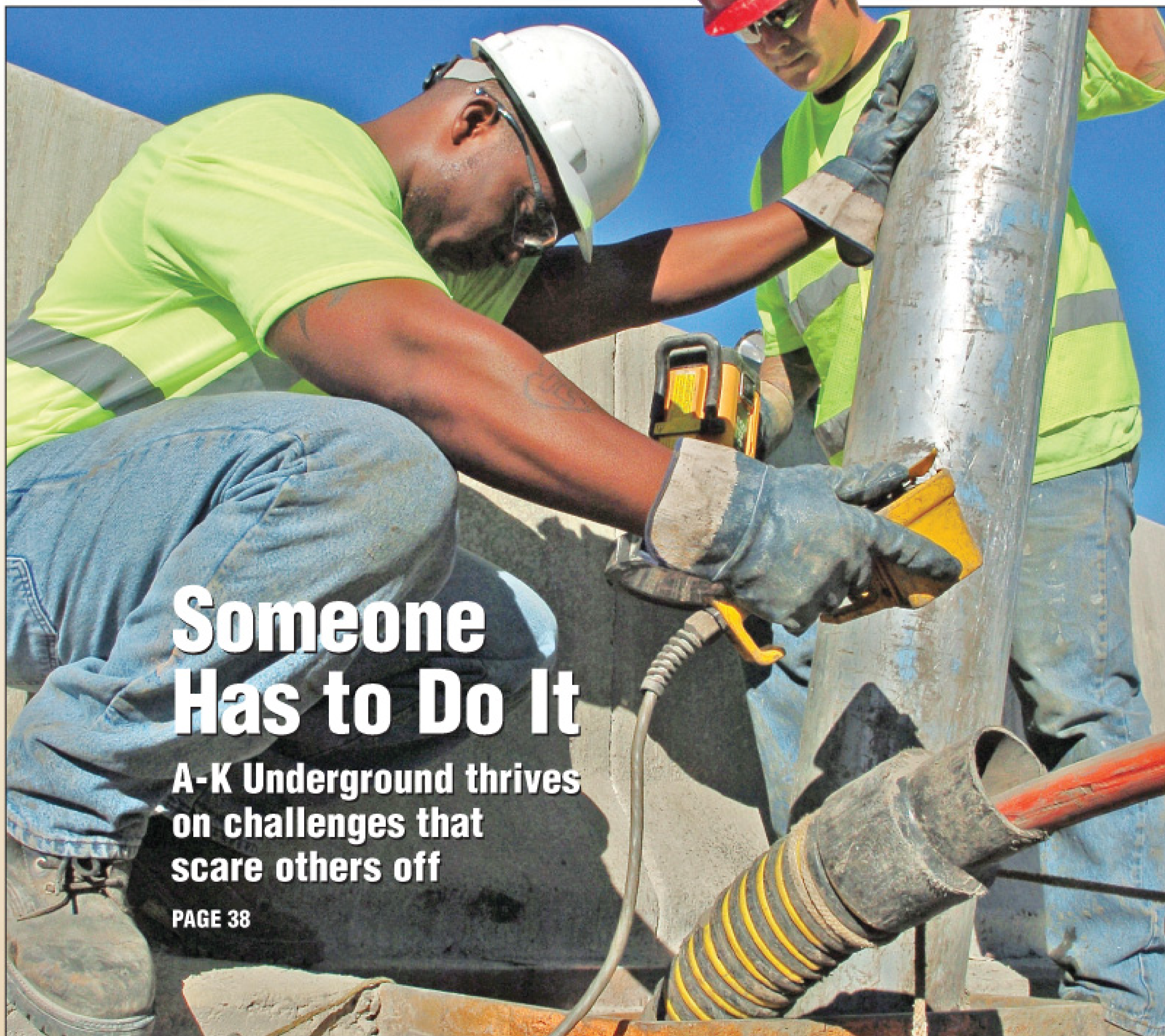


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### READER PIPELINES

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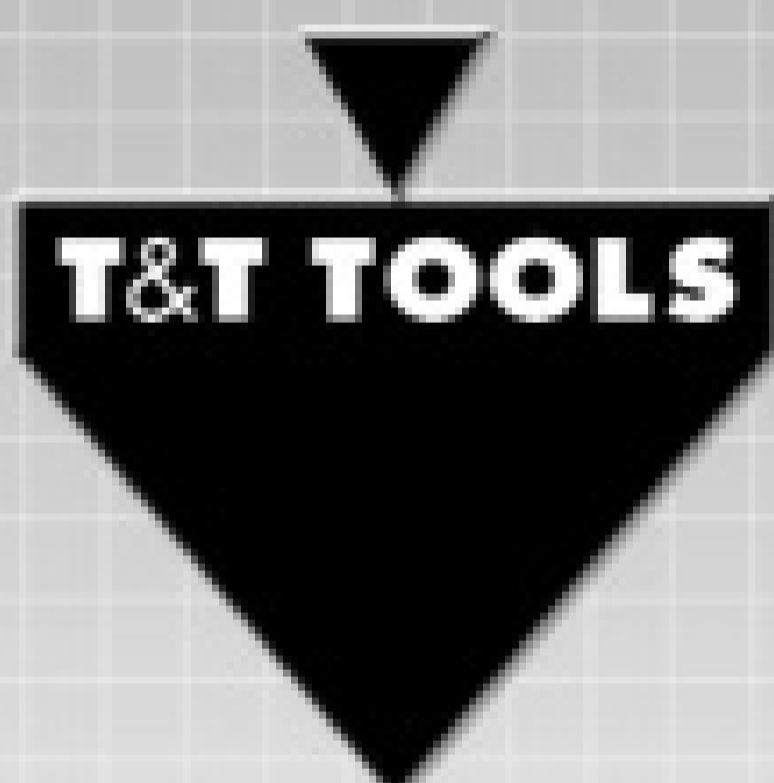
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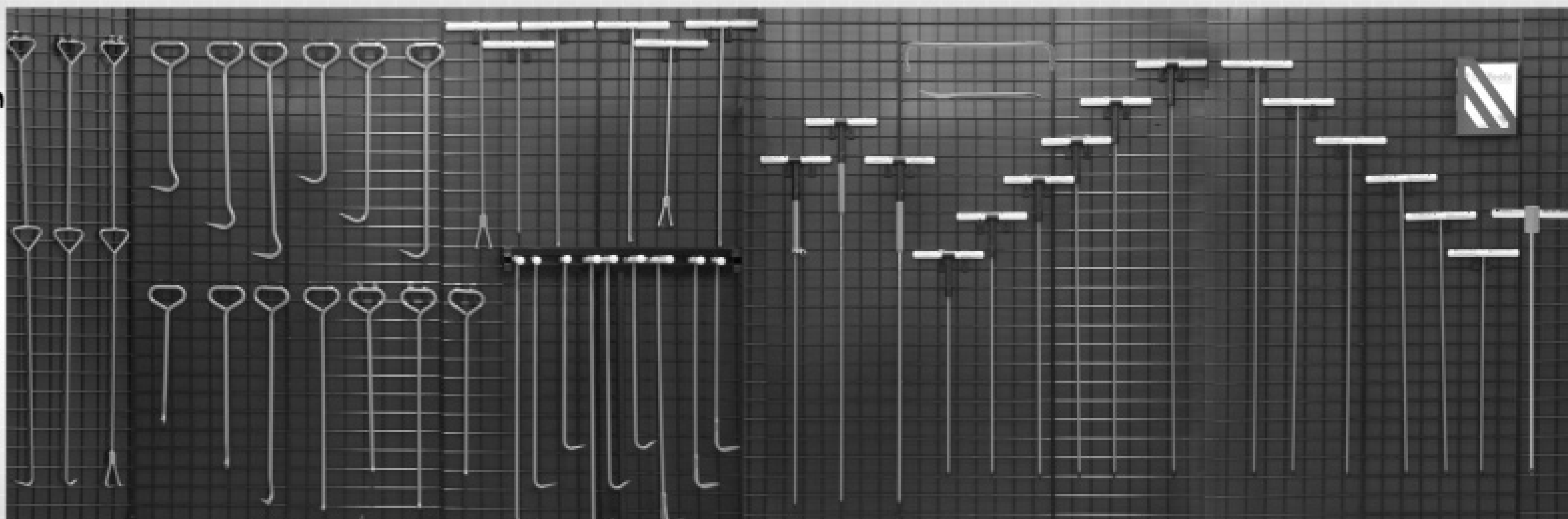


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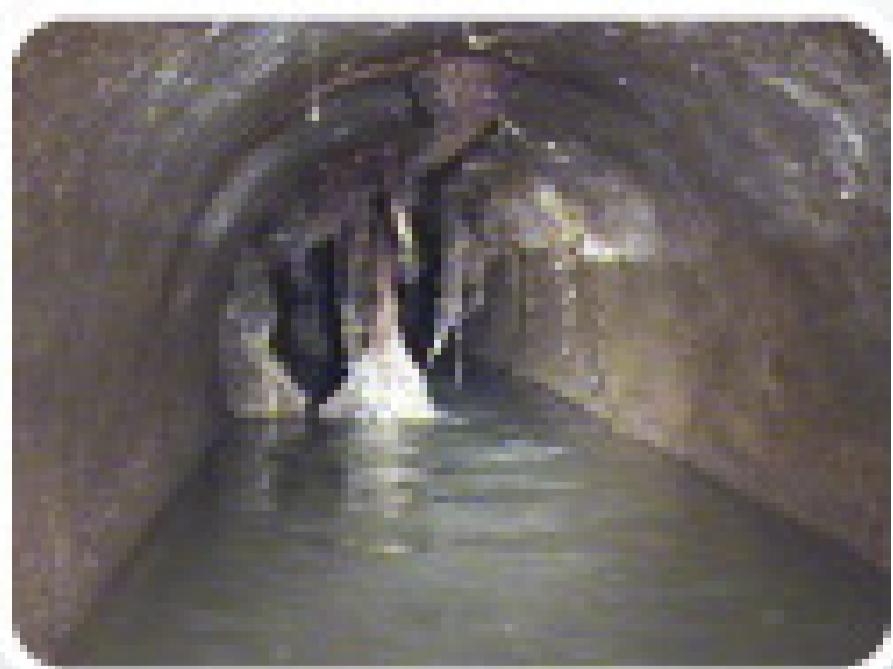
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FOR RESIDENTIAL, MUNICIPAL AND INDUSTRIAL CLEANING CONTRACTORS

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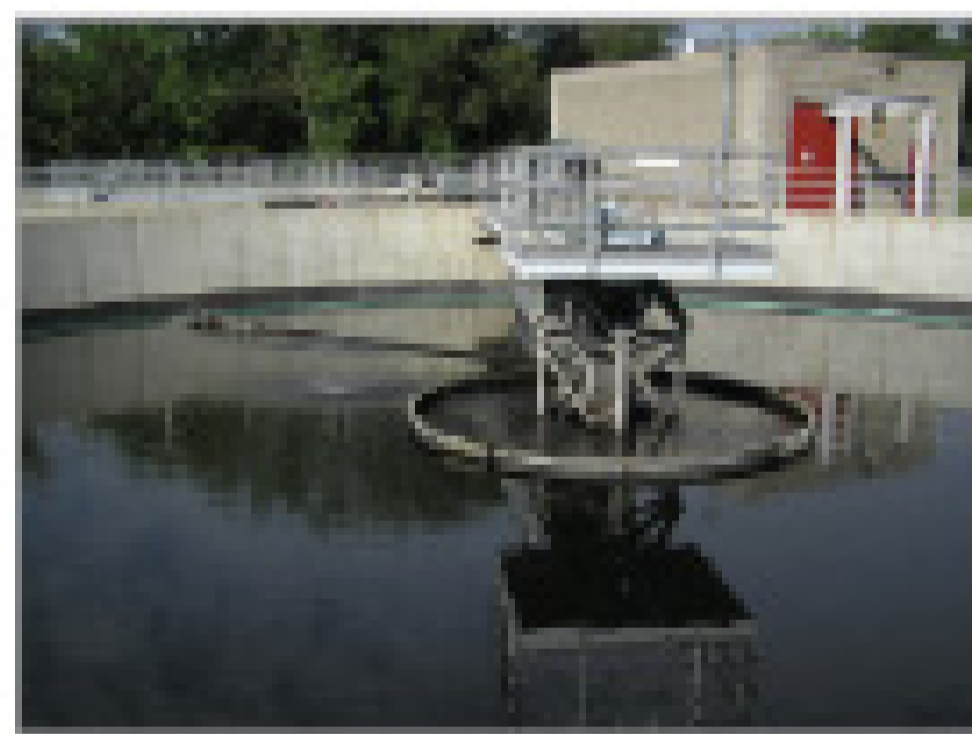
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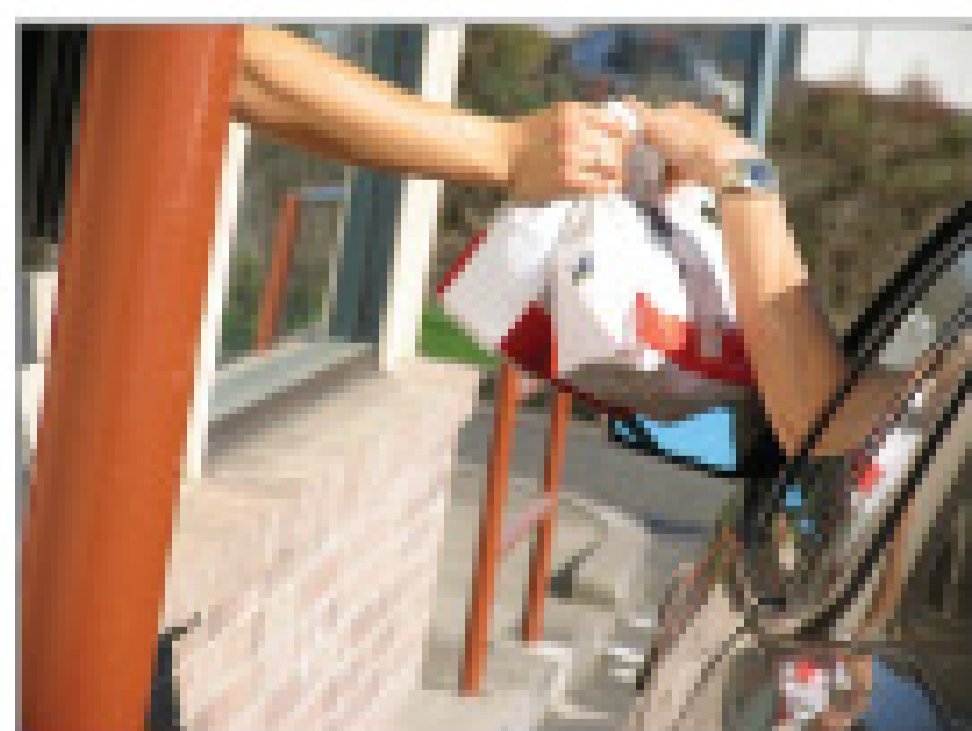
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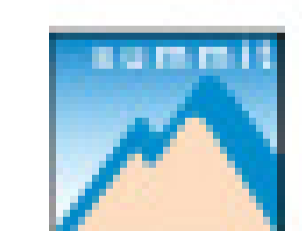


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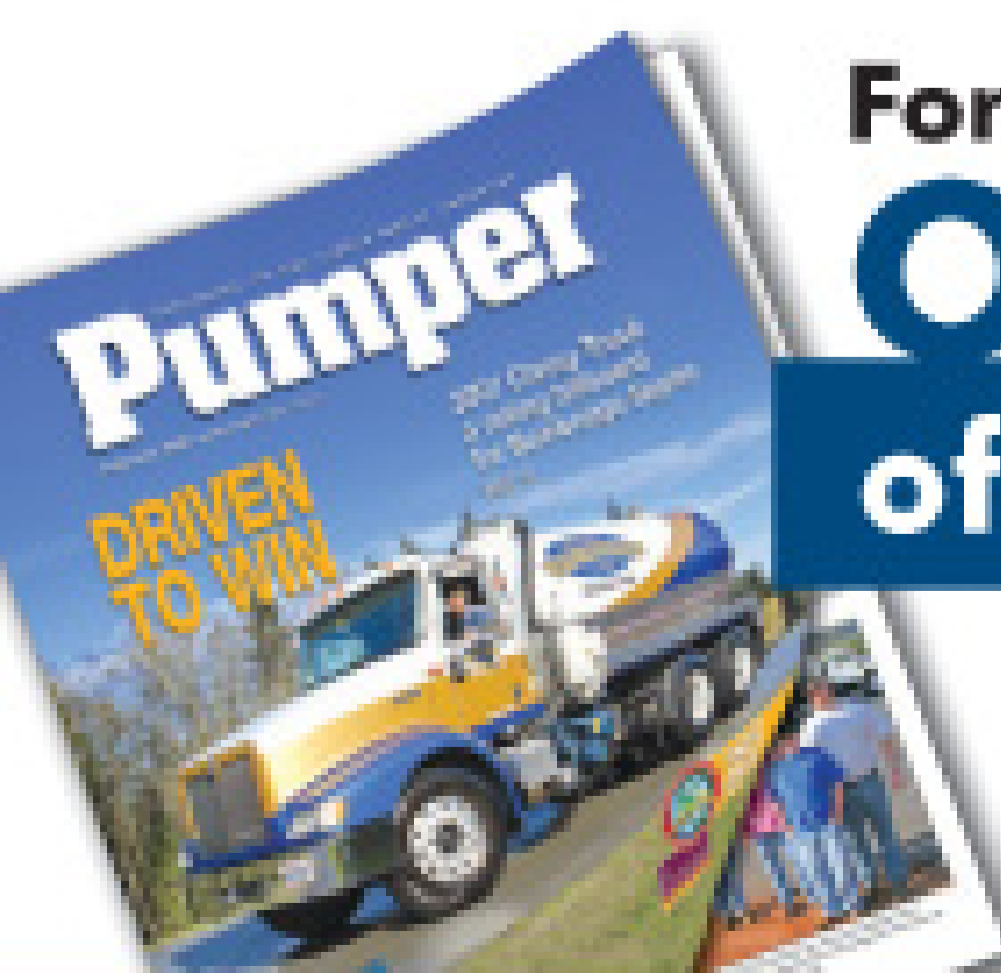
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## What's Your Passion?

A new 'After Hours' column in *Cleaner* looks at how contractors mix work with family matters, hobbies, and creative pursuits

Ted J. Rulseh



A neighbor down the street is an attorney, a sports lover, and all-around good guy. He's also, I learned quite some time after meeting him, a wine collector.

He has a cellar in his basement that contains some 3,000 bottles, much of it from European countries, and a considerable amount from vineyards in California whose owners he has come to know personally.

If you guess that my first visit to his cellar included a fairly long dissertation on wines, you'd be right. And my wife and I enjoyed it greatly.

The point is that we often don't find out how interesting people are until we see what they do on evenings and weekends. Most of us aren't fortunate enough to have careers we enjoy so much that they feel like recreation. So we own a business or hold a job that we find satisfying and that pays the bills, and we pursue passions when we can.

A new occasional column in *Cleaner*, titled "After Hours," looks at how service business owners invest their spare time. Judging from contacts we've made and stories we've planned so far, cleaners are interesting folks indeed.

### Lots of variety

The first "After Hours" story, in this issue, features David Currier, who moved his family and his business from Massachusetts to North Carolina so his son, David Jr., could pursue a promising career

in stock car racing.

It's not just about the racing, of course. It's about how Currier's wife, Cindy, and the kids adapted to new surroundings. And how David Sr. went about buying and building a new business in unfamiliar surroundings.

We're planning other stories on contractors whose pursuits include starting a Bible college, performing in a country band, building custom motorcycles, and putting on a huge Halloween haunted manor. We hope to include features on the spouses and families of contractors, their special interests, and how they deal with the

from topics like fuel prices, hiring practices and camera technologies to hobbies, children, pets, car restoration, fishing, sun-downer farming, travel. That's where friendships get formed.

So think of "After Hours" as a place to learn about new sides of industry colleagues you may or may not know, and how they find a place within business life for their favorite pursuits. You might even get inspired to make your own passions more of a priority in your life — and so be a little richer.

We'd like to run this feature often, and to do it we'll need to know about cleaners and families

**It's easy for a trade magazine to take itself a bit too seriously, to focus on business matters to the exclusion of all else. It's fitting for a magazine like this one, which serves mostly small family-owned businesses, to pay attention to the personal and family side of things, and in fact to celebrate them.**

special rewards and complications that go with a family business.

We all know there's more to life than work. A wise man once observed, "No one on their death bed has ever said, 'I wish I had spent more time at the office.'"

It's easy for a trade magazine to take itself a bit too seriously, to focus on business matters to the exclusion of all else. It's fitting for a magazine like

this one, which serves mostly small family-owned businesses, to pay attention to the personal and family sides of things, and in fact to celebrate them. And so we will.

### Finding inspiration

It's easy to imagine conversations between cleaners at industry venues like the Pumper & Cleaner Expo turning eventually away

who have interesting sidelines and interesting ways of keeping family life vibrant, even though the work days and weeks get hard and long.

So we invite you to let us tell your story. Or to let us know of someone in the business you like and admire who pursues a passion others would enjoy knowing about.

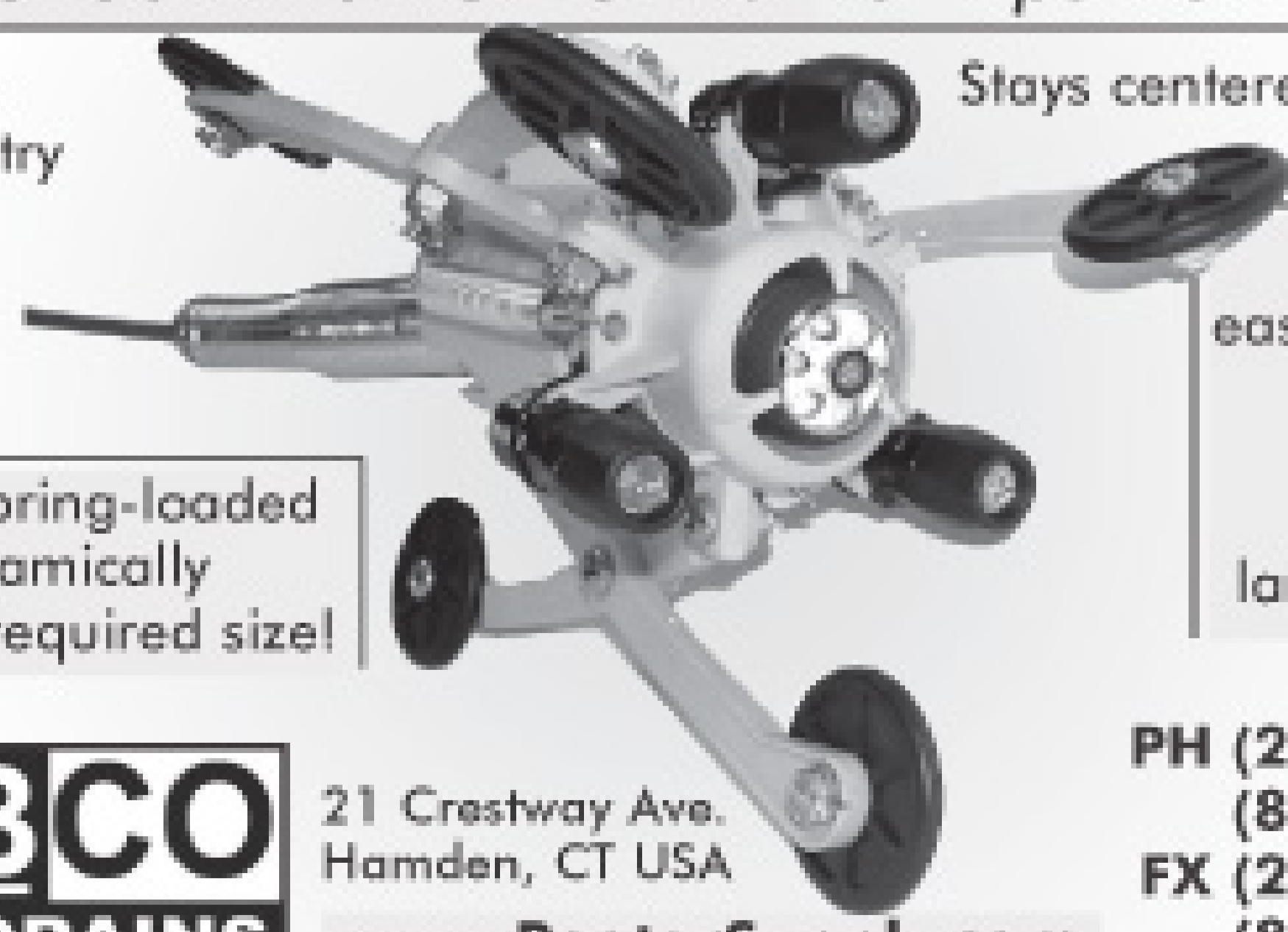
Just follow "After Hours" — without expecting it to appear every month, at least in the beginning. And if the spirit moves you to offer a story, please do. Just drop me a note to [editor@cleaner.com](mailto:editor@cleaner.com) and I'll be sure to respond. ■



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# Keith Huber was Vacuum Truck Pioneer

By Jim Kneiszel

**K**eith L. Huber, a vacuum truck pioneer who played an integral role in growing the efficiency of the liquid waste industry, died May 29 in a tractor accident on his family farm in LaFayette, Ill. He was 67.

Huber's Gulfport, Miss., company, Keith Huber Inc., was started in 1982 with its first product, the Dominator vacuum truck, still a mainstay of the industry. The company would rise to be known as the largest independent manufacturer of vacuum loading equipment in the U.S.

Huber was killed when a tractor he was operating overturned on the farm where he grew up in northwestern Illinois.

At the time of the accident, Huber was restoring the farm to its appearance in the 1950s, according to Al Klaser, vice president of Keith Huber Inc.

"He was doing what he loved to do. It was his passion," Klaser said of Huber's restoration of the farm and a number of vintage Plymouths.

After growing up in Galva, Ill., Huber moved to the Gulf Coast and made his lasting mark in business. In addition to the vacuum truck business, Huber had extensive real estate holdings around Gulfport, including the 45-acre industrial park where the truck-building company is located, Klaser said.

One of Huber's innovations, the King Vac, became a go-to tool for pumpers in the late 1980s. In a 2004 interview with COLE Publishing, Huber said the King Vac "revolutionized vacuum equipment by producing both high air flow and deep vacuum. It was totally different from anything that had been done before."

The reputation of the King Vac was cemented in 1989 when it was discovered to be the perfect tool to unload skimmers that cleaned oil pulled from Alaska's Prince William Sound following the Exxon Valdez oil spill.

In 2004, Huber was recognized as one of a number of industry pioneers in a series of feature stories in COLE's *Pumper* and *Cleaner*. In the story, he recalled how his father released him from an obligation to work the family farm after one of Huber's tinkering projects yielded a popular snowmobile design. Huber had taken his snowmobile to the Minnesota State Fair, and quickly received more orders for the product than he could produce. So he sold the design and his inventory to Mallard Coach, which manufactured the snowmobile under the Sno-Wing brand.

"My father said, 'Son, you made more money with that one sale than your dad has in his entire life of farming, so I guess I'm going to have to let you do what you love to do,'" Huber recalled. He would say that he started tinkering with machinery as a child, then somewhere along the line figured out, "it came incredibly easy for me. I guess Beethoven was born with his innate ability and I was born with mine in machinery design."

Before he turned his attention to vacuum trucks, Huber was credited with creating the first production model electronically controlled four-wheel golf car.

Klaser said the company is poised to move forward to build on its founder's legacy. He credited Huber for putting capable people in place to carry the company forward.

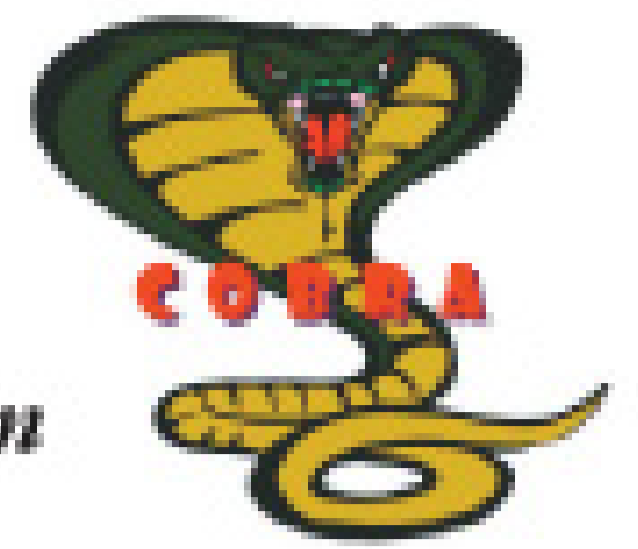
"We're certainly going to miss him, but we're well-prepared to move forward," Klaser said. "We really don't expect to skip a beat, and that's the way he would have wanted it."

Memorials in Huber's name may be made to the Maxine Huber Memorial Summer Camp Fund at Messiah Lutheran Church, 317 SW Third St., Galva, IL 61434, or Palmer College of Chiropractic, 1000 Brady St., Davenport, IA 52803. ■



Keith L. Huber

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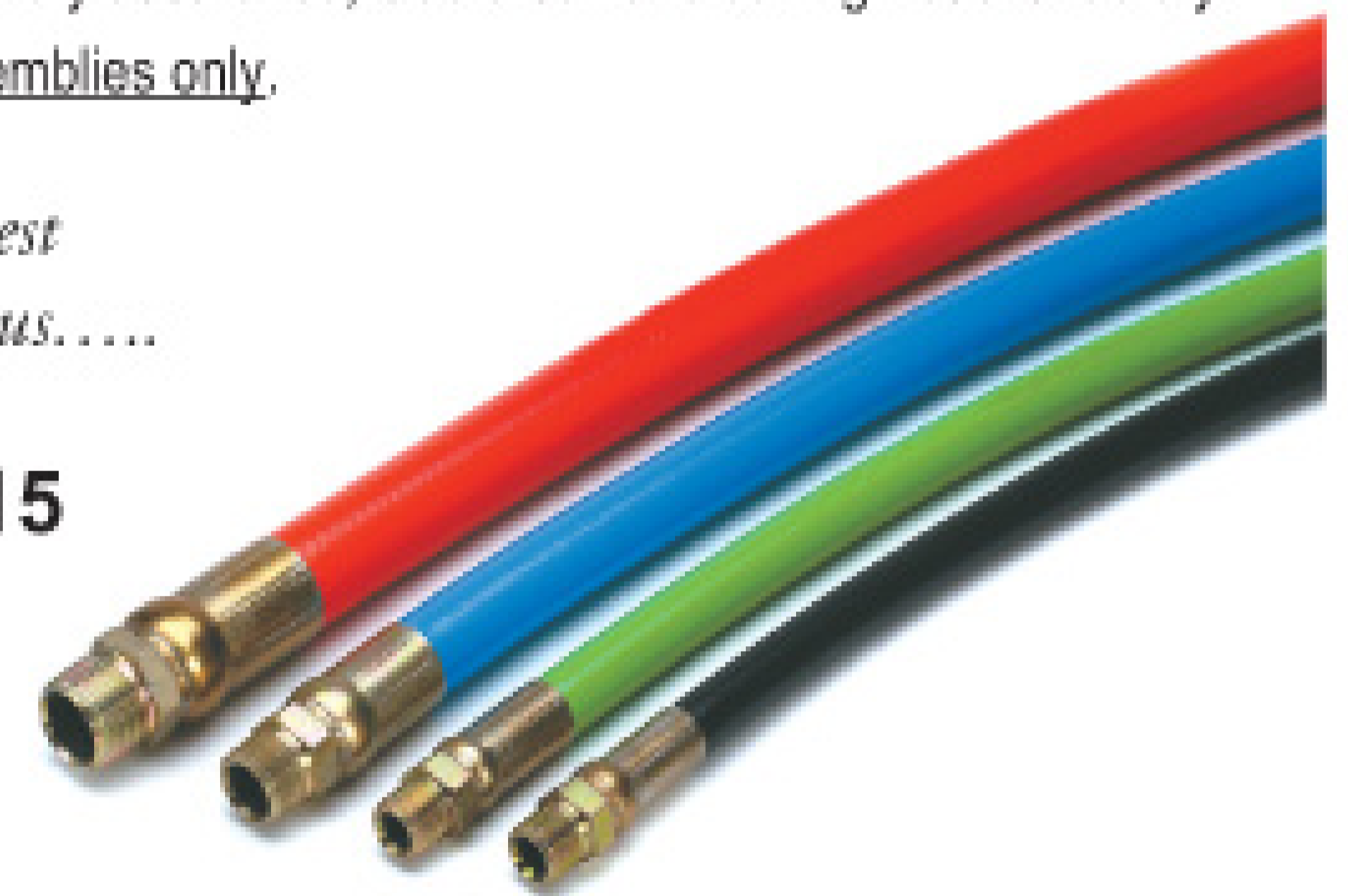


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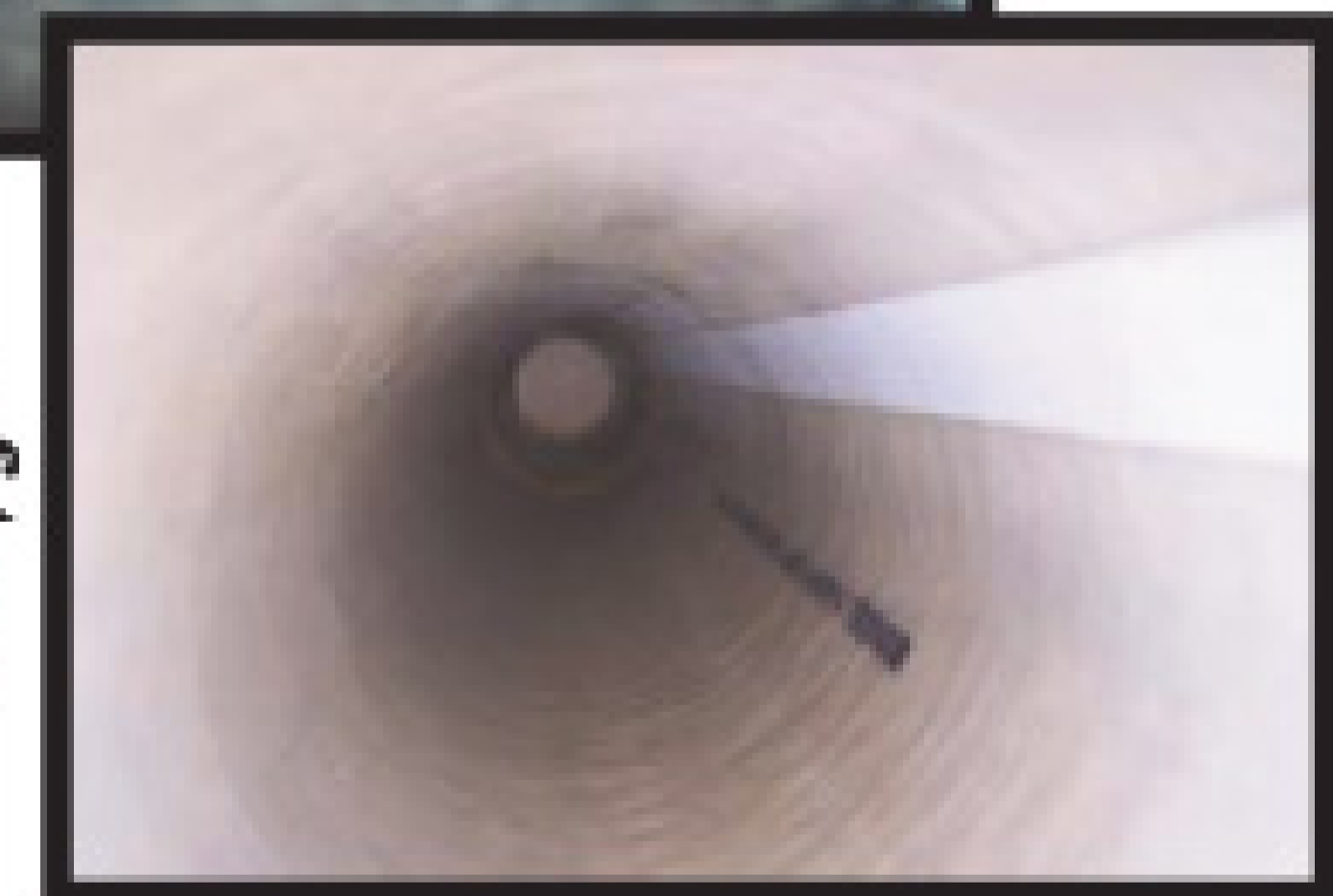
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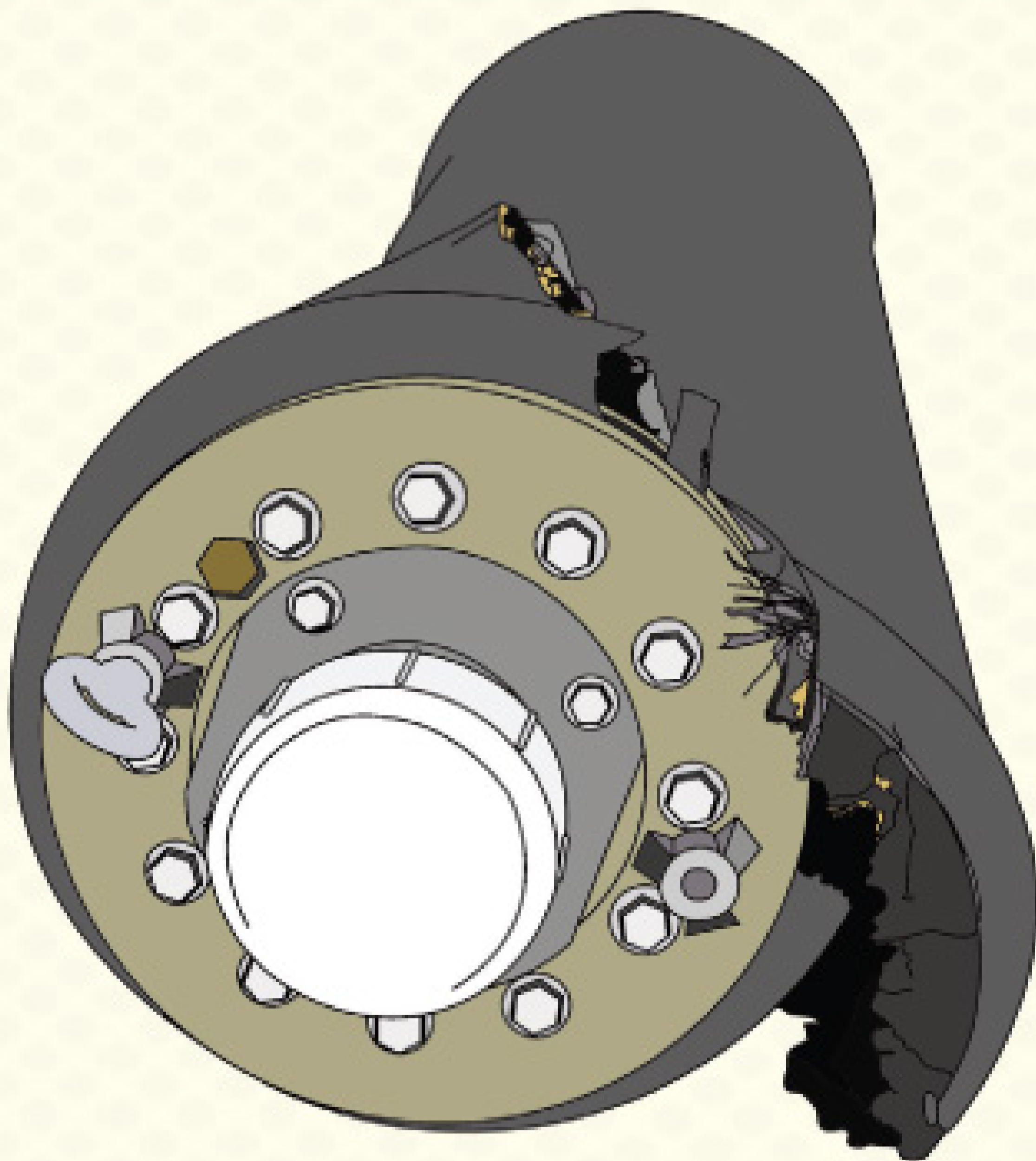
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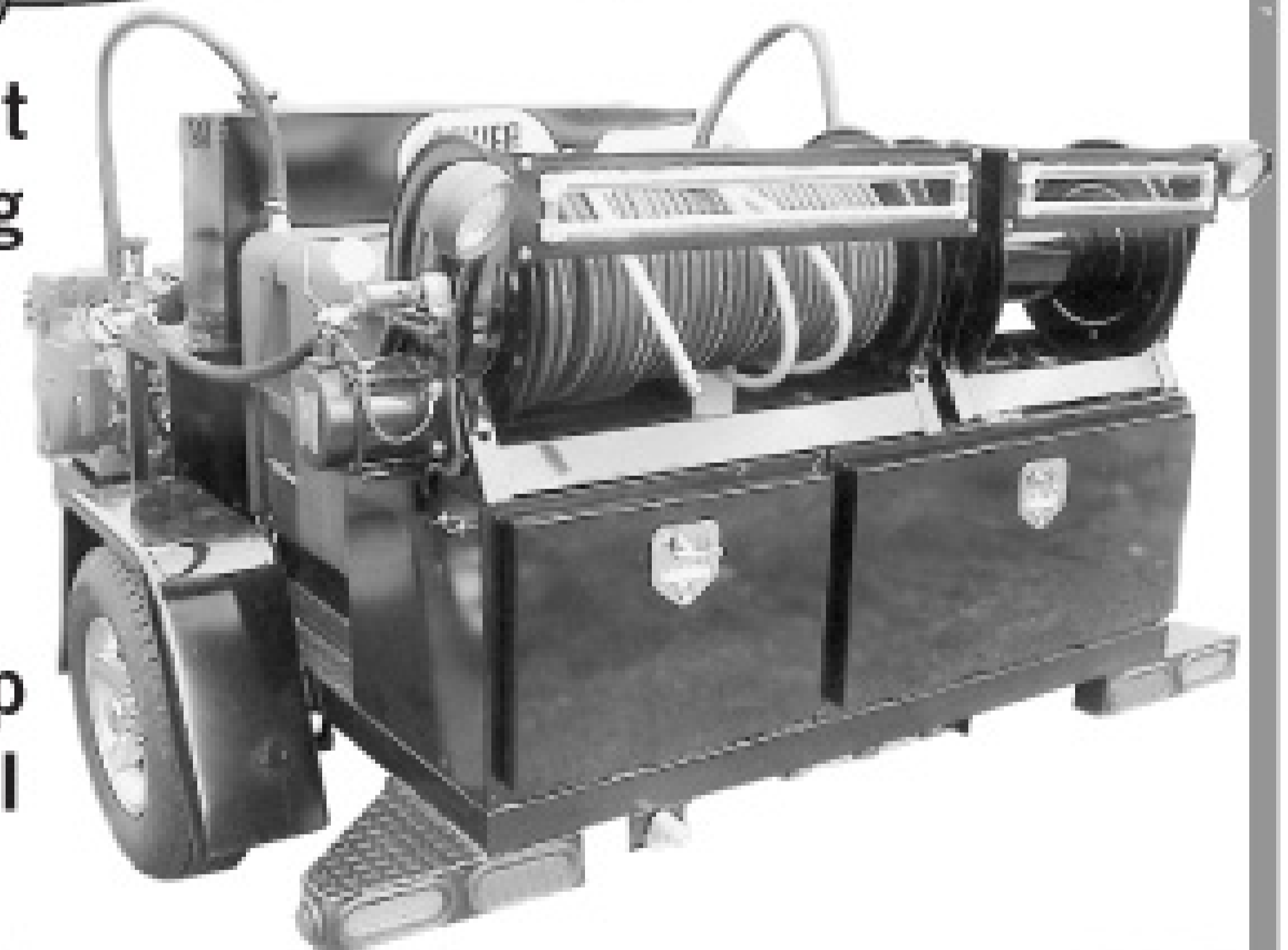
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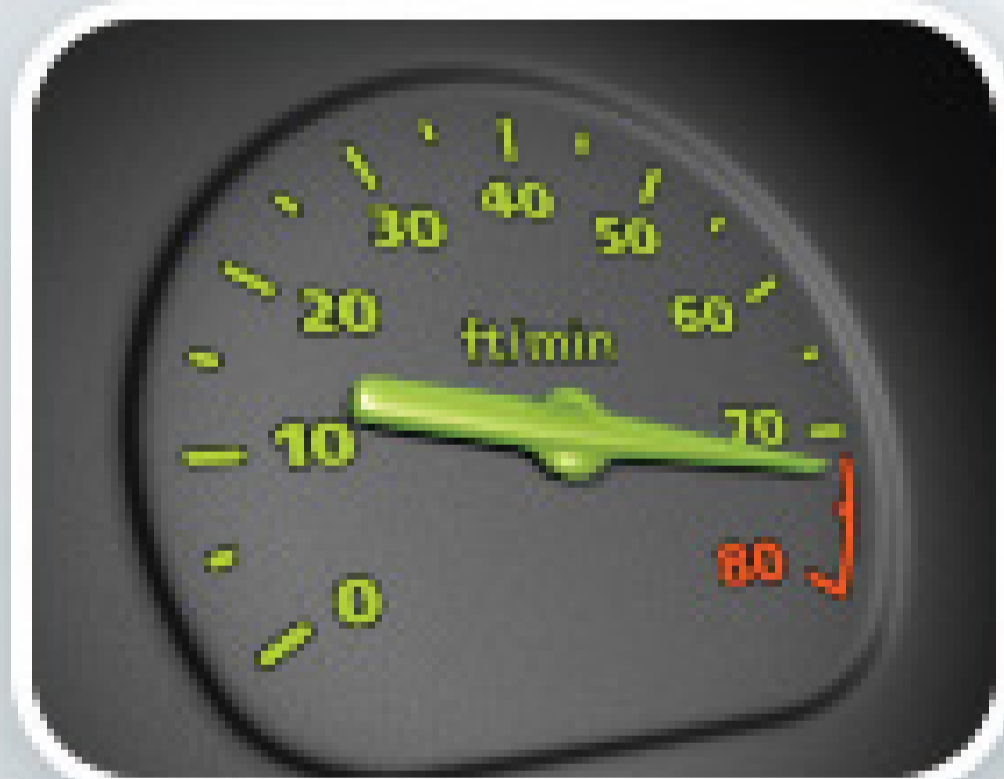
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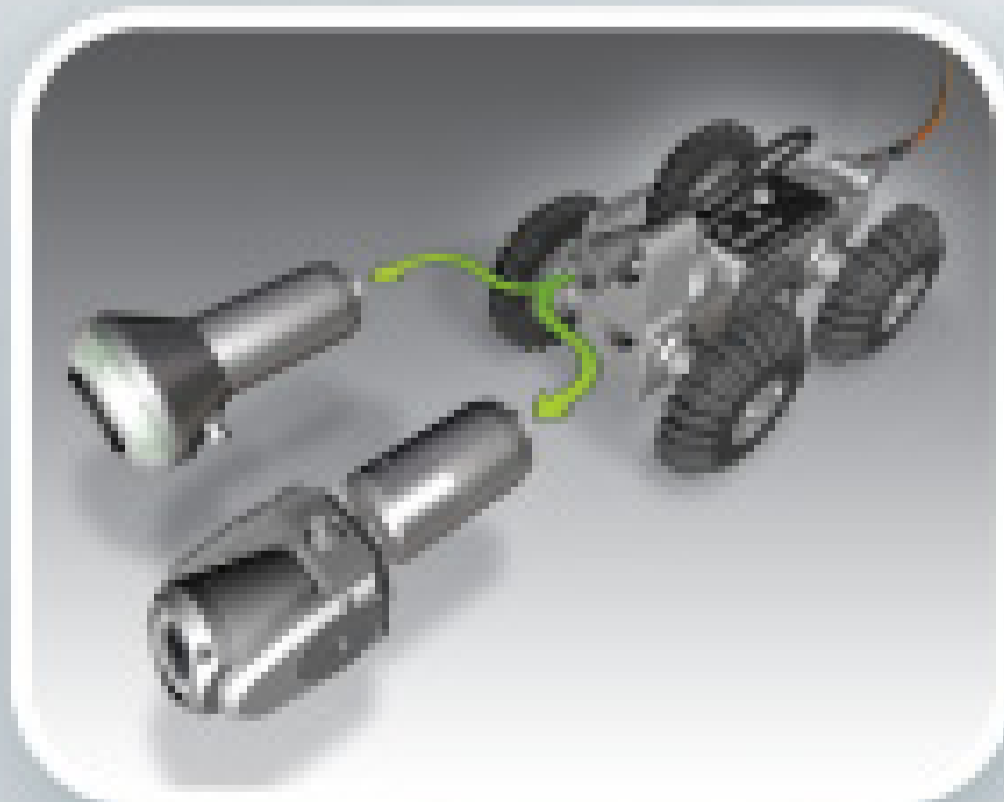
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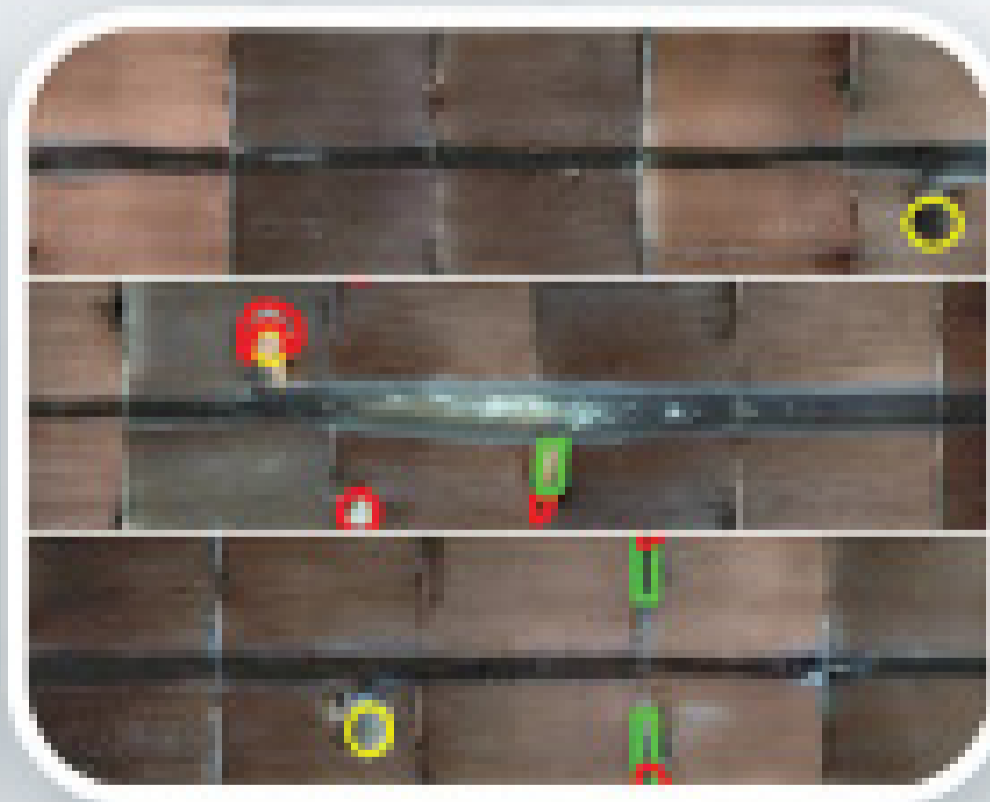
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# In the Zone

Roadway work zone safety means staying focused and avoiding distractions

By Scottie Dayton

Everyone knows parts of the United States and Canada have two seasons: winter and road construction. Your employees can easily become upset and distracted when the dreaded orange barrels impede their progress to a service call — especially if it's an emergency — or the highway becomes a one-lane parking lot.

The U.S. National Highway System expects at least 3,000 work zones, or one every 100 miles, during the peak of this construction season. Most of us assume that highway workers are the people at risk, but of the 1,010 persons killed in work zones in 2006, 85 percent were drivers or vehicle occupants. According to Federal Highway Administration statistics, 160 work zone injuries occur daily — one every nine min-

utes. A fatality occurs every 8.7 hours, almost three a day.

## Fighting back

Work zone deaths and injuries have increased because of more construction projects and inattentive driving in heavy traffic. Employers, however, can help their workers overcome the frustration and impatience that road construction delays often generate by stressing that they

Safety  
FIRST

are responsible for making lifesaving decisions.

"Put yourself on high alert," advises Barbara Manning Grimm,

editor of *Safety Smart! Online*. "Be aware of your surroundings, including the construction activity, signs, signals, and flagger instructions."

Your company's driver safety program probably stresses the dangers of speeding, but make your employees aware also that speed is a major cause of work zone crashes, and that rear-end collisions are the most common type of crash. If your drivers can't avoid work zones, have dispatchers schedule enough time to compensate for delays.

Advise drivers especially not to make cell phone calls or switch the tune on the radio or CD player while driving through a work zone. Because construction activities change continually (the work and equipment are often the biggest distraction), employees must pay extra attention to the road ahead and be alert for any obstacles.

"Hazards develop unexpectedly, such as loads on trucks and buckets on backhoes extending suddenly into your lane," says Grimm.

"Watch what's going on around you. Be prepared to take action quickly. Gear down if necessary, and stay ready to brake. Check your rearview mirror to see if other vehicles are slowing accordingly. If not, flash your brake lights."

## Slow for the cone zone

Remind your drivers not to exceed the posted speed limit, as

finer for speeding in work zones are hefty. They should follow speed limits even if they do not see anyone working; otherwise, they could be going too fast to negotiate narrow lanes, sudden turns, and rough road surfaces. Stress that you expect your drivers to be patient and stay calm, enabling them and the people building the roads to make it home safely.

**"Hazards develop unexpectedly, such as loads on trucks and buckets on backhoes extending suddenly into your lane. Watch what's going on around you."**

**Barbara Manning Grimm**

The National Work Zone Safety Information Clearinghouse has a free Know the Signs poster that illustrates various work zone safety signs your drivers will encounter. Contact [lmcliskey@artba.org](mailto:lmcliskey@artba.org) to order it.

Employees comfortable with computers can take a short quiz offered by the Federal Highway Administration on what the signs, signals, and cones mean. Go to [www.workzonedriver.org/index.htm](http://www.workzonedriver.org/index.htm), click the For Teens tab, then Know the Signs. Drivers of all experience levels will benefit from the review. ■

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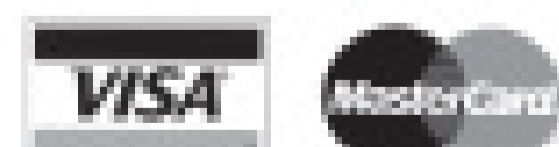
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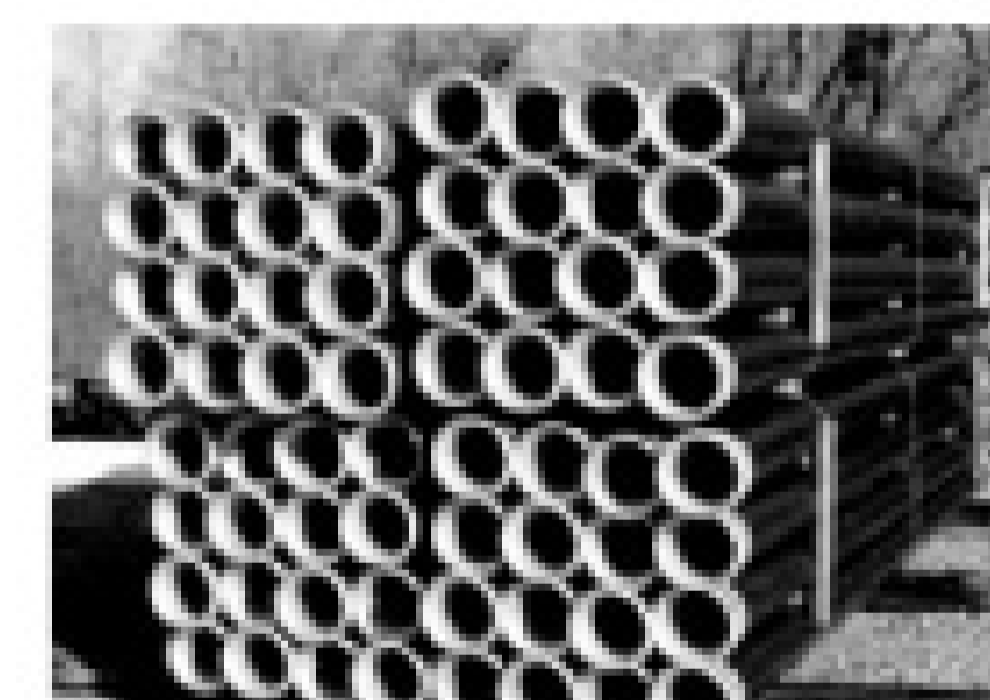
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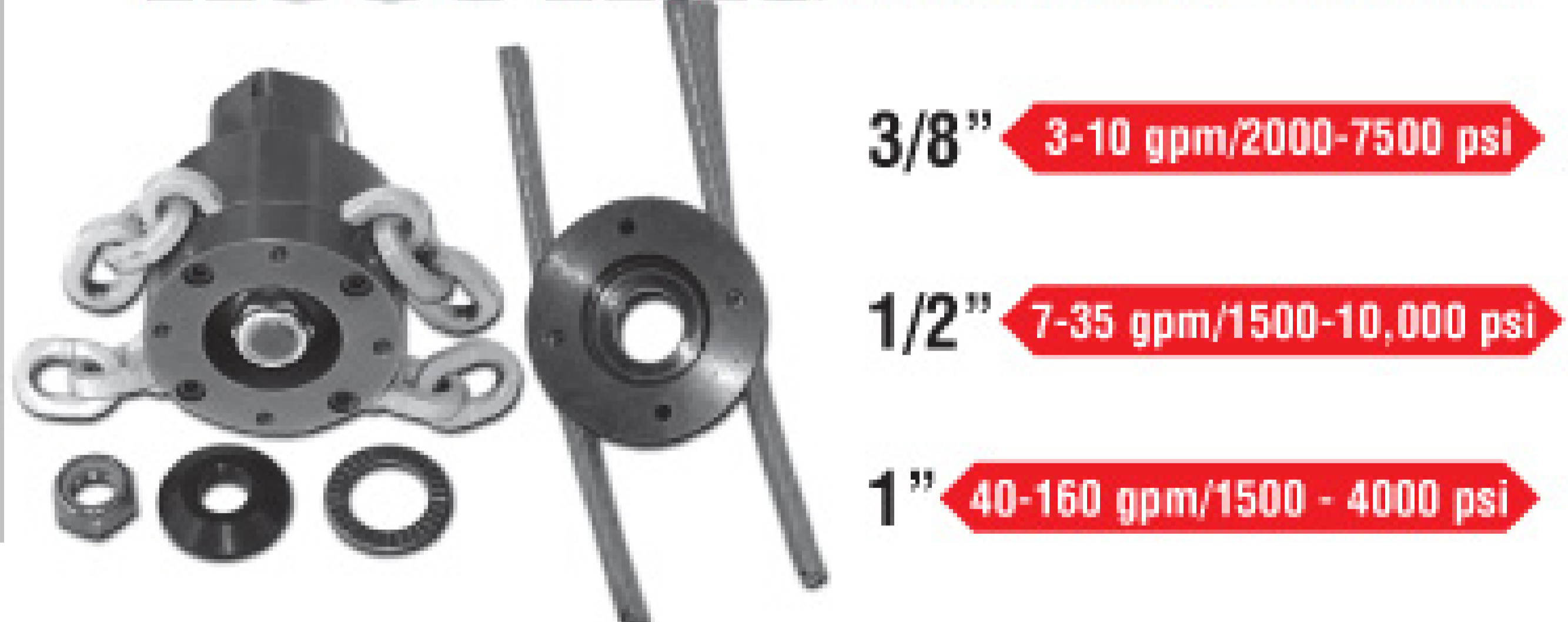
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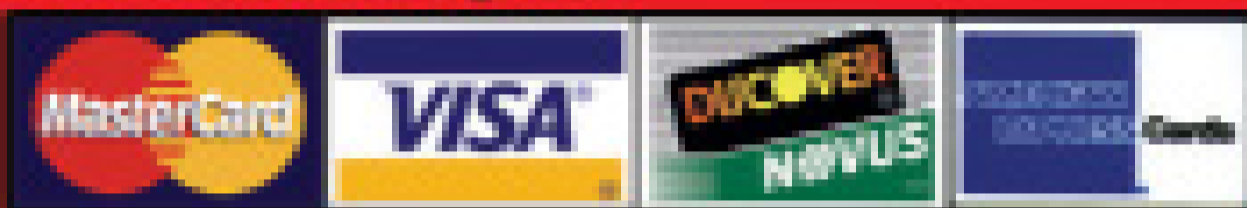


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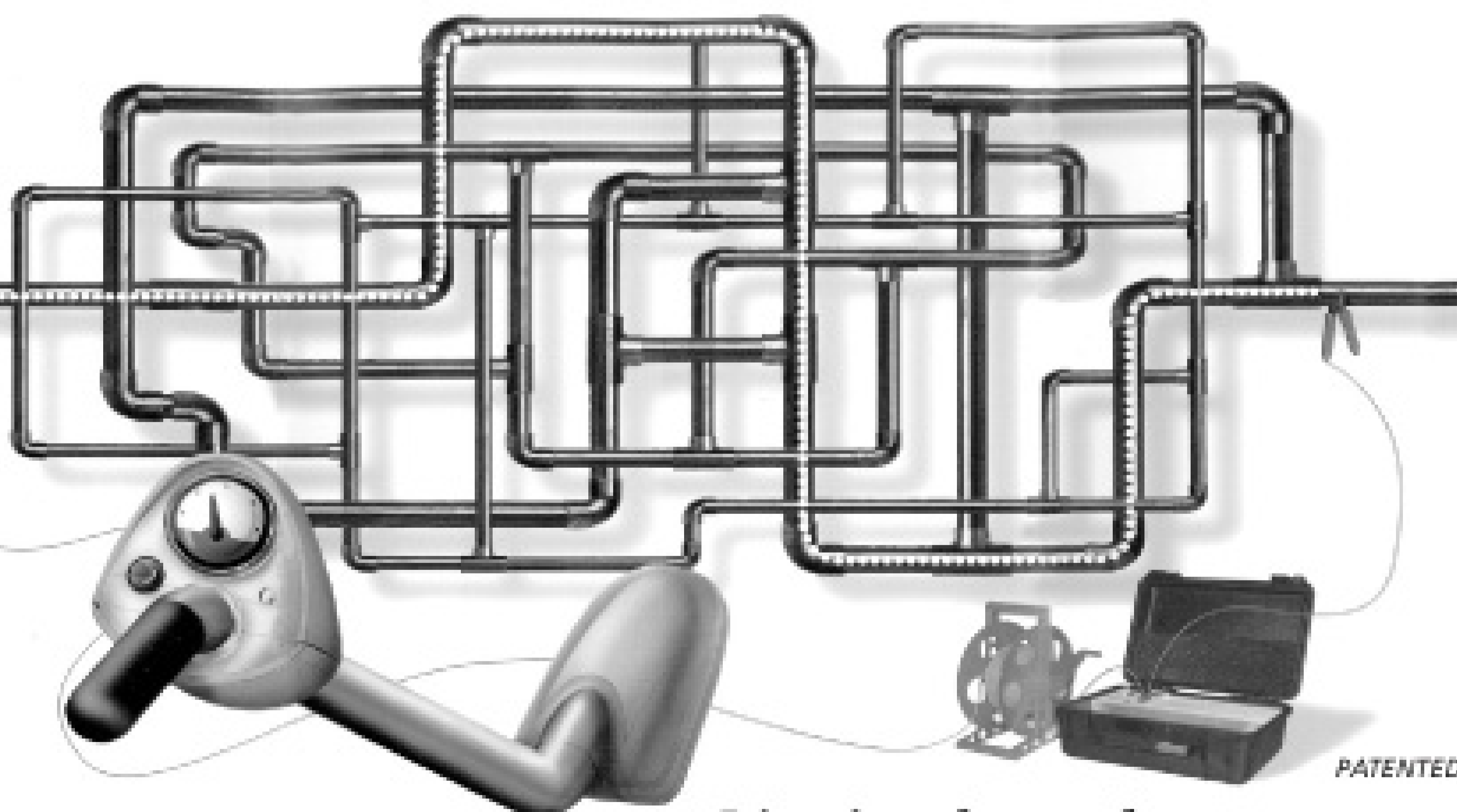
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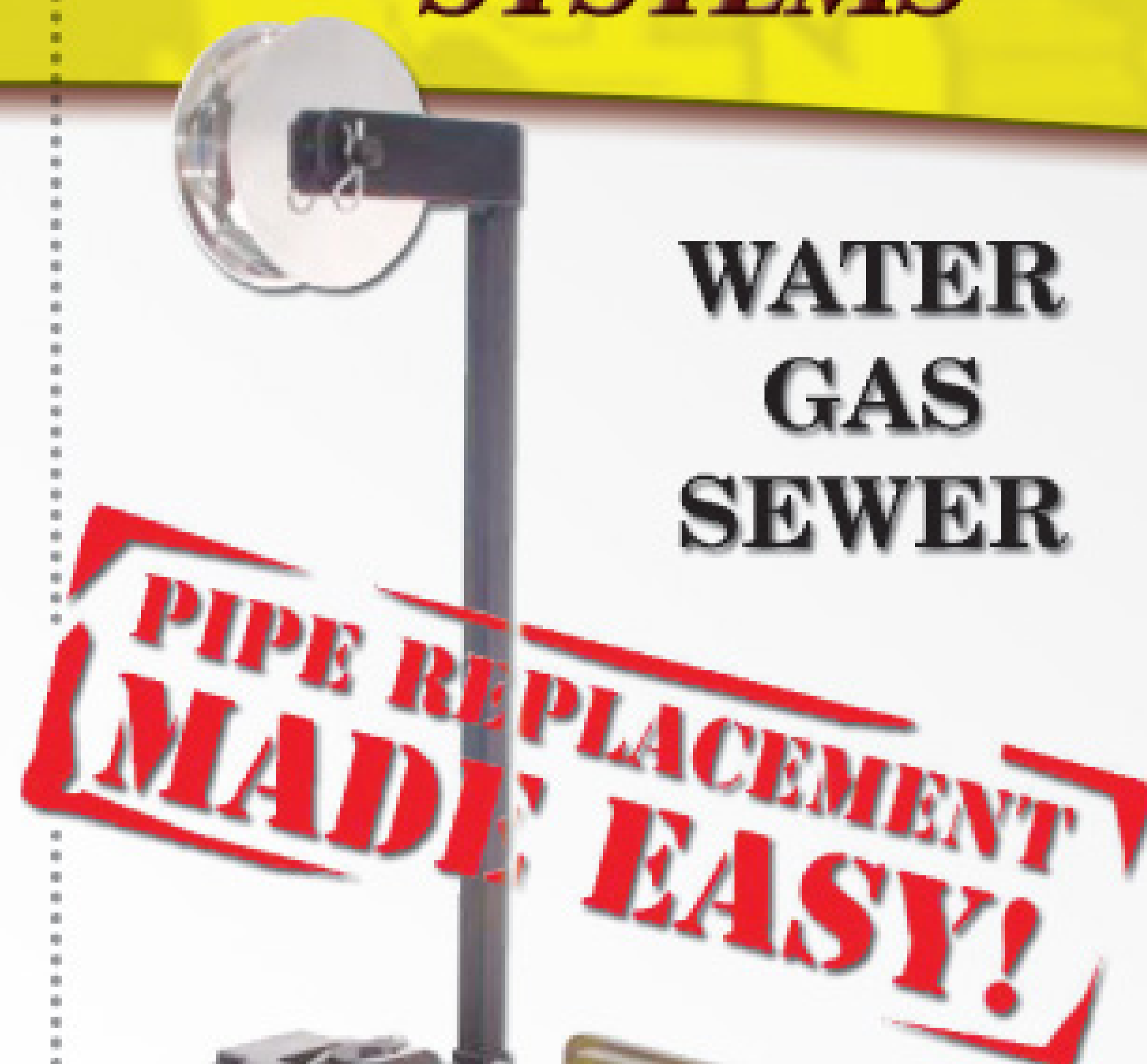
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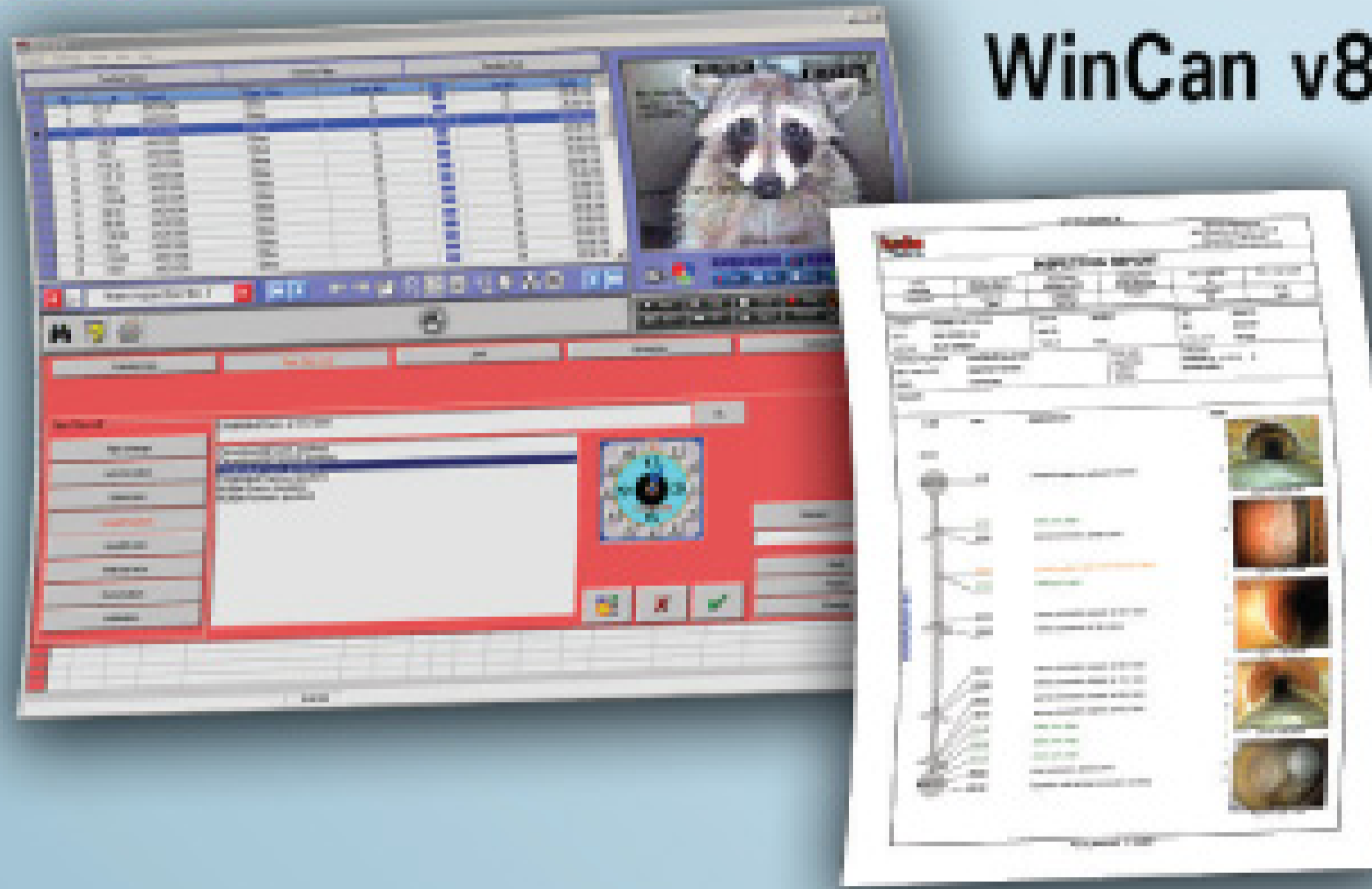
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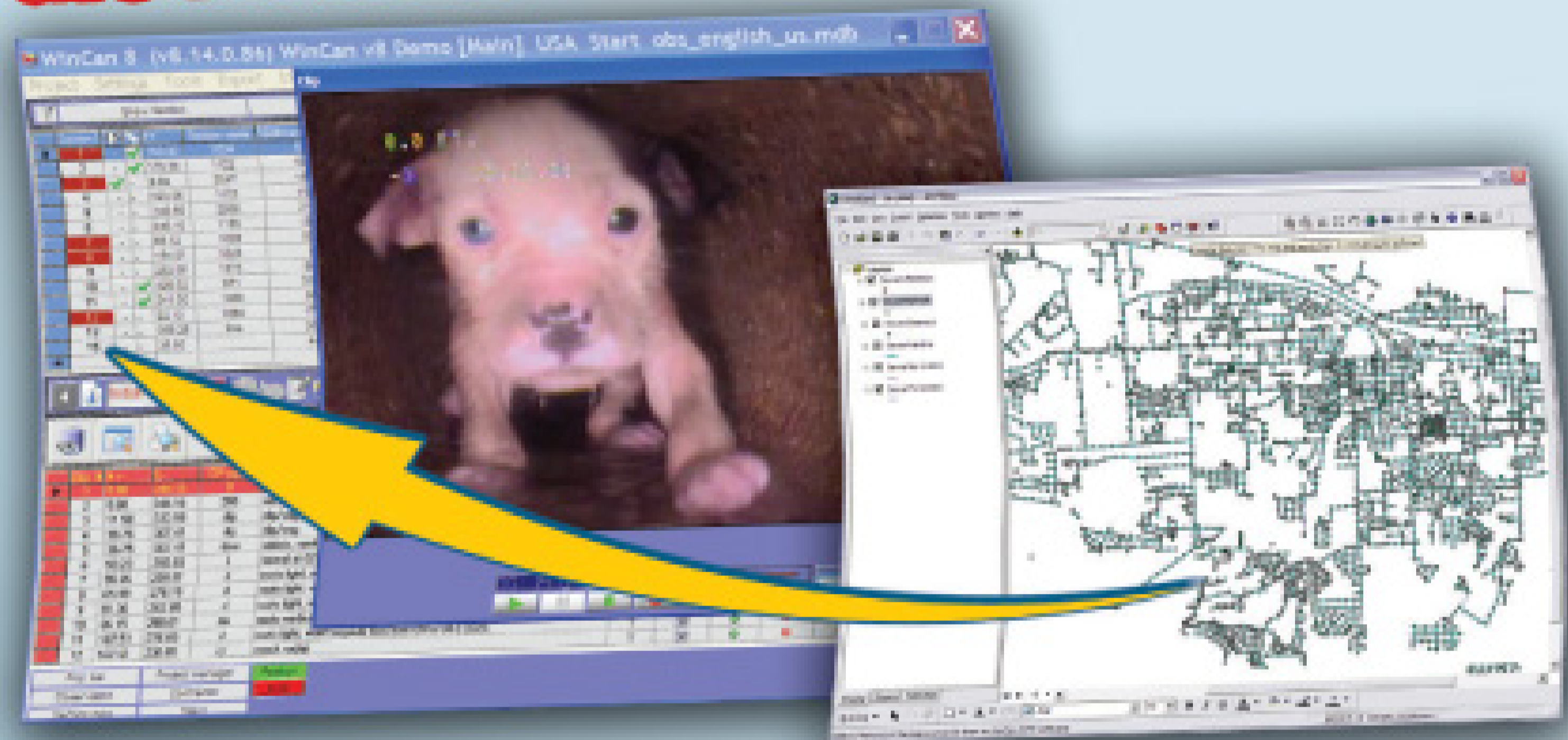
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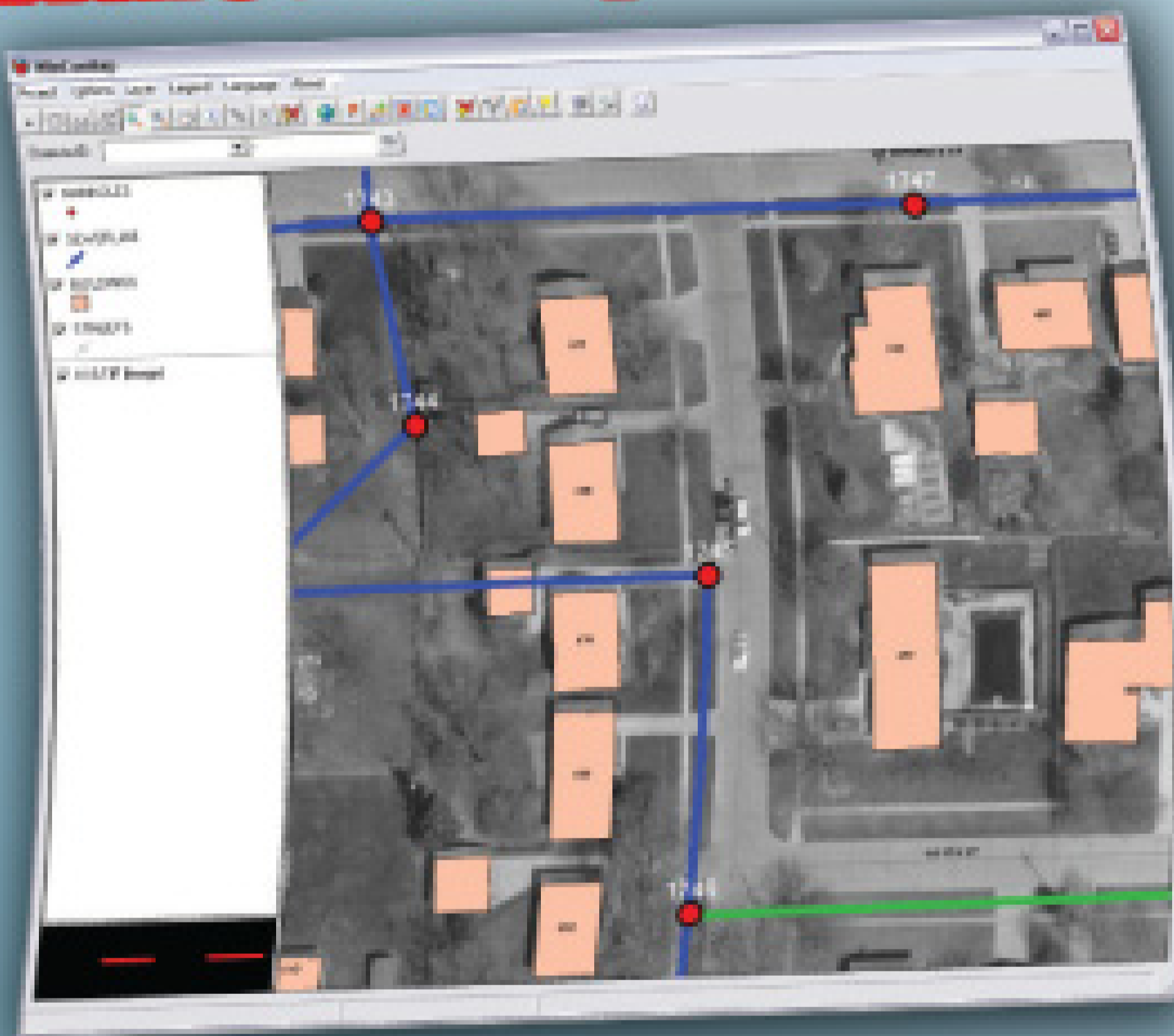
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# 10 Ways to Hurt Your Business

If you want to make life in business tougher than it needs to be, here are ten good prescriptions to try on a regular basis

By Erik Gunn

**M**uch of what goes wrong in the world or in business can be blamed on bad decisions. Yes, natural disasters and other events happen that no one can control. But even when those happen, just how well we cope with the aftermath may depend on how carefully we thought things through in advance.

Too often, we go on automatic pilot and just plain don't think about the consequences of our actions. If you're the parent of a teenager — in fact, if you just follow the news — you already know this. But let's be honest with ourselves: all of us can make this mistake, and not just teens or politicians.

There are some foolish mistakes in business that people make time after time, even though it seems they should know better. Here are a few of them. Let's call them ten ways to hurt your business.

**10. Buy something just because "it's deductible."** Ahh, deductibility. That may be the most insidious seducer of fledgling business owners — and many experienced business people fall for it, too.

While it's true that every legitimate business expense reduces the income on which you pay taxes, we often forget the other half of the story: Every dollar you incur in expenses first has to be earned as revenue. Remember, too: For each dollar you spent on that thing you didn't need, the tax deduction got you only 20 or 30 cents back.

**9. Don't take credit cards.** So you think

letting customers pay with plastic is too risky, or requires too much work, or costs too much because the credit card company takes a cut from every sale? Fine. Just don't think about how much more it costs when your competitor gets more business from the growing number of customers who use credit or debit cards to pay bills — especially the ones in three figures or more.

**8. Rely too much on credit card debt.** Used carefully, credit card debt can help you smooth your cash flow. And with low- or no-interest teaser rates, you can cut the cost of that debt to virtually nothing. The danger is getting over your head. Don't take on this kind of debt — if fact, don't take on any kind of debt — without making sure you can pay it down in time to avoid huge interest expenses.

**7. Cut your prices just to beat the competition.** Face it: If all you're competing on is price, there's always someone who can charge less money. Yes, you have to pay attention to market prices for your services, but if you're going to stay in business, what you really need to do is make sure you deliver value that brings good customers back.

**6. Save money by not advertising.** No question, the media marketplace is changing as the Internet becomes a more important source of information. But old media — radio, TV, even newspapers — aren't dead yet. You know the old Bible verse about not hiding your light under a bushel. Not advertising is one way to snuff that candle right out.

**5. Under-insure (or over-insure) your business.** Not getting enough coverage can leave you vulnerable to a major catastrophe. But there's a flip side: spending money on more coverage than you need. That may be less damaging, of course, but who needs to leak revenue?

**4. Save money by not hiring a bookkeeper.** What's your No.1 job? Keeping the

Erik Gunn is a magazine writer and editor in Racine, Wis., where he operates Great Lakes Editorial Services, consulting for businesses, non-profits and individuals. Readers may direct inquiries to him by contacting this publication at 800/257-7222 or e-mailing [editor@cleaner.com](mailto:editor@cleaner.com).



business going by finding customers and delivering service. You can't do it all, no matter how small your operation. Keeping track of where the money comes from and where it goes is a critical job in any business. So find someone to track that for you. (And while you're at it, go out and retain a good accountant to help you map out the big picture financially.)

**3. Hire whoever comes in the door.** Yes, it can be tough to find good, skilled labor, but remember: You're in the service business. Savvy employers know that hiring the wrong person

**Yes, it can be tough to find good, skilled labor, but remember: You're in the service business. Savvy employers know that hiring the wrong person costs way too much — in training, in turnover, in low customer satisfaction.**

costs way too much — in training, in turnover, in low customer satisfaction. That's why they invest time in hiring people who fit their company.

Again there's a flip side: relying on overtime instead of adding the staff you need. Overtime is best used to get through busy times of short duration. In time, if you work your people too hard, they'll burn out.

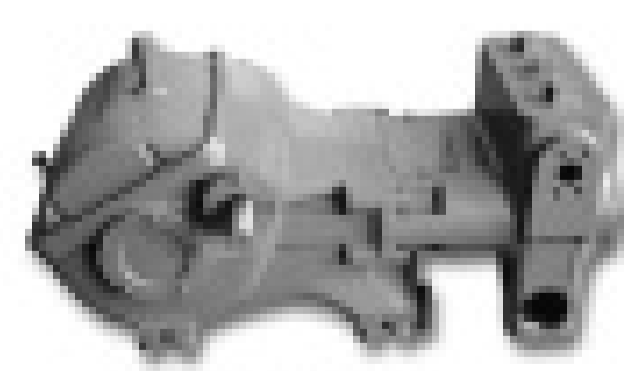
**2. Don't get bids.** You don't need to be a stickler about making sure everything you buy is competitively priced. An hour spent shopping prices for paper or printer ink may cost you more than just buying those items in the most convenient place. But relying on the same old sources time and time again, for everything, is a good prescription for spending more than you need to.

**1. Don't have a plan.** The old saying goes: "If you don't know where you're going, any road will get you there." It's true. And if you count too much on winging it, you're pretty likely to fly right into the ground. But once again, don't over-compensate. A plan doesn't have to be etched in stone.

The best plans are flexible enough to change as circumstances warrant. And the simpler they are, the better. Because if you spend all your time planning, when are you going to do any business? ■



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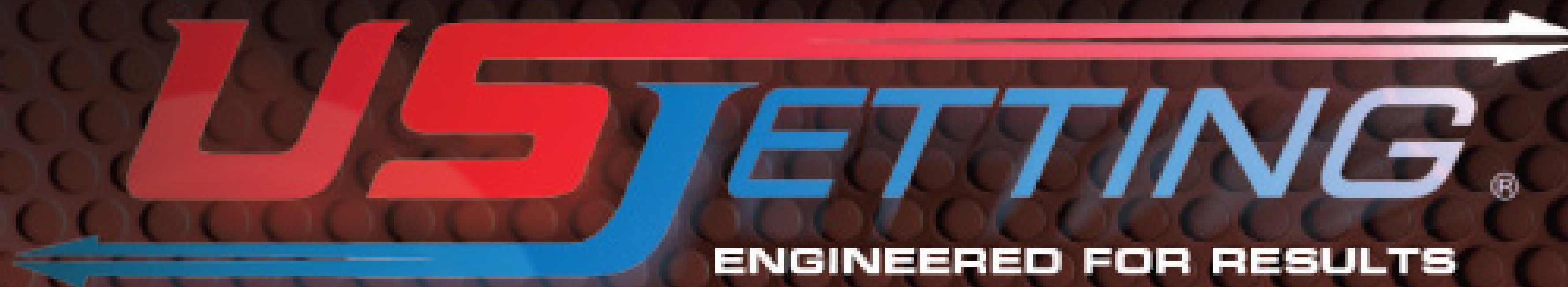
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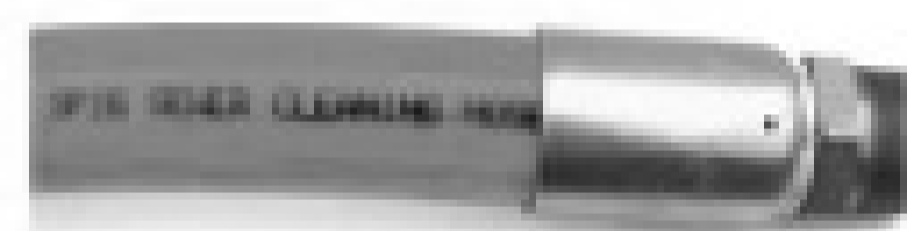


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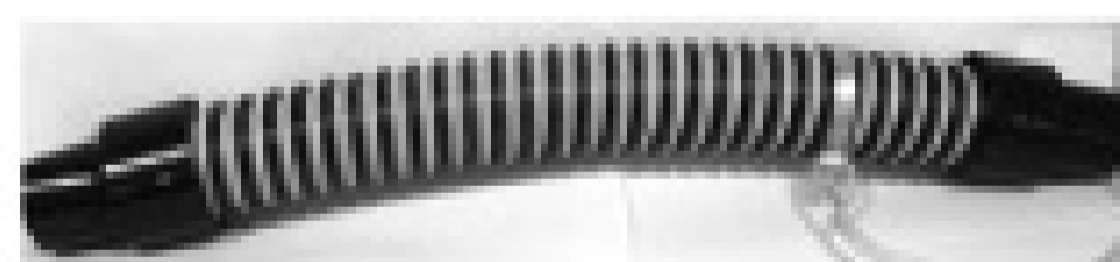
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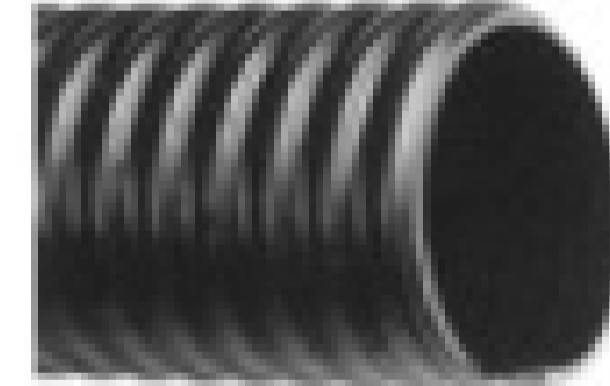
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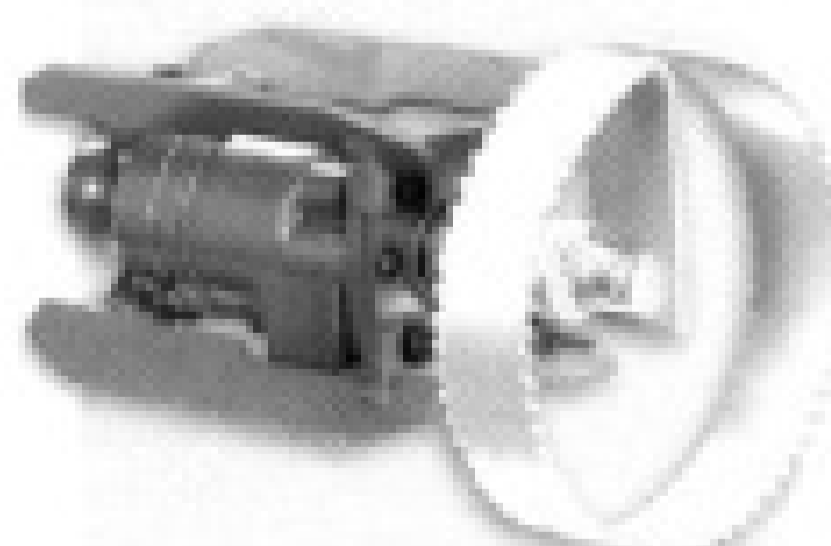
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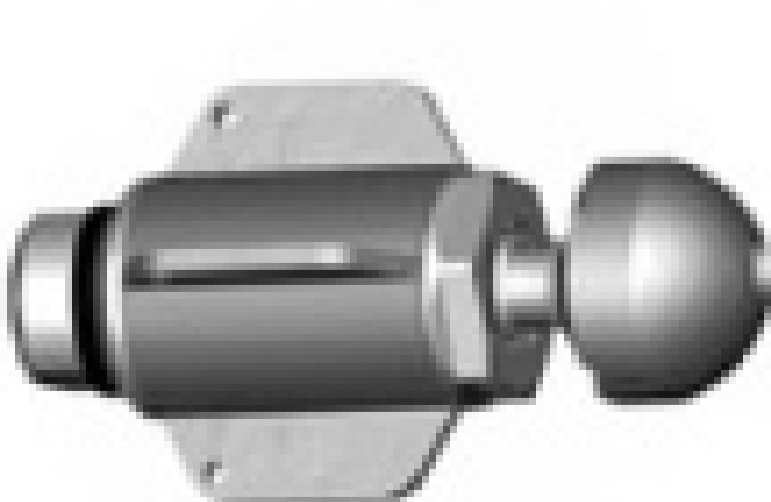
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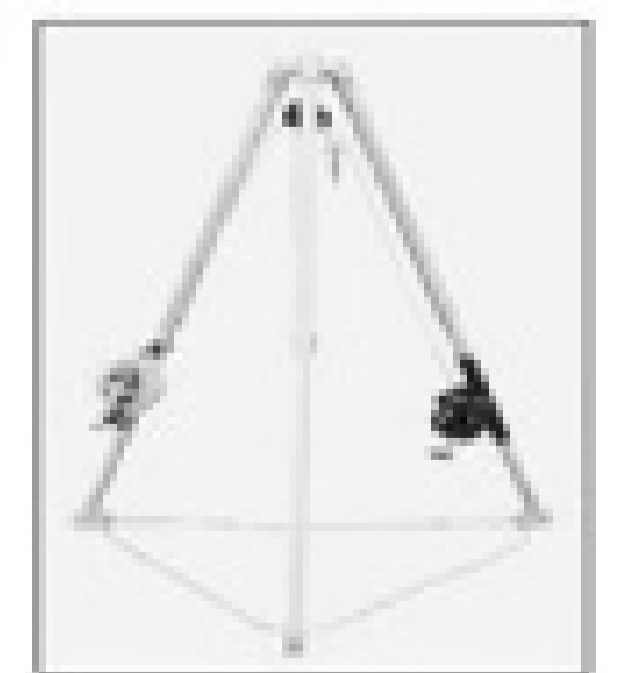
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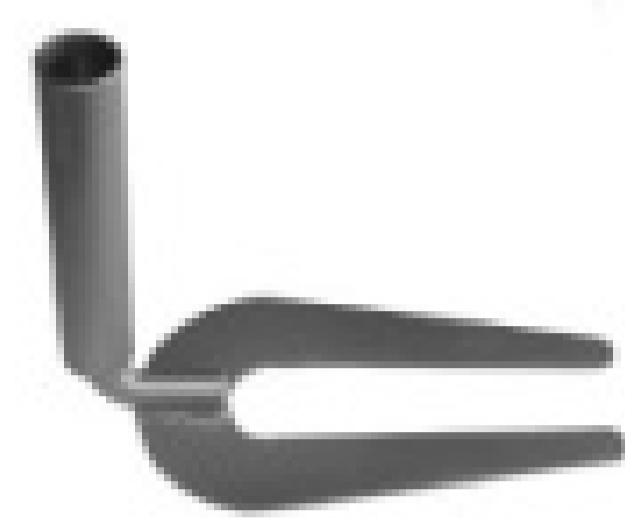
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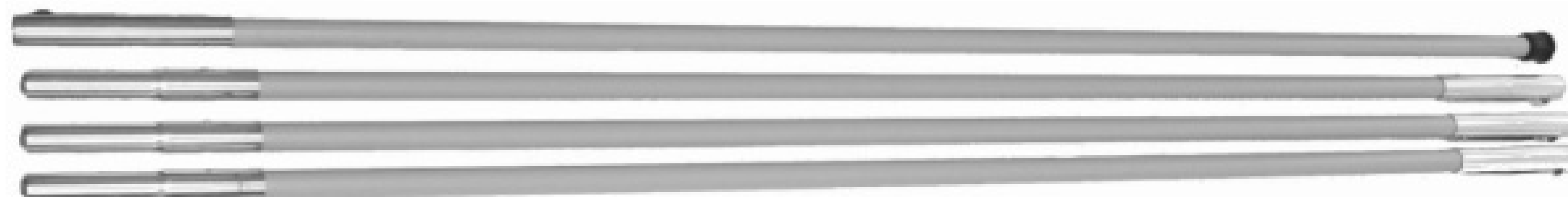
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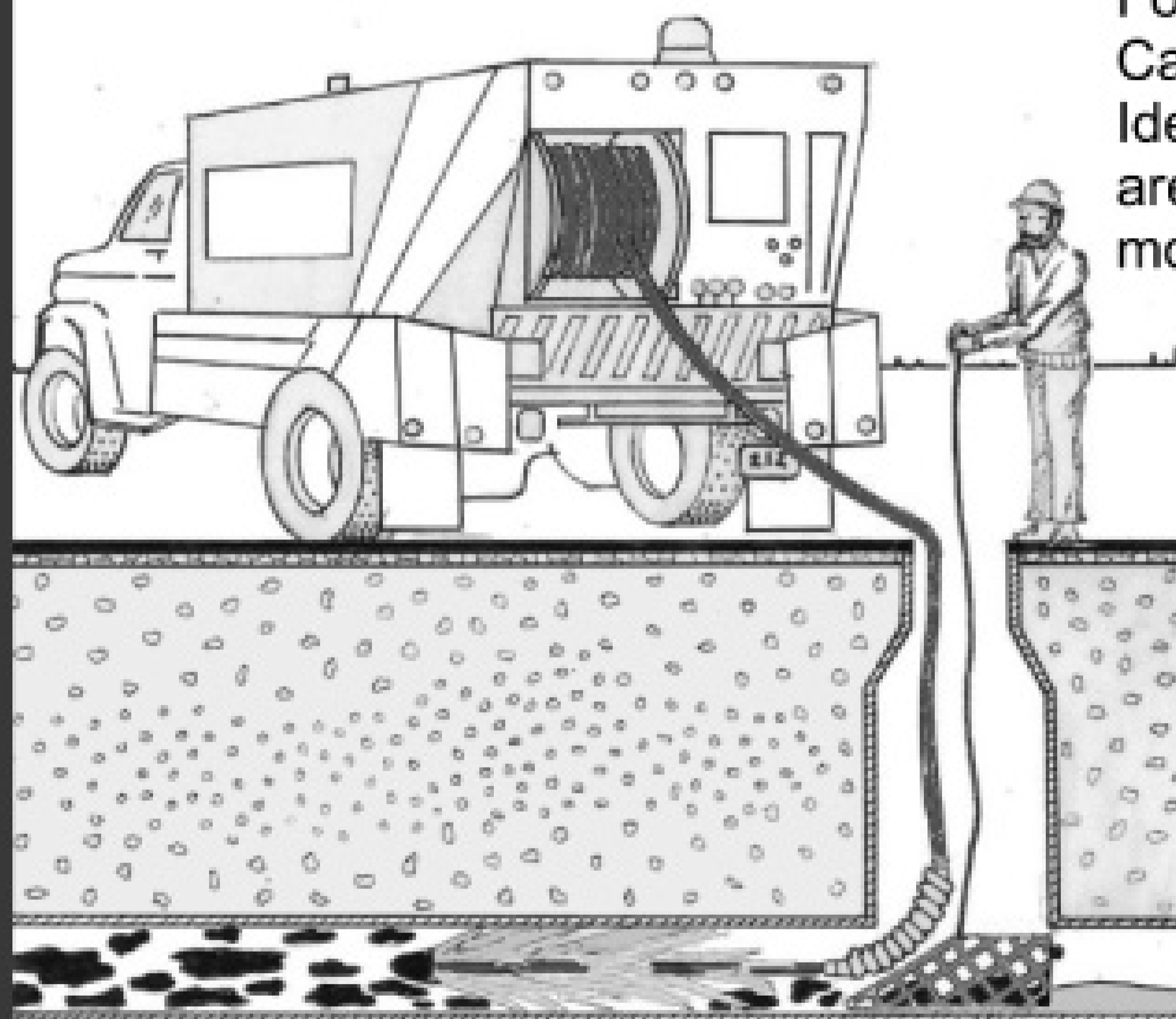


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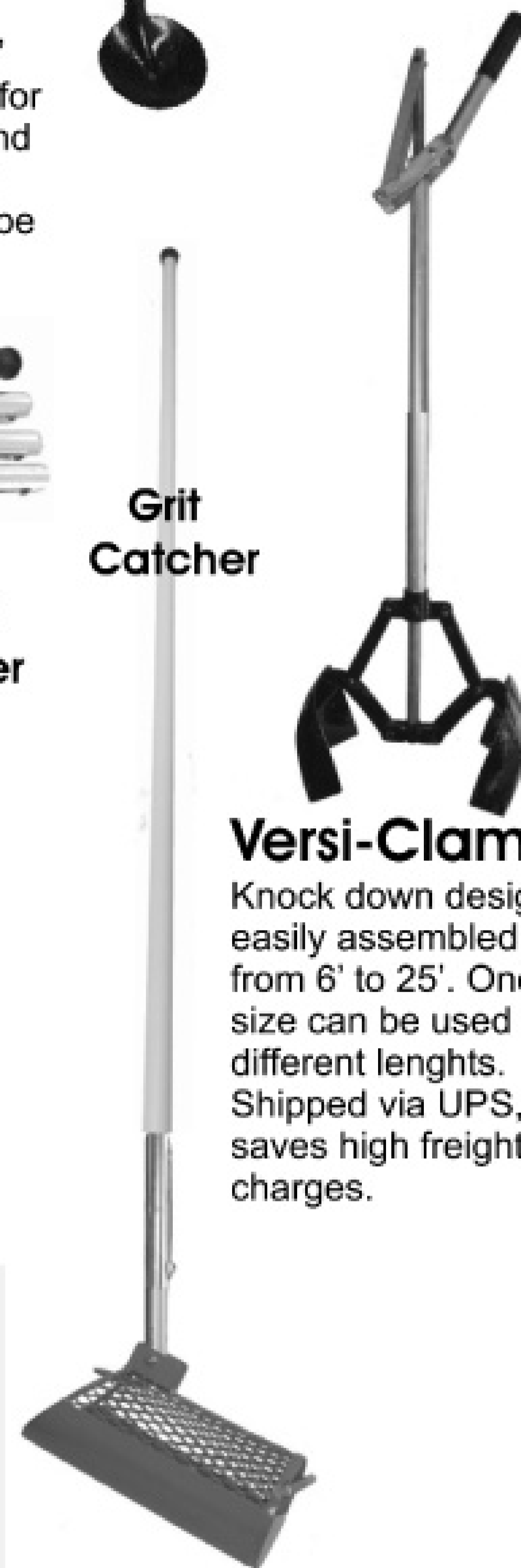


Specify **MDC-6W**, 6" pipe size to use with fiberglass poles (see right) in any length for positive action of positioning, raising and lowering in manholes. For 6" to 18" pipe. Special larger sizes available.

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# More Than a Bookkeeper

A quality accountant can provide analytical services and sound advice on a variety of issues and decisions that drive success and growth

By Mark E. Battersby

**A**ccounting is a foreign language to the owners of many service businesses. An accountant is far more than someone who prepares income tax returns. Understanding what an accountant does — and using those services — can mean the difference between a troubled business and a successful one.

Many owners think accounting and bookkeeping are the same. They are not. Bookkeeping is chiefly the clerical phase of accounting. A bookkeeper primarily records the business' financial transactions.

Accounting is much broader. Accountants develop systems to classify and summarize transactions and interpret financial statements. They are — or should be — decision makers.

## A business partner

Accountants are far more than tax preparers or "bean counters." A good accountant can be a business owner's financial partner for life — with intimate knowledge of everything from how to finance the next equipment purchase to how to pay for a child's college education.

A general accounting practice usually covers four basic areas: business advisory services, accounting and record keeping, taxes and auditing. More and more accountants are also moving into personal financial planning, a natural extension of their familiarity with their clients' financial affairs.

The four basic disciplines often overlap. For instance, an accountant helping prepare financial statements required for a loan might cross the line from auditing into business advisory services by showing how certain estimates could be recalculated to get a more favorable review. Or, after preparing midyear financial statements, the accountant might suggest how year-to-date figures will affect year-end tax liability.

An accountant can be hired to set up a bookkeeping system for a new or growing business, to help evaluate a particularly complex business transaction, to prepare annual tax returns, or to provide accounting services on an on-going basis. But, how can you find a good, affordable accounting professional?

## Many choices

According to the Bureau of Labor Statistics, there were 1.2 million accountants and auditors employed in 2004. Some 134,000 CPAs owned their businesses or worked for firms serving mostly small or mid-sized businesses.

So, finding a professional to help your drain cleaning business grow should not be difficult. The key is to choose the right accountant. The first step is to take an inventory of what you and your business need in service and advice and how much you can afford to pay. You need to determine up front which tasks you can handle and which to delegate to a professional.

It's essential to shop around. Many accountants offer free first meetings to discuss expectations, services needed, and the amount and kind of work they will be expected to do. The best way to start is to get referrals from your attorney, your banker, or a business colleague. For more possibilities, every state has a Society of Public Accountants.

In choosing an accountant, remember that bigger isn't always better. A large accounting firm

**Accountants are far more than tax preparers or "bean counters." A good accountant can be a business owner's financial partner for life.**

may have impressive credentials, but its fees are likely to be high, and a small business is likely to be served by a less experienced junior partner. This is not a bad thing, so long as the charges accurately reflect that junior member's lower billing fees.

## Things to consider

When interviewing potential accountants, consider services performed, personality and fees. Virtually all accounting firms offer tax and auditing services. But what about bookkeeping? Management consulting? Pension fund accounting? Estate planning? Will the accountant help you install and set up bookkeeping software?

Other services include analyzing transactions for business loans and financing; preparing, auditing, reviewing and compiling financial statements; managing investments; and even representing the business or its owner before tax authorities in case of an audit.

In addition to services, make certain the accounting firm has experience with businesses of a similar size and, if at all possible, with your industry. Someone already familiar with the financial issues facing small businesses will not have to waste time and money getting up to speed.

Another important question: Is the accountant's style compatible or complementary with yours? You want an account whose personality makes you comfortable and whose outlook generally fits your own.

On the other hand, it can be healthy to have an accountant who takes a different approach. For example, if you are extremely conservative, a more aggressive accountant may be able to help you see things in new ways. As part of the interview, ask whether the person you are speaking with will actually handle your business.

Always ask about fees up front. While you should not make your decision solely on price, the hourly rate is a consideration. Accounting firms charge by the hour at rates ranging from as low as \$75 per hour to as much as \$300 or \$400. Some accountants work on a retainer, providing certain regular services against a flat monthly fee.

After determining what accounting services you need and what options will be the most cost-effective, get quotes from different accountants. Also, try to get an estimate of total annual charges based on the services you have discussed. Don't forget references — particularly from clients in the same industry.

## Nurturing relationships

After you choose an accountant, make sure the terms of the agreement are spelled out in an engagement letter, especially details about the returns and statements to be provided and the fees charged. This ensures you and the accountant have the same expectations and helps prevent misunderstandings.

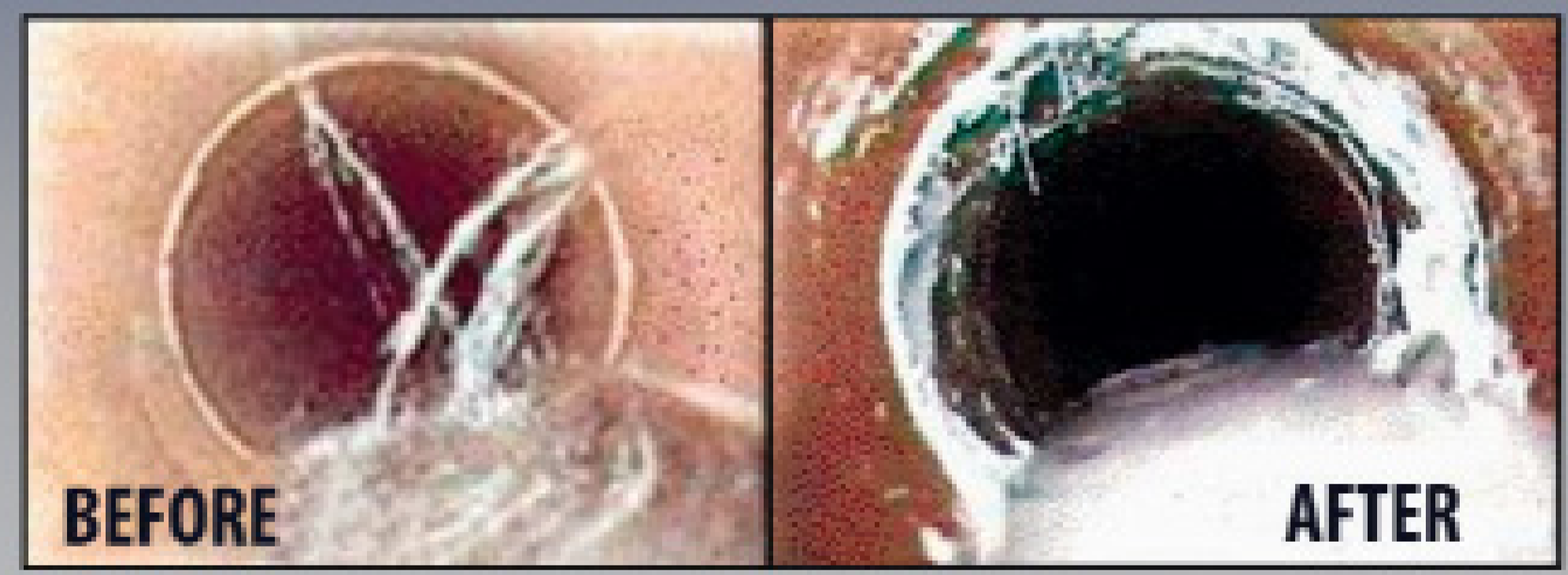
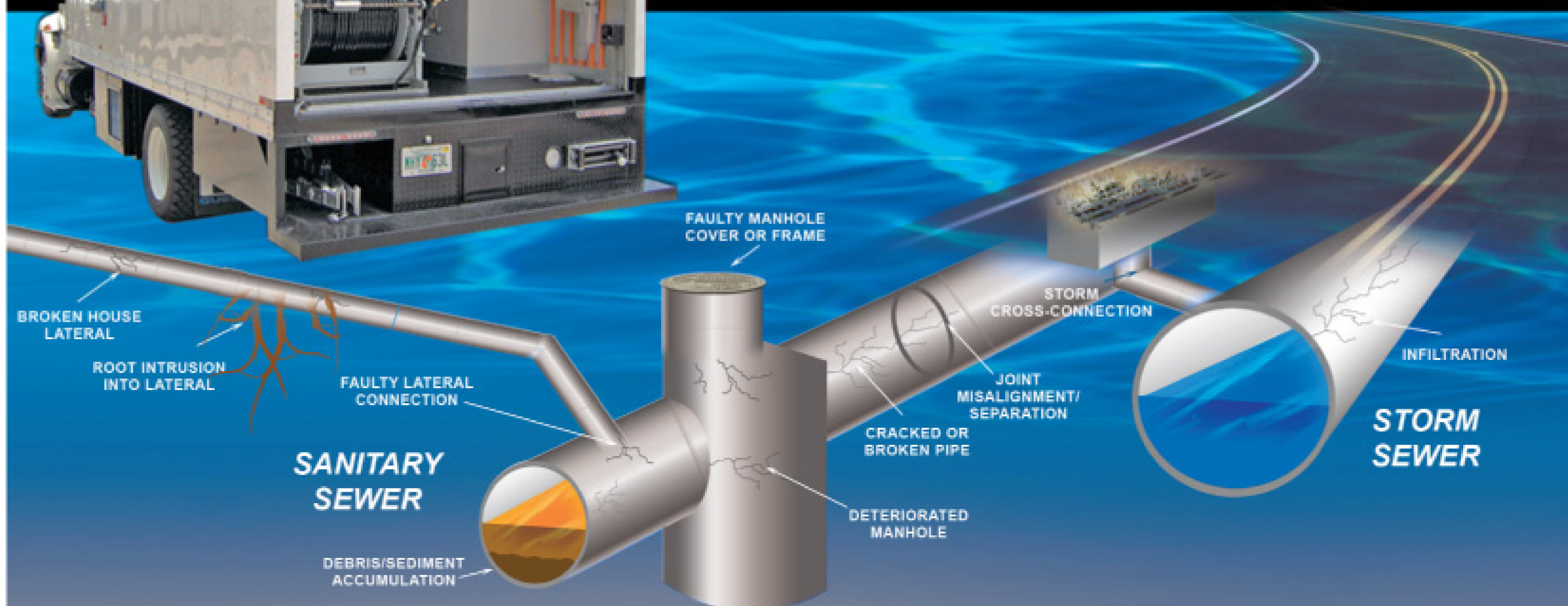
The accounting relationship is much like a partnership in which each party is expected to do his or her share. For example, at tax time, don't hand the accountant a shoebox full of jumbled receipts. Record details of all checks in your check register. Likewise, identify sources of income on your bank deposit slips. The better you maintain records — ideally on computer software — the less time your accountant has to spend on your business, and the lower your fees will be.

It is a good idea to meet with your accountant every month. Review financial statements and go over any problem areas so you know exactly where your money is going. This is when your accountant should go beyond "number crunching" to suggest alternative ways of cutting costs. The accountant also can act as a sounding board for any ideas or questions you have about your finances.

Obviously, not every business needs or can afford the specialized knowledge and skills of an accountant. But it is wise to know what services accountants can offer in case your business should need them in the future. Now is a good time to find an accountant and discuss how accounting services can help your business grow. ■

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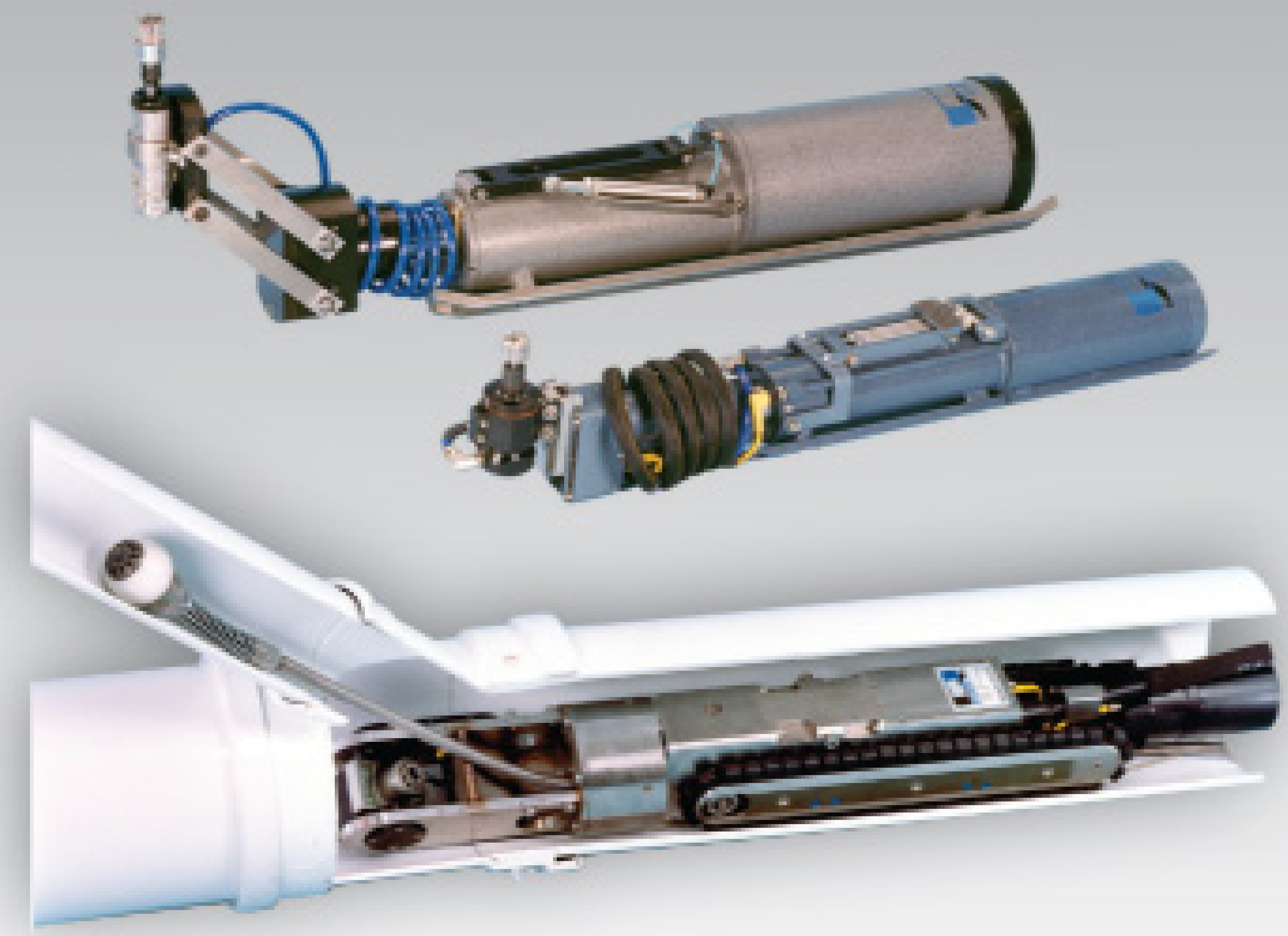
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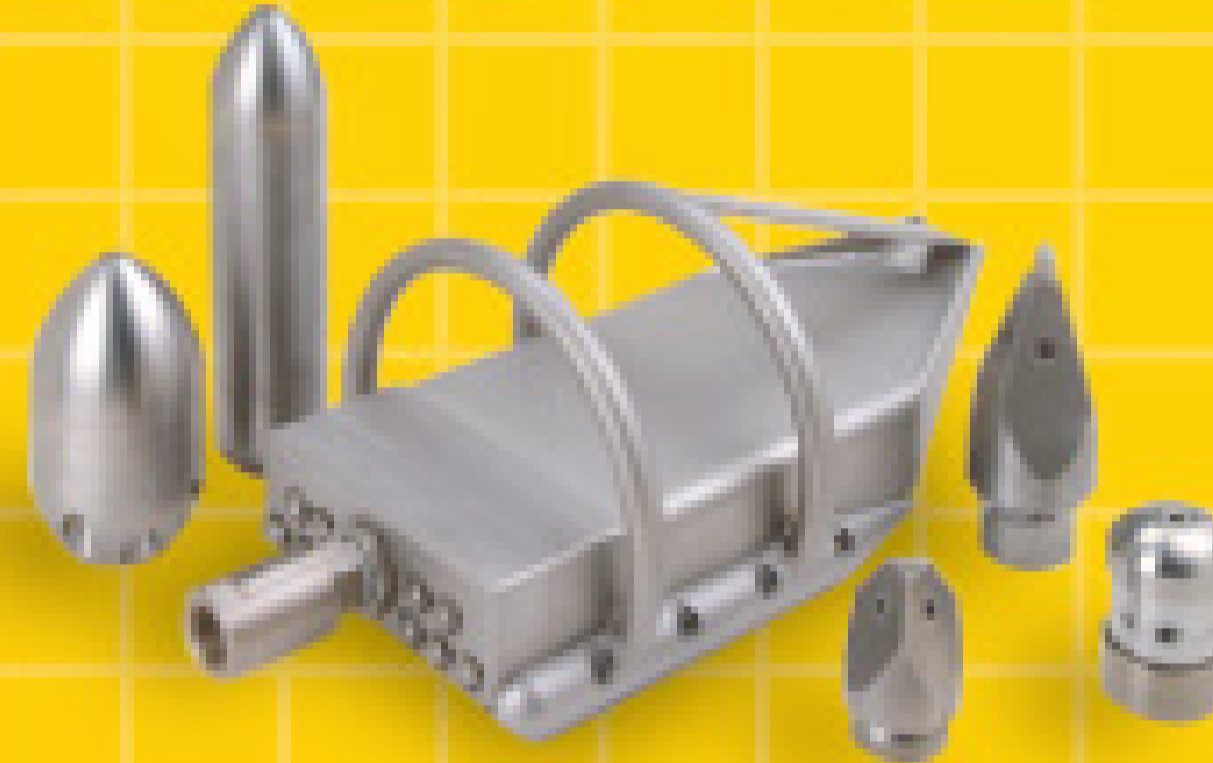
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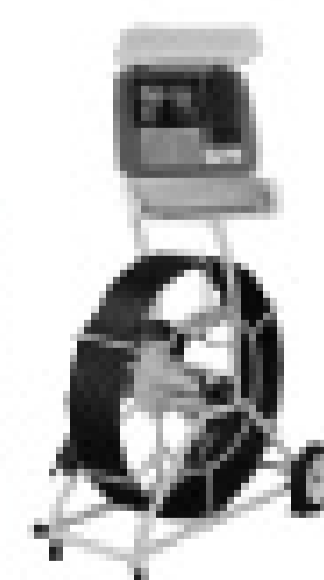
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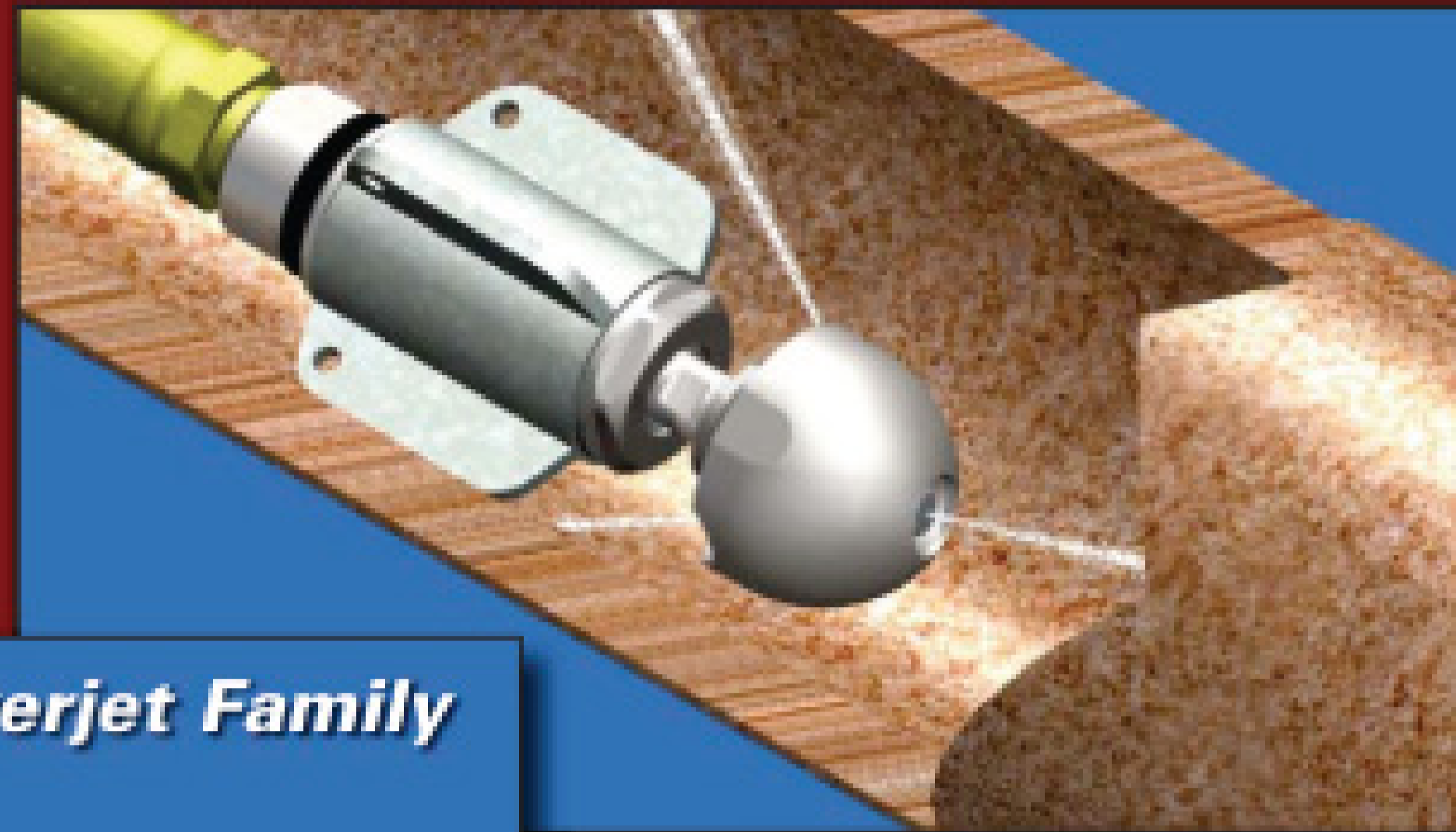
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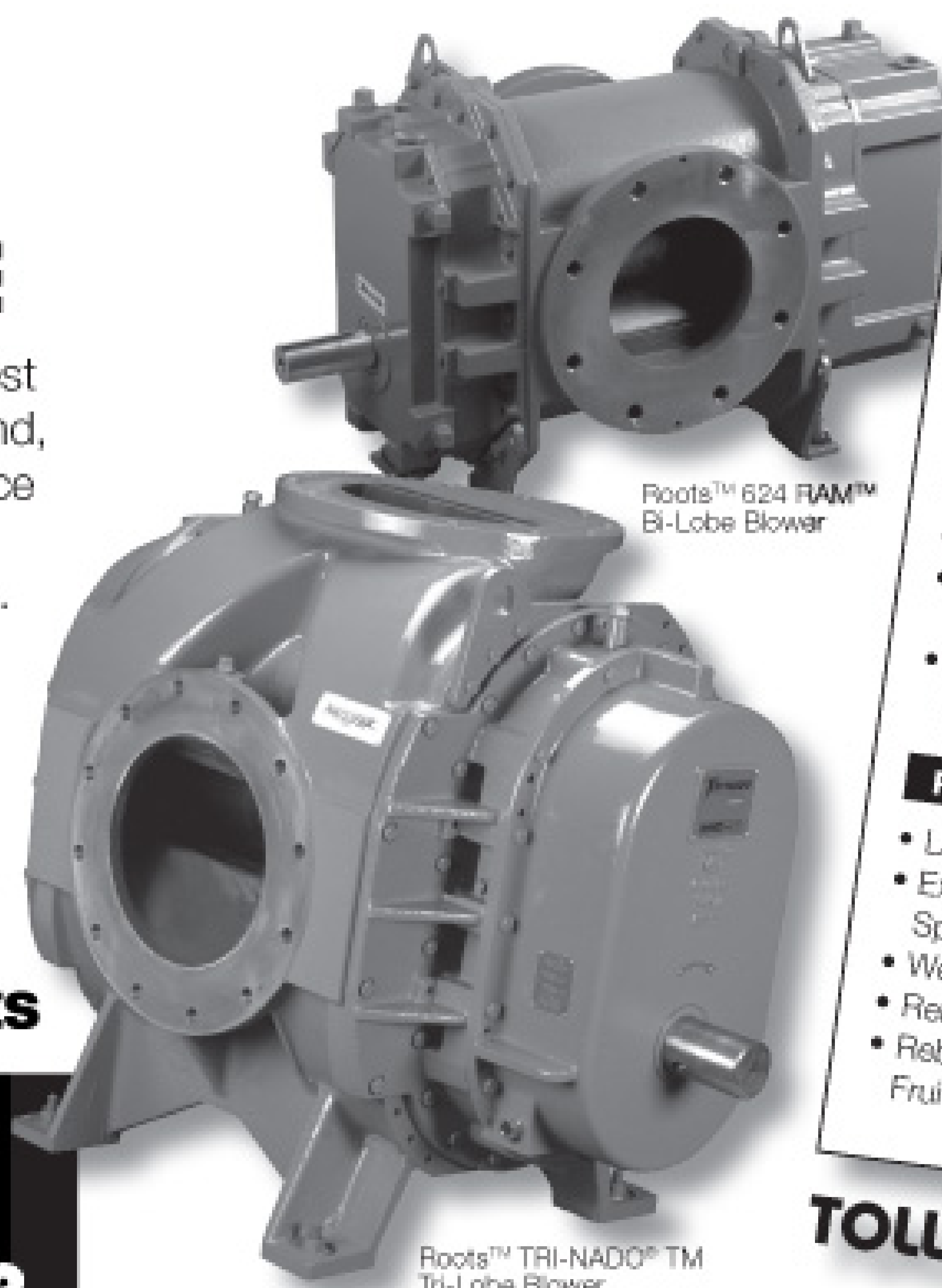


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# Someone Has to Do It

**A-K Underground has found and stuck to a niche in handling difficult, messy cleaning jobs that other contractors walk away from**

By Mary Shafer

Al Kulig takes a straightforward approach to business. He brings the savvy of a sales position to the operational challenges of tough cleaning jobs.

Against conventional wisdom in an industry that encourages diversification, Kulig has found a profitable niche in truly difficult, sometimes disgusting jobs no one else wants.

A-K Underground, the business he owns with his wife, Karen, concentrates on clearing hopelessly clogged sewers, weirs, box culverts and other utilities. His strategy is to stay small and reap big rewards.

#### The accidental cleaner

“Not every job is complex,” says Kulig. “We might get called out to

clean the drain from a retention pond that isn’t draining, or from a contractor whose equipment knocked rocks down into a manhole and blocked it off.” Small, often simple jobs like these opened the door for A-K Underground to enter the cleaning business.

Kulig used to sell sewer cleaners and related equipment. In 1990, he sold an old, Vactor combination truck

to a friend. Five years later, the friend called, wanting to sell the truck back. “He also sold me \$100,000 worth of business, so I left my sales job and took it over. I got a VacAll street sweeper and modified it with a Vactor boom to clean out catch basins.”

This enabled Kulig to tackle more challenging jobs, and he began to get calls for small projects that didn’t interest larger competitors. “A lot of bigger contractors with the powerful equipment stay away from

the small jobs — the ones that take two hours up to one day, rather than two to three months,” Kulig says.

“We thrive on that. We didn’t want to go after the hyper-competitive government contracts, so we positioned ourselves to do smaller jobs well, and do them right. We found a lot of people complaining about jobs left half-done. We’ve never had a callback, unless it’s for additional work. I believe in no callbacks. We don’t leave until the

## PROFILE

### A-K UNDERGROUND TINLEY PARK, ILL.

OWNERS: Al and Karen Kulig  
FOUNDED: 1995  
SERVICE AREA: Metro Chicago  
EMPLOYEES: 6  
SPECIALTIES: Challenging drain, pipe and culvert cleaning jobs



Larry Jeffries (right) hydrojets a sewer line while Chuck Cushing checks on progress. The truck is parked several feet from the structure to allow room for viewing while jetting and vacuuming. (Photos by Dave Kenik)





Larry Jeffries operates the jetter on a combination unit as Chuck Cushing vacuums debris.

**“We didn’t want to go after the hyper-competitive government contracts, so we positioned ourselves to do smaller jobs well, and do them right. We found a lot of people complaining about jobs left half-done. We’ve never had a callback, unless it’s for additional work.”**

**Al Kulig**

job is done. So I don’t schedule other jobs until the one we’re working on is complete.”

#### **Long work days**

It’s a tight juggling act that keeps Kulig hopping about 12 hours a day. “We have two or three crews going, so things stay busy,” he says. “I call ahead of time to schedule, so the customer knows when we’re coming. That keeps everybody happy. No one’s sitting around with a crew full of union workers, waiting for a truck to show. You do that once,

you’ll never get another call.”

A-K doesn’t do residential work. Thirty to 40 percent of its business is commercial and government contracts, and the rest consists of service to developers and apartment complexes.

Kulig’s sales background helps him win business as a contractor. “In sales, you’re always trying to please the customers and get in their heads to see what they need and want,” he says. “Then you try to perform when and where they want, within their budget. I transfer those

## **STAYING SAFE**

Al Kulig demands constant attention to safety from his field crews. They wear hardhats and reflective vests on almost every job. “Sometimes it’s hard to get the guys to use safety glasses because they get dirty so quickly, but we stay after them,” he says. “It’s important.” Kulig himself was the cause of one safety addition.

“When lift stations are particularly deep, they’re so far from the vacuum tube that it can’t reach all the way, so you have to put a guy down there with confined-space entry equipment to shovel debris into the hose,” he says. “That can be dangerous. You really have to work with care, not to get arms or hands too close to the hose.

“We now use a vacuum brake when we’re a long distance from the hose, since one job where I got my arm caught in it. I was trying to shovel some debris into the vacuum tube, and a piece of garbage got caught in front of it. I went to grab it away from the tube, and my arm got sucked into it.

“It took almost two minutes to pull it away, and my arm was blue for two weeks. It was painful and made me nervous, since I’d had open heart surgery before that, and wasn’t supposed to stress my body.”

Blue arm and all, Kulig was soon back to work.



Owner Al Kulig (left) and operator Chuck Cushing discuss progress on an obstructed sewer line.

skills to what we do now.

“I’ve found customers appreciate a problem-solver. I try to come up with a solution, and then I keep that customer. Not only do you need to listen, but you’ve really got to hear what the customer’s not necessarily telling you. What’s the problem, short-term and long-term? How do you fill that void?”

To make sure he finds an answer, Kulig strategizes every job. “I plan with scratch pad and pencil,” he says. “I know what I have for capabilities and equipment, so I listen for what the problem is. I might go to look at the job in advance. I know what needs to be done, but not how long it’ll take. We bid those jobs on a time-and-materials basis.

#### **Ready and willing**

“You have to make sure you bring all the equipment and staff you might need. You don’t want to have your customer waiting for you to

finish the job so they can proceed with their project, and then have to admit you don’t have the right equipment.

“There may just be a dirty pipe or catch basin, but even on these apparently simple cleaning jobs, you might run into something unexpected. We keep three different nozzles on each truck to make sure we’re ready for whatever comes up.

“Like yesterday, a road had sunk in and we needed to televise the pipes underneath. It looked like liability all over the place. We had to put danger signs and cones everywhere just to be able to clean it, but we got it done and no one got hurt. If you take care of that kind of thing, you’ve got a friend, and that’s better than just a customer.”

Sometimes, pleasing a customer is a matter of being creative. “We’ve cleaned elevator shafts, and the hydraulic cylinders sometimes go bad and the hole would fill up with



An A-K Underground technician monitors a video inspection. (Photo courtesy of A-K Underground)

**“I’ve found customers appreciate a problem-solver. I try to come up with a solution, and then I keep that customer. Not only do you need to listen, but you’ve really got to hear what the customer’s not necessarily telling you.”**

**Al Kulig**

water and sand,” Kulig says. “So the workmen could get at those, we had to go down 30 or 40 feet and vacuum that out. I had put a hydroexcavating pump on one truck, so I could jet a line and excavate with the same vehicle. So we used that.

A-K’s equipment includes an Aquatech combination unit with a Robuschi vacuum powered by an FMC pump and jet rodder for large circumference cleaning; a Clean Earth (VacAll) combination truck with a Dresser Roots blower; and a Guzzler vacuum truck converted into a combination unit.

#### Formula for success

Equipment is only half of what it takes to do the job, and Kulig says the other half is in good shape at A-K Underground. “For some reason, I’ve found good help,” he says. “I call the union because those guys have their CDLs, have some apprenticeship in, and have some idea of what’s involved in the work. In Chicago, the money’s good, plus they get a pension and 100 percent

healthcare coverage. That’s a job worth showing up for. I believe it’s the money that attracts the kind of guys you want.”

Kulig can spot winning candidates quickly. “You can tell when you interview, or after a few days on the job, whether a guy’s into it or not,” he says. “Generally speaking, the guy should be over 30 and married or with a family, because he’s stable and wants to work. If he doesn’t work, he’s gone. I tried some 20-year-olds, but they weren’t ready to work. Drugs, alcohol and tardiness were real problems. If they’re like that, they’re not here. It’s too dangerous, and failures cost money.”

Dedicated crews are necessary to handle the tough assignments A-K Underground takes on. On one job, a contractor called the company to clear a 12- by 9- by 90-foot box culvert running beneath I-90, as part of a road improvement contract. The culvert was full of mud from two parallel creeks it spanned.

“We bid it as a per-linear-foot job,” Kulig says. “We had to divert the water with lumber and sandbags

into one culvert while we cleaned the other one. You wouldn’t believe what all was in there. There were tree branches, construction boulders, brush, debris, lots of garbage. We nearly lost a wheelbarrow and two shovels when there was a flash flood from a thunderstorm.

“We thought there was about a foot of mud in it, but it turned out there was actually 18 inches. We thought the job would take two weeks, but it took closer to four.”

#### Value added

Kulig prefers that his crews learn up front, without having to go through that kind of experience, so he stresses getting as much information as possible before work begins.

“My guys are all capable of carrying on an intelligent conversation with a client and figuring out a problem,” he says. “If you’re going to get to the heart of a problem, you’ve got to have dialogue. I tell them, ‘Don’t be afraid of the customer. Go talk to him, find out what he needs. You’re the one who’s going to make it better, so they’re depending on you. You have to appear confident, so they have confidence in you.’”

Kulig starts new hires by spending a couple of weeks on the truck with them, showing them the daily routine. “Once you start the task, the customer doesn’t bug you every minute,” says Kulig. “Soon the guys know what they’re supposed to do: initial assessment, job extent, technical stuff. I take care of the administrative work.”

Kulig keeps his eye on the industry, and has strong opinions about what is coming. “Hydroexcavation is going to get bigger, especially in the big city,” he says. “It helps you work in tight-packed utilities without piercing them the way an excavator

might. It minimizes physical and visible disruption, and it eliminates the time it takes for permits to cut curb. It ends up being a cheaper job, too, because you don’t have to rebuild everything you’ve destroyed.

“If I saw a young guy just getting started today, I’d tell him: No matter what you think you need for startup capital, figure three times that much. Everything has accelerated: insurance costs, vehicle registration, parts and labor, permits and licensing. Everything has gone up, and everyone has raised their prices to a great degree. You play with a lot of bucks, but not much of it sticks to you.”

And yet the success continues to stick to A-K Underground. ■

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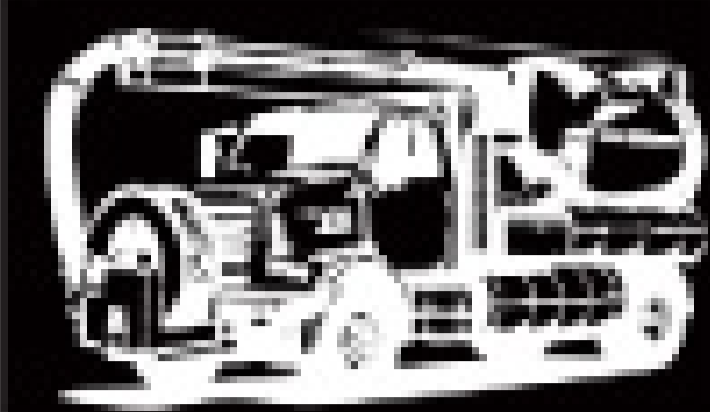
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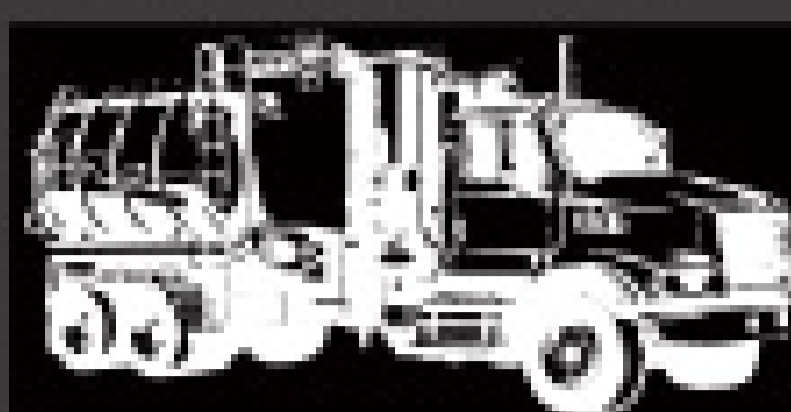
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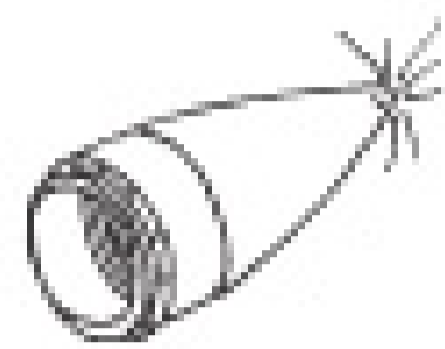
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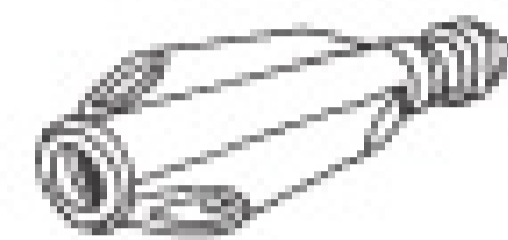
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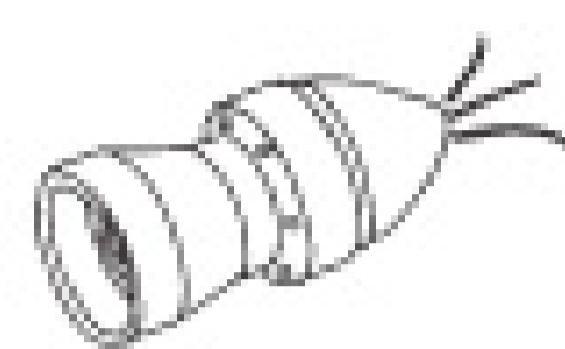
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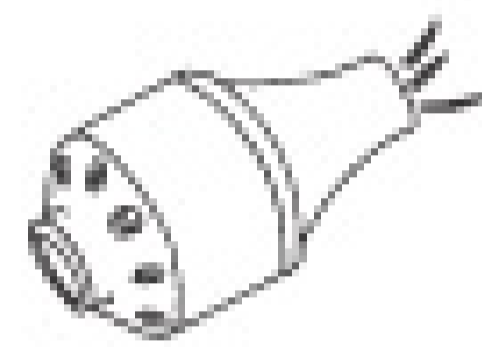
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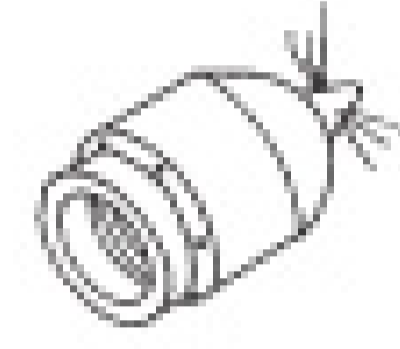


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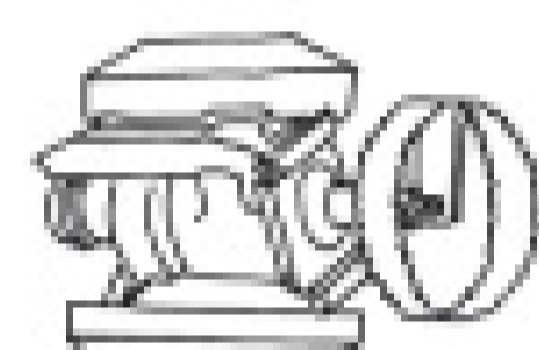


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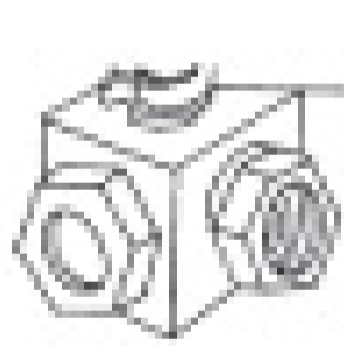
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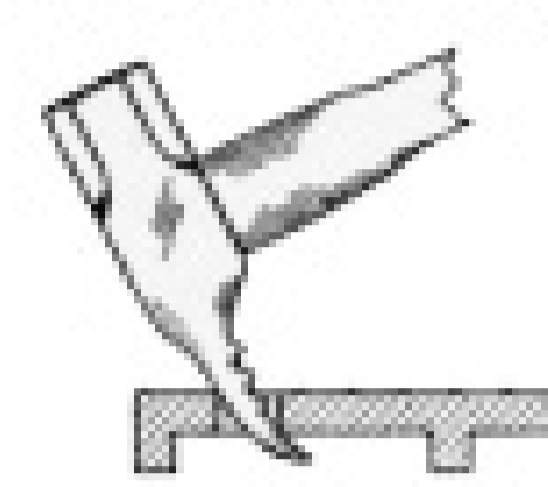
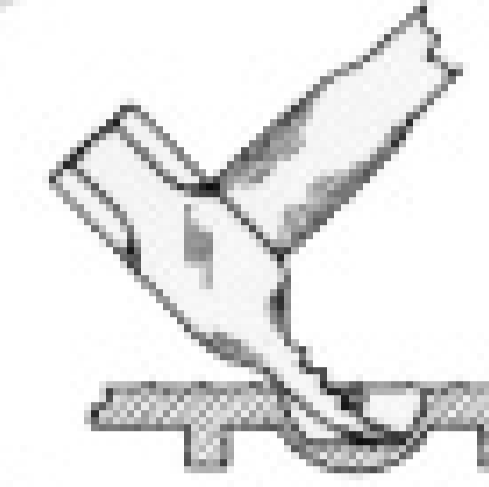
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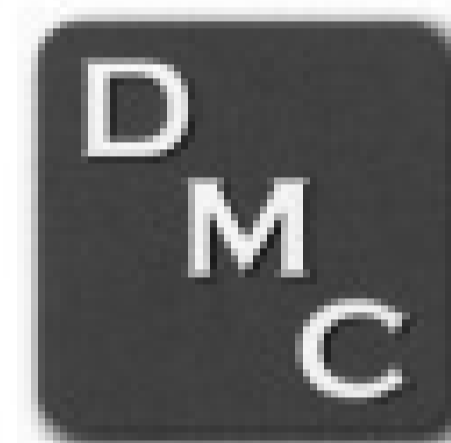


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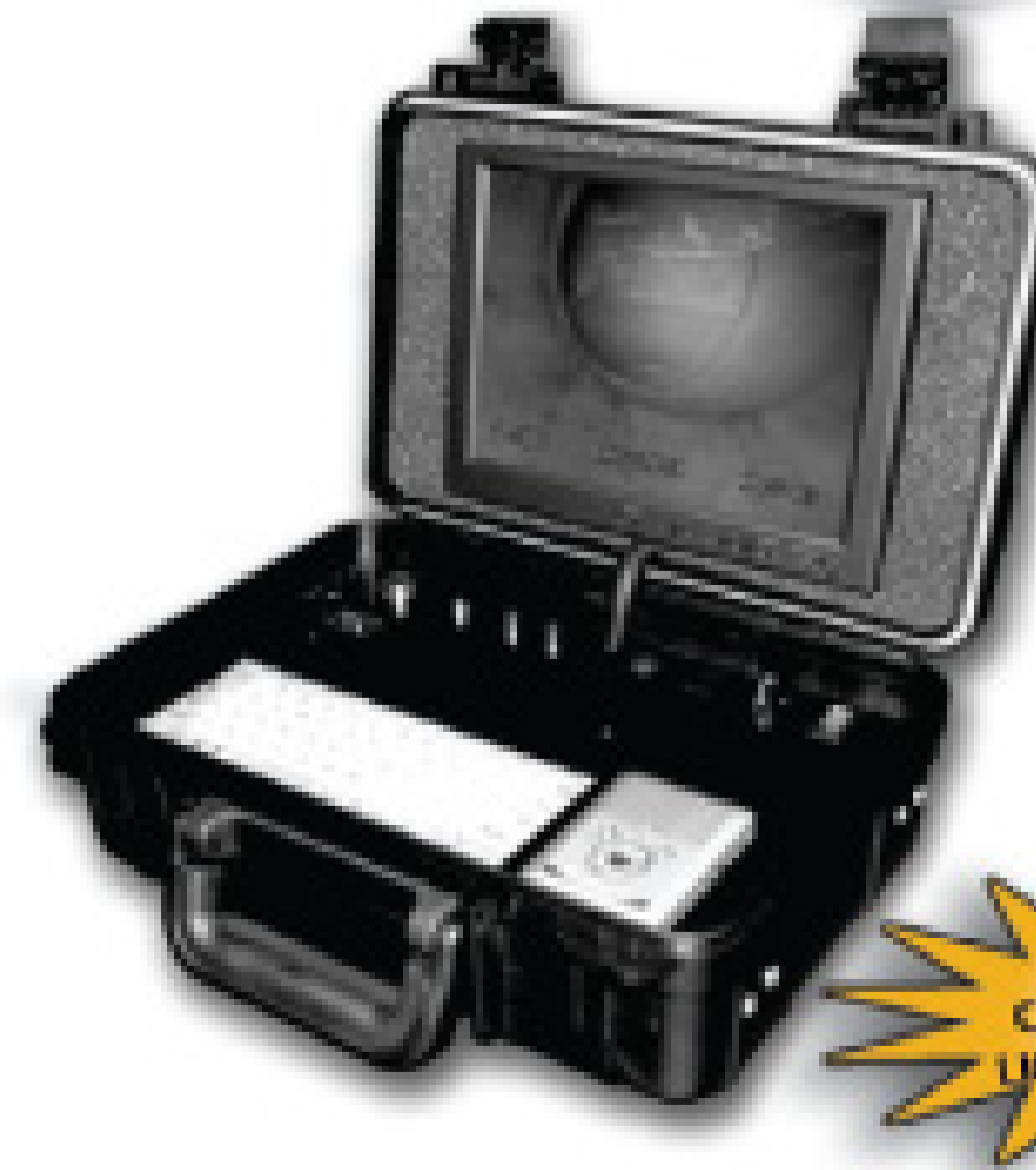
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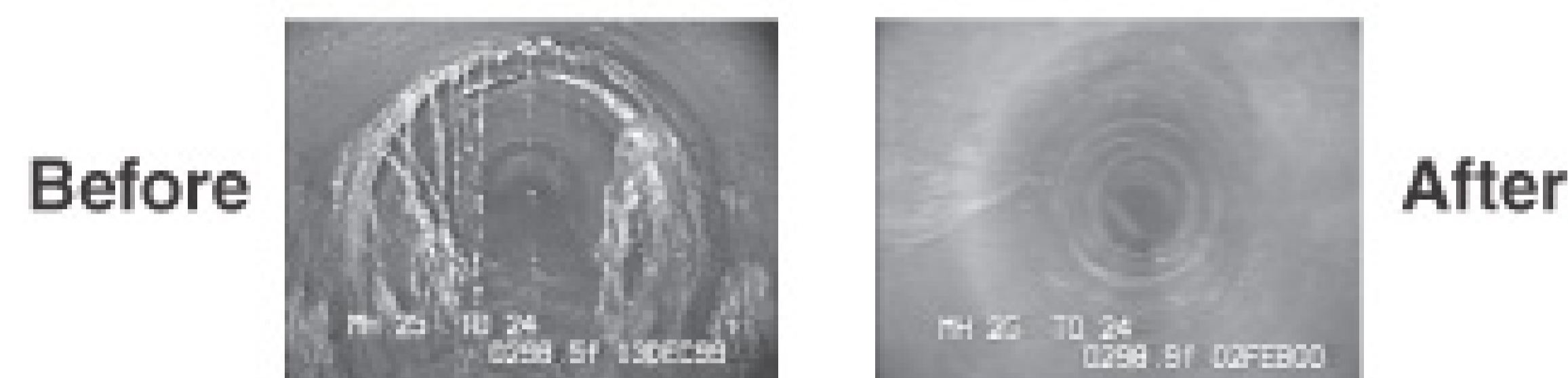
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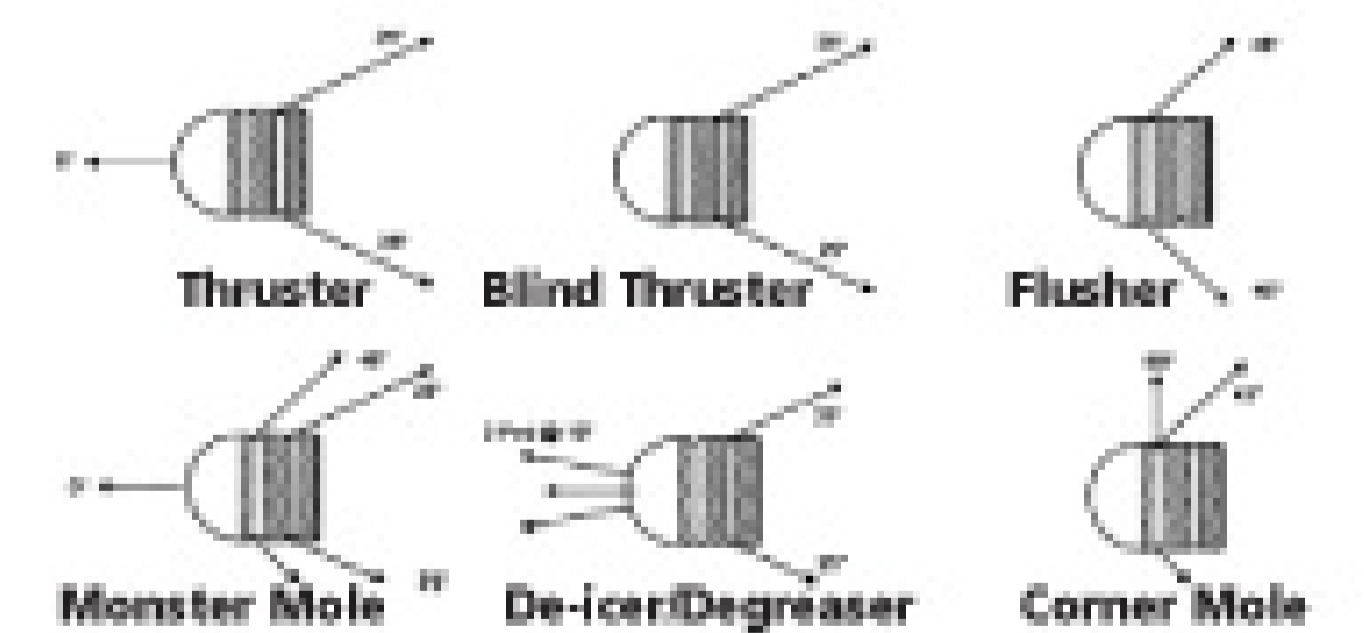
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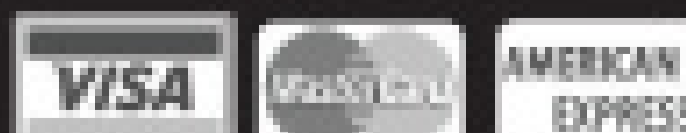
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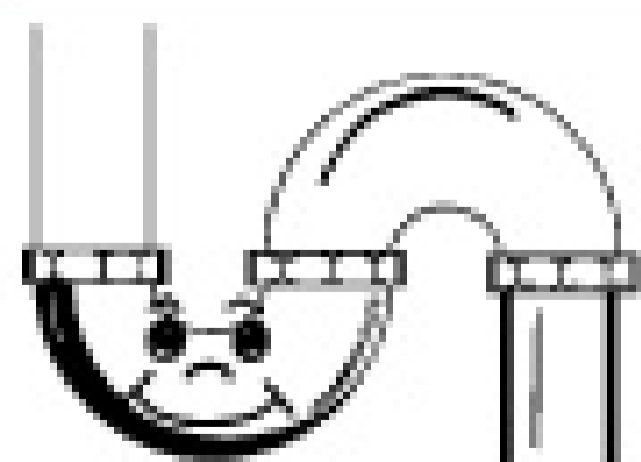
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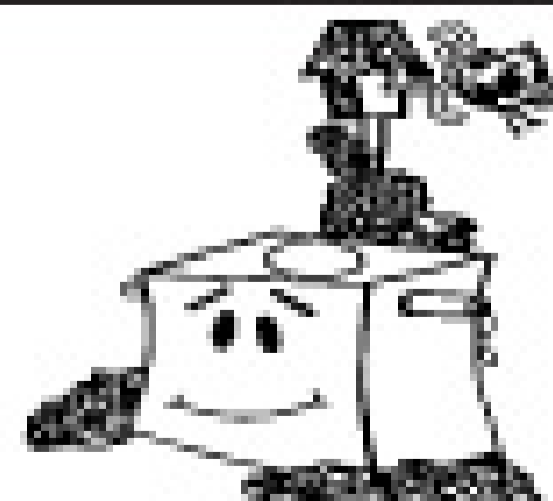
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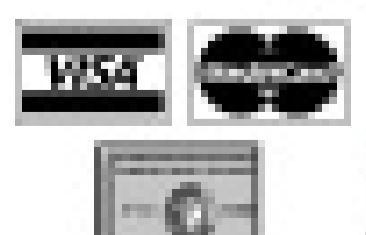
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**See Everything.**

# Sealing the Chimney

Various grouts and sealants help contractors and their customers protect against clear water infiltration in manhole structures

By Scottie Dayton

**M**anholes account for a substantial amount of infiltration to wastewater collection systems, and yet they are relatively cost-effective to remediate.

Industry manufacturers offer numerous products to help seal these structures, whether made of concrete, masonry, or other material. Many of these same products also work well to repair or prevent deterioration in lift stations, wet wells, catch basins, and other structures.

The products listed here represent a wide range of materials and methods of application. To get a fuller picture of the possibilities for cost-effectively sealing manholes, consult the manufacturers' web sites.

## Waterproof protection

**Brushbond** two-component acrylic polymer-modified cement-based coating waterproofs and fills holes, cracks, and imperfections, permanently sealing aged brick, block, cast-in-place, and precast manholes. It protects walls from positive and negative hydrostatic pressure. The coating comes in pre-measured units, applies easily with a smooth consistency, and bonds to porous and nonporous surfaces. **PrimeLine Products Inc.:** 407/772-8131; [www.primelineproducts.com](http://www.primelineproducts.com).

## Injected sealer

**Prime-Flex** polyurethane chemical grouts are designed for manhole, sewer pipe, and lateral



Prime-Flex polyurethane chemical grouts from Prime Resins Inc.

grouting. The low-viscosity liquid resins are usually injected under pressure into or near leaks. Once the resin contacts water, it forms an expansive closed-cell foam or a gel depending on the material

formulation. The foam can be flexible and resilient (hydrophilic) or rigid, but the cell structure crushes when compressed (hydrophobic). **Prime Resins Inc.:** 800/321-7212; [www.primeresins.com](http://www.primeresins.com).

## Watertight joints

**Conseal CS-102** butyl rubber sealant self-seals joints in manholes, concrete vaults and pipes, box culverts, and other precast concrete structures. Providing permanently flexible, watertight joints, the material is workable in temperatures from 30 to 120 degrees, and has a service temperature range from -30 to 200 degrees F. A high chemical and mechanical bond occurs when the sealant is applied to clean, dry surfaces, and the joints will not shrink, harden, or oxidize with age. Priming is normally unnecessary. **Concrete Sealants Inc.:** 800/332-7325; [www.conseal.com](http://www.conseal.com).

## Sealing chimneys

**Internal Manhole Chimney Seal** prevents excess inflow/infiltration in manholes and stops pavement settling around manhole covers and catch basins. The rubber seals conform to the physical requirements of ASTM C-923, with a minimum 3/16-inch thickness for durability and resistance to puncturing and tearing.

The standard 8-inch internal seal is double-pleated, and the 10-inch-wide internal seal is triple pleated. Extra-wide internal seals have four pleats to allow for a minimum 2-inch vertical and 1/2-inch horizontal movement before stretching the rubber. The rubber's flexibility allows one size to fit a frame/chimney diameter range of more than 20 percent. The seals have a tensile strength of 1,500 psi and are highly chemical resistant. **Cretex Specialty Products:** 800/345-3764; [www.cretexseals.com](http://www.cretexseals.com).

## Hydrophilic polymer

**AV-202 Multigrout** is a polymer solution that reacts with water to form a strong polyurethane film, gel, or foam to prevent water infiltration into manholes, sub-grade structures, and pipes. The nonflammable product handles

AV-202 Multigrout polymer solution from Avanti International.



heavy or light flow conditions, and cures under water. **Avanti International:** 800/877-2570; [www.avantigrout.com](http://www.avantigrout.com).

## CIP for chimneys

The **CIPMN Chimney Works** system has a one-size-fits-all stretchable felt liner with sealed seams and polyurethane coating. Delivered in pre-measured kits, the 100-percent solids, silicate-based, VOC-free resin produces strong bonds with no shrinkage. The liner, vacuum impregnated and cured under pressure, can be installed with minimal equipment and no manhole entry. It resists damage from freezing and thawing, leaves a smooth interior, and accommodates odd shapes. **LMK Enterprises Inc.:** 815/433-1275; [www.performanceliner.com](http://www.performanceliner.com).

## Stopping leaks

**Parson Hydro Grout** is a nonhazardous, low-viscosity hydrophobic polyurethane grout. Mixed with predetermined amounts of Parson Grout Accelerator, it exhibits controlled reaction times from 30 seconds to 3 minutes. The grout cures to a chemically resistant closed-cell foam that stops medium- to high-volume active leaks through hairline cracks in manholes, pump stations, and other structures. **Parson Environmental Products Inc.:** 800/356-9023; [www.parsonenvironmental.com](http://www.parsonenvironmental.com).

## Flow containment

The **RELINER Inside Drop Bowl** is a compact, simple, cost-effective solution for containing the flow of inside drops in manholes. The low-profile bowl attaches with stainless steel expansion bolts and special fully adjustable stainless steel pipe clamping supports to the manhole wall. Its design enables full access and inspection from above without reducing access to areas below.

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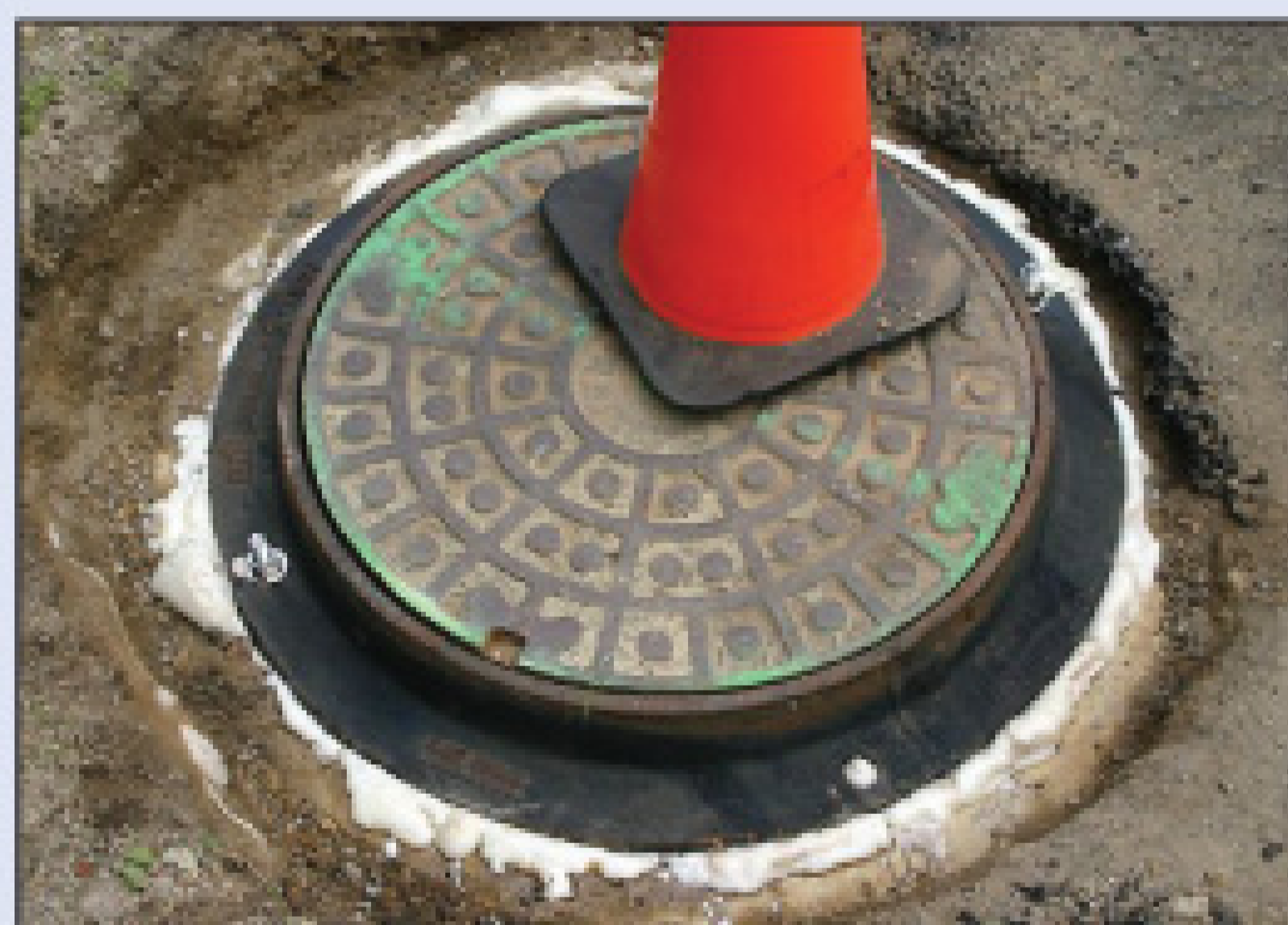
hydrogen sulfide emissions. Service is from the street. Applications include new service installations, micro-tunneled services, wet wells, and existing and failed outside drops. Several standard and custom sizes are available. **RELINER/Duran Inc.:** 800/508-6001; [www.reliner.com](http://www.reliner.com).

### One-component sealer

**QM-1s Restore** is a factory-blended, high-strength, cement-based polypropylene fiber reinforced and shrinkage-compensated mortar enhanced with a mono-crystalline quartz aggregate (Granusil). Designed to repair concrete and masonry structures, the product's formulation allows for a monolithic, one-pass application up to three inches thick by low-pressure spraying. Recommended for vertical and overhead repairs to sewer manholes, pipe, tunnels, and other facilities, the one-component blend provides uniform results. It has high early and ultimate compressive flexural and bond strengths, resists sulfate attack, and has extremely low permeability. **Quadex Inc.:** 888/831-1650; [www.quadexonline.com](http://www.quadexonline.com).

### Versatile sealer

**XSeal** is a single-component, closed-cell, hydrophobic polyurethane that is applied during new construction and rehabilitation for assembling chambers, manhole sections, and vaults. It also is used for attaching grade/adjusting rings and manhole frames to the concrete cone. The



XSeal hydrophobic polyurethane from SealGuard Inc.

product can bond concrete, metals, and plastics, expanding to fill voids and seal all substrates. **SealGuard Inc.:** 866/625-4550; [www.sealguardinc.com](http://www.sealguardinc.com).

### Epoxy sealant

**Perma-Poxy** is a rapid-curing, medium-viscosity modified epoxy resin that repairs manholes, sumps, wet wells, and other structures. A single pass by spray, brush, roller, or trowel creates a 40- to 250-mil thick film that cures reliably even at low temperatures and in moisture. A hard surface typically develops in four hours or less. The resin is highly chemical resistant to acids, caustics, gasoline, and other hydrocarbons. **Perma-Liner Industries Inc.:** 727/507-9749; [www.perma-liner.com](http://www.perma-liner.com).

### Rotary-applied sealer

**SewerGard No. 210RS** is a rotary spray-applied material that protects concrete, steel, and new or rehabilitated substrates from chemical attack and physical abuse. When cured, the material creates an impermeable, high-strength, corrosion-resistant lining for manholes, lift stations, and similar facilities that are subject to infiltration and attack from hydrogen sulfide and acid. **Sauereisen Inc.:** 412/963-0303; [www.sauereisen.com](http://www.sauereisen.com).

### Layered resins

The **SpectraShield** liner is a 100-percent solids, VOC-free system engineered to seal manholes, wet wells, and other structures using multiple layers of polymer resins to impart structural strength, stop groundwater intrusion, restore structural profiles, and bar environmental penetration. Cured-in-place installation causes minimal disruption. The manufacturer states that a 7-foot-deep manhole can be lined in less than one hour. **SpectraShield Liner Systems:** 904/268-4951; [www.spectrashield.com](http://www.spectrashield.com).

### Fast-curing spray

**SprayWall** is a durable, spray-applied, VOC-free polyurethane coating that provides structural enhancement and chemical resistance in under-

ground structures and manholes. The product's formula enables curing to begin in less than 30 seconds, and the structure can be returned to service moments later. The material has a 50-year design life, retaining 70 percent of its original flex modulus. **Sprayroq Inc.:** 205/957-0020; [www.sprayroq.com](http://www.sprayroq.com).

### Stops microbe activity

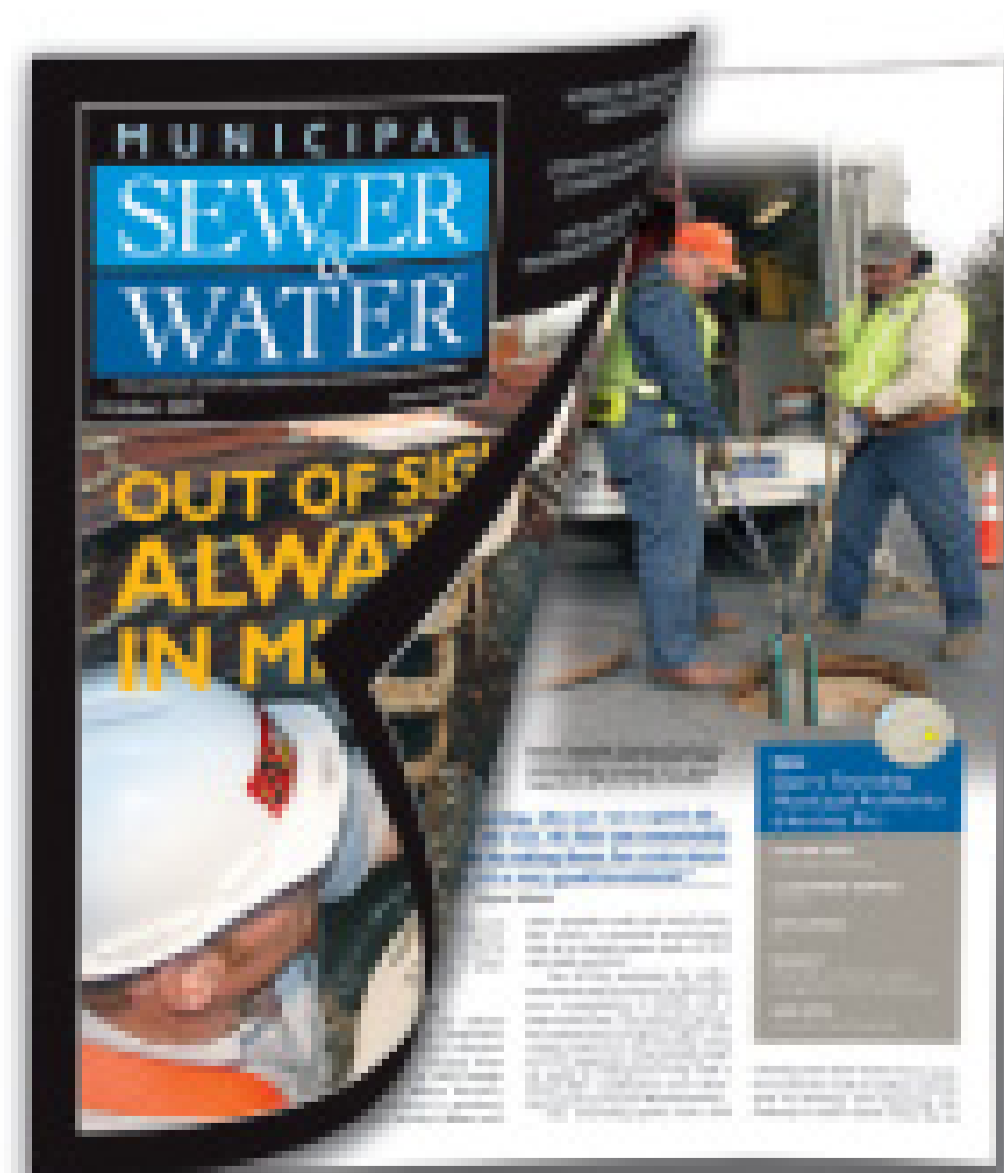
**Strong-Seal High Performance Mix** is a pure-fused calcium aluminate mortar that protects against microbiological-induced corrosion, but also stops infiltration and restores structural integrity. Tests document that the material protects cement wastewater structures by limiting bacterial activity and thus regulating biosulfuric acid production. **The Strong Company Inc.:** 800/982-8009; [www.strongseal.com](http://www.strongseal.com).



Hydro Active Cut hydrophobic polyurethane from DeNeeff Construction Chemicals.

### Hydrophobic grout

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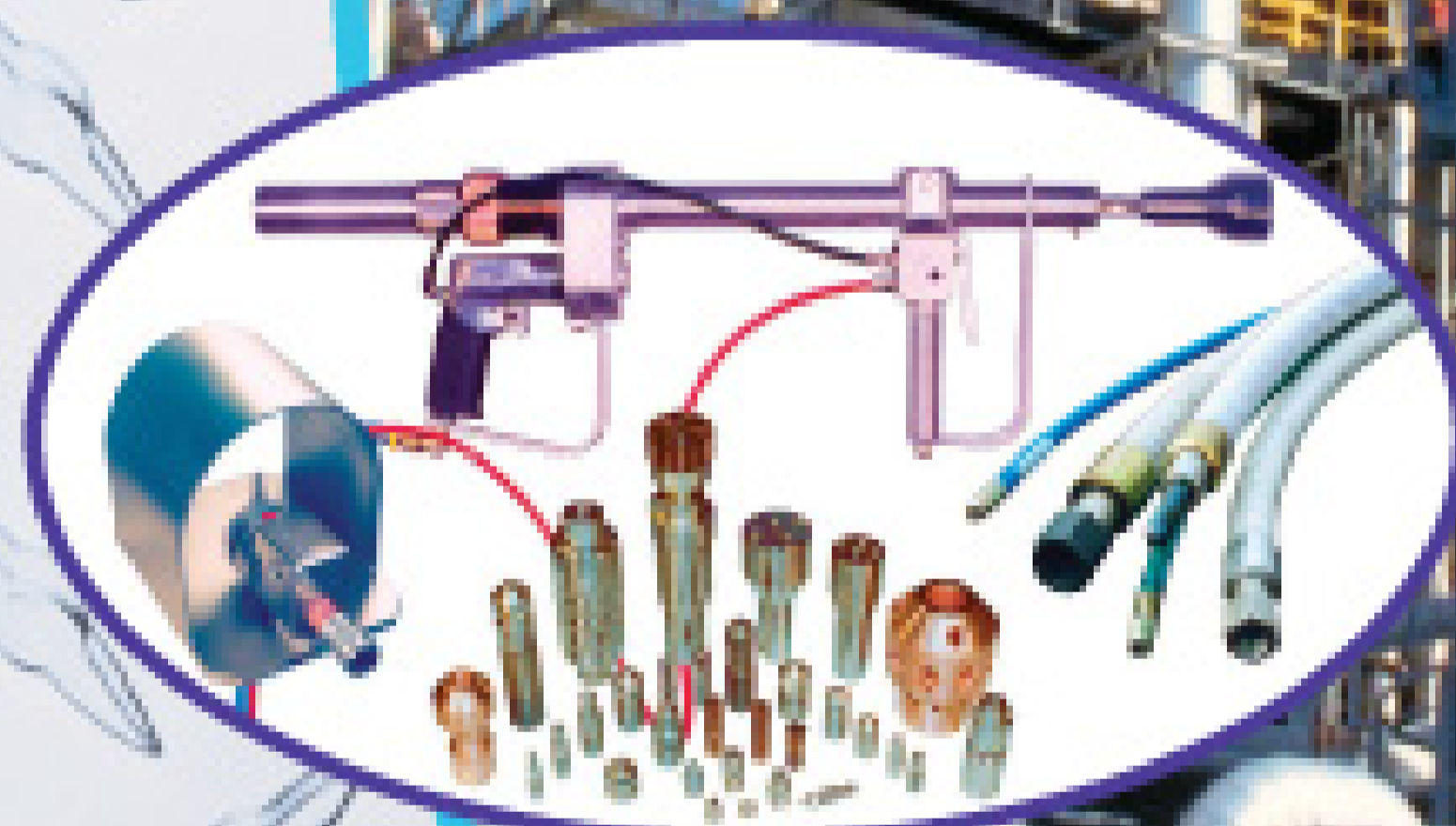
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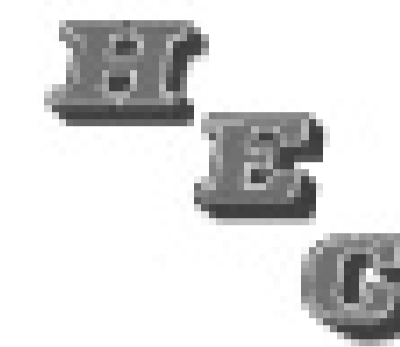
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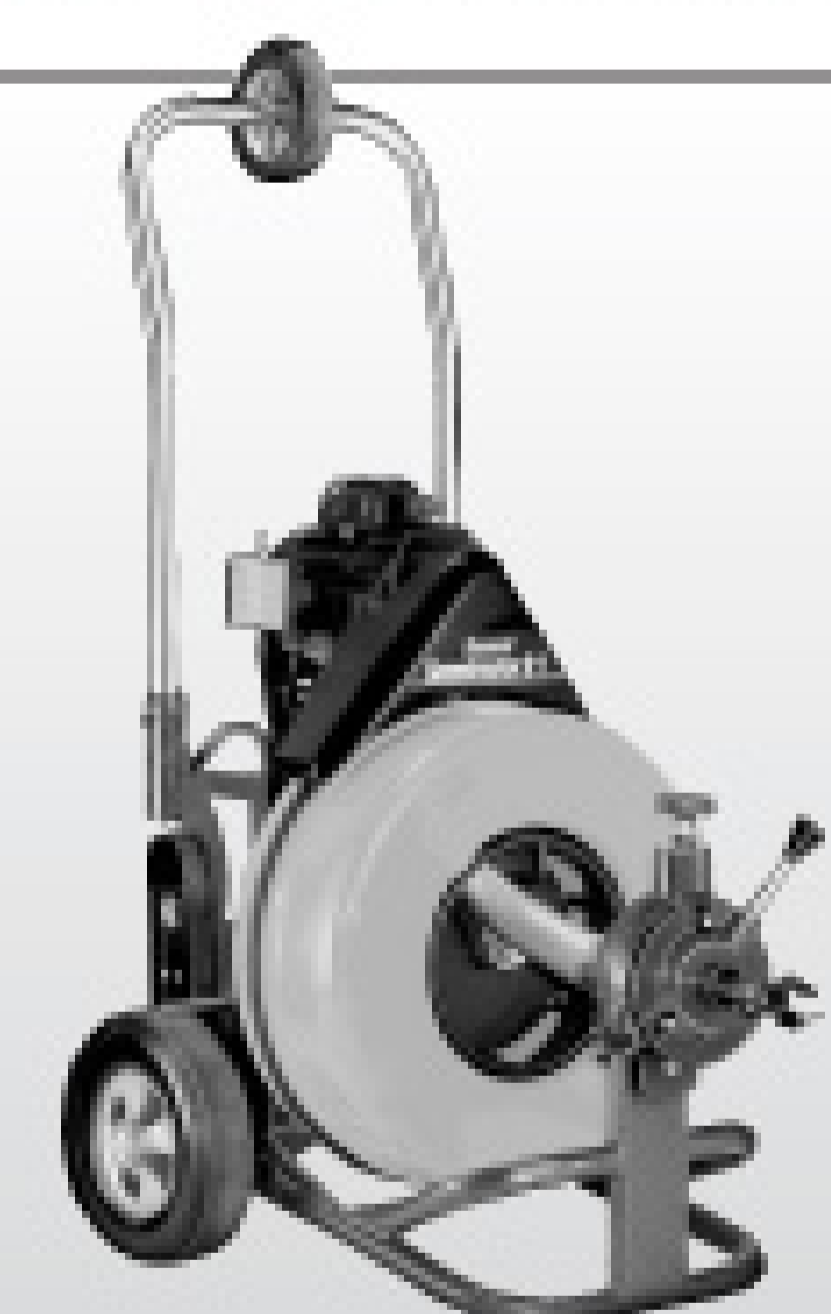


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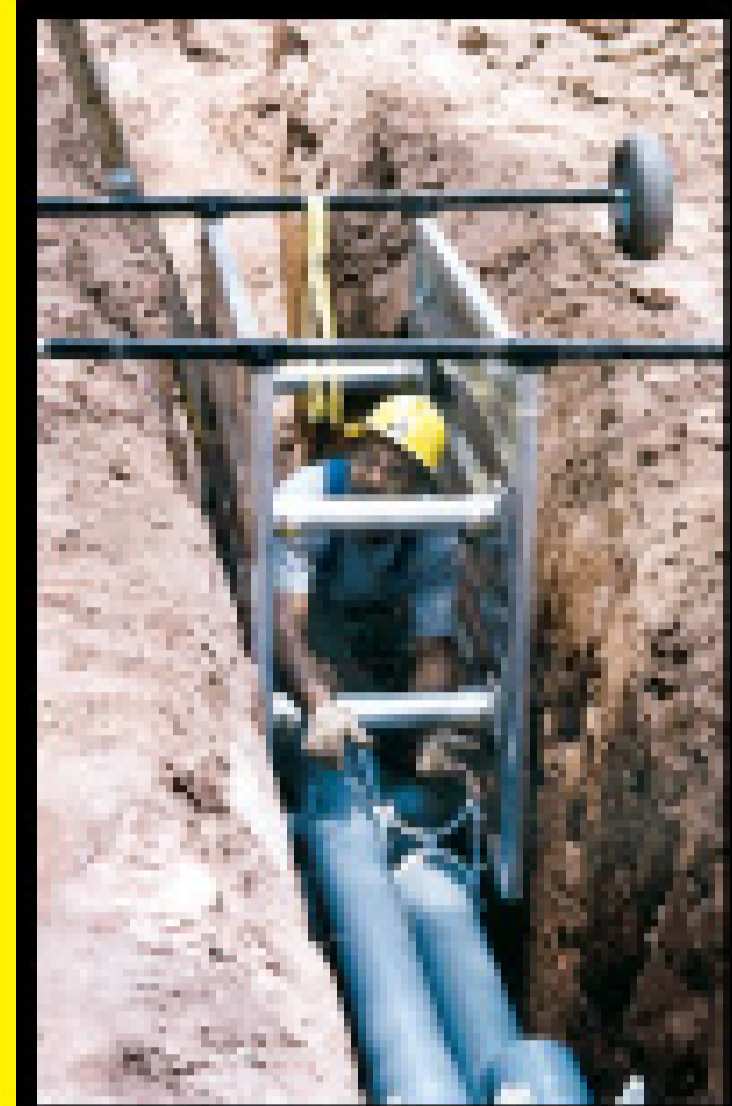
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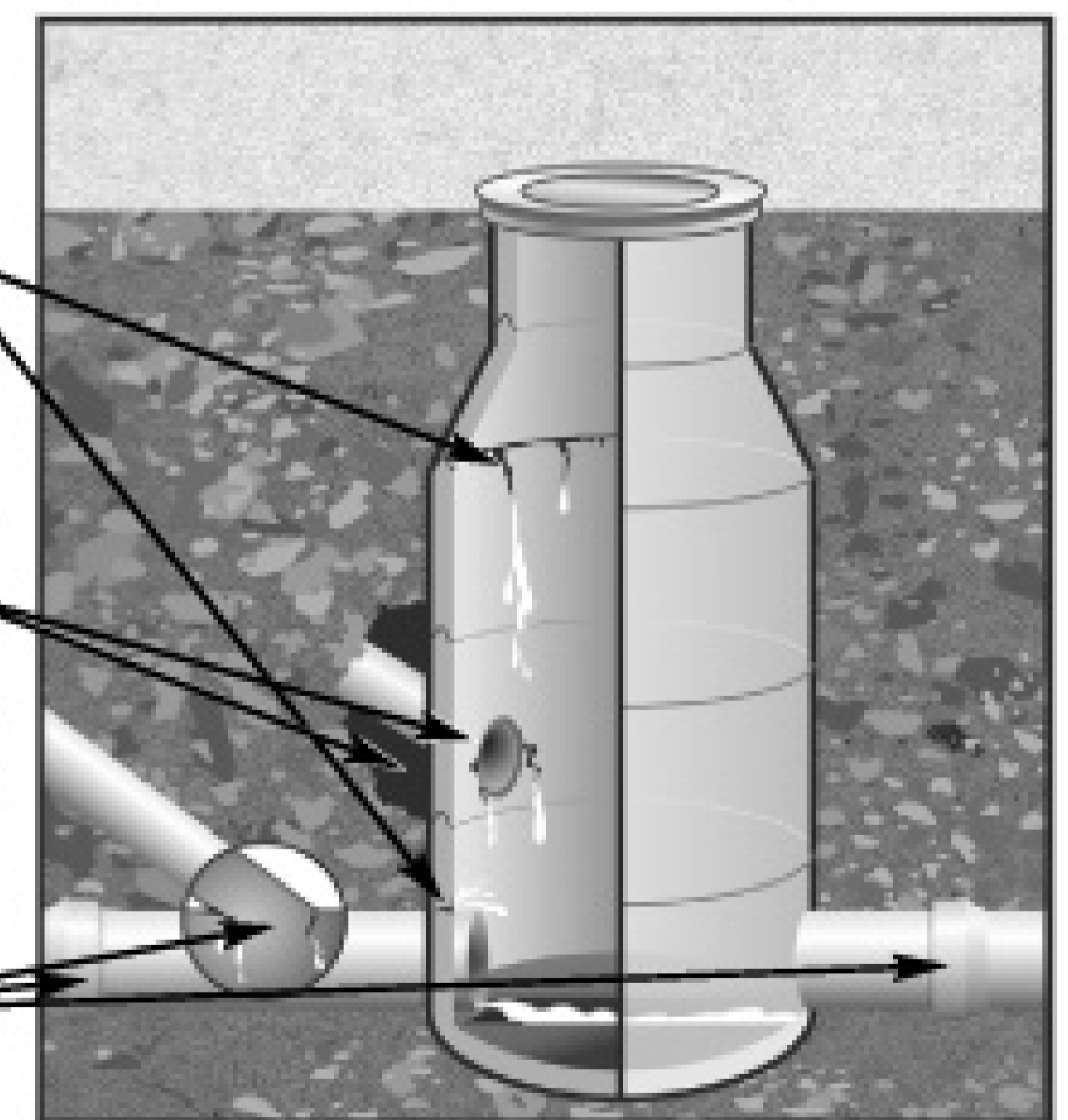
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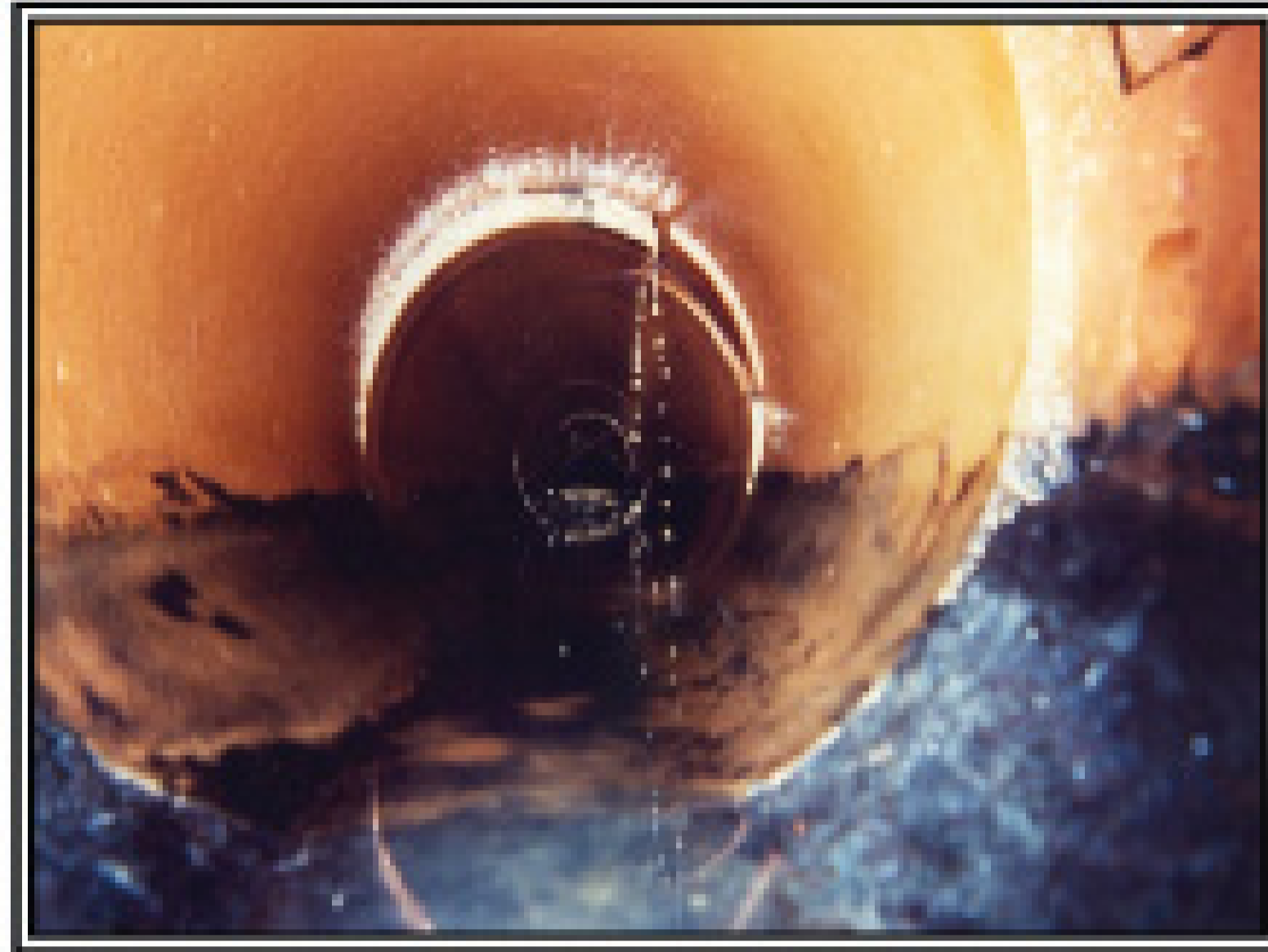
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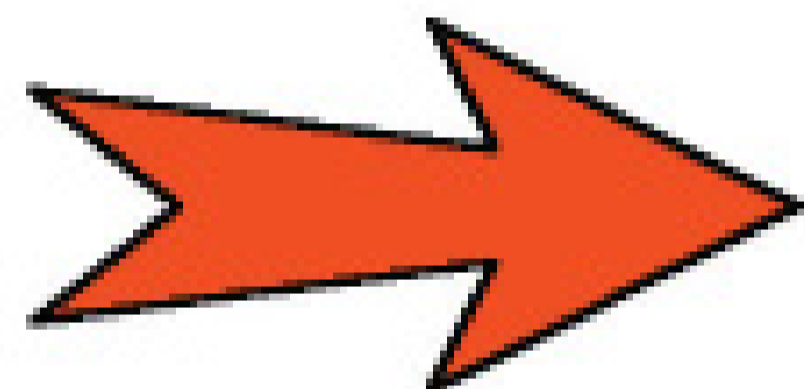
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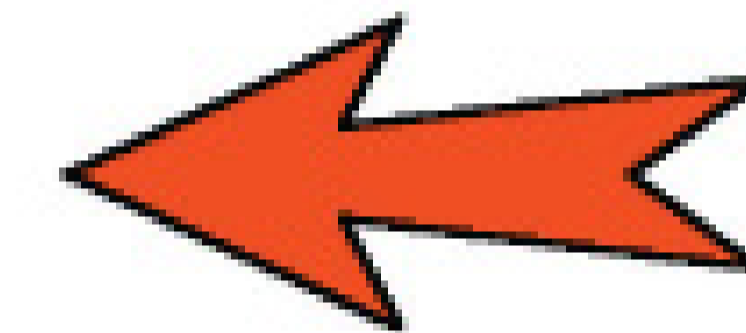
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The image is a composite. The background is a scenic landscape of a mountain range with snow-capped peaks, a dense forest of evergreen trees, and a clear, blue lake that reflects the surrounding scenery. In the bottom right foreground, a portion of a robotic crawler is visible, featuring two large, treaded black wheels with red hubs and a silver metal frame. The overall color palette is dominated by blues, greens, and greys, with the red of the robot's wheels providing a focal point.



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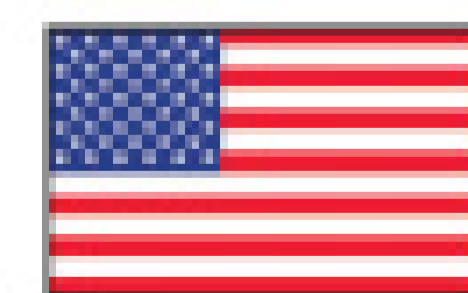
Aries high resolution camera module used in conjunction with the 432:1 zoom ratio and High intensity detachable LED lighthead, allows you see details that other cameras miss. The wireless operation makes the system extremely versatile and allows you to take it anywhere and transmit the video anywhere. When this system is used with the optional media case with 10" day light readable screen, it allows the user to inspect any pipe anywhere you can get to. For more versatility virtually any reporting software can be added to greater enhance the systems capabilities.



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Greg Thomson of Darr's Cleaning Inc. monitors the progress of a waterjet hose as it is fed into a sewer line in North Baltimore, Ohio. The company's Vactor truck can deliver up to 80 gpm at 2,500 psi. (Photos by Luke Wark)

# Back On Top

**An Ohio contractor weathers personal tragedy, an economic slowdown and a limited customer base by diversifying offerings and courting a wider range of clients**

By Peter Kenter

*Randall Robert Darr (Randy) November 10, 1965 to January 24, 1998.*

That inscription appears on the home page of Darr's Cleaning Inc. of Clyde, Ohio, beneath the names of the owners, Bernie and Roger Darr.

Bernie and Roger lost their brother Randy to a traffic accident, the first in a string of hardships that almost sidelined the business as it embarked on an ambitious expansion plan. There was no insurance policy on Randy's life to help his brothers buy out his share of the business.

There were also loan payments for new equipment, and then the complication of an economic downturn that affected some of the firm's largest customers. Bernie and Roger Darr succeeded with a strategy of continued diversification and growth, offering more to their customers instead of cutting back.

Today, Darr's Cleaning has eight employees, about \$1 million in revenue, and a diverse portfolio of

services, including sewer jetting, CCTV inspection, trenchless pipe repair, and vacuuming.

**Always a family**

The company began a trajectory of slow but steady growth when it was founded in 1960 by Harold Darr as a furnace cleaning service. Harold sidestepped a decline in the furnace business by diversifying in 1967 to offer septic tank cleaning and

portable restroom rentals. The initial fleet consisted of a vacuum truck, a van, and a cable machine.

In 1972, the company took on a partner, becoming Darr & Konst. Four years later, the partnership split into two business entities. The newly formed Konst Cleaning took

on the furnace cleaning and portable restroom businesses, while Darr's concentrated on pipe cleaning and septic tank services.

After the split, Harold Darr's three sons gradually became more involved in the business. Bernie came to work for the company in

P R O F I L E	
<b>DARR'S CLEANING INC. CLYDE, OHIO</b>	
OWNERS:	Bernie and Roger Darr
FOUNDED:	1960
EMPLOYEES:	8
ANNUAL REVENUE:	Approximately \$1 million
MARKET AREA:	Northwest Ohio
SPECIALTIES:	Sewer jetting, CCTV inspection, trenchless repair, vacuuming
AFFILIATIONS:	National Association of Wastewater Transporters
WEB SITE:	www.darrscleaning.com



1976 and Roger 1980. Both bought shares in 1985. Younger brother Randy became an employee in 1987 and a partner in 1988. The trio bought out their father's final 25 percent share in 1991. Harold stayed on as an employee and still pumps septic tanks up to 30 hours a week at age 76.

Clyde is a small town near Lake Erie, about 50 miles east of Toledo

**“With only 6,700 people, Clyde doesn’t have a large enough population to support us. I think people 50 miles away have more of an idea of what we do than people who live five miles down the road. Ohio has 88 counties, and we’ve provided services in 50 of them.”**

**Bernie Darr**

and 80 miles west of Cleveland. The company has direct access to U.S. Route 20, a four-lane highway, and a 10-minute drive connects it with Interstate 80/90, allowing Darr’s to service both cities. The company does work as far from home as the state capital, Columbus, about 100 miles away.

“With only 6,700 people, Clyde doesn’t have a large enough population to support us,” says Bernie Darr. “I think people 50 miles away have more of an idea of what we do than people who live five miles down the road. Ohio has 88 counties, and we’ve provided services in 50 of them.”

**Broadening horizons**

As the company served clients over a wider range, it built its fleet size and offered more services. Local competitors collectively provide the same services, but Darr’s prides itself on being a one-stop shop. “Nobody in the vicinity does everything we do,” he says.

Besides the Vactor unit and septic tank pumping equipment, Darr’s Cleaning owns a trailer jetter from US Jetting, truck-mounted jetters from Sewer Equipment Company of America and Hi-Vac Corporation/Aquatech Products, and a CCTV truck with inspection equipment from Aries Industries Inc.

The company’s trenchless sewer line repair equipment includes a trailer-mounted epoxy pipe lining system from Nu Flow America for repair of pipes from four to six inches, and a point repair technology from Infrastructure Repair Systems for lengths up to five feet and pipe diameters to 21 inches.

But the expansion coincided with family tragedy. While driving



Technician Scott Cheek (left) and company founder Harold Darr watch the monitor of an Insight Vision camera as they search for debris in a customer’s clogged drainage pipe in Bellevue, Ohio.

**DIGITAL REVOLUTION**

Among the more popular services offered by Darr’s Cleaning is CCTV sewer inspection. The company uses flexidata pipe survey software from PipeLogix to provide clients with a video record of each inspection. The firm retains a backup copy in the company archives.

“After years of offering the service, we had more than 700 VHS tapes of CCTV inspections collected on a huge rack of shelves,” says Bernie Darr, a partner in the company. “It was taking up a lot of space.” To help conserve space and to make record keeping easier, the company digitized the full video archive to DVDs. “The entire rack has been reduced to a single shelf,” says Darr.

Some clients still prefer to receive their records on VHS tape. The company is pleased to oblige, but keeps its own backup on DVD or CD-ROM. Reports are also presented to clients in digital format; hard copies are delivered on request.

“It’s all digital now,” says Darr. “We won’t be generating file cabinets full of reports or shelves full of tapes over the next 10 years.”



Above, Harold Darr (left) talks to his son and current owner Bernie Darr after cleaning out a farmer’s septic tank using the company’s 2006 International PayStar 5600 vacuum truck built by Precision Tank & Equipment. At left, Roger Darr (left) co-owner of Darr’s Cleaning, and technician Steve Frate lower a tractor unit with a pan-and-tilt camera from Aries Industries Inc.



Harold Darr mans the controls of the company's 2006 International PayStar 5600 built by Precision Tank & Equipment with 4,000 gallon waste/200 freshwater tank while cleaning a customer's septic tank with his son, Bernie Darr.

to inspect the rebuilding of one of the company's jet trucks in 1998, Randy was killed when a train struck his car at a blind crossing.

"This was one month after we ordered the new Vector," says Darr. "We had talked for two years before that about buying life insurance for ourselves and creating a succession plan, but at the time of the accident we had no life insurance and no plan in place to deal with something like this."

Without an insurance payment to support Randy's family, the company had no choice but to take out a loan to buy Randy's share of the business. "We already had equipment with a loan to pay down," says Darr. "Just as we were expanding, we were hit with two big loan payments at the same time."

#### Triple whammy

The company soon faced more trouble as an economic downturn in 2000 saw established clients fall away and traditional sources of revenue dry up. "We never thought our business would be so dependent on the economy," says Darr. "We found out the hard way that it was. There wasn't as much work as before, and projects that had been on were suddenly off. Then 9/11 happened, and it compounded the problem."

To make matters worse, some clients most affected by the downturn were Darr's largest. A single industrial client accounted for almost 20 percent of Darr's annual

revenue. The company's strategy in response was to diversify.

"We realized we had so many mouths to feed and that the only way to do that was to expand our services," says Darr. "Whenever we saw another need in the market, we went after it. We had to diversify."

The company began to promote services such as trenchless repair, infrastructure point repair, electronic sewer and tile locating, leach bed rejuvenation, and smoke testing. "We're the boys with lots of toys,

**"We had talked for two years before Randy was killed about buying life insurance for ourselves and creating a succession plan, but at the time of the accident we had no life insurance and no plan in place to deal with something like this."**

Bernie Darr

with the knowledge and experience to best serve your needs," says the company web site. But toys cost money, and the company had to be careful where it invested scarce capital.

"Clients aren't using some of these services all of the time," says Darr. "Certain services are just requested in spurts, so we have to maintain a list of offerings that's always changing to keep pace with market demand."

For example, the company doesn't perform a lot of smoke testing, but because that service ties up very little capital, it can stay on the com-

pany roster without financial risk. Purchasing an extra jetting/vacuum truck, on the other hand, would please one or two clients but would stretch the company's resources.

Darr's also became diligent in choosing suppliers and products. "We have a good network of people to supply us, but it pays to shop around," says Darr. "Whether it's equipment, parts, or consumable supplies, the market is always changing and we need to look for good value to help the bottom line." ■

generated by our web site and by word-of-mouth. A good example is an industrial park where we performed some work after the EPA came down hard on them. One successful job led to a series of referrals in the same area."

The company is also aggressively courting the municipal sector, a market far less susceptible to market fluctuations. Roger Darr heads the sales effort and has won contracts with the town of Clyde and surrounding communities. A more vigorous sales effort has even struck up new contracts with old clients, although the company makes sure that no single client dominates its business.

This year, after overcoming significant hurdles, the Darr brothers are confident that the business is on firm footing. "We're responsive to the market, we're busy, we're insured and we have a succession plan in place," Bernie Darr says. "We have slowly come back to being a profitable business." ■

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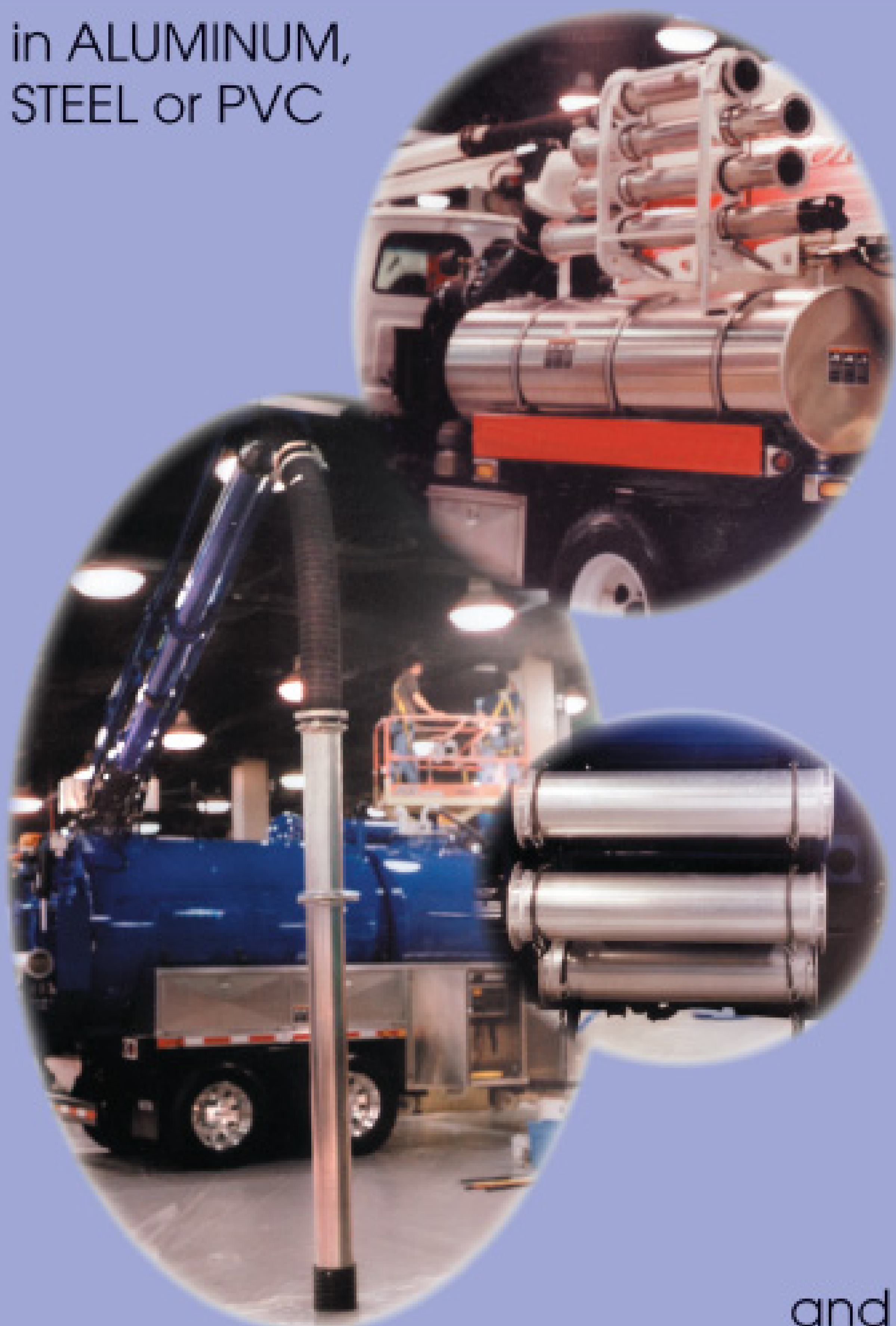
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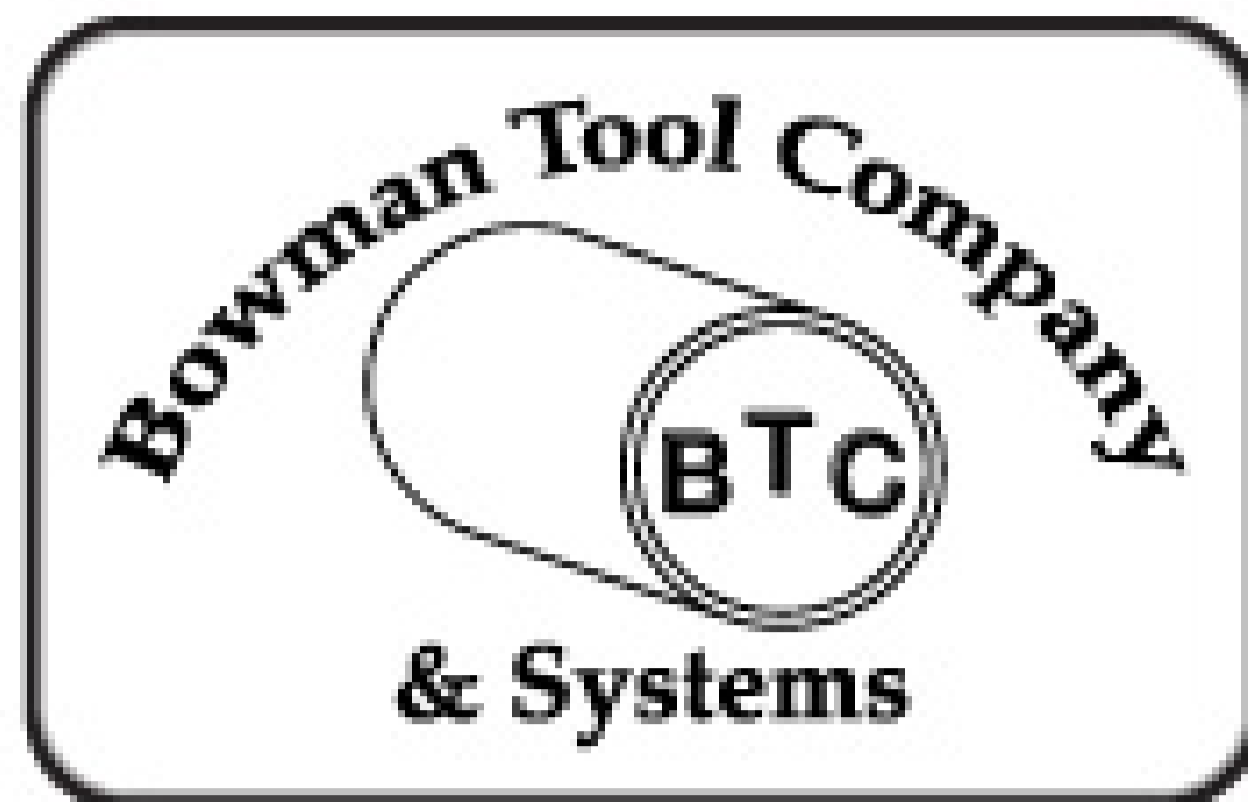
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# FRANCHISE NEWS

## Paul and Saunda Kitchen Mr. Rooter® franchise in Santa Rosa, Calif.

*Paul and Saunda Kitchen are only in their 30s, but they have the wisdom of plumbers much older. They've created a positive work environment that encourages their team to grow and succeed while taking care of their customers.*

*But the Kitchens don't stop with just their shop; they are leaders, mentors and role models for the entire Mr. Rooter network. Paul serves on the Mr. Rooter advisory council, and Saunda started a fund that helps franchisees with travel expenses to annual conferences.*

*The Mr. Rooter Corporation has recognized this dynamic duo with the Franchisee of the Year, Sales Leader of the Year and Excellence in Leadership awards. They were recently named to the 'Forty Under 40' list of professionals in their community.*



Photo: Saunda and Paul Kitchen

### Why did you buy a Mr. Rooter franchise?

**Saunda:** We were amazed at the camaraderie the Mr. Rooter franchisees shared, and we immediately wanted to be a part of it. We wanted to want to come to work. Having fun at work and being a part of something bigger than you is so rewarding. Owning a Mr. Rooter franchise lets us be in business for ourselves but not by ourselves.

**Our business is at the level it is because of the education and technology Mr. Rooter provides.**

### How have you grown your business?

**Saunda:** When we first started we thought we would cap out at five trucks, but we now have a 22-vehicle fleet with more than 30 team members. We attribute the growth to the positive work culture we created. We constantly train our team on technical aspects as well as personal development, including goal setting, balancing work and home life, among many other topics.

**We were amazed at the camaraderie the Mr. Rooter franchisees shared, and we immediately wanted to be a part of it.**

### What impact does the Mr. Rooter brand have on your business?

**Paul:** It has a phenomenal impact. Our business is at the level it is because of the education and technology Mr. Rooter provides. Mr. Rooter is a well-known and well-respected brand in our community.

### How have your lives and business changed since you became a Mr. Rooter franchisee?

**Paul:** We've surrounded ourselves with the fantastic network of fellow Mr. Rooter franchisees. Being affiliated with such a dynamic group allows us to break goals we didn't know we were capable of setting in the first place. We learned to work on the business - not in it.



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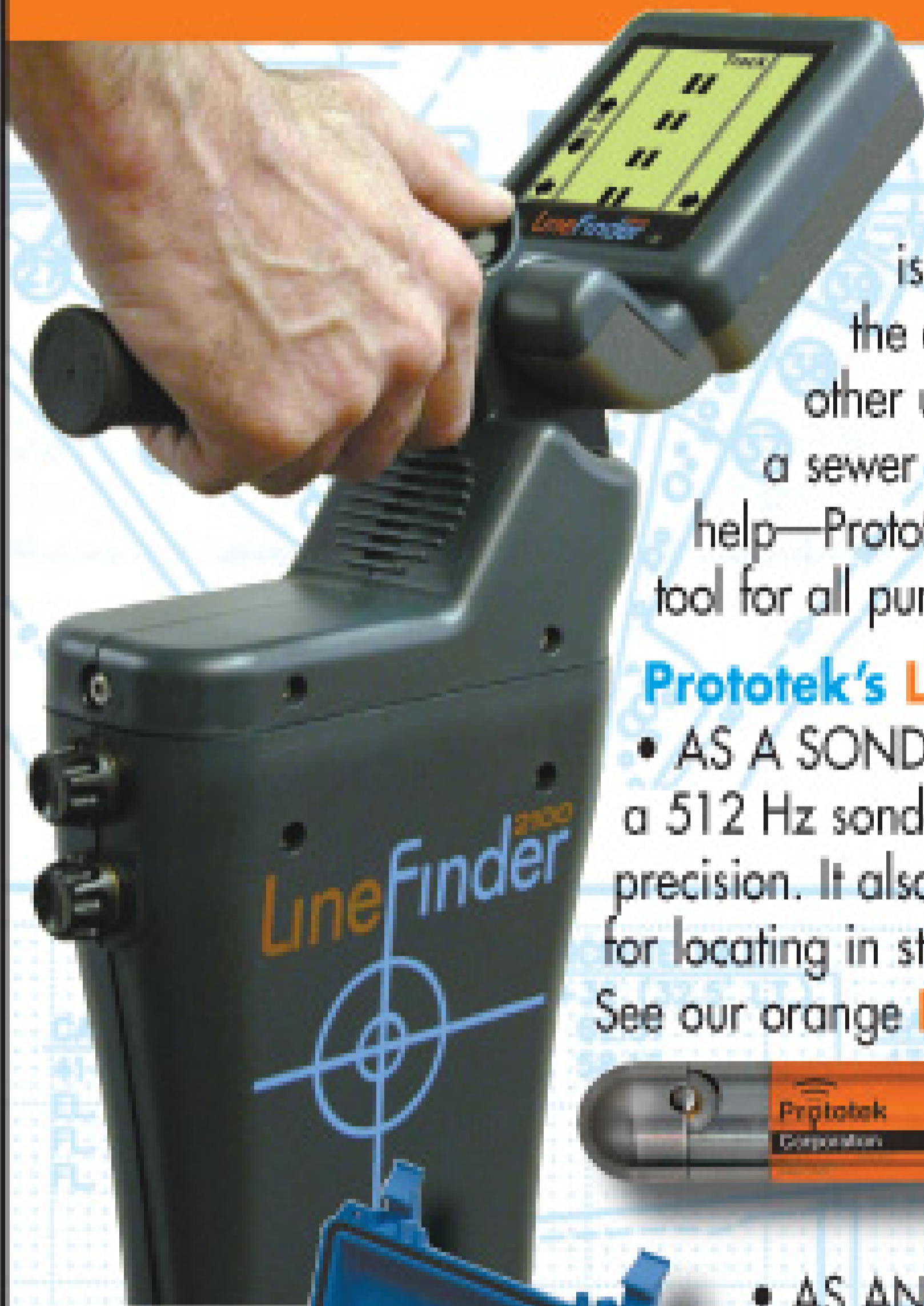
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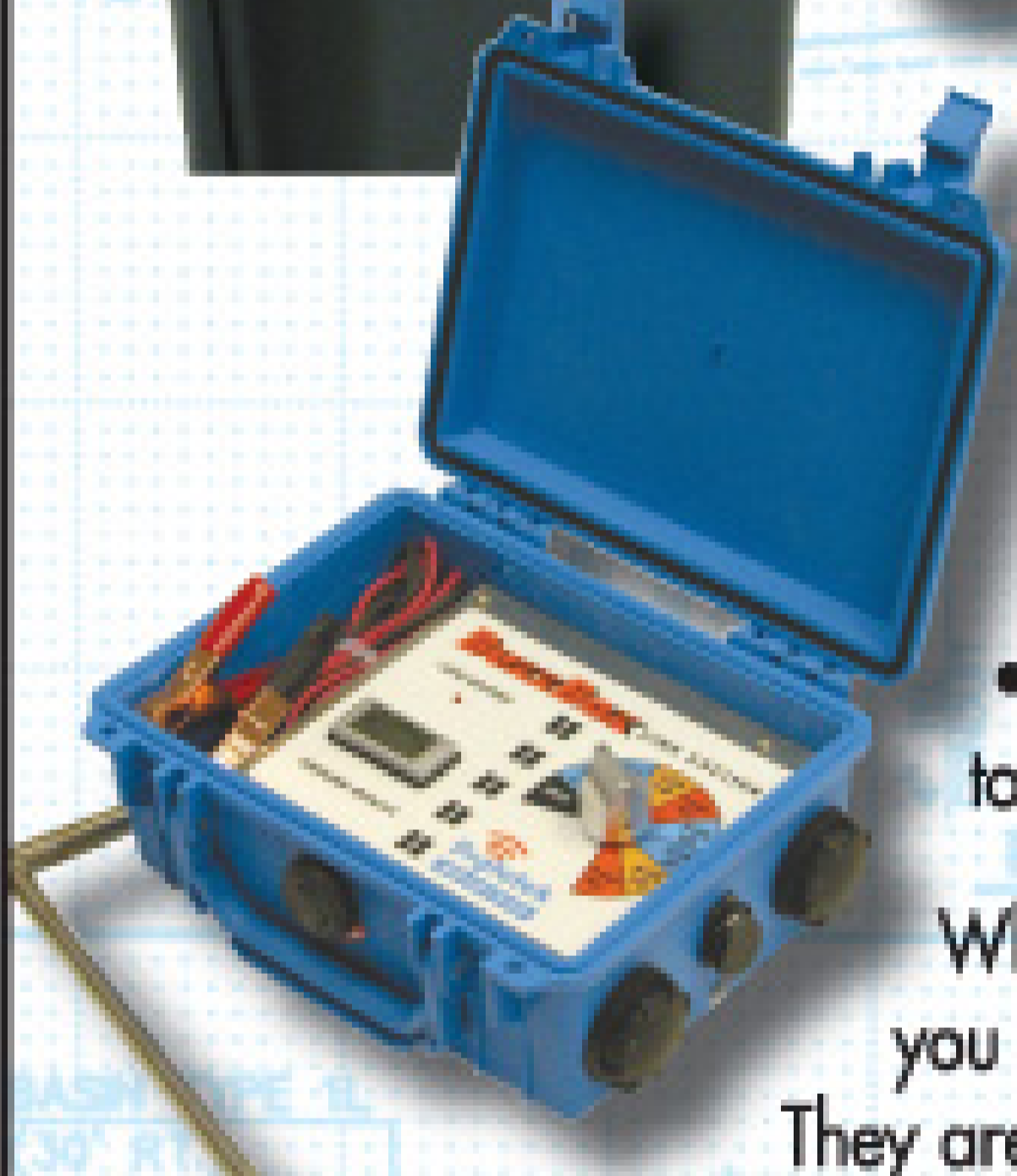
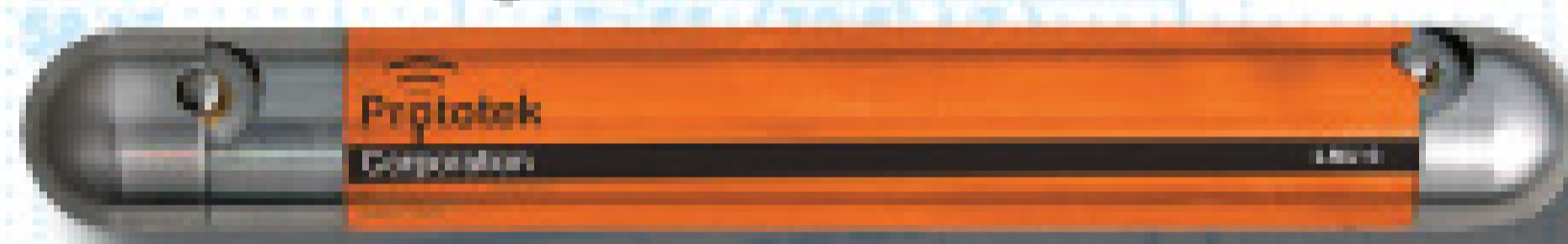
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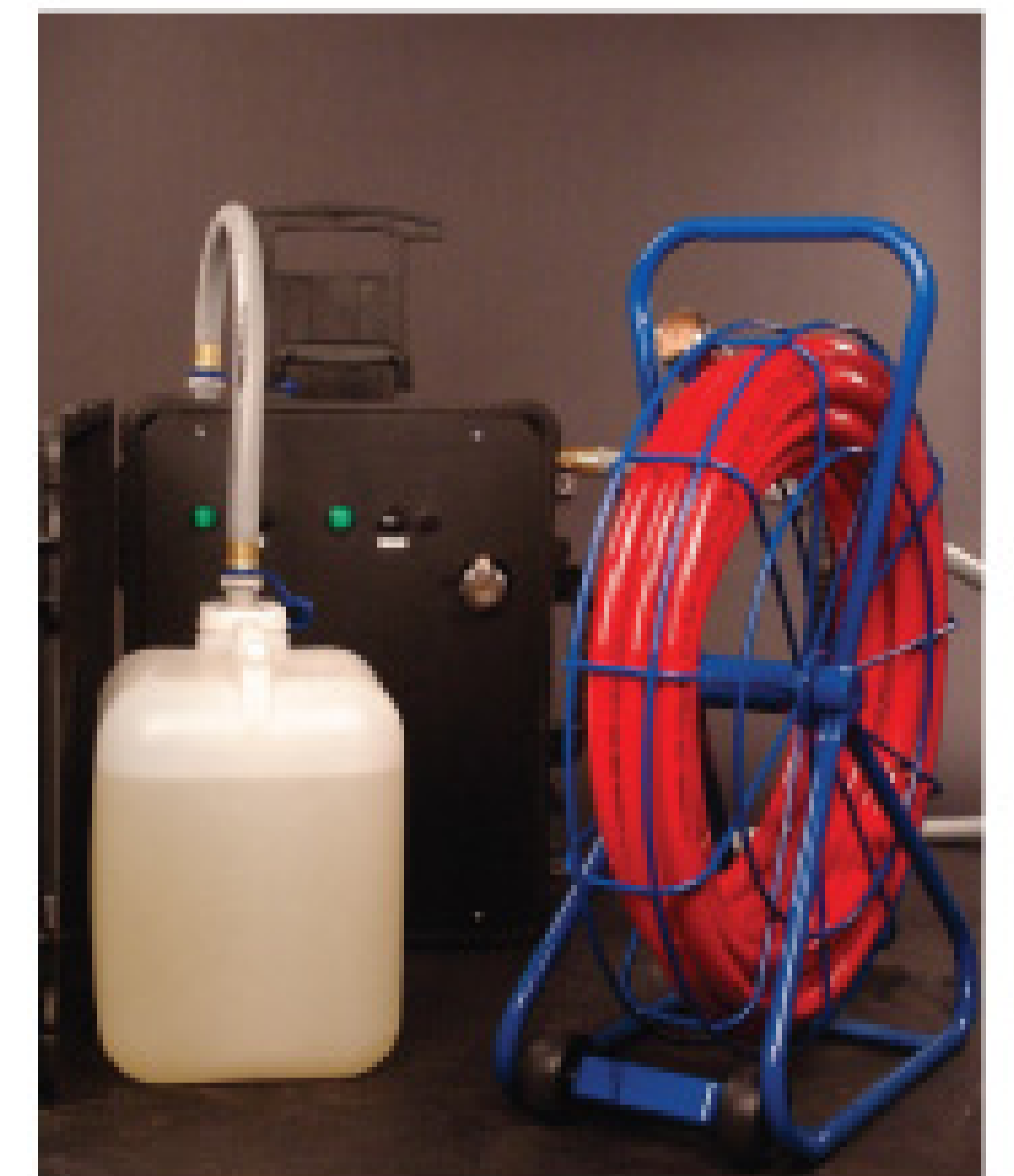
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David Currier Jr.

# Fear Gets Lapped

An industry contractor relocates his business and family to help his son pursue a promising career as a stock car race driver

By Ted J. Rulseh

Someday, David Currier Jr. hopes to drive a race car bearing the emblems of brands like Mountain Dew, Craftsman, and The Home Depot.

Right now, he's happy driving on a late-model circuit in a Chevy Monte Carlo with sponsors that include Cape Cod Biochemical Co. and Lake Norman Sewer & Septic Service — his father's business.

David Currier Sr. used to own and operate Currier Septic & Drain Service in Middleton, Mass. He moved the family to Denver, N.C., in August 2006 and started a new business so that David Jr. could be closer to the world of racing, for which he had a special talent since he started

in quarter midget cars at age 7.

Currier admits it was difficult — and tough on the family — to move across several state lines to help one son pursue a dream. He had to sell his business and start over. He and his wife, Cindy, had to leave good friends and a community they enjoyed. The three kids had to adjust to new surroundings and new schools.

Still, there are no regrets. Currier's new business is growing fast, and young David is moving up the ranks on the stock car circuit. "I've always been pretty good at shooting from the hip," the elder Currier says. "I've never been afraid to try things. I knew that if I put my mind to it, and had enough time, I could make it work."

## Pulling stakes

The family actually moved twice to land in North Carolina, in a small town near Mooresville, known as Race City, USA, and home base for numerous top NASCAR teams. Currier

**"I've always been pretty good at shooting from the hip. I've never been afraid to try things. I knew that if I put my mind to it, and had enough time, I could make it work."**

David Currier Sr.

Septic & Drain had 12 employees at the time Currier sold it.

David Jr. excelled as a driver almost from the first time he took the wheel. His brother Dennis, two years younger, also raced midget cars for a few years, until age 10. Currier took them on racing trips as far as Colorado. In time, he felt guilty being away so often and leaving his parents, Dennis and Carolyn Currier, in charge of the business.

In 2000, Wind River Environmental, the large septic system service firm in Hudson, Mass, made an offer for the business. It was attractive enough so that Currier could use some of the sale proceeds to help his parents retire. He worked for Wind River for two years, then moved the family to Swanzey, N.H., so that David Jr. could race on tracks

David Currier Jr. hopes to someday race with NASCAR's elite, but if his career doesn't take off, he plans to become a plumber. Currier currently drives the No. 3 late model for car owner Gary Hargett (left), who helped launch the career of the late Dale Earnhardt. (Photos courtesy of David Currier Sr.)

in the area.

"He wasn't old enough to race on the NASCAR sanctioned tracks near Middleton, so we decided to get him established on the non-sanctioned tracks in New Hampshire," Currier says.

In Swanzey, he spent three years building up a used-car business. The move was difficult for the kids. "The boys adapted pretty easily, but it was a lot tougher for our daughter Katie (then 14)," Currier says.

In Middleton, the family lived in an upscale suburban neighborhood. Swanzey was a smaller community of working people. "Back in Massachusetts, you could have any food you wanted delivered to the house," Cindy Currier observes. "The mall was 10 minutes away. In Swanzey, the mall was an hour and 15 minutes."

## Powering up

David Jr. kept progressing, racing both cars and motocross bikes. In 2005, at age 15, in his first season driving a full-size car in the mini-stock division on the 3/8-mile paved oval at Canaan, N.H., he won the track championship and was named rookie of the year. The next year he wanted to move up to late models, so his father took him to FinishLine Racing School in Florida to work under instructor Mike Loescher, who has trained the likes of NASCAR champion Jeff Gordon.

"I told him, 'We don't have a lot of money, and I want to know if my son has talent before we try late models,'" says Currier. After three days of competition at the school, David finished atop a group of 14 drivers.

"I asked Mike at the end, 'What do you think?'" recalls Currier. "He told me, 'Your kid is loaded with talent.'"

Another top name in racing thought so too: NASCAR team owner Richard Childress had seen David Jr. race and called the Curriers to suggest they consider moving south, where he would have a better chance to advance his career. In August 2006, Currier sold the car lot and various properties, and the family moved to North Carolina.

Looking to re-establish himself in business as soon as possible, Currier bought a small firm that installed and repaired grinder pumps. By advertising in newspapers and telephone directories, making cold calls on plumbers for subcontract work, and earning a

good reputation by word-of-mouth, Currier built the business into a diversified sewer, drain and septic service. His team includes his father, employee John Grant, and David Jr. after school and on weekends when he's not racing or working on his car.

## Squarely on track

Last year, in his first season in North Carolina, David Jr. raced limited late models. He now drives the late-model circuit on the half-mile track at Concord Motorsports Park in Concord, N.C., where speeds can reach 140 mph. He also expects to run in a few United Auto Racing Association (UARA) events at bigger tracks.

He is on the team of Gary Hargett, who is legendary in racing circles for recognizing and developing talent. Hargett has been credited with helping the late Dale Earnhardt build his career.

Currier's first race at Concord, in March, was memorable. "We qualified mid-field, and we were running well, until two guys trashed each other and bounced off the wall in turn four," he says. "We were clear to miss the crash, but one of the cars that was at the top of the track let off the brakes and started rolling down the track and smashed into the right side of our car."

David Jr. returned to the track about 10 laps down after extensive repairs in the pits. "We got out there right in front of the leaders," he says. "I must have had about five car lengths on them before they were going to lap me, but I just pulled away from them. They weren't coming anywhere close to me."

David Jr. (web site [www.davidcurrierjr.com](http://www.davidcurrierjr.com)) is already planning his next steps up the racing ladder. He hopes to race full time on the UARA circuit next year, then move up to the Automobile Racing Club of

America (ARCA), a level below the NASCAR Nationwide series. His plan is to make the Nationwide Series by age 20. "He's opening a lot of eyes," the elder Currier says. "He's had wonderful opportunities to learn from some of the best people in the racing business. We're excited about his future."

## Building the business

Currier's own business future looks good, too, although the cost of David Jr.'s venture is sobering. He expects to spend \$60,000 to run local tracks for the 2008 season and \$150,000 for the bigger venues next year.

Fortunately, Currier chose a business he knows well in an area with high market potential and without excessive competition. "I bought the business at a good price, and I was able to start slow and feel my way around the community," Currier says. "Being a Yankee and having such a Northern accent, I was a little concerned about how people would accept me. But the people here are incredibly nice."

"Over time, I bought drain-cleaning machines, a waterjetter, a Terralift machine, and a vacuum truck. I already had a mini-excavator. The area has a lot of septic systems, a lot of grinder pumps, and a lot of city sewer."

"It hasn't been easy at all. It's been hard, and knew it would be hard. But what isn't? I've found that if you're always fair to people, if you treat customers like you want to be treated, if you give them the respect they deserve, you're going to have a good business. That's the way my parents always did it, and they taught me the same way."

"I'm hoping David's racing career can take off. If not, he has already said, 'Dad, I know this is a million-to-one shot. If I don't make it, I want to work with you, and I want to get my license to become a plumber.' He graduated from high school this spring, and his work uniform is already ordered." ■

## NO REGRETS

David and Cindy Currier are sure of one thing: No matter how David Jr.'s racing career turns out, they'll never have to wonder, "What if ..."

"I'm never going to look back and say, 'Man I wish I'd done that with my kids,'" David Currier says.

His wife adds, "I feel pretty much the same way. When Richard Childress called, I was the one who said, 'Hey, there's nothing really holding us down in New Hampshire, other than some properties and a business, and it's not like we can't sell them.'"

"Once we moved from Massachusetts to New Hampshire, it didn't frighten us to make a bigger move down here. I don't ever want to look back and say, 'Gee, I wish we had tried.' You talk to many people who say, 'I was really good at such-and-such, and I never went anywhere with it.'"

"Even if the racing never works out, we'll never have any regrets. We've adjusted down here. It's really nice. I love the area."

Currier advises other contractors who have a dream, for themselves or their children, to follow their heart. "If you can run a business and do a very good job at it, why can't you do that with your dream?" he says. "It's basically the same thing."

"David's racing is like running another business. It's a lot more competitive than any plumbing company, but it's still a business. I've run a couple of businesses at a time before. I've just never been afraid to do anything like that and I don't think anybody else should be, either."



At left, when not behind the wheel of a race car, David Currier Jr. works the controls of a backhoe for his father's sewer and septic business. Above, David Currier Jr. (from left) enjoys the support of his mother, Cindy; father, David Sr.; older sister, Katie, and younger brother, Dennis.

*After Hours is an occasional feature that describes how business owners reconcile work life with family, leisure time, charitable pursuits, and personal interests and passions. Cleaner welcomes story ideas. If you take part in something interesting outside work, or if you know someone in the cleaning business who does, please send a note to [editor@cleaner.com](mailto:editor@cleaner.com).*

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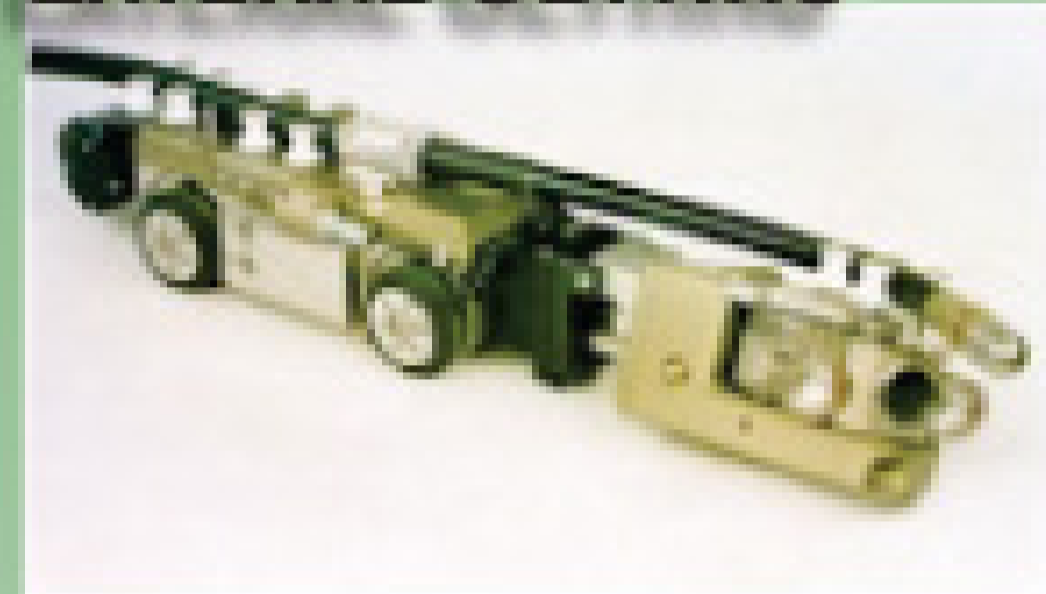
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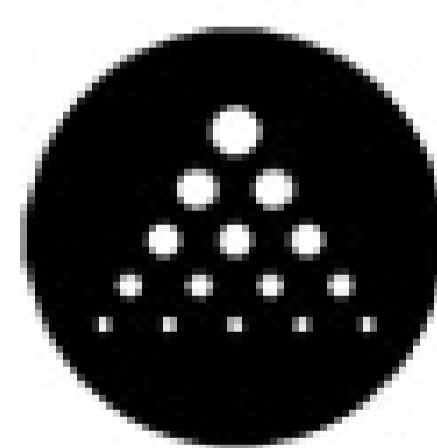


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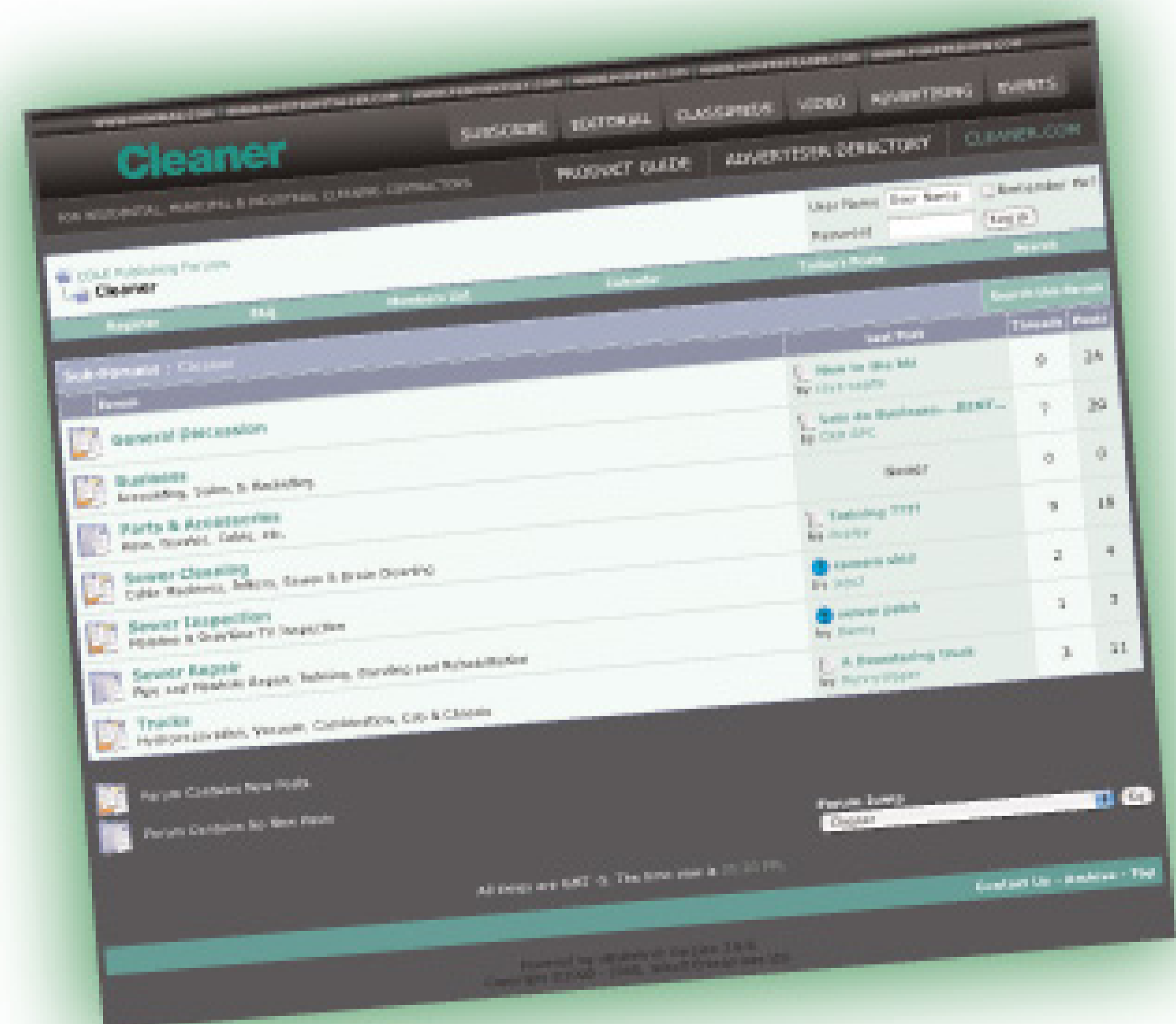
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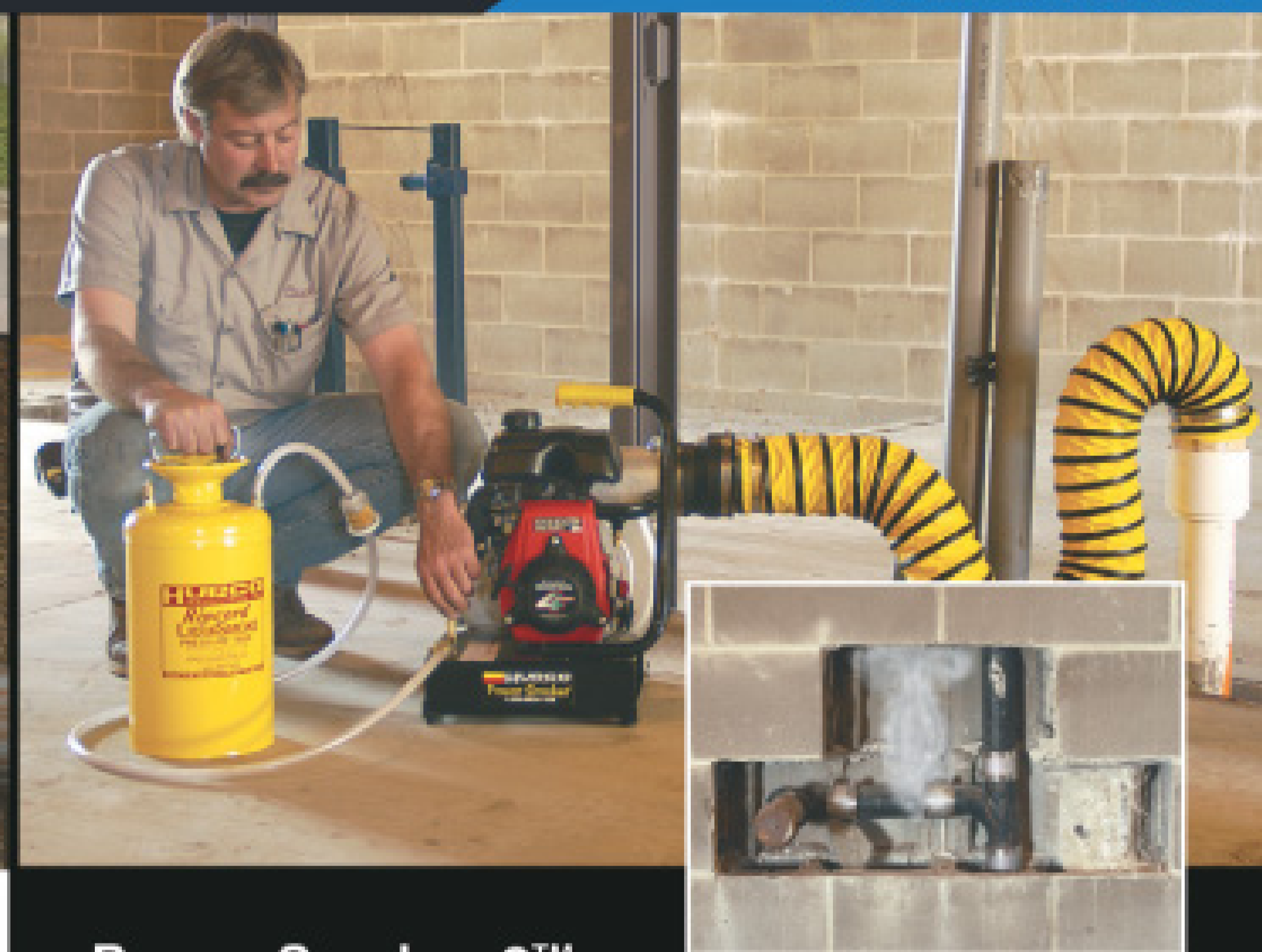
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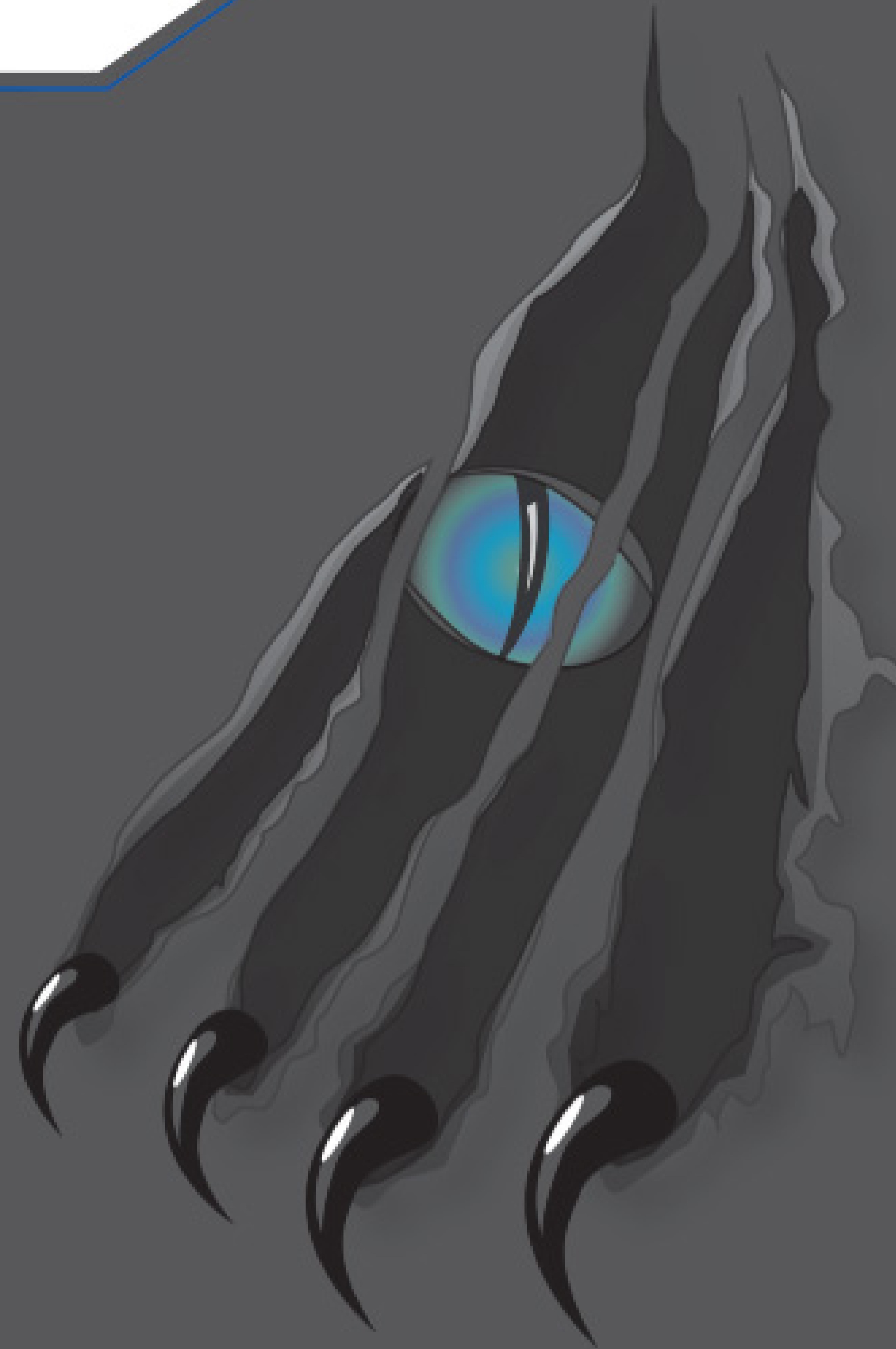
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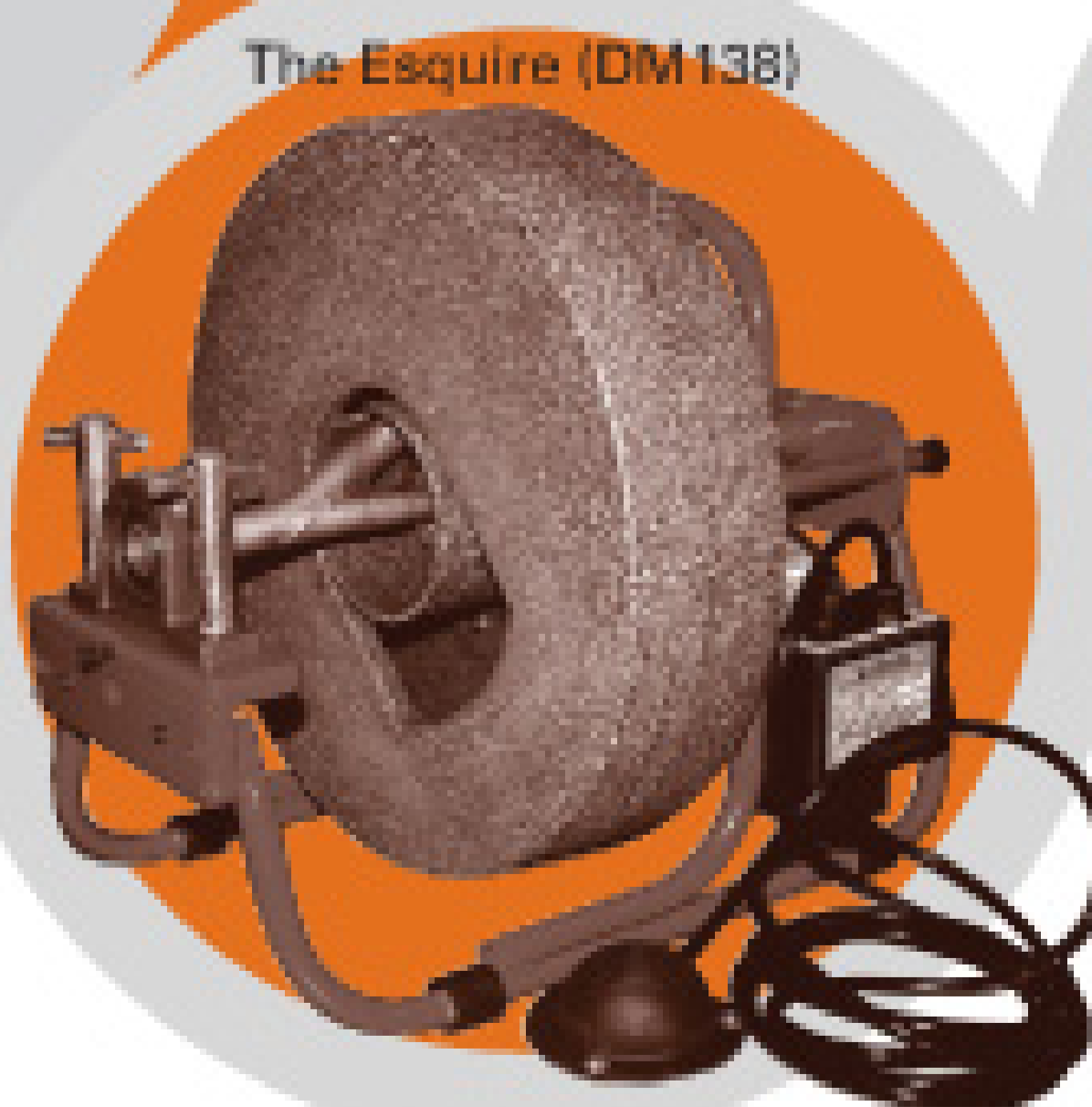
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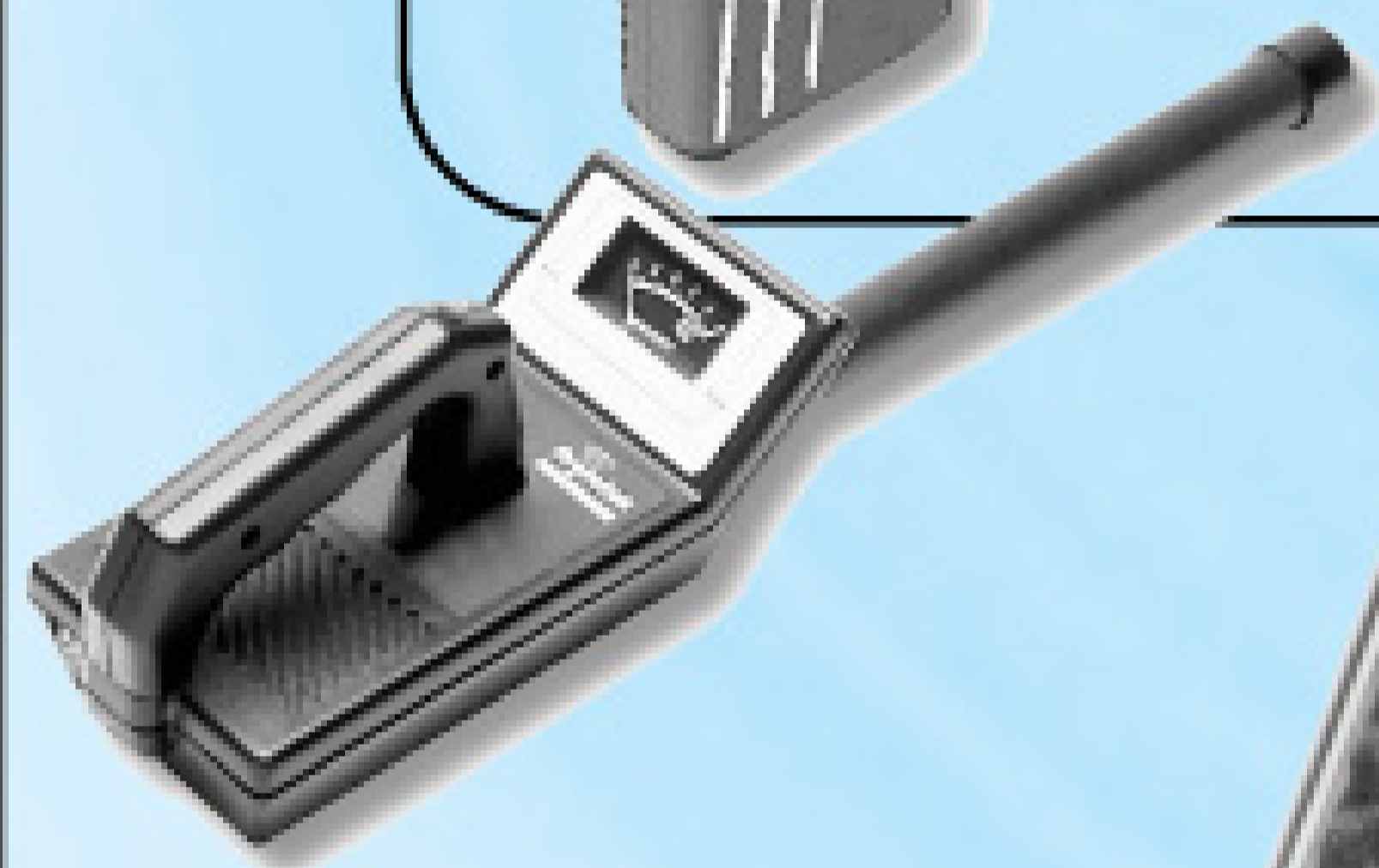
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# No More Ping-Pong

A fleet of specially designed drain-cleaning trucks helps a Pennsylvania contractor keep its technicians productive and serve customers well

By Ken Wysocky

Several years ago, employees at Kline's Services Inc. in Salunga, Pa., felt more like ping-pong balls at times than drain-cleaning service technicians.

"Our vans couldn't carry everything we needed for a job," recalls Brad Brubaker, wastewater management specialist. "We'd dispatch a

and commercial line opening, industrial waste removal, and septic tank installation and service. While Brubaker can't quantify the trucks' financial impact on the business, he points out that the drain-cleaning division is now one of the most profitable in the company.

"We've increased the number of vehicles and technicians, and we're doing more work than we ever did before," he says. "We have five technicians, and we keep them on the road all day. These trucks are much more efficient. It's like having everything but the kitchen sink right in the back of the truck."

Three trucks carry Model 184 jettors from Mongoose Jettors, delivering 18 gpm at 4,000 psi. The others carry Model 4018 jettors from US Jetting Inc. that produce 15 gpm at 4,000 psi. Each truck also carries 3/8-, 1/4- and 5/8-inch cable machines from Duracable Manufacturing Co., as well as large and small SeeSnake cameras from RIDGID, says Shawn Perry, project manager.

Three of Kline's trucks carry Model 184 jettors from Mongoose Jettors, delivering 18 gpm at 4,000 psi. Others carry Model 4018 jettors from US Jetting Inc. that produce 15 gpm at 4,000 psi.

Kline's fashions its own shelving for the trucks, which are geared toward convenient access to the large, heavy, skid-mounted jettors. "The jettor sits at the very back of the truck," Perry says. "All the trucks are set up the same way — just open the tailgate and the jettor hose is right there."

## 'Those nice clean trucks'

The distinctive silver and red trucks, bearing the company logo and slogan — "Doing the Job Right!" — also serve as rolling billboards. "Our trucks are incredibly recognizable," Brubaker says. "They're

"Our trucks are incredibly recognizable. They're washed every day. They're spotless. We're known for our clean trucks. That helps us stand out, because there are a lot of beat-up trucks in this business."

Brad Brubaker

washed every day. They're spotless. We're known for our clean trucks.

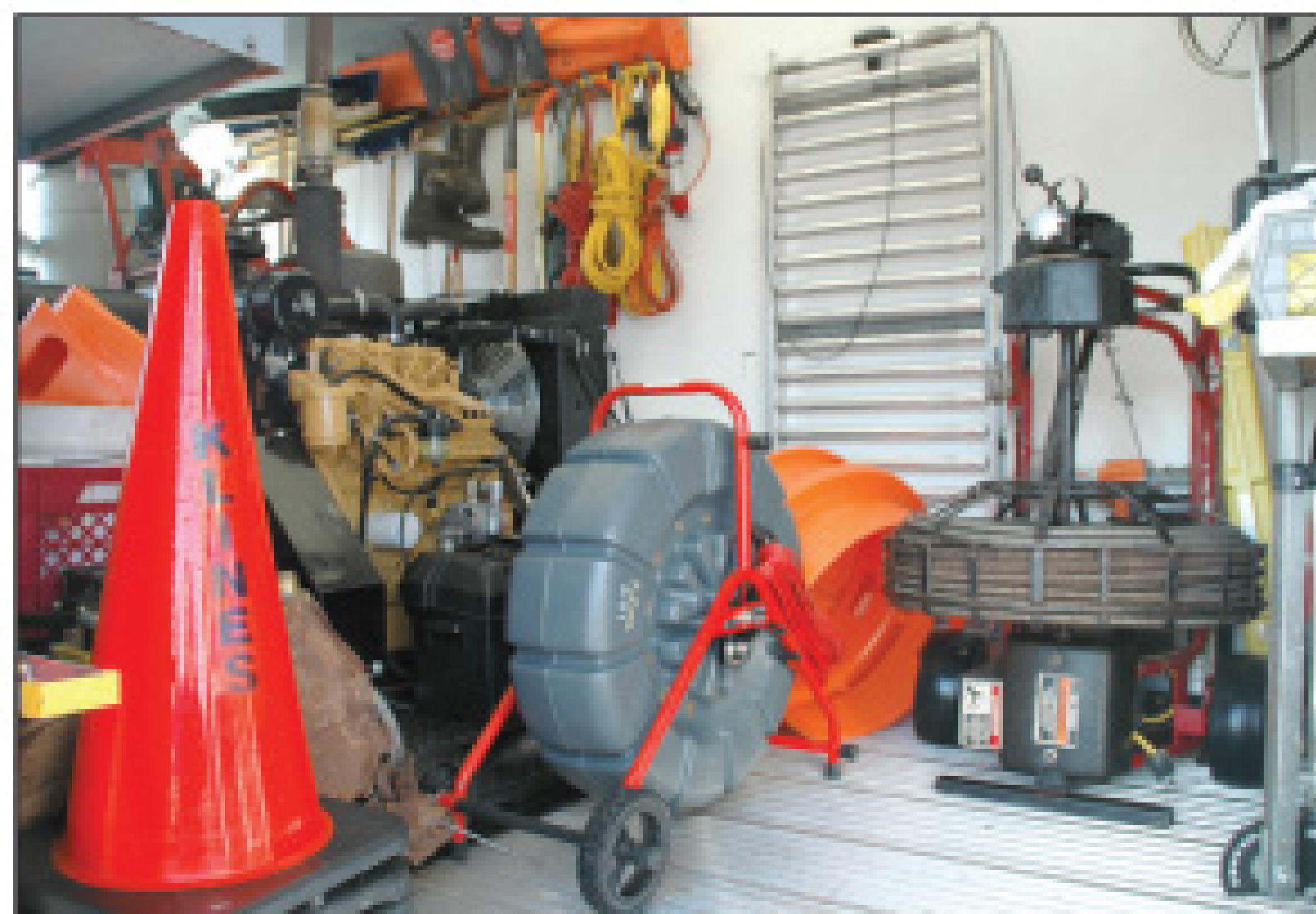
## MONEY Machines

driver, and he'd arrive at the job only to find out he needed a jettor. Since the trucks couldn't carry a jettor, he'd have to drive back to the shop to pick one up, then drive back to the job. A technician could easily burn up an hour and a half in hours on the road."

Those days are long gone, thanks to a fleet of Mitsubishi FE180 trucks outfitted with 14-foot aluminum service truck bodies from Morgan Corp. Kline's owns five of the trucks, all designed specifically to carry jettor equipment.

### Doing more business

Kline's works in a 75-mile radius in Lancaster County in southeast Pennsylvania, offering residential



Each truck also carries 3/8-, 1/4- and 5/8-inch cable machines from Duracable Manufacturing Co., as well as large and small SeeSnake cameras from RIDGID.

## MONEY MACHINES

<b>OWNER:</b>	Kline's Services Inc., Salunga, Pa.
<b>FUNCTION:</b>	Transporting skid-mounted waterjetting and video inspection equipment
<b>VEHICLE TYPE:</b>	Mitsubishi FE180 chassis with 14-foot body from Morgan Corp.
<b>PRIMARY EQUIPMENT:</b>	Waterjettors from US Jetting Inc. and Mongoose Jettors; cable machines from Duracable Manufacturing Co.
<b>COST:</b>	About \$150,000 fully equipped
<b>WEB SITE:</b>	<a href="http://www.klinesservices.com">www.klinesservices.com</a>





Kline's fashions its own shelving for its trucks, which are geared toward convenient access to the skid-mounted jettors.

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Money Machines, a new feature in *Cleaner*, reports on innovative work vehicles that help contractors operate more efficiently, satisfy customers, and earn more profit. We'd like to know about your Money Machine — be it a service van, camera truck, jetting rig, vacuum unit, or any vehicle that really helps drive your business. To nominate your vehicle for a feature in this column, send an e-mail to [editor@cleaner.com](mailto:editor@cleaner.com). Tell us briefly but specifically what features make it a great producer. And send a picture — because appearance counts. We look forward to seeing your Money Machine.

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When people hear our company name, the standard response is, 'Oh, you're the guys who drive those nice clean trucks.'

"That helps us stand out, because there are a lot of beat-up trucks in this business. The message behind a clean truck is that we'll take care of a customer's property the same way we take care of our own equipment."

The trucks also display the company's web site and several phone numbers. "We cover a wide area, so we put several phone numbers on the truck," notes Brubaker. "Most people feel more comfortable calling a local number."

And those familiar trucks arrive at jobs a lot sooner, now that technicians no longer play ping-pong. ■

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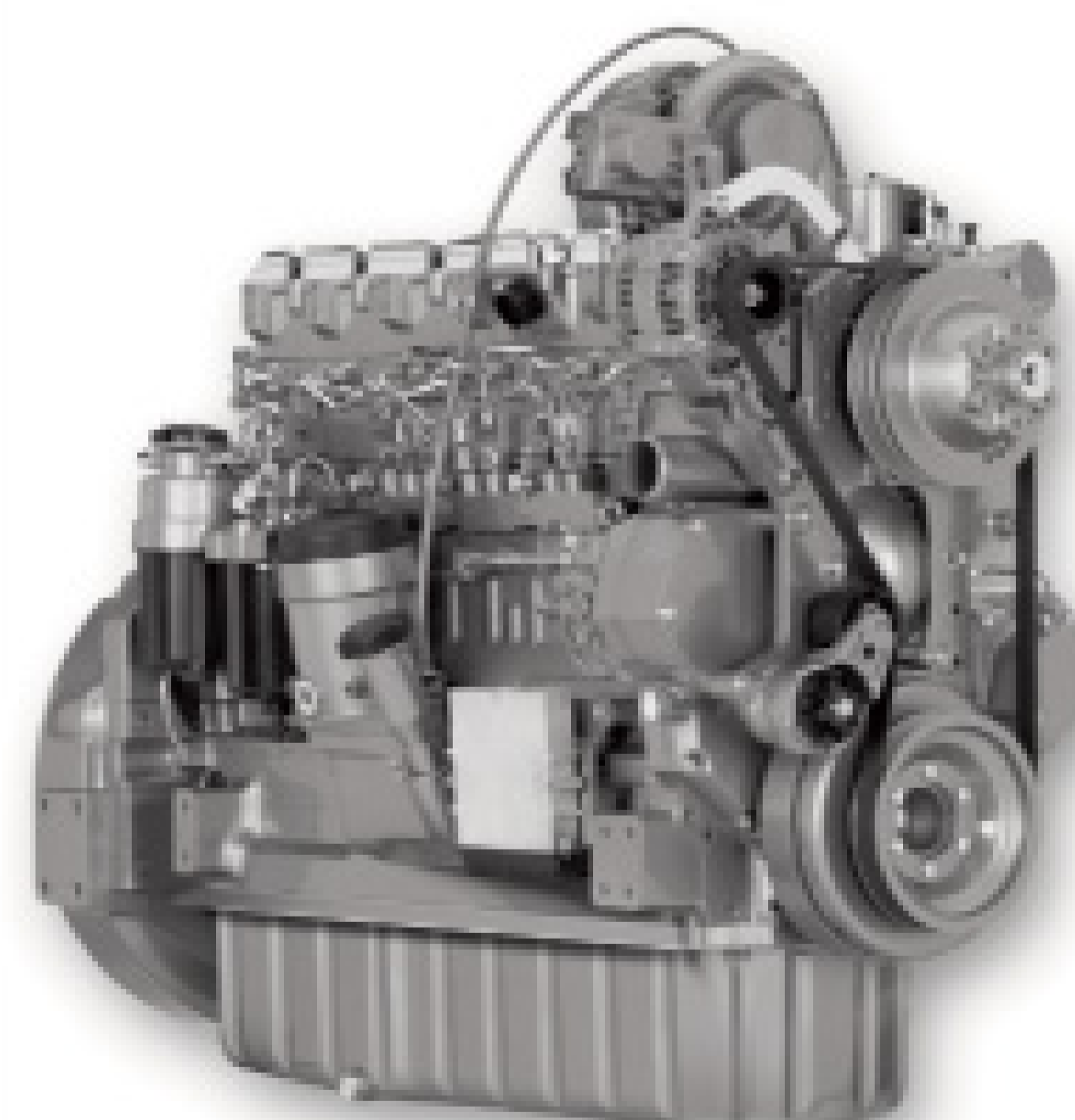
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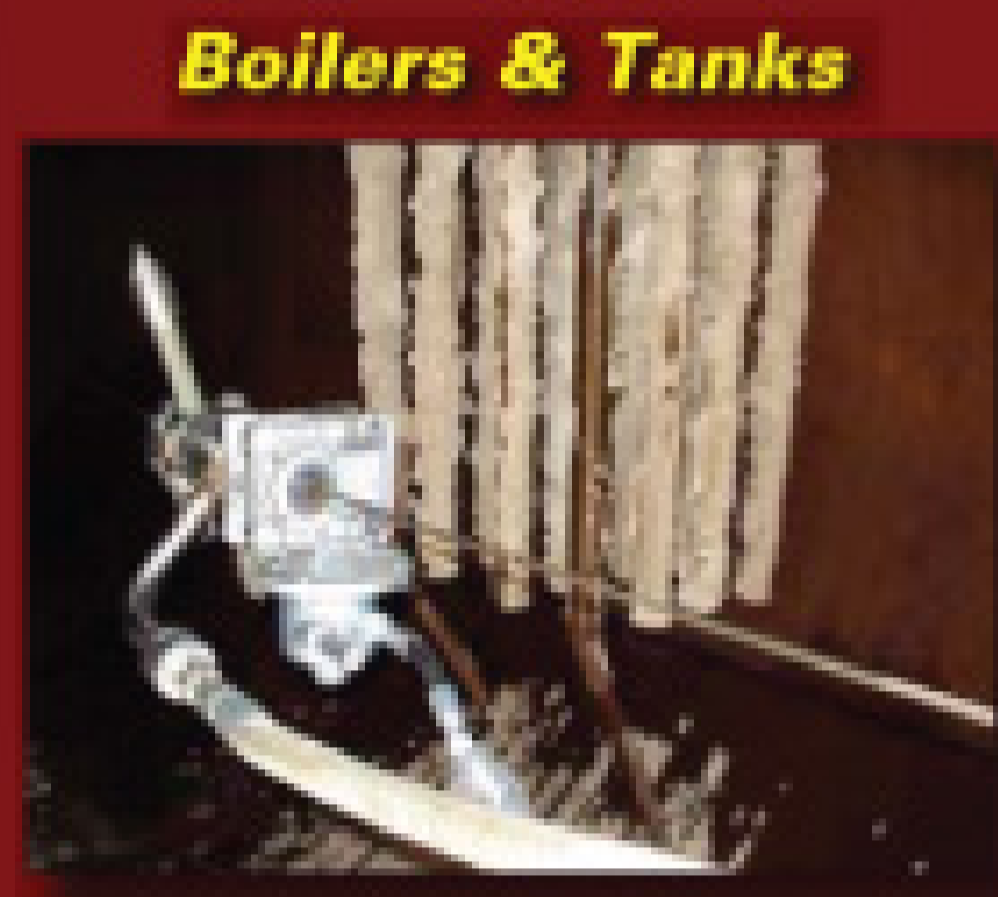
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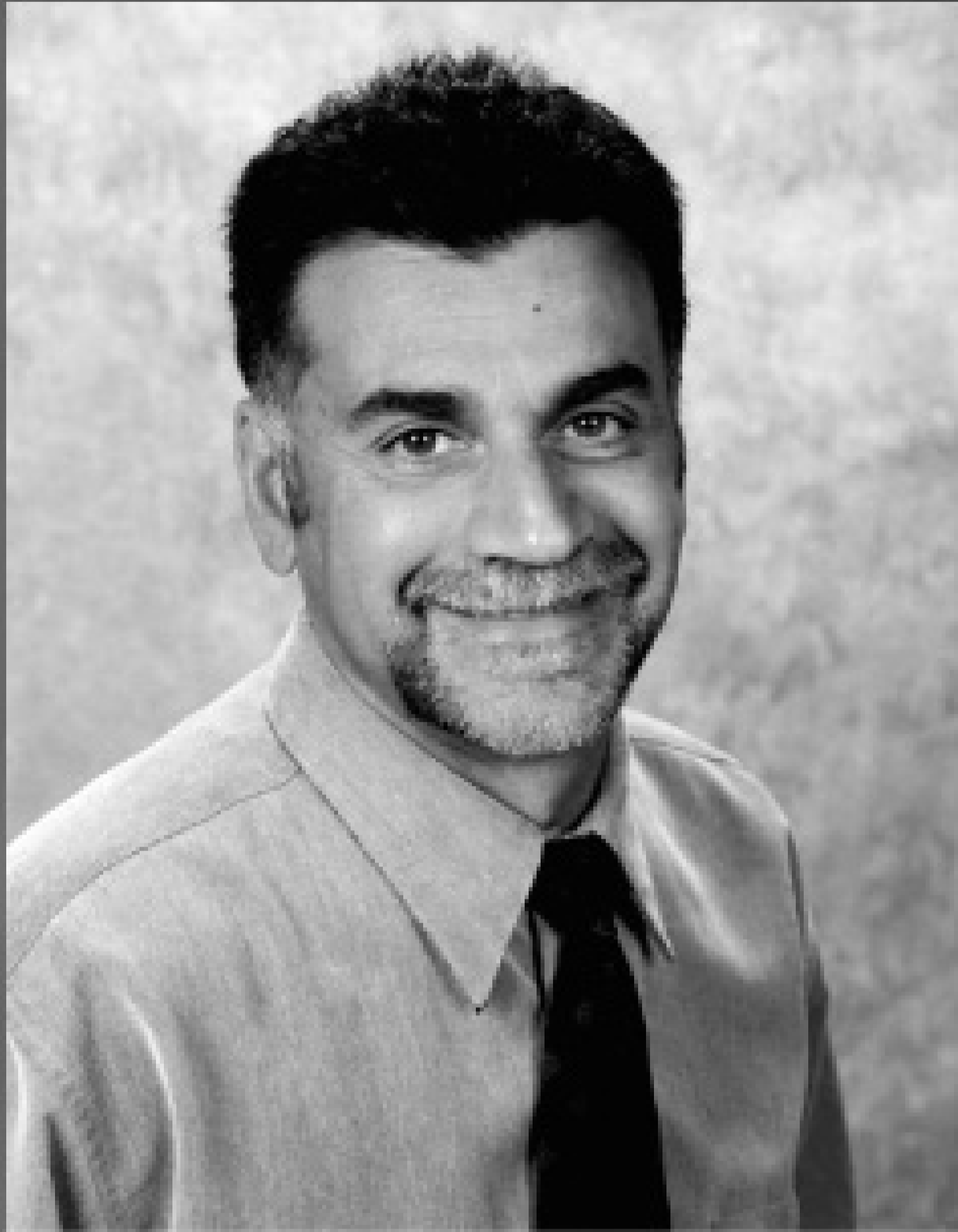


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## Tech Perspective

# Injecting Long Life

**Chemical grouting provides simple and cost-effective repair for manhole leaks — if you use the right material and the right installation method.**

By Scott Kelly

**T**here are many ways to repair leaks in concrete structures like sanitary and storm pipes, manholes and basins. One of the oldest yet least understood methods uses polyurethane chemical grouts that react with water to bond with the concrete to form watertight, permanent seals, or to become rigid, filling voids and stabilizing soil.

According to the National Association of Sewer Service Companies (NASSCO), chemical grout was developed in 1955. Since then, it has been used in sewers, manholes,

first trenchless technology — is still a highly cost-effective, long-term defense against infiltration of groundwater into structurally sound sewer systems.

Grouting can be especially effective for sealing leaks in manholes, which by some estimates account for up to 40 percent of infiltration to wastewater collection systems.

### Reducing infiltration

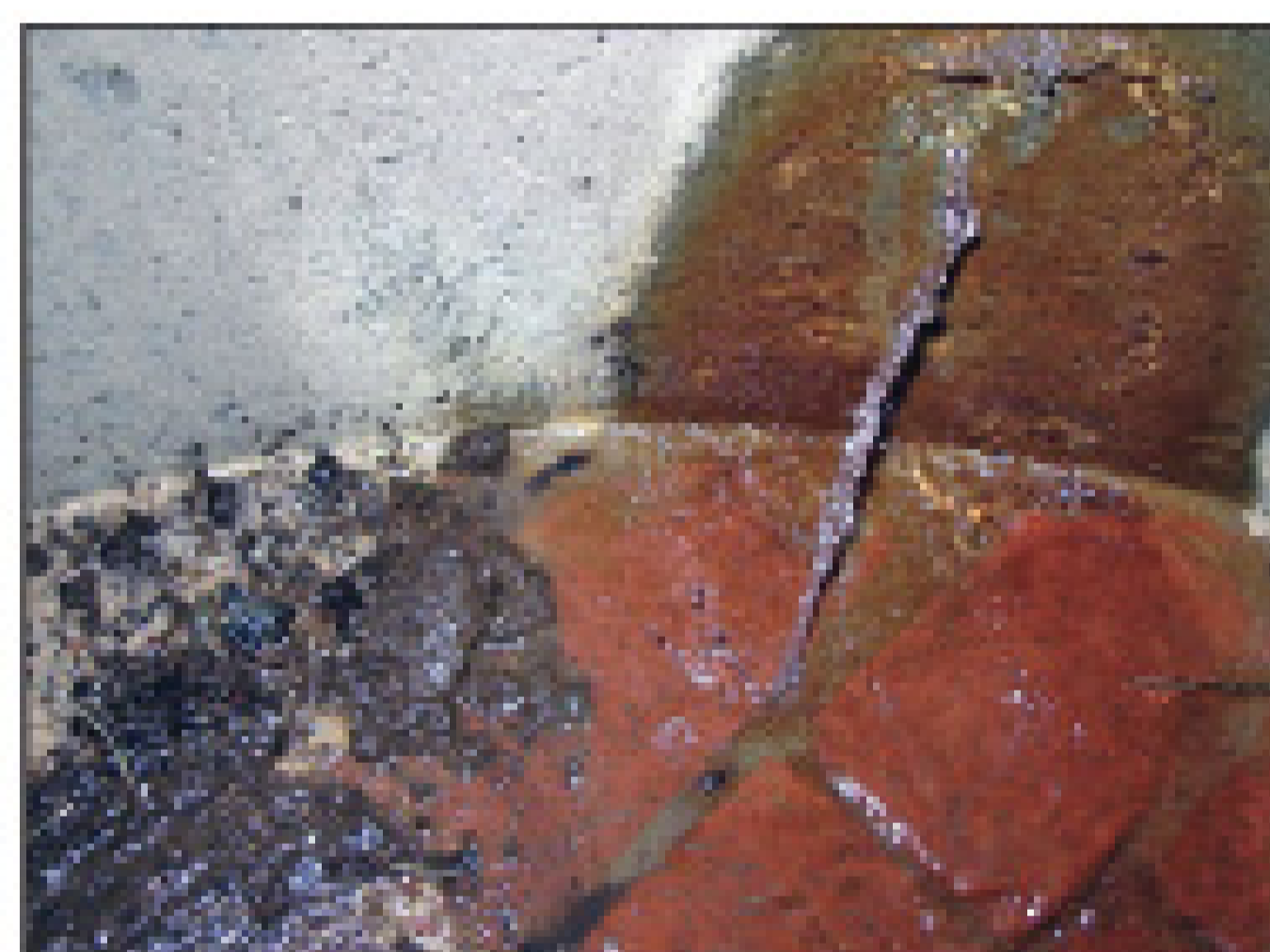
The nation's infrastructure is aging while its population continues to grow. As a result, municipalities and contractors are under pressure to find effective repair options to reduce infiltration, which increases treatment plant loads, adds treatment cost, and increases the risk of sanitary sewer overflows (SSOs).

Groundwater leaks also carry sand, silt, and other debris into the system, increasing wear and tear on equipment. Voids often form around leaking structures that can lead to instability and settling. A properly chosen grout can stop leaks in seconds, forming a long-lasting seal and providing immediate cost-savings.

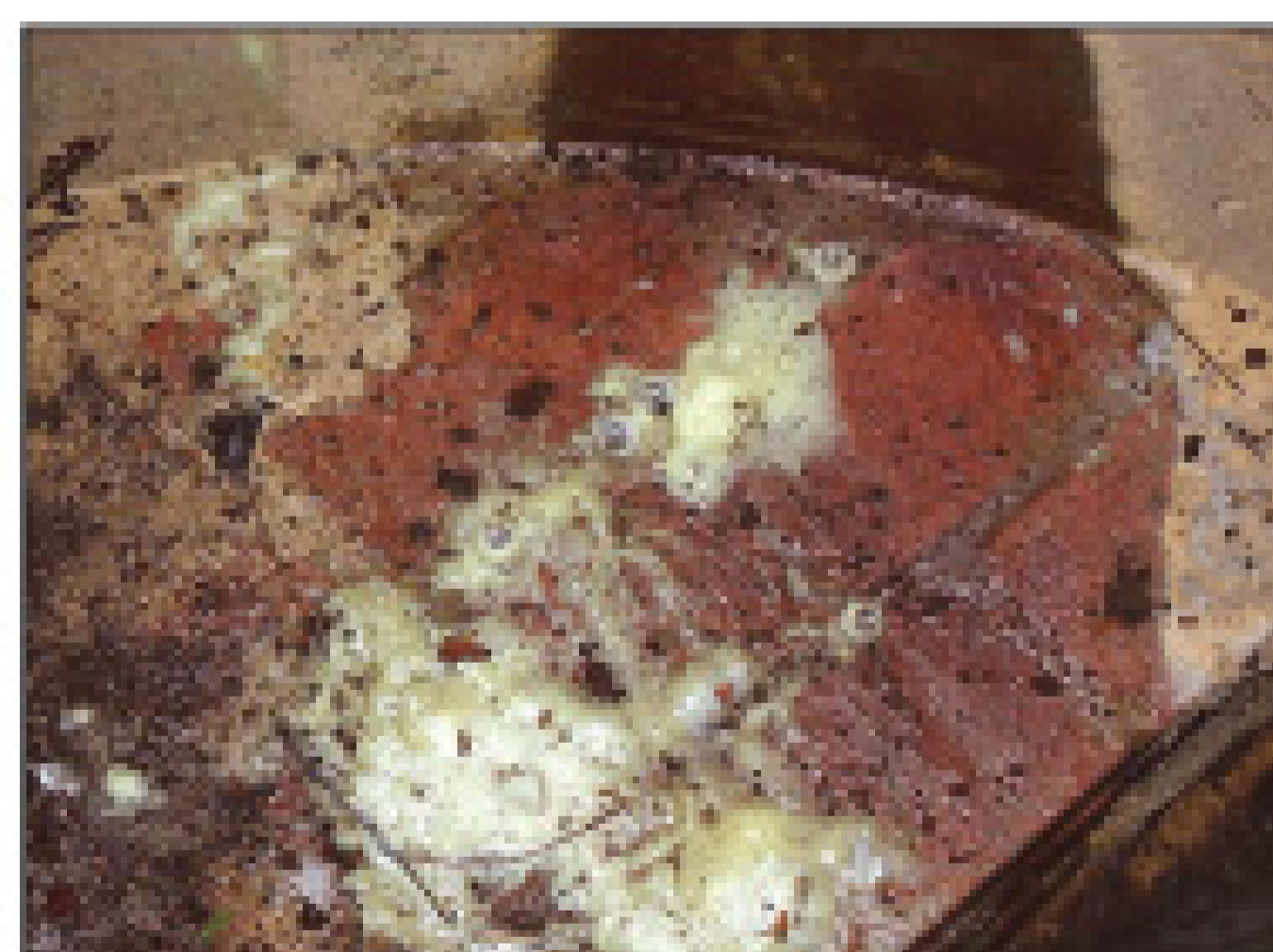
Some manholes require structural rehabilitation, usually involving a sprayed, hand-applied or cured-in-place (CIP) lining. Contractors and municipal crews must realize that groundwater infiltration needs to be stopped before such linings are installed.

Too often, leaks in manholes are treated by applying a quick-set hydraulic cement over the active infiltration. This stops the leak temporarily and allows time for the lining to be installed. But water remains within the primary structure and can weaken the bond and eventually cause a lining failure.

*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.*



A crack at the base of a manhole allows water to infiltrate. (Photos courtesy Prime Resins Inc.)



A hydrophilic chemical grout was used to repair the crack and stop all leaks.

tanks, vaults, tunnels, and many other applications worldwide.

Recent studies and more than 40 years of experience indicate that grouting — known as the nation's



An injection specialist uses chemical grout to repair a leaking joint.

---

**Grouting can be especially effective for sealing leaks in manholes, which by some estimates account for up to 40 percent of infiltration to wastewater collection systems.**

### Installation basics

Polyurethane chemical grouts are usually injected under pressure as a liquid resin into or near the leak. Once the resin contacts water, a chemical reaction occurs. Depending on the material formulation, the grout/water combination forms an expansive closed-cell foam or a gel. The foam can be flexible and resilient (hydrophilic) or rigid, meaning the cell structure of the foam crushes when compressed (hydrophobic).

In most manhole leaks, the water flow can be used to pull the grout into the structure. To accomplish this, a hole is drilled near the leak, and the chemical grout is

injected through the wall into the water source. As the resin reacts with the groundwater, it is pulled back into the structure and seals the leak from the outside in, creating a seal through the entire wall.

Where the leak is not strong enough to pull the grout into the structure, the grout can be injected directly into the defect. The expansion of the foam helps drive the grout through the structure to seal the gap. Hydrophilic polyurethane resins that produce gels are typically installed by running water along with the resin through a manifold that briefly mixes the two before they are injected. These gels are non-expansive but can be produced at

water-to-resin ratios as high as 15 parts water to one part resin.

### Knowing the material

Both hydrophilic and hydrophobic chemical grouts will seal leaks in all types of concrete structures initially. The issue is how to create a permanent seal. The longevity of the repair depends on choosing the right material. No single product will repair all leaks in concrete. Many products will temporarily fix a leak, but if applied correctly, most polyurethane grouting repairs are essentially permanent.

To break down the decision process, it helps to examine the basic properties of both hydrophobic and hydrophilic grouts. The properties of each type can be used to reduce installation cost and improve the quality and life of the repair.

**Hydrophilic grouts** (from Latin the *hydro*, for water, and *philic*, for affinity) can produce either closed-cell foam or a non-cellular gel when mixed with water. The reaction time is typically 30 to 45 seconds for foams and 12 to 15 seconds for gels. When activated, foams expand in volume from five to eight times. The volume of gel produced is relative to the ratio of water mixed with resin during installation. Hydrophilic gels can shrink after they cure in the absence of water.

Hydrophilic chemical grout likes water and can bond tightly to wet surfaces. Water-scavenging agents seek out water as they react and allow the resin to work its way into water-filled pores in concrete surfaces. Hydrophilic grouts are flexible and resilient after full cure and allow the structure to move without damage to the seal or bond.

**Hydrophobic grouts** (from the Latin *hydro*, for water, and *phobic*, for fear) require a catalyst that is blended into the resin before installation. The dosage of catalyst controls the reaction time and the volume of foam produced. When used with the maximum catalyst dosage (10 percent by volume), hydrophobic resins expand aggressively. The reaction time is 10 to 12 seconds, and the expansion can be up to 29 times.

Hydrophobic chemical grouts repel water after activation. When injected into a wet crack or joint, the resins can trap water in the pores of concrete. This trapped water becomes a bond inhibitor. Hydro-

phobic resins cure rigidly and do not recover from compression. If the structure moves, there is good chance the cell structure will be damaged and leaks will reappear. Hydrophobic grout has low viscosity and permeates loose soils readily.

### What to do

This basic knowledge of the two types of polyurethane grout helps in



Water enters the manhole due to a pipe penetration.

choosing the right product and the right method for a given repair.

If a leak repair involves a non-structural defect in a concrete or masonry structure, a hydrophilic chemical grout should be used, unless job conditions dictate otherwise.

Gels should be used only in below-grade structures where either moisture from the interior (like in a manhole) or from groundwater is present to keep the cured gel hydrated. Gels will shrink if water becomes absent, but provide a low-cost alternative to foams.

Foams are appropriate for above-grade or below-grade installation. They are typically 85 percent air-filled after cure and have excellent elongation, compression and rebound for use in expansion joints, cracks, or any other non-structural defect in concrete.

The aggressive expansion of hydrophobic chemical grouts is helpful in repairing a gushing leak that is impractical to repair with milder-expanding hydrophilic resins. In below-grade structures, this is a good way to fill voids that may be present outside the structure. Once the leak is reduced to a manageable level, hydrophilic resin should be injected into the defect to back up the hydrophobic material.

Hydrophilic gels can also be used to stop gushing leaks when injected near or with a 1:1 water-to-resin mix. In this case, it is necessary to push in as much material as

possible, as fast as possible. If a high-volume pump is available, less material will be used to stop the leak, because the high flow of resin reduces the dilution.

It is wise to use activated oakum (dry oakum soaked in hydrophilic resin) to reduce the flow in gushing leaks. If the leak can be slowed, a hydrophilic resin may be used to complete the repair.



Hydrophilic chemical grout is injected around the area. Activated by the water, the grout expands to seal off any leaks.

### What to avoid

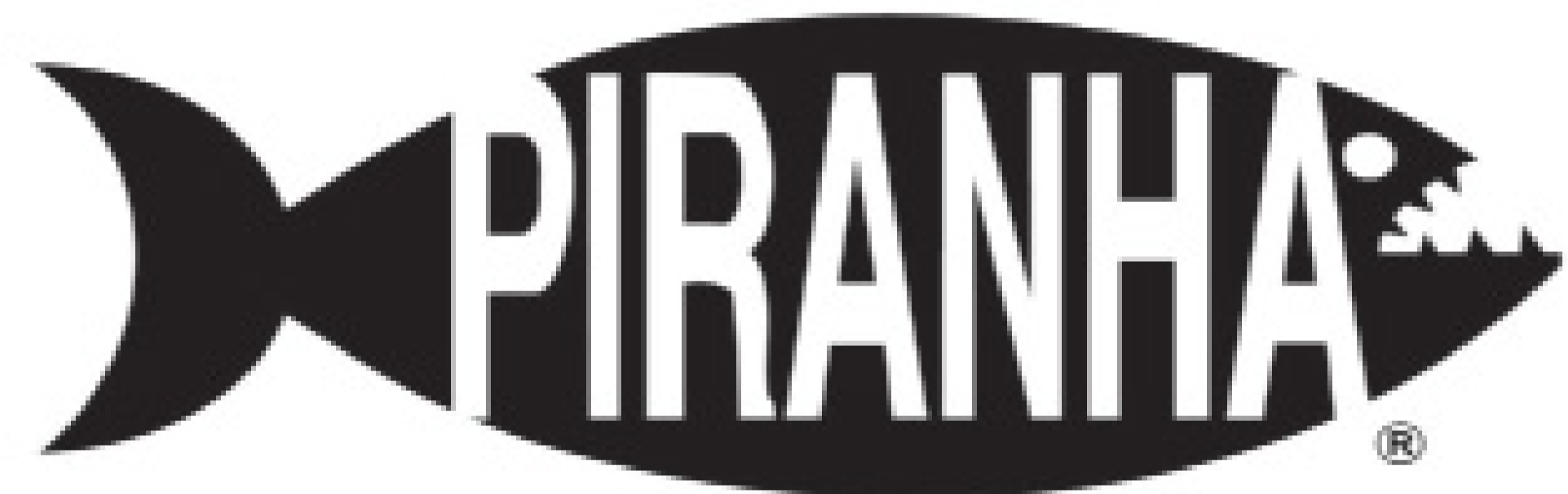
Users should avoid installing gels in expansion joints or cracks that are subject to movement. Gels form a solid material with little or no

cellular structure to disperse tension under compression. This tension can split the gel and damage the seal.

It is also important to avoid installing hydrophobic chemical grouts for repairing minor leaks in cracks or joints. The repair will be temporary. Don't hurry when repairing tight cracks and minor leaks. These can be the most difficult to repair for the long term.

As infrastructure ages, chemical grouting will maintain its value as one of the easiest, most cost-effective and longest-lasting repair solutions available. If the right polyurethane chemical grout is chosen for a repair project, and the correct installation techniques are used, the repair will actually outlast the structure.

*Scott Kelly is a technical support specialist with Prime Resins Inc., a supplier of chemical groups based in Conyers, Ga. He can be reached at [skelly@primeresins.com](mailto:skelly@primeresins.com).* ■



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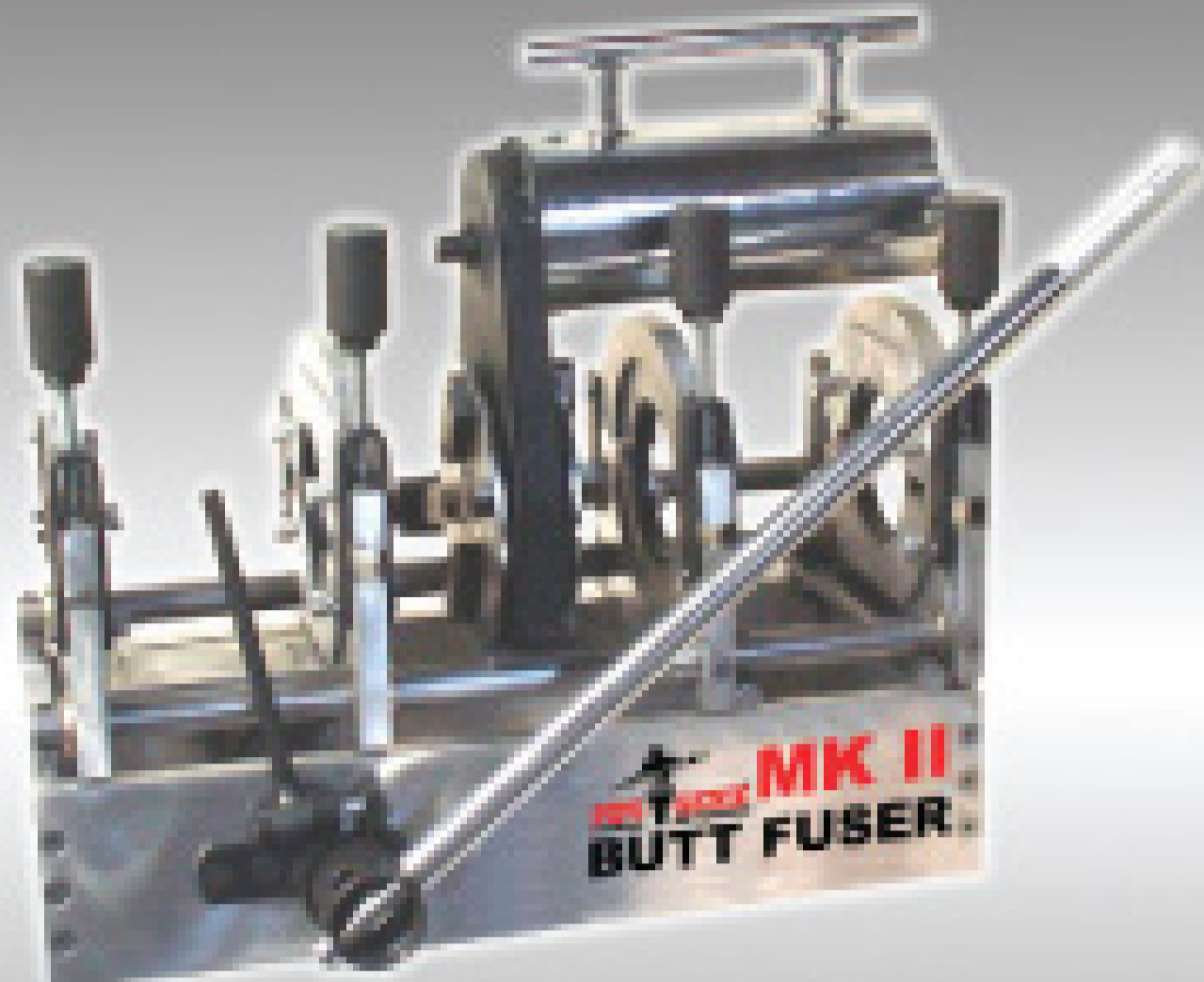
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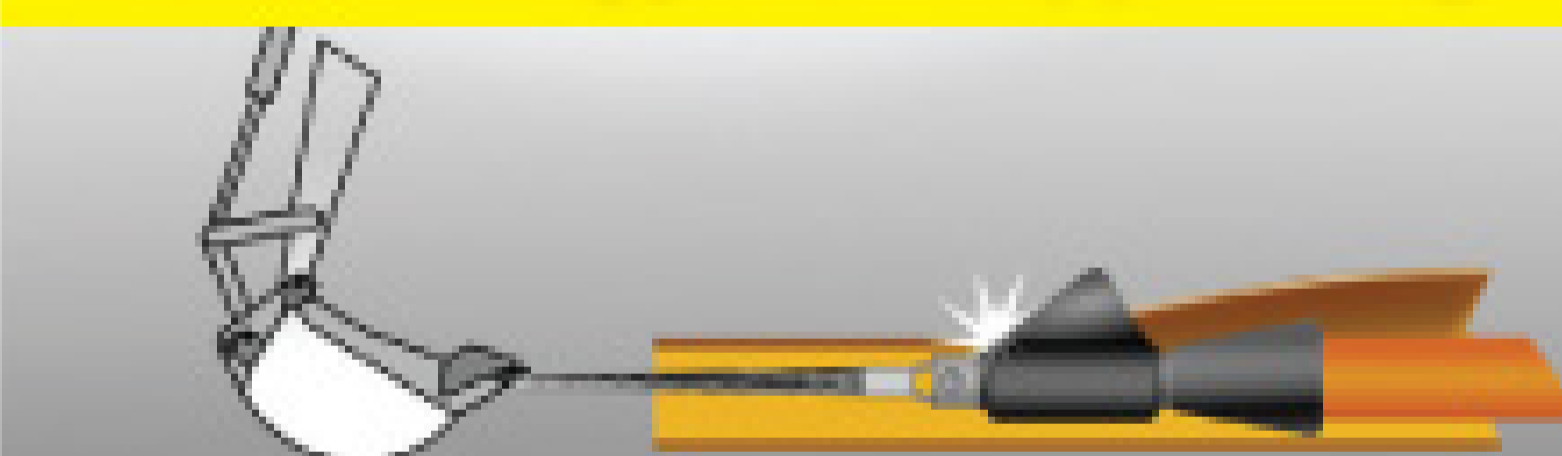
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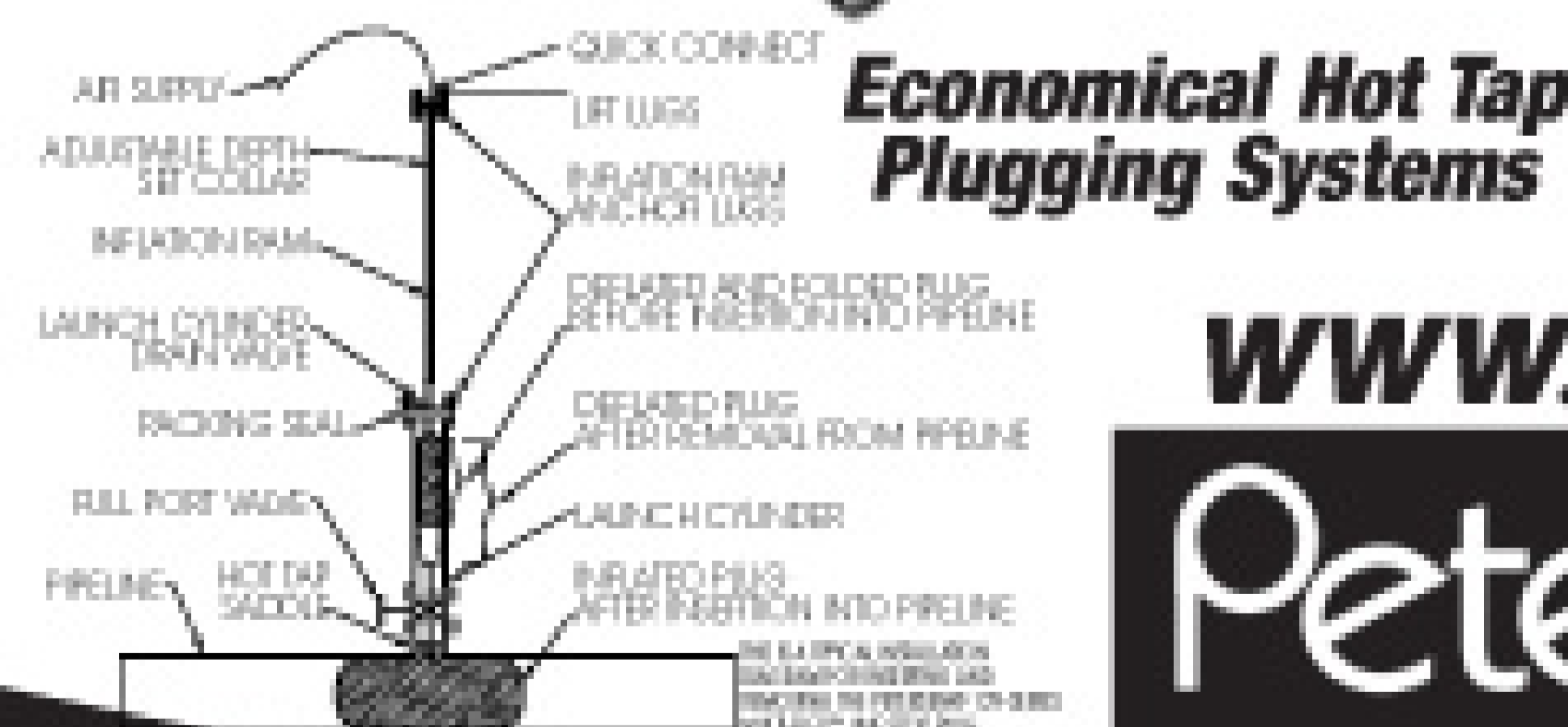
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13820	200'	<del>\$159.99</del>

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8' 4000PSI Jumper Hose W/ Qc's Included

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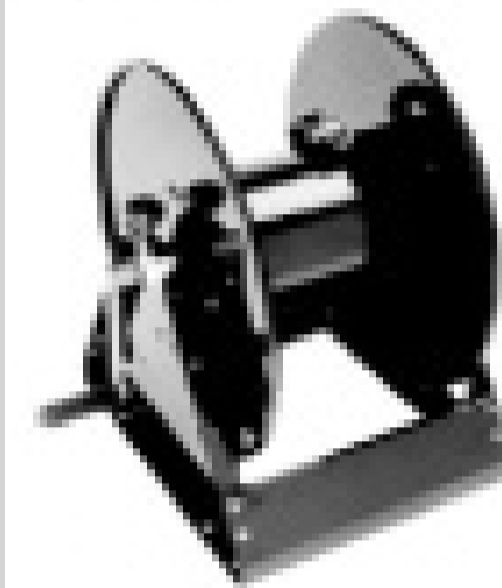


Model	Capacity	Each
M10-5	250'	<del>\$168.13</del>
M15-5	350'	<del>\$181.25</del>
M20-5	450'	<del>\$210.71</del>
M25-5	550'	<del>\$222.44</del>

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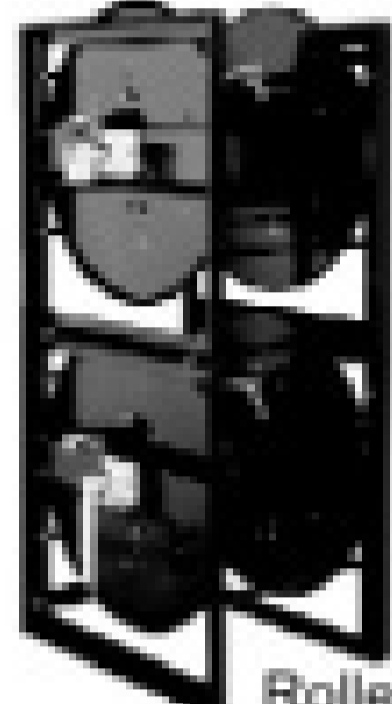


Model	Capacity	Each
M10-5LP	150'	<del>\$161.17</del>
M15-5LP	225'	<del>\$168.45</del>
M20-5LP	300'	<del>\$215.54</del>
M25-5LP	375'	<del>\$218.67</del>

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\*\*Image Shows 2 Units\*\*

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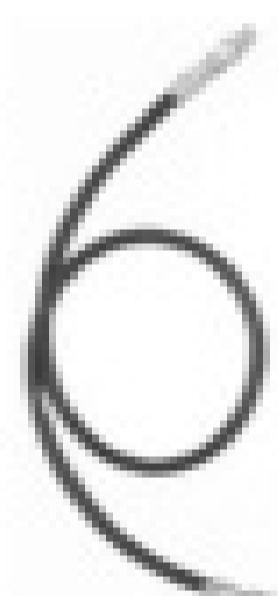
Model	Capacity	Each
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22.0082	13" Foam 3/4" Bushing	<del>\$18.99</del>	<del>\$17.49</del>	<del>\$16.99</del>
22.0107	10" Air 3/4" Bushing	<del>\$6.49</del>	<del>\$5.99</del>	<del>\$5.39</del>
22.0083	10" Foam 3/4" Bushing	<del>\$9.99</del>	<del>\$8.99</del>	<del>\$8.09</del>
22.0108	10" Air 5/8" Bushing	<del>\$6.49</del>	<del>\$5.99</del>	<del>\$5.39</del>
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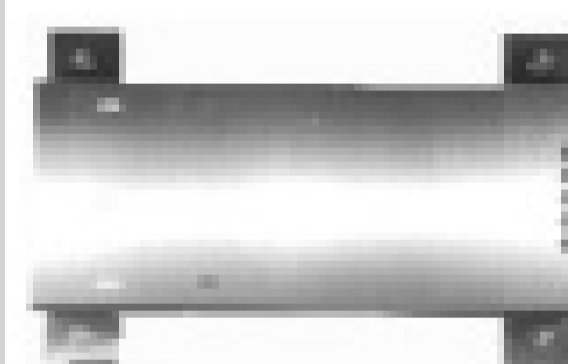


Model	Fits	Each
WCA008	6.5HP	<del>\$99</del>
WCA030	13HP	<del>\$119</del>
WCA040	24HP	<del>\$149</del>

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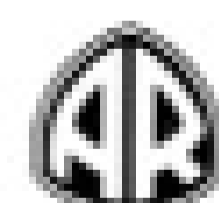
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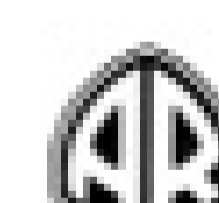


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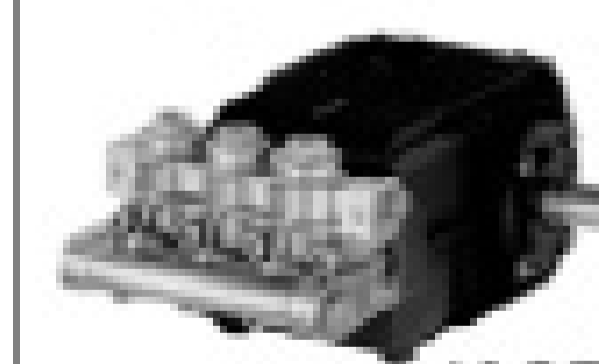
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# Life and Death

**Contractors and municipal agencies emphasize safety for confined-space entry, trenching, and other potentially dangerous duties their people may face**

By Mary Shafer

In the summer of 2002, two CIPP technicians, ages 25 and 19, were overcome by toxic sewer gas and drowned while walking through a 600-foot section of underground sewer in Iowa. Five co-workers who tried to rescue them were also overcome, but later recovered in the hospital.

Investigators found that the workers' employer, in business more than 25 years with 1,500 employees, was negligent in failing to provide adequate training for confined-space safety. The employer was also found not to have properly ascertained the hazards of the work site from the contractor, nor provided oversight to ensure the proper use of respirators and other safety equipment.

The deaths could have been prevented. Yet, these fatalities continue to occur at an alarming rate, and it's not just isolated individuals working in less-than-safe conditions who are affected. According to the National Institute for Occupational Safety and Health (NIOSH), more than 60 percent of confined space fatalities are would-be rescuers, as unprepared to encounter hazardous conditions as those they try to save.



**David Johnson**

Utility Supervisor III  
City of Raleigh (N.C.)  
Public Utilities Dept.  
Employees: 18

In an industry that depends largely on young men whose bravado may trump a sense of safety, it's critical to require comprehensive safety training. Since much contract cleaning requires operating in confined spaces, which are often hazardous, this training is especially important. What are

you doing to ensure the safety of your employees? It's a consideration not taken lightly by these cleaning operators.

The **City of Raleigh** takes no chances with its human resources. Each new hire in its Public Utilities Department who may be involved in field work is sent to Fayetteville, N.C., or to Atlanta, Ga., for 10 hours of Competent Person training, a total of three times in their first year of employment. Thereafter, every utility employee must return for an annual refresher course that keeps them updated on new federal and state regulations and new safety technology they may be expected to use on the job.

**"No one enters a confined space unless I or my operations manager is there with them. We've been trained by another company, and we oversee any work."**

**Jim Meredith**  
ABC Sanitation Inc.  
London, Ontario

"Trenching and excavations, confined-space entry, anything they might be required to do," is what these workers learn during training, according to **David Johnson**, utility supervisor III. Part of his job is to monitor these workers on the job. That includes making sure the complete pre-entry checklists for confined-space work is followed. He ensures that gas monitors and fresh air blowers and other necessary items are on site and in use.

"We also teach everyone how to fill out readings of potential toxic gases and other hazards to apply for a site permit," says Johnson.

"No one enters a confined space unless I or my operations manager is there with them," says

**Jim Meredith**, president of **ABC Sanitation**, a sewer and drain cleaning firm in London, Ontario, about halfway across the stretch of Canada that separates Lake Erie from Lake Huron. "We've been trained by another company, and we oversee any work."

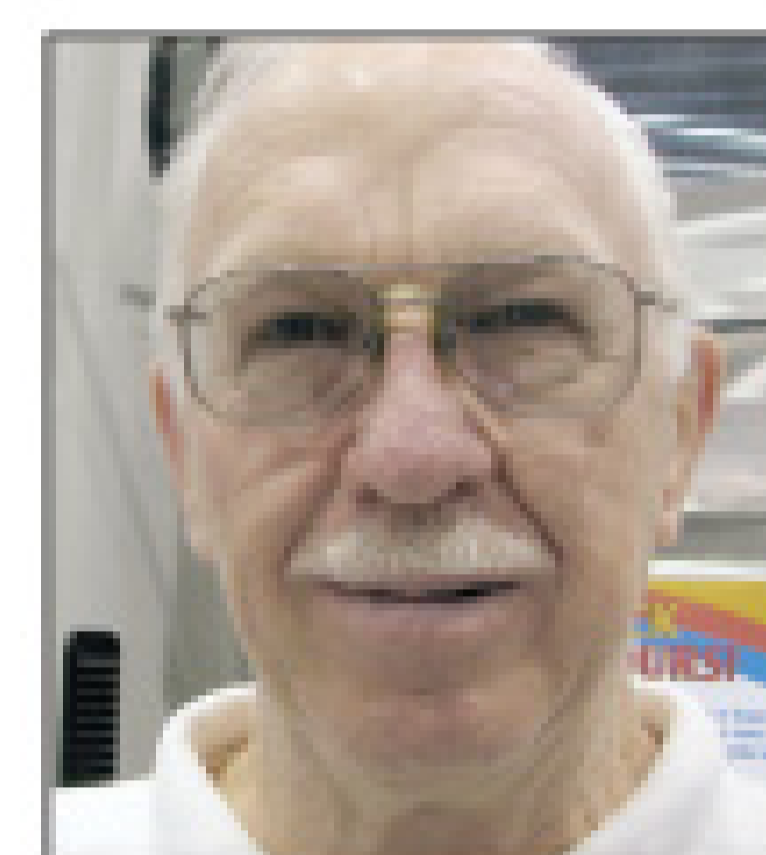
Though there's no explicit ongoing training program separate from the work itself,

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



ABC field technicians are thoroughly briefed before each job about potential safety hazards related to confined-space entry and other aspects of the project. Then Meredith or his operations manager carefully monitors the operation and use of harnesses, masks and other safety gear, along with acceptable safety practices.

Anything deemed unacceptable is called out immediately and corrected, then discussed during a project postmortem on the way back from the job.



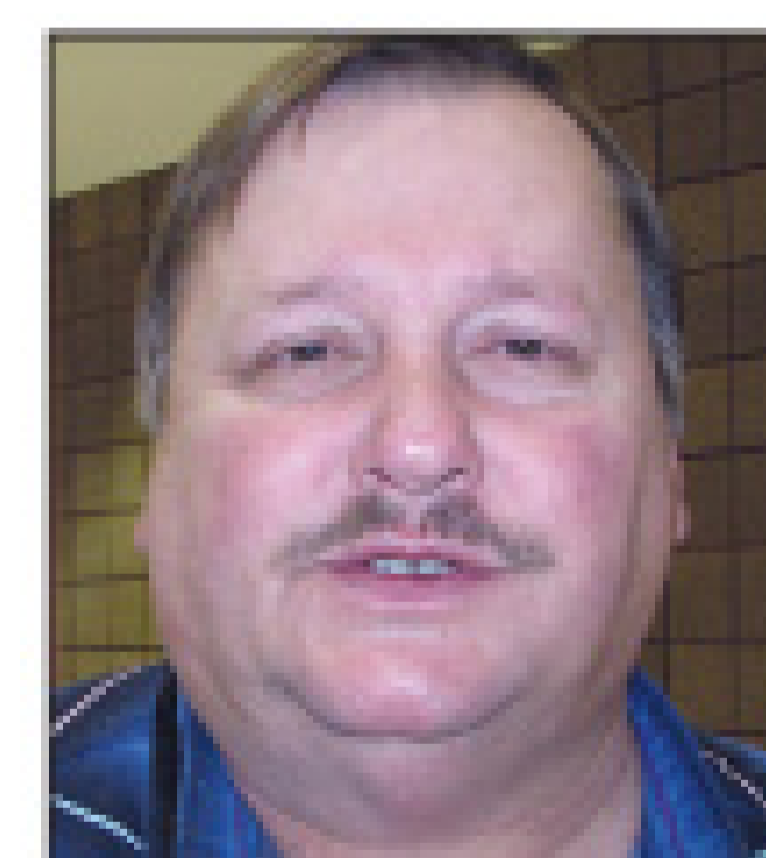
**Jim Meredith**

Owner  
ABC Sanitation Inc.,  
London, Ontario  
Employees: 6  
Years in Business: 38

There's not a big problem with having to train new workers, says Meredith. "We've been very fortunate to have the same guys now for a number of years."

Wastewater collection superintendent **Wayne Terry** works for the **City of Pampa** (Texas) Department of Public works. He oversees a department of four in this seat of Gray County in the Texas Panhandle. Safety is a paramount concern. New hires attend a required 8-hour general training program that includes guidelines for safe operation of all heavy equipment.

After that, confined-space training is conducted by representatives from the Texas Commission on Environmental Quality (TCEQ). This is part of the mandatory Water Utility Safety course of the state



**Wayne Terry**

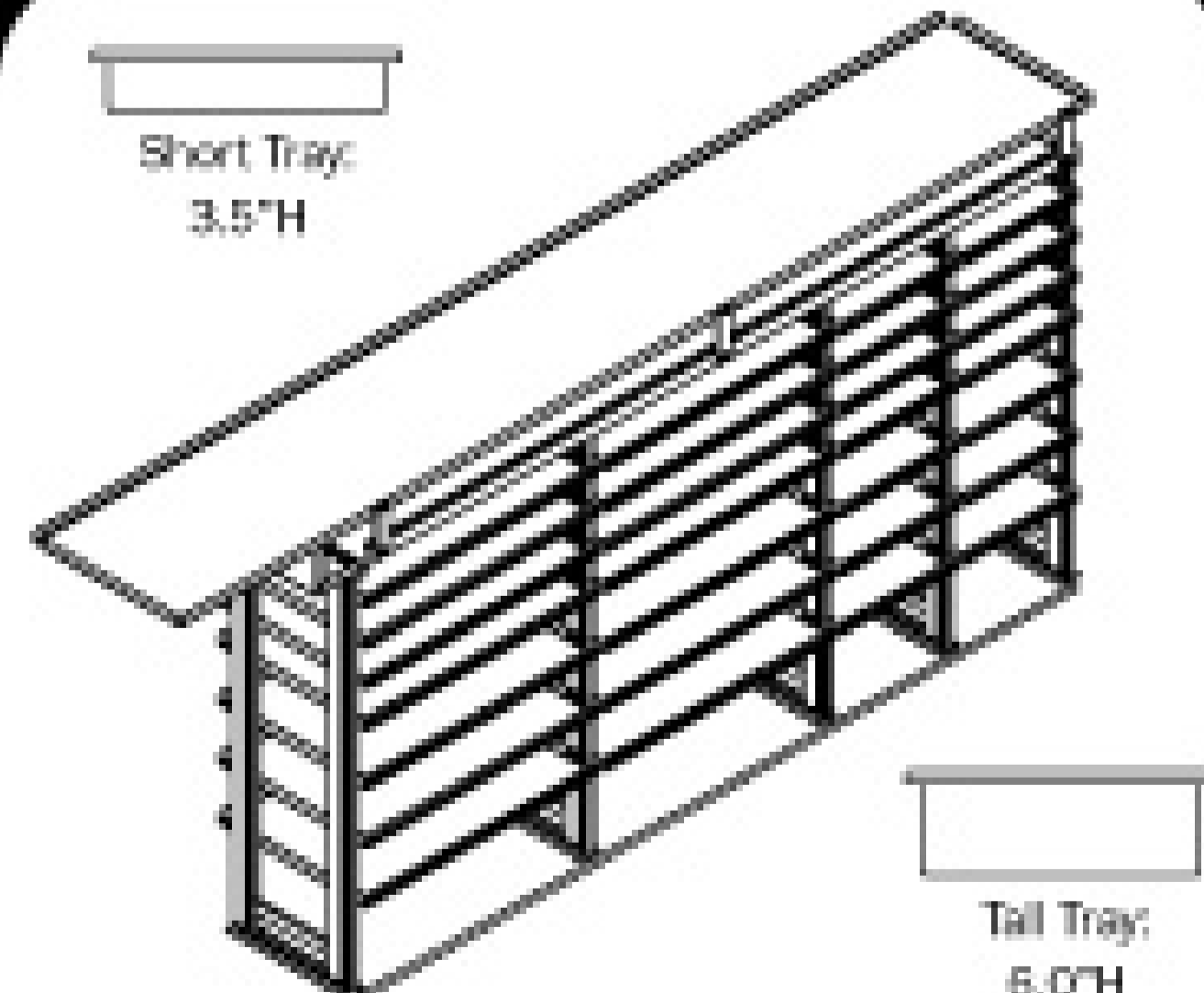
Wastewater Superintendent  
City of Pampa (Texas)  
Dept. of Public Works  
Employees: 4

regulatory body's Wastewater Licensing program.

All of Terry's employees must complete this annual certification program and occasional refresher and update courses. "We're constantly upgrading or renewing our people's certifications," says Terry. "Depending on the position, that happens every two to three years. Vendors come in regularly to demonstrate the safety aspect of using their products and equipment. Each month, attendance is mandatory at a safety training film." ■

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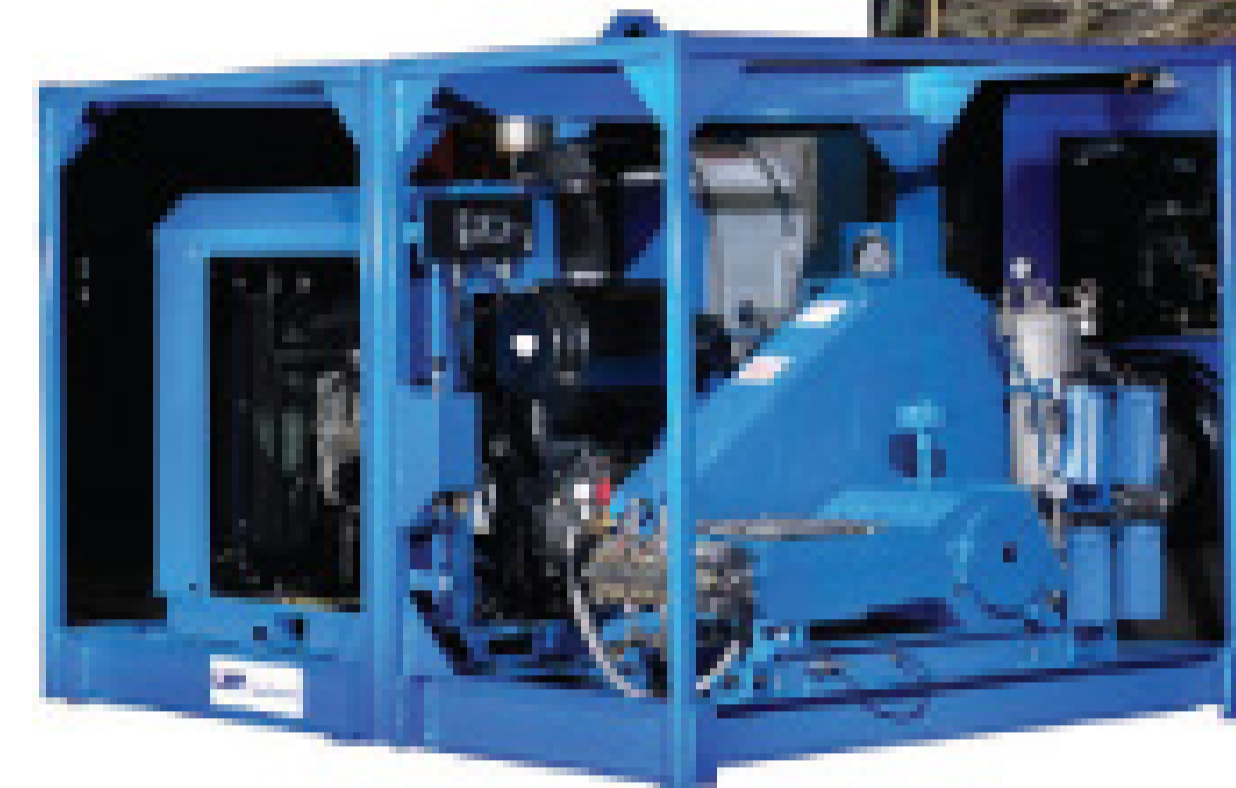


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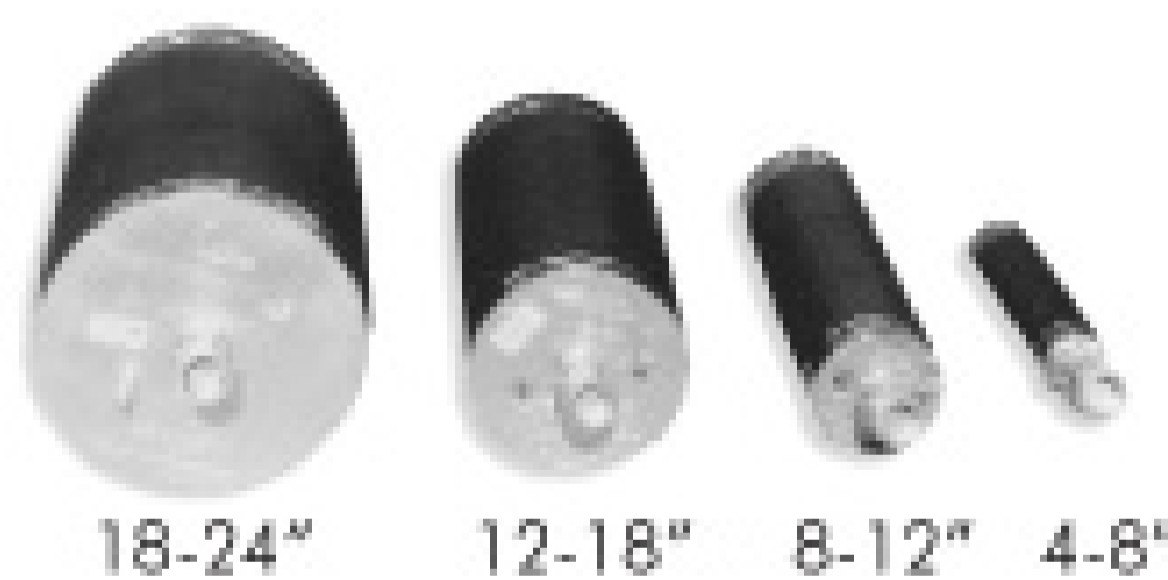
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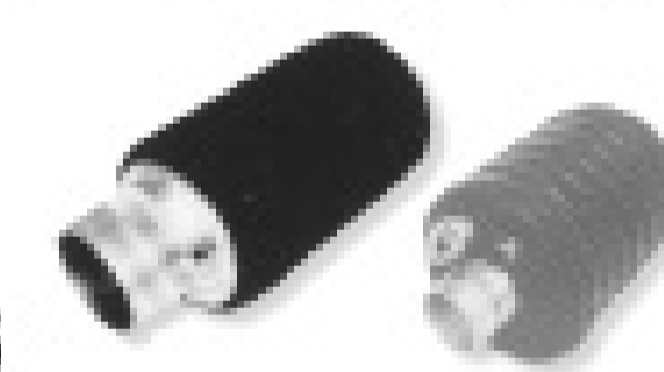
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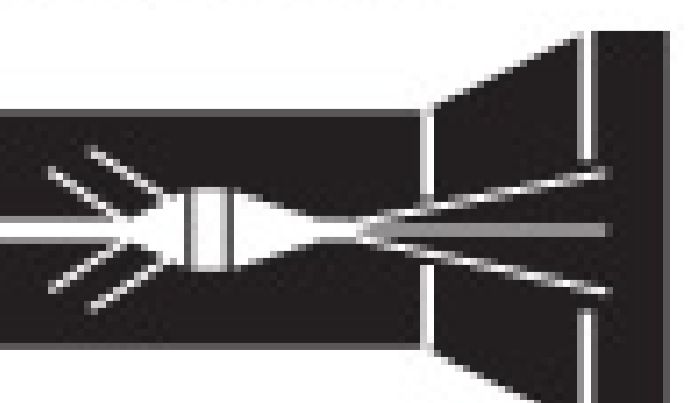
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# Clean Sweep

**A sewer pipe floor-cleaning nozzle enables a New York village to keep its street reconstruction program on schedule**

By **Scottie Dayton**

**T**he Department of Public Works in the Village of Owego, N.Y., planned to reconstruct Spencer Avenue and needed the 24-inch clay sewer line running beneath it evaluated. Wastewater Superintendent Ron Horton suspected that the 80-year-old pipe, one of the oldest in the village, had problems, but the amount of sand, grit, and gravel in it prevented an inspection.

Horton and his three-man crew spent 30 hours cleaning 300 feet of the line using a 62 gpm/1,000 psi floor-cleaning nozzle. "We were going nowhere fast, and we weren't getting down to the bottom of the pipe," he says. "We had to clean and televise that line so the DPW knew what to expect and could plan accordingly."

and meet the deadline. Based on their evaluation, the DPW will reline the combination storm and sanitary sewer with cured-in-place pipe before resurfacing the street this year.

## Stubborn adversary

The Spencer Avenue line handles 40 percent of the flow from the village, and has three pump stations. A portion of the 2,100-foot pipe was cleaned in 1978 using drag buckets, but a sewer cleaning and inspection program wasn't established until four years ago. That's when the village bought a Saturn III pan-and-tilt camera on a Badger six-wheeled crawler from Aries Industries Inc., and a floor-cleaning nozzle.

"We couldn't run the camera through the clay line because debris built up under the crawler and stopped it," says Horton. "However, we did remove some car parts. I'm still shaking my head trying to figure out that one."

When the KEG nozzle arrived, the crew worked manhole to manhole. The manholes were centered



Operator Mike Lanning prepares to lower the KEG floor cleaner into the 24-inch combined sewer line.

in intersections about 300 feet apart. They cleaned upstream 20 to 30 feet, then brought the nozzle back so as not to build up a dam that would block its progress. The streets were wide enough so that lanes remained open and traffic flowed around the work crews.

"We devoted four or five hours a day to the project, working mid-morning to mid-afternoon when the flow in the line was a little less and traffic was lighter," says Horton.

Lanning unloads the debris tank at the treatment plant for proper disposal. A total of 30.3 tons was removed from 2,100 feet of pipe.



KEG floor cleaner in place and ready to begin work.

Searching for a solution, Horton contacted KEG Technologies Inc. to demonstrate its floor-cleaning nozzle for 12- to 24-inch lines. Using an above-ground test rig, Horton saw the difference in flow characteristics between his nozzle and the eight-jet, 40 gpm/1,800 psi KEG nozzle.

Horton purchased one, enabling his crew to work seven times faster

## TOUGH JOB

### PROJECT:

Clean and televise a 2,100-foot-long, 24-inch clay sewer before a scheduled street resurfacing

### CUSTOMER:

Village of Owego, N.Y.

### EQUIPMENT:

Eight-jet floor-cleaning nozzle from KEG Technologies Inc., Madison, Miss.

### RESULTS:

Pipe cleaned, inspected, and scheduled for CIPP repair; street project completed on schedule



**“The nozzle concentrates the flow at the base of the debris, lifting it up and allowing it to collapse from above. It enabled us to stay on the job and move a larger volume of material. For example, we cleaned the entire line in 30 hours, but went only 300 feet in the same time using the old nozzle.”**

**Ron Horton**



The KEG floor cleaner brings debris back to the manhole for removal by the Vac-Con's three-stage blower.

it up and allowing it to collapse from above,” says Horton. “It enabled us to stay on the job and move a larger volume of material. For example, we cleaned the entire line in 30 hours, but went only 300 feet in the same time using the old nozzle.”

The camera traveled unobstructed through the cleaned pipe, taking images of multiple longitudinal fractures, tops of broken pipes repaired with flashing and concrete, and other issues, but no root intrusion (the area has few trees). “We met our deadline and the reconstruction of Spencer Avenue is on course and on schedule,” says Horton. ■

#### Cleaning up debris

The village's 2003 combination truck from Vac-Con Inc. powered the nozzle, which cleaned 70 feet in the 20 minutes it took to empty the 1,000-gallon water tank. Excess water in the 9-cubic-yard debris tank was directed back into a manhole. After the crew refilled the water tank twice, they had to empty the debris tank at the wastewater treatment plant. The crew removed 30.3 tons of sand, grit, and gravel from the line.

“The nozzle concentrates the flow at the base of the debris, lifting

#### MORE INFO:

**Aries Industries**  
800/234-7205  
www.ariesindustries.com

**KEG Technologies Inc.**  
866/595-0515  
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Rick Joy, *Plumbing Contractor, S.W. Florida - 30 years*

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148 hours, SEWER EQUIPMENT OF AMERICA, Model 747, 600 gallons, Perkins diesel, 600' hose, 35 gpm, 2000 psi, new paint, dual axle, Florida. Email for pics: drainexpert@gmail.com. \$7,900 OBO. Call 239-340-3840. (C8)

USJ 4018-300 trailer power pullout, wireless remote, rpm 960, hp 50, psi 4000, gpm 18. Used 37 hours, 5-head pressure washer wand, 2006 model. Asking \$28,000. Call 423-595-3343. (CPT7)

1991 Ram Rodder Jetter. Myers pump. 300 gallon water tank. 4 cyl. gas motor. Hose & heads included. \$5,750. 770-443-0131. Atlanta. (CP8)

## JETTERS-TRAILER

1993 Sreco model HV2060 trailer jet, 35 gpm, 2000 psi, Myers pump, 500' of 3/4" hose, 600 gal. plastic water tanks. Was a city owned unit. 714-639-8352. [www.empireequip.com](http://www.empireequip.com). (CPBM)

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## JET VACS

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2000 VacCon Model V311LHA on an International 2554, 3-stage fan, 50 gpm, 3000 psi pump, 11-yd. debris tank, new white paint. Located in Dallas. 972-938-1905. www.empireequip.com. (CPBM)

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## TV INSPECTION

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## TV INSPECTION

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1998 GMC Cues TV System: Approx. 1,700 L.F. of multi conductor cable, pan & tilt, Shorty transporter, washdown system, lots of storage. Good condition. Ready to work. Financing available. \$55,000. Kelly 608-279-2299. (CBM)

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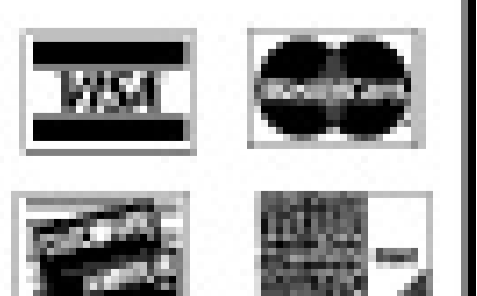
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July



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**1994 Vactor GMC White Cabover:** Cummins 6 cylinder x2, 1,000 gallons, 5 yards, dual fans, excellent condition.  
.....\$70,000 OBO  
**Contact Bill at 1-866-744-9921** CP7



**1995 Ford L-8000, Vac-Con V-390:** 8.3 Cummins, John Deere diesel upper, 3-stage blower, 9 cu. yd. debris body, 37,789 miles, 1,389 hrs. vac unit, 527 hrs. jetter. ....\$47,900  
**814-696-4343 - Hollidaysburg, PA** CPM7



**1963 Trinity Stainless Propane Tank:** 9,346 gallon, converted to MC307 Vac Tanker in 1990, new Watson air ride suspension, 5 manholes on top for easy cleanout. ....\$40,000 OBO  
**989-233-7650 - Ryan for Details** CPM7



**2008 SRECO Hydro Excavator Trailer:** 99 hp diesel, 1400 cfm, 1100 gal. sectional debris/water tank, pot holing system, hydraulic boom, hydraulic door, decant.  
.....\$93,500  
**800-421-6356 - Ask for Mark** CP7



**2002 Ford E450 Video Inspection Van:** 16' cube, 7.3L V8 turbo diesel, 101,500 mi., new tires, very well maintained. RST equip., 1,821 hrs. on computer, 5,749 hrs. on Onan Quiet diesel 8000 generator, OmniEye II & OmniEye II Zoom cameras w/mainline tractor. Computer: Windows XP Pro, WinCan 7 w/NASSCO Optibase MPEG. Ready to work. ....\$62,500  
**909-422-8990** P6C7



**1990 Vactor 825:** 1000 gal. water, 10-yd. debris, PD blower, hydraulic locks & door opener, variable flow, 240 hp Ford LNT8000, partial restoration, 90% primed, rebuilt pump. Other new parts to include 500' hose. ....\$32,000  
**Frankie @ 800-527-4469** CP7



**1984 Vactor 1200:** International chassis, diesel/diesel, 12-yd. debris tank, 1000 water. ....\$10,000  
**214-212-4604** CP7



**1997 Pipe Hunter:** 30 gpm, 3,000 psi, 600' 3/4" hose, new paint, new tires, rebuilt pump. ....Make Offer  
**518-857-7420** CP7

## LMK Receives Patent for No-Dig CIPP Lateral Lining

LMK Enterprises Inc. has received a U.S. patent for its CIPP lateral lining through a cleanout without the need for digging or cutting. Lining is positioned within a translucent bladder and vacuum impregnated, inverted through the cleanout and directed by a guide shoe. The process includes the use of a camera port, which allows a lateral push camera to be inserted inside the translucent bladder, providing visual verification of liner placement prior to curing. The system allows for installation from one access point, typically from a cleanout. The liner can be cured at ambient temperatures or accelerated with steam, and remains inflated throughout the curing process. When cured, the bladder is re-inverted and removed from the pipe. For more information on the process, call 888/433-1275 or visit [www.performanceliner.com](http://www.performanceliner.com). ■

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C07



## A Truck Body Designed for Technician Productivity

By Ken Wysocky

**A** crammed, unorganized service truck is the bane of any technician. Wasting time searching for a part or tool and traveling back to the shop cuts into profits and causes frustration.

The Hackney Performer DC/2000 service body (P/2000 for plumbers) is designed to help create an organized and efficient environment. "With flat-rate pricing, you must have as much inventory onboard as possible," says Mike Pearson, national sales manager of special applications for Hackney, a division of VT Specialized Vehicles Corp. (VT SVC). "That way, you won't need to make extra trips and lose your profit on the job."

Measuring 84 inches wide and 12 1/2 feet long with 75 inches of headroom, the DC/2000 makes efficient use of space. The shelving setup frees space in front of the truck for larger items such as sewer machines or jettors. It can be ordered with a roll-up side door for access to hose reel storage. Two sections in the rear allow for water tank storage.

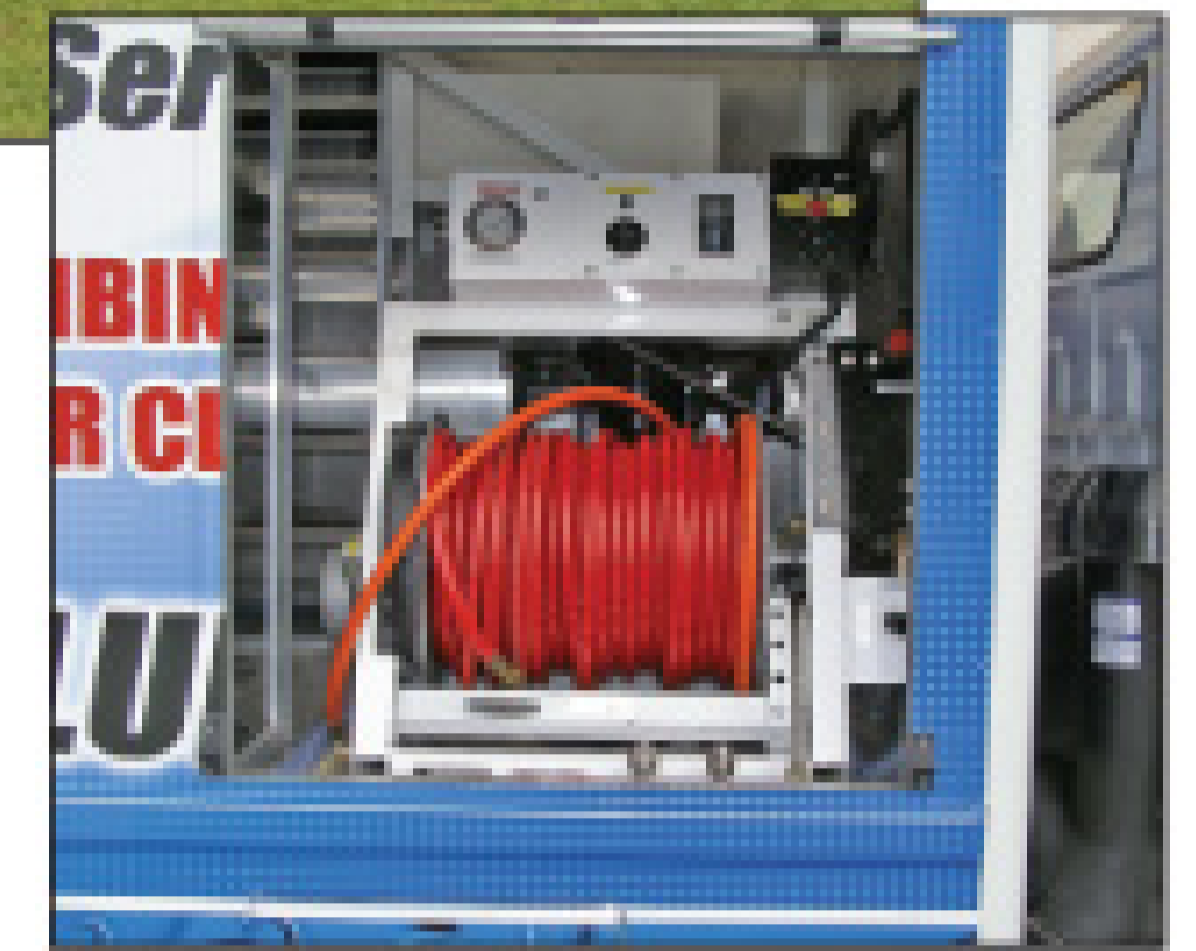
Full-width, double swing-out rear doors, which include spring rod retainers that hold them open at 90 degrees, offer easy access to storage

shelves. The shelves, 18 inches deep for drain cleaners and 23 inches deep for plumbers, are mounted on aluminum tracks and are infinitely adjustable.

"All you have to do is loosen four bolts and you can move a shelf wherever you want it," Pearson says. "Plastic storage trays rest inside the shelves like drawers in a dresser, with a one-inch retainer lip on the aisle side. Each tray has adjustable dividers that allow for up to nine compartments. There's no wasted space."

Above the shelves on each side, pipe and ladder racks provide room for 10-foot pipe sections and ladders. The truck comes with removable exterior 20-foot pipe racks. Three 7-inch dome lights provide interior lighting. A translucent ceiling is available.

"We went to a lot of trouble to make it easy to get in and out of the vehicle," Pearson says. A drop frame at the back of the chassis creates a three-step entrance. The drop frame also creates



space to store a slide-out, non-skid ramp for moving heavy items.

The all-aluminum remountable body is corrosion resistant and has double-wall construction for the sides and a double-layer roof with insulation. Smooth, flat exterior side panels offer unobstructed room for graphics. "People who buy these trucks are very image conscious, so it's designed to look great going down the road, with space for real nice graphics," Pearson notes. "It's a rolling billboard."

**For information: 800/763-0700 or [www.hackneyplumbing.com](http://www.hackneyplumbing.com).**



### RIDGID Introduces Cordless Pressing Tool

The RIDGID RP 330 pressing tool is designed for compressing 1/2- to 4-inch joints and is compatible with all standard RIDGID pressing jaws. Available in both a corded (RP 330-C) and battery-powered (RP 330-B) version, the tool has a 270-degree jaw rotation and a flattened top for easier access in confined spaces. An audible signal lets the user know when the pressing cycle is complete. The cordless model

utilizes an 18-volt lithium-ion battery. Both versions come with a three- or six-jaw kit. The cordless unit also includes two batteries and charger. **For more information: 800/769-7743; [www.ridgid.com](http://www.ridgid.com).**

### Water Cannon Offers Skid-Mounted Pressure Washer

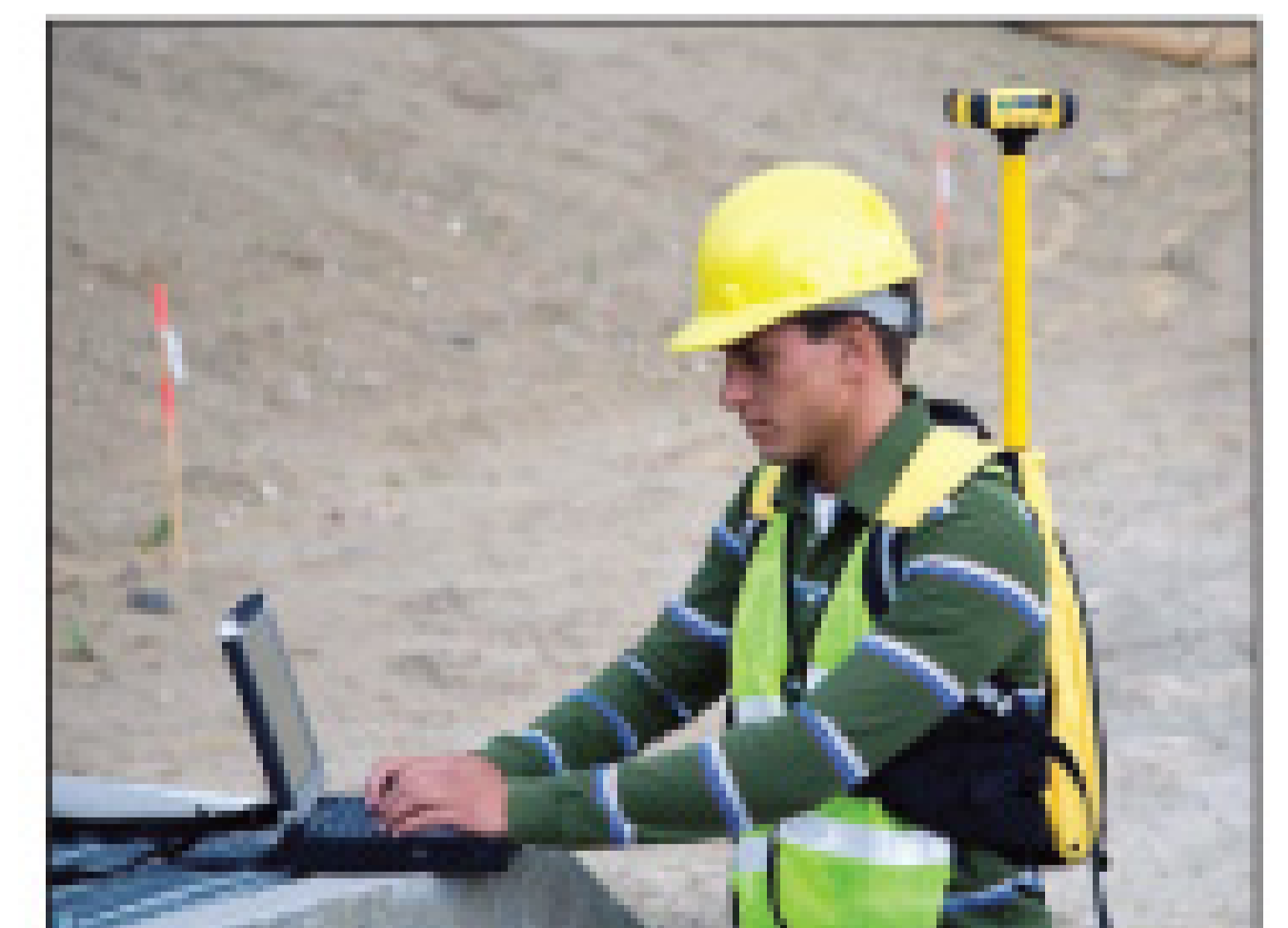
The Gator skid-mounted pressure washer from Water Cannon is available with a water tank, ranging from 50 to 200 gallons in size. The unit includes automatic engine oil level



shutdown, thermal pump protection, first-pull starting, fuel-efficient overhead valve engine, automatic decompression, lifetime aluminum frame, high-quality triplex ceramic plunger design and more. Options include a tank feed kit with external bypass assembly, drain kit, tank auto fill shutoff kit, and hose reel choices from 100, 200 and 250 feet, as well as 250-foot painted or stainless steel kits. **For more information: 800/333-9274; [www.watercannon.com](http://www.watercannon.com).**

### CUES Designs Backpack Mapping System

The CUES GPS Backpack Mapping Kit features a "hands-free" portable PC that enables field users to collect sub-meter accurate GPS coordinates, conduct asset inspections and perform data entry. The kit is designed to work with Granite XP software or an optional Granite XP ESRI module. The unit enables users to display/record sewer (manhole and lateral assets), storm, fiber and gas pipeline coordinates from a GPS receiver and transfer data to Granite XP and map their location. A Trimble ProXT receiver is included. **For more information: 800/327-7791; [www.cuesinc.com](http://www.cuesinc.com).**





## VacAll Provides High-Performance Catch Basin Cleaners

The VacAll VC model vacuum catch basin cleaner features a 16,500-cfm blower, designed to pull muck, debris, rocks, bottles and large volumes of water from catch basins through a

rugged 12-inch diameter vacuum hose. Equipped with a 120-hp engine at 2,200 rpm, the unit delivers 372 foot-pounds of torque and has a heavy duty, two-stage air cleaner with restrictor indicator. Available in 16-, 13- and 10-yard capacities, the unit offers a 12-inch vacuum tube on all models, coupled with a hydraulically controlled rear boom with 1,000-pound lift capacity. Optional front-mounted booms are available. **For more information: 800/382-8302; www.vacallindustries.com.**

## Radiodetection Launches RD7000, RD8000 Locators

The RD7000 and RD8000 pipe and cable locators from Radiodetection are ergonomically designed, lightweight and energy efficient. The receiver and transmitter feature a high contrast, backlit LCD screen for optimal viewing in any light condition. Model RD800, with an advanced Bluetooth link and SurveyCERT reporting capability, is designed for multiple applications, while the RD7000 is designed for an industry specific application. Both models are Centros enabled. **For more information: 877/647-9495; www.radiodetection.com.**



## General Pipe Introduces Metro-Rooter Cutting Machine

The Metro-Rooter cutting machine from General Pipe Cleaners features 75 feet of 5/8-inch Flexcore wire rope center cable, engineered to handle roots and other tough stoppages in 3-inch through 6-inch lines, or can be switched to 100 feet of 1/2-inch cable for smaller jobs. The narrow profile of the lighter, compact unit facilitates handling in tight places, on stairs and during loading onto trucks. The root cutter includes a fold-down handle, truck-loading wheel and tough, lightweight frame on 10-inch semi-pneumatic wheels for easy transport. **For more information: 800/245-6200; www.drainbrain.com. ■**



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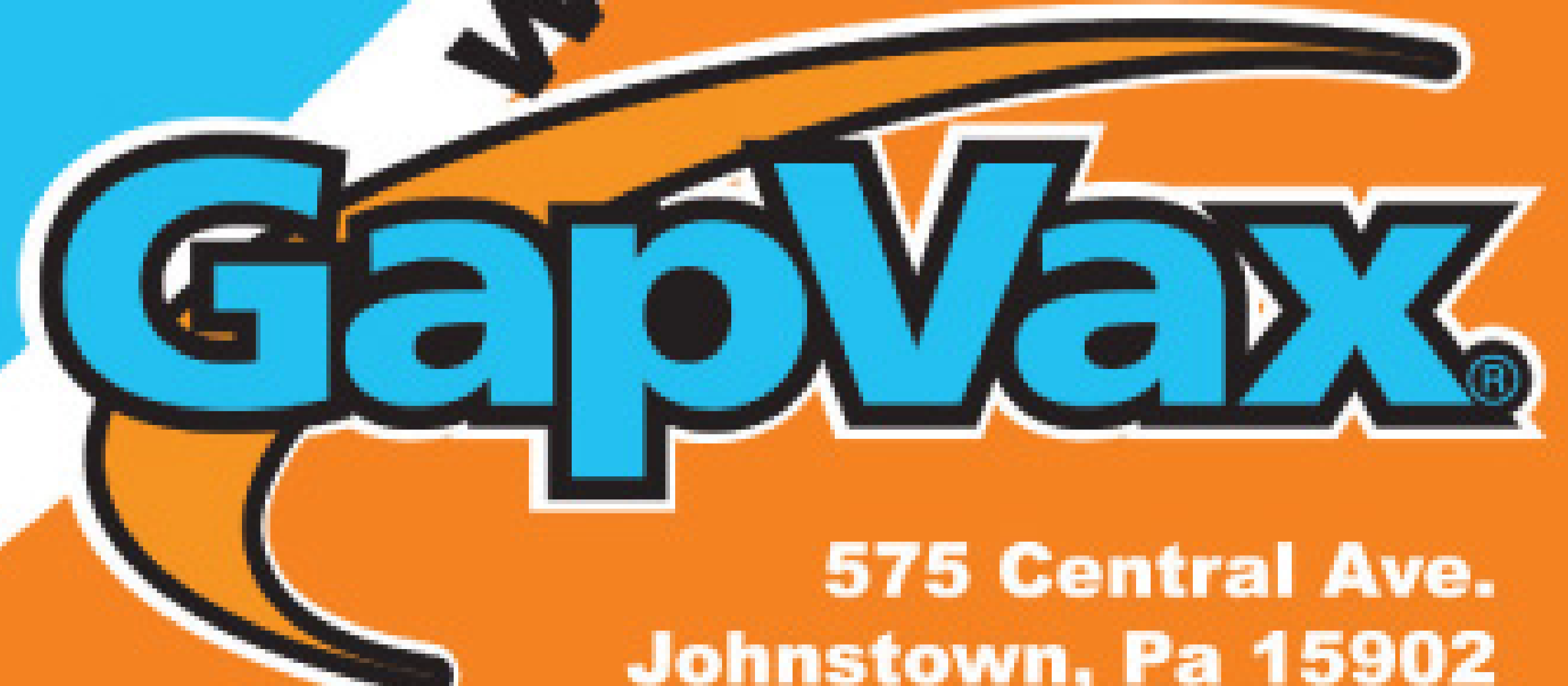
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