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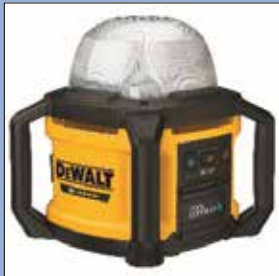
MARCH 2020

THE VOICE OF THE INDUSTRY

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NEWS

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



Editorial Focus

What's new? What's improved? Find out here as ICN takes a look at the latest offerings in Tools and Test Instruments.

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Features

Quality Refrigeration installs 10 new package heat pumps for The Boys & Girls Club of the Los Angeles Harbor.

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Troubleshooting

In this month's column, contributing editor Jim Johnson puts the spotlight on a gas pack that's not heating.

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California News

Air Resources Board Holds Workshop on Refrigerant Regulations

By Ted Rieger
Northern California
Correspondent

The California Air Resources Board (CARB) held a public workshop in Sacramento on Jan. 30 to take public and industry comments on a draft "Proposed Regulation Order" to limit global warming potential (GWP) levels for refrigerants used in new stationary air-conditioning (AC) equipment, and in new stationary refrigeration equipment used for commercial and industrial process refrigeration and cold storage systems in California. CARB also presented its proposal for an incentive program to award \$1 million in funds to assist adoption of new refrigerant technologies for refrigeration systems in the retail food sector.

Under CARB's proposal, effective Jan. 1, 2023, new AC systems must use a refrigerant with a GWP value less than 750. This would cover all types of residential and commercial/non-residential AC equipment manufactured after the effective date.

CARB discussed a revised proposal (since the previous Aug. 6, 2019 workshop) for stationary refrigeration equipment. New refrigeration equipment containing more than 50 pounds of refrigerant, must have refrigerant with a GWP less than 150 starting Jan. 1, 2022. CARB revised proposed requirements for existing retail food facilities to allow two compliance pathways: a weighted-average GWP reduction on a company-wide basis for equipment

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Industry Events



The AHR Expo 2020 Innovation Award winners were honored at this year's event in Orlando, Florida.

Danfoss Wins AHR Expo Product of the Year

At 2020 AHR Expo, Danfoss takes top award for its CO2 Adaptive Liquid Management (CALM) Solution.

It was high fives and congratulations all around as the AHR Expo handed out this year's Innovation Awards.

Gathered in the new technology theatre of the Orange County Convention Center, Orlando, Fla., the Innovation Award winners not only received their plaque, but they waited to find out who among them would be named Product of the Year.

That honor and distinction went to the Danfoss CO2 Adaptive

Liquid Management (CALM) Solution.

"It's a huge honor, not just for me for accepting the awards on behalf of Danfoss, but for all the people in the organization that have contributed to this product," said Peter Dee, sales

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Inside

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IHACI 2020 Training Class Schedule

Keep your skills up-to-date by enrolling today!

See Pages 20-21 for schedule and details.

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3.5	4TWR4042G1000A
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TONS	SKU #
1.5	4TWL6018A1000A
2.0	4TWL6024A1000A
2.5	4TWL6030A1000A
3.0	4TWL6036A1000A
3.5	4TWL6042A1000A
4.0	4TWL6048A1000A
5.0	4TWL6060A1000A

XR16



TONS	SKU #
1.5	4TWR6018H1000A
2.0	4TWR6024H1000A
2.5	4TWR6030H1000A
3.0	4TWR6036H1000A
3.5	4TWR6042H1000A
4.0	4TWR6048H1000A
5.0	4TWR6060H1000A

XR17



TONS	SKU #
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- Contact a TM or Ferguson HVAC location for information on manufacturer and utility rebates on heat pump products.



Industry News



CALIFORNIA



CEC OKs \$2.7M for New Clean Energy Technologies

Sacramento, Calif. – The California Energy Commission (CEC) recently approved \$2.7 million to help entrepreneurs continue developing their clean energy projects.

The grants were awarded through the CEC's California Sustainable Energy Entrepreneur Development (CalSEED) initiative. Administered by New Energy Nexus, CalSEED funds early-stage startups, entrepreneurs, and individuals developing innovative clean technology solutions.

CalSEED provides up to \$150,000 in initial funding and up to \$450,000 more in follow-on funding. The awardees were selected for follow-on funding through a competitive process based on the projects' technical and commercial potential.

CalSEED is funded through the CEC's Electric Program Investment Charge (EPIC) program, which drives clean energy innovation and entrepreneurship by funding research to help achieve California's goal of a 100 percent clean energy generation system by 2045.

"CalSEED represents some of the best of California's entrepreneurial spirit and it's this spirit that is going to help us realize our clean energy goals," said CEC Vice Chair Janea A. Scott. "Through the CEC's EPIC research program, CalSEED is helping innovators turn great ideas into implementable solutions and providing benefits to California ratepayers."

Since 2017, 71 projects have received initial CalSEED grants totaling \$10.6 million. Ten of those projects have received follow-on funding totaling \$4.5 million.

In addition to funding, CalSEED gives innovators access to technical expertise, mentoring, and business development training through its network of companies, nonprofits, universities, and clean energy incubators.

"CalSEED propels clean energy ideas into commercially viable

startups. This flagship program not only creates a path for innovative entrepreneurs to realize their dreams, but for California and the world to realize our ambitious climate goals," said New Energy Nexus Chief Energy Officer Danny Kennedy. "CalSEED is only one piece of the puzzle; we need thousands of successful clean energy startups get to market as soon as possible if we are to achieve 100 percent clean energy for 100 percent of the community and prevent climate change from worsening."

The grantees include:

- Modesto-based Stasis Group is working on a retrofit project that reduces energy consumption and peak demand for cooling in commercial buildings by integrating a thermal energy storage system into HVAC systems and combining it with a unique control system. The award will allow Stasis to finetune a prototype and conduct field installations to demonstrate real-world electric cost savings.

- Empow Lighting of Sacramento is developing a low-cost, thin and flexible fluorescent-to-LED lighting retrofit project that requires no rewiring or training. The company will use the funds to design full-scale working prototypes and test the technology's performance.

- Maxout Renewables is developing a low-cost, all-in-one solar inverter that combines panel optimization, battery storage, and emergency back-up capability. The Livermore-based company will use the award to complete battery technology development, manufacture prototype units, and conduct tests.

- InPipe Energy's project is a first-of-its-kind control valve that captures energy that would otherwise be lost from pressurized release valves in water pipelines. The Chino company will use the funds to demonstrate the project at a water agency.

- Palos Verdes Estates-based GenH is developing and deploying a first-of-its-kind, rapidly deployable, modular system that electrifies non-powered dams and canal heads without construction or investment in fixed infrastructure. The system moves water over the dam to turbines downstream providing energy production without the need for storage at half the energy cost of natural gas.

- Skycool Systems of Mountain View is working on a project to reduce energy and water use in data center cooling systems through

panels that radiate heat, consume no water, and use only enough energy to run a pump. The company will use the grant to continue modeling efforts and deploy a test system to demonstrate the cooling performance of the panels.

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Service Roundtable to Host Conference in San Diego

San Diego, Calif. – Service Roundtable, an organization founded by a collaboration of contractors, will host the fourth annual International Roundtable in San Diego at the Mission Bay Resort on March 11 and 12. The event is for Service Roundtable members only, but guests can attend if they buy a ticket and join for \$10 for their first month.

Attendees will have the opportunity to network with residential contractors and experts in the HVAC, plumbing, electrical, and remodeling industries who have built their businesses from the ground up. Speakers will share how to gain the tools and resources successful contractors use to grow their companies. Speakers will touch on the mistakes they've made and the opportunities they've leveraged to achieve success.

"We are excited to put on this exclusive event," said Matt Michel, president of Service Roundtable. "All of our members are entrepreneurs. They are business owners who constantly strive to improve their business knowledge so they can become better leaders and lead their companies to better performance year after year."

Keynote speakers include Ken Goodrich, CEO of Goettl Air Conditioning & Plumbing; Mark Eaton, best-selling author and Teamwork Expert who went from auto mechanic to NBA All-Star; and Jim Hinshaw, president of Sales Improvement Professionals Inc., a sales training company.

"The International Roundtable has always been a members-only event but this year we are encouraging non-members to buy a ticket and join for just one month," said David Hiemer, senior vice president of Service Roundtable. "This is a great opportunity to get a sample of what Service Roundtable has to offer and how we can help their businesses grow."

The 2020 San Diego International Roundtable will take place on March 11 and 12 at Mission Bay Resort at 1775 East Mission Bay Drive, San Diego, CA 92109. To register for the show, visit <https://irtshow.com/irt-san-diego>.



Attendees listen in to a presentation at last year's Service Roundtable International Roundtable.

CoolSys Opens New So. Calif. Training Center

Brea, Calif. – CoolSys, a parent of refrigeration and HVAC services companies nationwide, opened the doors of its new, state-of-the-art training facility in Fullerton, Calif., with a ribbon-cutting ceremony commemorating the occasion in January. As the company's largest training center in the United States, it provides in-depth training classes to equip CoolSys technicians to be successful and grow with the latest knowledge in refrigeration and HVAC technology.

"Training and investing in people is a top priority at CoolSys and this new location represents an important step in furthering these objectives," said Adam Coffey, chief executive officer at CoolSys. "We're looking forward to seeing our CoolSys technicians take full advantage of the new training offered at our Fullerton facility, and the great things to come from enhancing their professional development to better serve our customers. At CoolSys, we are always striving for continual growth and improvement in our people as we continue to expand our market presence and footprint across the United States."

CoolSys will offer 24 classes during Q1 2020 to approximately 200 technicians at the new training facility. It will provide a full range of HVAC and refrigeration courses including seven levels of service training and five levels of installation training. The new training center shares the same location as the Source Orange County branch operations and the California branch of CoolSys Energy

Designs, the company's full MEPR (mechanical, electrical, plumbing, and refrigeration) engineering business. In its own section of the building, the training center features three full classrooms and resources to teach three classes simultaneously with different areas of the training center designed to meet the specific needs of each training level.

"We're excited to open our newest training center in Southern California," said Beth Goldstein, chief human resources officer at CoolSys. "As a progressive employer, we strive to deliver the resources and support that our employees need to achieve their dreams, goals, and personal success. Training and investing in people have always been cornerstones at CoolSys, and we pride ourselves on the advanced level of training that we are able to offer our technicians."

ARIZONA



GPS Insight Buys Field Management Software Provider

Scottsdale, Ariz. – GPS Insight, a provider of fleet software for organizations with vehicles, trailers, and other mobile assets, announced the acquisition of Chicago-based ServiceBridge, a field service management software company for small businesses and franchises with tools that empower field service teams to better serve their customers. The move further

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Continued from Page 4

broadens the scope of the GPS Insight software portfolio to deliver more comprehensive solutions to its expanding customer base.

“We are incredibly excited about completing this acquisition with ServiceBridge,” said Gary Fitzgerald, CEO and chief technology officer, GPS Insight. “Our company has always provided great fleet insight, and now we’re able to deliver businesses an even greater opportunity to save valuable time and money with the addition of advanced field services.”

The acquisition will expand GPS Insight’s capabilities by more efficiently connecting organizations with not only their vehicles but also their mobile workforce for more holistic business management.

“By providing an integrated software experience, businesses will have everything they need to run

their operations – all in one place,” said Fitzgerald. “GPS Insight has always been passionate about delivering an innovative platform that its customers love, and we’re confident that ServiceBridge will add an even broader set of solutions to the high-touch, high-value experience they’ve come to expect.”



Daikin Upgrades HVAC Warranties

Houston, Texas – Daikin North America LLC is enriching limited warranty coverage for select 13- and 14-SEER air conditioners,

heat pumps and packaged units.

A 2-Year Unit Replacement Limited Warranty will now complement Daikin’s robust 12-Year Parts Limited Warranty covering the following products:

- Condensing Units – DX14SN, DX13SN, DZ14SN
- Residential Packaged Units – DP14CM, DP14CH, DP14HH, DP14HM, DP14GM

This new 2-Year Unit Replacement Limited Warranty does not apply to gas furnaces. All Daikin gas furnaces are already covered by either a 6- or 12-Year Unit Replacement Limited Warranty. Existing extended limited warranty protection remains in place for all other Daikin products.

When properly registered online within 60 days after installation, Daikin’s new 2-Year Unit Replacement Limited Warranty will replace the original unit, for the original homeowner, due to a compressor or tubular heat exchanger failure during

the first two years after the installation date. Registration is not required for California or Quebec residents.

“As the globe’s leading HVAC company, we are committed to manufacturing top-quality indoor comfort products and groundbreaking technological innovations,” explains Marc Bellanger, Director of Marketing & Communications for Daikin North America LLC. “Enriching our warranty coverage for several Daikin products embodies that commitment, while adding peace-of-mind. We want homeowners to rest assured that by choosing Daikin, they’ve made the best decision for their home.”

Daikin’s North American market HVAC products are designed, engineered and assembled in one of the industry’s most advanced manufacturing facilities, the \$450 million Daikin Texas Technology Park just outside Northwest Houston.

Complete limited warranty details are available at daikincomfort.com.

NATIONAL



ACCA Names 2020 Commercial Contractor of Year

Arlington, Va. – The Air Conditioning Contractors of America (ACCA) announced LC Anderson Inc. in Brighton, Massachusetts, as the ACCA 2020 Commercial Contractor of the Year.

Each year, ACCA’s Contractor of the Year award is presented to a contracting company that demonstrates an extraordinary commitment to contractor excellence. Finalists are judged on a range of qualities including community involvement, industry involvement, and a commitment to training and certifications. A panel of ACCA past chairmen judges the finalists and selects the ACCA Contractor of the Year winner. The 2020 judges were Tony Shaker of Enfinity Partners LLC, Mashpee, Massachusetts (2000); Larry Taylor of Taylor Consulting, Fort Worth, Texas (2001); Greg Leisgang of JonLe Heating & Cooling, Cincinnati, Ohio (2005); Richard Dean of Environmental Systems Associates Inc., Columbia, Maryland (2006); and Stan Johnson, retired from Stan’s Heat-

ing and Air Conditioning Inc., Dennison, Texas (2009).

“ACCA is excited to present the 2020 Commercial Contractor of the Year award to the LC Anderson Inc. team,” said Barton James, ACCA president and CEO. “LC Anderson is an elite company that has served the greater Boston area for more than 75 years. Their dedication to their customers through superior service, and by offering cost-effective and energy-efficient solutions set them apart from their competition. Their long-term commitment to ACCA and the industry makes them the type of leaders that move the HVACR industry forward for everyone.”

“We are honored to be named ACCA’s 2020 Commercial Contractor of the Year,” said Kurt Hudson, principal of LC Anderson Inc. “We owe so much to our key partners, ACCA, our ACCA MIX Group, Associated Builders and Contractors, and key mentors. But mostly, to our amazing team members at LC Anderson Inc. They are committed to providing quality work, and always have our customers as their top priority.”

Hudson will be presented with the Commercial Contractor of the Year award at ACCA’s 2020 Conference and Expo, March 16-18, in St. Louis, Missouri.

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EVAPCO Names New Sales Rep

Miami, Fla. – EVAPCO, Inc. has announced the hiring of Integrated Cooling Systems of Central Florida, as the exclusive EVAPCO representative in the Tampa and Orlando, Fla. areas. They also continue to represent EVAPCO in Miami, Fla.

“I’m excited to extend the responsibilities and reach of Integrated Cooling Systems,” said Jamie Facius, vice president of EVAPCO North America sales. “Their expertise in our technology, and its application, and their familiarity with these key Florida markets, will greatly strengthen our exposure there.”

“We enjoy a great working relationship with Integrated Cooling Systems and have confidence that this change will bring the same exceptional customer service our clients have come to expect from EVAPCO.”

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CLEAResult is a SoCalGas authorized contractor responsible for administering the Residential HVAC Program through December 31, 2020.

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Industry News

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Study: Contractors, Wholesalers Need to Prepare for 2023 Regulations

Sidney, Ohio – A January 2020 survey of contractors and wholesalers by Emerson (NYSE: EMR) has found that only about half of HVAC professionals are familiar with upcoming 2023 efficiency and refrigerant regulations. Contractors and wholesalers surveyed said training service people and technicians is both a top concern and top priority as they think about getting their businesses regulation ready.

“With three years to go before new residential and commercial

AC energy efficiency regulations take effect, and with alternative refrigerants required as early as 2023 in California, contractors and wholesalers are becoming more aware of the extent of this transition,” said Jennifer Butsch, manager regulatory affairs for Emerson. “The higher efficiencies and shift to mildly flammable refrigerants have contractors concerned about their readiness. As a trusted partner, we will continue to provide information and resources for the industry as we work through this change-over together.”

The Emerson survey asked HVAC contractors and wholesalers about their knowledge of and preparation for increasing federal minimum SEER/IEER efficiency requirements mandated for AC systems and heat pumps by the U.S. Department of Energy

(DOE) in January 2023. About 50% of HVAC professionals surveyed said they had at least a basic understanding of the efficiency standards and its requirements. But only 7% said they currently have an extensive understanding of these regulations and the requirements for their businesses.

Two-thirds of respondents say that the efficiency standards will affect daily operations of their HVAC business. But 40% of contractors and wholesalers surveyed say they have taken no action to address these changes in their businesses to date.

For both the efficiency standards and refrigerant regulations, contractors who are actively working to get their businesses ready say they are preparing by talking to their OEM or distributor, training their service people and techni-

cians, creating inventory plans, attending product information sessions and developing new marketing plans to address the standards.

Asked about the requirement to begin using lower Global Warming Potential refrigerants as early as January 2023, 58% of contractors and wholesalers surveyed say they have at least a basic understanding of the requirements. And 73% say this requirement will affect their company's daily operations; however, about two-thirds of contractors surveyed have not taken action yet to prepare.

In comments provided with the survey, contractors and wholesalers stated they are not only concerned about getting educated themselves on these regulations but also what they will need to do to help their customers get through these changes. Issues like repair versus replace and talking customers through new equipment

and refrigerant options are all upcoming challenges for HVAC professionals.

For more information on HVACR industry regulations and how to get regulation ready, contractors can visit Emerson's online resource at Emerson.com/HVACRregulations.

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Johnson Controls Expands Air-Handling Facility

Milwaukee, Wisc. – Johnson Controls broke ground on an expansion of its air-handling unit manufacturing facility in Hattiesburg, Miss.

The 22,000 square-foot expansion will create 40-50 new assembly jobs to boost production and the local economy. The facility, which manufactures both YORK and Miller-Picking brand systems, is increasing its footprint in response to the growing demand for custom air-handling units.

“We're excited to start this project, create attractive employment opportunities for area residents, and serve the growing needs of the heating and air conditioning industry,” said Ramiro Rodriguez, plant manager, Johnson Controls. “This expansion is another chapter in our long-term commitment to employees, Forrest County, and area business partners.”

The expansion, which will increase the facility's size to 120,000 square feet, includes the relocation of several sub-assembly cells and opens more manufacturing space in the main plant. Johnson Controls will also install a new crane system that will move products during the manufacturing process. The project is slated to be completed in May 2020.

“It is always welcome news when one of Hattiesburg's longstanding manufacturing employers adds additional jobs,” said Hattiesburg Mayor Toby Barker. “We congratulate Johnson Controls on this expansion. It is a testament to the company's forward-thinking leadership and to Hattiesburg's dynamic and skilled workforce.”

Johnson Controls currently employs 225 workers at the facility. The existing plant was built in 1968, and the last building expansion was completed more than 20 years ago.

The new expansion involves ongoing collaboration among many partners, including the

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Industry News

City of Hattiesburg, Forrest County, and Area Development Partnership. The general contractor is Rustin Metal Buildings and Construction, Laurel, Mississippi.

“Johnson Controls’ expansion in Hattiesburg speaks to our pro-business operating environment and the quality of our regional workforce,” said Chad Driskell, chair, Area Development Partnership. “Employees drive from across South Mississippi to work in the regional hub, which also creates more opportunities here for them to dine, shop and play.”

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Lifetime Heating Merges with Allred Heating

Snohomish, Wash. – Lifetime Heating & Air Conditioning announced that it has merged with Allred Heating, Cooling, Electric LLC.

“I have known the owners for many years. During this time, we developed a trusted business and personal relationship,” said Matt Allred, owner of Allred Heating, Cooling and Electric. “We are excited about this merger and what it means for the people in Western Washington. Our two companies have a history of going the extra mile to serve our customers and will continue that standard going forward.”

“We’re thrilled to grow our business through the merger with Allred Heating,” said Dwight Miller, co-owner of Lifetime Heating & Air Conditioning. “This merger brings together two strong and well-respected heating and air conditioning companies that provide top quality products and services, fast response times to a larger geographical area, and the best warranties in the industry.”

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Milwaukee Tool Opens New Plant

Milwaukee, Wisc. – Milwaukee Tool will once again expand its footprint in the United States (US) with the announcement of a new vertically integrated manufacturing plant in West Bend, Wisc. Located only 20 minutes from Milwaukee Tool’s Global Headquarters, the facility will manufacture new-to-market hand tools for

professional electricians and utility linemen.

“With a focus on core users in the electrical, plumbing, and mechanical trades, our strategy for hand tools from the beginning has been to disrupt the market with superior performance, quality, and user-driven feature sets,” said Tim Albrecht, president of Hand Tools for Milwaukee Tool. “As we continue with that strategy, we are thrilled to invest in state-of-the-art technology and equipment, and a skilled labor force – right in the heart of Wisconsin – to deliver the next wave of hand tool innovation to the industry.”

With an initial expected investment of almost \$26 million, Milwaukee Tool will break ground in April 2020 on the new manufacturing plant, and expects mass

production to begin in early 2021.

“We will continue to invest, we will continue to grow, and we will continue to change the game,” said Steve Richman, Group President of Milwaukee Tool. “In 2020 alone, we will invest over \$100 million, and create 350 jobs in the United States to diversify our operations and better serve the professional trades.”

Milwaukee Tool currently has manufacturing and distribution operations around the nation in Greenwood, Olive Branch, and Jackson, Miss., as well as in Mukwonago, and Sun Prairie, Wisc. Along with the new hand tool manufacturing plant in West Bend, Wisc., plans in progress to expand in 2020 include: operations in Cookeville, Tenn., for power tool manufacturing and assembly;

in Sun Prairie, Wisc. for accessories manufacturing, and; in Olive Branch, Miss., for a new 766,000 square-foot distribution facility.

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Air Pros Acquires Promaster Air

Coral Springs, Fla. – Air Pros Residential and Commercial Air Conditioning Services (Air Pros) announced it has acquired Coral Springs-based Promaster Air Conditioning, adding nearly 3,000 customers. All employees were retained, and the fleet will all be rebranded under the Air Pros name. Jose Anon, who owned Promaster Air Conditioning, has agreed to remain as regional manager to run the Coral Springs-based operation. As part of the acquisition, Air Pros has agreed

to honor all customer warranties and guarantees made under the Promaster entity.

“We are impressed by Promaster’s leadership and their talented technicians, leading us to quickly realize they are the perfect partner to strengthen our market position in South Florida,” said Anthony Perera, founder of Air Pros. “Promaster’s 5.0 star Google rating and their community relationships will lead to continued growth within the Coral Springs region and beyond as we continue to combine best practices to ensure our customers have a fantastic, long-term relationship with Air Pros.”

“We were searching for a partner to help us attain the next level in customer care and quality service, and Air Pros with its marketing

Continued on Page 10

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Continued from Page 9

expertise, proven processes, and stronger group buying power is the perfect fit,” said Anon. “Air Pros is keeping our staff and said that it would transfer and honor all warranties as part of the sale. We couldn’t have asked for a better transition partner whose ethos aligns with ours.”

Promaster employees have already started the transition to Air Pros, utilizing the companies increased resources to provide services to customers at lower costs due to the vendor relationships Air Pros has in South Florida and nationally. Air Pros will continue expanding in the

Florida market, and to other markets across the U.S.

Sanhua Becomes Johnstone Supply Approved Vendor

Portland, Ore. – Sanhua International has been named as an approved vendor of Johnstone Supply, a premier U.S. distributor of parts and products to the HVAC/R (Heating, Ventilation, Air Conditioning, Refrigeration), MRO, property maintenance and appliance repair fields.

Based in Portland, Ore., Johnstone Supply is a leading wholesale

distribution cooperative with six U.S. distribution centers and 436 stores throughout the U.S. and Canada.

As an approved vendor, Sanhua products including filter-driers, TXVs, service valves, reversing valves and more will be stocked in all Johnstone Supply distribution centers, as well as featured in Johnstone sales and marketing materials supplied to its members.

“We are pleased that Johnstone Supply has recognized Sanhua as an approved vendor,” said Mike Noelke, Sanhua Vice President Commercial Business, Americas. “As a component supplier to all major North America air conditioning OEMs with a growing installed base on refrigeration equipment, technicians can now count on Johnstone Supply as a source of quality Sanhua aftermarket replacement components.”

Sanhua International was founded in 2002 as the North American subsidiary of a global manufacturer headquartered in Zhejiang, China. With 22 sales offices and 14 manufacturing locations, including North America facilities in Mississippi, Arkansas, Texas and Mexico, Sanhua has delivered innovative, environmentally friendly, energy efficient solutions to the HVAC/R industry for more than 34 years. Quality is at the foundation of every product Sanhua makes. As the world’s largest producer of Service Valves, Reversing Valves, Electronic Expansion Valves and Microchannel (HVAC/R), Sanhua is recognized by the HVAC and automotive industries for providing products at world-class quality levels.

Trane Earns Tenn. State Award for Customer Service

Memphis, Tenn. – Trane, a provider of indoor comfort solutions and services, has earned the Tennessee Valley Authority’s (TVA) Excellence in Customer Service Award for the second consecutive year. This annual recognition honors contractors in TVA’s Preferred Partner Network based on customer survey ratings. Trane received the highest number of customer survey responses, with a maximum possible average rating and perfect score: Five out of five.

“Trane is a trusted partner, helping us address the issues in our facilities,” said Chris Marczak, superintendent of schools, Maury County Public Schools. “Their assistance has been absolutely amazing; they are a true partner in helping us, help more kids learn.”

“At Trane, our customers count on us to help navigate the complex

energy space and find solutions that create the best environment possible while delivering energy and operational savings,” said Brian Durr, vice president and area general manager for Trane. “We are creating more comfortable places to learn and work and reducing energy use, both of which have a positive impact on our future. We’re honored to be recognized by Tennessee Valley Authority and our customers for this important work.”

Winsupply Opens Waterworks Distributor in Quad Cities

Dayton, Ohio – Winsupply Inc., one of the nation’s largest distributors, has opened Quad Cities Winwater, serving waterworks and utilities contractors in the Quad Cities including eastern Iowa and northwest Illinois.

Christopher Burgmeier is the president of Quad Cities Winwater. A resident in the area over the past 14 years, Burgmeier has been in the waterworks and utilities industry since 2002. Most recently he was in sales at Lincoln Winwater, a Winsupply company in Nebraska. Before joining Winsupply, he was territory manager for A.Y. McDonald Mfg. Co. based in Dubuque, Iowa.

“In addition to his deep knowledge in the waterworks industry, Chris has the entrepreneurial spirit we look for in individuals to lead his own company,” said Rob Ferguson, president of Winsupply Local Company Group.

“I’ve learned many things during my 17 years in the waterworks industry,” said Burgmeier. “One of the most important things is the customer is the boss. I want to develop a partnership with our customers and help them grow their business and be successful.”

The Quad Cities Winwater location has been operating as part of Lincoln Winwater, whose president is Eric Leatherman, for the past year. The location is now a separate company with Winsupply Inc. as majority owner and Burgmeier as minority owner.

In the Winsupply co-ownership business model, Winsupply Inc. has majority equity in each of its locations, while the local company presidents and sometimes employees own substantial equity. With this model,

local company presidents have the autonomy and flexibility to decide how best to meet the needs of the customers in their markets. They also share uncapped financial rewards and risks of ownership.

Winsupply Inc. provides the local company locations purchasing power, distribution, and other support services such as business consulting, accounting, payroll, IT and marketing.

Cambridge Unveils New Name, Logo and Tagline

St. Louis, Mo. – Cambridge Engineering, a manufacturer of HVAC equipment and technology for warehousing, manufacturing, and industrial applications for nearly 60 years, announced a new name, logo, tagline, and website address (www.CambridgeAir.com). The company will be known as Cambridge Air Solutions.

The new name reflects the company’s broadened array of product offerings, and a continued commitment to bring innovative HVAC solutions to the industry.

“With our introduction of evaporative cooling products last year, we simply outgrew the old name, logo, and tagline,” said Cambridge Engineering’s marketing director, Randy Niederer. “So we explored how to better align these elements with our company’s vision for the future. We selected Cambridge Air Solutions to retain the Cambridge name with our strong reputation for creating better working environments with high quality and efficient HVAC products. The Air Solutions term reflects our ongoing dedication to bring new HVAC solutions to the market.”

By adopting “Enriching Lives” as the company’s tagline and rallying cry, the company promises to improve lives through products, services, and interactions with others.

The new logo reinforces the company’s focus on conditioning and moving air, showing three airflows, signifying heating, cooling, and ventilation. The logo is shaped as a capital letter “C” for Cambridge.

“This marks another step of our company’s evolution to provide a full range of HVAC solutions,” said Cambridge Engineering’s president, Marc Braun. “We’re holding fast to our people-centric focus while positioning Cambridge for exponential growth in the future.”

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CARB Holds Workshop on Draft Refrigerant Regulations to Reduce GWP Levels

Continued from Page 1

in multiple stores, or an overall greenhouse gas potential (GHGp) reduction to allow retail food companies more flexibility to plan reductions over 8 to 10 years.

CARB plans to issue a complete proposed regulation by June 5, 2020 to begin the 45-Day Notice for the rulemaking proceeding. The full CARB Board could then consider the regulations for adoption at a meeting on July 23 or 24, 2020.

CARB officials welcome input from the industry during the formal rulemaking and comment pe-

riod, but they also encourage input on proposed language prior to the formal comment period. Information and draft regulatory language is available at the link below.

<https://ww2.arb.ca.gov/our-work/programs/stationary-hydrofluorocarbon-reduction-measures>.

Background

The California Cooling Act (SB 1013), enacted in September 2018, (Lara, D-Bell Gardens), preserves phase-out targets for certain hydrofluorocarbon (HFC) refrigerants used in HVAC and refrigeration equipment, originally adopted by the U.S. Environmental Protec-

tion Agency (EPA), and provides for incentives to install equipment and systems that use alternative refrigerants that are non-ozone depleting substances (ODSs) and have low GWP. SB 1013 also assists efforts to meet California's target to reduce HFC emissions 40 percent by 2030, established by SB 1383 of 2016, and allows CARB to adopt regulations and have enforcement authority.

HFCs are potent greenhouse gases (GHGs) with a GWP up to four times greater than carbon dioxide (CO₂) on a pound for pound basis. Just 1 pound of R-410A is equal to 2,088 pounds of CO₂. HFCs are one of the fastest growing categories of GHGs, and are expected to increase as they replace R-22 in newer AC systems. Stationary AC equipment accounted for 34 percent of total HFC emissions in California in 2018 with a projected increase to 52 percent by 2030. Stationary refrigeration equipment accounted for 27 percent of HFC emissions in California in 2018 and is projected to account for 23 percent in 2030.

New AC Stationary Equipment Proposal and Discussions

Kathryn Kynett, staff member of CARB's GHG Reduction Strategy Section, presented proposed HFC regulations for stationary AC equipment and draft regulatory language. Systems affected are residential and commercial air conditioners and heat pumps (HPs) including: room air conditioners – window, through-the-wall and portable; dehumidifiers; packaged terminal ACs and HPs; residential split and packaged AC and HP systems including ducted and ductless systems; and commercial/non-residential split and packaged AC and HP systems including ducted and ductless systems; and variable refrigerant flow/volume systems.

The draft regulations include requirements for manufacturers for recordkeeping and equipment labeling in order to support enforcement. Kynett said CARB will also be completing a required economic analysis for the proposed regulations.

AC refrigerant alternatives to R-410A with less than 750 GWP include: R-466A, R-290, A2Ls including HFCs and HFC-HFO blends such as HFC 32 (R-32), R-447A, R-447B, R-452B, R-454B, and others.

Based on market reports from ASHRAE, from 25 to 90 percent of markets in Australia, Europe and Japan have already transitioned to lower GWP refrigerants, commonly with R-32 (GWP=675).

Challenges to having alternative refrigerants available in California by 2023 include: development and enactment of codes and standards for A2L refrigerants; acceptance and training for A2L use by contractors, technicians, and businesses; and economic impacts on the supply chain and end-users for new equipment and installation.

Kevin Messner of the Association of Home Appliance Manufacturers (AHAM) represents manufacturers of portable and room ACs and dehumidifiers. Portable and room AC units are now on the market in the U.S. using R-32. AHAM does not oppose the proposed 2023 start date for portable and room ACs. Messner expressed concern about the inclusion of dehumidifiers in the regulation, and the lack of refrigerant alternatives for dehumidifiers.

New Stationary Refrigeration System Proposal and Discussions

CARB staff member Dr. Richie Kaur of the GHG Reduction Strategy Section presented the proposed regulations for stationary refrigeration systems. CARB proposes new limits of less than 150 GWP for refrigerants in new refrigeration equipment containing more than 50 pounds of refrigerant, effective Jan. 1, 2022. This would apply to new commercial systems used by retail outlets, supermarkets, and wholesalers; new industrial refrigeration systems used by manufacturing or processing facilities; and new systems used in cold storage warehouses and packaging facilities.

The numbers of low GWP systems in supermarkets and grocery stores are increasing annually in California and the U.S., and thousands of stores have these systems worldwide. Non-ODP and low-GWP refrigerants available include: CO₂ (GWP=1), ammonia (GWP=0), hydrocarbons such as propane and isobutane with GWPs less than 4, and HFO-based systems.

Explaining the revision in CARB's proposal since the last workshop, Kaur explained that refrigerants with a GWP less than 150 can be achieved in new equipment systems and facilities, but this is less feasible in existing facilities where a large proportion of higher GWP refrigerants still exist, so CARB is now proposing alternatives to achieve reduction goals. CARB has

proposed the following compliance requirements for companies with retail food facilities:

- For companies owning or operating 20 or more retail food facilities: Attain a company-wide weighted-average GWP of 2,500, or a 25 percent reduction in GHGp below 2018 levels effective Jan. 1, 2026. Attain a company-wide weighted-average GWP of 1,400, or a 55 percent reduction in GHGp below 2018 levels effective Jan. 1, 2030.

- For companies owning or operating fewer than 20 retail food facilities: Attain a company-wide weighted-average GWP of 1,400, or a 55 percent reduction in GHGp below 2018 levels effective Jan. 1, 2030.


Stakeholders continued to express the need for better coordination between CARB and other agencies and groups such as codes and standards organizations, fire safety organizations and the California Energy Commission to develop regulations and effective dates in parallel. Manufacturers need to know what refrigerants will be legal and available on the effective dates. Users want to know what refrigerants they can use that will still be available to service a new system over the course of its lifespan. Another challenge is having training available for contractors and technicians on equipment with new refrigerants which generally does not occur until the refrigerants are part of the standards.

F-Gas Reduction Incentive Program

CARB staff member Aanchal Kohli presented initial proposals for the Fluorinated Gases (F-Gas) Emission Reduction Incentive Program (FRIP). SB 1013 established an incentive program to promote the adoption of new refrigerant technologies to provide financial assistance to convert existing refrigeration systems to lower GWP refrigerants. \$1 million was allocated in the state budget for fiscal year 2019-20 from the Greenhouse Gas Reduction Fund, under the umbrella of California Climate Investments, that collects and allocates funds from the state Cap and Trade Program.

CARB plans to issue draft program guidelines in April 2020, and hold a second public workshop in May 2020. Program solicitation is planned for an 8-week period in Summer 2020 to accept applications, with awards announced in

Continued on Page 19






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Danfoss Product Captures Product of Year Award at 2020 AHR Expo

Continued from Page 1

and service director – North America, Danfoss. “It is just an honor to be recognized by the industry for this product. This product is unique because it is a combination of all our products coming together with software.”

CALM 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.

Check Presentation

Another tradition of the AHR Expo Innovation Awards is to donate all of the entry fees collected to a local charity outreach. This year, the Orlando Police Athletic League (PAL) received \$26,300 in a special presentation during the awards ceremony. Three officers involved with the PAL program were on hand to accept the award. The host of the awards said that this is the highest amount the AHR Expo has awarded in the history of the contest.

Moving Forward

Last year’s winner, enVerid’s

HVAC Load Reduction® (HLR) module 1000E-M, has been slightly upgraded in 2019 and the indoor model now has an outdoor model as well. According to the company, the HLR 1000-15R is designed for outdoor use, typically on a rooftop. The cabinet is double-walled, insulated, weather-tight, and deployed in horizontal orientation.

“We’re working on several things from a product standpoint, but the most important thing for us is continuing to expand our offering and presence,” said Udi Meirav, founder and CEO of enVerid. “We continue to make typical generational improvement in the [HLR] system, nothing earth shattering but it does the same thing a little bit better and a little bit more powerful.”



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DEWALT DCL074



DEWALT announces the 20V MAX* Tool Connect™ All-Purpose Light (DCL074), an LED that emits 5,000 lumens of natural white light. It features Bluetooth® connectivity that provides tracking and setting control through the free mobile TOOL CONNECT™ app.

Users can fine-tune light

output to match their environment with the All-Purpose Light's three variable brightness settings. Featuring an impact-resistant lens and durable "roll cage" design, it's made to withstand demanding jobsite conditions with IP54 dust and water resistance. The All-Purpose Light can also be hung via an integrated rafter hook for multiple lighting position, or, it can be used freestanding or tripod-mounted (tripod sold separately). Using the 20V MAX* 6.0Ah Lithium Ion Battery (DCB206 sold separately) on low setting, the 20V MAX Tool Connect™ All-Purpose Light runs for up to 11 hours. It is also compatible with all DEWALT 20V MAX* and DEWALT FLEX-VOLT® Batteries.

At only 8.6 lbs. (bare tool), the

20V MAX* Tool Connect™ All-Purpose Light is a lightweight yet durable solution for a wide variety of applications. It will be available in early 2019 for \$199 MSRP (DCL074), battery and charger sold separately. It comes standard with a three-year limited warranty, one-year free service contract and 90-day money-back guarantee.

The Bluetooth® word mark and logos are registered trademarks owned by Bluetooth SIG, Inc. and any use of such marks by DEWALT is under license. Other trademarks and trade names are those of their respective owners.

More information: www.dewalt.com.

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Dwyer Instruments DAFA



Dwyer Instruments, a preferred source for a complete range of practical and affordable instrumentation is announcing the release of the Series DAFA Air Flow Indicator and Alarm. The Air Flow Indicator and Alarm is designed to alert users of low or no air flow conditions in pipes.

The DAFA is ideal for monitoring radon mitigation systems by detecting

a loss of air flow in the pipe and providing a signal to the homeowners if the fan has stopped operating.

The Air Flow Indicator and Alarm utilizes a thin, field trimmable vane to sense the air flow rate in pipe sizes between three to four inches. The DAFA is battery-powered to provide versatility of installation location and offers a yellow LED to indicate a low battery. In addition, the battery can last up to five years when in a steady state. An 85 dB audible buzzer alternates with a bright red LED to alert users when the air flow rate drops below the desired rate.

More information: www.dwyer-inst.com/Product/Series-DAFA.

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Extech CO260



Extech, a world leader in test and measurement tools, announces the launch of the new CO260 Datalogging Indoor Air Quality meter with both carbon monoxide (CO) and carbon dioxide (CO2) measurements in addition to dew point, wet bulb, air temperature and relative humidity.

The rugged handheld meter can be used to solve elusive indoor air quality (IAQ) problems in an array of job sites including schools, homes and apartment buildings, offices, boiler and mechanical rooms, hotels and senior housing facilities, loading docks, as well as transportation sites such as bus and train stations. HVAC technicians responding to CO alarms or occupant complaints of dizziness, headaches, fatigue or flu-like symptoms resulting from inadequate fresh air can quickly measure both carbon monoxide (PPM) and carbon dioxide (PPM) levels, along with other complementary environmental readings.

When an alarm is triggered due to high CO levels and emergency responders are called to evacuate a building, the clock starts ticking for HVAC or IAQ pros to identify



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Tools & Test Instruments

and validate the source of hazardous or fatal air quality conditions using the CO260. In less urgent cases, techs can use the datalogging meter when occupants report stuffy air or when managers notice productivity has declined because of too-hot or too-cold work areas. For both on the spot readings and extended datalogging, the CO260 can identify IAQ anomalies such as idling trucks near a fresh air intake, clogged flue or simply incorrect thermostat programming.

With the increased prevalence of LEED-certified buildings and more modern high efficiency HVAC systems, troubleshooting IAQ issues is increasingly complex. The new Extech IAQ meter puts powerful capabilities to measure air quality into one meter.

The CO260 features a large, bright 2-line display that displays the time along with carbon monoxide, carbon dioxide, dew point, wet bulb, air temperature or relative humidity.

Unlike most CO/CO2 meters, the CO260 from Extech goes beyond basic, real-time measurements with 4 additional environmental metrics for a complete picture of a site's IAQ. Users can program High CO alarm thresholds that will trigger an audible alarm. In addition to tracking Minimum and Maximum values and a Data Hold function, the IAQ meter calculates dew point and wet bulb values. For added datalogging insights on air quality over the course of office hours for example, the useful meter offers an 8-hour Time Weighted Average (TWA) snapshot of carbon dioxide readings.

For occupational health and industrial hygiene managers tracking acceptable average exposure over a short period of time, a 15-minute Short Term Exposure Limit (STEL) function monitors is useful for diagnosing abnormal, transient CO/CO2 spikes. The CO260 pressure compensation adjustment capability ensures accuracy in a wide range of altitudes beyond sea level.

For extended data recording requirements at a job site, the meter's auto power off can be disabled while datalogging up to 32,000 readings (in addition to 99 manually saved readings). Data logs can be downloaded via USB to a PC for trending, analysis and reporting to diagnose problems and to document before/after conditions.

More information: www.extech.com/co260.

Fieldpiece Instruments SC480 & SC680



Fieldpiece Instruments introduces two new wireless power clamp meters that work with the Fieldpiece Job Link® System App for on-the-go testing and reporting. The SC480 and SC680 meet the rigorous demands of the HVAC professional in the field for HVACR electrical tests.

HVACR professionals are dealing with time constraints in getting their jobs completed in a suitable manner, while having the accurate measurements they need. These new clamp meters utilizing the Job Link® System offer advanced solutions for HVACR electrical tests that can be customized for the jobs they are working on. While working on-the-go, technicians must get the correct data to make informed decisions about the service they are providing in a timely manner, including measuring power in kilowatts to help determine how efficiently a system is running. With the electrical measurements documented, technicians can recommend cost saving actions to the customer. The Fieldpiece Job Link app makes the job easier, faster, better.

With the mini-split market continuing to grow, these new meters are perfect for getting electrical measurements on mini-splits. The included Molex tips are super thin to get readings on hard to reach circuitry and a low pass filter provides more reliable voltage readings on variable frequency drives (VFDs). Plus, the SC680 also measures DC amps for inverter systems.

Using Power (kW), phase rotation, True RMS, Inrush features, and super thin Molex test leads, the field technician can easily test HVACR electrical equipment. Because these new meters are CAT IV rated at 600 Volts they cover the higher levels of transient overvoltage HVACR professionals may encounter when working on utility service equipment.

More information: www.fieldpiece.com.

Klein Tools IR07



Klein Tools introduces the Dual IR/Probe Thermometer (Cat. No. IR07). The IR07 is a pocket-sized meter designed to provide air, liquid and surface temperature measurements. Klein Tools continuously introduces new jobsite solutions to the Test and Measurement line, helping tradespeople across all jobsites measure common parameters.

- Measures temperatures ranging from -40 to 572°F (-40 to 300°C)
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- Probe with nub prevents temperature transfer when opening

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 - Stainless steel probe is FDA GRAS compliant
 - Certified to IEC EN 61326-1:2013; EN61326-2-3:2013
 - Includes carrying pouch, instruction manual, and 2 x AAA batteries
- "Across all jobsites, there is a need for additional Test and Measure equipment," says Sabrina Kalsi, product manager at Klein Tools. "Klein Tools' newest product provides key measurements for a variety of jobsite applications. The pocket-sized IR07 is an infrared thermometer designed to measure hot spots in electrical wires and panels as well as monitor air quality HVAC measurements."

More information: www.klein-tools.com/new-products.

.....

NAVAC Model NTE11H



NAVAC, the world's largest supplier of HVAC vacuum pumps in addition to a wide array of tools, gauges, charging machines, recovery units and other industry-specific items, has introduced a compact hydraulic tube expander suitable for expanding large copper tubes in tight spaces. The user-friendly Model NTE11H Hydraulic Tube Expander offers

Continued on Page 17



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FIGURE 1

Growing Green Technicians Part 125: FPM, CFM in Air Flow Systems

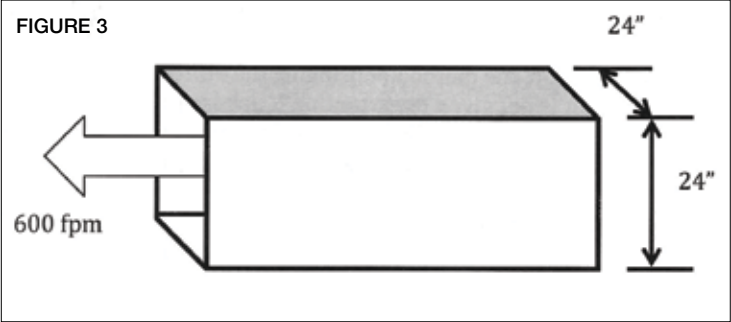
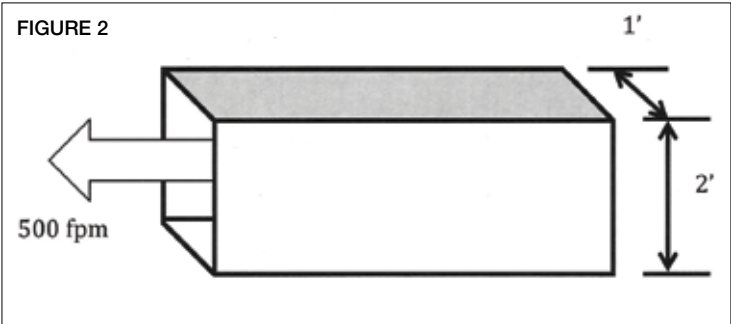
By Jim Johnson
Contributing Editor

When considering the correct volume and velocity of flow in a given air handling system, a flow hood is an effective device to employ to determine whether or not a room in a building is receiving its design CFM. Another device that technicians can use check air flow in a duct when following up a customer's request for service is an anemometer, one example of which is shown in **Figure One**.

A hand-held anemometer (available as both a stand-alone device or as an attachment to a digital multi-meter) employs a rotating vane to provide a digital readout of the velocity of air. Which means that unlike a flow hood that is used to directly provide precise CFM measurements

necessary for TAB (Testing, Adjusting & Balancing) procedures related to commissioning, it measures only FPM (Feet Per Minute). However, it can be employed in an initial survey to measure the velocity of air being delivered from a supply register and to a return grille. And in many cases, a device such as this is designed to simultaneously measure temperature, another important factor for technicians to consider regarding system performance.

One way to grasp the concept of FPM related to velocity of air flow and CFM related to volume of air is to consider how a measurement of FPM, coupled with the measurement of a duct, can be used with simple arithmetic to calculate CFM. In **Figure Two** we're showing a duct that measures 12" wide and 24" tall, and the velocity of the air flow is 500 FPM.



With the knowledge that the air speed in this situation is 500 FPM and the duct size is 1ft x 2ft, we can calculate the CFM by first determining the square foot area of the duct...1 x 2 = 2.

Next, we apply the calculated square foot duct size to the speed of the air moving through the duct...200 x 2 = 1,000 CFM.

As another example, consider the duct shown in **Figure Three** that is 24" x 24" and has an air velocity of 600 FPM.

Considering that our 24" x 24" duct is simply 2 ft. x 2 ft.

we know that the square foot area of the duct is 4 ft. And, when we apply the velocity of air...600 FPM x 4ft. = 2,400 CFM... is the result of that calculation.

Taking this fundamental approach to checking velocity with an anemometer that allows the technician to gather and save information from multiple supply ducts and calculate CFM can be a preliminary step in accomplishing an evaluation of the performance of an air flow system.

Quality Refrigeration Installs Package Heat Pumps for Boys & Girls Club in L.A. Harbor



Quality Refrigeration prepares to install a package heat pump at The Boys & Girls Clubs of the Los Angeles Harbor facility.

During the month of December, Quality Refrigeration Co. Inc. installed 10 new package heat pumps for The Boys & Girls Clubs of the Los Angeles Harbor ensuring that the young people who utilize the Harbor City location have adequate heating and comfort cooling for years to come.

True to its mission since 1937,

the Boys & Girls Clubs of the Los Angeles Harbor helps young people, especially those who need it most, to reach their full potential as productive, caring and responsible citizens.

As a proud alumni of the program, Quality Refrigeration

Continued on Page 17



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16 ICN MARCH 2020

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Troubleshooting

A Gas Pack That's Not Heating

By Jim Johnson
Contributing Editor

In this month's troubleshooting situation a customer has called for service, reporting that their heating system isn't working. The equipment is a rooftop gas pack, and when you arrive you confirm the following:

....The equipment power supply is correct.

....All over-temperature protective devices are closed.

When you initiate a call for heat, you note that the combustion blower motor starts and operates properly. And you also observe that, after the appropriate delay, the direct ignition system functions, but the burner does not ignite.

As your next step, you decide to disconnect the power supply, remove the wiring connections from the gas valve, and perform

a resistance check on the coil. (See **Figure One**)

Your troubleshooting question: *Based on the results of your resistance check, what is your next step 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@techtrainassoc.com or by U.S. Mail to: Technical Training Associates, PO Box 2259, Green Valley, AZ 85622-2259.

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

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

Answer to Last Month's Problem

The component that caused the failure is the blower motor. The other component that needs to be replaced is the limit switch.

The winner of last month's troubleshooting is:

Andrew Puckett
Nicholasville, Ky.

Quality Refrigeration

Continued from Page 16

tion's President Jeff Hawke has close ties to the club as he has seen firsthand how it can greatly improve the choices and direction of at-risk youth in the L.A. Harbor/South Bay area.

Quality Refrigeration provides charitable service work to the Boys and Girls Club's and offered its services to assist in the assessment of all the air conditioning/

heating units currently at the facility. It was determined that replacing the units would ensure the comfort of all who use the facility into the future.

Quality Refrigeration takes great pride in assisting the community with projects like the one completed at The Boys & Girls Club. The youth of today are tomorrow's future and ensuring that all young people have access to equal opportunity will ensure the success of this great area of Los Angeles well into the future.

Editorial Focus

Continued from Page 15

single-handed operation in line with NAVAC's mission of providing tools that make HVAC'R technicians' jobs less complicated and more efficient – both crucial to busy technicians charged with conducting efficient yet exacting service.

Featuring an ergonomically designed pressure release knob, the NAVAC NTE11H offers a differentiating maintenance-free vacuum-sealed hydraulic system. Among other benefits, this helps make the tool exceedingly durable: with a lifecycle of over

200,000 uses, the NTE11H is designed for long-lasting operation.

With a multi-type connector, NAVAC's NTE11H hydraulic tube expander comes with seven different fittings for various tubing sizes, as well as a deburring tool and a high-quality tube cutter. These are housed in a product-specific carrying case.

Stephen Rutherford, Director of HVAC Tools Business for NAVAC, said: "Our intuitive, single-handed hydraulic tube expander is a strong example of tools designed with techs in mind."

More information: www.navacglobal.com.



FIGURE 1

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IHACI 2019 TRADE SHOW

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Jordan Sweeney of
Action Duct Heating Company.



Southern California P.I.P.E.:
Mark Burnside (left) and
Oscar Delcidseguna



Go Green Financing: Casey Connorton (left)
and Drew Marie Brauer



The Wright Sales booth.



Thermaflex: Cindy Brase (left) and
Bliss Cain.



Aspen Refrigerants: Scott Zwibel (left)
and Brett Bradley.



J-Mar Controls: (from left) Gina Elliott,
Jeff Pose and Hoon Chiat Lim.



Sealed Unit Parts Co.: (from left) Brent
Littrell, Jim Adcox and Dale Keene.



Interplay Learning: Fred Klimt (left)
and Reynaldo Gil.



i Permit E Raters: Ian Jacoby (left)
and Josh Lertzman.



Slingshot: Ty and Kami Walker.



Eugene Silberstein of Esco Institute.



SoCal Gas Multi Family Rebate
Program: Brianna Moncada (left)
and Savi Bassa.



Jonathan Taub of Fieldboss.



Lauren Lovato of Broadly.



Global The Source: (from left)
Jason Smith, Katie Wollslager
and Ashley Lynds.



David Garcia of Southern California
Sheet Metal JATC.



Sigler Wholesale Distributors:
John Collins (left) and Chris Aspeitia.



Market Air: Jim DeSantis (left)
and Andrew Olefson.



Jeff Purcell of Thorson Motor.

Indoor People



HAYS BASSETT



RICH STRAIN

Fujitsu General America welcomes two area sales managers – **Hays Bassett and Rich Strain.**

Bassett will support all Fujitsu products in the Florida market. He brings industry experience, including employment with a manufacturer's rep firm where he gained in-depth familiarity with Fujitsu product lines. He is versed in all aspects of Fujitsu sales and support, including training, system design and jobsite visits.

Strain will support national accounts throughout the Mid-Atlantic region of the US. He joins Fujitsu General America after working in the HVAC industry for more than 25 years. He has held various positions in manufacturing, distribution and on the manufacturer's rep side, including a most recent role as account manager with Stroh Sales Associates.

.....

Dewberry announced that **John Bowling**, P.E., has been hired as a senior mechanical engineer in the mechanical, electrical, and plumbing (MEP) department based in Raleigh, N.C.

Bowling's background is primarily in building automation, fire alarm, security, and HVAC systems and service. With more than 30 years of experience, his expertise includes construction cost scheduling, estimating, and engineering.

Prior to joining Dewberry, Bowling served as a preconstruction tender manager for a building company in Morrisville, N.C., where he had the opportunity to work on the HVAC control system for the PNC Arena in Raleigh. In his new role, he works with Dewberry's building automation group to design integrated building management systems, primarily for clients in the federal and healthcare market.

Bowling graduated from North Carolina State University with a bachelor's degree in mechanical engineering (1986) and is a member of the Association of Energy Engineers.



JOHN BOWLING

.....

Fieldpiece Instruments recently appointed **Cameron Rouns** as chief executive officer.

Rouns brings over 25 years of experience delivering technologies and instrumentation across a broad range of industries. Previously he held key positions with diverse

eligible technologies.

Tier 1 – Innovative Technologies (\$500,000 available). For partial or full installations of systems using ultra-low GWP refrigerants (GWP<10) in new and existing stores.

Tier 2 – Conventional Technologies (\$500,000 available). For refrigerant retrofits from R-404A/R-507A to R-448A/R-449A. Or for the same refrigerant retrofits and accompanied by a permanent charge reduction of 25 percent or greater through system architectural changes.

Kohli said, "The program requires that funded projects result in



CAMERON ROUNS

companies from pre-revenue start-ups to Fortune 500 companies including Kimberly-Clark, Medtronic, Abbott, and others where he has been responsible for leading teams to develop, manufacture, and commercialize break-through technologies.

"Fieldpiece Instruments is an innovative company focused on creating and bringing to market better, simpler, and more efficient HVACR tools and test instruments," said Rouns. "The success of an organization is based on having strong ties to the customers you serve. I was inspired and very aligned with Fieldpiece's customer-driven culture and the deep commitment of bringing innovation to the HVACR industry. My goal is to continue Fieldpiece's growth and solidify our reputation as the industry's most trusted and used tools. I'm looking forward to joining the great team at Fieldpiece."

"We have been searching for the best person to lead Fieldpiece into this new decade and beyond," said Rey Harju, founder, Fieldpiece Instruments. "Cam has a strong history of leveraging advanced innovation to propel businesses to dominant market positions. As we continue to develop new products and refine our current ones, we will rely on Cam to provide feedback and keep us on the right path. With his help, our goal is to continue to bring more useful tools to market."

.....

Reliable Controls Corp. announced the appointment of **Thomas Leslie Zaban**, P.Eng, LEED Green Associate, to the office of president for the headquarters and worldwide operations of the company.

Roland Laird, founder of Reliable Controls, will be retiring at the end of 2019. Laird founded the company in 1986 and has remained active in leadership and technical roles.

Zaban has taken the first half of 2019 to transition into the top position of the firm while continuing with his executive sales and marketing responsibilities. Zaban joined the company in 1996 to oversee sales, marketing, training, and technical documentation. Since that time, he has been instrumental in establishing and building the company's brand, training curricula, sales forecasts, and distribution channel, as well as expanding the



THOMAS LESLIE ZABAN

company's global market share.

"[I am] grateful for being chosen as the next President of one of the best companies in the industry," said Zaban.

"There remains much to do to deliver simple, flexible, and sustainable solutions that optimize energy efficiency, comfort, and greenhouse gas reductions in buildings all around the world," he added.

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CARB Workshop

Continued from Page 12

Fall 2020. Award funds would have an encumbrance deadline of June 30, 2021. The liquidation deadline by which recipients must use their award funds would be June 30, 2025.

CARB is proposing these funds be available only to owners and operators of refrigeration systems in the retail food sector with systems with refrigerant capacities more than 50 lbs. CARB is proposing a program with two tiers of

GHG reductions that are quantifiable." CARB will offer an Excel-based tool for making calculations.

CARB noted that stakeholders may also be eligible for incentives offered through programs from individual utilities including Southern California Edison (SCE), Los Angeles Department of Water & Power (LADWP), and the Sacramento Municipal Utility District (SMUD).

More information is at the FRIP website:

<https://ww2.arb.ca.gov/our-work/programs/f-gas-reduction-incentive-program>

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MARCH

System Diagnostics Module
(Four-Night Class, Cont. in Apr.)
Instructor: John Dalton
Tues., March 24 – Part 1
Wed., March 25 – Part 2

APRIL

System Diagnostics Module
(Four-Night Class, Cont. From Mar.)
Instructor: John Dalton
Wed., April 1 – Part 3
Thurs., April 2 – Part 4

MAY

CAQI/QM/QS System Performance Module
(Four-Night Class)
Instructors: John Dalton / Dave Highland
Wed., May 20 – Part 1
Thurs., May 21 – Part 2
Wed., May 27 – Part 3
Thurs., May 28 – Part 4

JUNE

Chiller Module
(Two-Night Class)
Instructor: John Dalton
Wed., June 10 – Part 1
Thurs., June 11 – Part 2

Commercial Cooling Tower Module
(Two-Night Class)
Instructor: John Dalton
Wed., June 17 – Part 1
Thurs., June 18 – Part 2

SEPTEMBER

CAQI/QM/QS Air Distribution Module
(Four-Night Class)
Instructors: Mike Griffin / Dave Highland
Wed., Sept. 2 – Part 1
Thurs., Sept. 3 – Part 2
Wed., Sept. 9 – Part 3
Thurs., Sept. 10 – Part 4

OCTOBER

NATE Training
(Four-Night Class)
Instructor: John Dalton
Wed., Oct. 21 – Part 1
Thurs., Oct. 22 – Part 2
Wed., Oct. 28 – Part 3
Thurs., Oct. 29 – Part 4
Sat., Oct. 31 - NATE Exam, 7:30 a.m.

SoCA EDISON, ENERGY EDUCATION CENTER, IRWINDALE

MARCH

CAQI/QM/QS Electrical Module
(Four-Night Class)
Instructor: John Dalton
Wed., March 4 – Part 1
Thurs., March 5 – Part 2
Wed., March 11 – Part 3
Thurs., March 12 – Part 4

APRIL

CAQI/QM/QS Air Distribution Module
(Four-Night Class)
Instructors: Mike Griffin / Jayme Carden
Wed., April 1 – Part 1
Thurs., April 2 – Part 2
Wed., April 8 – Part 3
Thurs., April 9 – Part 4

MAY

CAQI/QM/QS AC/HP Refrigeration Module
(Four-Night Class)
Instructor: John Dalton
Wed., May 6 – Part 1
Thurs., May 7 – Part 2
Wed., May 13 – Part 3
Thurs., May 14 – Part 4

JUNE

NATE Training
(Four-Night Class)
Instructor: Mike Griffin
Wed., June 3 – Part 1
Thurs., June 4 – Part 2
Wed., June 10 – Part 3
Thurs., June 11 – Part 4
Sat., Jun. 13 - NATE Exam, 7:30 a.m.

SEPTEMBER

System Diagnostics Module
(Four-Night Class)
Instructor: John Dalton
Wed., Sept. 2 – Part 1
Thurs., Sept. 3 – Part 2
Wed., Sept. 9 – Part 3
Thurs., Sept. 10 – Part 4

OCTOBER

Chiller Module
(Two-Night Class)
Instructor: John Dalton
Wed., Oct. 7 – Part 1
Thurs., Oct. 8 – Part 2

Commercial Cooling Tower Module
(Two-Night Class)
Instructor: John Dalton
Wed., Oct. 14 – Part 1
Thurs., Oct. 15 – Part 2

NOVEMBER

Non-Residential Acceptance Testing
(Two-Night Class)
Instructor: Bill Brown
Wed., Nov. 4 – Part 1
Thurs., Nov. 5 – Part 2

2019 Non-Residential Title 24
(Two-Night Class)
Instructors: Mike Griffin / Jayme Carden
Wed., Nov. 18 – Part 1
Thurs., Nov. 19 – Part 2

PACIFIC GAS AND ELECTRIC ENERGY TRAINING CENTER, SACRAMENTO

MARCH

NATE HVAC/R Service Technician
(Four-Night Class)
Instructor: [Name]
Wed., Mar. 11 – Part 1
Thurs., Mar. 12 – Part 2
Wed., Mar. 18 – Part 3
Thurs., Mar. 19 – Part 4

APRIL

CAQI/QM/QS Electrical Module
(Four-Night Class)
Instructor: [Name]
Wed., Apr. 1 – Part 1
Thurs., Apr. 2 – Part 2
Wed., Apr. 8 – Part 3
Thurs., Apr. 9 – Part 4

MAY

CAQI/QM/QS Air Distribution Module
(Four-Night Class)
Instructors: Mike Griffin / Jayme Carden
Wed., May 6 – Part 1
Thurs., May 7 – Part 2
Wed., May 13 – Part 3
Thurs., May 14 – Part 4

JUNE

CAQI/QM/QS AC/HP Refrigeration Module
(Four-Night Class)
Instructor: [Name]
Wed., June 3 – Part 1
Thurs., June 4 – Part 2
Wed., June 10 – Part 3
Thurs., June 11 – Part 4

SEPTEMBER

System Diagnostics Module
(Four-Night Class)
Instructor: [Name]
Wed., Sept. 2 – Part 1
Thurs., Sept. 3 – Part 2
Wed., Sept. 9 – Part 3
Thurs., Sept. 10 – Part 4

OCTOBER

CAQI/QM/QS System Performance Module
(Four-Night Class)
Instructors: Mike Griffin / Jayme Carden
Wed., Oct. 7 – Part 1
Thurs., Oct. 8 – Part 2
Wed., Oct. 14 – Part 3
Thurs., Oct. 15 – Part 4

NOVEMBER

NATE Training
(Four-Night Class)
Instructor: [Name]
Wed., Nov. 4 – Part 1
Thurs., Nov. 5 – Part 2
Wed., Nov. 11 – Part 3
Thurs., Nov. 12 – Part 4
Sat., Nov. 21 - NATE Exam, 7:30 a.m.

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

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SOCALGAS, CHATSWORTH

MARCH

Support Training
(Two-Night Class)
Instructor: Jeff Painter
Wed., March 4 – Part 1
Thurs., March 5 – Part 2
Wed., March 11 – Part 3
Thurs., March 12 – Part 4 (NATE Exam)

APRIL

Electrical Module
(Four-Night Class)
Instructor: Jeff Painter
Wed., April 1 – Part 1
Thurs., April 2 – Part 2
Wed., April 8 – Part 3
Thurs., April 9 – Part 4

MAY

Air Distribution Module
(Four-Night Class)
Instructors: Mike Griffin / Jayme Carden
Wed., May 20 – Part 1
Thurs., May 21 – Part 2
Wed., May 27 – Part 3
Thurs., May 28 – Part 4

JUNE

Refrigeration Module
(Four-Night Class)
Instructor: Jeff Painter
Wed., June 3 – Part 1
Thurs., June 4 – Part 2
Wed., June 10 – Part 3
Thurs., June 11 – Part 4

SEPTEMBER

System Diagnostics Module
(Two-Night Class)
Instructor: Mike Griffin
Wed., Sept. 16 – Part 1
Thurs., Sept. 17 – Part 2
Wed., Sept. 23 – Part 3
Thurs., Sept. 24 – Part 4

OCTOBER

System Performance Module
(Four-Night Class)
Instructors: Mike Griffin / Jayme Carden
Wed., Oct. 7 – Part 1
Thurs., Oct. 8 – Part 2
Wed., Oct. 14 – Part 3
Thurs., Oct. 15 – Part 4

NOVEMBER

Support Training
(Two-Night Class)
Instructor: Jeff Painter
Wed., Nov. 4 – Part 1
Thurs., Nov. 5 – Part 2
Wed., Nov. 18 – Part 3
Thurs., Nov. 19 – Part 4
NATE Exam, 7:30 a.m.

MARCH

CAQI/QM/QS Air Distribution Module
(Four-Night Class)
Instructors: Mike Griffin / Jayme Carden
Wed., March 11 – Part 1
Thurs., March 12 – Part 2
Wed., March 18 – Part 3
Thurs., March 19 – Part 4

APRIL

CAQI/QM/QS AC/HP Refrigeration Module
(Four-Night Class)
Instructor: Mitch Bailey
Wed., April 15 – Part 1
Thurs., April 16 – Part 2
Wed., April 22 – Part 3
Thurs., April 23 – Part 4

MAY

System Diagnostics Module
(Four-Night Class)
Instructor: Mitch Bailey
Wed., May 13 – Part 1
Thurs., May 14 – Part 2
Wed., May 20 – Part 3
Thurs., May 21 – Part 4

JUNE

CAQI/QM/QS System Performance Module
(Four-Night Class)
Instructors: Mike Griffin / Jayme Carden
Tues., June 9 – Part 1
Wed., June 10 – Part 2
Tues., June 16 – Part 3
Wed., June 17 – Part 4

SEPTEMBER

Chiller Module
(Two-Night Class)
Instructor: Mitch Bailey
Tues., Sept. 22 – Part 1
Wed., Sept. 23 – Part 2

Commercial Cooling Tower Module
(Two-Night Class)
Instructor: Mitch Bailey
Tues., Sept. 29 – Part 1
Wed., Sept. 30 – Part 2

OCTOBER

NATE Training
(Four-Night Class)
Instructor: Mitch Bailey
Wed., Oct. 14 – Part 1
Thurs., Oct. 15 – Part 2
Wed., Oct. 21 – Part 3
Thurs., Oct. 22 – Part 4
Sat., Oct. 24 - NATE Exam, 7:30 a.m.

NOVEMBER

2019 Non-Residential Title 24
(Two-Night Class)
Instructors: Mike Griffin / Jayme Carden
Tues., Nov. 3 – Part 1
Wed., Nov. 4 – Part 2

Non-Residential Acceptance Testing
(Two-Night Class)
Instructor: Bill Brown
Tues., Nov. 17 – Part 1
Wed., Nov. 18 – Part 2

APRIL

CAQI/QM/QS AC/HP Refrigeration Module
(Four-Night Class)
Instructor: Mike Griffin
Wed., April 22 – Part 1
Thurs., April 23 – Part 2
Wed., April 29 – Part 3
Thurs., April 30 – Part 4

**SAN DIEGO GAS & ELECTRIC,
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MARCH

NATE HVAC/R Support Training
(Four-Night Class)
Instructor: Dave Highland
Wed., March 4 – Part 1
Thurs., March 5 – Part 2
Wed., March 11 – Part 3
Thurs., March 12 – Part 4 (NATE Exam)

APRIL

CAQI/QM/QS Electrical Module
(Four-Night Class)
Instructor: John Dalton
Wed., Apr. 15 – Part 1
Thurs., Apr. 16 – Part 2
Wed., Apr. 22 – Part 3
Thurs., Apr. 23 – Part 4

MAY

CAQI/QM/QS Air Distribution Module
(Four-Night Class)
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Thurs., May 7 – Part 2
Wed., May 13 – Part 3
Thurs., May 14 – Part 4

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Thurs., June 4 – Part 2
Wed., June 10 – Part 3
Thurs., June 11 – Part 4

SEPTEMBER

System Diagnostics Module
(Four-Night Class)
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Thurs., Sept. 3 – Part 2
Wed., Sept. 9 – Part 3
Thurs., Sept. 10 – Part 4

OCTOBER

NATE Training
(Four-Night Class)
Instructor: Dave Highland
Wed., Oct. 7 – Part 1
Thurs., Oct. 8 – Part 2
Wed., Oct. 14 – Part 3
Thurs., Oct. 15 – Part 4
Sat., Oct. 17 - NATE Exam, 8:00 a.m.

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Institute of Heating and Air Conditioning Industries, Inc., Southern California Gas Company, San Diego Gas & Electric, Southern California Edison, and Pacific Gas and Electric Company



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

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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 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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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

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family owned and operated, we have grown to be one of our nation's leading wholesale distributors of HVACR equipment, parts and supplies and we have more than 250 locations nationwide.

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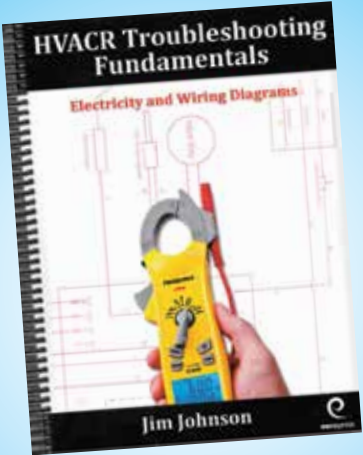
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