

**RECOMMENDED NOISE CRITERIA FOR AIR DISTRIBUTION PRODUCTS**

TYPE OF ROOM	NC dB	TYPE OF ROOM	NC dB
Auditoriums		Sports Activites Indoor	
Concert and Opera halls	20 to 25 25 to 30	Coliseums	30 to 40
Studios and Sound reproduction		Bowling Alleys, Gymnasiums	35 to 45
Legitimate theatres and Multi-Purpose halls		Swimming Pools	40 to 55
Movie theatres and Lecture halls			
Planetorium and TV audience studios	30 to 35	Transportation	
Lobbies	35 to 40	Ticket sale Office	30 to 40
		Lounges, Waiting rooms	35 to 50
Churches and Schools			
Sanctuaries	20 to 30	Hotels	
Libraries, School and Classroom	30 to 40	Individual rooms or Suites, Bell rooms	30 to 40
Laboratories	35 to 45	Banquet rooms	
Recreation halls, Corridors and halls	35 to 50	Halls and Corridors, Lobbies	35 to 45
Kitchens	40 to 50	Garages, Kitchen and Laundries	40 to 50
Offices		Restaurants and Lounges	
Board Room	20 to 30	Restaurants	35 to 45
Conference Room	25 to 35	Cocktail Lounges	35 to 50
Excecutive Office	30 to 40	Night Clubs	35 to 45
Supervisor Office, Reception room	30 to 45	Cafetarias	40 to 50
General Open offices, Drafting Rooms	35 to 50		
Halls and Corridors		Hospitals and Clinics	
Tabulation and Computation	40 to 60	Private Rooms	25 to 35
		Operating rooms, Wards	30 to 40
Manufacturing Areas		Halls and Corridors, Laboratories	
Foreman's Office	40 to 50	Lobbies and Waiting rooms	35 to 45
Assemble lines, Light Machinery	55 to 75	Washrooms and Toilets	40 to 50
Foundries, Heavy Machinery			
		Public Buildings	
Stores Retail		Public Libraries, Museums	30 to 40
Clothing stores	35 to 45	Court Rooms	
Department Stores (upper floors)		Post Offices, General banking area	
Department Stores (main floors)		Lobbies	
Small Retail store, Supermarkets	40 to 50	Washrooms and Toilets	40 to 50

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No. 42 , Sy. No. 157, Jhanvi Industrial Layout

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Websie: <http://www.jaydeutility.com>

PERFORMANCE CHART: GRILL

LINEAR BAR GRILL : 0°											
Width in.	Area ft²	Velocity fpm	400	500	600	700	800	1000	1200	1400	1600
		Tot Pr. In.	0.009	0.014	0.021	0.028	0.036	0.056	0.08	0.11	0.146
3"	0.1	CFM	40	50	60	70	80	100	120	140	160
		Throw, f	12	15	16	17	22	31	36	40	45
		N_c dB	<20	<20	<20	<20	<20	24	27	32	32
4"	0.15	CFM	60	70	90	105	120	150	180	210	240
		Throw, f	14	17	20	25	30	38	46	47	52
		N_c dB	<20	<20	<20	<20	<20	25	27	30	34
5"	0.19	CFM	75	93	115	130	155	187	232	265	307
		Throw, f	17	23	26	33	37	44	52	58	63
		N_c dB	<20	<20	<20	<20	<20	27	28	33	36
6"	0.23	CFM	90	114	140	160	185	237	279	324	372
		Throw, f	20	28	28	35	37	51	60	61	65
		N_c dB	<20	<20	<20	<20	20	27	29	34	38
8"	0.31	CFM	123	151	189	207	240	311	376	437	498
		Throw, f	20	27	31	38	42	54	62	61	72
		N_c dB	<20	<20	<20	<20	21	26	30	37	39
10"	0.4	CFM	160	200	240	280	320	400	480	560	640
		Throw, f	22	26	30	39	44	56	63	71	75
		N_c dB	<20	<20	<20	<20	22	29	32	37	42
12"	0.48	CFM	194	246	286	338	387	485	577	672	769
		Throw, f	24	31	37	40	48	60	66	73	78
		N_c dB	<20	<20	<20	<20	23	30	31	35	43

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LINEAR BAR GRILL : 15°											
Width (in)	Area (ft ²)	Velocity fpm	400	500	600	700	800	1000	1200	1400	1600
		Tot Pr. In.	0.009	0.014	0.021	0.028	0.036	0.056	0.08	0.11	0.146
3"	0.09	CFM	35	45	56	68	73	95	118	136	152
		Throw, f	11	14	17	20	21	27	33	38	41
		N _c dB	<20	<20	<20	<20	<20	24	27	32	36
4"	0.13	CFM	58	73	81	97	115	148	164	195	227
		Throw, f	12	16	20	25	36	44	50	54	60
		N _c dB	<20	<20	<20	<20	<20	25	29	30	37
5"	0.17	CFM	69	89	110	123	149	184	220	256	296
		Throw, f	18	22	28	37	44	52	55	59	60
		N _c dB	<20	<20	<20	<20	20	22	28	33	36
6"	0.21	CFM	90	111	130	150	172	227	268	308	357
		Throw, f	17	22	29	34	37	48	55	60	63
		N _c dB	<20	<20	<20	<20	22	27	29	34	38
8"	0.29	CFM	120	156	187	215	248	310	368	430	484
		Throw, f	24	26	33	36	41	50	57	66	68
		N _c dB	<20	<20	<20	<20	21	28	30	37	38
10"	0.38	CFM	155	195	235	278	315	392	466	540	616
		Throw, f	22	28	34	39	42	56	63	66	68
		N _c dB	<20	<20	<20	<20	22	29	32	37	42
12"	0.46	CFM	180	237	280	327	377	474	563	653	754
		Throw, f	25	30	37	44	55	62	62	69	71
		N _c dB	<20	<20	<20	<20	23	30	31	35	43

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LINEAR BAR GRILL : 30°											
Width (in)	Area (ft²)	Velocity fpm	400	500	600	700	800	1000	1200	1400	1600
		Tot Pr. In.	0.009	0.014	0.021	0.028	0.036	0.056	0.08	0.11	0.146
3"	0.09	CFM	34	42	55	66	70	91	106	128	148
		Throw, f	11	14	18	19	22	29	21	35	39
		N_c dB	<20	<20	<20	<20	<20	25	27	33	34
4"	0.13	CFM	50	67	75	90	102	133	158	180	210
		Throw, f	14	15	20	21	25	32	40	47	48
		N_c dB	<20	<20	<20	<20	<20	25	29	30	38
5"	0.17	CFM	65	87	100	118	135	172	206	236	271
		Throw, f	15	21	26	32	35	44	48	52	58
		N_c dB	<20	<20	<20	<20	20	22	26	33	36
6"	0.21	CFM	82	103	123	144	167	211	256	293	337
		Throw, f	18	22	28	33	38	45	47	55	58
		N_c dB	<20	<20	<20	<20	22	23	29	32	38
8"	0.29	CFM	120	156	176	213	242	312	367	413	481
		Throw, f	20	24	29	34	37	47	50	56	60
		N_c dB	<20	<20	<20	<20	21	26	37	37	39
10"	0.38	CFM	154	193	227	264	300	383	457	536	610
		Throw, f	20	26	30	39	41	49	52	57	62
		N_c dB	<20	<20	<20	<20	22	29	32	38	42
12"	0.46	CFM	182	234	278	319	365	457	551	643	733
		Throw, f	22	26	30	37	42	50	55	63	67
		N_c dB	<20	<20	<20	<20	23	29	33	37	42

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Terms used in Table:

Jet Velocity (Vk) : In FPM for an outlet or inlet is the velocity measured with an approved calibrated velometer at specified locations relative to the face of the outlet or inlet.

Terminal Velocity (Vt) : In FPM is the highest sustained velocity in the mixed air stream arbitrary specified and used to determine throw.

Velocity pressure (Pd) (Dynamic pressure): The forward moving force of an air stream within a duct measured in mm (inch) W.G. of water.

Static pressure (Ps) : The outward force within a duct measured in mm (inch) W.G. of water.

Total pressure (Pt) : The sum of the velocity pressure and the static pressure measured in mm (inch) W.G. of water.

Throw (T) : Throw of an outlet in m (feet), is the distance from the center of the outlet to a point in the mixed air stream where the highest sustained velocity of the mixed air stream has been reduced to a specified level (100 FPM & 50 FPM terminal velocity).

Area factor : Of an outlet or inlet which is also a flow factor determined from the discharge or intake velocity (Vk) and the volume flow rate (Q)

$$A = Q/V \text{ in m}^2 \text{ or Ft}^2$$

NC : Noise Criteria