

# PERFORMANCE DATA

## 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 <sub>t</sub> FPM	Isothermal	Δ <sub>t</sub> = -20° F	Δ <sub>t</sub> +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<sub>t</sub>

Total Pressure (P<sub>t</sub>, inches of water) is equal to static pressure (P<sub>s</sub>) + velocity pressure (P<sub>v</sub>) immediately upstream of the diffuser. **P<sub>t</sub> = P<sub>s</sub> + P<sub>v</sub>.**

Velocity Pressures in inches of water are as follows:

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

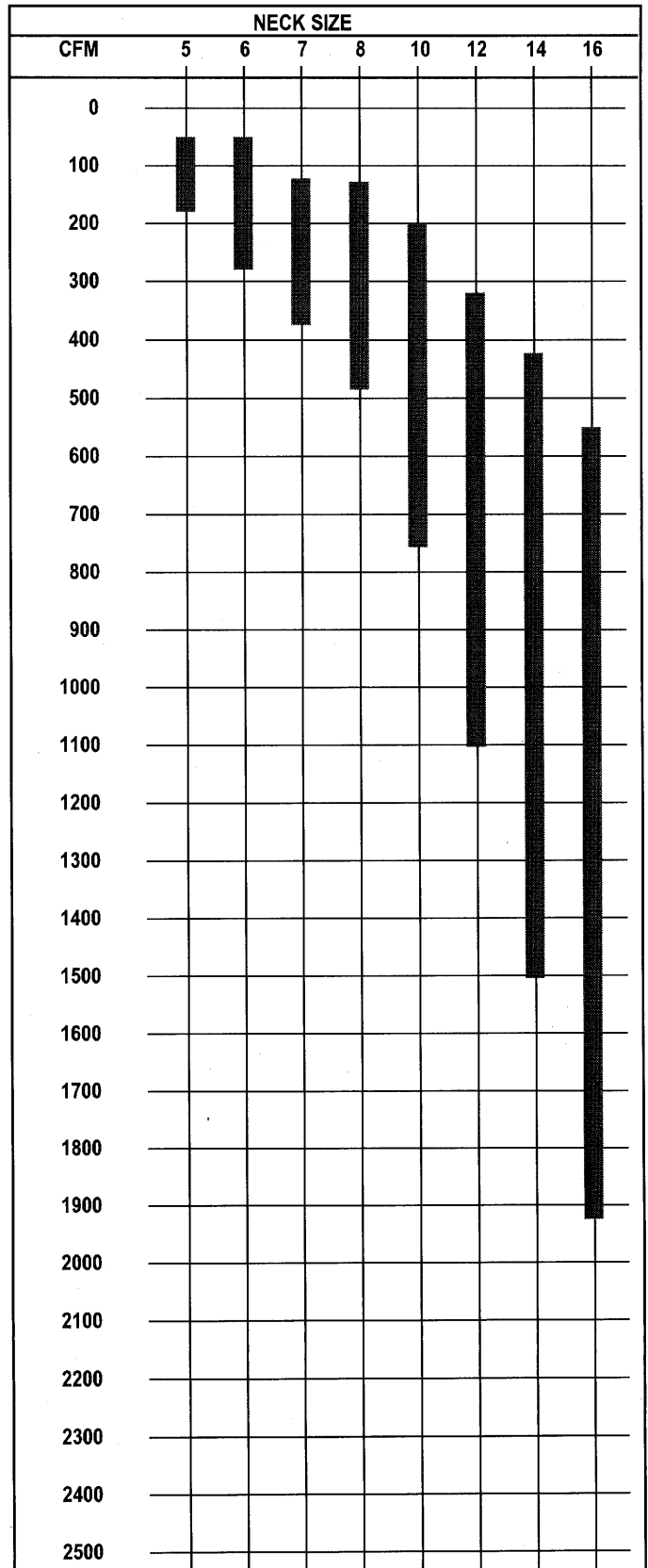
Tabulated P<sub>t</sub> values are given without a damper in the diffuser neck. To find P<sub>t</sub> when the Model KXMB damper is used in the wide open position, multiply the tabulated P<sub>t</sub> by 1.1.

### 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<sup>-12</sup> watt.

## NOMINAL CFM SELECTION CHART



Sq. & Rect. Louvered Diffusers

# PERFORMANCE DATA

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	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

Sq. & Rect. Louvered Diffusers

# PERFORMANCE DATA

## 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

Sq. & Rect. Louvered Diffusers