

PERFORMANCE DATA

Ceiling Diffuser - Industrial Round Model CDIR

Neck Velocity		400	500	600	700	800	900	1000	1200	1400	1600
Velocity Pressure		0.01	0.016	0.022	0.031	0.04	0.05	0.062	0.09	0.122	0.16
6	CFM	80	100	120	135	155	175	195	235	275	315
	Ps - H	0.004	0.007	0.010	0.013	0.017	0.022	0.027	0.039	0.052	0.069
	Pt -H	0.014	0.022	0.032	0.044	0.057	0.072	0.089	0.128	0.175	0.228
	Ps - V	0.02	0.032	0.046	0.062	0.081	0.103	0.127	0.182	0.248	0.324
	Pt -V	0.03	0.047	0.068	0.093	0.121	0.153	0.189	0.272	0.371	0.484
	NC H	-	-	15	16	17	19	21	24	26	29
	NC V	-	-	-	-	15	16	18	22	25	29
	Throw H C	1-1-3	1-2-3	1-2-4	1-2-4	2-2-5	2-3-6	2-3-6	2-4-7	3-4-9	3-5-9
	Throw V C	2-4-8	4-5-11	4-6-13	5-7-14	5-8-16	6-9-19	7-10-21	8-12-25	10-15-29	11-17-33
	Throw V H	0-1-3	1-2-4	1-2-4	1-2-5	2-3-6	2-3-6	2-4-7	3-4-8	3-5-10	4-6-11
8	CFM	140	175	210	245	280	315	350	420	490	560
	Ps - H	0.003	0.004	0.006	0.009	0.011	0.014	0.018	0.026	0.035	0.046
	Pt -H	0.013	0.020	0.029	0.039	0.051	0.065	0.080	0.115	0.157	0.205
	Ps - V	0.012	0.018	0.026	0.036	0.046	0.059	0.073	0.104	0.142	0.186
	Pt -V	0.022	0.034	0.049	0.066	0.086	0.109	0.135	0.194	0.264	0.345
	NC H	-	16	18	20	21	23	25	28	31	34
	NC V	-	-	+	-	-	17	19	24	28	32
	Throw H C	1-2-3	1-2-4	2-2-5	2-3-6	2-3-7	2-4-7	3-4-8	3-5-10	4-6-12	4-7-12
	Throw V C	3-6-11	5-7-14	6-8-17	6-10-19	7-11-22	8-13-25	9-14-28	11-17-33	13-19-39	15-22-45
	Throw V H	1-1-4	1-2-5	1-3-6	2-3-7	3-4-8	3-4-9	3-5-9	4-6-11	4-7-13	5-8-15
10	CFM	220	275	325	380	435	490	545	655	765	875
	Ps - H	0.003	0.004	0.006	0.009	0.011	0.014	0.018	0.026	0.035	0.046
	Pt -H	0.013	0.020	0.029	0.039	0.051	0.065	0.080	0.115	0.157	0.205
	Ps - V	0.012	0.018	0.026	0.036	0.046	0.059	0.073	0.104	0.142	0.186
	Pt -V	0.022	0.034	0.049	0.066	0.086	0.109	0.135	0.194	0.264	0.345
	NC H	-	16	17	19	20	22	23	26	29	32
	NC V	-	-	-	-	-	15	17	23	27	31
	Throw H C	1-2-4	2-3-5	2-3-6	2-4-7	3-4-8	3-5-9	3-5-10	4-6-12	5-7-14	6-8-15
	Throw V C	4-7-14	6-9-18	7-10-21	8-12-24	9-14-28	10-16-31	12-17-35	14-21-42	16-24-49	10-28-56
	Throw V H	1-2-5	1-3-6	2-4-7	2-4-8	3-5-9	4-5-11	4-6-12	5-7-14	6-8-17	6-9-19
12	CFM	315	395	470	550	630	705	785	940	1100	1255
	Ps - H	0.003	0.004	0.006	0.009	0.011	0.014	0.018	0.026	0.035	0.046
	Pt -H	0.013	0.02	0.029	0.039	0.051	0.065	0.080	0.115	0.157	0.205
	Ps - V	0.011	0.017	0.025	0.034	0.044	0.056	0.069	0.099	0.134	0.175
	Pt -V	0.021	0.033	0.047	0.064	0.084	0.106	0.131	0.188	0.257	0.335
	NC H	-	-	15	19	23	26	29	35	40	43
	NC V	-	-	-	17	20	23	27	32	37	41
	Throw H C	2-2-5	2-3-6	2-4-7	3-4-9	3-5-10	4-6-11	4-6-12	5-7-15	6-9-17	7-10-19
	Throw V C	4-8-17	7-10-21	8-12-25	10-15-29	11-17-33	12-19-37	14-21-42	17-25-50	19-29-58	22-33-67
	Throw V H	1-2-6	1-3-7	2-4-8	3-5-10	4-6-11	4-6-13	5-7-44	6-8-17	7-10-20	8-11-23
14	CFM	430	535	640	750	855	960	1070	1285	1495	1710
	Ps - H	0.003	0.004	0.006	0.009	0.011	0.014	0.018	0.026	0.035	0.046
	Pt -H	0.013	0.020	0.029	0.039	0.051	0.065	0.080	0.115	0.157	0.205
	Ps - V	0.011	0.017	0.024	0.033	0.043	0.055	0.068	0.097	0.133	0.173
	Pt -V	0.021	0.033	0.047	0.064	0.083	0.105	0.13	0.187	0.255	0.333
	NC H	-	16	21	25	29	32	36	41	44	46
	NC V	-	15	19	23	27	30	33	38	42	45
	Throw H C	2-3-6	2-4-7	3-4-9	3-5-10	4-6-12	4-6-13	5-7-14	6-9-17	7-10-20	8-12-22
	Throw V C	1-3-13	2-5-21	3-7-28	5-10-33	6-13-38	7-17-43	9-21-48	13-29-57	18-33-67	24-38-71
	Throw V H	1-2-5	1-3-7	2-4-8	3-5-9	4-5-11	4-6-12	4-7-13	5-8-16	6-9-19	7-11-22

PERFORMANCE DATA

Ceiling Diffuser - Industrial Round Model CDIR

Neck Velocity		400	500	600	700	800	900	1000	1200	1400	1600
Velocity Pressure		0.01	0.016	0.022	0.031	0.04	0.05	0.062	0.09	0.122	0.16
16	CFM	560	700	840	975	1115	1255	1395	1675	1955	2235
	Ps - H	0.003	0.004	0.006	0.009	0.011	0.014	0.018	0.026	0.035	0.046
	Pt -H	0.013	0.020	0.029	0.039	0.051	0.065	0.080	0.115	0.157	0.205
	Ps - V	0.010	0.016	0.024	0.032	0.042	0.053	0.066	0.094	0.129	0.168
	Pt -V	0.02	0.032	0.046	0.063	0.082	0.104	0.128	0.184	0.251	0.328
	NC H	15	20	25	29	33	37	40	45	48	50
	NC V	16	20	24	28	31	35	38	43	47	49
	Throw H C	2-3-7	3-4-8	3-5-10	4-6-12	4-7-13	5-7-15	6-8-17	7-10-20	8-12-23	9-13-25
	Throw V C	2-4-14	3-6-23	4-8-30	5-11-35	6-14-40	8-18-45	10-22-50	14-30-60	20-35-69	26-40-79
	Throw V H	1-2-6	1-3-8	2-4-9	2-5-11	3-6-12	4-7-14	5-8-16	6-9-19	7-11-22	8-12-25
18	CFM	705	885	1060	1235	1415	1590	1765	2120	2475	2825
	Ps - H	0.003	0.004	0.006	0.009	0.011	0.014	0.018	0.026	0.035	0.046
	Pt -H	0.013	0.02	0.029	0.039	0.051	0.065	0.08	0.115	0.157	0.205
	Ps - V	0.01	0.016	0.023	0.031	0.041	0.051	0.064	0.092	0.125	0.163
	Pt -V	0.02	0.031	0.045	0.062	0.081	0.102	0.126	0.181	0.247	0.322
	NC H	-	19	23	27	31	35	38	44	50	54
	NC V	-	16	21	25	30	34	37	43	49	52
	Throw H C	2-4-7	3-5-9	4-6-11	4-7-13	5-7-15	6-8-17	6-9-19	7-11-22	9-13-26	10-15-28
	Throw V C	2-4-14	3-6-23	4-8-32	5-11-37	6-14-43	8-18-48	10-23-53	14-32-64	20-37-74	26-43-85
	Throw V H	1-1-5	1-2-8	1-3-11	2-4-12	2-5-14	3-6-16	4-8-18	5-11-21	7-12-25	9-14-28
20	CFM	875	1090	1310	1525	1745	1965	2180	2620	3055	3490
	Ps - H	0.003	0.004	0.006	0.009	0.011	0.014	0.018	0.026	0.035	0.046
	Pt -H	0.013	0.02	0.029	0.039	0.051	0.065	0.08	0.115	0.157	0.205
	Ps - V	0.01	0.015	0.022	0.029	0.038	0.049	0.06	0.087	0.118	0.154
	Pt -V	0.02	0.031	0.044	0.06	0.078	0.099	0.123	0.176	0.24	0.314
	NC H	-	19	25	29	34	38	41	48	53	57
	NC V	-	-	20	25	30	35	39	45	50	52
	Throw H C	3-4-8	3-5-10	4-6-12	5-7-14	6-8-17	6-9-19	7-10-21	8-12-25	10-14-29	11-17-31
	Throw V C	2-4-14	2-6-22	4-8-32	5-11-41	6-14-47	8-18-553	10-22-59	14-32-71	19-41-83	25-47-95
	Throw V H	0-1-4	1-1-6	1-2-9	1-3-12	2-4-15	2-5-18	3-6-19	4-9-23	5-12-27	7-15-31
24	CFM	1255	1570	1885	2200	2515	2825	3140	3770	4400	5025
	Ps - H	0.002	0.004	0.005	0.007	0.009	0.012	0.015	0.021	0.029	0.038
	Pt -H	0.012	0.019	0.028	0.038	0.049	0.062	0.077	0.111	0.151	0.197
	Ps - V	0.009	0.014	0.021	0.028	0.037	0.047	0.058	0.083	0.113	0.148
	Pt -V	0.019	0.03	0.043	0.059	0.077	0.097	0.12	0.173	0.236	0.308
	NC H	-	19	25	31	36	40	44	50	54	56
	NC V	-	17	23	28	32	37	40	47	52	56
	Throw H C	3-5-10	4-6-12	5-7-15	6-9-17	7-10-20	7-11-22	8-12-25	10-15-30	12-17-35	13-20-37
	Throw V C	2-4-17	3-7-27	4-10-38	6-13-50	8-17-57	10-21-64	12-27-71	17-38-8	23-50-99	30-57-109
	Throw V H	1-1-5	1-2-7	1-3-10	2-3-14	2-5-18	3-6-21	3-7-23	5-10-28	6-14-33	8-18-37

PERFORMANCE NOTES FOR SERIES CDIR

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, 100fpm 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
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 = $P_t - P_v$ (inches of water column)
Throw	Isothermal throw (supply air temperature the same as average room temperature); values are for 150, 100 and 50fpm velocities
Ps -H	static pressure horizontal
Ps-V	static pressure vertical
Pt V	total pressure vertical
Throw H C	throw horizontal cooling
Throw V C	throw vertical cooling
Throw V H	vertical heating