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**DesignFlo® (DFL)**

This architectural supply linear slot diffuser features aluminum extrusions with 1 or 2 slots from 1" to 3" slot widths. Custom curving is available.

- **DFL** - Linear
- **DFP** - Plenum
- **DFRH** - Return Hood
- **DFBO** - Blank Off
- **DFB** - DFL for Lay-in T-Bar
- **DFNT** - DFL for Narrow-T
- **DFMC** - Mitered Corner
- **DFC** - 4-Legged Junction
- **DFT** - 3-Legged Junction

**1900, 1900M,
1900BOOT**

This supply linear slot diffuser features aluminum extrusions with 1 to 8 slots from 1/2" to 2" slot widths. Custom curving and additional slots are available.

- **1900** - Linear
- **1900BOOT** - Boot
- **1900MC** - Mitered Corner

**1900SQS, 1900SQSI,
1900SQR**

These supply (1900SQS), return (1900SQR), and insulated supply (1900SQSI) linear slot diffusers feature linear slots in a square form with a ceiling tile center (by others).

DesignFlo® DFL, DFP, DFRH, DFBO, DFB, DFNT, DFMC, DFC, DFT

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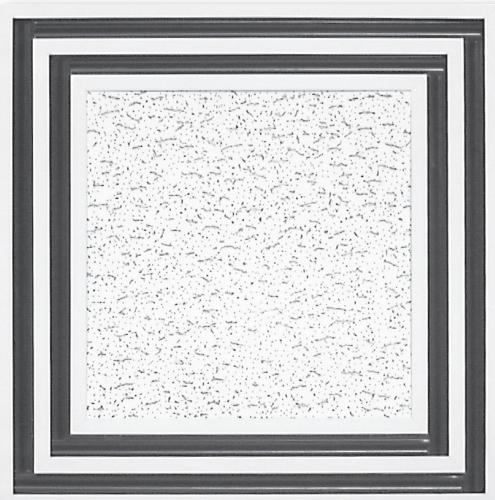
1900, 1900MC, 1900BOOT

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1900SQS, 1900SQSI, 1900SQR

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1900SQS

FEATURES

- Aluminum diffuser with steel backpan, round neck.
- 1 - 4 slots available in 3/4" and 1" slot widths.
- Blades are removable to allow diffuser to serve as a low-pressure-drop return.
- Airflow pattern is adjustable 1, 2, 3, and 4-way.
- Ceiling tile center receptacle. (Ceiling tile by others.)

Introduction: 1900SQS, 1900SQSI, 1900SQR

The 1900SQ series incorporates the optimal performance and versatility of a 1900 series linear diffuser with the attributes of a 24"x24" lay in panel diffuser. The 1900SQ is designed to allow a ceiling tile to be inserted in the face of the diffuser to provide a smooth, clean appearance with adjacent ceiling tiles. Additionally, the variety of finishes available allows the diffuser to blend, complement, or contrast with the ceiling system. The 1900SQ has individually adjustable blades to allow horizontal and vertical throw from the same unit. The blades can also be adjusted to blank off any side where throw is not required. When the diffuser is set in the 4-way discharge setting, typical isothermal throws of 12' to 24' can be achieved. This design makes Krueger's 1900SQ series diffuser an ideal choice for modular office spaces where room airflow patterns can be adjusted according to cubical layout and for non-standard ceiling height applications.

MODELS

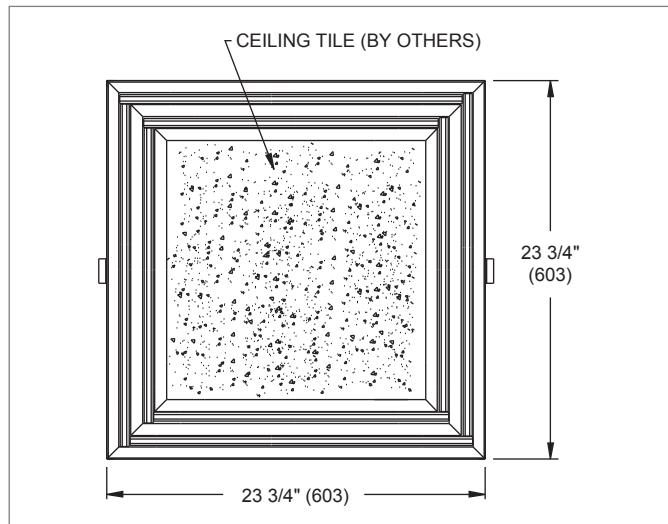
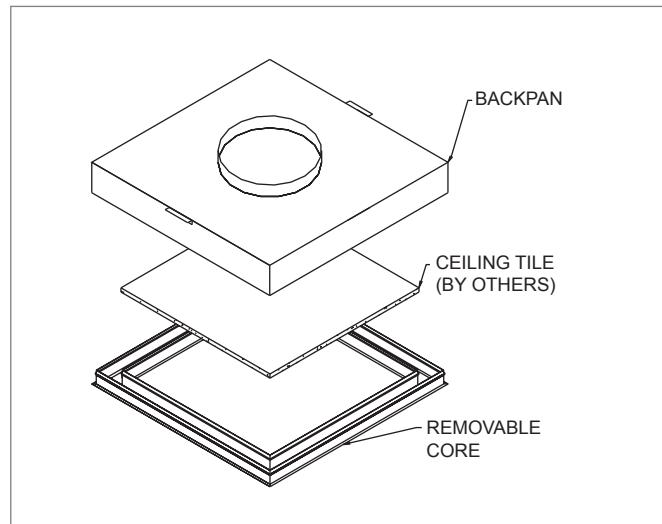
- 1900SQS - Linear Slot Square Supply Diffuser
- 1900SQR - Linear Slot Square Return Diffuser
- 1900SQSI - Linear Slot Insulated Supply Diffuser

PANEL SIZES

- 24"x24"

FINISHES

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

1900SQS, 1900SQSI, 1900SQR Exploded Views
1900SQ SERIES, FACE VIEW

1900SQ SERIES, EXPLODED VIEW


NOTES: Dimensions in parentheses are mm. Two-slot shown in drawing above.

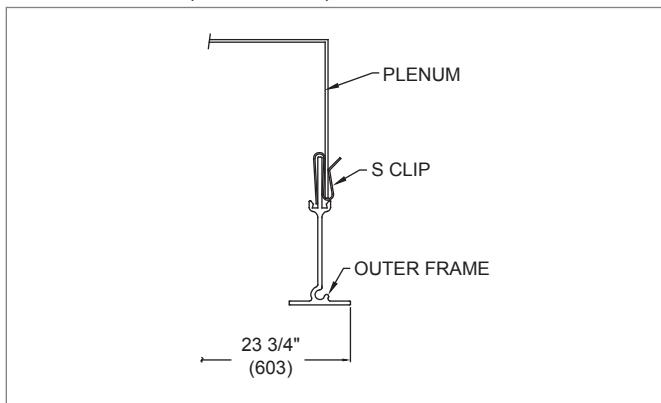
E1 LINEAR SLOT DIFFUSERS

1900SQ Series | Square, Supply/Return Linear Slot Diffuser

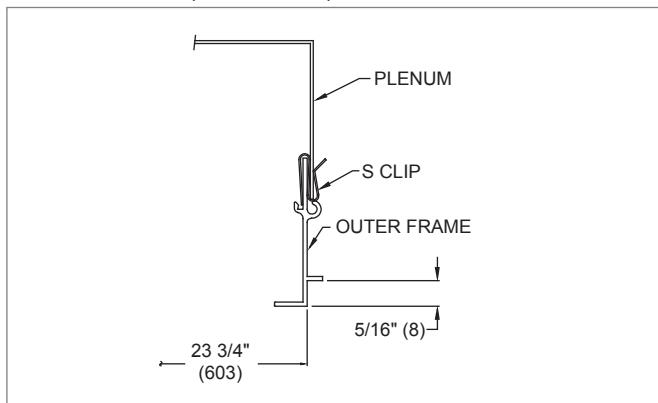


1900SQS, 1900SQSI, 1900SQR Dimensional Information

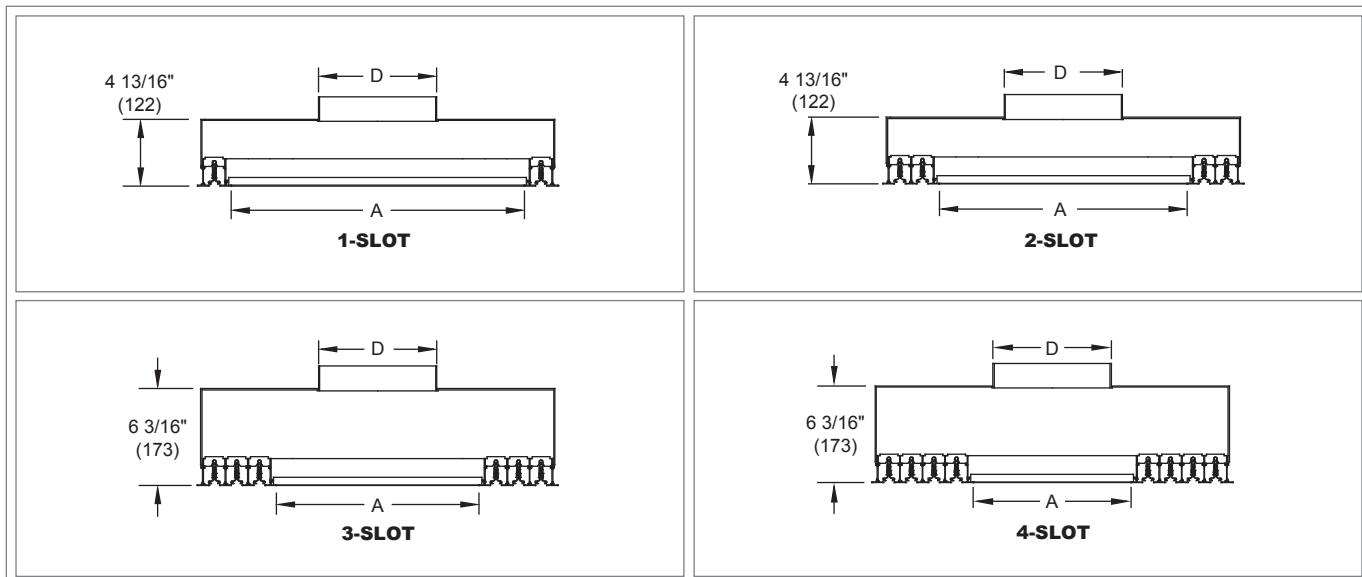
1900SQ SERIES, FRAME 23, LAY-IN T-BAR



1900SQ SERIES, FRAME 98, NARROW-T



1900SQ SERIES, CROSS SECTIONS & SLOT CONFIGURATIONS



1900SQ SERIES, DIMENSIONAL DETAIL

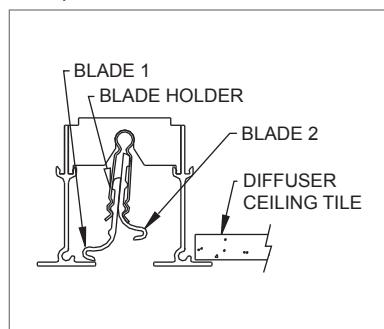
Number of Slots	Slot Width	Frame 23		Frame 98	
		A	D	A	D
1	3/4" (19)	19 1/4" (489)	8" (203)	19 9/16" (497)	8" (203)
2		16 1/4" (413)	10" (254)	16 9/16" (421)	10" (254)
3		13 1/4" (337)	12" (305)	13 9/16" (344)	12" (305)
4		10 1/4" (260)	14" (356)	10 9/16" (268)	14" (356)
1	1" (25)	18 3/4" (476)	8" (203)	19 1/16" (484)	8" (203)
2		15 1/4" (387)	10" (254)	15 9/16" (395)	10" (254)
3		11 3/4" (298)	12" (305)	12 1/16" (306)	12" (305)
4		8 1/4" (210)	14" (356)	8 9/16" (217)	14" (356)

NOTE: Dimensions in parentheses are mm.

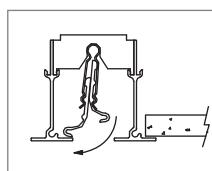
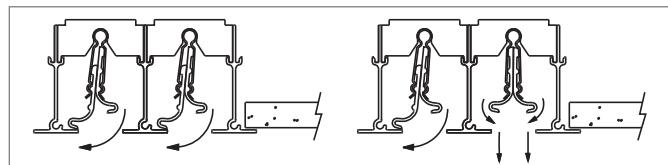
1900SQS, 1900SQSI, 1900SQR Airflow Adjustment & Details
AIRFLOW ADJUSTMENT

The 1900SQ series is capable of both volume and directional control. The blades pivot and slide up and down to give you total flexibility and control.

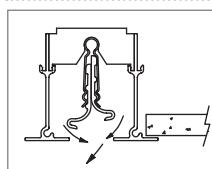
In the Blade Detail (below), locate the blades and blade holder. Each blade has three positions - up, mid, and down. Similarly, the blade holder has three positions - out, center, and in.

1900, BLADE DETAIL


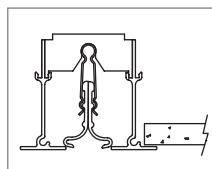
For this example, the blade holder is set to out; blade one is down and blade two is up. Keep in mind that slight variations in blade adjustment can have a big effect. The examples shown here are only a guide. In critical zones, actual airflow direction should be verified visually or by measurement.

MULTIPLE DIRECTIONAL THROW

HORIZONTAL FULL FLOW

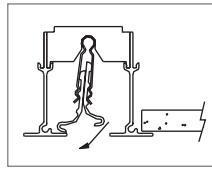
Blade Holder = Out
Blade 1 = Down
Blade 2 = Up
Result: Creates tight ceiling pattern.


ANGLED FLOW

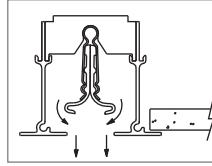
Blade Holder = Center
Blade 1 = Mid
Blade 2 = Up
Result: Deflects the pattern down slightly.


FULL DAMPERED

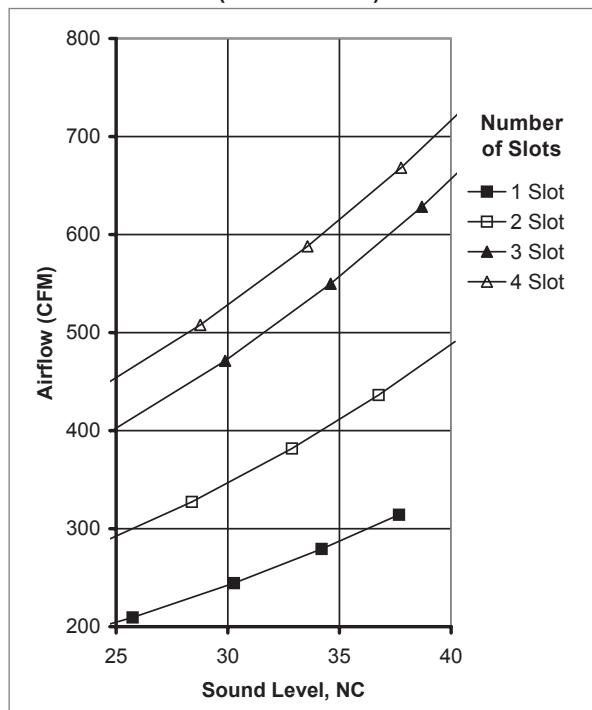
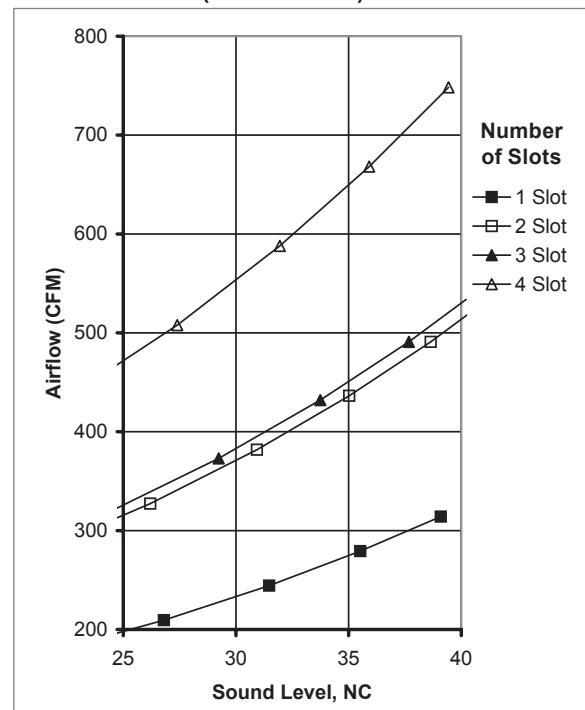
Blade Holder = Center
Blade 1 = Down
Blade 2 = Down
Result: Full dampered flow that is to be used for volume control only.


HORIZONTAL DAMPERED FLOW

Blade Holder = Out
Blade 1 = Down
Blade 2 = Mid
Result: Creates tight ceiling pattern with reduced air volume.


VERTICAL FLOW, BLADES UP

Blade Holder = Center
Blade 1 = Up
Blade 2 = Up
Result: Directs airflow downward; move both blades to mid for reduced flow.

1900SQ Reference Charts
**AIRFLOW VS. NC: 1900SQS,
3/4" SLOT WIDTH (NO DAMPER)**

**AIRFLOW VS. NC: 1900SQS,
1" SLOT WIDTH (NO DAMPER)**


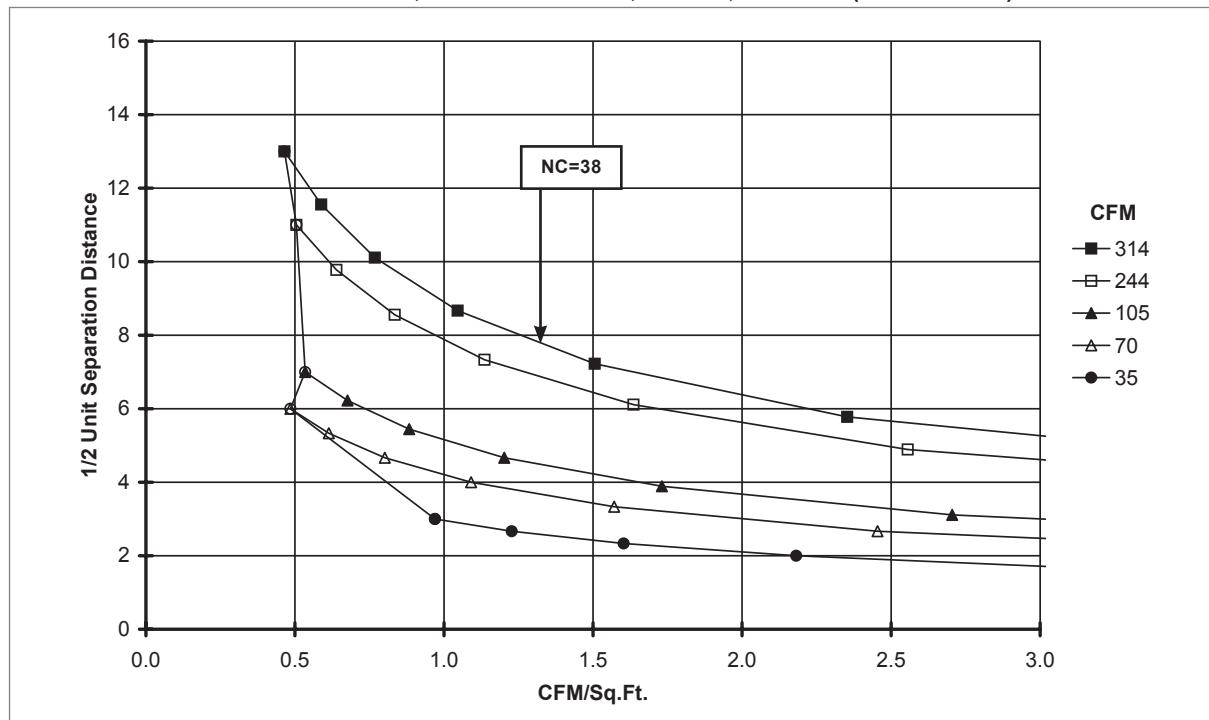
E1 LINEAR SLOT DIFFUSERS

1900SQS | Square, Supply/Return Linear Slot Diffuser

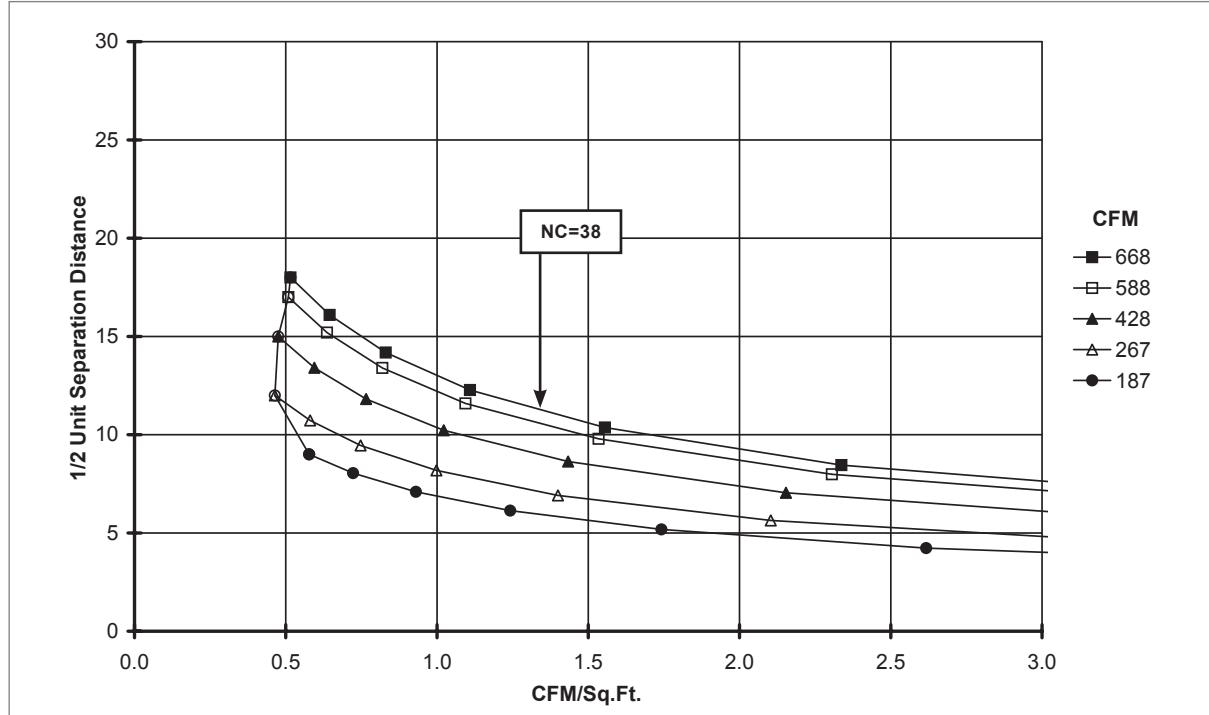


1900SQS Reference Charts: Horizontal Throw

SPACING FOR 80% ADPI: 1900SQS, 3/4" SLOT WIDTH, 1-SLOT, 8" INLET (NO DAMPER)



SPACING FOR 80% ADPI: 1900SQS, 3/4" SLOT WIDTH, 4-SLOT, 14" INLET (NO DAMPER)

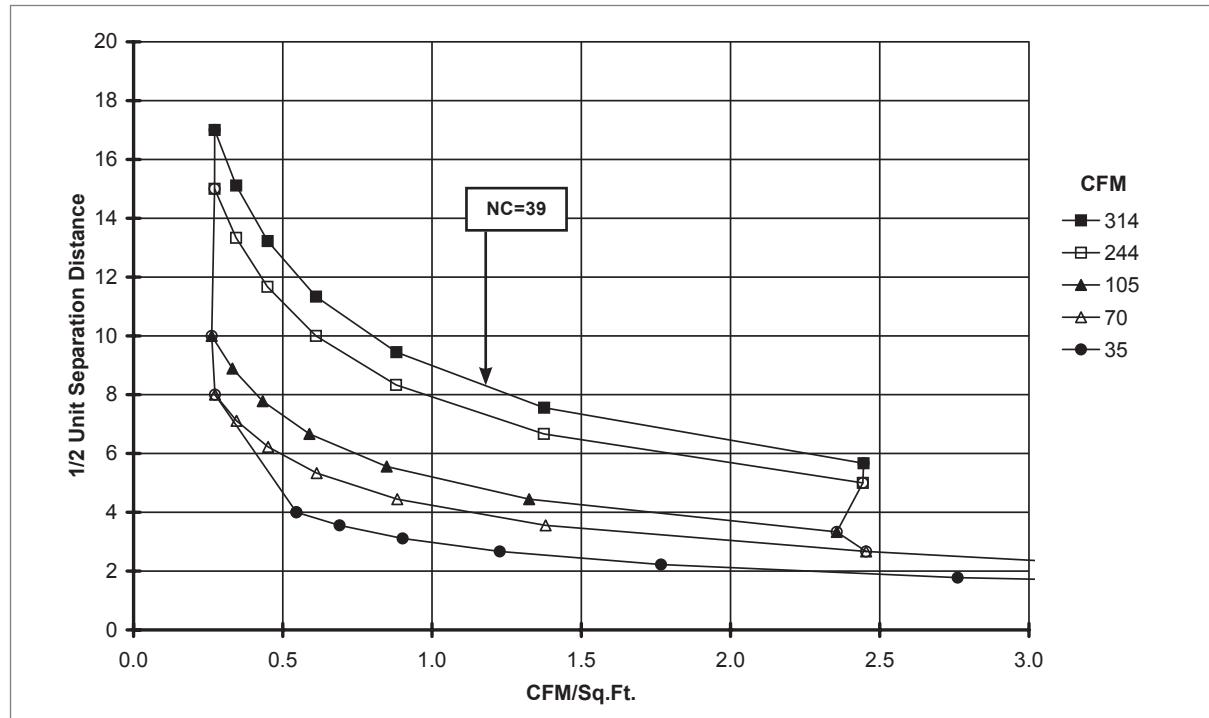


Charts are at 20 BTUH/ft² loads.

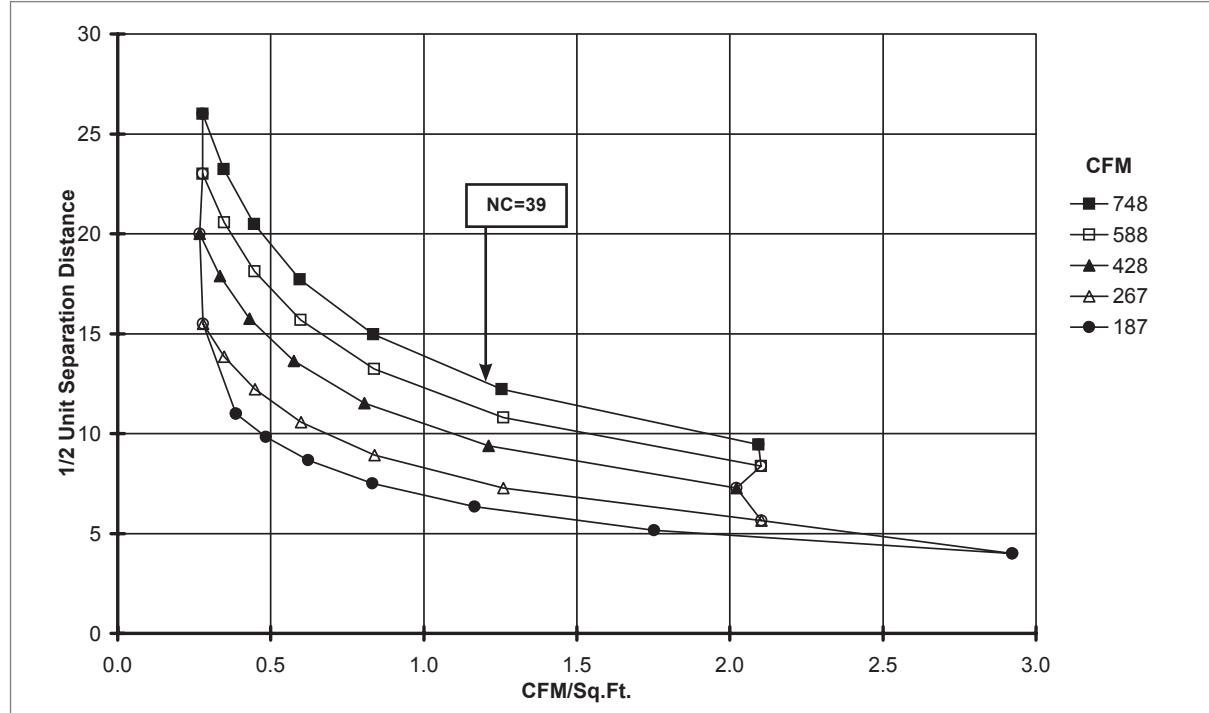
See the Engineering section of this catalog for instructions on how to read these charts and additional ADPI information.

1900SQS Reference Charts: Horizontal Throw

SPACING FOR 80% ADPI: 1900SQS, 1" SLOT WIDTH, 1-SLOT, 8" INLET (NO DAMPER)



SPACING FOR 80% ADPI: 1900SQS, 1" SLOT WIDTH, 4-SLOT, 14" INLET (NO DAMPER)


 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.

E1 LINEAR SLOT DIFFUSERS

1900SQS | Square, Supply/Return Linear Slot Diffuser



Excellence in Air Distribution

1900SQS Performance Data: Horizontal Throw

IP/METRIC DATA: 1900SQS, 3/4" SLOT WIDTH, 1-SLOT, 24"x24" PANEL, 4-WAY (NO DAMPER)

8" Dia.	IP Data					NC	Metric Data					Octave Band, dB						
	Neck Vel	Air Flow	Ps	Pt	Throw		Neck Vel	Air Flow	Ps	Pt	Throw	m	2	3	4	5	6	7
	FPM	CFM	"WG	"WG	ft		m/s	L/s	Pa	Pa		m	2	3	4	5	6	7
8" Dia.	100	35	0.002	.003	1 - 2 - 3	-	0.51	16	0.5	0.6	0.2 - 0.5 - 1.0	-	-	-	-	-	-	
	200	70	0.008	.010	2 - 3 - 6	-	1.02	33	2.0	2.6	0.7 - 1.0 - 1.8	24	21	12	-	-	-	
	300	105	0.018	.023	3 - 5 - 7	-	1.52	49	4.4	5.8	1.0 - 1.5 - 2.2	32	30	23	-	-	-	
	400	140	0.032	.042	4 - 6 - 8	14	2.03	66	7.9	10.4	1.3 - 1.8 - 2.6	38	37	30	16	-	-	
	500	175	0.049	.065	5 - 7 - 9	20	2.54	82	12.3	16.2	1.6 - 2.0 - 2.9	43	42	36	23	14	-	
	600	209	0.071	.094	6 - 7 - 10	26	3.05	99	17.7	23.3	1.8 - 2.2 - 3.1	46	46	41	29	21	13	
	700	244	0.097	.127	6 - 8 - 11	30	3.56	115	24.1	31.7	2.0 - 2.4 - 3.4	49	50	46	35	26	18	
	800	279	0.126	.166	7 - 8 - 12	34	4.06	132	31.5	41.4	2.1 - 2.6 - 3.6	52	53	49	39	32	22	
	900	314	0.160	.211	7 - 9 - 13	38	4.57	148	39.9	52.4	2.2 - 2.7 - 3.8	54	55	52	43	36	25	

IP/METRIC DATA: 1900SQS, 3/4" SLOT WIDTH, 2-SLOT, 24"x24" PANEL, 4-WAY (NO DAMPER)

8" Dia.	IP Data					NC	Metric Data					Octave Band, dB						
	Neck Vel	Air Flow	Ps	Pt	Throw		Neck Vel	Air Flow	Ps	Pt	Throw	m	2	3	4	5	6	7
	FPM	CFM	"WG	"WG	ft		m/s	L/s	Pa	Pa		m	2	3	4	5	6	7
8" Dia.	200	70	0.004	.006	1 - 2 - 5	-	1.02	33	1.0	1.6	0.3 - 0.6 - 1.4	19	12	-	-	-	-	
	300	105	0.009	.015	2 - 3 - 7	-	1.52	49	2.2	3.6	0.6 - 1.1 - 2.1	26	21	14	-	-	-	
	500	175	0.025	.041	4 - 6 - 9	-	2.54	82	6.2	10.1	1.2 - 1.8 - 2.9	35	33	27	13	-	-	
	600	209	0.036	.058	5 - 7 - 10	16	3.05	99	8.9	14.5	1.4 - 2.1 - 3.1	39	37	32	19	-	-	
	700	244	0.049	.079	5 - 8 - 11	20	3.56	115	12.2	19.8	1.6 - 2.4 - 3.4	41	41	36	24	15	-	
	800	279	0.064	.104	6 - 8 - 12	24	4.06	132	15.9	25.8	1.9 - 2.6 - 3.6	44	44	40	29	20	12	
	900	314	0.081	.131	7 - 9 - 13	28	4.57	148	20.1	32.7	2.1 - 2.7 - 3.8	46	46	43	33	25	16	
	1000	349	0.100	.162	8 - 9 - 13	31	5.08	165	24.8	40.3	2.3 - 2.9 - 4.0	48	49	46	36	29	20	
	1100	384	0.121	.196	8 - 10 - 14	33	5.59	181	30.0	48.8	2.4 - 3.0 - 4.2	49	51	48	39	33	23	
10" Dia.	200	109	0.010	.013	2 - 4 - 7	-	1.02	51	2.5	3.1	0.7 - 1.1 - 2.2	28	20	15	-	-	-	
	275	150	0.019	.024	3 - 5 - 9	-	1.40	71	4.8	5.9	1.0 - 1.5 - 2.6	34	27	23	-	-	-	
	350	191	0.031	.039	4 - 6 - 10	13	1.78	90	7.7	9.6	1.3 - 1.9 - 3.0	38	33	29	17	-	-	
	400	218	0.040	.050	5 - 7 - 11	17	2.03	103	10.1	12.6	1.5 - 2.2 - 3.2	40	36	33	21	-	-	
	500	273	0.063	.079	6 - 8 - 12	23	2.54	129	15.8	19.6	1.8 - 2.5 - 3.6	44	41	39	28	19	11	
	600	327	0.091	.114	7 - 9 - 13	28	3.05	154	22.7	28.3	2.2 - 2.8 - 3.9	48	45	44	34	26	17	
	700	382	0.124	.155	8 - 10 - 14	33	3.56	180	30.9	38.5	2.4 - 3.0 - 4.2	50	48	48	39	32	22	
	800	436	0.162	.202	9 - 11 - 15	37	4.06	206	40.3	50.3	2.6 - 3.2 - 4.5	53	51	52	44	38	26	
	900	491	0.205	.255	9 - 11 - 16	40	4.57	232	51.0	63.6	2.8 - 3.4 - 4.8	55	54	55	48	43	30	

NOTES: Throw values are given for terminal velocities of 150, 100, and 50 FPM (0.75, 0.50, and 0.25 m/s). Throw values are given for isothermal conditions. NC values are based on octave band 2 - 7 sound power levels minus a room absorption of 10dB, re10⁻¹² 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. Blades are in horizontal full flow position; see page E1-79 for blade orientation. See selection software for performance data not shown, including octave band data.

1900SQS Performance Data: Horizontal Throw

IP/METRIC DATA: 1900SQS, 3/4" SLOT WIDTH, 3-SLOT, 24"x24" PANEL, 4-WAY (NO DAMPER)

	IP Data					NC	Metric Data					Octave Band, dB						
	Neck Vel	Air Flow	Ps	Pt	Throw		m/s	L/s	Pa	Pa	m	2	3	4	5	6	7	
	FPM	CFM	"WG	"WG	ft													
8" Dia.	200	70	0.001	.004	1 - 1 - 4	-	1.02	33	0.3	0.9	0.2 - 0.4 - 1.1	13	-	-	-	-	-	
	300	105	0.003	.008	1 - 3 - 6	-	1.52	49	0.7	2.1	0.4 - 0.8 - 1.7	22	16	-	-	-	-	
	500	175	0.007	.023	3 - 5 - 9	-	2.54	82	1.8	5.7	1.0 - 1.4 - 2.9	32	29	22	-	-	-	
	600	209	0.010	.033	4 - 6 - 10	11	3.05	99	2.6	8.2	1.1 - 1.7 - 3.1	36	33	27	11	-	-	
	700	244	0.014	.045	4 - 7 - 11	16	3.56	115	3.6	11.2	1.3 - 2.0 - 3.4	39	37	32	17	-	-	
	800	279	0.019	.059	5 - 8 - 12	20	4.06	132	4.6	14.6	1.5 - 2.3 - 3.6	42	40	35	22	14	-	
	900	314	0.024	.074	6 - 8 - 13	23	4.57	148	5.9	18.4	1.7 - 2.6 - 3.8	45	43	39	26	19	11	
	1000	349	0.029	.091	6 - 9 - 13	26	5.08	165	7.3	22.8	1.9 - 2.9 - 4.0	47	46	42	29	23	14	
	1100	384	0.035	.111	7 - 10 - 14	29	5.59	181	8.8	27.6	2.1 - 3.0 - 4.2	49	48	44	33	27	17	
10" Dia.	200	109	0.002	.004	1 - 3 - 6	-	1.02	51	0.4	1.0	0.4 - 0.9 - 1.8	21	13	-	-	-	-	
	300	164	0.004	.009	3 - 4 - 9	-	1.52	77	0.9	2.3	0.9 - 1.3 - 2.7	29	23	17	-	-	-	
	500	273	0.010	.026	5 - 7 - 12	16	2.54	129	2.6	6.4	1.5 - 2.2 - 3.6	40	36	32	17	-	-	
	600	327	0.015	.037	6 - 9 - 13	21	3.05	154	3.7	9.3	1.8 - 2.7 - 3.9	44	40	37	24	16	-	
	700	382	0.020	.051	7 - 10 - 14	26	3.56	180	5.0	12.6	2.1 - 3.0 - 4.2	47	44	42	29	22	14	
	800	436	0.026	.066	8 - 11 - 15	30	4.06	206	6.6	16.5	2.4 - 3.2 - 4.5	50	48	45	34	28	18	
	900	491	0.033	.084	9 - 11 - 16	34	4.57	232	8.3	20.9	2.7 - 3.4 - 4.8	52	50	49	38	33	21	
	1000	545	0.041	.104	10 - 12 - 17	37	5.08	257	10.3	25.8	2.9 - 3.6 - 5.0	55	53	52	42	37	24	
	1100	600	0.050	.125	10 - 12 - 17	40	5.59	283	12.4	31.2	3.1 - 3.7 - 5.3	57	55	55	45	41	27	
12" Dia.	200	157	0.002	.005	3 - 4 - 8	-	1.02	74	0.6	1.2	0.8 - 1.3 - 2.6	27	19	14	-	-	-	
	250	196	0.004	.007	4 - 5 - 10	-	1.27	93	0.9	1.8	1.1 - 1.6 - 3.0	32	25	21	-	-	-	
	300	236	0.005	.011	4 - 6 - 11	-	1.52	111	1.3	2.7	1.3 - 1.9 - 3.3	36	29	26	-	-	-	
	400	314	0.009	.019	6 - 8 - 13	17	2.03	148	2.2	4.7	1.7 - 2.6 - 3.8	42	37	34	20	11	-	
	500	393	0.014	.030	7 - 10 - 14	24	2.54	185	3.5	7.4	2.1 - 3.0 - 4.3	46	42	40	27	20	13	
	600	471	0.020	.043	8 - 11 - 15	30	3.05	222	5.0	10.6	2.6 - 3.3 - 4.7	50	47	45	34	28	18	
	700	550	0.027	.058	10 - 12 - 17	35	3.56	259	6.8	14.4	2.9 - 3.6 - 5.1	53	50	50	39	34	22	
	800	628	0.036	.076	10 - 13 - 18	39	4.06	297	8.9	18.8	3.1 - 3.8 - 5.4	56	54	54	44	40	26	
	900	707	0.045	.096	11 - 13 - 19	42	4.57	334	11.3	23.9	3.3 - 4.1 - 5.7	59	57	57	48	45	30	

NOTES: Throw values are given for terminal velocities of 150, 100, and 50 FPM (0.75, 0.50, and 0.25 m/s). Throw values are given for isothermal conditions. NC values are based on octave band 2 - 7 sound power levels minus a room absorption of 10dB, re10⁻¹² 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. Blades are in horizontal full flow position; see page E1-79 for blade orientation. See selection software for performance data not shown, including octave band data.

E1 LINEAR SLOT DIFFUSERS

1900SQS | Square, Supply/Return Linear Slot Diffuser



1900SQS Performance Data: Horizontal Throw

IP/METRIC DATA: 1900SQS, 3/4" SLOT WIDTH, 4-SLOT, 24"x24" PANEL, 4-WAY (NO DAMPER)

	IP Data					NC	Metric Data					Octave Band, dB						
	Neck Vel	Air Flow	Ps	Pt	Throw		m/s	Air Flow	Ps	Pt	Throw	2	3	4	5	6	7	
	FPM	CFM	"WG	"WG	ft		L/s	Pa	Pa	m								
8" Dia.	200	70	0.001	.004	0 - 1 - 3	-	1.02	33	0.3	1.0	0.1 - 0.2 - 0.9	12	-	-	-	-	-	
	300	105	0.003	.009	1 - 2 - 5	-	1.52	49	0.8	2.2	0.2 - 0.5 - 1.5	21	14	-	-	-	-	
	500	175	0.009	.024	2 - 4 - 8	-	2.54	82	2.2	6.0	0.6 - 1.2 - 2.5	32	27	21	-	-	-	
	600	209	0.012	.035	3 - 5 - 10	-	3.05	99	3.1	8.7	0.9 - 1.5 - 3.0	36	32	27	12	-	-	
	700	244	0.017	.048	4 - 6 - 11	15	3.56	115	4.2	11.8	1.2 - 1.7 - 3.4	39	36	31	17	-	-	
	800	279	0.022	.062	4 - 7 - 12	19	4.06	132	5.5	15.5	1.3 - 2.0 - 3.6	42	39	35	22	15	-	
	900	314	0.028	.079	5 - 7 - 13	23	4.57	148	7.0	19.6	1.5 - 2.2 - 3.8	45	42	39	27	20	12	
	1000	349	0.035	.097	5 - 8 - 13	26	5.08	165	8.6	24.2	1.7 - 2.5 - 4.0	47	45	42	31	25	16	
	1100	384	0.042	.117	6 - 9 - 14	29	5.59	181	10.4	29.2	1.8 - 2.7 - 4.2	49	48	45	34	29	19	
10" Dia.	200	109	0.002	.004	1 - 2 - 5	-	1.02	51	0.5	1.1	0.2 - 0.6 - 1.5	19	-	-	-	-	-	
	300	164	0.004	.010	2 - 4 - 8	-	1.52	77	1.1	2.5	0.6 - 1.2 - 2.3	28	21	16	-	-	-	
	500	273	0.012	.028	4 - 6 - 12	14	2.54	129	3.0	6.9	1.3 - 1.9 - 3.6	40	34	31	16	-	-	
	600	327	0.017	.040	5 - 8 - 13	20	3.05	154	4.3	9.9	1.5 - 2.3 - 3.9	44	39	37	23	16	-	
	700	382	0.023	.054	6 - 9 - 14	25	3.56	180	5.8	13.4	1.8 - 2.7 - 4.2	47	43	41	29	23	14	
	800	436	0.031	.071	7 - 10 - 15	30	4.06	206	7.6	17.6	2.1 - 3.1 - 4.5	50	46	45	33	28	18	
	900	491	0.039	.089	8 - 11 - 16	34	4.57	232	9.7	22.2	2.3 - 3.4 - 4.8	53	49	49	38	33	22	
	1000	545	0.048	.110	8 - 12 - 17	37	5.08	257	11.9	27.4	2.6 - 3.6 - 5.0	55	52	52	42	38	25	
	1100	600	0.058	.133	9 - 12 - 17	40	5.59	283	14.4	33.2	2.8 - 3.7 - 5.3	57	54	55	45	41	28	
12" Dia.	200	157	0.003	.005	2 - 4 - 7	-	1.02	74	0.6	1.3	0.5 - 1.1 - 2.2	26	16	12	-	-	-	
	250	196	0.004	.008	3 - 5 - 9	-	1.27	93	1.0	2.0	0.8 - 1.4 - 2.8	31	21	19	-	-	-	
	300	236	0.006	.011	4 - 5 - 11	-	1.52	111	1.4	2.8	1.1 - 1.7 - 3.3	35	26	24	-	-	-	
	400	314	0.010	.020	5 - 7 - 13	16	2.03	148	2.6	5.0	1.5 - 2.2 - 3.8	41	34	33	17	-	-	
	500	393	0.016	.032	6 - 9 - 14	23	2.54	185	4.0	7.9	1.9 - 2.8 - 4.3	46	39	39	25	19	11	
	600	471	0.023	.045	7 - 11 - 15	29	3.05	222	5.7	11.3	2.2 - 3.3 - 4.7	50	44	45	32	27	17	
	700	550	0.031	.062	9 - 12 - 17	34	3.56	259	7.8	15.4	2.6 - 3.6 - 5.1	53	48	49	38	33	21	
	800	628	0.041	.081	10 - 13 - 18	38	4.06	297	10.2	20.1	3.0 - 3.8 - 5.4	56	52	53	42	39	26	
	900	707	0.052	.102	11 - 13 - 19	42	4.57	334	12.9	25.5	3.3 - 4.1 - 5.7	59	55	57	47	44	29	
14" Dia.	100	107	0.001	.001	1 - 2 - 5	-	0.51	50	0.2	0.4	0.2 - 0.5 - 1.5	16	-	-	-	-	-	
	175	187	0.003	.004	2 - 4 - 9	-	0.89	88	0.6	1.1	0.7 - 1.3 - 2.7	28	17	15	-	-	-	
	250	267	0.005	.009	4 - 6 - 12	-	1.27	126	1.3	2.3	1.3 - 1.9 - 3.5	36	26	25	-	-	-	
	325	347	0.009	.015	5 - 8 - 13	16	1.65	164	2.2	3.8	1.6 - 2.5 - 4.0	42	33	33	17	-	-	
	400	428	0.013	.023	7 - 10 - 15	23	2.03	202	3.3	5.8	2.0 - 3.0 - 4.5	46	38	39	25	19	-	
	475	508	0.019	.033	8 - 11 - 16	29	2.41	240	4.7	8.2	2.4 - 3.4 - 4.9	50	43	44	31	26	16	
	550	588	0.025	.044	9 - 12 - 17	34	2.79	277	6.3	11.0	2.8 - 3.7 - 5.2	53	46	49	36	32	20	
	625	668	0.032	.057	10 - 13 - 18	38	3.18	315	8.1	14.1	3.2 - 4.0 - 5.6	56	50	53	41	37	24	
	700	748	0.041	.071	11 - 14 - 19	41	3.56	353	10.1	17.7	3.4 - 4.2 - 5.9	59	53	56	45	42	28	

NOTES: Throw values are given for terminal velocities of 150, 100, and 50 FPM (0.75, 0.50, and 0.25 m/s). Throw values are given for isothermal conditions. NC values are based on octave band 2 - 7 sound power levels minus a room absorption of 10dB, re10⁻¹² 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. Blades are in horizontal full flow position; see page E1-79 for blade orientation. See selection software for performance data not shown, including octave band data.

1900SQS Performance Data: Horizontal Throw

IP/METRIC DATA: 1900SQS, 1" SLOT WIDTH, 1-SLOT, 24"x24" PANEL, 4-WAY (NO DAMPER)

Neck Vel	Air Flow	IP Data			NC	Metric Data					Octave Band, dB						
		Ps	Pt	Throw		m/s	L/s	Pa	Pa	m	2	3	4	5	6	7	
		FPM	CFM	"WG		"WG	ft										
8" Dia.	100	35	0.002	.003	0 - 1 - 4	-	0.51	16	0.5	0.7	0.2 - 0.3 - 1.3	12	-	-	-	-	-
	200	70	0.009	.011	2 - 4 - 8	-	1.02	33	2.2	2.8	0.6 - 1.3 - 2.5	26	22	11	-	-	-
	300	105	0.019	.025	4 - 6 - 10	-	1.52	49	4.8	6.2	1.3 - 1.9 - 3.0	34	31	23	-	-	-
	400	140	0.035	.045	6 - 8 - 11	15	2.03	66	8.6	11.1	1.7 - 2.5 - 3.5	39	38	31	16	-	-
	500	175	0.054	.070	7 - 9 - 13	21	2.54	82	13.5	17.3	2.1 - 2.7 - 3.9	44	43	37	24	13	-
	600	209	0.078	.100	8 - 10 - 14	27	3.05	99	19.4	25.0	2.5 - 3.0 - 4.3	47	47	42	30	20	13
	700	244	0.106	.137	9 - 11 - 15	31	3.56	115	26.4	34.0	2.7 - 3.2 - 4.6	50	51	47	35	27	18
	800	279	0.138	.178	9 - 11 - 16	36	4.06	132	34.5	44.4	2.8 - 3.5 - 4.9	53	54	50	40	32	21
	900	314	0.175	.226	10 - 12 - 17	39	4.57	148	43.6	56.2	3.0 - 3.7 - 5.2	55	57	54	44	37	24

IP/METRIC DATA: 1900SQS, 1" SLOT WIDTH, 2-SLOT, 24"x24" PANEL, 4-WAY (NO DAMPER)

Neck Vel	Air Flow	IP Data			NC	Metric Data					Octave Band, dB						
		Ps	Pt	Throw		Neck Vel	Air Flow	Ps	Pt	Throw	2	3	4	5	6	7	
		FPM	CFM	"WG		"WG	ft	m/s	L/s	Pa							
8" Dia.	200	70	0.003	.005	1 - 2 - 6	-	1.02	33	0.7	1.3	0.2 - 0.5 - 1.8	15	-	-	-	-	-
	300	105	0.006	.012	2 - 4 - 9	-	1.52	49	1.5	2.9	0.5 - 1.1 - 2.7	23	20	11	-	-	-
	500	175	0.017	.032	4 - 7 - 13	-	2.54	82	4.1	8.0	1.3 - 2.2 - 3.9	33	32	26	12	-	-
	600	209	0.024	.046	6 - 9 - 14	14	3.05	99	6.0	11.5	1.8 - 2.7 - 4.3	37	36	31	19	-	-
	700	244	0.033	.063	7 - 10 - 15	19	3.56	115	8.1	15.7	2.1 - 3.1 - 4.6	40	40	35	24	15	-
	800	279	0.043	.082	8 - 11 - 16	23	4.06	132	10.6	20.5	2.4 - 3.5 - 4.9	43	43	39	29	21	11
	900	314	0.054	.104	9 - 12 - 17	27	4.57	148	13.4	26.0	2.7 - 3.7 - 5.2	45	46	42	33	26	15
	1000	349	0.066	.129	10 - 13 - 18	30	5.08	165	16.6	32.1	3.0 - 3.9 - 5.5	47	48	45	36	30	19
	1100	384	0.080	.156	11 - 13 - 19	33	5.59	181	20.0	38.8	3.3 - 4.1 - 5.8	49	51	48	40	34	22
10" Dia.	200	109	0.008	.011	2 - 4 - 9	-	1.02	51	2.0	2.6	0.5 - 1.2 - 2.8	26	17	11	-	-	-
	300	164	0.018	.024	4 - 7 - 12	-	1.52	77	4.5	5.9	1.2 - 2.1 - 3.8	34	27	22	-	-	-
	400	218	0.032	.042	6 - 9 - 14	14	2.03	103	8.0	10.5	1.9 - 2.8 - 4.3	40	34	30	18	-	-
	500	273	0.050	.066	8 - 11 - 16	21	2.54	129	12.5	16.4	2.3 - 3.4 - 4.9	44	39	37	25	16	-
	600	327	0.072	.095	9 - 12 - 17	26	3.05	154	18.0	23.6	2.8 - 3.8 - 5.3	48	44	42	32	23	14
	700	382	0.098	.129	11 - 13 - 19	31	3.56	180	24.5	32.1	3.3 - 4.1 - 5.7	51	47	46	37	30	19
	800	436	0.128	.168	12 - 14 - 20	35	4.06	206	32.0	41.9	3.5 - 4.3 - 6.1	53	50	50	42	35	23
	900	491	0.163	.213	12 - 15 - 21	39	4.57	232	40.5	53.0	3.8 - 4.6 - 6.5	56	53	53	46	40	27
	1000	545	0.201	.263	13 - 16 - 23	42	5.08	257	50.0	65.5	4.0 - 4.9 - 6.9	58	56	56	49	45	31

NOTES: Throw values are given for terminal velocities of 150, 100, and 50 FPM (0.75, 0.50, and 0.25 m/s). Throw values are given for isothermal conditions. 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. Blades are in horizontal full flow position; see page E1-79 for blade orientation. See selection software for performance data not shown, including octave band data.

E1 LINEAR SLOT DIFFUSERS

1900SQS | Square, Supply/Return Linear Slot Diffuser



1900SQS Performance Data: Horizontal Throw

IP/METRIC DATA: 1900SQS, 1" SLOT WIDTH, 3-SLOT, 24"x24" PANEL, 4-WAY (NO DAMPER)

	IP Data					NC	Metric Data					Octave Band, dB						
	Neck Vel	Air Flow	Ps	Pt	Throw		Neck Vel	Air Flow	Ps	Pt	Throw	2	3	4	5	6	7	
	FPM	CFM	"WG	"WG	ft		m/s	L/s	Pa	Pa	m	2	3	4	5	6	7	
8" Dia	200	70	0.000	.003	0 - 1 - 3	-	1.02	33	0.1	0.7	0.1 - 0.3 - 1.0	19	-	-	-	-	-	
	300	105	0.001	.006	1 - 2 - 7	-	1.52	49	0.2	1.6	0.3 - 0.6 - 2.2	26	16	-	-	-	-	
	500	175	0.002	.017	2 - 5 - 12	-	2.54	82	0.5	4.3	0.7 - 1.6 - 3.7	36	29	24	-	-	-	
	600	209	0.003	.025	3 - 7 - 14	12	3.05	99	0.7	6.2	1.0 - 2.2 - 4.3	40	34	29	14	-	-	
	700	244	0.004	.034	5 - 8 - 15	17	3.56	115	0.9	8.5	1.4 - 2.6 - 4.6	43	38	33	19	11	-	
	800	279	0.005	.045	6 - 10 - 16	21	4.06	132	1.2	11.1	1.9 - 2.9 - 4.9	46	41	37	24	16	-	
	900	314	0.006	.056	7 - 11 - 17	24	4.57	148	1.5	14.1	2.2 - 3.3 - 5.2	48	44	40	28	21	13	
	1000	349	0.007	.070	8 - 12 - 18	28	5.08	165	1.8	17.4	2.4 - 3.7 - 5.5	50	47	43	32	26	16	
	1100	384	0.009	.084	9 - 13 - 19	31	5.59	181	2.2	21.0	2.7 - 4.0 - 5.8	52	49	46	36	30	18	
10" Dia	200	109	0.013	.016	1 - 2 - 8	-	1.02	51	3.2	3.9	0.3 - 0.6 - 2.3	25	16	-	-	-	-	
	300	164	0.029	.035	2 - 5 - 11	-	1.52	77	7.3	8.7	0.6 - 1.4 - 3.4	33	26	22	-	-	-	
	400	218	0.052	.062	4 - 8 - 14	13	2.03	103	13.0	15.5	1.1 - 2.3 - 4.3	39	33	30	14	-	-	
	500	273	0.081	.097	6 - 9 - 16	20	2.54	129	20.3	24.1	1.8 - 2.9 - 4.9	43	39	36	23	15	-	
	600	327	0.117	.140	8 - 11 - 17	25	3.05	154	29.2	34.8	2.3 - 3.4 - 5.3	47	44	41	29	23	15	
	700	382	0.159	.190	9 - 13 - 19	30	3.56	180	39.7	47.3	2.7 - 4.0 - 5.7	50	48	45	35	29	20	
	800	436	0.208	.248	10 - 14 - 20	34	4.06	206	51.9	61.8	3.1 - 4.3 - 6.1	52	51	49	39	35	24	
	900	491	0.264	.314	11 - 15 - 21	38	4.57	232	65.6	78.2	3.4 - 4.6 - 6.5	55	54	53	44	40	27	
	1000	545	0.325	.388	13 - 16 - 23	41	5.08	257	81.0	96.6	3.8 - 4.9 - 6.9	57	57	56	47	44	30	
12" Dia	100	79	0.007	.008	0 - 1 - 4	-	0.51	37	1.8	1.9	0.1 - 0.3 - 1.3	17	-	-	-	-	-	
	175	137	0.022	.024	1 - 3 - 9	-	0.89	65	5.4	5.9	0.4 - 1.0 - 2.9	28	20	16	-	-	-	
	250	196	0.045	.049	3 - 7 - 14	-	1.27	93	11.1	12.1	0.9 - 2.1 - 4.1	35	29	26	-	-	-	
	325	255	0.075	.082	5 - 9 - 15	18	1.65	120	18.8	20.4	1.5 - 2.7 - 4.7	40	36	34	20	12	-	
	400	314	0.114	.124	7 - 11 - 17	24	2.03	148	28.5	30.9	2.2 - 3.3 - 5.2	44	41	40	27	20	15	
	475	373	0.161	.175	9 - 13 - 19	29	2.41	176	40.1	43.6	2.6 - 3.9 - 5.7	48	45	45	33	28	20	
	550	432	0.216	.235	10 - 14 - 20	34	2.79	204	53.8	58.5	3.0 - 4.3 - 6.1	51	49	49	39	34	24	
	625	491	0.279	.303	11 - 15 - 21	38	3.18	232	69.5	75.5	3.4 - 4.6 - 6.5	53	52	52	43	39	28	
	700	550	0.350	.381	13 - 16 - 23	41	3.56	259	87.2	94.8	3.8 - 4.9 - 6.9	55	55	56	47	44	32	

NOTES: Throw values are given for terminal velocities of 150, 100, and 50 FPM (0.75, 0.50, and 0.25 m/s). Throw values are given for isothermal conditions. NC values are based on octave band 2 - 7 sound power levels minus a room absorption of 10dB, re10⁻¹² 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. Blades are in horizontal full flow position; see page E1-79 for blade orientation. See selection software for performance data not shown, including octave band data.

1900SQS Performance Data: Horizontal Throw

IP/METRIC DATA: 1900SQS, 1" SLOT WIDTH, 4-SLOT, 24"x24" PANEL, 4-WAY (NO DAMPER)

	IP Data					NC	Metric Data					Octave Band, dB						
	Neck Vel	Air Flow	Ps	Pt	Throw		m/s	L/s	Pa	Pa	Throw	2	3	4	5	6	7	
	FPM	CFM	"WG	"WG	ft						m							
8" Dia	200	70	0.002	.004	0 - 1 - 2	-	1.02	33	0.4	1.1	0.1 - 0.2 - 0.7	14	-	-	-	-	-	
	300	105	0.004	.010	1 - 1 - 5	-	1.52	49	1.0	2.4	0.2 - 0.4 - 1.5	22	14	-	-	-	-	
	500	175	0.011	.027	2 - 3 - 10	-	2.54	82	2.7	6.6	0.5 - 1.1 - 3.2	33	27	23	-	-	-	
	600	209	0.016	.038	2 - 5 - 13	11	3.05	99	3.9	9.5	0.7 - 1.5 - 3.8	37	32	28	13	-	-	
	700	244	0.022	.052	3 - 7 - 15	15	3.56	115	5.4	13.0	0.9 - 2.1 - 4.4	40	36	32	18	12	-	
	800	279	0.028	.068	4 - 8 - 16	19	4.06	132	7.0	16.9	1.2 - 2.5 - 4.9	43	39	36	23	17	-	
	900	314	0.036	.086	5 - 9 - 17	23	4.57	148	8.9	21.4	1.5 - 2.9 - 5.2	45	42	39	27	22	13	
	1000	349	0.044	.106	6 - 10 - 18	26	5.08	165	10.9	26.5	1.9 - 3.2 - 5.5	47	45	42	31	26	17	
	1100	384	0.053	.129	7 - 11 - 19	29	5.59	181	13.2	32.0	2.3 - 3.5 - 5.8	49	47	45	34	30	20	
	200	109	0.005	.008	1 - 1 - 5	-	1.02	51	1.2	1.9	0.2 - 0.4 - 1.7	20	-	-	-	-	-	
10" Dia	300	164	0.011	.017	1 - 3 - 10	-	1.52	77	2.8	4.2	0.4 - 0.9 - 3.0	29	20	17	-	-	-	
	500	273	0.031	.047	4 - 8 - 16	14	2.54	129	7.8	11.7	1.1 - 2.5 - 4.9	40	33	31	16	-	-	
	600	327	0.045	.067	5 - 10 - 17	20	3.05	154	11.2	16.8	1.7 - 3.0 - 5.3	43	38	36	22	16	-	
	700	382	0.061	.092	7 - 11 - 19	25	3.56	180	15.3	22.9	2.3 - 3.5 - 5.7	47	42	40	28	22	12	
	800	436	0.080	.120	9 - 13 - 20	29	4.06	206	19.9	29.9	2.6 - 4.0 - 6.1	49	45	44	33	28	17	
	900	491	0.101	.152	10 - 15 - 21	33	4.57	232	25.2	37.8	3.0 - 4.5 - 6.5	52	48	47	37	32	20	
	1000	545	0.125	.187	11 - 16 - 23	36	5.08	257	31.2	46.7	3.3 - 4.9 - 6.9	54	51	50	40	36	24	
	1100	600	0.151	.227	12 - 17 - 24	39	5.59	283	37.7	56.5	3.6 - 5.1 - 7.2	56	53	53	44	40	27	
	200	157	0.009	.011	1 - 3 - 9	-	1.02	74	2.2	2.9	0.4 - 0.9 - 2.9	26	15	13	-	-	-	
	250	196	0.014	.018	2 - 4 - 12	-	1.27	93	3.5	4.5	0.6 - 1.3 - 3.6	30	21	19	-	-	-	
12" Dia	300	236	0.020	.026	3 - 6 - 14	-	1.52	111	5.0	6.4	0.9 - 1.9 - 4.3	34	25	24	-	-	-	
	400	314	0.036	.046	5 - 9 - 17	15	2.03	148	8.9	11.4	1.5 - 2.9 - 5.2	40	33	32	16	-	-	
	500	393	0.056	.072	8 - 12 - 19	22	2.54	185	14.0	17.8	2.4 - 3.6 - 5.8	45	38	38	23	17	-	
	600	471	0.081	.103	9 - 14 - 21	28	3.05	222	20.1	25.7	2.9 - 4.3 - 6.4	49	43	43	30	25	13	
	700	550	0.110	.140	11 - 16 - 23	33	3.56	259	27.4	35.0	3.3 - 4.9 - 6.9	52	47	47	35	31	18	
	800	628	0.144	.183	13 - 17 - 24	37	4.06	297	35.7	45.7	3.8 - 5.2 - 7.4	55	50	51	40	36	23	
	900	707	0.182	.232	14 - 18 - 26	41	4.57	334	45.2	57.8	4.3 - 5.5 - 7.8	57	53	54	44	41	26	
	100	107	0.003	.004	1 - 1 - 5	-	0.51	50	0.9	1.0	0.2 - 0.4 - 1.6	16	-	-	-	-	-	
	175	187	0.010	.012	2 - 4 - 11	-	0.89	88	2.6	3.1	0.5 - 1.2 - 3.4	27	16	15	-	-	-	
	250	267	0.021	.025	4 - 8 - 16	-	1.27	126	5.3	6.3	1.1 - 2.4 - 4.8	35	25	25	-	-	-	
14" Dia	325	347	0.036	.043	6 - 10 - 18	16	1.65	164	9.0	10.6	1.9 - 3.2 - 5.5	40	32	32	15	-	-	
	400	428	0.055	.065	9 - 13 - 20	22	2.03	202	13.6	16.1	2.6 - 3.9 - 6.1	45	37	38	22	16	-	
	475	508	0.077	.091	10 - 15 - 22	27	2.41	240	19.2	22.7	3.1 - 4.6 - 6.6	48	41	43	28	23	11	
	550	588	0.103	.122	12 - 17 - 23	32	2.79	277	25.7	30.4	3.6 - 5.0 - 7.1	52	45	47	33	28	16	
	625	668	0.133	.158	13 - 18 - 25	36	3.18	315	33.2	39.3	4.0 - 5.4 - 7.6	54	48	50	38	34	20	
	700	748	0.167	.198	15 - 19 - 26	39	3.56	353	41.7	49.3	4.5 - 5.7 - 8.0	57	51	53	42	38	23	

NOTES: Throw values are given for terminal velocities of 150, 100, and 50 FPM (0.75, 0.50, and 0.25 m/s). Throw values are given for isothermal conditions. NC values are based on octave band 2 - 7 sound power levels minus a room absorption of 10dB, re10⁻¹² 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. Blades are in horizontal full flow position; see page E1-79 for blade orientation. See selection software for performance data not shown, including octave band data.

1900SQS, 1900SQSI, 1900SQR Suggested Specification & Configuration**1900SQS, 1900SQSI, 1900SQR**

The architectural, square linear slot supply diffuser shall be Krueger model 1900SQS with 3/4" or 1" slot width of the sizes and frame styles shown on the drawings or job schedule. The 1900SQS shall be constructed of extruded aluminum and shall be available with 1 through 4 slots. The diffuser face shall require a ceiling tile provided by the ceiling contractor to match the ceiling system and fill out the face of the diffuser. The backpan shall be provided by the manufacturer and be constructed of 22 gage steel.

The pattern controllers for the 1900SQS diffuser shall be extruded aluminum and have an "inverted T" appearance after installation into the slot diffuser. "Clam Shell" or "Ice Tong" pattern controllers are not acceptable. The pattern deflectors shall be held in place by a blade holder constructed of spring steel and be removable from the linear diffuser without the use of special tools. The diffuser must be field adjustable for 1-way, 2-way, 3-way and 4-way horizontal discharge and vertical discharge.

Return models (1900SQR) of the architectural, square linear slot diffuser shall be made like the 1900SQS linear slot diffuser except without pattern controllers.

Optional internal insulation is available (1900SQSI) and shall be provided by the manufacturer.

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: (XXXXXXX)

1900SQS - Square Supply Linear Slot Diffuser
1900SQSI - Square Supply Linear Slot Diffuser with Insulation
1900SQR - Square Return Linear Slot Diffuser

2. MODULE SIZE: (XX)x(XX)

24"x24"

3. NECK DIMENSION: (XX)

8" - 14" in 2" Increments

4. NUMBER OF SLOTS: (X)

1, 2, 3, or 4

5. SLOT WIDTH: (XX)

75 - 3/4"
10 - 1"

6. FRAME STYLE: (XXX)

F23 - Lay-in T-Bar
F98 - Narrow T-Bar Ceiling Mount

7. DAMPER: (XXXXXX)

PR10 - Neck Mounted Damper
PRD10 - Duct Mounted Damper
PRN100 - Neck Mounted Radial Fan Blade

8. ACCESSORIES: (XXXX)

00 - None
PRSG - Round Straightening Grid

9. FINISH: (XX)

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