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Date: 6-Apr-18

TEST NO. 18-171-8

ASHRAE Standard 52.2-2017 APPENDIX J TEST REPORT Efficiency with KCL Conditioning

Filter Description

Manufacturer	AAF/ Flanders
Filter Model	Mega Pleat M9
Part Number	N A
Generic Filter Type	Pleated
Nominal Dimensions (H x W x D)	24" x 24" x 2"
Pocket / Pleat Quantity	30 Pleats
Media Type	Synthetic
Est. Gross Media Area	17.5 Ft ²
Adhesive Type	N/A



Test Conditions

Conditioning Aerosol Type	KCL		
Loading Dust Type	N/A	Test Air Temp (degrees F.)	75
Barometric Pressure (In. Hg.)	29.20	Relative Humidity (%)	52

Test Results

Airflow Rate (CFM)	1968
Nominal Face Velocity (fpm)	492
Initial Resistance (in WG)	0.22

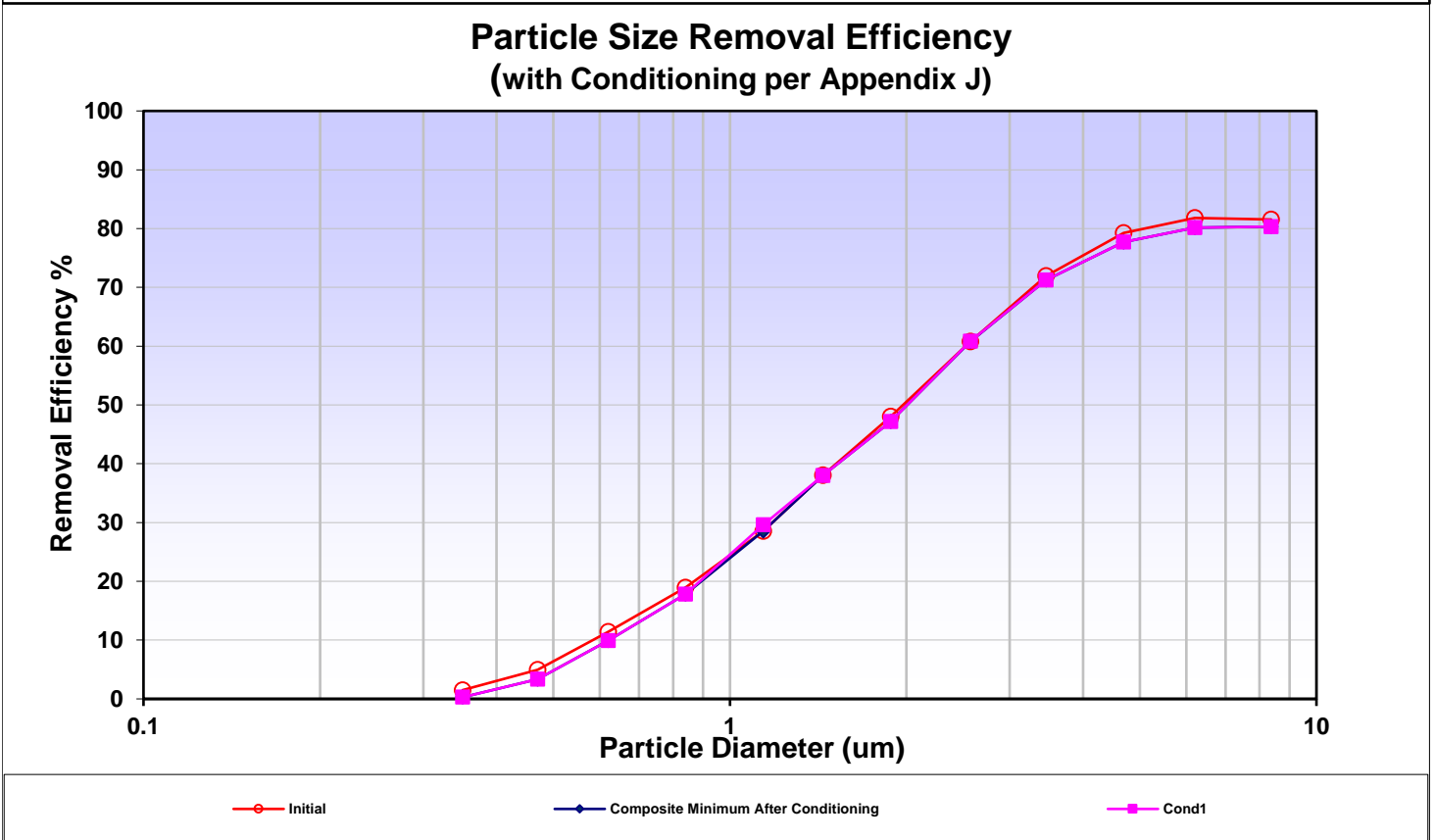
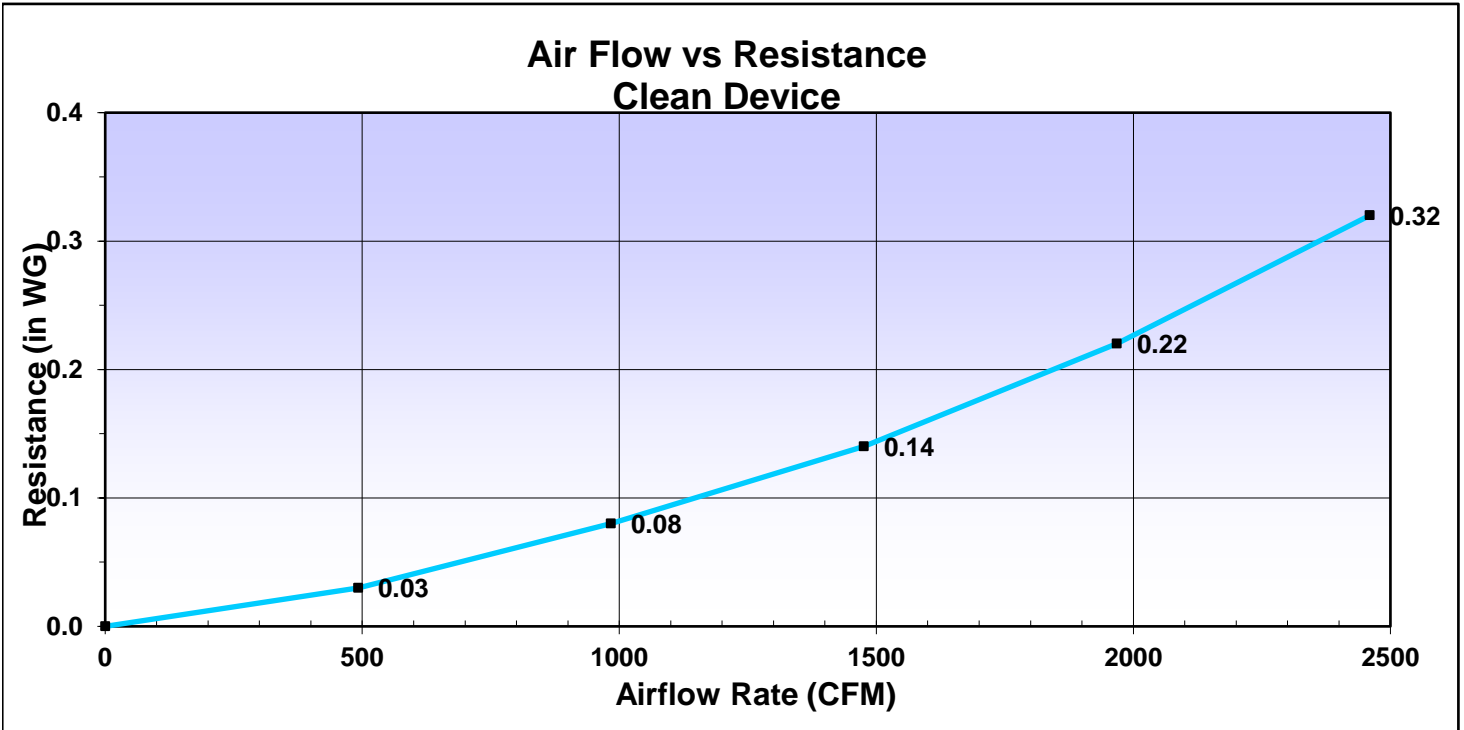
E1-A (%) Min. Composite Efficiency after KCL Conditioning 0.30 - 1.0 um	8
E2-A (%) Min. Composite Efficiency after KCL Conditioning 1.0 - 3.0 um	44
E3-A (%) Min. Composite Efficiency after KCL Conditioning 3.0 - 10.0 um	77

*Minimum Efficiency Reporting Value after KCL Conditioning (MERV-A) **MERV 9-A @ 1968 CFM**
 (* assumes no efficiency reduction during subsequent ASHRAE dust loading)

Comments Tested For: AAF International

Test Performed by: JPS Approved By:  Test Completed: 6-Apr-18

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Data - Initial Resistance

Airflow (CFM)	Resistance (in WG)
0	0.00
492	0.03
984	0.08
1476	0.14
1968	0.22
2460	0.32

Data - Particle Removal Efficiency per Appendix J

Particle Size Range (um)	Geometric Mean Diam (um)	Particle Removal Efficiency (%)		
		0.3	1.5	3.0
0.30 - 0.40	0.35	0.3	1.5	0.3
0.40 - 0.55	0.47	3.3	4.9	3.3
0.55 - 0.70	0.62	9.9	11.4	9.9
0.70 - 1.00	0.84	17.8	18.9	17.8
1.00 - 1.30	1.14	28.5	28.5	29.6
1.30 - 1.60	1.44	38.0	38.1	38.0
1.60 - 2.20	1.88	47.2	48.0	47.2
2.20 - 3.00	2.57	60.8	60.8	60.8
3.00 - 4.00	3.46	71.2	71.9	71.2
4.00 - 5.50	4.69	77.7	79.2	77.7
5.50 - 7.00	6.20	80.2	81.8	80.2
7.00 - 10.00	8.37	80.3	81.6	80.3
	Composite Min Eff (CME)	Initial	Conditioning Increment 1	

Conditioning Procedure Details
 (included for reference as required by Appendix J11.1)

	Initial	Cond 1	Post	Req'd by App J
Background concentration (particles cm-3) ----->	1.25		0.97	low
Correlation ratio small to large particles ----->	28,758		26,855	> 20,000
Avg conditioning aerosol concentration (particles cm-3) ----->		81,576		< 1,000,000 record
Incremental conditioning duration (minutes) ----->		1069.8		
Cumulative conditioning duration (minutes) ----->		1069.8		
Incremental CT (particle cm-3 min) ----->		87,272,315		> 6.4 x 10E7
Cumulative conditioning CT (particles cm-3 min) ----->		87,272,315		< 1.2 x 10E9 record
Dust Holding Capacity DHC-A (grams) ----->		NA		