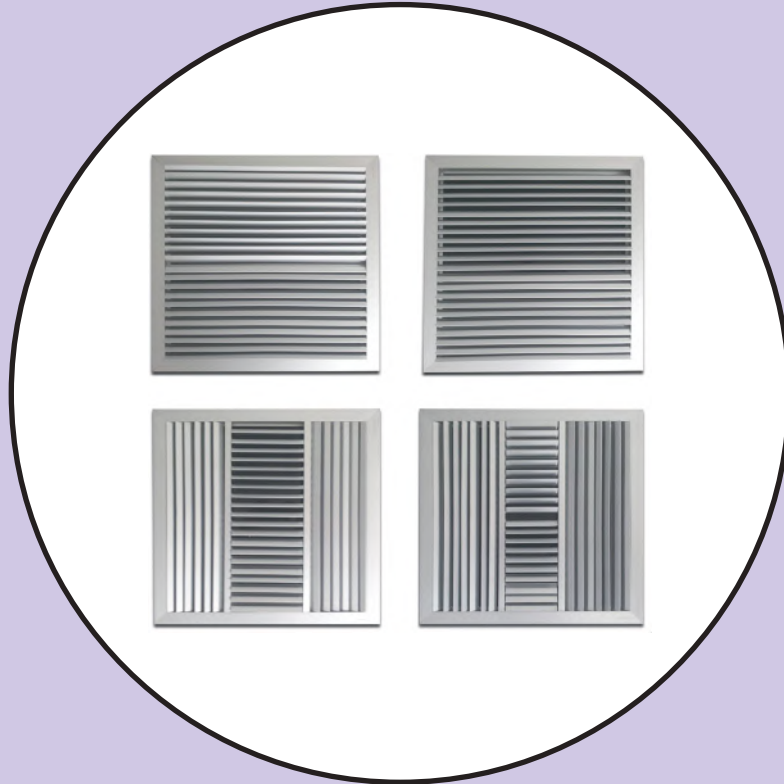


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شركة الخليج لفتحات التكييف المركزي

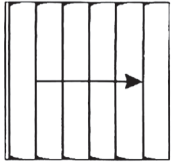
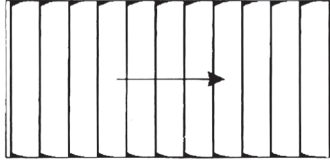
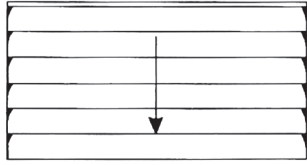
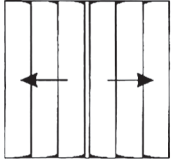
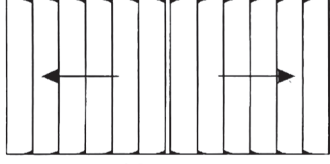
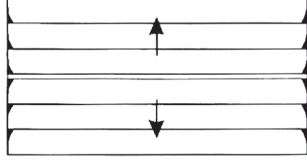
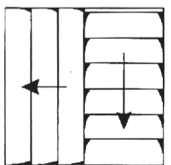
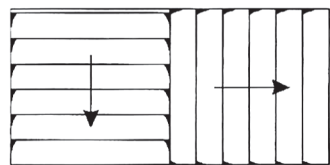
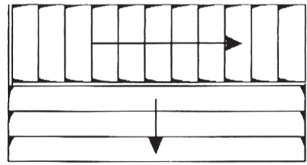
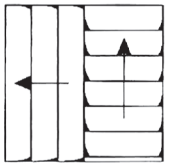
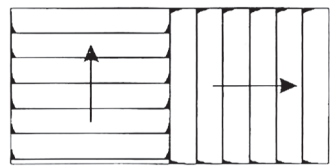
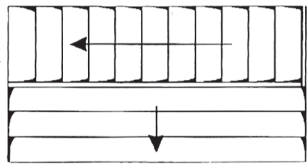
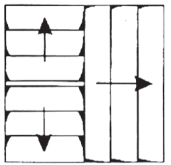
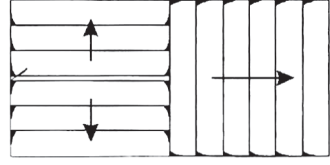
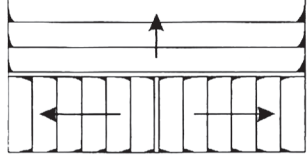
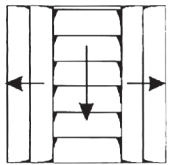
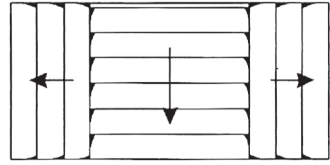
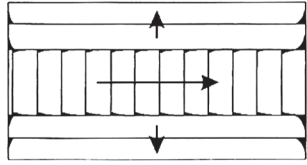
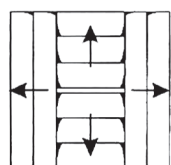
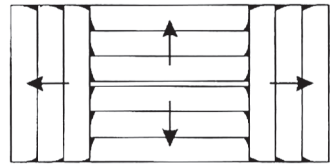
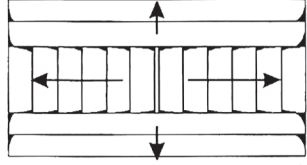
GULF GRILLES CO.



CEILING  
& SIDE WALL DIFFUSER

A05  
CEILING  
& SIDE WALL DIFFUSER

# CORE PATTERN PLAN VIEW

1 Way	 <p>SC13 - 1S</p>	 <p>SC13 - 1R</p>	 <p>SC13 - 1R</p>
2 Way	 <p>SC13 - 2S</p>	 <p>SC13 - 2R</p>	 <p>SC13 - 2R</p>
	 <p>SC13 - 2S</p>	 <p>SC13 - 2R</p>	 <p>SC13 - 2R</p>
	 <p>SC13 - 2S</p>	 <p>SC13 - 2R</p>	 <p>SC13 - 2R</p>
	 <p>SC13 - 3S</p>	 <p>SC13 - 3R</p>	 <p>SC13 - 3R</p>
3 Way	 <p>SC13 - 3S</p>	 <p>SC13 - 3R</p>	 <p>SC13 - 3R</p>
	 <p>SC13 - 4S</p>	 <p>SC13 - 4R</p>	 <p>SC13 - 4R</p>



SC13 - 1SD



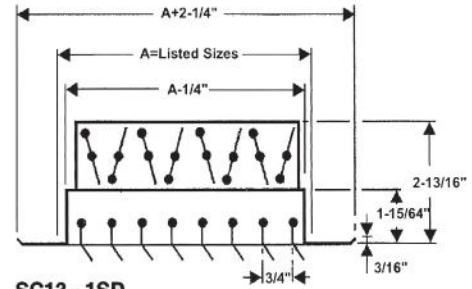
SC13 - 2SD



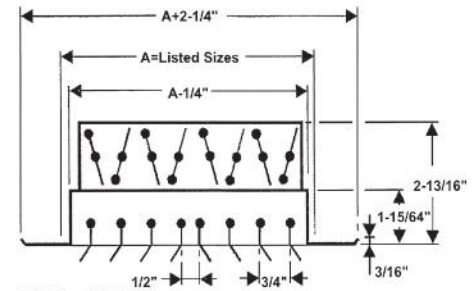
SC13 - 3SD



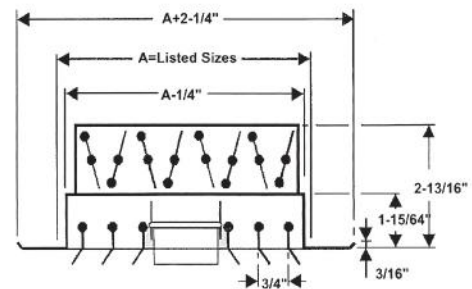
SC13 - 4SD



SC13 - 1SD



SC13 - 2SD



SC13 - 3SD; SC13 - 4SD

### PRODUCT DESCRIPTION

A Square Ceiling, high and low sidewall diffuser with multiple air flow patterns and with a volume control damper.

- The frame and blades are extruded aluminium alloy and electrostatic polyester powder coated with white finish.
- The frame and blades have a typical wall thickness of 1/16".
- Angle-curved blade which are permits individually adjustable (by hand) from horizontal to vertical, or in between, in locations where periodic changes are required.
- The diffuser projects 3/16" from the mounting surface.
- The unit size increases in 2 inches increments, beginning with 6 in. x 6 in. as the smallest available.

- The opposed blade damper section connects to the frame with screws and has a lever operated adjustment accessible through the face of the diffuser.
- The frame of the damper housing is separated from the blades with PVC bushings. This method of assembly helps eliminate corrosion and vibration.
- Standard finish white for frame and blades. Damper in black color. Painted under electrostatic polyester powder coated system. Other colors available on request. The polyester powder of highest quality are used to enhance the appearance of the units.
- Equalizing grid is provided as an option.

### Listed Sizes

Size	Horizontal		Vertical		CFM Range
	in.	(mm)	in.	(mm)	
6 x 6	6	(152.4)	6	(152.4)	20 - 200
8 x 8	8	(203.2)	8	(203.2)	35 - 350
10 x 10	10	(254.0)	10	(254.0)	60 - 620
12 x 12	12	(304.8)	12	(304.8)	85 - 870
14 x 14	14	(355.6)	14	(355.6)	125 - 1250

Size	Horizontal		Vertical		CFM Range
	in.	(mm)	in.	(mm)	
16 x 16	16	(406.4)	16	(406.4)	155 - 1530
18 x 18	18	(457.2)	18	(457.2)	210 - 2100
20 x 20	20	(508.0)	20	(508.0)	270 - 2680
22 x 22	22	(558.8)	22	(558.8)	315 - 3150
24 x 24	24	(609.6)	24	(609.6)	365 - 3650





SC13 - 1S



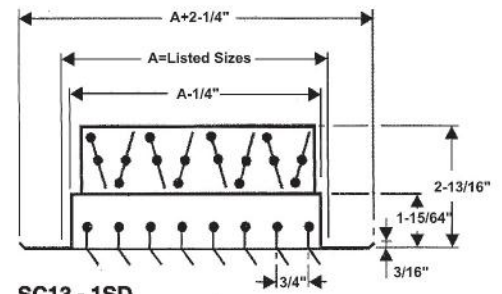
SC13 - 2S



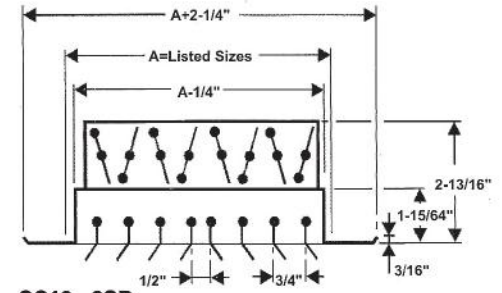
SC13 - 3S



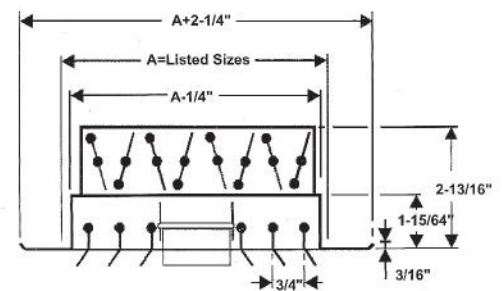
SC13 - 4S



SC13 - 1SD



SC13 - 2SD



SC13 - 3SD; SC13 - 4SD

### PRODUCT DESCRIPTION

A Square Ceiling, high and low sidewall diffuser with multiple air flow patterns and with a volume control damper.

- The frame and blades are extruded aluminium alloy and electrostatic polyester powder coated with white finish.
- The frame and blades have a typical wall thickness of 1/16".
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- The diffuser projects 3/16" from the mounting surface.
- The unit size increases in 2 inches increments, beginning with 6 in. x 6 in. as the smallest available.

- The opposed blade damper section connects to the frame with screws and has a lever operated adjustment accesible through the face of the diffuser.
- The frame of the damper housing is separated from the blades with PVC bushings. This method of assembly helps eliminate corrosion and vibration.
- Standard finish white for frame and blades. Damper in black color. Painted under electrostatic polyester powder coated system. Other colors available on request. The polyester powder of highest quality are used to enhance the appearance of the units.
- Equalizing grid is provided as an option.

### Listed Sizes

Size	Horizontal		Vertical		CFM Range
	in.	(mm)	in.	(mm)	
6 x 6	6	(152.4)	6	(152.4)	20 - 200
8 x 8	8	(203.2)	8	(203.2)	35 - 350
10 x 10	10	(254.0)	10	(254.0)	60 - 620
12 x 12	12	(304.8)	12	(304.8)	85 - 870
14 x 14	14	(355.6)	14	(355.6)	125 - 1250

Size	Horizontal		Vertical		CFM Range
	in.	(mm)	in.	(mm)	
16 x 16	16	(406.4)	16	(406.4)	155 - 1530
18 x 18	18	(457.2)	18	(457.2)	210 - 2100
20 x 20	20	(508.0)	20	(508.0)	270 - 2680
22 x 22	22	(558.8)	22	(558.8)	315 - 3150
24 x 24	24	(609.6)	24	(609.6)	365 - 3650



# CEILING AND SIDEWALL DIFFUSERS ENGINEERING DATA

**Throw:**

The horizontal distance in feet where the highest sustained velocity has been reduced to 50 feet per minute. The throw values shown are for the diffuser mounted to the ceiling. Throw values shown are based on isothermal air.

**Velocity:**

The average feet per minute on the tip of diffuser vanes as measured with an ALNOR Velometer with tip no. 2220A. A minimum of four readings should be taken at random over the diffuser and averaged.

**Total Pressure:**

Measured in inches of water gage(in. W.G.). Equals to the sum of static pressure plus velocity pressure.

**Selection Procedure**

The angle curved blades are fully adjustable for any discharge pattern from full horizontal to full vertical.

This can be accomplished without removing the diffuser from the ceiling or sidewall.

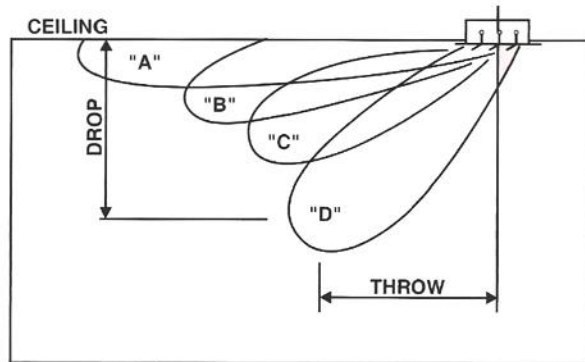
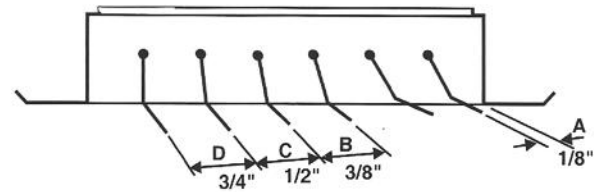
**Recommended Blade Settings**

The angle curved blade models offer maximum flexibility for controlling air discharge patterns in both direction and plane of delivery and throw. The blade setting provide some guidelines for establishing the proper discharge pattern for various applications.

Suggested Outlet Velocities for Various Installations				
Typical Applications	Recommended Maximum Ceiling Sidewall Diffuser Velocity in FPM			
	SUPPLY		RETURN	NC Range
	Sidewall	Ceiling		
Concert Halls Conference Rooms (large, 50 peoples) Mosques Executive Offices, Residences(subarbia) Residence (urban) T. V. Studios (Recording)	400 to 600	200 to 400	200	20-30
Conference Rooms (20 peoples) Hospital rooms (private) Hotel Rooms (Suites) Lecture Rooms, Libraries (study) Private Offices, School Rooms T. V. Studios (Audience)	650 to 800	600	400	30-35
Industrial Business Office Medium Size Offices Museums, Operating Rooms Public Libraries	900 to 1000	800	600	35-40
Drafting Rooms Engineering Offices (large) General Banking Areas Post Offices Restaurants (Dining Rooms)	1100 to 1200	1000	800	40-45
Department stores (Upper floors) Cafeterias Coliseums, Recreation Halls	1200 to 1400	1200	1000	45-50
Department stores (Main floors) Business Machine Areas	1500	1200	1000	50-55
Boiler Plants Factories Laundries Process Plants	1700	1200	1000	55 & Over

The NC values shown in the Performance Data are based upon a room absorption of 10dB, re 10<sup>12</sup> Watts.

**TABLE1** - Suggested outlet velocities for various installation



**Fig. 1** - Air pattern for various blade setting .

**Setting "A":-**

The selection data is based on a setting of 1/8" for 1, 2, 3 or 4 way patterns. Setting "A" produces an optimum horizontal air pattern flat against the ceiling surface for maximum throw.

**Setting "B":-** (Correct data tables for 1,2,3 or 4 way).

Blade setting "B" produces a slightly off-horizontal air pattern and shortened throw equal to about 75% of Setting "A". Data in tables 1,2,3 or 4 way should be corrected as follows:

- i) Throw x 0.75
- ii) Air stream drop = 15% of corrected throw value.
- iii) Total pressure x 0.70.
- iv) Sound level (NC) - 3.

## CEILING AND SIDEWALL DIFFUSERS ENGINEERING DATA

**Setting "C":**- (Correct data tables for 1,2,3 or 4 way).

Blade setting "C" produces a slightly off-horizontal air pattern and shortened throw equal to about 60% of Setting "A". Data in tables 1,2,3 or 4 way should be corrected as follows:

- i) Throw x 0.60
- ii) Air stream drop = 40% of corrected throw value.
- iii) Total pressure x 0.50.
- iv) Sound level (NC) - 6.

**Setting "D":**- (Correct data tables for 1,2,3 or 4 way).

Blade setting "D" produces a decidedly off-horizontal air pattern and shortened throw equal to about 50% of Setting "A". Data in tables 1,2,3 or 4 way should be corrected as follows:

- i) Throw x 0.50.
- ii) Air stream drop = 80% of corrected throw value.
- iii) Total pressure x 0.30.
- iv) Sound level (NC) - 7.

### Diffuser Selection Guidelines:

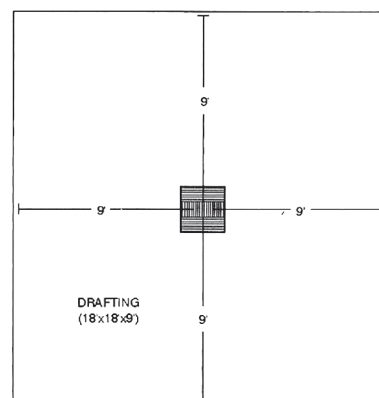
1. The diffuser or diffusers selected should deliver the necessary CFM for the area to be conditioned.
2. The throw should reach approximately 3/4 of the distance from outlet to opposite wall.
3. The core velocity should not exceed the recommended velocity for the application.
4. Using correct ceiling heights to prevent air stream from dropping into occupied zone. The occupied zone is generally thought of as 6 feet above floor level.
5. After determining CFM requirements, consult chart for the proper outlet size to satisfy the throw, ceiling height, total pressure and face velocity requirements.

Ceiling Height (ft)	Maximum Cooling Temperature Diff. (°F)	Max. CFM One Direction
8	52	150
10	58	350
12	60	525

**Table 2** - Recommended maximum air flow (CFM) per direction in relation to the height differential between the supply air and room air.

### Illustrative Problem:

A drafting area measuring 18 x 18 feet with a 9 foot high ceiling with the total air supply being 300 CFM.



The area has a square floor plan (18' x 18'), since the single 4 way outlet located at room center is desirable. The outlet selected must deliver 300 CFM at a velocity of 1000 FPM maximum, an NC level not exceeding NC 45 (from table 1) and maximum 9 foot throw (from table 2) in each of 4 directions. We find that a unit 16" x 16" diffuser will handle the required 300 CFM at 9 to 11 foot throw with a resulting noise level of NC <20, or well within design limitations.

**NOTE :** All performance data appearing in illustrative problem is based on blade setting "A" for optimum horizontal air pattern. See page 5-4, Recommended Blade Settings.

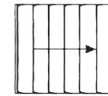
# SUPPLY AIR SQUARE CEILING AND SIDEWALL DIFFUSERS PERFORMANCE DATA



## SC13 Supply Square Ceiling and Sidewall Diffusers with Damper

## SC13 - 1SD (One Way)

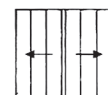
Size (inches)	Core Area (Sq. ft.)	Nominal Area (Sq. ft.)	Core Velocity										
			100	200	300	400	500	600	700	800	900	1000	
			Velocity Pressure	0.001	0.002	0.006	0.010	0.016	0.022	0.031	0.040	0.051	0.062
Total Pressure			0.003	0.014	0.031	0.056	0.090	0.131	0.175	0.225	0.290	0.355	
6 x 6	0.20	0.25	CFM	20	40	60	80	100	120	140	160	180	200
			THROW	-	-	9-14	11-18	14-22	16-26	19-30	21-34	24-38	26-42
			NC	-	-	<20	<20	22	27	31	34	37	40
8 x 8	0.35	0.44	CFM	35	70	105	140	175	210	245	280	315	350
			THROW	-	6-10	10-16	13-21	16-25	19-30	22-35	25-40	27-44	31-49
			NC	-	<20	<20	<20	24	29	33	37	39	42
10 x 10	0.62	0.69	CFM	60	125	185	250	310	370	435	495	560	620
			THROW	4-6	7-12	11-18	15-24	19-30	22-35	26-41	29-46	32-51	36-57
			NC	<20	<20	<20	21	27	32	36	39	42	45
12 x 12	0.87	1.00	CFM	85	175	260	350	435	520	610	695	785	870
			THROW	4-7	9-14	12-20	16-26	20-32	24-39	28-45	31-50	35-56	39-63
			NC	<20	<20	<20	22	28	33	37	40	43	46
14 x 14	1.25	1.36	CFM	125	250	375	500	625	750	875	1000	1125	1250
			THROW	5-8	9-15	14-22	18-29	22-35	26-42	30-48	34-55	39-62	43-69
			NC	<20	<20	<20	24	30	35	39	42	45	48
16 x 16	1.53	1.78	CFM	155	305	460	610	765	920	1070	1220	1380	1530
			THROW	5-8	10-16	14-23	19-30	23-37	27-44	32-51	36-58	41-65	46-73
			NC	<20	<20	<20	25	31	36	40	43	46	49
18 x 18	2.10	2.25	CFM	210	420	630	840	1050	1260	1470	1680	1890	2100
			THROW	6-9	11-17	16-25	21-33	25-40	30-48	34-55	39-62	44-70	50-80
			NC	<20	<20	<20	26	32	37	41	44	47	50
20 x 20	2.68	2.78	CFM	270	535	805	1070	1340	1610	1880	2140	2410	2680
			THROW	6-9	11-18	17-27	22-35	27-43	32-51	37-59	41-66	47-75	53-85
			NC	<20	<20	20	27	33	38	42	45	48	>50
22 x 22	3.15	3.36	CFM	315	630	945	1260	1580	1890	2200	2520	2840	3150
			THROW	6-10	12-19	18-28	22-36	28-45	33-53	39-62	43-69	49-79	56-89
			NC	<20	<20	20	28	34	39	43	46	49	>50
24 x 24	3.65	4.00	CFM	365	730	1100	1460	1820	2190	2560	2920	3280	3650
			THROW	6-10	12-20	18-29	23-37	29-46	34-55	40-64	45-72	51-82	57-92
			NC	<20	<20	21	29	35	39	43	47	50	>50



## SC13 Supply Square Ceiling and Sidewall Diffusers with Damper

## SC13 - 2SD (Two Way)

Size (inches)	Core Area (Sq. ft.)	Nominal Area (Sq. ft.)	Core Velocity										
			100	200	300	400	500	600	700	800	900	1000	
			Velocity Pressure	0.001	0.002	0.006	0.010	0.016	0.022	0.031	0.040	0.051	0.062
Total Pressure			0.003	0.014	0.031	0.056	0.090	0.131	0.175	0.225	0.290	0.355	
6 x 6	0.20	0.25	CFM	20	40	60	80	100	120	140	160	180	200
			THROW	-	-	7-11	9-15	11-18	14-22	16-25	18-29	20-32	22-35
			NC	-	-	<20	<20	22	27	31	34	37	40
8 x 8	0.35	0.44	CFM	35	70	105	140	175	210	245	280	315	350
			THROW	-	6-9	8-13	11-17	13-21	16-25	18-29	21-33	23-37	26-41
			NC	-	<20	<20	<20	24	29	33	37	39	42
10 x 10	0.62	0.69	CFM	60	125	185	250	310	370	435	495	560	620
			THROW	3-5	6-10	9-15	12-20	16-25	18-29	21-34	24-38	27-43	29-47
			NC	<20	<20	<20	21	27	32	36	39	42	45
12 x 12	0.87	1.00	CFM	85	175	260	350	435	520	610	695	785	870
			THROW	4-6	7-11	11-17	14-22	17-27	20-32	23-37	26-42	29-47	32-52
			NC	<20	<20	<20	22	28	33	37	40	43	46
14 x 14	1.25	1.36	CFM	125	250	375	500	625	750	875	1000	1125	1250
			THROW	4-6	7-12	11-18	15-24	19-30	22-35	26-41	29-46	32-51	36-57
			NC	<20	<20	<20	24	30	35	39	42	45	48
16 x 16	1.53	1.78	CFM	155	305	460	610	765	920	1070	1220	1380	1530
			THROW	4-7	8-13	12-19	16-25	20-32	23-37	27-43	30-48	34-55	37-60
			NC	<20	<20	<20	25	31	36	40	43	46	49
18 x 18	2.10	2.25	CFM	210	420	630	840	1050	1260	1470	1680	1890	2100
			THROW	4-7	9-14	13-21	18-28	21-34	25-40	29-46	32-52	37-59	41-66
			NC	<20	<20	<20	26	32	37	41	44	47	50
20 x 20	2.68	2.78	CFM	270	535	805	1070	1340	1610	1880	2140	2410	2680
			THROW	5-8	9-15	14-22	18-29	22-36	30-48	31-49	35-56	39-62	44-70
			NC	<20	<20	20	27	33	38	42	45	48	>50
22 x 22	3.15	3.36	CFM	315	630	945	1260	1580	1890	2200	2520	2840	3150
			THROW	5-8	10-16	15-24	19-30	24-38	28-45	32-51	36-58	41-65	46-73
			NC	<20	<20	20	28	34	39	43	46	49	>50
24 x 24	3.65	4.00	CFM	365	730	1100	1460	1820	2190	2560	2920	3280	3650
			THROW	5-8	10-16	15-24	20-32	24-39	29-46	34-54	37-60	42-68	48-76
			NC	<20	<20	21	29	35	39	43	47	50	>50



- Core Velocity in feet per minute.
- All pressures are in inches of water.
- Throw Data in feet, based on isothermal air at 100 and 50 FPM terminal velocity.
- NC data based on a room absorption of 10dB, re 10<sup>-12</sup> Watts.
- These data based on an opening of about 1/8 inch between the border and the adjacent blade, progressively wider spacings between blades farther away from the border. This setting discharges the air parallel to the face of the diffuser. (Horizontal discharge if installed in a ceiling).
- - Denotes NC values less than 10 and CFM values less than 50.



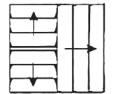
# SUPPLY AIR SQUARE CEILING AND SIDEWALL DIFFUSERS PERFORMANCE DATA



**SC13 Supply Square Ceiling and Sidewall Diffusers with Damper**

**SC13 - 3SD (Three Way)**

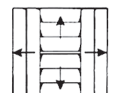
Size (inches)	Core Area (Sq. ft.)	Nominal Area (Sq. ft.)	Core Velocity										
			Velocity Pressure	100	200	300	400	500	600	700	800	900	1000
			Total Pressure	0.001	0.002	0.006	0.010	0.016	0.022	0.031	0.040	0.051	0.062
6 x 6	0.20	0.25	CFM	20	40	60	80	100	120	140	160	180	200
			THROW	-	-	6-10	9-14	10-16	12-20	14-23	16-26	18-29	20-32
			NC	-	-	<20	<20	22	27	31	34	37	40
8 x 8	0.35	0.44	CFM	35	70	105	140	175	210	245	280	315	350
			THROW	-	5-8	7-12	9-15	12-19	14-23	16-26	19-30	21-33	23-37
			NC	-	<20	<20	<20	24	29	33	37	39	42
10 x 10	0.62	0.69	CFM	60	125	185	250	310	370	435	495	560	620
			THROW	3-5	6-9	9-14	11-18	14-22	17-27	19-31	21-34	24-39	27-43
			NC	<20	<20	<20	21	27	32	36	39	42	45
12 x 12	0.87	1.00	CFM	85	175	260	350	435	520	610	695	785	870
			THROW	3-5	6-10	9-15	12-20	16-25	18-29	21-33	24-38	26-42	29-47
			NC	<20	<20	<20	22	28	33	37	40	43	46
14 x 14	1.25	1.36	CFM	125	250	375	500	625	750	875	1000	1125	1250
			THROW	4-6	7-11	10-16	14-22	17-27	20-32	23-37	26-41	29-46	32-51
			NC	<20	<20	<20	24	30	35	39	42	45	48
16 x 16	1.53	1.78	CFM	155	305	460	610	765	920	1070	1220	1380	1530
			THROW	4-6	7-12	11-17	14-23	18-28	21-33	24-39	27-44	31-49	34-54
			NC	<20	<20	<20	25	31	36	40	43	46	49
18 x 18	2.10	2.25	CFM	210	420	630	840	1050	1260	1470	1680	1890	2100
			THROW	4-7	8-13	12-19	16-25	19-30	22-36	26-42	29-47	33-53	37-59
			NC	<20	<20	<20	26	32	37	41	44	47	50
20 x 20	2.68	2.78	CFM	270	535	805	1070	1340	1610	1880	2140	2410	2680
			THROW	4-7	9-14	12-20	16-26	21-33	24-39	28-45	31-50	36-57	39-63
			NC	<20	<20	20	27	33	38	42	45	48	>50
22 x 22	3.15	3.36	CFM	315	630	945	1260	1580	1890	2200	2520	2840	3150
			THROW	4-7	9-14	13-21	17-27	21-34	25-40	29-46	32-52	37-59	41-66
			NC	<20	<20	20	28	34	39	43	46	49	>50
24 x 24	3.65	4.00	CFM	365	730	1100	1460	1820	2190	2560	2920	3280	3650
			THROW	5-8	9-15	14-22	18-28	22-35	26-42	30-48	34-55	38-61	42-68
			NC	<20	<20	21	29	35	39	43	47	50	>50



**SC13 Supply Square Ceiling and Sidewall Diffusers with Damper**

**SC13 - 4SD (Four Way)**

Size (inches)	Core Area (Sq. ft.)	Nominal Area (Sq. ft.)	Core Velocity										
			Velocity Pressure	100	200	300	400	500	600	700	800	900	1000
			Total Pressure	0.001	0.002	0.006	0.010	0.016	0.022	0.031	0.040	0.051	0.062
6 x 6	0.20	0.25	CFM	20	40	60	80	100	120	140	160	180	200
			THROW	-	-	6-9	8-13	9-15	11-18	13-21	15-24	17-27	18-29
			NC	-	-	<20	<20	22	27	31	34	37	40
8 x 8	0.35	0.44	CFM	35	70	105	140	175	210	245	280	315	350
			THROW	-	4-7	7-11	9-15	11-18	13-21	16-25	18-28	19-31	21-34
			NC	-	<20	<20	<20	24	29	33	37	39	42
10 x 10	0.62	0.69	CFM	60	125	185	250	310	370	435	495	560	620
			THROW	3-4	6-9	8-13	11-17	13-21	16-25	18-28	20-32	22-36	25-40
			NC	<20	<20	<20	21	27	32	36	39	42	45
12 x 12	0.87	1.00	CFM	85	175	260	350	435	520	610	695	785	870
			THROW	3-5	6-9	9-14	12-19	14-23	17-27	19-31	22-35	24-39	27-43
			NC	<20	<20	<20	22	28	33	37	40	43	46
14 x 14	1.25	1.36	CFM	125	250	375	500	625	750	875	1000	1125	1250
			THROW	3-5	6-10	9-15	12-20	16-25	18-29	21-34	24-38	27-43	29-47
			NC	<20	<20	<20	24	30	35	39	42	45	48
16 x 16	1.53	1.78	CFM	155	305	460	610	765	920	1070	1220	1380	1530
			THROW	4-6	7-11	10-16	13-21	16-26	19-31	22-36	25-40	28-45	31-50
			NC	<20	<20	<20	25	31	36	40	43	46	49
18 x 18	2.10	2.25	CFM	210	420	630	840	1050	1260	1470	1680	1890	2100
			THROW	4-6	7-12	11-18	14-23	18-28	21-34	24-39	27-44	31-49	34-55
			NC	<20	<20	<20	26	32	37	41	44	47	50
20 x 20	2.68	2.78	CFM	270	535	805	1070	1340	1610	1880	2140	2410	2680
			THROW	4-7	8-13	12-19	16-25	19-30	22-36	26-42	29-47	32-52	37-59
			NC	<20	<20	20	27	33	38	42	45	48	>50
22 x 22	3.15	3.36	CFM	315	630	945	1260	1580	1890	2200	2520	2840	3150
			THROW	4-7	8-13	12-19	16-26	19-31	23-37	27-43	31-49	34-55	39-62
			NC	<20	<20	20	28	34	39	43	46	49	>50
24 x 24	3.65	4.00	CFM	365	730	1100	1460	1820	2190	2560	2920	3280	3650
			THROW	4-7	9-14	12-20	17-27	21-33	24-39	28-45	31-50	36-57	40-64
			NC	<20	<20	21	29	35	39	43	47	50	>50



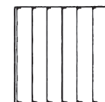
- Core Velocity in feet per minute.
- All pressures are in inches of water.
- Throw Data in feet, based on isothermal air at 100 and 50 FPM terminal velocity.
- NC data based on a room absorption of 10dB, re 10<sup>-12</sup> Watts.
- These data based on an opening of about 1/8 inch between the border and the adjacent blade, progressively wider spacings between blades farther away from the border. This setting discharges the air parallel to the face of the diffuser. (Horizontal discharge if installed in a ceiling).
- - Denotes NC values less than 10 and CFM values less than 50.

## RETURN AIR SQUARE CEILING AND SIDEWALL DIFFUSERS PERFORMANCE DATA

### SC13 Return Square Ceiling and Sidewall Diffusers without Damper

### SC13 - 1S (One Way)

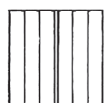
Size (inches)	Core Area (Sq. ft.)	Nominal Area (Sq. ft.)	Core Velocity		100	200	300	400	500	600	700	800	900	1000
			Velocity Pressure		0.001	0.002	0.006	0.010	0.016	0.022	0.031	0.040	0.051	0.062
			Negative SP		0.007	0.034	0.076	0.137	0.220	0.320	0.427	0.559	0.707	0.866
6 x 6	0.20	0.25	CFM		20	40	60	80	100	120	140	160	180	200
			NC		-	-	<20	<20	21	25	30	33	36	39
8 x 8	0.35	0.44	CFM		35	70	105	140	175	210	245	280	315	350
			NC		-	<20	<20	<20	23	28	32	36	38	41
10 x 10	0.62	0.69	CFM		60	125	185	250	310	370	435	495	560	620
			NC		<20	<20	<20	20	26	31	35	38	41	44
12 x 12	0.87	1.00	CFM		85	175	260	350	435	520	610	695	785	870
			NC		<20	<20	<20	21	27	32	36	39	42	45
14 x 14	1.25	1.36	CFM		125	250	375	500	625	750	875	1000	1125	1250
			NC		<20	<20	<20	23	29	34	38	41	44	47
16 x 16	1.53	1.78	CFM		155	305	460	610	765	920	1070	1220	1380	1530
			NC		<20	<20	<20	24	30	35	39	42	45	48
18 x 18	2.10	2.25	CFM		210	420	630	840	1050	1260	1470	1680	1890	2100
			NC		<20	<20	<20	25	31	36	40	43	46	49
20 x 20	2.68	2.78	CFM		270	535	805	1070	1340	1610	1880	2140	2410	2680
			NC		<20	<20	<20	26	32	37	41	44	47	50
22 x 22	3.15	3.36	CFM		315	630	945	1260	1580	1890	2200	2520	2840	3150
			NC		<20	<20	<20	27	33	38	42	45	48	>50
24 x 24	3.65	4.00	CFM		365	730	1100	1460	1820	2190	2560	2920	3280	3650
			NC		<20	<20	20	28	34	38	42	46	49	>50



### SC13 Return Square Ceiling and Sidewall Diffusers without Damper

### SC13 - 2S (Two Way)

Size (inches)	Core Area (Sq. ft.)	Nominal Area (Sq. ft.)	Core Velocity		100	200	300	400	500	600	700	800	900	1000
			Velocity Pressure		0.001	0.002	0.006	0.010	0.016	0.022	0.031	0.040	0.051	0.062
			Negative SP		0.008	0.039	0.086	0.156	0.250	0.364	0.486	0.625	0.806	0.986
6 x 6	0.20	0.25	CFM		20	40	60	80	100	120	140	160	180	200
			NC		-	-	<20	<20	21	25	30	33	36	39
8 x 8	0.35	0.44	CFM		35	70	105	140	175	210	245	280	315	350
			NC		-	<20	<20	<20	23	28	32	36	38	41
10 x 10	0.62	0.69	CFM		60	125	185	250	310	370	435	495	560	620
			NC		<20	<20	<20	20	26	31	35	38	41	44
12 x 12	0.87	1.00	CFM		85	175	260	350	435	520	610	695	785	870
			NC		<20	<20	<20	21	27	32	36	39	42	45
14 x 14	1.25	1.36	CFM		125	250	375	500	625	750	875	1000	1125	1250
			NC		<20	<20	<20	23	29	34	38	41	44	47
16 x 16	1.53	1.78	CFM		155	305	460	610	765	920	1070	1220	1380	1530
			NC		<20	<20	<20	24	30	35	39	42	45	48
18 x 18	2.10	2.25	CFM		210	420	630	840	1050	1260	1470	1680	1890	2100
			NC		<20	<20	<20	25	31	36	40	43	46	49
20 x 20	2.68	2.78	CFM		270	535	805	1070	1340	1610	1880	2140	2410	2680
			NC		<20	<20	<20	26	32	37	41	44	47	50
22 x 22	3.15	3.36	CFM		315	630	945	1260	1580	1890	2200	2520	2840	3150
			NC		<20	<20	<20	27	33	38	42	45	48	>50
24 x 24	3.65	4.00	CFM		365	730	1100	1460	1820	2190	2560	2920	3280	3650
			NC		<20	<20	20	28	34	38	42	46	49	>50



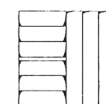
- Core Velocity in feet per minute.
- All pressures are in inches of water.
- NC data based upon 10dB room attenuation.
- Negative SP is Negative Static Pressure.
- - Denotes NC values less than 10 and CFM values less than 50.

## RETURN AIR SQUARE CEILING AND SIDEWALL DIFFUSERS PERFORMANCE DATA

SC13 Return Square Ceiling and Sidewall Diffusers without Damper

SC13 - 3S (Three Way)

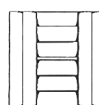
Size (inches)	Core Area (Sq. ft.)	Nominal Area (Sq. ft.)	Core Velocity										
			100	200	300	400	500	600	700	800	900	1000	
			Velocity Pressure	0.001	0.002	0.006	0.010	0.016	0.022	0.031	0.040	0.051	0.062
Negative SP			0.007	0.035	0.075	0.140	0.225	0.328	0.438	0.563	0.725	0.888	
6 x 6	0.20	0.25	CFM	20	40	60	80	100	120	140	160	180	200
			NC	-	-	<20	<20	21	25	30	33	36	39
8 x 8	0.35	0.44	CFM	35	70	105	140	175	210	245	280	315	350
			NC	-	<20	<20	<20	23	28	32	36	38	41
10 x 10	0.62	0.69	CFM	60	125	185	250	310	370	435	495	560	620
			NC	<20	<20	<20	20	26	31	35	38	41	44
12 x 12	0.87	1.00	CFM	85	175	260	350	435	520	610	695	785	870
			NC	<20	<20	<20	21	27	32	36	39	42	45
14 x 14	1.25	1.36	CFM	125	250	375	500	625	750	875	1000	1125	1250
			NC	<20	<20	<20	23	29	34	38	41	44	47
16 x 16	1.53	1.78	CFM	155	305	460	610	765	920	1070	1220	1380	1530
			NC	<20	<20	<20	24	30	35	39	42	45	48
18 x 18	2.10	2.25	CFM	210	420	630	840	1050	1260	1470	1680	1890	2100
			NC	<20	<20	<20	25	31	36	40	43	46	49
20 x 20	2.68	2.78	CFM	270	535	805	1070	1340	1610	1880	2140	2410	2680
			NC	<20	<20	<20	26	32	37	41	44	47	50
22 x 22	3.15	3.36	CFM	315	630	945	1260	1580	1890	2200	2520	2840	3150
			NC	<20	<20	<20	27	33	38	42	45	48	>50
24 x 24	3.65	4.00	CFM	365	730	1100	1460	1820	2190	2560	2920	3280	3650
			NC	<20	<20	20	28	34	38	42	46	49	>50



SC13 Return Square Ceiling and Sidewall Diffusers without Damper

SC13 - 4S (Four Way)

Size (inches)	Core Area (Sq. ft.)	Nominal Area (Sq. ft.)	Core Velocity										
			100	200	300	400	500	600	700	800	900	1000	
			Velocity Pressure	0.001	0.002	0.006	0.010	0.016	0.022	0.031	0.040	0.051	0.062
Negative SP			0.010	0.040	0.088	0.160	0.257	0.374	0.500	0.643	0.829	0.998	
6 x 6	0.20	0.25	CFM	20	40	60	80	100	120	140	160	180	200
			NC	-	-	<20	<20	21	25	30	33	36	39
8 x 8	0.35	0.44	CFM	35	70	105	140	175	210	245	280	315	350
			NC	-	<20	<20	<20	23	28	32	36	38	41
10 x 10	0.62	0.69	CFM	60	125	185	250	310	370	435	495	560	620
			NC	<20	<20	<20	20	26	31	35	38	41	44
12 x 12	0.87	1.00	CFM	85	175	260	350	435	520	610	695	785	870
			NC	<20	<20	<20	21	27	32	36	39	42	45
14 x 14	1.25	1.36	CFM	125	250	375	500	625	750	875	1000	1125	1250
			NC	<20	<20	<20	23	29	34	38	41	44	47
16 x 16	1.53	1.78	CFM	155	305	460	610	765	920	1070	1220	1380	1530
			NC	<20	<20	<20	24	30	35	39	42	45	48
18 x 18	2.10	2.25	CFM	210	420	630	840	1050	1260	1470	1680	1890	2100
			NC	<20	<20	<20	25	31	36	40	43	46	49
20 x 20	2.68	2.78	CFM	270	535	805	1070	1340	1610	1880	2140	2410	2680
			NC	<20	<20	<20	26	32	37	41	44	47	50
22 x 22	3.15	3.36	CFM	315	630	945	1260	1580	1890	2200	2520	2840	3150
			NC	<20	<20	<20	27	33	38	42	45	48	>50
24 x 24	3.65	4.00	CFM	365	730	1100	1460	1820	2190	2560	2920	3280	3650
			NC	<20	<20	20	28	34	38	42	46	49	>50



- Core Velocity in feet per minute.
- All pressures are in inches of water.
- NC data based upon 10dB room attenuation.
- Negative SP is Negative Static Pressure.
- - Denotes NC values less than 10 and CFM values less than 50.





SC13 - 1RD



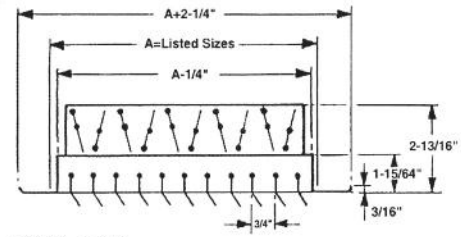
SC13 - 2RD



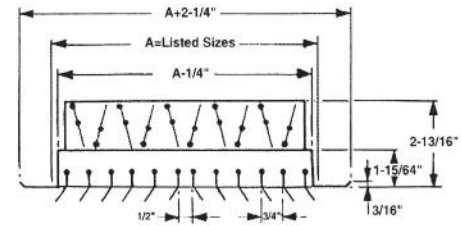
SC13 - 3RD



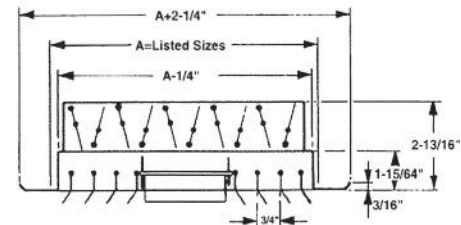
SC13 - 4RD



SC13 - 1RD



SC13 - 2RD



SC13 - 3RD - SC13 - 4RD

## PRODUCT DESCRIPTION

- A Rectangular Ceiling, high and low sidewall diffuser with multiple airflow patterns and with a volume control damper.
- The frame and blades are extruded aluminium alloy and electrostatic polyester powder coated with white finish.
- The frame and blades have a typical wall thickness of 1/16".
- Angle-curved blade which are permits individually adjustable (by hand) from horizontal to vertical, or in between, in locations where periodic changes are required.
- The diffuser projects 3/16" from the mounting surface.

- The unit size increases in 2 inches increments beginning with 6 in. x 4 in. as the smallest available.
- The opposed blade damper section connects to the frame with screws and has a lever operated adjustment accessible through the face of the diffuser.
- The frame of the damper housing is separated from the blades with PVC bushings. This method of assembly helps eliminate corrosion and vibration.
- Standard finish white for frame and blades. Damper in black color. Painted under electrostatic polyester powder coated system. Other colors available on request. The polyester powder of highest quality are used to enhance the appearance of the units.
- Equalizing grid is provided as an option.

## Listed Sizes

Size (inches)	CFM (range)	Size (inches)	CFM (range)	Size (inches)	CFM (range)	Size (inches)	CFM (range)
6 x 4	10 - 120	24 x 4	55 - 550	20 x 6	70 - 700	20 x 8	100 - 1020
8 x 4	15 - 160	30 x 4	70 - 700	24 x 6	80 - 810	24 x 8	115 - 1150
10 x 4	20 - 200	36 x 4	80 - 810	30 x 6	100 - 1020	30 x 8	155 - 1530
12 x 4	25 - 260	8 x 6	25 - 260	36 x 6	125 - 1250	36 x 8	180 - 1820
14 x 4	30 - 300	10 x 6	35 - 350	10 x 8	45 - 450	12 x 10	70 - 700
16 x 4	35 - 350	12 x 6	40 - 400	14 x 8	70 - 700	14 x 10	80 - 810
18 x 4	40 - 400	14 x 6	45 - 450	16 x 8	80 - 810	16 x 10	100 - 1020
20 x 4	45 - 450	18 x 6	60 - 620	18 x 8	85 - 870	18 x 10	115 - 1150

Size (inches)	CFM (range)	Size (inches)	CFM (range)	Size (inches)	CFM (range)	Size (inches)	CFM (range)
20 x 10	125 - 1250	24 x 12	180 - 1820	36 x 14	315 - 3150	30 x 18	365 - 3650
24 x 10	155 - 1530	30 x 12	235 - 2350	18 x 16	180 - 1820	36 x 18	405 - 4050
30 x 10	180 - 1820	36 x 12	270 - 2680	20 x 16	210 - 2100	24 x 20	315 - 3150
36 x 10	235 - 2350	16 x 14	135 - 1350	24 x 16	235 - 2350	30 x 20	405 - 4050
14 x 12	100 - 1020	18 x 14	155 - 1530	30 x 16	315 - 3150	36 x 20	470 - 4720
16 x 12	115 - 1150	20 x 14	180 - 1820	36 x 16	365 - 3650	30 x 24	470 - 4720
18 x 12	135 - 1350	24 x 14	210 - 2100	20 x 18	235 - 2350	36 x 24	580 - 5820
20 x 12	155 - 1530	30 x 14	270 - 2680	24 x 18	270 - 2680	36 x 30	715 - 7170



SC13 - 1R



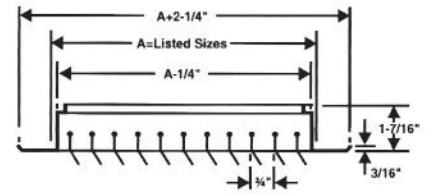
SC13 - 2R



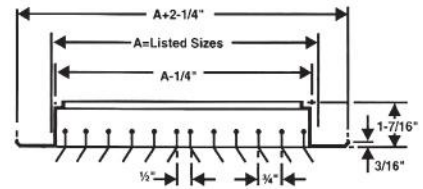
SC13 - 3R



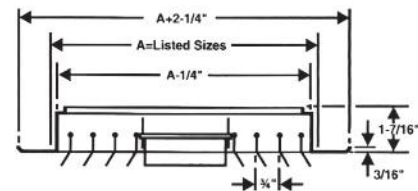
SC13 - 4R



SC13 - 1R



SC13 - 2R



SC13 - 3R - SC13 - 4R

### PRODUCT DESCRIPTION

A Rectangular Ceiling, high and low sidewall diffuser with multiple airflow patterns but with no volume control damper.

- The frame and blades are extruded aluminium alloy and electrostatic polyester powder coated with white finish.
- The frame and blades have a typical wall thickness of 1/16".
- Angle-curved blade which are permits individually adjustable (by hand) from horizontal to vertical, or in between, in locations where periodic changes are required.

- The diffuser projects 3/16" from the mounting surface.
- The unit size increases in 2 inches increments beginning with 6 in. x 4 in. as the smallest available.
- Standard finish white for frame and blades. Painted under electrostatic polyester powder coated system. Other colors available on request. The polyester powder of highest quality are used to enhance the appearance of the units.

### Listed Sizes

Size (inches)	CFM (range)	Size (inches)	CFM (range)	Size (inches)	CFM (range)	Size (inches)	CFM (range)
6 x 4	10 - 120	24 x 4	55 - 550	20 x 6	70 - 700	20 x 8	100 - 1020
8 x 4	15 - 160	30 x 4	70 - 700	24 x 6	80 - 810	24 x 8	115 - 1150
10 x 4	20 - 200	36 x 4	80 - 810	30 x 6	100 - 1020	30 x 8	155 - 1530
12 x 4	25 - 260	8 x 6	25 - 260	36 x 6	125 - 1250	36 x 8	180 - 1820
14 x 4	30 - 300	10 x 6	35 - 350	10 x 8	45 - 450	12 x 10	70 - 700
16 x 4	35 - 350	12 x 6	40 - 400	14 x 8	70 - 700	14 x 10	80 - 810
18 x 4	40 - 400	14 x 6	45 - 450	16 x 8	80 - 810	16 x 10	100 - 1020
20 x 4	45 - 450	18 x 6	60 - 620	18 x 8	85 - 870	18 x 10	115 - 1150

Size (inches)	CFM (range)	Size (inches)	CFM (range)	Size (inches)	CFM (range)	Size (inches)	CFM (range)
20 x 10	125 - 1250	24 x 12	180 - 1820	36 x 14	315 - 3150	30 x 18	365 - 3650
24 x 10	155 - 1530	30 x 12	235 - 2350	18 x 16	180 - 1820	36 x 18	405 - 4050
30 x 10	180 - 1820	36 x 12	270 - 2680	20 x 16	210 - 2100	24 x 20	315 - 3150
36 x 10	235 - 2350	16 x 14	135 - 1350	24 x 16	235 - 2350	30 x 20	405 - 4050
14 x 12	100 - 1020	18 x 14	155 - 1530	30 x 16	315 - 3150	36 x 20	470 - 4720
16 x 12	115 - 1150	20 x 14	180 - 1820	36 x 16	365 - 3650	30 x 24	470 - 4720
18 x 12	135 - 1350	24 x 14	210 - 2100	20 x 18	235 - 2350	36 x 24	580 - 5820
20 x 12	155 - 1530	30 x 14	270 - 2680	24 x 18	270 - 2680	36 x 30	715 - 7170

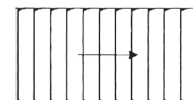


## SUPPLY AIR RECTANGULAR CEILING AND SIDEWALL DIFFUSERS PERFORMANCE DATA

SC13 Supply Rectangular Ceiling and Sidewall Diffusers with Damper

SC13 - 1RD (One Way)

Size (inches)	Core Area (Sq. ft.)	Nominal Area (Sq. ft.)	Core Velocity	100	200	300	400	500	600	700	800	900	1000	
				Velocity Pressure	0.001	0.002	0.006	0.010	0.016	0.022	0.031	0.040	0.051	0.062
				Total Pressure	0.003	0.014	0.031	0.056	0.090	0.131	0.175	0.225	0.290	0.355
6 x 4	0.12	0.17	CFM	10	25	35	50	60	70	85	95	110	120	
			THROW	-	-	-	10-16	12-19	14-23	17-27	19-30	21-34	23-37	
			NC	-	-	-	<20	20	24	28	32	35	38	
8 x 4	0.16	0.22	CFM	15	30	50	65	80	95	110	130	145	160	
			THROW	-	-	8-13	11-17	13-21	16-25	18-29	20-32	22-36	25-40	
			NC	-	-	<20	<20	21	26	30	33	36	39	
10 x 4	0.20	0.28	CFM	20	40	60	80	100	120	140	160	180	200	
			THROW	-	-	9-14	11-18	14-22	16-26	19-30	21-34	24-38	26-42	
			NC	-	-	<20	<20	22	27	31	34	37	40	
12 x 4 8 x 6	0.26	0.33	CFM	25	50	80	105	130	155	180	210	235	260	
			THROW	-	6-10	9-15	12-19	15-24	18-28	20-32	23-37	26-41	28-45	
			NC	-	<20	<20	<20	23	28	32	35	38	41	
14 x 4	0.30	0.39	CFM	30	60	90	120	150	180	210	240	270	300	
			THROW	-	6-10	9-15	12-20	16-25	18-29	21-34	24-38	27-43	29-47	
			NC	-	<20	<20	<20	23	28	32	36	39	42	
16 x 4 10 x 6	0.35	0.44	CFM	35	70	105	140	175	210	245	280	315	350	
			THROW	-	6-10	10-16	13-21	16-25	19-30	22-35	25-40	27-44	31-49	
			NC	-	<20	<20	<20	24	29	33	37	39	42	
18 x 4 12 x 6	0.40	0.50	CFM	40	80	120	160	200	240	280	320	360	400	
			THROW	-	7-11	10-16	14-22	16-26	19-31	22-36	26-41	29-46	32-51	
			NC	-	<20	<20	<20	25	30	34	37	40	43	
20 x 4 14 x 6 10 x 8	0.45	0.56	CFM	45	90	135	180	225	270	315	360	405	450	
			THROW	-	7-11	11-17	14-22	17-27	20-32	23-37	26-42	29-47	33-53	
			NC	-	<20	<20	<20	26	30	34	38	41	44	
24 x 4 16 x 6 12 x 8	0.55	0.67	CFM	55	110	165	220	275	330	385	440	495	550	
			THROW	4-6	7-12	11-18	14-23	18-29	21-34	24-39	27-44	31-50	35-56	
			NC	<20	<20	<20	20	26	31	35	39	41	44	
18 x 6	0.62	0.75	CFM	60	125	185	250	310	370	435	495	560	620	
			THROW	4-6	7-12	11-18	15-24	19-30	22-35	26-41	29-46	32-51	36-57	
			NC	<20	<20	<20	21	27	32	36	39	42	45	
30 x 4 20 x 6 14 x 8 12 x 10	0.70	0.83	CFM	70	140	210	280	350	420	490	560	630	700	
			THROW	4-7	8-13	12-19	16-25	19-30	22-36	26-42	29-47	33-53	37-59	
			NC	<20	<20	<20	21	27	32	36	40	42	45	
36 x 4 24 x 6 16 x 8 14 x 10	0.81	0.97	CFM	80	160	245	325	405	485	565	650	730	810	
			THROW	4-7	8-13	12-20	16-26	20-32	24-38	27-44	31-49	34-55	39-62	
			NC	<20	<20	<20	22	28	33	37	40	43	46	
18 x 8	0.87	1.00	CFM	85	175	260	350	435	520	610	695	785	870	
			THROW	4-7	9-14	12-20	16-26	20-32	24-39	28-45	31-50	35-56	39-63	
			NC	<20	<20	<20	22	28	33	37	40	43	46	
30 x 6 20 x 8 16 x 10 14 x 12	1.02	1.25	CFM	100	205	305	410	510	610	715	815	920	1020	
			THROW	4-7	9-14	13-21	17-27	21-34	25-40	29-46	32-52	37-59	41-65	
			NC	<20	<20	<20	23	29	34	38	41	44	47	
24 x 8 18 x 10 16 x 12	1.15	1.33	CFM	115	230	345	460	575	690	805	920	1040	1150	
			THROW	5-8	9-15	14-22	18-28	22-35	26-41	29-47	34-54	37-60	42-68	
			NC	<20	<20	<20	24	30	34	38	42	45	48	
36 x 6 20 x 10	1.25	1.50	CFM	125	250	375	500	625	750	875	1000	1125	1250	
			THROW	5-8	9-15	14-22	18-29	22-35	26-42	30-48	34-55	39-62	43-69	
			NC	<20	<20	<20	24	30	35	39	42	45	48	
16 x 14 18 x 12	1.35	1.56	CFM	135	270	405	540	675	810	945	1080	1220	1350	
			THROW	5-8	9-15	14-23	18-29	22-36	27-43	31-50	35-56	39-63	44-70	
			NC	<20	<20	<20	24	30	35	39	42	45	48	
30 x 8 24 x 10 20 x 12 18 x 14	1.53	1.67	CFM	155	305	460	610	765	920	1070	1220	1380	1530	
			THROW	5-8	10-16	14-23	19-30	23-37	27-44	32-51	36-58	41-65	46-73	
			NC	<20	<20	<20	25	31	36	40	43	46	49	





## SUPPLY AIR RECTANGULAR CEILING AND SIDEWALL DIFFUSERS PERFORMANCE DATA

## SC13 - 1RD (One Way)

## SC13 Supply Rectangular Ceiling and Sidewall Diffusers with Damper

Size (inches)	Core Area (Sq. ft.)	Nominal Area (Sq. ft.)	Core Velocity										
			100	200	300	400	500	600	700	800	900	1000	
			Velocity Pressure	0.001	0.002	0.006	0.010	0.016	0.022	0.031	0.040	0.051	0.062
			Total Pressure	0.003	0.014	0.031	0.056	0.090	0.131	0.175	0.225	0.290	0.355
36 x 8 30 x 10 24 x 12 20 x 14 18 x 16	1.82	2.00	CFM	182	365	545	730	910	1090	1270	1460	1640	1820
			THROW	5-8	10-16	15-24	20-32	24-39	29-46	34-54	37-60	42-68	48-76
			NC	<20	<20	<20	26	32	36	40	44	47	50
24 x 14 20 x 16	2.10	2.33	CFM	210	420	630	840	1050	1260	1470	1680	1890	2100
			THROW	6-9	11-17	16-25	21-33	25-40	30-48	34-55	39-62	44-70	50-80
			NC	<20	<20	<20	26	32	37	41	44	47	50
36 x 10 30 x 12 24 x 16 20 x 18	2.35	2.50	CFM	235	470	705	940	1180	1410	1640	1880	2120	2350
			THROW	6-9	11-17	16-26	21-34	26-42	31-49	36-57	40-64	45-72	51-82
			NC	<20	<20	<20	27	33	37	41	45	48	>50
36 x 12 30 x 14 24 x 18	2.68	3.00	CFM	270	535	805	1070	1340	1610	1880	2140	2410	2680
			THROW	6-9	11-18	17-27	22-35	27-43	32-51	37-59	41-66	47-75	53-85
			NC	<20	<20	20	27	33	38	42	45	48	>50
36 x 14 30 x 16 24 x 20	3.15	3.50	CFM	315	630	945	1260	1580	1890	2200	2520	2840	3150
			THROW	6-10	12-19	18-28	22-36	28-45	33-53	39-62	43-69	49-79	56-89
			NC	<20	<20	20	28	34	39	43	46	49	>50
36 x 16 30 x 18	3.65	4.00	CFM	365	730	1100	1460	1820	2190	2560	2920	3280	3650
			THROW	6-10	12-20	18-29	23-37	29-46	34-55	40-64	45-72	51-82	57-92
			NC	<20	<20	21	29	35	39	43	47	50	>50
36 x 18 30 x 20	4.05	4.50	CFM	405	810	1220	1620	2020	2430	2830	3240	3640	4050
			THROW	6-10	12-20	19-30	24-39	29-47	36-57	41-66	46-74	52-84	59-94
			NC	<20	<20	22	29	35	40	44	47	50	>50
36 x 20 30 x 24	4.72	5.00	CFM	470	945	1420	1890	2360	2830	3300	3780	4250	4720
			THROW	7-11	13-21	19-31	25-40	31-49	37-59	42-68	49-78	55-88	61-98
			NC	<20	<20	22	30	36	40	44	48	>50	>50
36 x 24	5.82	6.00	CFM	580	1160	1750	2330	2910	3490	4070	4660	5240	5820
			THROW	7-11	14-22	20-32	26-42	32-52	39-62	45-72	51-82	58-93	66-105
			NC	<20	<20	23	31	37	41	45	49	>50	>50
36 x 30	7.17	7.50	CFM	715	1430	2150	2870	3580	4300	5020	5740	6450	7170
			THROW	7-12	14-23	21-34	27-44	34-55	41-66	48-77	54-87	61-98	69-110
			NC	<20	<20	24	31	37	42	46	>50	>50	>50

- Core Velocity in feet per minute.
- All pressures are in inches of water.
- Throw Data in feet, based on isothermal air at 100 and 50 FPM terminal velocity
- NC data based on a room absorption of 10dB, re 10<sup>-12</sup> Watts.
- These data are based on an opening of about 1/8 inch between the border and the adjacent blade, progressively wider spacings between blades farther away from the border. This setting discharges the air parallel to the face of the diffuser. (Horizontal discharge if installed in a ceiling).
- - Denotes NC values less than 10 and CFM values less than 50.

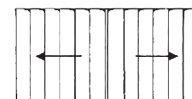


## SUPPLY AIR RECTANGULAR CEILING AND SIDEWALL DIFFUSERS PERFORMANCE DATA

SC13 Supply Rectangular Ceiling and Sidewall Diffusers with Damper

SC13 - 2RD (Two Way)

Size (inches)	Core Area (Sq. ft.)	Nominal Area (Sq. ft.)	Core Velocity										
			Velocity Pressure	100	200	300	400	500	600	700	800	900	1000
			Total Pressure	0.001	0.002	0.006	0.010	0.016	0.022	0.031	0.040	0.051	0.062
6 x 4	0.12	0.17	CFM	10	25	35	50	60	70	85	95	110	120
			THROW	-	-	-	8-13	10-16	12-19	14-22	16-25	18-28	19-31
			NC	-	-	-	<20	20	24	28	32	35	38
8 x 4	0.16	0.22	CFM	15	30	50	65	80	95	110	130	145	160
			THROW	-	-	7-11	9-14	11-17	13-21	15-24	17-27	19-30	21-33
			NC	-	-	<20	<20	21	26	30	33	36	39
10 x 4	0.20	0.28	CFM	20	40	60	80	100	120	140	160	180	200
			THROW	-	-	7-11	9-15	11-18	14-22	16-25	18-29	20-32	22-35
			NC	-	-	<20	<20	22	27	31	34	37	40
12 x 4 8 x 6	0.26	0.33	CFM	25	50	80	105	130	155	180	210	235	260
			THROW	-	5-8	7-12	10-16	12-20	15-24	17-27	19-31	21-34	24-38
			NC	-	<20	<20	<20	23	28	32	35	38	41
14 x 4	0.30	0.39	CFM	30	60	90	120	150	180	210	240	270	300
			THROW	-	5-8	8-13	11-17	13-21	15-24	18-28	20-32	24-38	24-39
			NC	-	<20	<20	<20	23	28	32	36	39	42
16 x 4 10 x 6	0.35	0.44	CFM	35	70	105	140	175	210	245	280	315	350
			THROW	-	6-9	8-13	11-17	13-21	16-25	18-29	21-33	24-38	26-41
			NC	-	<20	<20	<20	24	29	33	37	39	42
18 x 4 12 x 6	0.40	0.50	CFM	40	80	120	160	200	240	280	320	360	400
			THROW	-	6-9	9-14	11-18	14-22	16-26	19-30	21-34	24-38	26-42
			NC	-	<20	<20	<20	25	30	34	37	40	43
20 x 4 14 x 6 10 x 8	0.45	0.56	CFM	45	90	135	180	225	270	315	360	405	450
			THROW	-	6-9	9-14	12-19	14-23	17-27	19-31	22-35	24-39	27-44
			NC	-	<20	<20	<20	26	30	34	38	41	44
24 x 4 16 x 6 12 x 8	0.55	0.67	CFM	55	110	165	220	275	330	385	440	495	550
			THROW	3-5	6-10	9-15	12-20	15-24	18-29	21-33	23-37	26-41	29-46
			NC	<20	<20	<20	20	26	31	35	39	41	44
18 x 6	0.62	0.75	CFM	60	125	185	250	310	370	435	495	560	620
			THROW	3-5	6-10	9-15	12-20	16-25	18-29	21-34	24-38	27-43	29-47
			NC	<20	<20	<20	21	27	32	36	39	42	45
30 x 4 20 x 6 14 x 8 12 x 10	0.70	0.83	CFM	70	140	210	280	350	420	490	560	630	700
			THROW	4-6	7-11	10-16	13-21	16-25	19-30	22-35	25-40	27-44	31-49
			NC	<20	<20	<20	21	27	32	36	40	42	45
36 x 4 24 x 6 16 x 8 14 x 10	0.81	0.97	CFM	80	160	245	325	405	485	565	650	730	810
			THROW	4-6	7-11	10-16	14-22	16-26	19-31	22-36	26-41	29-46	32-51
			NC	<20	<20	<20	22	28	33	37	40	43	46
18 x 8	0.87	1.00	CFM	85	175	260	350	435	520	610	695	785	870
			THROW	4-6	7-11	11-17	14-22	17-27	20-32	23-37	26-42	29-47	32-52
			NC	<20	<20	<20	22	28	33	37	40	43	46
30 x 6 20 x 8 16 x 10 14 x 12	1.02	1.25	CFM	100	205	305	410	510	610	715	815	920	1020
			THROW	4-6	7-12	11-17	14-23	18-28	21-33	24-39	27-43	31-49	34-55
			NC	<20	<20	<20	23	29	34	38	41	44	47
24 x 8 18 x 10 16 x 12	1.15	1.33	CFM	115	230	345	460	575	690	805	920	1040	1150
			THROW	4-6	7-12	11-18	14-23	18-29	21-34	25-40	28-45	31-50	35-56
			NC	<20	<20	<20	24	30	34	38	42	45	48
36 x 6 20 x 10	1.25	1.50	CFM	125	250	375	500	625	750	875	1000	1125	1250
			THROW	4-6	7-12	11-18	15-24	19-30	22-35	26-41	29-46	32-51	36-57
			NC	<20	<20	<20	24	30	35	39	42	45	48
16 x 14 18 x 12	1.35	1.56	CFM	135	270	405	540	675	810	945	1080	1220	1350
			THROW	4-7	8-13	12-19	16-25	19-30	22-36	26-42	29-47	33-53	37-59
			NC	<20	<20	<20	24	30	35	39	42	45	48
30 x 8 24 x 10 20 x 12 18 x 14	1.53	1.67	CFM	155	305	460	610	765	920	1070	1220	1380	1530
			THROW	4-7	8-13	12-19	16-25	20-32	23-37	27-43	30-48	34-55	37-60
			NC	<20	<20	<20	25	31	36	40	43	46	49



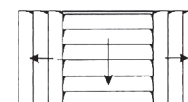


## SUPPLY AIR RECTANGULAR CEILING AND SIDEWALL DIFFUSERS PERFORMANCE DATA

**SC13 Supply Rectangular Ceiling and Sidewall Diffusers with Damper**

**SC13 - 3RD (Three Way)**

Size (inches)	Core Area (Sq. ft.)	Nominal Area (Sq. ft.)	Core Velocity	100	200	300	400	500	600	700	800	900	1000	
				Velocity Pressure	0.001	0.002	0.006	0.010	0.016	0.022	0.031	0.040	0.051	0.062
				Total Pressure	0.003	0.014	0.031	0.056	0.090	0.131	0.175	0.225	0.290	0.355
6 x 4	0.12	0.17	CFM	10	25	35	50	60	70	85	95	110	120	
			THROW	-	-	-	7-12	9-14	11-17	12-20	14-23	16-25	18-28	
			NC	-	-	-	<20	20	24	28	32	35	38	
8 x 4	0.16	0.22	CFM	15	30	50	65	80	95	110	130	145	160	
			THROW	-	-	6-10	8-13	9-15	12-19	14-22	15-24	17-27	19-30	
			NC	-	-	<20	<20	21	26	30	33	36	39	
10 x 4	0.20	0.28	CFM	20	40	60	80	100	120	140	160	180	200	
			THROW	-	-	6-10	9-14	10-16	12-20	14-23	16-26	18-29	20-32	
			NC	-	-	<20	<20	22	27	31	34	37	40	
12 x 4 8 x 6	0.26	0.33	CFM	25	50	80	105	130	155	180	210	235	260	
			THROW	-	4-7	7-11	9-15	11-18	13-21	15-24	17-27	19-31	21-34	
			NC	-	<20	<20	<20	23	28	32	35	38	41	
14 x 4	0.30	0.39	CFM	30	60	90	120	150	180	210	240	270	300	
			THROW	-	5-8	7-11	9-15	12-19	14-22	16-25	18-29	20-32	22-35	
			NC	-	<20	<20	<20	23	28	32	36	39	42	
16 x 4 10 x 6	0.35	0.44	CFM	35	70	105	140	175	210	245	280	315	350	
			THROW	-	5-8	7-12	9-15	12-19	14-23	16-26	19-30	21-33	23-37	
			NC	-	<20	<20	<20	24	29	33	37	39	42	
18 x 4 12 x 6	0.40	0.50	CFM	40	80	120	160	200	240	280	320	360	400	
			THROW	-	5-8	7-12	10-16	12-20	15-24	17-27	19-31	22-35	24-38	
			NC	-	<20	<20	<20	25	30	34	37	40	43	
20 x 4 14 x 6 10 x 8	0.45	0.56	CFM	45	90	135	180	225	270	315	360	405	450	
			THROW	-	5-8	8-13	11-17	13-21	15-24	18-28	20-32	22-36	24-39	
			NC	-	<20	<20	<20	26	30	34	38	41	44	
24 x 4 16 x 6 12 x 8	0.55	0.67	CFM	55	110	165	220	275	330	385	440	495	550	
			THROW	3-5	6-9	8-13	11-18	14-22	16-26	19-30	21-33	24-38	26-41	
			NC	<20	<20	<20	20	26	31	35	39	41	44	
18 x 6	0.62	0.75	CFM	60	125	185	250	310	370	435	495	560	620	
			THROW	3-5	6-9	9-14	11-18	14-22	17-27	19-31	21-34	24-39	27-43	
			NC	<20	<20	<20	21	27	32	36	39	42	45	
30 x 4 20 x 6 14 x 8 12 x 10	0.70	0.83	CFM	70	140	210	280	350	420	490	560	630	700	
			THROW	3-5	6-9	9-14	12-19	14-23	17-27	20-32	22-36	25-40	27-44	
			NC	<20	<20	<20	21	27	32	36	40	42	45	
36 x 4 24 x 6 16 x 8 14 x 10	0.81	0.97	CFM	80	160	245	325	405	485	565	650	730	810	
			THROW	3-5	6-10	9-15	12-20	16-26	18-28	21-33	23-37	26-41	29-46	
			NC	<20	<20	<20	22	28	33	37	40	43	46	
18 x 8	0.87	1.00	CFM	85	175	260	350	435	520	610	695	785	870	
			THROW	3-5	6-10	9-15	12-20	16-25	18-29	21-33	24-38	26-42	29-47	
			NC	<20	<20	<20	22	28	33	37	40	43	46	
30 x 6 24 x 8 16 x 10 14 x 12	1.02	1.25	CFM	100	205	305	410	510	610	715	815	920	1020	
			THROW	4-6	6-10	10-16	13-21	16-25	19-30	22-35	24-39	27-44	30-48	
			NC	<20	<20	<20	23	29	34	38	41	44	47	
24 x 8 18 x 10 16 x 12	1.15	1.33	CFM	115	230	345	460	575	690	805	920	1040	1150	
			THROW	4-6	7-11	10-16	13-21	16-26	19-31	22-36	26-41	28-45	31-50	
			NC	<20	<20	<20	24	30	34	38	42	45	48	
36 x 6 20 x 10	1.25	1.50	CFM	125	250	375	500	625	750	875	1000	1125	1250	
			THROW	4-6	7-11	10-16	14-22	17-27	20-32	23-37	26-41	29-46	32-51	
			NC	<20	<20	<20	24	30	35	39	42	45	48	
16 x 14 18 x 12	1.35	1.56	CFM	135	270	405	540	675	810	945	1080	1220	1350	
			THROW	4-6	7-11	11-17	14-22	17-27	20-32	23-37	26-42	29-47	32-52	
			NC	<20	<20	<20	24	30	35	39	42	45	48	
30 x 8 24 x 10 20 x 12 18 x 14	1.53	1.67	CFM	155	305	460	610	765	920	1070	1220	1380	1530	
			THROW	4-6	7-12	11-17	14-23	18-28	21-33	24-39	27-44	31-49	34-54	
			NC	<20	<20	<20	25	31	36	40	43	46	49	





**SUPPLY AIR RECTANGULAR CEILING  
AND SIDEWALL DIFFUSERS  
PERFORMANCE DATA**



**SC13 Supply Rectangular Ceiling and Sidewall Diffusers with Damper**

**SC13 - 2RD (Two Way)**

Size (inches)	Core Area (Sq. ft.)	Nominal Area (Sq. ft.)	Core Velocity	100	200	300	400	500	600	700	800	900	1000	
				Velocity Pressure	0.001	0.002	0.006	0.010	0.016	0.022	0.031	0.040	0.051	0.062
				Total Pressure	0.003	0.014	0.031	0.056	0.090	0.131	0.175	0.225	0.290	0.355
36 x 8 30 x 10 24 x 12 20 x 14 18 x 16	1.82	2.00	CFM	182	365	545	730	910	1090	1270	1460	1640	1820	
			THROW	4-7	9-14	12-20	17-27	21-33	24-39	28-45	31-50	36-57	39-63	
			NC	<20	<20	<20	26	32	36	40	44	47	50	
24 x 14 20 x 16	2.10	2.33	CFM	210	420	630	840	1050	1260	1470	1680	1890	2100	
			THROW	4-7	9-14	13-21	18-28	21-34	25-40	29-46	32-52	37-59	41-66	
			NC	<20	<20	<20	26	32	37	41	44	47	50	
36 x 10 30 x 12 24 x 16 20 x 18	2.35	2.50	CFM	235	470	705	940	1180	1410	1640	1880	2120	2350	
			THROW	5-8	9-15	14-22	18-28	22-35	26-42	30-48	34-54	38-61	42-68	
			NC	<20	<20	<20	27	33	37	41	45	48	>50	
36 x 12 30 x 14 24 x 18	2.68	3.00	CFM	270	535	805	1070	1340	1610	1880	2140	2410	2680	
			THROW	5-8	9-15	14-22	18-29	22-36	27-43	31-49	35-56	39-62	44-70	
			NC	<20	<20	20	27	33	38	42	45	48	>50	
36 x 14 30 x 16 24 x 20	3.15	3.50	CFM	315	630	945	1260	1580	1890	2200	2520	2840	3150	
			THROW	5-8	10-16	15-24	19-30	24-38	28-45	32-51	36-58	41-65	46-73	
			NC	<20	<20	20	28	34	39	43	46	49	>50	
36 x 16 30 x 18	3.65	4.00	CFM	365	730	1100	1460	1820	2190	2560	2920	3280	3650	
			THROW	5-8	10-16	15-24	20-32	24-39	29-46	34-54	37-60	42-68	48-76	
			NC	<20	<20	21	29	35	39	43	47	50	>50	
36 x 18 30 x 20	4.05	4.50	CFM	405	810	1220	1620	2020	2430	2830	3240	3640	4050	
			THROW	6-9	11-17	16-25	20-32	25-40	29-47	34-55	39-62	44-70	49-79	
			NC	<20	<20	22	29	35	40	44	47	50	>50	
36 x 20 30 x 24	4.72	5.00	CFM	470	945	1420	1890	2360	2830	3300	3780	4250	4720	
			THROW	6-9	11-17	16-26	21-34	26-42	31-49	36-57	40-64	46-73	51-82	
			NC	<20	<20	22	30	36	40	44	48	>50	>50	
36 x 24	5.82	6.00	CFM	580	1160	1750	2330	2910	3490	4070	4660	5240	5820	
			THROW	6-9	11-18	17-27	22-35	27-44	35-52	37-60	42-68	48-77	54-87	
			NC	<20	<20	23	31	37	41	45	49	>50	>50	
36 x 30	7.17	7.50	CFM	715	1430	2150	2870	3580	4300	5020	5740	6450	7170	
			THROW	6-10	12-20	18-29	23-37	29-46	34-55	40-64	45-72	51-82	57-92	
			NC	<20	<20	24	31	37	42	46	>50	>50	>50	

- Core Velocity in feet per minute.
- All pressures are in inches of water.
- Throw Data in feet, based on isothermal air at 100 and 50 FPM terminal velocity
- NC data based on a room absorption of 10dB, re 10<sup>-12</sup> Watts.
- These data are based on an opening of about 1/8 inch between the border and the adjacent blade, progressively wider spacings between blades farther away from the border. This setting discharges the air parallel to the face of the diffuser. (Horizontal discharge if installed in a ceiling).
- – Denotes NC values less than 10 and CFM values less than 50.

**SUPPLY AIR RECTANGULAR CEILING  
AND SIDEWALL DIFFUSERS  
PERFORMANCE DATA**



**SC13 Supply Rectangular Ceiling and Sidewall Diffusers with Damper**

**SC13 - 3RD (Three Way)**

Size (inches)	Core Area (Sq. ft.)	Nominal Area (Sq. ft.)	Core Velocity	100	200	300	400	500	600	700	800	900	1000	
				Velocity Pressure	0.001	0.002	0.006	0.010	0.016	0.022	0.031	0.040	0.051	0.062
				Total Pressure	0.003	0.014	0.031	0.056	0.090	0.131	0.175	0.225	0.290	0.355
36 x 8 30 x 10 24 x 12 20 x 14 18 x 16	1.82	2.00	CFM	182	365	545	730	910	1090	1270	1460	1640	1820	
			THROW	4-6	7-12	11-18	15-24	18-29	22-35	25-40	28-45	32-51	36-57	
			NC	<20	<20	<20	26	32	36	40	44	47	50	
24 x 14 20 x 16	2.10	2.33	CFM	210	420	630	840	1050	1260	1470	1680	1890	2100	
			THROW	4-7	8-13	12-19	16-25	19-30	22-36	26-42	29-47	33-53	37-59	
			NC	<20	<20	<20	26	32	37	41	44	47	50	
36 x 10 30 x 12 24 x 16 20 x 18	2.35	2.50	CFM	235	470	705	940	1180	1410	1640	1880	2120	2350	
			THROW	4-7	8-13	12-20	16-25	19-31	23-37	27-43	31-49	34-55	37-60	
			NC	<20	<20	<20	27	33	37	41	45	48	>50	
36 x 12 30 x 14 24 x 18	2.68	3.00	CFM	270	535	805	1070	1340	1610	1880	2140	2410	2680	
			THROW	4-7	9-14	12-20	16-26	21-33	24-39	28-45	31-50	36-57	39-63	
			NC	<20	<20	20	27	33	38	42	45	48	>50	
36 x 14 30 x 16 24 x 20	3.15	3.50	CFM	315	630	945	1260	1580	1890	2200	2520	2840	3150	
			THROW	4-7	9-14	13-21	17-27	21-34	25-40	29-46	32-52	37-59	41-66	
			NC	<20	<20	20	28	34	39	43	46	49	>50	
36 x 16 30 x 18	3.65	4.00	CFM	365	730	1100	1460	1820	2190	2560	2920	3280	3650	
			THROW	5-8	9-15	14-22	18-28	22-35	26-42	30-48	34-55	38-61	42-68	
			NC	<20	<20	21	29	35	39	43	47	50	>50	
36 x 18 30 x 20	4.05	4.50	CFM	405	810	1220	1620	2020	2430	2830	3240	3640	4050	
			THROW	5-8	9-15	14-22	18-29	22-36	27-43	31-49	35-56	39-63	44-70	
			NC	<20	<20	22	29	35	40	44	47	50	>50	
36 x 20 30 x 24	4.72	5.00	CFM	470	945	1420	1890	2360	2830	3300	3780	4250	4720	
			THROW	5-8	10-16	14-23	19-30	24-38	28-45	32-52	36-58	41-66	46-74	
			NC	<20	<20	22	30	36	40	44	48	>50	>50	
36 x 24	5.82	6.00	CFM	580	1160	1750	2330	2910	3490	4070	4660	5240	5820	
			THROW	6-9	10-16	16-25	20-32	25-40	29-47	34-55	38-61	44-70	49-78	
			NC	<20	<20	23	31	37	41	45	49	>50	>50	
36 x 30	7.17	7.50	CFM	715	1430	2150	2870	3580	4300	5020	5740	6450	7170	
			THROW	6-9	11-17	16-26	21-34	26-42	31-50	36-57	41-65	46-73	51-82	
			NC	<20	<20	24	31	37	42	46	>50	>50	>50	

- Core Velocity in feet per minute.
- All pressures are in inches of water.
- Throw Data in feet, based on isothermal air at 100 and 50 FPM terminal velocity
- NC data based on a room absorption of 10dB, re 10<sup>-12</sup> Watts.
- These data are based on an opening of about 1/8 inch between the border and the adjacent blade, progressively wider spacings between blades farther away from the border. This setting discharges the air parallel to the face of the diffuser. (Horizontal discharge if installed in a ceiling).
- - Denotes NC values less than 10 and CFM values less than 50.

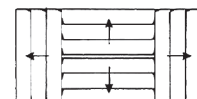
**SUPPLY AIR RECTANGULAR CEILING  
AND SIDEWALL DIFFUSERS  
PERFORMANCE DATA**



**SC13 Supply Rectangular Ceiling and Sidewall Diffusers with Damper**

**SC13 - 4RD (Four Way)**

Size (inches)	Core Area (Sq. ft.)	Nominal Area (Sq. ft.)	Core Velocity	100	200	300	400	500	600	700	800	900	1000	
				Velocity Pressure	0.001	0.002	0.006	0.010	0.016	0.022	0.031	0.040	0.051	0.062
				Total Pressure	0.003	0.014	0.031	0.056	0.090	0.131	0.175	0.225	0.290	0.355
6 x 4	0.12	0.17	CFM	10	25	35	50	60	70	85	95	110	120	
			THROW	-	-	-	7-11	8-13	10-16	12-19	13-21	15-24	16-26	
			NC	-	-	-	<20	20	24	28	32	35	38	
8 x 4	0.16	0.22	CFM	15	30	50	65	80	95	110	130	145	160	
			THROW	-	-	6-9	7-12	9-14	11-17	12-20	14-22	16-25	18-28	
			NC	-	-	<20	<20	21	26	30	33	36	39	
10 x 4	0.20	0.28	CFM	20	40	60	80	100	120	140	160	180	200	
			THROW	-	-	6-9	8-13	9-15	11-18	13-21	15-24	17-27	18-29	
			NC	-	-	<20	<20	22	27	31	34	37	40	
12 x 4 8 x 6	0.26	0.33	CFM	25	50	80	105	130	155	180	210	235	260	
			THROW	-	4-7	6-10	9-14	10-16	12-20	14-23	16-26	18-29	20-32	
			NC	-	<20	<20	<20	23	28	32	35	38	41	
14 x 4	0.30	0.39	CFM	30	60	90	120	150	180	210	240	270	300	
			THROW	-	4-7	6-10	9-14	11-17	13-21	15-24	17-27	19-30	21-33	
			NC	-	<20	<20	<20	23	28	32	36	39	42	
16 x 4 10 x 6	0.35	0.44	CFM	35	70	105	140	175	210	245	280	315	350	
			THROW	-	4-7	7-11	9-15	11-18	13-21	16-25	18-28	19-31	21-34	
			NC	-	<20	<20	<20	24	29	33	37	39	42	
18 x 4 12 x 6	0.40	0.50	CFM	40	80	120	160	200	240	280	320	360	400	
			THROW	-	5-8	7-11	9-15	12-19	14-22	16-26	18-29	20-32	22-35	
			NC	-	<20	<20	<20	25	30	34	37	40	43	
20 x 4 14 x 6 10 x 8	0.45	0.56	CFM	45	90	135	180	225	270	315	360	405	450	
			THROW	-	5-8	7-12	9-15	12-19	14-23	16-26	19-30	21-33	23-37	
			NC	-	<20	<20	<20	26	30	34	38	41	44	
24 x 4 16 x 6 12 x 8	0.55	0.67	CFM	55	110	165	220	275	330	385	440	495	550	
			THROW	3-4	5-8	7-12	10-16	12-20	15-24	18-28	19-31	22-35	24-39	
			NC	<20	<20	<20	20	26	31	35	39	41	44	
18 x 6	0.62	0.75	CFM	60	125	185	250	310	370	435	495	560	620	
			THROW	3-4	6-9	8-13	11-17	13-21	15-25	18-28	20-32	22-36	25-40	
			NC	<20	<20	<20	21	27	32	36	39	42	45	
30 x 4 20 x 6 14 x 8 12 x 10	0.70	0.83	CFM	70	140	210	280	350	420	490	560	630	700	
			THROW	3-5	6-9	8-13	11-17	13-21	16-25	18-29	21-33	23-37	26-41	
			NC	<20	<20	<20	21	27	32	36	40	42	45	
36 x 4 24 x 6 16 x 8 14 x 10	0.81	0.97	CFM	80	160	245	325	405	485	565	650	730	810	
			THROW	3-5	6-9	9-14	11-18	14-22	16-26	19-30	21-34	24-38	27-43	
			NC	<20	<20	<20	22	28	33	37	40	43	46	
18 x 8	0.87	1.00	CFM	85	175	260	350	435	520	610	695	785	870	
			THROW	3-5	6-9	9-14	12-19	14-23	17-27	19-31	22-35	24-39	27-43	
			NC	<20	<20	<20	22	28	33	37	40	43	46	
30 x 6 20 x 8 16 x 10 14 x 12	1.02	1.25	CFM	100	205	305	410	510	610	715	815	920	1020	
			THROW	3-5	6-10	9-15	12-19	15-24	18-28	20-32	22-36	26-41	28-45	
			NC	<20	<20	<20	23	29	34	38	41	44	47	
24 x 8 18 x 10 16 x 12	1.15	1.33	CFM	115	230	345	460	575	690	805	920	1040	1150	
			THROW	3-5	6-10	9-15	12-20	16-25	18-29	21-33	24-38	26-42	29-46	
			NC	<20	<20	<20	24	30	34	38	42	45	48	
36 x 6 20 x 10	1.25	1.50	CFM	125	250	375	500	625	750	875	1000	1125	1250	
			THROW	3-5	6-10	9-15	12-20	16-25	18-29	21-34	24-38	27-43	29-47	
			NC	<20	<20	<20	24	30	35	39	42	45	48	
16 x 14 18 x 12	1.35	1.56	CFM	135	270	405	540	675	810	945	1080	1220	1350	
			THROW	4-6	6-10	10-16	13-21	16-25	19-30	22-35	24-39	27-44	30-48	
			NC	<20	<20	<20	24	30	35	39	42	45	48	
30 x 8 24 x 10 20 x 12 18 x 14	1.53	1.67	CFM	155	305	460	610	765	920	1070	1220	1380	1530	
			THROW	4-6	7-11	10-16	13-21	16-26	19-31	22-36	25-40	28-45	31-50	
			NC	<20	<20	<20	25	31	36	40	43	46	49	





**SUPPLY AIR RECTANGULAR CEILING  
AND SIDEWALL DIFFUSERS  
PERFORMANCE DATA**



**SC13 Supply Rectangular Ceiling and Sidewall Diffusers with Damper**

**SC13 - 4RD (Four Way)**

Size (inches)	Core Area (Sq. ft.)	Nominal Area (Sq. ft.)	Core Velocity	100	200	300	400	500	600	700	800	900	1000	
				Velocity Pressure	0.001	0.002	0.006	0.010	0.016	0.022	0.031	0.040	0.051	0.062
				Total Pressure	0.003	0.014	0.031	0.056	0.090	0.131	0.175	0.225	0.290	0.355
36 x 8 30 x 10 24 x 12 20 x 14 18 x 16	1.82	2.00	CFM	182	365	545	730	910	1090	1270	1460	1640	1820	
			THROW	4-6	7-11	11-17	14-22	17-27	20-32	23-37	26-42	29-47	33-53	
			NC	<20	<20	<20	26	32	36	40	44	47	50	
24 x 14 20 x 16	2.10	2.33	CFM	210	420	630	840	1050	1260	1470	1680	1890	2100	
			THROW	4-6	7-12	11-18	14-23	18-28	21-34	24-39	27-44	31-49	34-55	
			NC	<20	<20	<20	26	32	37	41	44	47	50	
36 x 10 30 x 12 24 x 16 20 x 18	2.35	2.50	CFM	235	470	705	940	1180	1410	1640	1880	2120	2350	
			THROW	4-6	7-12	11-18	15-24	18-29	22-35	25-40	28-45	31-50	36-57	
			NC	<20	<20	<20	27	33	37	41	45	48	>50	
36 x 12 30 x 14 24 x 18	2.68	3.00	CFM	270	535	805	1070	1340	1610	1880	2140	2410	2680	
			THROW	4-7	8-13	12-19	16-25	19-30	22-36	26-42	29-47	32-52	37-59	
			NC	<20	<20	20	27	33	38	42	45	48	>50	
36 x 14 30 x 16 24 x 20	3.15	3.50	CFM	315	630	945	1260	1580	1890	2200	2520	2840	3150	
			THROW	4-7	8-13	12-19	16-26	19-31	23-37	27-43	31-49	34-55	39-62	
			NC	<20	<20	20	28	34	39	43	46	49	>50	
36 x 16 30 x 18	3.65	4.00	CFM	365	730	1100	1460	1820	2190	2560	2920	3280	3650	
			THROW	4-7	9-14	12-20	17-27	21-33	24-39	28-45	31-50	36-57	40-64	
			NC	<20	<20	21	29	35	39	43	47	50	>50	
36 x 18 30 x 20	4.05	4.50	CFM	405	810	1220	1620	2020	2430	2830	3240	3640	4050	
			THROW	4-7	9-14	13-21	17-27	21-34	25-40	29-46	32-52	37-59	41-66	
			NC	<20	<20	22	29	35	40	44	47	50	>50	
36 x 20 30 x 24	4.72	5.00	CFM	470	945	1420	1890	2360	2830	3300	3780	4250	4720	
			THROW	5-8	9-15	14-22	18-28	22-35	26-42	30-48	34-54	38-61	42-68	
			NC	<20	<20	22	30	36	40	44	48	>50	>50	
36 x 24	5.82	6.00	CFM	580	1160	1750	2330	2910	3490	4070	4660	5240	5820	
			THROW	5-8	9-15	14-23	19-30	23-37	27-44	32-51	36-57	40-64	45-72	
			NC	<20	<20	23	31	37	41	45	49	>50	>50	
36 x 30	7.17	7.50	CFM	715	1430	2150	2870	3580	4300	5020	5740	6450	7170	
			THROW	5-8	10-16	15-24	20-32	24-39	29-46	34-54	37-60	42-68	48-76	
			NC	<20	<20	24	31	37	42	46	>50	>50	>50	

- Core Velocity in feet per minute.
- All pressures are in inches of water.
- Throw Data in feet, based on isothermal air at 100 and 50 FPM terminal velocity
- NC data based on a room absorption of 10dB, re 10<sup>-12</sup> Watts.
- These data are based on an opening of about 1/8 inch between the border and the adjacent blade, progressively wider spacings between blades farther away from the border. This setting discharges the air parallel to the face of the diffuser. (Horizontal discharge if installed in a ceiling).
- - Denotes NC values less than 10 and CFM values less than 50.

# RETURN AIR RECTANGULAR CEILING AND SIDEWALL DIFFUSERS PERFORMANCE DATA

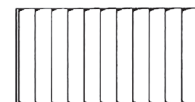


## SC13 Return Rectangular Ceiling and Sidewall Diffusers without Damper

## SC13 - 1R (One Way)

Size (inches)	Core Area (Sq. ft.)	Nominal Area (Sq. ft.)	Core Velocity		100	200	300	400	500	600	700	800	900	1000
			Velocity Pressure		0.001	0.002	0.006	0.010	0.016	0.022	0.031	0.040	0.051	0.062
			Negative SP		0.007	0.034	0.076	0.137	0.220	0.320	0.427	0.559	0.707	0.866
6 x 4	0.12	0.17	CFM	10	25	35	50	60	70	85	95	110	120	
			NC	-	-	-	<20	<20	23	27	31	34	37	
8 x 4	0.16	0.22	CFM	15	30	50	65	80	95	110	130	145	160	
			NC	-	-	<20	<20	20	25	29	32	35	38	
10x 4	0.20	0.28	CFM	20	40	60	80	100	120	140	160	180	200	
			NC	-	-	<20	<20	21	26	30	33	36	39	
12 x 4 8 x 6	0.26	0.33	CFM	25	50	80	105	130	155	180	210	235	260	
			NC	-	<20	<20	<20	22	27	31	34	37	40	
14x 4	0.30	0.39	CFM	30	60	90	120	150	180	210	240	270	300	
			NC	-	<20	<20	<20	22	27	31	35	38	41	
16 x 4 10 x 6	0.35	0.44	CFM	35	70	105	140	175	210	245	280	315	350	
			NC	-	<20	<20	<20	23	28	32	36	38	41	
18 x 4 12 x 6	0.40	0.50	CFM	40	80	120	160	200	240	280	320	360	400	
			NC	-	<20	<20	<20	24	29	33	36	39	42	
20 x 4 14 x 6 10 x 8	0.45	0.56	CFM	45	90	135	180	225	270	315	360	405	450	
			NC	-	<20	<20	<20	25	29	33	37	40	43	
24 x 4 16 x 6 12 x 8	0.55	0.67	CFM	55	110	165	220	275	330	385	440	495	550	
			NC	<20	<20	<20	<20	25	30	34	38	40	43	
18 x 6	0.62	0.75	CFM	60	125	185	250	310	370	435	495	560	620	
			NC	<20	<20	<20	20	26	31	35	38	41	44	
30 x 4, 14 x 8 20 x 6, 12 x 10	0.70	0.83	CFM	70	140	210	280	350	420	490	560	630	700	
			NC	<20	<20	<20	20	26	31	35	39	41	44	
36 x 4, 16 x 8 24 x 6, 14 x 10	0.81	0.97	CFM	80	160	245	325	405	485	565	650	730	810	
			NC	<20	<20	<20	21	27	32	36	39	42	45	
18 x 8	0.87	1.00	CFM	85	175	260	350	435	520	610	695	785	870	
			NC	<20	<20	<20	21	27	32	36	39	42	45	
30 x 6, 16 x 10 20 x 8, 14 x 12	1.02	1.25	CFM	100	205	305	410	510	610	715	815	920	1020	
			NC	<20	<20	<20	22	28	33	37	40	43	46	
24 x 8 18 x 10 16 x 12	1.15	1.33	CFM	115	230	345	460	575	690	805	920	1040	1150	
			NC	<20	<20	<20	23	29	33	37	41	44	47	
36 x 6 20 x 10	1.25	1.50	CFM	125	250	375	500	625	750	875	1000	1125	1250	
			NC	<20	<20	<20	23	29	34	38	41	44	47	
16 x 14 18 x 12	1.35	1.56	CFM	135	270	405	540	675	810	945	1080	1220	1350	
			NC	<20	<20	<20	23	29	34	38	41	44	47	
30 x 8, 20 x 12 24x10, 18 x 14	1.53	1.67	CFM	155	305	460	610	765	920	1070	1220	1380	1530	
			NC	<20	<20	<20	24	30	35	39	42	45	48	
36 x 8, 30 x 10 24 x 12, 20 x 14 18 x 16	1.82	2.00	CFM	180	365	545	730	910	1090	1270	1460	1640	1820	
			NC	<20	<20	<20	25	31	35	39	43	46	49	
24 x 14 20 x 16	2.10	2.33	CFM	210	420	630	840	1050	1260	1470	1680	1890	2100	
			NC	<20	<20	<20	25	31	36	40	43	46	49	
36 x 10, 24 x 16 30 x 12, 20 x 18	2.35	2.50	CFM	235	470	705	940	1180	1410	1640	1880	2120	2350	
			NC	<20	<20	<20	26	32	36	40	44	47	50	
36 x 12 30 x 14 24 x 18	2.68	3.00	CFM	270	535	805	1070	1340	1610	1880	2140	2410	2680	
			NC	<20	<20	<20	26	32	37	41	44	47	50	
36 x 14 30 x 16 24 x 20	3.15	3.50	CFM	315	630	945	1260	1580	1890	2200	2520	2840	3150	
			NC	<20	<20	<20	27	33	38	42	45	48	>50	
36 x 16 30 x 18	3.65	4.00	CFM	365	730	1100	1460	1820	2190	2560	2920	3280	3650	
			NC	<20	<20	20	28	34	38	42	46	49	>50	
36 x 18 30 x 20	4.05	4.50	CFM	405	810	1220	1620	2020	2430	2830	3240	3640	4050	
			NC	<20	<20	21	28	34	39	43	46	49	>50	
36 x 20 30 x 24	4.72	5.00	CFM	470	945	1420	1890	2360	2830	3300	3780	4250	4720	
			NC	<20	<20	21	29	35	39	43	47	>50	>50	
36 x 24	5.82	6.00	CFM	580	1160	1750	2330	2910	3490	4070	4660	5240	5820	
			NC	<20	<20	22	30	36	40	44	48	>50	>50	
36 x 30	7.17	7.50	CFM	715	1430	2150	2870	3580	4300	5020	5740	6450	7170	
			NC	<20	<20	23	30	36	41	45	49	>50	>50	

- Core Velocity in feet per minute.
- All pressures are in inches of water.
- NC data based upon 10dB room attenuation.
- Negative SP is Negative Static Pressure.
- - Denotes NC values less than 10 and CFM values less than 50.





## RETURN AIR RECTANGULAR CEILING AND SIDEWALL DIFFUSERS PERFORMANCE DATA

**SC13 Return Rectangular Ceiling and Sidewall Diffusers without Damper**

**SC13 - 2R (Two Way)**

Size (inches)	Core Area (Sq. ft.)	Nominal Area (Sq. ft.)	Core Velocity	100	200	300	400	500	600	700	800	900	1000
			Velocity Pressure	0.001	0.002	0.006	0.010	0.016	0.022	0.031	0.040	0.051	0.062
			Negative SP	0.008	0.039	0.086	0.156	0.250	0.364	0.486	0.625	0.806	0.986
6 x 4	0.12	0.17	CFM	10	25	35	50	60	70	85	95	110	120
			NC	-	-	-	<20	<20	23	27	31	34	37
8 x 4	0.16	0.22	CFM	15	30	50	65	80	95	110	130	145	160
			NC	-	-	<20	<20	20	25	29	32	35	38
10x 4	0.20	0.28	CFM	20	40	60	80	100	120	140	160	180	200
			NC	-	-	<20	<20	21	26	30	33	36	39
12 x 4 8 x 6	0.26	0.33	CFM	25	50	80	105	130	155	180	210	235	260
			NC	-	<20	<20	<20	22	27	31	34	37	40
14x 4	0.30	0.39	CFM	30	60	90	120	150	180	210	240	270	300
			NC	-	<20	<20	<20	22	27	31	35	38	41
16 x 4 10 x 6	0.35	0.44	CFM	35	70	105	140	175	210	245	280	315	350
			NC	-	<20	<20	<20	23	28	32	36	38	41
18 x 4 12 x 6	0.40	0.50	CFM	40	80	120	160	200	240	280	320	360	400
			NC	-	<20	<20	<20	24	29	33	36	39	42
20 x 4 14 x 6 10 x 8	0.45	0.56	CFM	45	90	135	180	225	270	315	360	405	450
			NC	-	<20	<20	<20	25	29	33	37	40	43
24 x 4 16 x 6 12 x 8	0.55	0.67	CFM	55	110	165	220	275	330	385	440	495	550
			NC	<20	<20	<20	<20	25	30	34	38	40	43
18 x 6	0.62	0.75	CFM	60	125	185	250	310	370	435	495	560	620
			NC	<20	<20	<20	20	26	31	35	38	41	44
30 x 4, 14 x 8 20 x 6, 12 x 10	0.70	0.83	CFM	70	140	210	280	350	420	490	560	630	700
			NC	<20	<20	<20	20	26	31	35	39	41	44
36 x 4, 16 x 8 24 x 6, 14 x 10	0.81	0.97	CFM	80	160	245	325	405	485	565	650	730	810
			NC	<20	<20	<20	21	27	32	36	39	42	45
18 x 8	0.87	1.00	CFM	85	175	260	350	435	520	610	695	785	870
			NC	<20	<20	<20	21	27	32	36	39	42	45
30 x 6, 16 x 10 20 x 8, 14 x 12	1.02	1.25	CFM	100	205	305	410	510	610	715	815	920	1020
			NC	<20	<20	<20	22	28	33	37	40	43	46
24 x 8 18 x 10 16 x 12	1.15	1.33	CFM	115	230	345	460	575	690	805	920	1040	1150
			NC	<20	<20	<20	23	29	33	37	41	44	47
36 x 6 20 x 10	1.25	1.50	CFM	125	250	375	500	625	750	875	1000	1125	1250
			NC	<20	<20	<20	23	29	34	38	41	44	47
16 x 14 18 x 12	1.35	1.56	CFM	135	270	405	540	675	810	945	1080	1220	1350
			NC	<20	<20	<20	23	29	34	38	41	44	47
30 x 8, 20 x 12 24 x 10, 18 x 14	1.53	1.67	CFM	155	305	460	610	765	920	1070	1220	1380	1530
			NC	<20	<20	<20	24	30	35	39	42	45	48
36 x 8, 30 x 10 24 x 12, 20 x 14 18 x 16	1.82	2.00	CFM	180	365	545	730	910	1090	1270	1460	1640	1820
			NC	<20	<20	<20	25	31	35	39	43	46	49
24 x 14 20 x 16	2.10	2.33	CFM	210	420	630	840	1050	1260	1470	1680	1890	2100
			NC	<20	<20	<20	25	31	36	40	43	46	49
36 x 10, 24 x 16 30 x 12, 20 x 18	2.35	2.50	CFM	235	470	705	940	1180	1410	1640	1880	2120	2350
			NC	<20	<20	<20	26	32	36	40	44	47	50
36 x 12 30 x 14 24 x 18	2.68	3.00	CFM	270	535	805	1070	1340	1610	1880	2140	2410	2680
			NC	<20	<20	<20	26	32	37	41	44	47	50
36 x 14 30 x 16 24 x 20	3.15	3.50	CFM	315	630	945	1260	1580	1890	2200	2520	2840	3150
			NC	<20	<20	<20	27	33	38	42	45	48	>50
36 x 16 30 x 18	3.65	4.00	CFM	365	730	1100	1460	1820	2190	2560	2920	3280	3650
			NC	<20	<20	20	28	34	38	42	46	49	>50
36 x 18 30 x 20	4.05	4.50	CFM	405	810	1220	1620	2020	2430	2830	3240	3640	4050
			NC	<20	<20	21	28	34	39	43	46	49	>50
36 x 20 30 x 24	4.72	5.00	CFM	470	945	1420	1890	2360	2830	3300	3780	4250	4720
			NC	<20	<20	21	29	35	39	43	47	>50	>50
36 x 24	5.82	6.00	CFM	580	1160	1750	2330	2910	3490	4070	4660	5240	5820
			NC	<20	<20	22	30	36	40	44	48	>50	>50
36 x 30	7.17	7.50	CFM	715	1430	2150	2870	3580	4300	5020	5740	6450	7170
			NC	<20	<20	23	30	36	41	45	49	>50	>50

- Core Velocity in feet per minute.
- All pressures are in inches of water.
- NC data based upon 10dB room attenuation.
- Negative SP is Negative Static Pressure.
- - Denotes NC values less than 10 and CFM values less than 50.





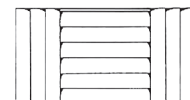
# RETURN AIR RECTANGULAR CEILING AND SIDEWALL DIFFUSERS PERFORMANCE DATA

## SC13 Return Rectangular Ceiling and Sidewall Diffusers without Damper

## SC13 - 3R (Three Way)

Size (inches)	Core Area (Sq. ft.)	Nominal Area (Sq. ft.)	Core Velocity	100	200	300	400	500	600	700	800	900	1000	
				Velocity Pressure	0.001	0.002	0.006	0.010	0.016	0.022	0.031	0.040	0.051	0.062
				Negative SP	0.007	0.035	0.075	0.140	0.225	0.328	0.438	0.563	0.725	0.888
6 x 4	0.12	0.17	CFM	10	25	35	50	60	70	85	95	110	120	
			NC	-	-	-	<20	<20	23	27	31	34	37	
8 x 4	0.16	0.22	CFM	15	30	50	65	80	95	110	130	145	160	
			NC	-	-	<20	<20	20	25	29	32	35	38	
10x 4	0.20	0.28	CFM	20	40	60	80	100	120	140	160	180	200	
			NC	-	-	<20	<20	21	26	30	33	36	39	
12 x 4 8 x 6	0.26	0.33	CFM	25	50	80	105	130	155	180	210	235	260	
			NC	-	<20	<20	<20	22	27	31	34	37	40	
14x 4	0.30	0.39	CFM	30	60	90	120	150	180	210	240	270	300	
			NC	-	<20	<20	<20	22	27	31	35	38	41	
16 x 4 10 x 6	0.35	0.44	CFM	35	70	105	140	175	210	245	280	315	350	
			NC	-	<20	<20	<20	23	28	32	36	38	41	
18 x 4 12 x 6	0.40	0.50	CFM	40	80	120	160	200	240	280	320	360	400	
			NC	-	<20	<20	<20	24	29	33	36	39	42	
20 x 4 14 x 6 10 x 8	0.45	0.56	CFM	45	90	135	180	225	270	315	360	405	450	
			NC	-	<20	<20	<20	25	29	33	37	40	43	
24 x 4 16 x 6 12 x 8	0.55	0.67	CFM	55	110	165	220	275	330	385	440	495	550	
			NC	<20	<20	<20	<20	25	30	34	38	40	43	
18 x 6	0.62	0.75	CFM	60	125	185	250	310	370	435	495	560	620	
			NC	<20	<20	<20	20	26	31	35	38	41	44	
30 x 4, 14 x 8 20 x 6, 12 x 10	0.70	0.83	CFM	70	140	210	280	350	420	490	560	630	700	
			NC	<20	<20	<20	20	26	31	35	39	41	44	
36 x 4, 16 x 8 24 x 6, 14 x 10	0.81	0.97	CFM	80	160	245	325	405	485	565	650	730	810	
			NC	<20	<20	<20	21	27	32	36	39	42	45	
18 x 8	0.87	1.00	CFM	85	175	260	350	435	520	610	695	785	870	
			NC	<20	<20	<20	21	27	32	36	39	42	45	
30 x 6, 16 x 10 20 x 8, 14 x 12	1.02	1.25	CFM	100	205	305	410	510	610	715	815	920	1020	
			NC	<20	<20	<20	22	28	33	37	40	43	46	
24 x 8 18 x 10 16 x 12	1.15	1.33	CFM	115	230	345	460	575	690	805	920	1040	1150	
			NC	<20	<20	<20	23	29	33	37	41	44	47	
36 x 6 20 x 10	1.25	1.50	CFM	125	250	375	500	625	750	875	1000	1125	1250	
			NC	<20	<20	<20	23	29	34	38	41	44	47	
16 x 14 18 x 12	1.35	1.56	CFM	135	270	405	540	675	810	945	1080	1220	1350	
			NC	<20	<20	<20	23	29	34	38	41	44	47	
30 x 8, 20 x 12 24x10, 18 x 14	1.53	1.67	CFM	155	305	460	610	765	920	1070	1220	1380	1530	
			NC	<20	<20	<20	24	30	35	39	42	45	48	
36 x 8, 30 x 14 24 x 12, 20 x 14 18 x 16	1.82	2.00	CFM	180	365	545	730	910	1090	1270	1460	1640	1820	
			NC	<20	<20	<20	25	31	35	39	43	46	49	
24 x 14 20 x 16	2.10	2.33	CFM	210	420	630	840	1050	1260	1470	1680	1890	2100	
			NC	<20	<20	<20	25	31	36	40	43	46	49	
36 x 10, 24 x 16 30 x 12, 20 x 18	2.35	2.50	CFM	235	470	705	940	1180	1410	1640	1880	2120	2350	
			NC	<20	<20	<20	26	32	36	40	44	47	50	
36 x 12 30 x 14 24 x 18	2.68	3.00	CFM	270	535	805	1070	1340	1610	1880	2140	2410	2680	
			NC	<20	<20	<20	26	32	37	41	44	47	50	
36 x 14 30 x 16 24 x 20	3.15	3.50	CFM	315	630	945	1260	1580	1890	2200	2520	2840	3150	
			NC	<20	<20	<20	27	33	38	42	45	48	>50	
36 x 16 30 x 18	3.65	4.00	CFM	365	730	1100	1460	1820	2190	2560	2920	3280	3650	
			NC	<20	<20	20	28	34	38	42	46	49	>50	
36 x 18 30 x 20	4.05	4.50	CFM	405	810	1220	1620	2020	2430	2830	3240	3640	4050	
			NC	<20	<20	21	28	34	39	43	46	49	>50	
36 x 20 30 x 24	4.72	5.00	CFM	470	945	1420	1890	2360	2830	3300	3780	4250	4720	
			NC	<20	<20	21	29	35	39	43	47	>50	>50	
36 x 24	5.82	6.00	CFM	580	1160	1750	2330	2910	3490	4070	4660	5240	5820	
			NC	<20	<20	22	30	36	40	44	48	>50	>50	
36 x 30	7.17	7.50	CFM	715	1430	2150	2870	3580	4300	5020	5740	6450	7170	
			NC	<20	<20	23	30	36	41	45	49	>50	>50	

- Core Velocity in feet per minute.
- All pressures are in inches of water.
- NC data based upon 10dB room attenuation.
- Negative SP is Negative Static Pressure.
- - Denotes NC values less than 10 and CFM values less than 50.





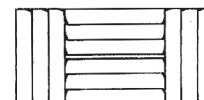
## RETURN AIR RECTANGULAR CEILING AND SIDEWALL DIFFUSERS PERFORMANCE DATA

**SC13 Return Rectangular Ceiling and Sidewall Diffusers without Damper**

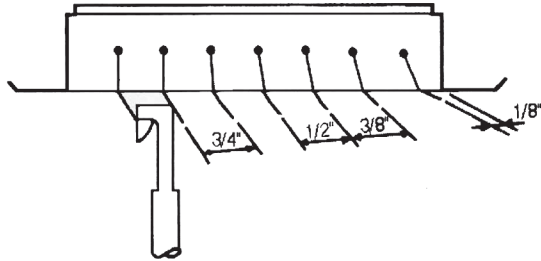
**SC13 - 4R (Four Way)**

Size (inches)	Core Area (Sq. ft.)	Nominal Area (Sq. ft.)	Core Velocity		100	200	300	400	500	600	700	800	900	1000
			Velocity Pressure		0.001	0.002	0.006	0.010	0.016	0.022	0.031	0.040	0.051	0.062
			Negative SP		0.010	0.040	0.088	0.160	0.257	0.374	0.500	0.643	0.829	0.998
6 x 4	0.12	0.17	CFM		10	25	35	50	60	70	85	95	110	120
			NC		-	-	-	<20	<20	23	27	31	34	37
8 x 4	0.16	0.22	CFM		15	30	50	65	80	95	110	130	145	160
			NC		-	-	<20	<20	20	25	29	32	35	38
10x 4	0.20	0.28	CFM		20	40	60	80	100	120	140	160	180	200
			NC		-	-	<20	<20	21	26	30	33	36	39
12 x 4 8 x 6	0.26	0.33	CFM		25	50	80	105	130	155	180	210	235	260
			NC		-	<20	<20	<20	22	27	31	34	37	40
14x 4	0.30	0.39	CFM		30	60	90	120	150	180	210	240	270	300
			NC		-	<20	<20	<20	22	27	31	35	38	41
16 x 4 10 x 6	0.35	0.44	CFM		35	70	105	140	175	210	245	280	315	350
			NC		-	<20	<20	<20	23	28	32	36	38	41
18 x 4 12 x 6	0.40	0.50	CFM		40	80	120	160	200	240	280	320	360	400
			NC		-	<20	<20	<20	24	29	33	36	39	42
20 x 4 14 x 6 10 x 8	0.45	0.56	CFM		45	90	135	180	225	270	315	360	405	450
			NC		-	<20	<20	<20	25	29	33	37	40	43
24 x 4 16 x 6 12 x 8	0.55	0.67	CFM		55	110	165	220	275	330	385	440	495	550
			NC		<20	<20	<20	<20	25	30	34	38	40	43
18 x 6	0.62	0.75	CFM		60	125	185	250	310	370	435	495	560	620
			NC		<20	<20	<20	20	26	31	35	38	41	44
30 x 4, 14 x 8 20 x 6, 12 x 10	0.70	0.83	CFM		70	140	210	280	350	420	490	560	630	700
			NC		<20	<20	<20	20	26	31	35	39	41	44
36 x 4, 16 x 8 24 x 6, 14 x 10	0.81	0.97	CFM		80	160	245	325	405	485	565	650	730	810
			NC		<20	<20	<20	21	27	32	36	39	42	45
18 x 8	0.87	1.00	CFM		85	175	260	350	435	520	610	695	785	870
			NC		<20	<20	<20	21	27	32	36	39	42	45
30 x 6, 16 x 10 20 x 8, 14 x 12	1.02	1.25	CFM		100	205	305	410	510	610	715	815	920	1020
			NC		<20	<20	<20	22	28	33	37	40	43	46
24 x 8 18 x 10 16 x 12	1.15	1.33	CFM		115	230	345	460	575	690	805	920	1040	1150
			NC		<20	<20	<20	23	29	33	37	41	44	47
36 x 6 20 x 10	1.25	1.50	CFM		125	250	375	500	625	750	875	1000	1125	1250
			NC		<20	<20	<20	23	29	34	38	41	44	47
16 x 14 18 x 12	1.35	1.56	CFM		135	270	405	540	675	810	945	1080	1220	1350
			NC		<20	<20	<20	23	29	34	38	41	44	47
30 x 8, 20 x 12 24 x 10, 18 x 14	1.53	1.67	CFM		155	305	460	610	765	920	1070	1220	1380	1530
			NC		<20	<20	<20	24	30	35	39	42	45	48
36 x 8, 30 x 10 24 x 12, 20 x 14 18 x 16	1.82	2.00	CFM		180	365	545	730	910	1090	1270	1460	1640	1820
			NC		<20	<20	<20	25	31	35	39	43	46	49
24 x 14 20 x 16	2.10	2.33	CFM		210	420	630	840	1050	1260	1470	1680	1890	2100
			NC		<20	<20	<20	25	31	36	40	43	46	49
36 x 10, 24 x 16 30 x 12, 20 x 18	2.35	2.50	CFM		235	470	705	940	1180	1410	1640	1880	2120	2350
			NC		<20	<20	<20	26	32	36	40	44	47	50
36 x 12 30 x 14 24 x 18	2.68	3.00	CFM		270	535	805	1070	1340	1610	1880	2140	2410	2680
			NC		<20	<20	<20	26	32	37	41	44	47	50
36 x 14 30 x 16 24 x 20	3.15	3.50	CFM		315	630	945	1260	1580	1890	2200	2520	2840	3150
			NC		<20	<20	<20	27	33	38	42	45	48	>50
36 x 16 30 x 18	3.65	4.00	CFM		365	730	1100	1460	1820	2190	2560	2920	3280	3650
			NC		<20	<20	20	28	34	38	42	46	49	>50
36 x 18 30 x 20	4.05	4.50	CFM		405	810	1220	1620	2020	2430	2830	3240	3640	4050
			NC		<20	<20	21	28	34	39	43	46	49	>50
36 x 20 30 x 24	4.72	5.00	CFM		470	945	1420	1890	2360	2830	3300	3780	4250	4720
			NC		<20	<20	21	29	35	39	43	47	>50	>50
36 x 24	5.82	6.00	CFM		580	1160	1750	2330	2910	3490	4070	4660	5240	5820
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36 x 30	7.17	7.50	CFM		715	1430	2150	2870	3580	4300	5020	5740	6450	7170
			NC		<20	<20	23	30	36	41	45	49	>50	>50

- Core Velocity in feet per minute.
- All pressures are in inches of water.
- NC data based upon 10dB room attenuation.
- Negative SP is Negative Static Pressure.
- - Denotes NC values less than 10 and CFM values less than 50.



## BALANCING DATA



**Position for velocity measurements.**

1. Set the blades at the desired settings as shown, so that it directs the flow of air to be discharged parallel to the face of the diffuser.
2. Obtain the average velocity with a minimum of 1 and a maximum of 4 equispaced velocity readings on tip of diffuser blades on each throw.
3. Determine the flow by the following equation :

$$\text{CFM} = \text{Core Area} \times \text{Average Velocity}$$



# INSTALLATION DETAILS

