TABLE 1

Situation	Air Changes per hour
Assembly Halls	4-6
Bakeries	15-30
Banks	2-4
Bathromms	6-8
Bars	6-8
Boiles Houses	15-30
Cafes	8-12
Canteens	8-12
Churches	1-10
* Cinemas	6-10
Classrooms	2-4
Cleaners	15-30
Dance Halls	8-12
Domestic Kitchens	10-15
Dyres	15-30
Engine Rooms	15-30
Foundries	30-60
Furnace rooms	30-60
Garages	6-10
Hospital Wards	6-8
Hospital Treatment Rooms	6-8
Kitchens for Restaurants	13-30
Laboratories	4-6
Laundries	10-15
Libraries	2-4
Offices	4-6
Paint Shops	30-60
Residences	1-2
* Restaurants	10-15
Storage Areas	1-2
Swimming Baths	15-30
* Theatres	6-8
Workshops	6-10

* General Requirements are 28m3/h per person minimum in public places; more if smoking is allowed.
+ Dependent on height of building and number of perseons.

in	x 25.4	= mm
ft	x 0.305	= m
ft3	x 0.028	= m3
lb	x 0.454	= kg
BTU	x 1054.8	= J
HP	x 0.746	= kW
k cal/h	x 0.00116	= kW
Ton Refrigeration	x 3.52	= kW
BTU/ft2h F	x 5.678	= J/m2s C or = W/m2 C
ft3/min	x 0.000472	= m3/s
in.wg	x 249.1	= Pa

FAN LAWS

The most commonly used fan laws in simplified form are :

1) CFM varies DIRECTLY with RPM
CFM/CFM2 = RPM/RPM2

2) SP varies with the SQUARE of the RPM
Sp/SP2 = (RPM/RPM2)2

3) HP varies with the CUBE of the RPM
HP/HP2 = (RPM/RPM2)3

FUME REMOVAL

Recommended minimum velcotities across face of extract hood:

Sanblast Bpooths	2.5 m/s openings
Sandblast Booths	0.4 m/s downwards through booth
Electro-Plating	0.75-1.0 m/s
Electric Welding	0.5-1.0 m/s
Paint Spray Booths	0.75 m/s in breathing zone
Kitchen Equipment	0.5-0.75 m/s