

Duct Size		Nom Duct	Core Area	Core Velocity	300	400	500	600	700	800	1000	1200																	
Nom Width W	Nom Height H	ft2	ft2	Ps	0°	0.004	0.01	0.01	0.02	0.03	0.04	0.06																	
					22.5°	0.01	0.01	0.02	0.03	0.04	0.05	0.07	0.11																
				45°	0.01	0.02	0.02	0.04	0.05	0.06	0.10	0.14																	
12	6	0.50	0.42	CFM	130	170	210	250	290	330	420	500																	
				NC	<20	<20	<20	<20	<20	<20	<20	24	28																
				Throw	0°	3	6	12	4	8	16	5	10	18	6	12	20	7	14	22	8	16	23	10	18	26	12	20	28
					22.5°	2	4	9	3	6	12	4	7	13	4	9	14	5	10	16	6	12	17	7	13	19	9	14	20
45°	2	3	6		2	4	8	3	5	9	3	6	10	4	7	11	4	8	12	5	9	14	6	10	15				
10	10	0.69	0.60	CFM	180	240	300	360	420	480	600	720																	
				NC	<20	<20	<20	<20	<20	20	25	29																	
				Throw	0°	4	7	14	5	9	19	6	12	22	7	14	24	8	17	26	9	19	28	12	22	31	14	24	34
					22.5°	3	5	10	4	6	14	4	9	16	5	10	17	6	12	19	6	14	20	9	16	22	10	17	24
45°	2	4	7		3	5	10	3	6	11	4	7	12	4	8	14	5	9	15	5	10	16	7	12	18				
14	8	0.78	0.68	CFM	200	270	340	410	470	540	680	810																	
				NC	<20	<20	<20	<20	<20	21	26	30																	
				Throw	0°	4	7	15	5	10	20	6	13	23	8	15	26	9	17	28	10	20	30	13	23	33	15	26	36
					22.5°	3	5	11	4	7	14	4	9	17	6	11	19	6	12	20	7	14	22	9	17	24	11	19	26
45°	2	4	8		3	5	10	3	7	12	4	8	14	5	9	15	5	10	16	7	12	17	8	14	19				
16	8	0.89	0.78	CFM	230	310	390	470	540	620	780	930																	
				NC	<20	<20	<20	<20	<20	21	26	30																	
				Throw	0°	4	8	16	5	11	21	7	14	25	8	16	28	9	19	30	11	21	32	14	25	36	16	27	39
					22.5°	3	6	12	4	8	15	5	10	18	6	12	20	6	14	22	8	15	23	10	18	26	12	19	28
45°	2	4	8		3	6	11	4	7	13	4	8	15	5	10	16	6	11	17	7	13	19	8	14	20				
12	12	1.00	0.89	CFM	270	360	440	530	620	710	890	1070																	
				NC	<20	<20	<20	<20	<20	22	27	31																	
				Throw	0°	4	9	18	6	12	23	7	14	27	9	17	29	10	20	32	12	23	34	14	27	38	17	29	42
					22.5°	3	6	13	4	9	17	5	10	19	6	12	21	7	14	23	9	17	24	10	19	27	12	21	30
45°	2	5	9		3	6	12	4	7	14	5	9	15	5	10	17	6	12	18	7	14	20	9	15	22				
20	8	1.11	0.98	CFM	290	390	490	590	690	780	980	1180																	
				NC	<20	<20	<20	<20	<20	20	22	27																	
				Throw	0°	4	9	18	6	12	24	8	15	28	9	18	31	11	21	33	12	24	36	15	28	40	18	31	44
					22.5°	3	6	13	4	9	17	6	11	20	6	13	22	8	15	24	9	17	26	11	20	29	13	22	32
45°	2	5	9		3	6	12	4	8	15	5	9	16	6	11	17	6	12	19	8	15	21	9	16	23				
18	10	1.25	1.12	CFM	340	450	560	670	780	900	1120	1340																	
				NC	<20	<20	<20	<20	<20	20	23	28																	
				Throw	0°	5	10	20	6	13	26	8	16	30	10	19	33	11	23	36	13	26	38	16	30	43	19	33	47
					22.5°	4	7	14	4	9	19	6	12	22	7	14	24	8	17	26	9	19	27	12	22	31	14	24	34
45°	3	5	10		3	7	14	4	8	16	5	10	17	6	12	19	7	14	20	8	16	22	10	17	24				
12	12	1.00	0.89	CFM	270	360	440	530	620	710	890	1070																	
				NC	<20	<20	<20	<20	<20	22	27	31																	
				Throw	0°	4	9	18	6	12	23	7	14	27	9	17	29	10	20	32	12	23	34	14	27	38	17	29	42
					22.5°	3	6	13	4	9	17	5	10	19	6	12	21	7	14	23	9	17	24	10	19	27	12	21	30
45°	2	5	9		3	6	12	4	7	14	5	9	15	5	10	17	6	12	18	7	14	20	9	15	22				
16	10	1.11	0.99	CFM	300	400	500	590	690	790	990	1190																	
				NC	<20	<20	<20	<20	<20	20	23	27																	
				Throw	0°	5	9	18	6	12	25	8	15	28	9	18	31	11	21	33	12	24	36	15	28	40	18	31	44
					22.5°	4	6	13	4	9	18	6	11	20	6	13	22	8	15	24	9	17	26	11	20	29	13	22	32
45°	3	5	9		3	6	13	4	8	15	5	9	16	6	11	17	6	12	19	8	15	21	9	16	23				
22	8	1.22	1.08	CFM	320	430	540	650	760	870	1080	1300																	
				NC	<20	<20	<20	<20	<20	20	23	28																	
				Throw	0°	5	9	19	6	13	25	8	16	30	10	19	32	11	22	35	13	26	38	16	30	42	19	32	46
					22.5°	4	6	14	4	9	18	6	12	22	7	14	23	8	16	25	9	19	27	12	22	30	14	23	33
45°	3	5	10		3	7	13	4	8	16	5	10	17	6	11	18	7	14	20	8	16	22	10	17	24				
20	12	1.67	1.52	CFM	460	610	760	910	1060	1210	1520	1820																	
				NC	<20	<20	<20	<20	<20	21	24	29																	
				Throw	0°	6	11	23	8	15	30	9	19	35	11	23	38	13	26	41	15	30	44	19	35	50	23	38	54
					22.5°	4	8	17	6	11	22	6	14	25	8	17	27	9	19	30	11	22	32	14	25	36	17	27	39
45°	3	6	12		4	8	16	5	10	18	6	12	20	7	14	21	8	16	23	10	18	26	12	20	28				
24	12	2.00	1.83	CFM	550	730	920	1100	1280	1470	1830	2200																	
				NC	<20	<20	<20	<20	<20	22	25	30																	
				Throw	0°	6	12	25	8	16	33	10	21	39	12	25	42	14	29	46	17	33	49	21	39	54	25	42	60
					22.5°	4	9	18	6	12	24	7	15	28	9	18	30	10	21	33	12	24	35	15	28	39	18	30	43
45°	3	6	13		4	8	17	5	11	20	6	13	22	7	15	24	9	17	25	11	20	28	13	22	31				
22	16	2.44	2.27	CFM	680	910	1130	1360	1590	1810	2270	2720																	
				NC	<20	<20	<20	<20	<20	20	23	26																	
				Throw	0°	7	14	28	9	18	37	11	23	43	14	28	47	16	32	51	18	37	54	23	43	61	28	47	66
					22.5°	5	10	20	6	13	27	8	17	31	10	20	34	12	23	37	13	27	39	17	31	44	20	34	48
45°	4	7	15		5	9	19	6	12	22	7	15	24	8	17	27	9	19	28	12	22	32	15	24	34				

Test Standard

- ANSI / ASHRAE standard 70
- Isothermal air used during testing. For large grilles with a cooling differential, the drop of the air stream should be evaluated.

Throw

- The numbers shown are throw distances, in feet, measured along the jet trajectory axis relating to terminal velocities of 200, 100, & 50 fpm, with a free jet (no surface effects). With surface effect (top of grille with 12° of surface), increase throw distance x 1.4
- 0°, 22.5°, 45° represent the blade deflection or spread angle settings
- Terminal velocity is the air speed, in feet per minute, measured in the supply air stream.

Sound Levels

- NC shown is for 0° blade angle setting and 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. For 22.5° blade angle setting, add 2 NC to the tabulated value shown. For 45° blade angle setting, add 4 NC to the tabulated value shown.

Neck Velocity, Core Velocity

- Feet per minute

Pressure

- P_s represents static pressure, inches of water

Duct Size		Nom Duct	Core Area	Core Velocity	300	400	500	600	700	800	1000	1200																	
Nom Width W	Nom Height H	ft2	ft2	Ps	0°	0.004	0.01	0.01	0.02	0.03	0.04	0.06																	
					22.5°	0.01	0.01	0.02	0.03	0.04	0.05	0.07	0.11																
					45°	0.01	0.02	0.02	0.04	0.05	0.06	0.10																	
				CFM	840	1120	1400	1680	1960	2240	2800	3360																	
				NC	<20	<20	<20	21	24	27	32	36																	
Throw					0°	8	15	31	10	20	41	13	26	48	15	31	52	18	36	56	20	41	60	26	48	67	31	52	74
					22.5°	6	11	22	7	14	30	9	19	35	11	22	37	13	26	40	14	30	43	19	35	48	22	37	53
					45°	4	8	16	5	10	21	7	14	25	8	16	27	9	19	29	10	21	31	14	25	35	16	27	38

Test Standard

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Throw

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- 0°, 22.5°, 45° represent the blade deflection or spread angle settings
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Sound Levels

- NC shown is for 0° blade angle setting and 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. For 22.5° blade angle setting, add 2 NC to the tabulated value shown. For 45° blade angle setting, add 4 NC to the tabulated value shown.

Neck Velocity, Core Velocity

- Feet per minute

Pressure

- P_s represents static pressure, inches of water

Specialty Grilles and Registers

F

Duct Size		Nom Duct	Core Area	Core Velocity	300	400	500	600	700	800	1000	1200																	
Nom Width W	Nom Height H	ft2	ft2	Ps	0°	0.004	0.01	0.01	0.02	0.03	0.04	0.06																	
					22.5°	0.01	0.01	0.02	0.03	0.04	0.05	0.07	0.11																
					45°	0.01	0.02	0.02	0.04	0.05	0.06	0.10																	
				CFM	2160	2880	3590	4310	5030	5750	7190	8630																	
				NC	<20	<20	21	25	28	31	36	40																	
Throw					0°	12	25	49	16	33	66	20	41	76	25	49	84	29	57	90	33	66	97	41	76	108	49	84	118
					22.5°	9	18	35	12	24	48	14	30	55	18	35	60	21	41	65	24	48	70	30	55	78	35	60	85
					45°	6	13	25	8	17	34	10	21	40	13	25	44	15	30	47	17	34	50	21	40	56	25	44	61

Test Standard

- ANSI / ASHRAE standard 70
- Isothermal air used during testing. For large grilles with a cooling differential, the drop of the air stream should be evaluated.

Throw

- The numbers shown are throw distances, in feet, measured along the jet trajectory axis relating to terminal velocities of 200, 100, & 50 fpm, with a free jet (no surface effects). With surface effect (top of grille with 12" of surface), increase throw distance x 1.4
- 0°, 22.5°, 45° represent the blade deflection or spread angle settings
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Neck Velocity, Core Velocity

- Feet per minute

Pressure

- P_s represents static pressure, inches of water