

PRODUCT APPLICATION GUIDE

A technical bulletin for engineers, contractors and students in the air movement and control industry.

Suggested Air Changes for Good Ventilation

The most common method used to calculate cfm requirements for a given fan or fans is based on complete changes of air in a structure or room in a given time period.

To determine the cfm required to adequately ventilate an area, divide the room volume (in cubic ft.) by the appropriate "Minutes per Air Change" as shown in the chart below.

Additional considerations when determining the number of air changes are:

- Local code requirements on air changes
- Specific use of the space
- The type of climate in the area

In the most severe conditions select the lower number (in the series shown) to change the air more frequently.

For moderate conditions, select the mid range. For less severe conditions in cool climates, the higher number will provide adequate ventilation.

Type of Space	Minutes per Air Change	Type of Space	Minutes per Air Change
Assembly Halls	3 - 10	Heat Treat Rooms	1 - 2
Attic	2 - 4	Hospital	4 - 6
Auditoriums	4 - 15	Kitchens	2 - 4
Bakeries	1 - 3	Laboratory	2 - 5
Banks	3 - 10	Laundries	2 - 5
Banquet Halls	3 - 4	Locker Rooms	2 - 5
Bar/Lounge	2 - 5	Lodge Rooms	3 - 5
Barns	10 - 15	Machine Shops	3 - 5
Beauty Parlors	2 - 5	Meeting Rooms	4 - 6
Boiler Rooms	2 - 5	Mill (General)	3 - 8
Bowling Alleys	2 - 8	Mills (Paper)	2 - 3
Cafeteria	3 - 5	Mills (Textile)	5 - 15
Church	4 - 10	Office	2 - 8
Schools/Classroom	4 - 6	Packing Houses	2 - 5
Club Room	3 - 7	Plating Rooms	1 - 5
Corridors/Halls	6 - 20	Printing Plants	3 - 8
Dairies, Creameries	2 - 5	Projection Room	1 - 2
Dance Hall	3 - 7	Recreation Rooms	2 - 8
Dining Rooms	3 - 6	Residences	3 - 6
Dormitories	5 - 8	Restaurants/Dining Rooms	3 - 7
Dry Cleaners	2 - 5	Restrooms	3 - 6
Engine Rooms	1 - 2	Retail Stores	3 - 8
Factories (Light)	5 - 10	Ship Holds	8 - 10
Factories (Heavy)	2 - 6	Shops (General)	3 - 10
Forge Shops	1 - 3	Theaters	3 - 8
Foundries	1 - 4	Transfer Room	1 - 5
Garages	2 - 10	Transformer Rooms	1 - 5
Generator Room	2 - 5	Tunnels	6 - 10
Glass Plants	1 - 2	Turbine Rooms	2 - 6
Gymnasiums	3 - 8	Warehouses	3 - 10