

 <p>Blue Heaven Technologies</p> <p>2820 S. English Station Road - Louisville, KY 40299 Tel: (502) 357-0132 Fax (502) 267-8379</p>	<p>Date: 8-Jul-22 TEST NO. 22-214-4</p> <p>ASHRAE Standard 52.2-2017 TEST REPORT Initial Efficiency / Resistance / Dust Holding Arrestance</p>
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Filter Description

Manufacturer	Permatron Corporation
Filter Model	BHC
Part Number	Double Layer (U2)
Generic Filter Type	Flat Sheet Media
Nominal Dimensions (H x W x D)	24" X 24" x 1"
Pocket / Pleat Quantity	NA
Media Type	Synthetic
Est. Gross Media Area	Standard
Adhesive Type	NA



Test Conditions

Loading Dust Type	ASHRAE	Test Air Temp (degrees F.)	81
Barometric Pressure (In. Hg.)	29.31	Relative Humidity (%)	51

Test Results

Airflow Rate (CFM)	1180
Nominal Face Velocity (fpm)	295
Initial Resistance (in WG)	0.06
Final Resistance (in WG)	1.00
Dust Fed (gms) to Final Resistance	96
E1 (%) Initial Efficiency 0.30 - 1.0 um	0
E2 (%) Initial Efficiency 1.0 - 3.0 um	4
E3 (%) Initial Efficiency 3.0 - 10.0 um	25
Estimated * Minimum Efficiency Reporting Value (MERV) * If initial data is minimum	MERV 5 @ 1180 CFM

Test results relate only to items tested. This report shall not be reproduced except in full without the written approval of Blue Heaven Technologies

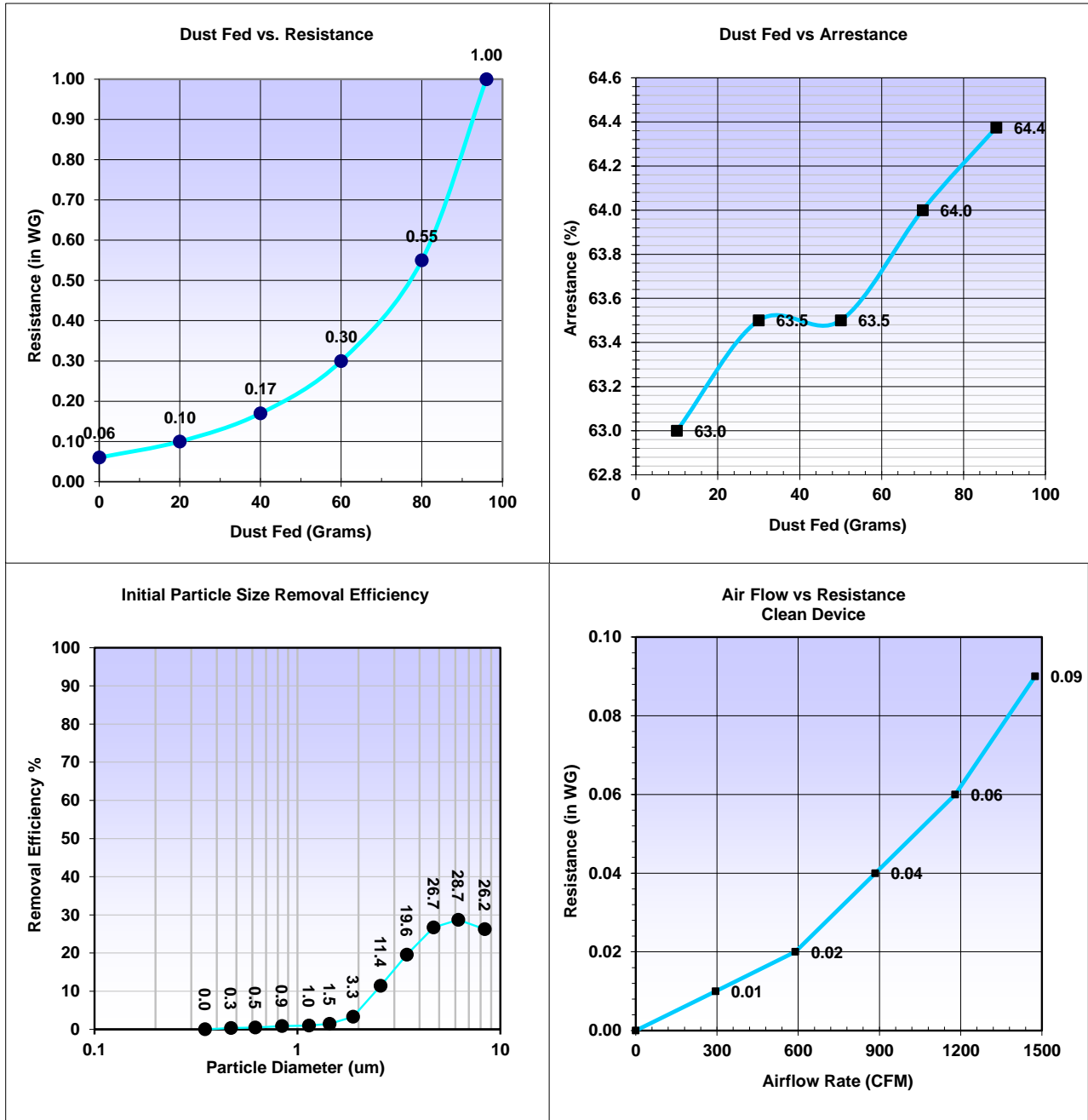
Remarks

Comments

Tested For: Permatron Corporation
Final Pressure Drop ("w.c.) 1.00"w.c.
Dust Holding Capacity (gms) 61
Average Arrestance (%) 63.6

Test Performed by: TS Approved By:  Manager Test Completed: 8-Jul-22

Important Note: Please be advised that the ASHRAE committee SSPC 52.2, in March 2016, has published "addendum E" relative to the 52.2-2012 test protocol. This addendum restricts the use of the acronym "MERV" as only applicable to a test report that has been completed using the "entire procedure prescribed by the standard". This report is a modified version of the procedure and therefore, subject to that ruling. In the best interest of our customers, Blue Heaven Technologies has elected to delay this action until further assessment can be made at committee level. Where applicable, the qualified use of the term "MERV" will continue to be part of our reported data.



Data - Dust Fed / Resistance

Dust Fed Increment (gms)	Total Dust Fed (gms)	Resistance (in WG)
0	0	0.06
20	20	0.10
20	40	0.17
20	60	0.30
20	80	0.55
16	96	1.00

Data - Dust Fed / Arrestance

Incremental Arrestance (%)	Dust Fed Plot Point (gms)
63.0	10
63.5	30
63.5	50
64.0	70
64.4	88

Data - Particle Removal Efficiency

Particle Size Range (um)	Geometric Mean Diam (um)	Initial Particle Removal Efficiency (%)
0.30 - 0.40	0.35	0.0
0.40 - 0.55	0.47	0.3
0.55 - 0.70	0.62	0.5
0.70 - 1.00	0.84	0.9
1.00 - 1.30	1.14	1.0
1.30 - 1.60	1.44	1.5
1.60 - 2.20	1.88	3.3
2.20 - 3.00	2.57	11.4
3.00 - 4.00	3.46	19.6
4.00 - 5.50	4.69	26.7
5.50 - 7.00	6.20	28.7
7.00 - 10.00	8.37	26.2

Data - Resistance (Clean Device)

Airflow (CFM)	Resistance (in WG)
0	0.00
295	0.01
590	0.02
885	0.04
1180	0.06
1475	0.09