

INTRODUCTION

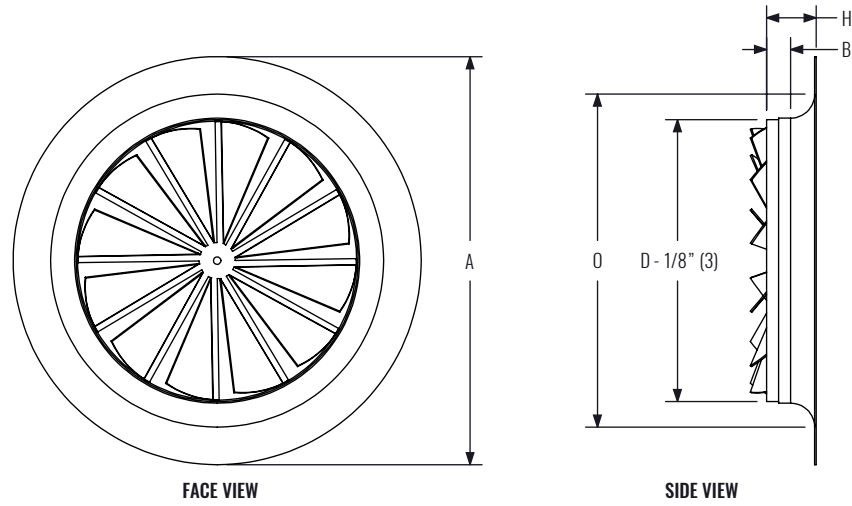
This high induction diffuser promotes the rotation of room air, which increases mixing effectiveness. The 360° horizontal discharge pattern works great in VAV applications where turndown requirements exceed 50% of maximum airflow for properly selected diffusers. The unique style of this diffuser will 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

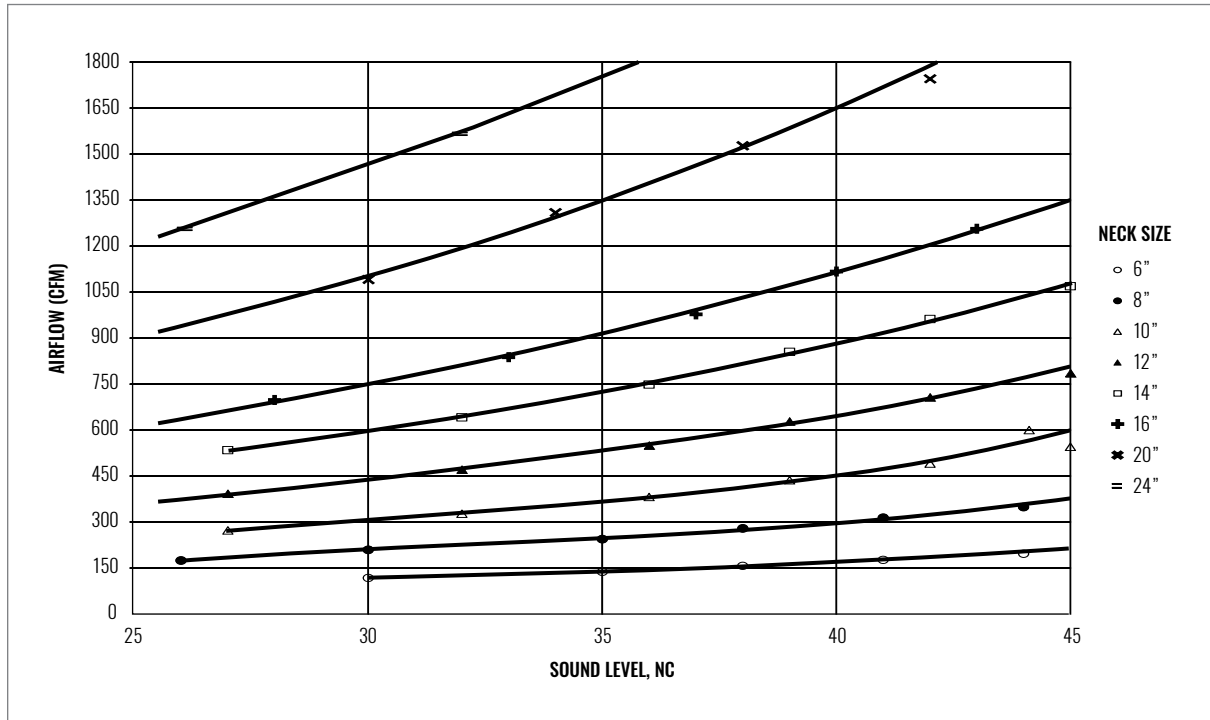
DIMENSIONAL DATA


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						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