

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 _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

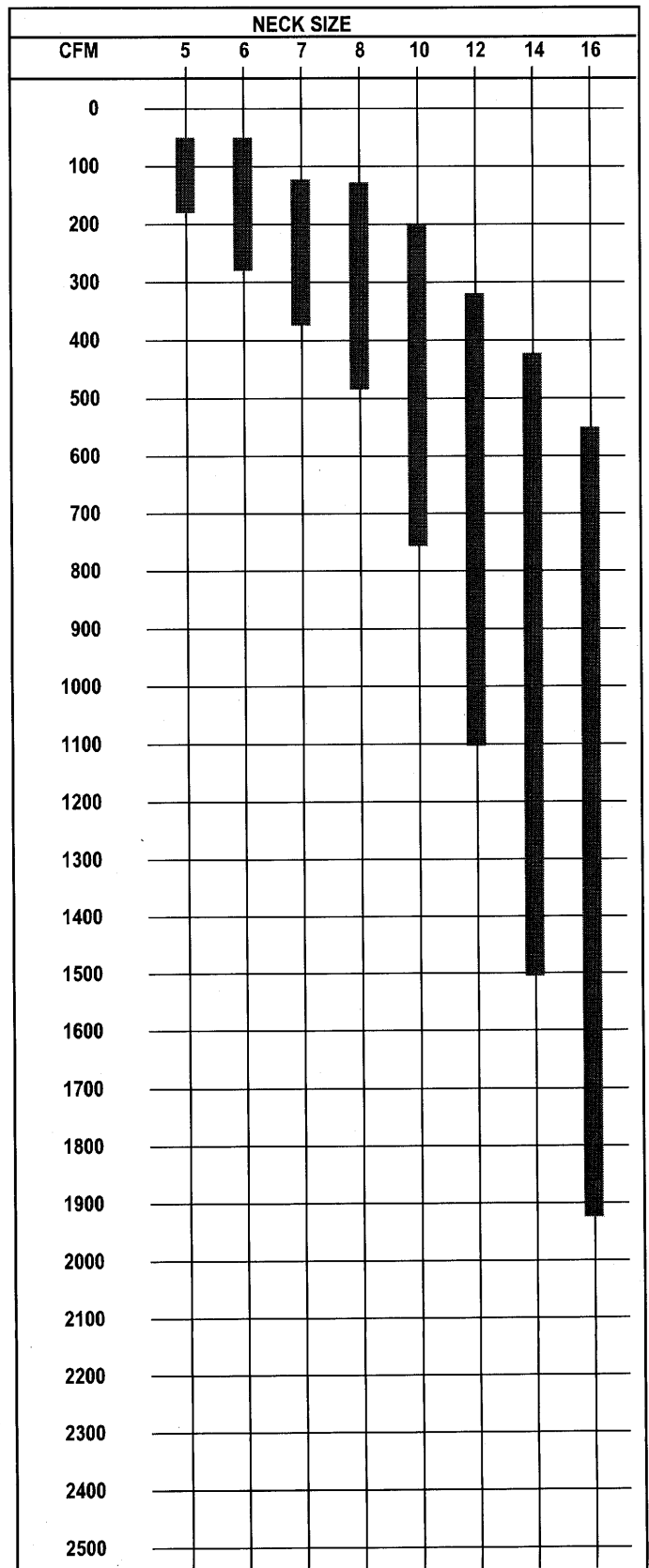
Tabulated P_t values are given without a damper in the diffuser neck. To find P_t when the Model KXMB damper is used in the wide open position, multiply the tabulated P_t by 1.1.

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.

NOMINAL CFM SELECTION CHART



Sq. & Rect. Louvered Diffusers

PERFORMANCE DATA

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