Formulas and Conversions

Formulas

Media Velocity (fpm or m/s) = $\frac{\text{Airflow (cfm or } m^3/s)}{\text{Effective Media Area } (ft^2 \text{ or } m^2)}$

Energy Consumption (E) in KWh = $\frac{QPT}{n1000}$

where Q is Air flow (m^3/s)
P Average pressure loss (Pa)
T Operation time (hours)
n Efficiency of fan

Conversions

1 m/s = 196.8 fpm	1 Pa = 1.450×10^{-4} psi
1 m^3/s = 2,119 cfm	1 Pa = 4.015×10^{-3} in. H_2O
1 KW = 3,413 Btu/hr	1 m^2 = 10.76 ft^2

Media Conversions

Linear Yards = $\frac{\text{Lineal Feet}}{3}$

Square Yards = $\frac{\text{Square Feet}}{9}$

Linear Feet = $\frac{\text{Square Feet}}{\text{Width in feet}}$

Linear Yards = $\frac{\text{Square Feet/Width in feet}}{3}$

Linear Feet = $\frac{\text{Square Yards x 3}}{\text{Width in yards}}$

Linear Yards = $\frac{\text{Square Yards}}{\text{Width in inches/36}}$

Square Yards = $\frac{\text{Linear Feet x Width in inches}}{108}$

Square Yards = $\frac{\text{Linear Yards x Width in inches}}{36}$

Linear Yards = $\frac{\text{Square Yards x 36}}{\text{Width in inches}}$

Linear Yards = $\frac{\text{Square Yards x 108}}{\text{Width in inches}}$

$$\textbf{Pounds} = \frac{\text{Square Yards}}{1000} \times (\text{Basis Weight in OSY} \times 62.5)$$

$$\textbf{Grams per Square Meter} = \text{Ounces per Square Yard} \times 33.91$$

$$\textbf{Ounces per Square Yard} = \frac{\text{Grams per Square Meter}}{33.91}$$

$$\textbf{Square Yards} = \text{Square Meters} \times 1.196 \qquad \textbf{Square Meters} = \frac{\text{Square Yards}}{1.196}$$

$$\textbf{Centimeters} = \text{Inches} \times 2.54 \qquad \textbf{Inches} = \frac{\text{Centimeters}}{2.54}$$

Media Pricing Conversions

$$\textbf{Square Yard Price} = \frac{\text{Linear Yard Price} \times 36}{\text{Width in inches}} \qquad \textbf{Square Meter Price} = \text{Square Yard Price} \times 1.196$$

$$\textbf{Linear Yard Price} = \frac{\text{Square Yard Price} \times \text{Width in inches}}{36} \qquad \textbf{Square Yard Price} = \frac{\text{Square Meter Price}}{1.196}$$