

ENTHALPY CHART

The enthalpy chart (the chart itself is a separate document) makes it easy to calculate your total capacity or latent capacity on a cooling application. For the following equations you need to have the wet bulb temperatures which are easily found from the accompanying chart.

Formulas for cooling coils:

- ◇ Total Capacity = $4.45 \times \text{CFM} \times (h_1 - h_2)$
 - h_1 = the enthalpy at the entering wet bulb temperature
 - h_2 = the enthalpy at the leaving wet bulb temperature

- ◇ Sensible Capacity = $1.08 \times \text{CFM} \times (t_1 - t_2)$,
 - t_1 = the entering dry bulb temperature
 - t_2 = the entering wet bulb temperature

- ◇ Latent Capacity (*simplified, not precise*) = $.68 \times \text{CFM} \times (w_1 - w_2)$
 - w_1 = the grams of moisture at the entering wet bulb temperature
 - w_2 = the grams of moisture at the leaving wet bulb temperature

- ◇ OR, Latent Capacity = Total Capacity – Sensible Capacity

SUMMARY

It is much easier to find latent capacity by first determining the total and sensible capacities since those formulas use values that are easily obtainable.