	1968
Final Resistance (in H2O)	1.50

Efficiency (%) per Indicated Size Range

OPC Channel Number	1	2	3	4	5	6	7	8	9	10	11	12
Min. Diam. (um)	0.3	0.4	0.55	0.7	1	1.3	1.6	2.2	3	4	5.5	7
Max. Diam. (um)	0.4	0.55	0.7	1	1.3	1.6	2.2	3	4	5.5	7	10
Geo. Mean Diam (um)	0.35	0.47	0.62	0.84	1.14	1.44	1.88	2.57	3.46	4.69	6.20	8.37

	Run No.	60	67	74	81	88	90	92	95	97	98	98	99
Initial efficiency	03230002	60	67	74	81	88	90	92	95	97	98	98	99
after first dust load	03230003	67	73	80	87	91	93	95	96	98	98	99	99
after second dust load	03240001	82	86	91	94	96	97	97	98	98	100	99	100
after third dust load	03240002	88	91	93	95	96	96	97	98	99	99	100	100
after fourth dust load	03240003	86	92	94	95	96	97	97	98	98	99	99	100
after fifth dust load	03240004	84	93	94	95	96	97	97	98	98	100	99	99
Minimum Composite Efficiency		60	67	74	81	88	90	92	95	97	98	98	99

E1 = 71  
E2 = 91  
E3 = 98

MERV: 13

Resistance to Airflow:

Airflow (%)	Airflow (m3/s)	Airflow (cfm)	Air Velocity (fpm)	Air Velocity (m/s)	Resistance (in H2O)	Resistance (Pa)
50	0.46	984	246	1.25	0.13	32
75	0.70	1476	369	1.87	0.24	60
100	0.93	1968	492	2.50	0.35	87
125	1.16	2460	615	3.12	0.48	119

Resistance to Airflow with Loading at 1968 cfm

	Resistance (in H2O)	Resistance (Pa)
Initial	0.35	87
After first dust load	0.38	95
After second dust load	0.64	159
After third dust load	0.93	230
After fourth dust load	1.21	302
After fifth dust load	1.50	373