

SMART SOLUTIONS

SUMMER 2017

Helping contractors save money and enhance productivity

Craft & Son Find EVAPCO Cooling Towers a Perfect Fit for Gettysburg Hospital

Only EVAPCO, Inc. had cooling towers with a small-enough footprint, yet large-enough capacity, to meet WellSpan Gettysburg Hospital's need for upgraded towers that would lend themselves to future expansion. Manchester, PA-based James Craft & Son Inc. worked closely with EVAPCO to find the perfect solution to a challenging installation.

No Room for Error

Civil War-era physicians and nurses could only have dreamed of the contemporary health care facility that now stands within sight of the Gettysburg National Military Park. WellSpan Gettysburg Hospital was first constructed in 1921 and has since undergone several facility improvements and enhancements to patient care. Today, it is a nationally recognized acute care community hospital.

According to Joe Lehigh, a 27-year member of the facility's engineering team, the hospital needed "to modernize mechanical systems that would assure reliability of critical patient care functions. High on the list was cooling equipment that had close ties to operation of our clinical and



The mechanical systems in the basement make all the life-saving work of the WellSpan Gettysburg Hospital possible. Working closely with EVAPCO, Craft & Son found the right products to meet the hospital's needs and accommodate a challenging installation.

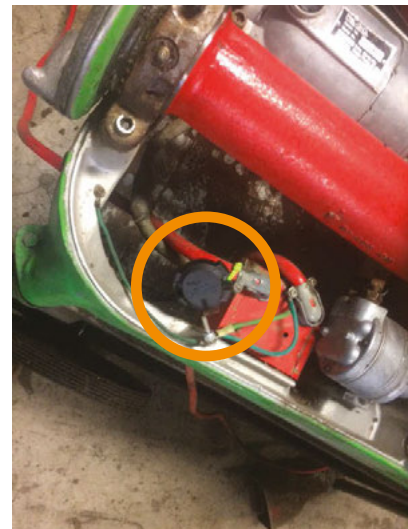
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JH Kelly Keeps Tabs on Tools with Milwaukee Tool's TICK

JH Kelly recognizes how much time and money it stands to lose when tools are lost or stolen. To avoid delays on the job or, worse, the cost of replacing expensive equipment, they adopted Milwaukee Tool's One-Key™ system, the first digital platform for tools and equipment. Now, with the addition of Milwaukee Tool's TICK™ equipment tracker, they can manage inventory, recover tools quickly—and even locate lost items.

With One-Key, JH Kelly can track tools in real-time and customize compatible products. Through the One-Key inventory management functionality, a contractor creates a central place to manage all of their tools and equipment across their network of jobs and operators by using a free web and mobile app. By putting the information where it can be easily accessed, JH Kelly keeps a pulse on the location of tools and equipment at all times.

The TICK—a professional-grade Bluetooth™-enabled tracking device, takes One-Key's tracking technology to the next level. Designed to withstand the harshest jobsite environments, the TICK is just over 2" in diameter and can be easily attached and hidden from sight on any product, so JH Kelly can track anything in their inventory. A more cost-effective solution than RFID tracking, the TICK pairs with the One-Key app, providing



JH Kelly is using Milwaukee Tool's TICK, paired with the One-Key app, to track the location of tools in real-time, preventing costly delays from trying to track down lost or missing items. The TICK is just over 2" in diameter and can be attached to any product.

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MCAA
Adding Value to Your Supply Chain

SMART SOLUTIONS

Helping contractors save money
and enhance productivity

Smart Solutions showcases new technologies and promotes cost-saving and productivity-enhancing applications available from members of MCAA's Manufacturer/Supplier Council. *Smart Solutions* is published biannually for contractor members of MCAA and its subsidiaries.

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MANUFACTURER / SUPPLIER COUNCIL

MCAA

Adding Value to Your Supply Chain



Productive Partnerships

MCAA members continue to seek ways to stay competitive. This issue of *Smart Solutions* demonstrates how our Supplier Partners are helping you resolve demanding technical challenges, increase efficiency, and improve productivity. Read how an exceptional designer from Anvil® International helped Bennell, Inc., figure out how to install multiple systems in a cramped mechanical room. Similarly, engineers at Jay R. Smith Mfg. Co.® rapidly designed new trench drains to keep J.W. McClenahan Co.'s project on track.

Learn why Arden Building Companies chose Victaulic's easy-to-install grooved connections to speed up installation for a major renovation. Or how Commonwealth Plumbing used Viega fittings to accommodate the tight spaces of a historic building.

Also see how contractors are tackling complex jobs. James Craft & Son Inc. found that only EVAPCO, Inc. had cooling towers with a small-enough footprint, yet large-enough capacity, to meet its client's needs. Daikin's commercial rooftop systems, paired with its software solution, met the stringent demands of a museum storage facility. With aerial lifting by Erickson Inc., Hill Mechanical Group placed equipment on a downtown Chicago rooftop in just a few hours. John E. Green Company trusted Johnson Controls products to meet energy efficiency demands and save installation time. P1 Group installed 300' of Aquatherm piping in just 24 hours, minimizing downtime for their client.

Members are always finding new tools and products to beef up productivity, such as Uponor's AquaPEX® crosslinked polyethylene piping, which saved Metropolitan Mechanical Contractors installation time. Josam Company's easy-to-install Pro-Plus trench drain system cut labor and installation time for Miinc Mechanical Contractors. Atomic Mechanical Services' relies on the quality of Wheatland Tube's domestic pipe to ensure leak-free pipes and save time both onsite and after installation.

On the technology side, to battle "the paper demon," Egan Company installed KEY2ACT's MobileTech solution, slashing billing time and eliminating time-consuming paperwork. Implementing an integrated software solution from Jonas Construction Software helped Flo-Tron Contracting reduce payroll processing time by 50 percent. Anderson, Rowe & Buckley deployed MobiliForms from iBusiness Technologies, cutting labor costs. With Rhumbix, Independent Mechanical Industries, Inc.'s foremen fill out time cards on their phones in minutes, minimizing errors. Milwaukee Tool's digital equipment tracker helps JH Kelly manage inventory and recover tools quickly.

Finally, read about SPX Cooling Technologies' donation of a Marley® NC cooling tower to the Steamfitters UA Local #602 Mechanical Trades School for its apprenticeship program for another example of how our Supplier Partners recognize the needs of the field and work with you to meet them.

Bill Tavenner, Chairman

Join me in welcoming our newest supplier partners:

- Asahi/America, Inc.
- FabPro1
- FARO Technologies, Inc.
- Hilti, Inc.
- Jomar Valve
- ManufactOn
- Procore Technologies, Inc.
- Rhumbix, Inc.
- ServiceTrade
- Software Motor Corporation
- T-Drill Industries, Inc.

SPX Donates Cooling Tower to Steamfitters Trades School

Apprentices Get Hands-On Training Using Real-World Equipment

When the Steamfitters **UA Local 602** Mechanical Trades School needed equipment to use in its apprenticeship program, **SPX Cooling Technologies** donated a Marley® NC cooling tower, enabling the school to present students with a real-world environment. Instructors use the complete new cooling system to teach students how to troubleshoot and fix problems with HVAC systems.

Union Beefs Up Training Spaces

Steamfitters UA Local 602 Mechanical Trades School recently expanded and renovated its training facilities. The union, which represents journeymen, apprentices, and helpers working in the heating, air conditioning, refrigeration, and process piping industries, sought equipment donations to outfit the school and help with its apprenticeship training mission. The school's training centers in Landover, MD, and Springfield, VA offer a five-year apprenticeship and train a diverse group of over 700

students ranging in age from 19 to 70 years old.

Apprentices are assigned to a union contractor and jobsite, and they generally work 40 hours per week. Classes range from soldering and brazing, health and safety, and drawing and blueprint-reading to basic and advanced refrigeration and electricity.

James Balderson, assistant training director, explained that the nonprofit school has a very small equipment budget, so he has to think creatively to beef up the equipment available for HVAC training. Balderson is the coordinator for the school's HVAC department and trains air conditioning, refrigeration, and boiler technicians.

"Being able to expose our students to real equipment gives us a greater advantage compared to teaching out of a book," said Balderson.

"Classroom time is necessary, but we must reinforce it with hands-on training."

Balderson notes that he and other instructors regularly ask vendors if they know anyone discarding equipment. "If they are going to replace equipment and it's still usable, we'll arrange to come get it. Hands-on knowledge is the most important part of the steamfitter's trade, so the ability to have access to real equipment to solve real-time problems is essential in the industry."

He developed a long equipment wish list, at the top of which was a cooling tower. SPX agreed to donate a factory-assembled single-cell crossflow Marley NC® 8401 cooling tower. Originally constructed as a demonstration cooling tower for trade shows, the tower is typical of what students would see in the field every

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Left The Steamfitters UA Local 602 Mechanical Trades School benefits from equipment donations like those of SPX Cooling Technologies for hands-on training in its apprenticeship program. **Middle** Students and instructors install the Marley NC cooling tower donated by SPX, which serves as the centerpiece for learning start-up, maintenance, and troubleshooting.

With Victaulic Couplings, Arden Meets Tight Timeline, Saves \$100,000 on Overall Costs

Contracted to design and install the mechanical, electrical, plumbing, and fire protection systems for a massive renovation, **Arden Building Companies** faced a tight timeline, a tight space, and a tight budget—all of which made welding a poor choice for completing the mechanical room. Using **Victaulic's** easy-to-install grooved connections, Arden joined, hung, and installed pipe quickly and efficiently once it was lowered into the mechanical room. Arden estimated that the speed of installation reduced overall costs by approximately \$100,000.

Rhode Island's Largest Construction Project

Built in 1912, the two-story, 58,000-square-foot South Street Landing Power Station in Providence, RI, provided electricity to jewelry, textile, and machinery manufacturing firms through the early 20th century. The historic power station, decommissioned in the 1990s, has since been transformed into an impressive seven-story, 265,000-square-foot, state-of-the-art nursing education and administrative office complex, which opened in April 2017. It is now home to the Rhode Island Nursing Education Center and Brown University.

Arden joined the project in 2016 and recognized that the sheer size and scale of the expansion efforts magnified the complexity of the project. In fact, South Street Landing was Rhode Island's largest economic development project in 2016, as determined by the manpower needed, the amount of money invested, and the amount of materials used.

John Puniello, vice president of Arden, recalled the difficulties his

“Their grooved solutions, couplings, and valves enabled us to work quickly and efficiently, exceeding our expectations and saving us money.”

—Don Forsythe, Senior Foreman, Arden

team came across—specifically with the top-floor mechanical room. “Not only did Arden have just six weeks to complete the large mechanical room, but the space was tight, making maneuverability and installation difficult, and, since the mechanical room was saved for last, it required each section of pipe be installed in a specific order,” he said.

Timeline, Budget Call for Efficient Solutions

After closely analyzing the timeline, the budget, and the scope of work ahead of them, the Arden team quickly realized that welding the condenser and chilled-water piping would take too long and had the

potential to drive the project over budget. So, they called Victaulic. Having used Victaulic on previous projects, Arden saw firsthand how Victaulic's innovative piping technologies reduced installation times and increased efficiencies without sacrificing safety or reliability.

According to Puniello, the Arden/Victaulic partnership led to an “erector set” approach. Arden designed and prefabricated 90 percent of the piping systems at its facility, relying on Victaulic's grooved connections for installation onsite.

The entire mechanical room was delivered to the jobsite, and the



Victaulic delivered the entire mechanical room for the renovated South Street Landing Power Station to the jobsite. Overall, it took Arden less than two months to put the mechanical room together once the pieces were prepped and delivered onsite—an unachievable feat with a welded solution.



By prefabricating 90 percent of its piping and using Victaulic's grooved couplings, Arden was able to install the entire mechanical room for a massive renovation in less than two months.

installation went directly from the truck to the hanger. Arden designed and prefabricated nearly all of the systems in-house, using their 33,000-square-foot facility, located just seven miles from downtown Providence. Once onsite, they used a crane to lift each piece of equipment into the mechanical room through a large hole in the roof.

Overall, it took less than two months to put the entire mechanical room together once the pieces were prepped and delivered onsite—an unachievable feat with a welded solution.

“Given the nature of the project, I knew the condenser and chilled piping job was well-suited for the Victaulic portfolio,” said Don Forsythe, Arden’s senior foreman. “Their solutions provide ease of installation and time savings, which was just what we needed to complete the job.”

Victaulic QuickVic™ Style 107N rigid couplings and QuickVic™ Style 177N flexible couplings were used

to make the 2 1/2” to 12” connections on the condenser and chilled water lines, along with Series 732 Wye-Type Vic-Strainers®, Series 761 Vic-300 MasterSeal™ butterfly valves, the corresponding fittings, and IMI Hydronic Engineering TA balancing valves. Victaulic was used exclusively on the building’s fire protection system. An added benefit to Victaulic’s grooved solution is

its ability to accommodate building settlement, seismic movement, and thermally induced expansion or contraction of the piping.

“Victaulic’s products were a huge complement to our own prefabrication capabilities,” explained Puniello. “With a project of this size and on such a compressed schedule, our partnership provided us the needed resources and solutions to get the job done on time.”

In addition to reducing installation time, Victaulic’s solutions played a large factor in the overall savings of the project. Forsythe said using Victaulic grooved products reduced overall costs by approximately \$100,000.

“Their grooved solutions, couplings, and valves enabled us to work quickly and efficiently, exceeding our expectations and saving us money,” said Forsythe. “The condenser and chilled water systems have been tested and are running nicely.”

For more information, visit www.victaulic.com.



Partnering with Victaulic enabled Arden to meet the tight timeline for the transformation of Rhode Island’s South Street Landing Power Station—the state’s largest economic development project in 2016—and saved Arden an estimated \$100,000 in overall costs.

Daikin Rooftop Units Paired With Intelligent Equipment Protect Museum's Collections

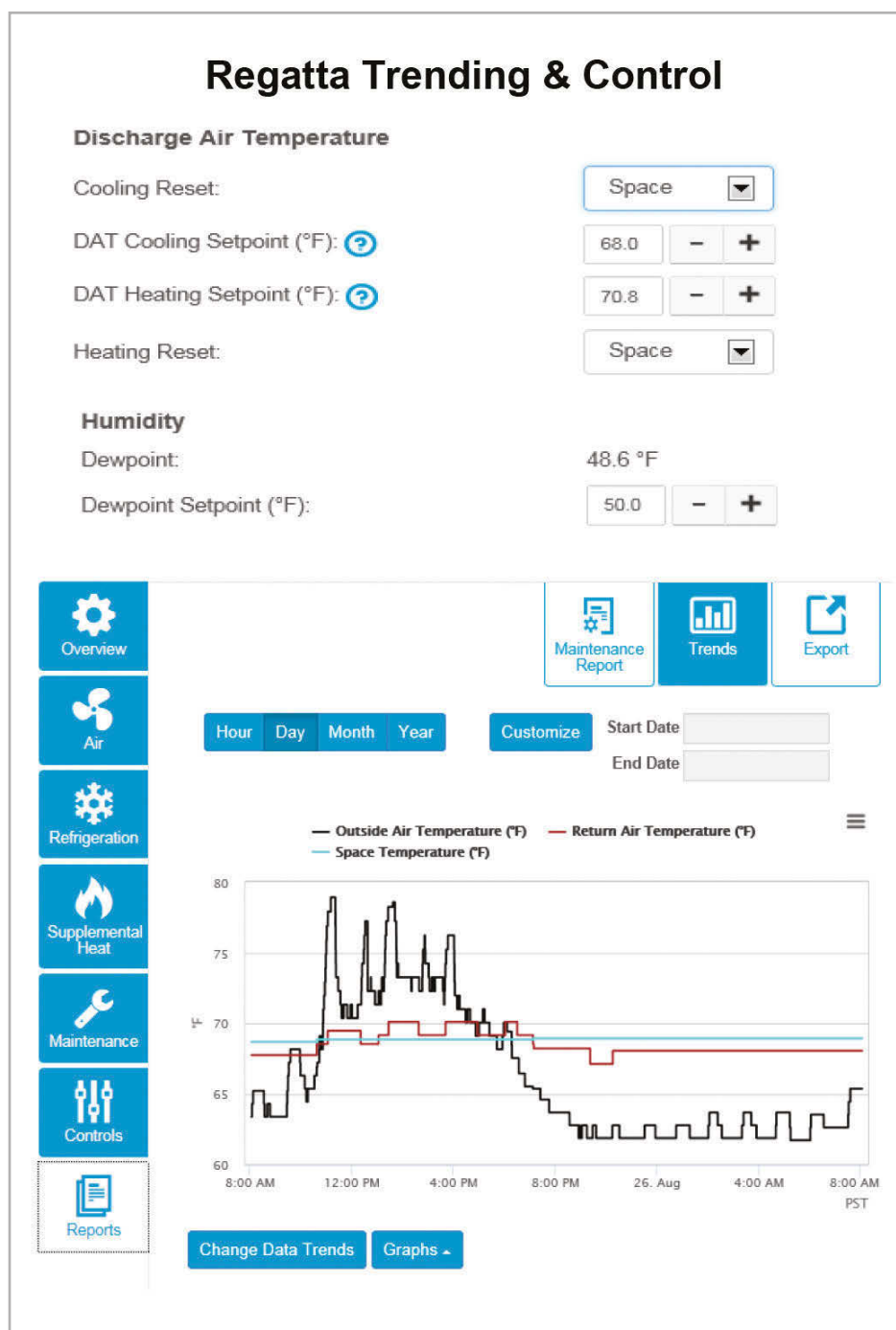
Remote Troubleshooting Ability Saves on Service Calls

To meet the stringent standards for climate control required to protect its treasured artwork and artifacts in storage, the University of California Berkeley's Regatta Museum installed Daikin Rebel® commercial rooftop systems, paired with the Daikin Intelligent Equipment® solution that provides real-time data. Using the software solution saved time and money during the 6-week startup and commissioning process of a critical control application where rooftop package units are seldom used. "With some fine-tuning, Daikin optimized the control of the Rebel units to meet required tolerances of +/- 2 degrees and +/- 5-percent relative humidity," said Matt Dodds, Daikin application engineer for commercial rooftop units.

For the major renovation of 21,000 square-feet of its warehouse space, the museum specified two 10-ton Daikin Rebel rooftop systems to maintain optimal cooling and tight humidity control. "The variable speed compressors on the Rebel rooftop units have the capability to provide temperature and humidity control at significantly less cost than the installed price of an air-cooled chiller desiccant system with storage tank," said Daikin representative Steve Dobberstein.

Each Rebel rooftop unit is connected to the Daikin Intelligent Equipment solution, which gives the museum real-time data it can use to anticipate and respond to operational needs. Intelligent Equipment is factory-installed, so there is no need to call in a controls-specific contractor during equipment installation. At the Regatta's climate-controlled warehouse, Intelligent Equipment was used to calibrate the rooftop

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At the Regatta's climate-controlled warehouse, the Daikin Intelligent Equipment provides almost 350 diagnostic points on the Rebel rooftop units, allowing technicians to dive deep into unit diagnostics and identify potential problems. During the set-up for the museum, technicians could see and adjust equipment settings remotely, eliminating the need for the facility manager or building owner to make a service call.

Commonwealth Plumbing Finds Viega Double Drop Elbows Are Perfect Fit for Historic Building

Fittings Eliminate Dead Legs, Preventing Bacteria Growth

While renovating a historic building, **Commonwealth Plumbing** found that **Viega's** double drop elbows were the best solution for accommodating new bathroom sinks in a tight space with limited design options. By using pressed fittings, Commonwealth not only saved time on installation but also avoided soldering in an old building with a lot of wood.

Rising to the Challenge

The central dining facility at Emerson College in downtown Boston was built around 115 years ago. With a historic structure of that age, the space needed to install completely new plumbing came at a premium. In addition, the renovation included metered faucets on timers, adding a level of complication.

New hot-water plumbing systems were designed for two bathrooms in the dining facility. One bathroom had enough space to install regular tees, but the other bathroom was too small. Viega double drop elbows were selected for the tight space.

"It's a very old building and just has the issues that come with renovations to a very old building. We had to drop individually to each sink as opposed to having the space to run it horizontally down right to the fixture," explained Peter Hannon, vice president of Commonwealth. "Due to space within the wall, we didn't have that luxury. The tight quarters made the double drop elbows the best choice."

An average user will take 30 seconds or less to wash his hands. Most of the time, that means the water will have been sitting in the pipeline for

a while. It will not be freshly heated water until the line is purged. By using Viega's double drop elbow fittings in the bathroom installation, dead legs in the line were eliminated completely.

"Installing the double drop elbows allows us to get the piping much closer to the fixtures to minimize the dead legs," Hannon said. "Having warm water at the faucet is a better experience for the user, so they'll think the best of the facility."

A series design was installed in the other bathroom, the one with more space, which allowed Commonwealth to use more traditional fittings.

Staving Off Stagnation

Stagnant water in plumbing lines can lead to the development of *Legionella* bacteria. These bacteria can cause Legionnaire's disease, which can be fatal. *Legionella* bacteria are particularly concerning in facilities such as hospitals or nursing homes, where users might have compromised immune systems.

At Emerson College, the main focus was providing hot water to users in spite of the low-flow faucets. In a series design installation, like the sinks in a bathroom, when water is turned on at the end of the line, the water circulates through the whole system, purging the line and providing hot water to the active fixture almost immediately.

"We've done a loop system before similar to this," said Hannon. "This was the first time we'd used these particular fittings, the double drop elbows. We met our installation



Using Viega's double drop elbow fittings allowed Commonwealth Plumbing to accommodate new sinks in the tight space of a historic building in Boston. With the pressed fittings, Commonwealth also saved time and avoided soldering.

goals. Especially where there was a lot of wood in the building, pressing saved us from having to solder."

Time and labor savings, along with quality of connections are important factors in Commonwealth's use of Viega solutions. "We've been using Viega for a number of years and have had very good luck with it," Hannon said. "We recommend and submit it for projects as often as possible as a product to use."

For more information, visit www.viega.us.

Metropolitan Mechanical Contractors Cuts Installation Time in Half with Uponor's PEX Pipe

Metropolitan Mechanical Contractors of Eden Prairie, MN, found that using Uponor's AquaPEX® cross-linked polyethylene (PEX) piping for the risers and the unit piping in a new hotel saved crews about two to three days of installation per floor. On a 13-story project with 50 units per floor, that adds up to almost a month of installation time savings.

Bob Wolf, Metropolitan's project manager for the Radisson Blu hotel project, said, "We started out with a three-man crew, which took three days to complete each floor," he says. "Installing copper would have been double that time."

Miles of Piping Required

From south of the Twin Cities, you can see the Radisson Blu Hotel at the Mall of America on the horizon. This 570,000-square-foot, 13-story, 506-room structure sits on a two-acre site in Bloomington, MN. It is the first

hotel to be connected to the Mall of America—the second largest mall in the world.

The hotel sports more than 1.2 million pounds of structural steel, 24,000 cubic yards of concrete, and 23,000' (nearly 4 1/2 miles) of Uponor PEX pipe for the plumbing system. The PEX pipe was selected for the in-suite potable-water plumbing and the floor-to-floor riser piping.

On learning that the project required having the product files in the Trimble Building-Data database, Uponor's Design Services Manager Mike Rivers and .NET Developer Chris Bertsch responded rapidly, getting the product information into the database within two weeks.

Saving Time at Every Step

When the product landed at Metropolitan's shop, workers learned how to make 2" ProPEX® expansion

connections to prefabricate the risers. The unique shape memory of Uponor's PEX allows the pipe to be expanded before inserting a higher-flow fitting. As the PEX shrinks back down around the fitting, it creates a solid, strong connection without the need for torches, solder, or open flame.

Wolf was on the project from the beginning and found the plumbing installation

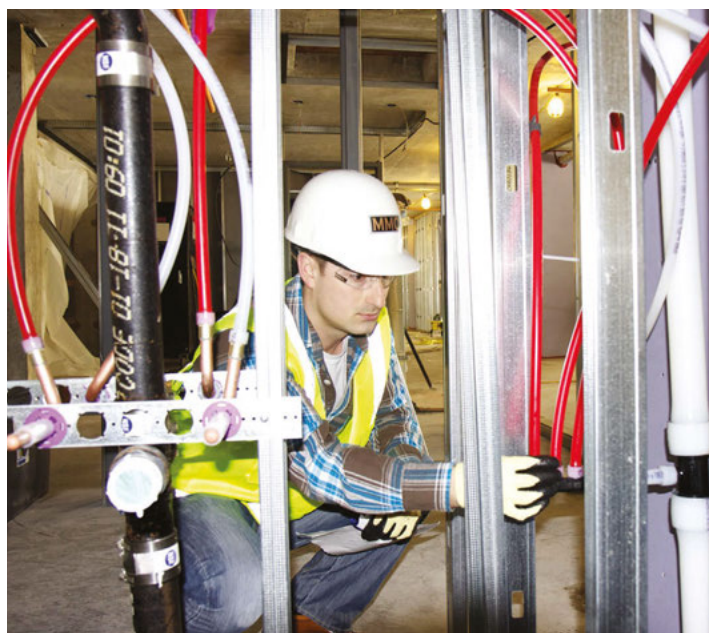
"With the experience we've had with the [Uponor] PEX pipe saving us a couple days of install time per floor, I know we're going to be using it more and more in commercial plumbing applications in the future. It just makes sense."

—Bob Wolf, Project Manager, Metropolitan Mechanical Contractors

with PEX to be very efficient. "I started installing PEX in small retail applications several years ago, and I really like how the flexible tubing makes it faster to install because we don't need as many fittings," said Wolf. "The Radisson Blu project has been my first experience using large-dimension PEX in riser applications, and I really like the additional labor savings it provides."

Mark Montgomery, Metropolitan foreman, said the PEX pipe's flexibility is one of his favorite features of the product. "I've been working with PEX pipe in residential structures for about five years now, but this has been my first experience using it in a commercial application," he said. "I like the 2" PEX for the risers. It works really well. And the flexibility of the pipe for in-suite distribution makes it faster and easier to fish through the walls."

Metropolitan prefabricated the risers and installed them during the cast iron installation. Then, the crew hooked up the unit piping for all 50 units on each of the 11 occupied



Chris Dent, Metropolitan assistant project manager, examines the ProPEX expansion fitting connections in the Radisson Blu hotel. Dent and his coworkers found that Uponor's PEX piping shrink-to-fit fittings, the piping's flexibility, and multiport tees made installation faster and easier.

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Bennell, Inc., Overcomes a Tight Squeeze Thanks to Anvil International's Creative Gruvlok System Design

Savvy design from Anvil® International allowed Bennell, Inc. to install all the needed systems in the very small mechanical room of a new residence hall and bookstore at Bloomsburg University of Pennsylvania. Because of the creative design, which included Anvil's Gruvlok® connections for the heating and cooling pipe, Bennell managed to "make 10 pounds fit in a five-pound bag," said President Craig Hosler.

The building helps the university alleviate a student-housing crunch, provides much-needed retail space, and creates what a university official calls a "wow factor" that will help the campus compete for new students and enhance the student experience. Completed on time for the fall term beginning August 2017, the 163,000-square-foot, \$61.9-million building has room for 398 students in suite-style apartments. The building's mechanical room had to fit heating and cooling pipe, ductwork, and the electrical, mechanical, plumbing, and fire-sprinkler systems.

The mechanical room was not the only cramped location on campus. Until the new residence hall opened, said university spokesperson Tom McGuire, many dorm rooms at the university had three students squeezed into spaces designed for two. In welcome contrast, said McGuire, the new facility's suites are consistent with the college living arrangements that many of today's students prefer. Besides providing more privacy and elbow room, the new residence also features Chick-fil-A and Qdoba restaurants.

Bloomsburg University is the third-largest within Pennsylvania's 14-campus state system of higher education. More than 9,600 students were

enrolled in the 2016–2017 school year. The university sits 75 miles north of Harrisburg. Founded in 1839 as a literary academy, the school today offers 56 undergraduate and 20 graduate programs. Like all colleges, Bloomsburg needs to attract students both with responsive degree offerings and inviting facilities.

Standing Out in a Crowd

"Competition for students these days is very tight among institutions," McGuire observed. "We're in a state with dozens of institutions that students can choose from. So it's important to have something that's eye-catching to students and parents as they get to campus. This building will be a showplace and a centerpiece for our admissions office." New study areas in the building will also improve the learning environment.

Bloomsburg's students will probably never see the Gruvlok connections that Anvil provided for the building-wide heating and cooling systems. Nor are they likely to know the challenges that accompanied their design and installation. But those issues were substantial, and Anvil responded with the unique expertise of its senior piping designer, Merrill Davis, based in North Carolina.

In his work, Davis takes architectural and structural drawings, adds schedules and equipment specifications,



Faced with a cramped mechanical room, the project team for Bennell, Inc., relied on the expertise of Anvil designers to create a layout that could accommodate all the systems required.

and builds 3D computerized models of hydronic systems. He is accustomed to solving intricate design puzzles. This one, however, taxed his abilities in new and demanding ways.

"We're used to working with tight spaces," Davis said. "But this was particularly challenging for coordination purposes with the other trades, because we just had so many people trying to use the same area."

A Collaborative Approach

As sometimes happens in complex projects, the mechanical room's design evolved through several iterations. Each time, Davis took the new drawings and created CAD-compatible files for the various contractors. In what Davis describes as a "round-robin," the electrical, plumbing,

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John E. Green Company Saves Installation Time, Ensures Energy Efficiency With an Array of Johnson Controls Products

John E. Green Company (JEG) trusted its longtime partner, **Johnson Controls**, to help them meet the demands of Detroit Medical Center's (DMC's) new tower and identify products that could save the contractor installation time. YORK® YMC2 centrifugal magnetic drive chillers paired with the Metasys® building automation system (BAS) with Central Plant Optimization 10 (CPO10) optimized energy efficiency, while using YORK Solution Air Handling Units and SimplexGrinnell's addressable notification system ensured speedy installation.

From JEG's perspective, complex projects run better when working with trusted a partner that carries a diverse portfolio of products and technologies. "There's a real nice synergy when there is one supplier across the different platforms. Having one person at the forefront makes a much smoother process overall," Chief Operating Officer Rob Martin said.

The new \$155-million tower at DMC's Children's Hospital of Michigan in the heart of Detroit is a six-story, 248,000-square-foot facility with state-of-the-art systems and technology. Hospital leaders never wavered in their quest to build a comfortable, safe, healing environment that optimized space, improved efficiencies, and reliably delivered leading pediatric care to 90,000 visitors a year. They gathered architects and designers to work with families, patients, and staff and then methodically evaluated needs and workflows—at one point building a cardboard mock-up of six floors of the proposed tower.

Armed with valuable input, leaders immersed themselves in an integrated design process to drive out waste and

boost efficiency. DMC formed a team of key partners and contractors, all leaders in their industries, to carry their vision forward.

"There's a real nice synergy when there is one supplier across the different platforms. Having one person at the forefront makes a much smoother process overall."

—Rob Martin, Chief Operating Officer, John E. Green Company

Tackling Challenges Together

JEG and Johnson Controls have a long history of collaboration, which helped ensure success, according to Martin. "Nobody likes surprises," Martin said. "It helps to work with a company who is familiar to you and provides technologically innovative products and solutions while meeting schedules and deadlines."

While patients and families would never see the chilled water plant on the top floor of the new tower, the location raised some challenges. High-capacity chillers could produce enough sound to reach lower floors where children were recuperating. Johnson Controls and JEG chose two YORK YMC2 centrifugal magnetic drive chillers. The energy-efficient design could reduce noise by about 50 percent compared with other chillers on the market.

Enhancing Energy Efficiency

Reliability and energy efficient systems drove the discussion around other products and technologies. For example, chilled water plants can offer the greatest opportunity for energy savings—but only if configured and run correctly. The consulting engineer wanted a BAS that could capture that energy savings throughout the lifecycle of the plant.

Johnson Controls and JEG chose the Metasys BAS with CPO10. Instead of controlling a collection of independent components and controls,

Metasys and CPO10 integrate and harmonize the plant's entire operation through documented best practices, algorithms, and ASHRAE recommendations. With CPO10, Metasys can squeeze out five to 15 percent more energy savings compared with standard automation.

Addressing Other Concerns

With existing facilities staff stretched thin, to manage the additional space of the new tower, the new BAS needed to be intuitive and offer easy-to-use remote monitoring. The advanced graphics capabilities and new reporting features of Metasys make it easy for facility staff to view information by location, access trends, and drill down on the cause of alarms.

Another concern was selecting air handling units with enough capacity and performance for the job. Customization drives up cost, so Johnson Controls proposed its YORK Solution Air Handling Unit, with standard features (factory-mounted controls, humidifiers, and split coils) that meant installation onsite would happen much faster.

The fan array was also unique for a standard line. It included eight fans

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Jay R. Smith Crafts Speedy Solution for J.W. McClenahan's Drainage Dilemma

Faced with new, more stringent building requirements mid-project, J.W. McClenahan Co. got a boost from the engineers at Jay R. Smith Mfg. Co.,[®] who rapidly designed new trench drains and had them verified by a third party to satisfy city inspectors—all in just four months.

McClenahan is the design/build plumbing contractor on the Transbay Block 8 mixed-use development project, located just two blocks from the Transbay Transit Center in San Francisco, CA. While San Francisco's building code stipulates placement of a trench drain that can accommodate a 100-gallons-per-minute (gpm) flow of the automatic fire sprinklers in remote areas outside the fire service access elevator lobbies, the city has become more stringent in evaluating drains. McClenahan learned that city building inspectors and the fire marshal were now requiring full documentation for the drains at Transbay Block 8. (Elevator lobby trench drains prevent water from infiltrating the shaft enclosure and keep the elevator lobby area free of water to allow firefighters to do their jobs safely.)

Smith had a standard drain available that met the requirements, but the architects for Block 8 specified lengths that were not yet available anywhere. Rick Kelly, a superintendent at McClenahan, said that one of the problems was that the architects had included different-size door openings into the elevator lobbies.

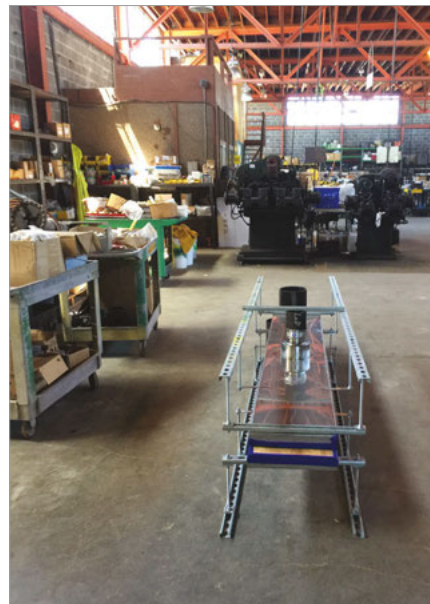
The other issue encountered was the depth of the trench drain due to structural restraints. McClenahan wanted to put the

outlets at the ends of the drain instead of the center, which would affect the flow rate.

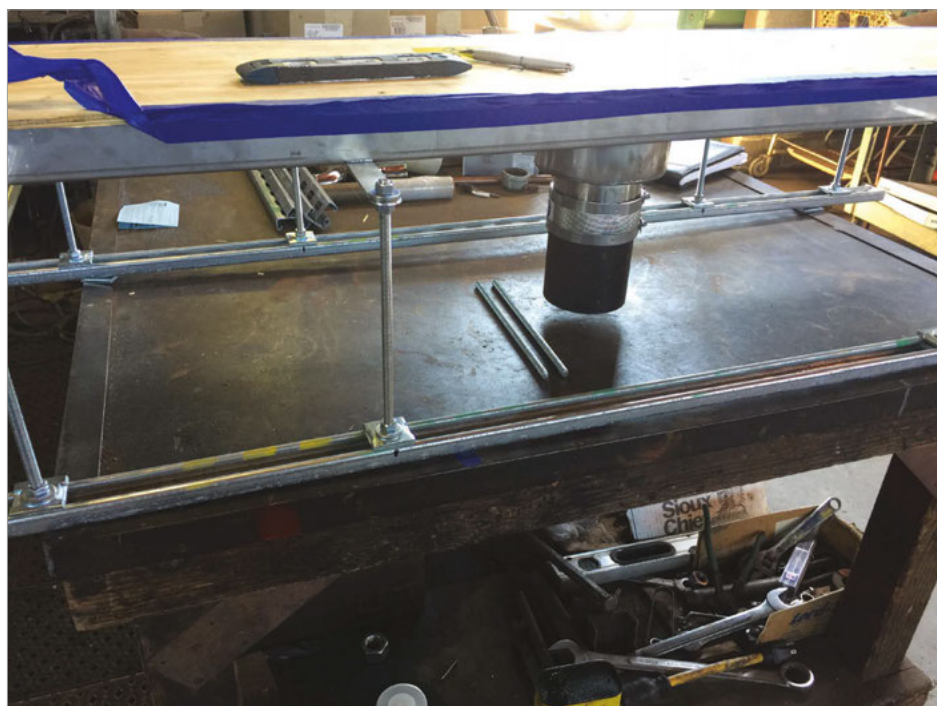
McClenahan had two choices. Go back to the architects and have them revise the design to specify the lengths and depths available or find a manufacturer who could come up with a solution that satisfied the design and met the code at the lengths required. McClenahan approached Smith, where engineers got to work right away to design drains that would accommodate the lengths required and the 1 3/4" drain for the shallow application.

Smith engineers created and tested lengths from 42" to 123" with outlets in three different positions to ensure water would not overflow the threshold drain and spill into

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McClenahan prepared the customized trench drains from Jay R. Smith in their prefabrication shop. The drains helped them stay on track when unexpected building requirements required a quick pivot.



Engineers at Jay R. Smith Mfg. Co. custom-designed and tested a stainless steel threshold drain—and had it certified by a third party—in just four months, allowing J.W. McClenahan Co. to meet stringent new evaluation requirements for its San Francisco building project.

Egan Realizes Rapid ROI with KEY2ACT's MobileTech

Egan Company installed the MobileTech solution from KEY2ACT, slashing billing time and eliminating time-consuming paperwork. Jeff Hawthorne, Egan's senior vice president, estimated that Egan will see its return on investment (ROI) within 18 months of implementing MobileTech, which connects field staff to the back office, providing instant access to information and enabling both sides to easily manage service calls and appointments.

Taming the Paper Demon

Egan belongs to a peer group of similarly sized companies located throughout the country whose members share best practices and help each other identify potential areas of improvement. An evaluation by that group a few years ago provided valuable insight. "The feedback we got back was 'paper, paper, paper,'" said Hawthorne. "There's just a lot of paper. We needed to help streamline our processes here and ultimately provide a better customer experience along with a better experience for our field staff. That's what led us to start to look at mobile solutions."

In addition to Egan's problems with having too much paper, the company often had a disconnect with getting information back and forth to the service technicians, details like whom the tech needed to contact at the site

"It takes 50 percent less time to fill out a report using MobileTech."

—Dave Benkowski, Service Technician, Egan Company

and any extra equipment needed. The only way staffers could communicate with technicians in the past

MobileTech "has streamlined things so much, it's just incredible. It's made all the difference in the world."

—Tim Miller, Technical Support, Egan Company



Thanks to KEY2ACT's MobileTech solution, Egan Company's technicians in the field can see a full description of work to be completed, access customer information, record and update details about a job, and enter and track expenses—saving time on site and cutting down on paper reporting.

was to actually call techs and provide all the information necessary, which takes up time in a busy dispatch center.

When Egan decided to look into mobile solutions, company leaders knew that whatever they chose had to be able to fully integrate with their accounting system. "Our requirements were that we wanted a complete solution that's going to tie right back in to our home office for all of our payroll services, all of our labor costing, all of our material. A place where all of our expenses can be captured," Hawthorne said.

MobileTech Fits the Bill

MobileTech enables a free flow of information from the office to field staff and, ultimately, to customers. Technicians can see a full description

of work to be completed; access customer information, including service and equipment history; record and update details about a job; and enter and track expenses. Because technicians can enter their own time directly into payroll, dispatchers no longer have to do so for them back at the office. This feature alone is saving Egan at least two hours per day for each of the company's four dispatchers.

"We have been on the product for less than a year. We are looking at eight hours a day, 40 hours a week that we're saving on payroll entry," Hawthorne said. "It will definitely have an ROI of less than a year-and-a-half."

Not only is MobileTech saving time

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P1 Group Installs Aquatherm PP-R Piping, Saving Time When Every Second Counts

By using **Aquatherm** polypropylene-random (PP-R) Blue Pipe® to replace carbon-steel pipe at Berry Global's injection-molding facility, the **P1 Group** of Lawrence, KS, successfully completed installation in just 24 hours. The lightweight pipe is easy to transport and easy to join using a flameless heat-fusion technique that saves time. The speed of installation was more than just a productivity win for the contractor; at Berry Global, a mere half-second loss in production time can cost tens of thousands of dollars.

A Tricky Transition

Berry Global needed to replace a large portion of pipe used to transport cooling water to more than 20 injection-mold and thermoforming machines. The existing carbon-steel piping, along with an undersized chilled-water storage tank, showed excessive corrosion. Cooling the molds is a critical, time-sensitive part of the injection-molding process; the plant already had begun to incur losses because rust and pipe scale were interfering with the cool-water flushing of the molds.

"Our [cooling] cycle time on some of the equipment had increased due to hot cores. This resulted in significant losses in production," said Jacob Francis, facility maintenance supervisor. Increasing production demands on an undersized storage tank and piping system exacerbated the complex problem.

The system itself is simple. Chilled water leaves the chiller at 55° F and flows directly to the injection-molding equipment. Water exits through orifices in the aluminum or steel molding equipment and circulates

to what was originally a 4,000-gallon holding tank before circulating back through the chiller. However, according to Francis, at the required 3,800 gallons per minute, the water never had an opportunity to "settle," causing air to be absorbed within the system. The completely aerated system not only was rusting badly, but the excessive air also prevented water-treatment chemicals from adhering to and protecting the carbon-steel pipe effectively. Corrosion already had eaten two holes in the chilled-water tank.

The situation would only get worse until the piping was replaced, but that created an even greater challenge: How do you replace 300' of 10" and 16" welded steel pipe for a manufacturing process that virtually never stops?

The plant in Lawrence, one of Berry Global's 130 facilities around the world, produces food-grade plastic cups and containers for various restaurants and food and beverage industries. The plant operates 24/7, every day of the year, save a day or two at Thanksgiving and Christmas. Shutting down operations for just one hour comes at a high price—one Berry Global most certainly would have to pay several times over if the piping were replaced with field-welded carbon steel, which can take a long time to install.

Aquatherm Eases Installation

Todd Mihalchik, industrial mechanical estimator and project manager for P1 Group, suggested Aquatherm PP-R piping systems, even though no one from P1 Group had installed Aquatherm pipe in such large diameters. Mihalchik's conversations with local representatives from the Lawrence branch of **Ferguson**, a wholesale distributor of plumbing and mechanical supplies with 1,400 locations serving customers throughout the United States, Puerto Rico, the Caribbean, and Mexico, convinced him that the piping might be the answer for his longtime client, Berry Global.

Wedged between a costly shutdown and a rapidly deteriorating system, Francis agreed. He gave P1 Group the green light to install Aquatherm Blue Pipe to replace the chilled-water piping serving two thirds of the plant's injection-molding processes.

Unlike metal pipe, which must be welded into place at the jobsite, Aquatherm pipe components are joined using a safe and simple

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Thanks to the light weight of Aquatherm PP-R piping, P1 Group workers were able to prefabricate large sections in their shop, transport them to the jobsite, and hoist them into place quickly, saving much-needed time for a 24-hour installation job.

AQUATHERM

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heat-fusion process to create virtually leak-proof connections in minutes. Because the product is so lightweight, large sections can be fabricated in a contractor's shop—or in London, UT, at Aquatherm's North America headquarters—then easily

“At first, we were going to have three days for the actual installation, but that got whittled down to just 24 hours. ... The timeframe was really challenging, but Aquatherm made things a lot easier.”

—Todd Mihalchik, Industrial Mechanical Estimator and Project Manager, P1 Group

transported to the jobsite. Because Aquatherm PP-R is completely non-corroding, it will not break down, weaken, or scale like metal piping systems and does not require chemical treatment.

At a training session held just prior to the Berry project, installation specialists Aquatherm Regional Sales Manager Mike Engle and Ferguson's Nathan Geyer taught P1 Group technicians the appropriate heat-fusion procedures. “About five or six of our installers attended the five-hour course taught by Aquatherm, where they learned all the different heat-fusion welding techniques,” Mihalchik said.

The installation included the construction of a new 10,400-gallon outdoor chilled-water tank, 16” supply and return piping to and from the tank, and assorted lengths of 12” and 10” piping connecting a 16” Aquatherm header to the various injection-mold presses. Nearly all the piping sections were fabricated in advance at P1 Group's fabrication shop, then installed using rented butt-welding equipment and handheld socket-fusion equipment. The

only exception was the 16” header, which Aquatherm's Design & Fabrication Services team fabricated because P1 Group did not have ready access to the welding equipment needed for the large-diameter pipe.

The fabricated piping sections, some of which were 15’ or longer, were lightweight enough for just two

workers to carry into the installation space and hoist into place—a huge advantage for P1 Group, given the project's ever-shrinking installation window. “At first, we were going to have three days for the actual installation, but that got whittled down to just 24 hours on Good Friday before Easter. The timeframe was really challenging, but Aquatherm made things a lot easier,” said Mihalchik.

A “Fortunate Mistake”

The only glitch, which occurred during the all-night installation, turned into a blessing for Mihalchik and his crew. At one point, the installers discovered that two of the 10” lines off the 16” header had been cut too short. It might have been a panic-inducing discovery if not for Engle, Geyer, and Ferguson's Kent Cramer, who were at the jobsite during the installation and were able to oversee some impromptu pipe fusion to adjust the length of the 10” pipe.

“They showed us how easy a fix it really was. In a way, it was a fortunate mistake because now we know we can work through it easily on our own. I'm a 100-percent believer in Aquatherm now for sure,” Mihalchik said.

Francis is equally convinced he made the right decision choosing Aquatherm. In fact, he had another 700’ of Aquatherm Blue Pipe installed for domestic water service to Berry's nearby warehouse, and he looks forward to identifying even more opportunities to use Aquatherm piping.



P1 Group workers quickly learned the flameless heat-fusion welding techniques required to join Aquatherm PP-R Blue Pipe, which is not only safer than traditional welding but also saves time.



P1 Group recommended Aquatherm PP-R piping systems for Berry Global's injection-molding facility because they resist corrosion, rust, and scale, eliminating future downtime caused by pipe corrosion. Workers were able to install 300' of new pipe in just 24 hours.

No Insulation Required

"The fact that we didn't have to insulate the pipe is another huge benefit. None of the indoor pipe had to have any insulation, even though we are carrying 55° F water in an 80° F ambient space," Francis said.

Francis added that despite some extremely warm, humid days since the pipe was installed, he has yet to see a drop of condensation on the Aquatherm pipe. "I have one flange where carbon-steel pipe meets the Aquatherm," said Francis. "I can put a hand on each and feel that the Aquatherm is barely below room temperature while the carbon-steel pipe is really cold."

An inherent low thermal conductivity (R-value of one or more depending on the pipe size and standard dimension ratio) makes insulating Aquatherm unnecessary

in certain indoor applications. Not only does this save installation costs, it creates a cleaner, more uniform installation in which the pipe is exposed for easy inspection. "It really looks sharp," said Francis, who also credited P1 Group for a very professional-looking installation.

The plant already has seen improvements in system performance, both in terms of chiller usage and pump efficiency. Perhaps even more important, the Berry plant has eliminated future downtime caused by pipe corrosion—at least where Aquatherm is installed. Furthermore, the company has all but eliminated the need for chemical treatment in its piping system. "For a process project like this, Aquatherm was a no-brainer choice," Francis said.

For more information, visit www.aquatherm.com.

SPX COOLING TECHNOLOGIES

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day, making it an excellent fit for the school. "When I was in the field, the Marley brand was known as one of the superior cooling towers out there, so I was happy when I heard we had an opportunity to get one for our program," Balderson said.

Cooling Tower Central to Training

The cooling tower is key to the students' hands-on training. When it was delivered, the apprentices helped install the tower, and now it is being used to cool one of the new classrooms.

The instructors also use the tower in conjunction with other pieces of HVAC equipment in the classroom. The availability of real operating equipment allows instructors to intentionally put "faults" in the

system as it runs, so they can train students to troubleshoot. When the system shuts down—for example, a pump stops pumping water or a fan no longer pulls air through the heat exchanger—the apprentice is tasked with identifying the problem and fixing it.

"We could buy trainer units, but having the real thing is so much better," said Balderson. "A working cooling system where I can place faults that HVAC technicians have to fix is the best way to train. They can process firsthand how important it is to properly maintain equipment and components and how water treatment is critical to product lifecycle."

In sum, Balderson said, "Without these kinds of equipment donations,



The Marley NC, provided by SPX Cooling Technologies for training, is also being used to cool the school's newly designed classrooms for interactive learning.

we could not provide the education we do. They help us educate our apprentices to a high level."

For more information, visit spxcooling.com.

JOHNSON CONTROLS

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instead of one for system redundancy. If one fan went down, the hospital could still maintain 96-percent air flow. Redundancy is especially important in hospitals, because downtime is not an option when operating rooms or entire hospital wings are at risk.

To ensure patient safety, DMC needed redundancy and flexible features in a fire safety system, so SimplexGrinnell's addressable notification system was selected. The system's flexible wiring design could

lower installation costs by 50 percent, but addressable notification was also a key selling point. Fire notification testing can be upsetting to young patients and disrupt the peaceful, healing environment. The SimplexGrinnell system tests itself quietly in the background. Each device reports its location and status, giving facilities staff confidence that the system is performing properly.

SimplexGrinnell is the JCI fire sprinkler product line.

Benefits of Partnership

By the end of 2017, patients and staff will be completely moved in to the new critical care tower. Silently in the background, the products and technologies carefully chosen by key partners will support the extraordinary work of skilled clinicians and staff. Now, DMC's Children's Hospital of Michigan stands ready to embrace the expanding needs of the communities they serve.

For more information, visit www.johnsoncontrols.com.

DAIKIN

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equipment during the commissioning process. Intelligent Equipment controls give almost 350 diagnostic points on the Rebel units. By allowing technicians to dive deep into unit diagnostics, Intelligent Equipment identifies potential problems. During the set-up for the museum, technicians could see and adjust equipment settings remotely, eliminating the need for the facility manager or building owner to make a service call.

"The customer trusted using Rebel rooftops and Intelligent Equipment in this climate-control application. The fact that a Daikin applications engineer halfway across the country can be virtually hands-on with Intelligent Equipment allowed us to sell the job," Dobberstein said.

"Intelligent Equipment provides a window into basic trending information on base temperature and humidity and other control points such as compressor speed, fan speed, and unit state, giving engineers the

ability to adjust the settings and troubleshoot," said Dodds. "On a remote basis, you can go into the data for a deeper level of insight than you would by talking to a service technician standing by a unit on the roof."

Dobberstein added, "Intelligent Equipment gave access to hundreds of diagnostic points unobtainable from the facility's building automation system. [It] is also a helpful application because of the high cost of technician services," noting the platform's remote troubleshooting capability eliminated several service truck rolls during commissioning.

With highly secure Ethernet LAN or high-security cellular network connections available, the museum always knows that the only individuals



University of California Berkeley's Regatta Museum's storage facilities contain thousands of historic artifacts. The museum installed Daikin Rebel commercial rooftop systems paired with the Daikin Intelligent Equipment solution to meet its stringent standards for climate control and to preserve the integrity of the collection.

accessing their equipment are those who keep their system running at its utmost peak efficiency.

For more information, visit www.DaikinApplied.com.

Erickson's Aircrane Cuts the Hill Group's Installation Time Down to Hours

In the summer of 2016, **Hill Mechanical Group** called on **Erickson Inc.** to lift and place cooling towers and chillers by air into a building in crowded downtown Chicago, accomplishing the goal in hours compared with weeks needed for other methods. The project was located at East Randolph Street in a crowded landscape with multi-level streets and nearby residential buildings, so land crane equipment was not an option. Using Erickson's precision capabilities, aerial crane operators placed chiller equipment through a hole in the roof, with inches to spare, and then set it 15' below the roof level.

Erickson's signature Aircrane is a giant in the world of helicopters, with a rated lift capacity of up to 25,000 lb. It features a unique glass-enclosed aft-facing pilot station that allows the crew member to precisely lift and place large, oversized, or heavy objects. The heaviest section for this move weighed 19,000

lb. By taking advantage of the Aircrane's lift capacity, the Hill Group saved time because fewer pieces had to be assembled on the roof.

Five aerial lifts were completed in 1.3 hours of flight time, saving the Hill Group several weeks of time compared with other move methods. Hill Mechanical Group had previously worked with Erickson on other projects, and they knew airlifting was the only option for completing this project in a safe, efficient, and cost-effective manner.

For more information, visit ericksoninc.com.



Using Erickson's precision capabilities and the lift capacity of the Aircrane helicopter, aerial crane operators placed chiller equipment on the roof of a downtown Chicago building, cutting the Hill Group's installation time to hours compared with weeks needed for other methods.

JAY R. SMITH

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the elevator lobby and hoistway. To meet the San Francisco Fire Department's requirements, the drains were promptly sent out for third-party testing and verification. The whole process, including the much-needed third-party certification, took less than four months. With that certification in hand, McClenahan had proof of the efficacy of the drains that the city inspectors and fire marshal needed.

While McClenahan's main concern was that the drains met the

required flow rate, the architects were also concerned with the aesthetics. Fortunately, the Smith low-profile threshold drains lived up to those demands as well. The drains use 1/4" grate spacing, which complies with ADA requirements, and they are heel-proof to help prevent falls and injuries.

McClenahan's Kelly confirmed that Smith was the right choice for the job. "We received the [stainless steel threshold drains] on time, and they are easy to work with," he said.

Transbay Block 8 includes a 56-story residential tower will have 118 condominiums, 279 luxury apartments, and 70 below-market-rate apartments. The ground floor will feature 17,000 square feet of retail space set around an open public paseo. The project is scheduled to be completed in March of 2020.

For more information, visit www.jrsmith.com.

Anderson, Rowe & Buckley Shaves Hours, Speeds Up Cash Flow With MobiliForms From iBusiness

Anderson, Rowe & Buckley (AR&B) deployed MobiliForms from iBusiness Technologies, cutting labor costs and going paperless painlessly. “Our 100+ field techs are shaving time each day, and I’ve personally recaptured eight hours per week,” said Darin Sheridan, HVAC superintendent, who is tasked with overseeing the solution.

“[With MobiliForms,] our 100+ field techs are shaving time each day, and I’ve personally recaptured eight hours per week.”

—Darin Sheridan, HVAC Superintendent. Anderson, Rowe & Buckley, Inc.

Technology upgrades are notorious for creating upheaval, busting budgets, and falling short on promises. After carefully examining the alternatives, AR&B selected MobiliForms to streamline operations with mobile. The solution paid for itself quickly, implementation took just weeks, and it works hand-in-hand with their current backend software.

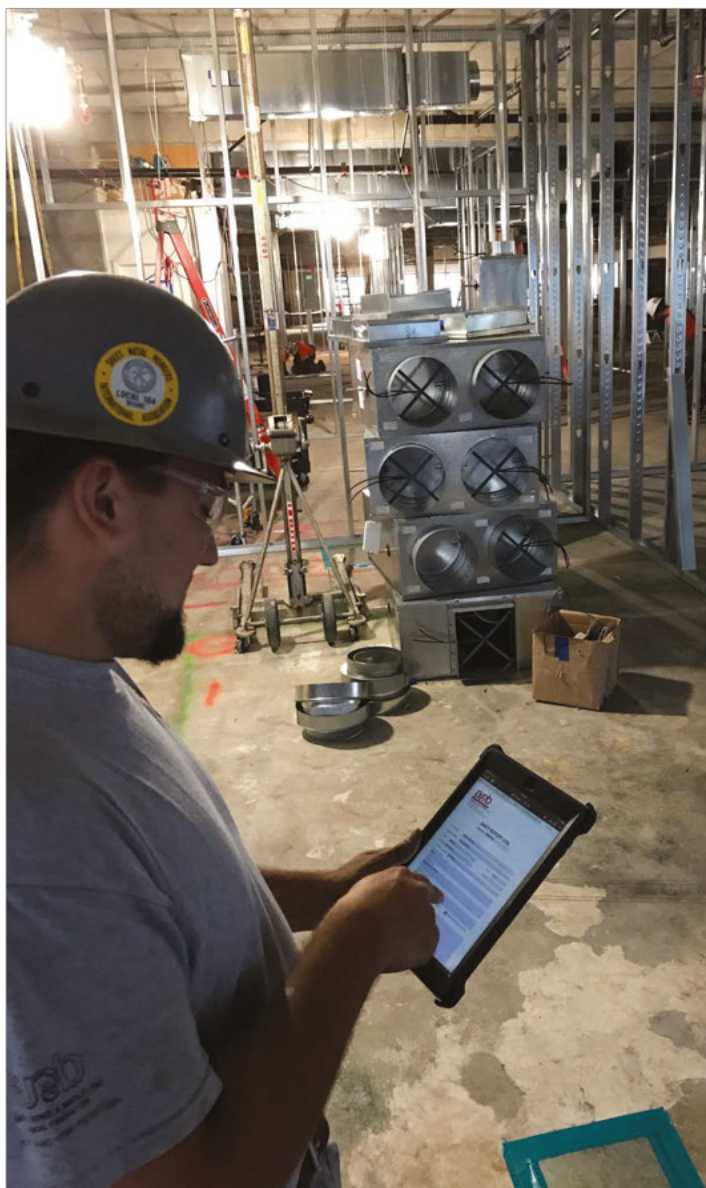
“Our primary goal was to standardize processes, but we’ve also been able to cut clerical mistakes and eliminate the need to rewrite tickets, and our customers absolutely love it. MobiliForms is among the best partners we have,” noted Sheridan. AR&B’s service orders, daily reports, requisitions, and timecards now appear exactly the same on iPads as they do on paper, and techs can capture

images and signatures digitally. Based in San Francisco, the company has been around since 1921, so there are many long-time employees who did not grow up using digital technology. However, they are adapting easily to their familiar and identical forms on iPads.

AR&B’s critical documents are instantly emailed or stored in the cloud to share with foremen, subcontractors, and customers, which has improved communications and accelerated cash flow. Team members can collaboratively resolve issues quickly as they arise. Sheridan heard about successes other MCAA member companies had replacing paper forms. What compelled him was the fact that MobiliForms did not require any change to his backend software and that all forms would appear identical on the company’s devices.

According to Forbes Magazine, more than 50 percent of digital transformations do not go properly, and companies’ expectations are not met. MobiliForms, however, has an extraordinary track record of success within the MCAA/MSCA. The 2016 MSCA Field Service Software Report, conducted by independent laboratory JBK Labs, the research and development team of JBK Knowledge, concluded, “Contractors looking for a low-cost, low-risk, and incremental transition to field mobile operations would do well with MobiliForms.”

For more information call 877-565-3261 or visit MobiliForms.com.



In the field, AR&B technicians use MobiliForms from iBusiness Technologies on iPads to speed up reporting, eliminate errors, improve communication, and accelerate cash flow.

IMI Empowers Foremen With Rhumbix, Improves Productivity in the Field and Home Office

Manual collection of paper time cards in the field is prone to errors, takes too much time, and, most importantly, takes attention away from important jobs in the field. Since rolling out **Rhumbix** so their foremen could go paperless, **Independent Mechanical Industries, Inc. (IMI)** has found, “Foremen use the Rhumbix app on their iPhones to record time cards in just minutes, [which] allows them to clear their minds and attack the work in front of them,” said David Reynolds, IMI vice president.

Reynolds and the executive team at IMI, based in Illinois, are constantly looking for new tools for their project teams in the field to “help them run their jobs more efficiently,” he said. Furthermore, IMI wants to attract and retain the best people in the business. “We want to show our field that IMI is advancing in terms of using technology and tools they need. I hope they see IMI as the best place for them to continue their career,” said Reynolds.

Reynolds is the fourth generation of his family to work at IMI. One of his responsibilities as vice president is overseeing operations and information technology. He led the effort to incorporate Rhumbix as a key tool for IMI’s foremen and the home office.

Before Rhumbix, “We were faxing

Since rolling out Rhumbix, “all I need to do is log into the Rhumbix dashboard and review hours. I don’t have to put out fires anymore.”

—David Reynolds, Vice President, IMI

“[Rhumbix] is eliminating errors, saves time, and frees up our payroll clerk for other important jobs.”

—David Reynolds, Vice President, IMI

over time sheets or snapping pictures on cell phones and sending them in. Sometimes the picture or fax quality wasn’t great either,” Reynolds noted. “The result could be as simple as the payroll clerk not being able to read the timecard, or worse, the time is incorrectly entered and a check gets cut for incorrect time. On top of this, and most importantly, the back-and-forth between payroll and our foremen on correcting errors took valuable time away from production. That’s too much time taken away from the office and the field correcting errors.”

Reynolds continued, “The ability [of Rhumbix] to eliminate errors from reporting time from the field to the home office was a major draw for IMI to start using Rhumbix.

“At the Home Office, Rhumbix is, without question, an efficiency improvement and time-saver,” said Reynolds. “We simply upload an Excel file from Rhumbix right into our accounting software (Viewpoint) for payroll. [Rhumbix] is eliminating errors, saves time, and frees up our payroll clerk for other important jobs.”

Since rolling out Rhumbix,

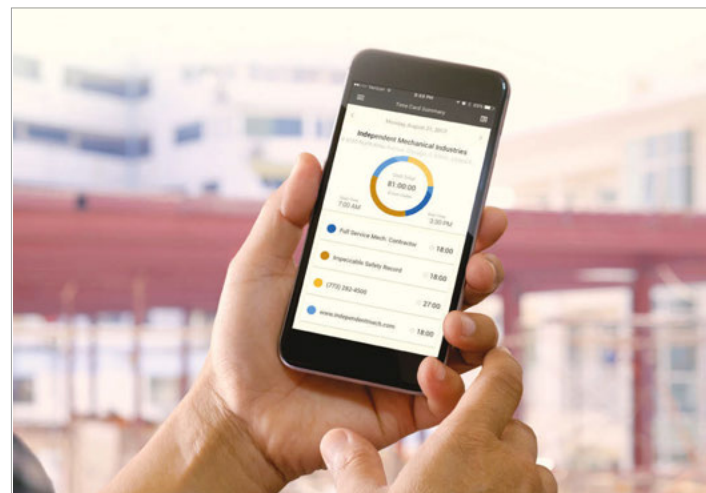
the time-card-to-payroll process at IMI runs more smoothly and does not require costly reconciliation. “I’ve been able to become more hands-off. ... All I need to do is log into the Rhumbix dashboard and review hours. I don’t have to put out fires anymore,” Reynolds stated.

IMI is continuing to roll out Rhumbix to additional foremen, and the company is seeing even more time go back into production-based activities. Furthermore, IMI is reviewing Rhumbix Pro, which introduces automated reports and dashboards to measure budget vs. actual production data.

“We want to make sure our field knows that IMI is going to give them the best tools to run their job as smoothly as possible,” Reynolds observed.

For more information, visit www.rhumbix.com.

MCAA welcomes Rhumbix as a new member.



IMI foremen use the Rhumbix app on their iPhones to record time cards in minutes, so they can spend more time focused on the work at hand. As a result, the payroll process is smoother and there are fewer errors.

EVAPCO

continued from page 1

catheterization labs, sterilizing, the critical care department, operating rooms, and maternity ward functions—all with no room for errors that could lead to downtime.”

Maintaining reliability of the hospital’s indoor environments—and the ability to shed heat from cleaning and sterilization—took precedence over energy efficiency. But, said Lehigh, “We needed unerring dependability of critical patient care. We expected the rest to follow suit.”

Cooling Towers Top the List

“Replacement of the towers was a five-year effort,” explained Lehigh. “Early on, we identified a need and began preparations. At first, we considered a retrofit to the existing, 30-year-old cooling towers. Another approach would be to replace some of the evaporative coolers. But after careful evaluation, in an effort that actually took several years and through many budget cycles, it was clear to us that we needed to replace the old evaporative coolers.”

Lehigh said that the team of managers and outside experts tasked with finding a solution to the hospital’s needs all focused on the importance of improving cooling tower operations. Then, related mechanical equipment challenges would need attention as well.

“It felt at times like trying to assemble a jigsaw puzzle, not knowing if we had all the pieces,” added Lehigh. “The old cooling towers, with 900 tons of cooling capacity, were reparable—at least some of them were—but at considerable cost. Plus, there was the need for ongoing maintenance. New cooling towers offered many advantages, yet the higher price tag became the obstacle.”

Through the years of studying all aspects of the project’s “pieces,” the completed puzzle began to take shape when the hospital considered the many long-term advantages of improved energy efficiency, greatly reduced maintenance, improved operational performance, the ability to have redundancy, and capacity for hospital expansion.

Finding the Right Fit

The existing cooling towers were contained by brick walls on all sides, defining the footprint. WellSpan Health Engineering managers formulated a plan to replace the failing equipment in the same footprint and provide additional capacity for N+1 redundancy. Only one manufacturer, EVAPCO, had products that would meet the need for 1,200 tons of evaporative cooling equipment and also fit within the limits of the space. The existing cooling towers were connected to three, 300-ton York/Johnson Controls centrifugal chillers. The new coolers would have to have additional capacity for a new, 300-ton chiller needed for the hospital’s anticipated expansion.

Valuable Visit

Craft & Son brought a healthy attitude to the project. “Sure, there were challenges, but what job doesn’t throw a surprise occasionally?” said Allan Jordan, jobsite supervisor with Craft & Son. Furthermore, Jordan said, “We’ve worked with [EVAPCO] systems a lot in the past, and their ability to offer a custom solution to meet the hospital’s needs went a long way.”

A visit to EVAPCO’s plant in Maryland provided Craft & Son new



WellSpan Gettysburg Hospital’s existing cooling towers were contained by brick walls on all sides, defining the footprint. Craft & Son determined that EVAPCO towers were the only products with a small-enough footprint for the defined space yet large-enough capacity to meet the hospital’s current needs and anticipated expansion.

insights and a source of solutions. “At EVAPCO, we were introduced to a team of folks who took our challenges seriously, and helped us find just the solution we were looking for,” said Jordan. “EVAPCO was able to offer a modular approach that permitted greater cooling capacity within the given footprint.

“The day we spent there was so valuable,” Jordan continued. “After seeing the complexity of the challenge, to find the answers so close to home, and with all of the professionals on our team nodding in appreciation . . . that was the moment when we knew we’d be able to accomplish the task we’d set out to do.

“No other manufacturer could do this for us,” Jordan noted.

Evaporative Solution

Specified for the hospital were two EVAPCO AT series, induced-draft, counterflow cooling towers, rated for 2,063 maximum gallons per minute (gpm), each with two modular, 300-ton (six-million BTU) cells, for a total of 1,200 tons or 14.4 million BTUs of evaporative cooling capacity. A key advantage is that these coolers have the smallest footprint in the industry

for their size.

Each AT cooling tower provides external access to fully enclosed motors and belts. Attached to the motors is the company's heavy-duty Power-Band drive system with aluminum alloy sheaves and pillow block bearings that provide a minimum guaranteed life of 75,000 hours, as well as an aluminum alloy, statically-balanced, variable-frequency-drive-controlled, 25-horsepower fan.

The Gettysburg cooling towers also have galvanized steel access ladders and platforms, ideal for service and maintenance work. They provide easy access to fan motors and water distribution components.

"With EVAPCO, the ease of service and maintenance is a big improvement over our previous system. Before, we had to crawl into our old units to maintain them. Now, everything's available from the exterior," said Lehigh.

Prefabbed and Prepped

Despite unexpected warm weather on installation day, Craft & Son was prepared. "Allan [Jordan] informed me that, because of all the prefab work they did at the shop, they needed only one welded joint on installation



Despite hot weather, installing the new EVAPCO cooling towers went smoothly because Craft & Son had prefabricated piping and other components. On the day of installation, they needed only one welded joint, saving time onsite.

"At EVAPCO, we were introduced to a team of folks who took our challenges seriously, and helped us find just the solution we were looking for. . . . No other manufacturer could do this for us."

—Allan Jordan, Jobsite Supervisor, Craft & Son

day," said Lehigh. "His technicians had already prepared and installed as much of the 14" condensing system supply-and-return piping, onsite, as they could, with every other component considered for prefab," he continued. "They also installed most of the necessary piping for expansion of the hospital—ready for when that day arrives."

Redundancy Plus Efficiency

"In reality, there are four [new] cooling towers, not two," said Jordan. "Each 'module' acts as its own system. They're identical, separate, and singly functional. There are four fans, four sets of valves, and four level controllers."

On a given day, the facility may need only 900 tons of cooling capacity, but a full cell is available for redundancy, as well as to ensure peak efficiency of the entire system by modulating the fan speeds. Electric controls connect all facets of the mechanical system, and they constantly assess the variables and make decisions to ensure dependability.

The control system also selects system function for maximum energy efficiency. For instance, conditions may call for operation of one cell (or modular evaporator section) at 100 percent. Instead, two cells are tapped at 50 percent each. In addition to energy savings, tower fan speeds can be lowered to reduce wear on motors, belts, and bearings.

EVAPCO's independent water level control and isolation valves allow operators to easily lock out individual towers as needed and to generate an alarm to the building management system. Each module can be isolated easily, allowing other systems to ramp up to replace any part of the system that is shut down temporarily for routine maintenance. In a failure scenario, the control system can automatically shut that cell down, lock it out, and then notify technicians that service work is required.

Systems Come Together

In the bowels of the hospital are the chillers and water treatment equipment and the pump stations that circulate fluids to and from all of the connected equipment. Included are three 945-gpm Taco base-mounted cooling tower condenser pumps and three 756-gpm base-mounted pumps to govern constant flow of chilled water to and from the hospital's 22 air handling units, from 10 to 120 tons in size.

"Important, sometimes life-saving work goes on every day in any of the floors above us," noted Lehigh. "Yet, down here—and, now, out on the rooftop—are the new and improved systems that make it all possible. A lot of planning, and a lot of work, and the right systems all came together.

"Now we know that the facility's ultimate mandate—no downtime—is as close to a full guarantee as we can make it," he concluded.

For more information, visit www.evapco.com.

Josam Company's Trench Drain Saves Miinc Mechanical Money, Time, and Headaches

With its light weight and easy installation, Josam Company's Pro-Plus trench drain system not only minimized hassle for Miinc Mechanical Contractors of Dallas, TX, but it also saved them labor and installation time. Instead of using three or four workers to install the trench drain, Miinc needed only one or two workers laying the Pro-Plus system during a recent project for Southwest Airlines.

Avoiding the Hassle Factor

Most contractors do not enjoy working with trench drain. "Finding a trench drain system that, first, is not broken into pieces when you receive it; second, doesn't require an advanced degree to determine the proper way to install it; and can also withstand extreme weather conditions and temperature changes is not an easy task," said Alan Milby, director of preconstruction at Miinc. "In such a competitive environment, we need to avoid as many delays and potential issues in the field as possible that can cause increased labor costs on a job. Installation of trench drain is no different," he added.

Miinc was awarded the Simulator Office at Southwest Airlines Headquarters Building adjacent to Love Field in Dallas. The company spearheaded the five-story expansion, which included office space, a flight training building, and central plant expansion. The scope of work included three trench drain runs that were 8" wide with a C class load rating. In search of a trench drain system that would prove to be different than previous experiences, Milby turned to Miinc's long-time cast iron drainage supplier Josam Company for a solution. Josam Company was up for the task of proving to Milby that

working with a trench drain system does not need to be a dreaded task.

Surviving Texas Heat

The Josam Company Pro-Plus trench drain system is the only system made of glass-reinforced polyester pressed from sheet molded compound, or SMC/GRP. The product is 1.5 times stronger than polymer concrete, yet it is 70 percent lighter, a big plus in handling and labor. Similar systems made of polypropylene experience 4.4 times more thermal expansion than SMC/GRP, and trench drain systems made out of high density polyethylene (HDPE) experience 10 times more. In the heat of Texas, thermal expansion is a big deal. Milby noted, "When we put the Josam Pro-Plus in, it stayed nice and straight on the install. We didn't have to do anything special with bracing or blocking to keep it that way like we would have with other manufacturers' products that we used. It went in really nice."

To meet the specifications, Josam Company shipped their 8" nominal-width trench drain with a class-C ductile iron grating and the innovative Starfix grating system. "While the Starfix design results in a much nicer-looking finished installation, we

locking bar system," said Milby. "It is little features like this that can help keep our labor costs down and be a benefit to our client down the road from a safety and ease-of-cleaning standpoint."

Easy Installation

Milby further noted, "The channels were received at the jobsite with no breakage, and all channels were easily marked with a numbering system for easy installation. I have a few larger projects coming up where I fully intend to take advantage of Josam's no-charge service to provide an installation layout drawing which tells you exactly where each channel is to be placed for longer and more complex runs. The reduced weight of this product allows me to use one to two men for laying out and installing the run, as opposed to three or four men for the heavier products we've used. Again, this cuts down on my manhours and ultimately reduces labor costs.

"Lastly, when I received my quotation from Josam Company, I questioned why they quoted product to meet a class-C load rating without quoting a rail to support the load," Milby stated. "Josam advised us that, unlike

"The reduced weight of this product allows me to use one to two men for laying out and installing the run, as opposed to three or four men for the heavier products we've used."

—Alan Milby, Director of Preconstruction, Miinc Mechanical Contractors

were even more pleased with the simplicity of simply securing the grates by pushing down on them with your hand and locking them into place as opposed to the timely process of securing the grates with a traditional

other manufacturers, they are able to achieve up to and including a class-E load rating without needing to add an additional rail system like other manufacturers we have used. This not

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Flo-Tron Tackles Outdated Business Processes with Jonas Construction Software

Implementing a fully automated, integrated software solution from **Jonas Construction Software** helped **Flo-Tron Contracting** streamline their business, enhance efficiencies, and reduce payroll processing time by 50 percent. “The software we were using prior to Jonas was very limited, and we found ourselves having to regularly pay for external services and consultants to handle many of our business processes. With the fully-integrated nature of Jonas, we could handle all facets of our business in-house, which truly helped us meet all of our needs in a single software solution,” said Kari Cordell, controller at Flo-Tron.

With Jonas eTimesheets, Flo-Tron experienced an immediate impact. As Cordell explained, “With eTimesheets, I no longer have to manually type in hours for our office staff and technicians. Instead, everyone logs their own hours, and all I have to do is upload and review, which has truly changed the way I do my job for the better.”

The office staff is much more productive as well, so employees can focus on more meaningful tasks and even redistribute the workload more efficiently. Flo-Tron has reduced the time it takes to complete union remittances, which used to take half a day. Now, they can be done instantly with the simple push of a button.

Seamless Transition

Having trainers who walked through the process many times ensured that Flo-Tron migrated to the new system proficiently, minimizing staff training time. Jonas Construction Software trainers understand construction, accounting, and technology, which made the transition the best

experience possible, from Flo-Tron’s perspective. Jonas trainers were also flexible about meeting Flo-Tron’s needs, and staff members were able to learn the software at their own pace.

“We found ourselves having to regularly pay for external services and consultants to handle many of our business processes. With the fully-integrated nature of Jonas, we could handle all facets of our business in-house.”

—Kari Cordell, Controller, Flo-Tron Contracting

Pruning Paperwork

Since partnering with Jonas Construction Software, Flo-Tron has significantly reduced their manual processes as well as the amount of physical paperwork in the office thanks to Digio, Jonas’ document management system. “With Digio, we are not only able to scan and upload documents, but we are also able to quickly locate and open any document as well. The drill-down functionality, however, is what impressed us the most, as we can go into the details of any given project and instantly view the purchase orders and committed costs in actual dollars, which has been great for us and our project managers,” said Cordell.

Streamlined for Success

The continued support Flo-Tron receives has also been a huge benefit to their business. With a full internal support team at Jonas, Flo-Tron gets the help they need on an ongoing

basis, which keeps their business running as efficiently as possible with no downtime. Being primarily a service-based construction business, the dispatch scheduler in Jonas has helped Flo-Tron manage their technicians better and has made the lives of their dispatchers much easier. Flo-Tron is now able to schedule the nearest technician to the closest service job by leveraging GPS. They can dispatch more quickly with all information stored in a single system, and they have been able to reduce error-prone double entries as well.

The decision to partner with Jonas Construction Software has already proven to be a great fit for Flo-Tron Contracting and has helped them transform their business. Flo-Tron has been able to streamline their business in all aspects. By eliminating time-consuming manual processes and reducing physical paperwork, Flo-Tron’s back office is able to operate in a more efficient and organized manner. With Jonas Construction Software, Flo-Tron is confident they have the right software solution to help their business continue to grow and improve going forward.

For more information, visit www.jonasconstruction.com.

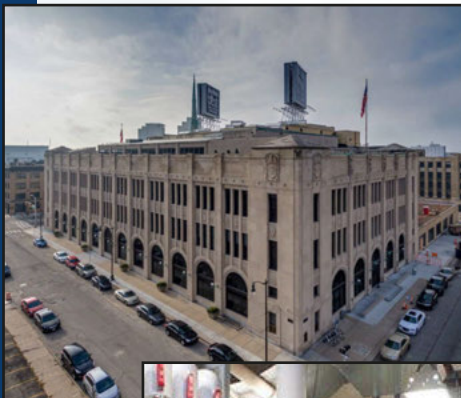
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Adding Value to Your Supply Chain

JOSAM

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only is a material cost savings, but once again a labor-savings feature.”

Although Miinc has a longstanding relationship with Josam Company, they often never thought of Josam when it came to trench drain.

“Working with the Josam Pro-Plus system was an enjoyable and profitable experience for us, and we fully intend to use it whenever we encounter a trench drain installation” said Milby. “We are always searching for quality products that we can provide to our clients. The Josam Pro-Plus system not only is a quality product but one that offers a variety of labor savings features that enables us to remain profitable in our competitive environment.”

For more information, visit www.josam.com.



Looking for a smart solution to your latest business challenge? The members of MCAA's Manufacturer/Supplier Council can help! Check out the Smart Solutions Case Studies and be sure to visit the Virtual Trade Show at mcaa.org.

KEY2ACT

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for the dispatchers, it has also helped Egan cut days off their average days-to-bill. The time savings provided by MobileTech extend to the field as well. Egan's techs have found that completing all the steps necessary to close out a work order is now much faster.

“It takes 50 percent less time to fill out a report using MobileTech,” said Dave Benkowski, an Egan service technician. “Out in the field, it's definitely quicker than manually writing or getting out the laptop and typing it up that way.”

Responding to Customer Needs

Service technicians can also create their own jobs on their devices while in the field. “If they're on a planned maintenance service call, and there is an item that the customer needs to have repaired, they can automatically create their own service call,” Hawthorne said. “They don't need to call back into the office to request another job number.”

Using MobileTech, technicians can

also capture images of work done and attach those pictures both to the call summary report, which is e-mailed to the customer, and to the customer's account within Egan's KEY2ACT system. In addition, they can turn around proposals in record time.

“If there is a customer that has a request for a quote or needs an additional proposal, we can get that information to our inside account management staff to have a proposal turned around and back to the customer sometimes that same day,” Hawthorne said.

And the “too much paper” issue that first led Egan to MobileTech? “We don't touch nearly as much paper as we used to,” said Tim Miller, Egan Company technical support.

“It has streamlined things so much, it's just incredible,” Miller said. “It's made all the difference in the world.”

For more information, visit www.key2act.com.



Using MobileTech from KEY2ACT, Egan Company's field staff have cut the time they spend documenting and reporting in half, so they can better focus on the job at hand.

ANVIL INTERNATIONAL

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ductwork, and other contractors electronically overlaid their designs on Anvil's Gruvlok system scheme, noting conflicts and suggesting changes. The highly collaborative process ultimately resulted in a model that enabled all of the contractors to fit their systems into the tight space.

Hosler had worked with Anvil previously, but had never used the company's design services. He came away impressed.

"I've told Merrill if he ever finds himself up this way and he needs work, to call me," Hosler said, adding that Anvil "had a very good knowledge of how to lay out the systems and how they worked—the principles behind them. They were also very tech-savvy when it came to getting information into our hands."

Once the design challenges were met, fabrication represented the final question mark. To save labor costs,



Bennell, Inc., specified Anvil's Gruvlok systems for the heating and cooling pipe of Bloomsburg University's new residence hall because they are easy to install, especially in tight spaces.

Hosler opted for prefabrication of the mechanical room's piping in Texas. Davis worked with Hosler to determine how best to split the piping into sections that could ultimately be connected at the construction site. But when the pieces got to the building site, would they fit?

"I was holding my breath about having it done offsite," Hosler confided. When the shipment arrived, he saw that every piece was tagged as it had been in the drawing, and everything fit together like an erector set.

The new building will be named after retiring university President David L. Soltz, Ph.D. The honor is especially fitting, as Soltz concentrated on building programs and infrastructure during his tenure at Bloomsburg University.

For more information, please contact Anvil's corporate offices at 603-418-2800 or visit anvilintl.com.



Bloomsburg University's new residence hall and bookstore brings a "wow factor" to campus. For Bennell, the wow factor was Anvil International's impressive design work to "make 10 pounds fit in a five-pound bag," said Bennell President Craig Hosler, effectively housing heating and cooling pipe, ductwork, and the electrical, mechanical, plumbing, and fire-sprinkler systems in the building's complex mechanical room.

MILWAUKEE TOOL

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tool records and locations whenever any device with the app comes within 100 feet of the Bluetooth range of the piece of equipment to which the TICK is attached.

JH Kelly employs close to 800 employees across a variety of trades, from carpenters to electricians. Jack Vanderford, electronic tool technician, is responsible for managing the company's vast array of tools—quite an undertaking given the sheer footprint of the company, which operates throughout Washington, Oregon, Idaho, and Montana. Vanderford noted that one of the biggest contributors to tool loss within the company is the fact that employees move around a lot—from state to state—and often tools are never checked back in after use. With the assistance of TICK and One-Key-enabled tools, Vanderford can now actively keep an eye on where everything is or was last seen.

Milwaukee Tool's TICK tracker technology is "priceless for the insight it'll lend our entire company. If I could put one on everything one day, I would."

—Jack Vanderford, Electronic Tool Technician, JH Kelly

"Before One-Key, if someone took a tool without proper documentation to a jobsite, we were at a loss as to where it was," said Vanderford. "With tracking capability inside One-Key power tools, and now with the TICK tracker, we have been able to manage inventory and recover tools and equipment easily."

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UPONOR

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floors (third through 13th floors). “When you’re talking about 50 units on one floor, you can whip through it pretty fast with PEX and the multiport tees,” said Chris Dent, Metropolitan assistant project manager. “The multiport tees also help save time by reducing the number of fittings required.”

Multiport tees are made of engineered polymer, a highly durable material that is resistant to corrosion and can withstand high temperatures and pressures. The multiport tees offer an ideal parallel piping fitting solution for hospitality and multi-family applications, and they require about 60-percent fewer connections compared with a piping system using traditional elbows and tees.

The fewer connections offered by the multiport tees not only save significant installation time, but they also reduce potential leak point liability. For a 506-room hotel, the fewer potential leak points, the better.



For the new Raddison Blu hotel, with 13 stories and 50 piping units per floor, Metropolitan took advantage of the time-savings offered by Uponor’s PEX piping, halving the installation time compared with copper pipes.

“With the experience we’ve had with the PEX pipe saving us a couple days of install time per floor, I know we’re going to be using it more and more in commercial plumbing applications in

the future,” said Wolf. “It just makes sense.”

For more information, visit www.uponor-usa.com.

MILWAUKEE TOOL

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Most often Vanderford will find these tools were taken to the next jobsite without being checked back in. Thanks to Milwaukee Tool’s technology, however, he could also find tools that were taken somewhere they should not have been—like a user’s garage.

“This extra layer of communication is vital. Currently, we have a system to check tools and equipment in and out of the shop, but it’s up to employees to update us on where tools are,” said Vanderford. “Now, if I’m uncertain about the location of equipment or an employee hasn’t checked in with me,

I can do some quick research on my phone through the One-Key app to have visibility into what’s going on.”

Vanderford plans to bring more than 800 more TICK tool and equipment trackers into his company, but he said that is just a drop in the bucket for a company of JH Kelly’s size.

“That amount [of TICK trackers] is only going to cover a certain percentage of our overall inventory—forklifts, cranes, scissor lifts, chain falls—but in the end it’ll be priceless for the insight it’ll lend our entire company,” said Vanderford. “If I

could put one on everything one day, I would.”

However, JH Kelly’s experience has shown the value of the trackers and the app even when they are not incorporated into every tool. The company reports that in one situation, they recovered stolen tools with the tracking app. They were able to reclaim seven cordless tools and 14 batteries, even though only one item was a One-Key-enabled tool.

For more information, visit www.milwaukeetool.com.

Automatic Investment in High-Quality, U.S.-Made Wheatland Tube Pays Off

In 2015, Automatic Mechanical Services won the bid to install a large chiller plant in a renovated office building in Chicago's West Loop and chose Wheatland Tube pipe for nearly every part of the project. Automatic knew that reliable, high-quality, domestic pipe is easier to weld than imported pipe and much less likely to deteriorate or cause leaks—so it would save Automatic time both onsite and after installation. As expected, the system has had no leaks, which helped allow the chiller plant to become operational two weeks ahead of schedule.

Counting on Quality

The loft-style high-rise building, now known as the Gogo Building, is home to high-profile tenants such as Gogo, Twitter, and Uber. Automatic used a total of 1,600 tons of Wheatland Tube cooling pipe in sizes ranging from 1/2" to 16". The crew set up a pipe fabrication station onsite for cutting, threading, and welding and made more than 200 screwed joints. With eight pipefitters working six days a week, plus overtime, they completed the project in just five months.

Automatic's focus on total quality has always been the key to its success and steady growth. While other HVAC providers try to cut costs by using imported pipe, Automatic remains

from our competition. And I think our customers respect that. We do it right the first time, so they don't need to call us back to fix leaks. They call us back for more new projects."

Perils of Inferior Pipe

LaMonto has seen a lot of pipe since he entered the industry nearly 30 years ago. He has seen the welding process cause inferior pipe to split along the seam and develop leaks. He has seen imported pipe deteriorate over the span of a year when exposed to the elements. And he has seen a substantial difference in quality when using pipe from Wheatland Tube, especially when welding, threading, or cutting Wheatland's SureThread™ continuous weld standard steel pipe.

"Import pipe acts funny sometimes when you weld and thread it, because the steel can be inconsistent," LaMonto said. "But SureThread is made of quality steel, so it doesn't have any hard and soft spots. It's annealed during the manufacturing process, which makes it much easier to work with."

LaMonto never gives quotes involving any other pipe, and he works with a supply house that keeps Wheatland Tube's product well stocked. Occasionally, though, the supplier

By using Wheatland Tube pipes, "we do it right the first time, so they don't need to call us back to fix leaks. They call us back for more new projects."

—Nick LaMonto, Construction Manager, Automatic

provided but had such a hard time with the threading that they gave up and replaced all the pipe with product from Wheatland Tube when it was back in stock. Automatic finished the job easily and knew the pipe would perform well for their customer.

Higher Quality Means Lower Labor Costs

Because the team at Automatic understands the quality difference between Wheatland pipe and imported pipe, they also understand the cost difference. Imported pipe is cheaper upfront but costs more in labor when workers have to recut inferior pipes, rethread or clean up uneven pipe ends, and fix leaks.

"We obviously want to be competitive and make a profit on every job, but we don't want to use inferior product. Leaks are embarrassing and a pain to repair," LaMonto said. "So we might spend a little more on materials by buying Wheatland pipe, but we make up the difference in labor savings during installation. It's more than worth it."

For more information, visit www.wheatland.com or call 800-257-8182.

"So we might spend a little more on materials by buying Wheatland pipe, but we make up the difference in labor savings during installation. It's more than worth it."

—Nick LaMonto, Construction Manager, Automatic

loyal to high-quality domestic pipe from Wheatland Tube. "We're growing because we put quality first and always use the best pipe," said Nick LaMonto, construction manager at Automatic. "That's how we're different

runs out, and Automatic has to use imported pipe to meet a deadline. Such a situation happened recently, when Automatic needed to install gas piping on a roof. Workers tried to use the imported pipe that the supplier