

HORIZONTAL PATTERN

Neck Size, ϕ	Nom Duct Area, ft ²	Neck Velocity	400	500	600	700	800	1000	1200	1400	1600	1800
6	0.196	Velocity Press	0.01	0.02	0.02	0.03	0.04	0.06	0.09	0.12	0.16	0.20
		CFM	80	100	120	140	160	200	240	270	310	350
		Ps	0.01	0.01	0.02	0.03	0.03	0.05	0.07	0.09	0.13	0.16
		NC	<20	<20	<20	<20	20	27	32	35	39	43
		Throw	1 2 4	2 3 5	2 3 7	3 4 8	3 4 9	4 5 11	4 7 13	5 7 15	6 8 16	6 9 17
8	0.349	CFM	140	170	210	240	280	350	420	490	560	630
		Ps	0.01	0.02	0.03	0.04	0.05	0.08	0.11	0.15	0.20	0.25
		NC	<20	<20	<20	<20	23	29	35	39	43	46
		Throw	2 3 5	2 3 7	3 4 8	3 5 9	4 5 11	5 7 14	5 8 16	6 10 19	7 11 22	8 12 23
		10	0.545	CFM	220	270	330	380	440	550	650	760
Ps	0.01			0.01	0.01	0.02	0.02	0.03	0.05	0.06	0.08	0.11
NC	<20			<20	<20	<20	<20	25	29	34	38	41
Throw	2 3 7			3 4 8	3 5 10	4 6 12	5 7 14	6 8 17	7 10 20	8 12 23	9 13 27	10 15 29
12	0.785			CFM	310	390	470	550	630	790	940	1100
		Ps	0.01	0.01	0.02	0.02	0.03	0.04	0.06	0.09	0.11	0.14
		NC	<20	<20	<20	20	23	30	35	40	43	47
		Throw	3 4 8	3 5 10	4 6 12	5 7 14	6 8 17	7 10 21	8 12 25	10 14 29	11 17 33	12 19 35
		15	1.227	CFM	490	610	740	860	980	1230	1470	1720
Ps	0.01			0.02	0.02	0.03	0.04	0.07	0.10	0.13	0.17	0.22
NC	<20			<20	22	26	30	37	42	46	50	54
Throw	3 5 10			4 6 13	5 8 15	6 9 18	7 10 20	9 13 26	10 15 31	12 18 36	14 20 41	15 23 43
18	1.767			CFM	710	880	1060	1240	1410	1770	2120	2470
		Ps	0.01	0.02	0.03	0.04	0.05	0.08	0.12	0.16	0.22	0.27
		NC	<20	<20	20	25	28	35	40	44	48	52
		Throw	4 6 12	5 8 15	6 9 19	7 11 22	8 12 25	10 15 31	12 19 37	14 22 43	16 25 49	19 28 52

Notes

- Data provided with adjustable cone assembly in fully lowered position.
- Neck velocity is fpm, feet per minute.

Test Standard

- ANSI / ASHRAE standard 70
- Isothermal conditions
- Non-uniform air flow into diffusers increase sound levels, operating pressures, and can distort the air distribution pattern into the space

Sound Levels

- NC is noise criteria curve that will not be exceeded at the operating point. This is determined by assuming a 10dB (ref: 10⁻¹² watts) room attenuation that is subtracted from the power levels in each of the 2nd thru 7th octave bands

Throw

- The numbers shown are throw distances, in feet, measured along the jet trajectory axis relating to terminal velocities of 150,100,& 50 fpm and include a surface effect.
- Terminal velocity is the air speed, in feet per minute, measured in the supply air stream.
- For exposed duct installations, throws are 70% of the table values above.

Pressure

- P_s represents static pressure, inches of water
- P_t total pressure can be calculated by adding the Velocity pressure and Static pressure (P_s), inches of water
- All pressures are stated and calculated in inches of water.

VERTICAL PROJECTION

Neck Size, ø	Nom Duct Area, ft ²	Neck Velocity											
		400	500	600	700	800	1000	1200	1400	1600	1800		
6	0.196	Vel Press	0.01	0.02	0.02	0.03	0.04	0.06	0.09	0.12	0.16	0.20	
		CFM	80	100	120	140	160	200	240	270	310	350	
		Ps	0.03	0.04	0.06	0.09	0.11	0.17	0.25	0.32	0.42	0.53	
		NC	<20	<20	<20	23	27	33	38	42	46	49	
		Projection, ft	8 10 15	9 12 16	10 13 18	11 14 19	12 15 21	13 16 23	15 18 25	15 19 27	17 20 29	18 22 30	
8	0.349	CFM	140	170	210	240	280	350	420	490	560	630	
		Ps	0.04	0.06	0.09	0.12	0.17	0.26	0.37	0.51	0.67	0.84	
		NC	<20	<20	21	25	29	36	41	45	49	52	
		Projection, ft	11 14 19	12 15 21	14 17 24	15 18 25	16 19 27	18 22 30	19 24 33	21 25 36	22 27 38	24 29 41	
		10	0.545	CFM	220	270	330	380	440	550	650	760	870
Ps	0.02			0.03	0.04	0.05	0.07	0.11	0.16	0.21	0.28	0.36	
NC	<20			<20	<20	20	25	31	36	40	44	48	
Projection, ft	14 17 24			15 19 27	17 21 30	18 22 32	20 24 34	22 27 38	24 29 41	26 32 45	28 34 48	29 36 51	
12	0.785			CFM	310	390	470	550	630	790	940	1100	1260
		Ps	0.02	0.04	0.05	0.07	0.09	0.15	0.21	0.28	0.37	0.47	
		NC	<20	<20	22	26	30	37	42	46	50	54	
		Projection, ft	17 20 29	19 23 32	20 25 35	22 27 38	24 29 41	26 32 46	29 35 50	31 38 54	33 41 58	35 43 61	
		15	1.227	CFM	490	610	740	860	980	1230	1470	1720	1960
Ps	0.04			0.06	0.08	0.11	0.14	0.23	0.32	0.44	0.58	0.73	
NC	<20			23	29	33	37	43	48	53	57	60	
Projection, ft	21 25 36			23 28 40	26 31 44	28 34 48	29 36 51	33 40 57	36 44 62	39 48 67	42 51 72	44 54 76	
18	1.767			CFM	710	880	1060	1240	1410	1770	2120	2470	2830
		Ps	0.05	0.07	0.10	0.14	0.18	0.28	0.40	0.55	0.72	0.91	
		NC	<20	22	27	32	36	42	47	52	56	59	
		Projection, ft	25 31 43	28 34 48	31 37 53	33 40 57	35 43 61	40 48 68	43 53 75	47 57 81	50 61 87	53 65 92	

Notes:

- Data provided with adjustable cone assembly fully raised.
- Neck velocity is fpm, feet per minute.

Test Standard

- ANSI / ASHRAE standard 70
- Isothermal conditions - Adjust projection distances for temperature differentials using Graph 4, page E-11
- Non-uniform air flow into diffusers increase sound levels, operating pressures, and can distort the air distribution pattern into the space

Sound Levels

- NC is noise criteria curve that will not be exceeded at the operating point. This is determined by assuming a 10dB (ref: 10⁻¹² watts) room attenuation that is subtracted from the power levels in each of the 2nd thru 7th octave bands

Projection

- The numbers shown are vertical projection distances, in feet, measured along the jet trajectory axis relating to terminal velocities of 150, 100, & 50 fpm for a free, unbounded jet.
- Terminal velocity is the air speed, in feet per minute, measured in the supply air stream.

Pressure

- P_s represents static pressure, inches of water
- P_t total pressure can be calculated by adding the Velocity pressure and Static pressure (P_s), inches of water
- All pressures are stated and calculated in inches of water.