

Cleaner

A NATURAL EVOLUTION

FOR DRAIN AND PIPE CLEANING,
INSPECTION AND REHABILITATION
PROFESSIONALS

RODNEY KING'S ENTREPRENEURIAL SPIRIT AND
INGENUITY ALLOWED HIM TO TURN A PART-TIME
PRESSURE-WASHING GIG INTO A SUCCESSFUL
DRAIN CLEANING ENTERPRISE / 28



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“The biggest reason why we went with NuFlow is because of the support that we got from the very beginning.”

Now entering their third year in business, the duo couldn't be happier with their choice.

“The profitability of pipe lining has been a huge part of our success. It's allowed us to invest in more equipment and hire more people.”

While adding pipe lining was a great tool to add to their portfolio, they agree that choosing the right partner was also an important factor.

“Absolutely do it, but make sure you do it with a company like NuFlow because of the support they offer. We wouldn't have landed some of the bigger jobs and wouldn't be as successful getting the projects done if it wasn't for their support. The most valuable thing about NuFlow is contacting someone directly and getting a response right away.”



Greg Copas and Spencer Drake,
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ON THE COVER // Rodney King had quite the circuitous journey to the drain cleaning industry. He went from a law enforcement career, to a regular contract with Walmart pressure cleaning AC coils, to eventually adapting that equipment to launch his sewer and drain cleaning company Hydro-Mole, based in southern Illinois. (Photography by Brad Leeb)



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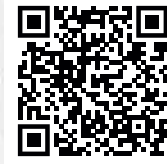
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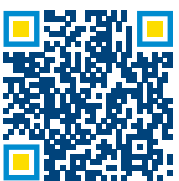
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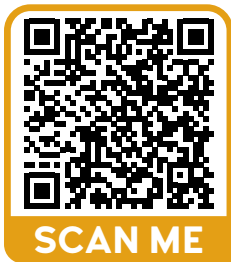
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UNDER THE MICROSCOPE

Milwaukee Plumber Aces Honesty Test

Integrity is a big issue for consumers when they hire plumbers and drain cleaners. Unfortunately, there's no honesty test or truth serum available to customers to ensure they're not being ripped off by unscrupulous contractors. But a Milwaukee TV station tried to make one once, investigating area plumbing companies in a sort of "sting" operation to assess their honesty. Heiden Plumbing ended up being a target. Andy Wyderka, president and co-owner, talks about it in this online exclusive. >> [cleaner.com/featured](https://www.cleaner.com/featured)



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WEB SURFING

Sharing the Best Content

We're always on the lookout for relevant and interesting plumbing and drain cleaning content across the internet and social media. In our e-newsletters, we regularly highlight that and share what

else out there we're reading and watching. For example, this fun news story out of New York City, where for four nights, people gathered on the shores of the East River where it met a combined sewer outfall to hear musicians use the tunnel's characteristics to produce a unique audio experience. Be sure to sign up for *Cleaner* e-newsletters if you haven't already. >> [cleaner.com/featured](https://www.cleaner.com/featured)

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GAME-CHANGER

Trailer-Mounted Jetter Opens Up New Markets for Kansas Drain Cleaner

A-1 Pump & Jet of Emporia, Kansas, was featured in the June issue. In this online exclusive, Ronald McCoy, who co-owns the company with wife Judith, talks about his approach to equipment investment. He focuses on tools that can open up new customer markets. Take the company's latest water jetter, a model 4025 trailer-mounted unit made by U.S. Jetting (4,000 psi at up to 25 gpm). "I believe that with the ability to generate pressure of 4,000 psi, this machine will be a game-changer for us going forward," McCoy says. "For instance, there's a nuclear power plant about 50 miles away that needs a lot of high-pressure cleaning that we couldn't do before with our other jettors (which generate 2,000 psi). But a machine with 4,000 psi will open a lot of doors to business we've been unable to do before." >> [cleaner.com/featured](https://www.cleaner.com/featured)



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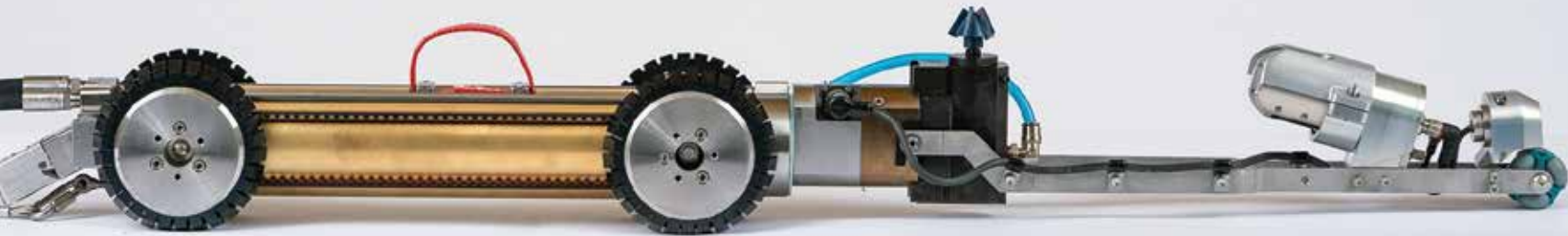
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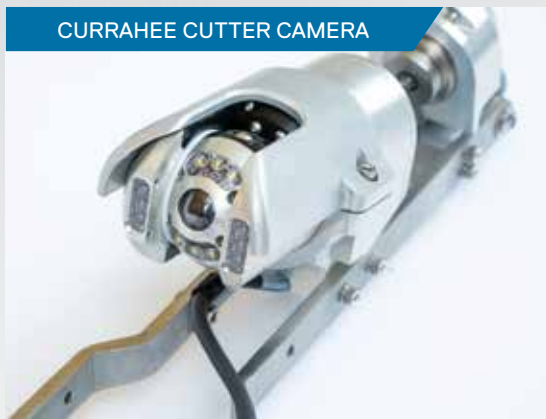
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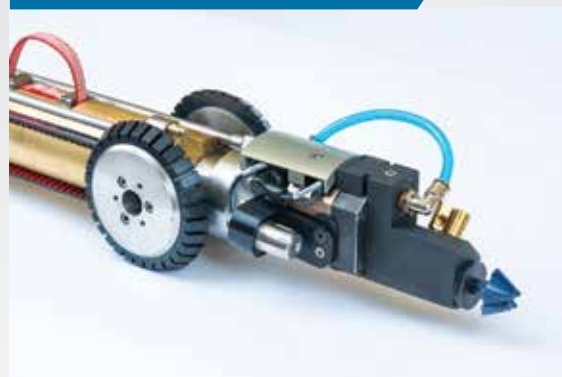
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Customers may not always appreciate or understand the factors that go into your pricing, but don't let that deter you from asking for the true value of your services



Email me with comments, questions or opinions at editor@cleaner.com

THE PUBLIC SOMETIMES has difficulty understanding the value of your services. How often have you encountered a customer who balks a little at your pricing on a job, especially something like a drain clog that takes 30 minutes to clear? You know you're offering a fair rate when you consider your expertise and overhead costs like equipment and employee salaries. But all the customer sees is something that appeared to be fairly easy to do accompanied by what they view as a high price tag. They feel a little ripped off.

Armando Ramos, whose company is featured in this issue, actually got into the industry off this dichotomy between drain cleaning and public perceived value. While working in maintenance at an apartment complex, he took note of the prices being charged by the drain cleaning techs who would come in.

"They would take maybe 30 or 40 minutes to unclog a drain and then charge \$250, which seemed like a lot of money to me. It opened my eyes to the opportunities," Ramos says.

That's what prompted him to charge only \$50 per cleaning as he got started in the business. It helped him gain some market share in the beginning, but in time Ramos realized that it was unsustainable.

"I went really low with my prices to be competitive," he says. "I was proud of telling people that I did the same thing as other contractors, but for a much cheaper price. But then we had a hard time paying the bills. Charging people too little for your services is one of the biggest mistakes a business owner can make."

Know your worth. You provide a valuable service to people, and you deserve to be compensated appropriately for it. It can be tempting to fall into the cost-cutting trap in a competitive business environment, but that approach only worsens the public's perception of the value of your services and hurts the larger industry. Plus, any company with that mindset likely won't be able to stay in business for long as they struggle to provide quality service on slim profit margins.

Of course, knowing your worth is only half the battle. You have to also be able to express it to your customers so that they understand the value they're getting for their money. Then they won't blink at whatever price you're charging. Easier said than done. The Better Business feature in this month's issue by Anthony Pacilla covers that topic some, highlighting things you can do to make sure customers feel that they're getting their money's worth.

There may still be a disconnect on pricing with some customers no matter how exemplary the service you provide is or what you do to educate them. There are people who simply get stuck on what they think a certain thing should cost. Just be sure you don't accidentally get caught up in that same mindset. Remember, it's OK to charge the proper value your services are worth.

Enjoy this month's issue. **c**

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BRAND MASTER

ARMANDO RAMOS GOT HIS START OFFERING CHEAP DRAIN SERVICE VIA CRAIGSLIST ADS, BUT HIS COMPANY QUICKLY GREW THANKS TO A SAVVY REBRANDING AND SOME SOUND THIRD-PARTY BUSINESS ADVICE // **By Ken Wysocky**

WHEN ARMANDO RAMOS DECIDED AT AGE 19 TO OPEN A DRAIN CLEANING BUSINESS IN PHOENIX IN 2010, HE WAS THE DEFINITION OF A BUSINESS ROOKIE — A ONE-MAN OPERATOR WHO UNCLOGGED DRAINS FOR \$50 A POP AND RELIED ON CRAIGSLIST ADS TO ATTRACT CUSTOMERS.

Now the owner of Plomero en Phoenix (Plumber in Phoenix), Ramos, 31, is an experienced businessman, not a novice. He employs six people; runs three professional-looking service trucks, replete with eye-catching vinyl wraps; manages an effective marketing campaign centered on social media; and generates more than \$1 million in gross revenue annually.

Not bad for a self-made entrepreneur with little formal education.

A combination of key factors drove his transformation from small-time operator to big-time contractor: a strong work ethic, an innate sense of marketing savvy, business coaches and investments in durable and efficient equipment.

“Honestly, I didn’t have any other options,” Ramos says when asked what made him think he could build a successful business. “I had no other career path to follow. What could go wrong?”

He started out with only a 1992 Toyota Tundra pickup truck and a RIDGID drum drain cleaning machine.

“I already was making minimum wage at my job as a maintenance technician at an apartment complex,” Ramos says. “So in my head, I figured if I did three or four drain jobs a day for \$50 apiece, I was making much more money.”



Plomero en Phoenix
PHOENIX, ARIZONA

OWNER	Armando Ramos
EMPLOYEES	6
FOUNDED	2010
SERVICES	Plumbing, drain cleaning, camera inspections, sewer line replacement and repair
SERVICE AREA	Phoenix metro area
WEBSITE	www.miplomeroenphoenix.com

» Armando Ramos, owner of Plomero en Phoenix, poses in front of one of his service vans.

PLOMERO

EN PHOENIX





◀ Bryan Estrada unloads equipment, including a RIDGID SeeSnake, at a job in Phoenix, Arizona.

✔ Plomero en Phoenix's service focus includes plumbing, drain cleaning, camera inspections, and sewer line replacement and repair.



"I WAS PROUD OF TELLING PEOPLE THAT I DID THE SAME THING AS OTHER CONTRACTORS, BUT FOR A MUCH CHEAPER PRICE. BUT THEN WE HAD A HARD TIME PAYING THE BILLS. CHARGING PEOPLE TOO LITTLE FOR YOUR SERVICES IS ONE OF THE BIGGEST MISTAKES A BUSINESS OWNER CAN MAKE."

ARMANDO RAMOS

Ramos was inspired by the high prices he saw contractors charge for cleaning drains at the apartment complex where he worked. During his time there, he also gained basic plumbing knowledge from a longtime elderly employee.

"I'd talk to technicians and ask them about their jobs, which intrigued me," Ramos says. "And money-wise, they would take maybe 30 or 40 minutes to unclog a drain and then charge \$250, which seemed like a lot of money to me. It opened my eyes to the opportunities."

Those prices are what prompted him to charge only \$50 per cleaning. The low price helped him "buy" market share, but he later realized it was unsustainable from a business standpoint.

WILLING TO WORK HARD

At first, Ramos cleaned drains only very early in the morning or after finishing his shift at the apartment complex. But after about five months of working and building his confidence, Ramos quit his

regular job and worked full time on building TCI Solutions, the first iteration of Plomero en Phoenix, by running Craigslist ads.

Even then, Ramos displayed a commonsense aptitude for marketing by writing his own ad copy as well as using different phone numbers for different ads so that he could track which ones performed better than the others. He used a free app called Google Voice to funnel all phone calls to his cellphone.

"I spent a lot of time at night trying to figure out how to stand out with my Craigslist ads," Ramos says. "I had to think outside the box."

After dabbling in a couple other advertising platforms, Ramos achieved a breakthrough when he created a Google My Business profile and a website page in Spanish.

"After about two weeks, the phone started ringing," he says. "I figured out it was the Spanish website and Google profile. So when I saw how many people wanted a Latino plumber, I switched gears and

» Armando Ramos (right) talks with Scottin McCabe and Bryan Estrada during a morning meeting at Plomero en Phoenix's office.



rebranded the company from TCI Solutions (which he had envisioned as both a plumbing and a handyman business) to Plomero en Phoenix. At that point, making the change was a no-brainer.”

At first, Ramos feared he might lose his English-speaking customers. But that didn't happen. In fact, he says many customers call the company because they want to support a minority-owned business.

THE PRICE WASN'T RIGHT

Ramos credits much of the company's success to several business coaches he's hired over the years. They taught many important basics of business, including how much to charge customers for various services.

In short, Ramos learned that was selling himself short by doing drain cleaning jobs for only \$50.

“I went really low with my prices to be competitive,” he says. “I was proud of telling people that I did the same thing as other contractors, but for a much cheaper price. But then we had a hard time paying the bills. Charging people too little for your services is one of the biggest mistakes a business owner can make.”

Ramos says he knew he needed help when he eventually realized his profit margins were consistently too small.

“I thought we were making money, or at least it looked like we were,” he recalls. “But when we'd do our taxes at the end of the year, we'd realize we didn't make that much money after all. It looked like I didn't even own a company. We were doing a lot of jobs and trying to stay competitive, but we weren't making much money. So I realized we needed someone to show us some better business practices.”

KNOW THE NUMBERS

Enter Matthew Barbosa, a business coach and trainer from a company called Service Excellence.

“Matthew taught us how to price jobs properly and build value for customers,” Ramos says. “He taught me that we have to create value

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» Scottin McCabe and Bryan Estrada do work in a bathroom.

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so that at the end of the day, price no longer is a factor because customers understand the value of what they're getting for their money."

Barbosa also showed Ramos how to factor in all business expenses when setting prices, including salaries for him and his employees then a 12% to 15% profit margin on top of that.

"Now we're not the cheapest contractor around," Ramos says. "But the other day, we won a job even though we were \$1,000 more than two other competitors. How? It was the way we treated them — provided a full evaluation and different options with no sales pressure."

SPEND MONEY TO MAKE MONEY

Ramos also pays for a coach from Power Selling Pros that provides ongoing coaching for employees who take service calls. The result? A 20% increase in job bookings, he says.

In addition, once a year for the last two years, he's hired a coach from Service MVP who holds a five-day "boot camp" for technicians.

The company spends roughly \$2,100 a month on coaching, but Ramos says it's a worthwhile investment because it helps him see his business in a totally different light.

"If you don't know your numbers, you don't know your business," he says.

"I'M NOT AFRAID TO SPEND MONEY ON OUTSIDE CONSULTANTS. ... I'M INVESTING IN MY COMPANY BY HIRING THE RIGHT PEOPLE WHO CAN TEACH US HOW TO DO THINGS RIGHT AND HELP GET US WHERE WE WANT TO GO."

ARMANDO RAMOS

Ramos also hired an outside marketing firm, KickCharge Creative, for his rebranding campaign.

"I wanted to go full bore on the rebranding," he says.

Based in New Jersey, KickCharge Creative specializes in branding and advertising services for home-service contractors. The company developed Plomero en Phoenix's eye-catching logo and vinyl wraps for service vehicles.

"I'm not afraid to spend money on outside consultants," Ramos says. "The way I look at it, I'm investing in my company by hiring the right people who can teach us how to do things right and help get us where we want to go. They've all been a huge part of our success."

PRODUCTIVE EQUIPMENT

Technicians drive three service vehicles: a 2021 Isuzu NPR chassis with a Hackney box body and 2021 and 2006 Chevrolet Express cutaway vans, one with a WorkMaster utility body from Harbor Truck Bodies and the other with a utility body made by Knapheide Manufacturing Co.

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NO DANCE MOVES REQUIRED

TikTok isn't just for teens that perform eye-catching dance moves or lip-sync to the latest jams. Contractors like Plomero en Phoenix (Plumber in Phoenix) find the social media platform to be a great marketing tool, too.

"TikTok helps you connect with an audience on a more personal level," says owner Armando Ramos. "You can do things on TikTok you wouldn't do on Facebook. Like if I talk like a plumber, it would be inappropriate on Facebook. But on TikTok, viewers just think I'm being real — they find it authentic."

Ramos started using TikTok in 2020. He shoots his own videos and has almost 150 posted on his account. Most of them are educational and all are spoken in Spanish.

For example, one video — which starts with Ramos using a large circular saw to cut open an old water heater — explains what an anode rod is. The video, which is one minute and 27 seconds long, has more than 96,000 views.

What are some keys to successful videos? Keep them short and simple and focus on things people can identify with or might find interesting, Ramos says.

"You need to give them information no one has given them before," he says. "It engages them because no one has ever explained these things to them."

Ramos' most popular post uses time-lapse video to show him replacing an old exterior hose bib on a house in a dizzying 58 seconds, with country music artist Aaron Tippin's "Working Man's Ph.D." playing as he works. The video so far has garnered 11,700 likes, 186 comments, and a whopping 499,000 views. A similar video that features a catchy Plomero en Phoenix jingle garnered more than 59 million views, more than 1.8 million likes and more than 7,800 comments.

In all, Ramos' TikTok account has collected nearly 247,000 followers and more than 2.3 million likes. And it's entirely free exposure, Ramos points out.

"All it costs me is the time to do the videos, which is time well spent compared to the amount of work we get from it and how effectively it brands our company," he says. "It really drives revenue."

Ramos knows this because employees who take phone calls are trained to always ask people how they heard about the company, so it's apparent which marketing efforts are working the best.

"I'm well known locally. People have stopped me at gas stations to take photos with me," he says. "They congratulate me and say they love what I'm doing. It totally surprised me. I never expected it would take off like this. I was kind of shocked at the beginning and I'm still kind of shocked now."



▲ Armando Ramos (center) started out as a solo operation gaining work via Craigslist and now runs a company that does more than \$1 million in gross annual revenue and employs five technicians, including Scottin McCabe (left) and Bryan Estrada (right).

"I WAS JUST A SOLO GUY IN A TRUCK WHO COULD BARELY PAY HIS BILLS AND NOW I EMPLOY FIVE GUYS AND RUN THREE TRUCKS."

ARMANDO RAMOS

Each truck is equipped with a K-60 portable cable machine and K-45 handheld drain machine from RIDGID and a wheeled model 100 cable machine from Spartan Tool.

"I like RIDGID machines because they're so durable — real workhorses," Ramos says. "The K-60 is light enough that you can carry it up to a rooftop without dismantling the machine. And I love the automatic feed and retrieve functions on the Spartan 100. I don't have to use my back to pull back the cable."

The company also owns a larger Spartan Model 300, designed for 3- to 6-inch-diameter lines, for jobs the other machines can't handle, like severe root blockages.

In addition, Ramos has invested in a trailer-mounted Brute water jetter (9 gpm at 4,000 psi) and a PlumberJet cart-mounted jetter (5 gpm at 3,000 psi), both from Jetters Northwest.

"Overall, they're very dependable and they're powerful — they get the job done," Ramos says. "Every time I turn them on, they work."

The company also relies on three inspection camera systems — one RIDGID SeeSnake Mini Pro and two SeeSnake Minis — that Ramos describes as "real moneymakers" for the business. Technicians use RIDGID Pipe Patch Repair kits for point repairs in pipelines. A Bobcat E20 compact excavator rounds out the company's equipment fleet.

How did Ramos initially afford equipment? Largely with lines of credit, he says.

"But all the machines paid for themselves very quickly," he notes.

JUST GETTING STARTED

Looking back, Ramos says he's both amazed and proud of how far his company has come in the past decade.

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"I was just a solo guy in a truck who could barely pay his bills and now I employ five guys and run three trucks," he says. "But it's not just me. At the end of the day, I'm even prouder of everyone who works around me, including my brother, Bryan, and my wife, Triny. You're only as good as your employees."

As for what lies ahead, Ramos is eager for more growth. In five years, he says he wants to be a \$5 million-a-year company.

"I want to bring on more technicians, bring trenchless pipe rehab in-house (the company currently subcontracts for that) and keep growing our market and keep making the right investments," Ramos says. "We just want to keep growing." c

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A NATURAL EVOLUTION

Photography by Brad Leeb

RODNEY KING'S ENTREPRENEURIAL SPIRIT AND
INGENUITY ALLOWED HIM TO TURN A PART-TIME
PRESSURE-WASHING GIG INTO A SUCCESSFUL
DRAIN CLEANING ENTERPRISE // **By Giles Lambertson**

Some successful companies spring full-blown from the mind of a founder. All contingencies planned for. Five- and 10-year goals firmly in place. Every box checked. Success, here we come.

Other companies just sort of happen. They segue from startups to seriously successful enterprises by taking risks and riding opportunities. That's the story of Hydro-Mole Drain and Sewer Cleaning Contractors and its owner Rodney King.

King, 56, was a police officer for 10 years in his native Mount Vernon, Illinois. In about the eighth year of his law enforcement career, he decided to also start a pressure-washing business on the side. Being self-employed was a family trait, and the entrepreneurial gene hadn't skipped a generation. King bought a Honda pressure washer and went to work cleaning concrete surfaces part time in banks and fast-food drive-thrus as well as in other locations.

The next step in his serendipitous business plan occurred the

« Rodney King, owner of Hydro-Mole, removes grease from a line coming out of a kitchen at the DoubleTree Inn and Suites in Mount Vernon, Illinois.

very next year when he spotted a Walmart service technician in the store's parking lot. He idly inquired if Walmart might have some pressure-cleaning work that he could do. It turned out that Walmart hired contractors to clean air conditioning coils in rooftop units.

"I was at the right place at the right time," King says.

Walmart management was not satisfied with the work of the company then holding the contract and encouraged King to bid on the work. He did, won the contract and soon had two guys in two trucks cleaning AC coils in all the Walmart and Sam's Club stores in southern Illinois and southern Indiana.

King kept his day job on the police force, though he helped his workers from time to time. The following year, Walmart executives expressed complete satisfaction with the pressure cleaning work and gave King a contract for all of the corporation's Illinois and Indiana facilities.

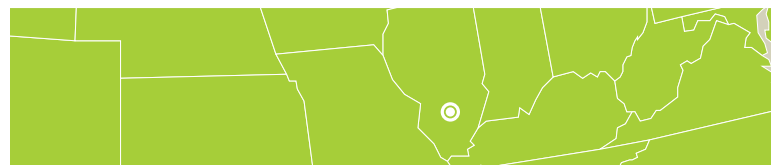
"In 1999, I quit the police department and concentrated on my business," King says. "A contract was just for a year, so I was gambling that I could keep it."

The gamble paid off. Over the next 11 years, King's pressure washing business with Walmart grew until he had six guys in three trucks cleaning stores in about a dozen states from Virginia to Montana. The workload increased further when Walmart contracted him to clean refrigeration racks in addition to the AC units.

MAKING THE MOVE TO DRAIN CLEANING

King kept thinking about how he could evolve his business. He diversified and began to dabble in drain and sewer work while he was still fully engaged with Walmart.

» Hydro-Mole is a solo operation and King intends to keep it that way, noting that he enjoys doing the work and is able to keep his prices affordable without any employees.



Hydro-Mole Drain and Sewer Cleaning Contractors

MOUNT VERNON, ILLINOIS

OWNER Rodney King

FOUNDED 2011

SERVICES Drain and sewer cleaning, camera inspections

SERVICE AREA All of southern Illinois

FACEBOOK PAGE www.facebook.com/hydromole

Then, in 2010, King ended his work with Walmart entirely and the following year launched Hydro-Mole Drain and Sewer Cleaning Contractors.

Furthermore, he adapted to pipe cleaning the same pressure-washing equipment he had so effectively used on Walmart rooftops.





“ALL THAT EQUIPMENT I HAD FOR WALMART TRANSFERRED OVER. I DIDN'T HAVE TO GO OUT AND BUY A JETTER.”

RODNEY KING



“All that equipment I had for Walmart transferred over,” he says. “I didn’t have to go out and buy a jetter.”

Instead, King calls on his two Honda pressure-washing units, each of which produces 8 gpm at 3,000 psi. If one can’t unclog a line, he brings both units to tackle a blockage. That proves sufficient for the lines he works on, mostly ranging from 2 inches to 8 inches in diameter.

But the transition to full-time pipe cleaning wasn’t without some difficulty for King.

“Starting a new business is hard,” he says. “Some plumbers referred jobs to me, some didn’t. I had to work to get the business off the ground.”

For three years he hedged by bidding and winning some more pressure cleaning contracts with Walmart, but he persisted.

“Then the business really started taking off,” King says.

SOLO OPERATION

Today, King answers drain and sewer service calls all across southern Illinois, from Effingham to Cairo. Three quarters of his customers are homeowners and property owners. The rest are

split between industrial and commercial.

“I do it all,” King says. “I might work at cleaning culverts for a township one day, then answer a call from the local Continental Tire factory.”

He says he likes the mix.

“It is different every day,” King says. “One day you have nothing particular going and then the next you’re called to a food processing plant. I’m blessed with the work that people give me.”

Though the workload of Hydro-Mole has increased, the number of people doing the work has not. King works alone.

“It’s just me,” he says. “There are times when I wish I had a helper. It would be nice to have someone else setting up when I get to a job. But I have a lot of plumbing buddies, and most of the time if I really need someone to help, I can get someone. I can do it myself 95% of the time.”

Because King works alone, that means some customers call when he’s already obligated to another job. He can’t be in two places at once.

“Most of the time, they’ll wait. They know I’ll get to them,” he says.

That suggests Hydro-Mole Drain and Sewer enjoys a good reputation and also might reflect the prices King charges for his services.

“Not having employees helps me keep prices at an affordable level,” King says. “I don’t have any extra overhead. I can do a job for \$125 an hour, and most of the time I’m done within an hour. Go 60 miles west to St. Louis and you’ll pay \$700-800. This is southern Illinois. You need to keep prices affordable.”

RELIABLE TOOLS

The use of pressure washing equipment to clear impediments from smaller-diameter

◀ Rodney King’s preferred jetting nozzles are from StoneAge.

✔ King cleans a drainline at the Elks Lodge in Mount Vernon, Illinois.



drains and sewers made business sense because King could reuse equipment he already owned. Otherwise, King’s tool selections and his approach to the work are pretty conventional.

He attends the WWETT Show in Indianapolis most years, usually searching for new nozzles.

“My main nozzles are from StoneAge, the Warthogs. The WT for 3/8-inch hoses; the WS for 1/2-inch hoses,” King says.

His Picote Mini Cleaner is a go-to tool when he is working narrower lines. He can also haul out a Spartan Model 300 cable

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DO-IT-YOURSELF EQUIPMENT MANUFACTURING

Rodney King subscribes to the belief that if you need a tool and can't find one to purchase, make it yourself.

The owner of Hydro-Mole Drain and Sewer Cleaning Contractors did just that, and it led to the creation of what he named Keikarts, an allusion to the miniature kei trucks popular in Japan.

It happened this way: Five years after starting Hydro-Mole Drain and Sewer Cleaning Contractors, King was frustrated with the transport of inspection camera units from work van to work site.

"The camera is narrow and is constantly flipping on you when you're pulling it through a yard to where you want to use it," King says.

So he sketched out the design for an all-terrain rig in which his EnviroSight camera could be securely placed and more easily be moved. The cart also fits a MiniCam camera.

"It allows you to move with ease from Point A to Point B, whether the terrain is muddy or rocky or the place you'll use it is 300 feet away," King says.

He took his idea to a metal fabricator and had several all-terrain carriers made in hopes of marketing them. He affixed the Keikart name to the finished product, patented the creation and took it to Indianapolis to a WWETT Show. The manufacturer Picote subsequently asked King to create an all-terrain cart specifically for its Maxi Miller unit. On his own initiative, King designed yet another model for the RIDGID SeeSnake.

Eventually, King also showed his camera carrier to Mike Vislay, vice president of Key Equipment & Supply Co. in St. Louis where King buys his cameras. Vislay was impressed by King's invention and asked him if he was willing to sell his patent. Today, Key Equipment & Supply Co. owns and markets the cart.

"His guys sell cameras at shows and they have the cart with them when they do. It's an easy sell. I knew the carrier needed to be in Mike's hands," King says.

The all-terrain carrier wasn't a one-off inventive impulse. King also made what he branded a Stealth jetting cart that he also sold at equipment outlets and the WWETT Show. Is there another gizmo coming together somewhere in his head?

"I have some stuff in the works," King admits, though he's not ready to reveal anything yet.



📍 Rodney King cleans a drainline for the embalming table at a funeral home.

machine or a sectional machine from Electric Eel. For pipe inspections, King relies on EnviroSight and KeyVision units.

When a plug resists both pressure and cable, King fires up his Mi-T-M burner to heat up water to unleash against the clog.

SUCCESS STORIES

King has had notable success with his hot water solution. On one call from a plumber friend, a hospital had a thoroughly clogged 600-foot drainline that everyone assumed would have to be excavated and replaced.

"I started jetting with hot water and poked a hole through the grease," King recalls. "Then I ran a camera in there — into a 6-inch PVC line connected to an 8-inch cast iron line — and found years of buildup in the cast iron. I got it cleared and now I go out there every quarter and jet the lines. It turned into a pretty good gig."

On another occasion, a plumber called about a drain that served two adjacent houses.

"I went there and started jetting," King says. "There was a chemical smell and I didn't know what it was. Turns out the other house used to be a funeral home and the smell was formaldehyde that had built up in the line. Rock hard."

King used a degreaser and his hot water to tear through the blockage.

One more hot-water story: A convenience store was being remodeled and at the end of the day the flooring crew flushed their excess epoxy down

"NOT HAVING EMPLOYEES HELPS ME KEEP PRICES AT AN AFFORDABLE LEVEL. I DON'T HAVE ANY EXTRA OVERHEAD."

RODNEY KING

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«Rodney King often uses his Mi-T-M burner to heat up water to use on especially tough clogs.

“Whenever you’re jetting, you have water coming back. You have to contain it. I use them whenever I’m working indoors. That back-wash can be nasty.”

Needless to say, customers appreciate the care shown for their kitchen or bathroom floors, and that’s good for business.

“I enjoy helping people,” King says. “I’ve always been a people person. I like the position I am in in my life. I enjoy cleaning drains and sewers.”

And if all else fails, King can always return to Walmart, which

still invites him to bid for new contracts. But he says he has no plans to send in any bids.

“I just want to keep doing what I’m doing, which is providing the best service at the best price,” King says. **c**

“I ENJOY HELPING PEOPLE. I’VE ALWAYS BEEN A PEOPLE PERSON.”

RODNEY KING

a toilet. It took King two days to clear the epoxy from the line, which served both men’s and women’s restrooms.

“I had my hot water and the WS nozzle and a flushing nozzle and I was able to start breaking it apart and pull it out of there,” he says.

The flooring company indirectly paid that bill.

A cleaning job not involving hot water instead involved distance. A coal mining company in southern Illinois called King because the mine’s water discharge line running to the surface became blocked when accumulated coal dust solidified inside. The company told King the line probably ran 500 feet down to the mine floor.

“At 520 feet it still wasn’t unblocked,” he says. “I kept adding 50-foot lengths to the 1/2-inch hose. At 720 feet, I finally broke through.”

Then things got interesting. Air pressure from the deep mine wouldn’t release its hold on the hose until King hooked it to a truck and pulled it out. The unorthodox retrieval method ruined all but the last 200 feet of hose. The company ended up buying King new hose.

“It was down there 720 feet,” King says. “That’s a long way. The St. Louis Gateway Arch is only 630 feet tall.”

A coal mine executive told King he was going to make a notation in his work file next to King’s name: “Expert.”

KEEP ON KEEPING ON

One of the work habits King picked up in his Walmart pressure cleaning days was using polyurethane dikes to contain water runoff around air-conditioning units. When he switched to working in homes and restaurants, he continued the practice.

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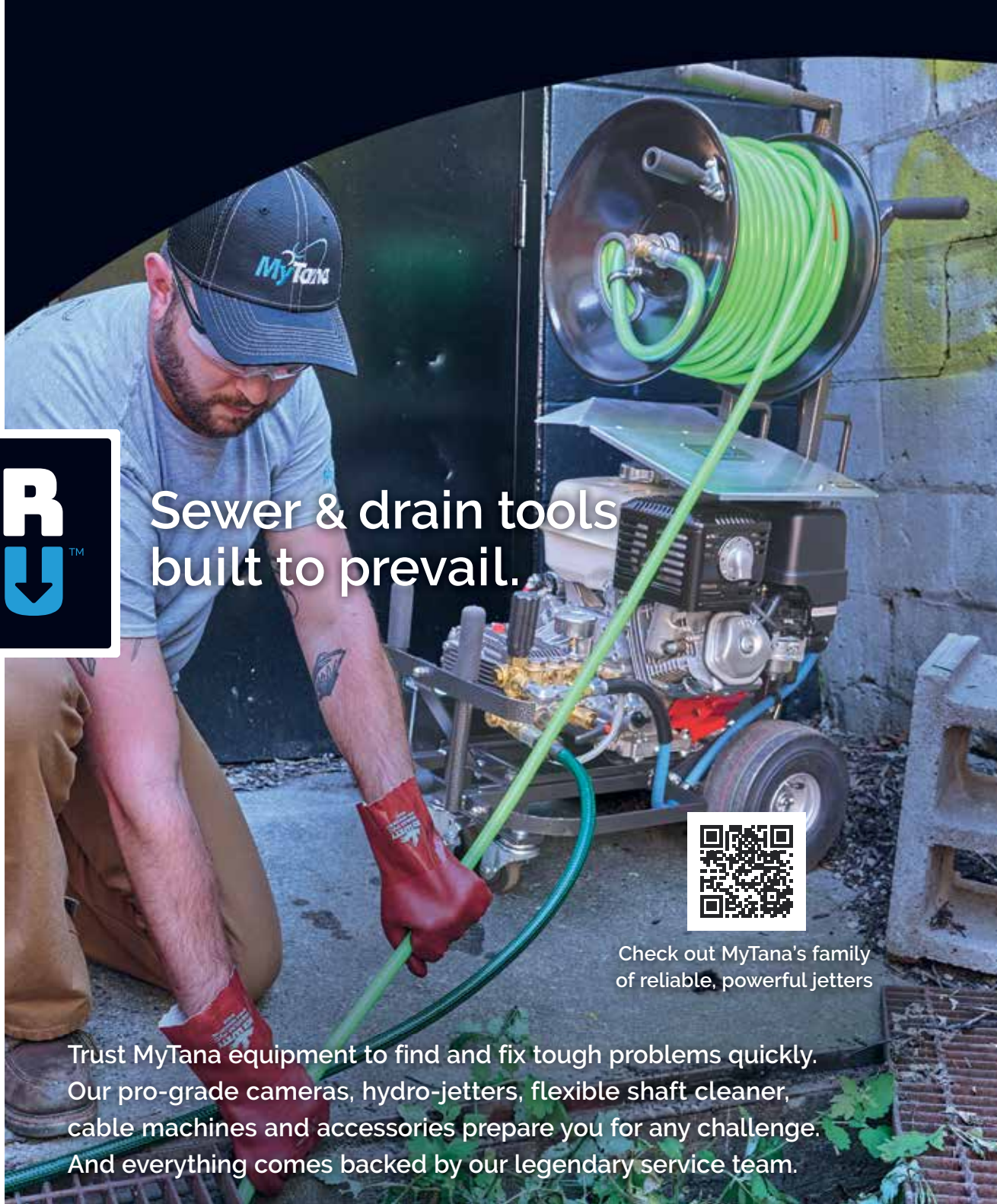
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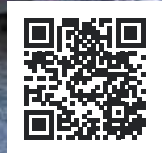
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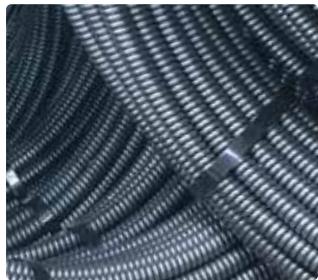
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Anthony Pacilla

SHOW YOUR WORTH

Even the simplest service calls provide opportunity to demonstrate your value to customers // By Anthony Pacilla

A S DRAIN TECHS, we are in and out of different buildings doing a wide variety of work — commercial line jetting, residential root cutting, main drain backups, routine maintenance contracts, etc. Most of those jobs come with their own highs and lows, but the smaller drain cleaning calls are what can really turn into a nightmare for a drain tech.

The problem is that you are taking a drain tech who has vast experience with all types of crazy problems, earning a lot of money, and applying that skill to something as simple as a clogged toilet — making them in a way overqualified for the job. More than likely the company you work for — or own — has overhead, wages, taxes, etc. That makes a simple call difficult to bill.

WITH NEW DRAIN TECHNOLOGY, HOWEVER, YOU CAN CHANGE THE PERCEPTION OF THE SERVICE CALL AND PROVIDE SOME ADDITIONAL VALUE TO THE HOMEOWNER WHILE DOING A BETTER JOB.

On one hand, you want to provide the customer with a good deal to gain customer loyalty. On the other hand, you need to make money on the call. The average homeowner has no idea how much it costs to run a drain cleaning business. An hour of labor plus a service call fee could be just shy of \$200 — and that's just to break even most times. The customer thinks they've been taken advantage of for such a simple task, the business is more than likely taking a loss or breaking even on the call, and the drain tech on site is now in a bad spot because walking into a clogged toilet with a toilet auger for a 10-second fix is hard to do when you must collect hundreds of dollars a few minutes later.

These small calls can rack up thousands or hundreds of thousands of dollars a year for the company so you must charge

the full rate, which puts everyone in a bind. With new drain technology, however, you can change the perception of the service call and provide some additional value to the homeowner while doing a better job.

INTRODUCE NEW TECHNOLOGY

Most of the time, the customer is just upset because they feel like they didn't get a good value. They see you walk in with a hand auger — or a plunger — and they think, "Wait, I have one of those" or, "I should have just called my son to come over if that's all they were going to use." It's as if they were expecting you to walk in with some fancy machine that they've never seen before with some real power.

And if that's what the customers want, that's what you should give them. Especially with some of the new technology and tools that are available. General Pipe Cleaners' Kinetic Water Ram, Milwaukee Tool's AIRSNAKE or Milwaukee's battery-powered toilet auger are all good examples that come to mind.

If you swear by your brand of hand auger, it doesn't hurt to follow that up with a battery-powered auger and/or an air snake. This does two things: It shows the customer you've provided a service that they couldn't have done themselves, and it does do a better job than plunging the toilet and leaving.

USING COMPRESSED AIR

There's debate on whether you should use an AirSnake or Water Ram before the auger or as a follow-up tool after the auger. In my opinion it should be used after an auger, especially on a water closet.

Both the Water Ram and the AirSnake utilize a blast of compressed air or a combination of water and compressed air to blast clogs downstream. But if there is a ton of corrosion buildup inside the internal trap, or the rubber adapter doesn't squeeze and seal all around the opening, you are going to take an unwanted shower when the blast from the gun discharges into the air and all over you.

If you can use the battery-powered auger and follow that up with the Water Ram or the AirSnake, you are really giving the customer the best possible service for such a small call. It will also help justify the cost of the call because you used tools that the homeowner either has never seen or doesn't have.

SPEAKING TO THE HOMEOWNER

It's also a smart move to make sure the customer sees that you are going the extra mile by bringing in these tools. It may even help to explain what you are going to do, or what you just did, to put their mind at ease. Even though it's a very straightforward and simple service call, a quick explanation can go a long way. Explain that an auger does a good job but that the new technology available with drain cleaning equipment provides a more powerful cleaning service. That information can justify the service charges in the customer's mind.

Don't totally rely on these tools, but make sure you leverage their use to provide additional value to your calls. **c**

ABOUT THE AUTHOR

Anthony Pacilla is a registered master plumber for McVehil Plumbing in Washington, Pennsylvania. He has over two decades of experience in the plumbing, drain cleaning and HVAC trades, and has a bachelor's in business and economics from Thiel College.



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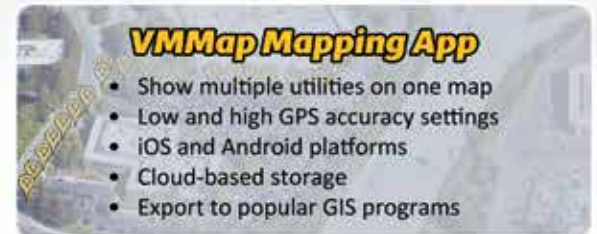


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ODD JOBS

Spray-lining system helps contractor efficiently repair irregularly shaped sewers and manholes // By Ken Wysocky

WHEN MARRA SERVICES TACKLES complex, large-diameter sewer and manhole repair projects, it brings out the heavy artillery: a Quadex I-MARS Gen1 infrastructure rehabilitation system that has significantly amped up the Cleveland-based company's productivity and profitability.

A good example is a project the company took on in 2018 in Lakewood, a western suburb of Cleveland located along Lake Erie. The project required repairing a 129-foot-deep brick manhole that ranged from 4 to 8 feet in diameter, plus an egg-shaped brick culvert that was roughly 350 feet long, 6 1/2 feet tall and 5 1/2 feet wide. The manhole and the culvert were built in 1912 and 1915 respectively and were deteriorating badly.

"It was one of the more difficult jobs we've ever done, particularly the manhole because it was more than 100 feet deep, which made spraying the mortar a real challenge," says Nick Marra, company vice president. "We had to use a crane to lower a man-basket into the manhole. We also had to spray the mortar on thicker — up to 3 inches in some areas."

While the project was difficult, it played to the strengths of the I-MARS rig (International Mobile Asset Renewal System), which can maintain pumping pressure over long distances and repair oddly shaped sewer lines.

BIG INVESTMENT

Founded in 2006, Marra Services works primarily for municipalities in Ohio and Michigan and employs about 30 people. The business first bought a remote-operated spincast Quadex spray-MASTER system about six years ago for lining small manholes. It cost around \$65,000.

Later, the company invested approximately \$500,000 in the I-MARS system; that price tag also included training and Quadex's RMX-5000 mortar-mixing/pumping unit.

"You're always taking a risk when you invest that much money in equipment," Marra says. "But there's a lot of sewer rehab work out

MARRA SERVICES INC., CLEVELAND, OHIO

OWNER Ciara Marra

EQUIPMENT I-MARS spray-lining system from Quadex (owned by Vortex Companies)

FUNCTION Trenchless rehab of sewers/manholes

FEATURES Approximate I-MARS system dimensions are 13 feet long by 7 feet wide by 6 feet tall; weighs 5,200 pounds; includes a compressor, generator, 4-ton chiller and power-distribution center; approximate RMX-5000 dimensions are 11 1/2 feet long by 5 feet wide by 5 feet tall; weighs 5,500 pounds; includes a 1,000-pound-capacity mixer, a 1,200-pound-capacity hopper and a pump that generates 3,000 psi and can spray up to 5 cubic yards of material per hour.

COST About \$500,000, including training and the mixing/pumping unit

WEBSITE www.marrainc.com

there, so we decided to buy it. We were pretty confident it would pay for itself fairly quickly, and a lot of that confidence came from the people at Quadex. The customer service is excellent. Now we probably do a couple million dollars a year in spray liners for sewer lines."

PORTABILITY AND PRODUCTIVITY

The I-MARS system's relatively small footprint — roughly 13 feet long by 7 feet wide by 6 feet tall — provides a productivity and efficiency boost by combining a compressor, a generator, a 4-ton chiller and a power distribution center in one portable unit. It weighs 5,200 pounds.

"We used to have to bring along an air compressor, a water



◀ Before: The view of an egg-shaped culvert in Lakewood, Ohio, before it was rehabbed by Marra Services with the Quadex I-MARS spray-lining system.

trailer and other equipment,” Marra says. “Now everything is all in one unit, which saves us a lot of setup time.”

The RMX-5000, which measures 11 1/2 feet long by 5 feet wide by 5 feet tall and weighs 5,500 pounds, features a 1,000-pound-capacity mixer, a 1,200-pound-capacity hopper, a 65 hp Yanmar diesel engine and a pump that generates 3,000 psi and is capable of spraying up to 5 cubic yards of material per hour.

“The technology for mixing and pumping the material is better than with other systems we’ve used,” Marra says.

On a good day, a crew can spray about 225 feet of sewer line per shift, compared to around 125 feet per shift with other equipment the company has used in the past. And they can spray about 50 to 60 feet per day on manholes, compared to 20 to 25 feet per day before.

“When we can roughly double our production, it helps us get more work because we can be more competitive with bidding,” Marra notes.

TOUGH GEOPOLYMER MORTAR

To line infrastructure, the company often uses Quadex GeoKrete, a formulated eco-friendly mortar. When mixed with water, GeoKrete forms an inorganic polymer with strong bonding properties.

Furthermore, GeoKrete is fully structural and corrosion-resistant; can be applied by trowel, spincasting or spraying; can be used in cooler winter temperatures (but heaters are required and the company uses units from Frost Fighter); and cures with virtually no shrinkage. Curing time is about 24 hours before recoating. GeoKrete lasts for about 50 years.

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MONEY MACHINES

Marra says there is a learning curve involved in using the I-MARS system because there are many variables to consider when spray-lining sewers and manholes, all of which determine how well the lining material will adhere and cure. As such, it makes sense to have Quadex personnel on site for the first several jobs, Marra suggests.

“Quadex provides great field support,” he says. “They’re always available to help.”

GAME-CHANGING TECHNOLOGY

The Lakewood project in 2018 took 23 days to complete over the course of a roughly two-month period due to late-spring snow and rain. It earned the company about \$700,000, which paid for the cost of the I-MARS system. The I-MARS system’s relatively small equipment footprint allowed roads above the project to remain open.

“We couldn’t have done that job without the I-MARS system,” Marra says. “It’s been a very valuable piece of equipment for us. We’ve grown quite a bit since we bought it, not just because

After: An employee with Marra Services works in the nearly completed rehabbed culvert. The Lakewood job played to the strengths of the I-MARS system, which can maintain pumping pressure over long distances and repair oddly shaped sewer lines.



of the equipment, but the doors it opened up for us for jobs we couldn’t do before. Also, Quadex is a contractor, too, so we’ve been hired to work with them at times, which increases our business opportunities with companies we hadn’t worked with before.”

Marra notes that the company was rehabbing sewers and manholes for years before it bought the Quadex equipment.

“But because we can work so much more efficiently now, we go after a lot more jobs than we used to,” he says. **c**

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PRIORITIZING CUSTOMER NEEDS

EPL Solutions designs diagnostic and drain cleaning equipment tailored to solving the real problems contractors encounter in the field // By Kyle Rogers

E PL SOLUTIONS WAS BORN out of necessity.

Founder and CEO John Bartucciutto began his career as a journeyman plumber in 1989 and eventually owned a subcontracting company, Electronic Pipe Locators (EPL Inc.), specializing in utility locating, leak detection, video pipe inspection, jetting and drain cleaning services. He started designing his own equipment when he found himself dissatisfied with some features of existing options.

In 1999, Bartucciutto built his first digital video recorder for sewer pipe inspections. In 2005, he designed the Gvision S/2000, the inspection camera monitor that eventually launched EPL Solutions in 2007.

“When other contractors expressed interest in my monitor, I decided to build more for others and realized the industry’s need,” Bartucciutto says.

Cleaner recently spoke with Bartucciutto about the history of EPL Solutions and what differentiates its diagnostic and drain cleaning tools in the market.

company in 2012 after servicing the Southern California area for 19 years.

CLEANER: What differentiates your range of diagnostic and drain cleaning tools from the competition?

Bartucciutto: Our products are designed from an end user’s perspective. We want reliable products to get the job done in the most efficient manner. The Gvision brand started as a simple, ruggedized monitor with a direct sunlight (TruView) LCD screen and an external DVR for digital recording. Before the market introduced Wi-Fi recording, we created a monitor that would record directly to an iPhone, iPod Touch and later on the iPad using the charge and sync cord that comes with your Apple device. It’s still a popular monitor and we’ve continued that feature in the Gvision V5 Pro. Our customers prefer DirectConnect recording to Wi-Fi recording for its ease of use and reliability. Most recently, we’ve integrated the latest Wi-Fi streaming technology in the Gvision M1 and V7 to allow for viewing and controlling the monitor remotely via Wi-Fi to an Apple or Android device. Because Wi-Fi can be unreliable, all recordings are stored on the monitor’s internal SSD. You can easily share recordings with customers using your phone, tablet or USB drive.

Our newest product is SpeedCut, a high-speed descaling, reinstatement and drain cleaning tool. Our proprietary 10mm Speed-Shaft cable is ideal for 2-to-8-inch pipe at lengths up to 150 feet. The DC brushless motor design — 2 hp and 0 to 3,200 rpm — does not have a mechanical clutch and only requires 110 volts at 13 amps at peak loads. Our SpeedConnectors allow for quick and easy tool attachment changes, especially for chain cutters. The built-in cable oiler provides easy maintenance and prolongs cable life.

Other popular tools are our sewer sondes and sonde carriers. Our sewer sondes have a max depth of 30 feet measuring only 3 1/2 inches by 3/4 inch. The sonde carriers are designed to securely fit on duct rodders and sewer cables with an integrated connector and jetting hose with an integrated nozzle for various flows and pressures.

CONTINUED >>



JOHN BARTUCCIOTTO
CEO of EPL Solutions

YEARS IN THE INDUSTRY: 34
YEARS WITH COMPANY: 16

CLEANER: Tell us a little about the history of EPL Solutions.

Bartucciutto: EPL Solutions started with the Gvision S/2000 monitor. I originally built it for my company EPL Inc. because the other camera monitors were inefficient in direct sun glare, bulky and heavy. When other contractors expressed an interest in the invention, I turned to manufacturing and sold my subcontracting

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4008H Compact Skid

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3012H Compact Skid

±12 gpm @ 3000 psi ±400' x 1/2" Jet Hose
±800 cc EFI Honda Engine on DC Powered Reel

(100 GALLON TANK)

Call for Quote

NEW



NEW



RCJ4008H

±8 gpm @ 4000 psi ±200' x 3/8" Jet Hose
±800 cc EFI Honda Engine on Manual Reel

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NEW



LJ4008H

±8 gpm @ 4000 psi ±200' x 3/8" Jet Hose
±800 cc EFI Honda Engine on Manual Reel

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VM4008H

±8 gpm @ 4000 psi ±50' x 3/8" Washdown
±690 cc Honda Engine Hose on DC Reel

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CV4008H-HOT

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» EPL Solutions' Gvision monitors are designed to easily share video inspections and view in direct sunlight.

» One of EPL Solutions' newest products is SpeedCut, a high-speed descaling, reinstatement and drain cleaning tool.



CLEANER: What sort of needs do they address? Tell us about your best sellers and what applications they best serve.

Bartucciotto: The Gvision monitor was designed to easily share video inspections and view in direct sunlight (TruView). It is weatherproof and includes an optional internal battery. The Gvision V5 Pro uses DirectConnect to record directly to an Apple device or USB thumb drive. Our USB drives can then be plugged into any modern smartphone or tablet to easily share or store your recordings in your database without the need of recording over Wi-Fi. Our Gvision TruView LCD allows the operator to leave the camera reel and monitor on the ground while doing a video inspection from a roof vent access and view the screen in direct sunlight without shade. The TruView LCD was designed for wide viewing, enabling the operator to position the Gvision monitor for viewing from the sides, from above, or from below. The TruView LCD is also resistant to harsh chemicals and can be cleaned with glass cleaner, Simple Green or a degreaser. Of course, accidents can happen to your equipment. The rugged design of the Gvision has been known to survive falls from two-story buildings or being run over by heavy work vehicles. The Gvision is weatherproof against rain and freezing snow. For working in areas where power outlets are not available, the Gvision has an optional internal battery for up to six hours normal use. With power management, you can get up to 12 hours on a single charge.

“WE LISTEN AND UNDERSTAND THE USERS' NEEDS BY NOT ONLY TALKING, BUT ALSO GOING OUT IN THE FIELD WITH THEM, WORKING SIDE BY SIDE. ONLY THEN CAN YOU TRULY DEVELOP AND INNOVATE.”

JOHN BARTUCCIOTTO

The SpeedCut was designed for high speed and torque without a mechanical clutch. Incorporating an anti-flip 10 mm SpeedShaft cable creates a powerful and flexible machine for faster descaling and reinstatements. SpeedCut incorporates a slim, heavy-duty X-frame design for working in small areas and weighs less than 90 pounds, making it compact and maneuverable. The SpeedCut's handle mount holds and locks the control box in place when positioned upright and allows the operator to easily dismount the control box for convenient placement. Because of low power requirements, SpeedCut is less likely to pop a breaker while powering from a household outlet. SpeedCut also uses a clamshell mechanical foot pedal for easy operation and allows for handheld operation.

The sonde carriers are inline with the cable and jetter hose allowing for navigating turns. The size of the sewer sonde will negotiate a 2-inch cast iron P-trap when attached to a sewer cable using a sonde carrier.

CONTINUED >>



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Industrial

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1 1/2" - Inlet Thread
1" - Discharge Thread
110 cc - Oil Capacity

RTD 1000 RPM N VERSION SOLID SHAFT 35MM

MODEL	Max GPM	Max L/Min	Max PSI	Max BAR	POWER EBHP	BORE DIA MM	STROKE MM	CRANKSHAFT ID STAMP	WEIGHT LBS.
RTD80-300	21.0	79.5	4350	300	65.0	32	42	4	128
RTD100-200	25.0	94.6	2900	200	49.8	32	42	3	128
RTD100-200SX	25.0	94.6	2900	200	49.8	32	42	3	128
RTD130-160	32.0	121.1	2300	160	50.5	36	42	3	128
RTD130-200H	34.5	115.0	2900	200	68.0	36	42	3	128
RTD160-130	40.0	151.4	1850	130	50.8	40	42	3	128

SX - 180° Rotated Shaft Configuration
H - Nickel Plated

RTX



Industrial

140° F - Max Water Temp
1" - Inlet Thread
1/2" - Discharge Thread
76 cc - Oil Capacity

RTD 1450 RPM N VERSION 30 x 80MM SOLID SHAFT

MODEL	Max GPM	Max L/Min	Max PSI	Max BAR	POWER EBHP	BORE DIA MM	STROKE MM	CRANKSHAFT ID STAMP	WEIGHT LBS.
RTX30	8.0	30.3	4350	300	23.9	20	23	3	72
RTX50	12.0	45.4	4350	300	35.8	25	23	3	72
RTX60	14.0	53.0	4350	300	41.8	25	28	1	72
RTX70	17.0	64.4	3000	200	33.8	30	23	3	72
RTX85	21.0	85.0	2200	200	31.7	30	28	1	72
RTX-HW85.150N*	21.0	85.0	2200	200	31.7	36	23	1	72
RTX100	24.0	90.8	1800	124	29.8	36	23	3	72
RTX150	39.6	150	1450	100	36.2	40	28	1	72

*HW - includes Hot Water Kit



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BEHIND THE GEAR

CLEANER: What's the most common problem you see your customers facing?

Bartucciotto: Not understanding the technology of the equipment and tools.

CLEANER: What's the philosophy behind development and innovation at EPL Solutions?

Bartucciotto: We listen and understand the users' needs by not only talking, but also going out in the field with them, working side by side. Only then can you truly develop and innovate.

CLEANER: How do you see the pipe inspection and drain cleaning industry evolving?

Bartucciotto: Regarding video pipe inspections, it will be about durability of camera heads improving, improved push cable performance, and improved locating depth.

For jetting, 5 gpm to 9 gpm at 5,000 psi or greater is where the market is headed because of water shortages. For jetting nozzle intensity, it will be about high pressure at low flows. For example, 10 years ago root cutting was best with a 1/2-inch hose and 14 gpm to 18 gpm at 4,000 psi. Today a 1/4-inch nozzle on a 1/4-inch hose at 7 gpm and 4,000 psi has more cutting power. Why? A jet stream that is more intense like a laser beam has more cutting power.

For high-speed chain cutters, they'll continue to get safer and easier to operate. There will be accessibility for cleaning a larger pipe from a smaller access. For example, a 4-inch sewer line could be descaled from a 2-inch opening. There will be improved reinstatement tools.

CLEANER: What's new for EPL Solutions in 2023? What can customers expect in the future?

Bartucciotto: Improving our current products. We have a new mini camera reel system we launched at the WWETT Show earlier this year with increased flexibility in smaller pipe while having a longer push in 4-inch mainlines than the industry standard.

In addition, we will be launching a new camera sonde with a more powerful transmitter than anything currently available. We will also be launching new SpeedCut reinstatement tool attachments and new 6 mm and 8 mm SpeedShaft cables.

CLEANER: What do you want your customers to think of when they hear the name EPL Solutions?

Bartucciotto: That we put the customer's needs first and we are a solutions company. Part of our job is to keep up on our own education. Our customers depend on us to know the how and why so they can get the most potential from their products, which is important to us. We want to build something we'd be proud to use ourselves. In the end, it's about our customers' successes. **c**



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WATERBLASTING AND WATERJET CLEANING AND ACCESSORIES

By Craig Mandli

» HOSE

1 // ALL JETTING TECHNOLOGIES PARKER HANNIFIN TOUGHJACKET

Parker Hannifin TOUGHJACKET water blast hoses, distributed by All Jetting Technologies, are designed to eliminate the need for an additional PVC sleeve and reduce the hose weight by up to 16%. This allows for ease of handling, improved productivity and reduced operator fatigue. They have polyurethane jackets, are tested to DIN EN 1829-2 standards and exceed the abrasion resistance and durability of standard PVC-covered assemblies by more than 100%. ColorGard technology means the primary hose jacket is a different color than the abrasion-resistant WJTA-compliant colored outer jacket to provide easy visual identification of abrasion issues, allowing for efficient inspections and reducing unscheduled downtime. 772-286-1218; www.alljetting.com



2 // GENERAL PIPE CLEANERS STAINLESS STEEL BRAID JET HOSE

Stainless steel braid jet hose from General Pipe Cleaners slides more easily down 1.5- to 3-inch drainlines. It also navigates tight bends easily, while its Teflon core reduces resistance and improves cleaning power. It's available in 30-, 50- and 75-foot lengths. It can increase the performance of General's compact, lightweight JM-1000 Mini-Jet. Clear grease, sand and ice from small lines, sinks and laundry drains with high-pressure, wall-to-wall water spray. For larger lines and longer runs, the powerful JM-1450 Jet-Set electric water jet pulverizes clogs with a 1 1/2 hp, 13 amp sealed motor that drives a 1,500 psi, 1.7 gpm triplex pump. Vibra-pulse helps the hose slide around tight bends in small lines and down long runs. 800-245-6200; www.drainbrain.com



3 // KURIYAMA OF AMERICA ALFAGOMMA WATERBLAST

Alfagomma Waterblast hydraulic hoses from Kuriyama of America are made with an oil- and water-resistant synthetic rubber tube. The reinforcement is four high-tensile steel spirals, and the cover is oil-, water- and ozone-resistant synthetic rubber. The hose is designed for very high-pressure waterjetting service. The WATERBLAST WB10 Series hose provides 10,000 psi service for I.D. sizes 06, 08, 12 and 16. The WATERBLAST WB15 Series hose provides 16,000 psi for the dash 08 I.D. size and 14,500 psi for the dash 12 I.D. size. The WATERBLAST WB20 hose provides 20,000 psi service for the dash 08 I.D. size. 847-755-0360; www.kuriyama.com



» HOSE REELS

4 // COXREELS 1125 SERIES

The 1125 Series from COXREELS is now available with two upgraded swivel options. The medium-pressure (up to 4,000 psi) and high-pressure (up to 5,000 psi) can both be factory installed on the standard 1125 Series. The medium-pressure swivel is precision machined from solid brass and features upgraded wall thickness as well as upgraded seals and backup rings. The high-pressure swivel is machined from high-strength steel and nickel plated for corrosion resistance. This ball bearing swivel features maximum flow and enhanced load-bearing capabilities. 800-269-7335; www.coxreels.com





5 // HANNAY REELS 6200 POWER REWIND REEL

The **6200 Power Rewind Reel** from **Hannay Reels** is designed to stand up to rigorous waterjetting and blasting applications. With its heavy-duty steel construction, strong spool, sturdy frame and hydraulic motor, this reel offers hose expansion control for I.D. hose widths between 3/4- and 1-inch. Up to 500 feet of hose is supported at 3,000 psi, making it suitable for large jobs. The A-assembly roller on the front of the frame allows for proper storage and easy dispensing on truck or trailer mounts. Optional upgrades include 5,000 psi working pressure, roller assembly, direct drive hydraulic motor rewind and a hose package, allowing for a wide range of customizations to suit every need. **518-797-3791; www.hannay.com**

» NOZZLES

6 // ARTHUR PRODUCTS ALPHA KIT

Arthur Products designed its **Alpha Kit** for low-flow, low-pressure systems. Available in 1/8-inch FNPT and 1/4-inch FNPT versions, the jets are drilled to the end user's exact pressure and flow specifications. Designed for do-it-yourself property owners with low-pressure systems, the kits are highly versatile. Each kit includes a flusher nozzle, a penetrator nozzle, a deicer/degreaser nozzle, a sewer hose (25, 50, or 100 feet), a tip cleaner, a quick disconnect coupling and a carrying case. **800-322-0510; www.arthurproducts.com**



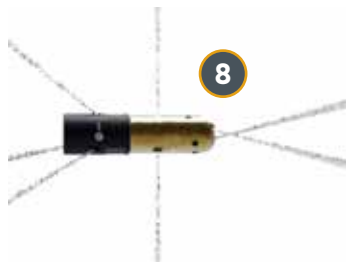
7 // ENVIROSIGHT JETSCAN

The **Jetscan HD** video nozzle from **Envirosight** is an easy way to see what you're jetting. The system streams video footage straight to a tablet after removal from a manhole. An app-based interface makes it easy to view and annotate footage then upload to WinCan, where you can enjoy effortless sharing, analysis and storage in the cloud. Two interchangeable sleds allow for deployment in lines 6 to 24 inches in diameter. The system's welded stainless steel construction is built to withstand abuse inside dirty and damaged lines, and a sealed, pressurized design protects the camera components from the elements. It provides a simple solution to assess pipe condition and confirm cleaning success, eliminating wasted resources and guesswork. **866-567-8316; www.envirosight.com**



8 // ENZ USA UC LINE

The **UC Line** with CrossJet Technology from **Enz USA** offers a complete line of high-pressure solutions for tough industrial cleaning projects. The nozzles are suitable for cleaning tubes such as heat exchangers in nuclear power plants or in the sugar industry. This CrossJet Technology offers ideal cleaning performance with lower leakage and long durability. The nozzles are available up to 22,000 psi. They are available in 9, 13, 18, 22 and 28 mm sizes. **877-369-8721; www.enz.com**



9 // HYDRA-FLEX AQUA-ROCKET

The **Aqua-Rocket** from **Hydra-Flex** is a heavy-duty nozzle built to wash away the toughest commercial and industrial cleaning challenges. Constructed with a stainless steel housing and tungsten carbide wear surfaces, it can withstand harsh environments and provide a long lifespan. Thanks to the tungsten carbide tip, it can start and stop both vertically and horizontally. It includes a high-temperature, drop-resistant rubber cover and blasts a concentrated 0-degree water stream that ranges between 750 and 5,600 psi. Its powerful 22-degree cone-shaped, rotating spray pattern creates an impingement force strong enough to take on graffiti, heavy equipment, car washes, livestock barns, peanut broilers and everything in between. It was designed to be repairable — not replaceable — and repair kits extend the nozzle's life and have you back up and running in only 10 minutes. **952-808-3640; www.hydrflexinc.com**



10 // NOZZTEQ SWEAGLE

The **SWEAGLE** nozzle from **NozzTeq** is ideal for removing a lot of material in sewer and storm pipes at the lowest working pressure. In pipes with higher water level, the ejectors create an extreme negative pressure, utilizing water in the pipe in combination with the water supplied from the jetting truck. The result is close to a doubling of the volume of water cleaning the pipe. It is compatible with all jetting trucks on the market, and can be used with clean or recycled water. It works efficiently in both water-filled and dry pipes. **866-350-0624; www.nozztequsa.com**



11 // ROOT RAT CUTTING NOZZLE

Root Rat cutting nozzles are used with jetters from 11 hp to large truck-mounted models. The cutters are made of hardened stainless steel and come with a toolbox with two interchangeable rotors — one with cables and the other with chains. The combination kit includes extra chain, cable and bearings. They need no repair or rebuilding other than bearing replacement, which can be completed in less than two minutes for under \$10 in parts. **800-288-7873; www.rootrat.net**



12 // SEWERPROSHOP RAVEN

The **Raven** hydroexcavation nozzle from **SewerProShop** has been precision engineered by Intersewer and manufactured to the highest technical standards of ISO 9001:2008 certification in Germany. The weight counteracts the high-pressure kickback of the wand. It is constructed from high-grade stainless steel, is threaded and includes a replaceable ceramic nozzle insert with forward water jet angled at zero degrees or a fan jet. It is rated for 18 gpm at 4,000 psi up to 80 gpm at 2,500 psi. It includes a 1/2- to 1-inch sewer hose connection. It is operator-friendly with no maintenance required. **877-864-9394; www.sewerproshop.com**



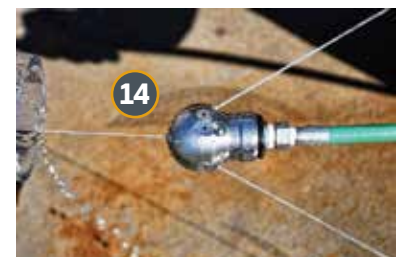
13 // USB-USA GATOR AND MINI GATOR

High-performance **Gator and Mini Gator** nozzles from **USB-USA** cut and remove roots, grease, blockages and scale in various pipes ranging from 2 to 20 inches. Encased in a compact stainless steel body, the strong reinforced internal design rotates the head. 3D fluid mechanics in the head smoothly direct all the incoming high-pressure water to the four rotating jets in the rear of the head and one in front. These rotating jets create a powerful 360-degree all-around complete cleaning of the pipe, flushing and removing debris in fewer passes. The offset front jet eliminates blockages easily and effectively. The Gator is capable of being used on hose between 3/4 and 1 1/4 inches, while the Mini Gator nozzle can be used on 3/8- to 1/2-inch hose. Also available are case kits that include an additional skid to centralize the nozzle in larger pipe. **844-285-5770; www.usb-usa.com**



14 // WARTHOG NOZZLES BY STONEAGE WT-1/2

The **WT-1/2** nozzle from **Warthog Nozzles by StoneAge** has a 1/2-inch inlet option and an R24 head engineered to increase the flow range up to 21 gpm. This configuration enables maximum use of higher-flow pumps for more powerful cleaning, while maintaining the small form factor of the WT for navigating pipe bends, according to the maker. The high-flow capacity paired with the company's WT 040-R24-C head allows use of full pump power to tackle the toughest jobs and achieve a higher rate of cleaning. The small form factor is optimized for cleaning 3- to 6-inch pipes with elbows. The nozzle's slow, controlled rotation combined with high flow delivers optimal cleaning power for cutting roots or clearing tough deposits. **866-795-1586; www.warthog-nozzles.com**





» PORTABLE JETTERS

15 // ELECTRIC EEL EEL-JET EJ3000

The Eel-Jet EJ3000 from Electric Eel can clean 2- to 8-inch-diameter lines up to 300 feet. It offers 3,000 psi at 4.7 gpm and a 13 hp overhead valve engine for smooth, quiet running and dependable operation with electric start available. It has a 2-1 gear reduced triplex pump with pulsation for longer life, a 300-foot-capacity hose reel, a heat shield to protect the hose and convenient nozzle storage on the unit. Its steel nozzles penetrate and clean tough clog problems from drainpipe walls with a variety of spray angles. Throttle back control automatically adjusts engine speed. It comes with a low-tone muffler for quiet operation and 12-inch pneumatic tires on a rugged steel base for easy maneuverability. 800-833-1212; www.electriceel.com

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16 // JENNY PRODUCTS STEAM JENNY DIRECT-DRIVE COLD PRESSURE WASHERS

Jenny Products offers four models of **Steam Jenny** direct-drive cold pressure washers. Providing a compact, economical alternative to belt-driven models while yielding the professional performance of commercial grade units, all models are designed for maximum durability and portability. The pressure washers are powered by 9 or 13 hp Honda GX Series engines, and all models feature a triplex ceramic plunger pump, which provides years of service while requiring little maintenance. They are available with pressure ratings between 3,000 and 4,000 psi, and flow rates vary between 3 and 4 gpm. Features include thermal pump protection, an unloader valve and a high-pressure relief valve to prevent damage to the pump. To protect the engine, the unit will automatically shut down if low oil levels are detected. Furthermore, the chassis is made with powder-coated, seven-gauge steel. **814-445-3400; www.steamjenny.com**

17 // MYTANA MV84

The **MV84** jetter from **MyTana** efficiently cleans and clears 3-to-10-inch lines. It has a robust 800 cc Honda engine that lets the super-duty triplex pump deliver 8 gpm at 4,000 psi. With a dual cart design and remote throttle control, it lets you jet indoors or access hard-to-reach cleanouts. The jetter cart houses the engine, super-duty triplex pump and supply buffer tank. A separate hose cart is connected with a 50-foot jumper hose and has ball valve flow control. It comes fully equipped with 250 feet of 3/8-inch jetter hose. Attach a specialty nozzle and take on roots. It is easy to load, maneuver, maintain and use. **800-328-8170; www.mytana.com**

18 // RIDGID KJ-2200 WATER JETTER

The **RIDGID KJ-2200 Water Jetter** propels a highly flexible hose through 1 1/4-to-6-inch lines, blasting through sludge, soap and grease blockages. As users pull the hose back, it power-scrubs the line, flushing debris away, restoring drainlines to their full, free-flowing capacity. A working pressure of 2,200 psi and flow of 2.4 gpm provides fast, effective cleaning of lines. It comes standard with a 6.5 hp recoil-start gasoline engine for quick start and a FV-1 foot valve to make remote or indoor operation simple and convenient. The user controls the jetting action at the drain while leaving the jetter outdoors. Simply guide the hose into the drain while the thrust propels the hose down the line. Activate the pulse action to easily navigate difficult bends and traps. The optional H-30 cart makes for easy job site transport. **800-477-3443; www.ridgid.com**

19 // SECON PORTABLE GAS HYDRO JETTERS

Portable Gas Hydro Jetters from **SECON** are available from 0 to 4,000 psi and generate 1.5 to 9 gpm. They include electric start, air cooled engines, flat-free tires and an hour meter. Optional propane kits are available. Accessories include different size nozzle kits and hoses and pressure gauges. **702-527-5100; www.seconv.com**





» SAFETY EQUIPMENT
20 // CREWPLEX

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» TRUCK/TRAILER JETTERS

21 // AMERICAN JETTER 58 SERIES INFERNO BURNER HOT JETTER

The **58 Series Inferno Burner Hot Jetter** from **American Jetter** offers up to 67% more efficient heat over traditional burners. This super fuel-saving hot water system packs extra cleaning power for grease cutting and deicing. Consistent power comes from a 38 hp EFI Kohler gasoline engine with flows up to 20 gpm and pressure to 5,000 psi. The rear speed control reel provides precise cleaning speeds and easy access to the jet hose with the included hose guide. Low-water shutoff stops the engine if the 220-gallon tank runs low. The optional 1-mile open range wireless remote option features water ON/OFF, engine shutdown and hose reel control. The heavy-duty square tubing trailer has a 2-inch ball coupler and standard electric brakes. **866-944-3569; www.americanjetter.com**



22 // CAM SPRAY 3012H COMPACT SKID MOUNT JETTER

The **3012H Compact Skid Mount Jetter** from **Cam Spray** is designed for a high cube van or pickup bed and takes up as little space as possible while providing 12 gpm at 3,000 psi. Features include a Honda iGX800 fuel-injected gasoline engine with oil alert and hour meter, powering a gearbox-driven plunger pump with ceramic plungers, stainless steel valves, pressure gauge and 80-mesh water filter. An unloader valve and secondary pop-off protects the pump. A power pulse feature is used for navigating longer runs and elbows. The 100-gallon tank includes low-water shutoff and a float valve to manage filling the tank. An industrial-coated skid platform and frame offers transferability among vans, trucks and trailers, while mounting flanges and D-rings allow for the machine to be fastened or tied down. The machine measures 52 inches long by 41.5 inches wide by 50 inches tall. **800-648-5011; www.camspray.com**



23 // GAPVAX G7 JETTER

The **G7 Jetter** from **GapVax** is built on a heavy-duty, contractor-grade NATM-certified trailer. Several engine choices, including Cummins diesel, are certified and sized appropriately for the water pump combinations. The unit's 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 a capacity of 800 feet of 3/4-inch jetter hose. The polyethylene plastic water tank is available in 300-, 500-, 600- or 700-gallon capacities. The water pump is center-fed for optimal performance. The controller is interlocked with safety features that will show low fuel levels and low water, and is capable of a complete engine shutdown in an emergency. **888-442-7829; www.gapvax.com**



24 // HI-VAC O'BRIEN 7000 SERIES

O'Brien 7000 Series hydrojetters from **Hi-Vac** offer flow ranges from 18 to 65 gpm, pressure up to 4,000 psi, and a 700-gallon water capacity, meaning jobs can be completed the first time without costly job site returns. Its powerful engine-pump combination, heavy-duty construction and longer jetting time on a single tank makes it suitable for the toughest jobs. A 190-degree rotating hose reel provides easy access no matter how the trailer is parked. The O'Brien 7000-T Series offers the versatility of the 7000 Series trailer-mounted units custom-mounted to a chassis for the ultimate all-in-one convenience. **800-752-2400; www.obrienmfg.com**



25 // HOTJET USA HOTJET II

The **HotJet USA HotJet II** trailer-mounted jetter is available with hydraulic hose reels and a 37 hp Vanguard fuel-injected engine. Operating with hot or cold water, it runs at 12 gpm at 4,000 psi, cleaning 2- to 12-inch lines, making it an alternative between small-output and larger-output machines. It arrives turnkey with a 330-gallon water tank, detergent tanks and full power-washing capabilities for cleaning, disinfecting and sanitizing after the job. It includes a hydraulic hose reel, heavy-duty 7,000-pound-rated tandem axle trailer (single axle also available), rear control panel with remote control, two heavy-duty diamond-plate side toolboxes and one front toolbox. **800-624-8186; www.hotjetusa.com**





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PRODUCT FOCUS

26 // JETTERS NORTHWEST EAGLE-300/4020-SW-DWR

The 20 gpm, 4,000 psi **Eagle-300/4020-SW-DWR** trailer-mounted jetter from **Jetters Northwest** can clean larger lines with its 20 gpm flow-capability and 4,000 psi velocity, yet can easily be adjusted down for jetting smaller sewers or sensitive lines. With up to 600 feet of jetter hose, its DC-powered hose reel sits on a 180-degree swiveling base and operates even if the jetter runs out of fuel. The wireless remote offers safe control of jetting on/off, engines on/off, throttle/pressure up/down and reel-wind. Manual controls are panel-mounted on the swiveling hose reel. Powered by emissions-friendly Kawasaki fuel-injected/liquid-cooled engines, these jetters are built on industrial-duty trailers with brakes for safety and can be towed with a full water tank. Choose between 300- or 600-gallon tank sizes. Twin fender-mounted tool bins allow for significant storage space, and aluminum wheels provide a sharp appearance. Pulsation control helps the jetting nozzle pull through long runs. Four jetting nozzles are provided, and several root/grease nozzles are optional. **877-901-1936; www.jettersnorthwest.com**



27 // MONGOOSE JETTERS BY SEWER EQUIPMENT MODEL 184

The **Mongoose Jetters by Sewer Equipment Model 184** comes with a run-dry pump offering 18 gpm at 4,000 psi, a tubular steel frame, corrosion-resistant prepainted subassemblies, state-of-the-art controls, strong hose reel and high-quality gas engine. It is suitable for drain cleaning and sewer jetting, remote access locations, mainlines up to 12 inches in diameter, and commercial and industrial lines. The trailer unit comes with a water tank capacity of 300 gallons and standard hose reel capacity of 600 feet of 1/2-inch hose. The trailer setup consists of a 6,000-pound-rated single-axle trailer, and the addition of a wireless remote control system makes this equipment a true one-person operation. It is also available as a van pack or truck-mounted unit. **815-835-5566; www.sewerequipment.com**



28 // SPARTAN TOOL WARRIOR

With fiberglass casing to protect and silence the entire machine, **Spartan Tool's Warrior** trailer jetter provides 4,000 psi at 18 gpm for the strength to clear almost any line. The 180-degree pivoting hose reel and optional four-function remote control let you handle the tightest spots. With pulsation and a full antifreeze system, it conquers tough clogs in any weather. Its clean finish gives you room to customize it with your company logo and colors, allowing you to easily transform the unit into your company's mobile billboard, and its 300-gallon towing capacity takes you above and beyond. **800-435-3866; www.spartantool.com**



29 // SUPER PRODUCTS SUPERJET

The **SuperJet** truck-mounted jetter from **Super Products** is used to blast debris to clear blockages and maintain sewer lines when vacuuming extraction is not required. It uses a strong and smooth single-piston water pump to create consistently high water pressure. Units come standard with rotationally molded polyethylene water tanks in a modular design to accommodate water capacities ranging from 1,080 to 3,240 gallons. Additionally, they offer convenient standard curbside and street-side fill. The hose reel has 1,000 feet of 1-inch-diameter sewer hose, 200-degree rotation and a digital monitor. This allows operators to work efficiently while positioning themselves out of traffic and away from other hazards. The monitor displays a hose footage counter, offers 20 saved settings for hose reel payout and is designed with LED panel lights to enable readability in a variety of environments. **800-837-9711; www.superproducts.com**





30 // VAC-CON VJ SERIES

The VJ Series of jetters from Vac-Con is designed to provide operators with an economical, portable and powerful system in two configurations. The VJ375 offers a 375-gallon water capacity on a single-axle trailer. The VJ750 boasts 750-gallon water capacity on a tandem-axle trailer. Standard features include Tier 4 diesel engine, cold-weather recirculation and air purge system, hydraulically driven hose reel and a reel-mounted, weatherproof electronic control panel. Units are available in multiple water pump pressure and flow configurations. Optional features include gas engine, wireless remote and an antifreeze tank system for cold-weather use. **904-284-4200; www.vac-con.com**



31 // VACALL ALLJET

Vacall's Alljet truck-mounted jetter is an easy-to-operate, efficient sewer root maintenance machine. The hydraulically powered triplex plunger water pump is capable of 87 gpm at 2,000 psi with other power options available. The hose reel telescopes out 54 inches from a retracted position and swivels 200 degrees to properly direct the 600-foot jetting hose. It uses a single-engine PTO design and a 1,600-gallon UV-resistant polyethylene water tank. Operator-friendly features include four locking aluminum tool storage cabinets, a rear-view camera, roll-up doors and a washdown system with options including LED lighting packages, an extendable rear canopy and a heating and insulation package inside the all-aluminum rear compartment. **800-382-8302; www.vacall.com**

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PRODUCT FOCUS

32 // VACTOR RAMJET

The truck-mounted **Vector Ramjet** is equipped with a Jet Rodder water pump to effectively break up blockages in sanitary lines and flush out debris. Armed with up to 3,000 gallons of water in a stainless steel tank, it delivers flows up to 100 gpm and 3,000 psi. The water pump is a single-piston, hydraulically driven, dual-acting pump that delivers a jackhammer action water flow, breaking through line blockages and scouring even the toughest caked-on debris from pipe walls. Operators can quickly drive to each job site to solve line problems and tackle regular line maintenance. It can be configured with either a front- or rear-mounted hose reel. **800-508-3381; www.vactor.com**



>> WATER PUMPS

33 // CAT PUMPS 4SP AND 4DX SERIES

Cat Pumps teams **4SP and 4DX Series** high-pressure pumps with premium DC electric motors for on-the-go pressure-wash power. The systems can be used in various applications, including portable restroom cleaning, air conditioner fan cleaning, and equipment and surface washdown. The pump and motor assemblies provide up to 3 gpm at pressures from 400 to 1,000 psi and operate on any standard DC source. The auto start/stop control runs the pressure washer only when there is demand, increasing pump and motor life. Convenient, reliable and easy-to-service integrated unloaders accurately set and maintain system pressure while diverting water flow during bypass, reducing the pump and motor load and increasing system life. Crankcase oil is pre-filled, so pumps are ready to use right out of the box. Multiple build-to-order configurations are available to fit a variety of needs. **763-780-5440; www.catpumps.com**



34 // HAMMELMANN PUMPS

Compact three-, five- and seven-cylinder pumps for industrial cleaning, pressure testing and chemical injection service from **Hammelmann** have input capabilities up to 1,500 hp. The “Zero Emission Pump” option keeps pumped fluid hermetically sealed within, preventing leakage to atmosphere during operation. They combine a compact integral speed-reduction gear end with vertical configuration that channels oscillating forces directly downward into the base structure, eliminating unwanted lateral oscillations. The integral speed reducer with twin helical gears arranged in a herringbone configuration ensures smooth running and even power transmission without axially loading the bearings. A selection of gear ratios is available to allow the optimal choice of driver. The compact construction eliminates the need for an external gearbox and prevents rotary oscillation. Mechanical efficiency is in excess of 95%. **800-783-4935; www.hammelmann.com**



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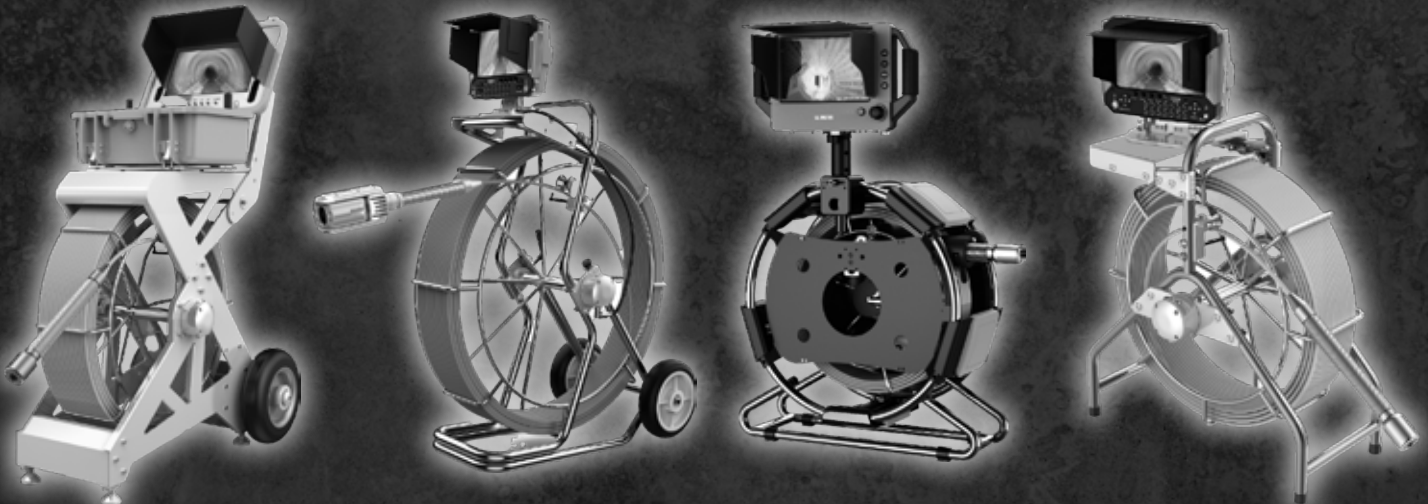
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PRODUCT SPOTLIGHT

USE LIVE MICROBES TO ATTACK FOG

By Craig Mandli

Fat, oil and grease can cause real problems for municipalities, homeowners, businesses and property managers. The contaminants stick to pipe walls, restricting the water flow to the point of causing blockages and backups. Now, through biotechnology, there is a reliable and easy-to-use treatment that offers a preventive maintenance solution — GREASE-X Biozyme from RootX.

The live microbes contained in GREASE-X Biozyme, along with the enzymes they secrete, are designed to digest fat, oil, grease and other organic matter as it enters and flows through a collections system. The microbes adhere to collections system lines and lift station walls. In digesting organic waste, they reproduce and form colonies that continue to consume floating waste and accumulated FOG. The wall coating also acts as a lubricant to help reduce backups. The byproducts of microbial digestion are perfectly natural, environmentally safe substances made of carbon dioxide and water.

“What makes GREASE-X Biozyme unique is that it comes in a granule that activates the microbial from hibernation when put into water,” says Dan Lawrence, western region sales manager for RootX. “This allows its shelf life to be substantially longer than other products that come in a liquid form and must be used within 90 days to prevent the microbes from dying off.”

It is a highly concentrated microbial ecosystem containing specialized natural microorganisms selected for maximum efficiency in the biodegradation of organic contaminants in wastewater systems.



Because it utilizes natural microorganisms, it is harmless to humans, plants and animals.

“In most cases, the environment of the sewer system receives many harsh chemicals that will kill the existing microbes, making the addition of enzymes fruitless,” Lawrence says. “GREASE-X Biozyme is not a drain opener or a chemical that will harm the pipes or a wastewater treatment plant. It’s a safe and natural microbial/nutrient combination with isolated specific microbial strains that will improve one’s wastewater system.”

For ease of handling, GREASE-X Biozyme is supplied in both 2-pound jars and 5-gallon pails. It is typically left with the homeowner to add a few scoops to warm water and pour down their drains once a day for five days as part of the inoculation period, then once a week after that to maintain a system.

“It’s simple and effective application makes it an easy sell for plumbing companies to offer their customers peace of mind,” Lawrence says. **800-844-4974; www.rootx.com**

1 // GENERAL PIPE CLEANERS SPEEDROOTER XL

Now with easily interchangeable drums, the Speedrooter XL from General Pipe Cleaners clears tough clogs in 3-to-10-inch lines up to 200 feet. The rugged, easy-to-manuever Speedrooter XL sports a powerful 3/4 hp motor and 100-foot capacity drums for Flexicore cable. To change drums to add cable lengths or swap cable sizes, simply loosen three knobs and remove the drum. Users can switch between 3/4- or 5/8-inch cables in the large drum design — General’s see-through inner cage lets users quickly gauge how much cable remains — or substitute the small drum with 100 feet of 1/2-inch cable for smaller lines. Variable-speed cable feed offers raw driving and pulling power for long, tough jobs, feeding and retrieving 3/4-, 5/8- and 1/2-inch cables. The durable design features a braced frame at key stress points, front and rear drum supports for longer bearing wear, and Flexicore cable. **800-245-6200; www.drainbrain.com**



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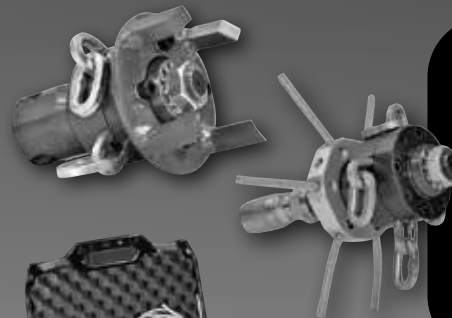


2

2 // ENVIROSIGHT ROVVER X SEWER INSPECTION CRAWLER

Envirosight's ROVVER X crawler is ready to go wherever you're headed, whether it's in a trailer, truck, van or ATV. ROVVER X's modular design can adapt to provide lateral launch, sidescanning and laser profiling. It's ready for any challenge, with 12 sizes and treads of quick-change wheels, along with accessories like add-on lights, lifts and wheel carriages. Its compact cable and reel take up minimal space and weigh only 123 pounds. Plus, the system can be mounted in a truck or standalone. The Outpost mobility enclosure is a great tool for transporting the crawler to tricky easements or out-of-the-way sites in the woods. With all inspection gear organized and protected, traveling for jobs is a whole lot easier. 866-936-8476; www.envirosight.com

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HammerHead facility fully operational

A new HammerHead Trenchless Order Fulfillment Center located in Fresno, California, is now fully operational. This is the fourth OFC providing services to HammerHead customers, joining two East Coast OFCs and a location in Canada. According to a press release, the Fresno OFC covers Montana directly south to New Mexico and all states west, including Hawaii.

Alchemy Spetec rebranding as Alchatek

Alchemy Spetec is changing its name and rebranding as Alchatek, to reflect a streamlined focus on a growing portfolio of advanced construction technologies. Alchatek will continue to provide chemical grouts for geotechnical, leak seal and seawall applications while adding to its product offering to provide growth opportunities for customers. Providing solutions from its headquarters in Tucker, Georgia, and a West Coast manufacturing facility in Reno, Nevada, Alchatek offers products and solutions for sealing leaks, stabilizing soils, lifting concrete and repairing seawalls.

MAB celebrating 15th anniversary

The Municipal Advisory Board is celebrating its 15th anniversary this year. Formed May 1, 2008, MAB serves as an independent, noncommercial adviser to the municipal and industrial division of the Plastics Pipe Institute, and is made up of industry experts who volunteer their time and expertise to improve the design, installation, and operation of municipal HDPE water piping systems.

Avanti announces two new managers

Avanti International has named two managers to its team. Northeast Regional Manager Keith Sisson has been a member of Avanti's sales and support team since 2015. For the past several years, Sisson has served as the West/South-Central regional manager. In his new role, he will serve the following states: Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont and Washington, D.C. West/South-Central regional manager Billy Jalomo has been part of the logistics/procurement team at Avanti since 2016 and has made the transition into the role of regional manager for the West and South-Central states including Alaska, Arkansas, Arizona, California, Colorado, Hawaii, Idaho, Louisiana, Mississippi, Montana, New Mexico, Nevada, Oklahoma, Oregon, Texas, Utah, Washington and Wyoming.



Keith Sisson



Billy Jalomo

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Recipients of the Explore The Trades Skills Lab, Built by Ferguson grants announced

The Explore The Trades Skills Lab, Built by Ferguson grants were announced in May. Explore The Trades is a nonprofit focused on bridging the technical talent gap to the plumbing, heating, cooling and electrical service trades. Ferguson is committed to strengthening the communities in which its branches are located. Together, both organizations are dedicated to building the next generation of plumbers and HVAC technicians. The following schools received grants this year for plumbing programs: Bronx Design and Construction High School, New York; Franklin Co. High School, Virginia; Hastings High School, Michigan; Lyman High School, Florida; Milford Mill Academy, Maryland; Roxbury High School, New Jersey; West Lincoln Middle School, North Carolina; and Western School of Tech and Environmental Science, Maryland. These schools were awarded for the HVAC programs: Carroll Co. Career and Technical Center, Maryland; Somerset Co. Technical High School, Maryland; and SVHEC Career Tech Academy, Virginia. **c**



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