

2020 WWETT SHOW ISSUE

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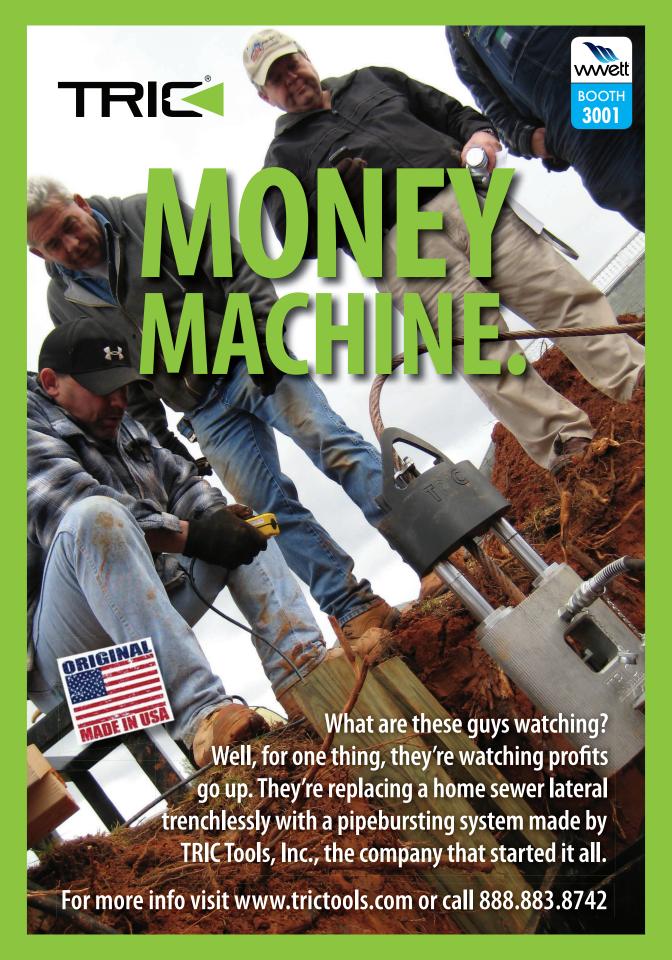
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Taking It Light

Durable and easy-to-carry drain machines provide California plumber with a

- By Ken Wysocky



On the Cover

Joel George, owner of Drain Doctor, in front of one of his service vans at a job site at a local hospital. The Toledobased company has six employees handling plumbing, sewer cleaning and repair, sewer lining, hydrojetting, and camera location work. (Photo by Amy Voigt)

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- Smart Business: 7 Reasons to Put Golden Handcuffs on Your Best Employees
- On The Road: Pipe shear from Milwaukee Tool

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Passing Along Traditions

Family businesses can be tricky, but also rewarding for future generations if handled correctly. - By Cory Dellenbach

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Taking on New Challenges

Building customer trust and embracing innovative technology lay a foundation for success.

- By Giles Lambertson

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Is Your Business Ready for a Full-Time Mechanic?

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- By Craig Mandli

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From 8 Trucks to 48 Trucks in 5 Years



After 13 years in business, Aaron Gaynor of The Eco Plumbers has seen tremendous growth in the last 5 years. It's more than just trucks – in the same time period, he's gone from 13 employees to 73 employees and counting.

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-Aaron Gaynor

-Aaron Gaynor The Eco Plumbers – Nexstar members since November 2014

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FROM THE EDITOR



Cory Dellenbach

Passing Along Traditions

Family businesses can be tricky, but also rewarding for future generations if handled correctly

ver the past several months, my family and I have been spending our weekends cleaning out my grandparent's house after their passing in the last year.

While I was going through and helping clean out the house — looking at all the items that spurred memories of them — I started thinking about family members passing things down to other family members.

How do you decide what should be passed along, who gets what and how it is going to be used after you are gone?

You could almost use that same line of questioning when it comes to owning a plumbing company and deciding to pass it down: Who should I leave this to? Will they know what to do with it? What will they do with the company after I step away?

FIND THE RIGHT PERSON

The first step is to answer those tough questions. A lot of times in this industry, the answer to that first question will be a family member — your siblings, children, nephews/nieces and so on.

That one alone can be tricky enough to answer. You don't want to upset another family member, friend or employee in the process of selecting who you are going to pass the company down to. What do you look at when you make this difficult selection?

Here are some ideas: Do they have industry experience? How much experience? Do they have the know-how to run a business on the financial side? Are they familiar with the area being served already?

Come up with a short list of possible successor candidates, go through each of these questions and see which one ranks higher. That person is likely who you should pick to take over the company when you hang up the toolbelt.

KNOWING WHAT TO DO

The next question often asked by someone looking to

hand down their business is: Does the person taking over know what do to with the company? The answer to that one should hopefully be yes if it is someone who has worked in the industry and, even better, for you for a long period of time.

You want someone who will know what to do with a plumbing company and how to run it. If you already have someone in mind to take over the company and they already work for you, try leaving them in charge for a couple days while you take vacation and see what happens.

You'll not only find out if they have what it takes to run the company, but it'll get them more comfortable with being in charge. And as a bonus, you get a few good days of rest and relaxation!

UP TO THEM

Now, that last question: What will they do with the company after you step away? The short answer to that one is it's really none of your business. You're hanging up the belt and handing over the company to someone else.

You've selected them after a long and careful thought process, so it's time to let them run the company and do what they want with it. They could operate it just as you did, or they could decide to make it a smaller company or grow it considerably in staff and services offered. It's all up to them. You'll just have to learn to look the other way and hope you've taught them well.

WHAT'S YOUR PLAN?

What's your plan for your company when you decide it's time to call it quits? How are you selecting who takes over your company? I'd like to hear your thoughts. I can be reached at editor@plumbermag.com or 715-350-8436.

Enjoy this issue!



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DRAIN CLEANING

The Benefits of Flexible Shafts

There is always room for improvement, even with fairly straightforward tasks like cleaning a drain. This online exclusive takes a look at the benefits that come when flexible shafts are incorporated into drain cleaning machines.

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OVERHEARD ONLINE

"So many businesses spend a lot of money, hire a consultant, and get a fantastic business plan, and then it just sits on the shelf and gathers dust."

- Why Your Business Plan Needs to Be Updated



RADIANT SYSTEMS

Tips For Working With a Design Consultant

For contractors who don't specialize in radiant systems, it's wise to work with a design consultant in order to stay on the right track and avoid costly mistakes. This online exclusive offers some tips on how to get the most out of that working relationship. / plumbermag.com/featured

CUSTOM EQUIPMENT

Original Design on New Jetting Truck Improves Productivity

Instead of sticking with the status quo on equipment, why not think more carefully about what you need and go with a custom design? That's what AP Plumbing of Rochester, New York, did a couple of years ago when it needed to invest in a new jetter. The company approached HotJet USA with some ideas, and the manufacturer produced exactly what AP Plumbing was looking for. Read more about it in this online exclusive.

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oel George never hesitates when the opportunity arises to try something new. The founder of Drain Doctor plumbing and drain cleaning services in Toledo, Ohio, has an entrepreneur's risk-taking instincts.

But he also has an overriding sense of loyalty to customers that sometimes leaves his employees shaking their heads.

"They said, 'Is this like your mom's friend or something?" George recalls being asked after charging relatively little for a service call to the home of one of his longtime customers. "We have lots of people on our customer list who I have served for more than 10 years. We don't charge them that much because it makes me feel better to help people doing what we are good at doing.

"I tell my employees that we are helping people. Some plumbing companies are just plumbing companies. We are a service company. Every job we do we are helping someone. Sometimes employees don't understand that," George says.

STARTING SMALL

Drain Doctor is in its 20th year of helping people deal with clogged drains and leaky pipes. But it wasn't a seamless rise from launch to business success. The Toledo native didn't even get into plumbing until after he had worked for a while at the city's Chrysler Jeep plant and then had a stint as a sprinkler system maintenance person.

He finally entered the plumbing industry as an apprentice and worked for a couple of plumbing companies before succumbing to his entrepreneurial impulses and starting Drain Doctor. For the first seven years, he stayed small, with just one employee — and then got even smaller, working alone for the next decade as a oneman shop.

Robert Werner, plumbing technician, gets his tools out of the van to work on changing a water heater at a residence in Toledo, Ohio.



That decade included the U.S. recession after the financial crisis hit in 2008, a period of struggle for many construction and utility maintenance companies. "I knew it probably wasn't a good idea to expand a business during a recession," he says. "I could look around and see companies that tried to do that and filed for bankruptcy." When the economy eventually "straightened up a little bit," George began to develop his small company into a larger one.

Gifted with an open and inviting personality, he retains customers by quickly earning their trust. This same characteristic served him well as he made the transition from plumbing employee to plumbing shop owner. He frankly told one potential plumbing service employer just what he planned to do.

"I am coming here to apply for a job, but about a year out I'm going to start my own business," he told his startled

44 We are a service company. Every job we do we are helping someone." **Joel George** job interviewer. "In the meantime, I want to make you a ton of money." His candor not only won him a job, it earned him respect that has endured through the years. He and his former employer, and current competitor, are on the best of terms.

WELL EOUIPPED

George is a certified master plumber, but he is also a licensed sewer contractor in surrounding northwest Ohio counties. His plumbing work carries him as far south as Bowling Green, 24 miles away. He performs drain work north into Michigan just across the state line from Toledo. When he started Drain Doctor, he mostly cleaned drains. Drain cleaning remains a key component of what the company does today, accounting for 60% of business activity.

His stable of equipment reflects that emphasis. It includes a new Valor drum machine from Draincables Direct, which has a 1.5 hp motor that spins cable at more than 200 rpm and will clear floor drainlines 1 1/4 inches to 4 inches in diameter. "It's a cool-looking machine," George says. "You just set it down and adjust it for a 45-degree angle. I've used it twice and love it."



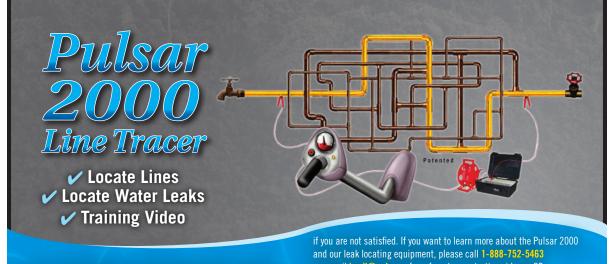
Robert Werner sets up a Gorlitz Sewer & Drain Model GO 15 drain cleaning machine to unclog a drain in a residential bathtub while Joel George looks on.

A drain cleaning mainstay is an older Electric Eel Z5 unit. Its 1/3 hp motor rotates a 1/2-inch cable to chew through impacted debris using twisted saw-blade cutter heads. The unit is designed to open lines up to 3 inches in diameter. Each work van carries 200 feet of cable for the machine.

For cutting through roots in pipes as large as 10 inches, George uses a Picote Solutions Maxi Miller. A Shark 1,500 psi jetter with 150 feet of 1/4-inch hose is frequently utilized; and for larger pipes — up to 24 inches — George relies on a US Jetting 4018 jetter, which produces 4,000 psi at 18 gpm, with a 300-gallon tank and 500 feet of Piranha hose with Warthog nozzles (StoneAge).

Cameras are used every day in evaluating the condition of pipe, and RIDGID is his go-to brand for camera work. Drain Doctor techs employ RIDGID SeeSnake cameras, one with a 200-foot reel, to peer





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It's a jumble out there. www.Pulsar2000.com





▲ Joel George, left, and Robert Werner, right, work together to change a hot-water heater at a residence. After draining and removing the previous tank, they installed a 40-gallon natural gas water heater.

66 Back before 2000, when I worked for other companies, it seemed to me people were always waiting for your iob. This generation seems like it isn't worried about losing a job." Joel George

> into drainlines. To find an underground line, George grabs a RIDGID NaviTrack Scout locator. "I've used all kinds of locators, but I've had the Scout for 15 years. That thing is awesome." When calls come in to uncover and replace underground infrastructure, a John Deere mini-excavator in the equipment yard is sent out.

With the exception of the trailered jetter and the John Deere excavator, the Drain Doctor's equipment is hauled from job to job in style — in four new Mercedes-Benz 2500 Sprinter vans George purchased from Vin Devers Autohaus of Sylvania, Ohio. Sporting bright-yellow Drain Doctor logos and promotional messages, the vans announce

Exciting challenges

If Joel George has a business philosophy, it might be stated this way: Be willing to think outside the box and allow yourself to become excited about your work.

The founder and owner of Drain Doctor plumbing and drain cleaning in Toledo, Ohio, certainly exemplifies both attitudes. "This industry is so dynamic," George says. "It changes daily. Not one day goes by that I don't see something I haven't seen before."

That sounds tough, but the Ohioan knows tough. He used to play hockey, where getting banged against the boards is an art form. He pushed the puck in high school and college and coached the game for a while. Toledo is in hockey country, after all, home to a midlevel professional hockey franchise.

But his hockey experience is "ancient history," George says, even though he keeps a hockey stick in his office as a reminder. More relevant to his career success is the example his parents set during their working lives. George's father, also named Joel, was an automotive engineer commuting 30 minutes each morning to put in 12-hour days in a Michigan plant.

For more than 30 years, his mother, Janet George, taught a cooking class in a local school. Her students were Ohioans wanting to refine their culinary skills. She teamed with celebrated area chefs to teach individual specialty dishes. Janet George, like her son, was also an entrepreneur, operating a business on the side.

So, Joel George credits his parents' work ethic in teaching him the perseverance that held him in good stead during the early years of Doctor Drain, when expanding the business was mostly a pipe dream. Today, George has seen success with his company, and the business challenges that come his way excite him.

"So many different tools are coming out. I find myself looking at something and I'm not sure what I'm looking at," he says. "But you have to keep up. You don't have a choice. You just have to try to improve how you are doing things every single day. You can't freak out about it."





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▲ Joel George gets tools out of the van to work on changing a water heater. George uses a shelving system in the vans to keep track of the tools and parts he and his crews are using.

to customers that well-equipped and trained plumbing technicians have arrived at their door.

But the vehicles also were chosen to send a second message, this one to George's team of millennial employees. His message to his employees born in the 1980s and '90s is simple: We are state of the art, so be all-in for the company.

Millennials sometimes are characterized by a sense of entitlement and a willingness to jump from job to job. George, who is 46, has methodically engaged the younger generation in conversations about work expectations. "Back before 2000, when I worked for other companies, it seemed to me people were always waiting for your job. This generation seems like it isn't worried about losing a job."

TEAM PLAYERS

To encourage his employees to embrace the work, George caters to their individual preferences in assigning out tasks. Even though each of his employees — which include three journeyman plumbers and three helpers is fully capable of cleaning a drain or fixing a leaky faucet, each has a favorite work assignment.

sewer. Lining them will keep me busy right here in town." Joel George

"I have a guy who does most of the sewer lining, a guy who does most of the plumbing, another guy who does faucets — he loves repairing old faucets," he says. "And then there's Mr. Water Heater, as I call him. He puts in most of them for us. The other guys don't really sell water heaters like he does."

George reflects on the situation. "Back in the day, we did everything. 'Here's a call. Go do it.' That's how it was," he says about an earlier era in the workplace. "In my first plumbing truck, the air conditioning was a floorboard we pulled out to get air flowing. You could see the street below. I drove that one for two years." He realized, however, that such "good old days" talk was not likely to impress his employees, so he looked to the future and invested in the Mercedes vans.

Generational differences aside, George is not down on millennials. He believes in his team. "You have to challenge them, but they're responding." As for his customers, he relies on his website, Facebook and other social media to reach them. "I go online with everything."



His willingness to try new things led him to test a pipe lining product he now swears by. Formadrain is a lining system that's pulled into place instead of being unfolded. The environmentally friendly and thin fiberglass-and-epoxy system is steam-cured and fits so tightly against the interior of a pipe that there's no measurable loss of pipe capacity. What's more, it can be fully installed in just four hours. An industrial version of the system is notably impervious to kerosene and diesel fuels, even to sulfuric acid.

"I get excited about this product," George says. "I studied liners for 15 year before I bought this franchise. I love lining. You could line the world with this stuff, but that wouldn't be cost-effective." Most of his Formadrain jobs are 100 feet or less.

Toledo has some 1,100 miles of sanitary sewers. "Just imagine how many miles of pipe there are running from houses to the sewer. Lining them will keep me busy right here in town," he says. George estimates 60% of the galvanized and clay pipe in the greater Toledo area is years past its expected life span.

"I'm going to go on a mission. I'll knock on doors and ask if I can get a camera in there and show them that lining the pipe has to be done. Maybe they'll let me get in there before it collapses on them."

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Is Your Business Ready for a Full-Time Mechanic?

Weigh many important financial factors before hiring an in-house wrencher to care for your fleet of vehicles and equipment By Erik Gunn

here are several essentials in your underground utility construction business — skilled workers, appropriate licenses, a sharp front office staff. And then there's your heavy equipment.

You have at least one truck, and chances are you've got several — vacuum trucks, directional drills, service vans and pickups, perhaps a backhoe or other excavating machine, and more.

If yours is a small operation, you probably take equipment to an outside shop for maintenance and repairs. But at what point is it a better deal to staff up and hire a full-time mechanic as your direct employee?



COMPLEX DECISION

It's not a simple decision, says Bob Rudolf, who teaches future diesel mechanics at Milwaukee Area Technical College in Wisconsin. The first question — how large is your fleet? — is really only half of the question, Rudolf points out. You also need to consider how old it is on average. The older your equipment, the more demand you're likely to have for a mechanic's services, whether you contract out for the work or do it in-house.

"You have to do a little bit of a balancing act," Rudolf says.

Start with the fact that in the typical service shop, you could pay as much as \$100 an hour for repairs and main-

> tenance for your vehicles. It's one thing if they're new and just go in and out for routine maintenance. It's another if they're starting to age and need new parts and more frequent attention.

> But new or old, federal law requires commercial trucks go through an inspection every year, Rudolf points out. And new or old, your vehicles need a thorough checkup every 10,000 miles, including an oil change and a grease job. As a fleet grows, that mandate alone could justify hiring a licensed mechanic of your own to conduct the inspections and provide the routine upkeep.

> "If I'm a business guy and I've got one or two trucks, and they're relatively new, I'm not interested in hiring a technician," Rudolf says.

◀ There are two questions a contractor should ask when deciding if they should hire a mechanic for their shop. The first is how large is the fleet? The owner of the company also needs to consider how old the fleet is on average. The older the equipment, the more demand there likely is to have for a mechanic's services, whether you contract out for the work or do it in-house. (Photography by Kevin Blackburn)

"I would consider a full-time technician with a fleet of 10 trucks or more." If the fleet is older, that threshold might be lower.

COMPETITION FOR LABOR

If you decide to hire an in-house mechanic, it's important to know the reality of the industry these days. "Right now the truck world is very competitive, and there's a huge shortage of diesel technicians," he says. By the next decade, the shortage could be critical.

Chances are you've already faced similar hiring challenges and for similar reasons. "Baby boomers are retiring," Rudolf points out. "The young people have been conditioned to go to school to become a doctor or lawyer or businessperson, and the trades are getting neglected."

So if you think you don't have 40 hours a week of work for a mechanic but will just hire someone part time, forget it. "You're probably going to have to go full time or nothing," he says.

Something else to remember is that most, if not all, of your equipment is what the trade calls "vocational," special purpose, not general purpose vehicles. The exception might be pickup trucks that have been turned into basic service trucks, mostly used for hauling tools and supplies.

But chances are most of your trucks come with a lot of additional parts, such as pumps, tanks, perhaps a built-in jetter, and they all need specialized mechanical care. So your mechanic needs at least a beginning familiarity with those machines and the capacity to learn a lot more, and fast.

OFFER GOOD WAGES

When it comes to hiring, don't try to skimp, either. Starting wages in the Midwest for automotive technicians have climbed to between \$17 and more than \$20 an hour. They're likely to be higher in some parts of the country.

"If you're going to hire a master technician, you're talking \$25-\$30 an hour, maybe \$35 in some cases," Rudolf says.

It's possible you could strike up an arrangement with another business that has needs for mechanic's services similar to your own, and work out a deal to jointly hire a full-time technician. But that might be a lot more complicated than simply waiting until you're big enough to hire a full-timer yourself.

And don't skimp on the actual cost of repairs, either, even if you're doing them in-house.

44 For me personally, a mom and pop shop is the best. There's a family atmosphere. You have a lot more freedom as a technician than you do in a large shop. You're not a number. You're actually a name."

Bob Rudolf

"You don't want to hire a technician and have to make them make do with Band-Aids and bailing wire," Rudolf says. The job is too critical to the health and safety of your employees and the general public for that. "If the truck is in a collision and there's a fatality, they might be looking at a manslaughter charge," he says.

And then there are the costs you take on in addition to employee compensation.

Just like your personal car, more and more your heavy equipment is filled with sophisticated, computer-controlled systems. Just like your car's mechanic, your equipment mechanic will need diagnostic computer software to analyze problems that crop up. That software might run on a \$1,500 laptop computer, but it probably will cost you up to \$10,000, Rudolf says.

And just as your other specialized workers need periodic training as technology changes, your automotive technician will too. Upgrading their skills with proper training and certification is just as much your responsibility as it is with the rest of your staff.

On the plus side, some of that training may be free or at relatively low cost. Machine manufacturers may provide factory training to their customers at little or no charge; parts suppliers might, too. For other training needs, check out your local technical education offerings.

OTHER CONSIDERATIONS

Also, you'll have to take responsibility for the environmental impact of a vehicle repair facility on your property. Preventing contamination of dangerous chemicals is a top concern.

You need to properly take care of everything from waste oil every time you service your trucks to other chemicals and cleaners that are essential to automotive repair. Handling those will require special licenses from regulatory authorities and special equipment to make sure everything is handled and disposed of safely.

"You want to make sure you're not creating a mess, or otherwise you could be into some fines," Rudolf says.

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You might be wondering whether an operation like yours would attract a full-time mechanic. After all, unless you're a huge operation, there's probably not going to be a long career path.

Don't sell yourself short. Not everyone goes into a job expecting to climb some promotional ladder that leads to an office with a vice president's nameplate on the door.

"For me personally, a mom and pop shop is the best," Rudolf says. "There's a family atmosphere. You have a lot more freedom as a technician than you do in a large shop. You're not a number. You're actually a name. If you're in a dealership, you might not have some of that camaraderie."

So is it worth it to hire your own mechanic instead of taking your vehicles to an outside dealership? In the end, of course, only you can make that decision. But as your fleet grows, and as it gets older, it might be worth it to at least sit down and work out the detailed costs and benefits.

After all, without solid, dependable equipment, what future would your business have?





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Taking It Light

Durable and easy-to-carry drain machines provide California plumber with a competitive advantage **By Ken Wysocky**

hen it comes to buying tools and machines, Manny Jimenez relies on a two-pronged philosophy: You get what you pay for, and stick with what works. As such, the fact that he owns more than two dozen Quadra Plex 2000 cable drain machines speaks volumes about the value they bring to his company, EJ Plumbing in Santa Clara, California.

"I started plumbing when I was 17, and the company I worked for at the time used Quadra Plex machines," says Jimenez, age 39, who established his company in 2005 and

employs 52 people, including 45 service technicians. "So when I started my own company, I stuck with Quadra Plex. I really like the machines."

Jimenez has invested in 25 or so Quadra Plex 2000s, designed for lines ranging from 1 1/2 to 4 inches in diameter. Why is he so loyal to Quadra Plex? For starters, they're easy on technicians' backs because the drum is easily removed in seconds — no tools required or belts to take off — for convenient transport.

"I love the fact that you can break the machine down into two easy-to-carry pieces," he says. "That way it's not so heavy that you need a small crane to lift it in and out of your truck — or two men.

"And customers like it, too, because we don't have to roll a heavy unit through their homes," he adds.

Manny Jimenez, owner o

I love the fact that you can break the machine down into two easy-to-carry pieces. That way it's not so heavy that you need a small crane to lift it in and out of your truck — or two men."

Manny Jimenez



Santa Clara, CA **COMPANY** EJ Plumbing Inc., Santa Clara, California **OWNER** Manny Jimenez PRODUCT Ouadra Plex 2000 cable drain machine FUNCTION Cleaning drainlines ranging from 11/2 to 4 inches in diameter FEATURES Cable reels detach (no tools required) for easy transport; 2/5 hp electric motor that generates 190 rpm; 100-foot cables come in 3/8-, 1/2- and 3/4-inch diameters; built-in ground-fault circuit interrupter; air-controlled foot switch; machine chassis (without a reel) weighs about 60 pounds and measures 25 inches long, 27 inches tall and 17 inches wide **[05]** Ranges from \$1,865 to \$2,516, depending on the number of reels purchased

In addition, the Quadra Plex 2000's transportability gives EJ Plumbing a competitive advantage because technicians can take the machine up on a roof to clean lines. "Other companies will not go on a roof because they can't get their machine up there," Jimenez says. "For safety reasons, we don't like to go on roofs if we don't have to. But sometimes we have no choice if there's no clean-out or we can't go through a toilet or a tub drain without creating a real mess.

WEBSITE www.ejplumbing.com

"So we go up on that roof and clear the line and make a customer happy."

EJ Plumbing's services primarily include residential service and repair work, some new-construction plumbing, drain cleaning/inspections and trenchless pipe rehab work within roughly a 20-mile radius around Santa Clara, a suburb of San Jose.

ONE VERSATILE MACHINE

In addition, the removable drums make it easy to switch to various-sized cables, depending on what's required for each job. It's like having multiple cable machines that take up only the space of one machine on a service vehicle, he says.

The 2000 model can be purchased with 100 feet of either 3/8-, 1/2- or 3/4-inch-diameter cables for jobs ranging from clogged sink drains to mainline sewer blockages. Quadra Plex makes its own cables.

The drums weigh roughly 80 pounds with cable in them; the motor/chassis unit weighs about 60 pounds and measures 25 inches long, 27 inches tall and 17 inches wide (without a drum attached). The 3/8-inch cable drum is 12 inches in diameter and about 14 inches long; the 1/2-inch drum is 14 inches in diameter and about 16 inches long; and the 3/4-inch drum is 9 inches in diameter and about 22 inches long.

The 2000 model comes with a 2/5 hp electric motor that spins the drum at up to 190 rpm. It includes a built-in ground-fault circuit interrupter for safety in wet environments, plus an air-controlled foot switch.

"These machines are virtually maintenance-free," Jimenez says. "But when we need help, Quadra Plex provides great service, too. You can always talk to a human being instead of an answering service."

WORTHWHILE INVESTMENTS

EJ Plumbing also relies on hand-held drain machines made by Gorlitz Sewer & Drain. The company also owns about 20 pipeline inspection cameras, built by either RIDGID (SeeSnakes) or Vivax-Metrotech, plus a pipe bursting system manufactured by TRIC Tools, he says.

The cost of a Quadra Plex 2000 unit ranges from \$1,865 with one drum of cable to \$2.516 with three drums of cable. So with 25 or so machines, EJ Plumbing has spent a significant chunk of money over the years. But Jimenez says the machines are a great value because of their durability and reliability.

"My oldest machine is more than 10 years old," he reports. "And if a motor ever goes out, I just order a new one from Quadra Plex and put it in — it's really simple.

"We've unclogged thousands of drains over the years with these machines," he adds. "And I've never been dissatisfied with their performance. You definitely get what you pay for.

"I always come back to them because they're true workhorses," he concludes. "I've built a drain cleaning business around these machines. The bottom line is they fix peoples' problems, as well as help us employ 50-some people and feed their families."





The Positive Power of Local Politics

Starting at the city or state level can lead to change if you keep talking to area representatives and being involved Bv Ania Smith

f you are obsessing over the 2020 presidential election, stop it. It's a waste of energy. Yes, the drama is high. The stakes are high too. But your energy is better spent on local politics.

Inform yourself on national issues, by all means. Vote your interests, for sure. But the amount of attention national politics receives is out of proportion to how it affects our everyday lives.

Understand you can't affect national politics. Few of us have time, power or money to carry influence in Washington.

Closer to home, your vote, voice and involvement can dramatically affect your community's quality of life. Local and regional issues include trash pickup, traffic, fire rescue, business licensing, permitting, building codes and much more.

State, county and city politics provide an opportunity to get involved and share your voice. Not every issue will go your way, but you can almost always find a seat at the table. Few can say that about national politics.

I doubt you could influence trade tariff discussions, but you can change your city council's mind.

SHARING MY STORY

Recently, I testified in front of my state representatives about business license tax reform. The current system is fine for some businesses but hostile to others. It's an issue that directly impacts our plumbing business, costing us time and money every year.

My opportunity to testify was sudden, but it wasn't out of the blue. I had unknowingly been laying the groundwork for years, starting with my involvement at the chamber of commerce.

My activities at the chamber led to an invitation to sic on its board. That led to an invitation to join the state chamber of commerce small-business council. As an active

State, scurily and city politics provide an opportunity to get involved and share your voice. Not every issue will do vour way, but you can aknost always find a seat at the table Few can say that about national politics.

member of that council. I got the chance to share my story.

My testimony educated politicians who were not aware of the adverse effects of the system. Politicians aren't always subject-matter expects, they rely on data, stories and testimony from their constituents to decide.

Business license reform may or may not pass -- it's still an active bill Either way, I'm proud of my work.

GETTING INVOLVED

If you want to move beyond yelling back at the talking heads on TV and want to make an impact -- here are some ideas for getting involved:

1. Monitor the issues. Know what your politicians are voting on so you can speak up. Rely on associations, chambers of commerce and advocacy groups to provide undates and navigate the confusing legal jargon of government. Sign up for newsletters and alerts based on your location and interests.

Next-Level Effort: Attend public meetings for your local government. This is a big time commitment and not workeble for many, but your city or county council likely post transcripts, minutes or recordings of meetings online after the fact.



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2. Join a committee. Any group that has a legislative agenda, like your chamber of commerce or industry association, has a legislative committee. Ask how you can get involved with that group and help decide which issues get resources and attention.

Next-Level Effort: Nominate yourself to sit on a city, county, or state board or commission. Examples might include a city planning commission, a health advisory board or a small-business regulatory review committee. Options will vary by location.

3. Get face-to-face. For specific issues of concern or interest, get together with your mayor, a council member or your local representative. It's easier to access these individuals than you might think. Some will sit down with you; others will take a phone call. You can always start with a written letter or email.

Next-Level Effort: Run for office! Most local politicians keep their day job, so no excuses here. Running for an office is the ultimate opportunity for influence.

After testifying at the state level, I sat down with my

mayor and a member of our city council. Business license taxes fund municipalities in our state, so I wanted to understand their concerns. We found an unbelievable amount of common ground that day, despite initially being on opposite sides of the issue.

Maybe that's the beauty of local politics. There is less theory. The issues are smaller scale and get resolved faster. It's easy to understand that everyone's intentions are the same — we want to live and work in a beautiful place.

Finding compromise feels possible in a way that national politics can't provide.

My evolution on local politics is ongoing. I didn't dive into the deep end so much as slowly wade into the waters. I suggest you do the same. Take one step that feels comfortable and see where it leads.

Anja Smith is the managing partner at All Clear Plumbing and writer/speaker at Tradebiz Toolbox. Contact Anja at www.tradebiztoolbox.com.

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Erik Gunn

Five Tips to Quickly Convert Invoices Into Cash

You can solve the age-old problem of lag time between services rendered and dollars in your bank account **By Erik Gunn**

ash flow is the lifeblood of your plumbing business. A hefty balance of accounts receivable might feel like it's money in the bank, but don't kid yourself. As long as they're unpaid, those receivables represent money in your *customer's* bank, not yours.

To boost your cash flow, you need to stay on top of those receivables, says Melinda Toy, vice president and director of treasury management for PyraMax Bank, a full-service commercial bank in suburban Milwaukee.

Toy offers a series of tips on how to do that, starting from the moment your customers agree to hire you for the service they need.

1. Require a signed contract.

This doesn't have to be complicated. But getting your customer's signature on the proverbial dotted line makes it clear from the start that everyone knows the price and the expected outcome of your work and the terms and conditions of your transaction.

2. Require a deposit.

For a really short-term job, like unclogging a drain, this might not be realistic. But for a larger job, such as a kitchen and bathroom remodel with a new water heater, which will come with hefty labor costs and material costs, a down payment offers financial protection.

3. Invoice early and often.

Unless you're collecting immediately upon completion of the job, you can expect at least a day's lag for payment in the best of circumstances. But you want to do everything in your power to make sure that lag is as short as possible.

"The best practice should be to invoice upon completion of a project, shipping a product or completing a service," Toy says. If you want to get paid faster, don't fall into the practice of waiting for one day each week to send out invoices. As much as possible, ask for payment on receipt. If you feel that's not possible or realistic, set a deadline of net 10 days (business days, not counting the weekends) for payment of a bill.

An alternative, especially for larger clients, is to offer a slightly longer payment window with a discount for early payment. For example, your invoice might set a net 30 days payment deadline for the full amount, but also offer a small discount for customers who pay in 10 or 20 days from the date of the invoice.

"Deadlines for payment of course also need to factor into your business model," Toy points out. "If it's not possible to get paid in 10 days, maybe there are some efficiencies you can put in place to at least shorten the cycle."

4. Make it convenient for customers to pay you.

Convenience is a two-way street. You want to make it convenient for your customers to pay as quickly as possible. But you also want to make it convenient for your business to convert that payment into cash on hand.

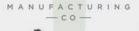
Literally demanding cash is probably not going to fly, for all kinds of reasons. The associated recordkeeping headaches and the fact you can't pay your own bills in cash are just two of them. Not to mention that you'll almost certainly turn away far more customers with a policy like that than you would with multiple payment options.

It's up to you if you want to refuse cash at all, but at the very least don't require it.

Taking checks is the most common practice. That's convenient for your customer and it should probably still be an option you offer. But how convenient is it for you, really? Remember, it still takes time to make the deposit.

"What about mobile deposit through my smartphone?" you might ask. That's a great convenience. It also comes with limitations, as the financial advice website Bankrate points out. Those include monthly limits on how much











MADE USA TOUGH

FOR DRAIN CLEANING PROS
WHO NEED THEIR EQUIPMENT

ON THE JOB,

NOT IN A REPAIR SHOP.





If you want to get paid faster, don't fall into the practice of waiting for one day each week to send out invoices.

you can deposit by mobile and hold times for mobile deposits, especially after hours.

Credit card payment options have become standard, and easy to take with Square and similar swiping devices that attach to (once again) your smartphone or its bigger cousin, the tablet. Of course, there's also a fee that takes a bite out of your payment. Those usually combine a small flat-fee charge and a charge that is typically in the neighborhood of 2% of the bill.

Some merchants impose a transaction fee to offset those costs, but they can spark resistance among customers.

5. Explore new options.

Toy suggests another alternative to credit cards: automated clearing house payments. ACH is a form of electronic funds transfer, she explains, and it's becoming increasingly popular with businesses, even small ones. Toy says some of PyraMax Bank's customers even use it to pay their own bills, including handling payroll and paying vendors.

And businesses can establish ACH payment options for their customers using portal services. "It's a faster way to get funds into your account. It's an alternative to a wire transfer," she explains.

ACH transactions typically settle within 24 hours, and same-day transfers through those systems are within our capability now. The system is more popular in Europe — "They more often settle those debits and credits the same day," Toy says — but catching on in the U.S.

ACH transactions have an advantage of much higher limits. Again, European countries, where limits are as high as \$1 million a day, are ahead of the U.S., where they're still at \$25,000 a day.

SETTING UP

If you're interested in pursuing this newest approach to making payment easier — and therefore improving your business cash flow — have a conversation with the financial advisor who counsels your business. Only that professional will have access to the details about your personal circumstances that will be important in making a sound judgment.

But assuming you get sound advice that it's at least worth considering, Toy recommends these steps:

- Check with your financial institution's commercial banking department. If there's a treasury management office, such as Toy runs, that's your first stop. Otherwise, inquire about direct deposit options.
- Be prepared to present detailed financial operations records — perhaps two to three years' worth of tax returns — and to submit to a credit check.
 "ACH means some exposure to the bank," Toy points out, and so to agree to an arrangement demands due diligence on your banker's part.
- Be prepared for limits on ACH transactions, and make sure your typical revenue stream will fall within those limits.

Once you've gone through that mutual vetting process, you'll set up a payment portal connected to your website. Make sure it's easy for customers to get to and easy to navigate. Typically, Toy explains, the portal will give the customer the option of paying by credit card or to initiate an ACH transfer using information from their checking account.

There also will be some mechanism for securing customer permission before you're able to automatically debit their account.

THE PAYOFF

There's no question that moving to an ACH system for taking payments will require some due diligence to make sure it's right for your business. But given the resulting ease and convenience it can provide for you and your customers alike, it should be worth your while to at least look into the concept.

Because in today's digital financial world, it may be the closest you'll get to realizing that famed money management maxim — "cash is king."

Erik Gunn is a magazine writer and editor in Racine, Wisconsin.

ambition

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Brigham Dickinson

Maximum Productivity in the Workplace Is in Your Hands

Building a stronger business begins with you, the owner, learning to develop a mission and focusing on your strengths Bv Brigham Dickinson

e, as business owners, are always searching for silver bullets. If we can just fire and hire the right people, outsmart our competition and get our teams doing the right things, everything will fall into place. We'll finally

be able to take our business to the next level, right?

No. That's not right.

If your team is not fully invested, who's fault is that? There are no followers without great leaders. This is why I find it puzzling that we as business owners always look outside ourselves for solutions. I am as guilty as everyone else. I need to change. To achieve maximum productivity in the workplace, we all do.

The answers aren't out there. The answers are in the hearts and minds of us, the leaders. I can tell you story after story about how my own behavior kept my company from growing until I realized that, to become a leader, I had to step up and become someone worthy of following. I was the biggest impediment to my company's growth. And it is you that keeps your team from being totally emotionally invested in your organization as well.

But you have the power — like I do — to change yourself and set the tone for business success through your own choices and behaviors. You can start by overcoming the tendencies that keep you from becoming a great leader. Here are three tips for recentering and finding the right focus.

START WITH A PERSONAL MISSION

Do you roll your eyes when people talk about mission statements? To a home service professional, it might sound like touchy-feely nonsense, but getting a solid grasp on what you want to accomplish is the first step toward accomplishing it. Without a plan, each day runs by default. That's not the way to achieve growth.

What are your short-term and long-term goals as the leader of your organization? You set the tone for the kind of person you want to be. What are your personal goals? Where would you like to be in 10 years? Make your goals measurable and specific.

According to Seth Godin, a former business executive, "Your team will remember what you did long after what you said is forgotten." Your team members will come to admire the person you become, and they will want to emulate the example you set with their customers. Your company will grow because your team is emotionally invested in you as its leader.

> You can't control what's happening outside your circle of influence (outside of your family, neighbors and company), but you can control yourself. Focus on how you can serve your team and/or customers proactively.

I recommend starting each day by reviewing your personal and team goals. Once you have your personal mission statement nailed down, work to build a team mission statement. Get everyone on the same page and aligned behind what you want to accomplish. Create space to calm your mind and get your head on straight regularly, whether that means meditating, reading or journaling daily.

The minute you decide to proactively work on being a great leader is the minute you decide to never have a bad day, ever. Starting each day with purpose means you can block out the distractions that keep you from accomplishing your goals, and it means your negative headspace won't become a distraction for those around you.

FOCUS ON YOUR STRENGTHS

Have you considered that maybe the person you need to fire is yourself? As business owners, we have a tendency to want to do everything ourselves, even if something is not in our wheelhouse. Learn to delegate and step back and do only what you do best; allow your team members to do what they do better than you. Give them a chance to learn and grow in their individual set of responsibilities.

Your strengths are specific things you do best. Narrow it down to three strengths, ideally less, and focus on those. This might mean you have to get humble about yourself and get real about your team. If what you do best is service in the field, own it and find someone else to do office work, business development and sales. There is nothing wrong with you being in the field if that is where you feel the most fulfilled. Just make sure you have great people elsewhere to fill the void. They will be inspired by the example you set for them. They will want your success as much as you want it. Why? Because they believe in you as their leader.

It's far easier to immerse yourself in work that you can perform to the highest level, especially in those areas where you really shine. When you distribute responsibility according to everyone's strengths, the entire team's performance will increase dramatically, setting the stage for business growth.

LEARN TO LET GO

Look around at the forces clamoring for your attention: social media, daily news, personal conflict, your competitors or anything that draws you away from achieving your goals. Now ask yourself, "What can I control?"

Everything else is a distraction. Let it go.

You can't control what's happening outside your circle of influence (outside of your family, neighbors and company), but you can control yourself. Focus on how you can serve your team and/or customers proactively. Do not let your focus be distracted from your personal mission, as well as your life's true purpose.

Whatever distracts you from your purpose and goals, let it go for now. Step away from the news. Delete the social media apps from your phone. Hire someone else to keep up on all that stuff. Enter every interaction, every day, with your true purpose firmly in mind.

BE THE AUTHOR OF YOUR LIFE

When you make the choice to live purposefully, you're doing more than marking items off a to-do list. You're taking control of yourself and truly becoming the author of your own life. You have the power to change your business and your life and be a positive force for your team, your customers and the world. Don't just get things done. Instead, move forward, making every day you breathe full of purpose and another step toward personal growth. As a result, you will experience maximum productivity in your workplace.

Brigham Dickinson is president and founder of Power Selling Pros, a coaching and training firm dedicated to teaching businesses to wow more customers. Dickinson is also a founding faculty member of EGIA Contractor University and the author of Patterned After Excellence: Pursuing Truth in Work and Life, a leadership and development book intended to help business owners learn to overcome human tendencies that hold them and their team back and adhere to universal truths in both their professional and personal lives.





Residential Plumbing

By Craig Mandli

Boilers

LAARS Heating Systems Pennant

Pennant boilers and volume water heaters from LAARS Heating Systems include the LAARS Linc intuitive control system with



color touch screen. It has an easy-to-navigate icon control structure, quick-start option, USB input, BACnet connectivity and performance metrics displayed on the home screen. Also included is an auto cascade feature that automatically configures up to eight Pennant units. The cascade feature includes auto redundancy — if the lead unit drops out, the remaining will continue to operate. They are available in seven sizes from 500 to 2,000 mBh, natural or LP gas, thermal efficiency levels up to 85% and stage firing of up to 4-1. Systems also qualify as low-NOx emission-rated, below 10 ppm. They can be vented from the top or back, installed indoors or outdoors, and racked on top of each other for up to 4,000 mBh in a small footprint. 800-900-9276; www.laars.com.

Navien NFB fire-tube boilers

NFB-175 and NFB-200 highefficiency condensing fire-tube boilers from Navien are in-house designed and manufactured with Navien parts. The stainless steel heat exchanger with a onepiece combustion chamber eliminates high-stress point welds that are prone to corrosion. It is rated AFUE 95% and has advanced user-interface controls with intuitive text display and a click wheel



simplifies boiler setup. It has built-in hardware to connect a boiler pump, three zone pumps or three zone valves integrated into the unit, so there's no need to add extra zone panels. 800-519-8794; www.navieninc.com.

Coatings/Linings/Sealants

HammerHead Trenchless point repair kit

HammerHead Trenchless offers a sectional point repair system



for rehabilitating sewer and stormwater pipe with circular or oval cross-sections 3 to 60 inches in diameter. It is an environmentally friendly CIPP point or sectional repair solution available in custom kits based on customers' specific project requirements. The point repair kit offers plumbers and other contractors the important benefit of a longer working time combined with a shorter cure time. The working time of silicate resins is much longer than that of thermosetting epoxies. Resins cure under ambient sewer conditions with very low shrinkage, even underwater. The resin is odor-free, styrene-free, VOC-free and presents no hazards to the environment or human health. 800-331-6653; www.hammerheadshop.com.

Perma-Liner Industries vertical connection lining system

Perma-Liner Industries' vertical connection pipe lining system offers a way to approach and repair vertical pipelines in residential and commercial markets, making the process easier in



less time. The system cures in one hour using a compact, electric steamer or vacuum pump. The system offers uniform thickness throughout. The host pipe does not need to be dry prior to installation, which lessens the installation and cure time. The materials come in kit form, eliminating measuring and waste, and an experienced crew can easily install five or more per day. 866-336-2568; www.perma-liner.com.

Fittings

BrassCraft Dual Outlet

BrassCraft's Dual Outlet is a supply stop designed for running two supply lines like a dishwasher and a kitchen



faucet from a single inlet. It is suitable for where there are multiple workstations in close proximity, enabling installers to efficiently supply two fixtures with a single waterstop. With a turn of the handle, it stops the flow of water leading to the specific plumbing fixture or appliance you are working on, allowing for maintenance and repair without shutting off the water to the other fixture. A one-piece brass body provides strength, durability and long-lasting performance. It is compatible with copper or PEX, and an easy-to-remove handle protects against accidental operation during rough-ins. 877-272-7755; www.brasscraft.com.

Caleffi North America 520 Series AngleMix

The 520 Series AngleMix thermostatic mixing valve from Caleffi North America delivers accurately tempered domestic hot water from an angle-style body. The valve mounts on top of water heaters, minimizing the use of elbow fittings and



reducing cost while saving installation time and space. It has tight close-off inlets to increase accuracy performance and eliminate temperature creep. The valve is ICC-ES certified to ASSE 1017, CSA B125.3 and NSF 372 (low-lead laws). It meets the requirements of IPC, IRC, UPC and NPC for use in accordance with the U.S. and Canadian plumbing codes. It is available for 3/4-inch pipe sizes in press or sweat union connection styles with temperature gauge or body-only for the flexibility of separately ordered end connections. 414-238-2360; www.caleffi.us.

Gerber Plumbing Fixtures Trevsta tub and shower valve

The Treysta tub and shower valve from Gerber Plumbing Fixtures provides flexibility based on the specific requirements of



each installation. A real timesaver, its vertical inlets allow for convenient connection to the valve body, and it can be installed next to a stud in PEX applications, which greatly reduces the need for reframing. An innovative pressure-test cap makes the process of air and water testing easier to complete. An easyaccess mounting system and integrated depth indexing features on the plaster guard make for a smooth installation. It is fully compatible with Gerber and Danze by Gerber pressure balance trim kits. 866-538-5536; www.gerberonline.com.

REHAU EVERLOC+

The REHAU EVERLOC+ compression-sleeve fitting system has 26 additional configurations, making transitions between pipe sizes more convenient in single-



family and multifamily residential plumbing projects. The system comprises RAUPEX UV shield PEXa pipe in 3/8- to 2-inch diameters, polymer and lead-free brass fittings, and power tools for reliable and safe connections. Designed for no-leak security, the two-step fitting expansion and compression process is performed quickly in any weather, making installation faster than other PEXa cold-expansion fittings and copper. The NSF/ANSI 14 and 61 certified system delivers safe drinking water with no mineral buildup, allowing contractors to create healthy and sustainable residential environments in less time. 800-247-9445; www.everlocplus.com.



SharkBite EvoPEX system

The SharkBite EvoPEX system is a push-to-connect plumbing solution for new or retrofit residential construction.



It allows installers to plumb an entire structure without the need for special tools, crimping, glue or solder, improving job site efficiency and reducing the risk of installation errors. Designed as a PEX pipe system, it extends beyond traditional pipe-and-fitting solutions to include fittings, PEX pipe, outlet boxes, valves and other accessories needed to install a complete potable water plumbing system from meter to fixture. 877-700-4242; www.sharkbite.com.



Viega MegaPress three-piece ball valve

Viega has incorporated a threepiece ball valve for its MegaPress carbon and stainless steel pipe

pressing systems. The valve is approved for all MegaPress applications, excluding natural gas. It is available in 1/2-, 3/4-, 1-, 1 1/4-, 1 1/2- and 2-inch sizes and in multiple materials for specific applications. The carbon steel valve is available with EPDM and FKM sealing elements. The 304 stainless steel valve has an FKM sealing element, while the 316 stainless steel valve has an EPDM sealing element. It makes industrial maintenance and installation programs faster and more efficient by minimizing downtime and keeping projects on schedule. Secure connections with the ball valves can be made in seven seconds or less with no adapters. The valve is equipped with Smart Connect technology, which makes it easy to identify unpressed connections. 800-976-9819; www.viega.us.

Webstone. a brand of NIBCO. thermostatic mixing valve

The thermostatic mixing valve from Webstone, a brand of NIBCO. is suitable for high-temperature solar heat sources. This valve accepts outputs up to 230 degrees F from a



heat source, then mixes with cold-water supply to achieve temperatures for the desired application. Optional hightemperature in-line check inserts are also available. Choose from dezincification-resistant end connection fittings in FIP, MIP, SWT or Press and in 1/2- to 1-inch sizes. The valve has lead-free, forged brass construction and a temperature-locking handle. An array of G1 union fittings, accessories and isolation kits offer a solution for most installation needs. 800-255-9529: www.webstonevalves.com.

Fixtures

AD Waters ALT Circo floor-mount tub filler

Easy-Fit adapters, a component on all of ALT's Circo floor-mounted tub fillers. distributed by AD Waters, make for a quick, easy and efficient installation of the faucets, as the rough-in can be done prior to



receiving the floor-mount tub filler. Moreover, there is no need to have access from underneath when installing floormounted tub fillers, as the adapters give extra play room and snap when the faucet is pushed down. The adapters are compact and pass easily through wooden or concrete construction, and they work for both above-slab and belowfloor installation. The floor-mounted tub fillers are offered in trendy designs and in polished chrome or electro black. 800-239-9336; www.alt-aqua.com.



Elkav ezH20 Liv

The ezH2O Liv from Elkay is a built-in filtered water dispenser for indoor residential settings. It is a sensoractivated, hands-free unit with a longlasting filter that is NSF certified to reduce lead and other harmful

contaminates directly at the point of use. Its front has a brushed stainless steel alcove with two different color options: Midnight and Aspen White. The unit also has a backlit LED Green Ticker that tracks the number of 20-ounce single-use plastic water bottles diverted from waste and has an automatic shut-off that prevents accidental overflow. Add-on features include a drip tray with optional drain connection and a water chiller for refrigerated water delivery. It notifies the user when its filter needs to be changed and is designed to fit within two standard wall studs for easier installation. It is ADA compliant. 800-476-4106; www.elkay.com.

FloLogic System with CONNECT

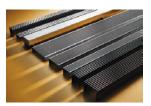
The FloLogic System with CONNECT app-based operation delivers a leak control solution to homes and businesses with water service from 3/4 up



to 2 inches. All systems offer real-time leak detecting abilities beginning at 1/2 ounces of water flow per minute, thanks to EverWatch leak-sensing technology. When a leak is detected, the water is shut off automatically and the users receive an alert through a smartphone app. The module has a thermometer, allowing low room-temperature alerts and automatic water shut-offs. 877-356-5644; www.flologic.com.

Infinity Drain Site Sizable low-profile linear drain

Site Sizable low-profile linear drains from Infinity Drain have a 1-inch-deep channel. The lower profile



helps further simplify the barrier-free installation process by minimizing the floor height needed to achieve a curbless entry. The PVC channel also has a new "mortar lock" design to keep it positioned firmly in the mortar bed floor. The drain is available in 36-, 48-, 60-, 72- and 96-inch lengths in a tile-insert frame, as well as wedge wire or slotted grate styles. Finishes include satin stainless steel, polished stainless steel, oil-rubbed bronze, satin bronze and matte black. 516-767-6786; www.infinitydrain.com.

Isenberg Bath Tanz faucet

The Tanz faucet from Isenberg Bath brings an industrial look to the kitchen. This stainless faucet design has a simple, yet chic vibe inspired by plumbing mechanics. Its sleek



lines and soft curves create a sculptural silhouette that looks at home in contemporary or traditional settings. A rotating projection spout and side sprayer offer plenty of practicality to tackle tough kitchen tasks. Its eco-friendly design includes a 1.8 gpm flow rate and a spout projection of 8.5 inches. In addition to traditional metallic finishes, it is offered in 20 ceramic-based color finishes that include glossy white and black, as well as soft shades of gray, brown and green, plus bolder options such as crimson and navy blue. 888-342-2284; www.isenbergfaucets.com.

Keeney Mfg. Stylewise full-soak bath drains

Stylewise full-soak bath drains from Keeney Mfg. are designed to offer a better bathing experience by allowing a deeper bath. The drain has an overflow



that can be pushed closed, allowing the water to rise higher than a traditional bath drain. When not in use, the overflow can be pushed open to function like a traditional overflow. The drain also has an attractive flat foot-lok-style stop that can easily be pushed close or open without needing to bend over to adjust. The kit fits most standard bathtubs up to 22 inches deep with 1 1/2-inch PVC Schedule 40 tube. The kit is available in polished chrome, brushed nickel and oil-rubbed bronze, and includes everything necessary for the complete installation of one complete drain. 800-243-0526; www.keeneymfg.com.

MTI Baths 6036 shower base

The 6036 shower base from MTI Baths appears to be a standard model with hidden drain at first glance — until the drain cover is removed. The cover



conceals an offset drain, which allows the base to replace an original narrower base or tub without the hassle of repositioning the drain plumbing in most cases. Measuring 60 by 36 inches, the base is crafted from durable Lucite, a cross-linked cast acrylic. It is further enhanced by multiple layers of fiberglass, resin, titanium and wood to prevent flexing. Another option allows for factory-leveled bases supported by high-density foam for easy installation. The base includes an integral tile flange on three sides and a stainless steel or white powdercoated hidden drain cover; it can be specified with a left- or right-side drain. It is available in white, bone or biscuit with a glossy finish or an optional white matte finish. 800-783-8827; www.mtibaths.com.





Niagara Conservation Nano dual-flush elongated toilet

The Nano dual-flush elongated toilet from Niagara Conservation is built with the company's Stealth Technology to provide a high-power, low-maintenance, no-waste toilet that guarantees a powerful, clean flush every time. It is WaterSense certified and uses 77% less water than typical toilets. The

dual-flush technology allows people to select either 0.5 or 0.8 gpf, with the same power as the industry standard 1.6 gpf. Its flapperless Stealth Technology delivers a powerful flush, preventing clogging and leaking and eliminating the need to flush more than once. A Fluidmaster 400A fill valve is fully submerged, canceling out the noise typically produced by a standard toilet. In addition, its compact, elongated bowl provides maximum comfort. 800-831-8383; www.niagaracorp.com.

PRIER Products C-434 outdoor faucet

The C-434 outdoor faucet from PRIER Products is designed to drain even when the hose is attached. It also includes



anti-siphon and backflow preventer to eliminate water or chemicals from going back into the potable water supply, which prevents contamination. The self-draining faucet provides customers all-season protection, even when the hose is attached. 800-362-9055; www.prier.com.



Ruvati USA Terraza farmhnuse sinks

Terraza farmhouse kitchen sinks from Ruvati USA are available in a brass-tone matte gold finish, coppertone matte bronze or matte black

gunmetal. All three bring a pop of color to the kitchen and ensure that this high-traffic area is a high-impact design space. Using a nano-PVD finish, the stainless steel sink is overlaid with a durable colored finish. Its matte texture resists fingerprints and stains and holds up against the demands of even the busiest kitchen. Each sink is crafted of 16-gauge T-304 grade stainless steel that will never rust or tarnish. The sinks are available in three sizes — 30, 33 and 36 inch — and include a matchingcolor strainer or garbage disposal flange. They are constructed with heavy-duty SoundGuard undercoating and thick rubber NoiseDefend padding to muffle the sounds of dishwashing and other culinary tasks. 855-478-8284; www.ruvati.com.

Pipe

Omega Flex CounterStrike CSST

CounterStrike CSST gas piping from Omega Flex is available in 25-foot coils of its system in 1/2-, 3/4- and 1-inch



diameters. Used for natural gas or propane-powered appliances, the smaller coils are suitable for smaller jobs involving the installation or relocation of a single gas appliance. It is designed to withstand higher levels of lightning energy when compared to conventional CSST. 800-355-1039; www.omegaflex.com.

Tools

DeWALT Tool DCE700 FLEXVOLT 60V MAX cordless pipe threader

The DCE700 FLEXVOLT 60V MAX cordless pipe threader from DeWALT Tool has a high-



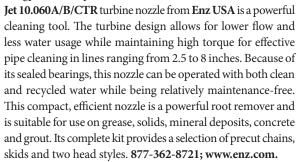
performance brushless motor that delivers long runtime in demanding applications. For fire sprinkler, mechanical and electrical applications, it threads up to 2-inch black iron pipe and rigid conduit. At 9.4 inches tall, 26.38 inches long and 19.98 pounds, it accepts a pipe capacity of 1/2 to 2 inches. It has a right-handed thread direction and its die and die head materials are made of high-speed steel and cast iron. It is also compatible with RIDGID 12R style die heads. Its E-Clutch system senses the motion of the tool and shuts it down if necessary. Its FLEXVOLT battery has an oil-resistant, glassfilled nylon housing that is secured in a latched and sealed box to guard it from corrosive cutting oils. 800-433-9258; www.dewalt.com.





Enz USA Golden Jet 10.060A/B/CTR turbine nozzle

With operating flows as low as 8 gpm at 2,000 psi, the Golden





General Pipe Cleaners stainless steel braid hose

High-performance stainless steel braid jet hose from General Pipe Cleaners/General Wire **Spring** enhances the performance

and cleaning power of the portable JM-1000 Mini-Jet and JM-1450 water jet drain cleaners. The durable stainless steel braid makes it easier to slide the jet hose down 1.5- to 3-inch drainlines and more easily navigate tight bends. The 3/16-inch Teflon core reduces flow resistance and improves small line cleaning power. It is available in 30-, 50- and 75-foot lengths. 800-245-6200; www.drainbrain.com.

Milwaukee Tool M18 **FUEL SUPER HAWG**

The M18 FUEL SUPER HAWG from



Milwaukee Tool has the power and speed to replace corded right angle drills. Its POWERSTATE brushless motor has been upgraded to deliver 30% more power in high speed. The tool's REDLINK PLUS electronics have also been optimized to increase power under load and capacity, allowing the tool to drill 6 1/4-inch holes through a 6-inch beam without bogging down. The tool also has an optimized gear ratio for increased performance and 50%-faster application speeds. Delivering 1,550 rpm, the tool is as fast as corded-in application. When equipped with an M18 REDLITHIUM HIGH OUTPUT XC6.0 battery, the drill can complete more than 100 2 9/16inch holes on a single charge, eliminating the hassle of cords or the constant switching out of multiple battery packs, while exceeding the performance of higher-voltage solutions. 800-729-3878; www.milwaukeetool.com.

Picote Solutions Mini Cleaner

The Mini Cleaner from Picote Solutions is a high-speed pipeline cleaning system aimed at the domestic drainage and plumbing markets. The unit has a flexible twopart shaft with a rotating inner core where the cleaning heads are attached. The stationary outer casing



ensures the operator's hands do not make contact with rotating parts during the cleaning operation, improving safety and flexibility. The outer casing is durable and also flame, abrasion and chemically resistant with a high continuous service temperature. The whole unit weighs in at 58 pounds so it can be easily transported. It also has the flexibility to handle multiple 90-degree bends, even in the smaller-diameter pipes. 219-440-1404; www.picotesolutions.com.

RIDGID C-Style close quarters copper tubina cutters

RIDGID C-Style close quarters copper tubing cutters are designed





to eliminate a cutter from toolboxes by cutting three sizes with only two tools. The 1/2- and 3/4-inch combined tubing cutter has a quick-change feature that allows easy switching between the two sizes, with the second cutter designed for 1-inch tubing. Each comes with a spring-loaded cutter wheel that provides constant pressure on the tubing and features the RIDGID X-CEL Wheel Pin for quick wheel replacement without tools. In addition, slots were added around the outside of each cutter for a flat-head screwdriver to advance and rotate the tool where access is limited. 800-474-3443; www.ridgid.com.

Continued >

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Water Heaters



A. N. Smith Water Heaters Prol ine

The **ProLine** electric tankless series from A. O. Smith Water Heaters is designed for commercial, residential and point-of-use applications. The

water heater is available in three sizes, with 45 different models ranging from 2.4 to 32 kW and Uniform Energy Factor up to 0.93. The units are available in a variety of voltage options: 120, 208, 240 and 277 volt. All models have true dry fire protection, where the element will only turn on when the chamber is full of water. All models also have scale reduction technology. This feature reduces scale formation on the elements and on the chamber walls, which reduces failures and service requirements. 800-527-1953; www.hotwater.com.



Bosch Thermotechnology Greentherm 9000 Series

The Greentherm 9000 Series from Bosch Thermotechnology is available in nine models for high-efficiency domestic hot water in residential or commercial applications with features for easy installation, operation and

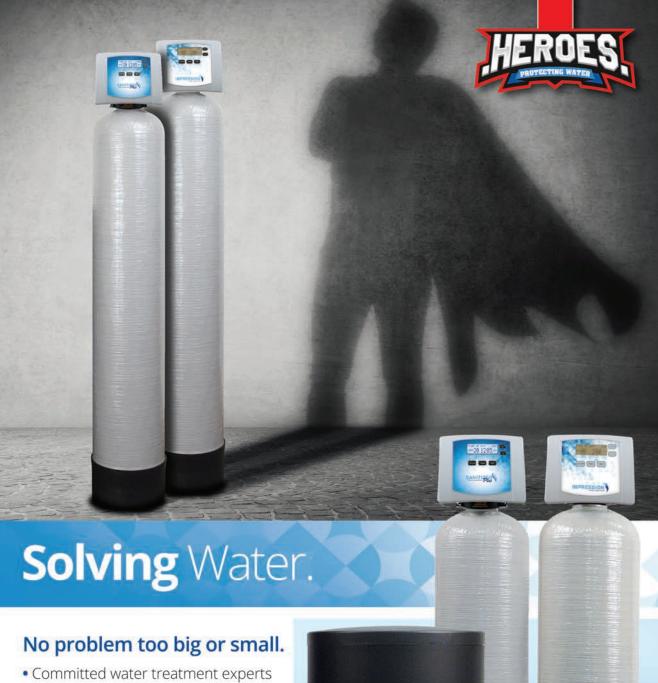
maintenance. It has a UEF of 0.97 with thermal efficiency of 100%. This series achieves temperature stability of plus or minus 2 degrees F through the active bypass. Its advanced technology controls output capacity, optimizing comfort and efficiency by combining the burner's pulsating mode with the bypass valve to achieve the desired outlet temperature, even at low flow rates. Its wide operating range between 9,000 and 199,000 Btu, saves energy when hot-water demand is low. 800-283-3787; www.boschheatingandcooling.com.

Bradford White Water Heaters AeroTherm Series heat pump water heater

Bradford White Water Heaters AeroTherm **Series** heat pump water heater is available in a 65-gallon capacity to handle higher-demand households. It is ENERGY STAR certified for year-round savings and provides four operating modes (heat pump, hybrid, electric and vacation)



to give customers more control and flexibility. It offers Vitraglas corrosion protection and qualifies for many state and local utility rebates and tax credits. It is designed with top connections for easy installation. It can also be fully repaired in the field (both sealed system and electrical). 800-523-2931; www.bradfordwhite.com.



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Residential Plumbing By Craig Mandli

High-efficiency tankless water heater system helps apartment complex achieve LEFN Gold status



Problem: The AVA 55 Ninth high-rise apartment building in San Francisco's Central Market neighborhood has 273 apartments on 16 levels, a fitness center, a ground floor and a retail space. Owner AvalonBay Communities wanted to meet the building's demands for hot water with a sustainable domestic hot-water system. The goal was to build the property with an array of sustainable features that would lead to LEED Gold status.

Solution: Combining 18 separate gas-fired tankless water heaters into a single, cohesive operation was their ultimate solution. Made by **Noritz America**, the **NCC1991-DV** units are hung and piped together in a custom-fabricated, Unistrut rack system located in a "penthouse" mechanical room on the roof of the building. The heater package was designed and installed by ACCO Engineered Systems. Kevin Hunt, lead plumbing engineer, did the design, assisted by a lead coordinator and two technicians who handled the installation. Hunt estimates that his work required three days, with another five devoted to 3D modeling and coordination. Rack construction, heater hookup and testing spanned roughly one week.

Result: "Tankless technology was a good fit for this building, and it helped us achieve our goal of LEED Gold certification," says Tony Joyce, project engineer for several AvalonBay properties. From design to delivery, installation and its subsequent performance for the tenants of this property, the tankless domestic hot-water system has proven to be a solid choice. **866-766-7489**; www.noritz.com.

Multiple reinstatements make coating the best option in apartment complex



Problem: The Plumbing Brothers from Los Angeles were tasked to rehabilitate a three-story apartment building in La Jolla. The apartment building had eight units on each floor for a total of 24 apartments with cracked cast iron pipes that were deteriorating and leaking. A typical fix would be tearing out the walls and replacing all the pipes. This would displace tenants and take months to fix.

Solution: After considering all the options, the Plumbing Brothers decided to coat the 4-inch cast iron pipe. They first used **Pipe Lining Supply's** Renssi cable and chain knockers to clean and descale the pipe. They then used the **Quik-Coating System** to coat the pipes with a durable polyurea resin that has a fast dry time of five minutes. Each apartment unit had at least six tie-ins of 2-inch pipe. They coated the 38 feet of 4-inch mainline pipes with a 3 mm finish, then coated 46 feet of the 2-inch laterals coming into each main.

Result: The results were quick, easy and affordable. After the coating was complete, they used a camera to inspect the pipes and put the apartments back into service. The tenants were out of their units for two days with minimal disruption. The entire building was completed in less than three weeks, and no walls were torn into, with pipes restored with a 50-plus-year life expectancy. **888-354-6464**; www.pipeliningsupply.com.

Continued)



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Macerating toilet provides compact plumbing solution for tiny home



Problem: Tom and Johanna Elsner, owners of Perch & Nest in Winston-Salem, North Carolina, specialize in building luxury, tiny-home recreational vehicles. Crucial to creating that luxurious feel is the inclusion of a traditional toilet, rather than a maintenance-intensive composting unit. With limited space, however, incorporating a bulky water tank is often impractical. As for standard RV toilets? "They don't aesthetically mesh with the deluxe atmosphere we're trying to generate," Tom Elsner says.

Solution: The **Sanicompact**, a sleek, one-piece macerating toilet from Saniflo, was the solution. The Elsners chose the Sanicompact because of its ease of installation, especially in tight spots. Moreover, the fact that it flushes and resembles a traditional toilet was very attractive, given the goal of creating a homey feel. Licensed plumber Garrett O'Neal of O'Neal's Plumbing installed the Sanicompact. "Not only was this toilet compact enough to fit in the petite, 4-by-6foot bathroom, but the installation was super straightforward, lasting only about one hour," O'Neal says. He ran 1-inch pressure-rated PVC piping beneath the floor for a distance of 8 feet to a blackwater holding tank. "The allowance of the smaller pipe and fewer fittings translated to materialcost savings," O'Neal says.

Result: "The macerating toilet was a hot topic of conversation among visitors to our tiny home at the Tiny House Festival in Pink Hill," Elsner says. "I described it as an off-grid option with a traditional feel, and the reception was incredible." The tiny home and its macerating toilet will continue to intrigue passers by at similar events in the future. 800-571-8191; www.saniflo.com.

Half-century-old senior housing complex repipes leaky copper plumbing with PEX system



Problem: The DeChantal Apartments is a senior housing complex, located in Saranac Lake, New York. As the apartments began to age, it became clear the building was in need of a plumbing repipe. Due to the town's poor water conditions, according to Tom Hall of Hall Plumbing & Heating, the building's copper plumbing system began to fail.

Solution: The team at Hall Plumbing & Heating called upon Uponor for a PEX plumbing system to confidently and reliably repipe the 45-year-old building. "Ninety percent of the copper leaks are hot water in the solder joints," says Steve Ziamandanis from Northeast Sales Associates, an Uponor sales agent. "There was no way they were going to repipe the failing copper pipes with copper again, and CPVC would have taken far too long. They chose AquaPEX for the system's reliability and efficient installation." The biggest challenge, as in most repipe jobs, is maintaining the minimum distances between fittings in the preexisting tight spaces. "PEX added the flexibility we needed to maneuver through the building repipe," Hall says.

Result: For the tenants and crew, staying within the project timeline was nonnegotiable, and AquaPEX was able to deliver a high-quality system on time and within budget. "PEX has a much quicker installation versus copper, with half the labor costs," Hall says. 800-321-4739; www.uponor-usa.com.

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duty 1/2 H.P. capacitor-type motor to provide more torque. The power feed and drum can be quickly removed. Loading wheel is built into the handle.



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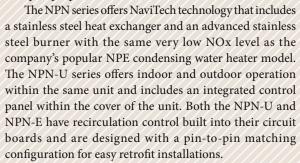


Product Spotlight

Longtime tankless water heater manufacturer introduces noncondensing model

By Craig Mandli

ue to their efficiency and energysaving features, tankless water heaters are becoming sought-after house appliances. Navien, a longtime producer of condensing tankless heaters, recently took its first step into the noncondensing market by introducing their Premium Noncondensing (NPN) series tankless water heaters. The NPN is offered in two series: the NPN-U (universal) and NPN-E (exterior), both of which will be available in 160,000 Btu/h, 180,000 Btu/h and 199,900 Btu/h models for either natural gas or liquid propane.



"Extensive research, development and testing have gone into the development of the NPN unit," says Brett Butler, senior brand specialist for Navien. "With proven technology



from Navien, the NPN includes a water adjustment valve and mixing valve, air pressure sensor, and more eco-friendly low NOx Naviendesigned burner. It is an improved tankless water heater for the noncondensing market."

Additional features of the 0.81 UEF NPN series include Wi-Fi remote-control capability with NaviLink that provides a remote system that allows the user to adjust the water temperature, turn the system on or off, and monitor system status. Units also offer low noise levels for quiet operation and a sleek, space-saving and lightweight design. According

to Butler, the feedback from those who have already used the new unit has been encouraging.

"Our Navien contractors who have seen the new NPN series are all excited about Navien's known product reliability entering the noncondensing tankless water heater category," he says. "The stainless steel heat exchanger and the NPN-U's indoor/outdoor installation ability are both firsts for the industry."

Multiple Navien units can be connected (cascaded) to meet high water demands. Like all tankless systems, the NPN series poses zero risk of a water heater flood that can cause costly damage to a home. 800-519-8794; www.navieninc.com.

Ranger Design Partskeeper cases and cabinets

Partskeeper cases and cabinets from Ranger Design are designed for contractors to store and organize small parts and tools. The cases are rugged and durable and have been put through rigorous strength tests. They come in a clear, hard-plastic



cover with snaps along the sides that allow them to be stacked on top of one another for easier transport. The cabinets have been updated with branded black end panels to allow for more rigidity and overall resilience. They come in four different sizes, ranging from a single-case carrier to an eightcase cabinet to contain a wider variety of tools. 800-565-5321; www.rangerdesign.com.

Genemis Laboratories Exact Blue microbial water testing

Genemis Laboratories of America's Exact Blue is a smartphone-based system that uses nanotechnology to detect bacteria, E. coli and Legionella. It uses specially created gold nanoparticles with a shape



and charge designed to efficiently attach to the cell membrane of bacteria and other microorganisms. Originally designed for monitoring microbial levels and biofilm information for drinking water applications, it has extended into other applications where freshwater is utilized, including well water, cooling towers, water towers, homes, hotels, spas, agriculture, swimming pools, hot-water tanks and piping. 866-574-8929; www.americatestyourwater.com.

American Standard Ultima diaphragm flush valves

The Ultima diaphragm flush valves from American Standard are built to reduce maintenance and save water in commercial applications. The flush valves, available for commercial urinals and



toilets, feature DynaClean technology, engineered to stop valve run-on. Each valve has a DynaClean wiper spring, which cleans the refill orifice with every flush. The wiper spring keeps the orifice clear of debris and mineral buildup, helping to deliver maximum performance with every flush while saving on water usage and maintenance costs. The valves are equipped with an EvoLast diaphragm, made with a premium, chlorine-resistant material that resists premature deterioration and failure from water treatment chemicals. 800-442-1902; www.americanstandard.com.

AguaMotion Agua-Flash AMK-IIK valve kit

The AMK-UK universal brass and stainless valve kit from Aqua-Motion has a bimetal coil that provides 90 degree F hot water to every faucet. It does not require power under the sink. The allmetal construction eliminates



plastic valve problems, and it can handle larger pump pressures up to 21 feet of head. The kit includes valve, hose and tee and can be installed quickly into the cold angle stop. 401-785-3000; www.aquamotionhvac.com.

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Emerson ASCO lead-free brass valves

Emerson has expanded the options available on its ASCO lead-free brass solenoid valve line to enable original equipment manufacturers and contractors



to comply with U.S. Safe Drinking Water Act Section 1417. The product line expansion includes larger pipe sizes up to 2 inches, normally open constructions, and next-generation electronically enhanced coil options with low-power and voltage-ranging features. The ASCO Series 210 model will now be available with both normally open and normally closed constructions. An optional next-generation electronically enhanced coil will offer customers lower power consumption and voltage-ranging options for both AC and DC constructions. The valves carry UL listing certification and are NSF 372 compliant. 800-972-2726; www.emerson.com.

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INDUSTRY NEWS

General Pipe Cleaners' new tools catalog

A new catalog from General Pipe Cleaners features new, rugged drain cleaning tools and inspection equipment. Included in the catalog are a full line of cable drain cleaning machines, high-pressure water jets, video sewer inspection cameras and pipe locators, water leak locators, pipe freeze kits, pipe thawing machines and more.

WWETT Show slated for Indianapolis in February

From Feb. 17 to 20, the Water & Wastewater Equipment, Treatment & Transport Show will take place at the Indiana Convention Center. With new dates for 2020, the fourday trade show has over 100 education sessions and also offers business opportunities, collaboration with industry professionals, a slate of live demonstrations, exposure to cutting-edge technology trends, and the latest product launches across multiple industry segments.

Crescent adding Crescent APEX brand

Crescent Tools announced that Apex Tool Group is bringing the APEX Industrial Fastening brand under the Crescent umbrella as Crescent APEX. The new Crescent APEX brand will offer power tool accessories used by industrial and construction tradesmen, including their professional line of u-GUARD nonmarring covered tools. Crescent APEX becomes the sixth brand under the Crescent name, joining Crescent Wiss, Crescent Lufkin, Crescent Nicholson, Crescent H.K. Porter and Crescent IOBOX.

PMI elects Smith as president. board members also approved

Plumbing Manufacturers International announced the election of Joel Smith as president of the 2020 PMI board of directors. The director of faucets product engineering at Kohler Co., Smith succeeds Nate Kogler, the director of product management at Bradley. Kogler will continue to serve on the board as immediate past president. Todd Teter, senior vice president and general manager at House of Rohl, was elected vice president; and Martin Knieps, director of technical marketing for Viega, will serve as secretary/treasurer.

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EMPLOYMENT

Plumber Position available at the University of Pennsylvania located in Philadelphia, PA. Position pay rate is \$34.66/hr and includes generous health insurance options. To apply: https://wd1.myworkdaysite.com/ en-US/recruiting/upenn/careersat-penn/job/Left-Bank-Facilites--Real-Estate-Services/Plumber_ JR00001727-1. Candidates must have knowledge of the principles and methods used in the installation of water piping systems, backflow prevention, sanitary piping systems and vent piping systems. Extensive experience in service plumbing: example repair of fixtures, faucets, drain cleaning, and leak repairs on sanitary and water piping. Ability to interpret and work from drawings, sketches and operation and maintenance manuals. Knowledge of materials, tools and equipment used in the installation and repair of plumbing systems. Ability to troubleshoot and diagnose problems in the field with plumbing systems. Experience in installation of piping and fixtures in laboratories, hospitals, dental clinics, or restaurants. Experience or knowledge in backflow testing and repair. Knowledge of OSHA regulations, PPE requirements, and safe work practices. Must have successfully completed an approved accredited plumbing apprenticeship of 4 to 5 years, or completed 2 years of technical or vocational school with 5 to 7 years' experience in plumbing installation and repair under a License City Master Plumber. Must have experience working in a Multi-trade environment and must be willing to work outside the craft person's primary trade as operational needs dictate. (L02)



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CALENDAR

Feb. 3-5 AHR EXDO.

Orange County Convention Center, Orlando, Florida. Visit www.ahrexpo.com

Feb. 17-20

Water & Wastewater Equipment Treatment & Transport (WWETT) Show,

Indiana Convention Center, Indianapolis. Visit www.wwettshow.com

Feb. 21-23

Kitchen & Bath Industry Show (KBIS),

Las Vegas Convention Center, Las Vegas. Visit www.kbis.com

March 15-19

Mechanical Contractors Association of American (MCAA) Annual Convention Wailea.

Maui, Hawaii. Visit www.mcaa.org

March 16-18

ACCA 2020 Annual Conference,

St. Louis Union Station Hotel Curio Collection by Hilton, St. Louis. Visit www.accaconference.com

March 20

Illinois Plumbing Heating Cooling Contractors (PHCC) Expo North,

Drury Lane Conference Center, Oakbrook Terrace. Illinois. Visit www.ilphcc.com

March 21

Flow Expo 2020, Fairplex, Pomona, California.

Visit www.flowexpousa.com

May 5-7

National Hardware Show,

Las Vegas Convention Center. Las Vegas. Visit www.nationalhardwareshow.com

June 14-17

American Water Works Association Annual Conference & Exposition (ACE),

Orange County Convention Center, Orlando, Florida. Visit events.awwa.oro

June 23-25

Safety 2020 Professional Development **Conference & Exposition,**

Orange County Convention Center, Orlando, Florida. Visit www.safety.assp.org



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