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KRUEGER
Excellence in Air Distribution

PRISM
This supply diffuser features an arcuate faceplate. Center square appliqué offers nine standard colors to match interior décor.

PLQ & 5PLQ
This supply diffuser features a square plaque faceplate.

PLQR
This supply diffuser features a round plaque faceplate.

PLQLT
This supply diffuser features a square plaque face plate and insulated backpan for low-temperature applications.

PLQIMP
This supply diffuser features a square plaque faceplate with an integrated multi-port ring.

KSD
This architectural supply diffuser features a center swirl.

PLQ

PLQR

Introduction: PLQ, 5PLQ, PLQR

The PLQ/5PLQ architectural ceiling diffuser provides the building designer with the desired appearance and superior performance of a uniform radial discharge air pattern. A 360° horizontal pattern delivers even air throughout the space.

The PLQ/5PLQ has a square faceplate made of one-piece, nonfolded material with rounded corners to give the diffuser a clean appearance that is unobtrusive to ceiling systems. (Round faceplate available with model PLQR that provides an expanding square discharge air pattern.) The single faceplate gives the diffuser reduced pressure drops and a quiet sound profile and is held in place by hooks that lock into the backpan. The one-piece, stamped backpan provides smooth, consistent corners, exacting dimensions, and performance tolerances. The removable faceplate offers easy duct and damper access.

MODELS

PLQ - Square Plaque, Round Neck, Steel Construction
5PLQ - Square Plaque, Round Neck, Aluminum Construction
PLQR - Round Plaque, Round Neck, Steel Construction

ACCESSORIES

- Dampers
- Straightening Grid

PANEL SIZES

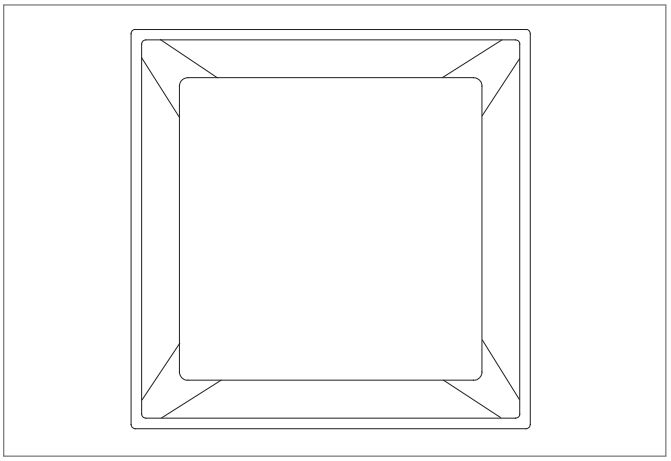
- 12”x12” (Plaque drops 1/4” below ceiling.)
- 20”x20” (Plaque drops 1/4” below ceiling.)
- 24”x24” (Plaque drops 1/4” below ceiling.)

FINISHES

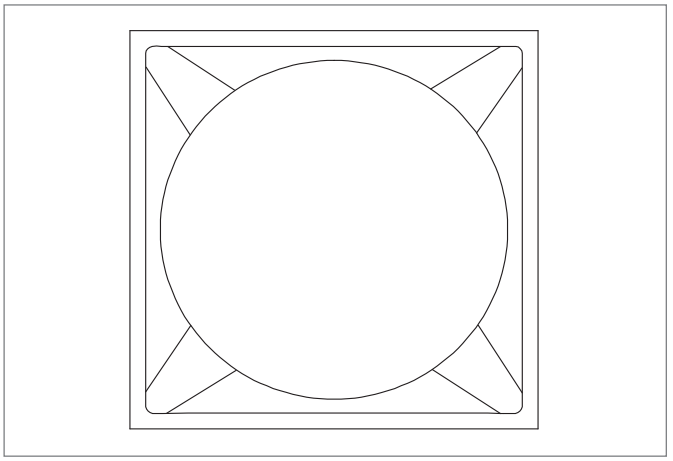
- Standard finish is #44 British White.
- Optional finishes available.

PLQ, 5PLQ, PLQR Dimensional Information

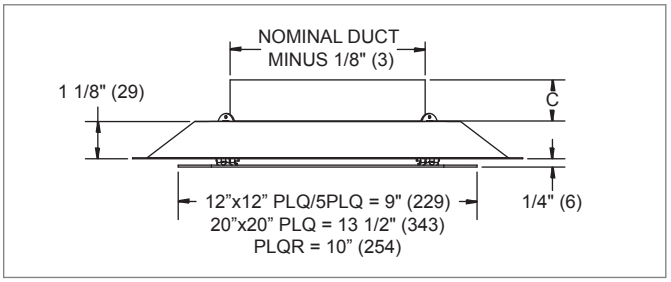
PLQ, 5PLQ, FACE VIEW



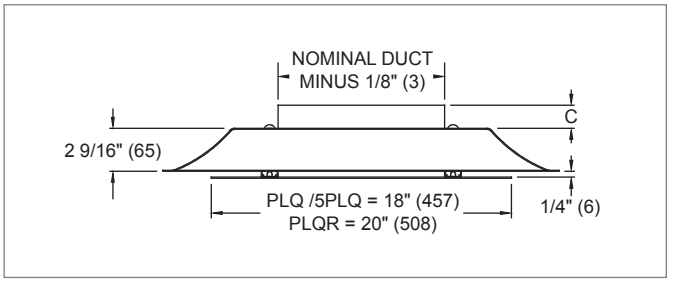
PLQR, FACE VIEW



PLQ, PLQR, 12”x12” & 20”x20” PANEL SIDE VIEW



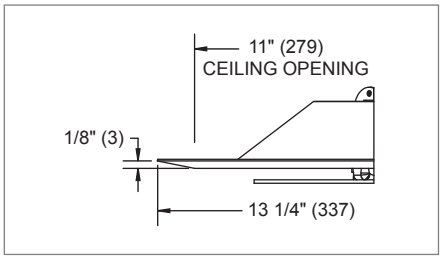
PLQ, 5PLQ, PLQR, 24”x24” PANEL SIDE VIEW



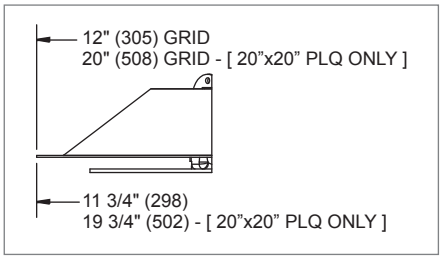
NOTES: Dimensions in parentheses are mm. See tables on next page for value of ‘C’.

PLQ, 5PLQ, PLQR Frame Styles

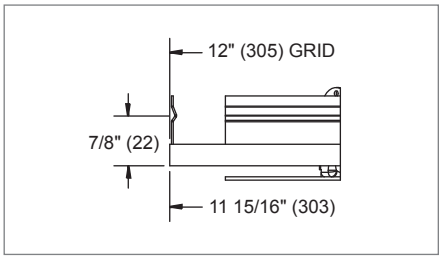
PLQ, PLQR, 5PLQ
FRAME 22, 12”x12” PANEL
SURFACE MOUNT



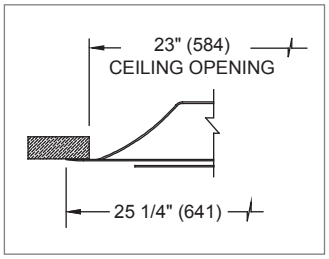
PLQ, PLQR, 5PLQ
FRAME 23, 12”x12” & 20”x20”
PANEL, LAY-IN T-BAR



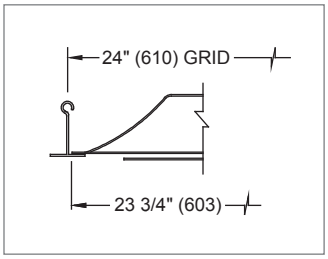
PLQ, PLQR
FRAME 24, 12”x12” PANEL
SNAP-IN T-BAR



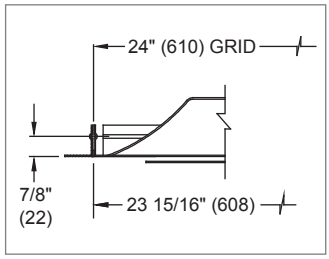
PLQ, 5PLQ, PLQR,
FRAME 22, 24”x24”
PANEL, SURFACE MOUNT



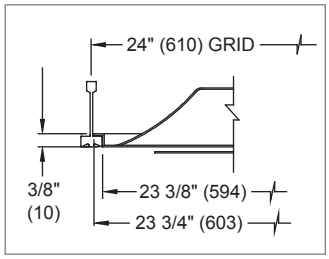
PLQ, 5PLQ, PLQR,
FRAME 23, 24”x24”
PANEL, LAY-IN T-BAR



PLQ, PLQR,
FRAME 24, 24”x24”
PANEL, SNAP-IN T-BAR



PLQ, 5PLQ, PLQR,
FRAME 98, 24”x24”
PANEL, NARROW-T



PLQ, 5PLQ, PLQR, AVAILABLE FRAMES

Frame Style	Panel Size	PLQ	5PLQ	PLQR
Frame 22	12" x 12"	x	x	x
	24" x 24"	x	x	x
Frame 23	12" x 12"	x	x	x
	20” x 20”	x	-	-
	24" x 24"	x	x	x
Frame 24	12" x 12"	x	-	x
	24" x 24"	x	-	x
Frame 98	12" x 12"	-	-	-
	24" x 24"	x	x	x

PLQ, 5PLQ, PLQR, AVAILABLE NECK SIZES

12" x 12" Panel	
Nominal Duct Size	C
6" (152)	1 1/8" (29)
7" (178)	1 1/8" (29)
8" (203)	1 1/4" (32)

20" x 20" Panel	
Nominal Duct Size	C
6" (152)	3/4" (19)
8” (203)	
10” (254)	

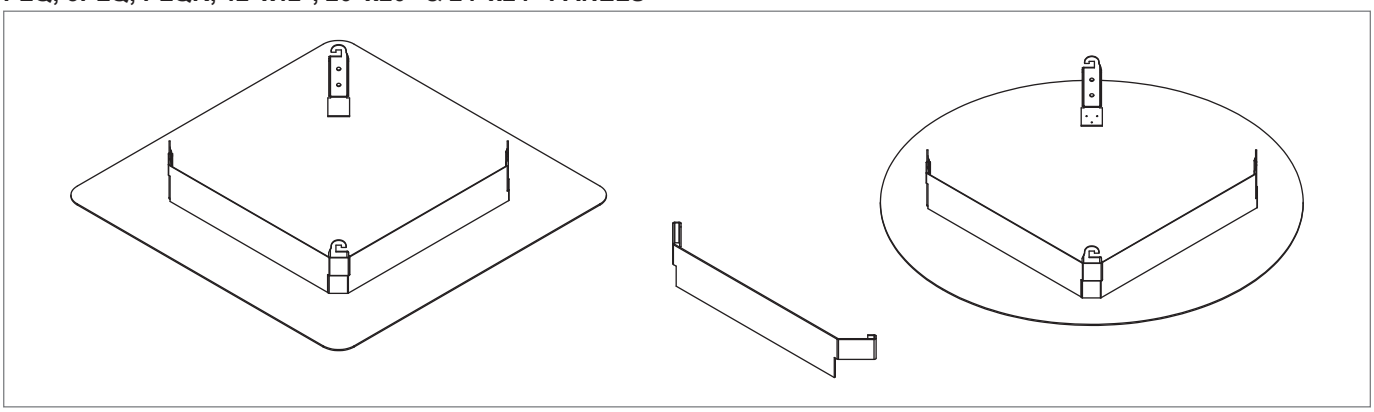
24" x 24" Panel	
Nominal Duct Size	C
6" (152)	1 1/8" (29)
8" (203)	1 1/4" (32)
10" (254)	1 3/8" (35)
12" (305)	1 3/8" (35)
14" (356)	1 3/8" (35)
15" (381)	1 3/8" (35)

See previous page, Side Views, for references to dimension ‘C’.

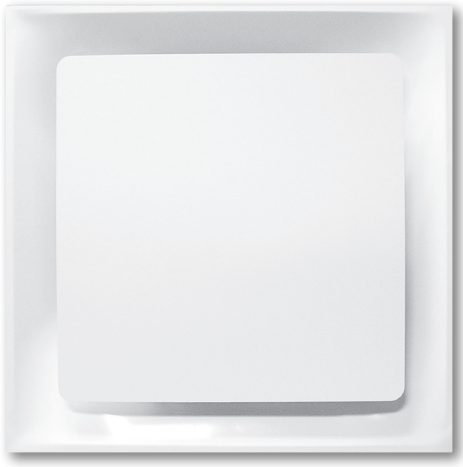
Dimensions in parentheses are mm. Dash indicates not available.
Reference charts, performance data, and engineering specifications are continued, beginning on page A1-16.

PLQ, 5PLQ, PLQR Directional Blow Tabs (DBT & 5DBT)

PLQ, 5PLQ, PLQR, 12”x12”, 20”x20” & 24”x24” PANELS

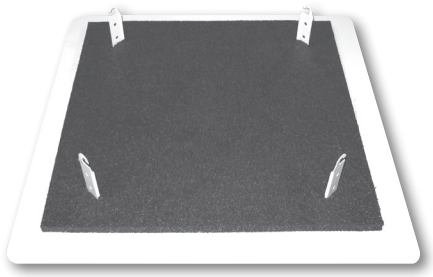


PLQLT | Insulated, Square Plaque Face



PLQLT, Face View

PLQLT, Back View of Backpan



PLQLT, Back View of Plaque

Introduction: PLQLT, 5PLQLT

The PLQLT architectural ceiling diffuser provides the building designer with the desired appearance and superior performance of a uniform, 360° horizontal discharge air pattern while providing condensation resistance.

The 24”x24” PLQLT has a square faceplate made of one-piece, non-folded material with rounded corners, backed by 3/8” thick cellular liner that insulates the plaque from cold supply air. Held in place by hooks that lock into the backpan, the single faceplate gives the diffuser reduced pressure drops and a quiet sound profile. The one-piece stamped backpan provides smooth, consistent corners, exacting dimensions, and performance tolerances and is covered with a foil faced R-6 formed fiberglass backing to provide excellent condensation resistance. Additionally, the removable faceplate offers easy duct and damper access.

MODEL

PLQLT - Square Plaque-Style Ceiling Diffuser with R-6 Rigid Fiberglass Insulated Backpan and 3/8” Insulated Plaque Face, Steel Construction

5PLQLT - Square Plaque-Style Ceiling Diffuser with R-6 Rigid Fiberglass Insulated Backpan and 3/8” Insulated Plaque Face, Aluminum Construction

PANEL SIZE

- 24”x24” (Plaque drops 1/4” below ceiling.)

ACCESSORIES

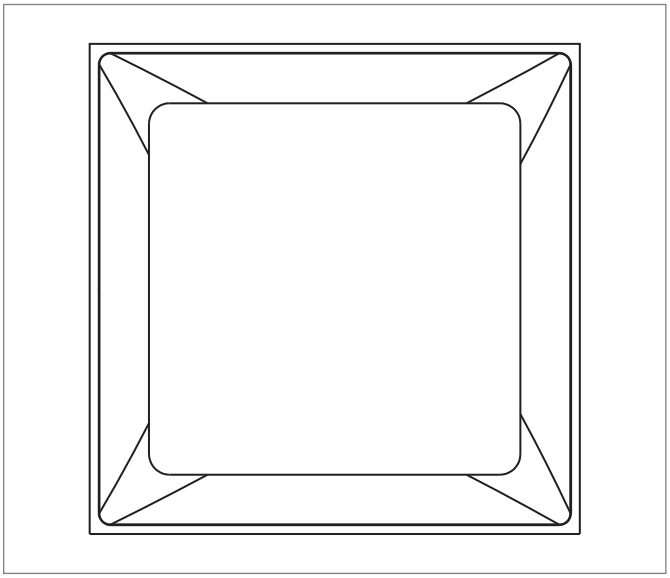
- Dampers
- Straightening Grid

FINISHES

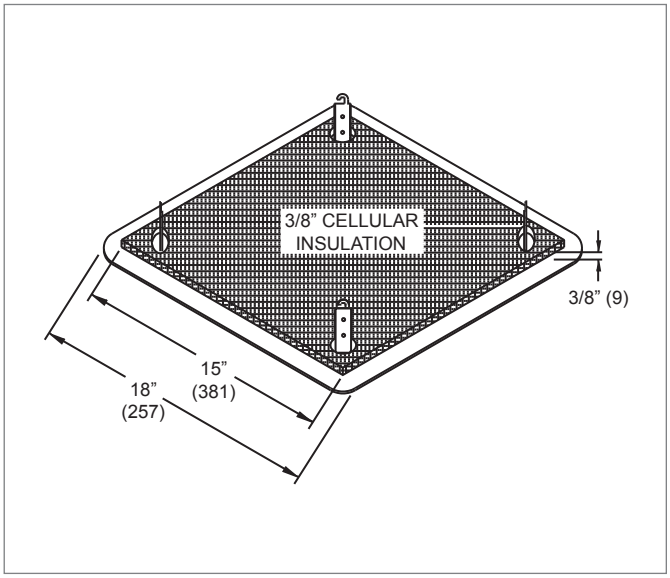
- Standard finish is #44 British White.
- Optional finishes available.

PLQLT, 5PLQLT Dimensional Information

PLQLT, 5PLQLT, FACE VIEW

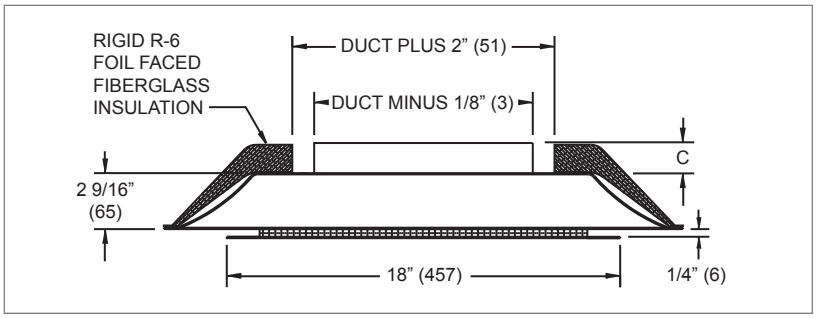


PLQLT, 5PLQLT, BACK VIEW OF PLAQUE



NOTE: Dimensions in parentheses are mm.

PLQLT, 5PLQLT, 24"x24" PANEL SIDE VIEW



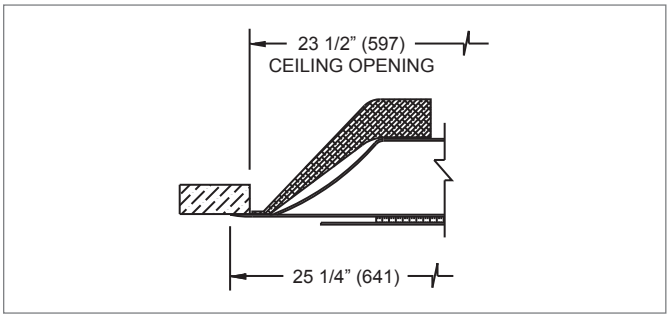
NOTE: Dimensions in parentheses are mm.

PLQLT, 5PLQLT, AVAILABLE NECK SIZES

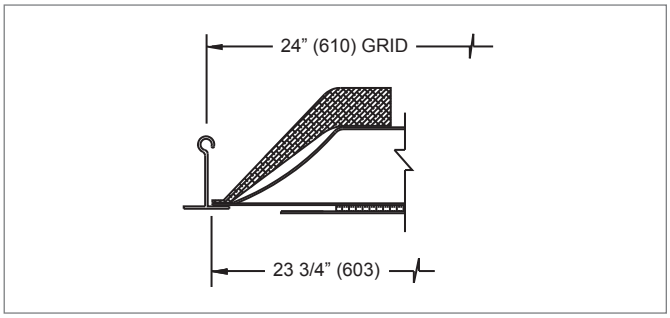
24" x 24" Panel	
Nominal Duct Size	**C**
6" (152)	1 1/8" (29)
8" (203)	1 1/4" (32)
10" (254)	1 3/8" (35)
12" (305)	1 3/8" (35)
14" (356)	1 3/8" (35)
15" (381)	1 3/8" (35)

PLQLT, 5PLQLT Frame Styles

PLQLT, 5PLQLT, FRAME 22, 24"x24" PANEL, SURFACE MOUNT



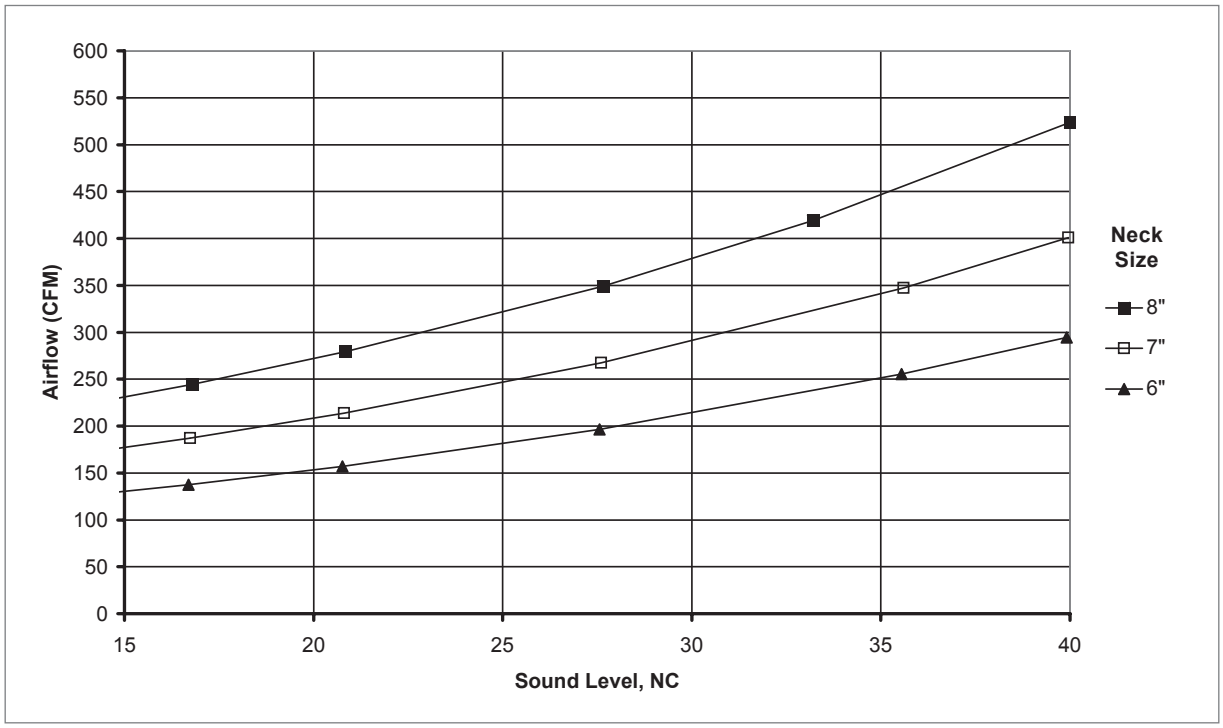
PLQLT, 5PLQLT, FRAME 23, 24"x24" PANEL, LAY-IN T-BAR



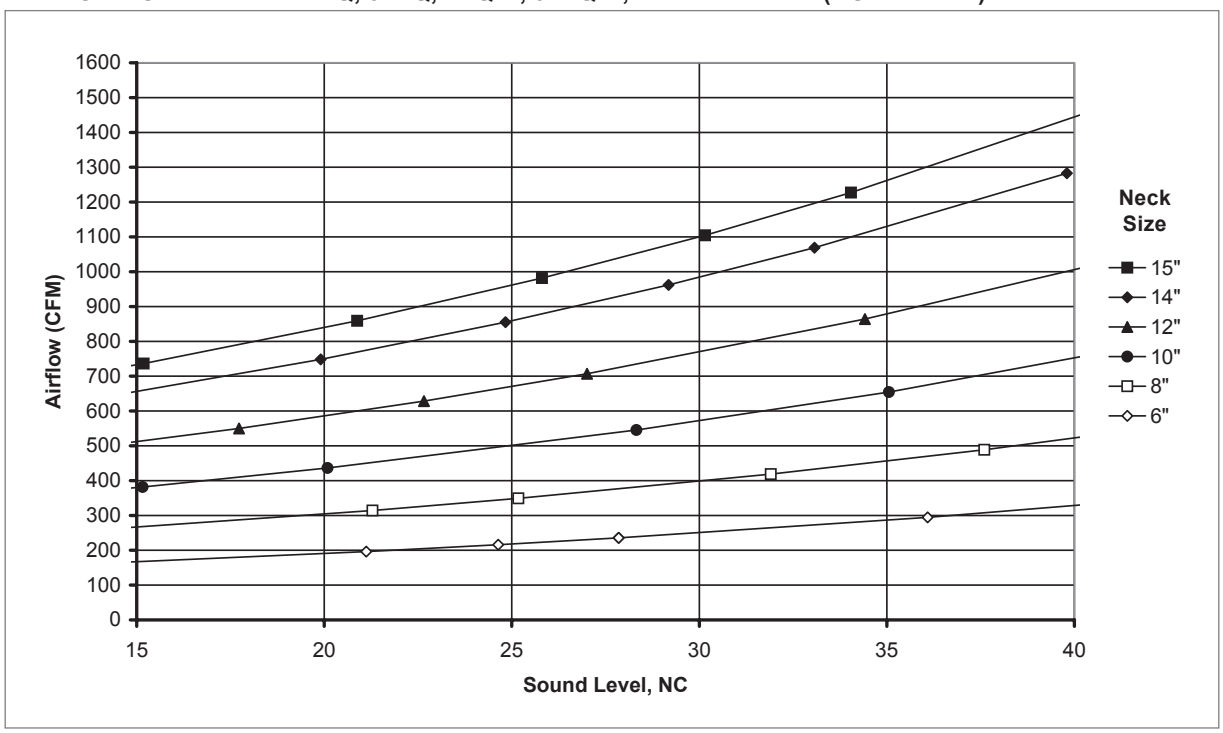
NOTE: Dimensions in parentheses are mm.

PLQ, 5PLQ, PLQLT, 5PLQLT Reference Charts

AIRFLOW VS. NC LEVEL: PLQ, 12"x12" PANEL (NO DAMPER)

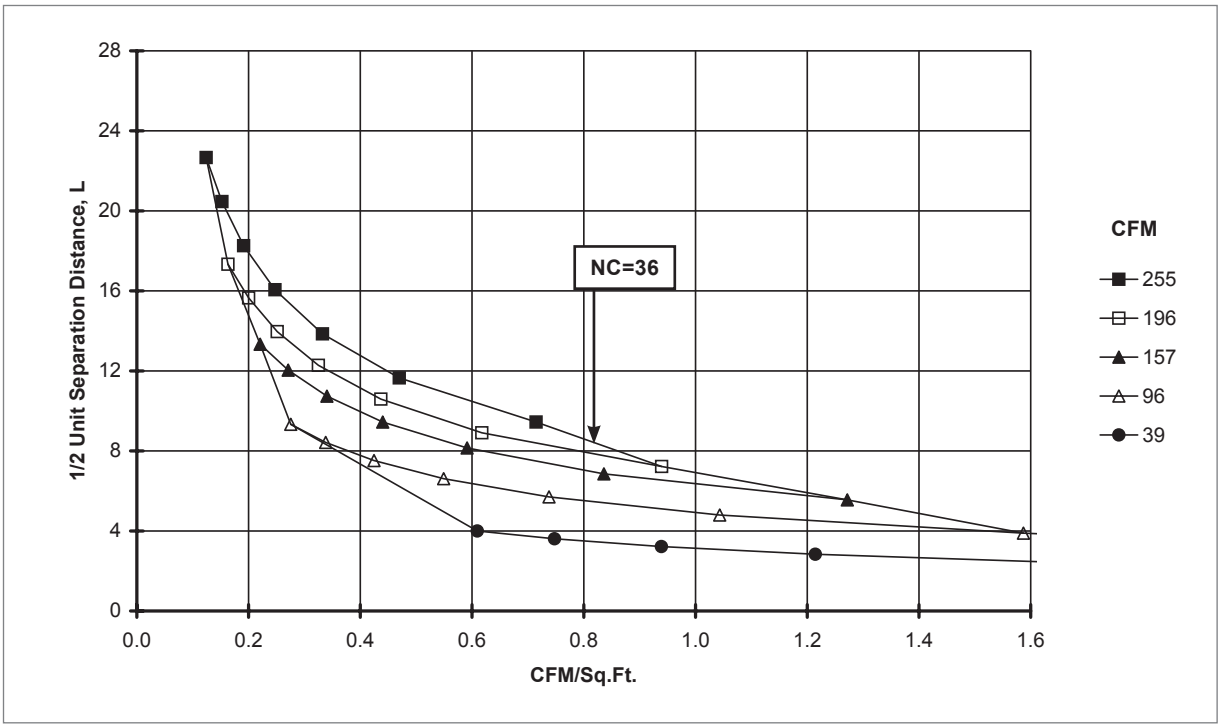


AIRFLOW VS. NC LEVEL: PLQ, 5PLQ, PLQLT, 5PLQLT, 24"x24" PANEL (NO DAMPER)

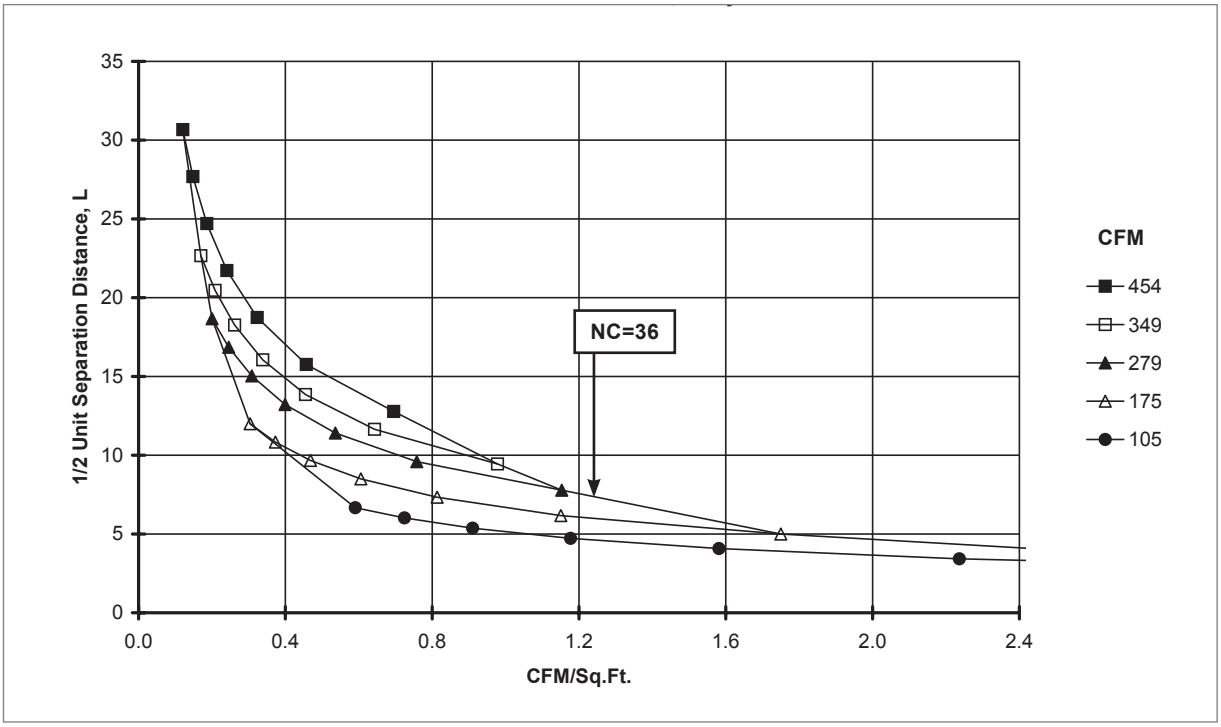


PLQ Reference Charts: Horizontal Throw

DIFFUSER SPACING FOR 80% ADPI: PLQ, 12"x12" PANEL, 6" NECK, 4-WAY (NO DAMPER)



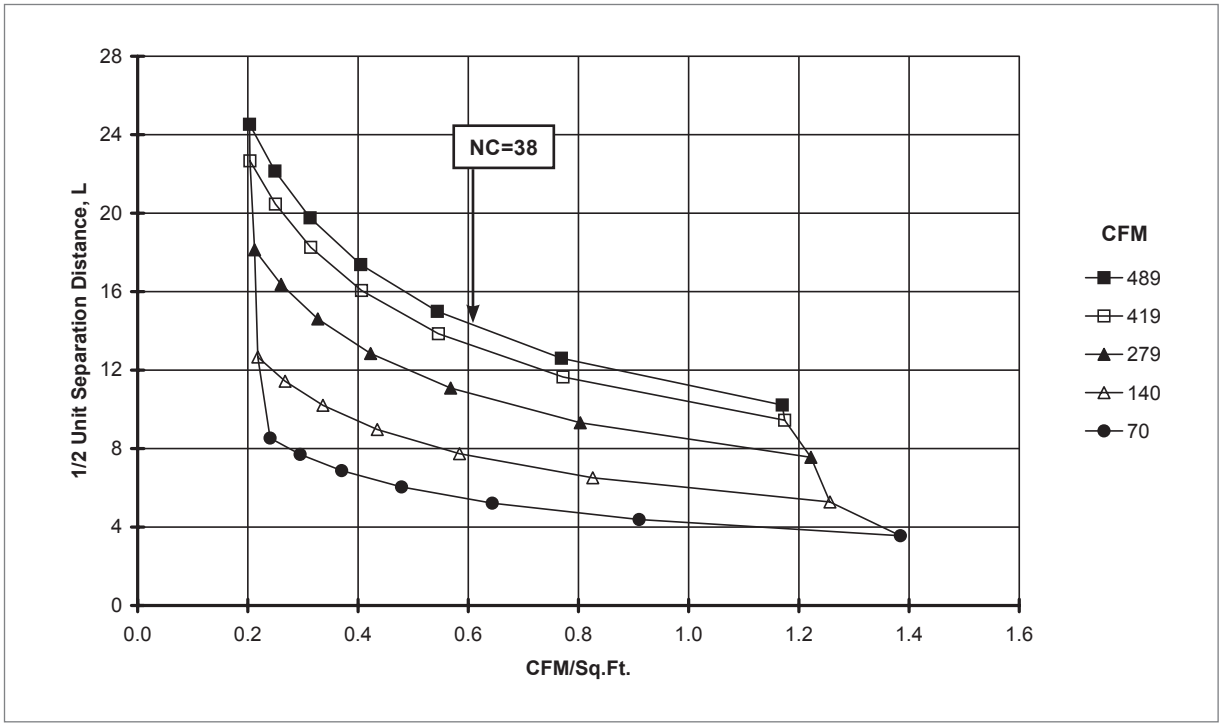
DIFFUSER SPACING FOR 80% ADPI: PLQ, 12"x12" PANEL, 8" NECK, 4-WAY (NO DAMPER)



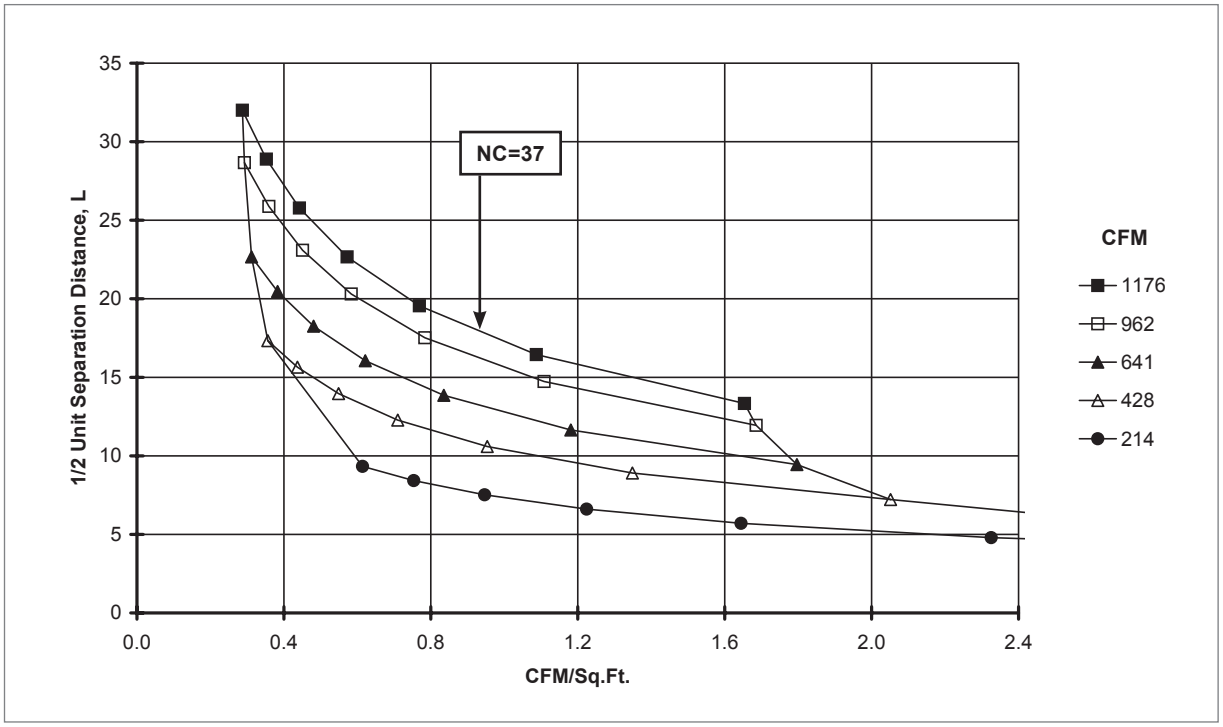
NOTES: Charts are at 20 BTUH/ft² loads. See the Engineering section of this catalog for instructions on how to read these charts and additional ADPI information.

PLQ, 5PLQ, PLQLT, 5PLQLT Reference Charts: Horizontal Throw

DIFFUSER SPACING FOR 80% ADPI: PLQ, 5PLQ, PLQLT, 5PLQLT, 24"x24" PANEL, 8" NECK, 4-WAY (NO DAMPER)



DIFFUSER SPACING FOR 80% ADPI: PLQ, 5PLQ, PLQLT, 5PLQLT, 24"x24" PANEL, 14" NECK, 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.

PLQ Performance Data: Horizontal Throw

IP/METRIC DATA: PLQ, 12"x12" PANEL, ROUND NECK (NO DAMPER)

	IP Data						Metric Data											
	Neck Vel	Air Flow	Ps	Pt	Throw	NC	Neck Vel	Air Flow	Ps	Pt	Throw	Octave Band, dB					
	FPM	CFM	"WG	"WG	ft		m/s	L/s	Pa	Pa	m	2	3	4	5	6	7
6" Dia.	200	39	0.010	.012	1 - 1 - 3	-	1.02	19	2.4	3.0	0.2 - 0.4 - 0.8	-	-	-	-	-	-
	300	59	0.022	.027	1 - 2 - 4	-	1.52	28	5.4	6.8	0.4 - 0.6 - 1.2	-	-	-	-	-	-
	500	98	0.060	.076	2 - 3 - 7	-	2.54	46	15.0	18.9	0.7 - 1.0 - 2.0	-	12	18	16	11	-
	600	118	0.087	.109	3 - 4 - 8	12	3.05	56	21.6	27.2	0.8 - 1.2 - 2.4	13	18	24	22	17	12
	700	137	0.118	.149	3 - 5 - 9	17	3.56	65	29.4	37.0	0.9 - 1.4 - 2.8	18	23	29	27	22	17
	800	157	0.154	.194	3 - 5 - 10	21	4.06	74	38.4	48.4	1.1 - 1.6 - 3.2	22	27	33	31	26	21
	900	177	0.195	.246	4 - 6 - 12	24	4.57	83	48.7	61.2	1.2 - 1.8 - 3.6	25	30	36	34	29	24
	1000	196	0.241	.304	4 - 7 - 13	28	5.08	93	60.1	75.6	1.3 - 2.0 - 4.0	29	34	40	38	33	28
	1100	216	0.292	.367	5 - 7 - 14	30	5.59	102	72.7	91.5	1.5 - 2.2 - 4.4	31	36	42	40	35	30
7" Dia.	200	53	0.012	.015	1 - 2 - 3	-	1.02	25	3.0	3.6	0.3 - 0.5 - 0.9	-	-	-	-	-	-
	300	80	0.027	.033	2 - 2 - 5	-	1.52	38	6.8	8.2	0.5 - 0.7 - 1.4	-	-	-	-	-	-
	500	134	0.076	.091	3 - 4 - 8	-	2.54	63	18.8	22.7	0.8 - 1.2 - 2.3	-	12	18	16	11	-
	600	160	0.109	.131	3 - 5 - 9	12	3.05	76	27.1	32.7	0.9 - 1.4 - 2.8	13	18	24	22	17	12
	700	187	0.148	.179	4 - 5 - 11	17	3.56	88	36.9	44.5	1.1 - 1.6 - 3.2	18	23	29	27	22	17
	800	214	0.193	.233	4 - 6 - 12	21	4.06	101	48.1	58.1	1.2 - 1.8 - 3.7	22	27	33	31	26	21
	900	241	0.245	.295	5 - 7 - 14	24	4.57	114	60.9	73.5	1.4 - 2.1 - 4.2	25	30	36	34	29	24
	1000	267	0.302	.364	5 - 8 - 15	28	5.08	126	75.2	90.7	1.5 - 2.3 - 4.6	29	34	40	38	33	28
	1100	294	0.365	.441	6 - 8 - 17	31	5.59	139	91.0	109.8	1.7 - 2.5 - 5.1	32	37	43	41	36	31
8" Dia.	200	70	0.015	.017	1 - 2 - 3	-	1.02	33	3.7	4.3	0.3 - 0.5 - 1.1	-	-	-	-	-	-
	300	105	0.034	.039	2 - 3 - 5	-	1.52	49	8.3	9.7	0.5 - 0.8 - 1.6	-	-	-	-	-	-
	500	175	0.093	.109	3 - 4 - 9	-	2.54	82	23.2	27.0	0.9 - 1.3 - 2.6	-	13	19	17	12	-
	600	209	0.134	.156	3 - 5 - 10	12	3.05	99	33.4	39.0	1.1 - 1.6 - 3.2	13	18	24	22	17	12
	700	244	0.182	.213	4 - 6 - 12	17	3.56	115	45.4	53.0	1.2 - 1.8 - 3.7	18	23	29	27	22	17
	800	279	0.238	.278	5 - 7 - 14	21	4.06	132	59.3	69.2	1.4 - 2.1 - 4.2	22	27	33	31	26	21
	900	314	0.301	.352	5 - 8 - 16	24	4.57	148	75.1	87.6	1.6 - 2.4 - 4.8	25	30	36	34	29	24
	1000	349	0.372	.435	6 - 9 - 17	28	5.08	165	92.7	108.2	1.8 - 2.6 - 5.3	29	34	40	38	33	28
	1100	384	0.450	.526	6 - 10 - 19	31	5.59	181	112.1	130.9	1.9 - 2.9 - 5.8	32	37	43	41	36	31

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. Nominal duct is duct width. 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.

PLQ, 5PLQ, PLQLT, 5PLQLT Performance Data: Horizontal Throw

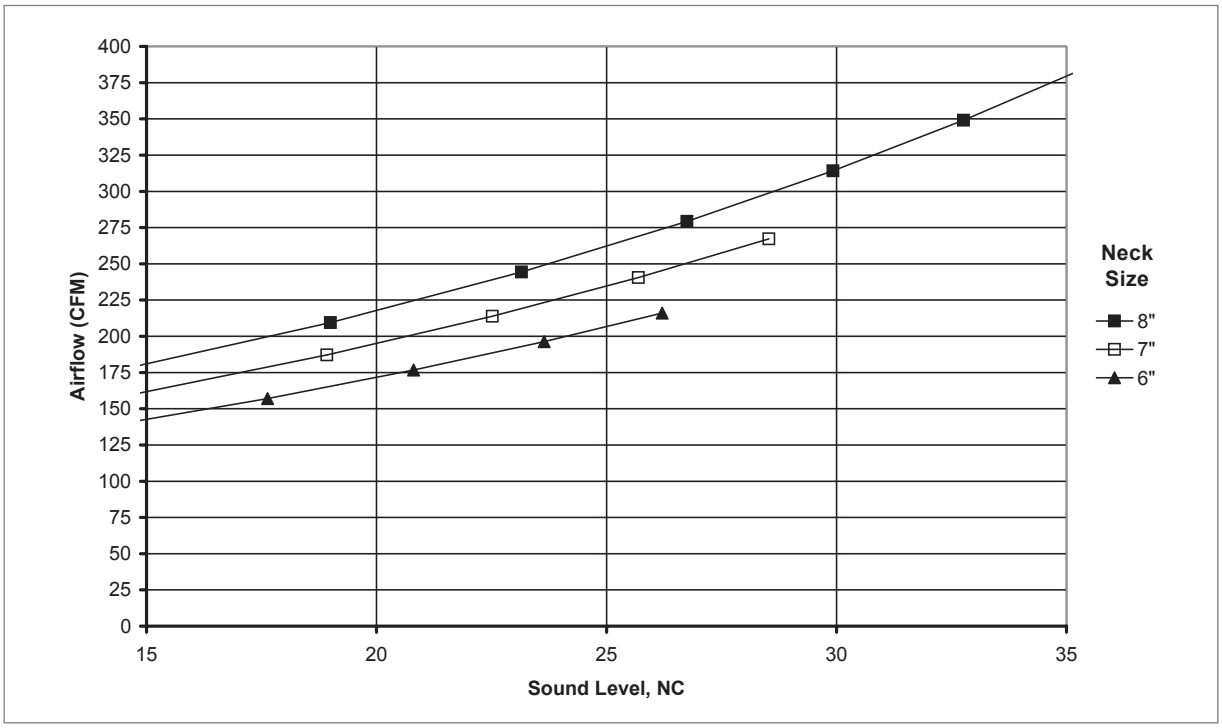
IP/METRIC DATA: PLQ, 5PLQ, PLQLT, 5PLQLT, 24"x24" PANEL, ROUND NECK (NO DAMPER)

	IP Data						Metric Data											
	Neck Vel	Air Flow	Ps	Pt	Throw	NC	Neck Vel	Air Flow	Ps	Pt	Throw	Octave Band, dB					
	FPM	CFM	"WG	"WG	ft		m/s	L/s	Pa	Pa	m	2	3	4	5	6	7
6" Dia.	200	39	0.000	.003	0 - 0 - 1	-	1.02	19	0.1	0.7	0.0 - 0.1 - 0.4	-	-	-	-	-	-
	300	59	0.001	.006	0 - 1 - 3	-	1.52	28	0.2	1.6	0.1 - 0.2 - 0.8	14	-	-	-	-	-
	500	98	0.002	.017	1 - 2 - 4	-	2.54	46	0.4	4.3	0.3 - 0.7 - 1.3	28	21	17	-	-	-
	600	118	0.002	.025	1 - 3 - 5	-	3.05	56	0.6	6.2	0.4 - 0.8 - 1.6	33	27	23	11	-	-
	700	137	0.003	.034	2 - 3 - 6	-	3.56	65	0.8	8.4	0.6 - 0.9 - 1.9	37	31	28	17	-	-
	800	157	0.004	.044	2 - 4 - 7	13	4.06	74	1.1	11.0	0.7 - 1.1 - 2.1	41	35	32	22	11	-
	900	177	0.006	.056	3 - 4 - 8	17	4.57	83	1.4	14.0	0.8 - 1.2 - 2.4	44	39	36	26	16	-
	1000	196	0.007	.069	3 - 4 - 9	21	5.08	93	1.7	17.2	0.9 - 1.3 - 2.7	47	42	40	30	21	-
	1100	216	0.008	.084	3 - 5 - 10	25	5.59	102	2.1	20.8	1.0 - 1.5 - 2.9	49	45	43	33	25	-
8" Dia.	200	70	0.002	.005	0 - 1 - 3	-	1.02	33	0.5	1.1	0.1 - 0.3 - 0.9	-	-	-	-	-	-
	300	105	0.005	.010	1 - 2 - 4	-	1.52	49	1.1	2.5	0.3 - 0.6 - 1.3	19	-	-	-	-	-
	500	175	0.012	.028	2 - 4 - 7	-	2.54	82	3.1	7.0	0.7 - 1.1 - 2.2	33	25	20	-	-	-
	600	209	0.018	.040	3 - 4 - 9	-	3.05	99	4.5	10.1	0.9 - 1.3 - 2.6	38	30	26	15	-	-
	700	244	0.024	.055	3 - 5 - 10	12	3.56	115	6.1	13.7	1.0 - 1.5 - 3.1	42	35	31	21	11	-
	800	279	0.032	.072	4 - 6 - 12	17	4.06	132	8.0	17.9	1.2 - 1.8 - 3.5	46	39	36	26	16	-
	900	314	0.040	.091	4 - 6 - 12	21	4.57	148	10.1	22.7	1.3 - 2.0 - 3.7	49	43	39	30	21	-
	1000	349	0.050	.112	5 - 7 - 13	25	5.08	165	12.4	28.0	1.5 - 2.2 - 3.9	52	46	43	34	26	11
	1100	384	0.060	.136	5 - 8 - 14	29	5.59	181	15.1	33.8	1.6 - 2.4 - 4.1	54	49	46	38	30	16
10" Dia.	200	109	0.004	.007	1 - 2 - 4	-	1.02	51	1.1	1.7	0.2 - 0.5 - 1.3	12	-	-	-	-	-
	300	164	0.009	.015	2 - 3 - 6	-	1.52	77	2.4	3.8	0.5 - 0.9 - 1.9	23	12	-	-	-	-
	500	273	0.026	.042	3 - 5 - 10	-	2.54	129	6.6	10.4	1.0 - 1.6 - 3.1	37	28	23	12	-	-
	600	327	0.038	.060	4 - 6 - 12	-	3.05	154	9.4	15.0	1.3 - 1.9 - 3.8	42	33	29	19	-	-
	700	382	0.052	.082	5 - 7 - 13	15	3.56	180	12.9	20.5	1.5 - 2.2 - 4.1	46	38	34	24	15	-
	800	436	0.067	.107	5 - 8 - 14	20	4.06	206	16.8	26.7	1.7 - 2.5 - 4.4	49	42	38	29	20	-
	900	491	0.085	.136	6 - 9 - 15	24	4.57	232	21.3	33.8	1.9 - 2.8 - 4.6	53	46	42	34	25	12
	1000	545	0.105	.168	7 - 10 - 16	28	5.08	257	26.2	41.8	2.1 - 3.1 - 4.9	55	49	45	37	30	17
	1100	600	0.128	.203	8 - 11 - 17	32	5.59	283	31.8	50.5	2.3 - 3.4 - 5.1	58	52	49	41	34	22
12" Dia.	200	157	0.007	.009	1 - 3 - 5	-	1.02	74	1.7	2.3	0.3 - 0.8 - 1.6	15	-	-	-	-	-
	300	236	0.016	.021	3 - 4 - 8	-	1.52	111	3.9	5.3	0.8 - 1.2 - 2.5	26	14	-	-	-	-
	500	393	0.043	.059	4 - 7 - 13	-	2.54	185	10.8	14.7	1.4 - 2.1 - 4.1	40	30	25	15	-	-
	600	471	0.062	.085	5 - 8 - 15	12	3.05	222	15.5	21.1	1.6 - 2.5 - 4.6	45	36	31	21	11	-
	700	550	0.085	.115	6 - 9 - 16	18	3.56	259	21.1	28.7	1.9 - 2.9 - 4.9	49	40	36	27	18	-
	800	628	0.111	.151	7 - 11 - 17	23	4.06	297	27.6	37.5	2.2 - 3.3 - 5.3	53	44	40	32	23	12
	900	707	0.140	.191	8 - 12 - 18	27	4.57	334	34.9	47.5	2.5 - 3.7 - 5.6	56	48	44	36	28	17
	1000	785	0.173	.236	9 - 13 - 19	31	5.08	371	43.1	58.6	2.7 - 4.1 - 5.9	59	51	47	40	33	22
	1100	864	0.210	.285	10 - 14 - 20	34	5.59	408	52.2	71.0	3.0 - 4.4 - 6.2	61	54	51	44	37	26
14" Dia.	200	214	0.010	.013	2 - 3 - 7	-	1.02	101	2.5	3.1	0.5 - 1.0 - 2.0	18	-	-	-	-	-
	300	321	0.023	.028	3 - 5 - 10	-	1.52	151	5.7	7.1	1.0 - 1.5 - 3.1	29	16	-	-	-	-
	500	535	0.063	.079	6 - 8 - 16	-	2.54	252	15.8	19.6	1.7 - 2.5 - 4.9	42	32	26	17	-	-
	600	641	0.091	.114	7 - 10 - 17	14	3.05	303	22.7	28.3	2.0 - 3.1 - 5.3	47	38	32	24	14	-
	700	748	0.124	.155	8 - 12 - 19	20	3.56	353	30.9	38.5	2.4 - 3.6 - 5.7	52	42	37	29	20	-
	800	855	0.162	.202	9 - 13 - 20	25	4.06	404	40.4	50.3	2.7 - 4.1 - 6.1	55	46	42	34	26	16
	900	962	0.205	.256	10 - 15 - 21	29	4.57	454	51.1	63.7	3.1 - 4.6 - 6.5	58	50	46	39	31	21
	1000	1069	0.253	.316	11 - 16 - 23	33	5.08	505	63.1	78.6	3.4 - 4.9 - 6.9	61	53	49	43	35	26
	1100	1176	0.306	.382	12 - 17 - 24	37	5.59	555	76.3	95.1	3.7 - 5.1 - 7.2	64	56	52	46	39	30
15" Dia.	200	245	0.012	.014	2 - 4 - 7	-	1.02	116	3.0	3.6	0.6 - 1.1 - 2.2	19	-	-	-	-	-
	300	368	0.027	.032	4 - 6 - 11	-	1.52	174	6.7	8.1	1.1 - 1.7 - 3.4	30	17	-	-	-	-
	500	614	0.074	.090	6 - 9 - 17	-	2.54	290	18.5	22.4	1.9 - 2.8 - 5.2	44	33	27	18	-	-
	600	736	0.107	.130	7 - 11 - 19	15	3.05	347	26.7	32.3	2.2 - 3.4 - 5.7	49	38	33	25	15	-
	700	859	0.146	.177	9 - 13 - 20	21	3.56	405	36.4	44.0	2.6 - 3.9 - 6.1	53	43	38	30	22	11
	800	982	0.191	.231	10 - 15 - 22	26	4.06	463	47.5	57.4	3.0 - 4.5 - 6.6	56	47	43	35	27	17
	900	1104	0.241	.292	11 - 16 - 23	30	4.57	521	60.1	72.7	3.4 - 4.9 - 7.0	59	51	47	40	32	23
	1000	1227	0.298	.360	12 - 17 - 24	34	5.08	579	74.2	89.7	3.7 - 5.2 - 7.3	62	54	50	44	37	28
	1100	1350	0.361	.436	14 - 18 - 25	38	5.59	637	89.8	108.6	4.1 - 5.5 - 7.7	65	57	53	47	41	32

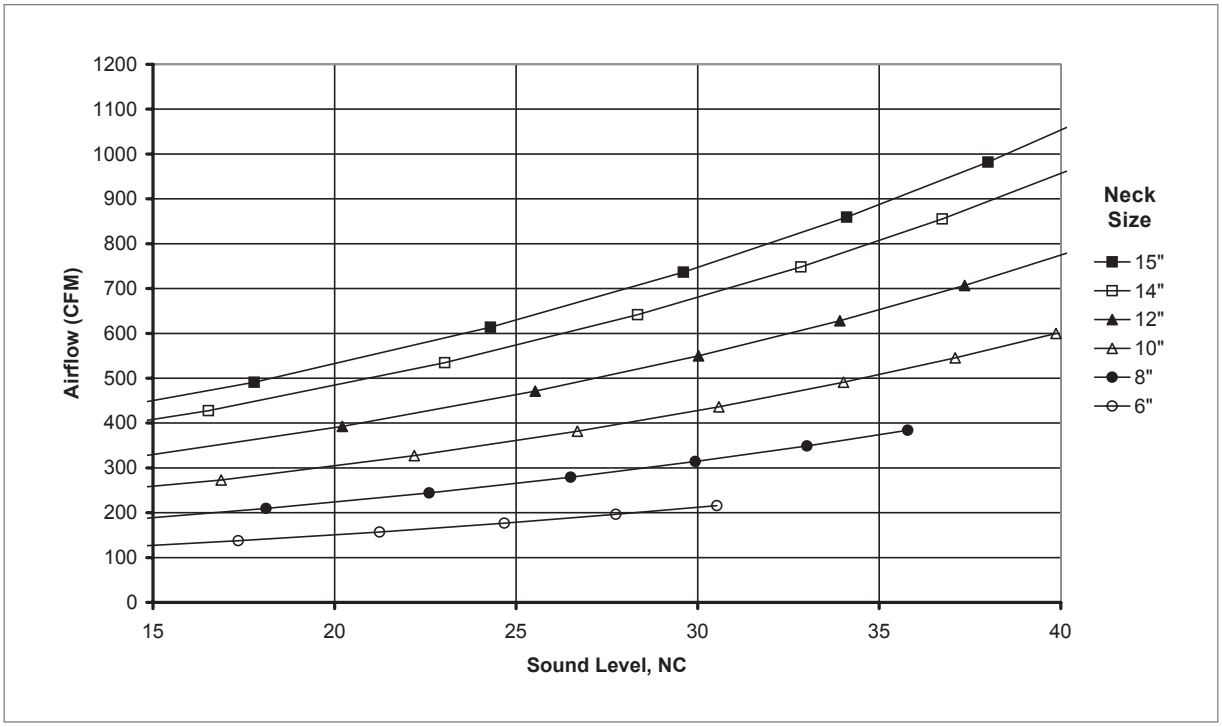
NOTES: Throw values are given for isothermal conditions and terminal velocities of 150, 100, and 50 FPM (0.75, 0.50, and 0.25 m/s). NC values are based on octave band 2 - 7 sound power levels minus a room absorption of 10dB, re 10^{-12} Watts. Dash in space denotes a NC or dB value of less than 10. Nominal duct is duct width. 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.

PLQR Reference Charts

AIRFLOW VS. NC LEVEL: PLQR, 12"x12" PANEL (NO DAMPER)

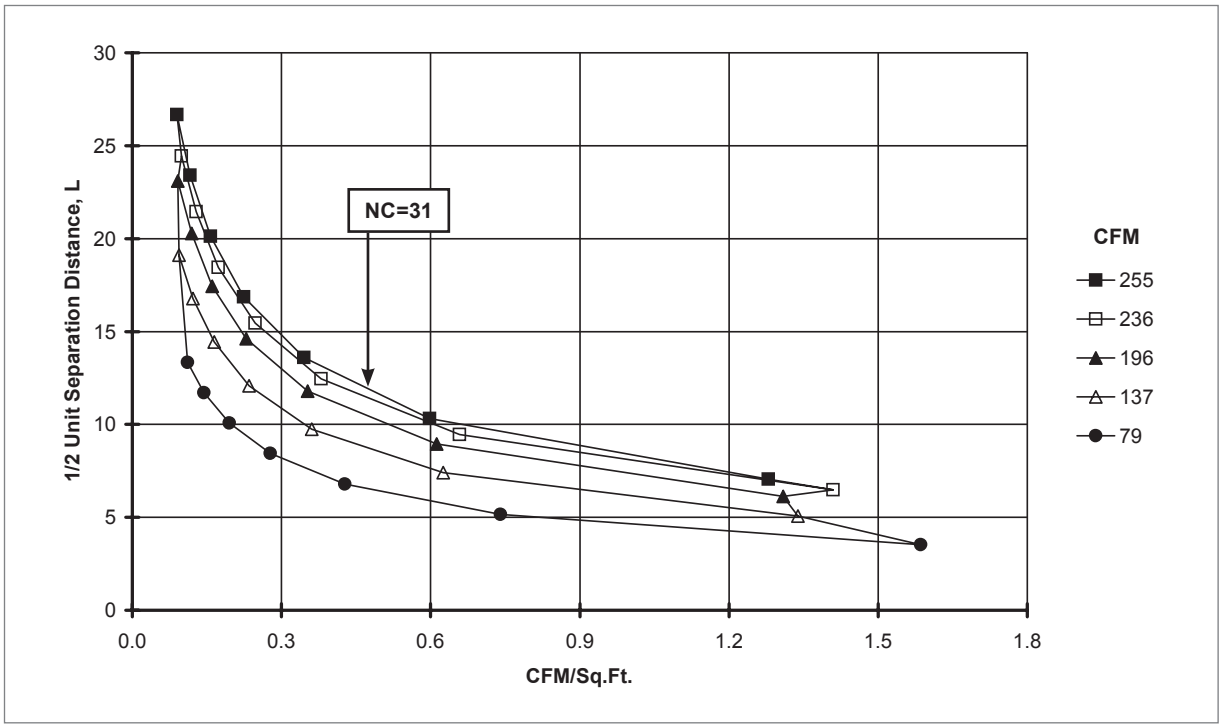


AIRFLOW VS. NC LEVEL: PLQR, 24"x24" PANEL (NO DAMPER)

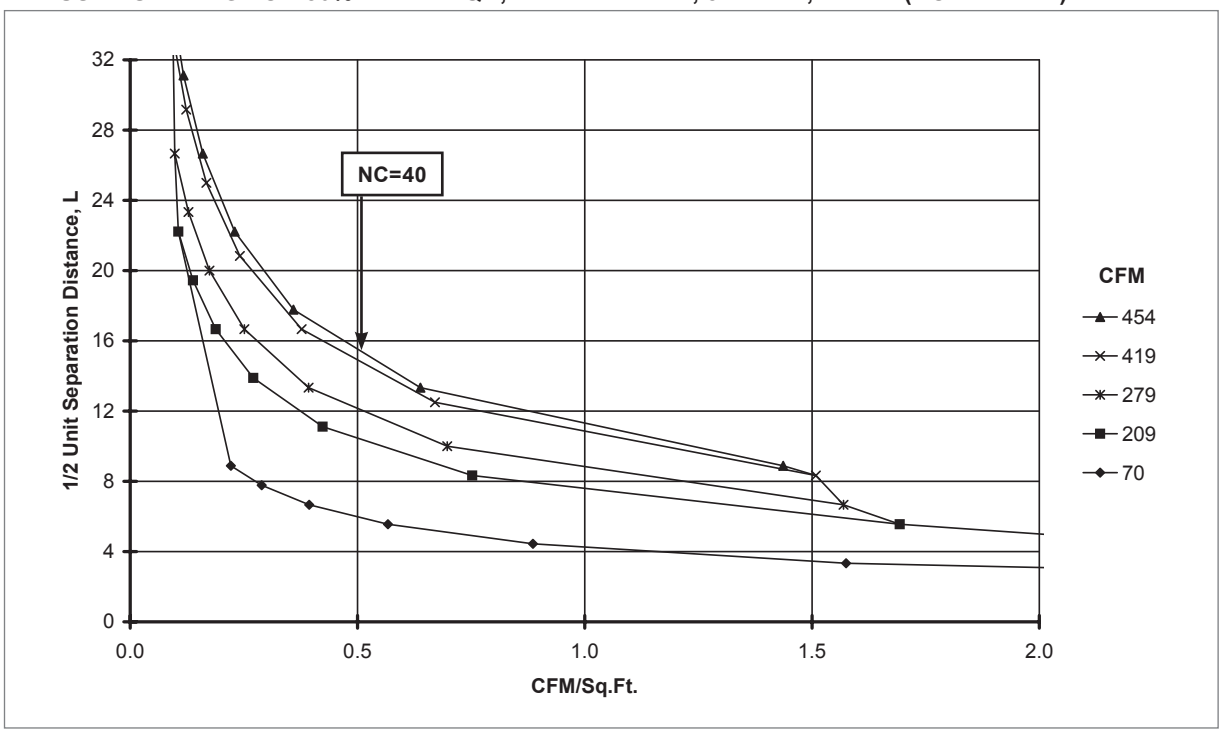


PLQR Reference Charts: Horizontal Throw

DIFFUSER SPACING FOR 80% ADPI: PLQR, 12"x12" PANEL, 6" NECK, 4-WAY (NO DAMPER)



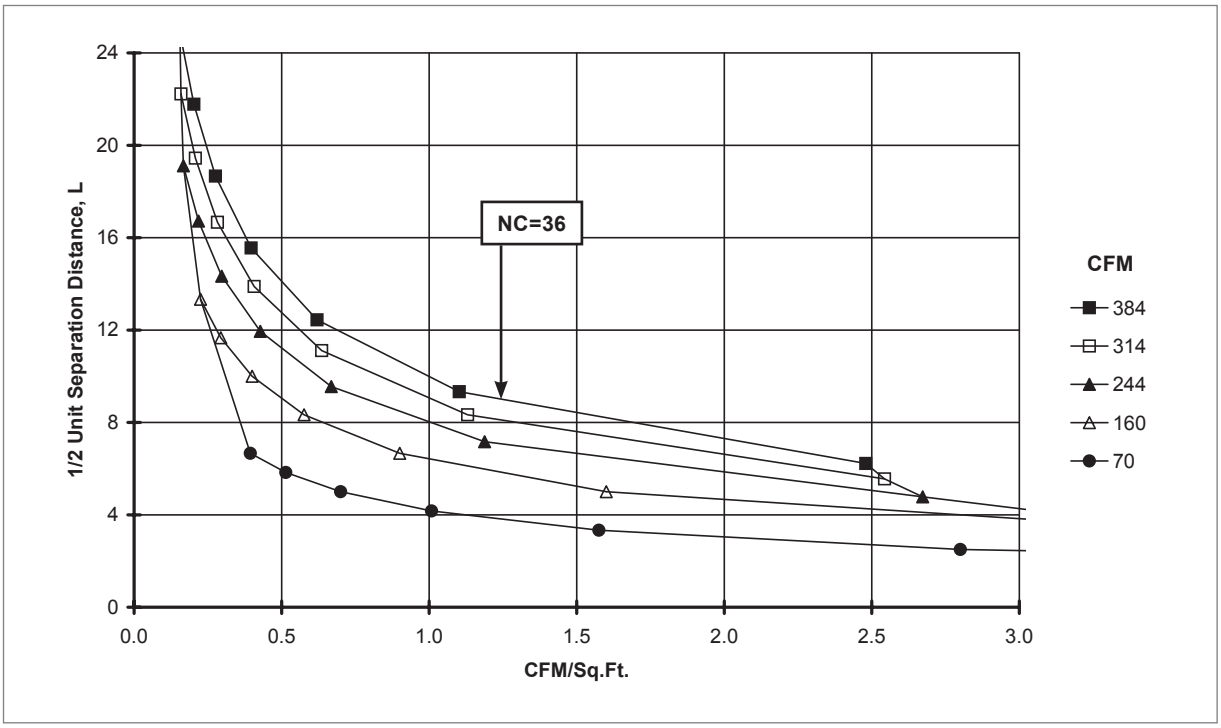
DIFFUSER SPACING FOR 80% ADPI: PLQR, 12"x12" PANEL, 8" NECK, 4-WAY (NO DAMPER)



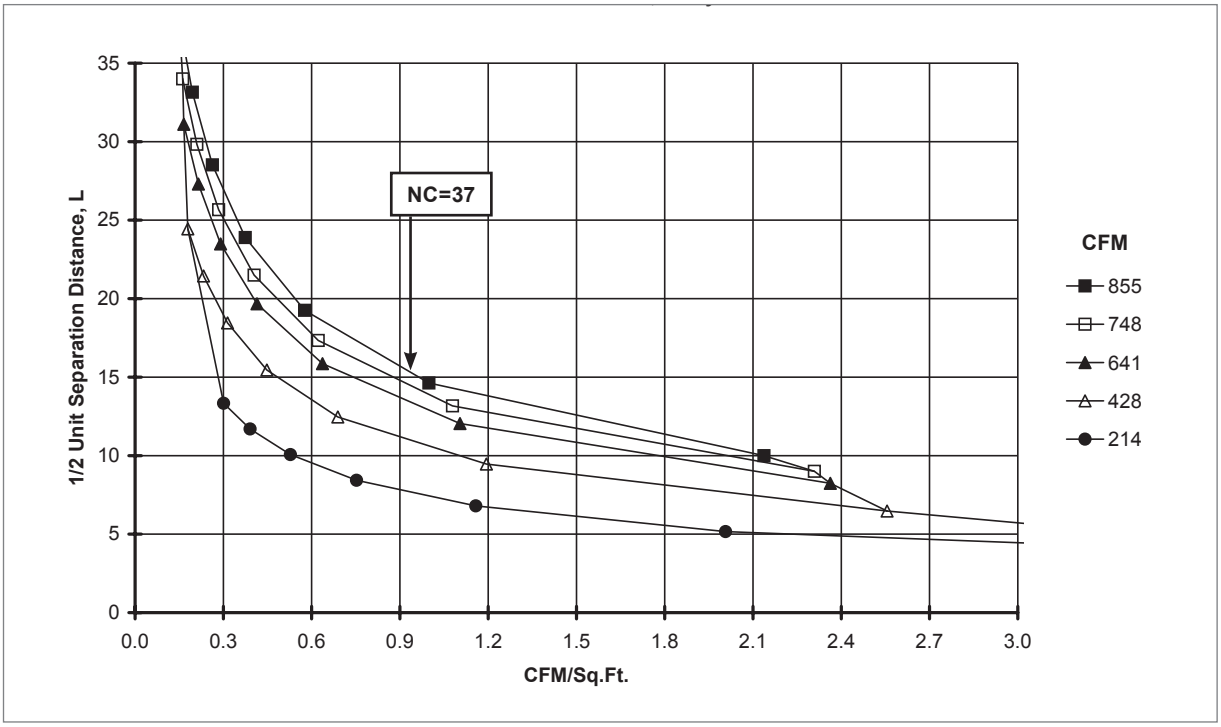
NOTES: Charts are at 20 BTUH/ft² loads. See the Engineering section of this catalog for instructions on how to read these charts and additional ADPI information.

PLQR Reference Charts: Horizontal Throw

DIFFUSER SPACING FOR 80% ADPI: PLQR, 24"x24" PANEL, 8" NECK, 4-WAY (NO DAMPER)



DIFFUSER SPACING FOR 80% ADPI: PLQR, 24"x24" PANEL, 14" NECK, 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.

PLQR Performance Data: Horizontal Throw

IP/METRIC DATA: PLQR, 12"x12" PANEL, ROUND NECK (NO DAMPER)

	IP Data						Metric Data											
	Neck Vel	Air Flow	Ps	Pt	Throw	NC	Neck Vel	Air Flow	Ps	Pt	Throw	Octave Band, dB					
	FPM	CFM	"WG	"WG	ft		m/s	L/s	Pa	Pa	m	2	3	4	5	6	7
6" Dia.	200	39	0.004	.006	0 - 1 - 3	-	1.02	19	0.9	1.5	0.1 - 0.3 - 0.8	20	-	-	-	-	-
	300	59	0.008	.014	1 - 2 - 4	-	1.52	28	2.1	3.5	0.3 - 0.6 - 1.3	26	17	12	-	-	-
	500	98	0.023	.039	2 - 3 - 7	-	2.54	46	5.8	9.7	0.7 - 1.1 - 2.1	33	28	24	16	-	-
	600	118	0.033	.056	3 - 4 - 8	-	3.05	56	8.3	13.9	0.8 - 1.3 - 2.4	36	31	28	20	11	-
	700	137	0.046	.076	3 - 5 - 9	**14**	3.56	65	11.3	18.9	1.0 - 1.5 - 2.6	38	35	31	24	17	-
	800	157	0.059	.099	4 - 6 - 9	**18**	4.06	74	14.8	24.7	1.1 - 1.7 - 2.8	40	37	35	28	21	13
	900	177	0.075	.126	4 - 6 - 10	**21**	4.57	83	18.7	31.3	1.3 - 1.9 - 2.9	42	40	37	31	25	17
	1000	196	0.093	.155	5 - 7 - 10	**24**	5.08	93	23.1	38.7	1.4 - 2.1 - 3.1	44	42	40	34	29	21
	1100	216	0.112	.188	5 - 8 - 11	**26**	5.59	102	28.0	46.8	1.5 - 2.3 - 3.3	45	44	42	36	32	24
7" Dia.	200	53	0.008	.010	1 - 1 - 3	-	1.02	25	1.9	2.5	0.2 - 0.4 - 1.0	22	12	-	-	-	-
	300	80	0.017	.023	1 - 2 - 5	-	1.52	38	4.3	5.7	0.4 - 0.7 - 1.5	28	20	16	-	-	-
	500	134	0.048	.064	3 - 4 - 8	-	2.54	63	12.0	15.9	0.8 - 1.2 - 2.5	36	31	28	21	12	-
	600	160	0.069	.092	3 - 5 - 9	**15**	3.05	76	17.2	22.8	1.0 - 1.5 - 2.8	38	34	32	26	18	-
	700	187	0.094	.125	4 - 6 - 10	**19**	3.56	88	23.5	31.1	1.1 - 1.7 - 3.0	41	38	35	30	23	16
	800	214	0.123	.163	4 - 6 - 11	**23**	4.06	101	30.7	40.6	1.3 - 2.0 - 3.2	43	40	38	33	28	20
	900	241	0.156	.206	5 - 7 - 11	**26**	4.57	114	38.8	51.4	1.5 - 2.2 - 3.4	44	43	41	36	32	25
	1000	267	0.192	.255	5 - 8 - 12	**29**	5.08	126	47.9	63.4	1.6 - 2.5 - 3.6	46	45	43	39	35	28
	1100	294	0.233	.308	6 - 9 - 13	**31**	5.59	139	58.0	76.7	1.8 - 2.7 - 3.8	47	47	46	42	39	32
8" Dia.	200	70	0.012	.015	1 - 1 - 4	-	1.02	33	3.1	3.7	0.2 - 0.4 - 1.1	24	14	-	-	-	-
	300	105	0.028	.033	1 - 3 - 6	-	1.52	49	6.9	8.3	0.4 - 0.8 - 1.7	30	23	19	12	-	-
	500	175	0.077	.092	3 - 5 - 9	**14**	2.54	82	19.1	23.0	0.9 - 1.4 - 2.8	38	33	31	25	17	-
	600	209	0.111	.133	4 - 6 - 11	**19**	3.05	99	27.5	33.1	1.1 - 1.7 - 3.2	40	37	35	30	24	17
	700	244	0.150	.181	4 - 6 - 11	**23**	3.56	115	37.5	45.1	1.3 - 2.0 - 3.5	43	40	39	34	29	22
	800	279	0.197	.236	5 - 7 - 12	**27**	4.06	132	48.9	58.9	1.5 - 2.3 - 3.7	45	43	42	38	33	27
	900	314	0.249	.299	6 - 8 - 13	**30**	4.57	148	61.9	74.5	1.7 - 2.5 - 3.9	46	45	44	41	37	31
	1000	349	0.307	.369	6 - 9 - 14	**33**	5.08	165	76.5	92.0	1.9 - 2.8 - 4.1	48	48	47	43	41	35
	1100	384	0.372	.447	7 - 10 - 14	**35**	5.59	181	92.5	111.3	2.1 - 3.1 - 4.3	49	50	49	46	44	38

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. Nominal duct is duct width. 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.

PLQR Performance Data: Horizontal Throw

IP/METRIC DATA: PLQR, 24"x24" PANEL, ROUND NECK (NO DAMPER)

	IP Data						Metric Data											
	Neck Vel	Air Flow	Ps	Pt	Throw	NC	Neck Vel	Air Flow	Ps	Pt	Throw	Octave Band, dB					
	FPM	CFM	"WG	"WG	ft		m/s	L/s	Pa	Pa	m	2	3	4	5	6	7
6" Dia.	200	39	0.000	.003	0 - 0 - 2	-	1.02	19	0.1	0.7	0.1 - 0.1 - 0.5	23	14	-	-	-	-
	300	59	0.001	.006	0 - 1 - 2	-	1.52	28	0.2	1.6	0.1 - 0.3 - 0.7	29	21	13	-	-	-
	500	98	0.002	.017	1 - 2 - 4	-	2.54	46	0.4	4.3	0.4 - 0.6 - 1.2	36	31	26	14	-	-
	600	118	0.002	.025	2 - 2 - 5	13	3.05	56	0.6	6.2	0.5 - 0.7 - 1.5	39	35	30	20	-	-
	700	137	0.003	.034	2 - 3 - 6	17	3.56	65	0.8	8.4	0.6 - 0.9 - 1.7	41	38	34	25	12	-
	800	157	0.004	.044	2 - 3 - 7	21	4.06	74	1.1	11.0	0.7 - 1.0 - 2.0	43	40	38	29	17	-
	900	177	0.006	.056	2 - 4 - 7	25	4.57	83	1.4	14.0	0.7 - 1.1 - 2.2	45	42	41	33	22	14
	1000	196	0.007	.069	3 - 4 - 8	28	5.08	93	1.7	17.2	0.8 - 1.2 - 2.4	46	44	43	36	25	17
	1100	216	0.008	.084	3 - 4 - 8	31	5.59	102	2.1	20.8	0.9 - 1.4 - 2.5	48	46	46	39	29	20
8" Dia.	200	70	0.002	.005	0 - 1 - 3	-	1.02	33	0.5	1.1	0.1 - 0.3 - 0.8	25	17	-	-	-	-
	300	105	0.005	.010	1 - 2 - 4	-	1.52	49	1.1	2.5	0.3 - 0.6 - 1.2	31	25	17	-	-	-
	500	175	0.012	.028	2 - 3 - 7	13	2.54	82	3.1	7.0	0.7 - 1.0 - 2.0	39	35	30	20	-	-
	600	209	0.018	.040	3 - 4 - 8	18	3.05	99	4.5	10.1	0.8 - 1.2 - 2.4	42	38	35	26	14	-
	700	244	0.024	.055	3 - 5 - 9	23	3.56	115	6.1	13.7	0.9 - 1.4 - 2.7	44	41	39	31	20	12
	800	279	0.032	.072	4 - 5 - 9	27	4.06	132	8.0	17.9	1.1 - 1.6 - 2.9	46	44	42	35	25	16
	900	314	0.040	.091	4 - 6 - 10	30	4.57	148	10.1	22.7	1.2 - 1.8 - 3.0	48	46	45	39	29	20
	1000	349	0.050	.112	4 - 7 - 11	33	5.08	165	12.4	28.0	1.3 - 2.0 - 3.2	49	48	48	42	33	24
	1100	384	0.060	.136	5 - 7 - 11	36	5.59	181	15.1	33.8	1.5 - 2.2 - 3.4	50	50	50	45	36	27
10" Dia.	200	109	0.004	.007	1 - 2 - 4	-	1.02	51	1.1	1.7	0.2 - 0.5 - 1.1	28	20	-	-	-	-
	300	164	0.009	.015	2 - 3 - 6	-	1.52	77	2.4	3.8	0.5 - 0.8 - 1.7	33	28	21	-	-	-
	500	273	0.026	.042	3 - 5 - 9	17	2.54	129	6.6	10.4	0.9 - 1.4 - 2.8	41	37	34	25	13	-
	600	327	0.038	.060	4 - 6 - 10	22	3.05	154	9.4	15.0	1.1 - 1.7 - 3.1	44	41	38	30	20	12
	700	382	0.052	.082	4 - 6 - 11	27	3.56	180	12.9	20.5	1.3 - 2.0 - 3.4	46	44	42	35	25	17
	800	436	0.067	.107	5 - 7 - 12	31	4.06	206	16.8	26.7	1.5 - 2.3 - 3.6	48	46	46	40	30	22
	900	491	0.085	.136	6 - 8 - 13	34	4.57	232	21.3	33.8	1.7 - 2.5 - 3.8	50	49	49	43	35	25
	1000	545	0.105	.168	6 - 9 - 13	37	5.08	257	26.2	41.8	1.9 - 2.8 - 4.0	51	51	51	47	38	29
	1100	600	0.128	.203	7 - 10 - 14	40	5.59	283	31.8	50.5	2.1 - 3.0 - 4.2	53	53	54	50	42	32
12" Dia.	200	157	0.007	.009	1 - 2 - 5	-	1.02	74	1.7	2.3	0.4 - 0.7 - 1.5	29	22	13	-	-	-
	300	236	0.016	.021	2 - 4 - 7	-	1.52	111	3.9	5.3	0.7 - 1.1 - 2.2	35	30	23	12	-	-
	400	314	0.028	.038	3 - 5 - 10	14	2.03	148	6.9	9.4	1.0 - 1.5 - 2.9	39	35	31	21	-	-
	500	393	0.043	.059	4 - 6 - 11	20	2.54	185	10.8	14.7	1.2 - 1.8 - 3.4	43	40	36	28	18	11
	600	471	0.062	.085	5 - 7 - 12	26	3.05	222	15.5	21.1	1.5 - 2.2 - 3.7	45	43	41	34	25	16
	700	550	0.085	.115	6 - 8 - 13	30	3.56	259	21.1	28.7	1.7 - 2.6 - 4.0	48	46	45	39	30	21
	800	628	0.111	.151	6 - 10 - 14	34	4.06	297	27.6	37.5	2.0 - 2.9 - 4.3	50	49	48	43	35	26
	900	707	0.140	.191	7 - 11 - 15	37	4.57	334	34.9	47.5	2.2 - 3.2 - 4.6	51	51	51	47	39	29
	1000	785	0.173	.236	8 - 11 - 16	40	5.08	371	43.1	58.6	2.4 - 3.4 - 4.8	53	53	54	50	43	33
14" Dia.	200	214	0.010	.013	2 - 3 - 6	-	1.02	101	2.5	3.1	0.5 - 0.9 - 1.8	31	24	15	-	-	-
	300	321	0.023	.028	3 - 4 - 9	-	1.52	151	5.7	7.1	0.9 - 1.4 - 2.7	37	32	26	15	-	-
	400	428	0.041	.051	4 - 6 - 12	17	2.03	202	10.1	12.6	1.2 - 1.8 - 3.5	41	37	33	25	14	-
	500	535	0.063	.079	5 - 7 - 13	23	2.54	252	15.8	19.6	1.5 - 2.3 - 4.0	44	42	39	32	22	14
	600	641	0.091	.114	6 - 9 - 14	28	3.05	303	22.7	28.3	1.8 - 2.7 - 4.3	47	45	43	37	29	20
	700	748	0.124	.155	7 - 10 - 15	33	3.56	353	30.9	38.5	2.1 - 3.2 - 4.7	49	48	47	42	34	25
	800	855	0.162	.202	8 - 12 - 17	37	4.06	404	40.4	50.3	2.4 - 3.5 - 5.0	51	51	51	46	39	29
	900	962	0.205	.256	9 - 12 - 18	40	4.57	454	51.1	63.7	2.7 - 3.8 - 5.3	53	53	54	50	43	33
	1000	1069	0.253	.316	10 - 13 - 18	43	5.08	505	63.1	78.6	3.0 - 4.0 - 5.6	54	55	56	53	47	36
15" Dia.	200	245	0.012	.014	2 - 3 - 7	-	1.02	116	3.0	3.6	0.6 - 1.0 - 2.0	31	25	16	-	-	-
	300	368	0.027	.032	3 - 5 - 10	-	1.52	174	6.7	8.1	1.0 - 1.5 - 3.0	37	33	27	17	-	-
	400	491	0.048	.058	4 - 7 - 13	18	2.03	232	11.9	14.4	1.3 - 2.0 - 3.8	41	38	34	26	16	-
	500	614	0.074	.090	5 - 8 - 14	24	2.54	290	18.5	22.4	1.6 - 2.5 - 4.3	45	42	40	33	24	16
	600	736	0.107	.130	7 - 10 - 15	30	3.05	347	26.7	32.3	2.0 - 3.0 - 4.7	47	46	44	39	30	22
	700	859	0.146	.177	8 - 11 - 17	34	3.56	405	36.4	44.0	2.3 - 3.5 - 5.0	50	49	48	44	36	26
	800	982	0.191	.231	9 - 13 - 18	38	4.06	463	47.5	57.4	2.6 - 3.8 - 5.4	52	51	52	48	41	31
	900	1104	0.241	.292	10 - 13 - 19	41	4.57	521	60.1	72.7	3.0 - 4.0 - 5.7	53	54	55	52	45	34
	1000	1227	0.298	.360	11 - 14 - 20	45	5.08	579	74.2	89.7	3.3 - 4.3 - 6.0	55	56	57	55	49	38

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. Nominal duct is duct width. 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.

PLQ, PLQR Suggested Specification & Configuration

PLQ

The architectural square panel ceiling diffusers of the sizes and mounting types shown on the plans or outlet schedule shall be the Krueger model PLQ. The PLQ shall have a one piece square face plaque not exceeding 18”x18” for 24”x24” panel sizes, 14”x14” for 20”x20” panel sizes, and 9”x9” for 12”x12” panel sizes and constructed of 16 gage steel with rounded corners that have a minimum radius of 3/4”. Face plaques that have a secondary wrapper are not acceptable. The face plaque shall not extend below the ceiling more than 3/8” and shall be removable from the backpan for access to the optional damper. The diffuser backpan shall be one piece stamped construction of 22 gage steel and have an integrally drawn round neck.

PLQR

The architectural square panel ceiling diffusers of the sizes and mounting types shown on the plans or outlet schedule shall be the Krueger model PLQR. The PLQR shall have a one piece round face plaque not exceeding 20” diameter for 24”x24” panel sizes and 10” diameter for 12”x12” panel sizes and constructed of 16 gage steel. The face plaque shall not extend below the ceiling more than 3/8” and shall be removable from the backpan for access to the optional damper. Diffusers must discharge in the horizontal plane of the room. The diffuser backpan shall be one piece stamped construction of 22 gage steel and have an integrally drawn round neck.

Optional duct or neck mounted round damper shall be constructed of heavy gage steel. Damper shall be operable from the face of the diffuser.

Optional directional blow tabs shall be constructed of heavy gage steel and offered to provide 1-way, 2-way and 3-way throw patterns.

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)**
   PLQ - Square, Steel Plaque-Style Ceiling Diffuser
   PLQR - Round, Steel Plaque-Style Ceiling Diffuser

2. **NECK: (XX)**
   6”
   7” *
   8”
   10” **
   12” **
   14” **
   15” **

3. **FRAME: (XXX)**
   F22 - Surface Mount
   F23 - Lay-in T-Bar
   F24 - Snap-in T-Bar
   F98 - Narrow-T **

4. **PANEL: (XX)x(XX)**
   12”x12”
   20”x20” †
   24”x24”

5. **DAMPERS: (XX)**
   00 - No Damper
   03 - PR10
   04 - PRD10
   06 - PR12
   08 - PRN100

6. **ACCESSORIES: (XX)**
   00 - No Accessories
   IB - Insulated Blanket***
   R - Round Straightening Grid
   R6 - Molded Insulation***

7. **FINISH: (XX)**
   01 - Mill
   10 - Alumican
   35 - Black
   44 - British White
   49 - Off White

* *Available with 12”x12” panel only.*
** *Available with 24”x24” panel only.*
*** *24” x 24” Panel with 6”, 8”, 10”, or 12” neck dimensions only.*
† *20”x20” panel only available with PLQ.*

SAMPLE CONFIGURATION: PLQR - 10 - F23 - 24x24 - 00 - 00 - 44

5PLQ, PLQLT, 5PLQLT Suggested Specification & Configuration

1. **SERIES: (XXXXX)**
   5PLQ - Square, Aluminum Plaque-Style Ceiling Diffuser
   PLQLT - Square Plaque-Style Ceiling Diffuser with R-6 Rigid Fiberglass Insulated Backpan and 3/8" Cellular Insulated Plaque Face

2. **NECK: (XX)**
   6"
   8"
   10"
   12"
   14"
   15"

3. **FRAME STYLE: (XXX)**
   F22 - Surface Mount
   F23 - Lay-in T-Bar
   F98 - Narrow-T

4. **PANEL: (XX)x(XX)**
   24"x24"

5. **DAMPER: (XX)**
   00 - No Damper
   03 - PR10
   04 - PRD10 *
   06 - PR12 *
   08 - PRN100

6. **ACCESSORIES: (XX)**
   00 - No Accessories
   IB - Insulated Blanket**
   R - Round Straightening Grid
   R6 - Molded Insulation**

7. **FINISH: (XX)**
   01 - Mill
   10 - Alumican
   35 - Black
   44 - British White

** PR12 and PRD10 are provided with a black finish.*
*** 24" x 24" Panel with 6", 8", 10", or 12" neck dimensions only.*

5PLQ
The Architectural square panel ceiling diffusers of the sizes and mounting types shown on the plans or outlet schedule shall be the Krueger model 5PLQ. The 5PLQ shall have a square face plaque not exceeding 18"x18" for 24"x24" panel. The panel shall be constructed of aluminum. The face plaque shall not extend below the ceiling more than 1/4" and shall be removable from the backpan for access to the optional damper. Diffusers must discharge in the horizontal plane of the room. The diffuser backpan shall be one piece stamped construction of .0253" thick aluminum and have an integrally drawn round neck. The construction shall be 100% aluminum for use in MRI rooms and high humidity environments.

Optional duct or neck mounted round damper shall be constructed of heavy gage steel. Damper shall be operable from the face of the diffuser.

Optional directional blow tabs shall be constructed of aluminum and offered to provide 1-way, 2-way and 3-way throw patterns.

PLQLT
The low temperature architectural square panel ceiling diffusers of the sizes and mounting types shown on the plans or outlet schedule shall be the Krueger model PLQLT. The PLQLT shall have a one piece square face plaque not exceeding 18"x18" for 24"x24" panel size and be constructed of 16 gage steel with rounded corners that have a minimum radius of 3/4". The face plaque shall have a backing of 3/8" closed-cell engineered polymer foam insulation meeting UL 181 and NFPA 90A. Face plaques that have a secondary wrapper or use fiberglass on the back side of the plaque are not acceptable. The face plaque shall not extend below the ceiling more than 3/8" and shall be removable from the backpan for access to the optional damper. The diffuser backpan shall be one piece stamped construction of 22 gage steel and have an integrally drawn round neck. An R-6 rigid foil faced fiberglass cover shall be used on the backpan for vapor barrier isolation.

Diffusers must discharge in the horizontal plane of the room.

Optional duct or neck mounted 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 performance data for the diffuser, including 2 thru 7 Octave Band data. 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: 5PLQ – 12 – F23 – 24x24 – 08 – 00 – 44