

PERFORMANCE DATA

Ceiling Diffuser Directional/(S1) 1-Way Air Pattern

MODEL CDD

Neck Size		Neck Velocity					
		200	300	400	500	600	700
		Ps	0.018	0.040	0.071	0.111	0.160
	Pt	0.020	0.046	0.081	0.127	0.182	0.248
6 x 6	Total CFM	50	75	100	125	150	175
	Throw	5-9	8-15	13-20	18-26	22-31	26-37
	NC	-	-	-	-	23	28
9 x 9	Total CFM	113	169	225	281	338	394
	Throw	8-16	12-21	17-27	22-32	27-38	31-44
	NC	-	-	-	24	29	37
12 x 12	Total CFM	200	300	400	500	600	700
	Throw	11-22	16-27	21-33	26-38	31-44	35-50
	NC	-	-	22	27	32	37
15 x 15	Total CFM	313	469	625	781	938	1094
	Throw	12-24	17-30	23-35	28-41	33-47	37-52
	NC	-	-	24	29	34	39
18 x 18	Total CFM	450	675	900	1125	1350	1575
	Throw	14-26	22-32	33-45	36-48	38-52	40-56
	NC	-	20	25	30	35	40
21 x 21	Total CFM	613	919	1225	1531	1837	2144
	Throw	16-28	26-34	33-43	37-51	40-55	42-58
	NC	-	21	26	31	36	41
24 x 24	Total CFM	800	1200	1600	2000	2400	2800
	Throw	19-29	28-36	39-45	40-53	41-59	44-61
	NC	-	22	27	32	37	42
27 x 27	Total CFM	1013	1519	2025	2531	3037	3544
	Throw	21-31	30-39	35-49	41-55	43-60	46-64
	NC	-	23	28	33	38	43

PERFORMANCE DATA/

Ceiling Diffuser Directional/(S2/SC) 2-Way/2-Way Corner Air Pattern

MODEL CDD

Neck Size		Neck Velocity					
		200	300	400	500	600	700
		<i>Ps</i>	0.018	0.040	0.071	0.111	0.160
	<i>Pt</i>	0.020	0.046	0.081	0.127	0.182	0.248
6 x 6	Total CFM	50	75	100	125	150	175
	CFM/Side	25	38	50	63	75	88
	Throw	3-6	7-2	11-17	16-23	20-28	24-34
	NC	-	-	-	-	23	28
9 x 9	Total CFM	113	169	225	281	338	394
	CFM/Side	56	84	113	141	169	197
	Throw	5-10	9-15	13-21	18-27	23-32	27-38
	NC	-	-	-	24	29	34
12 x 12	Total CFM	200	300	400	500	600	700
	CFM/Side	100	150	200	250	300	350
	Throw	7-14	12-20	16-26	21-31	26-37	30-42
	NC	-	-	22	27	32	37
15 x 15	Total CFM	313	469	625	781	938	1094
	CFM/Side	156	234	313	391	469	547
	Throw	10-19	14-25	19-30	25-36	30-41	33-47
	NC	-	-	24	29	34	39
18 x 18	Total CFM	450	675	900	1125	1350	1575
	CFM/Side	225	338	450	563	675	788
	Throw	12-23	16-28	22-34	27-39	32-45	36-51
	NC	-	20	25	30	35	40
21 x 21	Total CFM	613	919	1225	1531	1837	2144
	CFM/Side	306	459	613	766	919	1072
	Throw	12-24	17-30	23-35	28-41	33-47	37-52
	NC	-	21	26	31	36	41
24 x 24	Total CFM	800	1200	1600	2000	2400	2800
	CFM/Side	400	600	800	1000	1200	1400
	Throw	12-22	16-28	21-34	27-39	32-45	36-50
	NC	-	22	27	32	37	42
27 x 27	Total CFM	1013	1519	2025	2531	3037	3544
	CFM/Side	506	759	1013	1206	1519	1772
	Throw	8-15	12-21	17-27	22-32	27-38	31-43
	NC	-	23	28	33	38	43

PERFORMANCE DATA

Ceiling Diffuser Directional/(S3) 3-Way Air Pattern

MODEL CDD

Neck Size		Neck Velocity																	
		200		300		400		500		600		700							
		Ps	0.013		0.030		0.053		0.083		0.120		0.163						
		Pt	0.016		0.036		0.063		0.099		0.142		0.194						
SD	A	B	A	B	A	B	A	B	A	B	A	B							
6 x 6	Total CFM		50		75		100		125		150		175						
	CFM/Side	19		13	28		19	38		25	47		31	56		38	66		44
	Throw	3-5		2-4	6-11		6-10	10-16		10-16	15-22		15-21	20-28		19-27	24-33		23-32
	NC		-		-		-		-		-		23			28			
9 x 9	Total CFM		113		169		225		281		338		394						
	CFM/Side	42		28	63		42	84		56	105		70	127		84	148		98
	Throw	4-8		3-6	8-14		7-12	12-19		11-18	17-25		16-23	22-31		21-29	26-36		24-34
	NC		-		-		-		24		29		34						
12 x 12	Total CFM		200		300		400		500		600		700						
	CFM/Side	75		50	113		75	150		100	188		125	225		150	263		175
	Throw	6-12		5-9	10-17		8-15	15-23		13-20	20-29		18-26	24-34		22-31	28-40		26-37
	NC		-		-		22		27		32		37						
15 x 15	Total CFM		313		469		625		781		938		1094						
	CFM/Side	75		50	176		117	234		156	293		195	352		234	410		273
	Throw	6-12		5-9	12-22		10-18	17-27		15-23	23-33		20-29	27-38		25-35	31-44		29-40
	NC		-		-		24		29		34		39						
18 x 18	Total CFM		450		675		900		1125		1350		1575						
	CFM/Side	169		113	253		169	338		225	422		281	506		338	591		394
	Throw	10-20		8-16	15-25		12-21	20-31		17-27	25-37		22-32	30-42		27-38	34-48		31-44
	NC		-		20		25		30		35		40						
21 x 21	Total CFM		613		919		1225		1531		1837		2144						
	CFM/Side	230		153	345		230	459		306	574		383	689		459	804		536
	Throw	12-23		10-19	16-28		14-24	22-34		19-30	27-40		24-36	32-45		29-41	36-51		33-47
	NC		-		21		16		31		36		41						
24 x 24	Total CFM		800		1200		1600		2000		2400		2800						
	CFM/Side	300		200	450		300	600		400	750		500	900		600	1050		700
	Throw	12-24		11-22	17-30		16-27	23-35		21-33	28-41		26-38	33-47		31-44	37-52		35-50
	NC		-		22		27		32		37		42						
27 x 27	Total CFM		1013		1519		2025		2531		3037		3544						
	CFM/Side	380		253	570		380	759		506	949		633	1139		759	1329		886
	Throw	12-23		12-24	17-29		17-19	22-34		22-35	27-40		28-40	32-46		33-46	36-51		37-52
	NC		-		23		28		33		38		43						

PERFORMANCE DATA

Ceiling Diffuser Directional/(S4) 4-Way Air Pattern

MODEL CDD

Neck Size		Neck Velocity					
		200	300	400	500	600	700
		<i>Ps</i>	<i>0.013</i>	<i>0.030</i>	<i>0.053</i>	<i>0.083</i>	<i>0.120</i>
	<i>Pt</i>	<i>0.016</i>	<i>0.036</i>	<i>0.063</i>	<i>0.099</i>	<i>0.142</i>	<i>0.194</i>
6 x 6	Total CFM	50	75	100	125	150	175
	CFM/Side	13	19	25	31	38	44
	Throw	2-4	6-10	10-16	15-21	19-27	23-32
	NC	-	-	-	-	23	28
9 x 9	Total CFM	113	169	225	281	338	394
	CFM/Side	28	42	56	70	84	98
	Throw	3-6	7-12	11-18	16-23	21-29	24-34
	NC	-	-	-	24	29	34
12 x 12	Total CFM	200	300	400	500	600	700
	CFM/Side	50	75	100	125	150	175
	Throw	5-9	8-15	13-20	18-26	22-31	26-37
	NC	-	-	22	27	32	37
15 x 15	Total CFM	313	469	625	781	938	1094
	CFM/Side	78	117	156	195	234	273
	Throw	6-12	10-18	15-23	20-29	25-35	29-40
	NC	-	-	24	29	34	39
18 x 18	Total CFM	450	675	900	1225	1350	1575
	CFM/Side	113	169	225	306	338	394
	Throw	8-16	12-21	17-27	22-32	27-38	31-44
	NC	-	20	25	30	35	40
21 x 21	Total CFM	613	919	1225	1531	1837	2144
	CFM/Side	153	230	306	383	459	536
	Throw	10-19	14-24	19-30	24-36	29-41	33-47
	NC	-	21	26	31	36	41
24 x 24	Total CFM	800	1200	1600	2000	2400	2800
	CFM/Side	200	300	400	500	600	700
	Throw	11-22	16-27	21-33	26-38	31-44	35-50
	NC	-	22	27	32	37	42
27 x 27	Total CFM	1013	1519	2025	2531	3037	3544
	CFM/Side	253	380	506	633	759	886
	Throw	12-24	17-29	22-35	28-40	33-46	37-52
	NC	-	23	28	33	38	43
33 x 33	Total CFM	1513	2269	3025	3781	4537	5294
	CFM/Side	378	567	756	945	1134	1323
	Throw	12-23	17-29	22-34	27-40	33-46	36-51
	NC	-	24	29	34	39	44

PERFORMANCE NOTES FOR SERIES CDD

All data is tested in accordance with ANSI/ASHRAE 70-2006

DEFINITION OF UNITS

CFM Cubic Feet per Minute (air)

Horizontal Throw Throw distance in feet at terminal velocities of 150fpm and 50fpm.

NC Noise criterion, sound pressure level NC ratings are based on sound power level (Lw) re: 10^{-12} watts minus a 10dB room attenuation in all octave bands

P_s Static pressure = $P_t - P_v$ (inches of water column)

P_t Total pressure (inches of water column)

P_v Velocity pressure (inches of water column)

fpm Velocity of air stream in Feet per Minute