

Engineering Data

RENPS, PDS (Page 90, 94)

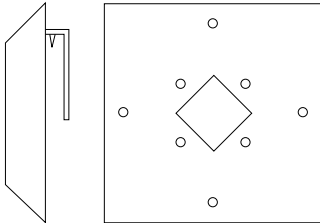
	Neck Velocity	300	400	500	600	700	800	900	1000	1100
6" Dia.	cfm	60	80	100	120	140	160	180	200	220
An .20	Ps	.008	.011	.017	.024	.032	.042	.054	.066	.080
	NC	x	x	x	x	24	27	32	36	38
	Throw	1	2	3	4	5	6	7	8	9
8" Dia.	cfm	110	140	175	210	245	280	310	350	385
An .35	Ps	.008	.011	.017	.024	.034	.043	.054	.068	.083
	NC	x	x	x	20	24	27	30	34	38
	Throw	2	3	4	5	6	7	8	9	10
10" Dia.	cfm	165	220	270	325	385	430	490	550	600
An .54	Ps	.008	.012	.017	.024	.032	.043	.056	.068	.082
	NC	x	x	20	24	29	33	36	39	42
	Throw	2	3	4	5	6	7	8	9	10
12" Dia.	cfm	230	310	390	470	550	610	700	780	870
An .78	Ps	.009	.016	.026	.037	.050	.065	.080	.100	.125
	NC	x	x	20	23	26	31	34	37	40
	Throw	3	4	5	6	7	8	9	10	11
14" Dia.	cfm	315	430	535	640	750	855	960	1090	1200
An 1.07	Ps	.009	.016	.026	.037	.050	.065	.083	.125	.150
	NC	x	20	25	30	35	39	43	45	48
	Throw	3	5	6	7	8	9	10	11	12

Note: The use of a balancing hood is recommended to balance the system.

NC is based on 10 db room attenuation (Re: 10^{-12} watts) ASHRAE 36-72. X=less than 20.

Terminal velocity of 75 fpm.

Probe Position: The probe is held 1 inch in from the outer edge of the diffuser, flush with the face.

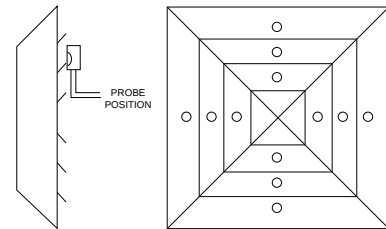


HVS, FPD, FPD3 (Page 91)

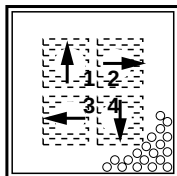
	Neck Velocity	400	500	600	700	800	900	1000	1200	1400	1600
6" Dia.	cfm	80	100	120	135	155	175	195	235	275	315
An .20	Ps	.008	.012	.017	.021	.028	.035	.043	.063	.086	.112
	NC	x	x	x	x	x	x	20	25	30	35
	Throw	2	3	3	3.5	4	4.5	5	6	7	8
8" Dia.	cfm	140	175	210	245	280	315	350	420	490	560
An .35	Ps	.010	.015	.022	.029	.038	.049	.060	.086	.117	.150
	NC	x	x	x	x	20	25	30	35	40	45
	Throw	3.5	4.5	5.5	6.5	7	8	9	10.5	12.5	14.5
10" Dia.	cfm	220	270	325	380	435	490	545	655	765	870
An .54	Ps	.014	.021	.030	.041	.054	.068	.084	.122	.167	.212
	NC	x	x	x	20	25	30	35	40	45	50
	Throw	5.5	7	8.5	10	11	12.5	14	17	19.5	22
12" Dia.	cfm	315	390	470	550	630	705	785	940	1100	1255
An .78	Ps	.015	.023	.033	.045	.060	.072	.094	.132	.180	.230
	NC	x	x	20	25	30	35	40	45	50	55
	Throw	6	7.5	9	10.5	12	13.5	15	18	21	24
14" Dia.	cfm	430	535	640	750	855	960	1070	1285	1500	1710
An 1.07	Ps	.023	.036	.051	.071	.093	.115	.140	.205	.277	.350
	NC	x	x	20	25	30	35	40	45	50	55
	Throw	6.5	8	9.5	11.5	13	14.5	16	19	22.5	25

Terminal velocity of 75 fpm.

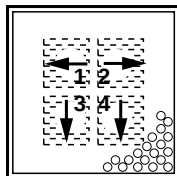
An = neck area in sq. feet.



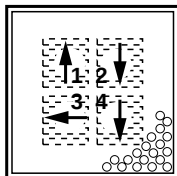
SBP (Page 93)

**Four-Way (Short Throw)**

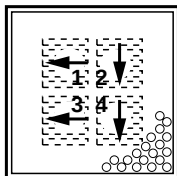
- For throw in all four directions, use short throw data.

**Three-Way (Short Throw)**

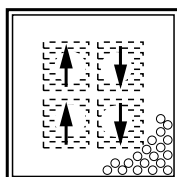
- For throw in all three directions, use short throw data.

**Three-Way (Long & Short)**

- For throw in the #2 & #4 direction use long throw data.
- For throw in the #1 & #3 directions, use short throw data.

**Two-Way Corner (Long & Short)**

- For throw in the #2 & #4 direction use long throw data.
- For throw in the #1 & #3 directions, use short throw data.

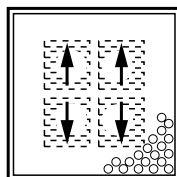
**Two-Way (Long Throw)**

- For throw in both directions use long throw data.

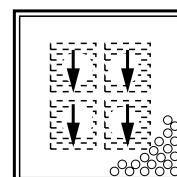
	Neck Velocity	300	400	500	600	700	800	900	1000	1200	1400
6" Dia.	Velocity Pressure	0.006	0.010	0.016	0.022	0.031	0.040	0.051	0.062	0.090	0.122
	Cfm	60	80	100	120	140	160	180	200	240	280
	Total Pressure	0.005	0.008	0.013	0.025	0.025	0.032	0.041	0.050	0.027	0.098
	Short Horizontal Throw	2-1-1	2-1-1	3-1-1	3-2-1	4-2-1	4-2-1	5-2-2	5-3-2	6-3-2	7-4-2
	Long Horizontal Throw	3-1-1	4-2-1	5-2-2	6-3-2	7-3-2	8-4-3	9-4-3	10-5-3	12-6-4	14-7-5
	Noise Criteria	<20	<20	<20	<20	<20	22	24	26	31	37
8" Dia.	Cfm	105	140	175	210	245	280	315	350	420	490
	Total Pressure	0.009	0.015	0.024	0.034	0.046	0.061	0.077	0.095	0.136	0.185
	Short Horizontal Throw	3-1-1	4-2-1	5-2-2	6-4-3	7-3-2	8-4-3	9-4-3	10-5-3	12-6-4	14-7-5
	Long Horizontal Throw	5-3-2	7-4-2	9-5-3	11-5-4	13-6-4	15-7-5	16-8-5	18-9-6	22-11-7	25-13-8
	Noise Criteria	<20	<20	<20	<20	20	25	30	34	39	44
10" Dia.	Cfm	165	220	275	330	385	440	495	550	660	770
	Total Pressure	0.013	0.023	0.036	0.052	0.071	0.092	0.117	0.144	0.208	0.283
	Short Horizontal Throw	5-2-2	6-3-2	8-4-3	10-5-3	11-6-4	13-6-4	14-7-5	16-8-5	19-10-6	23-11-8
	Long Horizontal Throw	9-5-3	12-6-4	15-8-5	18-9-6	21-11-7	24-12-8	27-14-9	30-15-10	36-18-12	42-21-14
	Noise Criteria	<20	<20	<20	22	25	28	33	36	41	47
12" Dia.	Cfm	240	320	400	480	560	640	720	800	960	1120
	Total Pressure	0.017	0.030	0.047	0.068	0.093	0.121	0.153	0.189	0.273	0.371
	Short Horizontal Throw	7-4-2	10-5-3	12-6-4	15-7-5	17-9-6	20-10-7	22-11-7	25-12-8	30-15-10	35-17-12
	Long Horizontal Throw	14-7-5	19-9-6	23-12-8	28-14-9	33-16-11	37-19-12	42-21-14	47-23-16	56-28-19	65-33-22
	Noise Criteria	<20	<20	21	25	29	32	35	38	44	50
14" Dia.	Cfm	330	440	550	660	770	880	990	1100	1320	1540
	Total Pressure	0.020	0.036	0.057	0.081	0.111	0.145	0.183	0.226	0.326	0.443
	Short Horizontal Throw	11-6-4	15-7-5	18-9-6	22-11-7	26-13-9	29-15-10	33-17-11	37-18-12	44-22-15	52-26-17
	Long Horizontal Throw	21-10-7	28-14-9	34-17-11	41-21-14	48-24-16	55-28-18	62-31-21	69-34-23	83-41-28	97-48-32
	Noise Criteria	<20	<20	25	31	36	40	43	45	48	53

Notes:

1. Tests conducted in accordance with ANSI/ASHRAE 70-1991 at isothermal conditions.
2. Tests conducted with a straight rigid inlet condition. Other inlet conditions may alter performance.
3. Unit of measure: Neck Velocity = fpm; Velocity Pressure = in. w.c. Air Flow Rate = cfm; Total Pressure = in. w.c. Throw = ft at 50, 100, and 150 fpm terminal velocity
4. Noise Criteria (NC) is based upon 10 dB room absorption (Re: 10^{-12} watts) evaluated at 125 thru 4000 Hz octave bands.
5. Flow hoods are recommended for system balancing.

**Two-Way (Short Throw)**

- For throw in both directions use short throw data.

**One-Way (Long Throw)**

- For throw use long throw data.