

# The Comfort First Filtered Diffuser™

## Specification Sheet



### PERFORMANCE DATA\*

Velocity (fpm)	300	400	500	600	700	800	900	1000	
6"	Flow Rate (cfm)	59	79	98	118	137	157	177	196
	Pressure Drop (sp)	0.076	0.107	0.144	0.176	0.215	0.257	0.301	0.343
	Noise Criteria (nc)	<20	<20	22	27	32	36	40	43
8"	Flow Rate (cfm)	105	140	174	209	244	279	314	349
	Pressure Drop (sp)	0.076	0.107	0.144	0.176	0.215	0.257	0.301	0.343
	Noise Criteria (nc)	<20	<20	24	29	34	37	41	44
10"	Flow Rate (cfm)	164	218	273	327	382	436	491	545
	Pressure Drop (sp)	0.076	0.107	0.144	0.176	0.215	0.257	0.301	0.343
	Noise Criteria (nc)	<20	20	26	31	36	39	43	46
12"	Flow Rate (cfm)	236	314	393	471	550	628	707	785
	Pressure Drop (sp)	0.076	0.107	0.144	0.176	0.215	0.257	0.301	0.343
	Noise Criteria (nc)	<20	21	27	32	37	40	44	47
14"	Flow Rate (cfm)	321	427	534	641	748	855	962	1068
	Pressure Drop (sp)	0.076	0.107	0.144	0.176	0.215	0.257	0.301	0.343
	Noise Criteria (nc)	<21	27	32	38	43	46	>50	>50

\*Data extrapolated from tests conducted on an 8" Comfort First Filtered Diffuser™ with filters installed

### Filter Efficiency vs. Particle Diameter

MERV Rating	14	13	
Size Range (µm)	Initial Fractional Efficiency (%)		
Average	100 fpm	200 fpm	
0.3 – 0.4	0.35	66.2	60.9
0.4 – 0.55	0.475	73.9	70.9
0.55 – 0.7	0.625	80.2	79.0
0.7 – 1.0	0.85	85.8	85.1
1.0 – 1.3	1.15	88.8	88.4
1.3 – 1.6	1.45	90.9	90.5
1.6 – 2.2	1.9	92.5	92.0
2.2 – 3.0	2.6	94.4	93.5
3.0 – 4.0	3.5	96.0	95.0
4.0 – 5.5	4.75	97.3	96.7
5.5 – 7.0	6.25	98.6	97.6
7.0 – 10.0	8.5	99.8	98.9

Resistance ins H2O	0.12	0.26
Resistance mm H2O	2.97	6.71

Test results certified by LMS Technologies

### Comfort First Filtered Diffuser™

Throw Data and Velocity in Feet Per Minute (fpm)

Distance From Ceiling Inches	Distance from diffuser (in feet)																			
	1'	2'	3'	4'	5'	6'	7'	8'	9'	10'	11'	12'	13'	14'	15'	16'	17'	18'	19'	
1	340	310	265	240	210	180	170	150	130	120	105	95	90	80	75	70	60	50		
3	145	170	190	190	170	155	150	135	120	110	105	95	85	75	70	65	60	55		
6	55	65	85	85	85	90	95	95	80	90	80	80	70	60	55	55	50			
9	55						50	50	55	55	50	55	55	50						
12	80																			
18	150																			
24	55	65																		
30		95	50																	
36		80	70	50																
42			65	60																
48			50	65	50															
54				55	50															
60				50	50															

#### Test Conditions

Air Volume (CFM) 300  
 Inlet Static Pressure (in. of H2O) 0.060"  
 Room Ambient Temp. (Deg. F) 74 ± 2  
 Supply Air Temp. (Deg. F) 74 ± 2  
 Inlet Dimensions: 10 inch diameter

Test results certified by Intertek ETL Semko

FPM Horizontal Throw (vanes parallel to ceiling)  
 FPM Downward Throw (vanes diagonal to ceiling)

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