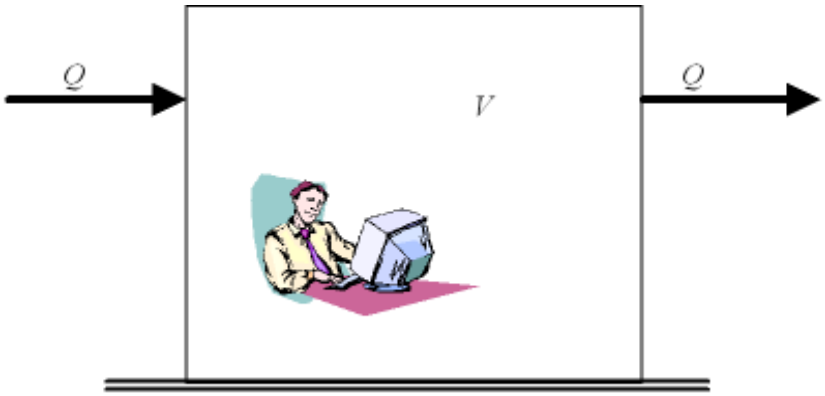
The volume of fresh air (make up air) required for a proper ventilation of a space is determined of the size and the use of the space - typical the no. of persons in the space, if smoking is allowed or not and pollution from processes.



The table below indicates air change rates (air changes per hour) in common types of rooms and buildings.

Building / Room	**Air Change Rate** ***- n -*** ***(1/h, h^{-1})***
All spaces in general	min 4
Assembly halls	4 - 6
Attic spaces for cooling	12 - 15
Auditoriums	8 - 15
Bakeries	20 - 30
Banks	4 - 10
Barber Shops	6 - 10
Bars	20 - 30
Beauty Shops	6 - 10

Boiler rooms	15 - 20
Bowling Alleys	10 - 15
Cafeterias	12 - 15
Churches	8 - 15
Classrooms	6 - 20
Club rooms	12
Clubhouses	20 - 30
Cocktail Lounges	20 - 30
Computer Rooms	15 - 20
Court Houses	4 - 10
Dance halls	6 - 9
Dental Centres	8 - 12
Department Stores	6 - 10
Dining Halls	12 -15
Dining rooms (restaurants)	12
Dress Shops	6 - 10
Drug Shops	6 - 10
Engine rooms	4 - 6
Factory buildings, ordinary	2 - 4
Factory buildings, fumes and moisture	10 - 15
Fire Stations	4 - 10
Foundries	15 - 20
Galvanizing plants	20 - 30
Garages repair	20 - 30

Garages storage	4 - 6
Homes, night cooling	10 - 18
Hospital rooms	4 - 6
Jewellery shops	6 - 10
Kitchens	15 - 60
Laundries	10 - 15
Libraries, public	4
Lunch Rooms	12 -15
Luncheonettes	12 -15
Nightclubs	20 - 30
Machine shops	6 - 12
Malls	6 - 10
Medical Centres	8 - 12
Medical Clinics	8 - 12
Medical Offices	8 - 12
Mills, paper	15 - 20
Mills, textile general buildings	4
Mills, textile dye houses	15 - 20
Municipal Buildings	4 - 10
Museums	12 -15
Offices, public	3
Offices, private	4
Photo dark rooms	10 - 15
Pig houses	6 - 10

Police Stations	4 - 10
Post Offices	4 - 10
Poultry houses	6 - 10
Precision Manufacturing	10 - 50
Pump rooms	5
Residences	1 - 2
Restaurants	8 - 12
Retail	6 - 10
School Classrooms	4 - 12
Shoe Shops	6 - 10
Shopping Centres	6 - 10
Shops, machine	5
Shops, paint	15 - 20
Shops, woodworking	5
Substation, electric	5 - 10
Supermarkets	4 - 10
Swimming pools	20 - 30
Town Halls	4 - 10
Taverns	20 - 30
Theaters	8 - 15
Transformer rooms	10 - 30
Turbine rooms, electric	5 - 10
Warehouses	2
Waiting rooms, public	4

Warehouses	6 - 30

Be aware of local regulations and codes.

Fresh air supply - make up air - to a room based on the table above can be calculated as
q = n V (1)
where
q = fresh air supply (ft^3/h, m^3/h)
n = air change rate (h^{-1})
V = volume of room (ft^3, m^3)