

CBPS (Page 92)

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	.06	.08	.10	.15	.20	.26	.40	.58
	Throw	2.5-4.5	3.5-5.6	4-6-7	4.5-7-8.5	5.5-8-9.5	6.5-9.5-11.5	8-12-14.5	9.5-14-17
	NC	<20	<20	<20	<20	22	30	40	>45
8"	CFM	105	140	175	210	245	280	350	420
	Ps	.08	.11	.16	.24	.32	.42	.65	.93
	Throw	4-6-7	5.5-8-9.5	6.5-10-12	8-12-14.5	7.5-14-17	10.5-16-19	13.5-20-24	16-24-29
	NC	<20	<20	23	26	31	39	>45	>45
10"	CFM	165	220	275	325	380	435	545	650
	Ps	.08	.11	.17	.25	.32	.43	.66	.94
	Throw	4.5-7-8.5	6.5-9.5-11.5	8-12-14.5	9.5-14.5-17.5	11-16.5-20	12.5-19-23	16-24-29	19-28.5-34
	NC	<20	<20	21	26	34	40	>45	>45
12"	CFM	235	315	395	470	550	630	790	940
	Ps	.08	.11	.17	.25	.34	.44	.69	.98
	Throw	5.5-8.5-10	7.5-11-13.5	9.5-14-17	11-16.5-20	13-19.5-26.5	14.5-22-26.5	18.5-27.5-33	22-33-39.5
	NC	<20	<20	25	30	40	45	>45	>45
14"	CFM	325	430	535	640	750	860	1075	1275
	Ps	.11	.14	.21	.30	.42	.55	.86	1.20
	Throw	4.5-7-8.5	6.5-9.5-11.5	8-12-14.5	9.5-14.5-17.5	11.5-17-20.5	13-17.5-23.5	16.5-24.5-29.5	19.5-29-35
	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	5-8-10	7-10-12	10-13-16	12-15-18	13-18-21	14-19-24	18-26-30	20-31-36
	NC	<20	<20	26	34	39	43	>45	>45

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	.05	.07	.09	.13	.17	.22	.34	.50
	Throw	2-3-3.5	2.5-4.5	3.5-5.6	4-5.5-6.5	4.5-6.5-8	5-7.5-9	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	.08	.11	.16	.24	.32	.42	.65	.93
	Throw	3-4.5-5.5	3.5-5.5-6.5	4.5-7-8.5	5.5-8.5-10	6.5-9.5-11.5	7.5-11-13	9.5-14-17	11-16.5-20
	NC	<20	<20	<20	23	29	36	43	>45
10"	CFM	165	220	275	325	380	435	545	650
	Ps	.06	.08	.13	.18	.25	.31	.51	.73
	Throw	4.5-6.5-7.5	5.5-8.5-10	7-10.5-12.5	8.5-12.5-15	9.5-14.5-17.5	11-16.5-20	14-21-25	16.5-25-30
	NC	<20	<20	<20	25	29	37	45	>45
12"	CFM	235	315	395	470	550	630	790	940
	Ps	.05	.07	.11	.15	.21	.27	.43	.60
	Throw	4.5-6.5-7.5	5.5-8.5-10	7-10.5-12.5	8.5-12.5-15	10-15-18	11.5-17-20.5	14.5-21.5-26	17-25.5-30.5
	NC	<20	<20	23	30	37	43	>45	>45
14"	CFM	325	430	535	640	750	860	1075	1275
	Ps	.05	.07	.10	.15	.20	.26	.41	.57
	Throw	3.5-5.5-8.5	4.5-7-8.5	6-9-11	7-10.5-12.5	8.5-12.5-15	9.5-14-17	11.5-17.5-21	14-21-25
	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	4-6-8	5-8-9	7-10-12	9-11-13	10-14-16	11-16-19	13-19-24	16-22-27
	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	.02	.03	.04	.06	.08	.10	.16	.23
	Throw	2.5-3.5-4.5	3-4.5-5.5	3.5-5.5-6.5	4.5-6.5-8	5-7.5-9	5.5-8.5-10.5	7.5-11-13.5	8.5-13-15.5
	NC	<20	<20	<20	<20	23	25	34	40
8"	CFM	105	140	175	210	245	280	350	420
	Ps	.02	.03	.04	.06	.08	.10	.16	.22
	Throw	3-4-5	4-5.5-6.5	4.5-7-8.5	5.5-8-9.5	6.5-9.5-11.5	7.5-11-13.5	9-13.5-16	11-16.5-20
	NC	<20	<20	<20	21	26	33	39	44
10"	CFM	165	220	275	325	380	435	545	650
	Ps	.03	.04	.06	.09	.12	.15	.24	.34
	Throw	4.5-6.5-8	5.5-8.5-10.5	7-10.5-12.5	8.5-12.5-15	9.5-14.5-17.5	11.5-17-20.5	14-21-25	17-25-30
	NC	<20	<20	<20	21	26	34	41	>45
12"	CFM	235	315	395	470	550	630	790	940
	Ps	.02	.03	.05	.07	.10	.13	.20	.29
	Throw	4.5-6.5-8	5.5-8.5-10	7-10.5-12.5	8.5-12.5-15	10-14.5-17.5	11-16.5-20	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	.02	.03	.05	.07	.10	.13	.20	.28
	Throw	4-5-7	5.5-8-9.5	6-9-11	8-12-14.5	9.5-14-17	10.5-16-19.5	13.5-20-24	15.5-23.5-28
	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	5-6-8	6-9-10	7-9-12	9-13-15	10-13-16	11-15-18	12-18-21	15-21-26
	NC	<20	<20	26	34	39	43	>45	>45

NOTES:

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

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	<.01	.01	.02	.03	.04	.05	.08	.12
	Throw	1.5-2.5	1.5-2.5-3	2-3-4	2.5-3.5-4.5	3-4.5-5.5	3.5-5-6	4-6-7	5-7.5-9
	NC	<20	<20	<20	<20	21	24	32	38
8"	CFM	105	140	175	210	245	280	350	420
	Ps	<.01	.01	.02	.03	.04	.06	.09	.12
	Throw	1.5-2.5-3	2-3-4	2.5-4-5	3.5-5-6	4-5.5-7	4.5-6.5-8	5.5-8-10	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	.01	.02	.03	.04	.06	.07	.11	.16
	Throw	3-4-5	3.5-5.5-6.5	4.5-6.5-8	5.5-8-10	6-9-11	7-10.5-12.5	9-13-15.5	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	.01	.02	.03	.04	.06	.08	.12	.17
	Throw	2.5-3.5-4	3-4.5-5.5	3.5-5.5-6.5	4.5-7-8.5	5.5-8-9.5	6-7-11	7.5-11.5-14	9-13.5-16
	NC	<20	<20	20	26	32	37	42	>45
14"	CFM	325	430	535	640	750	860	1075	1275
	Ps	.01	.02	.03	.05	.06	.08	.13	.18
	Throw	2-3-3.5	2.5-4-5	3.5-5-6	4-6-7	4.5-7-8.5	5.5-8-10	6.5-10-12	7.5-11.5-14
	NC	<20	<20	<20	24	30	35	42	>45
16"	CFM	420	560	700	840	980	1120	1400	1680
	Ps	.020	.040	.060	.080	.10	.140	.220	.260
	Throw	3-4-5	4-6-7	5-8-11	6-9-12	8-11-14	9-13-16	10-15-19	12-17-22
	NC	<20	<20	26	34	39	43	>45	>45

CBPR Return (Page 92)

Neck Velocity – V _N	200	300	400	500	600	700	800
-Ps	.01	.02	.03	.05	.07	.10	.12
6" Dia. CFM	40	60	80	100	120	140	160
8" Dia. CFM	70	105	140	175	210	245	280
10" Dia. CFM	110	165	220	275	330	385	440
12" Dia. CFM	160	240	320	395	475	550	630
14" Dia. CFM	215	320	430	535	640	750	855
16" Dia. CFM	281	420	563	698	836	975	1114
18" Dia. CFM	356	531	712	881	1056	1231	1406

SCBPS Diffuser (Page 92)

Neck Velocity		300	400	500	600	700	800	1000	1200
6 "	CFM	60	80	100	120	135	155	195	235
	An 0.20 Ps	0.012	0.022	0.034	0.049	0.066	0.086	0.135	0.194
	Ak 0.33 NC	-	-	-	21	27	30	36	41
Vt 75	Throw	1	1.5	1.5	2	2.5	3	3.5	4
Vt 150	Throw	0.5	1	1	1.5	1.5	1.5	2	2.5
8 "	CFM	105	140	175	210	245	280	350	420
	An 0.35 Ps	0.012	0.022	0.034	0.049	0.066	0.086	0.135	0.195
	Ak 0.45 NC	-	-	10	25	30	34	39	45
Vt 75	Throw	2.25	3	3.5	4.5	5.25	6	7.5	9
Vt 150	Throw	1.25	2	2.5	3	3.5	3.5	4.5	5.5
10 "	CFM	165	220	275	325	380	435	545	655
	An 0.55 Ps	0.012	0.022	0.034	0.049	0.066	0.087	0.135	0.195
	Ak 0.57 NC	-	-	20	28	33	37	42	48
Vt 75	Throw	3.5	4.5	5.5	7	8	9	11.5	13.5
Vt 150	Throw	2	3	3.5	4.5	5	5.5	7	8.5
12 "	CFM	235	315	395	470	550	630	785	945
	An 0.79 Ps	0.014	0.025	0.039	0.056	0.076	0.099	0.155	0.223
	Ak 0.70 NC	-	-	21	28	34	38	44	50
Vt 75	Throw	5	6	7.5	9.5	11	12.5	15.5	18.5
Vt 150	Throw	3	4	5	6	7	7.5	9.5	11.5
14 "	CFM	320	430	535	640	750	855	1070	1285
	An 1.07 Ps	0.016	0.028	0.044	0.063	0.086	0.112	0.175	0.252
	Ak 0.84 NC	-	-	21	28	35	39	46	52
Vt 75	Throw	6	7.5	9.5	11.5	13.5	15.5	19	23
Vt 150	Throw	3.5	5	6	7	8.5	9.5	12	14.5

- Less Than 20 NC