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CCSI branched out well beyond its industrial cleaning origins and Ohio boundaries to become a diversified underground infrastructure firm working across the country.

By Ken Wysocky

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Operators Steve Nichols (left) and Nick Mason, (right) hold the vacuum tube in place while fellow operator Scott Oliver uses a digging wand as they work with one of the CCSI hydroexcavation trucks (KAISER Premier) as they pothole for utilities on a job site near Monroe, Ohio. (Photography by James DeCamp)

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The Future of Utility Construction

ENGINEERING STUDENTS READY TO LEAD AND TAKE THIS INDUSTRY TO THE NEXT LEVEL IN THE COMING YEARS

BY CORY DELLENBACH, EDITOR



WITH THEIR FRESH PERSPECTIVES, TECHNOLOGICAL FLUENCY, AND INNOVATIVE APPROACHES, THESE **YOUNG PROFESSIONALS ARE SET TO REVOLUTIONIZE AN INDUSTRY THAT IS FUNDAMENTAL TO OUR INFRASTRUCTURE AND DAILY LIVES.**

As the utility construction industry faces an aging workforce, the spotlight turns to the next generation of leaders poised to take the reins: engineering students.

With their fresh perspectives, technological fluency and innovative approaches, these young professionals are set to revolutionize an industry that is fundamental to our infrastructure and daily lives.

I ended up seeing what's ahead for our industry when I attended the 2024 No-Dig Show in April and our booth was right next to the student poster contest. Seeing what these college students did as research projects and are

continuing to do is inspirational and they all have bright futures ahead in this industry.

A PRESSING CONCERN

The utility construction sector, encompassing water, sewer, gas and electrical systems, is experiencing a demographic shift.

According to the U.S. Bureau of Labor Statistics, a significant portion of the current workforce is approaching retirement age. This trend raises concerns about a potential skills gap and a shortage of experienced workers to maintain and expand our critical infrastructure.

Enter the engineering students, a cohort uniquely positioned to address these challenges. Today's engineering programs are more comprehensive and technologically advanced than ever before. Students are not only learning traditional engineering principles but also gaining expertise in cutting-edge technologies such as AI, robotics and data analytics. These skills are invaluable in modernizing and streamlining utility construction processes.

Moreover, engineering students bring a fresh enthusiasm for sustainability and resilience.

They are trained to think critically about the environmental and social impacts of their projects. As climate change and urbanization pose increasing challenges to utility infrastructure, these future engineers are equipped

to develop innovative solutions that are both effective and sustainable.

BRIDGING THE SKILLS GAP

One of the most significant advantages that engineering students offer is their ability to bridge the skills gap. Many educational institutions are partnering with industry leaders to provide hands-on experience through internships and co-op programs. These opportunities allow students to apply their theoretical knowledge in real-world settings, ensuring they are job-ready upon graduation.

Furthermore, mentorship programs are becoming increasingly common, where seasoned professionals share their expertise with students. This transfer of knowledge is crucial in preserving industry best practices and ensuring continuity as the older generation retires.

A CALL TO ACTION

As the industry prepares for this generational transition, it is essential to support and nurture the incoming talent. Companies should invest in training programs, provide opportunities for professional development and foster an environment that encourages innovation and continuous learning. Educational institutions must continue to adapt their curricula to meet the evolving needs of the industry.

Engineering students are not just the future workforce of the utility construction industry — they are its future leaders. Their blend of traditional engineering knowledge, technological prowess, and commitment to sustainability positions them to address the challenges and opportunities that lie ahead.

By embracing and supporting these young professionals, we can ensure a smooth transition and a robust future for our essential utility infrastructure. Starting in this issue, *Dig Different* will be highlighting engineering students and programs throughout the U.S. and Canada from time to time with the new Future Innovators column.

If you have a student or a program that you feel should be recognized, email me at editor@digdifferent.com and let me know about them.

Enjoy this issue! ▼

Do you know a utility infrastructure engineering student or program that you feel should be recognized? Send a note today to editor@digdifferent.com or call 715-350-8436 for consideration in our Future Innovators column.

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Securing Success

ENSURING RELIABLE PIPE CONNECTIONS IN HORIZONTAL DIRECTIONAL DRILLING INSTALLATIONS

BY CHAD DECKER

Horizontal directional drilling is a preferred method for installing underground pipelines with minimal environmental disruption. However, the success of an HDD project greatly depends on the reliability of pipe connections throughout the pullback phase and over time.

It is crucial to use effective techniques like pipe gluing, fusing and ensuring meticulous joint integrity to prevent joint failures.

When undertaking an HDD project, the priority is always on establishing robust, lasting pipe connections. Methods such as gluing, fusing and securing are vital for preventing leaks and failures. Focusing on these techniques enhances the structural integrity of pipelines and ensures functionality over long periods.

TECHNIQUES FOR GLUING PIPES

Gluing is a common method employed in pipe connections. Adhesives provide a tight seal and are most effective when used correctly. The type of adhesive varies based on pipe material, and following an exact methodology is crucial for success.

First, the pipe surface must be clean and dry. Applying the adhesive evenly and allowing it to cure fully before initiating pullback operations is essential to avoid common pitfalls like premature joint failures.

CHOOSING THE RIGHT CONNECTION METHOD DEPENDS ON MULTIPLE FACTORS SUCH AS COST, THE NATURE OF THE SOIL, AND PIPE MATERIAL.

Selecting the right adhesive is pivotal for the integrity of the pipe connection. For example, PVC pipes typically require solvent cements, while epoxy resins are more suitable for metallic pipes. The choice of adhesive should match the pipe material to ensure a strong bond.

Avoid applying excess adhesive as it can lead to weak joints. Also, incorrect curing times can compromise the integrity of the connection.

FUSING PIPES FOR MAXIMUM STRENGTH

Fusion welding is another reliable approach used in HDD installations. This method involves different techniques such as butt fusion and electrofusion, which melt the pipe ends together to form a strong bond.

Understanding the precise fusion parameters and implementing proper cooling cycles ensures the longevity of the connections. Using appropriate fusion equipment is crucial for achieving high-quality joints.

Butt fusion and electrofusion are the most prevalent techniques in HDD projects. Butt fusion involves heating two pipe ends before pressing them together, while electrofusion uses a coil embedded in the fitting to heat and fuse pipe interfaces.

Specialized machines for heating and aligning pipes are essential. Proper handling and operation according to manufacturers' guidelines ensure pristine fusion joints.

Ensuring clean, squarely cut pipe ends and accurate temperature control during fusion promotes strong, leakproof joints.

A THIRD OPTION

Bore-Gard is an innovative solution for securing pipe connections during HDD operations. This system utilizes a combination of mechanical and adhesive techniques to provide a reliable bond that withstands the stresses of pullback and long-term use.

Some advantages are that Bore-Gard systems offer robust connections that can handle significant stress and pressure; the system simplifies the installation process, reducing the likelihood of errors and ensuring consistent results; and it uses environmentally friendly materials, making it a sustainable choice for HDD projects.

Using Bore-Gard involves preparing the pipe ends, applying the adhesive system and mechanically securing the joints. This method ensures that the connections are both strong and flexible, capable of withstanding the rigors of HDD operations.

COMPARATIVE ANALYSIS

Choosing the right connection method depends on multiple factors such as cost, the nature of the soil, and pipe material.

Gluing offers a quick fix but might lack the strength provided by fusion methods. On the other hand, fusion provides a more durable and permanent bond but requires special equipment and expertise, making it more expensive. Each method has its specific applications and should be selected based on project requirements and environmental conditions.

Making reliable pipe connections in HDD requires a keen understanding of the techniques and principles of pipe gluing, fusing and maintaining joint integrity. By employing these methods judiciously, practitioners can ensure the long-term success and durability of their underground installations.

As technology and materials evolve, staying updated on the best practices and adapting to new methods will continue to enhance the effectiveness of HDD projects. For further details on HDD failures and preventive strategies, visit McKim & Creed's comprehensive report on the subject at mckim-creed.com/wp-content/uploads/2014/11/2014-no-dig-hdd-failures-blake_lowe_katz.pdf

ABOUT THE AUTHOR

Chad Decker is the chief operating officer for California-based service company DEVCO Development & Engineering. To reach Decker, email editor@digdifferent.com. ▼



Chad Decker

WHEN UNDERTAKING AN HDD PROJECT, THE PRIORITY IS ALWAYS ON ESTABLISHING ROBUST, LASTING PIPE CONNECTIONS.

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Tips to Protect Workers

Summer is a great time for business, but a brutal time for workers. Excessive heat and sun exposure pose significant dangers. Read about how Western Specialty Contractors manages a heat illness training program and a safety hotline for its employees.

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SOUND SAFETY SOLUTIONS

Detailed Accident Investigations

Nearly all job site injuries and fatalities are preventable via thorough incident investigations to identify and correct underlying causes, according to John Brengosz of R&R Insurance. By prioritizing safety training and maintaining a safe workplace, organizations can demonstrate their commitment to worker well-being while preventing future incidents.

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ALWAYS EVOLVING

CCSI BRANCHED OUT WELL BEYOND ITS INDUSTRIAL CLEANING ORIGINS AND OHIO BOUNDARIES TO BECOME A DIVERSIFIED UNDERGROUND INFRASTRUCTURE FIRM WORKING ACROSS THE COUNTRY

STORY: **KEN WYSOCKY** PHOTOS: **JAMES DECAMP**

When Champion Cleaning Specialists was first established in 1982, the company focused exactly on what their name indicated — a sewer cleaning company.

But in the years since, the company's specialties have significantly expanded. The Cincinnati, Ohio-based company's branding these days — CCSI — aims to drop that "cleaning" phrasing to show that it is much more diversified in its service capabilities: cross-bore work, sewer maintenance and inspections, hydroexcavation and pipe lining.

"A couple years ago, we abbreviated it down to the CCSI," say Jon Parnell, operations manager. "It's shorter and stands out a little more. It's on our website. When you see our trucks go down the road, it's CCSI. We once did a large cross-bore project for an energy company. When our contact brought the bill to his boss, he saw Champion Cleaning and thought they were paying \$1.5 million to an agency for dry cleaning. So there you go. If we're going to do things like line pipe, we need to get away from saying 'cleaning.'"

When the company first started, Parnell said it was mainly a van and maybe four or five guys doing just general sewer-cleaning work in the Cincinnati area. CCSI now has over 100 employees working in areas across the country.

"We've grown into a big company, but we still try to maintain that small family feel to it," Parnell says.

TAKING ON MORE

Today, brothers Pat and Chris Kurtz own CCSI. They purchased it from the company's founder, their father Kevin, in 2009.

That ownership transfer also coincides with how CCSI has transitioned away from being just an industrial cleaning company. The company purchased its first vacuum and CCTV inspection trucks in the early 2000s and began doing some sewer projects around Cincinnati. By about 2007, CCSI started teaming up with local Duke Energy gas line installers to do pre- and post-job inspections as cross-bore awareness became more prevalent.

“WE’VE GROWN INTO A BIG COMPANY, BUT WE STILL TRY TO MAINTAIN THAT SMALL FAMILY FEEL TO IT.”

Jon Parnell

“We really kicked off with Duke Energy in 2009 and started to work directly with them,” Parnell says. “Then we just continued to grow from there.”

Hydroexcavation work increasingly came into the picture starting in 2010.

“We had combo units, but we didn’t do a lot of hydroexcavation at the time. It really wasn’t a big thing,” Parnell says. “But then there was an incident that required a safe way to dig, and we were contracted for the work.”

There was concern about an underground nitrogen gas line leaking into a manhole after a worker who entered the manhole died. CCSI had to expose a roughly mile-long stretch of the line in search of the leak.

“We ended up finding the leak,” Parnell recalls. “At the time, we had three Vactor 2100s. Then we brought in one rental, and another company we had assist us brought in two. We purchased another Vactor after that, and the hydroexcavation work kicked off from there. We saw the profit that could be made. We weren’t doing much hydroexcavation at all before that.”

The hydroexcavation mixed in well with the other work CCSI had been doing for energy companies.

It was around 2010 that CCSI also started branching out more beyond the Cincinnati area, first in other areas of Ohio and gradually across the country. In 2012, CCSI began doing cross-bore contracts for Pacific Gas and Electric and eventually opened a California office. Energy company contracts have also caused CCSI to establish offices in St. Louis, Missouri, and Charlotte, North Carolina.

“Signing multiyear contracts with energy companies forced us to open these various offices,” Parnell says. “In the beginning we used to have everyone from Cincinnati travel wherever to work, but as we have grown in these other areas, we’ve hired people from those areas.”

CCSI Operations Manager Jon Parnell (left) stands with President Lincoln Stephenson at a job site with one of the company’s KAISER PREMIER CV200 units. Company owners Pat and Chris Kurtz leave much of the day-to-day operations in the hands of Parnell and Stephenson.



When it pays to rent

The traditional line of thinking is that ownership always trumps renting. But whether it's home real estate or heavy equipment, the truth is renting can have benefits depending on the circumstances.

CCSI has a significant amount of equipment that it owns, but in the past couple of years, the company has also started regularly maintaining some rentals, finding it helpful in certain situations, says Jon Parnell, CCSI operations manager.

"If we're testing the market on a piece of equipment and don't want to deal with a lot of issues, we're looking to rent versus purchase because we see it as more cost-effective," Parnell says. "If a rental goes down, you can just take it back in."

CCSI also likes rentals for out-of-town work that takes equipment far away from its home bases and in-house mechanics.

"We have some full-time mechanics, but with how many pieces of equipment we have they're quite busy," Parnell says. "The problem is some of the fixes can be super minor, but it still shuts down the truck. If you're out of town working, it's hard to send a mechanic there or get the truck back to the shop. So we've found that when we're working out of town, it can work better to rent the truck."

When Parnell first joined the company in 2006 as a general laborer, he was one of about 20 employees. Now across all the markets CCSI works, the company employs more than 100.

MANAGING THE TEAM

Managing a large team spread out across the country has its challenges. Employee hiring and retention can be a struggle, Parnell says.

"It's harder now than it was," he says. "We go through maybe three people to find one good person. It's the work ethic more than anything. The work we do is hard. It's in the elements, and it can be hard to find a person willing to do that work."

CCSI does many of the typical employee satisfaction standards from annual holiday parties to bonuses.



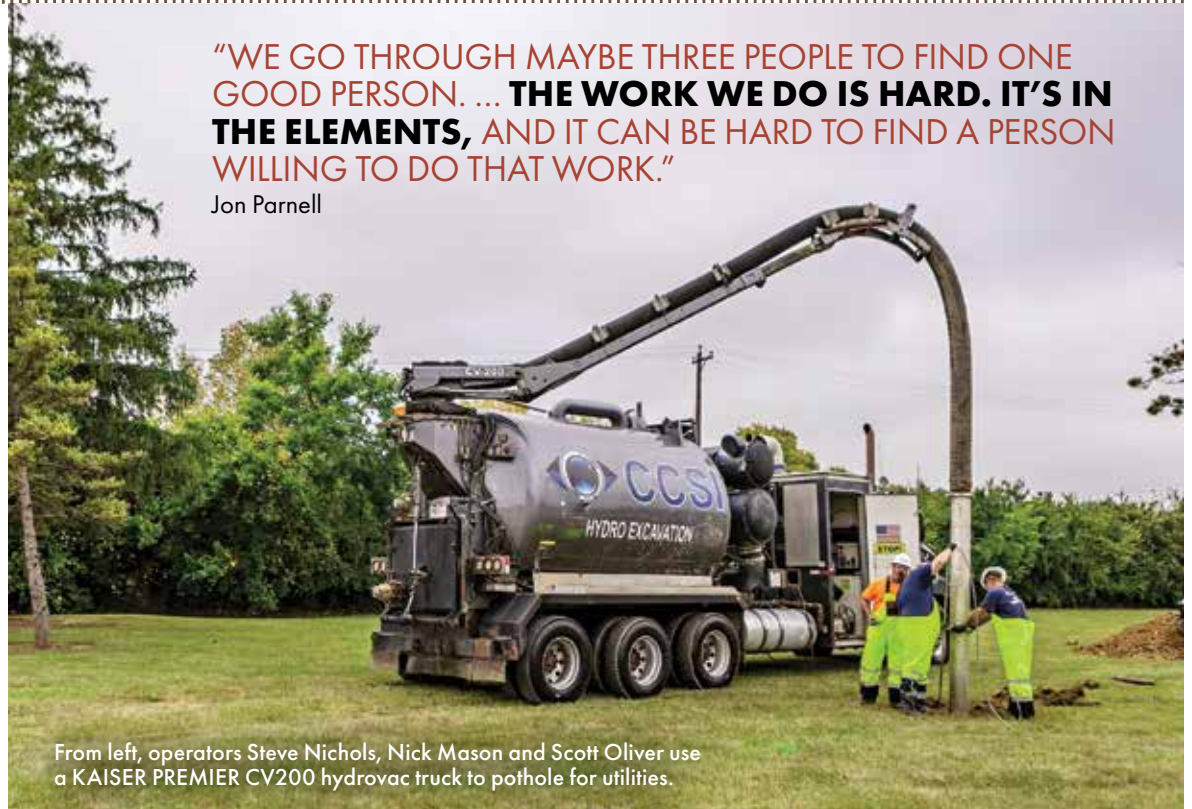
Operator Steve Nichols moves the boom for more potholing work.



Nick Mason uses a high-pressure digging wand. The company's decision to expand beyond the Cincinnati area has paid off.

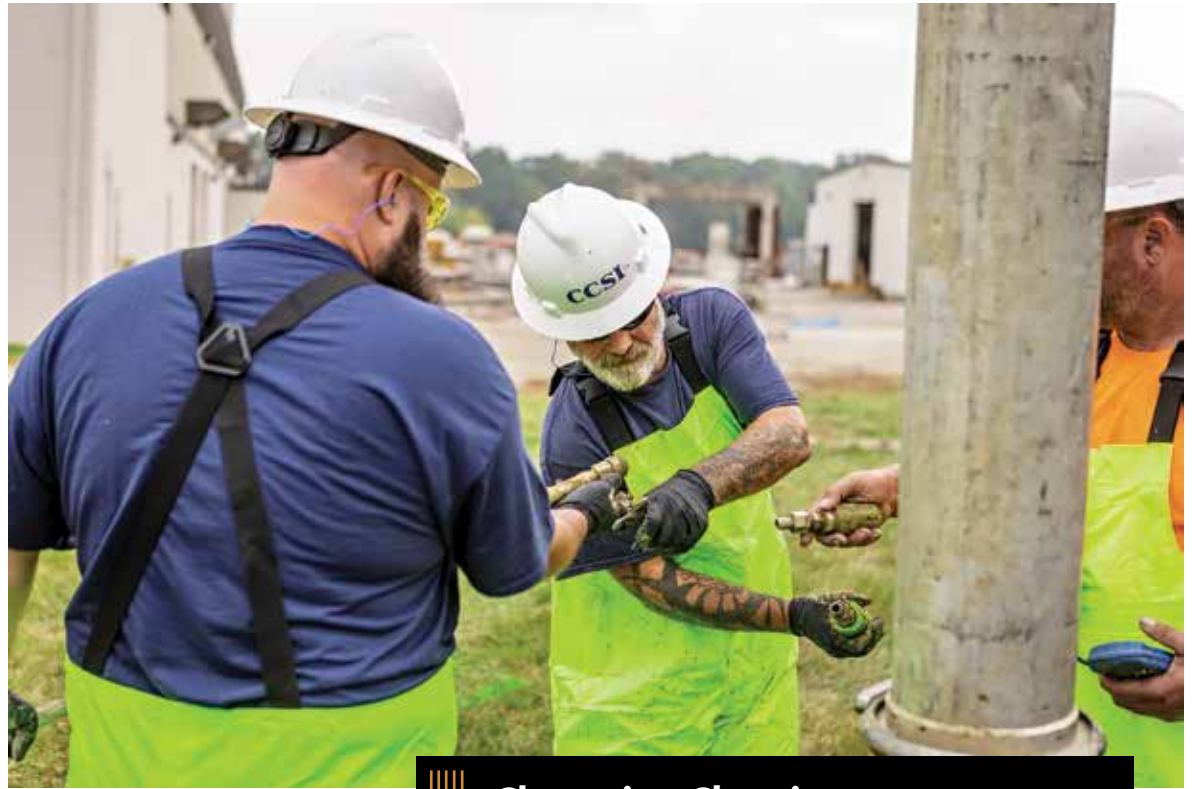
"WE GO THROUGH MAYBE THREE PEOPLE TO FIND ONE GOOD PERSON. ... **THE WORK WE DO IS HARD. IT'S IN THE ELEMENTS,** AND IT CAN BE HARD TO FIND A PERSON WILLING TO DO THAT WORK."

Jon Parnell



From left, operators Steve Nichols, Nick Mason and Scott Oliver use a KAISER PREMIER CV200 hydrovac truck to pothole for utilities.

Operator Scott Oliver, center, helps Nick Mason, left, and Steve Nichols switch out nozzle heads during a potholing job in Monroe, Ohio. When the company started in 1982, it had five employees. Today, the Cincinnati-based company has over 100 employees.



“We just try to be fair,” Parnell says. “If we get an emergency call, and guys have to come in the middle of the night and work till the afternoon the next day, we’ll give them a bonus on their paycheck. Whatever we need to do to keep them happy.”

The growth necessitated hiring a human resources manager a few years ago.

“That has been very beneficial,” Parnell says.

One initiative the human resources manager set up is a company culture committee.

“We try to meet twice a month or at least once a month,” Parnell says.

“It’s all the area managers from across the country and myself coming together to discuss what we can do to make employment better here. We do it on Zoom. That’s been a lifesaver.”

The culture committee recently put out a survey to solicit feedback from employees on things CCSI could be doing better. Anything related to employee satisfaction can come up in a meeting, Parnell says, like a recent discussion about options for company-wide outings or events.

EQUIPPED TO WORK

CCSI’s equipment roster includes 42 lateral-launch CCTV inspection trucks — 24 from Rausch USA and 18 from Aries Industries. The vacuum truck fleet includes 12 Vactor 2100s, four Guzzlers, KAISER PREMIER trucks and an Aquatech (Hi-Vac).

“Some jobs, we’ve had to go 200 to 300 feet off the road. So we’ve been able to utilize a hydrovac with the water, and then we take a Guzzler truck that we can run the flex hose off the 200 to 300 feet, be in the middle of the woods and still hydroexcavate down,” Parnell says. “We’ve noticed that some of these dedicated hydroexcavation trucks can’t pull the distance.”

SEEKING SERVICE BALANCE

“I don’t think they foresaw it getting this big,” Parnell says of CCSI owners Pat and Chris.

But through the growth, CCSI has still maintained a certain ethos that was in place when the company was much smaller. Although semiretired now, Pat and Chris have been active owners who for many years were very hands-on and putting in five-day work weeks regularly, Parnell says.

“Through networking, I know owners from other companies, and you’re meeting them on the golf course. That type,” Parnell says. “But Pat and Chris were here every day, five days a week. One would come in 7 a.m. to 5 p.m. and the other would be here 10 a.m. to 7 p.m., every day. They were involved in every aspect of the company.”

The brothers remain involved in some decisions but have passed on a lot of company oversight and leadership to people like Parnell and CCSI President Lincoln Stephenson.

“He’s very involved too like Pat and Chris were,” Parnell says. “Pat and Chris provided a good example of dedication. We’re appreciative of all the people working for us, and they’ve been a big part of the growth. It seems like when people come to CCSI, if they fit, they stay.”

Champion Cleaning Specialists Inc. Cincinnati, Ohio



OWNERS: Pat and Chris Kurtz

FOUNDED: 1982

EMPLOYEES: 100

SERVICES: Cross bore pre- and post-job inspections and legacy work, hydroexcavation, sewer maintenance and CCTV inspections, pipe lining

SERVICE AREA: Across the country, with offices in Cincinnati; Burlingame, California; Charlotte, North Carolina; and St. Louis, Missouri

WEBSITE: championcleaning.net

Going forward, Parnell says the short-term plan is to focus on getting the pipe-lining division well established because the long-term goal is to have a healthy balance among all of CCSI’s service offerings.

“We’d like to get it to where the lining and all the industrial vac services make up 50% and the cross-bore work makes up 50%,” Parnell says. ▼

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Finding New Methods

LOUISIANA TECH PH.D. STUDENT FINDS HER CALLING IN THE ENGINEERING WORLD AS SHE STUDIES CIPP METHODS THAT COULD REDUCE TIME AND ENERGY CONSUMPTION

BY JAMES CARELESS

Tulie Chakma stood near her poster during the 2024 No-Dig Show’s student poster competition and skillfully answered any questions about her research project that were thrown at her by the attendees walking the show floor. Chakma, a Ph.D. student at Louisiana Tech University in Ruston, Louisiana, was one of many students from around the U.S. that were taking part in the annual contest that highlights what engineering students are researching and learning about.

Chakma won first prize for her poster at the show, which is hosted by the North American Society for Trenchless Technology. Chakma is a member of her university’s North American Society for Trenchless Technology student chapter.

THE RESEARCH

The theme of Chakma’s award-winning poster was “Frontal Polymerization Technique in CIPP.” The bold, clear graphics in her poster illustrate the efficiency of using the chemical “frontal polymerization” method for heating resin liners to seal leaks within existing pipes, compared to traditional cured-in-place methods that use hot water or steam.

“My goal is to reduce time and energy consumption for sealing pipes,” says Chakma. “To achieve this, I proposed using polymerization in CIPP liner sealing. The process works like a domino effect. I start the reaction of the initiating chemical with just a little bit of heat and the reaction propagates throughout the entire pipe length, curing the resin liner on its own with the energy created by the reaction. This means we don’t need to heat the pipe the entire time, saving a lot of energy consumption and time. It is very fast!”

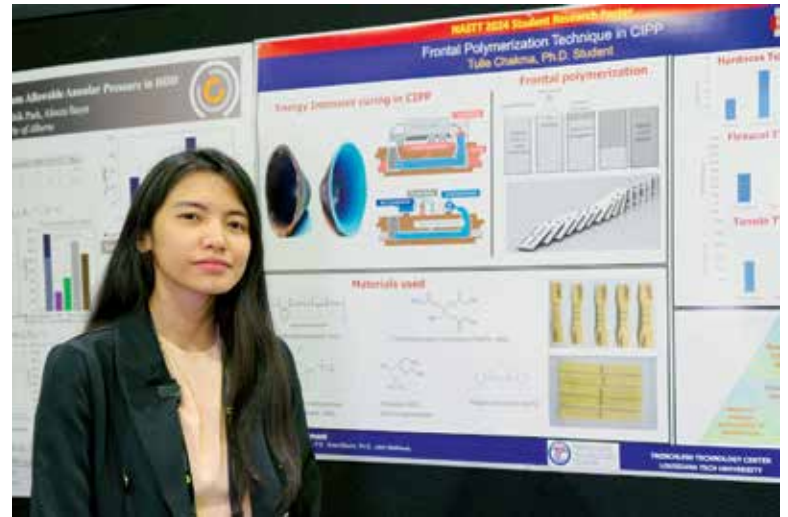
“I ALWAYS FEEL THAT I CAN SAY MORE IF I HAVE VERY GOOD GRAPHIC IMAGES. PEOPLE GET LOST IF THERE ARE A LOT OF WORDS.”
Tulie Chakma

The fact that the No-Dig Show is over doesn’t spell the end of Chakma’s research into this process. She continues to dig into the potential of frontal polymerization as an effective trenchless technology technique.

“My bachelor’s was in chemical engineering, and my research is in civil engineering,” Chakma observes. “So it is very interdisciplinary.”

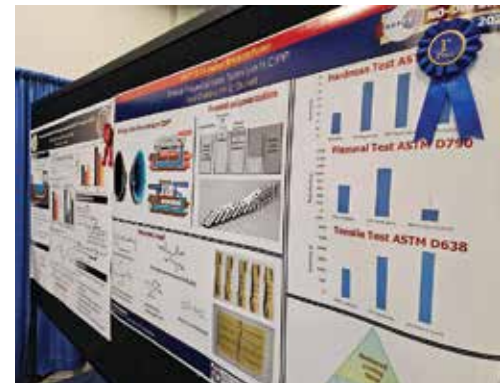
Chakma was introduced to this field of research by her Ph.D. faculty adviser, Dr. Shaurav Alam. He is an associate professor in Louisiana Tech’s departments of civil engineering and construction engineering technology; associate director of research at the University’s Trenchless Technology Center; a SWEPSCO-endowed professor; and a former faculty adviser to the local NASTT student chapter.

“I was very intrigued to know that I could actually apply my chemical knowledge into civil engineering,” says Chakma. “Until Dr. Alam told me about CIPP, I didn’t have any idea about it.”



Tulie Chakma stands with her first-place poster during the NASTT Student Research Poster Competition at the 2024 No-Dig Show in Rhode Island.

RIGHT: For her poster, Chakma researched a novel frontal polymerization technique in CIPP.



To test her frontal polymerization process, Chakma tried three different kinds of chemical initiators. As it turned out, “We have found that Perkadox CH-50 worked very well,” she says.

As for focusing her poster’s explanation of her work with bold graphics and few words? “I always feel that I can say more if I have very good graphic images,” replies Chakma. “People get lost if there are a lot of words, and I just wanted to draw their attention to the words that I was saying. That was the whole idea of it.”

Chakma’s approach to poster design certainly helped her win first prize at the No-Dig Show. It also garnered lots of attention from show attendees.

“I got very good and positive responses from people, who were really interested,” she says. “They asked me a lot of questions regarding the test results and the time reduction.”

ONTO THE INDUSTRY

Chakma hopes that this success will boost her career, along with the networking she was able to do with industrial partners at the No-Dig Show.

“I’m hoping it’ll help me in my research and also in landing a good job in the industry,” she says. “Before I went to my first No-Dig Show in 2022, I had no idea that this CIPP technology existed. But after I went there and saw all this cool stuff that we could do, I started to incorporate those into my research. So this has been very educational for me.”

One thing is certain: “I can positively say that I would love to work in the trenchless industry,” says Chakma. “My research is going in that direction, and I’m very much wanting to use my chemical knowledge into the trenchless sector.”

According to Dr. Alam, this is a very real possibility.

“Two big resin industry partners that we have — AOC Resins and Interplastic Corporation — were very excited about her work,” he says. “So I think she has a very good shot in those two companies, and others. I expect that the resin industry will try to hire her right away.” ▼

For more information on the NASTT student chapters, go to nastt.org/membership/student-chapters/

Combating the Burnout Battle

COMPANY LEADERS WHO PRIORITIZE THE WELL-BEING OF THEIR EMPLOYEES AND TAKE PROACTIVE STEPS TO PREVENT AND COMBAT BURNOUT ARE SAFEGUARDING THE LONG-TERM SUCCESS OF THEIR ORGANIZATIONS

BY JESSICA RECTOR

Business leaders often find themselves in the trenches, navigating through the chaos and driving their teams toward success. However, amid the pursuit of goals and objectives, there's a lurking enemy that can undermine all efforts — burnout.

Burnout is impacting every industry, company and role. There are no exceptions. In the burnout battle, we often find the great divide.

Leaders believe that their employees aren't being impacted by burnout or that their people have everything they need to beat it. Yet, employees are struggling in the day-to-day and believe they don't have the strategies, tools or support to help them. We call this the burnout gap — the distance between what leaders think and how employees feel.

Much of the burnout battle begins with educating leaders not only on the importance of burnout, but also the urgency of it because burnout won't go away on its own or work itself out. You must be intentional and strategic as a leader and organization to prevent it.

Our research has uncovered two components of burnout: the company and individuals. More specifically, a company's culture and an individual's habits.

If one of these is misaligned it will lead to burnout. Your organization might have a wellness program, but that solely focuses on what employees can do to prevent or beat burnout in themselves, so it leaves out almost half of the contributing factors for burnout.

In other words, if employees work through a wellness program, they will still be headed toward burnout because it doesn't incorporate the company side of the contributing factors to burnout.

Here is why it's crucial for leaders to take proactive measures to prevent and combat burnout within their teams, along with small, actionable steps leaders can take for massive results.

KILLING PRODUCTIVITY

Burnout doesn't just sap employees' energy and enthusiasm; it also wreaks havoc on productivity. Exhausted and disengaged workers are far less likely to perform at their peak, resulting in more mistakes and decreased efficiency. The detrimental outcomes often can lead to safety issues. When leaders fail to address burnout, they inadvertently sabotage their team's performance and jeopardize the organization's bottom line.

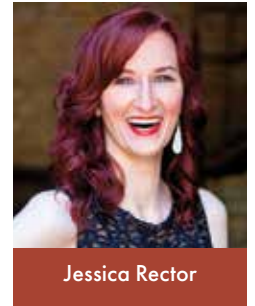
Action: Find one way to acknowledge or appreciate your people at least on a weekly basis. When employees get recognition six times a year (once every other month), performance increases by 32%, according to WorkHuman. Imagine how much their performance would increase if they received recognition weekly.

BREEDING DISENGAGEMENT

A burned-out workforce is a disengaged workforce. When employees feel overwhelmed and undervalued, their commitment to the job dwindles, and they become more prone to absenteeism and turnover, which costs U.S. employers \$300 billion annually due to burnout. Leaders who turn a blind eye to burnout risk losing their top talent to competitors and creating a toxic culture of

apathy and discontent.

Action: Address the elephant in the room and start talking about burnout. When you talk about burnout, employees lean in and become engaged, knowing that you're creating a safe place where they will be met with compassion, empathy and understanding. They recognize their work community is operating on the same foundation on which they can all build and thrive.



Jessica Rector

BURNOUT WON'T GO AWAY ON ITS OWN OR WORK ITSELF OUT. YOU MUST BE INTENTIONAL AND STRATEGIC AS A LEADER AND ORGANIZATION TO PREVENT IT.

UNDERMINING CREATIVITY AND INNOVATION

Innovation thrives in environments where individuals are energized, motivated and encouraged to think outside the box. Unfortunately, burnout stifles creativity and dampens innovation. Exhausted minds lack the clarity and focus needed to generate fresh ideas and problem-solve effectively. By neglecting to address burnout, leaders inadvertently

stifle their team's creativity and hinder their organization's ability to adapt and thrive.

Action: Encourage frequent breaks. People are most productive when you work for 50 minutes and take a 10-minute break. Instead of pushing through to finish a project or a task, give their brains the time and space to unwind and decompress. When they get back to it, they're more creative and innovative and are able to finish things faster by taking that much needed break.

DAMAGING HEALTH AND WELL-BEING

Beyond its impact on productivity and performance, burnout takes a significant toll on employees' health and well-being. Chronic stress and overwork can lead to a host of physical and mental health issues including anxiety, depression, cardiovascular problems and weakened immune systems. Leaders who prioritize the bottom line over their team's wellbeing not only jeopardize individual health but also incur long-term costs in terms of healthcare expenses and employee morale.

Action: Implement more fun into the work days. Fun and work aren't mutually exclusive. The more fun employees have at work, the more they will stay at the company. Fun shows up in different ways for people. Ask them what they like to do for fun and then find opportunities to work it into the company culture a little.

LEADING TO LEADERSHIP FAILURE

Ultimately, leaders bear the responsibility for the well-being and success of their teams. Failing to address burnout is a failure of leadership. Leaders who ignore the warning signs of burnout, or worse, contribute to its prolifer-

(Continued on page 17)

Keeping It Running

REGULAR MAINTENANCE, DRILL BIT SELECTION AND TRAINING COME TOGETHER TO HELP KEEP DIRECTIONAL DRILLS RUNNING AT PEAK PERFORMANCE

BY JASON GARLAND

With the cost of equipment, you want to do everything possible to make sure you and your team are taking care of the equipment so it can last for years or decades to come.

One of those important pieces of equipment — especially when it comes to installing utilities — is the directional drill sitting in your fleet yard.

Given the significant investment in HDD equipment, ensuring the longevity and reliability of your horizontal directional drill is paramount. Here are five technical tips to help extend the life of your HDD machine and keep it running efficiently.

MAINTAIN A RIGOROUS MAINTENANCE SCHEDULE

Regular maintenance is essential for the optimal performance and longevity of your horizontal directional drill. Adhering to the manufacturer's recommended maintenance schedule ensures that all components are inspected and serviced at appropriate intervals.

Key maintenance tasks include:

Hydraulic System Checks: Regularly inspect hydraulic hoses, fittings and fluid levels. Replace any damaged or worn components and ensure the fluid is clean and at the correct level.

Engine Maintenance: Follow the manufacturer's guidelines for oil changes, filter replacements and coolant checks. Keeping the engine in top condition prevents overheating and reduces wear.

Drill Rod Inspection: Regularly inspect drill rods for wear and damage. Clean and lubricate threads to prevent corrosion and ensure proper torque.

By staying proactive with maintenance, you can prevent minor issues from becoming major problems, reducing downtime and costly repairs.

REGULAR MAINTENANCE IS ESSENTIAL FOR THE OPTIMAL PERFORMANCE AND LONGEVITY OF YOUR HORIZONTAL DIRECTIONAL DRILL.

USE HIGH-QUALITY DRILLING FLUIDS

The choice and management of drilling fluids are crucial to the efficiency and lifespan of your HDD equipment. High-quality drilling fluids reduce friction, stabilize the borehole and carry cuttings to the surface effectively.

Consider the following when using drilling fluids:

Fluid Composition: Use the appropriate mix of bentonite, polymers and other additives to match the soil conditions and drilling requirements.

Regular Monitoring: Continuously monitor fluid properties such as viscosity, density and pH to ensure they remain within optimal ranges.

Proper Disposal: Ensure proper disposal of used drilling fluids to prevent environmental contamination and comply with regulations.

Using the right drilling fluids and maintaining them properly can significantly reduce wear on your drill components and improve overall performance.



Companies should make sure their employees are properly trained for whatever equipment — including drills — they could be operating. Improper training could lead to equipment breakdowns and damage.



Cleaning off the directional drill components following a job will help workers keep the equipment in working condition and notice when maintenance is needed.

OPTIMIZE DRILL BIT SELECTION AND USAGE

Selecting the right drill bit for the specific ground conditions is critical to efficient drilling and reducing wear on your equipment.

Soil Analysis: Conduct a thorough analysis of the soil to determine the appropriate bit type. For instance, use a tricone bit for hard rock formations and a paddle bit for softer soils.

Bit Condition Monitoring: Regularly inspect the drill bit for wear and damage. Replace bits when they become dull or damaged to maintain drilling efficiency and reduce stress on the drill rig.

Proper Rotation and Thrust: Operate the drill at the correct rotation speed and thrust pressure for the selected bit and soil conditions. This reduces the risk of bit failure and prolongs the life of the drill string.

By optimizing your drill bit selection and usage, you can enhance drilling efficiency and extend the lifespan of your HDD machine.

IMPLEMENT TRAINING PROGRAMS

Proper operator training is essential to ensure the efficient and safe operation of your horizontal directional drill. Well-trained operators can significantly extend the life of the equipment by using it correctly and avoiding common mistakes that lead to wear and damage.

Key training components should include:

Equipment Familiarization: Ensure operators understand all the features and functions of the HDD machine.

Safe Operating Procedures: Train operators on safe practices including correct startup and shutdown procedures, monitoring system alerts and emergency response actions.

Regular Refresher Courses: Offer ongoing training to keep operators up to date with the latest techniques, safety protocols and equipment updates.

In most cases manufacturers like Ditch Witch and Vermeer can help correctly train employees on the machines.

ENSURE PROPER STORAGE AND TRANSPORTATION

How you store and transport your horizontal directional drill can have a significant impact on its longevity. Proper storage and transportation prevent unnecessary wear and tear, corrosion and mechanical damage.

Clean Before Storage: Thoroughly clean the HDD machine before storing it. Remove any soil, debris and drilling fluid residues to prevent corrosion and mechanical issues.

Dry Environment: Store the equipment in a dry, well-ventilated area to prevent rust and corrosion. Use covers or tarps to protect the machine from dust and moisture.

Regular Inspection: Even during periods of inactivity, regularly inspect the stored equipment for signs of wear or damage. Address any issues immediately to prevent them from worsening.

INVESTING IN A HORIZONTAL DIRECTIONAL DRILL REPRESENTS A SIGNIFICANT COMMITMENT, AND PROTECTING THAT INVESTMENT THROUGH DILIGENT MAINTENANCE AND CARE IS CRUCIAL.

Secure Transportation: When transporting the HDD machine to and from job sites, ensure it is securely fastened to prevent movement and potential damage. Use appropriate transport equipment, such as trailers with suitable weight capacities and tie-down points.

By following these storage and transportation guidelines, you can protect your horizontal directional drill from the elements and mechanical damage, thus extending its operational life.

PUTTING IT ALL TOGETHER

Investing in a horizontal directional drill represents a significant commitment, and protecting that investment through diligent maintenance and care is crucial.

By adhering to a maintenance schedule, using high-quality drilling fluids, optimizing drill bit selection and usage, implementing comprehensive training programs and ensuring proper storage and transportation, you can significantly extend the life of your HDD machine.

These proactive measures not only enhance the efficiency and reliability of your equipment, but also reduce operational costs and downtime, ensuring your HDD machine remains a valuable asset for years to come. ▼

SMART BUSINESS *(Continued from page 15)*

ation through unrealistic expectations and poor management practices, risk damaging their reputation and undermining their credibility as effective leaders. The ability to recognize, prevent and address burnout is a fundamental skill that separates great leaders from mediocre ones.

Action: Do a two-word check-in. Ask your team, “How are you really feeling?” And don’t allow them to just say, “Fine.” Inspire them to tap into other feelings. When they say anxious, stressed, depressed, sad, hesitant or words like these, it’s an opportunity to dive into a deeper conversation and ask, “How can I help?” This lets them know you care about them as a real person and not just a worker.

The battle against burnout is more critical than ever. Leaders who prioritize the wellbeing of their employees and take proactive steps to prevent and combat burnout are not only fostering a healthier and more engaged workforce, but also safeguarding the long-term success of their organizations. By leading by example, cultivating a supportive work culture, and promoting work/life balance, leaders can empower their teams to thrive under any circumstance. Remember, the fight against burnout begins at the top, and it’s a battle worth waging.

ABOUT THE AUTHOR

Jessica Rector, MBA, author of the No. 1 best-selling Blaze Your Brain to Extinguish Burnout and nine other books, helps organizations, leaders, and teams eradicate burnout and enhance mental health. As a burnout trailblazer, her research is used in her consulting and speaking and often shared on her podcast, The Say Yes Experience. For more, visit jessicarector.com. ▼

Happenings

Aug. 7-9: Safety 2024 Professional Development Conference & Exposition, Colorado Convention Center, Denver. Visit safety.assp.org.

Sept. 9-11: 16th Annual Breakthroughs in Tunneling Short Course, University of Denver – Joy Burns Center, Denver. Visit tunnelingshortcourse.com.

Sept. 23-27: International Pipeline Conference, TELUS Convention Center, Calgary, Alberta. Visit event.asme.org/ipc.

Sept. 28-29: Dozer Day Nebraska, Sarpy County Fairgrounds, Springfield. Visit nebraska.dozerday.org.

Oct. 3: Underground Contractors Association of Illinois Annual Business Meeting, Venuti’s Italian Restaurant & Banquet Hall, Addison, Illinois. Visit uca.org.

Oct. 5-9: 97th Annual Technical Exhibition and Conference, Ernest N. Morial Convention Center, New Orleans. Visit weftec.org.

Oct. 6-8: Tunneling Association of Canada Montreal Conference, Hotel Bonaventure Montreal, Ontario. Visit tunnelcanada.ca.

Jan. 28 - Feb. 1, 2025: The American Rental Association Show, Las Vegas Convention Center, Nevada. Visit arashow.org.

Feb. 17-20: Water & Wastewater Equipment, Treatment & Transport (WWETT) Show, Indiana Convention Center, Indianapolis. Visit wwettshow.com.

Feb. 24-26: Global Excavation Safety Conference, Phoenix Convention Center, Phoenix, Arizona. Visit globalexavationsafetyconference.com.

CONTRACTOR CAPABILITIES



Competent contractors in the alternative excavation industry demand quality products.

See how these partnerships ensure success in the following special section.

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Dig Smart, Dig Safe: Unleashing the Power of TRUVAC's DigRight Technology

TRUVAC's DigRight Technology stands out as a pioneering advancement in the hydroexcavation sector, offering increased safety and operational efficiency.

At the heart of this revolutionary technology is a sophisticated variable water flow pump, designed to precisely tailor the water flow to the specific requirements of the nozzle in use. Unlike conventional systems that may generate excessive flow — leading to energy wastage and unnecessary strain on components — the DigRight pump operates within strictly defined parameters. This ensures optimal performance without risking damage to the nozzle, surrounding utilities, or the pump mechanism.

Should water pressure inadvertently exceed these predetermined boundaries, an integrated pressure relief valve activates instantly, providing an essential safety net for operators. Furthermore, the system permits the programming of three distinct pressure upper limits, which operators can modify on the fly with a user-friendly handheld wireless controller, thereby eliminating concerns over accidental limit breaches. These settings can be adjusted to meet the varying demands of different job sites and nozzle configurations.

The unique attributes of DigRight Technology differentiate it significantly from conventional digging equipment by offering:

- Superior safety measures. With its capability to prevent excessive water pressure, DigRight Technology safeguards against the accidental disruption of underground utilities and ensures operator safety.
- Increased operational efficiency. Automating water flow adjustments according to nozzle size makes the hydroexcavation process smoother and more effective.
- Lowered risk of water-induced damage. By keeping water pressure within a safe threshold, DigRight Technology substantially reduces the likelihood of causing water damage to surrounding properties.

TRUVAC's dedication to product innovation is fueled by a genuine commitment to listening to and acting upon customer feedback, thereby delivering solutions that directly address their needs. TRUVAC consistently delivers superior quality, avant-garde engineering, groundbreaking innovation and unwavering support, according to company officials.



TRUVAC remains at the forefront of vacuum excavation technology, enhancing user experiences by streamlining operational requirements, reducing on-site vehicle and manpower needs, and minimizing potential hazards. This empowers contractors across municipal, commercial and residential sectors to broaden their services and efficiently cater to the needs of their clientele, driving overall productivity to new heights.



TRUVAC specializes in vacuum excavators, with models for any size job, and its extensive dealer network means TRUVAC vacuum excavators are available near you.

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Over 50 years of high-pressure pump manufacturing experience has earned Cat Pumps a reputation for producing high quality, long lasting pumps. Engineers at Cat Pumps designed the models 2560 (16 gpm at 3,000 psi) and 2565 (20 gpm at 2,500 psi) specifically for the hydroexcavation market. Developed to withstand continuous-duty applications in harsh environments, model 2560 and 2565 pumps are what

industry leaders demand — a dependable, high-quality product backed by world-class customer service, training and support.

BH MODELS

The BH versions have a machined bearing cover that pairs with the 76SAEC.25FR hydraulic bell housing, allowing the 2560BH and 2565BH to be directly driven by an SAE C hydraulic motor. Addi-

tionally, alternative pumps rated up to 50 gpm and 10,000 psi can be mounted quickly and securely to hydraulic motors with SAE A, SAE B or SAE C mounts via heavy-duty bell housings. These bell housings are available as individual components or included in a complete pump/motor assembly. The compact direct drive allows for a space-saving footprint, and being direct-driven, it's simple to install and maintain.



Cat Pumps is a manufacturer supplying high-end industrial triplex high-pressure plunger and piston pumps and related products. With a reputation as a premier pump supplier, the family-owned Minneapolis company designs pumps that meet the rigorous requirements of markets like high-pressure cleaning, hydroexcavation, heavy equipment wash-down and saltwater reverse osmosis.

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rated up to 50 gpm and 10,000 psi. Industrial-duty flexible coupling assemblies ensure full torque transfer from the motor to the pump. Bell housings and couplings are available as individual components or built-to-order as complete pump/motor units. Great for hydro excavation, jetting, washdown and much more.



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Increasing Production Speed on Small-Diameter Jobs

To make an analogy, large-diameter drilling and residential service line installation drilling are similar to the difference between a Green Beret sniper and a quickdraw lawman of the Old West. Would you expect that sheriff wielding a long-barreled rifle with a scope to outdraw an opponent for each draw? Nope, he will need something lighter, easier to maneuver and able to get several shots out quickly. Drillers similarly rely on their different tools to deliver specific results.

Drillers who are looking to bore deep and far in ground conditions of varying difficulty will opt for something like a 4 1/4-inch thread-on universal transmitter housing with DCI's 19-inch transmitter, using a tri-cutter bit such as the Eagle Claw SD. This setup will ensure stability and consistency and get the job done on a 1,000- to 2,000-foot shot. On the contrary, using that same setup for a street-to-house service line bore will be just as clunky as that sheriff trying to quickdraw with a sniper rifle.

A residential driller will need something faster and more agile. He'll need quick setup, agile steering, fast pullback and speedy cleanup. There are systems such as Melfred Borzall's Service Shot System that can give that driller the "quickdraw" production he'll need for the day to be successful, but let's break down why on a more general level.

SETUP

Let's face it, setting up the job is much of the work, but it's not the most interesting part. Companies can brag about long bores and dead-on shots, but never mention the time-sapping setup that precedes the actual boring: Establishing safety protocols, digging pilot and exit pits, positioning the rig, mixing the mud recipes, getting the vac in place, connecting the tooling and clocking your locating equipment. When your day includes 15-20 residential shots, this setup becomes problematic for production time.

Using tooling that doesn't require mud mixing or fluid will dramatically reduce the time to set up and eliminate the cost and time of a vac. Coupled with the right tooling, this elimination of fluid, when appropriate and safe, can also remove the time you'll need to dig those entry/exit pits.

PILOT SHOT AND PULLBACK

Now that you're set up properly (and quickly), it's time to start drilling. This is when you're maneuvering through the ground, which has to be performed quickly and with agility. Because you're in a residential area, one minute you may be next to a water main only to find yourself a few inches from an abandoned irrigation system someone buried. This requires a smaller diameter housing and bit combination with minimal ground resistance and maximum steerability to dodge quickly without much clearance.

In residential, forgiving soil, you can either opt for a direct pullback, which can speed up production considerably, or have a quick-disconnect option for your tooling. Either way, avoiding the timely threading on and off of lead rods and reamers will be crucial if your job allows for that. Look for something that can bolt onto your pilot bore housing/blade combo or has a quick-disconnect type that you can just knock out a roll pin, swap out the bit for a reamer, and start pullback.



CLEANUP AND RESET

Once a bore is complete, the crew needs to quickly move on to the next shot on the block. Using a housing with optional drill fluid gives the possibility of not having to clean or dispose of messy mud — especially when the ground and conditions are such that fluid is not needed.

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Rival Hydrovacacs Designed With Weight Limits in Mind

Rival Hydrovac — a Canada-based supplier of cost-effective, efficient and lightweight hydrovac vehicles — has grown quickly since 2016. A major factor in the rapid growth of Rival is increased awareness and enforcement of the loaded weights of some hydrovac units.

Rival is mindful of keeping the truck as easy to operate as possible. The company's tandem T7 trucks are just over 30 feet in total length. Both models come with Allison Automatic Transmissions. Rival utilizes high performance components in an effort to provide a competitively performing unit with a smaller footprint and lighter weight.

DESIGNED TO COMPLY

The Rival T7 tandem was designed primarily to be a unit that could be loaded with debris and driven within legislated road limits with most types of debris on board. Additionally, the unit comes standard with a scale that reads real-time weights both in the cab and on the wireless remote to confirm weights prior to travel.

Rival Hydrovac recently added an optional air compressor to the T7. These air units also have the hydro features that any other Rival truck would include. The compressor is a dual-pressure Vanair unit, allowing for a setting for tooling and another for air excavation.

ABOUT THE T10

The Rival T10 unit is the larger brother of the T7 unit. The T10 comes on three different chassis configurations, depending on the jurisdiction it will operate within. Rival is also offering the air package on this size unit. The T10 offers additional debris and water capacities, and it has a larger boom and more blower.

Rival strives to continually add features to address customer needs as it learns of challenges faced in the field, according to a company spokesperson. Auxiliary hydraulic outlets are available that will allow for the operation of hydraulic tools, utilizing the system already on the truck. The real-time truck weights are displayed both in the cab of the truck and on the remote. The boom has a shutoff valve and the blower can be run in pressure or vacuum modes to allow for pressure offloading into another truck or tank. All Rival trucks are fully equipped to work in the winter, featuring cabinet heaters, heated valves and a purge/glycol system for the water pump and boiler.



Rival also has several important safety features, including a retractable railing atop the unit, D-ring tie-off locations, a grounding rod, traffic cones and an emergency shutdown system.

Other accessories include a poly dig tube with neoprene end, multiple dig tube extensions, all necessary clamps, two wash wands with nozzles, dig wand extensions, a spare handheld remote and a wand for washing the vehicle and washing out the tank.



Rival Hydrovac units are distributed by Transwest Trucks in the United States and a Transwest sister company, Summit Truck Equipment in Canada. Transwest and Summit offer parts, service and training as required. Rentals and in house financing are also available.

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Digging Safer and Smarter With Mud Dog Vacuum Excavators

There are more than 100 billion feet of underground utilities located in northern America. In the U.S. alone, a utility line is hit every 6 minutes causing power and utility disruption, injuries and even death. Compared to abrasive, traditional machinery, vacuum excavators offer a safer, smarter and more precise digging method. Mud Dog Vacuum Excavators are designed to meet the challenges of compact, urban projects to large-scale excavation projects by offering versatility, safety and productivity on the job site.

VERSATILITY

Mud Dogs come in a variety of model configurations to tackle applications in various environments, including harsh conditions. The 700 offers a compact footprint for excavation in urban environments while maximizing payload and maintaining the power and precision that larger units offer. The 1200 offers consistent performance and precision for excavation during mid to large-scale projects. The 1600, the largest vacuum excavator in the industry, offers maximum payload and performance for large-scale excavation in the harshest environments; no project is too big or too tough to tackle.

SAFETY

The use of large, traditional machinery on a job site can be risky and hazardous to operators and even the surrounding community. Due to the precision and nondestructive nature of utilizing compressed air or pressurized water, vacuum excavation is the safer solution. With the Mud Dog, an operator can choose to dig with the most efficient and safest application for the job or environment at hand. Soil conditions can vary from soft topsoil to clay to limestone or rock; each of these requires a different excavation strategy: air, water or both.

Air excavation is desired in applications where soil tends to be less compact, water is not easily available, for small-scale projects or where backfill is required. Additionally, when working with buried electrical lines or brittle utilities, air excavation is often preferred due to lower operating pressures and its nonconductivity.

Hydroexcavation is desired in applications where soil is made of dense materials or frozen. Additionally, hydroexcavation does not produce nearly as much high velocity debris as air excavation, reducing the risk of damage to underground utilities and injuries to operators.

PRODUCTIVITY

Excavating in remote areas or narrow streets and roads with traditional equipment can cause damage to the surrounding landscape and increase traffic congestion, which can be hazardous and inconvenient. When cables, utility lines or water mains need to be repaired or installed in these hard-to-reach areas, vacuum excavation provides an ideal solution. The unit can be located



away from the excavation site by utilizing an extendable, 8-inch diameter boom that rotates and pivots downward.

Mud Dogs also come with features to ensure efficient workflow and productivity, including variable blower and water pump speed. These allow for increased digging effectiveness, water conservation and fuel efficiency.

PARTNER WITH SUPER PRODUCTS

Product innovation, customer satisfaction and ensuring the safety of businesses and operators in the industry has been and will continue to be a priority for Super Products, according to a company spokesperson. “Partner with Super Products for your next excavation project.”



Super Products gives contractors and municipalities access to efficient and progressive vacuum excavators, combination sewer cleaners, industrial vacuum loaders, truck-mounted jetters and liquid vacuum trucks. Super Products has a broad support network of representatives supporting contractors, dealers supporting municipalities and nine rental facilities supporting short- and long-term rentals, parts and service.

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DIG SAFER. DIG SMARTER.

EXCAVATE WITH AIR OR WATER



VIEW FULL
MUD DOG LINEUP

 **Super Products®**

Underground Magnetics Introduces Mag X Pro HDD Locating System

Underground Magnetics has been on the cutting edge of innovation in the world of HDD locators since the company's inception. "Simple, powerful, affordable" is the guiding philosophy that President Mike Young and UMAG's team of talented engineers used as the cornerstone for the Iowa-based company's birth and has been built into every UMAG system produced: the simplicity of tracking on the fly; powerful data ranges that allow walkover locating at depths previously unheard of, and bundled at an affordable price point.

NEW MAG X PRO HDD LOCATING SYSTEM

Underground Magnetics is again innovating by introducing its most powerful HDD Locating System — the Mag X Pro.

As congestion in utility easements continues to increase, the need for improved accuracy is crucial. Sub-kHz frequencies have always been the best solution for drilling in these conditions. Unfortunately, sub-kHz frequencies traditionally have limited the range, depth and ability to overcome active interference. With these concerns in mind, the new Solid Core 3D Antenna Cluster has effectively doubled the standard range enabling contractors to work in sub-kHz regardless of any active interference.

BUILT-IN, AUTOMATED DATA LOGGING

One-Touch data logging is integrated into the Mag X Display. Users can automatically record rod-by-rod data (roll, pitch and depth); review rod-wise and chart views; add and edit utility crossings; monitor projects in real-time; and generate and share reports from the UMmaps app/portal or Mag X display.

OTHER FEATURES

Changing the frequency and power mode downhole is a breeze thanks to the simplicity of the user interface on the Mag Series system. Once you have calibrated a frequency, you can follow the simple, on-screen instructions to perform a downhole change at any point throughout your bore.

Simply set the locator out in front of your drill and Bore-To mode will guide the drill operator to your location. Mirrored screens between the locator and remote display make communication between operators seamless, which increases the effectiveness and efficiency of drilling.

The new Echo 75XF 19-inch transmitter is the only transmitter you'll need for any job. From drilling across 10-lane highways to drilling under heavy rebar and wire mesh, the Echo 75XF will do it all. Features include:

- 16 frequencies: sub-kHz .325 up to 41 kHz
- Three power Levels: low, 114 feet per 100 hours; medium, 180 feet per 60 hours; and high, 278 feet per 11 hours
- A diameter of 1.25 inches and length of 19 inches

The Echo 50XF 15-inch transmitter can handle anything from heavy rebar and wire mesh in concrete to river and highway crossings requiring extra power for bore-to and extreme depths. Features include:

- 16 frequencies: sub-kHz .325 up to 41 kHz
- 2 power levels: normal, 131 feet per 60 hours; and high: 164 feet per 15 hours
- A diameter of 1 1/4 inches and a length of 15 inches

Underground Magnetics' HDD locating systems have the power and precision you need to do the job with ease.



Underground Magnetics

simple. powerful. affordable.

Underground Magnetics is based in the U.S. with fresh ideas and designs backed by experience. The company is centered around a core team of industry experts dedicated to designing, producing, and servicing powerful HDD locating systems.

515-505-0960 | umaghdd.com

MAG X PRO



NEW! SOLID CORE 3D ANTENNA CLUSTER
» Double the Range for the Sub-kHz Frequencies



NEW! ECHO 75XF TRANSMITTER
Three Power Levels
» Low: 114ft (35m) / 100 hours
» Medium: 180ft (55m) / 60 hours
» High: 278ft (85m) / 11 hours



MAG X PRO

The Mag X Pro is our most powerful HDD Locating System to date. Paired with the New Echo 75XF and even the toughest jobs will be done with ease.

 **Underground Magnetics**
simple. powerful. affordable.

UMAGHDD.COM | 515.505.0960

Modular Hydraulic Bracing Slashes Excavation Shoring Time

Protecting deep, long or irregular excavations is a job in itself. Crews can easily spend days or weeks welding walers and chairs for steel beam bracing. The work is hot, time-consuming and hazardous. In some cases, there's a better solution.

High-load-capacity modular hydraulic bracing systems, available for rent, can help contractors save time, money and effort while boosting safety. These systems can replace traditional support systems and eliminate the need for welding in many applications, including cofferdams, basements, bridge abutments and tunnels. Additionally, they reduce materials costs and waste.

With these systems, companies can often begin work inside the excavation sooner.

WHAT IS A MODULAR HYDRAULIC BRACING SYSTEM?

Modular hydraulic bracing systems run the perimeter of an excavation. They consist of an adjustable hydraulic ram unit with up to a meter of adjustment connected by pins to extension sections, available in different lengths, from 1 to 12 meters. The hydraulic rams utilize water-based, biodegradable fluid to alleviate hazardous contaminant concerns. They're often used as part of a sheet pile bracing system, or in conjunction with slurry walls, or beam and lag walls. The system hangs from chains anchored to the tops of the sheet piles or to higher-level braces. The corners can be adjusted at different angles as needed to fit irregularly shaped excavations.

United Rentals can assemble sections prior to delivery that would be installed with a crane or excavator to minimize on-site assembly and labor, or deliver short, manageable sections to be connected onsite.

To support large excavations, modular hydraulic braces can be used in conjunction with high-load-capacity hydraulic struts. These struts require little to no fabrication or welding and come in a range of load capacities, from 150 tons to as large as 750 tons. The MP750, which can handle loads up to 7,355 kN, is the largest hydraulic strut available in the continental United States, only from United Rentals, according to the manufacturer. Load pins can be installed to allow wireless monitoring of the load.

A complete hydraulic bracing and struts system can support a number of excavation length and width dimensions ranging from 10 feet to 100-plus feet.

BENEFITS OF MODULAR HYDRAULIC SHORING

Time, minimizing material waste and safety are the major benefits of these versatile, high-tech solutions. By largely eliminating the need for welding, a



hydraulic shoring system can keep workers out of harm's way while reducing shoring time by as much as two-thirds.

Removing a modular hydraulic bracing system is relatively easy. Thanks to the modular nature of the system, it can be removed with relatively light-duty equipment.

ENGINEERED PLANS ARE A MUST

Designing a hydraulic shoring and bracing system for the excavation and the anticipated load is a job for registered professional engineers. United Rentals is a leader in the use of hydraulic shoring and bracing systems in the U.S. and is adept at developing engineered plans for even the most complex environments. Once the system is designed, United Rentals can help ensure that it's installed according to the plan.

With its extensive inventory of hydraulic shoring and bracing equipment and engineering expertise, United Rentals can quickly provide systems and components that increase shoring productivity and deliver savings to the bottom line.



United Rentals is the largest rental equipment provider in North America. Backed by a dedicated Trench Safety team with experience and expertise, the company is ready to help tackle any job big or small. **800-UR-RENTS (800-877-3687) | [unitedrentals.com/trench](https://www.unitedrentals.com/trench)**



Safety powered by productivity.

United Rentals Trench Safety is the largest provider of underground protective systems in North America. Our dedicated engineering department, industry-leading safety trainers, digital solutions like Total Control® and 24/7 support can help your site stay safe without sacrificing efficiency.

UnitedRentals.com/TrenchSafety

Vac-Con's X-Cavator CXT Is Ready to Meet the Demands of Any Application

The legacy Vac-Con vacuum excavator — the X-Cavator CXT — is a simple, user- and maintenance-friendly unit ideal for contractor and municipal operations.

The overall design of the CXT is based on the hydrostatic drive system, allowing for the elimination of blower idle time. Unlike direct-drive traditional units, the CXT blower does not start turning until the water or vacuum systems are engaged. This decreases the amount of heat being generated from an idling blower and extends the life of the component.

Independent control of the water system is hydrostatically driven from the front PTO and rated for 20 gpm at 4,000 psi.

The CXT is available with either a positive displacement blower or three-stage centrifugal compressor fan to power the vacuum system. Dual cyclonic separators and a removable cartridge and final filter housing comprise the filtration system.

A simplified passenger-side-mounted control panel features throttle switch operations for all unit systems. The CXT is also available with a wireless remote that controls all system functions. This device features integrated batteries inside of the remote control, which are charged magnetically on the cab dashboard. These are considered permanent batteries that don't need replacing and are safe from environmental corrosion and dirt. In addition, the elimination of a battery compartment reduces entry points for water, which can quickly decommission a remote control.

EASY MAINTENANCE

Components on the CXT are easily accessible and centrally located, ideal for maintenance needs. Water pump components are available behind a removable panel located just below the mainframe. The blower is located at midbody with an eye-level fluid indicator, eliminating the need for operators to go under the truck to verify levels.

An optional catwalk component is available to be mounted onto the side of the debris tank. This feature is ideal for simplified hydraulic and boom maintenance access.

The CXT is available with up to 1,300 gallons of water capacity in cross-linked polyethylene water tanks that carry a standard 10-year warranty.

POWERFLEX BOOM OPTION

Upgrade the CXT with the telescoping PowerFlex boom option, designed to give the operator a greater range of motion and control. The PowerFlex boom is an innovative component that boasts a total reach of 28 feet in length,



34 feet of upward lift, 110 degrees of articulation and 315 degrees of rotation. Top-mounted on the debris tank, PowerFlex can be operated at the front, sides and back of the machine. PowerFlex allows the operator to work difficult angles and covers more ground than a traditional boom. The ability to sweep and rake with the boom is great for long trenching. In addition, PowerFlex is easier to operate than boom hoses made of flexible material, which require a lot of manual handling and management.

The capabilities and power of the X-Cavator CXT are designed to make the operator's job easier, while bringing the best in power and performance to the job. The CXT is available in a range of configurations and options ready to meet the demands of any operator, any application and any job site, according to Vac-Con.



Vac-Con Inc. has since 1986 manufactured more than 9,000 custom-built, truck-mounted machines to serve public and private environmental markets globally. Located in Green Cove Springs, Florida, the company is one of the largest producers of sewer cleaning equipment in North America.

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Ultraslow Speed Control Technology Offers Solution to Efficient Drilling in Rock

When it comes to directional drilling in rock, operators face numerous challenges. The hardness and unpredictability of rock formations require precise control and consistent power from the drill. Too much or too little force can lead to inefficient drilling, equipment damage and even project failure.

“Drilling inconsistent rock formations is where drill operators are really put to the test,” says Jeff Utter, product manager for Vermeer. “Maintaining a slow, steady pace requires constant adjustments to avoid stalling the drill string. Whether using an automatic mode or drilling manually, the objective is to maintain the maximum allowable weight on the bit while preventing frequent rotational stalls.”

Most HDD rigs struggle with this balance of power and control, often leading to overcompensation by the operator and inconsistent drilling performance.

CONTROL IS KEY

Ultraslow speed control technology fundamentally changes the way HDD operators approach drilling in rock. The technology allows for precise control over the drill’s thrust, optimizing the cutting action for challenging rock bore conditions.

“It’s not necessarily about slow speed; it’s really about controllability,” says Utter. “Slow speed often lends to controllability. Feathering the thrust manually doesn’t always allow the operator to maintain a consistent weight on the bit. This technology is not about making the drill slower, it’s about giving the operator more control over the drilling process. It’s the ability to adjust the speed and power of the drill to maintain a constant weight on the drill bit, allowing optimal cutting performance and efficient drilling.”

The Vermeer D550 horizontal directional drill is one of the first HDD rigs to implement ultraslow speed control technology. It is designed to deliver optimal operational and service experience for contractors.

BENEFITS OF THE TECHNOLOGY

The introduction of ultraslow speed control technology in the Vermeer D550 HDD has several benefits for contractors using directional drilling in rock.

Ultraslow speed control technology enhances operator control. With this technology, the operator can better manage the balance between power and control, leading to more efficient drilling. This enhanced control allows the operator to push the drill closer to its limits while limiting the risk of stalling, helping lead to more efficient and productive drilling.



One of the most significant benefits of ultraslow speed control is the reduction in equipment stalls. With ultraslow speed control, the drill can maintain a consistent pace, minimizing the likelihood of stalling. This helps optimize productivity on the job site.

Another benefit of ultraslow speed control is it can help operators extend the life of drill tooling. By maintaining a consistent weight on the bit, the drill is able to optimize the cutting action, minimizing wear and tear on the tooling and extending its life.

ENHANCING ROCK DRILLING

Ultraslow speed control is an innovative technology that can enhance the process of directional drilling in rock. By providing precise control over the drill’s thrust, this technology allows for optimal cutting action, minimized equipment stalls, improved tooling life and enhanced operator control.

If you want to learn more about the Vermeer D550 HDD and how it can help you with productive directional drilling in rock, contact your local Vermeer dealer.



Vermeer Corporation delivers a real impact on the way important work gets done through the manufacture of high-quality agricultural, underground construction, surface mining, tree care and environmental equipment. With a reputation for being built tough and built in a better way, Vermeer equipment is backed by localized customer service and support provided by independent dealers around the world.

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Vermeer rigs are at the forefront of underground

With a range of size and power offerings across our drill lineup, Vermeer helps utility contractors tackle jobs in tight spaces and challenging soil types, including small-diameter installation bores in rocky ground conditions. Plus, these rigs are backed by the unrivaled support of Vermeer HDD Tooling Specialists.

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Switch to UNDERHOOD for Easy and Powerful Mobile Air

Twenty-seven years after it hit the market, UNDERHOOD remains one of the most popular air compressor systems in the world.

Engineered for mobile applications in the toughest environments, UNDERHOOD air compressors stand out from tow-behind and truck-mounted counterparts with their performance, durability and duty cycle in one very small package.

“Mounting directly onto the vehicle’s engine, UNDERHOOD air compressors deliver the service truck industry’s top performance. UNDERHOOD systems produce incredible air volume at 100% duty cycle, withstand the abuse of wear and tear in the tightest applications, and are resilient in extreme climates,” says Gordon Duval, vice president of sales and marketing at VMAC.

Crafting each UNDERHOOD system to fit within a vehicle’s confined engine compartment demands extraordinary engineering expertise and design precision. The engineering team at VMAC collaborates closely with OEM engineers to design mounting kits for new model year work vehicles, including Ford, RAM, Chevrolet and Mercedes.

“Working directly with the major OEMs, we continue to seamlessly integrate the compressor into a highly restricted space while ensuring easy installation and maintenance,” Duval says.

The UNDERHOOD lineup includes four powerful models: UNDERHOOD 40 Truck Series, UNDERHOOD40 Van Series, UNDERHOOD70 and UNDERHOOD150. The most powerful system, the UNDERHOOD150, produces up to 110 cfm and can power 90-pound jackhammers, rock drills, and piercing tools without hesitation.

This capability makes it a favorite among digging and construction crews, utility workers and other professionals who rely on heavy-duty tools but can’t afford to give up the space and weight of typical above-deck mounted air compressors.

All UNDERHOOD systems feature VMAC’s oil-injected rotary screw air compressors, operating at a 100% duty cycle. This means operators never have to pause for air, working swiftly and efficiently. Whether it’s for continuous drilling, hammering or any other demanding task, UNDERHOOD compressors ensure uninterrupted productivity.

Thanks to its innovative engine-mounted location, UNDERHOOD air compressors free up to 80 cubic feet when compared to utility-mount air compressors, making room for additional tools and equipment, and ensuring a sleek, professional-looking vehicle.

“UNDERHOOD air compressors are so discreet you can’t even tell they’re installed unless you pop the hood. There are over 33,000 of them deployed so you might pass dozens of UNDERHOOD systems every single day and you would never know it,” Duval says.



Moreover, UNDERHOOD air compressors help reduce gross vehicle weight by up to 1,900 pounds. Weighing between 62 and 200 pounds, these systems significantly boost payload capacity.

“You just can’t beat the compact, powerful performance of the UNDERHOOD product line. It’s the ultimate choice for saving space and weight without sacrificing air power,” Duval says.

Another game-changing advantage of UNDERHOOD air compressors is reduced maintenance. Unlike most vehicle-mounted compressors with independent engines, UNDERHOOD air compressors are powered by the vehicle’s primary engine, eliminating the need to service a secondary compressor engine. d multipower systems with extraordinary build quality, durability and reliability.

“Servicing UNDERHOOD compressors is as quick and easy as a regular oil change,” Duval says. “No secondary engine means no extra maintenance hassle or expense.”

And the best part? The UNDERHOOD air compressor is always with your truck or van, wherever it goes.

“Imagine never having to worry about leaving your tow-behind air compressor behind or realizing it’s back at the shop when you unexpectedly need it,” Duval says. “With UNDERHOOD, that’s a nonissue. If your vehicle is there, so is your compressed air.”



VMAC Global Technology Inc. designs and manufactures innovative mobile air compressors and multipower systems. As one of the only true air compressor manufacturers in North America, VMAC has earned a reputation for air compressors and multi-power systems with extraordinary build quality, durability, and reliability.

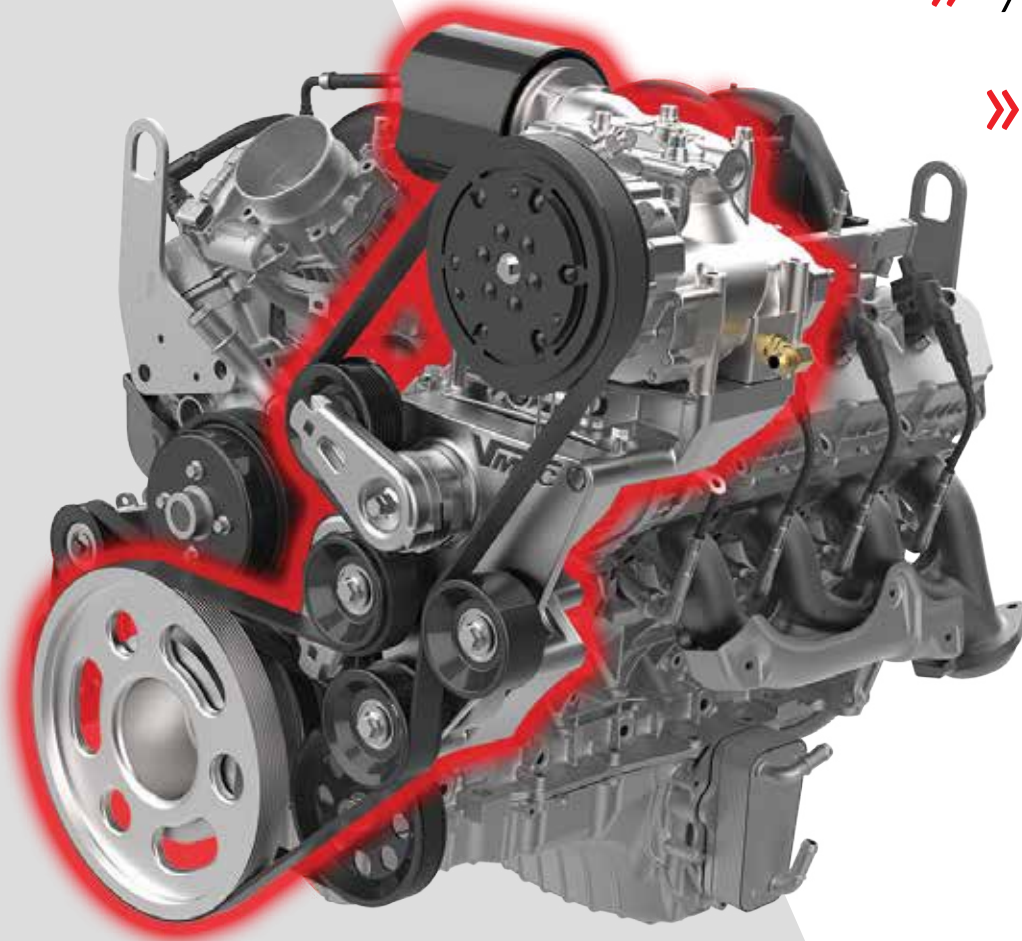
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Connect Your Crew With CrewPlex Crew Communication Solutions

As a leading provider of hands-free communication systems for D1 football teams for more than 31 years, CrewPlex knows how to deliver team communications that work in tough, challenging game-day environments. Building on its proven CrewPlex DR10 crew communication technology, CrewPlex recently added the DR10 All-In-One wireless headset to its product line. The headset combines the great sound quality and excellent performance of the proven DR10 system with the comfortable fit, exceptional noise isolation and mic-muting technology, but without the wire.

Available in single- and dual-ear configurations, the All-In-One headset features an operating time of seven hours (single) and 14 hours (dual). The lightweight and adjustable design allows for comfortable all-day wear, and the headsets collapse for easy storage. Its unique all-in-one design features an easy-to-read OLED display, two intercom channels with a dual listen option, and support for up to 10 full-duplex users, including unlimited listen-only and shared users.

The DR10 All-In-One headset is compatible with DR10 packs, DR10 receivers, and MR10 packs, allowing work groups of any size to stay connected and work seamlessly with others. Users can talk and hear each other in real time without voice triggering or pushing a button. Industry-leading audio quality pro-

vides better communication, especially in operations where noise levels can exceed 100 dB.

With CrewPlex, you get the versatility you need for any application requiring a reliable, great-sounding wireless intercom with excellent RF coverage and range, even in the toughest and loudest work environments.



CrewPlex is a line of hands-free, full-duplex wireless communication solutions to help crews overcome the challenges of communicating continuously in environments where noise, distance and task complexity can affect safety and productivity.
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Drill Defender Gives HDD Contractors Competitive Advantage

Whether you're drilling in cobble, stone, sand, sandstone, or a mix of soil, Kondex Drill Defender cobble bits and housings are your solution to get in, get out, and get onto the next job without breaking the bank.

Kondex's HDD components feature the company's patented laser cladding wear protection that stands up to your toughest conditions.

"Stop messing around with hard facing and get real with Kondex Drill Defender bits and housings," says Kevin Miller, HDD sales manager. "Our products deliver longer footage and are sold at a very competitive price point."

Kondex cobble bits start at \$1,420 with carbides or \$1,000 without carbides. The company's sonde housings are between \$2,550 and \$2,850.

"Kondex was the first to bring laser cladding to HDD bits and housings, and we're continually expanding our product line," Miller says. "We've mastered laser cladding with nearly 15 years of experience with this technology."



KONDEX® Kondex Corp. was founded in 1974 and manufactures and engineers high-quality, wear-resistant components for the construction, agriculture and commercial turf care industries. Its Drill Defender-enhanced HDD components provide longer product life and greater drilling distances. Visit the online store at www.kondexparts.com/hdd.

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1

1. Cat Pumps Model 660 for hydroexcavating

The high-pressure pump is critical to hydroexcavating, jetting and washdown equipment and must perform in a wide range of environments. That's why operators working in the heat of Texas or the cold of Alberta rely on Cat Pumps to provide long-lasting, reliable products wherever they are used. Cat Pumps Model 660 has been the workhorse of the mobile high-pressure industry for years. With a performance rating of 10 gpm at 3,000 psi, the combination of high performance, compact footprint and proven longevity helps hydroexcavators dig through the most challenging jobs. The pump can be belt-driven with a clutch, providing the on-demand ability to engage or disengage the water flow, which reduces runtime, saving energy and increasing pump life. Or, with a bell housing, an SAE hydraulic motor can be conveniently mounted to drive the pump. When productivity and reliability matter, you can trust Cat Pumps to keep equipment running. **763-780-5440; www.catpumps.com**



2

2. Hypertherm Associates Powermax45 SYNC plasma cutter

Hypertherm Associates launched the newest member of the Powermax SYNC family, the Powermax45 SYNC plasma cutter. Engineered to meet the diverse needs of metalworkers seeking a versatile system available for gouging, cutting and marking applications, the Powermax45 SYNC delivers. With strong cutting power and the single-piece Powermax cartridge providing up to five times longer consumable life than the competition, according to the maker, Powermax45 SYNC decreases operating costs. It has an advanced torch communication for automated setup and improved cut quality. And the cutter is easy to set up for mechanized usage with an optional CNC interface and FastConnect torch connection. **800-643-0030; www.hypertherm.com**

This Issue's Feature:

Pit-launched directional drill ideal for tight spaces

BY CRAIG MANDLI

Installing sewer laterals and other utilities in congested, urban areas is sometimes very difficult with a traditional surface horizontal directional drill. You might not have the space to reach your target depth. However, a pit launch drill can be a solution: They are lowered into a pit and can drill from point to point without the setback angle needed for surface units.

TT Technologies recently redesigned the **Grundopit pit-launched mini directional drill** to make it even a better fit for difficult fiber-to-the-home and utility service line installations in tight working conditions. The unit is a compact 54 inches long, 43 inches wide and 57 inches tall, and it delivers 13,489 pounds of thrust and pullback and 553 ft-lbs of torque with bore length up to 150 feet. According to Mark Dorn, regional manager for TT Technologies, the Grundopit is an ideal entry-level system for utilities, cable industries or as a supplement to larger units.

"Several areas around the country are pushing new water services within municipal lead replace-

ment programs," says Dorn. "The Grundopit has received a lot of attention in that market and is a workhorse, installing water services in older communities with lead pipe, ... which is ideal because those neighborhoods have tight working conditions and narrow streets."

The unit features an instant plug-in lock that holds the drill stem in place. The system allows new drill stems to be added easily by engaging the new drill stem at the rotational motor. This means that drill stems are only screwed into the lead stem and not the rotational motor, cutting the time it takes to add a stem in half. Components include a two-part bore rig, 30 drill stems, bore head with angled steering surface, back-reamer and swivel coupling, hose package and power pack.

"Bores over 100 feet long are no problem for this machine," says Dorn. "That gives contractors the versatility to bore in water and gas services one day and do a 120-foot road bore the following day pulling in 8-inch PVC. All while maintaining a specific grade with the same rig."



Grundopit from TT Technologies

According to Dorn, the feedback from those using it in the field has been encouraging. "We hear that the overall power and accuracy in drilling with this machine paired up with DCI locating equipment is great," he says. "The durability and reliability, even when used all day, every day of the week, continues to impress."

800-533-2078; www.tttechnologies.com



Zip Tube Designed With Durability in Mind

Milwaukee Rubber Products Inc. has announced it is now distributing the Zip Tube — a new hydroexcavation suction/water erosion nozzle engineered with a rugged build to withstand harsh environments.

The Zip Tube is built with a 0.100-inch wall, 6- or 8-inch Tuff Tube, and is equipped with an external stainless steel water ring containing 10 (6-inch) or 12 (8-inch) stainless steel replaceable jets that pulverize soil with water pressure. Soil is then removed by vacuum suction through the tube.

It's available with a Vactor style 6- or 8-inch flange, and Super Products Bandlock or Aquatech connection options.

ENGINEERED FOR SAFETY

Features of the Zip Tube include an adjustable handle with a rubber bump stop inside the water ring. The bump stop protrudes forward to help safeguard the water ring jets against abrasion from rocks, debris and underground services.

There's also a rubber safety tube attached to the exterior of the water ring that helps control the spray of water and eroded material that can splatter during the hydroexcavation process.



Milwaukee Rubber Products Inc. has been in business more than 65 years and is based out of Menomonee Falls, Wisconsin. The company stocks and distributes hoses, couplings, valves, pumps, vacuum accessories and safety equipment. It also custom builds rubber parts to exact specification for its clients.

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Terramac expanding globally

Established 13 years ago, Terramac, part of the CK Power Family of Companies, is setting its sights on international expansion, starting in Europe, the Middle East, Africa and Latin America. Strategic partnerships have been forged to support global expansion. Netherlands-based Royal Eijkelkamp, a longtime business connection, has been appointed as the distributor of Terramac products in Europe, the Middle East and Africa. And IPESA will represent Terramac in Peru.

VMAC named one of Canada's Best Managed Companies

VMAC has been named one of Canada's Best Managed Companies for the sixth consecutive year, maintaining its Gold Standard designation. The Best Managed Companies award recognizes VMAC for its global business practices, innovation and sustained growth. Companies are evaluated on leadership in the areas of strategy, culture and commitment, capabilities, innovation, governance and financial performance.

Felling Trailers' Laurie Engle to retire

Laurie Engle, Felling Trailers' inside trailer sales consultant, is retiring after working with trailers for 32 years. Through the years, she built many working relationships with dealers and customers, solving transport problems among many others. Felling's Trailer Experts work with dealers/customers to configure a trailer to meet the desired specifications and provide a custom solution.



Laurie Engle

"Laurie has been a strong asset to our team. In addition to her deep trailer knowledge and excellent cus-

tomers relationships, Laurie's bright smile and tremendous personality will be missed in the office. I wish her the best retirement, making memories with her family," President/CEO Brenda Jennissen says in a press release.



Brian Lowry



Alex Phelps



Mike Suiter



Ty Rose

Vacuum Truck Rental announces new managers

Brian Lowry was promoted to regional operations manager of Richland, Mississippi-based Vacuum Truck Rentals. Lowry has been employed with the company since 2012. In his new role, he will be responsible for offices in the Southern U.S. Keith Veros was promoted to general manager of the company's Livonia location in Michigan, and Alex Phelps joined Vacuum Truck Rentals as service manager of the Livonia location. Prior to joining Vacuum Truck Rentals, Veros held positions as a product specialist and territory manager with various organizations across Michigan. Previously, Phelps served as the lead mechanic for a municipal contractor in Michigan, where he oversaw the servicing, maintenance and DOT compliance of a large fleet comprising over 100 pieces of rolling stock. Vacuum Truck Rentals also announced the promotion of Mike Suiter to the position of vice president of strategic accounts. He has been employed with the company

since 2017. And Robert Knotts joins Vacuum Truck Rentals as general manager of the Washington, West Virginia location. Prior to joining Vacuum Truck Rentals, Knotts worked in the equipment service industry for over 20 years. Additionally, the company promoted Ty Rose to the position of regional operations manager. In this role, he will be responsible for offices in the Northern U.S.

Superior Environmental Solutions acquires Arrowhead Environmental Services

Superior Environmental Solutions, a portfolio company of Palladium Equity Partners, has acquired Arrowhead Environmental Services. The combination broadens SES' geographic reach into the Southern Mid-Atlantic market, where Arrowhead is based. With approximately 50 employees and 75 active customers throughout the Central Virginia area, Arrowhead represents one of SES' largest acquisitions to date.

Vermeer's Mary Andringa named to HDDA 2024 Hall of Fame Class

Mary Andringa, the chair emerita of Vermeer, has been inducted into the Horizontal Directional Drilling Association Hall of Fame Class of 2024. This honor acknowledges individuals whose pioneering work and significant contributions have made a lasting impact on the horizontal directional drilling industry. The HDDA is a trade organization dedicated to promoting HDD within the utility and pipeline industry. Its mission includes educating the public and government agencies about HDDs environmental and economic benefits and limitations.



Mary Andringa

McElroy launches new website for Australian customers

McElroy launched a new website dedicated to the Australian distributors and customers at mcelroyfusion.com.au. Since 1993, McElroy has served customers in Australia through partnerships with leading local distributors. McElroy equipment is used in many industries in Australia, including mining, water infrastructure and coal bed methane gas extraction. On this new site, users can find information about McElroy's partner distributors in Australia, including distributors offering certified McElroy rental machines.

Brokk opens new distribution center, hires manager in Canada

Brokk opened a distribution center in Hamilton, Ontario. While Brokk has had a sales presence in Canada for more than 30 years, the new facility marks an expansion of its network. The new location will be run by Jim Bennett, who joined the Brokk team in Canada as warehouse and logistics manager. Bennett's responsibilities include managing product and assisting customers and regional sales managers by providing parts support throughout Canada. The new 4,000-foot distribution facility will house the full line of demolition machines with attachments as well as Aquajet Hydrodemolition robots and parts inventory for both brands. The new center will also offer Brokk and Aquajet demonstrations.



Jim Bennett



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