



Company Profile

"**Phoenix Controls Corporation**, founded in 1985, is a recognized leader in the design and manufacture of *precision airflow control systems for use in critical room environments*. Our systems are in operation worldwide in [hospitals](#), laboratories, vivariums, pharmaceutical process areas, cleanrooms and biocontainment facilities.

[Theris® Solutions](#) for Healthcare applications, designed for compliance with all industry regulatory standards, meet ventilation needs in operating rooms, isolation rooms and critical care areas where directional flow and pressurization is crucial. Theris Solutions which are priced competitively with VAV boxes are practical for deployment throughout an entire healthcare facility.

We offer innovative and technologically sound solutions that combine ***unparalleled safety and performance with value and energy savings***; business and operation benefits include:

- **VAV Energy Savings**
- **Enhanced Airborne Infection Control**
- **Code-Aligned Directional Flow and Room Pressurization**
- **USP 797 Pharmaceutical Compounding Code Alignment**
- **Emergency Preparedness Ventilation Control Options**
- **Room Temperature, Humidity, Pressure and Occupied/Unoccupied Options**
- **Stand Alone Control and/or BAS/BMS Interoperability**
- **BACNet or LON Integration**
- **No Maintenance With No Re-Calibration Requirements**

We look forward to meeting with you to discuss how we may assist you and your facility with ventilation needs and operational cost return. Thank you for your consideration and interest in Phoenix Controls.

Phoenix Controls Corporation - 75 Discovery Way - Acton, MA 01720 – 978.795.1285

Phoenix Controls
Corporation



Speaking Submittal

Airflow Guidelines & Design Trends for Healthcare Facilities

In a global economy where air travel and commerce extends around the world, human disease can be easily transmitted through airborne delivery, contact with infected people and contaminated surfaces, and via clothing and household articles that come from other nations. Evidence of the spread of highly infectious disease occasionally appear in the news media, usually resulting in some alarm for the general public and the healthcare industry. Recent cases include SARS, Tuberculosis, Mad Cow Disease, and others. The healthcare industry, particularly local hospitals, is the first line of defense in identifying and treating patients.

It is the responsibility of these caregivers to not only diagnose the disease, but also contain serious strains of bacterial and viral pathogens from spread to others within the hospital, and the public at large. Proper facility and ventilation design is a key factor in addressing this problem. Applying the principles of directional airflow, combined with filtration and sanitation techniques, is an effective way to reduce the spread of airborne infectious agents. Additional benefits of proper airflow control include greater energy conservation, lower HVAC maintenance costs, flexibility of facility design to enable space conversion to revenue generating procedures, and more.

This presentation describes best practices in airflow control and ventilation design for healthcare facilities. It is intended to aid the facility managers and engineers in specifying airflow products and control methodology that meet or exceed currently published and accepted industry guidelines. Furthermore, this presentation will educate the attendee about emerging and forward looking airflow trends in healthcare including evidence based design, so that the team can offer additional value to the customer for patient safety, energy conservation, pandemic preparation, and other benefits that can be sustained after construction or renovation.

Snapshot of the Healthcare Industry

The business motivators for ventilation in healthcare are infection control, energy savings, maintenance-free operation, pandemic readiness, and the flexibility to control ventilation throughout the facility for varying uses over the lifetime of the building. These topics can be grouped into three main topics important to running a hospital:

Liability and Risk Motivators

- Infection Control
- Hospital Acquired Infection
- Pathogens
- Critical Airflow Control
- Pandemic Readiness

Operational Cost Motivators

- Energy Conservation
- HVAC Maintenance

Patient Healing Motivators

- Evidenced-based Design
- Outcome-linked Environmental Factors

Phoenix Controls Corporation - 75 Discovery Way - Acton, MA 01720 – 978.795.1285

Phoenix Controls
Corporation



Speaking Submittal

(Short) Best Practice Ventilation Design – Why Minimum Standards Are Not Enough

Strong interest exists in reducing the energy costs associated with the operation of healthcare facilities. Heating and cooling are responsible for a large part of such costs with their need to condition and extract large volumes of air. This presentation describes best practices in airflow control and ventilation design for healthcare facilities. It is intended to aid the facility managers and engineers in specifying airflow products and control methodology that meets or exceed currently published and accepted industry guidelines.

Attendees Will Learn How To:

- Save energy with higher turndowns of VAV airflow
- Improve infection control through more reliable pressurized space
- Reduce maintenance by eliminating traditional problematic HVAC devices

(Long) Best Practice Ventilation Design – Why Minimum Standards Are Not Enough

Strong interest exists in reducing the energy costs associated with the operation of healthcare facilities. Heating and cooling are responsible for a large part of such costs with their need to condition and extract large volumes of air. Regulations and guidelines prescribe the use of high air change rates, filtration, and in some cases, 100% outdoor air in an effort to ensure the safety of patients, staff, and the public. Constant volume systems can do this quite well from a strictly functional aspect, but unnecessarily consume large amounts of energy in the process. This presentation describes best practices in airflow control and ventilation design for healthcare facilities. It is intended to aid the facility managers and engineers in specifying airflow products and control methodology that meet or exceed currently published and accepted industry guidelines.

As we look to the future we anticipate more and more spaces requiring pressurization, higher air change rates, or 100% outdoor exhaust. This trend is an outcome of years of studies, research, and empirical data showing that proper airflow control is imperative for successful infection control. Although these changes have been made with the goal of improving infection control, they require an increase in energy usage to do so. A brief review of the design guideline requirements will show why critical care areas are costly to operate.

However, these same guidelines also state that air change rates (ACH) may be reduced during unoccupied periods for energy savings. Understandably, engineers and facility managers have been reluctant to apply this concept to critical care areas of a hospital due to life safety, infection control and health issues. Pressurization must be maintained during any setback or turndown of airflow. Air terminal units (ATUs), the air control device of choice in healthcare facilities, have been shown to be incapable of accurately reducing airflow, thus not enabling reduced ACHs. Other precision airflow control devices, such as venturi valves, possess the accuracy and turndown capabilities that can enable energy savings AND controlled pressurization in high consequence spaces. Recent designs have demonstrated that turndowns of 4 or 5:1 or greater are achievable while maintaining pressurization. The design methodologies and implications to implementing such alternative designs will be discussed.

Several recent hospital designs have implemented these alternative designs with calculated and proven energy saving results. A brief discussion of these projects will be presented, with emphasis on the HVAC system design and the calculated or measured system performance.

Phoenix Controls Corporation - 75 Discovery Way - Acton, MA 01720 – 978.795.1285

Phoenix Controls
Corporation



Workshop Submittal

INTERACTIVE CONFERENCE WORKSHOP

Sustainable Airflow Design for Hospitals: Optimizing Safety, Comfort, and Conservation

Hosted by Phoenix Controls Corporation of Boston, MA

This xxx hour, not-to-miss workshop is designed to help participants make informed design and operational decisions about the design and planning of sustainable hospitals.

Presentation and open discussion will include; how to establish HVAC design parameters for sustainable hospitals to achieve higher efficiency in building performance. Discussion will include ideas for reduced energy consumption, improved indoor air quality/supportive healing environments and lower operational cost.

Come and learn first hand about implementing a sustainable approach to healthcare HVAC design!

Session Highlights Include:

- New building codes and energy conservation guidelines for 2010
- Current market trends
- Energy Conservation without sacrificing Patient Safety
- Funding, Grant & Research Monies available for Sustainable Hospital Construction & Renovation
- Examples of sustainable HVAC system designs and implementation

In the first 30 minutes of the workshop, we cover the first four topics below and will lead into # five topic. We then have 2-6 other speakers (based on allotted workshop time) present 15 min of material each on an HVAC technology of your choice. We also allow time for Q&A between or after presentations.

Other speaker presentation solutions must enhance Hospital health, safety and/or sustainability. Examples of an installation where the application was used successfully are covered. Focus is on Hospital HVAC designs that benefit; health, safety, life cycle cost, LEED, energy conservation, workstaff impact and/or sustainability.

Phoenix Controls Corporation - 75 Discovery Way - Acton, MA 01720 – 978.795.1285

Phoenix Controls
Corporation



Presenter Bio's

CHERYL LANIEWICZ

National Accounts Sales Manager – Healthcare, Phoenix Controls
claniewicz@phoenixcontrols.com

Cheryl Laniewicz has over 20 years of technical sales, specification and relationship management experience in the healthcare, research, education and government industries. Currently, she serves as the U. S. Sales Manager for Healthcare. Ms. Laniewicz has worked in the HVAC industry for seven years and has laboratory air balance and air purification/filtration industry experience in healthcare, laboratory and research environments. Prior to the HVAC industry she worked in the petroleum industry within Danaher Corporation; she sold and specified flow controls and software within the National Accounts Manager of Shell Petroleum and Valero. She started in the commercial specification and technical industry as U.S. National Accounts Manager for a Laufen, a Swiss based Ceramics company; here she was responsible for national teams in the sales of commercial construction product specification. Cheryl attended Regis University in CO for her Master's program and is currently studying for LEED AP. Ms. Laniewicz is a member of ASHE, CAHED and HESNI.

MIKE SOPER

Product Marketing Manager – Healthcare, Phoenix Controls Corporation
msoper@phoenixcontrols.com

Michael Soper is the Product Marketing Manager for Healthcare at Phoenix Controls Corporation in Acton, Massachusetts. Mr. Soper has 17 years experience in building automation and process control, contributing in engineering and product management roles at Modicon, Andover Controls, and TAC. He has written many papers on energy, ventilation and security topics for Healthcare facilities, including building automation methods. He speaks annually at industry trade events. Mr. Soper's broader background includes software development, product management, and marketing in the communications industry. Prior to Phoenix Controls, Mr. Soper held senior management positions at NetScout Systems and Cabletron. In addition, he has served in entrepreneurial roles at several startup companies. He holds two U.S. patents for software inventions. His degree is in mathematics from Boston College. He is a senior member of the Association of Energy Engineers, and holds memberships in the American Institute of Architects, ASHRAE, and ASHE.

RICH STAKUTIS

VP of Marketing, Phoenix Controls Corporation
rstakutis@phoenixcontrols.com

Richard Stakutis, LEED AP, is currently Vice President of Marketing for Phoenix Controls Corporation. His responsibilities include business development for healthcare, life science and wet chemistry markets for Phoenix's airflow control solutions. Rich's background includes undergraduate and graduate degrees in mechanical engineering, as well as a graduate degree in business administration. He has held various roles over his twenty years of HVAC industry experience, ranging from engineering to project management, and marketing group leadership roles.

BILL SCHULTZ

Regional Sales Manager, Phoenix Controls
bshultz@phoenixcontrols.com

Bill Schultz has over 30 years of sales and operations experience in temperature control, energy management and laboratory airflow control. He has a degree in Engineering and a Masters in Business from Oregon State University. For the past 8 years, Bill has been the Western Regional Manager for Phoenix Controls, a company that specializes in the control of airflow and air pressure in critical spaces such as laboratories, hospital isolation rooms, and animal and clean room facilities.

Phoenix Controls Corporation - 75 Discovery Way - Acton, MA 01720 – 978.795.1285

Phoenix Controls
Corporation