

# DIFFUSERS

## F Diffusers | Architectural, Square Plaque | Performance Data

### Performance Data

OMNI, OMNI-AA • Architectural Ceiling • Square Plaque

F122

PERFORMANCE DATA

		Neck Velocity	400	500	600	700	800	900	1000	1200	1400
		Velocity Pressure	0.010	0.016	0.022	0.031	0.040	0.051	0.062	0.090	0.122
12"x12" Module Size	4" Round Neck	Airflow, cfm	35	44	52	61	70	79	87	105	122
		Total Pressure, Inches WG	0.034	0.053	0.076	0.103	0.134	0.170	0.210	0.303	0.412
		Throw Feet	1-2-3	1-2-4	2-2-5	2-3-6	2-3-6	2-4-7	3-4-8	3-5-10	4-6-11
		NC (Noise Criteria)	-	-	12	17	21	24	27	33	38
	5" Round Neck	Airflow, cfm	55	68	82	95	109	123	136	164	191
		Total Pressure, Inches WG	0.040	0.063	0.091	0.124	0.161	0.204	0.252	0.363	0.494
		Throw Feet	2-2-5	2-3-6	2-3-7	3-4-8	3-5-9	3-5-10	4-6-12	5-7-14	5-8-15
		NC (Noise Criteria)	-	-	12	17	21	24	28	33	38
	6" Round Neck	Airflow, cfm	78	98	118	137	157	176	196	235	274
		Total Pressure, Inches WG	0.049	0.076	0.109	0.149	0.194	0.246	0.303	0.437	0.594
		Throw Feet	2-3-6	3-4-8	3-5-9	4-5-11	4-6-12	5-7-14	5-8-15	6-9-17	7-11-18
		NC (Noise Criteria)	-	-	12	17	21	24	28	33	38
7" Round Neck	Airflow, cfm	107	134	160	187	214	240	267	320	374	
	Total Pressure, Inches WG	0.058	0.091	0.131	0.178	0.233	0.295	0.364	0.524	0.714	
	Throw Feet	3-4-8	3-5-9	4-6-11	4-7-13	5-8-15	6-9-17	6-9-18	8-11-20	9-13-21	
	NC (Noise Criteria)	-	-	12	17	21	24	28	33	38	
8" Round Neck	Airflow, cfm	140	175	209	244	279	314	349	419	489	
	Total Pressure, Inches WG	0.070	0.109	0.156	0.213	0.278	0.352	0.434	0.626	0.852	
	Throw Feet	3-5-9	4-6-11	5-7-14	5-8-16	6-9-18	7-10-19	8-11-20	9-14-22	11-16-24	
	NC (Noise Criteria)	-	-	12	17	21	24	28	33	38	
24"x24" Module Size	6" Round Neck	Airflow, cfm	78	98	118	137	157	176	196	235	274
		Total Pressure, Inches WG	0.011	0.017	0.025	0.034	0.044	0.056	0.069	0.099	0.135
		Throw Feet	1-1-4	1-2-4	1-3-5	2-3-6	2-4-7	3-4-8	3-4-9	4-5-11	4-6-11
		NC (Noise Criteria)	-	-	-	-	13	17	21	28	34
	8" Round Neck	Airflow, cfm	140	175	209	244	279	314	349	419	489
		Total Pressure, Inches WG	0.018	0.028	0.040	0.055	0.072	0.091	0.112	0.162	0.220
		Throw Feet	2-3-6	2-4-7	3-4-9	3-5-10	4-6-12	4-6-12	5-7-13	6-9-14	7-10-15
		NC (Noise Criteria)	-	-	-	12	17	21	25	32	38
	10" Round Neck	Airflow, cfm	218	273	327	382	436	491	545	654	763
		Total Pressure, Inches WG	0.027	0.042	0.060	0.082	0.107	0.136	0.168	0.241	0.329
		Throw Feet	3-4-8	3-5-10	4-6-12	5-7-13	5-8-14	6-9-15	7-10-16	8-12-18	10-13-19
		NC (Noise Criteria)	-	-	-	15	20	24	28	35	41
12" Round Neck	Airflow, cfm	314	393	471	550	628	707	785	942	1099	
	Total Pressure, Inches WG	0.038	0.059	0.085	0.115	0.151	0.191	0.235	0.339	0.461	
	Throw Feet	4-5-11	5-7-14	5-8-15	6-9-16	7-11-17	8-12-18	9-14-19	11-15-21	13-16-23	
	NC (Noise Criteria)	-	-	12	18	23	27	31	38	43	
14" Round Neck	Airflow, cfm	428	535	641	748	855	962	1069	1283	1497	
	Total Pressure, Inches WG	0.051	0.079	0.114	0.155	0.202	0.256	0.316	0.455	0.619	
	Throw Feet	4-7-13	6-8-16	7-10-17	8-12-19	9-13-20	10-15-21	11-16-23	13-17-25	15-19-27	
	NC (Noise Criteria)	-	-	14	20	25	29	33	40	45	
15" Round Neck	Airflow, cfm	491	614	736	859	982	1104	1227	1472	1718	
	Total Pressure, Inches WG	0.058	0.090	0.130	0.177	0.231	0.292	0.360	0.519	0.706	
	Throw Feet	5-7-15	6-9-17	7-11-19	9-13-20	10-15-22	11-16-23	12-17-24	15-19-26	17-20-29	
	NC (Noise Criteria)	-	-	15	21	26	30	34	41	46	

- Data obtained from tests conducted in accordance with ANSI/ASHRAE Standard 70-2006. Actual performance, with flexible duct inlet, may vary in the field. See the Engineering Guidelines section of this catalog for additional information.
- If the diffuser is mounted on an exposed duct, the throw values are 70% of those listed in the table.
- Throw values are given for terminal velocities of 150, 100 and 50 fpm and for isothermal conditions. See the section, Engineering Guidelines for catalog throw data information.
- NC values based on octave band 2 to 7 sound power levels minus a room absorption of 10 dB.
- Dash (-) in space denotes an NC value of less than 10.
- Each NC value represents the noise criteria curve which will not be exceeded by the sound pressure in any of the octave bands, 2 through 7, with a room absorption of 10 dB, re 10<sup>-12</sup> watts.
- All pressures are given in inches of water.
- To obtain static pressure, subtract the velocity pressure from the total pressure.

