

DIFFUSERS

F Diffusers | Perforated Ceiling, Curved Blade | Performance Data

Performance Data

PCS • Round • Curved Blade • Adjustable • 1-, 2-, 3- or 4-way Deflectors

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PERFORMANCE DATA

		Neck Velocity	300	400	500	600	700	800	900	1000	1100
		Velocity Pressure	0.006	0.010	0.016	0.022	0.031	0.040	0.051	0.062	0.075
12" x 12" Module Size	6" Neck	Air Flow, cfm	59	78	98	118	137	157	176	196	216
		NC (Noise Criterion)	-	-	13	19	24	29	32	36	40
		Total Pressure	0.015	0.025	0.040	0.058	0.079	0.103	0.130	0.161	0.196
		4 Way - Horizontal Throw	2-3-5	3-4-7	3-4-9	4-5-10	4-6-11	4-7-11	5-8-12	5-9-12	6-9-13
		3 Way - Horizontal Throw	3-4-8	4-5-12	4-7-14	5-8-15	6-10-17	7-12-18	8-12-19	10-14-20	11-15-21
		2 Way - Horizontal Throw	3-4-9	4-6-12	5-8-15	6-9-17	7-11-17	8-12-19	9-13-20	10-15-21	12-16-23
	1 Way - Horizontal Throw	3-4-9	4-6-12	4-7-14	6-9-18	7-11-20	8-12-23	9-13-27	10-14-29	11-16-32	
	8" Neck	Air Flow, cfm	105	140	175	209	244	279	314	349	384
		NC (Noise Criterion)	-	-	15	21	26	31	34	38	41
		Total Pressure	0.020	0.036	0.056	0.080	0.109	0.143	0.181	0.224	0.271
		4 Way - Horizontal Throw	2-4-7	4-5-9	4-6-12	5-7-13	6-8-14	6-9-14	7-11-15	7-12-17	8-12-18
		3 Way - Horizontal Throw	4-6-11	5-7-15	6-9-19	7-11-20	8-13-22	9-15-24	11-17-25	13-19-27	14-20-28
2 Way - Horizontal Throw		4-6-12	6-8-17	7-11-20	8-12-22	9-14-24	11-17-26	12-18-27	13-20-28	15-21-31	
24" x 24" Module Size	6" Neck	Air Flow, cfm	59	78	98	118	137	157	176	196	216
		NC (Noise Criterion)	-	14	19	22	26	29	31	33	36
		Total Pressure	0.008	0.015	0.023	0.033	0.045	0.059	0.074	0.092	0.125
		4 Way - Horizontal Throw	1-2-5	2-3-6	3-4-8	3-5-9	4-6-10	4-6-11	5-7-11	5-8-12	6-9-13
		3 Way - Horizontal Throw	1-3-6	2-4-9	3-5-10	4-6-11	5-7-12	6-9-13	6-10-14	7-10-14	8-11-15
		2 Way - Horizontal Throw	3-5-10	4-6-11	5-8-12	6-9-13	7-10-14	9-11-15	10-12-16	10-12-018	11-13-19
	1 Way - Horizontal Throw	4-7-12	6-9-13	7-11-15	9-12-16	10-13-18	11-13-19	12-14-20	12-15-21	13-16-22	
	8" Neck	Air Flow, cfm	105	140	175	209	244	279	314	349	384
		NC (Noise Criterion)	10	16	21	24	28	31	33	35	37
		Total Pressure	0.011	0.020	0.032	0.046	0.062	0.081	0.103	0.127	0.154
		4 Way - Horizontal Throw	1-3-6	2-4-9	4-6-11	4-6-12	5-8-13	6-9-14	6-10-15	7-11-16	8-11-16
		3 Way - Horizontal Throw	1-4-9	3-6-11	4-7-13	4-9-15	6-10-16	8-11-18	9-13-18	10-13-19	11-14-21
2 Way - Horizontal Throw		4-6-13	6-9-15	7-11-16	9-12-18	10-13-19	11-15-21	12-16-22	13-16-23	14-17-24	
1 Way - Horizontal Throw	5-9-16	8-12-18	10-14-20	12-16-22	13-17-24	15-18-26	16-19-27	16-20-28	17-21-30		
10" Neck	Air Flow, cfm	164	218	273	327	382	436	491	545	600	
	NC (Noise Criterion)	11	17	22	25	28	31	33	36	38	
	Total Pressure	0.015	0.027	0.042	0.060	0.082	0.107	0.136	0.167	0.205	
	4 Way - Horizontal Throw	2-4-8	3-5-11	4-7-13	5-8-15	6-10-17	7-11-18	8-12-19	9-13-19	10-14-20	
	3 Way - Horizontal Throw	2-4-11	4-7-14	5-9-17	6-11-19	8-12-20	10-14-22	11-16-23	12-17-24	13-18-26	
	2 Way - Horizontal Throw	4-7-15	7-10-18	8-13-19	10-15-22	12-16-24	13-18-25	15-19-27	16-20-28	18-21-30	
1 Way - Horizontal Throw	7-10-19	9-15-22	12-18-25	15-19-28	16-21-30	19-22-32	19-24-34	21-25-35	22-27-37		
12" Neck	Air Flow, cfm	235	314	392	471	549	628	706	785	863	
	NC (Noise Criterion)	12	19	22	26	29	32	34	37	39	
	Total Pressure	0.018	0.033	0.051	0.074	0.100	0.131	0.166	0.205	0.250	
	4 Way - Horizontal Throw	2-4-10	3-6-13	5-9-16	6-10-18	7-12-20	9-13-21	10-1-22	11-16-23	12-17-24	
	3 Way - Horizontal Throw	2-5-13	4-9-17	6-11-20	6-13-22	10-15-24	12-17-27	13-19-28	14-20-29	16-21-31	
	2 Way - Horizontal Throw	6-10-19	9-13-22	11-16-24	13-18-27	15-20-29	17-22-31	19-23-33	20-24-35	21-26-36	
1 Way - Horizontal Throw	7-14-23	12-18-27	15-21-30	18-23-33	20-26-35	22-27-38	23-29-40	24-30-43	26-32-45		
14" Neck	Air Flow, cfm	320	427	534	641	748	855	961	1068	1175	
	NC (Noise Criterion)	13	18	23	27	30	33	35	37	40	
	Total Pressure	0.022	0.039	0.061	0.088	0.120	0.157	0.198	0.245	0.297	
	4 Way - Horizontal Throw	2-5-11	4-7-15	6-10-19	7-11-21	9-13-24	10-15-25	11-17-26	12-19-27	14-20-29	
	3 Way - Horizontal Throw	3-6-15	5-10-20	7-12-24	7-15-26	11-17-29	14-20-31	15-22-32	16-24-34	19-25-36	
	2 Way - Horizontal Throw	7-11-22	10-15-26	12-19-29	15-21-31	17-24-34	20-26-36	22-27-38	24-29-40	25-30-42	
1 Way - Horizontal Throw	6-16-27	14-21-31	17-25-35	21-27-38	24-30-41	26-32-45	27-34-47	29-36-50	30-37-52		
16" Neck	Air Flow, cfm	419	558	698	837	977	1116	1256	1395	1535	
	NC (Noise Criterion)	13	19	24	27	30	33	36	38	40	
	Total Pressure	0.026	0.046	0.072	0.103	0.141	0.184	0.233	0.287	0.347	
	4 Way - Horizontal Throw	3-6-13	4-9-17	7-11-21	9-13-24	10-15-27	11-17-28	13-20-30	14-21-31	16-23-33	
	3 Way - Horizontal Throw	4-7-17	6-11-23	9-14-27	10-17-30	13-20-33	16-23-35	17-26-37	19-27-38	21-28-41	
	2 Way - Horizontal Throw	9-13-26	11-17-30	14-21-33	17-23-35	20-27-38	23-30-41	26-31-44	27-33-47	28-34-48	
1 Way - Horizontal Throw	10-18-31	16-24-35	20-28-40	24-31-44	27-34-47	30-35-51	31-38-54	33-40-57	34-43-60		

- 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.
- Throw values given are for terminal velocities of 150, 100 and 50 fpm and for isothermal conditions.
- For an explanation of catalog throw data, see the Engineering Guidelines section of this catalog.
- NC values based on octave band 2 to 7 sound power levels minus a room absorption of 10 dB.

- Each NC value represents the noise criteria curve that 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 10⁻¹² watts.
- Dash (-) in space denotes an NC value of less than 10.
- All pressures are given in inches of water.
- To obtain static pressure, subtract the velocity pressure from the total pressure.



Performance Data (continued)

PCS • Square • Curved Blade • Adjustable • 1-, 2-, 3- or 4-way Deflectors

		Neck Velocity	300	400	500	600	700	800	900	1000	1100
		Velocity Pressure	0.006	0.010	0.016	0.022	0.031	0.040	0.051	0.062	0.075
12" x 12" Module Size	6 x 6 Neck	Air Flow, cfm	75	100	125	150	175	200	225	250	275
		NC (Noise Criterion)	-	-	14	20	25	30	34	37	41
		Total Pressure	0.016	0.029	0.046	0.066	0.089	0.117	0.148	0.182	0.220
		4 Way - Horizontal Throw	2-3-6	3-4-8	3-5-10	4-6-11	5-7-12	5-8-12	6-9-13	6-10-14	7-10-15
		3 Way - Horizontal Throw	3-5-9	4-6-13	5-8-16	6-9-17	7-11-19	8-13-20	9-14-21	11-16-23	12-17-24
		1 Way - Horizontal Throw	3-5-10	5-7-14	6-9-17	7-10-19	8-12-20	9-14-22	10-15-23	11-17-24	13-18-26
	8 x 8 Neck	Air Flow, cfm	133	178	222	267	311	356	400	444	489
		NC (Noise Criterion)	-	-	15	22	26	31	35	38	41
		Total Pressure	0.023	0.041	0.065	0.093	0.127	0.166	0.209	0.258	0.313
		4 Way - Horizontal Throw	3-4-8	3-5-10	4-6-13	5-8-14	6-9-16	7-10-17	8-12-18	9-13-19	10-14-20
		3 Way - Horizontal Throw	4-6-13	6-8-17	7-11-21	8-13-23	10-15-25	11-17-27	13-19-29	14-21-30	15-22-32
		1 Way - Horizontal Throw	5-7-14	6-9-18	8-11-23	9-14-25	11-16-27	12-18-29	14-21-31	15-23-33	17-24-34
24" x 24" Module Size	6 x 6 Neck	Air Flow, cfm	75	100	125	150	175	200	225	250	275
		NC (Noise Criterion)	-	15	19	23	26	29	32	34	36
		Total Pressure	0.010	0.017	0.027	0.039	0.053	0.069	0.087	0.107	0.130
		4 Way - Horizontal Throw	1-2-6	2-4-8	3-5-10	4-6-10	4-7-11	5-8-12	6-9-13	6-10-14	7-10-14
		3 Way - Horizontal Throw	1-3-8	2-5-10	3-6-12	5-8-13	6-9-14	7-10-15	8-11-16	8-12-17	9-12-18
		1 Way - Horizontal Throw	4-5-11	5-7-13	6-9-14	7-11-15	8-12-17	10-13-18	11-13-19	11-14-20	12-15-21
	8 x 8 Neck	Air Flow, cfm	133	178	222	267	311	356	400	444	489
		NC (Noise Criterion)	-	17	21	25	28	31	33	35	37
		Total Pressure	0.014	0.025	0.035	0.053	0.072	0.095	0.120	0.147	0.180
		4 Way - Horizontal Throw	1-3-8	3-5-10	4-6-13	5-8-14	6-9-15	7-10-16	8-11-17	8-13-18	9-13-19
		3 Way - Horizontal Throw	2-3-10	3-6-13	4-8-16	6-10-17	8-12-19	9-13-20	10-15-21	11-16-22	12-17-23
		1 Way - Horizontal Throw	5-7-14	6-10-17	8-12-19	10-14-20	11-16-22	13-17-24	14-18-25	15-19-26	16-20-28
10 x 10 Neck	Air Flow, cfm	208	278	347	417	486	556	625	694	764	
	NC (Noise Criterion)	12	18	22	26	29	31	34	36	38	
	Total Pressure	0.018	0.031	0.048	0.068	0.092	0.120	0.152	0.187	0.227	
	4 Way - Horizontal Throw	2-4-10	3-6-13	5-8-16	6-10-17	7-11-19	8-13-20	10-14-21	11-16-23	12-17-24	
	3 Way - Horizontal Throw	2-4-13	3-8-17	5-10-20	8-13-22	10-15-23	11-17-25	13-19-26	14-20-28	15-21-29	
	1 Way - Horizontal Throw	6-9-18	8-12-21	10-15-23	12-18-26	14-20-28	16-21-29	18-22-31	19-23-33	20-24-35	
12 x 12 Neck	Air Flow, cfm	300	400	500	600	700	800	900	1000	1100	
	NC (Noise Criterion)	12	18	22	26	29	32	35	37	39	
	Total Pressure	0.021	0.037	0.059	0.084	0.115	0.150	0.190	0.233	0.284	
	4 Way - Horizontal Throw	2-5-11	4-8-15	6-10-19	8-11-21	9-13-23	10-15-24	11-17-26	13-19-27	14-20-28	
	3 Way - Horizontal Throw	2-5-15	4-9-20	6-13-24	9-15-26	12-18-28	13-20-30	15-22-32	17-24-33	18-25-35	
	1 Way - Horizontal Throw	7-11-22	10-14-25	12-18-28	14-22-31	17-23-33	19-25-35	22-27-38	23-28-40	24-29-42	
14 x 14 Neck	Air Flow, cfm	408	544	681	817	953	1089	1225	1361	1497	
	NC (Noise Criterion)	13	19	23	27	30	33	35	38	40	
	Total Pressure	0.026	0.046	0.072	0.105	0.140	0.185	0.230	0.289	0.340	
	4 Way - Horizontal Throw	2-6-13	4-9-18	7-11-22	9-13-24	10-16-26	12-18-28	13-20-30	15-22-32	16-23-33	
	3 Way - Horizontal Throw	3-6-18	5-11-24	7-15-28	11-18-30	14-21-33	16-24-35	18-26-37	20-28-39	22-29-41	
	1 Way - Horizontal Throw	8-13-25	11-17-29	14-21-33	17-25-36	20-27-39	22-29-41	25-31-44	27-33-46	28-34-48	
15 x 15 Neck	Air Flow, cfm	469	625	781	938	1094	1250	1406	1563	1719	
	NC (Noise Criterion)	13	19	24	27	31	34	36	38	40	
	Total Pressure	0.028	0.049	0.078	0.110	0.150	0.195	0.245	0.302	0.365	
	4 Way - Horizontal Throw	3-6-14	5-10-19	7-12-24	10-14-26	11-17-28	13-19-30	14-22-32	16-24-34	18-25-35	
	3 Way - Horizontal Throw	3-6-19	5-11-25	8-16-30	11-19-32	15-22-35	17-25-37	19-28-40	21-30-42	23-31-44	
	1 Way - Horizontal Throw	9-14-27	12-18-31	15-23-35	18-27-38	21-29-41	24-31-44	27-33-47	29-35-49	30-37-52	
16 x 16 Neck	Air Flow, cfm	533	711	889	1067	1244	1422	1600	1778	1956	
	NC (Noise Criterion)	13	19	24	27	31	34	36	38	40	
	Total Pressure	0.030	0.054	0.084	0.120	0.163	0.214	0.268	0.335	0.405	
	4 Way - Horizontal Throw	3-6-15	5-10-20	8-13-26	10-15-28	12-18-30	14-20-32	15-23-34	17-26-36	19-27-38	
	3 Way - Horizontal Throw	3-7-20	5-12-27	8-17-32	12-20-35	16-24-37	18-27-40	20-30-42	22-32-45	25-33-47	
	1 Way - Horizontal Throw	10-14-29	13-19-33	16-24-37	19-29-41	22-31-44	26-33-47	29-35-50	30-37-53	32-39-55	

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PERFORMANCE DATA

