

### Classes

- January 4, 12-1 p.m., CST – Proper Application and Specification of Ceiling Radiation Dampers and Ceiling Radiation Damper- Ceiling Exhaust Fan Combinations
- January 5, 12-1 p.m., CST – Understanding AMCA 500-L Louver Weather Testing and FEMA 361 Tornado Shelters
- January 6, 12-1 p.m., CST – Increasing Design Efficiency Using Software
- January 11, 12-1 p.m., CST – Make-Up Air Ventilation
- January 12, 12-1 p.m., CST – COVID Mitigation Strategies Utilizing HVAC Systems
- January 18, 12-1 p.m., CST – Laboratory Fume Exhaust
- January 19, 12-1 p.m., CST – Warehouse Ventilation Strategies and Design Considerations
- January 25, 12-1 p.m., CST – Motor Technology in the HVAC Industry
- January 26, 12-1 p.m., CST – HVLS Fan Design, Application and Specification

#### **Proper Application and Specification of Ceiling Radiation Dampers and Ceiling Radiation Damper-Ceiling Exhaust Fan Combinations**

An overview of the purpose of ceiling radiation dampers commonly utilized in commercial construction. This course discusses relevant test standards and third-party certification, including applications and design assemblies for ceiling radiation dampers. The application and proper specification of ceiling radiation dampers in conjunction with bathroom exhaust and ceiling exhaust fans is also explored.

#### **Understanding AMCA 500-L Louver Weather Testing and FEMA 361 Tornado Shelters**

This course focuses on the different louver weather test procedures within AMCA 500-L while providing valuable louver application guidelines. FEMA 361 dictates stringent construction guidelines for FEMA funded Tornado Safe Rooms or Shelters. This course will provide you with an understanding of FEMA 361 along with an understanding of the type(s) of louver products required for compliance.

#### **Increasing Design Efficiency Using Software**

This course discusses how to be more efficient in the design process using Greenheck's software. It covers three major software; eCAPS®, CAPS®, and Revit® integration. Included is a demonstration on how to size, apply, specify, schedule and generate AutoCAD® or Revit drawings for fans, energy recovery, packaged rooftop units, louvers, and dampers. Energy recovery payback analysis and other time-saving features are included.

#### **Make-Up Air Ventilation**

This course discusses make-up air systems used in commercial kitchens and industrial applications. Topics include heating and cooling technologies, energy reduction strategies, direct and indirect gas heating technology, controls, UL requirement for cooling in kitchens, demand-based ventilation for saving energy, processing make-up air, and building pressurization.

#### **COVID Mitigation Strategies Utilizing HVAC Systems Understanding**

This course examines the role of HVAC equipment and systems in mitigating the risk of air borne viruses such as COVID-19. Fundamental technology such as outdoor air, ventilation, humidification, and filtration

are reviewed along with additive technologies such as electronic air cleaning devices. A case study of the re-opening of a commercial building with a focus on HVAC systems is presented.

### **Laboratory Fume Exhaust**

This course is aimed at familiarizing participants with the basics of laboratory ventilation and emphasizing the importance of codes and standards for laboratory design. AMCA's Induced Flow Ratings Seal will be explained along with a discussion on airflow measurement and controls.

### **Warehouse Ventilation Strategies and Design Considerations**

This course is intended to familiarize participants with typical heating and ventilation systems in warehouse applications. Topics include summer ventilation strategies, space heating systems, benefits of high volume, low speed (HVLS) fans for air circulation and life safety design considerations.

### **Motor Technology in the HVAC Industry**

This course examines new and existing motor technology in the HVAC industry. A comparison of traditional AC induction motors, permanent magnet (PM) and electronically commutated (EC) motor technology is presented. The interactive demonstration illustrates the controllability, energy efficiency, reliability and payback of using EC motors in single phase applications. The demonstration will also introduce you to additional systems and applications for variable fan flow based upon pressure, temperature, humidity, volatile organic compounds (VOC), and carbon dioxide space control.

### **HVLS Fan Design, Application, and Specification**

This course covers the proper selection and specification of high volume, low speed (HVLS) fans for different applications. An overview of HVLS performance testing, performance data, safety and industry standards is included.