



1230 Perforated Return

Neck Velocity		200	300	400	500	600	700	800
- Ps		.01	.02	.03	.05	.07	.10	.12
6"								
An .20	CFM	40	60	80	100	120	140	160
8"								
An .35	CFM	70	105	140	175	210	245	280
10"								
An .54	CFM	110	165	220	275	330	385	440
12"								
An .78	CFM	160	240	320	395	475	550	630
14"								
An 1.07	CFM	215	320	430	535	640	750	855

Notes:

1. The use of a balancing hood is recommended to balance the system.
2. An = Neck Area in square feet
3. -Ps = Negative Static Pressure Loss in inches of water

1231 Curved-Blade Perforated Supply

Neck Velocity - V _N		300	400	500	600	700	800	1000	1200
6"	CFM	60	80	100	120	135	155	195	235
	Ps	.012	.022	.034	.049	.066	.086	.135	.194
	An .200	1.00	1.50	1.50	2.00	2.50	3.00	3.50	4.00
	Ak .330	0.50	1.00	1.00	1.50	1.50	1.50	0.20	2.50
	NC	<20	<20	<20	21	27	30	36	41
8"	CFM	105	140	175	210	245	280	350	420
	Ps	.012	.022	.034	.049	.066	.086	.135	.195
	An .350	2.25	3.00	3.50	4.50	5.25	6.00	7.50	9.00
	Ak .450	1.25	2.00	2.50	3.00	3.50	3.50	4.50	5.50
	NC	<20	<20	10	25	30	34	39	45
10"	CFM	165	220	275	325	380	435	545	655
	Ps	.012	.022	.034	.049	.066	.087	.135	.195
	An .550	3.50	4.50	5.50	7.00	8.00	9.00	11.50	13.50
	Ak .570	2.00	3.00	3.50	4.50	5.00	5.50	7.00	8.50
	NC	<20	<20	20	28	33	37	42	48
12"	CFM	235	315	395	470	550	630	785	945
	Ps	.014	.025	.039	.056	.076	.099	.155	.223
	An .790	5.00	6.00	7.50	9.50	11.00	12.50	15.50	18.50
	Ak .700	3.00	4.00	5.00	6.00	7.00	7.50	9.50	11.50
	NC	<20	<20	21	28	34	38	44	50
14"	CFM	320	430	535	640	750	855	1070	1285
	Ps	.016	.028	.044	.063	.086	.112	.175	.252
	An 1.070	6.00	7.50	9.50	11.50	13.50	15.50	19.00	23.00
	Ak .840	3.50	5.00	6.00	7.00	8.50	9.50	12.00	14.50
	NC	<20	<20	21	28	35	39	46	52

1234 Curved-Blade Perforated Diffuser

One-Way Supply

Neck Size		Neck Velocity - V _N							
		300	400	500	600	700	800	1000	1200
6"	CFM	60	80	100	120	140	160	200	240
	Ps	.060	.080	.100	.150	.200	.260	.400	.580
	Throw	2.5-4.0-5.0	3.5-5.0-6.0	4.0-6.0-7.0	4.5-7.0-8.5	5.5-8.0-9.5	6.5-9.5-11.5	8.0-12.0-14.5	9.5-14.0-17.0
	NC	<20	<20	<20	22	26	30	40	>45
8"	CFM	105	140	175	210	245	280	350	420
	Ps	.080	.110	.160	.240	.320	.420	.650	.930
	Throw	4.0-6.0-7.0	5.5-8.0-9.5	6.5-10.0-12.0	8.0-12.0-14.5	7.5-14.0-17.0	10.5-10.6-19.0	13.5-20.0-24.0	16.0-24.0-29.0
	NC	<20	<20	21	26	31	39	>45	>45
10"	CFM	165	220	275	325	380	435	545	655
	Ps	.080	.110	.170	.250	.320	.430	.660	.940
	Throw	4.5-7.0-8.5	6.5-9.5-11.5	8.0-12.0-14.5	9.5-14.5-17.5	11.0-16.5-20.0	12.5-19.0-23.0	16.0-24.0-29.0	19.0-28.5-34.0
	NC	<20	<20	23	26	34	40	>45	>45
12"	CFM	235	315	395	470	550	630	790	940
	Ps	.080	.110	.170	.250	.340	.440	.690	.980
	Throw	5.5-8.5-10.0	7.5-11.0-13.5	9.5-14.0-17.0	11.0-16.5-20.0	13.0-19.5-26.5	14.5-22.0-26.5	18.5-27.5-33.0	22.0-33.0-39.5
	NC	<20	20	25	33	40	45	>45	>45
14"	CFM	320	430	535	640	750	860	1075	1275
	Ps	.110	.140	.210	.300	.420	.550	.860	1.200
	Throw	4.5-7.0-8.5	6.5-9.5-11.5	8.0-12.0-14.5	9.5-14.5-17.5	11.5-17.0-20.5	13.0-17.5-23.5	16.5-24.5-29.5	19.5-29.0-35.0
	NC	<20	20	25	30	38	44	>45	>45
16"	CFM	420	560	700	840	980	1120	1400	1680
	Ps	.020	.040	.060	.080	.110	.140	.220	.260
	Throw	5.0-8.0-10.0	7.0-10.0-12.0	10.0-13.0-16.0	12.0-15.0-18.0	13.0-18.0-21.0	14.0-19.0-24.0	18.0-26.0-30.0	20.0-31.0-36.0
	NC	<20	<20	26	34	39	43	>45	>45



PERFORMANCE DATA—LIGHT COMMERCIAL

1234 Curved-Blade Perforated Diffuser

Two-Way Supply

Neck Size		Neck Velocity - V _N								
		300	400	500	600	700	800	1000	1200	
6"	CFM	60	80	100	120	140	160	200	240	
	Ps	.050	.070	.090	.130	.170	.220	.340	.500	
	Throw	2.0-3.0-3.5	2.5-3.5-4.5	3.5-5.0-6.0	4.0-5.5-6.5	4.5-6.5-8.0	5.0-7.5-9.0	6.5-9.5-11.5	7.5-11.5-13.5	
	NC	<20	<20	<20	20	24	28	37	44	
8"	CFM	105	140	175	210	245	280	350	420	
	Ps	.400	.054	.084	.120	.165	.215	.330	.480	
	Throw	3.0-4.5-5.5	3.5-5.5-6.5	4.5-7.0-8.5	5.5-8.5-10.0	6.5-9.5-11.5	7.5-11.0-13.0	9.5-14.0-17.0	11.0-16.5-20.0	
	NC	<20	<20	<20	23	29	36	43	>45	
10"	CFM	165	220	275	325	380	435	545	650	
	Ps	.060	.080	.130	.180	.250	.310	.510	.730	
	Throw	4.5-6.5-7.5	5.5-8.5-10.0	7.0-10.5-12.5	8.5-12.5-15.0	9.5-14.5-17.5	11.0-16.5-20.0	14.0-21.0-25.0	16.5-25.0-30.0	
	NC	<20	<20	<20	25	29	37	45	>45	
12"	CFM	235	315	395	470	550	630	790	940	
	Ps	.050	.070	.110	.150	.210	.270	.430	.600	
	Throw	4.5-6.5-7.5	5.5-8.5-10.0	7.0-10.5-12.5	8.5-12.5-15.0	10.0-15.0-18.0	11.5-17.0-20.5	14.5-21.5-26.0	17.0-25.5-30.5	
	NC	<20	<20	23	30	37	43	>45	>45	
14"	CFM	325	430	535	640	750	860	1075	1275	
	Ps	.050	.070	.100	.150	.200	.260	.410	.570	
	Throw	3.5-5.5-6.5	4.5-7.0-8.5	6.0-9.0-11.0	7.0-10.5-12.5	8.5-12.5-15.0	9.5-14.0-17.0	11.5-17.5-21.0	14.0-21.0-25.0	
	NC	<20	<20	22	28	35	40	>45	>45	
16"	CFM	420	560	700	840	980	1120	1400	1680	
	Ps	.020	.040	.060	.080	.110	.140	.220	.260	
	Throw	4.0-6.0-8.0	5.0-8.0-9.0	7.0-10.0-12.0	9.0-11.0-13.0	10.0-14.0-16.0	11.0-16.0-19.0	13.0-19.0-24.0	16.0-22.0-27.0	
	NC	<20	<20	26	34	39	43	>45	>45	

Three-Way Supply

Neck Size		Neck Velocity - V _N								
		300	400	500	600	700	800	1000	1200	
6"	CFM	60	80	100	120	140	160	200	240	
	Ps	.020	.030	.040	.060	.080	.100	.150	.230	
	Throw	2.5-3.5-4.5	3.0-4.5-5.5	3.5-5.5-6.5	4.5-6.5-8.0	5.0-7.5-9.0	5.5-8.5-10.5	7.5-11.0-13.5	8.5-13.0-15.5	
	NC	<20	<20	<20	<20	23	25	34	40	
8"	CFM	105	140	175	210	245	280	350	420	
	Ps	.020	.030	.040	.060	.080	.100	.160	.220	
	Throw	3.0-4.0-5.0	4.0-5.5-6.5	4.5-7.0-8.5	5.5-8.0-9.5	6.5-9.5-11.5	7.5-11.0-13.5	9.0-13.5-16.0	11.0-16.5-20.0	
	NC	<20	<20	<20	21	26	33	39	44	
10"	CFM	165	220	275	325	380	435	545	650	
	Ps	.030	.040	.060	.090	.120	.150	.240	.340	
	Throw	4.5-6.5-8.0	5.5-8.5-10.5	7.0-10.5-12.5	8.5-12.5-15.0	9.5-14.5-17.5	11.5-17.0-20.5	14.0-21.0-25.0	17.0-25.0-30.0	
	NC	<20	<20	<20	21	26	34	41	>45	
12"	CFM	235	315	395	470	550	630	790	940	
	Ps	.020	.030	.050	.070	.100	.130	.200	.290	
	Throw	4.5-6.5-8.0	5.5-8.5-10.0	7.0-10.5-12.5	8.5-12.5-15.0	10.0-14.5-17.5	11.0-16.5-20.0	13.5-20.5-24.5	16.5-24.5-29.5	
	NC	<20	<20	21	27	34	39	44	>45	
14"	CFM	325	430	535	640	750	860	1075	1275	
	Ps	.020	.030	.050	.070	.100	.130	.200	.280	
	Throw	4.0-5.0-7.0	5.5-8.0-9.5	6.0-9.0-11.0	8.0-12.0-14.5	9.5-14.0-17.0	10.5-16.0-19.5	13.5-20.0-24.0	15.5-23.5-28.0	
	NC	<20	<20	20	25	32	37	44	>45	
16"	CFM	420	560	700	840	980	1120	1400	1680	
	Ps	.020	.040	.060	.080	.110	.140	.220	.260	
	Throw	5.0-6.0-8.0	6.0-9.0-10.0	7.0-9.0-12.0	9.0-13.0-15.0	10.0-13.0-16.0	11.0-15.0-18.0	12.0-18.0-21.0	15.0-21.0-26.0	
	NC	<20	<20	26	34	39	43	>45	>45	

Four-Way Supply

Neck Size		Neck Velocity - V _N								
		300	400	500	600	700	800	1000	1200	
6"	CFM	60	80	100	120	140	160	200	240	
	Ps	<.010	.010	.020	.030	.040	.050	.080	.120	
	Throw	1.5-2.0-2.5	1.5-2.5-3.0	2.0-3.0-4.0	2.5-3.5-4.5	3.0-4.5-5.5	3.5-5.0-6.0	4.0-6.0-7.0	5.0-7.5-9.0	
	NC	<20	<20	<20	<20	21	24	32	38	
8"	CFM	105	140	175	210	245	280	350	420	
	Ps	<.010	.010	.020	.030	.040	.060	.090	.120	
	Throw	1.5-2.5-3.0	2.0-3.0-4.0	2.5-4.0-5.0	3.5-5.0-6.0	4.0-5.5-7.0	4.5-6.5-8.0	5.5-8.0-10.0	6.5-9.5-11.5	
	NC	<20	<20	<20	<20	25	31	37	42	
10"	CFM	165	220	275	325	380	435	545	650	
	Ps	0.01	.020	.030	.040	.060	.070	.110	.160	
	Throw	3.0-4.0-5.0	3.5-5.5-6.5	4.5-6.5-8.0	5.5-8.0-10.0	6.0-9.0-11.0	7.0-10.5-12.5	9.0-13.0-15.5	10.5-15.5-18.5	
	NC	<20	<20	<20	21	27	32	39	44	
12"	CFM	235	315	395	470	550	630	790	940	
	Ps	.010	.020	.030	.040	.060	.080	.120	.170	
	Throw	2.5-3.5-4.0	3.0-4.5-5.5	3.5-5.5-6.5	4.5-7.0-8.5	5.5-8.0-9.5	6.0-7.0-11.0	7.5-11.5-14.0	9.0-13.5-16.0	
	NC	<20	<20	20	26	32	37	42	>45	
14"	CFM	325	430	535	640	750	860	1075	1275	
	Ps	.010	.020	.030	.050	.060	.080	.130	.180	
	Throw	2.0-3.0-3.5	2.5-4.0-5.0	3.5-5.0-6.0	4.0-6.0-7.0	4.5-7.0-8.5	5.5-8.0-10.0	6.5-10.0-12.0	7.5-11.5-14.0	
	NC	<20	<20	<20	24	30	35	42	>45	
16"	CFM	420	560	700	840	980	1120	1400	1680	
	Ps	.020	.040	.060	.080	.110	.140	.220	.260	
	Throw	3.0-4.0-5.0	4.0-6.0-7.0	5.0-8.0-11.0	6.0-9.0-12.0	8.0-11.0-14.0	9.0-13.0-16.0	10.0-15.0-19.0	12.0-17.0-22.0	
	NC	<20	<20	26	34	39	43	>45	>45	

Notes:

1. P_s is static Pressure Loss in inches of H₂O.
2. NC is based on 10dB room attenuation (RE: 10⁻¹² watts).
3. Throw is isothermal air at 150, 100, 75 FPM terminal velocities.
4. The use of a balancing hood is recommended to balance the system.