

The Comfort First Filtered Diffuser™

Specification Sheet



Comfort First Filtered Diffuser™

THROW TERMINAL VELOCITY

(fpm = FEET PER MINUTE)

Air Volume (CFM) 300
 Inlet Static Pressure (in. of H2O) 0.060
 Room Ambient Temp. (Deg. F) 74 ±2

Inlet Dimensions: 10 inch diameter
 Supply Air Temp. (Deg. F) 74 ±2

Distance From Ceiling Inches	Distance from diffuser (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														
66																			

Throw Pattern: Horizontal (vanes parallel to ceiling)

Test results certified by Intertek ETL Semko

Throw Pattern: Diagonal (vanes Diagonal to ceiling)

PERFORMANCE DATA*

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

Filter Efficiency vs. Particle Diameter

MERV Rating = 11

Size Range (µm)	Initial Fractional Efficiency(%)	
	150fpm	250fpm
0.3 – 0.4	40.6	31.1
0.4 – 0.55	50.3	42.5
0.55 – 0.7	60.1	54.6
0.7 – 1.0	70.3	67.0
1.0 – 1.3	78.4	75.5
1.3 – 1.6	82.4	79.9
1.6 – 2.2	86.5	82.9
2.2 – 3.0	89.6	84.4
3.0 – 4.0	92.3	85.5
4.0 – 5.5	94.1	86.4
5.5 – 7.0	95.1	87.2
7.0 – 10.0	95.9	87.9

Test results certified by LMS Technologies

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

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