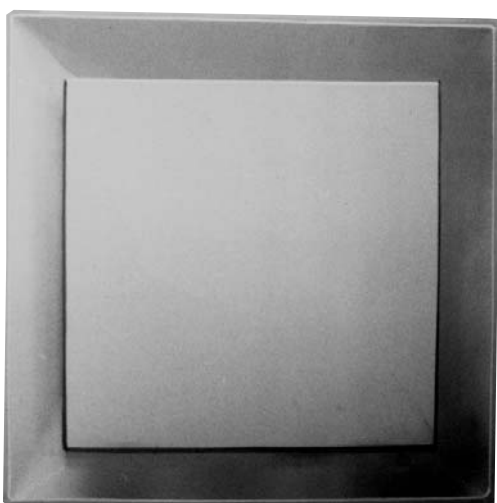




STAMPED LOUVERED DIFFUSER
Models SFTB — SFAB

FEATURES

- All Stamped Process - No Miter Lines or Unsightly Fasteners.
- Louvered or Plaque Face.
- Choice of Steel or Aluminum Construction.
- Choice of Seven Round Neck Sizes.
- Three Face Sizes Available.

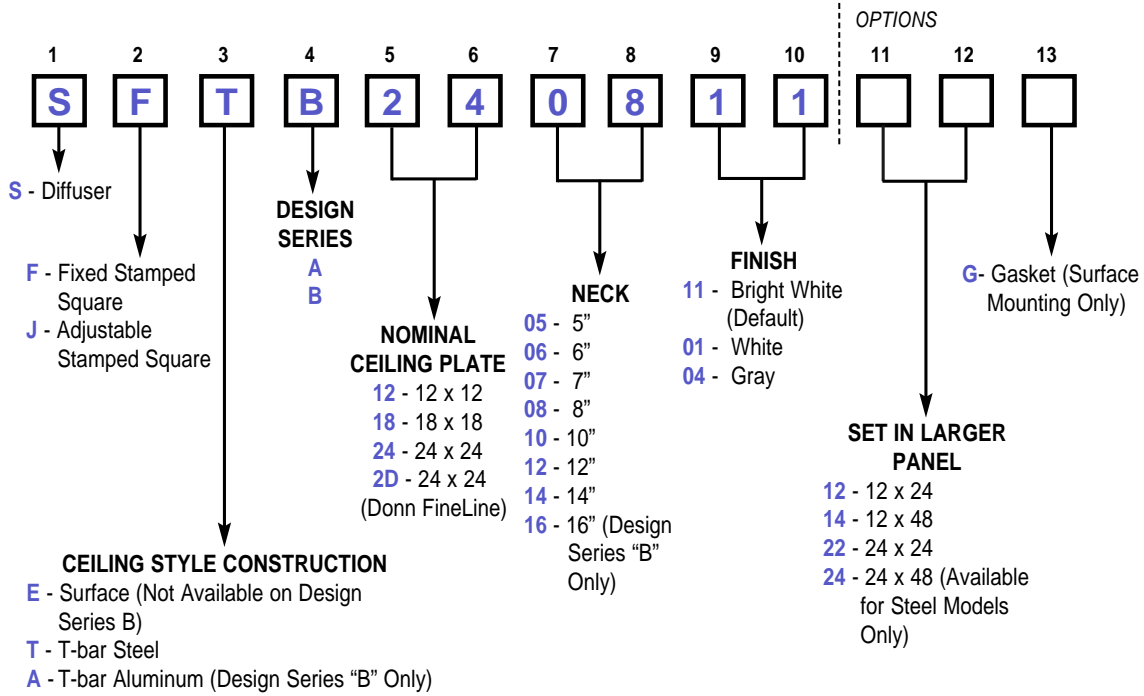


PLAQUE DIFFUSER
Model SFPA

FEATURES

- Fixed Horizontal or Adjustable Air Pattern Models.
- Models for Plaster or T-bar Ceilings.
- 1-1/4" Deep Inlet Collar for Easy Duct Connection.
- Full Line of Easily Installed Duct Accessories.
- Carnes White Electrocoat Paint Finish.

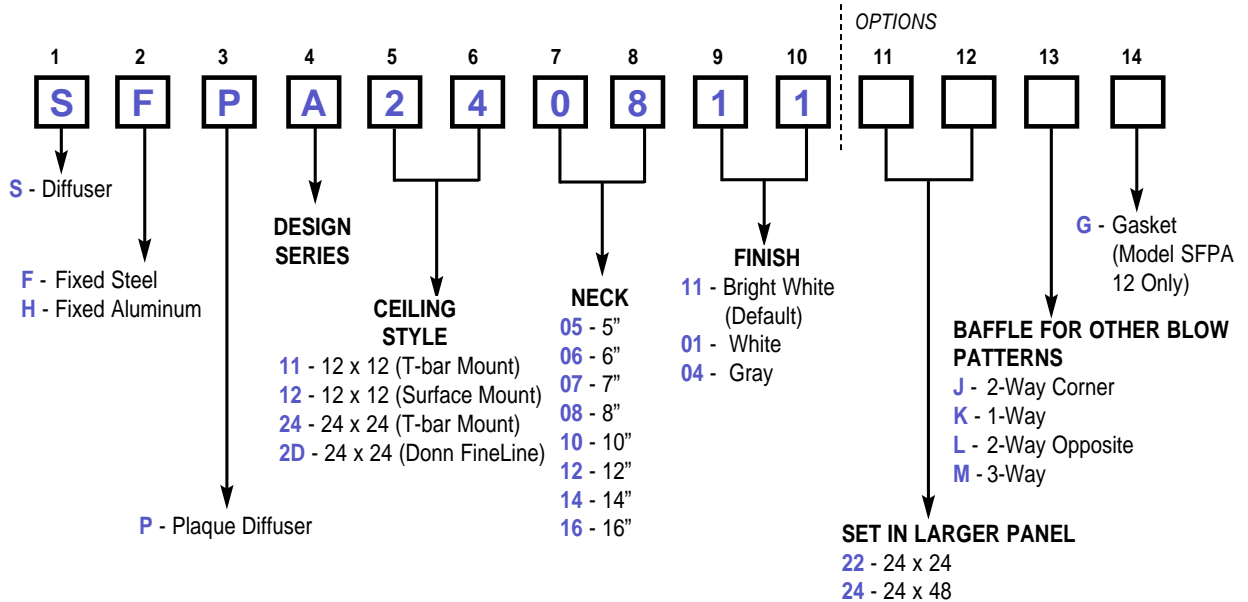
▼ **Stamped Louvered Diffusers**



SURFACE MOUNT APPLICATIONS:

- Flex Duct - use lay in model (224) with auxilliary frame (KXFAA) is recommended.
- Hard Duct - surface mount frame (222) is recommended.

▼ **Plaque Diffusers**



SURFACE MOUNT APPLICATIONS:

- Flex Duct - use lay in model (224) with auxilliary frame (KXFAA) is recommended.
- Hard Duct - surface mount frame (222) is recommended.

DEFINITION OF TERMS

Throw

Throw, expressed in feet, are based on supply air temperature equal to room temperature. Chilled supply air will result in throw values less than tabulated. Heated supply air will result in longer throw values. Use the multiplication factors in the table below to determine throw values depending on supply air temperature.

V _t FPM	Isothermal	Δ _t = -20°F	Δ _t +20°F
150	1.00	1.00	1.00
50	1.00	.90	1.10

Throws are base on installation in a nine foot ceiling.

Total Pressure - P_t

Total Pressure (P_t, inches of water) is equal to static pressure (P_s) + velocity pressure (P_v) immediately upstream of the diffuser. **P_t = P_s + P_v.**

Velocity Pressures in inches of water are as follows:

	Neck Velocity - FPM								
	400	500	600	700	800	900	1000	1200	1400
P _v	.010	.016	.022	.030	.04	.050	.062	.090	.150

Tabulated P_t values are given without a damper in the diffuser neck. To find P_t when the Model KXMB damper is used in the wide open position, multiply the tabulated P_t by 1.1.

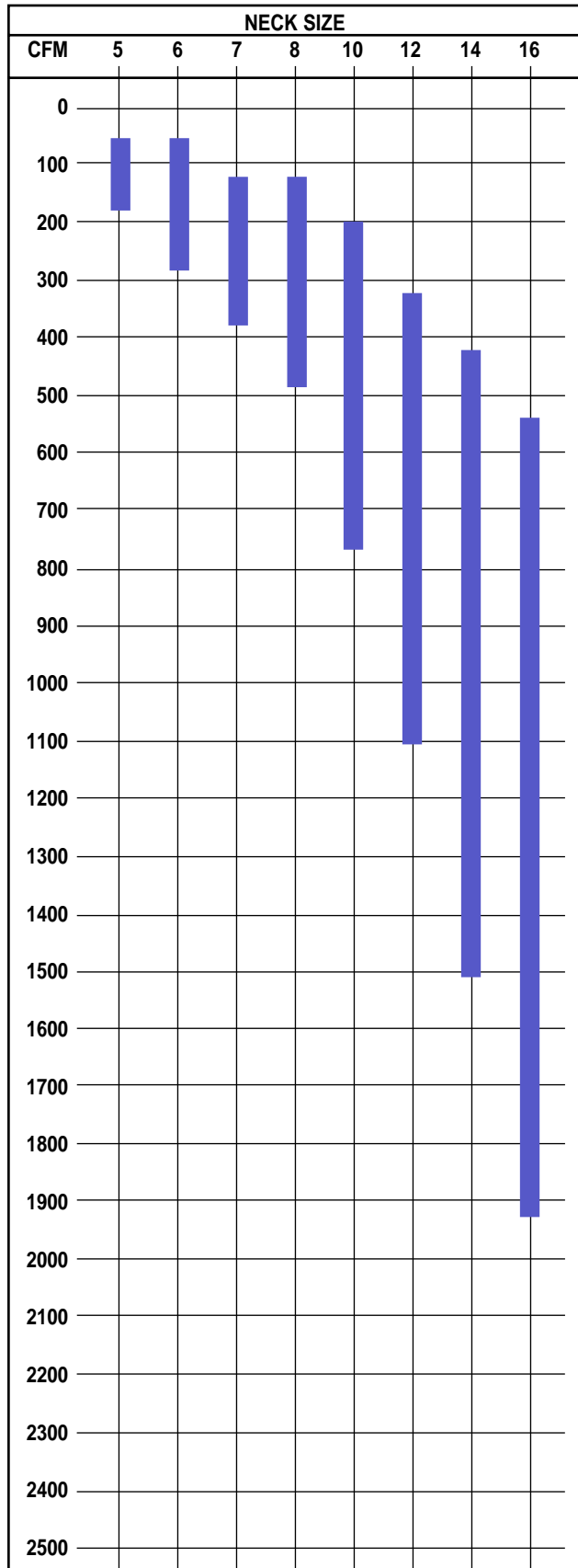
Sound Data

NC is the noise criterion curve which will not be exceeded by the diffuser in a room having a room attenuation equaling 10 decibels (db). (This is a conservative figure. Most rooms actually have higher values of room attenuation.) Rating "L" indicates an NC level less than 20 db.

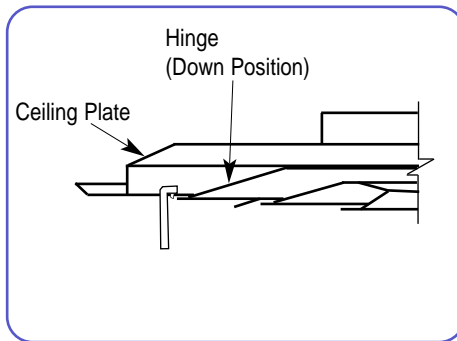
Sound data is based on 10⁻¹² watt.

NOTES:

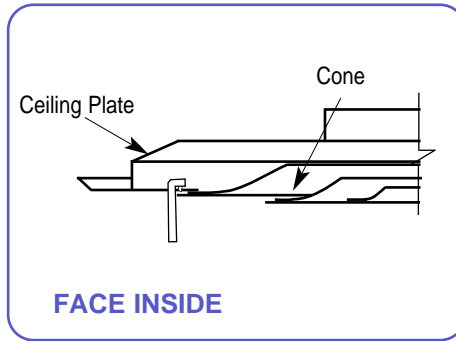
NOMINAL CFM SELECTION CHART



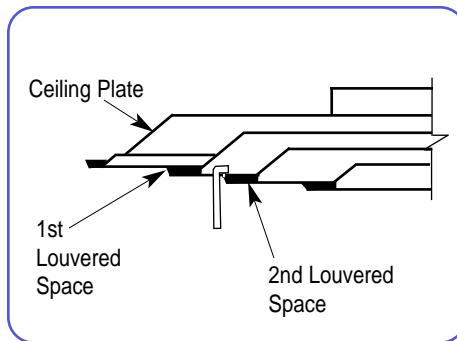
Model SJTB - Horizontal



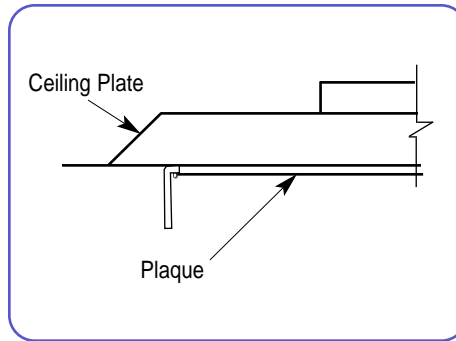
Model SJTB - Vertical



Models SFTB

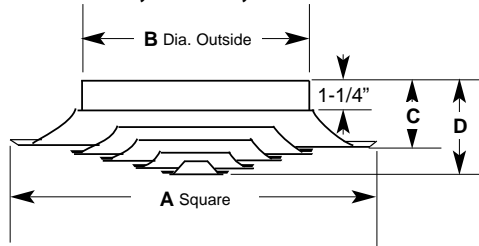


Models SFPA & SHPA

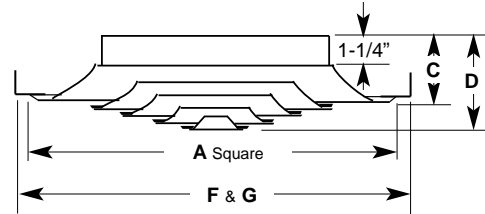


1. For measuring supply air flow rates an Anor Jet No. 2220A or 6070 is used.
2. Position probe as shown taking readings in the center of all four sides. Use the average reading (-4) to obtain V_k .
3. From the performance data in this catalog, select the A_k applicable to the diffuser size.
4. Calculate $CFM = V_k \times A_k$.

Models SFEA, SFTA, SJEA and SJTA



Surface Mounted Units - Size and Selection



Panel Mounted Units - Size and Selection - Exposed T-Bar

Model	Dimensions Listed In Inches						Number of Cones
	A	B	C	C*	D	D*	
SFEA 1205	12-1/2	4-7/8	3	3-5/8	3-3/4	3-3/4	3
SFEA 1206	12-1/2	5-7/8	3	3-5/8	3-3/4	3-3/4	3
SFEA 1207	12-1/2	6-7/8	3	3-5/8	3-3/4	3-3/4	3
SFEA 1806	18-1/2	5-7/8	3-9/16	4-7/16	4-15/16	4-15/16	4
SFEA 1807	18-1/2	6-7/8	3-9/16	4-7/16	4-15/16	4-15/16	4
SFEA 1808	18-1/2	7-7/8	3-9/16	4-7/16	4-15/16	4-15/16	4
SFEA 1810	18-1/2	9-7/8	3-9/16	4-7/16	4-15/16	4-15/16	4
SFEA 1812	18-1/2	11-7/8	3-9/16	4-7/16	4-15/16	4-15/16	4

Model	Dimensions Listed In Inches								Number of Cones
	A	B	C	C*	D	D*	F	G	
SFTA 1205	11-3/4	4-7/8	3	3-5/8	3-3/4	3-3/4	11-3/4	11-3/4	3
SFTA 1206	11-3/4	5-7/8	3	3-5/8	3-3/4	3-3/4	11-3/4	11-3/4	3
SFTA 1207	11-3/4	6-7/8	3	3-5/8	3-3/4	3-3/4	11-3/4	11-3/4	3
SFTA 1205_12	11-3/4	4-7/8	3	3-5/8	3-3/4	3-3/4	11-3/4	23-3/4	3
SFTA 1206_12	11-3/4	5-7/8	3	3-5/8	3-3/4	3-3/4	11-3/4	23-3/4	3
SFTA 1207_12	11-3/4	6-7/8	3	3-5/8	3-3/4	3-3/4	11-3/4	23-3/4	3
SFTA 1205_14	11-3/4	4-7/8	3	3-5/8	3-3/4	3-3/4	11-3/4	47-3/4	3
SFTA 1206_14	11-3/4	5-7/8	3	3-5/8	3-3/4	3-3/4	11-3/4	47-3/4	3
SFTA 1207_14	11-3/4	6-7/8	3	3-5/8	3-3/4	3-3/4	11-3/4	47-3/4	3
SFTA 1205_22	11-3/4	4-7/8	3	3-5/8	3-3/4	3-3/4	23-3/4	23-3/4	3
SFTA 1206_22	11-3/4	5-7/8	3	3-5/8	3-3/4	3-3/4	23-3/4	23-3/4	3
SFTA 1207_22	11-3/4	6-7/8	3	3-5/8	3-3/4	3-3/4	23-3/4	23-3/4	3
SFTA 1205_24	11-3/4	4-7/8	3	3-5/8	3-3/4	3-3/4	47-3/4	23-3/4	3
SFTA 1206_24	11-3/4	5-7/8	3	3-5/8	3-3/4	3-3/4	47-3/4	23-3/4	3
SFTA 1207_24	11-3/4	6-7/8	3	3-5/8	3-3/4	3-3/4	47-3/4	23-3/4	3
SFTA 1806_22	17-3/4	5-7/8	3-1/16	4-7/16	4-15/16	4-5/16	23-3/4	23-3/4	4
SFTA 1807_22	17-3/4	6-7/8	3-1/16	4-7/16	4-15/16	4-5/16	23-3/4	23-3/4	4
SFTA 1808_22	17-3/4	7-7/8	3-1/16	4-7/16	4-15/16	4-5/16	23-3/4	23-3/4	4
SFTA 1810_22	17-3/4	9-7/8	3-1/16	4-7/16	4-15/16	4-5/16	23-3/4	23-3/4	4
SFTA 1812_22	17-3/4	11-7/8	3-1/16	4-7/16	4-15/16	4-5/16	23-3/4	23-3/4	4
SFTA 1806_24	17-3/4	5-7/8	3-1/16	4-7/16	4-15/16	4-5/16	23-3/4	47-3/4	4
SFTA 1807_24	17-3/4	6-7/8	3-1/16	4-7/16	4-15/16	4-5/16	23-3/4	47-3/4	4
SFTA 1808_24	17-3/4	7-7/8	3-1/16	4-7/16	4-15/16	4-5/16	23-3/4	47-3/4	4
SFTA 1810_24	17-3/4	9-7/8	3-1/16	4-7/16	4-15/16	4-5/16	23-3/4	47-3/4	4
SFTA 1812_24	17-3/4	11-7/8	3-1/16	4-7/16	4-15/16	4-5/16	23-3/4	47-3/4	4

* Dimensions for SJ Units — “D” Dimensions shown for SJ are for vertical pattern position. For face size 12x12 add 5/8” and face size 24x24 add 13/16” for horizontal position.

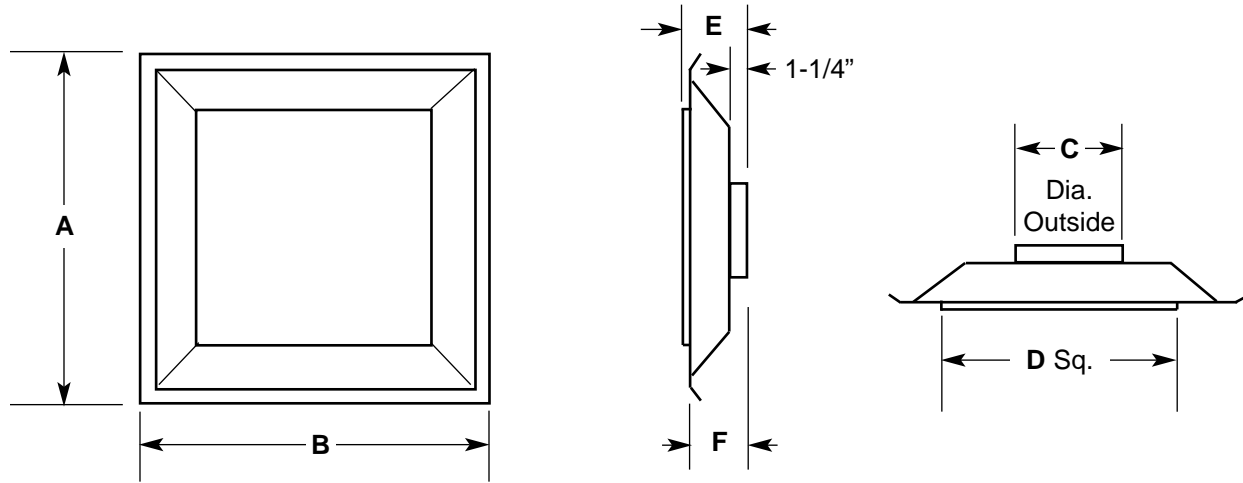
Notes on Performance Data

- Performance data is based on tests conducted in accordance with ANSI/ASHRAE Standard 70-1991.
- Actual performance in the field may vary.
- Tests were conducted in isothermal conditions.
- Sound levels are based on a room absorption of 10 db re 10⁻¹² watts.

Notes on Units of Measure Used

- Air flow is given in cubic feet per minute (CFM).
- Static Pressure is given in inches of water (w.g.).
- Sound data is given in NC.
- L indicates an NC below 20.

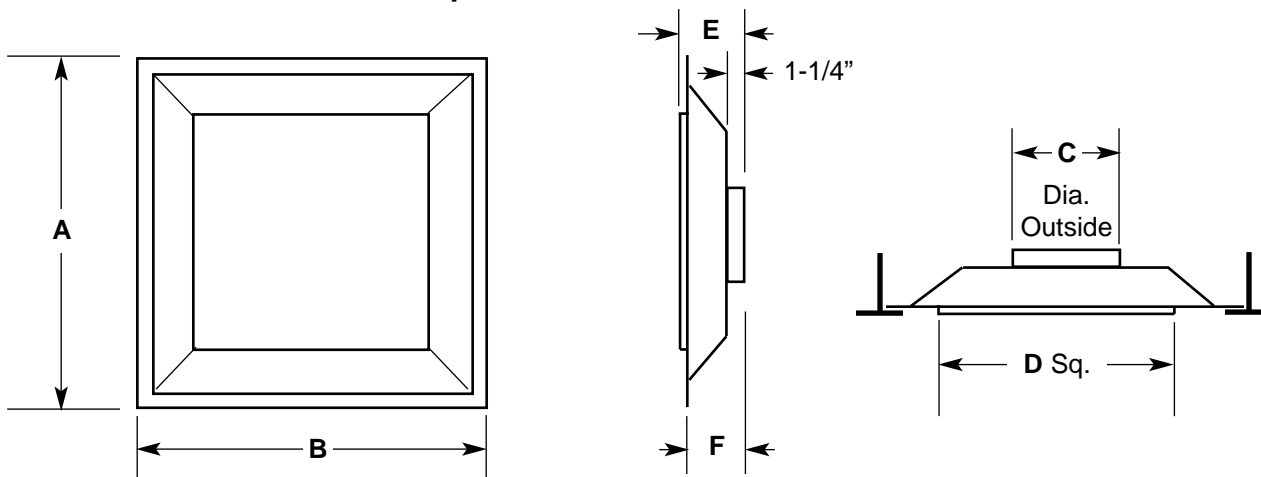
Model SFPA Plaque Diffuser — Size 12" x 12" Surface Mount



Model	Nominal Duct Size (Dia. — In.)	Dimensions Listed In Inches					
		A	B	C	D	E	F
SFPA 1206	6	12-1/2	12-1/2	5-7/8	9	3-7/16	3
SFPA 1208	8	12-1/2	12-1/2	7-7/8	9	3-7/16	3

- NOTES:**
1. Plaque easily removable by disengaging the spring lock and rotating counter clockwise.
 2. Plaque is hemmed edge 20 ga. cold roll steel.
 3. Standard finish is Carnes #11 Bright White Electrocoat.
 4. Recommended ceiling opening is 11-1/4" x 11-1/4".

Models SFPA and SHPA Plaque Diffuser — Size 12" x 12" & 24" x 24" T-bar Mount

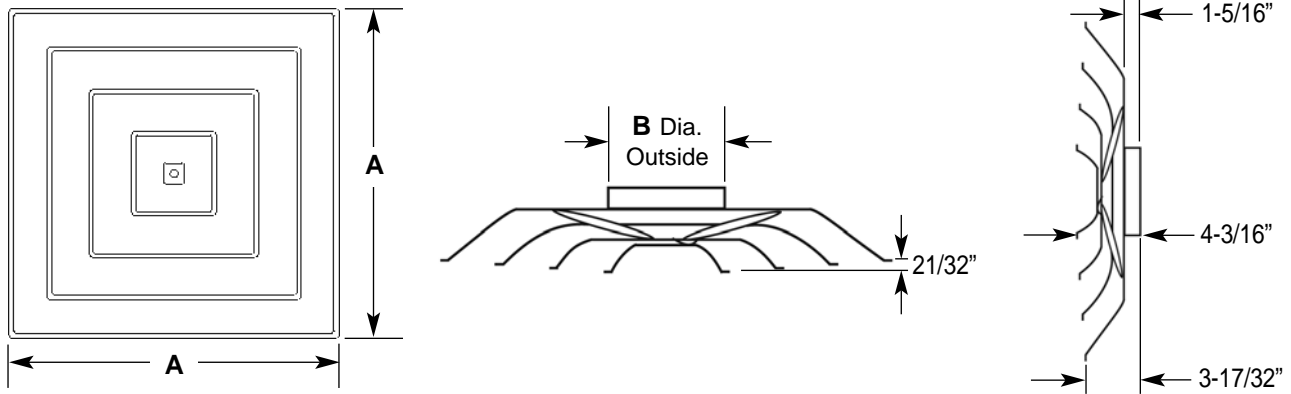


Model	Nominal Duct Size (Dia. — In.)	Dimensions Listed In Inches					
		A	B	C	D	E	F
SFPA 1106	6	11-3/4	11-3/4	5-7/8	9	3-7/16	3
SFPA 1108	8	11-3/4	11-3/4	7-7/8	9	3-7/16	3
SFPA/SHPA 2406	6	23-3/4	23-3/4	5-7/8	17-5/8	3-7/8	3-1/2
SFPA/SHPA 2408	8	23-3/4	23-3/4	7-7/8	17-5/8	3-7/8	3-1/2
SFPA/SHPA 2410	10	23-3/4	23-3/4	9-7/8	17-5/8	3-7/8	3-1/2
SFPA/SHPA 2412	12	23-3/4	23-3/4	11-7/8	17-5/8	3-7/8	3-1/2
SFPA/SHPA 2414	14	23-3/4	23-3/4	13-7/8	17-5/8	3-7/8	3-1/2
SFPA/SHPA 2416	16	23-3/4	23-3/4	15-7/8	17-5/8	3-7/8	3-1/2

- NOTES:**
1. Plaque easily removable by disengaging the spring lock and rotating counter clockwise.
 2. Plaque is hemmed edge 20 ga. material.
 3. Standard finish is Carnes #11 Bright White Electrocoat.

Sq. & Rect. Louvered Diffusers

Model SFTB Steel and SFAB Aluminum — Horizontal Pattern — T-bar Mount



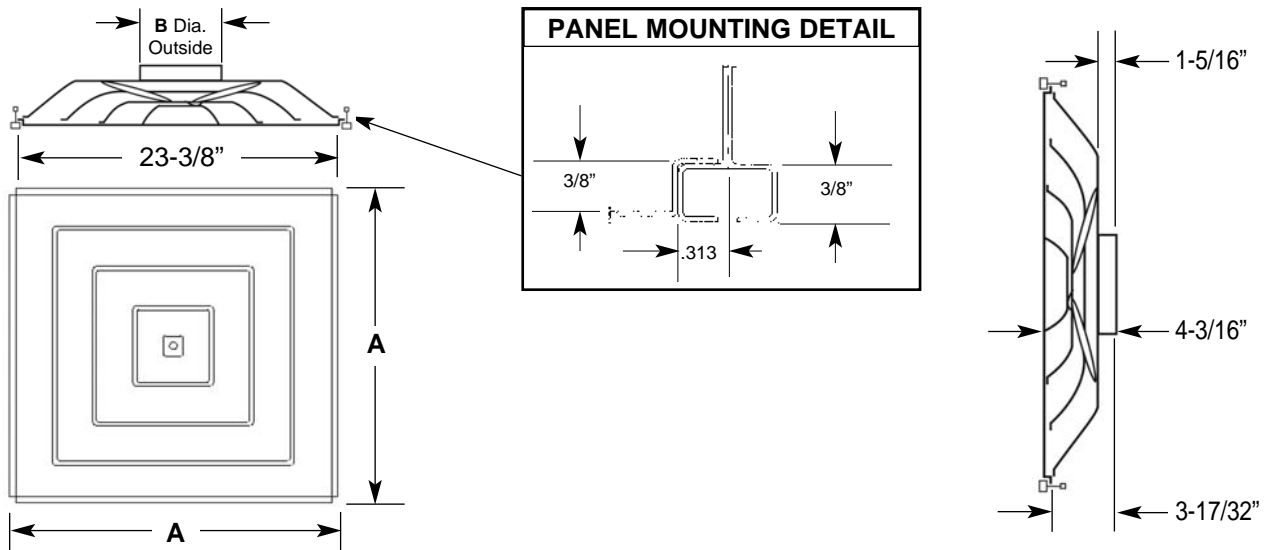
Dimensions Listed In Inches

Model Number	Nominal Duct Size (Dia. In.)	Nominal Louvered Area (In.)	Panel Size	Panel Mount				Number of Cones
				A	B	C	D	
SFAB/SFTB 2406	6	24x24	24x24	23-3/4	5-7/8	23-3/4	23-3/4	3
SFAB/SFTB 2408	8	24x24	24x24	23-3/4	7-7/8	23-3/4	23-3/4	3
SFAB/SFTB 2410	10	24x24	24x24	23-3/4	9-7/8	23-3/4	23-3/4	3
SFAB/SFTB 2412	12	24x24	24x24	23-3/4	11-7/8	23-3/4	23-3/4	3
SFAB/SFTB 2414	14	24x24	24x24	23-3/4	13-7/8	23-3/4	23-3/4	3
SFAB/SFTB 2416	16	24x24	24x24	23-3/4	15-7/8	23-3/4	23-3/4	3
SFTB 2406 — OPT 24	6	24x24	24x48	23-3/4	5-7/8	23-3/4	47-3/4	3
SFTB 2408 — OPT 24	8	24x24	24x48	23-3/4	7-7/8	23-3/4	47-3/4	3
SFTB 2410 — OPT 24	10	24x24	24x48	23-3/4	9-7/8	23-3/4	47-3/4	3
SFTB 2412 — OPT 24	12	24x24	24x48	23-3/4	11-7/8	23-3/4	47-3/4	3
SFTB 2414 — OPT 24	14	24x24	24x48	23-3/4	13-7/8	23-3/4	47-3/4	3
SFTB 2416 — OPT 24	16	24x24	24x48	23-3/4	15-7/8	23-3/4	47-3/4	3

NOTES:

1. The 3 cone inner assembly is easily removable by disengaging the spring lock and rotating counter clockwise.
2. To gain access for damper adjustment, remove the plug button on the center cone.
3. To surface mount this diffuser, use Carnes Model KXFA Auxiliary Frame.

Model SFTB Steel and SFAB — Horizontal Pattern — Donn® FineLine® T-bar Lay In

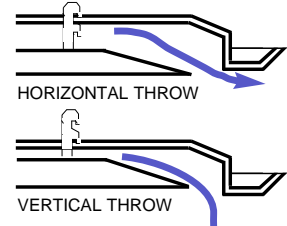
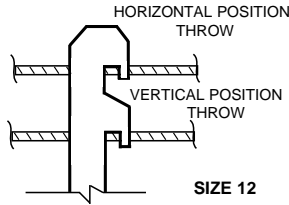
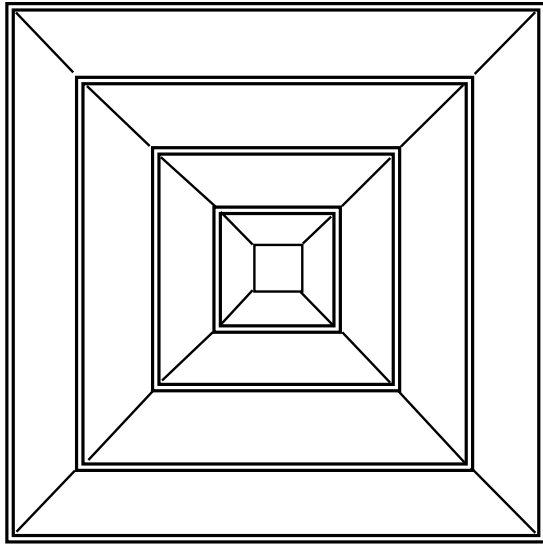


Model Number	Nominal Duct Size (Dia. In.)	A	B
SFAB/SFTB 2D06	6 (152)	23-3/4 (603)	5-7/8 (149)
SFAB/SFTB 2D07	7 (178)	23-3/4 (603)	6-7/8 (175)
SFAB/SFTB 2D08	8 (203)	23-3/4 (603)	7-7/8 (200)
SFAB/SFTB 2D10	10 (254)	23-3/4 (603)	9-7/8 (251)
SFAB/SFTB 2D12	12 (305)	23-3/4 (603)	11-7/8 (302)
SFAB/SFTB 2D14	14 (356)	23-3/4 (603)	13-7/8 (352)
SFAB/SFTB 2D16	16 (406)	23-3/4 (603)	15-7/8 (403)

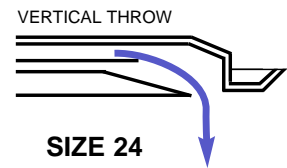
NOTES:

1. The inner assembly is easily removable by disengaging the spring lock and rotating counter clockwise.
2. To gain access for damper adjustment, remove the plug button on the center cone.
3. To surface mount this diffuser, use Carnes Model KXFA Auxiliary Frame.
4. Standard finish is #11 Bright White Electrocoat Enamel. Other finishes available upon request.
5. Metric (SI) dimensions are given in millimeters.
6. Construction of model SFTB is steel.
7. Construction of model SFAB is aluminum.

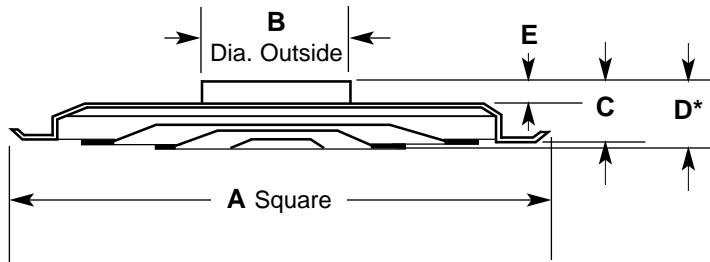
Model SJEB Adjustable Pattern — Surface Mount



SIZE 12



SIZE 24



****D*** Dimension is shown for SJEB 12 in vertical position. For horizontal **ADD 5/8"**.

Minimum recommended ceiling opening is dim 'A' minus 1-1/4"

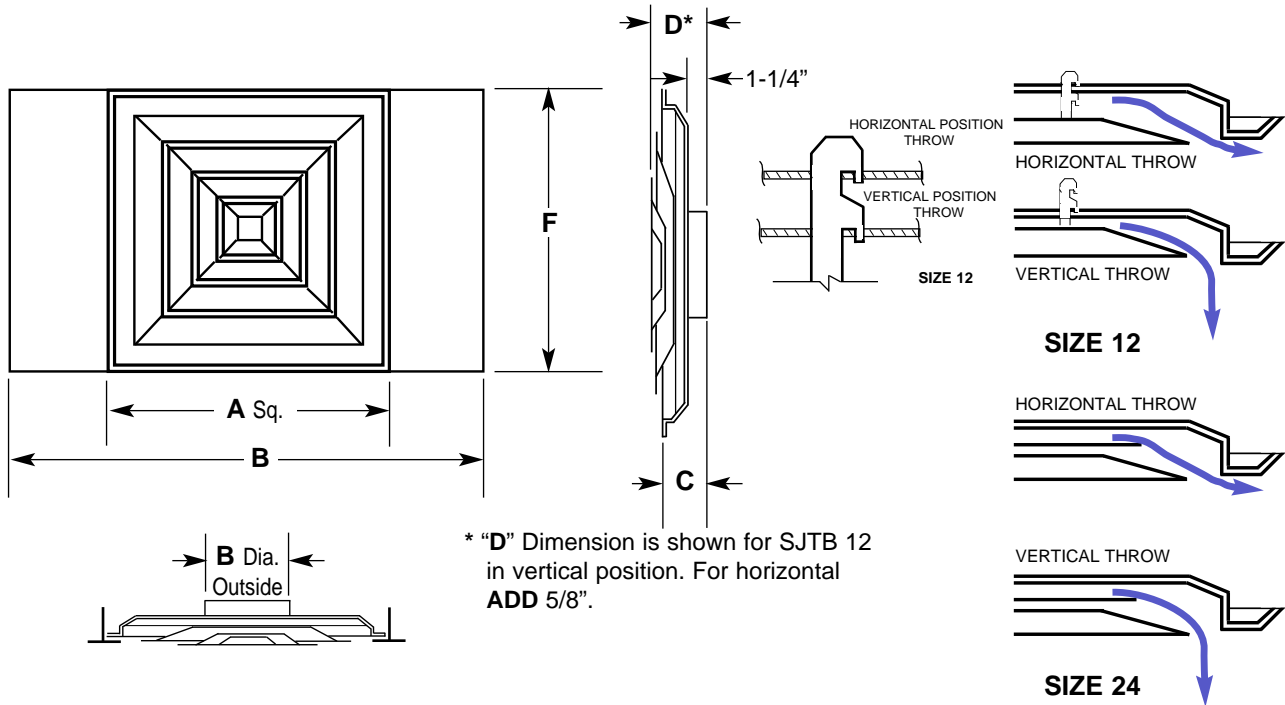
DIMENSIONS LISTED IN INCHES

Model Number	Nominal Duct Size (Dia. In.)	Surface Mount					Number of Cones
		A	B	C	D	E	
SJEB 1205	5	12-1/2	4-7/8	3	3-1/4	1-1/4	2
SJEB 1206	6	12-1/2	5-7/8	3	3-1/4	1-1/4	2
SJEB 1208	8	12-1/2	7-7/8	3	3-1/4	1-1/4	2
SJEB 2406	6	24-1/2	5-7/8	4-1/2	5-3/16	1-1/4	3
SJEB 2407	7	24-1/2	6-7/8	4-1/2	5-3/16	1-1/4	3
SJEB 2408	8	24-1/2	7-7/8	4-1/2	5-3/16	1-1/4	3
SJEB 2410	10	24-1/2	9-7/8	4-1/2	5-3/16	1-1/4	3
SJEB 2412	12	24-1/2	11-7/8	4-1/2	5-3/16	1-1/4	3
SJEB 2414	14	24-1/2	13-7/8	4-1/2	5-3/16	1-1/4	3

NOTES:

1. The inner assembly is easily removable by compressing the locking spring and rotating counter clockwise.
2. To gain access for damper adjustment, remove the plug button on the center cone of the inner assembly.
3. Horizontal to vertical air pattern adjustment is made by changing the position of the inner assembly on size 12 and adjusting the pattern deflectors on size 24.

Model SJTB Adjustable Pattern — T-bar Mount



DIMENSIONS LISTED IN INCHES

Model Number	Nominal Duct Size (Dia. In.)	Nominal Louvered Area (In.)	Panel Size	Panel Mount						Number of Cones
				A	B	C	D*	F	G	
SJTB 1205	5	12 x 12	12 x 12	11-3/4	4-7/8	3	3-1/4	11-3/4	11-3/4	2
SJTB 1206	6	12 x 12	12 x 12	11-3/4	5-7/8	3	3-1/4	11-3/4	11-3/4	2
SJTB 1208	8	12 x 12	12 x 12	11-3/4	7-7/8	3	3-1/4	11-3/4	11-3/4	2
SJTB 1205-Opt 12	5	12 x 12	12 x 24	11-3/4	4-7/8	3	3-1/4	11-3/4	23-3/4	2
SJTB 1206-Opt 12	6	12 x 12	12 x 24	11-3/4	5-7/8	3	3-1/4	11-3/4	23-3/4	2
SJTB 1208-Opt 12	8	12 x 12	12 x 24	11-3/4	7-7/8	3	3-1/4	11-3/4	23-3/4	2
SJTB 1205-Opt 14	5	12 x 12	12 x 48	11-3/4	4-7/8	3	3-1/4	11-3/4	47-3/4	2
SJTB 1206-Opt 14	6	12 x 12	12 x 48	11-3/4	5-7/8	3	3-1/4	11-3/4	47-3/4	2
SJTB 1208-Opt 14	8	12 x 12	12 x 48	11-3/4	7-7/8	3	3-1/4	11-3/4	47-3/4	2
SJTB 1205-Opt 22	5	12 x 12	24 x 24	11-3/4	4-7/8	3	3-1/4	23-3/4	23-3/4	2
SJTB 1206-Opt 22	6	12 x 12	24 x 24	11-3/4	5-7/8	3	3-1/4	23-3/4	23-3/4	2
SJTB 1208-Opt 22	8	12 x 12	24 x 24	11-3/4	7-7/8	3	3-1/4	23-3/4	23-3/4	2
SJTB 1205-Opt 24	5	12 x 12	24 x 48	11-3/4	4-7/8	3	3-1/4	23-3/4	47-3/4	2
SJTB 1206-Opt 24	6	12 x 12	24 x 48	11-3/4	5-7/8	3	3-1/4	23-3/4	47-3/4	2
SJTB 1208-Opt 24	8	12 x 12	24 x 48	11-3/4	7-7/8	3	3-1/4	23-3/4	47-3/4	2
SJTB 2406	6	24 x 24	24 x 24	23-3/4	5-7/8	4-1/2	5-3/16	23-3/4	23-3/4	3
SJTB 2407	7	24 x 24	24 x 24	23-3/4	6-7/8	4-1/2	5-3/16	23-3/4	23-3/4	3
SJTB 2408	8	24 x 24	24 x 24	23-3/4	7-7/8	4-1/2	5-3/16	23-3/4	23-3/4	3
SJTB 2410	10	24 x 24	24 x 24	23-3/4	9-7/8	4-1/2	5-3/16	23-3/4	23-3/4	3
SJTB 2412	12	24 x 24	24 x 24	23-3/4	11-7/8	4-1/2	5-3/16	23-3/4	23-3/4	3
SJTB 2414	14	24 x 24	24 x 24	23-3/4	13-7/8	4-1/2	5-3/16	23-3/4	23-3/4	3
SJTB 2406-Opt 24	6	24 x 24	24 x 48	23-3/4	5-7/8	4-1/2	5-3/16	23-3/4	47-3/4	3
SJTB 2407-Opt 24	7	24 x 24	24 x 48	23-3/4	6-7/8	4-1/2	5-3/16	23-3/4	47-3/4	3
SJTB 2408-Opt 24	8	24 x 24	24 x 48	23-3/4	7-7/8	4-1/2	5-3/16	23-3/4	47-3/4	3
SJTB 2410-Opt 24	10	24 x 24	24 x 48	23-3/4	9-7/8	4-1/2	5-3/16	23-3/4	47-3/4	3
SJTB 2412-Opt 24	12	24 x 24	24 x 48	23-3/4	11-7/8	4-1/2	5-3/16	23-3/4	47-3/4	3
SJTB 2414-Opt 24	14	24 x 24	24 x 48	23-3/4	13-7/8	4-1/2	5-3/16	23-3/4	47-3/4	3

- NOTES:**
1. The inner assembly is easily removable by compressing the locking spring and rotating counter clockwise.
 2. To gain access for damper adjustment, remove the plug button on the center cone of the inner assembly.
 3. Horizontal to vertical air pattern adjustment is made by changing the position of the inner assembly on size 12 by adjusting the pattern deflectors on size 24.

Models SFEA and SFTA

12" x 12" Nominal Louvered Face

Neck Size		Duct Velocity - FPM								
		400	500	600	700	800	900	1000	1200	1400
5 Ak .120	CFM	54	67	82	95	108	122	136	162	190
	Pt	.04	.05	.07	.10	.13	.16	.19	.26	.41
	Throw 150 fpm	1	1	1	1.5	1.5	2	2	3	3
	Throw 50 fpm	2	2.5	3	3.5	4	5	5.5	6	7
	NC	L	L	L	22	26	29	32	36	42
6 Ak .140	CFM	80	100	120	140	160	180	200	235	275
	Pt	.03	.04	.06	.09	.12	.15	.17	.25	.39
	Throw 150 fpm	1	1	1.5	2	2	2.5	3	3.5	4
	Throw 50 fpm	2.5	3	3.5	4	5	5.5	6	7	8.5
	NC	L	L	L	20	24	27	30	34	40
7 Ak .170	CFM	105	135	160	190	215	240	270	320	375
	Pt	.02	.04	.06	.09	.10	.13	.16	.23	.33
	Throw 150 fpm	1.5	2.5	3	3.5	4	4.5	5	5.5	6
	Throw 50 fpm	6	7.5	8.5	10	10.5	11	12	13	15
	NC	L	L	L	L	23	26	28	33	38

Models SFEA and SFTA

18" x 18" Nominal Louvered Face

Neck Size		Duct Velocity - FPM								
		400	500	600	700	800	900	1000	1200	1400
6 Ak .220	CFM	80	100	120	140	160	180	200	235	275
	Pt	.01	.02	.03	.04	.05	.06	.08	.11	.18
	Throw 150 fpm	1	1	1	1.5	2	2.5	3	3.5	4
	Throw 50 fpm	3	4	5	6	7	7.5	8	9.5	10.5
	NC	L	L	L	L	20	23	27	31	37
7 Ak .250	CFM	110	135	160	185	215	240	270	320	375
	Pt	.01	.02	.03	.04	.05	.07	.09	.13	.21
	Throw 150 fpm	1	2	2.5	3	3.5	4	4.5	5	6
	Throw 50 fpm	4	6	7	8	8.5	9	9.5	10.5	12
	NC	L	L	L	L	21	25	29	34	39
8 Ak .270	CFM	140	175	210	245	280	315	350	420	490
	Pt	.01	.02	.04	.05	.06	.08	.10	.15	.23
	Throw 150 fpm	1.5	2.5	3	3.5	4.5	5	6	7	8
	Throw 50 fpm	6	7	7.5	8	9	10	10.5	11	12
	NC	L	L	L	L	23	27	31	37	43
10 Ak .380	CFM	220	270	330	380	435	490	595	655	765
	Pt	.02	.03	.04	.06	.08	.10	.14	.19	.29
	Throw 150 fpm	2	3	4	4.5	5	5.5	6	7	8.5
	Throw 50 fpm	7	8.5	10	12	14	15	16	17.5	19
	NC	L	L	20	24	28	32	36	41	46
12 Ak .480	CFM	315	390	470	550	630	705	785	940	1100
	Pt	.02	.04	.05	.07	.10	.12	.15	.23	.33
	Throw 150 fpm	3.5	4	5	6	7	8	9	10	12
	Throw 50 fpm	10	12	13	15	16	16.5	17	18.5	20
	NC	L	L	L	23	27	32	36	42	48

Notes on Performance Data

- Performance data is based on tests conducted in accordance with ANSI/ASHRAE Standard 70-1991.
- Actual performance in the field may vary.
- Tests were conducted in isothermal conditions.
- Sound levels are based on a room absorption of 10 db re 10⁻¹² watts.

Notes on Units of Measure Used

- Air flow is given in cubic feet per minute (CFM).
- Static Pressure is given in inches of water (w.g.).
- Sound data is given in NC.
- L indicates an NC below 20.

Sq. & Rect. Louvered Diffusers

Model SFPA

12" x 12" Nominal Plaque Face

Neck Size	Horizontal	Duct Velocity - FPM								
		400	500	600	700	800	900	1000	1200	1400
5 Ak .084	CFM	52	65	78	91	104	117	130	156	182
	Pt	.019	.031	.046	.063	.084	.108	.135	.198	.275
	Throw 150 fpm	.5	1	1.5	2	2.5	3	3.5	4	5
	Throw 50 fpm	4	5	6	7	8	9	10	11	12
	NC	L	L	L	L	23	27	30	33	37
6 Ak .105	CFM	75	94	113	132	150	169	188	226	263
	Pt	.028	.045	.066	.091	.119	.152	.189	.276	.376
	Throw 150 fpm	1	2	2.5	3	3.5	4	5	6	7
	Throw 50 fpm	6	7	8.5	10	11	12	13	14	15
	NC	L	L	L	20	24	28	31	35	39
8 Ak .142	CFM	135	169	203	237	270	304	338	406	473
	Pt	.046	.074	.107	.147	.191	.243	.302	.436	.595
	Throw 150 fpm	4	5	6	8	9	10	11	13	14
	Throw 50 fpm	13	14	15	17	18	19	20	22	24
	NC	L	L	L	21	25	29	32	37	41

Models SFPA and SHPA

24" x 24" Nominal Plaque Face

Neck Size	Horizontal	Duct Velocity - FPM								
		400	500	600	700	800	900	1000	1200	1400
6 Ak .176	CFM	75	94	113	132	150	169	188	226	263
	Pt	.017	.027	.039	.053	.068	.087	.107	.155	.208
	Throw 150 fpm	1	1.5	2	2.5	2.8	3	3.5	4	5
	Throw 50 fpm	4	5.5	6	7	7.5	8	8.5	9	10.5
	NC	L	L	L	L	L	L	L	L	L
8 Ak .224	CFM	135	169	203	237	270	304	338	406	473
	Pt	.024	.039	.056	.076	.098	.130	.150	.220	.298
	Throw 150 fpm	2.5	3	3.5	4	4.5	5.5	6	7	8
	Throw 50 fpm	7	8.5	9	10	10.5	11.5	12	13	14
	NC	L	L	L	L	L	20	21	24	26
10 Ak .294	CFM	213	266	319	372	426	479	532	638	745
	Pt	.027	.043	.062	.086	.113	.142	.179	.250	.351
	Throw 150 fpm	3.5	4	5	6	6.5	7.5	8.5	10	11
	Throw 50 fpm	10	11	12	13	14	15	15.5	17	18.5
	NC	L	L	L	L	22	23	25	28	31
12 Ak .355	CFM	308	385	461	538	615	692	769	923	1077
	Pt	.048	.076	.110	.150	.196	.249	.302	.430	.569
	Throw 150 fpm	4.5	6	7	8	9	10.5	11	12	13
	Throw 50 fpm	12	13.5	14.5	16	16.5	18	18.5	21	22
	NC	L	L	22	25	29	32	35	39	44
14 Ak .434	CFM	420	525	630	735	840	945	1050	1260	1470
	Pt	.050	.078	.110	.151	.196	.250	.304	.442	.620
	Throw 150 fpm	6	7.5	9	10.5	12	12.5	13	14	15.5
	Throw 50 fpm	14	16	17.5	18.5	20	22	22.5	25	26.5
	NC	L	L	23	28	31	34	37	41	45
16 Ak .484	CFM	548	685	822	959	1096	1233	1370	1644	1918
	Pt	.074	.117	.173	.228	.301	.367	.468	.662	.909
	Throw 150 fpm	9	11	12	13	14	15	16	16.5	18.5
	Throw 50 fpm	16.5	19.5	21	23	24	26	28	31	33.5
	NC	20	25	30	33	36	39	41	45	49

Sq. & Rect. Louvered Diffusers

Models SFTB and SFAB
24" x 24" Nominal Louvered Face

Neck Size	Horizontal	Duct Velocity - FPM								
		400	500	600	700	800	900	1000	1200	1400
6 Ak .180	CFM	75	94	113	132	150	169	188	226	263
	Pt	.014	.023	.034	.047	.062	.079	.099	.145	.198
	Throw 150 fpm	1	2	2.5	3	3.5	3.5	4	4.5	5
	Throw 50 fpm	4	5	6	7	8	9	9.5	10	11
	NC	L	L	L	L	L	20	24	30	35
8 Ak .270	CFM	135	169	203	237	270	304	338	406	473
	Pt	.018	.029	.042	.058	.076	.097	.120	.173	.236
	Throw 150 fpm	2	3	3.5	4	4.5	5	5.5	6	8
	Throw 50 fpm	7	9	10	11	12	13	14	15	16
	NC	L	L	L	L	20	23	26	32	36
10 Ak .370	CFM	213	266	319	372	426	479	532	638	745
	Pt	.028	.032	.047	.066	.087	.113	.141	.207	.288
	Throw 150 fpm	3	4	4.5	5	6	7	7.5	8	10
	Throw 50 fpm	8	11	12	13	15	15.5	16	18	19
	NC	L	L	L	20	25	30	34	40	48
12 Ak .450	CFM	308	385	461	538	615	692	769	923	1077
	Pt	.032	.048	.071	.101	.135	.176	.222	.333	.420
	Throw 150 fpm	4	5	6	7	8	9	10	11	12
	Throw 50 fpm	12	15	15.5	16	18	19	20	22	24
	NC	L	L	23	30	35	39	43	50	56
14 Ak .520	CFM	420	525	630	735	840	945	1050	1260	1470
	Pt	.042	.068	.101	.140	.185	.230	.285	.420	.550
	Throw 150 fpm	6	7	9	10	11	13	14	15	16
	Throw 50 fpm	15	17	19	20	21	22	24	26	28
	NC	L	20	26	32	37	42	46	53	58
16 Ak .610	CFM	548	685	822	959	1096	1233	1370	1644	1918
	Pt	.056	.089	.129	.177	.233	.297	.367	.534	.731
	Throw 150 fpm	6	7	11	13	14	15	16	18	19
	Throw 50 fpm	18	20	21	24	25	26	29	30	33
	NC	L	23	29	34	39	43	47	54	59

Notes on Performance Data

- Performance data is based on tests conducted in accordance with ANSI/ASHRAE Standard 70-1991.
- Actual performance in the field may vary.
- Tests were conducted in isothermal conditions.
- Sound levels are based on a room absorption of 10 db re 10⁻¹² watts.

Notes on Units of Measure Used

- Air flow is given in cubic feet per minute (CFM).
- Static Pressure is given in inches of water (w.g.).
- Sound data is given in NC.
- L indicates an NC below 20.

NOTES:

Sq. & Rect. Louvered Diffusers

Models SJEA and SJTA

12" x 12" Nominal Louvered Face - Horizontal

Neck Size	Horizontal	Duct Velocity - FPM								
		400	500	600	700	800	900	1000	1200	1400
5 Ak .090	CFM	54	67	82	95	108	122	136	162	190
	Pt	.016	.025	.038	.051	.066	.084	.105	.150	.205
	Throw 150 fpm	1	1	1	1	1	2	2	3	3
	Throw 50 fpm	2	2	3	3	4	5	5	5	6
	NC	L	L	L	L	20	23	27	31	37
6 Ak .120	CFM	80	100	120	140	160	180	200	235	275
	Pt	.0153	.0255	.0390	.056	.074	.098	.126	.185	.265
	Throw 150 fpm	1	1	1	2	2	2	3	3	4
	Throw 50 fpm	2	3	3	4	5	5	5	6	8
	NC	L	L	L	L	L	24	28	35	42
7 Ak .150	CFM	105	135	160	190	215	240	270	320	375
	Pt	.022	.038	.054	.078	.100	.127	.162	.230	.320
	Throw 150 fpm	1	2	3	3	4	4	5	5	5
	Throw 50 fpm	5	7	8	9	9	10	11	12	14
	NC	L	L	21	26	30	34	37	42	47

Notes on Performance Data

- Performance data is based on tests conducted in accordance with ANSI/ASHRAE Standard 70-1991.
- Actual performance in the field may vary.
- Tests were conducted in isothermal conditions.
- Sound levels are based on a room absorption of 10 db re 10⁻¹² watts.

Notes on Units of Measure Used

- Air flow is given in cubic feet per minute (CFM).
- Static Pressure is given in inches of water (w.g.).
- Sound data is given in NC.
- L indicates an NC below 20.

NOTES:

Models SJEA and SJTA

12" x 12" Nominal Louvered Face - Vertical

Neck Size	Vertical	Duct Velocity - FPM								
		400	500	600	700	800	900	1000	1200	1400
5 Ak .100	CFM	54	67	82	95	108	122	136	162	190
	Pt	.0198	.031	.046	.063	.084	.105	.135	.190	.270
	NC	L	L	L	L	22	25	29	33	39
6 Ak .110	CFM	80	100	120	140	160	180	200	235	275
	Pt	.026	.0415	.061	.083	.110	.140	.175	.245	.385
	NC	L	L	L	20	25	29	33	38	44
7 Ak .120	CFM	105	135	160	190	215	240	270	320	375
	Pt	.038	.063	.090	.125	.160	.200	.255	.350	.450
	NC	L	24	29	34	38	41	44	49	54

Models SJEA and SJTA

18" x 18" Nominal Louvered Face - Horizontal

Neck Size	Horizontal	Duct Velocity - FPM								
		400	500	600	700	800	900	1000	1200	1400
6 Ak .200	CFM	80	100	120	140	160	180	200	235	275
	Pt	.0177	.0285	.042	.058	.076	.098	.125	.175	.203
	Throw 150 fpm	1	1	1	1	1	2	3	3	4
	Throw 50 fpm	3	4	5	5	6	7	7	8	9
	NC	L	L	L	L	21	25	28	33	38
7 Ak .230	CFM	110	135	160	185	215	240	270	320	375
	Pt	.010	.0275	.0435	.0595	.0820	.115	.135	.205	.285
	Throw 150 fpm	1	2	2	2	3	4	4	5	6
	Throw 50 fpm	4	5	5	6	7	8	8	9	10
	NC	L	L	L	L	23	27	30	35	40
8 Ak .260	CFM	140	175	210	245	280	315	350	420	490
	Pt	.026	.041	.060	.082	.107	.137	.170	.245	.340
	Throw 150 fpm	1	2	3	3	4	5	5	6	7
	Throw 50 fpm	5	6	6	7	8	9	9	10	11
	NC	L	L	L	22	25	29	33	38	43
10 Ak .290	CFM	220	270	330	380	435	490	595	655	765
	Pt	.035	.047	.072	.096	.128	.165	.245	.305	.420
	Throw 150 fpm	2	3	4	4	5	5	5	6	7
	Throw 50 fpm	6	7	9	11	13	14	14	15	17
	NC	L	L	20	24	28	31	37	40	44
12 Ak .380	CFM	315	390	470	550	630	705	785	940	1100
	Pt	.038	.060	.089	.125	.165	.210	.265	.390	.540
	Throw 150 fpm	3	4	5	5	6	7	8	9	11
	Throw 50 fpm	9	11	12	14	14	15	15	16	18
	NC	L	L	24	28	31	34	37	41	45

Notes on Performance Data

- Performance data is based on tests conducted in accordance with ANSI/ASHRAE Standard 70-1991.
- Actual performance in the field may vary.
- Tests were conducted in isothermal conditions.
- Sound levels are based on a room absorption of 10 db re 10⁻¹² watts.

Notes on Units of Measure Used

- Air flow is given in cubic feet per minute (CFM).
- Static Pressure is given in inches of water (w.g.).
- Sound data is given in NC.
- L indicates an NC below 20.

Models SJEA and SJTA

18" x 18" Nominal Louvered Face - Vertical

Neck Size	Vertical	Duct Velocity - FPM								
		400	500	600	700	800	900	1000	1200	1400
6 Ak .210	CFM	80	100	120	140	160	180	200	235	275
	Pt	.0335	.051	.072	.098	.127	.160	.195	.265	.300
	NC	L	L	23	27	30	34	37	41	45
7 Ak .230	CFM	85	135	165	190	220	255	275	330	380
	Pt	.017	.047	.062	.098	.135	.187	.210	.330	.450
	NC	L	L	24	28	32	35	38	43	57
8 Ak .240	CFM	140	175	210	245	280	315	350	420	490
	Pt	.043	.069	.100	.138	.180	.230	.285	.410	.560
	NC	L	20	25	29	33	36	39	44	49
10 Ak .230	CFM	220	270	330	380	435	490	595	655	765
	Pt	.052	.080	.125	.167	.230	.290	.440	.550	.760
	NC	L	23	28	32	36	39	44	45	50
12 Ak .300	CFM	315	390	470	550	630	705	785	940	1100
	Pt	.059	.094	.140	.195	.265	.330	.420	.620	.860
	NC	20	25	30	34	37	40	43	47	51

Notes on Performance Data

- Performance data is based on tests conducted in accordance with ANSI/ASHRAE Standard 70-1991.
- Actual performance in the field may vary.
- Tests were conducted in isothermal conditions.
- Sound levels are based on a room absorption of 10 db re 10⁻¹² watts.

Notes on Units of Measure Used

- Air flow is given in cubic feet per minute (CFM).
- Static Pressure is given in inches of water (w.g.).
- Sound data is given in NC.
- L indicates an NC below 20.

NOTES:

Models SJEB and SJTB

12" x 12" Nominal Louvered Face - Horizontal

Neck Size	Horizontal	Duct Velocity - FPM								
		400	500	600	700	800	900	1000	1200	1400
5 Ak .095	CFM	52	65	78	91	104	117	130	156	182
	Pt	.018	.030	.043	.059	.077	.097	.120	.172	.234
	Throw 150 fpm	1	1.5	2	2.5	2.75	3	3.5	4	5
	Throw 50 fpm	4	5	6	7	7.5	7.75	8	9	10
	NC	L	L	L	L	L	21	23	28	31
6 Ak .119	CFM	75	94	113	132	150	169	188	226	263
	Pt	.024	.037	0.54	0.74	.096	.123	.153	.223	.302
	Throw 150 fpm	1.5	2	2.5	3	3.5	4	5	5.5	6
	Throw 50 fpm	6	7	7.5	8	8.5	9	10	10.5	11
	NC	L	L	L	L	21	23	26	31	36
8 Ak .170	CFM	135	169	203	237	270	304	338	406	473
	Pt	.033	.054	.080	.111	.145	.186	.232	.339	.467
	Throw 150 fpm	3	4	5	5.5	6	7	8	9	10
	Throw 50 fpm	9	10	11	12	13	14	15	16	17
	NC	L	L	L	21	23	26	30	35	40

12" x 12" Nominal Louvered Face - Vertical

Neck Size	Vertical	Duct Velocity - FPM								
		400	500	600	700	800	900	1000	1200	1400
5 Ak .106	CFM	52	65	78	91	104	117	130	156	182
	Pt	.023	.038	.056	.077	.101	.130	.163	.238	.328
	NC	L	L	L	L	22	24	28	32	36
6 Ak .114	CFM	75	94	113	132	150	169	188	226	263
	Pt	.033	.053	.078	.107	.139	.178	.222	.323	.439
	NC	L	L	L	20	23	26	29	35	39
7 Ak .138	CFM	135	164	203	237	270	304	338	406	473
	Pt	.059	.094	.136	.186	.243	.309	.383	.554	.756
	NC	L	L	L	24	29	33	37	44	49

Notes on Performance Data

- Performance data is based on tests conducted in accordance with ANSI/ASHRAE Standard 70-1991.
- Actual performance in the field may vary.
- Tests were conducted in isothermal conditions.
- Sound levels are based on a room absorption of 10 db re 10⁻¹² watts.

Notes on Units of Measure Used

- Air flow is given in cubic feet per minute (CFM).
- Static Pressure is given in inches of water (w.g.).
- Sound data is given in NC.
- L indicates an NC below 20.

NOTES:

Sq. & Rect. Louvered Diffusers

Models SJEB, SJTB (Steel) and SJAB (Aluminum)

24" x 24" Nominal Louvered Face - Horizontal

Neck Size	Horizontal	Duct Velocity - FPM								
		400	500	600	700	800	900	1000	1200	1400
6 Ak .303	CFM	75	94	113	132	150	169	188	226	263
	Pt	.018	.030	.042	.057	.075	.093	.115	.164	.218
	Throw 150 fpm	—	1	1	1	1	2	2	2	2
	Throw 50 fpm	2	2	3	3	3	3	4	4	4
	NC	L	L	L	20	23	25	29	33	36
8 Ak .320	CFM	135	169	203	237	270	304	338	406	473
	Pt	.024	.037	.054	.075	.096	.123	.143	.216	.300
	Throw 150 fpm	2	2	2	3	3	3	4	4	5
	Throw 50 fpm	4	5	5	6	6	7	7	8	8
	NC	L	L	L	23	28	31	34	40	44
10 Ak .360	CFM	213	266	319	372	426	479	532	638	745
	Pt	.027	.041	.059	.079	.106	.133	.162	.231	.320
	Throw 150 fpm	3	3	4	5	7	7	7	9	10
	Throw 50 fpm	9	10	11	12	13	14	14	16	17
	NC	L	L	21	26	31	34	39	43	48
12 Ak .505	CFM	308	385	461	538	615	692	769	923	1077
	Pt	.025	.041	.058	.079	.102	.129	.159	.227	.307
	Throw 150 fpm	4	5	6	7	8	9	10	12	13
	Throw 50 fpm	12	14	15	16	17	18	20	21	23
	NC	L	L	22	26	30	32	35	39	42
14 Ak .620	CFM	420	525	630	735	840	945	1050	1260	1470
	Pt	.030	.047	.069	.091	.122	.155	.185	.268	.357
	Throw 150 fpm	6	7	9	10	12	13	13	15	16
	Throw 50 fpm	15	17	18	20	21	22	23	25	27
	NC	L	L	22	28	32	36	39	45	49

Models SJEB, SJTB (Steel) and SJAB (Aluminum)

24" x 24" Nominal Louvered Face - Vertical

Neck Size	Vertical	Duct Velocity - FPM								
		400	500	600	700	800	900	1000	1200	1400
6 Ak .345	CFM	75	94	113	132	150	169	188	226	263
	Pt	.018	.029	.042	.057	.073	.093	.114	.164	.219
	NC	L	L	L	L	22	25	28	32	36
8 Ak .261	CFM	135	169	203	237	270	304	338	406	473
	Pt	.022	.036	.054	.074	.096	.124	.154	.224	.307
	NC	L	L	L	23	28	31	34	39	43
10 Ak .318	CFM	213	266	319	372	426	479	532	638	745
	Pt	.027	.044	.063	.087	.114	.145	.179	.258	.354
	NC	L	L	20	24	29	32	36	41	45
12 Ak .467	CFM	308	385	461	538	615	692	769	923	1077
	Pt	.026	.042	.061	.084	.109	.139	.173	.249	.341
	NC	L	L	23	26	30	33	35	39	42
14 Ak .568	CFM	420	525	630	735	840	945	1050	1260	1470
	Pt	.033	.053	.078	.107	.140	.170	.221	.321	.440
	NC	L	L	22	28	32	36	39	44	49

Notes on Performance Data

- Performance data is based on tests conducted in accordance with ANSI/ASHRAE Standard 70-1991.
- Actual performance in the field may vary.
- Tests were conducted in isothermal conditions.
- Sound levels are based on a room absorption of 10 db re 10⁻¹² watts.

Notes on Units of Measure Used

- Air flow is given in cubic feet per minute (CFM).
- Static Pressure is given in inches of water (w.g.).
- Sound data is given in NC.
- L indicates an NC below 20.