PERFORMANCE DATA

SDS with ½ in. Slot Width (SDS50) and Pressurized Ceiling Plenum (Non-Ducted)

Slots	Total Pressure (in. w.g.)	H V	0.005 0.003	0.019 0.012	0.043 0.029	0.075 0.050	0.117 0.080	0.170 0.144	0.225 0.155	0.290 0.200
1	Airflow (cfm/ft)		5	10	15	20	25	30	35	40
	Throw	H	1-1-2	1-2-9	2-5-11	4-9-13	7-10-14	9-10-15	9-11-16	10-12-18
	(ft.)	V	2	6	9	11	12	14	15	16
	Sound (NC)		-	-	-	17	23	29	33	38
2	Airflow (cfm/ft)		10	20	30	40	50	60	70	80
	Throw	H	1-1-4	2-4-12	5-9-15	8-12-17	10-14-19	12-15-21	13-16-23	14-17-24
	(ft.)	V	4	8	13	16	17	19	20	22
	Sound (NC)		-	-	-	22	28	34	38	43
3	Airflow (cfm/ft)		15	30	45	60	75	90	105	120
	Throw	H	1-2-7	3-7-15	7-11-18	10-15-21	13-16-23	15-18-25	16-19-27	27-21-29
	(ft.)	V	5	10	15	19	21	23	25	27
	Sound (NC)		-	-	16	25	31	37	41	46
4	Airflow (cfm/ft)		20	40	60	80	100	120	140	160
	Throw	H	1-2-9	4-9-17	9-13-21	12-17-24	15-19-27	17-21-29	19-23-32	20-24-34
	(ft.)	V	7	12	18	22	25	27	29	31
	Sound (NC)		-	-	18	27	33	39	43	48
5	Airflow (cfm/ft)		25	50	75	100	125	150	175	200
	Throw	H	1-3-10	6-10-19	10-15-23	13-19-27	17-22-30	20-24-33	21-26-35	23-27-38
	(ft.)	V	7	14	20	25	28	30	32	35
	Sound (NC)		-	-	19	28	34	40	44	49
6	Airflow (cfm/ft)		30	60	90	120	150	180	210	240
	Throw	H	2-4-11	7-11-21	11-16-26	15-21-29	18-24-33	21-26-36	23-28-39	24-30-42
	(ft.)	V	7	16	22	27	30	33	35	38
	Sound (NC)		-	-	20	29	35	41	45	50
7	Airflow (cfm/ft)		35	70	105	140	175	210	245	280
	Throw	H	3-6-16	8-11-23	12-18-28	16-23-32	20-26-36	23-28-39	25-30-42	26-32-45
	(ft.)	V	8	16	24	29	32	35	38	41
	Sound (NC)		-	-	21	30	36	42	46	51
8	Airflow (cfm/ft)		40	80	120	160	200	240	280	320
	Throw	H	3-6-13	8-12-24	13-19-29	17-25-34	22-27-38	24-30-42	26-32-45	28-35-48
	(ft.)	V	8	17	26	31	35	38	41	43
	Sound (NC)		-	-	22	31	37	43	47	52

* Non-ducted performance tables can be used to approximate performance data when contractor fabricated plenums are supplied. Plenums must be sized to achieve equal velocity along the slot length. Inlets should be sized to reduce additional contribution of sound or pressure drop.

NC Correction for Various Diffuser Lengths

Length, ft	1	2	4	8	9	10	15	20	25	30
Supply	-16	-11	-6	-3	-2	0	+3	+5	+6	+8
Return	-10	-7	-4	-2	-1	0	+2	+3	+4	+5

Example:
A model SDS 75 diffuser 4 slots wide and 15 feet long is selected for 1800 cfm of supply air. 1800 " 15 = 120 cfm per foot. From the performance chart, the NC value is 34. The NC correction for 15 feet of length for supply service is +3. The corrected NC value is 34 + 3 = 37.

Performance Notes:

1. Tested in accordance with ASHRAE Standard 70-2006 "Method of Testing for Rating the Performance of Air Outlets and Inlets."
2. All pressures are in in. w.g.
3. Throw values are based on a 3 ft long active section. When only 1 ft is active the values are 0.6 times those shown. For a 10 ft or continuous length the values are 1.8 times those shown.
4. Horizontal (H) throw is minimum to a terminal velocity of 150 fpm, middle to 100 fpm and maximum to 50 fpm.
5. Throw data is based on supply air and room air being at isothermal conditions.
6. Horizontal throw values are based on full-open, one direction.
7. Vertical (V) throw is to a terminal velocity of 50 fpm.
8. The NC values are based on a room absorption of 10 dB, re 10^{-12} watts and 10 ft active section. Th NC values are 11 lower with vertical projection.
9. Blanks "-" indicate an NC level below 15.

PERFORMANCE DATA

SDS with ¾ in. Slot Width (SDS75) and Pressurized Ceiling Plenum (Non-Ducted)

Slots	Total Pressure (in. w.g.)	H V	0.004 0.003	0.015 0.011	0.032 0.024	0.058 0.044	0.091 0.067	0.125 0.095	0.175 0.125	0.230 0.170
1	Airflow (cfm/ft)		6	12	18	24	30	36	42	48
	Throw	H	1-1-3	1-3-9	3-6-11	5-9-13	8-10-15	9-11-16	10-12-17	11-13-19
	(ft.)	V	2	6	10	12	14	15	16	17
	Sound (NC)		-	-	-	18	24	30	35	39
2	Airflow (cfm/ft)		12	24	36	48	60	72	84	96
	Throw	H	1-1-5	2-5-13	5-10-16	9-13-19	11-15-21	13-16-23	14-17-25	15-19-27
	(ft.)	V	4	9	14	17	19	21	23	24
	Sound (NC)		-	-	-	23	29	35	40	44
3	Airflow (cfm/ft)		18	36	54	72	90	108	126	144
	Throw	H	1-2-8	4-8-16	7-12-20	11-16-23	14-18-26	16-20-28	18-22-30	19-23-32
	(ft.)	V	6	11	17	21	23	26	28	30
	Sound (NC)		-	-	16	25	32	38	43	47
4	Airflow (cfm/ft)		24	48	72	96	120	144	168	192
	Throw	H	1-3-10	5-10-19	10-15-23	13-19-27	16-21-30	19-23-32	21-25-35	22-27-37
	(ft.)	V	6	13	19	24	27	30	32	34
	Sound (NC)		-	-	18	28	34	40	45	49
5	Airflow (cfm/ft)		30	60	90	120	150	180	210	240
	Throw	H	2-3-11	6-11-21	11-16-26	15-21-30	18-24-33	21-26-36	23-28-39	25-30-42
	(ft.)	V	7	14	21	27	30	33	36	38
	Sound (NC)		-	-	19	29	35	41	46	50
6	Airflow (cfm/ft)		36	72	108	144	180	216	252	288
	Throw	H	2-4-12	8-12-23	12-18-28	16-23-32	20-26-36	23-28-40	25-31-43	26-33-45
	(ft.)	V	8	15	24	30	33	36	39	42
	Sound (NC)		-	-	20	30	36	42	47	51
7	Airflow (cfm/ft)		42	84	126	168	210	252	294	336
	Throw	H	3-6-12	9-13-25	13-20-30	18-25-35	22-28-39	25-31-43	27-33-46	29-35-49
	(ft.)	V	8	16	24	32	36	39	42	45
	Sound (NC)		-	10	21	31	37	43	48	52
8	Airflow (cfm/ft)		48	96	144	192	240	288	336	384
	Throw	H	4-7-14	9-14-27	14-21-32	19-27-37	24-30-42	26-33-47	29-35-49	30-37-52
	(ft.)	V	8	16	24	33	38	42	45	48
	Sound (NC)		-	-	22	31	38	44	49	53

* Non-ducted performance tables can be used to approximate performance data when contractor fabricated plenums are supplied. Plenums must be sized to achieve equal velocity along the slot length. Inlets should be sized to reduce additional contribution of sound or pressure drop.

NC Correction for Various Diffuser Lengths

Length, ft	1	2	4	8	9	10	15	20	25	30
Supply	-16	-11	-6	-3	-2	0	+3	+5	+6	+8
Return	-10	-7	-4	-2	-1	0	+2	+3	+4	+5

Example:

A model SDS 75 diffuser 4 slots wide and 15 feet long is selected for 1800 cfm of supply air. 1800 " 15 = 120 cfm per foot. From the performance chart, the NC value is 34. The NC correction for 15 feet of length for supply service is +3. The corrected NC value is 34 + 3 = 37.

Performance Notes:

1. Tested in accordance with ASHRAE Standard 70-2006 "Method of Testing for Rating the Performance of Air Outlets and Inlets."
2. All pressures are in in. w.g.
3. Throw values are based on a 3 ft long active section. When only 1 ft is active the values are 0.6 times those shown. For a 10 ft or continuous length the values are 1.8 times those shown.
4. Horizontal (H) throw is minimum to a terminal velocity of 150 fpm, middle to 100 fpm and maximum to 50 fpm.
5. Throw data is based on supply air and room air being at isothermal conditions.
6. Horizontal throw values are based on full-open, one direction.
7. Vertical (V) throw is to a terminal velocity of 50 fpm.
8. The NC values are based on a room absorption of 10 dB, re 10^{-12} watts and 10 ft active section. Th NC values are 11 lower with vertical projection.
9. Blanks "-" indicate an NC level below 15.

PERFORMANCE DATA

SDS with 1 in. Slot Width (SDS100) and Pressurized Ceiling Plenum (Non-Ducted)

Slots	Total Pressure (in. w.g.)	H V	0.004 0.002	0.016 0.009	0.037 0.022	0.064 0.038	0.098 0.058	0.140 0.084	0.195 0.115	0.250 0.150
1	Airflow (cfm/ft)		8	16	24	32	40	48	56	64
	Throw	H	1-1-3	2-3-11	3-8-13	6-11-15	9-12-17	11-13-19	12-14-20	12-15-22
	(ft.)	V	2	8	12	14	15	17	419	19
	Sound (NC)		-	-	-	22	29	34	39	43
2	Airflow (cfm/ft)		16	32	48	64	80	96	112	128
	Throw	H	1-2-6	3-6-15	6-12-19	11-15-22	14-17-24	15-19-27	16-25-28	18-22-31
	(ft.)	V	5	11	16	19	22	24	26	28
	Sound (NC)		-	-	18	27	34	39	44	48
3	Airflow (cfm/ft)		24	48	72	96	120	144	168	192
	Throw	H	1-3-10	4-10-19	10-16-23	13-19-27	16-21-30	19-23-32	20-25-35	22-27-37
	(ft.)	V	7	13	20	24	27	29	32	34
	Sound (NC)		-	-	21	30	37	42	47	51
4	Airflow (cfm/ft)		32	64	86	128	160	192	224	256
	Throw	H	2-3-11	6-11-22	12-17-27	15-22-31	20-24-34	22-27-37	24-29-40	25-31-43
	(ft.)	V	8	15	23	28	31	34	36	39
	Sound (NC)		-	-	23	32	39	44	49	53
5	Airflow (cfm/ft)		40	80	120	160	200	240	280	320
	Throw	H	2-4-13	8-13-24	13-20-30	18-24-34	22-27-38	24-30-42	26-32-45	28-34-48
	(ft.)	V	9	17	25	31	34	38	41	43
	Sound (NC)		-	-	24	33	40	45	50	54
6	Airflow (cfm/ft)		48	96	144	192	240	288	336	384
	Throw	H	3-5-14	9-14-27	15-21-32	19-27-37	24-30-42	27-32-45	29-35-49	30-37-52
	(ft.)	V	9	19	28	34	38	41	45	48
	Sound (NC)		-	-	25	34	41	46	51	55
7	Airflow (cfm/ft)		56	112	168	224	280	336	392	448
	Throw	H	3-7-15	10-15-28	15-23-35	21-29-40	26-32-45	29-35-49	31-38-53	33-40-56
	(ft.)	V	10	20	30	36	41	45	48	52
	Sound (NC)		-	-	26	35	42	47	52	56
8	Airflow (cfm/ft)		64	128	192	256	320	384	448	512
	Throw	H	4-8-16	11-16-31	16-25-37	22-31-43	28-34-48	30-37-52	33-40-56	35-43-60
	(ft.)	V	11	22	32	39	43	48	52	55
	Sound (NC)		-	-	27	36	43	48	53	57

* Non-ducted performance tables can be used to approximate performance data when contractor fabricated plenums are supplied. Plenums must be sized to achieve equal velocity along the slot length. Inlets should be sized to reduce additional contribution of sound or pressure drop.

NC Correction for Various Diffuser Lengths

Length, ft	1	2	4	8	9	10	15	20	25	30
Supply	-16	-11	-6	-3	-2	0	+3	+5	+6	+8
Return	-10	-7	-4	-2	-1	0	+2	+3	+4	+5

Example:

A model SDS 75 diffuser 4 slots wide and 15 feet long is selected for 1800 cfm of supply air. 1800 " 15 = 120 cfm per foot. From the performance chart, the NC value is 34. The NC correction for 15 feet of length for supply service is +3. The corrected NC value is 34 + 3 = 37.

Performance Notes:

1. Tested in accordance with ASHRAE Standard 70-2006 "Method of Testing for Rating the Performance of Air Outlets and Inlets."
2. All pressures are in in. w.g.
3. Throw values are based on a 3 ft long active section. When only 1 ft is active the values are 0.6 times those shown. For a 10 ft or continuous length the values are 1.8 times those shown.
4. Horizontal (H) throw is minimum to a terminal velocity of 150 fpm, middle to 100 fpm and maximum to 50 fpm.
5. Throw data is based on supply air and room air being at isothermal conditions.
6. Horizontal throw values are based on full-open, one direction.
7. Vertical (V) throw is to a terminal velocity of 50 fpm.
8. The NC values are based on a room absorption of 10 dB, re 10^{-12} watts and 10 ft active section. Th NC values are 11 lower with vertical projection.
9. Blanks "-" indicate an NC level below 15.

PERFORMANCE DATA

SDS with 1 ½ in. Slot Width (SDS150) and Pressurized Ceiling Plenum (Non-Ducted)

Slots	Total Pressure (in. w.g.)	H V	0.016 0.007	0.037 0.017	0.058 0.028	0.085 0.043	0.119 0.062	0.161 0.086	0.216 0.119	0.271 0.154
1	Airflow (cfm/ft)		13	21	28	34	41	49	58	66
	Throw	H	1-3-8	3-7-12	6-9-13	7-10-15	9-11-16	10-12-18	11-13-19	12-14-20
	(ft.)	V	7	9	10	12	13	14	15	16
	Sound (NC)		-	-	18	25	30	35	40	44
2	Airflow (cfm/ft)		25	40	51	63	77	91	107	122
	Throw	H	2-4-9	4-7-14	6-9-17	8-11-19	9-14-21	11-16-23	13-18-25	15-19-27
	(ft.)	V	7	12	14	16	18	19	21	22
	Sound (NC)		-	-	20	27	32	37	42	46
3	Airflow (cfm/ft)		35	57	73	91	110	130	154	174
	Throw	H	2-4-10	4-8-15	7-10-20	8-12-22	10-15-24	12-18-26	14-20-29	16-22-30
	(ft.)	V	6	12	15	19	21	23	25	27
	Sound (NC)		-	-	22	28	33	38	43	47
4	Airflow (cfm/ft)		46	73	95	117	142	168	198	225
	Throw	H	2-4-10	4-8-17	7-11-21	9-13-24	11-16-26	13-19-29	15-22-31	17-23-33
	(ft.)	V	4	11	15	18	22	26	29	31
	Sound (NC)		-	15	22	29	34	39	44	48
5	Airflow (cfm/ft)		56	90	115	143	173	205	242	275
	Throw	H	2-4-11	4-9-18	7-12-23	10-14-25	12-17-28	14-20-30	16-23-33	18-25-35
	(ft.)	V	3	8	14	18	22	26	30	34
	Sound (NC)		-	16	23	29	35	40	45	49
6	Airflow (cfm/ft)		66	105	136	168	203	241	284	323
	Throw	H	2-3-12	4-9-19	7-12-24	10-15-26	12-18-29	15-22-31	17-24-34	20-26-36
	(ft.)	V	2	7	11	17	21	25	30	34
	Sound (NC)		-	16	24	30	36	41	45	49
7	Airflow (cfm/ft)		75	121	155	193	233	276	326	370
	Throw	H	1-3-13	4-9-20	6-13-24	10-16-27	13-20-29	16-23-32	18-25-35	21-26-37
	(ft.)	V	2	5	9	14	21	25	29	33
	Sound (NC)		-	17	24	30	36	41	46	50
8	Airflow (cfm/ft)		85	136	175	217	262	311	367	417
	Throw	H	1-3-13	4-8-21	6-14-24	10-17-27	14-21-30	16-23-32	19-25-35	22-26-37
	(ft.)	V	1	4	8	12	18	24	29	33
	Sound (NC)		-	17	25	31	36	41	46	50

Performance Notes:

1. Tested in accordance with ASHRAE Standard 70-2006 "Method of Testing for Rating the Performance of Air Outlets and Inlets".
2. All pressures are in in. w.g.
3. Throw values are based on a 3 ft long active section. When only 1 ft is active the values are 0.94 times those shown. For a 10 ft or continuous length the values are 1.33 times those shown.
4. Horizontal (H) throw is minimum to a terminal velocity of 150 fpm, middle to 100 fpm and maximum to 50 fpm.
5. Throw data is based on supply air and room air being at isothermal conditions.
6. Horizontal throw values are based on full-open, one direction.
7. Vertical (V) throw is to a terminal velocity of 50 fpm.
8. The NC values are based on a room absorption of 10 dB, re 10^{-12} watts and 10 ft active section. Th NC values are 11 lower with vertical projection.
9. Blanks "-" indicate an NC level below 15.

NC Correction for Various Diffuser Lengths

Length, ft	1	2	4	8	9	10	15	20	25	30
Supply	-18	-13	-8	-4	-2	0	+3	+5	+6	+8
Return	-12	-9	-7	-3	-1	0	+2	+3	+4	+5

* Non-ducted performance tables can be used to approximate performance data when contractor fabricated plenums are supplied. Plenums must be sized to achieve equal velocity along the slot length. Inlets should be sized to reduce additional contribuition of sound or pressure drop.

Example:

A model SDS150 diffusers 4 slots wide and 15 feet long is selected for 1425 cfm of supply air. 1425÷15 = 95 cfm per foot. From the performance chart, the NC value is 22. The NC correction for 15 feet of length for supply service is +3. The corrected NC value is 22 + 3 = 25.

PERFORMANCE DATA

SDS Return with ½ in. Slot Width (SDR50)

Slots	Negative Static Pressure (in. w.g.)	0.011	0.025	0.045	0.072	0.103	0.180	0.275	0.415
1	Flow Rate (cfm/ft)	10	15	20	25	30	40	50	60
	Sound (NC)	-	-	-	20	25	33	39	44
2	Flow Rate (cfm/ft)	20	30	40	50	60	80	100	120
	Sound (NC)	-	-	17	23	28	36	42	47
3	Flow Rate (cfm/ft)	30	45	60	75	90	120	150	180
	Sound (NC)	-	-	19	25	30	38	44	49
4	Flow Rate (cfm/ft)	40	60	80	100	120	160	200	240
	Sound (NC)	-	-	20	26	31	39	45	50
5	Flow Rate (cfm/ft)	50	75	100	125	150	200	250	300
	Sound (NC)	-	-	21	27	32	40	46	51
6	Flow Rate (cfm/ft)	60	90	120	150	180	240	300	360
	Sound (NC)	-	-	22	28	33	41	47	52
7	Flow Rate (cfm/ft)	70	105	140	175	210	280	350	420
	Sound (NC)	-	-	23	29	34	42	48	53
8	Flow Rate (cfm/ft)	80	120	160	200	240	320	400	480
	Sound (NC)	-	-	23	29	34	42	48	53

SDS Return with ¾ in. Slot Width (SDR75)

Slots	Negative Static Pressure (in. w.g.)	0.007	0.028	0.063	0.108	0.170	0.250	0.345	0.450
1	Flow Rate (cfm/ft)	10	20	30	40	50	60	70	80
	Sound (NC)	-	-	18	26	32	37	41	45
2	Flow Rate (cfm/ft)	20	40	60	80	100	120	140	160
	Sound (NC)	-	-	21	29	35	40	44	48
3	Flow Rate (cfm/ft)	30	60	90	120	150	180	210	240
	Sound (NC)	-	-	23	31	37	42	46	50
4	Flow Rate (cfm/ft)	40	80	120	160	200	240	280	320
	Sound (NC)	-	-	24	32	38	43	47	51
5	Flow Rate (cfm/ft)	50	100	150	200	250	300	350	400
	Sound (NC)	-	-	25	33	39	44	48	52
6	Flow Rate (cfm/ft)	60	120	180	240	300	360	420	480
	Sound (NC)	-	-	26	34	40	45	49	53
7	Flow Rate (cfm/ft)	70	140	210	280	350	420	490	560
	Sound (NC)	-	16	27	35	41	46	50	54
8	Flow Rate (cfm/ft)	80	160	240	320	400	480	560	640
	Sound (NC)	-	16	27	35	41	46	50	54

SDS Return with 1 in. Slot Width (SDR100)

Slots	Negative Static Pressure (in. w.g.)	0.018	0.040	0.070	0.108	0.160	0.215	0.280	0.450
1	Flow Rate (cfm/ft)	20	30	40	50	60	70	80	100
	Sound (NC)	-	-	19	25	30	34	38	44
2	Flow Rate (cfm/ft)	40	60	80	100	120	140	160	200
	Sound (NC)	-	-	22	28	33	37	41	47
3	Flow Rate (cfm/ft)	60	90	120	150	180	210	240	300
	Sound (NC)	-	16	24	30	35	39	43	49
4	Flow Rate (cfm/ft)	80	120	160	200	240	280	320	400
	Sound (NC)	-	17	25	31	36	40	44	50
5	Flow Rate (cfm/ft)	100	150	200	250	300	350	400	500
	Sound (NC)	-	18	26	32	37	41	45	51
6	Flow Rate (cfm/ft)	120	180	240	300	360	420	480	600
	Sound (NC)	-	19	27	33	38	42	46	52
7	Flow Rate (cfm/ft)	140	210	280	350	420	490	560	700
	Sound (NC)	-	20	28	34	39	43	47	53
8	Flow Rate (cfm/ft)	160	240	320	400	480	560	640	800
	Sound (NC)	-	20	28	34	39	43	47	53

Performance Notes:

1. Tested in accordance with ASHRAE Standard 70-2006 "Method of Testing for Rating the Performance of Air Outlets and Inlets."
2. All pressures are in w.g.
3. Noise Criteria (NC) values are based on a room absorp-tion of 10 dB, re 10^{-12} watts and 10 ft active section.
4. Blanks "-" indicate an NC level below 15.