October 2016

Small Jobs – Big ELARDS

Drain cleaning provides stepping stone to new jobs and continued growth for Service-Disabled Veteran-Owned Small Business Page 12

On the Road ROLLING BILLBOARD HAS ROOM TO ROAM Page 24

First Responders FROZEN PIPES PUT UP A FIGHT Page 34



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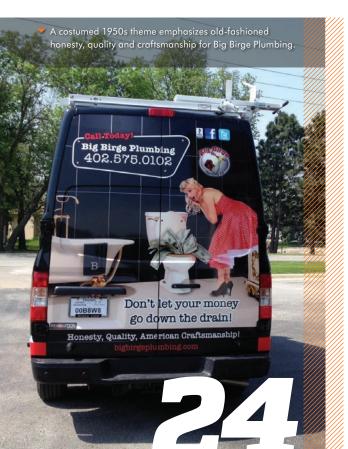


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Now, That's a Wrap!

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By Ken Wysocky



On the Cover

BPI Plumbing technician Matt Delashaw replaces a copper drainpipe in an underground garage of a condominium complex. The rusted pipe had broken clamps, causing a leak that damaged a tenant's vehicle.

Photography by Collin Chappelle

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- Plumber Profile: A Pipeline to Profit

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October 2016



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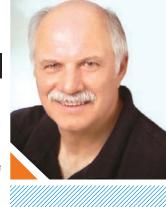


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FROM THE EDITOR



Ed Wodalski

Helping Ensure Tomorrow's Workforce

From the streets of New York to the California coast, closing the skills gap is everyone's job

magine spending your weekend camped on the streets of Long Island City, New York, hoping to be among the lucky 1,000 to receive an apprentice application.

Earlier this year, hundreds of hopefuls braved fierce storms and blistering 90-degree heat for the opportunity to interview for an opening in a five-year program offered by the United Association (UA) Plumbers Local 1 Training Center.

Luring them to the streets was the promise of high wages and good benefits — some hope to make \$40 to \$67 an hour. Signs on the training center advise applicants not to camp, but those who heed the warning have little chance of scoring an application Monday morning. By Saturday, more than 1,400 were already in line — some since Thursday night.

However, there are no guarantees — even for those willing to wait. Being first in line does not secure a place on the approved ranked list.

Qualified applicants are required to take an aptitude test and go through an interview. Combined scores determine their place on the list of about 500 that will fill 200 to 250 openings over the next two years.

Applicants must be at least 18, have a high school diploma, pass a drug test and have a better-than-average grasp of math.

If accepted into the program, they must report to work, provide their own transportation to and from the job site, work under the direction of a journeyman, attend required training sessions and remain free of substance abuse. Apprentices receive over 10,000 hours of on-the-job training and 1,070 hours of classroom education.

Alex Galicia, owner of BPI Plumbing in Chula Vista, California, and the subject of this month's *Plumber* profile, says finding good people has been a key component of his company's growth — and a challenge.

"Everybody knows there's a labor shortage, and it's really hard to find good plumbers right now," he says. "The biggest thing I picked up from my uncle is a willingness and ability to train, mentor and develop our own plumbers. He basically raised his own people."

Galicia's Uncle Benny became involved in the Job Corps and helped teach at-risk young adults, ages 18-25, the trade, and in some cases, hired them on. As a member of the board of directors, Galicia has followed in his uncle's footsteps.

An advocate for apprenticeships and training in general, BPI Plumbing has donated time and offered ridealongs to Castle Park High School's industrial arts training program — another relationship that began with Uncle Benny, a Cuba refugee who came to the United States to escape execution by Fidel Castro.

In recognition for its involvement with the Job Corps and the local high school, the South County Economic Development Council named BPI Plumbing its Outstanding Corporate Citizen.

I think you'll enjoy learning more about Galicia, a service-disabled veteran, and the guidance he provides to the plumbers of tomorrow.

"It feels good to give back," Galicia says. I have to agree. Have a good day. ₿

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3-Day Music Festival Puts Plumbing to the Test

50,000 guests swarm Minnesota site, clogging toilets with cellphones and a whole lot of clothing.

Keeping the water flowing and toilets flushing can be a challenge during the three days of WE Fest in Detroit Lakes, Minnesota. Each August, the typically tranquil resort community of 9,000 swells to over 50,000. Through the years, Nick Green, owner of Green's Plumbing and Heating, has removed cellphones, shoes, jewelry, hats and a whole lot of clothing from restrooms in the concert hall and campsite. Keeping everything working can be an all-day – and often latenight – job.

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Small Jobs – Big

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BPI Plumbing, Chula Vista, California

OWNERS	Alex Galicia and Brian Wicklund						
EMPLOYEES	24						
FOUNDED	2001						
SERVICES	Full-service plumbing with service/repair and construction divisions						
SERVICE AREA	San Diego County						
WEBSITE	www.bonitaplumber.com						

17. Plumber

 Members of the BPI Plumbing team (from left) include Steve Morales, technician; Matt Delashaw,
 technician; Alex Galicia, owner; Juan Gonzalez, service manager; Linda Garcia, dispatcher; and Dionisio
 "Ray" Raymond, technician in front of the Eagle Jetter by JETTERS NORTHWEST with two mounted COXREELS hose reels. Not pictured are Omar Pedraza, technician, and Edwin Mota, apprentice.

Drain cleaning provides stepping stone to new jobs and continued growth for Service-Disabled Veteran-Owned Small Business

By Paul Nicolaus | Photos by Collin Chappelle

lex Galicia calls drain cleaning his stepping stone to continued growth.

"It gives you the chance to show off your skills and show that you can be trusted," says the owner of BPI Plumbing in Chula

Vista, California, a Service-Disabled Veteran-Owned Small Business.

"I would say a lot of our biggest customers started as a drain call."

One such call brought BPI Plumbing a \$2 million repiping job at the Marine Corps Recruit Depot in nearby San Diego two years ago.

Meeting the challenge

A series of interconnected buildings had been remodeled, but a drainfield issue where recruits march and graduation ceremonies are held hadn't been resolved.

"These are three of the original buildings that were World War I era," Galicia says. "They presented every challenge imaginable, from asbestos to old, forgotten wires that were still active."

On top of that, Thursdays and Fridays were parade days, which meant workers had to remain extremely quiet and out of sight.

"But with all that we were able to implement a plan

Plumber **Profile**

and a schedule," says Galicia, who completed the job about three months early. "We were able to get through it, but it required a lot of planning and a lot of coordination."

On-call plumbing services account for about half of BPI's revenue, which topped \$4 million in 2015. New

construction accounts for much of the rest. Drain cleaning plays a role in both areas and represents about a quarter of BPI Plumbing's total revenue. It has also opened countless doors and provides an opportunity to build new relationships. "Many commercial companies have plumbers on staff,

Steve Morales charges an expansion tank (Watts Water Technologies) at a large condo complex in San Diego.

but some are handymen as opposed to professional plumbers," Galicia says. "When they hit a roadblock with issues like blocked sewer lines, BPI comes in, handles the issue, and oftentimes becomes their go-to plumber from that point on."

BPI's go-to cleaning tools are eight mainline machines, eight kitchen drainline machines, eight tub machines and a hand jetter — all manufactured by Gorlitz Sewer & Drain.

I would say a lot of our biggest customers started as a drain call." Alex Galicia

Other equipment includes an Eagle 600 trailer jetter from JETTERS NORTHWEST (600-gallon water tank, 18 gpm and 4,000 psi), RootX for clearing roots and Calci-Solve for dissolving rust, lime, calcium, concrete, hard water and mineral deposits.

Another piece of BPI's equipment arsenal is its company fleet. At one time, BPI Plumbing paid workers mileage for driving their own vehicles, but Galicia wanted to move away from that model.

"Little by little we started buying a vehicle here and a vehicle there," he says. "And now we're 100 percent company-owned vehicles."

The vehicle of choice was ultimately a decision Galicia calls circumstantial.

"During the height of the recession we decided to stick with one vehicle," he says. BPI Plumbing technician Steve Morales finishes work on a closet flange.

After doing some research, checking into reviews, and seeing what was available on the market, the Chevy Express 2500 floated to the top of the list.

While searching for the right fit, Galicia says brand was an important factor. When buying new, he tends to look for a topnotch warranty and when purchasing used he searches for lower mileage and good maintenance records.

"If we can find one that already has racks and things set up that's nice, but most of the time we have to set it up ourselves. And that's why we stick to that one brand because we're kind of standardized," he says.



Returning full circle

A service-disabled veteran, it was a military job that Galicia considers his most memorable. Teaming up with a larger plumber, BPI helped with a major tenant improvement project at the Marine Corps dining facility in 2010.

Fresh out of high school and 18 at the time, Galicia was on active duty in the Navy when the facility opened in 1985. He was attending a service school next door at the former Naval Training Center. When word got out about a meal the facility would be serving for its grand opening, Galicia made a point to fully enjoy lunch and dinner.

Many commercial companies have plumbers on staff, but some are handymen as opposed to professional plumbers." Alex Galicia

"I wasn't limited to the dining facilities on my base. I could go next door to the Marine Corps base and utilize theirs as well," he says. "I went along with some Navy buddies, and we chowed down on their lobster and steak."

Nearly 25 years later, Galicia was back, this time taking

on most of the plumbing, including a copper and DWV repipe and water fixture upgrades.

"I kind of love that," Galicia says of the opportunity to come full circle and revisit a memorable site — this time as a plumbing pro.

A member of the Army National Guard, Galicia was activated for Operation Noble Eagle, airport security, following 9/11 and served on a series of activations for about eight years.

"The longest one was almost two years, which involved 15 months in Iraq," he says.

While serving in the Middle East, Galicia thought of starting his own business — perhaps a travel agency.

"And then it hit me," he says, recalling a pivotal moment.

As a transportation officer, Galicia went from camp to camp on deliveries in Iraq and Kuwait, supervising third-country nationals who handled everything from cooking to sweeping — whatever needed to be done in camp.

"I'm watching the plumbers and I thought, wait a minute. I grew up in the plumbing industry. I know I can get back into it, and it's a really good industry."





An internal pipe cutter is used to trim a pipe for a closet flange at a remodel project.

Galicia — who was born and raised in Los Angeles — and his older brother, Moe, along on jobs as assistants.

From grade school through high school and even during and after college, Galicia developed his plumbing skills.

When he approached Garcia in 2005 about returning to the plumbing trade, the idea was well received. Moe was sick at the time, and when Garcia died unexpectedly, Galicia decided it was now or never.

"I became the heir apparent, so to speak, from overseas," he says of losing his brother and uncle within six months of each other.

Returning to the U.S., Galicia was activated

Uncle Benny

Galicia's male role model was his Uncle Benny Garcia, the plumber who founded BPI Plumbing (originally Benny's Plumbing) in 1976. Garcia lived next door and took once again — this time to border security duty in San Diego. On orders with the National Guard and working 12-hour days, he was unable to focus on the business full time and called on his friend. Brian Wicklund, an Aus-

Paying it forward: Mentoring program provides business guidance

As a Service-Disabled Veteran-Owned Small Business, BPI Plumbing takes its lead from Alex Galicia, who served in the U.S. Navy in the 1980s and continues to serve as a commissioned officer (major) in the California Army National Guard.

"As a veteran, first and foremost I feel a responsibility to help other veterans," says Galicia, whose sense of responsibility partly stems from the guidance he received after his uncle and brother passed away within six months of each other.

"I didn't have a lot of guidance at first even though I grew up in the industry," Galicia says. "It's nice to have a more experienced professional to fall back on as questions, both simple and complex, arise." Galicia found support in the Mentor Protégé program offered by the Associated General Contractors (AGC) and city of San Diego.

"I was lucky to be accepted," Galicia says, "but I didn't realize that getting accepted was the first challenge. Finding a mentor was the second one."

Rich Collins, founder of Collins Plumbing in La Mesa, California, had been approached to become a mentor for other plumbers, but the timing wasn't right.

"He's a good guy, but he was busy running a business," Galicia says.

When approached about helping a fellow veteran, Collins, who served in Vietnam, was more than willing to lend a hand.

"He took me under his wing," Galicia says. "He basically taught me how to compete against him."

The idea on the part of both the city of San Diego and the AGC was to develop competitors and make plumbing a more competitive industry. It worked out well for the city, Galicia says, who has bid against tralian native with an entrepreneurial background, to lend a hand.

Now the CFO and chief estimator at BPI Plumbing, Wicklund took over operations in 2006 until Galicia was able to come aboard full time in 2008.

"My uncle basically ran it as an old 1099 shop where everybody was an independent contractor," says Galicia, who envisioned a different future, and along with Wicklund, worked to transform the company from a sole proprietorship into a small-business corporation.

The art of training

Finding good people has been a key component of their growth and success.

"Everybody knows there's a labor shortage, and it's really hard to find good plumbers right now," Galicia says. "The biggest thing I picked up from my uncle is a willingness and ability to train, mentor and develop our own plumbers. He basically raised his own people."

Garcia became involved in the Job Corps and helped teach at-risk young adults, ages 18-25, the trade, and in some cases, hired them on. As a member of the board of directors, Galicia has followed in his uncle's footsteps and has hired five employees from the Job Corps.

An advocate for apprenticeships and training in general,

BPI Plumbing has donated time and offered ride-alongs to Castle Park High School's industrial arts training program another relationship that began with Garcia.

In recognition for its involvement with the Job Corps and the local high school, the South County Economic Development Council named BPI Plumbing its Outstanding Corporate Citizen for 2014.

66 It's nice to have a more experienced professional to fall hack on as questions, both simple and complex, arise." Alex Galicia

Garcia came to the United States on Jan. 3, 1959, a few davs after Fidel Castro marched into Havana.

A Cuban Army sergeant and plumber, Garcia's name appeared on a security clearance list because of the work he handled in the Presidential Palace, generals' homes and other government buildings.

Castro ordered most on the list killed, but fortunately for Garcia, the revolutionary soldier verifying identities was a childhood friend. He told Garcia to get out of Cuba and to not go home. Continued >

Collins on city projects.

"He took time out of his day to sit with me I can give him a call and ask for his advice. So I see that as an obligation, and Rich helped me see it as one. He said, 'Someday you're going to do the same for somebody else."

Galicia has since paid it forward and then

A former board member of Service-Disabled Veteran-Owned Businesses (SDVOB), he is Disabled Veteran Business Alliance (DVBA).

"I'm involved in the veterans' business world to provide mentorship and guidance to up-andcoming veterans," Galicia says. "And it doesn't necessarily have to be in plumbing."

There are other aspects of business that

need to be figured out by those who are following an entrepreneurial path in any industry, he says, such as writing a business plan, setting up a marketing plan or



figuring out how to finance a business.

"It feels good to give back," Galicia says. "We do what we can based on our ability."

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Catching a flight to Key West, Florida, Garcia never saw his mother again and didn't see his father until almost 30 years later.

"He had the experience that a lot of refugees have," Galicia says. "They come to the U.S. with nothing except the clothes on their backs and a few dollars in their pockets."

It was plumbing that allowed Garcia to flee to the U.S. and find work.

Initially, he put his skills to use at Miami hotels, but about the time of the Bay of Pigs Invasion, Garcia left for California to escape growing pressure to go back to Cuba and overthrow Castro.

Eventually, Garcia became known as a go-to guy who would help other Cuban refugees learn the plumbing trade and establish themselves.

"I don't know how many plumbers out there owe their trade to my uncle," Galicia says.



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Judy Kneiszel

Worked Up? Work It Out!

Disputes are unavoidable in the plumbing business, but there are workable, lower-cost alternatives to lawsuits when conflicts arise *By Judy Kneiszel*

eing in the plumbing business means dealing with customers, employees and lots of other people. Unfortunately, dealing with people can create conflict. Conflicts or disputes can start with a small difference of opinion and quickly escalate. Disputes arise around bill collections, employee performance problems, partnership disagreements and broken contracts. Leaving a conflict unresolved or handling it badly can affect more than just the people involved. It can affect the success and stability of a business for years.

WHY NOT TAKE IT TO COURT?

The legal system may be the first option for dispute resolution that comes to mind. Going to court, however, can escalate a dispute, and in the end the only ones who win are the lawyers. Real lawsuits don't get neatly tied up in less than 60 minutes like court cases on TV. Going to court almost always means burned bridges and hard feelings. It can pit co-workers and community members against each other, and often ends relationships permanently. Going to court costs a lot of money and wastes a lot of time. Other methods of dispute resolution, on the other hand, can save time, money and relationships. Think of a lawsuit as a last resort if an agreement can't be reached any other way.

One alternative method that provides cheaper, faster dispute resolution is mediation. In mediation, a neutral third party works with both sides in a dispute trying to facilitate a settlement that's agreeable to all. This neutral person is chosen by the parties, and is usually experienced in mediation. A good mediator will calm emotions while determining the interests of both parties. The mediator will attempt to satisfy both sides with possible solutions, hopefully resolving all issues without a lawsuit. Mediation sometimes takes place after a lawsuit has been filed and, if successful, cuts the proceedings short, saving time and money. While mediation can be helpful, it has its limits because a mediator does not have the authority to make a binding decision.

The benefits of mediation are:

- It is private and confidential.
- Parties are directly involved and work together in negotiating the settlement.
- The mediator objectively helps the parties in exploring possible solutions.
- Because mediation can be scheduled early in the dispute, a settlement can be reached much more quickly than through litigation.
- Both parties save money through reduced legal costs and staff time.
- The chances of continuing a business relationship after resolving the dispute are increased.
- Creative solutions can become part of the settlement.

ARBITRATION

Arbitration is another form of dispute resolution. Unlike mediation where a third party makes suggestions for settlement, an arbitrator hears both sides of the dispute and makes a decision on the issues. The decision is binding and cannot be appealed.

While there's no guarantee you'll be happy with the outcome, arbitration is usually less adversarial, less formal and generally takes less time than a legal trial. It is also generally cheaper than going to court.

Other benefits of arbitration include:

- Unlike a trial, which is open to the public, arbitration is private. There is no public record of the proceedings.
- The extensive "discovery" or relevant documents required in a court case can be avoided. There is only a limited exchange of documents that relate specifically to the dispute.
- Unlike the courts, arbitrators don't usually have

much of a backlog so hearings are scheduled as soon as both parties and the arbitrator are available.

- You can choose an arbitrator with expertise and training that relates to the subject of the dispute. If the dispute is with an employee over job performance, for example, you would most likely choose an arbitrator with employment law experience.
- Because of limited discovery, informal hearing procedures, and the expedited nature of the process, parties save on legal fees.
- Arbitration is less adversarial and more informal than litigation, so chances are better that you can continue to have a relationship with the other people involved in the dispute after a decision is made.

When drawing up business contracts, you can include what is called an arbitration provision. If you include this clause requiring arbitration, then any disputes "arising under or relating to" the agreement must be arbitrated. This allows you to avoid a lawsuit and instead hire an arbitrator to rule on future disagreements over the contract.

WHERE TO FIND ALTERNATIVE SOLUTIONS

Triple

Professional arbitrators and mediators list their services in phone book advertising and on the internet, but you may want to get a referral from a trusted business peer in your community. Local chapters of the Better Business Bureau or American Bar Association may offer arbitration services or be able to recommend someone. Arbitration can be arranged privately or through a recognized service, such as the American Arbitration Association.

Many arbitrators are lawyers, former judges and business leaders. An effective arbitrator will have experience and knowledge of multiple industries.

Because alternative methods of dispute resolution only take a few days, the total cost to the parties involved is likely to be less than with a lawsuit, especially since research and discovery costs, court fees and expert witness expenses are eliminated.

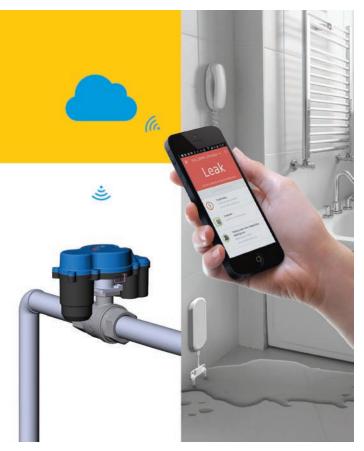
Mediation and arbitration services are not free, however. Fees can exceed \$200 per hour. There is also a filing fee for commercial arbitration that can range from several hundred to several thousand dollars depending on the complexity of the dispute. Generally, the parties will split the fees. How they will be split should be agreed upon prior to the start of mediation or arbitration.

Judy Kneiszel has operated her own small business for about 20 years and is familiar with the many rewards and challenges of ownership. Write to her with questions, comments or topic suggestions at thewordhouse@ameritech.net.

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Now, That's a Wrap!

For sheer marketing firepower and increased efficiency, Omaha plumber's Nissan van stands out from the competition **By Ken Wysocky**

ven though Brad Birge runs a plumbing business founded on the principles of old-fashioned service, the owner of Omaha-based Big Birge Plumbing Co. can still appreciate the value of modern equipment and marketing techniques.

For proof, look no further than the company's 2014 Nissan NV service van and its eye-catching vinyl wrap, which features a flannel-shirt-clad Birge on one side and his wife and business co-owner, Lallenia, on the other. The vehicle, one of four service trucks, enhances efficiency and effectively bolsters brand recognition for the business, established in 2011.

A clean
 workspace
 is a happy
 workspace."
 Brad Birge

Before Birge bought the Nissan, the company ran two pickup trucks with utility bodies and one utility van. (Residential remodeling and service work generates about half the company's revenue, while commercial plumbing work provides the rest.)

When the need for a fourth truck arose, Birge wanted a vehicle with more curb appeal, a comfortable cab, a taller interior (Birge is 6 feet 2 inches tall) and an

exterior with plenty of room to display the company's playful vinyl wrap. The Nissan checked all the boxes.

Birge also wanted a boxier, more masculine-looking van to offset the vinyl wrap, which he describes as "a bit on the eccentric side — a little edgy." He also wanted a cargo area that could be configured for maximum efficiency. The Nissan's unusually tall roofline helped accomplish both goals.

"I can stand inside the truck without ducking," the master plumber says. "It's awesome. You don't have to get on your knees and crawl around to find things. You're already on your knees a lot

	Omaha, NE
COMPANY	Big Birge Plumbing Co.
LOCATION	Omaha, Nebraska
OWNERS	Brad and Lallenia Birge
VEHICLE	2014 Nissan NV van
BENEFITS	Efficient, productivity- enhancing storage and highly visible marketing/ brand development
COST	About \$32,500
WEBSITE	www.bigbirgeplumbing.com



Metal supports provide out-of-the-way storage for up to 10-foot sections of pipe.

as a plumber while you're working, so being able to stand up while looking for items in the truck is a big plus. We spend less time looking for things because it's well organized and don't waste as much energy doing so.

"A clean workspace is a happy workspace," he adds. "The more room you have to work, the cleaner you can keep it and the happier the guys are who are working out of it. They finish jobs faster, which makes for happier customers."

The only drawback was the van's 8-foot-long bed, which makes it difficult to carry 10-foot pipe sections. But Birge got around that by cutting a hole in the partition that separates the cargo area from the cab, then fastening U-shaped "trapeze" devices — fashioned with metal Unistrut supports and All-Thread sections — to the roof joists. The devices hold the pipes high up and out of the way, near

the roofline. One end of the pipes extends into the cab, high above the driver's seat, where they're supported by another U-shaped support.

The interior storage system was supplied by Badger Body & Truck Equipment in Omaha. The company didn't make a system specifically for plumbing vans, so Birge cherry-picked parts of other storage systems made by Badger

that he thought would work best. The result is three sections of shelving — two on one wall and one on the wall with the van's sliding door. One section is dedicated to power tools; the other two feature built-in drawers with compartments that hold about \$20,000 in spare parts.

Two drain cleaning machines, made by RIDGID and Ken-Way Corp., are stored up front, behind the cab and by the sliding side door. A rooftop ladder rack — which

folds down for easier access because the truck is so tall — carries a 28-foot extension ladder. Inside, 4- and 6-foot step-ladders are strapped upright to the cab wall.

Birge also picked the Nissan because of its spacious cab that features plenty of handy storage compartments and a



between-the-seats console with a built-in file folder holder.

In addition, the van's large sidewalls provide a wealth of space for a vinyl wrap designed by the Birges.

"We were talking about how to emphasize old-fashioned values from the 1950s, the way that movies from that era portrayed them, and her mind goes, 'Ding! Let's dress up in costumes," Birge says.

In my opinion, we have a very prestigious trade that performs a very valuable service that should be presented in a clean, valuable and professional way." Brad Birge

> Since he often wears a flannel shirt, it seemed like a natural choice to make Birge look like a lumberjack, holding a large wrench that at first glance resembles an ax. The other side shows Lallenia wearing a polka-dot red dress, white sweater and heels — also holding a large pipe wrench.





n the **ROAD**



Birge casts an imposing figure as a wrench-toting lumberjack.

While Birge says it's difficult to quantify how many service calls are generated by the wrap — which cost about \$3,700 and was made by Revolution Wraps in Omaha — it definitely attracts attention and enhances the company's brand recognition.

"It's like driving a billboard down a highway," Birge says. "Lots of customers tell us they noticed the truck on the interstate or parked in a neighborhood. It actually makes us look like a larger company than we really are because when people see a fancy wrap, they figure we must be a decent-sized company that's doing pretty well."

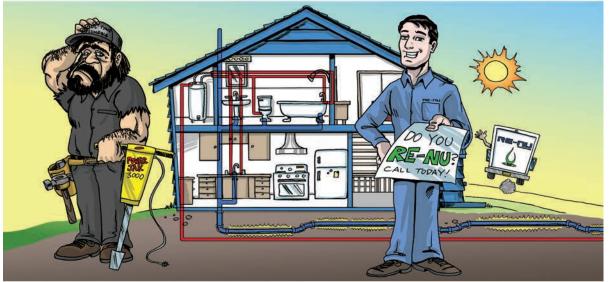
Long term, Birge — who employs five other plumbers — would like to replace all his residential service trucks with vinyl-wrapped Nissan NVs. He firmly believes the van also helps him achieve an even larger goal: to improve Omaha-area consumers' perception of plumbers.

"In my opinion, we have a very prestigious trade that performs a very valuable service that should be presented in a clean, valuable and professional way," he says.

Service vehicles included. 🖻



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25' - 350'	11/4" - 10"	1,350 - 3,000 PSI	1.4 - 5.5GPM	•	35' - 350'	2" - 10"	
0' - 250'	2" - 10"	0 - 3,000 PSI	1.4 - 8 GPM	•	0' - 150'	0" - 10"	
100' - 300'	1" - 8"	1,500 - 3,000 PSI	1.7 - 4.7 GPM				
30' - 400'	2" - 12"	1,500 - 3,000 PSI	2 - 12 GPM	•	25' - 150'	11/4" - 10"	
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100' - 800'	4" - 48"	2,000 - 4,000 PSI	12 - 80 GPM	•	25' - 100'	2" - 12"	
				•	1' - 100'	11/4" - 10"	
100' - 1,000'	2" - 120"	1,000 - 4,000 PSI	4 - 120 GPM				
115' - 190'	2" - 12"	1,000 - 2,000 PSI	10 - 20 GPM				
115' - 500'	11/4" - 36"	1,000 - 4,000 PSI	2.2 - 35 GPM	•	25' - 110'	11/4" - 10"	
30' - 500'	11/2" - 12"	1,200 - 7,000 PSI	2 - 18 GPM				



Get Ready for Winter

Whether preparing equipment for storage or months of cold weather work, here are a few steps you will want to follow **By Ed Wodalski**

epending on where you live, the winter chill may already be in the air. Hopefully, you've taken the time to properly store your compact equipment for spring. Or maybe you plan on using it year-round. A skidsteer loader, after all, makes a handy snow removal tool.

In either case, your operator's manual is a good place to start. Each piece of equipment is unique and requires its own shutdown procedures.

Shutting down until spring?

Typically, winterization includes a multipoint inspection: lubricate and/or replace parts; drain and/or change fluids, oil and filters; check tires; and inspect the brakes, steering and gearboxes. This is also a good time to check



Snowblowers can be a handy winter attachment. Before sending yours out in the cold, be sure to check the hydraulic hoses for cracks and wear and the condition of the cutting edge and skid shoes.

the hours on your machine to see if it's due for required maintenance.

Lars Arnold, product manager for compact equipment at Volvo Construction Equipment, says after referring to the operator's manual, it's a good idea to clean the machine, removing all dirt and corrosive materials.

"Grease the machine's moving parts; don't miss any grease points," he says. "Check the machine for oil leaks and damage."

That includes engine oil as well as hydraulic fluids and lines, topping off as needed. And don't forget the windshield fluid. Arnold prefers using soap and water for summer, but switching out to an approved winter washer formula when temperatures dip to prevent damaging fluid reservoirs. He

If the temperature is extremely low, like in the northern states or Canada, we recommend changing the hydraulic oil to an arctic oil. But again, this is different from machine to machine."
 Lars Arnold

also recommends filling the fuel tank to prevent condensation and be sure the coolant is suited to your environment. It's also a good idea to use a fuel stabilizer.

Keep the tracks clean

If possible, store equipment inside, but if left outdoors, don't park it in the mud, especially tracked vehicles. It's also a good idea to jack your skid-steer wheels at least an inch off the ground to prevent flat spots.

 When working in cold weather, give your equipment time to warm up before putting it to work.



"This will cause unnecessary wear and tear on the tracks if it becomes frozen to the ground," Arnold says. "Get some 2-by-8s or 2-by-12s and park the machine on the wood."

Arnold also recommends retracting all hydraulic cylinders, lowering the attachments to the ground and releasing the hydraulic pressure.

"If needed, apply a thin layer of grease or petroleum jelly to all exposed cylinder piston rods so you don't get rust."

He also suggests removing the battery and keeping it in a warm, dry place. "Put the battery on trickle charge or charge the battery periodically," he says. "Cover the machine with a tarp so you don't get moisture and snow buildup."

Warm it up

Arnold recommends periodically (monthly) starting the machine and running it until the engine reaches working temperature. Remove the grease from the cylinder pistons, check all fluid levels and carefully operate

the hydraulic controls, making sure they function properly.

"Get the machine nice and warm and then put it back in storage," he says. "If the temperature is extremely low, like in the northern states or Canada, we recommend changing the hydraulic oil to an arctic oil. But again, this is different from machine to machine."

Working in winter?

Of course, not everyone shuts down until spring. If you plan on working your equipment this winter, be sure the diesel fuel is winter blend. Arnold says there's no need for additives unless you still have a summer blend in the tank.

"The other thing I would strongly recommend, besides checking the fluids for winter operation, is installing a block heater to ease engine starting and for comfort," he says. "And maybe a programmable diesel auxiliary heater; set it for an hour before you start working, that way the engine coolant and oil are already heated. When you start the engine it gets

warm right away inside the cab."

Take time to stretch

Winter or summer, it's always a good idea to idle down your equipment before shutting it off, especially a turbocharged engine, and give it time to warm up before you begin working.

"It's like an athlete: An athlete never comes out of the locker room and starts playing; he always stretches and

It's like an athlete: An athlete never comes out of the locker room and starts playing; he always stretches and does warm-up exercises. You need to do the same with your equipment. Before you start operating the machine hard, you need to make sure the engine is warmed up and the hydraulic oil is warmed up."
Lars Arnold

does warm-up exercises," Arnold says. "You need to do the same with your equipment. Before you start operating the machine hard, you need to make sure the engine is warmed up and the hydraulic oil is warmed up." He says an excavator started at minus 20 degrees F needs time to get the oil warmed and moving in the cylinders and through the control valves.



Frozen Pipes Call for All Hands on Deck

Cold snap brings out the best in New Hampshire plumbing company *By Paul Nicolaus*

he love was spread among customers this past Valentine's Day weekend by Steve Labbe, president and owner of Paradigm Plumbing, Heating & Air Conditioning Inc. in Hooksett, New Hampshire, when he and his crew went beyond the call of duty battling frozen pipes.

In the midst of a mild winter, Labbe tuned in to the weather report and saw the winter storm coming, but he had a feeling it would catch plenty unprepared. To help others ward off frozen pipes, the company spread tips of the trade using newsletters and Facebook, but when the storm hit and the temps dropped, the calls poured in.

"Once the storm came in, it was like you couldn't field the calls fast enough," he says. "The phones were all lit up."

With 30 company staff members in total, Labbe says it was all hands on deck.

"You're trying your hardest to help everybody, and it's just chaos."

Race against time

Throughout the weekend, Paradigm fielded 41 calls in all, and Labbe had his hands full as he honed in on a 30-unit apartment building.

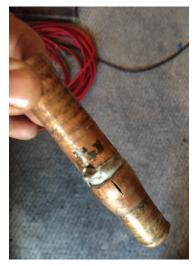
"We were pulling out baseboard and looping," Labbe says, "but everything was so rocksolid frozen in there that you couldn't get the water to loop around."

And time was of the essence.

"You have to get the system online, even when it's down, because if you don't more of it is going to freeze," he says. "And if you don't fix it quick Once the storm came in, it was like you couldn't field the calls fast enough. The phones were all lit up."
Steve Labbe







Labbe removes a split copper pipe.

enough you just got yourself into another leak that's in another part of the wall or ceiling or floor. So there's this race against time, and you're constantly under a lot of pressure."

To help thaw the frozen pipes, he and his licensed tech pulled out an arsenal of equipment that included a Wagner HT1000 1,200-watt heat

gun that produces 4,100 Btu with a temperature setting of 750 degrees or 1,000 degrees F as well as a Hot-Shot 320amp pipe thawing machine from General Pipe Cleaners and a TurboTorch TX-504 (Victor Technologies).

"You're cutting open pipes to see if there's any flow and you're working with the boiler and circulators and valves," he says. "You've got hoses going to them and you're trying to find where the water is."

After an exhausting day of repairing leaks and getting the heat in eight units back up and running, Labbe even-

tually headed home to recoup.

"My wife made me some nice soup, I ended up taking a shower, and I said, 'Sweetheart, we're going to celebrate Valentine's Day tomorrow or the next day. I promise I'll make it up to you. I'm going to bed."

Not done yet

As Labbe started walking up the stairs on his way to bed, his phone rang again; the same apartment complex had yet another line in need of repair. Labbe threw his clothes back on, drove back out to the site, and spotted water pouring out of the ceiling from the second floor to the first.

"I run into the building, and it's just raining inside this apartment," he says.

Labbe spun around, ran outside, fell over and slammed onto the ground.

"I went head over tea kettle because the water that was going out turned to ice as it hit the parking lot," he says.

"I think that any plumber can relate. You're so engulfed in the moment and you're trying to prevent damage from happening that you do whatever it takes, whether it's taking sewage in the face or taking a header because you're not thinking that the parking lot is going to be frozen."

Labbe brushed himself off, went to the boiler room, shut the water off, and repaired the pipes using couplings and new solder. He also fixed remaining leaks by cutting out the split pipes. By 11 o'clock that night, his day had finally come to an end.

44 We go out when the world needs us, and it gets treacherous out there. We're first responders. And that's what we do." Steve Labbe

"Valentine's Day is a special day for all the guys

in this industry who have loved ones and relationships, but we're the Navy Seals of plumbing," he says. "We go out when the world needs us, and it gets treacherous out there. We're first responders. And that's what we do."



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On the Cutting Edge

Exact Pipe Tools introduces lightweight pipe cutter to the US market *By Luke LeNoble*

ver the years, Exact Pipe Tools has developed a number of modern tools for pipe cutting. However, they haven't been available in the United States until recently. That's why the Finland-based company decided the Water & Wastewater Equipment, Treatment & Transport Show was an ideal place to highlight its diverse line of pipe cutters designed to safely cut all types of pipe.

The lightweight PipeCut 170E is specifically designed for cutting pipes from .5 to 6.7 inches in diameter. It can cut any pipe material, including steel, copper, cast iron and all plastics. Mike Helwich, national sales manager for Exact Pipe Tools, says the pipe cutter has been well received, both overseas and domestically.

"It's been all positive," he says. "There are over 40,000 of these units in the market worldwide. We just came to America roughly two years ago and started selling and distributing the product here probably 15 months ago."

The saw's blade diameter is 5.51 inches with a mounting bore of 2.44 inches. It is ideal for cutting stainless steel and cast iron pipes because of the pipe cutter's adjustable speed and steady torque feature.

"What's unique about this system is the gripper," Helwich says of the 12-pound saw. "The product will grip itself around the pipe. It has eight pressure points on it where it will not kick back once on the pipe, and the blade is never exposed until it's in the plunge mode."

The ergonomic design and additional safety features of the pipe cutter help eliminate job-related accidents.

"A lot of people now are becoming very safety conscious," Helwich says. "That's why they like this product. The blade is never exposed until it's actually into the material. Another aspect is, when you're cutting the pipe, the pipe is never hot. You'd think when you're cutting a piece of steel pipe or cast piping in half, the piece that you cut would be very hot. But all your heat is transferred out into the chips, which fall to the ground, so the cut piece is actually warm to the touch; it's not red hot as you think it would be."

The WWETT Show exposed Exact Pipe Tools to a new

and larger audience. Helwich says he spent as much time answering questions about the company as he did about pipe cutting.



▲ Lauri Makkonen, a sales representative for Exact Pipe Tools, demonstrates the 170E saw for an attendee at the 2016 WWETT Show. The saw can cut any pipe material, including steel, copper, cast iron and all plastics .5 to 6.7 inches in diameter. (Photo by Luke LeNoble)

"We've received a lot of questions like, 'Where have you been? I've never heard of you before.' Then we have to tell them the history that we just came to America, so we're in that process right now where we're building a dealer base, doing as many shows as we can, getting the word out about Exact Pipe Tools," Helwich says.

"The exposure that we got here has been very positive," he adds. "We sell through distribution, so we're basically showing the product here. Everybody knows that noise creates attention, so once we start making a cut, it seems to attract a crowd." **844/392-2800; www.exacttools.com.**



IT'S THE INDUSTRY EVENT OF THE YEAR



The WWETT Show - Water & Wastewater Equipment, Treatment & Transport - is the world's largest annual trade show for environmental service professionals. Over 12,000 people will gather from across the U.S. and beyond to see the latest in equipment and technology in the expo hall, participate in over 110 education sessions, and network with industry peers. Conference: February 22-24, 2017 Exhibits: February 23-25, 2017

Indiana Convention Center, Indianapolis, IN

Register today at www.wwettshow.com



There Are No Shortcuts When it Comes to Safety

A cave-in survivor, Utah plumber insists on shoring for every trench project By Marian Bond

erald Stott, owner of Stott Plumbing and Heating in Salt Lake City, Utah, had spent a good many years in the industry getting his training and licenses before opening his own business in 1978.

Today, he and his two sons, Mike and Bryan, provide plumbing and heating, CCTV, drain cleaning, line replacement, directional boring, pipe bursting and excavation services to residential and commercial customers.

Before Stott begins any excavation he insists trench boxes are on the site and remain on site until the project is complete.

"There is never an excuse to forgo the trench box," he says.

Q: What kind of safety procedures do you and your employees follow when making sewer repairs in terms of using shoring on work sites in trenches?

A: Shoring in the trenches is absolutely essential. It could destroy your business if you do not, as well as put your workers in terrible jeopardy. One accident of any sort and you are out. You must always be sure a trench box is used, and that your worker uses a hard hat and all protective gear called for. OSHA is non-forgiving and you don't want an accident.

Q: Do you have any experiences you can share?

A: A trench 5 feet deep is where you need a shoring box. I was in a 4-foot-deep trench and bent over to hook up a pipe when the trench gave way. It flattened me out. I felt like I'd been hit by a pro football player. It was not illegal, but it was a sobering experience.

Q: Anything else?

A: About 10 years ago we had an experience where we had dug a hole and were ready to put the shoring box together. Our worker dropped a shovel in the trench and stepped



I was in a 4-foot-deep trench and bent over to hook up a pipe when the trench gave way. It flattened me out. I felt like I'd been hit by a pro football player."

down to grab and pull it up. A nice young lady walked up and asked how we were doing. We said fine, and how are you? Our man was out of the trench at this point when she said, "I'm writing you a ticket for \$15,000." Well, after a lot of classes and negotiation and agony, we got it reduced to \$400. Thankfully, nobody got hurt. It's just not worth it to take any chances.

Q: What can be done to slow the deadly trend of plumbers losing their lives in trench accidents?

A: No. 1, always use a shoring box. No. 2, you have regular monthly safety meetings. No. 3, if you have an employee who violates the rules, you give him a week off without pay and tell the worker that he will not work for the company if he does not follow the proper safety procedures. It's hard to punish an employee with a week without pay, but he still has a job. It is very important to us that they always use the shoring box and that they stay safe. We have companies that sell the shoring boxes come in and talk with our people. They are a good resource.

Q: Is the trench box a safety measure that can be depended upon?

A: Yes, if properly installed. In our company, before a hole is ever dug, we have our sewer trailer and the trench box on the site. And it stays on site until the job is done and the hole is filled. There is never an excuse to not have a shoring box on the site we are working.

Q: What are some other safety concerns you address?

A: We worry about tripping, falling, the use of tools, and working around large equipment such as backhoes.

Q: Switching subjects: What advice do you have for a plumbing company thinking of expanding into sewer and drain cleaning?

A: I suggest they go someplace other than Salt Lake City so they are not competing with me. Seriously, you need to have the proper equipment. Don't go on the cheap side. I've seen people break into the industry with a minimum amount of equipment. You need a selection of machines that do different things. Don't go in underfunded without the proper equipment. Having one properly equipped truck is better than three trucks that are poorly equipped.

Q: Why did your plumbing company make the move into drain and sewer cleaning?

A: We were doing excavating for companies doing sewer replacement, and our policy was to never take business from another firm if we had gone out for that competitor on a job. So basically we were being a helper to the other plumbing company. We decided to offer the service with Stott Plumbing & Heating. We started off with one truck. We built it up slowly and now have four service vans in that department.

Q: Did you feel confident going in that direction?

A: Completely confident. I did it gradually, starting with the one truck until that driver got too busy to handle it. Then we added another truck.

Q: What are the important tools you need?

A: You need sewer augers in several sizes: small for cleaning washbasins, medium for cleaning kitchen sinks and large for cleaning sewer lines and even the mainlines. We use our small jetters a lot. The trailer jetter does not go out on every call, just when needed.

Q: Finally, how would you rate yourself as a boss? A: Poor.

Q: Are you too kind-hearted?

A: Quite the opposite. I have learned the best thing for me to do is take some time off, work on my 1965 Mustang, and let my two sons, who are my business partners, take over and confront an employee. I expect a great deal from my employees.





Drain Cleaning | By Craig Mandli

Cable Machines

Cobra Products ST-650 Drain Cleaning Power Machine

The ST-650 Drain Cleaning Power Machine from Cobra Products, a division of BrassCraft Manufacturing Co., is designed, manufactured and tested to stand up to the rigorous demands of the professional plumber. Applications



include main drains, sewer lines and root blockages in 4to 10-inch lines up to 100 feet long. The cable machine has a 3/4 hp motor with thermal overload protector and manual rest switch, tilt-a-way three-position power feed with grease fitting for quick drum change, double-reinforced contour welded frame, extra-large stair climber skids and extendible handles, dual handle wheels for easy loading and unloading, 100 feet of 3/4-inch music wire cable with inner core, reinforced 19-inch molded cable drum, and six-piece cutter set. **800/835-2200; www.cobraus.com.**



Electric Eel Model C

The **Model** C dual-cable sectional drain cleaning machine from **Electric Eel** runs up to 200 feet of 1 1/4inch self-feeding dual cable in 8- or 10-foot sections that require no handling when rotating. It spins cable at twice the rpm of a continuous cable machine for cleaning power in 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, with 3/4 and 1 hp motors available. A custom-designed and manufactured gearbox ensures parts availability. The heavy-duty, 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.**

Gorlitz Sewer & Drain Model GO 68HD

The **Model GO 68HD** heavyduty electric drain cleaning machine from **Gorlitz Sewer & Drain** is available with either



an open steel reel or enclosed polyethylene drum, and can be outfitted with an optional power feeder. Designed to clean pipes from 3 to 8 inches in diameter, the standard configuration is 150 feet of 11/16-inch hollow-core cable. The machine weighs 185 pounds. Adding a loading ramp and electric winch to any vehicle makes transportation quick and simple. **877/446-7548; www.gorlitz.com.**



Ken-Way Junior

The **Ken-Way Junior** drain cleaner weighs 24 pounds without cable. An optional Easy-Move Cart allows for easy transport in large buildings. The small footprint (17.5 inches wide, 11 inches deep and 17.5 inches high) makes

for easier access in tight spaces and under sink areas. The drain cleaner accepts three different drums, allowing use of 1/4-, 5/16-, 3/8-, 13/32- and 1/2-inch cable for cleaning pipes from 1 up to 4 inches (in-house drain and process lines only). The drums are interchangeable and can be switched in seconds by removing two wing nuts and sliding the belt off. No adjustment of the machine or motor is needed. The unit is powered by a 1/4 hp motor equipped with ground fault interrupter cord and air-powered foot switch. **800/533-0551; www.ken-way.com**.



Picote Solutions Smart Spider

The **Picote Solutions Smart Spider** is for pipes where the base or other sections are missing. It cleans all types of pipes,

including PVC. The Spider navigates 90-degree bends, and when combined with the Maxi Miller drive unit, technicians can clean and descale damaged pipes and install a liner to the remaining host pipe. The cable machine can clean 4- or 6-inch pipes and be rebuilt for either size when necessary. Powered by the Maxi Miller Power Plus, larger 8-, 10- and 12-inch models are available. **219/440-1404;** www.picotesolutions.com.

RIDGID K-3800 Drum Machine

The **RIDGID K-3800 Drum Machine** is designed for cleaning indoor drains. Easy to transport, it requires minimal setup to clean sink lines, floor drains and roof vents. The cable spins at 240 rpm



and fits 3/4- to 4-inch lines. Maximum drum capacity is 100 feet of 3/8-inch cable or 90 feet of 1/2-inch continuous-length cable. The corrosion-resistant molded cable drum won't dent or rust. The drum adjusts for proper cable feed angle while the inner drum guards against cable flip-over. An optional sink drum holds up to 50 feet of 5/16- or 1/4inch cable for cleaning 3/4- through 1 1/2-inch sink traps. The quick-release handholds allow easy cable change and transport. **800/769-7743; www.ridgid.com**.

Chemicals for Grease

Oatey Hercules PT BIO1

Hercules PT BIO1 from Oatey is an enzyme-based concentrated liquid for maintaining healthy drain systems. The fast-acting grease and waste-digesting bacteria, together with the biodegradable grease and soil removers, eliminates drainline buildup and con-



trols odors in grease traps and sewer lines. It breaks down fats, oils, grease, and other waste-stream organics from cesspools, septic tanks and drainfields. It is safe for use in all types of drainage plumbing, and contains no acids, caustics, solvents or other harsh or harmful ingredients. It is USDA authorized for use in food processing plants, and available in quart, gallon and 5-gallon pails and 15-gallon drums. **800/321-9532; www.oatey.com.**

Chemicals for Root Control



Duke's Root Control Razorooter II

Diquat-based **Razorooter II** root-control herbicide from **Duke's Root Control** is registered by the U.S. Environmental Protection Agency for controlling nuisance tree roots in sanitary sewer line collections systems, and received a classification of "evidence of noncarcinogenicity for humans." In 2014, the EPA further approved an amendment of labels to lower the signal word from "warning" to "caution." Crews insert a hose from manhole to manhole, preparing to fill the affected sewer pipe with herbicide. The foam is then released, compressing against pipe surfaces and penetrating cracks, joints and connecting sewers. Roots are killed on contact, decay naturally and slough away. Applications prevent root-related stoppages for two to three years. **800/447-6687; www.dukes.com.**

Lenzyme/Trap-Cleer Foaming Root Control

Foaming Root Control from Lenzyme/Trap-Cleer has double the dichlobenil active ingredient of previous solutions



and a latex base that helps it stick to roots longer. It is easy to apply and provides a slower foaming action to coat the entire pipeline and eliminate fast foam-over messes. **800/223-3083; www.lenzyme.com.**



RootX root control

Chemical root control from **RootX** is a long-term solution to pipeline root intrusion. It stunts new root growth without damaging the pipe, clearing pipeline roots that can cause blockages

resulting in sanitary sewer overflows. The chemical won't harm water treatment systems and is registered with the EPA for both sanitary and storm use (EPA Reg. No. 68464). Simplicity of application enables crews to perform root control on demand or as scheduled preventive maintenance. **800/844-4974; www.rootx.com.**



Enz USA Bulldog 37 Series Cross Jet Nozzle

The **Bulldog 37 Series Cross** Jet Nozzle from Enz USA is engineered to operate with both fresh

and recycled water. The cross jet design opens completely blocked lines, frozen pipe and interlaced root intrusions. An integrated oil-free braking system provides low-wearand-tear operation, delivering a controlled number of rotations for efficient cleaning of roots, grease and solids. The



nozzle is available in 1/2- and 3/4-inch connecting threads and can be used on pipes from 2.5 to 8 inches in diameter. **877/369-8721; www.enzusainc.com.**



StoneAge Switcher

Switcher cleaning heads from StoneAge eliminate extra runs by alternating between pulling and descaling jets. Technicians can use the same tool to

quickly run down the line, engage full cutting force to clear obstructions, and switch back to move debris. Each time the pump is idled down and brought back to pressure, the tool alternates function between two different sets of jets. Field use of the WGR Magnum with Switcher head versus the traditional method of using two tools (rotational and fixed nozzle) uses up to 35 percent less water and completes the job 50 percent faster. **866/795-1586; www.sewernozzles.com**.

Water Cannon Turbo Nozzle

Turbo Nozzles from **Water Cannon** combine a 0-degree blast in a 25-degree pattern with no



gears, teeth or bearings to wear out. Precision ceramic surfaces provide long life and are rebuildable. Applications include stripping paint, degreasing heavy-duty equipment and removing stubborn oil, dirt, grime and soil residues from concrete, walkways, driveways, sidewalks, brick and building exteriors. The turbo rotating nozzle increases the blasting power by concentrating a 0-degree stream of water into a 25-degree high rpm pattern. The nozzle works with equipment rated from 3,000 to 4,500 psi with orifice sizes up to 7 inches. **800/333-9274; www.watercannon.com.**

Portable Jetters

Amazing Machinery BossJet Max

BossJet Max jetters from Amazing Machinery offer versatile hose reel configurations with the choice of no reels, fixed reel or 360-degree stainless steel pivoting reel and mounting bracket for an optional remote hose reel for indoor jetting.



Jetters are available with Honda, Kohler, Yanmar or Vanguard engines with or without electric start. Pump options include CAT, A/R and General with pressures up to 4,200 psi and flow rates up to 5.5 gpm. The frame is powder-coated 1.5-inch tubular steel, which wraps around the engine and pump for protection. Each jetter includes a Laser nozzle and washdown accessories with 50 feet of leader hose. **800/504-7435; www.amazingmachinery.com.**

MyTana MV80 Jet Pro Cart

The **MV80 Jet Pro Cart** from **MyTana Mfg. Company** is powered by a 24 hp Honda engine and delivers 8 gpm at 3,000 psi. It has a compact steel cart and



easy-to-use controls for the pressure unloader and pulseable valves. The 12-gallon water tank is set up for continuous resupply from a garden hose. The unit comes with 250 feet of 3/8-inch thermoplastic jetter hose and a set of nozzles for penetrating, cornering and blind thrust. The hose cart has two reels, one for the 3/8-inch hose and one for a 50-foot jumper hose useful for remote jetting. **800/328-8170**; www.mytana.com.



Arthur Products Cnt-r-KUT Elite

The **Cnt-r-KUT** Elite from **Arthur Products** is a rotating mechanical tool designed to



symmetrically clean pipes. Equipped with interchangeable chain and cable on the same rotor, the cutter operates at 2,000 to 10,000 psi. The lightweight, flexible centering device, engineered from an aerospace elastomer, allows the unit to navigate the contour of the pipe. Advanced jet porting uses both rotor sidekick jets for optimizing rotational force and rear thruster jets for propulsion maximization. It is available in 3/8-, 1/2- and 1-inch NPT. **800/322-0510;** www.arthurproducts.com.

NozzTeq Lumberjack

The **Lumberjack** low-torque, high-speed cutting nozzle from **NozzTeq** is designed for high water pressures. It can be used for



removing roots, as well as clearing grease, tuberculation, protruding laterals and other buildups without cutting through host pipes. The water-cooled bearings are sealed, grease-lubricated, and largely maintenance-free. The cutters rotate at a minimum speed of 10,000 rpm with flow rates from 10 to 250 gpm at varying pressures and operate in pipes from 3 to 48 inches in diameter. All models clean with chain links and optional cutting blades for severe blockages. All models have a propelling jet housing with optional tow rings. **866/620-5915; www.nozzteq.com.**

Nu Flow Micro-Cutter

The pneumatic **Micro-Cutter** from **Nu Flow** is designed to clean and remove calcite and roots from the inside of a variety of pipes, including steel, cast



iron and Orangeburg. The system rotates at approximately 2,000 rpm and negotiates turns of 90 degrees in pipes down to 2 inches in diameter. It runs at 40 cfm and allows for multiple cutting heads to be attached. The drill tip has an adjustable spline available in various sizes to match different pipe diameters. 800/834-9597; www.nuflowtechnologies.com.



Southland Tool Super Red Hot

The round-body **Super Red Hot** heavy-duty bearing root-cutting motor from **Southland Tool** comes with a specially machined oversized front bearing. This

hydraulic root cutter motor allows the user to cut, rip and destroy roots in sewer lines. A direct replacement for the Patriot Motor, it puts out over 14.58 ft-lbs of torque. Available in 1- and 3/4-inch hose models, it has the exact tail thruster to bolt to green skids or smart cutter skids. **714/632-8198; www.southlandtool.com.**

USB - Sewer Equipment Corporation Turbo Chain Cutters

Turbo Chain Cutters from USB - Sewer Equipment Cor-

poration are made of tempered stainless steel and offer continuously adjustable guide skids. The chain retainer is driven by a high-performance turbine to remove roots, grease and mineral deposits from 4- to 48-inch sewer lines. Made for use with recycled or clean water, features include an optimized 3-D hydromechanics design and ceramic nozzle inserts. It can also be used with diamond bits as a barrel cutter for the smooth removal of protruding laterals. Heavy mineral deposits can be removed with carbide bits attached to the specialized chain. **866/408-2814; www.usbsec.com**.

Trailer/Truck Jetters



American Jetter 58 Series Hot Jet

The **58 Series Hot Jet** from **American Jetter** offers increased cleaning power for

grease cutting and deicing by heating water up to 190 degrees. Consistent power is provided by a 32.5 or 37 hp Kohler gasoline engine with flows of 8.5 and 11 gpm to 4,000 psi. The rear electric speed control reel provides precise cleaning speeds and easy access to the jet hose with the included hose guide. Low-water shut-off prevents pump damage if the 200-gallon tank runs low. The optional 1-mile open-range wireless remote allows for water ON/OFF, engine shutdown and hose reel control. The heavy-duty square tubing trailer has a 2-inch ball coupler and electric brakes. **866/944-3569; www.americanjetter.com.**

Hot Jet USA Vac 'N Jet Series

The Vac 'N Jet Series of drainline jetters from Hot Jet USA is available with hot- or cold-water



operation, 13 to 35 hp engines with electric start, 12-gallon gas tank, 24-gallon diesel tank, full variable pressure and rear throttle control. General Emperor Series pumps supply outputs of 10 gpm at 4,000 psi. Vacuum systems feature an all-steel 300- to 800-gallon spoil tank, Gardner Denver vac/blower, Colt 4-ton hydraulic dump, Centri-Clean filter system and a 24-inch fully opening rear hatch. The diamond-plated steel deck trailer has two 5,000-pound-capacity axles, electric brakes and 200-gallon water tank. The unit comes with a variety of jetting and power wash accessories. **800/624-8186; www.hotjetusa.com.**



Sewer Equipment Mongoose Jetters Model 184

The Mongoose Jetters Model 184 jetter from Sewer Equipment has a tubular

steel frame, corrosion-resistant pre-painted subassemblies, state-of-the-art controls, strong hose reel, high-quality diesel engine and a Mongoose Run Dry Pump. **877/735-4640;** www.mongoosejetters.com.

US Jetting 4018

The **4018** trailer jetter from **US Jetting** is available with powder-coated or galvanized frames, as well as aluminum com-



ponents, including fenders, toolboxes, antifreeze tanks and fuel tanks. The 4,000 psi at 18 gpm jetter has a true run-dry pump with stainless steel fluid end and triplex plungers that are easy to maintain and service. A HATZ Tier 4 Final diesel engine is fuel-efficient, lightweight and generates a high amount of power. **800/538-8464; www.usjetting.com.**



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. **855/336-2962; www.vac-con.com.**

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Compact, lightweight jetter saves contractor time, trouble and money



Problem: Craig Casteen of Casteen Plumbing & Repair in North Carolina faced working in a residential crawl space that didn't allow much room to work. He needed a jetting unit compact enough to get into tight areas, and powerful enough to dislodge blockages from small lines.

Solution: Casteen chose the lightweight JM-1000 Mini-Jet from General Pipe Cleaners. The compact, electric-powered unit lets him clear grease, sand and ice from 1 1/2- to 3-inch lines up to 50 feet long. Its 1,500 psi of cleaning power hits soft stoppages with high-pressure, wall-to-wall water streams, flushing them away. Pulse technology helps slide the hose around tight bends and down lines. It breaks the initial tension between the hose surface and pipe walls, increasing cleaning power. Weighing 23 pounds, the JM-1000 is easy to carry. Casteen notes that the unit is "lighter than my tool bag" — and ideal for one-man operation.

Result: Casteen used the unit in the crawl space to quickly clear the blockage. "The JM-1000 is perfect for spot-clearing kitchen stoppages," he says. "The compact size makes it great for one-man operation, and it's perfect for much of the work I do!" 800/245-6200; www.drainbrain.com.

Compact jetter helps company overcome the hassle of city parking



Problem: Bob Oates Plumbing, Sewer and Rooter in Seattle, Washington, had regular issues working in urban areas, where space was at a premium. "In high-density populated areas, most customers have two or three cars, so in the front of customers' homes there is limited street parking," Bob Oates says.

Solution: The company began using the **Brute Jetting System** from **JETTERS NORTHWEST** to have a flexible, plug-and-play alternative to its fleet of trailer jetters. "The Brute Jetting System allows me to pull up with one vehicle and eliminates the need to disconnect a trailer and park the service van elsewhere," Oates says. "It offers the convenience of being mounted in a truck or van, with the power (12 gpm at 3,000 psi) of a trailer jetter."

Result: Oates is now able to save on the initial cost of building a custom skid-mounted jetter and valuable time on the job site. **877/901-1936; www.jettersnorthwest.com.**



Problem: A residential customer in Indianapolis, Indiana, was experiencing a backup caused by paper and minor root intrusion that left several inches of sewage in the basement. The homeowner called Hamm and Sons. Its technician, Dave Depew, was dispatched to open the blockage.

Solution: Depew determined he would need to build up a platform to keep his **Spartan Tool 1065** out of the water to avoid electrical shock hazards. After locating the 4-inch clean-out in the floor, Depew quickly cleared the blockage. The 1065 had more than enough cable and power to quickly eliminate the paper and roots that had caused the backup.

Results: While the homeowner had a major cleanup project, he was thankful Depew was able to respond quickly and remedy the problem. **800/435-3866; www.spartantool.com**.



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Product Spotlight

lotur Guest push-tit black shut-ott valve includes hot and cold color-coding By Eli Wodalski

he black shut-off valve from John Guest. available in 1/2- and 3/4-inch copper tube sizes (CTS), are designed for hot and cold plumbing applications, including water softeners. Features include an indicator arrow displaying the off position and two interchangeable red and blue buttons for color-coding hot and cold waterlines. The valve also features a quarter-turn long handle to prevent unwanted movement and allow for easy installation and repair.

"The valves have been designed to allow temporary servicing of downstream equipment," says Maribel Pagan. marketing communications manager for John Guest. "They can be used in whole-house water conditioning and purification systems and household plumbing applications where a shut-off valve is required."

Made from high-quality, engineered plastic, the black valve is UV stabilized for outdoor use and complies with the latest edition of the Uniform Plumbing Code (UPC).

The shut-off valve, like all John Guest push-fit fittings, eliminates the need for tools or sealants.

"You simply take your pipe in one hand and the valve in the other hand and push it into the tube stop," Pagan says. "Once it's pushed to the tube stop — that's it."



A twist-and-lock cap adds extra security. Stainless steel teeth grip the pipe while an EPDM O-ring provides a leakproof seal.

The fitting is reusable and can be removed by unlocking the cap, pressing on the Collet (gripper) and removing the pipe. The shut-off valve can be used with copper. PEX and CPVC pipe. Working pressures and temperatures include 100 psi at 73 degrees F. 100 psi at 180 degrees F or 80 psi at 200 degrees F.

"When installing the fitting, the plumber needs to make sure the system is depressurized, the pipe is cut square and all burns and sharp edges are removed. Install the fitting, test it and pressurize the system," Pagan says. "There's no waiting for glue or sealant. It's a very neat and clean installation." 973/808-5600: www.johngnest.com.

J.C. Whitlam plastic pipe cutter

The one-handed Sabertooth plastic cutter from J.C. Whitlam Mfg. Co. features a retractable blade that cuts all types of plastic



pipe and conduit through 1 5/8-inch O.D., including PVC, thin wall, CPVC, ABS, PE, polypropylene (PP-R) and PEX. The cutter has a diecast aluminum body. No tools are required to change blades. Replacement blades and spring are available. **800/321-8358; www.jcwhitlam.com.**



PSI Pressure Systems high-pressure pumps

The NX-Series (NX-365, NX-600, NX-800) of high-pressure pumps from PSJ Pressure Systems feature the Smart Water Systems conversion system,

capable of operating from 8,000 to 40,000 psi without changing or removing the discharge manifold, accessory manifold, rupture disc assemblies or pressure gauges. 855/775-5055; www.psipressuresystems.com.



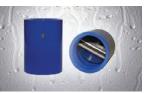
Noritz tankless water heater racks

The prefabricated commercial water heater system from Noritz America combines commercial-grade tankless units with system controllers, manifolds and accessories. Thir-

ty-six rack models are available, specifically designed for the commercial Energy Star certified NCC199 (GQ-C3257WZ US) Condensing Tankless Water Heater Series. With a thermal efficiency of 94 percent DV (95 percent O.D.) the model offers inputs from 16,000 Btu/h to 199,000 Btu/h and a maximum flow rate up to 11.1 gpm. **714/433-2905; www.noritz.com.**

Flomatic Slim Line well check valves

Model 80SL Slim Line well check valves from Flomatic Corporation are designed to support the



weight of up to 1,000 feet of pipe and well pump. Sizes range from 2 through 8 inches. Fusion epoxy coating is standard. The small outside diameter allows for tight fits in the well. The valves have a stainless steel body with corrosion-resistant internal parts. **800/833-2040; www.flomatic.com.**



Milwaukee Tool job site work gloves

Job site work gloves from Milwaukee Tool feature touch-screen-compatible material on the fingertips, palms and knuckles. Available in Free-Flex and Perfor-

mance models as well as Performance Fingerless glove for added dexterity when handling small objects, the palms of the fingerless gloves are padded and reinforced. All three gloves have a reinforced thumb seam and hook-and-loop closures for a secure fit, breathable lining and mesh backing to wick away moisture. A terry cloth wipe on the backside provides a place to remove sweat. Sizes range from small to XXL. **800/729-3878; www.milwaukeetool.com.**

Goulds Water Technology pump controller

The Aquavar e-ABll pump controller from Goulds Water Technology, a Xylem brand, features extended hydraulics from low-water residential



and commercial applications. The updated controller is designed for municipal water customers with low water pressure or those drawing water from a storage tank who want continuous water pressure, even when demand is high. Controllers are available individually for retrofitting or as part of a pump package. Packages include a wall mount and are delivered factory programmed. Up and down buttons enable users to adjust pressure as needed. **866/325-4210**; **www.goulds.com**.

COXREELS air pillow packaging protection

Protective pillow packaging for customer shipments from COX-REELS features small air pillows that are resistant to impact during product transportation. The packing inserts are created from raw material on demand and located at the end of each assembly station. **800/269-7335; www.coxreels.com**.

Ditch Witch backreamers for challenging conditions

Backreamers from Ditch Witch, a Charles Machine

Works Company, include the Sandhog HD (heavy-duty), Swab and EZ. The triple-action Sandhog, designed



for sandy and soft soils, combines aggressive cutting, mixing and packing for efficient pullback on the job. The Sandhog is available in a 2 3/4-inch shaft with 2.0 IF threads and 3 1/4-inch shaft with 2 3/8 API threads, ranging in diameter from 8 to 18 inches. The Swab backreamer is designed for rocky and hard soils and enables direct pullback for Ditch Witch all-terrain HDD rigs. It is available in a 3 1/4inch shaft with 2.77 male thread size for a diameter of 5 1/2 inches. The EZ backreamer for small-diameter installation jobs in soft to medium-hard soil conditions is designed for direct connection to the EZ connect assembly. The backreamer is available in a 3 1/4-inch shaft with an EZ2 and EZ3 connection, ranging in diameter from 6 to 8 inches. **800/654-6481; www.ditchwitch.com.**

Dallas Specialty toilet clamp

The DS-TC2 Toilet Clamp from Dallas Specialty & Manufacturing is designed to fix wobbly toilets from the top down without removing the bowl. Made for

wood floor installations, more than two clamps can be used if needed. **800/222-5644; www.dallasspecialty.com**.

Send us your plumbing product news: Email new plumbing product news, photos, and videos to editor@plumbermag.com.

Nexstar Network adds sales representative



Nexstar Network named Lucas McAlpin to its sales team. McAlpin has worked in the plumbing, heating, cooling and electrical trades for eight years and has 15 years of sales experience. He joins a team of 38 coaches, trainers and support staff who work with plumbing, HVAC and electrical residential service contractors to help them improve their businesses.

Grundfos appoints managing director of the Americas

Grundfos Pumps Corporation appointed Dieter Sauer regional managing director of the Americas region. He will oversee all aspects of the global pump manufacturer's North and South American business, including driving regional growth and maintaining a workforce.

IPEX completes \$55 million Edmonton plant expansion

IPEX completed a \$55.4 million expansion of its Edmonton, Alberta, Canada, plant. The 17,245-square-foot facility enables the thermoplastic piping systems manufacturer to provide western provinces with large-diameter PVCO piping. In addition to the three new PVC and PVCO lines, 15 local full-time skilled tradespeople, including PVC extrusion line operators, design engineers, as well as quality control and maintenance workers will be joining the Edmonton plant.

Franklin Electric VP appointed to Hydraulic Institute board



DeLancey Davis, Franklin Electric vice president and president of North America Water Systems, was appointed to the Hydraulic Institute's 2016-2019 board of directors. The board is primarily responsible for the strategic direction and defining the organizational priorities of the Hydraulic Institute — the global authority on pumps and pumping systems.

PHCC offers HVAC, plumbing pre-apprenticeship courses

The Plumbing-Heating-Cooling Contractors (PHCC) Educational Foundation offers potential workers an opportunity to learn about day-to-day aspects of the trades before beginning a longer-term apprentice program and career through its HVAC & Plumbing Pre-Apprenticeship Course. Available online, prospective apprentices can take the course, using six thematically focused modules that include basic math skills, tools, safety and construction drawings. To register for the online course, go to www.phccweb.org/ EducationEvents and click "Apprentice Training" for an enrollment form. There is a \$59 fee for PHCC members and \$79 fee for nonmembers.

Dwyer Group awards franchise scholarships to veterans

The Dwyer Group awarded five veterans a \$1,000 scholarship for use with franchise training or other franchise opening costs as part of its VetFran program. The scholarships are awarded to honorably discharged veterans who have been chosen and qualified to operate a Dwyer Group franchise. This year's recipients include Carl Allen, Marc Beede, Nathan Burkholder, Ricky Jones and Robert Starvish. Funding for the scholarships came from Dwyer Group, Dawson Insurance and PTN Vendor Veteran Scholarships.

Bosch Thermotechnology regional president appointed to AHRI board



Vitor Gregorio, regional vice president for Bosch Thermotechnology Corp., was appointed director-at-large for the board of the Air-Conditioning, Heating and Refrigeration Institute (AHRI). AHRI is the trade association representing manufacturers of air-conditioning, heating, commercial refrigeration and water heating equipment. An internationally recognized advocate for the industry, AHRI develops standards for and cer-

tifies the performance of many of these products. AHRI's 300-plus member companies manufacture quality, efficient and innovative residential and commercial air-conditioning, space heating, water heating, and commercial refrigeration equipment and components for sale in North America and the world.

Uponor North America named a top Minnesota workplace

Uponor North America was named one of the Top 150 Workplaces in Minnesota by the *Minneapolis Star Tribune*. This is the fourth consecutive year the company has received the recognition.

Taco Comfort Solutions hires marketing brand manager

Taco Comfort Solutions appointed Ken Watson to the new position of marketing and brand manager. He brings 20-plus years of advertising and marketing experience to Taco, having served in both agency and client-side roles.

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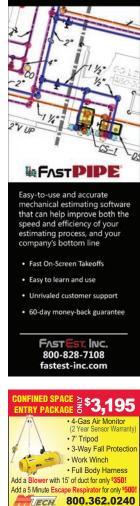
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Sewer Rehabilitation Contractor in Denver, CO is closing its doors. Currently have all of the equipment necessary for installing CIPP, Fold & Form, and accomplishing CCTV surveys and general cleaning. Go to www.RMSRInc.com to see a complete inventory of what's available or call 303-953-0210. All reasonable offers will be considered. (C10)

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