Electric Heat CFM Formula

CFM = $\dfrac{\text{Volts X Amps X 3.414}}{\text{1.1 X ACF X } \Delta T}$

Fossil Fuel CFM Formula (Known BTU Output)

CFM = $\dfrac{\text{BTU Output}}{\text{1.1 X ACF X } \Delta T}$

Fossil Fuel CFM Formula (Known BTU Input)

CFM = $\dfrac{\text{BTU Output X Furnace efficiency}}{\text{1.1 X ACF X } \Delta T}$

Total BTU (Cooling Only)

BTU/H = .075 X 60 X 400 X 6.66

- .075- Air Density At Sea Level

- 60- Minutes per Hour

- 400- CFM per Ton

- 6.66- Different in Enthalpy (Δh)

To obtain enthalpy, convert the supply and wet-bulb temperature to enthalpy using the Wet-bulb to Enthalpy Chart provided in class.

Sensible BTU's

Sensible BTU = CFM X ΔT X 1.1

- CFM- Is the CFM you measure using airflow tools or the CFM formulas

- Air factor at sea level. If you are not at sea level, use the Altitude Correction Factor chart that was provided in class

Latent BTU's

Latent BTU = CFM X ∆T X .68

- CFM- Is the CFM you measure using airflow tools or the CFM formulas

- ∆W- Measured in Grains Different

- .68- Conversion Factor

.68 = 1/700 X 1061 X 60 X .075

- 1/7,000- There are 7,000 grains per found (water)
- 1061- There is 1061 BTU's to change water at 212°F to steam at sea level
- 60- Minutes per Hour
- .075- Air Density at Sea Level

1.08 = .075 X 60 X .24

- .075- Air Density at Sea Level

- 60- Minutes per Hour

- .24- Specific Heat of 70°F Air