



ENGINEERING DATA

PV, APV Series: Square Neck

12x12 Module

Neck Size (in.)	Nominal Duct Area	Airflow (CFM)	100	125	150	175	200	225	250	275	300
		Neck Velocity (fpm)	400	500	600	700	800	900	1000	1100	1200
6x6	0.25	Static Pressure	0.019	0.030	0.043	0.059	0.077	0.097	0.120	0.145	0.173
		Total Pressure	0.029	0.046	0.066	0.089	0.117	0.148	0.182	0.221	0.263
		4-way - Horizontal Throw	2-4-9	4-5-10	4-7-11	5-8-12	6-9-13	7-10-14	7-10-15	8-11-15	9-11-16
		3-way - Horizontal Throw	4-7-15	6-9-18	7-11-19	9-13-21	10-15-22	11-16-24	12-18-25	13-18-26	15-19-27
		2-way - Horizontal Throw	4-8-15	6-9-18	8-11-19	9-13-21	10-15-22	11-17-24	13-18-25	14-19-26	15-19-27
		1-way - Horizontal Throw	8-13-24	11-16-27	13-19-30	15-22-32	17-24-34	19-26-36	21-27-38	23-28-40	24-30-42
		Noise Criteria	-	-	19	24	28	33	36	39	43

24x12 Module

Neck Size (in.)	Nominal Duct Area	Airflow (CFM)	118	137	157	176	196	216	235	274	314
		Neck Velocity (fpm)	600	700	800	900	1000	1100	1200	1400	1600
6x6	0.25	Static Pressure	0.036	0.049	0.064	0.081	0.099	0.120	0.143	0.195	0.254
		Total Pressure	0.058	0.079	0.104	0.131	0.162	0.196	0.233	0.317	0.414
		4-way - Horizontal Throw	1-2-5	2-3-5	2-3-6	2-4-6	3-4-6	3-4-7	3-5-7	4-5-7	4-6-8
		3-way - Horizontal Throw	8-11-20	9-13-22	10-15-23	11-17-24	13-18-26	14-19-27	15-20-28	18-22-30	19-23-33
		2-way - Horizontal Throw	5-11-20	7-13-22	9-15-23	11-17-24	12-18-26	14-19-27	15-20-28	17-22-30	19-23-33
		1-way - Horizontal Throw	10-15-26	12-17-28	13-20-30	15-22-31	17-23-33	18-25-35	20-26-36	23-28-39	24-30-42
		Noise Criteria	-	-	21	25	28	32	35	41	47

16x16 Module

Neck Size (in.)	Nominal Duct Area	Airflow (CFM)	88	113	138	163	188	213	238	263	288
		Neck Velocity (fpm)	350	450	550	650	750	850	950	1050	1150
6x6	0.25	Static Pressure	0.019	0.031	0.046	0.064	0.086	0.110	0.137	0.168	0.201
		Total Pressure	0.026	0.043	0.065	0.091	0.121	0.155	0.194	0.237	0.284
		4-way - Horizontal Throw	2-3-6	3-4-7	3-5-8	4-6-9	5-7-9	5-7-10	6-7-10	6-8-11	7-8-12
		3-way - Horizontal Throw	3-5-11	5-7-14	6-9-16	7-10-18	8-12-19	9-13-20	10-15-21	11-16-22	12-17-23
		2-way - Horizontal Throw	3-7-13	5-8-17	7-10-19	8-12-20	9-14-22	11-16-23	12-17-25	13-18-26	14-19-27
		1-way - Horizontal Throw	5-10-19	8-13-22	11-16-24	13-18-26	15-20-28	17-21-30	18-22-31	19-23-33	20-24-35
		Noise Criteria	-	-	20	24	30	33	37	40	43

Neck Size (in.)	Nominal Duct Area	Airflow (CFM)	155	200	244	289	333	377	422	466	511
		Neck Velocity (fpm)	350	450	550	650	750	850	950	1050	1150
8x8	0.44	Static Pressure	0.029	0.049	0.073	0.102	0.135	0.174	0.217	0.265	0.318
		Total Pressure	0.037	0.061	0.092	0.128	0.170	0.219	0.273	0.334	0.400
		4-way - Horizontal Throw	1-3-6	2-4-7	3-5-8	4-6-9	4-6-10	5-7-10	5-8-11	6-8-11	6-8-12
		3-way - Horizontal Throw	3-5-10	4-6-12	5-8-13	6-9-14	7-10-15	8-12-16	9-12-17	10-13-18	11-14-19
		2-way - Horizontal Throw	4-9-17	7-11-22	9-14-25	11-16-27	12-19-29	14-21-31	16-23-33	17-25-35	19-26-36
		1-way - Horizontal Throw	5-11-24	8-16-27	12-20-30	16-23-32	18-25-35	21-26-37	23-28-39	24-29-41	25-31-43
		Noise Criteria	-	16	23	30	35	39	44	49	53

Neck Size (in.)	Nominal Duct Area	Airflow (CFM)	153	167	194	215	236	278	333	375	659
		Neck Velocity (fpm)	220	240	280	310	340	400	480	540	950
10x10	0.69	Static Pressure	0.014	0.019	0.026	0.032	0.039	0.054	0.077	0.098	0.302
		Total Pressure	0.017	0.023	0.031	0.038	0.046	0.063	0.091	0.116	0.358
		4-way - Horizontal Throw	2-4-9	2-5-11	3-6-13	4-7-15	5-8-16	6-9-17	7-11-19	8-13-21	9-15-22
		3-way - Horizontal Throw	3-7-15	4-9-17	6-10-18	7-12-19	9-13-20	10-15-22	12-17-24	14-18-25	16-19-27
		2-way - Horizontal Throw	4-8-18	5-11-22	7-13-25	10-14-28	11-16-30	12-18-31	14-22-34	17-25-37	19-24-40
		1-way - Horizontal Throw	7-15-27	10-18-29	14-21-32	16-24-34	18-26-36	20-27-38	24-29-42	26-32-45	28-34-48
		Noise Criteria	-	-	-	20	26	31	39	46	52

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. Dash "-" indicates NC less than 15.
6. When two diffusers are discharging air toward each other, selection should be based on the diffuser size which will produce the required throw (one half the distance between diffuser centers) within the minimum to maximum throw range at the airflow requirements.

ENGINEERING DATA

PV, APV Series: Square Neck

20x20 Module

Neck Size (in.)	Nominal Duct Area	Airflow (CFM)	113	138	163	188	213	238	263	288	313
		Neck Velocity (fpm)	450	550	650	750	850	950	1050	1150	1250
6x6	0.25	Static Pressure	0.021	0.031	0.044	0.058	0.075	0.093	0.114	0.136	0.161
		Total Pressure	0.034	0.050	0.070	0.093	0.120	0.149	0.183	0.219	0.259
		4-way - Horizontal Throw	3-6-11	4-7-12	5-8-13	6-9-14	7-10-15	8-11-16	8-12-16	10-12-17	10-13-18
		3-way - Horizontal Throw	5-7-13	6-8-14	7-10-15	8-11-16	9-12-18	10-13-19	11-14-19	12-14-20	12-15-21
		2-way - Horizontal Throw	2-5-11	3-7-13	5-8-14	6-9-15	7-11-16	8-12-17	9-12-18	10-13-18	10-14-19
		1-way - Horizontal Throw	6-12-21	9-14-23	11-17-25	13-19-27	15-20-28	16-21-30	18-22-32	19-23-33	20-24-35
		Noise Criteria	-	-	18	23	28	33	36	40	43

Neck Size (in.)	Nominal Duct Area	Airflow (CFM)	178	222	266	311	355	400	444	488	533
		Neck Velocity (fpm)	400	500	600	700	800	900	1000	1100	1200
8x8	0.44	Static Pressure	0.025	0.040	0.057	0.078	0.102	0.129	0.159	0.193	0.229
		Total Pressure	0.035	0.055	0.080	0.109	0.142	0.179	0.221	0.268	0.319
		4-way - Horizontal Throw	2-4-7	3-4-9	4-5-10	4-6-11	5-7-11	5-8-12	6-9-13	6-10-13	7-10-14
		3-way - Horizontal Throw	3-5-10	4-6-13	5-8-14	6-9-15	7-10-16	8-11-17	8-13-18	9-13-19	10-14-20
		2-way - Horizontal Throw	4-9-18	6-11-21	9-14-23	11-16-25	12-18-27	14-20-29	15-21-30	17-22-32	18-23-33
		1-way - Horizontal Throw	8-16-27	13-20-30	16-23-33	18-25-35	21-27-38	23-28-40	24-30-42	25-31-44	27-33-46
		Noise Criteria	-	16	23	28	34	38	42	47	51

Neck Size (in.)	Nominal Duct Area	Airflow (CFM)	208	278	347	416	486	555	625	694	763
		Neck Velocity (fpm)	300	400	500	600	700	800	900	1000	1100
10x10	0.69	Static Pressure	0.019	0.034	0.054	0.077	0.105	0.137	0.173	0.214	0.259
		Total Pressure	0.025	0.044	0.069	0.100	0.136	0.177	0.224	0.277	0.335
		4-way - Horizontal Throw	2-5-12	4-8-15	6-10-17	8-12-18	9-14-20	10-15-21	12-16-22	13-17-24	14-18-25
		3-way - Horizontal Throw	3-7-14	6-11-17	9-13-19	11-14-20	13-16-22	14-17-24	14-18-25	15-19-26	16-20-28
		2-way - Horizontal Throw	5-10-20	8-13-23	11-17-26	13-20-29	16-22-31	18-23-33	20-25-35	21-26-37	22-27-39
		1-way - Horizontal Throw	10-15-25	14-20-29	17-23-32	20-25-35	22-27-38	23-29-40	25-30-43	26-32	27-33-47
		Noise Criteria	-	-	24	32	39	44	49	45	59

Neck Size (in.)	Nominal Duct Area	Airflow (CFM)	250	325	375	450	525	675	750	825	900
		Neck Velocity (fpm)	250	325	375	450	525	675	750	825	900
12x12	1.00	Static Pressure	0.022	0.037	0.049	0.070	0.095	0.158	0.195	0.236	0.280
		Total Pressure	0.026	0.043	0.057	0.083	0.113	0.186	0.230	0.278	0.331
		4-way - Horizontal Throw	3-6-13	5-9-17	7-11-19	9-13-21	10-16-23	12-17-24	13-18-26	15-19-27	16-20-29
		3-way - Horizontal Throw	4-8-17	7-13-19	10-15-22	13-17-24	15-18-25	16-19-27	17-20-29	18-22-30	18-23-32
		2-way - Horizontal Throw	6-12-24	10-16-28	13-20-32	16-24-35	19-26-37	22-28-40	24-30-42	26-32-45	27-33-47
		1-way - Horizontal Throw	11-17-27	15-22-31	19-25-35	22-27-38	24-29-42	26-31-44	27-33-47	29-35-50	30-37-52
		Noise Criteria	-	-	24	32	39	44	49	54	59

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. Dash "-" indicates NC less than 15.
6. When two diffusers are discharging air toward each other, selection should be based on the diffuser size which will produce the required throw (one half the distance between diffuser centers) within the minimum to maximum throw range at the airflow requirements.



ENGINEERING DATA

PV, APV Series: Square Neck

24x24 Module

Neck Size (in.)	Nominal Duct Area	Airflow (CFM)	127	142	159	181	210	236	259	287	314
		Neck Velocity (fpm)	509	566	635	722	840	943	1034	1148	1256
6x6	0.25	Static Pressure	0.027	0.034	0.042	0.055	0.074	0.093	0.112	0.138	0.165
		Total Pressure	0.029	0.036	0.045	0.058	0.079	0.099	0.119	0.147	0.176
		4-way - Horizontal Throw	2-5-10	3-6-11	3-6-13	4-7-14	6-9-15	6-10-16	7-10-17	8-12-18	8-13-18
		3-way - Horizontal Throw	2-5-13	3-7-14	4-8-15	5-19-16	7-10-17	8-12-18	9-13-19	10-14-20	10-15-21
		2-way - Horizontal Throw	5-9-15	6-15-16	8-11-17	9-13-18	10-14-20	11-15-21	12-16-22	13-16-23	14-17-24
		1-way - Horizontal Throw	9-14-19	11-14-20	12-15-22	13-15-23	14-17-25	15-19-29	19-19-27	17-20-29	17-21-30
		Noise Criteria	15	18	21	24	28	32	34	37	40

Neck Size (in.)	Nominal Duct Area	Airflow (CFM)	191	213	239	269	313	351	380	429	473
		Neck Velocity (fpm)	429	480	538	605	703	790	856	965	1064
8x8	0.44	Static Pressure	0.017	0.022	0.027	0.035	0.047	0.059	0.069	0.088	0.107
		Total Pressure	0.021	0.027	0.034	0.042	0.057	0.072	0.085	0.108	0.131
		4-way - Horizontal Throw	4-7-13	4-7-14	6-8-15	6-9-15	7-11-17	8-12-18	9-13-18	10-14-20	11-14-20
		3-way - Horizontal Throw	4-8-15	5-9-16	6-10-17	8-11-18	9-13-19	10-14-20	11-15-21	12-16-22	13-17-23
		2-way - Horizontal Throw	8-12-17	9-13-18	10-14-19	11-14-20	13-16-22	13-17-23	14-17-24	15-18-26	16-19-27
		1-way - Horizontal Throw	12-16-23	13-17-24	15-18-25	15-19-27	17-20-29	18-22-32	18-23-32	20-24-34	21-25-36
		Noise Criteria	15	18	21	24	28	31	34	37	40

Neck Size (in.)	Nominal Duct Area	Airflow (CFM)	272	304	341	395	450	488	530	581	639
		Neck Velocity (fpm)	391	438	491	569	649	702	764	836	920
10x10	0.69	Static Pressure	0.018	0.023	0.029	0.039	0.050	0.059	0.070	0.084	0.101
		Total Pressure	0.027	0.033	0.042	0.056	0.073	0.086	0.101	0.121	0.147
		4-way - Horizontal Throw	5-8-14	6-9-15	7-10-16	8-11-17	9-13-18	9-13-19	10-14-20	11-14-20	12-15-21
		3-way - Horizontal Throw	5-10-16	7-11-17	8-12-18	9-14-19	11-15-21	11-15-21	12-16-22	13-17-23	14-17-25
		2-way - Horizontal Throw	9-13-19	10-14-20	12-15-21	13-16-22	14-17-24	14-18-25	15-18-26	16-19-27	16-20-28
		1-way - Horizontal Throw	14-17-24	15-18-16	16-19-27	17-21-29	18-22-31	19-23-33	20-24-34	21-25-36	22-26-37
		Noise Criteria	15	18	21	24	28	31	34	37	40

Neck Size (in.)	Nominal Duct Area	Airflow (CFM)	363	408	448	529	605	655	715	786	840
		Neck Velocity (fpm)	363	408	448	529	605	655	715	786	840
12x12	1.00	Static Pressure	0.019	0.024	0.029	0.041	0.054	0.063	0.075	0.091	0.104
		Total Pressure	0.029	0.036	0.044	0.061	0.080	0.094	0.112	0.135	0.154
		4-way - Horizontal Throw	5-8-15	6-9-15	7-10-16	8-12-18	9-13-19	10-14-19	11-14-20	12-15-21	13-16-22
		3-way - Horizontal Throw	5-9-15	7-10-16	8-12-17	9-13-18	10-14-20	11-14-20	12-15-21	13-16-22	13-16-23
		2-way - Horizontal Throw	9-13-19	10-14-20	11-15-21	13-16-23	14-17-24	15-18-26	15-19-27	16-20-28	17-20-29
		1-way - Horizontal Throw	13-17-24	15-18-26	16-19-27	17-21-29	18-22-31	19-23-33	20-24-34	21-25-36	21-26-37
		Noise Criteria	15	18	21	24	28	31	34	37	40

Neck Size (in.)	Nominal Duct Area	Airflow (CFM)	440	494	558	635	754	817	900	980	1088
		Neck Velocity (fpm)	323	363	410	466	554	601	661	720	800
14x14	1.36	Static Pressure	0.021	0.027	0.034	0.044	0.063	0.073	0.089	0.106	0.130
		Total Pressure	0.031	0.039	0.050	0.064	0.091	0.107	0.129	0.153	0.189
		4-way - Horizontal Throw	4-8-14	6-9-15	7-10-16	8-11-17	9-13-18	10-14-19	11-14-20	12-15-21	13-16-22
		3-way - Horizontal Throw	5-7-15	6-8-16	6-9-17	7-1-18	9-13-19	9-14-20	10-15-21	11-15-22	12-16-23
		2-way - Horizontal Throw	6-11-18	8-13-19	10-14-20	11-15-22	13-17-24	14-18-25	15-18-26	16-19-27	17-20-29
		1-way - Horizontal Throw	10-16-23	12-17-24	13-18-26	15-19-27	17-21-30	18-22-31	19-23-33	20-24-34	21-25-36
		Noise Criteria	15	18	21	24	28	31	34	37	40

Neck Size (in.)	Nominal Duct Area	Airflow (CFM)	580	657	742	874	985	1048	1176	1280	1396
		Neck Velocity (fpm)	326	369	417	491	554	590	661	720	785
16x16	1.78	Static Pressure	0.018	0.023	0.029	0.041	0.052	0.058	0.073	0.087	0.104
		Total Pressure	0.030	0.039	0.049	0.068	0.087	0.099	0.124	0.147	0.175
		4-way - Horizontal Throw	2-5-14	3-6-15	3-7-16	5-10-17	6-13-18	7-13-19	8-14-20	10-15-21	12-15-22
		3-way - Horizontal Throw	3-6-15	3-8-16	4-10-17	6-13-18	8-14-19	9-14-20	11-15-21	13-15-22	13-16-23
		2-way - Horizontal Throw	3-7-18	4-9-19	5-11-20	7-14-22	6-19-23	10-17-24	12-18-25	14-19-26	15-20-28
		1-way - Horizontal Throw	3-8-21	4-10-23	6-13-24	8-17-26	10-20-28	11-20-29	14-22-31	17-23-32	19-24-33
		Noise Criteria	15	18	21	24	28	31	34	37	40

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. Dash "-" indicates NC less than 15.
6. When two diffusers are discharging air toward each other, selection should be based on the diffuser size which will produce the required throw (one half the distance between diffuser centers) within the minimum to maximum throw range at the airflow requirements.

ENGINEERING DATA

PV, APV Series: Round Neck

12x12 Module

Neck Size (in.)	Nominal Duct Area	Airflow (CFM)	98	118	137	157	176	196	235	274	314
		Neck Velocity (fpm)	500	600	700	800	900	1000	1200	1400	1600
6	0.20	Static Pressure	0.025	0.036	0.048	0.063	0.080	0.099	0.142	0.193	0.253
		Total Pressure	0.040	0.058	0.079	0.103	0.130	0.161	0.232	0.316	0.412
		4-way - Horizontal Throw	2-3-9	2/5-11	3/7-12	4/7-13	5/8-13	6/9-14	7/11-15	9/12-17	10/13-18
		3-way - Horizontal Throw	4/6-12	5/7-15	6/9-16	7/10-17	7/11-18	8/12-19	10/15-21	12/16-22	13-17-24
		2-way - Horizontal Throw	4/9-17	6/11-18	8/12-20	9/14-21	11/16-23	12/17-24	14-18-26	16-20-28	17-21-30
		1-way - Horizontal Throw	6/13-25	9/16-28	12/19-30	14-21-32	16-24-34	18-25-36	21-28-39	24-30-42	26-32-45
		Noise Criteria	-	-	18	22	26	30	35	41	46

16x16 Module

Neck Size (in.)	Nominal Duct Area	Airflow (CFM)	98	118	137	157	176	196	235	274	314
		Neck Velocity (fpm)	500	600	700	800	900	1000	1200	1400	1600
6	0.20	Static Pressure	0.023	0.034	0.046	0.060	0.076	0.094	0.135	0.183	0.239
		Total Pressure	0.039	0.056	0.076	0.100	0.126	0.156	0.224	0.306	0.399
		4-way - Horizontal Throw	3-5-9	4-6-11	4-7-12	5-8-13	6-8-14	6-9-14	8-11-16	9-12-17	10-13-18
		3-way - Horizontal Throw	3-5-11	4-7-13	5-8-15	6-9-16	7-11-17	9-13-19	11-15-21	12-16-22	14-17-24
		2-way - Horizontal Throw	3-6-12	4-7-14	6-9-15	7-10-16	8-12-17	10-14-19	12-15-21	13-16-23	14-17-25
		1-way - Horizontal Throw	3-6-17	4-10-19	6-13-21	9-15-22	11-17-24	14-19-27	17-21-29	18-22-32	20-24-34
		Noise Criteria	-	15	19	23	28	31	36	42	47

Neck Size (in.)	Nominal Duct Area	Airflow (CFM)	140	157	175	192	209	244	279	349	419
		Neck Velocity (fpm)	400	450	500	550	600	700	800	1000	1200
8	0.35	Static Pressure	0.026	0.032	0.040	0.048	0.058	0.078	0.103	0.160	0.231
		Total Pressure	0.036	0.045	0.056	0.067	0.080	0.109	0.142	0.223	0.320
		4-way - Horizontal Throw	1-2-9	1-3-10	2-4-11	2-5-12	2-6-12	3-7-13	4-9-14	7-11-16	9-12-17
		3-way - Horizontal Throw	3-6-11	4-6-12	5-7-13	5-8-14	6-8-14	6-10-15	7-11-16	9-13-18	11-14-20
		2-way - Horizontal Throw	3-7-13	4-7-14	5-8-15	6-9-16	7-10-17	8-12-18	9-13-19	11-15-21	13-17-23
		1-way - Horizontal Throw	9-14-22	11-16-23	12-17-24	13-18-25	14-19-27	17-20-29	18-22-31	20-24-34	22-27-38
		Noise Criteria	-	16	19	22	24	30	34	41	48

Neck Size (in.)	Nominal Duct Area	Airflow (CFM)	218	245	273	300	327	382	436	545	654
		Neck Velocity (fpm)	400	450	500	550	600	650	700	800	1000
10	0.55	Static Pressure	0.034	0.043	0.053	0.064	0.077	0.104	0.136	0.213	0.306
		Total Pressure	0.044	0.056	0.069	0.083	0.099	0.135	0.176	0.275	0.396
		4-way - Horizontal Throw	3-5-9	3-5-11	4-6-12	4-6-13	5-7-13	6-8-14	6-9-15	8-12-17	9-13-19
		3-way - Horizontal Throw	4-6-12	4-7-13	5-7-15	5-8-16	6-9-18	7-10-19	8-12-21	10-15-23	12-18-25
		2-way - Horizontal Throw	4-6-12	4-7-13	5-7-15	5-8-16	6-9-18	7-10-19	8-12-21	10-15-23	12-18-25
		1-way - Horizontal Throw	5-8-16	6-9-18	7-10-20	7-11-22	8-12-23	10-14-25	11-16-27	14-20-30	16-23-33
		Noise Criteria	-	16	21	25	29	33	36	41	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. Dash "-" indicates NC less than 15.
6. When two diffusers are discharging air toward each other, selection should be based on the diffuser size which will produce the required throw (one half the distance between diffuser centers) within the minimum to maximum throw range at the airflow requirements.



ENGINEERING DATA

PV, APV Series: Round Neck

20x20 Module

Neck Size (in.)	Nominal Duct Area	Airflow (CFM)	78	98	118	137	157	196	235	274	353
		Neck Velocity (fpm)	400	500	600	700	800	1000	1200	1400	1800
6	0.20	Static Pressure	0.016	0.025	0.036	0.049	0.064	0.101	0.145	0.197	0.326
		Total Pressure	0.062	0.041	0.059	0.080	0.104	0.163	0.235	0.320	0.528
		4-way - Horizontal Throw	1-2-6	1-3-8	2-5-10	3-6-11	4-6-13	5-8-16	6-10-17	7-11-19	10-14-21
		3-way - Horizontal Throw	2-4-8	3-5-10	4-6-12	5-7-14	5-8-16	6-10-18	8-12-19	9-14-21	12-17-24
		2-way - Horizontal Throw	2-4-9	2-5-11	3-6-12	4-7-14	6-9-17	7-11-19	8-12-20	9-14-22	11-16-23
		1-way - Horizontal Throw	2-5-12	3-7-14	4-8-17	5-10-19	8-12-22	10-14-24	11-17-26	13-19-27	14-20-29
		Noise Criteria	-	-	15	19	23	30	36	42	52

Neck Size (in.)	Nominal Duct Area	Airflow (CFM)	140	157	175	192	209	244	279	349	419
		Neck Velocity (fpm)	400	450	500	550	600	700	800	1000	1200
8	0.35	Static Pressure	0.024	0.030	0.037	0.045	0.054	0.073	0.095	0.149	0.214
		Total Pressure	0.034	0.043	0.053	0.064	0.076	0.104	0.135	0.211	0.304
		4-way - Horizontal Throw	1-2-6	1-3-6	2-4-7	2-4-8	2-4-9	3-5-10	4-6-11	5-7-14	6-9-17
		3-way - Horizontal Throw	3-7-14	4-8-15	5-9-17	6-9-18	7-10-19	8-12-20	9-14-22	11-17-24	14-19-26
		2-way - Horizontal Throw	3-6-12	4-7-14	5-8-15	6-8-17	6-9-17	7-11-19	8-12-20	10-15-22	12-17-25
		1-way - Horizontal Throw	5-11-20	6-13-21	8-14-23	10-16-24	11-17-25	14-19-27	15-20-29	18-23-32	20-25-35
		Noise Criteria	-	-	-	18	21	28	34	43	50

Neck Size (in.)	Nominal Duct Area	Airflow (CFM)	218	245	273	300	327	382	436	545	654
		Neck Velocity (fpm)	400	450	500	550	600	650	700	800	1000
10	0.55	Static Pressure	0.034	0.043	0.053	0.064	0.076	0.104	0.136	0.212	0.305
		Total Pressure	0.044	0.056	0.069	0.083	0.099	0.134	0.175	0.274	0.395
		4-way - Horizontal Throw	4-7-13	5-8-13	6-9-14	6-9-15	7-10-15	8-12-17	9-13-18	11-14-20	13-15-22
		3-way - Horizontal Throw	5-11-19	7-12-21	8-13-22	10-15-23	11-16-24	12-18-26	14-19-27	18-22-31	19-24-34
		2-way - Horizontal Throw	4-9-17	5-10-18	7-11-19	8-12-20	9-13-21	10-16-23	12-17-24	15-19-27	17-21-20
		1-way - Horizontal Throw	8-18-26	10-20-28	12-21-29	15-22-31	18-23-32	20-24-35	21-26-37	24-29-41	26-32-45
		Noise Criteria	-	18	22	25	30	33	35	41	50

Neck Size (in.)	Nominal Duct Area	Airflow (CFM)	236	275	314	353	393	432	510	628	707
		Neck Velocity (fpm)	300	350	400	450	500	550	650	800	900
12	0.79	Static Pressure	0.024	0.032	0.042	0.053	0.066	0.080	0.112	0.169	0.214
		Total Pressure	0.029	0.040	0.052	0.066	0.082	0.099	0.138	0.209	0.246
		4-way - Horizontal Throw	3-6-13	4-8-14	5-9-15	6-10-16	7-11-17	8-12-18	9-14-19	12-15-22	13-16-23
		3-way - Horizontal Throw	5-10-18	7-12-20	9-14-21	10-16-23	12-17-24	13-18-25	15-19-27	17-21-30	18-23-32
		2-way - Horizontal Throw	4-9-18	6-11-20	8-12-22	9-14-23	10-15-24	11-17-25	13-19-27	16-22-30	18-23-32
		1-way - Horizontal Throw	5-12-25	7-16-27	10-18-29	12-20-31	15-23-33	17-24-34	20-26-37	24-29-41	25-31-44
		Noise Criteria	-	-	17	21	25	30	36	43	49

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. Dash "-" indicates NC less than 15.
6. When two diffusers are discharging air toward each other, selection should be based on the diffuser size which will produce the required throw (one half the distance between diffuser centers) within the minimum to maximum throw range at the airflow requirements.

ENGINEERING DATA

PV, APV Series: Round Neck

24x24 Module

Neck Size (in.)	Nominal Duct Area	Airflow (CFM)	111	129	145	168	198	225	249	281	311
		Neck Velocity (fpm)	567	659	738	854	1009	1146	1266	1430	1583
6	0.20	Static Pressure	0.024	0.033	0.041	0.055	0.079	0.098	0.120	0.153	0.188
		Total Pressure	0.034	0.045	0.057	0.076	0.106	0.137	0.167	0.213	0.261
		4-way - Horizontal Throw	6-8-12	7-9-13	7-10-14	8-10-15	9-11-16	10-12-17	10-13-18	11-13-19	11-14-20
		3-way - Horizontal Throw	6-9-13	7-10-14	8-10-15	9-11-16	10-12-17	11-13-18	11-14-19	12-15-21	13-15-22
		2-way - Horizontal Throw	6-10-14	7-10-15	8-11-15	10-12-17	10-13-18	11-14-19	12-14-20	12-15-21	13-16-23
		1-way - Horizontal Throw	7-10-14	8-11-15	9-11-16	10-12-17	11-13-19	12-14-20	12-15-21	13-16-22	14-17-24
		Noise Criteria	15	18	21	24	28	31	34	37	40
Neck Size (in.)	Nominal Duct Area	Airflow (CFM)	189	204	228	268	307	345	385	427	469
		Neck Velocity (fpm)	541	584	653	769	879	989	1103	1223	1343
8	0.35	Static Pressure	0.016	0.019	0.024	0.033	0.043	0.055	0.068	0.084	0.101
		Total Pressure	0.032	0.037	0.046	0.064	0.083	0.105	0.131	0.161	0.194
		4-way - Horizontal Throw	8-10-15	9-11-15	9-11-16	10-12-17	11-13-19	11-14-20	12-15-21	13-16-22	13-16-23
		3-way - Horizontal Throw	9-11-15	9-11-16	10-12-17	10-13-18	11-14-19	12-14-20	12-15-21	13-16-23	14-17-24
		2-way - Horizontal Throw	10-13-18	11-13-19	11-14-20	12-15-22	13-16-23	14-17-24	15-18-26	16-19-27	16-20-28
		1-way - Horizontal Throw	11-13-19	11-14-20	12-15-21	13-16-23	14-17-24	15-18-26	16-19-27	17-20-29	17-21-30
		Noise Criteria	15	18	21	24	28	31	34	37	40
Neck Size (in.)	Nominal Duct Area	Airflow (CFM)	246	298	339	413	483	516	587	655	745
		Neck Velocity (fpm)	513	623	709	862	1009	1077	1226	1368	1554
10	0.55	Static Pressure	0.019	0.029	0.037	0.055	0.075	0.085	0.111	0.138	0.178
		Total Pressure	0.036	0.053	0.068	0.101	0.138	0.158	0.204	0.254	0.328
		4-way - Horizontal Throw	8-10-14	9-11-16	10-12-17	11-13-19	12-14-20	12-15-21	13-16-22	14-17-24	15-18-25
		3-way - Horizontal Throw	8-11-15	10-12-17	10-12-18	11-14-19	12-15-21	13-15-22	13-16-23	14-17-25	15-19-26
		2-way - Horizontal Throw	11-13-19	12-15-21	13-16-22	14-17-25	15-19-27	16-20-28	17-21-30	18-22-31	19-23-33
		1-way - Horizontal Throw	13-16-22	14-18-25	15-19-26	17-21-29	18-22-32	19-23-33	20-25-35	21-26-37	23-28-39
		Noise Criteria	19	22	25	31	35	37	40	43	46
Neck Size (in.)	Nominal Duct Area	Airflow (CFM)	334	375	414	467	537	575	623	683	732
		Neck Velocity (fpm)	461	518	572	645	742	794	861	944	1010
12	0.79	Static Pressure	0.020	0.025	0.030	0.038	0.050	0.058	0.068	0.082	0.094
		Total Pressure	0.033	0.041	0.050	0.064	0.085	0.097	0.114	0.137	0.157
		4-way - Horizontal Throw	8-11-16	9-12-17	10-13-18	11-13-19	12-14-20	12-15-21	13-15-22	13-16-23	14-17-24
		3-way - Horizontal Throw	8-12-17	9-13-18	10-13-19	12-14-20	13-15-22	13-16-22	14-17-23	14-17-25	15-18-25
		2-way - Horizontal Throw	10-14-20	12-15-21	13-16-23	14-17-24	15-18-26	15-19-27	16-20-28	17-20-29	17-21-30
		1-way - Horizontal Throw	12-15-22	13-16-23	14-17-24	15-18-26	16-20-28	16-20-29	17-21-30	18-22-31	19-23-32
		Noise Criteria	15	18	21	24	28	31	34	37	40
Neck Size (in.)	Nominal Duct Area	Airflow (CFM)	419	465	523	587	680	770	831	914	996
		Neck Velocity (fpm)	392	435	489	549	636	720	777	855	932
14	1.07	Static Pressure	0.013	0.016	0.020	0.026	0.035	0.044	0.052	0.062	0.074
		Total Pressure	0.025	0.030	0.039	0.049	0.065	0.084	0.097	0.118	0.140
		4-way - Horizontal Throw	5-10-14	6-11-15	8-11-16	10-12-17	11-13-18	11-14-19	12-14-20	12-15-21	13-16-22
		3-way - Horizontal Throw	6-10-17	7-11-18	8-13-19	9-14-20	11-15-21	12-16-23	13-17-23	14-17-25	15-18-26
		2-way - Horizontal Throw	7-12-19	8-14-20	10-15-21	11-16-22	13-17-24	15-18-25	15-19-26	16-20-28	17-20-29
		1-way - Horizontal Throw	8-15-21	10-16-22	12-16-23	14-17-25	15-19-27	16-20-28	17-21-29	18-22-31	19-23-32
		Noise Criteria	15	18	21	24	28	31	34	37	40
Neck Size (in.)	Nominal Duct Area	Airflow (CFM)	479	527	593	686	782	846	918	1004	1094
		Neck Velocity (fpm)	343	377	425	491	560	606	658	719	784
16	1.40	Static Pressure	0.018	0.022	0.028	0.037	0.048	0.057	0.067	0.080	0.095
		Total Pressure	0.025	0.030	0.038	0.051	0.066	0.078	0.092	0.110	0.130
		4-way - Horizontal Throw	1-3-13	2-4-14	2-5-15	3-7-16	4-9-17	5-10-18	5-12-18	6-14-19	8-14-20
		3-way - Horizontal Throw	3-7-16	4-8-17	5-11-18	6-13-19	8-14-20	10-15-21	11-16-22	13-16-23	14-17-24
		2-way - Horizontal Throw	5-10-20	6-11-21	8-12-22	10-14-23	11-16-25	12-18-26	13-19-27	14-20-28	15-21-30
		1-way - Horizontal Throw	6-14-25	7-17-26	9-19-28	13-21-30	16-22-32	19-23-33	20-24-34	21-25-36	22-26-37
		Noise Criteria	15	18	21	24	28	31	34	37	40

Notes:

- Tests conducted in accordance with ANSI/ASHRAE 70-1991 at isothermal conditions.
- Tests conducted with a straight rigid inlet condition. Other inlet conditions may alter performance.
- Unit of measure: Total Pressure = in. wc; Throw = ft. at 150 fpm, 100 fpm and 50 fpm terminal velocity.
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