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SOLUTIONS

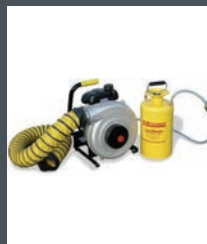
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# “NUFLOW IS THE WHOLE PACKAGE.”

## PROfile

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Mike’s team has taken advantage of NuFlow’s comprehensive training. They’ve completed their initial certification and are already working through advanced training.

**“The technical support and family atmosphere at NuFlow are really valuable. Being able to call the team and get a response right away is so helpful. NuFlow is the whole package.”**



**Mike Lomonaco,**  
Lomonaco Coast Plumbing  
San Clemente, CA

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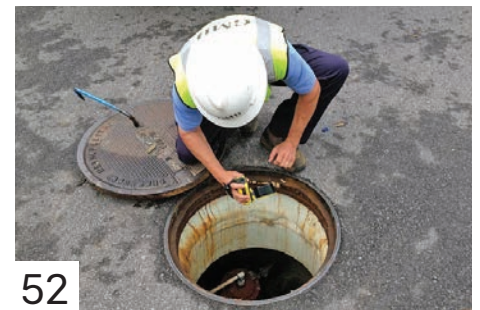
**ON THE COVER //** Jaco Vasile always dreamed of owning his own business. In 2018, he made it happen when he started Pipeshield, a drain cleaning and trenchless pipeline rehab company located outside Philadelphia. While it's been difficult to find employees, Vasile's wife Sonya and their son, Henryk Sucheck, help him in the field, and investing in equipment has helped the couple grow the company significantly in the past three years.  
(Photography by Kevin Blackburn)



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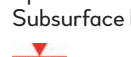
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## Cleaner

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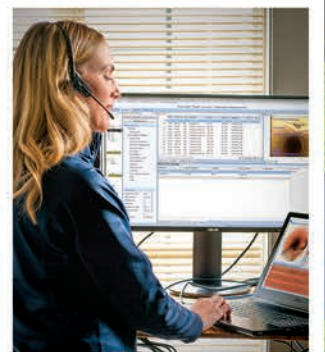
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## DON'T DISMISS CUSTOMERS' QUESTIONS

Providing an explanation of your work on a service call goes a long way with customers



Email me with comments, questions or opinions at [editor@cleaner.com](mailto:editor@cleaner.com)

**M**OST HOMEOWNERS HAVE ONLY a vague idea, at best, of how their septic system works, even when they've been utilizing one for years. I work on digital content for *Cleaner's* sibling publication, *Onsite Installer* magazine, and one thing that we discuss fairly often is homeowner education. Some of the questions our featured installers get asked are pretty wild.

For example:

"Why are all these nonbiodegradable products in my system?"

"So now I pump this, what — every 20 years?"

"How many holes should I shoot through the 55-gallon drum I'm installing as my septic system for my hunting cabin up north?"

"Why can't I just run my sewer into the river?"

And my personal favorite: "What makes a better septic tank, a car or a pickup?"

But as one installer put it, what seems like a ridiculous question is purely the customer's lack of knowledge. Before you were trained as a drain cleaner or plumber, you didn't know everything either. It takes years of learning and making mistakes to gain the knowledge to do this job.

Just like those septic customers, your clients probably don't know much about the inner workings of their plumbing and drainlines either. But you shouldn't judge them for it — you should encourage those questions as an easy way to start a conversation and help them learn. That same installer also pointed out that many homeowners have told him they learned more from talking with him during an hour-long service call than in all their years of homeownership. That's when you know you are doing your job properly.

I know a quick service call is beneficial to your bottom line. The faster you complete a job, the quicker you are on to the next. But, the next time you're asked a ridiculous question, see it as an opportunity to educate your customer. A client who knows why you're suggesting a repair or why you're bringing out the jetter is one who is less likely to complain about the bill. But the reasons for talking things through with the homeowner extend beyond an easier transaction.

Being clear about how you're going to solve their problem and walking them through it also builds trust. When customers know they can trust you, they are more likely to make you their go-to service provider, and probably recommend you to others. So many contractors we profile in this magazine say they get most of their business through word-of-mouth and referrals, so anything you do to make a good impression on your customers can only help you.

During a busy workday, it's not always easy to muster the patience to walk a customer through what you're doing and answer questions about something you've done a thousand times before. But some simple explanations can go a long way to assuring your customers you have their best interests in mind.

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

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## WHAT'S IN YOUR TOOLBOX? Contractors Highlight Favorite Tools and Equipment

What is in your toolbox is important. It is what allows you to maximize your knowledge and expertise. Check out this series of recent online exclusives about contractors highlighting the tools and equipment that allow them to more easily do their jobs and reach their productivity goals. >> [cleaner.com/featured](https://cleaner.com/featured)

## OVERHEARD ONLINE

"If we're going to be successful, safety training cannot be about compliance. We have to let human beings know we care about them and let them know we want them to stay alive."

— 5 Ways to Shake Up Your Safety Training  
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## LOOKIN' GOOD

### Image is Everything

"A truck's appearance reflects on the kind of work you'll do. You never get a second chance to make a first impression," says Julius Voss, owner of Julius Voss Plumbing & Construction in Cleveland, Mississippi. "I get compliments all the time how neat and clean the truck is." That's one way of portraying an image of professionalism. In this online exclusive, several companies discuss the various tactics they implement to look attractive to customers. >> [cleaner.com/featured](https://cleaner.com/featured)



## SELLING ASSETS

### What to Know Before Getting an Equipment Appraisal

Before selling an asset in your fleet, you might want to get an equipment appraisal to establish its value. Even if you've done this in the past, you may not know about some of the new technology and services that are transforming the traditional appraisal process in order to add transparency and consistency for both buyers and sellers. Learn more in this online exclusive. >> [cleaner.com/featured](https://cleaner.com/featured)

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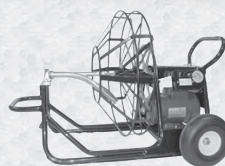
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# POWER COUPLE

HUSBAND-AND-WIFE TEAM GROWS PIPE REHAB COMPANY BY  
LEVERAGING EQUIPMENT INVESTMENTS TO FILL A MARKET NICHE

// By Ken Wysocky



▲ Sonya and Jaco Vasile own Pipeshield, a small drain cleaning and trenchless pipeline rehab company in Downingtown, Pennsylvania.

**THE ABILITY TO OFFER CUSTOMERS MORE SOLUTIONS FOR THEIR DRAINLINE PROBLEMS NOT ONLY OPENS THE DOOR WIDER FOR MORE BUSINESS OPPORTUNITIES, IT ALSO MAXIMIZES REVENUE AND PROFITABILITY.**

For proof, look no further than Pipeshield, a small drain cleaning and trenchless pipeline rehab company in Pennsylvania that punches above its weight when it comes to embracing numerous technologies.

In just three short years, owner Jaco Vasile and his wife, Sonya, have increased the company's revenue by nearly 300% while developing a roster of equipment that would be the envy of many companies. From a trailer jetter and pipe lining, bursting and coating systems to a full array of drain machines and pipeline inspection and locating equipment, Vasile clearly understands the benefits of investing in new technology.

"We're continually reinvesting back into the company," he says of the business, located in Downingtown, about 40 miles northwest of downtown Philadelphia. "You have to spend money to make money.

"We're always interested in finding ways to do jobs easier and faster. Our equipment enables us to turn around jobs quicker, which allows us to do more work than we otherwise could. And with so many solutions at our disposal, we can choose the best option for our customers.

"And we never have to give work away to other companies because we usually have a solution for our customers."



✔ Jaco Vasile attaches a chain knocker to a milling machine to clear a sewer line before lining the pipe.



Photography by Kevin Blackburn

The one thing that stymied the company from growing even more is difficulty in finding quality employees. “We’re willing to start people at \$20 an hour, but still have trouble finding good employees,” he says. “I just don’t understand it.”

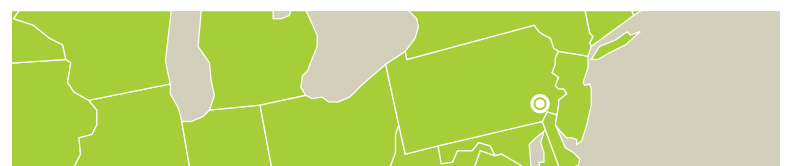
But Sonya helped minimize some of the labor issues by leaving her job as a physical therapist and joining forces with her husband in early 2021.

“Bringing her on board really helped,” he says. “Having a second set of hands 24/7 made a real difference.”

### ENTREPRENEURIAL SPIRIT

Vasile was born and raised in Italy, where he was both a restaurant owner and also helped his uncle, who is a plumber. “I just love to fix things,” he says.

The Vasiles moved to the United States in 2009. While attending school to get his journeyman’s plumbing license, Vasile worked for



## Pipeshield Inc.

DOWNINGTOWN, PENNSYLVANIA

**OWNER** Jaco Vasile

**FOUNDED** 2018

**EMPLOYEES** 2

**SERVICES** Pipe lining, pipe bursting, drain cleaning, pipeline inspections, plumbing

**SERVICE AREA** Pennsylvania

**WEBSITE** [www.pipeshield-inc.com](http://www.pipeshield-inc.com)





a Rooter-Rooter franchise and then a trenchless pipeline rehab company before striking out on his own.

"It always was my dream to open my own business and be in control of things," he explains. "If I fail, it's my own fault. And if I succeed, it's to my credit."

The business really took off when Sonya came on board — and when the company invested in a Mongoose Model 123 trailer-mounted water jetter (12 gpm at 3,000 psi), a brand owned by Sewer Equipment Co. of America. "That machine gave us a lot more options for drain cleaning," Vasile says.

A RIDGID SeeSnake Compact M40 inspection camera coupled with a RIDGID SeekTech SR-60 utility locator also were game-changing investments.

"If I was starting over, I'd buy the SeeSnake camera right away because you can show clients what's going on inside their pipes," he says. "Sometimes what we do is hard for customers to understand, but the cameras help a lot.

"Sometimes we let customers use one of our cellphones or an iPad so they can watch an inspection in their home through a RIDGID app while we're doing the inspection outside."

The SeeSnake isn't cheap, but because it helps sell so many jobs, it paid for itself quickly, he says.

« Vasile sets up the Pipe Lining Supply quick water gun — modified with multiple ports — he uses in the water curing process on lining jobs.

✓ Henryk Sucheck and Vasile double-check measurements and then cut a liner to the proper length.



## INVESTMENTS IN PRODUCTIVITY

The company also owns a Quik-Shot pipe lining system and a Quik-Coating pipeline coating system, made by Quik Lining Systems and sold by Pipe Lining Supply; a Liner Cannon made by Picote Solutions and used for short lining runs; and a TRIC Tools pipe bursting system.

"The Quik-Shot makes it easy to line pipes with just two people," Vasile points out. "We've done up to 250 feet of 6-inch-diameter pipe in one day, which I think is pretty good."

Vasile uses fiberglass PrimeLiner liners made by Primeline Products and felt liners from MaxLiner USA. He also relies on the PipePatch point repair system made by Source One Environmental; jetting nozzles made by Enz USA; and an SC70 air compressor made by Con X Equipment.

The company's wide range of drain machines includes a RIDGID K-5208 sectional drain machine; RIDGID K9-102 and K9-204 FlexShaft drain machines; and a Super Midi Miller and a Mini Miller from Picote Solutions.

In addition, Pipesield has invested in an enclosed box trailer made by Rock Solid Cargo, used to haul pipe lining equipment; Dodge and Ford pickup trucks; and a Komatsu mini-excavator.

## FULFILLING A NEED

Trenchless pipeline rehab work accounts for about 90% of the company's revenue, with drain cleaning kicking in the balance. "Drain cleaning is a good way for use to get our foot inside the door," Vasile says.





▲ Sonya Vasile, Jaco Vasile and Henryk Sucheck use a roller to make sure the epoxy mix is thoroughly pressed into the liner.

He decided to focus primarily on trenchless pipe rehab work for two reasons: There's a large amount of aging infrastructure in the area, and when he started out almost no one else on his service area was doing it, which left an inviting niche to be filled.

Most of the company's work centers on rehabbing residential sewer laterals. These drainlines typically are 60 to 80 feet long and about 6 to 11 feet deep.

Diversifying into other areas is not likely, he notes. "We're pretty satisfied where we are. We want to keep focusing on our specialty, trenchless technology, and see where it can take us."

Vasile credits several things for the company's success and quick growth. One is constantly communicating with customers during every step in a project. "People really like that," he says.

Another factor was cultivating relationships with plumbing companies that don't do drain cleaning or use trenchless technology. Furthermore, Vasile capitalized on a new market when local municipalities began to pass ordinances that require lateral inspections prior to home sales, in order to reduce the chances of unexpected — and very expensive — repairs.

The trend toward required inspections started about 1 1/2 years ago, Vasile says.

"We saw it as a business opportunity. We scope the lines so everyone involved, both the home seller and the homebuyer, can have peace of mind."

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JACO VASILE

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▲ Vasile, with assistance from Sonya Vasile, loads the liner into the Picote Cannon.

## SIDE BY SIDE

It's not unusual for husbands and wives to work together in small, family-owned businesses in the plumbing and drain cleaning fields. The division of labor typically shakes out with the husband working in the field while the wife manages the office and handles things like invoicing, accounting and miscellaneous paperwork.

But things are a little different at PIPESHIELD in Downingtown, Pennsylvania, where Sonya Vasile and her husband, Jaco, buck that stereotypical arrangement. Customers routinely see Sonya working in the field with Jaco, who established the company in 2018.

When Jaco found it impossible to hire a quality employee to help with cleaning drainlines and doing trenchless pipeline rehabilitation work, Sonya decided to quit her job as a physical therapist in early 2021 and help him out.

Sonya doesn't remember if it was her idea or his, but one thing is certain: She's not afraid to tackle unfamiliar things, such as running a water jetter or pipeline inspection camera or lining pipes.

"Since I couldn't find a good employee, she's out in the field with me," Jaco says. "She does just about whatever I do — inspecting lines, cleaning drainlines, digging pits, installing liners and so forth. She's a real trooper."

"I really enjoy the work," Sonya says. "I like that it's very technical and that there's a lot of science behind it all. Plus it's very cool to see jobs before and after."

"I also love to see the solutions Jaco comes up with. Sometimes I think, 'Oh my god, this job is impossible to fix.' But then Jaco fixes it and the customer is super happy."

Sonya, who routinely helps Jaco shoot liners up to 200 feet long, says most of the technologies the company uses can be fairly easy to use if people are diligent and eager to learn. Learning new skills is a bonus — and so is working with her husband, she says.

"It's nice to work alongside Jaco because I can see him more. It has helped us get closer because I know what he goes through every day."

Why leave a good job to do something completely unfamiliar and unknown? "I believe in him and want him to succeed," she says. "By helping him, I'm also helping our family. And it's actually a lot of fun doing something completely different, as well as seeing exactly what he does."

Ultimately, the couple would like to hire employees, especially since they have small children and put in very long hours. But until that happens, they plan to keep making it work by working together.

"We're trying very hard to hire someone," Jaco says. "But it's going to be difficult to find someone who can replace her."

**"IF I FAIL, IT'S MY OWN FAULT.  
AND IF I SUCCEED, IT'S TO MY CREDIT."**

**JACO VASILE**

Vasile met with and gave presentations to local realty companies, and word-of-mouth referrals soon followed.

"We found out about the new laws through our Pennsylvania Association of Plumbing-Heating-Cooling Contractors [PA PHCC] organization. Every plumbing company should consider joining local groups like this. A membership will keep you up to speed on things like new laws and building codes."

### LOOKING TO GROW

The couple definitely is interested in continuing to grow their business, but concede that expansion will be difficult without more employees. The pair already works long hours every day as well as on weekends at times, so they've reached their limit, especially with children to attend to.

"Finding good people is our biggest obstacle to further growth," Vasile says. "We already have turned down work at times because we simply don't have enough manpower."

CONTINUED >>





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"WE WANT TO KEEP FOCUSING ON OUR SPECIALTY, TRENCHLESS TECHNOLOGY, AND SEE WHERE IT CAN TAKE US."

JACO VASILE

"We'd really like to help out more people, but we physically can't do anything more than what we're already doing."

Eventually, Vasile envisions offering trenchless pipe rehab franchises based on the company's business model and family-owned culture. But first the company will have to grow further, he says.

"But even if we get bigger, we want to keep that family-owned and local company feel. We also want to hire people who share our values and ethics and are willing to take care of clients the same way that we do."

Vasile would eventually like to have two or three pipe rehab teams made up of two to three employees each, plus an office staff that can attend to customer needs. He envisions employing 10 to 15 people in all, but given the scarcity of good employees, he has no idea how fast that might happen.

"But I definitely think it's doable," he says. **c**



« Henryk Suheck watches an inspection camera feed to check for blockages.



» Vasile uses the Picote Cannon to shoot the liner into the pipe.

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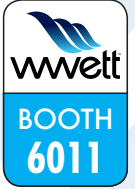
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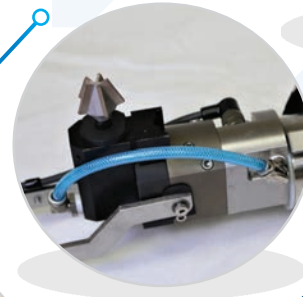
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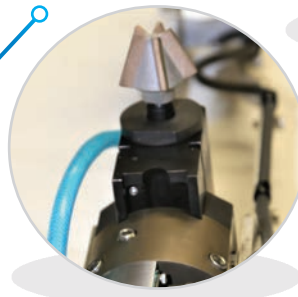
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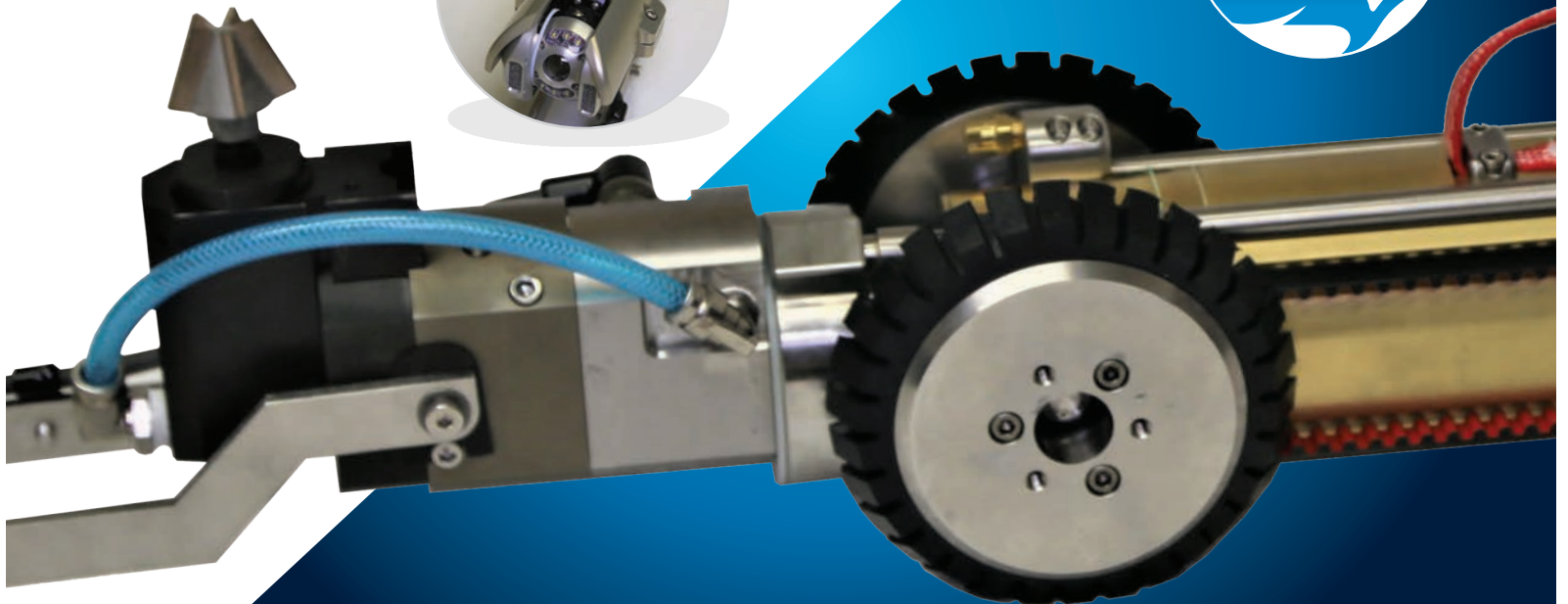
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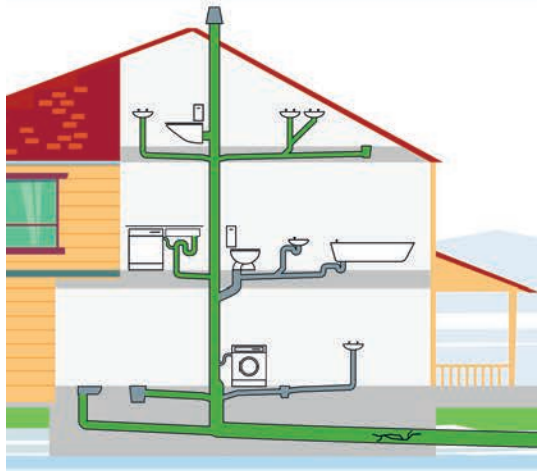
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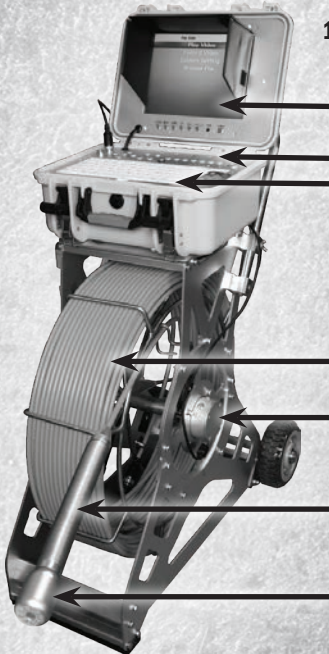
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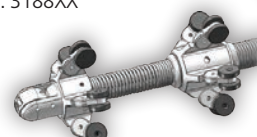
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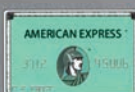
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# OWN YOUR JOBS

Drain technicians who take ownership of their work will help the company succeed

// By Anthony Pacilla

**IF YOU ARE A DRAIN TECH** reading this, I think you'll be surprised to find what your boss is really looking for to get you to the next level of your career.

It's true; your boss is trying to build a team of performers who can rake in the money and minimize his or her exposure to risk in order to turn a profit for the company. There is no doubt about that. But a business owner is really looking for someone who can take that concept to the next level for all involved. And whether you believe it or not, that usually has nothing to do with your skills with a jetter. It has everything to do with your ability to take charge and effectively lead others while taking on more and more responsibility.

In the service business, it is great to have an 'A Guy' who run calls all day, does great work, brings in the money and makes customers happy. But an A Guy who wants more responsibility and wants to grow the company is what all bosses are looking for.

**YOU CAN QUICKLY GET TO THE NEXT LEVEL OF YOUR CAREER IN A SERVICE BUSINESS, WITH MAJOR INCREASES IN PAY AND REWARDS, BY TAKING ON MORE RESPONSIBILITY.**

Your boss wants you to shine, succeed and get to the next level not only because it feels great, but it makes you, the boss and your fellow co-workers more money. You can quickly get to the next level of your career in a service business, with major increases in pay and rewards, by taking on more responsibility. Here are a few ways you can stand out from your co-workers and get to the next level of your career.

## OWN THE JOB

The unfortunate part about being a true leader is that when you hit a home run, it was because of a great team effort; but when something goes horrible wrong it was all because of you personally.

Taking responsibility is by far the biggest difference between your average A Guy and the 'Rockstar.'

When a job goes over the expected time because Jimmy the apprentice showed up late three days in a row and Tim forgot to fill up the jetter, the Rockstar says: "That's my fault. I should have been hard on Jimmie to be here on time or sent him home, and I should have checked with Tim before we left. I will adapt, take note, and correct those actions on the next job." And then the Rockstar actually makes those changes to how they manage the people and the jobs.

That's it. That is all your boss really wants to hear. When the boss sees someone take ownership of what goes on with a job, the boss knows they have a Rockstar they can trust. They can put you in charge of more jobs and more people leading to more money in everyone's pocket.

Owners are so used to hearing a list of excuses about how it is always someone else's fault. Owning the job means truly taking ownership and responsibility for the job. When you start to own the jobs you are on, you are on the fast track to being in command — it will not go unnoticed and you will quickly separate yourself from the herd.

## TAKE ON MORE RESPONSIBILITY

Depending on how your company is organized, there is usually an abundance of opportunities to take on more responsibility. Own the process. Stay on top of your paperwork, follow up with customers without having the office staff bug you about it and foster relationships with customers, wholesalers, your office staff, co-workers, business agents, commercial customers, etc.

Do you have to send info over to an estimator? Be more involved and more detailed in the process. Volunteer to spend time with the estimator on your own time and see how they do their job. Build a relationship with the estimator. Do you have salespeople? Ask them to show you how they go about their job, and what, if anything, you can do in the field to make their job easier.



Verify that all equipment is maintained and ready to go so you and your crew don't get a surprise on a job site arrival. Show up early, leave late. Take control and spend time training new hires. Most important, ask questions, ask if they have any questions and be a good listener.

Pass out company business cards; ask to volunteer as a recruiter online or at the company job fair booth.


When you take control of your day, build relationships and take action, things will go your way. When your boss sees this, raises, commissions, bonuses, vacations, responsibility hikes and promotions will start coming your way — while the guy who shuffles in late, leaves early and is doing the minimum will forever be half baked and going nowhere.

None of this has anything to do with how well you wield your Warthog tip. Sure, you have to have skills, but owning your job and taking initiative is what your boss is really looking for and what will get you to the next level. **c**

## ABOUT THE AUTHOR

Anthony Pacilla is a registered master plumber for McVehil Plumbing in Washington, Pennsylvania. He has 23 years' experience in the plumbing and HVAC trades and has a bachelor's in business and economics from Thiel College.

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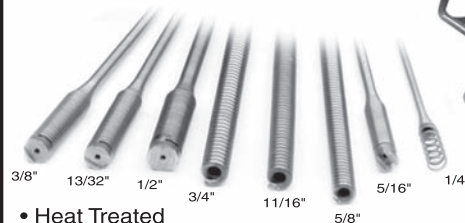


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## GET THE BALL ROLLING

Round water-jetter head helps contractor play hardball with tough clogs

/// By Ken Wysocky

**A**S AN EXPERIENCED DRAIN CLEANER, Billy Teeter believes in having as many options as possible to contend with a wide range of clogs. So when he needs to cut through tree roots or descale pipes quickly and efficiently, the owner of San Diego-based Drain Mob has just the tool for the occasion: the Cutting Ball CB90 nozzle from Enz USA.

The nozzle is an outlier in the industry, due to its spherical shape that includes built-in cutting blades and an unusual six-jet pattern that enhances cutting and flushing capabilities. But sometimes different is better, as Teeter learned the first time he used the CB90.

Teeter was having trouble getting roots out of a 4-inch-diameter, clay-pipe lateral. The roots were growing upward at an odd angle from the main sewer line and into the lateral. So he attached the CB90 to the 1/2-inch-diameter hose on one of the company's five US Jetting 4018 water jetters (4,000 psi at up to 18 gpm), dropped it into a clean-out and went to work.

"It cut roots as thick as my fingers in one swipe," he reports. "It was tricky because of the weird angle the roots were sitting at ... it was a weird situation that would've been a problem for other nozzles."

"It's definitely a specialty-use head. It's a great tool to have in our arsenal."



### DRAIN MOB LLC

SAN DIEGO, CALIFORNIA

**OWNER** Billy Teeter

**TOOL** Cutting Ball CB90 jetting nozzle from Enz USA

**FUNCTION** Descaling

**FEATURES** Ball-shaped carbide easily navigates pipe bends; about 3 1/2 inches in diameter; self-sharpening blades/channels; fits on 1/2-inch-diameter hose; weighs just less than 5 pounds; jet configuration creates X-shaped jets for enhanced cutting and flushing power; designed for descaling and cutting roots in 4- to 6-inch-diameter pipes; minimum flow of 16 gpm and maximum pressure of 2,900 psi

**COST** About \$2,375

**WEBSITE** [www.drainmob.com](http://www.drainmob.com)

« The Cutting Ball CB90 nozzle from Enz USA is a favorite of Drain Mob service technician Joey Flores because of how efficiently its X-shaped spray pattern cuts through roots and grease clogs. The nozzle's spherical shape helps it navigate bends in pipe more easily.



### GREAT FOR DESCALING

The built-in and self-sharpening cutting blades, which are formed by channels in the carbide cutting ball, are designed to descale pipes from 4 to 6 inches in diameter. But Teeter says the nozzle has worked well in pipes up to 8 inches in diameter, too.

"The channels in the nozzle head act like a drill bit," says Joey Flores, a Drain Mob technician. "It really works great on descaling cast iron pipes. That head spins really fast at a high water pressure."

The nozzle's spherical shape also enables it to navigate bends in pipes more efficiently, although it's a tight fit in 4-inch-diameter pipes, Flores says. The nozzle measures about 3 1/2 inches in diameter and weighs just less than 5 pounds; it requires minimum flow of 16 gpm and will handle maximum pressure of 2,900 psi.

"It exerts a lot of pulling force on the hose," he says. "We've had no issues with it getting caught in a line."

Furthermore, each of the nozzle's three pairs of rear jets create an X-shaped spray pattern that's very effective at cutting through roots. "It'll take out roots in one pass — it's unbelievable," Flores says. "It gives you twice the cutting force compared to typical jets, where there's usually just one jet stream in contact with the pipe at any one time."

"In that regard, it's different from anything else on the market."

But the CB90's shape doesn't lend itself to penetrating extremely compacted masses of roots. As such, it's not suitable for all root clearing applications because it can't do any cutting if it can't get past the roots, Flores says.

### FLUSHING POWER

The CB90 really displayed its mettle on a particularly difficult job: A 300-foot-long section of 6-inch-diameter clay sanitary-sewer pipe that was almost completely clogged with sand that infiltrated through a break in the line, Flores says.

"IT GIVES YOU TWICE THE CUTTING FORCE COMPARED TO TYPICAL JETS, WHERE THERE'S USUALLY JUST ONE JET STREAM IN CONTACT WITH THE PIPE AT ANY ONE TIME."

JOEY FLORES



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"A job like that typically would require five or six hours of almost constant jetting," he explains. "But we finished the job in about two and a half hours. It was unreal — we're probably talking about two cubic yards of sand lodged in there."

"Large amounts of sand are hard to move with a jetting nozzle. When you pull back on a wall of sand, it can be kind of like one of those Chinese finger-trap toys — the harder you pull, the harder it is to get out. But when we finally got the head upstream far enough and started dragging it back, it cleaned the pipe completely."

The CB90 costs about \$2,375. But Teeter — who established the company in 2017, has 13 employees and runs 11 service trucks — says it's a sound investment that pays for itself quickly. He also recommends the Enz Bulldog and Rotodrill nozzles.

"Getting jobs done quickly and done right is everything in this business and using the right equipment is a big part of that," he says.

"I would definitely say it's a good nozzle to have. I remember back in the day when there basically was one kind of jetter head. Then they kept coming out with more and more. Some work and some don't, but this one definitely has its place on the truck." **c**

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# BUILDING A LEGACY

A THIRD-GENERATION PLUMBER AND DRAIN CLEANER CONTINUES  
A FAMILY TRADITION OF QUALITY WORK // By Giles Lambertson

Photography by Amy Voigt

**T**he Halstead name long has been associated with superior drain cleaning and plumbing in Cleveland, Ohio. Now a third generation is well along the family's career path. Josh Halstead has a master plumber's license on his wall and is increasing management responsibility for the family company, whose service area now ranges across a hundred miles.

It all began with his grandfather, Robert Halstead, who emigrated from West Virginia to Ohio in 1962. He first worked at a manufacturing facility in Brook Park and then at a plant in Avon. In 1971, he joined the workforce at the Lorain Ford Motor Co. assembly plant, which closed in 2005 after 48 years of production.

More significantly, while working at the Ford plant, he and his brother started a sewer cleaning company on the side. When Robert Halstead had the chance in 1973 to buy the Roto-Rooter franchise for Lorain County, he fully committed to the cleaning industry, leaving Ford behind and operating the franchise for the next 30 years.

Josh Halstead says his grandfather's long involvement in the cleaning industry helped create today's competitive drain cleaning industry in the area. "Grandfather trained up a lot of people around here in drain cleaning, people

who went on to start their own gig," Halstead says. "I'll talk to my dad about some company, and he'll say, 'Yes, they used to work for your grandfather back in so and so.' That happens quite a bit."

"IT'S SO COOL THAT WE CAN GRIND BACK CAST IRON PIPE TO ITS REGULAR DIMENSION, SAVING A CUSTOMER FROM HAVING TO TEAR UP A DRAIN IN HIS BASEMENT."

JOSH HALSTEAD





Halstead's father, Russell, also worked at the family Roto-Rooter business before launching a plumbing and drain cleaning company of his own in 1997, The Personal Plumber. He renamed his company Valu-Rooter in 2006, retaining "The Personal Plumber" as a company trademark.

In November, a full 24 years after being launched and then renamed, Valu-Rooter is going strong and answering service calls across north-central Ohio. Company vans are in and out of Cleveland proper as well as serving a swath of suburbs along the south side of Lake Erie from Painesville on the east all the way to Sandusky on the west and as far south as Akron.

At age 15, Halstead officially began working at the family business, drawing a part-time paycheck. Ten years later, while his father still comes to the office in Elyria "to make sure everything is running smoothly," Halstead serves as field supervisor.



## Valu-Rooter "The Personal Plumber"

ELYRIA, OHIO

**OWNER** Russell Halstead

**YEARS IN BUSINESS** 24

**EMPLOYEES** 13

**SERVICES** Drain cleaning, sewer line repair and replacement, sewer and drainline camera inspections, jetting, complete array of plumbing services including water heater and gas line installation, repair and replacement

**SERVICE AREA** North-central Ohio



« Valu-Rooter co-owner Josh Halstead uses a RIDGID SeeSnake CS10 to inspect catch basin lines on a commercial property in Elyria, Ohio.





Valu-Rooter staff includes (from left) Dave Burner, Ron March, Jason Sams, co-owners Jonathan Halstead, Russell Halstead, Josh Halstead, Eric Nicolai, Ryan Swiney, and Moises Torres.

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## READY TO SERVE

Valu-Rooter is principally a provider of residential services, which partly is a reflection of the changing face of Cleveland itself. Once a center of heavy manufacturing — steel, auto production and shipbuilding — the city and its suburbs survived relocation of some of those mainstay industries to other states and the resulting “Rust Belt” period that followed. Today, biomedical, polymer, electronics and engineering are the major industries, with employees scattered among the various suburbs.

Consequently, some 70-80% of the company’s business is on residential properties, with perhaps 5% of calls taking techs to industrial settings, the rest being commercial. “Typically, a service call is the clearing of a line at a home along with ‘There’s also a drip under my sink’ kinds of things.”

Being able to respond to a variety of tasks on a single service call means the company’s eight service vans each carry gear for most routine fixes. RIDGID or MyTana camera systems are there so a technician can visually verify a clogged line problem and its resolution. Traditional cable machines in the trucks are from Duracable, the Des Moines, Iowa, manufacturer.

The latest addition to the company’s toolbox is a RIDGID FlexShaft drain machine. “Most of the time drain cleaning is done using the traditional cable, but the FlexShaft is growing in popularity,” Halstead says. “Every time I show customers that machine, they quickly see how great it is and they’re sold on using it.”

He says he especially enjoys using the RIDGID tool in descaling work. “It’s so cool that we can grind back cast iron pipe to its regular dimension, saving a customer from having to tear up a drain in his basement.”



Valu-Rooter technician Eric Nicolai uses a SeeSnake Compact2 system with a CS6x VERSA digital monitor to inspect a line in a middle school in Grafton, Ohio.

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Cast iron is a common pipe material encountered by drain cleaners in northern Ohio. “Cleveland is an old city,” Halstead says, “though it depends on where you go. Some of the suburbs are building a lot of new housing, but we still find clay tile. We still go to places that have original cast iron lines from a hundred years ago.”

Valu-Rooter techs have four jetters they can call on to clear a line. Three are Harben single-axle units with 300-gallon tanks and 18 gpm flow at 4,000 psi. A smaller Cam Spray jetter produces 2,800 psi. The ideal pipe diameter to jet is 10 inches, Halstead says, though the larger jetters are rated for 12-inch pipe and occasionally are called upon to clear mud from a storm culvert.



Technicians Moises Torres, Dave Burner and Eric Nicolai (from left) discuss a game plan on a service call.

## PICKING UP STEAM

If digging is required, the company has a trio of Kubota mini-excavators it can haul to a site. A 28 hp KX91 was acquired about 10 years ago. A 42 hp KX121 was added to the equipment yard eight years ago. A narrower 10 hp model K008 was procured more recently to give techs easier entry into fenced backyards.

The company does all kinds of pipeline excavations, Halstead says. “If water is running through it, we deal with it.” That means techs roll out of the equipment yard two or three times a week with an excavator in tow. The other heavy piece of equipment in regular use is a Kubota 65 skid-steer, which mostly is used to load small-diameter stone into dump trucks.

“Excavation work has been picking up, actually,” Halstead says, citing recent rains. “In Lorain, sanitary sewer lines tie in with the storm sewer, so when it rains, sewers clog and sewage backs up into basements. When it rains, we’re busy in northern Ohio.”

CONTINUED >>

## A REWARDING CAREER

Finding and retaining employees is the biggest challenge facing U.S. trades. Josh Halstead has no secret formula for resolving the dilemma. But the field supervisor of Valu-Rooter, a plumbing and drain cleaning company in Elyria, Ohio, knows this much: A company can’t fix it alone.

Valu-Rooter is 24 years old and no one aside from company founder Russell Halstead has exceedingly long tenure. Two current employees did leave and then return, which surely says something good about the company.

Two other technicians joined the firm recently enough that they are still in training. Becoming fully trained might take a little longer at Valu-Rooter than at some firms because the techs are all cross-trained for plumbing, drain cleaning, operating a mini-excavator, installing a new water heater, working on natural gas lines and so on. There’s lots to learn.

It’s the long-term hiring and retention of employees that concerns Josh Halstead. “Right now, it’s hard to find anybody to work here. We’ve been trying to get more tech trainees, but it’s hard.”

The company is nonunion and he tells of a “union guy who came up to me and wanted me to jump over to his company. Well, I didn’t, and I’m not going to turn away a qualified person who’s looking to work here, but if everyone does that, it’s not helping.”

Halstead recites statistics that tell the story: In Ohio, for every two plumbers or drain cleaners who retire, only one is coming into the industry. That’s not a sustainable formula if the trade is to meet the needs of customers in future years.

Instead of new blood entering the trade, Halstead says, experienced hands are moving from place to place within it. “Everyone is trying to talk to my tech or plumber or somebody’s else’s tech or plumber and persuade him to come to work for them. That’s not helping. We are only redistributing the help.”

He knows of one Cleveland-area plumbing house that is working with a local high school to encourage teens to enter the trade. He says he’s thinking about reaching out to local vocational schools to develop a similar pipeline for young men and women.

“We need to come together as an industry and try hard to persuade the upcoming generation that working in a trade is a great option for them. It is not just a job. It can be a very rewarding career.”



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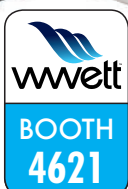
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The company's main office is on state Route 254 in the county seat town of Elyria, west of Cleveland, with two satellite offices to the east — one in Medina and the other in Willoughby Hills. The latter two locations are mostly warehouse and staging areas for technicians working those parts of the service area, thereby shortening supply lines and response times.

Halstead lives in the Sandusky area farther west along the Lake Erie shore. When service calls are scheduled, he is apt to end up calling on customers between the home office and his home. The busiest service area is in Cleveland and communities on its west side.



« Jason Sams restocks supplies in the Valu-Rooter storeroom.

The company is a Rheem-certified and Moen-certified dealer and a full-service plumber, but the biggest single component of Valu-Rooter's business remains drain cleaning. As was the case in other parts of the country, clogged pipes became an even bigger problem for homeowners with the onset of COVID-19. "During the pandemic, cleaning pipes picked up quite a bit," Halstead says. "People were staying home and using the facilities more. Some of them learned that this or that didn't go down the drain like they thought it did."

## EYE ON THE FUTURE

Halstead wears a variety of hats. Besides periodic service calls on the way home to Sandusky, he supervises other techs, repairs equipment, estimates jobs and calls on his master plumber experience to handle the larger and more difficult plumbing jobs. "Basically, I do whatever is needed."

He also is the point man on large remodeling projects or the renovation of a house that has suffered fire damage. "I love those projects because it can be tricky to ensure the plumbing is brought up to code. I like the challenge, though. That's how you get better. You don't grow by being comfortable, so I welcome getting out of my comfort zone."

"I LOVE THOSE PROJECTS BECAUSE IT CAN BE TRICKY TO ENSURE THE PLUMBING IS BROUGHT UP TO CODE. I LIKE THE CHALLENGE, THOUGH. THAT'S HOW YOU GET BETTER."

JOSH HALSTEAD

As next in line to head the family business, Halstead also has his eye on the future. He is actively interested in having the company offer trenchless repairs, he says, probably starting with pipe patching, then getting into relining or coating. "I've been reading up on it, but before we make a decision we need to talk to vendors." He had planned to thoroughly explore trenchless technology at the 2021 WWETT show in Indianapolis in February, but it was canceled.

For now, the company is concentrating on expanding its service presence in the Cleveland area, with additional trucks. Halstead has his eyes on Columbus as a future satellite location for Valu-Rooter, but there's no timetable for such southward expansion. "We have to get a little bigger in Cleveland first."

Besides the company's eye-catching bright yellow-and-black service vans promoting "The Personal Plumber," marketing of Valu-Rooter is primarily by word of mouth. He runs a few newspaper ads and Google reviews are welcomed, but the company's business base remains referrals and repeat customers.

Halstead attributes such loyalty to the company's belief in customer care. "We strive to take care of our customers. We're not worried about upselling. My dad believes in customer care and our technicians all believe in it. Consequently, our customers trust us, and we get repeat business and referrals."

It's a simple formula, but it works. "I believe in treating customers like you want to be treated, so I recommend to a customer what I would do at my house. You go from there." c

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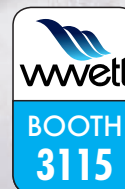
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## SHINE A LIGHT

Intrinsically safe headlamps improve worker safety in hazardous environments /// By Del Williams

**UTILITIES AND CONTRACTORS** have a duty to protect employees and provide a safe work environment, but many fail to supply or specify all the proper personal protective equipment — namely headlamps.

The lack of suitable headlamps can lead to serious — even deadly — accidents in hazardous locations.

As a tool, headlamps are essential when hands-free lighting is required for tasks in low-light areas. This can include operating/maintaining machinery and assessing its condition, or servicing pipes, manholes or other infrastructure. Headlamps are also necessary for safe, efficient personnel movement, particularly in confined or restricted spaces.

In many situations, having a headlamp that does not generate a spark is critical. This is particularly important whenever flammable gases, vapors, liquids or off-gassing is present.

Despite meeting OSHA's definition of PPE, "equipment worn to minimize exposure to hazards that cause serious workplace injuries and illnesses," headlamps are often not included in budgets for PPE.

As a result, workers may be left to purchase their own, and if they overemphasize price and choose products that lack necessary options, the units may be unsafe for some tasks, settings or conditions. This could open the utility to potential liability.

To protect personnel in any work environment and to defend against such liability, a growing number of safety officers are including or specifying headlamps in the budget, as PPE.

"It is safer to provide suitable headlamps upfront rather than leaving it up to employees to make their own purchases. However, department approval of only intrinsically safe product would handle the issue. Preventing even one serious injury, fire or explosion would pay for any implementation," says Scott Colarusso, general manager and co-owner of All Hands Fire Equipment & Training in Neptune City, New Jersey.

When contractors and utilities supply intrinsically safe headlamps, which are specifically designed not to be a source of ignition in hazardous zones, workers are protected wherever they need to go from serious, even potentially lethal accidents. Essentially, everyone is covered and the chance of mishap eliminated.

"Without safety certified headlamps appropriate for the application, utilities are exposed to potential liability if an incident occurs. By supplying workers with headlamps that are rated for any hazardous environment that could be encountered, utilities can prevent the problem," Colarusso says.

### MANDATING GREATER SAFETY

Headlamps enhance safety and efficiency by leaving workers' hands free. It's important to choose devices that are designed to be easily operable even when workers need to wear heavy gloves. Typically, the units are waterproof and chemically resistant, ready for use in

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« Headlamps are essential when hands-free lighting is required for tasks in low-light areas.





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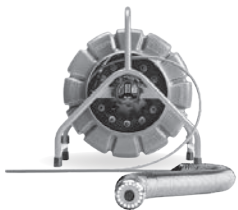
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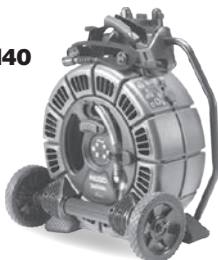
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rugged surroundings, which may include getting thrown into a truck toolbox or dropped, and providing sufficient “burn time” to last an entire work shift without a change of batteries.

For sewer and pipeline workers, however, typical headlamps can be a dangerous source of ignition if workers unwittingly enter a hazardous area or are exposed to flammable materials or conditions.

Safety considerations are particularly important considering OSHA’s recently issued standard for construction work in confined spaces (Subpart AA of 29 CFR 1926). The new standard recognizes that such spaces can present physical and atmospheric hazards that can be avoided if recognized and addressed prior to entry. It is designed to eliminate potentially deadly hazards by requiring employers to determine what kinds of spaces their workers are in, what hazards could be there and how those hazards should be made safe (including the use of headlamps, flashlights and other lighting equipment that carry the proper safety ratings).

Therefore, in inherently volatile settings, headlamps should carry the proper certification for various classes, divisions and groups of materials. One example that meets these requirements is the intrinsically safe Vizz II headlamp by Princeton TEC, a producer of ETL- and UL-approved lighting products.

In response to the new OSHA standards, some manufacturers now make headlamps with durable thermoplastic material designed to withstand drops and rough handling and have superior resistance to common, potentially dangerous chemicals and solvents utilized by utilities.

The latest models also offer anti-static properties and safety features, such as a locking mechanism that requires a tool to open the battery compartment. This prevents users from inadvertently opening the battery housing in a hazardous environment, which could not only result in electric shock, but also potentially ignition or explosion.

“Many of our corporate customers specify Princeton Tec headlamps and lighting products due to the reliability, longevity, price point and made-in-the-USA. production,” says John Navarro, a purchasing agent for Bayville, New Jersey-based CWR Wholesale Distribution.



⚡ Sewer cleaning contractors can take a positive step by providing workers with headlamps that ensure compliance and minimize operational risk and liability.

“With an intrinsically safe headlamp, you are meeting the standard and enabling employees to work in the safest possible conditions with the most up-to-date equipment,” Navarro says. “Now the technology is at a better price point than it was five years ago. So, it is affordable for corporate safety budgets.”

Many of Navarro’s industrial customers are willing to spend a little more for higher rated, compliant, intrinsically safe headlamps.

“Our industrial customers want to know their plant personnel can safely use their intrinsically safe headlamps anywhere. Safety committees do not want to worry about where personnel may use the units, if it is safe to use under hazardous conditions.”

While sewer service and maintenance carry some inherent risk, companies seeking to improve safety can take a positive step by providing workers with safe headlamps that ensure compliance.

As the need for safety only grows along with stricter regulation, sewer cleaning contractors can take a positive step by providing workers with headlamps that ensure compliance and minimize operational risk and liability. **c**



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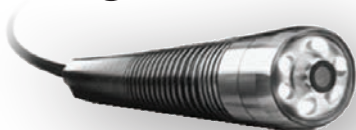
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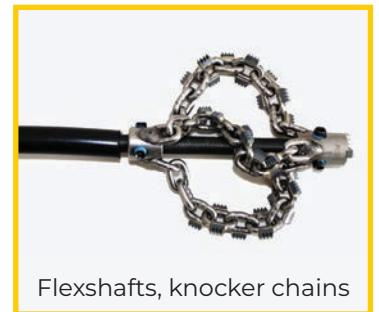
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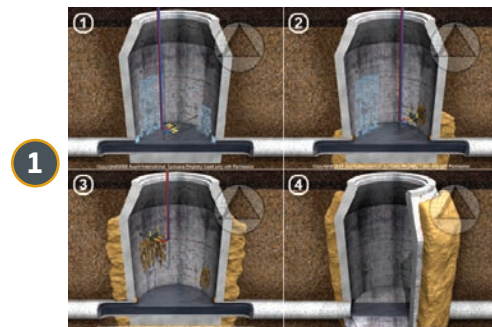
## MANHOLE INSPECTION AND REHABILITATION

By Craig Mandli

### » CHEMICAL GROUT

#### 1 // AVANTI INTERNATIONAL INJECTION GROUTS

Infiltration enters underground systems every day through defects or faulty joints in manholes, causing system capacity issues, overload at treatment plants and possible injury to the community. **Avanti International** injection grouts have historically proven to be an economic and long-term solution to combatting infiltration entering all areas of a collections system, including manholes. Injection grouts are engineered to stop leaks, stabilize soil and control groundwater, and can be used in precast barrel joints, brick and concrete masonry units, pipe penetrations, vertical or horizontal cracks, void fill and pinholes. Each technique enables the technician to stop several leaks at once and helps to extend the life of the structure. 800-877-2570; [www.avantigrout.com](http://www.avantigrout.com)



### » EPOXIES

#### 2 // INFRASTRUCTURE REPAIR SYSTEMS INFRAGARD

**Infragard** concrete and manhole rehabilitation products from **Infrastructure Repair Systems** include Top Coat and Chim-Coat, which are nonhazardous ambient-cure epoxy systems for a small patch, entire manhole or retaining wall. This cost-effective solution requires no expensive equipment, as it has an easy trowel-on application. They are corrosion resistant and high strength, with an impermeable structural bond to the substrate or to almost any concrete or metal surface. Chim-Coat is engineered with a flexible feature that maintains adhesion while expanding or contracting with changing temperatures and traffic loads. 877-327-4216; [www.irsnet.net](http://www.irsnet.net)



#### 3 // PICOTE SOLUTIONS DUAL-COLOR EPOXY BRUSH COATING SYSTEM

The **Dual-Color Epoxy Brush Coating System** from **Picote Solutions** allows technicians to rehabilitate pipes from 1.25 to 12 inches for drains, sewers, water pipes, electrical conduits and heat and air-conditioning ducts by brush-casting a coating. The coating resin forms a pipe inside the original pipe that is tested, safe and environmentally friendly. The new pipe is damp-proof, corrosion-resistant and wear-resistant. It is ASTM and NSF certified (NSF/ANSI 61-5). It is a 100% solids epoxy, and the method allows for clear visual verification during the application process. Apply to small areas or all drains in multistory buildings. The system is practical and easily fits in tight places. 219-440-1404; [www.picotesolutions.com](http://www.picotesolutions.com)



#### 4 // SOURCE ONE ENVIRONMENTAL QUADEX STRUCTURE GUARD EPOXY

**Quadex Structure Guard**, distributed by **Source One Environmental**, is a high-build epoxy coating formulated to provide long-term corrosion protection and structural enhancement for manholes, pump stations, treatment plants or any wastewater infrastructure subject to high levels of corrosion and/or abrasion to include both municipal and industrial applications. It is also suitable for invert repairs. It can be trowel and/or spray applied, and is a 100% solids material with no VOCs and a fast set time. 877-450-3701; [www.s1online.com](http://www.s1online.com)







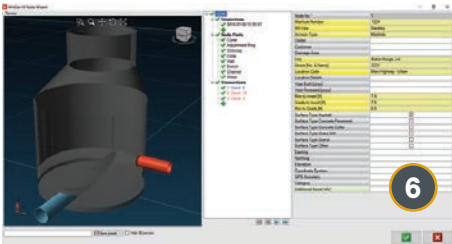
## » LEAK LOCATION

### 5 // HURCO TECHNOLOGIES POWER SMOKER 2

The Power Smoker 2 from Hurco Technologies quickly locates leaks in new and existing plumbing systems. The machine is connected to a clean-out, and smoke is sent through the system to reveal any problem areas. The system uses LiquiSmoke, a laboratory-tested safe smoke that costs cents per minute to use and has an indefinite shelf life. When the test is complete, the smoke dissipates without leaving an odor or residue. 800-888-1436; [www.hurcotech.com](http://www.hurcotech.com)

### 6 // WINCAN MANHOLE MODULE

The WinCan Manhole Module simplifies MACP 7 data entry and guides the user through the manhole data collection process. Templates for standard manholes help save time and speed up data entry. The software reduces the complexity of MACP's numerous field entry requirements to a few simple steps. It also provides a dynamic graphic of the manhole data entered, allowing the user to visualize data for assessment and rehab planning. The user can see additional inlets and outlets, and even changes in the dimensions of manhole components. Plus, WinCan Validator confirms that both imported legacy data and newly entered manhole data are MACP 7 certified before export. Once an inspection is complete, customized reports with detailed visuals and photos ensure that deliverables are professional and easy to navigate. 877-626-8386; [www.wincan.com](http://www.wincan.com)



## » MANHOLE CAMERAS

### 7 // CUES SPIDER

The SPiDER scanner from CUES is wireless, color manhole inspection technology in a lightweight and compact form. It is operated with a tablet computer that controls the scanners and lights. It does not require a truck or data/power cable for operational use. Scanning data is recorded on the unit. It collects millions of 3D points during each manhole scan that provides engineering and survey-quality information about manhole geometry and condition. Information gathered can be used for structural assessment, pre- and post-rehabilitation analysis, hydrological surveys, and general condition assessment. It provides a 190-degree field-of-view live video stream, an ideal tool for I&I studies which depend on live video to detect moving water. 800-327-7791; [www.cuesinc.com](http://www.cuesinc.com)



### 8 // ENVIROSIGHT CLEVERSCAN

CleverScan, a manhole scanner from EnviroSight, performs a comprehensive, fully automated assessment of manhole condition in just two to three minutes. It captures visual and dimensional data, and presents the user with a flat scan with detailed image data covering every inch of the manhole wall, a dense point cloud for 3D visualization of the manhole structure and easy CAD integration, and a virtual view inside the manhole, where an operator can pan, tilt and zoom to areas of interest. It sits over an open manhole. With the press of a button, the system's probe descends into the manhole, capturing image data using five HD cameras and building a dimensional profile using an array of four lasers. An onboard rangefinder controls descent and determines when the scan is complete. Scan data is immediately transferred to a laptop running CleverScan software, where it can be viewed, annotated and shared. 866-936-8476; [www.envirosight.com](http://www.envirosight.com)





## 9 // RAPIDVIEW IBAK NORTH AMERICA PANORAMO SI

The PANORAMO SI manhole inspection system from RapidView IBAK North America offers 100% coverage, inspection speeds of up to 14 inches per second, geometric measurements from any point inside the manhole, laser depth measurement and 225 feet of cable. It can be operated in manholes 10-inch diameter and up. The software allows the user to view the manhole from any angle and at any position, creating a virtual-reality-style view of the manhole. This file can be viewed from any computer, any time. The system also automatically generates a 3D model of the inside of the manhole that can be rotated, viewed, measured or output to a CAD file for further analysis. The system can be an addition to a PANORAMO mainline inspection system or is available in a stand-alone version. It allows a crew to inspect more than 50 manholes per workday. 800-656-4225; [www.rapidview.com](http://www.rapidview.com)



## » MANHOLE LINERS

### 10 // PERMA-LINER INDUSTRIES EXTREME COLD 4:1 RESIN

Extreme Cold 4:1 Resin from Perma-Liner Industries provides customers with a lower viscosity product when used in colder temperatures and more stability during transportation. This epoxy resin comes in 40-pound buckets consisting of A resin and B hardener sold separately, and is a complement for ambient curing in temperatures 50 degrees F and lower. The 4-1 mixture is a styrene-free epoxy resin used for mainlines, laterals and verticals in extremely cold conditions. It has a 15-minute pot life, a 30-minute work time in 50 to below 30 degrees, cure times ranging from 1.5 to 4 hours, and it exceeds ASTM F1216 standards. 866-336-2568; [www.waterlinerenewal.net/perma-liner/](http://www.waterlinerenewal.net/perma-liner/)



### 11 // SPRAYROQ SPRAYWALL

SprayWall from Sprayroq is a rigid polyurethane material that provides structural integrity and infiltration control to underground infrastructure assets. It is a 2-1 ratio product that is applied via a heated, plural component spray system. It begins to gel in about eight seconds and is tack-free after two minutes. Within 30 to 60 minutes, the initial cure is complete and the structure is capable of accepting flow. The benefits include its structural capacity, which provides for protection against multiple load components within an underground asset including water, soil and traffic loads. In addition, it allows an asset owner to return a structure to service quickly, creating a huge savings on bypass cost, as well as decreasing the overall downtime for a given structure. It is also third-party tested and most recently has undergone significant successful evaluations through AASHTO. 205-957-0020; [www.sprayroq.com](http://www.sprayroq.com)



### 12 // THE STRONG COMPANY STRONG-SEAL SYSTEM

Strong-Seal MS-2A and MS-2C from The Strong Company are designed to rehabilitate municipal concrete and masonry structures, and effectively stop inflow, infiltration and exfiltration. When spray-applied to a minimum of a 1/2-inch thickness, the cementitious mortars are impervious monolithic liners with compressive and flexural strengths exceeding that of the original structure. Made with Portland cement, MS-2A is the most cost-effective solution for stopping infiltration and restoring structural integrity. MS-2C provides high early strengths and added corrosion protection in mild sulfide environments. High Performance Mix is a pure-fused calcium aluminate mortar that stops infiltration, restores structural integrity, and protects against microbiologically induced corrosion in sanitary sewer systems with harsh sulfide conditions. 800-982-8009; [www.strongseal.com](http://www.strongseal.com)







## » MANHOLE PARTS AND COMPONENTS

### 13 // CHERNE AIR-LOC BLADDER STYLE MANHOLE TESTERS

Cherne Air-Loc Bladder Style Manhole Testers provide an efficient, cost-effective method of testing new, existing and rehabilitated manholes, per ASTM C 1244. The testers, supported by an aluminum brace, seal the inside diameter of the manhole at the frame or core. The pushpin rod design enables easy depth adjustment. The remote inflation and monitoring system keeps users away from the danger zone. They are available in 10 variations. 800-321-9532; [www.cherneind.com](http://www.cherneind.com)



### 14 // ENZ USA BULLDOG MANHOLE NOZZLE

The Bulldog Manhole Nozzle from Enz USA was designed to clean lift stations and vertical pipes. Using a high-pressure surface cleaning gun to remove hardened grease and debris that accumulates on lift station walls is a messy job. Removing the debris and disposing of it adds additional time and effort. This nozzle eliminates the disposal process by emulsifying the grease, allowing operators to pump the resulting wastewater to a sewage treatment plant. A job that could take hours to do can now be done in 20 or 30 minutes. Additional advantages of this nozzle include no water loss from leaks and no required maintenance. 888-369-8721; [www.enz.com](http://www.enz.com)



### 15 // PRIME RESINS SOAKUM OAKUM KIT

The Soakum Oakum Kit from Prime Resins is composed of a dry oakum soaked in a hydrophilic polymer solution. When wet and either packed or worked into a joint or crack, the resin will foam to form a flexible and tight joint to stop groundwater infiltration. It reacts with water and becomes a watertight rubber-like composite. The oakum cord gives strength and density to the composite, and makes the application of the resin easier, especially when gushers are present. 800-321-7212; [www.primeresins.com](http://www.primeresins.com)



### 16 // RELINER/DURAN MANHOLE INVERT CHANNEL

Improve manhole hydraulics with RELINER/Duran Modular Manhole Invert Channels. Molded fiberglass flumes with smooth sewer pipe interfaces are used to rehabilitate inverts without flow interruption and can be used for new construction. The field-installed modular components bolt together inside the manhole and serve as the form for a new concrete bench. The channels eliminate the inconsistencies associated with field-formed concrete channels. The full-depth lined channels are high flow and easy to clean and maintain. Standard 8- and 12-inch depth channel sections fit through a 24-inch manhole frame and will accommodate 6- through 12-inch pipes. Larger sizes are available. 800-508-6001; [www.reliner.com](http://www.reliner.com)



## » SEALANT

### 17 // SEALING SYSTEMS FLEX-SEAL 2.0

Flex-Seal 2.0 all-purpose sealant from Sealing Systems adheres to many surfaces and has over 800% elongation. It is designed to prevent inflow and infiltration and to provide corrosion protection at the grade adjustment ring section or joint section of manholes and catch basins. It is 100% safe and Prop 65 compliant. The internal seal is manually applied using a paintbrush and the kit is designed to cover 12 vertical inches on a 27-inch manhole. 800-478-2054; [www.ssisealingsystems.com](http://www.ssisealingsystems.com) c



# MANHOLE INSPECTION AND REHABILITATION

// By Craig Mandli

## AFFORDABLE MANHOLE INSPECTION PROGRAM SEES BIG RETURN



**PROBLEM** / Greenwood Metropolitan District is a special purpose district in Greenwood County, South Carolina, originally started to provide sewer conveyance and treatment to the area. However, in 1999 GMD took over the collections systems that fed into their trunk lines. What the district received was a patchwork of 38 collections systems, including the city of Greenwood's system, which had pipe and manhole assets in excess of 100 years old.

**SOLUTION** / One of GMD's first steps was identifying assets, including mapping manholes using Esri software. This hunt took almost three years, but the final tally showed more than 8,700 manholes, with about 75% of them constructed of brick and mortar. Additionally, a significant number of the manholes were noted to have heavy I&I. Crews completed visual inspections on all manholes using a simple digital video camera. Back at the office, the videos were then uploaded into **ITpipes Web** and coded using a configured template. Since ITpipes fully consumes Esri maps, location data and GIS header info is already attached to the manhole asset, making identification easier and reducing data errors.

**RESULT** / By inspecting all 8,700 manholes with this method, GMD was able to build a database in ITpipes Web with a holistic view of its entire sanitary sewer system. This web-based platform allows the district employees to have virtual access to videos and data of not only pipes, but also the manhole structures and the ground surface areas. More than 3,100 manholes had repairs made to help reduce I&I — many of which were simple repairs that made a large impact in reducing overflows during wet-weather events. 877-487-4737; [www.itpipes.com](http://www.itpipes.com) **c**

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## PRODUCT SPOTLIGHT

### VERSATILE WINCH DESIGNED FOR MULTIPLE PULLING AND BURSTING APPLICATIONS

By Craig Mandli

Whether you're pipe bursting, pipe slitting, slip lining or cable pulling, the materials you work with vary. The length and lay of runs vary from job to job. Customer requirements differ. That's why the HG550 HydroGuide Winch from HammerHead Trenchless can be a quality investment.

The dual capstan design winch has the capacity of utilizing multiple sizes of wire cable. It provides infinite proportional control of up to 5.5 tons of pulling force with line payout and faster pullback speeds than previous models.

"Now you can match any job's unique requirements," says a company spokesperson. "And while any operator can say they did the job well, the HydroGuide HG550 erases any doubt."

The winch is ideal for use in lines ranging from 1/2 to 2 inches in diameter. According to HammerHead, its high-tech features and options protect profit margins through increased operational efficiency and help operators satisfy their customers even on the most demanding jobs.

The HG550 provides infinite, proportional control of pulling force at payout/pullback speeds ranging from 3 inches to 110 feet per minute. This means operators not only can use it to precisely match payout and pullback to the task, they also have a top-rate capability to complete runs up to 20% faster than previous winch models.

In addition, the HG550 features a data tracking system to record performance information. Documentation can be used to meet reporting requirements, to support operator training programs, or for



internal project tracking and assessment. The easy-to-read Precision Digital Job Data Recorder keeps track of line speed, distance, force and pressure. A USB flash drive makes it easy to store and download data. Use of the optional printer provides hardcopy right on site.

"The unit's data tracking system records performance information you can use for your own documentation, for training, or for your project reports," says the spokesperson. "With the HG550, the data speaks for itself."

If your jobs have you working near electrical utilities, according to HammerHead, the company is the only winch manufacturer to offer an optional Electrical Strike Indicator Device for added safety, helping operators stay aware of what's going on in and around the drill and job site. 800-331-6653; [www.hammerheadtrenchless.com](http://www.hammerheadtrenchless.com)

#### 1 // CHERNE LARGER-SIZED I-SERIES LINE OF TEST PLUGS

Cherne Industries added larger test plug sizes within its I-Series line of Test-Ball, Muni-Ball and Air-Loc pipe plugs. The new plugs are available as large as 24 to 48 inches. Manufactured robotically, each plug's natural rubber core is mechanically bonded to its aluminum end plate, ensuring precision and consistency while eliminating failures that can result from chemical-bonding processes. In addition, I-Series plugs feature corrosion-resistant aluminum base plates with laser-etched identifiers, replacing the use of raised rubber markings that eventually wear away with usage. The plugs are lightweight, short and flexible, while offering back pressure to accommodate the range of plug sizes offered. Protective sleeves are also available for the full range of I-Series plugs, helping further preserve the plugs for extended use. 800-843-7584; [www.cherneind.com](http://www.cherneind.com)







## 2 // MILWAUKEE TOOL LEVELING TRIPOD CHAIN VISE

Milwaukee Tool's 6-inch leveling tripod chain vise has a fold-flat design and a centered carry handle that enable balanced, briefcase-style transportation and compact storage in vehicles and job boxes. With only two simple steps to deploy, the chain vise eliminates multiple setup hassles and delivers a quick and painless setup. Equipped with STABLE LOK, contractors can easily adjust the tension of the deck to maintain steadiness throughout the life of the stand. The tripod features an adjustable leg, allowing the deck to be pitched plus/minus 3 degrees for level alignments. With a multimaterial chain vise, a larger work surface, and optimized tool storage, the stand can serve as a portable work desk while on the job site. 800-729-3878; [www.milwaukeetool.com](http://www.milwaukeetool.com)



## 3 // GENERAL PIPE CLEANERS GEN-EYE X-POD PLUS SEWER CAMERA

The Gen-Eye X-POD Plus sewer camera system from General Pipe Cleaners now includes the Gen-Pack battery adapter, Wi-Fi transmitter and an on-screen distance counter as standard equipment. Depending on battery type and settings, the built-in battery adapter allows for up to 12 hours of operation in remote locations with limited access to power. The built-in Wi-Fi transmitter lets you view and record work on a cellphone or tablet. And using the system's USB port, you can also archive activity on flash drives. The new on-screen distance counter also shows how far the camera has travelled down a line in feet or meters. And for optimum accuracy, settings can be adjusted for full-size or mini-reel configurations. A 7-inch LCD color monitor with a sunscreen provides easy viewing in any location, and the camera has a one-touch recording for speed and convenience. 800-245-6200; [www.drainbrain.com](http://www.drainbrain.com)



## 4 // PICOTE SOLUTIONS BATTERY-POWERED MILLER SYSTEMS

Picote Solutions has launched two of its latest easy-to-use and easily transported miller options in a battery-powered format. The two new units are the battery-powered Mini Miller and Mini Cleaner. The Two units are totally cordless when operating and feature a new dedicated brushless motor. The Mini Miller is designed for cleaning and descaling as well as root removal in pipes between 2 to 4 inches in diameter. The units can also be used for cutting and reinstatement work in pipes from 2 to 3 inches. The Mini Cleaner is designed for cleaning, descaling, root cutting and brush coating operations in pipes from 1 1/4 to 3 inches in diameter. Both the Mini Miller and the Mini Cleaner can be retrofitted or upgraded to operate with the Picote +C option, which allows operations to viewed in real time via an onboard CCTV camera. 708-267-6366; [www.picotesolutions.com](http://www.picotesolutions.com) c

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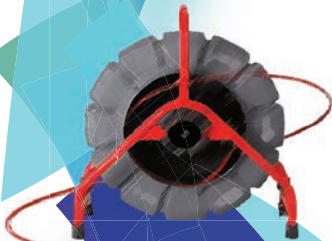
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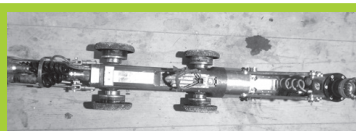


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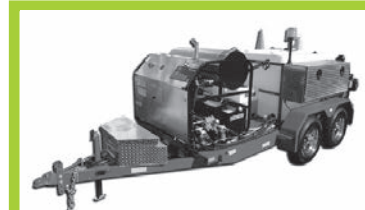
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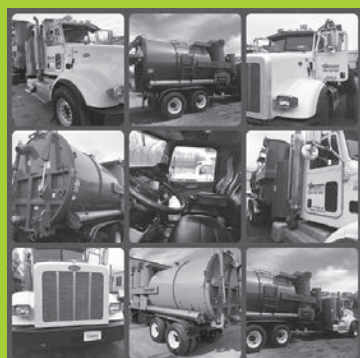
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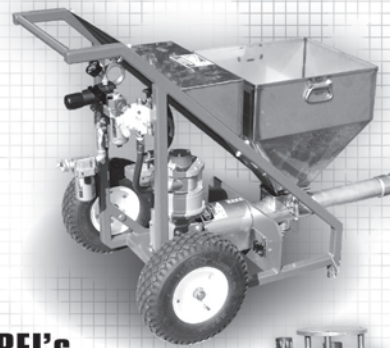
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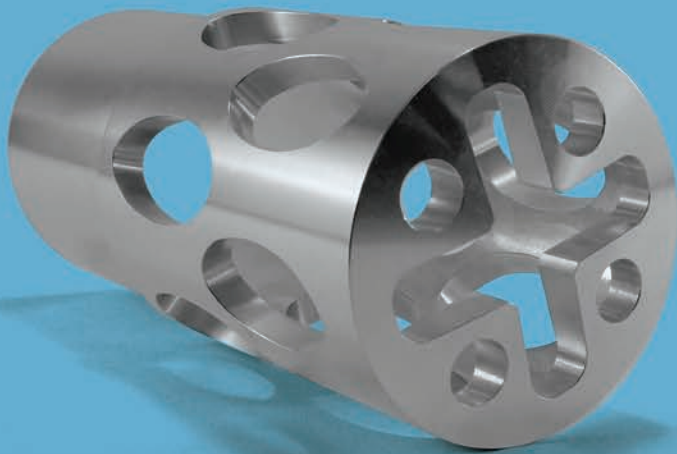
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# INDUSTRY NEWS

## Vortex promotes Matt Timberlake to chief administration officer

The Vortex Cos. announced the promotion of Matt Timberlake to chief administration officer to oversee the company's process improvement, fleet management and procurement divisions. He was previously the company's head of corporate development.



Matt Timberlake

## RIDGID awards four PHCC scholarships

RIDGID awarded scholarships to four plumbing and HVACR apprentices as part of its partnership with the Plumbing-Heating-Cooling Contractors Educational Foundation and its apprentice contest. Each winner received a \$1,000 education scholarship, plus \$1,500 of tools from RIDGID and special recognition at PHCC Connect 2021, held Oct. 20-22, in Kansas City. The 2021 scholarship recipients included Tyler Earle, Forestdale, Massachusetts; Martin Gorman, Belmont, Massachusetts; Paul Kwiecinski, Chicago; and Christopher Friendly, Anchorage, Alaska.

## NLB Corp. combines Michigan operations

NLB Corp. opened a new headquarters in Wixom, Michigan, in December. The 170,000-square-foot facility, only a few miles from the company's current headquarters, combines all its Michigan operations — sales, parts, service, manufacturing, engineering and rentals — under one roof.

## Western Drain opens new store in Anaheim

Western Drain Supply opened a new location in Anaheim, California. Shoppers can quickly find the brands they prefer in exclusive brand rooms stocked with tools and supplies from Picote, RIDGID and APS. The store also features a try-before-you-buy pipe wall where customers can put equipment to the test before purchasing. A new training center allows the company to host on-site seminars and demonstrations for new product releases, pipe lining, patching and descaling.

## bluefrog Plumbing + Drain to expand in Arizona

bluefrog Plumbing + Drain announced plans to award 12 franchise agreements in 2022 with two locations in Phoenix and Tucson, Arizona, at the top of the list. As part of the network's planned expansion, the plans are part of bluefrog's larger goal to open 50 new locations in the U.S. over the next five years. **c**



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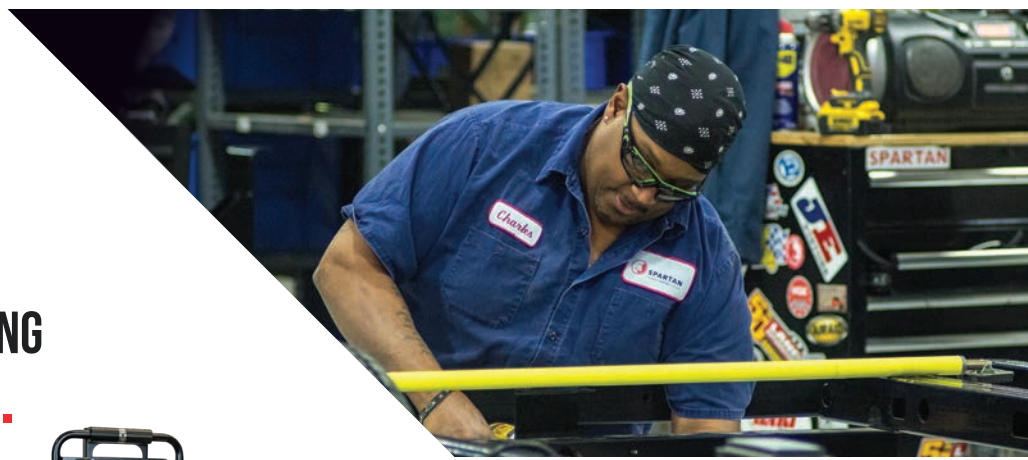
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