

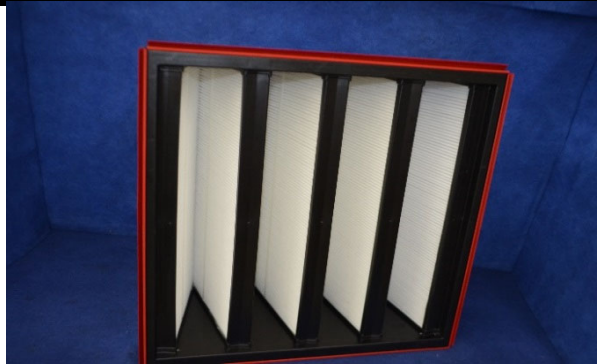


LMS TECHNOLOGIES, INC.
6423 Cecilia Circle
Bloomington, MN 55439
(952) 918-9060, Fax: (952) 918-9061

Test Report-ASHRAE Test Standard 52.2-2017 with Appendix J (New Classification)

Test Requested By: Columbus Industries, Inc.
 Manufacturer: Columbus Industries, Inc.
 Prototype #: PR-19-017-02
 Media: _____
 Dimensions: 24" x 24" x 12"
 Number of Pleats: N/A
 Filter Description: White Minipleated V-Cell Filter
 How Filter Obtained: Provided by Columbus Industries, Inc.

Report #: 9064
 Test Date: 02/15/2019



Test Results

Test Air Flow Rate(CFM)/Velocity (FPM)	<u>1968 cfm / 492 fpm</u>
Initial Resistance (in. WG)	<u>0.205"</u>
Final Resistance (in. WG)	<u>1.500"</u>
Minimum Efficiency Rating Value (MERV)	<u>MERV 14A @ 1968 cfm</u>
Minimum Average Efficiency 0.3 to 1.0 Microns (E1)	<u>83.2A</u>
Minimum Average Efficiency 1.0 to 3.0 Microns (E2)	<u>92.6A</u>
Minimum Average Efficiency 3.0 to 10 Microns (E3)	<u>97.2A</u>
Dust Fed to Final Resistance (grams)	<u>204.3 grams</u>
Dust Holding Capacity (grams)	<u>201.6 grams</u>
Arrestance:	<u>98.7%</u>

Test Description

Temp & Humidity: 71° F @ 40%
 Particle Analysis: Met One 3400
 Test Dust: ASHRAE 52.1 Dust
 Test Aerosol: KCl, Neutralized
 LMS#: 5483

Test Engineer : Emile Tadros/Kevin Kwong/Pat Best/Jose Tizcareno/Kia Kiantaj

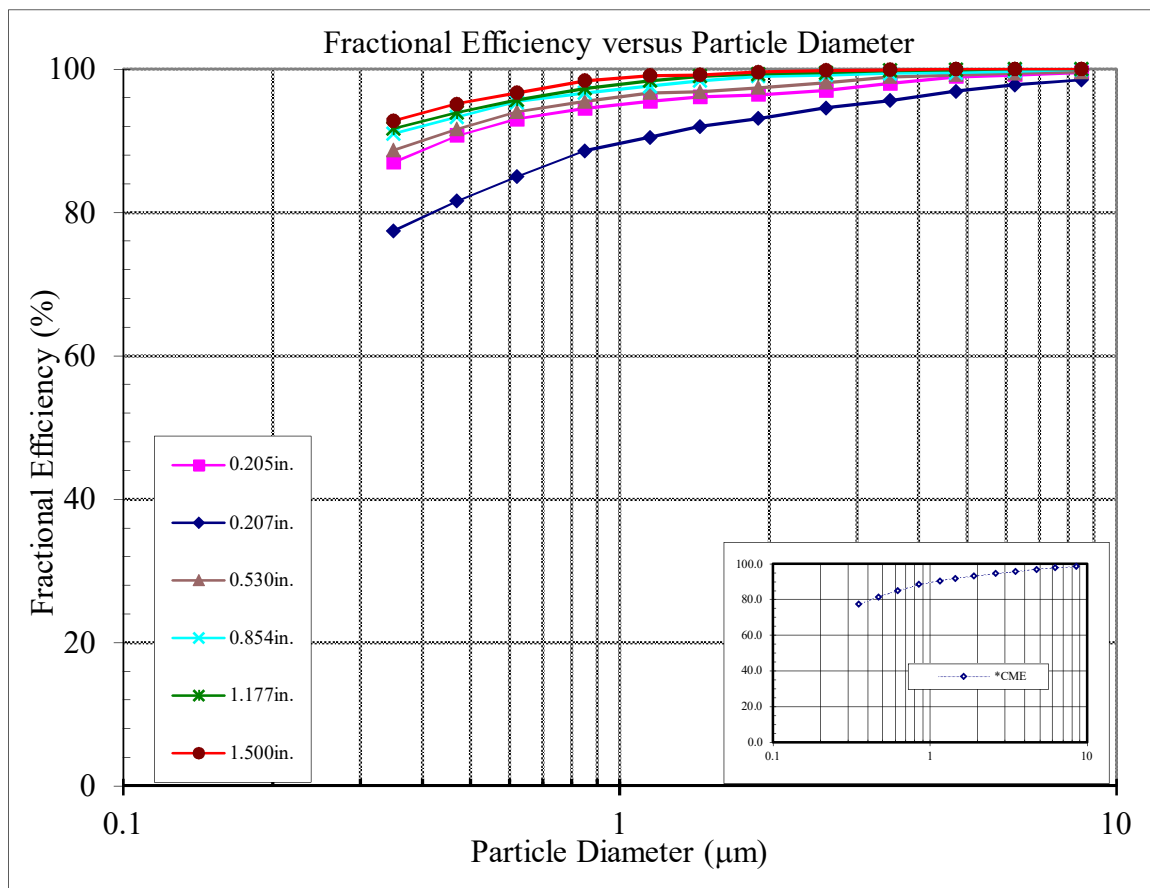
Approved By: K. C. Kwok, Ph.D.

Data verified by LMS Calibration filter* Patent Pending

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Date : February 15, 2019 Filter ID : PR-19-017-02 Test Type : 52.2-2017 REP# 9064 Test Aerosol : KCl, Neutralized	Requested by : Columbus Industries Manufacturer : Columbus Industries
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ΔP (" H ₂ O)	0.205in.	0.207in.	0.530in.	0.854in.	1.177in.	1.500in.	*CME
Size Range (μm)	Fractional Efficiency (%)						
0.3-0.4	87.0	77.4	88.7	91.0	91.7	92.8	77.4
0.4-0.55	90.7	81.6	91.6	93.3	93.9	95.1	81.6
0.55-0.7	93.0	85.0	94.0	95.4	95.7	96.7	85.0
0.7-1.0	94.5	88.6	95.5	96.7	97.3	98.4	88.6
1.0-1.3	95.5	90.5	96.7	97.6	98.4	99.1	90.5
1.3-1.6	96.1	92.0	96.8	98.4	99.0	99.2	92.0
1.6-2.2	96.4	93.1	97.4	99.0	99.3	99.6	93.1
2.2-3.0	97.0	94.6	98.1	99.2	99.5	99.8	94.6
3.0-4.0	98.0	95.6	98.9	99.4	99.8	99.9	95.6
4.0-5.5	98.9	96.9	99.2	99.5	99.9	100.0	96.9
5.5-7.0	99.2	97.8	99.4	99.7	100.0	100.0	97.8
7.0-10.0	99.5	98.5	99.6	99.9	100.0	100.0	98.5



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Date: February 15, 2019 Filter ID : PR-19-017-02 Test Type : Pressure Drop of Clean Filter For ASHRAE 52.2-2017 REP# 9064	Test Requested by : Columbus Industries Filter Manufacturer : Columbus Industries
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Flow Rate CFM	Velocity FPM	dP (mm H ₂ O)	Pressure drop ("H ₂ O)	% of Rated Airflow	Dust fed	Pressure drop
0	0	0.00	0.000	0%	0.00	0.205
492	123	0.82	0.032	25%	0.00	0.207
984	246	1.96	0.077	50%	120.00	0.530
1476	369	3.42	0.135	75%	155.20	0.854
1968	492	5.20	0.205	100%	183.90	1.177
2460	615	7.50	0.295	125%	204.30	1.500

