



AHR Expo 2022 Innovation Awards Winners Announced; Attend In-Person to See Winning Products and Technology Come to Life on the Show Floor in Las Vegas

WESTPORT, Conn., October 20, 2021 – The AHR Expo (International Air-Conditioning, Heating, Refrigerating Exposition) today announced the [winners](#) of the 2022 AHR Expo Innovation Awards. Each year, winners are chosen in ten industry categories to represent the most innovative products and technologies hitting the market in the coming year.

“This past year was a challenge for everyone, and in unique ways, the HVACR industry,” said Show Manager, Mark Stevens. “Our industry was called to the front lines to put our very best products and technologies to the test. The Innovation Awards purpose is to honor those that are pushing the bar to create innovative solutions to difficult problems. We are thrilled to celebrate this year’s winners and what they bring to the industry, as well as to continue to champion innovation among our professionals.”

The Innovation Awards encourage exhibitors to submit new products and technologies for recognition via review and selection by a panel of third-party judges made up of distinguished ASHRAE members. Entrants are evaluated based on overall innovative design, the creativity of the product or service offered, application, as well as potential market impact.

“This industry is tremendously exciting for its role in our everyday lives,” continued Stevens. “Now more than ever we have the chance to show the world just how important HVACR is. Manufacturers on the AHR Expo Show floor are in tune with their stakeholders and the greater needs of the world and are responding by developing new tools, products and services that offer safety, efficiency, and sustainable smart solutions.”

The Innovation Awards program serves as a metric to see the year-to-year growth in the industry. While the Awards officially recognize only a select few, the Show floor is a robust example of how manufacturers are growing the industry in exciting ways.

“AHR Show Management would like to formally congratulate each of our 2022 AHR Expo Innovation Award winners, as well as finalists and all our entrants, for their continued leadership and contribution to HVACR,” said Stevens. “We look forward to seeing these innovators in the marketplace in the coming year, and in-person on the Show floor in 2022.”

The 2022 AHR Expo Innovation Award Winners and finalists were selected in ten industry categories, including building automation, cooling, heating, indoor air quality, plumbing, refrigeration, software, sustainable solutions (formerly green building), tools and instruments, and ventilation.

BUILDING AUTOMATION

Winner: iSMA CONTROLLI S.p.A., *iSMA-B-MAC36NL Hybrid IoT Controller powered by Niagara Framework*, Booth C969

Innovation: The iSMA-B-MAC36NL master application controller family provides an all-in-one solution for mini-BMS. Created visualization can be displayed and controlled via HDMI output and 2 USB ports that enable connection of a mouse/keyboard or dedicated touch for the HMI panel. No PC, additional licenses, or additional costs are required. As MAC controllers are based on the Niagara Framework, it enables the integration of almost any existing protocol on the building network. The onboard M-Bus port, 2 ethernet ports, and the RS485 port can be integrated with just one device. Finally, the controller has an onboard dip and rotary switches that can be used as a part of the application. All of the features of the controller are managed by dedicated modules in Niagara Framework to accelerate the installation process and thus reduce labor costs.

Finalists in this category include: BrainBox AI, *BrainBox AI*; CUBE USA, *CUBE Edge IOT*

COOLING

Winner: Danfoss, *Danfoss Turbocor® VTCA400 Compressor*, Booth C3906

Innovation: The new VTCA400 from Danfoss offers improvements on traditional centrifugal compressor designs that are large in physical size and footprint, which ultimately lead to higher cost and space constraints for the end user. The VTCA400 solves this problem by using a patent-pending hybrid compression design that uses a combination of mixed flow and radial impellers enabling both high-performance and a compact footprint. In this design, the first stage impeller uses a mixed flow impeller with both axial

and radial components while the second stage impeller uses a radial design. The hybrid compression design allows for a compressor footprint that is half the physical size and weight of a conventional radial-only design. It also maintains high efficiency levels—a 10% improvement in full load efficiency and 30% improvement in IPLV above ASHRAE 90.1-2019 minimums when considering a three (3) compressor, 1200-Ton system.

Finalists in this category include: Copeland Compressors and Condensing Units / Emerson, *Copeland™ oil-free centrifugal compressor*; Teqtoniq GmbH, *Teqtoniq TRC150 Oil-Free Centrifugal Compressor*

HEATING

Winner: Carrier, *Infinity® 24 Heat Pump with Greenspeed® Intelligence*, Booth C1310

Innovation: The Infinity® 24 Heat Pump with Greenspeed® Intelligence is Carrier's highest-efficiency and most advanced heat pump with up to 24 SEER and 13 HSPF for premium energy savings, extremely quiet performance and premium comfort features. The unique, variable speed compressor of this unit allows it to adapt its output to the needs of the home with infinite adjustments between 25 - 100% capacity. The heat pump offers excellent humidity control and is capable of removing up to 400% more moisture than standard systems. Based on Carrier testing, all data was run with the systems cycling once they met the assumed home load. The assumed load at AHAM conditions (80/70, 80) is the capacity of the variable-speed running continuously in dehumidification mode. The difficult conditions load was determined by a Wrightsoft® load calculation for a home in Florida at 69 OD 72/63 ID. This condition was provided by a customer in Florida as "worst case."

Finalists in this category include: HVAC Manufacturing and Technology Inc., *SpaceGain Air Handling Units*; Addison, *FrostShield Defrost-Free Heat Pumps*

INDOOR AIR QUALITY

Winner: Antrum, *AntrumX™ IAQ Facilities Monitoring System*, Booth C1071

Innovation: AntrumX is a patented centralized sensing technology. AntrumX monitors IAQ for 32 spaces from a single location, using one sensor for every 16 rooms. Consolidating one centralized sensor for multiple spaces increases sensor accessibility while ensuring better overall control. Centralized sensing ensures better overall control because the data from 16 spaces comes from a single source, allowing building managers to optimize their

ventilation strategy, and save energy without sacrificing IAQ. Additionally, the AntrumX has the ability to transport air without moving parts. Leveraging the building's pressure differential between supply and exhaust, AntrumX is able to move air samples from each space to the Sensor Pack without adding energy to the system.

The Sensor Pack also monitors multiple data points across multiple rooms. Using over-the-air software updates and a state-of-the-art hardware design, the Sensor Pack can be customized to sense what's required today and be easily exchanged or updated as requirements change over the life of the building.

Finalists in this category include: LG Electronics USA, Inc., *LG Split Rooftop DOAS (Dedicated Outdoor Air System) with Energy Recovery Wheel*; TZOA, *HAVEN IAQ*

PLUMBING

Winner: Franklin Electric / Little Giant, *Inline SpecPAK, Multi-Pump Pressure Boosting System*, Booth C4334

Innovation: With only 14.5 inches deep, its unique smaller footprint makes the Franklin Electric Inline 1100 SpecPAK Pressure Boosting System small enough to be hung in a small utility closet or wall hung to preserve critical floor space. The system's Inline 1100 constant pressure pumps are quiet, compact, self-contained, and versatile. Powered by water-cooled motors, it delivers quieter operation versus traditional air-cooled motors.

The self-contained design delivers a "plug and play" solution that is part of a complete package centered around easy installation, operation, and durability. The ability to expand is a foundational and distinctive benefit. Both the suction and discharge headers are sized to accommodate the flow rate from the maximum speed of four pumps. Quick and easy disconnects to the main panel allow customers to disconnect each pump individually with minimal system disruption.

Finalists in this category include: Lochinvar, LLC, *Lochinvar Commercial Heat Pump Water Heaters*; Towle Whitney LLC, *GEN-5 Platform*

REFRIGERATION

Winner: ebm-papst Inc., *AxiEco 630-910 Axial Fan*, Booth C3324

Innovation: The AxiEco 630-910 incorporates new impeller geometry with a rotating diffuser and optimized blade design in order to reach a low noise level and high-efficiency. The steep air performance curve provides a pressure increase of more than 700 Pa, which is extraordinary for axial fans. With a maximum air flow of up to 30,000 m³/h the AxiEco 630-910 covers a wide range of different applications, especially those where high-efficiency and high back pressure are key. The integrated commutation electronics with an active PFC (power factor correction) as an option enables the fan to be used in applications with low harmonics requirements, without any external filtering measures.

Finalists in this category include: Copeland Compressors and Condensing Units / Emerson, *Copeland™ horizontal variable speed scroll compressor for refrigeration (1 to 4 HP)*; Johnson Controls, Inc., *ZS series horizontal scroll compressors with R290 and variable speed compatibility*

SOFTWARE

Winner: Bluon, Inc., *Bluon Support Platform*, Booth C6617

Innovation: The Bluon Support Platform is a mobile application that becomes a centralized hub for HVAC technicians. Bluon was built for technicians, by technicians, and provides detailed system information, just-in-time training, best practices and 24/7 live tech support. The app's most important function is its ability to make the lives of technicians easier by providing a single, trustworthy source of detailed HVAC system information, along with live tech support when needed in the field. The main features of the free app include: a comprehensive unit database of 40,000 HVAC model numbers spanning 75+ brands, with 75,000+ original manuals, troubleshooting guides, wiring diagrams, and technical specifications; best practices known as "pro-hacks" for a wide-range of situations; easy to use calculators for SH/SC, airflow, pressure setpoints, TXV sizing, etc.; HVAC training videos and tools that techs can use on the job; a revolutionary HVAC forum that gets techs the info they need when they need it; 24/7 live tech support; and a replacement parts identification tool cross-referenced by model numbers and compatible part numbers.

Finalists in this category include: CoolAutomation, *Service Provision App*; Interplay Learning, *SkillMill™*

SUSTAINABLE SOLUTIONS (formerly Green Building)

Winner: Enginuity Power Systems Inc, *E/ONE Home Power System*, Booth N7435

Innovation: Enginuity's E/ONE Home Power System is a modern rethinking of a classic combined heat and power system. Using clean and plentiful natural gas, the E/ONE produces both electricity and heat for homes or businesses. Since the E/ONE is capable of making more power than the home or business requires, the additional power can be sold back to the grid, generating income for the E/ONE's owner. In addition, the E/ONE leverages the reliability of the natural gas distribution network to replace conventional backup generators. E/ONEs easily produce all the electricity needed to operate homes or businesses, therefore the periodic blackouts such as those recently seen in Texas and California will not affect the product's ability to function.

Finalists in this category include: Caleffi Hydronic Solutions, *Commercial domestic hot water (DHW) recirculation systems combine energy efficiency and water conservation*; Danfoss, *Danfoss Turbocor® TGS380 Compressor*

TOOLS & INSTRUMENTS

Winner: Fluke Corporation, *Fluke 378 FC Non-Contact Voltage True-rms AC/DC Clamp Meter with iFlex*, Booth C2737

Innovation: The Fluke 378 FC true-rms clamp meter uses FieldSense technology to make testing faster and safer, all without contacting a live conductor. The meter measures accurate voltage and current measurements through the clamp jaw. It works by clipping the black test lead to any electrical ground and putting the clamp jaw around the conductor which results in reliable, accurate voltage and current values on the display. The 378 FC clamp meter includes a unique PQ function that senses power quality issues automatically. When making FieldSense measurements, the 378 FC will detect and display power quality issues, relating to current, voltage, power factor or any combination of the three. This allows for quick determination if an upstream supply problem exists, or if there is a downstream equipment problem.

Finalists in this category include: Climatech International S.A., *F-100 Cordless Stud Welder Machine*; RIDGID / Emerson, *RIDGID® PCS-500 Pipe Saw*

VENTILATION

Winner: Aldes, *InspirAIR® Fresh*, Booth C2734

Innovation: The InspirAIR® Fresh contains new innovative design features. A newly developed counterflow enthalpic core and unique fan scrolls ensure 75% sensible recovery efficiency at 32F as tested to the new CSA 439 standard required as of October 2020. Occupants can also expect to get ample fresh filtered air due to variable speed EC motors that adjust speed to changes in pressure due to stack effect and filter loading. The InspirAIR® Fresh is designed to provide optimal fresh air, regardless of filter type. Currently, ERVs are rated for use with a basic filter, and when using a MERV13 or HEPA filter, the airflow is reduced significantly.

Finalists in this category include: Carrier, *Carrier Aero® 39M with ECM Direct Drive Plenum Fans*; LG Electronics USA, Inc., *LG Split Compact DOAS (Dedicated Outdoor Air System)*

“It’s always exciting to follow along as these products and services come to life in the marketplace,” said Stevens. “What’s more, is to see others work to keep pace with innovation and develop new solutions. We are thrilled to be back in-person and headed to Las Vegas for a return to business. We hope you’ll join us and these winners in action on the Show floor before they hit the market.”

Funds raised from the entry fees of the Innovation Awards competition will be donated to a Vegas-area charitable cause. More information to follow.

Registration for the 2022 AHR Expo is free until January 30, 2021, and can be completed on ahrexpo.com.

ABOUT THE AHR EXPO

The AHR Expo is the world’s premier HVACR event, attracting the most comprehensive gathering of industry professionals from around the globe each year. The Show provides a unique forum where manufacturers of all sizes and specialties, whether a major industry brand or innovative start-up, can come together to share ideas and showcase the future of HVACR technology under one roof. Since 1930, the AHR Expo has remained the industry’s best place for OEMs, engineers, contractors, facility operators, architects, educators and other industry professionals to explore the latest trends and applications and to cultivate mutually beneficial business relationships. The next Show, co-sponsored by ASHRAE and AHRI, will be held Jan. 31 - Feb. 2, 2022, in Las Vegas, and is held concurrently with ASHRAE’s Winter Conference.

For more information, visit ahrexpo.com and follow @ahrexpo on Twitter, Instagram and Facebook.

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