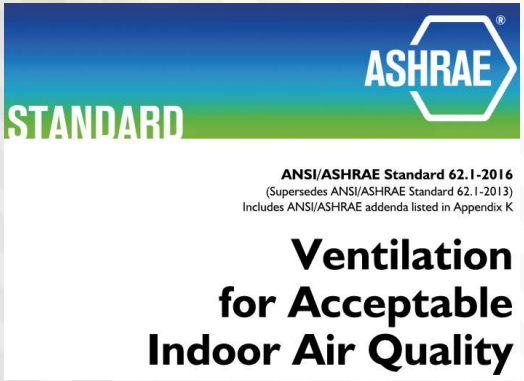
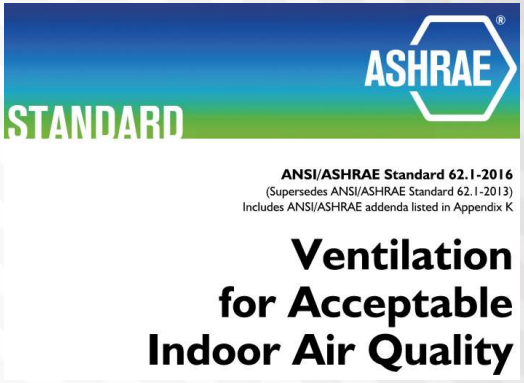
VENTILATION FOR ACCEPTABLE INDOOR AIR QUALITY



PART – 4



EXHAUST AIR CALCULATION

AS PER

ASHRAE 62.1

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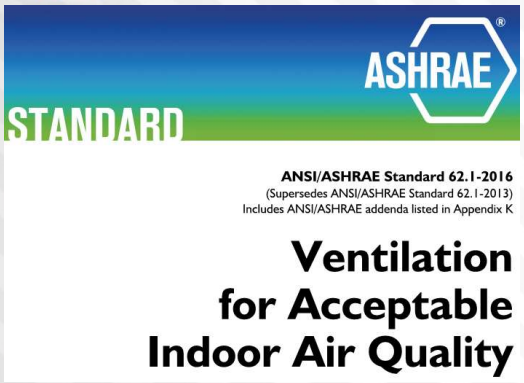
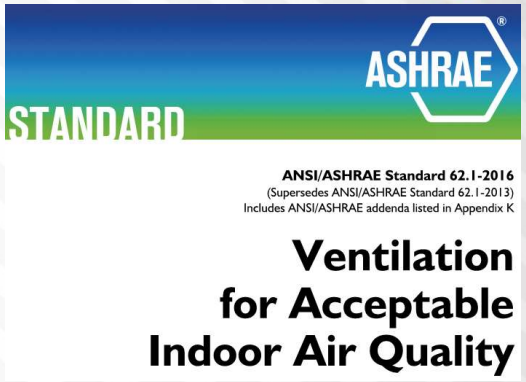
VENTILATION FOR ACCEPTABLE INDOOR AIR QUALITY

AWARDED TOP 20 HVAC YOUTUBE CHANNEL

HVAC

PART – 4





EXHAUST AIR CALCULATION

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हिन्दी

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ASHRAE 62.1
VENTILATION FOR ACCEPTABLE INDOOR AIR QUALITY

TABLE 6.5
Minimum Exhaust Rates

TABLE 6.5 Minimum Exhaust Rates

Occupancy Category	Exhaust Rate, cfm/unit	Exhaust Rate, cfm/ft^2	Notes	Exhaust Rate, L/s·unit	Exhaust Rate, L/s·m^2	Air Class

ASHRAE 62.1
VENTILATION FOR ACCEPTABLE INDOOR AIR QUALITY

One of the two (2) parameters are required to know the **(Exhaust air)** Ventilation Rate as per ASHRAE 62.1 Table 6.5

cfm/unit

(LPS/unit)

&

cfm/ft²

(LPS/m²)

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TABLE 6.5 Minimum Exhaust Rates

TABLE 6.5 Minimum Exhaust Rates

Occupancy Category	Exhaust Rate, cfm/unit	Exhaust Rate, cfm/ft^2	Notes	Exhaust Rate, L/s·unit	Exhaust Rate, L/s·m^2	Air Class
Arenas	—	0.50	B	—	—	1
Art classrooms	—	0.70		—	3.5	2
Auto repair rooms	—	1.50	A	—	7.5	2
Barber shops	—	0.50		—	2.5	2
Beauty and nail salons	—	0.60		—	3.0	2
Cells with toilet	—	1.00		—	5.0	2
Copy, printing rooms	—	0.50		—	2.5	2
Darkrooms	—	1.00		—	5.0	2
Educational science laboratories	—	1.00		—	5.0	2
Janitor closets, trash rooms, recycling	—	1.00		—	5.0	3
Kitchenettes	—	0.30		—	1.5	2
Kitchens—commercial	—	0.70		—	3.5	2
Locker rooms for athletic, industrial, and health care facilities	—	0.50		—	2.5	2
All other locker rooms	—	0.25		—	1.25	2
Shower rooms	20/50		G,I	10/25		2
Paint spray booths	—	—	F	—	—	4
Parking garages	—	0.75	C	—	3.7	2
Pet shops (animal areas)	—	0.90		—	4.5	2
Refrigerating machinery rooms	—	—	F	—	—	3
Residential kitchens	50/100	—	G	25/50	—	2
Soiled laundry storage rooms	—	1.00	F	—	5.0	3
Storage rooms, chemical	—	1.50	F	—	7.5	4
Toilets—private	25/50	—	E, H	12.5/25	—	2
Toilets—public	50/70	—	D, H	25/35	—	2
Woodwork shop/classrooms	—	0.50		—	2.5	2

Minimum Exhaust Rates As Per ASHRARE 62.1 - TABLE 6.5

EXAMPLE

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Minimum Exhaust Rates As Per ASHRARE 62.1 - TABLE 6.5

- The Exhaust airflow required in the space or spaces shall be not less than the value determined in accordance with the Table 6.5 requirements.

EXAMPLE - 1

Exhaust Rate : CFM / Unit

TABLE 6.5 Minimum Exhaust Rates

Occupancy Category	Exhaust Rate, cfm/unit	Exhaust Rate, cfm/ft^2	Notes	Exhaust Rate, L/s·unit	Exhaust Rate, L/s·m^2
Toilets—private	25/50	—	E, H	12.5/25	—
Toilets—public	50/70	—	D, H	25/35	—

Toilet Public = 50 cfm/unit

No. of Units = 4

Total 50cfm x 4units = 200 CFM

The total Exhaust Air required for the Toilet Room is 200 CFM

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Minimum Exhaust Rates As Per ASHRARE 62.1 - TABLE 6.5

- The Exhaust airflow required in the space or spaces shall be not less than the value determined in accordance with the Table 6.5 requirements.

EXAMPLE - 2

Exhaust Rate : CFM / ft²

TABLE 6.5 Minimum Exhaust Rates

Occupancy Category	Exhaust Rate, cfm/unit	Exhaust Rate, cfm/ft²	Notes	Exhaust Rate, L/s·unit	Exhaust Rate, L/s·m²	Air Class
Barber shops	—	0.50		—	2.5	2
Beauty and nail salons	—	0.60		—	3.0	2

Barber Shop = 0.50 cfm/ ft²

Area = 900ft²

Total 0.50cfm x 900ft² = 450 CFM

The total Exhaust Air required for the Barber Shop is 450 CFM

Prepared By : AMK

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