

Cleaner

FOR DRAIN AND PIPE CLEANING, INSPECTION AND REHABILITATION PROFESSIONALS

DECEMBER 2019
CLEANER.COM

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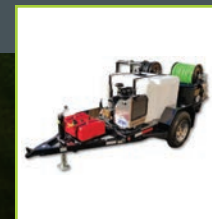


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ON THE COVER

Owners Tracy and Shawn Chilton started All Clear Pumping & Sewer 10 years ago out of their apartment in Jefferson City, Missouri, and have since grown the business into the area's one-stop shop for septic work, drain cleaning, hydroexcavation, and sewer line replacement and repair. (Photography by Denny Medley)

COMING IN JANUARY

Manhole Inspection & Rehabilitation

SAFETY FIRST: Shoring techniques to keep crews safe in trenches

TECH PERSPECTIVE: Troubleshooting tips for your hydroexcavator

BETTER BUSINESS: A texting tool to land you more jobs

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Kayla Bisnette



Jim Koshuta



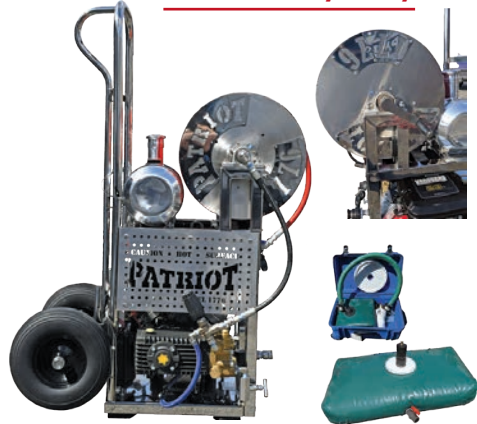
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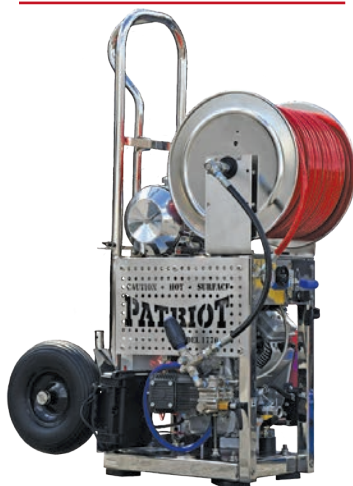
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- Patented Design: U.S. Patent #: D802,241
- Electric / Remote Start • Hour / Battery Gauge
- Pulsation Valve • 1.3" Flat Free Tires
- Audible battery alarm
- Winch mount for easy loading and unloading
- High Quality Stainless Steel & Brass Fittings
- Removable Top handle for easy storage

Motor: 23 hp Briggs & Stratton V-Twin
Fuel: Gas / Propane
Pump / Pressure: 11 GPM Pump @ 3,500 PSI
Frame & Reel: 100% Stainless Steel
Hose: 300' of 3/8" Piranha Jetter Hose – (5k PSI Max, 12k Burst)
Weight: 341 lbs
Dimensions: 55"H (with handle), 43 1/2" (without handle), 38"L x 25"W

1776 Standard Edition



- Patented Design: U.S. Patent #: D802,241
- Electric / Remote Start • Hour / Battery Gauge
- Pulsation Valve • Safety Relief Valve
- 1.3" Flat Free Tires • Audible battery alarm
- Winch mount for easy loading and unloading
- High Quality Stainless Steel & Brass Fittings
- Removable Top handle for easy storage

Motor: 23 hp Briggs & Stratton V-Twin
Fuel: Gas / Propane
Pump / Pressure: 5.5 GPM Pump @ 4,000 PSI
Frame & Reel: 100% Stainless Steel
Hose: 300' of 3/8" Piranha Jetter Hose – (5k PSI Max, 12k Burst)
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Pump: Axial Cam
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Patriot - Mini Rod

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Conductor Wires: 6
Conductor Wire Size: 20 AWG
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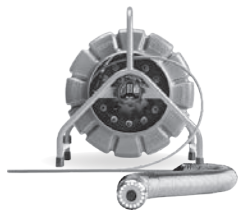
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Kim Peterson

Diversify and Conquer

Adding to your service offerings brings in more revenue and helps you better serve customers

This issue marks the end of 2019 and my first year as editor of *Cleaner*.

It's been a good year. I learned a lot in this role, and my appreciation for this industry has grown. When I started at COLE Publishing in 2013, I began a crash course in the wastewater industry. As my understanding deepens, so does my respect for all the hardworking people in this industry.

While editing the magazine is not without its challenges, I am so glad I embraced the opportunity. There are essentially three parts to my job now at COLE Publishing, and while they're all related to creating and editing content, they require different skills.

I'm sure the same can be said for many of you. Of course a majority of you clean drains. But many of you are also plumbers, septic pumpers or pipe rehab specialists. Some businesses may stick solely to drain cleaning, and there's nothing wrong with that. Doing one thing really well is often a great business model.

But if you are interested in branching out into other services, this issue is for you. This is the Business Diversification issue, where our coverage broadens to include products and articles for the plumbing and septic industries.

This month's Product Focus features the tools and equipment for both those ventures, and you'll also find a refresher on septic tank maintenance, why plumbing certifications are a good idea and tips for keeping your business profitable no matter what services you offer.

The two companies profiled this month are both one-stop shops with diverse service offerings. Their paths to growth look very different, though, proving there's no one right way to build a business.

Koberlein Environmental Services is a 60-year-old company that started out as a septic pumping business. Chris Ravenscroft saw potential in the established business and thought the market was underserved in other related areas. So he bought Koberlein in 2001 and enacted a plan for incremental growth over the next 15-plus years. Gradually adding services and expanding the geographical service area added new revenue streams. Customers appreciate the convenience of having Koberlein handle a variety of jobs, which creates repeat business and word-of-mouth referrals.

All Clear Pumping & Sewer grew by a more "fly by the seat of your pants" approach, but it worked out equally well. Owners Shawn and Tracy Chilton started the company out of their apartment 10 years ago. There was no clear plan in place; services were added and equipment purchased as customer requests demanded. Shawn says the growth seemed to just happen "overnight," and the company is so busy that he wonders sometimes if downsizing would be a good idea. But he's still making plans to add pipe lining services, as it seems like the next natural step in continuing to meet the needs of his customers.

Whether you're winging it or carefully planning a new service addition, I hope these articles provide a little insight as you expand into new ventures. No matter what services you offer, remaining dedicated to serving your customers will pay off.

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



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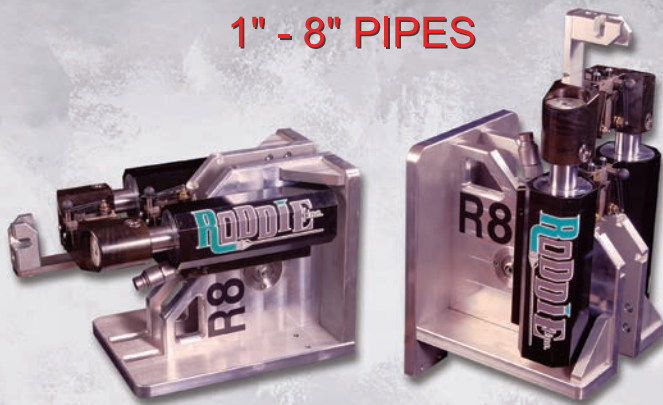
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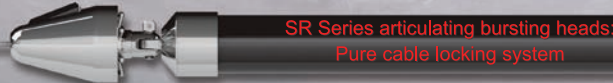


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PROFILE

NuFlow Certified Contractor

Jayson Arendall saw the need to expand and diversify his leak detection business. He chose NuFlow in March of 2019 because of their superior products and reputation for outstanding support.

“The culture of NuFlow is what makes this work. They give you a sense of family with the type of support they provide.”

The NuFlow team worked with Jayson to get him up and running, first with hands on technical training and then following up with onsite support.

“One of my very first jobs was really technical. I called NuFlow and they sent two guys out to help me bid and execute the job. Everyone talks about support, NuFlow actually provides it.”

“We are already profitable on our investment, and now we’re getting bigger contract jobs and looking to expand. We love what we are doing!”



Jayson Arendall - Trenchless Leak Detection

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BACK SAVER

Auger Features Ergonomic Design

Ben Kohn's workload is full of drainline cleanings and inspections and minor plumbing repairs. And at age 40, the owner of From Sinks to Sewers in Ventura, California, says he's more aware of the physical strain certain tasks produce that he didn't think twice about in his 20s. So he is keenly interested in any tool that reduces fatigue and job-related aches and pains. In this online exclusive, learn more about one of those key tools that Kohn relies on.

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BRIDGING THE GAP

Adjusting to Generational Differences in the Workplace

We're living in a time where many different generations occupy the same shifting workplace. Things like exponentially increasing technology can expand the generational divide and make it challenging to keep everyone functioning as a team. This online exclusive looks at how you can tweak your management style to ensure your team stays intact no matter its age diversity.

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"Embrace your ignorance because the potential consequences are serious. A great agent will have no problem taking the time to make sure you understand your policy."

— Business Insurance Shopping Tips
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DISPEL ANGER

Navigating Customer Service in the Internet Age

Even if a customer's complaint is largely unfounded, you have to tread carefully because of the power and visibility of an angry online review. Regular contributor Anja Smith recounts an experience she had in her family's business that provides good lessons on how to approach dealing with a complaint.

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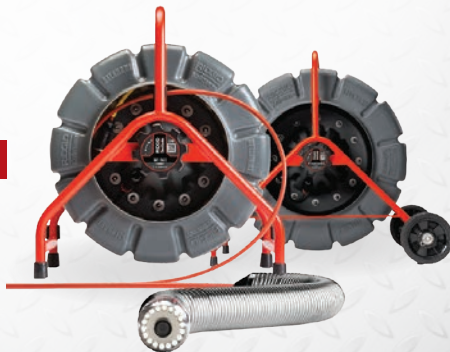
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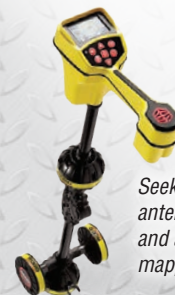
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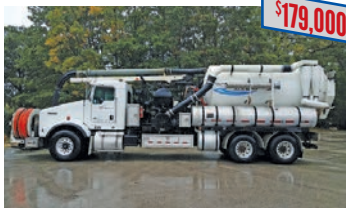
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« Owner Chris Ravenscroft has completely transformed Koberlein Environmental Services since purchasing the company in 2001.

DIVERSE BY DESIGN

A multifaceted growth strategy produces solid results for Pennsylvania pipeline and industrial cleaning contractor

By Ken Wysocky // Photography by Kevin Blackburn

There are many ways to build a successful company. At Koberlein Environmental Services, the formula includes a strong emphasis on diversified services and efficiency-enhancing technology, coupled with a slow-growth philosophy that enables the company to remain focused on quality control and customer service.

As a result of this strategy, the nearly 60-year-old company in Honesdale, Pennsylvania, is a dramatically different animal than it was when owner Chris Ravenscroft bought it in 2001. At the time, the company's primary focus was septic tank pumping, a seasonal industry that generates poor cash flow during the winter.

But Ravenscroft's emphasis on branching into diversified services paid off. Gross revenue rose nearly 800% from 2001 to 2018. Employment more than tripled to 53 people. Equipment now includes a large fleet of vacuum trucks, jetting trucks and trailers, pipeline inspection camera systems and drain cleaning machines. And services expanded to include drainline inspections and jetting, industrial vacuuming and bulk-sludge hauling, grease trap pumping, hydroexcavating and septic system installations and repairs. The company even sells and services wastewater pumps.

The company also broadened its geographic footprint enough to warrant establishing branch facilities in Waymart and Ferndale, in southwestern New York.



Sean Durango and Josh Hartman remove debris from a Maxi Screen 400 receiving station (ScreencO Systems) while a vacuum truck off-loads septage.

“A year-round book of business is very important to us in terms of fully utilizing our equipment and employees,” Ravenscroft says about the importance of service diversification. “It base-loaded the company. With that year-round workflow, it’s easier to pay for your fixed costs. And in terms of selling more services, our residential septic pumping part of the business is pretty mature, so we simply needed to look for new customers.”

Moreover, commercial and industrial work generally produces higher profit margins. On the other hand, overhead expenses rise, too, especially due to more expensive equipment and training to meet rigorous safety requirements and regulations. But that also works in the company's favor, to a degree, because the higher costs also serve as a barrier to market entry for potential competitors. “As a result, you can sustain having a higher cost basis because of those barriers,” he says.



Koberlein Environmental Services

LOCATION: Honesdale, Pennsylvania

OWNER: Chris Ravenscroft

FOUNDED: 1960

EMPLOYEES: 53

SERVICES: Inspecting and cleaning municipal sewers; industrial/commercial vacuum loading; hydroexcavation; septic tank pumping; septic system installations, maintenance and inspections; grease trap pumping; sludge hauling

SERVICE AREA: Northeastern Pennsylvania and southwestern New York

WEBSITE: www.koberlein.com



« Matt Thompson cleans the line to a septic tank before inspecting a customer's system for needed repairs.

» Matt Thompson (left) and Dalton Derrick get the jetter ready to clean out sewer lines running to a septic tank.



Initially, Ravenscroft says Koberlein intrigued him as a business venture because it already was a well-established and profitable company. He thought it would make a great foundation from which to launch other services aimed at underserved marketplaces on the municipal, residential and industrial sides. "Through diversification and acquisitions, I felt like we could grow," he says. And his hunch proved correct.

Creating a culture of safety

To create a more comprehensive culture of safety at Koberlein Environmental Services, as well as reduce premiums for workers' compensation insurance, the Honesdale, Pennsylvania-based company created a certified safety committee about eight years ago.

Owner Chris Ravenscroft says the company initially set up the committee so it could bid on jobs from oil field contractors that vet contractors' safety records through third-party compliance organizations such as ISNetwork and Avetta. "They review things like safety compliance, days lost from on-the-job accidents, state truck inspection violations and so forth, and you have to hit certain standards in order to get work," he explains.

"But now we do it for utility and power companies, too," he says, noting that more and more companies are vetting contractors and subcontractors to see if they have certified safety committees.

As a side benefit, companies in Pennsylvania that form a certified safety committee get a 5% reduction on the premiums paid for workers' compensation insurance. "But the injuries we avoid are much more significant than the money we save. That's

why insurance companies give you a break in the first place — they know they're going to pay out less on injuries and that the injuries that occur won't be as serious.

The committee must fulfill numerous requirements, such as providing a paper trail of how safety concerns are handled and resolved. In addition, the state mandates that only 30% of the committee members can leave the committee in any one year, which ensures continuity.

"It's not cheap," he says. "There are costs associated with hiring safety-trainers for employees, a fair amount of overhead costs devoted to paperwork and sending documents to third-party compliance companies and subscription fees paid to those third-party compliance companies.

"But the safety committee has changed the culture of our company — made us a safer company." He says that Koberlein's experience modification rating (a number insurance companies use to price insurance premiums by gauging both a company's past cost of injuries and the future chances of risk) is around 0.89. A rating

SLOW AND STEADY

But as the company grew, its services expanded only incrementally. In fact, it took 15 to 20 years to develop them. That slow, purposeful growth was completely intentional, says Ravenscroft, a real estate lawyer who made an abrupt career U-turn in 1992, when he accepted a marketing and business development position at a Rhode Island-based waste hauling company.

"I realized I didn't want to sit at a desk and look at the same filing cabinets every day, plus I really like business," he explains. He then held jobs at two other companies; the last one owned nine businesses, including Koberlein. When that parent company started selling off assets, Ravenscroft jumped at the chance to buy Koberlein.

Historically, a surplus of work was available in the markets the company entered. But Koberlein approached new opportunities carefully and deliberately, first ensuring it could find and develop the right people, invest in the right equipment and nurture those customers — and do it all at about the same speed.

of one represents the national average.

"We're not standing on an assembly line making widgets," he says. "With the variety of services we provide and all the trucks we have on the road, there are a lot of moving parts to our company, and the conditions under which we work change almost every day.

"We also work for a variety of industries using a variety of equipment on a variety of job sites. So having a culture that supports safety is a fundamental requirement for keeping employees and the general public safe. About one-third of our employees have served on the committee, so this safety mentality infiltrates throughout the company."

"A year-round book of business is very important to us in terms of fully utilizing our equipment and employees. ...

With that year-round workflow, it's easier to pay for your fixed costs."

Chris Ravenscroft



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Chris Ravenscroft



▲ Barbara Lukens and Gene Mohrmann use fleet tracking software from Geotab to make route and schedule adjustments for the daily workload.

◀ Chris Ravenscroft is always looking to expand Koberlein Environmental Services through acquisitions and added services.

“It wasn’t always easy to get the people, equipment and business opportunities to line up at the same pace,” he says. “But we didn’t want to grow too fast and run the risk of losing control over the quality of our work.”

Aside from creating new revenue streams, diversified services also help the company weather both economic and seasonal cycles. And customers like the one-stop-shop convenience, where Koberlein can handle a variety of needs. That, in turn, engenders repeat business and word-of-mouth referrals.

MORE BENEFITS

Providing other services also helps drive the company’s commitment to safety. Many of the company’s field employees are cross-trained; as such, it’s not unusual for septic tank pumpers to also work on utility projects and other jobs with extremely strict safety rules and regulations.

Cross-training also allows the company to more effectively leverage its manpower and avoid layoffs. Take hauling sludge, for example. The loss of a sludge-hauling contract could mean layoffs.

“But if those same employees can transition safely and cost-effectively to large utility projects, such as pipeline installations, and we can provide hauling and disposal services for hydrostatic test water, we can pick up replacement work for those sludge haulers to do,” he says.

Great employees — people who are honest, work hard and enjoy assuming new responsibilities — also have been critical to the company’s success. “It all starts with the people who work here,” Ravenscroft says. “Sure, we have great equipment and customers, but that’s because we have really smart, hardworking and capable people.”

Avoiding substantial debt also helped. While expanding services requires a continual commitment to reinvesting in new technology, Ravenscroft says that assuming too much debt can force companies to accept lower-margin work, just to make bank payments.

“Growing slowly allowed us to price work where it needs to be priced,” he says. “If you’re overleveraged and you have to pay the bank, you may end up bidding work just to maintain cash flow. We don’t want to work for everyone who calls us. Instead, we try to sell a value-added service. I firmly believe you get what you pay for.”

Another factor contributed to the growth: the acquisition of three septic pumping companies from 2001 to 2014. The acquisitions added more than 1,300 accounts to the company’s septic customer base and increased the company’s geographic footprint. That, in turn, provided more opportunities to sell additional services to these new customers, Ravenscroft says.

A GROWING FLEET

For industrial and municipal sewer cleaning, the company relies on a Vactor 2100 Plus combination vac truck, built on an international chassis and equipped with a hydroexcavating package, a 12-cubic-yard debris tank and a 4,200 cfm Roots blower (Howden). Two specialty vac trucks, custom-built on a Kenworth chassis by Pik Rite and featuring Robuschi rotary lobe blowers (912 cfm) and 4,500-gallon

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John Wetmore reads and records pH levels from a septage storage tank before loading into the spreader for land application.

Matt Thompson operates a Jettors Northwest Brute Series jetter with a COXREELS hose reel.



steel debris tanks, round out the truck fleet. The latter two trucks are used primarily to clean out grit chambers at local municipal wastewater treatment plants and pump stations, he says.

The company also relies on three Proteus crawler inspection camera systems made by Mini-Cam; five RIDGID SeeSnake push cameras; an excavator and mini-excavator, both made by Kubota; a Bobcat skid-steer; six flatbed trailers made by Eager Beavers Trailers and Load Trail; and two enclosed trailers made by Haulmark and Integrity Trailers.

For cleaning drainlines, the company invested in two jetter trucks: One is a Ford F-350 with a 12-foot box body made by Stahl Truck Bodies (a Scott Fetzer company), and the other is a Chevrolet 3500 with a 12-foot utility body from Duramag (a brand owned by F3 Mfg.). Both trucks carry skid-mounted Spartan Tool jettors (2,000 psi at 12 gpm). The two trucks also carry drum machines made by Duracable, RIDGID and Gorlitz Sewer & Drain, plus sectional drum machines from Electric Eel. Koberlein also owns five trailer jettors: three made by Spartan Tool (2,000 psi at 12 gpm) and two built by O'Brien (2,000 psi at 40 gpm and 3,500 psi at 5 gpm), a Hi-Vac company. And for thawing frozen lines, the company owns five Arctic Blasters steam machines.

Continual reinvestments in newer equipment pays dividends in numerous ways, from increasing productivity and efficiency to even attracting and retaining quality employees. "We've actually hired people who were sick of working with lousy equipment that always broke down and made customers upset," Ravenscroft says. "We believe that if you're driving a truck for 10 hours a day, you should have sufficient horsepower and have air-conditioning that works on a hot August day. Good pay is only part of the equation for creating satisfied employees."

To ensure the company's large fleet of trucks is in good working order, Koberlein employs a fleet maintenance manager, Scott Riggs, and five other managers: Gene Mohrmann, Gary Sprague, Bruce Thompson, Dolores Leopardi and Mike Sprague. Collectively, they

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"I think that being comfortable where you are is dangerous."

Chris Ravenscroft

have more than 100 years' experience, Ravenscroft says, and are integral to the company's operations.

"They treat the company as if it were their own," Ravenscroft says. "They're largely responsible for making sure we have safe and reliable equipment and for successfully managing the challenges posed by growth and diversification."

FOSTERING RELATIONSHIPS

Many tangible factors have contributed to Koberlein's growth. But Ravenscroft also points to an often overlooked and less-tangible asset: Strong working relationships with outside vendors, ranging from disposal site operators to banks to insurance companies.

"These relationships are the underpinning of all our growth," he says. "It's almost like having an informal board of directors at our disposal." For example, Koberlein's insurance agent, Knowles Associates in Scranton, also has been a great business partner.

Agent Todd Zimmerman attends almost all of the company's monthly safety meetings. In addition, Jerry Kozich, a representative from Penn National Insurance, attends four or five safety meetings a year and also audits several jobs annually.

Those audits sometimes reveal operating practices or equipment that could pose a liability. In one instance, Kozich noticed a crack in a jackhammer electric cord while auditing a residential job site.

"So at the next safety meeting, we discussed looking at all of our power cords," Ravenscroft says. "Now we examine power cords on a regular basis. Insurance agents look at the world from a different perspective and they bring value when they do that."

The insurance company also reviews the company's new service offerings before they go live, just to advise Koberlein about potential risks.

NO RESTING ON LAURELS

Looking ahead, it's easy to envision how Ravenscroft might be content to hit the pause button on growth, especially considering all the incumbent headaches that can accompany it. But that's not how he rolls.

"I think that being comfortable where you are is dangerous," he says. "I believe you constantly need to figure out how to improve. I'm definitely not interested in staying where we are.

"To do that effectively, we have to try to find new opportunities that make sense for the business we already have. Philosophically, we remain very interested in continuing to grow and diversify." **c**



Gene Mohrmann (left), Mike Sprague and Chris Ravenscroft look over a Purestream comminutor prior to installation.

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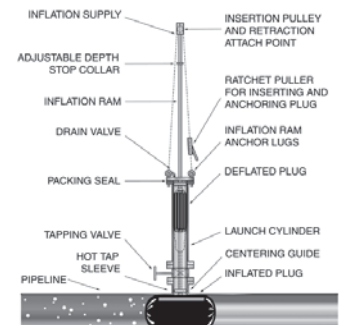
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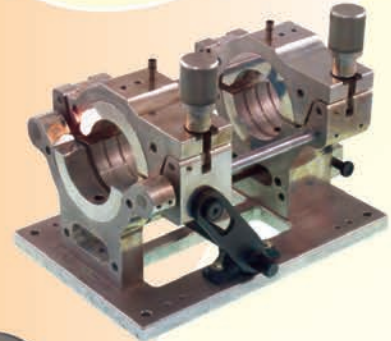
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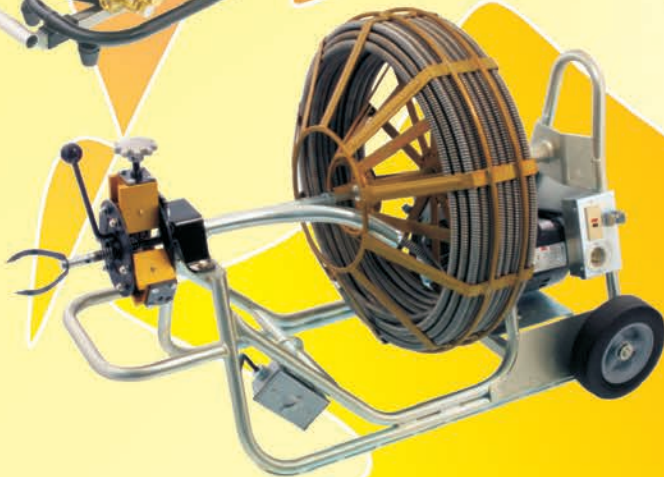


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Brute Force

Portable water jetters prove to be a profitable investment for Hawaiian drain cleaner

By Ken Wysocky

Jason Koran hit the return-on-investment jackpot when he purchased a Brute portable water jetter from Jetters Northwest for about \$14,000.

His company, Pipe Masters, landed a \$100,000 annual maintenance contract to clean sewer lines at two high-rise condominiums in Honolulu, on the Hawaiian island of Oahu. And the contract definitely wouldn't have happened without the Brute.

"We couldn't do jobs like this without the Brute," he says. "It's not only powerful, but it's also small enough to fit inside an elevator so we can work in high-rise buildings.

"We also can move the machine around and clean with just one guy. We still have two guys out there for safety reasons, but we can get away with just one guy if needed. It weighs almost 500 pounds, but it sure doesn't feel like it when you're moving it around."

Koran notes the machine's 4,000 psi at up to 9 1/2 gpm makes it powerful enough to push debris, such as heavy scale, downstream. The Brute also features 200 feet of 1/2-inch-diameter hose, a triplex plunger water pump manufactured by UDOR U.S.A., a 12-gallon "buffer" water tank, a heavy-duty hose reel and a 25 hp propane-powered engine made by Kohler Power Systems. It also offers pulse control, an easy-access control panel; an adjustable pressure regulator; and heavy-duty caster wheels that improve maneuverability in tight quarters. It measures 45 inches long by 33 inches wide by 46 inches high.

PROVING ITS METTLE

Thanks to the Brute, cleaning pipes to virtually brand-new condition is no problem for technicians at Pipe Masters. In fact, a bigger issue is just convincing people that a water jetter can get the job done where cable machines with cutter heads often fail, Koran says.

In fact, that's exactly what happened at the two high-rise condo buildings, one 27 stories tall and the other 13 stories high. Both



▲ Pipe Masters technician Rory Chinen prepares to clean a drainline in a condominium unit, where the Brute jetter's maneuverability becomes a great asset.

buildings were plagued by sewer line backups, he explains.

Pipe Masters provided the owner of the condos with two quotes, one for jetting the lines and another for cabling the lines. "We ended up with a one-year maintenance contract to do cabling but still had issues with clogged lines on the bottom floors," Koran says.

But the problems ceased when the owner agreed to let Pipe Masters use the Brute to jet the lines clean. "From then on, the board (of the condominium's homeowner association) was sold on jetting technology. But the contract is ours to lose, too. If we don't do a good job, they can pull the contract. So we need a machine we can rely on."

The insurance company covering the two buildings threatened to drop the policy unless the owner committed to a regular maintenance program aimed at reducing the number of claims filed for sewer backups. So now Pipe Masters cleans about 1,000 linear feet of underground sewer lines (6 to 8 inches in diameter) and roughly 5,000 linear feet of cast iron vertical stack pipes (3 to 4 inches in diameter).

"It takes us about six weeks to clean all the lines in both buildings, using one Brute and two technicians," Koran says.

PIPE MASTERS

HONOLULU

OWNER: Jason Koran

MACHINE: Brute cart-mounted water jetters from Jetters Northwest

FUNCTION: Cleaning commercial sewer pipes

FEATURES: Triplex plunger pump (4,000 psi at 9 1/2 gpm) made by UDOR U.S.A.; 200 feet of 1/2-inch-diameter hose; 12-gallon "buffer" water tank; heavy-duty hose reel; 25 hp propane-powered engine made by Kohler Power Systems; easy-access control panel; pulse control; adjustable pressure regulator; and heavy-duty caster wheels for better maneuverability. Weighs 498 pounds and measures 45 inches long by 33 inches wide by 46 inches high.

COST: Approximately \$14,000

WEBSITE:
www.oahupipemasters.com

CLOG-FREE GUARANTEE

Pipe Masters guarantees its work for one year — a guarantee Koran says he'd never offer without the Brute. "If a pipe backs up after we clean it, we're out there working for free, unless the clog is caused by a mechanical failure or foreign objects.

"We inspect the lines when we're finished, so we know they shouldn't clog again. The Brute gives us a great deal of confidence because we know it's opening up pipes to their original size."

The company owns five SeeSnake inspection cameras: one standard model for inspecting mainlines, plus two Mini and two microDrain models. The company also relies on three SeekTech SR-20 pipeline locators made by RIDGID.

Established in 2008, the Honolulu-based company employs 10 people, runs five service vehicles (Ford cargo vans) and services the island of Oahu. Its main services are drain cleaning, trenchless pipe repair, and residential plumbing service and repair work.

For drain cleaning, the company's main customers are apartment and condominium buildings, commercial businesses and shopping centers, Koran says.

MAKING BANK

The Brute is a good revenue generator because Koran charges a premium rate for drain cleaning work that includes a two-hour minimum charge. "If we're out on an emergency call and we're done in half an hour, which isn't unusual, we still charge for two hours. Plus, we can do jobs with the Brute that others can't. We're constantly dealing with 4-inch-diameter pipes that are (tuberculated) down to 2 inches or less, but the Brute restores them to their original size."

Pipe Masters actually owns two Brutes, one bought in 2012 and the second in February 2019. Koran says they're well-engineered machines that are reliable and easy to maintain. His plans include buying another one.

"I already know that for sure. We just hired three techs, and if we continue with this kind of growth, we're going to need more jetters. We're as busy as we can be and there's still so much work out there." **c**

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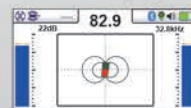
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Randy Lorge

Earn Customers' Trust

Plumbing certifications reflect your skills and education, and that will attract new customers

By Randy Lorge

“Back in my day,” my dad would say, “you didn’t need all these silly certifications: You just did the work because that’s what plumbers did.”

Cross-connection control, medical gas installation, residential fire sprinkler systems, service plumbing, hydronic heating and cooling systems, health and safety of construction workers, OSHA, brand “X” water heater installations — the list of certifications go on and on.

If you’re a plumber, you probably have one or more of these types of certifications, or one of many others not listed.

WHY GET THEM?

The need for plumbers to become certified for various installations and/or processes is essential to the success of the modern-day plumber.

Certifications can open doors you didn’t even know existed. When a customer is looking for a plumbing contractor, the simple addition of “Certified in _____,” or “_____ Certified” following your name or your company’s name makes a very powerful statement about the expertise and commitment you bring to the trade and assures the customer that you are one of the best in your field.

EFFECTS OF BECOMING CERTIFIED

Certifications can help you earn credibility and respect in your field. I recently had some brake work done on my car. As I entered the mechanic’s shop to set up the appointment, there was a banner hanging there for all to see that stated that all personnel working here were certified. I had no clue what it meant, but internally I automatically felt a sense of confidence that the work I needed done on my car was going to be done by competently trained individuals.

Your potential customer is looking for what sets you apart from the next plumber on the list. The argument could certainly be made that this decision is based on how much your services are going to cost, but

we have to give the customer the benefit of the doubt and realize that they know they are going to get what they pay for in the end.

As the current market of customers seems to be doing less of their own work than customers in the past simply due to, in most cases, lack of time to do it, it doesn’t mean that they will just hire anyone. On the contrary, today’s customers are more informed than ever due to technology. They have information at their fingertips 24/7. They will do their research on your company and find out why they should hire you. Your very own advertisements or website is a perfect place to display these industry certifications. It’s an opportunity to demonstrate your commitment to your profession by going the extra mile to achieve them.

From an individual plumber’s perspective, becoming certified in plumbing-related skills can open more opportunities for advancement within your company and also provide some job security when times get slow. We all know the amount of work in the plumbing industry can fluctuate. When times are slow and employers need to look at laying off employees, those without the certifications are more commonly the first to be let go versus those who have them. Case in point are those with backflow tester certifications.

Whether times are slow or not, backflow preventers need to be tested on a yearly basis. If you have a testers certification and the next employee doesn’t, it makes the employer’s decision much easier as to who is let go first.

Your potential customer is looking for what sets you apart from the next plumber on the list.

AN EVER-CHANGING INDUSTRY

I’m pretty sure that the water heaters my 75-year-old dad worked on during his years as a plumber were a little different than today’s water heaters.

Just remove the panel on a modulating tankless water heater or take the control panel off a commercial water heater. It won’t take long to realize that without some form of extra education or industry certification, you wouldn’t be able to troubleshoot the problem, much less make a repair.

The plumbing industry sees this as well and offers certification classes on many products. Water heaters, tools, pumps, CSST gas piping, PEX, copper — almost every facet of the trade has some specialized training available. By attaining these various types of certifications, we as plumbers build confidence in our knowledge of the profession and we can then assure our customers will have



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confidence in us that we can effectively, and efficiently, repair and/or install the products and services they require.

DAD'S DEFENSE

I tend not to disagree with my dad very often. He still schools this 51-year-old plumber every time we sit down to talk. So, in his defense, he was partially right when he said that we as plumbers should know how to do these now-certified plumbing tasks. By becoming certified, however, we stay up to date on the skills needed to accomplish them.

Every time our industry changes or learns something new, the public can rest assured that the certified plumber they hire is ready to help them.

Sincerely yours,

Master Plumber – Randy R. Lorge

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P.I.P.E. Certified Backflow Tester

Wisconsin Certified Backflow Tester **c**

ABOUT THE AUTHOR

Randy Lorge is a third-generation plumber and plumbing instructor and trainer for the Plumbers Union, Local 400 out of Kaukauna, Wisconsin. Lorge was a coach for Team USA in 2015 in Nashik, India; 2016 in Diepsloot, South Africa; 2017 in Indonesia; and in 2018 in Nevada, where he and his team participated in the Community Plumbing Challenge. Lorge also sits on the International Association of Plumbing and Mechanical Officials Training and Education committee.



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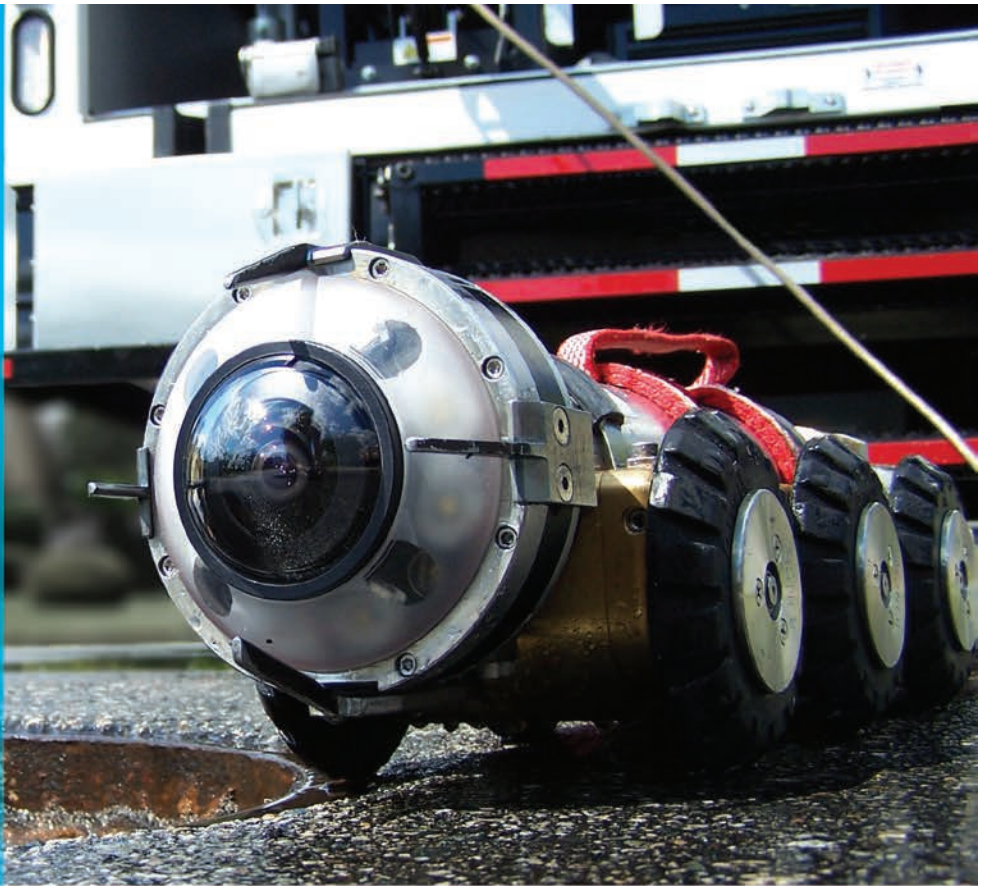
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GO THE DISTANCE

Lean Operations Maximize Profits

Implementing these technologies can keep your company profitable by allowing you to closely monitor day-to-day activity

By Jared Raney

Every plumbing and drain cleaning business has down years that can make or break it. The best way to weather downturns is to ensure your company is running lean when business is good.

That means implementing technology like GPS monitoring and routing, digital invoicing and electronic infrastructure, not to mention the oft-touted preventive maintenance.

“The dynamics of doing what we do — the big thing in keeping our costs down — is trying to make everybody works smarter, not harder,” says Darrin Black, president of Black Plumbing in Abilene, Texas. “It’s more of an intentional thought process that they’ve got to be aware of. There are a lot of cost-saving measures to ensure the job is being done efficiently.”

EYE ON THE PRIZE

“GPS is a huge benefit, honestly,” says Justin Moe, CEO and founder of All Ways Drains in Minnesota’s Twin Cities. “I personally think it’s one of the best decisions we’ve ever made.”

Moe says he has had clients claim that a technician billed them for longer than they were at a job. With GPS, simply printing the GPS record clears up that issue quickly. The same could go for the reverse, ensuring that GPS records line up with employees’ time sheets and that they are only using their work vans for work purposes.

All Ways Drains uses Verizon Connect software for fleet management. GPS offers a number of benefits, not all of them apparent on the surface.

“First of all, you can obviously track them, watch their speed, their idle time — and the benefits don’t stop there,” Black says. “The thought process is for the guys to not cross paths while going up and down the road all day long.”



Black Plumbing, like most plumbing companies of its size, runs jobs through superintendents, who are in charge of directing individual technicians. This gives those superintendents a lot of potential for cost savings — or wasted time.

The GPS helps to determine the most efficient assignments and routes for technicians.

“There’s a lot of logistical stuff that goes into scheduling jobs,” Black says. “Being that we cover such a large area, if we’re on the north side, then we try to schedule guys to stay on the north side and so on.”

A NECESSARY EVIL

Preventive maintenance may seem paradoxical when it comes to saving money — paying someone by the hour to work on equipment when it’s working just fine seems like throwing money away. But it makes equipment last longer, and when properly executed, it will save thousands of dollars by extending the life of your equipment. The cost of ongoing maintenance is a pittance when compared to replacing equipment due to premature failure.

“When a piece of equipment comes in from a job site, it gets serviced. It gets greased, oiled — it gets everything done to it after every use,” Black says. “We don’t drive little trucks. I mean, we’re spending \$80,000 to \$90,000, so when they come in, we’re maintaining them. The cost-efficiency is obvious: We keep the trucks updated and maintained, and they keep running up and down the road.”

Depending on the size of your shop, where to do maintenance and repairs can be a big influence on the bottom line.

“Regular maintenance needs to be done, just like anything else. It’s always a good idea on any vehicle,” Moe says. “We do have an in-house mechanic — rather than paying mechanic rates at shops, I’m getting by cheaper through having an in-house mechanic.”



◀ A crew from Black Plumbing in Abilene, Texas, works on a job site in town. The company outfits each vehicle with GPS devices to track fuel usage and time on jobs in an effort to boost efficiency. (Photography by Cory Jones)

“The cost-efficiency is obvious: We keep the trucks updated and maintained, and they keep running up and down the road.”

Darrin Black

using software to manage invoicing and job estimates and is in the process of choosing a fleet management computer system.

“We can enter everything into the computer system and keep track of our fleet better. We needed to five years ago. We just haven’t decided on the program that we’re going to go with just yet,” Black says.

Adding plumbing services means sinking a lot of capital into inventory, so managing parts requisition effectively can have a huge impact on profits.

Black Plumbing is moving in the direction of stock deliveries to save on downtime, as well as saving money on parts ordering and inventory. The company also has trailers that can carry more parts and supplies for large jobs.

“Going to a job site one time — making a good list of everything we’re going to need for that job and getting it one time — it just alleviates the unnecessary trips to the supply houses,” Black says.

There are a number of methods and technologies to save money on inventory.

The digital system has been such a cost-saving endeavor that Black’s only regret is that he hasn’t been able to devote more man-hours to utilizing all the software features.

“As busy as we are — knock on wood — I wish we had more time to devote toward having somebody on staff to monitor that and look at it. We don’t have the staff or manpower to monitor that as much as we need to,” he says. “The cost savings, if we did, we’d probably prove to ourselves that it would be worth the manpower — it’s just unrealized cost savings right now.”

All Ways Drains runs between 15 and 20 trucks. The key is having enough work for an in-house technician to fill their time and justify the cost of retaining them, as well as managing resources for a mechanic shop.

DON'T LET DOLLARS FALL THROUGH THE CRACKS

The biggest difficulty in all these cost-savings methods is simply managing all the information, which is where a solid data infrastructure becomes a necessity. Black Plumbing recently began

A lot of owners don’t like thinking about the minutiae of nickel-and-dime cost savings, but Black points out that those small savings can add up quickly.

“For the most part, when I’m talking about cost-efficiency, we’re at 90% efficiency. But when you’re running 30 trucks, that 10% adds up to be quite a bit,” he says. “Until you get something better-equipped within the system and within your grasp, it’s really going to be hard to ever realize what’s lost until the savings come back after incorporating something.”

PROFIT REQUIRES CHANGE

Underestimating the impact of cost-saving efforts has been the bane of many plumbing companies, and at the end of the day, it’s often a matter of putting in the due diligence on small matters like these.

“We’ve been pretty lucky. Things have gone pretty well, but we’ve worked very hard at it — there is no replacement for hard work,” Moe says. “You have to work at this stuff. And we make mistakes too — all the time — and there are problems and hiccups.”

To truly optimize cost savings, the only real solution is being proactive.

“A lot of it is continued education, continual communication between me, the guys, superintendents, our staff personnel,” Black says. “Nobody wants change, but we went to the computer system last year. The nice thing is we went through the bumps and bruises, and I think now everybody sees the need.” c





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IN DEMAND

Keeping up with customer requests has driven the growth of All Clear Pumping & Sewer

By Giles Lambertson
Photography by Denny Medley



In the heart of Missouri, All Clear Pumping & Sewer has repeatedly demonstrated to customers what good service means.

"I am extremely pleased with all that you did," customer Joe Brown writes in a testimonial on the company website. Brown goes on to praise company technicians for professionalism, honesty, sticking to quoted prices — and doing the job well: "The basement has remained completely dry since you left; I am very pleased with that."

Similar testimonials crowd the All Clear website. What that means for owners Shawn and Tracy Chilton is an ever-expanding lineup of offerings that keeps the company working steadily to meet demand.

It all began with straightforward cleaning of sewer lines and septic systems. Shawn Chilton had become interested in the industry at age 21 when he applied for a job with a sewer cleaning firm in St. Louis. He worked several years for that company, learning skills, honing expertise and awakening a desire to work for himself.

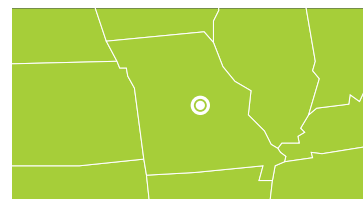
His focus shifted when his wife — who was managing the family's funeral home in Troy, west of St. Louis — asked him to assist her. Still a sewer man at heart, Chilton worked at it part-time while helping at the funeral home. In 2009, the Chiltons decided to move west to Jefferson City, the state capital, and opened All Clear.

« The crew at All Clear Pumping & Sewer includes (from left) technician Daniel Schipper, owners Shawn and Tracy Chilton, office manager Coley Peters, and technician Jason Jones.

» Technician Job Parson uses a Spartan 2001 cable machine to clean a residential lateral.

Missouri is largely a rural state with fertile farmland and rolling topography. Farm and livestock operations nestle among stands of trees on surrounding hills. The university town of Columbia, 29 miles north of Jefferson City, is the region's largest urban center with some 120,000 residents. While the core of business is in Columbia and Jefferson City, All Clear responds to calls from as far away as Cape Girardeau (233 miles east on the banks of the Mississippi River) and Joplin (209 miles west near the border with Kansas). "We'll go anywhere," Shawn Chilton says.

All Clear technicians drive vans and trucks that are essentially billboards, serving as the company's principal marketing tool. Splashed



All Clear Pumping & Sewer

LOCATION: Jefferson City, Missouri

OWNERS: Shawn and Tracy Chilton

EMPLOYEES: 12

YEARS IN BUSINESS: 10

SERVICES: Septic tank installation repair and pumping; drain cleaning; aeration filter and grease trap cleaning; hydroexcavation; waterline and sewer line replacement and repair

SERVICE AREA: A 200-mile radius of Jefferson City

WEBSITE: www.allclearmo.com



➤ Job Parson uses a winch to load a Spartan cable machine back into the service van after a job.

➤ Parson feeds out hose to jet a residential sewer line.



“We are the only pump and sewer company around here that is a one-stop shop. **We have it all.**”

Shawn Chilton

in ocean blue and a light mossy green, the eye-catching vehicles feature the All Clear logo with the “r” resembling a faucet and drops of water. The slogan “Clean Courteous Pros” floats above the company name.

On service calls, Chilton and his techs do everything from uncovering and repairing a municipal sewer line with a Vac-Con hydroexcavator to installing engineered septic systems at rural homesteads to inspecting commercial lines for invasive tree roots. “I would say working on septic systems is 60% of the business,” Chilton says, a reflection of the farm homes dotting the region.

Even so, the diversity of the company’s services gives All Clear a competitive edge that is driving growth. “We are the only pump and sewer company around here that is a one-stop shop. We have it all.”

Chilton is state certified to perform septic tank inspections for real estate transactions. To install engineered septic systems, he would need another level of training, so an outside contractor engineers All Clear systems. Nonengineered septic systems are usually installed in flat, unobstructed lots with agreeable soil conditions. In the region’s rolling countryside with high concentrations of clay, septic systems must be engineered — about 90% of All Clear’s installations fall into this category.

Growing pains

TEAMWORK

The Chiltons are a team, and they both love what they do. While Shawn still spends a lot of time in the field along with the company's nine technicians, Tracy and a secretary keep the books and answer phones in the office. The couple started All Clear working from their apartment and moved the operation into a stand-alone office after three years.

This move corresponded with the company's expansion of services. Having started the company in the immediate aftermath of the 2007 recession, the Chiltons stayed small until they felt they could bank on the slowly improving economy to expand their work.

As they grew, the number and types of machinery in the equipment yard swelled. The biggest machine in the inventory is a 2005 Vac-Con hydroexcavation rig on an International

Shawn Chilton worked for a sewer cleaning firm in St. Louis and, later, part time with another sewer company. He learned the trade working in those positions, but there's nothing like owning a company yourself to really understand what it takes.

After Chilton and his wife, Tracy Chilton, went all-in and launched Jefferson City-based All Clear Pumping & Sewer, the meaning of being on their own came home to him on a hillside in south-central Missouri. He was on his very first call to pump a septic tank. It was situated on a residential property at the Lake of the Ozarks.

The region's Osage River was dammed in 1931 to create a hydroelectric power source, creating the 54,000-acre Lake of the Ozarks that reputedly was the largest man-made body of water in the U.S. at the time. The main channel squiggles through 92 miles of Missouri countryside with some 70,000 homes squatting on its shoreline.

It was at one of these homes in 2009 that Chilton found himself with a pump truck. "I was on my first job and was scared to death my truck was going to go rolling down the hill and into the house and lake," he recalls. "That hill was so steep. I was excited, but I kept thinking about all the bad things that could happen. They didn't happen, though, or we wouldn't be talking about it."

All Clear is a big success story now, but it was a one-man operation at that time. Or, rather, a two-person operation. "It was just me and my wife," Chilton says. "I remember being on another job at the lake and I needed a pump truck for a sewer call in the snow. Tracy crawled in the truck and drove it to where I was. And she was eight months pregnant."



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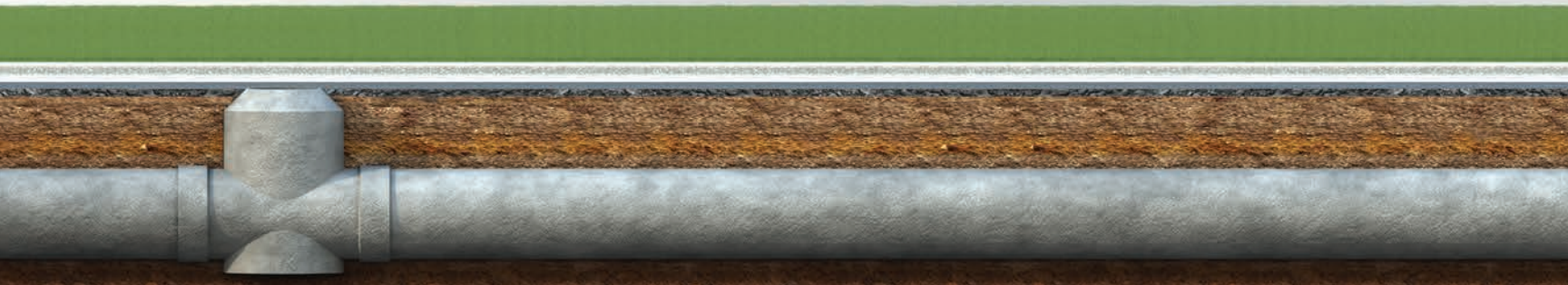


Technician Kelvin Lee cements portions of a drip distribution system using Netafim Broline dripline at a residential onsite septic installation.

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chassis. It features a 1,000-gallon water tank, 14-cubic-yard debris tank and an 80 gpm jetter. The fleet includes a dump truck and vans by Ford, Chevy, GMC and Nissan; the oldest vehicle is from 2002, the newest a 2019 F-450.

The company's mini-excavator lineup is all Bobcat — an E63 and 435. The former is a 60 hp diesel 7-ton model with 5,900-pound lift capacity; the 435 is a slightly lighter and smaller-engined (49 hp) excavator. Both are utilized for septic tank excavation work and similar digging tasks. All Clear is all Spartan Tool in its choice of drain cleaning machines — with a Spartan Tool 1065 cable machine that can ream out clogged lines 250 feet away and smaller models 100 and 300 for less challenging blockages.

Company techs employ RIDGID and Spartan Tool cameras to scope out the interior condition of drainpipes and other buried lines. The newest addition to All Clear's camera equipment is a big step up in functionality: a CUES steerable camera transporter linked to monitoring equipment in an F-350 van. The heavy-duty camera system is utilized to inspect larger-diameter pipelines.

That was the plan, anyway. Shawn Chilton bought the \$150,000 unit more than two years ago, confident that sewer line work was awaiting the company across Missouri. Alas, no jobs showed up. "My wife and project manager said, 'Sell the camera truck.' But I said, no, we just need a job or two to pay for it. My wife would have sold the truck and camera a long time ago."



Part of the All Clear fleet which, like the company, has grown larger than the Chiltons ever anticipated.

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« Technician Bob Nivens uses a Bobcat E63 excavator to backfill after a drip distribution system installation.

» Septic installation and pumping has grown to 60% of All Clear's business in rural Missouri.

“We have the jetters and the hydrovac, the cameras and expertise. Pipe lining naturally follows.”

Shawn Chilton

In the end, he proved prescient. The company finally landed a \$50,000 contract in 2018 and in the coming months will undertake a \$300,000 camera job in Cuba, Missouri, about two hours from Jefferson City. This “buy it and the jobs will come” approach was successful in this instance, but it isn't always Chilton's operating philosophy.

Sometimes the demand for a new service is so obvious he can't buy equipment fast enough. Such was the case with the purchase of the Vac-Con hydrovac truck. Municipal officials had repeatedly expressed to Chilton that they would like the opportunity to work with All Clear. “We mainly got the vac truck with a jetter on it because the municipalities kept calling us,” he says.

OVERNIGHT SUCCESS

All Clear has become a company with a diverse range of services, though that was not the initial goal. “We never planned to do this. It just happened,” Chilton says. “Something would come up and we hoped we could find a way to do it ourselves rather than sub it out. We finally worked our way up to where we could buy our own stuff and not have to turn to subcontractors.”

By 2014, the switch to being a self-sufficient provider of numerous services was well underway, and it isn't finished. Now that the mainline sewer inspection system is beginning to make the company some money, Chilton is ready to jump into pipe lining work. “We have the jetters and the hydrovac, the cameras and expertise. Pipe lining naturally follows. I would buy the liner machine tomorrow if I could. I certainly will in the next six months.”

Chilton's business philosophy is simple: Never burn any bridges. “You should get along with your customers and your competitors. You



should try to maintain relationships with everybody in the industry. That way they know they can call when they need my help and I can call when I need theirs.”

All Clear answers calls for help across much of Missouri, but Chilton has no plans to open a satellite office. “We have enough work. In fact, I sometimes wonder if I could make as much money as I am and be a smaller company. The bigger you are, the more workers you need to have and the more responsibilities you take on. There's a trade-off if you're smaller: You have fewer headaches.”

The growth of the company and expansion of All Clear services still seem to surprise him. “There was never any plan. We never ever thought we would be as big as we are today. It just happened overnight.” c

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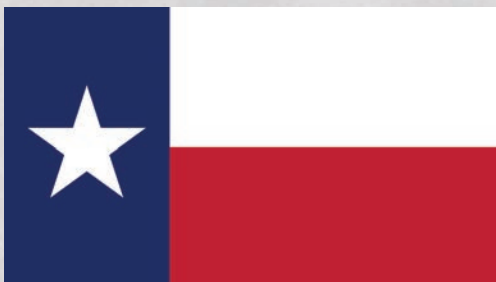
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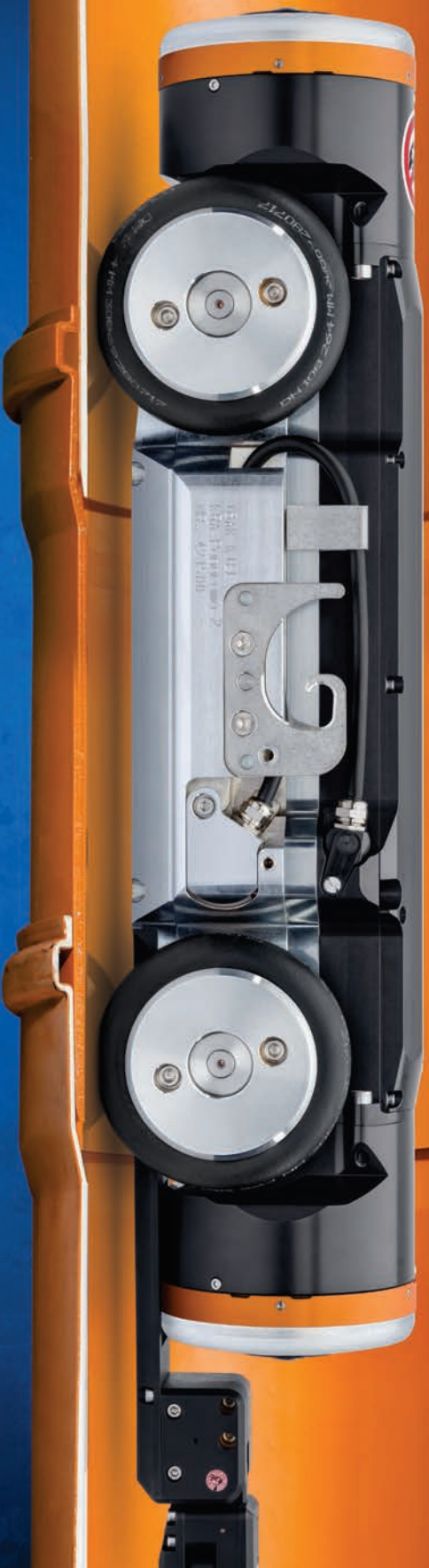
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Erik Gunn

Better Cash Flow

You can solve the problem of lag time between services rendered and dollars in your bank account

By Erik Gunn

Cash flow is the lifeblood of your drain cleaning business. A hefty balance of accounts receivable might feel like it's money in the bank, but don't kid yourself. As long as they're unpaid, those receivables represent money in your customer's bank, not yours.

To boost your cash flow, you need to stay on top of those receivables, says Melinda Toy, vice president and director of treasury management for PyraMax Bank, a full-service commercial bank in suburban Milwaukee.

Toy offers a series of tips on how to do that, starting from the moment your customers agree to hire you for the service they need.

1. Require a signed contract.

This doesn't have to be complicated. But getting your customer's signature on the proverbial dotted line makes it clear from the start that everyone knows the price and the expected outcome of your work and the terms and conditions of your transaction.

2. Require a deposit.

For a really short-term job, like busting out a clogged drain, this might not be realistic. But for a larger job, such as a major lateral replacement, that will come with hefty labor costs and upfront materials purchases, a down payment offers financial protection.

3. Invoice early and often.

Unless you're collecting immediately upon completion of the job, you can expect at least a day's lag for payment in the best of circumstances. But you want to do everything in your power to make sure that lag is as short as possible.

"The best practice should be to invoice upon completion of a project, shipping a product or completing a service," Toy says. If you want to get paid faster, don't fall into the practice of waiting for one day each week to send out invoices.

As much as possible, ask for payment on receipt. If you feel that's

If you want to get paid faster, don't fall into the practice of waiting for one day each week to send out invoices.

not possible or realistic, set a deadline of net 10 days (business days, not counting the weekends) for payment of a bill.

An alternative, especially for larger clients, is to offer a slightly longer payment window with a discount for early payment. For example, your invoice might set a net 30 days payment deadline for the full amount, but also offer a small discount for customers who pay in 10 or 20 days from the date of the invoice.

"Deadlines for payment of course also need to factor into your business model," Toy points out. "If it's not possible to get paid in 10 days, maybe there are some efficiencies you can put in place to at least shorten the cycle."

4. Make it convenient for customers to pay you.

Convenience is a two-way street. You want to make it convenient for your customers to pay as quickly as possible. But you also want to make it convenient for your business to convert that payment into cash on hand.

Literally demanding cash is probably not going to fly, for all kinds of reasons. The associated recordkeeping headaches and the fact you can't pay your own bills in cash are just two of them. Not to mention that you'll almost certainly turn away far more customers with a policy like that than you would with multiple payment options.

It's up to you if you want to refuse cash at all, but at the very least don't require it.

Taking checks is the most common practice. That's convenient for your customer, and it should probably still be an option you offer. But how convenient is it for you, really? Remember, it still takes time to make the deposit.

"What about mobile deposit through my smartphone?" you might ask. That's a great convenience. It also comes with limitations, as the financial advice website Bankrate points out. Those include monthly limits on how much you can deposit by mobile and hold times for mobile deposits, especially after hours.

Credit card payment options have become standard, and easy to take with the Square and similar swiping devices that attach to your smartphone or the tablet. Of course, there's also a fee that takes a bite out of your payment. Those usually combine a small flat-fee charge and a charge that is typically in the neighborhood of 2% of the bill.

Some merchants impose a transaction fee to offset those costs, but they can spark resistance among customers.

5. Explore new options.

Toy suggests another alternative to credit cards: automated clearing house payments. ACH is a form of electronic funds transfer, she explains, and it's becoming increasingly popular with businesses, even small ones. Toy says some of PyraMax Bank's customers even use it to pay their own bills, including handling payroll and paying vendors.

And businesses can establish ACH payment options for their customers using portal services.

"It's a faster way to get funds into your account. It's an alternative to a wire transfer," she explains.

ACH transactions typically settle within 24 hours, and same-day transfers through those systems are within our capability now. The system is more popular in Europe — "They more often settle those debits and credits the same day," says Toy — but catching on in the U.S.

ACH transactions have an advantage of much higher limits. Again, European countries, where limits are as high as \$1 million a day, are ahead of the U.S., where they're still at \$25,000 a day.

SETTING UP

If you're interested in pursuing this newest approach to making payment easier — and therefore improving your business cash flow — have a conversation with your financial advisor. Only that professional will have access to the details about your personal circumstances that will be important in making a sound judgment.

But assuming you get sound advice that it's at least worth considering, Toy recommends these steps:

- Check with your financial institution's commercial banking department. If there's a treasury management office, such as Toy runs, that's your first stop. Otherwise, inquire about direct deposit options.
- Be prepared to present detailed financial operations records — perhaps two to three years' worth of tax returns — and to submit to a credit check. "ACH means some exposure to the bank," Toy says, and so to agree to an arrangement demands due diligence on your banker's part.
- Be prepared for limits on ACH transactions, and make sure your typical revenue stream will fall within those limits.

Once you've gone through that mutual vetting process, you'll set up a payment portal connected to your website. Make sure it's easy for customers to get to and easy to navigate. Typically, Toy explains, the portal will give the customer the option of paying by credit card or to initiate an ACH transfer using information from their checking account.

There also will be some mechanism for securing customer permission before you're able to automatically debit their account.

THE PAYOFF

There's no question that moving to an ACH system for taking payments will require some due diligence to make sure it's right for your business. But given the resulting ease and convenience it can provide for you and your customers alike, it should be worth your while to at least look into the concept.

Because in today's digital financial world, it may be the closest you'll get to realizing that money management maxim — "cash is king." **c**

ABOUT THE AUTHOR

Based in Racine, Wisconsin, Erik Gunn writes for magazines on business and other topics.

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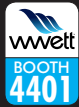


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The Proper Approach to Pumping

Straightforward tips and procedures to simplify septic tank maintenance and evaluation

By Jim Anderson

A neighbor recently asked me that old question: “How frequently should septic tanks be cleaned?” This query popped up because our county requires an assessment of a tank every three years to determine whether the tank should be pumped. How often the tank needs to be emptied depends on a number of factors, including tank capacity, number of people using the system, whether there is a garbage disposal and how water is used in the house.

Before we go further, one note on the common words used to indicate the tank needs to be pumped. Like my neighbor, many laymen use the word “clean” when describing septic service, which could lead to misunderstandings. Saying a tank will be cleaned may indicate to some that the tank will be scrubbed, chemically treated or disinfected. Obviously we in the wastewater industry know that’s not what’s happening when you pull up with the vacuum service truck. So for the purposes of consumer education, let’s stick to “emptying” or “pumping” the tank.

Three years is considered an average threshold for the accumulation of sludge and floating scum in the tank to reach the point where they occupy 25% of tank volume. This is a somewhat lower volume than the 33% level that was recommended in the 1970s and ’80s. The bottom line is to prevent solids from being discharged to the soil treatment unit. Periodic tank pumping, along with installation of effluent screens, can dramatically reduce solids impact on soil treatment areas.

Periodically evaluating septic tanks can have some other benefits. Baffles can be inspected to make sure they are in place and operating. The tank operating level can be checked to determine if there are any leakages or backups. Effluent screens can be cleaned and accumulation of solids measured, allowing an estimate of the rate of solids buildup.

ACCESS ISSUES

Personally, I have my tank pumped every three years. This allows my service provider to get a good look at the inside of the tank to inspect for any excessive corrosion and the occurrence of cracks and potential leaks. To me, this is a good “insurance policy” to make sure I protect my soil treatment unit. Replacing the soil treatment part of the system is usually very expensive.

The next question on the part of homeowners is: What should be done to empty the tank properly? As a service provider, part of your responsibility to the homeowner is to explain what you need to do to properly pump and evaluate the tank.

First, the tank needs to be opened. A proper assessment and pumping cannot be done through an inspection port. This means the maintenance hole needs to be located and opened. In what I like to call the “old days,” this required spending some time locating the tank — sometimes not a small task — and then estimating the location of the maintenance hole and digging down until you found it. Now most codes require the addition of manhole risers at or near the surface, making locating easier for the service provider.

« Digging to uncover the tank maintenance hole is required, as a thorough assessment and pumping shouldn’t be done through an inspection port.



As a service provider, part of your responsibility to the homeowner is to explain **what you need to do to properly pump and evaluate the tank.**

In areas where raising the access is not mandated, if you service a tank where the depth to the opening is more than 1 foot, it's a good idea to sell the customer on the benefits of adding a riser in time and money savings during future visits.

After the tank is opened and before any pumping occurs, the contents of the tank should be inspected. There should be three distinct layers: sludge on the bottom, a clear zone and the floating scum layer. If these layers are not present, it is a good indicator of some potential problems due to homeowner use or the presence of some water-using devices affecting tank operation.

THOROUGH INSPECTION

A missing scum layer may indicate the pH of the tank is higher or lower than the optimum range for bacterial action or the presence of water softener recharge water. The clear zone should be 75% of the tank volume. If the zone is very cloudy and flocculent is present, it indicates a high BOD content as a result of large additions of alcohol or dairy. Total lack of a clear zone means there is some antibacterial use impacting proper bacterial function in the tank. A dark sludge may indicate the presence of an iron filter. Presence of any of these conditions calls for a discussion with the homeowner about their system use and the need for an increased maintenance frequency.

Proper tank evacuation means all solids and liquid are removed. The industry standard is that everything is removed to a depth of 1 inch. To accomplish this, the tank contents must be broken up and mixed. This can be accomplished either by mechanical mixing (my preference) or continual backflushing until the scum layer is broken up enough to be pumped into the truck.

When the tank is empty, it should be inspected to make sure the baffles are in place and are in good shape — not corroded. The tank should be checked for signs of cracks and leaks; just as important is to observe if water is coming in from either the inlet or the outlet. If water is coming from the inlet and you had the homeowner refrain from using water while working on the tank, they have a leaky fixture that needs to be fixed. If water is coming from the outlet it may mean the drainfield is backing up into the tank and should be evaluated.

When the pumping is complete, the job of the service provider is not done until the cover on the maintenance hole and/or riser is securely placed to prevent unauthorized access. Most state codes address how these covers are to be secured. Know those rules and follow them. Every year, lack of secure covers results in homeowners or children falling into tanks, which can be fatal.



Using a Crust Buster to break up the solid material in the septic tank before pumping it out helps make sure the tank is properly emptied.

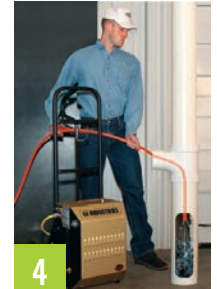
Finally, fix any damage to the lawn by replacing soil and sod that was dug up to locate the maintenance cover. Check to make sure you have not left anything behind in the way of tools and the site is cleaned. **c**

ABOUT THE AUTHOR

Jim Anderson, Ph.D., is an emeritus professor at the University of Minnesota Department of Soil, Water and Climate. He works with the National Association of Wastewater Technicians and is a recipient of the pumping industry's Ralph Macchio Lifetime Achievement Award.

Business Diversification - Septic Pumping, Plumbing

By Craig Mandli



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The Model C dual-cable sectional drain cleaner from Electric Eel runs up to 200 feet of 1 1/4-inch, self-feeding dual cable in 8- or 10-foot sections that require no handling when rotating. It spins cable at twice the revolutions per minute of a continuous cable machine for cleaning 3- to 10-inch lines for distances up to 200 feet. One-man operation means less time and labor expense. A heavy-duty, 1/2 hp motor comes standard, and 3/4 and 1 hp motors are also available. A custom-designed and manufactured gearbox ensures higher quality, lower cost and parts availability. The heavy-duty, fully adjustable safety clutch keeps cable and tool breakage to a minimum and provides overload protection. A fold-down handle allows for easy transportation, storage and use in crawl spaces. Its carry handle allows for balance and easy transport. 800-833-1212; www.electriceel.com.

3 / GENERAL PIPE CLEANERS SEWEROOTER T-4

The Sewerooter T-4 midsize drain cleaner from General Pipe Cleaners/General Wire Spring can be used to unclog 3- to 6-inch-diameter lines up to 100 feet long. It carries 100 feet of 9/16-inch Flexicore cable to clear stubborn stoppages in 3- to 4-inch inside lines. A heavy-duty, 9/16-inch cable provides more torque than traditional 1/2-inch cables offer, yet it can clean the same size drainlines. To clear tree roots and other tough clogs from 3- to 6-inch lines, simply switch drums to 75 feet of 5/8-inch Flexicore cable. To adjust to different cable sizes, just turn a knob on top of the feed. A labor-saving variable-speed Power Cable Feed provides enhanced control through blockages, to easily guide the cable in and out of the line at up to 20 feet per minute, yet keeps hands clean and off spinning cable. It comes with a fold-down handle, stair climbers and truck loading wheel for easy transport, maneuvering and storage. 800-245-6200; www.drainbrain.com.

4 / GI INDUSTRIES TCM 5000

The high-speed TCM 5000 pipe cleaning machine from GI Industries combines high-flow air/water flushing and brushing at variable speeds to provide the operator more control in various applications, creating a jetter and cable machine in one package. The variable-speed (zero to 1,750 rpm) control allows operators to use cleaning/drill heads or devices from other manufacturers. It provides contractors greater flexibility in deciding which tools are correct for their application. These systems can clean 1/2- to 24-inch lines at over 150 feet on a single unit. 800-724-1944; www.giind.com.



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5 / MILWAUKEE TOOL M18 FUEL SEWER SECTIONAL MACHINE WITH CABLE DRIVE

The M18 FUEL Sewer Sectional Machine with CABLE DRIVE from Milwaukee Tool provides an automatic feed and retract solution within a sectional machine designed to reduce user strain when pulling back the cable from the pipe. It offers the power to clear roots at 200 feet with a cordless solution to provide users the power they need to clear tough clogs with easy setup and transport, allowing users to work with less hassle. 800-729-3878; www.milwaukeetool.com.

6 / PICOTE SOLUTIONS SMART SPIDER

The Smart Spider from Picote Solutions is designed for use with the Super Midi Miller, Maxi Miller and Maxi Miller Power Plus. It is designed to clean and descale pipes when the bottom has rotted out over time, or sections of the pipe are crumbled or missing. The Spider legs flex but remain under tension, and when they hit the edge, they move seamlessly back into the remaining pipe. The pipe is clean and descaled and can have a cured-in-place pipe or new patch installed. The unit can also be used to remove fats, oils and grease. It is fully rebuildable. 219-440-1404; www.picotesolutions.com.

7 / SPARTAN TOOL MODEL 300

The Model 300 from Spartan Tool has a compact design that makes it ideal for tight spaces and narrow doorways. It includes a Dial-A-Cable power feed that automatically sends cable in and out of the line and a whisper quiet, gear-reduced permanent magnet motor that provides quicker torque and longer life. Its 107-foot cable capacity means customers don't have to give up big power and performance in a compact machine. 800-435-3866; www.spartantool.com.

FRANCHISE SYSTEMS

8 / ROOTER-MAN FRANCHISE SYSTEM

The Rooter-Man Franchise System offers a low-cost solution to franchise ownership, with a flat-rate pricing system (no royalty on percentage of sales). Franchisees are granted an exclusive franchise license for their chosen territories, and they become part of a team of independent dealers working together under a nationally branded website and recognized trademark with proven systems for success. It has been named the top plumbing franchise by *Entrepreneur* magazine 15 years in a row. Franchisees receive equity in the national brand by receiving exclusive use of the trademark in their territory. 800-700-8062; www.rooterman.com.

9 / ZOOM DRAIN FRANCHISE

Zoom Drain Franchise pulls from a larger pool of willing and capable people because they don't need skilled techs. Their "green" apprentices practice in training centers, on trucks and in the field with techs, using comprehensive digital manuals as the training curriculum. Graduating from apprentice to tech is the first step on a career path. The manuals match the specialized configuration of the trucks. The software, tools, equipment and materials are specifically referenced in the procedures and systematically updated on tablets. 877-855-5100; www.zoomdrain.com.



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PLUMBING PRODUCTS

10 / FLUIDMASTER FLUSH 'N SPARKLE SELF-CLEANING TOILET SYSTEM

Fluidmaster's Flush 'n Sparkle self-cleaning toilet system is designed to achieve safe and effective hands-free cleaning for most any toilet. The system puts a powerful bleach cleaning solution directly into the overflow tube of the flush valve, so no chemicals ever touch the flapper, fill valve or other tank parts. This prevents the damage that drop-in tablets normally inflict, leading to breakdown and part malfunction. It offers a powerful toilet cleaning solution that lasts up to three months. Installation is simple in three quick steps. The system comes with one bleach cartridge and can be refilled with bleach, blue or septic tank refill cartridges. 949-728-2000; www.fluidmaster.com.

11 / MANSFIELD PLUMBING PRODUCTS VANQUISH

The Vanquish from Mansfield Plumbing Products includes durable side-mount seat hinges, an ultrasmooth PuraClean glazed surface and twice the rinsing power, making cleaning the toilet easy. It is a recent recipient of the GOOD DESIGN Award, and placement of Top 20 Products of 2018 with both *Supply House Times* and *Plumbing & Mechanical*. It includes a durable, slow-close seat with side-mounted hinges that are cycle-tested for 10 years of trouble-free use. It comes with MagnaFlush high-performance flushing technology with a 3-inch rigid flapper flush valve, Fluidmaster Pilot anti-siphon fill valve, decorative metal trip lever, SmartFasten two-bolt connection, PuraClean glaze, a fully glazed trapway and a 12-inch rough-in. 877-850-3060; www.mansfieldplumbing.com.

PORTABLE JETTERS

12 / GORLITZ SEWER & DRAIN MODEL GO 1500A SERIES

The Model GO 1500A Series jetter from Gorlitz Sewer & Drain has a functional frame construction with a carrying handle, reel accessory tube, retractable pull handle and phenolic 4-inch wheels for easy transportation to the job site. All models come with a custom-built, dual-capacitor, 2 hp electric motor drawing 19.8 amps at full load. The duplex ceramic plunger pump with dual pulsation will generate more than 1,500 psi at 2.1 gph to clear tough stoppages or open frozen pipes. The unit is supplied with one 1/8-inch by 50-foot-long trap hose to clear drainlines 1 1/2 to 3 inches in diameter. The hose and reel connections are provided with quick-disconnect fittings to simplify operation. The reel accessory tube accepts an optional hose reel for compact hose storage and operation. 562-944-3060; www.gorlitz.com.

13 / PATRIOT SEWER EQUIPMENT & REPAIR 1776 HEAVY-DUTY EDITION

The 1776 heavy-duty edition from Patriot Sewer Equipment & Repair generates 3,500 psi at 11 gpm. Standard equipment includes a Piranha 3/8-inch, 300-foot, red jetter hose and remote start for one-man operation. A portable 100-gallon water tank with autofill valve and stainless steel nozzle set is custom-engineered to work at max pounds per square inch and gallons per minute. It can be used to clean 4- to 6-inch sewer pipes with ease. Propane or gas models are available. It includes an all-stainless-steel reel and frame. All units are built to order. 888-318-9888; www.patriot.us.

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PRESSURE WASHERS AND SPRAYERS

14 / EASY KLEEN PRESSURE SYSTEMS PORTABLE PICKUP SKID

The Easy Kleen Pressure Systems Portable Pickup Skid is a self-contained system that allows for portable cleaning. This unit was designed and manufactured in-house to fit perfectly in a 6-foot-6-inch pickup truck box. Forklift slots and a lifting eye makes loading this unit easy and efficient. With three different models available: Choose between a 14 hp Kohler or 13 hp Honda gasoline engine or a 9.8 hp Kohler diesel engine. All models are equipped with an oil-fired commercial hot-water, gearbox-driven General Pump offering 4 gpm at 3,000 to 3,500 psi, 225-gallon water tank, hose reel and winterizing system. It is suitable for municipal cleaning and construction, as well as building restoration, cleaning and maintenance. 800-315-5533; www.easykleen.com.

15 / WATER CANNON 19K02

The 19K02 commercial-duty, 225-gallon, 12-volt, tank-fed, self-contained, skid-mounted, hot-water cleaning system from Water Cannon Inc. - MWBE can be permanently mounted in a truck bed or trailer or moved to multiple locations or trucks with minimal effort. It arrives ready for use, serving up powerful performance and helping users complete jobs rapidly at remote job sites or when on the move at any location with or without an external water source. 800-333-9274; www.watercannon.com.

PUSH TV CAMERA SYSTEMS

16 / CUES MPLUS+ XL

The CUES MPlus+ XL push system is designed for easy operation with an all-in-one setup and flexibility by quick removal of the control unit to be used separately. It includes a coiler configuration and

pan-and-tilt camera for mainline and larger pipeline applications up to 500 feet. It integrates video observation coding, observation coding interface and digital recording. The lightweight system includes large, durable wheels for portability and a balanced footprint for stability. It is manufactured to handle rigorous field use. 800-327-7791; www.cuesinc.com.

17 / ENVIROSIGHT VERISIGHT PRO

The VeriSight Pro from Envirosight has a stainless self-leveling camera with shadowless, variable LED illumination to capture crisp video footage regardless of pipe material. With supplied centering devices, it inspects lines 2 to 9 inches and snakes through multiple bends for maximum range. An integral triband sonde (33 kHz, 512 Hz, 640 Hz) works with almost any locator. Its welded steel coiler comes with 130, 200 or 330 feet of pushrod. The system runs continuously for six hours off internal rechargeable lithium-ion batteries or off main or vehicle power. Its multilanguage controller displays footage on an 8-inch thin-film-transistor LCD and captures up to 90 hours of MPEG-4 video on an SD/SDHC card or USB stick. It has 3x zoom, captures images in JPEG format from both live and recorded video, and offers a 16-page text writer with full QWERTY keyboard. 866-936-8476; www.envirosight.com.

18 / FORBEST PRODUCTS FB-PIC3188XX/4188XX

The FB-PIC3188XX/4188XX portable lay-flat camera system from Forbest Products comes with a 1-inch waterproof color camera head or 1-inch self-leveling color camera head with a built-in 512 Hz sonde transmitter, stainless steel spring kit and bright LED lights. It comes with 130 feet of 5.2 mm or 200 feet of 6 mm fiberglass cable, with a high-resolution 7- or 10-inch color control station with USB and SD recording. Typing and editing is optional for the 10-inch multifunction control station. The lay-flat design is convenient for one user to operate the camera independently. 877-369-1199; www.forbestusa.net.

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19

19 / MYTANA MFG. DRAINSTEER

The DrainSteer from MyTana Mfg. uses high-pressure water for propulsion, steering and cleaning as it captures live inspection video from inside lateral lines. Its design makes it able to traverse multiple bends in pipe, steer through branches and levitate above debris. With these special capabilities, municipal contractors and commercial plumbers can locate failed pipes, cross bores and blockages, as well as clean the lines. It is fully water-driven, as six propulsion nozzles generate the power needed to pull its own flexible hose through multiple bends, and a side nozzle on the camera can be aimed to steer through diverging pipes and hover past obstacles. An optional forward-facing nozzle can be pulsed to clear debris and other obstructions. The system works with any high-pressure water source, including pressure washers and combination trucks. Its 1/2-inch hose comes in lengths from 115 to 190 feet. 800-328-8170; www.mytana.com.

20 / PEARPOINT (USA) FLEXITRAX P550C

The flexitrax P550c from Pearpoint (USA) is designed around simplicity of operation. Ready to use in 30 seconds after powering on, it requires minimal training to operate, letting the user concentrate on pipe inspection. A large, 12.1-inch, high-definition, daylight-visible screen combined with a full-size keyboard and dedicated function keys guide the user through the survey process, making the system faster and easier to use. Built in is a high-capacity internal lithium-ion battery, providing power for up to a full day's typical usage, and 128 GB of solid-state memory, sufficient for over 90 hours' video recording. This portable and modular crawler system enables operators to customize the solution for the inspection of a vast range of pipes, in all locations. It can be readily transported and easily wheeled on site with its rugged, ergonomic design, allowing the user to reach access points beyond the range of their vehicle. 800-688-8094; www.pearpoint.com.



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21 / POLLARDWATER OPTICAM SEWER CAMERA

The Opticam sewer camera from Pollardwater is designed for inspecting pipes between 2 and 12 inches in diameter. A high-resolution, self-leveling color camera displays images with clarity on a 10.4-inch LCD screen, and its lightweight, weatherproof design makes it easy to use and transport from job to job. It is available in 200-, 300- and 400-foot lengths. 800-437-1146; www.pollardwater.com.



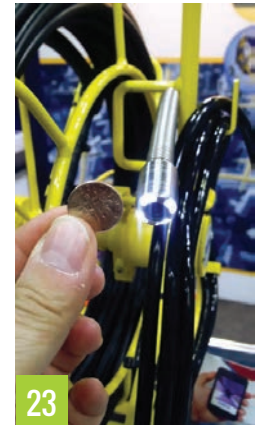
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22 / RAPIDVIEW IBAK NORTH AMERICA MICROLITE PUSHROD SYSTEM

The MicroLite Pushrod System from RapidView IBak North America is a lightweight, small-diameter push system with durable steel-frame construction that delivers a high-quality image for all contractors and plumbers. Fitted with 100 feet of push cable, powerful LED lighting and an auto-uprighting camera, it is designed to inspect pipelines 2 to 4 inches in diameter. The entire system is powered by rechargeable batteries and is equipped with the positionable MicroLite Command Console, which includes a 10-inch touch-screen monitor, full Windows operating system, two USB connections and recording software. 800-656-4225; www.rapidview.com.

23 / RATECH ELECTRONICS 5/8-INCH ULTRA MICRO CAMERA

The 5/8-inch Ultra Micro Camera from Ratech Electronics is tiny enough to inspect kitchen sinks and toilet P-traps. Made for 1- to 4-inch pipe inspections, it conveniently maneuvers around bends and turns smoothly. It is adaptable to any existing Ratech Electronics system, including the Elite SD/USB, Fast Peek or Mini Peek portable drainline units. The camera is complemented with four super-bright LED lights producing an ideal color picture. 800-461-9200; www.ratech-electronics.com.



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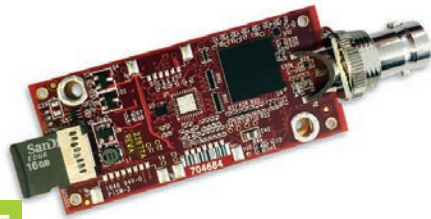
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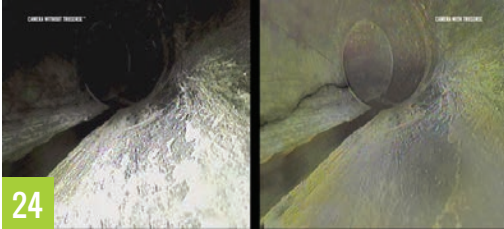
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24 / RIDGID SEESNAKE WITH TRUSENSE

Connecting to RIDGID SeeSnake CSx series Wi-Fi enabled monitors, **TruSense** conveys information about the in-pipe environment, eliminating common challenges faced by diagnostic professionals. For example, the high dynamic range image sensor expands the camera's dynamic range, allowing a greater ratio of bright and dark areas to be displayed in the same image at the same time. This means fewer blown-out areas and sections of pipe that are too dark to see. In addition, the camera lets the user choose between fixed or self-leveling camera options. **TruSense** also includes an integrated **TiltSense** feature that reports the pitch of the camera in-pipe. This on-camera inclinometer helps contractors accurately identify and diagnose problems underground. 800-769-7743; www.ridgid.com.

25 / SENSORAY MODEL 4067

The **Model 4067** from **Sensoray** is an ultracompact, HD-SDI digital video recorder optimized for embedding in OEM systems. It records to a micro SD card and includes microphone or stereo line audio inputs and a clock/calendar with battery backup. It captures JPEG snapshots without video interruption. Text overlay generator can position the current date and time and user-entered custom text anywhere in the video frame. It includes a customizable user interface. 503-684-8005; www.sensoray.com.

26 / VIVAX-METROTECH VCAM-6

The **vCam-6 HD** inspection system from **Vivax-Metrotech** includes features such as text writer, voice-over, locatable sonde and traceable pushrod as standard equipment. The standard reel is available with 200, 300 or 400 feet of pushrod and choices of 1.3- or 1.8-inch self-leveling HD camera. The system includes a daylight-viewable control module with a 9.7-inch HD LCD monitor, distance counter and internal rechargeable batteries with five-plus hours' battery life. Video recording and JPG-format pictures can be saved to the internal 1 TB hard drive. The control module has built-in Wi-Fi to stream live video and snapshots to smartphone apps or

directly to a computer for recording to the hard drive. 800-446-3392; www.vivax-metrotech.com.

TRUCK/TRAILER JETTERS, NOZZLES

27 / AMERICAN JETTER HOT JETTER

Hot Jetters from **American Jetter** include a water-heating system that uses efficient dual-coil burners. Burner exhaust temperatures are reduced from 400 degrees F to around 127 degrees F, effectively releasing less heat into the atmosphere. This is coupled with 20% or more fuel savings from the optional Kohler 19 to 38 hp EFI engines. The increased fuel savings will provide longer runtimes. 866-944-3569; www.americanjetter.com.

28 / CAM SPRAY CV SERIES

The **CV Series** cargo van drain jet from **Cam Spray** offers diesel-fired hot water to add additional jetting power. Several models are available up to 4,000 psi and 12 gpm. A triplex plunger pump with power pulse valve provides an extra push when needed. Air purge and recirculation to the tank are provided for freeze protection. A 5-gallon fuel tank provides hours of runtime on a single fill. It comes with a heavily built, powder-coated frame with full deck and 130-gallon water capacity; a 12-volt DC reel with 2-1 clutch drive allowing for free spooling; and a powered hose return. It is controlled by a push button or foot switch. Accessories include a four-nozzle set, storage box, tip cleaner, tiger tail, safety shield, rubber gloves, high-visibility safety vest, 50-foot washdown hose and trigger gun. 800-648-5011; www.camspray.com.

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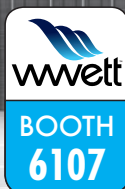
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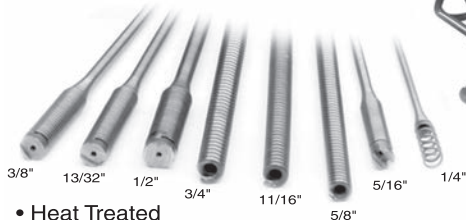
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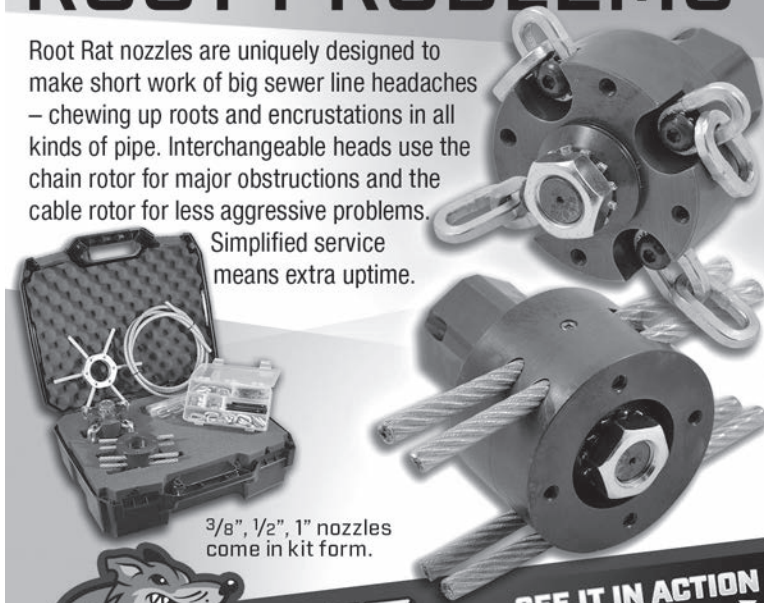
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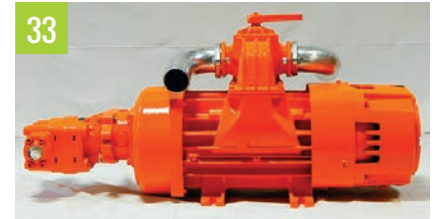
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29 / ENZ USA CUTTING BALL

The water-driven cutting ball nozzle from Enz USA is available in 3- and 4-inch sizes; and it can move easily around curves in 3- to 6-inch polyethylene, steel or concrete pipes while safely removing roots and mineral deposits, resulting in no damage to the pipe. It works without impact but has the ability to switch to a vibrating nozzle. It comes with a hard metal front blade for pipes that are more than 50% clogged. The side blades are self-sharpening and maintain their sharpness over their entire service life. The cutting ball operates with controlled rotation speed and is capable of running on recycled water. It is leak-free. 877-362-8721; www.enz.com/en-us/home.

30 / HOTJET USA XTREME FLOW III

The Xtreme Flow III trailer jetter from HotJet USA offers 18 gpm at 4,000 psi jetting power, clearing drains from 2 to 24 inches. It offers twin 35 hp Vanguard engines on a 5-by-14-foot, heavy-duty, 10,000-pound-rated trailer. It is designed to bust through any clog, roots or debris. 800-213-3272; www.hotjetusa.com.

31 / JETTERS NORTHWEST EAGLE 200

The Eagle 200 midsize trailer jetter series from Jettters Northwest is available in 12 gpm/3,000 psi (model Eagle-200/3012) with 1/2-inch I.D. jet hose or the 9 gpm/4,000 psi (model Eagle-200/4009) with 3/8-inch I.D. jet hose. It comes with either a Kawasaki (liquid-cooled) or Kohler (air-cooled) fuel-injected engine, an industrial-duty trailer with brakes for safety, and an A-frame tongue that allows it to be towed when full of water. Flattop fenders allow for additional mounting surface. Chrome wheels give it a sharp appearance. It comes with a super-duty triplex UDOR U.S.A. pump, 12-volt power-wind hose reel with wind-speed controller, 200-gallon water tank, large 60-inch lockable tool storage bin, 300 feet of jetting hose on the main 12-volt reel, 100 feet of 3/4-inch water-supply hose on a second reel, adjustable pulsation control and four jetting nozzles. 877-901-1936; www.jetttersnorthwest.com.

32 / MONGOOSE JETTERS MODEL 184

The Mongoose Jettters by Sewer Equipment Model 184 comes with a Mongoose run-dry pump offering 18 gpm at 4,000 psi, a tubular steel frame, corrosion-resistant pre-painted subassemblies, state-of-the-art controls, strong hose reel and high-quality gas engine. It is suitable for drain cleaning and sewer jetting, mainlines up to 12 inches in diameter, remote access locations, 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-man operation. It is also available as a van pack or truck-mounted unit. 877-735-4640; www.sewerequisite.com.

VACUUM TRUCKS/PUMPS/ACCESSORIES

33 / MORO USA PM80T

The Moro USA PM80T fan-cooled rotary vane vacuum pump includes dual-fan cooling to keep it cool under the toughest conditions. Its integrated forced-oil lubrication system feeds the right amount of oil at all times. Low operating speeds keep pump component life at a maximum and costs at a minimum. The pump comes with a built-in changeover valve and nonreturn check valve, and it has a 3-inch hose barb intake and discharge ports and 1 3/8-inch keyed shaft. It is also available in right angle, hydraulic, gas and diesel packages. 800-383-6304; www.morousa.com.

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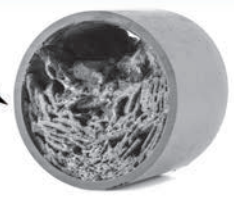
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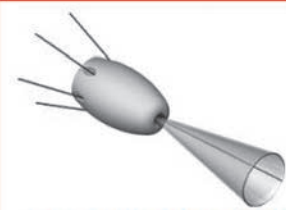
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34



35



36

34 / PIK RITE STEEL 3,600-GALLON VACUUM TANK

The **Pik Rite** steel 3,600-gallon vacuum tank is designed for strength and reliability. Its 3-inch internal plumbing keeps the exterior clean and simple. The vacuum pump mount is attached to both frame rails and easily supports pumps from any major pump manufacturer. Four sight eyes provide level indication for the waste compartment. The tank interior is equipped with walk-through baffles and a 20-inch rear manway for easy clean-out. The LED running light kit is installed with a fully molded wire harness. Operator work lights and a strobe light are mounted on the top rear lighting bracket. Polished aluminum hose trays, and the low hose hooks are coated with protective liner. 800-326-9763; www.pikrite.com.

35 / ROBINSON VACUUM TANKS PORTALOGIX 1150

The **Portalogix 1150**, distributed by **Robinson Vacuum Tanks**, offers 800 gallons of waste capacity in the tank, with 350 gallons of freshwater contained in the water bed. This model is able to haul up to four restrooms with the liftgate folded up. Two additional units may be strapped to the liftgate if desired. This unit is designed to fit a 120-inch cab-to-axle truck. Popular chassis choices include the Ford F-550 or Dodge 5500. Available vacuum pumps include the National Vacuum Equipment 304 (210 cfm), Fruitland 250

(165 cfm) and Masport HXL4V (165 cfm). Dual service is standard, and the Thieman liftgate includes aluminum posts and a steel grated platform. Accessories include two 2-inch-30-foot suction hoses with valve and wand, bucket fills, bucket holders, two 24-by-24-inch aluminum toolboxes with dry deck toolbox tiles, four Truck-Lite LED work lights, exterior control panel, and a 3-inch discharge with full-port poly ball valve. 814-933-0927; www.robinsontanks.com.

36 / WESTMOOR CONDE POWERPAKS

Conde PowerPaks preassembled gasoline- or diesel-powered vacuum pump units from **Westmoor** are easy to install. They include a heavy-duty steel base with aluminum diamond plate trim and belt guard for aesthetics. Rigid assembly is designed for minimum vibration and maximum power. They are available with either vacuum/pressure or vacuum-only pumps. A wide range of cubic-feet-per-minute options ensures matching the right unit to tank size and application. They are powered with optional Honda GX commercial-series gasoline engines or Hatz industrial air-cooled diesel engines. Units are designed for easy transfer to another tank system when needed. 800-367-0972; www.westmoorltd.com.

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2020

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Cleaner magazine is announcing the Contractors' Choice Awards where you, our readers, can cast votes for your favorite equipment in a variety of categories.

Head to www.cleaner.com/contractors-choice/vote to cast your vote.

Winners will be announced at the 2020 Water & Wastewater Equipment, Treatment & Transport (WWETT) Show, which will be held Feb. 17-20 at the Indiana Convention Center in Indianapolis.



SPOTLIGHT

Versatile combo unit is built for industrial cleaning

By Craig Mandli

Industrial cleaning jobs frequently require more power than the typical combination machine can provide. The Code Combo Vac from Westech Vac Systems is built for those challenges. Designed using customer input, the industrial-sized combo unit provides similar service to the company's noncode industrial hydrovac line while maximizing weight and hauling capacity to make it road legal and within Department of Transportation regulations. The increased hauling capacity means increased revenue potential on each job.

The unit offers a powerful vacuum system, high-pressure water system and a steam reel for tough greases, sludge and oils. It is built to Transport Canada code TC 407 for hazardous material applications, meaning it also falls under U.S. DOT 407 requirements. The unit can also be built to noncode specifications for off-highway use.

The maximum payload capacity is made possible through an internal 3D modeling and weight distribution program that optimizes the design. According to Westech Vac Systems, the goal is to efficiently use as much axle capacity as possible while keeping the design safe and productive, resulting in more time on the job and fewer overweight penalties.

The Code Combo Vac unit includes a Kenworth T800 tridem chassis built to endure harsh applications, a Hibon 820 trilobe blower (28-inch maximum vacuum, 1,600 cfm free airflow), Cat Pumps 660 water pump (offering a maximum 10 gpm at 3,000 psi), 700,000 Btu diesel-fired water heater, electrically powered tank vibrator, steamer kit and glycol hose reel. Units are built to specifications and include options such as heated compartments, valves and waterlines to meet adverse climate conditions.

It is available in single-axle, tandem-axle and tridrive configurations tailored to the job requirements. Additional features include hydraulically raising to off-load, industrial-grade controls, rear door discharge and suction valves, an epoxy-coated water compartment, diesel blower flush system, body vibrator and cross-cabinet water compartment. Additional options include a 6-inch loading boom, a vacuum system to equip the unit with a support trailer, a steamer option with an increased capacity 980,000 Btu boiler, van-body water compartment, upgraded National Vacuum Equipment suction and discharge valves, and LINE-X exterior coatings to protect the unit from especially adverse environments. 780-955-3030; www.westechvac.com.



1



2

1 MYTANA LD40 AUDITORY PIPELINE LEAK DETECTOR

The new LD40 leak detector from MyTana Mfg. uses a unidirectional sensor to filter out environmental noise, making it easier to detect hissing, trickling or seeping noises from leaking pipelines. Four interchangeable sensor tips simplify detecting for different surface textures including through carpet. The digital display features an instantaneous, easy-to-understand visual response meter to listen and watch for leaks. 800-328-8170; www.mytana.com.

2 RIDGID CS6X VERSA DIGITAL REPORTING MONITOR

The RIDGID CS6x Versa digital reporting monitor features a unique pivoting frame for high and low monitoring positions to allow flexible placement and optimal viewing. A 5.7-inch, daylight-viewable screen provides a crisp, clear in-pipe image, while the water-resistant keypad gives direct control of camera and monitor functions. Wi-Fi and Bluetooth connectivity allow for remote viewing and recording of inspections on an iOS or Android phone or tablet using the free HQx Live companion app. Inspections can be shared immediately or, if needed, footage can be saved to a USB drive for future review. 800-769-7743; www.ridgid.com.



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3



4

INSIGHT
VISION

3 GENERAL PIPE CLEANERS STAINLESS STEEL BRAID HOSE

The new high-performance stainless steel braid jet hose from General Pipe Cleaners/General Wire Spring enhances the performance and cleaning power of the portable JM-1000 Mini-Jet and JM-1450 water jet drain cleaners. The durable stainless steel braid makes it easier to slide the jet hose down 1.5- to 3-inch drainlines and more easily navigate tight bends. The 3/16-inch Teflon core reduces flow resistance and improves small line cleaning power. It is available in 30-, 50- and 75-foot lengths. 800-245-6200; www.drainbrain.com.

4 INSIGHT VISION IV2 INSPECTION CAMERA SYSTEM

The Insight Vision IV2 inspection camera system tablet has a 10.1-inch tablet screen that is daylight readable and lighter to use. Powering the unit can be done with either AC, DC or a Milwaukee Tool M18 battery. The system performs on-demand recording and snapshots and has an on-screen distance counter. It has a self-leveling color camera head with modular design and an always-on, built-in 512 Hz sonde. The tablet rotates to any angle and offers one-touch recording to USB. 800-488-8177; www.insightvisioncameras.com. c

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BUCKET MACHINES

BUCKET MACHINES - Municipally owned, Sreco Flexible Model: 37HP-PI/M/D & 37HP-HTL/HD. VIN/Serial: 4M5LB1117YLO120 & 4H5LB091311012171. Model Year: 2000. Meter: 894 hours. Both winches have recently been serviced and are in great running condition. Both machines have HATZ diesel engines. \$18,000. Please call 224-436-3618. (C12)

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Established drain/video/sewer cleaning company interested in selling established territories/franchises. Company is located in southern New Jersey. If interested, please email contact information to anthonyancanora@drainvisions.com. We look forward to hearing from you. (C12)

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2004 Peterbilt 330, ejector pusher plate, PD 824 blower, Meyers pump, 65gpm @ 2,000psi, 800-foot hose reel, 10-yard debris box, 1,500-gallon water tank, winter recirculation, 203,500 miles (engine replaced at 160,166 miles), 17,248 hours. \$55,000

920-734-4707, WI C01



NEW 2020 MC1510 GapVax sewer cleaner: JD Brule equipment, located in Greely, Ontario, Canada, is selling a GapVax sewer cleaner on a 2020 Western Star 4700 chassis and is available immediately. The unit has 10-cubic-yard debris tank, holds 1,500 US gallons of water, standard 4,500cfm 18" Hg blower (8.6 hours), and Giant water pump. If interested, please contact Adam Russell:

613-293-1965 C01



Lightly Used **2015 Aries UV Lining Truck:** JD Brule Equipment, located in Greely, Ontario, Canada, is selling a fully-equipped 2015 Ford F750 with 59,948 miles, 33,000 GVW, Aries UV lining truck, available immediately. The unit has 2 light trains included that can cure up to 48" diameter pipe, and 4 cans included. Unit is in great shape. Asking price is \$275,000 (USD) + applicable taxes. If interested, please contact Adam Russell:

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2012 GapVax MC1510 w/hydroexcavation, Allison automatic transmission, Giant jetting pump, Giant hydro pump, 18" blower, new tires. International remanufactured engine 2019. Ready to work. \$190,000 BO

William 317-773-7996, IN C02

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2000 Vactor 2100 Series, 15" Holmes blower HR42 PD, 60gpm @ 2,500psi, 600-foot hose reel, 10-yard debris box. 1,000-gallon water tank, winter recirculation, 174,000 miles, 9,975 hours. Allison automatic, hydraulic tool circuit, dump body. \$45,000

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2011 International Vactor 2100 Plus, 1,500-gallons of water, 15-yard tank, completely refurbished. Asking \$115,000.

Call Tim 920-655-8079, WI C12

Used Ridgid K-7500 - \$1,000. K-3800 - \$400. Ridgid seesnake monitor - \$250. Radiodetection line locator - \$250. All equipment in good running condition. Contact Joe at 920-450-7891 for any questions or pictures. (C11)

Used and rebuilt cable machines in stock: RIDGID K-7500, K-40, K-60, K-1500, Spartan #1064, #300, #100, Electric Eel model #C machines. The Cable Center: 800-257-7209. (CBM)

HYDROEXCAVATING EQUIPMENT



2001 Vactor 2112HXY hydro truck, dual fan system vacuum, 10gpm @ 2,500psi, 12-yard debris box, 1,000-gallon water tank. 8-speed manual transmission, 3126 CAT engine. 8" extendable boom. 86,000 miles (new engine in 2018), 10,774 hours. \$65,000

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2007 Volvo with a Vactor 2115 combination unit. (Stock# 5903C). **(888) VAC-UNIT (822-8648); www.vsirrentalsllc.com** (CBM)

2014 Freightliner 114SD with a VacAll AJV1215; 12-yard debris body, 1,500-gallon water, combination vacuum/jetting unit. (Stock# 052R). **www.VacuumSalesInc.com (888) VAC-UNIT (822-8648)** (CBM)

2001 Vac-Con VPD42HA/1300 sewer-cleaning unit mounted on a Sterling LT9501 with 131395 miles. 380hp Cat C12 in-frame rebuild at 101115 miles. Fuller 10-speed manual transmission, 120gpm FMC Quintuplex water pump, recent reman 165hp Cummins 8.3 auxiliary engine, recent reman Roots/Dresser 827 blower, cold-weather recirculation ,16-cubic yard-debris tank, 1,300-gallon water tank, 30' x 8" aluminum telescoping boom tube (great for catch basins), 500' x 1-1/4" hose on articulating reel. \$40,000. Call Mark 708-475-7116, IL (CBM)

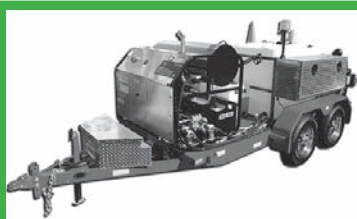
2011 Vac-Con V390LHA combination cleaning truck. Low miles, great condition. 1998 Vactor 2110-36PD ex-city owned, low miles See details of these units and CCTV inspection trucks at www.empireequip.com. Contact Craig at 714-639-8352. (CBM)

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Pipe Hunter 25gpm @ 4,000psi with PD vac, 700 gal, JD 4045 diesel, Meyers pump. Less than 500 hrs. City owned. \$35,000. Also Sewer 184 18gpm @ 4,000psi, CAT diesel, 600 gal, 2,100 hrs, in Isuzu box truck, cold-weather friendly. \$50,000. Both pre-emission. For more information, contact Mike 515-707-9002; mcczipar@pipellc.com. (C12)

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Honda model WP40X, 8 hp, 4" with hoses. Honda 4 hp, 2" pump with hoses. The Cable Center: 800-257-7209. (CBM)

Used Hatz diesel engine Harben high-pressure water pump with control panel. \$5,000 OBO. Call Pat's Pump and Blower 407-841-7867. (C12)

New & Used Pumps - Vactor, General, Myers, Giant & others - New & parts also. Cloverleaf Tool Co., Sarasota, Florida. Phone 941-739-0707; Email: sales@cloverleaftool.com (CBM)

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RIDGID model #300 with stand, RIDGID tri-stand vises, RP 330 ProPress kit. The Cable Center: 800-257-7209. (CBM)

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FOR SALE - 70-Tonne (+) winch trailer. 2010 Artis trailer S/N RC9121J Torsion flex 4500kg axles, pintle hitch with hydraulic surge brakes. Powered by a Deutz air-cooled engine S/N 8494592. Freshly rebuilt, 2 hours on engine. Bonfiglioli-type gear case with chain-driven winch reel, 500' 3/4" cable. Trailer has been given full maintenance, painted and ready to roll. Asking \$40,000 CDN, OBO + applicable taxes. Please contact Adam Russell if you are interested.

613-293-1965, Ontario C01

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Used and rebuilt camera kits in stock: RIDGID Mini Compact, Mini Color, Standard Self-Leveling, General Gen-Eye I, II and III, Aries Seeker, and SRECO kits. The Cable Center: 800-257-7209. (CBM)



2004 Ford E450 CUES camera truck with 91k miles. Onan 7kW generator (new in 2015) with approximately 3,500 hours. Camera reel with gold cable & technician station. No camera, transporter, or computer included. \$18,000

309-691-6653, IL C01

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NLB announces staffing changes

NLB announced that Bryce Mulligan has been promoted from the vice president of branch operations to the vice president of operations at the company's Wixom, Michigan, location. The company also announced that Renee Walsh has been promoted from the director of customer solutions to the vice president of branch operations for all U.S. branch operations.



Bryce Mulligan

Renee Walsh

Vacuworx names Williamson regional sales manager

Vacuworx announces it has hired Bruce Williamson as regional sales manager, Southeast, serving the territory of Florida, Georgia, Alabama, North Carolina, South Carolina, Kentucky and Tennessee. Williamson, who earned his master's degree in business administration from Oklahoma State University, will be based in Panama City, Florida.



Bruce Williamson

TGI-Connect and PressurePro unveil integration plans

TGI-Connect and PressurePro announced their intent to integrate technology. Announced in conjunction with the opening of Trimble's in.sight user conference, the completion of this integration would feature wireless connectivity between the solutions, allowing fleets immediate access to real-time tire condition reports for each of their trailers, powered or not. **c**

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2002 CUES CCTV inspection truck. Ford F550 SuperDuty, 7.3 diesel engine with 71k miles, 16' box. Onan 7.5 HDK diesel generator with 3k hours. CUES reel with approximately 1,000' of cable, CUES 1208 PCU. Call Mark for more information. \$45,000 OBO. 708-475-7116, Chicago area (CBM)

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Aries CCTV Inspection Truck: 2002 Ford E350, 5.4 Triton V8, 59,484 miles. Aries PCU, Dell operating system. New Onan commercial 7,000-watt generator. Pipe Tech pipeline inspection software, camera and transporter negotiable. Call for more information and more pictures. \$15,500. Mark 708-475-7116, IL (CBM)

2001 Chevy RST TV Van with POSM software. One (1) Omni 3 camera, Two (2) Omni 2 cameras. Two (2) 2-wheel tractors. 32,000 miles. \$28,000. Email cdscar@aol.com or call 916-207-7340. (C01)

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CUES CCTV Inspection Truck: 2000 Freightliner MT45 walk-in, Cummins 5.9, 71,086 miles. CUES PCU, Dell operating system, truck-mounted CUES grouting system. Onan 10.0 GenSet diesel generator. Software, camera and transporter negotiable. Call for more information and more pictures. \$19,500. Mark 708-475-7116, IL (CBM)

CUES Lamp System for sale, tons of extra parts and setups. Too many pics to upload. Text 401-996-9100 for more information. (C12)

WATERBLASTING



Waterblasting Units for Sale. Unit 1 — 428; year: 1994; 494130-1; hours: 14,590; brand: NLB; pressure, 10,000 psi; other specs: 150 hp 6CT, 8.3-liter Cummins water blast units; price: \$10,000. Unit 2 — 429; year: 1997; 790260-1; hours: 16,996; brand: NLB; pressure: 10,000 psi; other specs: 150hp 6CT, 8.3-liter Cummins water blast units; price: \$10,000. 24 gpm pumps, trailered units, waterblast units and trailers have been well maintained and serviced regularly — annual DOT inspections. Waterblast units and trailers are fully functional and in good working order.

Mike 262-783-8100, WI C01

Hydroblast company for sale (equipment only). Vac truck, 7 trailer-mounted pumps, ALL related hydro equipment (guns, hoses, tube/tank/pipe accessories, etc). Ethanol plant shutdown/paint shop cleaning. Many \$100,000's of related accessories and supplies. Most equipment needs attention. Heavy equipment includes 350hp 20/40K conv., 350hp 10/20K conv., 250hp 20/40K conv., and 4 NLB10150s. \$400,000 takes all. Equipment located in north-central Iowa. 515-344-4577 (C04)

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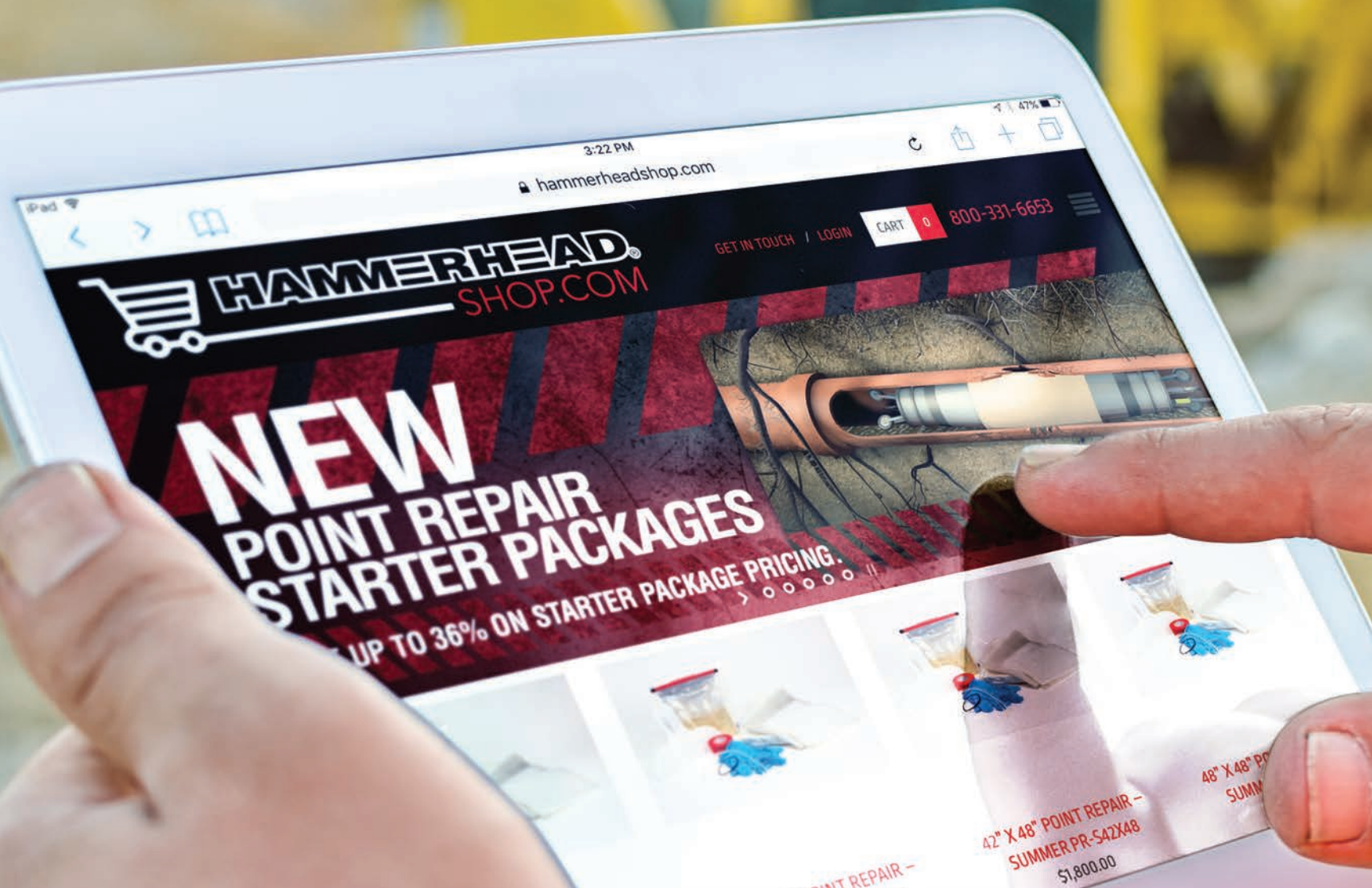
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