



DAC NEWS

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*“HVAC
Products for a
Sustainable
Future”*

**CALL US -
WE CAN HELP**

**Jim Shiminski-Chairman
Boston ASHRAE
Sustainability Committee**

**Rick McGinley
Ed Henningsen
Teri Shannon
David Goodman
Cheryl Rossini
Chris Libby
Lisa Marchand
Pat Will**

**DAC Sales
P.O. Box 576
W. Kennebunk, ME 04094
Ph: (207) 985-0873
Fx: (207) 985-0874**

sales@dac-hvac.com
www.dac-hvac.com




DAC Photo Op




*Pat Will & Chris Libby
pose while at a jobsite*

DID YOU KNOW?

 DAC continues commitment to renewable energy sources by offering **SolarWall®** systems. This transpired solar system uses solar energy to preheat ventilation air for commercial and industrial buildings. Paybacks are typically 2 - 3 years for new construction and 4 - 5 years for retrofits.

Call DAC to see how you can apply this technology to your building, and start saving energy and money today!

 **R-22 is being phased out.** R-22 production is already capped in the US and will be phased out of production completely by 2010. R-134a and R-407C are the leading replacements identified for commercial applications. [Heat Pipe Technologies](#) has chosen to specify R-134a in their heat pipes and [Aerofin](#) is seeing it widely used in lieu of R-22 as well. For more information, visit www.epa.gov/ozone/title6/phaseout.

UPCOMING EVENTS

DAC Energy Recovery Seminar - This Fall we are offering our Energy Recovery seminar at two locations on two days - one in MA and one in NH! Wed., **October 31** at The Forefront Center, Waltham, MA and Thurs., **November 1** at the Marriott Courtyard, Portsmouth, NH

Both days will have a morning (8:00 - 11:30 am) and afternoon (1:00 - 4:30 pm) session. Invitations will be sent out shortly - e-mail Teri to pre-register or if you'd like more information

Low Face Velocity (LVF) AHU's to Reduce Energy & Environmental Costs

A new trend is emerging in the design of air handling units. AHU's have traditionally been designed around 500 feet per minute (fpm) face velocity to avoid moisture carryover from cooling coil condensate. This design practice was developed during a time when energy costs were low and carbon emissions were not a consideration. That's all changing now. As every facilities manager knows only too well, energy costs are rising and carbon taxes are on the horizon.

LFV design uses larger air handlers and components to reduce face velocities to 250-350 fpm, which allows energy recovery devices and coils to achieve much higher efficiencies and fans to be sized much smaller due to lower pressure drops. As the face velocity of heating and cooling coils is decreased, the rows and fins are reduced resulting in a less expensive coil per square foot. Energy recovery device and coil pressure drops can be reduced over 0.5". Besides being smaller, fans can also be constructed from lighter materials (Class I vs Class III), further reducing cost and weight. With smaller fans and motors you will add less heat to the air and reduce cooling requirements. Shallow cooling coils are easier to clean and more efficient so chilled water temperatures can be higher, and water-side flows and pressures will be lower so pumps don't need to work as hard. Filters work better and last longer at lower face velocities.

By fan law, as face velocity drops, the resulting pressure drop through components is proportional to the square of the decrease in velocity and horsepower decreases as a cube function. So a 50% reduction in face velocity results in a decrease of fan power by over 87%! At \$0.15 for electricity, a 50,000 cfm AHU would use \$114,000 per year at 10" SP and that would be reduced to \$57,000 annually at 5" SP, which is more than \$1.1 million over the 20 year lifetime of the air handling system!

To find out more about how your AHU's can be designed using LFV techniques, contact DAC today!