

RCD

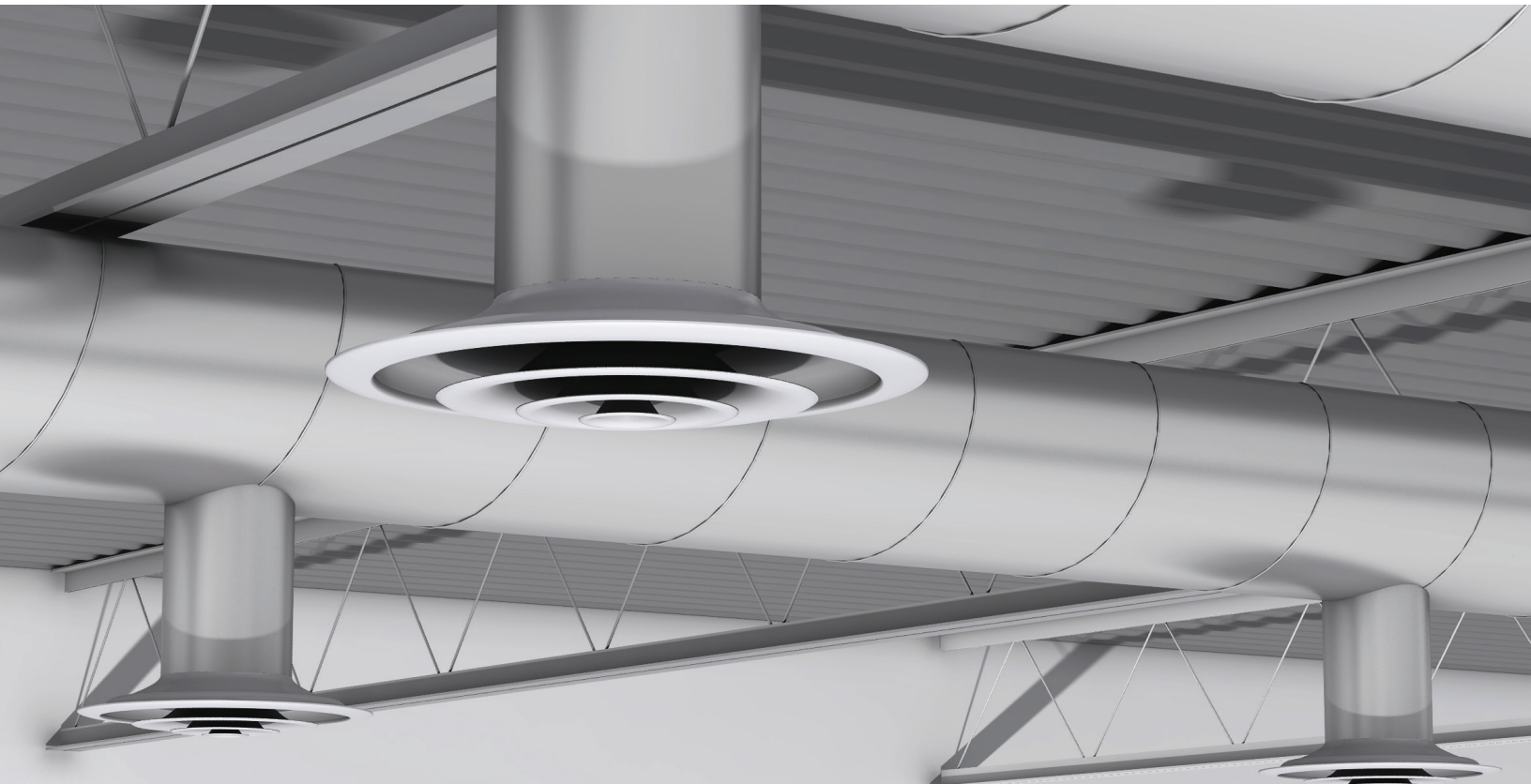
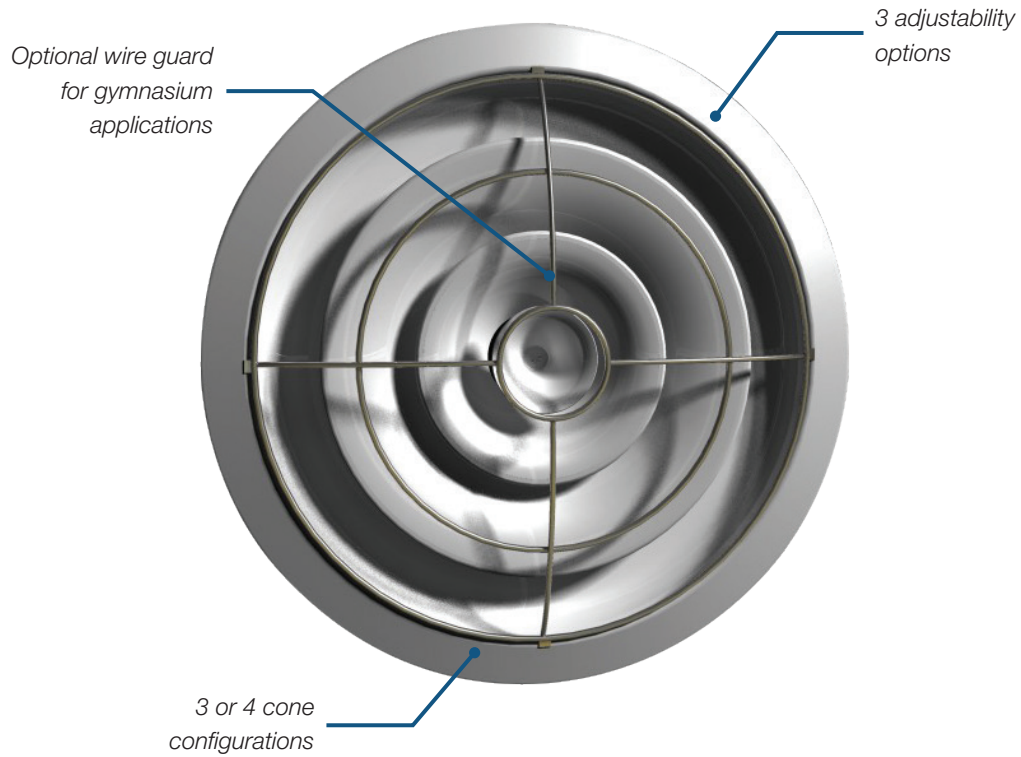
ROUND CONE DIFFUSER



RCD

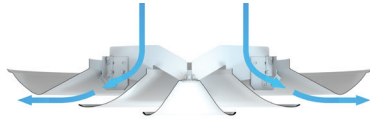
Round Cone Diffuser

Round Cone Diffusers (RCD) combine the visual appeal of a round cone design with maximum air diffusion efficiency. The RCD offers adjustable airflow with a variety of different adjustment methods allowing for the perfect balance between performance and economy.

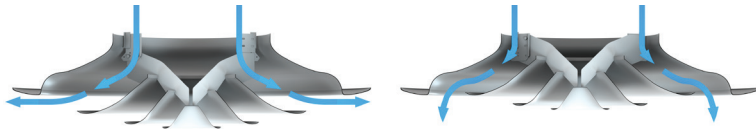


MULTIPLE CORE OPTIONS

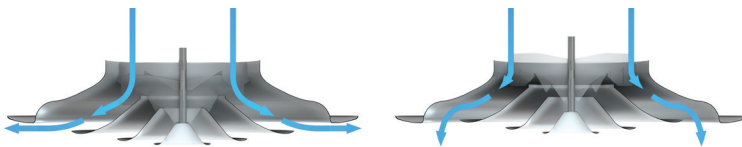
- + The RCD is available in three core styles, allowing for different degrees and methods of adjustability. With all options, the center cones move in unison to retain their relative position to minimize pressure drop and ensure uniformity under all conditions.
 - **2 position adjustable** – This model combines economy, simplicity and versatility in one unit and provides adjustment between two horizontal airflow patterns. The open position provides maximum airflow capacity while the closed position increases induction. A spring lock arrangement permits quick, easy removal of the inner cone assembly and access to the inner adjustment screw.



- **3 position adjustable** – This model can be adjusted between three distinct positions by removing the center cones, repositioning the mounting screws, and replacing the cones. The three positions provide vertical throw, horizontal throw for exposed duct mounting, and horizontal throw for surface mounting.



- **Fully Adjustable** – This model can be adjusted to provide anywhere from a fully horizontal to fully vertical air pattern, simply by turning the small center cone.



IDEAL FOR VAV OPERATION

- + The RCD can provide a tight horizontal 360° radial air pattern even at low flow rates, making the RCD an excellent choice for VAV applications.

TYPICAL APPLICATIONS

Ideally suited to exposed duct applications, Round Cone Diffusers provide a strong horizontal pattern, even without a ceiling present. Easily adjustable to provide both horizontal and vertical air patterns, performance of the RCD can be maximized for both heating, and cooling applications. Optional wire guards are available for grille protection in gymnasium applications.

CONSTRUCTION

- + Material
 - Steel (RCD/RCDA/RCDE)
 - Aluminum (ARCD)
- + Cones
 - 3 (RCDE)
 - 4 (RCD, RCDA, ARCD)
- + Size
 - 6 in. to 36 in.
- + Core Options
 - 2 position adjustable (RCDE)
 - 3 position adjustable (RCD/ARCD)
 - Fully adjustable (RCDA)
- + Options
 - Wire guards
 - Damper
 - Equalizing grid

PERFORMANCE DATA

RCD / RCDA - Four Cone

Size	Neck Velocity (fpm)		NC 20				NC30				NC 40			
	Velocity Pressure (in. w.g.)		400	500	600	700	800	900	1000	1200	1400	1600		
	Total Pressure (in. w.g.)	Horizontal Vertical	0.021 0.027	0.034 0.044	0.048 0.063	0.065 0.085	0.084 0.109	0.107 0.139	0.132 0.172	0.189 0.246	0.256 0.333	0.346 0.437		
6	Flow Rate (cfm)		80	100	120	140	160	180	200	235	275	315		
	Radius of Diffusion (ft.)		1-2-3	2-3-4	2-3-5	2-4-6	3-4-7	3-5-7	4-5-8	4-6-10	5-7-11	6-8-13		
	Sound (NC)		-	-	15	20	24	27	31	36	41	45		
8	Flow Rate (cfm)		140	175	210	245	280	315	350	420	490	560		
	Radius of Diffusion (ft.)		2-3-4	2-3-5	3-3-7	3-5-8	4-5-9	4-6-10	5-7-11	5-9-13	6-9-15	7-11-17		
	Sound (NC)		-	-	17	22	27	30	33	39	44	48		
10	Flow Rate (cfm)		220	270	330	380	435	490	545	655	765	870		
	Radius of Diffusion (ft.)		2-3-5	3-4-7	3-5-8	4-6-9	4-7-11	5-8-12	6-8-14	7-10-16	8-12-19	9-13-22		
	Sound (NC)		-	-	17	22	27	30	33	39	44	48		
12	Flow Rate (cfm)		315	390	470	550	630	705	785	940	1100	1255		
	Radius of Diffusion (ft.)		3-4-7	3-5-8	4-6-10	5-7-11	5-8-13	6-9-15	7-10-16	8-12-19	9-14-23	11-16-26		
	Sound (NC)		-	-	18	23	27	31	34	40	45	50		
14	Flow Rate (cfm)		425	530	635	745	850	955	1060	1270	1490	1695		
	Radius of Diffusion (ft.)		3-5-8	4-6-9	5-5-11	5-8-13	6-9-15	7-11-17	8-12-19	9-14-22	11-16-26	13-19-30		
	Sound (NC)		-	-	19	24	28	32	35	41	46	50		
16	Flow Rate (cfm)		560	700	840	980	1120	1260	1400	1680	1960	2240	NC 50	
	Radius of Diffusion (ft.)		4-5-9	5-7-11	5-8-13	6-9-15	7-11-17	8-12-20	9-14-22	11-16-26	13-19-30	14-22-35		
	Sound (NC)		-	-	19	25	29	32	36	41	46	51		
18	Flow Rate (cfm)		710	885	1060	1240	1420	1590	1770	2120	2480	2830		
	Radius of Diffusion (ft.)		4-6-10	5-8-12	6-9-15	7-11-17	8-12-20	9-14-22	10-15-24	12-18-29	14-21-34	16-24-39		
	Sound (NC)		-	15	20	26	30	33	36	42	46	52		
20	Flow Rate (cfm)		875	1100	1310	1530	1750	1970	2190	2610	3060	3500		
	Radius of Diffusion (ft.)		4-7-11	6-9-14	7-10-16	8-12-19	9-14-22	10-15-24	11-14-27	13-19-32	16-24-38	18-27-43		
	Sound (NC)		-	15	21	26	30	34	37	43	48	52		
24	Flow Rate (cfm)		1260	1570	1880	2200	2510	2830	3140	3770	4400	5020		
	Radius of Diffusion (ft.)		5-8-13	7-10-16	8-12-19	9-14-23	11-16-26	12-18-29	14-20-32	16-24-39	19-28-45	22-32-52		
	Sound (NC)		-	16	22	27	31	35	38	44	49	53		
30	Flow Rate (cfm)		1960	2450	2940	3430	3920	4410	4900	5880	6860	7840		
	Radius of Diffusion (ft.)		7-10-16	8-13-20	10-15-24	12-18-28	13-20-32	15-23-36	17-25-41	20-30-49	24-34-57	27-40-65		
	Sound (NC)		-	17	23	27	32	36	39	45	50	54		
36	Flow Rate (cfm)		2820	3520	4230	4930	5630	6340	7040	8450	9850	11,260		
	Radius of Diffusion (ft.)		8-12-20	10-15-24	12-18-29	14-21-34	16-24-39	18-27-44	20-30-49	24-36-58	28-42-68	32-48-78		
	Sound (NC)		-	18	24	28	33	37	40	46	51	55		

Performance Notes:

1. Tested in accordance with ASHRAE Standard 70 – 2006 "Method of Testing for Rating the Performance of Air Outlets and Inlets."
2. Air flow is in cfm.
3. All pressures are in in. w.g.
4. Throw values are measured in feet for terminal velocities of 150 fpm (minimum), 100 fpm (middle) and 50 fpm (maximum). If the diffuser is mounted on an exposed duct, multiply the throw value in table by 0.70.
5. Throw data is based on supply air and room air being at isothermal conditions.
6. NC values are based on room absorption of 10 dB re 10⁻¹² Watts and one diffuser. Values shown are for a horizontal pattern. Add 1 dB for a vertical pattern.
7. Blanks "-" indicate an NC level below 15.

PERFORMANCE DATA

RCDE - Three Cone

Size	Neck Velocity (fpm) Velocity Pressure (in. w.g.)	NC 20					NC 30				NC 40		NC 50
		400	500	600	700	800	900	1000	1200	1400	1600		
6	Total Pressure (in. w.g.)	.026	.041	.059	.079	.102	.130	.161	.230	.311	.408		
	Flow Rate (cfm)	80	100	120	140	160	180	200	235	275	315		
	Radius of Diffusion (ft.)	2-2-4	2-3-5	2-4-6	3-4-7	3-5-8	4-5-9	4-6-10	5-7-11	6-8-13	6-10-15		
	Sound (NC)	-	-	-	19	23	26	30	35	40	44		
8	Total Pressure (in. w.g.)	.033	.052	.075	.101	.130	.166	.205	.292	.397	.520		
	Flow Rate (cfm)	140	175	210	245	280	315	350	420	490	560		
	Radius of Diffusion (ft.)	2-4-8	3-4-7	4-5-9	4-6-10	5-7-11	5-8-13	6-9-14	7-11-17	8-13-20	10-14-23		
	Sound (NC)	-	15	21	26	31	34	37	44	48	53		
10	Total Pressure (in. w.g.)	.027	.043	.062	.084	.108	.138	.170	.243	.329	.432		
	Flow Rate (cfm)	220	270	330	380	435	490	545	655	765	870		
	Radius of Diffusion (ft.)	3-4-7	3-5-8	4-6-10	5-7-11	5-8-13	6-9-15	7-10-16	8-12-20	10-14-23	11-16-26		
	Sound (NC)	-	-	17	21	26	30	33	39	44	48		
12	Total Pressure (in. w.g.)	.026	.042	.060	.081	.105	.135	.166	.236	.320	.420		
	Flow Rate (cfm)	315	390	470	550	630	705	785	940	1100	1255		
	Radius of Diffusion (ft.)	3-5-8	4-6-10	5-7-12	6-8-13	6-10-15	7-11-17	8-12-19	10-14-23	11-17-23	12-19-31		
	Sound (NC)	-	-	17	22	26	30	33	39	45	49		
14	Total Pressure (in. w.g.)	.038	.061	.087	.118	.152	.194	.240	.342	.465	.608		
	Flow Rate (cfm)	425	530	635	745	850	955	1060	1270	1490	1695		
	Radius of Diffusion (ft.)	4-6-10	5-8-12	6-9-15	7-11-17	8-12-20	9-14-22	10-15-24	12-18-29	14-21-34	16-24-39		
	Sound (NC)	-	18	23	28	32	36	40	46	51	55		
16	Total Pressure (in. w.g.)	.033	.053	.076	.102	.132	.168	.208	.297	.403	.528		
	Flow Rate (cfm)	560	700	840	980	1120	1260	1400	1680	1960	2240		
	Radius of Diffusion (ft.)	5-7-11	6-9-14	7-10-16	8-12-19	9-14-22	10-15-24	11-17-27	14-20-33	16-24-38	18-27-43		
	Sound (NC)	16	16	22	27	31	35	39	44	49	53		
18	Total Pressure (in. w.g.)	.030	.048	.069	.093	.120	.153	.189	.270	.366	.480		
	Flow Rate (cfm)	710	885	1060	1240	1420	1590	1770	2120	2480	2830		
	Radius of Diffusion (ft.)	5-7-12	6-9-15	7-11-18	9-13-21	10-15-24	11-17-27	12-19-30	15-22-36	17-26-42	20-30-48		
	Sound (NC)	-	15	21	26	30	34	37	43	48	52		
20	Total Pressure (in. w.g.)	.030	.047	.068	.091	.118	.155	.196	.286	.390	.510		
	Flow Rate (cfm)	875	1100	1310	1530	1750	1970	2190	2610	3060	3500		
	Radius of Diffusion (ft.)	6-8-13	7-10-17	8-12-20	10-15-23	11-17-27	12-19-30	14-21-33	16-25-40	19-29-46	22-33-53		
	Sound (NC)	-	16	21	26	30	34	38	43	48	52		
24	Total Pressure (in. w.g.)	.024	.038	.054	.073	.094	.120	.148	.211	.286	.376		
	Flow Rate (cfm)	1260	1570	1880	2200	2510	2820	3140	3770	4400	5020		
	Radius of Diffusion (ft.)	6-9-15	8-12-19	9-14-22	11-16-26	12-19-30	14-21-34	16-23-37	19-28-45	22-33-52	25-37-60		
	Sound (NC)	-	-	19	24	28	32	35	41	46	50		

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