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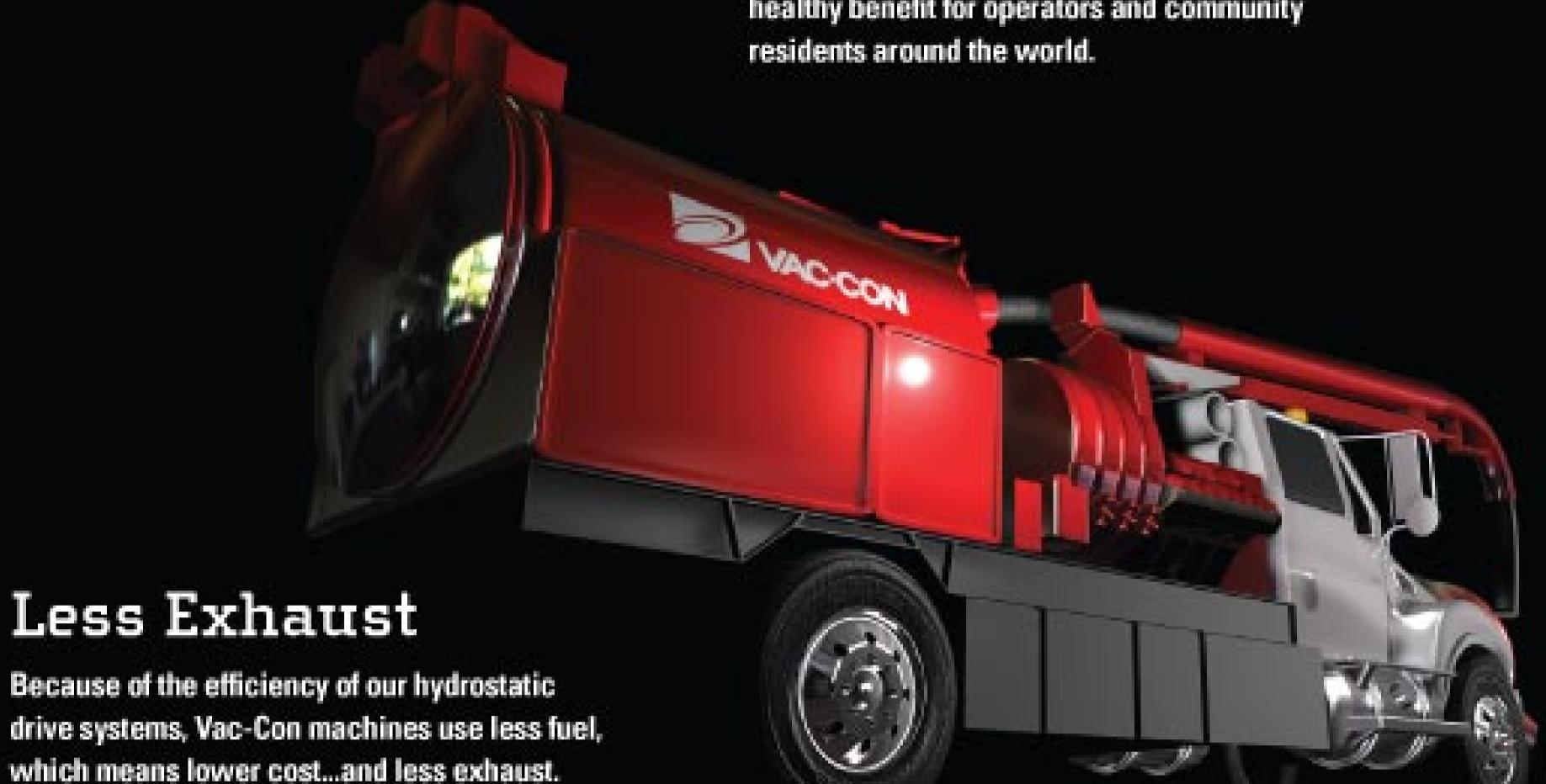
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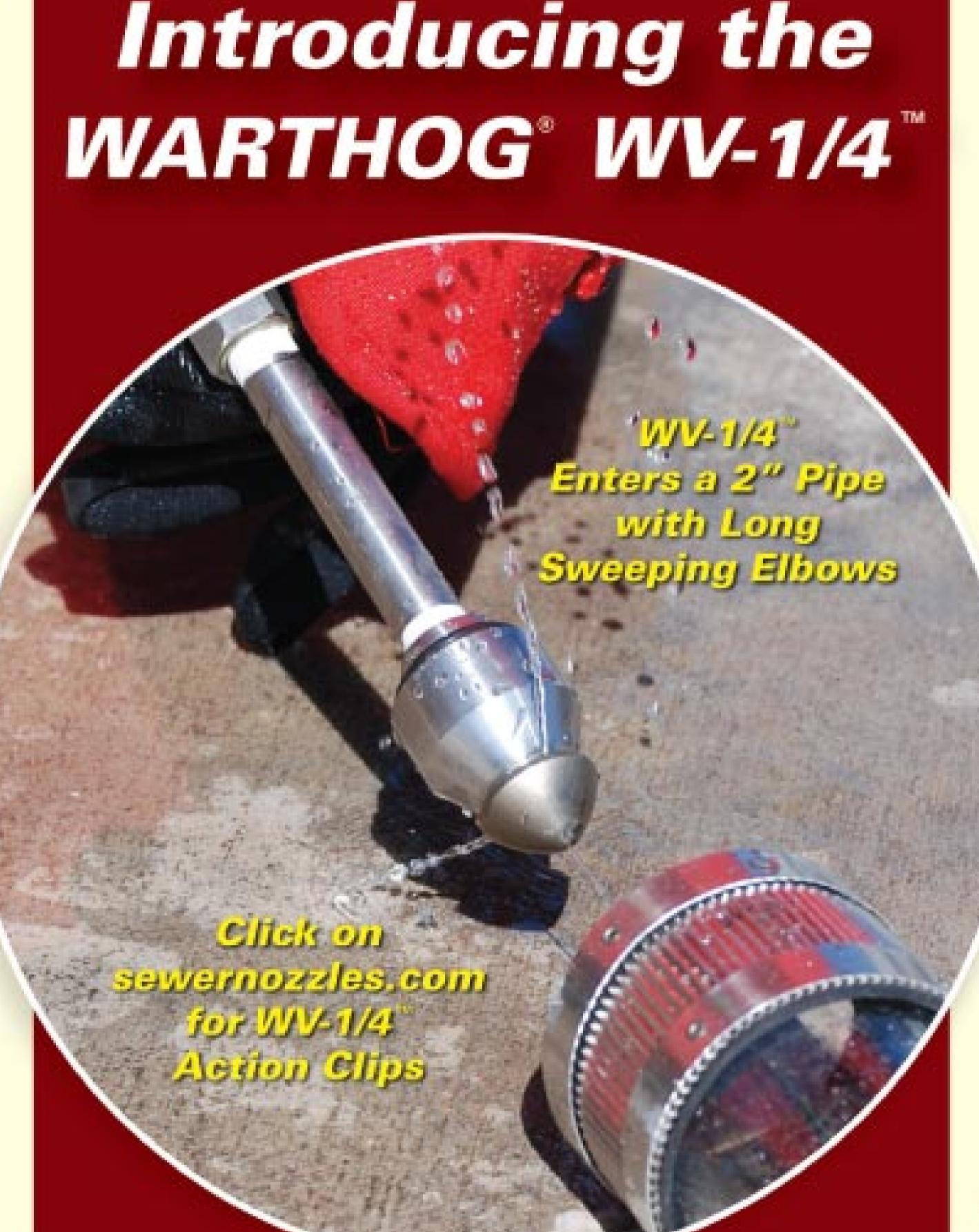


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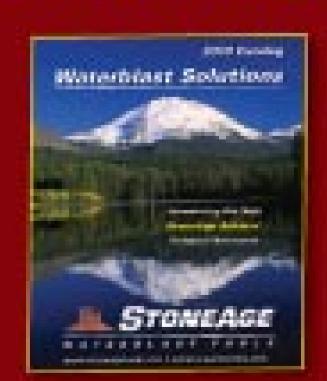
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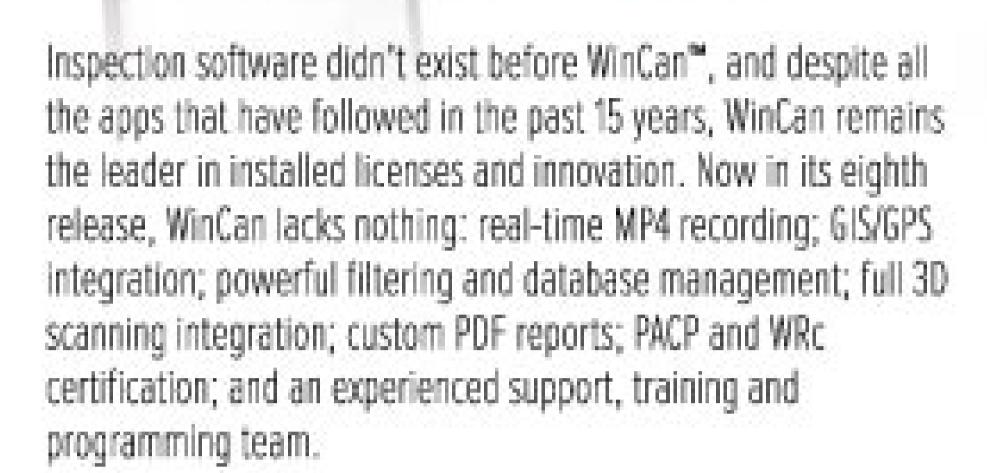
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EVER INDEPENDENT

Kyle Baxter has never worked for a paycheck always for himself. His growing business prospers on sharp marketing and word-of-mouth built on quality service.

By Ted J. Rulseh

PORTABLE JETTER & CABLE MACHINE COMPANY DIRECTORY

TECH PERSPECTIVE: GETTING CONNECTED

Web-based technology provides new ways for cleaning contractors to store, organize and share information and simplify business operations. By Ted J. Rulseh

BUILT FOR BIG JOBS

Manufacturers describe their largest and most powerful cable machines for clearing rough blockages in larger-diameter lines.

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WORKING AS A COUPLE

An installer's spouse and partner tells about the joys and challenges of operating a business while keeping a household and raising a family.

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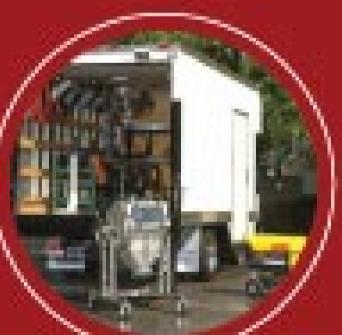
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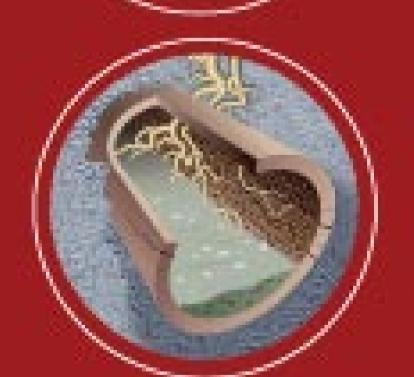
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Beating That Obstacle

Getting where we want to go often means investing a little time and energy to step outside our comfort zone and take on a challenge



Ted J. Rulseh

recently heard a best-selling author on a radio interview telling how he tackles his book projects. For every one of his books, there was an obstacle he had to overcome.

In one case, he wanted to write a novel set in a specific foreign country. Before doing it, he had go live there for a year. That was the obstacle he couldn't write the book until he had spent time getting to know the landscape, experiencing the culture, traveling the streets, hearing and speaking the language, eating the food.

He took on the obstacle, he wrote the book, and it was great.

Life is in a way similar for those

years ago, I did all my records invoices, checks, purchase orders, tax forms - manually. I had a computer. I worked on it all the time. But computerizing the business meant horror of horrors – setting up and learning an accounting software program.

About a year in, I began to see what a hassle it was to do all that work on a typewriter or in longhand. At tax time, putting my records together for the accountant was an enormous pain. So I bought a popular accounting program and asked my sister, who is a CPA, to help me set it up.

In return for the few hours I had to spend learning the system - beat-

drain-cleaning contractors store, access and share business information all in one convenient online

It looks like a great time saver. All it takes to get started is to invest time in learning the system and trying a different way of running the business. Pass that obstacle and business life suddenly gets more convenient.

Bigger scale

Obstacles. If we let them, they become reasons for putting off things we want to do, or know we should do, or would be better off if we did. They help us justify all the readymade excuses: I don't have the time.

One thing I know from my own experience is that some of our happiest times come when we take on a challenge – even something it seems we have no business even attempting with only the goal in mind and without a single thought that we might fail. At those times, it is amazing how straight and enjoyable the path to success can be.

Getting it done

A famous shoe company has a three-word, eight-letter piece of advice for attacking obstacles. A German philosopher and poet named Johann Wolfgang von Goethe has a longer and more persuasive way of saying the same thing – and

Obstacles. If we let them, they become reasons for putting off things we want to do, or know we should do, or would be better off if we did. They help us justify all the ready-made excuses: I don't have the time. I don't have enough money. I don't have the training. My market would never support it. If I tried it, I might fail.

plish almost anything worth doing, we have to surmount some kind of obstacle.

Small scale

This can happen in small ways. When I started a business a dozen

of us who aren't novelists. To accom- ing the obstacle – I freed myself from I don't have enough money. I don't it's one of my favorite quotations and an untold number of hours of tedium. And I could then devote those hours to money-making activity.

> There's a parallel here in a new technology tool described in this month's Tech Perspective column. It's a Web-based system that lets

have the training. My market would never support it. If I tried it, I might fail.

Too much reluctance to face obstacles can keep our worlds from getting bigger, or even cause them to shrink. In my life, I have not been the greatest at staring down and then attacking obstacles. I've done it sometimes, and usually have been rewarded. At other times, I have held back, and missed out on who knows what?

How about you? Have you ever shied away from adding another employee and service vehicle? From adopting a new technology that could open up a new line of business? From expanding into a new territory? From upgrading the skills of your people to give them (and your business) an edge in the marketplace?

one we all might do better to heed more often:

"Until there is commitment, there is hesitancy, the chance to draw ineffectiveness. back, always Concerning all acts of initiative and creation, there is one elementary truth, the ignorance of which kills countless ideas and splendid plans: The moment one definitely commits oneself, then providence moves, too.

"All manner of things occur to help one that would never otherwise occur. A whole stream of events issue forth from the decision, raising in one's favor all manner of unforeseen incidents and meetings and material assistance, which no man could have dreamed would come his way.

"Whatever you can do, or dream you can do, begin it. Boldness has genius, power, and magic in it. Begin it now!"





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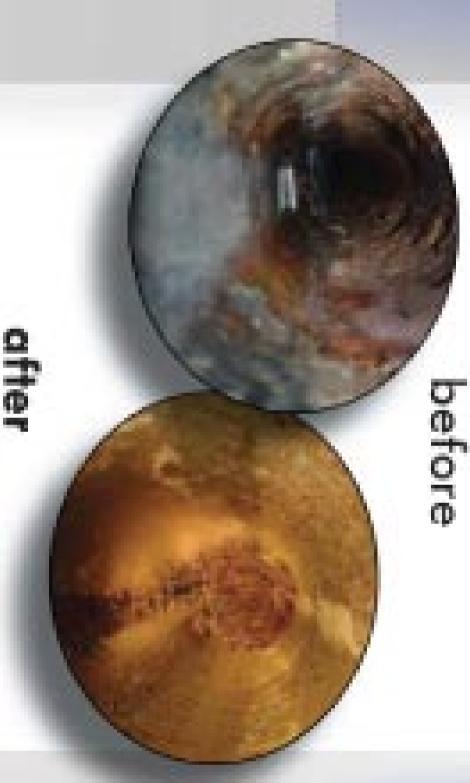


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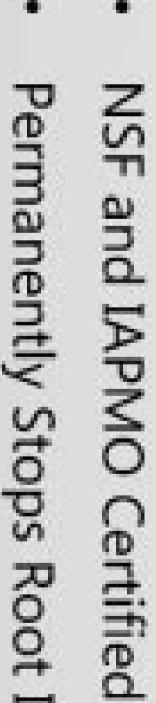
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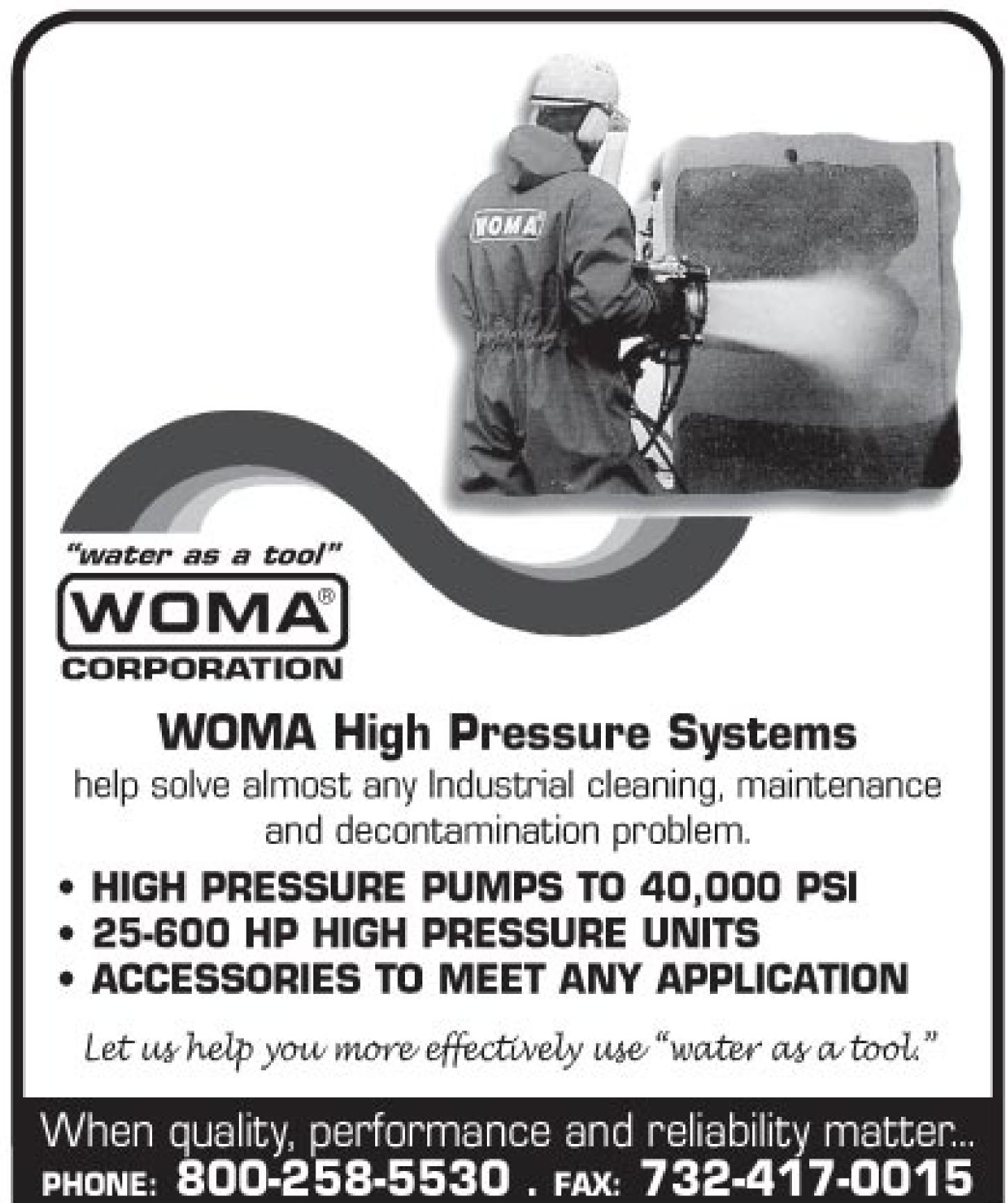




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The Hazards of Traffic

OSHA requires protective measures to protect employees from being struck by passing vehicles

orking on sewer and water pipes almost by definition means working in traffic at times. And accidents in which workers are hit by vehicles or mobile equipment

account for many fatal work injuries, according to the U.S. Bureau of Labor Statistics.

Workers in areas where there

are moving vehicles need to take special precautions to ensure their safety. Here are some of the requirements outlined by OSHA in a Work Zone Traffic Safety fact sheet.

General

You must have a traffic control plan for the movement of vehicles in areas where your people are working. Drivers, workers on foot and pedestrians must be able to see and understand the routes they are to follow.

The authority in charge (federal, state or local) will determine how to configure the temporary traffic control zone. The construction project

manager decides on the internal traffic control plan within the work site.

Signs

Standard highway signs for information, speed limits and work zones must be posted to help drivers identify, in designated traffic paths, such directives as: Do Not Enter, Reduced Speed Ahead, Road Closed and No Outlet. Using standard highway signs for internal construction work site traffic control will help workers recognize the route they are to use.

Traffic control devices

Standard traffic control devices, signals and message boards instruct drivers to follow a path away from where work is being done. The authority in charge determines the approved traffic control devices, such as cones, barrels, barricades and delineator posts that will be used as part of the traffic control plan. These standard devices should also be used inside the work zone.

Work zone protections

Various styles of concrete, water, sand, collapsible barriers, crash cushions and truck-mounted attenuators are available to limit motorist intrusions into the construction work zone.

Flagging

Flaggers and others providing temporary traffic control should wear high-visibility clothing with a background of fluorescent orange-red or yellow-green and retroreflective material of orange, yellow, white, silver or yellow-green. In areas of traffic movement, this personal protective equipment will make the worker visible for at least 1,000 feet, so that the worker can be seen from any direction, and make the worker stand out from the background.

Check the label or packaging to ensure that the garments are performance Class 2 or 3. Drivers should be warned in advance with signs that there will be a flagger ahead. Flaggers should use STOP/SLOW paddles, paddles with lights or flags (which should be used only in emergencies). The STOP sign should be octagonal with a red background and white letters and border. The SLOW sign is the same shape, with an orange background, black letters and a border.

Lighting

Flagger stations should be illuminated. Lighting for workers on foot and for equipment operators is to be 5 foot-candles or greater. Where available lighting is not sufficient, flares or chemical lighting should be used. Glare affecting workers and motorists should be controlled or eliminated.

Training

Flaggers should be trained/ certified and use the signaling methods required by the authority in charge. Workers on foot, equipment operators and drivers in internal work zones need to know the routes that construction vehicles will use. Equipment operators and signal persons need to know the hand signals used on the work site.

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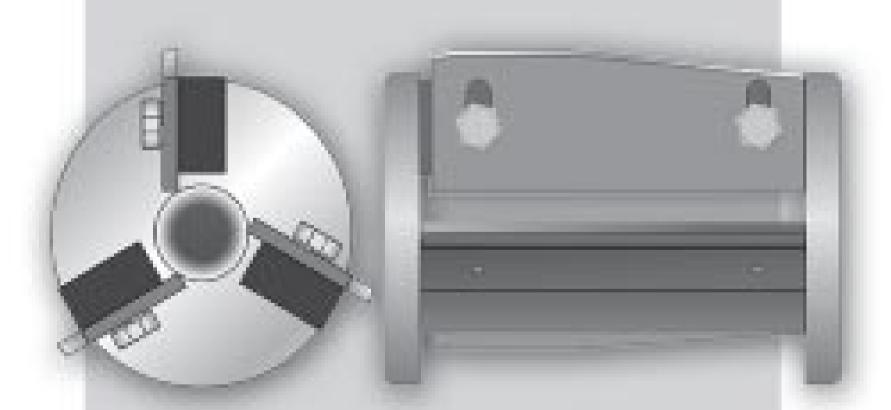
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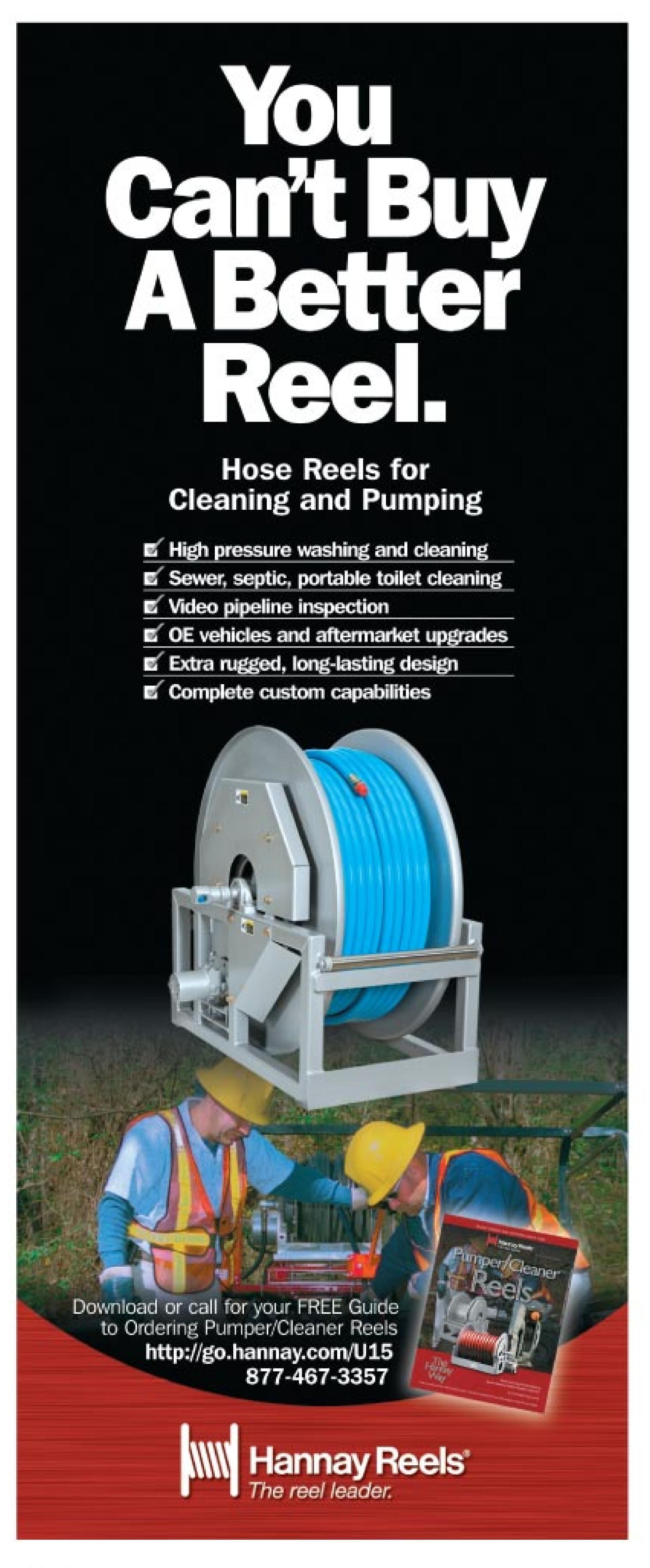
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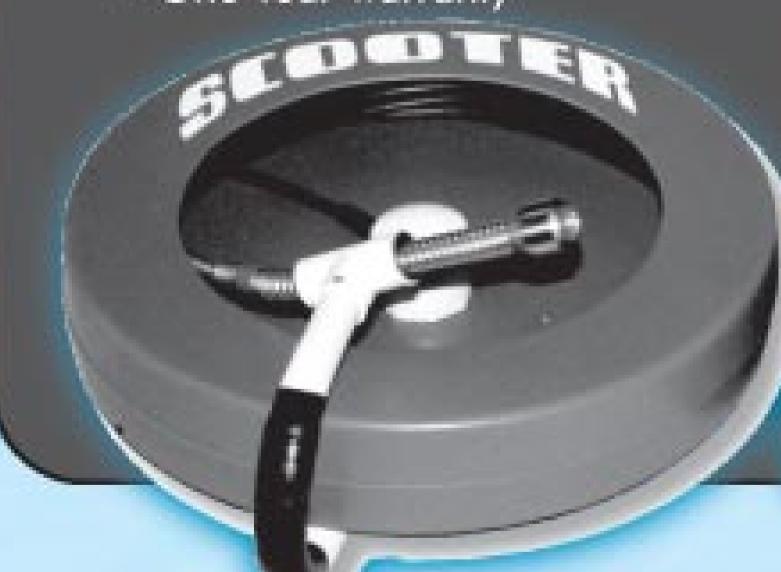
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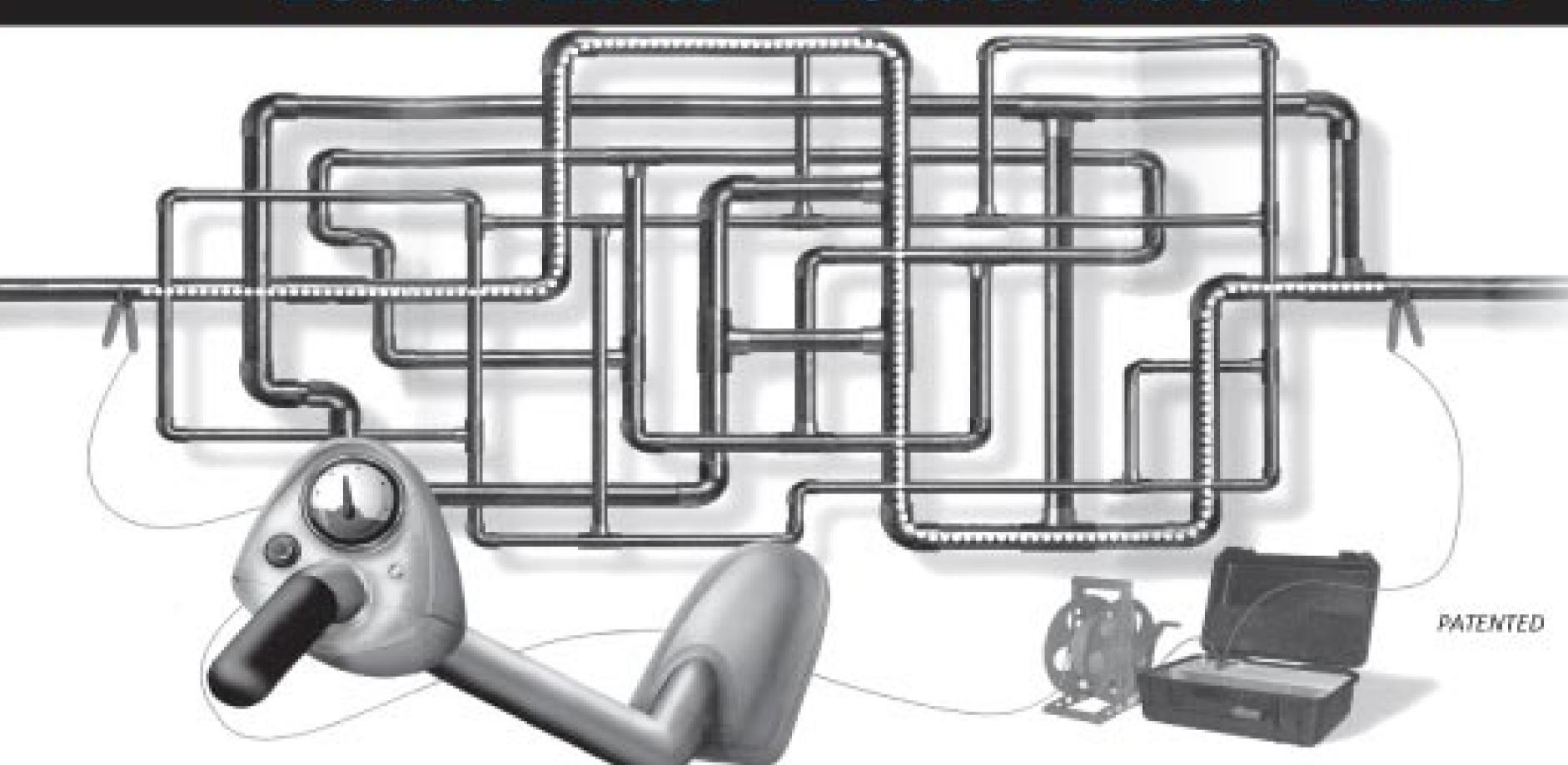
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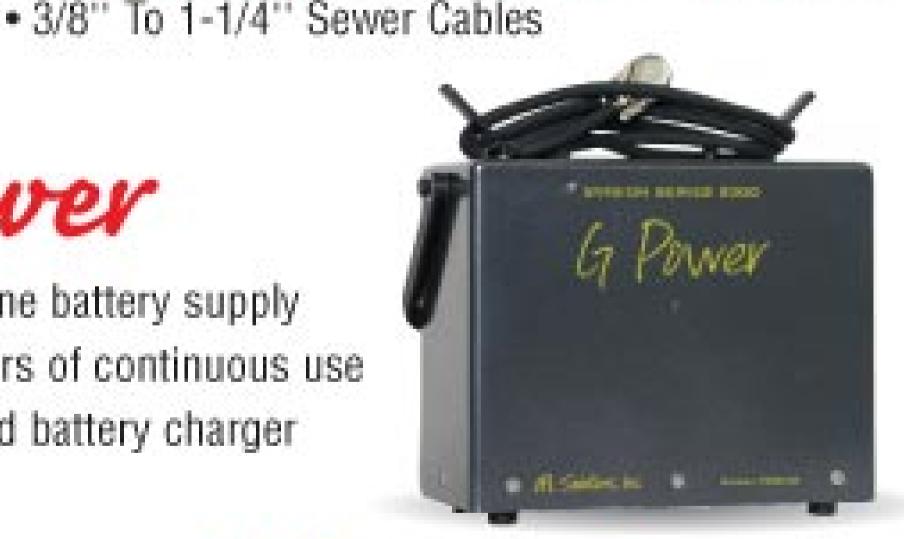
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Ever Independent

Kyle Baxter has never worked for a paycheck – always for himself. His growing business prospers on sharp marketing and word-of-mouth built on quality service.

By Ted J. Rulseh

From the time he was 10 years old, Kyle Baxter worked with his grandfather cleaning sewer pipes, often using an old pumper fire truck retrofitted as a waterjetter.

He worked for no pay. "Grandpa always said, 'This is an education – it will pay off someday,'" Baxter says. "It's paying off for me now."

It's paying off in the form of a growing 4-year-old business, Accu Jet Sewer and Drain Cleaning, based in Perry, Iowa, Baxter's hometown. Baxter and his team devote about half their time to mainline sewer inspection, waterjet cleaning and other work for municipalities.

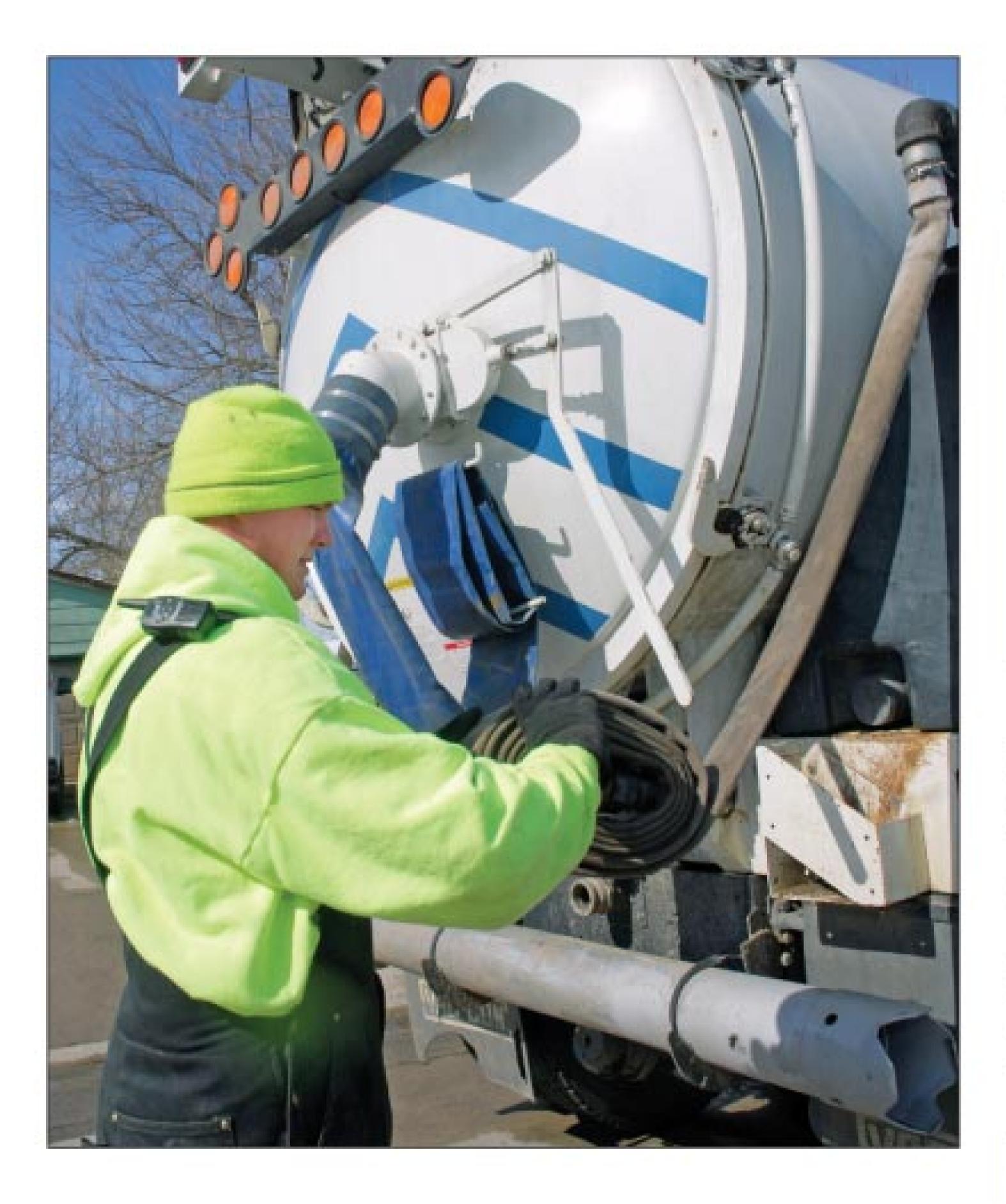
They also do preventive maintenance for restaurants, clean lines for duplexes and other rental properties, clear residential stoppages and repair sewer laterals with cured-in-place pipe lining or pipe bursting.

Common denominators include quality service, a strong brand identity and a determination to get the job done – even (or especially) when the going gets tough.

Straight into business

Baxter is proud to say he has never collected a paycheck from anyone but himself.

As he grew up, he and his grandfather used the fire truck jetter and homemade nozzles to clean residential lines in and around Perry. "Nobody else in the area had a jetter, so it worked out pretty well for what we needed to do," Baxter says.



While still in high school, he did contract work for the City of Perry, digging up and repairing sewer lines and water mains and handling assorted other tasks. After high school, looking for a change, he started a hood and duct cleaning business serving restaurants. The company never took off, and he missed the sewer business, so in April 2006, at age 22, he formed his own company and bought a Model 4018 trailer-mounted waterjetter from US Jetting LLC.

"I started doing a few jobs here and there. I thought if I could get four jobs a month, the jetter would pay for itself. As it turned out, we did about four jobs a day." Kyle Baxter

"I started doing a few jobs here and there," he says. "I thought if I could get four jobs a month, the jetter would pay for itself. As it turned out, we did about four jobs a day." He soon bought a GenEye 2 push cam from General Pipe Cleaners.

Customers began calling with progressively bigger jobs, which at first he referred to other contractors. As the calls kept coming, and the jobs got bigger, he invested in a used Vac-Con combination truck and a van-based mainline camera system from Aries Industries Inc. Six months after buying the combination truck, he replaced it with a newer (2001) Vac-Con V311 unit with an 11-cubic-yard debris tank, 1,300-gallon water tank, and 80 gpm/2,000 psi pump.

Accu Jet uses a variety of nozzles to get the job done when waterjetting. Favorite tools include the Grenade and the Bulldozer, both from ENZ USA.

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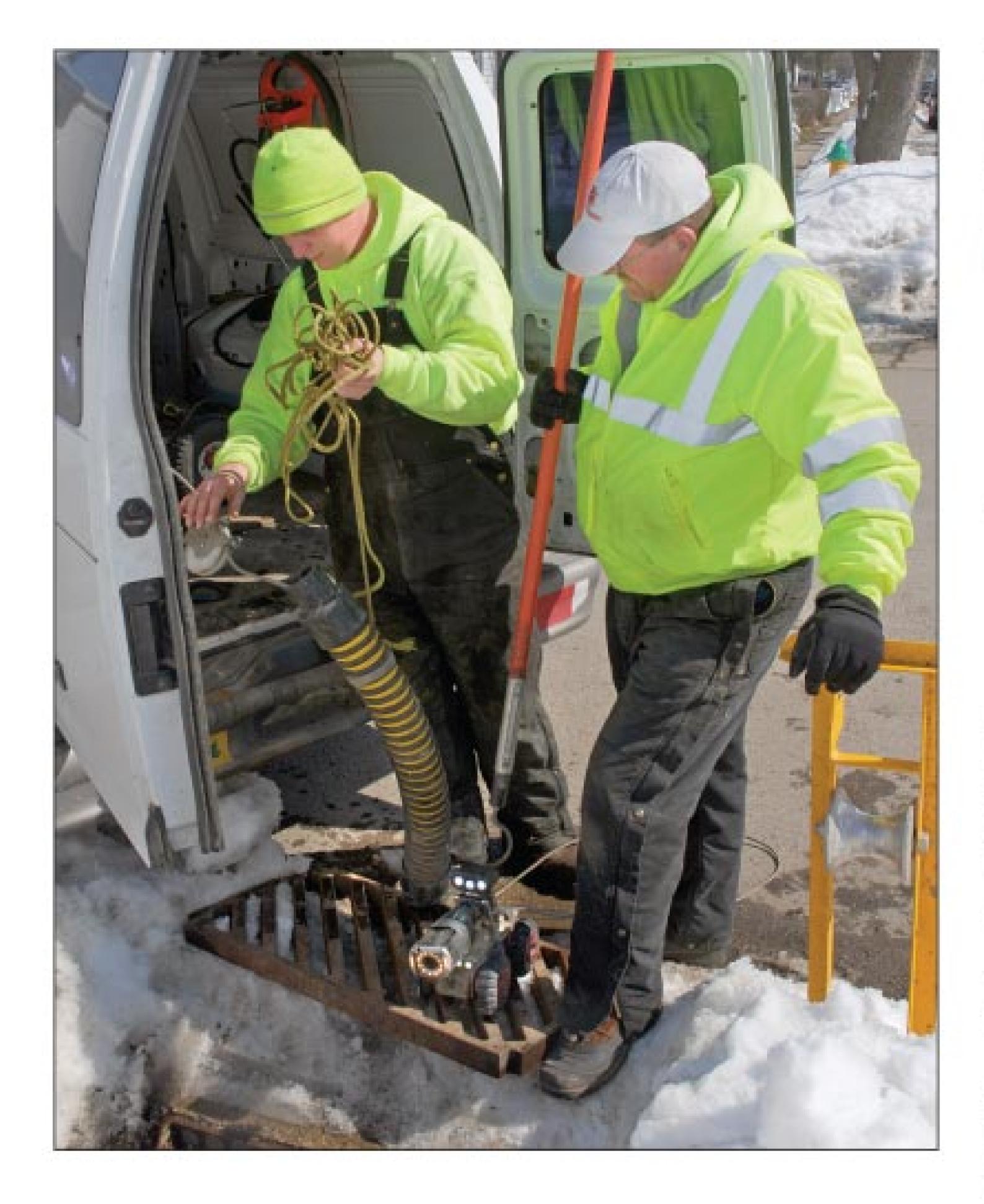


Today, after four years in business, he has three employees: his father, John Baxter, who helps out hauling water and running the jetter (now truckmounted) when needed; Matt Hix, jetter operator; and Justin Newman, combination truck operator. Baxter himself does most of the camera work.

Getting going

From the start, word-of-mouth treated Baxter well. He had built-in connections with the City of Perry (population 7,000), and once he performed well there, his reputation grew. "In an area like this, all the guys from different cities talk to each other at meetings and events," Baxter says. "My name got out that way."





To help push things along, he sometimes spent a day or two a week on the road, "stopping at every city shed I came to, dropping off my information and business card, and talking to them." The company now serves communities from 500 population to as large as 30,000.

Word-of-mouth also helped Baxter connect with farm drainage tile companies, who began calling to have tile lines cleaned and cleared of roots. The 4,000 psi jetter gave him plenty of root-cutting power, especially with a Warthog (StoneAge Inc.) or Bulldog (ENZ USA Inc.) nozzle at the end of the hose.

"My logo is very important to me. I put it on everything.

If it has room for a logo on it, I put it there. Pens, shirts, hats, stocking caps. My pickup truck and my camper have the logo on them. Pretty much wherever I go, I wear an Accu Jet sweatshirt."

Kyle Baxter

Today, he advertises in telephone directories covering a 150-mile radius around Perry. He also sends targeted postcard mailers. For example, nearly every plumbing shop in Iowa received a card promoting the company's CIPP lining service (MaxLiner USA). City public works directors got cards advertising inspection and cleaning services. Often, Daryle Bennett, a municipal contractor with whom Baxter has an alliance, follows up on mailers with personal visits.

A strong brand identity helps. The Accu Jet logo, which Baxter designed with a little help from his mother's graphics shop, covers almost the entire sides of the company's 16-foot box truck service vehicle.

"My logo is very important to me," Baxter says. "I put it on everything.



Left photo: Kyle (left) and John Baxter prepare to launch an Aries Pathfinder camera. Right: Kyle monitors an inspection inside the company's camera van from Aries Industries Inc. Equipment includes a Saturn III control unit, a tractor control unit and a laptop computer and auxiliary monitor.

If it has room for a logo on it, I put it there. Pens, shirts, hats, stocking caps. My pickup truck and my camper have the logo on them. Pretty much wherever I go, I wear an Accu Jet sweatshirt. The logo is on discs of our inspection data. It's on the covers of our inspection reports. Anything I give a customer, I want my logo on."

Delivering value

Of course, an identity has to be backed by quality work. To Baxter, customer satisfaction starts with "a good job at a fair price." He looks at the first job with a customer as an investment in a long-term relationship.

Cities especially demand responsive service. "Being there when they call and working according to their schedule is very important," Baxter says. "If they need us there at midnight, we're going to be there for them, because they may have homeowners who are upset, or a line that's giving them trouble. If they need us at six in the morning so they can get something done after we finish our work, we'll do that for them, too."

Inspections are key to the municipal business. The inspection van is equipped with a Pathfinder camera, Badger wheeled transporter, and PipeWorks Pro survey software, all from Aries and purchased from the local dealer, Mid-Iowa Solid Waste Equipment Co. Inc.

"We use the Pathfinder setup for 8- to 18-inch lines," says Baxter. "It's designed for up to 24-inch lines, and it will go down a 6-inch pipe. It's a light-weight tractor. You're not having to try and get a 70- to 80-pound tractor down a manhole. It weighs about 35 pounds, and one man can easily deploy it by himself."

The firm does post-construction cleaning and inspection, as well as preconstruction inspections to pinpoint the locations of laterals in pipes scheduled

LESSON FROM THE MEAT MAN

Kyle Baxter, owner of Accu Jet Sewer and Drain Cleaning, got a lesson in sales persistence from a friend in the meat business.

"He owned a meat-packing company," Baxter recalls. "When he first got into the business, he would call people every day, trying to sell them meat. Mostly they would just hang up on him. But he kept at it. He would call them and call them and call them.

"He said eventually they would get sick of hearing from him, so they would buy something, just so maybe he would quit calling. And then they would like what he sold them and become his customers.

"That has always stuck in my mind. I came to believe in that approach. If they tell you no, just keep after it. Don't give up. Once they try us out, they'll start using us, because we do a good job for them."



Three generations: Kyle and Mindy Baxter, daughter Reese, and Kyle's father John Baxter (standing, left) are shown with key components of the Accu Jet fleet. When not at work, Kyle and Mindy like to escape in their camper trailer.

to be repaired, replaced or lined. Accu Jet also does routine inspections that help communities identify infiltration and inflow (I&I) sources and other defects and plan repairs.

When it comes to pipe cleaning, Baxter relies solely on jetters. "We don't do any snaking," he says. "With a jetter, the pipe is 100 percent clean when you get done. You can also cut roots out right to the wall of the pipe."

Going underground

Accu Jet doesn't rehabilitate municipal lines but does perform trenchless repair on residential laterals with CIPP lining or with a Hammerhead PortaBurst PB30 pipe bursting system (Earth Tool Co. LLC).

Here, the company stands apart with a willingness to tackle jobs no one else wants to try. "We replaced a sewer lateral last year that came out in back of a house, under a concrete patio, under a great big tree, under a driveway and into an alley," Baxter says. "There wasn't enough room on either side of the line to dig it up. So we cut it off inside the house, dug a hole in the alley, and were able to pipe-burst it. Nobody else in our area has the technology to do that.

"We've also done quite a few challenging lining jobs. Normally we shoot liners about 70 feet, but we shot one 125-footer. It was a lake house with a garage and concrete patios in back, and the sewer went through there. If the lining job had failed, it would have been a great expense to dig up and replace that pipe. I was very nervous through that whole job."

Basic cleaning jobs can get difficult, too. "In tile cleaning, you may have

"As an owner-operator, I want to get the job done and make the customer happy. It's going to cost him a lot more if he has to replace that line, so let's get it working for him. My mentality is that I don't want to give up. I'll stay on it until the job is done."

Kyle Baxter

100 to 200 feet of tree root growing into a line," Baxter says. "Nobody else wants to take the time for jobs like that. They'll get in there and start on it, and when they see it's not opening up, they just want to quit.

"As an owner-operator, I want to get the job done and make the customer happy. It's going to cost him a lot more if he has to replace that line, so let's get it working for him. My mentality is that I don't want to give up. I'll stay on it until the job is done."

Always on call

For Baxter, getting the job done means working almost around the clock.

When not dealing with a customer's issue, Baxter may be found at home brainstorming or working at his desk.

To keep life balanced, he and his wife, Mindy, and their two-year-old daughter, Reese, enjoy camping in their 33-foot slide-out trailer, usually traveling with a group of friends. "We go camping just about every other weekend, from the time it's warm enough to go in spring until it's too cold to go out of the driveway in fall," Baxter says. "It's my time to relax and get away from everything. We pretty much stay in central Iowa. We try not to get too

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far from home, because you never know when the phone will ring."

The travels also include annual visits to the Pumper & Cleaner Environmental Expo International, where Baxter checks out new technology and enjoys talking to engineers and product designers in the show floor exhibits.

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INFO:

Looking ahead, Baxter envisions getting more involved in municipal work. "The Department of Natural Resources is coming down on these communities a lot more on I&I issues," he says. "I think they'll be needing us to televise their systems to satisfy DNR requirements." The company recently bought a municipal foam applicator for RootX root control, a service it already offers to residential and commercial customers.

Always alert for opportunities, Baxter sees nothing but more growth ahead. It's a good bet he won't be working for a paycheck anytime soon.

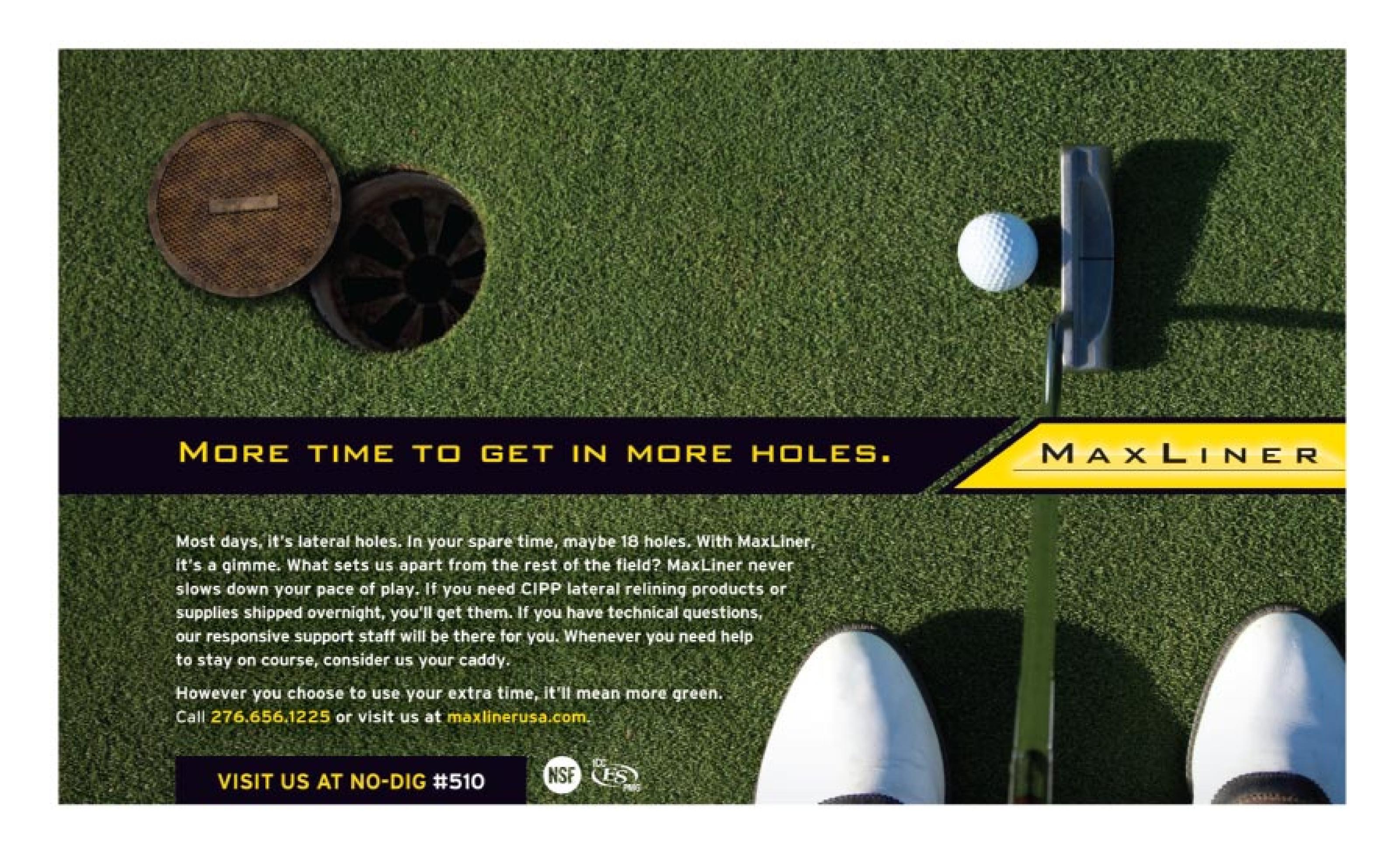
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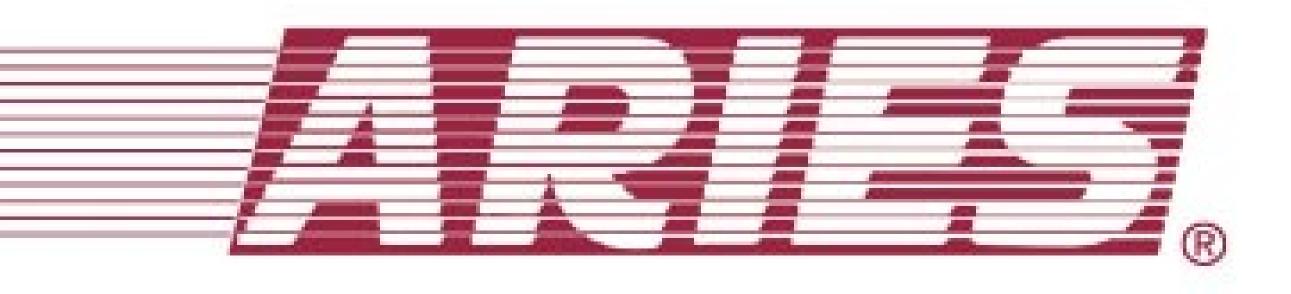
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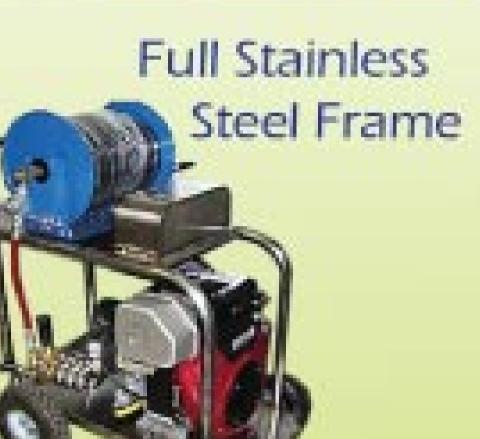
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See ad page 12	Cam Spray 641-648-5011 gillespie@camspray.com www.camspray.com	Yes			1 1/2 to 24 inches	1000 to 5000 PSI	2 to 60 GPM
See ad page 42	Central Oklahoma Winnelson 405-947-8761 kjones@winnelson.com www.centralwinnelson.com	Yes	Yes	25 to 300 feet	1 1/4 to 8 inches	1350 to 3000 PSI	1.4 to 4 GPM
See ad page 30	Chempure Products Corp 800-288-7873 Iloyd@chempure.com www.chempure.com	Yes		100 to 400 feet	2 to 12 inches		
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See ad page 81	Forbest Products Co. 650-757-4786 forbestusa@gmail.com www.forbestusa.net		Yes		1 1/2 to 60 inches		
GENERAL PIPE CLEANERS See ad page 2	General Pipe Cleaners 412-771-6300 info@drainbrain.com www.drainbrain.com	Yes	Yes	Drum-25 to 150 feet Reel-100 to 400 feet	Jetter- 1 1/4 to 12 inches Drum- 1 1/4 to 10 inches	1500 to 3000 PSI	1.7 to 12 GPM
See ad page 47	Gorlitz Sewer & Drain, Inc. 562-944-3060 sales@gorlitz.com www.gorlitz.com	Yes	Yes	35 to 150 feet	1 1/4 to 8 inches	1500 to 3000 PSI	2 to 5.5 GPM
See ad page 57	Hi-Vac Corporation 800-7522400 sales@hi-vac.com www.hi-vac.com	Yes		0 to 300 feet	1 to 6 inches	0 to 3000 PSI	0 to 4.8 GPM
See ad page 34	Jetter Depot 678-549-2621 sales@jetterdepot.com www.jetterdepot.com	Yes		50 to 300 feet	2 to 6 inches	1000 to 4000 PSI	2 to 12 GPM

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See ad page 14	JETTERS Northwest 877-901-1936 info@jettersnorthwest.com www.jettersnorthwest.com	Yes		50 to 1000 feet	1 to 60 inches	1000 to 7000 PSI	1.5 to 65 GPM
See ad page 52	Ken-Way Corporation 800-533-0551 keith@ken-way.com www.ken-way.com	Yes	Yes	Drum - 0 to 150 feet Reel - 0 to 250 feet	1 1/4 to 8 inches	1200 to 3000 PSI	2.2 to 5 GPM
See ad page 35	MyTana Mfg. Company, Inc. 800-328-8170 mytana@mytana.com www.mytana.com	Yes	Yes	15 to 125 feet	1 1/2 to 8 inches	1500 to 3000 PSI	2 to 8 GPM
See ad page 40	Pat's Pumper & Blower 800-359-7867 patspump@aol.com www.patspump.com	Yes		100 to 1000 feet	1 to 24 inches	1500 to 4000 PSI	1.7 to 40 GPM
See ad page 7	RIDGID 440-323-5581 info@ridgid.com www.ridgid.com	Yes	Yes	25 to 300 feet	3/4 to 10 inches	1350 to 3000 PSI	1.4 to 4 GPM
See ad page 58	Sewer Equipment Co. of America (Mongoose Jetters) 800-323-1604 sales@sewerequipment.com www.sewerequipment.com		Yes	250 to 350 feet	2 to 12 inches		
See ad page 69	Shamrock Pipe Tools, Inc 800-633-7696 shamrocktools@shamrocktools.com www.shamrocktools.com	Yes			1 1/2 to 6 inches	0 to 3000 PSI	0 to 5 GPM
See ad page 92	Spartan Tool LLC 800-435-3866 customerservice@spartantool.com www.spartantool.com	Yes	Yes	15 to 200 feet	2 to 12 inches	1200 to 3000 PSI	2.2 to 4 GPM
See ads pages 65, 71	The Cable Center 800-257-7209	Yes	Yes	35 to 400 feet	1 1/4 to 10 inches	1500 to 3000 PSI	1.7 to 12 GPM
See ad page 46	Triple R Specialty 800-356-9661 sales@triplerspecialty.com www.triplerspecialty.com	Yes	Yes	25 to 100 feet	1 1/2 to 12 inches	0 to 4000 PSI	2.2 to 16 GPM
See ad page 66	Trojan Worldwide, Inc. 800-392-4902 keithr@trojanworldwide.com www.trojanworldwide.com	Yes	Yes	10 to 162 feet	1 to 10 inches	2000 to 4000 PSI	4 to 12 GPM
CANNO V See ad page 73	Water Cannon 800-333-9274 (WASH) richard@watercannon.com www.jettersonline.com	Yes		100 to 700 feet	1 to 12 inches	1200 to 7000 PSI	2 to 20 GPM

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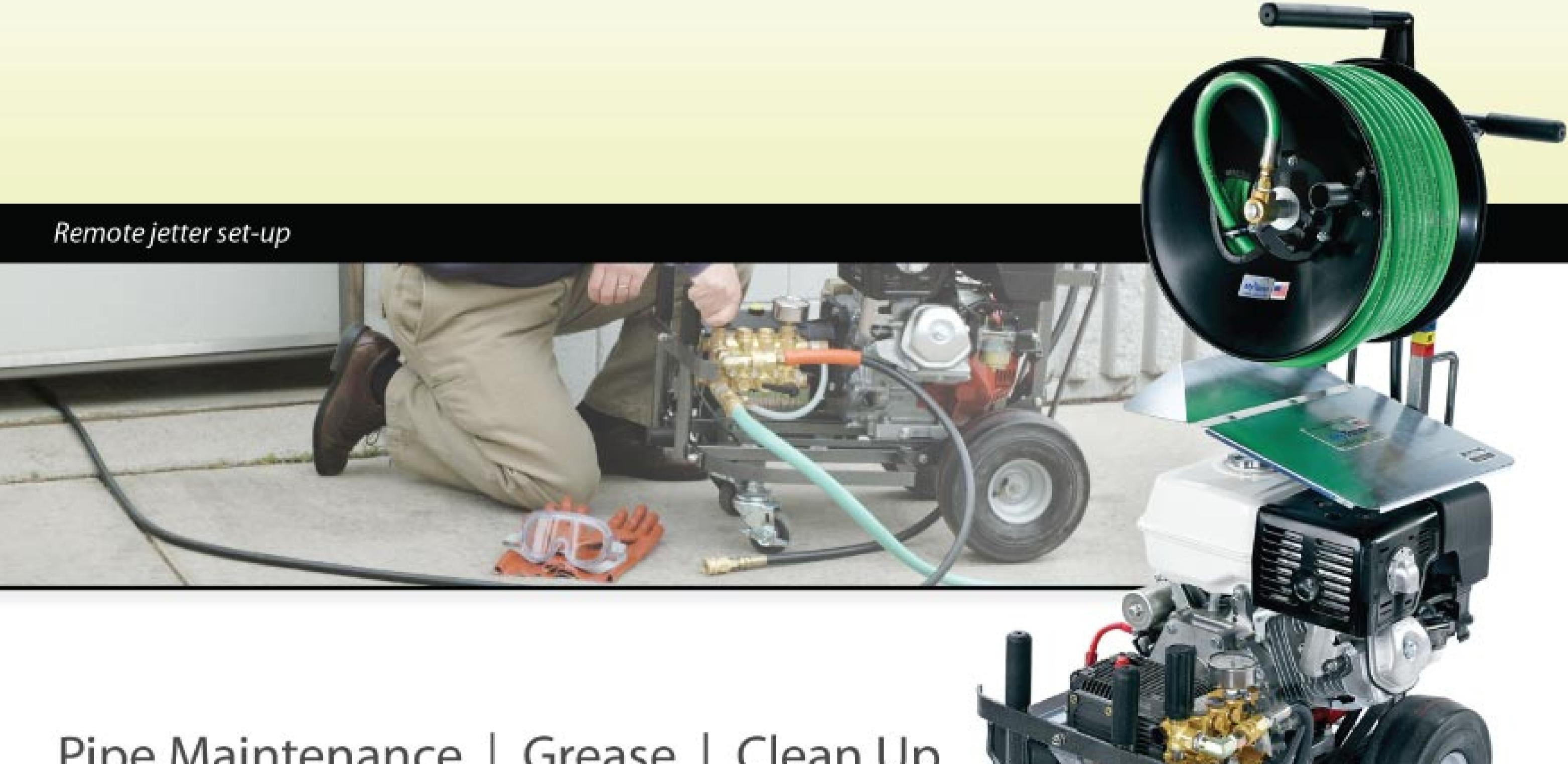
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Visual Assist

Perry Fish of Electric Eel Sewer & Drain Specialists outs a new twist on cleaning as part of an effort to thrive in a challenging boom-and-bust market area

By Peter Kenter



The economy in Alberta rises and falls with the energy sector. After almost 30 years in business, Perry Fish, owner of Electric Eel Sewer & Drain Specialists in Calgary, has developed a winning formula to survive and thrive in roughand-tumble times.

By respecting his client base, developing policies that encourage staff retention, and taking a measured approach to growth and new technology, Fish has managed to straddle the boom-and-bust cycles that can distort both the price of service and the cost of doing business.

Electric Eel is a traditional drain-cleaning enterprise, serving commercial, industrial and residential clients, while carving out a specialty niche in servicing high-rise office buildings and condominiums.

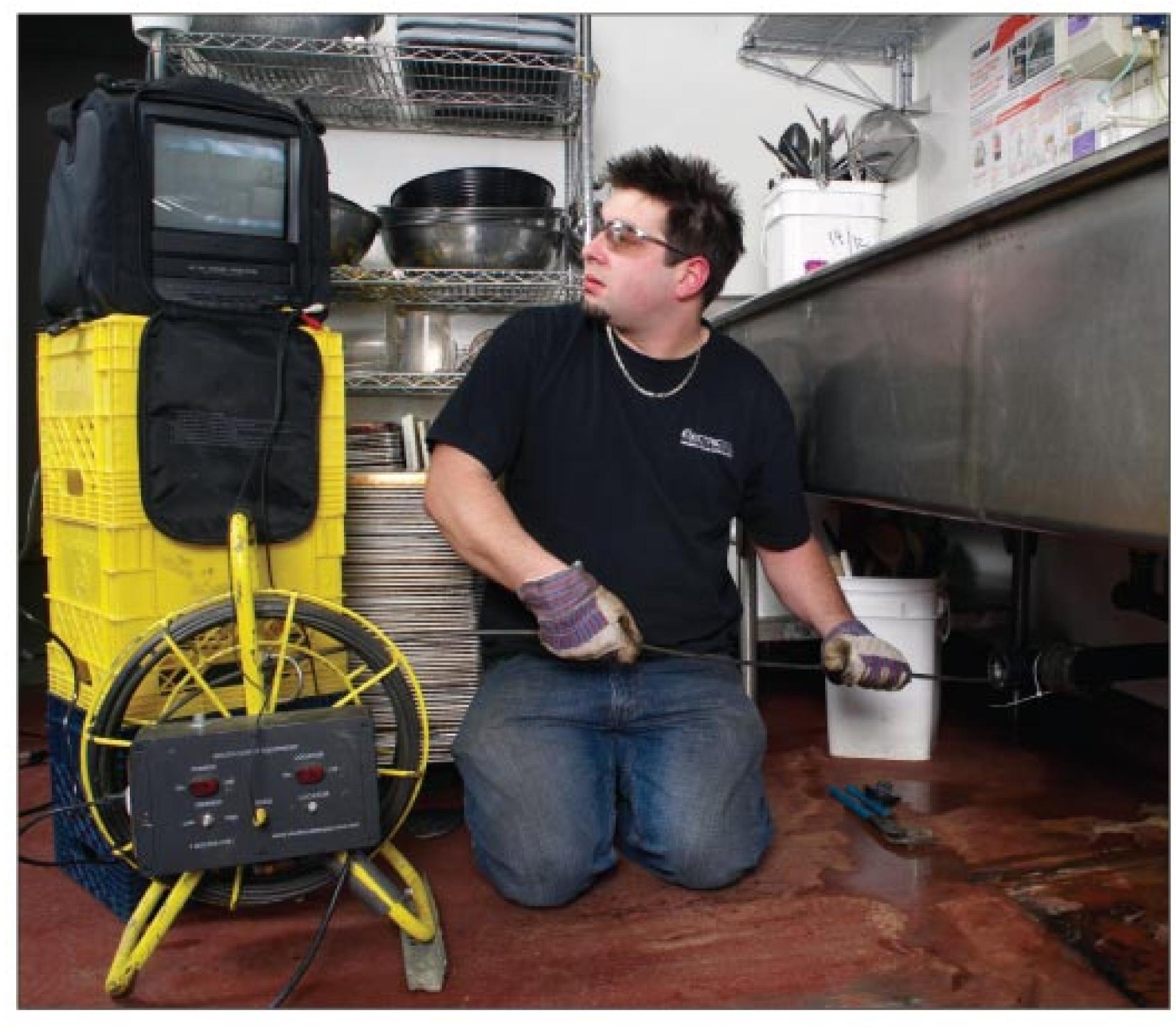
The company's diverse services include sewer and drain cleaning; maintenance and repair; vacuuming; hot and cold power washing; and jetting and flushing. A renewed emphasis on video inspection is helping the business to put a high-tech face on its service offerings. Fish calls his approach camera-assisted cleaning, and it's helping him to stand out from competitors and win over customers.

It's a family enterprise: Fish's wife, June, takes care of accounts, while daughter Nicole, is the operations manager and dispatcher. Son Jay is increasingly the company's front man, given a free hand in running vacuum and jetting operations.

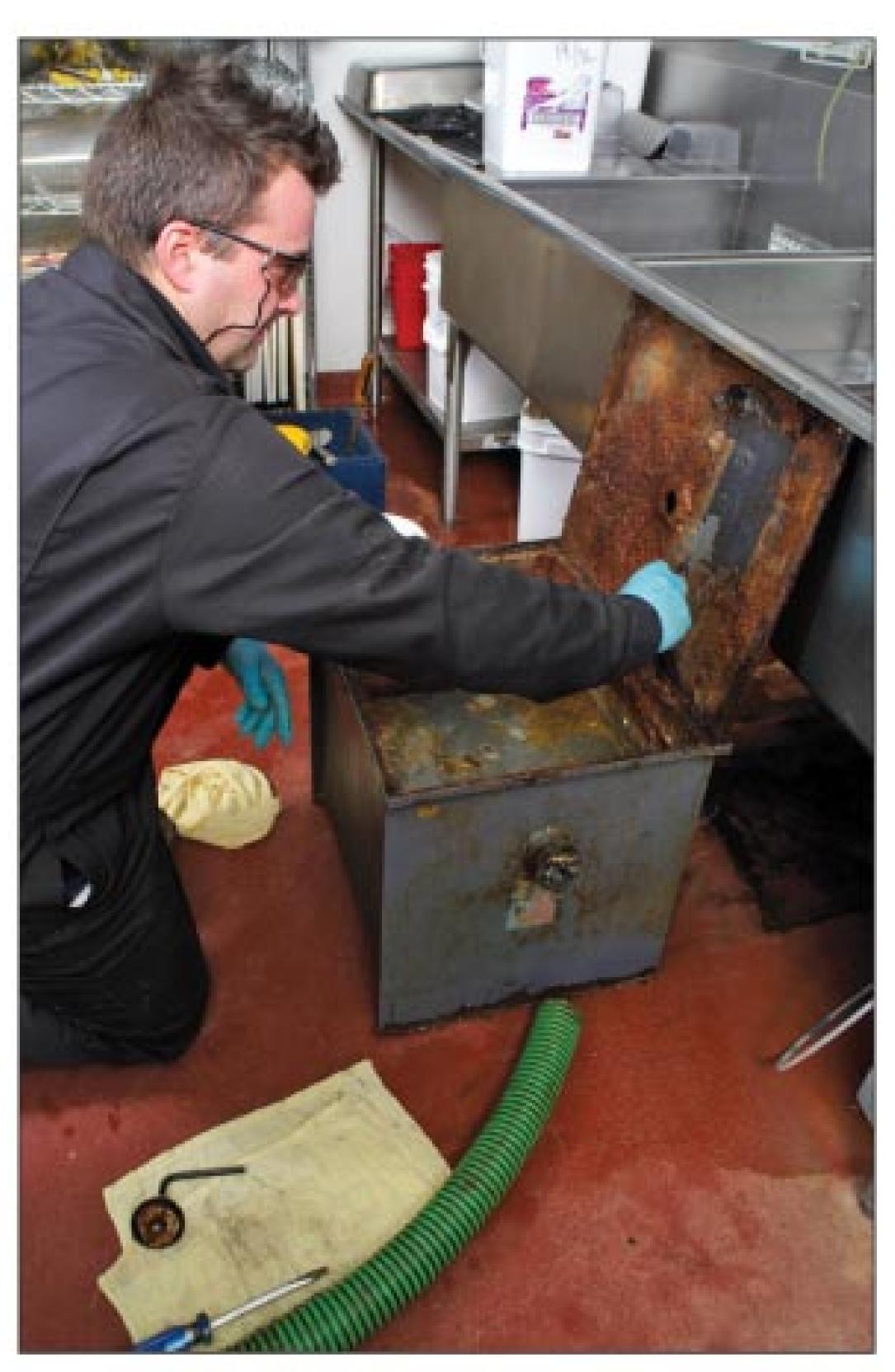
Overheated economy

Like his son, Perry Fish worked for his father's drain-cleaning business through the 1970s in Windsor, Ont., across the river from Detroit. Established in 1956, the business once included the province's distributorship for sewer and drain equipment from Electric Eel Manufacturing Inc. "Those Electric Eel machines were the closest thing I ever had to a brother," says Fish. "My father ultimately chose sewer and drain cleaning, but he kept the business name."

A depressed economy led Fish to strike out on his own in 1978. "The Detroit recession hit Windsor," says Fish. "The market wanted Corollas, not Cordobas, so I headed west to start a drain-contracting business in Calgary."







Jay Fish cleans a restaurant grease trap using a vacuum cleaner.

Taking nothing but a variation of the Electric Eel name, Fish faced a oneyear lag before his ad could appear in the Yellow Pages, so he got his feet wet working for other drain contractors. By 1980, he was on his own, subcontracting to larger mechanical contractors who didn't want to deal with drain work. But expanding the business proved problematic: An overheated economy made it difficult to hire new workers.

"There was a labor crunch," says Fish. "We would recruit for new hires, but weren't getting anyone. Things were still slow in Windsor, so I asked my dad to come out to Calgary as a subcontractor to help me."

"Every time it looks like there's a spike, you have to guess whether it's going to last. When labor prices skyrocket, you need to ask yourself whether you want to hire someone right now or six months from now."

Perry Fish

With three Windsor trucks at his disposal, Fish developed enough of a reputation to take a healthy share of business. But then the province was hit hard in the years after the establishment of the National Energy Program by the Canadian government. The move to create a made-in-Canada oil price and change revenue-sharing agreements between federal and provincial governments cost the Alberta economy billions of dollars and brought businesses to a standstill.

"I bought my house for \$75,000, and almost overnight it lost \$30,000 in value," says Fish. "For awhile, it was just me and the dog, treading water."

Decisions distorted

While real estate is sensitive to the energy economy, routine business decisions are, too. "Every time it looks like there's a spike, you have to guess whether it's going to last," says Fish. "When labor prices skyrocket, you need to ask yourself whether you want to hire someone right now or six months from now.

"You might delay a decision on buying equipment when prices are inflated. But if you think the economy is heading south, you might wait and see how far prices fall before buying - everybody's looking for the best deal. It's difficult to plan growth."

A hot economy also affects service prices. Some competitors take advantage of demand to charge what the market will bear. "They have no fixed price," he says. "If it's a busy day, their prices are up, and if it's dead, the price goes down. Demand can dictate the price. A few years ago, we were seeing people with flooded sewers on a waiting list of two to three weeks. It ends up being a recipe for gouging."

While that may net short-term revenue, Fish tries to charge a realistic advertised price for his services, a policy that helps him to retain customers during the inevitable bust that follows a decline in energy prices.

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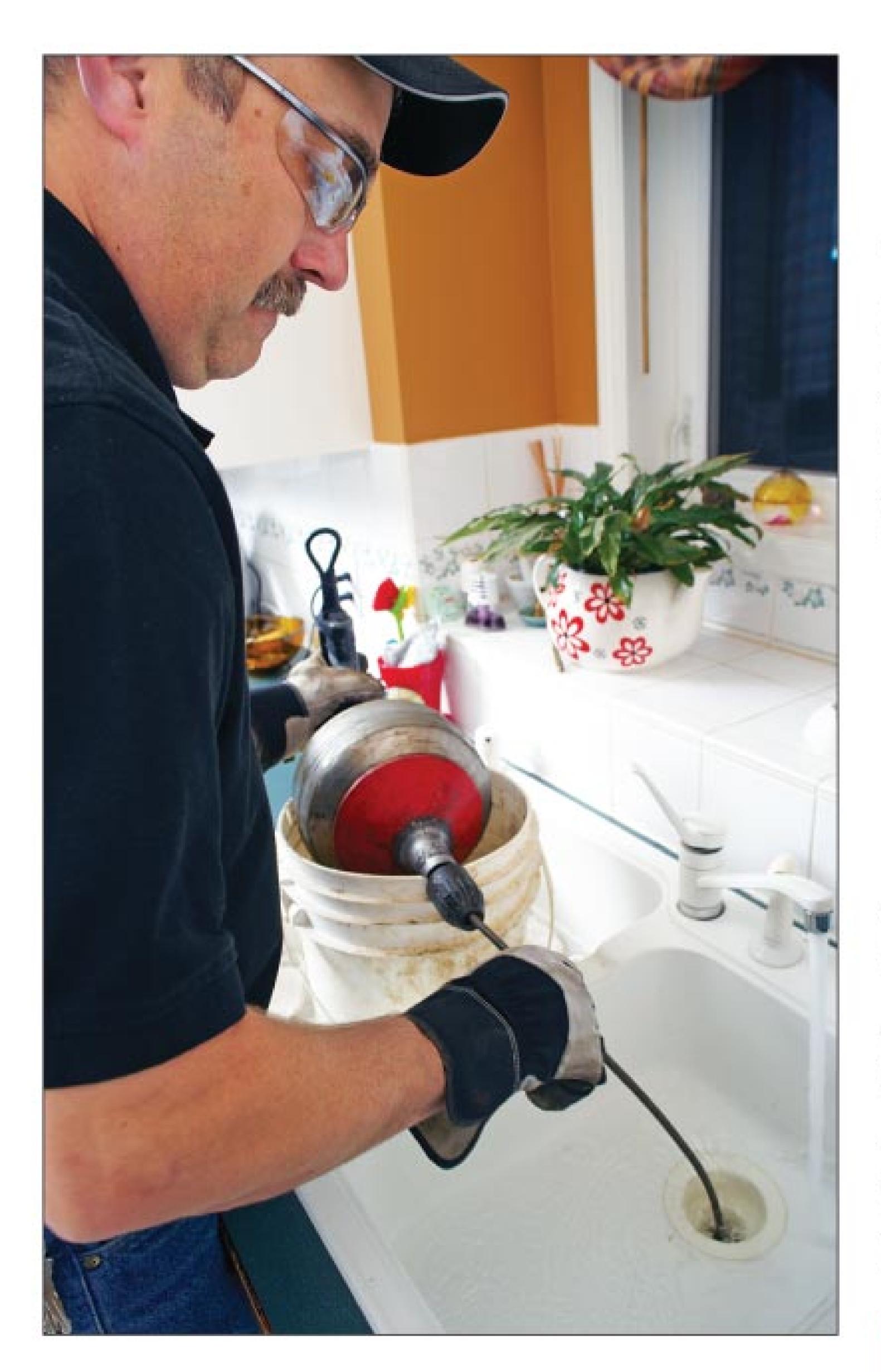
City of Calgary MARKET AREA:

Video-assisted drain- and pipe-cleaning SPECIALTIES:

for high-rise buildings

EMPLOYEES:





Fair treatment

"I have a 30-year-old customer base," he says. "Just because we happen to be going through a spike in the economy, doesn't give me the right to rob them. When the economy settles down and we're in more of a competitive situation, customers will remember who treated them fairly."

The late 1990s saw another major boom in the province's energy, construction and high-tech sectors, and it made hiring new workers even more problematic. That sustained boom only began showing signs of weakening in 2006.

"Burger King restaurants closed down, not because they couldn't sell hamburgers, but because they couldn't find anyone to work behind the counters at \$15 per hour," he says. "By the early 2000s we didn't have anybody coming up in the trades because the younger people were either being snapped up to work in the oil sector or going into computer technology.

"Drain cleaning was at the bottom of the labor market totem pole. Sometimes the only question I had about taking on more jobs was whether I had the manpower to do it. I could keep 10 guys busy, but I couldn't find 10 guys, and if the oil sector is offering \$60 per hour, I'm not offering \$25."

Fish reasoned that by adding high-tech equipment, he could intrigue workers who might otherwise be attracted to the computer sector.

Perry Fish augers a kitchen sink drain line with Model S drain machine from Electric Eel Manufacturing Inc.

Investing in cameras

Electric Eel began by investing in video-inspection cameras a little over two years ago. "We were always the cabling company that handled tough jobs that nobody else could do," says Fish. "But it seemed that everyone else was taking the easy ones. We wanted to get away from being a cabling company and show the world our high-tech face, and the camera was the fastest way to get us there."

One of the company's competitors also makes cameras. "We'd sort of given the market to them, but they were running a three-week waiting list whenever we needed their services," says Fish. "It was costing us business." Therefore, Electric Eel purchased a Gatorcam Pipe Inspection Camera System

"Guarantees are meaningless without visual confirmation...With a video inspection, we both have a benchmark to make sure that the warranty means something."

Perry Fish

(WCT Products Inc.) and "promoted the heck out of it" by placing the tagline, Get the Picture, on all service trucks.

"Ten years ago, if we ran an auger down a drain line and it came out full of clay, it wouldn't be

worth it to send a camera down there for a high price to find out what was happening," says Fish. "The line has collapsed and I'm digging into the clay. At today's lower cost, it's a better option to give the client the real picture."

Selling the service is often a matter of positioning the deal to clients. For example, Fish might offer a certain price to clean 100 feet of drain line, but also offer to include two hours of camera-assisted drain cleaning and inspection, with an ironclad guarantee, at a higher price.

"Guarantees are meaningless without visual confirmation," says Fish.
"The client can only take your word for it that the job was done right, and it means nothing if the client comes back in six months and says, 'You know, the drain was never really right after you cleaned it, and now it's plugged again.' With a video inspection, we both have a benchmark to make sure that the warranty means something."

PERSONAL SURVIVAL IN AN OVERHEATED ECONOMY

Alberta's high-octane business environment creates an atmosphere conducive to overwork, "I was running 500 miles per hour, with my hair on fire," says Perry Fish, president of Electric Eel Sewer & Drain Specialists in Calgary, "Everything I did was directed to promoting the business, finding new clients or moving it ahead in some way."

Relaxing at home or spending an evening at the movies wasn't really an attractive option. "The whole time I was thinking about work, or how to get back to work," he says. "The business was always pulling me in."

After talking to a counselor, Fish realized it wasn't the business calling his name during a dinner date with his wife – it was stress itself asking for a repeat performance of the day's busy schedule.

"I realized that I wasn't stuck on work," he says. "I was becoming addicted to the adrenalin that goes along with the stress of working at high gear. I took the problem seriously and had to teach myself how to relax so I could enjoy my off-hours."

Fish used to subscribe to the idea that one lives to work. "I'm trying to adjust to working to live," he says. "It's a lot healthier."

The company next equipped its service vans with sewer cameras manufactured by South Coast Equipment. Fish also recently picked up a Jet Eye combination camera and cleaning system by PipeHunter Inc. He believes it will help open the municipal cleaning market. "After seeing that model, it became obvious that the camera is the way to separate yourself from the pack," he says.

"When the market is price sensitive, you can't always justify adding a high-end camera to the inventory, but with camera prices coming down, it's an option that customers will consider. We're used to seeing cleaning and inspecting as two separate servic-



Electric Eel shop and truck fleet and staff, from left, Craig Rothwell, Brydon Fodie, Jay Fish, Darren Treen, Mark Smith, Perry Fish, Mark Russell, Wenbo Ji, Sam Parsons, Shay Erickson, June Fish, Nicole Fish, Nancy Troggweiler.

es, but with the Jet Eye system, we can do both in one run. We're the first in this market with it, but that advantage won't last too long."

New corporate image

While purchasing cameras turned out to be a sound business decision, it failed to attract new employees. "About two years ago, we realized that we needed to get out there with a larger corporate identity, not to generate more work, but to increase our ability to get people to work for us," Fish says. "If I'm looking to hire younger people, a good-looking T-shirt with a cool logo and a great looking company truck, as opposed to some plain-Jane vehicle, really makes a difference."

Fish updated the company's trademark eel, dropping its cartoon characteristics - a hat and comical eyes. "The logo is integrated with the letter L in 'electric," and its long, black tail underlines the word," says Fish. The new Chevy

"The infrastructure here is very young, most of it less than 25 years old. It hasn't deteriorated significantly. I love new technology, but I don't necessarily want to be the first guy in, either."

Perry Fish

Savannah vans are all white, with a black ribbon running from front to back. Black company T-shirts and ball caps feature the eel character.

"Jay wanted the slogan to be 'Serious Snake for Serious Pipe,' but I think we've gone far enough with the makeover," says Fish. "Our new image gives the company a different feel and makes new recruits feel like they're joining a team instead of just taking a job."

The new image helped the company get more drain work in the heavy commercial sector and the burgeoning condominium market. "But while we were holding onto our old residential customers, we weren't getting as many new ones, perhaps because the new identity doesn't look as friendly or inviting in the Yellow Pages," says Fish.

"The bigger contracts are more stable, but the they also require a lot of upfront work in bids and tenders and take from 30 to 120 days to pay. The little old lady with a plugged up kitchen sink pays cash on the barrel head."

A new strategy may help the company hold onto the best of both worlds. "We acquired a smaller neighborhood plumber with a folksy identity, so we could maintain that market without giving up the new image," Fish says. The company now also operates under the name Kiwi Plumbing and Heating, a business with a 25-year history.

Downsized trucks

Electric Eel is also experimenting with downsized versions of its service

trucks to help prosper in the city's busy core. "We do a lot of high-rise service work, so we're just finishing up a low-clearance truck unit - a 2006 Ford F-450 flat deck with integrated boxes for vacuuming and jetting, that will hit the streets and get into the tight corners of parkades that often have a clearance of six and a half feet and under," Fish says.

The unit has a 50-gallon water supply, a Wallenstein, a division of EMB MFG. Inc., vac pump with 500-gallon tank, two 13 hp pumps by American Honda Motor Co. Inc., and a range of hoses, jetting nozzles and lances. A tandem vacuum trailer, powered by a diesel pump from Isuzu Motors America LLC, is accompanied by a 2007 Caterpillar Inc. 232B skid-steer loader to assist the trailer to access the parkade if the turning radius is too tight for the truck.

A 2004 Toyota Matrix is designed to service downtown office high-rises where parking is at a premium. It's loaded with the Gatorcam camera and a Gatorcam locator, a Model S Sani-Rod (Electric Eel Mfg. Inc.) and a rigid closet auger

"The truck is a small enough fit in the courier parking spot, rather than the loading dock," Fish says. "It also carries the usual stuff like urinal-to-wall seals and toilet seals – the brass-tacks stuff to deal with plugged urinals, hand basins and coffee sinks. It's a first-response unit for smaller drain jobs that require immediate attention. If they need bigger guns, our technicians can call for backup."

Some competitors have begun offering pipe lining and pipe bursting, but Electric Eel so far has chosen not to compete there. "The infrastructure here

is very young, most of it less than 25 years old," says Fish. "It hasn't deteriorated significantly. I love new technology, but I don't necessarily want to be the first guy in, either."

The economy has slowed in Alberta with the decline in oil prices. "We're starting to hear words like 'unemployment' again," says Fish. He can't roll back the wages he was paying during the boom, but pay raises aren't on the books either.

"In a few years, we'll be back up to the point where we're hungry for people again, and we're always hungry for customers," he says. "You need to treat both your customers and your employees fairly, no matter what type of economic climate you find yourself in."

MORE INFO:

Electric Eel Manufacturing Inc.

800/833-1212 www.electriceel.com

EMB MFG Inc.

877/695-9283 www.embmfg.com

PipeHunter Inc.

800/373-1318 www.pipehunter.com

South Coast Equipment

800/688-0081 www.southcoastequipment.com

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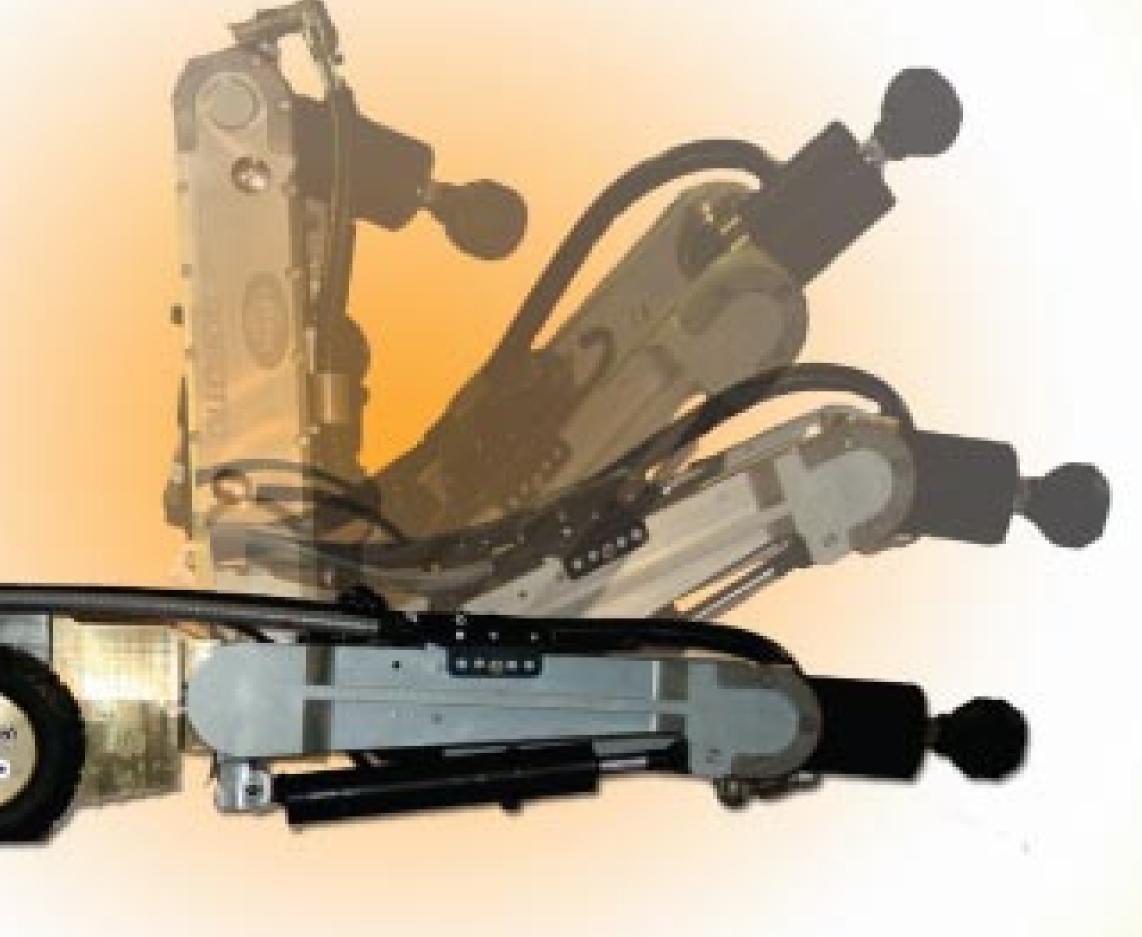
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Tech Perspective

Getting Connected

Web-based technology provides new ways for cleaning contractors to store, organize and share information and simplify business operations

By Ted J. Rulseh

n some ways, the drain-cleaning business hasn't changed in years. Drains and pipes still get blocked. Lines get inspected with push cameras and cleaned with spinning cables or high-pressure water. The equipment gets better by increments every year, but the mechanics of it are largely the same.

But the business has changed greatly in other ways. In a relatively few years, the world has gone electronic in wholesale fashion. Contractors use more digital tools to collect information, like job site photos and video pipe inspections.

And customers increasingly communicate with businesses digitally: They use Web sites and e-mail instead of phone calls and postal mail, and they expect information to be delivered quickly and clearly.

Contractors therefore face a two-sided challenge: How to store, organize and share digital information efficiently, and how to communicate with customers in ways that meet their higher expectations.

One leading-edge solution is a secure, subscription-based online service that lets contractors manage pictures, inspection videos, customer lists and job information; prepare and send quotes, job reports and invoices; and essentially organize and conduct all basic business functions in a single online location.

Digital world

Over the past three years, RIDGID, a manufacturer of drain- and pipe-cleaning and maintenance equipment, has tracked trends among plumbing and other service contractors in their use of digital tools and devices. Among the latest findings:

 51 percent use laptop computers as an integral part of their business.

- 16 percent carry mobile printers to produce invoices or quotes on site.
- 80 percent carry a digital camera into the field.
- 98 percent have mobile phones.
- 28 percent carry smart phones (BlackBerry, iPhone) twice as many as did so just one year ago.

It all adds up to a great deal of information, says Jay Gatz, vice president of strategic planning and development with RIDGID, which offers the RIDGIDConnect online business tool. "Even if you just think of taking pictures with a digital camera and with a cell phone, that's a lot of information," he says.

"A week or two weeks later, going back to reference all that can be difficult. You don't know where to find it. You have to go searching for

A contractor may need to search a file or drawer to locate the video information that documents a pipe or drain's condition, then edit the video, burn one or more copies of the information to DVDs, look in a file cabinet or on a computer for notes on the customer and job, access another program to complete a report, make copies, then deliver or mail the reports. It all costs money and takes time better spent in the field solving more customers' problems, Gatz maintains.

Changing standards

The emergence of digital cameras and digital video makes it relatively easy to take information online and virtually eliminate the handling of hard-copy reports and physical media. An online service can accommodate any information creat-

ed in digital form: Pictures, video,

"If you talk to business owners, one thing they're afraid of is having their technicians leave without the company having institutionalized their insights. This online service is a great way to get in the practice of capturing that information, so that it stays with the company."

Jay Gatz

it. It's not referenced. Even without considering data from a drain-inspection camera or a handheld inspection device, you're creating a digital dilemma, just from the capability you have in multiple devices used each day on the job site."

Now consider a contractor not just dealing with all that information inside the company but also communicating to customers, and in some cases to third parties like insurance agents, as well.

diagrams, drawings, word-processor documents, work orders, invoices, parts lists and much more.

The service is subscription based; a tiered rate structure lets smaller and larger businesses choose plans that suit them. Data is managed and backed up regularly in a highly secure third-party data center of the same type that hosts popular Web sites. Once subscribed, users register their business and can immediately begin using the system.

Tech Perspective looks at technology-related issues and provides information and advice that cleaning professionals can apply to equipment selection and to their daily work in the field. Industry members are welcome to offer ideas for this column. Please direct them to editor Ted J. Rulseh, editor@cleaner.com.

Customer lists, such as files in Microsoft Outlook, can be uploaded. The lists are then fully searchable and can be used to generate driving directions to customer locations or to populate the address book of a GPS navigation device.

Pictures and video can be uploaded to a media file from any device - inspection camera, laptop computer, digital camera, mobile phone. Then individual items can be given file names and assigned to customers or specific jobs.

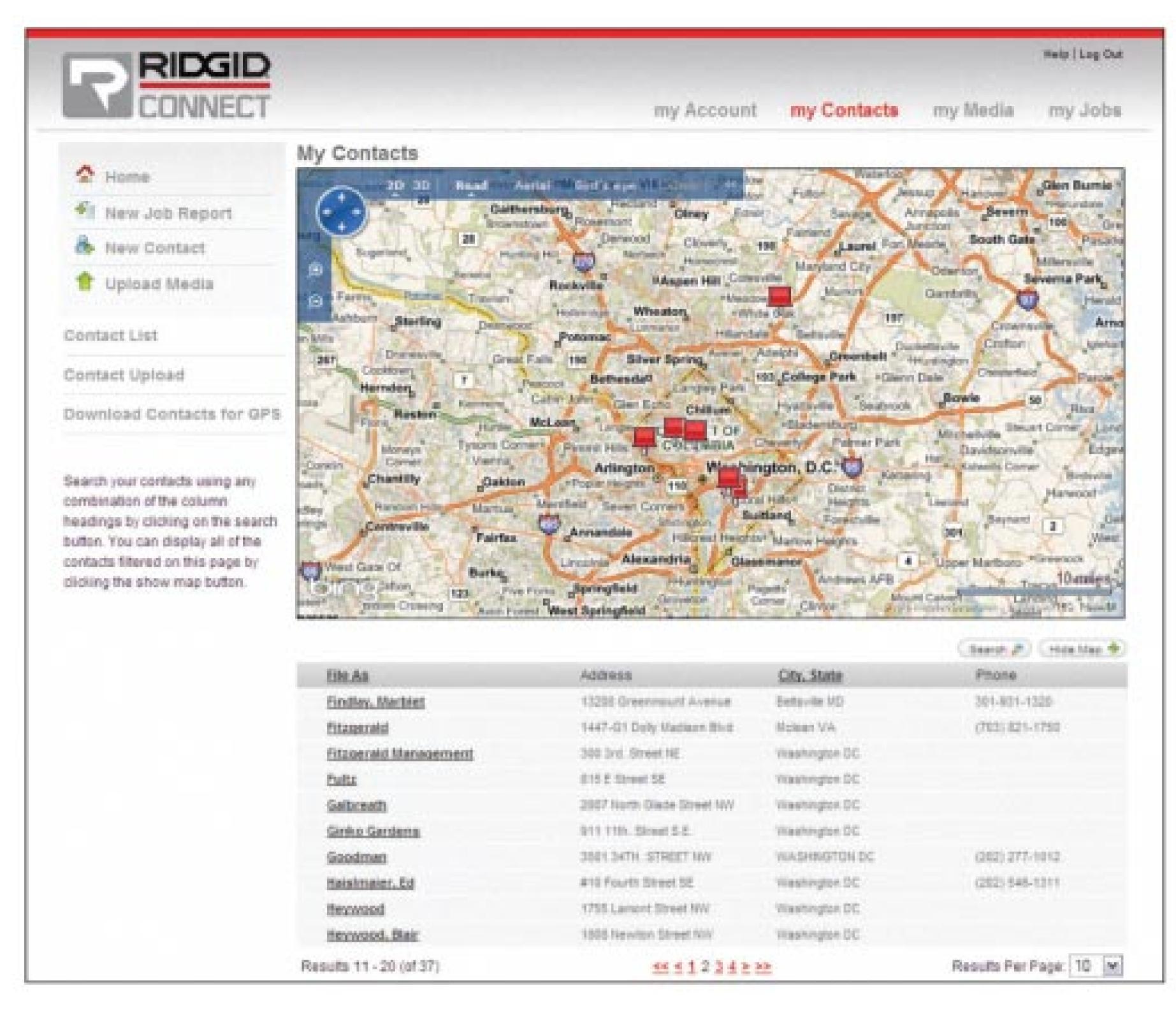
Getting to work

Gatz says the system greatly streamlines and simplifies a number basic business functions. Capabilities include:

Creating reports. Contractors can build detailed reports from a simple template. The template includes fields for information that the customer will see (problems found, work completed, price quote, recommended follow-ups). It also has spaces for information about the customer or job for contractor use only (dog in yard, location of cleanout, special tools needed). Public and private sections have color-coded headings to make it easy to keep the two straight.

Editing and annotating video. Instead of sending a customer raw video from an inspection, the contractor can bookmark specific areas of interest so that the customer can go straight to them with a mouseclick. In addition, the contractor can capture any video frame as a still image, highlight the area of interest and describe the problem with text.

Sending reports. Pictures, documents and videos can be attached to reports in essentially the same manner as making e-mail attachments. The contractor then sends the





Left: Subscribers can upload contacts from existing customer databases or add new ones within the system. Once loaded, BING Maps let users identify customer locations and get directions. Looking up a contact provides a complete view of all work associated with that address as well as any notes related to the contact. Right: Once a job report is built, a subscriber can e-mail a link of the report to the customer. The recipient can view a written description of the issue and recommendations as well as video and images that support the recommendation. Video can be edited on the site with bookmarks to direct viewers' attention to areas of interest. (Illustrations courtesy of RIDGID)

report via e-mail. The customer gets an e-mail message with a link to a page on the Web site. There the customer can open and read the report and view any visual media.

Because nothing downloads to the recipient's computer, the contractor can limit how long the customer can view the information either by length of time or number of viewings. "This helps prevent customers from taking the video that contractor created and shopping it to other companies to underbid the quote provided," Gatz says.

Receiving responses. The report template provides a space for the customer to respond, such as by authorizing work to proceed. The contractor gets notification in the system and via e-mail that the customer has responded. Contractors who use the system say they receive customer orders to complete work about 30 percent faster than before, Gatz says.

Communicating from the field. The contractor can access the system around the clock from any computer with a Web browser or from a mobile phone. In addition, a mobile application lets users upload video or pictures from devices such as a wireless-enabled inspection system, laptop computer, or smart phone, and even create job reports while in the field.

Benefits to users

Gatz says the system enables contractors to create "an electronic medical record of all the work they do." In particular, it lets them capture and retain information about customers and jobs otherwise stored

system makes it easier to share information with customers and across the organization.

Enhanced professionalism. Job and customer histories help technicians arrive at job sites well prepared and with the proper tools.

"Contractors can interface with customers in the way we all basically live our lives now, but without having to invest in IT infrastructure."

Jay Gatz

only in the minds of technicians.

"If you talk to business owners, one thing they're afraid of is having their technicians leave without the company having institutionalized their insights," Gatz says. "This online service is a great way to get in the practice of capturing that information, so that it stays with the company." Other advantages include:

Time and cost savings. RIDGID surveys show that the service can reduce by 25 percent the time to finish a video inspection, from acquiring the video to completing and distributing the report. It also eliminates the need to duplicate DVDs or print and deliver reports.

Better communication. The

Customers received professionallooking reports in the electronic form they increasingly prefer and

can react to quickly.

"Contractors can interface with customers in the way we all basically live our lives now, but without having to invest in IT infrastructure," Gatz says. "Customers feel the reports provide a personal touch and help them understand the work that was done. They perceive greater value than if they only received an invoice or a slip of paper with handwriting on it."

Gatz acknowledges that moving online puts contractors on a learning curve. "They have to adopt a new approach into their business process," he says. "But once they do, it can become just as much of a daily tool as a pipe wrench."











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SHOP WITH CONFIDENCE - ORDER ON LINE

Product Spotlight

Crawler-Based System Combines CCTV and GPR Inspection

By Ted J. Rulseh

ewerVUE Technology Corp. has released a robot-mounted, in-pipe inspection system that incorporates CCTV with ground-penetrating radar (GPR).

The SewerVUE Surveyor system accurately measures pipe wall thickness, pipe wall composition defects and rebar cover, while also locating cracks in the pipe wall and detecting voids and cavities outside pipelines, enabling prevention of potentially catastrophic sinkholes.

Primary applications include mapping sewers, water mains and tunnels for regular inspection, quality control and preventative maintenance. "SewerVUE can also be used for testing the condition and thickness of liners, or for installation or quality control of concrete or vitrified clay pipes," says company president Csaba Ékes.

The company developed the system in response to inquiries from engineering firms wanting

a way to detect voids behind sewer pipes and measure pipe wall thickness in large-diameter concrete pipes without confined space entry.

While CCTV provides visual information and laser and sonar profiling provide geometric data that can indirectly indicate pipe corrosion or loss, GPR enables users to "see through" concrete pipes. "Regular inspections with this technology enable the location of voids caused by damaged pipes before they develop into sinkholes," Ékes says.

Rebar cover is another critical measurement as it helps engineers estimate the remaining life of concrete pipes. When hydrogen sulfide erodes concrete at the crown of the pipe to the point where the rebar becomes exposed, the rebar becomes vulnerable to corrosion, and the pipe is susceptible to collapse, Ékes notes.

The SewerVUE system deploys GPR equip-

ment mounted on tracks and is equipped with two high-frequency antennae. The current system can be adjusted to survey 18- to 30-inch pipes, and a larger version for 36- to 72-inch pipes is planned for 2011. The GPR antennae can be rotated between

nine o'clock and three o'clock positions.

Radar data collection is continuous on two channels in both in and out directions, allowing a continuous reading. CCTV data is recorded simultaneously and is correlated with the GPR data collection. The system is equipped with two CCTV cameras (front and back). The standard tether length is 1,500 feet but can be upgraded to fiber optic cables with a maximum length of 6,000 feet. For information: 888/973-9378; www.sewervue.com.



The SeeSnake digital adaptor for the microExplorer inspection camera from RIDGID enables users to digitally record to existing SeeSnake camera inspection systems. The adaptor can be used on any video-out enabled monitor, including SeeSnake VHS or DVD monitors. 800/769-7743; www.ridgid.com.



CUES Introduces Powered Camera Lift

The remote-control CRP Power Lift from CUES is designed for use in 18-inch diameter pipe and slides in and out of the transporter cradle for quick and easy assembly. It features pre-wired connections for an optional rear-viewing camera and/or external lights. The electric lift enables the operator to manipulate the height of the camera while televising to remotely compensate for water, sediment or a sag in the line. The lift can be powered up or



down and will return to the down position in the event of power loss. 800/327-7791; www.cuesinc.com.



StoneAge Introduces Badger BA-P4 Nozzle

The Badger BA-P4 nozzle from StoneAge Tools is designed to handle 2-inch pipes with long sweep elbows. The nozzle weighs less than 1/5 pound, is 2 inches long and 1/3 inches in

diameter. Its maintenance-free design eliminates the need for bearings, seals or fluids. 866/795-1586; www.stoneagetools.com.



NLB Offers 325 Series Convertible Waterjet Pump

The 325 Series convertible waterjet pump from NLB Corp. offers an operating pressure range up to 40,000 psi. Units can be converted to operate at 8,000 psi, 10,000 psi, 12,000 psi, 15,000 psi, 20,000 psi, 24,000 psi or 40,000 psi. The unit offers flows from 12 to 74 gpm and 365 or 400 hp diesel. An update kit for earlier 325 models is available. 248/624-5555; www.nlbcorp.com.

MSA Offers Workman Tripod

The Workman tripod from MSA is designed for confined space entry and features an internal leglocking mechanism, maximum height indicator on the legs, cut-resistant leg pin retention chains, reduced weight and integral carrying strap. 877/672~2222; www.msanet.com.





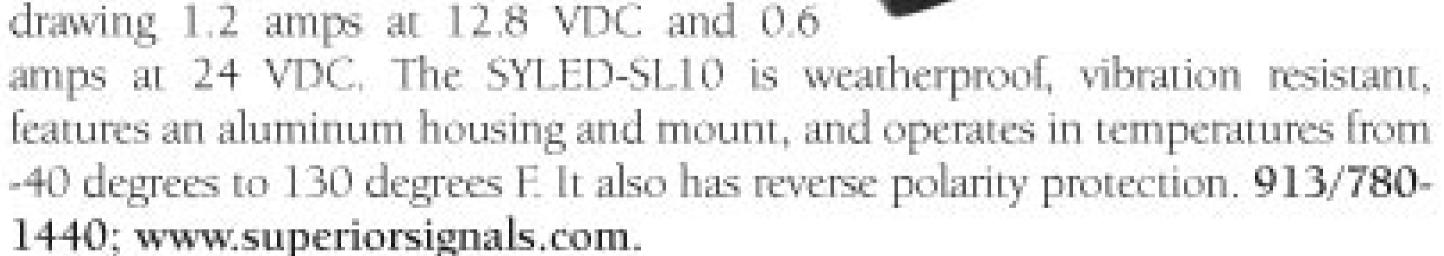
Electric Eel Introduces EJ1500 and EJ3000 **Jetters**

The EJ1500 electric and EJ3000 gas jetters from Electric Eel Manufacturing Company Inc. are engineered to clean 1

1/2-inch to 8-inch lines. The EJ1500 cleans 1 1/2- to 4-inch diameter lines and delivers 1,500 psi at 1.7 gpm. Features include 15-amp motor, duplex pump with pulsation, 150-foot 1/4-inch hose reel capacity, removable pump/motor assembly, thermal relief valve and inlet shut off valve, and removable handle/reel. The EJ3000 cleans 2- through 8-inch diameter lines up to 300 feet and delivers 3,000 psi at 4.7 gpm. Features include a 13 hp overhead valve engine with electric-start option, 2-to-1 gear reduced triplex pump with pulsation, 300-foot capacity hose reel, automatic throttle back control and low-tone muffler. 800/833-1212; www.electriceel.com.

Superior Signals Introduces Vehicle Scene Lights

The SL10 Illuminator Series Vehicle Scene light from Superior Signals utilizes 10 high-intensity LEDs, producing 80.6 lumens of light with a 90-degree viewing angle, while



McElroy Introduces MegaMc Pipe Stands

MegaMc pipe stands from McElroy are selfcontained and gasoline powered. The stands are available in a 36- to 65inch model that can accommodate pipes up to

16,000 pounds and a smaller 8- to 36-inch model for pipes up to

9,000 pounds. The stands offer 24 inches of lateral

movement and 34 inches of vertical adjustability. Features include rugged rollers with low-friction pillow block bearings for easy movement and a wide, stable base. The stands can be stacked for storage or shipping and are moveable with a forklift or crane. 918/836-8611; www.mcelroy.com.



Scorpion MAG and StarLite MAG bifocal eye protection from Gateway Safety are available in four diopter strengths: 1.0, 1.5, 2.0 and 2.5. Designed for aging workers, the Scorpion features an adjustable



length, ratcheting temples and comes in either clear or gray lenses. The StarLite comes in clear, anti-fog or gray. 800/822-5347; www. gatewaysafety.com.

Conjet Introduces Robotic Hydrodemolition System

The Nalta Jetframe 101 from Conjet is designed to replace handheld lances in hydrodemolition applications, reducing operator fatigue, increasing productivity and improving safety. The robotic system can operate on flat as well as curved surfaces as small as 400 mm. Primarily made for the hydrodemoliton of concrete, the system also can be used for surface preparation and the descaling of steel. The unit consists of a feed beam with an oscillating lance and fixed cradle.



The hydraulic unit is powered by a single-phase, 230-volt electrical supply mounted on a trolley for easy transport. A handheld remote control box directs all movement. www.conjet.com.



Ritam Introduces **Customer Reminder Card Software**

Summit Reminders Plus from Ritam Technologies Inc. is a simple program for users who don't need to track invoicing. The software enables users to catalog customers,

job site locations and job types, as well as enter notes for history, date of last service and frequency - by day, week or month. The program automatically calculates when a reminder postcard should to be mailed. There is no limit to the number of customers that can be entered into the program or the number of reminder cards that can be sent. 800/662-8471; www.ritam.com.

General Offers Gen-Eye SD Video System

The Gen-Eye SD video inspection system from General Pipe Cleaners features an 8-inch LCD color screen, SD card reader to store video or still image (a 1-GB card records approximately 2 hours of video), and a full keyboard for onscreen titling. The system is capable of connecting to a standard reel to troubleshoot 3-inch to 10-inch lines or a mini-reel to view 2- to 4-inch lines. Other features include built-in voice-over



microphone and switch, video and audio out connections, AC/DC power, camera test port, LED dimmer control, tripod mount, storage compartment for power cord, camera tool and remote controls and padded case weighing less than 10 pounds. 800/245-6200; www.drainbrain.com.

Waterblasting Technologies Offers HT100 Hand Hog

The hydraulically driven HT100 Hand Hog high-pressure cleaning system from Waterblasting Technologies is made for surface cleaning vessels, tanks, buildings and various industrial applications. It delivers up to 40,000 psi and 6 gpm at 4,000 rpm. The self-contained HT500 Hog Pack, available in gas, diesel or electric, manages the flow of hydraulics, which determines the speed of rotation that can be



adjusted from 600 to 4,000 rpm. The pack weighs approximately 450 pounds and can run up to three lances or two HT1000 Ground Hog floor cleaners at one time. The lance system has a cutting path of 0-4 inches, cleaning capacity of 50-400 square feet, is made of aluminum and stainless steel and weighs 14 pounds. Available with multiple head and nozzle configurations and up to 125 feet of cable, the unit has a built-in triple-operator safety trigger mechanism. 877/964-7312; www.waterblastingtechnologies.com.



Williams Innovations Introduces Movable Hitch Adapter

The TeleSwivel hitch adapter from Williams Innovations enables an individual to connect a truck and trailer in a single pass. The adapter features a target zone that's 25 times larger than a standard ball hitch. The coupler inserts into any 2-inch receiver. To use, the operator backs into position, swivels the hitch, connects and backs up to lock into place. The adapter is Class IV rated for up to 10,000 pounds gross trailer weight, 1,000-pound tongue weight and accepts any size ball. The BX

model accepts a three-ball or pintel hitch, while the Pro adapter is rated at 14,000 pounds and comes with a 2 5/16 and 2-inch ball as well as pintel capability. It also features 7 inches of drop for easier hookup. 919/794-5484; www.teleswivel.com.

Kuriyama Introduces Tiger-TR1 Hose

The Tigerflex Tiger-TR1 heavy-duty, rubber blend, wet and dry vacuum hose from Kuriyama of America Inc. is made with rigid PVC helix for light weight, flexibility and durability. Smooth bore construction eliminates material buildup, while the convoluted cover design keeps the hose flexible for easier handling and durability. Made to withstand temperatures from -40 degrees to 150 degrees F and working pressures from 13 to 32 psi, the hose is available in 2- to 6-inch I.D. and 2.38- to 6.88-inch O.D. It has a vacuum rating of 24 through 28 Hg, a



minimum bending radius of 1.5 to 9.5 inches at 68 degrees F and is available in 20-, 50- and 100-foot lengths. 847/755-0360; www.kuriyama.com.

McLaughlin Introduces GPS-Enabled Locator

The Verifier G2 GPS-enabled utility locator from the McLaughlin Group features one-touch operation and software applications that enable it to share real-time data with an integrated Magellan GPS unit installed on the locator. The program enables the receiver, through a serial port, to export real-time depth, current measurement index, frequency and locator mode (peak or null) to the integrated GPS unit. A second program enables Windows-based GPS units to receive the locator data. When the GPS unit receives that data, it cues the Magellan unit to record the latitude and longitude coordinates for the specific underground facility. Facility owners can download the raw data into a geographic information system as a layer that can be used to update existing maps or create new ones. It also can be overlaid on aerial photos or as-builts. 800/435-9340; www.mightymole.com.



ENECON Introduces DuraWrap Pipe, Tank Repair

DuraWrap pipe and tank repair from ENECON Corp. is a polymer/carbon fiber reinforced composite made for repairing and rebuilding aging and severely deteriorating piping and tanks. The wrap can be applied to the interior or exteri-

or of piping and equipment to both seal and strengthen. 888/436-3266; www.enecon.com.

Perma-Liner Releases Pull-In-Place CIPP

Pull-In-Place CIPP from Perma-Liner Industries Inc. features 100 percent solids epoxy and 3-hour cure time with ambient resin (hot water and steam cure can be completed with cure times of less than one hour). Designed for 3-inch through 36-inch diameter pipes, 4-inch through 6-inch transitions can be supplied at any length. The system nearly doubles the ASTM F1216 Specification on the minimum design life of 50 years and allows for multiple installations per day with either ambient or heat-assisted curing. 866/336-2568; www.perma-liner.com.

Draincables Direct Expands Product Line

Draincables Direct has expanded its line of jetter machines and jetter hoses. The company now offers from 2 hp, 2 gpm electric portables to 27 hp gas-powered, 11.5 gpm models, as well as 4,000 psi hoses in 25- to 500-foot lengths and five I.D. sizes: 1/8, 3/16, 1/4, 3/8 and 1/2 inches. Custom sizes are available. 800/421-4580; www.draincables.com.



Transportation Safety Offers Obstruction **Detection System**

The Eagle Eye obstacle detection system from Transportation Safety Technologies is designed to increase driver awareness of potentially dangerous areas surrounding the vehicle. The sys-



tem monitors side and rear blind areas or "no zones" for vehicles or objects. The dash-mounted digital display visually and audibly alerts the driver to potential contact beginning at eight to 10 feet away. The unit consists of up to seven weather-resistant strategically mounted sensors (heated to prevent snow and ice buildup) and driver alert module. 800/428-4449; www.tst-corp.com.















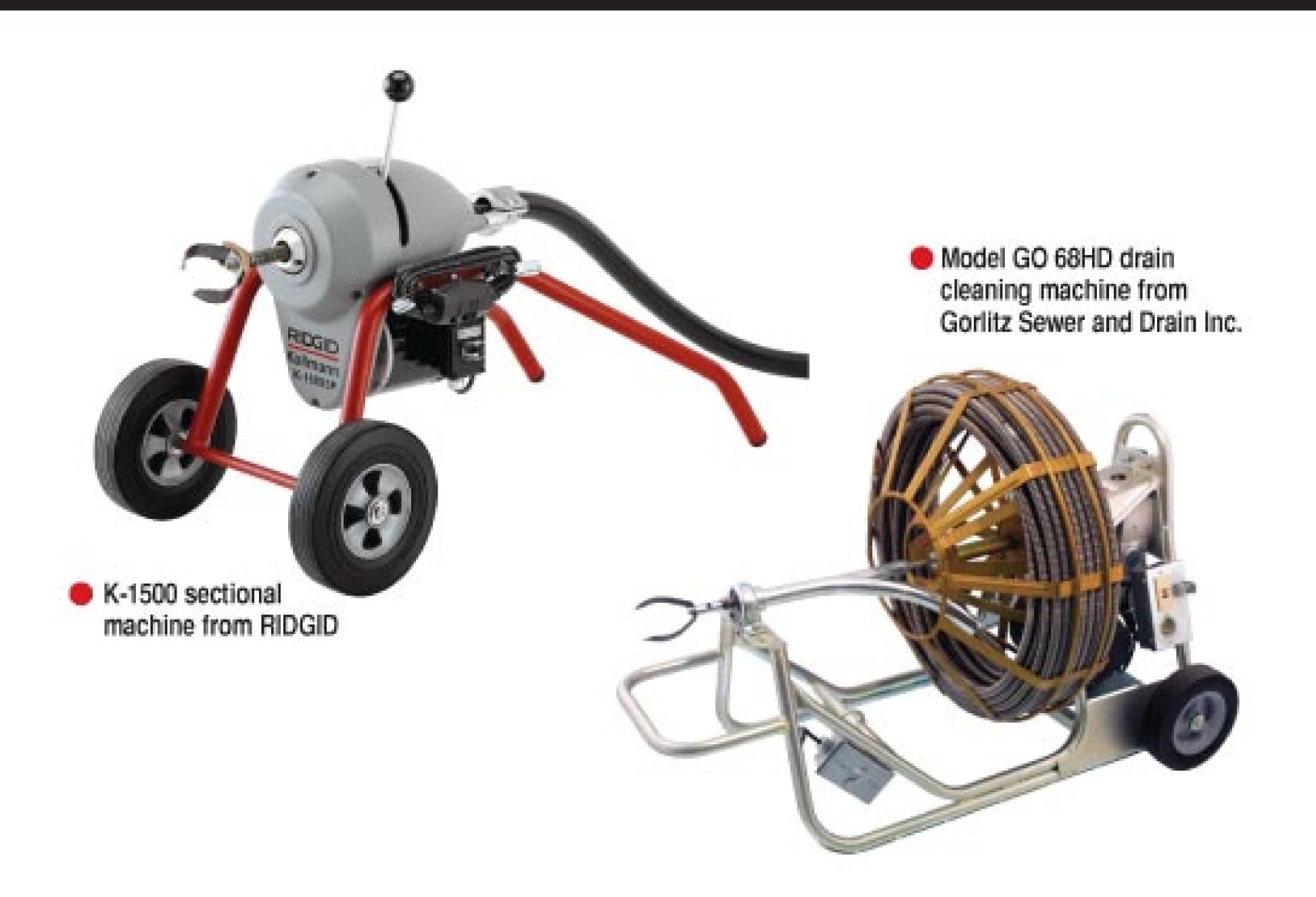
Built for Big Jobs

Manufacturers describe their largest and most powerful cable machines for clearing rough blockages in larger-diameter lines

By Benjamin Wideman

Cleaner asked makers of cable machines for drain and pipe cleaning to tell us about their biggest, toughest, meanest cable machines. Here is a look at their most powerful systems, designed to tackle large lines and difficult obstructions.







INSTANT-ACTING CLUTCH

Designed for 2- to 8-inch lines, the K-1500 sectional machine from RIDGID is an all-around sewer- and drain-cleaning machine. An instant-acting cable clutch maximizes control. When the operator pulls the handle down, the cable spins at a constant 710 rpm. Releasing the handle frees the cable instantly, so there is no overrun to loop or break the cable.

The machine has 15-foot sections of 1 1/4-inch cable to clean lines up to 200 feet out. A clutch jaw change-out adapts the machine to run 15-foot sections of 7/8-inch cable for 2- to 4-inch lines up to 175 feet. It comes equipped with a 3/4 hp motor. 800/769-7743; www. ridgid.com.

ASSORTED BLADES

The Model GO 68HD drain cleaning machine from Gorlitz Sewer and Drain Inc. has a 3/4 hp reversible motor and separate 10:1 ratio gearbox. The unit clears roots, sludge, grease and debris in 3- to 10-inch lines up to 500 feet long. A blade assortment, 150 feet of 11/16inch cable, cable connectors, splices, chucks and an electric foot pedal are standard.

The unit also has skid bars for added frame protection, large rubber wheels and a front handle. Rear rubber bumpers absorb shock when positioning the machine on its back. A tow ring helps it pull the machine up a ramp. Options include a power cable feeder, open steel reel and enclosed polyethylene drum. 877/446-7648; www.gorlitz.com.

DUAL DRUMS

The **Pro Dual** drum cable machine from **Triple R Specialty** has a 3/4 hp GFCI-protected motor and an electric foot switch on a 6-foot cord for hands-free operation. The belt-driven auto-feed dual system holds 100 feet of 3/4-inch cable and 75 feet of 1/2-inch cable. 800/356-9661; www.triplerspecialty.com.

SMALL FOOTPRINT

The Model 7500 cable machine from Sewer Equipment Co. of America has 350 feet of 1.25-inch cable. The Model 7500B uses 1-inch cable. The footprint of both units is 20 square feet. 800/323-1604; www.sewerequipment.com.

GASOLINE POWERED

Powered by a 4 hp Kohler gasoline engine, the **Big** Main (M98) mainline cable machine from MyTana Mfg. Company Inc. cleans 3- to 10-inch lines using 300 to 400 feet of 1/2-, 3/4-, 9/16-, 5/8- or 11/16-inch cable with automatic feed and retrieve. Units come with multiple blades, couplings, mounting blocks and slicing cores. Features include a foot pedal, reversing switch, built-in GFCI circuit and spring-loaded J-lock revolving arm. Threaded ends are standard. A dual gas-electric motor is available. 800/328-8170; www.mytana.com.

STEEL CABLE DRUMS

The single-operator Model 400 sewer rodder from **Ken-Way Corp.** cleans 3- to 10- inch lines using 50 to 130 feet of 3/4-inch cable, or 50 to 150 feet of 11/16inch heavy-duty cable with inner core or non-core. Interchangeable steel cable drums enable cleaning more than 300 feet. The cables interchange with most other brands.

The unit has a remote air-powered foot switch, two 8-inch rubber tires, twin stair-climbing tracks and a complete set of special tools and accessories. The machine knocks down in minutes to fit into any passenger vehicle trunk. A power cable feed is optional. 800/533-0551; www.ken-way.com.



MAY SPOTLIGHT

Typhoon™ 10 rotating nozzles: more power to clean small tubes

NLB's latest rotating water jet nozzles are powerful tools to clean and unblock tubes as small as 5/8-inch. Typhoon™ 10 nozzles have more rotating action up front to maximize force, plus a new seal that *cuts leakage in half*.



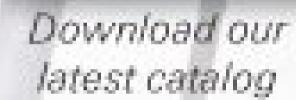
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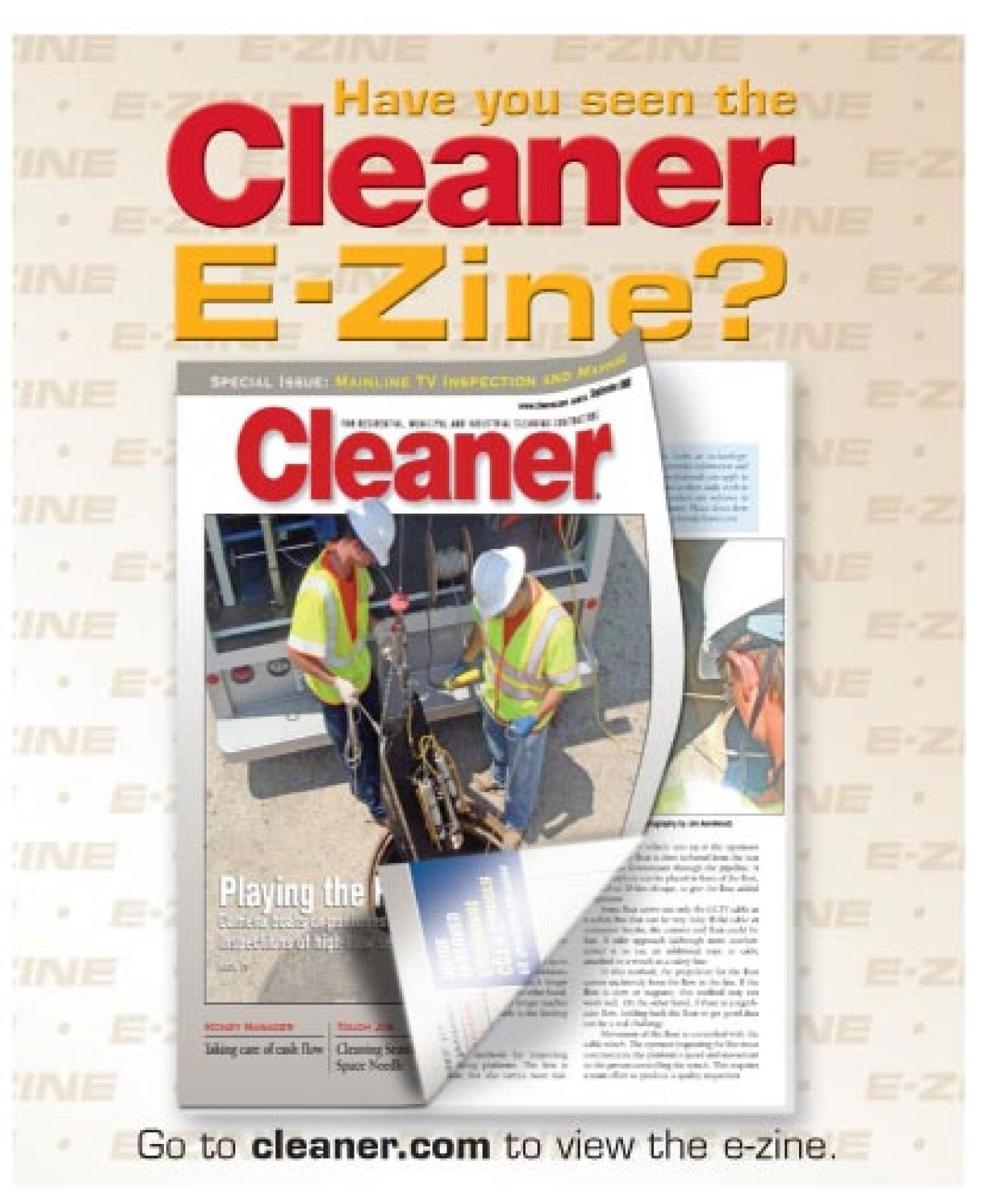
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Our product lines include chemical grouting systems for sewer line pipe joints capable of using a wide variety of grouting products. CUES manufactures lateral reinstatement cutting systems which enable the reinstating of laterals in mainline sewers after they have been relined with a wide variety of liner materials. Pipe profiling is accomplished via Laser or Sonar based systems.







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Editor's Note: In December's issue, Cleaner invited spouses to share their perspectives on being part of a small, family-owned contracting business. The accompanying story comes from the viewpoint of a wife involved in a septic system installation and maintenance business. We include it here because while the business is different, the family-related issues would be similar for a family-owned drain-cleaning company. We welcome further contributions on this topic. Please send them to editor@cleaner.com.

Working as a Couple

An installer's spouse and partner tells about the joys and challenges of operating a business while keeping a household and raising a family

By Sandra Gentry

n 1978, my husband took over a small septic system installation and maintenance business when his father retired. I was working part-time and raising three kids full-time, along with trying to make the business transition run as smoothly as possible.

Little did I know that this new job would become a 60-hour-a-week obsession with on-call duties in the supposedly off hours.

Home and office

We've always run our business from our home. It was wonderful to be able to stay home with my children when they were small and to be available for them most of the time when they became teenagers. It allowed me to be with them far more than if I had been working away from home. I was there at a moment's notice to kiss boo-boos or to give advice and comfort over broken hearts.

I never have to wonder what my husband, Wayne, is doing in his work. I know wives who really don't have much clue about their husbands' jobs, and husbands who don't know or don't care about what their wives do all day at work. That's definitely not the case with a family business. It has brought us a closeness I don't often see in other married couples. I speak his business



Sandra Gentry and her Husband, Wayne, work closely together as they own and operate Gentry Septic Tank Service in Richmond, Va. (Photo by David Gentry)

language and he speaks mine.

One of the worst things about working from home is that I have to leave home to get away from work! Even with answering machines and e-mail, the knowledge that I'm at the office never quite leaves. Some days the workday begins with the phone ringing before my feet hit the

floor in the morning, and doesn't end until I finally fall back into bed at night. And on a few rare occasions, 2 a.m. calls have interrupted that much needed sleep.

Breaking the tie

Having all of our financial resources tied up in one place is

probably the biggest danger of being in this business together. When the construction industry falls flat the way it has in the last couple of years, our worries are multiplied by two, since both our incomes depend on a single source.

We've also converted our two spare bedrooms into his and her

"Would I do it all over again? You bet! It has been the best of both worlds, being a stay-at-home mom and a contributing working wife at the same time. It helped us nourish a strong work ethic in our children and brought a feeling of closeness in our family that has been priceless."

Sandra Gentry

offices. After more than 10 years of this arrangement, I'm still not sure if this is a good or bad thing. It definitely cuts down on the overnight guest requests, but it also limits our ability to offer hospitality to someone who would prefer not to sleep on a futon.

A 50-50 partnership almost always brings a time when the partners have a major difference of opinion. When that partnership is both a business and a marriage, that can lead to problems too great to overcome.

From the beginning, our business has been 51-49 percent. We

YOUR STORY

Sandra Gentry, a native of the Richmond, Va., area, is the wife of Wayne Gentry, owner of Gentry Septic Tank Service. The company installs and maintains conventional and alternative onsite treatment systems for residential and small commercial owners.

Sandra has grown from a bookkeeper/secretary to being a certified installer of several alternative systems. As company manager, she runs the office, does most of the job estimating, and handles pricing, ordering of materials, customer relations, technology updates, and required education for employees.

In 2009, she was asked to serve on the Alternative Onsite Sewage Systems Emergency Regulations Ad Hoc Committee, formed to advise the Virginia Department of Health. She also serves on the board of the Virginia Onsite Wastewater Recycling Association (VOWRA). In her spare time, she is a Master Gardener volunteer with the Virginia Cooperative Extension and enjoys spending time with her three children and five (soon to be six) grandchildren.

work hard at coming to an agreement on all the big issues, but when we truly butt heads over something, I step back and remember who represents the 51 percent. This has always worked well for us.

Also, we keep most of our work well allocated. I don't run the backhoe and my husband doesn't run the office. I may make suggestions on job- or equipment-related issues, or he may suggest a way to improve dealing with the never-ending paperwork, but we try hard to stay out of each other's territory.

Ultimate tribute

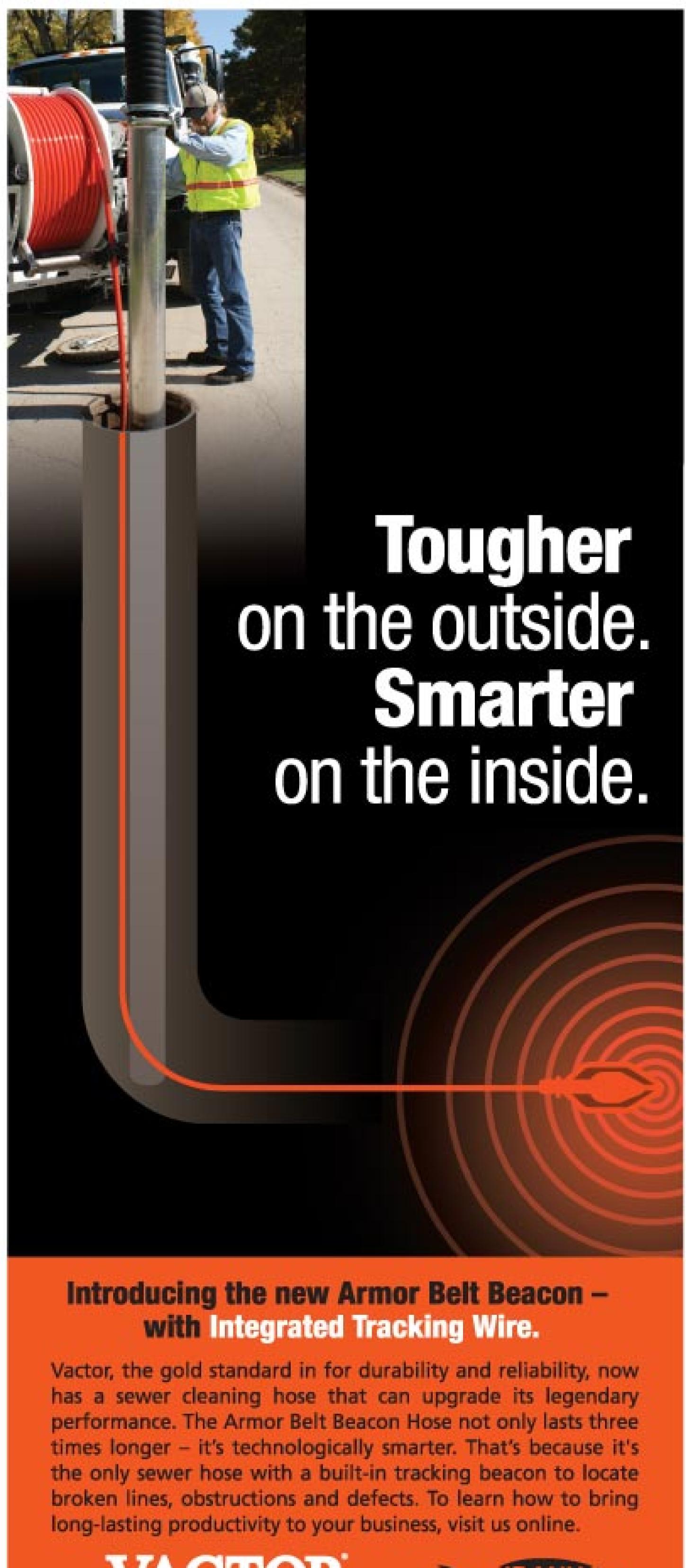
Fortunately, my husband and I both really enjoy most aspects of our jobs. Time actually away is rare and well appreciated, but we look forward to getting back to work. We occasionally spend a long weekend at the beach or touring NASCAR locations, sometimes getting away for a mountain vacation. A few times over the years, we've actually spent a whole week at a resort with our children and grandchildren. Those times are all the more precious for being so infrequent.

Since most of our friends are in some aspect of the construction business, when we get together with them, the conversation is often work-related. I guess you could say most of our so-called leisure time is still focused on the business.

Last year we received an e-mail that asked us to consider running for the Board of Directors of the Virginia Onsite Wastewater Recycling Association. Wayne suggested that I would be just as good at the job than he would be - maybe better.

That was the ultimate honor he could have given me in our business life. It said that I was a true partner in every sense of the word and could represent our views at the highest levels of our industry in Virginia. Acceptance by the organization and winning the election were just frosting on the cake.

Would I do it all over again? You bet! It has been the best of both worlds, being a stay-at-home mom and a contributing working wife at the same time. It helped us nourish a strong work ethic in our children and brought a feeling of closeness in our family that has been priceless.







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Off the Deep End

A complex hydroexcavating and pipe bursting job repairs a broken and blocked sewer lateral underneath a swimming pool

By Scottie Dayton

ewage erupting 18 to inches above ground near Lake waterfront Union brought City of Seattle crews on the double. The spill flowed over the curb, across the narrow street and down the steep hillside to flood neighboring yards.

After dye testing by Public Utilities workers confirmed that a 6-inch lateral serving four condominium buildings was the culprit, the city fined the homeowner association and ordered the breach repaired. The property management company that owned the buildings called Don Armenta, underground plumbing manager for Fischer Plumbing in Seattle.

"We scrambled a crew and within 24 hours had the green light to do the job," he says. "Project managers from three large plumbing companies looked at it, referred us, and walked away."

The repair involved pipe burst-

ing, hydroexcavating, concrete demolition and working on a hillside with a ski-slope grade. The fourweek project, which strained men and machinery, repaired the line and saved the management company \$150,000.

Phase one, bid one

The condominiums are 50 feet above the street. A 50-foot-wide rectangular swimming pool, surrounded by lifted landscaped areas within retaining walls, is 20 feet above the street. An 8-foot-wide expanse of overgrown vegetation begins at the curb and ends against a 30-foot-high retaining wall.

After a one-call service verified that no utilities were in the way, Fischer's crew excavated a 14- by 7by 15-foot-deep shaft in the center of the street. Subcontractor Tom Lavelle of Lavelle Vac and Drainage in Seattle potholed the remaining 5 feet down to the combination sewer and lateral tie-in with his Vactor

An example of the temporary, 1/4-inch plywood shoring workers built and moved numerous times throughout the project.

Sabino Valdez (left) and Dan Dahl (in shaft) plumb temporary connections to stop voiding. A pole tent provides shelter from the weather. (Photos courtesy of Lavelle Vac and Drainage, Seattle, Wash.)



hydroexcavator. One traffic lane remained open.

"When we exposed the 6-inch clay lateral, it was completely clogged with rock, hardpan soil, and chunks of pipe," says Armenta. "So, we excavated a second shaft closer to the retaining wall and saw some flow." The men jetted, vacuumed and cabled the line until they restored half its capacity, enabling sewage to flow throughout the гераіг.

An inspection with a RIDGID SeeSnake push camera revealed no broken sections. "That puzzled us because we didn't know why the pipe was full of debris," says Armenta. "Then we started cleaning upstream from the wall and found 15 feet of 6-inch ductile under it. Then it switched to asbestos. Using the camera's transmitter, we tracked the line 20 feet up the slope and over the edge of the pool."

The pipe maintained a 20-foot depth, but the camera televised four laterals, two per condominium, coming in 15 to 20 feet deep and intersecting the pipe at 45-degree

PROJECT:

Stop erupting sewage and repair 6-inch lateral under swimming pool

CUSTOMER:

Property management company, Seattle, Wash.

CONTRACTOR:

Fischer Plumbing, Seattle

SUBCONTRACTOR: Lavelle Vac and Drainage, Seattle

EQUIPMENT:

Pipe bursting system, Pipe Genie Manufacturing; Vactor hydroexcavator

RESULTS:

Flooding stopped and pipes repaired

angles. The junctions were under the pool's shallow end (three feet).

Because the lateral from the combined sewer to the wall was old, Armenta opted to burst it sizeon-size using a 40-ton Pipe Genie system and PVC pipe. The burst was uneventful and fast.

Phase two, bid two

After draining the pool, Lavelle's crew used 90-pound jackhammers to break up the two semicircular concrete steps, walls and floor, while Fischer's men threw the chunks over the wall and into a dump truck parked below. They removed 20 cubic yards of concrete in five days.

During the process, the men found aggregate concrete under the pool deck. A maintenance man said that every five to 10 years, a foundation repair company jacked the slab back into place. Armenta counted at least five different lift points.

"The hydroexcavator made the next stage possible," says Armenta. "Strategically, getting anything into that area was a nightmare, and damaging a retaining wall was always a risk." The driver parked the truck on the street or in the condo parking lot. Fischer's men worked the wands and suction hose, resting for most of the 90-minute intervals in which the truck driver emptied loads.

"Besides dragging hoses, the guys jackhammered the hardpan to

free it for vacuuming," says Armenta. "They also built and moved 1/4-inch plywood shoring back and forth. It was labor-intensive work." It took five days to vacuum the soil and expose the large holes in the asbestos pipe at the

Traditional solution

Because the hillside was opentrenched, Fischer's men laid 6-inch PVC pipe from the ductile section under the wall up to the pool, and replaced five or six feet of each lateral at the junction. To backfill, a

"We scrambled a crew and within 24 hours had the green light to do the job. Project managers from three other large plumbing companies looked at it, referred us, and walked away."

Don Armenta

lateral junctions. That's when Armenta formulated his theory.

"The pool was probably illegal, because even the city had no record of it," he says. "I believe the backhoe clipped the pipe while excavating the terrace. Since then, the ground had been hour-glassing under the pool, and every flush washed down more debris. The clay lateral allowed some sewage to escape into the soil, but eventually enough head pressure built up to cause the eruption."

concrete-truck driver reversed his truck against the condominium parking lot retaining wall, positioned the boom over it, and dropped the load 30 feet into the hole.

"We did a controlled-density backfill with lightweight cement slurry," says Armenta. "The men built wooden structures to deflect the weight of the material so it wouldn't damage the pipe." It took nine cubic yards to fill in 15 feet. Then another company reinforced

and restored the rest of the pool.

"This was one of the most technical projects of its kind performed in this market in recent times," says Daryl Miller, owner of Fischer Plumbing. "Our expertise, equipment, and confidence carried the day profitably and without any issues. I am proud of our group."

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Teach Your Children

Financial literacy is a badly neglected educational need. There are places you can turn to help your kids learn to handle money and build wealth.

By Ted J. Rulseh

Ted Rulseh is the editor of Cleaner magazine. He can be reached by calling 800/257-7222 or e-mailing

editor@cleaner.com.



uge numbers of Americans approaching retirement age have not saved nearly enough for their later years. The Federal Reserve reports that Americans carry more than \$2 trillion in consumer debt — nearly \$8,200 in debt for every man, woman and child.

Four in 10 Americans have less than one month's income in a bank account for emergencies. About three in 10 consumers say they have no extra cash and live from paycheck to paycheck.

Why are so many adults in such poor financial shape? Possibly in part because they never became financially literate while young. And as a society, we still do a poor job of teaching young people how to manage money. Little wonder then that:

five have any idea how to invest.

- Only 45 percent of teenagers know how to use a credit card and just one in four understand credit card interest and fees.
- Some 32 percent of students leaving college have four or more credit cards.

Finding the path

What's the state of your children's financial literacy? One favor you can do them as a parent is to help set them on a path to a financially sound future, starting at an early age. The traditional advice on teaching kids about money – set a good example, give them an allowance, take them along grocery shopping, play money games, show them the value of working for pay –

borrow intelligently, invest and plan for retirement, there is a great deal more you can do.

Right now, fewer than 30 percent of young people receive even a week's focused coursework in money management or personal finance while in high school. Fortunately, you can find a variety of programs that give your kids valuable advice and practical experience in financial matters.

Perhaps the first place to look is within your local school system. Growing numbers of schools offer financial literacy courses. If such a course is offered in your high school as an elective, encourage your sons or daughters to take it.

Ample resources

Inside or outside school walls, there are many other ways to help more than 118,000 students have been enrolled in the course since its inception.

Junior Achievement (JA). This worldwide organization is dedicated to teaching students about workforce readiness, entrepreneurship and financial literacy through hands-on programs. Programs show students how to generate wealth and effectively manage it, how to create jobs and how to apply entrepreneurial thinking at work.

The JA approach lets volunteers from the community deliver the curriculum and share their own experiences with students. Programs are available for kids from elementary through high school. On the Web site at www.ja.org, you can locate a JA office in or near your community.

Money Smart for Young Adults. This free program, from the

Right now, fewer than 30 percent of young people receive even a week's focused coursework in money management or personal finance while in high school. Fortunately, you can find a variety of programs that give your kids valuable advice and practical experience in financial matters.

 Only one in three teens know how to read a bank statement, balance a checkbook or pay bills, and only one in is fine as far as it goes.

But if you want to send your kids out of the nest knowing how to live on an income, save, budget,



your kids get a solid financial education. Here are a few.

MoneySkill. This program, sponsored by the AFSA Education Foundation, is a free online financial literacy course containing 34 modules on every aspect of personal finance, from income and taxation, to owning and renting a home, to borrowing and investing, to insurance and retirement.

The course is designed as a tool for teachers in financial literacy courses, but parents can enroll their children independently. The Web site at www.moneyskill.org says more than 6,500 teachers from all 50 states have registered to use the course to teach students personal finance concepts, and

Federal Deposit Insurance Corporation, helps youth ages 12 to 20 learn the basics of handling their money and finances and creating positive relationships with financial institutions. It consists of eight instructor-led modules, each with a fully scripted instructor guide, participant guide, and overhead slides.

The curriculum is aligned with educational standards for all 50 states and the District of Columbia. It can be used by professional educators as well as by informal educators. Visit http://www.fdic.gov/consumers/consumer/moneysmart/index.html.

Money Math: Lessons for Life. This four-lesson curriculum supplement for middle school math classes is offered by the U.S.





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Department of the Treasury, Bureau of the Public Debt. It teaches grade 7-9 math concepts using real-life examples from personal finance.

Offered free to teachers, the program was developed by the Center for Entrepreneurship and Economic Education at the University of Missouri-St. Louis in accordance with national school mathematics standards. The lessons were tested in Missouri schools and reportedly received excellent reviews. You can download the curriculum http://www.treasurydirect.gov/indiv /tools/tools moneymath.htm.

Another good resource is the Jump\$tart Coalition for Personal Financial Literacy (www.jumpstart .org), which encourages curriculum enrichment to make sure young people learn basic personal financial management skills during their education from kindergarten through high school.

The coalition includes a clearinghouse of course materials and online mini-lessons parents and teachers can use to illustrate the personal finance principles that Jump\$tart believes every young person should know.

Getting busy

Besides these programs, you can find many other financial literacy resources in a simple search of the Internet. Options range from formal courses, to online learning modules, to financial literacy camp experiences offered by regional organizations.

By helping your children become financially literate, you can set them up for economic success in life. You can also prepare them to take over your business someday, if that is your intent.

Why wait any longer? Consider investigating whether financial literacy programs are offered in your local schools and, if so, make sure your kids enroll. If nothing suitable is available locally, consider working with your school system to establish a program, or use the various resources available to parents to "home school" your kids in this important area. It's an excellent investment in their futures.



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Drains 101

Contractors find that teaching customers the dos and don'ts of drain maintenance helps build a professional image and leads to more maintenance agreements

By Ken Wysocky

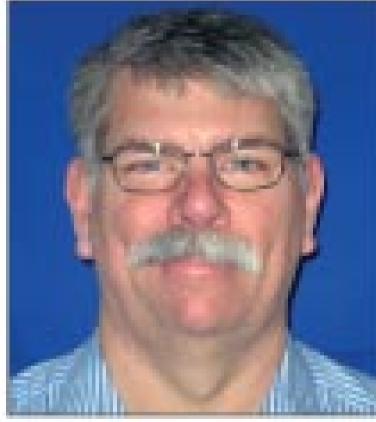
rain cleaners often charge a hefty premium for clogged-drain emergencies. Still, it makes sense to minimize such calls by educating customers about drain maintenance. After all, few contractors enjoy that SOS call from a restaurant or other commercial account on a holiday or late at night.

That's why education makes sense. Whether it's a verbal presentation to a restaurant's employees, or a leave-behind brochure or DVD that explains the ABCs of drain maintenance, keeping customers informed and alert is a big help.

Contractors who do so appear more professional, and that just might pave the way to maintenance contracts that provide a steadier revenue stream and make scheduling of work more manageable. Here's how several cleaners handle drain education:

"Education is a constant process," says David Boggs, manager of grease trap operations for Valley Proteins in Winchester, Va. "You have to explain to the customer what's going on. Most customers don't understand what you're doing to begin with. They don't understand that they have home fries or a roll of toilet paper stuck in the drain because they have poor kitchen management skills.

"We don't tell them their kitchen manager is bad. But we do tell them



David Boggs

Manager of Grease Trap
Operations
Valley Proteins Inc.,
Winchester, Va.
Employees: 1,400
Years in business: 61

they need to work on their kitchen manager's skills in terms of what they put down the drain. We like to gather their staff around and give presentations that usually last about an hour.

"We talk about grease traps and line cleaning and all things associated with that, and how to keep the lines clean. Despite that, it never fails – the line's going to back up at 7 p.m. on Friday night on Valentine's Day weekend. You don't want those things to happen at the wrong time.

"We emphasize that an ounce of protection will save them a ton of money. But it's hard to get people to understand. They say they can't afford preventive maintenance, but then they end up paying, say, eight times more for an emergency call. It's a valuable lesson to learn, but it's a hard lesson, too.

"We also hand out a kitchen manager's booklet. It's about four pages long and explains best drain-management practices. We're also working with another customer to produce a video. But it seems no matter what you do, you're toying with

"We don't tell them their kitchen manager is bad. But we do tell them they need to work on their kitchen manager's skills in terms of what they put down the drain. We like to gather their staff around and give presentations that usually last about an hour."

David Boggs

the devil. Clogs are going to happen. It's inevitable. There are too many minimum-wage employees that don't care."

"When we make an emergency call, the customer usually goes back and talks to their crew – the people doing the cooking, cleaning and sanitation – and tells them they can't keep putting this stuff down the drains," says Mike Kampenga, a supervisor at Expert Plumbing Service Inc. in Chicago, Ill.

"But it always ends up the same. Language barriers in food service don't help, nor do teenagers working for minimum wage in fast-food restaurants. They don't have to pay the bill for us to come in on a Sunday night to open up a drain.

"So the goal of our education efforts is to set up a maintenance program where we clean the lines on a regular basis. This helps us with client retention, because if they keep having to call you out for blocked drains in the middle of the night, eventual-

ly they start to think you're

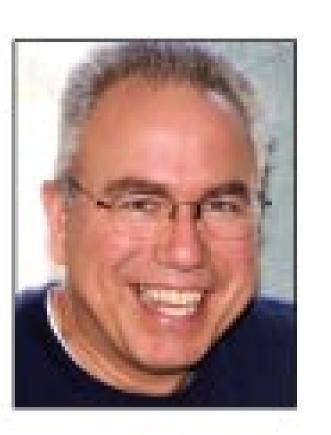


Mike Kampenga

Supervisor
Expert Plumbing Service Inc.,
Chicago, III.
Employees: 12
Years in business: 30

just not doing a good job – even though the fact is that people keep throwing the wrong stuff down there. Sometimes owners don't believe it, but the evidence is there.

"So if you can come in and hydrojet on a regular basis, they don't even have to think about it. Comments may be directed to Ken Wysocky in care of Cleaner. You may also e-mail pipelines@cleaner.com.



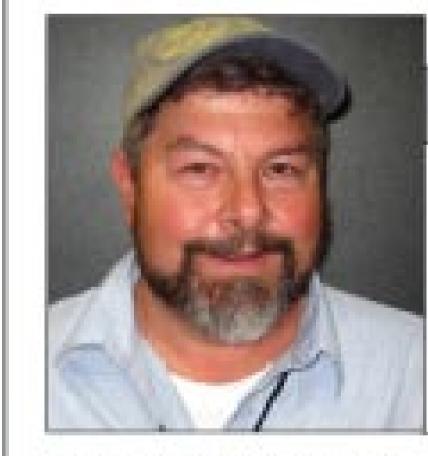
They pay for it ahead of time and it's budgeted. And all of a sudden, they're not calling you up so much. They're happy, and you know you have this job every other month or so. It's easy to schedule and provides a steady revenue stream. You're a happy little guy.

"We show clients the numbers in a proposal to help them understand the benefits of regular maintenance. Say they're spending \$5,000 a year on calls, and you can offer a maintenance program that's half the cost. At the end of the year, they've saved \$2,500 and they're going to think you're the best plumber that ever walked down the street.

"Plus, they won't be disrupted on Valentine's Day – that's a great day for a restaurant to have a sewer blockage. Or a butcher shop on Memorial Day weekend. People come in to buy their steaks for grilling and there's sewage running down the aisles. Plus, you'll be home for the holiday instead of out on an emergency call."

"We sell products that help customers keep their drains open and clean," reports Marty Brewer, co-owner of Brewer's Septic & Portable Toilets in Ovid, N.Y. "It makes them aware that maintenance is required to keep drains flowing. We also leave a

brochure behind on each



Marty Brewer

Owner
Brewer's Septic &
Portable Toilets,
Ovid, N.Y.
Employees: 9
Years in business: 30

job site. We buy the brochures from a product manufacturer.

"We also use our inspection camera to educate customers. After we camera a sewer line, we always show the homeowner or commercial owner what we found and what they can do to correct the problem. It's more effective than anything else we do.

"A picture is worth a thousand words, believe me. When they see you pulling out a 4-inch-thick plug of grease from a 12-inch line and it looks like a boat coming out, they're like, 'How'd that get there?'

"I think education is a big point. It makes customers respect you as a professional – they realize that you're actually trying to help them out. Educating them also helps sell them on a regular maintenance program. We'd much rather do regular maintenance. Scheduled work is going to cost them way less than one emergency call."

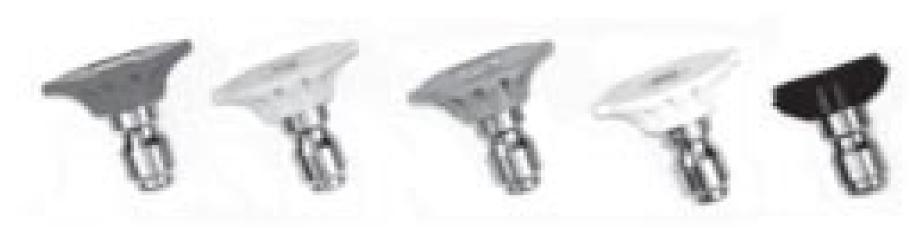
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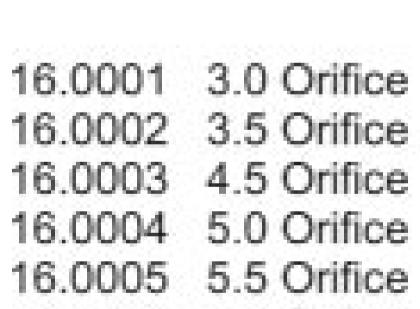
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Online Contracts

If you sell goods or services online, you need to give buyers a way to understand and accept your terms and conditions

By Fred S. Steingold

Fred S. Steingold practices law in Ann Arbor, Michigan.

He is the author of Legal Guide for Starting and Running a Small Business and The Employer's Legal Handbook, published by Nolo. Legal strategies may vary depending on the state in which you live and the specifics of your situation. See your lawyer for legal advice.



or centuries, business contracts have been written on paper. Today, however, more and more contracts are formed electronically. The computer is quickly replacing the paper-and-ink world.

Online contracts are enforceable, so long as they meet the usual requirements of contract law. For example, there must be a meeting of the minds. And there must be consideration – legalese for an exchange of things of value, such as money in exchange for goods or services.

If you're selling goods or services online, how can you help ensure kinds of goods or services you're selling. You'll probably want to state the nature of warranty you're offering, if any. And you may also want to include some disclaimers to limit your liability. Getting the contract terms in good shape will usually require a lawyer's help. You can get a head start by checking the terms offered online by businesses similar to yours.

The next step is to post your contract terms online in a way that lets buyers accept them and be bound by them. Although this can get a bit technical, it's not hard to do. Attorneys Michael Khoury and

Agree" to the contract terms, or "I Accept" them.

Arrange for your contract terms to appear automatically on the buyer's screen before he or she can agree to them. Or require the buyer click on a link to your terms before he or she can accept them. You don't want the buyer to claim later that your terms were hidden away somewhere on your site.

Don't rush the buyer. He or she should be able to read the terms at a leisurely pace. It's a mistake to have the terms disappear after 15 or 30 seconds. Finally, the buyer should be able to easily return to the terms

terms just above the "I Agree" button.

Give the buyer a chance to reject your terms. Offer the buyer a choice of accepting or rejecting your terms. For example, alongside the "I Agree" button, you might have an "I Reject" button. If the buyer rejects your terms, that should be the end of the transaction: You don't want to provide goods or services to someone who refuses to accept your terms. Make the rejection wording as clear as the acceptance wording. Instead of the words "I Reject," you might prefer "I Do Not Agree," or "I Decline."

If you're selling goods or services online, how can you help ensure that you and the buyer have a binding contract?

Your first task is to come up with a set of contract terms to post on your Web site. Your terms become an offer.

If the buyer accepts your terms, you have formed a proper legal contract.

that you and the buyer have a binding contract? Your first task is to come up with a set of contract terms to post on your Web site. Your terms become an offer. If the buyer accepts your terms, you have formed a proper legal contract.

The content of your contract terms will vary, depending on what

Sarah Weston have compiled a number of practical suggestions. Here is the essence of their wisdom:

Make your contract terms easy to find. You want the buyer to acknowledge that he or she will be bound by your contract terms. Typically, you'll do this by having the buyer click on a button that says "I

in the future, and to save or print them.

Be sure terms are clear and consistent. See that the contract terms appear clearly on the buyer's computer screen – and that they can be printed out in legible form if the buyer chooses to do so. And make sure the marketing materials you display on your site don't contradict the terms you've posted. For example, don't offer a six-month warranty in your contract terms, but promise a one-year warranty elsewhere.

Pay close attention to the assent format. Just before the place where the buyer agrees to your terms, emphasize that this will be a legal contract. You might say, for example: "When you click the 'I Agree' button, you'll be entering into a binding contract." It's wise to require the buyer to read – or at least scroll through – the terms before being able to agree. And it makes sense to summarize the contract

Keep good records. You may need to prove someday that you properly informed the buyer of your terms, and that you provided a way to accept or reject them. Keep records of your agreement process, including both the terms you post online and how the process works. Be able to show what steps the buyer had to take to view the terms, and what terms were in effect at the time.

Use caution in changing contract terms. Once you and the buyer have formed a contract, you typically can't change the terms by yourself. This is especially true when you're selling services. As with a paper-and-ink contract, you need the buyer's consent.

Posting a notice of a contract change isn't good enough. You can't require the buyer to continually monitor your Web site for possible changes.







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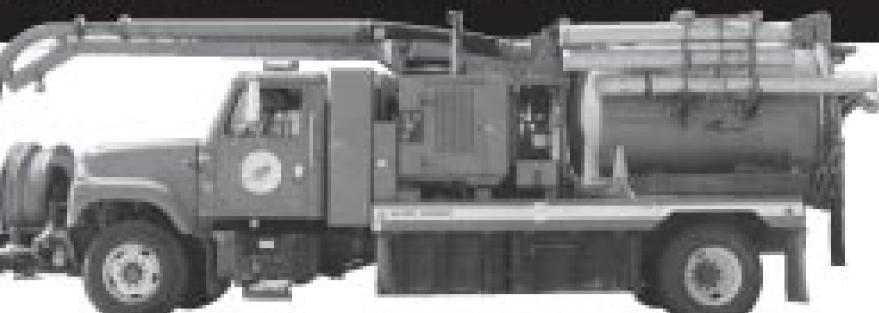
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1992 Western Star Combo

Truck: 280 hp, 1995 Super Products Camel, 16-yd. debris, 6-24 blower, 1500 gallon water, 65@2000 psi Myers pump.



1991 Camel Combination Cleaner w/1986 Mack: 80 gpm @ 2000 psi. 1,500 gal. poly tank, 1" x 600' hose, TigerTail/ MiniMissile.

1993 Ford LNT 8000 Vactor Combination: 80 gpm @ 2000 psi, 1,500 gal. alum. tank, 1" x 600" hose,

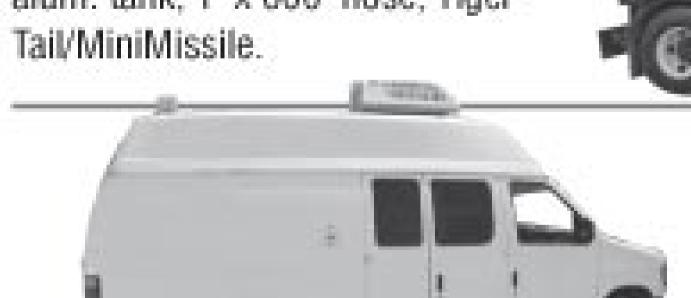
TigerTail/ MiniMissile.



2007 Sterling Combo Truck:

335 hp, 2008 Super Products Camel, 16-yd. debris, 6-24 blower, 1500 gallon water, 80@2000 psi Myers pump.

1996 Ford L8000 Vactor Combination: 87,500 miles. 80 gpm @ 2000 psi, 1,500 gal. alum. tank, 1" x 600' hose, Tiger-



1994 Ford Cargo Van: 1994 7.5 Onan gas generator, 1996 RST TV equipment. Many extra TV components included.

1994 Isuzu Step Van: 2000 Onan 10K diesel generator, 1996 RST TV equipment. Many extra TV components included.





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McElroy Adds Build and **Price Internet Feature**

McElroy has added a build and price feature to its Web site, www.mcelroy.com. The feature enables contractors to build and price fusion machines and pipelining accessories, as well as choose the cylinder force desired. Information can then be sent to the distributor of choice for a quote.



Mr. Rooter Named to AllStar Franchise List

Mr. Rooter Plumbing has been named to the second annual AllBusiness AllStar Franchise list compiled by Dun & Bradstreet's subsidiary, AllBusiness.com. The ranking lists the nation's top 300 franchises, based on financial strength, system size, franchise unit growth rate, availability of financing, Web visibility as well as years doing business and years franchising. Mr. Rooter ranks 132 on the list.

Sewage, Wastewater Construction at Record Levels

Sewage and wastewater construction is expected to remain at historically high levels, according to FMI's Construction Outlook: Fourth Quarter 2009. Report. The market has more than doubled in size in the past decade, from \$10.1 billion in 1999 to \$25.7 billion in 2009. Slow, steady growth will push the market to \$32.1 billion in 2013. Driving the projections are Environmental Protection Agency estimates that the nation needs to invest \$202.5 billion to update and improve wastewater systems and funding from the American Recovery and Reinvestment Act that will award the EPA \$4 billion to construct wastewater infrastructure. The greatest areas of need are the rehabilitation of sewer networks and wastewater treatment plant upgrades. To view the report, go to www.fminet.com/assets/FMI2009Q3Outlook.pdf.



Nolan Blalock

SPIR STAR Promotes Blalock to Outside Sales Rep

SPIR STAR Ltd. has promoted Nolan Blalock to outside sales representative. He will be responsible for assisting in the development of the company's sales strategies, promoting the SAMI Instruments high-pressure valve line and helping maximize customer satisfaction. Blalock brings several years of sales experience to his position.

Millers Win Flat Screen TV from 1-800-PLUMBER

James and Judi Miller of Tuttle, Okla., were winners of the 42-inch flat screen TV drawing from 1-800-Home Services Group Ltd. at the 2010 Pumper and Cleaner Environmental Expo in Louisville. More than 1,500 individuals participated in the drawing by completing a registration form at the Expo.



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Multitaskers

Three Vac-Con combination trucks give Russell Reid productive performance and high job site flexibility

By Ken Wysocky

n the infrastructure-heavy markets where municipal and commercial cleaner Russell Reid operates, business opportunities are plentiful. To capitalize, the company, based in Keasbey, N.J., relies on multitasking combination trucks that are as flexible as the vacuum hoses they carry.

"We wanted the flexibility to take on unusual jobs, like cleaning grease traps on the third floor down in an office building basement," says Mitch Weiner, CEO.

Machines

three almost identical trucks built by Vac-Con Inc. on Peterbilt 330 chassis. Each truck (2003, 2004 and 2005 models) has an 11-cubic-yard debris tank, Dresser Roots positive displacement blower that generates 4,200 cfm at 16 inches Hg, and a variable-flow jetting unit that delivers up to 50 gpm/2,000 psi.

So, the company invested in

Built to produce

Weiner says the trucks were specified to maximize productivity

and durability. For example, a high-dump option using a scissor lift under the debris tank lets the trucks off-load waste on site instead of wasting time traveling to and from a disposal site.

"In the market where we work, you typically can't dump waste on the job site," Weiner explains. "So you need to take it to a transfer station or disposal facility. To avoid that, we dump waste into roll-off containers.

"The scissor lift raises the debris tank high enough to perform a good dump and discharge the contents. Before, we used to back the trucks up onto wooden ramps, which was time-consuming and dangerous."

The trucks also have air-ride suspensions that give drivers a comfortable ride and help cushion the trucks from the constant jarring and bouncing they endure when the debris tank is empty, which is much of the time.

"It's abusive," Weiner says.

"That boom really bangs around, so

MONEY MACHINES

OWNER:	Russell Reid, Keasbey, N.J.
FUNCTION:	Pipe, basin, tank and grease trap cleaning
VEHICLE TYPE:	Combination trucks
MANUFACTURER:	Vac-Con Inc.
PRIMARY FEATURES:	11-cubic-yard debris tank; 4,200 cfm/16 inches Hg Dresser Roots PD blower; 50 gpm/2,000 psi water system
COST:	\$268,000

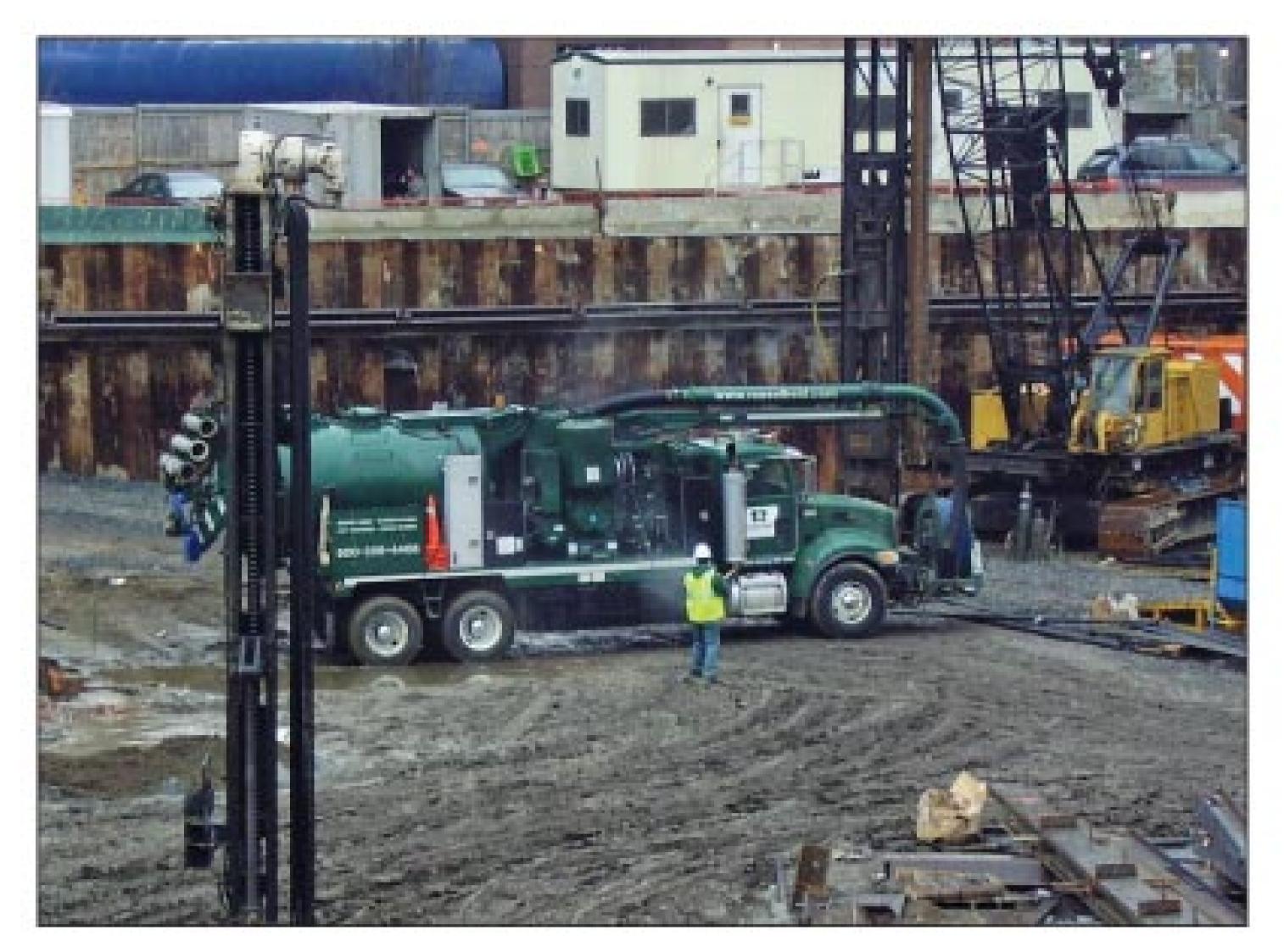


to the extent that we can soften the ride, things will last longer. A lot of people think air suspension makes trucks less stable on uneven ground, but that's not the case with these trucks."

Two power sources

The trucks get another productivity boost by using separate diesel engines for power vacuuming and jetting. Before, the company's trucks used one engine for both functions. That made it difficult when a cleaning job required, for instance, maximum vacuum power from the blower and minimum, low-volume capacity for jetting.

"To accomplish that, we had to use valves and controls to bypass the engine, which was not a very elegant solution," Weiner says. "Separate control of the blower and jetter make the trucks more flexible for the different kinds of work we do."



The Vac-Con combination trucks are designed to help company work crews operate efficiently in a wide variety of industries and work settings.

That work can vary greatly. About 30 percent of the workload involves cleaning storm and sanitary sewers, and the rest is cleaning lift stations and holding tanks.

"Occasionally, we have to empty a subterranean holding tank that's way below grade, under a high-rise building in the middle of a big city," Weiner says. "It's basically a lift station that ejects sewage up to the sanitary sewer line. It's very specialized work.

"The truck sits in the street, and we might have to run 300 feet of hose down two flights of stairs and into the tank. We need significant airflow to convey waste such long distances. We also clean day tanks,

which collect sewage during the day, when treatment plants are overburdened, then get pumped out at night, when the flow is lower."

No matter what's required, this trio of multitaskers is up to the challenge.

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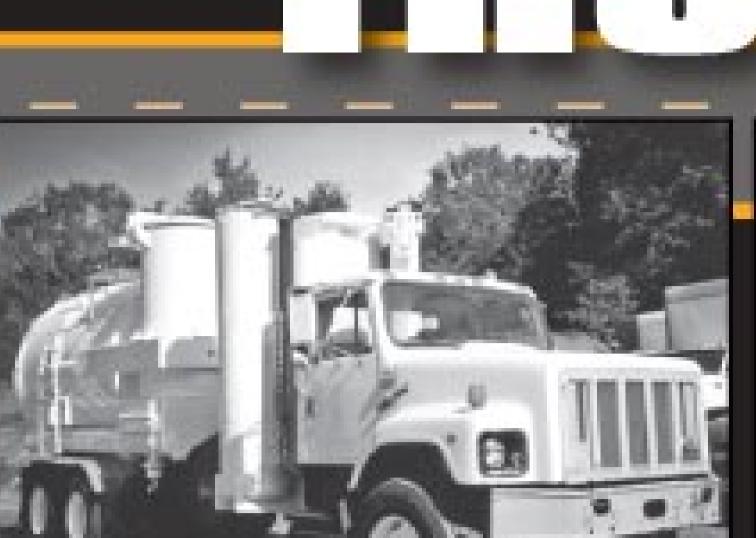
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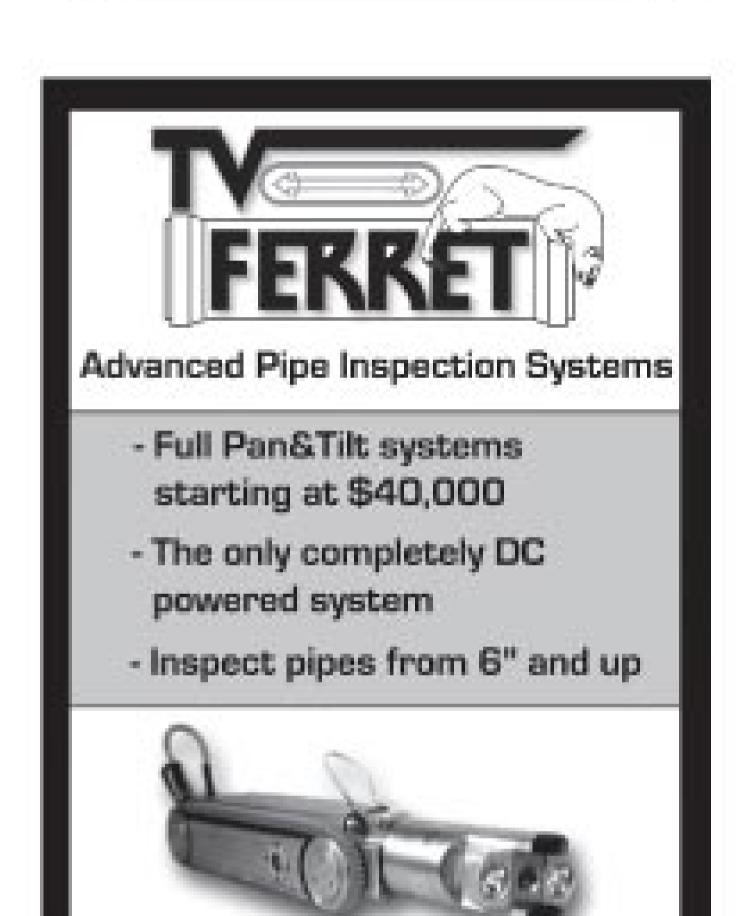
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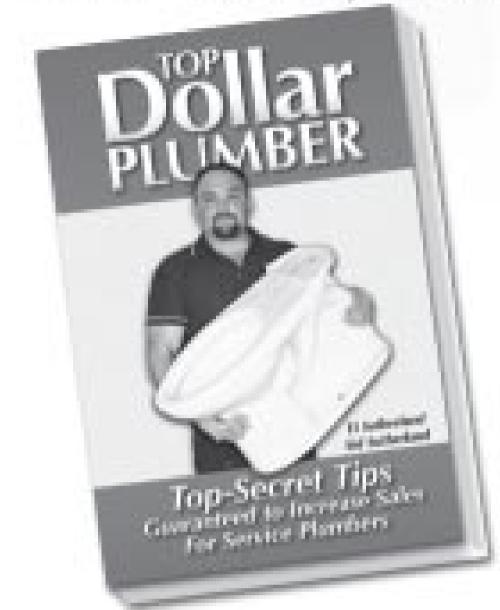
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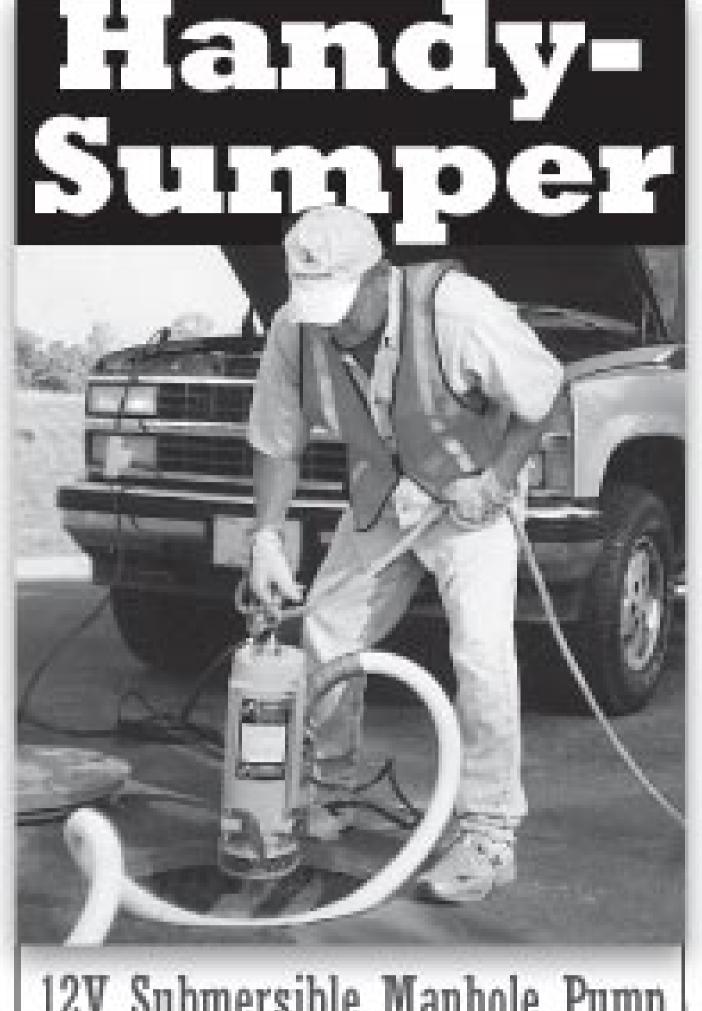


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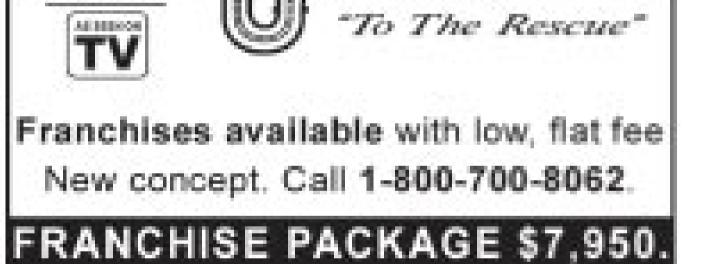
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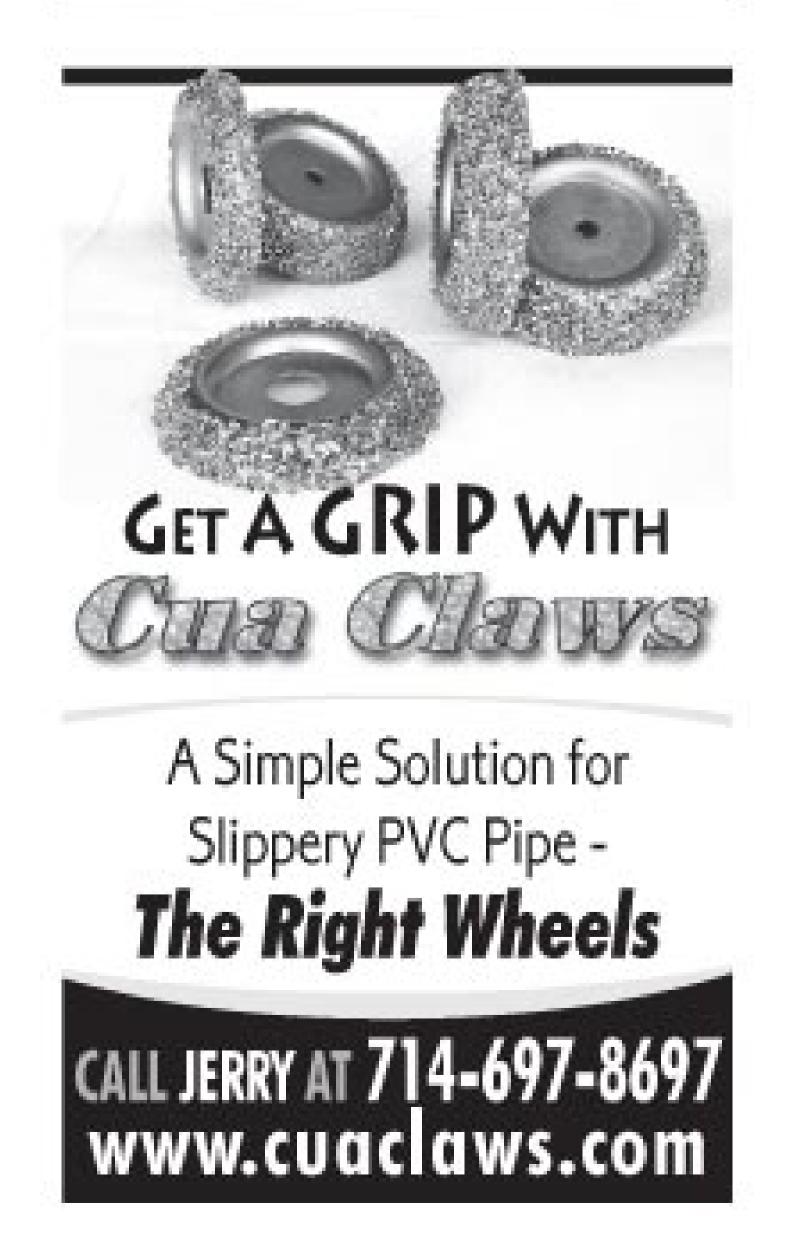
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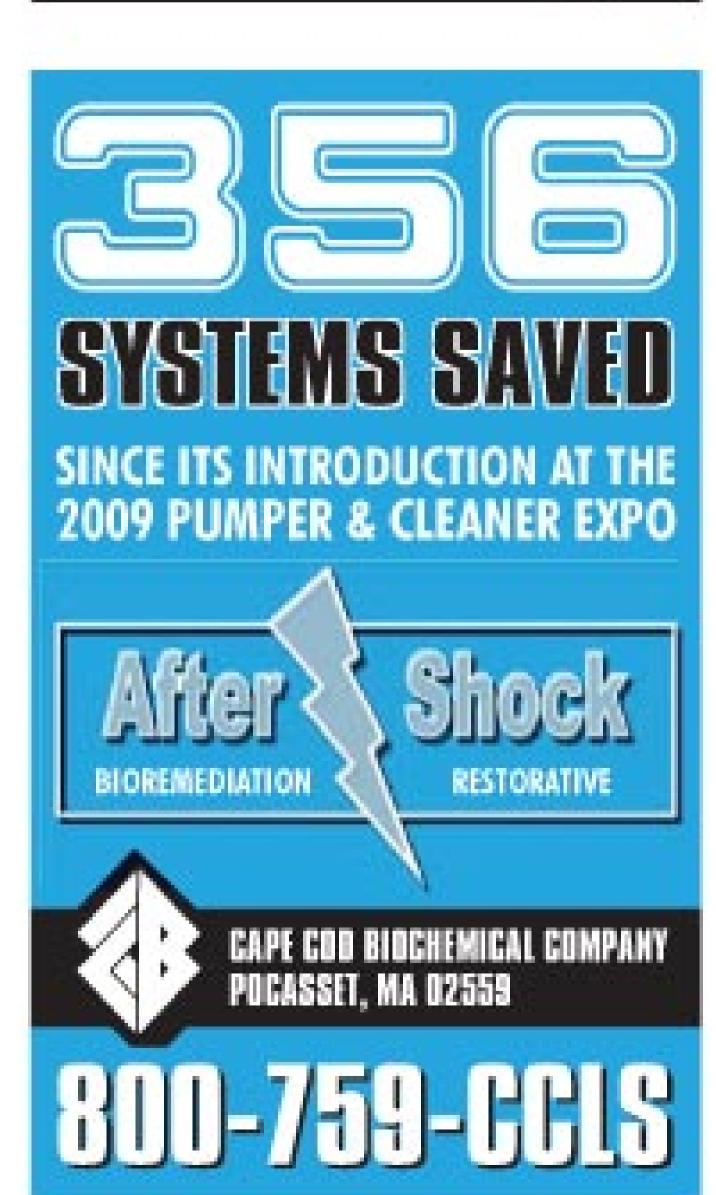
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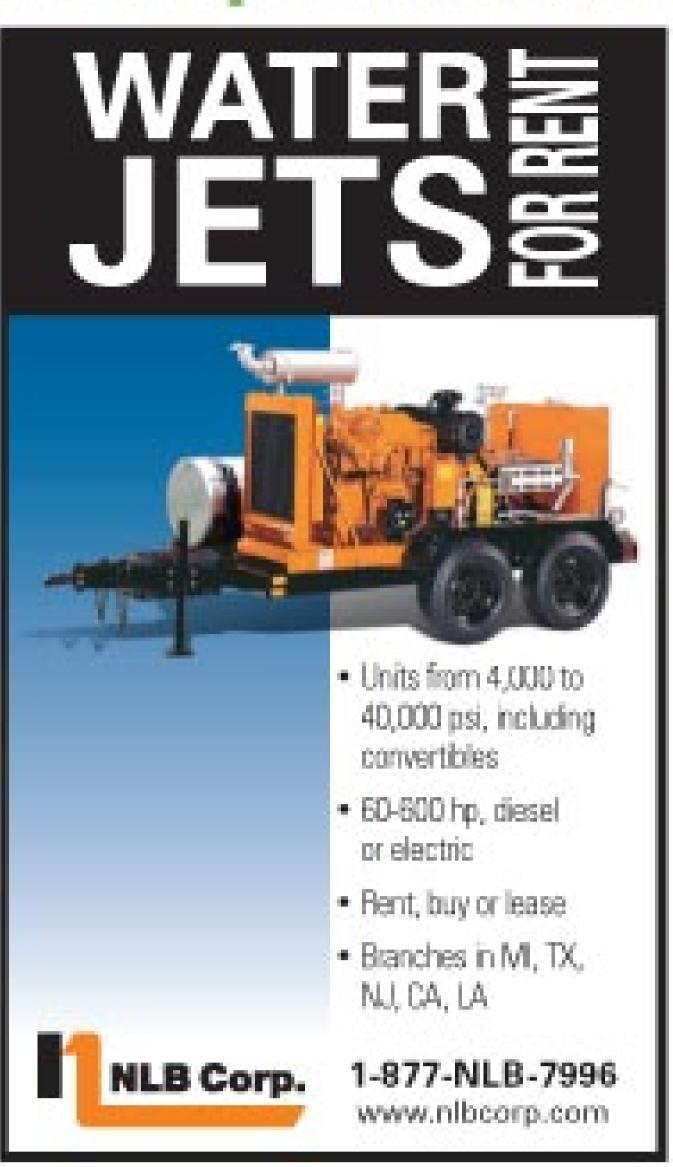








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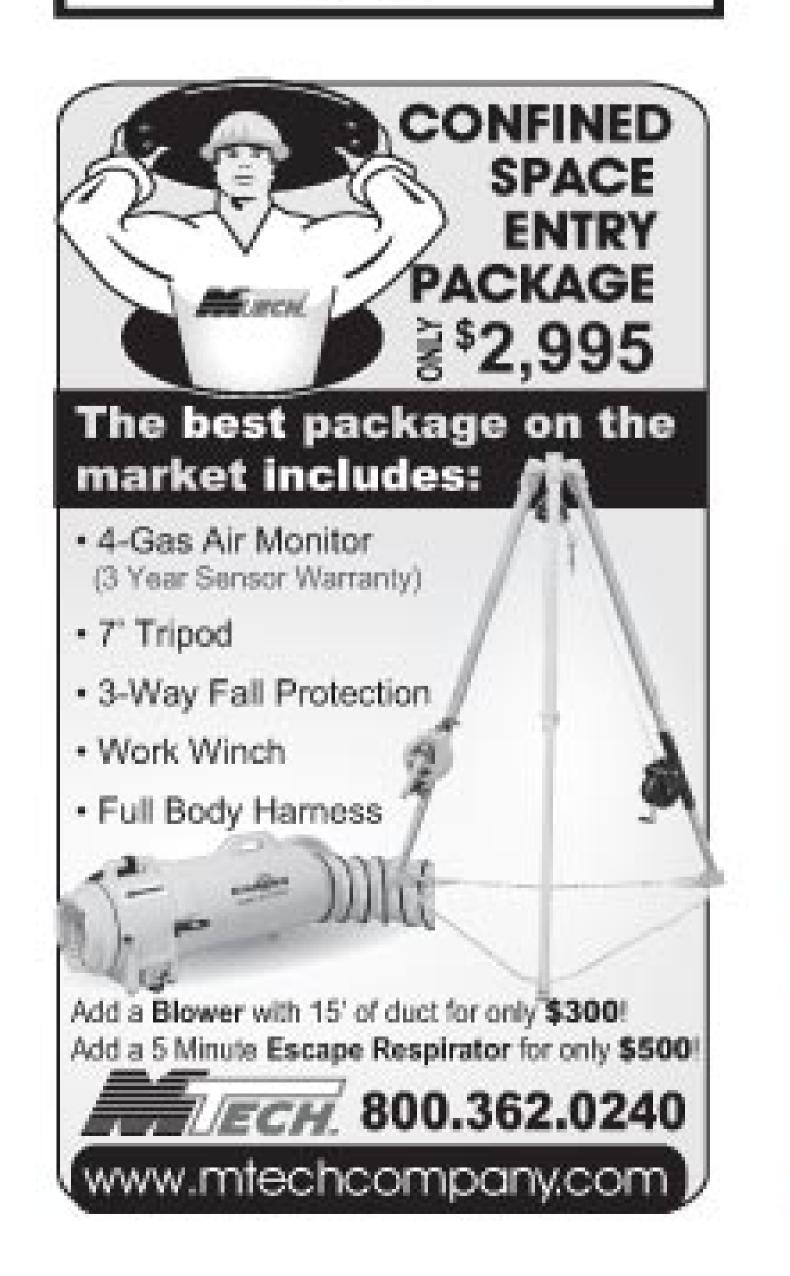














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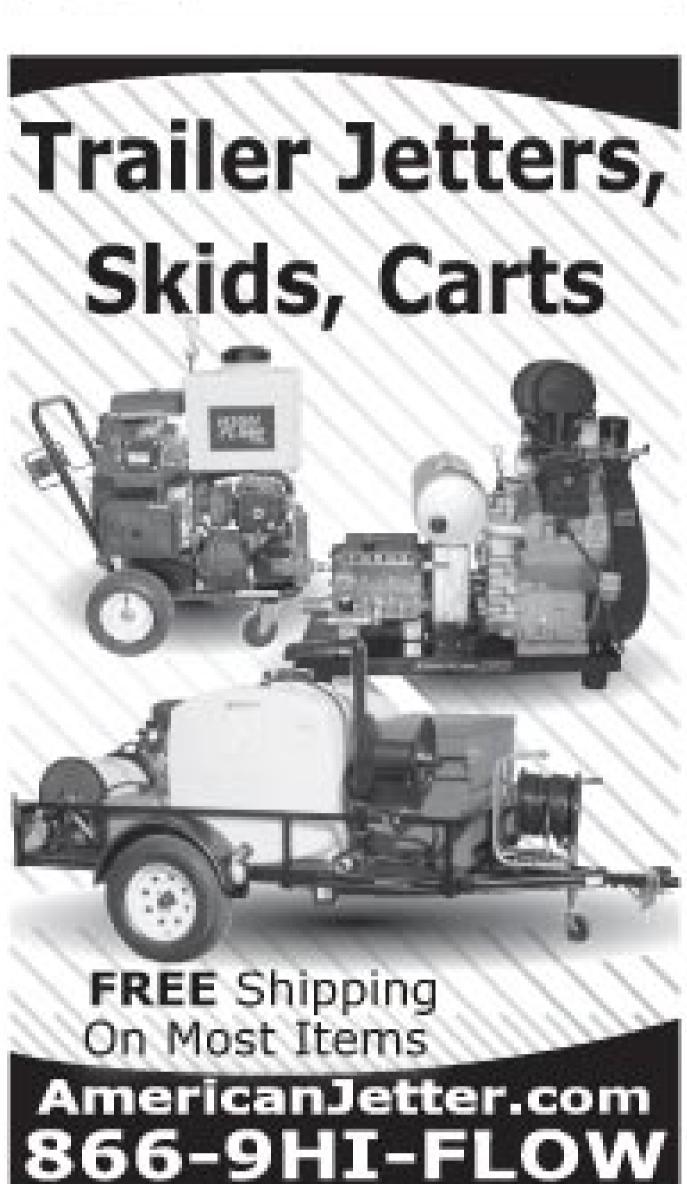
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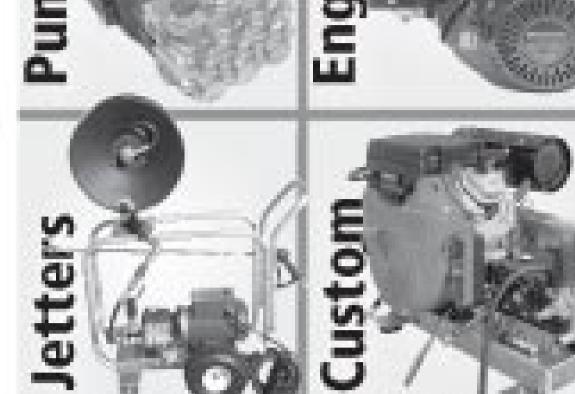
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North Carolina Septic and Installation Business for Sale. Showing good growth over the past 3 years. Includes all equipment to operate, extensive customer list, and owner is willing to train if necessary. Asking \$110,000. E-mail jeffb@colepublishing.com or call 800-257-7222 and ask for Jeff Bruss for more details. A B2 Business Brokerage Listing.

(CBM)

Very successful established Midwest based full service Trenchless Sewer Company with municipal and industrial experience and contacts available for acquisition. Serious confidential inquiries only. Please respond to P.O. Box 154283, Irving, TX 75015-4283 or email: cippcompany@yahoo.com.

(CM6)

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potential buyers in the liquid waste, portable sanitation, and sewer & drain industries, as well as your local markets, the Internet and other venues. No upfront fees — you don't pay unless your business sells. To learn more about brokering your business through B2 Business Brokers powered by

Cleaner, call 800-257-7222. (CBM)

Houston Texas Area Septic & Drain Business For Sale. Grossing nearly \$300,000 annually and showing growth. Established commercial clients and customer list. Includes all equipment to operate, a turn-key business. Huge potential, owner is motivated and moving on - asking \$140,000. Email jeffb@colepublishing.com or call 800-257-7222 and ask for Jeff Bruss for more details. A B2 Business Brokerage Listing.

(CBM)

BUSINESSES

Looking to buy a business in the liquid waste, portable sanitation, or sewer & drain industries? Call B2 Business Brokers powered by Cleaner at 800-257-7222 and we can add you to our VIP buyer list. No obligation, no fees, no pressure. (CBM)

CANTON, OHIO AREA SEPTIC, DRAIN & PLUMBING BUSINESS FOR SALE. Septic, drain cleaning, inspection, portable restroom and plumbing business for sale. Great revenue history and priced right. Excellent opportunity to expand or start your own business. Includes all service trucks, nearly 100 restrooms, holding tanks, drain & sewer equipment, all office equipment and computers, customer list, and more — a true turn-key or easy expansion opportunity. Current owner is moving into a new profession. Offered at \$165,000 for a quick sale. E-mail jeffb@cole publishing.com visit www.Btwo.biz or call 800-257-7222 and ask for Jeff Bruss for more details. A B2 Business Brokerage Listing.

(CBM)

Service and Repair Company for sale, turnkey operation, six trucks, established 1985. Located in Hilton Head Island, SC. Call 843-683-6001 anytime. (C7)

Philadelphia/Allentown Pennsylvania Area Sewer Business For Sale. Specializing in collection systems, video inspection, jetting, municipal work. Includes CUES TV & grout truck, Sewer Equipment Corporation jetter truck, Vactor 2100, RIDGID carnera, confined space equipment and more! Good revenue history. Great opportunity to expand or start your own business. Current owner wants to retire. Offered at \$330,000. E-mail jeffb@colepub lishing.com or call 800-257-7222 and ask for Jeff Bruss for more **B2** details. Business (CBM) Brokerage Listing.

Looking to sell your industrial cleaning, hydroexcavation or waterblasting business? We have buyers. Must have gross revenue in excess of \$1,000,000 annually. Nationwide interest. E-mail jeffb@colepublishing.com or call 800-257-7222 and ask for Jeff Bruss for more details. A B2 Business Brokerage Listing.

(CBM)

BUSINESSES

Northern California/Reno, Nevada Area Portable Restroom Service Business for Sale. Owner is motivated and inventory alone is worth the asking price. Includes 100+ restrooms, sinks, ADA units, holding tanks, 2 service trucks and a delivery trailer. Annual revenue in excess of \$100K each of the past 4 years. List of existing customers and contracts included. Owner is willing to train if needed. Asking \$75,000 -REDUCED TO \$55,000. E-mail jeffb@colepublishing.com or call 800-257-7222 and ask for Jeff Bruss for more details. A B2 Business Brokerage Listing. (C6)

Dallas/Fort Worth Texas Area Sewer/Rehab Business For Sale. Drain Cleaning, TV inspection, Pipeline & Manhole Rehab/ Relining, Municipal Cleaning and Maintenance business for sale. Excellent opportunity to expand or start your own business. Good revenue history and priced to sell. Includes all equipment to get started. Offered at \$150,000. E-mail jeffb@colepublishing.com www.Btwo.biz or call 800-257-7222 and ask for Jeff Bruss for more **B2** details. Business Brokerage Listing. (CBM)

pumping, grease trap, drain cleaning and other ancillary businesses wanted. We are buying well run businesses in New England, Mid-Atlantic and Florida. All opportunities will be given proper consideration. Confidentiality ensured. Will move quickly for the right opportunity. Serious inquiries only. Please contact Richard Bedard & Blue Water, 617-326-3344 or rbedard bwseptic.com. (CPBM)

Massachusetts Sewer & Drain Franchise For Sale. Confidential listing, Non Disclosure Agreement required. Turn-key business, good revenue — asking \$165,000. E-mail jeffb@colepublishing.com or call 800-257-7222 and ask for Jeff Bruss for more details. A B2 Business Brokerage Listing.

(CBM)

ARIZONA BUSINESS WANTED:

Qualified buyer looking to purchase existing industrial/municipal cleaning and inspection business in the Phoenix area. Will consider other areas in Arizona as well. If you are looking to sell, please call Jeff at 800-257-7222. (C6)

BUSINESSES

Green Bay Wisconsin Area Septic & Drain Business For Sale. Solid and steady revenue history and nearly 20 years established. Excellent opportunity to expand or start your own business. Includes very well-maintained 3,800 gallon septic service truck, fully outfitted 2002 Chevy drain service van, drain & sewer equipment, all office equipment and computers, 2,700+ customer list, and more - a true turn-key or easy expansion opportunity. Very meticulously maintained equipment all kept inside a heated shop. Current owner is retiring. Large shop and real estate is also available if desired at additional cost. Offered at \$249,000. E-mail jeffb@cole publishing.com, visit www.Btwo.biz or call 800-257-7222 and ask for Jeff Bruss for more details. A B2 **Business Brokerage Listing.**

(CBM)

REDUCED! MUST SELL DUE TO OWNER'S HEALTH. Drain cleaning, jetting, plumbing business for sale in Myrtle Beach, SC. 3 trucks, jetter, all equipment. Strong customer base. Will consider holding plumbing license. Willing to train. 843-997-5570. (CBM)

Well-Established and Profitable Texas Septic, Sewer & Installation Business For Sale. Grossing in excess of \$1,000,000 annually, customer list of nearly 2,000 accounts and 430 contracted customers. Includes nice late model equipment, most are 2007, 2008 model years. Real estate with rental income can be purchased separately if interested. Asking \$799,000. E-mail jeffb@colepublishing.com or call 800-257-7222 and ask for Jeff Bruss for more details. A B2 Business Brokerage Listing. (CBM)

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ROTO-ROOTER franchise for sale in TN. This area consists of Putnam and Cumberland counties. It includes the cities of Cookeville and Crossville. Contact Philip Harbin 423-593-2169. (C6)

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BUSINESS **OPPORTUNITIES**

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We can effectively market your business to more than 100,000 potential buyers in the liquid waste, portable sanitation, and sewer & drain industries, as well as your local markets, the Internet and other venues. No upfront fees you don't pay unless your business sells. To learn more about brokering your business through B2 Business Brokers powered by Cleaner, call 800-257-7222. (CBM)

Looking to sell your portable restroom business? We have buyers looking in the following areas; Florida, California, Virginia, Iowa, Kentucky, New York, Pennsylvania and more! Must have gross revenue in excess of \$250,000 in most cases. E-mail jeffb@colepublishing.com or call 800-257-7222 and ask for Jeff Bruss for more details. A B2 Business Brokerage Listing.

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PEARPOINT CRAWLER/CAMERA: P420 tractor and camera adaptor, P494 camera head, P599 drum with 1000 feet of cable, P489 power supply unit. Includes all cables from the hook up. Asking \$35,000 or MAKE AN OFFER. Photos and information available. additional Contact us at jnixon@terradiscov ery.ca.

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Harbin trailer hydrojetter with Warthog nozzle, 500' hose, 300 gallon tank, 416 hours, Hatz diesel, \$17,000. Call 505-780-4912. (C5)

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2 SECA trailer jets. Both have Myers 35 gpm, 2000 psi pumps. New paint on both. Located in Dallas, 972-938-1905, www.empire (CPBM) equip.com.

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1986 Aguatech SJR1500, GMC cabover with front reel, 26,100 miles, 2600 hrs. 60 GPM @ 2000, rebuilt pump. \$9,500 OBO. www.ahequipment.com

1982 Ford F350, V8 gas, manual trans., F. E. Myers Jetter, Ford 4 cylinder aux engine, 35 gpm @ 1800 psi pump, fixed hose reel with 300' hose. 515-864-1036.

Pipe Boss 3000 psi 30 GPM, 625 gal, 3/4" hose 600', articulating hose reel, 1997 GMC diesel/diesel, DC/AC convertor 2500 watt. Make an offer. 1-518-857-7420; http:// municipalsales.net/used_equip ment.html.

1994 Ford LN8000, diesel, automatic, single axle, about 14,000 miles, VERY NICE SRECO Model HV2000TM-H-A-P sewer jet with front mount PTO, 1,500 gal. poly water tank, 600' of 1" hose, 60 gpm @ 3000 psi water pump. 515-864-

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2005 Freightliner FL80, Cummins 8.3L diesel, Allison 3500 automatic, single axle, Sreco truck jet, about 11,000 miles/2,980 hrs., 1500 gal. poly water tank, 65 gpm @ 2000 psi Myers pump, rotating hose reel. Excellent condition, 515-864-1036.

RETIRING: 1987 Ford F-800 Jetter Truck, low miles, 1500 gallon, 36 gpm @ 3000 psi, new tires, arrow board, extras. Best reasonable offer. Jim 951-545-9604.

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2006 GMC TC6500 cab and chassis with Pipe Hunter trunk mounted jetting unit, 3000 psi @ 50 gpm with a 1,000 US gal. water tank, rear mounted hose reel with JET EYE camera system. 6,800 original miles, new new. \$129,000 sale price. (Retails for \$210,000). (Stock #13234V) www.Vacuum Salesinc.com, (888) VAC-UNIT (822-8648).

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(C5

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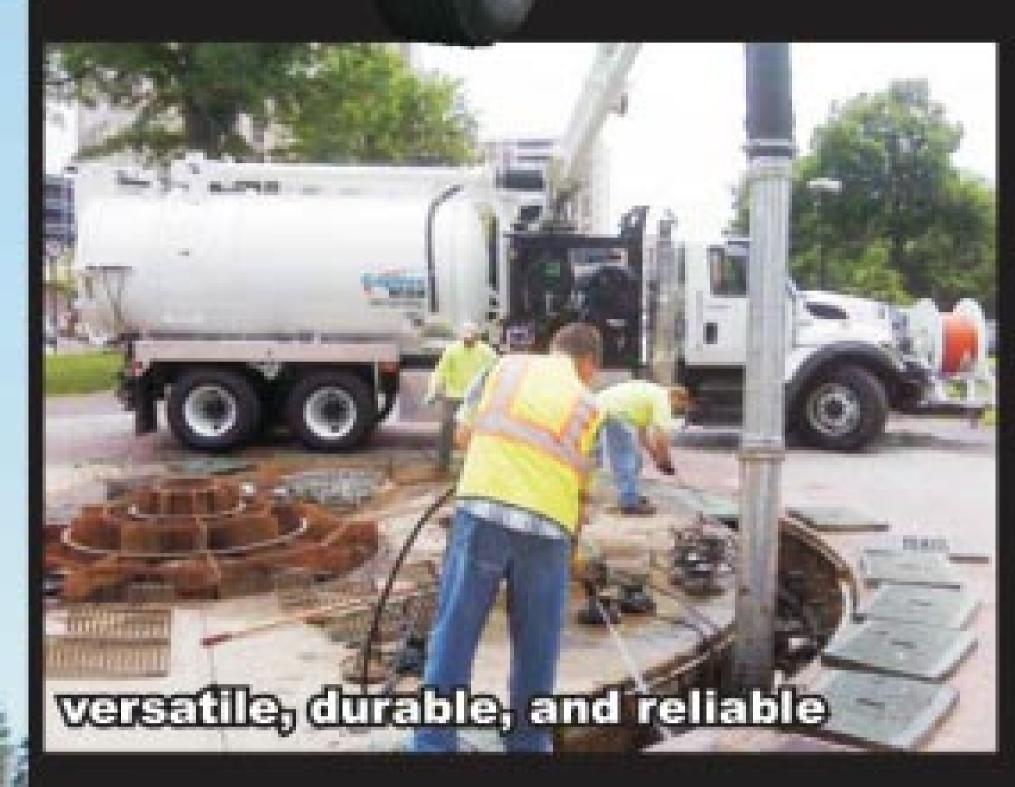
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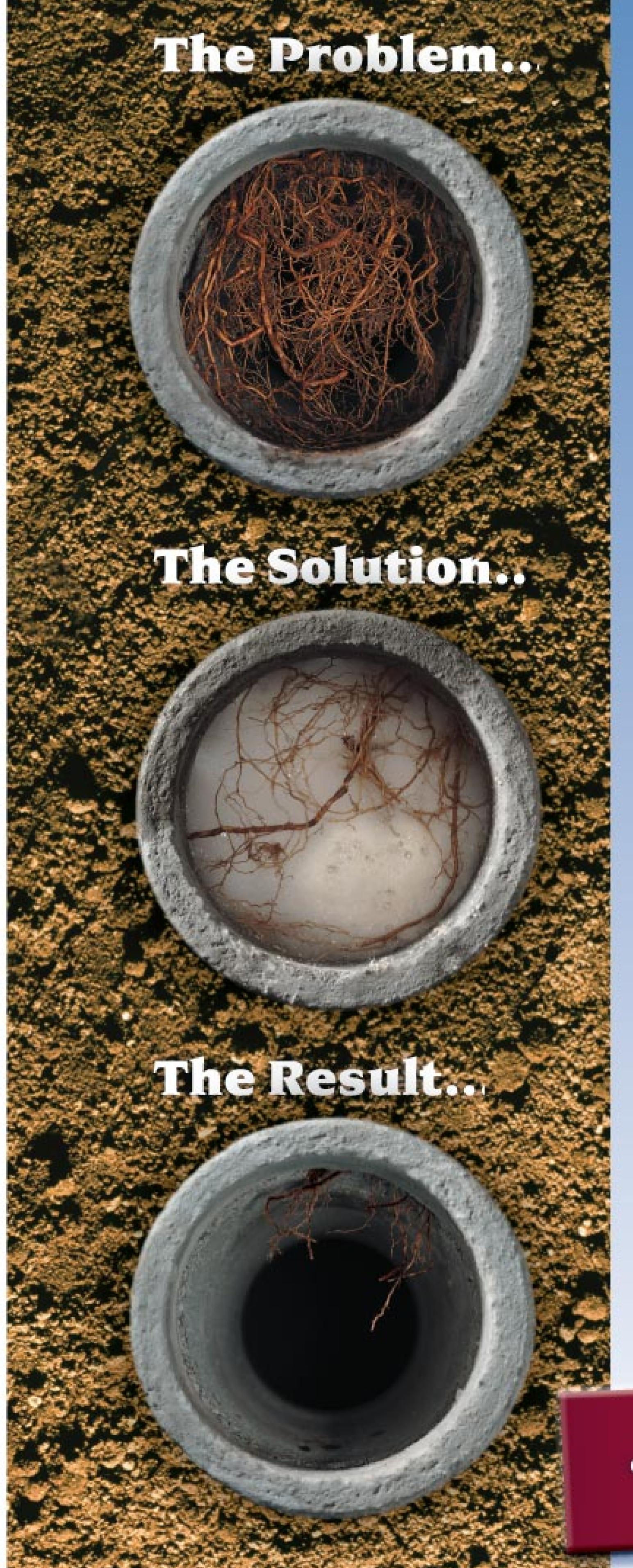
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I was with a customer yesterday who wanted to be able to do up to 6" lines and wanted to get an electric jetter. Well, we talked it over, and I suggested that for jobs that size, it'd be easier and safer to have the additional gallons and pressure of the gas-powered 727. That's a big benefit of being out here in the field. I'm glad I'm able to really help my customers understand what they need and why.

Tough Customer Preferred Product: 727 Mini Jet

With all the power and speed of larger water jets, this machine is ideal for heavy-duty jobs including cloth, paper, grease, lime, sand and sediment.

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Pressure: 3,000 PSIFlow: 4 GPM

