

Abbreviations

LVR â€“ Louvre
BHP â€“ Brake Horsepower
CFM â€“ Cubic Feet/Minute
L/S â€“ Litres/Second
S â€“ Seconds
MIN â€“ Minutes
HR â€“ Hour
KW â€“ Kilowatts
SP â€“ Static Pressure
TP â€“ Total Pressure
VEL â€“ Velocity
VP â€“ Velocity Pressure
HP â€“ Horsepower
oz - Ounces
LB â€“ Pound
FT â€“ Feet
g â€“ Grams
Kg â€“ Kilogram
Km â€“ Kilometre
m â€“ Metre
cm â€“ Centimetre
mm â€“ Millimetre
Pa â€“ Pascal
F â€“ Force
N - Newton
RPM â€“ Revolutions/Minute
Hg â€“ Mercury
WG â€“ Water Gauge
IN â€“ Inches

LOUVRES â€“ Quick Selection

Generally, free area assumed is 50%.
Maximum intake through 4" deep LVR = 600 FPM
Therefore:

$$\text{OUTSIDE LOUVRE AREA} = \frac{(\text{AIRFLOW}-(\text{CFM}))}{\text{MAX INTAKE VEL}} \times 2$$

FAN LAWS

$$V_2 = V_1 \times (\text{RPM}_2 / \text{RPM}_1)$$

$$SP_2 = SP_1 \times (\text{RPM}_2 / \text{RPM}_1)^2$$

$$VP_2 = VP_1 \times (\text{RPM}_2 / \text{RPM}_1)^2$$

$$P_2 = P_1 \times (\text{RPM}_2 / \text{RPM}_1)^3$$

DUCT LAW

$$\frac{P_1}{P_2} = \left(\frac{\text{CFM}_1}{\text{CFM}_2} \right)^2$$

AREA

<i>MULTIPLY</i>	<i>BY</i>	<i>TO OBTAIN</i>
FT ²	144	IN ²
FT ²	0.09290	m ²
m ²	10.76	FT ²

LENGTH

<i>MULTIPLY</i>	<i>BY</i>	<i>TO OBTAIN</i>
MILES	5280	FT
MILES	1.609	Km
MILES	1760	YARDS
cm	0.3937	IN
cm	0.01	m
cm	10	mm
mm	0.00328	FT
mm	0.03937	IN
FT	0.3048	m
IN	2.54	cm

PRESSURE

MULTIPLY	BY	TO OBTAIN
IN.Hg	13.619	IN.WG
IN.Hg	3386.4	Pa
IN.Hg	25.4	mm.Hg
IN.WG	0.07343	IN.Hg
IN.WG	248.36	Pa
IN.WG	1.8651	mm.Hg
Pa	0.00403	IN.WG
Pa	0.00030	IN.Hg
Pa	0.00750	mm.Hg

TEMPERATURE

MULTIPLY

°C + 17.78

°F - 32

E

MULTIPLY	BY	TO OBTAIN
LB.F.IN	0.11298	N.m
N.m	8.8511	LB.F.IN

VOLUME

<i>MULTIPLY</i>	<i>BY</i>	<i>TO OBTAIN</i>
m ³	10 ⁶	cm ³
m ³	35.31	FT ³
IN ³	16.39	cm ³
IN ³	5.787 X 10 ⁻⁴	FT ³
FT ³	1728	IN ³
FT ³	0.02832	m ³

VOLUME FLOW

MULTIPLY

CFM

CFM

CFM

CFM

L/S

L/S

L/S

L/S

WEIGHT