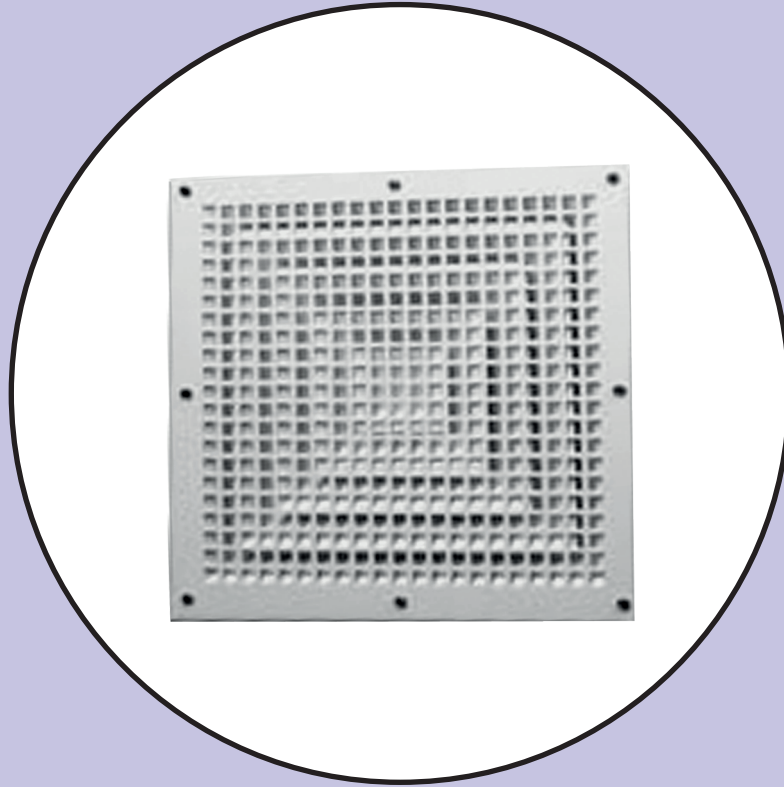


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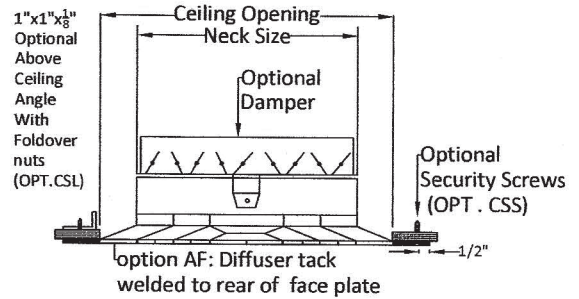
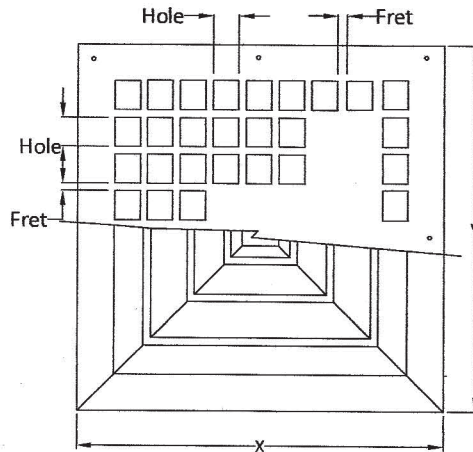
شركة الخليج لفتحات التكييف المركزي

GULF GRILLES CO.



CEILING SECURITY  
DIFFUSER

A19  
CEILING SECURITY  
DIFFUSER



### STANDARD CONSTRUCTION

**Face:** 2.5 mm steel

**Hole Pattern:** 13/16" square holes with 3/16" frets.

**Diffuser:** Commercial surface mount ceiling diffuser.

\* Neck sizes are available in 3" increments

**Finish:** Electrostatic polyester powder coated. White

#### Required Construction

##### Face Material:

- 2.5 mm steel(Std)
- 2 mm steel
- 3 mm steel
- Other

##### Hole Pattern:

- 13/16" square holes with 3/16" frets(std) 3/4"x3/4" square holes with 1/4" frets
- 1/2"x1/2" holes with 3/16" frets.
- Other

##### Finish :

- White(Std)
- Other

##### Other Material:

- SCD-A all aluminum construction.10 gauge thick face, aluminum diffuser
- SCD-SS all stainless steel construction.
- steel diffuser

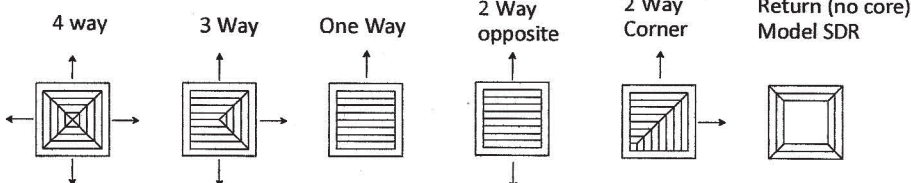
### Mounting Options

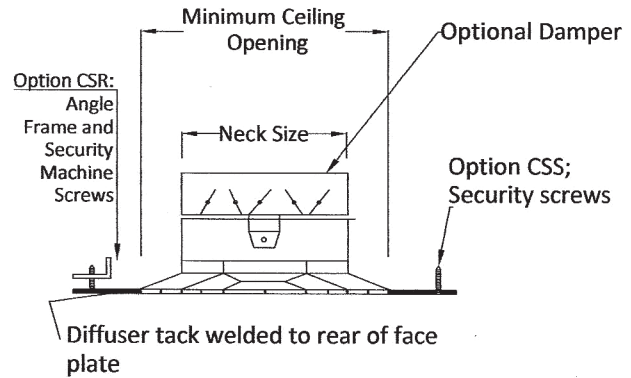
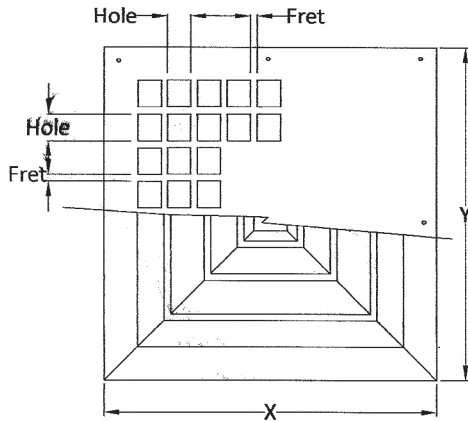
- CSS-countersunk screw holes in face 10" o.c with #10x2" long security sheet metal screws. Clearance hole in diffuser for securing to structure above diffuser.
- CST- Countersunk screw holes in face 10" o.c with # 10x1" long security sheet metal screws. Starter hole in diffuser for securing face plate directly to diffuser
- CSL- Countersunk screw holes in face 10" o.c with #10-24x 2" long security machine screws for 1-1/2" maximum ceiling thickness, 1"x1"x1/8" steel angle frame with matching holes and fold over nuts.
- AF- 1"x1"x1/8" angle frame with extended legs on one end. Loose for field welding to sleeve.

### Accessories

- OBD: Face operated opposed blade damper.
- SXR: Square to round transition
- EG: Equalizing grid.
- SLV: 2.5 mm steel sleeve with continuously welded or formed seams, stitch welded to diffuser neck

### THROW PATTERNS





### STANDARD CONSTRUCTION

**Face:** 12 gauge steel

**Hole Pattern:** 13/16" square holes with 3/16" frets.

**Diffuser:** Commercial surface mount ceiling diffuser.

\* Neck sizes are available in 3" increments

**Finish:** Electrostatic polyester powder coated. White

### Required Construction

#### Face Material:

- 12 gauge steel(Std)
- 14 gauge steel
- 10 gauge steel
- Other

#### Hole Pattern:

- 13/16" square holes with 3/16" frets(std)
- 3/4"x3/4" square holes with 1/4" frets
- 1.2"x1/2" holes with 3/16" frets.
- Other

#### Finish :

- White(Std)
- Other

### Other Material:

- SCD9-EA all aluminum construction.10ga (.100") thick face, aluminum diffuser
- SCD9-ESS all stainless steel construction.
- 12 gauge type 304 face, stainlesssteel diffuser

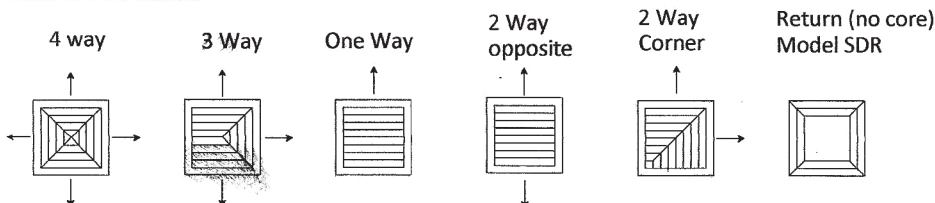
### Mounting Options

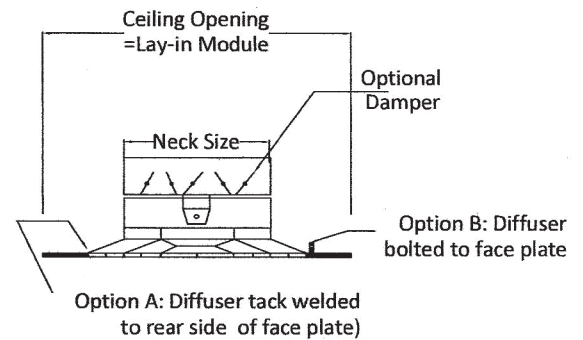
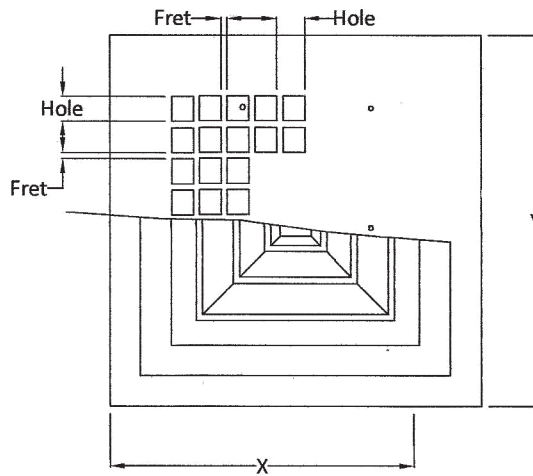
- CSS: Countersunk screw holes in face 10"o.c with #10x2" long security sheet metal screws. Clearance hole in diffuser for securing to structure above diffuser.
- CSR: Countersunk screw holes in face 10" o.c with #10-24x 2" long security machine screws for 1-1/2" maximum ceiling thickness, 1"x1" x 1/8" steel angle frames with matching holes and fold over nuts.

### Accessories

- OBD: Face operated opposed blade damper
- SXR: Square to round transition
- EG: Equalizing grid.

### THROW PATTERNS





### STANDARD CONSTRUCTION

Face: 2.5 mm steel

Hole Pattern: 13/16" square holes with 3/16" frets.

Diffuser: Commercial surface mount ceiling diffuser.

\* Neck sizes are available in 3" increments

Finish: Electrostatic polyester powder coated. White

### Required Construction

Face Material:

- 2.5 mm steel(Std)
- 2 mm steel
- 3 mm steel
- Other

Hole Pattern:

- 13/16" square holes with 3/16" frets(std)
- 3/4"x3/4" square holes with 1/4" frets
- 1.2"x1.2" holes with 3/16" frets.
- Other

Finish :

- White
- Other

### Other Material:

- SCD-A all aluminum construction. 2 mm thick face, aluminum diffuser
- SCD-SS all stainless steel construction.

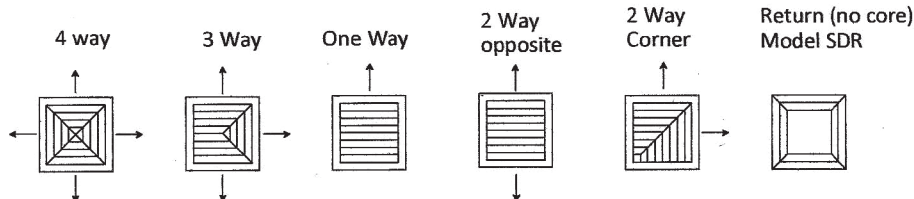
### Mounting Option

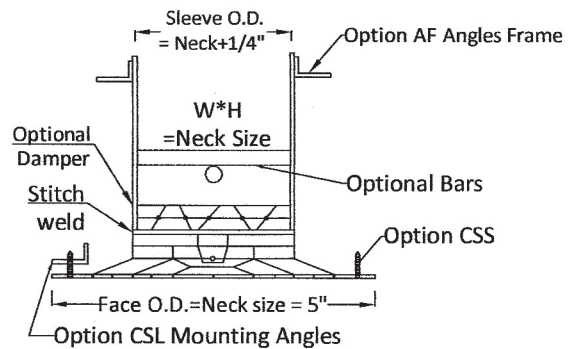
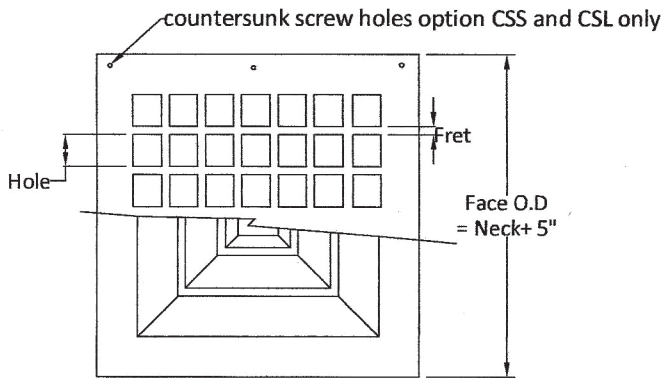
- TW: Diffuser tack welded to rear face plate(Std)
- CSS: Diffuser attaches to face plate with countersunk screw holes in face 10" o.c and #10-24x1" long security machine screws threaded into nuts on rear of face plate.

### Accessories

- OBD: Face operated opposed blade damper
- SXR: Square to round transition
- EG: Equalizing grid.

### THROW PATTERNS





### STANDARD CONSTRUCTION

**Face:** 2.5 mm thick steel

**Hole Pattern:** 13/16" square holes with 3/16" frets.

**Diffuser:** Commercial surface mount ceiling diffuser.

\* Neck sizes are available in 3" increments

**Finish:** Electrostatic polyester powder coated.  
White

### REQUIRED CONSTRUCTION

**Face Material:**

- 2.5 mm steel(Std)
- 2 mm steel
- 3 mm steel
- Other

**Hole Pattern:**

- 13/16" square holes with 3/16" frets(std)
- 3/4"x3/4" square holes with 1/4" frets
- 1/2"x1/2" holes with 3/16" frets.
- Other

### Finish :

- White(Std)
- Other

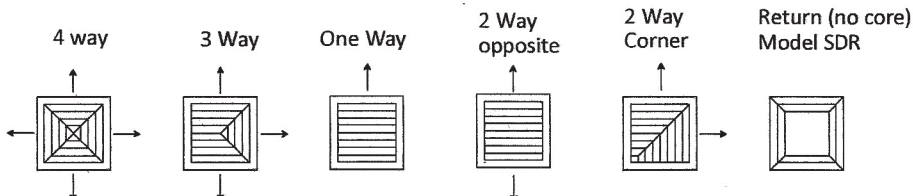
### Mounting Options

- CSS: countersunk screw holes in face 10" o.c with #10x2" long security sheet metal screws. Clearance hole in diffuser for securing to structure above diffuser.
- CSL: Countersunk screw holes in face 10" o.c with #10-24x 2" long security machine screws for 1-1/2" maximum ceiling thickness, 1"x1"x1/8" steel angle frame with matching holes and fold over nuts.
- AF: 1"x1"x1/8" angle frame with extended legs on two ends end. Loose for field welding to sleeve.

### Accessories

- OBD: Face operated opposed blade damper .
- SXR: Square to round transition
- EG: Equalizing grid.

### THROW PATTERNS



# SECURITY CEILING DIFFUSER PERFORMANCE DATA

Nominal Size		Neck Velocity (fpm)	200	300	400	500	600	700	800
W (inches)	H (inches)	Static pressure (in. of w.g)	0.02	0.05	0.09	0.15	0.21	0.29	0.38
6	6	cfm	50	80	100	130	150	180	200
		NC	<20	<20	<20	23	29	34	38
		4 way throw	1 2 4	2 3 6	3 4 8	3 5 10	4 6 11	5 7 12	5 8 13
		3 way throw	2 2 5	3 4 8	3 5 9	4 6 12	5 7 14	6 9 15	6 9 16
		2 way throw	2 3 5	3 4 9	4 5 11	5 7 14	5 8 16	7 10 17	7 11 18
		1 way throw	3 4 8	4 6 12	5 8 15	7 10 20	8 12 23	9 14 25	10 15 26
9	9	cfm	110	170	230	280	340	390	450
		NC	<20	<20	22	29	34	39	44
		4 way throw	2 3 6	3 4 9	4 6 12	5 7 14	6 9 17	7 10 18	8 12 20
		3 way throw	2 3 7	4 5 11	5 7 15	6 9 18	7 11 21	8 12 22	9 14 24
		2 way throw	3 4 8	4 6 12	6 8 17	7 10 20	8 12 24	9 14 26	11 16 28
		1 way throw	4 6 11	6 9 18	8 12 24	10 14 29	12 18 23	13 20 36	15 23 39
12	12	cfm	200	300	400	500	600	700	800
		NC	<20	<20	25	32	38	43	47
		4 way throw	3 4 8	4 6 12	5 8 15	6 10 19	8 12 23	9 14 24	10 15 26
		3 way throw	3 5 9	5 7 14	6 9 19	8 12 24	9 14 28	11 17 30	13 19 32
		2 way throw	4 5 11	5 8 16	7 11 22	9 14 27	11 16 32	13 19 34	15 22 37
		1 way throw	5 8 15	8 12 23	10 15 31	13 19 39	15 23 45	18 27 49	21 31 52
15	15	cfm	310	470	630	780	940	1090	1250
		NC	<20	<20	28	35	41	46	50
		4 way throw	3 5 10	5 7 15	7 10 20	8 12 24	10 15 28	11 17 30	13 19 33
		3 way throw	4 6 12	6 9 18	8 12 24	10 15 30	12 18 35	14 21 37	16 24 40
		2 way throw	5 7 14	7 10 21	9 14 28	11 17 34	14 21 40	16 24 43	18 27 46
		1 way throw	6 10 19	10 15 29	13 20 39	16 24 48	19 29 56	23 34 61	29 39 65
18	18	cfm	450	680	900	1130	1350	1580	1800
		NC	<20	21	31	38	43	48	53
		4 way throw	4 6 12	6 9 18	8 12 23	10 15 29	12 17 34	14 20 37	15 23 39
		3 way throw	5 7 14	7 11 22	9 14 28	12 18 36	14 21 41	17 25 45	19 28 48
		2 way throw	5 8 16	8 12 25	11 16 33	14 21 41	16 25 48	19 29 52	22 33 55
		1 way throw	8 12 23	12 18 35	15 23 46	19 29 58	23 35 68	27 41 73	31 46 78
21	21	cfm	610	920	1230	1530	1840	2140	2450
		NC	<20	24	33	40	46	50	55
		4 way throw	5 7 14	7 10 20	9 14 27	11 17 34	14 20 39	16 24 43	18 27 46
		3 way throw	6 8 17	8 12 25	11 17 33	14 21 41	17 25 48	19 29 52	22 33 56
		2 way throw	6 10 19	10 14 29	13 19 38	16 24 48	19 29 56	22 33 60	26 38 64
		1 way throw	9 14 27	14 20 41	18 27 54	23 34 68	27 41 79	32 47 85	36 54 91
24	24	cfm	800	1200	1600	2000	2400	2800	3200
		NC	<20	25	34	41	47	52	56
		4 way throw	5 8 15	8 12 23	10 15 31	13 19 39	15 23 45	18 27 49	21 31 52
		3 way throw	6 9 19	9 14 28	13 19 38	14 24 47	19 28 55	22 33 60	25 38 64
		2 way throw	7 11 22	11 16 33	15 22 44	18 27 55	22 33 64	26 38 69	29 44 74
		1 way throw	10 15 31	15 23 46	21 31 62	26 39 77	31 46 90	36 54 97	41 62 104

Data determined in accordance with ANSI/ASHRAE Standard 70-1991

Velocity-Neck Velocity, fpm

Ps-Static Pressure, inches w.g

Throw-Distance, in feet, to terminal velocities Vt=150,100,50fpm, respectively

3 Way-Throw distances shown are for the two opposite directions. The other throw distance is equal to the 4 way throw distance.

NC-Noise Criteria with 10 dB room attenuation.