

**ROUND NECK**

Nom Neck Ø, inch	Nom Neck Area, ft <sup>2</sup>	Duct Velocity		300	350	400	450	500	550	600	700	800																	
		CFM	Pt	0.04	0.06	0.07	0.09	0.11	0.14	0.16	0.22	0.29																	
6	0.196	CFM		60	70	80	90	100	110	120	140	160																	
		NC		<20	<20	<20	20	23	26	28	33	36																	
		1 Core throw	1	2	3	1	2	4	1	2	4	2	2	5	2	3	5	2	3	6	2	3	6	2	4	6	3	4	7
		2 Core throw	1	2	4	2	3	5	2	3	6	2	3	7	2	4	7	3	4	8	3	4	8	3	5	9	4	6	9
		3 Core throw	1	3	5	2	3	6	2	4	7	3	4	8	3	4	9	3	5	10	4	5	10	4	6	11	5	7	12
		4 Core throw	2	3	6	2	4	7	3	4	8	3	5	9	3	5	10	4	6	11	4	6	12	5	7	12	5	8	13
7	0.267	CFM		80	90	110	120	130	150	160	190	210																	
		NC		<20	<20	<20	21	24	27	29	34	38																	
		1 Core throw	1	2	4	1	2	4	2	2	5	2	3	5	2	3	6	2	3	6	2	4	7	3	4	7	3	5	8
		2 Core throw	1	2	5	2	3	6	2	3	7	2	4	7	3	4	8	3	5	9	3	5	9	4	6	10	4	6	11
		3 Core throw	2	3	6	2	3	7	3	4	8	3	5	9	3	5	10	4	6	11	4	6	12	5	7	13	5	8	13
		4 Core throw	2	4	7	2	4	8	3	5	10	4	5	11	4	6	11	4	7	13	5	7	13	6	8	15	6	9	15
8	0.349	CFM		100	120	140	160	170	190	210	240	280																	
		NC		<20	<20	<20	22	25	28	31	35	39																	
		1 Core throw	1	2	4	1	2	5	2	3	5	2	3	6	2	3	7	2	4	7	3	4	8	3	5	8	4	5	9
		2 Core throw	1	3	5	2	3	6	3	4	8	3	4	9	3	5	9	3	5	10	4	6	11	4	6	12	5	8	12
		3 Core throw	2	3	7	2	4	8	3	5	9	4	5	11	4	6	11	4	6	13	5	7	13	5	8	14	6	9	15
		4 Core throw	2	4	8	3	5	9	4	5	11	4	6	12	4	7	13	5	7	15	5	8	15	6	9	16	7	11	18
9	0.44	CFM		130	150	170	200	220	240	260	300	350																	
		NC		<20	<20	20	23	26	29	32	36	40																	
		1 Core throw	1	2	4	2	3	5	2	3	6	2	3	7	3	4	8	3	4	8	3	4	8	3	5	9	4	6	10
		2 Core throw	2	3	6	2	4	7	3	4	8	3	5	10	4	5	11	4	6	12	4	6	12	5	7	13	6	8	14
		3 Core throw	2	4	8	3	4	9	3	5	10	4	6	12	4	6	13	5	7	14	5	8	15	6	9	16	7	10	17
		4 Core throw	2	4	9	3	5	10	4	6	12	5	7	14	5	8	15	5	8	16	6	9	17	7	10	18	8	12	20
10	0.55	CFM		160	190	220	250	270	300	330	380	440																	
		NC		<20	<20	21	24	27	30	33	37	41																	
		1 Core throw	1	2	5	2	3	6	2	3	7	3	4	8	3	4	8	3	5	9	3	5	10	4	6	10	4	7	11
		2 Core throw	2	3	7	3	4	8	3	5	9	4	5	11	4	6	12	4	6	13	5	7	14	5	8	15	6	9	16
		3 Core throw	2	4	8	3	5	10	4	6	12	4	7	13	5	7	14	5	8	16	6	9	17	7	10	18	8	12	19
		4 Core throw	3	5	10	4	6	12	4	7	13	5	8	15	5	8	16	6	9	18	7	10	19	8	12	21	9	13	22
12	0.79	CFM		230	270	310	350	390	430	470	550	630																	
		NC		<20	<20	22	26	29	32	34	39	42																	
		1 Core throw	2	3	6	2	3	7	3	4	8	3	4	9	3	5	10	4	5	11	4	6	11	5	7	12	5	8	13
		2 Core throw	2	4	8	3	5	10	4	6	11	4	6	13	5	7	14	5	8	15	6	8	16	7	10	17	8	11	19
		3 Core throw	3	5	10	4	6	12	5	7	14	5	8	15	6	9	17	6	9	19	7	10	20	8	12	21	9	14	23
		4 Core throw	3	6	12	4	7	14	5	8	16	6	9	18	7	10	20	7	11	22	8	12	23	9	14	25	11	16	26
14	1.07	CFM		320	370	420	480	530	580	640	740	850																	
		NC		<20	20	24	27	30	33	36	40	44																	
		1 Core throw	2	3	7	3	4	8	3	5	9	3	5	10	4	6	12	4	6	13	5	7	13	5	8	14	6	9	15
		2 Core throw	3	5	10	4	6	11	4	6	13	5	7	15	5	8	16	6	9	18	7	10	19	8	11	20	9	13	22
		3 Core throw	3	6	12	4	7	14	5	8	16	6	9	18	7	10	20	7	11	22	8	12	23	9	14	25	11	16	27
		4 Core throw	4	7	14	5	8	16	6	9	18	7	10	21	8	12	23	8	13	25	9	14	27	11	16	29	12	19	31
16	1.40	CFM		420	490	550	620	690	760	830	970	1110																	
		NC		<20	21	25	28	31	34	37	41	45																	
		1 Core throw	2	4	8	3	5	9	4	5	11	4	6	12	4	7	13	5	7	15	5	8	15	6	9	16	7	11	18
		2 Core throw	3	6	11	4	7	13	5	7	15	6	8	17	6	9	19	7	10	21	7	11	21	9	13	23	10	15	25
		3 Core throw	4	7	14	5	8	16	6	9	18	7	10	21	8	11	23	8	13	25	9	14	26	11	16	28	12	18	30
		4 Core throw	4	8	16	6	9	19	7	11	21	8	12	24	9	13	26	10	15	29	11	16	30	12	19	33	14	21	35

**Test Standard**

- ANSI / ASHRAE standard 70
- Isothermal air used during testing.
- Data represents square neck with 4 cores.

**Throw**

- The numbers shown are throw distances, in feet, measured along the jet trajectory axis relating to terminal velocities of 150, 100, & 50 fpm, with the jet attached to the ceiling surface. For exposed duct installation with free, unattached jet, multiply throw distance in table x .70
- 1 core throw, 2 core throw, 3 core throw, 4 core throw indicates the number of cores discharging air in the same direction.

**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<sup>-12</sup> watts) room attenuation that is subtracted from the power levels in each of the 2nd thru 7th octave bands

**Pressure**

- P<sub>t</sub> represents Total Pressure, inches of water, measured in the supply duct.
- P<sub>v</sub> represents Velocity Pressure, inches of water, and is calculated (@ standard conditions) as: P<sub>v</sub> = (Duct Velocity, fpm / 4005)<sup>2</sup>
- Static pressure may be calculated by subtracting the Velocity pressure from the Total Pressure: P<sub>s</sub> = P<sub>t</sub> - P<sub>v</sub>

**Neck Velocity**

- Feet per minute (fpm), measured in the supply duct

**SQUARE NECK**

Nom Neck Size		Nom Neck ft2	Duct Velocity	300	350	400	450	500	600	700	800	900	
W	H		Pt	0.04	0.06	0.07	0.09	0.11	0.16	0.22	0.29	0.37	
6	6	0.25	CFM	90	100	110	130	150	180	200	230		
			NC	<20	<20	<20	20	23	28	33	37	40	
			1 Core throw	1 2 4	1 2 4	1 2 4	2 2 5	2 3 6	2 3 6	3 4 7	3 4 7	3 4 7	3 5 8
			2 Core throw	1 3 5	2 3 6	2 3 6	2 3 7	3 4 8	3 5 9	4 6 10	4 6 10	4 6 11	5 7 11
			3 Core throw	2 3 6	2 3 7	3 4 8	3 4 9	3 5 10	4 6 11	4 6 12	5 7 12	5 8 13	6 9 14
			4 Core throw	2 4 7	3 4 8	3 4 9	3 5 10	4 6 12	4 6 13	5 7 13	5 8 14	6 9 15	7 10 16
8	8	0.44	CFM	130	150	180	200	220	260	310	350	400	
			NC	<20	<20	<20	22	25	31	35	39	42	
			1 Core throw	1 2 4	2 3 5	2 3 6	2 3 7	2 4 7	2 4 8	3 4 9	3 4 10	4 6 10	5 7 11
			2 Core throw	2 3 6	2 4 7	3 4 9	3 5 10	4 5 11	4 6 12	5 7 13	6 8 14	6 8 15	6 10 15
			3 Core throw	2 4 8	3 4 9	4 5 11	4 6 12	5 7 13	5 8 14	6 9 16	6 9 16	7 10 17	8 12 18
			4 Core throw	2 4 9	3 5 10	4 6 12	5 7 14	5 7 15	6 9 17	7 11 19	8 12 20	9 14 21	10 16 21
10	10	0.69	CFM	210	250	280	320	350	420	490	560	630	
			NC	<20	<20	21	24	27	33	37	41	44	
			1 Core throw	2 3 6	2 3 7	3 4 8	3 4 9	3 5 9	4 6 11	4 7 12	5 8 12	6 8 12	6 8 13
			2 Core throw	2 4 8	3 5 9	4 5 11	4 6 12	4 7 13	5 8 15	6 9 16	7 11 18	8 12 19	8 12 19
			3 Core throw	3 5 10	4 6 12	4 7 13	5 7 15	6 8 16	7 10 19	8 11 20	9 13 22	10 15 23	10 15 23
			4 Core throw	3 6 11	4 7 13	5 8 15	6 9 17	6 9 19	8 11 22	9 13 23	10 15 25	11 17 26	11 17 26
12	12	1.00	CFM	300	350	400	450	500	600	700	800	900	
			NC	<20	<20	23	26	29	34	39	43	46	
			1 Core throw	2 3 7	2 4 8	3 5 9	3 5 10	4 6 11	5 7 13	5 8 14	6 9 15	7 10 16	7 10 16
			2 Core throw	3 5 10	4 6 11	4 6 13	5 7 14	6 8 16	7 10 18	8 12 20	9 13 21	10 14 22	10 14 22
			3 Core throw	3 6 12	4 7 14	5 8 16	6 9 18	7 10 19	8 12 22	9 14 24	10 16 26	12 18 27	12 18 27
			4 Core throw	4 7 14	5 8 16	6 9 18	7 10 20	8 11 23	9 14 26	11 16 28	12 18 30	14 20 32	14 20 32
14	14	1.36	CFM	410	480	540	610	680	820	950	1090	1220	
			NC	<20	20	24	27	30	36	40	44	47	
			1 Core throw	2 4 8	3 5 9	3 5 10	4 6 12	4 7 13	5 8 15	6 9 16	7 11 17	8 12 18	8 12 18
			2 Core throw	3 6 11	4 7 13	5 7 15	6 8 17	7 10 19	8 11 21	9 13 23	10 15 25	11 17 26	11 17 26
			3 Core throw	4 7 14	5 8 16	6 9 18	7 10 21	8 11 23	9 14 26	11 16 28	12 18 30	14 20 32	14 20 32
			4 Core throw	4 8 16	6 9 19	7 10 21	8 12 24	9 13 26	11 16 30	12 18 32	14 21 35	16 24 37	16 24 37
16	16	1.78	CFM	530	620	710	800	890	1070	1250	1430	1600	
			NC	<20	21	25	28	32	37	41	45	48	
			1 Core throw	2 4 9	3 5 10	4 6 12	4 7 13	5 8 15	6 9 17	7 11 19	8 12 20	9 13 21	9 13 21
			2 Core throw	3 6 13	5 7 15	6 8 17	7 10 19	8 11 21	9 13 24	10 15 26	11 17 28	13 19 30	13 19 30
			3 Core throw	4 8 15	6 9 18	7 10 21	8 12 23	9 13 26	10 16 30	12 18 32	14 21 34	16 23 36	16 23 36
			4 Core throw	5 9 18	7 10 21	8 12 24	9 13 27	10 15 30	12 18 34	14 21 37	16 24 40	18 27 42	18 27 42
18	18	2.25	CFM	670	780	900	1010	1120	1340	1570	1790	2020	
			NC	<20	22	26	29	33	38	42	46	49	
			1 Core throw	3 5 10	4 6 12	5 7 14	5 8 15	6 8 17	7 10 19	8 12 21	9 13 22	10 15 24	10 15 24
			2 Core throw	4 7 14	5 8 17	6 10 19	7 11 21	8 12 24	9 14 27	11 17 30	13 19 32	14 21 33	14 21 33
			3 Core throw	5 9 17	6 10 20	8 12 23	9 13 26	10 15 29	12 17 33	14 20 36	16 23 39	18 26 41	18 26 41
			4 Core throw	5 10 20	7 12 23	9 14 27	10 15 30	11 17 34	13 20 39	16 24 42	18 27 45	20 30 47	20 30 47
20	20	2.78	CFM	830	970	1110	1250	1390	1670	1950	2220	2500	
			NC	<20	23	27	30	33	39	43	47	50	
			1 Core throw	3 6 11	4 7 13	5 7 15	6 8 17	7 10 19	8 11 22	9 13 23	10 15 25	11 17 26	11 17 26
			2 Core throw	4 8 16	6 9 19	7 11 21	8 12 24	9 13 27	11 16 30	12 19 33	14 21 35	16 24 37	16 24 37
			3 Core throw	5 10 19	7 11 23	9 13 26	10 15 29	11 16 32	13 20 37	15 23 40	17 26 43	19 29 46	19 29 46
			4 Core throw	6 11 22	8 13 26	10 15 30	11 17 34	13 19 38	15 23 43	18 26 47	20 30 50	22 34 53	22 34 53
22	22	3.36	CFM	1010	1170	1340	1510	1680	2010	2350	2690	3020	
			NC	20	24	28	31	34	40	44	48	51	
			1 Core throw	3 6 12	5 7 14	5 8 16	6 9 19	7 10 21	8 12 24	10 14 26	11 17 27	12 19 29	12 19 29
			2 Core throw	5 9 18	6 10 20	8 12 23	9 13 26	10 15 29	12 17 33	14 20 36	16 23 39	17 26 41	17 26 41
			3 Core throw	6 11 21	8 12 25	10 14 29	11 16 32	12 18 36	14 21 41	17 25 44	19 29 47	21 32 50	21 32 50
			4 Core throw	7 12 25	9 14 29	11 16 33	12 19 37	14 21 41	16 25 47	19 29 51	22 33 55	25 37 58	25 37 58
24	24	4.00	CFM	1200	1400	1600	1800	2000	2400	2800	3200	3600	
			NC	20	25	29	32	35	40	45	49	52	
			1 Core throw	4 7 14	5 8 16	6 9 18	7 10 20	8 11 23	9 14 26	11 16 28	12 18 30	14 20 32	14 20 32
			2 Core throw	5 10 19	7 11 22	8 13 25	10 14 29	11 16 32	13 19 36	15 22 39	17 25 42	19 29 45	19 29 45
			3 Core throw	6 12 23	9 14 27	10 16 31	12 18 35	13 19 39	16 23 45	18 27 48	21 31 52	23 35 55	23 35 55
			4 Core throw	7 14 27	10 16 32	12 18 36	14 20 41	15 23 45	18 27 52	21 32 56	24 36 60	27 41 63	27 41 63

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- Data represents square neck with 4 cores.

**Throw**

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**Neck Velocity**

- Feet per minute (fpm), measured in the supply duct