



G1

ROUND DIFFUSERS



RM1, 5RM1
These supply ceiling diffusers discharge horizontally only. They feature three cones with two position settings to control room air induction.



RM2, 5RM2, & RA2
These supply ceiling diffusers discharge both horizontally and vertically. They feature four cones with three position settings (RM2/5RM2) or may be fully adjustable (RA2) to control vertical discharge.



RM4, 5RM4, & RA4
These supply ceiling diffusers discharge both horizontally and vertically. They feature four cones (outer anti-smudge cone) with three position settings (RM4/5RM4) or may be fully adjustable (RA4) to control vertical discharge.



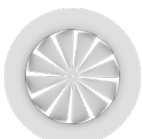
RM2PLQ
This supply ceiling diffuser discharges both horizontally and vertically. It features a round plaque face with three position settings available to control vertical discharge.



RM4PLQ
This supply ceiling diffuser discharges both horizontally and vertically. It features a round plaque face with an outer anti-smudge cone. There are three position settings available to control vertical discharge.



R1DBR10
This supply ceiling diffuser discharges both horizontally and vertically. It features a ring-operated center downblow adjustment with an anti-smudge outer cone.



RKSD
This high induction supply ceiling diffuser discharges air horizontally in a swirl pattern to increase mixing effectiveness.

RM1, 5RM1, RM2, 5RM2, RM4, 5RM4, RA2, RA4

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RM2PLQ, RM4PLQ

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R1DBR10

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RKSD

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INTRODUCTION

Krueger's RM/RA round ceiling diffusers provide excellent performance in variable air volume systems. The round ceiling diffusers have three or four cones depending on model selected to provide a uniform appearance regardless of design specifications. Krueger's round ceiling diffusers come in three styles.

The first style, RM1/5RM1, is used when vertical throw is not needed, but the consumer needs to adjust the room air induction. This is accomplished by utilizing the two position inner cones. At position one, capacity is maximized. In position two, room air induction is increased.

The second style, RM2/5RM2/RM4/5RM4, is used when horizontal and vertical discharge is required. This is accomplished by utilizing the three position inner cones. At position one, capacity is maximized and throw is horizontal. In position two, room air induction is increased and the throw remains horizontal. When set in position three, the air projects vertically from the diffuser.

The third style, RA2/RA4, is used when horizontal and vertical discharge is required with infinite adjustability between horizontal and vertical. In the full open setting, capacity is maximized and throw is horizontal. In the full closed setting, air projects vertically from the diffuser.

Krueger's round ceiling diffusers come with a safety cable to secure the inner cones after removal. (Safety cable is optional for 12" inlet size or smaller.)

MODELS

- RM1 - Steel, 3-Cones, 2-Position Adjustments
- 5RM1 - Aluminum, 3-Cones, 2-Position Adjustments
- RM2 - Steel, 4-Cones, 3-Position Adjustments
- 5RM2 - Aluminum, 4-Cones, 3-Position Adjustments
- RM4 - Steel, 4-Cones, 3-Position Adjustments
with Large Outer Anti-smudge Cone
- 5RM4 - Aluminum, 4-Cones, 3-Position Adjustments
with Large Outer Anti-smudge Cone
- RA2 - Steel, 4-Cones, Fully Adjustable
- RA4 - Steel, 4-Cones, Fully Adjustable,
with Large Outer Anti-smudge Cone

FEATURES

- Horizontal only (RM1/5RM1) air distribution.
- Horizontal/Vertical (RM2/5RM2/RM4/5RM4/RA2/RA4) air distribution. (Units ship in vertical position.)
- Designed for heating and cooling applications.
- 360° Discharge air pattern.
- Excellent performance in variable air volume systems.
- Designed for exposed duct or hard ceiling applications.
- Units ship with core set for vertical throw.
- Standard finish is #44 British White.
- Optional finishes available.

ACCESSORIES

- Optional Safety Cable (12" Inlets or Smaller)
- Optional Round Straightening Grid



RM1



RM2



RA4

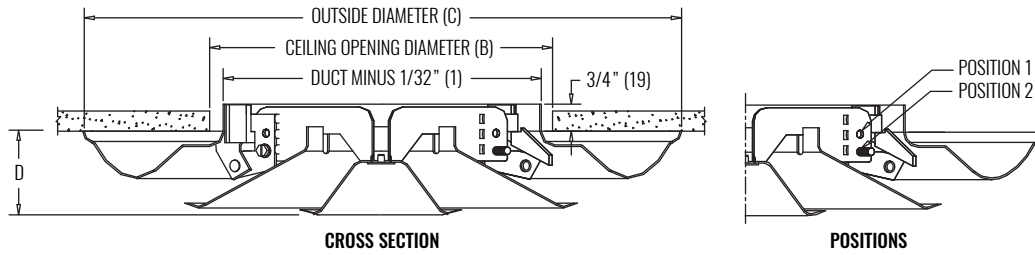
RM & RA SERIES

Round Diffusers, 3 and 4 Cones



DIFFUSERS | ROUND

DIMENSIONAL DATA | RM1, 5RM1 (3-CONES, 2-POSITION)

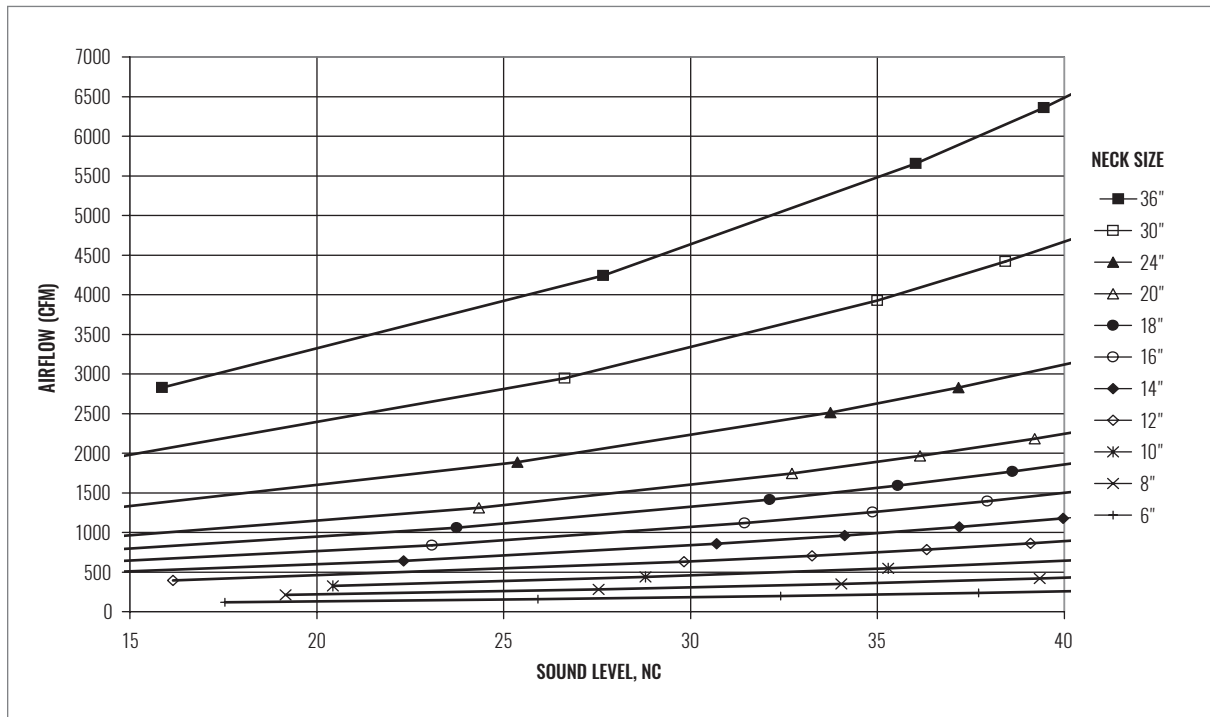


AVAILABLE NECK SIZES					
NOMINAL ROUND DUCT SIZE STEEL (RM1)	NOMINAL ROUND DUCT SIZE ALUMINUM (5RM1)	B	C	POSITION 1 D	POSITION 2 D
6"	6"	6 1/2" (165)	11 1/8" (283)	1 3/4" (44)	1 1/8" (29)
8"	8"	8 1/2" (216)	14 3/4" (375)	2 1/8" (54)	1 1/2" (38)
10"	10"	10 1/2" (267)	18 1/4" (460)	2 7/8" (73)	2 1/8" (54)
12"	12"	12 1/2" (318)	22" (559)	3 1/8" (79)	2 3/8" (60)
14"	14"	14 1/2" (368)	26" (660)	3 3/8" (86)	2 5/8" (67)
16"	16"	16 1/2" (419)	29" (737)	4" (102)	3 1/4" (83)
18"	18"	18 1/2" (470)	32 1/2" (826)	4 3/4" (121)	3 7/8" (98)
20"	-	20 1/2" (520)	36" (914)	5 7/8" (149)	4 7/8" (124)
24"	-	24 1/2" (622)	43 1/4" (1095)	7 3/4" (197)	6 5/8" (168)
30"	-	30 1/2" (775)	53 3/4" (1365)	8 1/8" (206)	6 5/8" (168)
36"	-	36 1/2" (927)	64 1/2" (1638)	10 1/8" (257)	8 3/8" (213)

NOTE: Dimensions in parentheses are millimeters (mm).

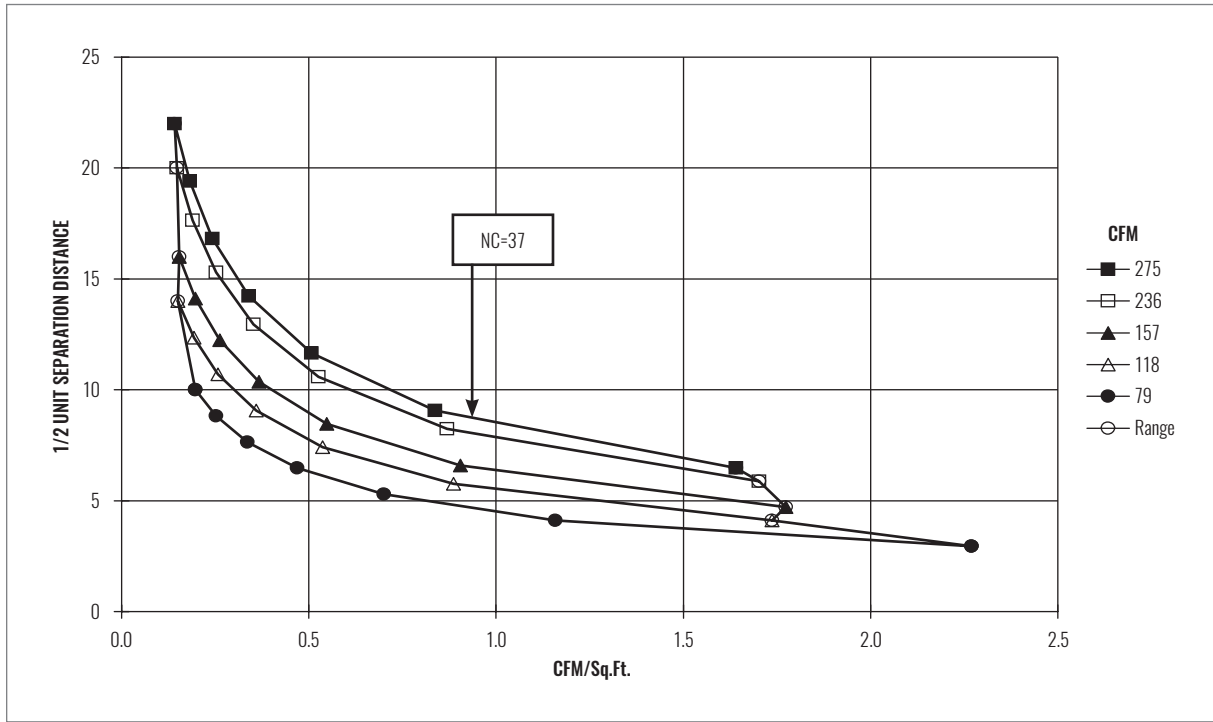
SOUND CHART | RM1, 5RM1 (3-CONES, 2-POSITION)

AIRFLOW VS. NC LEVEL (NO DAMPER)

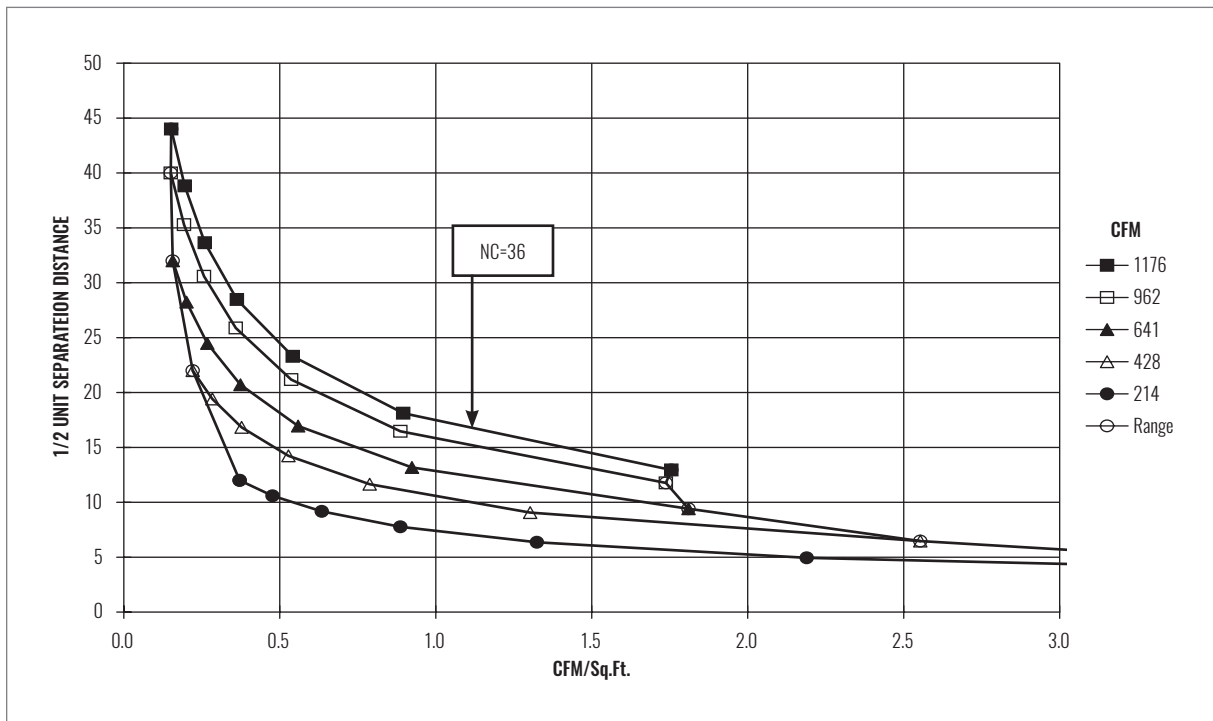


ADPI CHARTS | RM1, 5RM1 (3-CONES, 2-POSITION) | HORIZONTAL THROW

DIFFUSER SPACING FOR 80% ADPI (6" NECK, NO DAMPER)



DIFFUSER SPACING FOR 80% ADPI (14" NECK, NO DAMPER)



NOTES: Charts are at 20 BTUH/ft² loads. See the Engineering section of this catalog for instructions on how to read these charts and additional ADPI information.

DIFFUSERS | ROUND

RM & RA SERIES

Round Diffusers, 3 and 4 Cones



PERFORMANCE DATA | RM1, 5RM1 (3-CONES, 2-POSITION) | HORIZONTAL THROW, NO DAMPER

DIFFUSERS | ROUND

SIZE	IP DATA								METRIC DATA						
	NECK VEL	AIR FLOW	POS 2		POS 1 THROW	POS 2 THROW	POS 1	POS 2	NECK VEL	AIR FLOW	POS 2		POS 1 THROW	POS 2 THROW	
			Ps	Pt							Ps	Pt			
in	fpm	cfm	in wg	in wg	ft	ft	NC	NC	m/s	L/s	Pa	Pa	m	m	
6	400	79	0.037	.047	2-2-5	2-3-6	-	-	2.03	37	9.3	11.7	0.5-0.7-1.5	0.6-0.9-1.7	
	600	118	0.084	.106	2-4-7	3-4-7	-	18	3.05	56	20.8	26.4	0.7-1.1-2.1	0.9-1.3-2.1	
	800	157	0.149	.189	3-5-8	4-6-8	19	26	4.06	74	37.1	47.0	1.0-1.5-2.4	1.1-1.7-2.5	
	1000	196	0.233	.295	4-6-9	5-6-9	26	32	5.08	93	57.9	73.4	1.2-1.9-2.7	1.4-2.0-2.8	
	1200	236	0.335	.425	5-7-10	6-7-10	32	38	6.10	111	83.4	105.7	1.5-2.1-3.0	1.7-2.1-3.0	
	1400	275	0.456	.578	6-7-11	6-8-11	37	42	7.11	130	113.5	143.9	1.7-2.3-3.2	1.9-2.3-3.3	
	1600	314	0.595	.755	7-8-11	7-8-12	41	46	8.13	148	148.2	188.0	2.0-2.4-3.4	2.0-2.5-3.5	
	1800	353	0.753	.955	7-8-12	7-9-12	45	50	9.14	167	187.6	237.9	2.1-2.6-3.6	2.1-2.6-3.7	
2000	393	0.930	1.180	7-9-13	7-9-13	48	53	10.16	185	231.6	293.7	2.2-2.7-3.8	2.3-2.8-3.9		
8	200	70	0.009	.012	1-2-3	1-2-4	-	-	1.02	33	2.3	2.9	0.3-0.5-1.0	0.4-0.6-1.1	
	600	209	0.084	.106	3-5-9	4-6-9	12	19	3.05	99	20.8	26.4	1.0-1.5-2.8	1.1-1.7-2.9	
	800	279	0.149	.189	4-7-11	5-8-11	21	28	4.06	132	37.1	47.0	1.3-2.0-3.2	1.5-2.3-3.3	
	1000	349	0.233	.295	5-8-12	6-9-12	28	34	5.08	165	57.9	73.4	1.7-2.5-3.6	1.9-2.6-3.7	
	1200	419	0.335	.425	7-9-13	8-9-13	34	39	6.10	198	83.4	105.7	2.0-2.8-4.0	2.3-2.9-4.0	
	1400	489	0.456	.578	8-10-14	8-10-14	39	44	7.11	231	113.5	143.9	2.3-3.0-4.3	2.5-3.1-4.4	
	1600	559	0.595	.755	9-11-15	9-11-15	44	48	8.13	264	148.2	188.0	2.6-3.2-4.6	2.7-3.3-4.7	
	1800	628	0.753	.955	9-11-16	9-12-16	47	51	9.14	297	187.6	237.9	2.8-3.4-4.8	2.9-3.5-5.0	
2000	698	0.930	1.180	10-12-17	10-12-17	51	54	10.16	329	231.6	293.7	3.0-3.6-5.1	3.0-3.7-5.2		
10	400	218	0.037	.047	3-4-8	3-5-9	-	-	2.03	103	9.3	11.7	0.8-1.2-2.5	1.0-1.4-2.9	
	600	327	0.084	.106	4-6-12	5-7-12	14	20	3.05	154	20.8	26.4	1.2-1.9-3.5	1.4-2.1-3.6	
	800	436	0.149	.189	5-8-13	6-9-14	23	29	4.06	206	37.1	47.0	1.7-2.5-4.0	1.9-2.9-4.1	
	1000	545	0.233	.295	7-10-15	8-11-15	30	35	5.08	257	57.9	73.4	2.1-3.1-4.5	2.4-3.3-4.6	
	1200	654	0.335	.425	8-12-16	9-12-17	36	41	6.10	309	83.4	105.7	2.5-3.5-4.9	2.9-3.6-5.1	
	1400	764	0.456	.578	10-12-18	10-13-18	41	45	7.11	360	113.5	143.9	2.9-3.8-5.3	3.2-3.9-5.5	
	1600	873	0.595	.755	11-13-19	11-14-19	45	49	8.13	412	148.2	188.0	3.3-4.0-5.7	3.4-4.1-5.8	
	1800	982	0.753	.955	12-14-20	12-14-20	49	52	9.14	463	187.6	237.9	3.5-4.3-6.1	3.6-4.4-6.2	
1900	1036	0.839	1.065	12-14-20	12-15-21	51	54	9.65	489	209.0	265.1	3.6-4.4-6.2	3.7-4.5-6.4		
12	200	157	0.009	.012	2-2-5	2-3-6	-	-	1.02	74	2.3	2.9	0.5-0.7-1.5	0.6-0.9-1.7	
	500	393	0.058	.074	4-6-12	5-7-13	-	16	2.54	185	14.5	18.4	1.2-1.9-3.7	1.4-2.1-3.9	
	800	628	0.149	.189	7-10-16	8-11-16	25	30	4.06	297	37.1	47.0	2.0-3.0-4.8	2.3-3.4-5.0	
	900	707	0.188	.239	7-11-17	8-12-17	29	33	4.57	334	46.9	59.5	2.2-3.3-5.1	2.6-3.7-5.3	
	1000	785	0.233	.295	8-12-18	9-13-18	32	36	5.08	371	57.9	73.4	2.5-3.7-5.4	2.9-3.9-5.5	
	1100	864	0.281	.357	9-13-19	10-14-19	35	39	5.59	408	70.1	88.8	2.7-4.0-5.7	3.1-4.1-5.8	
	1200	942	0.335	.425	10-14-20	11-14-20	38	42	6.10	445	83.4	105.7	3.0-4.2-5.9	3.4-4.3-6.1	
	1400	1100	0.456	.578	11-15-21	12-15-22	43	46	7.11	519	113.5	143.9	3.5-4.5-6.4	3.8-4.6-6.6	
1600	1257	0.595	.755	13-16-23	13-16-23	47	50	8.13	593	148.2	188.0	4.0-4.8-6.9	4.0-5.0-7.0		
14	200	214	0.009	.012	2-3-6	2-3-7	-	-	1.02	101	2.3	2.9	0.6-0.9-1.7	0.7-1.0-2.0	
	400	428	0.037	.047	4-6-11	4-7-13	-	11	2.03	202	9.3	11.7	1.2-1.7-3.5	1.3-2.0-4.0	
	600	641	0.084	.106	6-9-16	7-10-16	17	22	3.05	303	20.8	26.4	1.7-2.6-4.9	2.0-3.0-5.0	
	800	855	0.149	.189	8-11-19	9-13-19	26	31	4.06	404	37.1	47.0	2.3-3.5-5.7	2.7-4.0-5.8	
	900	962	0.188	.239	9-13-20	10-14-20	30	34	4.57	454	46.9	59.5	2.6-3.9-6.0	3.0-4.3-6.1	
	1000	1069	0.233	.295	10-14-21	11-15-21	33	37	5.08	505	57.9	73.4	2.9-4.3-6.3	3.3-4.6-6.5	
	1100	1176	0.281	.357	10-15-22	12-16-22	36	40	5.59	555	70.1	88.8	3.2-4.7-6.6	3.7-4.8-6.8	
	1200	1283	0.335	.425	11-16-23	13-16-23	39	42	6.10	605	83.4	105.7	3.5-4.9-6.9	4.0-5.0-7.1	
1400	1497	0.456	.578	13-17-25	15-18-25	44	47	7.11	706	113.5	143.9	4.0-5.3-7.5	4.4-5.4-7.7		
16	200	279	0.009	.012	2-3-7	3-4-8	-	-	1.02	132	2.3	2.9	0.7-1.0-2.0	0.8-1.1-2.3	
	400	559	0.037	.047	4-7-13	5-8-15	-	11	2.03	264	9.3	11.7	1.3-2.0-4.0	1.5-2.3-4.6	
	600	838	0.084	.106	7-10-18	8-11-19	18	23	3.05	395	20.8	26.4	2.0-3.0-5.6	2.3-3.4-5.7	
	800	1117	0.149	.189	9-13-21	10-15-22	27	31	4.06	527	37.1	47.0	2.6-4.0-6.5	3.0-4.6-6.6	
	900	1257	0.188	.239	10-15-23	11-16-23	31	35	4.57	593	46.9	59.5	3.0-4.5-6.9	3.4-5.0-7.0	
	1000	1396	0.233	.295	11-16-24	13-17-24	34	38	5.08	659	57.9	73.4	3.3-5.0-7.2	3.8-5.2-7.4	
	1100	1536	0.281	.357	12-18-25	14-18-25	38	41	5.59	725	70.1	88.8	3.6-5.4-7.6	4.2-5.5-7.8	
	1200	1676	0.335	.425	13-18-26	15-19-27	40	43	6.10	791	83.4	105.7	4.0-5.6-7.9	4.6-5.7-8.1	
1400	1955	0.456	.578	15-20-28	17-20-29	45	48	7.11	923	113.5	143.9	4.6-6.0-8.6	5.0-6.2-8.7		

NOTE: See notes on next page.

G1-6

PERFORMANCE DATA | RM1, 5RM1 (3-CONES, 2-POSITION) | HORIZONTAL THROW, NO DAMPER

SIZE	IP DATA								METRIC DATA						
	NECK VEL	AIR FLOW	POS 2		POS 1 THROW	POS 2 THROW	POS 1	POS 2	NECK VEL	AIR FLOW	POS 2		POS 1 THROW	POS 2 THROW	
			Ps	Pt							Ps	Pt			
in	fpm	cfm	in wg	in wg	ft	ft	NC	NC	m/s	L/s	Pa	Pa	m	m	
18	200	353	0.009	.012	2-4-7	3-4-8	-	-	1.02	167	2.3	2.9	0.7-1.1-2.2	0.9-1.3-2.6	
	400	707	0.037	.047	5-7-15	6-8-17	-	12	2.03	334	9.3	11.7	1.5-2.2-4.5	1.7-2.6-5.1	
	600	1060	0.084	.106	7-11-21	8-13-21	19	24	3.05	500	20.8	26.4	2.2-3.3-6.3	2.6-3.9-6.4	
	800	1414	0.149	.189	10-15-24	11-17-24	28	32	4.06	667	37.1	47.0	3.0-4.5-7.3	3.4-5.1-7.4	
	900	1590	0.188	.239	11-17-25	13-18-26	32	36	4.57	751	46.9	59.5	3.3-5.0-7.7	3.9-5.6-7.9	
	1000	1767	0.233	.295	12-18-27	14-19-27	35	39	5.08	834	57.9	73.4	3.7-5.6-8.1	4.3-5.9-8.3	
	1100	1944	0.281	.357	13-20-28	16-20-29	39	41	5.59	917	70.1	88.8	4.1-6.0-8.5	4.7-6.2-8.7	
	1200	2121	0.335	.425	15-21-29	17-21-30	41	44	6.10	1001	83.4	105.7	4.5-6.3-8.9	5.1-6.4-9.1	
1400	2474	0.456	.578	17-22-32	19-23-32	46	48	7.11	1168	113.5	143.9	5.2-6.8-9.6	5.7-7.0-9.8		
20*	200	436	0.009	.012	3-4-8	3-5-9	-	-	1.02	206	2.3	2.9	0.8-1.2-2.5	1.0-1.4-2.9	
	400	873	0.037	.047	5-8-16	6-9-19	-	13	2.03	412	9.3	11.7	1.7-2.5-5.0	1.9-2.9-5.7	
	600	1309	0.084	.106	8-12-23	9-14-24	20	24	3.05	618	20.8	26.4	2.5-3.7-7.0	2.9-4.3-7.2	
	800	1745	0.149	.189	11-16-27	13-19-27	29	33	4.06	824	37.1	47.0	3.3-5.0-8.1	3.8-5.7-8.3	
	900	1963	0.188	.239	12-18-28	14-20-29	33	36	4.57	927	46.9	59.5	3.7-5.6-8.6	4.3-6.2-8.8	
	1000	2182	0.233	.295	14-20-30	16-21-30	36	39	5.08	1030	57.9	73.4	4.1-6.2-9.0	4.8-6.5-9.2	
	1100	2400	0.281	.357	15-22-31	17-23-32	39	42	5.59	1133	70.1	88.8	4.5-6.7-9.5	5.2-6.9-9.7	
	1200	2618	0.335	.425	16-23-33	19-24-33	42	45	6.10	1236	83.4	105.7	5.0-7.0-9.9	5.7-7.2-10.1	
1400	3054	0.456	.578	19-25-35	21-25-36	47	49	7.11	1441	113.5	143.9	5.8-7.6-10.7	6.3-7.7-10.9		
24*	200	628	0.009	.012	3-5-10	4-6-11	-	-	1.02	297	2.3	2.9	1.0-1.5-3.0	1.1-1.7-3.4	
	400	1257	0.037	.047	7-10-20	8-11-23	-	14	2.03	593	9.3	11.7	2.0-3.0-5.9	2.3-3.4-6.9	
	600	1885	0.084	.106	10-15-28	11-17-28	22	25	3.05	890	20.8	26.4	3.0-4.5-8.4	3.4-5.1-8.6	
	800	2513	0.149	.189	13-20-32	15-23-33	31	34	4.06	1186	37.1	47.0	4.0-5.9-9.7	4.6-6.9-9.9	
	900	2827	0.188	.239	15-22-34	17-24-35	35	37	4.57	1334	46.9	59.5	4.5-6.7-10.3	5.1-7.4-10.5	
	1000	3142	0.233	.295	16-24-36	19-26-36	38	40	5.08	1483	57.9	73.4	5.0-7.4-10.8	5.7-7.8-11.1	
	1100	3456	0.281	.357	18-26-37	21-27-38	41	43	5.59	1631	70.1	88.8	5.5-8.0-11.4	6.3-8.2-11.6	
	1200	3770	0.335	.425	20-28-39	23-28-40	44	46	6.10	1779	83.4	105.7	5.9-8.4-11.9	6.9-8.6-12.1	
1400	4398	0.456	.578	23-30-42	25-31-43	49	50	7.11	2076	113.5	143.9	6.9-9.1-12.8	7.6-9.3-13.1		
30*	200	982	0.009	.012	4-6-12	5-7-14	-	-	1.02	463	2.3	2.9	1.2-1.9-3.7	1.4-2.1-4.3	
	400	1963	0.037	.047	8-12-24	9-14-28	-	15	2.03	927	9.3	11.7	2.5-3.7-7.4	2.9-4.3-8.6	
	600	2945	0.084	.106	12-18-35	14-21-35	23	27	3.05	1390	20.8	26.4	3.7-5.6-10.5	4.3-6.4-10.7	
	800	3927	0.149	.189	16-24-40	19-28-41	33	35	4.06	1853	37.1	47.0	5.0-7.4-12.1	5.7-8.6-12.4	
	900	4418	0.188	.239	18-28-42	21-31-43	37	38	4.57	2085	46.9	59.5	5.6-8.4-12.9	6.4-9.3-13.1	
	1000	4909	0.233	.295	20-31-45	23-32-46	40	41	5.08	2317	57.9	73.4	6.2-9.3-13.6	7.1-9.8-13.9	
	1100	5400	0.281	.357	22-33-47	26-34-48	43	44	5.59	2548	70.1	88.8	6.8-10.1-14.2	7.9-10.3-14.5	
	1200	5890	0.335	.425	24-35-49	28-35-50	46	47	6.10	2780	83.4	105.7	7.4-10.5-14.8	8.6-10.7-15.2	
1400	6872	0.456	.578	29-37-53	31-38-54	51	51	7.11	3243	113.5	143.9	8.7-11.3-16.0	9.5-11.6-16.4		
36*	200	1414	0.009	.012	5-7-15	6-8-17	-	-	1.02	667	2.3	2.9	1.5-2.2-4.5	1.7-2.6-5.1	
	400	2827	0.037	.047	10-15-29	11-17-34	12	16	2.03	1334	9.3	11.7	3.0-4.5-8.9	3.4-5.1-10.3	
	600	4241	0.084	.106	15-22-41	17-25-42	25	28	3.05	2002	20.8	26.4	4.5-6.7-12.6	5.1-7.7-12.9	
	800	5655	0.149	.189	20-29-48	23-34-49	34	36	4.06	2669	37.1	47.0	5.9-8.9-14.5	6.9-10.3-14.9	
	900	6362	0.188	.239	22-33-51	25-37-52	38	39	4.57	3002	46.9	59.5	6.7-10.0-15.4	7.7-11.2-15.8	
	1000	7069	0.233	.295	24-37-54	28-39-55	41	43	5.08	3336	57.9	73.4	7.4-11.2-16.3	8.6-11.8-16.6	
	1100	7775	0.281	.357	27-40-56	31-41-57	45	45	5.59	3670	70.1	88.8	8.2-12.1-17.1	9.4-12.3-17.4	
	1200	8482	0.335	.425	29-41-59	34-42-60	47	48	6.10	4003	83.4	105.7	8.9-12.6-17.8	10.3-12.9-18.2	
1400	9896	0.456	.578	34-45-63	37-46-65	52	52	7.11	4670	113.5	143.9	10.4-13.6-19.2	11.4-13.9-19.7		

NOTES: Throw values are given for isothermal conditions and terminal velocities of 150, 100, and 50 FPM (0.75, 0.50, and 0.25 m/s). NC values are based on octave band 2 - 7 sound power levels minus a room absorption of 10dB, re 10⁻¹² Watts. Dash in space denotes a NC value of less than 10. Data was obtained from tests conducted in accordance with ANSI/ASHRAE Standard 70, ISO Standard 5219, and ISO Standard 3741. See selection software for performance data not shown, including octave band data.

* Available in model RM1 only.

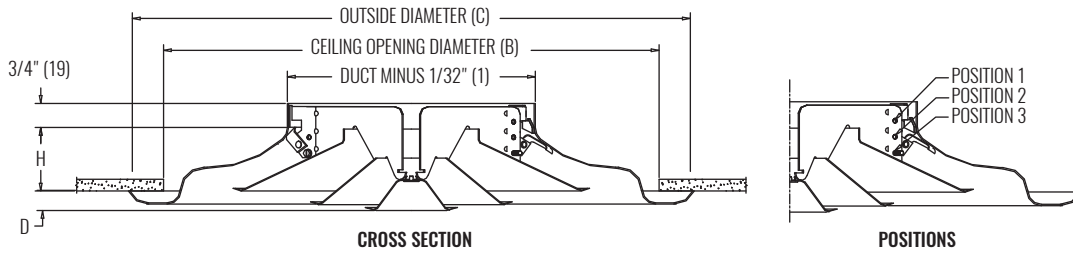
RM & RA SERIES

Round Diffusers, 3 and 4 Cones



DIFFUSERS | ROUND

DIMENSIONAL DATA | RM2, 5RM2 (4-CONES, 3-POSITION)

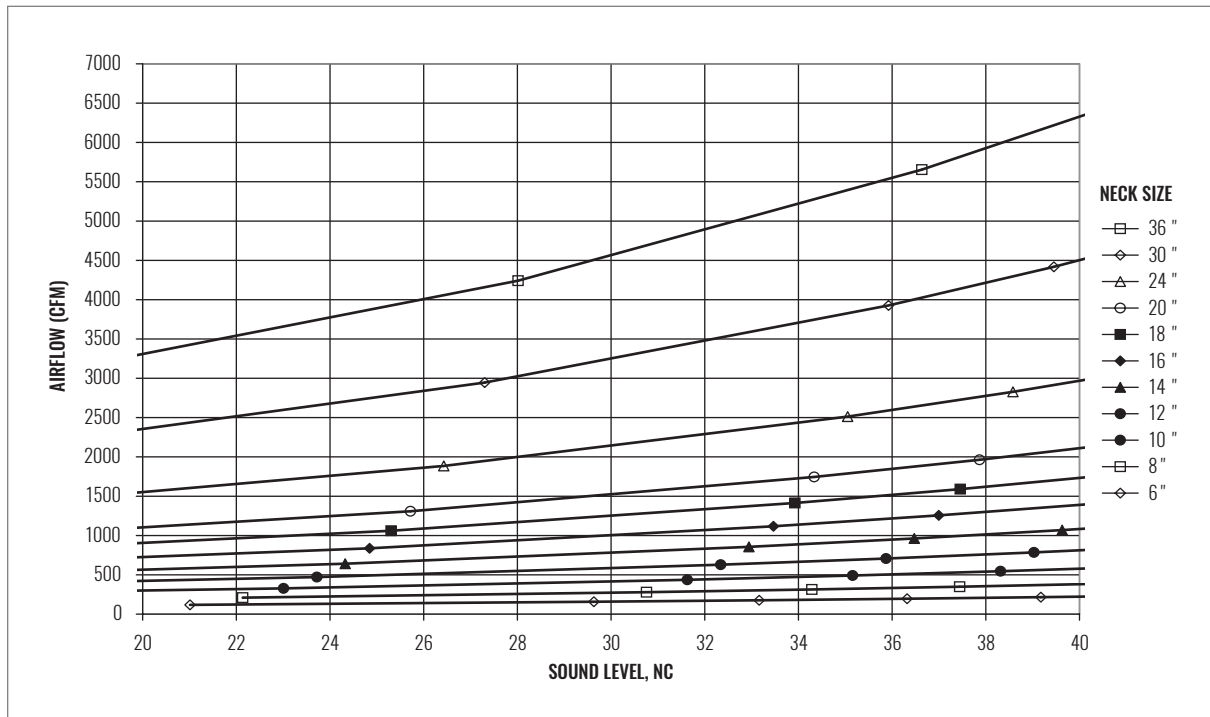


AVAILABLE NECK SIZES						
NOMINAL ROUND DUCT SIZE STEEL (RM2)	NOMINAL ROUND DUCT SIZE ALUMINUM (5RM2)	B	C	POSITION 1 (HORIZONTAL) D	POSITION 3 (VERTICAL) D	H
6"	6"	12" (305)	13 1/2" (343)	1 7/16" (37)	1 1/16" (17)	1 5/8" (41)
8"	8"	16" (406)	18" (457)	1 13/16" (46)	7/8" (19)	2 1/8" (54)
10"	10"	20" (508)	22 1/2" (572)	2 1/4" (57)	1 1/8" (29)	2 5/8" (67)
12"	12"	24" (635)	27" (686)	2 11/16" (68)	1 1/4" (32)	3 1/4" (83)
14"	14"	28" (711)	31 1/2" (800)	3 1/8" (79)	1 3/16" (30)	3 3/4" (95)
16"	16"	32" (813)	36" (914)	3 5/16" (84)	1 5/16" (33)	4 1/4" (108)
18"	18"	36" (914)	40 1/2" (1029)	3 3/4" (95)	1 1/2" (38)	4 7/8" (124)
20"	-	40" (1016)	45" (1143)	4 1/8" (105)	1 5/8" (41)	5 3/8" (137)
24"	-	48" (1219)	54" (1372)	4 7/8" (121)	1 7/8" (48)	6 1/2" (165)
30"	-	60" (1524)	67 1/2" (1715)	5 9/16" (141)	1 7/8" (48)	8" (203)
36"	-	60" (1524)	67 1/2" (1715)	5 9/16" (141)	1 7/8" (48)	8" (203)

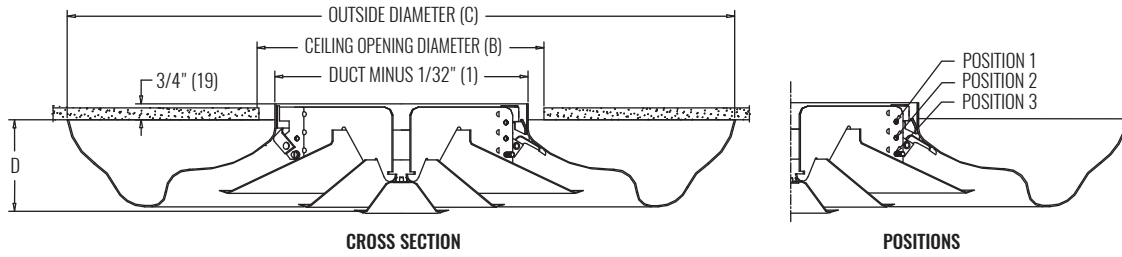
NOTE: Unit shipped in position 3. Dimensions in parentheses are millimeters (mm).

SOUND CHART | RM2, 5RM2 (4-CONES, 3-POSITION)

AIRFLOW VS. NC LEVEL (NO DAMPER)



DIMENSIONAL DATA | RM4, 5RM4 (4-CONES, 3-POSITION, ANTI-SMUDGE)

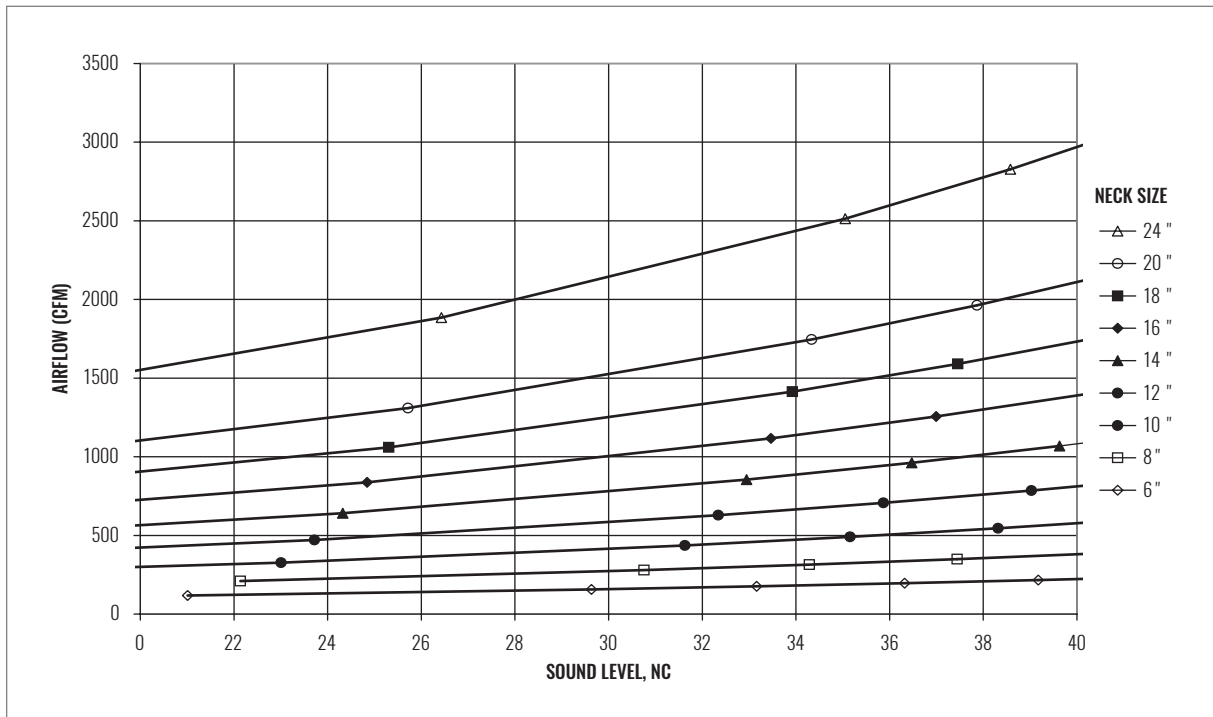


AVAILABLE NECK SIZES					
NOMINAL ROUND DUCT SIZE STEEL (RM4)	NOMINAL ROUND DUCT SIZE ALUMINUM (5RM4)	POSITION 1 (HORIZONTAL) D	POSITION 3 (VERTICAL) D	CEILING OPENING DIAMETER B	OUTSIDE DIAMETER C
6"	6"	3 1/16" (78)	2 5/16" (59)	7" (178)	17 3/8" (441)
8"	8"	3 15/16" (100)	3" (76)	9" (229)	23 1/4" (591)
10"	10"	4 7/8" (124)	3 3/4" (95)	11" (279)	29" (737)
12"	12"	5 15/16" (151)	4 1/2" (114)	13" (330)	34 7/8" (886)
14"	14"	6 7/8" (175)	4 15/16" (125)	15" (381)	40 5/8" (1032)
16"	16"	7 9/16" (192)	5 9/16" (141)	17" (432)	46 3/8" (1178)
18"	18"	8 5/8" (219)	6 3/8" (162)	19" (483)	51 3/8" (1305)
20"	-	9 1/2" (241)	7" (178)	21" (533)	56 1/4" (1429)
24"	-	11 3/8" (289)	8 3/8" (213)	25" (635)	67 1/2" (1715)

NOTE: Unit shipped in position 3. Dimensions in parentheses are millimeters (mm).

SOUND CHART | RM4, 5RM4 (4-CONES, 3-POSITION, ANTI-SMUDGE)

AIRFLOW VS. NC LEVEL (NO DAMPER)



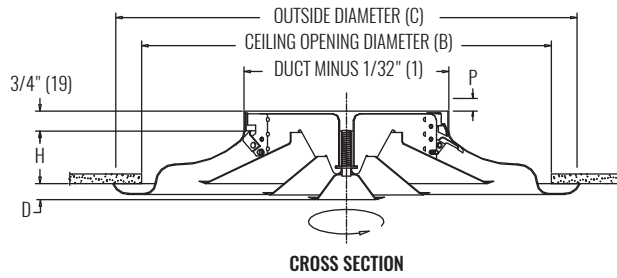
RM & RA SERIES

Round Diffusers, 3 and 4 Cones



DIFFUSERS | ROUND

DIMENSIONAL DATA | RA2 (4-CONES, FULLY ADJUSTABLE)



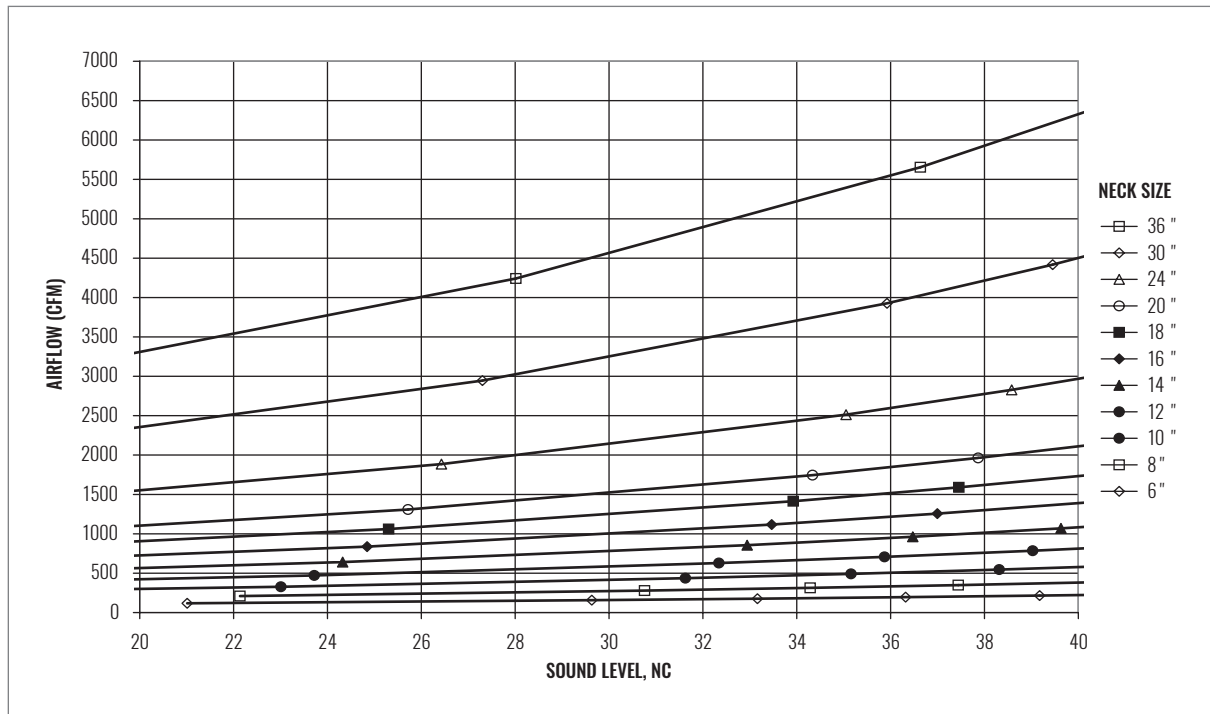
AVAILABLE NECK SIZES

NOMINAL ROUND DUCT SIZE	CEILING OPENING DIAMETER B	OUTSIDE DIAMETER C	POSITION 1 (HORIZONTAL) D	POSITION 3 (VERTICAL) D	H	P
6"	12" (305)	13 1/2" (343)	1 7/16" (37)	1 1/16" (17)	1 5/8" (41)	-
8"	16" (406)	18" (457)	1 13/16" (46)	7/8" (19)	2 1/8" (54)	-
10"	20" (508)	22 1/2" (572)	2 1/4" (57)	1 1/8" (29)	2 5/8" (67)	-
12"	24" (635)	27" (686)	2 11/16" (68)	1 1/4" (32)	3 1/4" (83)	-
14"	28" (711)	31 1/2" (800)	3 1/8" (79)	1 3/16" (30)	3 3/4" (95)	2 1/2" (64)
16"	32" (813)	36" (914)	3 5/16" (84)	1 5/16" (33)	4 1/4" (108)	2 5/8" (67)
18"	36" (914)	40 1/2" (1029)	3 3/4" (95)	1 1/2" (38)	4 7/8" (124)	2 3/4" (70)
20"	40" (1016)	45" (1143)	4 1/8" (105)	1 5/8" (41)	5 3/8" (137)	3" (76)
24"	48" (1219)	54" (1372)	4 7/8" (121)	1 7/8" (48)	6 1/2" (165)	3 1/8" (79)
30"	60" (1524)	67 1/2" (1715)	5 9/16" (141)	1 7/8" (48)	8" (203)	4 3/8" (111)
36"	60" (1524)	67 1/2" (1715)	5 9/16" (141)	1 7/8" (48)	8" (203)	4 3/8" (111)

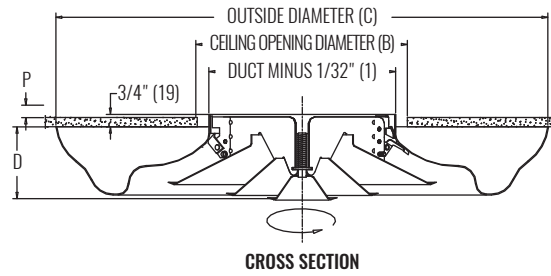
NOTE: Dimensions in parentheses are millimeters (mm).

SOUND CHART | RA2 (4-CONES, FULLY ADJUSTABLE)

AIRFLOW VS. NC LEVEL (NO DAMPER)



DIMENSIONAL DATA | RA4 (4-CONES, FULLY ADJUSTABLE, ANTI-SMUDGE)

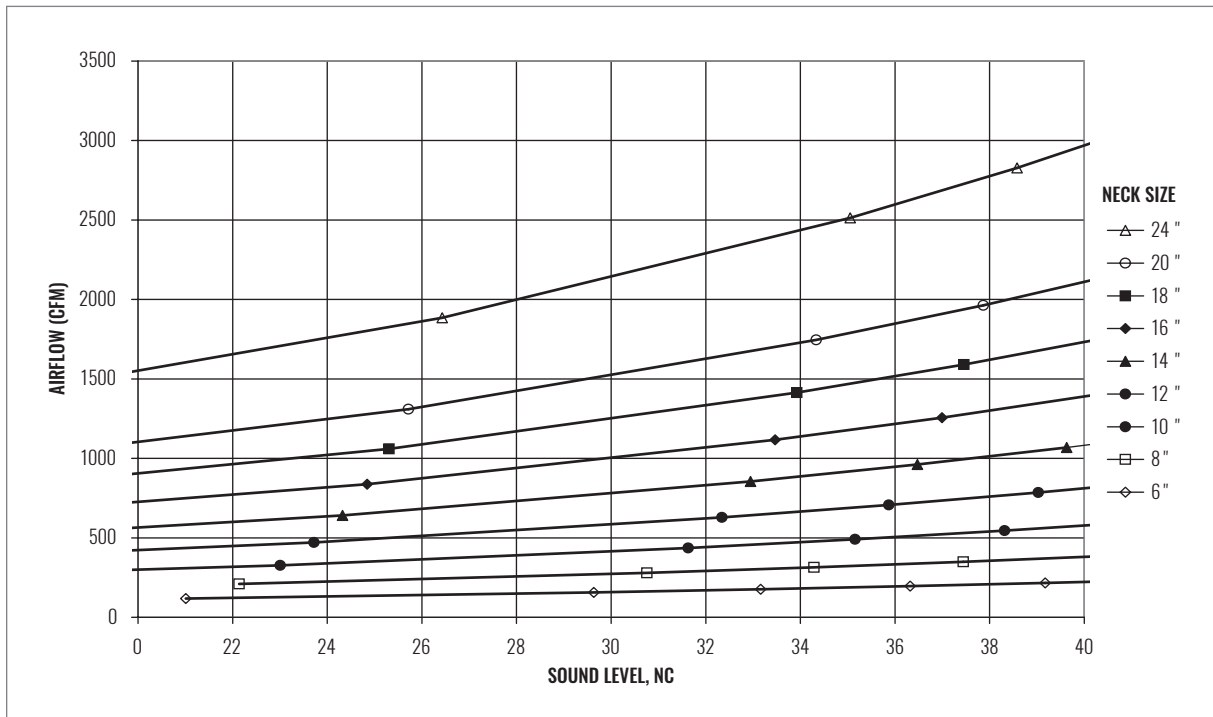


AVAILABLE NECK SIZES					
NOMINAL ROUND DUCT SIZE	POSITION 1 (HORIZONTAL) D	POSITION 3 (VERTICAL) D	P	CEILING OPENING DIAMETER B	OUTSIDE DIAMETER C
6"	3 1/16" (78)	2 5/16" (59)	-	7" (178)	17 3/8" (441)
8"	3 15/16" (100)	3" (76)	-	9" (229)	23 1/4" (591)
10"	4 7/8" (124)	3 3/4" (95)	-	11" (279)	29" (737)
12"	5 15/16" (151)	4 1/2" (114)	-	13" (330)	34 7/8" (886)
14"	6 7/8" (175)	4 15/16" (125)	2 1/2" (64)	15" (381)	40 5/8" (1032)
16"	7 9/16" (192)	5 9/16" (141)	2 5/8" (67)	17" (432)	46 3/8" (1178)
18"	8 5/8" (219)	6 3/8" (162)	2 3/4" (70)	19" (483)	51 3/8" (1305)
20"	9 1/2" (241)	7" (178)	3 1/2" (89)	21" (533)	56 1/4" (1429)
24"	11 3/8" (289)	8 3/8" (213)	3 1/8" (79)	25" (635)	67 1/2" (1715)

NOTE: Dimensions in parentheses are millimeters (mm).

SOUND CHART | RA4 (4-CONES, FULLY ADJUSTABLE, ANTI-SMUDGE)

AIRFLOW VS. NC LEVEL (NO DAMPER)



RM & RA SERIES

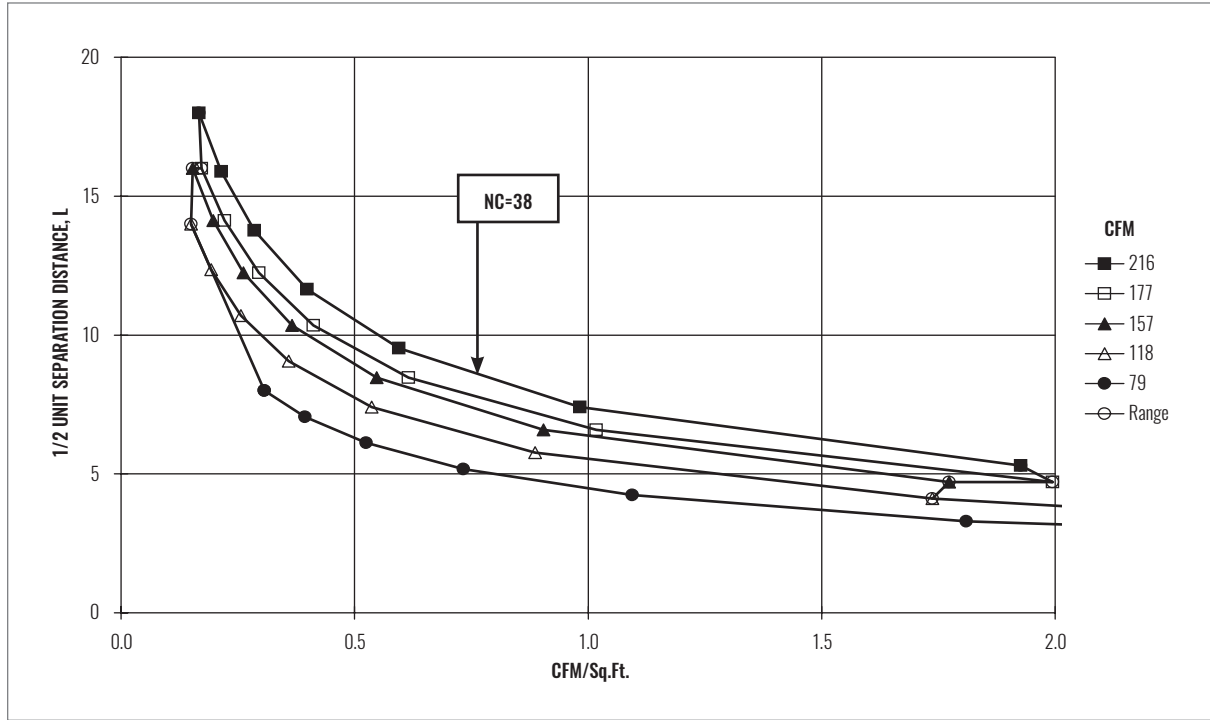
Round Diffusers, 3 and 4 Cones



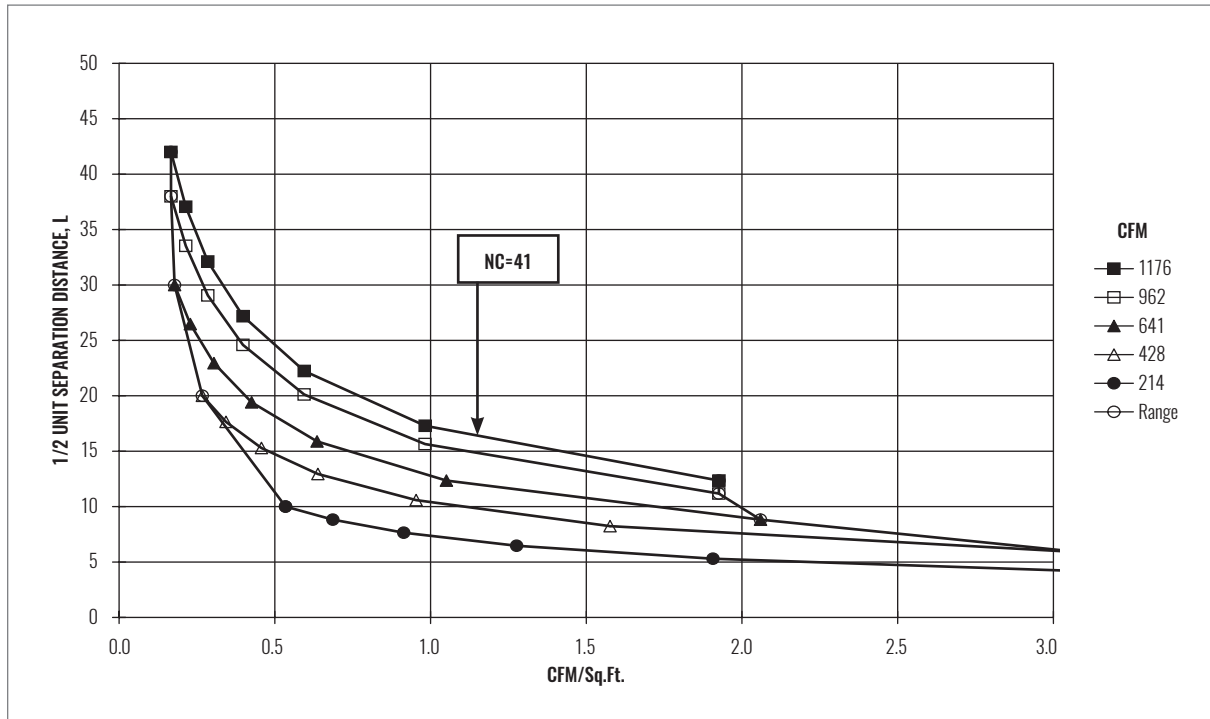
DIFFUSERS | ROUND

ADPI CHARTS | RM2, RM4, RA2, RA4 (4-CONES) | HORIZONTAL THROW

UNIT SPACING FOR 80% ADPI (6" NECK, NO DAMPER)



UNIT SPACING FOR 80% ADPI (14" NECK, NO DAMPER)



NOTES: Charts are at 20 BTUH/ft² loads. See the Engineering section of this catalog for instructions on how to read these charts and additional ADPI information.

PERFORMANCE DATA | RM2, RM4, RA2, RA4 (4-CONES) | NO DAMPER

SIZE	IP DATA												METRIC DATA											
	NECK VEL	AIR FLOW	HZ		VT		HZ THROW	VT PROJECTION				HZ	VT	NECK VEL	AIR FLOW	HZ		VT		HZ THROW	VT PROJECTION			
			Ps	Pt	Ps	Pt		10°F	20°F	30°F	40°F					Pa	Pv	Pt	Pt		5°C	11°C	17°C	22°C
in	fpm	cfm	in wg	in wg	in wg	in wg	ft	ft	ft	ft	NC	NC	m/s	L/s	Pa	Pa	Pa	Pa	m	m	m	m		
6	200	39	0.00	0.01	0.00	0.01	1-1-2	1	1	1	0	-	-	1.0	19	1	1	1	2	0.2-0.3-0.7	0.2	0.2	0.2	0.1
	400	79	0.01	0.02	0.02	0.03	1-2-4	3	2	2	2	-	-	2.0	37	3	5	4	7	0.5-0.7-1.4	0.9	0.7	0.6	0.5
	600	118	0.02	0.05	0.04	0.06	2-3-7	6	5	5	3	20	21	3.0	56	6	12	10	15	0.7-1.0-2.0	1.9	1.6	1.4	1.1
	800	157	0.04	0.08	0.07	0.11	3-4-8	10	7	6	6	29	30	4.1	74	11	21	17	27	0.9-1.4-2.3	2.9	2.2	1.9	1.7
	900	177	0.06	0.11	0.09	0.14	3-5-8	11	8	7	6	32	33	4.6	83	14	26	22	34	1.0-1.5-2.5	3.3	2.4	2.2	2.0
	1000	196	0.07	0.13	0.11	0.17	4-6-9	12	9	8	7	35	36	5.1	93	17	33	27	42	1.1-1.7-2.6	3.6	2.7	2.4	2.2
	1100	216	0.08	0.16	0.13	0.21	4-6-9	13	10	9	8	38	39	5.6	102	21	39	32	51	1.2-1.9-2.7	4.0	3.0	2.7	2.4
	1200	236	0.10	0.19	0.16	0.25	4-7-9	14	11	10	9	41	42	6.1	111	25	47	39	61	1.4-2.0-2.8	4.2	3.2	2.9	2.6
	1300	255	0.12	0.22	0.18	0.29	5-7-10	14	11	10	9	43	44	6.6	120	29	55	45	72	1.5-2.1-3.0	4.3	3.4	3.1	2.8
8	200	70	0.00	0.01	0.00	0.01	1-1-3	1	1	1	0	-	-	1.0	33	1	1	1	2	0.3-0.5-0.9	0.2	0.2	0.2	0.1
	400	140	0.01	0.02	0.02	0.03	2-3-6	3	3	2	2	-	-	2.0	66	3	5	4	7	0.6-0.9-1.8	1.0	0.8	0.7	0.5
	600	209	0.02	0.05	0.04	0.06	3-4-9	7	6	5	4	21	22	3.0	99	6	12	10	15	0.9-1.4-2.7	2.2	1.7	1.5	1.2
	800	279	0.04	0.08	0.07	0.11	4-6-10	12	9	8	7	30	31	4.1	132	11	21	17	27	1.2-1.8-3.1	3.6	2.7	2.4	2.1
	900	314	0.06	0.11	0.09	0.14	4-7-11	13	10	9	8	33	34	4.6	148	14	26	22	34	1.4-2.0-3.3	4.1	3.1	2.7	2.5
	1000	349	0.07	0.13	0.11	0.17	5-7-11	15	11	10	9	36	37	5.1	165	17	33	27	42	1.5-2.3-3.5	4.5	3.4	3.1	2.7
	1100	384	0.08	0.16	0.13	0.21	5-8-12	16	12	11	10	39	40	5.6	181	21	39	32	51	1.7-2.5-3.6	5.0	3.7	3.4	3.0
	1200	419	0.10	0.19	0.16	0.25	6-9-12	18	13	12	11	42	43	6.1	198	25	47	39	61	1.8-2.7-3.8	5.4	4.1	3.7	3.3
	1300	454	0.12	0.22	0.18	0.29	6-9-13	19	14	13	12	44	45	6.6	214	29	55	45	72	2.0-2.8-3.9	5.8	4.4	4.0	3.5
10	200	109	0.00	0.01	0.00	0.01	1-2-4	1	1	1	0	-	-	1.0	51	1	1	1	2	0.4-0.6-1.1	0.3	0.2	0.2	0.2
	400	218	0.01	0.02	0.02	0.03	2-4-7	4	3	3	2	-	11	2.0	103	3	5	4	7	0.8-1.1-2.3	1.1	0.9	0.8	0.6
	600	327	0.02	0.05	0.04	0.06	4-6-11	8	7	6	4	22	23	3.0	154	6	12	10	15	1.1-1.7-3.3	2.5	2.0	1.8	1.4
	800	436	0.04	0.08	0.07	0.11	5-7-13	14	11	10	8	31	32	4.1	206	11	21	17	27	1.5-2.3-3.9	4.4	3.3	3.0	2.4
	900	491	0.06	0.11	0.09	0.14	6-8-13	16	12	11	10	34	35	4.6	232	14	26	22	34	1.7-2.5-4.1	5.0	3.7	3.3	3.0
	1000	545	0.07	0.13	0.11	0.17	6-9-14	18	14	12	11	37	38	5.1	257	17	33	27	42	1.9-2.8-4.3	5.5	4.1	3.7	3.3
	1100	600	0.08	0.16	0.13	0.21	7-10-15	20	15	13	12	40	41	5.6	283	21	39	32	51	2.1-3.1-4.5	6.1	4.5	4.1	3.7
	1200	654	0.10	0.19	0.16	0.25	7-11-16	22	16	15	13	43	44	6.1	309	25	47	39	61	2.3-3.3-4.7	6.6	5.0	4.5	4.0
	1300	709	0.12	0.22	0.18	0.29	8-11-16	24	18	16	14	45	46	6.6	335	29	55	45	72	2.5-3.5-4.9	7.2	5.4	4.8	4.3
12	200	157	0.00	0.01	0.00	0.01	1-2-4	1	1	1	1	-	-	1.0	74	1	1	1	2	0.5-0.7-1.4	0.3	0.3	0.2	0.2
	400	314	0.01	0.02	0.02	0.03	3-4-9	4	3	3	2	11	12	2.0	148	3	5	4	7	0.9-1.4-2.7	1.3	1.0	0.9	0.7
	600	471	0.02	0.05	0.04	0.06	4-7-13	9	8	7	5	23	24	3.0	222	6	12	10	15	1.4-2.0-4.0	2.9	2.3	2.0	1.6
	800	628	0.04	0.08	0.07	0.11	6-9-15	17	13	12	9	31	32	4.1	297	11	21	17	27	1.8-2.7-4.6	5.1	3.9	3.5	2.8
	900	707	0.06	0.11	0.09	0.14	7-10-16	19	14	13	12	35	36	4.6	334	14	26	22	34	2.0-3.1-4.9	5.9	4.4	4.0	3.5
	1000	785	0.07	0.13	0.11	0.17	7-11-17	21	16	14	13	38	39	5.1	371	17	33	27	42	2.3-3.4-5.2	6.5	4.9	4.4	3.9
	1100	864	0.08	0.16	0.13	0.21	8-12-18	24	18	16	14	41	42	5.6	408	21	39	32	51	2.5-3.7-5.4	7.2	5.4	4.8	4.3
	1200	942	0.10	0.19	0.16	0.25	9-13-19	26	19	17	16	43	44	6.1	445	25	47	39	61	2.7-4.0-5.7	7.8	5.9	5.3	4.7
	1300	1021	0.12	0.22	0.18	0.29	10-14-19	28	21	19	17	46	47	6.6	482	29	55	45	72	2.9-4.2-5.9	8.5	6.4	5.7	5.1
14	200	214	0.00	0.01	0.00	0.01	2-3-5	1	1	1	1	-	-	1.0	101	1	1	1	2	0.5-0.8-1.6	0.4	0.3	0.3	0.2
	400	428	0.01	0.02	0.02	0.03	3-5-10	5	4	3	3	11	12	2.0	202	3	5	4	7	1.1-1.6-3.2	1.4	1.2	1.0	0.8
	600	641	0.02	0.05	0.04	0.06	5-8-15	11	9	8	6	23	24	3.0	303	6	12	10	15	1.6-2.4-4.7	3.3	2.6	2.3	1.8
	800	855	0.04	0.08	0.07	0.11	7-10-18	19	15	13	10	32	33	4.1	404	11	21	17	27	2.1-3.2-5.4	5.8	4.5	4.1	3.2
	900	962	0.06	0.11	0.09	0.14	8-12-19	22	17	15	13	35	36	4.6	454	14	26	22	34	2.4-3.6-5.7	6.8	5.1	4.6	4.0
	1000	1069	0.07	0.13	0.11	0.17	9-13-20	25	19	17	15	39	40	5.1	505	17	33	27	42	2.6-4.0-6.0	7.5	5.7	5.1	4.6
	1100	1176	0.08	0.16	0.13	0.21	10-14-21	27	20	18	16	41	42	5.6	555	21	39	32	51	2.9-4.4-6.3	8.3	6.2	5.6	5.0
	1200	1283	0.10	0.19	0.16	0.25	10-15-22	30	22	20	18	44	45	6.1	605	25	47	39	61	3.2-4.7-6.6	9.1	6.8	6.1	5.5
	1300	1390	0.12	0.22	0.18	0.29	11-16-23	32	24	22	19	46	47	6.6	656	29	55	45	72	3.4-4.9-6.9	9.8	7.3	6.6	5.9
16	200	279	0.00	0.01	0.00	0.01	2-3-6	1	1	1	1	-	-	1.0	132	1	1	1	2	0.6-0.9-1.8	0.4	0.3	0.3	0.2
	400	559	0.01	0.02	0.02	0.03	4-6-12	5	4	4	3	12	13	2.0	264	3	5	4	7	1.2-1.8-3.6	1.6	1.3	1.2	0.9
	600	838	0.02	0.05	0.04	0.06	6-9-18	12	10	9	7	24	25	3.0	395	6	12	10	15	1.8-2.7-5.4	3.7	3.0	2.6	2.0
	800	1117	0.04	0.08	0.07	0.11	8-12-20	21	17	15	12	32	33	4.1	527	11	21	17	27	2.4-3.6-6.2	6.5	5.1	4.6	3.6
	900	1257	0.06	0.11	0.09	0.14	9-13-22	25	19	17	15	36	37	4.6	593	14	26	22	34	2.7-4.1-6.6	7.7	5.8	5.2	4.5
	1000	1396	0.07	0.13	0.11	0.17	10-15-23	28	21	19	17	39	40	5.1	659	17	33	27	42	3.0-4.5-6.9	8.6	6.4	5.8	5.2
	1100	1536	0.08	0.16	0.13	0.21	11-16-24	31	23	21	19	42	43	5.6	725	21	39	32	51	3.3-5.0-7.2	9.4	7.1	6.4	5.7
	1200	1676	0.10	0.19	0.16	0.25	12-18-25	34	25	23	20	45	46	6.1	791	25	47	39	61	3.6-5.4-7.6	10.3	7.7	6.9	6.2
	1300	1815	0.12	0.22	0.18	0.29	13-18-26	37	27	25	22	47	48	6.6	857	29	55	45	72	3.9-5.6-7.9	11.2	8.4	7.5	6.7

NOTE: See notes on next page.

RM & RA SERIES

Round Diffusers, 3 and 4 Cones



PERFORMANCE DATA | RM2, RM4, RA2, RA4 (4-CONES) | NO DAMPER

DIFFUSERS | ROUND

SIZE	IP DATA													METRIC DATA																	
	NECK VEL	AIR FLOW	HZ		VT		HZ THROW	VT PROJECTION				HZ	VT	NECK VEL	AIR FLOW	HZ		VT		HZ THROW	VT PROJECTION										
			Ps	Pt	Ps	Pt		10°F	20°F	30°F	40°F					Pa	Pv	Pt	Pt		5°C	11°C	17°C	22°C							
	in	fpm	cfm	in wg	in wg	in wg	in wg	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft
18	200	353	0.00	0.01	0.00	0.01	2-3-7	1	1	1	1	-	-	1.0	167	1	1	1	2	0.7-1.0-2.0	0.5	0.4	0.3	0.2							
	400	707	0.01	0.02	0.02	0.03	4-7-13	6	5	4	3	12	13	2.0	334	3	5	4	7	1.4-2.0-4.1	1.8	1.5	1.3	1.0							
	600	1060	0.02	0.05	0.04	0.06	7-10-20	13	11	9	7	24	25	3.0	500	6	12	10	15	2.0-3.1-6.0	4.1	3.3	2.9	2.2							
	800	1414	0.04	0.08	0.07	0.11	9-13-23	24	19	17	13	33	34	4.1	667	11	21	17	27	2.7-4.1-7.0	7.3	5.8	5.1	4.0							
	900	1590	0.06	0.11	0.09	0.14	10-15-24	28	21	19	16	36	37	4.6	751	14	26	22	34	3.1-4.6-7.4	8.7	6.5	5.8	5.0							
	1000	1767	0.07	0.13	0.11	0.17	11-17-26	32	24	21	19	40	41	5.1	834	17	33	27	42	3.4-5.1-7.8	9.6	7.2	6.5	5.8							
	1100	1944	0.08	0.16	0.13	0.21	12-18-27	35	26	23	21	42	43	5.6	917	21	39	32	51	3.7-5.6-8.2	10.6	7.9	7.1	6.4							
	1200	2121	0.10	0.19	0.16	0.25	13-20-28	38	28	26	23	45	46	6.1	1001	25	47	39	61	4.1-6.0-8.5	11.5	8.6	7.8	7.0							
20	200	436	0.00	0.01	0.00	0.01	2-4-7	2	1	1	1	-	-	1.0	206	1	1	1	2	0.8-1.1-2.3	0.5	0.4	0.4	0.3							
	400	873	0.01	0.02	0.02	0.03	5-7-15	7	5	5	4	13	14	2.0	412	3	5	4	7	1.5-2.3-4.5	2.0	1.6	1.4	1.1							
	600	1309	0.02	0.05	0.04	0.06	7-11-22	15	12	10	8	25	26	3.0	618	6	12	10	15	2.3-3.4-6.7	4.5	3.6	3.2	2.5							
	800	1745	0.04	0.08	0.07	0.11	10-15-25	26	21	19	14	33	34	4.1	824	11	21	17	27	3.0-4.5-7.7	8.0	6.4	5.7	4.4							
	900	1963	0.06	0.11	0.09	0.14	11-17-27	32	24	21	18	37	38	4.6	927	14	26	22	34	3.4-5.1-8.2	9.6	7.2	6.5	5.5							
	1000	2182	0.07	0.13	0.11	0.17	12-19-28	35	26	24	21	40	41	5.1	1030	17	33	27	42	3.8-5.7-8.6	10.7	8.0	7.2	6.4							
	1100	2400	0.08	0.16	0.13	0.21	14-20-30	39	29	26	23	43	44	5.6	1133	21	39	32	51	4.1-6.2-9.1	11.7	8.8	7.9	7.1							
	1200	2618	0.10	0.19	0.16	0.25	15-22-31	42	32	28	25	45	46	6.1	1236	25	47	39	61	4.5-6.7-9.5	12.8	9.6	8.6	7.7							
24	200	628	0.00	0.01	0.00	0.01	3-4-9	2	2	1	1	-	-	1.0	297	1	1	1	2	0.9-1.4-2.7	0.6	0.5	0.4	0.3							
	400	1257	0.01	0.02	0.02	0.03	6-9-18	8	6	6	4	13	14	2.0	593	3	5	4	7	1.8-2.7-5.4	2.4	1.9	1.7	1.3							
	600	1885	0.02	0.05	0.04	0.06	9-13-26	18	14	12	10	25	26	3.0	890	6	12	10	15	2.7-4.1-8.0	5.4	4.3	3.8	2.9							
	800	2513	0.04	0.08	0.07	0.11	12-18-30	31	25	22	17	34	35	4.1	1186	11	21	17	27	3.6-5.4-9.3	9.5	7.6	6.7	5.2							
	900	2827	0.06	0.11	0.09	0.14	13-20-32	38	28	25	22	38	39	4.6	1334	14	26	22	34	4.1-6.1-9.8	11.5	8.6	7.7	6.6							
	1000	3142	0.07	0.13	0.11	0.17	15-22-34	42	31	28	25	41	42	5.1	1483	17	33	27	42	4.5-6.8-10.4	12.8	9.6	8.6	7.7							
	1100	3456	0.08	0.16	0.13	0.21	16-25-36	46	35	31	28	44	45	5.6	1631	21	39	32	51	5.0-7.5-10.9	14.0	10.5	9.5	8.5							
	1200	3770	0.10	0.19	0.16	0.25	18-26-37	50	38	34	30	46	47	6.1	1779	25	47	39	61	5.4-8.0-11.4	15.3	11.5	10.3	9.2							
30	200	982	0.00	0.01	0.00	0.01	4-6-11	2	2	2	1	-	-	1.0	463	1	1	1	2	1.1-1.7-3.4	0.7	0.6	0.5	0.4							
	400	1963	0.01	0.02	0.02	0.03	7-11-22	10	8	7	5	14	15	2.0	927	3	5	4	7	2.3-3.4-6.8	2.9	2.4	2.1	1.6							
	600	2945	0.02	0.05	0.04	0.06	11-17-33	22	18	15	12	26	27	3.0	1390	6	12	10	15	3.4-5.1-10.0	6.6	5.4	4.7	3.6							
	800	3927	0.04	0.08	0.07	0.11	15-22-38	39	31	27	21	35	36	4.1	1853	11	21	17	27	4.5-6.8-11.6	11.8	9.5	8.3	6.4							
	900	4418	0.06	0.11	0.09	0.14	17-25-40	47	35	32	27	38	39	4.6	2085	14	26	22	34	5.1-7.6-12.3	14.3	10.7	9.6	8.1							
	1000	4909	0.07	0.13	0.11	0.17	19-28-43	52	39	35	32	42	43	5.1	2317	17	33	27	42	5.7-8.5-13.0	15.9	11.9	10.7	9.6							
	1100	5400	0.08	0.16	0.13	0.21	20-31-45	58	43	39	35	44	45	5.6	2548	21	39	32	51	6.2-9.3-13.6	17.5	13.1	11.8	10.5							
	1200	5890	0.10	0.19	0.16	0.25	22-33-47	63	47	42	38	47	48	6.1	2780	25	47	39	61	6.8-10.0-14.2	19.1	14.3	12.9	11.5							
36	200	1414	0.00	0.01	0.00	0.01	4-7-13	3	2	2	2	-	-	1.0	667	1	1	1	2	1.4-2.0-4.1	0.9	0.7	0.6	0.5							
	400	2827	0.01	0.02	0.02	0.03	9-13-27	12	9	8	6	15	16	2.0	1334	3	5	4	7	2.7-4.1-8.1	3.5	2.8	2.5	1.9							
	600	4241	0.02	0.05	0.04	0.06	13-20-40	26	21	18	14	27	28	3.0	2002	6	12	10	15	4.1-6.1-12.0	7.9	6.4	5.6	4.3							
	800	5655	0.04	0.08	0.07	0.11	18-27-46	46	37	33	25	36	37	4.1	2669	11	21	17	27	5.4-8.1-13.9	14.1	11.4	10.0	7.7							
	900	6362	0.06	0.11	0.09	0.14	20-30-49	56	42	38	32	39	40	4.6	3002	14	26	22	34	6.1-9.2-14.7	17.1	12.8	11.6	9.7							
	1000	7069	0.07	0.13	0.11	0.17	22-33-51	63	47	42	38	42	43	5.1	3336	17	33	27	42	6.8-10.2-15.5	19.1	14.3	12.8	11.5							
	1100	7775	0.08	0.16	0.13	0.21	25-37-54	69	52	46	42	45	46	5.6	3670	21	39	32	51	7.5-11.2-16.3	21.0	15.7	14.1	12.6							
	1200	8482	0.10	0.19	0.16	0.25	27-40-56	75	56	51	45	48	49	6.1	4003	25	47	39	61	8.1-12.0-17.0	22.9	17.1	15.4	13.8							
1300	9189	0.12	0.22	0.18	0.29	29-41-58	81	61	55	49	50	51	6.6	4337	29	55	45	72	8.8-12.5-17.7	24.8	18.6	16.7	14.9								

NOTES: Throw values are given terminal velocities of 150, 100, and 50 FPM (0.75, 0.50, and 0.25 m/s). Horizontal throw values are given for isothermal conditions. Vertical throw values are for a terminal velocity of 50 FPM, free jet, at the temperature differences shown. NC values are based on octave band 2 - 7 sound power levels minus a room absorption of 10dB, re 10⁻¹² Watts. Dash in space denotes a NC value of less than 10. Data was obtained from tests conducted in accordance with ANSI/ASHRAE Standard 70, ISO Standard 5219, and ISO Standard 3741. See selection software for performance data not shown, including octave band data.

ENGINEERING SPECIFICATION & CONFIGURATION

RM1, 5RM1

The round ceiling diffuser shall be Krueger model RM1 (steel) or 5RM1 (aluminum). The RM1 and 5RM1 models shall be constructed of 3-cones. The inner 2-cone assembly shall be adjustable to provide 2 different horizontal discharge settings and be easily removable using a spring locking mechanism. The removable core shall be supported by a safety cable to provide ease of installation and maintenance for neck sizes 14" and larger. Diffusers shall be constructed of 18 gauge steel (RM1) or 0.051" aluminum (5RM1).

Optional round damper shall be constructed of heavy gauge steel. Damper shall be operable from the face of the diffuser.

PERFORMANCE

The manufacturer shall provide published (printed or electronic) performance data for the diffuser. Performance data shall include 2 - 7 octave band sound power levels. The diffuser shall be tested in accordance to the data standards at the time of product introduction or ANSI/ASHRAE Standard 70.

FINISH

The paint finish shall be #44 British White and be an anodic acrylic paint, baked at 315°F for 30 minutes. The paint thickness shall be 0.8 - 1.0 mils, gloss at 60° per ASTM D523-89 of 50 - 85%, pencil hardness per ASTM D3363-92A of HB - H, crosshatch adhesion per ASTM D3359-83 of 4B - 5B, impact per ASTM D2794-93 of direct impact >100 in/lb and reverse impact >80 in/lb, salt spray per ASTM B117-9048 of 96 hours, humidity per ASTM D2247-92 of >500 hours and water soak per ASTM D870-92 of 250 hours.

1. SERIES: (XXXX)

RM1 - 2-Position Round, Steel Diffuser
5RM1 - 2-Position Round, Aluminum Diffuser

2. INLET: (XX) *

6" - 20" in 2" Increments, 24", 30", or 36"

3. DAMPER: (XX)

00 - NONE
03 - PR10
04 - PRD10
06 - PR12
08 - PRN100

4. ACCESSORIES: (X) **

0 - No Accessories
C - Safety Cable
R - Round Straightening Grid

5. FINISH: (XX)

01 - Mill
10 - Alumican
35 - Black
44 - British White

* Largest inlet size available for 5RM1 is 18".

** Safety cable included on all units with 12" or greater neck size.

RM & RA SERIES

Round Diffusers, 3 and 4 Cones



ENGINEERING SPECIFICATION & CONFIGURATION

RM2, 5RM2, RM4, 5RM4

The round ceiling diffuser shall be Krueger model RM2 (steel) or 5RM2 (aluminum). The RM2 and 5RM2 models shall be constructed of 4-cones. The inner 3-cone assembly shall be adjustable to provide 3 different discharge settings from horizontal to vertical and be easily removable using a spring locking mechanism. The removable core shall be supported by a safety cable to provide ease of installation and maintenance for neck sizes 14" and larger. Diffusers shall be constructed of 18 gauge steel (RM2) or 0.051" aluminum (5RM2).

A deep, one-piece outer cone shall be provided for the enhancement to the anti-smudge characteristics of the RM4 (steel) and 5RM4 (aluminum) series.

Optional round damper shall be constructed of heavy gauge steel. Damper shall be operable from the face of the diffuser.

RA2, RA4

The round ceiling diffuser shall be Krueger model RA2. The RA2 model shall be constructed of 4-cones. The inner 3-cone assembly shall be fully adjustable by rotating the center cone to modify the discharge air setting from horizontal to vertical and be easily removable using a spring locking mechanism. The removable core shall be supported by a safety cable to provide ease of installation and maintenance for neck sizes 14" and larger. Diffusers shall be constructed of 18 gauge steel.

A deep, one-piece outer cone shall be provided for the enhancement to the anti-smudge characteristics of the RA4 series.

Optional round damper shall be constructed of heavy gauge steel. Damper shall be operable from the face of the diffuser.

PERFORMANCE

The manufacturer shall provide published (printed or electronic) performance data for the diffuser. Performance data shall include 2 - 7 octave band sound power levels. The diffuser shall be tested in accordance to the data standards at the time of product introduction or ANSI/ASHRAE Standard 70.

FINISH

The paint finish shall be #44 British White and be an anodic acrylic paint, baked at 315°F for 30 minutes. The paint thickness shall be 0.8 - 1.0 mils, gloss at 60° per ASTM D523-89 of 50 - 85%, pencil hardness per ASTM D3363-92A of HB - H, crosshatch adhesion per ASTM D3359-83 of 4B - 5B, impact per ASTM D2794-93 of direct impact >100 in/lb and reverse impact >80 in/lb, salt spray per ASTM B117-9048 of 96 hours, humidity per ASTM D2247-92 of >500 hours and water soak per ASTM D870-92 of 250 hours.

SAMPLE CONFIGURATION: RM2 - 10 - 00 - 0 - 44

1. SERIES: (XXXX)

- RM2 - 3-Position Round, Steel Diffuser
- RM4 - 3-Position Round, Anti-smudge Steel Diffuser
- 5RM2 - 3-Position Round, Aluminum Diffuser
- 5RM4 - 3-Position Round, Anti-smudge Aluminum Diffuser
- RA2 - Adjustable Round, Steel Diffuser
- RA4 - Adjustable Round, Anti-smudge Steel Diffuser

2. INLET: (XX) *

- 6" - 20" in 2" Increments, 24", 30", or 36"

3. DAMPER: (XX)

- 00 - NONE
- 03 - PR10
- 04 - PRD10
- 06 - PR12
- 08 - PRN100

4. ACCESSORIES: (X) **

- 0 - No Accessories
- C - Safety Cable
- R - Round Straightening Grid

5. FINISH: (XX)

- 01 - Mill
- 10 - Alumican
- 35 - Black
- 44 - British White

* Largest inlet size available for RM4 & RA4 is 24".

Largest inlet size available for 5RM2 & 5RM4 is 18".

** Safety cable included on all units with 12" or Greater neck size.

INTRODUCTION

The RM2PLQ/RM4PLQ architectural round ceiling diffuser provides excellent performance in variable air volume systems and provides a clean, smooth look for exposed duct or hard ceiling applications. Additionally, it has a center plaque with three adjustable positions. In position one, capacity is maximized with a uniform 360° horizontal throw. In position two, room air induction is increased and throw remains horizontal. In position three, the air projects vertically from the diffuser.

Krueger's round ceiling diffusers come with a safety cable to secure the inner plaque core after removal.

MODELS

RM2PLQ - Steel Round Diffuser with Aluminum Plaque

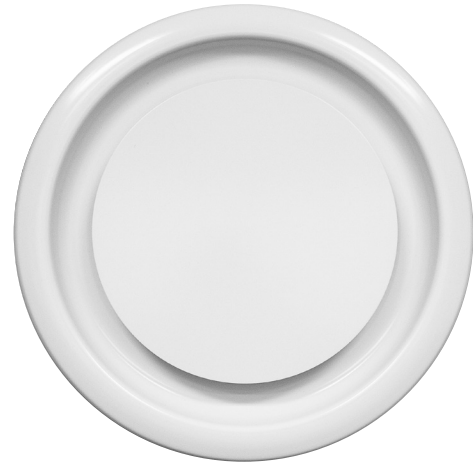
RM4PLQ - Steel Anti-Smudge Round Diffuser with Aluminum Plaque

FEATURES

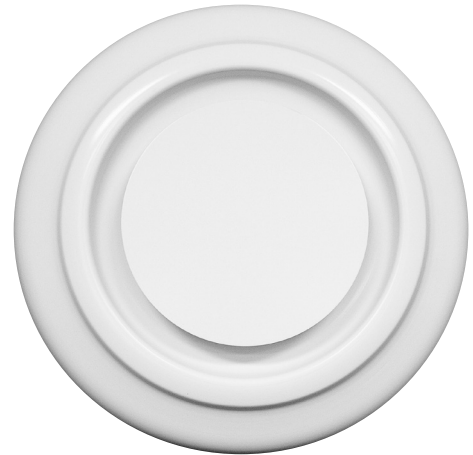
- Horizontal and vertical air distribution. (Units ship in vertical position.)
- Core is easily removable from face of diffuser.
- 360° Discharge air pattern.
- Excellent performance in variable air volume systems.
- Designed for exposed duct or hard ceiling applications.
- Safety cable included.
- Standard finish is #44 British White.
- Optional finishes available.

ACCESSORIES

- Optional Straightening Grids (Duct Mounted)
- Optional Round Damper (Duct Mounted)



RM2PLQ



RM4PLQ

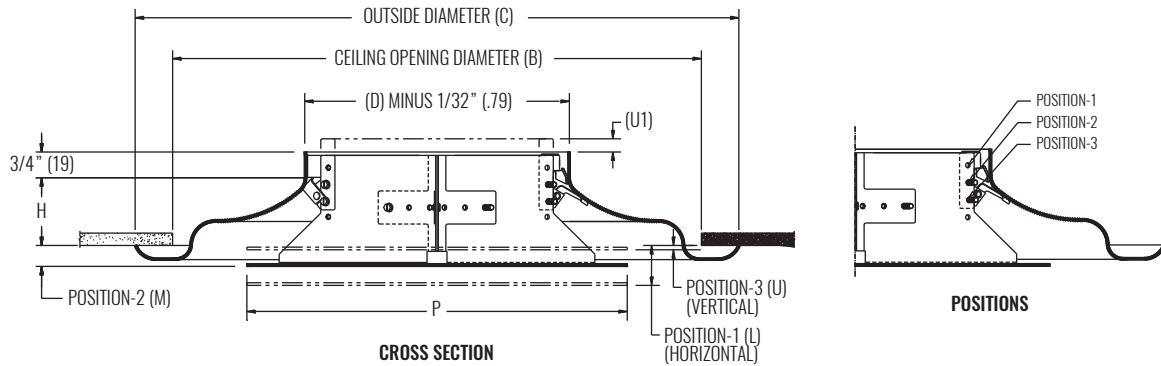
RM2PLQ, RM4PLQ

Round Diffusers, Center Plaque



DIFFUSERS | ROUND

DIMENSIONAL DATA | RM2PLQ



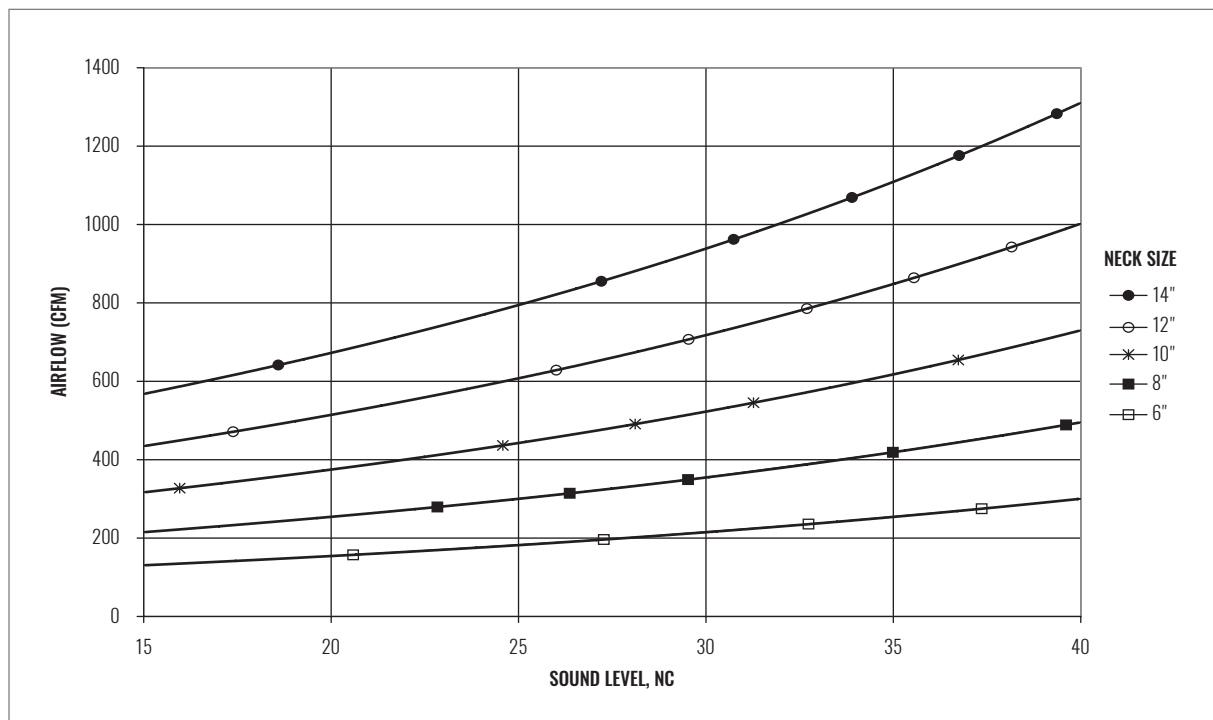
AVAILABLE NECK SIZES								
NOMINAL DUCT DIAMETER	B	C	H	P	U	U1 *	M	L
6"	12" (305)	13 1/2" (343)	1 5/8" (41)	6" (9)	1/16" (2)	1/2" (13)	5/8" (16)	1 3/16" (30)
8"	16" (406)	18" (457)	2 1/8" (54)	12" (305)	3/16" (5)	1/2" (13)	3/4" (19)	1 5/16" (33)
10"	20" (508)	22 1/2" (572)	2 5/8" (67)	15" (381)	0	1/2" (13)	9/16" (14)	1 1/8" (29)
12"	24" (635)	27" (686)	3 1/4" (83)	18" (457)	1/8" (3)	11/16" (17)	5/8" (16)	1 3/8" (35)
14"	28" (711)	31 1/2" (800)	3 3/4" (95)	21" (533)	1/16" (2)	13/16" (21)	13/16" (21)	1 9/16" (40)

NOTES: Unit shipped in position 2. Dimensions in parentheses are millimeters (mm).

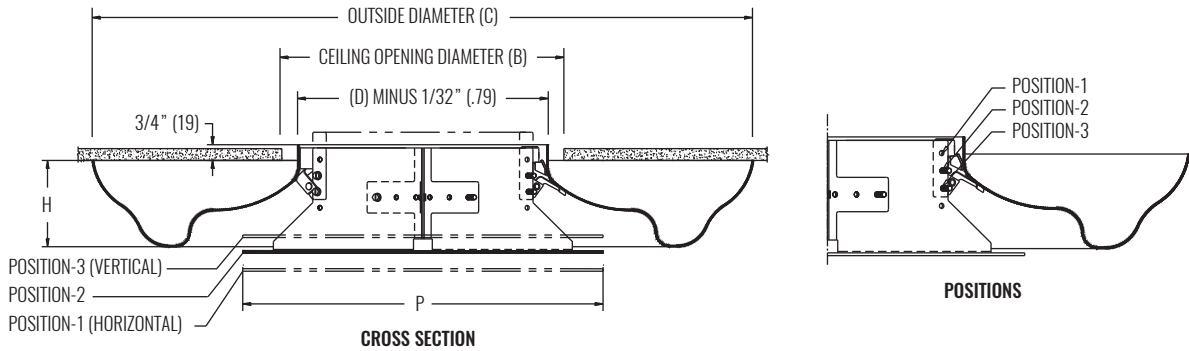
* (U1) Extends above the neck when plaque is placed in position 3.

REFERENCE CHART | RM2PLQ

AIRFLOW VS. NC LEVEL (NO DAMPER)



DIMENSIONAL DATA | RM4PLQ (ANTI-SMUDGE)

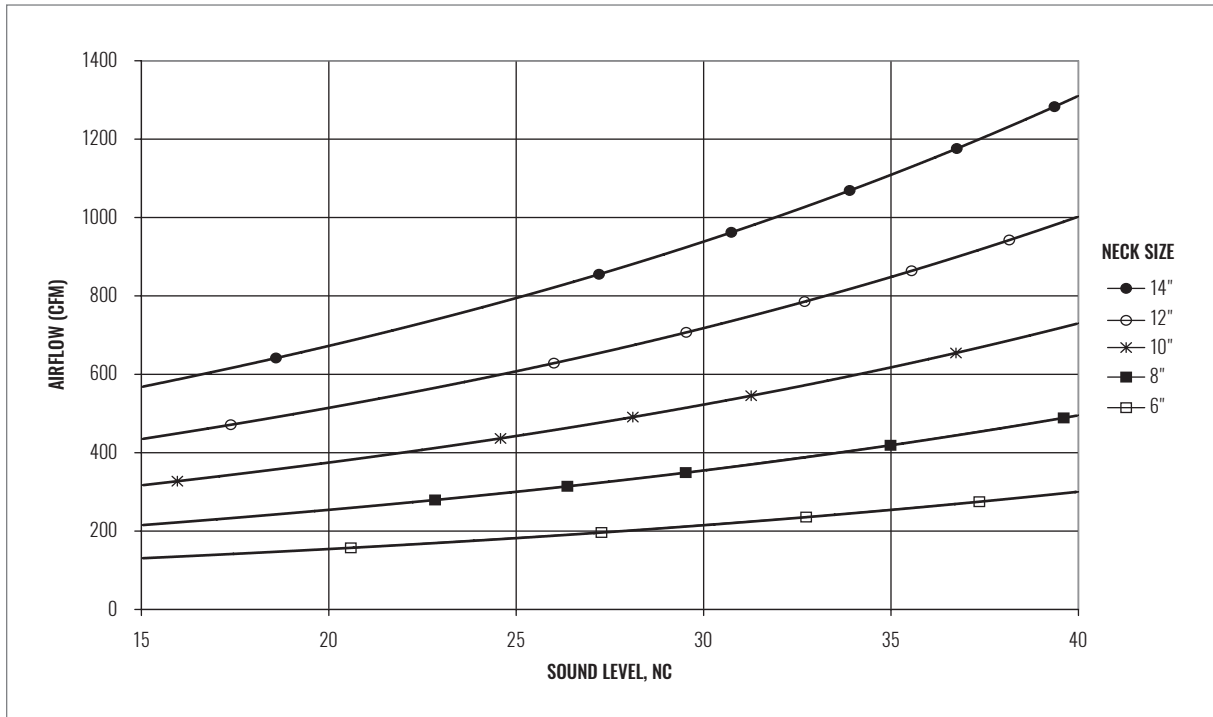


AVAILABLE NECK SIZES				
NOMINAL DUCT DIAMETER	B	C	H	P
6"	7" (178)	17 3/8" (441)	2" (51)	6" (9)
8"	9" (229)	23 1/4" (591)	2 11/16" (68)	12" (305)
10"	11" (279)	29" (737)	3 1/4" (83)	15" (381)
12"	13" (330)	34 7/8" (886)	4" (102)	18" (457)
14"	15" (381)	40 5/8" (1032)	4 1/2" (114)	21" (533)

NOTES: Unit shipped in position 2. Dimensions in parentheses are millimeters (mm).

SOUND CHART | RM4PLQ (ANTI-SMUDGE)

AIRFLOW VS. NC LEVEL (NO DAMPER)



RM2PLQ, RM4PLQ

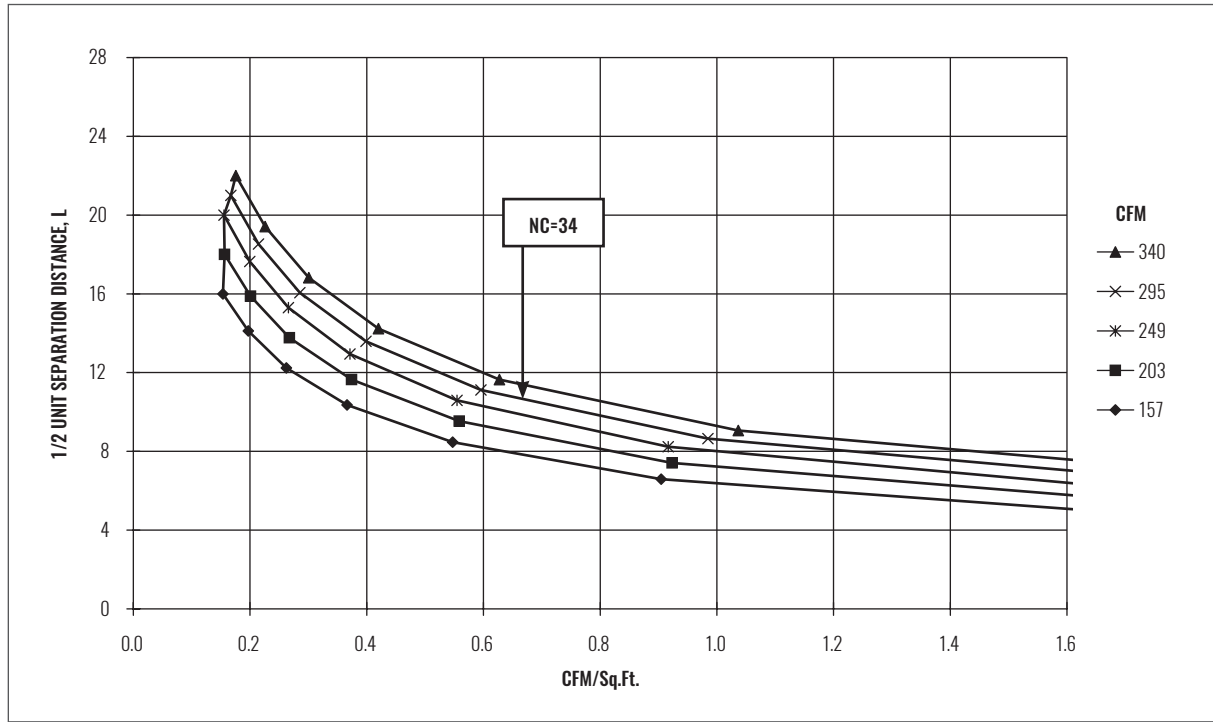
Round Diffusers, Center Plaque



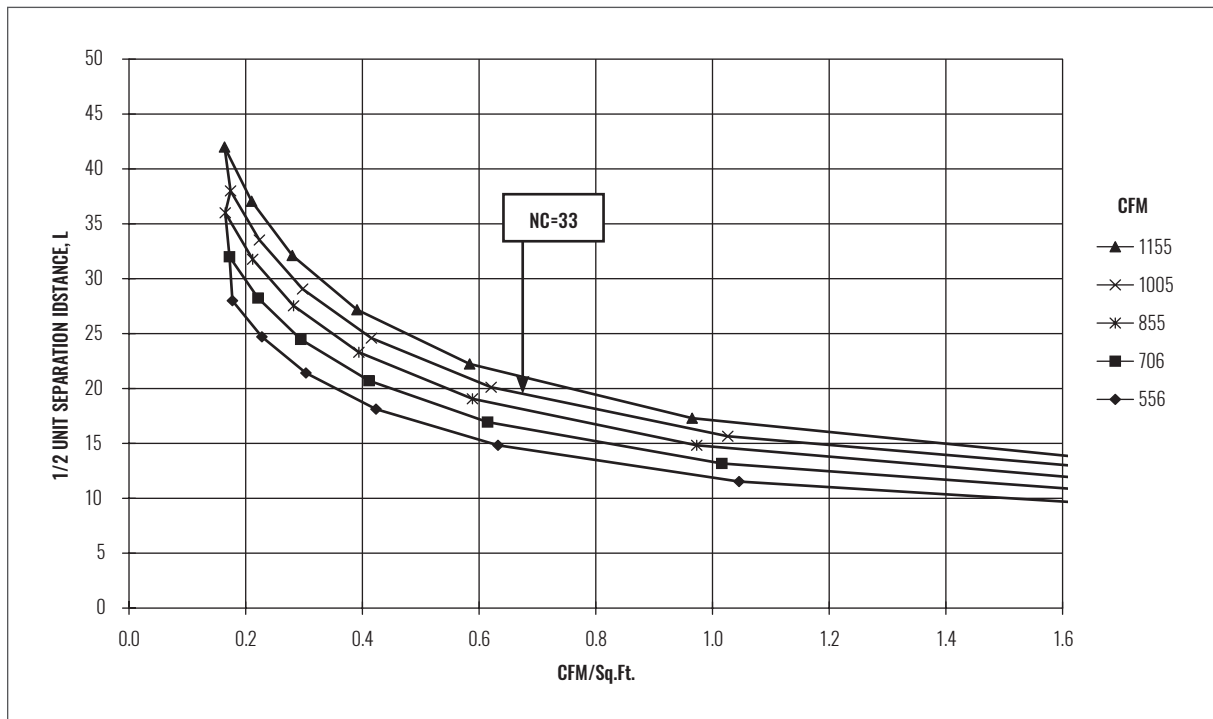
DIFFUSERS | ROUND

ADPI CHARTS | HORIZONTAL THROW

UNIT SPACING FOR 80% ADPI (6" NECK, NO DAMPER)



UNIT SPACING FOR 80% ADPI (14" NECK, NO DAMPER)



NOTES: Charts are at 20 BTUH/ft² loads. See the Engineering section of this catalog for instructions on how to read these charts and additional ADPI information.

PERFORMANCE DATA | NO DAMPER

SIZE	IP DATA														METRIC DATA									
	NECK VEL	AIR FLOW	HZ		VT		HZ THROW	VT PROJECTION				HZ	VT	NECK VEL	AIR FLOW	HZ		VT		HZ THROW	VT PROJECTION			
			Ps	Pt	Ps	Pt		10°F	20°F	30°F	40°F					Pa	Pt	Pa	Pt		5°C	11°C	17°C	22°C
in	fpm	cfm	in wg	in wg	in wg	in wg	ft	ft	ft	ft	ft	NC	NC	m/s	L/s	Pa	Pa	Pa	Pa	m	m	m	m	m
6	200	39	0.00	0.00	0.01	0.01	1-1-2	0	0	0	0	-	-	1.0	19	0	1	2	3	0.2-0.3-0.7	0.1	0.1	0.1	0.1
	400	79	0.00	0.01	0.03	0.04	1-2-4	1	1	1	1	-	-	2.0	37	1	4	8	11	0.5-0.7-1.4	0.4	0.3	0.3	0.2
	600	118	0.01	0.03	0.08	0.10	2-3-7	3	3	2	2	-	12	3.0	56	2	8	19	24	0.7-1.0-2.0	0.9	0.8	0.6	0.5
	800	157	0.02	0.06	0.13	0.17	3-4-8	5	4	4	3	11	21	4.1	74	4	14	33	43	0.9-1.4-2.3	1.6	1.4	1.1	1.0
	1000	196	0.03	0.09	0.21	0.27	4-6-9	8	7	6	5	17	27	5.1	93	7	22	52	67	1.1-1.7-2.6	2.6	2.1	1.8	1.5
	1200	236	0.04	0.13	0.30	0.39	4-7-9	11	10	8	7	23	33	6.1	111	10	32	75	97	1.4-2.0-2.8	3.5	3.1	2.3	2.1
	1400	275	0.05	0.18	0.41	0.53	5-7-10	13	12	9	8	27	37	7.1	130	14	44	102	132	1.6-2.2-3.1	4.1	3.7	2.7	2.5
	1600	314	0.07	0.23	0.53	0.69	6-8-11	15	14	10	10	31	41	8.1	148	18	57	133	173	1.8-2.3-3.3	4.6	4.2	3.1	2.9
8	200	70	0.00	0.00	0.01	0.01	1-1-3	1	1	1	0	-	-	1.0	33	0	1	2	2	0.3-0.5-0.9	0.2	0.2	0.2	0.1
	400	140	0.00	0.01	0.03	0.04	2-3-6	3	3	2	2	-	-	2.0	66	1	3	7	10	0.6-0.9-1.8	1.0	0.8	0.7	0.6
	600	209	0.01	0.03	0.07	0.09	3-4-9	7	6	5	4	-	14	3.0	99	2	8	17	22	0.9-1.4-2.7	2.1	1.8	1.5	1.2
	800	279	0.02	0.06	0.12	0.16	4-6-10	12	10	8	7	15	23	4.1	132	4	14	29	39	1.2-1.8-3.1	3.7	3.2	2.5	2.2
	900	314	0.02	0.07	0.15	0.20	4-7-11	14	12	9	9	19	26	4.6	148	5	17	37	50	1.4-2.0-3.3	4.2	3.8	2.8	2.6
	1000	349	0.02	0.09	0.18	0.25	5-7-11	15	14	10	10	22	30	5.1	165	6	21	46	61	1.5-2.3-3.5	4.7	4.2	3.1	2.9
	1200	419	0.03	0.12	0.27	0.36	6-9-12	18	17	12	11	27	35	6.1	198	8	31	66	89	1.8-2.7-3.8	5.6	5.0	3.7	3.5
	1400	489	0.05	0.17	0.36	0.48	7-10-13	21	19	14	13	32	40	7.1	231	11	42	90	120	2.1-2.9-4.1	6.5	5.9	4.3	4.1
1600	559	0.06	0.22	0.47	0.63	8-10-14	24	21	16	15	36	44	8.1	264	15	55	118	157	2.4-3.1-4.4	7.4	6.4	4.9	4.6	
10	200	109	0.00	0.00	0.01	0.01	1-2-4	1	1	1	1	-	-	1.0	51	0	1	2	2	0.4-0.6-1.1	0.4	0.4	0.3	0.2
	400	218	0.00	0.01	0.02	0.03	2-4-7	6	5	4	3	-	-	2.0	103	1	3	6	9	0.8-1.1-2.3	1.7	1.4	1.2	1.0
	600	327	0.01	0.03	0.06	0.08	4-6-11	12	10	9	7	-	16	3.0	154	2	7	14	19	1.1-1.7-3.3	3.8	3.1	2.6	2.2
	800	436	0.01	0.05	0.10	0.14	5-7-13	17	15	11	11	19	25	4.1	206	3	13	25	34	1.5-2.3-3.9	5.2	4.7	3.5	3.3
	900	491	0.01	0.07	0.12	0.18	6-8-13	19	17	13	12	22	28	4.6	232	4	16	31	44	1.7-2.5-4.1	5.9	5.3	3.9	3.7
	1000	545	0.02	0.08	0.15	0.22	6-9-14	21	19	14	13	25	31	5.1	257	4	20	38	54	1.9-2.8-4.3	6.5	5.9	4.3	4.1
	1200	654	0.03	0.12	0.22	0.31	7-11-16	26	23	17	16	31	37	6.1	309	6	29	55	78	2.3-3.3-4.7	7.8	6.9	5.2	4.9
	1400	764	0.04	0.16	0.30	0.42	9-12-17	28	25	20	18	35	41	7.1	360	9	39	75	106	2.6-3.6-5.1	8.6	7.5	6.1	5.6
1600	873	0.05	0.21	0.39	0.55	10-13-18	30	26	23	20	39	45	8.1	412	11	51	98	138	3.0-3.9-5.5	9.2	8.0	6.9	5.9	
12	200	157	0.00	0.00	0.00	0.01	1-2-4	2	2	1	1	-	-	1.0	74	0	1	1	2	0.5-0.7-1.4	0.6	0.5	0.4	0.4
	400	314	0.00	0.01	0.02	0.03	3-4-9	8	7	6	5	-	-	2.0	148	0	3	5	7	0.9-1.4-2.7	2.5	2.1	1.8	1.5
	600	471	0.00	0.03	0.04	0.06	4-7-13	17	15	11	10	13	17	3.0	222	1	7	10	16	1.4-2.0-4.0	5.1	4.6	3.4	3.2
	800	628	0.01	0.05	0.07	0.11	6-9-15	22	20	15	14	21	26	4.1	297	2	12	19	29	1.8-2.7-4.6	6.8	6.1	4.5	4.2
	900	707	0.01	0.06	0.09	0.14	7-10-16	25	23	17	16	25	30	4.6	334	2	15	24	36	2.0-3.1-4.9	7.6	6.9	5.1	4.8
	1000	785	0.01	0.07	0.12	0.18	7-11-17	28	25	18	17	28	33	5.1	371	3	18	29	45	2.3-3.4-5.2	8.5	7.6	5.6	5.3
	1100	864	0.01	0.09	0.14	0.22	8-12-18	30	26	20	19	31	36	5.6	408	3	22	35	54	2.5-3.7-5.4	9.2	8.0	6.2	5.8
	1200	942	0.02	0.11	0.17	0.26	9-13-19	32	27	22	20	34	38	6.1	445	4	26	42	64	2.7-4.0-5.7	9.6	8.3	6.7	6.2
1300	1021	0.02	0.12	0.20	0.30	10-14-19	33	28	24	21	36	41	6.6	482	5	31	49	75	2.9-4.2-5.9	10.0	8.7	7.3	6.4	
14	200	214	0.00	0.00	0.00	0.01	2-3-5	3	2	2	2	-	-	1.0	101	0	1	1	1	0.5-0.8-1.6	0.9	0.7	0.6	0.5
	400	428	0.00	0.01	0.01	0.02	3-5-10	11	9	8	7	-	-	2.0	202	0	3	3	5	1.1-1.6-3.2	3.5	2.9	2.4	2.0
	600	641	0.00	0.02	0.03	0.05	5-8-15	21	19	14	13	15	19	3.0	303	0	6	6	12	1.6-2.4-4.7	6.2	5.6	4.1	3.9
	800	855	0.00	0.04	0.05	0.09	7-10-18	27	25	18	17	24	27	4.1	404	0	10	12	21	2.1-3.2-5.4	8.3	7.5	5.5	5.2
	900	962	0.00	0.05	0.06	0.11	8-12-19	31	28	20	19	27	31	4.6	454	1	13	15	27	2.4-3.6-5.7	9.4	8.4	6.2	5.8
	1000	1069	0.00	0.07	0.07	0.13	9-13-20	34	29	23	21	31	34	5.1	505	1	16	18	34	2.6-4.0-6.0	10.2	8.9	6.9	6.5
	1100	1176	0.00	0.08	0.09	0.16	10-14-21	35	31	25	23	33	37	5.6	555	1	20	22	41	2.9-4.4-6.3	10.7	9.3	7.6	6.9
	1200	1283	0.00	0.09	0.10	0.19	10-15-22	37	32	27	24	36	39	6.1	605	1	23	26	48	3.2-4.7-6.6	11.2	9.7	8.3	7.2
1300	1390	0.00	0.11	0.12	0.23	11-16-23	38	33	30	25	38	42	6.6	656	1	27	30	57	3.4-4.9-6.9	11.6	10.1	9.0	7.5	

NOTES: Throw values are given terminal velocities of 150, 100, and 50 FPM (0.75, 0.50, and 0.25 m/s). Horizontal throw values are given for isothermal conditions. Vertical throw values are for a terminal velocity of 50 FPM, free jet, at the temperature differences shown. NC values are based on octave band 2 - 7 sound power levels minus a room absorption of 10dB, re 10⁻¹² Watts. Dash in space denotes a NC value of less than 10. Data was obtained from tests conducted in accordance with ANSI/ASHRAE Standard 70, ISO Standard 5219, and ISO Standard 3741. See selection software for performance data not shown, including octave band data.

RM2PLQ, RM4PLQ

Round Diffusers, Center Plaque



ENGINEERING SPECIFICATION & CONFIGURATION

RM2PLQ, RM4PLQ

The architectural round ceiling diffuser shall be Krueger model RM2PLQ. The removable plaque core shall be supported by a safety cable to provide ease of installation and maintenance for all neck sizes. The center plaque assembly shall be adjustable to provide three different discharge settings from horizontal to vertical and easily removable using a spring locking mechanism. The center plaque assembly shall be supported by a safety cable to provide ease of installation and maintenance. Round outer cone shall be constructed of 18 gauge steel and a heavy gauge aluminum plaque face.

An optional deep, one piece outer cone shall be available for the enhancement to the anti-smudge characteristics (RM4PLQ).

PERFORMANCE

The manufacturer shall provide published (printed or electronic) performance data for the diffuser. The diffuser shall be tested in accordance to the data standards at the time of product introduction or ANSI/ASHRAE Standard 70.

FINISH

The paint finish shall be #44 British White and be an anodic acrylic paint, baked at 315°F for 30 minutes. The paint thickness shall be 0.8 – 1.0 mils, gloss at 60° per ASTM D523-89 of 50 – 85%, pencil hardness per ASTM D3363-92A of HB – H, crosshatch adhesion per ASTM D3359-83 of 4B – 5B, impact per ASTM D2794-93 of direct impact >100 in/lb and reverse impact >80 in/lb, salt spray per ASTM B117-9048 of 96 hours, humidity per ASTM D2247-92 of >500 hours and water soak per ASTM D870-92 of 250 hours.

1. SERIES: (XXXXXX)

RM2PLQ - Steel, Round Diffuser
with Aluminum Plaque

RM4PLQ - Steel, Round Anti-Smudge Diffuser
with Aluminum Plaque

2. INLET: (XX)

6" - 14" in 2" Increments

3. DAMPER: (XX)

00 - NONE
04 - PRD10
06 - PR12

4. ACCESSORIES: (X)

0 - No Accessories
R - Round Straightening Grid

5. FINISH: (XX)

01 - Mill
10 - Alumican
35 - Black
44 - British White

SAMPLE CONFIGURATION: RM2PLQ - 12 - 00 - 0 - 44

INTRODUCTION

Krueger's R1DBR10 round ceiling diffusers are designed for applications that require heavy duty construction featuring a ring operator which is fully adjustable with a pole operator. Discharge patterns can be adjusted from full horizontal to full vertical blow patterns. At the full vertical setting, the diffuser forces the air in a long downward projection. The result is effective heating and spot cooling from high mounting locations. The R1DBR10 is especially suitable for installation in factories, warehouses, convention halls, coliseums and shopping malls where ceilings are high and conditions may vary.

MODEL

R1DBR10 - Steel with Ring Operated Center Downblow Adjustment

FEATURES

- Outer Cone is contoured to guard against ceiling smudging.
- Designed for heating and cooling applications.
- Adjustable horizontal and vertical discharge patterns.
- 360° Discharge air pattern.
- Designed for exposed duct applications and high ceilings.
- Standard finish is #44 British White.
- Optional finishes available.

ACCESSORY

- Optional Round Straightening Grid



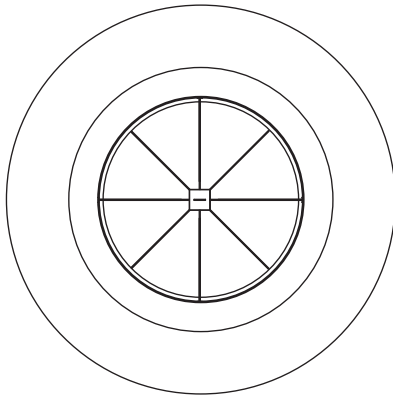
R1DBR10

R1DBR10

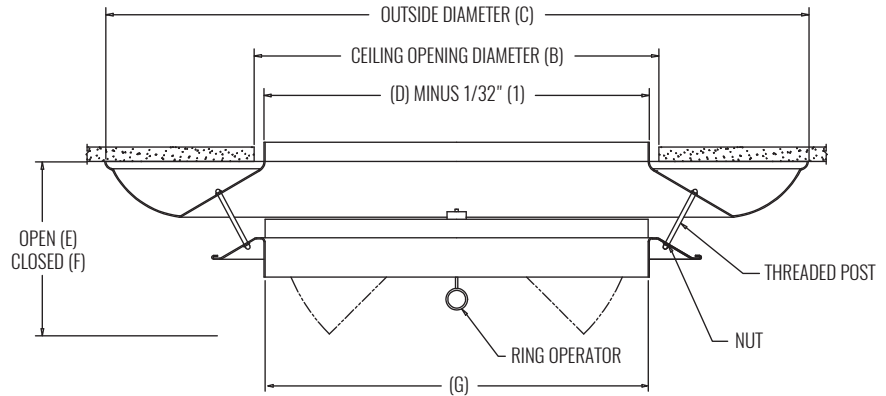
Round Diffuser, Ring Operated Center Downblow



DIMENSIONAL DATA



FACE VIEW



CROSS SECTION

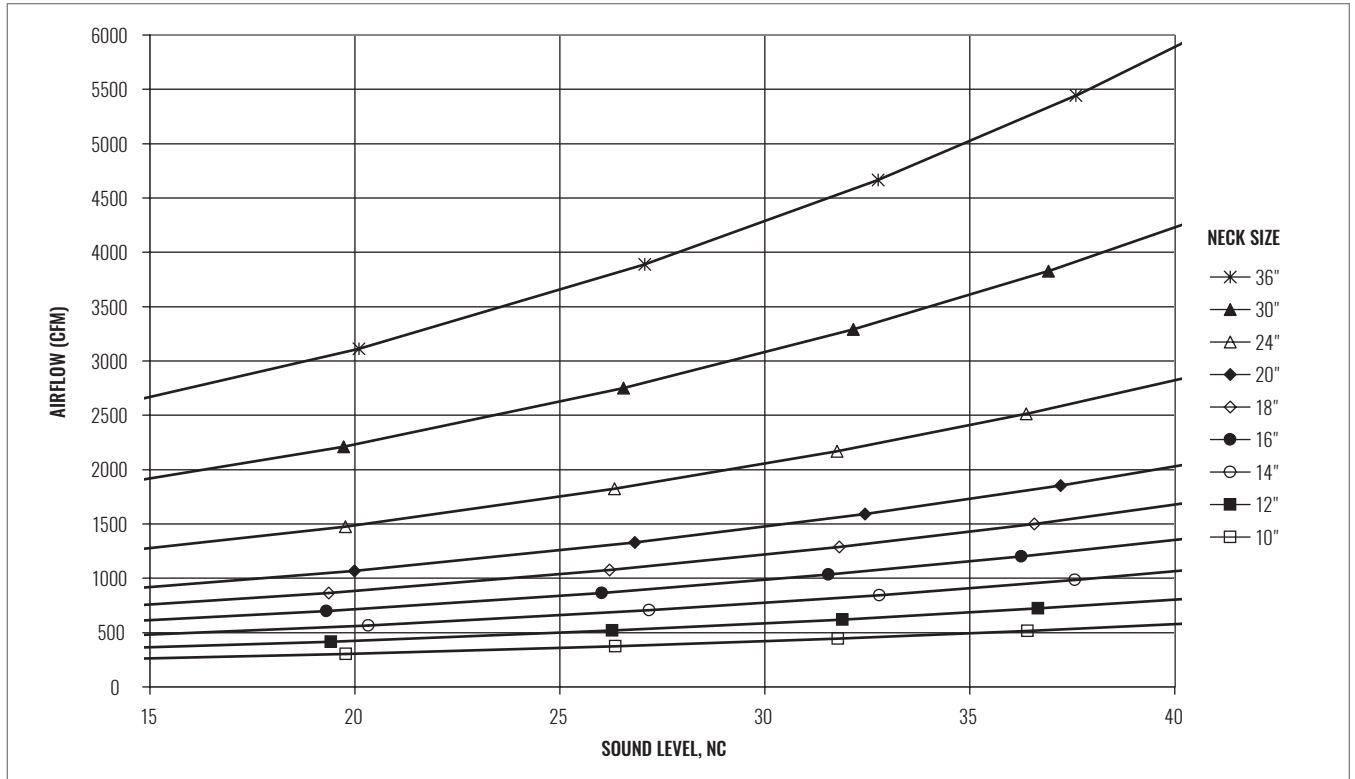
AVAILABLE NECK SIZES

NOMINAL ROUND DUCT SIZE D	B	C	E	F	G
10"	10 1/2" (267)	18 1/4" (464)	7 1/2" (191)	3" (76)	10" (254)
12"	12 1/2" (318)	22" (559)	9 3/8" (238)	4" (102)	12" (305)
14"	14 1/2" (368)	26" (660)	6 3/4" (171)	4" (102)	14" (356)
16"	16 1/2" (419)	29" (737)	8 1/2" (216)	5" (127)	16" (406)
18"	18 1/2" (470)	32 1/2" (826)	9 1/8" (232)	5" (127)	18" (457)
20"	20 1/2" (521)	36" (914)	10 3/8" (264)	5 1/2" (140)	20" (508)
24"	24 1/2" (622)	43 1/4" (1099)	12 1/4" (308)	6 5/8" (168)	24" (610)
30"	30 1/2" (775)	53 5/8" (1362)	13 7/8" (352)	8 1/4" (210)	30" (762)
36"	36 1/2" (927)	64 3/8" (1635)	15 5/8" (397)	10" (254)	36" (914)

NOTE: Dimensions in parentheses are millimeters (mm).

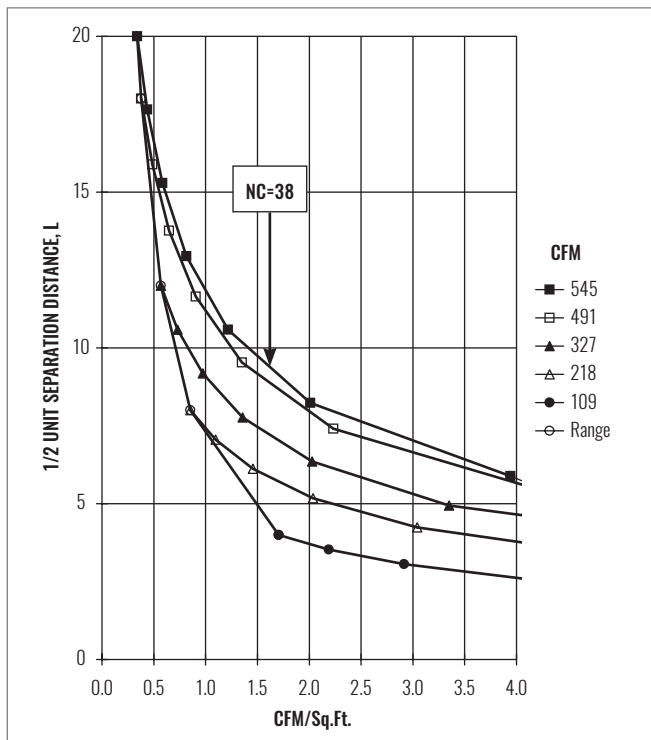
SOUND & ADPI CHARTS | HORIZONTAL THROW

AIRFLOW VS. NC LEVEL (NO DAMPER)

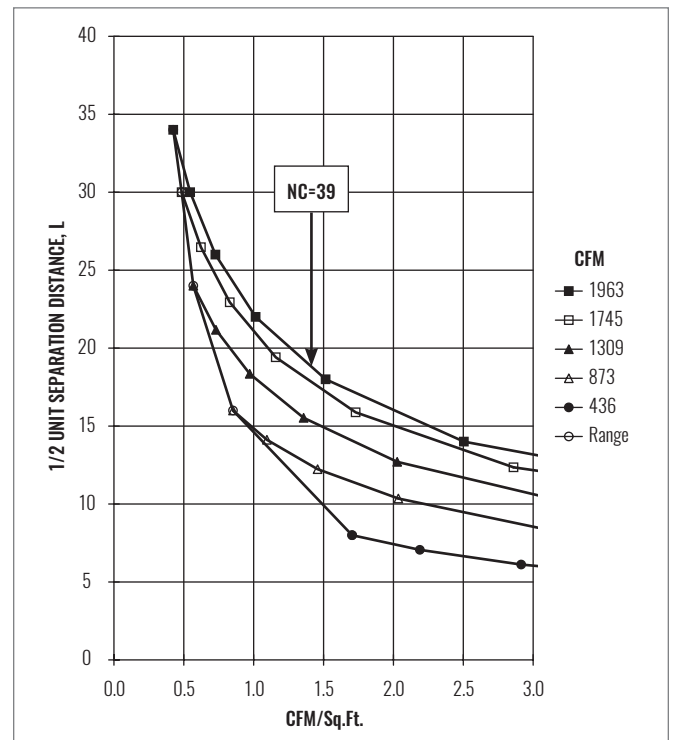


DIFFUSERS | ROUND

UNIT SPACING FOR 80% ADPI (10" NECK, NO DAMPER)



UNIT SPACING FOR 80% ADPI (20" NECK, NO DAMPER)



NOTES: Lower charts are at 20 BTUH/ft² loads. See the Engineering section of this catalog for instructions on how to read these charts and additional ADPI information.

R1DBR10

Round Diffuser, Ring Operated Center Downblow



PERFORMANCE DATA | NO DAMPER

SIZE	IP DATA										METRIC DATA									
	NECK VEL	AIR FLOW	HZ		VT		HZ THROW	VT		HZ	VT	NECK VEL	AIR FLOW	HZ		VT		HZ THROW	VT	
			P _s	P _t	P _s	P _t		20°F	40°F					P _s	P _t	P _s	P _t		11°C	22°C
in	fpm	cfm	in wg	in wg	in wg	in wg	ft	ft	ft	NC	NC	m/s	L/s	Pa	Pa	Pa	Pa	m	m	m
10	425	232	0.00	0.01	0.01	0.02	1-2-4	17	6	11	-	2.2	109	1	3	3	6	0.4-0.6-1.2	5.1	1.7
	555	303	0.00	0.02	0.02	0.04	2-3-5	22	7	20	17	2.8	143	1	6	5	10	0.5-0.8-1.6	6.7	2.2
	685	374	0.01	0.04	0.03	0.06	2-3-7	27	9	26	23	3.5	176	2	9	8	15	0.7-1.0-2.0	8.3	2.8
	815	445	0.01	0.05	0.05	0.09	3-4-8	32	11	32	29	4.1	210	2	13	11	22	0.8-1.2-2.4	9.8	3.3
	945	515	0.01	0.07	0.06	0.12	3-5-9	37	12	36	33	4.8	243	3	17	15	29	0.9-1.4-2.8	11.4	3.8
	1075	586	0.02	0.09	0.08	0.15	3-5-10	43	14	40	37	5.5	277	4	22	20	37	1.0-1.6-3.1	13.0	4.3
12	400	314	0.00	0.01	0.01	0.02	2-2-5	14	4	11	-	2.0	148	1	3	3	5	0.5-0.7-1.4	4.3	1.2
	530	416	0.00	0.02	0.02	0.04	2-3-6	22	7	19	16	2.7	196	1	5	5	9	0.6-0.9-1.9	6.5	2.2
	660	518	0.01	0.03	0.03	0.06	3-4-8	27	9	26	23	3.4	245	2	8	8	14	0.8-1.2-2.3	8.1	2.7
	790	620	0.01	0.05	0.04	0.08	3-5-9	32	11	32	29	4.0	293	2	12	11	21	0.9-1.4-2.8	9.7	3.2
	920	723	0.01	0.07	0.06	0.11	4-5-11	37	12	37	34	4.7	341	3	16	15	28	1.1-1.6-3.2	11.4	3.8
	1050	825	0.02	0.09	0.08	0.15	4-6-12	43	14	41	38	5.3	389	4	21	19	36	1.2-1.8-3.7	13.0	4.3
14	400	428	0.00	0.01	0.01	0.02	2-3-5	13	4	12	-	2.0	202	1	3	3	5	0.5-0.8-1.6	4.0	1.2
	530	567	0.00	0.02	0.02	0.04	2-4-7	23	7	20	17	2.7	267	1	5	5	9	0.7-1.1-2.2	6.9	2.0
	660	706	0.01	0.03	0.03	0.06	3-4-9	29	10	27	24	3.4	333	2	8	8	14	0.9-1.3-2.7	8.8	2.9
	790	845	0.01	0.05	0.04	0.08	4-5-11	35	12	33	30	4.0	399	2	12	11	21	1.1-1.6-3.2	10.5	3.5
	920	983	0.01	0.07	0.06	0.11	4-6-12	40	13	38	35	4.7	464	3	16	15	28	1.3-1.9-3.8	12.3	4.1
	1050	1122	0.02	0.09	0.08	0.15	5-7-14	46	15	42	39	5.3	530	4	21	19	36	1.4-2.1-4.3	14.0	4.7
16	380	531	0.00	0.01	0.01	0.02	2-3-6	12	3	11	-	1.9	250	1	3	3	5	0.6-0.9-1.8	3.6	1.0
	500	698	0.00	0.02	0.02	0.03	3-4-8	20	6	19	16	2.5	329	1	5	4	8	0.8-1.2-2.3	6.2	1.8
	620	866	0.01	0.03	0.03	0.05	3-5-10	30	9	26	23	3.2	409	2	7	7	13	1.0-1.4-2.9	9.0	2.8
	740	1033	0.01	0.04	0.04	0.07	4-6-11	36	12	32	29	3.8	488	2	11	10	18	1.2-1.7-3.5	10.8	3.6
	860	1201	0.01	0.06	0.05	0.10	4-7-13	41	14	36	33	4.4	567	3	14	13	24	1.3-2.0-4.0	12.6	4.2
	980	1368	0.02	0.08	0.07	0.13	5-8-15	47	16	40	37	5.0	646	4	19	17	32	1.5-2.3-4.6	14.3	4.8
18	370	654	0.00	0.01	0.01	0.02	2-3-6	12	3	11	-	1.9	309	1	3	2	5	0.6-1.0-1.9	3.5	1.0
	490	866	0.00	0.02	0.02	0.03	3-4-8	20	6	19	16	2.5	409	1	5	4	8	0.9-1.3-2.6	6.2	1.8
	610	1078	0.01	0.03	0.03	0.05	4-5-11	31	9	26	23	3.1	509	1	7	7	12	1.1-1.6-3.2	9.5	2.8
	730	1290	0.01	0.04	0.04	0.07	4-6-13	38	13	32	29	3.7	609	2	10	9	18	1.3-1.9-3.8	11.7	3.9
	850	1502	0.01	0.06	0.05	0.10	5-7-15	45	15	37	34	4.3	709	3	14	13	24	1.5-2.2-4.5	13.6	4.5
	970	1714	0.01	0.07	0.07	0.13	6-8-17	51	17	41	38	4.9	809	4	18	17	31	1.7-2.5-5.1	15.5	5.2
20	370	807	0.00	0.01	0.01	0.02	2-4-7	12	4	11	-	1.9	381	1	3	2	5	0.7-1.1-2.2	3.7	1.1
	490	1069	0.00	0.02	0.02	0.03	3-5-9	21	6	20	17	2.5	505	1	5	4	8	1.0-1.4-2.9	6.5	1.9
	610	1331	0.01	0.03	0.03	0.05	4-6-12	33	10	27	24	3.1	628	1	7	7	12	1.2-1.8-3.6	10.0	2.9
	730	1593	0.01	0.04	0.04	0.07	5-7-14	42	14	32	29	3.7	752	2	10	9	18	1.4-2.1-4.3	12.7	4.2
	850	1854	0.01	0.06	0.05	0.10	5-8-16	49	16	37	34	4.3	875	3	14	13	24	1.7-2.5-5.0	14.8	4.9
	970	2116	0.01	0.07	0.07	0.13	6-9-19	56	19	41	38	4.9	999	4	18	17	31	1.9-2.8-5.7	16.9	5.6
24	360	1131	0.00	0.01	0.01	0.02	3-4-8	13	4	11	-	1.8	534	1	3	2	4	0.8-1.3-2.5	3.9	1.1
	470	1477	0.00	0.02	0.02	0.03	4-5-11	22	6	20	17	2.4	697	1	4	4	7	1.1-1.6-3.3	6.6	1.9
	580	1822	0.01	0.03	0.02	0.04	4-7-13	33	10	26	23	2.9	860	1	7	6	11	1.4-2.0-4.1	10.1	3.0
	690	2168	0.01	0.04	0.03	0.06	5-8-16	46	14	32	29	3.5	1023	2	9	8	16	1.6-2.4-4.8	14.1	4.2
	800	2513	0.01	0.05	0.05	0.09	6-9-18	54	18	36	33	4.1	1186	3	12	11	21	1.9-2.8-5.6	16.3	5.4
	910	2859	0.01	0.06	0.06	0.11	7-10-21	61	20	40	37	4.6	1349	3	16	15	27	2.1-3.2-6.4	18.6	6.2
30	340	1669	0.00	0.01	0.01	0.02	3-5-10	14	4	11	-	1.7	788	0	2	2	4	1.0-1.5-3.0	4.1	1.2
	450	2209	0.00	0.02	0.01	0.03	4-6-13	24	7	20	17	2.3	1042	1	4	4	7	1.3-2.0-3.9	7.2	2.1
	560	2749	0.01	0.02	0.02	0.04	5-8-16	37	11	27	24	2.8	1297	1	6	6	10	1.6-2.5-4.9	11.1	3.3
	670	3289	0.01	0.04	0.03	0.06	6-10-19	52	15	32	29	3.4	1552	2	9	8	15	2.0-2.9-5.9	16.0	4.7
	780	3829	0.01	0.05	0.04	0.08	7-11-22	64	21	37	34	4.0	1807	2	12	11	20	2.3-3.4-6.8	19.5	6.3
	890	4369	0.01	0.06	0.06	0.11	9-13-26	73	24	41	38	4.5	2062	3	15	14	26	2.6-3.9-7.8	22.3	7.4

NOTES: Throw values are given terminal velocities of 150, 100, and 50 FPM (0.75, 0.50, and 0.25 m/s). Horizontal throw values are given for isothermal conditions. Vertical throw values are for a terminal velocity of 50 FPM, free jet, at the temperature differences shown. NC values are based on octave band 2 - 7 sound power levels minus a room absorption of 10dB, re 10⁻¹² Watts. Dash in space denotes a NC value of less than 10. Data was obtained from tests conducted in accordance with ANSI/ASHRAE Standard 70, ISO Standard 5219, and ISO Standard 3741. See selection software for performance data not shown, including octave band data.

PERFORMANCE DATA | NO DAMPER

SIZE	IP DATA										METRIC DATA									
	NECK VEL	AIR FLOW	HZ		VT		HZ THROW	VT		HZ	VT	NECK VEL	AIR FLOW	HZ		VT		HZ THROW	VT	
			Ps	Pt	Ps	Pt		20°F	40°F					Pa	Pa	Pa	Pa		11°C	22°C
in	fpm	cfm	in wg	in wg	in wg	in wg	ft	ft	ft	NC	NC	m/s	L/s	Pa	Pa	Pa	Pa	m	m	m
36	330	2333	0.00	0.01	0.01	0.01	4 - 6 - 11	15	4	11	-	1.7	1101	0	2	2	4	1.2 - 1.7 - 3.5	4.5	1.3
	440	3110	0.00	0.02	0.01	0.03	5 - 8 - 15	26	8	20	17	2.2	1468	1	4	3	6	1.5 - 2.3 - 4.6	8.0	2.3
	550	3888	0.00	0.02	0.02	0.04	6 - 10 - 19	41	12	27	24	2.8	1835	1	6	5	10	1.9 - 2.9 - 5.8	12.5	3.7
	660	4665	0.01	0.03	0.03	0.06	8 - 11 - 23	59	17	33	30	3.4	2202	2	8	8	14	2.3 - 3.5 - 6.9	18.0	5.3
	770	5443	0.01	0.05	0.04	0.08	9 - 13 - 27	75	24	38	35	3.9	2569	2	12	10	20	2.7 - 4.0 - 8.1	22.9	7.2
	880	6220	0.01	0.06	0.05	0.10	10 - 15 - 30	86	29	42	39	4.5	2936	3	15	14	26	3.1 - 4.6 - 9.2	26.2	8.7

NOTES: Throw values are given terminal velocities of 150, 100, and 50 FPM (0.75, 0.50, and 0.25 m/s). Horizontal throw values are given for isothermal conditions. Vertical throw values are for a terminal velocity of 50 FPM, free jet, at the temperature differences shown. NC values are based on octave band 2 - 7 sound power levels minus a room absorption of 10dB, re 10⁻¹² Watts. Dash in space denotes a NC value of less than 10. Data was obtained from tests conducted in accordance with ANSI/ASHRAE Standard 70, ISO Standard 5219, and ISO Standard 3741. See selection software for performance data not shown, including octave band data.

ENGINEERING SPECIFICATION & CONFIGURATION

R1DBR10

The round ceiling diffuser shall be Krueger model R1DBR10. The R1DBR10 model shall be constructed of a contoured outer cone for reduction of smudging and an adjustable inner vane assembly. The inner vane assembly shall be fully adjustable by rotating a ring operator to modify the discharge air setting from horizontal to vertical and be easily removable. The ring operator shall be adjustable with a pole operator for remote access. Diffusers shall be constructed of 18 gauge steel.

Optional round damper shall be constructed of heavy gauge steel. Damper shall be operable from the face of the diffuser.

PERFORMANCE

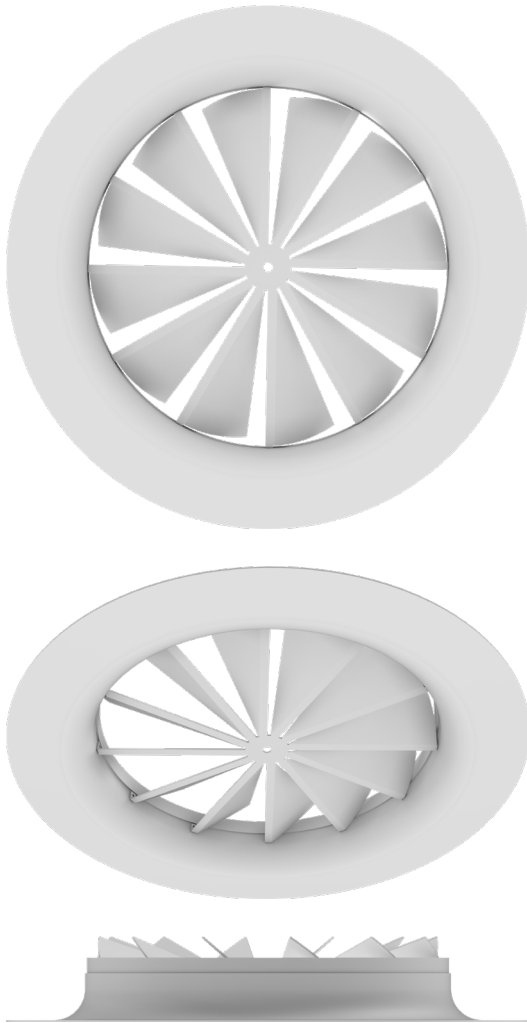
The manufacturer shall provide published (printed or electronic) performance data for the diffuser. Performance data shall include 2 - 7 octave band sound power levels. The diffuser shall be tested in accordance to the data standards at the time of product introduction or ANSI/ASHRAE Standard 70.

FINISH

The paint finish shall be #44 British White and be an anodic acrylic paint, baked at 315°F for 30 minutes. The paint thickness shall be 0.8 - 1.0 mils, gloss at 60° per ASTM D523-89 of 50 - 85%, pencil hardness per ASTM D3363-92A of HB - H, crosshatch adhesion per ASTM D3359-83 of 4B - 5B, impact per ASTM D2794-93 of direct impact >100 in/lb and reverse impact >80 in/lb, salt spray per ASTM B117-9048 of 96 hours, humidity per ASTM D2247-92 of >500 hours and water soak per ASTM D870-92 of 250 hours.

- SERIES: (XXXXXXX)**
R1DBR10 - Heavy Duty, Ring Operator Round Steel Diffuser
- INLET: (XX)**
10" - 20" in 2" Increments, 24", 30", or 36"
- DAMPER: (XX)**
00 - NONE
03 - PR10
04 - PRD10
06 - PR12
08 - PRN100
- ACCESSORIES: (X)**
0 - No Accessories
R - Round Straightening Grid
- FINISH: (XX)**
01 - Mill
10 - Alumican
35 - Black
44 - British White

SAMPLE CONFIGURATION: R1DBR10 - 14 - 00 - 0 - 44



INTRODUCTION

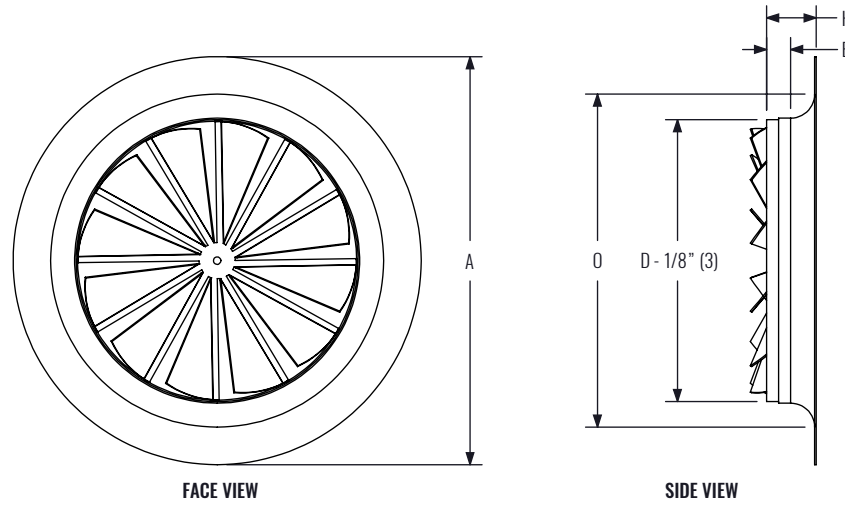
This high induction diffuser promotes the rotation of room air, which increases mixing effectiveness. The 360° horizontal discharge pattern works great in VAV applications where turndown requirements exceed 50% of maximum airflow for properly selected diffusers. The unique style of this diffuser will provide an aesthetically pleasing appearance to any architectural application. Offered in with a variety of neck sizes, the RKSD can handle a wide range of airflows.

MODEL

RKSD - Round Swirl Diffuser

FEATURES

- Aluminum construction
- 360° discharge air pattern
- Excellent performance in variable air volume systems
- Designed for exposed duct or hard ceiling applications
- High capacity airflow
- Aesthetically pleasing appearance
- Standard finish is #44 British White
- Optional finishes available

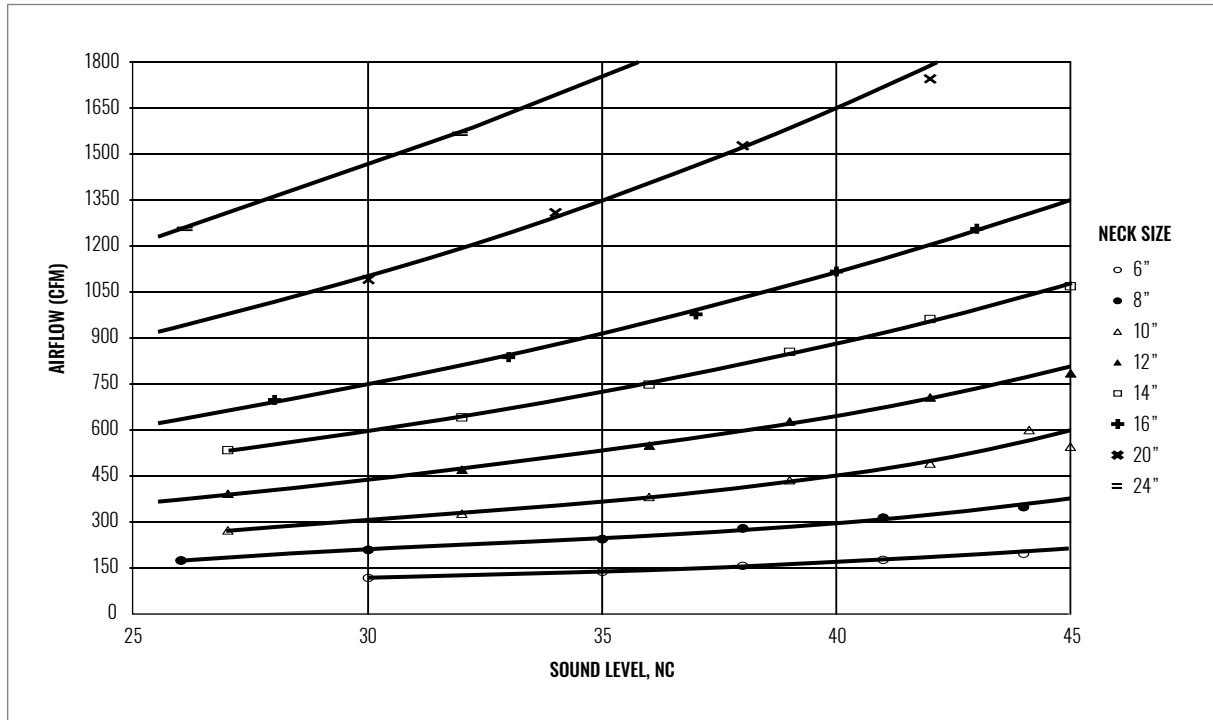
DIMENSIONAL DATA


AVAILABLE NECK SIZES					
NOMINAL SIZE	A	B	DUCT SIZE D	H	O
6	10" (254)	1 3/16" (30)	6" (152)	2" (51)	7 1/2" (191)
8	12" (305)	1 3/16" (30)	8" (203)	2" (51)	9 1/2" (241)
10	15" (381)	1" (25)	10" (254)	2" (51)	11 7/8" (302)
12	17" (432)	1" (25)	12" (305)	2" (51)	13 7/8" (352)
14	20" (508)	1 1/2" (38)	14" (356)	2 1/2" (64)	17 7/8" (454)
16	22" (559)	1 3/8" (35)	16" (406)	2 1/2" (64)	18" (457)
20	28" (711)	1 1/2" (38)	20" (208)	3 1/4" (82)	23 3/8" (594)
24	34" (834)	1 1/2" (38)	24" (610)	3 1/2" (89)	27 7/8" (708)

NOTE: Dimensions in parentheses are millimeters (mm).

ADPI CHART | HORIZONTAL THROW

AIRFLOW VS. NC LEVEL (NO DAMPER)



PERFORMANCE DATA | NO DAMPER

NOM DUCT	IP DATA					THROW	SOUND	NOM DUCT	METRIC DATA							
	NECK VEL	AIR FLOW	PRESSURE						THROW	SOUND	NOM DUCT	NECK VEL	AIR FLOW	HZ		THROW
			Ps	Pv	Pt									Ps	Pt	
in	fpm	cfm	in wg	in wg	in wg	ft	NC	cm	m/s	L/s	Pa	Pa	m			
6	400	79	0.11	0.0100	0.12	1 - 2 - 4	21	15.2	2.0	37	27	30	0.3 - 0.7 - 1.7			
	500	98	0.17	0.0156	0.18	2 - 3 - 6	26		2.5	46	41	45	0.5 - 1.0 - 2.2			
	600	118	0.24	0.0224	0.26	2 - 4 - 7	30		3.0	56	60	66	0.7 - 1.3 - 2.6			
	700	137	0.33	0.0305	0.36	3 - 4 - 7	35		3.6	65	82	90	0.9 - 1.5 - 3.0			
	800	157	0.43	0.0399	0.47	3 - 5 - 10	38		4.1	74	107	117	1.2 - 1.7 - 3.2			
	900	177	0.54	0.0505	0.59	4 - 6 - 11	41		4.6	83	135	147	1.3 - 2.0 - 3.4			
	1000	196	0.66	0.0623	0.72	4 - 6 - 12	44		5.1	93	165	180	1.4 - 2.2 - 3.6			
	1200	236	0.97	0.0898	1.06	6 - 9 - 13	46		6.1	111	242	264	1.7 - 2.6 - 4.0			
1400	275	1.36	0.1222	1.48	7 - 10 - 14	49	7.1	130	339	370	2.0 - 3.0 - 4.3					
8	400	140	0.09	0.0100	0.10	2 - 3 - 6	21	20.3	2.0	66	23	25	0.4 - 0.9 - 2.3			
	500	175	0.14	0.02	0.15	3 - 4 - 8	26		2.5	82	34	38	0.6 - 1.4 - 2.9			
	600	209	0.19	0.02	0.21	3 - 5 - 10	30		3.0	99	47	53	0.9 - 1.7 - 3.5			
	700	244	0.26	0.03	0.29	4 - 6 - 11	35		3.6	115	65	73	1.2 - 2.0 - 4.1			
	800	279	0.33	0.04	0.37	4 - 7 - 13	38		4.1	132	83	93	1.5 - 2.3 - 4.3			
	900	314	0.42	0.05	0.47	5 - 8 - 15	41		4.6	148	105	118	1.7 - 2.6 - 4.6			
	1000	349	0.53	0.06	0.59	6 - 8 - 16	44		5.1	165	132	148	1.9 - 2.9 - 4.8			
	1200	419	0.79	0.09	0.88	8 - 11 - 17	47		6.1	198	198	220	2.3 - 3.5 - 5.3			
1300	454	0.89	0.11	1.00	8 - 12 - 18	48	6.6	214	222	248	2.5 - 3.8 - 5.5					
10	400	218	0.08	0.01	0.09	3 - 4 - 8	22	25.4	2.0	103	19	21	0.5 - 1.1 - 2.9			
	500	273	0.10	0.02	0.11	3 - 5 - 10	27		2.5	129	24	28	0.8 - 1.7 - 3.6			
	600	327	0.16	0.02	0.18	4 - 6 - 12	32		3.0	154	40	46	1.1 - 2.2 - 4.3			
	700	382	0.19	0.03	0.22	5 - 7 - 14	36		3.6	180	48	56	1.5 - 2.5 - 5.1			
	800	436	0.28	0.04	0.32	6 - 9 - 17	39		4.1	206	70	80	1.9 - 2.9 - 5.4			
	900	491	0.32	0.05	0.37	6 - 9 - 18	42		4.6	232	79	91	2.2 - 3.3 - 5.7			
	1000	545	0.43	0.06	0.50	7 - 10 - 20	45		5.1	257	108	124	2.4 - 3.6 - 6.1			
	1100	600	0.50	0.08	0.57	9 - 13 - 21	44		5.6	283	124	143	2.7 - 4.0 - 6.4			
1200	654	0.58	0.09	0.67	10 - 14 - 22	46	6.1	309	144	167	2.9 - 4.3 - 6.6					
12	300	236	0.03	0.01	0.04	1 - 2 - 9	20	30.5	1.5	111	8	10	0.3 - 0.8 - 2.6			
	400	314	0.06	0.01	0.07	3 - 5 - 10	22		2.0	148	16	19	0.6 - 1.3 - 3.5			
	500	393	0.09	0.02	0.10	4 - 6 - 12	27		2.5	185	22	26	0.9 - 2.1 - 4.3			
	600	471	0.14	0.02	0.17	5 - 8 - 15	32		3.0	222	36	41	1.3 - 2.6 - 5.2			
	700	550	0.18	0.03	0.21	6 - 9 - 17	36		3.6	259	45	53	1.8 - 3.0 - 6.1			
	800	628	0.26	0.04	0.30	7 - 10 - 20	39		4.1	297	65	75	2.3 - 3.5 - 6.5			
	900	707	0.29	0.05	0.34	7 - 11 - 22	42		4.6	334	72	85	2.6 - 3.9 - 6.9			
	1000	785	0.40	0.06	0.47	8 - 12 - 24	45		5.1	371	100	116	2.9 - 4.3 - 7.3			
1100	864	0.52	0.08	0.59	10 - 16 - 25	46	5.6	408	129	148	3.2 - 4.8 - 7.6					
14	300	321	0.04	0.01	0.05	1 - 3 - 10	20	35.6	1.5	151	11	12	0.4 - 0.9 - 3.0			
	400	428	0.08	0.01	0.09	4 - 6 - 12	22		2.0	202	20	22	0.7 - 1.6 - 4.1			
	500	535	0.11	0.02	0.13	5 - 7 - 14	27		2.5	252	28	32	1.1 - 2.4 - 5.1			
	600	641	0.18	0.02	0.20	6 - 9 - 17	32		3.0	303	45	51	1.6 - 3.0 - 6.1			
	700	748	0.22	0.03	0.25	7 - 10 - 20	36		3.6	353	55	62	2.1 - 3.5 - 7.1			
	800	855	0.32	0.04	0.36	8 - 12 - 23	39		4.1	404	78	88	2.7 - 4.1 - 7.6			
	900	962	0.36	0.05	0.41	9 - 13 - 26	42		4.6	454	89	102	3.0 - 4.6 - 8.0			
	1000	1069	0.49	0.06	0.55	10 - 14 - 28	45		5.1	505	121	137	3.4 - 5.1 - 8.5			
1100	1176	0.56	0.08	0.64	12 - 18 - 29	47	5.6	555	141	159	3.7 - 5.6 - 8.9					

NOTES: Horizontal throw values are given for terminal velocities of 150, 100, and 50 fpm (0.75, 0.5 and 0.25m/s) for isothermal conditions. Vertical projection values are given for downward projection of heated air at temperatures indicated. N.C. values are based on Octave Band 2 - 7 sound power levels minus a room absorption of 10dB. Dash (-) in space denotes an NC value of less than 10. Data was obtained from tests conducted in accordance with ANSI / ASHRAE Standard 70-1991.

DIFFUSERS | ROUND

PERFORMANCE DATA | NO DAMPER

DIFFUSERS | ROUND

NOM DUCT	IP DATA					THROW	SOUND	NOM DUCT	METRIC DATA				
	NECK VEL	AIR FLOW	PRESSURE						NECK VEL	AIR FLOW	HZ		THROW
			Ps	Pv	Pt						Ps	Pt	
in	fpm	cfm	in wg	in wg	in wg	ft	NC	cm	m/s	L/s	Pa	Pa	m
16	200	279	0.03	0.00	0.04	1 - 2 - 9	18	40.6	1.0	132	9	9	0.2 - 0.4 - 1.8
	300	419	0.05	0.01	0.06	1 - 3 - 11	20		1.5	198	12	14	0.4 - 1.0 - 3.5
	400	559	0.08	0.01	0.09	4 - 7 - 14	23		2.0	264	19	22	0.8 - 1.8 - 4.6
	500	698	0.11	0.02	0.12	5 - 8 - 16	28		2.5	329	27	30	1.2 - 2.8 - 5.8
	600	838	0.18	0.02	0.20	7 - 10 - 19	33		3.0	395	44	50	1.8 - 3.5 - 6.9
	700	977	0.22	0.03	0.25	8 - 12 - 23	37		3.6	461	55	63	2.4 - 4.1 - 8.1
	800	1117	0.32	0.04	0.36	9 - 14 - 26	40		4.1	527	79	89	3.1 - 4.6 - 8.7
	900	1257	0.36	0.05	0.41	10 - 16 - 29	43		4.6	593	89	101	3.5 - 5.2 - 9.2
	1000	1396	0.49	0.06	0.55	11 - 18 - 32	46		5.1	659	121	137	3.9 - 5.8 - 9.7
20	200	436	0.02	0.00	0.02	1 - 3 - 11	17	50.8	1.0	206	4	5	0.2 - 0.6 - 2.2
	300	654	0.04	0.01	0.04	2 - 4 - 14	19		1.5	309	9	10	0.6 - 1.3 - 4.3
	400	873	0.07	0.01	0.08	5 - 9 - 18	24		2.0	412	18	21	1.0 - 2.2 - 5.8
	500	1091	0.11	0.02	0.12	6 - 10 - 20	30		2.5	515	27	31	1.6 - 3.5 - 7.2
	600	1309	0.15	0.02	0.17	8 - 12 - 24	34		3.0	618	38	43	2.2 - 4.3 - 8.7
	700	1527	0.21	0.03	0.24	10 - 15 - 28	38		3.6	721	53	61	3.0 - 5.1 - 10.1
	800	1745	0.27	0.04	0.31	11 - 17 - 31	42		4.1	824	68	78	3.9 - 5.8 - 10.8
	900	1963	0.35	0.05	0.40	12 - 19 - 35	44		4.6	927	87	100	4.3 - 6.5 - 11.5
	1000	2182	0.41	0.06	0.48	13 - 21 - 37	47		5.1	1030	103	119	4.8 - 7.2 - 12.1
24	200	628	0.05	0.00	0.05	4 - 9 - 20	19	61.0	1.0	297	12	12	0.3 - 0.7 - 2.7
	300	942	0.10	0.01	0.11	5 - 10 - 21	21		1.5	445	26	27	0.7 - 1.5 - 5.2
	400	1257	0.05	0.01	0.06	6 - 11 - 22	26		2.0	593	11	14	1.2 - 2.7 - 6.9
	500	1571	0.08	0.02	0.10	7 - 12 - 23	32		2.5	741	20	24	1.9 - 4.2 - 8.7
	600	1885	0.12	0.02	0.14	9 - 14 - 28	37		3.0	890	29	35	2.7 - 5.2 - 10.4
	700	2199	0.16	0.03	0.19	11 - 17 - 32	41		3.6	1038	39	47	3.6 - 6.1 - 12.2
	800	2513	0.20	0.04	0.24	13 - 20 - 36	44		4.1	1186	50	60	4.6 - 6.9 - 13.0
	900	2827	0.25	0.05	0.30	14 - 22 - 40	47		4.6	1334	62	75	5.2 - 7.8 - 13.8
	1000	3142	0.31	0.06	0.37	15 - 24 - 42	49		5.1	1483	77	92	5.8 - 8.7 - 14.5

NOTES: Horizontal throw values are given for terminal velocities of 150, 100, and 50 fpm (0.75, 0.5 and 0.25m/s) for isothermal conditions. Vertical projection values are given for downward projection of heated air at temperatures indicated. N.C. values are based on Octave Band 2 - 7 sound power levels minus a room absorption of 10dB. Dash (-) in space denotes an NC value of less than 10. Data was obtained from tests conducted in accordance with ANSI / ASHRAE Standard 70-1991.

ENGINEERING SPECIFICATION & CONFIGURATION

RKSD

The architectural round diffusers of the sizes and mounting types shown on the plans or outlet schedule shall be the Krueger model RKSD constructed of heavy gauge aluminum. The RKSD shall have fixed deflectors to maintain maximum discharge effectiveness and project air in a 360° horizontal plane in the room. Optional duct or neck mounted round damper (ordered separately) shall be constructed of heavy gauge steel. Damper options include models PR10, PRD10, PR12, and PRN100. Damper shall be operable from the face of the diffuser.

PERFORMANCE

The manufacturer shall provide published performance data for the diffuser. The diffuser shall be tested in accordance to the data standards at the time of product introduction or ANSI/ASHRAE Standard 70.

FINISH

The paint finish shall be #44 White and be a P-Series Powder Coating finish, baked at 400°F for 7 minutes. The paint thickness shall be 1.8 – 2.2 mils, pencil hardness per ASTM D3363 of H – 2H, crosshatch adhesion per ASTM D3359 of 4B, impact per ASTM D2794 of direct and reverse impact range of 40 to 160 in/lb depending on formulation, salt spray per ASTM B117 of 1000 hours, humidity per ASTM D2247 of 1000 hours and water soak per ASTM D8702 of 500 hours.

1. SERIES: (XXXX)

RKSD – Round Swirl Diffuser, Aluminum Construction

2. INLET: (XX)

6", 8", 10", 12", 14", 16", 20", 24"

3. FINISH: (XX)

01 - Mill

36 - Black Gloss

44 - British White

50 - Bright White

70 - Silver Metallic

99 - Custom Color