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DECEMBER 2019

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Happy Holidays

Legal Lines

New Employment Laws for '20

California governor inks numerous expansive legislation that will significantly affect employers in upcoming year.

California recently concluded another legislative session with new Gov. Gavin Newsom signing significant employment-related legislation. The following summarizes the bills that will affect employers going in to 2020. New laws are generally effective Jan. 1, 2020 unless otherwise indicated.

AB 5 and AB 170

AB 5 codifies the California Supreme Court's controversial Dynamex decision (Dynamex Operations West v. Superior Court (2018) 4 Cal.5th 903) and "ABC" test to determine whether an individual is properly classified as an independent contractor. To pass the ABC test, employers must prove the following three elements:

- The person is free from the control and direction of the hiring entity in connection with the performance of the work, both under the contract for the performance of the work and in fact;
- The person performs work that is outside the usual course of the

hiring entity's business; and

- The person is customarily engaged in an independently established trade, occupation, or business of the same nature as that involved in the work performed.

AB 5 clarifies that the ABC test applies to California's IWC Wage Orders, Labor Code, and Unemployment Insurance Code.

AB 5 exempts certain classifications of workers from the ABC test and instead submit such workers to the traditional multi-factor Borello test for purposes of the Labor Code and Wage Orders. Those workers include insurance brokers; physicians, surgeons, dentists, podiatrists, psychologists, or veterinarians; lawyers, architects, engineers, private investigators, and accountants; registered securities broker-dealers, investment advisers, their agents, and representatives; direct sales salespersons; com-

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Inside

Industry Events

AHR Expo Announces Innovation Award Winners

Ten products recognized as the best in their categories.

AHR Expo Show Management announced the winners of the 2020 AHR Expo Innovation Awards competition. Hosted annually by the AHR Expo, products in 10 industry categories are recognized for their innovative contribution to HVACR. The winning products, technologies, and systems from each award category will be formally recognized during the 2020 AHR Expo, Feb. 3-5, at the Orange County Convention Center in Orlando, Fla. Additionally, one of the category winners will be recognized as the most inventive and original product and will receive the 2020 Product of the Year Award. The ceremony is open to all Show attendees and is slated for Tuesday, Feb. 4, at 1:00 p.m. EST.

Winners are carefully reviewed and selected by a panel of third-party ASHRAE



The YORK LX Series TL9E Ultra-Low NOx Gas Furnace and the Infinitum Electric HVAC motor, winners in the heating and ventilation categories, respectively.



member judges who evaluate award entries based on their innovative design, creativity, application, value, and potential market impact.

"We had more entries submitted for the 2020 Innovation Awards than we've ever had," said Mark Stevens, AHR Expo show manager. "This speaks volumes to the advancement and outstanding innovation happening within the HVACR industry at the moment. As in previous years, the technologies vying for a category

award more than exceeded our expectations. We would like to congratulate each of our winners, finalists and all entrants for their leadership in advancing the future of our industry. We look forward to seeing these inventive solutions in action on the show floor in Orlando and to honor our winners in a special ceremony."

2020 AHR Expo Innova-

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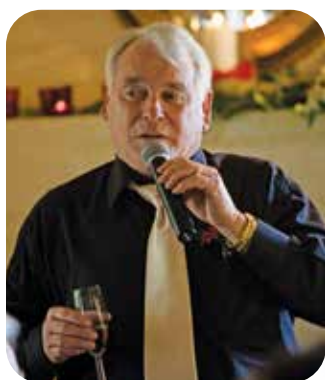
DEPARTMENTS

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A Farewell Toast to IHACI Board Member

Keith Thomas

Passed: Wednesday, October 16, 2019

Keith Thomas was a cherished member of the Institute of Heating and Air Conditioning Industries, Inc. (IHACI) Board of Directors. He was beloved by family, friends, business associates (Ret. CASCO), and all who had the privilege of knowing him. We celebrate his life and pay tribute to a man who lived life with love, joy and gratitude.

Until we meet again.

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INDOOR COMFORT NEWS

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DAY & NIGHT ULTRA-LOW NO_x FURNACES QUALIFY FOR A \$500 SCAQMD CLEANAIR REBATE

SOUTH COAST AQMD FURNACE DETAILS

- Effective October 1, 2019, condensing and non-condensing home furnaces installed within the South Coast Air Quality Management District (SCAQMD) must comply with a NO_x emission limit of 14 ng / J.
- South Coast AQMD offers up to \$500 consumer sales rebate for the first 6,000 compliant furnaces purchased*.
- Thereafter, rebates will be \$300 for compliant condensing (high efficiency) furnaces and \$200 for compliant non-condensing (standard), weatherized, and mobile home furnaces.
- More information at cleanairfurnacerebate.com

*Rebates will continue until funding is exhausted.

DAY & NIGHT ULTRA-LOW NO_x FURNACES

All models listed below meet the NO_x emission limits of 14 ng / J for South Coast (SCAQMD) and San Joaquin Valley Air Quality Districts (SJAPCD) in California.**

G80CSU

Four models
up to 80% AFUE

COMMUNICATING,
SINGLE-STAGE GAS FURNACE

G80CSU0401712A G80CSU0802120A
G80CSU0601716A G80CSU1002120A



N80ESU

Four models
up to 80% AFUE

NON-CONDENSING,
PERFORMANCE SERIES

N80ESU0401712A N80ESU0802120A
N80ESU0601716A N80ESU1002120A



N95ESU

Four models
up to 96% AFUE

CONDENSING,
PERFORMANCE SERIES

N95ESU0401712A* N95ESU0802120A
N95ESU0601716A N95ESU1002120A



*Not available until Q4 2019



* CALIFORNIA AQMD Jurisdictions: In Jurisdictions where warranty benefits cannot be conditioned meeting timely registration requirements will receive the registered limited warranty periods. Please see warranty certificate for further details and restrictions.
** Registration: Timely registration is required for 10-year parts limited warranty and lifetime limited heat exchanger warranty. Limited warranty period is 5 years for parts and 20 years for heat exchanger if not registered within 90 days of installation.

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ULTRA-LOW NOx ONE-HOUR TRAINING

COMPANY PRINCIPALS AND TECHNICIANS

Starting October 1, 2019, South Coast Air Quality Management District began enforcing Rule 1111.* This rule applies to sellers, and installers of residential fan-type central furnaces, requiring either single-phase or three-phased electric supply.

* More information at:

<https://www.aqmd.gov/docs/default-source/rule-book/reg-xi/rule-1111.pdf>

GET ULTRA-LOW NOx TRAINED

If you have a need for training in your area, Ferguson HVAC | Day & Night will provide recommended training for company principals and technicians for groups of three or more. Local training will be offered throughout Southern California at Ferguson HVAC locations.

To learn more about Day and Night's strategy for Ultra Low-NOx requirements, sign up for training.

HOW TO REGISTER: Visit: ultralownoxtraining.com



Scan with your smart phone to register.

COMING SOON – REGIONAL DEALER MEETINGS IN YOUR AREA

Learn about all the Day & Night dealer benefits and program information for 2020.

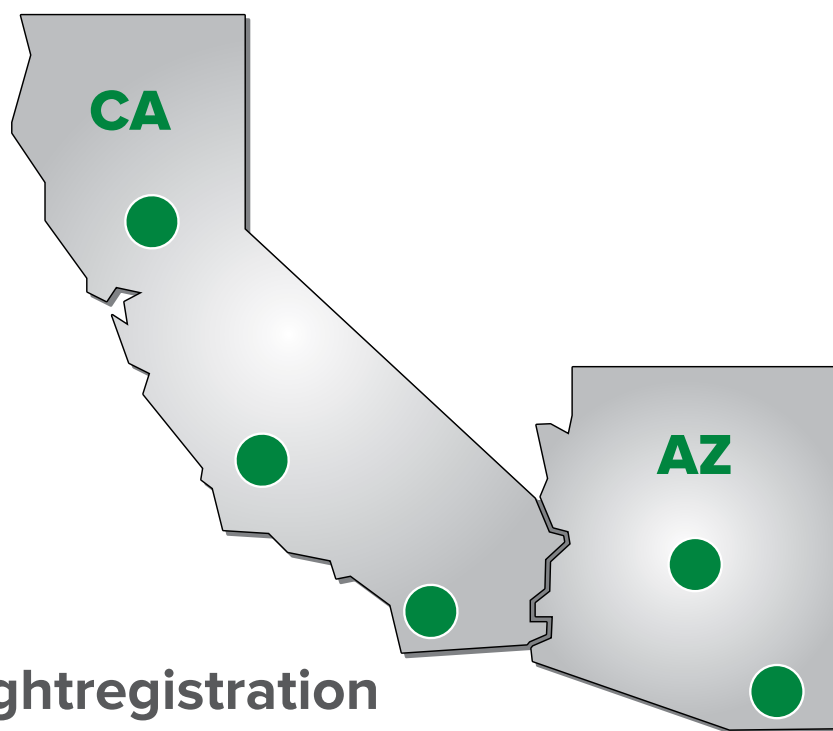
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www.fergusonhvac.com/dayandnightregistration
for more information



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Industry News



CALIFORNIA



Palm Springs Hosts Fujitsu Conference

Palm Springs, Calif. – Fujitsu General America recently held its third annual national distributor conference in Palm Springs. The conference, which took place Sept. 9 through 11, was held at the La Quinta Resort & Club, a Waldorf Astoria Resort. Roughly 250 reps and wholesalers attended, a 25 percent increase from 2018.

The event kicked off with a traditional Japanese sake barrel ceremony, or Kagami Biraki, which represents an opening of an event to harmony and good fortune.

"I want to thank everyone for coming to Palm Springs to share three days with us at an incredible venue," said President and COO, Matt Peterson. "We had such an awesome mix of business and pleasure, including stage presentations, breakout sessions on many different functions, and relaxing dinners including award ceremonies. Thanks to all that attended!"

The floor opened for general comments and an on-stage meeting of Fujitsu's Distributor Advisory Council, which has been a great source of improvement for the company. Members of the council commented on how well Fujitsu



Fujitsu's 2019 National Distributor Conference opens with a traditional Japanese sake barrel ceremony, or Kagami Biraki, led by Matt Peterson, President and COO (left foreground) and Tomokazu Hosoi, Vice President of Business Development (right foreground).

has responded to their input.

"This event provides face time with our best reps and distributors to discuss important issues," said Andy Armstrong, VP of Sales and Marketing. "What are our biggest challenges? What have we done well in the past year? What's coming in 2020? The response and enthusiasm was fantastic."

"Everyone is happy with the new initiatives we launched over the past year, from cost reduction to new tools on the service side," said Victor Gomez, VP of Operations. "We are doing our best to live up to our motto: Easier to do Business With."

Jeep tours throughout the desert were provided for attendees that opted not to golf or relax pool-side. The final evening included a party and awards ceremony. Two cigar rollers, a Marilyn Monroe impersonator and a mind-reading

Mentalist from New York City provided ambiance, entertainment and astonishment.

"I hope to see everyone next year," concluded Peterson. "It's going to be just as good as it was this week!"

For more information, please visit www.FujitsuGeneral.com.

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EGIA Foundation to Offer Scholarships

Sacramento, Calif. – The EGIA Foundation announced that it is now accepting applications for the 2020 EGIA Foundation Scholarship Program, a scholarship available exclusively for students preparing for careers in the trades.

"The trades in general, and the HVAC vertical in particular, continue to suffer a workforce shortage that impacts society at large, and our research indicates that's driven primarily by simple lack of awareness of the industry," said Bruce Matulich, EGIA foundation chairman and CEO. "The Scholarship is one of a number of public outreach initiatives the Foundation undertakes to help build a more stable industry and a better future."

The EGIA Foundation was created to help the home services industry reverse its ongoing workforce shortage by actively changing some of the negative perceptions that exist of the industry. That's accomplished by repositioning HVAC and other trades as first-choice career paths directly out of high school, and attracting more, better-trained students into the workforce. The Scholarship Program is a primary activity in that regard.

"The truth is that this work entails many of the characteristics that young people entering the workforce cite as desirable, along

with higher-than-average starting salaries, much more expedited educational programs than the common 4-year-college path, and no five- or six-figure student loan debt," Matulich continued. "The EGIA Foundation and the Scholarship Program are committed to casting a light on the endless opportunities that are available in the industry, and minimize one of the few small barriers to entry."

Now in its third year of existence, the EGIA Foundation Scholarship Program will award \$2,500 scholarships to up to 20 students planning to pursue or already pursuing a certification, diploma or technical degree in HVAC at an accredited institution for the entire 2020-21 academic year. Recipients will be selected based on academic merit, financial need and dedication to pursuing a career in residential HVAC or home performance contracting upon graduation.

Interested students can apply for the 2020 EGIA Foundation Scholarship Program, now through the final deadline of Jan. 30, 2020, at EGIAFoundation.org/Scholarship.

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Goettl Expands in Calif. Territory

Los Angeles, Calif. – Goettl Air Conditioning & Plumbing ("Goettl"), one of the largest providers of residential HVAC and plumbing services in the Southwest United States, announced the acquisition of Dutton Plumbing, a leading provider of plumbing and drain services in Los Angeles and Ventura counties.

Located in Simi Valley, Calif., Dutton Plumbing ("Dutton") provides dedicated and dependable plumbing and drain services to approximately 10,000 homeowners annually. Dutton's focus on workmanship and complete customer satisfaction is reflected in its motto, "The Plumber You'd Send to Your Mom's House." Dutton treats its customers like family and strives to be every customer's "plumber for life."

The acquisition of Dutton significantly expands Goettl's footprint in the Southern California market. Goettl intends to continue providing plumbing and drain services under the Dutton Plumbing brand, while also introducing its award-

winning HVAC service offerings to Dutton's loyal customer base as well as other homeowners in the surrounding area.

"In an effort to continuously perfect our service offerings, we pursued a partnership with a highly regarded industry leader in plumbing," said Goettl CEO Ken Goodrich. "The industry holds a lot of respect for Eric Dutton, founder of Dutton Plumbing, his general manager, Eric Falconer, and the dynamic team of home service professionals these gentlemen have assembled. I am excited to be part of the next leap forward for Goettl, side by side with team Dutton."

"To be aligned with a legacy company like Goettl is truly an honor," said Eric Dutton. "We are excited to offer HVAC services to our customers through one of the industry's best operators. I have been approached many times over the years for opportunities like this, but only after being given the opportunity to work with Ken Goodrich and his team, did I feel that it was a true benefit for my family, my loyal employees, my customers and myself. It was important for me to take the opportunity to do business with someone who is not only an icon in the industry, but also someone who I like and enjoy working with."

"All Dutton employees will be joining a top team of professionals that take pride in delivering personalized service and excellence in installation, consistent with the promise of the Goettl brand," noted Goodrich.

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Western HVAC Performance Alliance Dissolves

Lake Elsinore, Calif. – Western HVAC Performance Alliance Inc (WHPA) announced that it has closed permanently, effective as of November 2019. After careful deliberation, WHPA's Board of Directors authorized the dissolution of the organization largely due to the inability to secure sustainable funding as a nonprofit 501(c)3 public benefit charity.

Over the next few weeks, the WHPA Dissolution Transition Team will implement its dissolution plan. To preserve WHPA's rich research legacy and pay homage to the time and resource investment of those who contrib-

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Not all brands available at all locations

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uted to past WHPA work products, this team will investigate options to transfer WHPA's research library to a 501(c)3 organization with similar goals and objectives.

TEXAS



Hilti, Procore Form Partnership

Plano, Texas – The Hilti Group, a world-leading manufacturer and provider of construction tools, technology and productiv-

ity solutions, is collaborating with Procore, a leading provider of construction management software, to help strengthen digital workflows and drive productivity on jobsites. As part of the joint effort, Hilti ON!Track asset management system will become compatible for Procore platform users. The announcement was made during Procore's Groundbreak 2019, one of the largest construction conferences in the U.S.

"Procore is a market leader with Software core to the operations of many of our customers in North America. The way Procore expands ease of use by offering interoperability across users' software aligns well with Hilti's goal to provide digital solutions that fit how our customers work," said Rafael Garcia, Senior Vice President of Marketing at Hilti North America.

"This is a first step in establishing a long-standing relationship."

In recent years, Hilti has made major efforts to digitize the construction industry with software solutions. Hilti ON!Track is specifically designed to give contractors visibility into who has their assets. Smartphone scanning and active Bluetooth tags help track items moved between warehouses and jobsites. It also enables contractors to proactively manage repairs and inspections, set reminders for maintenance and verify proper training and certifications before assigning certain assets.

The API will open data exchange between Hilti ON!Track and Procore, starting with basic project info and expanding over time into further seamless workflows. Procore users appreciate

the benefits of reduced duplicate data entry of the same information into multiple spreadsheets or workflows. Customers using both Procore and ON!Track suggest for example that an open item from Procore's Tasks tool to request a piece of equipment could be checked off once the transfer is scanned and signed within the Hilti ON!Track App.

"We are excited to work with trusted names in our industry like Hilti," said Rusty Reed, Chief Strategy Officer. "Technology usage continues to expand into the field and the integration of Hilti ON!Track and Procore will play a big role in supporting the needs of contractors who use both. We're glad Hilti will be part of the embedded experience moving forward."

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Success Group Int'l Celebrates 20th Year

Dallas, Texas – Success Group International (SGI) recently hosted its fall 2019 Expo at the Gaylord Texan Resort & Convention Center in Dallas. The event marked SGI's 20th year in business. Over 1,300 people attended, making it the largest fall Expo in SGI's history. Expo began with tours of local member locations, one-on-one coaching sessions, and a 20th-Anniversary Party, but the following two days offered members 30 sessions on a variety of topics pertaining to residential contracting. Expo's keynote presentation delivered by SGI President Rebecca Cassel was on the topic of performance management for managers.

"We had a tremendous time celebrating SGI's 20th year in business with all our members and team," said SGI President Rebecca Cassel. "Since [my husband] Lon and I, along with our group of other SGI members, bought the company over five years ago, we believe it's in the best shape it's ever been. We've had record attendance at both our spring and now fall Expos, and, collectively, the Expo sessions we've offered have been scored by our members at a 9.6 out of 10."

"We know we can't rest on past successes," she continued. "We must continue to deliver valuable content to our members that will positively influence their businesses. Among the many topics discussed at the Dallas Expo, our main presentation focused on helping our members manage their management teams."

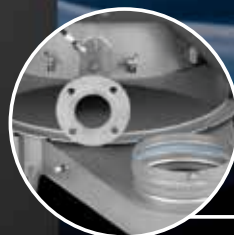
The comprehensive management performance program offers SGI members job descriptions, interviewing strategies, onboarding guidance, and other tools previously provided at other Expos. However, SGI presented members with several new devices to help them guide their management teams. The two biggest are manager checklists and the SGI Virtual Coach.

SGI constructed checklists for general managers, operations managers, and office-center managers, as well as a checklist for small-company operators without a management team. SGI personalized

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- Up to \$400 rebate on ENERGY STAR certified natural gas furnaces.

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CLEAResult is a SoCalGas authorized contractor responsible for administering the Residential HVAC Program through December 31, 2019.



Continued from Page 6

the checklists for each of the four trades in its organization, and the items on the checklists are broken into daily, weekly, monthly, quarterly, semi-annual, and annual activities.

SGI announced its spring Expo will be held at the Pechanga Resort in Temecula, Calif., April 1 through April 3, 2020.

NATIONAL



Samsung Hosts Business Partners

Denver, Colo. – Samsung hosted a diverse crowd of 300 business partners in Denver to recognize exceptional business performance, develop key relationships, and communicate the future of Samsung HVAC America.

Samsung recognized exemplary wholesale distributor partners, commercial spec and plan representative partners, and two exceptional Samsung residential dealers at their 2019 Annual Partner Summit. Nine companies accepted awards in front of the diverse crowd for their 2018–2019 accomplishments.

The Pinnacle Award of Excellence for a wholesale distributor recognized a combination of overall sales increase, year-over-year sales growth percentage, and greatest split system sales. Samsung recognized Shearer Supply based in Farmers Branch, Texas, as the



The winners of Samsung's distributor awards.

recipient of the Pinnacle Award of Excellence for the third consecutive year.

Samsung also recognized a spec and plan representative for noteworthy commercial sales growth and superior project win ratios. SRS Enterprises based in Brooklyn, New York, received the Pinnacle Award of Excellence for a commercial spec and plan representative.

- Additional award winners:
- Mini Split Champion: US Air Conditioning Distributors, California
 - Outstanding Samsung Dealer: Laird's HVAC, Maine; Paul's Air Conditioning and Heating Company, California
 - Samsung Edge: SRS Enterprises, New York; Insight Partners, Carolinas
 - Samsung Brand Ambassador: McCall's Supply, South Carolina
 - Mini Split Growth: Wolseley Canada, Ontario
 - Training Excellence: ILLCO Inc., Illinois

Johnson Controls Acquires Synchrony

Milwaukee, Wisc. – Johnson Controls announced that it will acquire Synchrony, a global leader in

the development of Active Magnetic Bearing (AMB) technology. Based in Roanoke, Virginia, Synchrony is part of Siemens Gas and Power.

The acquisition, which closed Nov. 1, will enable Johnson Controls to improve the performance of its centrifugal chiller products, which rely on magnetic bearings to boost energy efficiency, improve reliability and reduce maintenance costs, among other benefits.

"This acquisition will allow us to access untapped benefits in performance and efficiency that will competitively position our chiller products for years to come," said Ian Casper, vice president, product engineering, global chiller products, Johnson Controls.

Casper added that magnetic bearing chillers are the fastest-growing chiller product family for Johnson Controls and that the HVACR industry is rapidly adopting AMB technology.

"Owning this technology will enable deeper integration of chiller system development, which will further enhance customer value," he said.

"Synchrony, Inc.'s advanced magnetic bearing technology has enabled Siemens' oil and gas business to deliver world-class products and solutions to our customers," said Rainer Theisen, head of Global Solutions at Siemens Oil & Gas. "Johnson Controls' acquisition will enable Synchrony's technology to access new markets, while still playing a role in our manufacturing supply chain for our global energy business. We thank all Synchrony employees for their dedication and look forward to continuing our strong relationship with the team as a part of Johnson Controls in the future."

As part of the acquisition, Johnson Controls will obtain all of Synchrony's products and intellectual property. In addition to magnetic bearings, those products include motors and drives, generators and advanced AMB monitoring software.

In 2016, Johnson Controls and

Synchrony partnered to develop the YORK® YZ magnetic bearing centrifugal chiller. Launched in early 2018, the YZ is the first chiller fully optimized for ultimate performance, with a next generation low-global warming potential refrigerant, R-1233zd(E). Since its launch, the YZ chiller has won several industry awards, including the 2019 AHR Innovation Award in the cooling category.

Terms of the acquisition were not disclosed.

For more information about the Johnson Controls family of chiller products, go to <https://www.johnsoncontrols.com/hvac-equipment#Chillers>.

Ford Awarded for Energy Efficiency

Dearborn, Mich. – Ford Motor Company earned an Energy Efficiency Leader Award for achieving sustainability and energy conservation through energy saving equipment upgrades.

Ford engaged Trane on a large chiller plant project to keep its data centers at precise temperatures and high performance, and less energy use in line with its sustainability commitment. Ford selected and installed the first centrifugal chillers in North America using low global warming potential (GWP) refrigerant, Chemours XP30 (R-514A).

Through this project, Ford reduced greenhouse gas emissions by more than 330 metric tons — the equivalent of powering 45 homes for an entire year or planting 388 acres of trees.

"We are honored to be recognized for our sustainability leadership, which is core to our mission and vision at Ford Motor Company," said Dwayne Atkins, engineering manager for Ford. "We rely on innovative partners like Trane to help us both maintain our high performance and protect the planet by reducing emissions in our operations."

"We're proud to highlight companies like Ford that share our vision for a more sustainable future," said Donny Simmons, president, Trane Commercial HVAC North America, Europe, Middle East, and Africa. "Ford is leading by example with energy efficiency best practices that prove that there is no tradeoff and you can achieve high performance cooling while making impactful contributions towards environmental sustainability."

Ford and Trane commitments to sustainability extend beyond energy efficient practices; the companies share similar sustainability goals, focused on enhancing quality of life and climate action:

- Ford promotes the United Na-

tions 2030 Agenda for Sustainable Development by communicating how its vehicles and operations contribute towards related UN Sustainable Development Goals.

• Trane is meeting the challenge of climate change through 2030 Sustainability Commitments. Its Gigaton Challenge is designed to reduce customer carbon footprint from buildings, homes and transportation by one gigaton1 CO2e, while leading by example in its own operations – achieving carbon neutral and net positive water operations.

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Uponor N. America Wins International Trade Award

Apple Valley, Minn. – Minnesota Gov. Tim Walz and Steve Grove, commissioner, Minnesota Department of Employment and Economic Development, honored Uponor North America (UNA) with the International Trade Award for Foreign Direct Investment in a special luncheon ceremony in Minneapolis.

The annual award recognizes companies that have shown exceptional progress and success in exports to foreign markets, as well as foreign-owned companies, like UNA, that have made significant economic contributions through their investments in Minnesota.

"Each of the Governor's International Trade Award winners represent more than business success – they represent making the world a better place," said Governor Tim Walz.

"During the past 30 years, we increased our footprint in Apple Valley by 680 percent, expanding 10 times to more than 246,000 square feet of space in five buildings," said Bill Gray, UNA president. "Through further expansion, Uponor opened facilities in Lakeville and Hutchinson. Currently, in North America, we employ over 850 people and occupy just shy of 1 million square feet in Minnesota alone."

Through the partnership with the state of Minnesota and, in particular, the Department of Employment and Economic Development, Uponor has received over \$1.3 million to increase its footprint and create jobs.

"Our target for job creation from these investments was 231 new employees, but through the investments, we were able to create 395 jobs," said Gray, who also noted that UNA is now Apple Valley's largest employer.

Continued on Page 10

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Model Number	Heating BTUh	AFUE	Weight	Length (Inches)	Width (Inches)	Height (Inches)
TL8E060A12UH11	60k	80%	94	29.5	14.5	33.0
TL8E080C16UH11	80k	80%	114	29.5	21.0	33.0
TL8E100C20UH11	100k	80%	122	29.5	21.0	33.0

Model Number	Heating BTUh	AFUE	Weight	Length (Inches)	Width (Inches)	Height (Inches)
TL9E060B12UH11	60k	95%	122	29.5	17.5	33.0
TL9E080C16UH11	80k	95%	136	29.5	21.0	33.0
TL9E100C20UH11	100k	95%	145	29.5	21.0	33.0

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Continued from Page 8

AAON Opens New Innovation Center

Tulsa, Okla. – AAON, Inc. (NASDAQ: AAON), a leading manufacturer of heating and cooling products, officially opened the Norman Asbjornson Innovation Center (NAIC) Research and Development Laboratory. The Lieutenant Governor of Oklahoma, Matt Pinnell, the President and CEO of the Tulsa Regional Chamber, Mike Neal, and other local dignitaries attended the ribbon cutting ceremony.

The 65-foot tall, 134,000 square-foot facility features 10 test chambers that continue to solidify AAON as the technological leader in high performance HVAC equip-

ment. The NAIC is the only laboratory in the world able to measure supply, return, and ambient sound under actual load conditions, for an air conditioning system up to 300 tons and a chiller system up to 540 tons. Environmental application testing capabilities include -20°F to 140°F testing conditions, up to 8 inches per hour rain testing, up to 2 inches per hour snow testing, and up to 50 mph wind testing.

“We are very excited to have this facility up-and-running. It is the result of many years of designing, planning and implementation by our employees. I believe the technology built into this state-of-the-art laboratory will establish the company for many years to come,” said Norm Asbjornson, CEO of AAON.

“The NAIC is a major reason I decided to come and lead the



AAON staff members at the ribbon-cutting ceremony for the company's new Norman Asbjornson Innovation Center.

AAON team. The value this facility brings to the company is enormous; we are able to show our customers firsthand why AAON is the leader in the HVAC industry. Its capabilities have already resulted in multiple large AAON equipment orders, where the customer required testing

that was not possible anywhere else,” said Gary Fields, President of AAON.

AAON is engaged in the engineering, manufacturing, marketing and sale of air conditioning and heating equipment consisting of standard, semi-custom and custom

rooftop units, chillers, packaged outdoor mechanical rooms, air handling units, condensing units, makeup air units, energy recovery units, geothermal/water-source heat pumps, coils, and controls. Since the founding of AAON in 1988, AAON has maintained a commitment to design, develop, manufacture and deliver heating and cooling products to perform beyond all expectations and demonstrate the value of AAON to our customers. For more information, please visit www.AAON.com.

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Goodway, Camus to Offer Safe Cleaning Products

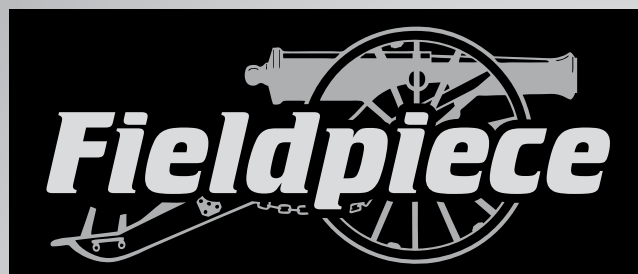
Stamford, Conn. – Goodway Technologies, a manufacturer of innovative industrial maintenance and cleaning solutions, is announcing a partnership with Camus to offer customers a safe and effective cleaning solution. Camus manufactures gas-fired, high efficiency copper tube and stainless steel boilers for residential, light commercial, commercial and industrial applications.

“Camus is consistently looking for new and improved solutions for their customers to help ensure that heat transfer and efficiencies remain optimal. One of the best ways to do that is to keep the equipment free of scale,” says Tim Fregeau, director of technical sales and business development at Goodway Technologies. “Our descaling solutions have been tested and approved for use on Camus boilers and water heaters.”

In boilers and water heaters, mineral deposits within the water supply can fall out of suspension and create an insulating barrier, in the form of scale, between the water and heat exchanger. This scale barrier also reduces efficiency of the boiler, resulting in higher gas or propane consumption.

However, the damage done by scale is not limited to reduced efficiency. A primary cause of premature heat exchanger failure is scale. It reduces flow and heat transfer within the appliance to the point of causing material failure.

Preventive maintenance is an integral part of any water operated piece of equipment's efficient operation. An increase in efficiency also means lower



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Continued from Page 10

operating costs, resulting in a positive impact to the bottom line.

“This partnership aims to provide education on the importance of proper maintenance and the best approach to get it done safely and effectively,” says Arman Shahabi, R&D Engineering Supervisor, M.Eng, P.Eng. at Camus. “We look forward to working with Goodway Technologies and providing our customers with high quality solutions that keep equipment running in peak operating conditions.”

One of those solutions is Goodway Technologies ScaleBreak®-MP, a unique blend of citric acid with corrosion inhibitors and wetting and penetrating agents. It offers excellent cleaning results

and speed without compromising the long-term integrity of equipment base metals. This biodegradable descaling solution will safely dissolve scale deposits into a liquid suspension allowing them to be flushed out of the chiller – leaving no residual solution.

For more information, visit www.goodway.com/camus.

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Cambridge Named Manufacturer of Year

St. Louis, Mo. – The Missouri Association of Manufacturers (MAM) has honored Cambridge Engineering by naming the company, Missouri’s “Small Manufacturer of the Year.” Cambridge is a leading manufacturer of energy-efficient heating ventilating and air condi-

tioning (HVAC) equipment for commercial and industrial facilities, and is located in Chesterfield, Missouri.

“I look forward to celebrating this win with all of our team members - they deserve the accolades for this award,” said John Kramer, CEO of Cambridge Engineering. “While we manufacture exceptional HVAC equipment, we’re most proud of how we go about the process. We have a great culture at Cambridge where we set high expectations, and deliver through a commitment of unconditional love for our staff and the people we’re honored to work with. Our intent is to create an enriching environment for the whole person, so at the end of the day, our team members go home as better husbands, wives, sons and daughters making

for a better family that improves their community.”

This honor comes on the heels of being named The St. Louis Post-Dispatch Top Workplace in 2016 and 2018. Cambridge received exceptionally high marks from MAM for their implementation of lean manufacturing methodologies that improve product quality, while reducing manufacturing labor and material waste. The company credits a strong culture that encourages personal and professional growth. Their employees are recognized for problem-solving abilities, providing everyone on the factory floor and office staff with an active voice. Said Marc Braun, president of Cambridge Engineering, “each of our 158 team members create solutions and improve processes daily that lead to better products, and through them, we can compete favorably with

anyone.”

A key passion of Cambridge is to restore glory and dignity to domestic manufacturing. As part of this commitment, they have provided factory tours to hundreds of other organizations who are interested in learning Cambridge’s people-centric lean manufacturing journey and how the company is strengthened through its culture. A key part of this culture includes their morning meetings where team members interact with each-other, stretch, share grateful appreciation, and review daily business metrics.

2019 has been a particularly busy year for Cambridge, having just entered the industrial cooling arena through the 2018 acquisition of the Spec-Air and Ares HVAC brands from Essick Air. These evaporative cooling products are now manufactured at the Cambridge facility, allowing the company to offer a broader array of HVAC solutions for commercial and industrial facilities.

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Thermal Transfer Celebrates 50th Anniversary

Racine, Wisc. – Thermal Transfer Products (TTP) is celebrating 50 years in business. The company manufactures high-performing heat exchangers for oil cooling and compressor cooling.

Thermal Transfer Products was founded in 1969 by Royse and Barbara Myers. From the basement of their home, the former technical training director of a hydraulics company and his wife set out to design and manufacture the best heat exchangers in the fluid power industry. Royse Myers engineered and tested the new products, Barbara handled administrative functions, and the couple hired Russ Gemmell to design and develop the product drawings.

From the beginning, the company experienced success. In 1972, the company’s third year of operation, TTP more than doubled in sales volume. In 1983, the company moved to its current location, which was expanded four times in 12 years to meet the demand for its products. Today, the company employs 130 people in its 135,000-square-foot facility.

Royse credits TTP’s long-standing success to “a combi-



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Industry News

nation of effective marketing, customer requests and ingenuity that led to a steady stream of new products.” He also added that the company was able to weather the recessions without losing ground due to the Myers’ aversion to long-term debt.

In 1998, the Myers sold the company to a private equity firm. API Heat Transfer, the market leader in innovative and energy efficient equipment, purchased TTP in 2012.

For 50 years, TTP has built a tradition of excellence by developing and manufacturing innovative, high-quality heat exchangers, and its design and application engineers continue to challenge themselves to develop next-generation technologies.

New RSES Board Sworn Into Office

Rolling Meadows, Ill. – The RSES (Refrigeration Service Engineers Society) Board and RSES Auxiliary International Annual Business Meetings were held during the 2019 RSES Conference & HVACR Technology Expo in Indianapolis. At that time, the 2019–2020 International Board and Auxiliary Board of Directors were sworn into office.

The 2019–2020 Board of Directors includes International President Steve Wright, Sr., CMS, RCT; International Vice President Michael Ralston, CM; International Secretary and Treasurer Raymond T. Clary, CMS; and International Sergeant at Arms Art Miller, CMS, RCT.

Regional Directors up for re-election and voted in for a two-year term include Region 2 Arthur T. Miller, CMS, RCT; Region 8 and 11 Brynn C. Cooksey, CMS, RCT; Region 14 and 15 TBA and Region 16 and 17 Gary Struhar, CMS, RCT.

The 2019–2020 RSES Auxiliary Officers and Board of Directors appointed include President Gail Paschal; Vice President Jill Malone; Secretary Irene Thompson; Treasurer Pat McCarthy; Sergeant at Arms Karla Miller; Director of Credentials Sandy Ralston and Director of Publicity Brenda Decker.

Since 1933, Refrigeration Service Engineers Society (RSES) has been a leader in training and education for professional HVACR technicians

and contractors.

For more information, visit www.rses.org.

Resolute Acquires American Equipment

Indianapolis, Ind. – Resolute Industrial Holdings LLC (“Resolute”), an independent provider of specialty HVACR equipment rental solutions, compressor remanufacturing, and refrigerant storage services, an-

nounced that it has acquired American Equipment Group (“AEG”).

Terms of the transaction were not disclosed. Resolute is a portfolio company of AE Industrial Partners, LP (“AEI”), a private equity firm specializing in Aerospace, Defense & Government Services, Power Generation, and Specialty Industrial markets.

“AEG expands Resolute’s existing rental fleet and service offerings, while also adding complementary power rental equipment products,

enabling us to better serve our customers,” said Mike McGraw, CEO of Resolute. “This acquisition also broadens our existing geographic presence into a handful of key target markets and allows us to maximize our sales channel reach. We are excited to welcome the AEG team to the Resolute and Mobile Air family.”

“Joining Resolute is a win for our customers and employees, as we will have greater resources to support growth across the organization and deliver industry leading solutions to

our customers,” said Tim Johnson. “We look forward to working with Mike and his team to grow the combined company.”

“The temporary HVACR market is growing and extremely fragmented,” said Charlie Santos-Buch, partner at AEI. “We remain strategically focused on additional acquisition opportunities that will allow Resolute to expand its product and geographic presence while also solidifying its leadership position in the industry.”

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Governor Signs Off On New Expansive Legislation Affecting Employers

Continued from Page 1

mercial fishermen working on American vessels; marketing, human resources administration, travel agents, graphic designers, grant writers, and artists; photographers, photojournalists, freelance writers, editors, and newspaper cartoonists; licensed estheticians, electrologists, manicurists, barbers, or cosmetologists; real estate agents; licensed repossession agencies; bona fide business-to-business contracting relationships; construction subcontractors; construction trucking services; certain referral agencies, and motor club services. AB 170 exempts newspaper carriers in the same manner.

The exemptions apply retroactively to existing claims and actions to the maximum extent permitted by law. The exemptions do not appear in the section of AB 5 amending the Unemployment Insurance Code and it is unclear whether the exemptions extend to such claims. However, legislative history to AB 170 suggests the intent of the Legislature was to apply the exemptions to both unemployment insurance and wage and hour claims.

What this means for employers: Businesses should review their independent contractor agreements and relationships in light of AB 5. Special attention must be paid to the various exemptions created by AB 5 for particular occupations and industries.

AB 9

AB 9 extends the statute of limitations for employees to file a complaint with the Department of Fair Employment and Housing (“DFEH”) from one year to three years for complaints of discrimination, harassment, and retaliation.

What this means for employers: Employers must be more diligent about documenting complaints from employees and the response to the complaints. Document retention policies will need to be adjusted accordingly to ensure that the employer’s documentation of complaints, investigations and resolution of complaints are not prematurely discarded. Proper documentation of performance issues and documentation of the reasons for disciplinary action and termination

decisions will become even more important given the lapse in time it will take to prosecute claims with the extended statute of limitations because supervisors’ memories will fade in such time.

AB 51

AB 51 prohibits employers from requiring applicants or employees to agree, as a condition of employment, to mandatory arbitration, class action or jury waivers relating to the Labor Code and the Fair Employment and Housing Act (“FEHA”). Under AB 51, an agreement that requires an employee to opt out of a waiver or take any affirmative action in order to preserve their rights is deemed a condition of employment. Arbitration agree-

ments subject to the Federal Arbitration Act (“FAA”) are excluded from this bill. AB 51 does not apply to post-dispute settlement agreements or negotiated severance agreements.

What this means for employers: Prior bills that attempted similar restrictions on arbitration agreements were vetoed by Gov. Jerry Brown based on federal pre-emption. The reach of this bill is uncertain due to the FAA carve out and potential legal challenges. The law only applies to agreements entered into after Jan. 1, 2020. Current arbitration agreements remain enforceable. Employers should contact their employment counsel to determine if their arbitration agreement is affected by this bill.

AB 673

AB 673 provides that penalties for late payment of scheduled wages (weekly, biweekly, or semimonthly) shall be recovered by the Labor Commissioner, payable to the affected employee, as a civil penalty or by the employee as a statutory penalty in a hearing before the Labor Commissioner. The affected employee may also enforce civil penalties for late payment of wages through the Private Attorneys General Act (“PAGA”) actions but cannot also recover statutory penalties for the same violation.

What this means for employers: The penalties for late payment of scheduled wages (as opposed to final wages) were uncertain prior to the passage of this bill. Employers will have to be especially careful about meeting scheduled paydays as missed payroll now carries significant penalties that may attract litigation.

AB 749

AB 749 prohibits settlement agreements from containing a provision that prohibits an employee from working for the employer or any parent company, subsidiary, division, affiliate, or contractor of the employer. AB 749 states that the restriction on no-rehire provisions will not apply if the employer makes a good faith determination that the person engaged in sexual harassment or sexual assault. Under AB 749, an employer is not required to continue to employ or rehire a

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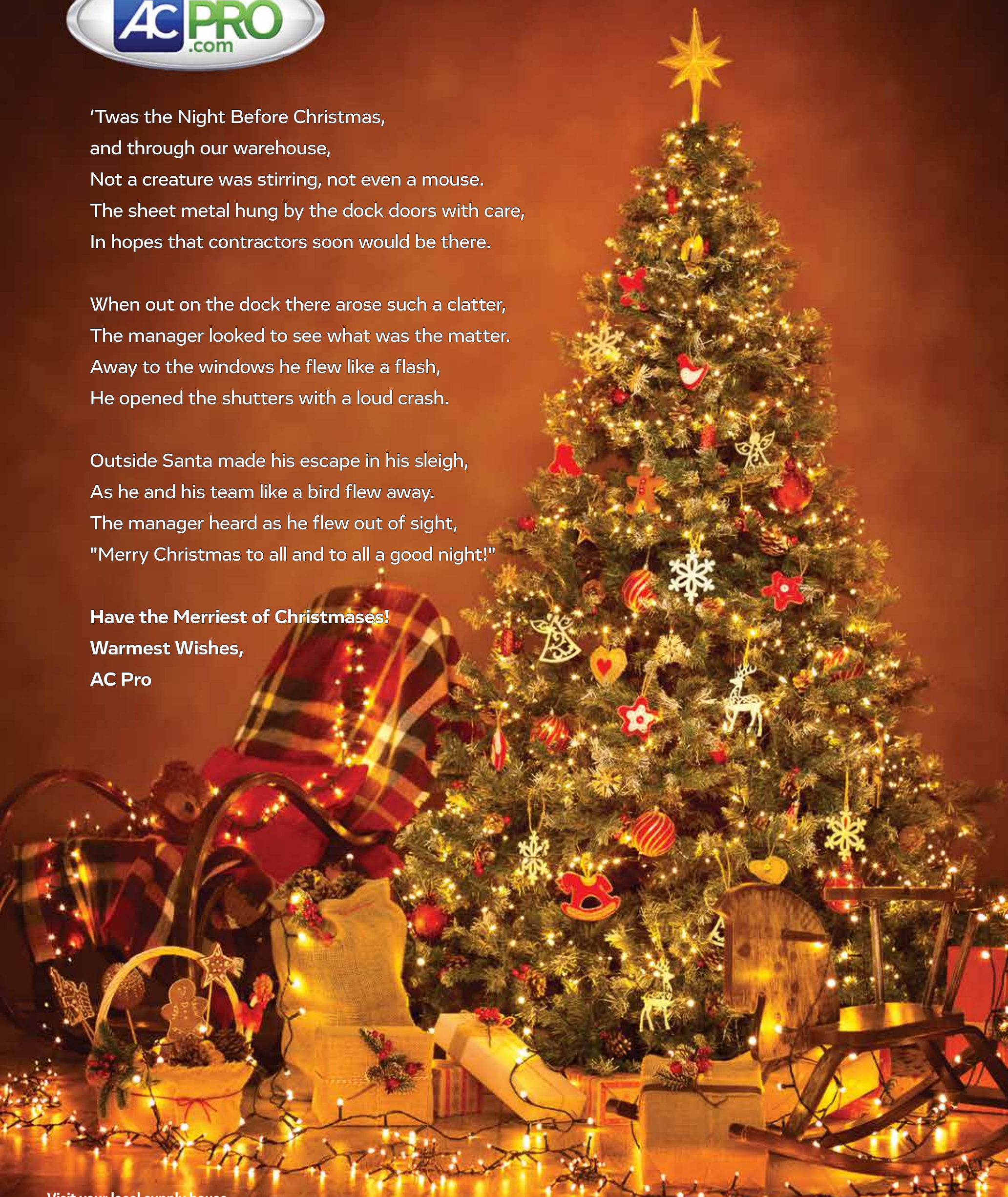


'Twas the Night Before Christmas,
and through our warehouse,
Not a creature was stirring, not even a mouse.
The sheet metal hung by the dock doors with care,
In hopes that contractors soon would be there.

When out on the dock there arose such a clatter,
The manager looked to see what was the matter.
Away to the windows he flew like a flash,
He opened the shutters with a loud crash.

Outside Santa made his escape in his sleigh,
As he and his team like a bird flew away.
The manager heard as he flew out of sight,
"Merry Christmas to all and to all a good night!"

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Westminster

New 2020 Laws

Continued from Page 14

person if there is a legitimate non-discriminatory or non-retaliatory reason for terminating or refusing to hire an individual.

What this means for employers: This is another bill in the wave of #Metoo legislation. Employers will need to review severance and settlement agreements and consult with counsel to determine whether the no-rehire provision is appropriate in each individual case.

AB 1223

AB 1223 requires employers to grant an employee an additional unpaid leave of absence, not exceeding 30 business days in a one-year period, for the purpose of organ

donation.

What this means for employers: Employers must amend their Employee Handbook policies concerning this additional time off. The organ and marrow donation leave law requires employers maintain health insurance for the duration of the leave.

AB 1554

AB 1554 requires an employer to notify an employee who participates in a flexible spending account of any deadline to withdraw funds before the end of the plan year, excluding plans governed by ERISA. Employers must provide notice electronically and in one other manner.

What this means for employers: Employers must determine if non-ERISA FSAs (such as for

dependent care) impose a deadline for withdrawal of funds prior to the end of the plan year, particularly for employees who terminate employment or lose eligibility mid-year.

SB 83

SB 83, which was signed earlier this summer will extend the maximum duration of paid family leave (PFL) benefits from six to eight weeks beginning on July 1, 2020.

What this means for employers: Employers should update policies including any discussion of PFL benefits in employee handbooks accordingly.

SB 142

SB 142 requires an employer to provide a lactation room, which meets the following requirements:

(A) The lactation room shall not

be a bathroom and shall be in close proximity to the employee's work area, shielded from view, and free from intrusion while the employee is expressing milk;

(B) The lactation room shall be safe, clean, and free of hazardous materials;

(C) The lactation room shall contain a surface to place a breast pump and personal items;

(D) The lactation room shall contain a place to sit; and

(E) The lactation room shall have access to electricity or alternative devices, including, but not limited to, extension cords or charging stations, needed to operate an electronic or battery-powered breast pump.

SB 142 further requires an employer to provide access to a sink with running water and a refrigerator suitable for storing milk in close

proximity to the employee's work space. If a refrigerator cannot be provided, an employer may provide another cooling device suitable for storing milk, such as an employer-provided cooler.

SB 142 deems the denial of a reasonable break time or adequate space to express milk a failure to provide a rest period in accordance with state law. This bill also prohibits an employer from discharging, or in any manner discriminating or retaliating against, an employee for exercising or attempting to exercise rights under this statute.

What this means for employers: This bill expands on existing requirements under federal and California law to provide accommodations and time off for employees desiring to express milk for their infants. This bill also requires employers to update their employee handbooks with a policy regarding lactation accommodation.

SB 188

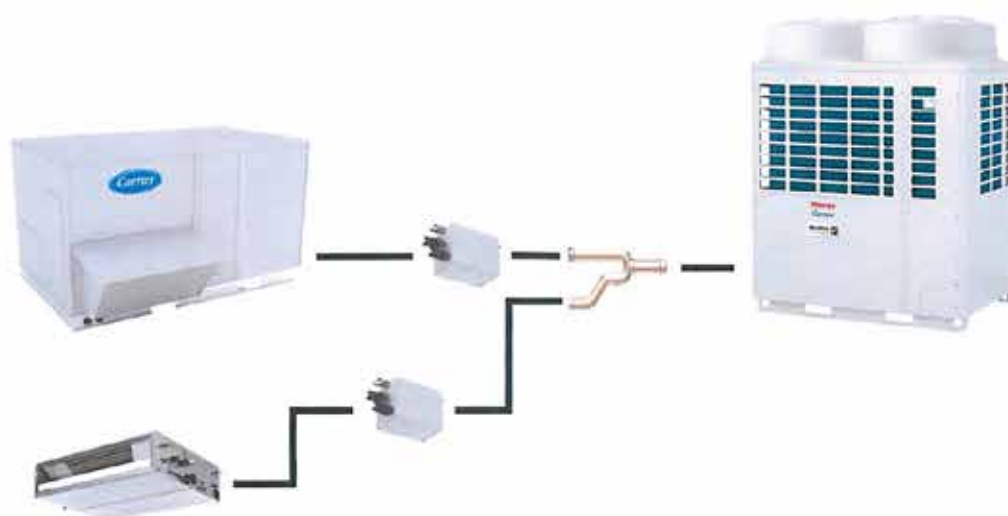
SB 188 amends the definition of race under the California Fair Employment and Housing Act ("FEHA") to include traits historically associated with race, including, but not limited to, hair texture and protective hairstyles. "Protective hairstyles" include, but are not limited to, such hairstyles as braids, locks, and twists.

What this means for employers: Employers should review their dress code policies and practices to ensure compliance with the expansion of law.

SB 707

SB 707 penalizes an employer for failing to timely pay arbitration fees and costs. Specifically, SB 707 provides that in an employment arbitration that requires the drafting party (usually the employer), to pay certain fees and costs before the arbitration can proceed, if the fees or costs to initiate an arbitration proceeding are not paid within 30 days after the due date, the employer is in material breach of the arbitration agreement, is in default of the arbitration, and waives its right to compel arbitration. If this occurs, the employee may withdraw the claim for arbitration and proceed in court, and the statute of limitations shall be tolled as of the date of the first filing of a claim in any court,

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Heating Products and Tools and Test Instruments

A.O. Smith Cyclone LV



A. O. Smith has announced the launch of the Cyclone® LV, a large volume commercial water heater which rounds out the company's industry-leading Cyclone family of high-efficiency gas products.

A. O. Smith created the LV model to serve the needs of facilities that require large storage for jobs with critical load requirements. The Cyclone LV model's modulating process adjusts the burner's firing rate to a specific demand, which allows for a highly

efficient performance of up to 96% thermal efficiency while dramatically lowering operating costs. Available in 220- and 250-gallon capacities, these units allow engineers to specify two Cyclone LV units where they would have previously needed four Cyclone Mxi® units.

"The Cyclone family revolutionized the market in 1996 and provided innovation that we continue to build on today," said Matt Schulz, senior product manager for commercial new products at A. O. Smith. "Cyclone LV models combine popular BTU inputs with new larger storage capacity. With the larger storage capacity a single LV unit can be used in place of multiple standard tanks freeing up space."

Cyclone LV products feature advanced electronic control

with built-in diagnostics and free iCOMM™ remote monitoring. LV models are designed for maneuverability and ease of installation due to their lightweight design.

More information: www.hotwater.com.

.....

DEWALT Radio & Charger



DEWALT announces the ToughSystem® 2.0 Radio & Charger (DWST08820), delivering powerful 360° sound and durability. It's the first product in an upcoming relaunch

of the original ToughSystem product line, first announced in 2011. More information will be available on the rest of the line in early 2020.

Features of the ToughSystem 2.0 Radio & Charger include Dynamic Range Control that gives users the optimal sound for indoor or outdoor use, via selectable settings. It incorporates four integrated, high-performance full-range speakers, an active subwoofer, and passive bass resonator, all driven by a 55W RMS amplifier to provide audio clarity. Compatible with all existing ToughSystem and future ToughSystem 2.0 modular storage solutions, the radio interface is intuitive and with robust stacking and locking side latches it's easy to assemble and disassemble.

Integrated Bluetooth® connectivity enables the radio and music from mobile devices to be controlled remotely via the DEWALT Sound Systems Android™ / iOS® operating system mobile apps. A 2.1A USB port is included on the radio for mobile device charging while a large compartment on top provides storage and protection for a battery, phone and the included AC power cable. The radio is also fully compatible with DEWALT 12V MAX*, 20V MAX* and FLEXVOLT® battery platforms (batteries are sold separately). Not only can the radio run off DEWALT batteries for cordless operation, it can also charge DEWALT batteries when it's plugged in via the optional AC power cable.

With a wide top handle, the radio is engineered for the jobsite. It's IP54 rated for dust and water resistance and its construction is reinforced to withstand daily use in tough conditions. The radio also features a large, full color LCD motion-flipping display, rubberized keypad, and touch-sensitive buttons.

More information: www.dewalt.com.

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Extech MM750W

Extech, (www.extech.com) announced the launch of the MM750W, a CAT-IV True RMS digital multimeter that HVAC and Refrigeration professionals can use to view electrical and temperature readings and datalog remotely using the ExView® W-Series app on



smartphones and tablets.

The innovative new meter uses a Bluetooth® module for wireless connectivity to iOS® and Android™ devices. The MM750W transmits real-time data for monitoring, trending, reporting and analysis. For HVAC/R installation and maintenance work, technicians can monitor and datalog readings at a safe distance from energized equipment, moving components and other hazardous locations (up to 10m/33ft). When extended temperature readings are needed, the DMM and Type-K temperature probe can be placed at the point of measurement (duct work, suction/liquid lines, air handler) while a tech monitors it remotely. Plus, the new digital multimeter (DMM) makes it easier to perform remote tasks such as powering up circuits, compressors, chillers and pumps or calling for heat/cooling at a thermostat, controller, or building automation system that is not nearby the device under test.

From a time-saving perspective, the MM750W lets HVAC/R technicians datalog readings throughout a site while easily viewing readings on an iPhone®, iPad® or Android device with a large, easy-to-read numerical readout and analog-style bar-graph. The datalogging sample rate can be adjusted according to a job's requirements using the app and up to 15,000 datalogged readings can be stored.

More information: www.extech.com.

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Lennox ML296V



The ML296V gas furnace is the latest addition to the **Lennox** Merit Series – the standard of excellence – designed to be the most energy-efficient furnace

Continued on Page 20

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¹The Ruud Ultra Low NOx R801T Upflow Gas Furnace was the first unit certified to meet California's South Coast Air Quality Management District Rule 1111 mandate to reduce NOx emissions from 40 ng/J to 14 ng/J.



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CO-SPONSORS



Continued from Page 18

in its class. With a 96% efficiency rating, the unit uses two-thirds less energy than competitive single-speed units, which means homeowners pay for perfectly heated air, not wasted energy. The ML296V uses a variable-speed fan to keep temperature swings at a minimum, while the two-stage heating saves gas by adjusting the flame size based on demand.

More information: www.lennox.com.

• • • • •

Mitsubishi SLZ-KF

The SLZ-KF Four-Way Ceiling Cassette from **Mitsubishi Electric Cooling & Heating** brings



optimized comfort and energy efficiency to any home or light-commercial application. The variable-capacity ductless indoor unit offers four-way vane control, allowing occupants to select two-, three- or four-way airflow patterns. Each vane can be adjusted individually. The optional 3D i-see Sensor™, which calculates the room occupancy rate, adjusts conditioning accordingly with direct or indirect airflow settings and dozens of different combinations for comfort.

The result is improved energy savings with a SEER rating over 19.8 and even temperature distribution. Not to mention, the sleek design sits flush to the ceiling; an unobtrusive look that fits any homeowner's aesthetic. With the introduction of a 3D-turbo fan, the SLZ-KF's sound level is also supremely quiet, as low as 25 dB(A). In addition, the unit includes easy-to-clean, washable, 10-year filters with multi-stage allergen filtration. This allows the system to remove particulates and contaminants from the air with continuous fan operation for better air circulation. The anti-allergen filter traps dust, impurities and other particles to provide occupants with high indoor air quality.

The SLZ-KF also features a streamlined redesign compared to previous models, making installation simplified for contractors. Specification is also easier with a new capacity size of 18,000 KBTUH. Generally, installation of a ceiling cassette requires contractors to work overhead. The temporary hanging hooks, captive screws and larger wrench-turning radius on piping all make this work easier. The liquid and gas pipe positions are reversed on the current model, providing contractors more space when servicing the gas pipe.

More information: www.mitsubishicomfort.com/products/indoor-units/ceiling-cassette.

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NAVAC BreakFree Series



BREAKFREE
CORDLESS SERIES

NAVAC will feature its Break-Free Series™ of cordless HVAC tools at AHR Expo, Feb. 3-5 in Orlando, Fla. On display at NAVAC's Booth 5380, the lineup includes the world's highest capacity cordless vacuum pump: the recently released model NP-4DLM, which can achieve a flow rate of 4 cubic feet per minute (cfm).

For NAVAC, the BreakFree Series exemplifies what has become a one-word product portfolio mantra: user-friendliness. The company seeks to meet a need for simpler, lighter, faster solutions that expedite service without sacrificing accuracy. The trifecta of solutions in the BreakFree Series

includes:

- The NP2DLM Cordless Vacuum Pump is a compact, lightweight unit suitable for residential HVAC systems up to 5 tons with high-speed evacuation hoses. Weighing just 8.4 lbs. including battery, with dimensions of only 9.2"×3.5"×7.5", NAVAC's cordless vacuum pump is convenient to carry for technicians and ideal for applications where power supply access is an issue. The dual-stage rotary vane pump can reach an ultimate vacuum level down to 23 microns, and its lithium-ion battery can operate up to one full hour. The unit has an air flow capacity of 2 cfm, and features a shut-off valve for system isolation.

- the NEF6Li Cordless Power Flare yields accurate, hassle-free flares in a fraction of the time compared to traditional flaring methods. Equipped with a high-performance, large-capacity rechargeable lithium battery, NAVAC's new automatic flaring solution makes flaring faster and far simpler without sacrificing accuracy or consistency. Designed to perform reliably in harsh environments, the NEF6Li Cordless Power Flare also offers variable speed control and quick-connect functionality. It comes in a sturdy blow-molded case with four tube holders, six commonly-sized flare dies, two batteries, a charger, a premium tubing cutter and a deburring tool.

- The aforementioned NP-4DLM Cordless Vacuum Pump features a high-performance lithium battery capable of up to one hour of continuous running time. At a scant 15.4 pounds, the unit is exceedingly efficient and, for technicians, easy to carry and store. The NP4DLM's twin cylinder operation provides high vacuum down to 15 micron. A check valve prevents backflow; other highlights include an isolation valve, a lifting hook and a gas ballast for better moisture handling. Its inlet port fits flares of 1/4", 3/8" and 1/2".

More information: www.navac-global.com.

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Navien NFB-C

Navien officially launched their commercial sized fire tube boiler series, the NFB-C. The NFB-C is available in two sizes: NFB-301C (301 MBH) and NFB-399C (399 MBH).

Each NFB-C boiler uses the same in-house designed and manufactured patented heat exchanger technology that was introduced with the NFB series in 2018. The heat exchanger is form-pressed and robotic laser welded to minimize the number of weak points that



could be prone to thermal stress and corrosion. Oval shaped tubes within the heat exchanger contain internal turbulators designed to improve both the heat transfer rate and the structural integrity of the assembly. A specific water flow is generated by baffles inside the heat exchanger to extract the maximum amount of heat from flue gasses while the non-metallic base provides additional protection against corrosion caused by acidic condensate.

The industry leading 97.5% thermal efficiency NFB-C series includes top and bottom piping connections for installation flexibility and an advanced 7-inch color touch screen display with easy intuitive navigation for setup, troubleshooting and operation. The built-in circuit board allows connections for a boiler pump and 3 zones pumps using dry contact relays, and also includes a DHW priority zone. The NFB-C series commercial fire tube boilers offer up to a 15:1 turndown ratio and extremely low NOx levels, certified by SCAQMD to meet the most stringent code requirements.

More information: www.Navi-Inc.com.

• • • • •

Goodway Technologies BPV-125



Goodway Technologies is bringing portability and convenience to a whole new level with the launch of its newest backpack vacuum for dry cleanup. The BPV-125 offers powerful cleaning power while residing in a comfortable backpack unit that makes it easier to maneuver throughout a job site, including tight, cramped areas such as stairwells, aisles, seats and shelving.

The BPV-125 comes with a full set of attachments and integrated

Continued on Page 22



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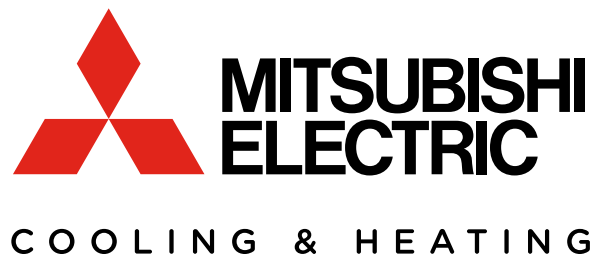
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Growing Green Technicians Part 122: Blower Performance Data and Static Pressure

By Jim Johnson
Contributing Editor

In the November issue, our discussion focused on the test procedures that go beyond temperature rise testing, and into the measurement of static pressure, to evaluate the operation of a blower and duct system in a furnace. In this installment, we'll follow up on the concept of TESP (Total External Static Pressure) testing, and applying that information to blower performance data. A chart that shows this data is provided by the equipment manufacturer, and is specific to the particular make and model of the equipment. (See **Figure One**)

As this example shows, one of

the variables that manufacturers consider when developing a blower performance chart is the voltage applied to the equipment, along with the configuration of the blower, being horizontal or vertical. In addition to those factors, it's common for manufacturers to add notes that the technician has to consider in regard to factors such as having a filter in place or not, and what mathematical calculations may have to be accomplished in regard to the static pressure readings obtained in a specific model of equipment.

When using a chart such as this, we can apply the TESP reading obtained to determine what the manufacturer requires in regard

to CFM. As an example, we'll apply the general concept that most residential furnaces are designed to operate with a total external static pressure of approximately .5 inches of water column, and apply that information to a horizontal installation in which the operating voltage is 230-volts, and the blower motor that is operating on medium speed.

When we apply this specific information, we find the two listing closest to our conditions are 0.52 and 0.47 in. w.g., which, when reading to the Air Flow CFM column to the left shows the recommended volume of air between 800 and 850 CFM. Also, consulting the Notes section of the chart, we confirm that the static pressure test should be taken with the filter out, and accomplish a mathematical calculation if it applies to our specific situation. And, when we apply the chart information along with the result of a temperature rise test that found the temperature difference between the return and supply duct systems to be correct, we have determined that the air handling system is operating within the manufacturer's specifications.

There are other factors to consider when evaluating air flow through a furnace, such as the type of motor employed, its current draw, and what issues could be preventing the proper volume of air in the system. We'll discuss these issues in the next segment in this series.

Editorial Focus

Continued from Page 20

tool belt, keeping all the accessories within arm's reach while technicians perform the job. The system roars through tough dirt and debris with its powerful 1.25 HP, yet is quiet on the job – and on the back – weighing only 10 lbs and producing just 60 decibels.

- Features of the BPV-125 include:
- Paper filter collection bag
 - Heavy-duty motor
 - High-impact, molded plastic body
 - Tool belt
 - Multiple cleaning tools
 - Includes hose, wand and tools

More information: www.goodway.com.

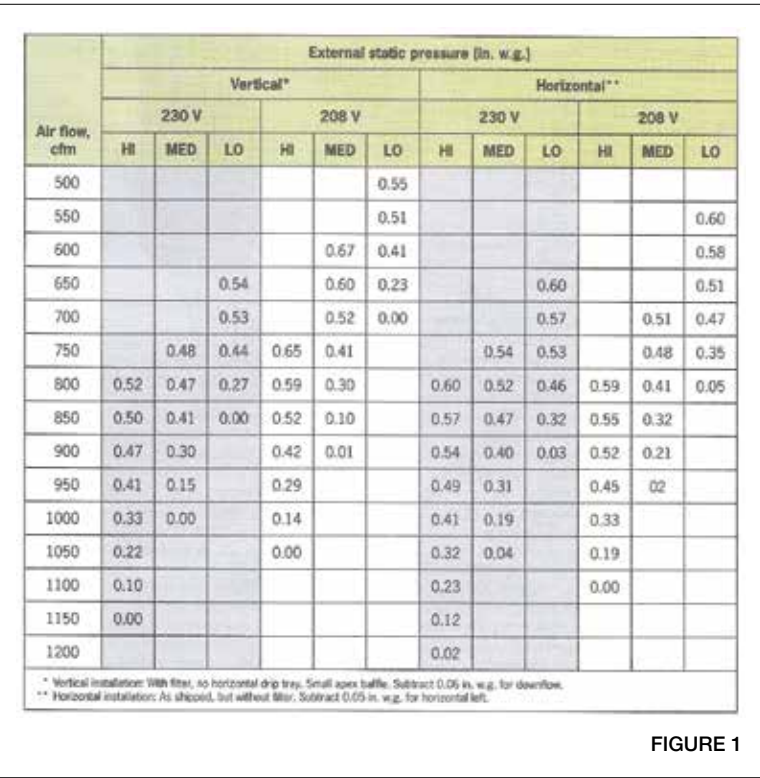


FIGURE 1

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Troubleshooting

A Faulty Walk-In Freezer

By Jim Johnson
Contributing Editor

In this month's troubleshooting situation, you are responding to a restaurant manager's call for service, and the equipment is a walk-in freezer that is supposed to maintain a cabinet temperature near 0°F. When you arrive, you observe the following:

...Cabinet temperature is 20°F and ambient temperature is 75°F

...The equipment is controlled by a temperature controller and a pump-down solenoid

...The evaporator and condenser fan motors are operating normally

...Both coils are clean and there is no obstruction limiting their air flow

...Liquid line sight glass is clear

...Compressor current draw is normal

As your next step, you perform a temperature test across the filter drier, which shows the results illustrated in **Figure One**.

Your troubleshooting question: *What is the next step you need to take in servicing this equipment?*

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@techtrain-assoc.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."

Solution to Last Month's Problem

The next step is to replace the contactor. Our voltage checks showed that while control voltage was applied to the coil, the N.O. switch contacts on the contactor were not closing.

The winner of last month's problem is:

Richardo Allen Hart

New Legislation

Continued from Page 16

arbitration forum, or other dispute resolution forum. SB 707 also requires courts to impose mandatory sanctions against the employer for the reasonable expenses, including attorneys' fees and costs, incurred by the employee as a result of the material breach.

What this means for employers: Employers seeking to compel arbitration must be mindful to deposit the necessary fees on a timely basis or endanger losing arbitration as a forum to resolve their dispute with the employee. This law likely will be challenged on the basis that it is preempted by the FAA, so stay tuned for further developments.

SB 778 and SB 530

Last year, Senate Bill 1343 amended Government Code section 12950.1 to require employers with five or more employees to provide two hours of sexual harassment prevention training to all supervisory employees and one hour of sexual harassment prevention training to all nonsupervisory employees by Jan. 1, 2020.

SB 778 extends the deadline to

provide the above sexual harassment prevention training to January 1, 2021.

SB 530 extends to Jan. 1, 2021, the date on which employers of seasonal, temporary, or other employees hired to work for less than six months must begin to provide harassment training to such employees. The law requires such employees to receive training within 30 days after the hire date or within 100 hours, whichever occurs first.

SB 530 also allows construction firms signatory to multi-employer collective bargaining agreements to satisfy harassment training obligations by demonstrating that employees received training in one of specified circumstances, such as receiving training from another signatory employer or an apprenticeship program.

What this means for employers: Did you think this was going to be all "doom and gloom?" Employers can breathe a sigh of relief regarding their obligations to provide harassment training has been extended with this

Continued on Page 24

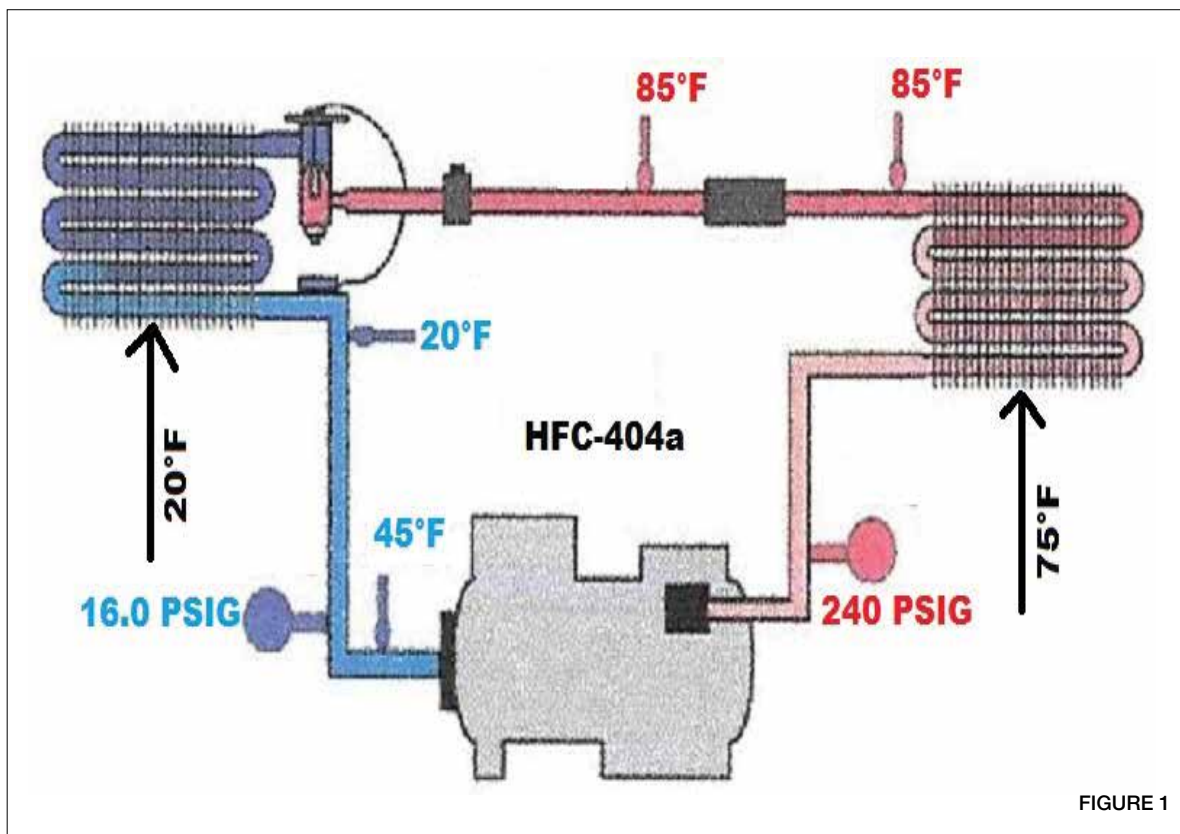


FIGURE 1



HERS Rating Air & Hydronic Balancing Permit Expediting & Retrieval



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Women in HVACR Hold 16th Annual Conference in Boston

Group celebrates the theme “Connect. Cultivate. Grow”

The Board of Directors for Women in HVACR held the 16th Annual Conference of WHVACR.

Over 200 engaged WHVACR members and sponsors came together to celebrate scholarship winners, the sharing of trends and ideas, success stories, and networking with the theme “Connect. Cultivate. Grow.”

The event featured 11 speakers, including keynotes Roseann Sdoia Materia, a Boston Marathon bomber survivor and amputee; and Dr. Lois Frankel, psychologist, author, and motivational speaker.

Danielle Putnam, president of the Board of Directors for WHVACR and president of The New

Flat Rate, opened the conference by welcoming all attendees and thanking the sponsors for making it all possible.

Following the message came the announcement and appointment of Karen Lamy DeSousa as incoming 2020 Women in HVACR board president.

“We are so fortunate to have had Danielle lead our efforts in WHVACR,” said DeSousa.

“Danielle served with great knowledge, dedication and grace. Because of her leadership, we have clear direction on how to continue our mission to grow membership, award valuable scholarships, and appoint more ambassadors and mentors.”

“I will know exactly where to pick up in my work as board



Keynote speaker Roseann Sdoia Materia addresses attendees at the annual Women in HVACR conference.

president to grow the organization and bring recognition to women’s contributions in this industry,” she continued. “On behalf of all us, we thank you, Danielle.”

Scholarship winners accepted

their \$2,000 awards at a formal dinner at the first day of the conference. The seven scholarship winners included Amanda Crafts, Emily Gavrilenko, Rebecca Gregg, Kailey Hardy, Morgan Lee, Janet Gibbons, and Briana Prouse.

“HVACR has provided me with confidence that I am good at something,” said technician Rebecca Gregg.

“I am interested in the design process of HVACR and seeing my ideas come to life in the real world,” said Industrial Engineering student Emily Gavrilenko.

Breakout and working sessions, networking, the technicians’ panel, and more inspiring speakers kept attendees engaged throughout the two-day event. Sponsors showcased their products in the common area.



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New Legislation

Continued from Page 23

bill. Employers who provided the training in 2018 are not required to provide refresher training until 2020, and employers who provided training in 2019 are not required to provide refresher training until 2021. Thereafter, employers shall provide sexual harassment prevention training to each employee once every two years.

Vetoes

Governor Newsom vetoed the following bills:

- AB 171 would have expanded Labor Code Section 230 to prohibit discrimination or retaliation based on an employee’s status as a victim of sexual harassment, domestic violence, sexual assault, or stalking.

- AB 403 would have extended the statute of limitations to file a retaliation complaint with the Labor Commissioner from six months to two years, and would have authorized a court to award reasonable attorneys’ fees to a prevailing plaintiff. The bill would also have amended Labor Code Section 1102.5, California’s general whistleblower statute, to authorize a court to award attorneys’ fees in such actions.

- AB 589 would have made it

an unlawful employment practice for an employer to confiscate an employee’s passport or other immigration document in the course of committing, or with the intent to commit, trafficking, slavery, involuntary servitude, or a coercive labor practice.

- AB 1478 would have authorized an aggrieved employee to file a civil action against an employer for discriminating against or discharging the employee because the employee: (1) takes time off for jury duty, (2) is a victim of a crime or takes time off to appear in court to comply with a subpoena or other court order as a witness in any judicial proceeding, or (3) is a victim of domestic violence, sexual assault, or stalking or takes time of work to obtain judicial relief.

Employers with questions regarding the legislation may contact the authors or their usual employment law counsel at Atkinson, Andelson, Loya, Ruud & Romo.

This AALRR alert is intended for informational purposes only and should not be relied upon in reaching a conclusion in a particular area of law. Applicability of the legal principles discussed may differ substantially in individual situations. Receipt of this or any other AALRR presentation/publication does not create an attorney-client relationship. The firm is not responsible for inadvertent errors that may occur in the publishing process.

Features

Nortek Featured in Lifetime TV Cable Show

Distributors in California, Iowa, Tennessee, and Alabama highlighted in "Designing Spaces."

Consumers are increasingly interested in HVAC and indoor air quality (IAQ) according to the significant viewership numbers logged for a recent Designing Spaces™ cable TV home improvement episode featuring four Nortek Global HVAC residential equipment brand installations.

The 30-minute HVAC episode aired Aug. 16 and Aug. 22 on the Lifetime Television® national cable TV network and documented four Nortek Global HVAC contractor/dealers' air conditioning and heating equipment installations. It was one of the more popular Designing Spaces episodes with over 350,000 viewers, according to production executives. "Understanding how HVAC systems function can be extremely intimidating to many homeowners" said Arash Farsi, broadcast creative director at the episode's Deerfield, Fla.-based video production company Brandstar. "Our goal was to combine HVAC system education with tips on how to have an intelligent conversation with an HVAC professional."

The video was also syndicated nationally to 150 TV stations and is now continuing its hot response with Internet visits to www.designingspaces.tv driven by social media promotions on Facebook, Twitter and Instagram. The popular show will air several more times on Lifetime Television throughout 2019's fourth quarter and syndication will reach more than 86 million households.

The episode's featured contractors, locations and equipment are:

- 1) Rusty Tensfield Heating & Cooling, Manchester, Tenn.—Frigidaire® FSA1BE split-system air conditioner;
- 2) My Guy Heating and Air, Carlsbad, Calif.—two Maytag® CSA1BE split-system air conditioners;
- 3) Valley Heating & Cooling, Athens, Ala.—an Airtemp® VQ7RE packaged heat pump in Athens, Ala.;
- and 4) Colony Heating & Air Conditioning, Cedar Rapids, Iowa—Reznor® UDAP unit heater.

Four Nortek Global HVAC distributors—Partners Sup-

ply, Chattanooga, Tenn.; AC Pro, Oceanside, Calif.; R.E. Michel Co., Decatur, Ala., and Plumb Supply Co., Cedar Rapids—helped coordinate logistics between their contractor dealers and the show producer.

Designing Spaces TV host David Leon chronicled each installation with creative storytelling using consumer-friendly descriptions, and offered homeowner tips for aftermarket HVAC maintenance and service. More than 500 hours of video were shot and edited down to 30 minutes by a 12-person production and post-production team, according to Jennifer Giordano, a Brandstar project director.

For Tensfield, who has installed

Nortek brands since 2000 with his five-year-old company and previous HVAC contractor employer, videotaping presented some unconventional moments, such as applying make-up and aesthetically wearing long pants and a long sleeve shirt in the three-hour sultry July attic scene. The typical four-hour retrofit also doubled in installation time due to additional takes and videotape set-ups. Surprisingly, he reports his Facebook page traffic is up 20 percent and website hits have increased since the taping, proving once again that consumers are interested in improving their home HVAC and IAQ environment.



Rusty Tensfield (black shirt), president, Rusty Tensfield Heating & Cooling, Manchester, Tenn., presents homeowner Ceresia Cummings with info on her new Frigidaire split-system air conditioner installation that Lifetime TV's Designing Spaces production crew documented from start to finish.

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Innovation Award Winners to be Honored in February at 2020 AHR Expo

Continued from Page 1

tion Award Winners and finalists selected within the categories of building automation, cooling, green building, heating, indoor air quality, plumbing, refrigeration, software, tools and instruments, and ventilation are:

Building Automation

Winner: Delta Controls Inc. (Booth 1161) - O3 Sensor Hub 2.0
Innovation: The O3 Sensor Hub 2.0 combines seven different sensors to provide the most accurate view of an interior space available on the market. IoT-enabled to function

as a standalone room controller, the O3 Sensor Hub 2.0 combines temperature sensing, occupancy detection, humidity, and wireless integration into one. This innovation uses Sensor Fusion to enhance the occupant experience with heightened room control and to reduce false occupancy detections. The O3 is ceiling-mounted to maximize functionality from the best vantage point of the room, enabling it to accurately detect occupancy with simple reads from body heat, keyboard noise, or other motion. It also quickly detects when occupants leave the room, resulting in cost savings valuable

to facilities management. With the O3 Sensor Hub 2.0, Delta Controls Inc. aims to change how the controls industry looks at occupant satisfaction.

"I am incredibly proud of the Delta Controls team and of the product they developed," said Shane Murphy, marketing manager at Delta Controls. "The O3 Sensor Hub allows users to experience the best room control on the market, and we are grateful to be recognized by AHR Expo and the ASHRAE committee for this product. At the 2020 Show, we are excited for the opportunity to show off the O3, and how Delta Controls is re-envisioning occupant experience."

Finalists in this category include: 75F (Booth 268) - 75F Building Intelligence System; BELIMO Americas (Booth 767) - Ultrasonic Flow Sensor; and Danfoss (Booth 1501) - Danfoss VLT® condition-based monitoring.

Cooling

Winner: Danfoss (Booth 1501) - Danfoss Interlaced Micro Channel Heat Exchanger (iMCHE)

Innovation: The Danfoss Interlaced Micro Channel Heat Exchanger (iMCHE) integrates multiple circuits into a single coil. It works using a shared air heat transfer area and controlling each one independently by a multi-circuits system. The iMCHE uses a whole air side heat transfer when operating under partial load conditions to maximize efficiency. Based on the results of a recent case study, the IEER increased 18 percent when using the iMCHE solution. The iMCHE provides a compact and cost-effective solution for dual-circuit rooftop units. While public concern for climate change continues to increase and higher energy standards are predicted, the iMCHE allows equipment to easily meet new standards with low cost impact.

"Our iMCHE Interlaced Microchannel Heat Exchanger is the newest addition in the already expansive Danfoss MCHE portfolio and supports our efforts to provide quality MCHE for condenser, evaporator, heat pump, radiator and reheat applications," said Jeff Tucker, Business Development at Danfoss. "The iMCHE was developed specifically for two-circuit refrigerant systems and targets the global Roof Top product as well as an array of two-circuit designs. Using iMCHE affords system developers the opportunity to improve overall system efficiency by more than 20 percent. This is significant as new efficiency standards

requiring approximately 15 percent efficiency increases will take effect starting in 2023."

Finalists in this category include: Baltimore Aircoil Company (Booth 2321) - Nexus™ Modular Hybrid Cooler; Smardt Chiller Group Inc. (Booth 6643) - Smardt G-class 515B Low GWP Chiller; and Vertiv (Booth 2411) - Liebert® VRC Rack Cooling System.

Green Building

Winner: Danfoss (Booth 1501) - Danfoss Turbocor® TG490 Compressor

Innovation: The Danfoss Turbocor® TG490 Compressor is designed for air- or water-cooled chiller applications. The oil-free, variable-speed, magnetic bearing centrifugal compressor is optimized for use with HFO-1234ze, which has a GWP of less than 1, and can also be used with low-GWP refrigerant R-515B. The Danfoss Turbocor® TG490 is the first of its kind oil-free, magnetic bearing centrifugal compressor that offers industry-leading efficiency, reduced maintenance requirements, and simplified design through the elimination of a traditional oil management system. It is also the industry's first oil-free compressor technology with the flexibility to be used with low-GWP R-515B — which has a rating as low as 299 as well as A1 safety classification.

"We are thrilled to have been recognized once again by ASHRAE and the 2020 AHR Expo for our commitment to develop new technologies to help slow and ultimately reverse the process of global warming," said Jose Alvares, vice president, Sales and Marketing, Danfoss Turbocor Compressors. "With the new Danfoss Turbocor® TG490 compressor, the world's first oil-free, magnetic bearing centrifugal compressor that can be used with R-515B, customers can now be compliant with applicable refrigerant regulations and safety codes due to its low GWP rating of 299 and ASHRAE A1 safety classification."

Finalists in this category include: Aeroseal LLC (Booth 3390) - AeroBarrier: air sealing technology; Arctic Chiller Group (Booth 5153) - EcoTherm modular simultaneous heating and cooling Heat Pump; and Baltimore Aircoil Company (Booth 2321) - HXV Hybrid Cooler.

Heating

Winner: York® For Your Home (Booth 3801) - YORK® LX Series TL9E Ultra-Low NOx Gas Furnace

Innovation: The York® LX Series TL9E Ultra-Low NOx Gas Furnace is an environmentally responsible gas furnace that meets even the most stringent standards for air quality while reducing greenhouse and smog-producing gasses by up to 65 percent compared to standard low-NOx furnaces. The furnace is ENERGY STAR® rated and reduces fuel costs by as much as 20 percent when connected to select YORK® home comfort systems.

"We are honored to receive this award, which recognizes our commitment to taking residential comfort beyond temperature control to meet the most stringent standards for efficiency and air quality," said Justin Patrick, vice president and general manager, Residential Products, Ducted Systems, Johnson Controls. "The YORK® Ultra-Low NOx furnace delivers exceptional reliability and durability to meet the needs of today's homeowners."

Finalists in this category include: AERCO, a Watts brand (Booth 1301) - AERCO Benchmark Platinum Boiler with Edge Controller; Emerson (Booth 2100) - Universal Single Stage Furnace Control for ECMx Blower Motors (Model 50X57-843); and Rheem Manufacturing Company (Booth 2743) - Rheem® Ultra Low NOx Gas Furnace.

Indoor Air Quality

Winner: Fresh-Aire UV (Booth 5853) - Purity Low Profile LED 1" Polarized Filter / LED Disinfection System

Innovation: The Purity Low Profile LED 1" Polarized Filter/LED Disinfection System (PLP-LED) by Fresh-Aire UV is the first 3-stage 1-inch polarized HVAC filtration system to incorporate Mini-LED technology. The PLP-LED offers high-efficiency filtration that captures 97 percent of particles down to 0.3 microns in size. The system also uses antimicrobial UV reactive media with an advanced photocatalytic coating for odor and VOC reduction. Fresh-Aire UV's filter mitigates many IAQ issues as well as many other challenges faced by occupants and contractors through delivery of a cleaner, safer filter to handle and service.

"We couldn't be more proud and more excited to be recognized with the 2020 AHR Innovation Award for IAQ," said Aaron Engel, vice president, Business Development at Fresh-Aire UV. "The award represents the HVACR industry's most innovative products, systems, and technologies and we believe this perfectly represents the PLP-LED. Available in the most common fil-



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Finalists in this category include: AtmosAir Solutions (Booth 4207) - AtmosAir Dena-li 600™ with AtmosSmart™, IoT Enabled Active Air Monitoring and Air Purification System; RGF Environmental Group Inc. (Booth 4151) - HALO-LED™ Whole Home Indoor Air Purification System; and Sensirion, Inc. (Booth 1473) - SCD40 CO2 and RH/T Sensor Component.

Plumbing

Winner: LG Electronics USA, Inc. (Booth 6343) - LG Hydro Kit

Innovation: LG Electronics USA, Inc. has developed the LG Hydro Kit, an indoor heat exchanger for LG Variable Refrigerant Flow (VRF) systems capable of transferring heat or cooling energy expelled from the air conditioning process to water, offering further efficiency of LG heat recovery and heat pump systems. Available in 42,000 and 96,000 Btu/h capacity, the LG Hydro Kits utilize waste energy generated during the conditioning process and enhance the energy efficiencies of LG VRF systems. This allows the hot or chilled water generated to then be distributed out to a number of different applications with integrated controls that set the temperature of the leaving water, hot water tank temperature, or the temperature of the conditioned space.

"LG has exhibited at the AHR Expo for more than 15 years, and we always enjoy getting to connect with our key partners and customers, as well as having the chance to build new relationships at our booth during the show and at our events throughout the week," said Lorie Quillin-Bell, director of marketing for LG Air Conditioning Technologies. "LG continues to challenge the industry to deliver exceptional innovation and value to our customers, so it's a tremendous honor to receive an AHR Expo 2020 Innovation Award in the Plumbing Category for the LG



Danfoss Turbocor® TG490 Compressor, winner in the green building category.

Hydro Kit. This is a testament to the many benefits of our award-winning residential and commercial product offerings, and another example of LG's commitment to providing innovative technologies that bring smarter, sustainable solutions to market."

Finalists in this category include: Caleffi Hydronic Solutions (Booth 6581) - LEGIOMIX® 6000 series Highest Flow Electronic Mixing Valve; NIBCO INC. (Booth 3121) - 585HP Full Port Bronze Ball Valve; and Viega LLC (Booth 1943) - Viega MegaPressG.

Refrigeration

Winner: Danfoss (Booth 1501) - Danfoss CO2 Adaptive Liquid Management Solution

Innovation: The Danfoss CO2 Adaptive Liquid Management (CALM) solution combines Danfoss' liquid ejector and adaptive liquid control case controller algorithm to fully utilize the evaporator surface in display cases and cold rooms. This technology provides, without equipment change, up to 10 percent greater energy efficiency in addition to the energy-saving inherent of CO2 refrigeration. The CALM solution works by pulling liquid refrigerant from the suction side and injects it into the evaporator of display cases and cold rooms. Danfoss' CALM solution aims to assist customers in making the transition to climate-friendly refrigerants while saving energy, maintaining system reliability and ensuring food safety.

"CO2 Adaptive Liquid Management is the next generation in energy saving technology that provides up to a 10 percent energy savings, in any climate, and all year round," said James K. Knudsen, North America Food Retail Segment Leader at Danfoss.

"Danfoss is committed to bringing innovation and next generation solutions to the market to help our customers and industry improve energy efficiency, reduce emissions and meet climate regulations," said John Galyen, president, Danfoss

North America. "Winning three awards this year is a testament to our investments and we look forward to working with our industry partners to deploy these solutions in the HVACR market."

Finalists in this category include: Emerson (Booth 2101) - Copeland™ End-to-End Solution for Micro-Distributed Architectures; Fresh-Aire UV (Booth 5853) - Ice UV-LED Disinfection System for Ice-Machines; and Sporlan Division - Parker Hannifan (Booth 2525) - SCS-PB Superheat Control System for Pulse Width Valve with Bluetooth feature.

Software

Winner: Interplay Learning (Booth 8562) - SkillMill™ Skilled Trades Course Catalog

Innovation: The Interplay Learning SkillMill™ Skilled Trades Course Catalog is an online, on-demand training course catalog designed for HVAC professionals to gain worksite skills accessible via mobile phone, computer, tablet, or in virtual reality (VR). HVACR professionals can sign-on to view expert-led video courses designed to first drive understanding, then move on to the interactive, 3D-based HVAC troubleshooting simulations delivered via field-like training. The training platform aims to provide scalable training that is robust enough to keep up with the growing skills gap as well as prepare HVAC techs quickly for every situation or scenario they might encounter in the real world. The use of state-of-the-art 3D simulations creates a unique, immersive learning environment for users.

"We're incredibly honored and humbled to receive this Innovation Award. Our team is excited about AHR 2020 and being able to showcase our software, which is already making a huge impact in the HVAC community," said Doug Donovan, CEO of Interplay Learning. "Our software is the first-of-its-kind, an online training that technicians will actually use because the simula-



Delta Controls Inc. O3 Sensor Hub 2.0, winner in the building automation category

tions mimic on-the-job training. As a company, we've helped more than 75,000 people build key technical skills, so we're confident in our ability to change the way the HVAC industry trains its professionals."

Finalists in this category include: Armstrong Fluid Technology (Booth 4161) - Pump Manager; BCA Technologies, Inc. (Booth 8579) - eRep CPQ; and Distech Controls (Booth 881) xpressNetwork Utility.

Tools & Instruments

Winner: Matelex (Booth 2551) - DNI (détecteur de niveau intelligent/smart level detector)

Innovation: Matelex has developed a détecteur de niveau intelligent/smart level detector (DNI) system that measures pressure, temperature, and refrigerant levels every two to three seconds, as well as conducts a complete leak detection cycle every hour. The system is designed to trigger an alarm using algorithmic learning in the event of a detected leak. The smart refrigerant leak detection system is also coupled with a remote surveillance web interface (Sentinelle) to issue email alerts when a leak occurs. It is suitable for all refrigerants and tanks — vertical, horizontal, inclined horizontal — and connects to the IoT via WIFI, cable Ethernet, or 3G-4G modules. When tested in the food retail sector, the system has saved 79 percent of refrigerant compared to traditional methods due to real-time data alerts and increased responsiveness to system maintenance requirements.

"The Matelex team is delighted with this award and honored to have the opportunity to share its successes and future challenges with the stakeholders of the 2020 AHR Expo," said Luc Dehon, CEO of Matelex. "We believe in the power of data to improve the performance of refrigeration installations, but also to reduce their environmental impact and guarantee a better future for future generations. Internet Of Refrigeration is on!"

Finalists in this category include: Fluke Corporation (Booth 2151)

- Fluke PTi120 Pocket Thermal Camera; Milwaukee Tool (Booth 427) - M18 FUEL™ Pipe Threader w/ ONE-KEY™; and Topcon Positioning System, Inc. (Booth 325) Topcon GTL-1000.

Ventilation

Winner: Infinium Electric (Booth 7485) - Infinium Electric, A Breakthrough HVAC Motor

Innovation: The Infinium Electric HVAC motor is significantly smaller, smarter, and quieter than traditional electric motors. These benefits equate to an ultra-high-efficiency motor that results in up to 25 percent lower costs for customers. The motor uses a circuit board stator resulting in up to 60 percent less weight, superior durability, improved performance, and enhanced IoT connectivity. Infinium Electric aims to change the industry standard for motor size and weight.

"The fundamental design of the electric motor has evolved very little since it was developed over a century ago, and we're honored that AHR has recognized our breakthrough motor technology," said Ben Schuler, CEO, Infinium Electric. "With our patented technology, we've been able to replace the iron laminated core and copper wire windings found in all motors with our patented Printed Circuit Board (PCB) stator. When applied to HVAC fans, compressors or pumps, this innovation results in lower costs, lighter weight and higher efficiency."

Finalists in this category include: American Aldes (Booth 6243) - IQ by ALDES (IQ-VFC) ERV/HRV-Integrated Vertical Fan Coil Units; Rosenberg USA, Inc. (Booth 2051) - Rosenberg "Generation 3" EC motors for plug fans and axial fans; and ZIEHL-ABEGG, Inc. (Booth 2361) - ZABluefin.

For more information regarding the AHR Expo Innovation Awards, visit the awards section on the AHR Expo website at www.ahrexpo.com.



AMIT AHUJA

The term of **Amit Ahuja**, 2019-2020 president of Air Movement and Control Association (AMCA) International Inc., is underway, following the organization's 2019 Annual Meeting in Maui, Hawaii. AMCA is a global association, Ahuja, who is managing director of Ras Al Khaimah, United Arab Emirates-based Maico Gulf LLC, said, adding that the focus of his presidency will be achieving greater cooperation and cohesiveness among the regions AMCA represents.

"While the association's actions are driven by strong government demand for energy efficiency, which we strongly support, we realize the challenges our members face when operating in different regions, which makes it essential for us as an association to play a pivotal role in advising global governmental institutions on adopting our codes and standards, improving the health, safety, and efficiency of buildings in the process," Ahuja said.

Ahuja joined Maico Gulf Dubai UAE in 2003 as a technical sales engineer. Three years later, he began participating in AMCA Annual Meetings. In 2009, he was appointed AMCA Middle East Region chair, a role in which he advocated for the AMCA Certified Ratings Program in the region. He was instrumental in developing the strategy AMCA adopted in the Middle East and is now part of the Middle East Region Steering Committee. In 2016, he was elected to the AMCA Board of Directors, going on to join the executive committee a year later.

A native of Delhi, India, Ahuja holds a degree in mechanical engineering from Birla Institute of Technology in India and a master's degree in business administration with a specialization in finance from the University of Leicester in the United Kingdom.

M Property Services (MPS) announces the hiring of **Ramona Tumblin-Rucker**, PEng, MBA, MPM, CHC, as Director of Design/Build & Construction Management.

In her new position, Tumblin-Rucker will provide oversight to evaluate and monitor complete design/build project bids, construction schedules, proformas, budgets and project activities. She will also manage project implementation, including resource allocation, quality control, change order processing and risk analysis, as well as conduct field inspections and monitor building program success.

She has more than 30 years of project management experience, having previously served as Project Manager for McCarthy Building Companies and Legacy Building Group where she successfully managed projects of various sizes and levels of complexity in the healthcare, academic and corporate industries.

"We are very excited to have Dr. Tumblin-Rucker join the M Property Services team," said MPS Chairman Paul McKee, Jr. "She uses best practices and industry standards to deliver high-level projects ranging in cost from \$50,000, all the way up to \$182 million. We are very impressed with her education and dedication to her profession and community and are excited to see what she does at MPS."

Tumblin-Rucker has a Bachelor of Science in Petroleum Engineering from Missouri University of Science and Technology in Rolla, MO; MBA in Management from Oklahoma City University in Oklahoma City, OK; Master of Project Management from Keller Graduate School of Management in St. Louis, MO and Doctor of Management from Webster University in Webster Groves, Mo.



RAMONA TUMBLIN
-RUCKER

Triangle Tube named **Tom Tonkins** director of sales & business development. Tonkins will report directly to Shaun Edwards CEO, GROUPE ATLANTIC - UK, ROI & North America Divisions.

Tonkins comes to Triangle Tube from a senior sales role with ADEY and is very well connected in the HVAC industry. He will be



TOM TONKINS

responsible at a strategic level for all sales and new business development for Triangle Tube.



DAVID MORTON

Pelican Products, Inc. is pleased to announce **David Morton** has been selected as Regional Human Resources Director for the South Deerfield, Mass. Pelican office.

In this position, Morton will be responsible for managing tactical HR, delivering on strategic operational goals, leading workforce planning and engaging employees for Pelican's Eastern region. Additionally, Morton will be tasked with developing collaborative relationships with Pelican's global HR counterparts, and sharing knowledge and best practices that will allow HR to be more effective across the organization.

"David has extensive experience working with companies to implement successful HR solutions, and we are excited to welcome him to the team," said Ellenmary Michel, VP of Worldwide Human Resources for Pelican. "His knowledge of HR policy, career development, and employment law make him a great asset to the region and Pelican as a whole."

Morton comes to Pelican with nearly 30 years of Human Resources experience, working in senior positions for two Connecticut companies, Henkel Corporation and The Hartford Financial Services Group. David holds a Master's degree in Industrial/ Organizational Psychology from Springfield College, as well as a Bachelor of Science degree in Management and Human Resources from the University of Connecticut.

Pelican Products, Inc. is a

portfolio company of Behrman Capital, a private equity investment firm based in New York and San Francisco.

Danfoss has announced the appointment of **John Sheff** as its new Director of Public and Industry Affairs for North America. Sheff will succeed **Mark Menzer** in the role when Menzer retires in July.

Sheff previously was Business Development Manager for Danfoss in North America, leading cross-business initiatives within buildings, including strengthening engagement with utilities and Danfoss partners to leverage incentive rebates to improve energy efficiency in existing buildings.

John joined Danfoss five years ago as part of its two-year Post Graduate Program after earning an MBA from the University of Maryland's Robert H. Smith School of Business. He also holds a second master's degree from the University of Maryland's School of Architecture in real estate development and sustainable urban development. He previously worked as a policy analyst for the office of former Maryland Governor Martin O'Malley, where he evaluated and developed energy efficiency and renewable energy plans for the State of Maryland.

Sheff succeeds Mark Menzer, who is preparing to retire after five years at Danfoss and 35 years in the industry, having successfully helped to raise the voice of Danfoss and its industry partners in crucial discussions throughout Washington, D.C., and within key industry associations. In 2018, Mark was recognized by the Air-Conditioning, Heating, & Refrigeration



JOHN SHEFF



MARK MENZER

Institute (AHRI) with its Richard C. Schulze award for distinguished service and commitment.

"Perhaps now more than ever – as issues, standards, and regulations affecting our industry continue to evolve, having a seat at the table for critical discussions and a voice that works to ensure the needs of our industry partners and customers are heard is imperative," said John Galyen, president, Danfoss North America. "John has great perspective on core issues and will be a true asset to all of our stakeholders as, through his work in this position, we continue to work with industry to advance efficiency and sustainability policy, among others."



MITCH BARTON

Ridgid announced the addition of **Mitch Barton** to the Ridgid Global Press Connection team, where he will serve as marketing director. In this new position, Barton will manage product development, partner relations, and new business opportunities for the growing line of Ridgid press tools.

Barton brings several decades of marketing and product development experience to his new role. Previously, he served as director, Global Project Management, for Performance Health in Akron. In this role, he transformed the product management group from a support organization to a team that led projects and decision making across the organization. At Ridgid, he brings this outlook to the Global Press Connection team, helping them strengthen their focus, responsiveness, and global connectivity solutions in the pressing category.

"Looking at the needs of our end-user – the professional tradesperson – is critical to our overall product development strategy," said John Ruese, vice president and general manager of Global Press Connection at Ridgid.

In addition to more than 30 years of marketing experience across a variety of industries, Barton also holds a Master of Business Administration and Bachelor of Science degree from Bowling Green State University.

Happy Holidays!

from the Institute of Heating and
Air Conditioning Industries, Inc.
and Indoor Comfort News.

May peace and joy be yours throughout the coming year.

We take this opportunity to express our thanks and appreciation
to our dedicated members, advertisers, exhibitors and all those
who continue to give selflessly of their time and effort.



Help Wanted



Institute of Heating and Air Conditioning Industries, Inc. (IHACI) Commercial HVAC Instructors Wanted

IHACI is looking for qualified Commercial HVAC/R/SM instructors to join its education team. These are evening classes (typically 4 nights/4 hrs. per night.) Locations: Chatsworth, Downey, Irwindale, San Diego, Stockton, and Tulare, CA. We offer competitive hourly rates, mileage reimbursement, hotel/meal accommodations when needed. Previous training experience very helpful.

HVAC/R/SM disciplines – Candidates should indicate all applicable areas of expertise.

- HVAC/R/SM Industry Certifications
- Commercial Components and Applications
- Boilers
- Chillers
- Water Towers
- Refrigeration Systems
- Water Source Heat Pumps
- Fan Coils & Air Handlers

1. Instructors should have a minimum of twenty (20) years of actual field experience in the HVAC/R/SM industry.
2. Instructors should have recognized HVAC/R/SM industry certifications.
3. Instructors should have the ability to teach face-to-face, HVAC/R/SM

Help Wanted

material as determined by the IHACI Education Committee (typical 80 to 160 seminar attendees).

4. Instructors should have minimum computer skill sets to present existing and future formatted IHACI curriculum.
5. Instructors should be able to pass HVAC/R/SM work history and security background checks.
6. Instructors should be able to travel as needed to the different training venues.
7. Instructors must be able to attend required education and training meetings.

Interested instructor candidates should submit their resumes to the IHACI office for review and evaluation by IHACI's Education Committee. Please send resumes to: s.evans@ihaci.org or fax to 818-551-1115.

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Help Wanted

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Company Overview

The R.E. Michel Company was founded in Baltimore, Maryland in 1935 as a supplier to the home heating oil burner industry. Still family owned and operated, we have grown to be one of our nation's leading wholesale distributors of HVAC/R equipment, parts and supplies and we have more than 250 locations nationwide.

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Help Wanted

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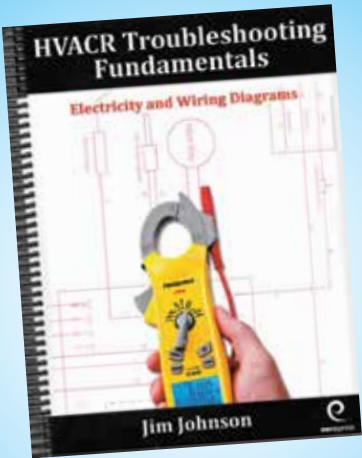


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GET YOUR CUSTOMER'S SYSTEM, VARIABLE SPEED PERFECTED.



Exclusive Refrigerant Cooled Inverter

UP TO
21
SEER

UP TO
10
HSPF

Climatuff® Variable Speed Compressor

Compressor Sound Insulators

WeatherGuard™ II Top

Integrated Fan System

Exclusive All-Aluminum Spine Fin™ Woven Coil

ComfortLink™ II Communicating Control Board

Simplified Two-Wire Connection

DuraTuff™

Full-Sided Galvanized Steel Louvered Panels

Powder-Paint Finish

WeatherGuard™ Zinc-Coated Fasteners

MODEL #'S:

4TWV0024A
4TWV0036A
4TWV0048A
4TWV0060A



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The art of precision

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Stainless-Steel Premix Burner – Creates an optimal combination of fuel and oxygen resulting in clean combustion with low emissions output.

Available Models – GME800403AU, GMES800603AU, GMES800604BU, GMES800804BU, GMES800805CU, GMES960403BU, GMES960603BU, GMES960805CU



At Goodman, we believe in American dependability. Units are designed, engineered and assembled in the U.S.A.

www.goodmanmfg.com

Our continuing commitment to quality products may mean a change in specifications without notice.

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