

# Cleaner

FOR DRAIN AND PIPE CLEANING,  
INSPECTION AND REHABILITATION  
PROFESSIONALS

## NEW TERRITORY

ROCKY MOUNTAIN WASTEWATER  
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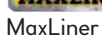
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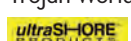
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## Cleaner

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## COMMIT TO THE DREAM

The drain cleaners who stand out have big goals and pursue them with passion

**WAS THINKING THE OTHER DAY** about some of the conversations I've had with business owners who have been profiled in *Cleaner* the last few months.

No matter how much time I spend talking with a potential profile candidate, I always learn so much more about them when I dive into the finished stories our writers deliver to me a few weeks later.

A few companies stood out to me as I started reviewing the 2021 issues, and I realized all those business owners shared a few

things in common that made me remember them.

These owners all put in several years working for other people: learning how to do business the right way (or learning from other's mistakes), honing their craft, and building a solid foundation of knowledge in order to eventually strike out on their own. Not everyone dreams of owning their own business but it seems that for many of these entrepreneurs, when the passion is there, they end up wanting to do things their own way.

These were also relatively newer businesses, on average about three to five years old, but they were growing, hiring and adding services, and they make it a priority to keep learning in order to do all of them well. Another common thread was putting an emphasis on treating their customers right. And they're already enough of a success that others in the industry are shouting them out and introducing them to me.

The last thing all these owners have in common is big goals. Some of them are huge, really — an office in every state, a nationwide franchise system, world domination, you name it. And they aren't afraid to talk about those goals publicly. They have the confidence to chase those dreams because they have confidence in themselves and their abilities, and they are willing to put in the work. They're already taking steps to achieve those goals.

Entrepreneurship will bleed into every area of your life. But to build a successful company and see those dreams come true, you need to embrace that. "It is a lifestyle, not a career," says Diego Lujan, featured in this month's profile of Alphalete. "We are only going to live once, so we should give it all we've got."

Your plans for the future don't have to include world domination, or even multiple locations. A "big dream" is different for everyone. But what these business owners should make you realize is that you should go after that dream, whatever it is you want for your company, and commit to it wholeheartedly.

I want to tell more of these stories. They inspire me, and hopefully they inspire you too.

I hope you enjoy this month's issue. **c**

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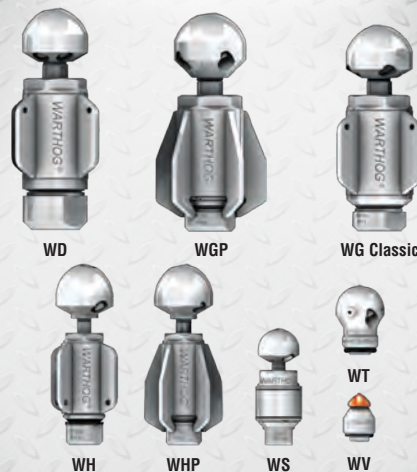
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## NEAT AND TIDY

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How your services vehicles are organized is important. Not only does a tidy work truck or van mean more efficient and safer workflow, it is also a representation of your technicians and business to every customer who sees it. In this online exclusive, read more about the shelving units and other options that can help keep you organized. >> [cleaner.com/featured](https://cleaner.com/featured)



## ECO-FRIENDLY

### The Benefits of a Green Vehicle Fleet

If you've thought about taking your business down a more environmentally friendly path, your vehicle fleet is a good place to start. It can also help your bottom line. This online exclusive takes a closer look at the benefits of CNG and electric vehicles.

>> [cleaner.com/featured](https://cleaner.com/featured)



## SHARPENING SKILLS

### Business Coaching Provides an Extra Push

The skills you need to be effective out in the field are oftentimes separate from what it takes to run a successful business. That's where a little outside coaching can help. In this online exclusive, one company owner shares the ways that he has been able to improve his business since embracing coaching. >> [cleaner.com/featured](https://cleaner.com/featured)

## OVERHEARD ONLINE

"If you don't have a system that shows exactly how to complete every single process and handle every situation your employees might encounter on the job, there's no one to get angry with but yourself."

— 3 Questions to Ask When an Employee Makes a Mistake  
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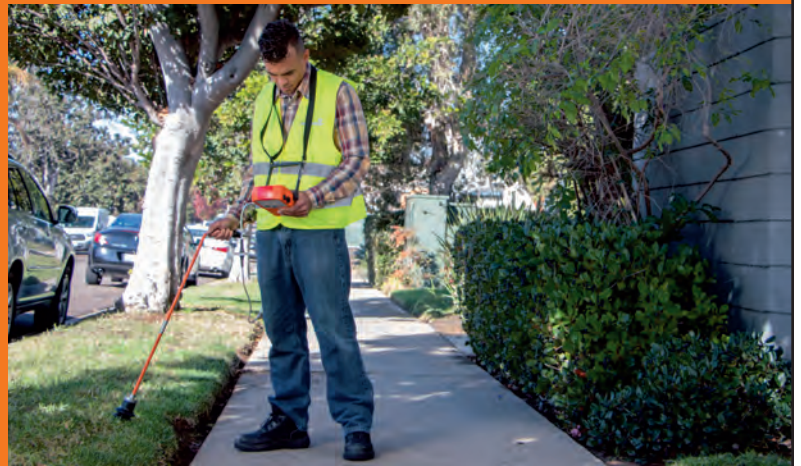


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# THE ALPHA AND THE ELITE

DIEGO LUJAN CREATED ALPHALETE TO SERVE HIS COMMUNITY,  
INCLUDING PLANS FOR A TRADE SCHOOL AND FRANCHISE SYSTEM

// By Giles Lambertson

Photography by Carl Scofield



« The Alphalete Plumbing crew includes (from left) Bryan Lau, Donny Vigil, Mercedes Garcia, Walter Sandoval, owner Diego Lujan, Floyd Adams, Robert DuPignac and Cruz Gonzales.

## DIEGO LUJAN IS MAKING A NAME FOR HIMSELF.

Besides giving his Colorado plumbing business the unique name Alphalete Plumbing & Heat, Lujan is reinventing what it means to be a community plumber and to be fully engaged in a community. The firm has steadily grown over five years from one employee to 10 and is already rebranding itself as it adds another major service component.

Lujan's surging success was officially recognized in November when an organization affiliated with the Colorado Springs Chamber of Commerce — the Hispanic Business Council — awarded not one, but two, 2020 awards to the company: Hispanic Business of the Year and, to Lujan personally, Rising Professional of the Year.

Lujan doesn't bring up the awards himself, but he doesn't mind explaining that they're pegged to the rapid growth of his business and to his community involvement — "the way we serve our community. We're here to solve problems, not add to them."

### CREATING A NAME

Alphalete is a word Lujan created by joining "alpha" and "elite." First and best — that's the reputation Lujan wants for his company. So, from five notebooks of possible business names that he compiled as a teenager, he selected "Alphalete" as a registered company name in 2015. He was 27 years old.

"We are the alpha of the industry and want to become elite," Lujan says. "I googled the joined words and found only two other companies in the world with the name." The company's trademarked symbol is a stylized lion, which also has roots in Lujan's early years. "My father is named Leon and the lion was bred into me."

Lujan grew up in an entrepreneurial and construction-oriented family. He says he did "every trade growing up. I wasn't interested in college and loved working with my hands. At some point, I decided I didn't want to be a roofer. Then I fell in love with plumbing."



### Alphalete Plumbing, Heating & Air

COLORADO SPRINGS, COLORADO

OWNER	Diego Lujan
YEARS IN BUSINESS	5
EMPLOYEES	10
SERVICES	Water heater replacement and repair, drain cleaning, installation and repair of fixtures, pipe replacement and leaking pipe detection and repair, real-estate plumbing installation and repair, and pipeline camera inspections
SERVICE AREA	Colorado Springs, Colorado, and surrounding area
WEBSITE	<a href="http://www.alphaleteplumbing.com">www.alphaleteplumbing.com</a>

✔ Alphalete owner Diego Lujan (right) and technician Donny Vigil clean and inspect a toilet drain in a commercial restroom using a RIDGID SeeSnake and Spartan 300 drain machine.







“WE ARE THE ALPHA OF THE  
INDUSTRY AND WANT TO  
BECOME ELITE.”  
DIEGO LUJAN

➤ In the company shop, Walter Sandoval and Donny Vigil prepare trench drains for installation at a car wash.

After registering the name, he worked for a plumber for another year before making the leap. “I would work eight hours a day as a plumbing superintendent for a company and then work another eight hours on my dreams of being in business for myself. Finally, when I felt I couldn’t give a hundred percent to the other company, which is unfair, I put in my notice and opened the doors to Alphalete Plumbing & Heat.” He worked alone for a year before hiring his first employee.

Five years in, the most frequent service calls for the company now are to clear drains and repair or install water heaters. He places about a thousand new water heaters each year in older neighborhoods in and around Colorado Springs.

About 60% of his service calls are residential, the rest commercial. Some 30% of all of his work is plumbing new homes, but Lujan wants to reduce that part of his workload in favor of more service calls. “When the economy tanks, service calls are where it’s at. And I love serving homeowners, as opposed to working for contractors.”

Calls to Alphalete Plumbing tend to come from inside Colorado Springs, but service trucks make regular runs outside the city limits, too. A frequent destination is Manitou Springs, a nearly 150-year-old tourist town picturesquely situated west of the city near the base of Pikes Peak.

“We spend a lot of time in that town,” Lujan says. “It’s a challenge to work there because everything you get into is going to take a patch or a full replacement. But sitting there on the mountain next to Pikes Peak, it’s all worth it.”

### EXPANDING SERVICES

Recently Lujan decided to add HVAC services, so the company name has grown to Alphalete Plumbing, Heating & Air. The expansion of services was partly serendipity: Lujan met Bob du Pignac through a mutual friend and the two men found they had much in common. He brought du Pignac aboard.

“I wanted a full home-services business,” Lujan says. “Plumbing and HVAC go hand in hand. I’ve had so many customers ask me if we would service their furnace, but we weren’t set up for that. Bob is a perfect fit to do that.”





The company's new senior HVAC technician has a master plumber license, earned in California, from which du Pignac moved to Colorado some years ago. He became an expert HVAC technician and a licensed mechanical contractor. The 65-year-old du Pignac is eager to share all of his expertise with another generation of technicians at Alphalete. Now, plumbing apprentices at the company also are HVAC apprentices.

"I wish I had that opportunity in the trade when I started, learning both trades at once," Lujan says, adding that he remains a plumber first. "We always will emphasize plumbing. That is my first love. It is just an added business within the business."

The makeover in advertised services — that is, adding HVAC to promotional material — is coming along. Once company vehicles are wrapped with the additional service prominently displayed in the name, Lujan is confident the expansion of services will be a "gold mine."

Lujan presently has eight company vehicles. The newest is a 2020 Ford Transit van, the popular work truck with a sliding cargo side door powered by a 275 hp V6 engine. "That is going to be the prototype van for the company.

✓ Walter Sandoval collects inventory for a project.



It should inspire us to work hard to get more of them."

The work trucks carry the normal staples of plumbing and drain cleaning equipment, in this case, Spartan 300 mechanical snakes and RIDGID SeeSnake CS6PAC and Compact2 cameras. When an outside drain or service line needs repair or replacement, Lujan rents an excavator.

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« Lujan and his staff meet for a quick morning briefing to go over the day's projects.

"OUR GOAL IS TO INSPIRE OUR COMMUNITY. I WANT THEM TO SAY, 'HEY, IF LUJAN CAN DO IT, I CAN DO IT.'"

DIEGO LUJAN

The mix of company equipment keeps evolving. Lujan says he is on schedule to procure a jetter this year to keep up with the almost daily demand for drain cleaning. "About halfway through this year, we hope to start offering trenchless pipe work, too."

this stuff out of the way.' Instead, we helped them move the landscape materials and to protect what remained from excavated dirt. After we put the line in place, we helped him move the boulders and things back where they were."

The extra work paid off in more ways than one. "The homeowner was impressed and since has referred more than \$150,000 in work to us. Doing stuff like that for customers encourages other people to come to us. It builds the business."

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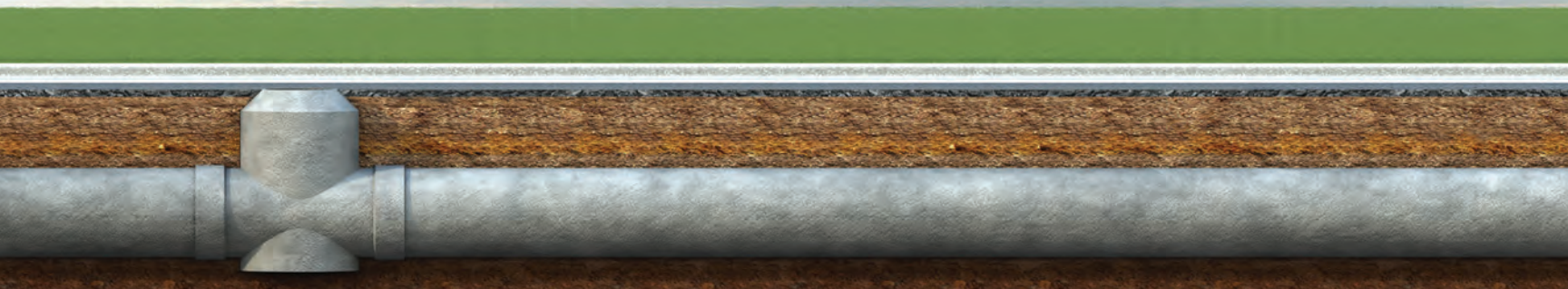
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# VIRTUAL VISITS

The pandemic had a terrible impact on the nation's economy and on many businesses, particularly small companies. It tested the capacity of business owners and managers to tailor their operations to new adverse conditions.

Alphalete Plumbing, Heating & Air adapted and survived. One of the Colorado Springs company's adaptations was the introduction of virtual service calls. The idea of such calls had been floating around in owner Diego Lujan's mind for a while and was quickly implemented in March 2020 after COVID-19 appeared in Colorado.

"We developed it right away to protect us and our customers. People were in need, some had been laid off, and calling the plumber was the last thing they wanted to do," Lujan says.

For \$35, a customer could call Alphalete and a service tech would listen to a complaint, visually examine the situation using a cellphone camera and, if the problem could be fixed by the homeowner, talk the customer through the process. In the event the problem couldn't be resolved without professional help, the \$35 was applied to the cost of a subsequent service call by the tech.

Lujan recalls a typical virtual call. "A lady's disposal quit working. We talked her through the steps to fixing it. Afterward, she was ecstatic. She had lost her job, had no extra money and the virtual repair was important to her."

The virtue of such a service during a pandemic is readily evident, but virtual service has value that transcends such conditions. For one, a problem can be resolved faster than is possible waiting for a technician to arrive. For another, it's less expensive.

"After the pandemic, we are going to keep it as an offered service," Lujan says. "Not everyone can afford a service call. Some people don't even know where a shut-off valve is and we can help them find it. And they don't have to wait for a tech in a truck to arrive to do that."

Lujan believes Alphalete's virtual and in-person service during the pandemic has raised their profile and the esteem in which they are held by the public. Plumbers aren't featured in television and newspaper promotion of pandemic "heroes" such as nurses and firefighters, but Lujan thinks perhaps they ought to be.

"We sacrificed the safety of our house to serve the community. We never missed a beat in helping protect the health of the nation. Plumbers were on the front line in the defense of this country."

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» Lujan connects sections of pipe for a gas line installation.

## TEACHING THE TRADE

Lujan says he is building his business on four pillars: educate, elevate, motivate and inspire. The goal is to achieve at least one of these in each transaction with his customers. “If we can do this, then we have won. Our goal is to inspire our community. I want them to say, ‘Hey, if Lujan can do it, I can do it.’”

His commitment to education is capped by plans to open a trade school for plumbers, operating it out of his 3,500-square-foot office-warehouse. Eventually, it will be relocated into a separate new or leased building.

“I am passionate about trade education,” Lujan says. “Plumbers in Colorado now have to have eight



**“IF YOU DON'T LOVE SOLVING PRESSURE, THEN YOU WON'T SUCCEED AS A BUSINESS OWNER. IF YOU DON'T LIKE SERVING THE COMMUNITY, THEN YOU HAVE NO REASON TO GET INTO BUSINESS.”**

**DIEGO LUJAN**

hours of continuing education each year, which is great. We will offer it and a full apprenticeship program that will be registered with state and federal agencies.”

Lujan himself will be among the school’s faculty members. His company’s apprentices will have free access to the school. “I’m pretty excited about this. It will serve the community and the business and the cause of education.”

And the business won’t be sacrificed to the school. Lujan’s vision is more far-reaching than that. He says he hopes eventually to make Alphalete Plumbing, Heating & Air into an operation that can be franchised. Gearing up for that — as well as getting the school going — may consume the next few years, “but within 10 years I want it to be a franchise-able business and to have multiple locations operating across the country.”

Lujan credits his wife, Brittany, for the progress the company has made. “She’s a full-time mom and I wouldn’t be able to do this without her. My wife and kids are the driving force behind my success.” The couple has four children.

The business owner seems to have blended the various facets of life — work, community, family, self — into a single challenge. To anyone aspiring to start his or her own business, he says, “It is a lifestyle, not a career. You have to want to welcome and to solve the pressures and problems that arise. If you don’t love solving pressure, then you won’t succeed as a business owner. If you don’t like serving the community, then you have no reason to get into business.”

Daunting as it might sound, Lujan encourages people to go for it. “We are only going to live once, so we should give it all we’ve got. If we do, then win, lose or draw, at the very least we will have shown we had the nerve to try.” **c**

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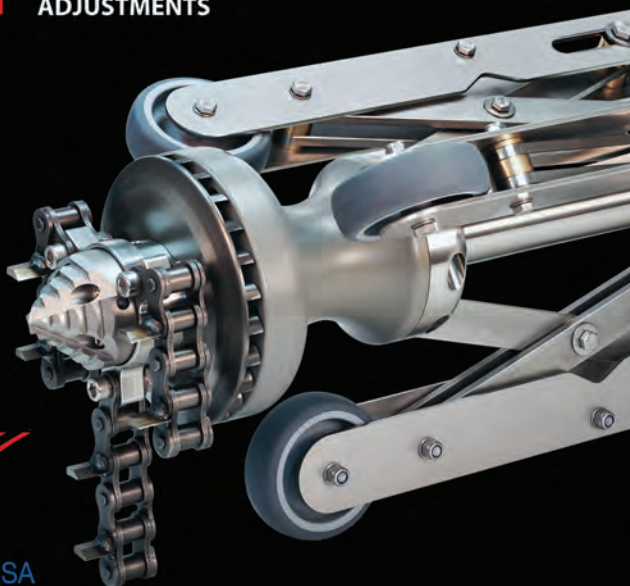
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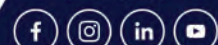
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## MAKING A STATEMENT

Compact robotic cutter reinstates laterals faster and reduces odds of jobs going sideways

// By Ken Wysocky

**R**EINSTATING BRANCH LINES after installing liners in residential and commercial sewer laterals used to be a time-consuming job for Norman Hostetler, a trenchless specialist at TCI Plumbing in Goodfield, Illinois.

But after investing in a Micro S light plus robotic cutter from IMS Robotics GmbH, Hostetler can reinstate lines in half the time — and with considerably less risk of creating other problems that could crimp productivity, he says.

“The Micro S speeds up reinstatements because it’s small enough to fit inside a 3-inch clean-out,” Hostetler explains. “That allows us to reinstate branch lines from inside the liner instead of coming down the ‘back side’ by pulling toilets or going down other drains to gain access.



### TCI PLUMBING (A DIVISION OF TCI COMPANIES INC.) GOODFIELD, ILLINOIS

<b>OWNERS</b>	Joe and Mike Barth
<b>MACHINE</b>	Micro S light plus robotic cutter from IMS Robotics
<b>FUNCTION</b>	Reinstating sewer laterals, grinding pipe debris
<b>FEATURES</b>	Designed for 3- to 9-inch-diameter sewer lines; pneumatically powered cutting heads; color camera head; LED lights; 10-inch LCD monitor; 98 or 164 feet of 1-inch-diameter hose with integrated pushrod; cutting-head module swivels up to 90 degrees and rotates 360 degrees; two-wheel cart with hose reel; approximate weight either 137 and 154 pounds, depending on hose length; measures roughly 33 inches long by 20 inches wide by 47 inches tall.
<b>COST</b>	Around \$78,000
<b>WEBSITE</b>	<a href="http://www.tcicompaniesinc.com">www.tcicompaniesinc.com</a>

« Norman Hostetler, trenchless specialist at TCI Plumbing, works the controls of the Micro S light plus robotic cutter from IMS Robotics GmbH. Hostetler says the cutter can reinstate lines in half the time because of its size.



“Reinstatements go a lot faster when you can reinstate all lines from one access point. I’d say that on average, we can reinstate a service in about 15 minutes, compared to 30 to 40 minutes if we come in through the back side. So it cuts reinstatement time roughly in half.”

While the compact unit allows entry into smaller-diameter pipes, it doesn’t sacrifice power for size. It has the same size motor as larger cutters, Hostetler says, so there’s no loss in cutting power.

Using multiple access points to reinstate lines also raises the risk of encountering problems in branch lines. The lines might be deteriorating or need descaling prior to reinstatement, which adds time and risk to lining jobs, says Jake Bridges, a licensed plumber at TCI Plumbing, which is a division of TCI Companies.

“The Micro S helps us keep costs in line because you’re less likely to run into a bunch of unexpected issues,” he says. “If a reinstatement turns into a much bigger job and you already quoted the customer a price, you’re stuck. So this machine essentially helps protect our bids.”

The company purchased the Micro S from Pipeline Renewal Technologies, the North American distributor for IMS Robotics products.

## PUSHING FOR PRODUCTIVITY

Designed to accommodate 3- to 9-inch lines, the Micro S — which includes a color camera head and LED lights for brighter illumination — is pushed into place via a 1-inch-diameter plastic hose with a pushrod inside. The unit comes with either 98 or 164 feet of hose.

The cutter heads are pneumatically powered; TCI uses air compressors built by Con-X Equipment. To lock the unit into place during reinstatements, the operator inflates a rubber bladder, located behind the cutting-head module, until it’s firmly lodged.

Controlled with a joystick, the cutting-head module swivels up to 90 degrees and rotates 360 degrees. It also offers a time-saving bonus: The cutting head rotates continuously in either direction, so

CONTINUED >>



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operators don't have to go all the way around the "clock" to reach different reinstatement positions — a big advantage on jobs with many reinstatements.

The system includes a two-wheel handcart that holds a hose reel and a control box featuring a 10-inch LCD color monitor. The cart/monitor ensemble weighs between 136 and 154 pounds (depending on the hose length) and measures roughly 33 inches long by 20 inches wide by 47 inches tall.

The cutter can work horizontally or vertically and can negotiate elbows in lined pipes. It comes with one cutting head but a variety of cutters designed to handle different materials are available.

## VERSATILE MACHINE

Established in 1987, TCI Companies added a plumbing division around 2001. The division does commercial and residential plumbing, ranging from new installations and service/repair work to drain cleaning and trenchless pipeline rehab. Its primary service area includes the central Illinois cities of Peoria and Bloomington.

The company also relies on a CIPP lining system made by HammerHead Trenchless and milling/descaling machines made by Picote Solutions. It runs seven service vehicles; four are equipped with box or utility bodies made by Reading Truck Body and Hackney.

The Micro S, which the company purchased in September 2020 for about \$78,000, checks off other boxes, too. It's also used to grind down protruding taps and off-set joints, which increases its value and versatility.

The machine also boosts employee safety because operators rarely have to go up on rooftops to gain access through stack pipes for reinstatements, Hostetler adds.

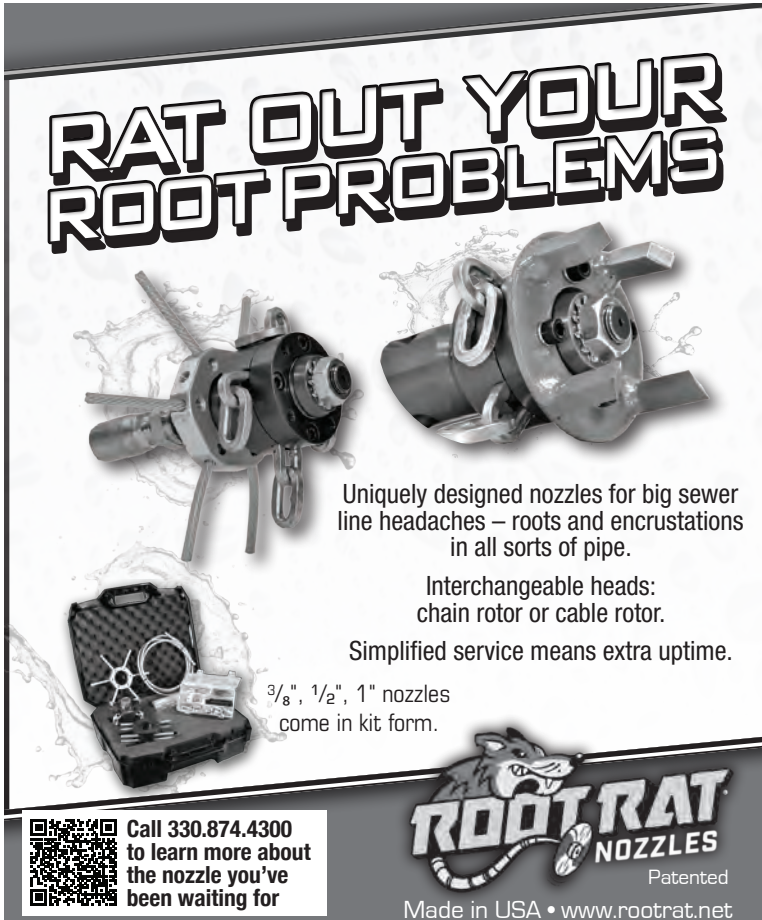
Furthermore, the Micro S has proven to be both durable and reliable. "We haven't had a breakdown yet," he says, noting that the machine gets used a few times a week. "IMS products are known for their reliability."

## KEEPING IT COMPETITIVE

As for improving customer service, most clients don't know how the machine saves time on a job. But Hostetler says the better productivity it provides translates into something they do understand: lower costs and a competitive bid from TCI Plumbing.

"When customers see a machine like this, it puts us in a different category," Bridges points out. "They're impressed when they see this kind of technology."

"I wouldn't want to line pipes without it," Hostetler adds. "It just makes the whole reinstatement process so much easier and faster." **c**



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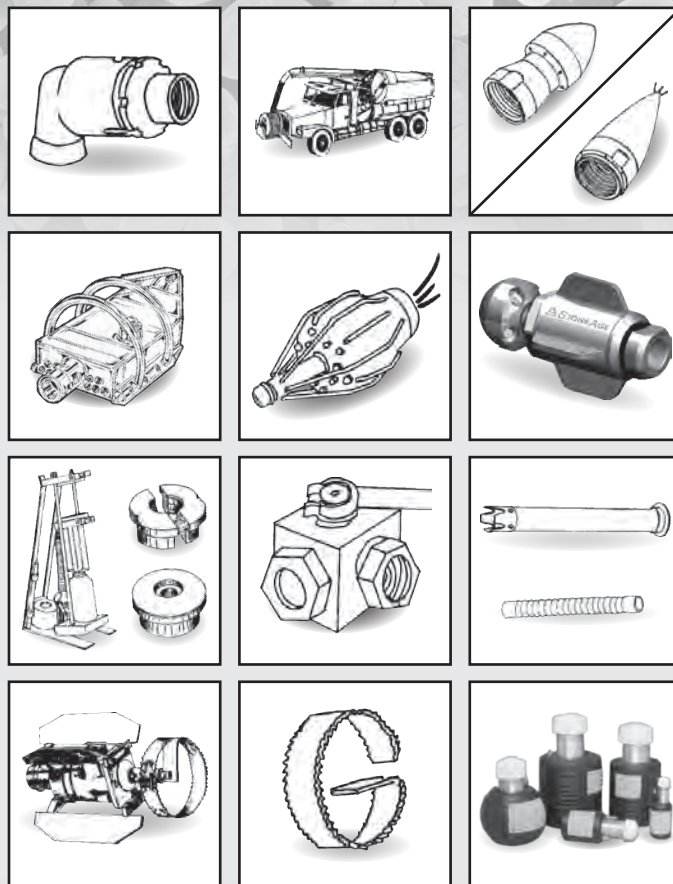
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# UNCOMPROMISED QUALITY

Enz USA supplies a nozzle for every application with balanced, sophisticated design

// By Kim Peterson

**T**HERE HAVE BEEN MANY CHANGES in the sewer cleaning industry in the last 35 years, but one constant has been the innovative nozzle solutions coming out of Swiss company Enz. The U.S. division of the company opened here in 1996 and the company has been delivering quality, high-performing nozzles stateside since.

Its first rotating nozzle was produced in 1998, and this year Enz will debut a camera-equipped eNozzle that records as it cleans pipe and sends video straight to your phone. Enz strives to provide a nozzle for every application, no matter the size of the pipe or the type of debris.

*Cleaner* recently spoke with Christoph Lendi, owner and president of Enz USA, about the company's wide array of nozzles, selecting the best nozzle for the job, and what's to come for the pipe cleaning industry.

**CLEANER:** Tell us a little about the history of Enz USA.

**Lendi:** The Enz company was established in 1985 by Albert Enz in Switzerland. Albert was a visionary and saw a need and opportunity to bring his product to the U.S. Enz USA was established 25 years ago when it opened on Feb. 2, 1996, in Schaumburg, Illinois.

Enz USA developed a successful dealer network in North America and continues to provide excellent products, delivery and customer service. In 2006, Enz USA expanded and moved to Aurora, Illinois. In 2012, Albert Enz sold the company to me, Christoph Lendi. In 2018, Enz USA invested further in the site in Aurora and doubled the location's footprint. In addition to having a strong focus on the sewer nozzle line, we also expanded our industrial nozzle portfolio. Our next move will be to introduce different camera nozzles to the market.

**CLEANER:** What differentiates Enz nozzles from the competition? What sort of needs do they address?

**Lendi:** Enz nozzles don't just spray water; they perform a deep clean. They transport debris efficiently out of the pipe with the correct balance between pressure and flow. Enz has expert technology and unique engineering styles that make us successful. Our rotating nozzles have controlled rotation with our patented JetMax inserts that can be used with recycled water.

Enz has a nozzle for all sorts of different applications for cleaning sewers and pipes. Our sewer systems are not sealed well so all types of debris can be found in the pipes. Loose debris, grease, roots and even concrete can find their way into them.

Products like those in the KBR line provide great value for the money while working with self-regulating accelerating and braking water jets. Higher-performance product lines, such as the Bulldog, work with an inductive magnet. The more you accelerate



Offerings from Enz USA include the eBomb (left) and eBulldog (right) camera nozzles, which deliver high-resolution video footage to help guarantee thorough cleaning.



» A nozzle that spins too fast results in ineffective cleaning and possible damage to the nozzle itself.

with water, the more braking the magnet provides. If rotation is not controlled, the nozzle will spin too fast, which will cause water to bend around the nozzle. This results in ineffective cleaning and possible damage to the nozzle.

### **CLEANER: What are some recommendations for customers shopping for nozzles?**

**Lendi:** Enz has a solution for every problem. Our nozzles are designed to clean pipes, not damage them.

- If you want a multipurpose nozzle that can cut through roots and remove grease, then we recommend our Bulldog nozzle. The Bulldog is like our Grenade Bomb in the back but with a spinner in the head and an unplugging in the front. With this versatile nozzle, you can clear anything from lots of debris to grease or even roots as thick as your finger. The Bulldog is a controlled rotating nozzle with a magnetic braking system.
- If you have a large-diameter pipe to clean with a lot of debris, we recommend our Bulldozer nozzle. The Bulldozer has enormous flushing capacity, a compact design, and excellent gliding ability.
- If you want to clean a very large-diameter pipe, we recommend the Propeller nozzle (P360). Our easy-to-adjust skids can be adapted to clean egg-shaped or oval pipe profiles.
- If you have heavy concrete or grout to remove, we recommend our Recycling Milling Cutter (IMC). It features low maintenance, easy handling and superior performance compared to other cutters.
- If you have very large roots that need removing, we recommend our line of chain cutters. The chain scrapers not only remove the toughest roots, they also remove incrustations, hardened grease and mineral deposits. You can install a diamond crown cutter on some of our scrapers to cut protruding taps.

Customers shopping for nozzles need to consider several things:

- What size pipe will you be cleaning?
- What kind of debris will you be removing?
- What is the gpm, psi and hose size you will be working with?

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Rotation that is too fast



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### **CLEANER: How do you see the drain cleaning industry evolving?**

**Lendi:** Several things come to mind. Pipe relining is an ever more common practice these days. Relining a pipe reduces the inner diameter of the pipe by up to 1/2 inch. Nozzles will need to adapt to new pipe materials and dimensions.

Recycled water trucks are making a debut in the U.S. to increase productivity. The nozzle technology will have to be able to handle recycled water.

And digitization will pick up even more speed in the coming years. Different camera designs will be available on the market that will increase the efficiency and the quality of cleaning. For example, if you can clean and record at the same time, you can reduce operational costs and also increase the quality of cleaning.

### **CLEANER: What's new for Enz in 2021?**

#### **What can customers expect out of Enz in the future?**

**Lendi:** We will introduce our first camera nozzle that can clean with rotation and record simultaneously using your smartphone or a tablet, while filing the videos in the cloud.

The new eNozzles expand our product portfolio to a new dimension for pipes greater than or equal to 6 inches in diameter. Later this year, Enz will also launch a camera nozzle with live view for pipes less than 6 inches in diameter.



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Our customers can continue to expect expert technology, constant innovation and production of the highest quality products.

### **CLEANER:** What do you want your customers to think of when they hear the name Enz USA?

**Lendi:** That Enz is the place to call if you need advice on sewer cleaning. We have a highly knowledgeable and experienced staff that cares about providing excellent customer service. Enz is synonymous with the highest quality and the most cutting-edge technology on offer when it comes to pipe cleaning.

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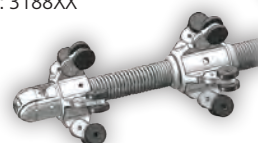
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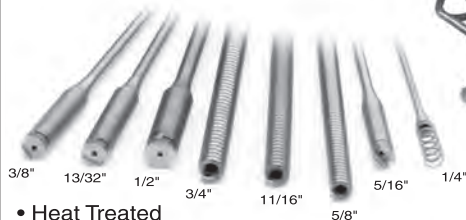
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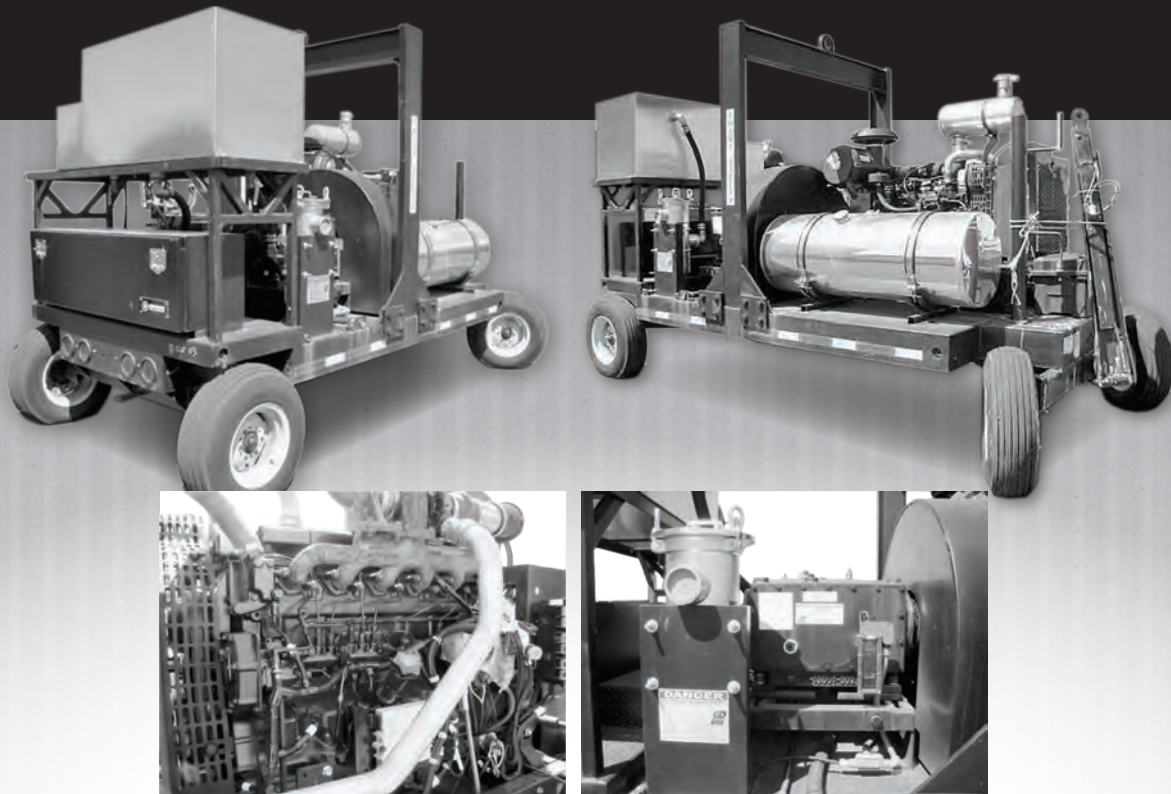
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# NEW TERRITORY

ROCKY MOUNTAIN WASTEWATER PROVIDER SEIZES  
THE OPPORTUNITY TO BRANCH INTO TRENCHLESS  
TECHNOLOGY // **By Suzan Chin-Taylor**



**W**hen Advanced Pump and Equipment was tasked to help a longtime client with the rehabilitation of a structure they had been servicing, the family-run business saw an opportunity to open a new trenchless division to answer the call and fill the void for specialized rehabilitation services in the region.

The new division, Advanced Lining LLC, now provides protective and rehabilitative coatings and lining services to its growing base of clients in Utah, Idaho, Wyoming, Montana and Nevada.

## LIFT STATION REHAB

Advanced Pump and Equipment had been asked to rehabilitate a self-priming lift station for the city of Belgrade, Montana, while retrofitting its submersible pumps. The structure was critical and in an area that would have been extremely

« Advanced Lining LLC technicians Skyler Hanges (left) and Austin Huggins prepare hookup hoses for installing a new manhole liner at a work site in Park City, Utah.





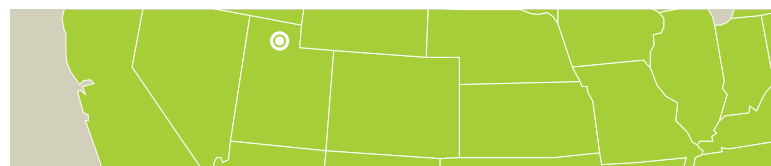
« Technician Austin Huggins installs a liner inside a new manhole in Park City.

difficult to excavate around, so Belgrade wanted to have it lined with something that would last “forever” — or at least extend the lift station’s life cycle another four to five decades.

Unfamiliar with the process of spray-applied linings and coatings, Advanced Pump and Equipment began the quest to find a local contractor who could perform the rehabilitation service and learned that the closest suitable vendor was based out of Denver. They moved forward and arranged for the work to be done to help their client but recognized that there was a void and need for support in their territory for this type of trenchless rehab work.

Advanced Pump and Equipment is owned by three brothers: Matt, Andrew and Seth Huggins. Seth had a long-term background in corporate America, primarily in sales, so his brothers tapped him to take point to set up and operate a new division for the company that would focus solely on providing trenchless technology.

The decision was made to focus on coatings and linings initially and Seth set out to find the right vendor who could support them on this new venture. The Huggins brothers decided that the best route would be to work with a single vendor who could supply a wide variety of products and equipment to streamline training and



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**EMPLOYEES** 6

**SERVICES** Structural and protective pipeline coating and lining for water, wastewater and industrial structures

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support since they would be truly “newbies” in the field. They settled on OBIC LLC of Dublin, Ohio, and signed on to become a licensee to handle the territories in and around the Rocky Mountain region.

They acquired a 2005 18-wheel Freightliner semitruck to house the spray equipment. The rig was customized by OBIC and outfitted with an array of support equipment that included holding tanks, a pressure washer, generator, Graco proportioners and spray equipment. With this rig and a product range that include polyureas, polyurethanes, foams, epoxies and grouts, Advanced Lining is capable of rehabilitating and extending the life of a wide variety of water, wastewater and industrial structures.





- Austin Huggins applies an OBIC spray lining inside a new manhole.
- Advanced Lining technicians unload equipment and set up at a manhole installation site.



## CREATING AWARENESS

Although one project had spurred the opening of the division, Seth Huggins realized that trenchless technology, although utilized for several decades, was not a common practice in his region and so market education would be essential to make the venture a success. The firm has an outside sales force to connect with municipalities and private sector asset owners, and they have heavily invested in their online presence, utilizing a digital marketing firm for their search engine optimization and digital footprint.

"We have multiple social media aspects or channels that we use to promote, but where we see the most success and spend most of our time is word-of-mouth and of course lunch-and-learn field demos," Huggins says.

Although COVID-19 has impacted their marketing practices and limited their ability to have face-to-face conversations with engineers and municipalities, they have found a way to shift their efforts and have engaged in more Zoom video conference calls and being more active on social media. Luckily, due to the outdoor nature of the activity, they have been able to continue conducting some lunch-and-learns with proper social distancing practices and making everyone safe and comfortable. "Once our prospects see it applied, it really does sell itself and we've noticed that at demos, prospects do really have an almost visceral reaction to what they see and the before and after difference," Huggins says.





They also utilized existing relationships with public works directors and engineers to whom they provided services and equipment through their sister company. The two entities have found that they are able to help generate work and leads for each other.

Overall Huggins has felt that his biggest challenge has been the simple lack of product knowledge and brand awareness of their solution, and along with being a new trenchless contractor within the territory. Next to that, bringing the crews up to speed on application proficiency and product understanding has been time consuming. They have been lucky: in several areas, they have been approved as an applicator and their products approved or spec'd for use. Getting to this point can sometimes be a lengthy process because as a new entity, they needed to build a trust factor and prove that they could deliver on their promises.

"We found that by offering a demo to those skeptical asset owners, to line a manhole for them at no cost, gave us an opportunity to showcase what we could do," Huggins says. "Of course, sometimes when we offer this, they will try to pick a structure that is in the worst condition possible, but our crews always rise to the challenge and are able to get that prospect to give us serious consideration for future work after they witness the demo."

Providing a demo for every city is not necessary as they have been able to use existing demonstration manholes as references and when there is familiarity between cities, prospects know that they can trust a recommendation from neighboring municipalities.

#### A VAST MARKET

For the time being the firm is not looking to add any additional services beyond coatings and linings apart from perhaps manhole inspection, simply to support their efforts for project planning and for project documentation. "We looked at the potential of adding other services but since there is such a large demand and need for structural rehabilitation utilizing lining within our territories. If we can become the experts at that, that's a recipe for a big win," Huggins says.

He knows there are close to 5,000 manhole structures in different stages of aging and corrosion in the area he lives in — multiply

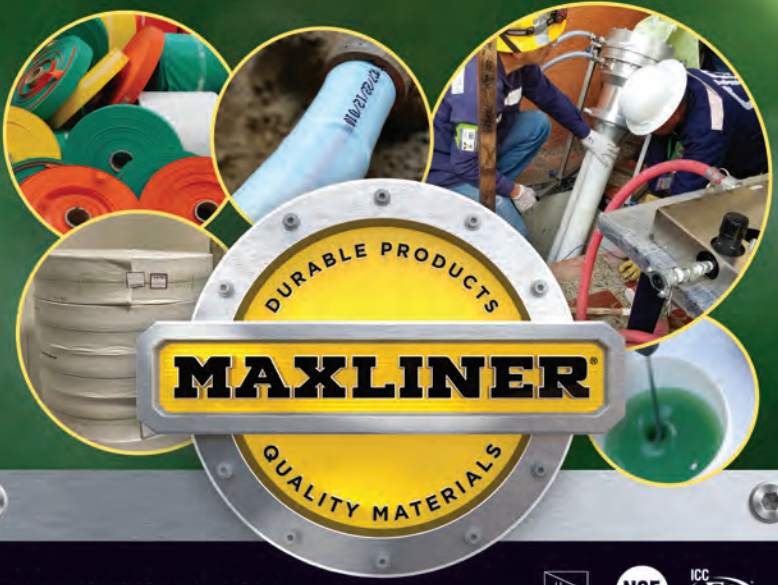
"WE HAVE MULTIPLE SOCIAL MEDIA ASPECTS OR CHANNELS THAT WE USE TO PROMOTE, BUT WHERE WE SEE THE MOST SUCCESS AND SPEND MOST OF OUR TIME IS WORD-OF-MOUTH AND OF COURSE LUNCH-AND-LEARN FIELD DEMOS."

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SETH HUGGINS

that by all the states they work in and there is plenty of work to keep them busy.

Advanced Lining does have a few competitors in the area using different trenchless lining methods and products. Huggins feels that it is good for his customers to see that there are various options and encourages them to make comparisons. He says that the variety of solutions they bring to their customers are ideally suited to this geographic region because they are formulated to withstand the severe freeze-thaw cycles and ground movement the area goes through each year, which is hard on buried infrastructure.

Manhole rehabilitation is a staple for the firm but larger projects such as clarifiers, aeration basins and vertical structures within treatment plants are on the radar.

They are currently servicing their entire territory with one truck and that means a lot of miles and time spent on the road with the crew. Their plan is to have shops in different states as the business develops to be able to support cities on a long-term basis.

"One of the things we really love is to work with cities over a five- to 10-year period, helping them to develop manageable rehabilitation plans that they can budget for. This way we can give them volume discounts to create value-add and getting them what they need to protect their system," Huggins says.

CONTINUED >>



➤ Austin Huggins checks hose connections and pressure at the start of a lining job.

➤ Austin Huggins applies a spray coating to a manhole.



## TWO-WAY SUPPORT

Advanced Pump and Equipment and its sister company Advanced Lining share a common bond. Not only are they owned and operated by the same three brothers, but they are also able to support the same target base of clients and feed each other work.

Advanced Pump and Equipment provides equipment, parts, design, installation, ongoing maintenance and repair services to municipal wastewater utilities and industrial facilities. Long known in the area as the go-to resource for piping, pumps, lift station design and installation, with its new sister trenchless division, they are now able to be a one-stop shop for all their customers infrastructure construction, servicing and rehabilitation needs.

Now, when dealing with key assets such as a lift station, customers such as Plain City, Utah, have one source to not only service a unit or install new components but also line it with a protective or rehabilitative coating so that the entire structure can be completely transformed.

"They don't have to go anywhere else," says Seth Huggins, co-owner and operations manager of Advanced Lining. "We are able to support them by way of our two entities completely and simultaneously, which makes projects more cost-effective and win-win for all involved."



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» Seth Huggins (front), co-owner of Advanced Lining LLC, with his lining crew.

» An Advanced Lining technician removes loose material from a manhole chimney to prep it for lining.



“ONE OF THE THINGS WE REALLY LOVE, IS TO WORK WITH CITIES OVER A FIVE- TO 10-YEAR PERIOD, HELPING THEM TO DEVELOP MANAGEABLE REHABILITATION PLANS THAT THEY CAN BUDGET FOR.”

SETH HUGGINS

### DEDICATED TEAM

In starting the new division, Huggins knew that they would need to put a strong emphasis on quality training and hiring dedicated employees. Linings and coatings can often be quite easy to apply in a substandard way or preparation may not be performed adequately. Huggins has sometimes found himself battling a perception that anyone can buy these materials and simply paint it on a pipe wall. To help eradicate this perception, Huggins has invested heavily in the training of his employees, focusing on developing their technical proficiency in the equipment they are using. This started with Tyler Garner, the firm's first employee who now serves as operations manager, along with Austin Huggins, Seth's son, now the second generation to work with the Advanced Pump and Equipment/Advanced Lining businesses. His “startup crew” has developed a model for future growth that ensures consistent application of the product on every project.

One way that they monitor quality is through a documented process system. Throughout each step of the rehabilitation process, from prep and application through final QC testing, the crew video-record and photograph to document everything. Because OBIC offers a 10-year warranty on both parts and labor, they stamp the date on every structure when it is completed and if there are any issues, they will remedy and repair it at no cost to the customer. To back themselves





up, and ensure that warranty claims are a rare instance, having this documentation allows the crews to view all the process pictures and learn from them in the event of a warranty claim. On larger projects they also provide the customer a zip drive with all this photo and video documentation.

By investing the time to study and develop these quality control practices, they have fast-tracked their learning curve and project profitability. Being able to replicate is one of Advance Lining's core values. It is essential to Huggins and his crew that the quality of work will consistently prove to their market that this is a solid solution, it is a technology they can place their faith in and they as a service provider can be relied upon to effectively solve the region's aging infrastructure issues for the long-term. **c**



➤ A technician inspects the walls of a lift station prior to applying a lining.

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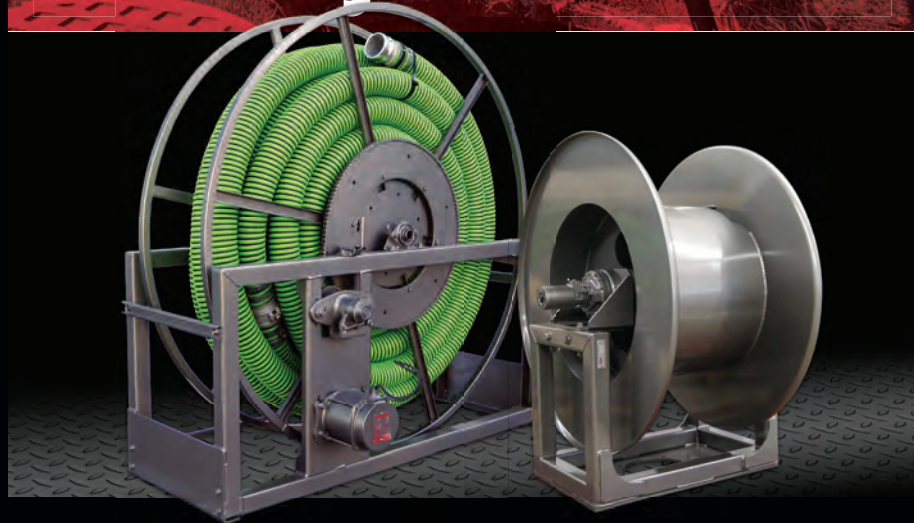
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For more about the work Advanced Lining is doing, check out another story in the Summer issue of I&I magazine, at **[iandimag.com](http://iandimag.com)**



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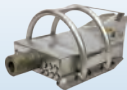
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## DON'T CUT CORNERS

Trench accidents can happen when proper safety precautions aren't taken, regardless of the crew's experience /// By David Dow

**IN APRIL 2021**, a Long Island contracting company was ordered to cease all excavating operations and pay \$136,000 in penalties, the result of a trench collapse accident that killed two workmen in late 2020.

The resulting agreement also commits the company to do the following:

- Develop an excavation safety checklist to identify hazards and protective measures for work in excavations and ensure that a competent person on site will consult and complete the checklist whenever employees enter excavations.
- Engage a qualified professional safety and health consultant to conduct at least one on-site assessment of excavation safety while employees are performing work in an excavation.
- Provide companywide training on ladder safety and hardhat use to its employees.

Safety precautions shouldn't only be driven by punishment or trying to avoid OSHA violations. Protecting your employees, and yourself, should always be a top priority. Don't make extra effort for only a few weeks after being reminded about a tragic accident like this. Systemic, lasting change is the only way to prevent these trench collapses from happening. Don't wait until after an accident to put safety procedures and training schedules in place.

If you've done this sort of work for many years, you may hear these stories about people dying in trenches and think, "That's someone else. I've been doing this a long time. I can tell when it's dangerous." But unfortunately, these accidents can happen to anyone and the training is not something anyone — no matter how experienced — should ignore.

The General Requirements Section of OSHA's Subpart P provides a number of commonsense steps to help ensure worker safety. As with any OSHA Standard or other safety procedure,

» This site shows an example of unsafe excavation practices: The worker is in the trench without shoring, and standing directly beneath the excavator as it operates.

it is important to always remember that these are the minimum requirements to ensure safe job sites.

### SURFACE ENCUMBRANCES

To ensure stability and integrity, they need to be removed or supported while an excavation is open. Examples include rocks, trees, telephone and utility poles, fire hydrants, etc.

### UNDERGROUND INSTALLATIONS

Examples include gas, electrical, water, sewer lines, etc. They must be:

- Located and marked before beginning work. Property owners and/or utility companies should be notified at least 24





hours prior to digging, unless a longer time is required by local law. Some states require 72 hours advance notice. Most other states require 48 hours' notice.

- Protected, supported or removed while the trench is open.

Most states have so-called 811 One-Call laws. Simply dial 811 to contact the one-call center in your state.

### ACCESS AND EGRESS

These are fancy words for entering and exiting a trench. The requirements are:

- In trenches that are 4 feet or more in depth, provide a means of access and egress.
- Spacing between ladders, stairs or ramps should not be more than 50 feet.
- No worker should have to travel more than 25 feet laterally to reach a means of egress (exit).
- Ladders must be secured and extend 36 inches above the landing.

In addition, it is important to use wood or fiberglass ladders where there is a possibility of electric shock. Many utility companies and contractors always use wood or fiberglass ladders to ensure there is never a problem.

A "competent person" must design all structural ramps used solely by employees. Further, a competent person qualified in structural design must design all structural ramps used for equipment. Usually, this person will be a registered professional engineer.

Finally, the components used in structural ramps must be connected, be of uniform thickness, be constructed so that cleats and other connectors do not create a tripping hazard, and if ramps are used instead of steps, they must be provided with cleats or other surface treatments to prevent slipping.

### EMERGENCY RESCUE EQUIPMENT

Such equipment must be available when a hazardous atmosphere exists or could

reasonably be expected to exist. Employees entering confined spaces must be properly trained. Harnesses and lifelines are

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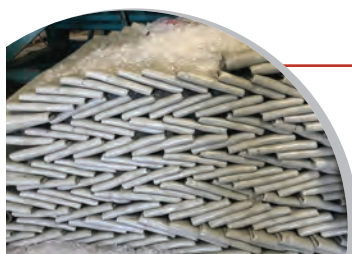
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# SAFETY FIRST

required whenever employees enter bell-bottom pier holes and other deep confined spaces. Lifelines must be attended at all times.

## WATER ACCUMULATION

Water must be controlled to prevent cave-ins. Methods for controlling water vary with each situation. Employees are not permitted to work in trenches where accumulation exists unless:

- Special support systems or shields are used to protect employees from cave-ins.
- Water removal equipment is used and monitored by the competent person to prevent water accumulation.
- Safety harnesses and lifelines are used to protect employees.

Surface water must be diverted or controlled. The competent person must inspect the trench after each rainstorm.

## STABILITY OF ADJACENT STRUCTURES

The objective is to protect employees from cave-ins.

- A support system, such as shoring, bracing or underpinning, must be used to support structures that may be unstable due to excavation operations.
- Excavating below the base or footing of a foundation or wall is not permitted unless:
  - A support system is provided to ensure the stability of the structure
  - The excavation is in stable rock (this is very rare)
  - The operation is approved by a registered professional engineer
- Support systems must be provided for sidewalks, pavements and other structures that may be affected by excavation operations.

Understanding the difference between shoring columns and trench boxes is crucial.

Shoring is designed to pressurize the trench wall and take away its ability to lean or cave in. Trench boxes are designed to be strong enough to take on the collapsing soil. So while a trench box is designed to simply hold back any soil that does collapse, shoring is meant to prevent a collapse in the first place.

Shoring functions via a principle called an “arch effect.” Basically, at the point where the shoring contacts the soil, it compresses outward in an arching pattern. So from point of contact, there is a dome of protection in the arch wall, the size of which depends on soil type.

This means you must know the maximum allowable separation between each column of shoring, which is to say how far apart horizontally two shoring bars may be placed. Manufacturers must provide those distances for each soil type.

The manufacturer specifications, or “tabulated data,” also tells users when plywood is required with shoring. While it’s generally



▲ A trench box, like this heavy steel example, is considered a shield system to protect workers from a trench collapse.

not needed due to the arch effect, sometimes it will be required to prevent minor collapses from the arch wall surface soil.

Due to the relatively complex nature of shoring devices, it can be tempting to use only trench boxes, but you could be asking for trouble. Even though they’re strong enough to take the collapse, they can be less convenient and less versatile depending on the situational factors of a given trench. If laterals or other utilities are a factor in digging the trench, it could limit the space for a bulky metal box.

Another factor is that different types of boxes have varying weight limits. Depth is the main factor here — weaker aluminum boxes, while often easier to maneuver, cannot be used past a certain depth because it cannot hold the weight of all the soil that could potentially cave in. Even the sturdiest steel construction boxes have limits, though they are in most cases deeper than any realistic trench.

Boxes are also required to be stacked up to the top of the trench, so multiple boxes may be needed, which is a lot to haul or maneuver to and around a job site.

## PROTECTION OF EMPLOYEES FROM LOOSE ROCK OR SOIL

Employees must be protected from being struck by soil or rocks that are falling or rolling from the edge and face of a trench. Spoils and equipment must be set back at least 2 feet from the edge of a trench.



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## FALL PROTECTION

It is required that walkways and bridges be provided over trenches that are least 6 feet above lower levels and are greater than 30 inches wide. Bridges and walkways must be equipped with standard guardrails and toe boards. Additional fall protection may also be required.

## INSPECTIONS

A competent person must make all inspections.

The fact of the matter is that preventing trench collapses is not always a simple endeavor. OSHA regulations attempt to simplify it as much as possible, but if it were a piece of cake, workers wouldn't be dying.

Stocking collapse prevention devices and following trench safety procedures to the letter may be a hassle, but supervisors at all levels don't have the luxury of cutting corners — or fieldworkers will be those who pay, possibly with their lives. **c**

Editor's note: Kim Peterson and Jared Raney contributed to this story.



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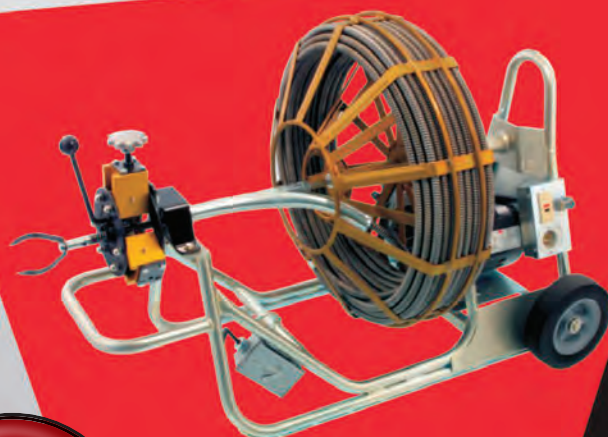
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Liz Uram

# MEASURING UP

Setting clear expectations for employees is the only way to get the results you want // By Liz Uram

**HAVE YOU EVER DREADED** having a conversation with an employee who wasn't meeting performance expectations? If so, you are not alone.

Most managers would agree that one of their least favorite tasks is talking to an employee about poor performance. When performance conversations are ignored, success is left up to interpretation. This can only result in conflict because everyone has different perceptions.

When an employee's failures can no longer be avoided, too many managers say in frustration, "They should have known!" And the good-intentioned employee who thinks they are knocking it out of the park is shocked when they finally find out they are barely getting by.

Addressing performance issues can be unpleasant and stressful. To avoid this discomfort, some managers ignore the issue and hope the situation improves on its own. Avoiding difficult discussions leads down dead-end roads, causing:

1. High stress levels. There are enough things in life to stress out about and discussing performance doesn't need to be one of them.
2. Poor morale. One of the fastest ways to demotivate a team is to ignore poor performers. The rest of the team can see what's going on and they are looking to the manager to address it. When the manager doesn't deal with it, it can result in negative attitudes. Bad attitudes are contagious and soon there are bigger issues to deal with than one person's performance.
3. Low-performing teams. People will perform to the standard that's allowed. A manager who doesn't hold people accountable sends the message that it's okay to deliver less than what's acceptable.

**A MANAGER WHO DOESN'T HOLD PEOPLE ACCOUNTABLE SENDS THE MESSAGE THAT IT'S OKAY TO DELIVER LESS THAN WHAT'S ACCEPTABLE.**

These are dead ends to career growth — for both the employees and manager — and can affect the organization as a whole, so they must be avoided.

Luckily, there is a better way; but first let's look at some things that don't work. At some point, every manager is tempted to take the softer, easier way. Here are some methods that have been tried:

## GENERIC EMAILS

Avoid the temptation to send a generic email to the whole team to address an individual performance issue. The person who caused the problem doesn't know you are talking to them because they aren't intentionally doing anything wrong. Or they know the manager is talking about them, but they aren't going to change because they know they won't be held accountable. It's a no-win situation.

## POSTING SIGNS

The answer to the question "Can't you read the sign?" is "No." Check out the common areas in your facility. You might find a sign similar to "Clean up after yourself, your mother doesn't work here." Or, "Put all items back where you found them." Despite the signs the problems persist.

Signs generally don't work because no one reads them. No matter how large or bold the font, or how many exclamation points are used.

## EMPLOYEE HANDBOOK UPDATES

Another common method some managers try is to update the employee handbook. This method is probably the least effective of the three. The reality is that most employees don't read the handbook. In fact, one survey revealed that 61% of millennials did not read any or all of the employee handbook.

These methods don't work. Let's look at a simple three-step solution that does:

1. Set clear performance expectations
2. Communicate the performance expectations
3. Meet regularly to discuss performance progress



### SET CLEAR EXPECTATIONS

You can only hold people accountable when they know what's expected of them. When performance expectations have been clearly defined it's easy to measure achievement and give feedback. The key is to define the expectation in black and white so there is no room for ambiguity. A manager needs to understand what is important to measure and how to measure it.

One company improved its order entry accuracy rate from 65% to 99% after the expectations for completion were defined. The low completion rate was a result of the team leaving a field on the order form blank. They weren't lazy — they just didn't understand why the field needed to be completed and the manager had never defined the expectation.

### COMMUNICATE EXPECTATIONS

Communicating performance expectations before there is a problem is the key to no-stress conversations later on.

Most people want to do a good job and will rise to the expectations when they know what they are. Don't assume that people know. One survey revealed that 50% of employees don't know what is expected of them at work.


Document the performance expectations and share them with new employees right away so they are set for success from the start.

### MEET REGULARLY

Meeting regularly with people individually to discuss their progress creates a culture of trust. How often you need to meet with people varies but a good rule of thumb is to meet at least once a month. If you defined and communicated the expectations in advance, there won't be any surprises. The employee

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will know exactly how they're doing. If they are falling short you can turn it into a positive coaching conversation to help them get back on track.

When these three simple rules are followed, performance discussions are easy, transparent and positive. The manager earns a good reputation, the team is motivated, and there is less conflict. Those are great benefits that result in successful teams and organizations that are able to fulfill their mission and purpose. **c**

### ABOUT THE AUTHOR


Liz Uram is a nationally recognized speaker, trainer, consultant and author. She equips leaders with the tools they need to communicate like a boss so they can make a bigger impact, get better results, and motivate others to do their best. Contact her at [www.lizuram.com](http://www.lizuram.com).



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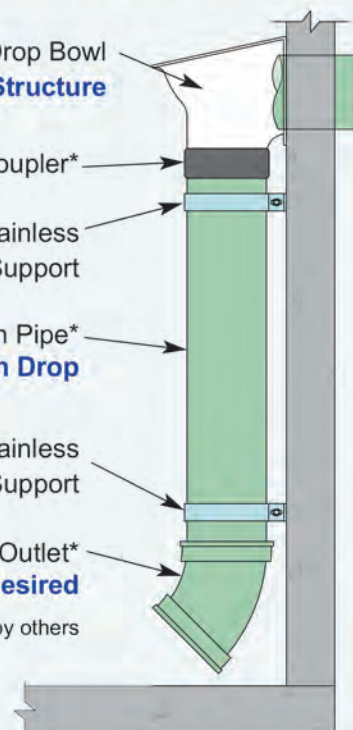
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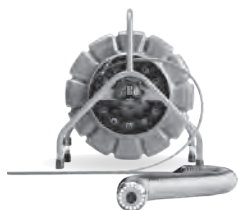
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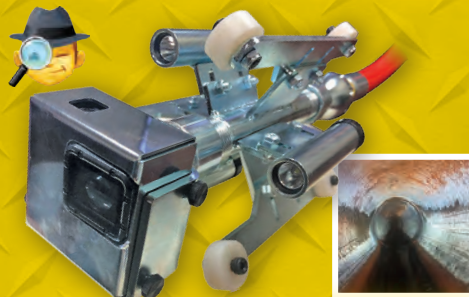
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New improved larger front steel bearing on the Red Hot Motor increases life, reduces maintenance and makes this motor able to withstand the shock produced by heavy cleaning. Round profile of this cutter allows it to enter lines from 4" and up. 40 - 80 GPM and pressures 2000 - 3000 PSI. Produces 225 ftlb. of torque, and 175 ftlb. continuous. Kit comes with SRRK-1H Red Hot Motor; 1" Saw Blade Hub; 6", 8", 10", 12" HD Concave Saw Blade; 6", 8" Cage Skid Single Size; new Set of 10" & 12" Fins



**SRRK-1 Super Green Meanie Green Kit**

The round profile allows the cutter to enter sewer lines 4" and up. Motor handles flows from 40 - 80 GPM and pressures 2000 - 3000 PSI. Rated up to 235 ftlb. of torque, and 175 ftlb. of continuous torque. Kit comes with SRRK-1P Super Green Motor; 1" Saw Blade Hub; 6", 8", 10", 12" HD Concave Saw Blade; 6", 8" Cage Skid Single Size; Set Of 10" & 12" Fins. Motor fits Green wheeled skids you may have.



**SRRK-4-15W Super Green Meanie Citizen Kit**

Large Range Kit gives you saws and skids for 4" to 15" pipe sizes. Cutter handles flows 40 - 80 GPM and pressures 2000 - 3000 PSI. Rated up to maximum 235 ftlb. of torque, and 175 ftlb. of continuous torque. Kit comes with SRRK-1P Super Green Motor; 1" Saw Blade Hub; 4", 6", 8", 10", 12", 15" HD Concave Saw Blade; Set of 4" Steel Rings; 6" Cage Skid; 8"-10" Adjustable Wheel Skid; 12"-15" Adjustable Wheel Skid; Allen Wrench and Screws

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## PRODUCT SPOTLIGHT

### POLE CAMERA HELPS AVOID CONFINED-SPACE ENTRY

By Craig Mandli

Entry into confined spaces carries its share of risks. It's a practice that should be avoided if possible. CUES helps make avoiding those situations a reality with its advanced model lightweight, portable, HD wireless video inspection pole camera, the QZ3 Advanced.

The camera is designed to allow users to perform swift inspections and surveys of pipelines, wet wells, manholes, sewer treatment plants, steam generators, tanks, vessels and other areas that are difficult to reach from 6 to 72 inches in diameter. It can also be used to locate lateral services or to identify blockages at manholes, access ports or other entry points without entering the line or structure. Added features over the basic model include motorized height and tilt, in addition to laser distance measurements and other benefits, according to Pierre Mikhail, director of the CUES Manhole Inspection Division.

"Video recordings are stored in the camera head to avoid lower-quality videos through weak Wi-Fi signals to the tablet," he says. "Motorized height control and an optional panning motor give the QZ3 Advanced many unique features."

The camera is mounted on a lightweight, telescopic carbon fiber pole that can extend up to 24 feet (with an optional 34-foot pole available). The 1080p camera features a 360:1 zoom with built-in image stabilization, automatic focus, distance-to-defect measurement, and self-contained waterproof M.A.P. lighting, including six LED spotlights, working in pairs and focused at different lengths, to provide enhanced, detailed viewing of cracks, breaks, pipe separations, scale and various defect conditions. It also includes two diffused flood LED lights for evenly lit manhole inspections.



Several options are available to enhance the utility of the QZ3 Advanced, including a dual-purpose bipod/tripod support, ruggedized tablet, tablet holders for mounting to the pole or as a wearable harness, pole mounted Wi-Fi repeater to extend range up to 150 feet from the manhole, and a panning accessory designed for use with the SPiDER scanner's tripod or with truck-mounted deployment systems, enabling the QZ3 Advanced to have 360-degree panning, in addition to its standard plus/minus 30-degree tilt for the precise positioning especially useful for pipeline inspections.

"We invested three years of research and development into this product," Mikhail says. "The sewer and storm maintenance industry is always looking for inexpensive tools to quickly perform preliminary documentation of manholes and pipelines before investing in more expensive cleaning and CCTV inspection methods." 800-327-7791; [www.cuesinc.com](http://www.cuesinc.com)

### 1 // MILWAUKEE TOOL MX FUEL ROCKET TOWER LIGHT/CHARGER

Part of the new MX FUEL Equipment System, the MX FUEL ROCKET tower light/charger from Milwaukee Tool is a portable 10-foot light for inside or outside use. Delivering up to 27,000 lumens of task and area lighting, the light can be set up in seconds, features outriggers for leveling and withstands the harshest job site environments. Built with all-terrain 8-inch wheels, the ROCKET requires little effort to move across uneven ground. The telescopic lighting tower can be set up quickly to a maximum height of 10 feet with a motorized mast and collapses back down to 44 inches for easy transportation and storage. While deployed, the light can withstand up to 35 mph winds and is protected from rain, wind and dust. 800-729-3878; [www.milwaukeetool.com](http://www.milwaukeetool.com)







## 2 // ARIES INDUSTRIES TRAILBLAZER ENCLOSURE

Aries Industries' TrailBlazer operations and transport enclosure is a self-contained equipment housing that can get critical equipment into tight work sites. The TrailBlazer mounts onto a pickup truck, ATV or trailer, allowing pipeline inspection equipment to be brought into locations too small for larger vehicles. The lightweight, lockable enclosure can house either an Aries Industries Mobile Pathfinder System or Master Controller System, both ready to send remote-controlled inspection robots into pipes and record interior conditions with video cameras. It has a weatherproof and corrosion-proof shell to protect and transport the control systems. Inside are two 250-pound-capacity drawers to securely store tractors, cameras and accessories. Two installed monitor options are available: one 17-inch sunlight-readable screen, or two 15-inch sunlight-readable units. The TrailBlazer has four 120-volt outlets and two USB outlets. 800-234-7205; [www.ariesindustries.com](http://www.ariesindustries.com)



## 3 // GAPVAX G7 TRAILER JETTER

GapVax's G7 trailer jetter has a simple design and a high-efficiency engine. The Fit-and-Finish assembly prior to powder coating ensures maximum long-term durability. The jetter is built on a heavy-duty, contractor-grade NATM-certified trailer. Several engine choices, including Cummins diesel, are all certified and sized appropriately for the water pump combinations. The hose reel is hydraulically powered with a direct-drive gearbox and variable-speed control. The hose reel offers a 3-foot curbside articulation from center of bearing, 180-degree rotation and 800-foot capacity (3/4-inch hose). The polyethylene plastic water tank is available in 300-, 500-, 600- or 700-gallon capacities, and the water pump is center-fed for optimum performance. The control box is weathertight and lockable. The controller is interlocked with safety features that will show low fuel levels, low water and is capable of a complete engine shutdown in the event of an emergency. 888-442-7829; [www.gapvax.com](http://www.gapvax.com)



## 4 // FLIR T865 T-SERIES THERMAL CAMERA

The T865 T-Series high-performance thermal camera from FLIR Systems is built for electrical condition and mechanical equipment inspection, and for use in research and development applications. The camera provides plus/minus 1.6 degree F or plus/minus 1% temperature measurement accuracy, a wider temperature range between negative 40 to 248 degrees F, and more on-camera tools for improved analysis. The T865 offers versatility with portable and handheld fixed mount options for inside and outside work in harsh conditions, and multiple lens options to inspect objects both near and far. The available 6-degree telephoto lens provides the required magnification for those routinely inspecting the condition of small targets at a distance, such as overhead power lines. 866-477-3687; [www.flir.com](http://www.flir.com)

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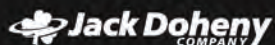
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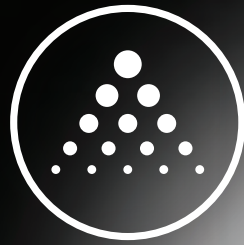


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## **Milwaukee Tool expanding footprint in Mississippi**

Milwaukee Tool announced it is building a new manufacturing facility in Grenada, Mississippi. Anticipated to open in late 2022, the new facility will accommodate increased capacity for the company's growing power tool and accessories business. With this facility, Milwaukee has committed to creating 1,200 jobs in the region.

## **Vacuworx introduces online training program**

Vacuworx introduced a training program to provide access to information to help ensure that dealers and contractors are able to use and service its equipment correctly and safely. The new online Vacuworx Training Center is available to anyone who operates or services Vacuworx vacuum lifting systems through the company's website, [www.vacuworx.com](http://www.vacuworx.com). The self-guided program currently includes five modules, each with course certifications, focused on the RC Series lifters including installation, daily operation checklist, operation, maintenance and troubleshooting.

## **Vacuum Truck Rentals named authorized service center**

Vacuum Truck Rentals has partnered with GapVax and Kaiser Premier and is now an authorized warranty and service center for both manufacturers. As an authorized warranty and service center, each of VTR's 16 locations will provide service, repair and warranty work for GapVax and Kaiser Premier equipment.

## **Custom Truck One Source and NESCO combine**

Custom Truck One Source and NESCO have combined into one company. With over 40 locations, the combined Custom Truck One Source will create a one-stop-shop provider of specialty rental equipment. The company will offer an 8,800-piece rental fleet, source NESCO's parts, tools and accessories, and provide varied equipment offerings of Custom Truck, including roll-offs, dump trucks, water trucks, vacuum trucks and trailers.

## **ServiceTitan announces \$500M investment**

ServiceTitan announced a \$500 million round at an \$8.3 billion valuation. The capital raised will be used to fuel growth as the company continues to invest in customer experience, product development and hiring talent. The company also announced that it has surpassed \$250 million in annual recurring revenue, growing more than 50% over the past 12 months. The company serves more than 7,500 contracting businesses that collectively employ more than 100,000 technicians and perform more than \$20 billion worth of annual transactions across various home and commercial service verticals, including plumbing, air conditioning, electrical and more.

## **New CUES Florida sales reps named**

In an effort to continue providing the best customer service to its Florida clients, CUES announced Al Milley and Stuart Rome as its two new Florida regional sales managers.

## **DCA launches new trenchless microsite**

The Distribution Contractors Association launched a microsite, [www.dcatrenchless.com](http://www.dcatrenchless.com), during the DCA Virtual Spring Meeting in early March. The site's multimedia content gives users a concise, basic overview of the applications, techniques, equipment and tooling used in horizontal directional drilling and trenchless work. Topics also include drilling fluid's purpose, environmentally friendly additives and recycling process.

## **ACPA names new executive director for Texas**

The American Concrete Pipe Association announced Patrick Tarlton as the Texas Concrete Pipe Association's new executive director. Joining ACPA's staff of state directors across the U.S., Tarlton will represent the TCPA and its mission to promote the benefits and specification of reinforced concrete pipe and box culverts.

## **Makita breaks ground on major expansion**

Makita U.S.A. launched construction of a new 600,000-square-foot facility northeast of Atlanta in Hall County, Georgia. The new facility will be constructed on 80 acres of land and is part of Makita's planned future development to address continuing growth in the United States. The new facility will serve as a distribution center, and will also include a sales and training center, customer service resources, and a factory service center. The location has adjacent space for future expansion up to 800,000 square feet.

## **GapVax welcomes new team members and dealer**

Brad Renzelmann and Gap Barbin joined the GapVax team. Renzelmann will serve Minnesota, Wisconsin and Illinois for municipal and industrial sales. Barbin handles industrial and municipal sales for Nebraska, Kansas, Iowa, Missouri, North and South Dakota. GapVax also announced a new dealer, JWR Inc., which will serve Wisconsin and Northern Illinois with GapVax sales, service and parts. **c**

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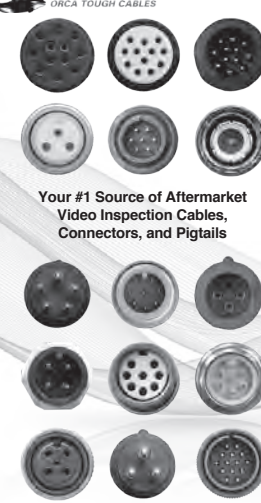
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