

ROUND CEILING DIFFUSER PERFORMANCE DATA

MODELS: RD2S, RDAS

Listed Neck Size	Neck Velocity, FPM	400	500	600	700	800	900	1000	1200	1400	1600
	VP	.010	.016	.023	.031	.040	.051	.063	.090	.122	.160
6	TP	.024	.037	.056	.071	.092	.112	.138	.197	.272	.345
	Airflow, CFM	80	100	120	140	160	180	200	235	275	315
	RD	2-5	3-5	4-6	4-7	5-7	6-8	6-9	6-9	7-10	7-10
	NC	—	—	12	17	21	25	28	34	39	41
8	TP	.033	.049	.068	.095	.122	.155	.192	.270	.362	.470
	Airflow, CFM	140	175	210	245	280	315	350	420	490	560
	RD	3-7	4-8	5-8	6-9	7-10	8-10	9-11	8-12	9-13	10-14
	NC	—	—	14	19	23	27	30	36	41	44
10	TP	.041	.062	.098	.121	.157	.200	.245	.350	.477	.610
	Airflow, CFM	220	270	330	380	435	490	545	655	765	870
	RD	4-9	5-10	7-11	8-11	9-12	9-13	10-14	11-15	11-16	12-17
	NC	—	10	16	21	25	29	32	38	43	46
12	TP	.043	.066	.093	.127	.165	.206	.249	.355	.482	.620
	Airflow, CFM	315	390	470	550	630	705	785	940	1100	1255
	RD	5-10	7-12	8-13	9-14	10-15	11-16	12-16	13-18	14-19	15-21
	NC	—	12	18	23	27	31	34	40	45	48
14	TP	.041	.061	.087	.118	.150	.190	.337	.325	.442	.560
	Airflow, CFM	425	530	635	745	850	955	1060	1270	1490	1695
	RD	6-13	8-14	10-15	11-16	12-17	13-19	14-19	15-21	16-22	17-24
	NC	—	15	21	26	30	34	37	43	48	51
16	TP	.043	.060	.093	.127	.153	.206	.252	.350	.482	.580
	Airflow, CFM	560	700	840	980	1120	1260	1400	1680	1960	2240
	RD	6-12	7-13	9-15	10-16	12-17	13-18	13-18	14-20	16-22	18-24
	NC	—	16	22	27	31	35	38	44	49	52
18	TP	.044	.068	.097	.130	.167	.214	.253	.370	.492	.630
	Airflow, CFM	710	885	1060	1240	1420	1590	1770	2120	2480	2830
	RD	7-16	10-18	12-19	14-21	16-22	17-23	18-24	19-27	21-29	22-31
	NC	—	17	23	28	32	36	39	45	50	53
20	TP	.045	.069	.099	.135	.170	.215	.262	.375	.512	.645
	Airflow, CFM	875	1100	1310	1530	1750	1970	2190	2610	3060	3500
	RD	8-18	11-19	14-21	15-23	17-24	18-26	19-27	21-30	23-32	24-34
	NC	10	18	24	29	33	37	40	46	51	54
24	TP	.043	.066	.095	.131	.170	.215	.267	.360	.407	.660
	Airflow, CFM	1260	1570	1880	2200	2510	2820	3140	3770	4400	5020
	RD	10-21	13-23	16-25	18-28	21-29	22-31	25-36	25-36	28-39	29-42
	NC	12	19	25	30	34	38	41	47	52	55

CFM - cubic feet per minute

FPM - feet per minute velocity

TP - total pressure - inches w.g.

VP - velocity pressure - inches w.g.

RD - radius of diffusion in feet, isothermal

NC - Noise Criteria (values) based on 10 dB room absorption, re 10⁻¹² watts.

Performance Notes:

1. Radius of diffusion values are given at 100 and 50 fpm terminal velocities under isothermal conditions.

2. Performance data as shown is for the diffuser only, with the cones in the "down" position. Performance for the cones in the "up" position can be approximated by multiplying the total pressures by 1.6, adding 5 NC to the sound levels, and multiplying the radius of diffusion by .90.

3. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 2006.

Listed Size	Ak Factor
6	.120
8	.200
10	.310
12	.440
14	.570
16	.785
18	.990
20	1.220
24	1.770