

ENGINEERING DATA PERFORATED DIFFUSERS



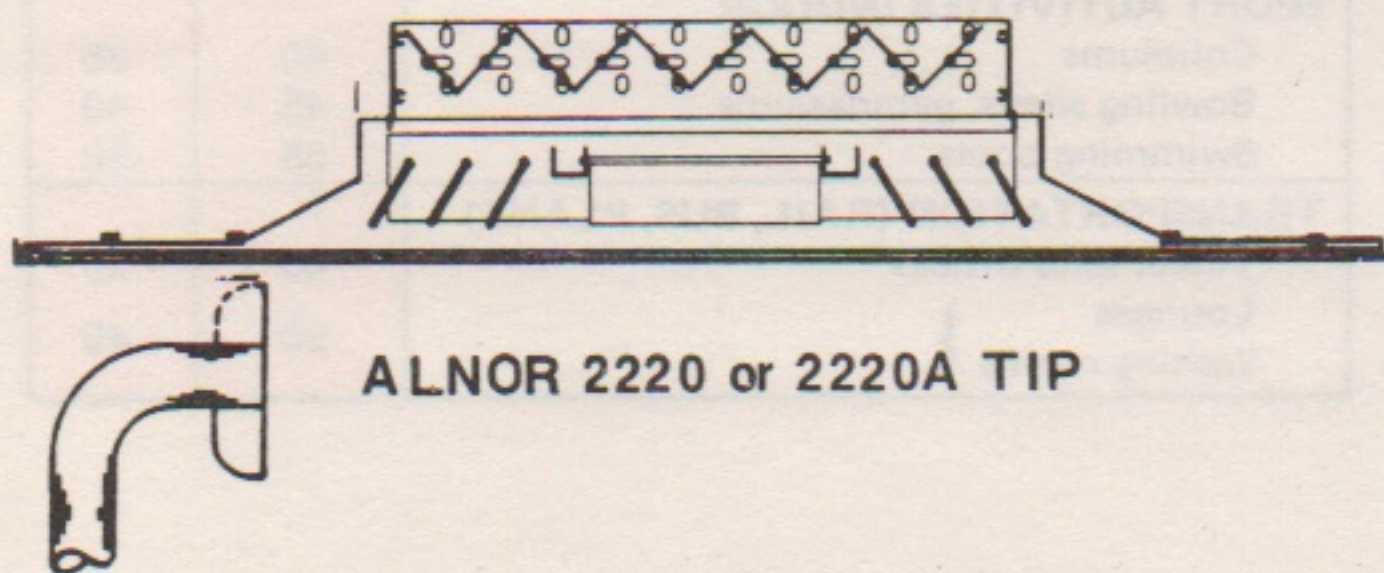
PERFORATED CEILING RETURN

AK	NECK SIZE INCHES	NECK VEL. FPM	Under NC 20			Under NC 30			Under NC 40		Under NC 50	
			100	200	300	400	500	600	800	1000	1200	1400
.39	10x10	CFM	70	140	210	280	350	417	555	695	835	875
		PRESSURE	.003	.012	.028	.048	.082	.104	.189	.289	.558	.657
.62	14x14	CFM	135	270	410	545	680	815	1090	1360	1630	1900
		PRESSURE	.003	.011	.026	.045	.076	.100	.180	.279	.404	.558
1.05	18x18	CFM	225	450	675	900	1125	1350	1800	2250	2700	3150
		PRESSURE	.003	.011	.026	.044	.075	.099	.171	.270	.397	.540
.71	22x10	CFM	153	306	460	610	765	920	1225	1530	1840	2140
		PRESSURE	.003	.011	.027	.046	.076	.099	.180	.279	.404	.557
1.55	22x22	CFM	336	670	1000	1350	1680	2020	2700	3360	4030	4700
		PRESSURE	.003	.011	.026	.045	.075	.097	.171	.270	.387	.531

NOTES ON PERFORMANCE DATA:

1. Supply throws are based upon 0° Temperature Differential
2. Minimum supply throw has Terminal Velocity of 100 FPM.
3. Maximum supply throw has Terminal Velocity of 50 FPM
4. Pressures are inches of water

BALANCING DATA



For proper blade setting, measure up 1/4" from perforated face position. This may be determined by removing perforated face plate, and replacing with a straight edge.

TO DETERMINE CFM:

1. Locate Velometer Nozzle above outer periphery of inner vane, facing squarely into the Air Stream. Determine Air Velocities at a minimum of eight points along the four sides. Average all eight values to determine your Average Velocity.
2. From the performance data table, select the proper Ak Factor for the Diffuser being tested. Then apply the formula:

$$CFM = Ak \times \text{Average Velocity.}$$