

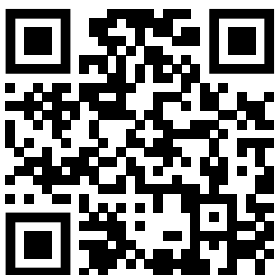
MCAA SMART *Solutions*





MCAA's Virtual Trade Show

MCAA's Virtual Trade Show, where our contractor members connect with the members of MCAA's Manufacturer/Supplier Council, because who doesn't need the best strategic supply chain to enhance productivity and profitability?



Learn more and experience the Virtual Trade Show for yourself today!

Don't forget to check out the "What's New" section where we have highlighted the newest additions to the show.

What's Inside **MCAA** SMART Solutions

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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Efficiency *Everywhere,* Every Day



Parthiv Amin

Chair, MCAA Manufacturer/Supplier
Council Executive Committee

This issue of *Smart Solutions* demonstrates how you can rely on MCAA manufacturer/supplier partners to become more efficient and productive on the shop floor, in the field, and in the office.

Productive Products

In this issue, W.W. Gay describes how they increased shop productivity by 200 percent with Novarc Technologies Inc.'s Spool Welding Robot. Read about how Hooper Corporation simplified installation and decreased downtime by switching from manual hoists to MILWAUKEE TOOL's compact, novel hoisting tool. Innovative cured-in-place pipe lining from NuFlow Technologies enabled NuFlow Midwest and Althoff Industries to complete a large-scale pipe rehabilitation with minimal downtime and disruption. Marking Services, Inc. teamed up with an energy company to replace its outdated labeling systems, saving time and labor.

For more insights on advancing fabrication, look at Way Engineering's use of Tecnar's Rotoweld 3.0 to deliver consistent, high-quality welds, even in the face of irregularities. Read about the instant time savings Cerris Systems North Central (formerly MMC Contractors) realized with its custom-built HGG Profiling Equipment, Inc. pipe cutter. Learn how Progressive Mechanical increased capacity and cut waste by adding a second Watts Specialties, LLC pipe cutting machine to keep up with shop demand.

Other stories exemplify the close relationships between contractors and

manufacturers. For example, the Helm Group counts on LAARS, a Bradford White Company, for their product quality and ease of installation as well as Laars' commitment to supporting customers. Learn about the collaboration between P.J. Dionne Company and SLOAN to deliver on a complex restroom renovation at Logan Airport.

Tech Support

Read how J.M. Brennan is using XOi technology in the field to show customers exactly what's needed, increasing sales and revenue as a result. Find out how McCarl's swapped out Excel spreadsheets for MSUITE software to optimize workflows and increase operational efficiency. Leaders at Postler & Jaeckle Corp. explain how they are testing new ways to use Stratus labels to streamline processes. See how Bassett Mechanical adopted Pype-Server, Inc. software to save time and minimize mistakes, or read about McKinstry implementing customized Procore project management software to increase efficiency and improve morale.

Expert Advice

This issue offers lots of advice you can use to boost your business, such as how to improve plumbing estimating (McCormick Systems), select the right tools for commercial plumbing projects (Ridge Tool Company), choose temporary heating solutions (Herc Rentals), and take advantage of digital time tracking software (Raken).

Wheatland Tube gives insights on using domestically manufactured pipe over imported equivalents to improve the quality, safety, and sustainability of any project. Copeland takes a deep dive to help you understand advances in commercial heat pumps. Tyfoom explains how cumulative learning can boost efficiency,

Join me in welcoming our newest supplier partners:

- **Bluebeam,
A Nemetscheck Company**
- **Herc Rentals**
- **HGG Profiling Equipment,
Inc.**
- **Lubrizol**
- **McElroy Manufacturing,
Inc.**
- **Spirax Sarco USA**
- **Tecnar**

reduce risks, and retain top talent. F.W. Webb Company demonstrates the benefits of HDPE pipe.

The recently opened Rex Martin NIBCO Interactive Museum is one place where you can immerse yourself in the past and future of plumbing. You can also get more in-person insights by visiting our manufacturer/supplier partners at select MCAA events throughout the year.

Parthiv Amin

Chair, MCAA Manufacturer/Supplier Council Executive Committee

QUALITY & PRODUCTIVITY

Soar

with **Tecnar & Way Engineering**

Way Engineering was skeptical that automated welding could deliver the high quality they demanded, but Tecnar's Rotoweld 3.0 technology proved so effective, the company purchased a second machine just three months later. The Rotoweld is also helping Way Engineering adapt to the industry-wide shortage of skilled welders.

Increasing Quality and Capacity

Way Engineering, a 100-year-old company with over 2,500 employees, faced a clear challenge: how to maintain the craftsmanship that built their reputation while meeting the demands of modern industrial projects. Historically, manual welding had been their gold standard, with skilled welders adept at handling the irregularities inherent in pipe joints. However, as the company scaled up operations, leadership began to question whether manual welding alone could meet growing demand while delivering the same level of consistency. They were also particularly concerned about how automation would cope with real-world conditions, such as gap changes, high-low misalignment (hi-lo), and pipe ovality—issues that seasoned welders had long managed with finesse.

Adding to these concerns was a broader industry trend: the growing scarcity of skilled welders. As experienced professionals retire and fewer young workers enter the trade, the mechanical contracting sector is facing a significant labor shortage. This new reality underscored the urgency for Way Engineering to explore automation not just as a means of enhancing productivity but also as a solution to labor challenges.

Addressing Automation Concerns

The transition to automation was not a decision Way Engineering took lightly. Company leadership was particularly apprehensive about whether a machine could replicate, let alone exceed, the adaptability of their skilled workforce. Automation, they feared, might struggle with the imperfections that are inevitable in pipe fit-up, leading to compromised weld quality and increased rework.

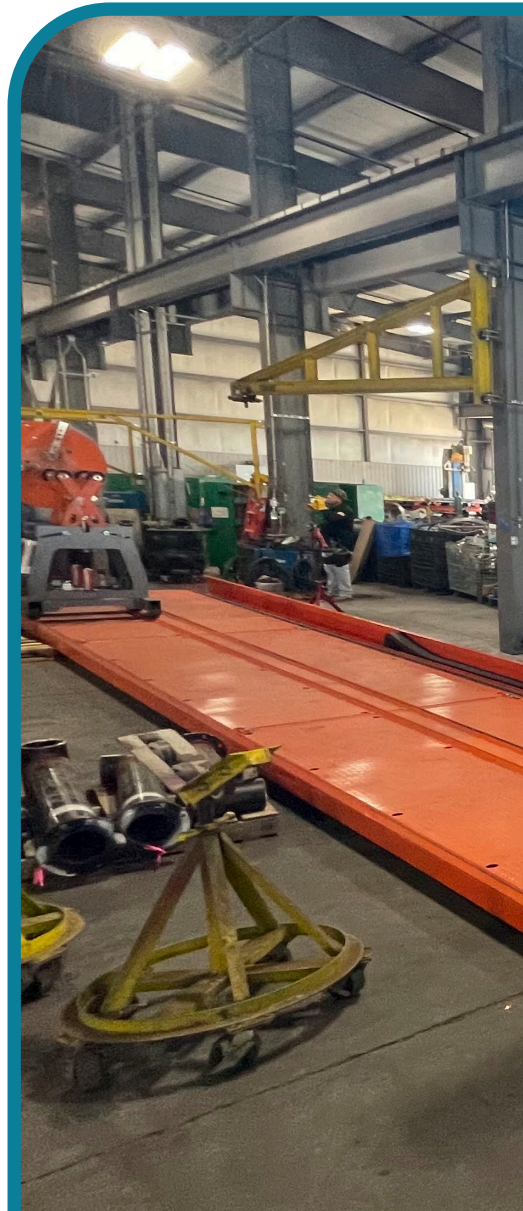
After extensive research and evaluation, Way Engineering chose Tecnar's Rotoweld 3.0, drawn by its reputation for flexibility and precision. The Rotoweld quickly dispelled their doubts, exceeding expectations with its ability to deliver consistent, high-quality welds, even in the face of irregularities. Unlike traditional automated systems, which often require near-perfect preparation, the Rotoweld adapted seamlessly to changes in gap, hi-lo, and ovality. This adaptability was made possible by the machine's

fully robotic arm and Tecnar's advanced PerfectPass-iQ technology, which continuously monitors and adjusts welding parameters to ensure optimal results.

In addition to its adaptability, the Rotoweld's design offered practical advantages for Way Engineering's operations. The company opted for a face-to-face configuration, which provides twin bay productivity in a compact footprint. This layout allows Way to efficiently handle small and medium spools simultaneously while maintaining the flexibility to produce large spools up to 60" in length when needed. The system's versatility and space-saving design made it an ideal fit for their facilities, enabling them to maximize output without requiring significant infrastructure changes.

Rapid Adoption and Expansion

Once the Rotoweld was deployed, its impact was immediate. Within weeks, Way Engineering saw dramatic improvements in both quality and productivity. Encouraged by the results, the company committed to purchasing a second machine just three months later, doubling their automated welding capacity. Way Engineering uses their Rotoweld units for carbon steel and stainless steel spools with diameter ranging from 48" to 2-1/2", for medical, commercial, and light industrial projects.



The success of the Rotoweld was further amplified by its integration with PerfectPass-iQ, Tecnar's fully automated welding technology. Way Engineering served as the beta tester for this groundbreaking system, providing valuable feedback that helped refine its capabilities. PerfectPass-iQ's real-time monitoring and parameter adjustments ensured flawless welds, even in challenging conditions. PerfectPass-iQ is not limited to automatic welding. It also automatically provides a report about the quality of the preparation and the performance on each welding pass. All of that information is included in Tecnar's ProDataLog, the Rotoweld's operating data system. Future implementations will aim at deploying fully automatic, high-level reporting so that shop operators can have insights about their welding quality at a glance using their mobile devices.

The Rotoweld's ease of use also addressed another critical challenge: the skilled welder shortage. With a growing demand for skilled welders and fewer entering the industry, Way Engineering sought innovative solutions to ensure they could continue meeting the increasing needs of their projects. The Rotoweld requires minimal operator training. Its automation capabilities allow operators to oversee the machine while performing other tasks, dramatically improving workflow efficiency.

Way Engineering's partnership with Tecnar has grown beyond that of client and supplier. As the beta tester for PerfectPass-iQ,

Way played a pivotal role in refining and enhancing the technology. This collaboration ensured that the Rotoweld continued to evolve, addressing new challenges and opportunities as they arose. The relationship between the two companies underscores the importance of innovation and adaptability in the face of industry challenges.

Embracing Automation

Corey Gill, vice president and director of construction at Way Engineering, is now a vocal advocate for embracing automation. When asked about the impact of the Rotoweld on operations, he was unequivocal in his advice to other contractors: "Don't wait, and stop trying to calculate ROI—just do it." For Gill, the value of automation extends far beyond immediate financial returns. It offers a long-term solution to the challenges of scalability, quality assurance, and labor shortages, positioning companies for sustained success in a competitive market.

Today, Way Engineering is reaping the rewards of its investment in welding automation. With two Rotoweld machines already in operation, the company is exploring additional applications and considering further investments to expand its capabilities.

For more information, visit <https://tecnar.com>.

Using Tecnar's Rotoweld automated welding technology, Tony Alonzo of Way Engineering delivers consistent, high-quality welds, even in the face of irregularities.



IMPROVING EFFICIENCY & MORALE WITH *Customized Software* with **Procore & McKinstry**

After multiple failed attempts to implement project management software that worked for everyone, McKinstry finally found success with Procore. The customized product from Procore increased efficiency, cut delays, and improved morale. Procore is a benefactor of MCAA25.

McKinstry is an MEP design-build contractor providing energy savings performance contract services. They specialize in eco-friendly retrofits of public buildings across the United States. Based in Seattle, WA, the company prides itself on solving problems for clients, eliminating the barriers that stand in the way of building smarter, healthier, and more sustainable environments. But they struggled with barriers of their own.

Tailored to Fit

Before they landed on Procore, getting anything done at McKinstry often required checking with multiple team members—who may or may not have the answer. With no project management software in place, the company relied on spreadsheets and emails to keep track of vital data, resulting in a leaky, inefficient system that created siloes, impeded progress, and frustrated team members. For example, safety information was typically kept in a single, overstuffed binder onsite that was not always accurate or up to date. For two years, the company tried at least four other software solutions, but none achieved widespread adoption, partly due to a resistance to technology and a commitment to obsolete processes among some employees.

When Matt Ophardt, senior standardization program manager, was tasked with bridging the gap between IT and the rest of the business, he concluded that Procore was the best fit—but left nothing to chance. Working with Procore Professional Services, Ophardt spent three months planning, preparing, and configuring Procore to McKinstry's precise needs. "We took the time to think through each tool and customize it to the way we run our projects, then showed our field teams exactly how they were going to use it," he said. "They could see right away that it wasn't really going to be that different—it was just going to optimize what they were doing."

The result was "fairly instantaneous adoption across most of our projects," said Ophardt. It helped that team members saw immediate payoff. "Procore optimizes the communication with both customers and subcontractors, and that was the most difficult thing we were struggling with," Ophardt noted. With all information in one central location, individual project managers and engineers were able to run their projects without checking in with other employees, helping them communicate with specialty contractors faster so they could move on to other tasks. "Procore has helped us gain efficiencies in all aspects of project management, which helps us get all our projects to close out faster," Ophardt shared.

Procore Professional Services worked closely McKinstry to configure the software to their exact needs and perform on-site walkthroughs in which employees could ask questions and receive training. After so many false starts, Procore proved to be the one platform that achieved universal adoption across the company and helped drive true digital

transformation. McKinstry realized numerous benefits:

- Increased efficiency by streamlining interactions with contractors and external partners across project management
- Faster decisions and quicker closeouts with a single source of truth, reducing delays and improving project timelines
- Company-wide adoption with ease of use, lifting morale and minimizing friction across the entire team

Better Communication Benefits Everyone

Communication has improved since McKinstry implemented Procore, and so have the working relationships among McKinstry employees and partners. "Our subcontractors and customers love using Procore with us, because they face the same struggles we do in terms of communication and focusing on the goals of the project," said Ophardt. "Having that all in one location in Procore helps all of us do better."

That newfound coordination even helped retain a key McKinstry engineer. As the person responsible for reviewing submittals, this engineer would become upset when the lack of organization prevented him from confirming their status or priority level. "He felt like he was letting too many people down, and almost left McKinstry because of it," said Ophardt. "Procore helped him organize that and deliver better to his coworkers, and he is still with us today."

Overall, the improvements brought about by Procore have lifted morale across the company and made McKinstry a more efficient and exciting place to work. "Procore has definitely helped improve the lives of people at McKinstry," Ophardt observed.

Tools Built for Purpose

Why did Procore succeed where so many other solutions had failed? Because it was built by people who understand construction, Ophardt stated. "We've purchased other software where it became clear that the people selling it had acquired a company or built a tool without quite understanding how it would be used," he said. "That's completely the opposite experience we've had with Procore. They understand how we use it and what we need it to do."

Ophardt continued, "It is night and day how we can communicate with our partners and work internally on our projects." With Procore in place, McKinstry is spending less time searching through emails and spreadsheets and more time focusing on its important work. "It's made us so much more digital and connected, with a path to being even more so, that we're excited about the future."

For more information, visit www.procore.com. MCAA thanks Procore for being a benefactor of MCAA25 and providing souvenir Western hats in celebration of the Austin, TX, location.

ACING SCHOOL

Installation Test

with **LAARS, a Bradford White Company & The Helm Group**

Asked for advice on the Belvidere, IL, School District's new boilers, the Helm Group's Service Division recommended Laars Heating Systems Company's MagnaTherm® FT boilers. The Helm Group was impressed with the product quality as well as Laars' extended warranty and commitment to supporting customers. Helm Group then competed for and won the contract to install and maintain the Laars systems, successfully installing them in the strict three-month window before the new school year. LAARS, a Bradford White Company, is a benefactor of MCAA25.

Value-Driven Proposition

Heating for Illinois school districts is always a priority. Last school year, Sean Winter, facility director for the Belvidere School District, worked hand-in-hand with the school board as the district had multiple buildings with boilers nearing the end of their lifespan that needed to be replaced prior to the next school year. With a combined enrollment of more than 5,000 students in those schools that needed new equipment (of the more than 8,000 in the district overall), the consequences of a heating system failure were serious. Additionally, it was agreed that any solution chosen had to be uniform and scalable across the district.

The district put a bid out to the public for the pre-purchase of equipment. Helm Group's Service Division provides HVAC, piping, automation, electrical, and plumbing to the Belvidere School District and also strongly advocates for the district. Because of that relationship, they were able to provide valuable guidance and insights about brand differences. They advised the district to consider the Laars MagnaTherm FT boiler. The school board discovered that this product checked all the boxes to meet the Belvidere School District's needs: high efficiency, oxygen combustion control, and high turndown to match each school's heating profile. However, the Laars commitment to field support with their industry-leading extended warranty proved critical in the decision-making process.



"Laars differentiated themselves not only with their product offering but with their extended warranty," said Pattie Krippendorf, vice president of service at Helm Group. "Because that's the type of company they are with the quality craftsmanship to stand behind their product."

When the district chose the Laars MagnaTherm FT boilers and issued an RFP to find a partner for installation and maintenance of the new systems, Helm Group immediately

responded. Highlighting their ability to take on the entire project, from assistance with acquisition of the equipment and installation to support and maintenance, plus the value of their familiarity with Laars equipment and existing working relationship with the manufacturer, Helm Group won the job.

"It's those value-driven propositions that we all want to pursue—being a solution provider and a trusted partner," Krippendorf said.

The work started quickly once the partnership with Laars and Helm Group was in place. Because of the synergies between the two companies, the "four-legged stool" of contractor, owner, engineer, and manufacturer provided a strong foundation for the project. As Laars sales representatives from Herkowski Stickler and Associates worked directly with the installation team on the ground, the Helm Group team members organized the many components and responded to needs in real time. This level of collaboration enabled the team to keep to the tight timeline while avoiding any major issues.

A Successful Summer

The project took place while the Belvidere School District was on summer break, giving Laars and Helm Group a strict three-month window to complete installation. They successfully stayed on target for the initial installation in six schools, and the district added a seventh school to the project upgrade. All installations were completed in advance of cold weather.

With the installation of the new systems, the district began to realize the savings. With its new, energy-efficient Laars MagnaTherm FT boilers, the school district was able to take advantage of an \$80,000 gas incentive rebate from NICOR, the gas provider in the area. Plus, the long-term utility savings generated by the high-efficiency boilers will add up quickly.

"It's gratifying to help a community organization the size of the Belvidere School District save money and provide safe conditions for students with the installation of our products," said Chuck O'Donnell, director of marketing at Laars Heating Systems Company. "Our Laars MagnaTherm FT boilers are built to last, and we are confident the professionals at Helm Group will keep them running at optimal performance for years to come."

In addition to the money saved through energy efficiency, standardizing equipment across a district this large will save space and money over the long run. As more boilers across the Belvidere School District near the end of their lifespan, the district will have the opportunity to standardize around the Laars brand with support from Helm Service, which means they will have to stock fewer parts for maintenance. The project represents a win for all the parties involved.

For more information, visit www.laars.com. MCAA thanks LAARS, a Bradford White Company, for being a benefactor of MCAA25 and providing the convention souvenir bag.

CHAIN HOIST SIMPLIFIES INSTALL & SAVES LABOR

with MILWAUKEE TOOL & Hooper Corporation

Switching from manual hoists to MILWAUKEE TOOL's M18™ Compact 1-Ton Chain Hoist with ONE-KEY™, Hooper Corporation minimized the physical demands on its workers while making installation much easier and decreasing downtime. Using a cordless chain hoist takes less time to set up and also allows Hooper's team to get into more tight spaces, increasing efficiency overall. MILWAUKEE TOOL is a benefactor of MCAA25.

View From the Front Lines

In the dynamic industry of commercial mechanical contracting, seasoned professionals like Neal Wallace, a sheet metal foreman with over 30 years of experience, understand the importance of safety and efficiency on the job. Wallace has worked for Hooper Corporation, an electric power and mechanical contractor, for the past 10 years. He oversees midsize commercial HVAC projects, managing a crew of up to 10 people. For years, professionals like Wallace have faced physical strain and safety concerns while installing heavy HVAC materials with manual equipment. However, with the recent implementation of the Milwaukee Chain Hoist, Wallace and his team are now experiencing almost effortless installations, less downtime, and improved mobility.

Before cordless tools, Wallace and his crew used primarily manual solutions, which presented their own set of challenges. Hooper primarily works on mid-sized to large commercial builds, so using manual hoists often required multiple units, each involving two to four people to operate. This process demanded significant physical effort and a large workforce, which introduced limitations when working with strict timelines and budgets, all while striving for operational efficiency. Other obstacles included a lack of accessibility and maneuverability. Wallace recalled, "We're supporting the duct underneath with the duct hoists, [so] we have a difficult time getting our hangers in between what's supporting the duct

and the duct itself" when using bulky machinery.

Moving to Milwaukee Tool Cordless Solutions

After reflecting on the limitations and frustrations with manual hoists, Hooper began considering how to make on-site improvements. With the company's recent decision to fully transition to Milwaukee and their existing investment in a variety of Milwaukee power tools, exploring solutions within the M18 battery system was the logical next step. Wallace added, "I think Milwaukee tools are really good tools. I like the batteries that they have, I like the battery life. ... I think they're about the best in the business." He also noted, "Hooper is very safety conscious, and they want to buy tools that make our job more efficient."

With these considerations, the M18 Compact 1-Ton Chain Hoist with ONE-KEY presented an exciting alternative to their existing approach. After a few months of implementation, Wallace said, "I would use them any chance I can get, let's put it that way."

Easing Installation

One key frustration Wallace and his crew identified with manual hoists was the hassle and inefficiency of the installation process. The M18 Chain Hoist provided a transformative solution for efficiency within on-site operations for both inverted and standard installations. The Chain Hoist's one-metric-ton capacity allows Wallace's team to handle heavy loads with ease, significantly reducing the physical exertion on employees. Fewer people are required to work on each lift, noted Wallace. In addition, the crew "is in total control, which is nice," said Wallace. "There's no communication that has to go on between somebody that's running it on the ground and somebody that's in the air. The guy in the air can run it and do his work." Wallace also highlighted that overall, the Chain Hoists are "pretty easy to install, they're not too overly heavy."



Decreasing Downtime

Another frustration commonly experienced onsite with manual hoists is the amount of time it takes to prepare for and conduct a lift. With the advanced features of the cordless M18 Chain Hoist, Wallace has experienced less downtime. Specifically, with a smaller crew needed for operation, less time is needed to prepare and set up. Wallace appreciated “the fact you don’t have to string a cord [...] sometimes on a jobsite power can be a long ways away,” which is why cordless solutions are becoming more prevalent and sought after by professionals. Referring to the integrated chain collection bag, Wallace said, “It’s nice to have the bag that the chain collects in, so you don’t have that chain hanging down.” Users save time because they do not have to untangle, reposition, and manage the chain as they would with an electric or manual option.

Improving Mobility and Safety

Thinking back to their previous inability to get into tighter spaces against walls, Wallace pointed out that with the M18 Chain Hoist, “We are now hanging that duct from above, and we can get our hangers underneath it.” This flexibility allows for more efficient use of space and easier installation. Wallace added, “The guy can keep it right in his lift with him, so as he moves

from point to point, he can take it down and move it to the next spot easily.” This portability and maneuverability significantly enhances workflow onsite. Wallace concluded, “Just a lot less moving parts is what it boils down to,” highlighting the streamlined operation and improved mobility that the M18 Chain Hoist brings to Hooper’s projects.

Wallace also recognizes the safety benefit of using the M18 Chain Hoist. “You don’t have guys underneath a large duct while you’re hoisting it in the air,” said Wallace, which significantly reduces the risk of injuries. “It’s definitely a lot safer to hoist it that way than with duct jacks underneath [...] since you don’t have to do as much lifting” Wallace continued, emphasizing enhanced safety and decreased physical strain with the M18 Chain Hoist. Looking ahead, Wallace noted that Hooper is now looking for more ways to use the M18 Chain Hoist and other Milwaukee tools.

For more information, visit www.milwaukeeetool.com. MCAA thanks MILWAUKEE TOOL for being a benefactor of MCAA25 and sponsoring the Wednesday night reception and Awards of Excellence breakfast.

Customized Pipe Cutter

Time & Money

with **HGG Group & Cerris Systems North Central, Inc.**

Cerris Systems North Central, Inc. (formerly MMC Contractors) needed a unique pipe cutter to meet rapidly growing demand, so they collaborated with HGG Group to develop the first-ever ProCutter 900 RB. The results were immediate, with instant time savings. A recurring job involving 30" pipes that used to take two weeks to cut now only takes four days.

Pursuing a Pipe Dream

Cutting with precision and accuracy is an integral part of any metal fabrication enterprise. A clean, exact cut makes for more accurate welding and less time spent grinding and refitting. Even when fed by a skillful hand, getting a clean cut often takes time, considerable effort (especially with a batch of big pipe), and a lot of rehandling to meet customer specifications. Delivering on schedule and on budget, often with little margin for error, can be difficult.

In recent years, CNC pipe profilers have revolutionized the metal fabrication industry, allowing shops to attain greater accuracy in a fraction of the time of the manual approach. These approaches can be a real game-changer, but depending on the scope and scale of the business and its infrastructure, they are not a one-size-fits-all solution. For Cerris Systems North Central, finding the tool that would meet the specific needs of their growing business seemed like a pipe dream.

According to Mark Janning, fabrication shop manager at Cerris Systems North Central, business has spiked over the past decade, creating more work and the need for more skilled workers and faster turnarounds than ever before. What started as a small shop with some focus on fabrication has grown into an entire building dedicated to fabrication for three different trades.

Cerris Systems North Central needed a machine with an offload system that was oriented sideways, enabling them to discharge pipe into the flow of the shop. The team decided to meet with HGG to discuss options. According to Janning, HGG listened intently to their wish list of desired features and machine capabilities, undaunted by the need for a unique solution.

"When we discussed design, they came to our offices and asked, 'What do you need?'" Janning noted.

HGG offered to design and build a machine that fit Cerris Systems North Central's space—one with a unique infeed and a side discharge. In November 2020, Cerris Systems North Central purchased and installed the fully automated, customized ProCutter 900 RB.

Saving Time, Labor, and Materials

In addition to saving substantial time with the new pipe cutter, Cerris Systems North Central saves on materials. The software is programmed to drop about 0.5" between cuts. This, paired with the ability to optimize the pipe to get the most cuts-per-length possible, dramatically decreases the amount of scrap generated.

"Being able to stack different sizes of pipe on the infeed and just have them at your fingertips and roll the pieces in as you need them has really cut down on material handling alone, let alone the manpower needed to do it," observed West. For a fab shop that turns out about 8,000



Saves

welds per year (an average of 40,000 weld inches) on average on pipes ranging in size from ½" to 48", this benefit adds up.

Increasing Efficiency

Not only is the fabrication process less taxing overall, it is also much more efficient.

With the customized ProCutter, pipe lengths are directed along the roller bed toward the main drive automatically, with precalculated precision and speed, turning finished profiles out with ease.

"We design it in CAD, we push it through from CAD into the machine, and then we pick which ones we want, push a button, and it cuts it all at once," said Matt Townsend, Cerris Systems North Central pipe fabrication manager.

The automated approach is quite a change from the tedious cutting method that required manual adjustments to the torch for bevel cuts and laying out pipe, a piece at a time, by hand.

"The quality of the cuts that have come off the machine has been phenomenal," Janning agreed. "None of our fitters had any complaints, even down to the pickiest guy in the shop."

"It's heavy duty. It's meant to handle big pipe and do it fast and do it well," observed Townsend. "We have not found a limit on how many welders we can feed. We currently run 10 spots right now, and they're full all the time."

Safe to operate and built to last, the machine Janning now affectionately refers to as "the heart-beat of the shop" is what makes the work possible every day. Going from a hand-cutting, primitive machine to the fully automated, customized ProCutter "that will do everything," said Janning, has only created one problem: he cannot imagine doing business any other way. West added, "I think we got kind of spoiled in having this machine and it would be very difficult to go without it."

For more information, visit www.hgg-group.com.

Justin West, steamfitter foreman at Cerris Systems North Central, said the HGG ProCutter 900 RB, customized for its shop, has cut down on material handling. Using the ProCutter, Cerris Systems North Central has dramatically increased efficiency.



MONITORING FAB PROJECTS IN *Real Time*

with **MSUITE & McCarl's**

By swapping out Excel spreadsheets for MSUITE software across multiple fabrication shops, McCarl's Industrial and Mechanical Contractors now has real-time visibility into their workflow, not the two-to-three-day lag time. Adopting a fully digital platform has optimized workflows and increased operational efficiency.

McCarl's is known for their expertise in complex heavy industrial services and pipe fabrication across various sectors. The collaboration between McCarl's fabrication management team—led by Jon Bushmire, operations manager, and Max Wimer, project engineer/project manager—and the team at MSUITE, has significantly improved their operations. MSUITE provides McCarl's with real-time visibility, optimized design-to-fab workflows, and enhanced quality-control (QC) capabilities.

McCarl's implemented MSUITE across two of their three fabrication shops. Each shop covers 60,000 square feet, and McCarl's employs about 50 fab shop workers. They use Autodesk's AutoCAD Plant 3D toolset to send designs to both shops. Integrating Power BI with MSUITE supports enhanced assignments, visibility, and tracking.

According to Bushmire, implementing MSUITE came with the typical challenges of new software adoption, but it has been a success, particularly due to the instrumental role of team members like Wimer. "As we grow, we've found the system to be very user-friendly and centralized. Our design and drafting departments are in one area, making it easy to create and distribute drawings to the fab shops. This has streamlined working on the same project across multiple shops, reducing confusion," said Bushmire.

A recent example involved a job that started in the Beaver Falls, PA, shop but had to be moved due to overflow. Tasks were seamlessly reassigned to another shop with all necessary drawings and welds in place, demonstrating the system's efficiency and ease of use.

Dashboard Highlights Progress

Integrating MSUITE with Power BI yields a dashboard that provides McCarl's a comprehensive overview of activities across two fabrication shops and one design team. It allows for easy monitoring of completed stages, tracking the delivery status of items, and determining the next steps for field teams.

McCarl's can share the dashboard with clients for better transparency, and reports can be easily exported to provide stakeholders with clear visibility into a project's status—whether it is a project McCarl's is fabricating for their own job or for others', as they occasionally do, Bushmire said. For example, reports can show:

- fabrication projects in process;
- items in the QC process;
- items scheduled for delivery; and
- Items that have been delivered.

Life Before MSUITE

Before implementing MSUITE, McCarl's used an internally developed Excel spreadsheet to track activities. According to Bushmire, Power BI closely mirrors their old spreadsheet, which made the transition smoother. They utilized this template to pull information into Power BI, maintaining a familiar format for their field teams.



Excel and manual tracking pose several challenges:

- **Limited access:** Only one person could use the spreadsheet at a time, leading to inefficiencies.
- **Data integrity issues:** Multiple users caused data duplication, deletion, and inconsistencies.
- **Manual updates:** Tracking and updating information manually was cumbersome.

Using MSUITE and Power BI allowed McCarl's to overcome those challenges:

- **Database reliability:** The database handles fabrication data management, helping provide accuracy and consistency.
- **Immutable reports:** Power BI allows view-only without manipulation, preserving data integrity.
- **Automatic updates:** Users can simply refresh the data to get the latest updates without manual input.

"From a management perspective, the real-time visibility provided by MSUITE is invaluable," said Bushmire. "Previously relying on outdated Excel spreadsheets, the team now benefits from up-to-the-minute data, significantly enhancing their ability to manage fabrication status." Immediate access to current information is crucial for effective management and decision-making. In addition, MSUITE's user-friendly interface ensures that everyone, regardless of tech experience, can operate the system easily using tablets.

Attention to Detail

Wimer pointed out, "MSUITE has revolutionized the QC Department by automating the generation of quality documents, which previously required manual input. This automation allows the QC team to make final adjustments and send documents to clients quickly. Our fitters and welders enter heat numbers, select weld procedures, and claim welds completed instantly."

Wimer noted that MSUITE has streamlined the design-to-fabrication process, especially when releasing drawings to the shop, further enhancing operational efficiency. He also appreciates the close collaboration with MSUITE. "The regular bi-weekly meetings with the MSUITE support team foster a strong partnership. These meetings ensure the software is continually improving and address any immediate issues."

"We're also working with MSUITE to develop more features tailored for industrial pipe fabricators like us. Our business is very dynamic, given the nature of industrial piping," said Wimer.

Bushmire added, "In industrial fabrication, tracking every detail is crucial. We need to know the heat number, chemical makeup of the steel, welding procedures, who welded it, and the results of X-ray tests."

"There's a lot of information to manage. Unlike some types of commercial work, which may not require such extensive tracking, industrial fabrication demands it. For less complex fabrication tasks, I think MSUITE works perfectly, but for intricate levels where tracking is essential, it's a vital tool," Bushmire continued.

Industrial Fabrication Trends

Bushmire and Wimer agree that the industry is rapidly advancing toward the adoption of new technology, including robotics

in welding. Bushmire noted that while every fabricator has their own way of doing things, technological systems greatly enhance efficiency. "Implementing new technology is a significant task and doesn't happen overnight," he said. It took McCarl's about a year to fully integrate and optimize their new MSUITE system.

Bushmire emphasized the importance of ensuring that new systems can integrate seamlessly with robotics and stay updated with the latest technology. As more fabricators adapt to new technology, maintaining pace with these advancements is crucial.

"In our pipe fabrication, the Rotoweld is our most advanced robot. From my visits to the Pipe Fabrication Institute, I've



become well-acquainted with two industry-leading robots: the Novarc and the Rotoweld. Both are excellent, each with unique strengths suited to different types of fabrication," said Bushmire.

Impact in the Fab Shop

Wimer reports that staff at various shops find MSUITE comprehensive and easy to use, making their tasks straightforward and satisfying. Bushmire emphasized that the utility of MSUITE depends on the scale of operations. "For high-volume fabrication, tracking thousands of welds each month, MSUITE is essential."

The new process, combined with tools created in Excel, has significantly streamlined operations at McCarl's. "We're just a couple of clicks away from getting 20–30 drawings in," said Bushmire, noting the immense time saved compared to the previous manual spreadsheet method.

While Excel might work for a single job, McCarl's found it was not feasible for managing multiple simultaneous projects. Bushmire advises fabricators looking to grow and manage multiple shops seamlessly to consider MSUITE. "As McCarl's expands into new areas like Nevada, Oregon, and North Carolina, using a system like MSUITE is crucial for ensuring seamless operations across various locations," he said.

For more information, visit www.msuite.com.

Simplify **TAGGING** Save **TIME**

featuring **Marking Services Inc.**

An energy company in the Southeast teamed up with Marking Services Inc. (MSI) to replace its outdated labeling systems across their electricity generating plants, saving time and labor. Working closely with the company, MSI developed a standardized labeling system to help with safety, compliance, maintenance, and emergency response at the company's many plants (including solar and hydroelectric facilities). As a result, the company implemented a labeling and asset management program using more than 500,000 labels. MSI's field team ensured proper and precise installation, which in turn saved the energy company time and labor.

Through a collaborative process, MSI tailored products to the company's needs, including more than 5,000 custom MS-215 Rigid Thermoplastic QR-coded process safety management tags designed for specific environments. The durable tags are engineered to withstand harsh conditions, including high heat, fierce winds, and exposure to dust from materials like limestone and gypsum.

MSI's Material Take-Off service reviews project drawings in detail to identify exactly where each label needs to go and create a precise bill of materials. Labeling materials are delivered to the jobsite meticulously packaged by MSI based on the drawing, building section, or even

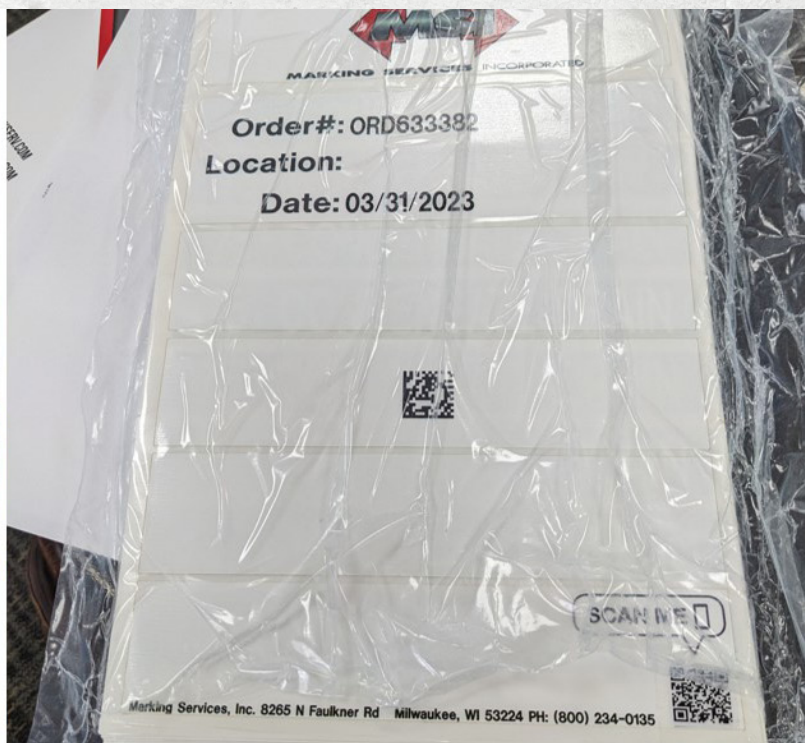
specific rooms, so the team can immediately install the right labels in the right places. Clients also receive access to the marked-up drawings on their mobile devices, enabling real-time, on-the-go reference to ensure nothing is missed.

The MSI approach saves hours in planning and labeling and significantly reduces the risk of errors, avoiding costly rework and delays. The energy company found that partnering with MSI freed up time to focus on the bigger picture of completing projects.

MSI's Valve Schedule Service simplifies valve tagging and includes essential components such as valve identification, type, service description, system abbreviations, valve number, level or area, operating positions (open, closed, or modulating), maintenance information, and safety information. MSI provides custom-manufactured tags meticulously organized according to project-specific drawings, room designations, or designated areas.

The collaboration between the energy company and MSI highlights how tailored solutions drive substantial improvements, reinforcing that efficiency and safety are paramount in today's fast-paced energy sector.

For more information, visit www.markserv.com.



Selecting the *Right* Tools for Plumbing *Success*

The complexity of longer, more elaborate pipe systems, paired with the urgency of getting a business back up and running, makes having the right tools for commercial plumbing repairs essential. You need tools with the appropriate power and size capacity to complete jobs, enough cable to ensure they can reach the end of longer pipes, and extra cable flexibility to allow navigation of longer pipe runs. Along with finding tools with these general features, here are five basic tools you should invest in for commercial work:

- **Cable machine with 6" or more of pipe capacity.**

Drain cleaners, whether drum or sectional style, are required to clean the tougher blockages found in large, commercial drains. The heavy-duty cable in products like the RIDGID K-5208 Sectional Drain Cleaner is designed to break up heavy debris, such as tree roots. Look for machines that have transport features, such as built-in wheels or transport carts, to aid you in getting your machine to the drain.

- **Jetter.** A jetter, such as the RIDGID KJ-2200 Water Jetter, is effective at removing grease and soft blockages from drain lines and a particularly good initial investment if you are working on grease-related restaurant projects. Make sure that you have a jetter

designed for the areas where you work. Gas-powered jetters must be operated outdoors, but you can access drains indoors with a detachable hose reel.

- **Press tool and attachments.** Pipes and tubing in commercial settings cover a wide range of sizes and types of material. Look for a standard or compact press tool that offers a wide variety of jaw types and attachments, such as rings and cutters, so you can easily adjust the tool based on the needs of the job-site. The RIDGID RP 251 Press Tool accommodates numerous attachments.
- **Inspection camera and locator.** Standard size inspection cameras provide the size and distance you need for most commercial applications. Essential diagnostic tools, including cameras and locating equipment like the RIDGID SeeSnake® M200 with TruSense® Technology can give you a better understanding of the work that needs to be done. They often pair well with equally versatile drain cleaning tools, so you have the right solutions to complete your drain cleaning jobs.
- **Standard threading machine.** Tight spaces tend to be less of an issue in commercial settings, making a standard threading machine a good investment. Additionally, if you are threading a lot of pipe, a larger machine like the RIDGID 1224 Threading Machine can handle a large number of threads more efficiently.

The right tools will make all the difference in how confident you feel about resolving your next commercial plumbing repair.

For more information, visit www.ridgid.com.



Small Steps, Big Wins: Staying Ahead With Cumulative Learning

Featuring **Tyfoom**

By Mark Nelson, CEO, Tyfoom

For mechanical contractors, staying competitive is a constant battle. But that doesn't mean you need to make big changes that take a lot of time, effort, and money—it's about making small, steady improvements over time in processes and people that add up to remarkable results. Focusing on marginal gains and cumulative learning offers a practical way to boost efficiency, reduce risks, and retain top talent—all while building a smarter and more capable workforce.

Marginal Gains

A single drop of water is pretty insignificant, but a consistent drip will fill a bucket over time. This principle of marginal gains—popularized by Sir Dave Brailsford in his transformation of British cycling—focuses on making one-percent improvements to achieve significant overall results.¹ One percent may not seem like much, but over the course of one year it results in a staggering 3,678-percent improvement. Brailsford coined this phenomenon as “the aggregation of marginal gains.”²

What Is Cumulative Learning?

In the training world, the aggregation of marginal gains is called “cumulative learning”—that is, people learn best when they layer new information on what they already know and have opportunities to apply it.³

Without a commitment to this type of learning, workers become stagnant in their skills and knowledge, hindering innovation and adaptability. They also become complacent in their safety practices, leading to more frequent incidents. Stagnation and complacency demolish motivation, heighten disengagement, and, ultimately, result in turnover as employees seek opportunities for advancement elsewhere. Employers are not only impacted by the costs of turnover,⁴ but they also lose valuable institutional knowledge and expertise.⁵

Why Cumulative Learning Matters

The principles of marginal gains can be applied to daily learning to drive continuous improvement by the following approach:

1. **Setting clear, incremental goals.** Break down larger objectives into small, manageable goals. This not only makes progress more tangible and less overwhelming mentally, but also provides a mathematical certainty of success.
2. **Focusing on process over outcome.** Emphasize the importance of the process rather than just short-cutting to an unsustainable (and likely unattainable) result. By concentrating on improving daily practices and routines, the desired outcomes will follow naturally. This shift in focus helps main-

tain motivation and reduces the pressure associated with ambitious goals.⁶

3. **Regularly reviewing and adjusting.** In aviation, for every one degree off course, the plane will miss its targeted landing spot by 92 feet per mile flown, equating to a staggering 500-mile difference after one hour of flight time.⁷

Regular course correction is essential to stay on target and reach the projected goal. Consistent progress tracking allows for continual adjustments, ensuring the team stays on track for achieving any goal.⁸

4. **Embracing a growth mindset.** The successful stay curious. Daily learning cultivates a mindset that values improvement. The belief that abilities and skills can be developed through effort and perseverance encourages adaptability and resilience to face challenges head-on.⁹

Building a More Efficient Workforce

Cumulative learning provides practical ways to strengthen teams and improve operations. Here's how to make these strategies work:

- **Personalize learning.** Training should be relevant to different roles in a company. Personalized training is immediately applicable, increasing employees' long-term engagement and knowledge retention. It also helps new hires become more familiar in their specific jobs so they can be better, safer, and faster.
- **Incorporate microlearning.** Microlearning, as embraced by Tyfoom's short educational videos, delivers content in small, bite-sized pieces and fits in the flow of work. Concepts are broken into small chunks that build on each other and gradually gain in complexity. Microlearning allows employees to absorb and apply new information without feeling overwhelmed.
- **Think mobile.** Mobile-first platforms give employees access to lessons on devices in the flow of work, making learning a seamless part of their day.
- **Encourage peer learning.** Social learning through peer collaboration and gamified elements—like leaderboards, badges, and real-time feedback—encourages healthy competition and fosters team engagement. Employees thrive when they feel supported and recognized for their efforts.

Building a Learning Culture That Lasts

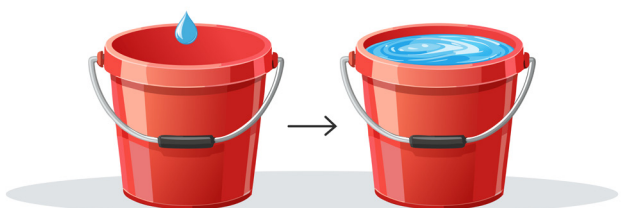
For MCAA members, cumulative learning represents more than just a training strategy—it's a way to future-proof your workforce. By focusing on small, consistent, daily improvement, mechanical contractors can create a culture of safety, productivity, and innovation.

Start small. Aim big. The results will speak for themselves.

Find the references in the online edition at mcaa.org.

For more information, visit www.tyfoom.com.

The Power of Marginal Gains Occurs One Drop at a Time



Additional Pipe Cutter *Increases* Capacity & *Trims* Waste

with **Watts Specialties, LLC & Progressive Mechanical, Inc.**

Progressive Mechanical, Inc. added a second Watts pipe cutting machine to keep up with shop demand, gaining capabilities and cutting waste. Progressive Mechanical has fabrication shops in Clawson and Bay City, MI.

Brian Hund, operations manager at Progressive Mechanical, explained, “Around 2015, we purchased a Watts W-132 pipe cutting machine. Our fabrication jobs began to grow, so we moved into a new corporate building in Clawson, which included a 35,000 square-foot shop. In 2019, we purchased a Rotoweld machine to add speed and efficiency to our pipe fabrications.

“After COVID passed and our fabrication started moving again, it became clear that we needed more speed and efficiency in our pipe cutting,” continued Hund. “Our fab team was consistently waiting for pipe to weld, but we also needed a machine that would work with our BIM modeling software. Our W-132 could not keep up with the welding machine. A huge project with over 260,000 feet of pipe fabrication made it clear that we needed another pipe cutting machine with more capability.”

Watts Wins the Day

“We looked at a few other machine manufacturers,” said Hund. “The other machines were either too expensive or had software that did not merge with our

MSUITE modeling software. Watts and Rotoweld Representative Vince Penny from VMP Automation helped us through the whole process, and in the end, we were convinced to continue with another Watts machine. In 2023 we purchased a Watts W-364 with a 25' infeed bed.”

Hund observed, “The new Watts CNC machine dramatically increased our pipe cutting capabilities. The Watts 3D-Profile Plus software merges seamlessly with MSUITE, so we are able to bring all pipe cuts into the machine quickly.

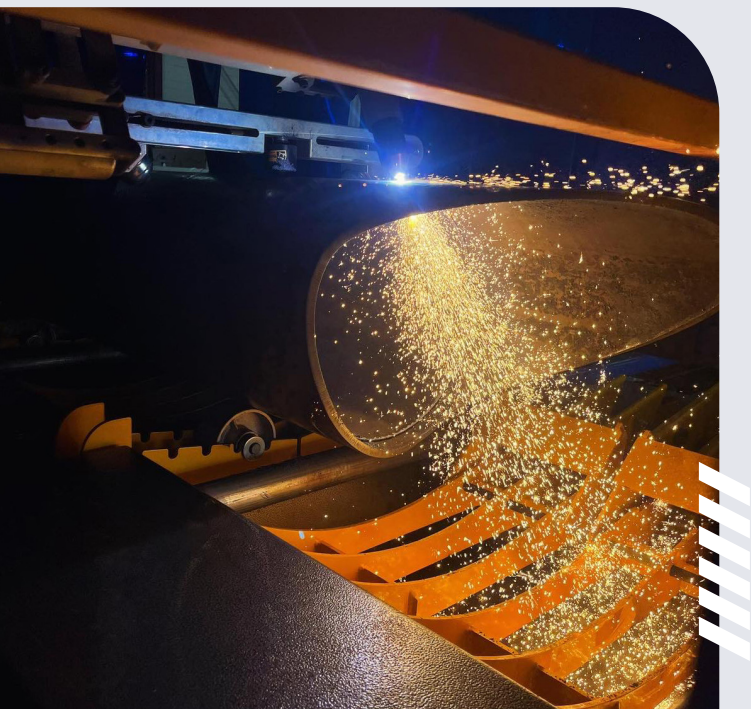
“In addition, the nesting capability of 3D-Profile Plus also increased our efficiency. Finally, the ability to use the pipe header at the chuck end reduced our material waste to less than 1 percent. This was a savings we had not expected. Less wasted pipe equals less material handling and labor costs. We use far less floor space dealing with wasted scrap pieces.”

Superior Support

“Unfortunately, we have needed Watts support a few times,” said Hund. “We damaged the machine ... twice. Both times it was simply an oversight, but each occurrence included broken machine parts. That forced us to call Dave Dunham [managing director] or Jesse Scribner [production manager/technical lead] for help and new parts. During one of these repairs, we also had software issues. Dave flew to our facility from Washington and worked through the night to get everything working properly!

“When Watts says they will go the extra mile with their support, they are serious,” Hund stated.

For more information, visit www.watts-specialties.com.



Advances IN OIL-FREE COMPRESSORS

Copeland Explains

In the air- and water-cooled chiller markets, oil-free compression technology is emerging as a more efficient, quieter, more easily applied, and easier-to-maintain alternative to legacy screw compressors. For original equipment manufacturers (OEMs) and end-users of mission-critical chillers in large HVAC applications, oil management adds costs and complexities to system designs—which typically result in declining energy efficiencies throughout their lifecycles.

Currently available oil-free compressors rely on costly magnetic levitation (maglev) bearings, which tend to decline in performance in warm climates and complicate system design. In recent years, environmental regulations and sustainability initiatives have driven design changes in air-cooled chillers. OEMs and industry stakeholders are pursuing the next generation of oil-free compression technologies that can achieve high operating efficiencies and simplify application complexities while supporting the imminent transition to lower global warming potential (GWP) refrigerants.

Emergence of Oil-Free Compression

Air- or water-cooled chillers provide essential cooling—and heat recovery in many cases—in data centers, health facilities, and other large buildings. Because of the high-tonnage cooling requirements of these applications, large screw compressors have traditionally been deployed. While reliable and robust, screw compressors pose oil management challenges:

- Maintenance and upkeep costs and requirements
- Declining energy efficiencies and performance over time
- Increased risk of performance degradation and potential chiller failure

In recent years, air-cooled chillers have been adopt-

ed, primarily in response to concerns about water availability and sustainability. Although an air-cooled chiller with screw compression and a flooded evaporator can deliver efficiency gains, the need for oil return and management mechanisms significantly increases system design complexities. A similar system designed with an oil-free compressor can provide the same performance benefits without the added oil management complexities, conserving water and reducing environmental impacts while improving application reliability.

The annual energy consumption of an air-cooled chiller is an important factor in determining both lifecycle costs and sustainability footprint. Chiller and compressor selection starts by matching a building's cooling load with chiller capacity. Then, the system's lifecycle costs or return on investment is calculated, including estimated operational and maintenance costs.

Air-cooled chiller and oil-free compression solutions deliver the highest possible energy efficiencies without sacrificing reliability or introducing unnecessary operational complexities. Compressor modulation technologies can provide significant efficiency gains over the operating envelope and allow precise load matching in both full- and part-load conditions. Moreover, an air-cooled chiller solution can achieve these goals in some of the most demanding design conditions, such as the high-lift, warm-climate cooling load requirements found in many data center installations.

With the global phasedown of hydrofluorocarbon (HFC) and high-GWP refrigerants, the HVAC industry is moving toward new, lower-GWP refrigerant alternatives. The Environmental Protection Agency has set a maximum GWP of 700 for the chiller sector, which will drive the market toward emerging A2L alternatives—many of which have lower flammability designations under ASHRAE classifications.

Upgrading Existing Technology

Today's oil-free compressors, designed with maglev technology, require multiple permanent electromagnetic bearings to levitate the compressor rotor (i.e., shaft). Radial and axial proximity sensors are needed to regulate the position of the rotor, and sophisticated, on-board, compressor controls are required to maintain reliable, frictionless operation. In the event of a power disruption, the compressor is no longer energized, and standard auxiliary (nonmagnetic) bearings are needed to maintain low-speed operation. This inherent design feature can increase compressor costs and application complexities.

Oil-free compressors with maglev bearings can experience performance-related limitations:

- Insufficient envelope range for high-lift conditions (i.e., significant cooling in high ambient temperatures)
- Reliability concerns and efficiency loss in part-load, turndown conditions
- Prone to surging (i.e., flow reversal) and choking (i.e., maximum flow) in stop/start conditions
- Short cycling, which can impact cooling performance

Current oil-free technology relies on the integration of a compressor, on-board controls, and a variable

frequency drive. But this preconfigured architecture can present design customization challenges for OEMs who are unable to decouple the compressor from the controls and drive. In hot, humid climates, for example, this inflexible architecture could result in on-board electronics issues—potentially increasing maintenance, threatening operational reliability, and limiting chiller applicability.

Oil-free centrifugal technologies are raising the standards for chiller performance—delivering high-lift reliability, improved efficiency and sustainability, and a broader application range for the next generation of air- and water-cooled chillers. For example, Copeland's oil-free centrifugal compressor leverages frictionless Aero-lift™ bearing technology to optimize energy efficiency, simplify design complexities, and maximize the performance of air- and water-cooled chillers in demanding conditions—and in full- or part-load cooling scenarios. Aero-lift bearings enable the Copeland oil-free centrifugal compressor to operate independently—without reliance on electromagnetics, proximity sensors, and complex controls. Compared to existing screw compressor technology, the Copeland oil-free centrifugal compressor delivers significant energy efficiency gains in full- and part-load conditions.

For more information, visit www.copeland.com.



Maximizing Efficiency With Novel Uses

with **Stratus & Postler & Jaeckle Corp.**

Labels have traditionally been used in construction to convey basic information, but Postler & Jaeckle Corp. is applying Stratus labels and weld maps to transform their practices, so their teams work smarter, not harder. Jesse Gorman, vice president at Postler & Jaeckle, recognizes the potential for using labels to communicate more detailed, actionable data. His goal is to build directly from the labels, an approach that maximizes their utility in conveying essential information for installing components accurately, boosting his team's efficiency. Using technology from Stratus, data are extracted and printed onto labels, providing teams with easy-to-understand guidance onsite.

Although labeling is a familiar tactic, Gorman believes that more effective implementation can bring significant changes in workflow efficiency. Integrating grid offset information allows workers to know exactly where each component should be placed, akin to how ironworkers label steel pieces on a construction site. This approach helps eliminate guesswork, ensuring components are installed correctly and swiftly.

Innovation and Efficiency

In another innovative step, Postler & Jaeckle is introducing continuation labels. This type of labeling goes beyond the conventional A-to-A, B-to-B matching by using existing data to show the next assembly's connection, thanks to Stratus's capabilities. This efficient system saves time and reduces errors, providing clear orientation for each assembly.

Postler & Jaeckle is also testing task labels in weld booths to streamline processes. By integrating Zebra printers in these stations, completed tasks such as fabrication automatically update the project's status, producing labels instantly. This ensures that all components are accurately tagged and traceable, facilitating a more seamless workflow from workshop to site.

Weld maps play a critical role in maintaining accuracy during field installations. Postler & Jaeckle uses a package category system within Stratus to track welds, aligning these with project test boundaries. This comprehensive tracking ensures

that documentation is thorough and organized, which is vital for successful project completion.

Postler & Jaeckle recognizes the importance of standardization to increase efficiency. Implementing kits and predefined packages for commonly used components ensures that project teams can spend less time sorting materials and more time installing them. Gorman pointed out the potential in moving away from traditional sequences by attempting to install hangers and pipes simultaneously, which, although still in experimental stages, shows promise for future projects.

Embracing Attitude Shifts

The construction industry is full of seasoned professionals who may be resistant to change, but as Gorman noted, adopting new practices often depends more on attitude than age. By focusing on efficiency, simplifying workflows, and leveraging technology, construction teams can achieve higher productivity levels, marking a significant shift in how projects are executed.

Postler & Jaeckle Corp.'s journey through these innovations showcases how even small changes, like improving label usage and systematizing weld maps, can have a significant impact. These advancements make it easier for teams to complete tasks accurately while ensuring the safety and reliability of the build. As the industry continues to innovate, those who are willing to embrace these changes will undoubtedly find themselves at the forefront of the next generation of construction practices.

For more information, visit www.stratus.build.



52428 Regeneron Building 27

L2 – Area E – Hangers – 001

HGR – 1339
3/8"
4' 5 – 3/8"

P&J

POSTLER & JAECKLE CORP.
MECHANICAL CONTRACTORS

LEADING THE INDUSTRY FOR 50 YEARS

**4" Type 2, Clevis Hanger with
Protection Shield**

EL: 9' 7 – 1/2"
GO: 4' 3" E [N]
GO: {2' S [5]

THE PROMISE OF HDPE PIPE

F.W. Webb Explains

As communities face challenges with aging water and underground infrastructure, an increasing number of contractors are discovering the benefits of HDPE pipe to address those challenges. HDPE is a cost-effective, easy-to-install, and versatile piping material for any underground utility project—from communications, electrical, and geothermal to sewer and domestic water. Contractors have used HDPE for over 50 years, yet its applications continue to expand, particularly in water and sewer line upgrades.

HDPE installation process differs from materials like ductile iron, as it is less disruptive and minimizes the need for extensive site excavation. F.W. Webb works with partners like McElroy to offer the fusion equipment that melds each HDPE pipe length together, creating leak-free seams. HDPE's fused joints are also more cost-effective than restrained joints for traditional materials.

"McElroy is the leading choice for fusion equipment when a customer chooses HDPE," said Rory Budds, director of Water Works for F.W. Webb Company. "We're thrilled to be a certified McElroy dealer and rental distributor, and we've quickly become a leader for McElroy training and service."

Using the McElroy line of tools, HDPE is fused above ground and can be placed via trenchless installations, reducing traffic and other disruptions.

Additionally, F.W. Webb's in-house staff offers training for the HDPE fusion process. F.W. Webb's certified trainers provide two types of training sessions: contractors can either visit the company's Fusion Training Center in Springfield, MA, or receive training on the jobsite. The training culminates in McElroy-backed certifications.

Once McElroy training is complete, F.W. Webb provides equipment maintenance and repairs for the full line of McElroy machines, including the TracStar series, which features the 900i. This fusion machine can be controlled remotely and maneuvered across uneven terrain to help install HDPE pipe up to 36" in diameter.

"Because of our partnership with McElroy, our customers don't have to waste time searching for the right parts or



a mechanic; they can simply bring the tools to us and be confident the equipment will be repaired to the highest standard set by the manufacturer," said Budds. "It's part of our commitment to our customers to understand their needs and craft solutions for every stage of their projects from start to finish."

The F.W. Webb Water Works team also evaluates project plans and informs contractors about the HDPE piping, fittings, accessories, and tools needed for the job. The full-service guidance removes any guesswork a contractor might face in determining the correct materials for a given project.

"With our end-to-end project support, contractors can seamlessly transition from traditional materials like ductile iron to HDPE without worrying about addressing each step on their own," said Budds.

Components for HDPE piping and Water Works projects are available at more than 100 F.W. Webb locations across the Northeast, with 15 locations dedicated to stocking pipe, accessories, fittings, and other Water Works products.

To learn more about HDPE installation and F.W. Webb's partnership with McElroy and other industry-leading brands, visit www.fwwebb.com/waterworks.

HOW TO CHOOSE *the Right Heater* FOR YOUR PROJECT

Featuring **Herc Rentals**

Whether you are managing a construction site, factory, warehouse, or other project site, you need your operations to run smoothly, but there is one variable you can never control: the weather. With some planning and the right heater, you can help prevent the effects of cold temperatures from snowballing.

Equipping your project site with an effective commercial or industrial heater can keep your team safe and warm, minimize expensive delays and rework, and help ensure that your team can meet project needs. Here, Herc Rentals explores why climate control is important for many project types and what you need to consider when selecting a temporary or supplemental heating solution for your project.

The Importance of Climate Control

Complex projects require careful coordination of multiple teams and resources to ensure everyone's safety. You also need to make sure the project stays on schedule and within budget. If one step goes wrong or is delayed, your entire project could fall behind.

Weather can have a major impact, especially if you are working in winter or if there is a sudden cold snap or freezing temperatures. Frozen ground can slow down foundation work. Fluctuating temperatures and humidity can warp materials and delay cure times, leading to inconsistent results and rework. Plus, some equipment cannot be operated effectively in colder temperatures, further delaying your project.

Winter weather can also affect your workers' productivity and safety. Slippery surfaces and the need to wear more layers, like bulky coats and gloves, can increase the likelihood of accidents and injuries.

Climate control solutions, such as a heater, can help ensure your workers stay comfortable and the work stays on track. In fact, heating your project site may even be required by law as part of maintaining a

safe workplace. The Occupational Safety and Health Administration (OSHA) and the National Institute for Occupational Safety and Health have guidance and resources on protecting workers.

How to Choose the Right Heater

1. Know the types of construction heaters and how they work. The first step in choosing a heater for your project site is to familiarize yourself with the types of heaters available. Understanding how different types of heaters work will help you determine which one is the best choice for the productivity and safety of your team.

Direct-Fired Heaters

Direct-fired heaters are fuel-efficient and can warm a very large area quickly by using fuel to create a flame. The flame itself warms the air, while a fan disperses the warm air over a large area. Direct-fired heaters are easy to use and do not require much maintenance.

However, a direct-fired heater does not have a fully enclosed flame. The warm air it produces will contain byproducts of the fuel and may add moisture to the air. You should only use a direct-fired heater in an outdoor or well-ventilated area, away from the public or animals. Direct-fired heaters may be prohibited in some locations. Be sure to check your local laws and regulations.

Indirect-Fired Heaters

Like a direct-fired heater, indirect-fired heaters also use fuel combustion to generate a large amount of warm air quickly. However, the flame produced by an indirect-fired heater is fully enclosed within a combustion chamber. In this way, indirect-fired heaters act like a mobile furnace, circulating air through delivery and return air ducting so that the dry, warm air released at your project site is free of fumes. Indirect-fired heaters can be used in enclosed areas, but

they may require an external power source, and they have a larger footprint than direct-fired heaters.

Self-Contained Heaters

Unlike direct- and indirect-fired heaters, which warm up a broad area, self-contained heaters are ideal for localized heating needs. Self-contained heaters can be powered by electricity, gas, diesel, or oil and often have their own generator. Without the need for auxiliary power, you can use self-contained heaters on remote projects for a variety of targeted heating needs, such as thawing ground, warming a specific work area, or temporarily heating a space where traditional heating systems are not feasible.

Herc Rentals offers a wide range of direct-fired, indirect-fired, and self-contained heaters.

2. Choose the fuel options that meet your safety and efficiency needs. Now that you know what types of heaters are available, you can narrow your options down by fuel type. A good place to start is by reviewing the regulations of the city where the project is located. Some cities or neighborhoods restrict the types of fuel sources you can use and may require you to choose a heater that uses only diesel or electric power.

If there are no restrictions on fuel type, then consider the safety and efficiency needs of the worksite. Check OSHA's guidelines for temporary heating devices to determine how much clearance and ventilation you will need before selecting a fuel type.

- Electric heaters have minimal risk of fire and are easy to set up, but they may require access to three-phase high-voltage electrical outlets and may cost more to run than propane or natural gas heaters.
- Natural gas heaters and propane heaters run on tanks of fuel and may cost less than all-electric heaters to run, but the site will need adequate space to ensure fire safety and ventilation.

Fuel and electricity costs are always fluctuating, so be sure to factor in how much it will cost to fuel and run the heater for the duration of your project. For instance, if you choose to rent a heater, approximately 20 percent of the associated costs

will be for equipment rental and 80 percent for fuel.

3. Consider how you will use the heater. Temporary heaters are a great option for when you need extra warmth for the duration of an entire project or just for a specific task. Understanding where, when, and exactly how your team will use the heater can help you identify specific features you need in a commercial heater.

- **Cure materials or prevent frost:** If your project needs to cure materials, warm concrete, or thaw the ground, then a portable self-contained ground heater, such as Herc Rentals' 1.0M BTU self-contained heater, 3.1" static pressure, diesel, with multiple zones could be the best choice.
- **Ensure sites are warm before work begins:** Some heaters can be turned on remotely or have advanced scheduling capacity that allow teams to plan ahead and have the site warmed up by the time workers arrive, such as Herc Rentals' 1.0M BTU self-contained heater, 7.5" static pressure, diesel unit.
- **Flexibility:** If you need to regularly adjust fuel usage or your jobsite temperature, look for a heater with adjustable fire settings or fuel selectors, such as the 1.5 million BTU direct-fired heater LPG (liquid petroleum gas)/NG (natural gas) from Herc Rentals.
- **Rapid deployment, access to the newest equipment, or cost savings:** Sometimes, the need for temporary heating arises quickly and you need access to the latest equipment without the burden of high upfront costs and ongoing maintenance that comes with purchasing a heater. In these cases, renting a heater benefits both your schedule and your budget.

For more information, visit www.hercrentals.com.



Highlighting Plumbing's *Past and Future*

with **NIBCO INC. & the Rex Martin NIBCO Interactive Museum**

NIBCO INC. unveiled the Rex Martin NIBCO Interactive Museum on November 12, 2024, coinciding with NIBCO's 120th anniversary. The museum offers a unique and enriching experience from a historical perspective, interactive learning, inspiration, community impact, and career opportunities. Not just a place to learn about the past, it's a place to get excited about the future of plumbing and the opportunities it holds. NIBCO INC. is a major sponsor of MCAA25.

The museum is located in Elkhart, IN, where Casper Schweitzer founded Northern Indiana Brass Foundry Works in 1904. The 8,845-square-foot building was completely renovated beginning in 2023. The museum portion of the space is 3,254 square feet, and additional space in the building will be used as a training area for customers, distributors, and NIBCO associates.

A Tribute to NIBCO's Contributions

Guests are welcomed into the museum by a 14"-copper-fitting water fountain that pumps 50 gallons through its reservoir, along with an interactive hologram feature. A "Plumbing Discovery House" uncovers the intricate systems behind the walls that keep homes running smoothly.

"Our decision to build the NIBCO Interactive Museum and name it after my father is a tribute to his remarkable contributions to the plumbing industry and a continuation of a legacy that began with my great-great-grandfather in 1904," said NIBCO's president and CEO, Ashley Martin. "This ambitious project was something I wanted to complete and dedicate on NIBCO's 120th anniversary to make it extra special. The museum is not just about preserving our history; it's about showcasing the profound impact we've had on the evolution of plumbing and our philanthropic efforts within the community."

Manufacturing displays with interactive features allow visitors to learn more about manufacturing processes and how prod-

ucts operate. An interactive educational kiosk features NIBCO locations, puzzles, and entertaining games, and a theater area provides seating for visitors to learn more via video programs.

"By making the museum interactive, we aim to create an engaging, hands-on experience that appeals to all ages, especially students. We want to make learning about plumbing, its importance, and the career opportunities it offers both fun and inspiring," added Martin.

Celebrating 120 Years

Since 1904, five generations of family leadership have driven NIBCO to flourish as a leading manufacturer of flow control products. Even through the toughest times, NIBCO has survived and thrived, a testament to the fact that it consistently provides the best quality products and employs the very best people. In addition, NIBCO adheres to its core values: safety, integrity, teamwork, continuous improvement, and philanthropy. These values have helped shape and promote NIBCO's culture to what it is today.

From starting out as a company manufacturing parts for musical instruments to becoming a household name in valves, fittings, and flow control products, the NIBCO brand has much to celebrate—today and looking forward to the next 120 years.

"This museum honors NIBCO's five generations of family-owned leadership dedicated to one of humanity's most essential innovations—plumbing and the ingenuity, resilience, and creativity that has brought clean water and sanitation throughout the world," added Martin.

For more information, visit www.nibco.com/museum. To schedule a visit or request a private tour, please contact museum@nibco.com. MCAA thanks NIBCO INC. for being a major sponsor of MCAA25, sponsoring the 4th Annual Pickleball Tournament & Convention app.



Avoiding Turbulence

with **SLOAN & P.J. Dionne Company**

P.J. Dionne Company found that using Sloan's AER-DEC® Integrated Sinks helped make a complex installation at Logan Airport a more collaborative effort. (SLOAN is a benefactor of MCAA25.) Sloan's AER-DEC Integrated Sinks contribute to the airport's sustainability goals while offering high standards of hygiene and efficiency.

Dario Correia, vice president of construction at P.J. Dionne Company, pointed out, "As the plumbing installation contractor on a typical project, we are usually one of the last to go in. With the Sloan AER-DEC systems, everything needed to be carefully coordinated, from the framing of the studs to support the sinks all the way to the final ¼" tolerance of the alcove measurements where the sinks were installed. We even had to carefully coordinate the outlet locations below the sinks to power each device."

The 23 AER-DEC systems installed at the airport—from single stations all the way up to six-station units—were released over six phases after field measurements could be taken to account for the very tight tolerances allowed for installation. All the sinks required precise measurements, as some locations were over 10' long with a single sink station. The largest station was 24' long.

"We had to work with finish carpenters and specialists in countertop seam sealing to help provide a quality product," Correia said. "These are all areas where we are typically not required to engage, so it was difficult but rewarding in the end to see the finished product and understand that we had a major impact on it."

As one of the busiest airports in the United States, Boston Logan International Airport plays a pivotal role in connecting Massachusetts and New England to the world. Logan Airport manages impressive passenger traffic, with over 40 airlines offering nonstop flights to more than 100 domestic and international destinations.

Stress-Free Maintenance

Logan Airport's restrooms are crucial to passenger satisfaction and operational efficiency. Faced with high passenger traffic and stringent hygiene standards, the airport needed innovative solutions to streamline the maintenance process. Sloan's AER-DEC sinks offer a number of key benefits:

- **Integrated design:** The AER-DEC system combines soap dispensers, faucets, hand dryers, and sink basins into a seamless, touch-free unit, significantly reducing the time required for cleaning and maintenance.
- **Minimized germ-prone areas:** The design of the AER-DEC minimizes crevices and joints where germs and bacteria can accumulate.
- **Effortless upkeep:** With features like the easy-to-clean, in-trough hidden drain, maintenance staff can quickly and efficiently manage water runoff, keeping the restrooms looking good with less effort.

Sustainable Travels

Sloan's commitment to sustainability aligns with Logan Airport's environmental objectives.

Through a series of advanced features and benefits, the AER-DEC Integrated Sinks play a critical role in this effort:

- **Water conservation:** The AER-DEC sinks feature integral basins that significantly reduce water usage. This is particularly important for an airport that handles millions of passengers.
- **Sensor activation:** Touch-free sensor technology ensures that water flows only when needed, eliminating waste and promoting responsible water use.
- **Reduced paper towel usage:** With integrated hand dryers, the need for paper towels is eliminated, reducing waste and lowering the airport's environmental footprint.

- **Energy efficiency:** The AER-DEC sinks are designed to consume less energy, contributing to the airport's broader sustainability initiatives.

Together, P.J. Dionne Company, Sloan, and Logan Airport are collaborating around innovative restroom solutions that address the unique challenges of transportation hubs, ensuring a cleaner, more sustainable, and user-friendly environment for all.

For more information, visit www.sloan.com. MCAA thanks SLOAN for being a benefactor of MCAA25 and sponsoring the Monday featured lunch speaker Kendall Toole.



Build Your Business with Updated Time Tracking

Advice from **Raken**

Modernizing the way you log, review, and approve work hours will positively impact more than just your payroll process. Streamlined digital time tracking with software from companies like Raken can help your construction business build more accurate estimates, increase profitability, and improve employee retention.

The Problem With Manual Methods

If you are using pen and paper or spreadsheets to collect time cards from the field, chances are you are not making the most of your resources. Your field crews are busy with project-related tasks. While they may make every effort to submit time cards on time, any payroll team can tell you that does not always happen.

Without standardization or automation, it takes significant effort to collect and organize time cards from your workforce every week, especially for larger businesses. Even if every worker turns in their hours by your deadline, you still have to manually process time card data when you are using an outdated system. Manual data entry is a tedious, error-prone task.

Accuracy Matters

It is important to pay your workers accurately and on time. Most businesses understand that and, if they are struggling with payroll, will often pull in employees from other departments to help calculate and deliver payments as needed, delaying other important projects and tasks.

If your time data is not accurate, you cannot rely on it to help you inform future budgets and schedules. An inaccurate insight is almost as bad as no insight. Trying to plan a profitable project based on data that is miscalculated or full of errors can seem like an impossible task.

It is all too easy for time theft to occur when workers are using outdated time tracking methods. Workers may make errors or be forced to guess the correct hours to add if they are rushing or multitasking when completing their time cards. With pen and paper or spreadsheets, it is difficult to identify time fraud or dis-

tinguish malicious behavior from an honest mistake.

Raken's flexible time entry options allow construction companies to track time in the way that works best for the business. Companies can choose from three options:

- Mobile time clock on workers' individual devices
- Shared time clock kiosk
- Supervisor-led digital time cards

Whatever combination you use, the time entry process is easier and faster than pen and paper or over-complicated spreadsheets. Crews or supervisors more easily enter hours by cost code in the field, using the devices they have in their pockets or a shared device every day. They can submit and approve hours with a click or a tap, instead of manually or by email, while the office can see and review this information immediately in a standardized format once it is submitted. Using Raken's time tracking software minimizes interruptions to your crews' busy workdays, encouraging compliance.

Other Benefits of Digital Time Tracking

While it is easy to see how going digital with products like Raken's will help fix some of the issues with outdated methods, there are other, less obvious benefits to updating your time tracking system. For example, with digital time tracking, you can more easily incorporate cost code data in your time-entry process. Once that data is incorporated, time cards become a useful tool for production tracking.

When businesses track hours by cost code, they gain detailed visibility into individual project efficiency. You can see exactly how many hours of labor were spent on specific tasks and measure actual numbers against estimates



in real time instead of weeks later. You can use these insights to make more proactive decisions on a day-to-day basis and keep stakeholders better informed of project progress.

Raken allows construction companies to get granular data with unlimited custom cost codes. When you can add custom cost codes to time cards, you can evolve your processes as needed, based on real data. You are not forced to track time by predetermined requirements.

Time card data can also help you plan ahead—especially when it is easily accessible and well organized. Digital time tracking gives you more reliable access to historical data to see how previous projects performed. You can easily locate and review past time data without searching through physical files or spending hours on manual analysis, which allows for better financial planning and, ultimately, better profitability.

Job satisfaction increases when employees are consistently paid on time. If the company is struggling to maintain sufficient cash flow to meet every payroll on time, that can contribute to employee turnover, an

especially big concern in the face of ongoing labor shortages. Moreover, manually collecting, reviewing, and approving time cards can lead to burnout in your accounting department.

Easy Time Management

Managing overtime, double time, and any other kind of pay rate can be complex, especially across multiple service areas with different laws and requirements. Raken allows you to manage overtime by setting custom rules and automatically applying them based on the project specifications and more. Both payroll administrators and employees can manage time by project or across all projects with easy-to-use views that make complex information digestible.

Raken also consolidates and organizes time card data automatically so you can more easily apply it. Automated insights demonstrate how work hours are spent and what that means for project progress. Raken integrates with industry-preferred accounting software. Digital solutions like Raken's for time tracking reduce manual data entry, eliminate errors, increase insights, and save time on payroll every pay period.

For more information, visit www.rakenapp.com.



Doubling SHOP PRODUCTIVITY

with **Novarc Technologies Inc. & W.W. Gay Mechanical Contractor, Inc.**

W.W. Gay Mechanical Contractor, Inc. saw a 200-percent increase in shop productivity and a 12-fold increase in weld productivity by implementing Novarc Technologies Inc.'s collaborative Spool Welding Robot (SWR). They are also realizing a 100-percent pass rate on radiography tests (RTs). The SWR has reduced W.W. Gay's dependence on highly skilled welders, of whom there is a global shortage.

Based in Florida, W.W. Gay provides a variety of commercial and industrial contracting services, and has the experience, equipment, facilities, and professional licensures and certifications to meet even the largest project requirements. To maintain their competitive edge, they needed to increase their productivity and efficiency to keep up with the fast-track projects in their market while ensuring high quality. W.W. Gay sought an automated welding solution that would allow them to use junior welders for simpler work and deploy their more experienced welders on other key projects.

Collaborative Solution

David Ray, W.W. Gay's pipe fabrication shop foreman, explained, "We looked extensively to find a solution, and we narrowed our search to several companies. After putting all our choices under the microscope, it was an easy choice. Only the Novarc SWR has the capabilities to do what we do on a daily basis in our shop." The SWR is designed specifically for pipe, small-pressure vessel, and other types of roll welding.

The company implemented the SWR at their facility and trained their operators to use it. Using the SWR combats the shortage of highly qualified welders because it can be operated by less-experienced workers and produce high-quality welds every time.

Ray continued, "My first impression was that the SWR was a really good investment. My impression now is that my first impression was 100-percent accurate."

Ray also appreciated Novarc's responsiveness. "To

date, any question or suggestion I have made has been met with a quick response, and we are 100-percent happy that we chose the Novarc SWR," he said. "The SWR was the only solution out there that fit our needs, it was a perfect fit."

Productivity Soars

Before purchasing the SWR, the team at W.W. Gay was welding between 80 and 100 diameter-inches on average per shift using welding positioners with the gas metal arc welding and flux core arc welding processes. The company wanted to increase the welding bays' inch count to the maximum amount that they could imagine.

"With the SWR, we have seen a tremendous increase of weld inches per shift from 6" and bigger," Ray noted. "Depending on pipe size, we can hit inch counts anywhere from 200" to 275" on a regular basis with the SWR."

"The fact that we can weld slip on flanges is probably one of the most impressive tasks that the Novarc SWR is capable of," Ray continued. "Also, we have gotten really efficient at welding stainless steel fabrication with the SWR, and this is helping tremendously with our efficiency. Our old way of welding stainless would be to TIG [tungsten inert gas] weld with using an ID [inner diameter] purge. A 16" schedule-10 weld would take two-and-a-half hours or so to get a purge set up and then weld out. We now can do a 16" schedule-10 weld in 12 minutes that will pass RT," said Ray.

Quality Improves

The SWR minimizes human error and therefore reduces the failure rate from the industry average of 3–5 percent to less than 1 percent. Ray noted, "The thing about the SWR is that it is a start-to-finish weld—once you hit the 'go' button, it welds the root, fills, and cap without stopping, which makes doing a weld that has to be RT'd a bit of a cakewalk, since there is no in-between pass clean up and prep. We currently have a 100-percent pass rate with our RTs on the SWR. To



put this into perspective, a 10" standard-weight weld can be achieved in 12 minutes or so, which is highly remarkable."

Managing the Welder Labor Shortage

With the SWR, W.W. Gay can assign their highly skilled welders where they are most needed. The company currently has three trained SWR operators, including a third-year apprentice, who are all equally efficient with running the SWR.

"[The SWR] is head-and-shoulders better and more efficient, and the quality is amazing," observed Jason Craven, welder at W.W. Gay. "I'm completely comfortable using it, there are no problems at all. Once you get the hang of it, it is easy to use. ... [Novarc] provided excellent training."

Ray pointed out that the SWR opens up opportunities for W.W. Gay. "We do our shop tours for any specific general contractor that we may be working for," said Ray. "They are really impressed when they see the speed and precision of the SWR. And when I explain how the SWR has improved our efficiency, it is a major eye-opener at our capabilities to keep up with job flow needs and expectations."

For more information, visit www.novarctech.com.



Helpful Habits OF SUCCESSFUL PLUMBING ESTIMATORS

Thoughts from **McCormick Systems**

Cultivating successful estimating habits should make creating fast, accurate bids a seamless process, so you win more plumbing jobs. Here are seven things to consider as you cultivate better estimating habits.

If you are new to estimating, or just trying to sharpen your processes, pick a few adjustments to start with, then continue adding to the routine over time. As one habit becomes engrained, move to the next. Soon, both your estimates and bids will give you a competitive edge.

What Makes a Good Plumbing Estimator?

1. Paying Attention to Project Scope

Successful plumbing estimators understand that every project has its own goals, and every owner has their specific demands. To build the most accurate estimate possible, it is crucial to constantly refer to the intended scope as you determine materials, quantities, costs, and timelines. Otherwise, you may miss crucial elements or add unnecessary expenses, eliminating you from consideration during the bidding process.

2. Focusing on Efficiency

Bidding is an incredibly competitive process that relies on speed and accuracy. A good estimator can build winning bids quickly by running takeoff and building efficient estimates and then submitting their bid in a timely manner.

One way to increase your bidding speed is by using estimating software with built-in takeoff, such as the trade-specific solutions created by McCormick Systems. As you make your measurements and identify the materials, prices are automatically added to the estimate, cutting

multiple steps out of your process.

Also, properly allocating the time of others is one of the most important elements of building an estimate. If you are able to do this consistently, you can effectively control labor costs, take on more projects simultaneously, and maximize productivity and profitability.

3. Being Precise When Building the Estimate

Depending on the job, project owners may comb through hundreds of plumbing bids, so even one mistake or inconsistency could mean you are out of consideration. Building precise estimates involves paying close attention to measurements, calculations, labor costs, and resource availability. It also means verifying this information again before submitting your bid to avoid mistakes and scheduling conflicts.

4. Being Willing to Collaborate

Before building their estimate, a good estimator may contact the project owner to learn more about their expectations, check resources and suppliers for availability, and gather references from previous estimates. As you build the estimate, it is crucial to communicate with project managers, project owners, and other stakeholders about project needs and costs. By keeping an open line of communication, you can stay ahead of changes and avoid mistakes that can impact the expected profitability of a job.

5. Organizing Project Information Appropriately

Developing a system to organize project information where you can easily reference it is critical to creating fast, precise estimates. It also

helps you compare actual costs to your estimate during the project. Plumbing estimating software like McCormick Systems' programs integrates with accounting software to make this step significantly easier

6. Reassessing Past Performance

Analyzing prior project experiences can help you avoid mistakes, apply the most productive processes, and maximize productivity and profitability. Some projects may have similar layouts or materials, such as water pumps or piping. Identifying these similarities allows you to draw on past experiences, which saves time and helps you build more precise estimates.

7. Leveraging Plumbing Estimating Software

Plumbing estimating software like McCormick's makes developing these habits much easier because it gives you access to trade-specific features to accurately calculate estimates, increase visibility, analyze past projects, and source high-quality material.

How Can You Start Building Successful Habits?

The first step to building strong plumbing estimating habits is determining where you can improve the most. You can do this by examining your current plumbing estimating process. Ask yourself, "Are there any common mistakes or pitfalls I've noticed when creating estimates?"

Some examples of potential pitfalls include the following:

- Overestimating or underestimating
- Consistently providing incorrect labor costs
- Being slow to adapt to changes provided by the project owner

Once you have identified an issue, begin applying the applicable habit that aligns with your problem.

How Can Construction Estimating Software Help You Build Good Habits?

These helpful habits are significantly easier to develop if you use plumbing estimating software. While you cannot change all of your habits instantly, the software gives you the tools to identify your weakest areas and work to improve them.

Additionally, construction plumbing estimating software gives you greater visibility into project costs, automates measurements and calculations, securely stores project information, and allows you to easily reassess past performance to determine areas of improvement. Investing in plumbing-specific software such as McCormick's ensures that you have access to features built for your projects, so you can start applying these habits to maintain long-term success.

For more information, visit <https://www.mccormicksys.com>.



A Novel Solution to High-Rise Pipe Rehab

with **NuFlow Technologies & Althoff Industries**

NuFlow Midwest, in partnership with Althoff Industries, successfully completed a large-scale pipe rehabilitation in a 60-story Chicago high-rise by using NuFlow Technologies' cured-in-place pipe lining (CIPP) for hard-to-reach pipes, avoiding costly, disruptive removal and preserving vital building systems. This minimally invasive solution enabled Althoff and NuFlow to comply with Chicago's building codes while preserving surrounding mechanical systems and reducing downtime in shared spaces.

A Tall Order

The mixed-use high-rise, located in downtown Chicago, comprises 24 floors of commercial office space beneath 35 floors of residential units, where significant issues with leaks and sludge buildup were affecting lateral lines and kitchen sanitary mains. The pipes were part of an intricate system running throughout the building, entwined with other mechanical systems, with some sections encased in concrete slabs within shared gym and pool spaces.

Though only 30 years old, the building's cast iron piping system was deteriorating, with degraded pipes and sludge accumulation along the exterior. An engineering firm identified the source: gases produced by food waste from garbage disposals in residential units were corroding the pipes. Access to the pipes was complicated by their entanglement with the building's electrical, HVAC, and fire protection systems, as well as their encasement in concrete. Traditional replacement would have required dismantling sections of these systems, resulting in extensive downtime and significant costs. The commercial office spaces below, unaffected by the plumbing issues, needed to remain fully operational throughout the project. Minimizing disruption to commercial tenants and residents was a priority, and NuFlow Midwest and Althoff's solution needed to

align with the project's tight timeline.

NuFlow Midwest and Althoff proposed NuDrain CIPP, allowing for in-place pipe rehabilitation without the need for removal. This approach preserved surrounding structures and minimized downtime, making it the ideal choice for the building's unique requirements.

NuFlow Midwest and Althoff specialize in advanced pipe rehabilitation solutions, offering a blend of conventional pipe replacement and trenchless lining techniques to address aging infrastructure. This project allowed NuFlow Midwest and Althoff to showcase the advantages of their combined approach, balancing CIPP lining for hard-to-reach areas with traditional pipe replacement in more accessible spaces. Their unique expertise enabled a unique solution tailored to the demands of the high-rise project, and they collaborated closely with the project's general contractor and engineering firm.

Trenchless Technology

NuFlow Midwest and Althoff lined 510' of 4", 265' of 5", 105' of 6", 75' of 8", 85' of 10", and 100' of 15" piping using NuDrain CIPP trenchless technology. This approach was especially effective for pipes buried deep within the building structure. In accessible areas, such as mechanical rooms, the team prelined and installed 100' each of 6" and 8" cast iron pipe, enhancing durability to prevent future deterioration.

To address fittings, the team employed a combination of the "gap" method and mechanical reinstatements. Using a pull-in-place technique, liners were precisely installed to start or stop at each fitting, overlapping the joints, leaving a gap to preserve the branch connection. This method is ideal when access to the branch is not possible for immediate reinstatement, allowing for future rehabilitation with

a specialized “connection” liner when the property is ready for that phase. Additionally, approximately 30 prelined 4” cast iron cleanouts were installed to facilitate ongoing cleaning and maintenance. This approach minimized disruptions, enhanced system reliability, and ensured smooth transitions between lined and unlined sections.

Strategic scheduling played a key role in maintaining tenant convenience. NuFlow Midwest and Althoff coordinated shutdowns only during standard work hours, limiting disruptions for residents and ensuring that commercial office spaces remained fully operational. A detailed daily schedule was provided to all residents, minimizing confusion and fostering transparency.

Minimizing Time, Disruption, and Costs

The project was completed over two to three months during the summer, delivering substantial savings and minimal disruption to building tenants. By rehabilitating pipes in place rather than removing them, NuFlow Midwest and Althoff preserved critical building systems and avoided costly and invasive dismantling of electrical, HVAC, and fire protection systems. With well-planned scheduling, the residential tenants experienced minimal inconvenience, while the commercial offices continued operations without interruption. This effective coordination not only saved the general contractor time and money but also contributed to high satisfaction levels for the building’s HOA and its residents.

NuFlow Midwest and Althoff’s combined use of CIPP lining and prelined cast iron sections resulted in a robust, low-maintenance pipe system for the building. Since project

completion, no issues have been reported, and both the HOA and general contractor expressed satisfaction with the outcome, citing significant cost savings, seamless project management, and long-term durability.

This project highlights NuFlow Midwest and Althoff’s expertise in delivering innovative, effective pipe rehabilitation solutions for complex, high-rise urban settings. Through careful planning, regulatory compliance, and strategic project execution, NuFlow Midwest and Althoff provided a sustainable solution with minimal impact on residents and commercial tenants, reinforcing their leadership in trenchless pipe rehabilitation for complex projects.

For more information, visit [nuflow.com](https://www.nuflow.com).



Seamlessly **INTEGRATING** **SOFTWARE & FAB TOOLS**

with **PypeServer** & **Bassett Mechanical**

Transferring data between different software programs and the fabrication shop exposed Bassett Mechanical to inefficiencies and potential for errors, so they adopted PypeServer software to streamline the process, which has saved time and cut down mistakes. A full-service contractor, Bassett Mechanical specializes in designing, fabricating, installing, and maintaining mechanical systems across several industries. Tyler Petersen, Bassett's vice president of manufacturing, turned to PypeServer for seamless integration between Bassett's multiple design software programs and the fabrication tools in the shop.

Improving Workflow

Bassett Mechanical creates piping, plumbing, and HVAC designs in Autodesk Revit and then processes them through MSUITE to form fabrication packages. Bassett also uses SpoolFab to create pipe spool drawings. Finally, Bassett uses SDS2 detailing software for structural steel, handrail, and other industrial projects. Historically, sending data from these different programs to the shop floor introduced inefficiencies, including the need to manually program automated machinery, with the associated potential for errors. Petersen explained, "We needed a solution that would streamline our process while maintaining flexibility for the variety of design programs we use."

PypeServer's software for fab shop tool control supports all of Bassett's design software and other programs as well. As a result, Bassett can process cut parts from all of their software, with the same automated part nesting, label printing, and fabrication status tracking regardless of the source of the data or the way it was sent to the fab shop.

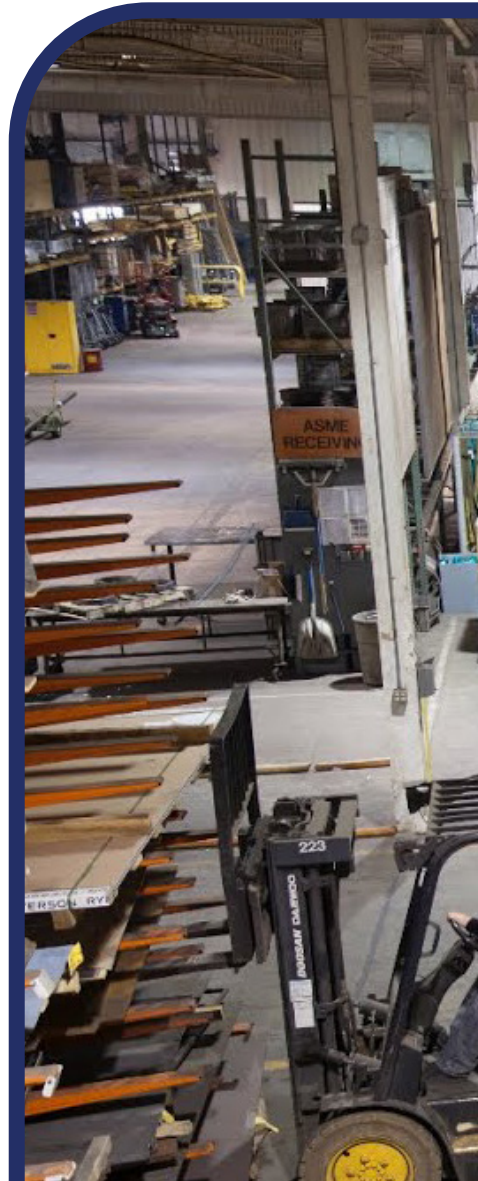
Bassett's Revit data flows to MSUITE and then to the PypeServer software running the shop tools via PypeServer's bidirectional application program interface (API) connection to MSUITE. Bassett's SDS2 designs are sent to the shop using PypeServer's Connect plugin for SDS2, which allows the designer to select parts

directly within SDS2 and send them to the PypeServer Cloud with all the data needed for fabrication with just a few clicks of the mouse. Bassett's SpoolFab software outputs PCD files that PypeServer's tool software can import directly.

Pipe parts are routed to an HGG 900 RB pipe profiler using PypeServer Enterprise, while saw-cut parts are sent to a Kentucky Gauge linear positioner system controlled by PypeServer Lyte and integrated with a Marvel Saw. This arrangement allows the Bassett team to send cut parts directly from the model to the most appropriate cutting equipment without having to manually program the machines. No matter which route the data takes, the fab shop machine operators have the same user interface and the same nesting and label printing capabilities. "The interface and usability stood out," Petersen noted. "PypeServer made it simple to connect our design software, fabrication software, and cutting equipment."

Achieving Results

The implementation process was straightforward, but Bassett's original, older pipe profiler was never designed for third-party software control and presented some challenges.



However, with dedicated support from PipeServer's team, including Kelly Dillon and Ricky Bell, these hurdles were quickly overcome. Petersen recalled, "Their support was instrumental in getting everything up and running, and now we've been processing parts seamlessly for over a year."

Since adopting PipeServer, Bassett Mechanical has significantly optimized operations:

- **Time savings:** By eliminating manual programming, the company has reduced the time spent preparing cut files.
- **Error reduction:** Automating file transfer minimizes human error in programming.
- **Increased flexibility:** PipeServer supports files from various design programs, streamlining the production of diverse projects.

"The flexibility to process cut parts regardless of the design program is key for us," Petersen emphasized.

For Bassett Mechanical, PipeServer has become a

critical component in the workflow. "We couldn't run as efficiently without it," Petersen stated. By integrating seamlessly from design through fabrication, PipeServer helped Bassett eliminate redundant steps, providing a strong return on investment.

Looking Ahead

Beyond its technical capabilities, Petersen appreciates PipeServer's commitment to innovation. "They're always willing to tackle new challenges and solve complex problems for us," he said. With PipeServer's support, Bassett Mechanical continues to deliver tailored, efficient solutions to its clients.

Bassett Mechanical found that embracing solutions like PipeServer transforms workflow efficiency and ensures reliable project outcomes. As Petersen concluded, "Optimizing information flow is just as crucial as optimizing physical material flow, and PipeServer makes that possible."

For more information, visit [PipeServer.com](https://pipeserver.com), send an email to info@pipeserver.com, or call 425-333-7736.



Increase Sales AND CUSTOMER SATISFACTION

with **XOi & J.M. Brennan, Inc.**

With XOi, J.M. Brennan, Inc. was better able to show customers exactly what their projects needed and why, resulting in increased sales and revenue. Tracking their key performance indicators (KPIs) with XOi, J.M. Brennan has seen their closure rate for field quotes increase by 10 percent, among other improvements.

Existing Systems Fell Short

J.M. Brennan faced several challenges in their service operations before adopting XOi. They had recently migrated to Coins ERP+ and used Microsoft Teams for advanced tasking and field quoting. While these systems were useful in their own right, they lacked the necessary features and customization options to support J.M. Brennan's innovative service vision, operationalize their ideas, and meet the evolving needs of their customers.

The service reports generated were generic and lacked effective customization, hindering the company's ability to provide detailed documentation and tell the customer story. J.M. Brennan also struggled to find a way to efficiently document their service activities and condition assessments, which were crucial for both internal processes and customer communication.

Customizing Counts

J.M. Brennan discovered XOi and realized its potential to address their challenges. They were particularly drawn to XOi's custom workflows, which allowed them to easily create and tailor processes to their specific needs.

The ability to document service activities with videos and easily share them with customers intrigued the team. As they began using XOi, they observed significant positive outcomes:

- **Exceptional customer response:** When J.M. Brennan introduced XOi to their customers, they received exceptionally positive feedback. Customers were pleased with the ability to view visual quotes, preventive maintenance activities, and other service documentation.
- **Increased sales and revenue:** The use of XOi in field quotes and customer presentations had a substantial impact on closing deals. J.M. Brennan's customers could now see precisely why equipment needed replacement, leading to increased sales and revenue—and high levels of confidence.
- **Streamlined workflows:** XOi's customizable workflows allowed J.M. Brennan to standardize service practices, ensuring consistency and quality in their work. Technicians now have clear guidelines, resulting in improved training processes.
- **Proactive maintenance:** Using XOi's custom workflows,

J.M. Brennan created their own rating system for equipment condition assessment, enabling them to be proactive in identifying potential issues. This proactive approach contributed to customer satisfaction and trust.

XOi Yields Excellent Results

J.M. Brennan tracks various metrics and KPIs with XOi, including usage by technicians, safety-related data, end-of-life reports, and the number of quotes produced and secured. Adopting XOi yielded the following results:

- **Reduced time on advanced tasking for preventive maintenance agreements:** XOi streamlined the tasking process, reducing the time needed to complete advanced tasking by 20 percent.
- **Increased customer satisfaction:** Standardized workflows and visual documentation led to a 10-fold increase in customer satisfaction.
- **Perfect consistency in preventive maintenance:** XOi helped J.M. Brennan achieve 100-percent consistency in preventive maintenance tasks.
- **Higher closure rate on field quotes:** J.M. Brennan anticipates a 10-percent increase in their closure rate for field quotes, leading to measurable revenue growth.

Managing Change Effectively

J.M. Brennan fully embraced XOi from day one. Their leadership made it a priority to attend every onboarding meeting and brought thoughtful questions to the table. They partnered with their XOi onboarding and customer success managers to provide their team with comprehensive training and support.

J.M. Brennan understood that change could be met with resistance and required support from leadership from the start, so they ensured that their team received the necessary coaching and assistance to become proficient with XOi and how it works with Coins. As a result, J.M. Brennan successfully transformed their service operations with XOi, addressing the challenges they faced in documenting service activities, providing better customer communication, and streamlining workflows.

By leveraging the power of XOi's customization, proactive maintenance features, and integration capabilities, J.M. Brennan enhanced customer satisfaction, increased revenue, and positioned themselves as an innovative and competitive player in their industry. Their commitment to adapting to new technology and their partnership with XOi have proven to be a winning combination for their business.

For more information, visit xoi.io.

Raising Project Quality, Safety, and Sustainability

Advice from Wheatland Tube

In an evolving industry where quality, labor shortages, safety, and environmental impact are top-of-mind, mechanical contractors are faced with critical decisions when specifying materials for their projects. Choosing domestically manufactured products like Wheatland Tube's 100-percent domestic line of standard pipe over their imported equivalents can increase the quality, safety, and sustainability of any project.

Risks of Imported Pipe

Imported pipe can come with issues that can result in waste and pose compliance challenges. Common concerns include poor weld quality and early-onset corrosion, which creates red and white rust that may lead to UL violations. Beyond the low quality of the pipe itself, some imported standard pipe may be produced in facilities that are not environmentally friendly or that use unethical labor practices. The high carbon footprint associated with overseas shipping further underscores the environmental cost of imported products.

Domestically Made Solutions

When you choose domestic pipe, you are choosing to use widely available products with the service and support that you need. When pipe products are sourced domestically, you have the opportunity to procure custom lengths and end finishes to avoid waste and work more efficiently on the jobsite. With over 350 combinations of finishes, end treatments, and custom lengths, Wheatland Tube is the top domestic manufacturer of high-quality standard pipe. Relying on domestic manufacturers also offers other benefits to contractors:

- **Total supply chain control:** Working with domestic manufacturers gives you more control of the ordering process. Wheatland provides manufacturer-direct services, such as dedicated sales representatives, alongside technical and logistics support. Investment in advanced commerce systems like electronic data interchange (EDI), automated in-

ventory management (AIM), and Wheatland's Z-Commerce online portal help minimize lead times, mitigate unexpected supply chain events, and result in faster fulfillment.

- **Technological advancements:** Domestic manufacturers use advanced technology to optimize efficiency. For example, Wheatland Tube's products are made in a state-of-the-art facility in Warren, OH. Their Matter Automated Warehouse minimizes manual handling throughout the production, bundling, and storage process, making the facility one of the safest in the world. Additionally, by storing products in a controlled environment and streamlining operations with full automation, products are delivered free of rust and damage and ready to install, with significantly shortened lead times.
- **Environmental advantages:** According to a 2023 report, the United States could cut approximately 11.3 million metric tons of carbon dioxide emissions per year—about 13 percent of the total annual emissions of the American steel industry—if imported steel were produced domestically.* Wheatland pipe sources steel from domestic suppliers. They are committed to reducing emissions from their factories by exceeding environmental regulations and investing in technology that allows them to manufacture products more efficiently and cleanly. Buying domestically produced products contributes to local economies and to the future of the planet.

Choosing and installing domestic pipe from companies like Wheatland not only ensures quality and reliability, but also lets you take pride in supporting local industries and creating projects you can truly stand behind.

For more information, visit www.wheatland.com.

*Find source information in the online edition at mcaa.org.



MCAA'S NEW PODCAST AVAILABLE NOW



Welcome to Inside MCAA, The Blueprint to Mechanical Contracting, the podcast dedicated to unveiling the strategies and resources that power success within the Mechanical Contractors Association of America. Hosted by renowned Customer Experience Coach and NEI Instructor Frank Favaro, each episode dives deep into the wealth of educational tools, networking opportunities, and advocacy efforts that define MCAA.

Join us monthly as we explore how MCAA supports its members with cutting-edge insights and industry updates, helping navigate the dynamic landscape of mechanical contracting. From legislative advocacy to fostering trusted partnerships, Inside MCAA offers a behind-the-scenes look at the initiatives driving innovation and growth in the field.

Visit mcaa.org and search “Inside MCAA” to find them all.

Explore BIM Related Cost Overrun Impacts with MCAA's Management Methods Bulletin & New Change Orders Edition

Mechanical, electrical, plumbing and sheet metal (MEP/SM) contractors are normally at the forefront of Building Information Modeling (BIM) activities on a construction project. Substantial BIM cost and time overruns have occurred on many projects due to the fluid boundaries between coordination and design. MCAA's Identifying, Quantifying and Preventing BIM Related Cost and Time Impacts Management Methods Bulletin explores the factors that contribute to these overruns, allowing contractors to better plan for them. The bulletin is now included in a 2024 edition of MCAA's Change Orders, Productivity, Overtime—A Primer for the Construction Industry. MCAA members can download both resources free as a benefit of membership. Printed copies of the Change Orders resource are also available for purchase.

The bulletin explores the types of contracts that are employed in the construction industry that can directly affect BIM estimates and BIM execution and how these forms of contracts can affect BIM management, time and costs. Key terms used in the BIM environment are explained in terms of contract scope, cost and time manage-

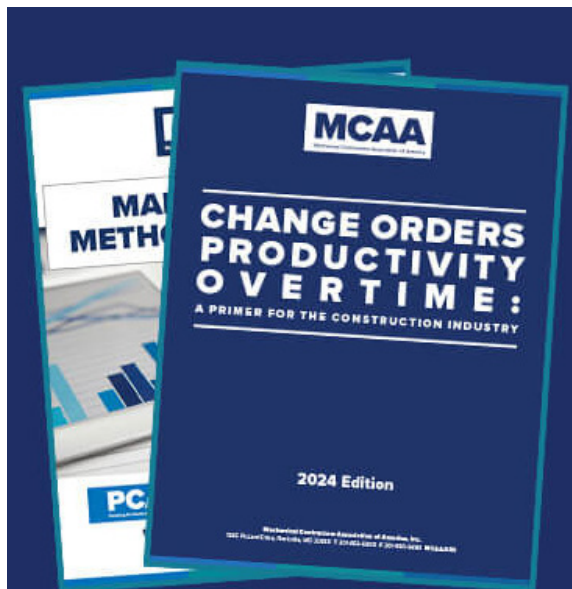
ment such as the all-important term “normal and expected coordination.”

Recognizing the Level of Development (LOD) to be provided to the contractor in the BIM process is a key element in estimating BIM costs and schedule times. Additionally, defining and scheduling the BIM process can be a key element in successful BIM execution. All of these key elements are discussed in detail in this Management Methods Bulletin.

The bulletin includes:

- A brief introduction to BIM
- Discussion about the various forms of construction contracts
- How design-bid-build forms of contract can affect the BIM process
- Differentiating between BIM “coordination” and design
- How the BIM Execution Plan (BEP) can affect BIM implementation – time and costs
- Determining the LOD to be provided by the design professionals to the contractor
- The importance of the LOD
- Discussion of design-assist forms of construction contracts
- The importance of including detailed BIM activities in the prime contractors' CPM schedule
- Tracking BIM scope change work using time records and schedule impact estimates
- Defining “normal and expected coordination” by the MEP/SM subcontractor
- Ten priorities to consider before entering into contracts requiring BIM coordination

Use the blue Find a Resource bar on MCAA.org to find both resources.



NEW RESOURCES

**EXPLORE
BIM COST
& TIME
IMPACTS**

MCAA AND PARTNERS *Team Up* WITH VIRGINIA TECH TO IMPROVE HEAD PROTECTION

Thirteen years after releasing the first independent safety ratings for varsity football helmets, the Virginia Tech Helmet Lab is expanding into the construction industry. This summer, researchers will begin an 18-month study to develop the first ratings system for safety helmets, commonly referred to as hard hats or construction helmets, using their five-star scale. This project is being funded and guided by the John R. Gentile Foundation, ELECTRI International, the American Society of Concrete Contractors, and The Association of Union Constructors in an effort to reduce the number of head injuries in our industry.

The lab has previously conducted injury biomechanics research outside sports, including toy product safety and drone impact testing. However, this is the first time they will develop a ratings system for a non-sports helmet.

“Construction has the most workplace fatalities,” said Steve Rowson, Helmet Lab Director. “Better head protection could be life-saving in many accidents.”

Between 2000 and 2008, the construction industry had more traumatic brain injuries (TBIs) than any other industry, according to the American Journal of Preventive Medicine.

The project’s objectives are:

- Analyze head impacts in construction through accident reports and surveillance video.
- Translate real-world conditions to controlled laboratory tests.
- Test and publicly release data on available safety helmets on the Virginia Tech Helmet Ratings website.

The lab will use its Summation of Tests for the Analysis of Risk (STAR) model to compute overall performance scores for helmets, assigning a rating from one to five stars based on a series of impact tests tailored to construction helmet conditions.

“We are honored to support research that will improve the safety of the men and women building our nation by focusing on the industry-specific factors that contribute to head injuries,” said Raffi Elchemmas of the Mechanical Contractors Association of America. “We are all committed to finding solutions to the challenges that the construction industry faces every day and confident this project will lead to improved head protection and reduce injuries.”

The project is scheduled for completion by August 2025.

“We hope this work reduces disabling or fatal head injuries by providing stakeholders with data to make informed decisions on the most effective personal protective equipment,” Rowson said.

Visit mcaa.org and search “helmet lab” to learn more.

PARTNERING TO IMPROVE HEAD PROTECTION
**Independent Research Will
Develop Worker Safety Tool**

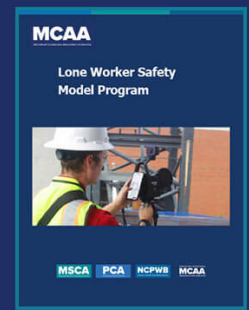


New Lone Worker Safety Model Program Introduced at MSCA24

Lone workers are the focus of a new model safety program introduced by MCAA Chair Renee Fiorelli at MSCA24. The Lone Worker Safety Model Program helps contractors identify risks and hazards and ensure adequate systems are in place to protect those who work by themselves where assistance is not readily available when needed, or who do not have the benefit of interactions with others.

MSCA contractors around the country have started to implement dedicated lone worker safety programs to help increase productivity and improve the safety and health of the workers they serve. The new Lone Worker Safety Model Program facilitates this process by helping contractors to identify risks and hazards while at the same time ensuring adequate systems are in place to protect these

**JUST
RELEASED**



workers' health and safety. It can be easily tailored to meet each company's specific needs, and highlights these areas and more:

- Risk assessment
- Risk mitigation
- Responsibilities
- Monitoring systems
- Lone worker safety assessment

"Workers deserve a safe working environment, and contractors require that workers perform work safely. This program helps them both," said Raffi Elchemmas, Executive Director of Safety, Health, and Risk Management for MCAA/MSCA.

Use the blue Find a Resource bar on mcaa.org to find the model program.

**JUST
RELEASED**



Beacon Economics Report Offers a Strategic Decision-Making Tool for Service

The 2024 Beacon Economics Market Report for MSCA is here! This essential report delivers up-to-the-minute insights and data-driven analysis tailored for mechanical service contractors. Uncover updated key trends for 2024, including market shifts and economic forecasts that directly impact your business. This study

is an invaluable resource for looking at market trends that will help guide strategic decisions and keep you competitive. Don't miss out on this powerful tool—download the new report today!

Use the blue Find a Resource bar on mcaa.org to find the study.

MCAA

2025 Event Calendar

MARCH

2-6 MCAA Annual Convention
Austin, TX

16-18 MSCA Dispatcher Training Program
Omaha, NE

26-28 MSCA Field Supervisors
Phoenix, AZ

26-28 MSCA Chiller Fundamentals 1
Phoenix, AZ

26-28 MSCA Sales Basecamp
Phoenix, AZ

APRIL

April 3 - May 29 Foundations of Field Leadership Course 8
Online

6-10 MSCA Service Managers Training Program
St. Louis, MO

27-29 NCPWB Annual Technical Conference/ Committee Meeting
Clearwater Beach, FL

MAY

5-7 CEA National Issues Conference
Washington, D.C.

12-14 Field Leaders Conference
Washington, D.C.

19-21 PCA Plumbing Service Conference
St. Louis, MO

JUNE

16-18 WiMI Conference
Kansas City, MO

23-25 Converge
Minneapolis, MN

JULY

27-30 2025 AEC Best Practices Conference
Boston, MA

For more information about MCAA's Educational Events, visit
[MCAA.org/events](https://mcaa.org/events).



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