



Air Conditioning TODAY



NOVEMBER 2019 Serving the HVACR and Plumbing Industries Established in 1986 Vol. 33, No 11

MiTek CoMMunity Classic Golf Tournament



Pictures on page B6.

Standard Supply/ Bartos Golf Tournament



Pictures on page B13.

AC Supply Golf Classic



Pictures on page B14.

Single-Family Housing Starts Hold Firm in September

Due to a decline in multifamily housing starts, total housing starts fell 9.4 percent in September to a seasonally adjusted annual rate of 1.26 million units, according to a report from the U.S. Housing and Urban Development and Commerce Department.

The September reading of 1.26 million starts is the number of housing units builders would begin if they kept this pace for the next 12 months. Within this overall number, single-family starts increased 0.3 percent to 918,000 units. The multifamily sector, which includes apartment buildings and condos, fell 28.2 percent to a 338,000 pace.

“Single-family builders continue to see positive conditions for housing, and this is reflected in NAHB’s Housing



Market Index, which measures builder sentiment,” said Greg Ugalde, chairman of the National Association of Home Builders (NAHB) and a home builder and developer from Torrington, Conn. “However, builders are still being somewhat cautious as they continue to deal with supply-side challenges which impact housing affordability.”

“Multifamily housing starts fell from an unsustainably high level in August and are running

at a solid pace despite the sharp monthly decline,” said NAHB Chief Economist Robert Dietz. “Meanwhile, the rebound for single-family construction continues. Single-family permits have increased since April, and single-family starts have posted gains since May. In another positive development, September marked the first monthly increase for the number of single-family homes currently under construction since January.”

On a regional and year-to-date basis, combined single-family and multifamily starts in September rose 6.0 percent in the South. Starts declined 0.6 percent in the Northeast, 6.2 percent in the Midwest and 12.2 percent in the West.

Overall permits, which are a harbinger of future housing production, fell 2.7 percent to a 1.39 million unit annualized rate in September. Single-family permits increased 0.8 percent to an 882,000 rate while multifamily permits declined 8.2 percent to a 505,000 pace.

Looking at regional permit data on a year-to-date basis, permits rose 8.1 percent in the Northeast and 3.4 percent in the South. Permits fell 4.9 percent in the Midwest and 3.5 percent in the West.

Women in HVACR Annual Conference



Pictures on page B10.

TACCA Greater Austin Golf Tournament



1st Place Team-Simkins, Reaux, Runge and McGill.
Pictures on page B16.

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Interplay Learning’s SkillMill™ Skilled Trades Course Catalog Wins Software Category of the 2020 AHR Expo Innovation Awards

The leading provider of online training for skilled trades utilizing Virtual Reality and 3D simulations wins the prestigious AHR Expo Innovation Award in the software category for its online, on-demand training course catalog designed for HVAC professionals and other skilled trades. The solution is recognized for its first-of-kind innovative design, creativity, application, value and market impact.

Austin, Texas – Interplay Learning, the leading provider of online training for skilled trades utilizing virtual reality (VR) and 3D simulations, announced it won the software category of the 2020 AHR Expo Innovation Awards for its innovative SkillMill™ Skilled Trades Course Catalog. Winners were selected by a panel of third-party ASHRAE member judges.

Interplay Learning’s winning solution is the world’s first online learning experience platform offering a catalog of on-demand, video-based and first-hand, VR-enabled training solutions for HVAC and other skilled trades. Its proprietary software, VOLT™, creates a wider variety of real-world scenarios and situations more economically in just a few weeks, not months or years. This makes training more scalable, effective and affordable for businesses while providing the opportunity for faster career advancement for students.

“We’re excited SkillMill™ won the 2020 AHR Expo Innovation Award,” said Doug Donovan, CEO of Interplay Learning. “No other similar product like it exists in the marketplace. Traditional training methods alone aren’t scalable enough, can be very expensive as well as time-consuming, and they can’t contend with the growing skills gap. Our solution is exponentially more valuable. SkillMill™ is already having a

profound impact on the market. It’s allowing HVAC and other skilled trades to quickly build a more highly skilled workforce. Our platform cost-effectively delivers technology to the skilled trades industries that was previously only available to highly funded industries such as aviation, medical and military. SkillMill™ is the future of training for skilled trades.”

For more information about Interplay Learning visit <https://www.interplaylearning.com/>.

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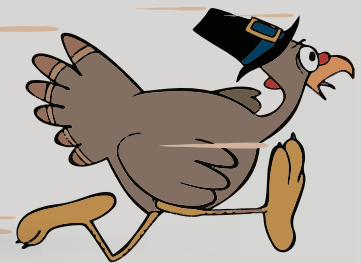
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Daikin Adopts R-32 for Key HVAC Products In North America to Reduce Greenhouse Gas Emissions and Climate Impacts

Washington, D.C. – Daikin companies in North America (Goodman Global Group, Inc.; Daikin North America LLC; Daikin Applied Americas Inc.; Daikin America, Inc.; and Daikin U.S. Corporation) today announced they are developing ducted and ductless residential, light-commercial, and applied products utilizing R-32 refrigerant.

In evaluating alternative, low global-warming-potential (GWP) refrigerants for North America, Daikin—a global technology leader in the heating, ventilation, and air conditioning (HVAC) industry—is focused on reducing greenhouse gas emissions and climate impacts. The company also took a holistic approach to include safety, energy efficiency, and cost-effectiveness. Based on comprehensive evaluation and testing, Daikin concluded R-32 is the ideal low-GWP alternative to R-410A for many key residential, light-commercial, and applied products in North America.

Daikin's choice of R-32 is based on the beneficial attributes of the refrigerant. Compared to R-410A and certain alternative refrigerants, R-32 can mitigate effects of direct refrigerant emissions by reducing the equipment refrigerant charge. Daikin has found that in comparison to R-410A, R-32 has a drastically lower GWP and could reduce refrigerant charge in certain

equipment by up to 40 percent. The company has also found that equipment using R-32 can be more energy efficient and compact—thereby consuming fewer manufacturing resources—when compared to equipment using R-410A or certain alternative refrigerants. Daikin believes that R-32—a pure, single component refrigerant available globally from multiple suppliers—is easier to reuse, reclaim, and recycle when compared to other refrigerants that are blends of R-32 and other components. In summary, Daikin believes R-32 can effectively help to minimize the environmental impact of HVAC equipment.

The choice of R-32 for the North American region is consistent with the wide global acceptance of the refrigerant. In Japan, R-32 is the dominant refrigerant for residential HVAC equipment while in other Asian countries—including China—and in many European countries, the refrigerant has become an increasing popular choice for HVAC equipment. Daikin has estimated that more than 84 million R-32 residential units have been installed by the industry across 70 countries. According to a Japan Air Conditioning, Heating & Refrigeration News, Ltd. (JARN) report, in 2018 alone, over 25 million residential units using R-32 were sold worldwide, accounting for more than 25 percent of total residential units sold in that year. This number is expected to increase in 2019.

Furthermore, in the United States, acceptance of the refrigerant has already begun in some HVAC applications: JARN reports that in 2018, almost half of window air conditioning units sold across the U.S. used R-32.

By selecting R-32 for various ducted and ductless residential, light-commercial, and applied products, Daikin is extending its leadership position in North America. The company was the first to introduce R-32 residential air conditioners and heat pumps globally and has, since 2012, sold more than 21 million R-32 residential units worldwide.

To advance the adoption of R-32, Daikin has committed to share its knowledge and expertise. Earlier this year, Daikin announced its patent non-assertion pledge of identified patents to further facilitate the use of the R-32 in HVAC products. Daikin has also provided education and training programs for the refrigerant—programs that have been supported by many governmental agencies. Daikin's overarching goal is to ensure that North America can benefit from the use of a refrigerant that provides measurable environmental and performance qualities that will advantage the environment and consumers.

"We know that the net effect of air conditioning on the environment is a combination of the refrigerant used and energy consumed,"

said Daikin Applied Americas' President and CEO Mike Schwartz. "R-32 enables home and building owners to achieve reduced climate impact, superior performance, and operational savings. Daikin is in a unique position as a manufacturer of both HVAC equipment and refrigerants. Our approach has always been to use our expertise to choose the right refrigerant for each application. R-32 is the right low GWP refrigerant choice for many of our residential, light-commercial, and applied products in North America."

Goodman Global's President and CEO Satoru Akama said, "Daikin's choice of R-32 demonstrates our strong commitment as a U.S. HVAC manufacturer to minimize environmental impacts of our equipment including the reduction of greenhouse gas emissions. R-32 brings many benefits including energy efficiency, resource reduction, and overall environmental mitigation. Based on our global experience, we are confident R-32 is the right choice for HVAC manufacturers, contractors, and consumers."

Daikin's North American production of R-32 products is the latest step in its efforts to advance technologies that reduce environmental impact and provide consumers superior technology. These efforts will take account of the developments in various North American jurisdictions as they enact appropriate regulations, codes, and standards.

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C” Your Business Grow

Two weeks ago I attended She Podcast, a woman’s podcasting conference. The attendees included professional podcasters with huge audiences, niche podcasters with shows like More than a Few Words (MTFW), new podcasters and hobbyists. We talked about growing our audiences, the pros and cons of sponsorships, telling a unique story, and the tools of the podcasting trade.

One of my favorite sessions was conducted by Erica Mandy creator of The NewsWorthy podcast. She shared her story as well as some solid tips on how to treat your podcast like a business. Her model included four C’s which every business owner should pay attention to if they want to have a successful business.

Confidence

Success starts with the belief that your endeavor is going to work. Let’s face it, if you don’t believe in your idea, no one else will. So even if you are suffering from imposter syndrome on the inside, you need to

learn to “fake it till you make it” and project an air of confidence, even if you don’t feel it on the inside.

Clear Goals

Once you understand what your primary objective is, you can begin to outline action plans and select the appropriate first steps. If, for example, your primary objective is to generate revenue, then your first priority is growing your audience. Why? The bigger your audience, the more prospective advertisers will be willing to pay for ads. If you jump to the second step without paying attention to the first, you will fail.

The other thing clear goals will do is help you decide what is really important, and that gives you permission to skip certain activities. Most podcasters are fixated on their downloads (how many people listened to a particular episode), but if your primary goal is using it to enhance your credibility as a professional, then perhaps tracking the relationships you build and the

podcasts on which you are invited to be a guest are significantly more important than the downloads.

The bottom line – clear goals help you select the right metrics as well as the right actions to drive you to success.

Commitment and Consistency

Most podcasts, and for that matter, most businesses don’t become an overnight success. It takes time and a sustained effort. It is about doing the hard work when no one is looking. So many podcasters, me included, give up just a little too soon.

I did that with MTFW. I had a solid audience but didn’t really understand how it fits into my overall business, so I became more sporadic in the shows and promotions. When I decided to bring it back to the forefront it was a long road back.

Today, we are taking a different approach. First off, this time around it is we. I am still the voice, but I am relying on the entire Roundpeg team to support the program in different

ways. We have a process to reach out to potential guests, create featured images and social shares, edit episodes, build individual landing pages, send links to the guests, add a feature in our newsletter, promote on social media, and track results. That is a lot of work, and most of it happens when no one is looking, but it is what has helped us regain our audience.

Chart the Results

The final C is the most important. Yes, you need to believe in yourself, know where you are going, and commit to the process but at the end of the day it is about results. This final C is what tells you that you are heading in the right direction. The data will give you insights into what is working and what isn’t. Then you can adjust your strategy and try again.

And you can’t measure everything so be sure you focus on the numbers which align most closely to your goals.



Lorraine Ball

Marketing strategist, Lorraine Ball leads the crazy, creative and very talented team at Roundpeg. (www.roundpeg.biz), a digital agency specializing supporting the service industry.

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Bring the 4 C’s into your business.

So if you are a podcaster or a business owner, these four concepts are a simple formula for setting yourself up for success. Need some help getting started? Give us a call we would love to help.

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So You Want to Grow Your Business?

It is always assumed in business that growth is a good thing. After all, business is like a living creature, right? If it is not growing, it must be decaying!

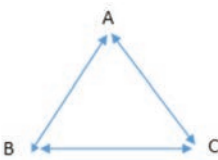
But does that always necessarily mean that a business must get BIGGER? How about getting BETTER? Is it possible for a business to become smaller (in terms of people) but to generate a lot more profit for the owner (which is the goal of any for-profit business)?

First, consider the complexities that come with business growth. Let's assume you are a one-person operation. How many lines of communication are there in your business? Just one—you can talk to yourself. (But if you lose your own arguments, maybe you should get out of business!)

Now suppose you add an employee? How many lines of communication are there now? Two. You to the employee and the employee to you.

Add a third person. How many lines? Let's use letters for the people. You are

"A". The first employee you added is "B", and the second employee is "C". Three are three arrows, each with a double-ended arrowhead. That means there are three channels.



But what happens when we add a fourth person? The channels are not four—they are now 6! And if we go to five people? The channels become 10! In fact, the number of lines of communication grows exponentially according to this rather simple formula:

$$\text{Lines of communication} = \frac{N \times (N - 1)}{2}$$

Here, "N" is the number of people in the company. If you have 12 employees, you have a staggering $(12 \times 11) / 2 = 66$ lines! How many of those lines can you keep tabs on during the day and still get your job done (and keep your sanity?)

Now, besides the complexity of adding lines of communication, consider that you are bringing on board

people you may not know very well, each with different ways of seeing life and different norms for behavior. If you aren't careful, as you grow, your company can get away from you!

That's the psychological side of things. What about the financial ones, though? One of the greatest tragedies that I see as a consultant is when a contractor calls me in to help and I discover that they are undercapitalized. The odds of survival drop precipitously as capitalization drops below recommended norms. For instance, in general, an owner needs to have about 15% of sales invested in the firm—10% as working capital, and 5% as fixed assets. But if you do slow-paying work (like commercial work on residential new construction) you probably need MORE than 15%, while if you do fast-paying work (like COD service and residential sales with consumer financing), you might squeak by with less than 15%.

I have developed an Excel worksheet that lets you simulate a growth plan and

see what it may cost you to grow over the next decade. Then, you can step back and say, "Yeah, I can do that," or "Holy bat wings! I don't want to tackle that!" But at least you'll know before trying to master 190 lines of communication and \$3 million in new capital over the next decade.

If you want a copy of this worksheet, drop an email to me (Rharshaw2@cox.net) and ask for the "Long Term Growth Analysis Worksheet". I'll send you an Excel file via return email.

I won't go into the setup of the worksheet, as this will be unique for each dealer. But I will show you a run of the spreadsheet using a hypothetical dealer's numbers.

This contractor—let's call him Fester Fonebone—has a 12-person operation that generates \$2.1 million in annual sales. He is strongly capitalized and wants to look at a 10-year growth plan. In fact, his capital base is so strong, he could afford to grow about 141% without having to ask the bank for

one dime! (Of course, if he uses all his capital reserves to grow that much next year, he must then find capital to grow beyond next year.)

Fester's staff ratio (ratio of field workers, who bring in revenues, to office workers, who consume revenue) is an anemic 2.0. But his productivity ratio (sales per employee) is stronger than the national average (at \$178,000).

The first part of the worksheet shows the growth plan he has modeled. He wants to grow 12% a year in sales. Here is the output of his scenario:

Enter a growth rate for each year of the forecast:

| Year | Sales | Growth Rate | Capital Required | Extrta Capital Required | NPAT to Fund Growth Internally |
|--------|-------------|-------------|------------------|-------------------------|--------------------------------|
| 2019 | \$2,136,418 | n/a | \$320,463 | \$0 | n/a |
| 2020 | \$2,392,788 | 12.00% | \$358,918 | \$0 | 0.00% |
| 2021 | \$2,679,923 | 12.00% | \$401,988 | \$20,702 | 0.87% |
| 2022 | \$3,001,513 | 12.00% | \$450,227 | \$68,941 | 2.57% |
| 2023 | \$3,361,695 | 12.00% | \$504,254 | \$122,968 | 4.10% |
| 2024 | \$3,765,098 | 12.00% | \$564,765 | \$183,479 | 5.46% |
| 2025 | \$4,216,910 | 12.00% | \$632,537 | \$251,251 | 6.67% |
| 2026 | \$4,722,940 | 12.00% | \$708,441 | \$327,155 | 7.76% |
| Total: | | | | \$974,496 | |

As you can see, his first year of growth will not require any additional investment because he is already strongly capitalized. He is even in good shape for 2020. But starting in 2021, he will need to generate



Richard Harshaw

extra capital (in the form of working capital and fixed assets) to support the sales volume he has forecast. In 2021, for instance, he needs to generate \$20,702 more in capital than he has now. That is a net profit after tax rate of 0.87%. If he can generate, say, 1% NP after taxes, he can fund his growth internally and not

become indebted to the bank. Of course, he can also work a hybrid approach—borrow some from the bank and fund some of his growth internally.

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The Duct-Free Zone

Is evacuation the weak link in the mini split installation? I think so...and I think for many of us, we have never had a good understanding of why we evacuate and how a vacuum pump works. Lets see if we can shed some light on it right now.

Most mini split outdoor units come pre-charged with some amount of refrigerant ...it is segregated in the outdoor unit by the hex-head valves, one on the suction and another at the liquid connection of the outdoor unit. Thus the evacuation in a new installation is limited to the lineset and the evaporator (indoor unit).

The primary purpose of evacuation is to remove any non-condensables and other contaminates from the lineset and evaporator coil which we just installed. Let's not assume we all know what non-condensables are:

Non-condensables are gases that will not condense into a liquid within the operating temperatures of the refrigeration system. Air and nitrogen are the most common non-condensables.

Why are non-condensables bad?

Non-condensables occupy condenser coil space that is normally used to condense

refrigerants. Because of this wasted condenser space, the proper amount of heat cannot be rejected, causing a rise in condenser temperatures/pressures, higher compression ratios, and system inefficiencies.

How do non-condensables get into the lineset and evaporator coil? Well, there is no way to avoid it. The moment you release the nitrogen the manufacturer charged in the evaporator to test for leaks...and remember nitrogen itself is a non-condensable, and remove the plastic caps from the end of your lineset tubing, letting air into the tubing, you now have an invasion of non-condensables in your system!

Believe it or not, there is a school of thought that evacuation is completely unnecessary. I am using the words "school" and "thought" VERY loosely here!

I had an attendee of one of my GREE mini split design and installation classes tell me that he worked for a fellow that insisted evacuation was a waste of time and that he never evacuated a system and he never had a problem as a result.

The greatest HVAC instructor in the biz is my friend John Barba of Taco

Comfort Solutions in Cranston, Rhode Island. John is the reason I am instructor... his enthusiasm is inspiring! John has a great saying when people tell him, "I have never had a problem"...his reply is always, "define problem."

Yeah, the guy who never evacuates may think he is on to something because the un-evacuated system works...it blows cold, but for how long? How cold? How inefficiently?

I was shocked to learn of a mini split product that is marketed specifically to the weekend warrior, the "do-it yourselfer." It is a complete system package including a lineset with something the manufacturer is calling "quick-connect fittings." The installation manual makes NO mention of an evacuation procedure!

I have to believe a majority of these products are installed with the weekend warrior thinking there is no problem, otherwise this company would be out of business but as my friend John Barba would say, "define problem."

If we remember what Mrs. Gillacuddy taught us in 9th grade science class, she said that "everything in nature seeks equilibrium



Gerry Wagner

Gerry Wagner is the Vice President of HVAC Technical Training for Tradewinds Climate Systems. He has 38 years in the HVACR industry working in manufacturing, contracting and now training. You can contact Gerry by email: gwagner@twclimate.com and also please visit our website: www.twclimate.com

of pressure."

I like to use the example of an automobile tire blowout. Air rushes from inside the tire to the atmosphere where the pressure is lower. This difference in pressure causes the air to seek equilibrium of pressure. Any time there is a greater pressure in one area than in another this differential in pressure exists. When an automobile tire has a slow leak, a greater amount of time is required for the equilibrium to take place.

SEE WAGNER PG.23

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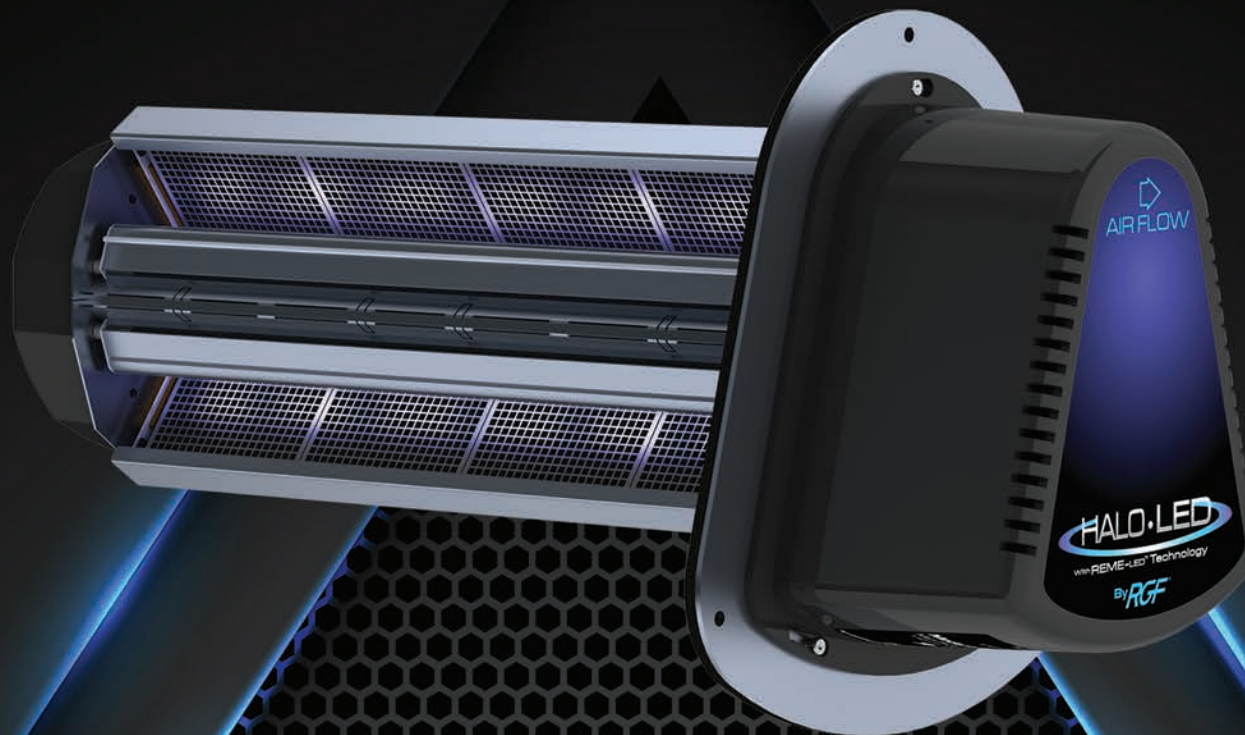
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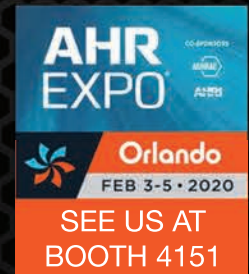
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Product News

CertainTeed Expands Line of Duct Board Grooving Equipment



*shown with optional Duct Board Support Arms

CertainTeed Machine Works has introduced the Glass Master SG-420 Duct Board Grooving Machine – a powerful machine that fabricates high-quality fiberglass spiral ducts more accurately, and up to 50 times faster than standard hand-cutting techniques.

The SG-420's four drive rollers and ¾ horsepower motor provide the necessary grip and power to quickly pull duct board through the 21 tools required to form spiral duct liner. Precision-ground and hardened tool blades generate clean grooves and consistent contours and duct dimensions.

Like CertainTeed's Glass Master SG-220, the SG-420 can be easily adapted to groove 1",

1 ½" and 2" boards. Its square duct tool holders include a unique measuring tab for easy and accurate groove spacing, and quick-release clamps on all tools allow for fast repositioning. Standard features include a foot-actuated switch for safe operation, four swivel casters and a durable powder coat finish.

The SG-420 not only simplifies the process of creating spiral duct systems with top-quality square and rectangular ducts but also enables contractors to easily manage even the most complex spiral duct projects.

For more information on CertainTeed Machine Works Glass Master products, visit <https://www.certainteed.com/glass-master>

Rheem Elevates its Partnership with Christopher Bell for the 2020 Monster Energy Nascar Cup Series

Atlanta – Rheem will continue its longstanding commitment to NASCAR and its relationship with driver Christopher Bell in 2020. The company is proud to sponsor Christopher as he joins Joe Gibbs Racing alliance partner, Leavine Family Racing (LFR) for the 2020 Monster Energy NASCAR Cup Series (MENCS) season as the driver of the No. 95 Toyota Camry.

Bell is currently competing in his second full-time NASCAR Xfinity Series season for Joe Gibbs Racing, where he's amassed 15 career-series victories and in 2018, set the record for most wins (seven) by a rookie in the series. He is the winningest driver in Rheem Racing's 11-year history.

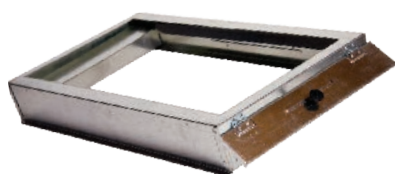
Bell's NASCAR Xfinity Series crew chief, Jason Ratcliff, will join him in the transition to the Cup Series. The technical alliance that LFR has had with Joe Gibbs Racing and Toyota Racing Development (TRD), U.S.A., will be enhanced in 2020 giving Bell the benefit of the same TRD's engines and technology used by JGR's four championship contending Cup teams.

"Christopher is exceptionally talented, and we are thrilled that Rheem will continue to support him as he moves up to the next level in his already impressive career," said Chris Peel, President and CEO, Rheem. "The Rheem Racing program has been a hallmark of our business for more than a decade, and we are looking ahead to 2020 with nothing but excitement. It's an honor to continue our winning relationship with Christopher, Joe Gibbs Racing and Toyota Racing Development."

"Since I was young, I wanted to make a career out of racing," said Bell. "To take this next step and race in the NASCAR Cup Series with the support of LFR, JGR and Toyota is just a dream come true. It also means a lot to me to have Rheem make the move to Cup racing with me. I wouldn't be in the position I am today without their support."

Since entering NASCAR as a sponsor, Rheem has steadily increased its level of participation in the sport. Throughout each season, the company hosts its valuable customers on-site at various races for truly unique experiences. To learn more, visit Facebook.com/RheemRacing.

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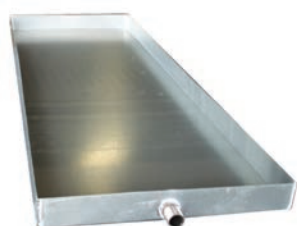


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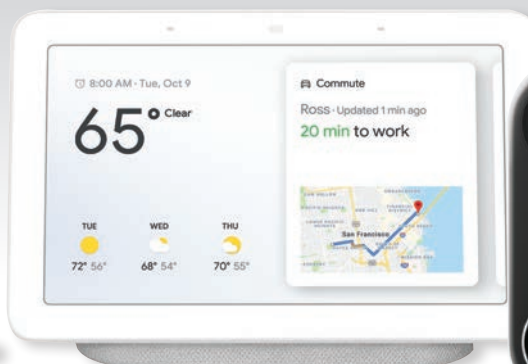
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Product News

New 15-27.5 ton Coleman® Point Choice rooftop units exceed 2023 DOE efficiency standards

Choice rooftop units reduce commercial building operating costs

Milwaukee – The Coleman® HVAC brand of Johnson Controls brings value and rugged reliability to the rooftop unit market with the launch of Coleman® Point™ Choice. The 15-27.5 ton units exceed Department of Energy (DOE) 2018 guidelines by up to 25% and already surpass future DOE 2023 part-load standards by nearly 10% to reduce energy use.

“Our Choice rooftop units are built to deliver the outstanding performance and exceptional durability Coleman is known for at an economical price point,” said Eric Newberg, director of commercial product management, commercial ducted systems, Johnson Controls. “The flexible design is ideal for both new construction and the retrofit market and features a footprint that can replace approximately 70% of the competitive installed base without the need for costly transition curbs.”

Choice rooftop units provide greater system design flexibility to meet the demands of diverse applications. An optional four-stage IntelliSpeed™ discrete fan control allows units to deliver 15% higher IEER ratings than some competitive high-efficiency units. Additional airflow strategies, including constant-volume (CV), variable air volume (VAV) and Continuous Reset Single Zone (CRSZ).

Additional features include:



- A wide range of gas heat options including full modulating gas heat with a 2.85 to 1 turndown ratio and 1% incremental change of heating capacity.
- Multiple outdoor air options, including both factory and field installed versions of low-leak damper economizers, constant volume powered exhaust and modulating powered exhaust.
- A lightweight design that is up to 33% lighter than existing Coleman models and up to 22% lighter than competing products.
- Smart Equipment enablement with a prepackaged control platform that maximizes control and efficiency while extending equipment life and reducing operating costs. Units seamlessly integrate with leading building controls systems,

including Verasys®. An optional Mobile Access Portal (MAP) gateway with Wi-Fi® hotspot provides access to commissioning, configuration and maintenance logs using a mobile smart device.

“We’re committed to meeting the unique requirements of Coleman customers in the commercial HVAC space by delivering innovative, cost-effective and dependable comfort solutions,” said Tim Brusseau, director of strategic national accounts, Johnson Controls. “Our heritage of quality and durability is crafted into every Coleman HVAC Point Choice rooftop unit to provide long-lasting comfort you can count on.”

The new Coleman units are designed, engineered, assembled and tested in America at the state-of-the-art Johnson Controls Rooftop Center for Excellence in Norman, Oklahoma. The systems are backed by some of the best warranties in the business, including a standard 1-year parts warranty, 5-year compressor and electric heat limited warranties, 10-year aluminized heat exchanger limited warranty and a 15-year stainless steel heat exchanger limited warranty – providing customers with greater peace of mind.

For more information, visit ColemanAC.com/PointChoice.

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It’s On My Heart: Angelfish or Pufferfish?

Our pastor just did a sermon where he asked the question, Angelfish or Pufferfish, which are you? Way back in the day, we bought an aquarium. No idea about what to put in the fish tank, we asked around. Almost everyone who had ever had a tank said the same thing: Angelfish make great aquarium inhabitants. They are gentle, not aggressive, don’t fight amongst themselves, and as a bonus, pretty to look at. So we bought some.

Our pastor seconded that decision, said the Angelfish are great with almost all other fish, they play well with others. The fish that doesn’t play well is the Pufferfish. Here is what the National Geographic has to say about Pufferfish.

“Biologists think pufferfish, also known as blowfish, developed their famous “inflatability” because their slow, somewhat clumsy swimming style makes them vulnerable to predators. In lieu of escape, pufferfish use their highly elastic stomachs and the ability to quickly ingest huge amounts of water (and even air when necessary) to turn themselves into a virtually inedible ball several times their normal size. Some species also have spines on their skin to make them even less palatable.

A predator that manages to snag a puffer before it inflates won’t feel lucky for long. Almost all pufferfish contain tetrodotoxin, a substance that makes them foul tasting and often lethal to fish. To humans, tetrodotoxin is deadly, up to 1,200 times more poisonous than cyanide. There is enough toxin in one pufferfish to kill 30 adult humans, and there is no known antidote.” Read that again, no known antidote. Kill 30 adults. Pretty scary.

What should be scary to us is which category do we fall in? are we Angelfish or

Puffers? Are we toxic to those around us? Do we help build up others, or bring a depressing atmosphere to the building.

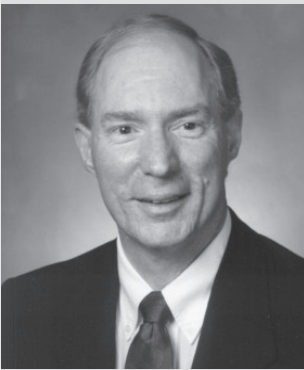
The real question is what about your team members? I can say with confidence that there are some employees out there that will “poison the well” that your company drinks from. They are set in their ways, many have had years of experience in our industry, some have had 1 year of experience repeated 15 times, have not learned anything new in over a decade. And actually reject the new ideas without even trying the concept out. I know this, if you are still waiting on the weather to get the phones to ring, if you think the customer you did work for 3 years ago remembers your name and will not do business with someone else, you have a correction coming up.

This is not business as usual these days, we have to change our model to reflect

consumer buying trends and the elephant in the room, the internet. So one employee who is unhappy can let that negative attitude spill over to the install or service call he or she is on that day. The customer picks up on that, you ask for a review and get ripped up on Yelp, Facebook, your own website, it can be tragic.

I just sat thru a webinar with Hire Dimensions, they are a recruiting agency that specializes in the trades, hvac, plumbing, electrical. They said at any given point today, 60% of the workforce is unhappy. Almost 2/3! Your job as the owner or general manager is to be sure everyone has their happy face on at work, and if they cannot do that, you may need to give them a chance to add to their resume. As a past employee. So what can you do as the leader of your pack to improve morale?

SEE HINSHAW PG.21



Jim Hinshaw

Upon graduating from the University of Missouri at Rolla, Hinshaw started his career in the air conditioning industry. Hinshaw’s background includes positions as a manufacturer’s rep, President of one of the oldest and largest air conditioning companies in Arizona, residential start-up specialist for the Carrier Corporation, and an officer in a Carrier owned service agency.

Hinshaw enjoys training sales, technical, and management team members with companies that want to increase profits and grow to the next level. He has worked in all areas of the industry: manufacturer, distributor, contractor and now consultant. He has worked with companies that have sales in the billions per year and family owned businesses with only two employees. He can help with sales, organizational issues, marketing, how to set

up the company for improved profitability, all phases of the business. He has provided high-results training for clients from Calgary, Canada to Adelaide, Australia. Hinshaw retired from the contracting business in 1999 when he formed his own training company, Sales Improvement Professionals, dedicated to bringing his real-world experience to help enhance your sales and marketing efforts.

Hinshaw can be reached at 602-369-8097, or via email at jimhinshaw@siptraining.com.

And now as an AUTHOR: “For those who might be interested, he has a collection of writings from the last 10 years. Stories of how one person can ruin a relationship with a customer, and how one can repair it! Stories of the loss of service in America, and how you can improve customer service today. Go to the following link for full details on how to make this collection yours!”

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For more information please contact him at Sales Improvement Professionals, Inc., 1281 E. Magnolia, #D-145, Fort Collins, CO 80524; Office Phone: 970-635-5675; Cell Phone: 602-369-8097, or visit www.siptraining.com; or on Facebook: Sales Improvement Professionals, Inc

Women in HVACR 16th Annual Conference

Boston, MA—September 30, 2019. The Board of Directors for Women in HVACR and Boston played host to a sold-out crowd for the 16th Annual Conference of WHVACR.

Over 200 engaged WHVACR members and sponsors came together last week to celebrate our scholarship winners, the sharing of trends and ideas, success stories, and networking with the theme “CONNECT. CULTIVATE. GROW.” The attendee size was record-breaking over all previous years and was filled with the brightest and best women in the industry today!

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 welcoming all attendees and thanking the sponsors for making it all possible.

Following the keynote’s inspirational message came the announcement and appointment of Karen Lamy DeSousa as incoming 2020 Women in HVACR board president, following Putnam’s excellent year leading our organization. DeSousa accepted the appointment, thanking Putnam and saying, “we are so fortunate to have had Danielle lead our efforts in WHVACR.

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,” said DeSousa. “I will know exactly where to pick up in my work as board president to grow the organization and bring recognition to women’s contributions in this industry. On behalf of all us, we thank you, Danielle.” concluded DeSousa.

Emily Saving, Executive Vice President of HARDI took to the main stage to present on trends for equipment sales and leading industry indicators to help us understand what to look forward to in the near future. Saving has worked for HARDI analyzing HVACR business and policy climate for seven years. She indicated that “with existing home sales down and construction activity flat, we can expect at best normal growth (+6-8%) in the coming year for equipment sales. More price increases will be seen, as well,” said Saving.

The moment we all awaited was when scholarship winners accepted their \$2,000 awards at a formal dinner on Day 1 of conference. The seven scholarship winners included:

- Amanda Crafts, **Hennepin College, Eagan, MN**
- Emily Gavrilenko, **California Polytechnic University, Antioch, CA**

- Rebecca Gregg, **Erie Institute of Technology, Erie, PA**
- Kailey Hardy, **ACE Institute, Gadsden, AL, Service Titan Scholarship Winner**
- Morgan Lee, **South River High School, Edgewater, MD, Pointmen Scholarship Winner**
- Janet Gibbons, **Conrad Weiser High School, Scranton, PA, NATE Scholarship Winner**
- Briana Prouse, **Idaho Falls, ID**

As they accepted their checks, the heartfelt and grateful sentiments of the scholarship winners were received by a cheering and supportive crowd. “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. The emotional crowd came to their feet as the scholarship winners then exited the stage.

Breakout and working sessions, networking, the “technicians’ panel”, and more inspiring speakers kept attendees engaged throughout the two-day event. And, sponsors showcased their products in the common area. Following the conference, Kate McLinden, Business Development for Schedule Engine, said “Congratulations on such an amazing event. Highlights for the Schedule Engine team

was the scholarship winners, tech panel, and comedian (Carolyn Plummer), and of course, all of the connections we made with women in the industry. Congrats on a well-planned and educational event!”

To conclude the event, Colleen Keyworth, board member, Director of Sales and Marketing for Online-Access, and a recognized 2019 TheNEWS 40 Under 40, preached on the importance and value of social media. Keyworth offered many new ideas to which all attendees could take on and grow their respective businesses with no matter what kind of industry business she has.

Of the conference, many long-time members said, “it was the best one we’ve ever attended.” “The content of this conference was very educational and so valuable, I know exactly what to do with it when I return to my business.” And, “I can’t wait for next year, even though this one will be hard to beat!”

The board of directors wishes to thank all of our sponsors for making the conference possible and a success.

To learn more about Women in HVACR or become a member, visit <https://www.womeninhvacr.org/>

Photos of the event can be viewed on pages B10-B11. Photos courtesy of Lance Lackey, AC Today, and Melody Chaney, New Flat Rate.





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HINSHAW con’t

First, realize that money is not the dominant reason. According to an article on NBCnews.com, the #1 reason employees quit their jobs today is lack of recognition. 79% of employees who quit their jobs claim that lack of appreciation was a major reason for them leaving. In a separate study, 65% of us claimed that we were not recognized even one time last year. 82% felt that the boss didn’t recognize them for their efforts, 60% said that recognition was more important than money. Repeat that, MORE important.

A great example of recognition is what happened to me on a flight last week. Flying out of Salt Lake to Phoenix, got upgraded to first class. The flight attendant was amazing. She visited each of us before takeoff and asked our last names and how to pronounce it. Used our names several times during the flight, but what she did at the end of the flight made it really special. She stood by the front door and as we all filed out, she thanked us by name for flying Delta. Several of us walked into the terminal talking about how that made us feel: appreciated, and in an individual way.

So the recipe is simple (not easy, but simple). Recognize your employees for what they do, appreciate them for the work that they do each and every day, catch them doing something well and compliment them publicly. The rule is: praise publicly, admonish privately.

Another key ingredient in the recipe is to let them know what is required, what the goal is. And, how they can earn it. We have to have clear definitions on what is expected, both minimum requirements to keep the job, and what results we are looking for going forward. To be clear, we are not talking about a participation trophy, if we recognize the fact they showed up, but not results, it loses the impact of the recognition.

Back to the Pufferfish. They are the literal definition of toxic, they are slow swimmers, they get really puffed up when threatened, and they carry poison. The same characteristics that a negative employee can show. You may have to have a talk with some employees this week, it may even result in an open position at your place. What happens next is amazing. Someone new and better appears, and the team says, glad you did what ya had to do, they were terrible to work with.

Thanks for listening, we’ll talk later.

HARSHAW con’t

As you can see, Fester would need to generate about \$1 million in extra capital over the next decade, averaging about 5% NPAT to fund this growth internally, or splitting the capital needs between retained earnings and bank funding.

If Fester thinks this is too aggressive a plan, he can scale back his growth forecast (using less than 12% annual growth), or even starting off at 12% and dropping it gradually to, say, 8% by 2026.

The other side of the coin—the psychological side, the lines of communication side—is shown by the last part of the worksheet. Here it is:

| Implications for Human Resources | | | | |
|----------------------------------|-------------|---------------|--------------|---------------|
| Year | Staff Ratio | People Needed | Field People | Office People |
| 2019 | 2.00 | 12 | 8 | 4 |
| 2020 | 2.10 | 13 | 9 | 4 |
| 2021 | 2.20 | 15 | 10 | 5 |
| 2022 | 2.30 | 17 | 12 | 5 |
| 2023 | 2.40 | 19 | 13 | 6 |
| 2024 | 2.50 | 21 | 15 | 6 |
| 2025 | 2.60 | 24 | 17 | 7 |
| 2026 | 2.70 | 27 | 20 | 7 |
| Total adds: | | 15 | 12 | 3 |

WAGNER con’t

The need for this differential in pressure emphasizes the importance of a high-vacuum pump, as well as the use of large diameter connecting tubing. The purpose of a vacuum pump is to remove contaminants from inside a closed system, thus reducing the pressure inside the system. In order for the mixture of gases to flow from inside the system to the pump, the pump must create a sufficiently lower pressure inside its cylinder than the one inside the system being evacuated.

Now, a common fault of installers when evacuating, one that I will admit to being guilty of in the past, is not changing the oil in their vacuum pump each and every time they use it. I frankly thought that this requirement in most vacuum pump instruction manuals was simply a ploy to sell more vacuum pump oil. The following comes from the manual of the Yellow Jacket “Bullet” vacuum pump:

“Oil may look clean, but still be contaminated. Looking clean is not enough. One job is more than enough to contaminate oil.”

The following is from the Yellow Jacket Buzz Newsletter:

“Vacuum pump oil is the versatile ingredient inside the pump that lubricates the pumping apparatus while also collecting moisture and contaminants from evacuated systems.

Simply put, it’s what keeps the pump, well...pumping.

Because vacuum pumps don’t have filters, the oil inside

Fester wants to gradually enrich his staffing ratio to have more “wrench-turning hands” (bringing in revenues) to office heads (which cost money). Ultimately, he should be in the 4 to 5 range, but going from 2 to 5 in a decade is tough. Fester’s plan is conservative—certainly doable—and if anything, may be a bit too cautious. But it is certainly doable.

His growth plan will mean he needs to add 12 mechanics (installers, service techs) and 3 office people to reach his 2.70 staffing ratio goal by 2026. With 12 employees now (and 66 lines of communication), he will go to 27 employees (and 351 lines of communication!). He will have to hire a manager or two along the way to help him carry this growing baby.

But at least by running the Long Term Growth Analysis Worksheet, Fester knows up front what his dream may cost in terms of money and ulcers.

Whether or not he can pull it off is another story.

Next month: the worst case of confusion since camouflage—margin and markup. (Thanks, Larry Phillips, for the idea!)

becomes saturated with contaminants, which reduces the pump’s efficiency. Once oil is saturated it can’t absorb any more system moisture.”

Often, installers and service techs think they are using the right tools to evacuate when in fact they aren’t.

One example is using your standard manifold gauge set to evacuate. Although most low-side analog gauges show a green shaded area for vacuum readings to 30 in. Hg vac. (500 microns) the fact is that standard manifold gauge sets are not suited for evacuation procedures.

I highly recommend the Yellow Jacket SuperEvac System! The system includes a 2-valve manifold and two 3/8” vacuum hoses for a fast vacuum. Vacuum valves allow core removal and system isolation. This combination reduces vacuum time by over 50% compared to using a regular 1/4” manifold.

Vacuum pumps were intended to create vacuum but vacuum pumps were never intended to hold vacuum. The pump must be segregated from the system once the proper vacuum level has been reached.

So, we should heed the words of Pearl Jam drummer, Matt Cameron and lyricist of the song Evacuation from the Binaural album... “time to take heed and change directions.”

AHR Expo announces the 2020 Education Program

Sessions offer insight into some of the HVACR industry’s biggest opportunities, challenges, new products, technologies and applications

Westport, Conn. – The 2020 AHR Expo announced its full schedule of sessions for the 2020 Education Program, including more than 200 free seminars, new product and technology presentations, professional certifications and continuing education courses. Each year, the Education Program discusses some of HVACR’s biggest opportunities and challenges through a series of comprehensive, informative and industry-focused sessions hosted by leaders from every sector of the industry. This year, the AHR Expo will add a series of HVACR trend discussions led by members of the AHR Expo Expert Council.

The 2020 AHR Expo will be held Feb. 3-5 at the Orange County Convention Center in Orlando, FL. To register, please visit the AHR Expo registration website.

“The Education Program adds a unique element of learning to the AHR Expo with the opportunity to hear directly from leaders within the HVACR industry about the latest trends, applications

and practices,” said Mark Stevens, AHR Expo Show Manager. “The development of our session schedule is ongoing, and we take careful consideration of discussions happening across the industry to identify pain points, opportunities, trends, etc. where we might offer support and solutions through dedicated sessions. There is tremendous planning involved, internally with AHR Expo as well as from the speakers and sponsoring organizations, to deliver useful advice, perspectives and tools to advance as professionals in the industry.”

EDUCATION SESSIONS

The 2020 Show features 76 free sessions led by industry experts working with leading organizations. Each session will range from one to two hours and will aim to deliver solutions to some of the HVACR industry’s most pressing challenges and exciting opportunities. Attendees are invited to attend general HVAC-related

subjects as well as those specific to their sector of the industry and practice. Additionally, attendees are encouraged to download the MyShowPlanner App for iOS and Android to manage their Show and Education Program schedule. Details and instructions for downloading the 2020 AHR Expo App will be released closer to the Show and available on the AHR Expo website.

“In our daily work, it’s easy to get tunnel vision. We often get so focused on what we see in our business that we lose touch with the rest of the industry,” said Pam Duffy, P.E., owner of SparkOne Solutions and member of the AHR Expo Expert Council. “Having diverse perspectives from experts in all industry sectors is invaluable in capturing real insights. The AHR Expo Expert Council has offered guidance from real industry experts to identify true industry trends. I look forward to furthering these discussions as part of the 2020 Education Program.”

AHR EXPO con't

Below are highlights for the 2020 AHR Expo's free seminar session agenda:

- General Industry-wide Topics
 - Global Trends in the HVACR Market, presented by BSRIA Ltd.
 - HVAC as a Service - How Soon is Now?, presented by BACnet International
 - Private Equity 101: What HVACR Founders Need to Know, presented by Women in HVACR
- Engineering
 - Fundamentals of Test, Adjust, & Balance for Engineers, Cx & Energy Providers, presented by Associated Air Balance Council (AABC)
 - Building for a Climate Emergency, presented by AutomatedBuildings.com
 - Key Factors for a Successful Snowmelt Design, presented by Radiant Professionals Alliance (RPA)
- Contractor-focused
 - HVAC Retrofit Paradigm Shift: First, Attack Distribution System; Second, Replace Equipment, presented by National Comfort Institute (NCI)
 - Hydrocarbon Refrigerants, presented by RSES/ RSES Journal
 - Fundamentals of Working with Flammable Refrigerants, presented by the Institute of Refrigeration (IOR)
- Specialized
 - SMACNA HVAC Duct Construction Standards - Metal & Flexible, presented by SMACNA
 - Fan Energy Index (FEI) as a Rating Metric and Design Tool, presented by Air Movement and Control Association International, Inc. (AMCA International)
 - Cooling Tower and Water Treatment Fundamentals, presented by Cooling Technology Institute (CTI)
- Bilingual

• NAFA, Requerimientos de Filtración de Aire en Áreas Limpias, presented by National Air Filtration Association (NAFA)

- Industry Trend
 - Pulling More Women into the Ranks of Smart Buildings Leadership, presented by AutomatedBuildings.com
 - Marketing Trends in HVAC, presented by AHR Expo Expert Council Member Pam Duffy
 - Applying Emotional Intelligence (E.Q.) to Strengthen Your Business Model and Customer Relationships, presented by AHR Expo Expert Council Member Karine Leblanc

CONTINUING EDUCATION

AHR Expo attendees have the opportunity to participate in professional development courses through ASHRAE Learning Institute (ALI) and short courses/professional development seminars approved for Continuing Education Units (CEUs) that can apply toward maintaining P.E. licensure. Attendees are required to register and pay tuition fees in advance of the Show and can do so by visiting the ASHRAE registration website.

Full-day courses account for six earned Professional Development Hours (PDHs)/Learning Units (LUs) or 0.6 CEUs. All half-day courses are awarded three accredited PDHs/AIA LUs. Topics cover a wide range of industry subjects, including the fundamentals of the commissioning process, complying with the requirements of ASHRAE standards, laboratory design basics and beyond, optimizing indoor environments and more. Course highlights include:

- Commissioning Authority (Cx) Workshop and Exam (2-days)
- NAFA CAFS Testing and 2-Hour Tutorial; NCT Testing
- ASHRAE Certification Exams

NEW PRODUCT AND TECHNOLOGY THEATER PRESENTATIONS

Attendees are also encouraged to sit in on exhibitor presentations in the New Product & Technology Theater. More than 100 presentations lasting approximately 20 minutes each are planned across all three days of the Show. These free presentations are meant to provide attendees with brief overviews of new product announcements and

technologies that can be found in exhibitor booths on the Show floor. Attendees are invited to follow up presentations with a visit to the booth for a more in-depth explanation and 1:1 interaction with products and representatives. These sessions are set to take place in special theaters right on the exhibit floor. No fee or registration is required.

This year, four 2020 Innovation Award winners and seven finalists will present, including:

Winners:

- Danfoss (Green Building)
- Interplay Learning (Software)
- Infinitum Electric (Ventilation)
- Matelex (Tools & Instruments)

Finalists:

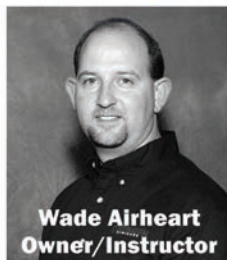
- Emerson (Heating)
- Sensirion, Inc. (IAQ)
- NIBCO INC. (Plumbing)
- BELIMO Americas (Building Automation)
- Smardt Chiller Group Inc. (Cooling)
- BCA Technologies, Inc. (Software)
- American Aldes (Ventilation)

Attendees can view the complete schedule for the 2020 AHR Expo Education Program on the education section of the AHR Expo website. The MyShowPlanner tool is available to assist attendees in building personalized Show agendas.

ABOUT THE AHR EXPO

The AHR Expo is the world's largest HVACR event, attracting the most comprehensive gathering of industry professionals from around the globe each year. The Show provides a unique forum where manufacturers of all sizes and specialties, whether a major industry brand or innovative start-up, can come together to share ideas and showcase the future of HVACR technology under one roof. Since 1930, the AHR Expo has remained the industry's best place for OEMs, engineers, contractors, facility operators, architects, educators and other industry professionals to explore the latest trends and applications and to cultivate mutually beneficial business relationships. The next Show, co-sponsored by ASHRAE and AHRI, will be held Feb. 3-5, 2020 in Orlando, and is held concurrently with ASHRAE's Winter Conference.

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

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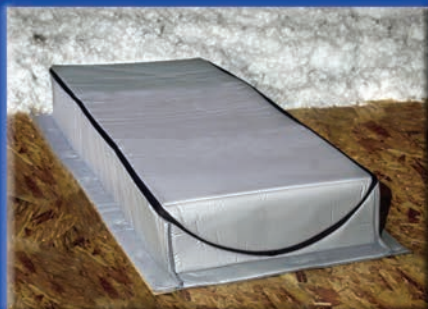
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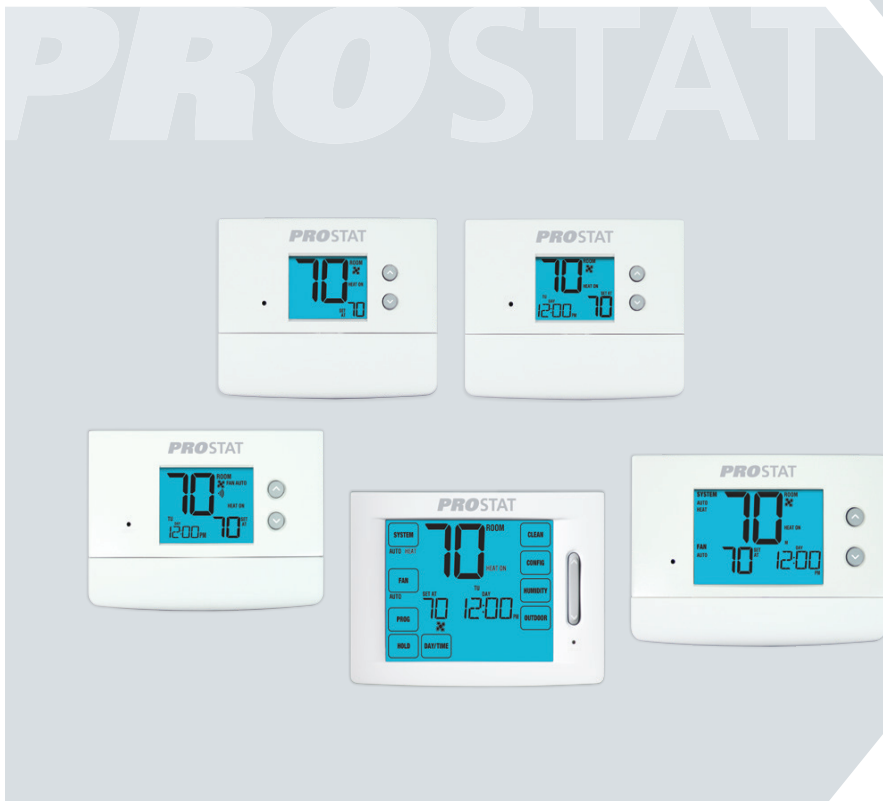
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Haier Ductless Training at HSG in Houston

HOUSTON - On Tuesday, October 1st Haier held ductless mini-split training at the Heyden Stanley Group training room in Houston, Texas. The trainers included Jim Wells, Chris Koutropoulos, Yi Hu, Mike Vaile and Ryan Van Dyk. The Haier trainers pointed out many of the features that make Haier such a good fit for both distributors and

contractors. These included new models being ‘backwards compatible’ with existing models thus eliminating ‘dead’ inventory. They also covered the ‘no hassle parts warranty’ whereby warranty replacement parts are sent directly to the contractor. The contractors were happy to hear that Haier Ductless products use alpha numeric error codes thus eliminating the

need to count flashing lights. The contractors also liked that technical support was readily available from 8 am to 4:30 pm and available after hours by appointment. They could also download the Haier Ductless Help App onto their cellphones.

After training The Heyden Stanley Group hosted a barbeque that featured brisket, sausage

and all the trimmings catered by Lucky 7 Cookers. Rick Heyden wanted everyone to know that The Heyden Stanley Group is stocking Haier Ductless units in their Houston warehouse to be able to better serve the needs of their distributors, especially in the filling of short orders that the distributors may need in a hurry, but don’t have in stock.



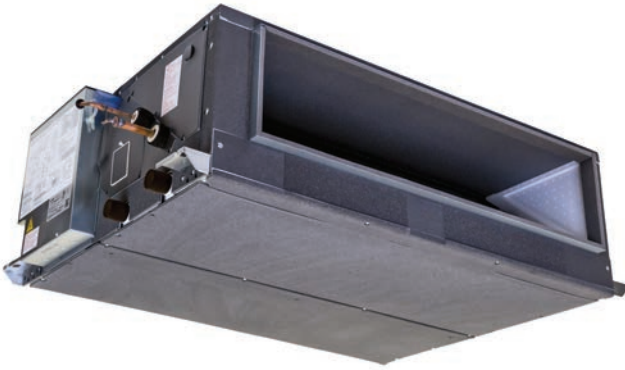
Pictures courtesy of The Heyden Stanley Group

Product News

Mitsubishi Electric Trane HVAC US Introduces PEFY-OA Ducted Outside Air Unit

Suwanee, Georgia – Mitsubishi Electric Trane HVAC US (METUS), the exclusive provider of Zoned Comfort Solutions® and leading supplier of Variable Refrigerant Flow (VRF) heating and cooling systems, introduces the PEFY-OA Ducted Outside Air Unit.

The PEFY-OA is a high-performance indoor unit that improves comfort by pre-treating and filtering outside air before delivering it to each zone. Available in 36,000, 48,000, 72,000 and 96,000 BTUH capacities, the PEFY-OA has three modes of operation: cooling, heating and fan only. The PEFY-OA heats or cools incoming outside air based upon the ambient temperature and set point, and provides discharge air temperature control. Compatible with CITY MULTI® systems, including other indoor unit styles, the PEFY-OA helps building owners, engineers and architects increase indoor air quality and meet requirements for ventilation in a variety of commercial applications.



“We’re constantly researching innovative ways to help HVAC specifiers provide increased indoor air quality for their customers,” said Kevin Miskewicz, director of commercial product planning for Mitsubishi Electric Trane HVAC US. “The PEFY-OA is able to temperature control fresh, outside air and can be used in conjunction with other indoor units within a CITY MULTI® system, leading to a more seamless install.”

The PEFY-OA is an ideal choice for office buildings, schools, hotels, assisted-living facilities and other applications where ceiling plenum space is available.

Additional features of the PEFY-OA Ducted Outside Air Unit include:

- CITY MULTI® R2- and Y-Series system compatibility
- Zone control for outside air applications
- Static pressure settings of 0.6 inches, 0.8 inches and 1.0 inch W.G.
- Discharge Air Temperature Control
- Integrated condensate lift mechanism providing up to 27-9/16 inches of lift
- Optional filter box with MERV 13 filters

For more information on the PEFY-OA Ducted Outside Air Unit and the complete line of heating and cooling solutions from Mitsubishi Electric Trane HVAC US, visit www.mitsubishipro.com.



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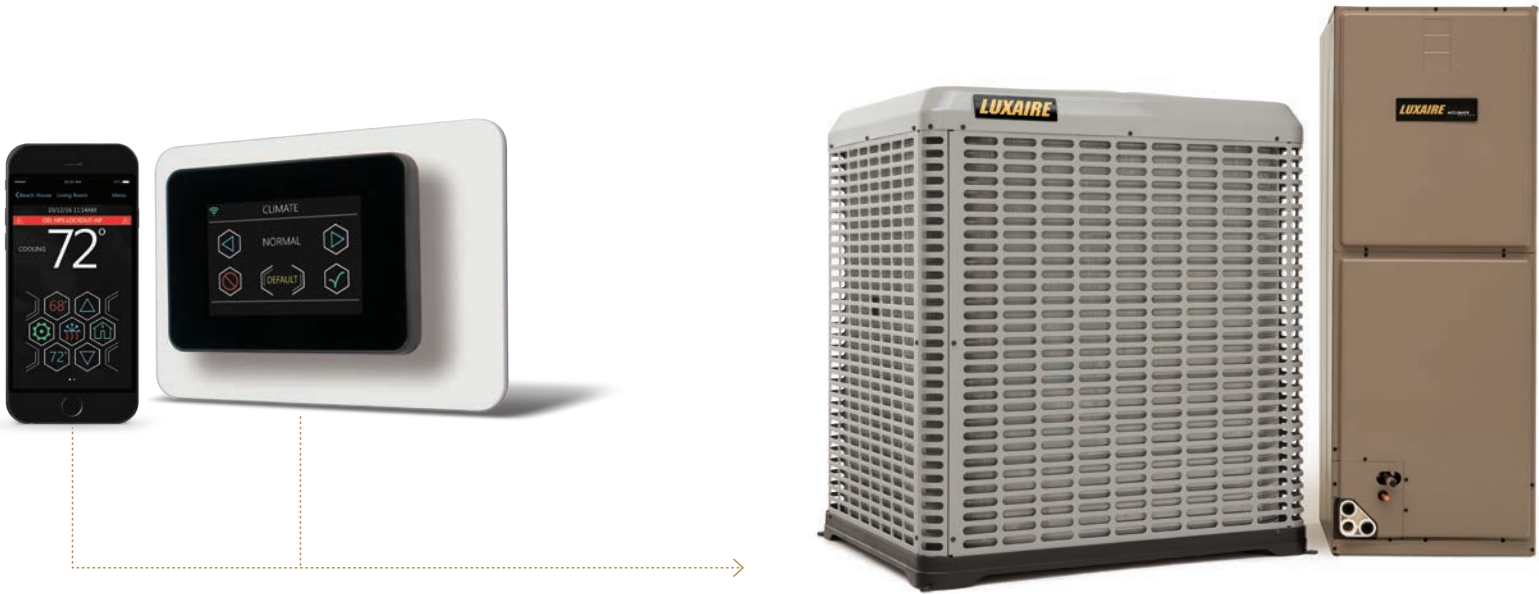
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Century A/C Supply Announces Key Promotions



Ken Schreiber



Todd Shadden



Renata Morgan

Houston, TX - Century A/C Supply, a leading HVAC distributor in the state of Texas, is pleased to announce key promotions within the organization. These changes come on the heels of implementing a new company-wide management strategy and regional leadership structure to help better steer them towards the future goals they have set for the company and for the brands they carry.

"These changes represent a strategic approach to long-term growth. The need for a more focused alignment of teams was necessary in order to grow and dedicate resources toward these regions" says President Rick Luke.

Ken Schreiber was recently promoted to General Manager of the Ruud Region. Ken has been employed with Century for over 27 years and has held the positions of Inventory Control Specialist, MIS Director, and most recently, Vice President of Operations. Ken will oversee sales and operations within the Ruud territory which encompasses Houston and the surrounding areas.

Todd Shadden, whose HVAC career started 37 years ago, is the General Manager of the York Region which includes locations from Dallas/Fort Worth all the way down to the Rio Grande Valley. Todd oversaw sales and operations at Johnson AC Supply before it

was acquired by Century A/C in 2008.

With the newly established regional teams, these gentlemen can now focus on growing the Ruud and York brands and will oversee the inventory and operations of the stores in their regions as well as lead the sales efforts.

Century is also pleased to announce the promotion of Renata Morgan to the position of General Manager of Business Administration. Renata has been with Century for over 12 years and most recently held the position of Director of Marketing & IT. Renata is a leader in the HVAC industry, serving on several industry councils and boards, and was named one of HARDI's Top 40 under 40 in 2016. She is currently working on obtaining her Master's Degree in Industrial Distribution at Texas A&M University. Renata will oversee the administrative departments of the company.

"I'm excited about the expertise this leadership team brings to the table. Each leader has a unique set of skills and that, coupled with their experience within the different departments in the organization, makes me more confident than ever that we have the right leadership team in place to push the company into our next phase of growth", Luke says.

SPX Cooling Technologies Announces Price Adjustment Effective Oct. 21, 2019

Overland Park, Kan. - SPX Cooling Technologies, Inc., a full-line, full-service industry leader in the design and manufacture

of evaporative cooling systems, has announced a price increase of 3-5 percent on Marley® and Recold® products effective Oct. 21, 2019.

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MiTek CoMMunity Classic Golf Tournament

MiTek hosted the MiTek CoMMunity Classic Golf Tournament on October 1, 2019 at the Cowboys Golf Course, benefiting Youth World Dallas. Youth World works to inspire hope and relieve economic burdens so that kids can live in stronger, healthier communities. The event drew approximately 200 customers, vendors and team members from the MiTek Community.







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**HARDI Hires New
Manager of Training and
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Williams**



**Winsupply names Eric
Roush, vice president,
Supply Chain**



**Heating, Air-conditioning
& Refrigeration
Distributors International
(HARDI) is pleased to
announce the addition of
Tim Fisher, Team Leader
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**Southwestern HVAC
Sales LLC welcomes
James Banks to their
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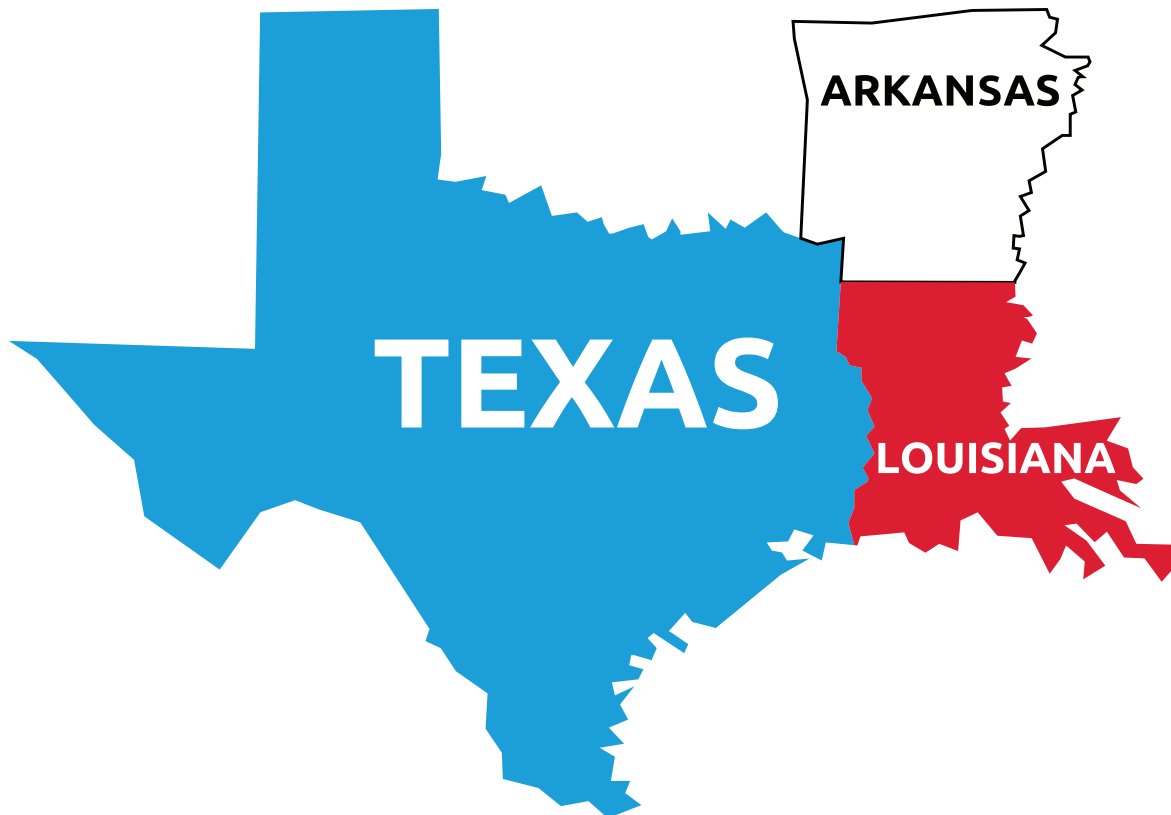
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ASHRAE Celebrates Incorporation of IEQ-GA

Atlanta – ASHRAE announced the incorporation of the Indoor Environmental Quality Global Alliance (IEQ-GA) as a legal entity. The announcement of IEQ-GA's incorporation took place at a ceremony during the 40th AIVC conference, Oct. 15 in Ghent, Belgium.

The mission of the IEQ-GA is to promote and advocate for acceptable indoor environmental quality (thermal environment, indoor air quality, lighting and acoustics) for building occupants globally, while ensuring the knowledge from IEQ research is implemented in practice.

At the ceremony, the founding members celebrated with short speeches about the establishment of the alliance and presented its vision for achieving a healthy indoor environment in the building industry.

Founding members of the corporation are the Italian Association of Air Conditioning, Ventilation and Refrigeration (AiCARR), the American Industrial Hygiene Association (AIHA), the Air Filtration and Ventilation Center (AIVC), the Indian Society of Heating, Refrigerating and Air Conditioning Engineers (ISHRAE), the Federation of European Heating, Ventilation and Air Conditioning (REHVA) and ASHRAE.

"We are inspired by the forward-thinking approach IEQ-GA has in the building industry," said 2019-20 ASHRAE President Darryl K. Boyce, P.Eng. "It is critically important that we advocate for the well-being of the people who occupy our buildings. Through the collaborative efforts and resources of IEA-GA's member organizations, we will continue to provide safe buildings for generations to come."

The creation of the IEQ-GA was the result of a presidential initiative of Bill Bahnfleth, 2013-14 ASHRAE Presidential Member and current IEQ-GA Vice President, based on the report of a presidential ad hoc committee chaired by Bjarne Olesen, 2017-18 ASHRAE Presidential Member and current ASHRAE IEQ-GA Alternate Director. The committee was tasked with exploring ways in which industry groups could work together to address all aspects of indoor environmental quality and health.

A memorandum of understanding was established between the Air & Waste Management Association (A&WMA), the Indoor Air Quality Association (IAQA), AIHA, AIVC, REHVA and ASHRAE to form IEQ-GA. AiCARR and ISHRAE later became members of the alliance.

"An important attribute of IEQ-GA is that it is a non-industrial alliance among societies representing members that promote IEQ," said Olesen. "The intent of IEQ-GA is to work with all partners of the value chain for indoor environmental quality including

building research, comfort and health research, building design, installation, commissioning, operation and occupant behavior. Furthermore IEQ-GA will work with industry organizations to help their members to provide products and services that promote IEQ."

The founding members represent professionals from various disciplines linked to indoor environment and are committed to work together and promote education, research and knowledge exchange at a global scale; to develop standards, codes, guidelines; and to encourage advocacy among the general public in indoor environments around the world.

The IEQ-GA is currently seeking new members from all the involved sectors and disciplines to join forces. Sectors include architects, engineers, environmental professionals, industrial/occupational hygienists and health section specialists, among others.

For more information on IEQ-GA, visit <https://ieq-ga.net/>.

ASHRAE Recognizes 2019 LowDown Showdown Modeling Challenge Teams

Atlanta – ASHRAE recognized the 2019 LowDown Showdown modeling competition teams. The competition was held in conjunction with the 2019 ASHRAE Building Performance Analysis Conference, Sept. 27-29 in Denver, Colorado.

The ASHRAE LowDown Showdown engages architects, engineers, designers and energy modelers by working on integrated teams in the creation of effective workflow and outstanding design in real-world building efficiency challenges.

"The competition not only challenged teams to achieve near net-zero, but also to include design and modeling elements to create a resilient building capable of withstanding natural disasters and providing prolonged emergency operations," said Annie Marston, competition chair.

This year's model building was a 90,000 square foot city hall (new construction) located in San Diego, Calif. The project involved designing a facility that is meant to be a multi-functional building, housing many of the cities vital public services including being an Emergency Operations Center in times of disaster or crisis.

Teams were evaluated in six categories:

- Energy use
- Teamwork
- Innovative approach
- Creativity
- Workflow
- Presentation

First place and fan favorite were awarded to C.R.E.A.M. (Carbon Rules Everything Around Me) for a proposed city hall that can maintain operations for 14 days during a utility outage to coordinate emergency responses while maintaining critical functions like prisoner life safety and security. During an event, the building will transition to a setback mode, minimizing energy

consumption by relaxing thermal comfort targets. Building systems will then draw energy from a 10,000 kWh battery system & 427 KW PV array for power and 10 kgal potable & 20 kgal non-potable water storage tanks.

"We saw the Lowdown Showdown as an opportunity for our team to collaborate across Built Ecology offices coast to coast and to experiment using new tools and workflows," said Jason Lackie, team captain for C.R.E.A.M. "With the wide-ranging scope of this year's competition - encompassing aspects of energy, water, resiliency, and health and wellness - everyone had a chance to step up and showcase their expertise while also being challenged to integrate that work with an evolving design. As much as the pallet of tools we drew on helped with this multifaceted design problem, our team's success depended on our ability to collaborate through obstacles."

Other teams presenting their results are as follows:

Highway to Sustainability – This second place team designed a new city hall with a 3-story atrium to provide ample space for green walls, skylight and natural breeze. The project included a spacious semi-outdoor area for fitness activities and the deployment of EnergyBox, an in-house web platform which speeds up design exploration by automating processes and encouraging collaboration by effective visualization.

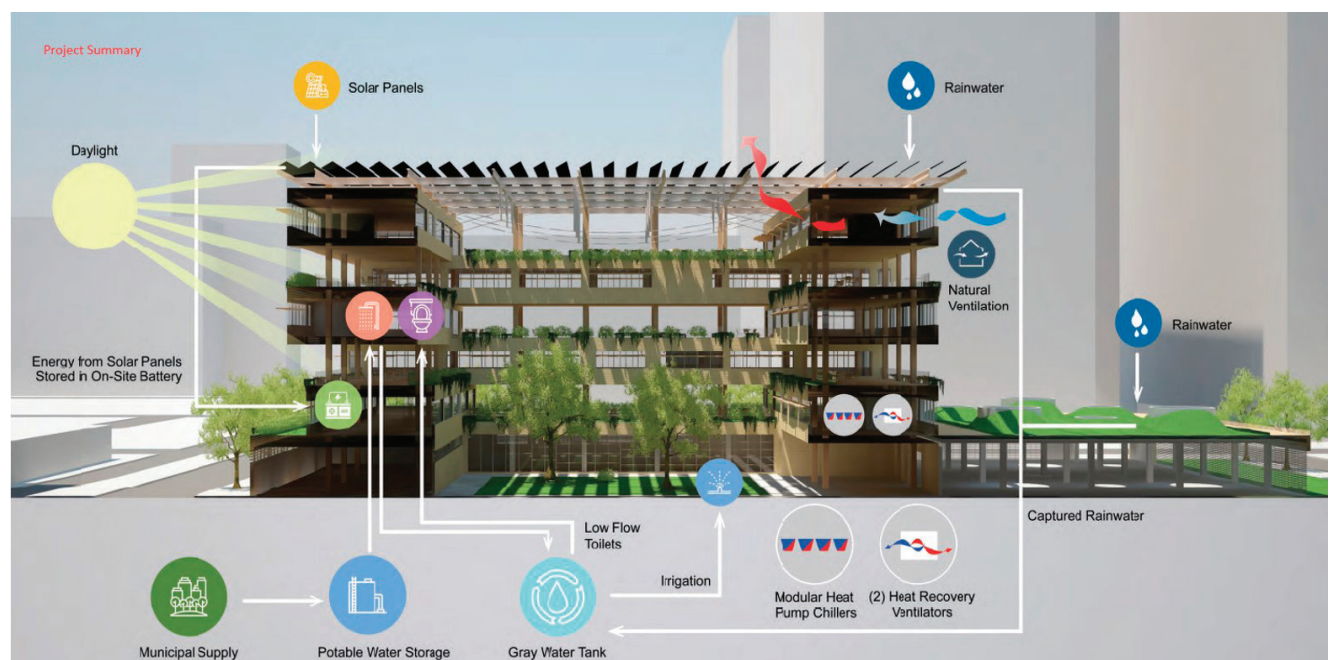
Operation ReSHED – The team's project included elevated walkways to surrounding critical government buildings for quick access to the Emergency Operations Center residing inside the new city hall. The vertically massed city hall was would be designed not only to transform the skyline, but creates opportunities for resiliency against forecasted disasters, increasing energy efficiency during the regular operation and to provide a safe and healthy environment for the occupants.

Parametric Posse – The team incorporated parametric modeling to replace design assumptions made with data-driven simulations to achieve a holistic design that exceeds technical requirements, leverages passive strategies, and supports use during emergency situations. Using both proprietary and open-source software for the parametric modeling, the base digital model allowed for interface with energy, daylighting, and climate analysis tools.

Ulti-Performance - The team's project included assembling an integrated team using a variety of design tools to achieve a net positive building designed for comfort, using dynamic glazing, natural ventilation, and a green roof outdoor amenity. Resilience features included underground water cistern, PV and battery storage.

The results were announced at a reception during the conference. See complete project overviews, including team posters on the 2019 ASHRAE LowDown Showdown Modeling Challenge results webpage.

The 6th annual LowDown Showdown Competition will take place at the 2020 Building Performance Analysis Conference and SimBuild co-organized by ASHRAE and IBPSA-USA in Chicago.



First place and fan favorite in the 2019 ASHRAE LowDown Showdown modeling competition were awarded to C.R.E.A.M. (Carbon Rules Everything Around Me).



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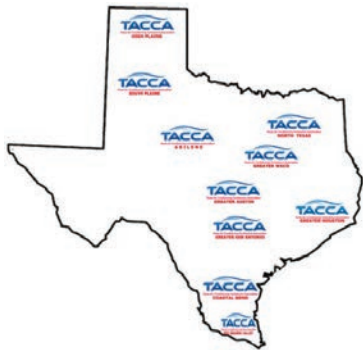
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TACCA is pleased to announce the hiring of Devorah Jakubowsky, CAE, as its new Executive Director. Devorah joins us from the Texas Veterinary Medical Association where she served eight years as the Director of Finance, followed by 10 years as Associate Director where she was responsible for membership development, administration of affinity programs and supporting board governance and committee volunteers.

Devorah's strong work ethic, strategic vision, excellent communication skills and service-oriented leadership will help create the growth and continuity that is essential for TACCA to be one of the premier member associations in Texas. We are very proud to have her join our team and we look forward to great things from TACCA under her guidance. Please welcome Devorah to the TACCA team.

"I am grateful to TACCA's Board of Directors for their trust in me and the opportunity to serve as Executive Director of this organization." said Devorah Jakubowsky. "TACCA is positioned to really advance its mission and gain momentum and I look forward to being a part of the effort to bring the organization to the next level."

Many thanks to the search committee for their time and dedication to the search – Randy Bellomy, Jimmy Barry, Roland Arrisola and Shannon Noble.

TACCA continues to be the leader in HVAC continuing education and license preparatory courses in the state of Texas as well as being an influential legislative voice at the State Capitol. TACCA's current primary focus is to grow membership, support and revitalize our local chapters, work with our national affiliation ACCA to provide more services to our contractor members, and provide scholarships for training and workforce development.

Roy Jones
2019 TACCA President

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Q: Can I get partial credit for completing part of a required continuing education course?

A: No. TDLR does not accept partial completion of a continuing education course. However, a provider may allow you to finish the course at another time. When the course is completed the provider will transmit the completion record to TDLR.

TACCA: Because instructors and the flow of information can change from one class to the next, in most cases TACCA recommends taking the entire class again.

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Mission: To promote quality and professionalism, help our members become more profitable, and enhance the HVAC/R industry's image with the consumer

TACCA focuses on providing information, benefits, education and legislative representation to our members. To advance its mission, TACCA is creating or restructuring five committees – Membership, Education/Training, Chapter Relations, Legislative and TACCAPAC (Political Action Committee), and is seeking volunteers to participate. **If you have an interest in supporting TACCA through one of these committees, please contact the TACCA office.**

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Women in HVACR 16th Annual Conference





Scholarship Award Winner
Rebecca Gregg



Scholarship Award Winner Amanda Crafts



Scholarship Award Winner
Brianna Prouse



Emily Saving receives the industry partner
award for Hardi



Scholarship Award Winner Janet Gibbons
receives her tools package



Patti Ellingson with Emerson receives the
10 year sponsorship award



Tom Jackson receives the 5 year
sponsorship award for Jackson Systems



Melody Chaney receives the 5 year
sponsorship award for The New Flat Rate



Marjorie McAllister receives the 5 year
sponsorship award for CPS Products



Gurminder Sidhu receives the
Distinguished Industry Partner award
for NATE



Scholarship Award Winner
Emily Gavrilenko with Angie Snow
and Denise Tudor



Neal Reeves and Kerry Embry
with Packard receive a 5 year
sponsorship award



Jennifer Bryan and WHVACR President
Danielle Putnam present the
Crystal Gavel Award to Mary Jo Gentry,
Past WHVACR President



Brandi Szeker receives the distinguished
industry partner award for Service
Round Table



Colleen Keyworth and Dave Squyres
receive the 10 year sponsorship award
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HARDI

HARDI Announces 2019 Annual Conference: Pulse Agenda and Speaker Lineup

Columbus, Ohio – Heating, Air-conditioning & Refrigeration Distributors International (HARDI) has released the complete agenda and speaker lineup for the 2019 Annual Conference: Pulse.

This year's agenda focuses on the state of the industry and HARDI's mission of ensuring wholesale distribution is the channel of choice for manufacturers and contractors. Kicking off the conference, HARDI's CEO, Talbot Gee, will be presenting HARDI's findings for the first annual "State of the Channel" report.

"In this inaugural edition of our State of the Channel Report, it is our intention to give our members and the industry the greatest insights into our channel's performance available to date and the latest on how wholesale distribution can drive greater value for their manufacturers and contractors," said Gee. "This year's report will just scratch the surface of future reports as we continue to expand our research capabilities, but I'm confident these initial findings will fuel some of the best discussions our annual conference has ever seen."

To ensure the conference maintains a lively pulse, sessions at the beginning of the day will be one hour in length, going down to 30 minutes and 20 minutes as the day goes on to keep attendees engaged and moving.

A highlight of the conference will be Keynote Speaker and Magician, Vinh Giang. Attendees will also learn about innovation and customer experience from Dustin Garis, market demography from Ken Gronbach, and an enlightening and entertaining look at today's most important political issues from James Carville & Mary Matalin. Rounding out the featured speaker lineup is Alan Beaulieu, one of the country's most informed economists.

The lineup features many more additional speakers handpicked to help HARDI assess the current State of the Channel and align for the future success of the industry.

To see the full agenda and speaker lineup, visit <http://hardiconference.com>.

HARDI Distributors Report 2.7% Percent Revenue Growth in August

Columbus, Ohio – Heating, Air-conditioning & Refrigeration Distributors International (HARDI) released its monthly TRENDS report, showing the average sales performance by HARDI distributors was an increase of 2.7% percent during August 2019.



The average annualized sales growth for the 12 months through August 2019 is 7.6 percent.

"There are two important factors to consider with the sales this month," said HARDI Market Research & Benchmarking Analyst Brian Loftus. "It was warmer during August of 2018 in four of our economic regions and about flat year-to-year in two others. There was one less billing day across all seven regions. We estimate the sales growth for the month would have been closer to 7% with the same number of billing days, and that would be a strong result given the poor cooling degree day comparison."

The Days Sales Outstanding (DSO), a measure of how quickly customers pay their bills, is now 44.2 days. "The DSO is consistent with performance for this time of year," said Loftus. "I was wondering if a slower sales rate this year would lead to a lower DSO but that has not been the case."

"This is the Tom Brady of economic expansions in terms of duration and continued success," said Loftus. "We have 107 months, almost nine years, of consecutive job growth. The unemployment rate continues at the formerly unimaginable rate of 3.7%. Consumer confidence has eased a little [Peyton Manning was slower in his Super Bowl winning final season] but remains at nothing short of very high levels. Some of the economic reports are generating concern, but the overall economic performance is excellent, especially at this advanced age." This economy is not done winning and either are the Patriots.

HARDI members do not receive financial compensation in exchange for their monthly sales data and can discontinue their participation without prior notice or penalty. Participation is voluntary, and the depth of market coverage varies from region to region. An independent entity collects and compiles the data that can include products not directly associated with the HVACR industry.

Standard Supply/ Bartos Golf Tournament

Standard Supply and Bartos hosted their 4th Annual Fall Classic Golf Tournament at Stevens Park Golf Course in Dallas. The proceeds from the tournament benefit Homes for our Troops, a non-profit organization that provides mortgage free homes for injured veterans.

For more information visit www.hfotusa.org



AC Supply Golf Classic

AC Supply held their annual AC Supply Golf Classic at the Shady Valley Golf Club in Arlington TX on Monday October 7th



First Place Team



Second Place Team



Longest Drive Winner



Closest to the Pin Winner



Most Honest Team Award



The AC Supply Team



Construction Employment Increases in 39 States and D.C. from September 2018 to September 2019, While 28 States Added Construction Jobs Last Month

Texas and Nevada Have Biggest Number and Percent of Annual Job Gains, While Louisiana Has Largest Losses; Texas and Hawaii Experience Largest One-Month Gains as Virginia and North Dakota Have Worst Declines

Thirty-nine states and the District of Columbia added construction jobs between September 2018 and September 2019, while construction employment increased in 28 states from August to September, according to an analysis by the Associated General Contractors of America of Labor Department data released today. Association officials said that it is likely additional states would have added new construction jobs if firms could find more qualified workers to hire.

“Although evidence is mounting that the overall economy is slowing, contractors in most states are still eager to hire,” said Ken Simonson, the association’s chief economist. “But they are unable to find qualified workers in some cases, and job openings in construction have soared as unemployment rates are at historic lows in many states.”

Texas added the most construction jobs over the year (52,000 jobs, 7.0 percent), followed by California (30,400 jobs, 3.5

percent), Arizona (16,500 jobs, 10.2 percent), Florida (16,200 jobs, 2.9 percent), and Nevada (11,100 jobs, 12.3 percent). Nevada added the highest percentage of construction jobs over 12 months, followed by Arizona, New Mexico (8.7 percent, 4,100 jobs), New Hampshire (7.8 percent, 2,100 jobs), Texas and Indiana (7.0 percent, 9,800 jobs). Construction employment reached a record high in Nebraska, Texas and Washington.

Eleven states shed construction jobs over the latest 12 months. Louisiana lost the largest number and percentage of construction jobs (-10,600 jobs, -7.0 percent). Other states with large job losses include Ohio (-7,600 jobs, -3.4 percent), Connecticut (-1,800 jobs, -3.1 percent), Tennessee (-1,300 jobs, -1.0 percent), Massachusetts (-1,200 jobs, -0.8 percent) and North Carolina (-1,200 jobs, -0.5 percent). Other states with a substantial percentage decline include Vermont (-6.0 percent, -900 jobs), Ohio, Montana (-3.4

percent, -1,000 jobs) and Connecticut.

Texas added the most construction jobs between August and September (7,200 jobs, 0.9 percent), followed by Arizona (2,200 jobs, 1.3 percent), Indiana (1,700 jobs, 1.1 percent), Wisconsin (1,700 jobs, 1.4 percent), Nevada (1,600 jobs, 1.6 percent) and Florida (1,500 jobs, 0.3 percent). Hawaii added the highest percentage of construction jobs for the month (2.7 percent, 1,000 jobs), followed by Idaho (2.2 percent, 1,100 jobs), Nevada, Arkansas (1.5 percent, 800 jobs), New Hampshire (1.4 percent, 400 jobs), and Wisconsin.

Construction employment decreased from August to September in 22 states and was flat in D.C. Virginia lost the largest number of construction jobs for the month (-3,200 jobs, -1.6 percent), followed by Ohio (-1,700 jobs, -0.8 percent), Pennsylvania (-1,500 jobs, -0.6 percent) and Missouri (-1,100 jobs, -0.9 percent). North Dakota

had the largest percentage decline for the month (-3.2 percent, -900 jobs), followed by Virginia, Wyoming (-1.4 percent, -300 jobs) and Rhode Island (-1.0 percent, -200 jobs).

Association officials said that 80 percent of construction firms that responded to the association’s recent workforce survey reported having a hard time finding qualified workers to hire. They urged federal leaders to increase funding for career and technical education and allow more immigrants to legally enter the country.

“Investing in more career and technical education programs, especially in high schools, would encourage and prepare even more young adults to pursue high-paying construction careers,” said Stephen E. Sandherr, the association’s chief executive officer. “Without new measures to develop the construction workforce, our economy will continue to suffer from missed opportunities.”

TACCA Greater Houston Golf Tournament

TACCA Greater Houston held their Annual Golf Tournament on October 17th at Clear Creek Golf Club in Houston TX



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TACCA Greater Austin Golf Tournament

TACCA Greater Austin held their Annual Golf Tournament on October 4th at The Golf Club at Star Ranch in Hutto TX



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Luxaire sponsors annual Walk For Wishes® events with Make-A-Wish® Wisconsin and Make-A-Wish Oklahoma

Since 2001, Luxaire and its partners have donated \$4.6 million to Make-A-Wish

Milwaukee – The Luxaire® brand of Johnson Controls, sponsored two annual Make-A-Wish Walk For Wishes® events in Milwaukee and Oklahoma City to benefit the Wisconsin and Oklahoma Make-A-Wish chapters. In total, the two events raised more than \$300,000 to grant life-changing wishes for children with critical illnesses.

Luxaire has been an active sponsor of Make-A-Wish since 2001, participating in an average of 18 events per year throughout the United States. To date, Luxaire and its partners have donated \$4.6 million to the organization – enough to help grant nearly 500 wishes to children, including several children of Johnson Controls employees, and:

- Five-year-old Bianca who was able to meet her favorite princesses at Disney World
- Hanna, 12, who swam with the dolphins on Paradise Island in the Bahamas
- Andrew, 18, who went ziplining, snorkeling and fishing in Hawaii

At the ninth annual Oklahoma City Walk For Wishes event, Luxaire served as the Hope and

Hospitality Sponsor, where company employees, family and friends rallied together to support the Oklahoma Make-A-Wish chapter, which has granted more than 3,000 wishes to Oklahoma children. In total, the event raised \$75,500.

“Supporting the communities where our employees and partners live through Make-A-Wish is an incredibly important commitment of Johnson Controls,” said Nina LoCicero, director of marketing and digital, Ducted Systems, Johnson Controls. “It’s particularly gratifying when we have the opportunity to join efforts with our valued distributor partners to benefit local Make-A-Wish chapters.”

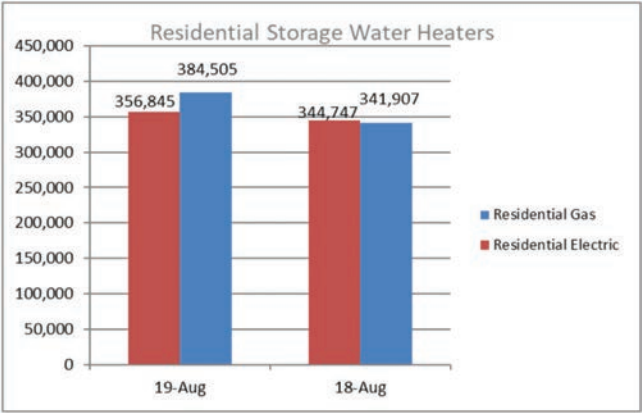
At the fundraiser, Johnson Controls and Luxaire led a team who participated in a one-mile walk around Oklahoma City’s Myriad Botanical Gardens. Guests also participated in various activities and entertainment such as a DIY craft station, photobooth and ticket raffle.

To learn more about how you can get involved, visit Luxaire.com/Residential/make-a-wish.

AHRI Releases August 2019 U.S. Heating and Cooling Equipment Shipment Data

Residential Storage Water Heaters

U.S. shipments of residential gas storage water heaters for August 2019 increased 12.5 percent, to 384,505 units, up from 341,907 units shipped in August 2018. Residential electric storage water heater shipments increased 3.5 percent in August 2019 to 356,845 units, up from 344,747 units shipped in August 2018.

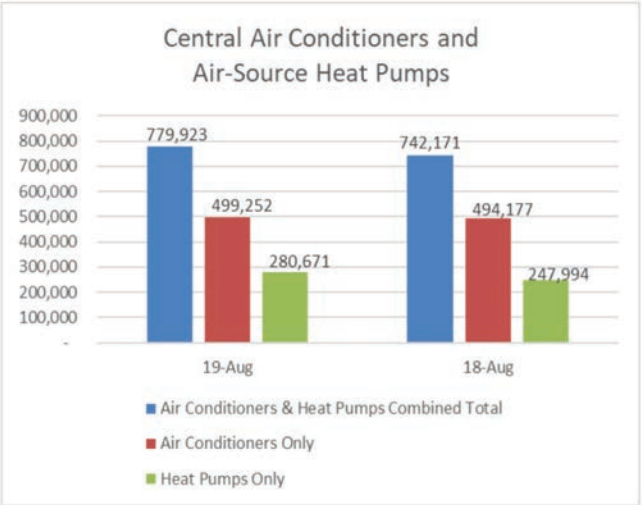


Year-to-date U.S. shipments of residential gas storage water heaters decreased 3.6 percent, to 2,957,253, compared to 3,066,624 shipped during that same period in 2018. Residential electric storage water heater shipments decreased 2.9 percent year-to-date, to 2,800,617 units, compared to 2,885,314 shipped during the same period in 2018.

| Year-to-Date | | | |
|------------------------------|------------|------------|-------|
| | Aug 19 YTD | Aug 18 YTD | %CHG. |
| Residential Storage Gas | 2,957,253 | 3,066,624 | -3.6 |
| Residential Storage Electric | 2,800,617 | 2,885,314 | -2.9 |

Central Air Conditioners and Air-Source Heat Pumps

U.S. shipments of central air conditioners and air-source heat pumps totaled 779,923 units in August 2019, up 5.1 percent from 742,171 units shipped in August 2018. U.S. shipments of air conditioners increased 1 percent, to 499,252 units, up from 494,177 units shipped in August 2018. U.S. shipments of air-source heat pumps increased 13.2 percent, to 280,671 units, up from 247,994 units shipped in August 2018.

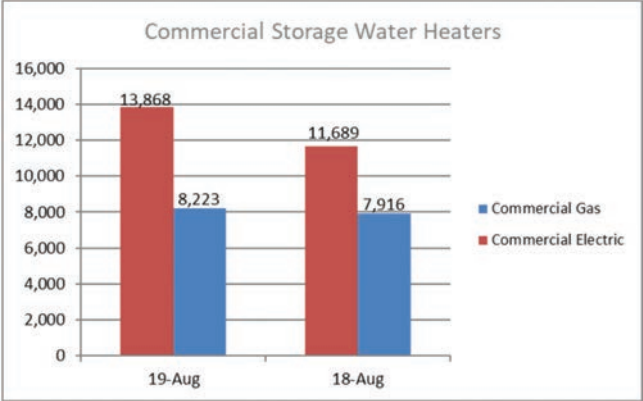


Year-to-date combined shipments of central air conditioners and air-source heat pumps increased 1.2 percent, to 6,370,742, up from 6,294,977 units shipped during the same period in 2018. Year-to-date shipments of central air conditioners decreased 1.2 percent, to 4,092,014 units, down from 4,141,428 units shipped during the same period in 2018. The year-to-date total for heat pump shipments increased 5.8 percent, to 2,278,728, up from 2,153,549 units shipped during the same period in 2018.

| Year-to-Date | | | |
|--|------------|------------|--------|
| | Aug 19 YTD | Aug 18 YTD | % Chg. |
| Air Conditioners & Heat Pumps Combined Total | 6,370,742 | 6,294,977 | +1.2 |
| Air Conditioners Only | 4,092,014 | 4,141,428 | -1.2 |
| Heat Pumps Only | 2,278,728 | 2,153,549 | +5.8 |

Commercial Storage Water Heaters

Commercial gas storage water heater shipments increased 3.9 percent in August 2019, to 8,223 units, up from 7,916 units shipped in August 2018. Commercial electric storage water heater shipments increased 18.6 percent in August 2019, to 13,868 units, up from 11,689 units shipped in August 2018.



Year-to-date U.S. shipments of residential gas storage water heaters decreased 3.6 percent, to 2,957,253, compared to 3,066,624 shipped during that same period in 2018. Residential electric storage water heater shipments decreased 2.9 percent year-to-date, to 2,800,617 units, compared to 2,885,314 shipped during the same period in 2018.

| Year-to-Date | | | |
|-----------------------------|------------|------------|-------|
| | Aug 19 YTD | Aug 18 YTD | %Chg. |
| Commercial Storage Gas | 60,687 | 66,107 | -8.2 |
| Commercial Storage Electric | 103,012 | 93,327 | +10.4 |

U.S. Manufacturers' Shipments of Central Air Conditioners and Air-Source Heat Pumps

| Month | | | YTD | | |
|-----------------------------|---------|--------------------|-----------------------------|-----------|--------------------|
| Size Description (000) BTUH | Total | % Change from 2018 | Size Description (000) BTUH | Total | % Change from 2018 |
| Under 16.5 | 29,739 | +20.4 | Under 16.5 | 220,434 | +15.7 |
| 16.5-21.9 | 66,243 | +21.6 | 16.5-21.9 | 540,801 | +9.1 |
| 22-26.9 | 143,719 | +10.1 | 22-26.9 | 1,243,048 | +3.1 |
| 27-32.9 | 120,083 | +13.2 | 27-32.9 | 1,020,184 | +1.9 |
| 33-38.9 | 162,910 | +2.6 | 33-38.9 | 1,364,219 | +0.2 |
| 39-43.9 | 60,189 | +0.5 | 39-43.9 | 493,032 | -2.1 |
| 44-53.9 | 88,431 | -4.3 | 44-53.9 | 713,145 | -3.1 |
| 54-64.9 | 77,609 | -5.2 | 54-64.9 | 561,356 | -3.5 |
| 65-96.9 | 11,328 | -7.0 | 65-96.9 | 76,894 | -1.7 |
| 97-134.9 | 8,571 | -8.1 | 97-134.9 | 58,887 | -2.0 |
| 135-184.9 | 5,716 | -6.0 | 135-184.9 | 38,980 | -3.9 |
| 185-249.9 | 2,383 | -2.5 | 185-249.9 | 17,223 | -1.5 |
| 250-319.9 | 1,474 | -13.2 | 250-319.9 | 11,119 | -3.0 |
| 320-379.9 | 391 | -5.1 | 320-379.9 | 2,747 | -5.5 |
| 380-539.9 | 394 | -17.9 | 380-539.9 | 3,029 | +4.3 |
| 540-639.9 | 278 | -16.8 | 540-639.9 | 2,186 | -7.5 |
| 640-799.9 | 142 | +21.4 | 640-799.9 | 1,053 | +8.3 |
| 800.0-899.9 | 56 | -25.3 | 800.0-899.9 | 541 | +2.3 |
| 900.0-999.9 | 57 | -29.6 | 900.0-999.9 | 560 | -10.7 |
| 1,000.0-1,199.9 | 52 | +30.0 | 1,000.0-1,199.9 | 366 | +2.2 |
| 1,200.0 & Over | 158 | +46.3 | 1,200.0 & Over | 938 | +38.8 |
| TOTAL | 779,923 | +5.1 | TOTAL | 6,370,742 | +1.2 |

BTUHs of 64.9 and below are for residential units; 65.0 and above for commercial.

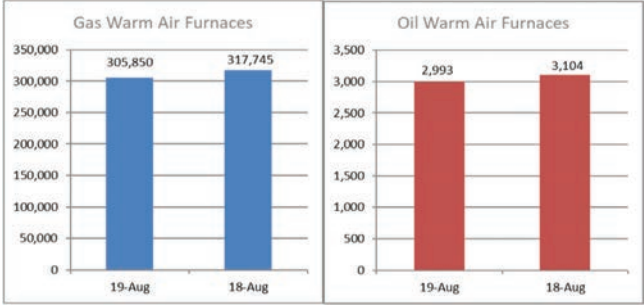
NOTE: A shipment is defined as when a unit transfers ownership; a consignment is not a transfer of ownership. Industry data is aggregated from the information supplied by AHRI member companies that participate in the statistics program and could be subject to revision. Published year-to-date data is inclusive of all revisions. No other AHRI data (e.g., by state or region) is available to the general public other than that published. AHRI does not conduct any market forecasting and is not qualified to discuss market trends. For previous monthly shipment releases and historical data, please see <http://www.ahrinet.org/statistics>.

About AHRI

The Air-Conditioning, Heating, and Refrigeration Institute (AHRI) is the trade association representing manufacturers of air conditioning, heating, and commercial refrigeration, and water heating equipment. An internationally recognized advocate for the industry, AHRI develops standards for and certifies the performance of many of these products. AHRI's 300+ member companies manufacture quality, efficient, and innovative residential and commercial air conditioning, space heating, water heating, and commercial refrigeration equipment and components for sale in North America and around the world.

Warm Air Furnaces

U.S. shipments of gas warm air furnaces for August 2019 decreased 3.7 percent, to 305,850 units, down from 317,745 units shipped in August 2018. Oil warm air furnace shipments decreased 3.6 percent, to 2,993 units in August 2019, down from 3,104 units shipped in August 2018.



Year-to-date U.S. shipments of gas warm air furnaces increased 5.9 percent, to 2,291,817 units, compared with 2,163,918 units shipped during the same period in 2018. Year-to-date U.S. shipments of oil warm air furnaces increased 14.9 percent, to 21,949 units, compared with 19,107 units shipped during the same period in 2018.

| Year-to-Date | | | |
|-----------------------|------------|------------|--------|
| | Aug 19 YTD | Aug 18 YTD | % Chg. |
| Gas Warm Air Furnaces | 2,291,817 | 2,163,918 | +5.9 |
| Oil Warm Air Furnaces | 21,949 | 19,107 | +14.9 |

AHRI, Alliance Member Companies Urge Congress to Act on HFCs

Arlington, Va. – In a letter sent to the leadership of the House Energy and Commerce Committee and the Senate Environment and Public Works Committee, 32 members of the Air-Conditioning, Heating, and Refrigeration Institute (AHRI) and the Alliance for Responsible Atmospheric Policy, , urging support for proposed federal legislation to establish a national structure for the phase-down of hydrofluorocarbon (HFC) refrigerants.

Noting that, “U.S. companies that produce and use fluorocarbons have been preparing for a transition from HFCs for more than a decade, investing billions in R&D to be the first to bring to market next-generation fluorocarbon products and equipment,” the letter expresses concern that while “American companies have led the world in fluorocarbon technology development for decades...that leadership – and the advantages it confers to the U.S. economy – is jeopardized by the lack of a federal policy for HFCs. The letter warns that inaction on the part of federal policy makers would result in “foreign competitors...poised to fill the technology void and displace American companies in a global fluorocarbon market expected to reach \$1 trillion in size.”

“Federal legislation phasing-down HFCs represents a chance to put America first, and to keep

American workers at the forefront of this important global industry,” the letter states, noting that, “A recent industry economic study showed that a new federal standard for the phase-down of HFCs would create 33,000 new U.S. manufacturing jobs, add \$12.5 billion per year to the U.S. economy, and expand U.S. exports in this sector by 25 percent. Failure to do so will cost U.S. businesses and jobs.”

The House and Senate are considering introduction of legislation to phase-down the use of HFCs, which are potent greenhouse gases.

CALENDAR OF EVENTS

|  JOHNSTONE SUPPLY | | | NOVEMBER 2019 TRAINING CALENDAR | | | |
|---|-----|------------------|---------------------------------|---|-------------------|---------|
| For info call Juan Villela at 210-829-1934 Ext. 155 - or email to: juan.villela@johnstonesupply.com | | | | | | |
| <u>Broadway</u> - 9311 Broadway Suite 200 / <u>Downtown</u> - 30 Essex St. Ste. 101 / <u>Alamo Downs</u> - 6900 Alamo Downs Ste. 140 | | | | | | |
| DATE | DAY | TIME | LOCATION | CLASS | REGISTRATION CODE | COST |
| 4-Nov | M | 10:00am - 1:00pm | Essex | Friedrich Advantage Dealer Program CounterDay | RSVP | FREE |
| 5-Nov | Tu | 8:00am - 10:30am | Broadway | The Basic Refrigeration Cycle Explained | TRAIN19-41-116 | \$35 |
| 5-Nov | Tu | 5:00pm - 7:00pm | Broadway | Goodman / Liberty Heat Pump Operation Overview | TRAIN19-41-117 | \$35 |
| 6-Nov | W | 8:00am - 10:30am | Broadway | Upflow Unit Installation Codes - Int'l. Residential Code | TRAIN19-41-118 | \$35 |
| 7-Nov | Th | 11:00pm - 2:00pm | Alamo Downs | Friedrich Advantage Dealer Program CounterDay | RSVP | FREE |
| 11-Nov | M | 8:00am - 10:30am | Broadway | Goodman Gas Furnace Service & Troubleshooting | TRAIN19-41-119 | \$35 |
| 12-Nov | Tu | 5:00pm - 7:30pm | Broadway | Gas Furnaces - Venting - Int'l. Fuel Gas Code | TRAIN19-41-120 | \$35 |
| 13-Nov | W | 8:00am - 10:30am | Broadway | Gas Furnaces - Combustion Air Codes & Best Practices | TRAIN19-41-121 | \$35 |
| 14-Nov | Th | 8:00am - 4:00pm | Broadway | ESCO EPA Review & Exam | ESCO-CLASS& EXAM | \$135 |
| 14-Nov | Th | 1:30pm - 4:00pm | Broadway | ESCO EPA Exam Only | ESCO EXAM | \$85 |
| 18-Nov | M | 8:00am - 5:00pm | Broadway | Total Immersion HVAC Service & Sales Training Part I | Call for Info | \$2,297 |
| 19-Nov | Tu | 8:00am - 5:00pm | Broadway | Total Immersion HVAC Service & Sales Training Part II | See Above | |
| 20-Nov | W | 8:00am - 5:00pm | Broadway | Total Immersion HVAC Service & Sales Training Part III | See Above | |
| 21-Nov | Th | 8:00am - 5:00pm | Broadway | Total Immersion HVAC Service & Sales Training Part IV | See Above | |
| 22-Nov | F | 8:00am - 5:00pm | Broadway | Total Immersion HVAC Service & Sales Training Part V | See Above | |
| 25-Nov | M | 8:00am - 11:00am | Essex | Brazing - Hands On Techniques & Best Practices | TRAIN19-41-122 | \$45 |
| 26-Nov | Tu | 8:00am - 10:30am | Broadway | Attic Installation Requirements - Int'l. Residential Code | TRAIN19-41-123 | \$35 |

Friedrich Air Conditioning Co. Named “Supplier of the Year” by AD HVAC

San Antonio, Texas–Friedrich Air Conditioning Co., a leading manufacturer of room air conditioning and other home environment products, earned the industry’s top “Supplier of the Year” award for 2019 from AD HVAC.

The award, which was presented during AD HVAC annual member meeting held earlier this month, reflects Friedrich’s strong commitment to support independent distributors by offering a wide range of innovative product solutions, training, customer service and personalized support.

As a member-owned organization, AD brings growth-oriented independent distributors and best-in-class supplier partners together with the purpose of outperforming the market and staying ahead of the competition. For nearly six years, Friedrich has been a member of AD HVAC, a premier group of industry-leading HVAC distributors and suppliers in North America.

“At Friedrich, we’re constantly investing in the ongoing success of our independent distributor partners,” said Chuck Campbell, CEO of Friedrich Air Conditioning Co. “We’re very proud to have been honored with this award because it reflects our unwavering commitment to support the industry with outstanding products and services.”

About Friedrich Air Conditioning Co.
Founded in 1883, Friedrich has manufactured room air conditioners since 1952. Friedrich is a leading manufacturer of air conditioners and other home environment products. Constructed of the highest quality components, Friedrich products are built to exacting standards and are among the most sophisticated, energy efficient and quietest available. Visit Friedrich at www.friedrich.com

TACCA Greater Austin Chapter November Meeting on November 12th at 5:30 pm

Location: Aces Supply, 1810 Rutherford Lane Austin, TX. 78754.
Monthly meeting will consist of “Brazing and Fire Safety Class”. This class will provide continuing education credit/hours for all who are NATE certified.



The Texas Department of Licensing and Regulation (Department) proposes a new rule to the Procedural Rules of the Commission and the Department (16 Texas Administrative Code, Chapter 60, Subchapter K §60.518). The proposed rule implements Senate Bill (SB) 1200, 86th Legislature, Regular Session (2019), which amends Texas Occupations Code, Chapter 55, to authorize a military spouse to engage in a business or occupation for which a license is required without obtaining the applicable license if the military spouse is currently licensed in good standing by another jurisdiction that has licensing requirements that are substantially equivalent to the licensing requirements in Texas. SB 1200 also authorizes a licensing agency to issue a license to a military spouse who meets such requirements.
The proposed rule is necessary to establish a process for the Department to identify which jurisdictions have licensing requirements that are substantially equivalent to the requirements in Texas and to verify that a military spouse is licensed in good standing in one of such jurisdictions. The proposed rule also provides for the issuance of a three-year license to a military spouse who meets these qualifications and successfully passes a criminal history background check.
The proposed rule was published in the October 4, 2019, issue of the Texas Register (44 TexReg 5689). The Department will accept comments on the proposal until November 4, 2019.
The Department encourages anyone interested in the Chapter 60 to review the rule proposal. Comments may be submitted by email to erule.comments@tdlr.texas.gov.

Insco’s November Events Schedule

New Laredo Branch
Our NEW Laredo Branch is now open located at 5714 Cerrito Prieto Ct., Laredo, TX 78041.

Training from Insko Academy
Insko Academy offers some of the best training available in the HVAC/R industry. With over 100 years of experience, we provide hands-on instruction at our state-of-the-art training facilities located in Houston, Grapevine & San Antonio. Most courses offer CE credits and our goal is to provide the needed skills and expertise to help our customers thrive in this evolving and competitive industry. Visit: insco.com/training to see the complete schedule of classes.

Grapevine
Tuesday, November 5th – Top Tech Ruud 90% Gas Furnaces from 8am – 12pm located at Insko’s Grapevine Training Facility | Only \$75
Tuesday, November 19th – Smart Thermostat Installation & EcoNet Zoning Design from 8am – 12pm located at Insko’s Grapevine Training Facility | Only \$50

Houston
Tuesday, November 5th – York Communicating Systems from 8am – 12pm located at Insko’s Houston Training Facility | Only \$75

San Antonio
Tuesday, November 12th – Ruud Inverter Systems from 8am – 12pm located at Insko’s San Antonio Training Facility | Only \$50

Lunch & Learns
Come enjoy FREE lunch while learning from select Insko vendors! No registration necessary, just show up at 11:30am on the Wednesday’s listed below.

Grapevine
Wednesday, November 6th – Mitsubishi Electric M & P Product Overview from 11:30am – 1:00pm located at Insko’s Grapevine Training Facility | FREE
Wednesday, November 13th – Nu-Calgon Product Line Review from 11:30am – 1:30pm located at Insko’s Grapevine Training Facility | FREE
Wednesday, November 20th – Azure Motor Training from 11:30am – 1:00pm located at Insko’s Grapevine Training Facility | FREE

Houston
Wednesday, November 6th – Carbon Monoxide Safety and Measurement from 11:30am – 1:30pm located at Insko’s Houston Training Facility | FREE
Wednesday, November 13th – Gas Vent Installation 101 from 11:30am – 1:00pm located at Insko’s Houston Training Facility | FREE
Wednesday, October 20th – Why You Should Be Selling IAQ from 11:30am – 1:00pm located at Insko’s Houston Training Facility | FREE

San Antonio
Wednesday, November 6th – Why You Should Be Selling IAQ from 11:30am – 1:30pm located at Insko’s San Antonio Training Facility | FREE
Wednesday, November 13th – Fieldpiece Job Link from 11:30am – 1:00pm located at Insko’s San Antonio Training Facility | FREE
Wednesday, November 20th – Gas Vent Installation 101 from 11:30am – 1:30pm located at Insko’s San Antonio Training Facility | FREE

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1050 Arion Parkway

Tuesday November 5, 2019 December 3, 2019

Location: **Southern Careers** – 6963 NW Loop 410

Saturday November 16, 2019 December 14, 2019

TDLR No. 1362 Class No. 20982

• LICENSE PREP CLASSES•

Friday November 22, 2019

Location: **Johnson Supply San Antonio**

1050 Arion Parkway

•EPA Exams• 1st Friday of the month

•NATE Exams•

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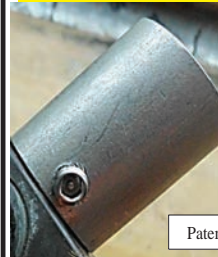
Always use with time delay relay to prevent short cycling.

Put disc side on copper line and secure with tape or wire tie.

2. FreonLock™ (FLI) “THINKING OUTSIDE THE CAP”.

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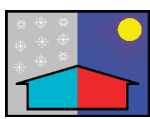
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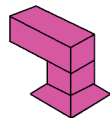
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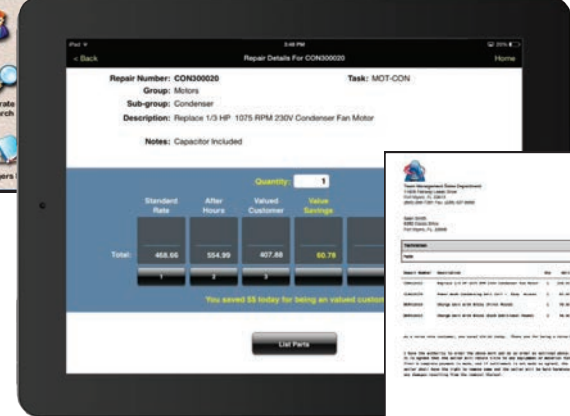
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