



1400, 1400FR, 51400, M1400 & M51400
 These supply diffusers feature a round neck and four cones.



1400A & 51400A
 These supply diffusers feature a round neck, four cones, and adjustable pattern controllers.



1450, 51450, M1450, & M51450
 These supply diffusers feature a round neck and three cones.



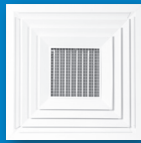
1450A & 51450A
 These supply diffusers feature a round neck, three cones, and adjustable pattern controllers.



SH, 5SH, SHFR, MSH, SHV, 5SHV, SHR, 5SHR, SHRV, 5SHRV, SHFB, & 5SHFB
 These supply diffusers feature a square neck, fixed louvered blades (1-way to 4-way), and removable core.



SHPC, 5SHPC, SHPCR, & 5SHPCR
 These supply diffusers feature a square neck, fixed louvered blades (1-way to 4-way), removable core, and adjustable pattern controllers.



5SH/CAD & 5SHR/CAD
 These supply diffusers feature fixed louvered blades with a center downblow.



SHRPLQ
 This supply diffuser features fixed louvered blades (1, 2, or 3 slots) with center plaque faceplate.



7000
 This combination supply/return diffuser features fixed louvered blades with removable egg-crate center frame.

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Introduction: 1400A Series

The 1400A series are square face, 4-cone, round neck ceiling diffusers with airflow pattern controllers between the cones, which change the discharge pattern from horizontal to vertical. They are available in a variety of frame styles to help meet the architectural requirements of today's ceilings. The spacing of the inner cones in relation to the backpan result in a design possessing anti-smudge characteristics, preventing the buildup of particles on the ceiling, which is achieved by minimizing the low pressure region inherent to most 4-way directional blow diffusers. The 1400A is typically used for spot heating or cooling applications in which airflow needs to be directed vertically in order to satisfy a specific load. It can also be applied as a seasonal air outlet device; adjusting for horizontal throw for cooling in warmer months and vertical throw for heating in colder months.

MODELS

- 1400A - Steel Louvered Diffuser
- 51400A - Aluminum Louvered Diffuser

PANEL SIZES

- 12"x12"
- 24"x24"

FINISHES

- Standard finish is #44 British White.
- Optional finishes available.



1400A

FEATURES

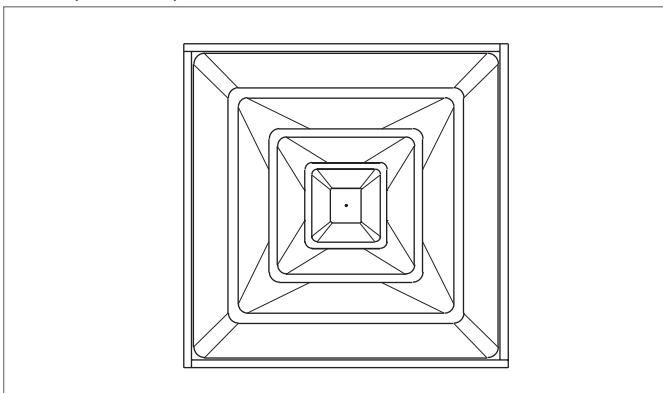
- Four cones for optimum airflow control.
- Adjustable airflow pattern controllers for vertical throw.
- Great choice for variable air volume spaces.
- Cones feature a one-piece stamped construction without mitered joints.
- Round neck for easy connection to round duct.
- Anti-smudge design prevents smeared ceilings.
- Two earthquake tabs are standard.

ACCESSORIES

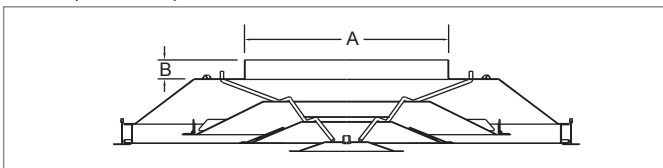
- Optional round damper.
- Optional insulated backpan (24"x24" only).

1400A, 51400A Dimensional Information

1400A, 51400A, FACE VIEW



1400A, 51400A, CROSS SECTION



1400A, 51400A, 12"x12" PANEL DETAIL

Nominal Neck Size	Actual Neck Size	1400A	51400A
	A	B	B
06	5 7/8" (149)	1 1/4" (32)	1 1/4" (32)
08	7 7/8" (200)	1 1/4" (32)	1 1/4" (32)

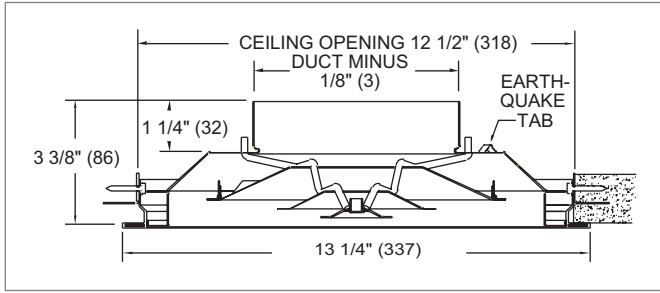
1400A, 51400A, 24"x24" PANEL DETAIL

Nominal Neck Size	Actual Neck Size	1400A	51400A
	A	B	B
06	5 7/8" (149)	1 1/4" (32)	1 1/2" (38)
08	7 7/8" (200)	1 1/4" (32)	1 1/2" (38)
10	9 7/8" (251)	1 1/2" (38)	1 1/2" (38)
12	11 7/8" (302)	1 1/2" (38)	1 1/2" (38)
14	13 7/8" (352)	1 1/2" (38)	1 1/2" (38)
15	14 7/8" (378)	1 1/2" (38)	1 1/2" (38)

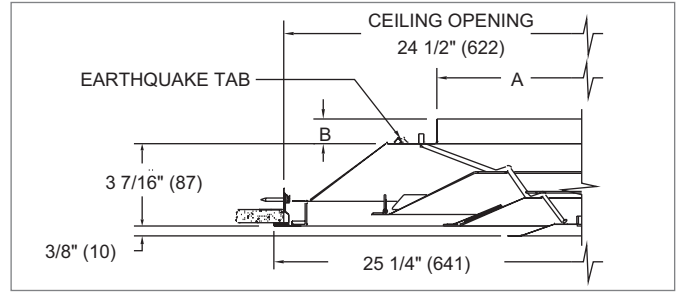
NOTE: Dimensions in parentheses are mm.

1400A, 51400A Frame Styles

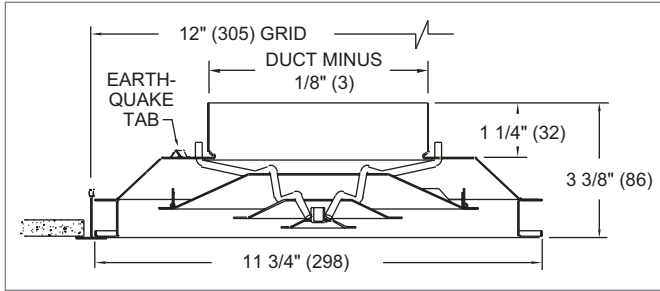
FRAME 22, SURFACE MOUNT, 12"x12" PANEL



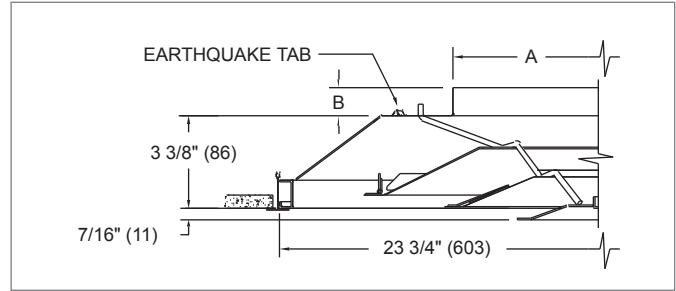
FRAME 22, SURFACE MOUNT, 24"x24" PANEL



FRAME 23, LAY-IN T-BAR, 12"x12" PANEL

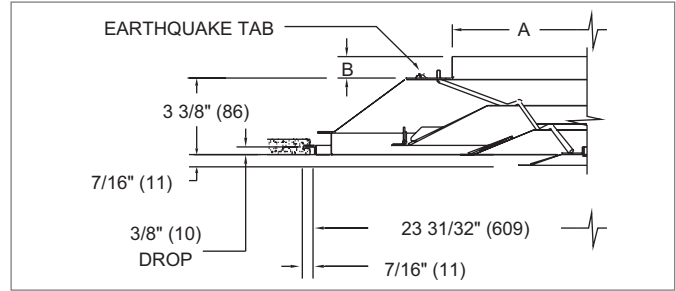


FRAME 23, LAY-IN T-BAR, 24"x24" PANEL

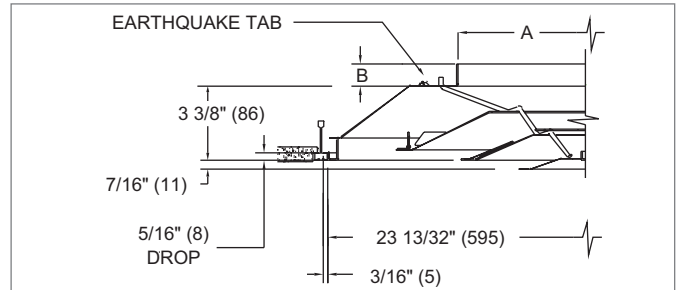


NOTES: Dimensions in parentheses are mm. For 'A' & 'B' dimensions, see page B1-15. Frame 22 includes separate surface mounting frame, as shown in the frame details on this page.

FRAME 27, SPLINE, 24"x24" PANEL

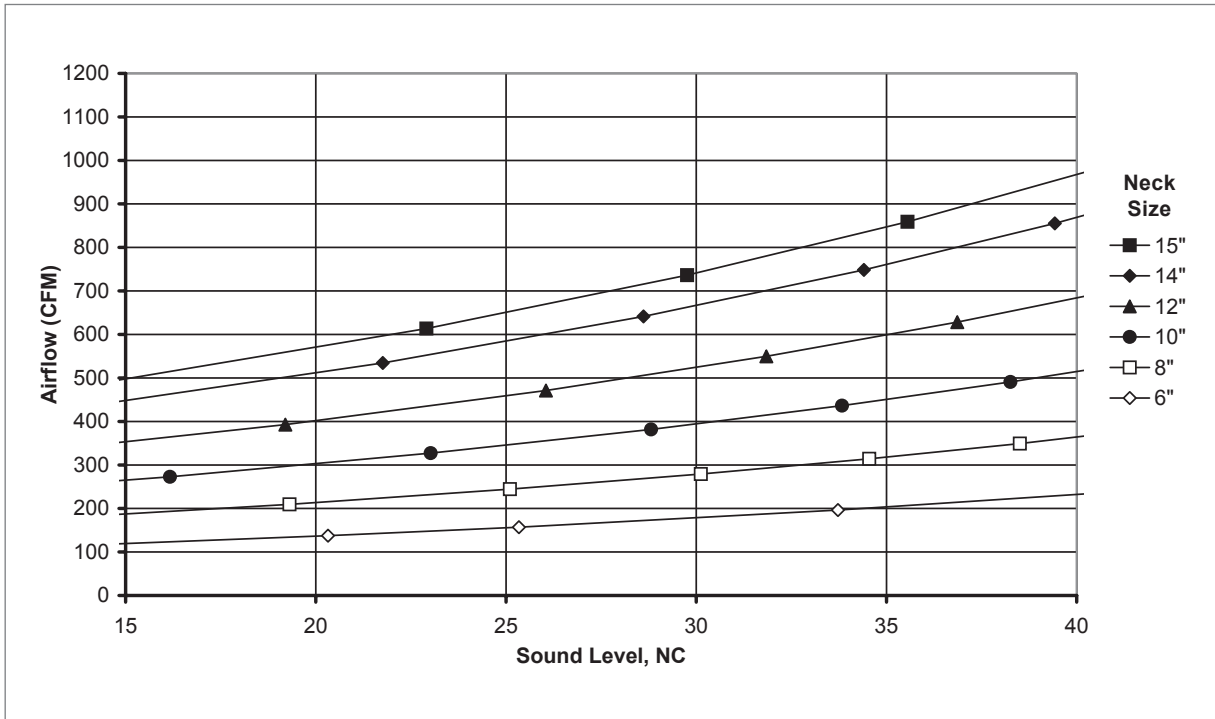
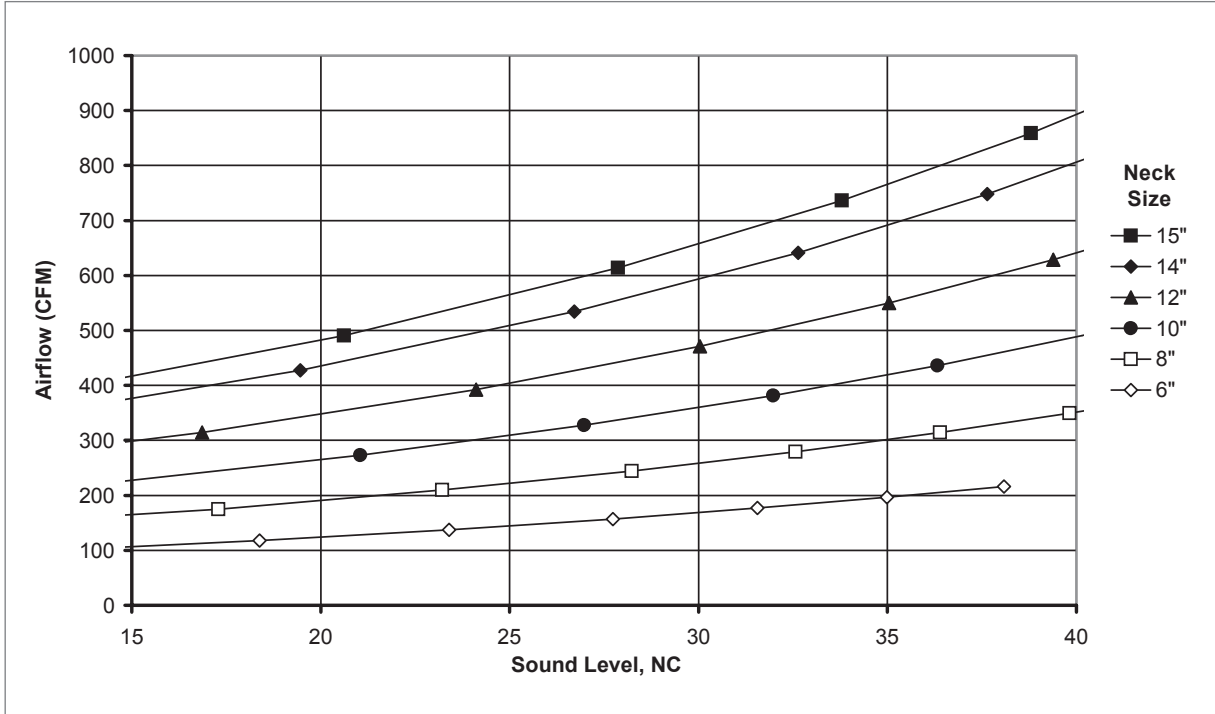


FRAME 98, NARROW-T, 24"x24" PANEL



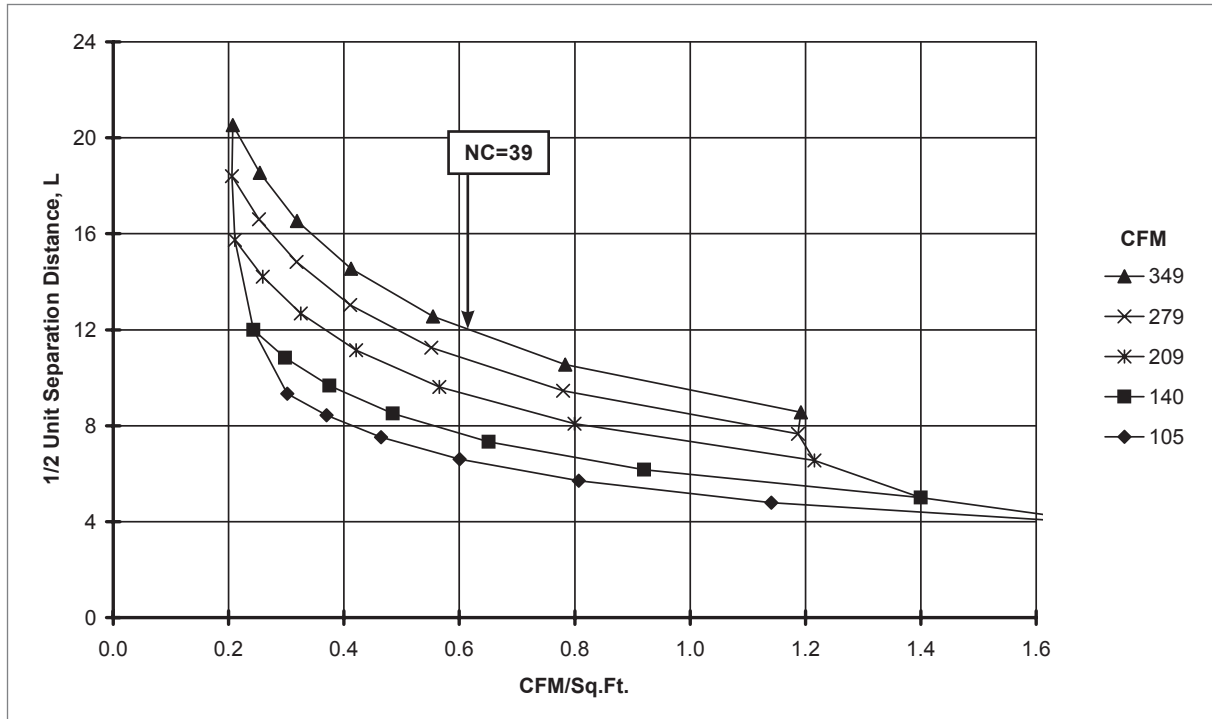
LOUVERED FACE DIFFUSERS

1
4
0
0
A
-
5
1
4
0
0
A

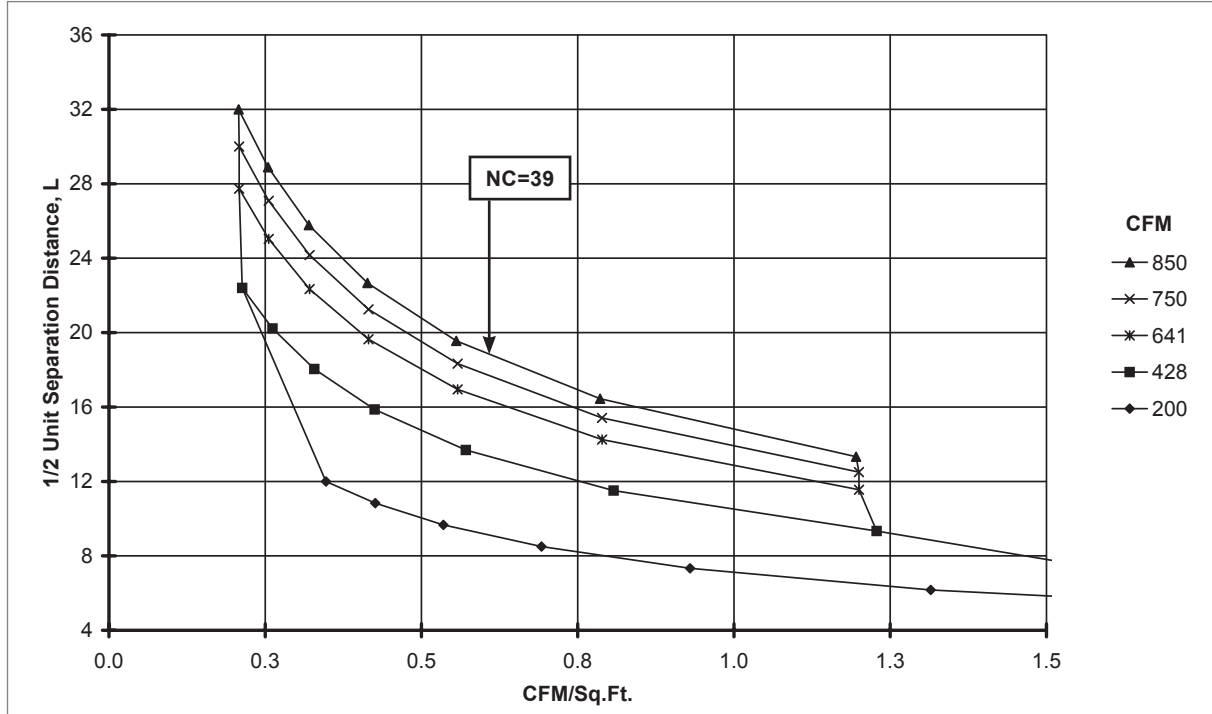
1400A, 51400A Reference Charts
AIRFLOW VS. NC LEVEL: 1400A, 51400A, 24"x24" PANEL, HORIZONTAL THROW (NO DAMPER)

AIRFLOW VS. NC LEVEL: 1400A, 51400A, 24"x24" PANEL, VERTICAL THROW (NO DAMPER)


1400A, 51400A Reference Charts: Horizontal Throw

DIFFUSER SPACING FOR 80% ADPI: 1400A, 51400A, 24"x24" PANEL, 8" INLET, 4-WAY (NO DAMPER)



DIFFUSER SPACING FOR 80% ADPI: 1400A, 51400A, 24"x24" PANEL, 14" INLET, 4-WAY (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.

LOUVERED FACE DIFFUSERS

1400A-51400A

1400A, 51400A Performance Data: Horizontal Throw

IP/METRIC DATA: 1400A, 51400A, 24"x24" PANEL (NO DAMPER)

	IP Data						Metric Data					Octave Band, dB						
	Neck Vel	Air Flow	Pt	Ps	Throw	NC	Neck Vel	Air Flow	Pt	Ps	Throw	2	3	4	5	6	7	
	FPM	CFM	"WG	"WG	ft		m/s	L/s	Pa	Pa	m							
6" Dia.	200	39	.006	0.004	0 - 1 - 2	-	1.02	19	1.6	0.9	0.1 - 0.2 - 0.7	-	-	-	-	-	-	
	300	59	.014	0.008	1 - 1 - 4	-	1.524	28	3.5	2.1	0.2 - 0.4 - 1.3	19	14	12	-	-	-	
	500	98	.039	0.023	2 - 4 - 7	-	2.54	46	9.7	5.8	0.5 - 1.1 - 2.2	31	25	24	19	-	-	
	600	118	.056	0.034	2 - 4 - 9	15	3.05	56	13.9	8.4	0.7 - 1.3 - 2.6	35	29	29	26	16	-	
	700	137	.076	0.046	3 - 5 - 10	20	3.56	65	19.0	11.4	0.9 - 1.5 - 2.9	38	33	33	32	24	12	
	800	157	.100	0.060	4 - 6 - 10	25	4.06	74	24.8	14.9	1.2 - 1.8 - 3.1	41	36	36	37	30	18	
	900	177	.126	0.076	4 - 7 - 11	30	4.57	83	31.4	18.8	1.3 - 2.0 - 3.3	44	38	39	41	36	24	
	1000	196	.156	0.093	5 - 7 - 11	34	5.08	93	38.7	23.2	1.5 - 2.2 - 3.5	47	41	42	45	41	29	
	1100	216	.188	0.113	5 - 8 - 12	37	5.59	102	46.9	28.1	1.6 - 2.4 - 3.7	49	43	44	49	46	33	
8" Dia.	200	70	.006	0.004	1 - 1 - 4	-	1.02	33	1.6	0.9	0.2 - 0.4 - 1.4	12	-	-	-	-	-	
	300	105	.014	0.008	1 - 3 - 7	-	1.524	49	3.5	2.1	0.4 - 0.8 - 2.0	21	18	15	-	-	-	
	500	175	.039	0.023	3 - 6 - 11	12	2.54	82	9.7	5.8	1.0 - 1.7 - 3.3	33	29	28	24	13	-	
	600	209	.056	0.034	4 - 7 - 12	19	3.05	99	13.9	8.4	1.4 - 2.0 - 3.6	37	33	33	31	22	-	
	700	244	.076	0.046	5 - 8 - 13	25	3.56	115	19.0	11.4	1.6 - 2.4 - 3.9	41	37	37	36	30	16	
	800	279	.100	0.060	6 - 9 - 14	30	4.06	132	24.8	14.9	1.8 - 2.7 - 4.2	44	40	40	42	36	23	
	900	314	.126	0.076	7 - 10 - 14	35	4.57	148	31.4	18.8	2.0 - 3.1 - 4.4	47	42	43	46	42	28	
	1000	349	.156	0.093	7 - 11 - 15	39	5.08	165	38.7	23.2	2.3 - 3.3 - 4.6	49	45	46	50	47	33	
	1100	384	.188	0.113	8 - 11 - 16	42	5.59	181	46.9	28.1	2.5 - 3.4 - 4.9	51	47	48	54	51	38	
10" Dia.	300	164	.014	0.008	2 - 4 - 9	-	1.52	77	3.5	2.1	0.6 - 1.3 - 2.8	23	21	18	-	-	-	
	400	218	.025	0.015	3 - 6 - 12	-	2.032	103	6.2	3.7	1.0 - 1.9 - 3.7	30	27	26	19	-	-	
	500	273	.039	0.023	5 - 8 - 14	16	2.54	129	9.7	5.8	1.5 - 2.3 - 4.1	35	32	31	28	18	-	
	600	327	.056	0.034	6 - 9 - 15	23	3.05	154	13.9	8.4	1.9 - 2.8 - 4.5	40	36	36	34	27	12	
	700	382	.076	0.046	7 - 11 - 16	29	3.56	180	19.0	11.4	2.2 - 3.2 - 4.9	43	40	40	40	34	20	
	800	436	.100	0.060	8 - 12 - 17	34	4.06	206	24.8	14.9	2.5 - 3.7 - 5.2	46	43	43	45	41	26	
	900	491	.126	0.076	9 - 13 - 18	38	4.57	232	31.4	18.8	2.8 - 3.9 - 5.5	49	45	46	50	46	32	
	1000	545	.156	0.093	10 - 14 - 19	42	5.08	257	38.7	23.2	3.1 - 4.1 - 5.8	51	48	49	54	51	37	
	1100	600	.188	0.113	11 - 14 - 20	46	5.59	283	46.9	28.1	3.4 - 4.3 - 6.1	54	50	51	57	56	41	
12" Dia.	200	157	.006	0.004	1 - 3 - 8	-	1.02	74	1.6	0.9	0.4 - 0.8 - 2.3	16	14	11	-	-	-	
	300	236	.014	0.008	3 - 6 - 12	-	1.524	111	3.5	2.1	0.8 - 1.8 - 3.5	25	23	21	11	-	-	
	400	314	.025	0.015	5 - 8 - 14	11	2.03	148	6.2	3.7	1.5 - 2.3 - 4.4	32	30	28	22	11	-	
	500	393	.039	0.023	6 - 10 - 16	19	2.54	185	9.7	5.8	2.0 - 2.9 - 4.9	37	35	34	31	22	-	
	600	471	.056	0.034	8 - 12 - 18	26	3.05	222	13.9	8.4	2.3 - 3.5 - 5.4	41	39	38	37	30	15	
	700	550	.076	0.046	9 - 13 - 19	32	3.56	259	19.0	11.4	2.7 - 4.1 - 5.8	45	42	42	43	38	23	
	800	628	.100	0.060	10 - 14 - 20	37	4.06	297	24.8	14.9	3.1 - 4.4 - 6.2	48	45	45	48	44	29	
	900	707	.126	0.076	12 - 15 - 22	41	4.57	334	31.4	18.8	3.5 - 4.7 - 6.6	51	48	48	53	50	35	
	1000	785	.156	0.093	13 - 16 - 23	45	5.08	371	38.7	23.2	3.9 - 4.9 - 7.0	53	50	51	57	55	40	
14" Dia.	200	214	.006	0.004	2 - 3 - 9	-	1.02	101	1.6	0.9	0.5 - 1.1 - 2.8	17	16	13	-	-	-	
	300	321	.014	0.008	3 - 7 - 14	-	1.524	151	3.5	2.1	1.1 - 2.1 - 4.3	27	25	23	14	-	-	
	400	428	.025	0.015	6 - 9 - 17	13	2.03	202	6.2	3.7	1.9 - 2.8 - 5.1	33	32	30	25	14	-	
	500	535	.039	0.023	8 - 12 - 19	22	2.54	252	9.7	5.8	2.4 - 3.5 - 5.7	38	37	36	33	25	-	
	600	641	.056	0.034	9 - 14 - 21	29	3.05	303	13.9	8.4	2.8 - 4.3 - 6.3	43	41	40	40	34	18	
	700	748	.076	0.046	11 - 16 - 22	34	3.56	353	19.0	11.4	3.3 - 4.8 - 6.8	46	44	44	46	41	25	
	800	855	.100	0.060	12 - 17 - 24	39	4.06	404	24.8	14.9	3.8 - 5.1 - 7.3	49	47	47	51	47	31	
	900	962	.126	0.076	14 - 18 - 25	44	4.57	454	31.4	18.8	4.3 - 5.5 - 7.7	52	50	50	55	53	37	
	1000	1069	.156	0.093	15 - 19 - 27	48	5.08	505	38.7	23.2	4.7 - 5.7 - 8.1	55	52	53	59	58	42	
15" Dia.	200	245	.006	0.004	2 - 4 - 10	-	1.02	116	1.6	0.9	0.5 - 1.2 - 3.1	18	17	14	-	-	-	
	300	368	.014	0.008	4 - 8 - 15	-	1.524	174	3.5	2.1	1.2 - 2.3 - 4.6	27	26	24	15	-	-	
	400	491	.025	0.015	7 - 10 - 18	15	2.03	232	6.2	3.7	2.1 - 3.1 - 5.5	34	33	31	26	15	-	
	500	614	.039	0.023	8 - 13 - 20	23	2.54	290	9.7	5.8	2.6 - 3.8 - 6.2	39	38	36	34	26	-	
	600	736	.056	0.034	10 - 15 - 22	30	3.05	347	13.9	8.4	3.1 - 4.6 - 6.7	43	42	41	41	35	19	
	700	859	.076	0.046	12 - 17 - 24	36	3.56	405	19.0	11.4	3.6 - 5.2 - 7.3	47	45	45	47	42	26	
	800	982	.100	0.060	14 - 18 - 26	41	4.06	463	24.8	14.9	4.1 - 5.5 - 7.8	50	48	48	52	49	32	
	900	1104	.126	0.076	15 - 19 - 27	45	4.57	521	31.4	18.8	4.6 - 5.8 - 8.3	53	51	51	57	55	38	
	1000	1227	.156	0.093	17 - 20 - 29	49	5.08	579	38.7	23.2	5.0 - 6.2 - 8.7	55	53	54	61	60	43	

LOUVERED FACE DIFFUSERS

 1
4
0
0
A
-
5
1
4
0
0
A

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 or dB 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 Krueger's selection software for performance data not shown, including octave band data.

1400A, 51400A Performance Data: Vertical Throw

IP DATA: 1400A, 51400A, 24"x24" PANEL (NO DAMPER)

LOUVERED FACE DIFFUSERS

Neck Dia.	Neck Vel	Air Flow	Pt	Ps	Vert Δ + 40°F Throw	Vert Δ + 20°F Throw	Vert Δ + 0°F Throw	Vert Δ - 20°F Throw	NC	Octave Band, dB						
										in.	FPM	CFM	"WG	"WG	ft	ft
6" Dia.	200	39	.008	0.005	0-0-1	0-0-1	0-0-1	0-1-1	-	-	-	-	-	-	-	-
	300	59	.017	0.011	0-0-1	0-1-1	0-1-1	1-1-2	-	16	13	13	-	-	-	-
	500	98	.047	0.032	0-1-1	1-1-2	1-1-2	1-1-2	12	29	26	27	24	11	-	-
	600	118	.068	0.046	1-1-1	1-1-2	1-1-2	1-2-2	18	34	31	31	30	20	-	-
	700	137	.093	0.062	1-1-1	1-1-2	1-1-2	1-2-3	23	38	36	35	35	27	13	-
	800	157	.121	0.081	1-1-1	1-1-2	1-2-2	1-2-3	28	41	39	39	39	33	18	-
	900	177	.154	0.103	1-1-1	1-1-2	1-2-2	2-2-3	32	44	42	42	43	38	23	-
	1000	196	.190	0.127	1-1-2	1-2-2	1-2-3	2-2-3	35	47	45	45	46	43	28	-
1100	216	.229	0.154	1-1-2	1-2-2	2-2-3	2-2-3	38	49	48	47	50	48	32	-	
8" Dia.	200	70	.009	0.007	0-0-1	0-0-1	0-1-1	0-1-1	-	11	-	-	-	-	-	-
	300	105	.021	0.015	0-1-1	0-1-1	1-1-2	1-1-2	-	22	17	17	12	-	-	-
	500	175	.058	0.042	1-1-1	1-1-2	1-1-2	1-2-3	17	35	31	30	29	17	-	-
	600	209	.084	0.061	1-1-2	1-1-2	1-2-3	1-2-3	23	39	36	35	35	26	13	-
	700	244	.114	0.083	1-1-2	1-2-2	1-2-3	2-2-4	28	43	40	39	40	33	19	-
	800	279	.148	0.109	1-1-2	1-2-3	2-2-3	2-3-4	33	47	44	43	44	39	25	-
	900	314	.188	0.137	1-1-2	1-2-3	2-2-3	2-3-4	36	49	47	46	48	45	30	-
	1000	349	.232	0.170	1-1-2	2-2-3	2-2-3	2-3-4	40	52	50	49	51	50	35	-
1100	384	.281	0.205	1-2-2	2-2-3	2-3-4	3-3-4	43	55	52	51	54	54	39	-	
10" Dia.	200	109	.011	0.009	1-2-4	1-2-5	1-2-6	1-2-8	-	16	-	-	-	-	-	-
	300	164	.026	0.020	2-3-6	2-4-8	2-5-9	2-5-11	-	26	21	20	16	-	-	-
	400	218	.046	0.036	3-4-8	3-5-10	4-6-12	4-8-15	14	33	28	27	25	12	-	-
	500	273	.072	0.056	3-5-9	4-6-13	5-8-15	6-9-19	21	39	34	33	32	22	-	-
	600	327	.103	0.081	4-6-10	5-8-14	6-9-17	8-11-20	27	43	39	38	38	31	18	-
	700	382	.140	0.110	5-7-11	6-9-15	7-11-18	9-13-22	32	47	44	42	43	38	24	-
	800	436	.183	0.143	5-8-12	7-10-16	8-12-20	10-15-24	36	51	47	46	48	44	30	-
	900	491	.232	0.182	6-9-12	8-12-17	9-14-21	11-17-25	40	54	50	49	52	49	35	-
1000	545	.287	0.224	7-9-13	9-13-18	10-15-22	13-19-26	44	56	53	52	55	54	40	-	
12" Dia.	100	79	.004	0.003	0-0-2	0-1-2	0-1-3	0-1-3	-	-	-	-	-	-	-	-
	200	157	.014	0.012	1-2-5	1-2-6	1-3-7	1-3-9	-	19	12	12	-	-	-	-
	300	236	.032	0.026	2-4-7	2-5-9	3-6-11	3-6-14	-	29	23	22	19	-	-	-
	400	314	.057	0.047	3-5-10	4-6-12	5-7-15	5-9-18	17	37	31	30	28	16	-	-
	500	393	.088	0.073	4-6-11	5-8-15	6-9-19	8-11-22	24	42	37	36	35	26	14	-
	600	471	.127	0.105	5-7-12	6-9-17	7-11-20	9-14-25	30	47	42	41	41	34	22	-
	700	550	.173	0.143	6-9-13	7-11-18	9-13-22	11-16-27	35	51	46	45	47	42	29	-
	800	628	.226	0.186	7-10-14	8-12-19	10-15-24	12-18-28	39	54	50	48	51	48	34	-
900	707	.286	0.236	7-10-15	9-14-21	11-17-25	14-20-30	43	57	53	51	55	53	39	-	
14" Dia.	100	107	.004	0.004	0-1-2	0-1-3	0-1-3	0-1-3	-	-	-	-	-	-	-	-
	200	214	.017	0.015	1-2-6	1-3-7	1-3-9	1-3-11	-	22	15	14	-	-	-	-
	300	321	.039	0.033	2-4-9	3-5-11	3-6-13	3-7-16	-	32	26	24	21	-	-	-
	400	428	.069	0.059	4-6-11	5-7-15	6-9-17	6-11-21	19	40	34	32	31	19	-	-
	500	535	.108	0.092	5-7-13	6-9-18	7-11-22	9-13-26	27	45	40	38	38	29	18	-
	600	641	.156	0.133	6-9-14	7-11-20	9-13-24	11-16-29	33	50	45	43	44	38	25	-
	700	748	.212	0.181	7-10-15	8-13-21	10-15-26	12-19-31	38	54	49	47	49	45	32	-
	800	855	.276	0.237	8-11-16	10-15-23	12-17-27	14-21-33	42	57	52	50	54	51	38	-
900	962	.350	0.299	9-12-17	11-16-24	13-19-29	16-24-35	46	60	56	54	57	57	43	-	
15" Dia.	100	123	.005	0.004	0-1-2	0-1-3	0-1-4	0-1-4	-	-	-	-	-	-	-	-
	200	245	.019	0.017	1-2-6	1-3-8	2-4-9	2-4-11	-	23	16	15	-	-	-	-
	300	368	.043	0.037	2-5-9	3-6-12	4-7-14	4-8-17	11	34	27	25	23	-	-	-
	400	491	.076	0.066	4-6-12	5-8-16	6-9-19	6-11-23	21	41	35	33	32	20	-	-
	500	614	.119	0.103	5-8-14	6-10-19	8-12-23	9-14-28	28	47	41	39	39	31	19	-
	600	736	.171	0.149	6-9-15	8-12-21	9-14-25	11-17-31	34	51	46	44	45	39	27	-
	700	859	.233	0.203	7-11-16	9-14-23	11-16-27	13-20-33	39	55	50	48	50	46	34	-
	800	982	.305	0.265	8-12-17	10-16-24	12-19-29	15-23-35	43	58	53	51	55	53	39	-
900	1104	.386	0.335	9-13-18	12-18-26	14-21-31	17-26-38	47	61	57	54	59	58	44	-	

NOTES: Throw values are given for temperature differences shown and terminal velocities of 150, 100, and 50 FPM. 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 or dB value of less than 10. Data was obtained from tests conducted in accordance with ANSI/ASHRAE Standard 70. See Krueger's selection software for performance data not shown, including octave band data.

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1400A, 51400A Performance Data: Vertical Throw
METRIC DATA: 1400A, 51400A, 24"x24" PANEL (NO DAMPER)

Neck Dia.	Neck Vel	Air Flow	Pt	Ps	Vert Δ + 22°C Throw	Vert Δ + 11°C Throw	Vert Δ + 0°C Throw	Vert Δ - 11°C Throw	NC	Octave Band, dB						
										2	3	4	5	6	7	
152 Dia.	1.02	19	1.9	1.3	0.0-0.1-0.2	0.1-0.1-0.2	0.1-0.1-0.3	0.1-0.2-0.3	-	-	-	-	-	-	-	
	1.52	28	4.2	2.9	0.1-0.1-0.3	0.1-0.2-0.3	0.1-0.2-0.4	0.2-0.2-0.5	-	16	13	13	-	-	-	
	2.54	46	11.8	7.9	0.1-0.2-0.3	0.2-0.3-0.5	0.2-0.3-0.6	0.3-0.4-0.7	12	29	26	27	24	11	-	
	3.05	56	17.0	11.4	0.2-0.3-0.4	0.2-0.3-0.5	0.3-0.4-0.6	0.3-0.5-0.7	18	34	31	31	30	20	-	
	3.56	65	23.1	15.5	0.2-0.3-0.4	0.3-0.4-0.5	0.3-0.5-0.7	0.4-0.6-0.8	23	38	36	35	35	27	13	
	4.06	74	30.2	20.3	0.2-0.3-0.4	0.3-0.4-0.6	0.3-0.5-0.7	0.4-0.6-0.9	28	41	39	39	39	33	18	
	4.57	83	38.2	25.7	0.3-0.3-0.4	0.3-0.4-0.6	0.4-0.5-0.8	0.5-0.6-0.9	32	44	42	42	43	38	23	
	5.08	93	47.2	31.7	0.3-0.3-0.5	0.4-0.5-0.7	0.4-0.6-0.8	0.5-0.7-1.0	35	47	45	45	46	43	28	
5.59	102	57.1	38.3	0.3-0.3-0.5	0.4-0.5-0.7	0.5-0.6-0.8	0.6-0.7-1.0	38	49	48	47	50	48	32		
203 Dia.	1.02	33	2.3	1.7	0.1-0.1-0.2	0.1-0.1-0.3	0.1-0.2-0.3	0.1-0.2-0.4	-	11	-	-	-	-	-	
	1.52	49	5.2	3.8	0.1-0.2-0.3	0.1-0.2-0.4	0.2-0.3-0.5	0.2-0.3-0.6	-	22	17	17	12	-	-	
	2.54	82	14.4	10.6	0.2-0.3-0.4	0.2-0.4-0.6	0.3-0.4-0.7	0.4-0.5-0.9	17	35	31	30	29	17	-	
	3.05	99	20.8	15.2	0.2-0.3-0.5	0.3-0.4-0.7	0.3-0.5-0.8	0.4-0.6-1.0	23	39	36	35	35	26	13	
	3.56	115	28.3	20.7	0.3-0.4-0.5	0.3-0.5-0.7	0.4-0.6-0.9	0.5-0.7-1.1	28	43	40	39	40	33	19	
	4.06	132	37.0	27.0	0.3-0.4-0.6	0.4-0.6-0.8	0.5-0.7-0.9	0.6-0.8-1.1	33	47	44	43	44	39	25	
	4.57	148	46.8	34.2	0.3-0.4-0.6	0.4-0.6-0.8	0.5-0.7-1.0	0.6-0.9-1.2	36	49	47	46	48	45	30	
	5.08	165	57.8	42.2	0.4-0.4-0.6	0.5-0.6-0.9	0.6-0.7-1.1	0.7-0.9-1.3	40	52	50	49	51	50	35	
5.59	181	69.9	51.1	0.4-0.5-0.7	0.5-0.6-0.9	0.6-0.8-1.1	0.8-0.9-1.3	43	55	52	51	54	54	39		
254 Dia.	1.02	51	2.9	2.2	0.2-0.5-1.2	0.2-0.6-1.6	0.3-0.7-1.9	0.3-0.7-2.3	-	16	-	-	-	-	-	
	1.52	77	6.4	5.0	0.5-0.9-1.9	0.6-1.2-2.4	0.7-1.4-2.8	0.7-1.6-3.5	-	26	21	20	16	-	-	
	2.03	103	11.4	8.9	0.8-1.2-2.5	1.0-1.6-3.2	1.3-1.9-3.8	1.3-2.3-4.6	14	33	28	27	25	12	-	
	2.54	129	17.8	14.0	1.0-1.5-2.8	1.3-2.0-3.9	1.6-2.4-4.7	1.9-2.9-5.7	21	39	34	33	32	22	-	
	3.05	154	25.7	20.1	1.2-1.9-3.0	1.6-2.4-4.2	1.9-2.8-5.2	2.3-3.5-6.2	27	43	39	38	38	31	18	
	3.56	180	35.0	27.4	1.4-2.2-3.3	1.8-2.8-4.6	2.2-3.3-5.6	2.7-4.0-6.7	32	47	44	42	43	38	24	
	4.06	206	45.7	35.7	1.7-2.5-3.5	2.1-3.2-4.9	2.5-3.8-6.0	3.1-4.6-7.2	36	51	47	46	48	44	30	
	4.57	232	57.8	45.2	1.9-2.6-3.7	2.4-3.5-5.2	2.8-4.2-6.3	3.5-5.2-7.6	40	54	50	49	52	49	35	
5.08	257	71.3	55.8	2.1-2.8-3.9	2.6-3.9-5.5	3.1-4.7-6.7	3.8-5.7-8.0	44	56	53	52	55	54	40		
305 Dia.	0.51	37	0.9	0.7	0.1-0.1-0.6	0.1-0.2-0.7	0.1-0.2-0.9	0.1-0.2-0.9	-	-	-	-	-	-	-	
	1.02	74	3.5	2.9	0.3-0.6-1.5	0.3-0.7-1.9	0.4-0.9-2.3	0.4-0.9-2.8	-	19	12	12	-	-	-	
	1.52	111	7.9	6.5	0.6-1.1-2.2	0.7-1.4-2.8	0.9-1.7-3.4	0.9-1.9-4.1	-	29	23	22	19	-	-	
	2.03	148	14.1	11.6	1.0-1.5-3.0	1.2-1.9-3.8	1.5-2.3-4.5	1.5-2.8-5.5	17	37	31	30	28	16	-	
	2.54	185	22.0	18.1	1.2-1.9-3.3	1.6-2.4-4.7	1.9-2.8-5.6	2.3-3.5-6.8	24	42	37	36	35	26	14	
	3.05	222	31.7	26.1	1.5-2.2-3.6	1.9-2.8-5.1	2.3-3.4-6.2	2.8-4.1-7.5	30	47	42	41	41	34	22	
	3.56	259	43.1	35.5	1.7-2.6-3.9	2.2-3.3-5.5	2.6-4.0-6.7	3.2-4.8-8.1	35	51	46	45	47	42	29	
	4.06	297	56.3	46.3	2.0-3.0-4.2	2.5-3.8-5.9	3.0-4.5-7.1	3.7-5.5-8.6	39	54	50	48	51	48	34	
4.57	334	71.2	58.7	2.2-3.1-4.5	2.8-4.3-6.2	3.4-5.1-7.6	4.1-6.2-9.1	43	57	53	51	55	53	39		
356 Dia.	0.51	50	1.1	0.9	0.1-0.2-0.7	0.1-0.2-0.8	0.1-0.3-1.0	0.1-0.3-1.0	-	-	-	-	-	-	-	
	1.02	101	4.3	3.7	0.3-0.7-1.7	0.3-0.8-2.2	0.4-1.0-2.6	0.4-1.0-3.2	-	22	15	14	-	-	-	
	1.52	151	9.7	8.3	0.7-1.3-2.6	0.8-1.7-3.3	1.0-2.0-4.0	1.0-2.3-4.8	-	32	26	24	21	-	-	
	2.03	202	17.2	14.7	1.2-1.7-3.5	1.4-2.2-4.4	1.8-2.6-5.3	1.8-3.2-6.4	19	40	34	32	31	19	-	
	2.54	252	26.9	23.0	1.4-2.2-3.9	1.8-2.8-5.4	2.2-3.3-6.6	2.7-4.0-8.0	27	45	40	38	38	29	18	
	3.05	303	38.7	33.1	1.7-2.6-4.2	2.2-3.3-5.9	2.6-4.0-7.2	3.2-4.8-8.7	33	50	45	43	44	38	25	
	3.56	353	52.7	45.1	2.0-3.0-4.6	2.6-3.9-6.4	3.1-4.6-7.8	3.8-5.6-9.4	38	54	49	47	49	45	32	
	4.06	404	68.8	58.9	2.3-3.5-4.9	2.9-4.4-6.9	3.5-5.3-8.3	4.3-6.4-10.1	42	57	52	50	54	51	38	
4.57	454	87.1	74.6	2.6-3.7-5.2	3.3-5.0-7.3	4.0-5.9-8.8	4.8-7.2-10.7	46	60	56	54	57	57	43		
381 Dia.	0.51	58	1.2	1.0	0.1-0.2-0.7	0.1-0.2-0.8	0.1-0.3-1.1	0.1-0.3-1.1	-	-	-	-	-	-	-	
	1.02	116	4.7	4.1	0.3-0.7-1.9	0.4-0.8-2.4	0.5-1.1-2.8	0.5-1.1-3.5	-	23	16	15	-	-	-	
	1.52	174	10.7	9.3	0.7-1.4-2.8	0.8-1.8-3.5	1.1-2.1-4.2	1.1-2.4-5.2	11	34	27	25	23	-	-	
	2.03	232	19.0	16.5	1.2-1.9-3.7	1.5-2.4-4.7	1.9-2.8-5.6	1.9-3.5-6.9	21	41	35	33	32	20	-	
	2.54	290	29.6	25.7	1.5-2.3-4.1	2.0-3.0-5.8	2.4-3.5-7.1	2.9-4.3-8.5	28	47	41	39	39	31	19	
	3.05	347	42.7	37.1	1.9-2.8-4.5	2.4-3.5-6.4	2.8-4.2-7.7	3.5-5.2-9.3	34	51	46	44	45	39	27	
	3.56	405	58.1	50.5	2.2-3.3-4.9	2.8-4.1-6.9	3.3-4.9-8.4	4.0-6.0-10.1	39	55	50	48	50	46	34	
	4.06	463	75.8	65.9	2.5-3.7-5.2	3.2-4.7-7.4	3.8-5.6-8.9	4.6-6.9-10.8	43	58	53	51	55	53	39	
4.57	521	96.0	83.4	2.8-3.9-5.6	3.5-5.3-7.8	4.2-6.3-9.5	5.2-7.8-11.4	47	61	57	54	59	58	44		

Throw values are given for temperature differences shown and terminal velocities of (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 or dB value of less than 10. Data was obtained from tests conducted in accordance with ANSI/ASHRAE Standard 70. See Krueger's selection software for performance data not shown, including octave band data.

1400A, 51400A Suggested Specification & Configuration

1400A, 51400A

The drop cone, square face diffuser shall be Krueger model 1400A (steel, adjustable) or 51400A (aluminum, adjustable). The 1400A and 51400A models shall be constructed of four precision die-stamped cones. The back cone shall have an integrally drawn neck for duct connections on 24"x24" panel sized units. Fabricated collars are only acceptable on 12"x12" panel sized units. The inner cone assembly shall be welded to the back cone and have a hole with removable plug for easy optional damper adjustment. The inner cone assembly shall also include adjustable vanes to change the airflow from fully horizontal to fully vertical. The surface mount 1400A and 51400A shall ship with an auxiliary aluminum surface mounting frame for easy installation. Diffusers shall be constructed of 22 gage steel (1400A) or 0.040" aluminum (51400A) with integral earthquake tabs.

Optional round damper shall be constructed of heavy gage 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° 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)**
1400A - 4-Cone, Adjustable, Steel Ceiling Diffuser
51400A - 4-Cone, Adjustable, Aluminum Ceiling Diffuser
- 2. PATTERN: (XX)**
04 - 4-Way
- 3. ROUND NECK: (XX)**
6", 8", 10", 12", 14", or 15"
- 4. FRAME: (XXX)**
F22 - Surface Mount *
F23 - Lay-in T-Bar
F27 - Spline
F98 - Narrow-T
- 5. PANEL: (XX)x(XX)**
12"x12" **
24"x24"
- 6. ACCESSORIES: (XX)**
00 - No Accessories
IB - Insulated Blanket
R6 - Molded Insulation
- 7. FINISH: (XX)**
01 - Mill
10 - Alumican
35 - Black
44 - British White

*Round damper not included in configuration code.
* Frame 22 includes separate aluminum plaster frame shipped loose for field installation.
** Available in Frame 22 and 23 only.*