AL2810 Supply with OBD

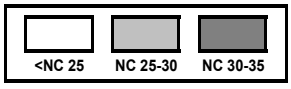
Table 1a

Face Velocity (FPM)		300	400	500	600	700	800	900	1000
Static Pressure Loss (inches W.G.)		.02	.03	.05	.07	.09			
Size	Effective Area (square feet)	Air Capacities (CFM)							
8 x 4	0.26	80	105	130	155	180	210	235	260
8 x 6	0.34	100	135	170	205	240	270	305	340
10 x 6 16 x 4	0.42	125	170	210	250	295	335	380	420
12 x 6 18 x 4	0.50	150	200	250	300	350	400	450	500
14 x 8 18 x 6	0.76	230	305	380	455	530	610	685	760
18 x 8 24 x 6 12 x 12	0.89	265	355	445	535	625	710	800	890
24 x 8 30 x 6 18 x 10	1.10	330	440	550	660	770	880	990	1100
22 x 10 28 x 8 36 x 6 20 x 12	1.50	450	600	750	900	1050	1200	1350	1500
24 x 12 30 x 10 36 x 8 48 x 6	1.80	540	720	900	1080	1260	1440	1620	1800
28 x 12 34 x 16 42 x 8	2.40	720	960	1200	1440	1680	1920	2160	2400
34 x 12 40 x 10 20 x 20	2.70	810	1080	1350	1620	1890	2160	2430	2700
30 x 24	4.10	1230	1640	2050	2460	2870	3280	3690	4100
48 x 20	5.20	1560	2080	2600	3120	3640	4160	4680	5200
48 x 30	7.40	2200	2960	3700	4440	5180	5920	6660	7400

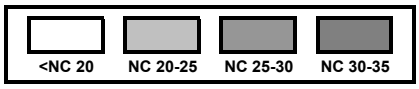
AL2815 Supply with OBD

Table 1b

Face Velocity (FPM)			400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600
Static Pressure Loss (inches W.G.)			.010	.015	.020	.030	.040	.050	.060	.080	.090	.110	.120	.140	.160
Size	Outlet Area (square feet)														
6 x 4	0.10	CFM	40	50	60	70	80	90	100	110	120	130	140	150	160
		Throw	6	7	9	11	12	13	15	16	18	19	20	22	24
10 x 4 6 x 6	0.15	CFM	60	75	90	105	120	135	150	165	180	195	210	225	240
		Throw	8	9	10	12	14	16	18	20	22	24	26	28	30
12 x 4 8 x 6	0.20	CFM	80	100	120	140	160	180	200	220	240	260	280	300	320
		Throw	9	10	11	13	15	17	19	21	23	25	27	29	31
12 x 6 10 x 8	0.30	CFM	120	150	180	210	240	270	300	330	360	390	420	450	480
		Throw	11	12	13	16	18	20	22	24	27	29	32	34	37
16 x 6 12 x 8	0.40	CFM	160	200	240	280	320	360	400	440	480	520	560	600	640
		Throw	13	15	17	19	21	23	25	28	31	34	37	40	43
16 x 8 12 x 10	0.50	CFM	200	250	300	350	400	450	500	550	600	650	700	750	800
		Throw	14	16	19	21	23	27	29	32	35	37	40	43	46
18 x 8 12 x 12	0.60	CFM	240	300	360	420	480	540	600	660	720	780	840	900	960
		Throw	15	17	20	23	25	29	31	34	37	40	43	46	49
18 x 10 14 x 12	0.72	CFM	300	372	450	525	600	675	750	825	900	975	1050	1125	1200
		Throw	17	19	22	25	28	31	34	37	40	43	46	49	52
24 x 10 18 x 14	1.00	CFM	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600
		Throw	19	22	26	31	33	36	39	43	46	50	55	60	65
30 x 12 26 x 14	1.50	CFM	600	750	900	1050	1200	1350	1500	1650	1800	1950	2100		
		Throw	22	26	30	35	39	43	46	50	55	61	64		
34 x 14 24 x 20	2.00	CFM	800	1000	1200	1400	1600	1800	2000	2200	2400				
		Throw	25	30	35	40	45	50	55	60	65				
36 x 20 30 x 24	3.00	CFM	200	1500	4800	2100	2400	2700	3000	3300					
		Throw	130	36	43	49	56	61	67	74					
48 x 20 40 x 24	4.00	CFM	600	2000	2400	2800	3200	3600							
		Throw	136	42	48	55	64	72							
48 x 24 40 x 30	5.00	CFM	2000	2500	3000	3500	4000								
		Throw	41	47	54	63	74								
48 x 30 40 x 36	6.00	CFM	2400	3000	3600	4200									
		Throw	45	55	64	75									



Side Spread Deflection



Face Velocity and Effective Area are based on 4" rotating vane anemometer.
CFM = Effective Area x Face Velocity.
NC re 8dB room attenuation.
10^{-12} watts reference.

Table 2
Multiply Table 1a and 1b Data By Factor For Various Spread Angles At Listed CFM

Spread Angle	Throw	V_k	A_x	NC	P_T
20°	.85	1.03	.97	+0	1.2
40°	.70	1.06	.94	+3	1.5

Position the Vertical Rear Vanes to obtain the air patterns shown. Determine change in T, P_T, A_k, and V_k from Table 2.

Symbols:

V_T Terminal Velocity of 75 FPM
V_k Outlet Velocity in FPM
NC re 8db room attenuation 10^{-12} watts reference
T Throw in Feet
A_k Outlet Area in Sq. Ft.
P_T Total Pressure in H_2O
CFM - A_K x V_K

Recommended Noise Criteria and Face Velocity Ranges are on page 98.