



**TEST REPORT ASHRAE 52.2-2012**

Performed For: Fellowes Test Date: 21 April, 2014	Location: Itasca, IL Received Date: 10 April, 2014	Contact: Peter Maletich <b>IBR JN: 15030C</b>
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<b>Filter and Element Identification</b>		
<b>Manufacturer's Data:</b>		
Manufacturer: ZFT	Sample Source: Fellowes	
<b>Filter ID: ZFT Filter #1</b>	Model: N/A	
Catalog rating: N/A	Air Flow Rate: 220 SCFM	Initial Pres. Drop: 0.05 kPa
<b>Sample Description: Pleated filter element</b>		
Dimensions: 14" x 14" x 2"		
EFA: 24.5 ft2	Media Color: White	

<b>Test Conditions:</b>		
Air Flow Rate: 220 SCFM	Temperature: 20 C	Relative Humidity: 48.2 %
Barometric Pressure: 733 mmHg		
Test Contaminant: NaCl (Neutralized) / ASHRAE Dust		
Terminal Pressure Drop: 0.35 kPa	Flow Rate: 220 SCFM	

<b>Resistance Test Results</b>		
Initial Resistance: 0.05 kPa	Final Resistance: 0.35 kPa	Capacity: 105.8 gm
<b>Minimum Efficiency Reporting Data:</b>		
Composite average efficiencies:		
E1(0.3-3.0): >99	E2(1.0-3.0): >99	E3(3.0-10): >99
Minimum efficiency reporting value (MERV):	<u>16</u>	

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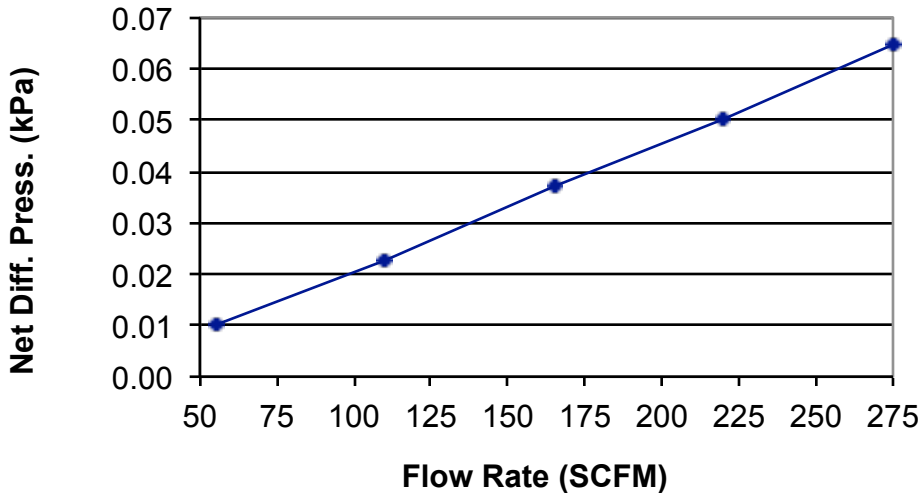
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**Flow Data:**

Flow Rate (SCFM) % of rated	Actual	Net Differential Pressure (kPa)
25	55	0.01
50	110	0.02
75	165	0.04
100	220	0.05
125	275	0.06

**Air Permeability**



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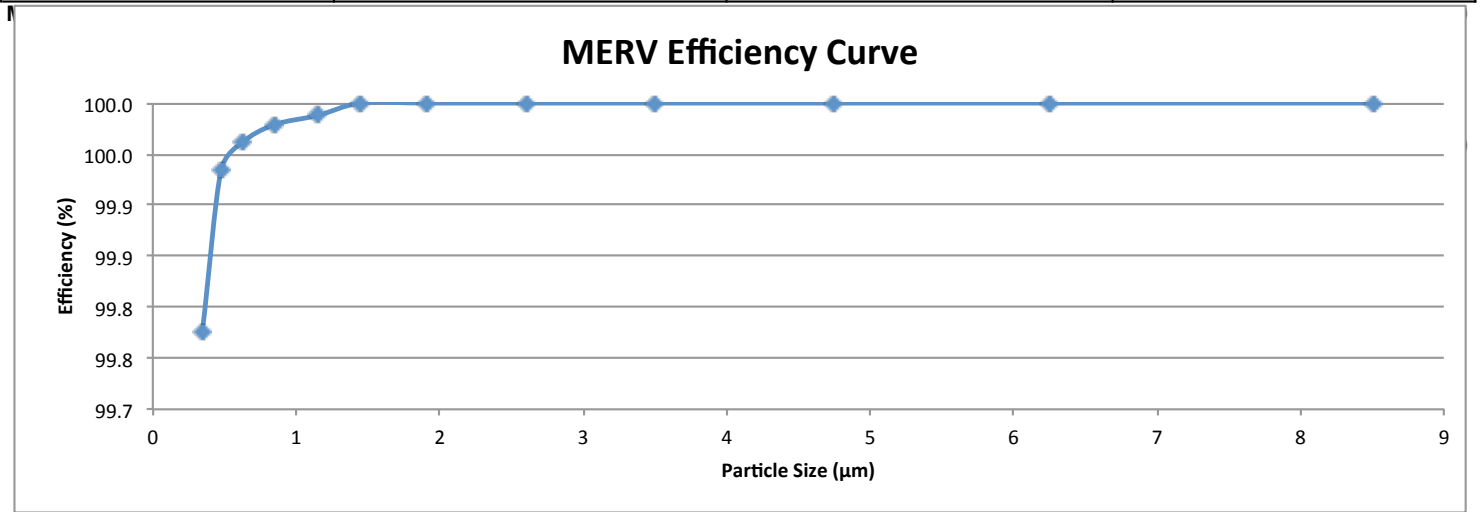
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Particle Size vs Efficiency:

Stage	# of cts	Port	Particles/2.5 Liters at: (in microns)											
			0.3-0.4	0.4-0.55	0.55-0.7	0.7-1.0	1.0-1.3	1.3-1.6	1.6-2.2	2.2-3.0	3.0-4.0	4.0-5.5	5.5-7.0	7.0-10.0
Clean	10	Upstream	1359773	868915	437785	451736	90377	47384	140114	57443	12698	3121	1438	309
		Downstream	3051	576	168	95	11	2	1	0	0	0	0	0
		Efficiency	<b>99.78</b>	<b>99.93</b>	<b>99.96</b>	<b>99.98</b>	<b>99.99</b>	<b>&gt;99.99</b>	<b>&gt;99.99</b>	<b>&gt;99.99</b>	<b>&gt;99.99</b>	<b>&gt;99.99</b>	<b>&gt;99.9</b>	<b>&gt;99.9</b>
20gm	10	Upstream	1362216	873934	443008	456486	90973	47342	140972	58424	13161	3435	1477	348
		Downstream	2060	435	131	19	4	2	1	1	0	0	0	0
		Efficiency	<b>99.85</b>	<b>99.95</b>	<b>99.97</b>	<b>&gt;99.99</b>	<b>&gt;99.99</b>	<b>&gt;99.99</b>	<b>&gt;99.99</b>	<b>&gt;99.99</b>	<b>&gt;99.99</b>	<b>&gt;99.99</b>	<b>&gt;99.9</b>	<b>&gt;99.9</b>
25%	10	Upstream	1374082	891598	454162	471470	94764	49349	145896	59757	13119	3078	1468	284
		Downstream	2243	371	102	26	5	2	1	0	0	1	0	0
		Efficiency	<b>99.84</b>	<b>99.96</b>	<b>99.98</b>	<b>99.99</b>	<b>99.99</b>	<b>&gt;99.99</b>	<b>&gt;99.99</b>	<b>&gt;99.99</b>	<b>&gt;99.99</b>	<b>&gt;99.99</b>	<b>&gt;99.9</b>	<b>&gt;99.9</b>
50%	10	Upstream	1416027	914979	471822	499305	101647	53018	159132	65813	14286	3280	1339	268
		Downstream	1455	178	53	11	4	1	2	0	0	0	0	0
		Efficiency	<b>99.90</b>	<b>99.98</b>	<b>99.99</b>	<b>&gt;99.99</b>	<b>&gt;99.99</b>	<b>&gt;99.99</b>	<b>&gt;99.99</b>	<b>&gt;99.99</b>	<b>&gt;99.99</b>	<b>&gt;99.99</b>	<b>&gt;99.9</b>	<b>&gt;99.9</b>
75%	10	Upstream	1375892	895232	458225	484654	97833	51541	155404	64915	14317	3223	1397	241
		Downstream	903	161	68	8	1	0	0	1	0	0	0	0
		Efficiency	<b>99.93</b>	<b>99.98</b>	<b>99.99</b>	<b>&gt;99.99</b>	<b>&gt;99.99</b>	<b>&gt;99.99</b>	<b>&gt;99.99</b>	<b>&gt;99.99</b>	<b>&gt;99.99</b>	<b>&gt;99.99</b>	<b>&gt;99.9</b>	<b>&gt;99.9</b>
100%	10	Upstream	1368223	884550	448596	469859	95415	50253	150461	63982	14024	3285	1418	268
		Downstream	538	91	42	9	2	1	2	1	0	0	0	0
		Efficiency	<b>99.96</b>	<b>99.99</b>	<b>99.99</b>	<b>&gt;99.99</b>	<b>&gt;99.99</b>	<b>&gt;99.99</b>	<b>&gt;99.99</b>	<b>&gt;99.99</b>	<b>&gt;99.99</b>	<b>&gt;99.99</b>	<b>&gt;99.9</b>	<b>&gt;99.9</b>



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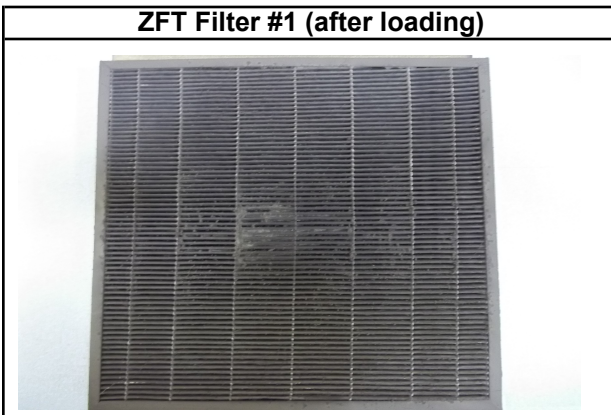
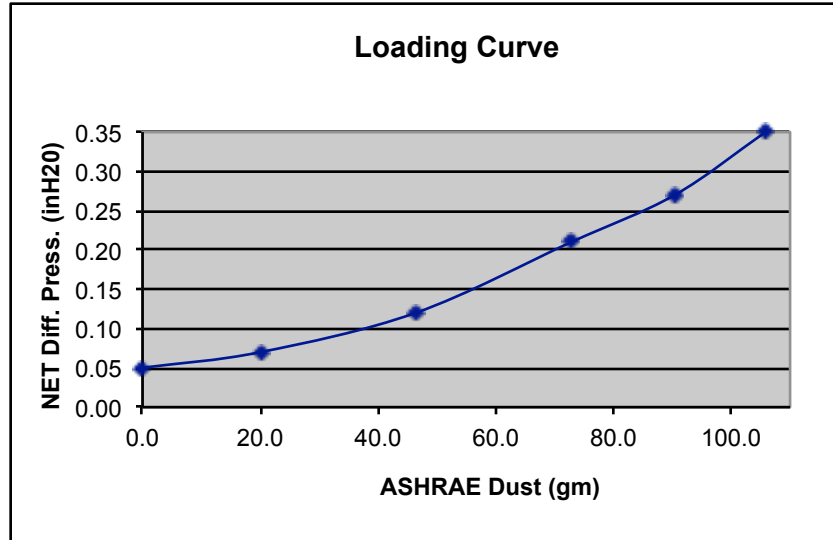
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**Dust Loading:**

Time Mins.	NET DP kPa	Dust Fed grams
0	0.05	0.0
45	0.07	20.0
105	0.12	46.4
165	0.21	72.8
205	0.27	90.4
240	0.35	105.8



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Reviewed By: \_\_\_\_\_  
Susan H. Goldsmith, Director of Technical Services

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