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MONEY MANAGER
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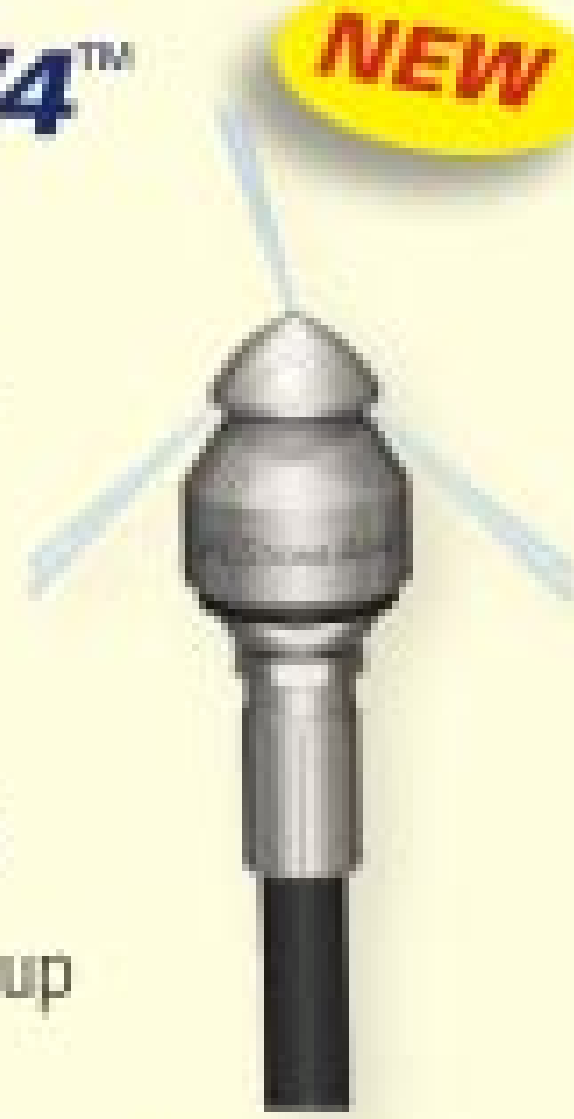
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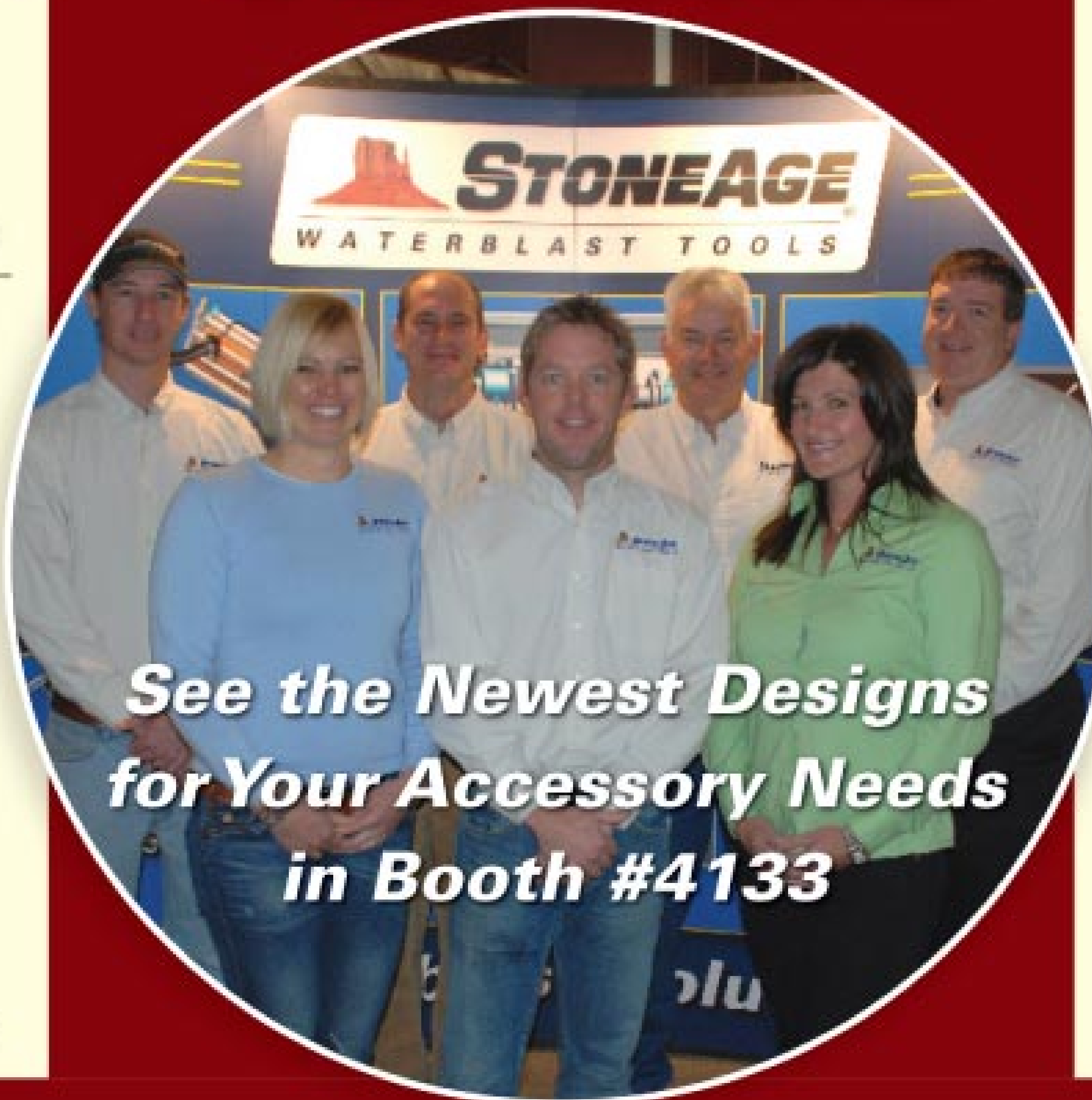
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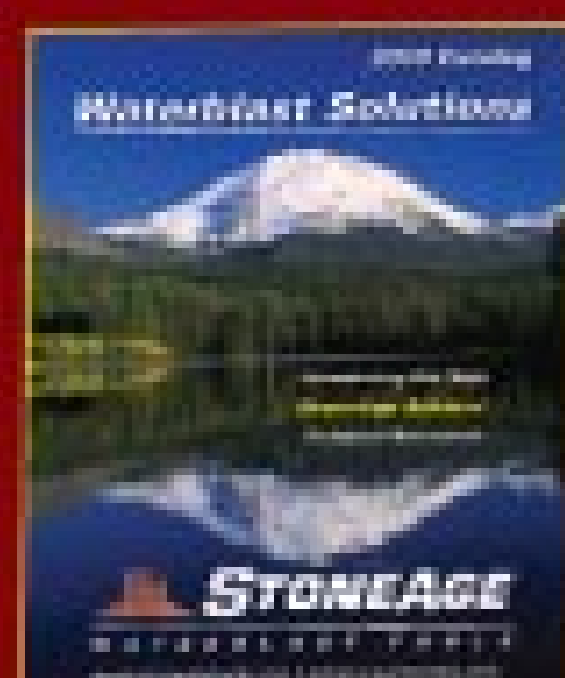
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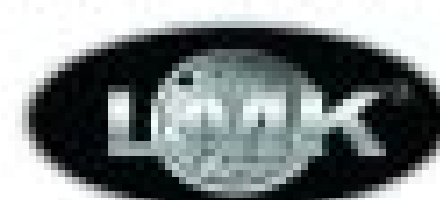
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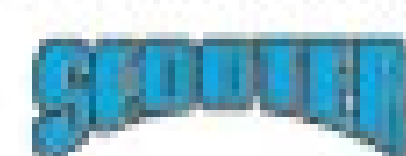


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Wisdom from the Fat Man

A line from an old movie with Paul Newman and Jackie Gleason is worth remembering when you need a pick-me-up after a fall



Ted J. Rulseh

On a fishing trip last July I had one of those humiliating days. My brother and I were working on a lake in Ontario one afternoon into evening. He caught several big northern pike in a row, while I caught nothing, despite using the same lure and casting to the same kinds of spots.

Then a cold front came and the fish shut down, although we kept at it for a few hours. When all was said and done, I had fished hard for five hours, in Canada no less, and could not catch a single northern pike. It wasn't that I begrudged my brother his catch. It was that I felt incompetent. Where fishing is concerned, I lose confidence easily.

Next morning, quite honestly, I barely wanted to get out of bed, and I dreaded going out on the water again. It was then I remembered the 1950s movie, "The Hustler," and some words from Minnesota Fats.

Double lesson

By way of background, the movie starred Paul Newman as "Fast"

Eddie Felson, a cocky young pool hustler, and Jackie Gleason as Minnesota Fats, the all-time great. The two hook up in an all-night, all-morning, high-stakes game at a pool hall in Ames, Iowa.

For most of the evening, Felson beats Fats repeatedly and takes him for a large sum of money. When they finally take a break, Felson looks sweaty, stubbled and worn. The Fat Man, in his suit with the rose in the lapel, also appears played out.

During the break, as Felson keeps drinking from his bottle of cheap whiskey, Minnesota goes to the back of the pool hall, washes his face, shaves, combs his hair, and freshens up his suit. When he returns to the

table, he looks as clean and groomed as when he had walked into the pool hall many hours earlier.

He looks at Felson, smiles, and

says, "Fast Eddie, let's play some pool." All that went before is forgotten. It's a brand new game. And Fats proceeds not only to win back the money he lost but also to take Fast Eddie's entire bankroll.

There's a double lesson here: a caution against letting arrogance take over, and a reminder that defeats happen to us all but are only temporary.

Getting back up

Minnesota Fats knew who he was. He knew that when on top of his game he would eventually beat anyone. Part of his mystique was his class: Even in a down-at-the-heels pool hall, he wore a three-piece suit with a flower in the lapel. His stan-

and confidence. Pick yourself up, dust yourself off, and start all over again. When you fall off your horse, get right back in the saddle. Champions keep playing until they get it right (that from Billie Jean King). When you come to the end of your rope, tie a knot and hang on (Franklin Roosevelt).

But I prefer the words of the Fat Man. When you fail one day, get up the next morning, shower and shave, put on a fresh suit of clothes, go face the world and say to yourself, "Fast Eddie, let's play some pool."

Ready to try again

That's what I did the morning after that disastrous outing on the

The thing we need to remember is that the person who failed that one time is not the sum and substance of who we are. We are the person who gets the job done, day after day; who in the final analysis is capable and successful.

dards never wavered. When he got beaten down, he came back stronger than ever.

Most of us over the years have learned that lesson one way or another. And yet when we have that rotten day (or week, or month), we still fall prey to low confidence, which if we're not careful can start a downward spiral.

The thing we need to remember is that the person who failed that one time is not the sum and substance of who we are. We are the person who gets the job done, day after day; who in the final analysis is capable and successful.

There are many ways to express the basic lesson about perseverance

lake in Ontario. I got into my rain suit and went out with my brother to cast the weedy bays for pike. I wish I could say we both slayed them, but the cold front had taken full effect, and the fish weren't cooperating.

But on a few casts, a fish followed my lure back to the boat, and that was enough. I knew then that my long day of failure was just one of those things. My Canada vacation is long over, but I'm ready to get back out there – just tell me when and where. After the next of your bad days, I hope you can say the same. ■

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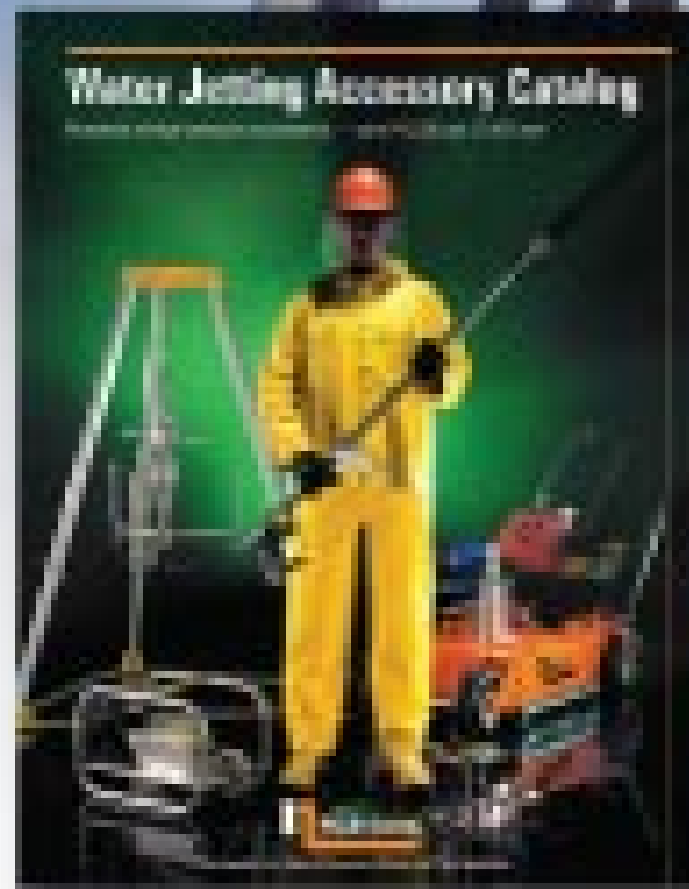
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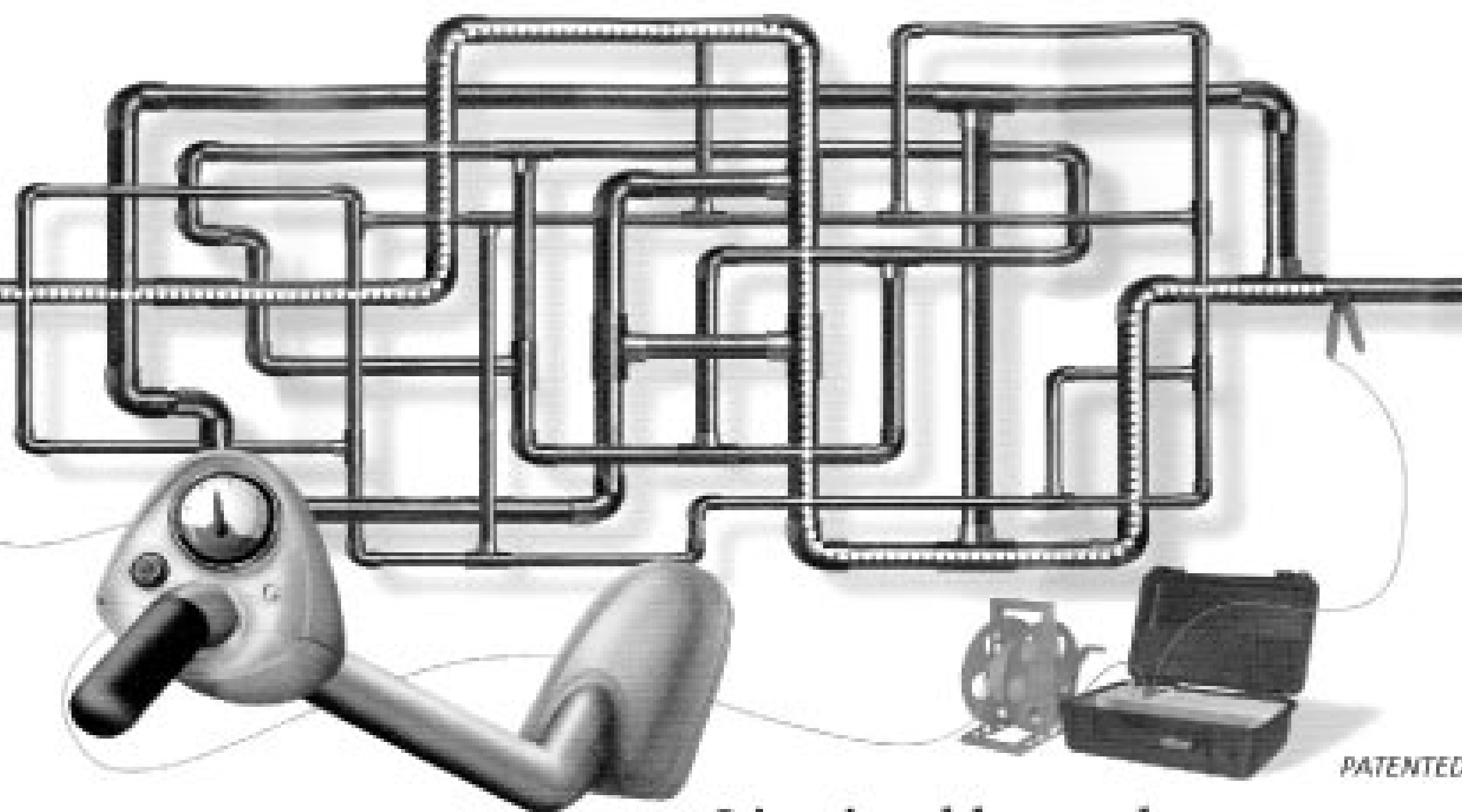
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Another View on Eye Protection

**Safety eyewear can do more than save vision:
It can help prevent infectious disease transmission**

By Ted J. Rulseh

There's more than one reason to wear proper eye protection on the job. Preserving vision is the obvious reason, but another for workers in the sewer and drain industry is to prevent infection.

where workers may be at risk of acquiring infectious diseases – and sewer and drain cleaners certainly face such risks from the many pathogens in wastewater. Infectious diseases can be transmitted through various mechanisms, including through the mucous membranes of the eyes.

Some of these viruses and bacteria can cause infection of the eyes themselves. Others can cause systemic infections. Pathogens can be introduced to the eyes by way of splashes, or from touching of the eyes with contaminated fingers. Ordinary prescription eyeglasses and contact lenses do not provide protection.

Safety glasses provide impact protection for the eyes but do not provide the same level of splash or droplet protection as goggles and generally should not be used for infection control.

For those who need prescription eyewear, many safety goggles and safety glasses fit comfortably over street eyewear. Prescription safety glasses with side protection are available, but do not protect against splashes or droplets as well as goggles. Special prescription inserts are available for goggles.

Contact lenses by themselves offer no infection control protection, but they can be worn with any recommended eye protection device. Workers who wear contact lenses should rigorously stick to hand-washing guidelines when inserting, adjusting, or removing the lenses.

Proper protective eyewear does provide a barrier to infectious materials.

What to wear

There are many kinds of eye protection, and the best kind for specific work situations depends largely on the nature and extent of the hazard. In general, eye protection must be comfortable, must allow for adequate peripheral vision, and must be adjustable to enable a secure fit. Employers may need to provide several types, styles, and sizes to accommodate different people and various tasks.

Appropriately fitted goggles with a manufacturer's anti-fog coating provide the most reliable practical eye protection from the splashes and sprays encountered in pipe cleaning. Newer styles of goggles may provide better indirect airflow to reduce fogging, and provide better peripheral vision and more size options.

Goggles must fit snugly, especially from the corners of the eye across the brow. Directly vented goggles may allow penetration by splashes or sprays, so indirectly vented or non-vented goggles are more appropriate for infection control.

Removing eyewear safely

Contaminated eye protection should be removed by handling only the portion that secures the device to the head (plastic temples, elasticized band, ties), as this material is considered relatively clean.

The front and sides of the device should not be touched, as these are the surfaces most likely to be contaminated by sprays or droplets. Non-disposable eye protection should be placed in a designated receptacle for cleaning and disinfection.

Where possible, workers should be assigned their own eye protection to ensure appropriate fit and to minimize the potential of exposing the next wearer.

Employers should keep track of incidents in which employees are exposed to splashes or droplets to the face. Incident reports should be reviewed to identify incidents that could have been prevented by the proper use of protective eyewear – whether or not actual infection resulted. ■

Appropriately fitted goggles with a manufacturer's anti-fog coating provide the most reliable practical eye protection from the splashes and sprays encountered in pipe cleaning. Newer styles of goggles may provide better indirect airflow to reduce fogging, and provide better peripheral vision and more size options.

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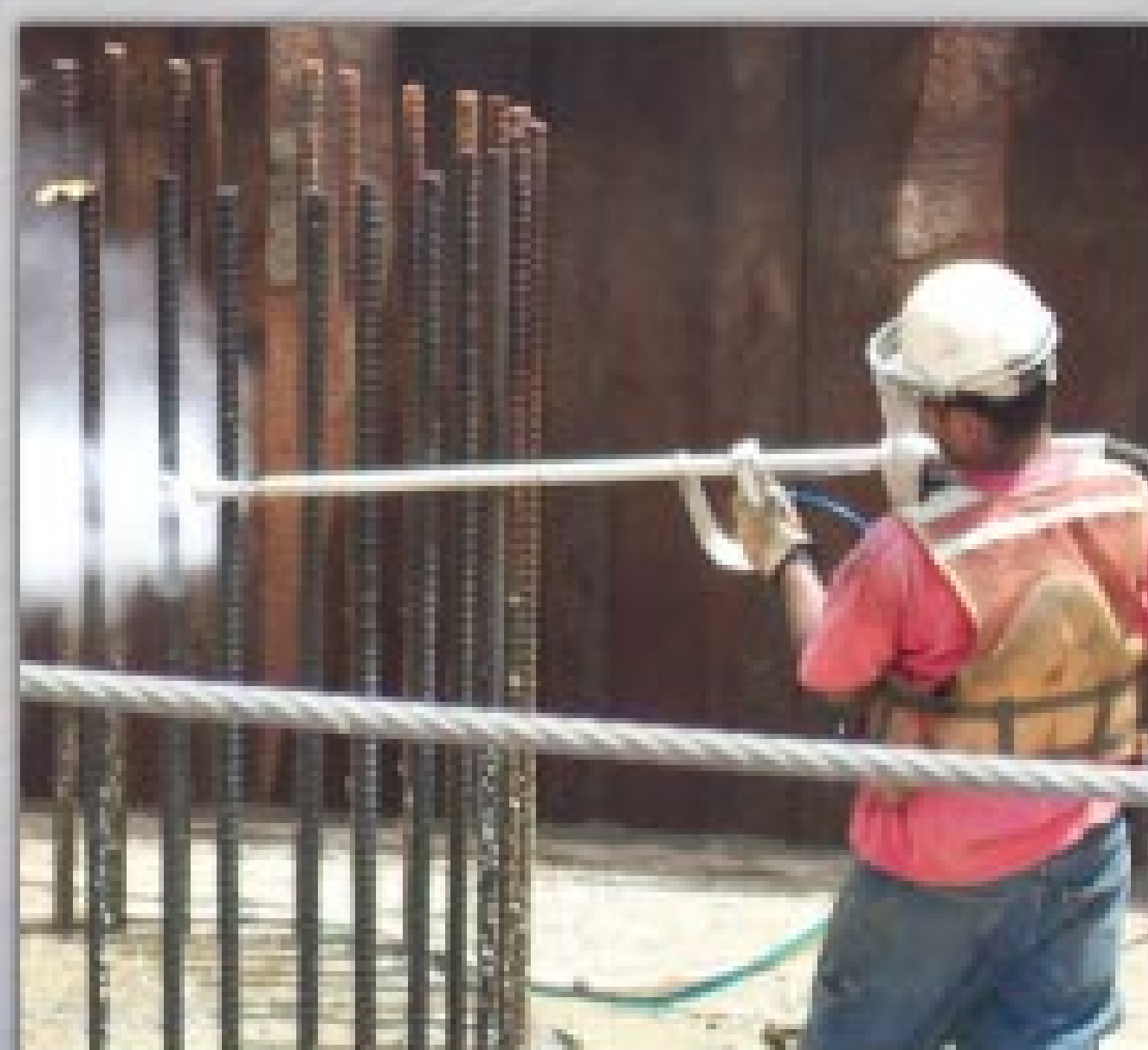
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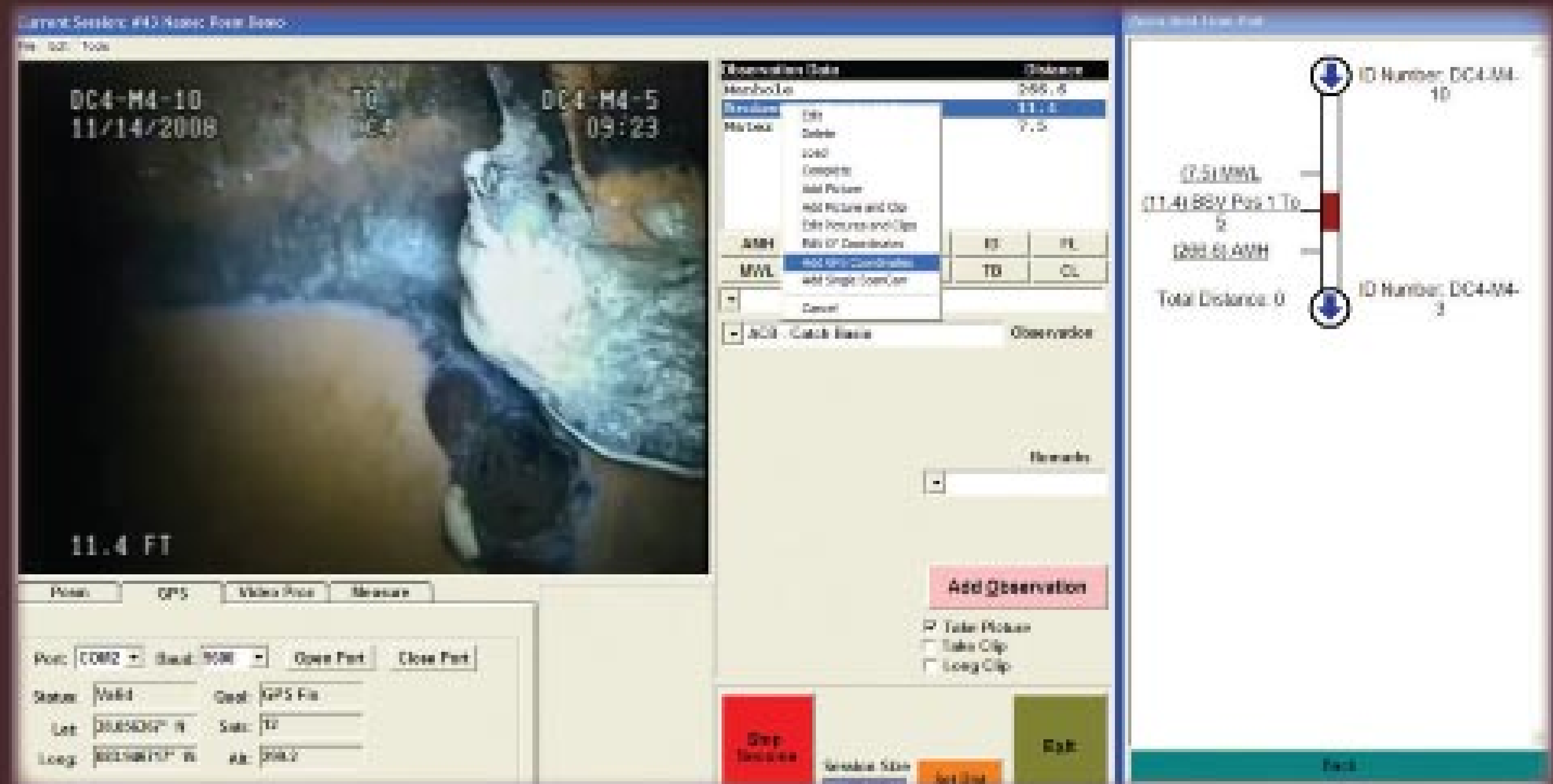
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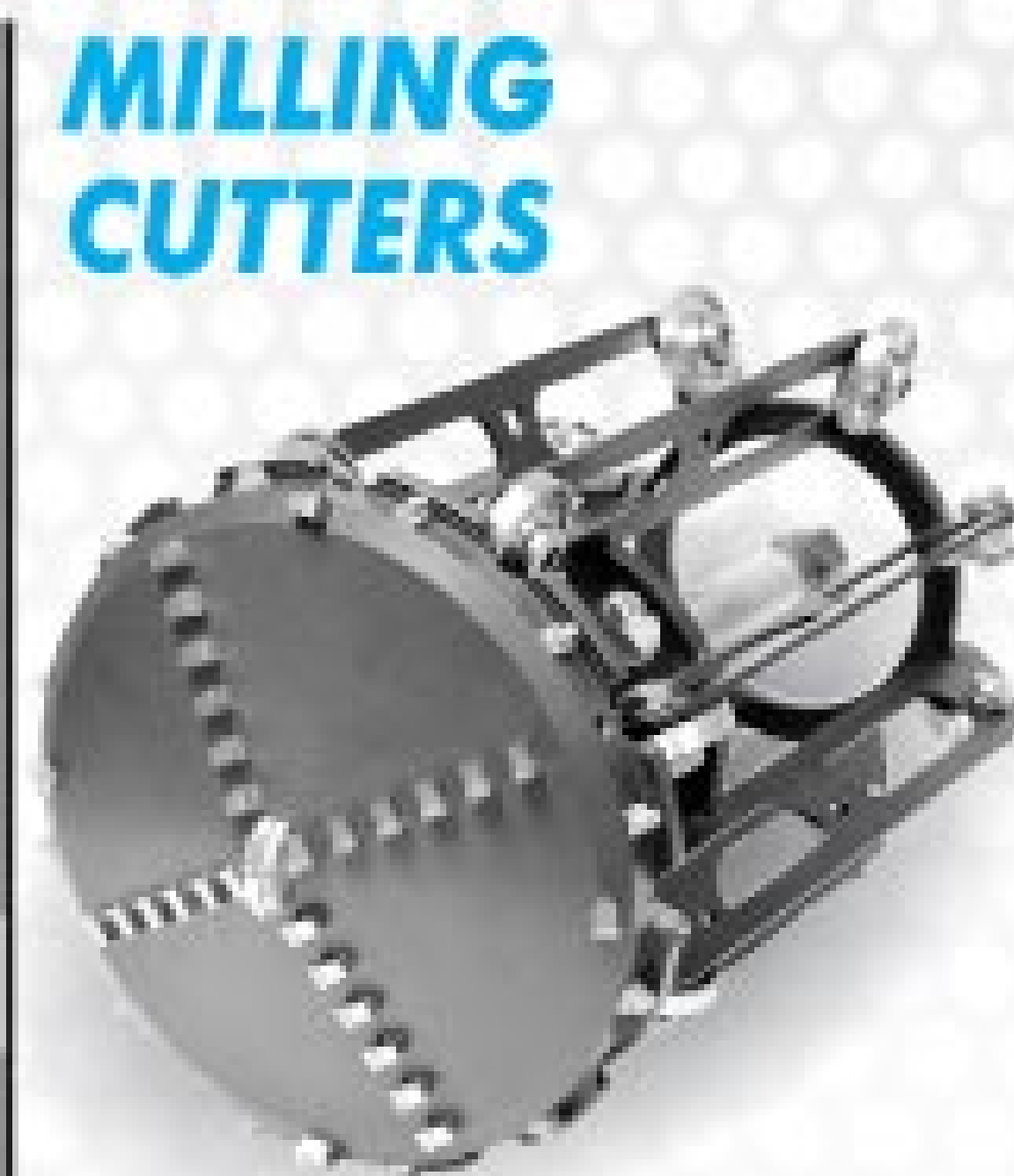
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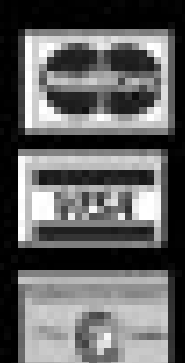
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Building an Edge

Seminars at the 2010 Pumper & Cleaner Expo focus on helping contractors improve business performance and profitability

By **Scottie Dayton**



A track of seminars presented by the Hunter Partnership Alliance (HPA) highlights the education lineup at the 2010 Pumper & Cleaner Environmental Expo International, Feb. 24-27 in Louisville, Ky.

The HPA workshops are part of Education Day on Wednesday, Feb. 24. The complete program includes 45 seminars presented by experts across the full range of environmental service industries. Seminars also are offered on Thursday and Friday mornings.

A summary of the HPA program follows. The presenter, Scott Hunter, is the company's founder and a business coach and speaker. For a complete seminar schedule, see the Expo pages in this issue of *Cleaner*.

Relationship is the Key!

Attendees will learn the art of creating and maintaining rich, meaningful, quality relationships within their organization, customers and prospects. Hunter will cover the nature of a paradigm and how it dictates attitudes and behavior, the source of the conversation in which participants live and how it affects their worldviews, how to listen to give people the experience of being heard, and how to improve the quality of every relationship in their lives.

The Art of Customer Service

Successful business owners train their employees to develop a foundation of strong customer service. They know that customers prefer doing business with people they like, and with people who are interested in them and care about their concerns. Hunter will cover what customer service is not, what it is, and how to create a company culture that is naturally committed to exceptional customer service.

Creating an Outrageously Successful Company, Part One

This workshop reveals that what individuals do, what they know, and how hard they work have little effect on success. Hunter will cover principles such as the laws in the universe that determine results, how these laws work, and how to use them to produce the desired results, and what quantum physics teaches about cause and effect.

Creating an Outrageously Successful Company, Part Two

Attendees will learn the meaning of integrity and how having it affects success, what the main ingredients are for achieving accomplishments, the significance of being of service, and the importance of having a clear business vision.

LRN program

The Education Day lineup also includes a track of seminars from the Leaders Resources Network (LRN):

- Creating Your Vision for Success – Kelly Newcomb, director, Leaders Resource Network
- Getting Your Team On Board – Kelly Newcomb
- Working Effectively in a Family Business Culture – Kelly Newcomb
- Creating Your Own Competitive Edge – Frank Taciak, owner and sales representative, C.A. Taciak & Sons
- Winning More Sales – Jessica Damasa, account executive-marketing consultant, Newcomb Integration Marketing Solution
- In Business: Panel Discussion – Jessica Damasa

Other seminars

Other business presentations at the Expo on Thursday and Friday include:

Thursday, Feb. 25

- New Four Ps of Marketing – Jerard Nighorn, business manager, Lenzyme Trap-Clear Inc.
- Quit Learning and Start Doing – Bill Raymond, master trainer, Nexstar Network
- Five Secrets of Winners – Kenny Chapman, master trainer, Nexstar Network

Friday, Feb. 26

- Quality and the True Cost of Ownership – Matthew Sutton, vice president of sales and marketing, RapidView
- Vision and Direction: Leading Your Service Company to Prosperity – Victoria Finley, vice president of business development, One Biotechnology
- How to Shop Your Insurance Effectively – Mark Herring, CRM, CIC, LUTCE, vice president, Heffernan Insurance Brokers

To find out more about the education program or any other Expo offering, visit www.pumpershow.com. Register online or by calling 800/257-7222. ■

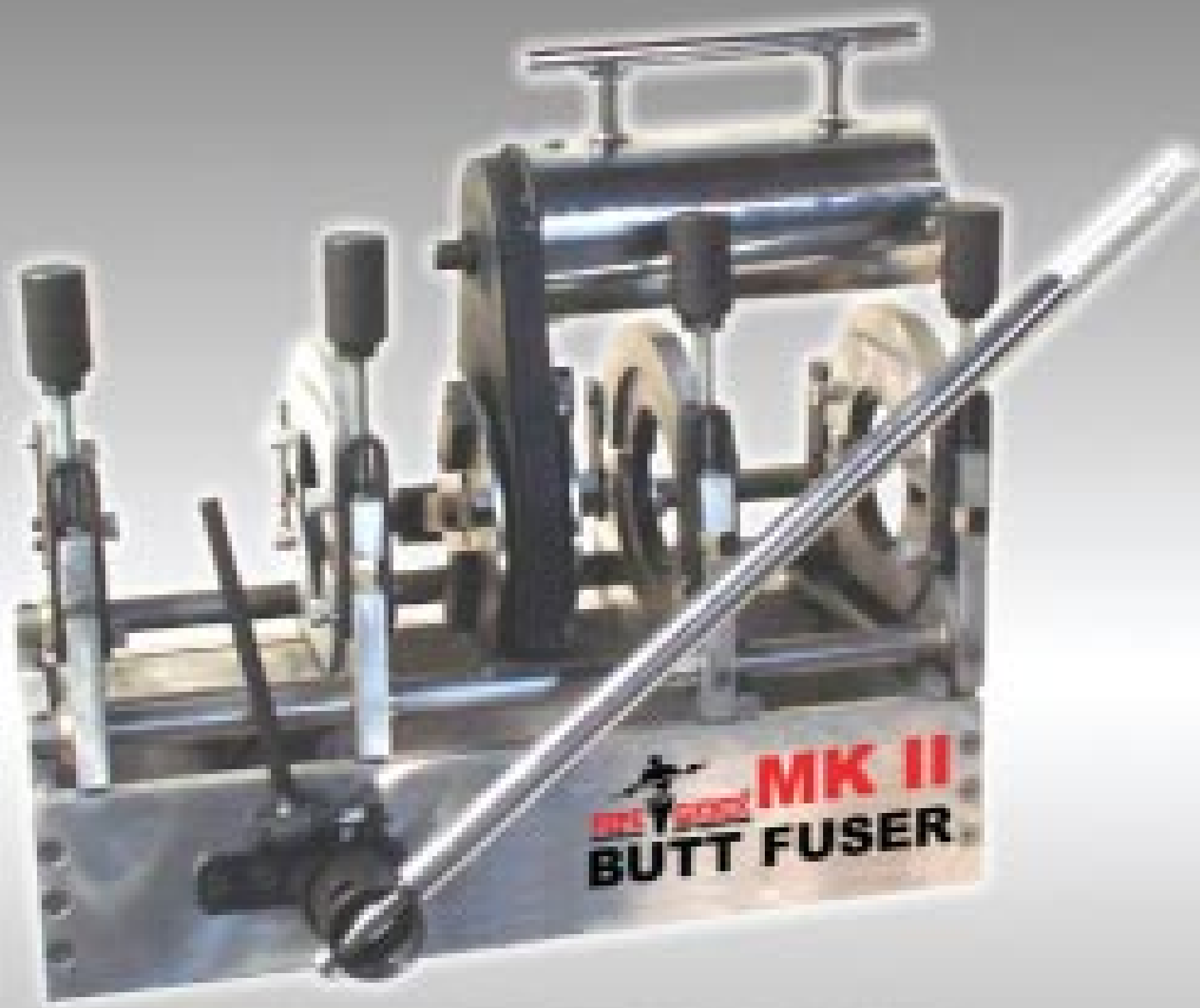
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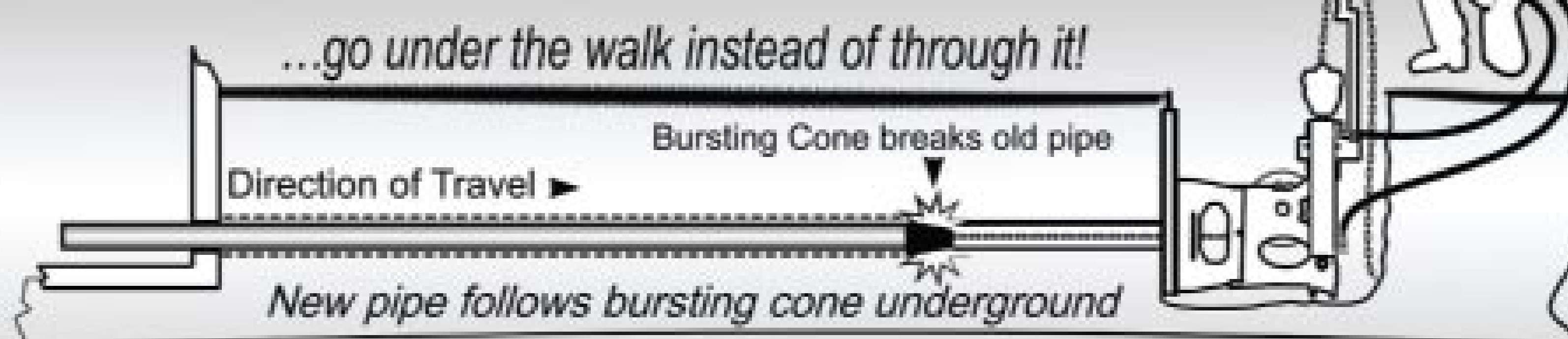


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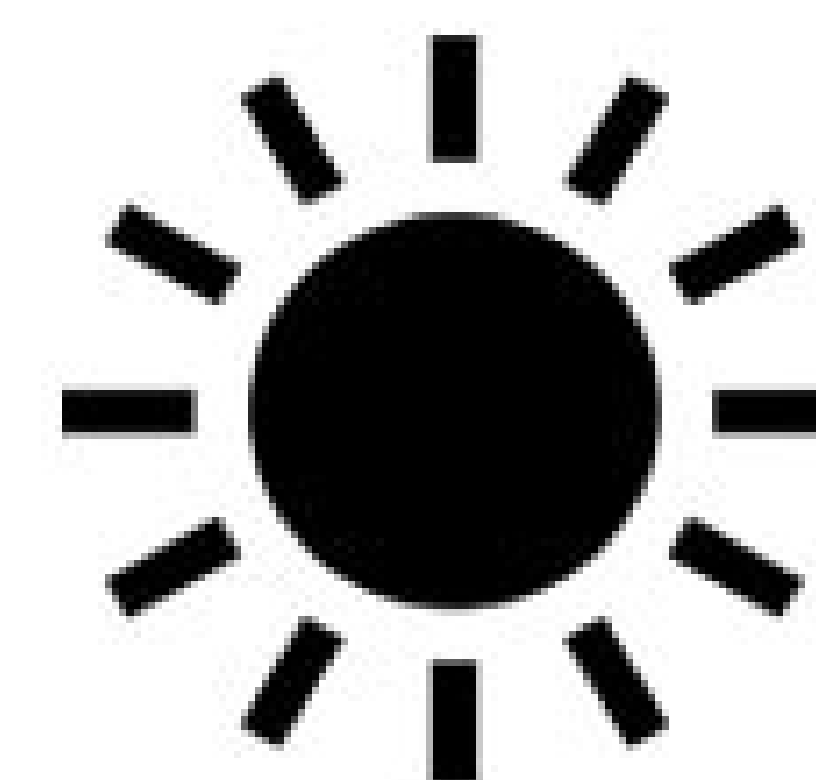


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Penetrating Vision

A South Carolina contractor tackles tough pipe investigations with a cutting-edge portfolio of video, laser, sonar and mapping technologies

By Ted J. Rulseh

AET innovations include a Kubota vehicle outfitted especially for off-road investigations. Shown from left are technician Drake Mraovich, company president Mike Mraovich, and health and safety officer Tina Watkins. (Photography by John Bolton)

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PROFILE

AET ROBOTICS & INSPECTION SERVICES, CLEMSON, S.C.

OWNERS: Mike Mraovich (president and CEO),
Dr. Larry Wright (chief financial officer),
Dr. Serji Amirkhanian (consultant),
Tina Watkins (health and safety officer)

FOUNDED: 1991

SPECIALTIES: Pipe inspection and restoration;
environmental services

SERVICE AREA: Entire U.S. and Canada and overseas

EMPLOYEES: 12

WEB SITE: www.aettopgun.com



A water and sewer utility in the southeastern United States faced the prospect of spending \$42 million to replace a 4,800-foot 28-inch steel force main that had been malfunctioning for three years.

Believing there must be a better way, the agency's engineering consultants brought in AET Robotics & Inspection Services to diagnose the trouble. Using a special float rig with CCTV cameras and laser and sonar profiling, AET, based in Clemson, S.C., inspected the pipe from end to end as it ran 75 percent full of wastewater.

The investigation found the problem: a contractor using horizontal directional drilling (HDD) had bored clear through the pipe and installed a 6-inch sewer lateral that obstructed the flow. The utility ended up repairing a 14-foot section of the force main at a cost of \$80,000 – which it ultimately recovered from the HDD contractor.

That's the kind of value AET can deliver with its complete array of pipe inspection technologies. The company, based in Clemson, S.C., solves tough problems for water and wastewater utilities, municipalities, and diverse industrial customers.

With a core group of 12 employees who are experts in their fields, the company reaches out across North America and sometimes overseas. The AET team members oversee projects and contract locally for the equipment and labor they need.

Ideal background

Company founder Mike Mraovich came to the business with extensive experience and multiple certifications in environmental services and hazardous materials. He became an EPA Certified Hazardous Materials Instructor and later worked in positions of increasing authority with four environmental companies, including general manager of BVER Environmental Inc., which became one of the nation's top companies in the field.

He started Top Gun Environmental in 1981, then merged it with two other companies to gain equipment and personnel and expand services. Those companies later split apart to go into different specialties. Mraovich started AET Robotics five years ago and serves as president and CEO.

AET still offers services such as hazardous materials management and transportation, waste minimization, industrial cleanup, site contamination investigation, and mold and bacteria testing. Mraovich added the inspection business because he saw a need for better ways to investigate pipe problems.

"At the time we entered the inspection business, all that was really available was CCTV," Mraovich

"We have the software configured so that we get three images: a laser image above the waterline, a digital video image above the waterline, and a sonar image below the waterline. We get all the information in one shot, and the pipe can be running at three-fourths full."

Mike Mraovich

says. "Everybody needed more capability. On CCTV, you can look at a pipe and you'd swear it's in pretty good shape. Then you look at the



Technicians Drake Mraovich and Adam Knight observe a camera inspection on the display screen inside the off-road inspection vehicle.

comparable laser image beside it, and you see that the pipe is more than 40 percent out of round in ovality. The naked eye is deceiving when you're looking at a tubular image in distance. Even though our cameras

bypassing and without excavating. "One of the biggest problems we ran into was the high cost of pumping around large water lines and collectors," Mraovich says. "That's ridiculously expensive, and we've come up with ways to avoid that."

Among the company's favored tools is a float rig for inspecting large pipes while they are charged with wastewater or other fluids. The unit includes four high-definition digital video cameras, a laser profiler above the float, and a sonar profiler below.

"We have the software configured so that we get three images: a laser image above the waterline, a digital video image above the waterline, and a sonar image below the waterline," Mraovich says. "From those images, we can tell how much debris is there, and detect any cracks, intrusions, deformities or other defects. We get all the information in one shot, and the pipe can be running at three-fourths full."

Multiple tools

That's not the only weapon in the AET arsenal. The company uses robotic camera units and submersible vehicles to inspect tanks, including potable water tanks in cities. "All potable water tanks need to be inspected every three years," Mraovich notes. "They used to have to send divers in. That's extremely costly, and some of the areas inside the tanks are too small for divers to have access. We have a mini-sub designed just for that purpose. It goes right down in and takes exact videos of every single thing."



AET makes use of expert sources in the academic world as well as the business world. Among company principals is Serji Amirhanian, the Mays Professor of Transportation in the Civil Engineering Department at Clemson University.



The inspection vehicle travels in a specially outfitted 28-foot transport truck.

AET uses laser profilers from CleanFlow Systems Ltd. It gets sonar units from SeaBotix Inc., and submersible vehicles from SeaBotix and VideoRay LLC.

For CCTV surveys, the company uses OZ II and OZ III cameras, Mudmaster transporters modified with electric lifts for very large pipes and tunnels, steerable Pipe Ranger crawlers, Ultra Shorty crawlers, and other CUES Inc. equipment. The firm uses push cameras and pole cameras from Envirosight LLC.

All the inspection technologies interface with Granite XP pipe survey software (CUES Inc.), Infor Public Sector/Hansen Technologies infrastructure management software, and ESRI geographic information systems (GIS). "We GIS and GPS map everything we do, so it will go right into any of the GIS that are out there," says Mraovich.

Field to desk

AET does not simply buy and deploy the best available technology. The firm has a strategic relationship with CUES Inc. for research and development on CCTV, laser and sonar technology. The company also has close ties to the Civil Engineering Department at Clemson University (see sidebar).

"We have mixed and matched and modified everything to suit specific needs," Mraovich says. "Engineers design things, but engineers don't work in the field. So when we buy a piece of equipment, it may work really well for specific applications – but every application is different. So we've designed different wheels, tires and lifts and different hookups for our CCTV equipment. We've also added software to enable

it to do all the things we need to do."

For example, instead of simply mounting inspection equipment in a truck or van, as municipal departments do, AET uses 28-foot trailers that carry an air-conditioned Kubota 4-wheel-drive vehicle that in turn carries the inspection gear.

"The Kubota can go anywhere," Mraovich says. "We can get off the road. We do work up in the mountains and everywhere. We send the video signal back to the trailer, and the technician working at the front of it can watch what's going on in the field on a 42-inch plasma screen TV.

"One of the biggest problems we ran into was the high cost of pumping around large water lines and collectors. That's ridiculously expensive, and we've come up with ways to avoid that."

Mike Mraovich

"In addition, the engineering department at Clemson has come up with a way to give us a live feed over the Internet. That means as a customer, you can log onto our Web site, get a password key for your project, sit in your office in Virginia Beach or wherever, and observe. There will be a five-minute delay, but you can see live video of what's going on in the field on your project."

For underwater work, the company can use a SeaBotix submersible transporter with a 4-wheeled crawler skid, enabling it to track along a tank or pipe bottom while the operator uses the thrusters to keep it down. "For metal tank inspections and for some metal pipelines, we've come up with magnetic track," Mraovich says. "It sticks right on a wall, so we can climb up the side of a tank if need be to do our video work."

On the road

The AET business mix is about 40 percent industrial and 60 percent government – city, county, federal and state, including departments of transportation. The industrial work mainly involves tanks, underground piping, and process piping. Much of the business comes through contracts with major engineering firms, such as Dennis Corp., Florence & Hutcheson, and URS.

When working around the continent, AET typically dispatches one or two experts to investigate the project and determine the best people and best equipment for the job. The company then sends the necessary specialists and inspection equipment. The AET personnel hire labor locally and contract as needed for cleaning equipment.

"It's not wise to put people on the road and pay per diems," Mraovich says. "And often, until you get to the job site and investigate, you're not really sure what equipment and how many people you need. It might start out one way today, but in three days you find a bunch of problems, and now you need two vacuum trucks, a sewer jetter, and repair equipment. We sub all that to the people we work with on contract."

When working close to home in the southeastern United States, AET relies on Phillips Recoveries of Pelzer, S.C., for cleaning and ancillary equipment. "The owner, Mike Phillips, has been a friend for a long time," Mraovich says. "He provides us with all the vacuum trucks and other equipment we need."

Better things coming

While AET finds itself on the leading edge of inspection, staying there is always a challenge. "When I was in college, we used engineering slide rules," Mraovich says. "If you buy a computer today, by this time next year you need another one,

SCHOOL TO WORK

AET Robotics & Inspection Services thrives on a close relationship with Clemson University for research and development. The company's principals include Dr. Serji Amirkhania, the Mays Professor of Transportation in the Civil Engineering Department.

"You've got to have the best technology, and it has to be on the cutting edge, but it's not always just what you know – in part it's who you know, and who they know," says Mraovich. "Serji knows professors from colleges all over the United States who are at the top in key fields. He knows the world's top experts in ground-penetrating radar. We get to work with the best of the best.

"Serji travels all over and speaks on all kinds of roadway and infrastructure problems. The people he knows, the international contacts he has, and the respect he has earned internationally – all that has helped us tremendously to get where we wanted to be, when by ourselves we weren't sure how to get there. We also get the cream of the crop of his graduate students to come and work on our R&D."

At present, AET is collaborating with Clemson on seminars to teach Department of Transportation and municipal personnel how to read sonar and laser profiling reports and how to use them to help devise cost-effective rehabilitation programs. "There are still so many people who don't have any idea what is really available and what information you can find out by non-invasive testing," Mraovich says.

because it's outdated. The technology is moving so fast."

One focus of R&D is the detection of sinkholes, a major problem for water and sewer utilities across the United States. A pipe inspection may readily detect a crack through which water may be leaking, but it leaves no clue to the presence and size of voids that may exist outside the pipe.

AET is developing a ground-penetrating radar (GPR) unit with a spinning head that can travel through a pipe on a tractor and continuously create an image of voids around the entire circumference. "So if you inspect a pipe and observe a crack, we can take a picture behind that pipe and determine the size of the void that has been created," Mraovich says.

It's easy to see what kind of disasters that might prevent – and harder to guess what will come next down the AET Robotics R&D pipeline. ■

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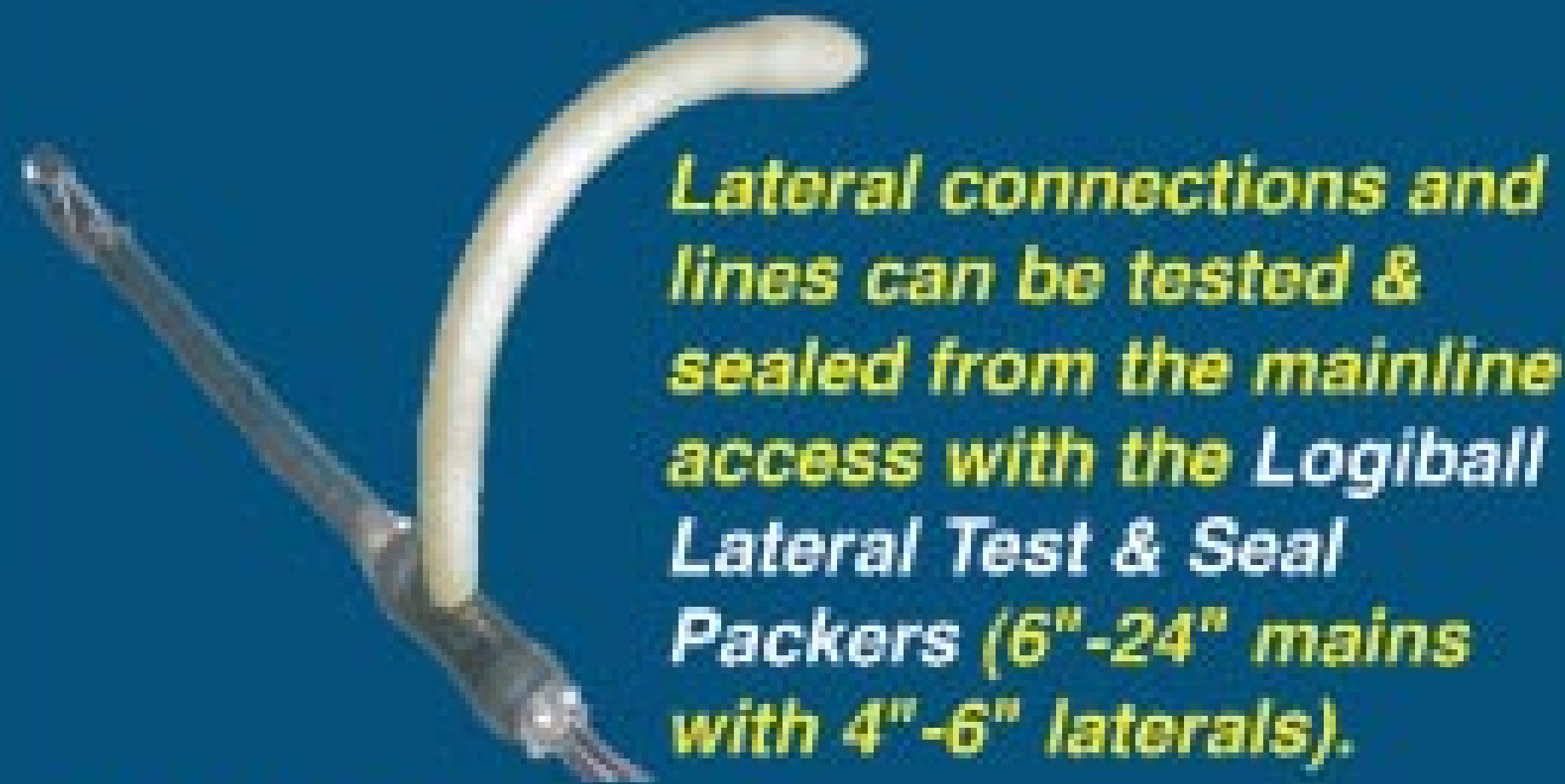


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Illustrating the company's team-based approach, a Drain Doctor service van is shown on the way to a job with vehicles from S&S Pumping and Nelson Excavating. (Photography by Deanna Sammons)



Strength in Numbers

Drain Doctor of Southwest Missouri discovers coop-etition as a way to get through tough economic times and build strength for the future

By Doug Day

PROFILE

DRAIN DOCTOR OF SOUTHWEST MISSOURI, ROGERSVILLE, MO.

OWNERS:	Fred and Tracey Stewart
ESTABLISHED:	1996
ANNUAL SALES:	\$750,000
SPECIALTIES:	Drain service, CIPP lining, plumbing, septic system installation and service
EMPLOYEES:	3
MARKET AREA:	Five counties



It's said that timing is everything in business. And when the timing isn't just right, all it takes is a little creativity to make things work. Just ask Fred Stewart.

Two years of healthy growth in his new company, Drain Doctor of Southwest Missouri, told him it was time to expand in 2008. He bought equipment, hired more employees and added services – just in time for the recession. “I saw it coming in March,” he says. “I had already bought the new equipment and signed the contracts. The backhoes were already delivered.”

One key step Stewart and his company took to get through a tough time was to form alliances with other businesses with related specialties – even if some of those firms' services competed with his own. It's a concept sometimes called coop-etition.

The approach has helped him increase profit with a smaller, leaner staff and put himself in a strong position for the turnaround he knows will come.

Simpler life

The onset of recession wasn't the first time Stewart has had to change his plans. His search for a new job outside of the corporate world in 2006 didn't go as he intended, either.

Before moving to Missouri, Stewart worked for a drain cleaning franchise for 12 years, including three as manager of the excavation and industrial division. “I just decided to come out here and live a more simple life,” he says.

The job search didn't go well: “I was much more qualified than every manager I spoke to, so nobody would hire me.” Then he and his wife, Tracey, learned that Drain Doctor of Springfield was for sale. So, instead of having a job, he found himself owning a 10-year-old sewer cleaning and waterjetting company in Rogersville.



Three companies with different specialties attack a repair job on a damaged stormwater culvert. On the backhoe is Josh Nelson, owner of Nelson Excavating. In the hooded jacket is Tim Smith, owner of S&S Pumping. With the umbrella is Eric Engel, owner of Riverside Inn, and next to the backhoe is Fred Stewart, owner of Drain Doctor.

The new Drain Doctor of Southwest Missouri grew quickly. Before the Stewarts took over, the company had just completed its best year with sales of \$235,000 (2005). The Stewarts took over in June 2006 and did almost \$275,000 in their first six months. The next year saw the company grow to nearly \$600,000 in sales.

start cutting staff right away, but "I felt that wasn't right. When I die and stand at the pearly gates it's not going to be, 'Well, you made an extra two percent profit this year so you're allowed in.' It's going to be about how I treated others and the impact I had on their lives."

The Stewarts maxed out their credit lines waiting for the economy

"The phones just stopped ringing. It had nothing to do with us or our service. It's just that nobody had money."

Fred Stewart

In 2008, they added plumbing services and Perma-Liner cured-in-place pipe lining, became licensed to install and inspect conventional and advanced septic systems, and hired employees to do the work. They also added an excavation division and expanded the service territory from one county to cover five counties around Rogersville, including Springfield and the popular tourist area of Branson.

By June, the company had matched its 2007 numbers and was on track to do \$1.2 million in sales. Then came August.

Screeching halt

"The phones just stopped ringing," says Stewart. "It had nothing to do with us or our service. It's just that nobody had money." They still did \$725,000 that year, but the sales they lost had been expected to fund the expansion.

Stewart admits that the smart business move would have been to

to rebound. "I really felt responsible for my guys and their families, and I did everything in my power, including self-sacrifice, to keep them working as long as I could," he says.

He weathered the storm until the end of November, when he had to lay off about half his workers. "At that point, I just did not have a choice," he says. "We were hurting."

Employment fell from 11 to 5, including the Stewarts. He now plans to keep it that way, not because he has given up but because he has found a new way.

Power in numbers

"We've revamped the company in a lot of ways and changed how we do business," says Stewart. With the core group of managers and service technicians, Drain Doctor now hires out much of the work to subcontractors, including other cleaning, plumbing and excavating companies who used to be the competitors. "We run the jobs," says Stewart.



The Drain Doctor van and Model 4018 trailer-mounted waterjetter from US Jetting at the site of a culvert repair.

GREAT NAME. OR IS IT?

When he bought Drain Doctor, Fred Stewart loved the name. "To me, it had everything a name should have," he says. It perfectly described the business at the time, it was recognizable, and people already knew it.

But Stewart has learned a thing or two about names since he took over the company in 2006. "I Googled it one day," he says. "There were more than 800 hits for Drain Doctor. It's such a common name. I never realized that until after the fact."

He now considers it less than ideal because it no longer describes the business. "People don't think of Drain Doctor when it comes to plumbing or excavating, even though we advertise it," he says.

When the company bid on a large project to replace more than a mile of sewer line, the county questioned whether Drain Doctor was qualified. "I had to explain that we had done jobs along that line before," he says. "We'd put in lift stations and sewage treatment plants. We'd done all that. It's hard to be taken seriously when people think you're just a drain cleaning company."

The name even lost the firm a contract with an international coffee shop that tries to hire local contractors rather than large corporate entities. "They had called for an emergency on a Sunday and we found a broken sewer line," Stewart recalls. "We gave them an estimate to repair it."

Even though the price was lowest, the work went to another local contractor because the customer thought, after doing a Web search, that Drain Doctor was a national company. "There's a case where we lost a very nice \$15,000 job," Stewart says.

Obviously, a small company can't do the market research and focus groups that large corporations use for branding issues like names and slogans. But Stewart says it is something to be aware of.

He did use informal focus groups to pick a marketing slogan. "We showed several options to people we knew," he says. They overwhelmingly preferred "We have the prescription for all your drain care needs."

But that was before the expansion. "As we expanded, I had them look at the slogans again, and they picked 'Bringing new life back to old plumbing.'"

He did the same with the design of his trucks. He hired a company to develop several options and showed them to many people. "Our trucks look like ambulances with a big cross on the side," Stewart says. "Instead of the cross being red, it looks like it's made of water. More people say they see our trucks now. It's not that our trucks are all over the place, it's that when you see our truck, it stands out in your head."

"We stay onsite and run every aspect of the job."

Through coop-etition, Drain Doctor has built "great relationships" with other companies who two years ago would have competed

about having jobs next week to keep everyone working."

He has found three key partners for the new approach: Tim Smith of S&S Pumping Service, Josh Nelson of Nelson Excavating, and Ted

work to Tim. He gets calls for drain cleaning and septic installations and sends the work to us." Besides referring work to each other, the four companies hire each other if they need help on jobs.

Stewart says all the companies love the arrangement. "It's helping all of us through slow times," he says. "They're keeping their crews busy, we're getting jobs, and 20 people are working every day."

Better still, all the companies are making money in the middle of the recession. "We all find ourselves growing," Stewart says with obvious enthusiasm. "We're advertising again and we're caught up on our debt. We're coming out of it as better people and better companies because we've decided to let that whole competition aspect go and have chosen to work with each other."

bang for our buck," he says. "We went to the home shows where I knew 20,000 people were going to see our booth."

Knowing that people like to work with local firms, the company got a phone number specific to each city where it does work. "We support the local youth teams through fundraisers and booster clubs," Stewart adds. "We're at the Kiwanis meetings, and we joined all the Chambers of Commerce and go to all the meetings. We put floats in the parades. We're part of the volunteer fire department, and we have guys who do volunteer work for emergency medical services and disaster relief groups."

For Stewart, the most important aspect of surviving the recession is that there is no animosity from the people he had to lay off. "We still



From left, Tim Smith, owner of S&S Pumping; Josh Nelson, owner of Nelson Excavating; and Fred Stewart, owner of Drain Doctor.

for the same jobs. "Now we all work together," says Stewart. "I don't have the burden of a large payroll every week. I don't have the overtime costs. And I don't have to worry

Wilcznski of TCM Environmental.

"We get septic pumping calls every day," says Stewart. "Instead of opening a pumping division and losing a friend over profits, we give that

"When I die and stand at the pearly gates it's not going to be, 'Well, you made an extra two percent profit this year so you're allowed in.' It's going to be about how I treated others and the impact I had on their lives."

Fred Stewart

The most interesting outcome for Drain Doctor? "We have half the people and we're making a higher profit. It's amazing." The company is earning a higher net income from savings in areas like vehicle maintenance, GPS tracking, fuel, insurance, payroll, uniforms, cell phones, office supplies, and accounting.

Stewart realizes that when the economy recovers, the coop-etition may go out the door. "I'm sure someone is going to jump ship eventually," he says. "But until that happens, there is safety in numbers, and four companies working together can be a lot stronger than one who chooses to stand on his own."

talk," he says. "They understand what had to be done. They understood that if I didn't do it, there was no tomorrow for any of us as far as business was concerned."

Those former employees still recommend Drain Doctor. Some have opened their own companies and send work Stewart's way – but only kinds of work they don't do. A former Drain Doctor employee doing drain cleaning isn't about to give up a job to Stewart, and he won't give up a job to them. "Business is business, after all. We all have families to support. But we're all benefiting by cooperating." ■

No time for the bunker

While the recession made it necessary to be careful with spending, Stewart tried hard to keep his name in front of customers and maintain his presence in the community. "Instead of the high-dollar television commercials in the Kansas City Chiefs games, we did more community radio advertising to get more

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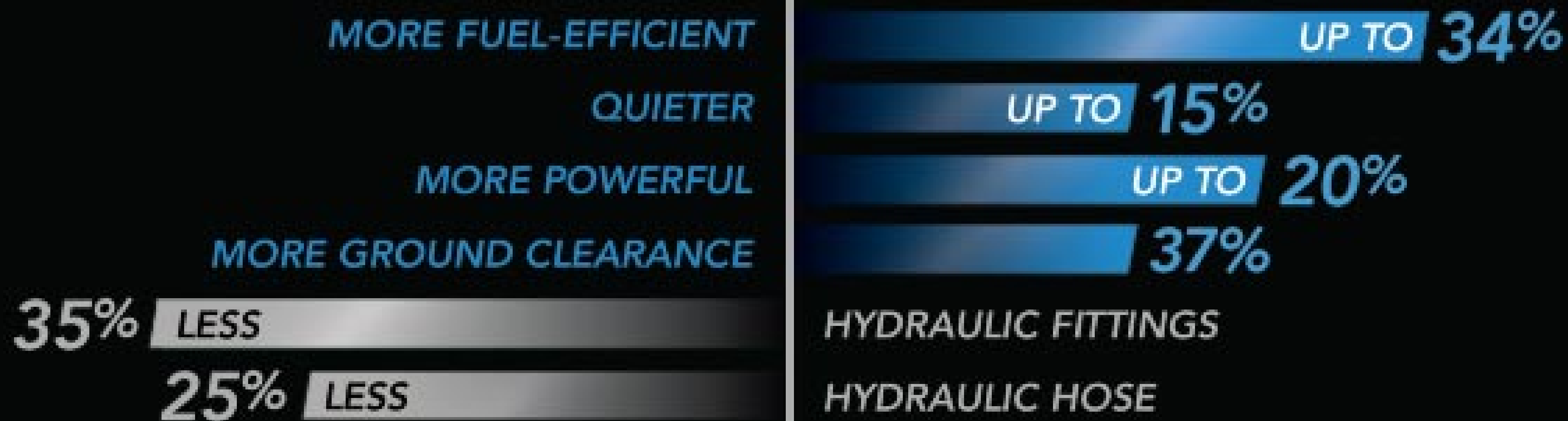


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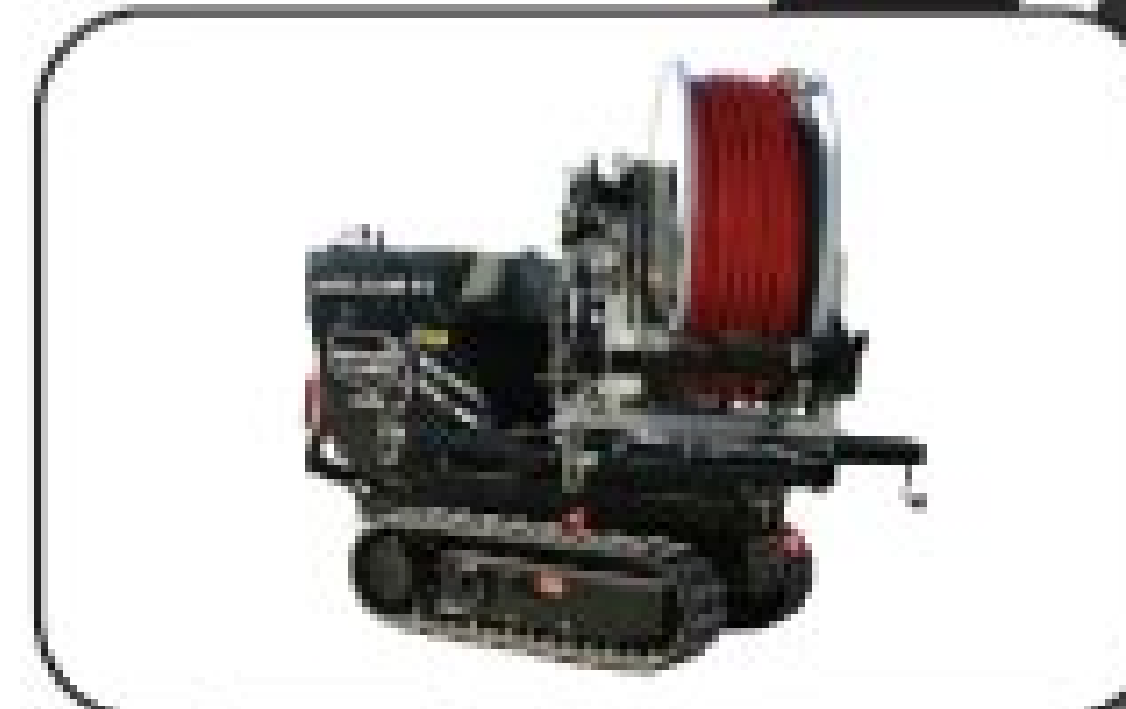
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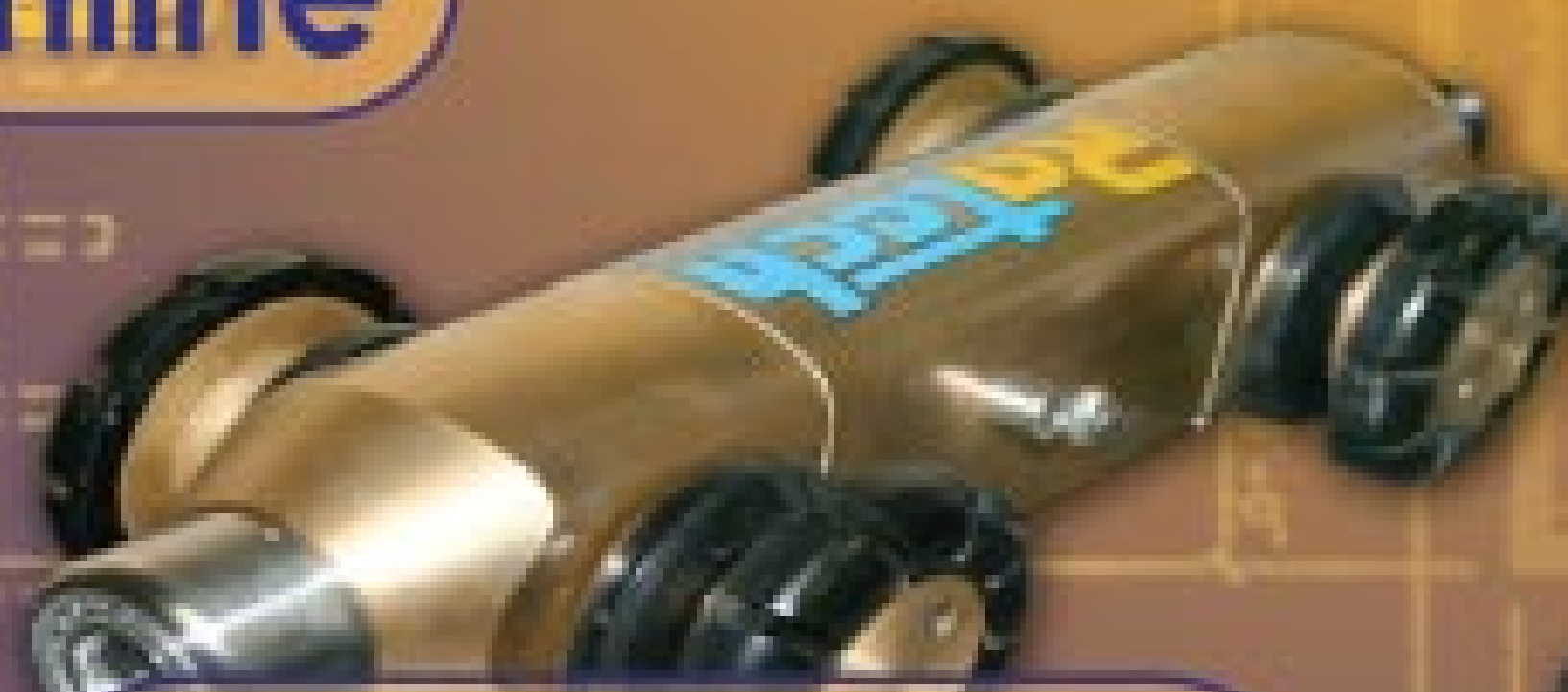
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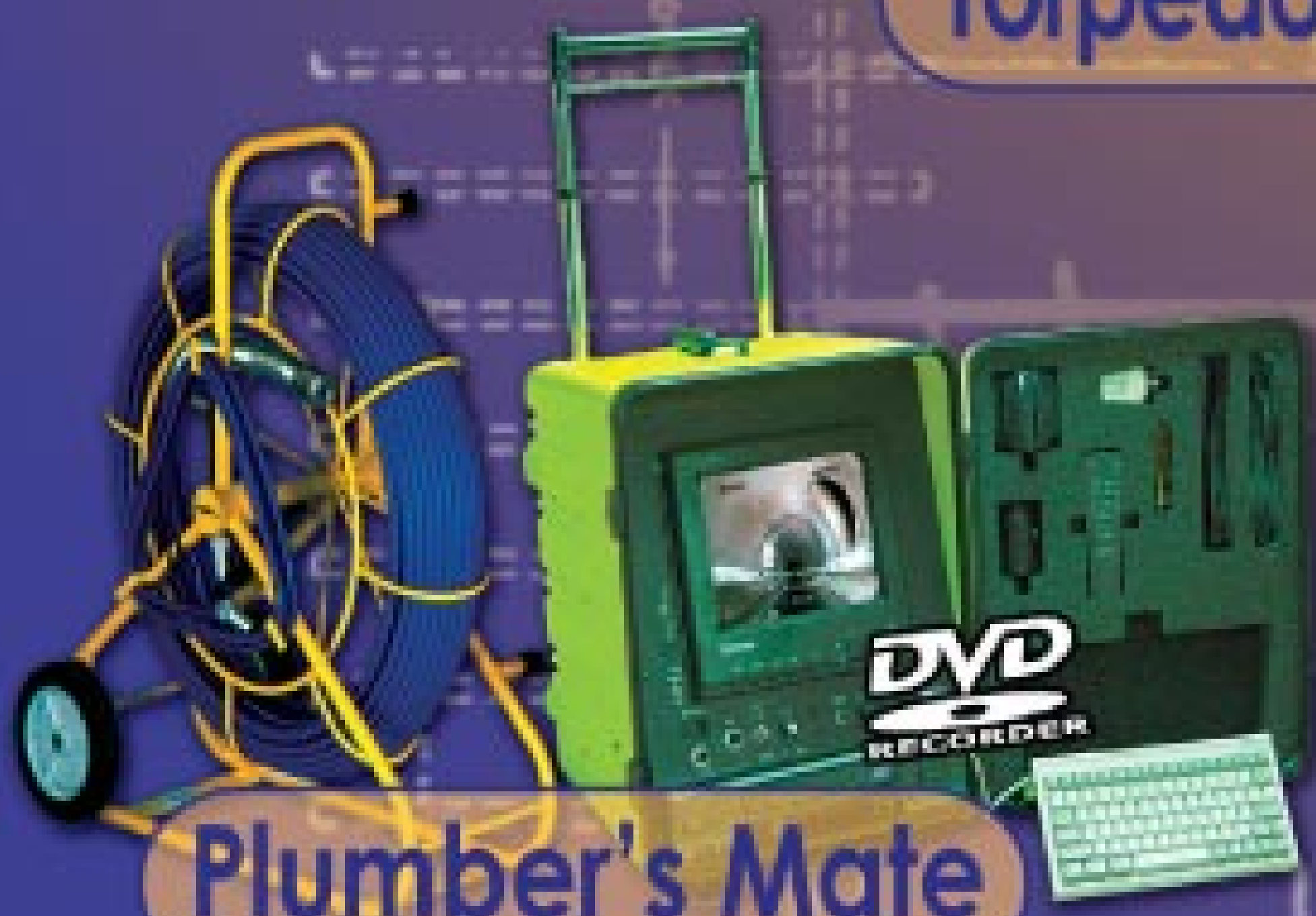
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Tending Technology

Don't let your computers and software fall out of date and slow you down. Keep things running smoothly with a regular program of upgrades and updates.

By Judy Kneiszel

When it comes to office technology, the story reads a bit like The Three Bears: Some businesses have too much, others have too little, and a few get it just right.

Unfortunately, office technology isn't something you can think about just once and then live happily ever after. An ongoing investment of time and money is what keeps a business technologically up to date and efficient.

But don't break the bank buying every piece of the latest and greatest equipment the second it hits the market. Your office probably

doesn't need a radical technology overhaul. More likely, it just needs a bit of a makeover.

Upgrade or replace?

One of the bigger investments a small business makes in office equipment is for computers. You want to keep them working well. On average, a desktop PC has a functional lifespan of two to five years, depending on the type of system and how hardware components advance. Lifespan also depends on how your software changes.

Generally, after a few years, a system may not be as fast as it once was, space to store files may become

limited, and the hardware may no longer meet the requirements for the latest software. The options are to upgrade or replace the computer.

A good rule of thumb is to upgrade only if it will cost roughly half or less what it would cost to get a new system. That's because an upgrade will give you a new functional lifespan of roughly half of what a replacement would give you.

What can you upgrade?
On a desktop computer, the most common upgrades are memory and hard drive. Memory is the simplest and most cost effective to upgrade. The more memory a PC has, the more data it can process efficiently. While most desktop computers come with enough memory when you buy them, they use up more working memory

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.

(random access memory, or RAM) as programs get more complex. After a while, you may need more memory. A computer might benefit from a memory upgrade when you:

- Upgrade the operating system
- Install new applications
- Install multimedia cards
- Add peripherals

You can buy memory where you bought your computer, or from online sources. Do some research or ask a reliable computer technician to recommend a supplier. Memory is easy to install yourself, but you can also take the computer to the place you bought it or a local computer repair shop.

As for hard drives, computers often need more storage space because the amount of digital audio, video, photos and data we store is growing so fast. When a computer starts running out of space, it is easy to buy a new internal or external drive. Refer to the computer specifications to determine what type of hard drive it uses.

One problem you don't have when you upgrade that you will have if you replace is how to get rid of the old computers. If they are still new enough to be useful, you can donate them to a school, church or other nonprofit group. Otherwise, check into local regulations on recycling of old computers.

Adding peripherals
Once your computer is running fast and efficiently, it's time to look

at your peripherals: printers, scanner, fax machine and copier. Laser printers have been quite affordable and efficient for years – what's new is that they are getting greener. For example, some models now offer automatic duplexing, which prints on both sides of the page to save paper. Some printers use nearly 80 percent less power with more energy-efficient ready and sleep modes.

Today's scanners (whether stand-alone or included in multi-function printers) use less power, too, thanks to LED light technology that allows them to be ready to scan almost instantly instead of having to warm up.

Many businesses choose combination units that print, scan, copy and fax. These save money and space and are especially helpful if there are some functions you only use occasionally. Why have a separate fax machine if you only send one fax per week?

Is the fax machine extinct or merely endangered? That depends on your business and your customers. Regardless, fax machines are often temperamental, and you can handle most of the same functions using e-mail or fax software on your computer. But if you have clients who are not online, or if some documents and contracts require an actual signature, you still need a good fax machine.

Do more with software
While you're updating your computer, you might consider

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Don't fear the update

The first step in keeping office computers operating smoothly is to stay on top of updates. Every computer should be set up to notify the user of updates from software vendors. Once you're notified, you can go ahead with the update, or wait. Some people prefer to go beyond notification, to having the computer update automatically.

There is no reason to fear updates and assume that to download them is to invite trouble. Just the opposite is true. Most updates improve security and help keep a computer running as fast as it should. The newer the software, the less likely your machine is to get a

limited, and the hardware may no longer meet the requirements for the latest software. The options are to upgrade or replace the computer.

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Do more with software

While you're updating your computer, you might consider

automating some of the operations you still do manually. For example, you probably would benefit from automating your bookkeeping with accounting software. Your accountant can show you how to use it.

To find out what else you can automate, do some online research to learn what software is available. You're likely to find affordable programs, for job scheduling, service dispatching, vehicle routing, job costing and estimating, equipment tracking, material and labor tracking, purchasing, payroll management, customer contact management, and more.

On the road

When your people are on the road, they may need portable computers. In the past, laptops could be bulky, but now there are smaller options called notebooks or netbooks. Notebooks are multifunctional, whereas netbooks are designed

mainly for Internet use. They are small and sleek, but their functionality is somewhat limited, and their smaller keyboards are awkward for some users.

Whatever type of computers you own, it's wise to create a technology upgrade and replacement schedule for your business. Upgrade after three years, replace after five? Or replace one-third each year in a regular cycle? Figure out what works best for your budget and systems. No matter how you spread out the expenditures, a schedule will help you avoid surprises and keep your business up to date with technology.

Once on a schedule, you may find yourself looking back in horror at how haphazardly you managed technology "once upon a time." ■

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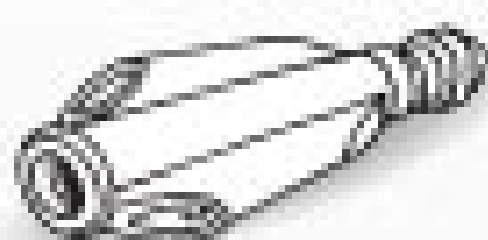
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3/8"-15°	\$33.00
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1/2"-25°LT	\$49.00
3/4"-12°	\$55.00
3/4"-12°LT	\$65.00
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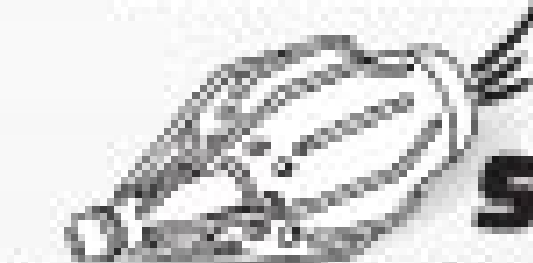
Aluminum Grease

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Truder

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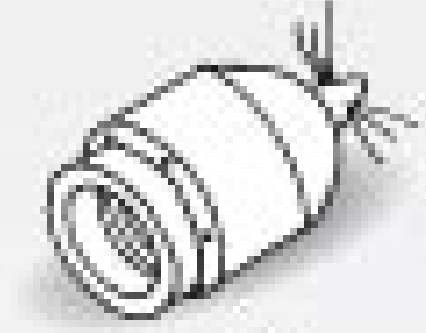
Shark

1" \$480.00
1" Big Shark \$595.00



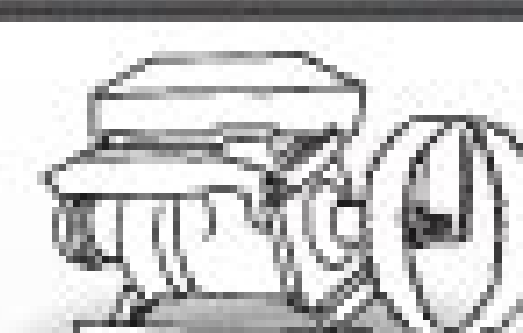
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3/4"-18° or 35° \$50.00
3/4"-18°/24° \$53.00
1"-18° or 30° \$66.00
1"-15° or 30° \$68.00
1-1/4"-18 or 35° \$85.00



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Assemblies come with one ea. of 6, 8, 10 and 12" blades, saw blades, hub, skids, etc.

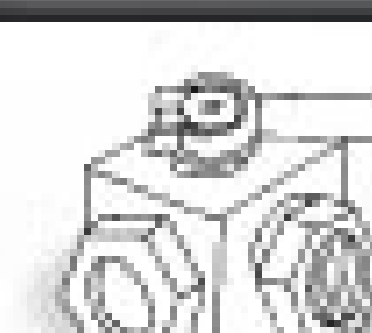
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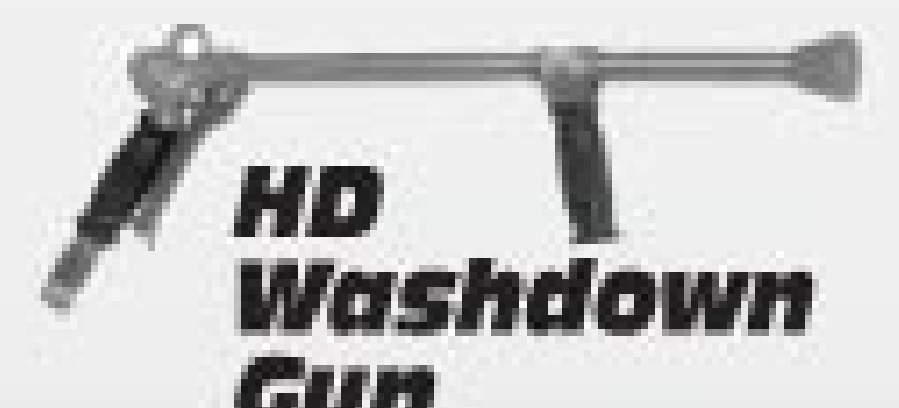


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2 & 3-way Ball Valves

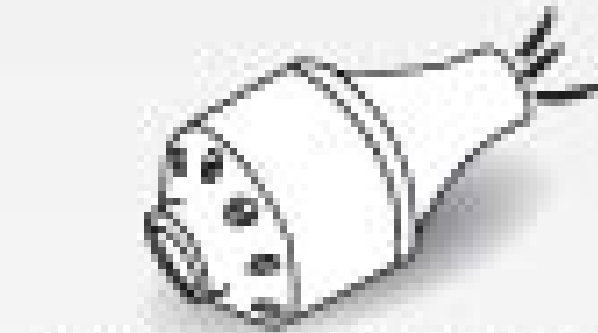
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1/2" 2-way \$65.00
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1-1/4" 2-way \$226.00

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3/4" 3-way \$180.00
1" 3-way \$190.00
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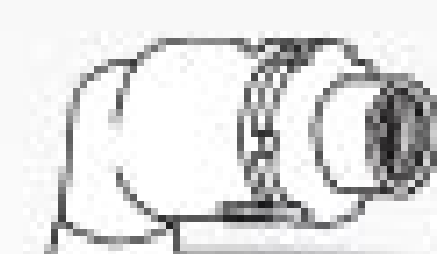
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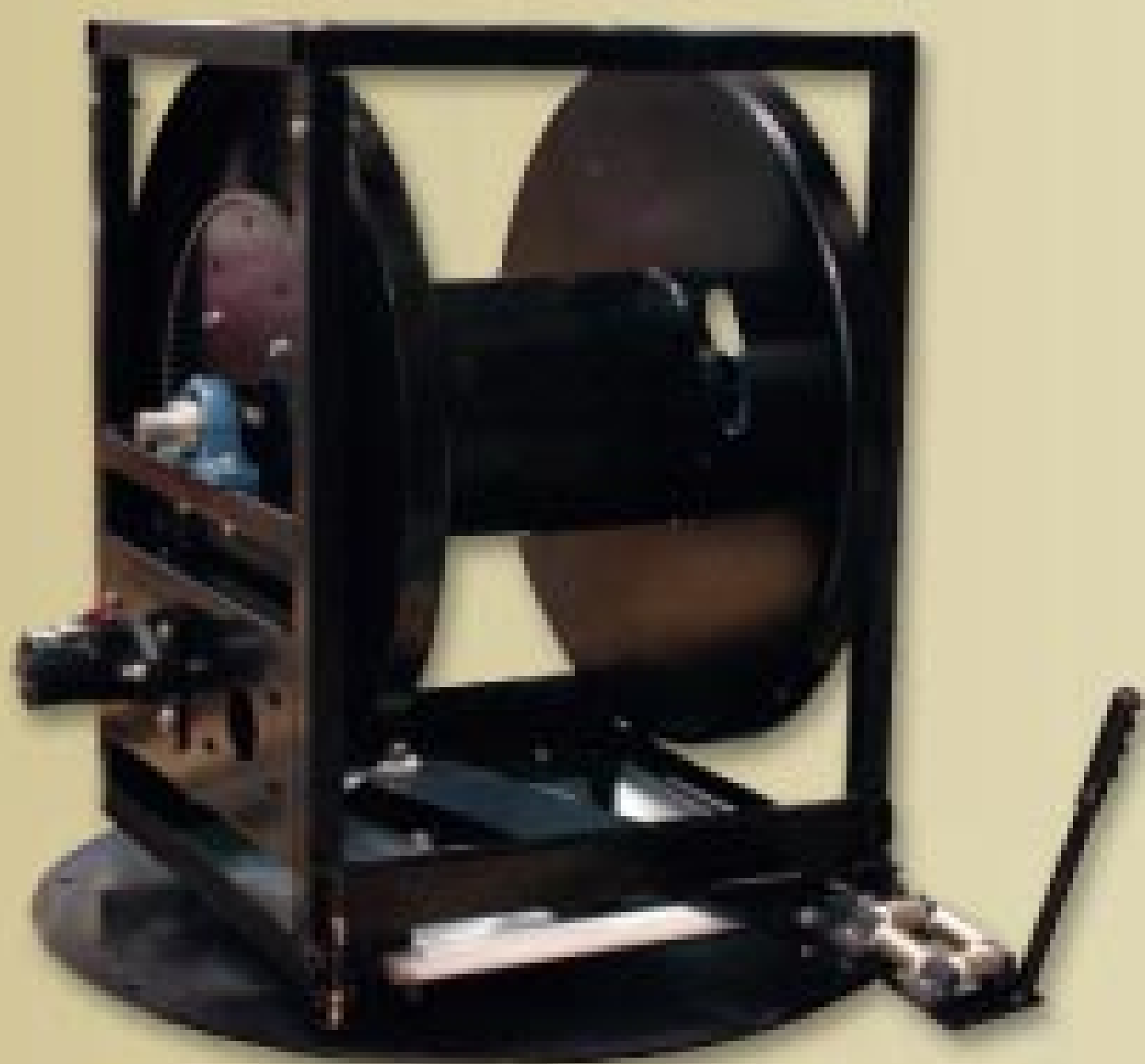
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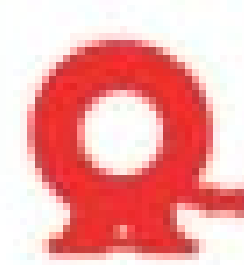


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SO MUCH TO SEE!

PUMPER & CLEANER ENVIRONMENTAL EXPO EXHIBITORS OFFER A SNEAK PEEK AT THEIR LATEST TECHNOLOGY AND SERVICES

By Ed Wodalski

Anyone who has been to the Pumper & Cleaner Environmental Expo will tell you there's just so much to see. From time-tested products to cutting-edge technology, the challenge is to see it all.

To make sure you don't miss out on any of the new breakthroughs at the Kentucky Exposition Center, show sponsor COLE Inc. has dedicated an area exclusively to new products. The display opens on Wednesday, Feb. 24, for a pre-show sneak peek and will remain open during regular show hours. There's also an interactive floor plan at www.pumpershow.com to help you pre-plan your visit.

Here's a look at some of the products and services being featured at the 30th Annual Expo.

INSPECTION

- 1 CUES INC.**
The QZ2 portable, pole-mounted video inspection system from CUES Inc. can be operated by one person to survey pipelines, wet wells, manholes, sewer treatment plants, steam generators, tanks, vessels and other difficult-to-reach areas without confined-space entry. The camera system is mounted on a carbon fiber, adjustable telescopic pole that extends up to 24 feet. An optional 34-foot pole is available. The system features a 420:1 (35 optical/12 digital) zoom with automatic focus and self-contained, waterproof lighting for detailed viewing of cracks, breaks, pipe separations, scale and various defects from hundreds of feet away. It can be used to locate lateral services or identify a blockage at a manhole, access port or other entry point. The unit includes two high-density discharge lights and VIS (video image stabilization) module for sharp and stable images. 800/327-7791; www.cuesinc.com; Expo booth 1068.
- 2 RAUSCH ELECTRONICS USA LLC**
The M-Series pipe inspection system from Rausch Electronics USA LLC features a single modular and steerable transporter with standard remote electric lift. The system is designed for mainline inspection, mainline and lateral launching, lateral jetting, laser pipe profiling, pressure testing and point repair. 717/709-1005; www.rauschtv-usa.com; Expo booth 2031.
- 3 ARIES INDUSTRIES INC.**
The LETS mini pan-and-tilt camera from Aries Industries Inc. can inspect lateral lines down to 3-inches in diameter and

up to 150 feet from main sewer lines. The inspection system has a built-in 512 Hz sonde for line locating and can operate as a backup mainline camera or a skid-mounted unit for larger pipes. 800/234-7205; www.ariesindustries.com; Expo booth 1008.

- 4 RAPIDVIEW IBAK NORTH AMERICA**
The PANORAMO 150 360-degree pipeline scanner system from RapidView IBAK North America is designed for pipelines 6 to 12 inches in diameter. The system uses two 185-degree, wide-angle cameras mounted to the front and rear. As the system moves through the pipeline, the integrated high-power strobes flash, enabling the cameras to capture images of the pipe wall. After inspection, data is compiled to create a complete 360-degree view of the pipeline in a self-contained file. Users can move through the virtual pipeline and take measurements and log defects. The scanner system does not need to stop as it moves through the pipeline and can inspect at up to 40 feet per minute without motion or blur. 800/656-4225; www.rapidview.com; Expo booth 2130.

- 5 COBRA TECHNOLOGIES**
The FastView telescopic zoom camera from Cobra Technologies is a portable system made for quick evaluation and inspection of manholes, pipes and areas where human entry is impractical or impossible. Designed for single-user operation, the camera functions as a stand-alone unit or with any CCTV system. Videos and images can be transferred to the office database or GIS system. Features include Cobra lighting system with Luxeon lights, 432:1 zoom for detailed

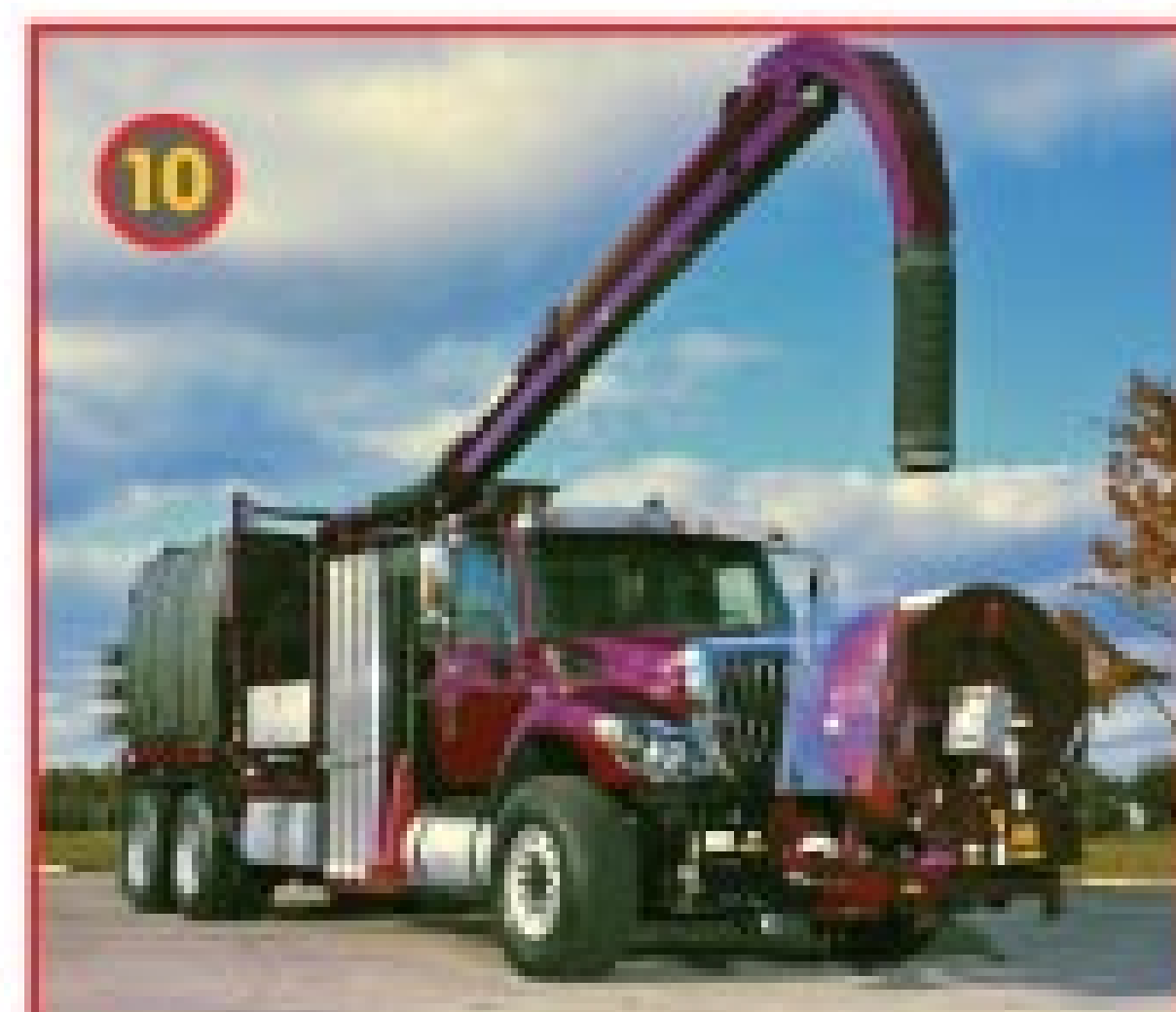


viewing hundreds of feet away and 24-foot extendable pole mount with optional 38-foot mount. 800/443-3761; www.cobratec.com; Expo booth 7063.

- 6 SHAMROCK PIPE TOOLS INC.**
The Bug Eye push camera inspection system from Shamrock Pipe Tools Inc. includes 100 feet of cable, color camera, monitor cable, power cord and large monitor. 225/275-7696; www.shamrocktools.com; Expo booth 2203.

MAINTENANCE

- 7 WASTEQUIP-CUSCO**
The Industrial Vac series from Cusco, a Wastequip Co., features a hydraulic operated, full-opening rear door and lift system. Designed for the removal of liquids and semi-solid waste, the standard unit offers pressure off-loading and has a vacuum system ranging from 350 cfm to 670 cfm and 28 inches Hg. Options include a high-pressure wash system, stainless steel tank, heated valves, hydraulic vibrator, transfer pump, as well as DOT and TC 407/412 configurations. 800/490-3541; www.wastequip-cusco.com; Expo booth 4041.
- 8 GAPVAX INC.**
HV-56 hydroexcavator from GapVax Inc. is designed for wet or dry vacuum work with no visible dust emissions. The unit has a 17-cubic-yard payload, while its single-mode filtration eliminates wet or dry changeover. Jet flow ranges from 3-40 gpm with 350, 550, 1,000 and 1,200 gallon water



capacity. It operates at 1,000 to 3,000 psi and 5,300 cfm at 28 inches Hg. Featuring a 25-foot boom, the hydroexcavator is built to operate in cold weather and remote locations. 814/535-6766; www.gapvax.com; Expo booth 1022.

9 VACALL

The AllJetVac vacuum combination sewer cleaner from Vacall features pumps from 16 to 27 inches Hg, three-stage filtration system for reduced maintenance/noise and an 8-foot, 6-inch telescopic boom. Debris is collected in the heavy-gauge, fabricated steel body. Jetting hose reels on the front and rear are equipped with a standard high-torque, direct-drive planetary gearbox and hydraulic cushion valve. Aluminum water tanks are fully baffled and mounted to a subframe for durability and stability. An electrical harness is connected to the control panel with a single, color-coded and numbered multi-pin connector. Safety features include tailgate and debris body safety props that are operated from ground level. 330/339-2211; www.vacallindustries.com; Expo booth 5171.

10 SUPER PRODUCTS LLC

The Camel sewer and catch basin cleaner from Super Products LLC features a single control panel setup, ejector plate unloading for cleaner debris removal and washdowns, and a single-engine design for lower fuel costs, maintenance and sound level. Units are available with hydroexcavation features and an optional water recycling system. 800/837-9711, www.cameleasy.com; Expo booth 1054.

11 SUPERVAC 2000

The 6,400 cfm Hydrovac from Supervac 2000 features a fully accessible, full aluminum acoustical, insulated enclosure. It has a 3,000-gallon debris tank and 1,200-gallon water tank with 25-foot

boom and 320-inch arc. Other features include an 880-BTU diesel boiler, programmable diesel heaters, adjustable water pump-pressure with all functions controlled by a pendant control panel and wireless remote. 866/839-5702; www.supervac2000.com; Expo booth 7031.

12 DITCH WITCH

The FX20 vacuum excavator from Ditch Witch is designed for cleaning valve boxes, commercial and residential debris cleanup and landscaping, exposing utility lines, posthole digging and other small, short-run projects. Offering 540 cfm of suction, the 27-hp excavator has a 150-gallon spoils tank mounted at a 45-degree angle. The unit can be transported on the back of a pickup truck, flatbed or small trailer. No CDL is required. 800/654-6481; www.ditchwitch.com; Expo booth 9048.

13 MAX-LIFE MANUFACTURING CORP.

The Vac-Trap manhole debris catcher from Max-Life Manufacturing Corp. connects to the suction tube, replacing the crown nozzle. Resting at the bottom of the invert in the sewer manhole, the basket fills with debris as water flows through. Once the trap is full, the contents can be vacuumed up. The debris catcher is available in 6- to 24-inch sizes and flanged to fit 6- or 8-inch tubes. 714/898-4830; www.flexmax.com; Expo booth 22.

CLEANING AND DISPOSAL

14 STONEAGE INC.

The Torus 3-D tank-cleaning tool from StoneAge Inc. is a direct replacement for the Hurricane and CyClean and is capable of handling pressures from 5,000 to 22,000 psi by changing the manifold and inlet coupling. Three bolt-on manifolds that control

flows from 17-80 gpm are available. The system features a magnetic speed control for various applications. Accessories include the TR 408-SS Cage Centralizer for use where debris or internal structures could interfere with the cleaning operation as well as extension nipples and positioning booms for vessels over 12 feet in diameter. 866/795-1586; www.stoneage.com; Expo booth 4133.

15 GAMAJET CLEANING SYSTEMS INC.

The GobyJet portable, diesel-powered tank cleaning system from Gamajet Cleaning Systems, Inc. is designed to clean wet wells. Using rotary impingement cleaning technology, the high-pressure pump system is skid-mounted for mobility and can be transported on the back of a pickup truck. 610/408-9940; www.gamajet.com; Expo booth 8155.

16 DURACABLE MFG.

The Gladiator DM175 upright machine drain cleaner from Durable Mfg. uses a direct-drive system with 10-1 gear ratio. Powered by a 1/2-hp motor with 175, 215 and 145 rpm variable speed options, the drain cleaning machine features power cable feed and return, quick-release reel with swing bolts, 23-inch polyethylene reel and polyethylene toolbox. It can run 100 feet of 3/4-inch cable, 110 feet of 11/16-inch cable or 140 feet of 5/8-inch cable. The unit has built-in stair climbers, three-position adjustable handle and continuous welded frame. 866/587-1597; www.duracable.com; Expo booth 3169.

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17 NLB CORP.

The Safflex-2000 semi-automated tube lancer from NLB Corp. is made for waterjet cleaning the inside diameter of tubes and features a hose-drive system powerful enough to drive hoses with an outside diameter of 4 to 15 mm at pressure to 40,000 psi. The unit enables the operator to position the lances against the tube bundle and index them forward using the controls on the hand lance. The flow of the high-pressure water can be started and stopped with the optional foot box. 800/441-5059; www.nlbcorp.com; Expo booth 7095.

18 ASHLAND TRAP DISTRIBUTION CO.

The APGI Series grease interceptor from Ashland Trap Distribution Co. is designed to separate grease, oil, fats and other sediment from large commercial and industrial sources. Made of acid-resistant, high-density polyethylene, the interceptors can be installed above or below ground and have non-skid 3/4-inch polyethylene covers with recessed handles for easy removal. All units are available with steel or aluminum non-skid tread plates. 800/541-8004; www.ashlandpolytraps.com; Expo booth 3011.

19 ACCENT MFG.

The DS1000 solid liquid separator dewatering and disposal system from Accent Mfg. increases hydroexcavating efficiency by enabling the user to dump on site, reducing the amount of spoil that needs to be hauled away. 604/850-7799; www.accentmanufacturing.com; Expo booth 34.

SMOKERS

20 HURCO TECHNOLOGIES INC.

The Power Smoker 2 from Hurco Technologies Inc. is designed to find leaks in plumbing systems as well as sewer odor in structures. The lightweight system features non-staining LiquiSmoke. 605/743-2466; www.gethurco.com; Expo booth 41.

21 SUPERIOR SIGNAL COMPANY LLC

The SE Electric Smoker from Superior Signal Company LLC, designed to detect leaks and odors, comes complete with hose. Weighing eight pounds, the smoker is available in 110-volt AC or 12-volt DC. The unit connects to any cleanout or vent. 800/945-8378; www.superiorsignal.com; Expo booth 6141.

PORTABLE ROADWAYS

22 SVE PORTABLE ROADWAY SYSTEMS

The TrakMat ground cover mat system from SVE Portable Roadway Systems Inc. is designed for moving vehicles across lawns, golf courses and other landscaped areas. Made of 100 percent recycled polyethylene plastic, the standard mat is light green in color to prevent it from getting hot and damaging turf. Traction nubs on both sides provide grip. Black mats are available where heat is not a concern. 800/762-8267; www.trakmats.com; Expo booth 6189.

23 ALTURNAMATS INC.

Ground protection mats from AlturnaMATS Inc. are made of 1/2-inch thick polyethylene and designed to withstand 60-ton loads. The mats are available in various treads and sizes.

Its Mobile Matt has a bold "M" tread with gripping studs on the underside. Hand slots on each side make for easy handling. 888/544-6287; www.alturnamats.com; Expo booth 7102.

REPAIR

24 SAUEREISEN INC.

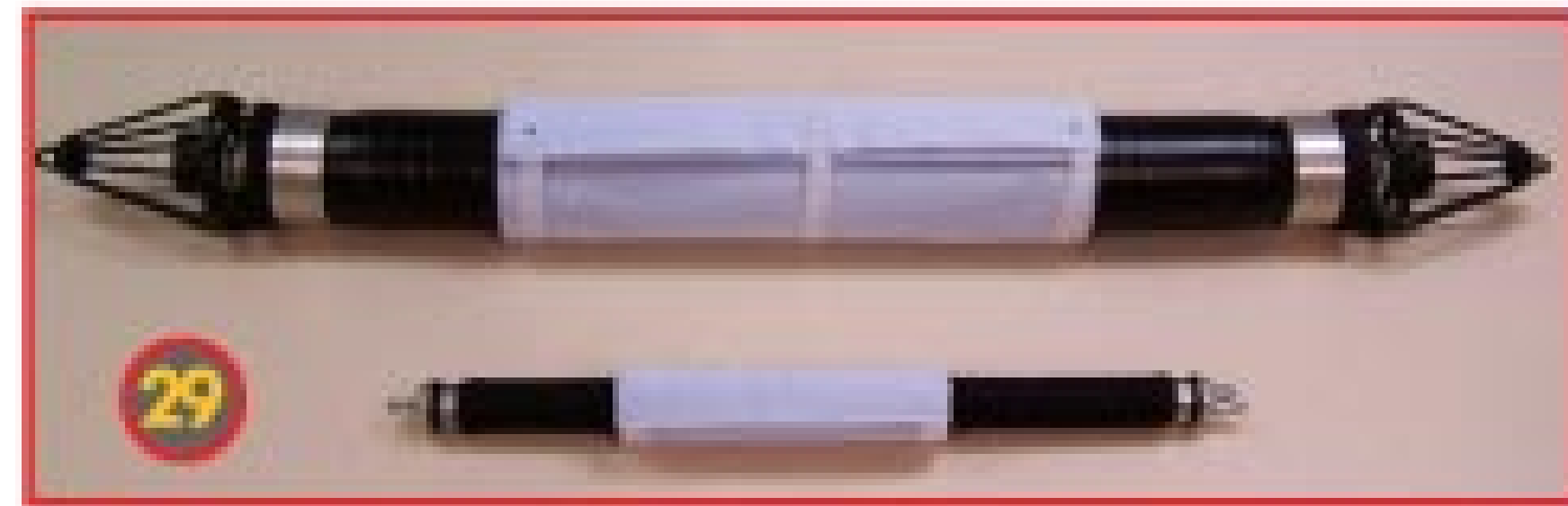
The SewerGard 210 family of protective polymer linings from Sauereisen Inc. is formulated for low permeability to enhance corrosion resistance and extend the longevity of infrastructure, such as manholes and lift stations. Available in several variations to accommodate desired thickness and methods of application, the liner can be spincast, trowled, rolled or applied by airless spray. 412/963-0303; www.sauereisen.com; Expo booth 4004.

25 SEALING SYSTEMS INC.

The Infi-Shield external seal from Sealing Systems Inc. is designed to prevent erosion and infiltration in manholes and catch basins. The one-piece molded seal is made from EPDM rubber, has a reinforced, pre-formed, L-shaped corner and is bonded with non-hardening butyl mastic. Made to pass a vacuum test, the shield installs without special tools. 800/478-2054; www.ssisealingsystems.com; Expo booth 165.

26 FORMADRAIN INC

The LMC lateral-to-main connection from Formadrain is designed to repair tee and wye sewer connections from 4 inches by 4 inches up to 24 inches by 8 inches. The inflatable rubber tee-shaped tube, once inflated, can seal and structurally repair a 10-inch to 4-inch tee sewer connection. Three



access points are required (two manholes and one cleanout inside or outside the building). The system cures in about a half hour and can be used in any type of pipe material. 888/337-6764; www.formadrain.com; Expo booths 4200, 4201.

27 NU FLOW TECHNOLOGIES INC
Nu Flex CIPP liner from Nu Flow Technologies, Inc. is designed for small diameter pipe rehabilitation. It can be launched through a 4-inch cleanout with no excavation required. The liner comes in 1.5- to 8-inch diameters. 800/834-9597; www.nuflowtech.com; Expo booth 5081.

28 INFRA TECH INFRASTRUCTURE TECHNOLOGIES INC.
The Monoform ABS interior manhole forming system from Infratech Infrastructure Technologies Inc. is made for pouring new concrete walls and bases for rehabilitation of existing manhole structures. It is designed to exceed H-20 traffic loading requirements. Custom forms are available for larger structures such as life-station rehab or retrofit. Installation service and on-site training is available. 800/533-4244; www.infratechonline.com; Expo booth 9059.

29 INFRASTRUCTURE REPAIR SYSTEMS INC.
Available for laterals as well as main lines, the Infrastructure Point Repair System is a no-dig, ambient cure spot repair system for any size pipe. The repair kit contains a sewn fiberglass and felt liner that can be customized for most jobs as well as Velcro straps, melt-away strings and pre-measured epoxy formulated for summer or winter. The product is ASTM 1216 certified. 877/327-4216; www.irsi.net; Expo booth 25.

30 AVANTI INTERNATIONAL
AV-248 Flexseal-LV from Avanti International is a dual-component, water-activated, MDI-based polyurethane resin made to withstand wet/dry cycles. The resin cures to a flexible, closed-cell foam, sealing static or moving cracks and stopping active water leaks. Engineered as a low viscosity resin to penetrate cracks, it is also effective for use as a large-void filler around structures. 281/486-5600; www.avantigrout.com; Expo booth 7136.

31 SPRAYROQ INC.
Bio-based Green SG#1 corrosion coating for wastewater collection and treatment systems from Sprayroq Inc. is an elastomeric, spray-applied polyurethane with 70 percent "B" content bio-based material. The product has been accepted for inclusion in the U.S. Department of Agriculture's BioPreferred program. It is NSF61 certified and approved for use in a potable water environment. 205/957-0020; www.sprayroq.com; Expo booth 6035.

32 MR. MANHOLE
The Six-Shooter manhole frame and lid replacement system from Mr. Manhole is designed to lock into a manhole and cut a circular groove in the road, enabling the frame and lid to be removed without labor. Suitable for high-production crews, the tool replaces the air-hammer and concrete saw method of repair, reducing the chance of worker injury. 419/229-3015; www.mrmanhole.com/sixshooter; Expo booth 9149.

33 BOWMAN TOOL COMPANY & SYSTEMS
The 2.5 hp, right-angle geared air motor from Bowman Tool Company & Systems delivers 28-38 cfm at 95-105 psi with an average rpm of 10,500. Constructed from aircraft aluminum and heat-treated steel, the air motor is designed for brushing and cutting off protruding laterals. It can be combined with a slitting

saw to aid in the removal of bad lining from pipe. The motor measures 5.75 inches long and has a 3-inch square base. It can work in 6-inch and larger relined pipe. 717/432-1403; www.bowmantool.com; Expo booth 9318.

JETTERS AND REELS

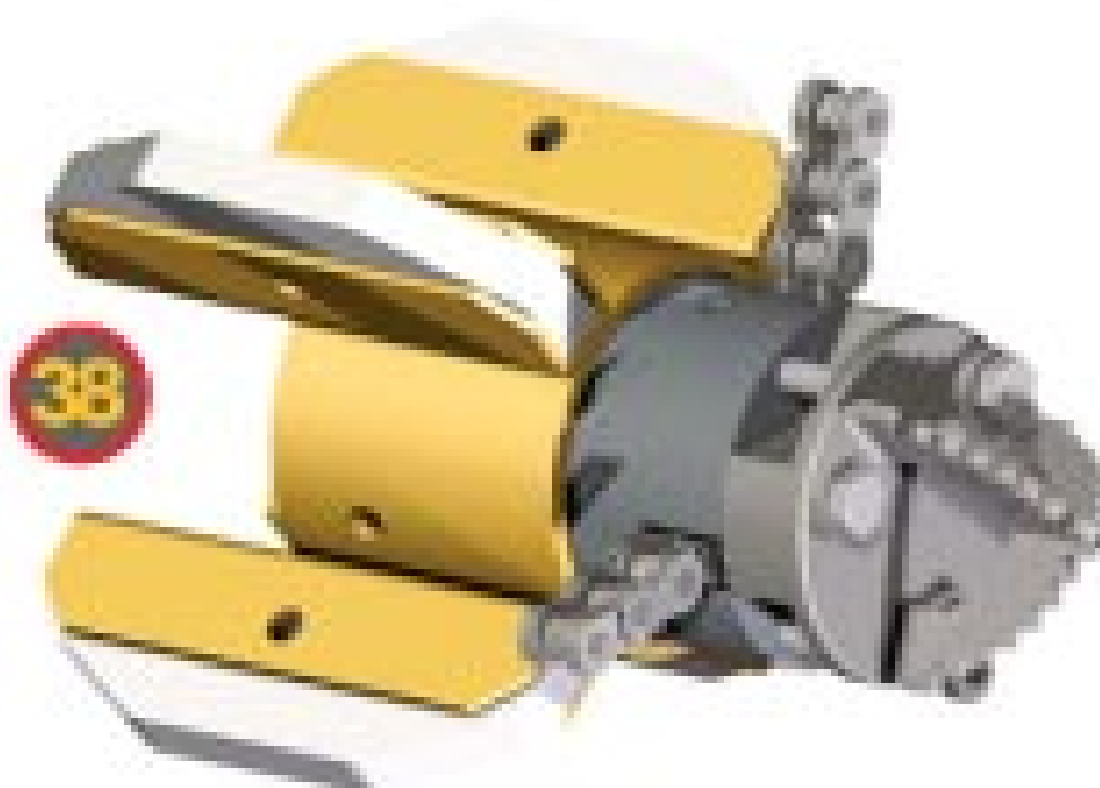
34 DURAND-WAYLAND INC.
The Bulldog Jetter from John Bean Sprayers and Durand-Wayland Inc. features wireless remote control, jet pulsation, anti-freeze circulation, mini-jet system with quick-release mount and a Udor 18 gpm at 4,000 psi run-dry pump with two tank options. 800/241-2308; www.durand-wayland.com; Expo booth 2017.

35 CAM SPRAY
The Model SK45018D trailer jetter from Cam Spray delivers 18 gpm at 4,000 psi. Powered by a 66-hp Kubota diesel engine, the jetter has electric two-speed control and over-center clutch drive. Features include a 500-foot by 1/2-inch hose on a hydraulic, variable-speed swivel reel, five-plunger pump, four-nozzle kit, 325-gallon water tank, power pulse, single-axle 6,000-pound trailer, anti-freeze tank, lockable tool storage, wash down gun, Tiger Tail hose, and hydrant fill. 800/648-5011; www.camspray.com; Expo booth 3069.

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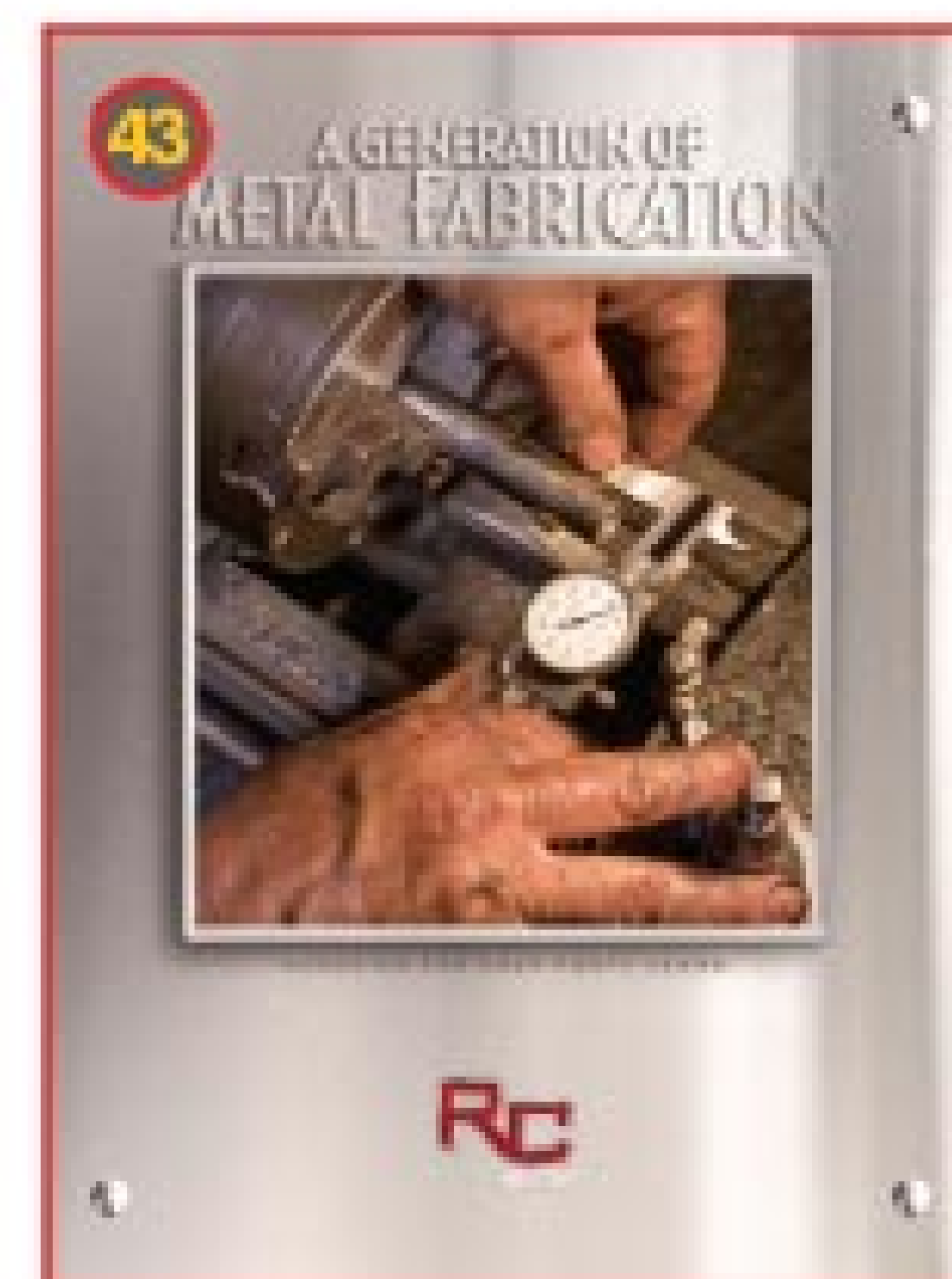
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36 HANNAY REELS

The Series 6200 high-pressure reel from Hannay Reels features a 1-inch FxF NPT 90-degree sealed ball-bearing, swivel-joint inlet with easy packing replacement and adjustable packing design. The outlet has a welded 1-inch female NPT thread. Other features include direct-drive hydraulic rewind motor, one-piece steel hub/axle assembly rated at 6,000 psi and roller arm guide on the front of the frame. Assorted hose packages are available. 877/467-3357; www.hannay.com; Expo booth 3161.

NOZZLES AND HOSES

37 NOZZTEQ INC.

The BL Swiper sewer cleaning nozzle from NozzTeq Inc. is made for pipes 8 to 18 inches in diameter. The nozzle uses both the water flow from the jets and air flow in the pipe. The water flow, through the pressure in the jets, creates a jet stream and thrust through air channels in the center of the nozzle for maximum cleaning and minimum water usage. 866/620-5915; www.nozzteq.com; Expo booth 8181.

38 ENZ USA INC.

The 10.125TR turbine-driven root-cutter nozzle from ENZ USA Inc. can be used with both clean and recycled water in pipes from 5 to 12 inches in diameter. The jetter has a low rotation speed, while maintaining high torque. It also can remove grease, solid and semi-solid sediments, mineral deposits, concrete, grout wash and other debris. The nozzle requires a 3/4- or 1-inch hose connection. A variety of attachments are available. 630/692-7880; www.enzusainc.com; Expo booth 67.

39 USB-SEWER EQUIPMENT CORP.

The vibrating Rocker Nozzle from USB Duesen GmbH is made to remove the toughest deposits, such as calcium and concrete from the bottom of 4- to 24-inch pipelines. The offset rotation of the rotor causes aggressive vibration that breaks up the deposits. The stainless steel nozzle with ceramic inserts is intended for use in plastic, HDPE, PVC, and cast iron pipes. No lubrication is required. 770/984-8880; www.usbsec.com; Expo booth 52.

40 SPIR STAR INC.

The 25/6 UltraFlow hose from SPIR STAR Inc. features a chemical-resistant polyamide inner core and outer cover, reinforced with six layers of high-tensile steel wire. The 1-inch I.D. hose is designed to handle working pressures up to 20,000 psi and is available with female M swivel or 1-inch MP tube nipple-end fittings. Developed for high-flow waterblasting, it can handle flow rates up to 150 gpm. 281/664-7800; www.spirstar.com; Expo booth 7088.

41 PIRANHA HOSE PRODUCTS INC.

The 1 1/2-inch, 2,500-psi cleaning hose from Piranha Hose Products Inc. is made of yellow, polyolefin tube, a double layer of synthetic fiber braids and an abrasion-resistant orange cover. It has a temperature range of 150 degrees F (66 degrees C). A Slither slick cover is available for those tough sewer bends. 231/779-4380; www.piranhahose.com; Expo booth 6119.

TRUCK ACCESSORIES

42 A & L SYSTEMS INC.

The windshield washer solvent heater from A & L Systems Inc. is designed to heat washer fluid and deice

windshields. Made to clear ice and frost in cold climates and as well as clean grime and insects in warm weather, the heater also aids in clearing hard-to-reach places, prevents ice buildup on wiper arms and reduces the time spent scraping the windshield. 313/533-7100; www.a-and-lsystems.com; Expo booth 4192.

43 RC INDUSTRIES INC.

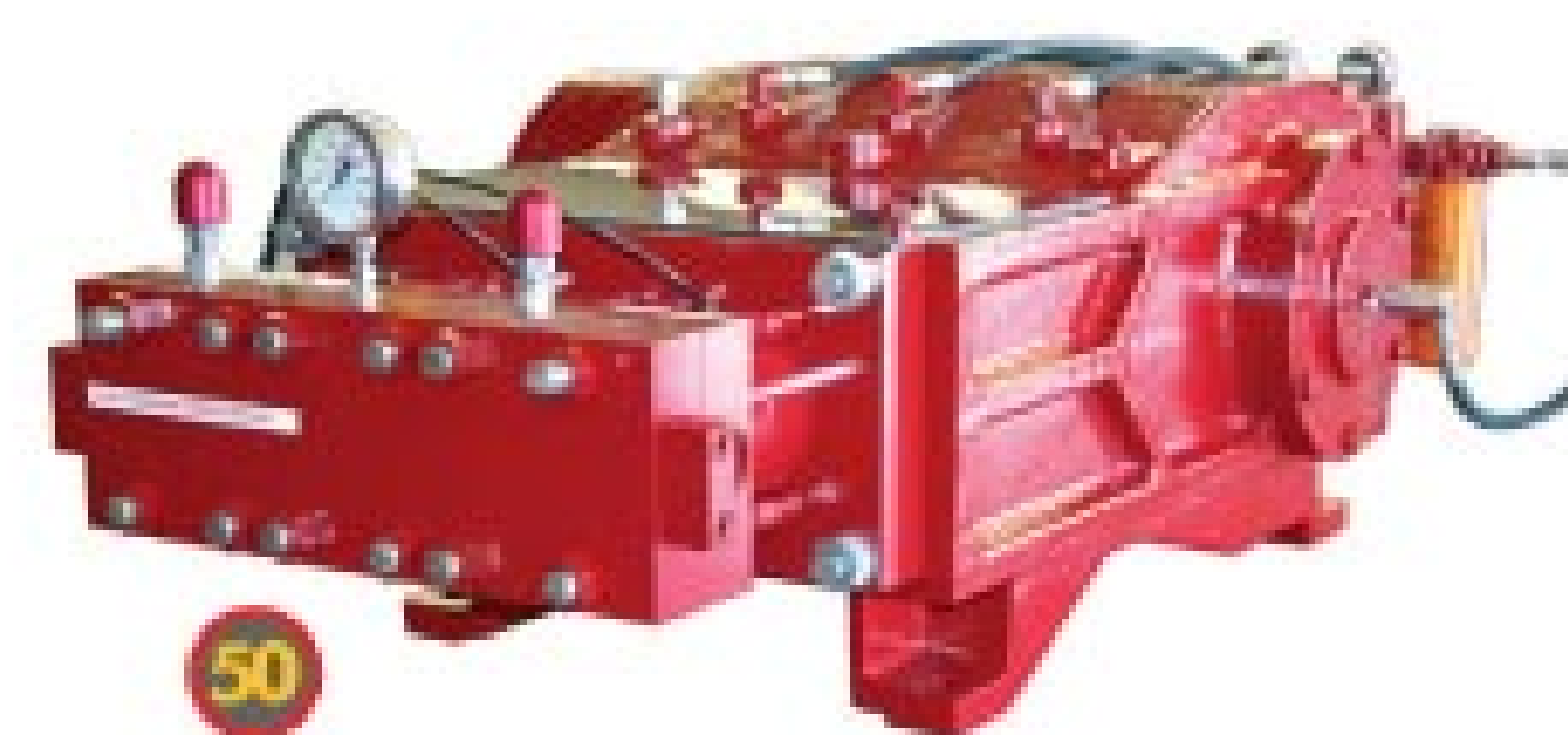
Custom storage systems from RC Industries Inc. utilize metal fabrication based on lean manufacturing principles. Products include under body side-swing and step toolboxes, slide-out trays, bumpers and custom fabrication, including punch and laser processing. 800/382-9511; www.rctoolbox.com; Expo booth 9133.

44 USA BLUEBOOK

Turbo-charged, truck-mounted CIC Powerboxes from USA BlueBook provide on-site power without using your truck battery. The units supply up to six hours of working power, recharging off your alternator. It can run power saws, grinders, drills, impact wrenches and air tools. Or use it to inflate tires. The DC output can power winches or boost-start backhoes, tractors and bulldozers. Models are available with built-in hydraulic power. The units deliver up to 4,000 watts, supplying 2,000 watts of continuous power, 100 psi air power and 2,100 cranking amps of emergency power. Boxes feature built-in lights and are available with radio, CD, TV and DVD options. 800/548-1234; www.usabluebook.com; Expo booth 9161.

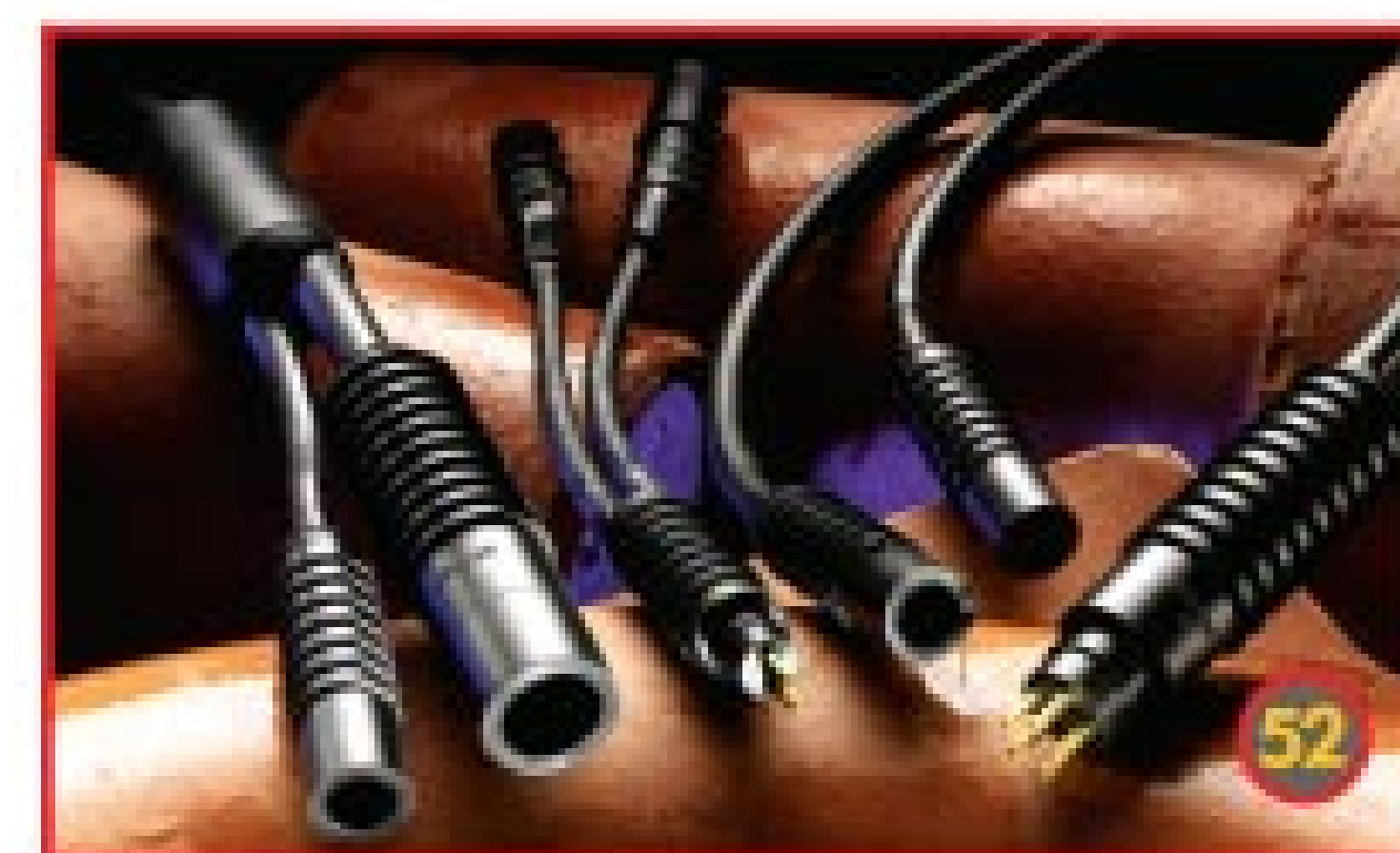
45 FLITZ INTERNATIONAL LTD.

The Professional Detailers Kit from FLITZ International Ltd. includes paste polish, aluminum PreClean, Speed Wax



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and Waxx Protectant, four BuffBalls in assorted sizes, microfiber cloths and mini-suff pads in a resealable bucket. The kit is designed to restore plastic and acrylic materials, detail aluminum, stainless steel and painted vehicle surfaces, fiberglass and more. It also removes oxidation, tar, scuffing, stains, bluing, rust and burn marks. 800/558-8611; www.flitz.com; Expo booth 31.

EDUCATIONAL MATERIALS

46 WATERJET TECHNOLOGY ASSOCIATION

Recommended Practices for the Use of Industrial Vacuum Equipment from the WaterJet Technology Association is a guide for setting up and operating a safe industrial vacuum project. Created for industrial vacuum equipment users or individuals who contract out for industrial vacuum services, topics include injury potential, damage and explosions, types of trucks, getting started, pre-job setup, working safely, job completion, load/off-loading, equipment maintenance, regulations and certifications. A glossary is included. A companion video offering a visual depiction of many of the major topics in the guide is available. 314/241-1445; www.wjta.org; Expo booth 6127.

47 LENZYME INC.

A year's supply of educational brochures and calendar reminder stickers have been added to each case of powder biological waste treatment products from Lenzyme Inc. Private-label powder packets also feature the educational brochures and reminder stickers. 800/223-3083; www.lenzyme.com; Expo booth 6151.

PUMPS

48 HAMMELMANN CORP.

The 1,000-hp HDP-750 pump from Hammelmann Corp. can deliver up to 43,500 psi and flow rates exceeding 450 gpm. Features include vertical five-cylinder design, stainless steel stress-free head, cross-head piston bellows seal, choice of application specific seal assemblies, solid ceramic or tungsten carbide plungers and choice of bronze or stainless steel suction chamber. Other features include twin helical integral reduction gear with crankshaft supported by four bearings and pressurized oil lubrication system with oil cooler/filter. The pump can be delivered in various configurations to fit application requirements. 800/783-4935; www.hammelmann.com; Expo booth 5127A.

49 CAT PUMPS

Made for sewer cleaning and vacuum trucks, the portable, hydraulic-powered 3CP and 5CP high-pressure pump systems from CAT Pumps deliver from 1,000 to 5,000 psi and flows from 2 to 25 gpm. The pumps offer a compact footprint for tight space installation and operate by using existing power from hydraulic equipment. Cleaning options include Mag-Jet jetter, chemical injectors, guns, lances and nozzles. 763/780-5440; www.catpumps.com; Expo booth 4068.

50 GARDNER DENVER WATER JETTING

The HC convertible pump line from Gardner Denver Water Jetting Systems Inc. permits the conversion of a single pump from 10,000 psi to 15,000 psi by changing the plungers, packing and packing backup rings. The pump line does not require valve and stuffing box replacement. 281/448-5800; www.waterjetting.com; Expo booth 5031.

TECHNOLOGY

CYCLOPS ELECTRONICS INC. (NO IMAGE)

P.I.D.S. pipeline inspection data software from Cyclops Electronics Inc. is PACP 4.4 certified. 830/249-9756; www.cyclopestv.com; Expo booth 4196.

51 SAVATECH CORP. The Sava-Sklarz Testboy pressure, vacuum or water-test system from Savatech Corp. is designed for verifiable, certified line acceptance testing of pipelines and manholes. The system can be used for rehabilitation, new construction, repairs or leak detection. It performs ASTM standard tests, records digitally and prints out tests results in a precision time-scale graph. It also reports all test parameters and test performance during a specified time. Tests are certified using ASTM standard and cannot be tampered with or altered. 386/760-0706; www.savatech.com; Expo booth 9037.

52 SEA CON BRANTNER & ASSOCIATES INC.

Rubber-molded connectors with integral gripper from Sea Con Brantner & Associates Inc. feature a serrated grip that allows for handling and unplugging the connectors in slippery and wet conditions. The small diameter connector is easy to mate and de-mate and available in various sizes, from a single pin up to 12 contacts. The connector also is offered with pins and sockets reversed for secure mating. 281/599-3509; www.seacon-usa.com; Expo booth 3031.

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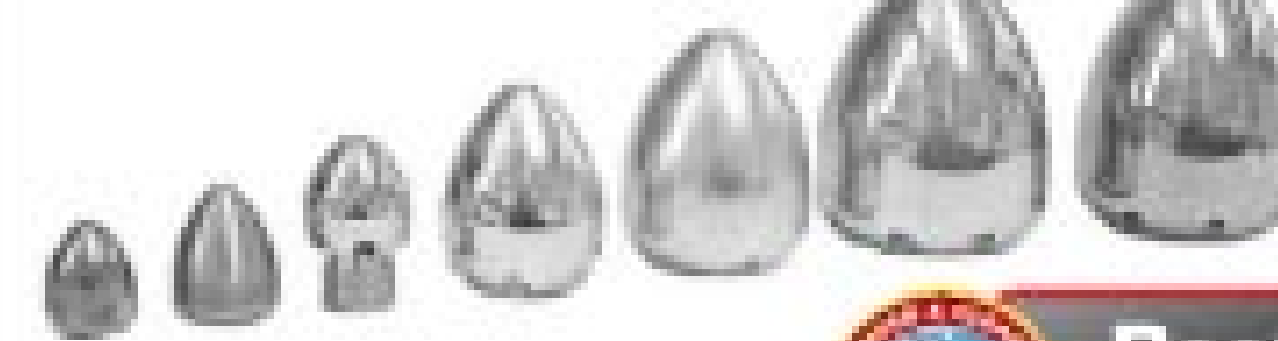
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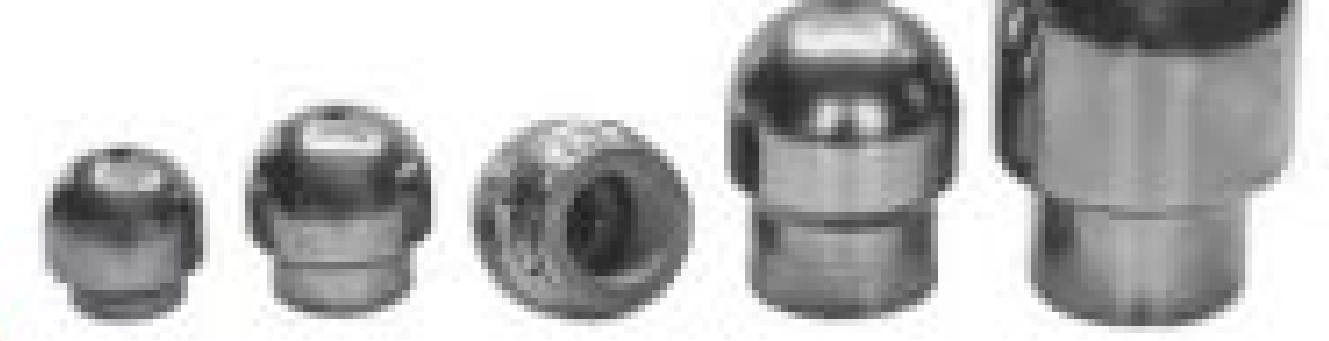
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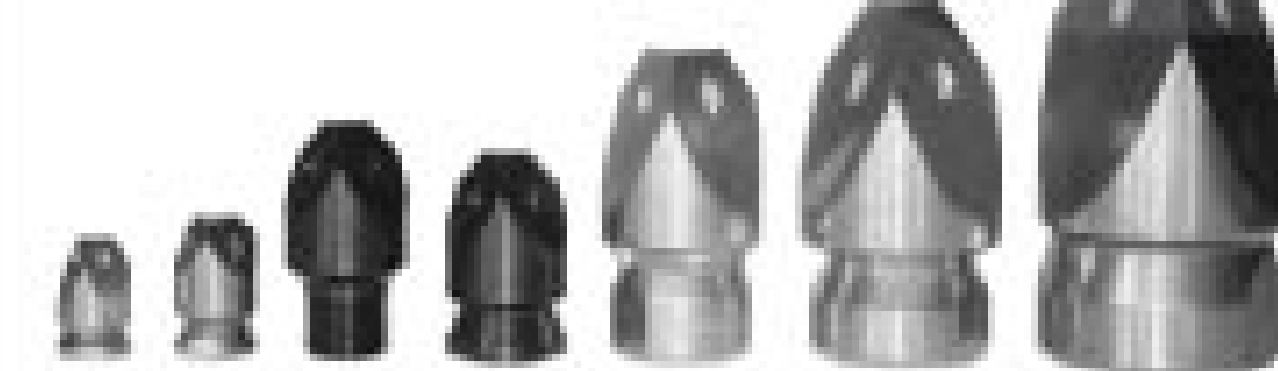
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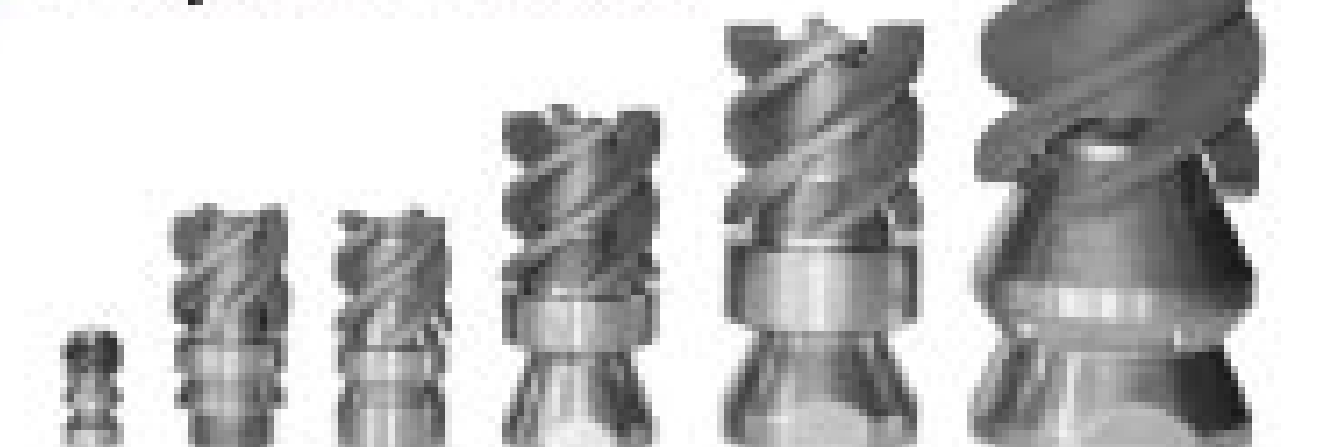
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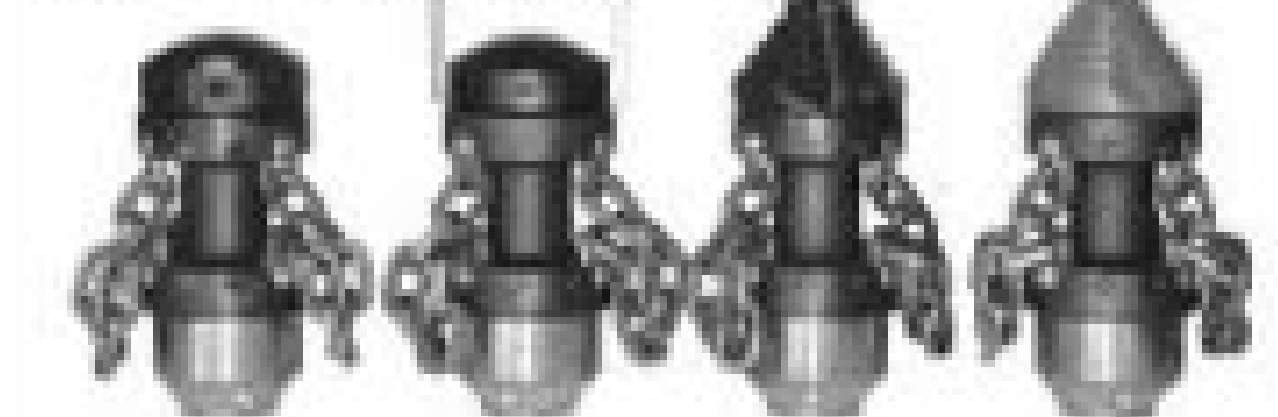
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Getting Through a Cash Crunch

When seeking financing for a cash infusion, it helps to know the programs available to understand the borrowers' perspectives

By Robert E. Carlson

Robert E. Carlson is owner of Glendale Welding, Glendale Ariz., and a business consultant for the Small Business Development Center of McLennan Community College in Waco, Texas.



In an economy like this, one of the biggest problems business owners face is the cash crunch. Customers are slower to pay and some have even filed for bankruptcy. Just when you were expecting a check, you get a Chapter 11 notice from some courthouse. Cash is king in any economy, so how do you get the cash during shortfalls in cash flow?

Financing vehicles

Lisa Key, from Diamond International in Kansas City, Mo., says it isn't significantly more difficult to get a loan for a major item like a truck these days. "Things haven't changed all that much," she says. "I can still get customers financed through Navistar in pretty much the same routine. If a customer has good credit or other criteria appear to make them worthy, they can still get financed."

"In terms of credit score, we've gone as low as 500 in some cases if the customer has a track record and we understand what has happened to put them in that rating bracket. We don't exclude anyone because of a relatively low credit score. Other factors come into play, such as how long the company has been in business, how much business they have done with us, and what the likelihood is that they'll be able to pay the loan off."

So in terms of trucks, the truck dealership may be your best bet for a loan. Manufacturers remain anxious to sell vehicles and have the latitude to work with buyers.

Financing the business

Businesses were booming a year ago. Expansion was part of the mindset, and owners took on some debt to move forward. In a growing

economy, perhaps some poor spending habits or inefficient processes that weren't properly dealt with left you vulnerable when customers started cutting back or leaving.

Now, with the business hitting some bumps, you may need financing to get by until the economy starts to recover. Many owners wonder where they can get this much-needed infusion of cash. A lot of media attention has focused on federal stimulus money and the U.S. Small Business Administration. But do these programs impact the environmental service industry?

Last February, when the stimulus package got the green light, some \$700 million was set aside for the SBA to help small business. Let's look back before we move forward and see how the SBA used to operate.

As a small businessman, I had always heard that the SBA was burdensome to deal with. I never dealt with them because I never needed to, but the criticisms boiled down to two: They required too much paperwork, and banks didn't like to administer SBA-guaranteed loans because of the slow repay from the government. Often, banks would file to get their guaranteed money and it took as much as a year for the government to pay them. The banks didn't want to slog through a lengthy process to be reimbursed.

Recessionary times

With the onset of the recession, the SBA was brought forward to pave the way for getting money to small-business owners who needed it so badly. Many loan programs were developed, including the ARC (America's Recovery Capital) loan, which would supply up to \$35,000 to a business to meet current debt obligations.

These were to be five-year loans with interest paid by the government over the life of the loan, and no payment due from the borrower until the beginning of the second year. It sounded good. I called several banks to see how ARC loans were going, and most reported that they hadn't made any because they weren't interested: Not enough profit and too much paperwork. A number of the bank representatives said they didn't enjoy dealing with the SBA.

It's important to remember that all these SBA loans go through banks. The banks gather the information, and if they deem it a good loan, they forward their approval, and the loan is approved and guaranteed by the SBA.

What banks demand

Ultimately, the bank makes the decision. And as you might imagine, they are more skittish about handing out money today than they were a few years ago. If you need a cash infusion, whether through an SBA loan or traditional bank financing, here are the requirements banks are demanding these days:

Money in their bank. Many banks don't like loaning money to someone who isn't "going in" on the deal with them. In some cases, they want you to pony up as much as 30 percent of the total amount in cash to establish your commitment to building back the business.

A Personal Financial Statement. Many banks require this document, showing everything you own, what you owe, and ultimately your net worth.

Collateral. The SBA recommends banks do whatever they can to secure 100 percent of the loan in business or personal assets, or a combination. And the assets are

valued at fire sale prices – what the bank could raise through immediate liquidation. So, to the bank, the assets are worth 50 to 75 percent of real market value.

Your credit rating. Many banks want a rating of 700 or above. Each bank sets its own requirements on a minimum score. Some will still consider a score of 600 or above.

An up-to-date business plan. Many banks want to see a detailed and current business plan that spells out your plans for the money being borrowed.

The big question

Once they have the information in hand, loan officers will have one last and crucial question: "If you are given the loan, will you be able to pay it back?" Obviously, your business is already stressed, so will another monthly payment simply make things worse?

Before seeking more financing, jump on the other side of the table. Take on the role of the banker and look at yourself the way the banker does. Knowing what you know, would you loan the money? Remember, like any business, the bank's job is to make money. They don't want to gather up collateral when someone fails and start selling off assets. That's not what they know how to do, and it's now how they turn a profit.

When it comes to financing, be realistic. The banker is. You've all heard the phrase, "If you don't need the money, the bank will lend it to you." This has a ring of truth to it, but it doesn't mean you can't secure a loan in these troubled times. You just have to be smarter about navigating the loan process. ■



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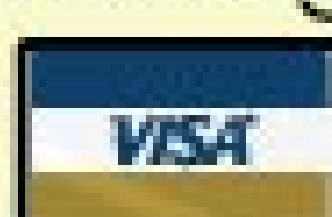
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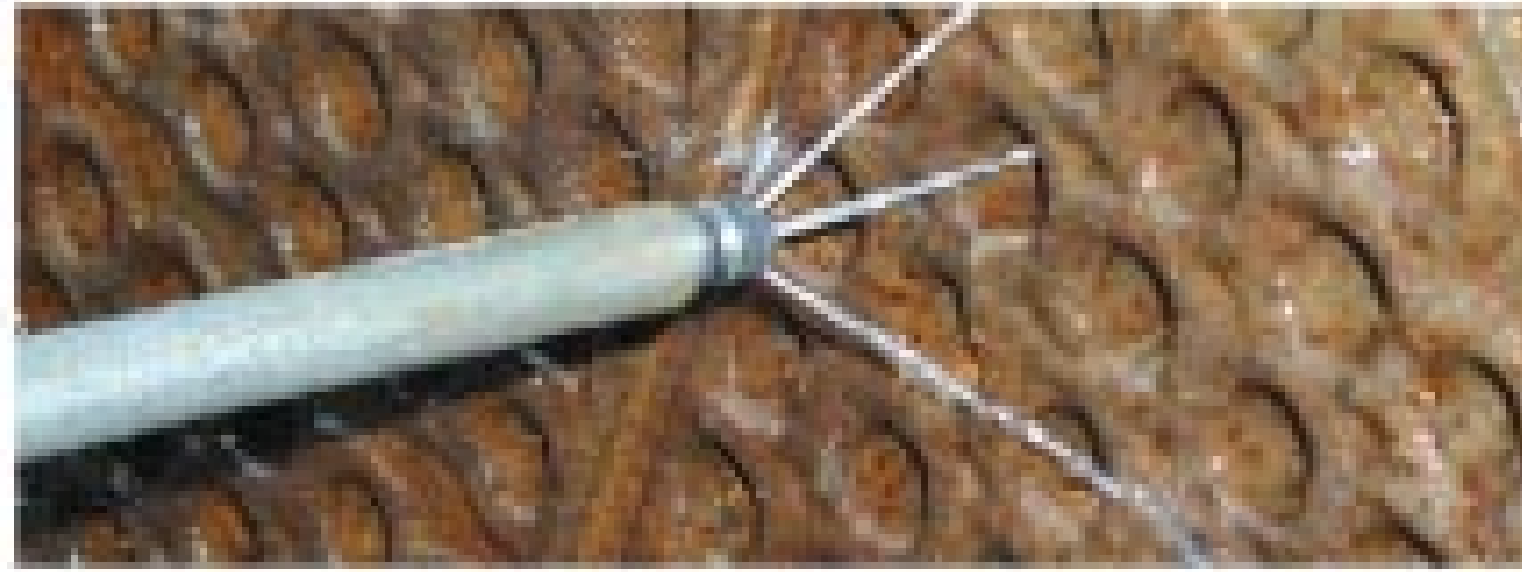
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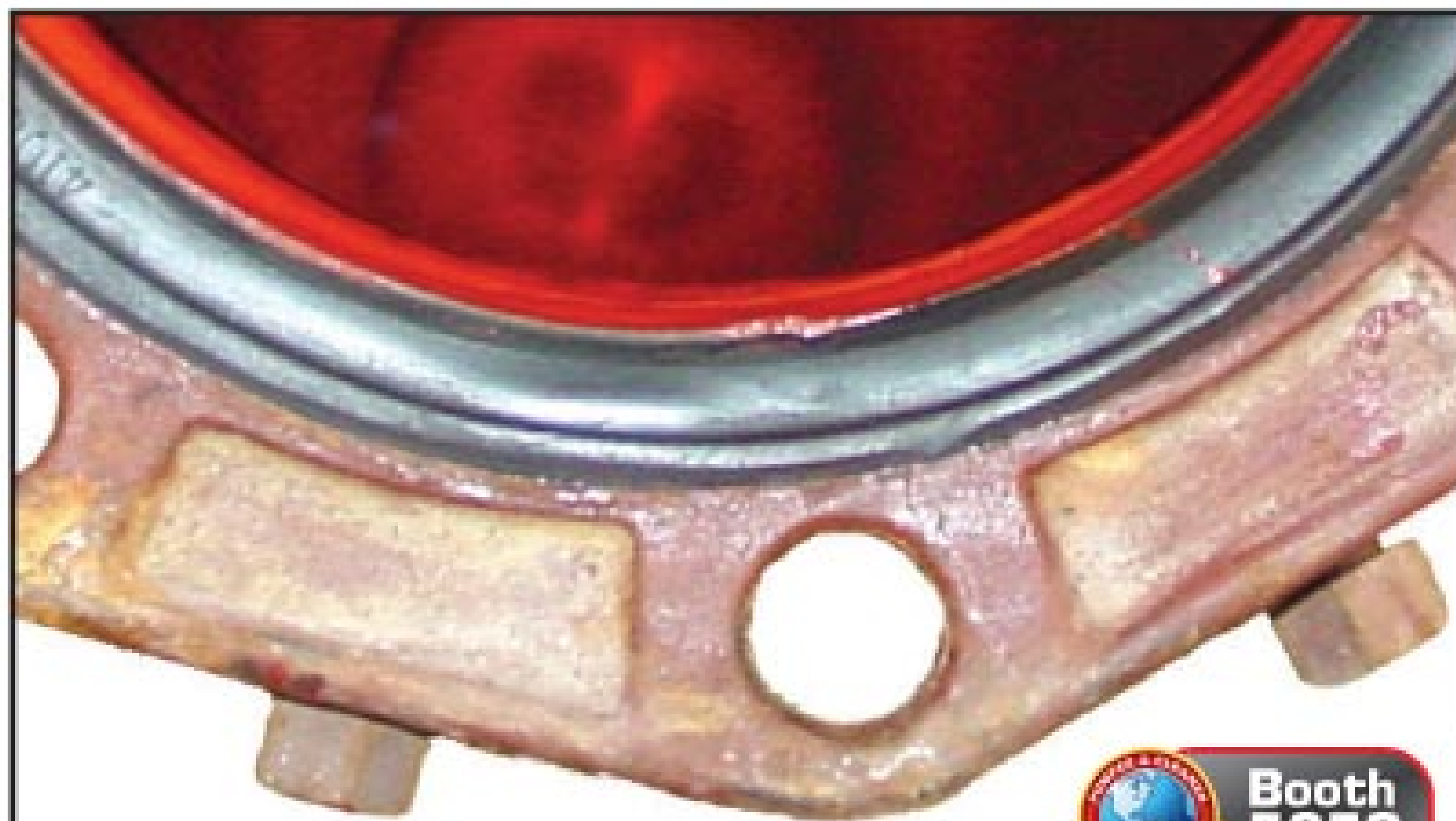
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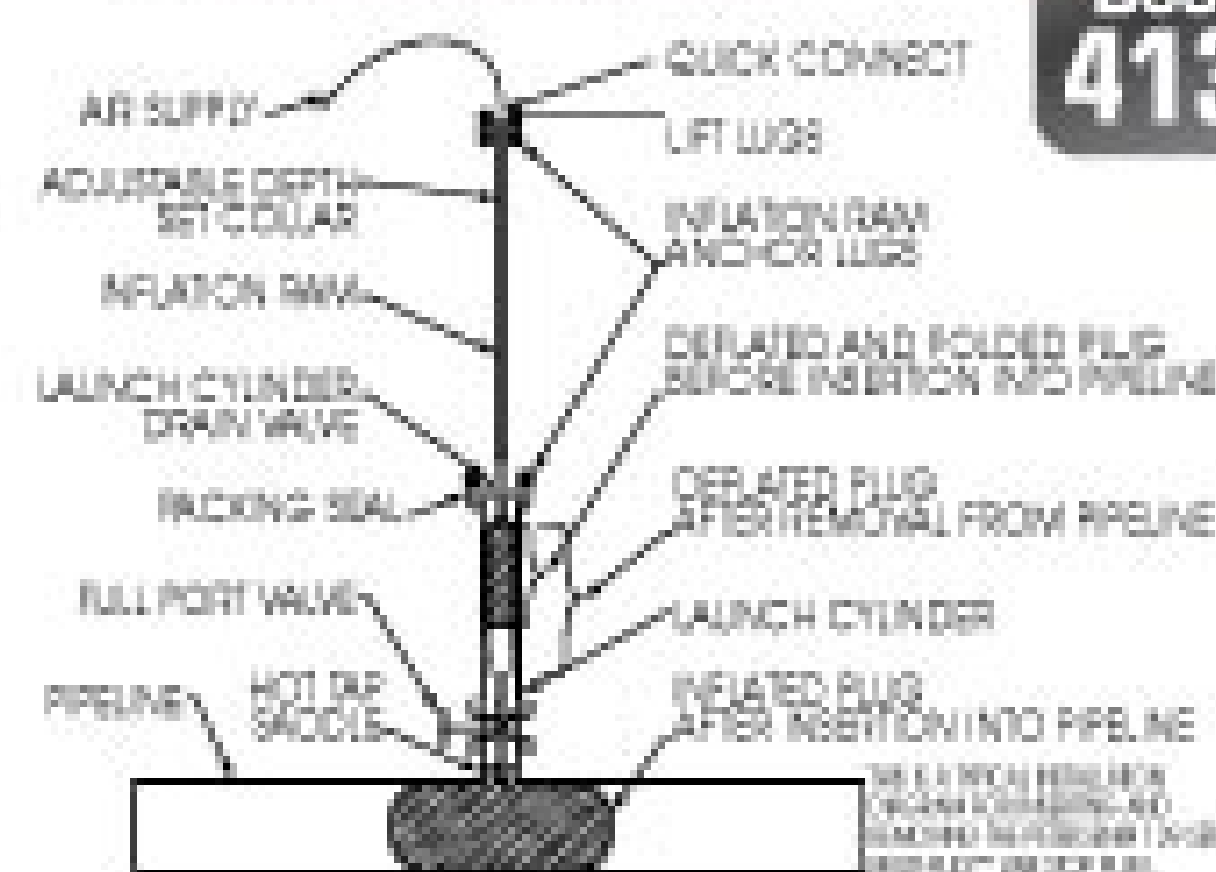
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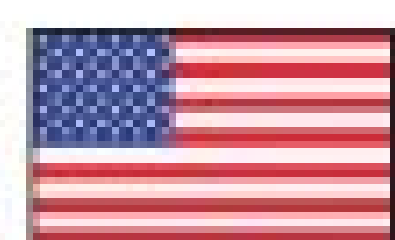


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Are You Top Dollar?

A new book reinforces many long-standing principles about operating a high-quality and profitable service contracting business.

By Ted J. Rulseh

Ted Rulseh is the editor of *Cleaner* magazine. He can be reached by calling 877/953-3301 or e-mailing editor@cleaner.com.



What does it take to be a good listener? Why should you charge based on flat rates? How do you handle customer objections? What are some good ways to close a sale? They're questions drain cleaning contractors ask themselves often.

The answers aren't necessarily new, but they always bear repeating. In their book, *Top Dollar Plumber*, Ti

"We guarantee that even if you are already a top producer, you can glean some technique that will increase your sales and profits," they say in the book's introduction. "The only catch is that you must want it badly enough to invest the effort."

At 140 pages and 19 chapters in paperback, the book is a quick read – but a once-through doesn't really do justice. Like any good book of advice, it's worth reading

- Close: Getting your customer to commit to the sales presentation.

"Plumbers need to master when to close the sale," the book says in Chapter 9. Many sales are won and then lost because the sale was not closed when the customer was ready to buy...When in doubt, if you are hearing a buying signal, ask a closing question and start writing the work order.

- They empathize with the customer (Mary, that would upset me, too.)
- They do not justify bad service or bad luck. They don't say, "The supplier let me down." Instead they say, "I blame myself for not following up with the supplier and assuming that this was ordered."
- They tell the customer, "I will

"We guarantee that even if you are already a top producer, you can glean some technique that will increase your sales and profits. The only catch is that you must want it badly enough to invest the effort."

Ti and Sid Sutherland

and Sid Sutherland answer them – and do a lot more. They promise tips guaranteed to increase sales.

While the Sutherlands are in the service plumbing business, their advice applies just as well to drain cleaning and pipe service businesses. After all, many fundamentals of service business success apply pretty much across the spectrum of specialties.

Based on experience

The authors – father and son – know their business. Sid Sutherland has worked in sales for Trane and other major companies and as a general contractor. A master plumber and master electrician, he also ran a plumbing company and an electrical contracting business. His son Ti was in his own plumbing truck at age 18. He is still active as a service plumber while also teaching others how to sell plumbing. He has written articles for national publications on plumbing sales.

through, and then revisiting, chapter by chapter. In fact, the authors recommend making the book a long-term resource, reviewing the skills it teaches, mastering one or two at a time, then moving on to the next.

Stages of selling

The authors see selling as a progression that starts at the first encounter with a customer and ends with the signing of a work order. The progression has six steps:

- Image: How you look, how your trucks look, and how your company is perceived.
- Relationship: You make the customer a friend.
- Facts: Desirable features about your product or service.
- Benefits: What your product can do for the customer.
- Agreement: When the customer agrees with what you say and gives you some kind of signal that affirms this.

Customer buying signal: Would I need to be home when the home is repiped?

Plumber's trail close: No, you don't. You can give me a key or arrange for someone else to be here. Will Thursday at 9 a.m. work as a time for us to get started? (This question will confirm the sale).

"My daughter will be here." (Sale is confirmed.)

When things go wrong

The book also addresses the delicate problem of handling unhappy customers. "Every firm has its favorite plumbers for solving customer complaints. Some customers even want this man to meet their daughter. They write letters to the boss about how well the problem was handled. They create dedicated customers." So, what's their secret?

- They listen and they listen and they listen.
- They let the customer finish before they speak.

do everything in my power to rectify this problem to your satisfaction." They are prepared to compromise somewhat.

- They build a relationship with the customer.
- They ask the customer, "What will make you happy with ABC Plumbing?" or "What kind of outcome would you like to see?"

Rules for selling

The book's next-to-last chapter lists two dozen rules for Top Dollar Plumbers. "Take a rule and post it on the dash of your service van," the authors say. "Before you enter the house, read the rule and dedicate yourself to using it. It may take a week or even a month to make this second nature. When you do, move on to the next rule. You will find this a life-changing experience." The rules include:

When the customer asks the

price, I will never blurt it out without prefacing it with facts and benefits. Ninety percent of the time, the price is more than the customer is expecting to pay, so you need to soften the impact. I won't say, "This toilet costs \$695." I will say, "This is a premium toilet with a 24-month warranty. Our VIP discount price is \$695. The toilet is on the truck and within two hours it can be installed. Mary, why don't you let me put this toilet in for you?"

Never argue with a customer. When two people argue with one another, it's a verbal form of fighting with their fists. When a customer wants to argue, remember that it takes two people, so don't get started...If you win the argument, you lose the customer.


Never say, "I don't know." There is no such thing as a question you cannot answer. "I don't know" translates to "I don't care." It has a sound of finality, and it irritates the customer. If you don't know, say, "That's a good question. Let me find out for you."

I will not prejudge my customer. I will not assume my customer cannot afford it, is too cheap to buy it, would not want another one, does not like my sales presentation, will not buy quality. ■

Top Dollar Plumber is available on the Sutherlands' Web site at www.topdollarplumber.com. The site also contains information about the authors' forthcoming book, Perfect Phone Answering



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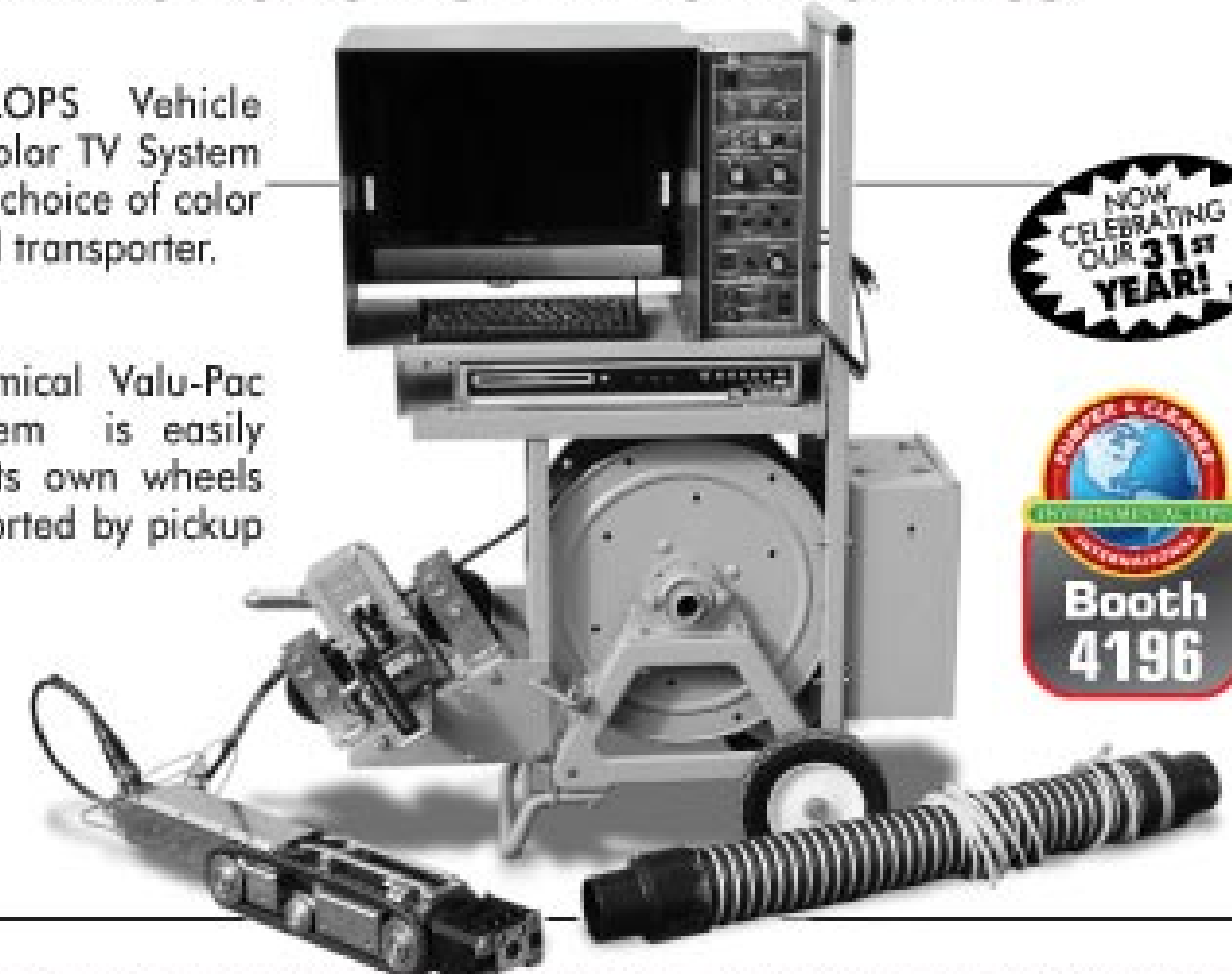
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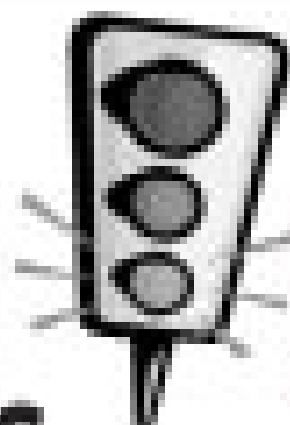
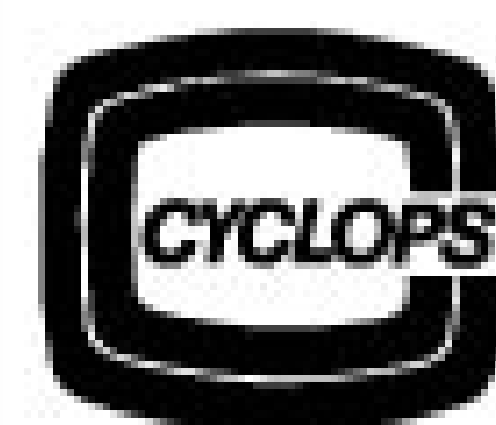
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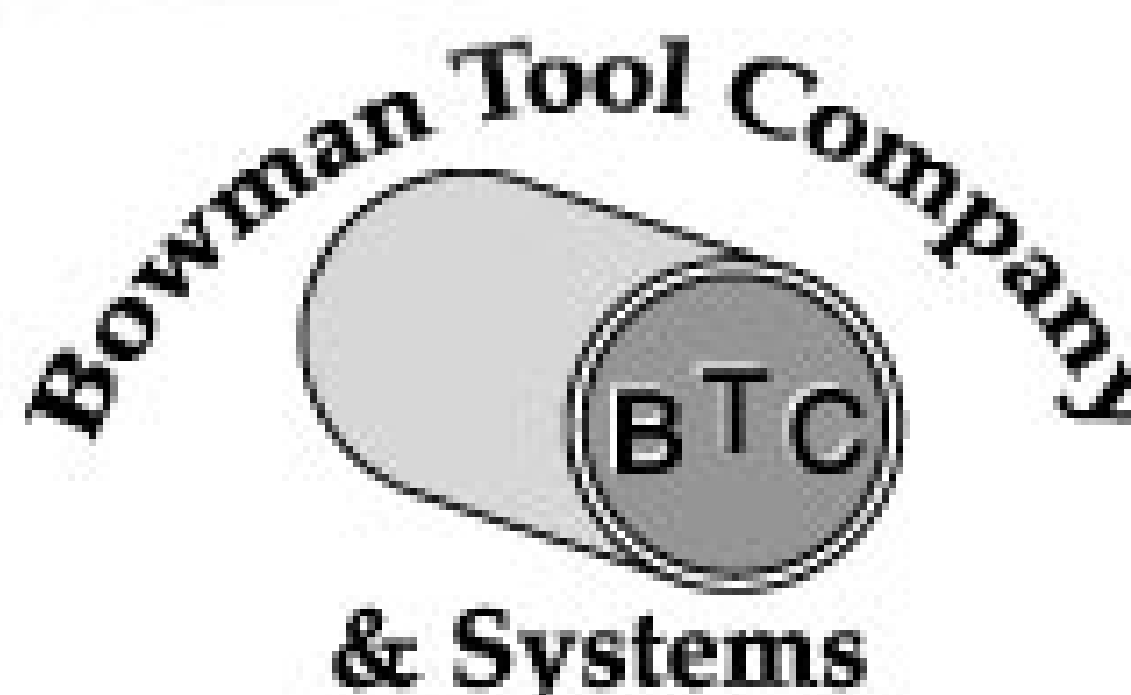
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Super-Size It

McRae's Environmental keeps customers happy and production up with a fleet of combination trucks that carry extra muscle

By Ken Wysocky

What do a McDonald's value meal and the new fleet of combo vacuum trucks at McRae's Environmental Services Ltd. have in common? They're both super-sized!

McRae's, an industrial cleaning company in Vancouver, B.C., ordered six giant-size trucks from Vacall Industries Inc. at \$350,000 each. The trucks are so customized that they don't even have a formal model number, says Bob Ballance, one of the principals of McRae's.

"They're built on a Freightliner FL120SD (severe duty) chassis, which actually is specified for the logging industry," he says. "They're almost built like tank trucks, because they can produce both pressure and vacuum, and pump and haul large loads of solids. They provide the best of both worlds."



McRae's Environmental uses triple-axle Vacall combination trucks that are highly customized for severe duty.

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OWNER:	McRae's Environmental Services Ltd., Vancouver, B.C.
FUNCTION:	Cleaning pipes, lagoons and ponds and hydroexcavating
VEHICLE TYPE:	Vacall triple-axle combination trucks
FEATURES:	14-cubic-yard debris tank, 1,700-gallon water tank, 5,000-cfm vacuum pump, 120- to 140-gpm/2,000-psi water pump
COST:	\$350,000

The trucks weigh in at 46,000 pounds unloaded and are about 41 feet long. They have 550-hp engines, 14-cubic-yard debris tanks and 1,700-gallon water tanks. "Everything on

MONEY Machines

McRae's chose "super-size" combination trucks for their high productivity. The trucks can stay on a job and clean longer without the need to dump debris or fill the water tank.



them is biggie-sized – the tires, frame, pumps, transmissions, cooling systems – everything," Ballance says. "The model 8702 vacuum pumps from Hibon-Ingersoll Rand are the biggest mobile blowers you can buy" (at 28 inches Hg at 5,000 cfm).

Instead of conventional water pumps, which deliver 60 to 80 gpm at 2,000 psi, the trucks, with three rear axles, carry pumps that generate 120 to 140 gpm at 2,000 psi. "By doubling the water volume, it doubles the thrust at the nozzle," Ballance says.

There's a simple reason behind the super-size approach: Productivity. "The trucks provide added value for our customers, because we can accomplish in half a day what it used to take us a day or two to do,"

Ballance says. "We can go longer on a jobsite – pump more and clean longer without needing to refill.

"We go to the dump once a day instead of multiple times. Since we don't have to off-load as often, our trucks aren't stuck in traffic as often. Instead, they're on the site, doing the job."

Jobs entail everything, from cleaning large-diameter pipes, lagoons, tailing sites and ponds to hydroexcavating. "We can pump slurries and liquids through hundreds and hundreds of feet of 6-inch hose," Ballance says. "Or we can suck liquids, mud and debris from holes drilled up to 100 feet deep for geothermal heating systems. In addition, the trucks can serve as a bypass system."



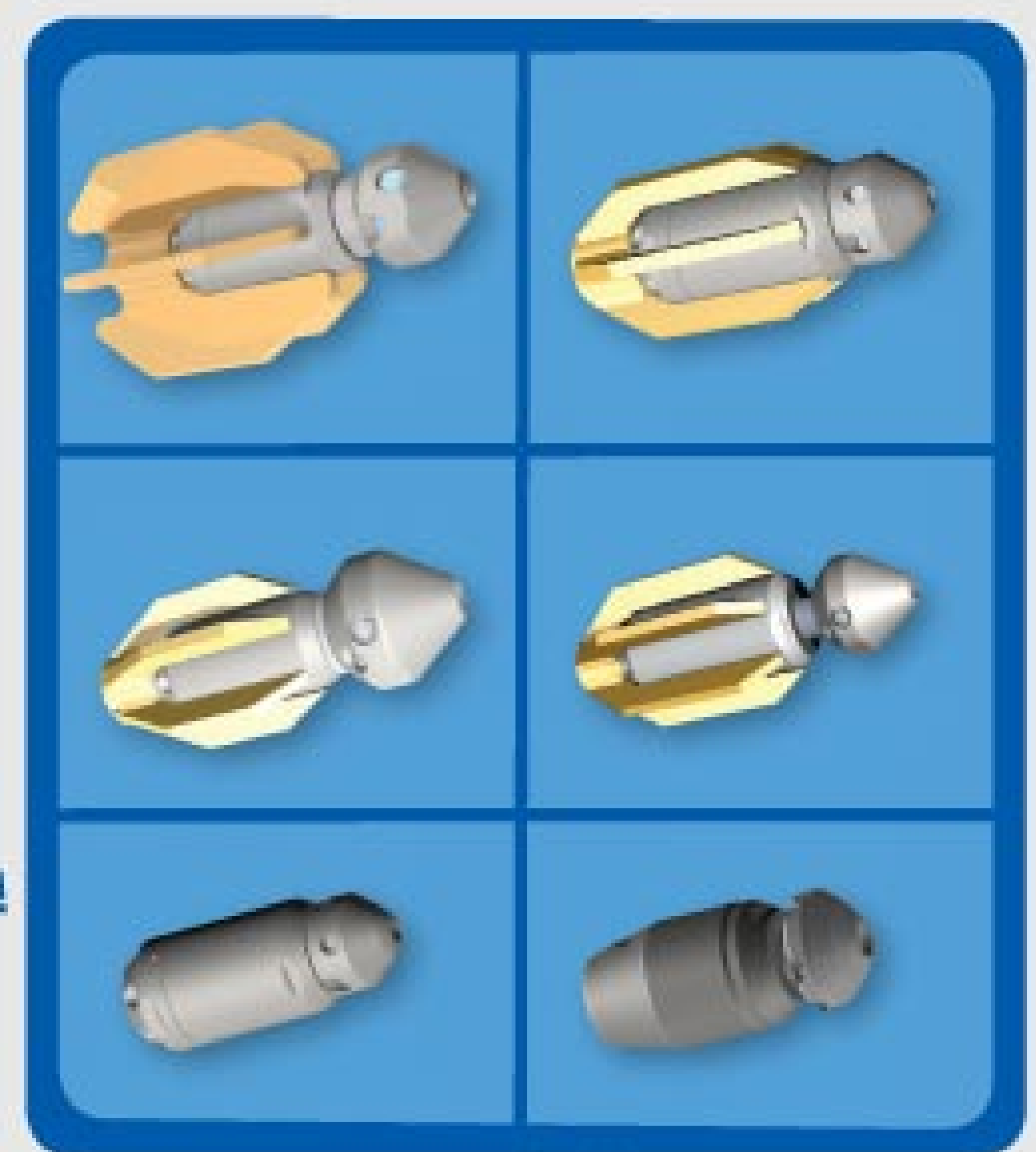
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"They basically have most options you'd find in a fully loaded Cadillac," Ballance says. "They have to be comfortable because our drivers might spend up to 14 hours a day in their trucks. They're not noisy either, because they're heavily insulated."

Customers like the trucks as much as the drivers do. "Their eyes bug out and they say, 'Whoa!'" Ballance says with a chuckle. "They want to get inside and drive it. We

have customers that ask only for a super combo. They know if that truck can't do the job, nothing can." ■

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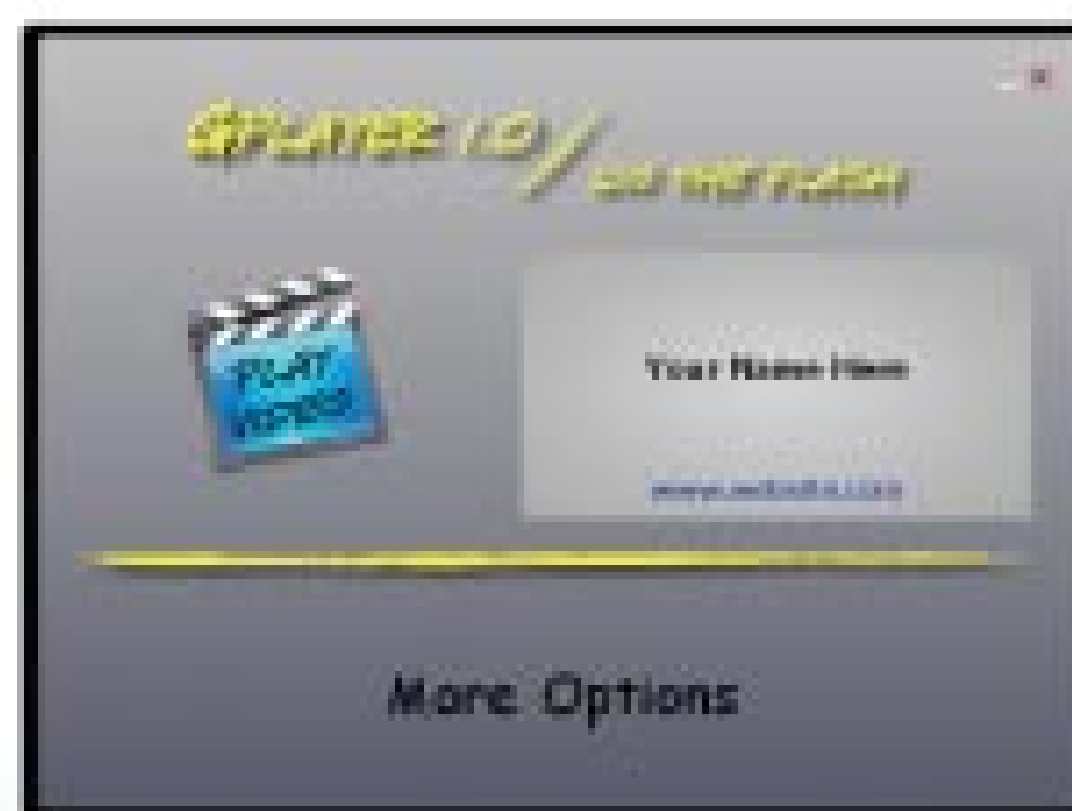


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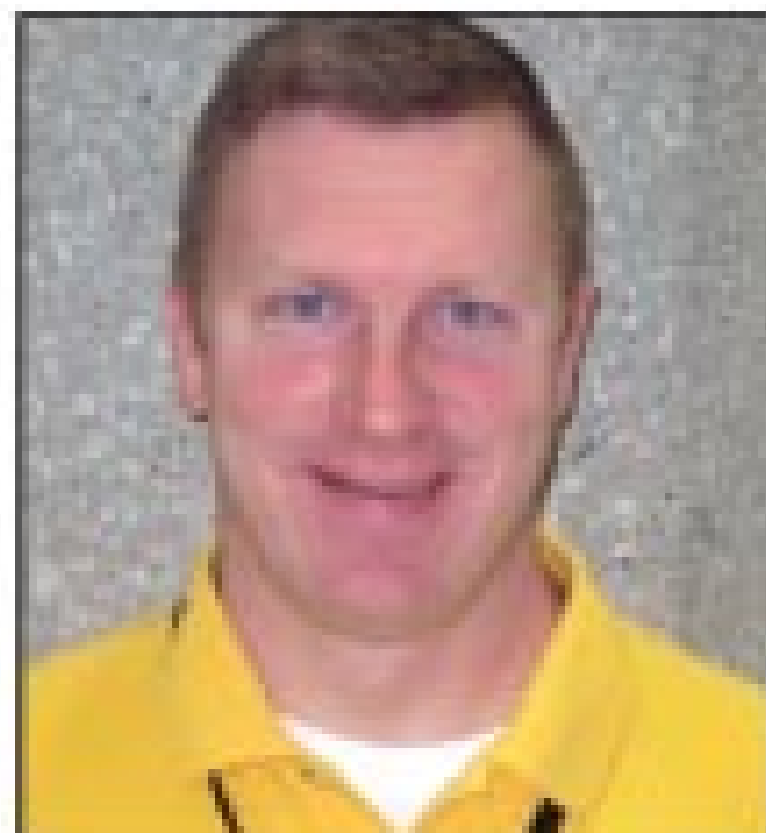
Technology Saves

Contractors find that computer software and use of the Internet enable greater staff efficiency and support better customer service

By Ken Wysocky

From dispatching and bookkeeping to database management and Internet marketing, computers are as valuable to many cleaners as high-pressure waterjetters. For savvy contractors, the days of keeping customer records on paper and in file drawers are long gone. They find that computer systems and software help them run their businesses more efficiently and profitably. Here are some examples of contractors who have tapped into the benefits of the computer age.

"To manage our customer database and accounts receivable, we use software made by Clear Computing Inc., and run all our financials through QuickBooks," says Brad LaVoy, owner of Brad's Septic Tank Service, which provides drain cleaning and septic tank pumping and services in Temperance, Mich.



Brad LaVoy

Owner
Brad's Septic Tank Service,
Temperance, Mich.
Employees: 9
Years in business: 21

"The database holds all kinds of information: customer names, addresses, ZIP codes, the size of their tank, the location of the tank, what kind of tank it is and how deep it is. It also tracks accounts receivable: what we did for customers and what we charged.

"We punch in codes – a drain cleaning or pumping code, plus any additives such as extra digging or backflushing. All services are coded and put in under each customer's name, so we have a com-

"We now have about 6,200 accounts – that would be a lot of manila folders! We back the database up every night on an external hard drive and keep a separate hard copy off-premise in a safe-deposit box. That way, if there ever was a fire, we've got a backup."

Brad LaVoy
Brad's Septic Tank Service

plete service history; I can look back and see every invoice, right at my fingertips. We can print out that information on a work order and go to a job with that information in hand. It's a huge time saver.

We'd be lost without it.

"In the early days, we kept all the data on pages of legal pads in folders; it was like the Dark Ages. Then we went to a basic, custom database program, which was okay for about the first 1,000 customers. After that, we went with this custom program around 10 or 12 years ago. My wife looked at a few different systems at one of the Pumper & Cleaner Expos while I was out looking at trucks.

"We now have about 6,200 accounts – that would be a lot of manila folders! We back the database up every night on an external hard drive and keep a separate hard copy off-premise in a safe-deposit box. That way, if there ever was a fire, we've got a backup. At the end of a month, we take one hard drive to the bank and bring the other one back and plug it in, and just keep swapping them out every month."

"We used to dispatch trucks with a hand-written list and a database program written by a local guy," recalls Bobbie Reppa, co-owner of Macy's Services, which offers drain cleaning, septic and portable toilet services in Jackson, Wyo. "In 2002 or



Bobbie Reppa

Co-Owner
Macy's Services,
Jackson, Wyo.
Employees: 12
Years in business: 24

2003, we looked at three or four dispatch systems at the Expo. We bought software from Summit Software Inc.

"Right now, if we generate a routing list, it automatically generates a bill, too. Before, we had to make a routing list and then at the end of the month go through and enter all the billing information into the computer again.

"When we bought the new software, we were able to transfer some of the existing information to the new system. But we also had to hand-key a lot of the data. It's been a huge benefit for us. We've gone from spending a lot of time generating everyday routing lists and not being able to integrate the billing system into it, to easily rearranging routes and generating bills. The software has easily paid for itself over time."

"We use Windows-based database software," says Neil Bateson, owner of Bateson Enterprises Inc., which provides sewer and drain services in Andover, Mass. "It's a pretty simple program that

Comments may be directed to Ken Wysocky in care of Cleaner. You may also e-mail pipelines@cleaner.com.



allows us to look up clients by address, phone number or street address.

"Before, we hand-typed all bills and things like labels for service-reminder



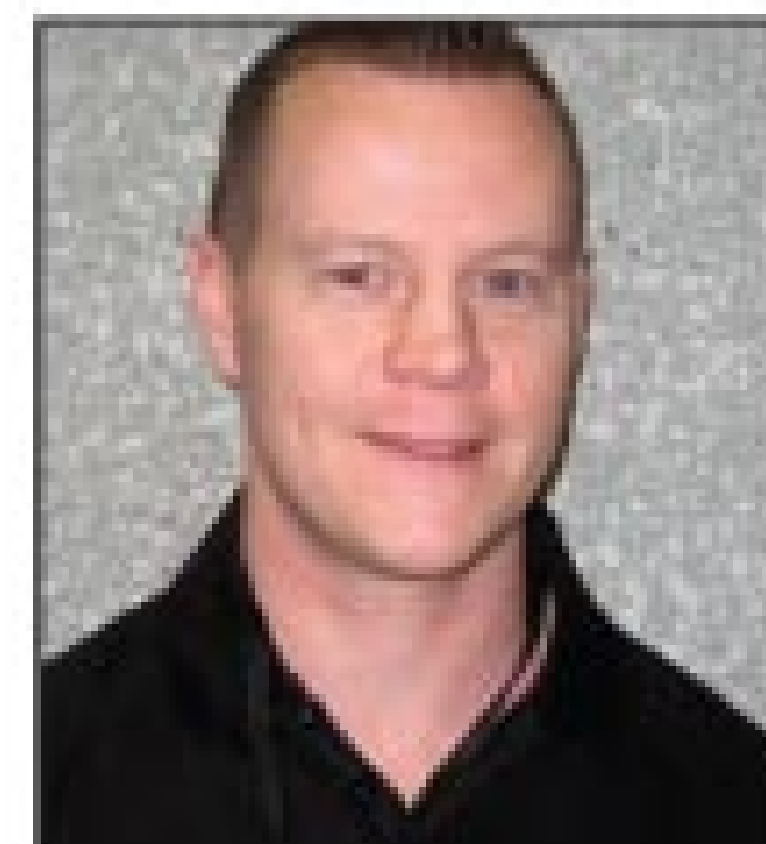
Neil Bateson

Owner
Bateson Enterprises Inc.,
Andover, Mass.
Employees: 6
Years in business: 30

postcards. Once a week, I used to spend five or six hours in the office after work. Now it only takes me a couple hours. It's made us efficient in other areas, too. When you sell a house in Andover, you have to file a Title V inspection report, which now is 17 pages long. My hand used to get pretty tired writing all that stuff out. Now we can download the report form and fill in the blanks."

"We've had a Web site for about six years now," notes Mark Lanneger, general manager of Sewer Technologies Inc. in Port Perry, Ont. "We wanted people to be able to use the Internet when they need our kind of services. When customers call us, we ask how they heard about us, and a lot of them say from your Web site, or we did a search for, say, lateral lining, and your Web site came up.

"A lot of our work is from bidding on jobs, so the Web site only provides about five to 10 percent of our business leads. But



Mark Lanneger

General Manager
Sewer Technologies Inc.,
Port Perry, Ont.
Employees: 25
Years in business: 7

it's still an essential part of an integrated marketing program. Sometimes we're asked to bid on projects because someone did an Internet search for sewer companies and our name came up.

"Our Web site has separate sections that explain all our services and provide an overview of the company. We have before-and-after visuals of certain repair projects. People like being able to see what we can do; they seem to respond to that. We also use the Internet to see what our competition is up to – what they're promoting and what kind of technology they have. We want to make sure we're using the latest and greatest technology to keep a competitive edge." ■

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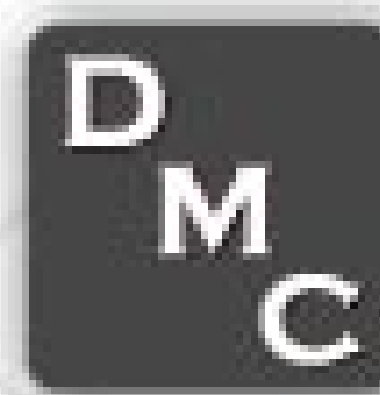
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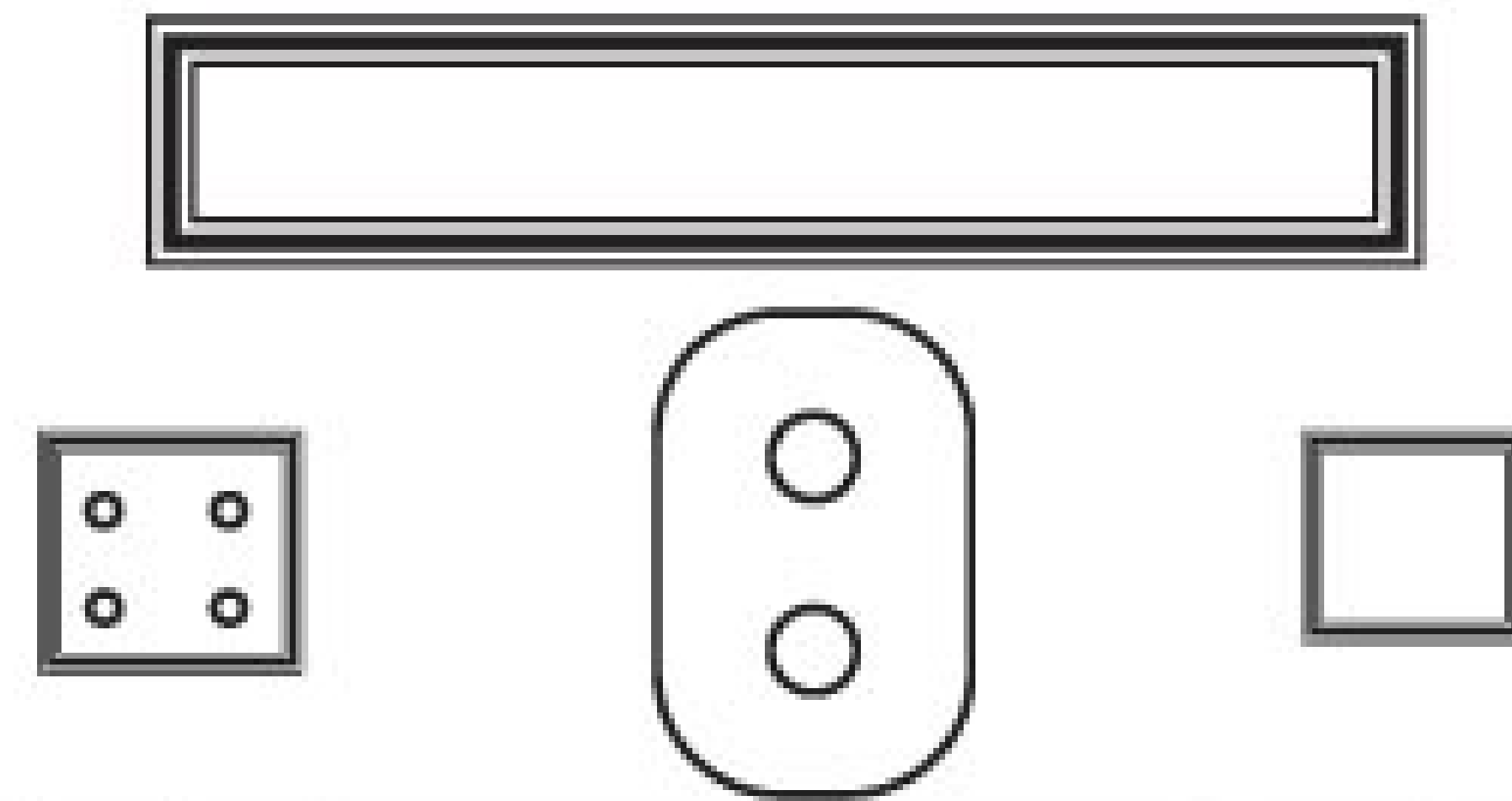
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Productivity Tools

Software providers offer their latest applications, versions, and electronic devices to enhance performance and efficiency in the office

By Benjamin Wideman

Being a small business doesn't mean having to do without advanced electronic tools that improve productivity and performance. Software providers constantly upgrade their applications, and each new version adds features and conveniences that make office work easier and more efficient. Here are some of the latest innovations from vendors catering specifically to the environmental service industry.

Flexible tools

Summit Service Profit Builder from **Ritam Technologies** is designed for sewer and drain cleaning and septic service businesses. Preventive maintenance can be automatically scheduled with each technician, and reminder cards can be sent. Inventory control features can track each technician's truck as if it were a mobile warehouse.

Jobs can be billed on a flat-rate or time-and-materials basis. Detailed history keeps everyone in touch with what occurred on the job and what recommendations were made. Diagrams, maps and up to 15 pictures can be attached to each job, making it easier to manage work and get up to speed on future work. The tool also includes dispatching and street-level routing with advanced mapping. 800/662-8471; www.ritam.com.

Complete control

Total Activity Control software by **Clear Computing Inc.** has several features that assist with customer records management, office operations, dispatch, routing, invoicing, mapping, material management, marketing, activity tracking, and service delivery scheduling. Tools include drag-and-drop dispatch board, in-vehicle voice and map directions by Garmin, GPS, route planning and optimization, real-time production reporting, and caller ID. Also included are a full audit log for all transactions, receipts for credit card transactions, a log file for service stops, security settings, site service history, and reports to rate drivers and customers. 888/332-5327; www.clearcomputing.com.

Fast paperwork

The **Linkwriter** wireless digital pen from **Famhost Hosted Applications** automatically sends paperwork from the jobsite to the database in real time. Before the driver leaves the jobsite, the paperwork is entered into the system and a digital copy is attached to the customer record. The pen enables true point-of-sale inventory, reads barcodes, and automatically sends proposals, invoices, inventory forms, time sheets, drawings and applications from field to office. 800/658-1676; www.famhost.com.

Privacy protection

ControlScan from **Matrix Payment Systems** alleviates concerns about security for Web sites, protecting customers' private information, thus encouraging them to stay online and make purchases. It meets Payment Card Industry (PCI) requirements. To boost Web traffic and increase sales, the offering includes interactive LIVECHAT, the RatePoint consumer feedback management system, and placement on search engines. 877/738-0731; www.matrixpaymentsystems.com.

Routing efficiency

RouteOptix software allows users to record detailed customer information, including mailing/billing details, locations with visual map-based confirmation, multiple services, follow-up calls, asset details, charges, and routing. It uses MapPoint technology to assist in visually analyzing geographic densities using a variety of parameters such as Service Type, Sales Representative and Service Frequency. 519/896-9433; www.routeoptix.com. ■

Equipment For Sale



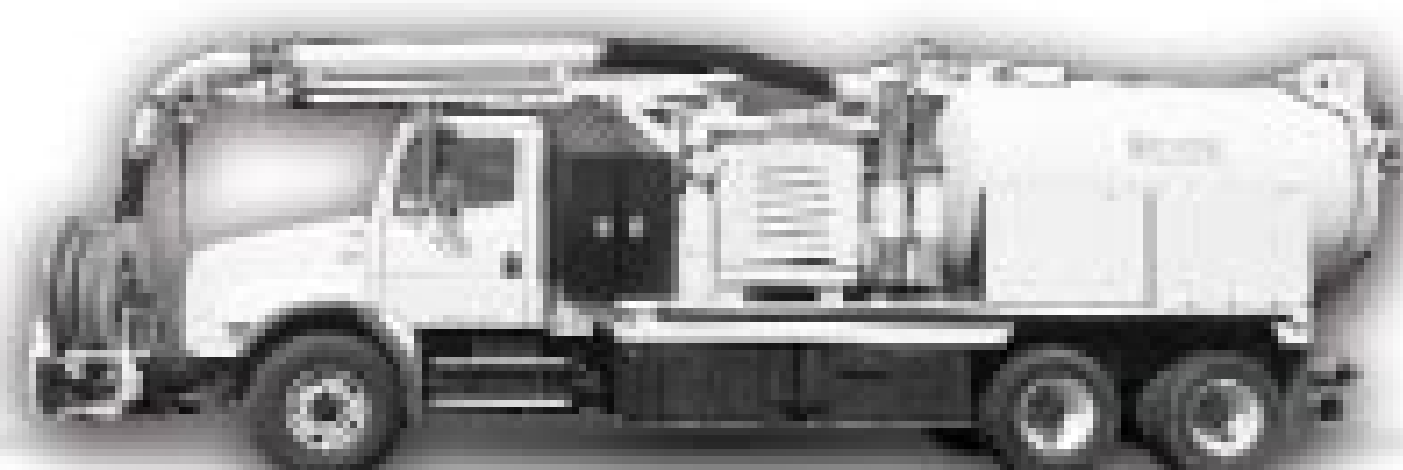
2006 International Vac-Con Combination Cleaner: 35,400 miles, 80 gpm @ 2500 psi, PD blower, 1500 gal. water tank, 1" x 800' hose, 3611 truck engine hours. "2007 Pumper Show Truck", fully loaded.



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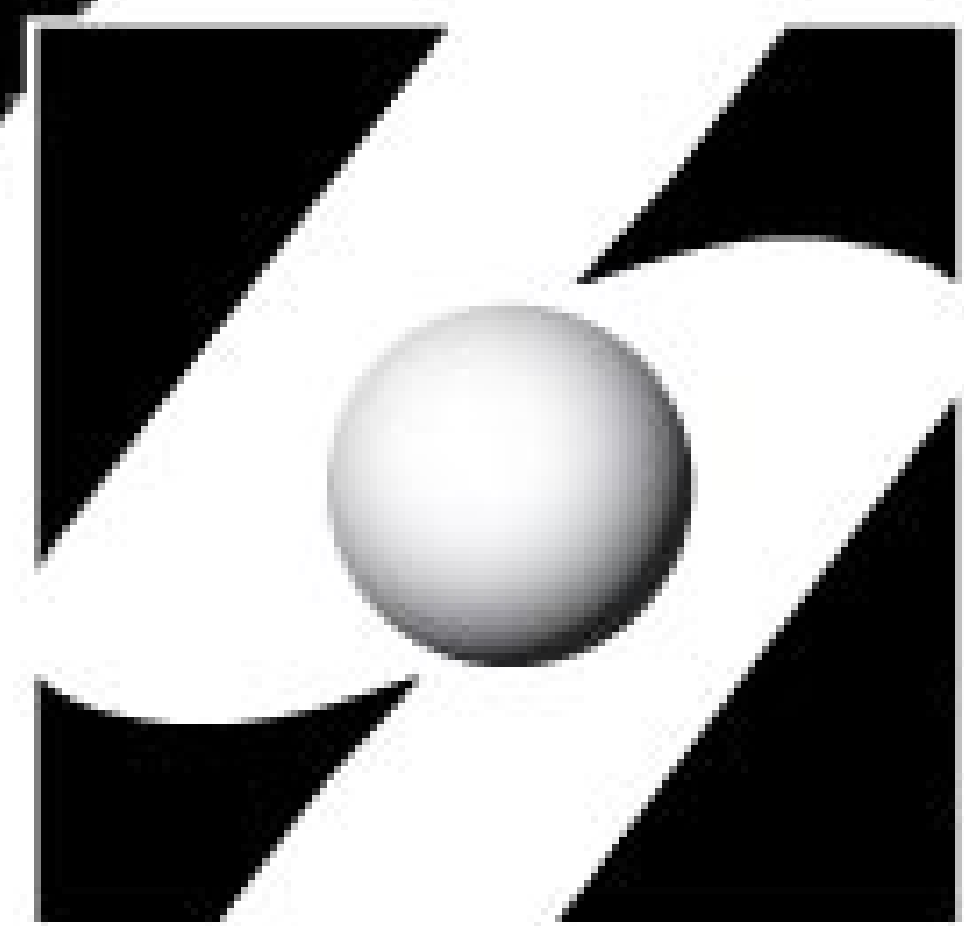
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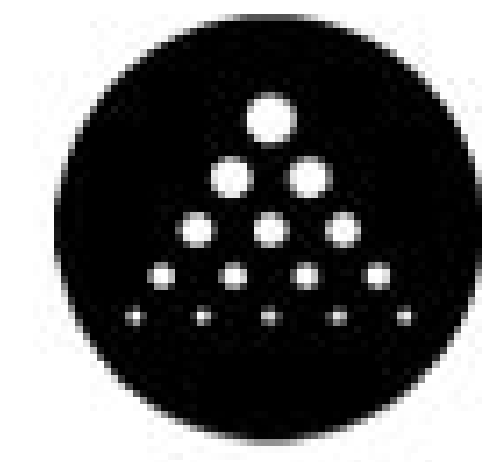
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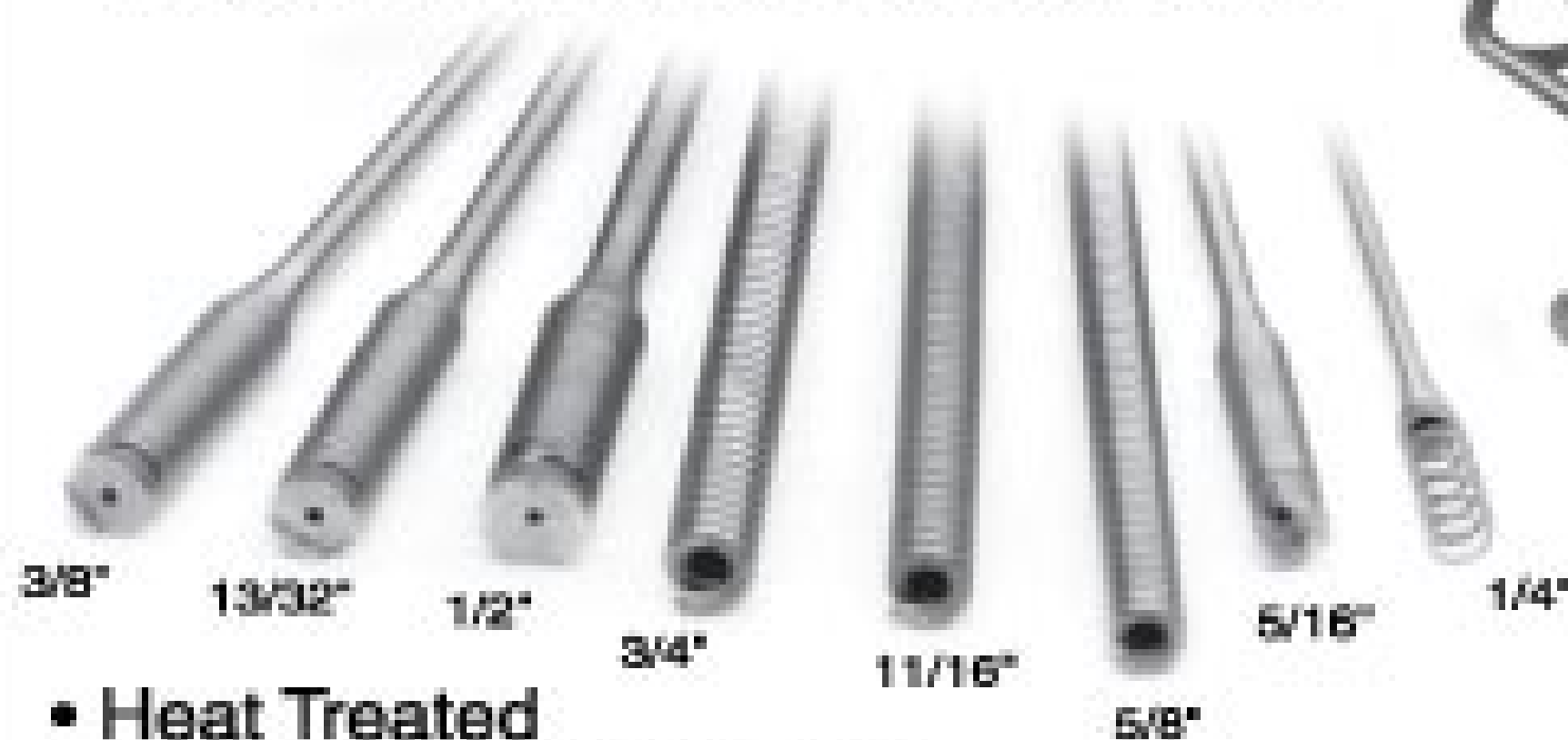
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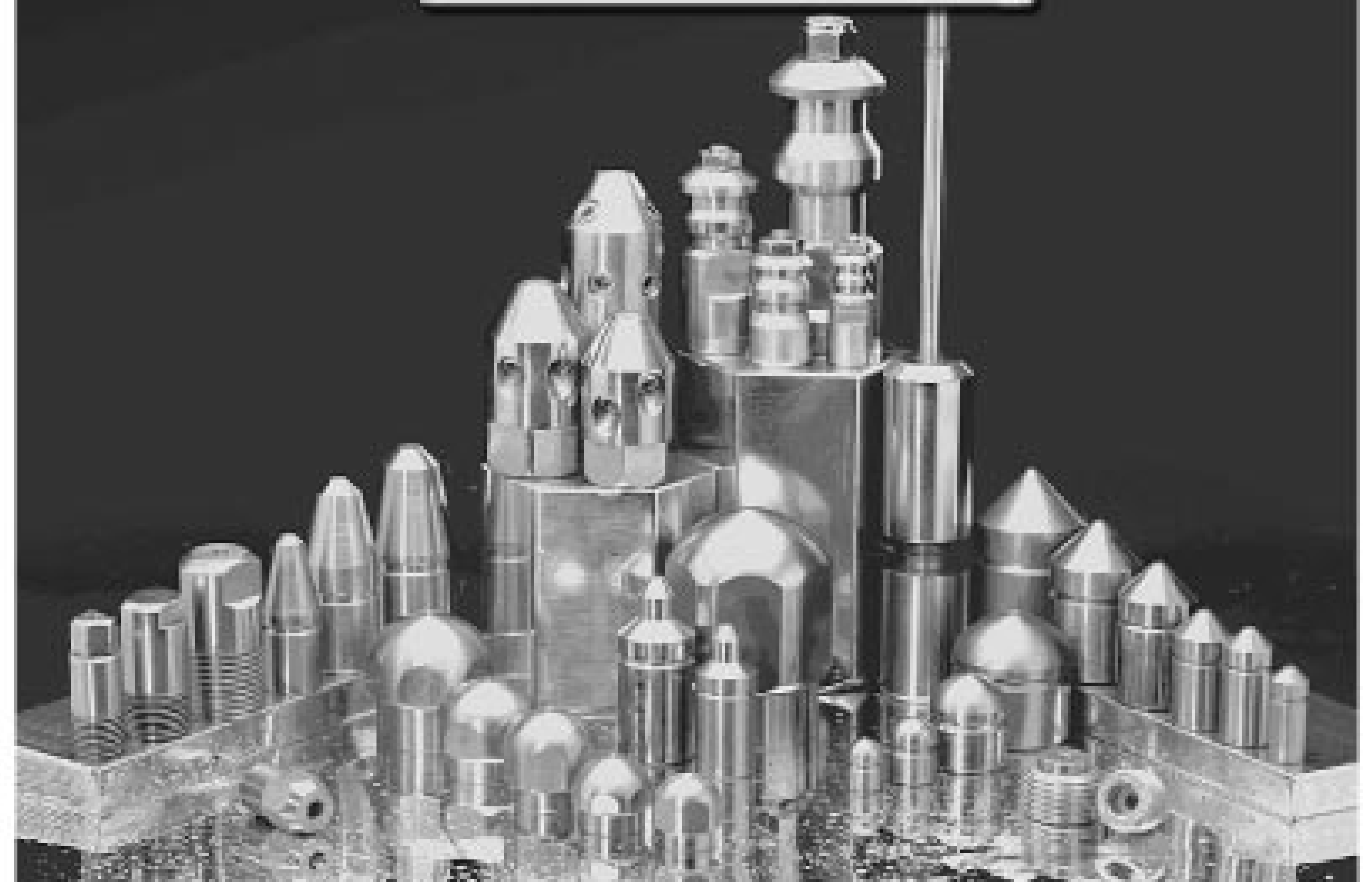
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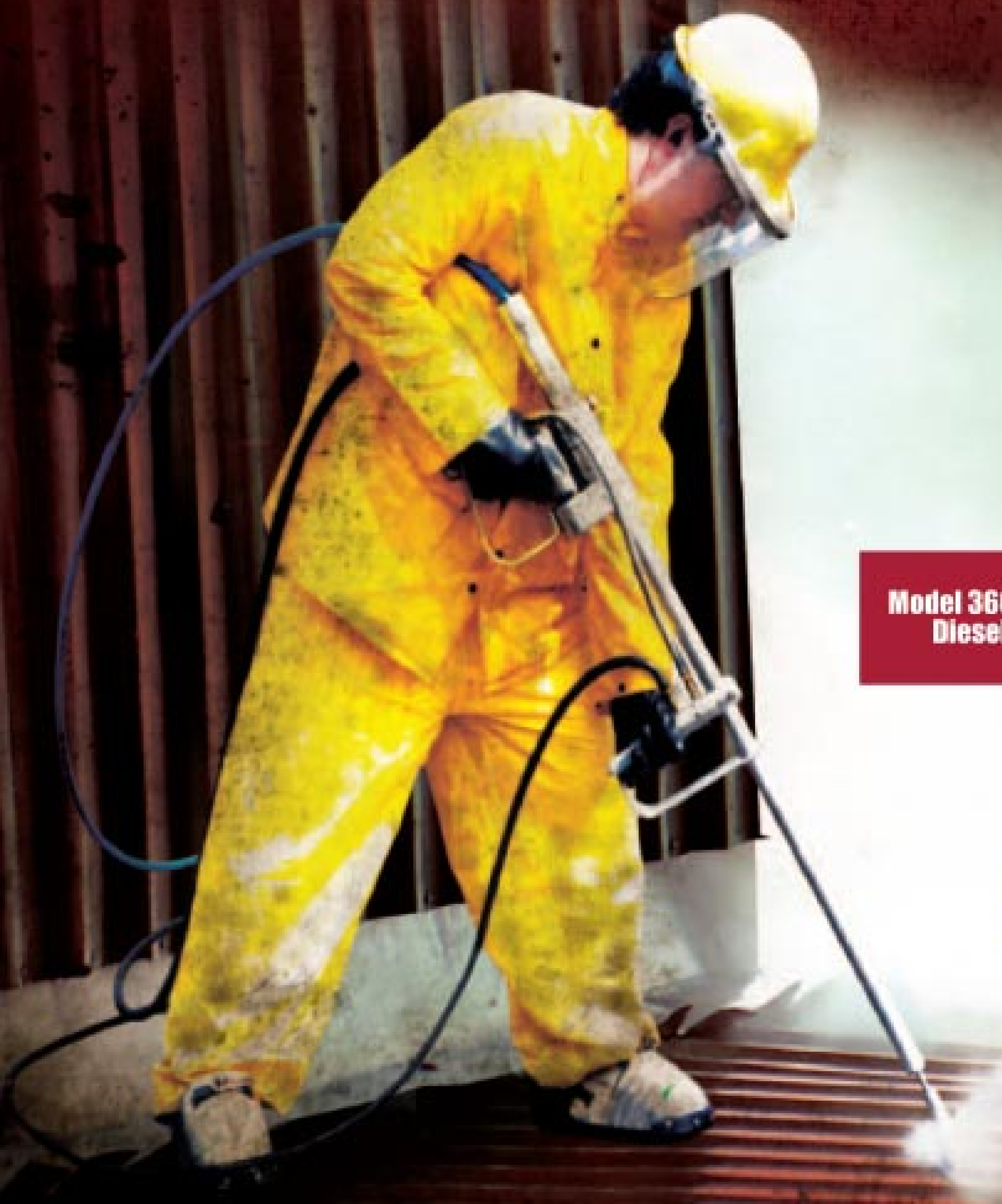
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By Ken Wysocky

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The unit has a 66-hp, 4-cylinder, liquid-cooled diesel engine; a 34-inch cleaning path; three plastic 40-gallon water tanks; three plastic 40-gallon reclaim tanks; hydraulic 4-wheel power steering with a tight turning radius; disc front



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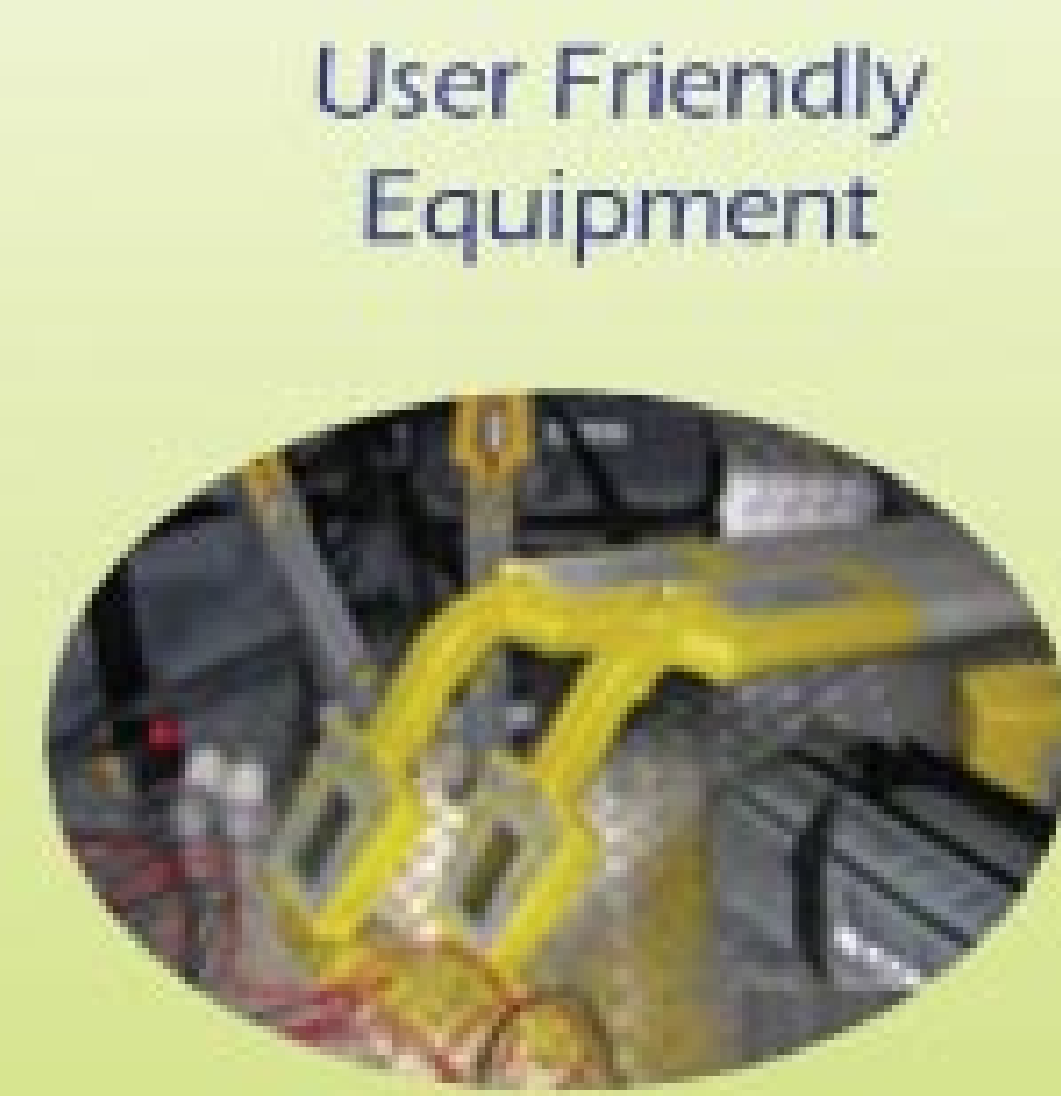
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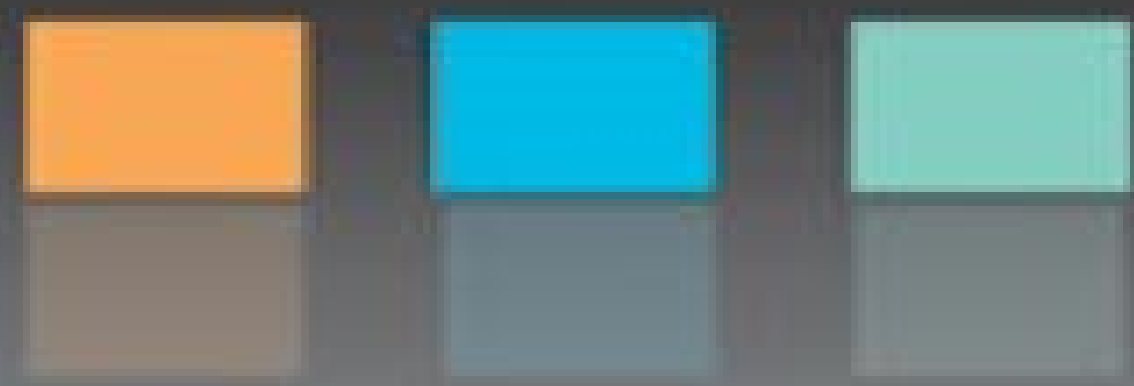


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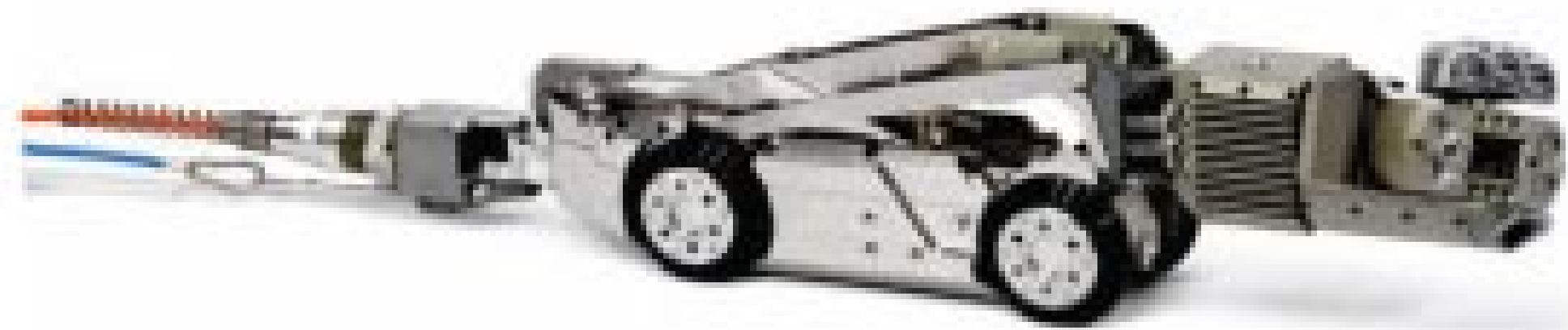


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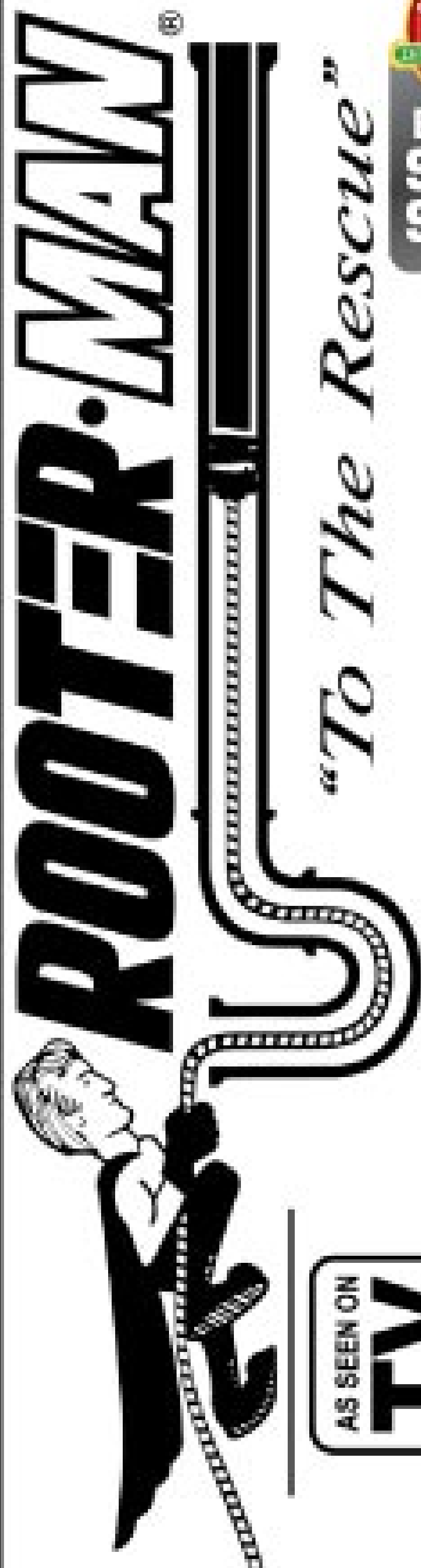
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Career Change

**A former engineer in the waterjetting industry
turns to writing science fiction novels in retirement**

By **Scottie Dayton**

Ideas for a science fiction novel swirled through Michael T. Gracey's head during the 36 years he worked as a mechanical engineer in the waterjetting industry.

Gracey, a resident of Houston, Texas, worked as an equipment design engineer for such companies as NLB Corp, Tracor Hydro-Services, Hydro-Chem, Freemyer Industrial Pressure LP, Butterworth Inc., and JETECH Inc. In industry circles, he is best known for his book, *High Pressure Pumps*, and more than 40 technical papers.

After retiring in January 2009, Gracey shifted gears and wrote *The Time Shift*, the story of a young man who tries to go back in time to change the course of his life and the lives



Michael T. Gracey

of others. Finding a publisher willing to accept a first-time novelist was the most difficult part for Gracey, who worked directly with the editors at Tate Publishing & Enterprises LLC in Mustang, Okla.

"They did a lot of work," says Gracey. "I originally submitted two manuscripts, but after the editors were done, part of the second book wound up in the back of the first one." Gracey's next effort, *Time Detour*, continues the story through the grandchildren of the original characters. Although Gracey isn't planning a trilogy, he already has ideas for a third book.

Gracey also finished a children's adventure book, *Invisible Islands*, which he wanted to write for years.

"Parents can read it to their youngsters or eight-year-olds can read it themselves," he says. The attitudes and personalities of his five little granddaughters helped write the book, due out later this year.

The 248-page paperback of *The Time Shift*, the eBook, or audio CD is available at Amazon.com, Tatepublishing.com, and in retail outlets. ■



Industry NEWS

Jetter Depot Named Nuova ConTec Dealer

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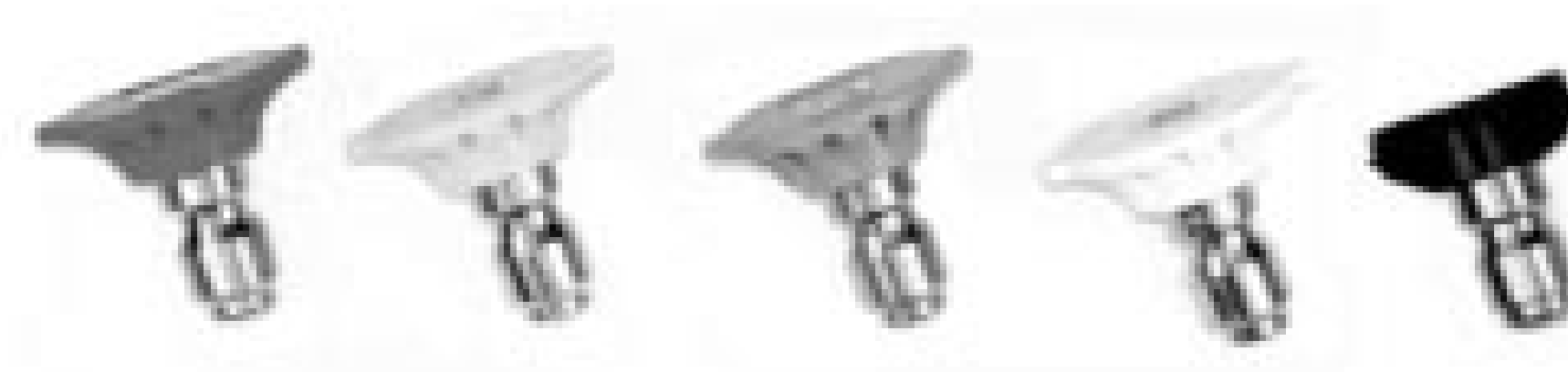
Orifice	Part#
2.0	17.0144
2.5	17.0151
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3.5	17.0165
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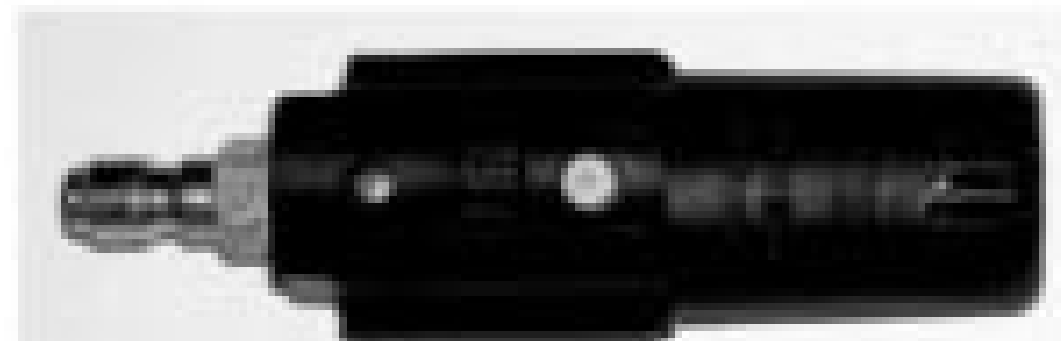
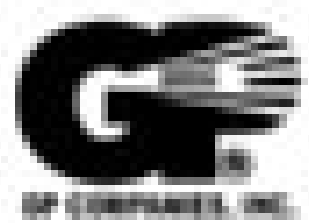


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Just Can't Stop

A Florida contractor uses cured-in-place pipe to rehabilitate machine drainage lines in a potato chip processing plant

By **Scottie Dayton**

Drain lines in a potato chip processing plant in Orlando, Fla., were running slowly or not at all. The facility, built in 1976, operates nonstop.

Herrell Plumbing in Orlando responded to the numerous service calls, cutting through the 6-inch-thick concrete floors to replace the worst of the cast-iron pipes. Three lines, however, were under a floor holding ovens and fryers weighing many tons.

Moving the equipment to open-cut, then rerouting the lines to accommodate the machines needing drainage, would have been extremely expensive. Chris Peterson of Herrell called Rusty McFall, owner of TNT Sewer LLC, a certified provider of Perma-Liner products in Hernando, Fla.

"I tried televising the lines and couldn't get the camera to go forward," says McFall. "All I could see from the manhole was grease packed in the pipes."

"The invert was missing from five to seven o'clock and the crown of the pipe was packed with grease. The combination of grease, lime deposits, rust buildup, and corrosion on the sides occluded three-quarters to seven-eighths of the inside diameter."

Rusty McFall

For the first time in 33 years, officials closed the plant, enabling McFall and crew to engage in a marathon of jetting, televising, and CIPP lining over an Easter weekend.

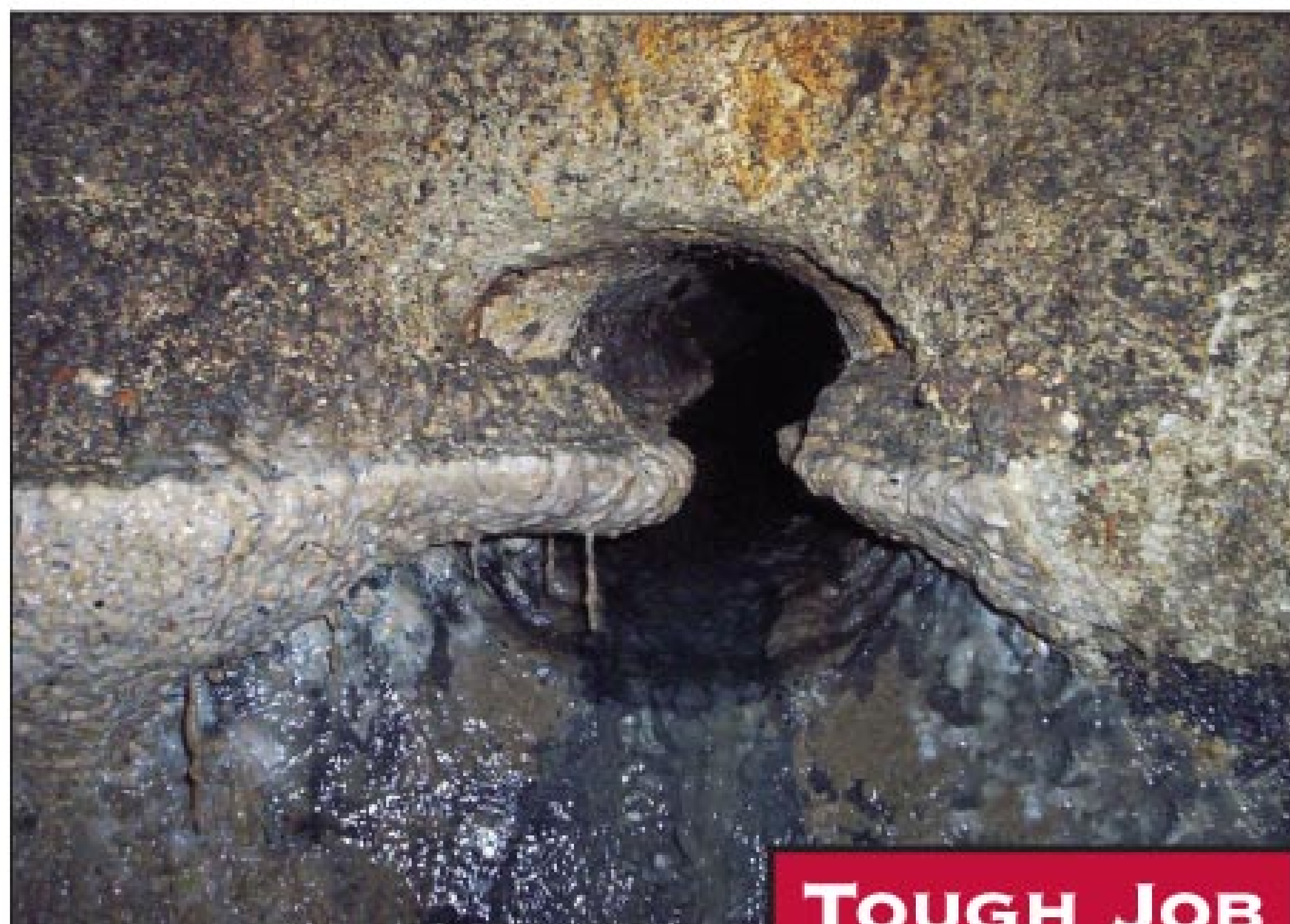
By Monday morning, the production lines were ready to fry and bake again.

Procedures

The only access to the 4-, 6- and 8-inch pipes was a manhole discharging to a lift station outside the building. The larger pipes, running for more than 100 feet, required a second access point for easier cleaning and lining. Peterson's men cut through the floor and dug a 6-foot-square access pit five feet deep at an appropriate location for both lines. Peterson also hired a contractor to vacuum the jetted debris from the lift station.

Plant policy required a one-hour safety class before McFall and his six men could begin work. Besides covering OSHA compliance, the class familiarized

the crew with FDA food-handling standards and the plant. "We had to wear earplugs and haimets, but were not allowed watches and jewelry," says McFall.



The 8-inch sewer main had no invert and was occluded with grease, lime deposits, rust buildup, and corrosion.

Once qualified, McFall parked his trailer-mounted Model 184 Mongoose jetter outside a service door and dragged in the hoses. A forklift driver brought the Outpost inspection transport system from EnviroSight LLC inside the building. The system powered the camera equipment, and WinCan V8 software (EnviroSight) enabled McFall to make reports and DVDs of the inspection for the client and Herrell Plumbing.

"I couldn't use a root or chain cutter to clean the larger lines because each had a double 45-degree bend," says McFall. "The machines wouldn't negotiate them,

TOUGH JOB

PROJECT:

Line three severely occluded drain pipes over a weekend

CUSTOMER:

Potato chip manufacturing plant, Orlando, Fla.

CONTRACTORS:

Herrell Plumbing, Orlando, Fla.; TNT Sewer LLC, Hernando, Fla.

EQUIPMENT:

Perma-Lateral pipelining system, Perma-Liner Industries Inc., Largo, Fla.

RESULTS:

Pipes lined and plant operational Monday morning

so I used the Warthog nozzle from StoneAge Inc. I probably could not have cleaned the pipes as well as I did without it."



Workers lined in both directions from the access point in the 184-foot-long 4-inch pipe, shooting 101-foot and 83-foot liners.

Wicked combination

Work started at the upstream end of the 25-foot-long 6-inch pipe. Jetting at 18 gpm/4,000 psi, the men cleaned it four times, then sent in the 125 Rovver crawler with pan-and-tilt camera from Envirosight.

"That was my first view of the extent of the problem," says McFall. "The invert was missing from five to seven o'clock, and the crown of the pipe was packed with grease. The combination of grease, lime deposits, rust buildup, and corrosion on the sides occluded three-quarters to seven-eighths of the inside diameter.

"We had a lot of sand and grease-saturated ground under the pipes, and our biggest challenge was not washing out too much bedding. Every time we cleaned, more product came through. With the invert gone, I had a heck of a time televising the lines because the VeriSight digital push camera kept falling into depressions. I finally stuck a piece of PVC pipe cut lengthwise into the line to bridge the holes."

McFall wanted 98 percent of the debris removed. The Warthog nozzle and diligent jetting got all of it. While another crew wetted out 34 feet of Perma-Lateral lining material (Perma-Liner Industries Inc.) on the plastic-covered factory floor for the 6-inch pipe, the cleaning crew began jetting the 116-foot-long 8-inch pipe.

"We cleaned in sections to control the amount of debris coming back," says McFall. "We didn't want the material damming up downstream." His men worked nonstop

for 24 hours to clean and inspect the line. "We took breaks, but the work was so intense that we lost track of time without our watches," says McFall.

Rehabilitation

Once the 6-inch pipe was clean, the liner crew positioned the air inversion tank and every associated item at the manhole. They rolled the felt liner impregnated with a two-part hot resin into the inversion tank. After the liner inverted, the men shot in the calibration tube and inflated it to 10 psi to form the material to the host pipe. As the resin cured, the men lowered the pressure to 7 psi and maintained it for three hours.

The 8-inch line was rehabilitated in two shots, 80 feet and 36 feet long. The men used the access pit to line the downstream leg first, then shot the upstream section from the manhole. "The upstream liner overlapped the downstream one by 12 inches, making a smooth transition and eliminating a lip on which solids could catch," says McFall.

The 8-inch liners were inverted at 12 psi, then cured at 8 psi for three hours. They blew around the bends without difficulty. The 184-foot-long 4-inch pipe was lined in 101- and 83-foot shots, following the same procedure. "We increased the pressure to 15 psi to nudge the liner round the bends, then lowered it to 7 psi," says McFall.

After the men removed the calibration tube from a section, McFall inspected the liner. "We also installed

a cleanout in both pits, enabling maintenance to flush the system," he says. "The potential for problems is there, as these are flat lines." The crew used a robotic lateral tap cutter from TRY TEK Machine Works Inc. to reinstate three connections in the 8-inch pipe.

Before work finished in the second pit, Peterson's men had backfilled the first one and were pouring concrete. They started backfilling the second one as soon as the boots of the last worker cleared the top.

"When Chris and the client saw the final inspections, they were thrilled that they didn't have to do anything else with these lines," says McFall. By 10 o'clock Monday morning, bags of potato chips rolled again toward the shipping boxes. ■

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Just for Women

A first-time seminar at the 2010 Pumper & Cleaner Expo will help women in the industry handle their roles effectively

By Scottie Dayton

For the first time, women attending the 2010 Pumper & Cleaner Environmental Expo International at the Kentucky Exposition Center in Louisville will find a workshop designed around their unique needs as contributors to family businesses and as members of the industry.

Ann Fry, an author, professional speaker, executive coach, and corporate culture consultant, will help women learn how to manage their roles with joy and enthusiasm and spend less time living in “that place called stress.” Her Women in the Industry seminar runs from 9 a.m. to noon on Thursday, Feb. 25.

‘Great multitaskers’

Fry’s specialty is helping people feel happy and fulfilled through her presentation: “The Regeneration Process: How to ReEnergize, RePurpose, Reinvent and Handle Everything!” Women will learn how to create balance in their work and personal lives, tap into their sense of humor, and figure out how to take care of themselves amid everything else they have to do.

“Women, the great multitaskers; they can handle everything,” says Fry. “They also are excellent at reaching out to and talking to each other, offering support and suggestions. Then why are so many stressed out, exhausted, frustrated, and annoyed?”

Through hands-on activities with partners or small groups, and a mini workbook, Fry will help women at her seminar diagram everything that is on their plate, then find ways to master the different kinds of stress.

“One playful activity I use is having a lady talk while another listens,” says

Fry. “The person talking is downloading her stress – one experience or event that ate her lunch recently – in a fun, outrageous way. The exercise teaches how important it is to release stress from your system and not keep it bottled up.”

Positive thinking

Another activity focuses on interesting facts about perfectionism and how it can drive the perfectionist and everyone around her crazy. Most women, being nurturers and caregivers, say yes to everyone and everything, Fry says. Her exercises center around helping them say no without inducing a guilt trip.

“The perspective people have on events carries a lot of weight on how they are handled,” says Fry. “By using a little positive thinking and seeing the humor in things, I will teach women how to look at situations so that they appear on the lighter side. If you can put an episode in perspective, you can handle it.”

Fry admits that the reinventing portion of her workshop can scare women. “They hear the word and think it means quitting their job, leaving their family, and moving to China,” she says. “Reinventing actually means changing how you deal with things and adjusting your attitude.

“We’ll look at some steps to reinventing yourself, such as being willing to do a few things differently. For example, you should stop doing things that are not working for you and start doing things that are more helpful.

“By the time we reach this point in the presentation, everyone will know what those things are in her life. I guarantee that women will leave the room energized, with a new direction and purpose.” ■

“I guarantee that women will leave the room energized, with a new direction and purpose.”

Ann Fry



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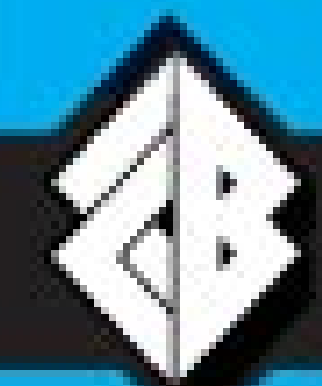
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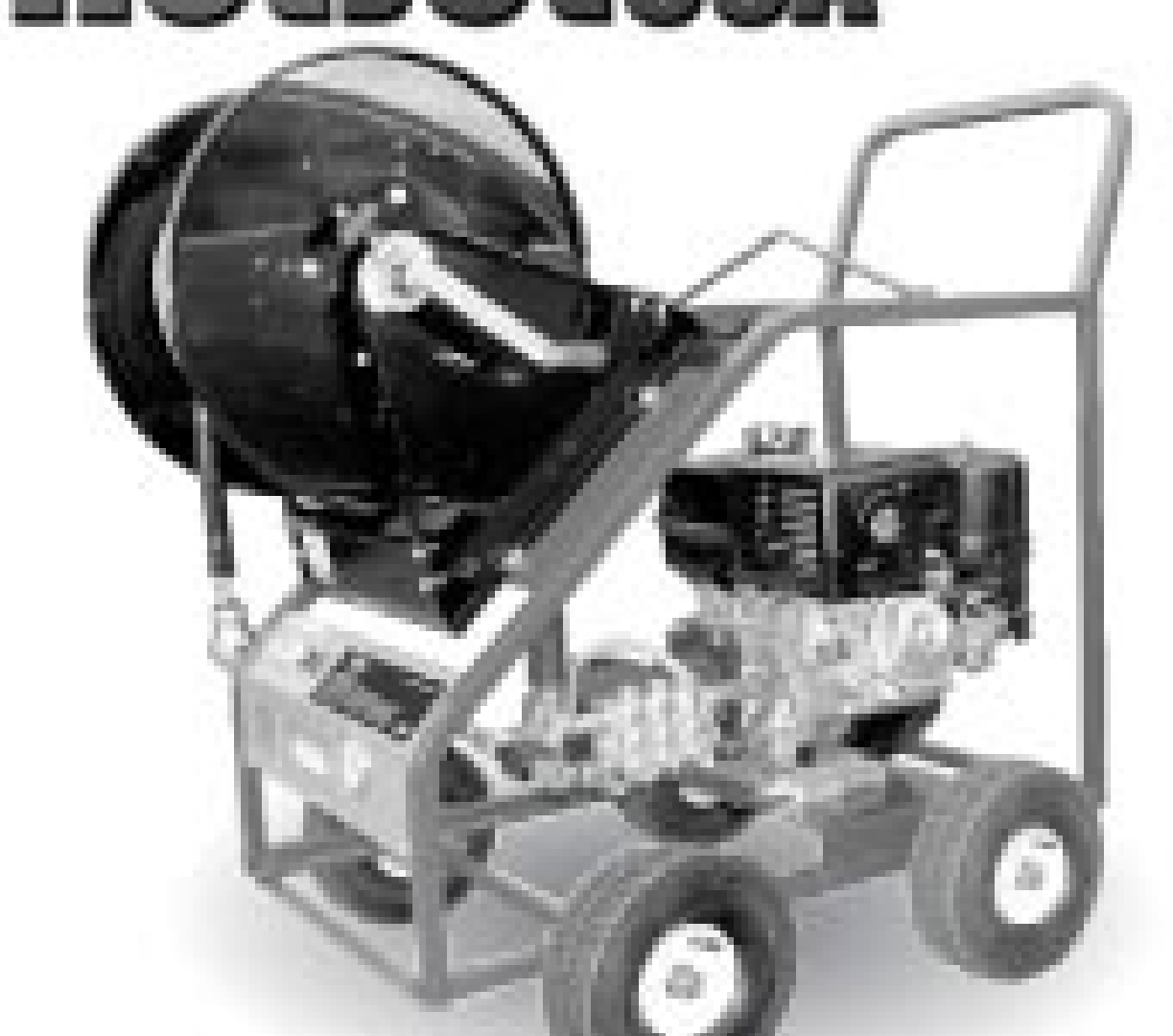
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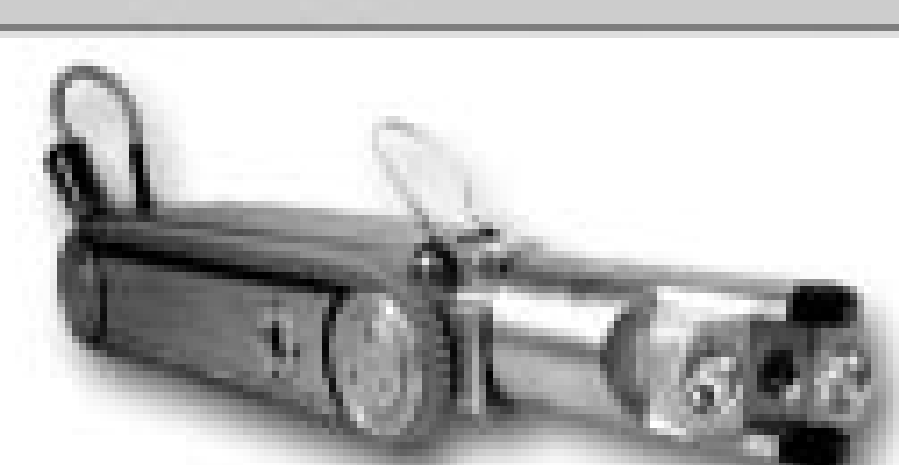


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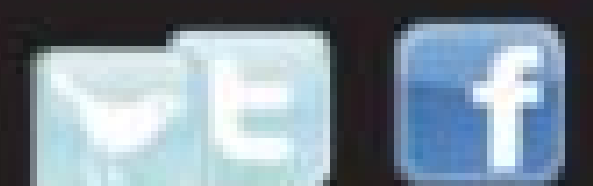
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