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ON THE COVER

Owners Dave and Maurine Burt opened a drain cleaning business 34 years ago that is still going strong. The plumbing division of Treasure Valley Plumbing and Drain Service was developed with the help of co-owner and son-in-law Jerry Robinson, who joined the company in 2005. (Photography by Darren Russinger)

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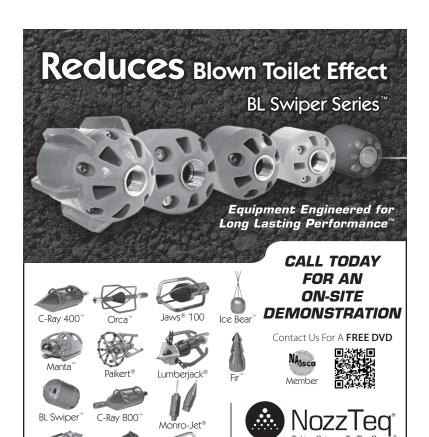
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A New View of Networking

Networking is necessary but it doesn't have to be a nightmare

rying to network turns me into a nervous idiot. It's not something I'm naturally good at, and I'm not sure any amount of practice will ever make me completely comfortable with it.

One reason is that it seems pretty self-serving. Sometimes it sounds like a bunch of people on the hunt for others who can give them a leg up in some way.

I did some reading on the subject and it turns out I'm not the



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only one with this view. The consensus seems to be that networking makes a lot of people who aren't total extroverts feel uncomfortable and a little bit inauthentic — but also that networking is necessary.

Despite the awkwardness, I'm making it a goal of mine to get better at it. So I've been doing a little research on how to network successfully. Part of this is making sure your interactions with your new contacts are a two-way street.

One tip I repeatedly see while reading up on ways to improve is to approach a networking opportunity looking to make connections, not just looking for help. You need to think about what you bring to the table. Don't just ask for the advice or help you're looking for — what can you offer others? This view definitely puts networking in a better, less aggressive light.

It's also smart to avoid starting off with "Where do you work?" or "What do you do?" Instead, make more personal connections with people. This is where I hit a snag: I am not great at small talk. I have a healthy terror of public speaking, and even in a much smaller group, I sometimes clam up and don't know what to say.

Once I know someone, it's another story, but that initial small talk is hard to get past sometimes. One thing I've learned that can help get a conversation going is asking other people questions instead of just talking about yourself. It shows that you're interested, not just trying to be interesting. People won't remember everything you said, but they will remember if you were friendly, helpful and engaging. And being a good listener is so important.

The give-and-take of a real relationship is ultimately what you're after when you're networking, so make sure you take the time to follow up with someone you connected with.

Don't rush things and try to set up multiple meetings right away. It takes time to make a genuine connection and form a relationship. It also takes time to develop trust, which is really important if you're making connections with people who on some level are your competitors.

I'm slowly starting to reframe my view of networking. Thinking of it as a necessary evil and something I just needed to work on wasn't lessening my dread of it. But looking at networking as a way to make real connections with others in the industry and to look for ways to offer up my own skills helps me make the mental shift from small-talk nightmare to learning opportunity.

Cleaner gives you a chance to learn about some of your industry peers every month, but making an effort to meet fellow contractors and business owners in person can give you a whole new perspective. It can help you grow, and that's good for business.

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

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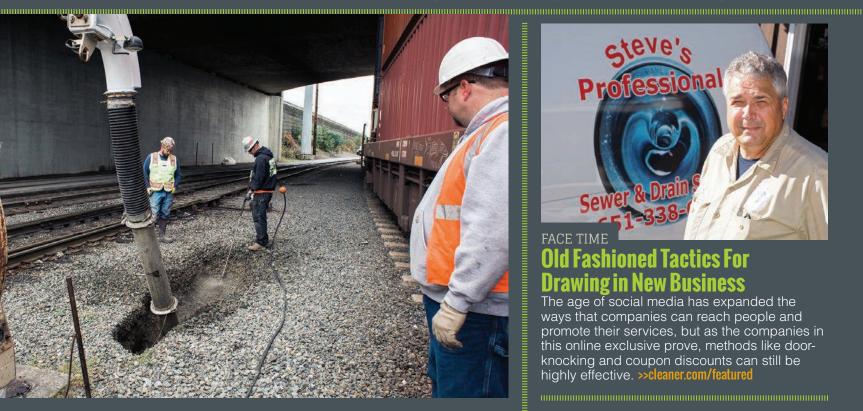
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"To build rapport with a prospect, you need to connect emotionally and intellectually. Logic makes you think, emotion makes you act."

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An Idaho plumbing business makes changes to best serve its customers and employees



By Giles Lambertson // Photography by Darren Russinger



ot many companies could get away with calling themselves "a humble bunch of plumbers wanting to take care of your plumbing and drain service needs" without sounding inauthentic. Treasure Valley Plumbing and Drain Service is an exception.

The company is located in Fruitland, a bucolic southwestern Idaho community of about 5,000 people, sitting on the eastern bank of the Snake River that separates Idaho from Oregon. Part of the Ontario, Oregon, micropolitan area, Fruitland is also home to apple orchards

and a family-oriented, small-town-America environment that persuaded Dave and Maurine Burt to settle there and raise their children. The couple opened a drain cleaning business in 1985 that 34 years later is serving customers across Treasure Valley.

Today, the company is well into a transition to second-generation ownership. It began when Gerard "Jerry" Robinson married his childhood sweetheart, who happened to be the Burts' daughter. "Her dad had a local drain cleaning business when I came into the picture. He had a dream to expand his company and asked me to be a part of it,"

The team at Treasure Valley Plumbing and Drain Service in Fruitland,

>> Chase Neill feeds a Gorlitz sewer cable through a clean-out to clean a sewer lateral.

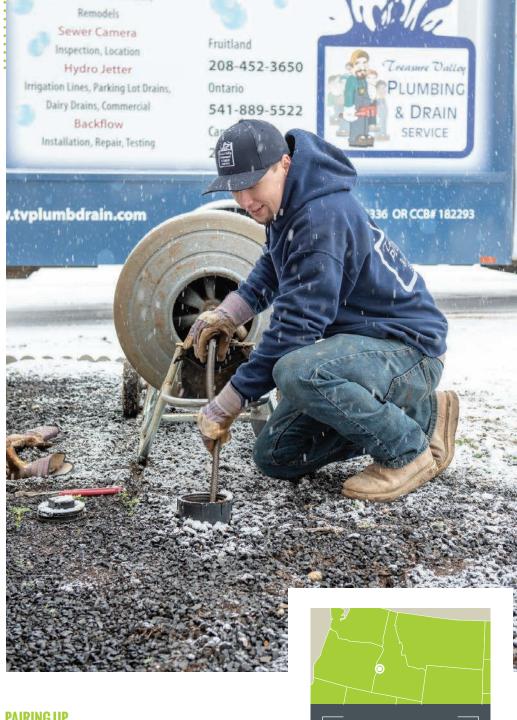
says Robinson, now a co-owner and positioned to take Treasure Valley Plumbing and Drain Service into the future.

It wasn't a huge career leap for Robinson. His father was a licensed electrician and he had spent post-high school years working construction. "I learned to build new homes and understood the plumbing in them. I worked at it for four or five years."

He is still heavily involved in homebuilding: About half of the company's business is installing plumbing and drain systems in new construction, nearly all of it residential with some light commercial properties sprinkled in. Two company crews are dedicated to running lines in those new houses. Four other crews perform service work. "In some ways, we are very diversified," Robinson says. "I can borrow one of the service crew members, if I need him, and switch him over to finishing a house. I like our guys to be diversified. They can do construction work on Friday and be hydrojetting on Saturday."

The construction side of the business is robust. It was even stronger in 2005 after Robinson joined and the drain cleaning company began to develop the plumbing side of its business. "It was a pretty good boom for a couple of years," he says, looking back on the run-up to the recession that slammed the construction industry nationwide. Fortunately, the company owners had the foresight to anticipate the slowdown before it struck them. "We began to focus on services instead of construction. We knew it could keep us alive."

It did. Now the company has expanded to include installing radiant floor heat systems, in which integrated hot-water piping in concrete flooring warms an interior room or parking area, and backflow prevention devices, which prevent contaminated and dirty water from re-entering municipal water distribution systems. The radiant floor work is not a big part of the company's business yet, but Robinson anticipates growth. As for backflow, he and one other employee are licensed to install and annually inspect the preventive devices, which adds to their workload in summer months.



PAIRING UP

Robinson can perform any of the company's service or new construction tasks and is crosstraining all of his employees to do the same. To reinforce this principle, he nearly always dispatches two technicians to every service call, regardless of the nature of the service. Plugged drain, water heater problem, leaking pipe, a clogged sewer line in need of inspection — whatever the problem, a two-person crew answers the call.

"We have done that for years," he says. "I think that came from when I started here. We had only one truck, and another guy and I worked service calls together. We decided to keep doing it that way because it seemed to serve our customers the best. It doesn't seem to be an industry standard."

Treasure Valley Plumbing and Drain Service

LOCATION: Fruitland, Idaho

CO! HE RS: Dave Burt, Maurine Burt, Gerard "Jerry" Robinson

EMPLOYEES: 17

SERVICES: Drain cleaning, sewer line and waterline replacement, plumbing services, radiant heat flooring, water heating systems, backflow prevention devices, water-quality systems

SERVICE AREA: Ontario (Oregon) micropolitan area and Treasure Valley

WEBSITE: https://tvplumbdrain.com



"I like our guys to be diversified.

They can do construction work on
Friday and be hydrojetting on Saturday."

Gerard "Jerry" Robinson

Besides having an extra brain and pair of hands at a site to diagnose and resolve a service issue, two-man crews address two company needs: the systematic training of apprentice plumbers and multiplying the number of service calls each day. Among the company's current employees are six journeymen plumbers (including Robinson), each of whom earned certification after four years of apprenticeship. They work closely with a third-year apprentice, two apprentices in their second year of training and a first-year apprentice. Working and learning go hand in hand at the company.

A coaching change

In 1985, Dave and Maurine Burt started a drain cleaning business in Fruitland, Idaho. Dave Burt did the service work, drawing upon his building contractor experience, and made calls with a service van he'd put together and a septic tank pumper. Meanwhile, Maurine Burt, who has an accounting degree from Boise State University, kept the books. She shifted into the role of office manager after the staff and customer base grew enough to warrant an office.

For the next 20 years, the family business kept busy. In 2005, son-in-law Gerard "Jerry" Robinson completed his four-year journeyman plumber course and the company added "Plumbing" to its name. With that, the business got busier.

"The work has changed a lot since 1985," Robinson says. "They didn't have any mobile phones, for example, so he'd find a phone and check in as a workday went along." Today, cellphones, smaller inspection camera units and more sophisticated jetting equipment speed the work. Furthermore, the internet has transformed marketing into a mostly online activity, supplanting traditional advertising on billboards and in telephone books, and the company has exploited the web.

In 2011, something else transformative occurred: business coaching. The Burts and Robinson were a member of a local business networking group that met weekly. There, they eventually became acquainted with Ed Renna, a business coach from Boise. "In plumbing school, they don't

teach you how to run a business," Robinson says. "That's a whole other education."

The three began to meet regularly with Renna, weekly at first and then twice a month. The focus of a meeting is whatever is on the owners' collective mind. "It might be different business strategies we want to try or some problems we may be having," Robinson says. "He also helps us manage our team — how to teach them good customer service skills or speaking skills." Renna talks regularly with other coaches about plumbing and drain cleaning and shares what he learns with the Treasure Valley Plumbing and Drain Service team.

The coaching has changed the way they do business. "Some things we were doing right. Other things we weren't doing at all. We learned about closely tracking our marketing dollars. We learned about what's good business and not good business. One thing that really stuck with us is goal setting. We began to set 90-day goals; annual goals; three-, five- and 10-year goals. The goals keep us on track."

Becoming a fuller-service company in 2005 with the addition of plumbing services was a watershed for the company, but so was the decision to engage a coach, Robinson says. "Without a doubt, taking up coaching was a pivotal point in our business. It already has taken us above and beyond where I ever thought we would be."

As for doing a maximum number of daily service calls, it seems counterintuitive to pair up repairmen at one location instead of sending them out individually to two jobs. Yet, Robinson says that, in practice, the company is able to complete six or seven calls a day with two-person crews compared to four or five when

the technicians work individually. "With the second man on hand, we seem to be able to cover more work and to get jobs done quicker — and safer — almost every time."

Some days, all four of the company's service trucks are on the road. Most are dually Chevrolet 1-ton chassis (with the exception of the fleet's oldest truck, which is an Isuzu). Each truck has a custom VT Hackney/Hackney service body and is loaded with the equipment a service technician is liable to need to resolve a problem.

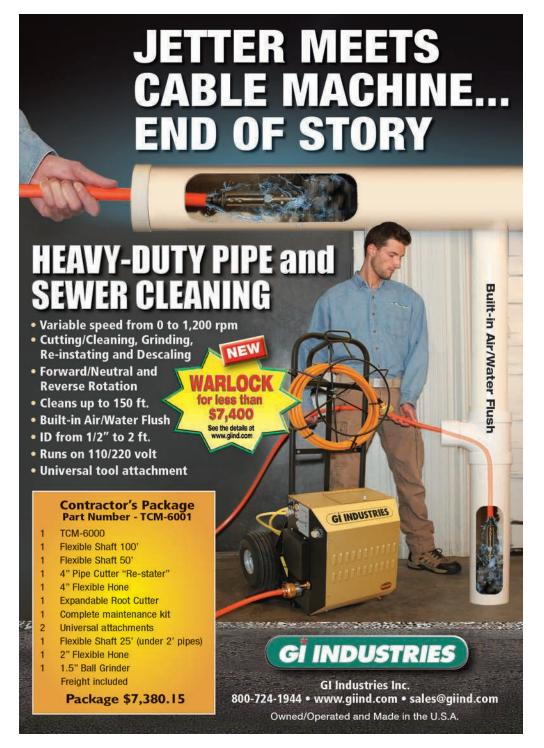
"That's another thing that sets us apart in our area," Robinson says. "Our trucks are equipped with the technology to handle just about anything." That means investing in drain cleaning machines and inspection cameras. Each service truck carries several models of Gorlitz Sewer & Drain cable machines ranging in size from 3/4 hp motors wed to 11/16 cable suitable for clearing sewer lines down to 1/4 hp units for unplugging sink drains.

The company relies on RIDGID SeeSnake cameras with 200-foot lines for inspection of water pipes, sewer pipes and drainpipes, a service the company playfully terms "Tour de Sewer." Besides natural obstructions, the camera work has located kids' toys, dead rodents and, on two occasions, wedding rings. One service call recovered a diamond band dropped down a toilet by a woman about to be married. The company performed the service free as a wedding gift.

But Robinson says a more frequent job is locating leaks in new homes after a homeowner or contractor has unknowingly punctured a PVC pipe when mounting a picture or TV on the wall. "We use a camera to find those leaks. It saves a lot of time spent tearing out Sheetrock when you know where the leak actually is."

"With the second man on hand, we seem to be able to cover more work and to get jobs done quicker – and safer – almost every time."

Gerard "Jerry" Robinson





« Cody Evenden-Griffin (left) and Jerimiah Brown unload a RIDGID SeeSnake inspection system. The company's four specialized service trucks are equipped with a Hackney plumbing box that carries all parts and equipment to handle almost any plumbing or drain cleaning issue customers may have.

IN THE FIELD

The firm's oldest service truck is outfitted with a US Jetting system to clean out plugged sewer lines and drainlines. It includes two 100-gallon water tanks, a diesel engine yoked to a 3,000 psi pump and 300 feet of hose. The rig can blast through blockages in pipes up to 10 inches in diameter.

On occasion, the company's jetting calls are to fields or orchards. Most of the agricultural land in the valley is irrigated, and irrigation lines sometimes become plugged because farmers typically pull water straight from the Snake River, which can introduce mud and rocks into a line. Or a root intrudes on a buried line to stanch the water's flow. Whatever the cause of blockage, the jetter blasts it loose.

More often the crews are jetting home drains, light commercial (restaurant, apartment complex, car wash) sewer lines, municipal mains and parking lot drains in places like Ontario, Fruitland and Payette, Idaho.

Most service calls originate within a 20-mile radius of the company office, yet it is not uncommon for one of the trucks to respond to a call from a customer in Jordan Valley, Oregon, an hour



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and a half south of Fruitland or from a ski resort in McCall, Idaho, 2 1/2 hours north. Occasionally, a call will arrive from Boise some 50 miles east. "We've gotten calls from California," Robinson says, attributing such errant encounters to confusion about town names. "We tell them a service call for them might be too expensive."

FAMILY TIES

Weekend calls are accommodated by service technicians working a rotating schedule. "We try our best to give our employees the time they need at home and with their families, but you have to take care of customers, too," he says. The company website mirrors Robinson's comment, declaring the company's commitment to faith, family and the business. "We try to keep family and faith tightly knit together in our everyday lives."

Robinson believes the company is also distinguished from rival firms by its family of dispatchers. Maurine Burt's tenure in the front office has

honed the support team into a professional unit that relies on ServiceTitan software to keep track of trucks and appointments and licensing. "We are unique in that we answer the phone professionally and with expertise unmatched in Treasure Valley."

So far, the formula has worked for Treasure Valley Plumbing and Drain Service. It has grown from a home-based, three-employee firm to one with an equipment yard and a 100-by-40-foot warehouse and office. The owners recently acquired an adjacent property with a building on it that may become a second company building.

"In the next three or four years, the Burts will retire or semiretire," says Robinson, whose vision goes well beyond those years. "I have looked into expanding to another area with possibly a second shop. And I'd like to venture into some other services, such as trenchless pipe-laying work. We've had a little trenchless work done for us from a company out of Boise. I think that will be a good opportunity for us." **c**

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Streamlining Pipe Replacement

A pipe bursting system provides an lowa contractor's customers with an attractive alternative to opencut pipeline replacement

By Ken Wysocky

ome contractors might feel a bit squeamish about spending \$22,000 on a new piece of equipment. Paul Williams is not one of them, and his willingness to give new technology a try — in this case, an RX-30 pipe bursting system made by RODDIE — provides an example of how making such investments can increase productivity, profitability and customer service.

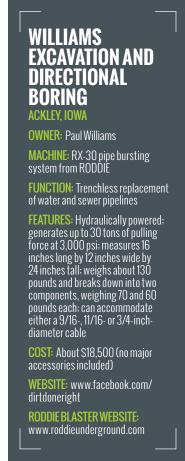
Williams, who owns Williams Excavation and Directional Boring in Ackley, Iowa, bought the RX-30 in summer 2018 after seeing RODDIE pipe bursting equipment a few years ago at the Water & Wastewater Equipment, Treatment & Transport (WWETT) Show. "I already owned an R2 pipe burster from RODDIE and was impressed with it," he says. "So I kept an eye on the company, and when the RX-30 came out, I bought one (with accessories) for \$22,000. It's a great price for what it does — money very well-spent."

Williams figured the RX-30 would streamline one of the company's core services: replacing waterlines and sewer lines. Founded in 2006, the company employs five people and also does horizontal directional boring in and around north-central Iowa.

The master plumber's hunch proved to be correct. Williams says that generally speaking, pipe bursting with the RX-30 is roughly twice as fast as opencut jobs, reducing a two-day job to just one day. "I'd say our profitability increases by about \$1,000 or more per job when we use the RX-30 compared to a conventional opencut project, and that money goes right back into our business pocket," he says.

"And when we can do more jobs per week, that increases profitability, too. Efficiency definitely drives profitability."





>> Paul Williams (center) increased his company's profitability by investing in a Roddie RX-30 pipe bursting system. The system speeds up pipe replacement work for his crew, which includes the father-son team of Doug Klosterman (right) and William Klosterman (left).

"I'd say our profitability increases by about \$1,000 or more per job when we use the RX-30 compared

to a conventional opencut project, and that money goes right back into our business pocket."

Paul Williams

OUT WITH THE OLD

In pipe bursting, a conical-shaped device called a bursting head is pulled under extreme pressure through the pipe that's being replaced. The bursting head is larger than the host pipe, so it fractures the pipe as it passes through.

At the same time, the bursting head tows a length of HDPE pipe that replaces the old pipe. During the process, new sections of pipe are fused onto the tail end as needed; the company uses a pipe-fusing machine made by McElroy.

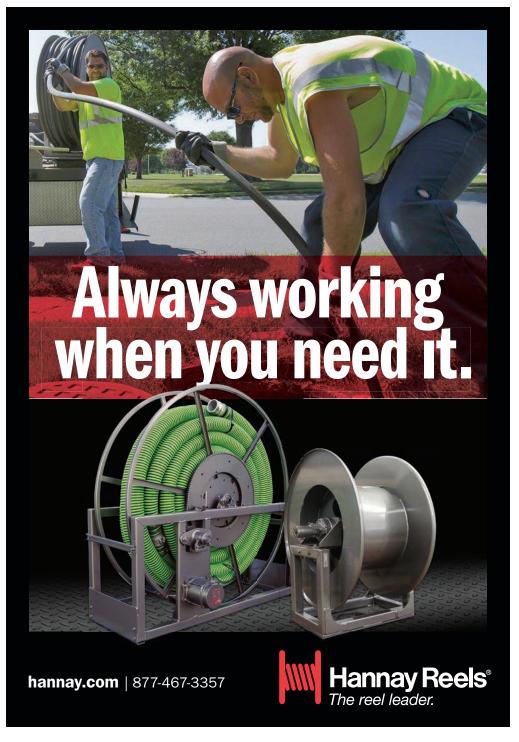
The ability to replace pipelines without disturbing customers' property is an extremely strong selling point. Even though pipe bursting typically is a little more expensive than conventional excavation, it saves money in the long run because customers don't have the additional property-restoration expenses that often accompany opencut jobs, such as replacing trees and shrubs, sidewalks, fences, patios, driveways and sidewalks.

"An opencut job might destroy a tree that was a gift from a customer's grandma, for example," Williams explains. "But if we do a trenchless repair from the house to the main, you'll never know we were there except for a hole in the street and a hole in the basement floor."

He recalls one particular job where a damaged residential sewer line ran right under a narrow space between a property line and a large, wraparound porch. "There was no room for an opencut job. To do so would've required removing the porch and a nearby fence, too.

"So instead, we used the RX-30 to pull a new pipe through from the street, leaving the porch and fence intact," he says. "It would've cost a huge amount of money to replace that porch — much more than the cost of the sewer line replacement. The customer was very grateful. I'm sure I made a lifetime customer there." CONTINUED >>







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To break a hole in basement floors, employees use an electric 90-pound jackhammer made by Wacker Neuson. To cut into pavement and excavate in streets, they rely on Stihl concrete saws and three Bobcat excavators. The company also owns two Bobcat skid-steers.

PORTABLE AND POWERFUL

The RX-30 essentially consists of a pulling unit that breaks down into two pieces for easy transport. The components weigh 70 and 60 pounds each. The unit can accommodate either a 9/16-, 11/16- or 3/4-inch-diameter cable; the cables, bursting heads and other accessories aren't included in the base price.

"We love the way it breaks down into smaller pieces, which makes it easier to move," Williams says. "One guy can grab one piece, and another guy grabs the other piece. And the machine is small enough that we can easily use it inside a basement."

The unit is hydraulically powered (possible power sources include a mini-excavator, a skid-steer or a hydraulic power pack). The RX-30's compact footprint (16 inches long by 12 inches wide by 24 inches tall) belies its power; it generates up to 30 tons of pulling power at 3,000 psi and can pull up to 8 feet of pipe per minute, according to information provided by RODDIE.

"The power is more than adequate," Williams says. "I don't think we've ever needed more than 10 to 12 tons of pulling power. Cast iron pipes are the hardest to break and we've never had any problem. The RX-30 just busts right through them."

Williams says the RX-30 has easily paid for itself already. And he expects no shortage of work in the years ahead, noting that the company uses the machine several times a month and does approximately 20 to 30 pipeline replacement jobs annually.

"The RX-30 is central to what we do because we replace so much sewer line," he says. "In our service area, most of the housing was built in the 1950s and '60s, when they used Orangeburg pipe for sewer lines. That pipe now is reaching the end of its service life — a lot of it is in really bad shape.

"We're going to be putting in new pipes for a long time around here. I don't see any end to it. So we might as well do it as efficiently and cost-effectively for customers as we can." ${\bf c}$

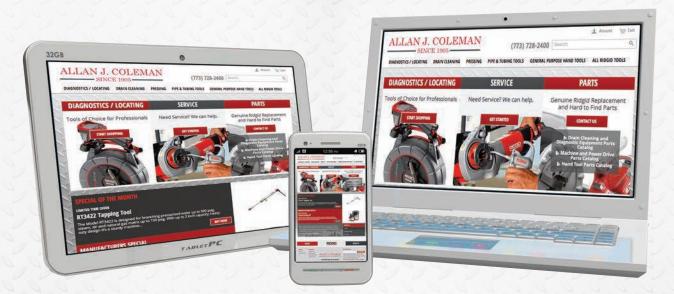
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One Conversation **Produces Better Performance**

An easier approach to discipline that respects the employee and your manager while resolving problems

By Sue Bingham

t's a great irony that the discipline policy preferred by most companies is called "progressive." The word progressive means "making favorable progress or change;" nothing is further from the truth with this type of policy.

A progressive discipline policy is about punishment — not improvement. This process was created to protect companies from adverse legal rulings, mostly at the advice of legal counsel. The irony is that a claim or charge can be adjudicated in favor of the employee — not because of what the terminated employee has or hasn't done, but because the company failed to follow the myriad details outlined in its own policies.

Most managers denounce their company's progressive discipline policy as lengthy, overengineered and ineffective. For the bad apple who shouldn't have been hired in the first place, this process takes far too long. And a small minority of abusers use the policy like a playbook and keep ahead of the game by changing the performance issue that is violated. They also know the time required for the last warning to be removed so they can do it again. Here's how it works:

PLEASE SIGN HERE

Typically, progressive discipline policies are composed of several steps, with each step involving an employee and his/her manager and eventually witnesses. In each step, the communication is routinely one-way and parent-child, ending with the threat: "Failure to improve will result in further disciplinary action up to and including termination."

• Step 1 is a verbal warning. The word "warning" is correct because the discussion ends with a threat. The angry employee then leaves.

- Step 2 is just like the first step but is now called a written warning. Again it ends with a threat (in a more serious tone) and the angry, dispirited or apathetic employee leaves after being asked to sign the warning.
- Step 3 varies among companies. It may be a second written warning or an unpaid suspension from work. The employee is sent home (which seems much like sending a child to his or her room), and the employee and his or her family are being punished because the company is withholding pay.
- Some companies even have a Step 4 a third and final written warning. This is usually a tense and negative interaction between the manager and employee. It exists to create a paper trail that will hold up in an unemployment claim or court of law once the employee is terminated (at this stage, the decision has already been made to fire the employee).

This is an adult conversation.

and the ending depends on the employee's response.

Punishment is not instructive. It cannot teach a new behavior or solve a problem. The improvement or desired behavior will never be permanently learned unless an employee and his or her supervisor work together to solve the problem.

In some traditional companies, equipment is treated better than employees. Using a progressive disciplinary approach is like banging on a machine to make it run better.

HERE'S A BETTER WAY

Assume that the vast majority of employees are good people who want the company to succeed. They are adults who own homes, raise children and serve in their communities. If a problem develops and is brought to their attention, their desire is to solve it.

A performance coaching approach is based on this assumption. If a problem arises, those involved will want to solve it. This coaching meeting has an agenda the manager partially prepares in advance to be clear and concise about the problem. When prepared, the manager can state the issue, usually in under 15 seconds, and then ask, "What's going on?" This turns the problem-solving conversation immediately over to the employee to discover the cause of the performance issue.

This is not a "step" process. This is an adult conversation, and the ending depends on the employee's response. For example:

• Cooperative: If the employee is cooperative (most are), he or she accepts responsibility and offers an action or commitment to address the cause — problem solved. The action or solution is not provided by the manager. The manager helps follow through on the employee's plan.

- Uncooperative: The employee may be uncooperative, meaning he or she isn't forthcoming regarding the cause, blames others or simply avoids responding as an adult to the manager's questions. When this happens, the manager reflects what he or she is seeing and hearing. Most people become cooperative at this point. If not, the manager will ask the employee to go home for the rest of the day. Unlike a suspension, this time off is paid because the employee's job that day is to decide about his or her employment. Is this a job he or she wants? Can he or she meet expectations? If so, the employee is expected to return with a sincere commitment statement or plan of action. If the employee determines the job is not for him or her, the company processes his or her resignation. (A surprising number of people make the decision to change.)
- Disrespectful: Occasionally an employee can go beyond uncooperative and become downright disrespectful. There is no room for disrespectful behavior in this process. The manager reflects what he or she is seeing or hearing, and if the employee continues to be disrespectful, the manager ends the meeting. The employee is sent home and informed that the manager will call in the morning to let the employee know if he or she still has a job.

In all three instances, the problem is solved — usually with less than two conversations.

This process does have documentation. When a manager lacks confidence that the improvement will be made, a letter is sent to the employee that documents both sides of the conversation including the employee's plan of action. It is kept in a company file. When the employee's response results in resignation or termination, a report detailing the conversations is submitted.

AVOID LEGAL ISSUES

With this approach, the legal process is now focused on the employee's response and subsequent actions versus whether the detailed progressive discipline steps were followed by the company.

As competition for good people becomes more intense, companies that treat their employees with respect gain the advantage. Managers are then free to use the leadership, judgment and communication skills for which they're paid. **c**

ABOUTTHEAUTHOR

Sue Bingham is founder of HPWP Group, a coach, speaker and author of Creating the High Performance Work Place: It's Not Complicated to Develop a Culture of Commitment. Reach her at www.hpwpgroup.com.



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ome plumbers don't want anything to do with drain cleaning beyond the occasional clogged kitchen sink or bathtub. Then there are plumbers like Dirk Feikema, who've made drain cleaning — ranging from smaller jobs to stopped-up sewer lines — a staple of their service offerings.

Sure, there are additional costs involved when entering new markets. And yes, sewer jobs literally stink. But the owner of Feikema Plumbing & Sanitation in Munster, Indiana, says that given the profit margins and high demand for such work, it's hard to justify not doing it — especially if it means giving away the business and revenue to a subcontractor. Moreover, larger drain-cleaning jobs serve as a launch pad for other high-margin services, such as drainline inspections and pipe bursting to replace bad lines.

"I grew up doing it, so I never considered not doing it," says Feikema, 50, the third-generation owner of the company. His grandfather, the late Peter Feikema, established the business in 1956 in Munster, located right by the Illinois/Indiana state line in the northwestern corner of the state. "I've been rodding sewer lines on my own ever since the day after my 16th birthday. I got my driver's license and my dad put me to work doing sewers on my own.

"Now sewer lines are a huge part of how I stay in business," adds Feikema, who says cleaning drains generates about 13 percent of his annual revenue. "It's a case of one hand feeding the other. I get calls a couple times a week from different contractors who can't get a sewer line open and believe it's broken. Then I can come out and use a camera to locate the problem and give the customer an estimate to fix it, if need be.

"At the end of the day, drain cleaning is a serious part of my

business," he says, pointing out that he and two of his six technicians are dedicated primarily to drain cleaning work.

BUSINESS EVOLUTION

The company started out as Peter Feikema Excavation, which primarily focused on new residential construction work, fueled by a post-World War II building boom that drove demand for everything from





Creating customers for life

To Dirk Feikema, the essence of good customer service is not all that complicated: Be accessible. Operate with honesty and integrity. And make it easy for people to remember your company the next time they need service.

"A lot of it boils down to just caring for the customer," says the third-generation owner of Feikema Plumbing & Sanitation in Munster, Indiana. "Most of my customers are pretty loyal to me because I take care of them. The key is providing timely service at a reasonable rate."

Accessibility is a key factor in that customer care. "For better or for worse, I answer the phone almost all the time," he says. Office calls usually get transferred to his cellphone if no one is in the office. "That way, when customers call, I can give them an answer right away."

The honesty component comes into play by not recommending unnecessary products and repairs. For example, Feikema says he could try harder to persuade customers to buy new fixtures and the like instead of making repairs but he doesn't. "I don't put any pressure on my guys to try and upsell products, either," he says.

In addition, Feikema says he strives to avoid overscheduling his technicians. That way if a customer wants to get a repair done that wasn't expected, there's still time to do it.

To make it easy for customers to remember his company, Feikema hands out refrigerator magnets designed to look like his vacuum truck. The magnets, made by Stamp Works Magnets in Texas, include the company's contact information.

"People respond well to that," he says. "It's hard to quantify how it affects business. All I know is that when I go into customers' kitchens to get paid, I usually still see the magnet on the fridge."





digging basements to installing septic systems. After a few years, the elder Feikema and his son, Wesley Feikema, decided to pump out septic tanks, too, as well as branch out into installing waterlines, sewer lines and drain tiles.

Larger market forces nudged the company toward plumbing work, but it didn't happen overnight. Over the years, as new-home construction gradually slowed in the northern half of Lake County where the company does most of its work, demand for excavation work declined. Meanwhile, demand for service-and-repair plumbing grew as the housing stock aged. As such, doing plumbing work locally made more sense than making longer drives to do new-home construction work, not to mention incurring the associated higher costs for fuel and vehicle maintenance and wear and tear, he says.

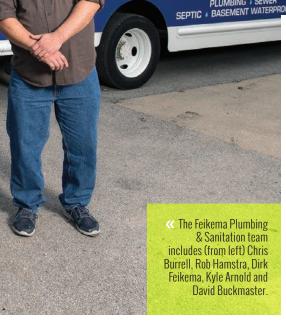
"We could've followed the new-construction world, but that would've meant working farther and farther away from our yard," says Feikema, a master plumber. "Or we could focus on fixing our neighbors' problems and stay 5 to 10 miles away from our yard. It was a no-brainer."

Dirk Feikema started working for his father during summers after he graduated from eighth grade. He went to college with ambitions to be a teacher. But after he graduated from college in 1991 with a history degree from Calvin College in Michigan, he decided to work for his father.



"We could've followed the new-construction world. but that would've meant working farther and farther away from our yard."

Dirk Feikema



At the time, the company already was dabbling in minor plumbing jobs, but Feikema felt it could be more valuable than just fill-in work. "So drain cleaning and service plumbing became my thing," says Feikema, who started attending plumbing school. "I'd pump two septic tanks in the morning, and then do two or three drain cleanings in the afternoon. That's how we went along for years.

"There was never any kind of master plan," he says of the company's gradual makeover. "It was just a go-where-God-leads-you kind of thing. I'm good at what I do, but I'm no strategic genius. Plumbing was just more my thing, while my father (Wesley Feikema, now retired) just loved to dig holes."

INVESTING IN EQUIPMENT

Offering a variety of services requires an array of equipment. For drain cleaning, the company relies on almost a dozen RIDGID machines including a K-40 sink cable machine, K-50 and K-60 sectional drain



>> Master plumber David Buckmaster clears a sewer line with a RIDGID 1500 drain machine.

machines, and a larger K-1500 drain machine; a cart-mounted water jetter made by General Pipe Cleaners/General Wire Spring; a Crap Shooter and Crap Shooter II, made by BullFrog Industries, for cleaning smaller drainlines; and a Kinetic Water Ram drain cleaner, made by General Pipe Cleaners/General Wire Spring. Feikema also owns two RIDGID SeeSnake pipeline inspection cameras, one SeeSnake Mini camera and a pipe bursting system manufactured by TT Technologies.

The plumbing end of the business relies on three service vehicles: a 2018 Ford F-59 step van with a 16-foot aluminum box body made by Morgan Olson, a 2004 GMC Savana extendedlength cargo van and a 2017 Ford Transit van equipped with a storage system from Kargo Master.

"The Kargo Master cabinet (with three long drawers) is just about the best thing ever," Feikema says. "It runs parallel to the bulkhead, so the drawers pull open to the side of the truck, which makes things very accessible." The drawers are divided into compartments.

"Ultimately, I feel lucky that I found something I'm good at and that allows me to help people with their problems."

Dirk Feikema

Feikema says he uses the bottom drawer for storing tubular combinations for traps, the middle drawer for faucet parts and the top drawer for items such as wax rings, Fluidmaster toilet fill valves, expansion plugs and so forth. "It's basically a horizontal filing cabinet that holds a ton of stuff."

For power tools, Feikema prefers Milwaukee Tool products. The company also owns a ROTHENBERGER USA Ropress tool for joining copper fittings; a RIDGID pipe-sawing machine; and a leak-detection smoke machine made by the Superior Signal. "We might only do smoke-testing three or four times a year," he says. "But that machine paid for itself after two jobs. And it has an electric motor, so it's not like it's going to go bad."

RIGHT-SIZED

Looking ahead, Feikema has no ambitions to dramatically increase the company's size and scope. Once again, geography makes that an easy strategic decision. "Sizewise, I don't want to grow any larger," he says. "I'm at a comfortable level in terms of employees and equipment.

"In addition, I'm sort of limited by my geographic location in that we work out of a barn on a farm my family owns. When we started out, there was no town around us, but now we're boxed in by neighbors, so I can't expand my yard. And it makes no sense to move to another location to get more room. Again, would you rather do service calls a mile or 2 from your shop or, say, more than 30 miles from your shop? I've accepted the size-limitation factors."





Apprentice Chris Burrell (left) goes over the day's assignment sheets with owner Dirk Feikema.

>> Kyle Arnold and Chris Haniford (front) replace a disintegrated concrete distribution box with a seven-hole TUF-TITE distribution box.

Down the road, Feikema may have to accept something else: The fact that there might not be a fourth generation taking over the family business. He has two children, a son and a daughter, ages 18 and 16, respectively. And neither of them appear to be interested in taking the reins.

"I don't expect my son to come back," Feikema says. "I'm trying to not put pressure on him to come back, either. If it happens, it happens — he has to choose his own life.

"But in the meantime, I would like to operate the business for another 10 years or so. And at the point, if there's no heir apparent, I'll have to look at selling the business."

Feikema says closing up a longtime, family-owned business would be difficult. But finding a buyer he likes would help ease the pain. Either way, he has no regrets about the decision he made 30some years ago to come back home and work for his father.

"It's funny because when I was at high school, I used to get mad at my dad because he was such a workaholic," he says. "And now I realize I work just as much as he did — it's easy to work long hours when you take ownership of something.

"Ultimately, I feel lucky that I found something I'm good at and that allows me to help people with their problems. I've been successful enough at it to make a good living. It's been very good for us." c



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ELECTRIC EEL MFG., CO., INC. 501 W Leffel Ln., Springfield, OH 45506 800-833-1212 • 937-323-4644 • (f) 937-323-3767 www.electriceel.com msperanza@electriceel.com See ad on page 16	EJ-1500 EJ-3000	4" 8"	1500 3000	1.7 4.7	11/2HP Motor 13HP Engine	X	X			150' x 1/4" 300'		
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JETTER Manufacturers	MANUFACTURER MODEL	MAX PIPELINE CAPACITY	PRESSURE (PSI)	FLOW (GPM)	MOTOR/ ENGINE	CARRY	PUSH/PULL	TOW	MOUNTED	HOSE REEL CAPACITY	WIRELESS REMOTE CAPABILITY	HOT WATER JETTING
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HOTJET USA 14773 S Heritage Crest Way, Riverton, UT 84065 800-624-8186 • 801-545-0777 • (f) 801-545-9132 www.hotjetusa.com • sales@hotjetusa.com See ad on page 81	HotJet II HotJet III HotJetIID XtremeFlow II XtremeFlow III	12" 24" 12" 12" 24"	4000 4000 4000 4000 4000	10 18 10 10 18	35HP Vanguard 70HP Vanguard (twin) 29HP Kubota 35HP Vanguard 70HP Vanguard (twin)			X X X X		300' 300' 500'	YES YES YES YES YES	YES YES YES
MONGOOSE JETTERS BY SEWER EQUIPMENT 1590 Dutch Rd., Dixon, IL 61021 877-735-4640 www.sewerequipment.com sales@sewerequipment.com See ad on page 9	Model 123 Model 184 Model 254 Model 402	6" 12" 24" 36"	3000 4000 4000 2000	12 18 25 40	Gas/Diesel Options Gas/Diesel Options Gas/Diesel Options Gas/Diesel Options			X X X	X X X X	200' 500' 500'	YES YES YES	YES YES
MYTANA LLC 746 Selby Ave., St. Paul, MN 55104 800-328-8170 • 651-222-1738 • (f) 651-222-1739 www.mytana.com • mytana@mytana.com See ad on page 73	M20T M20 M30 MV80	2" 4" 6" 10"	1500 1500 3000 3000	2 2 4.5 8	2HP Electric 2HP Electric 390cc Gas Honda 660cc Gas Honda	X	X X X			50' 115' 200' 250'		
S PARTAN SPARTAN SPARTAN TOOL 1506 W Division St., Mendota, IL 61342 800-435-3866 www.spartantool.com • sales@spartantool.com See ad on page 88	717 727 738 758 Soldier Elite Soldier The Cadet Warrior	1 1/4" to 6" 1 1/4" to 6" 3" to 12" 3" to 12" 3" to 24" 3" to 15" 1 1/4" to 3" Up to 24"	1500 3000 2000 3000 3000 4000 1500 4000	2.2 4 12 12 12 10 1.4 18	2HP Electric Gas Gas w/electric start Gas w/electric start Gas w/electric start 38HP Kohler 1.5HP Electric 74HP Diesel or Gas	X	X	X X X X	X X	115' 200' 250' 350' 350' 350'	YES YES	
TROJAN WORLDWIDE INC. 3306 Ella Blvd Warehouse C, Houston, TX 77018 800-392-4902 • 713-692-1140 • (f) 713-692-1053 www.trojanworldwide.com info@trojanworldwide.com See ad on page 65	C1500 C4300 TWW2000 TWW3012 TWW3034	2" 4" 6" 8" 12"	1500 4000 3000 2200 2200	2 4 10 13 23	2HP Electric 13HP Honda w/ Electic Start 29HP Kawasaki Liquid Cooled 31HP Kawasaki Liquid Cooled 50HP Cat Diesel		X	X X X		150' 300' 400' 500' 800'		YES YES YES
VACTOR VACTOR MANUFACTURING, LLC 1300 Bartlett Rd., Elgin, IL 60120 800-627-3174 • 815-672-3171 • (f) 815-672-2779 www.vactor.com • sales@vactor.com See ad on page 43	Ramjet Trailer Series	15"	2000-4000	18-40	Hatz and Kubota			X		600' to 800'	YES	
WATER CANNON INC. 4300 Lake Mary Blvd., Units #1010-424, Lake Mary, FL 32746 800-333-9274 • (f) 888-928-9274 www.watercannon.com sales@watercannon.com See ads on pages 80, 86	15.184 15.151 15.141 17H.145 16T47	3" 6" 6" 8" 10"	1500 4200 4200 4200 4000 3000	2 4 4 5.5 10			X X X	X				

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JETTER DISTRIBU	TORS	DISTRIBUTOR OF
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DURACABLE. HANDFACTURING	DURACABLE MANUFACTURING 300 Ashworth Rd., West Des Moines, IA 50265 877-244-0556 • (f) 515-223-6109 www.duracable.com • sales@duracable.com See ad on page 15	MyTana Manufacturing, RIDGID
EPL SOLUTIONS Thinking Ahead	EPL SOLUTIONS, INC. 1330 W Colins Ave., Drange, CA 92867 714-453-9760 • (f) 714-462-8103 www.epls-usa.com • sales@epls-usa.com See ad on page 81	Jetters Northwest
	THE CABLE CENTER, INC. 8318 Olive Blvd., Saint Louis, Mo 63132 800-257-7209 • 314-993-3099 • (f) 314-432-8024 www.thecablecenterinc.com • thecablecenterinc@gmail.com See ads on pages 34, 59	General Pipe Cleaners, RIDGID, Spartan Tool

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CENTRAL OKLAHOMA WINNELSON 5037 NW 10th St., Oklahoma City, OK 73127 888-947-8761 • 405-947-8761 • (f) 405-947-1934 www.centralwinnelson.com • krjones@winnelson.com See ad on page 75	K-3800 K-400 K-7500 K-50 K-60SP	100' Max 100' Max 250' Max 100' Max 150' Max	3/4" to 4" 11/4" to 4" 3" to 10" 3/4" to 4" 11/4" to 4"	RIDGID
COAST MANUFACTURING 29250 Meadowview Rd., Juction City, OR 97448 541-684-0743 www.coastmanufacturing.com sales@coastmanufacturing.com See ad on page 79	TM750 TM5800 TM50 TM38 TM25	11/16" x 150' or 3/4" x 150' 11/16" x 120' or 1/2" x 80' or 3/8" x 90' 1/2" x 120' 3/8" x 75' 1/4" x 50'	3" to 10" 3" to 8" 11/2" to 3" 11/2" to 3" 11/4" to 2"	
DURACABLE. MANUFACTURING 300 Ashworth Rd., West Des Moines, IA 50265 877-244-0556 • (f) 515-223-6109 www.duracable.com • Sales@duracable.com See ad on page 15	DM175 DM162 DM55 DM30 DM10 J-Maxx DM150 DM140 DM138 DM125	11/16" x 100' 5/8" x 80' 11/16" x 150' 5/8" x 100' 3/8" x 75' 1/2" x 75' 1/2" x 75' 3/8" x 75' 3/8" x 90' 1/4" x 37'	3" to 10" 2" to 6" 2" to 10" 2" to 6" 11/4" to 4" 11/4" to 4" 11/4" to 4" 11/4" to 3" 11/4" to 3" 11/4" to 2"	

CABLE MACHINE MANUFACTURER/DISTRIBUTOR	MANUFACTURER Model	DRUM CAPACITY	PIPE DIAMETER	DISTRIBUTOR OF
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GENERAL PIPE CLEANERS GENERAL PIPE CLEANERS 1101 Thompson Ave., Mc Kees Rocks, PA 15136-3818 800-245-6200 • 412-771-6300 www.drainbrain.com • info@drainbrain.com See ad on page 2	Super-Vee Mini-Rooter XP The Metro Speedrooter92 Maxi-Rooter	50' x 3/8" or 5/16", 35' x 3/8" 75' x 3/8", 50' x 123" 75' x 5/8" 100' x 3/4" or 5/8" 125' x 3/4" or 150' x 5/8"	1 1/4" to 3" 1 1/4" to 4" 3" to 6" 3" to 10" 3" to 10"	
GORLITZ SEWER & DRAIN, INC. 10132 Norwalk Blvd., Santa Fe Springs, CA 90670 877-460RLITZ • 562-944-3060 • (f) 562-944-7630 www.gorlitz.com • sales@gorlitz.com See ad on page 61	GO 68HD GO 68 GO 62A HD GO 50A GO 15A	11/16" x 150' 11/16" x 150' 5/8" x 100' 3/8" x 90' 1/4" x 50'	3" to 10" 3" to 10" 3" to 4" 11/2" - 3" 11/4" to 2"	
KEN-WAY CORPORATION 930 Roberts Rd., Sparta, WI 54656 800-533-0551 • 608-269-3752 • (f) 608-269-8129 www.ken-way.com • info@ken-way.com See ad on page 84	Ken-Way Jr. Ken-way 400'	1/4" up to 50' 5/16" up to 75' 3/8" & 13/32" up to 75' 11/16" up to 130' 3/4" up to 110"	11/2" to 2" 3" to 8"	
MYTANA MFG. CO. INC. 746 Selby Ave., St. Paul, MN 55104 800-328-8170 • 651-222-1738 • (f) 651-222-1739 www.mytana.com • mytana@mytana.com See ad on page 73	M888 M81 M844 M661 M500	125' 125' 125' 100' 50'	3" to 10" 3" to 10" 3" to 10" 11/4" to 3" 1" to 2"	
PICOTE LIFE FOR PIPES PICOTE SOLUTIONS 1506 Shaller Ln., Dyer, IN 46311 www.picotesolutions.com • tony@picotesolutions.com See ad on page 24	Mini Cleaner Mini Miller Super Midi Miller Maxi - Miller Maxi Miller Power +	52' 55' 66' + 32' 100' + 32' 59' + 40'	11/4" to 3" 11/4" to 3" 3" to 6" 3" to 10" 4" to 12"	
PIPE LINING SUPPLY 2790 E La Palma Ave., Anaheim, CA 92806 888-354-6464 www.pipeliningsupply.com • info@pipeliningsupply.com See ad on page 12				Renssi

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THE CABLE CENTER, INC. 831.8 Olive Blvd., Saint Louis, MO 63132 800-257-7209 • 314-993-3099 • (f) 314-432-8024 www.thecablecenterinc.com • thecablecenterinc@gmail.com See ads on pages 34, 59				Electric Eel Mfg., General Pipe Cleaners, RIDGID, Spartan Tool
TRESIAN WORLDWIDE INC. TROJAN WORLDWIDE INC. 3306 Ella Blvd Warehouse C, Houston, TX 77018 800-392-4902 • 713-692-1140 • (f) 713-692-1053 www.trojanworldwide.com • info@trojanworldwide.com See ad on page 65	Trojan Stallion Trojan Pony Trojan Colt Trojan DC Colt DT188 Drill Machine	162' 110' 105' 105' 45'	3" to 10" 2" to 6" 1 1/2" to 4" 1 1/2" to 4" 1 1/2" to 2"	



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Share the Wealth

There are many options for employee ownership, but they all give workers a vested interest in the company

By Erik Gunn

re you looking for a way to foster a stronger sense of team spirit among your employees? Are you nearing retirement and wondering about your exit plan? Do you have a family-owned company and no family members interested in picking up the reins when you're ready to hand them over?

Any or all of those situations — and perhaps a few others might offer a reason to consider a novel approach to restructuring your business: turning it over to your employees.

As a concept, employee ownership goes back decades. Legislation passed in the 1970s created tax incentives to encourage it, and an estimated 7,000 companies have some form of employee ownership, according to the National Center for Employee Ownership (www.nceo. org), based in Oakland, California. But it's still unknown to many.

Employee ownership may be ready for a second look, however. Tucked into the national defense bill President Donald Trump signed in August 2018 are provisions making it easier for small businesses to establish certain kinds of employee ownership arrangements.

Company owners who decide to convert their businesses to employee ownership do so for several reasons. "The primary motives are, first, to take care of the workforce," says Loren Rodgers, executive director of the NCEO. Ownership gives employees an opportunity to reap greater rewards if the business is someday sold to another company.

Employee-owned companies also find that the workforce benefits even if the business never changes hands, he says. "They can continue to grow, with everybody pulling in the same direction."

VARIATIONS

The most common form of employee ownership is called an employee stock ownership plan. Federal tax laws create incentives for employers to create ESOPs, allowing capital gains taxes to be deferred when the plan is established.

ESOPs tend to favor larger businesses established as C-corporations or S-corporations. Rodgers estimates that a company has to have at least 30 employees before the benefits offset the costs of establishing an ESOP in the first place.

The good news is that ESOPs aren't the only form of employee ownership.

Smaller businesses are most often structured as limited liability corporations. And for LLCs, Rodgers notes a couple ways to set up some form of employee ownership plan.

And while they lack the tax incentives that promote ESOPs, these plans can produce the other advantages that many employers find with employee ownership — a means of sharing the rewards of success with their workers and, as a consequence, a more unified and productive workforce.

CAPITAL INTERESTS

Unlike S- or C-corporations, LLCs don't issue stock. They can't offer ESOPs, and they can't offer other forms of stock-based compensation — such as stock options, restricted stock or conventional shares, according to the NCEO.

But they can still give employees an equity stake in the company in the form of "member interests," Rodgers says.

These member interests take two forms. One is called "capital interests." Rodgers compares capital interests in an LLC to a stock option grant in an S- or C-corporation. An employee is awarded part ownership in the LLC in the form of capital interests. Over time, as the value of the capital interests goes up (assuming the company is successful and grows), it's similar to holding stock that rises in value.

In essence, the capital interests form of ownership is a retirement benefit, with the value realized only when the employee leaves or retires and sells back the interests in the company.

SHARING PROFITS

Rodgers says most LLCs opt for the other form of employee ownership, however, called "profit interests."

As with capital interests, employees who are issued profit interests will share in the increase in the equity value of the interests over time. And as with capital interests, they won't actually benefit from that increased value until they leave or retire and sell the interests back to the company.

But profit interests also enable employees to get a distribution of profits from the LLC over the course of their employment — similar to a profit sharing program, but directly because they own part of the business. The profit distribution is taxed as ordinary income.

A business opting for one of these plans has a choice about how to treat the initial award of interests to employees. Some may have employees purchase the interests, but most don't, Rodgers says. Instead, the interests are awarded as a form of compensation.

Businesses usually buy back the interests when employees leave or retire at a price that reflects the gain in value of the company over time.

Since they are a form of compensation, an employee would typically pay tax on the value of the interests at the time they are awarded. Upon leaving or retiring, the employee would sell the capital interest, paying a capital gains tax assuming that the interests are sold at a higher price than they were worth at the time of the original award.

Businesses with these sorts of plans typically have a vesting schedule that spreads out the total units of interests an employee receives over a couple of years or more. That provides an incentive for employees to stay longer, Rodgers explains.

"A lot of our member companies find that it's just a lot more fun to work in a company where everybody feels like they're members of the same team."

Loren Rodgers

OTHER OPTIONS

Still another approach employers can take that is not quite the same as employee ownership is called a "phantom plan." That is the equivalent of stock appreciation rights in the company, and the awards are taxed like a profit sharing bonus, Rodgers says. The difference is "There's no legal ownership; it's purely contractual."

Unlike conventional profit sharing systems, however, phantom plan formulas take into account the growth in the equity value of the company.

GETTING INFORMATION

These arrangements can be complex, so getting thorough information about the options is important. Any business owner looking to make such a dramatic change must also get appropriate advice from a professional who knows the ins and outs of your specific business and circumstances.

Rodgers suggests companies interested in employee ownership first research the subject to become as familiar as possible with the process and details. The NCEO publishes its own guide to the subject, Equity Compensation for Limited Liability Companies, which includes sample plan documents in Microsoft Word formats.

Legal advice is essential, but Rodgers still suggests learning as much as you can before selecting a lawyer. And when you do retain an attorney, choose one who works with and understands the laws relating to LLCs.

Perhaps by now you're feeling a little intimidated by the whole idea and ready to say, "Why bother?" That's understandable, but this isn't entirely uncharted territory.

Many businesses that have opted for employee ownership report a genuine payoff, and so do their employees, Rodgers observes. An offshoot of the NCEO, www.ownershipeconomy.org, spotlights research showing employee ownership's benefits across the board.

Employee ownership helps align the interests of the company and its employees, spurring motivation and productivity. It gives people a reason to stay, and in a tight labor market, it can give them "a reason to join the company in the first place," Rodgers says.

"A lot of our member companies find that it's just a lot more fun to work in a company where everybody feels like they're members of the same team. There's a conceptual shift in what it means to be an employee-owner as opposed to just an *employee*." **c**





Right to Safety

Employees should feel comfortable speaking up to rectify a hazardous work environment — without fear of retaliation

By Jared Raney

veryone in the industry has heard at least one horror story about someone getting fired or demoted for reporting a safety violation.

In fact, OSHA's whistleblower department investigates approximately 3,000 such cases a year. Reporting a safety violation is rarely easy. Employees don't want to get their company in trouble and may be afraid of bringing the issue to superiors.

When employees notice a safety concern, it's not uncommon that the fear of blowback results in a reluctance to bring it to the attention of their supervisors. But repressive atmospheres that discourage employees from reporting can lead to much bigger problems for employers and their employees.

If an employer takes what could be considered a retaliatory action against an employee for protected activity like reporting safety issues, the best-case scenario is months of investigation, legal fees and headaches — without even taking into account the potential penalties if an employer is found to be at fault. This can also result in decreased productivity for the organization.

OSHA requires an anti-retaliation culture among employers to reduce these instances. The agency recently issued recommended practices to help employers establish anti-retaliation programs in their workplaces.

"The idea is that if we educate an employer about its responsibilities under the law and the benefits of having an effective program that allows employees to raise concerns without fear of retaliation, there's less likelihood of having to hire an attorney or legal team to defend itself against an allegation of retaliation or an unreported hazard that causes a serious injury or death," says Anthony Rosa, deputy director of OSHA's Directorate of Whistleblower Protection Programs.

Though employers often feel compelled to do everything they can to suppress reports of safety violations, creating an atmosphere that supports employees in raising those concerns can make them feel more comfortable to deal with the problem in-house, potentially avoiding OSHA involvement altogether. Moreover, it allows the employer to address the safety or health concern before an incident occurs, which could result in greater loss to the company.



≈ The most important component of developing a safety-first culture is making sure that employees understand their right to a safe workplace, and their right to report any violations without repercussions.

The most important component for developing a safety-first culture is making sure employees understand their right to a safe workplace and their right to report any violations without repercussions.

SAFETY AND HEALTH VS. WHISTLEBLOWING

There are two relevant offices within OSHA that come into play in these circumstances.

The safety and health program is actually separate from the whistleblower protection program. If an employee notices a safety issue on a work site that their employer cannot or will not resolve, they have an absolute right to report that violation.

In that instance, you would call the nearest OSHA area office.

If, after reporting that violation, an employer or superior within the company finds out that a particular employee was involved and takes retaliatory action against them, the whistleblower protection program in the nearest OSHA regional office gets the call.

When OSHA's Whistleblower Protection Program receives a report of retaliation, an initial review decides whether the case meets the minimum investigative requirements to proceed through the system. This is known as a prima-facie allegation.

Over half the complaints are administratively closed without investigation based on the initial evaluation, such as being filed late, lack of jurisdiction, or lack of a prima-facie case. About 7,000 reports are filed with the whistleblower protection program each year, and only 3,000 are docketed for investigation.

"One of the things I ask employees, and it's probably the hardest thing, is to have patience with us," Rosa says. "I have a lot of empathy for people who bravely come forward, because they're going through some strife, they're going through economic hardship, and our investigations can take a long time."

Patience and cooperation are important, as many cases are dropped simply because the employee gives up or doesn't respond by the time OSHA is able to reach out to them.

"In many instances, we end up dismissing the case because the employee never got back to the investigator, and there's a missed opportunity there," Rosa says.

RULES AND RIGHTS

First and foremost, all workers have a right to contact OSHA at any time to report a safety violation without being subjected to retaliation from their employer.

OSHA has many resources available on the website, by contacting an OSHA office, or by calling 800-321-6742. If you are unsure whether there is a safety issue or have questions about your rights or about the limits on the reporting process, it's always best to check.

Timing can be a factor. For example, with environmental complaints, there is a 30-day window to file a report with the whistleblower protection program after the retaliation.

Employees should also be aware that the circumstances around suspected retaliation can have an impact.

Say an employee notices an unshored trench on a work site. If they simply walk off the job site and are fired, that will most likely not be considered a protected work refusal. There are precipitating factors that OSHA looks for in determining valid work refusals.

Work refusal requirements:

- Imminent danger: In order for OSHA to consider a protected work refusal, the urgency of the situation must be so unsafe that serious injury or death could occur and there is not enough time to call OSHA.
- Notify employer: The field supervisor or other relevant management must be aware of the danger before work can be refused. Where possible, the employee must have sought the employer but have been unable to obtain correction of the dangerous condition.
- Good faith: Refusals must be made in good faith, which OSHA defines as "a reasonable person would agree that there was imminent danger."
- Alternative work: Employees who believe a situation is too unsafe to proceed should ask the employer if there is another job or work duty they could perform while the issue is addressed.

When all of these boxes are checked, the employee should still not leave the work site until directed to by his or her employer. If that is the case, it is possible that OSHA will find merit to the complaint, especially if the employee is subsequently disciplined or fired after the work refusal.

After the whistleblower protection program investigates a complaint that it finds to be meritorious, they will forward it on into the court system for litigation or issue a merit determination, depending on the whistleblower statute. Most merit cases are settled,

"I have a lot of empathy for people who bravely come forward, because they're going through some strife, they're going through economic hardship, and our investigations can take a long time."

Anthony Rosa

but if not, then the court or the Secretary's Findings can order a number of compensatory and punitive damages, again depending on the whistleblower statute.

In the case of an investigation, it is important for both employer and employee to keep records, as these are crucial pieces of evidence in OSHA's evaluation and determination.

"Our job is to investigate whether the allegations hold water. If the parties want to get together and settle, we absolutely entertain the settlement. In fact, we have an Alternative Dispute Resolution program that actually can halt the investigation while the parties try to settle the case," Rosa says. "That's our goal; we always look for opportunities to settle the case." c





Residential and Commercial **Sewer and Pipe Maintenance**

By Craig Mandli







1 / ELECTRIC EEL MODEL C

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

2 / GENERAL PIPE CLEANERS/ GENERAL WIRE SPRING MODEL DRZ-PH

The Model DRZ-PH power drain cleaner from General Pipe Cleaners/General Wire Spring offers a quick, clean way to clear clogged sink, tub and laundry drains in 1 1/4- to 3-inch lines. Weighing just 30 pounds, the light and powerful machine has a variable-speed power cable feed to provide complete control as it

feeds and retrieves the cable at up to 16 feet per minute. The 4-foot guide tube means the user never has to touch the cable. It can be operated horizontally on the kitchen counter or vertically on the floor next to the tub. The silent motor won't disturb customers while on the job. The pneumatic foot pedal helps keep hands free to control the feed and guide hose. The carrying handle on top of the frame makes transporting it to and from the job easier. The rust-resistant aluminum drum carries up to 50 feet of 1/4- or 5/16-inch or 35 feet of 3/8-inch Flexicore wire rope center cable. 800-245-6200; www.drainbrain.com.

3 / GI INDUSTRIES TCM 5000

The high-speed TCM 5000 pipe cleaning machine from GI Industries combines high-flow air/water flushing and brushing at variable speeds to provide the operator more control in various applications, creating a jetter and cable machine in one package. The variable-speed (0 to 1,750 rpm) control allows operators to use cleaning/drill heads or devices from other manufacturers. It provides contractors greater flexibility in deciding which tools are correct for their application. These systems can clean 1/2- to 24-inch lines at over 150 feet on a single unit. 800-724-1944; www.giind.com.









4 / GORLITZ SEWER & DRAIN MODEL GO 62HD SERIES

The Model GO 62HD Series machine from Gorlitz Sewer & Drain is a mirror image of the larger Model GO 68HD. Its smaller size, low profile and lighter weight make it suitable for getting into tight spaces or through narrow doorways and basements. It is available in a variety of reel and/or drum combinations. With a quick turn of an Allen wrench, the machine can be broken down into separate frame and reel components for easy transportation or adding an additional cable reel for extended reach. It includes a ball bearing 1/3 hp reversible motor and aluminum gearbox that develops approximately 100 pounds of torque and cleans sewer and drain lines from 2 to 4 inches in diameter up to 200 feet long. The machine comes equipped with a standard hollow-core 5/8-inchdiameter cable with slip-joint connectors. An electric foot switch is provided for safe operation of the machine. 877-446-7548; www.gorlitz.com.

5 / MILWAUKEE TOOL M18 FUEL SWITCH PACK SECTIONAL DRUM SYSTEM

The M18 FUEL SWITCH PACK Sectional Drum System from Milwaukee Tool combines the benefits of sectional and drum machines to create a versatile and mobile machine. It is easily transportable via an integrated backpack design, allows users to interchange and connect drums and provides maximum power to clear 100 feet down the line. 800-729-3878; www.milwaukeetool.com.

6 / PICOTE SOLUTIONS MINI CLEANER

The Mini Cleaner from Picote Solutions is capable of cleaning and reinstating 1 1/4- to 3-inch drains through P traps. Its use means there's no need to dig up floor drains anymore, as making reinstatements is fast and efficient with a choice of cutting tools. This miller has an ultraflexible, high heat-resistant sheathing covering the cable, a recalibrated safety clutch and redesigned drum making it capable of navigating through P traps and multiple tight bends. It comes with 52 feet of cable and has a revolutionsper-minute range of 500 to 2,900 and is light and portable. Each unit comes with a choice of a cleaning or reinstatement package. 219-440-1404; www.picotesolutions.com.

7 / PIPE LINING SUPPLY RENSSI RCM SERIES

Renssi RCM Series drain cleaning machines from Pipe Lining **Supply** allow the user to add CCTV views of their work in real time. This allows technicians to use a camera to watch what they are cleaning while doing the project. The sheathed cables allow a CCTV camera head to be attached to the working cable. The sheathing protects the operator and camera cable from getting tangled in the cable and clears blockages in seconds instead of minutes. Cables and machines come in various cable diameters and lengths. 888-354-6464; www.pipeliningsupply.com.







8 / RIDGID K-5208

The RIDGID K-5208 sectional machine cuts through tough roots with a 3/4 hp motor and cable that can spin up to 700 rpm. Designed for drains 2 to 8 inches in diameter, it has a toolless clutch adjustment to quickly switch between 7/8- to 1 1/4-inch cable sizes. It comes with a Trident Sectional Cable Decoupler for disconnecting cables efficiently and cable feeder with guide tube for easy loading and unloading into an enclosed cable carrier. Infield clutch serviceability minimizes downtime, while a carrying handle allows for easy transport from truck to job site. Designed with high-strength square steel tubing and rubber feet for enhanced stability, it includes a fluid management system that incorporates a reservoir to catch fluid for later draining. The enclosed cable carrier and cable feeder also enhance cleanliness by reducing exposure of the cables on the job site. 800-769-7743; www.ridgid.com.

9 / SPARTAN TOOL MODEL 300

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

CLEANING NOZZLES

10 / ENZ USA CUTTING BALL

The water-driven cutting ball nozzle from Enz USA is available in 3- and 4-inch sizes; and it can move easily around curves in 3- to 6-inch polyethylene, steel or concrete pipes while safely removing roots and mineral deposits, resulting in no damage to

the pipe. It works without impact but has the ability to switch to a vibrating nozzle. It comes with a hard metal front blade for pipes that are more than 50 percent clogged. The side blades are self-sharpening and maintain their sharpness over their entire service life. The cutting ball operates with controlled rotation speed and is capable of running on recycled water. It is leak-free. 877-369-8721; www.enz.com/en-us/home.

11 / NOZZTEO BL SWIPER

The BL Swiper sewer nozzle from NozzTeq is available in 1/2-, 3/4- and 1-inch sizes and is made of stainless steel inside with a poly body outside that makes it safe to use in lined, imperfect and sensitive pipes. Its stainless steel tubes loop the water around a system along air channels that increase airflow and jet stream length in the pipe. The design reduces revolutions per minute and pressure at the truck and thus at the nozzle to reduce the amount of blown toilets. It can be used on 4- to 12-inch lines with all pull-behind jetting units. 866-620-5915; www.nozzteq.com.

12 / SEWER SHARK ADVANCED NOZZLE EXTENSIONSSKIDS

Advanced Nozzle ExtensionsSkids from Sewer Shark make it quick and easy for operators to identify the right-sized skids, which helps to prevent repeat cleanings. The nozzle skid is an important, often overlooked part of jet cleaning. It's important that a proper-sized nozzle extension be used to maximize the cleaning power of advanced nozzles. In smaller pipelines, a proper-sized skid will roughly center the nozzle in the line while allowing room for minor offsets and obstructions. This will evenly distribute cleaning force to the top and bottom of the pipe. When a 6-inch skid is used in a 12-inch pipe, the bottom half of the pipe receives 75 percent of the cleaning force. 888-907-4275; www.sewersharkmfg.com.

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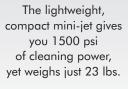
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13 / USB-USA PRIMUS NOZZLE

Designed for controlled rotation and use with recycled water, the Primus Nozzle from USB-USA requires no lubrication or replacement of internal parts for at least one year. The nozzle is built from hardened stainless steel. A rotating head removes grease, light scale and roots; and 3D fluid mechanics in the propulsion unit efficiently flush out debris. This nozzle is available in 1/2-, 3/4-, 1- and 1 1/4-inch hose connections from 12 to 120 gpm. 844-285-5770; www.usb-usa.com.

14 / FLUSHOUIP GRAB-ALL

The Grab-All from Flushquip is designed to remove sticks, stones, concrete and other debris. It's ideal for grease traps, septic tanks, lift stations, manholes and excavation holes, and it is made completely out of stainless steel and aluminum. Its powerful jaws can grab items from 4 to 19 inches in size. The compact unit is 39 inches high and weighs 12 pounds. It can reach up to 30 feet in depth, and additional rope can be added to reach unlimited depths. It can save the operator costly downtime and personal protective equipment expenses to avoid entering confined workspaces. 800-295-1669; www.flushquip.com.

15 / LENZYME TRAP-CLEER HIGH COUNT

High Count from Lenzyme Trap-Cleer is designed to attack grease. Its formulation follows the process by which complex organic compounds (grease and waste) — in the presence of water, bacteria and enzymes — are broken down or transformed into simpler compounds. All bacteria need an enzyme to break their food source down. In this process, grease-eating enzymes are added to speed up the union of water with a grease substance. This increases the efficiency of the bacteria. Then the bacteria can take over and eat the grease fragments. Bacteria enzyme action is specifically targeted. For example, grease-splitting enzymes will affect FOG but not proteins or carbohydrates. 800-223-3083; www.lenzyme.com.

16 / WESTMOOR CONDE PROVAC

The Conde ProVac preassembled industrial liquid waste pumping system from Westmoor is designed to promote efficient pumping of grease traps. The unit is quiet and lightweight and pumps at 120 gpm. Flip a switch to start the unit in vacuum mode for pumping. The built-in exhaust deodorizer is designed to keep odor at a minimum. Flip the switch to pressure mode for offloading. It can be used to service locations not suitable for large vacuum truck hoses, including indoor or remote difficult-to-access jobs. 800-367-0972; www.westmoorltd.com.

17 / HANNAY REELS VAC SERIES

VAC Series reels from Hannay Reels are designed to store and handle vacuum hose up to 4 inches I.D. and 150 feet in length. The series is available in a variety of configurations, including the heavy-duty VAC-5000. This reel is equipped to handle longer length and large-diameter vacuum hose. Constructed with a sturdy steel channel frame and spoked discs for weight savings, it provides easy and fast winding of vacuum hose. It offers a single-wrap configuration and is best used where width dimension is minimal, such as between cab and tank or mounted transversely to the frame of the truck. Other reels in the series include the VAC-9000, which allows for multiwrap solid disc configuration, as well as the vacuum hose storage-only VAC Series Storage Reel. 518-797-3791; www.hannay.com.



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18 / REELCRAFT INDUSTRIES SERIES DP5000

The Series DP5000 dual-pedestal reel from Reelcraft Industries is smaller and more compact than its Series DP7000 counterpart for air, water, oil and grease up to 1/2-inch I.D. hose. It has an interlocking steel-formed and stamped base design that provides rigidity in truck-mount service applications. This design also makes the base assembly strong, compact and resistant to vibration. Its diminutive profile makes it fit in tight spaces or mounted in cabinetry. 800-444-3134; www.reelcraft.com.

IFT/VAC COMBO UNITS

19 / BUCHER MUNICIPAL RECYCLER 315

The Bucher Municipal RECycler 315 sewer cleaning unit offers a fully continuous water recycling system, automatic fuelsaving technology and easy maintenance. Its five-step recycling process protects the tank, pumps and sewer lines, giving units a long operating life and a high residual value. It comes with an 8- or 15-cubic-yard tank, and a winter option allows for operation down to 20 degrees below zero. 312-705-3818; www.buchermunicipal.us.

20 / CUSCO SEWER JETTER

The Sewer Jetter from Cusco can help perform major cleanups by excavating debris with a 26-foot boom reach and a 270-degree boom rotation. Outfitted with quality components and reverse engineered for optimal weight and payload with a superior operator control system, the unit is designed for simple regular maintenance and features durable and uncomplicated systems to reduce repairs and downtime. It can be paired with a Cusco SJX hydroexcavator to provide municipalities and contractors a powerful option for handling sewer and waterline maintenance and digging new lines with one piece of equipment. Options include various tank and chassis sizes and can be modified based on customer specifications. 800-490-3541; www.wastequip-cusco.com.

21 / SUPERVAC TRITON

The Triton combination sewer cleaner from Supervac has a water recycling system that uses a Juggler filter to allow continuous work without downtime for water filling. It filters water collected in the debris tank and transfers it to a water reservoir used by the water pump. It comes with a 2,500-gallon debris tank with stainless steel liner and vibrator, 1,500-gallon water tank, hydraulic boom and dump, and a full-opening rear door. Vacuum is provided by a 3,800 cfm at 27 inches Hg Robuschi USA blower, while jetting power is provided by an 80 gpm, 2,500 psi Pratissoli water pump. The rear door-mounted hydraulic hose reel holds 600 feet of 1-inch hose. 866-839-5702; www.supervac.co.

PORTABI F IFTTFR

22 / BULLFROG INDUSTRIES CRAP SHOOTER 2 HD

The Crap Shooter 2 HD sewer jetter — "The Deuce" — from BullFrog Industries weighs less than 25 pounds and features a full 2,000 psi and 1.76 gpm running off a 15-amp circuit. It offers similar specifications to the company's previous model, but it comes encased in a polyethylene case. The unit comes with 75 feet of high-pressure hose with an upgraded quick connect that attaches to the unit, as well as two heavy-duty nozzles (the Flusher and Thruster). It is designed to handle up to 4-inch pipes. Two different faucet adapters allow the user to hook the unit up just about anywhere. All included fixtures and hoses can handle up to 120 degree F water temperatures. It has a 25-foot power cord with two-prong GFCI plug, along with a 25-foot expanding feed hose. 888-890-1555; www.flushafrog.com.

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PUSHTY CAMERA SYSTEMS

23 / CUES MPLUS+ XL

The CUES MPlus+ XL push system is designed for easy operation with an all-in-one setup and flexibility by quick removal of the control unit to be used separately. It includes a coiler configuration and pan-and-tilt camera for mainline and larger pipeline applications up to 500 feet. It integrates video observation coding, observation coding interface and digital recording. The lightweight system includes large, durable wheels for portability and a balanced footprint for stability. It is manufactured to handle rigorous field use. 800-327-7791; www.cuesinc.com.

24 / ENVIROSIGHT VERISIGHT PRO

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

25 / FORBEST PRODUCTS FB-PIC3188XX/4188XX

The FB-PIC3188XX/4188XX portable lay-flat camera system

from Forbest Products comes with a 1-inch waterproof color camera head or 1-inch self-leveling color camera head with a built-in 512 Hz sonde transmitter, stainless steel spring kit and bright LED lights. It comes with 130 feet of 5.3 mm or 200 feet of 6 mm fiberglass cable, with a high-resolution 7- or 10-inch color control station with USB and SD recording. Typing and editing is optional for the 10-inch multifunction control station. The lay-flat design is convenient for one user to operate the camera independently. 877-369-1199; www.forbestusa.net.

26 / INSIGHT VISION CAMERAS OPTICAM

With the Opticam from Insight Vision Cameras, the technician is ready to start inspecting in a matter of seconds by simply plugging in the video interconnect cable and plugging in power from AC, DC or battery. A large, 10.4-inch LCD screen allows the user to see in vivid detail and move videos or pictures of inspections onto a USB drive with one-touch recording or snapshot including audio with speaker and microphone. They can also stream an inspection to an iPhone or Android device. A QWERTY keypad lets the user type in pipe issues such as cracked pipe and roots. They can also enter information about the company and project. It comes with a modular 1.3-inch self-leveling color camera head with 12 super-bright LED lights. 800-488-8177; www.insightvisioncameras.com.

27 / MYTANA MFG. MS11-NG2

The MS11-NG2 midsize inspection system from MyTana Mfg. has USB for recording and storage. The system is suitable for inspecting 3- to 6-inch lines with the choice of 150 or 200 feet of pushrod. The unit has a 64 GB internal drive as well as two USB ports and a 32 GB removable USB drive. The one-piece design is lightweight with a carrying handle. The color camera head is self-leveling with a built-in 512 Hz transmitter for locating trouble spots, even in cast iron pipes. 800-328-8170; www.mytana.com.

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28 / PERMA-LINER INDUSTRIES DRAIN/ PIPE INSPECTION CAMERA SYSTEM

Perma-Liner Industries offers a drain/pipe inspection camera system with either a 130-, 165- or 197-foot cable length option and a diameter of 1/4 inch on each cable. The 7-inch monitor offers LCD color with universal installation brackets, a push record button, SD card slot and rechargeable battery that lasts up to five hours per charge. The camera head is made of 304 stainless steel, measures 1 1/2 by 3 1/4 inches, and features a view angle of 120 feet, focal distance of 5 to 47 inches, 1/3-inch Sony CCD, 480 TV lines sensor and self-leveling feature. The camera head is waterproof up to a maximum of 65 1/2 feet underwater. The inspection camera boasts two roller skids: a mini one with a diameter of 2 3/4 inches and another universal skid with a diameter of 4 3/4 to 6 inches. The camera system is a lightweight design at approximately 25 1/2 pounds. 866-336-2568; www.perma-liner.com.

29 / RAPIDVIEW IBAK NORTH AMERICA MICROLITE PUSHROD SYSTEM

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

30 / TROJAN WORLDWIDE C100-512SL

The C100-512SL self-leveling color camera system from Trojan Worldwide is a lightweight, easy-to-operate system designed for 1 1/2- to 4-inch lines. It has a 1-inch, self-leveling waterproof color camera head with adjustable LED lights. The 512 Hz sonde transmitter is built into the spring of the camera, which allows more flexibility when maneuvering around sharp turns, and also creates a stronger signal for locating. The system has a 115-foot durable pushrod and a built-in footage counter. The display screen is a 7-inch LCD with DVR, with SD card recording and a built-in microphone for voice recording. The built-in battery offers seven hours of runtime and has an AC adapter for charging or direct power. Also included is the SD card, USB adapter for the SD card, protective visor, two skids and a waterproof case for the entire system to fit in for easy transportation. 800-392-4902; www.trojanworldwide.com.

RODDING MACHINES

31 / POW-R MOLE SALES MODEL P1-6RT

The P1-6RT mechanical rod turner from Pow-R Mole Sales integrates with the PD-6 Thrust Boring Machine and Pl Pusher Box to help install sewer pipes on grade and more accurately steer the bore to the target. It eliminates the need for pipe wrenches to turn the rods, making steering safer and more productive. It creates 4,500 ft-lbs of torque, allowing the operator to steer the boring machine up to 200 feet. Quick disconnect hoses allow for fast and easy removal of the unit. 800-344-6653; www.powrmole.com.

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32 / SOUTHLAND TOOL POWER DRIVE

Southland Tool provides positive mechanical cleaning with a 6.5 hp power drive that rotates sewer rods and tools of either 5/16- or 3/8-inch diameter in lengths up to 600 feet. This unit has instant reverse transmission and Speed Chuck to provide positive engagement with a string of rods. The frame is powder coated, and shafts and covers are zinc plated to provide corrosion protection. A complete rod outfit with trailer, rods and tools can be a solution for sewer lines from 4 to 15 inches. Many cities employ these units for emergencies or where a jetter cannot access. They are available with Honda engines as an option, pneumatic tires for over terrain use and in four-wheel models. Just engage the rods and push the machine forward for positive unblocking of sewer lines. 714-632-8198; www.southlandtool.com.

33 / AMERICAN JETTER 51T3 SERIES

The 51T3 Series jetter from American Jetter offers flows from 8 to 40 gpm up to 5,000 psi. Consistent power is provided by up to three Kohler gasoline motors, creating the cleaning power of 111 hp while avoiding costly emissions maintenance on Tier 4 diesel engines. Low water shut-off prevents pump damage if the optional 330- to 800-gallon tanks run low. Hose reel speed control allows for precise cleaning in both directions. A long-range wireless remote option allows for water on/off, engine shutdown and hose reel control. The heavy-duty square tubing trailer offers standard electric brakes on both axles. 866-944-3569; www.americanjetter.com.

34 / CAM SPRAY TT4025HZ-350

The model TT4025HZ-350 trailer jetter from Cam Spray produces 25 gpm at 4,000 psi using an EPA Tier 4 Final Hatz Diesel 74 hp turbo intercooled, liquid-cooled engine. It comes with an over-center clutch, control panel with hour meter, lowfuel gauge, low-fuel shutdown, over-pressure shutdown and digital pressure readout. The reel is hydraulic powered with variable speed and comes mounted on a slide-out with angle adjustment fitted with 500 feet of 5/8-inch hose, manual shut-off valve and analog pressure gauge. RCM wireless remote control modes include valve open, valve close, engine idle down with a 15-second time-delay shutdown, emergency shut-off, two-speed engine revolutions per minute control, and auxiliary 10-amp circuit with on/off control. 800-648-5011; www.camspray.com.

35 / EASY KLEEN PRESSURE SYSTEMS GROUNDHOG JETTER

The Groundhog Jetter from Easy Kleen Pressure Systems is designed to blast through clogged pipes with its 35 hp Vanguard engine that provides 12 gpm at 3,500 psi. It is compact and easily transported in a pickup truck or van, with trailer options available. It includes a fully welded, powder-coated 2-inch steel tube frame, drilled and tapped, which houses the 200-gallon water tank. It comes with an accessible breather and 10-gallon fuel tank, General Pump with gearbox drive, 12-volt powered hose reel with 300 feet of 3/8-inch jetter hose, hose guides, super swivel and foot-pedal control, emergency shut-off valve and an hour meter. Optional remote features include hose reel-in, motor off/speed control and pressure on/off. 800-315-5533; www.easykleen.com.

36 / GAPVAX GJET

The GJet truck jetter from GapVax offers 500- to 3,000-gallon stainless steel water tank options and 40 to 100 gpm water pump options along with a front-mounted hose reel, various toolbox options, room for a vice or crane and 10-foot tube trays. 888-442-7829; www.gapvax.com. CONTINUED >>



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37 / HOT JET USA XTREME FLOW III

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

38 / JETTERS NORTHWEST EAGLE 200

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

39 / MONGOOSE JETTERS BY SEWER EQUIPMENT MODEL 184

The Model 184 jetter from Mongoose Jetters by Sewer Equipment has a tubular steel frame, corrosion-resistant prepainted subassemblies, state-of-the-art controls, a strong hose reel, high-quality diesel engine and the Mongoose Run Dry Pump. 877-735-4640; www.mongoosejetters.com.

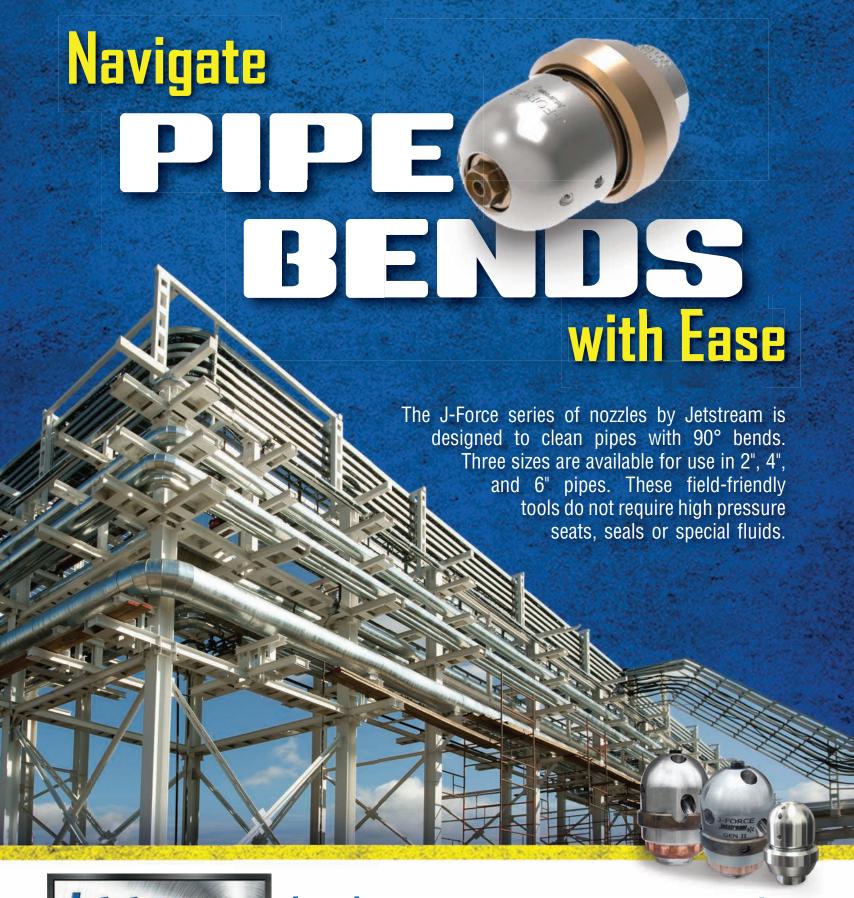
40 / VAC-CON HOT SHOT

The Hot Shot high-pressure water jet machine from Vac-Con is designed for removing stones, bottles, cans, grease, sludge and other debris from sanitary sewer and/or storm drainlines. Engineered for one-person operation, all high-pressure water and hose reel controls are located at the front of the machine for ease of operation and increased safety. Models are available with 1,000- and 1,600-gallon water tanks. Options include variable flow, articulating hose reel, polyethylene water tanks, 30 gpm at 3,000 psi water pump system, auxiliary engine or hydrostatic drive, cold-weather recirculation system, side-mounted toolboxes, air purge system, hose footage counter, arrow board, strobe lights, inspector cam, high-pressure spray bar, hose rewind guide, 600 psi handgun system with 25 feet of hose, and a selection of nozzles. 904-284-4200; www.vac-con.com.

41 / VACALL ALLJET

Vacall's AllJet truck-mounted jetter is an easy-to-operate, efficient sewer line maintenance machine. The hydraulically powered triplex plunger water pump is capable of 87 gpm at 2,000 psi to effectively jet blockages in sewer lines and routinely maintain flow, with other power options available. The hose reel telescopes out 54 inches from a retracted position and swivels 200 degrees to properly direct the 600-foot, 1-inch-diameter jetting hose. It uses a fuel-saving, single-engine PTO design, a 1,600-gallon UV-resistant polyethylene water tank and AllSmartFlow CANbus control system. The water tank is constructed with UV-resistant black polypropylene, internally baffled with a filling system that runs through the tank, eliminating external plumbing. 800-382-8302; www.vacall.com.

CONTINUED >>





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42 / VACTOR RAMJET 850 SERIES

The RamJet 850 Series truck jetter from Vactor has a choice of front or rear hose-reel locations and productivity-enhancing options. An integral aluminum rear shroud with heavy-duty, seethrough Lexan windows is available. Large service access doors on both sides of the shroud enable easy greasing, maintenance and service. The rear shroud keeps the hose and components warm and protected for quick setup and cleaning in extremely cold conditions. It comes standard with a certified flow of 0 to 80 gpm at a variable pressure up to 2,500 psi at the hose reel to clean any size of line. An optional JetRodder water pump-heated cabinet keeps the pump and plumbing covered and protected. 815-672-3171; www.vactor.com.

43 / VECTOR TECHNOLOGIES VECJET

The VecJet line of powerful, compact trailer-mounted jetter machines from Vac-Con, in cooperation with Vector Technologies, features a high-pressure water jet system with a Vac-Con hose reel. They come standard with a 99 hp Kubota diesel engine, a 500or 700-gallon water tank, 500 feet of 1/2- or 3/4-inch jetter hose, and water flow of 25 gpm at 4,000 psi or 40 gpm at 3,000 psi. 800-832-4010; www.vector-vacuums.com. c

AS VERSATILE AS YOU ARE

Want a single machine to tackle the many challenges you face in a workday? The new M745 Workhorse cleans drain *and* sink lines, and lets you throttle speed to get the job done fast, safely and completely.



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Imagine—a machine that cables drains 1.5" to 4". It's easy to swap the M745's drain reel and available sink line reel quickly and without tools. That means less equipment to haul and less upkeep.











With speed adjustable from 100 to 300 rpm, the M745 lets you feed and retract cable faster, snake confidently through bends, and vary the force of sidewall contact. Built-in torque protection enhances your safety and helps extend cable life.



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Residential and Commercial **Sewer and Pipe Maintenance**

By Craig Mandli

CABLE MACHINE HELPS CLEAR MAJOR ROOT BLOCKAGE

PROBLEM / On a January 2019 evening, GVA Plumbing received an emergency service call for a flooded basement in the La Prairie, Quebec, area. After several days of mild weather and heavy rain, area residents had been dealing with plenty of similar situations due to main sewer drains being blocked by major roots, which meant high water levels coming from melting snow and rain gutter spouts dumping close to foundation walls, causing water infiltration into basements through openings in the concrete slab.



SOLUTION / A technician from the company used the ZIP-ZIP REVOLUTION from Drain

Rehab Solutions to unblock the main sewer drain and a drain inspection camera to see what was going on. Giovanni Dipaolo, owner of GVA Plumbing, confirmed there was about 3 inches of clear cold water, which was at some places higher than the wooden subfloor. He located the main sanitary stack and opened the clean-out to pass his camera through 28 feet of pipe, where he reached a major blockage. Using his ZIP-ZIP REVOLUTION with its high-speed flexible shaft cable with a 2-inch chain knocker from Renssi, he was able to pierce through two major root blockages in less than 10 minutes.

RESULT / All the water in the basement started emptying quickly toward the city sewer. "We are now under contract from our satisfied and impressed client to return to rehabilitate the main sewer drain and seal the roots out," Dipaolo says. 514-379-3544; www.drainrehabsolutions.com.

GONGRETE REMOVED FROM STORM DRAIN UNDER SUBWAY TRACKS

PROBLEM / Over 15 feet of concrete was accidentally dumped inside a vintage, 20-inch, brick storm pipeline in one of London's oldest subway stations. The building-grade concrete was originally meant to fill blind laterals, but partially found its way into the mainline and restricted the flow of the 20-inch brick-and-mortar dewatering pipeline that was situated underneath the subway tracks just inside the tube.

SOLUTION / A Sewer Robotics truck with a 36,250 psi diesel engine-driven high-pressure pump was parked outside the entrance of the subway station. After the last metro had passed the station, the Sewer Robotics mobile cable reel, control unit, robot crawler and WJ180 water-jet cutting module were hand-carried to the platform, and high-pressure hoses were deployed over a



total length of 10,000 feet, from the truck to the robot. The high-pressure pump in the truck was remotely controlled from the mobile control unit at the tracks to adjust the water pressure and control the water-jet robot.

RESULT / With eyes on the job and continuous adjustment of water pressure, angle of attack and distance to the material, the high-pressure water blast was directly applied to the concrete deposit to loosen the obstruction from the host pipe within a few hours. The loosed deposits were then flushed into the manhole and removed. 717-251-2279; www.sewerrobotics.com.

CAMERA AND SONDE LOCATOR USED TO TRACE WATERLINES

PROBLEM / Saltillo Water in Mexico has 24-inch plastic waterlines, which were buried with no tracer wire. They were not able to locate any maps or records detailing where these plastic water pipes were buried. They did know that the majority of their lines would be buried under asphalt in the streets.

SOLUTION / The local Vivax-Metrotech distributor, Commercial Gepsa S.A. DE C.V., took a trip to visit the customer, bringing a vLoc3-Cam sonde locator and vCamMX-2 mini inspection camera. The customer dug 5 feet down to the buried water pipe to install a 3-inch saddle, which would allow the camera head and pushrod to enter the pressurized line without water escaping. With the camera in the plastic pipe, the 512 Hz sonde was activated and quickly picked up on the surface with the sonde locator.



Working in 10-foot increments, they were able to locate the direction and depth of the buried pressurized plastic water pipe. On other locate runs, they simply pushed 50 feet of pushrod into the waterline, then connected a portable utility locator transmitter to the camera reel, allowing them to trace the entire length of pushrod underground in the pipe.

RESULT / Together with the receiver in sonde mode and the mini camera, they were able to pinpoint with accuracy the location and depth of cover of the buried plastic water pipe. 800-446-3392; www.vivax-metrotech.com. c



SPOTLIGHT

A new workhorse for your arsenal

By Craig Mandli

Drain cleaners need products that are not only efficient, but also safe. The equipment also needs to be durable enough to stand up to heavy use in notso-ideal environments. Fortunately, a new-to-the-market cable drain cleaner from MyTana Mfg. bills itself as the productive and safe choice for drain cleaning professionals.



The new M745 Workhorse drain machine allows drain cleaning profes-

sionals to adjust cable speed on the fly for maximum performance and choose among two torque settings for safety. Incorporating My-Tana Mfg.'s SmartDrive technology allows for the cable speed to be throttled (up to 300 rpm) to negotiate turns, strengthen cleaning force, and expedite feeds and retrievals, or reduced (as low as 100 rpm) for tackling obstructions and debris.

SmartDrive also includes calibrated torque protection, which is designed to safeguard the operator and extend the life of the machine's cable. SmartDrive sounds an alarm when cable torque approaches an unsafe limit and then automatically cuts power when that limit is reached. The limit can be set high for large drains or low for sink lines. Operators can also select how tension is released: quickly with little resistance or slowly with more resistance.

"This new M745 Workhorse gives control to sewer and drain cleaning professionals that is unprecedented," says Dale Graber, general manager for MyTana Mfg. "The M745 is a high-performing machine that saves time and money by working more quickly and accurately and, in turn, protects the safety of the operator and the longevity of the cable."

A versatile machine, the M745 comes fully equipped to work in 3- to 4-inch lines with 100 feet of cable, slip-joint fittings, autofeed, blades and accessories. A sink line kit is available to address 1 1/2to 2-inch lines, and no tools are needed to swap reels due to the quick-release design of the drive system. The sink line kit includes a reel with 80 feet of 3/8-inch hollow-core cable, threaded fittings, a smaller feed tube and a complete set of blades and attachments.

The unit itself is compact (18 by 31 by 40 inches) to fit in tight spaces, has nonskid feet and balanced weight for stabilization during operation and transport, offers a telescoping adjustable handle that retracts easily for storage and has built-in stair-rollers for enhanced mobility. 866-327-7176; www.mytana.com.







BRAWNY OPTION FOR COXREELS' 100 SERIES REELS

The Brawny option from COXREELS is available for most 100 Series hose reels. The Brawny feature adds strength to the drum, minimizing potential damage under increased or pulsing pressure usage. The option is available for the 8-, 12.5- and 18-inch drum widths. The 100 Series reel can be mounted to a floor, wall, ceiling, bench or truck and is made of steel for strength and durability. It has a U-shaped frame for two-point axle support to provide stability during operation and has a brake assembly for braking or for locking the drum to a desired length of hose. 800-269-7335; www.coxreels.com.

HAMMERHEAD TRENCHLESS QUICKLOK INVERSION DRUMS

HammerHead Trenchless' QuickLok inversion drums are available in two drum sizes capable of holding up to 125 feet and 225 feet of 4-inch liner, respectively, and have a single-lever lockdown that gives a positive seal and secure latch. Other features include extra viewing ports and a detachable spindle wheel that makes it easier to navigate tight areas. Once in place, the wheel may be reattached to either side of the drum, accommodating workspace limitations or the preference of the operator. 800-331-6653; www.hammerheadtrenchless.com.

AQUAM PIPE DIAGNOSTICS INVESTIGATOR MINI DETECTION SYSTEM

The Investigator Mini pressurized asset management tool for live pipe inspection and leak detection pinpointing from Aquam Pipe Diagnostics is designed for 2- to 6-inch-diameter pipework up to 150 psi pressure. The system is inserted into the pipework through a selection of existing fittings and/or hot tappings. Realtime data monitoring is captured by the high-definition camera and hydrophone sensor head to understand internal pipework conditions and identify leaks. The system is supplied with a Flexi tracing wire to enable pipe and leak location even in plastic pipe. A 100-foot cable is supplied with the system, which can offer a maximum inspection distance of 200 feet upstream and downstream off the access point. 858-242-1640; www.aquampd.com.



ARIES INDUSTRIES WOLVERINE 2.0 CUTTING SYSTEM

The Wolverine 2.0 cutting system from Aries Industries is able to operate in pipes from 6 to 18 inches. The self-propelled, electric system features advanced ergonomic fingertip control and the ability to cut through materials with maximum speed and precision. Its linearly adjustable speed and axis movement offer maneuverability, coupled with a compact profile and all-wheel drive to navigate tough terrain. The 500-foot cable reduces truck setup time, and the electric two-speed milling motor is field repairable and rebuildable. The system has multiple wheel configurations to adapt to pipe conditions. 800-234-7205; www.ariesindustries.com.

LINK 20K SELF-STEER SUSPENSIONS

Link's 20K self-steer suspension incorporates technological and component upgrades already available in the company's lightercapacity suspensions. The suspensions feature Swift Mount technology, allowing installation to be completed in as little as two hours. The Swift Mount interchangeable ride height brackets incorporate improvements in the way the frame brackets attach to the suspension hanger. The brackets can be used to mount any Link suspension. Rear air spring brackets are compatible with wide flange frame rails by having the air fittings oriented to the outside. The air fittings can also be repositioned to the inside if desired. 800-248-3057; www.linkmfg.com.

JETSTREAM OF HOUSTON TWINFORCE DUAL PUMP SYSTEM

Jetstream of Houston's TwinForce dual pump 650 hp waterblast system features a John Deere Tier 4 engine and is designed for highflow applications including industrial cleaning, surface preparation and hydrodemolition. It functions as a large-capacity 650 hp unit or as two 325 hp independently run units. The TwinForce unit is built around the UNx fluid end water-blast system so operating pressures from 8,000 to 40,000 psi can be changed in minutes. 800-231-8192; www.waterblast.com. c



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Aries Industries announces promotions, new hires

Aries Industries announced it has strengthened its market outreach with a promotion and two new employees. John Kudis, formerly northeast regional sales manager, was promoted to the new position of national accounts manager. Kevin Hastings has rejoined the company as western regional sales manager. And Boris Holmes has been hired as the company's first Rocky Mountain regional sales manager.

Kudis has 15 years' experience at Aries Industries. His new role as national accounts manager focuses on business development with large contractors and supporting the growth of existing large contractor accounts. He is based in the Waukesha, Wisconsin, office.

Hastings rejoins Aries Industries, bringing 13 years of broad-based knowledge in the underground inspection industry. He started his career as a service technician and gradually added responsibilities for product training, as well as sales and management duties. His background encompasses both the



manufacturing and contractor side of the industry, plus certification by NASSCO. Hastings is based in the Fresno, California, office.

Holmes brings more than two decades' of experience in national accounts management to his role. He comes to Aries Industries from Master's Transportation in Denver, where he guided significant growth in revenue and office openings as regional sales manager. His background includes sales and management for two multilocation national engineering firms, plus a national provider of heavy equipment and tools, providing a significant knowledge base to serve Aries Industries' customers.

Scott Bardreau joins Midland Metal's management team

Midland Metal announced Scott Bardreau joined the company as chief sales officer for its growing platform of companies, which includes Anderson Metals and Buchanan Rubber. Bardreau has over 35 years' industry experience across plumbing and heating, industrial, waterworks and irrigation verticals. He spent the last 12 years with Matco-Norca in the role of vice president of sales and marketing. Prior to Matco-Norca, he served in various management roles at Watts Water Technologies, in both wholesale and retail channels.



John Kudis



Kevin Hastings



Boris Holmes

RELINEEUROPE acquires interest in RELINEAMERICA

RELINEEUROPE announced it acquired a 50 percent interest in American pipe liner manufacturer RELINEAMERICA, making the company part of the worldwide Reline UV Group. The operational leadership of RELINEAMERICA will be led by Tim Cook and Jerry Botts; both will hold the title of vice president. In the future, RELINEAMERICA will support the Reline UV Group's customers located in the North, Latin and South American markets.

Draincables Direct welcomes new sales representative

Draincables Direct announced it added a truck route that will service Utah and Nevada, as well as surrounding locations. The new route will be operated by Dean Pruitt, Draincables Direct territory sales representative. Pruitt began his career in the plumbing and drain



Dean Pruitt

cleaning industry in 1993 and worked for a local Utah plumbing company until 2002. At that time, he started a plumbing company of his own, which he ran until 2010. He has also worked for Spartan Tool in Utah, Nevada, Washington, Oregon and Idaho as a territory sales manager.

Smith named president of Subsite Electronics and HammerHead Trenchless

Charles Machine Works has named Kevin Smith president of Subsite Electronics and HammerHead Trenchless. The company also announced a joint leadership team headed by Smith. Smith's new leadership team will include Randy Rupp, Brian Kenkel and Christi Woods.



Kevin Smith

Rupp has been named general manager of Subsite Electronics. Rupp, who has served as vice president of product strategy at Ditch Witch for the past four and a half years, has held various positions within the organization including business and global accounts manager, regional sales manager, national sales manager, product manager and director of product definition.

Kenkel has accepted the position as general manager of HammerHead Trenchless. Kenkel joined the company six years ago, most recently serving as director of repair and replacement. He has spent his career in the underground construction industry, including 10 years owning and operating a successful contracting company.

Woods is assuming an expanded role as controller of Subsite Electronics and HammerHead Trenchless. She has more than 20 years' experience working as a CPA and small-business entrepreneur.

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Germundson's Home Furnishings to become **Mattracks Innovation Center**

The building in Karlstad, Minnesota, that housed furniture for about 70 years will become home to Mattracks vehicles and memorabilia. Glen Brazier, Mattracks founder and CEO, says the old furniture store is the "absolute perfect fit" for the Mattracks Innovation Center. According to Germundson's Home Furnishings, the building has been a furniture store since 1948. Mattracks, which started business in 1994, has shipped products to over 100 countries and can be found in operation on all seven continents.

Vactor announces plans to expand manufacturing facility

Vactor announced plans to expand its Streator, Illinois, manufacturing facility. The project is expected to increase Vactor's production capacity and add up to 90 additional jobs. The first phase of the project will expand the existing fabrication, welding, paint and assembly areas, as well as the test bays. Additionally, the current training center and customer inspection facility will be updated. Overall, the expansion will add approximately 100,000 square feet to the existing facility. Construction is expected to begin in the first half of 2019, with completion targeted by the end of the year.



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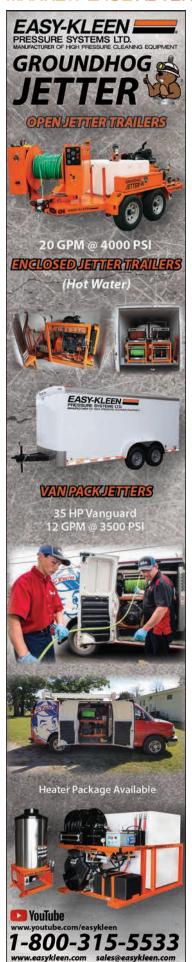
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- 689 CC Honda 300' x 3/8"Hose



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- Features 150' Wash Down Hose and Front-mounted & Over-fender Tool Boxes

Allan J. Coleman launches new website featuring online store

Allan J. Coleman announced the launch of a revamped website and online store for their RIDGID product line. The responsive design allows for shopping on desktop, mobile and tablet devices. Searches can be done by tool application, category and price. An account can be created for faster checkout, the ability to save multiple shipping addresses, tracking orders and creating a wish list of future purchases. The site and online store will soon feature monthly specials as well as tool kits exclusive to Allan J. Coleman. The new online store is at www.allanjcoleman.com. c

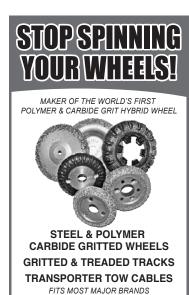












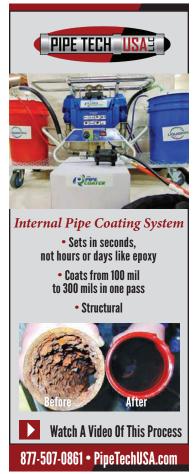
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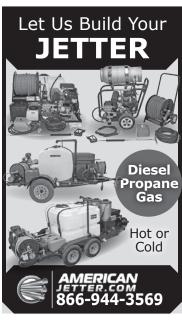




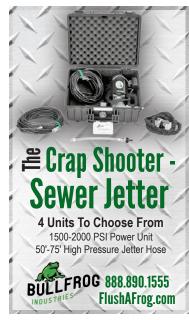


















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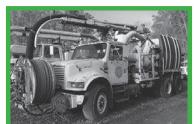
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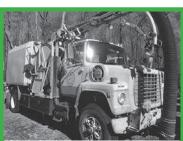
1991 International Camel 200 combination truck. Good condition. Rebuilt blower & Myers pump - 65gpm/2,000psi. New boom swivel, Allison automatic transmission. 337k miles. \$29,000

Call 804-746-9665. VA



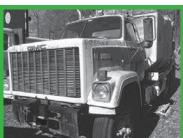
1995 Ford Camel 200 combination truck w/Roots blower. Good condition. Rebuilt 812 blower & Myers 60gpm/2,000psi. 262k miles, Allison automatic transmission. \$31,000

> Call 804-746-9665, VA C06



1986 Ford Camel 200. Water tanks need repair. Blower & Myers pump. 206k miles. \$7,000

Call 804-746-9665, VA



1979 GMC Myers combination truck. NO blower, parts truck. 202k miles. \$6,000

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1993 International Vactor 2100 combination truck. Low hours, rebuilt blower & water pump. New hydraulic hoses & vac tube, automatic transmission, DT466 engine. Good condition. 167k miles. \$35,000

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2002 Vactor 2100 Series combination sewer cleaner Model 2112-824-16. Approx. 146,517 miles & 15,564 hours. Both engine and a/c run good. Unit is in good condition. Selling price \$64,595. Call or email John Koschewitz for more information:

> 856-689-1020, NJ jfk@hadehart.com

C06

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

JET VACS



2000 International Vactor 2100, 12yard, 2-stage fan, automatic, 80gpm @ 2,000psi. Ex-city truck. Clean, workready unit. \$32,900

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Volvo Vactor, 10 yd., fan machine, 80gpm @ 2,000psi. Clean, work-ready unit. \$24,900

Call 800-627-0778



2004 International Vac-Con, ex-city unit. 12 yd., 3-stage fan, 80gpm @ 2,000psi. Allison automatic transmission. Low hours, low miles. \$48,900

Call 800-627-0778



2005 International Vactor 2100 Model 2115-36-42-15, ISM Cummins, Allison automatic, Roots HR-42 blower. 106,629 miles.

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C05

1997 Ford Louisville, Cummins ISM 320hp with Allison 4560 HD transmission, excellent condition, 67,404 miles, 8,289 hours, with a Vactor 2110-P4, 9-yard debris and 1,000 gallons of water on a tandem axle truck. 66,000 GVWR rating. Vactor single-piston water pump, front rotating hose reel with 600' of 1" hose with reel rotation. 4-cylinder auxiliary diesel engine, single-stage fan, extendable front boom pump and PTO. 425 front tires, 12R22.5 H rating 10 hole, air-ride driver's seat, stationary passenger seat. Overall length 32' and 11'8" height. Two strobes and arrow board rear. Small city owned! \$49,500. Located in Denver, Colorado. Call Ernie at 800-672-6010.

1999 International 4900, Vactor 2100: 600 ft. of hoses, 10-yard debris tank - relined and coated inside, needs repainting outside. 80qpm @ 2,000psi multi-flow pump. Hydroexcavation kit and new vac tubes. Truck in use, selling for health reasons. \$60,000 OBO. 815-719-5513 (C05)

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

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

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