

APPLICATION	MIN.	AVG.	MAX.
Broadcast Studios, Legitimate Theaters, Concert Halls, Music Rooms.	200	250	300
Conference Rooms, Libraries, Museums.	250	300	375
Private Offices, Hospitals, Hotel Rooms, Movie Theaters, Churches, Residences, Court Rooms.	300	380	450
Restaurants, General Office Spaces, Small Stores.	500	600	800
Public Buildings, Post Offices, General Stores, Department Stores, Cafeterias.	600	750	1050
Factories.	700	1000	1500

RG

MIN. — For extremely quiet operation. AVG. — Satisfactory for most installations. MAX. — Higher velocity where air noise is not objectionable.

IMPORTANT NOTE: Where selections are made for capacities between the charted numbers, always select the next larger size return air grille for better noise level performance.

SIZE SELECTION TABLE											
GRILLE SIZE	AREA SQ. FT.	200 FPM	300 FPM	400 FPM	500 FPM	600 FPM	700 FPM	800 FPM	1000 FPM	1200 FPM	1400 FPM
8 x 4	.163	33	49	65	82	98	114	130	163	196	228
10 x 4	.206	41	62	82	103	124	144	165	206	247	288
10 x 6	.286	57	86	104	143	172	200	228	286	343	400
10 x 8	.380	76	115	153	191	229	267	306	382	456	532
12 x 4	.249	49	75	100	125	149	174	199	249	298	348
12 x 6	.351	70	106	140	175	210	245	281	361	421	491
12 x 8	.488	97	146	195	244	293	342	390	488	585	683
12 x 12	.750	150	225	300	375	450	525	600	750	900	1050
14 x 4	.292	58	88	117	146	175	204	234	292	350	408
14 x 6	.421	84	126	168	211	252	295	336	421	505	589
16 x 6	.510	102	155	206	258	309	361	412	515	612	714
16 x 16	1.335	267	401	534	668	801	935	1068	1335	1602	1869
18 x 6	.542	108	163	217	271	325	386	434	542	650	758
18 x 12	1.1	220	330	440	550	660	770	880	1100	1320	1540
18 x 18	1.9	380	570	760	950	1140	1330	1520	1900	2280	2660
20 x 6	.647	129	194	259	324	388	453	518	647	776	905
20 x 8	.874	174	262	350	437	524	612	699	874	1048	1223
24 x 6	.779	155	234	312	390	467	545	623	779	934	1090
24 x 12	1.5	300	450	600	750	900	1050	1200	1500	1800	2100
24 x 18	2.33	466	701	934	1168	1402	1635	1869	2336	2796	3262
24 x 24	3.13	626	939	1252	1565	1878	2191	2504	3130	3756	4382
30 x 6	.978	195	293	391	489	587	685	782	978	1173	1369
30 x 12	1.911	382	573	764	955	1147	1338	1529	1911	2293	2675
30 x 18	2.935	587	880	1172	1467	1760	2053	2346	2935	3522	4109
30 x 24	3.97	794	1191	1588	1985	2382	2779	3176	3970	4764	5558
30 x 30	4.826	965	1448	1930	2413	2895	3378	3860	4825	5791	6756
36 x 12	2.414	482	722	962	1202	1442	1682	1922	2407	2892	3379
36 x 18	3.451	690	1035	1380	1726	2070	2416	2760	3450	4141	4831
36 x 24	4.626	925	1388	1850	2313	2775	3238	3700	4625	5551	6476
36 x 30	5.798	1159	1739	2319	2899	3478	4059	4638	5795	6955	8114
36 x 36	7.00	1400	2100	2800	3500	4200	4900	5600	7000	8400	9800
48 x 24	6.181	1236	1854	2472	3091	3708	4327	4944	6160	7415	8650
48 x 30	8.238	1647	2471	3295	4119	4943	5767	6590	8238	9890	11525
48 x 36	9.32	1864	2796	3728	4660	5592	6524	7456	9320	11180	13045
48 x 48	13.4	2680	4020	5355	6700	8045	9375	10720	13400	16080	18760

GYMNASIUM GRILLES							
Models: GHD, GHDC, GHDVP, GXHDS							
Listed Size W x H	Ak	NC 20-25 Application Non-Ducted		NC 25-30 Application Ducted		NC 30-40 Application Ducted	
		Ps		Ps		Ps	
		- .02"	- .03"	- .08"	- .10"	- .15"	- .20"
		CFM	CFM	CFM	CFM	CFM	CFM
8 x 4	.26	70	85	140	155	190	220
8 x 6	.34	90	110	180	200	245	280
10 x 6	.42	115	140	230	255	310	355
12 x 6	.50	140	170	275	310	380	435
10 x 8	.53	160	195	315	350	425	490
12 x 8	.63	195	235	385	430	525	605
10 x 10	.64	200	245	400	450	550	630
18 x 6	.75	215	260	425	475	580	665
12 x 12	.89	305	370	605	675	825	950
18 x 12	1.3	465	565	920	1030	1255	1445
22 x 10	1.4	505	615	1000	1120	1365	1570
24 x 12	1.7	630	770	1255	1405	1715	1970
18 x 18	1.9	720	880	1435	1605	1960	2255
34 x 10	2.1	780	950	1550	1735	2115	2430
30 x 12	2.2	790	965	1570	1760	2145	2465
24 x 18	2.5	975	1190	1940	2170	2645	3040
22 x 22	2.8	1090	1330	2165	2425	2960	3405
30 x 18	3.2	1220	1490	2430	2720	3320	3820
24 x 24	3.3	1300	1585	2585	2895	3530	4060
36 x 18	3.8	1475	1800	2935	3285	4005	4605
30 x 24	4.1	1650	2015	3285	3680	4490	5165
34 x 22	4.3	1730	2110	3440	3850	4695	5400
36 x 24	4.9	1980	2415	3935	4405	5375	6180
46 x 22	5.9	2440	2975	4850	5430	6625	7620
36 x 30	6.1	2520	3075	5010	5610	6845	7870
48 x 24	6.6	2660	3245	5290	5925	7230	8315
48 x 30	8.1	3400	4150	6765	7575	9240	10625
48 x 36	9.7	4040	4930	8035	9000	10980	12625

EGG CRATE RETURNS						
Vk (VELOCITY)	200	400	600	800	1000	
Ps In. H2O	-.005	-.019	-.041	-.074	-.115	
NOM. SIZE	Ak	CAPACITIES IN CFM				
6 x 6	.19	40	80	120	160	200
8 x 8	.36	70	144	215	288	360
10 x 10	.57	115	230	342	456	570
12 x 12	.85	170	340	510	680	850
14 x 14	1.17	235	468	700	935	1170
16 x 16	1.54	308	615	925	1230	1540
18 x 18	1.97	395	788	1180	1575	1970
20 x 20	2.41	480	965	1445	1930	2410
22 x 22	2.94	588	1175	1765	2350	2940
24 x 24	3.53	705	1410	2120	2825	3530
26 x 26	4.14	830	1655	2485	3310	4140
28 x 28	4.83	965	1930	2900	3865	4830
30 x 30	5.52	1105	2210	3310	4415	5520
32 x 32	6.34	1270	2535	3805	5070	6340
34 x 34	7.18	1435	2870	4310	5745	7180
36 x 36	8.00	1600	3200	4800	6400	8000
38 x 38	8.82	1765	3530	5290	7055	8820
40 x 40	9.72	1945	3890	5830	7775	9720
42 x 42	10.71	2140	4285	6425	8570	10710
44 x 44	11.70	2340	4680	7020	9360	11700
46 x 46	13.40	2680	5360	8040	10720	13400
48 x 48	14.00	2800	5600	8400	11200	14000
NC		20	25	30	40	45

RG

TO DETERMINE CFM

1. Measure velocity at several locations near the face of the return. Enough locations should be chosen to assure measurement of representative velocities. Hold probe one inch from grille face and rotate probe until maximum velocity reading is obtained at each location.
2. Calculate the average face velocity using the maximum velocity measured at each probe location.
3. Determine the Balancing Area Factor (Ak) from the attached table.
4. Calculate the air volume by multiplying the average face velocity and the balancing area factor.

CFM = Average Velocity x Ak

PERFORMANCE NOTES & SYMBOLS:

CFM - cubic feet (air) per minute
 FPM - velocity in feet per minute
 Vk - inlet velocity in FPM

Ak - effective inlet area in sq. ft.
 Ps - static pressure in inches of H2O
 NC - noise criteria

Based on 8 dB room attenuation