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International Exposition Co. Announces 2017 AHR Expo Innovation Award Winners
2017 Awards Ceremony & Product of the Year Unveiling Scheduled for January 31 in Vegas

WESTPORT, Conn., September 15, 2016 – International Exposition Company announces the winners of the 2017 AHR Expo (International Air-Conditioning, Heating, Refrigerating Exposition) Innovation Awards.

The annual awards competition honors the most inventive and original products, systems and technologies showcased at each year's AHR Expo in the categories of: building automation; cooling; green building; heating; indoor air quality; plumbing; refrigeration; software; tools & instruments; and ventilation.

Winners were selected by a panel of third-party ASHRAE member judges who evaluated all award entries based on innovative design, creativity, application, value and market impact.

Award winners will be recognized in a formal ceremony during the 2017 AHR Expo, which takes place next January 30 to February 1 at the Las Vegas Convention Center in Las Vegas, Nev. Additionally, one 2017 AHR Expo Product of the Year award winner, selected from among the 10 category winners, will be announced at that time.

“This year’s AHR Expo Innovation Award winners have shown, once again, that the parameters for HVACR advancement are truly ever expanding,” said Clay Stevens, president of International Exposition Company. “We congratulate those who have been recognized as 2017’s pioneers from across all areas of the industry, by proving there is always more to be achieved, and farther to be propelled, when it comes to HVACR innovation. This is the spirit that makes each year’s competition so fresh and exciting, and

is what we are proud to see, year after year, as a cornerstone of inspiration for the HVACR industry's ongoing creativity and advancement.”

Listed by category, the 2017 AHR Expo Innovation Award winners are:

Building Automation

Company: Danfoss (www.danfoss.us; 2017 AHR Expo booth No. C4506)

Innovation: Danfoss Enterprise Services

Designed specifically for food retail applications, Danfoss Enterprise Services is a cloud-based service delivery platform that collects a range of data points from connected devices to provide powerful insight into nearly every aspect of HVACR operations, energy management and usage, benchmarking, and safety. Danfoss Enterprise Services provides real-time, actionable information that enables store management to make fast decisions which translate to notable savings, with modules (available à la carte or in structured bundles) to monitor an array of parameters, including alarm management, compressor status, leak detection and refrigerant levels. Functions including password lockdown, global setpoint control, and HACCP, TQI and executive reporting further streamline store operations management. Services such as energy information benchmarking, a continuous commissioning process, demand response and remote assist promote maximized energy efficiency and savings, while helping to troubleshoot and adjust overall HVACR system functions.

Cooling

Company: Daikin Applied (www.daikinapplied.com; 2017 AHR Expo booth No. C2509)

Innovation: Pathfinder® Air-cooled Screw Chillers with Variable Volume Ratio (VVR) Technology

The new Daikin Pathfinder AWW air-cooled screw chiller features an industry-first Variable Volume Ratio (VVR) technology which allows the chiller's compressor to adjust its own internal compression ratio as water and air temperatures fluctuate. With VVR technology, its compressor senses the amount of lift needed and adjusts the compression ratio automatically to provide optimal efficiency under any operating condition, equating to reduced energy use, cost of ownership, and carbon footprint. The Daikin Pathfinder AWW air-cooled screw chiller also features VVR slides that operate on the discharge side of the screw to control the refrigerant compression ratio without altering the per-stroke refrigerant volume, unlike typical capacity control slide valves. Variable frequency drives (VFDs) are used in conjunction with the VVR slides to control motor speed, and subsequently compressor capacity. This results in superior performance under AHRI-standard conditions, and in real-world scenarios in which air and water temperatures can fluctuate greatly.

Green Building

Company: Carrier (carrier.com/commercial; 2017 AHR Expo booth No. C1510)

Innovation: Dual Stage Relief Economizer (DSRE)

Carrier's Dual Stage Relief Economizer (DSRE) for light commercial rooftop units combines a traditional economizer with a means of relieving building pressure without the use of a power-consuming device. DSRE uniquely combines an air economizer with two non-powered pressure relief stages, facilitating the relief of pressure during normal ventilation operation and during economizer free cooling. In many applications, DSRE also eliminates the need for a powered exhaust or a separate pressure relief system, thus reducing both installation costs and building energy consumption. In addition to the relief capability, DSRE allows customers to minimize electrical feeds and breakers for installation, and to lower their initial first cost by enabling use of a smaller electrical feed and breaker. According to a recent Carrier energy model analysis, a typical 10-ton DSRE unit can achieve between \$189 and \$389 in annual savings (based on \$0.12 kw/hr and between 1,200-2,400 hours of economizer operation).

Heating

Company: Noritz America (www.noritz.com; 2017 AHR Expo booth No. C5917)

Innovation: Noritz Combination Boiler

The Noritz Combination Boiler delivers hot water for both plumbing and hydronic residential heating applications, while managing the switch between uses without a perceivable difference in performance. With 95-percent annual fuel utilization efficiency (AFUE), it is ENERGY STAR rated to deliver maximum operational cost savings to homeowners. The Noritz Combination Boiler's compact, 90-pound package delivers up to 9.2 gallons per minute of domestic hot water – nearly twice the flow of comparable units. A unique flow control valve also facilitates maximum domestic hot water flow rate at stable temperatures and regardless of incoming water temperature. The boiler's external and booster pump drive terminals (up to 2 amps) do not require a relay, and its integrated condensing technology lowers exhaust temperatures to a level at which stainless steel venting material is no longer required.

Indoor Air Quality

Company: Nortec Humidity (www.humidity.com; 2017 AHR Expo booth No. C4706)

Innovation: Nortec GS Series - CS Model (Nortec GS CS) Humidifier

A gas-fired isothermal humidifier producing hygienic and atmospheric steam, the Nortec GS Series CS Model Humidifier fulfills a wide range of humidification requirements for indoor environments. Direct building management integration allows the GS CS humidifier to deliver necessary steam quantities both inside duct systems and directly into a space, thus more quickly elevating indoor humidity conditions to required set points. Its unique gas-fired operation – the first to employ condensing technology to facilitate high-efficiency

performance – is powered with either natural gas or propane, allowing for flexible and economical function. Delivering more than 93 percent total efficiency, the GS CS humidifier is also first in the industry to employ a secondary heat exchanger to pre-heat water before entering the tank, while subsequently cooling down combustion exhaust gasses. The result is a reduction of exhaust gas temperatures by more than 50 percent (when compared to the current market standard-efficiency of 80 percent), thus allowing for flexibility in venting options (both BH and CPVC). A low-emissions (NX) version of the GS CS humidifier is also available, offering further reduced efficiency (>88 percent), and with low NOx emissions of approximately 7 ppm (falling within SCAQMD emissions standards for gas-fired humidifiers).

Plumbing

Company: Taco, Inc. (www.tacomfort.com; 2017 AHR Expo booth No. N7926)

Innovation: SmartPlug Smart Hot Water Recirculation Control

The SmartPlug Smart Hot Water Recirculation Control from Taco allows for easy installation onto existing domestic hot water recirculation pump systems to more efficiently manage on-demand hot water delivery. The plug-in 115-volt control features technology to learn and record a homeowner's hot water usage pattern, and employ the resulting data to operate a home's hot water recirculation pump precisely when hot water is typically required. While hot water recirculation pumps typically run continuously or are controlled with an aquastat or timer, SmartPlug provides fully automatic and self-adjusting pump operation – only when hot water is desired. Usage patterns are monitored and recorded on a daily and weekly basis, with the SmartPlug system regularly refreshing data and adjusting any changes to hot water usage patterns. The result is a significant increase in water heater operational efficiency, promoting a simple yet notable way to save on residential energy costs.

Refrigeration

Company: Danfoss (www.danfoss.us; 2017 AHR Expo booth No. C4506)

Innovation: Danfoss CTM (Electrical Controlled Transcritical Multi Ejector)

The Danfoss CTM is an electrically controlled multi-ejector designed specifically for the warm climate operation of transcritical CO₂ systems in food retail applications. Capable of recovering energy while controlling the high pressure of the transcritical application, the CTM ejector delivers value to the application through significant (20 percent or greater) improvements in energy efficiency. This is achieved by employing energy recovered from the gas cooler and transferring it to increase the pressure of gas being compressed by parallel compressors, thus reducing overall compressor load. As the first commercially viable solution engineered to overcome energy penalties associated with operating transcritical CO₂ systems in high ambient temperatures, the CTM ejector also eliminates need for redundant, cascade refrigeration systems. In cooler and more temperate climates, it can deliver even further energy saving benefits, with ejectors that create a low pressure at high velocities to optimize operational efficiency in a wide range of load conditions.

Software

Company: Nidec Motor Corporation / U.S. MOTORS® (www.usmotors.com; 2017 AHR Expo booth No. C3924)

Innovation: Rescue Select Programming App

The Rescue Select Programming App has been developed to streamline programming of the Rescue Select Truck Stock motor – an electronically commutated (EC), constant torque, aftermarket motor developed for use in residential and light commercial blower motor replacement applications. Powered by a robust, cloud-based web service, the Rescue Select Programming App can be accessed via any smartphone or compatible wifi-enabled device. The Rescue Select Truck Stock motor and Programming App work in tandem to help service contractors identify an original blower motor’s particular horsepower ratings and operating parameters (ex. torque load, fan speed, rotation direction), and program an in-stock replacement motor to mimic that original performance profile. This allows a service contractor to stock a smaller range of aftermarket motors and use them to replace nearly any original blower motor or other electrically-powered device or system. Additionally, programming and installation are streamlined directly at the point of replacement, versus off site/in the shop. The first to provide HVACR service contractors with the ability to program a replacement blower motor at the point of installation, the Rescue Select Programming App is driven by a continuously updated database populated with thousands of motor profiles. In addition, the App provides service contractors with options to customize or develop new performance profiles that match special or unique application requirements.

Tools & Instruments

Company: PEXOLOGY, Inc. (www.pexgun.com; 2017 AHR Expo booth No. C6618)

Innovation: PEXGUN

The new PEXGUN from PEXOLOGY is an automatic, lightweight and compact hand-held tool that attaches PEX pipe to rebar or wire mesh in less than one second. Ideal for use in radiant heating and cooling, and snow and ice melt applications, the PEXGUN facilitates affixations that are three times faster than plastic staples, and five times faster than zip ties. With typical radiant system installations requiring thousands of ties, PEXGUN can notably reduce overall installation time, while minimizing repetitive strain on the installer. An optional extension arm provides further installer relief, enabling affixations without bending or kneeling.

Ventilation

Company: Titus (www.titus-hvac.com; 2017 AHR Expo booth No. C3137)

Innovation: Helios Digital Diffuser

The Titus Helios is a wireless digital variable air volume (VAV) diffuser, providing ventilation for indoor spaces to elevate occupant comfort and improve indoor air quality. The HVACR industry's first digital diffuser powered by both ambient light and direct sunlight, Helios features a wireless solar cell that is easily installed and provides notable energy savings.

Ideal for use in a wide range of applications – including office, healthcare and educational environments – the Titus Helios provides highly efficient, industry leading technology for promoting a healthy indoor environment.

Additionally, the following 24 companies have been recognized as finalists in each of the 10 award entry categories:

Building Automation

- BELIMO Americas (Belimo Energy Valve™)
- Daikin Applied (Intelligent Equipment® for System Performance Measurement)
- Delta Controls Inc. (eZNTW - Delta Wireless BACnet Thermostat)

Cooling

- BITZER US, Inc. (CSVH Series Screw Compressor w/ Integrated VFD)
- Johnson Controls, Inc. (YORK® YVFA Free-cooling Chiller)
- Mits Airconditioning Inc. / AERMEC S.P.A. (NYB Chiller and Integrated Free Cooling Chiller)

Green Building

- Danfoss (Danfoss Turbocor® TG Compressor)
- Yaskawa America, Inc. (Z1000U HVAC Matrix Drive)

Heating

- Eichenauer Inc. (Eichenauer Duct Heater)
- Honeywell International Inc. (Equipment Remote Module (ERM))
- Samsung HVAC (Samsung DVM S Max Heat VRF System)

Indoor Air Quality

- ATAS International, Inc. (InSpire Solar Air Heating Wall Panel System)
- Friedrich Air Conditioning Co. (VRP Single Package Vertical Heat Pump System with Built-in Conditioned Make-up Air)

Plumbing

- Orival Water Filters (Model ORZ Automatic Self-cleaning Screen Filter)
- RIDGID (STRAPLOCK Pipe Handle)

Refrigeration

- CAREL INDUSTRIES S.p.A. (EVD Ice Electronic Valve Driver)
- Chemours (Opteon™ XP40 (R-449A) Refrigerant)

Software

- Coolfront Technologies (Coolfront Mobile - the zero cost flat rate pricing app)
- Dwyer Instruments (PredictAir™ Application Software for the SMART Air Hood™ Balancing Instrument)

Tools & Instruments

- Mestek Machinery (Pro-Fabriduct® Manufacturing System)
- Milwaukee Tool (M18™ FORCE LOGIC™ Press Tool)
- Triatek (Stable Vortex II® Fume Hood Conversion Kit)

Ventilation

- DuctSox Corporation (DuctSox Silencer)
- ebm-papst Inc. (RadiPac Blower)

For more information on the 2017 AHR Expo, visit **ahrexpo.com**

About AHR Expo

The International Air-Conditioning, Heating, Refrigerating Exposition (AHR Expo), which began more than 85 years ago as a heating and ventilation show, has now grown into one of the world's largest HVACR events. The Exposition is held annually in key markets and major cities across the U.S., hosting close to 2,000 exhibitors and bringing in crowds of 60,000 industry professionals. The Show provides a unique forum for the HVACR community to come together and share new products, technologies, and ideas. The event is co-sponsored by ASHRAE and AHRI, and is held concurrently with ASHRAE's Winter Conference.

About International Exposition Company, Inc. (IEC)

International Exposition Company (IEC) is a Westport, Conn.-based trade show management company. For more than 100 years, the company has built its reputation on a track record of honesty, respect and fairness for exhibiting companies and show attendees. IEC owns and manages three major trade show events; the annual AHR Expo (International Air-Conditioning, Heating, Refrigerating Exposition), the biennial AHR Expo-Mexico, and the biennial Chem Show. Attendance across the three events totals in excess of 70,000.