Getting America Back To Work Again

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[Image of American flags]
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It’s Time to Try a New Way Of Getting Techs Certified

The sizzling summer is in full swing, and the HVAC service/replace­ment residential market is pretty hot as well. This means an old problem for HVAC contractors is once again rearing its ugly head — finding quality employees to go on these calls.

With the currently high unemployment rate in the country, HVAC contractors are at least fishing in a pond that is well stocked. In the past, it might have been hard to get many applicants to apply for a position, but I’m told in conversations with contractors that a few more resumes are coming in these days.

But these are not necessarily experienced HVAC folks who are applying for these jobs. Some are coming from different industries altogether — no doubt industries that have been hit harder by the COVID-19 pandemic.

That is not necessarily a bad thing. I have talked to many HVAC contractors who would rather train and build someone from the ground up than try to reverse what the individual has learned at previous industry jobs. There is nothing wrong with that way of doing things, but if that is the case, those contractors really need to focus on training.

North American Technician Excellence (NATE) is a big part of how the industry trains its technicians. They have recognized this trend of inexperienced technicians and have developed a program called CHP 5.

“Finding quality technicians is changing, and we realized we had to come up with a different approach,” NATE COO John Lanier told The ACHR NEWS in a recent NEWSmakers podcast. “Contractors are hiring techni­cians with no experience at all. We want to help develop the techni­cians very early in their careers.”

What NATE has introduced is a certification path that mirrors the on-the-job training that many new technicians receive. CHP 5 stands for Certified HVAC Professional 5. It follows a concept called micro learning.

This new way to earn NATE certification consists of five 30-question exams instead of the traditional 50-question core exam and 100-question specialty exam. Each exam covers one of five different subject domains: HVAC Fundamentals, Electrical and Controls, Comfort and Airflow, Installation, and Service. NATE recommends taking the exams in order for the easiest progression; however, technicians can take the exams in any order they choose. Candidates can take up to six months between each exam to study and prepare.

Lanier said it was the difference between just taking a final exam in high school or taking tests after each section of the sub­ject was completed.

“It is an opportunity to de­monstrate competence in smaller, more manageable pieces. I really think it will help technicians a lot,” Lanier said.

These smaller exams are developed in the same way as previous NATE exams. They have a technical committee of volun­teers that define competency and develop the questions.

Perhaps the best part of the program is the adjustment they made in this COVID-19 world. In addition to the traditional places exams can be taken, there is now online proctoring, which allows technicians to take exams from their home.

NATE teamed up with Inter­play Learning to offer this option for technicians.

“People will just need a webcam for their computer. An online proctor will monitor the process. This will ensure the health and safety of anyone want­ing to take the test,” Lanier said.

Lanier was quick to point out that this new program does not change anything for technicians who are already NATE certified.

Something to think about as you bring new employees on board. For more information, visit www.natex.org.
MSCA Cancels Annual Educational Conference

ROCKVILLE, Md. — The MSCA (Mechanical Service Contractors of America) board of managers have chosen to cancel this year’s annual educational conference in Scottsdale, Arizona. The event was scheduled on Oct. 11-14.

“This virus has forced all of us to re-evaluate and reposition our businesses to meet changing demands and address new ways of doing business,” said Kip Bagley and Mike Star, MSCA co-chairs. “Through it all, MSCA promises to continue to provide you with the quality programming you expect and deserve, and we will continue our proud tradition of being the ‘education’ association.”

The next annual conference is scheduled for Oct. 24-27, 2021, in Austin, Texas.

Bryant Announces Dealer Of the Year

INDIANAPOLIS — Family Heating and Air of Pensacola, Florida, has been named the 2020 Bryant Dealer of the Year, the highest honor a Bryant dealer can receive. Each year, this award recognizes the company whose hard work, expertise, and business acumen have helped them to stand out as a leader in the industry.

“Team Family is honored to be selected as the Bryant 2020 dealer of the year,” said David Fowler, co-owner, Family Heating and Air. “I am incredibly proud of my team, and it is confirmation of what I’ve been saying for years: Team Family is the best in the nation. We have always been dedicated to doing ‘Whatever it Takes’ to take care of the team and our customers.”

Family Heating and Air has been a Bryant dealer since 2005, and its team boasts over 100 years of combined experience in the HVAC industry. Family Heating and Air was selected to Bryant’s Circle of Champions in 2018 and has been a Bryant Medal of Excellence winner the last two years. In addition, co-owner Sonya Fowler is an active member in Bryant Women in HVAC and has been featured as a panelist at the organization’s annual meetings.

“Bryant dealers are among the best in the business, and they con-

AHRI Releases First Part of Safe Refrigerant Transition Guide

WASHINGTON — The AHRI Safe Refrigerant Transition Task Force has completed the first two chapters of its Guide to the Safe Refrigerant Transition. This guide is one of several ways in which the Task Force aims to inform stakeholders about the important steps needed to ensure a safe transition to low-GWP refrigerants.

According to the Task Force, “The HVACR industry’s safe transition to low-GWP refrigerants requires proper training of all stakeholders to safely and responsibly transport, handle, install, and service equipment with ASHRAE Standard 34 Class A2L refrigerants. While the majority of the physical and chemical properties of A2L gases are very similar to the traditional ASHRAE Standard 34 Class A1 refrigerants (CFCs, HCFCs, and HFCs such as R-134a and R-410A), stakeholders must be aware of the properties of these lower flammability refrigerants and trained to mitigate associated risks.”

This guide is intended to help ensure a safe transition to mildly flammable A2L refrigerants.

The first chapter, entitled “The Changing World of HFC Regulations,” covers the history of recent refrigerant transitions, including an overview of why most countries around the world are looking to phase down the use of HFCs. The chapter also covers the simi-
This chapter concludes by noting that many of the basic chemical and physical properties of new generation A2L refrigerants are very similar to previous genera-

ties and differences in refrigerant classes and the potential risks they introduce.

The second chapter, entitled “Chemical, Physical, and Environmental Properties of ASHRAE Standard 34 and ISO 817,” looks at flammability classifications of refrigerants and discusses the various properties of A2L refrigerants. This chapter concludes by noting that many of the basic chemical and physical properties of new generation A2L refrigerants are very similar to previous generation A1 (CFC/HFC) refrigerants and are readily available. In addition, the chapter notes that flammable refrigerants will only be used in new systems/applications designed and listed by a third-party laboratory to mitigate risks, and where allowed by appropriate codes and standards, unless approved by an authority having jurisdiction (AHJ).

AHRI’s Task Force was formed to address every step of the supply chain in the safe refrigerant transition to low-GWP refrigerants. The group comprises AHRI members and stakeholders employed with contractors, government agencies, the fire service, unions, training organizations, and other businesses.

Sheet Metal Firm Fabricates Device for COVID-19 Care

INDIANAPOLIS — Sheet Metal and Air Conditioning Contractors’ National Association (SMACNA) and Sheet Metal, Air, Rail and Transportation Workers (SMART) have partnered to make doctors safer.

Signatory contractor member Bright Sheet Metal Inc. and the workforce at Local 20 designed and are producing intubation boxes.

“As of late April we’ve made about 35 boxes that have been distributed as far away as Duke University in North Carolina — and it looks like we’ll be constructing at least 100 more in the weeks to come,” said Rob Groff, project manager for Bright Sheet Metal.

The project began in early April when a doctor read about intubation boxes being used in Taiwan and contacted Bright Sheet Metal.

“We received drawings Friday morning, and by 5:30 that afternoon, we had a rough prototype ready,” said Groff.

Doctors studied the prototype, requested a few changes, and over the weekend, Bright Sheet Metal built a smaller version with two metal panels and two Plexiglas panels (one of which has two holes through which a doctor can insert his gloved hands to perform the intubation) plus large grooves on the bottom so the box can lie across ventilation hoses without damaging them.

“That prototype was approved the following Monday, and we quickly provided Community Health North with a run of 12 boxes that were put into use immediately,” said Groff.

Since then, Duke University has asked Bright Sheet Metal to explore the idea of building larger boxes with vacuum attachments for intensive care COVID-19 patients who need to be isolated from other patients.

Obituary

Kevin J. Zugibe

Kevin J. Zugibe, P.E. of Nyack, New York, passed away unexpectedly on June 23, 2020. He was born on Sept. 8, 1963, to Dr. Frederick T. Zugibe and his wife, Catherine (O’Leary) Zugibe, in Pittsburgh, Pennsylvania. Kevin was the founder, CEO, and chairman of the board of Hudson Technologies Inc., Pearl River, New York. He was a professional engineer and graduate of RIT with a degree in mechanical engineering. He held numerous environmental and energy-saving patents, many of which are in use worldwide. Kevin was an entrepreneur in the truest sense of the word, building not only his own highly successful company but also an industry-leading approach to refrigerants, reclaimed, and sustainability long before these words were popular. He built Hudson with the strongest ethical principles, a care for every employee, and an unsurpassed understanding of customer needs that grew Hudson to where it is today.

Kevin was an avid musician, pilot, traveler, and environmentalist. He is survived by his wife, Maura (Langford) Zugibe; his mother, Catherine (O’Leary) Zugibe; sister-in-law, Anna Zugibe; brothers, Thomas Zugibe (Peggy) and Matthew Zugibe (Carol); sisters, Cathryn Blaber (Thomas), Theresa Mandracchia (Stephen), and Mary Raleigh (Peter); and numerous nieces and nephews. Donations may be made to the Tisch MS Research Center of New York in Kevin’s name.
Good news for dealers and homeowners.

Bad news for ..., ..., and ....
Oh, and especially ....

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Product #50 at achnews.com
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- Mike Murphy, publisher, The ACHR NEWS
I t is with great pride that The ACHR NEWS honors the winning products and manufacturers of the 2020 Dealer Design Awards, which honors exemplary manufacturing and design. Ninety-three products competed for a spot, and the quick-reference chart below identifies the winners at a glance. “These awards give us a unique opportunity to recognize the outstanding research and development efforts that go into many of the products serving the HVACR industry, and the awards issue gives our readers an opportunity to read about innovative installation and service solutions,” said Mike Murphy, publisher of The ACHR NEWS.

Manufacturers from across the globe submitted detailed information, photos, and videos to share full story about their products, which were then anonymously scored by a panel of contractor judges from ACCA, along with other industry members. In order to be eligible, the products must have been introduced to the market after Jan. 1, 2019, and be available to the market as of the printing of this issue.

Special coverage of all the Gold, Silver, and Bronze winners fills the pages of this issue. Congratulations to the winning manufacturers as well as the contractors and technicians who use these products. Those in the field are the true technicians who use these products to the winning manufacturers.

A tradition of design excellence continues for award-winning products

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HVAC Controls Provide Increased Connectivity for Easier Access

BY TED CRAIG

The Gold-winning Sporlan S3C series of case control products provide safety, security, and service for remote and self-contained refrigerated display appliances (single or multiple coil). The S3C family of controls includes a case controller, display module, and valve module that all support open protocol communication via BACnet and Modbus. The system is designed to facilitate both installation and integration by the refrigerated appliance OEMs as well as retrofit into existing supermarket refrigeration control installations.

Sporlan developed the series of tools using data gathered through surveys, interviews, and input from existing customers. When enabled, the controller provides automated configuration and network integration. The S3C Case Control peer-to-peer system is capable of standalone or BAS coordinated control of up to eight refrigerated cases per lineup. This family of controls simplifies and shortens the time required to set up new equipment or retrofit an existing system for more precise control.

Jeremy Bosco, foreman for DEEM Mechanical, a commercial and industrial mechanical and electrical company with offices in Lancaster, Missouri, said he found the controls save time for the technicians servicing them. The firm uses them at many of the Walmart stores it services. “The case control does all the figuring,” Brown said. “Just as long as you have all your sensors in the right place, they are very user-friendly.”

The Sporlan Tech Check App provides a way to connect to the S3C controller to verify settings, change parameters, and troubleshoot the case. The S3C has the ability to connect to RS-485 and Ethernet at the same time.

The Sporlan Superheat Control Systems (SCS) are intended for use on refrigerated display cases, walk-in coolers, and other applications where easy setup and precise superheat control are desired. Control systems utilize either the Sporlan pulse width modulation expansion valve (SCS-PB) or a Sporlan step motor operated electric expansion valve (SCS-SB).

The systems are intended to reside in the refrigerated space and communicate via Bluetooth with the Sporlan’s Tech Check mobile app. Once the system is installed, configuration is accomplished via Bluetooth. A technician activates the controller’s hall effect switch to establish the Bluetooth connection and select the refrigerant, superheat, and pressure transducer range within the mobile app. On-board LEDs offer system status indication.

Sporlan has found Bluetooth connectivity to be very successful,” said Heath Schaefer, Sporlan’s controls product manager. “The technician has the ability to connect, investigate, and troubleshoot the case without having the case opened up or dragging their tools into the store.”

If system data is needed, the controller collects data every 20 seconds and stores the last 30 days. That data can be transferred to the mobile device for viewing, graphing, and sharing with others.

Sporlan plans to continue the line by integrating the controls into other applications and cases.

SILVER

The Cooling and Heating Division of Mitsubishi Electric Trane HVAC US took home the Silver award for its Building Connect+.

The systems provide a cloud-based controls platform for managing CITY MULTI® VRF systems, third-party BACnet® devices and hardwired equipment from one convenient interface. Using an on-site panel (BCP-50), the platform connects the central controller and third-party equipment to the internet. The panel can auto-discover and connect up to 50 CITY MULTI VRF indoor units, five BACnet devices, and eight hardwired devices using digital input/output, with configuration done through a simple web portal.

“This innovation is an ideal mid-level solution for facility managers who need more than a centralized controller but less than a full building automation system to run their facilities,” said Tom Greco, the company’s director of solutions business development.

Building Connect+ allows account managers to add and manage independent users, giving specific levels of access to approved users through internet-connected devices.

For inspections and service, Building Connect+ makes Maintenance Tool data available in the browser, enabling technicians to easily view performance data and error codes without additional hardware. The technician is empowered to choose which data is important for the user and set permission levels and appropriate alarms based on the use case onsite without any special programming knowledge needed.

In researching contractor-oriented features to build into the design, operation, and function of the Color TEC3000 Series Smart Thermostat, Johnson Controls sought feedback on product specs from service technicians and systems specialists in branch offices around the world. The company reviewed customer requests and feedback with existing products. It then conducted surveys and focus groups with potential customers before implementation.

The ultimate goal is improving time efficiency for technicians. “During the commissioning process, instead of having to go to every single room in a dorm, school, or large office building to test the heating, cooling, and fan on every single unit, now the technician can access the status for every single unit remotely,” said Gary Gavin, director of engineering for thermostats and sensors at Johnson Controls Inc.
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GOLD WINNER
Emerson Copeland™ 6-40 Ton ZPKZ Fixed Speed Scroll Compressor climate.emerson.com

SILVER WINNER
RectorSeal RSH-50 Surge Protective Device rectorseal.com

Award-Winning Components Move HVAC Industry into the Future

The Copeland™ 6-40 Ton ZPKZ Fixed Speed Scroll Compressor from Emerson is a new component that the manufacturer believes can help set the industry standard for efficiency while meeting the upcoming nationwide refrigeration regulations. The company’s efforts in working to reach that goal earned it a Gold award.

The fixed-speed scroll compressor is designed for commercial applications. It features R410A, a lower-GWP refrigerant, and is being released initially from 12 tons to 15 tons. The product aims to decrease the complexity of original equipment manufacturer and contractor installations by adding harmonized fittings and plug-and-play features. These features provide scalability in electronics, allowing OEMs to interchange and test different modules without completely redesigning their HVAC systems. With harmonized fittings orientation across the product line, these products serve as drop-in replacements for legacy compressors, reducing complexity for OEMs.

Joe Nichte, president of Comfort Systems USA in Chandler, Arizona, said the Copeland Scroll ZPKZ represents the way Emerson is helping to advance the HVAC industry. He called the company a consistent leader in driving innovative change and said this new fixed-speed scroll compressor is a good example of that.

“Our industry traditionally has been very slow at innovative changes incorporated in equipment, materials, and systems,” Nichte said. “Over the past 10 years, I believe we are definitely starting to change that perception. We have seen multiple improvements in energy efficient equipment, modular, predictive maintenance, Internet of Things, and many other techniques that have improved safety, efficiency, quality, and productivity in the HVACR industry.

“As a mechanical contractor, we are always looking for better products that streamline installation and provide the reliability needed for our commercial customers.”

Copeland Scroll™ 12 to 40 hp ZPKZ compressors offer increased efficiencies, allowing OEMs to redesign commercial HVAC systems to comply with the Department of Energy (DOE) new minimum integrated energy efficiency ratio (IEER) standards that take effect January 2023. These products are recommended for use on rooftops or in chillers for commercial buildings. The fixed-speed scroll technology has been built on 30-plus years of proven Copeland Scroll reliability with over 150 million scrolls produced. The design and development took approximately three years. During that time, Emerson engineers worked to ensure that the new design enhancements would help customers meet the new standards. They used market studies, market analysis, and voice of the customer surveys to understand key trends that support higher efficiency systems. Sample testing through credible OEM and customer feedback was utilized as well.

“This product will serve as the industry steward for best-in-class efficiency, driving the market need for product development to improve efficiencies,” said Stephen Hueckel, Emerson’s marketing manager. “In addition to the higher efficiencies, the harmonized fittings orientation simplifies OEMs’ manual labor time and reduces their applied costs. With the oil-injection offering a larger operating envelope, these products can satisfy customer needs in more applications than other products in the market. Premium features such as oil detection and system communication will eventually become the industry standard features, with the ZPKZ leading the way.”

SILVER
The RSH-50 Surge Protective Device from RectorSeal earned the Silver award for components and accessories. It is a surge protection product line designed specifically for HVACR equipment and carries a lifetime warranty. The permanently-installed RSH Series is designed to protect all single-phase, 120/240-V air conditioning, heat pumps, and ductless mini-split systems from transient over-voltage and natural-caused surges. The RSH Series is weather-rated under NEMA 4X and can be installed within minutes to the nearby outdoor disconnect box’s knockout access with
As a high-efficiency alternative to the previous single-stage model, this compressor technology lowers energy consumption in air conditioning systems by operating at 66 percent capacity on cooler days when demand is low, and operating at full capacity on warmer days when demand is high,” said Mike Roberston, senior account manager at LG. “By reducing short-cycling during cooler days, the unit lowers indoor humidity by increasing the time spent circulating air across the evaporator coil.”

The RectorSeal uses superior and more reliable thermally-fused varistors (TFMOV) and innovatively combines them with a gas-discharge tube (GDT) — the HVACR industry’s first surge protection integration of TFMOVs with GDTs,” said Travis Weirich, director of business development for RectorSeal.

The TFMOV handles the everyday workload of commonly occurring surges generated within the building by millisecond transient over-voltages — in addition to supply-side utility voltage load transfers that repetitively degrade compressor motors, circuit boards, and other electrical components’ LED diagnostic lights — to easily indicate operational status installed within minutes to the nearby outdoor disconnect box knockout access. The RSH-50 reduces surge liabilities and damage.

BRONZE

As one of the world’s leading manufacturers of HVACR compressors, LG Electronics U.S.A Inc, Component Solutions’ Two-Stage Modulating Scroll Compressor brings enhanced performance to OEMs — enough to earn the manufacturer a Bronze award for components and accessories.

Stress-tested to LG’s reliability standards, the two-stage compressor features improvements and benefits made for technicians and manufacturers alike. Designed for multi-family, mixed-use, and other spaces requiring multiple HVAC units, the LG unit operates in two stages to improve efficiency by reducing capacity, particularly in moderate and unpredictable environments.

The compressor features a weather-resistant solenoid that is accessible and makes service easier. It is engineered to exceed the typical life cycle of a standard internal valve. Its 24V AC connection simplifies electrical troubleshooting and eliminates the need for special plugs.
Service and Software Improve Data Storage, Communication, Speed

Technology allows technicians to improve efficiency and reduce time at the jobsite

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**SILVER**

Reftek Inc. was awarded the Silver medal in the Contractor Services and Software category for the Reftek Bend Designer app.

The app is a simple yet dynamic CAD (computer-aided drafting) piece of software for mobile phones that allows...
contractors to quickly design and dimension a custom tube configuration with multiple bends from a single stick of tubing. It is designed to be used with the Reftekk Digi-Bender and its H55 rigid bendable copper stick tubing (ACR Type-L and ASTM B280 compliant) to accurately bend the tubing either on the job site or as pre-fab.

The app is not limited to preconfigured designs (any two-dimensional configuration can be quickly designed), nor is it limited to just center-line reference points. The user can also reference dimensions to the edges of the tubing or one of many insulation thicknesses.

“This app makes precision bending a relevant option versus the traditional brazing of elbows,” said Nate Phillips, vice president for Reftekk. “There are significant advantages to using the Reftekk bendable copper system, including significantly reduced potential for leaks and significantly less time finding/fixing leaks, both initially and with callbacks.”

BRONZE WINNER

Get My Parts
Get My Parts
getmyparts.us

process, connecting buyers of who need specific HVAC equipment parts for repairs with the appropriate sellers, based on the buyer’s parts requirements.

Get My Parts is mobile-friendly and easy to use and includes the ability for a technician to upload a picture and description of products when the part number is not known, for a local supply house to help identify. Instead of technicians needing to call various supply houses to find a specific part, vendors will individually be able to offer prices and lead times.

“Get My Parts streamlines the process of hunting around for parts, as it makes things easier and opens up the network of the entire country for local technicians,” said Chris Wisniewski, CEO of Get My Parts.

What is the recipe to make a classic even more innovative?

It’s simple. Add enhanced installation & serviceability features and incorporate energy efficient components. The result is DOE-compliant equipment that improves system performance.

The new 1/2 - 6 HP Air-cooled Condensing Units deliver the same trusted performance with plenty of innovation.

Get to know the new 2020 DOE-compliant line of products from Heatcraft at heatcraftrpd.com.

SILVER WINNER

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Reftekk Bend Designer
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REFTEKK
BEND DESIGNER

Configure Tube
Instructions

INCLUDING DOE COMPLIANT MODELS
AWARD-WINNING DESIGN 2020

1/2 - 6 HP AIR-COOLED CONDENSING UNITS
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2020 DEALER DESIGN AWARDS

INTRODUCING THE NEW

What is the recipe to make a classic even more innovative?

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BRONZE WINNER

Get My Parts
Get My Parts
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All-In-One Designs Take Top Three in Electronic Tools Category

These tools are designed to help contractors save time on the job

BY JOANNA TURPIN
ACHR NEWS STAFF

AVAC Inc. won Gold in the Electronic Tools category for its NRDC4M refrigerant recovery machine, which was created as an alternative to the conventional single- or dual-cylinder design.

“For most residential applications, those designs are adequate in terms of recovery speed,” said Stephen Rutherford, vice president of HVAC business at NAVAC Inc. “However, large HVAC systems used in commercial applications contain a significant amount of refrigerant, and conventional recovery units are too slow to do the job, or they require the use of cumbersome cart-mounted machines.”

To satisfy the demand from contractors for a faster and more robust recovery unit, NAVAC’s engineers created a four-cylinder design, which dramatically increases the recovery speed. Compared to a conventional two-cylinder machine, the NRDC4M recovery machine is up to 40 percent faster, said Rutherford.

Thomas Lech, owner of Lech Air Conditioning in San Francisco, California, agreed, noting that NAVAC has invented an entirely new class of portable recovery machines.

“The speed on these machines is incredible,” he said. “In fact, they essentially operate in Ludicrous Mode, just like on Elon Musk’s Tesla cars. They’re that fast. They actually recover right down into the micron vacuum level in about a quarter of the time of other recovery machines.”

For example, Lech said he could spend three to four hours recovering refrigerant on a normal commercial job, but with NAVAC’s NRDC4M, he is able to perform that same recovery in about 45 minutes.

“You are able to finish more jobs in a day, which is more profit in your pocket,” Lech continued. “This new recovery machine paid for itself in just a matter of weeks, and this is why I plan to replace all my other recovery machines as well.”

Adam Ogga, service manager at Payne Air Conditioning in Lakeland, Florida, is also a fan, noting that the time saved on rooftop compressor changeouts, particularly in the heat of summer, is significant.

“When you have the ability to recovery 17 pounds of refrigerant in less than 30 minutes, without having to cool off your recovery machine with ice and water, your profit levels rise,” he said. “It has been a game changer in our larger tonnage changeouts, like 70- and 100-ton chillers. This machine can make days off of refrigerant recovery. The first time we used it was incredible, unlike anything I have seen before. We recovered over 200 pounds of R-134a in less than two hours. This machine allows you to find the right psi to make the recovery time fly by.”

In developing the new recovery machine, NAVAC reached out to its contractor and distributor customers to engineer and fine-tune the NRDC4M’s features based on market needs. These features include a large, user-friendly LCD screen and a complex connecting method for the unit’s two compressors — each of which has two cylinders. It also has a brushless DC motor for high efficiency and improved startup performance and is suitable for all commonly used refrigerants.

But the most important feature of the machine is its speed, said Rutherford.

“It will provide substantial time savings for contractors to complete their residential or commercial jobs,” he said. “It’s particularly helpful for large tonnage commercial HVAC systems, as this unit will cut the recovery time by hours, providing significant economic benefits for the contractor and the end user.”

Ritchie Engineering won Silver for its YJACK™ Series Temperature and Humidity Wireless Sensors with YJACK VIEW™ app.

Winning Silver is Ritchie Engineering Co./Yellow Jacket®, for its YJACK™ Series temperature and humidity wireless sensors with YJACK VIEW™ app. The YJACK Series is a network of devices that form a new platform, which offers a total HVACR diagnostics solution.

The 67071 YJACK temperature/humidity kit includes two wireless YJACK temperature clamps, two YJACK DEW™ psychrometer probes, and a YJACK PATH™ range extender. The wireless temperature clamps allow the user to measure system temperatures without tangled wires, sending them to a Yellow Jacket® PS1-870 TITAN™ or smart device. Each device utilizes low-energy Bluetooth (BLE) technology to interconnect with each other and any Android or Apple smart device. The YJACK VIEW app provides easy-to-use access to all information measured by the YJACK Series of devices.

The wireless YJACK DEW psychrometer probes can measure temperature, humidity, wet bulb, and dew point at the air duct supply and return. Long measurement distance is not a problem, as the YJACK PATH range extender can double the 400-foot range of any YJACK probe to 800 feet, or the user can add up to five more YJACK PATH range extenders to a maximum 2,400-foot range.

“Continued innovation in the digital wireless measurement segment allows the service technician to be more productive and spend less time recording system information,” said Gary Lampasona, vice president of sales and marketing at Ritchie Engineering. “By driving all measured information to a central repository in the YJACK VIEW app, they only need to go to one place for all information.”

Ritchie Engineering won Bronze for its NRC62D refrigerant charging station, which is an all-in-one tool that allows technicians to automatically charge a system. It will also evacuate, test, and charge a system just by entering the amount of charge, said Stephen Rutherford, vice president of HVAC business at NAVAC Inc.

“The entire machine was designed with the technician in mind,” he said. “With just one easy hookup to the system and refrigerant tank, technicians need only enter the charge weight, and with one push of the button, three tasks can be completed automatically: evacuate, test, and charge. We also added temperature probes for technicians who use superheat and subcool parameters to charge a system. The easy menu-driven system allows technicians to enter their own individual parameters for vacuum target, decay level, and decay duration, which will help the technician get to specific levels that are required for each individual job.”

The refrigerant charging station features a 6-cfm DC inverter pump with high ultimate vacuum of 15 microns. It comes with a Bluetooth scale that can also be used as a standalone scale, and a digital manifold gauge is right on the 4.5-inch LCD display.
Malco Products SBC received the Gold award in the Hand Tools category for its 5/16-inch and 3/8-inch C-RHEX Drivers.

Malco’s cleanable, reversible magnetic hex (C-RHEX) drivers do double-duty with “2-EZ Technology” that ensure 5/16-inch and 3/8-inch hex drives are always at hand. Available in four lengths (2-inch, 21/2-inch, 4-inch, and 6-inch), Malco’s patented dual-sided C-RHEX drivers are quick to set up and change between sizes while the driver shank remains installed in the drill chuck. The reversible hex socket fits over a 5/16-inch magnet-tipped, ball-locking hex shaft, and can be quickly reversed to change sizes. The tested torque of the reversible hex chuck design is equal to one-piece drivers, and the impact-grade C-RHEX driver is designed for use in installing sheet metal ducting.

Malco spent two years developing, designing, and manufacturing this solution. During the design stage for this product, Malco hosted several focus groups that centered on increasing contractors’ speed to install metal duct, which led to the creation of the C-RHEX.

The buildup of metal shavings in hex drivers has been a problem for sheet metal HVAC technicians since the inception of sheet metal duct. The C-RHEX is easy to clean, eliminating frustration and buildup of metal shavings in the hex tip with the Easy Clean Magnet. Cleaning only requires the swipe of a glove or shop towel to clear any metal shavings.

The drivers also make it easy to switch between sizes while the driver shank remains installed in the drill chuck. This makes the job more efficient and reduces the number of drivers needed. The product is also durable and long-lasting, tested and backed by a lifetime guarantee.

“Designed with HVAC professionals in mind and built on Malco’s legacy of quality and innovation, Malco’s cleanable, reversible magnetic hex drivers ensure 5/16-inch and 3/8-inch hex drives are always at hand,” said Nancy Gunnerson, marketing manager for Malco Products. “Featuring single-piece strength and an indestructible magnet, it’s the perfect companion for trade pros.”

“Instead of taking time to change out or find your ¼-in or find your ¾-in and find your 5/8, you’ve got one bit that does most of anything that we’re going to run into on an HVAC system,” said Jaime Christensen, lead service tech at Holmberg Mechanical in Bellevue, Washington. “It saves time and it’s versatile. And you can pull that head off and clean off your magnet regularly.

“I love it,” he concluded.

Silver

The Valve Core Removal Tool with Slide Valve Port by JB Industries Inc. was awarded the Silver medal in the Hand Tools category.

The A32525NS is a valve core removal tool that utilizes an additional slide valve on the side port to accommodate a micron or vacuum gauge.

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High Efficiency Technology Takes Residential HVAC to the Next Level

BY TED CRAIG
ACHR NEWS STAFF

Carrier took home the Gold in the HVAC High Efficiency Residential Equipment category for its Infinity® 26 Air Conditioner and Infinity® 24 Heat Pump with Greenspeed® Intelligence. The units are designed to provide heating and cooling for single-family homes. They are rated Inverter, but one is an air conditioner and one is a heat pump. Product development and design began in 2016.

The Infinity 26 and Infinity 24 offer a number of benefits for technicians. Bluetooth technology is available on the outdoor unit, so it is not necessary to go inside the home to access outdoor unit diagnostic information. The equipment is compatible with an updated service tech app that includes the fault history of the unit, system parameters, and interactive fault trees. Over-the-air software updates are available, and technicians can assess over 130 diagnostic points. Plus, the equipment features two-wire installation, is self-configuring, and is Infinity® Zoning System capable. Installations can use up to 250 equivalent feet of refrigerant line length.

“As we continue to battle the shortage of technicians in our industry, there is a premium placed on time, so we’ve leveraged technology to simplify, installation and maintenance,” said Todd Nolte, Carrier’s senior director of product strategy and regulatory, HVAC - residential. “With our pinpoint accurate diagnostic tools, technicians can easily and quickly service these products and troubleshoot issues. Plus, we’ve tripled the number of diagnostics available to technicians and made Bluetooth® technology available on the outdoor unit, so they no longer need to access that information inside the home. With the Infinity 26 and 24, we’ve been able to truly highlight our role in helping to shape the industry with high-end equipment that is simple to service and maintain.”

The units provide homeowners with improved efficiency and sound ratings, as well as enhanced serviceability features for soothing home comfort.

“We’re proud of the Infinity® 26 and Infinity® 24 with Greenspeed® Intelligence, as these products truly showcase Carrier innovation,” Nolte said. “With this new equipment, we’ve broken through the ceiling of efficiency and through the floor of sound ratings for ducted systems.”

Jim Snyder, owner of Irish Air in Indianapolis, operates in a market with modest homes but owners who are looking at spending money on the houses as long-term investments. At the same time, Snyder said, these consumers don’t want the safe removal of the micron gauge without letting air inside the system and preventing the risk of refrigerant damaging the micron gauge.”

During design, the main ball valve handle was switched from a traditional 90-degree turn to a handle that is now actuated in-line with the valve. This allows the user to open and close the valve in tight areas with a single finger.

BRONZE
JB Industries’ JB Platinum Flex Vacuum Pump won the Bronze award in the Hand Tools category. The DV-83BP and DV-142BP, two vacuum pumps, both operate with a 9-amp-hour lithium-ion battery, but also include an A/C adapter. These large 3- and 5-cfm models boast features such as gas ballast valves, 25 ounces of oil, lift ring, heavy duty aluminum construction, and over-the-counter warranty.

The DV-83BP and DV-142BP provide long-lasting battery power of 90 and 60 minutes, respectively. If power is available, the A/C adapter can be utilized for continuous run. The pump also alerts the user to a low battery with a beeping alarm.

“These pumps offer the best of both worlds: A mobile battery powered pump for applications where A/C power is unavailable, and a corded A/C pump where long evacuation is required,” said Mark Smrha, engineer at JB Industries.
Demand-Driven Innovation Shines In HVAC Commercial Category

Coil technology featuring a proprietary aluminum alloy tube/fin coil for superior corrosion resistance and provides excellent heat transfer and low air sound levels for maximum efficiency. The EL16XP1 has sound levels as low as 71 dB. Contributing to the low sound is a compressor sound dampening system that uses a polyethylene compressor cover containing a 2-inch-thick batt of fiberglass insulation. Also, most tonnages have a variable-speed outdoor fan motor for quiet operation. The total development included competitive benchmarking, VOC, and product testing to ensure these units capture a growing market segment that requires higher efficiency equipment to qualify for utility rebates and new construction building requirements of at least 16 SEER/13 EER and 9.5 HSPF.

BRONZE
Ecoer Inc. won the Bronze award for its EO DA18H-2436 and EO DA18H-48-60. These are two condensing units that provide 18-20 SEER comfort. The systems utilize Mitsubishi compressors, Panasonic brushless motor fans, and Sagomonyna EEV/4 way valves. The units achieve 100 percent heating down to 5°F, and also offer four air handler units that cover from two to five tons. The EO DA18H units have eight sensors fully integrated into the unit that send out 14 different performance/operational parameters, via a patented IoT gateway, to the company’s monitoring centers and ultimately to the installing contractor, who can see live data logging and receive notifications when an issue arises. The installing contractor can also make remote changes to the system.

“This is the direction where most residential HVAC manufacturers will be heading in the future,” stated a representative from the company. “IoT ... saves time, allows for more functionality, and provides a platform from which the contractor can provide the best service possible to its customers.”

Symphony Insight:
Symphony Insight provides you with actual energy usage & operating costs data from WaterFurnace homeowners across the country.
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By Joanna Turpin
ACHR News Staff

Raypak won Gold in the HVAC Commercial category for its XVers L commercial boiler, which features a stainless steel fire-tube heat exchanger, functional design, and adaptive controls via the intuitive VERSA IC™ touchscreen display. The boiler came about as a response to contractor demand and company innovation, said Lyndal Moore, national sales manager of the commercial division at Raypak.

“As Raypak was rolling out the XVers platform, acceptance and success of the VERSA control package on our larger Btu firetube boilers was becoming a big hit,” he said. “There was immediate feedback from the field to have the same features and benefits incorporated into a lower-Btu range of boilers — hence, the creation of the XVers L.”

The XVers L commercial boiler features up to 98 percent thermal efficiency, a smaller footprint, and will soon have the ability to cascade up to eight units. The crown jewel of the product, however, is the continuation of the VERSA IC control platform across these smaller Btu boilers, said Moore. “The incorporation of the VERSA IC control platform, as well as the optional flow meter, and the Raymote™ monitoring system, give the same consistent features and benefits cherished by contractors on our larger XVers,” he said. “Because of the simplicity of the VERSA IC platform, contractors can get on and off a job during the initial set up in a timely manner, which is an important feature. A 4.3-inch touchscreen, the ability set up venting, glycol, cascading, as well as a multitude of other things that slow contractors down ... make the XVers L platform the go-to boiler.”

Contractors will also value the boiler’s smaller footprint, which gives them more room for installation and service, said Moore, and the ability to vent with a variety of different
HVAC Residential Equipment Promises Durability and Efficiency

Equipment service designed to be technician-friendly

**GOLD WINNER**

Trane Technologies
S9X2 Gas Furnace
www.tranetechnologies.com

Trane Technologies received the Gold award in the HVAC Residential Equipment category for the S9X2 Gas Furnace. The S9X2 family is a 96 percent AFUE, two-stage furnace equipped with a nine tap constant torque ECM blower motor. S9X2 models are part of Trane’s S-Series furnace line, and the S9X2-PSB series includes a drastic redesign of the heat exchanger assembly, resulting in ultra-quiet furnace operation compared to the original S9X2-PSA series.

S9X2 furnaces are used to heat and cool homes and are paired with a two-stage outdoor unit (air conditioner or heat pump). Along with many hours of lab testing, the S9X2 furnace was developed with the help of a 12-person dealer council. These dealers were from all areas of the country and deal with the models on an almost-daily basis. By incorporating dealers into the design process, the engineering team was able to capture many new design elements that make servicing and installing furnaces easier than before.

To test the value of these features, Trane installed more than 72 pre-production test units in the field to ensure that dealers, technicians, and end users would all be happy with the final product. The S9X2 features blower housing rails, which make the blower housing and blower motor easier to slide in and out of the furnace cabinet. The rails help technicians more easily remove the blower for servicing — even in difficult installation orientations.

The product also includes menu-driven Integrated Furnace Control (IFC) with electronically selectable speed taps. This means that a technician can go up to a unit, change the airflow setting by means of the menu and option buttons, and be done — all without having to shut the unit down or deal with a lengthy wiring process. Plus, each S9X2 burner can be removed one at a time (versus the typical standard of removing all at once) in order to make it easier to clean or replace if needed. Instead of having to disconnect gas lines, remove the entire set of burners, and replace them after cleaning, the S9X2’s burners can be snapped in and out of place one at a time with no disconnections required.

“They switched to a tabular design that can withstand a lot more heat and can hold up to the heating and cooling that a heat exchanger continually cycles through,” said Mike Bakker, owner of Dutchman Heating and Cooling in Naperville, Illinois. “This will probably be the longest-lasting heat exchanger on the market based on the design of a tabular heat exchanger.”

“The blower is designed to be extremely quiet and extremely efficient while not giving up

**SILVER WINNER**

Daikin Applied
Rebel Applied
Packaged Rooftop Systems
www.daikinapplied.com

ventilation material makes it more versatile. They will also appreciate the Raymote application, which allows contractors to remotely monitor a system from anywhere.

“The XVers L boiler has flexibility never before seen in the HVAC industry,” said Moore. “Its piping and venting options, in conjunction with its unique construction, is a perfect match to the VERSA IC, and Raymote, make it the ideal choice for just about any job. Not only are the XVers L features practical, they are also designed to enable contractors to be entrepreneurs and deliver new kinds of value to their customers.”

**BRONZE WINNER**

Raypak
XFIIRE Boiler and Domestic Water Heater
www.raypak.com

The optional Raymote app allows end users or contractors to remotely monitor the XFIIRE. With touch-of-a-button access to vital information, it aids in decision making and cost savings and reduces downtime. Raymote also provides technicians real-time service notifications to keep them informed and prepared with the right fixes, as well as a means to log those fixes, said Moore.

“A clever, functional jacket with large backlight provides instant and easy visibility of the heater status, so technicians can easily see whether the XFIIRE requires their attention,” he said.
LENNOX LEADS IN LIGHT COMMERCIAL TAKING THE
GOLD AND BRONZE

HVAC Light Commercial Equipment
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HVAC Light Commercial Equipment
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Product #90 at achrnews.com
New Unit Heater Earns Warmest Reception in Light Commercial

Easier installations, fewer moving parts, and long pipe lengths make these winners stand out

BY ROBERT BEVERLY
ACHR NEWS STAFF

Jean-Michel Roy has some experience with Lennox Commercial’s LF25 Unit Heater, on which the DDA judges bestowed the Gold medal for the Light Commercial category. Roy, who is the president of Laltech Climatisation in St-Joseph-du-Lac, Quebec, Canada, can sum up his team’s relationship with the equipment in few words.

“The installation of Lennox LF25 heating units are quick and easy. Service and repairs are also easy. We install the LF25 units because they are reliable for the long term.”

The LF25 evolved from two years of research and development, a teardown of the manufacturer’s LF24 models, and technician feedback on potential improvements.

The unit has a built-in base pan heater and Blue Fin anti-corrosion coating on the fins of the heat exchanger.

The SUZ H2i is also compatible with a broad range of indoor units, meaning distributors can carry less outdoor compressor inventory. This compatibility helps contractors to accommodate consumers’ aesthetic preferences as they offer a high-performance, cold-climate heat pump. With less product to inventory, the SUZ H2i is easy to service, since a commonly used unit means its replacement parts are common.

“The SUZ works with a broad range of indoor units, giving homeowners in all regions more efficient, all-electric equipment for their indoor heating needs, which reduces their dependence on fossil fuels,” said Heather Bocciachio, director of product marketing at METUS.

The unit provides excellent heat transfer performance across all surfaces. The tubular construction minimizes air resistance to allow for even heating across all surfaces increasing reliability.

Part of the LF25 unit heater’s appeal is its ability to deliver comfort without delivering noise. The manufacturer emphasized that these are built to provide an environment that is both warm and peaceful.

Lennox reported that the LF25 generates 25 percent less pure tones and projection than other options. Design improvements for chassis, mounting grill, and fan components further enhance the unit’s low-noise performance.

To ensure the reliability Roy mentioned, each unit is factory-wired and tested with complete cycles of startup and shutdown before being shipped. Once in place, the heater keeps routine cleaning effort minimal thanks to an easy-to-reach, in-shot cluster burner assembly.
SILVER WINNER

**Carrier Commercial HVAC**
Carrier Weather Series Packaged Rooftops with EcoBlue Technology™
www.carrier.com/commercial

This year’s Light Commercial Silver medal goes up on the roof, directly to Carrier’s Weather Series Packaged Rooftops with EcoBlue Technology™. This single package design includes all the cooling, heating, and ventilation needs from one device for zone comfort control. Fresh air and free cooling is provided through the unit’s internal economizer design and can be integrated with Demand Control Ventilation logic and Fault Diagnostic and Diagnostic controls.

In an era where existing equipment and space constraints are a common issue, Carrier said it held the unit’s footprint to actual sizes from the late 1980s to ensure that replacement projects would not require special adapter curbs or even more extensive modifications.

Carrier describes the Vane Axial Indoor Fan System as an industry first to be used with an RTU, built to use 75 percent fewer moving parts and eliminate common pain points for customers and technicians. Techs can set indoor fan speed from the unit control box easily, no need for strobe light, remove panels, or make pulley or belt adjustments.

The SystemVu™ controller trades the need for traditional refrigerant gauges for working through the text display on a backlight menu to access refrigerant system pressures.

BRONZE WINNER

**Lennox Commercial**
VRB Heat Recovery Outdoor Units
www.lennoxcommercial.com

Lennox Commercial bookends the category this year, taking the Bronze with its VRB Heat Recovery Outdoor Units.

The three-pipe design for these units features a dedicated hot gas line and enables simultaneous heating and cooling. The single-module capacities are available up to 16 tons, while twin and triple modules expand up to 42 tons, achieving up to 32.8 simultaneous Cooling & Heating Efficiency (SCEH).

Lennox cites the long pipe lengths and individual zone temperature controls in making these ideal for high-rise buildings, hotels, schools, and offices, although they can also serve settings like grocery and even indoor hydroponic grow facilities.

Just for contractors, the hinged doors allow quick, toolless access to internal components. Moreover, integral braces hold them open to allow installers and technicians to work safely and more easily. Its LCD console is detachable, with a 10-foot-long cable to let techs use it and close the doors for more accurate testing readings.

Speaking of hinges, a double-hinged electrical panel allows quick access to internal components. A final design detail for safety and convenience: the main control board sits on a hinged panel within the larger hinged control box.

**TOMORROW’S COMPRESSORS TODAY**

As we continue to develop Copeland™ technology that will offer regulation-ready performance, it is our honor to be recognized with a Gold 2020 Dealer Design Award.

**Copeland® ZPKZ fixed speed scroll compressor**

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Indoor, Outdoor IAQ Technologies Work to Advance Air Purification

Winning products provide efficient, long-life designs

**GOLD WINNER**
RGF Environmental Group Inc.  
HALO-LED™  
www.rgf.com

**SILVER WINNER**
Aprilaire  
Filter Grille Air Cleaners  
www.aprilaire.com

**BRONZE WINNER**
EnduR Maid  
EnduR Maid  
www.enduraduct.com

GF Environmental Group Inc. won the Gold award in the IAQ category for this year’s competition. Its all-new HALO-LED™ is an in-duct mounted, whole home air purification system that proactively treats every cubic inch of air conditioned space. The product has been in development for nine years, but RGF has been researching and developing chemical-free purification technology for more than 30 years.

The new patent pending technology is powered by low-energy, ultra-long-life LED light array utilizing an exclusive hybrid hydrophilic washable ceramic catalyst to provide indoor air purification. The product is mercury-free and zero ozone compliant. Usage reduces airborne and surface microbials, bacteria, viruses, mold, smoke, and VOCs. Leveraging bipolar ionization, the HALO-LED™ provides the added benefit of reducing airborne allergens, dust, and particulates.

“Combining REME-LED™ technology along with RGF’s proven PHI-CELL® technology, this ‘product provides revolutionary indoor air purification,’” said Walter Ellis, executive vice president and general manager at RGF Environmental Group. “RGF has been researching and developing UV LED-based treatment systems for many years. The technology has finally advanced to a point where usable UV LED output power and useable wavelengths have coincided to make this next generation of products possible.”

For the end user, this product has a long-life replaceable LED cell module that provides clean air. For the HVAC contractor and technician, the product features easy integration into existing residential HVAC systems and automatic self-cleaning bipolar ionizers with carbon fiber brushes to reduce particulates. “The HALO-LED offers the technician an opportunity to increase profits while providing a chemical-free indoor air quality solution to their customer,” said Ellis. “Utilizing UV LED technology, which is mercury-free and highly energy efficient, a near ideal green product offering, provides the technicians with a very unique product to offer to their customers.”

RGF tested many different UV LED array geometries and wavelengths with specific catalytic designs to achieve the best treatment results. Driving currents were optimized to provide the longest possible diode life with the highest possible efficacy. The company then used its in-house 3-D printers and fiber laser to manufacture multiple prototypes for conceptual mockups and for actual lab and in-duct testing. Testing occurred first in RGF’s digital 3-D environment with computer modeling and analysis, followed by controlled physical testing in the wet lab on microbial samples and VOC’s of concern. Finally, prototype testing was conducted in RGF’s in-house ASHRAE test method-based HVAC testing apparatus.

“We then sent several prototypes to the top contractors around the country for installation, analysis and criticism,” said Ellis. “Based on this testing and feedback, we came up with the final design.”

Future plans for the HALO-LED include introducing this technology into other new products in the near future.

**SILVER**
Aprilaire’s Filter Grille Air Cleaners take home Silver in this category. The product is designed to bring highly effective Aprilaire air cleaning to systems where the return is mounted on the ceiling for consumer access to filter replacement within the living space. This is the case in many markets in the South and West, where homes do not have basements and HVAC equipment is located in the attic. According to the company, these products provide a benefit to contractors in residential new construction markets.

Two years of design and research were invested by the company. The research was done primarily with contractor interviews in key new construction markets including Florida, the Carolinas, and California. From the interviews, the company realized that the primary issue was high system static and the subsequent callbacks to address the problem. The only alternative was to put additional filtered returns on the home’s HVAC system in an attempt to reduce static. This led to higher system install costs and relied on homeowners to change several filters of varying sizes throughout the house.

The research gave Aprilaire the insights needed to develop a contractor-friendly product that addressed their specific requirements. The filter comes in standard sizes for easy retrofit to existing 1-inch filter grilles and features a removable door for easy installation and filter changes. The addition of alignment blocks make it easy to replace filters and to keep the filter in place when the door is opened. All models use patented collapsible Aprilaire replacement filters — 610, 613, 810, and 813.

**BRONZE**
Taking Bronze, EnduraDuct’s patented design is a highly efficient outdoor ductwork system that is code compliant, including ASHRAE standards. This pre-insulated and cladded duct system provides true SMACNA standard duct construction with a non-turbulent metal interior along with a standard non-penetrating insulation and cladding connection system. The system is fully insulated, even at the connections, with no interior caulks or sealants to rely on, creating a long-lasting weather- and air-tight system. With R values ranging from R13 to R26, the outer coating will withstand and endure the elements while maintaining a professional looking leak-free, weathproof outer shell. The product comes in a high load tolerance, heat-reflective white color, but is also available in custom colors to match end user rooflines. Multiple selectable internal materials are available based on application, including G-90 galvanized, aluminum, PVC-coated stainless steel, black iron, and more. EnduraDuct’s easy installation uses connections field installers are familiar with — TDC/TDF connections. Installers use VHB double-sided tape on the field inserts to hold them securely in place, allowing the field technician to caulk the seams with ease.

The company’s next mission is to utilize the patented designs and advanced coating technologies to solve problems and improve other industry products and designs. EnduraDuct is currently in the research and development phase to master spiral ducts with the same R values as its standard ducts.
Most surveyed homeowners said they want zoning, and no one makes it easier to install than ZoneFirst! More affordable than mini-splits or second units, our thermostat-controlled, motorized dampers quickly install into existing duct systems and allow you to give both residential and commercial customers as many adjustable heating and cooling zones as they want. You get a highly-profitable product line, they save up to 30% on their energy bills. Deliver plug-and-play comfort with ZoneFirst.

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Better Access Makes Cool Products

Improved doors, flexible wireless control, managing clearances pay off for this trio of manufacturers

BY ROBERT BEVERLY
ACHR NEWS STAFF

ike other companies working in the sector, Heatcraft Refrigeration Products faced a new set of DOE Annual Walk-In Energy Factor (AWEF) standards taking effect on Jan. 1 of this year. Viewing the regulatory requirement as a larger opportunity, Heatcraft made a few contractor-friendly improvements big and small on its ½- to 6-hp Air-Cooled Condensing Unit (2020 Model). For its efforts, the company not only delivered ahead of the AWED deadline but came away with the Gold medal in this year’s Refrigeration & Ice Machines category.

Asked for access improvements he has appreciated on the new models, John Dieffenbach, owner of Refrigeration Service Company in South Williamsport, Pennsylvania, had a clear winner. “The swing door,” he said, referring to the new design that can still be removed but no longer needs to be. While Heatcraft has made other modifications, “that’s a big one,” he said.

“It’s a simple thing, but it really helps the technician a lot.”

The door also features captive fasteners, eliminating the scenario of searching for a screw that may have been dropped while accessing the panel.

Behind the door, the electrical box itself is larger and more accessible. Room to house all the factory-mounted components means no more oversized crating — and reduced chances for any damage during shipping. Elsewhere in the box, wiring is now secured with reusable clips, so there’s no more clipping of wire ties.

The company mentioned raised base valves, now accessible without removing the cabinet. Access ports open to field piping saves additional time. The liquid line assembly (filter and sight glass) is standard on all models.

On the performance side, Heatcraft reduced the number of operational gaps when using high-glide refrigerants at high ambient and suction temperatures.

As for service and maintenance, the condensing unit features QR codes that direct technicians to online technical information and resources. Other configuration labeling details the selected options per unit.

Sold under the Bohn, Larkin, Climate Control, and Chandler brands, the line offers medium- and low-temperature air-cooled condensing, available with microchannel coils standard on all units. Heatcraft reports that energy-efficient EC motors are also standard on the C1 cabinet.

Heatcraft designed these condensing units for the most commonly commercially available refrigerants, including R-404A/R-507A, R-407A/C/F, and R-448A/R-449A.

The units may be used primarily to meet walk-in food service needs, but they can also serve in medical/pharmaceutical applications and environmental test chambers. All design improvements aside, contractors perhaps appreciate no feature more than a lack of callbacks.

With proper installation and commissioning, Dieffenbach said, that has been his company’s experience. “Their units are always reliable.”

SILVER

When very low headroom clearance is a fact of life in walk-in coolers or freezers, the Center Mount EcoNet® Enabled Unit Cooler is designed to serve, with most models measuring 1 ½ inches in height. That profile plus other attributes opened the door to Heat Transfer Products Group LLC, which picked up a Silver in this year’s Refrigeration & Ice Machines category.

Capacity for these one-through five-fan models ranges from 3,700 to 32,400 Btuh at
10°TD, with an air flow range spanning 372 to 3,150 cfm.

Units mount flush to the ceiling to provide for extra storage space. As of July 1 this year, each model also uses dual-speed EC motors, compliant with California Title 24 requirements and new DOE regulations.

The units incorporate an innovative, proprietary independent defrost system. The technology utilizes two temperature sensing devices that independently control the individual coil defrost heaters to ensure both coil surfaces achieve complete defrost. This defrosting methodology delivers more stable room temperatures, lowers operating costs, and contributes to less food spoilage and loss.

The two-way airflow provides for even air circulation and consistent temperature. Center-Mount units also feature enhanced copper hairpins for maximum heat transfer while reducing refrigerant charge.

**BRONZE WINNER**

Carel Industries S.p.A.

**iJ Controller**

www.carel.com

Users may appreciate easy replacement of the field controller thanks to a guided procedure via smartphone app. It is possible to recover the unit configuration even when the controller is broken, downloading it via NFC in a standard spare controller by just touching the controller display with the smartphone. All these operations can be done also when the cooler is powered off to increase the safety during maintenance operations.

**GOLD WINNER**

Badger Meter

Dynasonics® TFX-5000 Ultrasonic Clamp-On Meter

www.badgermeter.com

As a flow or energy meter that clamps on the outside of the pipe, the TFX-5000 meter can be installed by one person without ever shutting down the system. Harry Herron, general manager of Pittsburgh Controls in Pittsburgh, Pennsylvania, appreciates the flexibility and quality of the TFX-5000 meter.

“This ultrasonic meter seems to work in any application we use it in,” he said. “With other meters we’ve used previously, we’ve had problems getting an ultrasonic reading. With the TFX-5000 meter, that doesn’t seem to be a problem — it enables us to do our jobs efficiently and effectively, saving on labor, troubleshooting, and trying to figure out why a meter might not be working.”

As a flow meter that records flow measurements and conditions, and a TFX-5000 meter logs up to eight readings or alarm conditions, such as high- or low-flow rate alarms, with time-date stamp. Up to 8 GB of data can be logged to a micro SD card in a readable format for Microsoft Excel, and users can review logs to troubleshoot closed or open loop systems. The TFX-5000 meter also offers easier wiring and checkout, said Ades Anspach.

“Tf we use the controller to log these readings, it’s c h i n g open or completely removed to

**SILVER WINNER**

Crowcon Detection Instruments Ltd.

Sprint Pro Combustion Analyzer

www.crowcon.com

Digital devices pack data capture, analysis in easy-to-work format

** Ultrasonic Meter Wins Gold Award In Testing and Monitoring Category **

** BY JOANNA TURPIN ACHR NEWS STAFF **

Badger Meter won Gold in the Testing and Monitoring category for its Dynasonics® TFX-5000 ultrasonic clamp-on meter, which measures volumetric flow and heating/cooling energy rates in clean liquids, as well as those with small amounts of suspended solids or aeration, such as surface water or raw sewage. The TFX-5000 meter is designed for users who require a high level of applicability, functionality, economy, and performance, said Cheryl Ades Anspach, senior product manager for Dynasonics, Badger Meter.

“Research on this product started about two years before development,” she said. “Our research included visits to customer sites, as well as interviews with people experienced in installing and setting up clamp-on ultrasonic meters, in order to identify areas for improvement. Some ideas were relatively easy to implement, while others required extensive research and design. Essentially, it was a case of customer needs driving innovation and design.”

The TFX-5000 ultrasonic meter can clamp onto the outside of pipes that are 48 inches or smaller. It does not contact the internal liquid, and the meter is available in two versions. The first is a flow meter for water delivery, sewage, cooling water, water-glycol mixtures, alcohols, and chemicals, and the second is a heating/cooling energy flow meter used in conjunction with dual clamp-on resistance temperature detectors (RTDs), which is ideal for hydronic process and HVAC applications.

The iJ is a simple and smart controller that enables new ways to interact with the final units through its NFC, Bluetooth, WiFi, or 2G connectivity. This enables IoT services with a cutting-edge user experience to simplify unit installation and diagnostic. Moreover, the company explains, iJ is a complete platform, from small to large formats, with the possibility of entirely changing controller style, color, and graphics to integrate an aesthetic into the final unit design.
allow easier access to wiring in tight spaces,” she said. “The TFX-5000 meter also features resistors integrated on the main board, which eliminates sourcing and the installation of external resistors, such as RS-485 terminating resistors. Test modes for current and digital outputs also ensure the signals get through to building automation systems. In addition, a technician can easily program or add options during or after installation.”

**SILVER**

Winning Silver is the Sprint Pro Combustion Analyzer from Crowcon Detection Instruments Ltd. Available in five models, these are more than just analyzers, as they combine flue gas analysis, ambient air monitoring, gas escape leak detection, and more. The full-color screen makes interpreting results easier than ever, and the large multi-function keypad makes operation simple, even with work gloves on.

“The Sprint Pro streamlines the service call process for the heating engineer through a user-friendly operation, multi-function capability, and simplified versatile reporting,” said Louise Laing, vice president of North American sales at Crowcon Detection Instruments. “Rugged construction and advanced water damage protection minimize downtime. This, along with quick calibration and service turnaround, free first-year calibration, and a four-year warranty, results in a low cost of ownership and increased time on the job.”

These analyzers minimize tool count by combining flue gas analysis with leak detection and ambient air testing. The three-stage water trap system minimizes downtime and delays caused by permanent or temporary sensor damage due to water intake, which is the No. 1 cause of combustion analyzer downtime. The external reservoir shows the engineer when it needs to be emptied, and the analyzer self-purges when the device is switched off. Flexible communications (USB, Bluetooth, and IR) simplify the testing process, allowing for easy creation and delivery of professional tests.

**BRONZE**

Claiming Bronze is REFCO Manufacturing US Inc., for its REFMATE digital manifold, which combines the latest technology with an intuitive and easy-to-use interface that makes it easy for technicians to quickly analyze any air conditioning or refrigeration system.

The REFMATE was three years in the making and is used to analyze target subcooling and superheat in order to maximize the efficiencies of air conditioning and refrigeration systems, said Steven Secord, vice president at REFCO. Further, it captures, processes, and evaluates all collected information and transfers it to the REFMESH app, where a comprehensive report can be produced and shared with customers as evidence for the work conducted.

“We used survey questions, focus groups, and email blasts to harvest data to use in the design and manufacture of the REFMATE,” he said. “As a result, the REFMATE features an easy-to-read color display that can be used both digitally and analog. That way, if technicians have a preference for how they like to read their gauges, they have the choice. Basically, the digital manifold has everything technicians need for analyzing the system right on its screen.”

Technicians do not need to use an app to be able to use the REFMATE, which acts as the center of communication with a number of ancillary devices (e.g., scale, vacuum gauge, temperature clamps). While the app is available if they choose to use it, all devices can also be used standalone. A flexible power supply, which includes either AA batteries or a USB, means that technicians should never have to worry about having power during use.
Affordable Intelligence Rules in Residential Controls Category

BY ROBERT BEVERLY
ACHR NEWS STAFF

In our hot and humid climate zone, our market can be difficult to satisfy,” said Robert Hadley, division president/home health for Air Innovations LLC in Cypress, Texas. “The ability for the M30 to set up with Lennox equipment for a fantastic dehumidification profile, an easy-to-use Wi-Fi feature, and flexibility of matching most equipment selections lets us cover all bases with one thermostat.”

That kind of presence and value for contractors led the iComfort M30 Smart Thermostat to the top of the Residential Controls category this year. An extensive research and feedback process in response to dealers who asked for “a smart thermostat option at a reasonable price point” started in 2014, and culminated in this year’s Gold winner.

The iComfort M30 is designed like a traditional thermostat, not requiring a Smarthub or equipment interface module while still using a simple seven-wire installation. The M30 gives the dealer the ability to choose up to 14 different wiring configurations for HVAC equipment. These can accommodate various staging of heating and cooling, dehumidification of humidification equipment, and integration of conventional air handler units (AHU) with water coils.

Lennox designed the unit to be easily installed, whether as a replacement or for new construction. The integrated 4.3-inch color capacitive touch display provides a simple and easy to use step-by-step setup and activation process.

Hadley, whose company has worked primarily with builders for new construction but has expanded to direct work with consumers, said, “While we understand that one of the most important aspects of a well-performing HVAC system is a proper start up commission, the M30 helps us confirm it.”

Lennox promotes the iComfort M30 as more than just a smart thermostat, thanks in part to a universal 24V option that also has a level of intelligence that interacts with the Lennox iComfort dashboard. The iComfort Dealer Dashboard provides dealers a window into the homeowner’s HVAC system, offering basic alerts, warnings, and reminders as well as system usage reports.

As Hadley noted, the overall capabilities allow the contractor to “view certain aspects that are happening in the home without sending out a truck.”

Information flows the other direction, too. As a benefit for customers and dealers alike, the thermostat can receive over-the-air updates that push new feature capabilities and enhancements without the need to replace the product on the wall.

Performance settings include a “Feels Like” mode. This takes into consideration the indoor and outdoor temperature, as well as indoor humidity levels, and adjusts accordingly to deliver a precise desired temperature based on how the homeowner wants the air to feel.

Homeowners can also set a seven-day schedule in three simple steps, and users can also control it via Amazon Alexa, Google Assistant, IFTTT, and Building36.

SILVER

The residential controls runner-up is officially the Smart Self-Balancing Bypass Damper, but readers can follow EWC Controls’ lead and use “SBD2” for short.

Available in round and rectangular dimensions, the SB2 serves to bypass “only enough” airflow, in the company’s description, to restore proper static pressure of .35 or .5 inches water column (wc) to the system during zoned operations. Near Field Control (NFC) wireless data protocol lets contractors access the unit using the Assistant app and Android or iOS smartphone. An NFC-to-Bluetooth adapter is also available, which the contractor temporarily mounts to an SBD2 instead of holding the phone against the SBD2 actuator.

EWC Controls built the SBD2 to work with any zone system to provide continuity for contractors in setting up bypass equipment in the field. The company also recognized that while some contractors may not have a manometer close at hand, they all have phones and can deploy the free app.

The SB2 uses the app to deliver data such as system static pressure value, system static pressure setpoint, current bypass damper position, total hours of bypass activity, total hours of indoor fan activity, and trend graph reporting.

BRONZE

The wall-mounted wireless remote controller with touchscreen operation is designed to provide complete control of personal comfort. Compatible with all Mitsubishi Electric M-Series and P-Series residential products as well as CITY MULTI® commercial products, kumo touch can be used with the kumo cloud® mobile app and web service or as a standalone wall controller. It is the result of three years of research to build a second-generation offering expanding on the earlier MHK1 controller.

User-friendly commands include basics like on/off and setpoint but also let users adjust fan speed and vane direction as they wish.

The wireless kumo touch gives contractors flexibility during installation, especially for hard-to-reach mounting locations. The kumo touch also features an easy pairing method that makes installation seamless for contractors.

A smaller receiver means the thermostat can “disappear” once installed. The kumo touch gives contractors and homeowners interested in a low-profile aesthetic increased flexibility for installing HVAC controls.
In Wake of COVID-19, Refrigeration Cleanliness Becomes Bigger Concern

Food retailers, restauranteurs interested in sanitation measures for refrigeration equipment

BY JOANNA TURPIN  
ACHR NEWS STAFF

During the height of the COVID-19 pandemic, people swamped supermarkets and other food retailers, stocking up on everything they could find, from fresh meat to frozen pizza. Refrigeration equipment was used hard as doors were opened and closed incessantly by shoppers — as were grocery store employees, who worked around the clock to keep shelves stocked.

For now, the panic has ebbed, and food retailers are seeing more normal foot traffic through their stores. Still, there is concern about transmission of the COVID-19 virus, and grocers — as well as restaurant owners — are becoming more vigilant in keeping their refrigeration equipment as clean as possible.

MORE CLEANING

Refrigeration contractors have noticed an uptick in the number of clients who are asking for additional cleaning and sanitizing measures. As Mike Ochoa, executive vice president of sales and marketing at CoolSys, Brea, California, noted, grocers are certainly more concerned about cleanliness and sanitation, as evidenced by the store staff wearing masks and grocery carts being sanitized between customer uses.

“There has definitely been a heightened focus on safety, resulting in HVAC filter changes and upgrades, case cleaning, sneeze guard installations, etc.,” he said. “Like all of us, grocers are also making sure their staff is outfitted with appropriate PPE [personal protective equipment] and that ‘high touch’ areas are being sanitized frequently.”

Sanitation is definitely a big deal in grocery stores now, said Bill Almoquist, president and CEO of Almcoe Refrigeration in Dallas, Texas. “Before the pandemic, there was some interest in having us come in after hours with our pressure washers to clean the equipment, but now grocers are much more interested in that service.”

To that end, refrigeration equipment manufacturer Minus Forty recommends deep cleaning refrigeration units monthly.

“However, exterior door handles and doors are high-traffic areas and should be wiped down several times daily as part of a COVID-19 cleaning routine,” said Randy Skyba, vice president of sales marketing at Minus Forty. “Having hand sanitizer or sanitizing hand wipes (with at least 70 percent alcohol content) next to the refrigeration units is another way to help keep everyone clean and safe.”

While COVID-19 has resulted in a greater focus on refrigeration equipment maintenance in both grocery stores and restaurants, it should always be a priority in order to keep units operating at peak performance.

PEAK PERFORMANCE: COVID-19 has resulted in a greater focus on refrigeration equipment maintenance in grocery stores and restaurants, but it should always be a priority in order to keep units operating at peak performance.  
PHOTO COURTESY OF MINUS FORTY

Heat is a big concern about transmission of the COVID-19 virus, and grocers — as well as restaurant owners — are becoming more vigilant in keeping their refrigeration equipment as clean as possible.

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Ice Machine Maintenance Means Regular Cleaning and Sanitizing

Extra cleaning may be needed if equipment is idle for a prolonged period of time.

**SMALL SOLUTION:** One of Embraco’s solutions for small-format stores, called the Plug n’ Cool, uses propane (R-290) as its refrigerant and features variable-speed compressor technology.

**BY JOANNA TURPIN**

ACHR NEWS STAFF

A s a result of the COVID-19 pandemic, many restaurants either shut down completely or else shifted to curbside/takeout service only. For the restaurants that closed their doors, some did not properly shut down their refrigeration equipment and ice machines, and regular maintenance was often deferred for those that shifted to takeout service only.

Once restaurants started reopening, smart owners asked contractors to clean and sanitize those ice machines before they were returned to service. In this market segment, however, ice machines are often not cleaned regularly under the best of circumstances. Now that profit margins are tighter than ever before, there is concern that some restaurant owners and managers may cut back on ice machine maintenance even more.

**SCHEDULE**

At a minimum, Manitowoc Ice recommends a detailed cleaning, which includes descaling and sanitizing, twice per year; however, the frequency with which an ice machine should be cleaned depends on the environment and where the ice machine is located, said Murray Meyer, director of product marketing at Manitowoc Ice.

“If the water source is high in minerals (or total dissolved solids), descaling may need to be done more often,” he said. “If the environment has yeast, sugar, and/or flour in the air, the machine may need to be sanitized more frequently.”

In the wake of the COVID-19 pandemic, there is a heightened awareness of sanitization in hospitality and foodservice operations, so Manitowoc is stressing the importance of following their existing recommended cleaning steps and procedures for proper descaling and sanitizing.

“In the busy workplace, the recommended cleaning steps are often not followed or not done to the frequency that is needed,” said Meyer. “Operators are now paying closer attention to cleaning their machine correctly and looking for automated solutions that will save them time and money.”

For its Flaker and DCM ice machines, Hoshizaki recommends — at a minimum — that they be cleaned and sanitized every six months; for its Cuber products, the recommendation is for an annual cleaning and sanitizing. Of course, cleaning frequency depends on where the ice machines are located, as in certain areas, water conditions are worse, or else the ice machines may be exposed to grease or flour, said Rodd Burger, director of technical support at Hoshizaki.

“We would be happy if owners just did the minimum number of cleanings, but unfortunately, some customers just don’t do preventive maintenance,” he said. “A concern with COVID-19 is that everybody is strapped for cash, so preventive maintenance may be overlooked even more. But ice machines need to be regularly cleaned and sanitized, and that is especially the case if they have been shut down for a prolonged period of time.”

**MAINTENANCE**

If ice machines are not shut down properly, standing water may be left in the unit, and if that happens, there is an opportunity for mold and bacteria to grow. For that reason, Hoshizaki recently issued the following guidelines, which call for additional cleaning and sanitizing at startup:

1. Replace water filters if used.
2. Turn the machine off.
3. Add sanitizer to the water.
4. Press the clean button on the machine.
5. Open the door and walk through the screen prompts, select stop when done.
6. Add the descaler to the water tray when prompted.
7. Turn on the ice machine.
8. Add the descaler to the water when prompted and let air dry.
9. Add sanitizer to the water tray when prompted, and let the machine do the work (10-minute wash, six 90-second independent rinses).
10. After the descaling cycle is complete (approximately 25 minutes), remove all the interior ice machine component parts, descale, and sanitize the parts and bin interior.
11. Reinstall all the components of the machine, spray the inside of the ice machine, food zone, and bin interior with diluted sanitizer and let air dry.
12. Press the clean button on the machine and select “make ice when finished.”
13. Add sanitizer to the water tray when prompted and let the machine do the work (10-minute wash, six 90-second independent rinses).
14. Close the door and walk away — the ice machine will

**PRODUCT**

Every OEM will have its own detailed procedures for refrigeration equipment, and contractors should always follow those guidelines. For self-contained commercial units, Minus Forty recommends the following:

- Be sure to unplug the unit from the outlet. It’s important to note that some units may still run fan motors and electronics even when switched off.
- Remove all products from the unit and thoroughly clean any spillage inside, as it could cause foul odors and mold to form.
- Allow additional time to fully melt ice in commercial freezers, especially chest-style freezers without automatic defrosts. Avoid scraping ice from the inside of the unit, as this may damage the unit or even puncture the wall, potentially damaging the refrigeration system.
- Leave the doors open to dry the interior of the unit, then wipe all surfaces with a detergent that is food-safe. There are some areas that will be inaccessible, so it’s important to leave the doors open and provide sufficient airflow to evaporate the majority of the moisture.
- Leave the door propped open slightly to allow any remaining moisture to escape. Failing to do so can also lead to odor and mold forming inside of the unit.
- When restarting the equipment, allow the unit to cool down to its ideal operating temperature before loading it with product.
- After performing these cleaning procedures, contractors should check the temperature in the refrigeration units to make sure they are in the proper range for food safety.

“Just like increased temperatures mean illness in humans, the same could be said for a refrigeration unit,” said Skyba. “Temperature variations are a serious threat to food safety, potentially contributing to bacteria growth, pathogens, and cross-contamination. In restaurants and grocery stores where doors are being opened and closed all day, maintaining optimal temperatures within the unit is crucial. If the unit does not have a temperature malfunctioning safeguard (such as Minus Forty’s NAMA-approved Smartlock™ food health monitor), owners should aim to monitor temperatures frequently to make sure they are within the healthy range.”

Skyba added that to ensure food safety, contractors — and end users — should remember the acronym ACT: airflow, cleaning, and temperature. All are necessary in order to keep refrigeration equipment operating safely and reliably.

**FOCUS**

Supermarkets, C-Store, and Restaurants

PROPER PROCEDURES

staff

CHR NEWS

JULY 27, 2020

AIR CONDITIONING, HEATING & REFRIGERATION NEWS | JULY 27, 2020
automatically go into the ice making mode, saving time.

Preventive maintenance on an ice machine must include proper descaling and sanitizing on a regular basis, said Meyer.

“Owners can perform remedial or intermittent descaling and sanitizing between the deep cleanings by adding the descaler and sanitizer in the water trough and running through the clean cycles mentioned above (no parts removal necessary),” he said. “But in most cases, owners should do a deep cleaning once a year to get to the parts that are not touched by water.”

If regular descaling is not done, two things can happen to the ice machine, said Meyer. First, the evaporator will not

b

for customers. Cold, damp environments are ideal locations for bacteria to grow, and if the machine is not regularly sanitized, said Meyer, biofilm can grow — and in some cases show up as black specks on the ice.

“Doing both descaling and sanitizing will improve the longevity of a machine and improve the quality of the ice, so the product it cools tastes even better,” he said.

In addition to cleaning and sanitizing the ice machine, contractors should clean the exterior of the unit and perform any other additional maintenance, said Burger.

“This includes cleaning the condenser and looking for water leaks, oil stains, or anything else that could be a sign of a potential problem,” he said. “All these preventive maintenance measures are important in order to keep the ice machine working properly.”

CLEANING AND SANITIZING

Ice machine manufacturers are always looking for ways to make their units easier to clean and sanitize, and many also offer additional devices that help do just that. Manitowoc, for example, offers LuminIce II, which is designed to control viruses in the air and on surfaces while inhibiting the growth of bacteria, mold, and yeast in the food zone.

“This is a fully integrated, automatic, UV gas air solution that uses a combination of UV light with two wavelengths,” said Meyer. “The 234 nm wavelength sterilizes the incoming air, and the 185 nm filament creates a COD (Cold Oxygen Plasma) that has proven to guard against airborne viruses, as well as inhibit the growth of yeasts, spores, and other bacteria.”

LuminIce II can be a factory-installed option on 26 Indigo NXT models, or it can be added as a plug-and-play aftermarket device. Once installed, the Indigo NXT automatically detects the device and generates a sanitation icon in the display. The icon shines blue if operating normally or changes to red, which indicates that the bulb needs to be replaced. LuminIce II can also be installed on the Neo® undercounter ice machine as an aftermarket solution.

“We also make our Indigo NXT ice machines easy to clean by including features such as a hinged front door, so it doesn’t have to be removed and put on a dirty floor,” said Meyer. “In addition, all internal parts are treated with the antimicrobial agent, Alpha-San®, which inhibits the growth of bacteria, and the food zone is front facing, so it is always accessible and visible for a thorough cleaning. We also seal our food zone with a thick rubber gasket both on the top and front panel door to keep out contaminants, and the component parts that need to be removed for a detailed descaling and sanitizing can be removed without tools in a matter of minutes.”

Ozone is also an effective sanitizer, and Hoshizaki offers an ozone generator that is placed directly in the water and therefore inhibits microbial growth on everything the water touches, including the water lines, drain, etc., said Burger. Even though the product works very well, he added that nothing replaces cleaning and sanitizing a machine.

Newer models of Hoshizaki’s ice machines also have CleanAssist, which does not require pre-mixing of the cleaning solution or sanitizer. Instead, the control board automatically dilutes the cleaner and bleach sanitizer in the ice machine, and the solution can be poured from the front of the machine, rather than from the top. The system then lets the operator know when to proceed to the next step.

In order to make its units easier to clean, Hoshizaki has decreased the number of parts in the water circuit, which results in fewer parts to clean, said Burger. These parts also “snap fit” together, so they are easier to take apart and put back together.

As restaurants start to reopen, owners should remember to have their ice machines cleaned and sanitized before opening their doors. And this should be done by a qualified contractor, said Burger.

“Restaurant owners have enough worries right now, just trying to open up again,” he said. “I would recommend that they leave the cleaning of their ice machines to a professional. And then have that professional continue to clean and sanitize the machine on a regular basis to keep it running safely and efficiently.”

| DETAILED CLEANING: At a minimum, Manitowoc recommends a detailed cleaning, which includes descaling and sanitizing the ice machine, twice per year. | Solve your oversized A/C problems with the APR Control

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Small-Format Stores Require Tailored Refrigeration Strategies

There is no one-size-fits-all approach for selecting equipment designed for smaller spaces.

BY JOANNA TURPIN  ACHR NEWS STAFF

When we think about supermarkets in the U.S., we typically think of sprawling suburban stores that utilize complex refrigeration rack systems, which can contain thousands of pounds of refrigerant. These ubiquitous large-format stores are often well over 100,000 square feet in size and offer shoppers virtually everything they need, from fresh produce to dog food to gardening equipment.

While these large grocery stores are not going away any time soon, there is a new trend taking hold in the marketplace: the small-format grocery store. These petite food retailers are usually under 40,000 square feet in size, and they are popping up in nontraditional locations such as urban areas and underserved communities. Refrigeration rack systems are too large for these small structures, so manufacturers are starting to offer new equipment that is designed to fit in these tight spaces.

THE TINY TRENDS

The global food retail industry has been trending toward smaller store footprints for several years, and there are many drivers leading retailers to embrace small-format grocery stores, said Andre Patenaude, director of solution integration — cold chain, Emerson.

“Retailers are tasked with providing optimum shopping experiences for their customers and tailoring their offerings to regional preferences,” he said. “Small-format stores, which can be located in much closer proximity to customer bases in urban areas and universities, are ideal for this type of personalized approach.”

Trying to find real estate for a larger-footprint store in a high-density population center can also be a challenge, which is another reason why retailers are starting to look at smaller spaces, which typically range in size from 20,000 to 40,000 square feet, said Patenaude.

“This smaller size gives retailers more flexibility in selecting a store location while minimizing the capital investment needed to open a new store,” he said. “In many ways, this trend is a win-win for retailers and customers — helping retailers get closer to their customers and providing more targeted regional offerings while lowering startup costs.”

Several major food retailers in the U.S. are already experimenting with the small-format concept, especially in densely populated urban areas, said Pedro Besen Soprana, who is the key account manager for the Embraco portfolio in North America at Nidec Global Appliance.

“In such regions, on-the-go shoppers tend to visit these stores more frequently, and small formats offer a faster and seamless shopping experience,” he said. “There has also been a significant growth of dollar stores, which are small format and usually offer groceries, so refrigeration equipment is needed there as well.”

Tecumseh is also seeing a small-format trend developing in the United States, as well as around the world, where urbanization is causing a shift in the way people shop for groceries, essentials, and other items, said Hiroshi Saito, director of global marketing at Tecumseh Products Company.

“Due to massive growth in e-commerce from places like Amazon and Wal-Mart and food delivery services like Blue Apron and Hello Fresh, grocery stores are shrinking their stock to items that are regularly bought,” he said. “There are also micro stores like Amazon Go, which are located in the city, where people can get in and out quickly for immediate essentials.”

SMALL DESIGN

Small-format stores are not usually newly built; instead, they are often constructed in existing mixed-use spaces that weren’t initially designed to accommodate the heavy refrigeration equipment normally required for a food retail store, said Soprana. As a result, repurposing the space can be quite challenging and costly.

“Another issue is that in certain cases, the spaces are leased and some tenants (retailers) are skeptical about investing big dollars in traditional refrigeration equipment that can limit the flexibility of negotiating lease contract renewals,” he said.

Not surprisingly, space — or lack thereof — is also a big consideration in small-format stores. For example, in several mixed-use spaces, even the door clearances can restrict the type of equipment that can be installed, said Soprana.

“Some of these spaces are located under residential buildings, where the installation of remote racks or condensing units, which are normally assembled on store rooftops, are not practical,” he said. “So, self-contained cases — systems in which the condensing unit is integrated with the case — tend to be well-suited for small-format stores, since a machinery room and long piping lines are not required in this configuration. Self-contained units also provide store layout flexibility, because the unit is integrated into the refrigeration equipment, so it can be moved around very easily inside the store.”

Patenaude agreed, noting that inaccessibility to a facility’s rooftop, as well as no available space for a mechanical room, will often refute which options a small-format store can consider. Fortunately, there are many refrigeration alternatives to the traditional, centralized approaches used in larger-format stores.

“These alternatives are often more flexible and typically combine a distributed refrigeration architecture for primary refrigeration needs, along with stand-alone cases that can be moved around the store to support seasonal and regional offerings,” he said. “This allows individual refrigeration assets to be operated and controlled independently, and when used in tandem with a centralized building or facility management controller, provide communication to maintain centralized visibility to all assets — a hybrid approach that enables the best of both worlds,” he said. “Each individual controller is responsible for operating its respective asset independently. In the event the facility controller goes down, there’s little to no impact to individual assets.”

AVAILABLE OPTIONS

As Patenaude noted, there are many refrigeration alternatives available for small-format stores, and he stressed that it is important to remember that there is no one-size-fits-all approach for selecting a refrigeration architecture.

“Retailers have a wide range of pain points and business criteria on which to base their individual decisions — such as environmental sustainability, system lifecycle costs, and servicing requirements,” he said. “Emerson supports, develops, and enables a variety of refrigeration solutions that can be utilized in most existing and emerging small-format architectures.”

To that end, Emerson offers a full complement of compression technologies, facility management controls and valves, outdoor condensing units — including its...
recently launched Copeland™ Digital Outdoor Refrigeration Unit, X-Line Series — and Copeland indoor modular solution.

“Not only are we committed to supporting the small-format retail industry with continual innovation, we are actively partnering with OEM and retail customers to help create high-value solutions for this growing sector,” said Katrina Kites, market and business development manager, food retail, cold chain at Emerson. “Our goal is to combine our refrigeration technology and component portfolios with design and domain expertise to provide fully integrated solutions that address a wide range of end user criteria.”

Tecumseh also offers a solution for small-format stores, with its IntelliCOOL Complete Refrigeration System (CRS). “These small stores need energy savings, monetary savings and to maximize space, and the Tecumseh IntelliCOOL. CRS solves all these problems by running on R-290 propane refrigerant and giving store owners the flexibility to move it wherever they need,” said Satto. “There is no piping, refrigerator charging, or installation needed by an experienced technician — all they need is to plug the system into an outlet. Furthermore, since the technology needed to cool the unit is drastically reduced, store owners are now able to keep more merchandise in their units.”

Embraco offers an array of compressors and condensing units, as well as pre-charged sealed units (also known as cassettes) that were designed to speed up the development cycle of self-contained units, said Soprana. “The cassettes are especially suited for small-format stores, given that they are factory-sealed modular systems,” he said. “This means there is no need for vacuuming, charging, or brazing in the field during the commissioning process. In case of maintenance, because of the modular concept, the cassette can be easily popped out of the case and replaced by a functional unit.”

One of Embraco’s sealed units, called Plug n’ Cool, uses propane (R-290) as its refrigerant and features variable-speed compressor technology. Embraco offers an array of compressors and condensing units, as well as pre-charged sealed units (also known as cassettes) that were designed to speed up the development cycle of self-contained cases, said Soprana. “The cassettes are especially suited for small-format stores, given that they are factory-sealed modular systems,” he said. “This means there is no need for vacuuming, charging, or brazing in the field during the commissioning process. In case of maintenance, because of the modular concept, the cassette can be easily popped out of the case and replaced by a functional unit.”

One of Embraco’s sealed units, called Plug n’ Cool, uses propane (R-290) as its refrigerant and features variable-speed compressor technology. Soprana noted that this unit is easy to install and maintain and can be repaired off-site, which avoids the disruption of sales when maintenance is needed. “The self-contained architecture saves time, money, and real estate when compared to remote systems,” he said. “The configuration also brings the benefit of safety, because it uses a small charge of refrigerant and has a smaller risk of refrigerant leakage. In addition, in a self-contained configuration, each cooling unit works independently, so if there is a problem in one unit, the others provide redundancy and can keep the products refrigerated until the first is up and running again.”

NEED TO KNOW

Many self-contained units contain propane, which is a flammable hydrocarbon (HC) refrigerant that requires special attention from those installing or servicing this type of equipment. OEMs agree that before working on any system that contains an HC refrigerant, technicians should first obtain proper training in how to work safely with these refrigerants. “Hydrocarbons can be flammable in a certain concentration,” said Denny Martin, who is the technical service specialist at Nidec Global Appliance, where he is responsible for technical support of Embraco brand aftermarket portfolio in North America. “For this reason, the work site must be monitored from start to finish for HC gas buildup by leaving a quality HC detector in the lowest part of the site, as the gas is heavier than air. An HC-specific ventilation fan can be used as well to ensure the gas will not accumulate in a low area. There are also recommended procedures for refrigerant removal, compressor replacement, tube connection, brazing, and more. Since they are very detailed, Embraco recommends all technicians to take a certified training before working in any system with natural refrigerants.”

It is also important for self-contained systems to be installed according to the OEM’s recommendations. This is usually pretty simple, said Martin, as generally speaking, the only requirements are a dedicated electrical circuit and an area with good ventilation.

“One other note is to protect the unit from moisture and debris and keep it away from everyday foot traffic as much as possible to keep the unit’s condenser coil clean,” he said. “The manufacturer’s recommendations for maintenance should also be followed closely to keep the unit working correctly and efficiently for a long time.”

Whether a unit contains natural refrigerants like CO₂ or propane, or synthetic A1 or A2L blends, the food retail industry is transitioning from higher-to lower-GWP refrigerant options and small-format retailers are no exception. Given the growing number of refrigeration options that are available, many small-format retailers are overwhelmed and are looking to contractors to play a more consultative role, said Patenaude.

“This means that contractors will need to be well-versed in both the emerging refrigeration architectures and the properties of the lower-GWP refrigerants with which they will be working,” he said. “Contractors can work with manufacturers such as Emerson to help retailers develop equipment strategies that will allow them to transition to lower-GWP refrigerants today, while giving them a roadmap for achieving even lower GWP levels in the future.”

What Causes Hydronic Pump Failure?

Manufacturers explain maintenance, assessment procedures

T he argument can be made that pumps don’t fail — they just function less efficiently. If the bearings are completely seized and refuse to turn, then the failure argument is valid; otherwise, the pump keeps on pumping in most cases. Poor design, like operating too far to the left or right on the pump curve, can cause problems, and misapplications can bring about premature failure, but the pump still pumps. Designed to do their job without wavering, hydronic pumps do require maintenance to optimize their performance — even the maintenance-free ones.

According to Ben Needham, field applications engineer, Taco Comfort Solutions, there are two general types of pump maintenance to consider as a technician — mechanical maintenance and pump assessment. “Regular maintenance, such as greasing bearings and realignment, will ensure proper mechanical performance,” he said. “Greasing pump and motor bearings will also help prevent bearing failures.”

Steven Lane, communications manager for Armstrong Fluid Technology, said that seized or failing bearings on a pump can definitely lead to failure, but stressed that early identification should help the technician avoid overall system failures.

“The most common pump component to experience problems is the mechanical seal,” he said. “Seals will often start to leak as they age or in response to excessive wear. As inconvenient as a leaking seal might be, as long as it is addressed early, the issue rarely leads to actual failure.” Bearings, seals, and pump grease aside, there is another
MAINTENANCE REQUIRED: Regular maintenance of traditional commercial pumps will contribute to better performance, but more so when paired with a proper pump assessment – which will vary by application.

A WATCHFUL EYE: Proper pump assessment, including hydraulic and electrical readings, will prevent failures by ensuring the pump is not operating outside of manufacturer recommendations.

EASY ACCESS: The Bell & Gossett e-B2 twin in-line vertical centrifugal pump design facilitates easy maintenance and part replacement, allowing the removal of the impeller, seal, and motor without disconnecting the piping system.

consideration for pump maintenance: performance. In order to understand how a pump is performing, Needham suggests that technicians conduct regular pump assessments along with the mechanical maintenance.

“A typical pump assessment will include an inspection of the pump, followed by gathering, analyzing, and comparing electrical and hydraulic performance readings to the manufacturer’s published performance data and system design requirements,” he said. “Visual inspection of suction/discharge flanges for leaks, as well as the pump volute, are important. An assessment should follow regular maintenance to ensure proper performance. Hydraulic and electrical readings should confirm that the pump is operating in accordance to the system design.”

According to Needham, a proper pump assessment will prevent failures by ensuring the pump is not operating outside of manufacturer recommendations.

PUMPS COME IN VARIETY OF OPTIONS

The choice of pump will put variations in pump maintenance procedures of which technicians should be aware.

“Today’s pump choices for the residential/light commercial market offer many ‘maintenance-free’ designs, but the proven oil-lubricated three-piece style pumps still have their place with the installing contractor audience,” said Mike Licastro, training and education manager, commercial building systems & HVAC, Bell & Gossett of Xylem Inc. “Keeping oil clean and at the recommended levels provides proper bearing lubrication to reduce friction, maintain quiet operation, and prevent bearing and motor drag or eventual seizure.”

Licastro advised that when it is applicable, couple alignment should be checked and motor mount rubber bushings should be inspected and replaced if a flat spot has developed due to compression.

“Make sure to look for signs of corrosion on metal surfaces and inside the motor, and occasionally, use compressed air to blow the motor out, removing accumulated dust and debris,” he said. “Maintenance should occur at the recommended frequency for inspection, which is at least every 90 days, although site conditions may require more periodic intervals.”

Needham explained that ECM pumps often feature high-powered magnets in their construction.

“These magnets are known to attract iron oxide debris into the pump,” he said. “Installing and regularly servicing a magnetic filtering element to the system will greatly aid in preventing the buildup of oxide debris inside the pump assembly. In-line filtration systems are constantly at work, filtering hydraulic system fluids, and are designed specifically to remove iron oxide that may be suspended within circulated fluids.”

Despite some pumps having a maintenance-free tag on them, Licastro and Needham agreed that these pumps will still benefit from regular system maintenance and assessment.

ENVIRONMENT PLAYS A ROLE

The pump’s environment can play a role in its performance and required maintenance.

“In many respects, regular maintenance to optimize pump performance involves inspecting both the pump and the environment in which the pump operates,” said Lane. “Systems should be checked regularly to ensure that valves are properly set, strainers are not clogged, and that the system fluid is clean. Any issues in this area should be addressed quickly.”

He cautioned that hard water can lead to calcification and scaling within water-based systems. Although not initially an issue, substantial scaling over time can lead to reductions in the pipe size and a drop off in fluid flow efficiency, he said. Saltwater exposure brings in a different set of concerns for technicians. With this liquid, regular seals and rubber components can be damaged.

“Those pumps operating in a saltwater environment typically use different materials for mechanical seals,” said Lane.

Pumping fluid is not the only concern when considering the environment. The key to each pump’s success in certain environments is that it is within manufacturer parameters.

“Extreme temperatures, humidity levels, or presence of corrosive materials in the atmosphere could require increased frequency of lubrication and the periodic application of a surface protectant, which removes iron oxides and protects from rust formation and spread,” said Licastro. “In some cases, a component may need replacement to provide different materials of construction better suited for actual field conditions, or an additional pump accessory may be added to protect the pump from a potential harmful situation.”

WHAT DID WE MISS?

Even good technicians can overlook issues that arise with pumps and hydronic systems, especially due to the fact that even when there are problems, pumps will continue to run. Gresing and assessments aren’t always enough to keep the pump running efficiently.

According to Licastro, it is important that system fluid quality sampling is conducted, specifically pH level testing.

“Measurement of total dissolved, undissolved, and suspended solids are often overlooked,” he said. “In a glycol system, verification of nux ratio should be conducted as unfavorable results can force the pump to work harder to maintain desired operating conditions, and can lead to early failure of some components, such as mechanical seals.”

Another overlooked maintenance task is flow verification and corresponding motor amperage tests. Licastro explained that in three-phase power supply situations, confirming good voltage on all three legs of the motor should be done.

“Prolonged exposure to inconsistent low or high power will shorten the motor life and most certainly change the efficiency at which it operates,” he said. “Where flow is concerned, a noticeable reduction when compared to using consistent system operating conditions each time may be an indication that internal tolerances may have changed due to surface wear on the impeller or pump casing. This will also affect pump efficiency.”

Needham said that a hydraulic assessment can be missed in pump maintenance as well.

“Proper pump operation at design conditions should be verified against the manufacturer’s published curve,” he explained. “Pumps are typically selected as close to the Best Efficiency Point (BEP) as possible. Hydraulic readings should confirm that the pump is operating in accordance to the system design.”

Some other items related to maintenance that are frequently overlooked include closed valves and clogged strainers.

“Our field technicians also regularly find that pump controllers have been switched to ‘pump in hand’ mode,” said Lane. “While there is no immediate problem associated with this setting, removing the variable-speed capability negates the value of the intelligent variable-speed technology and prevents changes in operation that would lead to energy savings.”
In the next decade, distributors are going to see large developments in the areas of robotics, Internet of Things technologies, and intelligent warehouses. Much of that technology is already here, and distributors ready to take advantage of today’s tech will witness improved efficiency, happier customers, and fewer headaches from trying to find enough workers.

**Distribution, Analytics, and the Internet of Things**

Alec Hicks, Ryder group director of solutions design, said that one important aspect of today’s smart warehouse is the company’s ability to visualize data. He explained that operations, engineering, and financial leaders need the ability to view the performance of warehousing operation within the supply chain. Building intelligence (BI) and analytics allow this visibility.

“You’re able to view demand in the form of orders, capacities in the form of labor and equipment, and orchestrate it in a way that ensures that you’re making your service obligations at the lowest possible cost,” he said.

Hicks explained that this technology can be something as simple as building a dashboard and analytics program so that customers can use the information about their orders to make strategic decisions.

“Communicate the information in a way that is of use to the consumer so they can make the right decision when it needs to be made,” he said. Hicks gave the example of RyderShare, which connects all of those in the supply chain and share data with stakeholders.

Smart warehousing also involves Internet of Things (IoT) technology and wearable augmentation technology. Workers can use a voice headset to receive instructions, or use visual clues through smart glasses that tell the worker what task they should complete next.

“When within the warehouse system, there’s a lot of work on IoT solutions, where sensors of one type or another can measure or monitor where the inventory is and what the associates are doing,” Hicks said. These sensors can connect to the analytics programs to optimize the solutions within the warehouse. He explained that the smart technologies are in varying degrees of readiness, depending on the application (some widely used, some being deployed, etc.).

Hicks explained that the future of warehousing technology is very exciting to him, but users should be aware of the risks associated with the rapid acceleration of warehousing technology.

“There’s value in being thoughtful and making sure that you understand both the needs of your operation and the maturity of the technology that you’re looking to deploy, to make sure that you’re going to get a solution that is going to deliver the value that you need,” Hicks said. He explained that anyone interested in introducing a new technology to their warehouse should pilot the product first to ensure it will work as planned.

**Smart Warehousing and the Labor Shortage**

Kary Zate, director of marketing for Locus Robotics, said that smart warehousing technology will help distributors deal with the labor shortage. He explained that distributors are finding it increasingly challenging to find labor that can keep up with demand. Especially with the rise of e-commerce sales, warehouses are changing the way they operate and requiring even more workers to function at the most profitable capacity.

“At some point, you reach a critical mass where you get no more return by putting more people into the equation,” he said. “That’s where automation comes into play, particularly robotic automation, because warehouses are such a dynamic environment.”

Zate said that a fully automated warehouse — without employees — is a very long way away. There are enough employees to keep warehouses operating, and humans still outmatch robotics in tasks such as picking and pallet-stacking. Instead, robots are currently designed to come alongside distribution workers and allow them to be more productive. Such a design allows employers to better weather surges in volume or seasonal fluctuations in demand, since the addition of more robots adds for quick and flexible scaling that the company wouldn’t have with just employees.

This flexibility also helps with retaining labor, Zate said. Because of logistical issues, warehouses tend to be clustered together and compete over the same workers, and this competition can lead to signing bonuses and other perks. Employees who realize this competition will move to another company to ensure a $1 isn’t significant enough for them to leave.
A lot of them specifically want to work with robots because they’re walking less and lifting less. So robots allow employers to retain those workers versus having to compete with somebody for an extra dollar or two down the road per hour.”

One such robot, from Locus, goes into the warehouse with the worker, and the employee can give work to the robot (such as transporting a box to a packing location).

In addition to this, robots allow warehouse owners to better study the specifics of how the distribution center is operating — how fast picks are being completed, which employees are picking the most effectively — aiding management of the center.

“When you combine this technology into a WMS (Warehouse Management System), or interface with those types of systems,” he said, “you give management the ability to look at what’s going on in their operation and have real, quantifiable information that they can use to make significant management decisions.”

**Intelligent Solutions (of Various Sizes)**

Mark Jensen, senior director of product management at Epicor, said that as warehouses transform with new technology, distributors are looking to do more with fewer people through the use of intelligent solutions of various sizes.

He explained that these solutions utilize IoT technology, such as smartphones and tablets that are able to track the products on hand and in bins, aiding with inventory management. He has seen some distributors install small push buttons next to bins (with glue or fabric fastener) so that workers can log when a bin is emptied.

“We’re going to see a lot more Internet of Things devices to track the movements of people and equipment. It will help optimize workflow within the warehouse,” Jensen said. “That’s the kind of the future we’re going towards.”

Jensen also added that people can use voice technology through apps on their smartphones, asking the application about a specific product and getting inventory data. This prevents managers from having to walk through a warehouse and write down notes on a piece of paper, or having to call someone to check if a product is in stock.

He explained that all of these changes improve the efficiency of managing large volumes of product. Having a managed warehouse, with regular updating technology through IoT devices, informs the company about when products need to be ordered and whether a specific order can be filled without needing to restock. It also allows distributors to communicate with customers better in a world of e-commerce.

“You’re able to show customers what product is available, how much there is, and when it could be shipped to them,” he said. Plus, as delivery becomes more common for vendors, distributing a system that links delivery with the inventory is incredibly beneficial.

“I need to have an online system that allows me to be able to manage the deliveries,” he said. “I need mobile devices in the hands of the delivery truck drivers. I want to be able to have up-to-the-minute notifications for the customers to let them know when the product is going to arrive.”

There is a lot of technology, Hicks said, and he recommended distributors start small.

“Find that one thing that will have a sizable impact,” he said. “It doesn’t have to be the biggest impact, because there’s time and money involved. Get your first success with something that won’t overwhelm the company.”

He explained that he has seen some people begin their move to an e-commerce system with something as small as customer self-service, allowing customers to inquire about their invoices or open orders, or request a quote.

“That’s a good start,” he said. “That’s a way for customers to be able to connect with you and get information from you when they can’t come into your office or your salespeople can’t go and visit them.”
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Innovation for a Better Life
HARDI Recovery Survey: Summer Optimism, Uptick in COVID Cases

HARDI received results from the second Pulse recovery survey on July 30. While it remains more of a “snapshot” than statistically significant, more than half of the participants indicated this summer will be better than the summer of 2019.

Looking at the year in full, participants projected sales would be up 1 percent. Individual answers ranged from 30 percent down to 21 percent up.

Segment Trends

Forty-five percent are seeing an increase in repair jobs (up considerably over last month’s 30 percent). Eleven percent report more repair jobs, down from 16 percent. Twenty-seven percent report one-month delays, while 6 percent report more repair jobs, down from 16 percent. Nearly half describe the residential new construction segment as doing normally. One-third describe it as performing below normal, while only 19 percent see it as doing better than usual.

On the commercial new construction side, 57 percent indicate below-average performance, while only 9 percent see it as better than usual.

Human Resources

COVID-19 presence among member companies moved upward. While 12 percent reported having a new case or cases within the organization in the previous two weeks, that is up from only 7 percent in the earlier survey.

More than two-thirds describe employees as having “relaxed about COVID but are still somewhat concerned,” while 27 percent report employees and customers as remaining “very concerned.”

Three percent responded as no longer concerned.

Inventory and Customer Preferences

At 53 percent, a slim majority of survey participants report that they are experiencing delays of two to three weeks. Twenty-seven percent report one-month delays, while 6 percent are dealing with delays of two months or more.

Fourteen percent are seeing delays of one week or less. Distributor perceptions of how customers are preferring to get their equipment is essentially unchanged from the last survey. Delivery remains most popular, and curbside remains the least popular. The only shift was in the middle, with counter and will-call preferences shifting positions.

Manufacturers Join Distributors, Contractors in Seeking Tax Credit Expansion

Many AHRI member companies joined more than 750 contractors and distributors in calling on Congress to extend and expand existing tax credits for home energy efficiency.

In a letter to House and Senate leadership, the companies, which represent some 2.4 million American jobs, requested the extension as a means to help equipment manufacturers, technicians, installers, distributors, and homeowners alike in weathering the pandemic that has cost more than 400,000 jobs since March of this year.

The signatories are asking for a reset and expansion of the current $1,200 lifetime single-use cap on the credit and raising the amount from the current 10-15 percent of eligible expenditures to 30 percent, up to $2,400, for the purchase and installation of energy efficient cooling and heating systems, windows, insulation, water heaters, and other energy efficiency improvements.

“Nearly 80 percent of energy efficiency companies have fewer than 20 employees, and these small businesses have been the hardest hit in our sector by the pandemic shutdown, with workers unable to get into homes and buildings to do their work,” the letter states, adding that “providing a robust tax incentive for homeowner energy efficiency improvements will quickly restart this industry and help put these workers back on the job.”

ASA Conducts Final COVID-19 Impact Survey

The American Supply Association released results on June 18 from its fourth and final COVID-19 impact survey as conducted by its business intelligence partner, Industry Insights. Responses show member respondents are making strides in a number of categories as the industry emerges from the throes of the pandemic.

When asked about current operating status, 88.9 percent of ASA member respondents to the survey said they are at 90-100 percent operational, while 8.9 percent put themselves in the 75-89 percent category.

Continuing on with questions in the “Impact” category of the survey, 42.2 percent of ASA respondents said stay-at-home and social distancing measures currently in effect are “very necessary,” while 31.1 percent said “somewhat necessary” and 22.2 percent said “somewhat unnecessary.”
When asked about the concerns of company long-term viability due to COVID-19, 42.2 percent of respondents had no concerns, while 40 percent had only mild concerns. The 42.2 percent no-concern number is in contrast to the 33 percent number of all respondents to the Industry Insights survey, which encompasses 20 of its client associations from various industries. A total of 1,328 surveys were received.

Two-thirds of ASA respondents report having experienced delays in getting materials/products from suppliers due to the virus. For those that answered yes, 44.4 percent report delays in the one-to-three-week category with supplier lead times, while 33.3 percent report delays less than a week and 11.1 percent report lead-time truncations of more than three weeks.

Only 35.6 percent of ASA member respondents to the final survey have had to furlough, lay off, or terminate employees since March 1. For those in the affirmative category, 16.3 percent fall into the 75th percentile of that measurement, while 12.9 percent are in the average range, and 10 percent fall into the median.

When asked about the Paycheck Protection Program that is part of the CARES Act, 73.3 percent of ASA respondents said they did receive funds for a loan through the program. Twenty percent of respondents did not apply.

Respondents were then asked: As the stay-at-home orders have started to lift for much of the nation, what are their top three challenges their companies are facing related to the pandemic? Nearly four of five respondents (77.8 percent) said economic uncertainty, followed by employee morale (53.3 percent) and customers going out of business (36.4 percent). Other top responses were external communications (28.9 percent), employee safety (26.7 percent), and managing safety requirements (20 percent).

In terms of when companies anticipate day-to-day operations returning to pre-COVID-19 levels, 27.3 percent of ASA respondents said two to three months from now, while 25 percent said four to six months and 18.2 percent said one to two months. A total of 25 percent said either seven to 12 months from now or one to two years from now (11.4 percent).

Survey respondents also were asked how soon they anticipate their companies returning to pre-COVID-19 activities in a variety of categories. For in-office workforce for most employees, 34.1 percent of ASA respondents said return in one to three months, while 29.6 percent said immediately return.

For domestic company travel, 46.5 percent of ASA respondents said resume in one to three months, while a combined 28 percent say either four to six months or seven to 12 months (both 14 percent).

Finally, when asked about participation in large group activities such as conferences, events, and exhibits, 31.1 percent of ASA respondents said resume in four to six months, while that same 31.1 percent total said resume in seven to 12 months. Nearly 18 percent said resume in one to three months, while nearly 16 percent said resume in a year or longer.

The survey from the ASA is composed of 64.4 percent distributors, while manufacturers make up 24.4 percent of the sample size. One-third of ASA respondents have 100 to 499 employees, while 20 percent have 50 to 99 employees.
HVAC 2020 Demands More IAQ, More Poise

Next-phase distribution leadership includes anything from evaluating ‘temporary’ policies to providing on-the-go hot water for job sites

by Robert Beverly

One predicted the current spike in demand in the volume we have seen in the last three weeks.”

In a year of surprises, Terry Ludwig illustrates that they aren’t all bad. Ludwig is executive vice president for sales and purchasing at APR Supply, headquartered in Lebanon, Pennsylvania.

Ludwig and other distributors agree that while it may have the occasional upside, the biggest challenge for HVAC distribution in an evolving reopen landscape remains uncertainty and its impacts.

Seth DePuy, director of sales and marketing at First Supply in LaCrosse, Wisconsin, said his firm remains optimistic that business conditions will remain favorable for the second half of 2020. And yet, “What happens if a second wave of COVID-19 hits later in the year?” he asked.

“Right now, there is still a lot of questions that cannot be answered.”

Several HVAC manufacturers experienced shutdowns during the worst of the initial crisis, said Mike Meiresonne, chief operation officer at Dakota Supply Group, with executive offices in Plymouth, Minnesota.

“We expect the production recovery to last well into late summer and early fall,” Meiresonne said. “Planning our supply chain has become a unique challenge.”

Kyle Cline, vice president of operations for Locke Supply Co. in Oklahoma City, said that ensuring sufficient inventory is hard when lead times and availability can change overnight. A supply chain that is as large and complex as for many HVAC distributors only amplifies the uncertainty.

Cline pointed out that a single COVID-19 case at a manufacturer can instigate a spike in demand from competing distributors, making it tough to procure products efficiently.

Even in a good period like the one APR’s Ludwig described, distributors know that tomorrow may be a different story.

“The supply chain is stretched in the short term. A plan to continue to inventory to support the current demand could be risky, but not as risky as the alternative.”

HVAC HYGIENE

Distributors have made a wide variety of cleaning and safety adjustments, as discussed in a Distribution Trends article earlier in the year. Recent trends do not suggest those will go away anytime soon.

Jason Halmen and Richard Boynton of F.W. Webb Company in Bedford, Massachusetts, mentioned that while making the adjustment is one thing, liking it is another.

“While we practice social distancing and other safety protocols, we do miss the personal interactions with our customers and vendors,” they said. “We are still getting used to not being able to shake their hands and talking to one another with a facemask or Plexiglas between us, but we know these are necessary precautions to protect everyone’s safety.”

F.W. Webb has had to increase time spent on cleaning and sanitizing — as has APR Supply, spending one to two hours per workday at each branch in what Ludwig concedes is an “unproductive disruption” but a needed investment with a cost the company absorbs.

All the companies participating in this article said that the added cleaning has not translated to new hires, but the policies and time investments look to continue, and companies frequently handle these issues a little differently.

APR has purchased sanitation foggers. Locke continues increased regular disinfection of counters, coffee stations, and shared areas in branches.

At First Supply, the distributor has made cleaning protocols more thorough or perhaps more frequent through a daily or weekly outside service.

LESS LUGGAGE, MORE LOG-IN

Another immediate shift early in the crisis, a pivot to virtual meetings, also looks to stick in many places moving forward. That comes in part with ongoing safety concerns, but also due to some recognition that it simply meets the need with less expense.

“There will be elements of this that continue for years to come,” said DSG’s Meiresonne in talking about his team’s sales practices.

DSG has implemented a “TalkNText” line for fast response to customers who prefer it, and the company’s Expressway curbside pickup seems to have passed its audition, too.

“We will face-to-face remains the ideal format for discussions and relationship building, meetings through video have proven to be highly interactive and certainly more cost efficient,” he said.
Locke Supply's Cline agreed that the savings is real, but he sees the video option as more of a solid alternative “when in-person meetings are not practical.”

APR's Ludwig reported that these months demonstrated the company's ability to conduct business as usual while working remotely. Video has been used for meetings, training, and events. But he noted that the distributor's comfort with these methods is only part of the equation.

“The real test is whether the marketplace will embrace (or even demand) these alternative solutions going forward,” he said. “It is to our economic advantage if they do.”

Add a garden hose and extension cord, and contractors have easy access to hot running water.

**FORWARD THINKING**

How, if at all, will the COVID-era realities affect demand and the business mix for distributors such as this group of ASA members?

At APR Supply, Ludwig says that “with so much of our business being replacement and repair, we don’t have any ‘hunches’ on lasting changes.” The demand for APR’s core business, however, is remaining steady.

**INTERNAL SUCCESSES**

Distributors’ answers to a follow-up question illustrated that manufacturers were not the only ones with a few moments to be proud of through the initial rough stretch.

Cline’s proudest moment came in the form of Locke Supply’s associates’ commitment and dedication during the scariest moments of the pandemic, especially as part of an essential business category.

“Our associates immediately adjusted to new business processes and came to work every day to serve our customers while COVID-19 cases were growing,” Cline said.

At DSG, Meiresonne pointed to leadership’s early attention to a range of issues that many distributors can attest seemed to all require top attention at the same time.

“We executed on a plan that included remote work environments, digital customer engagement, and travel restrictions to ensure we are not putting our employees and customers at risk.”

Meiresonne added that a weekly company-wide update regarding what employees are seeing and how to address that has proven equally valuable.

First Supply’s DePuy relayed that their “HVAC team was able to lock up commitment with customers throughout the uncertainty of COVID-19 for the entire year.”

Offering flexibility “that others were not able or willing to offer” created opportunities that he sees as setting the foundation for a good remainder of 2020.

At APR Supply, Ludwig referred to a big-picture commitment at the top.

“Early on, we made the decision to keep our teammates employed.”

Ludwig explained that they “quickly pivoted our internal teams who had greater capacity to projects that would benefit APR beyond COVID.”

The company worked to field anything from legal questions to PPE loan inquiries. Meanwhile in the safety realm, APR reacted to unfolding events in at least one instance by “locking the branch doors and providing curbside service only, without regard to what our competition was doing.”

F.W. Webb cited daily commitment to customer needs and safety as a source of pride, but the team also generated more creative responses.

“Our Hampden, Maine, branch designed a mobile handwashing station that they are building for a number of project sites with limited facilities,” said Halmen and Boynton. “It features a 2.5-gallon electric water heater, mop sink with a bar faucet, and a bucket to catch all the water.”
As for others, the individual voices become more of a chorus about one ascending category.

“We have seen an increased demand for indoor air quality products, and I believe that trend will continue,” said Cline. He also expects Locke Supply and others to see the continued increase in deliveries, curbside pickups, and mobile orders.

“Our society was forced to change purchasing habits during the pandemic,” he observed. And much like another distributor’s previous comment that more communication during the pandemic, “We have seen an increased demand for indoor air quality products, and I believe that trend will continue,” said Cline. And much like another distributor about one ascending category.

Cline commented that “the fact that most, if not all, of our chain issue,” emphasizing that being “completely transparent with what was happening in their factories” incurred” and helped the company to preserve its quality manufacturers were able to keep the supply chain open and maintained policies like split shifts and mandatory vacation time, the distributors noted that some used the turbulence in the first half of the year, distributors gave their partners fairly high marks.

The ones who communicated frequently and in various methods, as his company worked to do with its own customers, proved most helpful to the distributor’s decision making. “Some sort of hid in the bushes, waiting to see when it was safe to come out,” he said. While some suppliers implemented policies like split shifts and mandatory vacation time, the distributors noted that some used the virus as an excuse for poor customer service.

Another distributor praised the “great job of keeping their partners fairly high marks. “A partner and large manufacturer reached out to us at the onset of the pandemic,” recalled one distributor, acknowledging that his company like many others had yet to fully understand the disruption taking shape.

“First Supply has seen the IAQ boom as well. DePuy mentioned a “dramatic increase” in demand for “everything from UV air purifiers, ion generators, electric air cleaners, and media cleaners, among others.”

DePuy has also tracked a “tremendous uptick in sensor-related products” for First Supply, and he expects that to continue.

“IAQ products like air purification, humidification, dehumidification, and ventilation systems are in higher demand,” echoed F.W. Webb’s Halmen and Boynton.

They also observe more awareness when it comes to maintenance, on both the residential and commercial sides, as owners come to a deeper understanding that better maintenance improves the performance of those IAQ investments and decreases overall costs.

They see the increased consumer interest as creating a corresponding need for distributors to have quality information available for contractor and customer inquiries in order to meet a given need with the right product(s).

F.W. Webb and DSG’s Meirsonne both expressed a belief that some work-at-home makeshift arrangements will become more permanent, with a resulting downturn in new commercial office projects on one hand while other companies reduce their existing square footage.

Meirsonne said DSG expects growth in IAQ, touchless technology, and antiviral/bacterial infused products going forward.

Such changes in square footage requirements will hasten the need for building owners to have “flexible buildings with multiple tenants, where there may have only been one before,” said Halmen and Boynton.

For F.W. Webb’s part, they explain that this trend may lead to increased popularity for technologies such as variable refrigerant systems that can help systems adapt efficiently to changes in demand and occupancy.

The COVID era is already reshaping some consumer demand and extending already uncomfortable periods of volatility and uncertainty for distributors. Nevertheless, successful distributors are finding new ways to serve contractors — including APR Supply’s expansion into PPE supply for industry customers.

And as Ludwig commented, while emphases on IAQ and job site cleanliness will likely settle into the new normal, “helping contractors be prepared both from an education perspective and by distributing related product is probably an opportunity going forward.”

That much, at least, has a familiar ring to it, doesn’t it?

**EXPERIENCES UP THE CHAIN**

Asked for entirely anonymous feedback about how their respective manufacturers had done through the turbulence in the first half of the year, distributors gave their partners fairly high marks.

“A partner and large manufacturer reached out to us at the onset of the pandemic,” recalled one distributor, acknowledging that his company like many others had yet to fully understand the disruption taking shape.

“This manufacturer outlined what was taking place on the global scale and walked through some of the possible challenges we might face in the coming months. Wow, were they right on!”

That intelligence let the distributor in turn “get in front of some of the supply chain issues that others might have incurred” and helped the company to preserve its quality of service.

Another said that some manufacturers transitioned more quickly and more smoothly than others, but he noted that “the frequency of communication was a differentiator.”

The ones who communicated frequently and in various methods, as his company worked to do with its own customers, proved most helpful to the distributor’s decision making. “Some sort of hid in the bushes, waiting to see when it was safe to come out,” he said. While some suppliers implemented policies like split shifts and mandatory vacation time, the distributors noted that some used the virus as an excuse for poor customer service.

Another distributor praised the “great job of keeping us informed of extended lead times and possible supply chain issues,” emphasizing that being “completely transparent with what was happening in their factories” made for better distributor strategic decisions.

Hiccups and weak moments aside, another commented that “the fact that most, if not all, of our manufacturers were able to keep the supply chain open despite COVID-19 was remarkable.”

He pointed to extra help in the form of prioritizing high-demand products and assistance with delivering educational webinars to customers and employees.
MEET THE WHOLESALERS: BRANDON EMINETH & LUKE NELSON

Highlights include operating as an ESOP and the lasting impressions of the DIRT FOOT stamp

by Robert Beverly

Brandon Emineth / VP, Sales
Luke Nelson / HVAC Segment Manager

Company: Dakota Supply Group
Number of Locations: 34
Number of Employees: 700
Year Founded: 1898
Website: www.dsgsupply.com

This special two-for-one edition of Meet The Wholesaler features two distribution professionals from the upper Midwest’s Dakota Supply Group (DSG), a multidiscipline distributor and ASA member. Vice president of sales Brandon Emineth joined Luke Nelson, DSG’s HVAC segment manager, for this chat.

In addition, Emineth and Nelson represent the first participants in the MTW podcast. Listen to the full conversation — including how DSG’s business model can benefit owners later on — at www.archnews.com.

DSG was founded in 1898. Relatively speaking, that’s pretty old. Has the company held on to anything from its earliest history?

Emineth: DSG has held fast to the spirit of being an entrepreneurial company. As an ESOP [using an employee stock ownership plan model], everyone is an owner, giving a way for each person’s entrepreneurial tendencies to drive our focus on customer service, vendor relationships, and taking care of our DSG family.

In addition, we have a long history of acquisition activity, bringing together a melting pot of strong companies. The best practices of each respective company have helped DSG to experience continuous improvement and a legacy of growth.

What was the hardest decision — up to now — that you have had to make in the HVACR distribution business?

Nelson: Generally speaking, it’s always difficult to make a business decision to shift purchases away from vendors and reps that I enjoy working with. We get so close to our vendor and manufacturer reps that it’s often difficult to separate business from personal — the friendships forged are very real.

At the end of the day, however, our primary job is to provide the best products and services to our customers, and as an ESOP, to always make sure that the decisions are in the absolute best interest of all of my fellow employee owners.

Is there a business leader, famous or not, that you have admired and whose knowledge you have incorporated into your own work?

Emineth: My uncle, Jim White, comes to the top of my mind. He has been a small business owner for over 40 years and is going strong today. I attribute much of his company’s success to the fact that he is a servant leader. He embodies the notion that if you take care of your people, they will always take care of the customers and the business. People first and everything else follows — this is what motivates me to keep moving forward.

Nelson: Honestly, it’s my dad, Merlyn Nelson. He was a store manager for a large Midwest-based furniture store chain, and I had the pleasure of working for him for many years. His basic business philosophy was to do the little things right, and to do them right the first time. He had a rubber ink stamp in the shape of a foot with the word “DIRT” underneath it. Amongst his staff, this was known as the “DIRT FOOT,” an abbreviated acronym for “Do It Right The First Time.” If you saw the DIRT FOOT stamp on your paperwork, you knew that you had made a preventable mistake and the boss caught it.

Getting DIRT FOOT’ed wasn’t something you looked forward to, and his staff worked very hard to avoid it. His philosophy is the baseline for my own business strategy and leadership style today — I strive to do the little things right the first time.

On the other hand, what was the worst business advice you ever got?

Emineth: I had a leader tell me once that “everyone is replaceable, anyone can do the work, so just put someone in there and they will get the job done.” While I agree that every need in business must be met, a person’s unique skills and passions determine whether they will get the job done.

As a leader, you must give people your best for them to be successful — but start with getting the right person in the right seat on the bus. I ignore that leader’s advice.

Nelson: To accept the current state of the business. I’ve heard it at several steps in my career that “this is just how things work and we need to accept it,” or “that strategy won’t work,” or “that territory is mature and will have a hard time growing,” etc.

These statements may be true in some situations, but I’ve found more times than not that there are several ways to skin a cat, and accepting the status quo because “that’s how it’s always been done” is rarely beneficial. At the end of the day, I’m stubborn and like to push the envelope — so far, it’s worked out pretty well for me.

How is your company dealing with the ongoing threat of e-commerce and consumer-direct HVAC sales?

Nelson: We are continually adding to our own e-commerce site (dsgsupply.com) with the ultimate goal of having a true one-stop shop for our customers where they can research a product, check availability, and ultimately place the order.

As far as consumer-direct sales are concerned, it’s important for both wholesalers and contractors to be reminded (and remind others) that we provide value and expertise in the channel and are not just a place to buy product.

This is how it is in other industries. Take the medical field, for example. We count on a doctor to perform surgery and understand that there will be a high cost for the procedure since we are essentially paying for that person’s knowledge and expertise. We need to continually leverage this same idea in the trades as a way to justify our place (and our value) in that chain — our experience and our knowledge is something that Amazon or other consumer direct platforms can never replace and thus carries significant value.
If we execute our plans accordingly, we don’t see these as threats but rather as additional channels to give contractors access to the value DSG provides.

What is the most distinctive benefit and/or challenge of the ESOP model?

Emineth: It’s difficult to narrow down the benefits of an ESOP because there are many. From a big-picture standpoint, there is a palatable level of ownership and pride that you will experience from the employees.

The biggest challenge is helping the emerging workforce understand the value of being part of an ESOP, because it’s not a concept that is heavily researched by this group entering the workforce.

What was your favorite high school or college course? Why? Was it the content, the teacher, something else?

Nelson: I studied marketing in college and enjoyed courses around consumer/buyer behavior and the science of why we buy. The course content was spectacular, and it was fascinating to learn about how companies and brands cater to their audience to influence their customers’ behavior. It was a blast dissecting different marketing campaigns to determine why they worked (or didn’t work). This is a part of my job today that I really enjoy. I jump at the opportunity to work with our dealers on how to grow their own businesses.

If you could have built a career in any other job or field, what would you have chosen?

Emineth: That is an easy question. I would have chosen to be a college football coach. I love the game, I love the strategy required to build successful programs, but mostly I believe the thrill of the process, playing the games, and helping athletes find their best self would be the most rewarding career a person could have.

“I had a leader tell me once that ‘everyone is replaceable, anyone can do the work, so just put someone in there and they will get the job done.’ While I agree that every need in business must be met, a person’s unique skill set and passions determine whether they will get the job done.”

- Brandon Emineth

Oddly enough, much of these benefits exist in business today — just not the gameday adrenaline rush!

Nelson: At this point in my career, it’s difficult to imagine doing anything else, but in all likelihood, I would have been a teacher. I love working with kids and think it would be a blast helping them learn and grow. Now that I have two kids of my own, I know how important teachers are in young people’s lives — it would be awesome to have the opportunity to impact so many young people.

Is there a type of “minor” HVAC equipment that you’re seeing trending up or down these days?

Nelson: Without a doubt, it’s anything related to improving indoor air quality in both homes and businesses. IAQ has always had a place in our world, but it hasn’t been universally accepted as a required solution until COVID-19.

We are seeing dramatic increases in upgrades to 4-inch media filters, whole-home ventilation products, and most dramatically of all, UV lights and ionization products for air purification.

DSG covers about as broad a range of trades and equipment as any distributor we’ve talked to for this feature — electrical, plumbing, HVAC, automation, waterworks, on-site sewer/water/well, metering. Can you point to an insight or two picked up while dealing with one particular trade that carried over to how you do business with others?

Emineth: Some of our trades require DSG to provide significant technical expertise. When you think about designing an HVACR system, or complex site drainage design, or an automation panel that DSG engineers and builds, you are getting into a realm of expertise that many distributors don’t offer.

We often build on this expertise to bring service offerings to our other business segments. We use training concepts or ideas to help inform our customers in other business segments and round out their ability to upsell, create add-on solutions for existing clients, or develop capabilities in their service offering that are in addition to what they already do. It serves us well to have this expanded windshield, which forces us to be better across multiple disciplines.
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In the COVID Era, Customer Service Is Now More Important Than Ever

The other night, I left the office early — around 4:15 — to stop by my bank and cash a check. I had heard the lobby was closed, so I went directly to the drive-up. I was surprised that no one was in line — until I got up to the little tube machine and saw a sign that the bank closes at 4:00 p.m. Obviously, there was no one to discuss this with at that time, so I had to wait until the next day. This time, I went after lunch, and when the teller responded, I asked why the drive-up was closed at 4:00 p.m. rather than its normal 5:00. His response was because of the COVID-19 virus. My reply was, “Does the virus all of a sudden increase at 4:00 in the afternoon?” His response: “Sorry, that’s our policy.”

The next day, I called the bank manager and asked him the same question — and got the same response. I said it made no sense and was an inconvenience for their customers, and he said it was the policy and basically “get off of my back.” As long I was being obstinace, I decided to take it a step further and asked why the bank lobby was closed.

He said that was so that they didn’t have a large group of customers in the bank at the same time. I have been in this bank before, and the most customers I have ever seen in there besides myself was two. Meanwhile, adjacent to the bank is a convenience store that will allow up to 33 customers at a time. It became clear to me that he had no interest in discussing this with me, and that the bank was sticking with those decisions. The moral of this story is that they were using an already bad situation to inconvenience their customers even more. The only potential reason I could think of was to cut labor costs.

On to another area: restaurants. They have suffered deeply, no doubt. However, it is very interesting to see how different restaurants have adapted. Some have completely shut down. Some have gone to a modified takeout menu and give the impression you are bothering them when you arrive. Others have purchased new computer software and telephone systems in order to be able to handle the large number of people who desire to have takeout for dinner. Which of these do you feel will be the most likely survivor?

How have you handled the services you provide in these times? We have increased our availability and have actually hired some people in order to be able to better serve our customers. We have found that people are home more and need their A/C more. Many of our customer have found that their system really doesn’t cool during the day — they just haven’t been home to know it. We have seen these as opportunities to serve customers even better.

One issue we have to understand is that our employees are dealing with the same difficulties with which we are dealing — restaurants not open, shortened bank hours, and lack of access to the recreational activities they normally enjoy. It is easy for them to become upset and depressed over the situation, and it is important that we recognize this and continually feed them positive input to keep their “drive alive.” For some, more work hours may be a benefit; if they feel they can’t be enjoying their leisure time, they might as well make some extra money. For others who need down time to escape the stresses of their work, more hours may not be the solution. What is important is that you recognize each individual’s situation and handle it appropriately.

As far as COVID-19 is concerned, if it hasn’t directly affected your company yet, it will. Some employees will have been in contact with someone who tested positive. It is important that you have some pre-thought-out procedures for how to handle such a situation.

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For you as the leader, it is important that you not show panic and that you take a reasonable, rational approach to each situation. More than ever, it is absolutely necessary for you to show that you are the leader. Show that you are handling things, and generally assure your employees and customers that you are all going to get through this pandemic together.

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**Industry Survey**

**RESULTS FROM A SURVEY CONDUCTED BY EGIA**

What are contractors’ short-term business goals focused on? (Select all that apply.)

- **Sales & Marketing:** 71%
- **Company Growth:** 63%
- **Employee Management & Performance:** 59%
- **Customer Relationships:** 48%
- **Retirement:** 4%

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