ENGINEERING DATA

PP, APP Series: Square Neck

Neck Velocity	300	400	500	600	700	800	900	1200	1400
Velocity Pressure	0.006	0.010	0.016	0.022	0.031	0.040	0.062	0.090	0.122

12x12 Module

Neck Size (in.)	Nominal Duct Area	Airflow (CFM)	75	100	125	150	175	200	250	300	350
		Total Pressure	0.017	0.029	0.046	0.066	0.090	0.118	0.184	0.265	0.360
6x6	0.25	4-way - Horizontal Throw	1-2-4	1-3-5	2-3-7	3-4-8	3-5-9	3-5-10	4-7-12	5-8-13	6-9-15
		3-way - Horizontal Throw	1-3-5	2-3-7	3-4-9	3-5-10	4-6-12	5-7-14	6-9-16	7-10-17	8-12-19
		2-way - Horizontal Throw	1-2-6	2-4-8	3-5-10	4-6-12	5-7-14	5-8-16	7-10-19	8-12-21	9-14-22
		1-way - Horizontal Throw	1-2-8	2-4-11	3-6-14	4-8-17	5-10-19	7-11-20	9-14-22	11-17-24	13-19-26
		Noise Criteria	-	-	13	19	23	28	35	41	45

24x12 Module

Neck Size (in.)	Nominal Duct Area	Airflow (CFM)	75	100	125	150	175	200	250	300	350
		Total Pressure	0.017	0.029	0.046	0.066	0.090	0.118	0.184	0.265	0.360
6x6	0.25	4-way - Horizontal Throw	1-2-4	1-3-5	2-3-7	3-4-8	3-5-9	3-5-10	4-7-12	5-8-13	6-9-15
		3-way - Horizontal Throw	1-3-5	2-3-7	3-4-9	3-5-10	4-6-12	5-7-14	6-9-16	7-10-17	8-12-19
		2-way - Horizontal Throw	1-2-6	2-4-8	3-5-10	4-6-12	5-7-14	5-8-16	7-10-19	8-12-21	9-14-22
		1-way - Horizontal Throw	1-2-8	2-4-11	3-6-14	4-8-17	5-10-19	7-11-20	9-14-22	11-17-24	13-19-26
		Noise Criteria	-	-	13	19	23	28	35	41	45

16x16 Module

Neck Size (in.)	Nominal Duct Area	Airflow (CFM)	75	100	125	150	175	200	250	300	350
		Total Pressure	0.017	0.029	0.046	0.066	0.090	0.118	0.184	0.265	0.360
6x6	0.25	4-way - Horizontal Throw	1-2-4	2-3-6	2-3-7	3-4-8	3-5-10	4-6-11	5-7-12	6-8-13	7-10-15
		3-way - Horizontal Throw	1-2-5	2-4-7	3-5-9	4-5-11	4-6-13	5-7-14	6-9-16	7-11-17	9-13-19
		2-way - Horizontal Throw	1-2-6	2-4-9	3-5-11	4-6-13	5-8-15	6-9-17	7-11-19	9-13-21	10-15-22
		1-way - Horizontal Throw	1-2-8	2-5-12	3-7-15	5-9-17	7-10-19	8-12-20	10-15-22	12-17-24	14-19-26
		Noise Criteria	-	-	13	19	23	28	35	41	45

Neck Size (in.)	Nominal Duct Area	Airflow (CFM)	133	178	222	267	311	256	444	533	622
		Total Pressure	0.019	0.034	0.052	0.075	0.103	0.134	0.210	0.302	0.411
8x8	0.69	4-way - Horizontal Throw	1-3-6	2-4-7	3-5-9	4-6-11	4-7-13	5-7-15	6-9-16	7-11-18	9-13-19
		3-way - Horizontal Throw	2-4-7	3-5-10	4-6-12	5-7-15	6-9-17	6-10-19	8-12-21	10-15-23	11-17-25
		2-way - Horizontal Throw	2-4-9	3-6-11	5-7-14	6-9-17	7-10-20	8-11-23	10-14-25	11-17-28	13-20-30
		1-way - Horizontal Throw	2-4-12	3-7-16	5-10-20	7-12-23	9-14-25	10-16-27	13-20-30	16-23-33	15-25-35
		Noise Criteria	-	12	19	25	29	34	41	47	51

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: Total Pressure = in. wc; Throw = ft. at 150 fpm, 100 fpm and 50 fpm terminal velocity.
4. NC is based upon 10 dB room absorption (Re: 10^{-12} watts) evaluated at 125 through 4000 Hz octave bands.
5. Flow hoods are recommended for system balancing.
6. Dash (-) in space denotes an NC value of less than 10.

ENGINEERING DATA

PP, APP Series: Square Neck

Neck Velocity	300	400	500	600	700	800	900	1200	1400
Velocity Pressure	0.006	0.010	0.016	0.022	0.031	0.040	0.062	0.090	0.122

20x20 Module

Neck Size (in.)	Nominal Duct Area	Airflow (CFM)	75	100	125	150	175	200	250	300	350
		Total Pressure	0.017	0.029	0.046	0.066	0.090	0.118	0.184	0.265	0.360
		4-way - Horizontal Throw	1-2-4	2-3-6	2-3-7	3-4-8	3-5-10	4-6-11	5-7-12	6-8-13	7-10-15
		3-way - Horizontal Throw	1-3-5	2-4-7	3-5-9	4-5-11	4-6-13	5-7-14	6-9-16	7-11-17	9-13-19
6x6	0.25	2-way - Horizontal Throw	1-3-6	2-4-9	3-5-11	4-6-13	5-8-15	6-9-17	7-11-19	9-13-21	10-15-22
		1-way - Horizontal Throw	1-3-9	2-5-12	3-7-15	5-9-17	7-10-19	8-12-20	10-15-22	12-17-24	14-19-26
		Noise Criteria	-	-	13	19	23	28	35	41	45

Neck Size (in.)	Nominal Duct Area	Airflow (CFM)	133	178	222	267	311	356	444	533	622
		Total Pressure	0.019	0.034	0.052	0.075	0.103	0.134	0.210	0.302	0.411
		4-way - Horizontal Throw	1-3-6	2-4-7	3-5-9	4-6-11	4-7-13	5-7-15	6-9-16	7-11-18	9-13-19
		3-way - Horizontal Throw	2-4-7	3-5-10	4-6-12	5-7-15	6-9-17	6-10-19	8-12-21	10-15-23	11-17-25
8x8	0.44	2-way - Horizontal Throw	2-4-9	3-6-11	5-7-14	6-9-17	7-10-20	8-11-23	10-14-25	11-17-28	13-20-30
		1-way - Horizontal Throw	2-4-12	3-7-16	5-10-20	7-12-23	9-14-25	10-16-28	13-20-30	16-23-33	18-25-35
		Noise Criteria	-	12	19	25	29	34	41	47	51

Neck Size (in.)	Nominal Duct Area	Airflow (CFM)	208	278	347	417	486	556	694	833	972
		Total Pressure	0.022	0.039	0.061	0.087	0.119	0.155	0.243	0.349	0.476
		4-way - Horizontal Throw	2-3-7	3-5-9	4-6-12	5-7-14	5-8-16	6-9-18	8-12-20	9-14-22	11-16-24
		3-way - Horizontal Throw	2-5-9	4-6-12	5-8-15	6-9-18	7-11-21	8-12-23	10-15-26	12-18-29	14-21-31
10x10	0.69	2-way - Horizontal Throw	2-5-11	4-7-14	6-9-18	7-11-21	8-13-25	10-14-28	12-18-32	14-21-35	17-25-37
		1-way - Horizontal Throw	2-5-15	4-8-20	6-12-25	8-15-29	11-17-31	13-20-33	16-25-37	10-29-41	23-31-44
		Noise Criteria	-	16	23	29	34	38	45	51	56

Neck Size (in.)	Nominal Duct Area	Airflow (CFM)	133	178	222	267	311	256	444	533	622
		Total Pressure	0.019	0.034	0.052	0.075	0.103	0.134	0.210	0.302	0.411
		4-way - Horizontal Throw	1-3-6	2-4-7	3-5-9	4-6-11	4-7-13	5-7-15	6-9-16	7-11-18	9-13-19
		3-way - Horizontal Throw	2-4-7	3-5-10	4-6-12	5-7-15	6-9-17	6-10-19	8-12-21	10-15-23	11-17-25
8x8	0.69	2-way - Horizontal Throw	2-4-9	3-6-11	5-7-14	6-9-17	7-10-20	8-11-23	10-14-25	11-17-28	13-20-30
		1-way - Horizontal Throw	2-4-12	3-7-16	5-10-20	7-12-23	9-14-25	10-16-27	13-20-30	16-23-33	15-25-35
		Noise Criteria	-	12	19	25	29	34	41	47	51

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: Total Pressure = in. wc; Throw = ft. at 150 fpm, 100 fpm and 50 fpm terminal velocity.
4. NC is based upon 10 dB room absorption (Re: 10^{-12} watts) evaluated at 125 through 4000 Hz octave bands.
5. Flow hoods are recommended for system balancing.
6. Dash (-) in space denotes an NC value of less than 10.

ENGINEERING DATA

PP, APP Series: Square Neck

Neck Velocity	300	400	500	600	700	800	900	1200	1400
Velocity Pressure	0.006	0.010	0.016	0.022	0.031	0.040	0.062	0.090	0.122

24x24 Module

Neck Size (in.)	Nominal Duct Area	Airflow (CFM)	75	100	125	150	175	200	250	300	350
		Total Pressure	0.017	0.029	0.046	0.066	0.090	0.118	0.184	0.265	0.360
6x6	0.25	4-way - Horizontal Throw	1-2-4	2-3-6	2-3-7	3-4-8	3-5-10	4-6-11	5-7-12	6-8-13	7-10-15
		3-way - Horizontal Throw	1-3-5	2-4-7	3-5-9	4-5-11	4-6-13	5-7-14	6-9-16	7-11-17	9-13-19
		2-way - Horizontal Throw	1-3-6	2-4-9	3-5-11	4-6-13	5-8-15	6-9-17	7-11-19	9-13-21	10-15-22
		1-way - Horizontal Throw	1-3-9	2-5-12	3-7-15	5-9-17	7-10-19	8-12-20	10-15-22	12-17-24	14-19-26
		Noise Criteria	-	-	13	19	23	28	35	41	45

Neck Size (in.)	Nominal Duct Area	Airflow (CFM)	133	178	222	267	311	356	444	533	622
		Total Pressure	0.019	0.034	0.052	0.075	0.103	0.134	0.210	0.302	0.411
8x8	0.44	4-way - Horizontal Throw	1-3-6	2-4-7	3-5-9	4-6-11	4-7-13	5-7-15	6-9-16	7-11-18	9-13-35
		3-way - Horizontal Throw	2-4-7	3-5-10	4-6-12	5-7-15	6-9-17	6-10-19	8-12-21	10-15-23	13-20-30
		2-way - Horizontal Throw	2-4-9	3-6-11	5-7-14	6-9-17	7-10-20	8-11-23	10-14-25	11-17-28	11-17-25
		1-way - Horizontal Throw	2-4-12	3-7-16	5-10-20	7-12-23	9-14-25	10-16-27	13-20-30	16-23-33	9-13-19
		Noise Criteria	-	12	19	25	29	34	41	47	51

Neck Size (in.)	Nominal Duct Area	Airflow (CFM)	208	278	347	417	486	556	694	833	972
		Total Pressure	0.022	0.039	0.061	0.087	0.119	0.155	0.243	0.349	0.476
10x10	0.69	4-way - Horizontal Throw	2-3-7	3-5-9	4-6-12	5-7-14	5-8-16	6-9-18	8-12-20	9-14-22	11-16-24
		3-way - Horizontal Throw	2-5-9	4-6-12	5-8-15	6-9-18	7-11-21	8-12-23	10-15-26	12-18-29	14-21-31
		2-way - Horizontal Throw	2-5-11	4-7-14	6-9-18	7-11-21	8-13-25	10-14-28	12-18-32	14-21-35	17-25-37
		1-way - Horizontal Throw	2-5-15	4-8-20	6-12-25	8-15-29	11-17-31	13-20-33	16-25-37	20-29-41	23-31-44
		Noise Criteria	-	16	23	29	34	38	45	51	56

Neck Size (in.)	Nominal Duct Area	Airflow (CFM)	300	400	500	600	700	800	1000	1200	1400
		Total Pressure	0.033	0.059	0.092	0.133	0.181	0.236	0.369	0.531	0.723
12x12	1.00	4-way - Horizontal Throw	4-6-12	6-8-16	7-10-17	8-12-19	10-15-21	11-16-22	14-17-25	16-19-27	17-21-29
		3-way - Horizontal Throw	5-8-16	7-11-20	9-14-22	11-16-24	13-19-26	14-20-28	18-22-31	20-24-34	21-26-37
		2-way - Horizontal Throw	6-10-19	9-13-24	11-16-27	13-19-29	15-22-32	17-24-34	21-27-38	24-29-42	26-32-45
		1-way - Horizontal Throw	8-13-24	12-18-28	15-22-32	18-24-35	20-26-37	23-28-40	26-32-45	28-35-49	31-37-53
		Noise Criteria	-	20	27	33	38	42	49	55	60

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: Total Pressure = in. wc; Throw = ft. at 150 fpm, 100 fpm and 50 fpm terminal velocity.
4. NC is based upon 10 dB room absorption (Re: 10^{-12} watts) evaluated at 125 through 4000 Hz octave bands.
5. Flow hoods are recommended for system balancing.
6. Dash (-) in space denotes an NC value of less than 10.

PP, APP Series: Round Neck

Neck Velocity	300	400	500	600	700	800	900	1200	1400
Velocity Pressure	0.006	0.010	0.016	0.022	0.031	0.040	0.062	0.090	0.122

12x12 Module

Neck Size (in.)	Nominal Duct Area	Airflow (CFM)	59	79	98	118	137	157	196	236	275
		Total Pressure	0.016	0.028	0.044	0.064	0.087	0.113	0.177	0.255	0.347
		4-way - Horizontal Throw	1-2-3	1-2-5	2-3-6	2-3-7	3-4-8	3-5-9	4-6-11	5-7-12	5-8-13
		3-way - Horizontal Throw	1-2-5	2-3-6	3-4-8	3-5-9	4-5-11	4-6-12	5-8-14	6-9-15	7-11-16
6	0.20	2-way - Horizontal Throw	1-2-5	2-4-7	2-4-9	4-5-11	4-6-12	5-7-14	6-9-17	7-11-18	8-12-20
		1-way - Horizontal Throw	1-2-7	2-4-10	2-6-12	4-7-15	5-9-17	6-10-18	8-12-20	10-15-22	11-17-23
		Noise Criteria	-	-	-	16	21	25	32	38	43

24x12 Module

Neck Size (in.)	Nominal Duct Area	Airflow (CFM)	59	79	98	118	137	157	196	236	275
		Total Pressure	0.016	0.028	0.044	0.064	0.087	0.113	0.177	0.255	0.347
		4-way - Horizontal Throw	1-2-3	1-2-5	2-3-6	2-3-7	3-4-8	3-5-9	4-6-11	5-7-12	5-8-13
		3-way - Horizontal Throw	1-2-5	2-3-6	3-4-8	3-5-9	4-5-11	4-6-12	5-8-14	6-9-15	7-11-16
6	0.20	2-way - Horizontal Throw	1-2-5	2-4-7	2-4-9	4-5-11	4-6-12	5-7-14	6-9-17	7-11-18	8-12-20
		1-way - Horizontal Throw	1-2-7	2-4-10	2-6-12	4-7-15	5-9-17	6-10-18	8-12-20	10-15-22	11-17-23
		Noise Criteria	-	-	-	16	21	25	32	38	43

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: Total Pressure = in. wc; Throw = ft. at 150 fpm, 100 fpm and 50 fpm terminal velocity.
4. NC is based upon 10 dB room absorption (Re: 10^{-12} watts) evaluated at 125 through 4000 Hz octave bands.
5. Flow hoods are recommended for system balancing.
6. Dash (-) in space denotes an NC value of less than 10.

ENGINEERING DATA

PP, APP Series: Round Neck

Neck Velocity	300	400	500	600	700	800	900	1200	1400
Velocity Pressure	0.006	0.010	0.016	0.022	0.031	0.040	0.062	0.090	0.122

16x16 Module

Neck Size (in.)	Nominal Duct Area	Airflow (CFM)	59	79	98	118	137	157	196	236	275
		Total Pressure	0.016	0.028	0.044	0.064	0.087	0.113	0.177	0.255	0.347
		4-way - Horizontal Throw	1-2-4	2-2-5	2-3-6	2-4-7	3-4-9	3-5-10	4-6-11	5-7-12	6-9-13
		3-way - Horizontal Throw	1-2-5	2-3-6	3-4-8	3-5-10	4-6-11	4-6-12	5-8-14	6-10-15	8-11-16
6	0.20	2-way - Horizontal Throw	1-2-6	2-4-8	3-5-10	4-6-11	4-7-13	5-8-15	6-10-17	8-11-18	9-13-20
		1-way - Horizontal Throw	1-2-8	2-4-10	3-7-13	4-8-15	6-9-17	7-10-18	9-13-20	10-15-22	12-17-23
		Noise Criteria	-	-	-	16	21	25	32	38	43

Neck Size (in.)	Nominal Duct Area	Airflow (CFM)	105	140	175	209	244	279	349	419	489
		Total Pressure	0.018	0.032	0.049	0.071	0.097	0.126	0.197	0.284	0.386
		4-way - Horizontal Throw	1-2-5	2-3-7	3-4-8	3-5-10	4-6-12	4-7-13	5-8-15	7-10-16	8-12-17
		3-way - Horizontal Throw	2-3-6	3-4-9	4-5-11	4-6-13	5-8-15	6-9-17	7-11-18	9-13-20	10-15-22
8	0.35	2-way - Horizontal Throw	1-3-8	3-5-10	4-6-13	5-8-15	6-9-18	7-10-20	8-13-22	10-15-25	12-18-27
		1-way - Horizontal Throw	1-3-10	3-6-14	4-9-17	6-10-20	8-12-22	9-14-24	12-17-26	14-20-19	16-22-31
		Noise Criteria	-	-	16	22	27	31	38	44	49

Neck Size (in.)	Nominal Duct Area	Airflow (CFM)	164	218	273	327	382	436	545	654	764
		Total Pressure	0.020	0.036	0.056	0.080	0.109	0.143	0.223	0.321	0.437
		4-way - Horizontal Throw	1-3-6	3-4-8	3-5-10	4-6-12	5-7-14	5-8-16	7-10-18	8-12-20	10-14-21
		3-way - Horizontal Throw	2-4-8	4-5-11	4-7-13	5-8-16	6-9-19	7-11-21	9-13-23	11-16-25	13-19-27
10	0.55	2-way - Horizontal Throw	2-4-10	3-6-13	5-8-16	6-10-19	7-11-22	8-13-25	11-16-28	13-19-31	15-22-33
		1-way - Horizontal Throw	2-4-13	3-7-13	5-11-22	7-13-26	10-15-28	12-17-30	15-22-33	17-26-36	20-28-39
		Noise Criteria	-	14	21	27	32	36	43	49	54

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: Total Pressure = in. wc; Throw = ft. at 150 fpm, 100 fpm and 50 fpm terminal velocity.
4. NC is based upon 10 dB room absorption (Re: 10^{-12} watts) evaluated at 125 through 4000 Hz octave bands.
5. Flow hoods are recommended for system balancing.
6. Dash (-) in space denotes an NC value of less than 10.

PP, APP Series: Round Neck

Neck Velocity	300	400	500	600	700	800	900	1200	1400
Velocity Pressure	0.006	0.010	0.016	0.022	0.031	0.040	0.062	0.090	0.122

20x20 Module

Neck Size (in.)	Nominal Duct Area	Airflow (CFM)	59	79	98	118	137	157	196	236	275
		Total Pressure	0.016	0.028	0.044	0.064	0.087	0.113	0.177	0.255	0.347
		4-way - Horizontal Throw	1-2-4	2-2-5	2-3-6	2-4-7	3-4-9	3-5-10	4-6-11	5-7-12	6-9-13
		3-way - Horizontal Throw	1-2-5	2-3-6	3-4-8	3-5-10	4-6-11	4-6-12	5-8-14	6-10-15	8-11-16
6	0.20	2-way - Horizontal Throw	1-2-6	2-4-8	3-5-10	4-6-11	4-7-13	5-8-15	6-10-17	8-11-18	9-13-20
		1-way - Horizontal Throw	1-2-8	2-4-10	3-7-13	4-8-15	6-9-17	7-10-18	9-13-20	10-15-22	12-17-23
		Noise Criteria	-	-	-	16	21	25	32	38	43

Neck Size (in.)	Nominal Duct Area	Airflow (CFM)	105	140	175	209	244	279	349	419	489
		Total Pressure	0.018	0.032	0.049	0.071	0.097	0.126	0.197	0.284	0.386
		4-way - Horizontal Throw	1-2-5	2-3-7	3-4-8	3-5-10	4-6-12	4-7-13	5-8-15	7-10-16	8-12-17
		3-way - Horizontal Throw	2-3-6	3-4-9	4-5-11	4-6-13	5-8-15	6-9-17	7-11-18	9-13-20	10-15-22
8	0.35	2-way - Horizontal Throw	1-3-8	3-5-10	4-6-13	5-8-15	6-9-18	7-10-20	8-13-22	10-15-25	12-18-27
		1-way - Horizontal Throw	1-3-10	3-6-14	4-9-17	6-10-20	8-12-22	9-14-24	12-17-26	14-20-29	16-22-31
		Noise Criteria	-	-	16	22	27	31	38	44	49

Neck Size (in.)	Nominal Duct Area	Airflow (CFM)	164	218	273	327	382	436	545	654	764
		Total Pressure	0.020	0.036	0.056	0.080	0.109	0.143	0.223	0.321	0.437
		4-way - Horizontal Throw	1-3-6	3-4-8	3-5-10	4-6-12	5-7-14	5-8-16	7-10-18	8-12-20	10-14-21
		3-way - Horizontal Throw	2-4-8	4-5-11	4-7-13	5-8-16	6-9-19	7-11-21	9-13-23	13-19-31	13-19-27
10	0.55	2-way - Horizontal Throw	2-4-10	3-6-13	5-8-16	6-10-19	7-11-22	8-13-25	11-16-28	13-19-31	15-22-33
		1-way - Horizontal Throw	2-4-13	3-7-17	5-11-22	7-13-26	10-15-28	12-17-30	15-22-33	17-26-36	20-28-39
		Noise Criteria	-	14	21	27	32	36	43	49	54

Neck Size (in.)	Nominal Duct Area	Airflow (CFM)	236	314	393	471	550	628	785	942	1100
		Total Pressure	0.032	0.057	0.089	0.128	0.174	0.227	0.354	0.510	0.695
		4-way - Horizontal Throw	4-6-11	5-7-14	6-9-15	7-11-17	9-13-18	10-14-19	12-15-22	14-17-24	15-18-26
		3-way - Horizontal Throw	5-7-14	6-10-18	8-12-20	10-14-21	11-16-23	13-18-25	16-20-28	18-21-30	19-23-33
12	0.79	2-way - Horizontal Throw	6-8-17	8-11-21	9-14-24	11-17-26	13-20-28	15-21-30	19-24-34	21-26-37	23-28-40
		1-way - Horizontal Throw	7-12-22	10-16-25	13-19-28	16-22-31	18-23-33	20-25-35	23-28-40	25-31-43	27-33-47
		Noise Criteria	-	18	25	30	35	40	47	52	57

Neck Size (in.)	Nominal Duct Area	Airflow (CFM)	321	428	535	641	748	855	1069	1283	1497
		Total Pressure	0.034	0.060	0.093	0.135	0.183	0.239	0.374	0.538	0.733
		4-way - Horizontal Throw	4-6-13	6-9-16	7-11-18	9-13-20	10-15-21	11-16-23	14-18-25	16-20-28	17-21-30
		3-way - Horizontal Throw	6-8-17	7-11-20	9-14-23	11-17-25	13-19-27	15-20-29	19-23-32	20-25-35	22-27-38
14	1.07	2-way - Horizontal Throw	7-10-20	9-13-25	11-17-28	13-20-30	15-23-33	18-25-35	22-28-39	25-30-43	27-33-47
		1-way - Horizontal Throw	8-14-25	12-18-29	15-23-33	18-25-36	21-27-39	24-29-41	27-33-46	29-36-51	32-39-55
		Noise Criteria	12	21	28	34	38	43	50	56	60

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: Total Pressure = in. wc; Throw = ft. at 150 fpm, 100 fpm and 50 fpm terminal velocity.
4. NC is based upon 10 dB room absorption (Re: 10^{-12} watts) evaluated at 125 through 4000 Hz octave bands.
5. Flow hoods are recommended for system balancing.
6. Dash (-) in space denotes an NC value of less than 10.

ENGINEERING DATA

PP, APP Series: Round Neck

Neck Velocity	300	400	500	600	700	800	900	1200	1400
Velocity Pressure	0.006	0.010	0.016	0.022	0.031	0.040	0.062	0.090	0.122

24x24 Module

Neck Size (in.)	Nominal Duct Area	Airflow (CFM)	59	79	98	118	137	157	196	236	275
		Total Pressure	0.016	0.028	0.044	0.064	0.087	0.113	0.177	0.255	0.347
6	0.20	4-way - Horizontal Throw	1-2-4	2-2-5	2-3-6	2-4-7	3-4-9	3-5-10	4-6-11	5-7-12	6-9-13
		3-way - Horizontal Throw	1-2-5	2-3-6	3-4-8	3-5-10	4-6-11	4-6-12	5-8-14	6-10-15	8-11-16
		2-way - Horizontal Throw	1-2-6	2-4-8	3-5-10	4-6-11	4-7-13	5-8-15	6-10-17	8-11-18	9-13-20
		1-way - Horizontal Throw	1-2-8	2-4-10	3-7-13	4-8-15	6-9-17	7-10-18	9-13-20	10-15-22	12-17-23
		Noise Criteria	-	-	-	16	21	25	32	38	43

Neck Size (in.)	Nominal Duct Area	Airflow (CFM)	105	140	175	209	244	279	349	419	489
		Total Pressure	0.018	0.032	0.049	0.071	0.097	0.126	0.197	0.284	0.386
8	0.35	4-way - Horizontal Throw	1-2-5	2-3-7	3-4-8	3-5-10	4-6-12	4-7-13	5-8-15	7-10-16	8-12-17
		3-way - Horizontal Throw	2-3-6	3-4-9	4-5-11	4-6-13	5-8-15	6-9-17	7-11-18	9-13-20	10-15-22
		2-way - Horizontal Throw	1-3-8	3-5-10	4-6-13	5-8-15	6-9-18	7-10-20	8-13-22	10-15-25	12-18-27
		1-way - Horizontal Throw	1-3-10	3-6-14	4-9-17	6-10-20	8-12-22	9-14-24	12-17-26	14-20-29	16-22-31
		Noise Criteria	-	-	16	22	27	31	38	44	49

Neck Size (in.)	Nominal Duct Area	Airflow (CFM)	164	218	273	327	382	436	545	654	764
		Total Pressure	0.020	0.036	0.056	0.080	0.109	0.143	0.223	0.321	0.437
10	0.55	4-way - Horizontal Throw	1-3-6	3-4-8	3-5-10	4-6-12	5-7-14	5-8-16	7-10-18	8-12-20	10-14-21
		3-way - Horizontal Throw	2-4-8	4-5-11	4-7-13	5-8-16	6-9-19	7-11-21	9-13-23	11-16-25	13-19-27
		2-way - Horizontal Throw	2-4-10	3-6-13	5-8-16	6-10-19	7-11-22	8-13-25	11-16-28	13-19-31	15-22-33
		1-way - Horizontal Throw	2-4-13	3-7-17	5-11-22	7-13-26	10-15-28	12-17-30	15-22-33	17-26-36	20-28-39
		Noise Criteria	-	14	21	27	32	36	43	49	54

Neck Size (in.)	Nominal Duct Area	Airflow (CFM)	236	314	393	471	550	628	785	942	1100
		Total Pressure	0.032	0.057	0.089	0.128	0.174	0.227	0.354	0.510	0.695
12	0.79	4-way - Horizontal Throw	4-6-11	5-7-14	6-9-15	7-11-17	9-13-18	10-14-19	12-15-22	14-17-24	15-18-26
		3-way - Horizontal Throw	5-7-14	6-10-18	8-12-20	10-14-21	11-16-23	13-18-25	16-20-28	18-21-30	19-23-33
		2-way - Horizontal Throw	6-8-17	8-11-21	9-14-24	11-17-26	13-20-28	15-21-30	19-24-34	21-26-37	23-28-40
		1-way - Horizontal Throw	7-12-22	10-16-25	13-19-28	16-22-31	18-23-33	20-25-35	23-28-40	25-31-43	27-33-47
		Noise Criteria	-	18	25	30	35	40	47	52	57

Neck Size (in.)	Nominal Duct Area	Airflow (CFM)	321	428	535	641	748	855	1069	1283	1497
		Total Pressure	0.034	0.060	0.093	0.135	0.183	0.239	0.374	0.538	0.733
14	1.07	4-way - Horizontal Throw	4-6-13	6-9-16	7-11-18	9-13-20	10-15-21	11-16-23	14-18-25	16-20-28	17-21-30
		3-way - Horizontal Throw	6-8-17	7-11-20	9-14-23	11-17-25	13-19-27	15-20-29	19-23-32	20-25-35	22-27-38
		2-way - Horizontal Throw	7-10-20	9-13-25	11-17-28	13-20-30	15-23-33	18-25-35	22-28-39	25-30-43	27-33-47
		1-way - Horizontal Throw	8-14-25	12-18-29	15-23-33	18-25-36	21-27-39	24-29-41	27-33-46	29-36-51	32-39-55
		Noise Criteria	12	21	28	34	38	43	50	56	60

Neck Size (in.)	Nominal Duct Area	Airflow (CFM)	419	559	698	838	977	1117	1396	1676	1955
		Total Pressure	0.036	0.063	0.099	0.143	0.194	0.253	0.396	0.570	0.776
16	1.40	4-way - Horizontal Throw	5-7-15	7-10-18	8-12-21	10-15-23	11-17-24	13-18-26	16-21-29	18-23-32	20-24-34
		3-way - Horizontal Throw	6-10-19	9-13-23	11-16-26	13-19-29	15-22-31	17-23-33	21-26-37	23-29-41	25-31-44
		2-way - Horizontal Throw	8-11-23	10-15-28	13-19-32	15-23-35	18-26-38	20-28-40	25-32-45	28-35-49	31-38-53
		1-way - Horizontal Throw	10-16-29	14-21-33	17-26-37	21-29-41	24-31-44	27-33-47	31-37-53	33-41-58	36-44-63
		Noise Criteria	14	23	31	36	41	45	53	58	63

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: Total Pressure = in. wc; Throw = ft. at 150 fpm, 100 fpm and 50 fpm terminal velocity.
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