



Camfil Farr
1 North Corporate Drive
Riverdale, NJ 07457
(973) 616-7300

ASHRAE® 52.2-2007(B) Test Results w/Appendix J Results

Filter Description

Manufacturer		Filter Model			Filter Part Number		
Camfil Farr		Hi-Flo® HF/M14/24/24/22/8			402503A22		
Filter Type		Media Type		Media Color		Media Area (ft ²)	
Pocket		Fiberglass/Air Laid		Yellow		58	
Nominal Size	Actual Size						
HxWxD	Hgt (in)	Wid (in)	Dep (in)	Pleats/Pockets	UL Rating	LabFile	CrRef
24x24x22	23 3/8	23 3/8	22	8	Class 2	1480	1414

ASHRAE® 52.2-2007(B)

Date:	08/17/2009		
Test Number:	2009-0817-0705		
Test Data	Test Results	Rated Values	
AirFlow (cfm)	1970	1970	
Nominal Vel (fpm)	493	493	
Initial ΔP (inWG)	0.65	0.68	
MERV	15	14	@1970cfm
E ₁ (0.3-1.0μm), (%)	88	< 75	
E ₂ (1.0-3.0μm), (%)	99	≥ 90	
E ₃ (3.0-10μm), (%)	100	≥ 90	
Final DP, (inWG)	1.5	1.5	
Arrestance, (%)	100	99	
DHC, (g)	233	225	
Temp, (F)	72	Test Aerosol	KCL
RH, (%)	58	Loading Dust	ASHRAE

ASHRAE® 52.2-2007(B) w/App J

Date:	08/18/2009		
Test Number:	2009-0818-0820		
Test Data	Test Results	Rated Values	
AirFlow (cfm)	1970	1970	
Nominal Vel (fpm)	493	493	
Initial ΔP (inWG)	0.67	0.68	
MERV-A	15A	14A	@1970cfm
E ₁ -A (0.3-1.0μm), (%)	89	< 75	
E ₂ -A (1.0-3.0μm), (%)	99	≥ 90	
E ₃ -A (3.0-10μm), (%)	100	≥ 90	
Final DP, (inWG)	1.5	1.5	
Arrestance-A, (%)	100	99	
DHC-A, (g)	234	225	
Temp, (F)	73	Test Aerosol	KCL
RH, (%)	48	Loading Dust	ASHRAE

Comments

Comments

Certified Test Per ASHRAE 52.2-2007 (B)

Operator

Particle Counter

Model

Approval:

Don Thornburg
Electronic Signature, Original on file

A. Acain

Climet

CI-500

Camfil Farr Permission Required for Distribution

ASHRAE® 52.2-2007(B) Test Results

Date: **08/17/2009**

Test Number: **2009-0817-0705**

Manufacturer

Filter Model

Filter Part Number

Camfil Farr

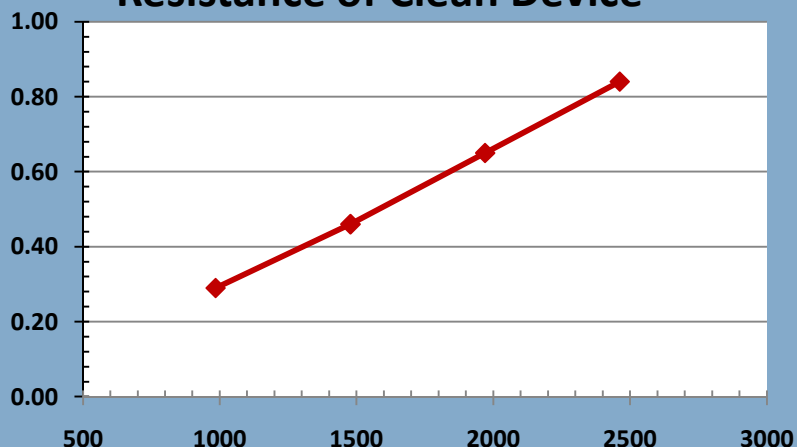
Hi-Flo® HF/M14/24/24/22/8

402503A22

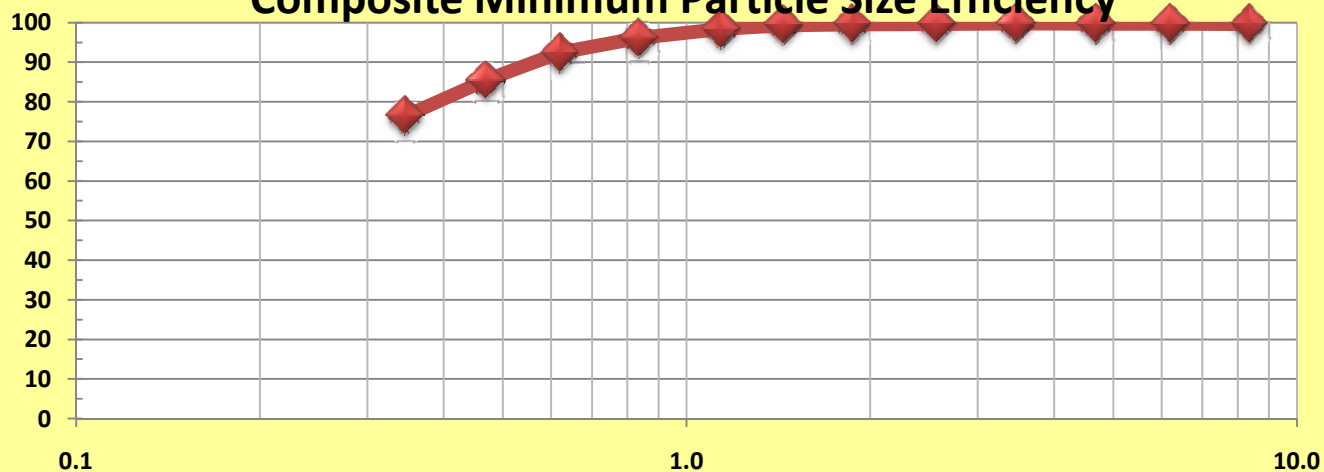
Clean Resistance Table

cfm	m ³ /s	inWG	Pa
985	0.46	0.29	72
1478	0.70	0.46	114
1970	0.93	0.65	162
2462	1.16	0.84	209

Resistance of Clean Device



Composite Minimum Particle Size Efficiency



ΔP (inWG)

Dust Fed (g)

0.65

0

0.69

13

0.89

97

1.10

164

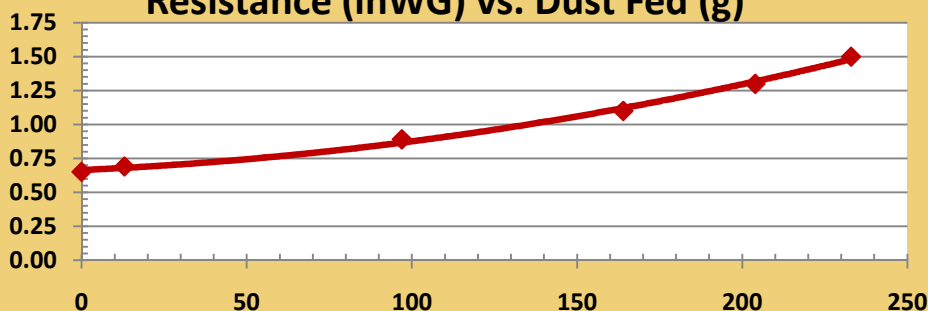
1.30

204

1.50

233

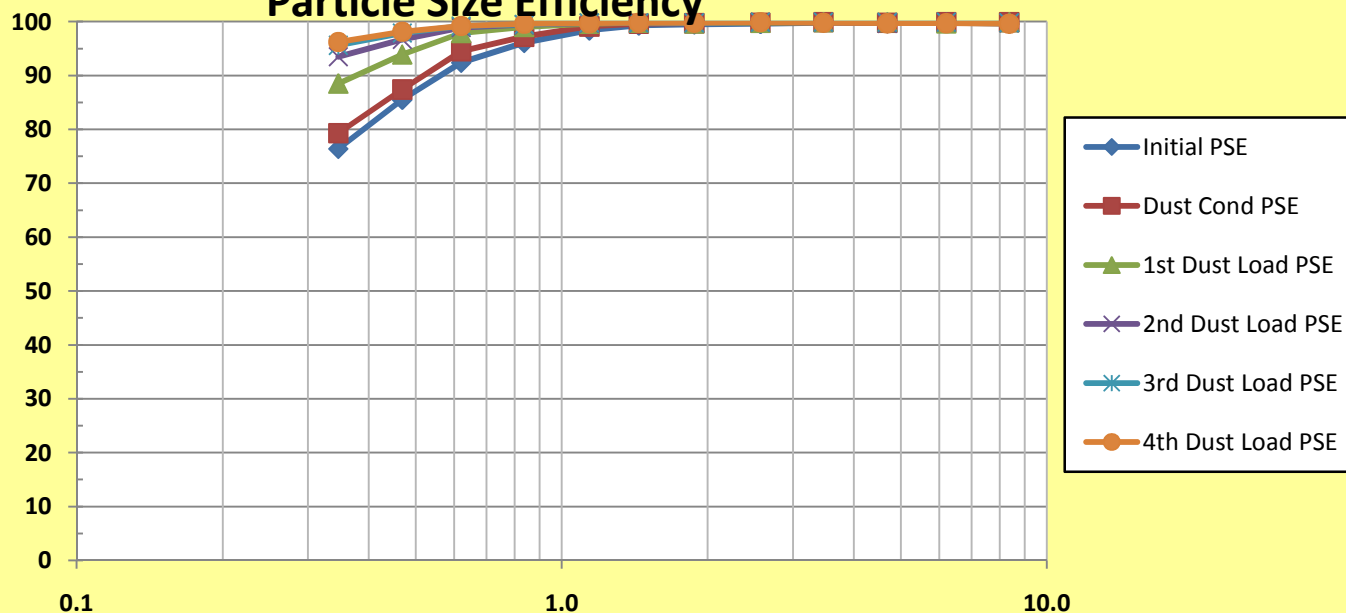
Resistance (inWG) vs. Dust Fed (g)



ASHRAE® 52.2-2007(B) Test Results

Date	08/17/2009				Test Number	2009-0817-0705							
Manufacturer	Camfil Farr				Filter Model	Hi-Flo® HF/M14/24/24/22/8							
						402503A22							
Efficiency Data Table	1	2	3	4	5	6	7	8	9	10	11	12	
Minimum Dia (µm)	0.3	0.4	0.55	0.7	1.0	1.3	1.6	2.2	3.0	4.0	5.5	7.0	0.35
Maximum Dia (µm)	0.4	0.55	0.7	1.0	1.3	1.6	2.2	3.0	4.0	5.5	7.0	10.0	0.45
Geometric Mean (µm)	0.35	0.47	0.62	0.84	1.14	1.44	1.88	2.57	3.46	4.69	6.20	8.37	0.40
Initial PSE	76	86	92	96	98	99	100	100	100	100	100	100	82
Dust Cond PSE	79	87	95	97	99	100	100	100	100	100	100	100	84
1st Dust Load PSE	89	94	98	99	100	100	100	100	100	100	100	100	91
2nd Dust Load PSE	94	97	99	99	100	100	100	100	100	100	100	100	95
3rd Dust Load PSE	96	98	99	100	100	100	100	100	100	100	100	100	97
4th Dust Load PSE	96	98	99	100	100	100	100	100	100	100	100	100	97
Composite Min PSE	76	86	92	96	98	99	100	100	100	100	100	100	82

Particle Size Efficiency



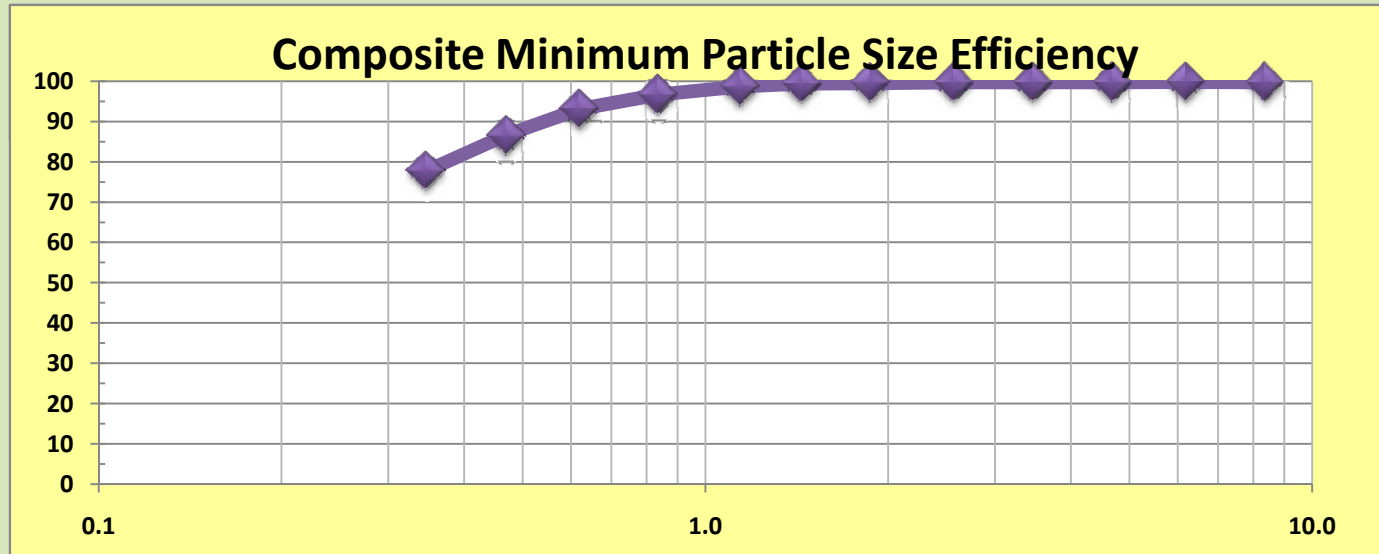
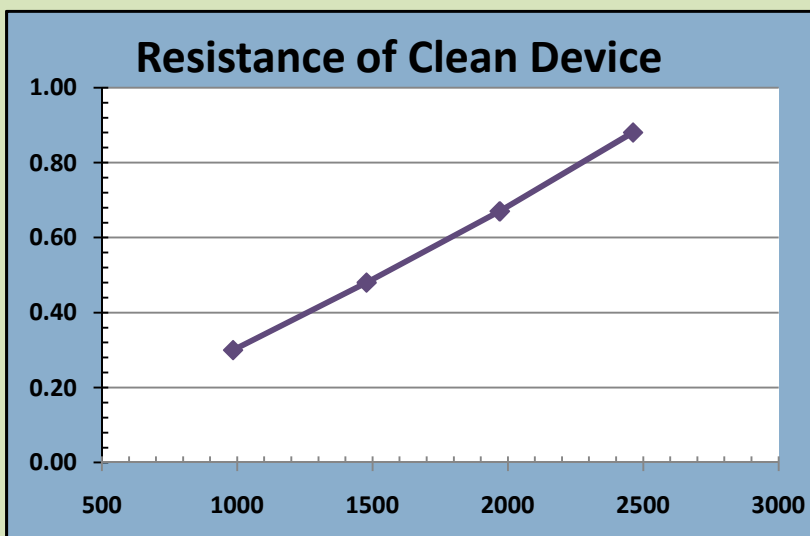
All testing is performed in compliance with the latest revision of ASHRAE Standard 52.2 in a state-of-the-art laboratory facility located at Camfil Farr's U.S. corporate headquarters in Riverdale, NJ. For more information, contact your local Camfil Farr representative or distributor.

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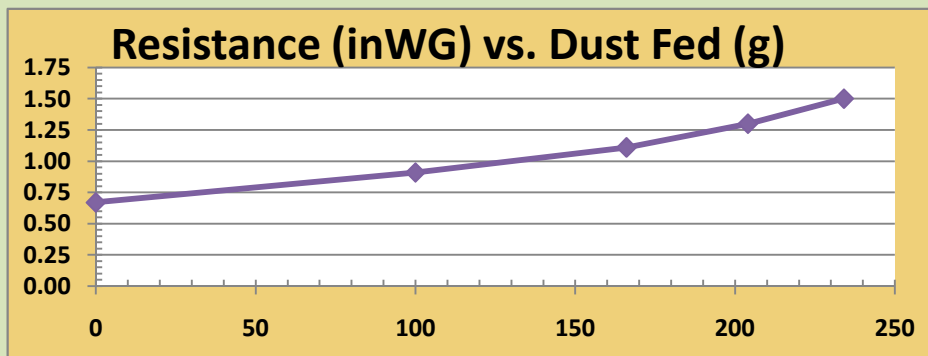
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Date:	08/18/2009	Test Number:	2009-0818-0820
Manufacturer	Camfil Farr	Filter Model	Hi-Flo® HF/M14/24/24/22/8
		Filter Part Number	402503A22

Clean Resistance Table			
cfm	m ³ /s	inWG	Pa
985	0.46	0.3	75
1478	0.70	0.48	119
1970	0.93	0.67	167
2462	1.16	0.88	219

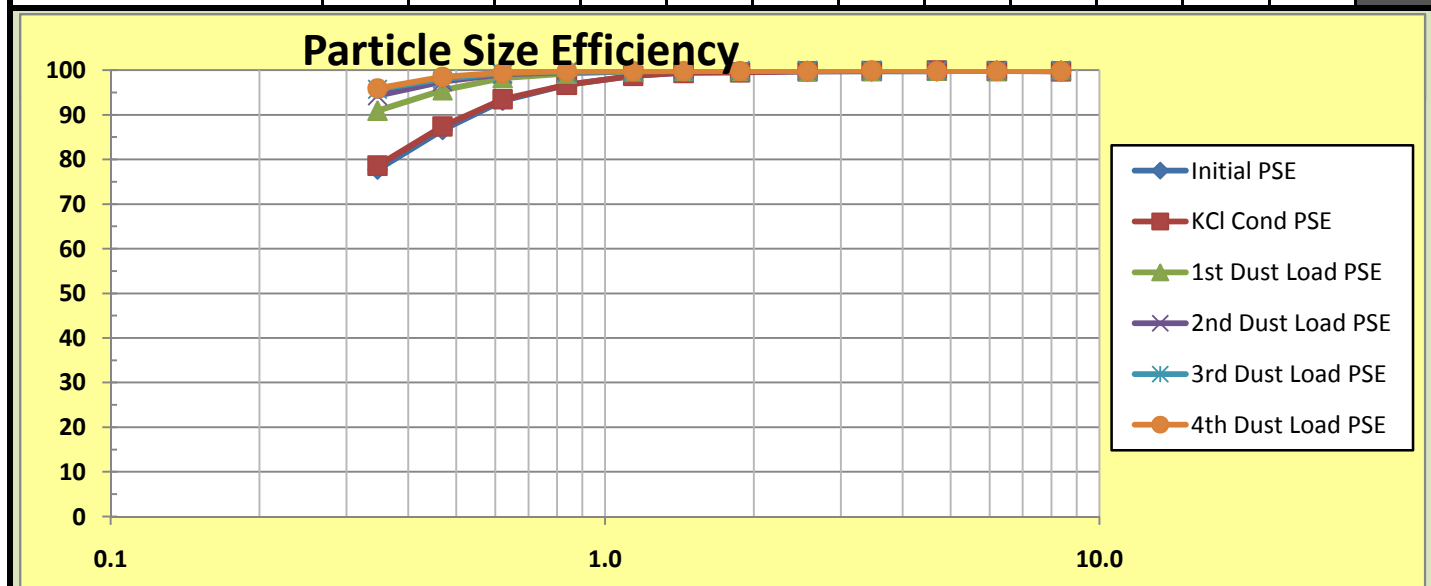


ΔP (inWG)	Dust Fed (g)
0.67	0
0.91	100
1.11	166
1.30	204
1.50	234



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Maximum Dia (µm)	0.4	0.55	0.7	1.0	1.3	1.6	2.2	3.0	4.0	5.5	7.0	10.0	0.45
Geometric Mean (µm)	0.35	0.47	0.62	0.84	1.14	1.44	1.88	2.57	3.46	4.69	6.20	8.37	0.40
Initial PSE	78	87	93	97	99	99	100	100	100	100	100	100	83
KCI Cond PSE	79	87	94	97	99	99	100	100	100	100	100	100	84
1st Dust Load PSE	91	96	98	99	100	100	100	100	100	100	100	100	94
2nd Dust Load PSE	94	97	99	100	100	100	100	100	100	100	100	100	96
3rd Dust Load PSE	96	98	99	100	100	100	100	100	100	100	100	100	97
4th Dust Load PSE	96	99	99	100	100	100	100	100	100	100	100	100	98
Composite Min PSE	78	87	93	97	99	99	100	100	100	100	100	100	83



Bkg Concentration (particles/cm ³)	Avg Cond Aerosol Conc (particles/cm ³)	Cumulative Cond Duration (minutes)		Cumulative Cond CT (particles-min/cm ³)	
0.4	5.29E+05	122		6.43E+07	
Large Particle Concentration (Particles ft ³)		Ratio Small to Large (>20,000)		Conditioning ΔP (inWG)	Same duct?
88,167		169,764		Initial ΔP	
				Final ΔP	Yes
				0.67	
				0.68	