ROUND NECK

Nom Neck Dia, ø	Nom Neck ft²	Neck Velocity	300			400			500			600			700			800			900			1000			1100		
		Velocity Press	0.01			0.01			0.02			0.02			0.03			0.04			0.05			0.06			0.08		
		CFM	60			80			100			120			140			160			180			200			220		
		Ps	0.01			0.01			0.02			0.02			0.03			0.04			0.05			0.06			0.08		
		NC	<20			<20			<20			<20			21			26			29			33			36		
6	0.20	4 way throw	1	2	3	1	2	4	2	3	5	2	3	6	2	4	7	3	4	8	3	5	9	3	5	9	4	6	9
		2 & 3 way throw	1	2	4	2	3	6	2	4	7	3	4	9	3	5	10	4	6	11	4	6	12	5	7	13	5	8	13
		1 way throw	2	3	6	3	4	8	3	5	10	4	6	12	5	7	14	5	8	16	6	9	17	7	10	18	7	11	19
		CFM	100			140			170			210			240			280			310			350			380		
		Ps	0.01			0.02			0.03			0.04			0.06			0.08			0.09			0.12			0.14		
		NC	<20			<20			<20			22			26			31			34			38			41		
8	0.35	4 way throw	1	2	4	2	3	6	2	4	7	3	4	9	3	5	10	4	6	11	4	6	11	5	7	12	5	8	12
		2 & 3 way throw	2	3	6	3	4	8	3	5	10	4	6	12	5	7	14	5	8	15	6	9	16	7	10	17	7	11	18
		1 way throw	3	4	8	4	6	12	5	7	14	6	9	17	7	10	20	8	12	21	9	13	22	10	14	24	10	16	25
		CFM	160			220			270			330			380			440			490			550			600		
		Ps	0.01			0.02			0.03			0.05			0.07			0.09			0.11			0.14			0.16		
		NC	<20			<20			20			27			31			36			40			44			47		
10	0.55	4 way throw	2	3	5	2	4	7	3	4	9	4	5	11	4	6	12	5	7	13	5	8	14	6	9	15	7	10	16
		2 & 3 way throw	2	4	7	3	5	10	4	6	13	5	8	15	6	9	18	7	10	19	8	11	20	9	13	21	9	14	22
		1 way throw	4	5	11	5	7	15	6	9	18	7	11	22	8	13	25	10	15	27	11	16	28	12	18	30	13	20	31
		CFM	240			310			390			470			550			630			710			790			860		
		Ps	0.02			0.03			0.05			0.07			0.09			0.12			0.16			0.19			0.23		
		NC	<20			<20			24			30			35			40			44			48			51		
12	0.79	4 way throw	2	4	7	3	5	9	4	6	12	5	7	14	6	8	15	6	9	16	7	11	17	8	12	18	9	13	19
		2 & 3 way throw	3	5	10	4	7	13	6	8	17	7	10	20	8	12	21	9	13	23	10	15	24	11	17	25	12	18	26
		1 way throw	5	7	14	6	9	19	8	12	23	9	14	28	11	17	30	13	19	32	14	21	34	16	24	36	17	26	37
		CFM	320			430			530			640			750			860			960			1070			1180		
		Ps	0.03			0.05			0.07			0.10			0.14			0.18			0.23			0.28			0.34		
		NC	<20			22			29			35			40			45			49			52			55		
14	1.07	4 way throw	3	5	9	4	6	12	5	8	15	6	9	16	7	11	17	8	12	19	9	14	20	10	15	21	11	15	22
		2 & 3 way throw	4	6	13	6	9	17	7	11	21	9	13	23	10	15	25	12	17	26	13	19	28	14	21	29	16	22	31
		1 way throw	6	9	18	8	12	25	10	15	29	12	18	32	14	21	35	16	25	37	18	27	39	20	29	42	22	31	44
		CFM	420			560			700			840			980			1120			1260			1400			1540		
		Ps	0.03			0.05			0.08			0.11			0.16			0.20			0.26			0.32			0.38		
		NC	<20			25			33			39			44			48			52			56			59		
16	1.40	4 way throw	4	6	11	5	7	15	6	9	17	7	11	18	9	13	20	10	15	21	11	16	23	12	17	24	14	18	25
		2 & 3 way throw	5	8	16	7	10	21	9	13	24	10	16	26	12	18	28	14	21	30	16	23	32	17	24	34	19	25	35
		1 way throw	7	11	22	10	15	30	12	18	34	15	22	37	17	26	40	20	30	43	22	32	45	25	34	48	27	35	50
		CFM	530			710			880			1060			1240			1410			1590			1770			1940		
		Ps	0.03			0.06			0.09			0.13			0.18			0.23			0.30			0.37			0.44		
		NC	<20			29			37			43			48			53			57			61			64		
18	1.77	4 way throw	4	7	13	6	9	17	7	11	19	9	13	21	10	15	22	12	17	24	13	18	25	15	19	27	16	20	28
		2 & 3 way throw	6	9	18	8	12	24	10	15	27	12	18	29	14	22	32	16	24	34	18	25	36	21	27	38	22	28	40
		1 way throw	9	13	26	12	17	34	14	22	38	17	26	41	20	30	45	23	34	48	26	36	51	29	38	54	32	40	56

Notes:
- 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.
- 2 & 3 way throw distances are obtained with 2 pattern controllers discharging air in the same direction.

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

SQUARE NECK

Nom Neck Size		Neck	Neck Velocity	300			400			500			600			700			800			900			1000			1100		
W	H	Area, ft²	Velocity Press	0.01			0.01			0.02			0.02			0.03			0.04			0.05			0.06			0.08		
6	6	0.25	CFM	80			100			130			150			180			200			230			250			280		
			Ps	0.01			0.01			0.02			0.03			0.04			0.05			0.07			0.08			0.10		
			NC	<20			<20			<20			<20			24			28			33			36			40		
			4 way throw	1	2	4	2	2	5	2	3	6	2	4	7	3	4	9	3	5	9	4	6	10	4	6	10	5	7	11
			2 & 3 way throw	2	3	6	2	3	7	3	5	9	3	5	10	4	6	12	5	7	13	5	8	14	6	9	14	6	10	15
			1 way throw	3	4	8	3	5	10	4	6	13	5	7	15	6	9	17	7	10	18	8	11	19	8	12	20	9	14	21
8	8	0.44	CFM	130			180			220			270			310			360			400			440			490		
			Ps	0.01			0.02			0.03			0.04			0.06			0.08			0.10			0.12			0.15		
			NC	<20			<20			<20			25			30			34			38			41			45		
			4 way throw	2	2	5	2	3	6	3	4	8	3	5	10	4	6	11	4	6	12	5	7	13	5	8	13	6	9	14
			2 & 3 way throw	2	3	7	3	5	9	4	6	11	5	7	14	5	8	16	6	9	17	7	10	18	7	11	19	8	12	20
			1 way throw	3	5	9	4	6	13	5	8	16	6	10	19	7	11	22	9	13	24	10	14	25	11	16	27	12	18	28
10	10	0.69	CFM	210			280			350			420			490			560			630			690			760		
			Ps	0.01			0.02			0.03			0.05			0.06			0.08			0.10			0.12			0.15		
			NC	<20			<20			23			29			34			38			41			44			47		
			4 way throw	2	3	6	3	4	9	4	5	11	4	6	13	5	8	14	6	9	15	6	10	16	7	11	17	8	12	18
			2 & 3 way throw	3	5	9	4	6	12	5	8	15	6	9	18	7	11	20	8	12	21	9	14	23	10	15	24	11	17	25
			1 way throw	4	6	13	6	9	17	7	11	22	9	13	26	10	15	28	11	17	30	13	19	32	14	21	33	16	23	35
12	12	1.00	CFM	300			400			500			600			700			800			900			1000			1100		
			Ps	0.02			0.04			0.06			0.09			0.12			0.15			0.19			0.24			0.29		
			NC	<20			20			27			33			38			42			46			49			52		
			4 way throw	3	4	9	4	6	12	5	7	14	6	9	16	7	10	17	8	12	18	9	13	19	10	14	20	11	15	21
			2 & 3 way throw	4	6	12	5	8	16	7	10	20	8	12	22	10	14	24	11	16	25	12	18	27	14	20	28	15	21	30
			1 way throw	6	9	17	8	12	23	10	14	28	12	17	31	13	20	34	15	23	36	17	26	38	19	28	40	21	30	42
14	14	1.36	CFM	410			540			680			820			950			1090			1230			1360			1500		
			Ps	0.02			0.04			0.07			0.10			0.13			0.17			0.22			0.26			0.32		
			NC	<20			25			32			37			42			46			50			53			56		
			4 way throw	4	5	11	5	7	14	6	9	17	7	11	18	8	12	20	9	14	21	11	16	22	12	17	23	13	17	25
			2 & 3 way throw	5	7	15	7	10	20	8	12	23	10	15	26	11	17	28	13	20	30	15	22	32	16	23	33	18	25	35
			1 way throw	7	11	21	9	14	28	12	17	33	14	21	36	16	24	39	19	28	42	21	32	45	23	33	47	26	35	49
16	16	1.78	CFM	530			710			890			1070			1240			1420			1600			1780			1960		
			Ps	0.03			0.05			0.08			0.12			0.16			0.20			0.26			0.32			0.39		
			NC	20			29			36			41			46			50			53			57			60		
			4 way throw	4	6	13	6	8	17	7	11	19	8	13	21	10	15	22	11	17	24	13	18	25	14	19	27	15	20	28
			2 & 3 way throw	6	9	18	8	12	24	10	15	27	12	18	29	14	21	32	16	24	34	18	25	36	20	27	38	22	28	40
			1 way throw	8	13	25	11	17	34	14	21	38	17	25	42	20	29	45	22	34	48	25	36	51	28	38	54	31	40	56
18	18	2.25	CFM	680			900			1130			1350			1580			1800			2030			2250			2480		
			Ps	0.03			0.06			0.09			0.13			0.18			0.24			0.30			0.37			0.45		
			NC	24			33			40			45			50			54			57			60			63		
			4 way throw	5	7	15	7	10	19	8	12	21	10	15	23	12	17	25	13	19	27	15	20	29	17	21	30	18	22	32
			2 & 3 way throw	7	11	21	9	14	27	12	18	30	14	21	33	16	25	36	19	27	38	21	29	41	23	30	43	26	32	45
			1 way throw	10	15	30	13	20	38	17	25	43	20	30	47	23	35	51	26	38	54	30	41	57	33	43	60	36	45	63

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