



# OPPORTUNITY



www.jacco.com

*Focused On The Engineered Environment*

December 2008

Welcome to OPPORTUNITY, a monthly newsletter provided by Jacco & Associates. Jacco's focus on engineering and design concepts will improve your HVAC system while significantly reducing design time, making you more productive for your clients.

## December Feature:



# Vapac



## Humidification Calculation Tool

Have you been to [www.jacco.com](http://www.jacco.com) lately? Check out our new "Engineering Tools" tab. This is a new section where we will be featuring various HVAC calculation programs to assist you in your system design. The first program we are highlighting is VAPAC's Humidification Calculation Tool. This is a simple yet effective tool to determine the proper humidification load for your building. By entering data such as outside air conditions, cfm, design conditions, and basic building criteria it will calculate your humidification load from three different perspectives: humidification load through ventilation, ventilation with economizer and building infiltration. From there Jacco & Associates can select the best humidifier for your application.

Please choose a measurement system:

Please choose an altitude:  ft

Outside air temperature:  (-25 to 72 degrees F)

Outside air relative humidity (in %):

Total airflow of the air handler:  cfm

Percentage of outside air:

**\*\*Please click on one of the titles below to open section.**

### Humidification load through Ventilation

Space design temperature desired:  Deg. F

Space design relative humidity desired (in %):

Calculated Load through ventilation:  lbs/hr

### Humidification load through Ventilation with Economizer

Space design temperature desired:  Deg. F

Space design relative humidity desired (in %):

Economizer mix-air temperature:

Calculated Load through ventilation with economizer:  lbs/hr

### Humidification load from infiltration

Space design temperature desired:  Deg. F

Space design relative humidity desired (in %):

Length:  ft

Height:  ft

Width:  ft

Choose your building construction type

Tight (0.2 to 1.0 air changes per hour)

Average (1.0 to 1.5 air changes per hour):  ach

Loose (2 air changes per hour)

Calculation load through infiltration:  lbs/hr

Humidification Load:

**Jacco & Associates Wishes Everyone A Safe & Happy Holiday Season!**

## December Question & Answer:

**Question:** What is the humidification load for the following conditions: 5,000' above sea level, 0°F/50%RH Outside Air, 72°F/45%RH Room Air, 24,000 Supply Air cfm, 4,800 Outdoor Air cfm, with an economizer cycle?  
a.) 132 lb/hr    b.) 189 lb/hr    c.) 253 lb/hr    d.) 324 lb/hr

**Prize:** GPX Portable DVD Player!

[Respond](#) by January 5th with the correct answer to be entered in the raffle for this month's prize!

## Last Month's Question & Answer Winner!

**Question:** Aeon has sold thousands of VCC's over the past several years. How many failures have been reported?

**Answer:** A—0. Congratulation to Lee Hodkey for winning a Samsung Camcorder!

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Questions or comments? E-mail us at [opportunity@jacco.com](mailto:opportunity@jacco.com)



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