

**PERFORMANCE DATA**  
**Ceiling Diffuser Square Cone**  
**MODEL CDS/CDS-A**

Listed Size	Neck Size	fpm Vn	400	500	600	700	800	900	1000	1200	1400	2000
		Pv	0.01	0.016	0.022	0.031	0.04	0.05	0.062	0.09	0.122	0.249
12 x 12	6	CFM	80	100	120	135	155	175	195	235	275	395
		Ps	0.021	0.033	0.048	0.061	0.080	0.102	0.127	0.184	0.253	0.521
		Pt	0.031	0.049	0.071	0.091	0.120	0.153	0.189	0.274	0.375	0.770
		Throw*	2-3-6	3-4-7	3-5-7	3-5-8	4-6-8	4-6-9	5-7-9	6-7-10	6-8-11	8-9-13
		Throw	3-4-6	3-5-7	4-5-7	4-6-8	5-6-8	5-6-9	5-7-9	6-7-10	6-8-11	8-10-13
		NC	-	-	18	20	23	26	28	33	36	44
	8	CFM	140	175	210	245	280	315	350	420	490	700
		Ps	0.029	0.046	0.066	0.090	0.118	0.149	0.184	0.265	0.360	0.735
		Pt	0.039	0.062	0.089	0.121	0.158	0.199	0.246	0.354	0.482	0.984
		Throw*	3-4-8	3-5-9	4-6-10	5-7-11	5-8-11	6-8-12	7-9-13	8-10-14	9-11-15	10-13-18
		Throw	3-5-8	4-6-9	5-7-10	6-7-11	7-8-11	7-8-12	7-9-13	8-10-14	9-11-15	10-13-18
		NC	-	-	19	22	25	28	31	36	40	46
20 x 20	6	CFM	80	100	120	135	155	175	195	235	275	395
		Ps	0.018	0.027	0.040	0.051	0.066	0.085	0.105	0.153	0.209	0.432
		Pt	0.028	0.043	0.062	0.081	0.106	0.136	0.167	0.242	0.331	0.682
		Throw*	2-2-5	2-3-5	2-3-6	3-3-6	3-4-6	4-5-6	4-5-7	5-6-7	5-6-8	5-6-9
		Throw	2-4-7	3-5-8	4-5-9	4-6-9	5-7-9	5-8-10	6-8-11	7-9-12	8-10-14	9-11-15
		NC	-	-	-	-	-	18	21	26	31	49
	8	CFM	140	175	210	245	280	315	350	420	490	700
		Ps	0.021	0.033	0.047	0.062	0.082	0.104	0.129	0.185	0.252	0.514
		Pt	0.031	0.048	0.069	0.093	0.122	0.155	0.191	0.275	0.374	0.764
		Throw*	2-3-6	3-4-7	3-5-7	4-6-8	4-6-8	5-6-9	5-7-9	6-7-9	7-8-10	8-10-11
		Throw	3-5-10	4-6-11	5-7-12	6-9-12	6-10-13	7-10-14	8-11-14	10-12-15	11-13-16	13-16-20
		NC	-	-	-	-	-	21	24	30	35	63
	10	CFM	220	275	325	380	435	490	545	655	765	1090
		Ps	0.025	0.039	0.055	0.074	0.098	0.125	0.153	0.222	0.303	0.615
		Pt	0.035	0.055	0.077	0.105	0.138	0.175	0.216	0.312	0.425	0.864
		Throw*	3-4-8	3-5-8	4-6-9	5-7-9	5-8-10	6-8-10	7-8-11	8-9-12	8-10-13	10-12-16
		Throw	4-6-11	5-8-13	6-9-15	7-11-15	8-12-16	9-13-17	10-14-18	12-15-19	13-16-21	16-19-25
		NC	-	-	-	-	18	23	28	35	40	72
24 x 24	6	CFM	80	100	120	135	155	175	195	235	275	395
		Ps	0.014	0.021	0.031	0.039	0.051	0.065	0.081	0.118	0.161	0.332
		Pt	0.024	0.037	0.053	0.069	0.091	0.116	0.143	0.207	0.283	0.582
		Throw*	2-2-5	2-3-5	2-4-6	3-4-6	3-4-6	4-5-7	4-5-7	5-6-8	5-6-8	6-7-10
		Throw	2-4-7	3-5-8	4-6-9	4-6-10	5-7-10	5-8-11	6-8-12	7-9-13	8-10-14	10-12-17
		NC	-	-	-	-	-	16	18	23	27	43
	8	CFM	140	175	210	245	280	315	350	420	490	700
		Ps	0.016	0.025	0.036	0.048	0.063	0.080	0.099	0.142	0.194	0.395
		Pt	0.026	0.040	0.058	0.079	0.103	0.131	0.161	0.232	0.316	0.645
		Throw*	2-3-6	3-4-7	3-5-7	4-6-8	4-6-9	5-6-9	5-7-10	6-7-10	7-8-11	8-10-13
		Throw	3-5-10	4-6-11	5-7-12	6-9-13	6-10-14	7-10-15	8-11-16	10-12-17	11-13-18	13-16-22
		NC	-	-	-	-	-	18	21	26	30	55

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Listed Size	Neck Size	fpm Vn	400	500	600	700	800	900	1000	1200	1400	2000
		Pv	0.01	0.016	0.022	0.031	0.04	0.05	0.062	0.09	0.122	0.249
24 x 24	10	CFM	220	275	325	380	435	490	545	655	765	1090
		Ps	0.019	0.030	0.042	0.057	0.075	0.096	0.118	0.171	0.233	0.473
		Pt	0.029	0.046	0.064	0.088	0.115	0.146	0.181	0.261	0.355	0.722
		Throw*	3-4-8	3-5-8	4-6-9	5-7-10	5-8-11	6-8-11	7-8-12	8-9-13	8-10-14	10-12-17
		Throw	4-6-12	5-8-14	6-9-15	7-11-16	8-12-17	9-13-18	10-14-19	12-15-21	13-16-23	16-19-28
		NC	-	-	-	-	16	20	24	30	35	63
	12	CFM	315	395	470	550	630	705	785	940	1100	1570
		Ps	0.021	0.033	0.046	0.063	0.083	0.104	0.129	0.185	0.253	0.515
		Pt	0.031	0.048	0.069	0.094	0.123	0.154	0.191	0.274	0.375	0.765
		Throw*	3-5-9	4-6-10	5-7-11	6-8-12	7-9-13	7-10-14	8-10-14	9-11-16	10-12-17	12-14-20
		Throw	5-7-15	6-9-17	7-11-18	8-13-20	10-15-21	11-16-22	12-17-23	14-18-26	16-20-28	19-23-33
		NC	-	-	-	-	19	23	27	33	39	68
	14	CFM	430	535	640	750	855	960	1070	1285	1495	2140
		Ps	0.026	0.041	0.058	0.080	0.104	0.131	0.163	0.234	0.377	0.650
		Pt	0.036	0.056	0.081	0.110	0.144	0.181	0.225	0.324	0.440	0.900
		Throw*	4-6-11	5-7-12	6-9-13	7-10-14	8-11-15	9-11-16	10-12-17	11-13-18	11-14-20	14-17-24
		Throw	6-9-17	7-11-19	8-13-21	10-15-23	11-17-24	13-18-26	14-19-27	17-21-30	19-23-32	22-27-39
		NC	-	*	-	-	18	23	28	35	40	57
	15	CFM	490	615	735	860	980	1105	1225	1475	1720	2455
		Ps	0.032	0.051	0.072	0.099	0.129	0.164	0.201	0.292	0.396	0.808
		Pt	0.042	0.066	0.095	0.130	0.169	0.214	0.263	0.381	0.519	1.057
		Throw*	4-6-11	5-8-13	6-9-14	7-11-15	8-11-16	9-12-17	10-13-18	11-14-20	12-15-21	15-18-25
		Throw	6-9-18	8-11-21	9-14-23	11-16-24	12-18-26	14-20-28	15-21-29	18-23-32	20-24-35	24-29-41
		NC	-	-	-	16	22	27	31	39	46	68

**PERFORMANCE NOTES FOR SERIES CDS/CDS-A**

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

**DEFINITION OF UNITS**

- CFM Cubic Feet per Minute (air)
- fpm Velocity of air stream in Feet per Minute
- Pv Velocity pressure (inches of water column)
- Pt Total pressure (inches of water column)
- Ps Static pressure = Pt-Pv (inches of water column)
- Throw\* Non-isothermal horizontal throw (supply air temperature 15°F colder than average room temperature); values are for 150, 100 and 50fpm velocities
- Throw Isothermal throw (supply air temperature the same as average room temperature); values are for 150, 100 and 50fpm velocities
- NC Noise criterion, sound pressure level NC ratings are based on sound power level (Lw) re: 10<sup>-12</sup> watts minus a 10dB room attenuation in all octave bands
- Vn Neck Velocity