

Cleaner

FOR DRAIN AND PIPE CLEANING, INSPECTION AND REHABILITATION PROFESSIONALS

JULY 2018
CLEANER.COM

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MORE PROFIT / 40



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ON THE COVER

Linda Hudek, owner of LH Plumbing in Fairfield, Ohio, opened her business at age 22 and has steadily added clients and equipment since. This year she's on pace to double her revenue compared to 2015 and prior years. (Photography by Amy Voigt)

COMING IN AUGUST

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MONEY MACHINES: Recycling system keeps trucks working

SAFETY FIRST: Protect pedestrians around your work sites

BETTER BUSINESS: 7 tips for budget-friendly marketing

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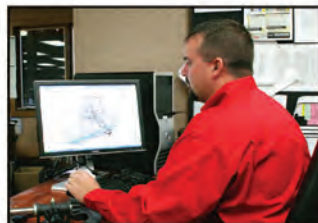
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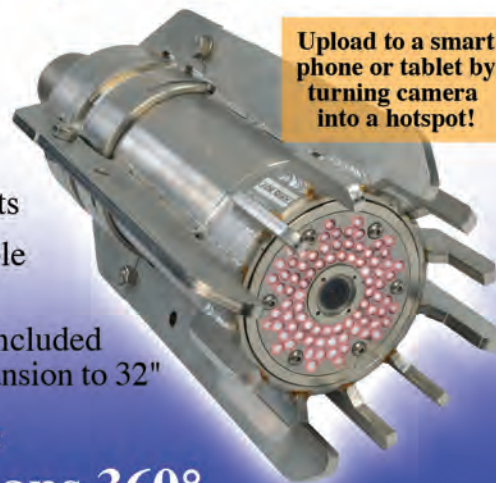


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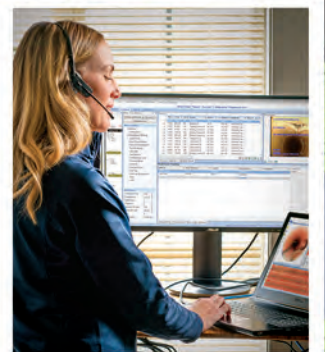
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With a Little Help From Your Friends

Connecting with your industry peers can be a good thing for your business

It's good to be part of a community, whether it's your hometown, a profession, recreational group or something else. It's good to feel connected.

I come from a small town. I never intended to move back, but family circumstances changed that. There are plenty of things I dislike about it, but my best friends are here and I know they have my back. I always have someone I can call if I really need help with something. It's a good feeling.

I was traveling last weekend and it occurred to me that I have friends nearby almost everywhere I go now. And it's not because of social media or

because I'm so well-traveled that I have friends in every corner of the country. It's because of this industry, and this magazine.

We've told the stories of so many sewer and drain contractors in the pages of *Cleaner* magazine. I count many among my friends, and they stretch across the U.S. and Canada. I've connected with many of you. It's a good feeling, and it says a lot about the industry. More importantly, the more people I talk to, the better I understand the challenges you face and the significant roles you play in your communities.

Linda Hudek, the owner of LH Plumbing Services in Fairfield, Ohio, knows a thing or two about the importance of being connected to others in the industry, too. Hudek and her company, profiled in this issue, have benefitted greatly from the relationships she's built with her industry peers.

In fact, a group of one-man shops in her area operate as friendly rather than cutthroat competitors. She says they often work together and refer work to each other when they have too much work to handle. "Most of us are very close, and we don't talk badly about each other or steal each others' customers. It works out very well."

Furthermore, ever since she struck out on her own in 2010, she's made long-distance friends — mostly via Facebook — who have contributed immeasurably to her success. She credits colleagues like Thomas Carlisle, the owner of Underground Connections in Wooster; Ben Kohn, who runs Sinks to Sewers in Ventura, California; and Nathan Hudelson, the owner of Schlueter Plumbing in Cincinnati.

"By joining the groups and posting pictures of my work and my thoughts on things such as pricing, I've met a lot of plumbers, including local guys I actually didn't know existed," she says. "I've learned a lot from these people — received business advice or heard about equipment I otherwise might not know about."

Regardless of whether they're down the street or across the country, it's good to be connected to the people in your industry. They may be competitors, but they can also be your biggest allies. You never know when you might need a little advice or support, and that help can go a long way.

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

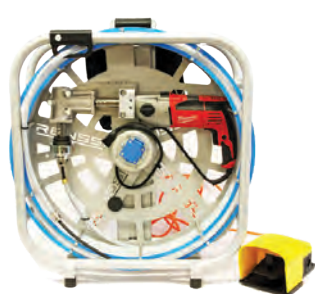


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Hydrovac Company Improves Efficiencies With Recycling Facility

New highway weight restrictions and extensive travel to dumping facilities made Canada's Ontario Excavac rethink how it was handling its spoils. It decided to open its own recycling facility, and the move has proven beneficial. Learn more about how the company set up its spoils recycling operation in this online exclusive.

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ROAD SAFETY

Spec'ing a Truck With Safety in Mind

No doubt you want your employees to be able to return home safely at the conclusion of the workday. A key part of that is ensuring that your truck fleet is properly equipped with features that promote safety, both at the job site and on the way to the job site. This article covers a few things you may want to consider for your work trucks if you haven't already.

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BUSINESS GROWTH

Joining Franchise Proves Successful for Drain Cleaning Company

Kathy and Duncan St. Croix were 11 years into a successful run as Drainman Jet-O-Rooter when they were featured in *Cleaner* magazine in 2009. Not long after, they joined the Mr. Rooter family, and the last decade has been filled with even more success. In this online exclusive, read more about how going the franchise route has helped the company grow.

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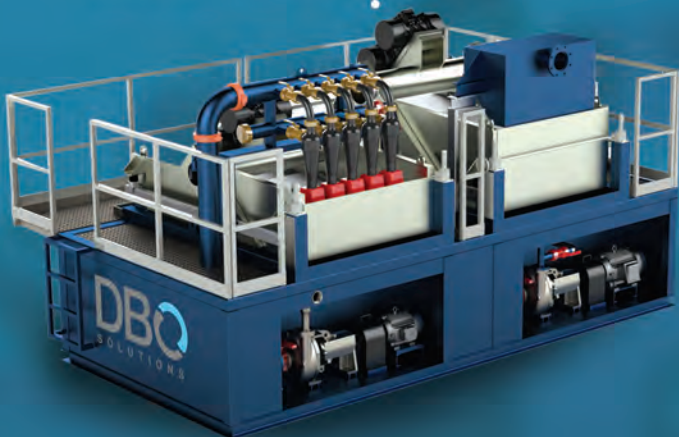
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« Linda Hudek,
owner and operator of
LH Plumbing Services
in Fairfield, Ohio.

CAN-DO ATTITUDE

Young plumber
invests in the right
relationships and
equipment to build
a successful drain
cleaning business

By Ken Wysocky

Photography by Amy Voigt



There was a time when master plumber Linda Hudek, the owner of LH Plumbing Services in Fairfield, Ohio, owned only the bare minimum of draining cleaning equipment and subbed out larger jobs to local contractors she trusted.

Now the shoe is on the other foot, with nearly a dozen local plumbers hiring Hudek to handle their drain cleaning needs. Investing heavily in inspection cameras and other equipment has made her more efficient. It's also amped up her revenue and profit margins — a win-win situation if there ever was one.

"It was a no-brainer," says Hudek, 30, who started her business in 2010. "I saw an opportunity — the market was there. I was getting enough requests that I knew investing in cameras and jetting equipment would pay off.

"Not only are those machines huge moneymakers, they totally diversified my abilities and company," she continues. "I went from someone who was just barely into drain cleaning and subbing things out to being able to take care of almost any problem. I want to offer customers complete service."

Sure, the equipment represented a significant capital investment. But the financial results exemplify the old adage about the need to spend money to make money: She's posted two record quarters revenue-wise at the end of 2017 and the beginning of 2018. And she's on pace to double her revenue compared to 2015 and prior years.

FROM AGRICULTURE TO PIPE WRENCHES

Oddly enough, Hudek never planned on becoming a plumber/drain cleaner. In fact, she had a scholarship lined up to study agriculture at Ohio State University. "I wanted to study horticulture and get into cut-flower farming," she says.

Then fate intervened during the summer before her senior year in high school, when she worked for her father, John Hudek, a master plumber and the owner of J&H Mechanical Contractors in Somerville.

"After I graduated from high school, I went to work for him full time," she explains. "I found I really liked working with my hands. I also liked the constant variety — the types of jobs and the people I met and worked with were never the same.

"I just enjoyed the controlled chaos," she adds. "I knew I'd never be bored because there's always a new challenge ... and you have to use your head and think every day because you're always getting thrown into new situations where it's basically sink or swim."

While working full time for her father, she also attended night classes at Miami University of Ohio and earned a degree in small-business management,

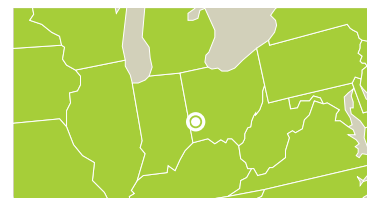


▲ Linda Hudek, owner and operator of LH Plumbing unspools hose from her jetter (Jetters Northwest) to clean a sewer line at a commercial property.

with a minor in real estate, in 2009. "Sometimes my dad's employees would drop me off at school after work and I'd be covered in mud and janitors would get on me," she recalls.

Hudek knows of several other female plumbers in Ohio. But anyone who thinks she became a plumber to become a poster child for breaking the industry's glass ceiling is mistaken. "I didn't become a plumber to prove a point," she states. "Male or female doesn't matter. I'm a good plumber who's earned the respect of my fellow plumbers and my customers. That's what matters. My work speaks for itself."

LH Plumbing Services' Facebook page reflects that respect, with numerous testimonials from customers. A look at the site reveals nearly 2,000 likes and nothing but five-star reviews. "Linda is extremely knowledgeable and great to work with," reads one comment. "When I was interviewing plumbers to install a tankless water heater, she was the only one who mentioned the specific code requirements or getting a permit and inspections. She did a great job at a reasonable price. Last Sunday morning, there was water spurting from a connector in my sump discharge pipe. I called her and she came over and fixed it that day. She's the best!"



LH Plumbing Services

LOCATION: Fairfield, Ohio

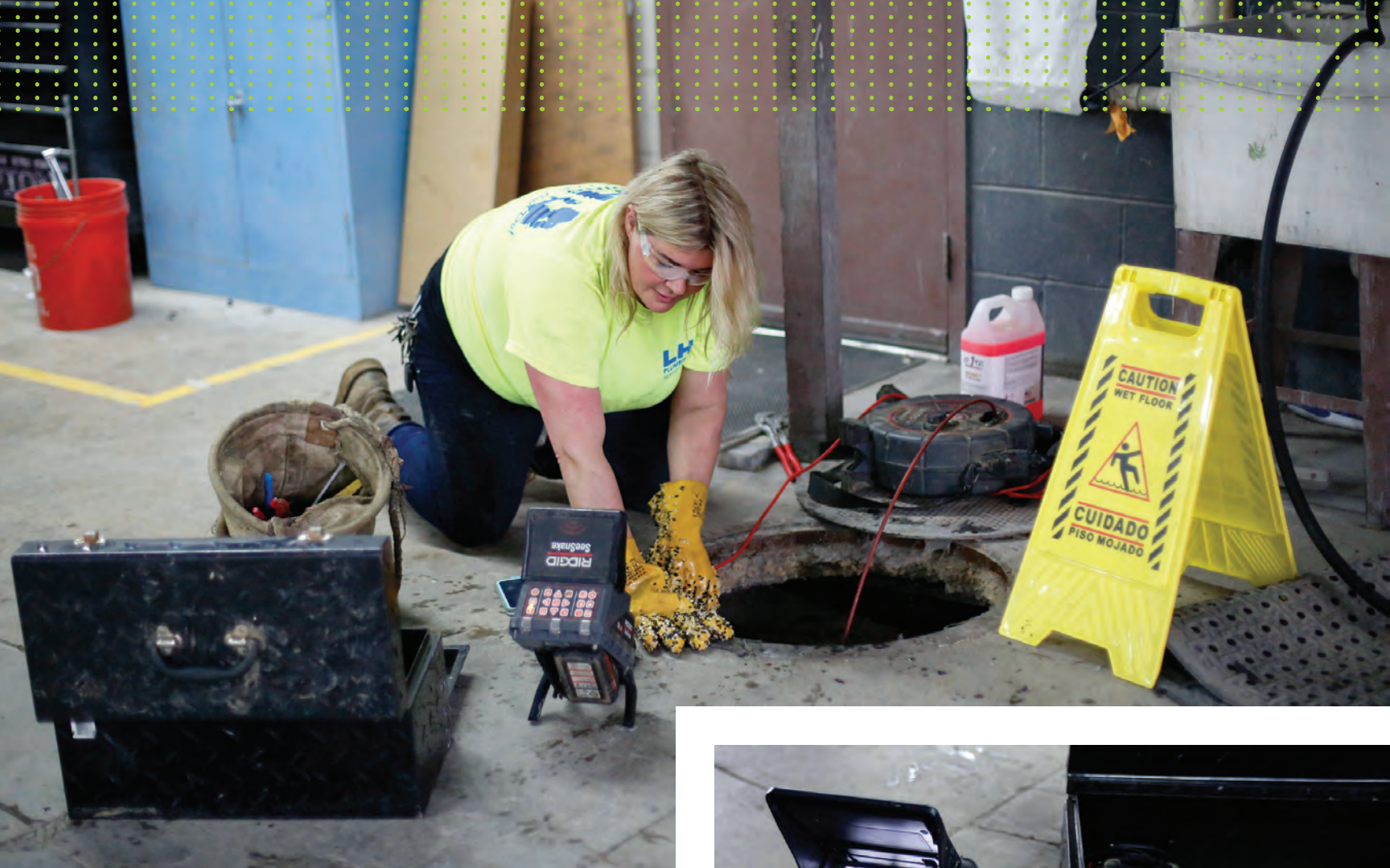
OWNER: Linda Hudek

FOUNDED: 2010

STAFF: 1

SERVICES: Drain cleaning, plumbing repair and trenchless drainline rehab

SERVICE AREA: 20-mile radius around Fairfield in southwest Ohio



▲ Linda Hudek uses a RIDGID SeeSnake microReel inspection system to assess a blockage in a commercial sewer line.

» A view inside the pipe on the SeeSnake monitor.

The company's Facebook page also includes comments from other plumbers — even some from outside Ohio. In fact, she says a group of one-man shops in her area operate as friendly rather than cutthroat competitors. “We often work together and refer work to each other when we have too much work to handle,” she explains. “Most of us are very close, and we don’t talk badly about each other or steal each others’ customers. It works out very well.”

EQUIPMENT MATTERS

To provide good customer service, Hudek runs a Chevrolet Silverado 3500 pickup truck that tows a 14-foot enclosed trailer built by Homesteader. The pickup carries a saddle toolbox and a Pack Rat pullout drawer unit from Weather Guard.

For drain cleaning, which generates about 45 percent of the company's revenue, Hudek relies on a RIDGID K-1500 sectional machine, a Jetters Northwest 4009 Brute water jetter (4,000 psi at 9 gpm) skid-mounted inside the trailer, a Speedroooter drum machine made by General Pipe Cleaners, and a Flex Shaft drain cleaning cable made by Clog Squad. Hudek uses cutter heads and chain knockers made by Seweri Finland Oy and also owns two inspection cameras made by RIDGID (a SeeSnake nanoReel and a SeeSnake microReel), plus an Opticam unit manufactured by Insight Vision Cameras.

Hudek also invested in a PipePatch trenchless spot repair pipe rehab system made by Source One Environmental. For plumbing, she relies on power tools built by Milwaukee Electric Tool, RIDGID and Hilti.



Starting out from scratch, back when she didn't have anywhere near as much equipment as she does now, wasn't easy. Hudek says she struggled early on, subsisting on jobs passed to her by her father or working as a subcontractor for other plumbers. To make matters worse, she struck out on her own right at the height of the great economic recession — not exactly opportune timing.

“I was able to pay my bills and that was about it,” she says. “I tried some coupon magazines for advertising, but I'd never do that again. All I got were calls from people who were looking for cheap work and didn't want to pay anything. So for the most part, I relied on word-of-mouth referrals and it kind of blossomed from there.”

CAN-DO ATTITUDE PAYS OFF

Just as important as her skills during those years was her attitude, reflected by her company's short-and-sweet slogan: Can do. Hudek picked that up from her father, who was a Seabee in the U.S. Navy. (The nickname Seabees stems from the acronym for the group's formal name, the U.S. Naval Construction Battalion.)

"Can do" is the Seabee's motto, along with, "The difficult we do now; the impossible takes a little longer." Hudek says that her father started calling her the "can-do kid" when she was a youngster. "He still calls me that, and it means a lot to me," she says.

Hudek credits other factors for her success, too. "No. 1 is Jesus Christ, who's blessed me with the abilities to do what I'm able to do. Then there's my dad, who taught me about determination.

"I knew I'd never be bored because there's always a new challenge ...

and you have to use your head and think every day because you're always getting thrown into new situations where it's basically sink or swim."

Linda Hudek

"I remember when I first started working for him, I messed something up with a backhoe," she continues. "I tried to grade out an area and made an absolute mess of it. I cried in front of him. He said, 'Why are you crying? That's not going to fix anything!' He taught me that without determination and resilience, I wasn't going to go very far in this business.

Providing good customer service also has paid big dividends. That includes doing the little things right, like leaving a clean job site when she completes a job. "I really go the extra mile to clean things up," she says. Educating customers also has been critical, she says, noting that it's important to explain to customers what they're getting for their money.

She also uses small-ball marketing techniques, such as giving customers refrigerator magnets and pens with her company's name on them.

THE PRICE IS RIGHT

But here's perhaps one of the most important lessons she's learned over the years: Building a business by trying to be the lowest-cost plumber



↑ Hudek, who believes in the importance of presenting a professional image, cleans her equipment trailer back at the company shop.



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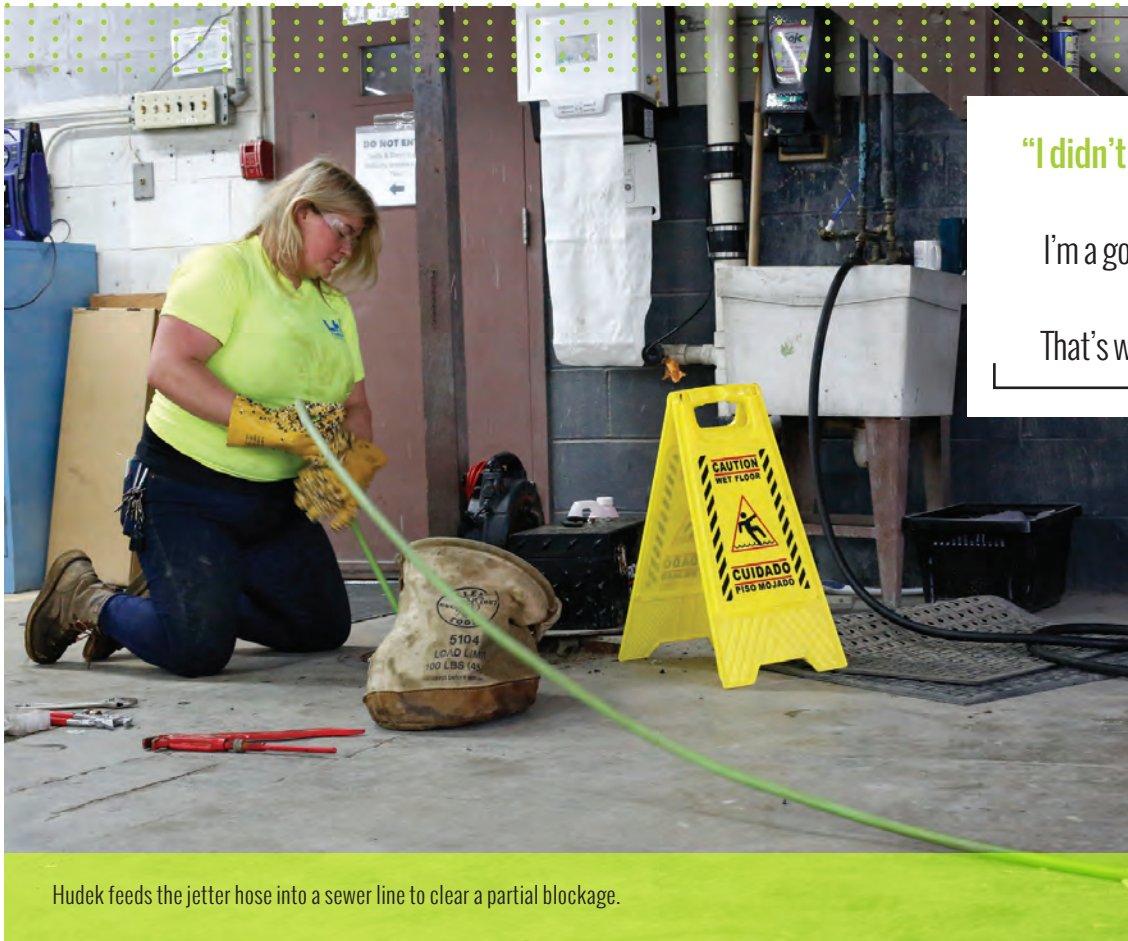
Boom Rotation



Boom Reach



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Hudek feeds the jetter hose into a sewer line to clear a partial blockage.

**"I didn't become a plumber to prove a point.
Male or female doesn't matter.**

**I'm a good plumber who's earned the respect of
my fellow plumbers and my customers.
That's what matters. My work speaks for itself."**

Linda Hudek

in town is a recipe for failure. Hudek concedes that early in her career, she charged less than she should have, for two primary reasons. First of all, the economy was bad. Second, most of her customers at the time were commercial accounts that she felt she couldn't afford to lose.

"I was afraid I wouldn't have enough work, so I'd cave in to general contractors and customers," she recalls. "I felt that I needed to keep these people happy because they're my bread and butter and without them, I'd fail."

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Local competitors and Facebook buddies provide mentorship

An old saying notes that you can never have too many friends. It's true in business, too, as Linda Hudek can attest.

The owner of LH Plumbing Services in Fairfield, Ohio, says that she has established solid and fruitful relationships with local competitors. Furthermore, ever since she struck out on her own in 2010, she's also made long-distance friends — mostly via Facebook — who have contributed immeasurably to her success. She credits colleagues like Thomas Carlisle, the owner of Underground Connections in Wooster; Ben Kohn, who runs Sinks to Sewers in Ventura, California; and Nathan Hudelson, the owner of Schluter Plumbing in Cincinnati.

"I joined a Facebook group called Plumbing Hacks, which has about 20,000 members," she explains. "And through that, I was introduced to other groups, including the Sewer Roundtable (Facebook page), which specializes in drain cleaning and drain repair. We post pictures of our jobs, share family events, and discuss various business and work issues.

"By joining the groups and posting pictures of my work and my thoughts on things such as pricing, I've met a lot of plumbers, including local guys I actually didn't know existed," she continues. "I've learned a lot

from these people — received business advice or heard about equipment I otherwise might not know about."

A good example is PipePatch, a trenchless spot repair system made by Source One Environmental. Hudek purchased a PipePatch system in summer 2017 for roughly \$4,000 and it has already paid for itself.

In particular, she says Carlisle and Kohn helped her understand the value of investing in better drain cleaning equipment that could diversify her services. They also taught her how to make jetting more profitable, she says. "When I told them how often I had to use other companies to do jetting work for me and how often the equipment I had at the time couldn't get the job done, they helped me realize that I had enough work to purchase better equipment," she says.

Hudek says that fellow plumbers also took time to educate her about how to jet more effectively. Some even showed her their inspection videos, she notes — a valuable instructional tool. "I learned a lot from them about things like the proper methods to inspect and record, as well as better jetting techniques," she says. "Their advice has been invaluable — and their friendship even more so."



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“From then on, I started working for people who respected me and respected my work. **Now I tell people that I’m not a cheap plumber and I don’t do cheap work.**”

Linda Hudek

The tipping point came during a service call for a commercial contractor. When Hudek arrived at the company to perform backflow tests, she encountered another plumbing company’s truck on site. Turns out they were completing a project on which Hudek had bid.

“I learned that they beat my price by \$100,” she says. “I’d bent over backward many times over the years to accommodate that customer. But in the end, there was no loyalty to me — they were always going to go with the cheapest guy, no matter how long I worked for them. The relationship didn’t matter.”

As she finished the job, Hudek realized that this customer would continually be slow to pay and quick to complain about pricing. So she gave the stack of backflow reports to a receptionist and told her to tell the owner she didn’t want to work for the company any more. “From then on, I started working for people who respected me and respected my work,” she explains. “Now I tell people that I’m not a cheap plumber and I don’t do cheap work.”

“I explain to them that they’re paying me for my expensive equipment investments and my knowledge and expertise,” she continues. “The people who buy into that concept are my customers. Everyone else can go pound sand. Learning to say no to those kinds of customers was huge. And I’m always trying to get other plumbers to realize they have to stop prostrating themselves before these guys like they’re our lords and masters.”

As for the future, Hudek says hiring a technician is the only way she could significantly further grow her business, given that she usually is working at full capacity. But managing employees can be stressful, so she plans to keep enjoying the freedom that comes from running a one-person shop, not to mention the great profit margins.

“In three to five years, I might have employees,” she says. “Then again, maybe not. But I don’t mind the unknown.” **C**



Linda Hudek packs up her equipment after clearing a sewer line for a commercial client.

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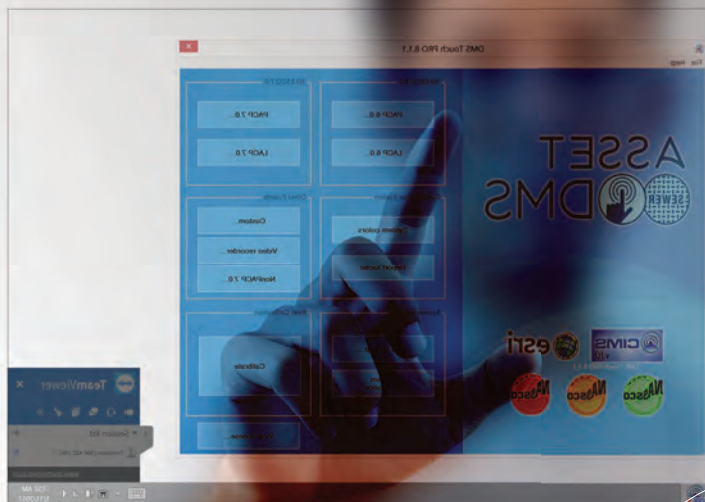
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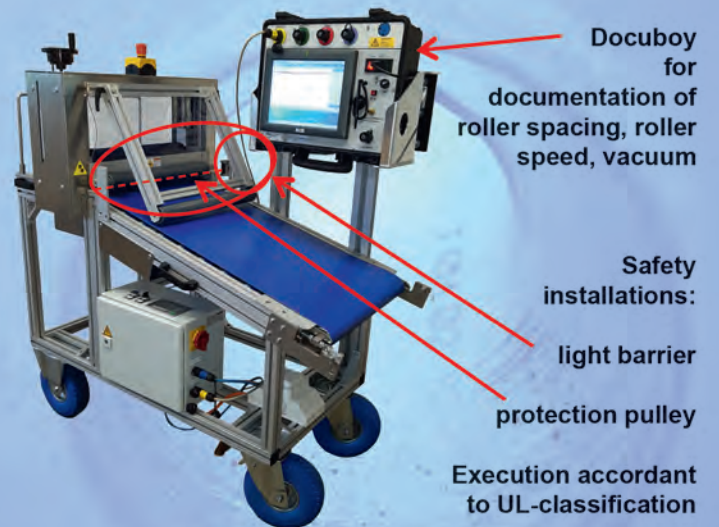
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Brand-New Coat(ing)

For applications where pipe lining is difficult, pipe coating gets the job done, one microlayer at a time

By Ken Wysocky

Mark Carpenter believes in offering customers as many options as possible to solve their pipeline rehabilitation needs. That philosophy explains why American Trenchless Technologies' array of trenchless technologies includes the Quick-Coating System, made by Pipe Lining Supply.

Instead of rehabbing pipes using traditional materials, such as felt and fiberglass liners, the Quick-Coating System applies a microthin layer of a polyurea-based resin, using a round rotating brush. The coating cures in five minutes and then is ready for as many more applications as necessary, says Carpenter, who co-owns the company, based in DeKalb, Illinois, with his brother, Chris.

Mobility is one of the primary advantages of the system. For instance, the company recently used it to fix leaks in a system of pipes — both main drainlines and branch connections — fed by roof drains atop the iconic, 24-story-tall Old Republic Building in downtown Chicago. The landmark Classical Revival-style building was built in 1925.

"When it rained, the pipes would leak into the executive offices (of Old Republic International, a global insurance company) on the 23rd floor," Carpenter explains. The insurance company had considered replacing the primary drainlines, but they run through a hard-to-access crawl space between the ceiling of the company's executive offices and a private rooftop club building. As such, replacing the lines would've required tearing down ornate plaster ceilings in the executive offices, he explains.

Lining the pipes also would've been extremely difficult, given the rooftop-only access and the number of branch connections, which would've required numerous reinstatements, not to mention buying an expensive robotic reinstatement cutter, he says. "Plus, when you're lining pipes, you always have to have an exit strategy in case the liner gets stuck," he adds. "But when you're on top of a 24-story building, there's no exit strategy."

In addition, the building stands near Lake Michigan, where rain showers can pop up unexpectedly. "So we needed something that would dry quickly, as opposed to a liner that might take hours to dry," he says. Furthermore, the system of drainlines — which included 4-, 5- and 6-inch-diameter pipes made of either galvanized steel or cast iron — included numerous 90-degree turns.

Given all these factors, the Quick-Coating System, which the company had recently purchased and used once before on a smaller job, was well-suited for the project. The system's primary components — a dual-pump, an electric motor and a control panel — fit on a heavy-duty, two-wheeled



▲ American Trenchless Technologies technicians Omar Franco (left) and Andy Smith use a Quick-Coating System made by Pipe Lining Supply to fix leaks in a system of pipes — both main drainlines and branch connections — fed by roof drains atop the Old Republic Building in downtown Chicago.

hand truck. The pumps distribute a two-part polyurea resin via two tubes attached to a sheathed, high-speed (3,000 rpm) Flex Shaft cable, made by Clog Squad. An electric motor spins the cable.

A brush — available in 1 1/2-, 2-, 3-, 4- and 6-inch-diameter sizes — attaches to the end of the cable. The system also comes with a small CCTV camera system so an operator can watch as the resin is applied.

To start, the brush, tubes, and camera head get pushed to the end of the section of pipe getting coated. Then the operator pulls the cable

American Trenchless Technologies

LOCATION: DeKalb, Illinois

EQUIPMENT: Quick-Coating System made by Pipe Lining Supply

FUNCTION: Trenchless restoration of drain, waste and vent pipes with a polyurea resin coating

FEATURES: Two pumps with reusable resin-distribution tubes; electric motor; high-speed cable; heavy-duty hand truck; application brushes; cures in five minutes; CCTV camera system for viewing as resin is applied; one-man operation

WEBSITE: americantrenchlesstechnologies.com

PRICE: Between \$20,000 and \$25,000, depending on options purchased

QUICK-COATING SYSTEM WEBSITE: www.quickcoating.com



back as the brush applies the coating. The electronic controls allow the operator to remotely start and stop the resin flow, as well as control the amount of resin being delivered. One person can do the coating, but on this job, American Trenchless Technologies used two people — one to operate the system and another to help coil up a 100-foot-long cable during the process, Carpenter says.

“The brush mixes and applies the resin at the same time,” he says. “You control the thickness of the coating by how fast you pull back the cable. It’s kind of like how a painter applies paint on the wall of a house. You just develop a feel for it and watch it on a camera when you’re doing it.

“Typically one-half millimeter is the average thickness per pass,” he continues. “On the Old Republic Building job, we did six passes, so the total thickness of the coating was 3 millimeters, which is comparable to

the thickness of a liner. It goes pretty quick. The average section of pipe we did on this job was between 30 and 60 feet, and we could coat that in less than 10 minutes per pass.”

The actual coating doesn’t take long compared to the preparation process, which requires extensive cleaning of the pipes with a water jetter. It took three weeks to clean the roughly 300 to 400 feet of pipe that the company coated, Carpenter says. The company used a cart-mounted Jet Pro MV80 water jetter (8 gpm at 3,000 psi) built by MyTana.

The roof drain system dates back to the building’s original construction. Four roof drains feed into a central stack pipe in the middle of the building, not its exterior. That made cleaning the system difficult because back then no one considered things like providing access points from which the pipes could be cleaned.

“Access was very poor, so the bottom line was that those pipes hadn’t been cleaned in more than 90 years,” Carpenter explains. “Between all the scale and debris, the (horizontal) pipes were down to half their normal diameter.” But American Trenchless Technologies employees were able to clean the pipes sufficiently, using the MyTana cart jetter with Warthog LN9-Hog nozzles from StoneAge and a Picote Solutions Maxi Miller combined with Cyclone chains and Smart Cutter tools, also made by Picote.

After completing the coating process, Carpenter says he uses a RIDGID SeeSnake pipeline inspection camera to make sure everything looks good. Sometimes the inspection reveals an uneven area of coating. That’s where

the Quick-Coating System offers another advantage: It’s fairly easy to go back into the pipe and use a Smart Cutter to smooth out any imperfections, then recoat just that area.

The technology also improves the company’s profitability by enabling it to tackle jobs that it otherwise might not be able to bid on, like the Old Republic project. “If I just would’ve told them that I couldn’t help them because we just do pipe lining, they’d just go out and find someone else to do the job,” Carpenter says. “But because I could offer them another solution, they went with it.” **C**

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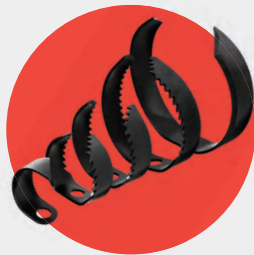
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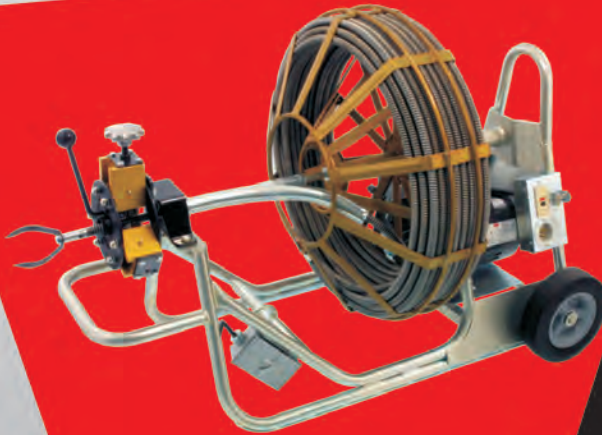
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Addition by SUBTRACTION

King's Sanitary Service traded portable restrooms for a combination truck in search of profitable municipal and hydroexcavation work

By Ken Wysocky //
Photography by Amy Voigt



Rex King Jr. — majority owner of King's Sanitary Service in Bristolville, Ohio — made a game-changing move in 2016 when he sold the portable restroom arm of his drain cleaning and septic pumping company.

In doing so, the 26-year-old businessman dramatically altered the face of the company he acquired in 2012. By selling roughly 400 restrooms and a luxury restroom trailer to a competitor, he shed a seasonal business with lower profit margins. And by using the proceeds to increase marketing efforts, update aging equipment, and invest in a jet/vac truck with a hydroexcavating package, he positioned King's Sanitary Service for growth in market sectors that offered higher profits and greater business volume: cleaning sewer lines and exposing utility lines for neighboring municipalities.

"It definitely was a big move for us," says King, who owns the business along with his father, Rex King Sr., and a silent partner. "There was money to be made in portable restrooms, but not year-round. ... And it required a lot of work for profit margins that weren't high enough. Now I feel like we're well-positioned for growth in municipal work."

To avoid going too far into debt, King Jr. bought a used jet/vac truck for \$80,000 instead of spending more than \$400,000 on a new unit. "When you're entering a new market, you don't spend a lot of money as if it's going to be a sure thing," he says. "You've got to be financially prudent."

The company makeover reflects key attributes that have enabled King to increase gross revenue by more than 100 percent since he acquired a local company and renamed it King's Sanitary Service: a conservative fiscal approach; an eye for new, high-potential markets; a willingness to take calculated risks; understanding the importance of embracing and investing in newer technology; and strong support from family, both financial and otherwise.

TRULY A FAMILY BUSINESS

As a youngster, King worked for his father, the owner of King Bros., a 61-year-old company that became the family business when Russell and Kenneth King — King Jr.'s grandfather and great-uncle — bought a feed mill at a sheriff's sale in 1956 and named it King Bros., Feed & Supply. During the next 30 years, the company expanded dramatically. Its services now include installation of residential and commercial septic systems and excavation work, and the company also owns a concrete business, a sand-and-gravel pit, a car wash and a hardware store.

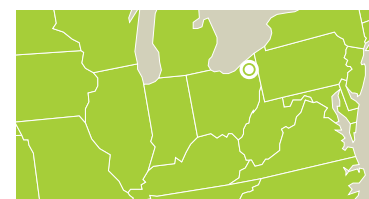
King Jr. says he benefited greatly from his father's entrepreneurial spirit. "My father is a genius," he says. "He taught me so much, including how to treat customers, and showed me what a good work ethic is all about. I also can't say enough about my mother, Mary King, and my grandmother, Marlene Hillman. They're the backbone of our family."



➤ Rex King Jr., owner of King's Sanitary Service, is always looking for better profitability, which prompted him to swap portable restrooms for municipal work and hydroexcavation. He's shown here with a new FlowMark vacuum truck.



◀ Kyle Dye (left) and Gary Lucik of King's Sanitary Service clean the boom on a Vactor 2110 combination truck after completing a job in Bristolville, Ohio.



King's Sanitary Service

LOCATION: Bristolville, Ohio

OWNERS: Rex King Jr., Rex King Sr. and a silent partner

FOUNDED: 2012

EMPLOYEES: 6

SPECIALTIES: Septic service and drain cleaning, hydroexcavation

SERVICE AREA: 45-mile radius around Bristolville (40 miles east of Cleveland)

WEBSITE:
www.kingsanitaryservice.com



“When you’re entering a new market, you don’t spend a lot of money as if it’s going to be a sure thing. **You’ve got to be financially prudent.**”

Rex King Jr.



➤ Kyle Dye (left) and Rex King Jr. take extension tubes off the truck to set up the vacuum boom on a Vactor 2110 combination truck.

◀ Gary Lucik (left) and Kyle Dye pothole to locate utilities.

From 2009 to 2012, King Jr. worked as a full-time employee for his father, who regularly hired the company that King Jr. now owns as a subcontractor to pump out tanks. When the owner decided to retire in 2012, he talked to his dad about buying the company, which would mesh well with King Bros., septic installation services.

“My father came to me and said here’s what the company does ... asked me if this was something I’d want to do,” King explains. “I couldn’t get financing because I was so young (21 years old), so my family helped me finance the purchase. It was a challenge I was willing to accept. ... I thought it was a great idea.

“Essentially, what I did in a nutshell was make King Bros., more of a full-service company,” he continues. “King Bros., installs tanks and King’s Sanitary Service pumps them out. There’s a lot going on at King Bros., and the part I own is a small piece of this giant puzzle.”

MAKING INVESTMENTS

As King’s Sanitary Service grew, so did its roster of equipment. To clean sewer lines and do hydroexcavating work, the company relies on a Vactor 2110 combination truck built on a Sterling chassis. It features a 10-cubic-yard debris tank, a 1,000-gallon water tank, a dual-fan unit, and a water pump (80 gpm at 2,500 psi). The business also owns



two skid-mounted water jetters, carried in Ford box trucks; the trucks' 14-foot insulated/heated box bodies were built by Morgan and Supreme.

One truck carries a US Jetting water jetter equipped with a 600-gallon water tank, Harben pump (15 gpm at 4,000 psi), and a Hatz diesel engine. The other vehicle carries a Mongoose jetter featuring a Caterpillar diesel engine, a 600-gallon water tank, and a water pump that generates 18 gpm at 4,000 psi.

King's Sanitary Service also owns two push pipeline inspection cameras for televising 4- to 6-inch sewer lines. One is made by Ratech Electronics, and the other is a Vyper model from Jack Doheny.

The company invested in the sewer vac truck after municipalities began to ask King about cleaning large-

diameter pipes. "If there's one thing I hate, it's telling customers no," he says. He added the hydroexcavating package because he felt the relatively small additional expense would generate more business — and revenue. "Plus, they're safer and more cost-effective for excavating," he explains.

The truck has opened doors to new markets, too, such as a long-term contract to clean large lines at a local auto manufacturing plant. "We couldn't clean those kinds of lines before, but now we can," King points out.

Of course, it takes good employees to work all the equipment and keep things running smoothly. King says he's lucky to have great employees like Kyle Dye, manager; Fred Bell, head septic service tech; Gary Lucik, service technician; Chrystal McCrimmon, office manager; and his mother, Mary, who handles the books. "You're only as good as your employees," King notes. "I can do a lot, but I'm only one person.

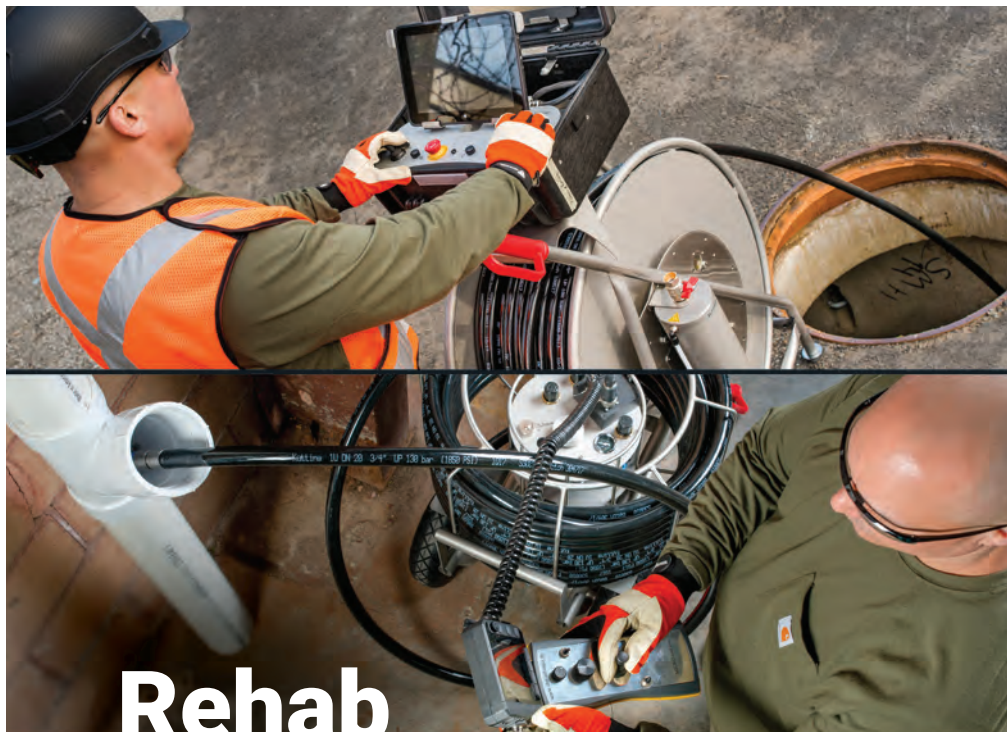
"We've got a great team," he adds. "We take the calls and get the job done. We often provide same-day service. Everything comes down to providing great customer service, and our employees do a great job. Our customers very rarely get an answering machine; emergency after-hours calls go right to my cellphone. And if we ever make a mistake, we take care of it — make it right."

CONTINUING EDUCATION

While King learned a lot about the business from his father, he says the Water & Wastewater

Equipment, Treatment & Transport Show has been a valuable tool in his professional development. The show enables him to see the newest technological advances in-person and offers a convenient way to fulfill Ohio's requirement for six continuing education credits a year.

"It's nice because I can pick and choose classes that I'm particularly interested in," he explains. "If I want to learn about effluent pumps, I can go to this class. And if I want to learn the latest about drainfields and leachfields, I go to another class."



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Rex King Jr.

« Kyle Dye (left) and
Rex King Jr. work
on a customer's Jet
residential wastewater
treatment system.

Presenting a professional image is no joke

Potty humor is commonly used to market portable sanitation companies, but Rex King Jr. isn't a fan. From vacuum trucks painted yellow and labeled "The Stool Bus" to others with slogans like "Yesterday's Meals on Wheels" or "We Like to Potty," he figures he's seen them all — and he's not going down that road.

Instead, King — the co-owner of King's Sanitary Service in Bristolville, Ohio — settled on something decidedly less crude for his company's slogan: "Your No. 1 choice for reliable and qualified sanitary services." While it doesn't employ bad puns and elicit chuckles, it positions the company as a serious, professional outfit, which is far more important to King than generating laughs.

"I hate those dumb slogans," he says. "It hurts the industry. How are people ever going to take you seriously? How are you ever going to raise your prices if people think you're a joke? This is a professional industry, and we need to treat it that way."

But professionalism at the company extends further than just a no-nonsense logo that clearly states what the company is all about. Route drivers are required to wear blue pants supplied by a uniform company and either a King's Sanitary Service T-shirt or baseball hat. They're also required to be polite and well-groomed.

"I believe that things like that make a difference," he explains. "I wouldn't want someone on my property who doesn't look nice, and I sure wouldn't want to write him a check. The bottom line is that we're professionals. I tell my guys that my name is on the trucks, and this is how we're going to do things. I'm not asking them to change their lives, just be neat, well-groomed and well-manicured."

King is also a firm believer in educating customers whenever possible. "If you educate your customers, it carries you further than any money you spend on advertising," he notes. "That's what keeps them calling the next time they need service."

King says he also benefits greatly from networking with other operators. Because WWETT Show attendees aren't typically direct competitors, he says they're more willing to share information, tips and advice. In one instance, he mentioned to a colleague that he was having trouble getting the correct pH level in a customer's septic tank. "Then he asked me if someone in the house has cancer and is getting chemotherapy treatments," he says. "That turned out to be the problem. You don't always find out about things like that unless you talk to people."

Attending a recent WWETT Show also convinced King to enter a lucrative market for hydroexcavating. While talking about the possible purchase of a combination sewer truck, a representative from Vactor mentioned that a hydroexcavating package would add value to the unit. "That's what pushed us toward hydroexcavating," he says.

MORE GROWTH EXPECTED

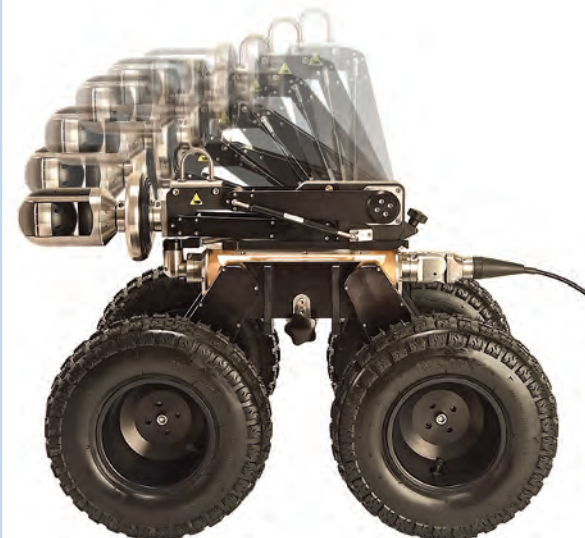
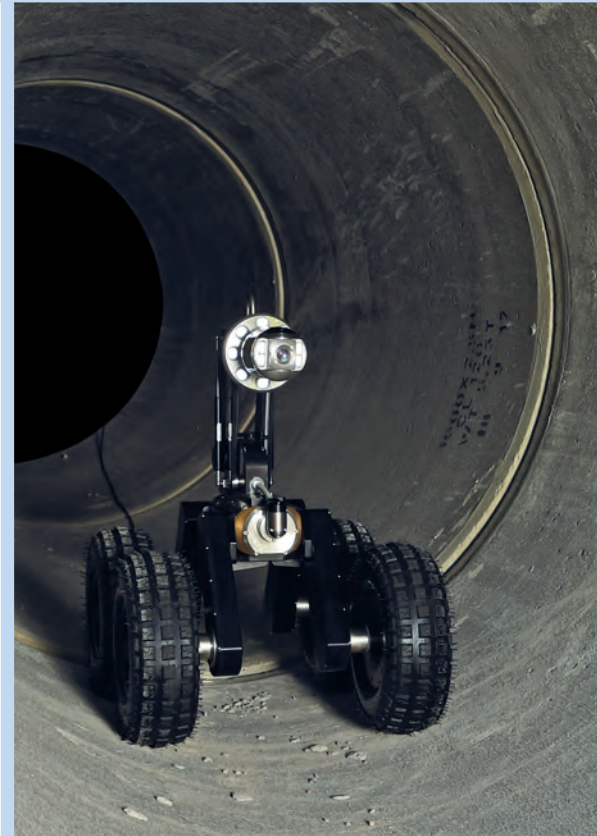
King says he's optimistic about further growth, especially in hydroexcavating work and cleaning larger municipal sewer lines. Because even used sewer/hydroexcavating trucks are expensive, most companies are reluctant to buy them, so there's an inherent barrier to market entry by competitors, he points out. **CONTINUED >>**

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▲ Kyle Dye, Gary Lucik and Rex King Jr. (from left) talk while pumping a tank.

**"If there's one thing I hate,
it's telling customers no."**

Rex King Jr.

work for it without even marketing its capabilities. Numerous municipalities have called to ask us to expose (utility) lines. I really see that part of the business taking off in the next year or two."

"We haven't even owned the (sewer) truck for a year yet, and we've already definitely seen an increase in hydroexcavating business," King says. "We've found

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King says he's considering investing in a crawler pipeline inspection camera capable of televising large-diameter lines. "Within about a 45-mile radius, there are probably 10 to 15 smaller municipalities that need help with sewer maintenance. I think we'll see more and more municipalities hiring out that work because they can't afford to buy an expensive combination sewer truck that might sit idle most of the time." **c**



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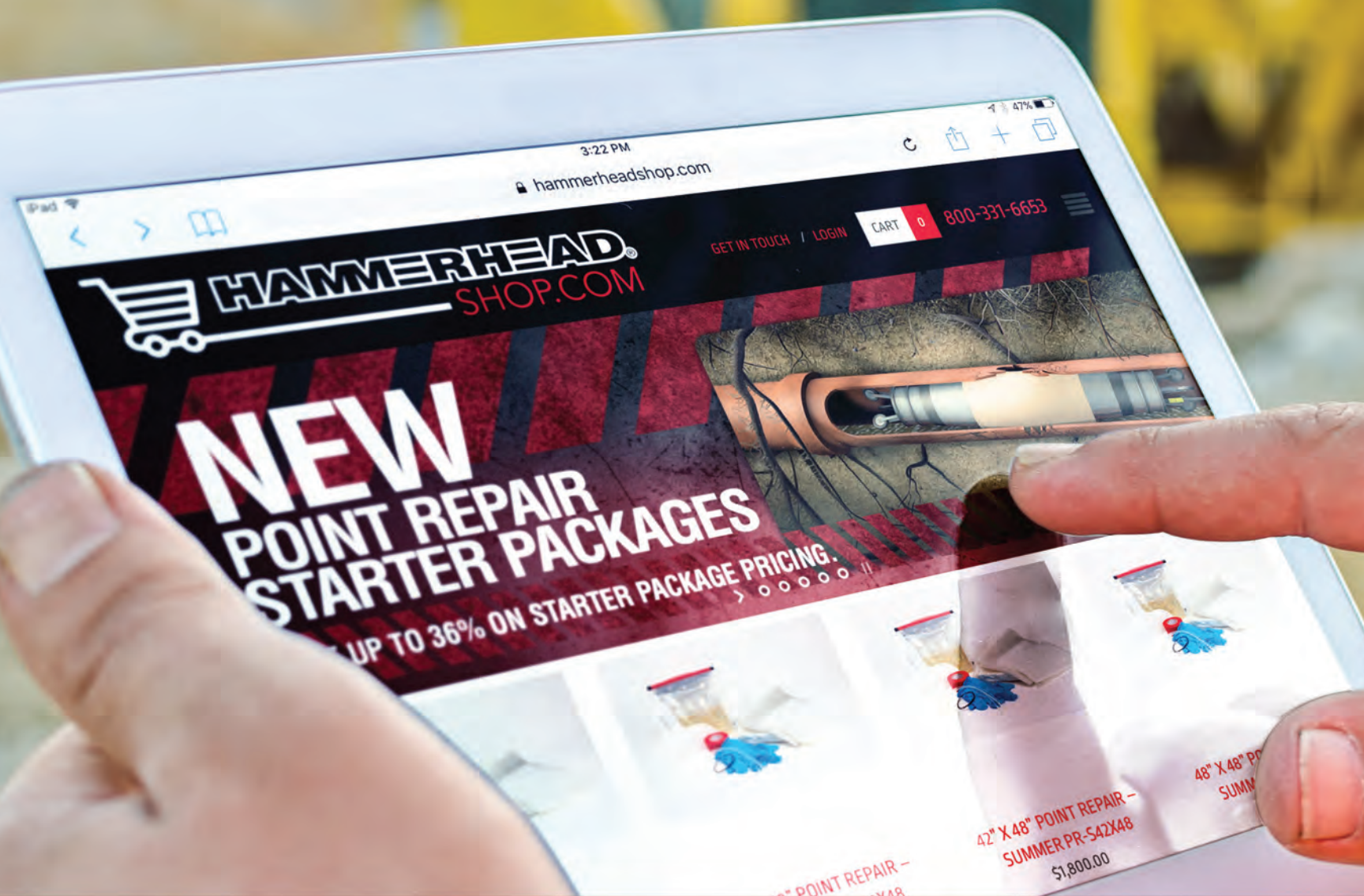
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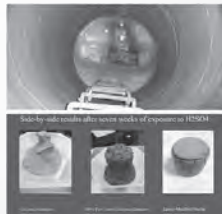
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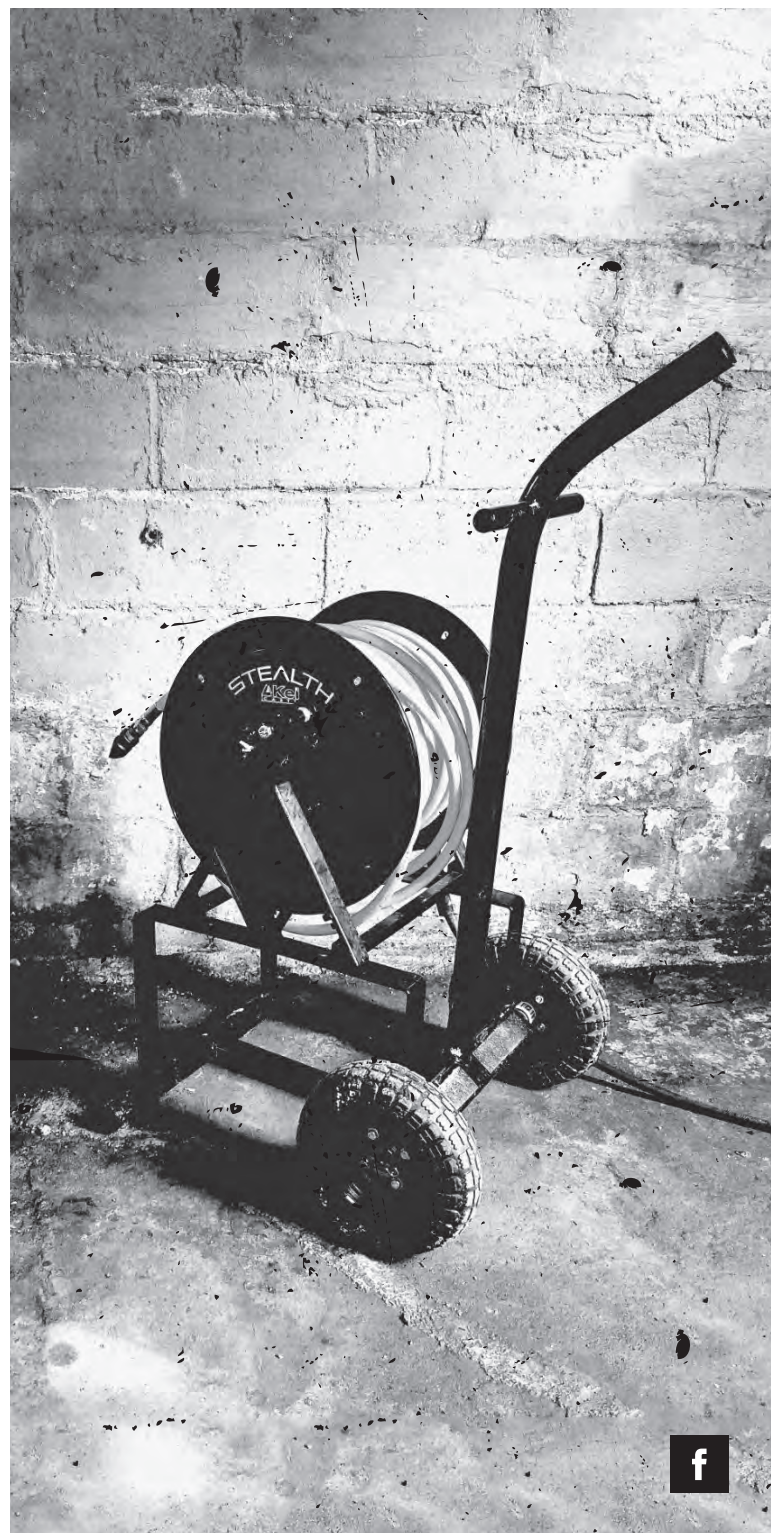
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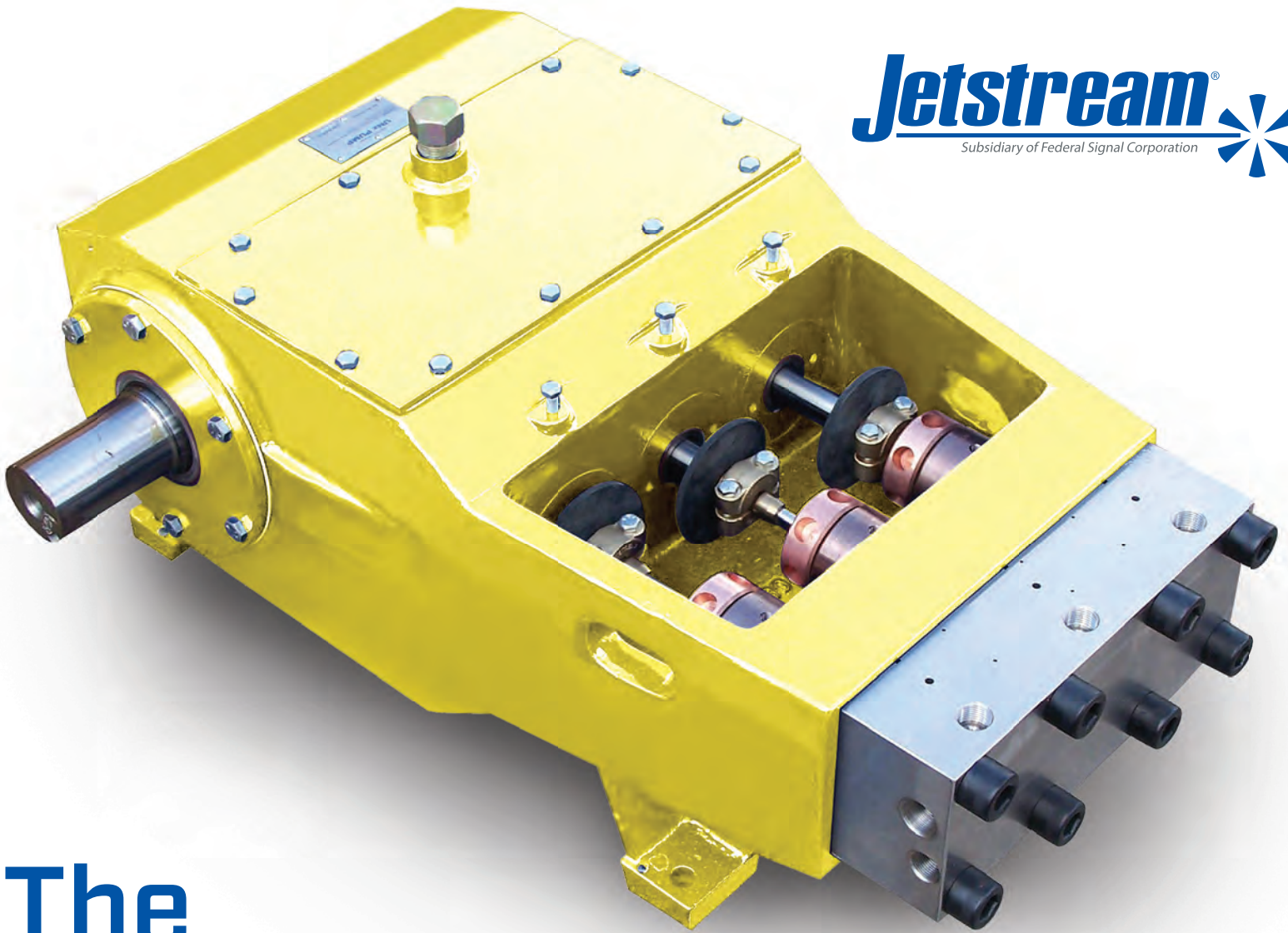


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Cleaning With Creativity

Simple innovation makes easy work of a difficult cleaning job

By Jared Raney

No vehicles, no heavy equipment, yet the job was cleaning 10,000 feet of 27- to 30-inch sewer main.

The site was the Four Seasons Golf Course in Irving, Texas, and the job would take thousands of feet of hose using conventional methods like a combo unit.

“You’re not bringing anything on the golf course that is much larger than a golf cart,” says Rusty Nezat, owner of Nezat Training and Consulting. “You couldn’t bring any jetters — none of that equipment could be brought out. No pickup trucks — nothing like that could be brought out on the course.”

The project consisted of two separate lines, a clay tile main and an HDPE bypass, both about 5,000 feet. Mineral deposits up to 8 inches were accumulating sediment, restricting flow.

Nezat’s solution was a patented, proprietary piece of equipment called the Jigawon. It is a large-diameter cleaning device that uses existing flow in the pipe to create head pressure and migrate silt and debris downstream.

Controlled by a trailer-mounted cable winch, in turn pulled by a small tractor, the device is essentially an inflatable canvas-type holding container with a conical extension ending in a plate on the front, where a series of jets channel about 3,000 gpm at 15 psi.

“It’s a canvas-type material that catches the water and restricts it, and it pushes against the edge of the pipe, so you get a scouring action on the pipe while it’s capturing the water,” he says. “It’s a combination of a kite, a scraper and a sewer ball, which is all old technology. I kind of combined the best of all three and made a new device. It worked really well, and that’s how it was born.”

UNDER CONTROL

The two pipes ran more or less parallel to each other on opposite sides of the long and narrow golf course, which straddles a section of river. On one side, the two pipes are in close proximity, allowing Nezat to end his first run and start his second from about the same spot.



« Nezat Training and Consulting’s sewer cleaning job at the Four Seasons Golf Course in Irving, Texas, took 2 1/2 months and stretched into the golf season. Toward the end of the project, golfers were out on the course while they worked.



« A crew member monitors the downstream manhole as the Jigawon progresses through the line. The job involved cleaning two 5,000-foot lines.

» The speed of the Jigawon's passage through the sewer line is controlled by a winch at the upstream end of the run.

"I mean, we took 90 percent of the mineral deposits out of the pipe, which was astounding. I had never tackled something like that."

Rusty Nezat

Because of this layout, Nezat only needed three setup locations. Crew members checked the Jigawon's progress in manholes along the course with a CUBE inspection system from R.S. Technical Services Inc. (RST). When large pieces of debris needed to be removed midrun, workers used standard entry equipment.

The unassembled device is lowered into an upstream manhole and assembled in the pipe, beginning the run. An inflatable Logiball plug is introduced to block flow and create head pressure behind the device. Once they have enough pressure, it begins its slow ride through the pipe, moving about 2 to 3 feet per minute.

The relatively modest pressure gently migrates material in the pipe. The device expands to fit pipe from 10 to 60 inches, according to the Jigawon website, and can be modified with high-grit siding to actually scour the sides of the pipe, removing any roots or deposits.

"We control its descent. We know how fast we're running through the pipe," Nezat says. "It's just the flow of the water; it's hydraulics basically. We capture flow and funnel it down, and it puts all the material in suspension."

The winch controlling the Jigawon is mounted on a trailer, and the extraction process only requires a vacuum box with a compact pump, allowing this project to be completed from manholes on the fringe of the property.

At the downstream end of the pipe, the vacuum box separates the solids and pulls them out. Nezat typically rents the vacuum box and has it delivered to the extraction site.

A weir is dropped at the end of the run, damming any material in the pipe, which is then vacuumed into the watertight box, and dewatered. Solids are dumped at an appropriate site, while liquids are sent back into the system. The device is then disassembled inside the manhole and removed by hand.

UNEXPECTED DELAYS

Though the patented process is simple, there were several snags in its execution on this project.

Nezat and his crew ran into a series of mineral deposits, which they estimated took about three times longer to scrub away than a normal run.

"The material of the device pushes against the walls, and it rubs it off," Nezat says. "We worked it back and forth till we rubbed all the mineral deposits off."

"I mean, we took 90 percent of the mineral deposits out of the pipe, which was astounding. I had never tackled something like that."

The original plan was for the job to be completed in the off-season, about January through March. Unseasonably cold weather for the Dallas area hampered their progress, delaying work and causing downtime.

Nezat estimates they lost approximately 20 to 25 workdays due to frost, when the golf course managers didn't want them even walking on the course.

When possible, the device would be left in a manhole overnight, or retrieved back through the pipe to the entry point. At times, the crew would work 24/7 if they had enough flow through the night.

The job ended up taking about 2 1/2 months, meaning by the time they finished, golf season had begun, and golfers were out on the course while they worked.

"Our equipment is very quiet, I mean nothing even runs any louder than maybe a pickup truck or something in idle," Nezat says. "We don't make any noise to bother golfers."



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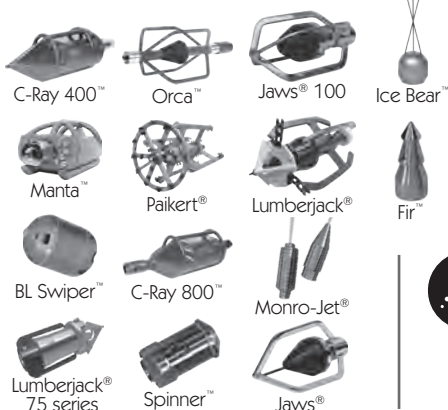
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⚡ No vehicles significantly larger than golf carts were allowed on the course during the project, which eliminated most traditional cleaning options.

SOFT AND SLOW

"It's very slow because the process is very slow," Nezat says "It's a very soft process, so to speak."

Despite its slow speed, the process is cheap and noninvasive. Nezat's bid beat out the competition by about \$2 million, and because the system uses existing flow, it doesn't even need a bypass. With this process, Nezat can clean up to 6,000 feet at a time, allowing him to do the 10,000 feet of this job in only two runs, all without putting a single tire mark on the fairways.

A post-cleaning inspection video and condition assessment coded with ITpipes inspection software accompanied the Jigawon process, proof of concept for the device and proof of a job well-done.

According to the director of the golf course, "the project was successful on every level." **C**

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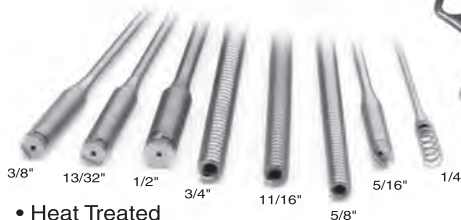
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Going Lean

Start looking at different ways to save money in order to make more money

By Cory Dellenbach

Sometimes a good, long look at how your company is operating, and what you could eliminate, can lead to more business.

Barry Wood, CEO of Toronto-based hydroexcavation company Ontario Excavac, has found that out. Wood, who has a manufacturing background, got involved in lean thinking a number of years ago with the U.S.-based Association for Manufacturing Excellence.

"In a nutshell, it's about flow and value-added removal of waste," Wood says. "You look across your operations and you start by asking yourself: What is value in the eyes of the customer? Look across your processes, flowchart them, and evaluate where there are opportunities to eliminate nonvalue-added activity."

Wood looked at his company using lean thinking and found several areas he could eliminate. While scary at first, the moves proved to be profitable as the company earned more business because of it.

FINDING WASTE

Things to eliminate by applying lean thinking include duplication of services and transportation wastes, but it shouldn't stop there.

"There are sources of waste that are epidemic in the construction sector," Wood says. "Wait time for example is rampant. People are waiting for the preceding steps to be done before someone starts to work."

Wood points to his own company as an example. While working with one of its largest customers, his crews would go out at the same time as the customer's crews. Ontario Excavac crews would excavate and then move aside and watch as the customer's crews did their work. After the crew was done, Ontario Excavac crews would then start restoration work.

That was one of the first and easiest things to change.

"Instead of us going out on a job site along with a customer's crew, we now go to the job site the day before and do the excavation work then," he says. "The next day, the customer's crew comes along and does their work, and then we'll go back after they're done and do the restoration. There is no waiting around at the job site anymore."

Both companies are increasing productivity just by sequencing operations that way.

"We dealt with that time waste by changing the order of steps and disconnecting a successive step from the previous one," Wood says. "We no longer have people that are just standing around and waiting."

The lean approach can help eliminate several other sources of waste in the industry. Here are some Wood found in his own company:

- Defects — Improper installation or repair, billing errors, change orders.
- Overproduction — Requesting too many locates to complete in a given time. Multiple forms with same information.
- Waiting — Equipment failure, missing work tools or personal protective equipment, not sequencing work and resources effectively.
- Nonutilized or underutilized resources and talent — Journeymen being used to operate a backhoe or dump truck.
- Transportation — Disposal of hydrovac debris many miles from both the site and the vac shop.
- Inventory — Field and office supplies, items stored on vehicles, email.
- Motion — Trying to find tools, misplaced items, wrong order of work steps.
- Excess processing — Insufficient use of alternate locate agreements. Failure to use keyhole technology.

"You can save a ton of money if you focus on applying lean practices," Wood says. "We're putting a big focus on eliminating waste and optimizing processes. The whole nature of moving more centrally into the city that we did a year and half ago, then putting the soil recycling facility here, it's all about eliminating waste transportation travel time and wait time."

LEAN THINKING

Wood admits that when he and other company officials began applying lean thinking, what they found was a little shocking.

"When we were analyzing billings to customers, we saw that on some days as much as 40 percent of what the customer was being billed was related to traveling to the site, to the disposal site, and then back to the shop," Wood says. "We saw that as probably the biggest initial opportunity for eliminating waste."

By adding a hydroexcavation recycling facility in a centralized location, Ontario Excavac knocked out over 30 percent of that travel time.

"We've taken four hours out of a bill and put it down to like two hours for travel to and from," Wood says. "Those are the type of savings we're seeing. It's substantial."

FOR THE CUSTOMER

It was a leap of faith for Wood and his company, not knowing how their major customer would take the news of applying lean practices.

"We told them we know they pay us for every minute that we're out from door to door, but in the long-term best interest for their business and ours, it just made sense to remove this nonvalue-added time," Wood says.

Wood hoped that on seeing the reduction in bills, their customer would reward Ontario Excavac with more work. "That's exactly what happened," he says. "We just executed an extended alliance agreement with this customer. They've been pleased with our active efforts to contain costs."

Wood says other company owners and managers have to trust that customers will reward them for applying lean thinking.

"I was pretty confident because we've worked with many customers for years," he says. "We were definitely taking a chance to do it because you can just sit there and be fat and sassy and say they can pay for all the travel time and we'll just keep billing them, but at some point, that was going to change. Somebody was going to change that model, and we decided it had to be us."

LEAN APPLIED TO THE UTILITIES SECTOR — EXAMPLES FROM ONTARIO EXCAVAC

TASK	LEAN IMPROVEMENT(S) IMPLEMENTED	BENEFITS OBTAINED
Ordering locates	Alternate locate agreements, preliminary inspections tightened locate area and dig zone	Quicker access to field, less locate fieldwork, bigger execution time window improves planning opportunities
Work planning and scheduling	Sequential work planning based on task cycle-time, self-directed excavation (done without utility crew in attendance, e.g., day prior)	Elimination of wait time, more optimized usage of equipment, level-loaded work schedule
Vehicle daily inspection	Standard two-copy inspection form, use of Vehicle Maintenance Request Form, air brake and wheel lug nut visual status flags	Consistent, documented completion of inspection, prioritization and tracking of repairs; accurate and quick indicators of brake/wheel compliance
Work equipment and tools	Crewman's checklist to verify personal protective equipment, traffic controls, equipment and tools on board	"Ready to Dig" when arrive at site
Site setup	Site hazard checklist, tailgate checklist, use of green cones for overhead wires/overhead wire signs	Consistent, thorough evaluation of site potential hazards and how risks are being mitigated, visual reminder of overhead wire risk
Fieldwork – hydroexcavation, working on underground plant, restoration services	Standard operating procedures documented, use of keyhole tools	Consistent order of steps, use of best technique to reduce cycle-time, smaller excavations, no need to get into excavation, consistent paperwork, safer operations, easier to train new people
Travel each day to and from work site to disposal site	Move to more central greater Toronto area site, build and operate a hydrovac soil recycling facility at the shop	Elimination of significant nonvalue-added transportation saving labor and fuel costs, reduction in carbon footprint, reuse and recycling of soil and water materials
Inventory control and usage	Use of kanban/vendor managed inventory (VMI) via vending machine for PPE	VMI vending machine controls min/max inventory levels, tracks usage by employee
Fuel cost and air/noise pollution	Reduction in gearing on PTO has engine running at lower revolutions per minute, use of acoustic cabinets	Lower operating cost, less air and noise pollution
Hydrovac vehicle design and layout	Storage cabinets designed for ease of access, auto-lube feature	Cycle-time reduction for setup, work execution, cleanup, ease of maintenance

MAKING A COMMITMENT

Any utility construction company can make the changes Ontario Excavac made — it just takes the right mindset.

"It starts with a mindset that you're going to examine your business and eliminate waste," Wood says. "It can be employed by service industries, manufacturing and construction. Construction is just a slow adopter. The industry is slow to adopt new practices and new ways of doing things, and lean is just one of them.

"You have to realize it's easy to talk about, but doing it is harder than talking about it. We have our own struggles here. It's change and a shift in culture and how we do things; and it takes time and effort and discipline and commitment to do it." **C**



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Are You Covered?

With shifting costs and new options, it's time to make sure your company has adequate insurance protection

By Keith Monti

The goal of any commercial insurance policy is to protect the golden goose that is your business and keep it laying eggs without disruption at the time of a claim. For wastewater industry companies, it's important to protect against the perils of losing expensive and critical equipment and keep your business operating smoothly and efficiently when any kind of calamity strikes.

For example, if you run a one-driver, one-truck business and your main vehicle is totaled in an accident, without business interruption coverage on that vehicle (loss of income coverage), the golden goose is not being protected as adequately as it could be. It is essential for any wastewater-related business — from the mom and pop operation to much larger companies — to take advantage of the latest insurance offerings.

The core objectives of commercial insurance have remained unchanged over the past decade (proper coverage, quick claims resolution and payment, aggressive customer service, ongoing business operations, etc.) but the options for meeting these objectives has dramatically advanced over this same time period. New insurance coverages may significantly benefit your business.

If you have not conducted a review of your commercial insurance coverage recently, consider these options to personalize your policies specifically for sewer and drain businesses. Here are points to consider:

REPLACEMENT COST

Auto insurance is rated on an actual cash value basis, more commonly referred to as “depreciated cost” basis. However, in the commercial insurance world for wastewater contractors, vacuum or jetter trucks can now be insured for full replacement cost, not depreciated value, if it is 10 years old or newer.

Let's say you purchase a brand-new vacuum truck for \$200,000. Let's also say the vehicle is totaled in an accident eight years after purchase. With replacement cost coverage, you will receive \$200,000 (minus any deductible) from the insurance company. With actual cash value, or depreciated cost insurance, you might be lucky to receive \$65,000 for the totaled vehicle due to its age and depreciation.

Obviously we are talking about a significant difference. Replacement cost insurance is a unique coverage improvement for wastewater businesses. I have only seen this coverage emerging for trucks through select insurers catering to the wastewater industry. Because they focus narrowly on vacuum and jetter equipment at this time, they have been able to keep the price of replacement insurance competitive with depreciated cost policies.



Cyber attackers have quickly learned that smaller businesses that accept credit cards are easier and quicker to infiltrate than larger companies with stricter internet security measures in place.

LOSS OF INCOME

If a vacuum truck is involved in an accident and becomes inoperable or unusable in some manner due to a covered insurance loss, your company can now be eligible for the lost income the vehicle would have generated had it been operating. Normally this type of insurance coverage is only offered for physical business locations. However, several specialized insurance carriers now extend this coverage to service trucks as well. This is also a case of specialty providers focusing on the unique needs of wastewater-related service companies.

ERRORS AND OMISSIONS

Errors and omissions insurance for businesses that design, install and inspect wastewater systems can now be purchased from the same company that insures the rest of your business policies. No longer is it necessary to purchase a separate, stand-alone, expensive errors and omissions policy for the business. Today, discounted bundled rates are available.

UMBRELLA SAVINGS

Commercial umbrella insurance rates for wastewater service providers have dropped over the past few years among select insurance carriers. Many

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1"	Premium Pirhana Orange 2500psi	\$1,285.00	\$1,540.00
3/4"	Premium Pirhana Blue 3000psi	\$1,154.00	\$1,385.00
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	50'	75'	100'	150'	200'	250'	300'	400'	500'	600'
1/8"	\$24.62	\$32.59	\$39.86	\$60.13	\$72.05	\$89.51	\$113.72	\$226.24	\$190.71	-
1/4"	\$35.90	-	\$59.84	\$81.79	\$104.05	\$145.71	\$167.97	\$234.16	\$281.22	-
3/8"	\$55.02	\$70.13	\$89.16	\$124.26	\$173.57	\$207.78	\$241.14	\$331.27	\$402.20	\$468.29
1/2"	\$88.76	-	\$167.76	-	\$339.77	423.61	\$498.00	\$634.32	\$820.11	\$934.80



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• TUBE 1/8" static-conducting NR/SBR.

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	\$38.49 ft.*		\$67.60 ft.*	

VOL-U-FLEX EXTRA HEAVY DUTY LINE HOSE

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	120"	62"	66"	127"
6"	\$452.95	\$334.93	\$358.86	\$623.12
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*bulk prices for comparative reasons, only available in pre-made lengths

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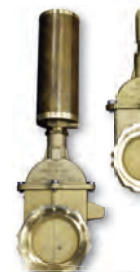
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sewer businesses used to only carry an excess liability insurance policy when required by municipal or general construction clients. The added cost (which was significant) was simply a means to getting the work. However, certain insurance carriers have considerably reduced their rates for an extra \$1 million, \$3 million or \$5 million in liability coverage.

This amounts to added coverage above and beyond the underlying \$1 million limits a business most likely has on their general liability and commercial auto policies. As a result, more wastewater contractors are now adding umbrella coverage onto their business insurance policies for the extra layer of protection it provides rather than simply because they are required to do so for a particular project or client.

BROADER LIABILITY

The number of lawsuits/insurance claims surrounding wrongful termination, discrimination and sexual harassment is quickly approaching an all-time high. These types of claims are not covered under general liability, workers' compensation or errors and omissions insurance policies. Coverage is only found under an employment practices liability policy. These types of policies are rapidly becoming a staple of the insurance portfolio for almost every business, regardless of industry or trade. Even an accusation of misconduct brought against an employer by an employee (past or current), whether it be true or false, can result in thousands of dollars in out-of-pocket defense costs without this type of insurance in place.

CYBER PROTECTION

Computer hackers used to be a concern only for large organizations. However, cyber attackers have quickly learned that smaller businesses that accept credit cards are easier and quicker to infiltrate than larger companies with stricter internet security measures in place. As a result, smaller businesses

are now targeted by online thieves more often than larger businesses. Cyber insurance can be purchased for as little as \$60 per year for \$100,000 in coverage. Any business that accepts credit cards should have cyber insurance in place, especially when the added cost can be minimal.

PAY AS YOU GO

The days of having to come up with hefty deposit amounts or down payments to initiate an insurance policy every year are fading away. Many insurers now offer monthly payment plans that require little to no money down to initiate. I cannot tell you the number of wastewater companies that have selected a particular insurance plan for this reason alone. The fixed monthly cost and budgeting advantage has proven to be a true benefit to many wastewater business accounting departments.

SHOP SMART

If you don't have these types of coverage in place, ask your insurance agent about them. In my opinion, it makes little sense to be missing out on these unique coverage protections. When it comes to protecting the golden goose, no business should settle for insurance that only covers the eggs. **C**

ABOUT THE AUTHOR

Keith Monti is an independent insurance agent at Boynton Insurance. Reach him at 978-241-2363 or kmonti@boyntonins.com.

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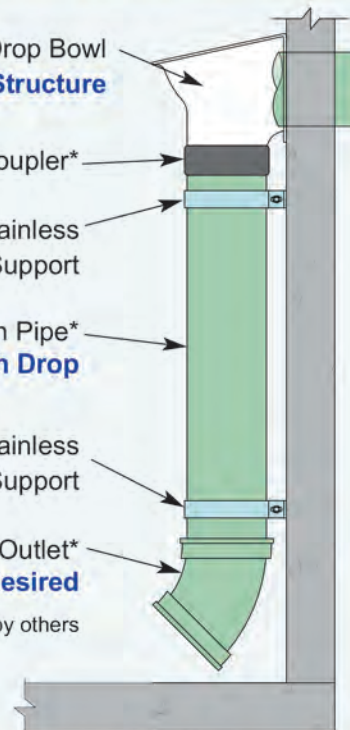
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Teamwork Ensures Safety

Safe hydroexcavation takes two sets of eyes and an understanding of all potential risks

By Jared Raney

Hydroexcavation is often promoted as a safer method of excavation — and in almost all ways, it is. But that doesn't mean it is without its own dangers, of which operators must be constantly aware.

As with any job site, working with hydrovac trucks has the potential for catastrophe if the proper precautions are ignored. The best way to keep operators and the public safe is to simply have a second pair of eyes on the job.

"That's the biggest thing — just having that extra guy around to watch your back," says Anthony Chavez, safety compliance officer for Davids Hydro Vac in White Bear Lake, Minnesota. "With hydroexcavation, 90 percent of the time while you're digging, you're staring at the ground. You try to keep your head on a swivel as much as you can, but there's a lot of different dangers that go on around you."

One of the biggest concerns is boom clearance. While operators are focused on the ground before them, booms are stretching far overhead and can come in contact with power lines or other obstacles if not closely monitored. And while it is less likely than with traditional digging equipment, damaging underground utilities is still possible, which brings gas lines and other utilities into play, in addition to electricity.

Bystanders present another potential safety issue. Unlike a typical construction or excavation site with backhoes and bulldozers, a job site with just a hydroexcavator doesn't always raise the same red flag in the minds of bystanders.

"If you're in a residential area, there could be commuters," Chavez says. "A lot of times you'll get the wanderers that come up and they just want to know what you guys are doing. If you don't have that extra guy, they may go into an area that you've already excavated — they may not pay attention to the caution tape or the cones that you have set up."

Proper training and apprenticeship are also important. It doesn't matter how many guys are on scene if they don't know what they're doing.

"That second guy in the truck is going to know all the safety features on the truck. If anything happens to that operator, you always have that backup person who's going to know how to operate that truck. So he can shut it down if need be, he can pull the operator out of it, so you always have that safety backup."



Hydroexcavation safety takes planning and teamwork. Having a second person on site to watch the operator and keep an eye on everything is critical. (Photography by David Ryder)

Of course, OSHA training is required, but for Chavez, that's the bare minimum. He also has their spotters go through union training on flagging and hand signal procedure, and the operators spend at least six months to a year riding along with senior operators before going out on their own.

"We could do a crash course and have the guys out there operating a truck, just because they have a CDL, within a month. That's just not the way we do it," Chavez says. "The less high-profile customer may not require certain training. We just go ahead and do the training regardless, across the board, with all of our guys."

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Lastly, Davids Hydro Vac has a job site checklist, something that is typical on many construction and job sites across the industry, but may be overlooked when it comes to hydroexcavating.

"When you handle it this way, there's no downtime. You don't have to stop the whole construction site or excavation. They can keep working and keep doing what they need to do," Chavez says. "The biggest thing is making sure that our guys and the guys they're working for are making it home safely."

If you don't think there is any risk for operators or contractors, consider the Ontario hydrovac company that was fined \$285,000 in February after one of its workers was killed when he hit an overhead electrical line with his hydrovac truck's boom. Reports say that there was no secondary monitoring of the boom's movement, and operators were so focused that they didn't realize the boom was too close to the lines.

"The fines, that's money. Somebody getting injured, that's somebody's life, their livelihood, their career," Chavez says. "It's not the money standpoint; it's that somebody's life could get taken away for a simple bonehead mistake if somebody's not paying attention or taking it for granted that they have the clearance."

With very little downside and plenty of upside, all hydroexcavation work should be accompanied by a second pair of eyes. **c**



▲ One of the biggest concerns in hydroexcavation is boom clearance. While operators are focused on the ground before them, booms are stretching far overhead and can come in contact with power lines or other obstacles if not closely monitored.

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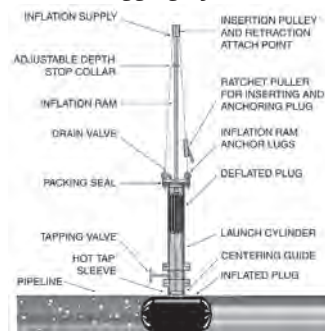
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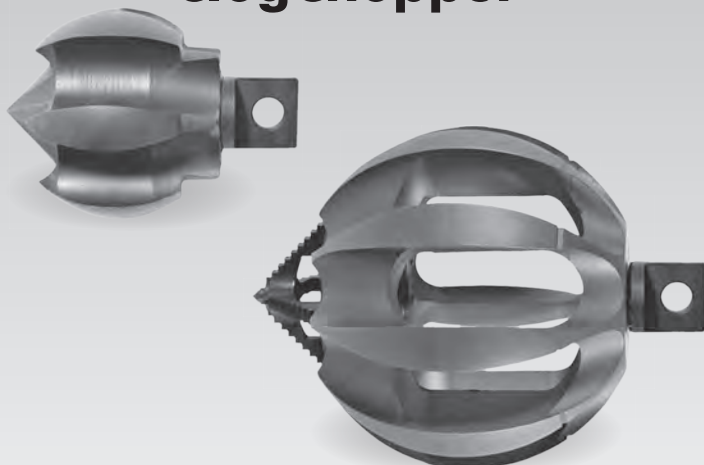
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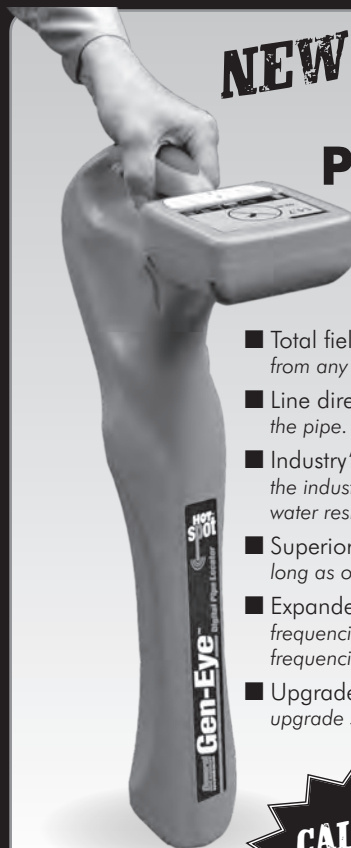
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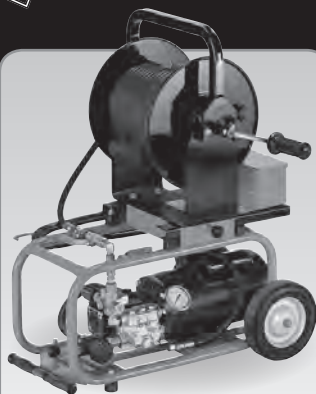
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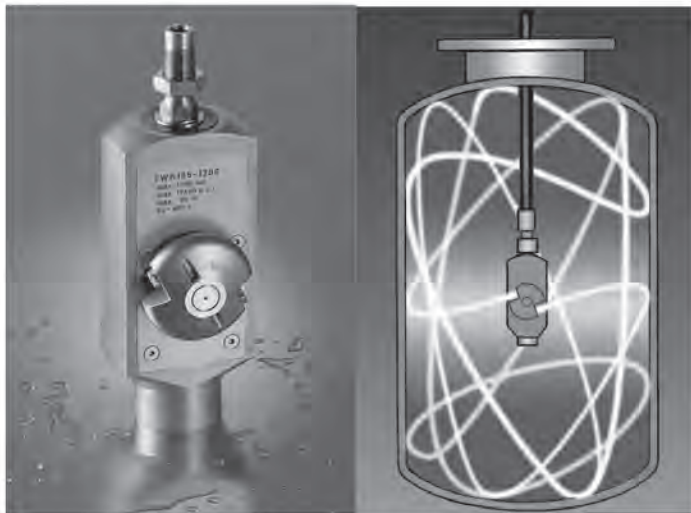
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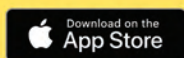


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SPOTLIGHT

Operator-friendly chain cutter keeps techs on the job

By Craig Mandli

To effectively clean stubborn root blockages from the inside of pipe walls, sometimes it takes a little mechanical “elbow grease.” Chain cutters can often be the last resort before excavation and costly and time-consuming pipe repair. That means the cutters need to be durable to stand up to harsh, demanding conditions. The makers of the Viper say their new unit is up to the challenge.

The newest multipurpose chain cutters from Sewer Pro Shop are made of high-grade stainless steel and are equipped with ceramic nozzle inserts. They

literally require no maintenance and have been designed to be extremely operator-friendly for the municipal and industrial markets.

“All it takes to use the Viper in different size pipes is easily changing out the skids,” says Reinhart Laimer, president of Sewer Pro Shop. “Just remove the swivel and a few set screws, and you can be back up and running in minutes.”

The Viper is a powerful hydrodynamic tool designed to remove heavy obstructions caused not only by roots, but by grease, mineral deposits, or other solid organic material as well. The unit is driven by a high-performance turbine, which according to Laimer, doesn’t require any lubrication.

“All it takes is connection to a pressurized sewer hose, and you are ready to work,” he says. “This unit was designed to be very operator-friendly. The skids are so easy to switch out, which makes this unit a fit for nearly any sewer pipe ranging from 10 to 48 inches.”

The Viper chain cutter also utilizes turbine technology with 3D Hydro Mechanics, thus providing less water and fuel consumption. The unit is available with three different size adjustable skids: 10- to 16-inch, 16- to 28-inch and 28- to 48-inch. It is also available with carbide bits for stubborn calcium deposits and scaling. According to Laimer, those using the Viper in the field have provided valuable positive feedback.

“The techs using the Viper love how operator-friendly it is and how easy it is to change over the skids for different size sewer pipe,” he says. “Our goal when designing it was to keep these techs working, rather than spending time doing maintenance on the cutter. That solves a big problem for them.” 877-864-9394; www.sewerproshop.com.



1 WATER CANNON INC. - MWBE INDOOR APPLICATION PRESSURE WASHERS

The new industrial-duty line of indoor pressure washers from Water Cannon Inc. - MWBE are powered with Baldor Electric 20 hp motors and General Pump TSP Series pumps. Three models are available offering up to 5.5 gpm and 7,000 psi. The attachment kit includes a 50-foot hose, trigger gun, and wand, and the washers come with quick-connect nozzles. The auto-stop/start feature shuts down the motor and pump when the trigger gun is closed. 800-333-9274; www.watercannon.com.

2 PICOTE SOLUTIONS LINER CANNON PIPE LINING DRUM

The Picote Solutions Liner Cannon is a lightweight, transparent tool designed to assist in the installation of CIPP linings, particularly smaller diameters. The transparent shell allows the user to watch the lining process in real time as it progresses. It uses the Fast Lock System to install liners from 2 to 4 inches in diameter. The single Cannon inversion kit includes multiple inversion heads and a Fast Cap to cover the varying-diameter installations. For particularly tight spaces and shorter liner lengths, the Cannon Mini is also available. Both systems are constructed using heavy-duty polycarbonate and aluminum and are safe to use with two independent pressure release systems and a maximum operating pressure of 29 psi. 219-440-1404; www.picotesolutions.com.

3 TRELLEBORG PIPE SEALS WATERTIGHT PIPE SEALS

Specifically designed for high-pressure potable water pipe relining, the I-Lock-P Mechanical Seal and the L-Lock-P Liner End Seal from Trelleborg Pipe Seals provide a watertight seal for most types of pipe, including steel, cast iron, concrete and plastic. Both are easily installed using a high-force hydraulic expansion tool and are available in multiple diameters. The I-Lock-P is a mechanical seal applied without a liner to repair sections of cracked or damaged pipe, and the L-Lock-P is a rubber liner end seal with stainless steel expansion bands, designed to keep the liner firmly in place. 800-626-2180; www.trelleborg.com.

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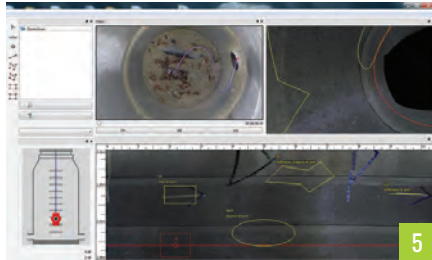
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4 ELECTRIC EEL eCAM ACE WI-FI

The eCAM Ace Wi-Fi from Electric Eel can be used to inspect pipelines ranging from 3 to 10 inches and is powered by a 120-volt AC supply or optional rechargeable battery pack. The camera is housed in rugged stainless steel and has a sapphire lens with 20 LED light ring and high-resolution CCD element. A flexible camera spring is designed to navigate 3-inch P-traps. The camera features a 5.4-inch LCD monitor with AR film for optimal viewing in sunlight, and is encased in an anodized aluminum housing mounted to the reel. There is a protective acrylic, anti-glare monitor shield and a video output jack for recording option. The heavy-duty screen cover closes to protect the monitor when in transit or storage, flips up as a sun shield and can be retrofitted to existing units. 800-833-1212; www.electriceel.com.

5 WINCAN MANHOLES MODULE

The Manholes Module from WinCan imports imagery and geometric data from automated manhole inspection equipment and provides the tools to analyze, annotate, report and share information. Users can use the module to create a virtual manhole, using pan, tilt, and zoom to scrutinize defects. It supports defect-coding standards like Manhole Assessment and Certification Program and Water Resource Center and makes it easy to generate custom reports that include tables, images and schematics. The module is fully compatible with WinCan Web, so inspection results can be uploaded to grant others access to view reports and navigate virtual manholes instantly on any device with a web browser. 877-626-8386; www.wincan.com.

6 RIDGID MODEL 286 SOIL PIPE CUTTER

The RIDGID Model 286 Soil Pipe Cutter's single stroke operation streamlines the cutting process while the outward-facing hooks simplify connecting clay and cast-iron pipe. The integrated handles are easy to adjust, helping users optimize angles and make repeated cuts with less fatigue. Long handles and a built-in cutting mechanism also provide the mechanical advantage to minimize cutting effort and enhance ergonomics. 800-769-7743; www.ridgid.com.

7 SUPER PRODUCTS CAMEL MAXXX 1200 SEWER CLEANER

The Super Products Camel Maxxx 1200 sewer cleaner offers 1,500-gallon water and 12-yard debris capacity and a large, 7-inch display at the front control panel. It utilizes a heavy-duty transfer case with a hot shift blower control at the front operator's station, eliminating trips back inside the cab to turn the vacuum pump on and off. An extreme transfer case and hydraulic cooling system allow for continuous work without the fear of overheating. The front-mounted hose reel extends 18 inches and is capable of 270-degree rotation, including when fully retracted, and is lockable in any position. 800-837-9711; www.superproductsllc.com.

8 GEOPHYSICAL SURVEY SYSTEMS INC.

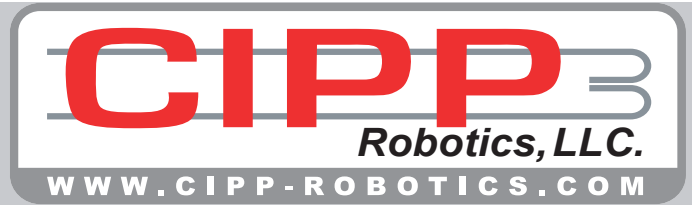
The UtilityScan system from GSSI uses sensor fusion, where coils that detect power radiated from electrical cables are fused with ground-penetrating radar in a single box. This produces an overlay over radar data that shows the presence of powered electrical cables. Weighing only 34 pounds, the UtilityScan is small and light and measures only 22 by 19.25 by 12.5 inches. The chassis is made from an insulated structural foam injection process, where thermoplastic materials such as high-density polyethylene, polypropylene, acrylonitrile butadiene styrene, and styrene are used along with a blowing agent to produce a molded part with a cellular core and solid skin. 800-524-3011; www.geophysical.com.

9 TST SWEDEN AB HEAD PROTECTION

TST Sweden AB head protection with visor and hearing protections are tested and certified to protect the user against objects and sweeping high-pressure water jets with pressures up to 43,511 psi. The head protection fulfills the requirements for industrial helmets, and the interior can be adjusted for a good fit. The visor fulfills the requirements for eye protection and protects the user against external impact on eyes and face, front and side. It is replaceable and can be set in an upfolded position. The hearing protection is certified for reduction of dangerous noise levels. It can be adjusted in height for best protection and fit. www.tst-sweden.com.

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product NEWS



10

Drain Service Notepad



11

10 MYTANA MFG. DRAIN SERVICE NOTEPAD

The Drain Service Notepad from MyTana Mfg. facilitates communication between industry professionals and homeowners. The Notepad can be used to explain plumbing configurations and indicate what and where problems are in the home. It also features space for notes, work estimates, and contact information, making it an easy-to-use leave-behind. The Notepad's household plumbing system diagram includes key features, such as a main stack, various trap and vent configurations, clean-outs, check valve, and common fixtures and appliances. It also demonstrates common improper or illegal plumbing features including S-traps and U-traps, as well as an illegal downspout connection. 800-328-8170; www.mytana.com.

11 SEESCAN LUCID BATTERY PACK

SeeScan's new Lucid battery pack is specially designed for SeeSnake diagnostic equipment. The battery pack is a durable, smart power solution that can stand up to the elements, with a purpose-built smart cell design that delivers more cycles. The Lucid battery pack monitors the cells to balance voltages, and protects the cells from overcharging, over-discharging, and short-circuiting. Status LEDs allow users to check the state of charge before work begins. Smart electronics enable the battery percentage to appear on a SeeSnake monitor, to show how much charge remains. The cells are protected by an internal aluminum chassis that not only maintains better structural integrity than plastic alternatives, but also helps dissipate heat away from the cells. 800-747-3887; www.seescan.com. **C**



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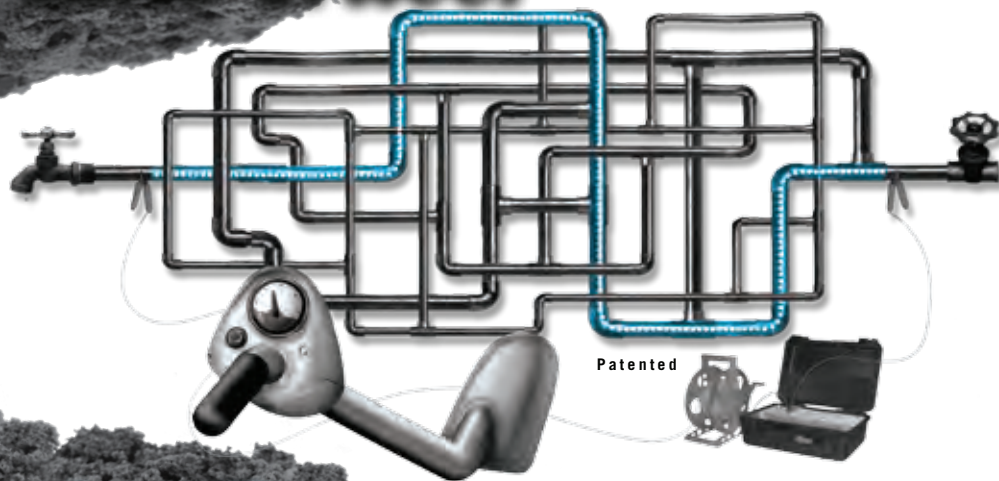
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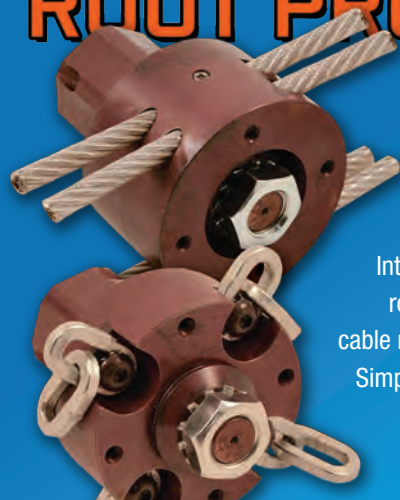
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industry NEWS

Draincables Direct welcomes new director

The McAlear Group, parent company of Draincables Direct, welcomed Tom Martin on Feb. 26, as director of culture and social responsibility. Martin will build on the company's mission to give back to the community through volunteer efforts and philanthropy, as well as organize company-sponsored events for employees and their families.



Tom Martin

Sewer Equipment names new president

Sewer Equipment announced the appointment of John Wichmann, vice president of operations, as the company's new president. Wichmann graduated from the University of Illinois in 1983 with a bachelor's in mechanical engineering and in 1998 completed his MBA at the University of Detroit Mercy. He takes over for Dan O'Brien, the company's past president. O'Brien will continue to stay involved as the company's owner.

HammerHead Trenchless announces management promotions

HammerHead Trenchless announced the promotion of three of its top personnel to newly created management positions. Ryan Boldan is now director of support services, and his responsibilities include marketing and e-commerce, inside sales, customer service, service and training and technical services teams. Brian Kenkel is now director of rehabilitation and replacement. In this position, he leads sales teams and provides product management for the rehabilitation and replacement division. Jeff Urbanski was named the training and technical services manager. He will lead a team of seven technicians tasked with building HammerHead University, an education center dedicated to the trenchless industry. He will also oversee the training facility and direct creation of all e-learning and testing solutions.



Ryan Boldan



Brian Kenkel



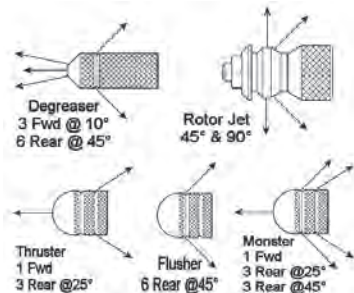
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Walker named bluefrog Plumbing + Drain chief operating officer

Bluefrog Plumbing + Drain announced that James Walker has joined the brand as chief operating officer. In this role, Walker will oversee bluefrog Plumbing + Drain's ongoing operations and procedures as the company continues to expand into new markets across the United States.

ServiceCore partners with CardConnect

ServiceCore announced a partnership with CardConnect, a secure payment acceptance provider. The partnership will allow users to accept credit and debit cards, as well as automatic clearinghouse checks, electronic benefit transfer, gift cards and near-field communication directly within the ServiceCore software. **c**

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JET VACS



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'x8" 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 C07



2000 Vac-Con, Sterling Model LT9500, 9-yard debris tank, 30,600 miles. 6-speed, automatic. Remote control pendant for operation of boom, vacuum, and tank lift. 3,000psi @ 50gpm, 1,000-gallon water tank. 3/4" jetter hose, 700 feet of new hose installed recently. \$75,000 OB0

415-505-2420 or 415-656-2130
ray@bayarearotorooter.com C07

2007 Sterling Vactor 2100PD tandem-axle combination cleaning truck. Ex-city owned, well maintained, and equipped with California Carb Compliant DPF System. See details of this unit and other cleaning and CCTV inspection units at www.empireequip.com. Contact Craig at 714-639-8352. (CBM)



Vactor Model 2112-824 combination sewer vacuum & high-pressure jet rodder. 12-cubic-yard hopper, 1,500-gallon water capacity, Roots 824 18" blower, 80gpm, 2,500psi on a 2008 International chassis. 57,991 miles and 6,752 hours. \$120,000

863-984-8727, FL
dkelecy@groundws.com C07



Vactor Model 2115-824 RCS-18 combination sewer vacuum & high-pressure jet rodder, 15-cubic-yard hopper, 1,500-gallon water capacity, Roots 824-RCS 18" blower, 95gpm, 2,500psi on a 2010 International chassis. 80,702 miles and 7,156 hours. \$130,000

863-984-8727, FL
dkelecy@groundws.com C07



2007 Vacall ALLJET VAC Model AJV1015 combination jet/vacuum machine mounted on a 2007 Sterling LT7501 with 171791 miles. 330hp Cat C-7, Allison 3000 RDS transmission. OMSI transfer case, 80 gpm General MSS55 water pump, cold-weather recirculation, Roots/Dresser 824 blower, 10-cu-bic-yard debris tank, 1,500-gallon water tank, long telescopic boom, 800' x 1" hose on articulating hose reel. \$55,000

Call Mark 708-475-7116, IL C07

2017 Vacall AJVR1015 Recycler combination machine. Rear reel, 10-yard debris, 1,260 gallons recycled water tanks, 240 dedicated clean water tank. Hydro-x kit, tank flush, 87gpm @ 2,000psi General water pump. Can recycle or work as a regular truck, recycles at 100gpm - never run out of water again. 824 Roots 18" blower. Freightliner 118SD, 450hp, DD13 engine, Allison 4000, 15,000 miles. This is a demo unit and comes with a 5-year factory warranty. This truck is ready to go to work. Call Brian for pricing, pictures, and specs: 303-898-9475. (C07)

2007 Vactor 2115, 7600 Series International, C11 Cat motor, 370hp, Model 2115-824-RCS-18. 18" Roots blower, 4,400cfm, 1,500-gallon water capacity, 15-cubic-yard debris body, 600 ft. of 1" hose capacity reel. Hydro-excavating kit, 20 feet of aluminum vac tubes & clamps. 80gpm at 2,500psi water pump with fresh rebuild, 3-inch debris pump off, wired remote. \$125,000. Contact Matt at matt@midwestvacproducts.com or call 618-566-3003. (C07)

2016 Sewer Equipment 900-ECO truck-mounted combination sewer cleaner, Freightliner 114SD. 4,400cfm PD blower, 1,600-gallon water tank, 12-yard debris. 80gpm @ 2,000 psi Myers pump. 600 ft. of 1" hose. Hydro-ex kit. Low miles and hours. Call Matt 618-566-3003 or email matt@midwestvacproducts.com (C07)

2002 Vac-Con jet-vac with Hydro-X option. Includes the following: 1,300 gallons of water, 12-yard debris tank, dual engine with 80gpm water pump, and 3-stage fan blower. System mounted on a Sterling chassis with 66k GVW and manual transmission. Chassis has 64k miles on it, and 7.5k hours. Asking \$28,900. Contact Dave at 262-951-8979 for more information. (C07)

2012 Vacall combo, Freightliner M2112, automatic transmission, Myers DP 85-20 pump, 18"Hg blower, hydroexcavation kit, 4" pump off, 12-yd. debris tank, 1,200-gallon water tank. 155k miles. \$125,000. 813-489-3108 (C08)

Recycle Jet Vac for Sale: 2015 Kenworth T880 w/Cummins ISX15 engine, 32,900 miles. 1,500-gallon stainless steel water tank, 10-yard stainless steel debris tank. 590 ft. 1-1/4" hose on rotating reel; 325 ft. 1/2" lateral hose. Uraca P3-45-70 Tri-plex water pump, 125gpm/2,175psi. Email MHughes@gapvax.com or call 888-442-7829. (C07)

JETTERS-TRAILER

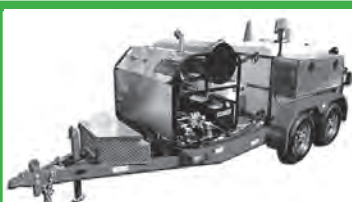


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or email chester@hotjetusa.com



Sewer Equipment Co. of America 747, John Deere 4039T turbo-charged diesel engine, 756 hours. 600-gallon plastic tanks, 4-500' of 1" hose on rotating reel. Myers pump 65gpm/2,000psi. Runs and works good. \$12,000

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Myers RJ0635 sewer jet trailer, Ford gas engine, 841 hours, 600-gallon tank. 600'+ of 3/4" hose on hydraulic reel, Myers pump 65gpm/2,000psi. Ready to work. \$7,500

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Hatz Silent Pak engine w/US Jetting pump & trailer. 18gpm, 4,000psi. Engine runs, pump works. Can be sold separate. \$5,000 FIRM

732-849-1900, NJ C07

2016 Sewer Equipment Model 545 trailer-mounted, high-pressure sewer cleaner, 3/4" x 500' Piranha lose. Like new, excellent condition, low hours. Contact Matt at 618-566-3003 or matt@midwestvacproducts.com. (C07)

JETTERS-TRUCK

2002 Sterling L7500 Vactor Ram Jetter Model V6015, 76k miles, 6,725 hours, Cat 3126 7.2L L6 turbo diesel. 1" x 600' hose, automatic transmission, single axle. AC/heat, air brakes, 33,000 GVWR. Contact Matt at matt@midwestvacproducts.com or call 618-566-3003. (C07)

Almost new 4,000psi pressure hydro-jet by American Jetting for sale in an Isuzu box truck. Only 56 hours, primarily used for own property. Las Vegas, NV. Price \$50,000. Only serious customers and local buyers with full cash payment please. Contact 702-285-5430. (C07)

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Used RIDGID NaviTrack, Gen-Eye Model 100 and Goldak Model 4400. The Cable Center 800-257-7209. (CBM)

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6 sets of bucket machines - full sizes of buckets. Trash pumps, sewer-cleaning nozzles - various styles. 500 feet of 1/4-inch television cable (new). Manhole cleaning tools, 8-inch vacuum suction tube, sewer plugs. Numerous other parts to list. For full details, e-mail to pmbf@usfamily.net (C07)

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PUMPS

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

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Bosch Brute hammer drill with cart irons. The Cable Center: 800-257-7209. (CBM)

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

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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)



CUES CCTV camera truck on 2016 Dodge Ram 5500 Cummins diesel chassis. 16' cargo box. 10,000-watt quiet diesel Onan generator, 2 P&T LED cameras, transporter, rearview camera, 1,000' cable, grout system and chemical Cat pumping system. GraniteNet software. Laser profiler and measurement system. 23,517 miles and 1,142 generator hours. \$350,000

863-984-8727, FL
dkelecy@groundws.com C07



CUES CCTV camera truck on 2015 Chevy C4500 AeroCap Duramax 6.6L diesel chassis. 16' cargo box. 7,500-watt quiet diesel Onan generator, 2 P&T LED cameras, transporter, rearview camera, 1,500' cable and GraniteNet software. 18,514 miles and 732 generator hours. \$200,000

863-984-8727, FL
dkelecy@groundws.com C07



2002 Chevy 3500 TV Van. POSM software. NovaStar camera & tractor. RST tractor & Omni 2 camera. Large line tractor & Omni 3 camera. Beacons, arrowboard, heat & air. \$40,000

Email cdscar@aol.com
or text 916-747-3819 C07

GREAT START-UP TRUCK! UEMSI TV inspection truck. 1997 GMC 3500 Savanna with extended roof. 5.7 gas engine, 89K miles. Includes Dell PC with Windows operating system, reel with some cable and gas mounted generator. Studio has heat and a/c. \$6,000 OBO. Software, camera and transporter not included at this price. Call Mark @ 708-475-7116 (CBM)

TV INSPECTION



2001 Chevy 2500 TV Van. POSM software. 2 RST Omni 2 cameras & tractors. Beacons, arrowboard, heat & air. Onan generator. \$30,000

Email cdscar@aol.com
or text 916-747-3819, CA C07



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. \$20,000 OBO

Mark 708-475-7116, IL C07



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. \$25,000 OBO

Mark 708-475-7116, IL C07

CUES pipe inspection unit with 16' box, 2004 Ford E450 with 88,000 miles, 7.3 diesel, new tires, roof/dash a/c, Honda diesel generator. 2018 software with all hardware updated to 2018 coded specs. 1,000 ft. reel gold cable, steerable OZ2 PipeRanger with lift, lights and spacers. Second camera with two track crawlers, tools, winch lift, pike poles, etc. and numerous new parts, motors and cables. Site ready, owner retiring. Unit located in MB, Canada. 204-688-5220. (C08)

CUES video inspection unit installed in 2006 Chevrolet 4500 Hi-Cube diesel with Onan 7500 Generator installed under deck. 14 ft. box, 41,000 miles. Optional OZ2 and Pipe Ranger available. Call Alan Grant at 404-915-0063 for additional information to discuss the equipment that you need in the truck. Currently has Lamp 1 system which can be removed. Located in Atlanta Ga. Pricing to be subject to customer specification. (C07)

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GREAT START-UP TRUCK! 2002 Ford E450 UEMS TV inspection truck. 16' box, V10 gas engine, 123K miles. Includes Dell PC with Windows operating system, Reel and some cable, power winch, two monitors. Studio has heat and a/c. \$8,000 OBO. Generator, software, camera and transporter not included at this price. Call Mark @ 708-475-7116 (CBM)

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Contact Bob 602-999-0899, AZ
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SafeVac, stainless steel tank, 6,308 hours. Mounted on a 1998 Freightliner truck. Asking \$45,000

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Guzzler, stainless steel tank, with 360-degree boom. Mounted on a 2001 International truck with 49,901 miles. Asking \$70,000

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Guzzler, stainless steel tank, 887 hours. Mounted on a 2002 International truck. Asking \$60,000

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