

VAV DIFFUSERS

P VAV Diffusers | Performance Data

Performance Data

T₃SQ Maximum Flow Selection

Inlet Size	Neck Velocity Velocity Pressure	400 0.010	500 0.016	600 0.022	700 0.031	800 0.040	900 0.050	1000 0.062
6"	Static pressure	0.016	0.024	0.037	0.048	0.064	0.082	0.100
	Total Pressure	0.026	0.040	0.059	0.079	0.104	0.132	0.162
	cfm	79	98	118	137	157	177	196
	NC	5	10	14	17	20	23	25
	Throw, ft	1-2-3	1-2-4	2-3-5	2-3-6	2-3-7	3-4-7	3-4-8
8"	Static pressure	0.021	0.032	0.047	0.063	0.083	0.106	0.130
	Total Pressure	0.031	0.048	0.069	0.094	0.123	0.156	0.192
	cfm	140	175	209	244	279	314	349
	NC	8	13	17	20	23	25	28
	Throw, ft	2-3-5	2-3-7	2-4-8	3-5-9	3-5-10	4-6-10	4-7-11
10"	Static pressure	0.030	0.047	0.069	0.093	0.122	0.155	0.190
	Total Pressure	0.040	0.063	0.091	0.124	0.162	0.205	0.252
	cfm	218	273	327	382	436	491	545
	NC	14	19	23	26	29	31	34
	Throw, ft	3-4-8	4-5-10	4-6-11	5-8-12	6-9-13	6-10-14	7-10-14
12"	Static pressure	0.048	0.075	0.109	0.147	0.192	0.244	0.301
	Total Pressure	0.058	0.091	0.131	0.178	0.232	0.294	0.363
	cfm	314	393	471	550	628	707	785
	NC	24	29	33	36	39	41	44
	Throw, ft	4-6-11	5-8-12	6-9-13	7-10-14	8-11-15	9-11-16	10-12-17

T₃SQ ARI Rating

ARI Rating Data		Inlet Size							
		6" Inlet	8" Inlet	10" Inlet	12" Inlet				
Standard Ratings Sound Power Level, dB	3. Airflow, cfm	147	262	409	589				
	4. Min. Operating Pressure, in H ₂ O	0.091	0.108	0.142	0.204				
	5. Max. Inlet Static Pressure @ 400 fpm Neck Velocity, in H ₂ O	0.116	0.196	0.392	0.565				
	6. Rated with Pressure Relief, yes/no	n	n	n	n				
	Discharge	Standard Airflow Fully open damper 750 fpm Neck Velocity	Minimum Differential Static Pressure, in H ₂ O	Hz Octave Band Center Frequency	125	36	38	46	53
					250	37	40	48	56
					500	34	36	42	50
					1000	30	34	39	44
					2000	21	29	32	36
					4000	+	19	23	28
Discharge	Standard Airflow Throttled Damper 400 fpm Neck Velocity	Max. Inlet Static Pressure, in H ₂ O	Hz Octave Band Center Frequency	125	+	44	46	50	
				250	36	52	54	55	
				500	40	57	58	60	
				1000	34	51	55	58	
				2000	23	44	48	52	
				4000	+	37	42	47	

Note: Sound Power levels below values shown in this table shall be listed as below significance.
Use a plus sign (+) to indicate below significance.

Hz Octave Band	125	250	500	1000	2000	4000
Sound Power Level, dB	36	29	26	22	19	17

Performance data is presented for the T₃SQ diffuser with the internal VAV damper in full open position.

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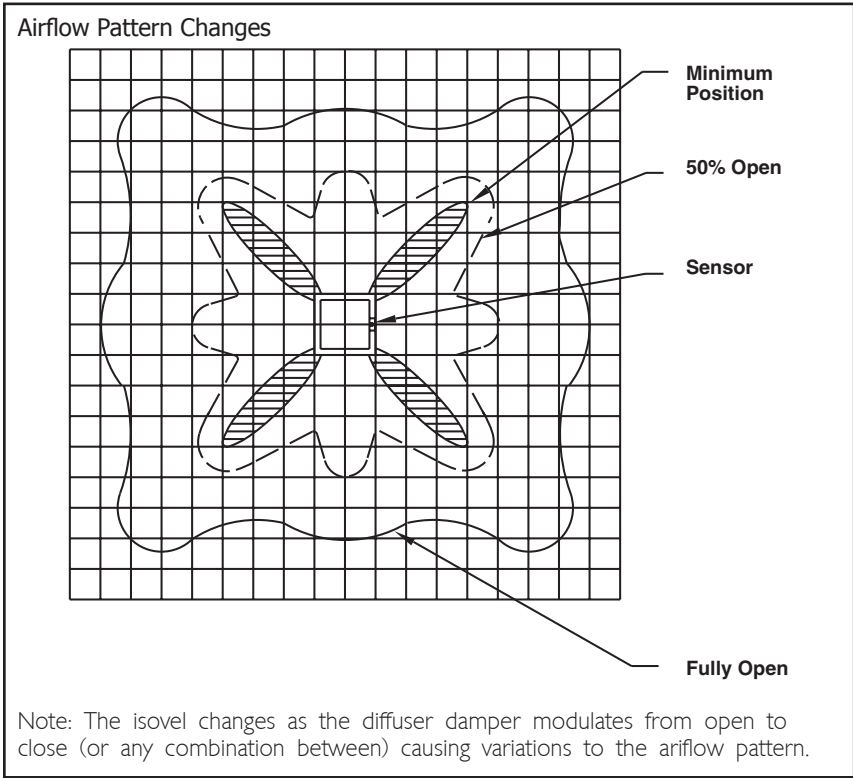
PERFORMANCE DATA



Performance Data (continued)

Air Distribution at Various Damper Positions

The performance of the T₃SQ diffuser is related to supply static pressure and size. If the supply static pressure is held at a constant value and the VAV diffuser damper is throttled to a closed position, the airflow pattern is changed from a square pattern to a star pattern. The isovel in the adjacent illustration demonstrates this pattern change. With the reduction of cfm, throw does not decrease as in standard diffusers. As the damper closes the discharge velocity is slightly increased, minimizing throw reduction. With a fixed inlet pressure, the sound values have very small changes of intensity as the damper is modulated.



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PERFORMANCE DATA

