

# INDOOR COMFORT

JANUARY 2024

THE VOICE OF THE INDUSTRY

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## NEWS

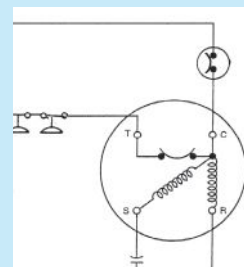
THE WEST'S LEADING MONTHLY NEWSMAGAZINE FOR THE AIR CONDITIONING, HEATING, REFRIGERATION, SHEET METAL AND VENTILATING INDUSTRIES



### Editorial Focus

What's new? What's been improved? Find out here as ICN takes a look at the latest products in our industry.

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### Troubleshooting

This month's problem focuses on a four-pin compressor that just won't start.

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## IHACI's Annual HVAC/R/SM Trade Show Pictorial

ICN takes a look back at last November's big industry event (more pics on Page 26).



## Inside

### Business Matters

## Saying Goodbye to a California Contracting Legend: David Kahn Retires, Discusses His Business, Legacy

By Lawrence Castillo  
IHACI Board Member

In 1961, Kahn Air Conditioning was established in Encino by Julian Kahn. Today, some 62 years later, David Kahn, Julian's son, prepares to leave the business and retire, and allowed me to interview him so he could share a few stories about his life, career, and legacy.

**Lawrence:** David, thanks for sitting down with me. I know this is an emotional time. Tell me about the sale of the business, and why now?

**David Kahn:** You know, I was getting approached 2,3, maybe 4 times a week by people wanting to buy the business. So many of them wanted to buy the business and flip it or turn it into something else or combine it with something else, and it was really important to me that the business maintain its image, maintain the name, and maintain the reputation while taking care of our employees and our customers in the way that we have for 62 years. I watched carefully what you were doing with Brody Pennell for the last two or three years and I saw that you were doing exactly what I wanted for this business, so at that point, it was clear there was only one choice.



(TOP) DAVID KAHN, RETIRING FORMER OWNER OF KAHN AIR CONDITIONING. (ABOVE) THE ORIGINAL KAHN OFFICES IN ENCINO, CALIF., IN 1961.

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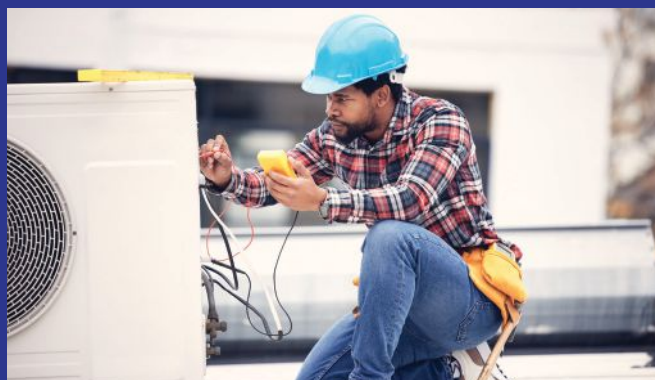
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IHACI

2024

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for more information.



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# NEW REFRIGERANT



## ON THE HORIZON FOR 2025 REFRIGERANT CHANGES AFFECTING YOUR COMPANY

In 2020, a bipartisan senate bill known as the American Innovation and Manufacturing (AIM) Act was enacted into law. It authorizes a 15-year phasedown of hydrofluorocarbons (HFCs) across a variety of applications, including HVAC. The bill gives the U.S. EPA the authority to prescribe the HFC phase down, with rulemaking underway.

### WHAT'S CURRENTLY HAPPENING

It is expected that the EPA will soon act, setting a 750 GWP limit for air conditioning in 2025. That will mean that R-410A, with a GWP of 2,088, will no longer be able to be used in new equipment manufactured after the compliance date – which has yet to be determined. It is estimated, however, that the transition to lower GWP refrigerants will begin in 2025.



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No Flame Propagation		
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Increasing Toxicity →

↑ Increasing Flammability

### WHAT ARE THE MOST COMMON ALTERNATIVES?

The most common low-GWP alternatives to R-410A are classified by ASHRAE as mildly flammable, or A2L. Due to their mildly flammable characteristics, A2L refrigerants will require updates to standards and building codes to allow for their safe installation. As a leading influencer on regulatory issues, we are actively involved in the discussions and will continually keep you informed and prepared.

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# Industry News



## CALIFORNIA



### Brody Pennell Acquires Kahn AC

**Los Angeles, Calif.** – Brody Pennell Heating & Air Conditioning, the leading residential HVAC company in Los Angeles since 1945, announced it has acquired Kahn Air Conditioning, the legendary San Fernando Valley contractor that was established in 1961. The acquisition marks Brody Pennell's continued expansion and the further strengthening of its position as one of the premier providers of residential HVAC service in the Southland.

Jordan Wadsworth, CEO of Brody Pennell, expressed gratitude about the opportunity to add Kahn Air Conditioning to the Brody Pennell family. "Our mission as we grow our portfolio is to continue to add legacy brands that can live up to the reputation that our platform company Brody Pennell has in the Los Angeles marketplace. Kahn has many of the

same hallmarks as Brody Pennell. A Five Star customer service reputation and a philosophy of building long-term relationships with clients. Those were the building blocks that attracted us to this legendary business."

Kahn Air Conditioning was established in 1961 by Julian Kahn and is one of the most awarded and celebrated Carrier dealers in the country. Julian Kahn was a pioneer in bringing air conditioning to the residents of Los Angeles and was the first inductee into the Carrier Dealer Hall of Fame. His son, David, has carried the business to new heights as a second-generation owner.

David Kahn, whose legendary guidance has kept his family business relevant and respected, explained, "It was really important to me that the business maintain its image, the name, and maintain its reputation while taking care of our employees and our customers in the way that we have for 62 years. I watched carefully what Lawrence has done with Brody Pennell over the last two or three years and I saw that he was doing exactly what I wanted for this business, so at that point, it was clear there was only one choice."

Lawrence Castillo, President of Brody Pennell, added "The Kahn family has built a business that has been a part of the fabric of the San

Fernando Valley for over 60 years. When you combine the heritage of Brody Pennell's 78 years in West Los Angeles with Kahn Air Conditioning's 62 years in the Valley, it becomes a snapshot of the history of HVAC in SoCal. It's incredibly special. I can't wait to see what we can do now that both brands are on the same team."

Brody Pennell Heating & Air Conditioning, is the leading provider of heating & air conditioning service, repair, and replacement in Los Angeles. Brody Pennell is now in its 78th year, was voted the BEST Heating & Air Conditioning company in Southern California in 2023 by the readers of the *Los Angeles Times*. For more information, please visit: [www.brodyennell.com](http://www.brodyennell.com).

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### CEC Celebrates Clean Energy Hall of Fame Winners

**Sacramento, Calif.** – The California Energy Commission recently presented six energy leaders with the 2023 Clean Energy Hall of Fame Awards for their courageous and outstanding work in helping California achieve a 100 percent clean energy future for all.

The fourth annual event featured special speakers as well as a ceremonial dance by the Sacramento Youth

Group – Miwok Style Dancing California and a cultural performance by Samba da Terra.

Short summaries of the awardees are below:

#### Lifetime Achievement Award

• Cliff Rechtschaffen, Member, California Air Resources Board, Oakland, Calif.

Cliff Rechtschaffen was named to the California Air Resources Board in September 2023. He received the Lifetime Achievement Award, which recognizes an individual who has retired or announced their retirement during the year of the event who has at least 20 years of experience advancing clean energy, is considered a leader in their community, and has had a significant positive impact on California and frontline communities.

He was a commissioner of the California Public Utilities Commission from 2017 to December 2022 before retiring from fulltime public service. His career has been dedicated to advancing human-centered environmental protection policies. He has worked on climate, energy, and other environmental issues as a senior advisor to Governor Edmund G. Brown Jr. and in multiple roles with the California Attorney General's

Office, including litigating cases enforcing environmental protection and right-to-know laws.

As a law professor at Golden Gate University (GGU) School of Law, he helped students apply a human-centered perspective to environmental law by co-authoring the first environmental justice casebook and co-founding/co-directing GGU's Environmental Law and Justice Clinic.

#### Youth Game-Changer Award

• Ava Acevedo, Student and Activist, Stanford University, Lodi, Calif.

Ava Acevedo is a climate activist and a Stanford University student who received the Youth Game-Changer Award. The award recognizes an individual 18 years of age or younger, or a leader of an organization focused on working with youth who are helping to advance California toward a clean energy future by combating climate change through innovative methods and inspiring a new generation of energy experts, entrepreneurs, and leaders who change the game.

She is a core leadership team member of the Green Schools Campaign (GSC). She founded the GSC chapter in her hometown of Lodi and led a campaign to install rooftop solar panels and promote efficient energy policies. The 19-year-old Stanford sophomore helps lead Fossil Free Stanford and is a member of Coalition for a True School of Sustainability, which both seek to cut ties between Stanford and fossil fuel companies.

#### Tribal Champion

• Linnea Jackson, General Manager, Hoopa Valley Public Utilities District, Hoopa Valley Tribe, Hoopa, Calif.

Linnea Jackson, the general manager of the Hoopa Valley Public Utilities District, was named the Tribal Champion. The award recognizes an individual who is a tribal member, tribal employee, or a person that works for a tribe who has advanced a clean energy future by combating climate change through innovative projects, long term service, dedication to implementing technology, or has served in a key coordinating role that has led to more equitable outcomes and/or transformational change for tribes or tribal communities in California.

In addition to overseeing daily utilities management, she has

Continued on Page 6

## Find the GOLD KEY and UNLOCK a PRIZE



Somewhere hidden inside the pages of Indoor Comfort News lies a golden key ! If you've discovered it, please email us the page number and location (e.g., page 4, inside USACD advertisement). The first correct email will receive a prize, courtesy of Indoor Comfort News!

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Note: Winners cannot win more than once in 12 months.





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Continued from Page 4

secured funding in collaboration with state and federal partners to promote community grid reliability and energy independence for the Hoopa Valley Tribe. She takes on legacy projects with the goal of having a generational impact on her community, and her mentorship and social media presence help inspire the next generation of California energy leaders.

## Clean Energy Champions

Three Clean Energy Champions were honored for combating climate change and contributing to California's clean energy future through their bold moves, leadership, and innovative ideas, while helping benefit communities in California through more equitable outcomes.

- Keith Fisher, Teacher, Calexico High School, Calexico, Calif.

Keith Fisher is a career technical education teacher at Calexico High School near the Mexico/California border. He teaches the school's advanced auto shop class which trains students to build and maintain electric vehicles. The class prepares students for careers in renewable energy and environmental sustainability, which Fisher encourages students to pursue.

- Reverend Frank Jackson, Jr., Chairman and Chief Executive Officer, Village Solutions Foundation and Chairman Council of Presidents, New Mount Pleasant Missionary Baptist Church, Inglewood and Irvine, Calif.

Reverend Frank Jackson, Jr. is the chairman and chief executive officer of the Village Solutions Foundation. The faith-based community development organization based in Southern California mentors low-income and minority communities on finance and energy issues, helping them save money and the environment through appliance replacement, home weatherization, and energy stewardship education programs. He is determined to end fossil fuels to help his community.

- David Kaneda, Principal and Thought Leader, IDeAs Consulting, San Jose, Calif.

David Kaneda is the founder of IDeAS Consulting, a San Jose firm designing high-performance electrical systems for buildings. Since designing the first net-zero energy commercial office building in the United States in 2005, he has designed more than 40 net-zero construction and retrofit projects. He shares his strategies for innovative electrical systems at conferences and is developing new strategies to convert existing buildings to become all-electric.

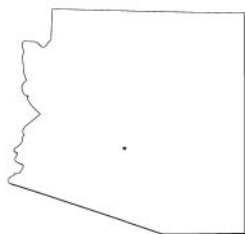


MEMBERS OF THE CEC 2023 CLEAN ENERGY HALL OF FAME.

The California Energy Commission is the state's primary energy policy and planning agency. It has seven core responsibilities: advancing state energy policy, encouraging energy efficiency, certifying thermal power plants, investing in energy innovation, developing renewable energy, transforming transportation, and preparing for energy emergencies.

For more information, visit [www.energy.ca.gov](http://www.energy.ca.gov).

## ARIZONA



## HARDI Conference Breaks Attendance Records in Phoenix

**Phoenix, Ariz.** – The recent Heating, Air-conditioning & Refrigeration Distributors International (HARDI) conference, in Phoenix again saw record-breaking attendance.

HARDI welcomed more than 1,940 people, including 519 wholesaler attendees from 180 companies, to the JW Marriott Phoenix Desert Ridge Resort for its 2023 conference, Ascend. The conference included a sold-out Booth Program featuring 250 vendors and a Solutions Center with 40 different service providers.

Ascend was the organization's best-attended annual conference to date and a testament to the HVACR industry's enthusiasm for networking and educational content, a press release from HARDI said.

"We are beyond excited to see the members come together to collaborate and connect," said Allison Greene, HARDI's marketing director. "The HARDI team's hard work provided a superior collection of speaker content and networking

opportunities to enable members the opportunity to elevate their strategic planning as well as their personal growth initiatives."

The event featured six keynote speakers whose presentations covered topics from innovation to work force management to geopolitical developments that are impacting not only the industry but global affairs. Speakers included Meagan Johnson, a generational humorist, who kicked off the conference with her opening presentation, "Zap the Gap: Generational Differences Reexamined"; geopolitical strategist Peter Zeihan, who spoke about global demographics, economics, politics, and technology; and best-selling author (and former Olympic speed skier) Vince Poscente, who talked about activating one's purpose and accelerating growth.

The conference also featured 26 breakout sessions that offered insights on business development and current industry and business trends.

The next HARDI annual conference will be held Dec. 7-10, 2024, at the Marriott Marquis in Atlanta, Georgia.

## RenewAire ERV Wins Brilliance Award at Summit

**Phoenix, Ariz.** – RenewAire, a Waunakee, Wisc.-based manufacturer of HVAC and indoor air quality (IAQ) products, received a Brilliance Award at the TecHome/Builder and Housing Transformation Summit in Phoenix. RenewAire's residential and light commercial building energy recovery ventilator (ERV) entry, the EV Premium Series won the Automated Ventilation System (HRV and ERV) section in the HVAC/IAQ category.

A panel of single and multi-family housing industry members judged dozens of the year's most innovative and technologi-

cally advanced housing products, services and solutions, according to John Galante, president, AE Ventures, Boston, who announced the awards and hosted the event. The EV Premium Series' MH, LH and SH models' details are now posted at <https://builderinnovator.com/renewaire-ev-premium-series-ervs/>. Winners in other categories span from all the building trades and include some of the housing industry's most prestigious brands, such as General Electric, Panasonic, Dish, Eaton and others.

The hard-wired EV Premium Series' innovations align with the seventh-annual Brilliance Awards' underlying automation technology theme. The residential and light commercial ERVs use energy efficient electronically commutated (EC) motors as they replace stale, contaminated indoor air with fresh outdoor air. Static plate enthalpy cores transfer energy from exhaust air to efficiently precondition outdoor air for optimum cooling, heating and humidity control. The variable speed fan automatically adjusts to remove airborne contaminants. The Boost Mode's demand-ventilation strategy is activated by occupancy sensors, or a space's manual remote push-button to maintain safe levels of CO2, VOC and other airborne contaminants.

For more information, please visit [www.renewaire.com](http://www.renewaire.com).

## Parts Town to Open Distribution Center in Glendale

**Glendale, Ariz.** – Parts Town, a distributor of parts for HVAC equipment, consumer electronics, home appliances, food service equipment, and similar products, plans to open a 420,000-square-foot distribution center in Glendale, Arizona, in late 2024.

The new distribution center will feature the same high-tech automation and robotics technology as the flagship Parts Town facility in Addison, Illinois, extending in-stock availability and enhancing the delivery speed of mission-critical parts, according to a press release from Parts Town.

The new distribution center will be designed to support accelerated growth and product expansion and will initially create approximately 100 jobs, the company said.

"Our organic growth continues to be very strong and has exceeded expectations in 2023," said Steve Snower, CEO of Parts Town Unlimited. "We are invest-

ing ahead of expected accelerated growth and product expansion in 2024 and beyond. Our emphasis on centralized, high-tech distribution allows customers to access more products, less split shipments, faster delivery, and higher quality."

Sustainable, environmentally friendly practices will be core to the new distribution center, the company said. Parts Town intends to purchase renewable energy certificates and carbon offsets to reduce emissions associated with the new center, and will use high-efficiency LED lighting throughout the facility.

"The Glendale community is excited to welcome Parts Town as our newest business resident, and we look forward to the added value this distribution center will deliver for our workforce and economy," said Mayor Jerry P. Weiers. "Parts Town's decision to expand to Glendale is a reflection of our business-friendly environment, strategic location, and commitment to fostering business growth and innovation."

Parts Town expects another year of 20%-plus organic growth in its core food-service parts category, and has also seen strong growth in the residential appliance parts category and a surge in demand for HVAC parts since it began carrying them earlier in the year, the press release said.

The company expects to exceed \$2.4 billion revenue for the year, compared to \$1.8 billion in 2022. Parts Town Unlimited now has nearly 50 brands across the globe and has grown to more than 5,300 employees worldwide.

## Air Force Vet Wins Military Hero HVAC Giveaway

**Glendale, Ariz.** – Forrest Anderson Plumbing and Air Conditioning, a family-owned business in the Phoenix area since 1961, has announced the winner of its eighth annual Military Hero Giveaway.

Don Kuhl, a Phoenix native, U.S. Air Force veteran, and civil servant, secured the most public votes and won an a/c unit in the giveaway, which honors the sacrifices of local veterans, active-duty service members, and their families, a press release from Forrest Anderson said.

"This is incredible. An a/c unit, especially these days, is of such value. It is so expensive compared to 10 years ago, and we would

Continued on Page 8



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- Up to **\$75** rebate on high-efficiency natural gas storage water heaters.

For additional product information and to learn more about available rebates, visit [socalgas.com/Rebates](https://socalgas.com/Rebates)



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# Industry News



AIR FORCE VETERAN DON KUHL (CENTER), WINNER OF FORREST ANDERSON PLUMBING AND AIR CONDITIONING'S EIGHTH ANNUAL MILITARY HERO GIVEAWAY. WITH HIM ARE CAMERON DAVIS, LEFT, PRESIDENT OF RAZOR THIN MEDIA, AND AUDREY MONELL, PRESIDENT OF FORREST ANDERSON.

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never be able to afford it," said Kuhl in the release. "I am so grateful for my family, gaming friends, and fellow veterans for voting for me, and thank you, Forrest Anderson team."

Kuhl served as a staff sergeant in the Air Force from 1989 to 1998 and served in the first Gulf War. He is currently a civilian employee at Luke Air Force Base, where he designs training devices to help crews learn how to use their aircraft.

In his spare time, Kuhl loves to hang out with family and friends and plays video games as a way to connect with friends online. Kuhl is currently in the process of renovating his childhood home, where he lives with his partner of more than 13 years.

"This giveaway serves as a humble token of gratitude for Don's dedicated service to our country and local community," said Audrey Monell, president of Forrest Anderson. "We extend our heartfelt thanks to all the finalists this year, and by sharing their stories, we aim to provide support and shed light on the significance of our military community. We are profoundly grateful for their service and the sacrifices they've made for our country."

Forrest Anderson will replace Kuhl's old unit with a brand-new unit, fully installed. As part of the surprise, Cameron Davis, president of Razor Thin Media, presented him with an additional cash prize of \$500. Runner-up Jeanette Garcia of Avondale won a free a/c tuneup.

Since 2016, Forrest Anderson has worked with local partners to sponsor the Military Hero Giveaway, each year around Veterans Day, because of the health risks of living without air conditioning in Arizona.

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## Winsupply Buys Milford Companies

**Justin, Texas** – Winsupply Inc. has acquired Milford Companies of Justin, a distributor of pipe, valve, and fitting (PVF) and waterworks equipment.

Milford Companies has been operating since 1972, supplying materials and rental equipment required for infrastructure needs, with five locations across Texas, Oklahoma, and New Mexico.

The details of the purchase were not disclosed. Sparkstone Capital Advisors and OMM represented Milford Companies during the transaction.

Chase Brown, who currently serves as the COO of Milford, will continue leading the company as president.

"It's truly rare to find two businesses that share each other's core values, like Milford and Winsupply. Milford has been part of my family for three generations, so I didn't take it lightly when we decided to find a partner," Brown said. "We had the privilege of exploring various options during this process, and Winsupply stood out as the clear choice to carry our legacy forward. From our first meeting, it was clear that our business styles were nearly identical. We are confident that this partnership will not only preserve the rich history of our business but also pave the way for many more generations of entrepreneurial success."

Shawn Beard, the CEO of Milford, will continue to play a role in the business as an actively involved

leader and member of the board of directors.

"From the first meeting with Milford's leadership team, we knew they had something special that would work great within the Winsupply model," said Steve Coen, director of business development at Winsupply. "Milford excels at wholesale distribution, showcasing a strength that aligns well with the strategic goals of Winsupply. Milford's emphasis on customer success is evident, as Milford has dedicated efforts to create services that contribute to their customers' victories."

## NATIONAL



## Orlando to Host ACCA 2024 Conference

**Orlando, Fla.** – HVACR professionals from across the U.S. are invited to participate in ACCA 2024, a learning experience for business owners, entrepreneurs, consultants, and innovators.

Hosted in partnership with the Florida Air Conditioning and Refrigeration Contractors Association (FRACCA), the conference will be held at the Loews Sapphire Falls Resort in Orlando, Florida, March 11-14, 2024.

Attendees will have opportunities to learn from industry experts, a press release from ACCA said. The conference will feature educational sessions and speakers focused on topics such as workforce development, leadership, finance, and the technical aspects of the HVACR business.

The sessions are tailored to address the elements that are essential for business success in the HVACR industry.

The conference will feature a keynote address by Jake Havron, a speaker and strategist, that will be sponsored by Rheem and Rudd. In his keynote, Havron will challenge traditional notions of leadership, unveiling the "Four Pillars of Influence" and providing attendees with the tools to connect deeply with their teams, foster collaboration, and inspire positive change within their organizations.

ACCA 2024's collaboration with FRACCA will enhance the event with a broad range of content and networking opportunities, ACCA said. Attendees will join a network of best-in-class peers and gain in-

sights not only from expert speakers but also from fellow industry professionals.

Attendees will have the opportunity to acquire Florida continuing education credits, and can also participate in the business and technical sessions ACCA will provide.

ACCA 2024 attendees can also look forward to appearances by product and service providers, who will offer insights into the latest industry innovations. The conference will also provide opportunities for networking, allowing attendees to connect with peers from around the country while enjoying the atmosphere on the doorstep of Universal Orlando Resort.

"We are excited to bring together the best minds and talents in the HVAC industry for ACCA 2024," said Paula Huband, director of events at ACCA. "Our collaboration with FRACCA, coupled with our stellar lineup of speakers and engaging sessions, promise a unique learning experience that will empower attendees to drive their businesses to new heights."

For more information about ACCA 2024, and to register, visit [acca2024.com](http://acca2024.com).

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## Danfoss Turbocor Celebrates 10th Anniversary

**Baltimore, Md.** – Danfoss Turbocor, manufacturer and pioneer of the world's first oil-free, magnetic bearing compressor for the HVAC industry, is celebrating its 10th anniversary as a wholly owned Danfoss company. Initially founded in 1994 and later becoming a joint venture with Danfoss in 2004, its Turbocor® compressors have delivered versatile and unmatched efficiency, with low-Global Warming Potential compatibility, helping to reduce emissions while earning strong return on investment for customers.

Ricardo Schneider, president of Danfoss Turbocor, stated: "From the beginning, we knew this technology was transformative; the cutting-edge technology combined with our strong manufacturing and sales network enabled us to provide our customers with solutions to improve operating performance and reach unprecedented energy efficiency levels."

The unique oil-free, magnetic bearing technology of Turbocor compressors results in zero performance degradation over the life of the compressor, reducing maintenance and replacement costs. The permanent magnet motors and variable-speed drives provide ef-



THE DANFOSS TURBOCOR COMPRESSOR.

iciency at both full and part loads. Their flexibility to be used in air cooled, water cooled or evaporative cooled chillers operating across a wide range of applications such as comfort cooling, low temperature process, ice storage and heat recovery, has resulted in over 130,000 compressors being installed around the world.

Over the years, Turbocor compressors have been recognized with multiple industry awards, including the Alliance to Save Energy's Innovative Star of Energy Efficiency award, the Air Conditioning, Heating and Refrigeration Institute's 2022 Product of the Year and the U.S. Environmental Protection Agency's Climate and Ozone Protection Award.

Globally, Danfoss Turbocor is continuing to grow its footprint, with an expanded facility in Haiyan, China opening next year, and the establishment of a configuration center in Nordborg, Denmark, at Danfoss' corporate headquarters. The Nordborg site currently handles sales and service for Turbocor's European customers; a new production facility is scheduled for completion in 2026.

At its headquarters in Tallahassee, Fla., Danfoss Turbocor continues to build collaborations with local institutions. In 2021, the company began a five-year partnership with FAMU-FSU College of Engineering, providing \$750,000 of scholarships and research grants to first-generation or underrepresented minority students, to develop engineering talent in the local community and help students achieve their career goals. The company has also partnered with Tallahassee Community College on workforce development programs, such as its CNC machinist apprenticeship.

Soon, the company will celebrate another milestone: its new 167,000 sq ft manufacturing facility in Tallahassee is scheduled for completion in early 2024. The new facility will increase current manufacturing capacity to meet a fast-growing demand from American and international markets for high efficiency compressors for cooling and heating. The expansion is projected to create significant additional jobs in the Tallahassee area.

Continued on Page 10



# The York® HMM7 Horizontal Discharge Heat Pump:

**2-5 Ton • Standard 24 Volt Controls • Works With Conventional Air Handling Units and Evaporator Coils • Price Competitive With Standard Heat Pumps**



**NEW LOWER PRICE!**

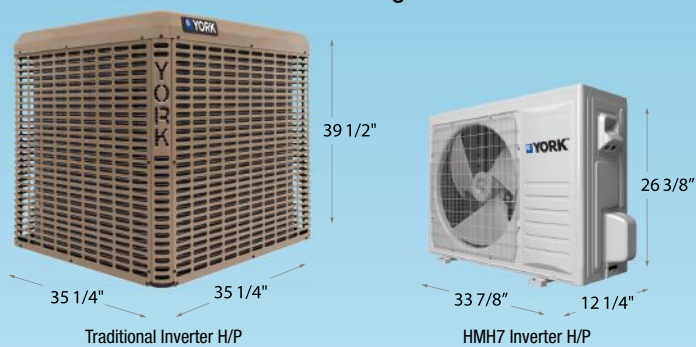
- Up to 18 SEER/10.5 HSPF
- 40% more compact than standard heat pump units and can be installed in tighter spaces – ideal for high-density areas
- 36% quieter operating sound; as low as 54 dBA
- Capable of dual-fuel operation when paired with an existing or new furnace, using a Venstar thermostat
- Can be installed in conjunction with existing furnace for lower installation cost and potentially avoid electrical service upgrade
- Modulating technology maintains exact temperatures by operating from 35-100% capacity
- No unique installation procedures required
- Long line set length (up to 246 ft)
- Designed to work with standard ECM indoor air handlers

Model	Tons	SEER	HSPF	Height (Inches)	Width (Inches)	Depth (Inches)	Operating Weight (Lbs)	Sound Range (dBA) Low-High*
HMH72B241S	2	17.5	9.0	26 3/8	33 7/8	12 1/4	112	54-65
HMH72B361S	3	18.0	10.5	33	37 3/8	13 3/8	155	56-68
HMH72B481S	4	18.0	9.5	54 5/8	37 3/8	13 3/8	227	62-69
HMH72B601S	5	17.0	10.0	54 5/8	37 3/8	13 3/8	251	62-73

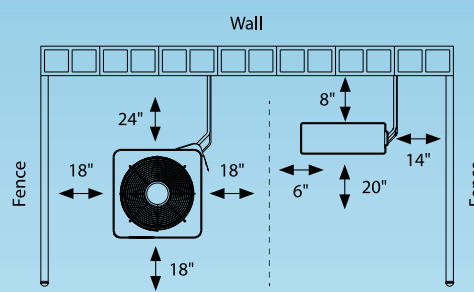
**NEW low-cost cooling-only unit now available!**

\*High sound rated in accordance with AHRI Standard 270.

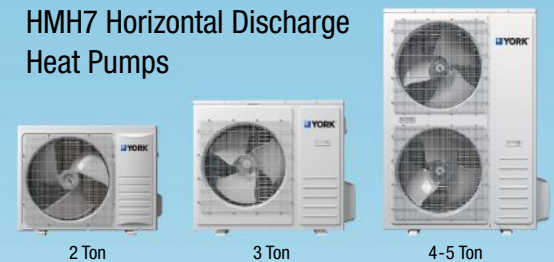
40% smaller footprint compared to traditional vertical discharge units



Traditional, Vertical Unit Minimum Clearances vs. HMM7 Minimum Clearances



HMM7 Horizontal Discharge Heat Pumps



Product registration required.



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# Industry News

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## DiversiTech Buys Niccons, GIA and Vorpa

Duluth, Ga. – DiversiTech Corp., North America's leading supplier of components and related products for heating, ventilation, air conditioning and refrigeration (HVAC/R) professionals, announced the acquisition of Niccons of Vicenza, GIA of Trecate, and Vorpa of Riccione, Italy. These three companies will significantly enhance the product range, service and manufacturing capabilities of DiversiTech Europe. The combined company will have over 300 employees, three distribution centers and six manufacturing plants in Europe that complement its seven manufacturing operations in North America.

Andy Bergdoll, CEO of DiversiTech, expressed enthusiasm for the acquisition saying, "We are thrilled to welcome the Niccons, GIA and Vorpa teams to the DiversiTech family. These three companies, in collaboration with our teams at Rodigas, Artiplastic, Castel and Pump House/DiversiTech UK, are committed to delivering a full range of HVAC/R parts, supplies and accessories to both our European and North American wholesale channel partners. We look forward to working with our customers in Europe to explore ways we can support their growth and simplify their supply chain for HVAC/R parts, suppliers and accessories."

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## PHCC Announces Winners of National Apprentice Contest

Cleveland, Ohio – The Plumbing-Heating-Cooling Contractors – National Association's (PHCC) Educational Foundation is proud to announce the winners of the national plumbing and HVAC apprentice contests. The contests were held Oct. 25 and 26 in Cleveland on the tradeshow floor during the PHCC – National Association's CONNECT 2023 event. A total of 21 plumbing and 11 HVAC apprentices from across the nation took part in the contests.

HVAC Apprentice Contest Winners:

- First place: Jacob Lee of P1 Service in Lenexa, Kansas. He was sponsored by RIDGID.
- Second place: AJ Posivak of Deluxe Plumbing & Heating in Bethlehem, Pennsylvania. He was sponsored by Milwaukee Tool.



THE WINNERS OF PHCC'S NATIONAL APPRENTICESHIP CONTEST.

- Third place: Raulie Rojas of Midwestern Mechanical in Rapid City, South Dakota. He was sponsored by RIDGID.

Plumbing Apprentice Contest Winners:

- First Place: Cody McDonald of Van Contracting, Inc. in Columbia City, Indiana He was sponsored by the International Code Council.
- Second place: Nick Vasknetz of Local 525 in Las Vegas, Nevada. He was sponsored by Home Depot Pro.
- Third Place: Joseph Hardin of Local 333 in Lansing, Michigan. He was sponsored by Bradford White.

The plumbing apprentices were required to rough-in a bathroom system. The set-up includes a toilet, sink and shower, complete with supply, waste and vent lines, plus cleanouts and extra features designed to test the contestants' knowledge and skills. The test set-up includes a variety of pipe materials – cast iron, copper and PVC and corresponding joining methods.

The HVAC competitors were required to complete a written test, demonstrate proper brazing techniques and perform a hands-on diagnostic on an HVAC package unit, with system errors created by the Foundation's contractor volunteers for the competition. The competitors also had to perform a pressure and leak test, demonstrate proper refrigerant recovery procedures and the ability to accurately take a variety of instrument readings.

A dedicated team of contractor volunteers arrived two days before the competitions to assemble the competitor test benches, distribute the materials and supplies and set up the testing areas. They monitor the competitions, evaluate the apprentices' work and provide constructive feedback on each competitor's performance following the event.

The contests are made possible by the generous support of several industry sponsors who

provide monetary support and in-kind material and tool donations. Sponsors for the 2023 competitions include: AB&I Foundry; A.O. Smith; Bradford White Corp.; BNP-Plumbing & Mechanical Magazine; Cast Iron Soil Pipe Institute; Contractor Magazine; Copper Development Association; Delta Faucet Co.; Emerson Copeland; Home Depot Pro; Hudson Technologies; International Association of Plumbing and Mechanical Officials (IAPMO); the International Code Council, Kohler Company; Legend Valve; Milwaukee Tool; Moen; North American Technician Excellence (NATE); NIBCO INC.; Oatey; NIBCO INC.; PHCC Academy; PHCC-National Auxiliary, Rheem HVAC and Water Htg. Division; RIDGID; Sharkbite; Sioux Chief Manufacturing Co.; State Water Heaters; Tyler Pipe & Coupling; and Zoeller Pump Company.

"I am proud of the Foundation volunteers and staff who pull these contests together," said Foundation Chair Kevin Tindall. "These are complicated events between getting the apprentices here and then having all the materials, tools, equipment, volunteers and judges ready to go – and all in a different city each year. It is amazing to see it all come together to create a great experience for the apprentices who are competing."

The PHCC Educational Foundation, a partnership of contractors, manufacturers, and wholesalers, was founded in 1987 to serve the plumbing-heating-cooling industry by preparing contractors and their employees to meet the challenges of a constantly changing marketplace. Students interested in pursuing a career in the plumbing or HVACR professions are invited to visit [phccfoundation.org/scholarships](http://phccfoundation.org/scholarships) for information on 2024 scholarships.

The premiere organization for the p-h-c professional, PHCC provides legislative advocacy, education and training to approximately

3,300 plumbing and HVACR open shop and union businesses and 65,000 technicians. Visit [www.phccweb.org](http://www.phccweb.org) for more info.

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## Honeywell to Buy Carrier's Global Access Solutions

Charlotte, N.C. – Honeywell International Inc. plans to buy the Global Access Solutions business at Carrier Global Corp. for \$4.95 billion in an all-cash transaction.

The acquisition will enhance and strengthen Honeywell's building automation capabilities and enable it to become a leading provider of security solutions for the digital age, the company said.

The acquisition, which includes both hardware and software solutions, further supports Honeywell's recently announced plans to align its portfolio with three megatrends: automation, the future of aviation, and the energy transition. The Global Access Solutions business will enhance Honeywell Building Technologies' business model of leading with high-value products that are critical for buildings, the company said.

The acquisition will add three brands with a focus on life safety and digital access solutions to Honeywell's portfolio. They are:

- LenelS2, which provides commercial and enterprise access solutions, including well-known offerings OnGuard and NetBox, used by numerous Fortune 100 companies.
- Onity, which offers electronic locks, including hospitality access, mobile credentials, and self-storage access. Nine of the 10 top hotel chains are customers, Honeywell said.
- Supra, which offers cloud-based electronic real-estate lockboxes as well as a digital platform to optimize scheduling for property showings.

"Honeywell's strong track record delivering building automation products and services makes this a natural fit that will create a leading security platform with forecasted annual revenue in excess of \$1 billion," said Vimal Kapur, the Honeywell CEO. "By leveraging the capabilities of the combined company's advanced security and safety systems, customers will be able to maximize their performance, efficiency, and cost-effectiveness and create long-term, sustainable value."

The transaction is expected to close during the third quarter of 2024, subject to customary closing conditions, including regulatory approvals.

## Mercury Off the Planet Contest Winners Named

New York, N.Y. – Thermostat Recycling Corp. (TRC) announced that Johnstone Supply Co., Refrigeration Sales Corp. and Sigler Wholesale Distributors are the 2023 Banish Mercury Off the Planet (BMOP) contest winners.

Overall, wholesale members of the Heating, Air-Conditioning & Refrigeration Distributors International (HARDI) collected 194 pounds of mercury from 57 companies in 2023, a decrease of 8.5% compared with 2022. In addition, more than 300 branch locations returned collection bins during the contest period, from May 1 to Oct. 31.

"We are pleased to witness the support of our partners who continue to diligently search for and recycle mercury-containing thermostats in our homes and businesses," said Danielle Myers, Executive Director, TRC.

"Our mission is essential to maintaining a cleaner and safer environment, and the efforts of these HARDI wholesalers make a significant contribution to supporting our recycling mission. It is worthwhile mentioning that this is the 11th consecutive year that Johnstone Supply has been a winner, placing them at the forefront of companies that commit themselves to a cleaner environment.

"TRC celebrated its 25th anniversary this year, and our success vividly demonstrates the unwavering support of our HARDI partners who participate year in and year out," said Myers.

TRC released the names of the BMOP winners during HARDI's annual conference Dec. 4 in Phoenix, AZ.

Distributor Winners are:

- Johnstone Supply recycled the most pounds of mercury overall at 65.1 pounds.
- Refrigeration Sales Corp. recycled the highest average pounds of mercury with 7 pounds.
- Sigler Wholesale Distributors had the highest participation rate (for 10 branches or more) with 41%.

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## Survey: Majority of Homeowners Open to Heat Pumps

Suwanee, Ga. – According to a survey conducted by Mitsubishi Electric Trane HVAC US (METUS), 63% of U.S. homeowners have heard of the Inflation Reduction Act (IRA,) and 54% ranked a

# Industry News

government incentive, such as a tax credit or rebate, as one of the top three reasons why they would consider installing a heat pump.

These findings, among others, were uncovered by the METUS 2023 Heat Pumps & Homeowners Index. The survey explored homeowners' attitudes toward the IRA and home upgrades, specifically heat pumps, that increase sustainability.

Most (83%) survey respondents said they were concerned about the impact of energy bills on their household budgets. Further, 46% responded that the cost to cool their homes last summer rose "somewhat" or "much more" than the summer before, and 54% said it cost "somewhat more" or "much more" to heat their home this winter, compared to last winter.

According to METUS, 24% of respondents said their home is already equipped with a heat pump, and 69% said they would consider installing a heat pump in their home. Some 28% of homeowners said the installation cost is preventing them from considering a heat pump. In addition to government incentives, reducing energy bills and improving air quality also were ranked among the top three reasons respondents would consider installing a heat pump, by 49% and 36%, respectively, of survey respondents.

The survey also found that more homeowners would be interested in tax credits for installing a heat pump or high-efficiency electric heating, ventilation, air conditioning, and/or water heating than would be for installing solar panels or buying a new or used electric vehicle.

## Company to Promote Skilled Trade Job Opportunities

**Dalton, Ga.** – Trade Jobs, a recruiting platform built specifically for the HVAC, electrical and plumbing industries, has recently launched. The company aims to address the ongoing and increasing employment crisis in the trades.

A report by Fox Business stated that there have been more than 770,000 skilled job postings from nearly 95,000 different employers across the country in 2023. With the

older generation of skilled workers retiring, that number will likely continue to increase.

Trade Jobs is addressing the longstanding challenges of costly and inefficient recruitment processes. Today, the company announces a transformative solution to streamline hiring and connect employers with pre-qualified candidates at a fraction of the cost of traditional methods.

"The employment crisis in the trades has been well-documented as the older generation continues to enter retirement," said Jeff Bond, president of Trade Jobs. "Contractors are always looking for professional, skilled workers to fill those vacancies, but it can be difficult."

Built for and crafted by trade professionals, Trade Jobs was de-

veloped to help contractors in the HVAC, Electrical and Plumbing spaces recruit qualified candidates. The platform helps reduce the need to sift through hundreds of resumes from unqualified candidates by connecting employers with job seekers who meet their specific job requirements.

Start posting jobs and connecting with qualified candidates by going to <https://gettradejobs.com>.

## Wrench Group Expands into Oklahoma Market

**Sarasota, Fla.** – Home services business Wrench Group has expanded into Oklahoma City, Okla., as it continues its "greenfield" growth

strategy of launching businesses from the ground up in markets across the country.

The company moved into its 27th market when Comfort Wave Home Services, an HVAC, plumbing, and electrical services provider, opened its first location in Oklahoma City in November. Although Comfort Wave is a new name on the local scene, its team has more than 125 years of combined experience serving homeowners in the region, and already has established roots with area community events and organizations, Wrench Group said.

"Oklahoma City is known for its friendly people and close-knit community, and that is exactly why we are launching a new company built by experienced area technicians and home-services professionals," said

Ken Haines, Wrench Group CEO. "Comfort Wave will make use of the most technologically advanced operations systems and solutions to help our team grow the business and provide an excellent customer service experience."

Comfort Wave plans to bring 100 new jobs to Oklahoma City in the first 15 months of operation in a service area that encompasses all of central Oklahoma.

"Oklahoma City quickly stood out as a place full of talented people looking for the right opportunity to be in a thriving, dynamic, and growing work environment. With Oklahoma City's friendly business climate and rapid growth, it seemed like the perfect fit in our greenfield initiative," said Andy

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Continued from Page 11

Piercefield, Wrench Group's vice president of business development and retail operations.

Oklahoma City is the seventh market in which Wrench Group has employed a "greenfield" strategy. The company previously opened greenfield locations in Austin, Texas; Orlando, Florida; Tucson, Arizona; Birmingham, Alabama; and Memphis and Nashville, Tennessee, over the past three years.

Wrench Group, which specializes in residential HVAC, plumbing, electrical, and related services, operates in 27 markets across 15 states.

## Fujitsu Partners with Budderfly to Develop Energy Efficiency Tech

**Shelton, Conn.** – Budderfly, the premier sustainability partner for businesses with repeatable footprints, recently announced a strategic partnership with Fujitsu General America, to develop and deploy high-efficiency energy technologies for mid-market businesses across the United States.

Under the terms of the agreement, Budderfly will leverage Fujitsu's AIRSTAGE Variable Refrigerant Flow (VRF) systems as the core component for its Ultra High Performance (UHP) heating, ventilation, and air conditioning (HVAC) architecture. The state-of-the-art heat pump and ventilator-separated system is the most advanced HVAC solution specifically designed for the approximately 94 percent of U.S. commercial buildings under 50,000 square feet.

The UHP HVAC system is an energy-efficient solution to replace conventional and outdated Roof Top Unit (RTU) HVAC systems, reducing a building's energy consumption by as much as 70 percent. Fujitsu expects to deliver a large number of AIRSTAGE VRF Systems to Budderfly in the coming year, scaling year-over-year to service Budderfly's robust customer pipeline.

In addition, Budderfly and FGAI will collaborate to innovate further and develop on-site, cloud-based sensing and control technologies that will unlock end-to-end digital transformation for small- and medium-sized businesses.

"As much as 50 percent of the energy businesses consume is attributed to HVAC systems. As electricity prices and sustainability



THE FUJITSU AIRSTAGE VARIABLE REFRIGERANT FLOW SYSTEM.

standards rise, we're excited to partner with Fujitsu General to help businesses reimagine their energy profile and better their bottom line," said Al Subbloie, chief executive officer and founder of Budderfly. "Fujitsu's AIRSTAGE Systems are designed to meet the wide range of energy needs for commercial buildings, making them the ideal solution to seamlessly integrate into our end-to-end energy management offering."

Budderfly's innovative UHP HVAC system decouples the conventional RTU HVAC into two components: an energy recovery ventilator and a variable refrigerant flow system. The energy recovery ventilator brings in outside air while also recovering energy from exhaust air. Fujitsu's AIRSTAGE system cools or heats the ventilated air based on the needs of the space and boosts overall air quality by improving humidity control, directing airflow, increasing oxygen levels, and lowering total volatile organic compounds (TVOCs). This provides a fully-electric system that eliminates the need for natural gas and is half the size of a traditional HVAC rooftop unit.

"Our partners at Budderfly share in our core mission of unlocking a better, more sustainable future," said Tomokazu Hosoi, president of Fujitsu General America. "As pressures mount for buildings to reduce their carbon footprint, we're combining our energy-efficient technology expertise and Budderfly's innovative Energy as a Service business model to help accelerate the sustainability transformation for commercial buildings across the U.S."

## Johnson Controls Opens New Innovation Center

**Milwaukee, Wisc.** – Johnson Controls recently celebrated the renovation of its North American Headquarters in Glendale, Wisc. The 144,000-square-foot facility exemplifies Johnson Controls'

dedication to the productivity and wellbeing of its nearly 1,500 local employees. With its new Open-Blue Innovation Center, it also serves as a showcase of solutions for building owners, operators, and other industry leaders to create a new class of smart buildings that are secure, healthy, and sustainable.

"This campus has been designed to create a culture of collaboration and sustainability with our Open-Blue digital platform at the core of its design," said Vijay Sankaran, chief technology officer at Johnson Controls. "We look forward to welcoming visitors to the Open-Blue Innovation Center, where together, we'll shape the future of building technologies."

The Innovation Center is a nearly 12,000-square-foot interactive space that will host thousands of visitors per year from a wide range of industries and provide interactive product demonstrations, cutting-edge virtual reality technology, and other multimedia sessions.

"This new innovation center will serve as a source of inspiration for our customers, helping to improve the design, operation, and maintenance of their indoor environments, ultimately driving value for their businesses," said Julie Brandt, president of Building Solutions North America at Johnson Controls. "By engaging with our leading experts and exploring the latest advancements, our customers will gain a comprehensive understanding of how connected, data-driven solutions provide deeper insights into their building's performance."

The Glendale location is the eleventh to join Johnson Controls' growing network of OpenBlue Innovation Centers across the globe.

In addition to the OpenBlue Innovation Center, the full Glendale campus also is a demonstration of how building technology and design can improve a building's efficiency, reduce environmental impact, and improve occupant experiences.

Technology plays a central role in reaching these goals. Johnson Controls' OpenBlue solutions, integrated with its Metasys building automation system and other third-party devices, serves as the centralized control network. This platform offers facility management staff a unified view to track performance metrics of building systems, such as the energy usage of its heating and cooling systems, lighting, and shade controls.

Recognizing that buildings are responsible for approximately 40% of global greenhouse gas emissions, Johnson Controls provides sustainable solutions to its customers



JOHNSON CONTROLS STAFF AT THE INNOVATION CENTER RIBBON-CUTTING CEREMONY IN GLENDALE, WISC.

while also setting ambitious targets for reducing its own environmental footprint. To help drive these goals, the campus includes a ground-mounted solar photovoltaic array system, generating 250 kW of power and reducing greenhouse gas emissions by 827,000 pounds annually. Further, Johnson Controls on-site heat pumps that use electricity to circulate energy rather than burn fuel are expected to cut winter heating costs by around 29%.

The renovations also are an investment in Johnson Controls' working environment to foster a positive culture for employees and other occupants. Reimagined floor plans and contemporary workstations give employees multiple work-points to utilize. Additionally, the newly implemented lighting system not only contributes to energy savings, but also enhances occupant comfort and productivity.

Furthering its commitment to its employee wellbeing, the Johnson Controls Glendale campus has achieved the prestigious WELL Health-Safety Rating from the International WELL Building Institute (IWBI) for the past two years. In addition to high-efficiency filtration and fresh air ventilation, the campus has an extensive indoor air quality (IAQ) monitoring platform to ensure optimal IAQ. Maintaining the WELL Health-Safety Rating, as well as leveraging Johnson Controls industry-leading IAQ technology through the OpenBlue digital platform, exemplifies Johnson Controls' dedication to creating healthy working environments that support high-performing teams for its employees and visitors, as well as its customers.

"As a leader in the smart buildings industry, Johnson Controls is committed to continually evolving our campuses to implement the latest and greatest digital solutions and design principles for more sustainable facilities and a top-

notch workplace culture," continued Brandt. "By transforming our North America headquarters, just as we do for our customers every day, we're truly putting our core values and offerings into action to show what's possible for our teams and visitors."

To learn more, visit [johnsoncontrols.com](http://johnsoncontrols.com).

## Malco Products Announces Winner of Counterperson of the Year Contest

**Annandale, Minn.** – Malco Products, one of the nation's leading solution developers and manufacturers of a variety of high-quality tools for the HVAC and building construction trades, announced that Zach Fellows of Ace Supply Company in Eden Prairie, Minn., won the company's first-ever Counterperson of the Year Contest.

As Counterperson of the Year, Fellows exemplifies the same values that make Malco great: dedication to superior customer service and going above & beyond to ensure contractors have the Malco tools they need to get the job done. Fellows earned a prize of \$500 cash, a Malco golf shirt and hat.

"In the realm of customer service, few shine as brightly as Zach Fellows," said Michael Dungan, Fellows' nominator. "His dedication, passion, and commitment to excellence are clear indicators that he is destined for a bright future."

"We are proud to recognize Zach for providing excellent customer service and setting the bar high for our industry," said Rebecca Talbot, vice president of marketing at Malco Products. "Zach's proactive approach to serving contractors and promoting Malco's high-quality products

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# Industry News



ZACH FELLOWS OF ACE SUPPLY COMPANY IN EDEN PRAIRIE, MINN., MALCO'S COUNTERPERSON OF THE YEAR.

Continued from Page 12

is well-deserving of our inaugural Counterperson of the Year title.”

For more information about Malco Products, visit [www.malco-products.com](http://www.malco-products.com).

## RETA, RSES Memberships OK New Merger

**Schaumburg, Ill.** – Refrigeration Service Engineers Society (RSES) is pleased to announce a merger with the Refrigerating Engineers & Technicians Association (RETA). RETA is the leader in training, education, and certification for industrial refrigeration technicians and engineers. RSES is a leader in training, education, and certification for professional HVACR technicians and contractors.

After nearly three years of discussion and planning, the memberships of both RETA and

RSES have approved a merge of the Associations during their respective Annual Business Meetings in November 2023. This decision was made to help strengthen two long-standing non-profit sister associations within the HVACR industry under one management model. Jim Barron, who has worked with both Boards throughout this momentous process, will serve as the Executive Director of the combined organization.

Barron states that both organizations are “two sides of the same coin” that stand to strengthen each other and this industry through this merge. “There is much work that still needs to be done,” states Barron, “and both Boards and HQ staffs are well-positioned to take on this task over this next year. We have already done a lot of work in both Associations in order to prepare for the changes we plan to make, and everyone is looking forward to working together to make this happen. We will continue to do the right things for the right reasons, for our memberships and the industry at large.”

The moniker “Better Together” was first coined nearly three years ago by the exploratory committee first tasked with coming up with a blueprint for what a merger would look like between both organizations. This has now become the driving tag line that is bringing the two groups together. Combined, the two organizations will provide training, testing, and certification for technicians and engineers in both Refrigeration and HVAC. These complimentary industries have similar needs so will make improvements in both areas. The combined organizations will share the strengths of each one to improve the other.

2023–2024 RSES International President Jerry Clark says, “I feel blessed to be serving as International RSES President during this time. The fact that RETA’s Conference for next year had been predestined to be held in my beloved Southwest Region [Oct. 22–25, 2024 at the Gaylord Texan Resort in Grapevine, TX] during my tenure as International RSES President is almost overwhelming. I look forward to the future and seeing RETA & RSES Members learning alongside each other in the coming year.”

“I’m honored to be serving as the RETA President during this historic moment as we are bringing our organizations back together as they once were,” adds 2024 RETA President Mike Hawkins. “Both facets of the refrigeration industry have been changing over the years and the merger puts both organizations in a terrific position to continue training and certifying the operators and technicians to Gold Standard! Both organizations have a lot of work ahead of us to implement to the merger and I’m excited to be working with RSES International President Jerry Clark to bring us together as one family.”

All professionals, students, and experts working in the HVAC and Refrigeration Industry, seeking continued education, and desiring to network with industry professionals should be members of these organizations.

Additional updates and announcements are forthcoming. For more information about RSES, email [general@rses.org](mailto:general@rses.org), call 800-297-5660 or visit [www.rses.org](http://www.rses.org). For more information about RETA, email [membership@reta.com](mailto:membership@reta.com), call 844-801-3711 [www.reta.com](http://www.reta.com).

## RIDGID Experience Hosts First Europe Edition Experience

**Elyria, Ohio** – RIDGID, a part of Emerson’s professional tools portfolio, recently hosted the first RIDGID Experience Europe Edition 2023, an all-expenses-paid, three-day VIP trip to company headquarters in Elyria, Ohio. The event welcomed a total of nine trade professionals from France, Germany, Greece, Italy, Norway, Poland, Romania, and the United Kingdom.

RIDGID Experience Europe included exclusive opportunities and team building events that highlighted the brand’s commitment to the trades. Hands-on experiences included a factory tour that invited each guest to build their own iconic RIDGID customized pipe wrench and time in the research test lab



THE RIDGID EXPERIENCE EUROPE GROUP.

working with innovations in the product development pipeline.

“Our guests got a sneak peek at what’s coming from RIDGID, and we loved hearing their opinions on how these tools can help them maximize their time on jobsites,” said Michael Lucas, marketing manager RIDGID Europe. “Getting this global perspective is so important and hearing it in person is really special to our teams.”

The trip was modeled after the North American RIDGID Experience now heading into its seventh year in 2024. RIDGID selected attendees from a pool of hundreds of professional tradespeople.

“Our annual RIDGID Experience event is a highlight of our year, and being able to bring some of Europe’s biggest RIDGID fans to our headquarters for a similar experience was a thrill for us,” said Becky Brotherton, director of brand and engagement marketing, RIDGID for Emerson. “RIDGID tools are used on jobsites around the world, but there’s something special about stepping on the manufacturing floor and talking with the people who make them. Our guests are always impressed with how much pride goes into manufacturing the tools they use every day.”

Emerson’s professional tools business, which includes RIDGID as well as the Greenlee® and Klauke® brands, provides the industry’s broadest portfolio of advanced, reliable tools and technologies for the mechanical, electrical and plumbing trades globally. Visit [emerson.com/professionaltools](http://emerson.com/professionaltools) for more information.

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## Munch’s Supply Donates \$104K to St. Jude’s Hospital

**St. Louis, Mo.** – Marcone, North America’s largest distributor of appliance repair, HVAC, plumbing, commercial kitchen and pool and spa parts, recently announced the culmination of a successful philanthropic campaign that will benefit pediatric cancer research.

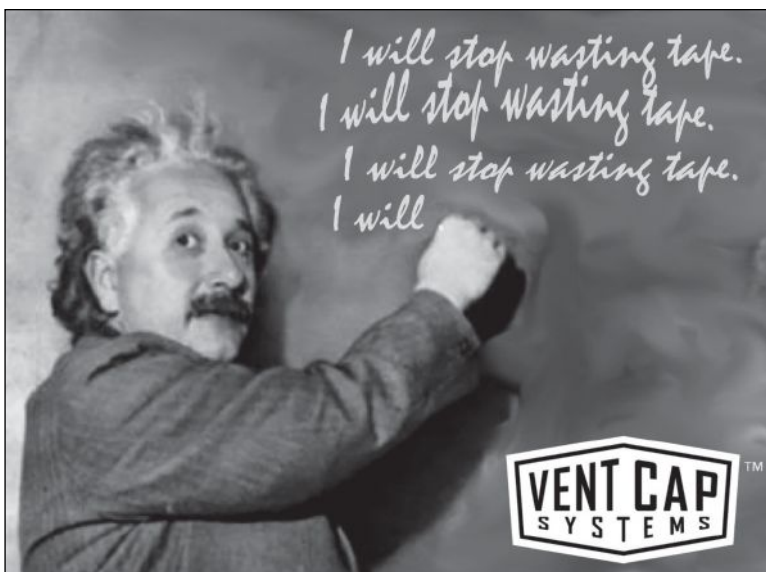
Marcone HVAC company Munch’s Supply raised \$104,752 for St. Jude Children’s Research Hospital, more than doubling its 2022 contribution of nearly \$43,000. Both years, Munch’s Supply was the largest fundraising team in the Chicagoland area.

Munch’s employees and customers came together to support St. Jude through a series of raffles, a promotional shop, a 5K run/walk, a golf outing and leadership matches. Employees were engaged through drawings for paid time off, while customers connected with the cause on the golf course.

“The generosity and commitment of both our staff and client base was overwhelming,” said Steve Raimondi, Munch’s Market President for Illinois and Indiana. “It’s wonderful to see everyone working together for such a worthy cause – and having a great time doing it.”

The annual St. Jude fundraising effort is an integral part of operations for Munch’s Supply, which has been donating for 10 years to the hospital’s mission of curing pediatric diseases. The company’s contributions help St. Jude fulfill its goal of treating sick children but never sending their families a bill, so that parents can focus simply on their child’s wellbeing.

It currently costs more than \$1.4 billion to run St. Jude each year, most of which comes from donors such as Munch’s Supply. Donations are used to research, treat and hopefully eliminate tragic diseases such as childhood cancer.



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# Business Matters

## California Contracting Legend David Kahn Retires, Discusses Business, Legacy

Continued from Page 1

**Lawrence:** Let's go back in time and talk a little bit about what this all looked like in 1961 and where the business began and the early days of Kahn Air Conditioning.

**David Kahn:** Well, it all started on the dining room table in my parents house. When my dad started the business and there was talk about what it was going to be called, they bounced a few ideas like "Kahn & Sons," but it ended up as Kahn Air Conditioning. Our first office was in Tarzana at 19545 Ventura Blvd. My first job in the business was sweeping the floor and doing the janitorial work on the weekends in the office. In those early days I couldn't drive yet so my mom would drop me off on Saturday or Sunday at the shop. Once I was able to drive, I was I was all around town picking up and delivering stuff. I would help the guys on jobsites crawling around under the house... whatever was needed. I then graduated to pouring the concrete slabs for condensers. You know, you couldn't buy freeform slabs in those days so I would go out on a job two or three days before we do the install and form up a slab. From there it progressed, and we used to sell a lot of "room-air's" so I became the "room air" salesman. Later, I graduated into selling and designing residential jobs, which is really what I love doing. My passion is solving people's problems. People call us when they have a problem...they're too hot, they're too cold, it's too noisy...there's always a problem and that's the fun part to go out and figure out what is the problem and how can we fix it and that's what we do really well at Kahn.

**Lawrence:** Let's talk about your Dad a little bit. He was a visionary, and in that era in Los Angeles, there were just a handful of people that were really instrumental in bringing air conditioning here and making it what it is today. Can you speak to that?

**David Kahn:** After World War II was over, he got a job at Midwest Heat Service in Chicago. We lived in Chicago at the time, and everybody had coal-fired furnaces. They were in the process of converting all those coal-fired furnaces and so my dad was designing the wiring diagrams to convert them over. Then Midwest took on the Fedders line of air conditioning and began to sell a/c to the Chicago market. My Dad wanted to come to California because he did his training in the Air Force in Santa Ana. My Mother said no



FOUNDER JULIAN KAHN.

until the winter of 1951. That year was a really nasty winter, and he said "I'm going to California with you or without you," and so she said yes.

**Lawrence:** Why did they end up in the San Fernando Valley?

**David Kahn:** My mother's friend Helen lived in Sherman Oaks, and my mother agreed to move if she could be near Helen, so we ended up in the Valley. When we got here, my Dad went to work for Thermal Air. They were a Carrier distributor in 1952 and very rapidly he became sales manager there from 1952 to 1956. Then in 1956, Charlie Morris, who was also a salesman at Thermal Air, decided to open his own shop in Pasadena and to become a Carrier dealership, but would only do so if he could get Julian Kahn as his partner. They opened in Pasadena, and my Father commuted from Encino to Pasadena every day before there was any freeways. Quite a commute if you were only using side streets. My father and Charlie operated from 1956 to 1961, when they went their separate ways. That's when Kahn Air Conditioning was born. My father was given the entire San Fernando Valley as the only Carrier Dealer. Obviously that didn't last forever, but it was nice while it lasted. Back in those early days, so many homes in the SFV were built without air conditioning. As a matter of fact, in our home, we had a Carrier "room-air" conditioner in our living room, and we were the only ones from the neighborhood that had any kind of air conditioning. The Valley was ripe with opportunity.

**Lawrence:** Let's talk a little bit about the people aspect of what we do by going out and making people happy and solving their problems.

**David Kahn:** I love taking care of our customers, and I love taking care of our employees. I have tried to instill in the employees that their paycheck is not coming



KAHN AIR CONDITIONING'S FLEET OF VEHICLES, CIRCA 1980S.

from me, but rather your paycheck is coming from the customer, so we have to take care of the customers. If we don't have customers, we don't have anything.

**Lawrence:** Tell me about the red trapezoid behind the name in the

logo and do you have any story or do you know how that happened?

**David Kahn:** It was a little bit of an evolution but in the beginning there was a billboard right above the building and we had a sign painter make a yellow sign. In the begin-

ning it was just kind of a script lettering and the painter decided to add this red trapezoid. The name Kahn evolved into the block letters over the years, but that was the decision of the sign-maker. All these years later it's still very recognizable and people love it. It is a part of our history in the San Fernando Valley.

**Lawrence:** What do you credit being able to stay in business and to thrive as long as this business has? You've certainly beaten the odds as there are just a small handful of businesses that have been around as Kahn Air Conditioning has.

**David Kahn:** Good business practices that were passed on from my Dad. He lived conservatively and operated within the means

Continued on Page 31

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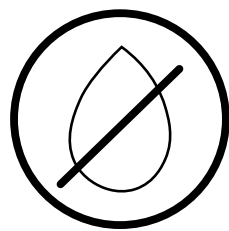
The MSY/Z-GS Wall-mounted Indoor Units provide a variety of application options as a single-zone heat pump, multi-zone heat pump, or H2i® Hyper-Heating INVERTER® heat pump. Its counterpart, the MSY-GS, is a single-zone air conditioner for climates where heating is unnecessary. Also, a newly designed text-based remote control is standard with the GS Series.

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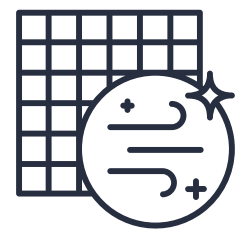
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The first Premier wall-mounted Hyper-Heat M-Series with capacities including 9-24 kBTU/H



Optional PM2.5 filter brings better indoor air quality by removing particulate matter (PM) with a diameter of less than 2.5 micrometers

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- Capacities: 6,000 to 36,000 BTU/H
- Sound: As low as 19 dB(A)
- SEER2: Up to 28.4
- HSPF2: Up to 10.9
- COP: Up to 4.44
- ENERGY STAR®: Most systems

Scan this QR code for additional technical data from LinkDrive on the GS Series





## The GS Series have a wide variety of applications



### Extensive Range Capacity

The MSY/Z-GS wall-mounted indoor units offer our highest design flexibility. Combinations include single-zone (cooling only or heat pump) and multi-zone (heat pump or hyper-heating heat pump) systems, a large selection of size ranges from 6,000 to 36,000 BTU/H.

### Powerful Operation

Depending on the capacity, the unit will automatically adjust the fan speed and set temperature for 15 minutes. Rapid cooling and heating will make the room comfortable quickly.

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### A.O. Smith Tankless Water Heater



The **A.O. Smith** Concentric Vent Non-condensing Tankless Water Heater line with X3 Scale Prevention Technology was designed with combating the number one enemy of tankless water heaters in mind – scale buildup.

The X3 Scale Prevention Technology ensures functionality, decreases the need for scale-related maintenance and extends the lifespan of tankless units three times longer than unprotected units.

This product helps to simplify installations thanks to contractor-preferred concentric venting. The unit accommodates long venting runs and features quick natural-gas-to-propane field convertibility for added flexibility.

**More information:** [www.hotwater.com](http://www.hotwater.com)



### Carrier i-Vu



The **Carrier i-Vu** weather forecasting add-on, for the i-Vu building automation system, enables intelligent control strategies based on real time outside air quality data, helping buildings adapt to changeable climate conditions.

The building automation system communicates with leading weather forecasting agencies, with the weather add-on. Ten-day hourly weather forecast data can be used to optimize energy efficiency indoors and the use of water in irrigation systems outdoors.

During times of high pollution, such as wildfires with heavy smoke, the outdoor air quality data can be used to control how much outside air is allowed in the building to keep indoor environments safe and comfortable.

Facilities professionals can create their own custom control strategies

using the outdoor air quality data, or they can deploy best-in-class ASHRAE Guideline 36 compliant control sequences that will automatically adjust ventilation rates based on current and past data.

The weather add-on retrieves air quality components including fine particulate matter, ozone, nitrogen dioxide, sulfur dioxide and carbon monoxide, and retrieves hourly weather forecast data for temperature, dew point, wet bulb temperature and humidity.

The hourly precipitation forecast is also included with rain, snow and ice, along with the wind conditions for direction, speed and gust.

**More information:** [www.carrier.com](http://www.carrier.com)



### Fujitsu General America Sales Builder Pro



**Fujitsu General America** has partnered with Intelligent Mobile Support to offer contractors Sales Builder Pro professional HVAC sales software for greater productivity and increased sales in less time. The app includes all AIRSTAGE H-Series and Fujitsu Unitary product.

Sales Builder Pro is an in-home sales app that allows HVAC salespeople to provide customers with a professional presentation, including company background, available products and a proposal with good-better-best options.

Ductless design tools within the app streamline the design process. Instantly-generated proposals include all accessories for the job and provide product brochures and videos, all presented on a custom-branded layout.

The app provides integration of Payment Option Programs, and does not require Wi-Fi. Sales Builder Pro app also offers a Site Survey tool to capture job site pictures and data. The Site Survey prevents unplanned job rollovers. This improves profitability and leads to more five-star customer reviews, in turn leading to more referrals.

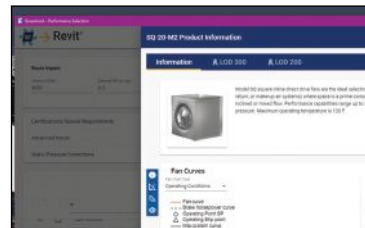
Setup of additional unitary

brands or ServiceTitan integration are optional enhancements.

**More information:** [www.mobilesupport.com/schedule-a-demo](http://www.mobilesupport.com/schedule-a-demo)



### Greenheck eCAPS Bridge to Revit



**Greenheck's eCAPS®** Bridge to Revit® plug-in allows users to seamlessly select and schedule Greenheck HVAC equipment without leaving the Revit® environment. The latest eCAPS Bridge release includes access to additional Revit® content and more functionality. Dedicated outdoor air systems (DOAS) LOD 300 content can now be selected by performance. DOAS schedule and parameter mapping capabilities have been added. Parameter mapping can now be applied to Energy Recovery Ventilator (ERV) and DOAS content from Greenheck's CAPS® Computer Aided Product

Selection program. Basic LOD 200 configuration options for the SQ direct drive square centrifugal inline fans, BSQ belt drive square centrifugal inline fans, and USF utility set fans including USF filtering options can now be accessed via the select by model window. A damper schedule is now available for LOD 200 Damper content. In addition, users can now rename schedule headers and save these changes to their schedule layout setting for future use.

Global clearance on/off buttons allow users to easily adjust service clearances on all Greenheck content placed in the Revit® project.

The eCAPS® Bridge to Revit® plug-in saves users time by automating the schedule creation process. Product selections can be made by performance, by model, or by accessing saved eCAPS® jobs.

Multiple product schedules can then be configured and created with a click of a button. Many product types including fans, louvers, dedicated outdoor air units, and preconditioners along with hundreds of Revit® families are available with more being added

with each release.

This add-in is free to download and use.

**More information:** [www.greenheck.com/resources/software](http://www.greenheck.com/resources/software)



### Navien NPF Hydro-Furnace

Available in Upflow and Horizontal configurations, the **Navien NPF** comes in two sizes of 60,000 BTU/h and 100,000 BTU/h that both boast 97.0% AFUE and meet the stringent requirements of SCAQMD rule 1111 for Ultra-Low NOx performance.

The NPF uses Navien's dual stainless steel heat exchangers to heat water in an isolated compartment out of the airstream which provides sound-reduction and energy efficiency. The heated water is circulated through a hydronic coil which transfers the heat into the airstream for the ultimate in quiet forced-air heating comfort.

The sealed combustion design allows the NPF to deliver comfortable heat without significantly impacting humidity levels at one of the quietest sound levels of any furnace on the market.

The NPF features industry leading variable capacity that can modulate down to 15% for an unparalleled level of comfort that allows the unit to meet year-round heating needs.

**More information:** [www.navienc.com](http://www.navienc.com)



### Thermal Solutions AMP-L

**Thermal Solutions AMP-L** condensing boiler and water heater is available in five sizes: 400, 500, 650, 800 and 1000 MBH. AHRI Certified and rated at 97% and 98% thermal efficiency respectively, the AMP-L is available in either a natural gas or propane configuration.

Standard AMP-L models save time and simplify planning. Included at no additional cost are the low water cutoff and high

and low gas pressure switch making the AMP-L CSD-1 compliant. Also equipped standard with a strength-adding 3-in-1 vent connector which allows for the use of polypropylene, CPVC or stainless steel venting. AMP-L is capable of up to 200 equivalent feet of vent in AL29-4C, polypropylene or CPVC. Modbus communication also comes standard.

Measuring only 27" wide, the AMP-L easily fits through most doorways and is easily maneuverable in the boiler room. AMP-L stacks two-high without the need for accessory racking systems. Zero side and top clearance optimizes the amount of BTUs AMP-L can offer per square foot.

In addition to standard 10:1 turndown, impressive 300 gpm flow rates and the self-cleaning nature provided by the commercial grade water tube design, an outdoor model is also available at no additional charge.

**More information:** [www.thermalsolutions.com](http://www.thermalsolutions.com)



### U.S. Boiler Company Citadel

**U.S. Boiler Company** introduces the all-new Citadel and Citadel XL condensing boilers and volume water heaters. The Citadel is available in five capacities (399 - 1000 MBH) and the Citadel XL is available in 1250 and 1500 MBH capacities. AHRI certified and rated up to 97% thermal efficiency (98% for water heater), the Citadel is available in either a natural gas or propane configuration.

The new boilers save time, space and simplify design and installation. The Citadel can be stacked two-high without the need for accessory racking systems, while the Citadel XL can be stacked with a rack system. Zero side and top clearance optimizes the amount of BTUs that can offer per square foot.

Because the Citadel is designed for the widest variety of applications, it's sold complete out of the box. Included at no additional cost are the low water cutoff and high and low gas pressure switch making the boilers CSD-1 compliant. A standard, reinforced 3-in-1 vent connector facilitates the use of polypropylene, CPVC or stainless steel venting on the Citadel. Venting of up to 300 equivalent feet (combined) of vent in AL29-4C, polypropylene or CPVC is accept-

## HVAC Business & Contractor Technologies/Green Technologies/ Heating Products

able. Modbus communication also comes standard.

In addition to standard 10:1 turndown and impressive 300 GPM maximum flow rate, an outdoor model is also available for all but the largest models at no additional charge. Citadel XL models are available with 208/60hz/1ph and 230/60hz/1ph electrical options.

**More information:**  
www.usboiler.net.



Uponor Xpress Trak



Uponor is continuing to innovate in the residential radiant market with the launch of its newest radiant panel – Xpress Trak. Designed for residential new construction and remodels, Xpress Trak is a single-panel system with lightweight XPS foam at its core and laminated aluminum around the entire surface to provide exceptional heat-transfer capability.

The XPS foam in Xpress Trak provides numerous benefits for both the installing contractor and the homeowner, including:

- Natural moisture resistance to eliminate caulking edges or panel grooves for increased installation efficiencies
- No insulation needed in joist space below the subfloor, saving labor time and materials costs
- Compressive strength of 49 psi (pounds per square inch) to eliminate floor deflection
- Lower mass for faster response times to improve system performance
- An R-value of 3.13 that allows energy use to heat the space rather than charging and storing energy into the panel

Xpress Trak is designed for use with 5/16" Wirsbo hePEX™ oxygen-barrier PEX-a pipe and includes a low, 5/8" profile to minimize construction in

remodel projects, as well as 6" on-center pipe spacing to accurately meet residential radiant application needs. The panels work well under most floor coverings, including hardwood, carpet, tile, linoleum, and luxury vinyl tile or plank. Additionally, the product features straight runs and return bends integrated into one panel for faster, easier ordering and installation.

"With more than 40 years in the radiant market, we are passionate about innovations that advance the industry," says Aaron Stotko, director, Segment Marketing, at Uponor. "By launching Xpress Trak,

which provides an ideal complement to our new Smatrix Pulse wireless radiant and air-side control system, installers will now have a comprehensive solution that can help increase efficiencies, productivity, and profitability in their residential projects."

**More information:**  
www.uponor.com.

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### Weil-McLain SVF Boiler

Hydronic comfort heating solutions leader WM Technologies, LLC, has added five sizes to its advanced, energy efficient Stain-



less Vertical Firetube (SVF™) boiler portfolio for commercial heating applications. The new Weil-McLain SVF boiler line has expanded to now include BTU sizes of 500, 600, 725, 850 and 1000 MBH models that join the existing 1500, 2000, 2500 and 3000 BTU configurations.

"The new SVF line of boilers carries forward the Weil-McLain

legacy of industry-leading ease of installation and service, making it the contractor's choice for light commercial and large heating installations – new or replacement applications," said John Miller, senior product manager with Weil-McLain. "With the addition of these new sizes, we now have a complete line of SVF products ideal for both small and large commercial projects such as schools, colleges and other educational facilities, municipal buildings, multi-family, healthcare, churches

Continued on Page 22



## CONTRACTOR TOOLS APP

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1



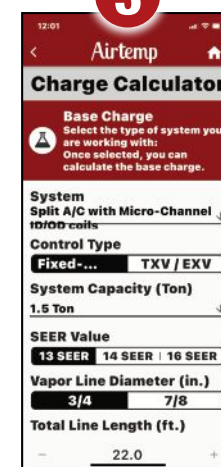
1 Easy to use AHRI system builder

2



2 Quickly check a unit's warranty status

3



3 Refrigerant Charge Calculator

4




4 Quick contact to Technical Support line

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# Product Spotlight

## Trane Variable Speed Heat Pumps Advance Sustainability at Historic Site in Georgia

The city and Friends of Mimosa Hall & Gardens are collaborating with Trane Residential on the installation of two Trane XV20i Variable Speed Heat Pump systems at Mimosa Hall, a historic venue for special events and private functions.

This partnership is a significant step toward achieving net-zero certification and solidifying Mimosa Hall's dedication to reducing its carbon emissions while preserving the integrity of the house.

Since it acquired the 182-year-old Mimosa Hall in 2017, Roswell has sought to make it a more energy-efficient facility. After research, the decision was made to replace its conventional heating system with more environmentally minded alternatives to optimize energy consumption and efficiently regulate

indoor temperatures.

Upgrading to the XV20i Variable Speed Heat Pumps, with ratings of up to 20.5 SEER2 and 8.7 HSPF2, ensures a comfortable environment for visitors and staff without compromising sustainability efforts, Trane Residential said.

Other projects to advance Mimosa Hall's sustainability have included the installation of solar panels, LED lighting, and advanced insulation.

"We are overjoyed about the successful completion," said Roswell Mayor Kurt Wilson. "As forward thinkers, this innovative path will lead us to saving money while accomplishing a great feat. We are thankful to Trane Residential for their kind donations of the electric heat pumps, and to the Friends of Mimosa Hall & Gardens for ensur-

ing this project reaches completion. We could not do it without our community partners."

"As a significant historical property, Mimosa Hall now offers living proof that through the combined efforts of public and private corporate and citizen entities, we can collaborate successfully and harness the attributes of nature to preserve the past and secure the future," said Simone du Boise, architect at Cadmus Construction. "Mimosa Hall represents a far-reaching, engaging, and data-driven example of resilience, independence, environmental and economic sustainability."

"We are thrilled to partner with Trane Residential, who is a leader in providing best-in-class energy-efficient comfort solutions," said Kelly Callen, a Friends of Mimosa Hall &

Gardens board member.

"Collaborating with the Friends of Mimosa Hall & Gardens on its effort to achieve net-zero certification for Mimosa Hall aligns with our passion to accelerate the use of clean energy technologies that heat and cool buildings in sustainable ways," said Jason Bingham, president of Trane Technologies' residential HVAC business. "We have provided them with some of our most efficient heat-pump systems available on the market today, with the goal of preserving its long-lasting legacy for the next 182 years to come."



MIMOSA HALL, WHICH DATES FROM THE 1840S, IS A ROSWELL, GA. VENUE FOR PRIVATE OCCASIONS AND SPECIAL EVENTS.

## METUS Partners with Maker of Smart Electric Panels

Mitsubishi Electric Trane HVAC US LLC (METUS) introduces a new system integration for its all-climate heat pumps with SPAN. IO, INC. (SPAN), a maker of smart electrical panels.

The METUS-SPAN product integration, once available, is intended to help homeowners eliminate dependence on fossil-fuel-reliant heating and cooling systems and conventional electrical panels, according to a press release from METUS.

In a METUS-conducted survey in 2023 of approximately 1,000 U.S. homeowners, almost 83% of respondents stated that they were either "somewhat concerned," "very concerned," or "extremely concerned" about the impact of energy bills on their household budgets. Mitsubishi Electric's all-electric heating and cooling systems are designed to reduce energy use compared to conventional HVAC

systems.

According to a 2021 analysis by Pecan Street, a research and product-testing company, approximately 48 million single-family homes may need an electrical service panel upgrade before they can be fully electrified. Smart electrical panels offer an immediate solution to scale the electrical grid by optimizing existing infrastructure, supporting electrification, and contributing to greater sustainability.

"Installation of energy-efficient, all-climate heat pumps is accelerating the path to broader decarbonization," said METUS CEO Mark Kuntz. "Converting from fossil fuels to heat pumps requires more electrical capacity than many older homes' existing circuit breaker panels and electric service are capable of. We believe the SPAN Panel provides a way for homeowners across America to

add our all-climate heat pumps using their existing electrical service."

The METUS-SPAN integration, activated through the kumo cloud app, is designed to help HVAC contractors reduce installation time by reducing the need for additional coordination with utilities to replace the electrical service to a home. By using the SPAN panel, homeowners may avoid the cost and inconvenience of an electrical service upgrade. SPAN Panels are designed to allow a homeowner to make upgrades while using the home's existing electrical service.

The SPAN Panel is designed to intelligently distribute power across the circuits where it is needed most. Because a Mitsubishi Electric heat pump operates at partial load, using inverter-compressor technology, the SPAN Panel will be able to send a command to it through the kumo cloud app to reduce the capacity to divert the power load



MITSUBISHI ELECTRIC TRANE HVAC US

to other appliances. Advanced variable-energy orchestration between the SPAN Panel and the Mitsubishi Electric heat pump will provide homeowners with greater overall flexibility of their home's energy use, METUS said.

"This collaboration with METUS is exciting for us because we believe this integration will unlock a better option for the over 40 million U.S. homeowners who may face unexpected obstacles and hassle when they choose to upgrade their heating and cooling," said Arch Rao, founder and CEO of SPAN.

METUS and SPAN products are eligible for a variety of local, state, and federal tax

incentives and rebates for U.S. homeowners purchasing and installing those products in their homes. The Inflation Reduction Act (IRA) makes heat pumps and panels more affordable for many households by providing tax credits up to \$2,000 for heat pumps and up to \$600 for qualifying panel purchases. As part of an upcoming IRA rebate program, low- and middle-income households may be eligible for rebates of qualifying products up to \$8,000 for heat pump HVAC, \$4,000 for panels, and \$2,500 for wiring for electrification upgrades.

METUS and SPAN anticipate launching the integration via an over-the-air software update in late 2023.

## SGS Certifying the Next Generation of HVAC Equipment with Panasonic nanoe X Technology

Indoor air quality is now acknowledged as an important part of health and safety for schools, hospitals, hotels, theatres, restaurants, etc. SGS has been helping Panasonic performance test its latest nanoe™ X technology enhanced air quality equipment for large public spaces.

### Changing concerns about air quality

Prior to COVID-19, most consumers thought about internal air quality in terms of keeping poor quality external air from entering their building. This changed with

the pandemic. The risk of airborne transmission of the SARS-Cov-2 virus through aerosols meant we all became cognizant of the importance of air quality in terms of agents such as bacteria, viruses, odors, allergens and pollen.

Indoor air quality has therefore become a Health and Safety consideration. Businesses and organizations that require large groups of people to congregate in one enclosed place now need to proactively consider air quality or risk a reduction in their viability.

### Air quality matters

The American Lung Association estimates the average adult male consumes 2,000 gallons (roughly 9,092 liters) of air a day – 10 times what we consume in food and water.[1] If that air is poor quality, it can lead to headaches, fatigue, allergic reactions, sinusitis, respiratory issues, eye irritation and asthma. Indoor air must therefore be clean, clear and low in bacteria and viruses.

Good indoor air quality also helps to keep rooms cleaner and fresher. By removing gaseous

impurities and pollutants such as smoke, pollen and dust from the atmosphere, we can ensure they do not adhere to surfaces and penetrate fabrics.

The traditional solution of opening a window may not always be sufficient or practical – it may be too cold outside or there could be smoke or smog. When this happens, consumers need to access an air quality system that does more than simply circulate air. Instead, it must also have the ability to remove particulates, odors, viruses,

bacteria, etc.

This problem becomes even more difficult to solve if the room with poor quality air is large.

### Hydroxyl radicals

Hydroxyl radicals are molecules that readily react and capture elements like hydrogen. Hydroxyl radicals therefore have the potential to inhibit the activity of pollutants, breaking them down and neutralizing their unpleasant effects. They are, in effect, nature's

Continued on Page 25



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- List of industry and trade certifications
- Two customer references

Services	Tier I	Tier II	Quality Kicker
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Quality Installation	\$500	\$1000	TBD
Quality Maintenance	\$350	\$700	TBD
Quality Maintenance Call	\$150	\$300	TBD

The Quality Residential HVAC Services Program is funded by California utility customers under the auspices of the California Public Utilities Commission and implemented by Frontier Energy under a contract awarded by San Diego Gas & Electric Company (SDG&E®). Customers who choose to participate in this program are not obligated to purchase any additional services offered by the Implementer. The trademarks used herein are the property of their respective owners.

# Troubleshooting

## A Four-Pin Compressor That Won't Start

By Jim Johnson  
Contributing Editor

In this month's troubleshooting situation, our problem involves a 4-pin compressor that uses both an internal and external overload protector. Two other factors in regard to this particular piece of equipment are that a single-pole contactor is used in the compressor circuit, and that it is equipped with high and low pressure switches that act as protective devices.

Upon your arrival and conducting an initial inspection of the equipment, you find the following conditions:

1. The compressor is cool to the touch.
2. The condenser fan motor is not operating.

As you begin your troubleshooting process, you make two quick voltage checks (see the partial diagram in **Figure One**) and you find the following:

1. 230-volts at L1 and L2 of the contactor.
2. 0-volts at the contactor coil.

With these voltage tests accomplished, the next step you decide to take is to disconnect the power supply, remove the appropriate wiring, and use an ohmmeter to make resistance and continuity checks, which reveal the following:

1. Infinity from C to T.
2. 2.5 Ohms from C to R.
3. 3.5 Ohms from C to S.
4. 6 Ohms from S to R.

Your troubleshooting question:

*What is the specific failure that is preventing this compressor from operating?*

If you believe you have the correct answer to one of Jim Johnson's Troubleshooting Problems, please submit it by email to Jim Johnson at [icntroubleshooting@techtrainassoc.com](mailto:icntroubleshooting@techtrainassoc.com) or by U.S. Mail to: Technical Training Associates, PO Box 2259, Green Valley, AZ 85622-2259.

In your email subject line please include "Troubleshooting Answer" and indicate which month the question you are responding to was published.

Correct answers will be entered into a drawing and will be eligible to receive a copy of Jim Johnson's video "Evaluating Refrigeration Systems: Troubleshooting & Identifying Problems."

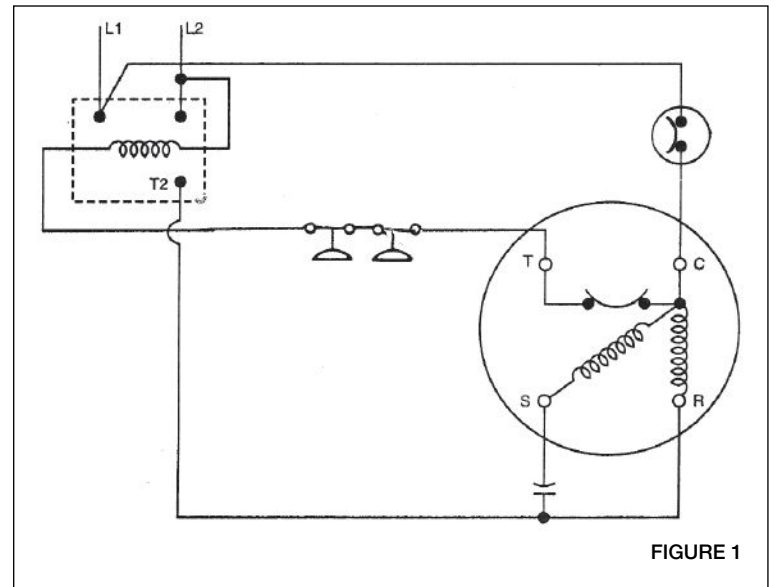


FIGURE 1

### Answer to Last Month's Troubleshooting

To get this unit back on line, we need to replace the furnace control. A voltage check at terminals 2 and 4 of the S2 segment of the board proved that 120-VAC was not leaving the board to power the hot surface igniter.

The winner of last month's Troubleshooting is:  
**Oscar Rios, San Diego, Calif.**

## Technical Training

### Growing Green Technicians Part 171: Fundamentals of Combustion and Gas Furnace Efficiency

By Jim Johnson  
Contributing Editor

Editor's Note: Illustrations courtesy of ESCO Group

In the two previous segments of this series, our focus has been on the subject of proper air flow through a gas furnace air handling system along with checking for proper temperature rise of the unit. In this issue, we'll be discussing another segment of air flow, that which is required for proper combustion in fuel-burning equipment.

Technicians taking a green approach to servicing gas furnaces not only understand the fundamentals of combustion relative to the safety of a fuel-burning system, but also how an efficiently operating system contributes to minimizing carbon monoxide and ensures proper (and thereby not only efficient, but safe) operating temperatures of the equipment.

This begins with a fundamental

understanding of the three things necessary for combustion.... air, fuel, and ignition....and the fact that these need to be provided in a proportionally balanced manner for a burner to operate according to its design. One way to consider this concept is from the perspective of a triangle. (See **Figure One**)

This simplistic approach confirms not only the three basic requirements for fuel, air, and heat to work together in combustion, but also illustrates that if any one of these system elements are insufficient due to any adverse condition, the end result will be incomplete combustion, which affects not only the efficiency, but the safety of the equipment operation. In conjunction with this fundamental theory, we'll add three factors that need to be correct in order for a burner to operate properly:

1. Time
2. Temperature
3. Turbulence

(See **Figure Two**)

When we consider that the process of combustion is a violent action (#3), that the temperature, as we mentioned above (#2) has to be correct, and that the fuel to air ratio not only has to be proper in volume but also in velocity in order to accomplish the proper mixture for burning the fuel completely (#1), we can understand the process of combustion from not only a very fundamental approach, but also from a more advanced perspective.

**Figure Three** shows the three factors in more detail and also explains the results that are accomplished when everything relative to the fundamentals of combustion work together according to design.

The bottom line to consider relative to verifying proper system performance when it comes to combustion is that when a technician has a firm understanding of the fundamentals, they also understand that just accomplishing a

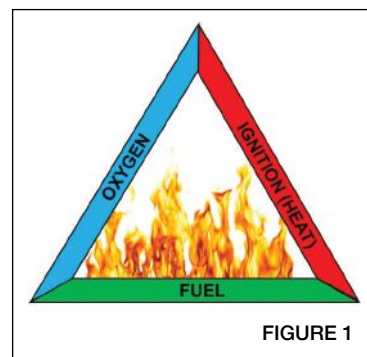


FIGURE 1

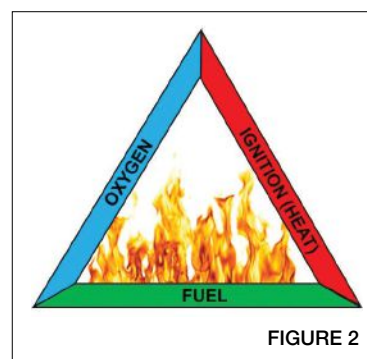


FIGURE 2

visual inspection to see if a system is "burning blue", or listening closely to determine if a burner is "louder than it should be" just doesn't cut it. A properly trained

Time Temperature Turbulence	
Time	Air : Fuel mix
	Flame to burn
	Flue gas flow
	Heat transfer
	Draft
Temperature	Flame temperature
	Flue gas temperature
	Rate of heat transfer
	Rate of combustion
	Radiant energy
Turbulence	Air : Fuel Mixture
	Flame
	Flue gas flow
Results	Increased CO2
	Increased heat transfer
	Increased efficiency
	Reduced stack loss
	Decreased emissions

FIGURE 3

and informed technician understands what a system is supposed to be doing from more than a visual or audible perspective when it is operating properly.

### Editorial Focus

Continued from Page 19

and more."

The SVF boiler line features industry-leading thermal efficiency up to 98%, unrivaled ease

of installation and maintenance, large color touchscreen Unity™ 2 and Nuro® control systems and Weil-McLain boiler design reliability and longevity. The SVF boiler meets all market-driven bid specifications for new construction projects and is ideal for hybrid and

replacement boiler applications.

The SVF line features a stainless-steel vertical fire tube and shell heat exchanger design for best-in-class corrosion resistance and reliability intuitive, user-friendly controls to make installation and operation easy.

Time-saving installation features include an integrated shipping ramp, heavy-duty roller casters for improved maneuverability in confined spaces, industrial-grade leveling legs mitigating the need for a concrete pad, an integrated burner in a cover plate

for minimized 18" overhead space requirements, and adjustable height control panel for improved front access to service and calibration points.

**More information:** [www.weil-mclain.com/SVF-Commercial-Condensing-Gas-Boiler](http://www.weil-mclain.com/SVF-Commercial-Condensing-Gas-Boiler).



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# Case Studies

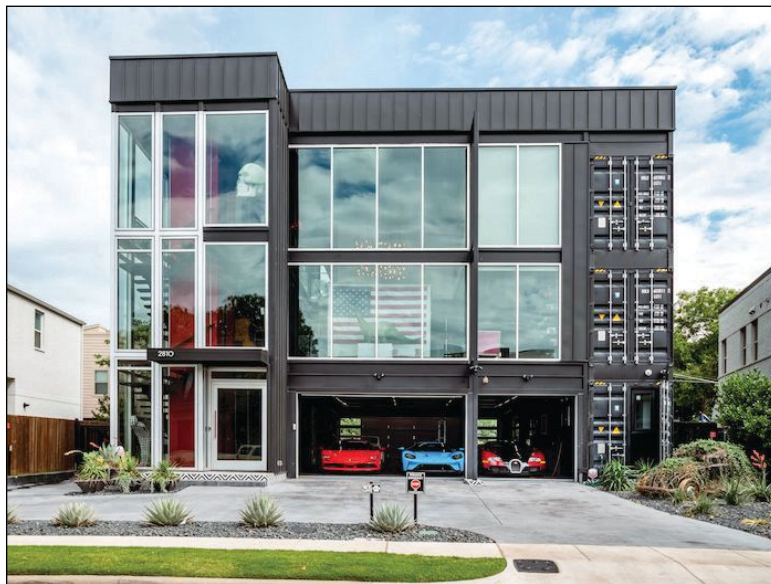
## Comfort Contained: LG Vertical Air Handling Unit Solves HVAC Dilemma

Homeowners Ron Sturgeon and Linda Allen are known for thinking outside the box in every aspect of their lives. “If it’s different, let’s try it,” said Ms. Allen. “That’s our attitude about most things in life.”

Sturgeon and Allen are avid world travelers, and their home and business projects are often inspired by art, architecture and design from across the globe. In 2018, Sturgeon built the Box Office Warehouse Suites (BOWS), an office, warehouse and retail park in Fort Worth, Texas, made from 154 shipping containers. Inspired by the BOWS property’s unique look and high performance, Sturgeon and Allen decided to build a custom home in the Linwood neighborhood of Fort Worth that would be eye-catching and energy-efficient.

The 5,500 square-foot, three-story home was constructed using six 45-foot shipping containers welded to a steel-centered superstructure. Sturgeon and Allen also have a guest home at the back of the main property, made from two 45-foot shipping containers. The primary residence, which includes a nine-car drive-through garage on the first floor, a third-floor swimming pool, and a rooftop running track and entertaining space, is industrial and sleek. Large expanses of glass break up the metal façade, allowing natural light to enter the home, which features large, open rooms and a 20-foot high ceiling in the main living area. The kitchen features a range of built-in high-end appliances from Signature Kitchen Suite, LG’s luxury line that Allen described as “fabulous.”

Because of the home’s open rooms, sizable glass windows, high ceilings, and location, keeping spaces cool during the hot Texas summers and warm during the cold winter months was critical. So, Sturgeon, who has used more than 400 duct-free systems from LG Electronics USA’s Air Conditioning Technologies division on several other projects, includ-



(ABOVE) AN OUTDOOR VIEW OF THE 5,500 SQUARE-FOOT CUSTOM HOME THAT WAS BUILT USING SHIPPING CONTAINERS. (TOP RIGHT) THE MAIN PROPERTY ALSO HAS A GUEST HOME. THE KITCHEN IN THE PRIMARY RESIDENCE (SECOND FROM BOTTOM) FEATURES HIGH-END APPLIANCES FROM LG. (BOTTOM RIGHT) THE LG INVERTER OUTDOOR UNIT.

ing the other shipping container development, reached out to Fort Worth-based AC Supply to design an LG HVAC system for the house.

As a result, AC Supply designed a system consisting of 16 LG Art Cool Mirror wall units with Smart Inverter Outdoor units. LG’s Vertical Air Handling Unit (VAHU) with exposed ductwork was used to condition the open-plan second floor. AC Supply, working with Garrett Davis, project supervisor and owner of Davis Commercial Services, contacted JD Webb at Webb Air Heating & Cooling to manage the HVAC installation.

In addition to wanting a comfortable, energy-efficient home, Sturgeon and Allen had a specific aesthetic in mind for the interior and exterior of their home. Allen, who designed the interior, wanted an “industrial [look] with a funky side to it” to allow them to showcase the unique art they had collected over their years of world travel.

“My number one goal was to make sure the house was comfortable and then configure the HVAC in the most aesthetically pleasing way. And to do all of that in a way

that was the most accessible for us to service after the installation,” said JD Webb, president of Webb Air Heating & Cooling. “Using the LG HVAC products opens all kinds of doors.”

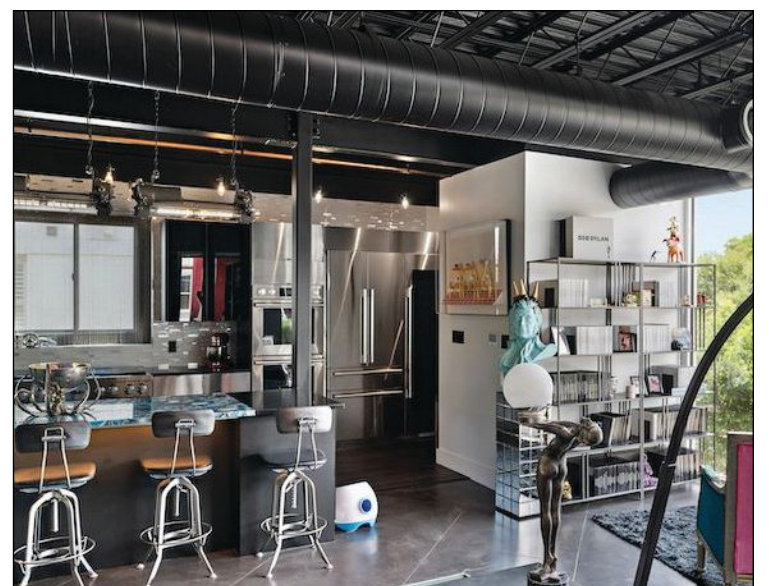
To ensure the HVAC systems worked with the overall design intent, the team had to address piping visibility.

Additionally, Sturgeon and Allen did not want any penetrations on the roof to avoid water damage should a leak occur. Sturgeon commented, “Roof penetrations are the bane of my existence, so I was determined to remove that possibility on this house.”

Therefore, the team needed to develop a solution for running the mini-split duct-free systems’ piping without penetrating the roof or interfering with plumbing and lighting.

Sturgeon and Allen’s home has a total of 21 Tons of conditioning. Ranging from 9,000 to 22,000 Btu/h capacities, the duct-free Art Cool Mirror units used in the interior of the home feature a sleek, mirrored finish, quiet operation and energy-efficient inverter technology. Thanks to ductless application, they allow Sturgeon and Allen to heat and cool individual spaces to their preferred comfort levels with natural airflow and auto operation modes. LG duct-free systems are designed for easier and more efficient installation, and most indoor units can mount on virtually any wall. Moreover, flexible piping lengths allow for extra flexibility in installation and design.

Also installed in the home was the LVN360HV Vertical Air Handling Unit, a multi-position air handler that can achieve 36,000



BTU cooling or 40,000 BTU heating, with exposed spiral ductwork. Because LG systems are considerably quieter than traditional HVAC systems, the noise comfort offered by the Vertical Air Handling Unit allowed the team to find a creative space for the unit, hiding it behind the pantry with its own access door.

Because of the number of units, the team from Webb Air Heating & Cooling, consisting of two lead technicians and a support member, began mapping the home system by system. Webb noted, “The overall project required insulated copper piping, with almost all the pipes exposed, so the team

worked on tucking them in and running them around corners. And with an LG heat pump system, you don’t have to worry about flu vents going through the roof, which gives you even more flexibility.”

The LG duct-free systems allow flexibility when it comes to pipe length. Davis said, “Using the LG mini split systems helped since we just ran the line set in, which gave us more versatility to go from first to the second floor.”

Utilizing the high-performing LG HVAC systems throughout the house has provided Sturgeon and Allen the comfort, energy efficiency, and visual appeal they have come to know and appreciate.



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# Industry Events

## PHCC Wraps Up Annual Conference in Ohio

Cleveland, Ohio, delivered a hometown welcome to an energetic group of plumbing, heating and cooling professionals as they gathered for PHCCCONNECT2023 in late October to make real progress on their plumbing and HVACR businesses – and to secure a strong future for the industry.

The passion of PHCC's people was on full display throughout the three-day event, reinforcing this year's conference theme of "People. Passion. Purpose." PHCC honored several people during the conference's opening session.

"As we recognize these individuals today – with the support of our industry partners – I am reminded of how valuable solid relationships are," said PHCC National President Dave Frame. "These people share a passion for improving society, making a difference, contributing to their communities, mentoring the next generation, and advancing the industry."

PHCC members and other attendees took to their feet to acknowledge veteran PHCC Member Herman Bohinc of Ohio (above, right), who was presented with a resolution from the PHCC Board of Directors for his distinguished service to the Ohio state chapter and for lasting contributions to the association and its mission. As an instructor and mentor to many, Bohinc has inspired others in the profession to strive for excellence.

From the start, PHCC of Ohio President John Milburn encouraged attendees to discover the spirit of Cleveland – "an inviting city ... that seamlessly weaves its rich history with an eager embrace of the future" – for themselves. And that they did, right through to the closing event at the Rock & Roll Hall of Fame, where some PHCC members took the mic and made their own music!

The keynote session, "Growth Begins at the End of Your Comfort Zone," once again had attendees on their feet for a standing ovation for Coach Ken Carter, a highly successful author, business owner, and educator. Many claimed that Carter – who mixed hard-hitting advice ("Discipline lasts you a lifetime.") with a need for compassion ("Great people meet people where they are.") – was the best speaker they ever heard. Among his other messages: be respectful; write down goals and carry them with you every day; and "reset your preset," reinforcing the need to adjust quickly in certain situations.

"Look at 2024 as an opportunity," said the event's second keynoter, Connor Lokar of ITR Economics. While inflation and rising prices are not going away anytime soon, he advised that contractors "look at areas of your business that could be opportunities ... things that you didn't have time to do before, like training, technology, and software



PHCC OF OHIO PRESIDENT JOHN MILBURN.

transitions." He warned of very tough economic times in 2030 and advised attendees on how to steer their businesses now in preparation.

### Product and Technology Showcase

CONNECT's welcoming atmosphere continued on the Product & Technology Showcase floor, which this year featured "Cleveland Park" for a taste of hometown hospitality. There was lots of shared enthusiasm in the Showcase arena, with attendees learning about new tools of the trade, listening in to live podcast interviews, and checking out product demonstrations.

### Educational Session

In addition to more than 20 educational sessions this year,



COACH KEN CARTER (ABOVE LEFT), AUTHOR AND BUSINESS OWNER, SERVED AS THE EVENT'S KEYNOTE SPEAKER.

PHCCCONNECT2023 introduced expo education on the tradeshow floor – interactive presentations of innovative products, unique takes on the latest technologies, and business management solutions. These "Knowledge Hubs" tackled topics such as the rise of artificial intelligence (AI), the refrigerant landscape, next generation garbage disposals, hybrid heat pump technology, and more.

### Targeted Opportunities

Also on the tradeshow floor, Beth Dobkin of PHCC's Quality Service Contractors (QSC) engaged attendees with her "QSC Talks," unlocking insights on several topics, including the power of emotional intelligence.

And PHCC's Union-Affiliated Contractors (UAC) hosted events geared toward signatory contractors, including sessions presented by attorney Christina Wernick (Laner-Muchin) on trust fund audits and on trustee responsibilities. A wide-ranging contractor forum moderated by S.J. Peters featured United Association officials (Director of Plumbing Tom Bigley, Training Director Ray Boyd, and Special Representative Joe Fernandez) as well as Dave Frame (2023-2024 UAC chairman) and Brian Rich (ITF representative and UAC past chairman).

### Rising Leaders Summit

The 2023 Rising Leaders Sum-

Continued on Page 30

## nanoe X Technology

Continued from Page 20

detergent.

However, hydroxyl radicals are inherently unstable and have a lifespan of less than one second. It has therefore been impossible to use this naturally occurring process indoors...until now.

### nanoe™ X

Panasonic has now found a way to utilize hydroxyl radicals in air quality systems. Its nanoe™ X technology collects invisible moisture that is present in the air and then applies a high voltage to it to release the hydroxyl radicals.

Using this process, the lifespan and therefore effectiveness of the hydroxyl radical is significantly extended – from less than a second to around 10 minutes.[2] This means the hydroxyl radical's ability to inhibit bacteria, viruses, molds, allergens, pollens, odors and other substances can now be effectively utilized in larger areas.

The hydroxyl radicals con-

tained in the moisture generated by nanoe™ X are also very small – 5-20nm. This means they can easily penetrate deeply into fabrics within a room to help deodorize them.

Because nanoe™ X technology uses a natural process to clean and deodorize, it is safe, effective and does not require the spreading of harmful chemical particles across a room.

### SGS testing solution

When Panasonic needed a TIC company to identify and certify its nanoe™ X equipped air conditioning units, they chose SGS. SGS has been at the forefront of performance testing and certification for air cleaners and antiviral products for several years and its experts actively support IEC in standardization for air cleaners.

Testing air quality systems and their ability to inhibit viruses and remove odors in large public areas meant the creation of a special new test environment. To ensure data accuracy, this needed to conform to

32 strict test requirements.

SGS then used recognized test protocols relating to Escherichia coli bacteriophage MS2 to test the technology's virus inhibiting capabilities. Phage cloth strips were placed in the appointed positions within the 52m2/139m3 test room. Once the air conditioning unit was turned on, these strips were subjected to observation over a number of time slots. The results were then compared to natural reduction. It was shown that nanoe™ X effectively inhibited 98.81% of viruses on surfaces.

The same nanoe™ X air conditioning configuration was also used to evaluate odor removing capabilities, with a control being set up using the same room configuration, temperature and humidity. Seven assessors with the required olfactory skills then scored the resulting room smells after 30 minutes. The results showed the room using nanoe™ X technology was 1.7 levels different to the control, leading to the conclusion that nanoe™ X was more effective at removing difficult

odors.

Working in collaboration with Panasonic on its new nanoe™ X technology represents a step forward in air quality and anti-virus testing for SGS. The company

has been able to break new ground in terms of testing large areas, creating effective solutions that allow companies to demonstrate the efficacy of their equipment for large public areas.

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NOVEMBER 7, 2023, PASADENA, CA



BOB SANSEVERINO OF MULLEN COMMERCIAL.



CARLOS RUIZ, EXECUTIVE DIRECTOR OF IHACI, ADDRESSES THE AUDIENCE AT ONE OF THE SHOW'S SEMINARS.



JOHN AUERBACH OF GEARY PACIFIC SUPPLY.



THE DANKO MECHANICAL SALES COMPANY BOOTH.



JOHN KOVACS (LEFT) AND DAMIEN WASHINGTON OF ROTOBUSH INTERNATIONAL.



THE AIREX MANUFACTURING, INC. BOOTH.



MARGIT BAROT (LEFT) AND CLAUDIA PINGATORE OF QUALITY RESIDENTIAL HVAC PROGRAM.



DAN GRESSMANN (LEFT) AND LEE TORRES OF WALTER'S MERCEDES-BENZ SPRINTER OF RIVERSIDE.



ROBERT SCOTT (LEFT) AND BOB WISEMAN IN THE VISUAL SERVICE BY IHACI BOOTH.



THE SIGLER WHOLESALE DISTRIBUTORS BOOTH.



CONNOR BUCKBOROUGH OF SIMPRO SOFTWARE.



AMY AND KIRK LEWANDOWSKI OF FLARETITE.

LOOK FOR MORE PHOTOS IN UPCOMING ISSUES!



(FROM LEFT) LAURIE SUMNER, TONY LOPEZ AND MEMO DAVILA OF MITSUBISHI ELECTRIC HVAC.



(FROM LEFT) JOHNNY MONROY, MARK BURNSIDE, OSCAR DELCID AND JESSE SANCHEZ OF P.I.P.E./SOUTHERN CALIFORNIA PIPE TRADES.



(FROM LEFT) YURI HAMAMURA, JOSH KOPLIN AND BEN PHILLIPS OF E-DEN HOME ELECTRIFICATION, INC.



THE SIERRA COMMERCIAL TRUCK CENTER BOOTH.



ZACH PONNEQUIN OF EWC CONTROLS, INC.



COLIN CLAUSEN (LEFT) AND GARRETT WONG OF FIELDPIECE INSTRUMENTS.



LONG NGUYEN (LEFT) AND GWEN YAMASAKI OF SOUTHERN CALIFORNIA EDISON.



(FROM LEFT) BRUCE CHENEY AND ZALMIE HUSSEIN OF ENERGY CODE ACE; NATHAN PAREDES OF CANOGA HVAC.



ZULFIE HAI (LEFT) AND RYAN CASTRO OF GOOGLE NEST PRO.



MARK SIMONSON, FRANK DELEON AND RYAN LEE OF BAKER DISTRIBUTING COMPANY.



(FROM LEFT) MIKE TOROSYAN, SERZHAK AKOPYAN AND SAR JANKOZIAN OF RAPID DUCT TESTING & AIR BALANCING, INC.



(FROM LEFT) RAHUL GULATI, TERESA WORKMAN, JAY TORRES AND BOBBY HAHN OF PACIFIC SYSTEMS GROUP.



THE INABA DENKO AMERICA BOOTH.



JEFF CUMMINGS OF MR. COOL, LLC HVAC.



CARLOS CASTRO (LEFT) AND BRAD ADCOX OF NAVAC.

# 2024 TRAINING

CALIFORNIA QUALITY INSTALLATION, QUALITY MAINTENANCE AND QUALITY SERVICE

**SOCALGAS, DOWNEY**

## JANUARY

### Gas Heating Module

(Two-Night Class) Instructor: Mike Griffin

Wed., Jan. 10 – Part 1  
Thurs., Jan. 11 – Part 2

## FEBRUARY

### Electrical Module (Webinar)

(Four-Night Class) Instructors: Mike Griffin / John Dalton

Mon., Feb. 5 – Part 1  
Tues., Feb. 6 – Part 2  
Mon., Feb. 12 – Part 3  
Tues., Feb. 13 – Part 4

## MARCH / APRIL

### AC/HP Refrigeration Module

(Four-Night Class) Instructor: John Dalton

Mon., March 11 – Part 1  
Tues., March 12 – Part 2  
Mon., April 15 – Part 3  
Tues., April 16 – Part 4

## MAY

### Air Distribution Module

(Four-Night Class) Instructors: Mike Griffin / John Dalton

Wed., May 22 – Part 1  
Thurs., May 23 – Part 2  
Wed., May 29 – Part 3  
Thurs., May 30 – Part 4

## JUNE

### System Diagnostics Module (Webinar)

(Four-Night Class) Instructors: Mike Griffin / John Dalton

Mon., June 3 – Part 1  
Tues., June 4 – Part 2  
Mon., June 10 – Part 3  
Tues., June 11 – Part 4

## JULY / AUGUST

### System Performance Module

(Four-Night Class) Instructors: Mike Griffin / John Dalton

Wed., July 10 – Part 1  
Thurs., July 11 – Part 2  
Wed., Aug. 7 – Part 3  
Thurs., Aug. 8 – Part 4

## SEPTEMBER

### NATE CORE & Gas Heating Training (Webinar)

(Four-Night Class) Instructors: Mike Griffin / John Dalton

Mon., Sept. 16 – Part 1  
Tues., Sept. 17 – Part 2  
Mon., Sept. 23 – Part 3  
Tues., Sept. 24 – Part 4

## OCTOBER

### NATE AC/HP Refrigeration & Air Distribution Training (Webinar)

(Four-Night Class) Instructors: Mike Griffin / John Dalton

Mon., Oct. 21 – Part 1  
Tues., Oct. 22 – Part 2  
Mon., Oct. 28 – Part 3  
Tues., Oct. 29 – Part 4

Sat., Nov. 2 - NATE Exam, 7:30 a.m. In-Person/Onsite

**SOUTHERN CALIFORNIA EDISON, IRWINDALE**

## JANUARY

### Gas Heating Module

(Two-Night Class) Instructors: Mike Griffin

Wed., Jan. 17 – Part 1  
Thurs., Jan. 18 – Part 2

### 2022 Title 24 Standards Training

(Two-Night Class) Instructors: Mike Griffin

Wed., Jan. 24 – Part 1  
Thurs., Jan. 25 – Part 2

## FEBRUARY

### Electrical Module

(Four-Night Class) Instructors: Mike Griffin / John Dalton

Wed., Feb. 14 – Part 1  
Thurs., Feb. 15 – Part 2  
Wed., Feb. 21 – Part 3  
Thurs., Feb. 22 – Part 4

## MARCH

### Air Distribution Module

(Four-Night Class) Instructors: Mike Griffin / John Dalton

Wed., March 13 – Part 1  
Thurs., March 14 – Part 2  
Wed., March 20 – Part 3  
Thurs., March 21 – Part 4

## APRIL

### AC/HP Refrigeration Module

(Four-Night Class) Instructor: John Dalton

Wed., April 10 – Part 1  
Thurs., April 11 – Part 2  
Wed., April 17 – Part 3  
Thurs., April 18 – Part 4

## MAY

### NATE CORE & Gas Heating Training

(Four-Night Class) Instructor: Mike Griffin

Wed., May 8 – Part 1  
Thurs., May 9 – Part 2  
Wed., May 15 – Part 3  
Thurs., May 16 – Part 4

## JUNE

### NATE AC/HP Refrigeration & Air Distribution Training

(Four-Night Class) Instructor: Mike Griffin

Wed., June 5 – Part 1  
Thurs., June 6 – Part 2  
Wed., June 12 – Part 3  
Thurs., June 13 – Part 4

Sat., June 15 - NATE Exam, 7:30 a.m.

## SEPTEMBER

### System Diagnostics Module

(Four-Night Class) Instructor: John Dalton

Wed., Sept. 11 – Part 1  
Thurs., Sept. 12 – Part 2  
Wed., Sept. 18 – Part 3  
Thurs., Sept. 19 – Part 4

## OCTOBER

### Commercial Chillers Module

(Two-Night Class) Instructor: John Dalton

Wed., Oct. 2 – Part 1  
Thurs., Oct. 3 – Part 2

### Commercial Cooling Towers Module

(Two-Night Class) Instructor: John Dalton

Wed., Oct. 9 – Part 1  
Thurs., Oct. 10 – Part 2

## NOVEMBER

### System Performance Module

(Four-Night Class) Instructors: Mike Griffin / John Dalton

Wed., Nov. 6 – Part 1  
Thurs., Nov. 7 – Part 2  
Tues., Nov. 12 – Part 3  
Thurs., Nov. 14 – Part 4

**Note:** When registering for a training class please make sure you honor that commitment and show up on time and prepared. If you cannot attend, please call (818) 551-1555 and cancel in ample time. Thank you.

**All Classes are scheduled for In-Person**  
All In-Person classes subject to change based on IACR  
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# CLASS SCHEDULE

SERVICE (CAQI/QM/QS) & NORTH AMERICAN TECHNICIAN EXCELLENCE (NATE)

**SOUTHERN CALIFORNIA EDISON,  
TULARE**

## JANUARY

### Electrical Module

(Four-Night Class) Instructors: Mitch Bailey / TBA

Wed., Jan. 17 – Part 1

Thurs., Jan. 18 – Part 2

Wed., Jan. 24 – Part 3

Thurs., Jan. 25 – Part 4

## FEBRUARY

### Gas Heating Module

(Two-Night Class) Instructors: Mitch Bailey / TBA

Tues., Feb. 6 – Part 1

Wed., Feb. 7 – Part 2

### 2022 Title 24 Standards Training

(Two-Night Class) Instructor: Mike Griffin

Wed., Feb. 21 – Part 1

Thurs., Feb. 22 – Part 2

## MARCH

### Commercial Chillers Module

(Two-Night Class) Instructor: John Dalton

Wed., March 6 – Part 1

Thurs., March 7 – Part 2

### Commercial Cooling Towers Module

(Two-Night Class) Instructor: John Dalton

Wed., March 20 – Part 1

Thurs., March 21 – Part 2

## APRIL

### Air Distribution Module

(Four-Night Class) Instructors: Mike Griffin / Mitch Bailey

Wed., April 10 – Part 1

Thurs., April 11 – Part 2

Wed., April 17 – Part 3

Thurs., April 18 – Part 4

## MAY

### System Performance Module

(Four-Night Class) Instructors: Mitch Bailey / TBA

Wed., May 8 – Part 1

Thurs., May 9 – Part 2

Wed., May 15 – Part 3

Thurs., May 16 – Part 4

## JUNE

### AC/HP Refrigeration Module

(Four-Night Class) Instructors: Mitch Bailey / TBA

Tues., June 18 – Part 1

Wed., June 19 – Part 2

Tues., June 25 – Part 3

Wed., June 26 – Part 4

## SEPTEMBER

### System Diagnostics Module

(Four-Night Class) Instructors: Mitch Bailey / TBA

Wed., Sept. 18 – Part 1

Thurs., Sept. 19 – Part 2

Wed., Sept. 25 – Part 3

Thurs., Sept. 26 – Part 4

## OCTOBER

### NATE CORE & Gas Heating Training

(Four-Night Class) Instructors: Mitch Bailey / TBA

Wed., Oct. 9 – Part 1

Thurs., Oct. 10 – Part 2

Wed., Oct. 16 – Part 3

Thurs., Oct. 17 – Part 4

## OCTOBER / NOVEMBER

### NATE AC/HP Refrigeration & Air Distribution Training

(Four-Night Class) Instructors: Mitch Bailey / TBA

Tues., Oct. 29 – Part 1

Wed., Oct. 30 – Part 2

Wed., Nov. 6 – Part 3

Thurs., Nov. 7 – Part 4

Sat., Nov. 9 - NATE Exam, 7:30 a.m.

**PACIFIC GAS AND ELECTRIC COMPANY,  
STOCKTON**

## JANUARY / FEBRUARY

### Gas Heating Module (Webinar)

(Two-Night Class) Instructor: Mitch Bailey

Wed., Jan. 31 – Part 1

Thurs., Feb. 7 – Part 2

### Electrical Module (Webinar)

(Four-Night Class) Instructor: Mitch Bailey

Wed., Feb. 14 – Part 1

Thurs., Feb. 15 – Part 2

Wed., Feb. 21 – Part 3

Thurs., Feb. 22 – Part 4

## FEBRUARY / MARCH

### NATE HVAC/R New Hire (Webinar)

(Four-Night Class) Instructor: Mitch Bailey

Wed., Feb. 28 – Part 1

Thurs., Feb. 29 – Part 2

Wed., Mar. 6 – Part 3

Thurs., Mar. 7 – Part 4

## MARCH

### NATE HVAC/R Support Training (Webinar)

(Four-Night Class) Instructor: Mitch Bailey

Wed., Mar. 13 – Part 1

Thurs., Mar. 14 – Part 2

Wed., Mar. 20 – Part 3

Thurs., Mar. 21 – Part 4

## MARCH / APRIL

### Air Distribution Module (In-Person/Simulcast)

(Four-Night Class) Instructor: Mitch Bailey

Wed., Mar. 27 – Part 1

Thurs., Mar. 28 – Part 2

Wed., April 3 – Part 3

Thurs., April 4 – Part 4



on EXCEPT Where Noted.

on IOUs/CA COVID requirements.

to 8:00 pm - Classes are subject to change

org (Training)

This program is funded by California utility customers under the auspices of the California Public Utilities Commission.



# Indoor People



PAULA HUBAND

ACCA has hired Florida executive **Paula Huband** as its next director of events.

In her new role, Huband will oversee all aspects of ACCA's national educational and networking events, including ACCA 2024, and focused leadership development programs like ACCA Next Level.

Since 2017, Huband has served as executive director of the Florida Refrigeration Air Conditioning Contractors Association (FRACCA), ACCA's allied contracting organization in Florida and co-host of the ACCA 2024 in Orlando, March 11-14, 2024. Huband has also served as executive director for ACCA of Central Florida (ACCA/CF) since 2015 and owns a printing, marketing, and promotional products company, IdeaGirl Solutions.

During her tenure, Huband grew the ACCA/CF membership from 51 to 125 and reinvigorated its apprenticeship program. She took FRACCA from seven chapters to nine, launched a successful advocacy day in Tallahassee, and organized four FRACCA educational conferences.

"I can think of no individual better equipped to hit the ground running as director of events," said Sean Robertson, ACCA's vice president of membership and business operations. "I was particularly impressed that Paula had already lined up all 10 of FRACCA's sessions for ACCA 2024 a full year in

advance, and I'm excited to see her deep familiarity with contractor needs translate into stronger peer-led content going forward."

• • • • •

Nidec Motor Corporation is proud to announce that **David Mangrum** has been named Salesperson of the Year for the company's HVACR Aftermarket Motors Group. Mangrum is the Sales & Business Development Manager for HVACR Aftermarket, covering North Texas, Oklahoma and Arkansas. He joined Nidec in 2016 and has worked in the electric motor industry for 36 years.

"David has not only achieved sales goals but just as importantly provided crucial support to new and existing customers during the supply chain challenges of the past few years. We commend David for this well-deserved recognition," said Brad Jacka, Director of Sales, Aftermarket.



DAVID MANGRUM

• • • • •

The Plumbing-Heating-Cooling Contractors – National Association's (PHCC) Educational Foundation has named **Joseph Sullivan** to the organization's Board of Governors. This distinguished group – composed of leading contractors, manufacturers, and other industry partners who are major donors to the Foundation – is responsible for guiding the development of industry education and training programs for contractors and their



JOSEPH SULLIVAN

employees.

After graduating from Boston College with a degree in accounting, Sullivan served on active duty and then in the Army Reserve for six years. He then started on a career in finance at a national public accounting firm. In 1968, Joe's father convinced him to come work at the family business – J.J. Sullivan Plumbing. When his father passed away two years later, Sullivan found himself in charge of the family business at 28 years old.

To help get the knowledge he needed to be successful, Sullivan joined a local plumbing association – PHCC. In time, he took on leadership roles, including becoming president of the state association. He continued to be active and served as the PHCC of Massachusetts state treasurer for 20 years.

In 2001, he was asked about serving on the PHCC Educational Foundation's Scholarship Committee – a role he took on without hesitation. For the next 22 years, Sullivan would spend his summers reviewing the application materials of thousands of apprentices and students looking to earn a scholarship award.

J.J. Sullivan Plumbing and Heating is thriving as the firm takes on commercial and institutional jobs, working in schools and labs in the Cambridge, Massachusetts area. His two sons, Patrick and Mike, are now helping to run the business as the third generation for the company. Sullivan's wife

Ann passed away in 2005, and he remarried in 2008 to Jacqueline Piret, a retired microbiology professor. He still shows up for work regularly, but makes his own hours as he likes.

• • • • •

The Seal Company, a background verification company helping service companies provide a security promise to their customers since 2008, has hired veteran home service industry advisor and operations manager **Lisa White** as its new vice president of business development.

White comes to The Seal with more than 25 years of experience in the trades. Not only did she work in business development for Nexstar Network for more than 21 years, she grew up in the industry as the daughter of a plumber. She wants to help service companies simplify their business.

"My purpose in joining The Seal is to find easy solutions for contractors to get things done and lessen their work and stress load," she said. "One of my missions is to help contractors provide home and business owners with an easy-to-use verification system that verifies that the service tech they are letting into their home has passed a thorough background check. Homeowners want to know if their families will be safe, and The Seal of Security and Confidence™ helps home service companies pro-



LISA WHITE

vide them with that information."

White said she came to The Seal because she firmly believes in its philosophy. The company's solution helps service businesses develop their reputation management program by giving customers a chance to confirm the credentials of their service technician, and it provides them with a quick option to leave a review after the service is complete.

• • • • •

**Sean Lannon** has joined Copeland as its first CFO.

Copeland, formerly Emerson's climate technologies division, spun off from its parent company in May when the asset management firm Blackstone acquired a majority stake.

"Sean brings with him vast experience across numerous industries within the industrial manufacturing sector. With his finance and leadership experience, Sean will be a key addition to the Copeland team as we grow and strengthen the Copeland business through our focus on developing and delivering sustainable technologies for the HVACR and industrial compression industry," said Copeland CEO Ross B. Shuster. "We look forward to welcoming Sean to Copeland as we build out our leadership team."

Lannon joins Copeland from Axalta, a paint and coatings manufacturing company, where he most recently served as CFO. Prior to joining Axalta, Lannon held financial roles at Trinseo, Endo Pharmaceuticals, and Price-waterhouse Coopers. He holds a bachelor's degree in accounting from Philadelphia University.

"It's an exciting time to join Copeland as it transitions to a leading, stand-alone company in the HVACR and industrial compression industry. As I looked to join Copeland, I was impressed

## PHCC Conference

Continued from Page 25

mit featured keynoters Jeremy Wall of GoalMakers and Steve Acho, a human and business performance coach, both of whom shared methods for harnessing leadership and management skills. Plus, a panel of top industry leaders inspired the future generation with real-world situations from their own shops.

### Women in Industry Luncheon

Led by moderator Susan Few of Sunshine Home Services, a panel of seven individuals involved in

Women in Plumbing & Piping shared insights on how PHCC members can attract more women into the trades and the benefits not just to their companies but to the industry as a whole. They discussed recruiting tactics and timing ("plant the seeds as early as possible"), company culture, and the evaluation of all roles in a business.

### Apprentice Contests

It takes a village of contractor volunteers and industry sponsors to support and set up the PHCC Educational Foundation's National Apprentice Contests ... and the contest area was buzzing

as 21 plumbing and 11 HVAC apprentices from across the nation tested their skills, knowledge, and accuracy. Congratulations to all our competitors and finalists.

### Investing in the Next Generation

Scholarships totaling \$190,000 were announced by the PHCC Educational Foundation and PHCC National Auxiliary at CONNECT. The Auxiliary awarded 14 scholarships totaling \$51,000 (full list here). The Foundation awarded \$139,000 to 57 plumbing and HVAC apprentices, trade school students, and college students pursuing studies directly related to the

p-h-c industry.

During CONNECT, attendees donated generously to the Foundation's Invest in Your Future campaign, pushing the annual total raised past \$257,000. Matching funds from InSinkErator, Ferguson, NIBCO, and SupplyHouse.com, plus A. O. Smith, Bradford White, Federated Insurance, Rheem, and Scorpion Home Services, helped to boost the fundraising total to this level. These valued partners make what we do possible!

### Honoring the Best of 2023

The 2023 PHCC Awards Luncheon "celebrates the very best in

2023," announced PHCC National Auxiliary President Ann Rivers. "It also illustrates our faith in the future as we continue to work together for the success of our association and our industry."

The association's highest honor – the Col. George D. Scott Award – went to Kevin Tindall of Tindall & Ranson in Windsor, New Jersey. A past PHCC National president and the current chairman of the PHCC Educational Foundation, Tindall has been paying his appreciation for PHCC forward for nearly two decades with selfless service to the association, the industry, his community, and future generations.

# Indoor People



SEAN LANNON

by the company's focus on scaling decarbonization, accelerating electrification, and delivering value to its customers," said Lannon. "Copeland is poised to play

a critical role in influencing how sustainability plays into society."



**Damon Reed** is the new COO at chiller manufacturer Pro Refrigeration Inc.

Reed joined Pro in 2005, starting with the sales team and advancing to vice president of sales. He was pivotal in Pro's launch of the ProGreen Solutions CO2 Chiller System, helping Pro become the first U.S. chiller manufacturer to offer an alternative chiller design that uses R744, a natural CO2 refrigerant.

In his new role, Reed will oversee all facets of the Pro Refrigeration

operation, including the production team, engineering group, customer support team, and technical team.

"I am honored to be given the opportunity for this new chapter in my career at Pro Refrigeration. I am grateful for the outstanding team that surrounds me and look forward to helping our team members, clients, and organization reach their goals," Reed said.

Reed recently accepted an appointment to the North Carolina State Board of Refrigeration, with which he will help with enforcing state codes and creating and administering contractor training and testing.



DAMON REED

## Business Matters

Continued from Page 15

of the business. I just carried on the same thing. There were good years, and there were bad years, and when you have a good year you can't go out and blow all the money because you always know that bad year is coming.

**Lawrence:** What would you like for people to know what's your legacy on the industry?

**David Kahn:** That I always did the right thing. Sometimes you have to make difficult decisions and sacrifices in business, but I always did so to take care of our people.

**Lawrence:** What do you plan to do with yourself now that you're going to find yourself on the outside looking in?

**David Kahn:** That's the \$64,000 question. As you know, I'm into cars, boats, and airplanes. I did just sell my airplane that I had owned for 33 years. I was getting too old and you know as a pilot we all know we can't fly forever and better to make that decision than to go just one step too far so I sold the airplane but I still love the boat and I still have my five sports cars to keep me busy. I also belong to an organization of pilots that I haven't been able to participate in very much lately. I also have my car guys that we used to get together

every Sunday morning and I look forward to seeing them again. I've got a few projects lined up at home as well. I'm sure I will stay plenty busy.

*Lawrence Castillo is the President/ Operating Partner of Brody Pennell Heating & Air Conditioning in Los Angeles and is a Board Member of IHACI. Castillo is nationally respected as one of the residential HVAC/ plumbing industry's top operators and has generated record revenue growth for some of the West Coast's most respected and well-known companies over the past 20+ years. Lawrence can be reached at Lawrence@brodypennell.com.*

## GOLD KEY Contest Winner

The winner of last month's ICN Gold Key contest is:



**Dan Van Wyhe**  
Van Wyhe Heating & AC  
Vista, CA

Dan is the winner of a \$50 Amazon gift card, courtesy of ICN. Congrats!

## NEW IHACI MEMBERS

- **JB Air**  
Stockton, CA 95207

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