

## How to Work Out Which Extractor Fan You Need

1. Measure the volume of the room in m<sup>3</sup> (length x width x height)
2. Times this number by the required number of air changes per hour (see the table below)

For example, if you want an extractor fan for a bakery which measures 10m x 10m x 3m, first work out the volume – in this case it's **300m<sup>3</sup>**. Then, check the table below and multiply this number by the required number of air changes per hour – in this case **20-30**. This will tell you that you need a fan which can move between **600-900m<sup>3</sup> per hour**.

## Volume Conversions

1m<sup>3</sup> per hour (m<sup>3</sup>/hr) = 0.278 litres per second (L/s) = 0.589 cubic feet per minute (CFM)

## Recommended Air Changes Per Hour

Room	Number of Air Changes Required Per Hour
Assembly Plants	4-8
Auditoriums	6-8
Bakeries*	20-30
Banks	4-8
Bathrooms	5-10
Battery Rooms*	5-10
Bedrooms	2-4
Billiard Rooms	6-8
Boiler Rooms	15-30
Cafes	10-12
Canteens	8-12
Car Parks*	5-8
Cellars	3-8
Changing Rooms	6-8
Churches	1-3
Cinemas/Theatres	8-12
Classrooms	5-7
Cloakrooms	4-6
Club Rooms	12-15
Compressor Rooms*	10-12
Conference Rooms	6-12
Dairies	8-12
Dance Halls	12-15
Dark Rooms*	10-15
Dye Rooms*	15-30
Electroplating Shops*	10-12
Engine Rooms*	15-30
Entrance Halls	3-5
Factories*	8-10
Foundries*	10-20
Garages	6-8
Greenhouses/Glass Houses	25-60
Gyms	6-10
Hair Salons	10-15
Hospital Wards	6-8

Hospitals (Sterile Rooms)	15-25
Kitchens (Commercial)*	20-30
Kitchens (Domestic)	15-25
Laboratories*	6-15
Launderettes	10-15
Lecture Theatres	5-8
Libraries	4-8
Living Rooms	3-6
Meeting Rooms	5-10
Mushroom Houses	6-10
Offices	6-10
Paint Rooms*	10-20
Plant Rooms	10-40
Pubs	15-25
Recording Studios	10-12
Restaurants	8-12
Retail Shops	4-8
School Rooms	5-7
Sheet Metal Shops	8-12
Shower Rooms	15-25
Spray Booths*	25-50
Squash Courts	4-8
Store Rooms	3-6
Supermarkets	8-15
Swimming Pools*	10-15
Tanneries	5-15
Toilets (Domestic)	6-10
Toilets (Public)	8-15
Utility Rooms	15-20
Waiting Rooms	4-6
Warehouses	3-6
Welding Shops*	20-30
Workshops	6-10

\*May require specialist extractor fans with waterproofing, heat resistance, explosion proofing, anti-corrosive parts, etc.