



Performance Data

MCD, MCD-AA • Square Ceiling • Modular Core • 1-, 2-, 3- or 4-way Blow Pattern

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
6 x 6 Neck	Airflow, cfm	75	100	125	150	175	200	225	250	275
	Total Pressure	0.011	0.019	0.030	0.043	0.059	0.077	0.097	0.120	0.145
	NC (Noise Criteria)	-	-	-	11	15	19	22	25	28
	1-Way - Horizontal Throw	8-11-16	10-13-18	12-15-21	13-16-23	14-17-24	15-18-26	16-20-28	17-21-29	18-22-30
	2-Way - Horizontal Throw	6-9-12	8-10-14	9-11-16	10-12-17	11-13-19	12-14-20	12-15-21	13-16-22	14-17-23
	3-Way - Horizontal Throw	5-8-12	7-10-13	9-11-15	10-12-16	10-13-18	11-13-19	12-14-20	12-15-21	13-16-22
4-Way - Horizontal Throw	4-5-8	5-6-9	6-7-10	6-8-11	7-8-12	7-9-13	8-9-13	8-10-14	9-10-15	
8 x 8 Neck	Airflow, cfm	133	178	222	267	311	356	400	444	489
	Total Pressure	0.013	0.023	0.036	0.053	0.071	0.093	0.118	0.146	0.177
	NC (Noise Criteria)	-	-	12	17	21	25	28	31	33
	1-Way - Horizontal Throw	10-15-21	14-17-25	16-19-27	17-21-30	19-23-32	20-25-35	21-26-37	22-27-39	23-29-41
	2-Way - Horizontal Throw	8-12-16	11-13-19	12-15-21	13-16-23	14-18-25	15-19-27	16-20-28	17-21-30	18-22-31
	3-Way - Horizontal Throw	7-11-16	10-13-18	12-14-20	13-16-22	14-17-24	15-18-25	16-19-27	16-20-28	17-21-30
4-Way - Horizontal Throw	5-7-10	6-8-12	8-9-13	8-10-15	9-11-16	10-12-17	10-13-18	11-13-19	11-14-20	
10 x 10 Neck	Airflow, cfm	208	278	347	417	486	556	625	694	764
	Total Pressure	0.016	0.029	0.045	0.065	0.088	0.115	0.145	0.179	0.217
	NC (Noise Criteria)	-	-	17	21	26	29	32	35	38
	1-Way - Horizontal Throw	13-19-27	17-22-31	20-24-34	22-27-38	23-29-41	25-31-43	27-33-46	28-34-48	29-36-51
	2-Way - Horizontal Throw	10-14-20	13-17-24	15-19-26	17-20-29	18-22-31	19-24-33	20-25-35	22-26-37	23-28-39
	3-Way - Horizontal Throw	9-14-19	12-16-22	14-18-25	16-19-27	17-21-30	18-22-32	19-24-34	20-25-35	21-26-37
4-Way - Horizontal Throw	6-9-13	8-11-15	10-12-17	11-13-18	11-14-20	12-15-21	13-16-22	14-17-23	14-17-25	
12 x 12 Neck	Airflow, cfm	300	400	500	600	700	800	900	1000	1100
	Total Pressure	0.020	0.035	0.055	0.079	0.108	0.141	0.178	0.220	0.266
	NC (Noise Criteria)	-	14	20	25	29	33	36	39	41
	1-Way - Horizontal Throw	16-23-32	21-26-37	24-29-41	26-32-45	28-34-49	30-37-52	32-39-55	34-41-58	35-43-61
	2-Way - Horizontal Throw	12-17-24	16-20-28	18-22-32	20-24-35	22-26-37	23-28-40	24-30-42	26-32-45	27-33-47
	3-Way - Horizontal Throw	11-16-23	14-19-27	17-21-30	19-23-33	21-25-36	22-27-38	23-29-40	25-30-42	26-32-45
4-Way - Horizontal Throw	7-11-15	10-13-18	12-14-20	13-15-22	14-17-24	15-18-25	15-19-27	16-20-28	17-21-30	
14 X 14 Neck	Airflow, cfm	408	544	681	817	953	1089	1225	1361	1497
	Total Pressure	0.024	0.043	0.067	0.097	0.132	0.172	0.217	0.268	0.325
	NC (Noise Criteria)	-	17	23	28	32	36	39	42	44
	1-Way - Horizontal Throw	18-26-37	24-30-43	28-34-48	30-37-53	33-40-57	35-43-61	37-46-64	39-48-68	41-50-71
	2-Way - Horizontal Throw	14-20-29	19-23-33	21-26-37	23-29-40	25-31-44	27-33-47	29-35-49	30-37-52	32-39-55
	3-Way - Horizontal Throw	13-19-27	17-22-31	20-25-35	22-27-38	24-29-41	26-31-44	27-33-47	29-35-50	30-37-52
4-Way - Horizontal Throw	8-13-18	11-15-21	13-16-23	15-18-25	16-19-28	17-21-29	18-22-31	19-23-33	20-24-34	
16 X 16 Neck	Airflow, cfm	533	711	889	1067	1244	1422	1600	1778	1956
	Total Pressure	0.029	0.052	0.081	0.117	0.159	0.207	0.263	0.324	0.392
	NC (Noise Criteria)	12	20	26	31	35	39	42	45	47
	1-Way - Horizontal Throw	21-30-42	28-35-49	32-39-55	35-42-60	37-46-65	40-49-69	42-52-74	45-55-78	47-57-81
	2-Way - Horizontal Throw	16-23-33	21-27-38	24-30-42	27-33-46	29-35-50	31-38-53	33-40-57	34-42-60	36-44-63
	3-Way - Horizontal Throw	14-22-31	19-25-36	23-28-40	25-31-44	27-34-47	29-36-51	31-38-54	33-40-57	34-42-59
4-Way - Horizontal Throw	10-14-21	13-17-24	15-19-27	17-21-29	18-22-31	19-24-34	21-25-36	22-27-38	23-28-39	
18 X 18 Neck	Airflow, cfm	675	900	1125	1350	1575	1800	2025	2250	2475
	Total Pressure	0.035	0.062	0.097	0.139	0.190	0.248	0.314	0.387	0.469
	NC (Noise Criteria)	15	22	28	33	37	41	44	47	49
	1-Way - Horizontal Throw	28-34-48	32-39-55	36-44-62	39-48-68	42-52-73	45-55-78	48-59-83	50-62-87	53-65-91
	2-Way - Horizontal Throw	21-26-37	24-30-42	27-34-47	30-37-52	32-40-56	35-42-60	37-45-64	39-47-67	41-50-70
	3-Way - Horizontal Throw	20-25-35	23-29-40	26-32-45	29-35-49	31-38-53	33-40-57	35-43-60	37-45-64	39-47-67
4-Way - Horizontal Throw	13-16-23	15-19-27	17-21-30	19-23-33	20-25-35	22-27-38	23-28-40	24-30-42	26-31-44	
20 X 20 Neck	Airflow, cfm	833	1111	1389	1667	1944	2222	2500	2778	3056
	Total Pressure	0.041	0.073	0.114	0.165	0.224	0.293	0.371	0.458	0.554
	NC (Noise Criteria)	17	24	30	35	39	43	46	49	52
	1-Way - Horizontal Throw	31-38-53	35-43-61	40-48-69	43-53-75	47-57-81	50-61-87	53-65-92	56-69-97	59-72-102
	2-Way - Horizontal Throw	24-29-41	27-33-47	30-37-53	33-41-58	36-44-62	38-47-67	41-50-71	43-53-75	45-55-78
	3-Way - Horizontal Throw	22-27-39	26-32-45	29-35-50	32-39-55	34-42-59	37-45-63	39-48-67	41-50-71	43-53-74
4-Way - Horizontal Throw	15-18-26	17-21-30	19-23-33	21-26-36	23-28-39	24-30-42	26-32-45	27-33-47	28-35-49	



Performance Data (continued)

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	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
22 X 22 Neck	Airflow, cfm	1008	1344	1681	2017	2353	2689	3025	3361	3697
	Total Pressure	0.048	0.086	0.134	0.193	0.263	0.343	0.434	0.536	0.648
	NC (Noise Criteria)	19	26	32	37	41	45	48	51	53
	1-Way - Horizontal Throw	34-41-58	39-48-67	44-53-75	48-58-83	51-63-89	55-67-95	58-72-101	62-75-107	65-79-112
	2-Way - Horizontal Throw	26-32-45	30-37-52	33-41-58	37-45-64	40-49-69	42-52-73	45-55-78	47-58-82	50-61-86
	3-Way - Horizontal Throw	25-30-43	28-35-49	32-39-55	35-43-60	38-46-65	40-49-70	43-52-74	45-55-78	47-58-82
4-Way - Horizontal Throw	16-20-28	19-23-33	21-26-37	23-28-40	25-31-43	27-33-46	28-35-49	30-37-52	31-38-54	
24 X 24 Neck	Airflow, cfm	1200	1600	2000	2400	2800	3200	3600	4000	4400
	Total Pressure	0.056	0.099	0.155	0.224	0.304	0.398	0.503	0.621	0.752
	NC (Noise Criteria)	20	28	34	39	43	47	50	53	55
	1-Way - Horizontal Throw	37-45-64	42-52-74	47-58-82	52-64-90	56-69-97	60-74-104	64-78-110	67-82-116	70-86-122
	2-Way - Horizontal Throw	28-35-49	33-40-57	37-45-63	40-49-69	43-53-75	46-57-80	49-60-85	52-63-89	54-66-94
	3-Way - Horizontal Throw	27-33-47	31-38-54	35-42-60	38-47-66	41-50-71	44-54-78	47-57-81	49-60-85	51-63-89
4-Way - Horizontal Throw	18-22-31	21-25-36	23-28-40	25-31-44	27-33-47	29-36-50	31-38-53	33-40-56	34-42-59	
6" Round in 6x6 Square Neck	Air Flow, cfm	60	80	100	120	140	160	180	200	220
	Total Pressure	0.016	0.029	0.046	0.066	0.089	0.117	0.148	0.182	0.221
	NC (Noise Criteria)	-	15	19	23	26	28	30	33	34
	1-way Throw	3-5-10	5-7-14	6-9-15	7-10-17	8-12-18	9-14-20	10-15-21	12-15-22	13-16-23
	2-way Throw	3-5-10	4-7-11	6-8-12	7-10-14	8-10-15	9-11-16	10-12-17	10-12-18	11-13-18
	3-way Throw	2-3-7	3-5-9	4-6-11	5-7-12	5-8-13	6-9-14	7-10-14	8-11-15	9-11-16
4-way Throw	1-2-4	1-3-5	2-3-7	3-4-8	3-5-9	3-5-10	4-6-10	4-7-11	5-7-11	
6" Round in 12x12 Square Neck	Air Flow, cfm	60	80	100	120	140	160	180	200	220
	Total Pressure	0.007	0.012	0.019	0.027	0.037	0.048	0.061	0.075	0.091
	NC (Noise Criteria)	15	22	26	30	33	36	39	41	43
	1-way Throw	1-3-9	3-6-12	4-7-13	6-9-15	7-10-16	8-12-17	9-13-18	10-13-19	11-14-20
	2-way Throw	1-2-7	2-4-9	3-6-10	4-7-11	5-8-12	6-9-13	7-10-14	8-10-14	8-11-15
	3-way Throw	1-2-6	2-4-8	3-5-9	4-6-10	5-7-11	5-8-12	6-9-12	7-9-13	7-10-14
4-way Throw	1-2-4	1-2-5	2-3-6	2-4-7	3-4-8	3-5-8	4-5-9	4-6-9	4-7-9	
8" Round in 12x12 Square Neck	Air Flow, cfm	105	140	175	209	244	279	314	349	384
	Total Pressure	0.008	0.014	0.022	0.032	0.043	0.056	0.071	0.088	0.106
	NC (Noise Criteria)	-	-	15	19	22	25	27	29	31
	1-way Throw	3-6-13	5-9-17	7-11-19	9-13-21	10-15-23	12-17-24	13-18-26	15-19-27	16-20-28
	2-way Throw	3-6-13	5-8-15	7-10-17	8-12-18	9-14-20	10-15-21	12-16-22	13-17-24	14-18-25
	3-way Throw	2-5-9	4-6-12	5-8-15	6-9-17	7-11-18	8-12-19	9-14-20	10-15-22	11-16-23
4-way Throw	2-4-7	3-5-9	4-6-10	5-7-11	5-8-12	6-9-12	7-9-13	8-10-14	8-10-15	
10" Round in 12x12 Square Neck	Air Flow, cfm	164	218	273	327	382	436	491	545	600
	Total Pressure	0.010	0.019	0.029	0.042	0.057	0.074	0.094	0.116	0.140
	NC (Noise Criteria)	-	-	14	18	22	25	28	31	33
	1-way Throw	5-10-18	8-13-20	11-16-23	13-18-25	15-19-27	17-20-29	18-22-31	19-23-32	19-24-34
	2-way Throw	3-7-15	5-10-18	8-12-20	10-15-22	11-17-24	13-18-26	15-19-27	16-20-29	17-21-30
	3-way Throw	2-4-10	4-7-13	6-8-15	7-10-16	8-12-18	9-13-19	10-14-20	11-15-21	12-16-22
4-way Throw	2-4-8	3-5-10	4-7-11	5-8-12	6-9-13	7-10-14	8-10-14	9-11-15	9-11-16	
12" Round in 12x12 Square Neck	Air Flow, cfm	236	314	393	471	550	628	707	785	864
	Total Pressure	0.014	0.025	0.040	0.057	0.078	0.101	0.128	0.158	0.192
	NC (Noise Criteria)	-	12	18	23	26	30	33	35	38
	1-way Throw	13-17-24	16-19-28	18-22-31	19-24-34	21-26-36	22-28-39	24-29-41	25-31-44	26-32-46
	2-way Throw	8-12-18	10-15-21	13-16-23	15-18-26	16-20-28	17-21-29	18-22-31	19-23-33	20-24-35
	3-way Throw	7-11-19	9-14-22	12-17-25	14-19-27	16-21-29	18-22-31	19-23-33	20-25-35	21-26-37
4-way Throw	2-5-12	4-8-15	6-10-17	8-12-18	10-14-20	11-15-21	12-16-22	14-17-23	14-17-23	

Performance Data

- Data obtained from tests conducted in accordance with ANSI/ASHRAE Standard 70-1991. Actual performance, with flexible duct inlet, may vary in the field. See the section, Engineering Guidelines for this catalog for additional information.
- Dash (-) in space denotes an NC value of less than 10.

- Throw values given are for terminal velocities of 150, 100 and 50 fpm and for isothermal conditions. See the section, Engineering Guidelines for the catalog throw data information.
- 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.
- All pressures are given in inches of water.
- To obtain static pressure, subtract the velocity pressure from the total pressure.

