



# PPORTUNITY



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*Focused On The Engineered Environment*

October 2008

Welcome to PPORTUNITY, 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.

## October Feature:



## Radiant Cooling



With the advent of LEED and Green building technologies, active and passive radiant cooling systems have been gaining momentum in the engineering and construction community due to their high efficiency, lower overall construction costs, dedicated ventilation systems, and low sound levels. This month we will show the two basic types of radiant cooling; active and passive.

### Active



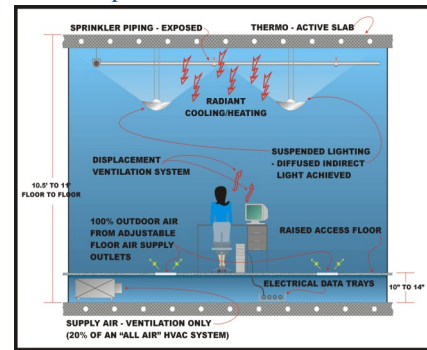
Active Radiant Cooling (aka induction units) utilizes a mixture of forced dedicated outside air into a chamber or beam that will mix with induced return air from the space. The mixed air will then pass through cooling/heating coils and be directed back into the space. The active chilled beam can be 2 or 4 pipe, and operates under a minimum 0.5gpm/circuit and 5-7°F temperature differential.



### Passive



Passive Radiant Cooling utilizes piping installed in the floors, walls or ceiling of a building. Heat is radiated to the surrounding cooler surfaces, absorbed and removed from the space. Water typically travels through the capillary tubes at 2-4 gpm and operated under a differential temperature of 3-5°F. A separate Dedicated Outdoor Air System will supply air into the space to handle latent loads and ventilation requirements.



For more info on active and passive radiant cooling systems please see your Sept. 2008 ASHRAE Journal, or go to [www.ashrae.org](http://www.ashrae.org)

## October Question & Answer:

**Question:** In an active chilled beam (ACB) application, increasing the end of run static pressure from 0.4" to 1" will increase the ACB capacity by what percentage?

- a.) 45%    b.) 50%    c.) 55%    d.) 60%

**Prize:** Sony Walkman!

Respond by November 10th with the correct answer to be entered in the raffle for this month's prize!

## Last Month's Question & Answer Winner!

**Question:** According to ASHRAE Standard 170-2008, what are the minimum distances required from the exhaust discharge and the roof/closest outdoor air intake?

**Answer:** B—10'/10'. Congratulation to Brian Holloway for winning a Sanyo GPS!

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



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