

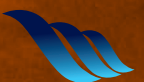
# Plumber™

## ALL IN THE FAMILY

Frasier's Plumbing, Heating & Cooling in Wisconsin overcomes a major setback to mark 100 years of being family-owned and -operated Page 16



### 2018 WWETT SHOW ISSUE



▲ On The Road  
DRAIN CLEANING MACHINES BRING  
REVENUE BUMP FOR CONTRACTOR  
Page 12

▲ First Responders  
PLUMBING FIRM TACKLES PIPE  
BURSTING JOB AND REPIPES  
ENTIRE HOME  
Page 28

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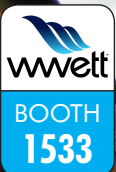


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**Waterless Flushing**

Plumber's expansion into the trenchless pipe-rehab market gets a profitable assist from productivity-enhancing technology.

- By Ken Wysocky

**On the ROAD**



**On the Cover**

Dan Schwanz, a master plumber for Frasier's Plumbing, Heating & Cooling in Rhinelander, Wisconsin, finishes cutting out a lateral pipe and switches to a flashlight to see the work better. Schwanz was using a Milwaukee Electric Tool saw and flashlight.

**Photography by Cory Dellenbach**

**Coming Next Month - Rehabilitation & Repair**

- ▲ Smart Business: Expanding to Take on Mechanical Projects
- ▲ Plumber Profile: The Sunny Plumber (Las Vegas)

**8 From the Editor: Celebrating an Anniversary**

The three keys to a successful business are right in front of you — great service, loyal customers and dedicated employees.

- By Cory Dellenbach

**10 @plumbermag.com**

Check out our exclusive online content.

**16 Profile: All in the Family**

Frasier's Plumbing, Heating & Cooling in Wisconsin overcomes a major setback to mark 100 years of being family-owned and -operated.

- By Kyle Rogers

**26 Smart Business: A More Perfect Union**

Contractors should look at all the pros and cons to union and nonunion workforces when deciding which route to take.

- By Neil Feldman

**28 First Responders: Working Inside and Out**

Contractor replaces pipe inside and outside customer's home after learning sewer line was broken.

- By Cory Dellenbach

**32 Industry Insider: Don't Be a One-Person Show**

Look at all the options available to you as you grow your plumbing business.

- By Anja Smith

**36 In the Shop: Bringing Safety to Your Fleet**

New monitoring technology and cab comforts will help your driver return safely from a long and productive workday.

- By Larry Towner

**40 Product Focus: Residential Plumbing**

- By Craig Mandli

**50 Case Studies: Residential Plumbing**

- By Craig Mandli

**52 Industry News**

**52 Calendar**

**54 Product News Product Spotlight: A multipurpose leak sealer**

- By Craig Mandli

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1-800-Plumber .....	52	Pentair - Myers .....	33
<b>ALLAN J. COLEMAN</b> SINCE 1905			
Allan J. Coleman Co. ....	37	Perma-Liner Industries, LLC ....	60
American Jetter .....	57	PHCC - GLAA .....	51
Arctic Blasters, Inc. ....	57		
Bradford White Corp. ....	49	Picote Solutions .....	39
Cam Spray .....	23		
		Pipe Lining Supply .....	59
Central Oklahoma Winnelson ...	25		
Classifieds .....	56	PrimLine Products, Inc. ....	23
		RIDGID .....	11
DURACABLE MANUFACTURING COMPANY		RuB .....	25
Duracable Manufacturing Company .....	45	Simple Solutions Distributing ...	57
Electric Eel Mfg. ....	27		
Enz USA, Inc. ....	35	Spartan Tool .....	5
FastEST, Inc. ....	57	Superior Signal Company LLC ..	57
		The Home Depot .....	15
Formadrain Inc. ....	31		
<b>General</b> PIPE CLEANERS		TRIC Tools, Inc. ....	3
General Pipe Cleaners .....	2		
Hackney .....	47	Ultra Shore .....	39
Hot Jet USA .....	58		
Hurco Technologies, Inc. ....	31	Water Cannon, Inc. - MWBE .....	7
I.S.T. Services, Inc. ....	35	WWETT Show .....	53
			
MaxLiner USA .....	21		
MyTana Manufacturing .....	9		
			
Nu Flow Technologies .....	13		

# Plumber

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Cory Dellenbach

## Celebrating an Anniversary

The three keys to a successful business are right in front of you — great service, loyal customers and dedicated employees

**I**t can be tough having a family-run company that spans multiple generations. Many things have to fall into place: the children must want to take over, the business has to be financially sound and it must be able to keep up with the times.

It all lined up perfectly for Frasier's Plumbing, Heating & Cooling, featured in this issue. Phil Frasier's grandfather started the company, his dad ran it for several years and now Phil Frasier holds the reins. Technology upgrades over the past year are making the technicians' work easier.

Frasier's Plumbing, based in Rhinelander, Wisconsin, is celebrating its 100th anniversary this year. A century is a huge milestone for any business but even more so for a service company, where longevity depends on great service, loyal customers, and a dedicated staff.

### GREAT SERVICE

It all starts with great service. The owner of North Dakota's Skooters Plumbing and Drain Cleaning knows that firsthand. Skooter Thompson started the company in 2005 and knew right away he wanted to specialize on the drain cleaning side of plumbing. Few others in the area offered those services.

Much of Skooter's pipe bursting work comes as the crews are on site doing the drain cleaning. They won't just clean a drain and leave. They'll make sure any problems are fixed.

In the First Responder feature, Skooters Plumbing and Drain Cleaning installs a new waterline and sewer line from a city main to a customer's home, 95 feet away, using pipe bursting. The crews not only accomplished that; they also repiped the entire inside of the home to improve water quality.

### LOYAL CUSTOMERS

Next up: You want customers to keep coming back anytime they need service work.

The easiest way to keep customers is to give them what they want, whether it be quality work or the one fixture from a manufacturer they love. This month's Product Focus highlights residential plumbing products, from boilers to sealants, fittings, fixtures and more. Take a look, and see what you can start offering your customers.

### DEDICATED STAFF

The final big ingredient for longevity is a dedicated staff. You want a crew who know how to do their job, do it without complaint and always push for the best. Frasier's Plumbing, Heating & Cooling has such crews, and that's evident when you are follow them to job sites and watch their interactions with customers.

In the Industry Insider feature, Anja Smith talks about having a staff who can support the owner or manager. Smith, a managing partner for All Clear Plumbing in Greenville, South Carolina, says it takes a while for a new business to grow; the owner shouldn't be expected to do it all forever.

### TALK TO ME

Is your family company marking an important anniversary — 20 years, 50 years or more? If so, I'd love to talk about your company for a potential *Plumber* profile.

While companies steeped in history have interesting stories, so do savvy startups and first-generation businesses, and we're interested in those stories too. By sharing your experience, we hope to pass on great advice to help everyone in the plumbing community.

I'd enjoy hearing from you if you're willing to share your story. I also welcome your feedback and suggestions for topics we should cover. You can reach me at [editor@plumber.com](mailto:editor@plumber.com) or at 800-257-7222.

Enjoy this issue! 📧



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## INDUSTRY WISDOM

### Seven Successful Contractors Share Advice

In this online exclusive, we looked back at the profiles of all the companies featured in *Plumber* magazine in 2017 and compiled a collection of some of the best industry wisdom that was shared. If you missed any of the stories, here is a chance to catch up and see if there's anything you can learn from these companies' experiences.

▶ [plumbermag.com/featured](http://plumbermag.com/featured)



## LOW FLOW A NO GO?

### Reconsidering the Benefits of Low-Flow Toilets

Low-flow toilets are a no-brainer water conservation method, right? In this online exclusive, contributor and master plumber Anthony Pacilla examines the issue more closely and asks whether the introduction of low-flow toilets has actually been a detriment to the industry.

▶ [plumbermag.com/featured](http://plumbermag.com/featured)

## OVERHEARD ONLINE

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— *The Pros and Cons to Offering Employee Retirement Plans*

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## GO-TO TOOLS

### Contractors Discuss Key Tools That Drive Their Companies

In this collection of three stories, learn more about some of the key pieces of equipment other plumbers rely on to give their customers exemplary service and grow their businesses. ▶ [plumbermag.com/featured](http://plumbermag.com/featured)

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# Waterless Flushing

Plumber's expansion into the trenchless pipe-rehab market gets a profitable assist from productivity-enhancing technology

By Ken Wysocky

**W**hen a friend first told Raymond Gray, the owner of A-1 Total Service Plumbing in Los Angeles, about the TCM 5000 drain cleaning machine made by GI Industries, he admits he was a little skeptical. That didn't last long — just one job, in fact. And an ensuing revenue bump of about 20 percent over the last year or so certainly sealed the deal.

The project entailed descaling and deburring a 16-inch-diameter, corrugated-metal stormwater drainline to prepare it for a fiberglass liner. Using some stiff brush attachments custom-made by GI Industries, the unit — known as the Merlin — cleaned the 64-foot-long drainline in just six hours. And without using any water. "It worked magnificently," Gray says. "That's an excellent time to clean a pipe like that.


"Normally we would've used a hydrojetter, but the pipe was so deteriorated it had holes in the top," he explains. "So every time we used the hydrojetter, more dirt would fall in. We would have had to go in with a vacuum truck (to suck up the dirt) and do just 2 or 3 feet at a time, which would've taken two or three days and a crew of four guys.

*"The machine paid for itself in just one job. I call that money in the bank."*

*Raymond Gray*

"But we did it in six hours with just a helper and me," he adds. "The machine paid for itself in just one job. I call that money in the bank."

The Merlin is different from most drain cleaning machines because it can use air or water pressure to flush out debris as it cleans and scours pipelines with various attachments, such as brushes and drills, attached to a flexible shaft. It's designed to clean lines ranging from 1/2 inch to 24 inches in diameter and is equipped with variable-speed control. A 3/4 hp electric motor that can be plugged into a conventional



<b>COMPANY</b>	A-1 Total Service Plumbing
<b>LOCATION</b>	Los Angeles
<b>MACHINE</b>	TCM 5000 Merlin drain cleaning machines
<b>FUNCTION</b>	Scouring pipelines to prep them for lining
<b>FEATURES</b>	3/4 hp electric motor that generates cleaning-head rotation up to 1,750 rpm; cleans pipes 1/2 to 24 inches in diameter; can flush debris with either air or water; protective cable sheath for better wear and safety; pneumatic foot-pedal control that activates the cleaning attachments and the airflow/water flow; variable-speed control; weighs 45 pounds; measures 19-by-16-by-10 inches
<b>COST</b>	Starts at about \$5,500, including some accessories
<b>WEBSITE</b>	<a href="http://www.a-1totalserviceplumbing.com">www.a-1totalserviceplumbing.com</a>
<b>GI INDUSTRIES WEBSITE</b>	<a href="http://www.giind.com">www.giind.com</a>

110-volt electrical outlet powers the machine (7-amp draw).

A belt-drive system spins the cleaning attachments at up to 1,750 rpm. A pneumatic foot pedal activates rotation of the flexible shaft and controls airflow and water flow for flushing. The shaft is housed inside a protective sheath made from a proprietary blend of nylon and plastic; this reduces the chances of binding and improves operator safety.

The machine is housed inside a heavy-duty steel cabinet that measures 19-by-16-by-10 inches and weighs about 45

Continued ▶

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▲ A-1 Total Service Plumbing technician Nicholas Lee uses a TCM 5000 Merlin drain cleaning machine (RIDGID Seesnake) to descale 140 feet of 4-inch diameter cast-iron pipe in a strip mall in preparation for lining. (Photo Courtesy of A-1 Total Service Plumbing)

pounds. A switch on the unit’s cabinet controls forward, neutral and reverse functions. In neutral mode, the head stops spinning so the operator can apply either air or water pressure to move debris. The unit includes a fitting for attaching a compressor for air-pressure flushing, and water is supplied by hooking the unit up to a conventional faucet bib with a garden hose.

The waterless-cleaning function is a big plus for A-1 Total Service Plumbing, which started out as strictly a service plumbing outfit but added trenchless pipe-repair technology such as pipe lining and pipe bursting. (The company uses systems made by Perma-Liner Industries, Pipetek USA and Prairie Dog Boring Equipment.) Established in 2004, the company now employs 35 people and runs 26 service trucks. The company also owns drain cleaning equipment made by Picote Solutions, a portable vacuum/hydroexcavating trailer made by Vac-Tron Equipment, and several custom-built water jetters for servicing both residential and commercial customers, Gray says.

“When we epoxy-coat a line, it has to be bone dry,” he says, explaining the value of waterless debris-flushing. “If you use water to remove debris, it takes longer for the pipe to dry, which prolongs the coating process. The Merlin moves debris with air, breaking it up so it can be removed with a vacuum.”

The Merlin provides another advantage: a 200-foot-long, one-piece cable that eliminates the weak link created when crews have to connect two cables together to cover that kind of ground. As such, expensive and time-consuming line breaks are removed from the equation.

In addition, because the Merlin completes jobs faster, Gray says his company can do more jobs per year. That resulted in about a 20-percent revenue bump since the company bought the Merlin in August 2016. Moreover, he’s also able to parlay that productivity increase into lower-cost bids, which make the company more competitive when vying for projects.

“It also allows me to pay my techs more money as well as pay for additional training, which makes them more loyal,” he adds — no small thing these days when quality help is in short supply. “They know they can’t get that kind of pay or training somewhere else.”

Gray also appreciates GI Industries’ willingness to quickly make custom cleaning heads as well as adaptors that allow him to use the machine with cleaning attachments he fabricates himself. “I haven’t found another company that will do that,” he says.

“The Merlin complements all our other equipment and has opened us up to new avenues of business by cleaning pipes faster,” he concludes. “It’s been a game-changer.”

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# ALL IN THE **FAMILY**

Frasier's Plumbing, Heating & Cooling in Wisconsin overcomes a major setback to mark 100 years of being family-owned and -operated

By Kyle Rogers  
Photography by Cory Dellenbach



*Frasier's Plumbing, Heating & Cooling, Rhinelander, Wisconsin*

<b>OWNERS</b>	Phil and Joanna Frasier
<b>EMPLOYEES</b>	14
<b>ESTABLISHED</b>	1918
<b>SERVICES</b>	Plumbing and HVAC service and repair
<b>WEBSITE</b>	<a href="http://www.frasiers.com">www.frasiers.com</a>





▲ Multiple generations of the Frasier family (from left): David Frasier, Janet Frasier, Joan Frasier, Bruce Frasier, Joanna Frasier and Phil Frasier.

**A**fter nearly a century of being family-owned and -operated, Frasier’s Plumbing, Heating & Cooling started to make a transition in 2014. Fourth-generation owners Phil and Joanna Frasier passed control of the company to a management group so that they could focus full-time on a second business outside the plumbing arena.

But under the new management, Frasier’s Plumbing floundered and the company began losing the critical pieces that had made it a stable part of the business community of Rhinelander, a city of about 8,000 people in northern Wisconsin, for decades. Over the course of only five months, the business saw a majority of its employees leave, including two who had been at Frasier’s Plumbing more than 20 years. One week of revenue was the equivalent of what had once been the company’s daily revenue.

The Frasers returned to resurrect the longtime family business. “The key thing was that we lost our top revenue-producing employees,” Phil Frasier says. “We came back to a shell of a staff, many of whom we had never worked with. If there was ever a time I was grateful that I learned the plumbing trade, it was the day I came back because it was all hands on deck in order to meet the demand. Those were some very long days for our

service manager, Kyle Leighton, and Joanna and I as we tried to get our arms around this very different company. In some ways, it was like starting over.”

But only three years after the Frasers retook control of the business from the management group, Frasier’s Plumbing is back on track and celebrating the 100th anniversary of what Phil’s great-grandfather started in 1918.

“We’re stronger now than we were when we left the business,” Phil says. “We had to sort of start over, but we rebuilt our team and got through it. Now here we are sitting at 100 years in business. I would never want to go through the last few years again, but I think it gave us a new appreciation of our family business and its history and our customers and employees.”

“If there was ever a time I was grateful that I learned the plumbing trade, it was the day I came back because it was all hands on deck in order to meet the demand. In some ways, it was like starting over.”

*Phil Frasier*

## A BEGINNING OF TIES AND DERBY HATS

Along River Street, coming into Rhinelander, stands a billboard for Frasier's Plumbing. It shows an old black-and-white photo of the company's founder, George Frasier, sitting atop a horse-drawn cart full of toilets and wearing a tie and derby hat. That was the plumbing attire of his East Coast origins, receiving his training through the labor guild in Providence, Rhode Island.

"When he came to Wisconsin, that was still the way he dressed," says Bruce Frasier, Phil's father and the third generation of the family business. "That changed rather quickly, though."

George began by working for another firm, Meekma Plumbing, upon arriving in Rhinelander before starting his own company in 1918. Business was good until the Depression hit. The period following that downturn marked the time that the second generation of Frasier, Bruce's father Bill, got involved in the plumbing trade.

"I remember that in order to get customers, he started installing water heaters for the public service — just to get into some homes and get the phone to ring," Bruce says.

The company's volume of work gradually grew, and by 1942, a second plumber was finally brought into the fold. A steady growth trajectory continued. In 1958, Frasier's Plumbing welcomed a third generation when Bruce decided to join following a stint in the Navy and consideration of other career options. Shortly after, his brother, David, also joined the company. The transition to the fourth generation began in 1996 with Phil formally coming into the company, taking complete control upon the retirement of Bruce and David in 2004.

Frasier's Plumbing evolved as it needed to over the years. There was a period where the company tackled any job at all that was plumbing or heating related. That meant both new construction installations and service work — even septic system installations. The company was also involved in kitchen and bathroom remodeling and maintained a retail store.

"At one time, we had over 40 people in the business," Bruce says.



Eventually, to improve efficiency and stay competitive, Frasier's Plumbing decided to become more specialized, opting to focus on service work. The retail store dropped off once the big-box stores emerged and it stopped being a profit center for the company. The kitchen and bathroom remodeling portion remains today but as a separate company that spun off of Frasier's Plumbing.

Early on in Phil's tenure as the head of the company, the decision was made to expand into the Wausau market (a city of 60,000 people located an hour south of Rhinelander). That coincided with the acquisition of another small company, and Frasier's Plumbing saw 38 percent growth in one year. The company continued to grow until 2014 when the management group got involved.

"I've often thought that's a day I wish that we could go back to," Phil says. "But that struggle has also made us stronger than we ever would have been without it. We have learned to operate very efficiently and we appreciate each other, our customers, and our heritage more than ever before. In many ways, it has been a gift."

## REBUILDING A FAMILY LEGACY

A key component that did not go well under the management group, Phil says, was changes to employees' pay structure. "I think they thought that they would be able to rehire a bunch of people," he says.



◀ After tearing out a portion of drywall under a kitchen sink, Dan Schwanz uses a Milwaukee Electric Tool flashlight to locate a leak in a private residence in Rhinelander, Wisconsin. The lateral drainpipe behind the wall was completely rotted out, causing leaking into the basement. Schwanz replaced the portion of the pipe that was leaking.

▼ Apprentice Adam Aply installs a catch basin (NDS) in the driveway of a private residence near Rhinelander.



Instead, about 70 percent of the Frasier's Plumbing staff left during the time the company was being overseen by the management group and some were still departing when the Frasers returned. Over the next 20 months, Joanna worked almost seven days a week, and occasionally through the night, to try and get the financials in order under the guidance of their local CPA firm. Frasier's Plumbing is part of the Nexstar Network, and when a fellow member company heard about the situation, it sent two employees on its own dime to Rhinelander to help Joanna with the accounting work.

"They stayed several days and helped us. Beyond that, they also gave us great encouragement and hope that we could pull this off," Phil says. "Nexstar is an amazing group of people that become like family. We had members reaching out to us regularly offering help."

In rebuilding a quality team — currently 14 employees between both field and office staff — Phil says the company has relied on several different recruiting platforms. Craigslist has been one of the most effective. Every week, one of Frasier's Plumbing customer service



► Frasier's Plumbing, Heating & Cooling master plumber Dan Schwanz, left, and apprentice Adam Aply, right, load up trucks to start the workday. Each plumber and HVAC technician get their own truck to take home to help cover the wide area the company services.

representatives reposts all of the company's job ads on Craigslist.

"It's not free anymore; you have to pay for it. But it's still cheap," Phil says. "It's worked very well for us. Our last three employees have come through Craigslist."

Frasier's Plumbing has also found success using the websites Indeed and BirdDog Jobs. Bringing on a new hire often begins with a Skype interview since the company has been frequently finding candidates outside of Wisconsin.

"There's not a huge base in our area to draw from," Phil says.

If the initial Skype interview goes well and both Frasier's Plumbing and the job candidate feel like it could be a good fit, the candidate comes in for a second in-person interview.

"We try to meet their family if we can and tell them about the community," Phil says. "We really need people who know more than just how to do the trade. They're going into people's homes, sometimes when people aren't there, so we do background checks and make sure that they're trustworthy and have good character. We can train the trade. But some of that other stuff you can't train, so that's what we're looking for."

“Developing a relationship of trust between the customer and the business is important. You realize early on that without trust, there isn't any relationship.”

**Bruce Frasier**

Rebuilding the team has been about making the company an enticing place to work for potential candidates as well. Since retaking control of the business, Phil says an emphasis has been placed on providing technicians a more consistent work schedule. Frasier's Plumbing still considers itself a 24/7, emergency services plumbing firm, but a lot of discretion is used to determine which calls truly are emergencies that require after-hours service.

"We're realizing that it's important for our guys to have time at home, so we try to have their last call finish around 4 or 4:30 p.m.," Phil says. "It used to be that we'd have everybody available for any call that came in before 5 p.m. We'd have them just keep going, and they'd sometimes not get home until 8 p.m. We're trying to change that and focus on our employees and their quality of life."

Continued ▶



▲ The plumbing and HVAC staff at Frasier's Plumbing, Heating & Cooling in the company training room in Rhinelander, (from left): master plumber Dan Schwanz, HVAC install technician Dan Arnott, customer care specialist Kathleen Jones, HVAC technician Shawn Irwin, owner Joanna Frasier, owner Phil Frasier, accounting manager Carrie Jane Danner-Vozka, customer care representative Shelby Lewis, HVAC install technician Jeff Anderson, customer care specialist Haley Kempken, HVAC service technician Gene Ziegler, service manager Kyle Leighton, apprentice Adam Aply, and apprentice Josh Burdick.



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Now Frasier's Plumbing codes all calls on a 1 to 5 scale to determine how critical they are to take care of immediately, and employees are trained on how to communicate with customers in order to delay service if something is not an emergency.

"We're still a 24/7 operation. I think we need to be. We're just doing it a little bit differently," Phil says. "If somebody calls and says, 'My shower is dripping. Can someone come out? I'm willing to pay the extra after-hours fee,' we're not going to go. We'll talk them through it and give them an incentive to wait until the next day. Now, if they have no water at all, we're going to go. We keep one person on call for plumbing and one person on call for heating, and we'll get everybody else home. Those on-call people know they might have an emergency or two to turn. That's how we've been doing it instead of running every single call that comes in."

The strategies Frasier's Plumbing has used have led to a strong team of employees that Phil says he's happy with, just a few years after so many longtime employees left. The company has been able to attract people to Rhinelander from in state to as far away as Utah.

Phil says, "We have one master plumber with 32 years of experience who loves to do plumbing service work and wants to retire in the Northwoods of Wisconsin. Another guy came in two years into his apprenticeship and is interested in both heating and plumbing. All of a sudden, we've had several people deciding to relocate to Rhinelander who also came with a tremendous amount of experience. Our internal staff is performing at a very high level and they are streamlining and improving our systems regularly to better meet the needs of our entire operation and our customers. We also have a 10-minute daily huddle by phone with our internal staff to go over our three-day pace report and any actions that may need to be taken. When Joanna and I are gone with Fellowship Adventures (their other business), we know our team and our customers are in great hands. We have a good team established right now, and we're very grateful."

## DEVELOPING CUSTOMER TRUST

No matter how much experience a new employee might come in with, though, they're immediately put into a 10-day onboarding process that Frasier's Plumbing uses through a model from the Nexstar Network.

"Our service manager, Kyle Leighton, is tough on it," Phil says.

He recalls a day where he came into the office and there was a job that needed more manpower. He noticed a new employee and asked Leighton if that employee was

# The evolution of technology

Frasier's Plumbing, Heating & Cooling was founded in 1918, so it goes without saying that today's technology and available materials have significantly affected the way the company does business compared to those early days.

"When I think of technology, it reminds me of the trucks. The trucks have become much more productive than they were years ago," says Bruce Frasier, part of the third generation of the family-owned company. "I remember when we had 6-volt systems instead of 12-volt systems. When it got below zero, we'd spend more time getting the trucks started in the morning than we did anything else."

Bruce's brother, David, adds: "I think about the changes in plumbing materials. When I did my apprenticeship, it was cast iron, and when my dad and grandpa were in the business, they were working with lead water pipes. Even the evolution of the tools: Think of how important the portable electric drill has been compared to a screwdriver. But that's what we used back then."

Now Frasier's Plumbing takes advantage of all the modern equipment that is available, such as press tools.

"It looks really nice and does a great job. It saves about four hours of labor on a boiler install, just having these press tools," says Phil, the fourth generation of the business.

Frasier's Plumbing also uses GPS in its service trucks, and all of the company's technicians are equipped with iPads for doing estimates, invoicing, and taking photos on the job.

"Then when a tech collects on a job, that automatically hits our books. All the automation and technology is pretty amazing," Phil says. "I remember back when we had to rely on a big wall in the dispatch center. Every tech was up there, and there were different colored cards depending on the type of job. Our dispatcher would use little magnets to show where each truck was in our service area. Now all of that is handled through software. Technology is definitely the biggest change as far as operations."

Continued ►



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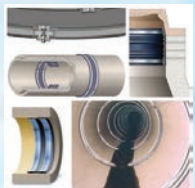
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► Master plumber Dan Schwanz, right, goes over a recent job with customer care specialist Kathleen Jones at the company office. Plumbing and HVAC technicians use tablets to receive dispatch calls, do estimates, and process payments.

available to help out. Leighton explained that the employee was in the middle of his 10-day onboarding process.

“I said, ‘Let’s go, he can do that tomorrow,’” Phil says. “But Kyle told me no. I’m glad that he’s tough on it and makes sure everybody goes through that process.”

That’s because a significant part of that onboarding process is training on customer relations. With all the changes that have occurred in the company over the years, one constant has been how Frasier’s Plumbing has viewed its relationship with customers.

“Developing a relationship of trust between the customer and the business is important,” Bruce says. “You realize early on that without trust, there isn’t any relationship. We always made it a point — when we made a proposal to a customer — to definitely adhere to the proposal. We would not back off. We felt it was very important to give a customer everything we said we’d do in a proposal. That only got better after we joined Contractors 2000 (the original name of the Nexstar Network). It enabled us to focus more on servicing the customer rather than just servicing the equipment.”

As an example of the company’s dedication to building customer trust, look at how Frasier’s Plumbing handles the servicing of boilers.

Phil says when he goes to a job, he can immediately recognize if a Frasier’s Plumbing technician has been there before. If so, there will be blue test plugs on the HVAC equipment where the technician measured airflow, temperature and combustion.

“We always have a performance chart for the customer that tells them everything about how the system is running. We’re not just cleaning burners and looking at it. We’re measuring the performance of the system,” Phil says. “That’s something not a lot of people in our industry do. I’m grateful that our company has always done it like that and it has stayed that way through to today. If we’re going to put something in someone’s home — plumbing or heating — we want to verify it’s doing what we said it does.”

In fact, there are customers who have built up so much



trust with the Frasier name that they left the company when the management group took over.

“Then, when they heard we were coming back to the company, they came back,” Phil says. “It means a lot to the our community — more than I realized — that it’s been family-owned and -operated all these years.”

## ANOTHER 100 YEARS?

To mark 100 years of being in business, Phil says one of the plans this year is to get involved in some Rhinelander community events. Also being discussed is giving a nod to the company’s origins by doing a sort of recreation of the old photo of founder George Frasier sitting on the horse-drawn cart full of toilets.

Most importantly, the plan is to mark 100 years by simply continuing to do what Frasier’s Plumbing has already done successfully for decades: providing quality plumbing and HVAC services to Rhinelander and the surrounding areas that the company serves.

“We don’t have any grandiose plans other than to just be good at what we do,” Phil says. “Our goal is to be profitable in doing that so we can properly take care of our customers and employees and protect the company. We want to make sure it’s here for the next generations.” 📱

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# A More Perfect Union

Contractors should look at all the pros and cons to union and nonunion workforces when deciding which route to take

By Neil Feldman

Once a stronghold of the middle class, labor unions have seen a steady decline in membership, particularly in the private sector — including in the construction industry.

According to the U.S. Bureau of Labor Statistics, total union membership in 2015 was approximately 40 percent less than what it was in 1983, and the percentage of construction workers who are union members dropped 4 percent to 13.2 percent between 2002 and 2015.

Why have unions seen a downturn in recent years? And what factors should commercial plumbing contractors consider when deciding between union and nonunion labor?

## LOOKING AT THE EXPENSE

The primary impetus behind this shift is the expense. Using union versus nonunion labor can mean a 20 percent reduction in profits, according to David MacPherson, professor of economics at Trinity University in San Antonio. “I cannot think of a single economic study that has not found that unions lower profits,” he says. “So unless union workers are at least 20 percent more productive, they’re going to hurt profits.”

Furthermore, the additional cost of using union labor can be as much as 33 percent but normally falls between 20 and 25 percent, notes Thomas Baylis, partner at the law firm Cullen and Dykman in New York, a market that still has a strong union presence. Baylis notes that virtually all the large projects like airport expansions, skyscrapers, wastewater treatment plants, and ground-up schools are still union in New York and certain other markets like Boston and Chicago. But he added that many markets, particularly smaller cities and more rural areas, have little or no union presence.

A big part of why union wages are so high rests with the fringe benefits package that can be as expensive as the wage

“If we get real busy and need to add some plumbers to cover all the work, all we need to do is pick up the phone and call the (union) hall.”

Mike Morena

rate itself. While the package is lofty for members, it makes it virtually impossible to be competitive with such rates when competing against nonunion contractors.

## DIFFERENT OPPORTUNITIES

The advantage of being a union plumbing contractor is it opens the door to take on projects that only other union contractors have access to. “To really grow and get involved with big projects in New York, you have to be a signatory (union) contractor,” says Mike Morena, director of purchasing at Cardoza Plumbing, a Westbury, New York-based union plumbing contractor.

The unions and unionized employers argue that union laborers are more skilled and safer than nonunion laborers and that it is far easier to mobilize large numbers of workers when they are organized.

Most plumbers unions have an apprentice program with a strong emphasis on training. The idea is for contractors to invest in individuals by having them partake in several years of trade-specific and safety training. Upon graduating from an apprentice program, which typically takes 4-5 years, the individual becomes a journeyman, who is paid significantly more than an apprentice. If, however, there’s a lull in work and the contractor must lay some labor off, that



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multiyear investment could be for naught if the worker accepts a position with a different contractor.

Collective bargaining agreements also spell out very specific guidelines in terms of what members can and cannot undertake. As Larry Haney, vice president at R.E. Robertson Plumbing, Heating & Air Conditioning in Annapolis, Maryland, notes, work ebbs and flows, and employee flexibility can mean the difference between holding on to someone and laying them off. "We have a very good core of professionals, and we do what we can to keep that intact," Haney says. "That may mean a plumber helps out on a large AC project, or an HVAC guy may need to take on the role of delivery man for a day. When you're a small business everyone needs to be mobile and wear multiple hats, so working within a defined set of rules simply wouldn't work for a business like ours."

Union contractors also have other commitments that are required under the agreements, like filing certified payrolls on a weekly basis.


## THE LABOR POOL

A key advantage to being a union contractor is the access to a large pool of labor. "If we get real busy and need to add some plumbers to cover all the work, all we need to do is pick up the phone and call the (union) hall," Morena says. "If we're not happy with a particular person, they can be

easily replaced, and if things slow up, we have the ability to lay off some people."

But all that jockeying of labor also requires tight management on the part of the contractor. Morena acknowledges that good foremen are necessary to ensure everyone remains productive on job sites.

In major urban areas, most union plumbing contractors are either large organizations that are well capitalized and have the horsepower to take on projects of all sizes or are niche contractors that focus on specific types of work that tends to be union, like hospital renovations or sewage projects. Union contractors generally agree that it's important to carve out a well-crafted business plan before even considering becoming a signatory contractor.

"Signing a collective bargaining agreement is a major commitment," Baylis says. "If you're in a union-heavy market, can foster the right relationships, and know how to navigate the labor and paperwork, it can mean access to work with less competition," he says. "But there's a lot of non-union work out there — even in major union markets — and you have to be fully committed that it's the right move for your business." 

*Do you have a plumbing business question you'd like answered? Email [editor@plumbermag.com](mailto:editor@plumbermag.com) with your question.*

## Working Inside and Out

Contractor replaces pipe inside and outside customer's home after learning sewer line was broken *By Cory Dellenbach*

**A** simple video inspection following a sewer line cleaning turned into much more than a contractor and homeowner expected. The problem required a full replacement of the sewer lines and waterlines from the city main to the house as well as piping in the house.

"We were doing a video inspection of the line and found that the clay tile sewer line was broke," says Skooter Thompson, owner of Skooters Plumbing and Drain Cleaning. "We showed her the video live as we were doing it, and it showed she had some breaks in the clay tile where dirt and roots were coming in. We advised it would be a wise idea to replace her sewer before it collapsed completely."

**PROJECT** Pipe bursting and repiping of home

**CUSTOMER** Private homeowner

**CONTRACTOR** Skooters Plumbing and Drain Cleaning, Fargo, North Dakota

**EQUIPMENT** PortaBurst PB30G2, HammerHead Trenchless, 800-331-6653, [www.hammerheadtrenchless.com](http://www.hammerheadtrenchless.com)

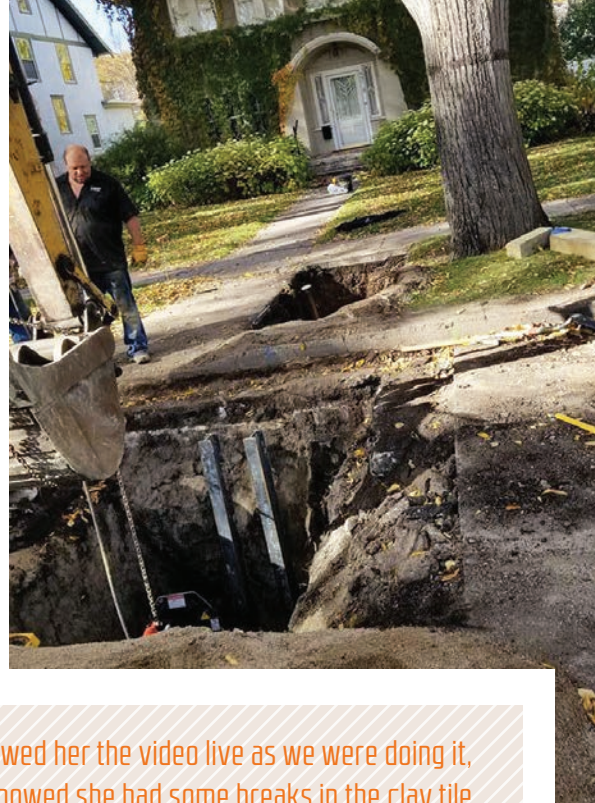
**RESULTS** 95 feet of pipe burst to install 4-inch HDPE fusible pipe in place of clay tile pipe, installed a 1-inch copper waterline and installed PEX pipe throughout the house



▶ A technician from Skooters Plumbing and Drain Cleaning in Fargo, North Dakota, prepares for the new waterline and sewer line to enter the house during a pipe bursting project in October 2017. Crews installed a new 1-inch copper waterline and a 4-inch HDPE sewer line. The pipe burst was about 95 feet in length.



- ▶ Both the copper waterline and the HDPE sewer line enter the basement of the home as they are pulled back through the old pipe.
- ▶ The entry pit for the pipe bursting job in Fargo, North Dakota. Skooters Plumbing and Drain Cleaning handles everything from the excavation to the pipe bursting and then patching the road and basement.



It's not an uncommon problem in the company's service area — a 50-mile radius around Fargo, North Dakota. The company does about three pipe bursting jobs a month in the spring, summer and fall. In the winter, it slows down a bit because of the frozen ground, but the company stays busy with general plumbing service repair work.

"Most of our work is residential drain cleaning, sewer replacements and waterline replacements," Thompson says. "Most of the pipe we're replacing is clay tile, which seems to be what people are having issues with right now."

## GETTING TO WORK

Thompson and his staff discovered the problem at the Fargo home in October when they were called because of a slow drain. The crew cleaned out the line but wanted to find the cause.

"Typically we get most of our jobs through drain cleanings," Thompson says. "A customer needs their drain cleaned, and after we get it cleaned, we scope it with a camera to make sure all the roots and intrusions are out."

“We showed her the video live as we were doing it, and it showed she had some breaks in the clay tile where dirt and roots were coming in. We advised it would be a wise idea to replace her sewer before it collapsed completely.”

*Skooter Thompson*

After finding the breaks in the line, Thompson started to plan for the job ahead. Not only would the sewer pipe need to be replaced, but also a 1-inch waterline leading from the city service to the home.

"We called in our locates to find the nearby utilities and got our equipment staged," Thompson says. "We try to start our jobs on Mondays so we have the whole week to do them if need be, but most jobs only take three days."

On the first day of the job, crews got the street dug down 11 feet using CASE Construction Equipment backhoes and wrapped the basement for the interior work. The second day was the pipe bursting and installation of the new pipe.

The Skooters Plumbing and Drain Cleaning crew removed an old lead waterline and replaced it with a 1-inch copper

line. Crews then replaced the old clay tile sewer line with a 4-inch HDPE fusible pipe. “We also installed a new clean-out and backwater valve inside the house, eliminating any possibility of the sewer backing up from the neighbors,” Thompson says.

The pipe bursting portion was about 95 feet long. Thompson says a PortaBurst PB30G2 (HammerHead Trenchless) was used on the job. Typically, the pipe bursting and installation takes one full day. The third day is then used as a cleanup and inspection day.

“Another plumbing company might come in and open the drain, but we’ll come in and thoroughly clean it all out.”  
*Skooter Thompson*

## MORE WORK INSIDE

Not only was work needed on the outside of the home, but inside work was also required.

The home had galvanized waterlines throughout, so crews replaced both the hot and cold waterlines with PEX. “It’s a big time saver and money saver for the homeowner, using PEX,” Thompson says.

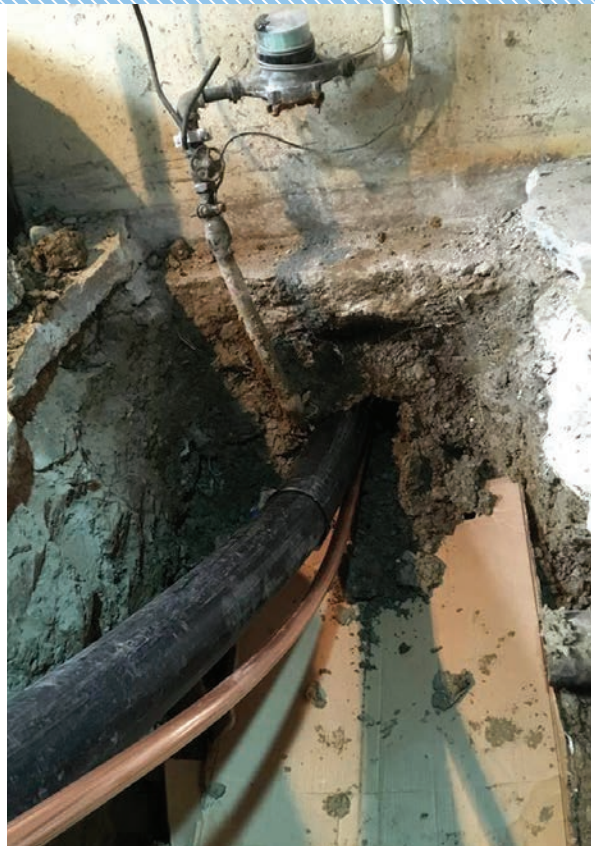
Some cast-iron pipes above-ground were also replaced because of leaking issues in the house.

## FINDING A NICHE

Thompson founded his company in 2005, saying he was tired of working for somebody else. He knew early on that he wanted to have drain cleaning as a service option for customers.

“I was subbing a lot of it out to another company in town,” Thompson says. “There’s only one other company in town that has equipment to do trenchless sewer and water replacement. I decided I would purchase the equipment and do it myself.”

From May to December 2017, the company did about 1,100 feet of pipe bursting. Thompson has made his company a one-stop shop for customers. “We handle everything from start to finish: the street cutting, patching, the backfill, all the excavation, all the removal of concrete from inside the house,” he says. “There are no other subcontractors in the house, we’re the only ones there from start to finish.”



▲ Both the copper waterline and the HDPE sewer line enter the basement of the home as they are pulled back through the old pipe.

Thompson says his company works with other plumbers in the area who don’t offer drain cleaning services or sewer replacements.

“We have different equipment than most,” Thompson says. “Most plumbing companies use drum-style snakes, but we use a sectional machine because it has the ability to do a lot better job in cleaning. Another plumbing company might come in and open the drain, but we’ll come in and thoroughly clean it all out.”

The company has three K-1500 sectional machines (RIDGID). They also use General Wire jetters.

Skooters Plumbing and Drain Cleaning was called in to assist another plumbing company this past summer after a subcontractor for the city put in a light pad and drove the ground rods through the sewer. The other plumbing company had come out, but could not get the sewer cleaned enough to see what happened.

“We were able to come in, clean it out and that’s when we saw the ground rod through the sewer,” Thompson says. “We located it and had the subcontractor come over to verify it.”

Thompson takes pride in being able to do work that others may not be able to handle. “It is challenging work,” he says. “But it’s a good feeling when you finish up the job and the customers’ homes are back working again.”



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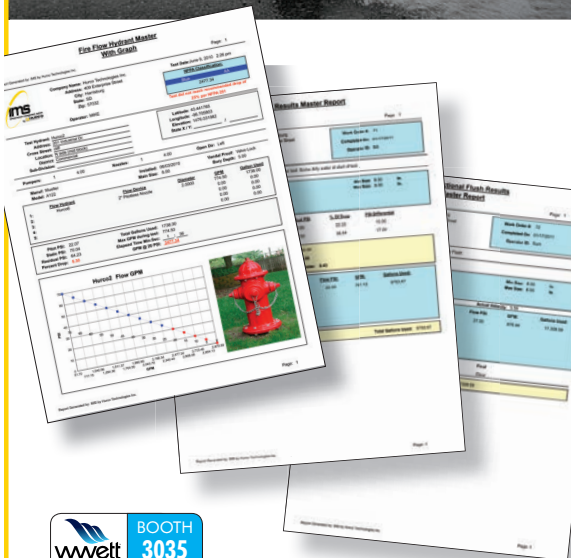
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Anja Smith

# Don't Be a One-Person Show

Look at all the options available to you as you grow your plumbing business *By Anja Smith*

I spent my early adulthood working in restaurants. In these businesses, there are clear lines of delineation for responsibilities. There's a front-of-house and a back-of-house staff. The front-of-house staff takes care of the customers and keeps the dining area neat and tidy. They're the face of the restaurant.

The back-of-house staff is in charge of running the kitchen — cooking and preparing food, cleaning cutlery and plates, designing menus, etc.

You don't see sit-down restaurants that are one-person shows. You can't be in both the front of house and back of house at the same time. The food would burn, and the service would be terrible. Yet in plumbing, that is exactly what we're asked to do.

Contractor service or trade businesses are fantastic entrepreneurial opportunities because they have low barriers to entry. If you know a trade, like plumbing, it doesn't take much to hang a shingle and start a business of your own. In fact, thousands of people try it every year.

And yet, many of them fail or stay stagnant. The story I see and hear the most is this:

A plumber thinks he can do it better than his boss. He wants the profits for himself, not just a paycheck. So, he goes out on his own. He starts by calling on friends, neighbors and all the customers he knows. He easily picks up enough business to stay busy for a few months. That's when word-of-mouth begins to work as more folks find out about his business. At this point, he may feel he has made enough money to try a little advertising.

That advertising keeps the phone ringing for a bit longer. Now, he's really struggling to keep up with all those calls. He's trying to be in 10 places at once. He's falling behind on his billing, missing appointments and forgetting about estimates. His reputation becomes spotty, and the phone calls start to slow down.

This is what I call the "commitment moment."

## THE COMMITMENT MOMENT

This moment forces you to decide if you're a freelance plumber or a business owner. Did you create a job for yourself or start a company? Many would argue that the decision is to grow or die.

It's not hard to create a job for yourself in this industry, but a job doesn't grant the same long-term stability as owning a company. You aren't building value or equity

*If you're serious about building a business, you'll learn that as business grows, you can't do it all forever.*

that can provide for you when you're no longer able or willing to work the same hours. If you want to become a business owner, that's a different thing. Because a business owner is like a restaurateur. They don't expect one employee to do everything.

It's incredible how we expect contractors to do every part of the business. It creates an obscene list of pros and cons. On the one hand, if you know the craft, you can own the business. On the other, you'll be wearing at least a dozen hats of different sizes and colors.

## TAKE OFF ONE HAT AT A TIME

If you're serious about building a business, you'll learn that as business grows, you can't do it all forever.

If you're well-funded, you might be able to hire from the beginning. For most plumbing contractors, though, early investments are in equipment and transportation. That puts you in the boat of being the plumber, business

Continued ▶



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owner, bookkeeper, dispatcher, appointment scheduler, marketing director and more.

Once you get to the commitment moment, the first step is to decide which of these hats you can no longer wear. Then you have to find a new person to wear it.

### YOU HAVE OPTIONS

The decision to hire versus outsource is a big one. Your first employee is always the hardest hire because it comes with more administrative work. If you are over this hump, maybe the decision to bring in an office assistant is easier. Having a great office employee requires training. Are you going to be able to take a week off from your business to train them? Probably not.

For this reason, you may have better luck using a firm or service to off-load responsibility to. These will seem expensive at first, but they typically cost less than an employee and provide higher quality talent than you would be able to afford on your own. Not to mention that they should be giving you back time to spend in the field.

If you decide you're not ready for an employee but want to deal with an individual, you can try contracting a freelance employee. This would be a 1099 option, so tread carefully. These workers have more freedom in their decisions about how, when, and where to work than an employee does. You don't have to worry about payroll taxes or workers' compensation, but you do have to understand the basics of employment law. Seek counsel before deciding this route, and make sure it is the right choice for your business.

### IT TAKES A VILLAGE

Most likely, it will be a very long time before you take off all those hats. The plumber who wants to grow a business is going to continue to evolve and change over time. The work you do day to day when you're making \$125,000 per year versus producing \$5 million in revenue are as different as night and day.

At some point, it may not hurt to get some business training if you haven't already. Once you decide to own a plumbing business, you're not a plumber anymore. You're a business person. That's a harsh reality that many plumbers discover they don't like.

It's that reality that closes more plumbing startups than anything else in the first two years of business. By the time

A business partner who knows the basics of bookkeeping, marketing, sales, administration, and more is worth splitting the profit with.

you're running a company with a handful of trucks, you have a real company on your hands. You'll quickly realize there's no way to do all this different work on your own.

### TAKING ON A PARTNER

The value of a business partner in the plumbing industry is widely underrated. A business partner who knows the basics of bookkeeping, marketing, sales, administration, and more is worth splitting the profit with. You might be the blood of the company, but they are the heart that keeps you pumping. Blood is useless without a heart. A plumber without business savvy is not going to form a living, breathing company.

Of course, you have to trust this person implicitly and be on the same page about how business should be done. Finding and maintaining this relationship is difficult, so don't take the task lightly.

### POWER IN NUMBERS

It is really hard to do it all. If you are in the trenches and feel stuck on the precipice, don't be afraid to ask for help. Talk to complementary home services businesses (or competitors, if they will let you) in your area that are ahead of you in their business journey. That might feel intimidating at first, but it will give you ideas and insights as to what resources might be available.

If you can find business training services, either through the Small Business Administration or a Small Business Development Center, use them. There are often free programs available for folks looking to grow small businesses.

The bottom line is that you might be expected to do it all in the beginning, but that doesn't mean you have to do it all forever. Don't let a short-term growth challenge deter you from pursuing a business that could be a meaningful asset for the rest of your life.

Embrace your commitment moment. 

-----  
*Anja Smith is managing partner for All Clear Plumbing in Greenville, South Carolina. She can be reached at [anja.nicole.smith@gmail.com](mailto:anja.nicole.smith@gmail.com).*

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Larry Towner

## Bringing Safety to Your Fleet

New monitoring technology and cab comforts will help your driver return safely from a long and productive workday *By Larry Towner*

**I**n work truck fleets, operator safety is a paramount concern. Adding safety options can have huge payoffs in terms of insurance savings, productivity and employee morale.

Driving is the most dangerous activity most Americans undertake on a regular basis. Thousands perish in traffic crashes annually. Even though a large number of our wastewater industry drivers possess CDLs, this does not mean they are “good” or “professional” drivers. Safe driving is an attitude and a learned skill.

Safety encompasses more than just vehicular accidents. Job site safety is as important as roadway safety. It is important that the vehicle gets from the shop to the job site safely, but while on the job site, operator safety takes the lead. These are distinctly different conditions that have different requirements, concerns and needs.

Crashes are costly in many ways, from property damage to injury, even fatalities. I was at a drivers’ meeting in which the manager of the facility announced that the company had a fatality on the job. A worker had been run over by a truck he was guiding into a job site. The manager was in tears. The accident was avoidable, and he felt personally responsible for the employee’s death. In the subsequent investigation, the event was ruled accidental and no blame was assigned, but the manager struggled for some time afterward. I hope you never have to make that announcement to your staff.

### ROADWAY SAFETY OPTIONS

Many truck brands now offer such options as collision avoidance technology, lane departure technology, camera technologies, and other electronic means of making trucks safer for driving. GPS and telematics programs can also help by tracking driver behavior and allowing

management to make decisions based on data, both recorded and real-time.

Collision avoidance uses onboard radar technologies that “sense” the surrounding environments with radar systems. These systems are usually combined with the cruise control features and can be programmed to give the truck’s computer the ability to override driver inputs and slow or stop the truck by several methods. Full stops are available on some models. The various systems offer a range of features including frontal, side mount, and rear radars. Programming can include automated features (braking engagement) or various degrees of driver alerts, such as a steering wheel shaker or audible alerts.

Cutting-edge camera technology will eliminate mirrors and put heads-up displays in the side windows of trucks, simulating the view from the traditional mirror.

Lane departure technology is optically based, a camera observes the lines on the roadways and alerts the driver to movement out of the lane. These functions engage if the driver does not use the turn signals and have a speed threshold (around 35 mph).

Camera systems can give drivers unparalleled ability to see the environment around the vehicle. There are backup cameras and sophisticated systems that give a comprehensive 360-degree view. Cutting-edge camera

Continued ▶

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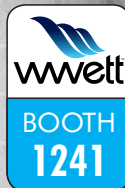
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technology will eliminate mirrors and put heads-up displays in the side windows of trucks, simulating the view from the traditional mirror.

## DRIVER MONITORING

GPS and telematics programs allow managers to track a driver's behavior. GPS tracks truck location on a working route and has limited functionality. Telematics integrate the truck's operating systems, combining them with a GPS function and offering more data to be monitored. Telematics can monitor engine conditions, mechanical equipment, speed, G-force loading on the vehicle, braking incidents and more. Telematics allows for immediate notification of predetermined parameters of operation and reports can be generated to show activities of the truck.

An example of parameters could (and should) be a text notification of an engine-overheat situation. If the truck starts to run hot, the program will send a text to the fleet manager (or anyone you indicate). In turn, the fleet manager can call the driver and make an appropriate suggestion (shut it down, now!).

Other parameters can be set to send emails or just be put into reports. For example, telematics programs can monitor activities such as seat belt use. Seat belt engagement is self-explanatory and provides data about drivers and their habits. This information can help managers monitor the drivers, identifying undesirable behaviors before they become problematic and costly.

## SIMPLER SPECS

Other options are less glamorous but offer protections that can be more valuable than the sophisticated technological approach. These options are a part of the truck specification process.

Common risks include slip and fall accidents. Slips and falls usually occur when entering or leaving the truck cab. Rain, snow and ice make footing and handholds unsure. Proper handholds with rubber grips and steps with ample foothold decrease slip and fall accidents.

Be aware of visibility concerns. Common items that can be overlooked include mirror options, door lenses and window options. Most chassis brands offer several mirror options, including heated mirrors, spot mirrors and hood-mounted spot mirrors. Downward-looking mirrors can often be specified as well. This type of mirror


is mounted to the top of the door frame and gives a view of the passenger side of the truck. Hood-mounted spot mirrors add tremendous visibility along with the benefit of a "sight rod" feature. (They can tell the driver where the edge of the hood is in relation to objects.)

Window options also need to be addressed. Some chassis manufacturers can install a "port" in the door, a small window in the lower corner that allows the driver to see the blind spot. Other options include one-piece windows, removing the center post of the window and the associated blind spot, and rear corner post windows, allowing visibility aft of the cab.

Seating and cab options are also critical to operator safety. Providing a comfortable cab enhances driver productivity and safety. Simple options such as air-ride seats, heated seats, lumbar control, etc. can help a driver pay attention to road with minimal distractions. A tilt steering wheel enhances vehicle control by allowing proper handhold of the wheel. High-visibility seat belts allow law enforcement and management to visually check if a driver is using his seat belt. Cab storage options can reduce clutter and the potential for flying debris — and give the added advantage of being more organized and productive.

Proper tire specification can also affect safety. Choosing the wrong tires can lead to traction or loading issues, creating potentially dangerous conditions. Modern tires are engineering marvels, specifically engineered to maximize performance. Consider speed and load ratings as well as tread design, and apply your parameters to tire choice.

## ORDER CAREFULLY

These are some of the highlights of truck specifications that have a bearing safety, and many are overlooked. Consult a professional when building a truck and understand all available options. 

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*Larry Towner is a vocational solutions specialist for Peach State Truck Centers in Norcross, Georgia. Send your Truck Corner questions to [editor@plumbermag.com](mailto:editor@plumbermag.com).*



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By Craig Mandli

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## LMK Technologies Performance Liner Lateral System

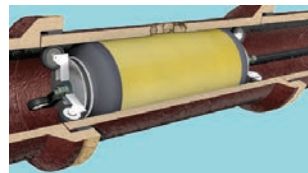
### The Performance Liner Lateral System

The Performance Liner Lateral System from LMK Technologies is installed from one access point using custom-fabricated equipment. The system repairs and rehabilitates broken and leaking pipes with diameters of 3 to 8 inches. No digging is required to line 4-inch pipes up to 130 feet or 6-inch pipes up to 100 feet. The system is NSF/ANSI 14 certified and meets ASTM F1216. **815-433-1275; www.lmktechnologies.com.**



## Trelleborg Pipe Seals epros DrainPacker

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## Picote Solutions Dual-Color Epoxy Brush Casting System

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Designed for use in the plumbing market, **ProLock Flexi Hoses** from **John Guest USA** are available in several sizes. They are ideal for water heater installations. These corrosion-resistant hoses are double crimped for greater reliability. Fast and easy to install, they can be used with copper, PEX, and CPVC pipe and are suitable for both commercial and residential applications. They are lead-free. **973-808-5600; www.johnguest.com.**



### Omega Flex AutoSnap Tee

**AutoSnap Tee** fittings from **Omega Flex** do not require any disassembly or reassembly of the fitting to the TracPipe CounterStrike CSST. Just twist, snap, and tighten, and the work is done. This greatly reduces installation difficulty and time, as there are no small loose gaskets, O-rings, or retainer rings to contend with in a dark and/or cold workplace environment. The fittings are CSA-listed, manufactured from brass, and have a metal-to-metal cup seal without any exposed stainless steel pipe behind the new fitting. Reduced torque value and reusability all make for an optimum installer-friendly fitting. The fittings are available in 16 different configurations. **800-671-8622; www.tracpipe.com.**



### REHAU, Building Solutions Division, EVERLOC+

The **EVERLOC+** compression-sleeve fitting system from **REHAU, Building Solutions Division**, includes 1 1/4-, 1 1/2- and 2-inch diameters for commercial plumbing and hydronic piping applications. Designed for use with RAUPEX PEXa pipe, the system has both polymer and lead-free brass fittings and power tools for making secure, reliable connections. **800-247-9445; www.everlocplus.com.**



### Uponor ProPEX

**ProPEX** lead-free brass valves from **Uponor** are constructed from high-quality **ECO BRASS** lead-free brass. The upgraded valves comply with the International Plumbing Code, Uniform Plumbing Code and International Residential Code as well as being listed to NSF 14, NSF 61, NSF 359 and NSF 372, providing confidence in a product that is code-compliant and listed for all plumbing installations. The complete line features six products in three different configurations — angle and straight stop for 1/2-inch pipe, copper to PEX for 1/2- and 3/4-inch pipe, and PEX to PEX for 1/2- and 3/4-inch pipe. **800-321-4739; www.uponor-usa.com.**



## Fixtures

### American Standard Delancey

**Delancey** kitchen and bar sink faucets from **American Standard** are designed to complement kitchens with classic decors. For easy installation, the pull-down kitchen and bar sink faucets include color-coded flexible supply lines with 3/8-inch connections that come pre-installed on single control models. The pullout hoses are also preassembled for installation ease. They have durable metal bodies and ADA-compliant lever handles. Washerless ceramic disc valves provide a lifetime of worry-free, drip-free performance. **800-442-1902; www.americanstandard-us.com.**



### BainUltra Opalia

**Opalia** therapeutic baths from **BainUltra** draw the eye with fascinating curves and are available in five configurations. The oval inner shell of the bath can be centered, off-centered to either side, or oblique from the center, creating a play of elliptical shapes and boldly distinctive decks. The tub measures 68-by-39-by-25 inches with generous proportions to accommodate two bathers in comfort, and it comes in glossy or UltraVelour Matte finishes. They are made of acrylic for durability and lasting beauty. They offer hydrothermo massage to relax the body and mind, relieve back pain, stimulate blood



flow and eliminate toxins. Geysair technology adds warm-air jets that provide uniform heat and maintain water temperature for longer periods. ThermaSens features integrated aromatherapy (AromaCloud), chromatherapy and Thermotherapy with WarmTouchShell heating zones. 866-344-4515; [www.bainultra.com](http://www.bainultra.com).



### Blanco America ATURA

The ATURA faucet with pull-down spray from **Blanco America** has an attractive high arc and solid brass body. It offers a high-performance dual spray and is available in a standard 2.2 gpm as well as a 1.5 CALGREEN water-saving model. It is also available in a bar faucet model and comes in polished chrome and stainless finish. It is 16 3/8 inches high with a 9-inch reach. 888-668-6201; [www.blancoamerica.com](http://www.blancoamerica.com).



### Chicago Faucets 420-T Series

The 420-T Series faucets from **Chicago Faucets** include TempShield, built-in ASSE 1070-compliant scald protection that eliminates the need for a separate thermostatic valve. They deliver water at a comfortable temperature, providing an all-in-one solution for most residential

applications. An integrated thermostatic control element helps prevent burning and scalding, especially in children, the physically challenged and the elderly. They comply with ADA requirements, and scald protection may even be code in certain areas. They are easy to install and maintain, and offer water-saving outlet options from 1.5 to .35 gpm. Their ceramic discs are tested up to 4.5 million full motions. The solid brass, chrome-plated body meets current building codes. 847-803-5000; [www.chicagofaucets.com](http://www.chicagofaucets.com).



### Creative Cleanout Covers products

Custom cleanout covers from **Creative Cleanout Covers** are designed for homeowners and businesses looking to add a decorative touch to the traditional chrome clean-out. This

line of decorative clean-out cover products currently offers five designs with five finishes. Colors include beechnut bronze, seaside silver, glamour gold, Newport copper and paint grade white (paintable). Made from injection-molded ABS plastic,

the covers snap into place using a rare earth magnet. Designed for indoor and outdoor use, applications include residential and commercial retrofits, new construction, hotels and restaurants. Custom designs are available. 714-841-4930; [www.creativecleanoutcovers.com](http://www.creativecleanoutcovers.com).

### Delta Faucet Esque kitchen faucet

The **Esque** kitchen faucet from **Delta Faucet** offers a clean, poised look to complement the fresh modernity found in contemporary kitchens as well as the tranquility of transitional spaces. A strong yet subtle wrap at the faucet's base creates a sense of asymmetrical movement that is reflected in the swoop of the handle. The sleek pull-down design is coupled with modern innovations, such as MagnaTite Docking to hold the spray head firmly in place via a powerful magnet and DIAMOND Seal Technology to ensure like-new operation for the life of the faucet. Optional Touch2O Technology with TempSense Technology allows the faucet to be turned on and off with just a touch, simplifying kitchen tasks during food prep and cleanup, and features an LED light at the base of the faucet to let users know when the water has reached the desired temperature. 800-345-3358; [www.deltafaucet.com](http://www.deltafaucet.com).



### Franke Kitchen Systems Absinthe pull-down faucet

The **Absinthe** pull-down faucet from **Franke Kitchen Systems** has a high arch, a single-lever handle, a pullout spray hose, and a swivel range of 360 degrees. Equipped with a toggle spray function and both full and needle spray streams, this faucet has a flow rate of 1.75 gpm. It is available in polished chrome, matte black, polished nickel, or satin nickel finishes. 800-626-5771; [www.franke.us/ks](http://www.franke.us/ks).

### GROHE Retro-Fit Shower System

Ideal for retrofit or renovation, the **GROHE Retro-Fit Shower System** quickly and easily transforms an existing showerhead installation with concealed pressure balance valve into a luxurious shower system with a showerhead and the added convenience of a hand shower. Simply replace the existing shower arm and add the system components without altering any in-wall plumbing. Once installed, it's easy to use; a quarter turn of the diverter lever (located at the bottom of the shower bar)



switches water flow from showerhead to hand shower or you can have both outlets on simultaneously. The showerhead and hand shower both have DreamSpray technology. Both the head and hand showers can be operated simultaneously. The optional 6-inch height extension offers an extra solution for most applications. The upgrade is quick and easy to install, as there is no need to change the tiles or remove any of the original work. **800-444-7643; www.groheamerica.com.**



### Outdoor Shower FTA-W50-WMHC

The FTA-W50-WMHC wall-mount hot and cold shower from **Outdoor Shower** is made from 316 marine-grade stainless steel for harsh environments such as salt water and chlorine. The mirror finish is resistant to corrosion, making it ideal for swimming pools, beachfront properties, resorts, outdoor

living spaces and yachts. It has an adjustable hand spray with a 60-inch hose and an 8-inch showerhead with a swivel ball joint. Showerheads with 1.8 gpm are available upon request. The hand spray is great for rinsing or bathing from head to toe as well as bathing pets outdoors with warm water. **866-746-9371; www.outdoorshowerco.com.**

### Pfister Faucets/Hospitality Lita

The **Lita** filter faucet from **Pfister Faucets/Hospitality** delivers healthy, great-tasting water on demand from the kitchen faucet. The faucet is equipped with the GE 2X High Flow Filtration System. This high-performance filtration system reduces contaminants such as pharmaceuticals, chlorine, lead and cysts from drinking water. Its Xtract feature allows the user to activate the filter mode simply by using the faucet handle. It delivers filtered water fast while completely eliminating the need for a bulky filter pitcher, filter attachment or separate drinking water spigot. It includes a Pforever Seal, an advanced ceramic disc valve technology with a never-leak guarantee. It offers 1.8 gpm at 60 psi and 1.0 gpm in Filter Mode. **800-422-4278; www.pfisterfaucets.com.**



### Saniflo - part of SFA Group Saniaccess2

The **Saniaccess2** above-floor macerating plumbing system from **Saniflo - part of SFA Group** handles sink and toilet fixtures in



powder room applications and comes with two access panels that allow for easy internal service. Periodic maintenance can be accomplished quickly and easily without having to disconnect the unit from the fixtures it is serving. It ships fully preassembled and ready for installation directly behind the rear-outlet toilet that is available with the macerator. If the home or building owner prefers to conceal the unit behind a finished wall, an 18-inch extension pipe for making the macerator-toilet connection is available. It permits the creation of a new powder room in virtually any space that lacks below-floor drainage and where conventional plumbing would be impractical. Walls and floors remain intact, and installation is accomplished quickly and economically with minimal disturbance to room layout. The system can be fully operational in as little time as a half day. **800-571-8191; www.saniflo.com.**

### Victoria + Albert Trivento

The **Trivento** free-standing bateau bathtub from **Victoria + Albert** has a fine rim and a deep, double-ended bathing well. Combining the clean lines of a modern aesthetic with the graceful curves of a classic silhouette, it was designed to provide support for a luxurious bathing experience. Measuring a comfortable 22 7/8 inches high, 27 7/8 inches wide, and 65 inches long, it works with the company's Kit 40 Intelli Waste bath drain. It is crafted from ENGLISHCAST composition — a naturally white material rich in volcanic limestone that is warm to the touch and hand-finished to create a glossy finish that is durable and easy to clean. It is available in seven finishes, including gloss white, gloss black, matte white, matte black, anthracite, stone grey and light grey. **800-421-7189; www.vandabaths.com.**



## Pipe

### Asahi/America Asahitec PP-RCT

**Asahitec PP-RCT** piping systems for plumbing and HVAC applications from **Asahi/America** are comprised of two systems: Climatec for hydronic heating applications and Watertec for potable water. Pipe in both systems is manufactured with Fibercore technology, which minimizes expansion and contraction by up to 75 percent, in turn



Continued ▶

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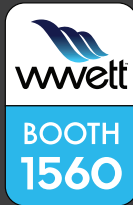
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reducing installation costs by minimizing expansion loops and supports. Fibercore PP-RCT pipe consists of three coextruded layers that make one homogenous pipe. The middle layer is a mix of short fiberglass strands and PP-RCT, which is isolated by an inner and outer layer of solid PP-RCT. The systems include both molded socket fusion fittings and molded butt fusion fittings, and molded large-diameter fittings up to 630 mm. They are NSF 14-pw certified for potable water applications and have lead-free brass adapter fittings. **800-343-3618; www.asahi-america.com.**

## Tools

### DEWALT 20V MAX XR Brushless Drain Snake

The lightweight **20V MAX XR Brushless Drain Snake** from **DEWALT** provides a cordless, powered solution for cleaning clogged drains. This allows service plumbers to get in and out quickly without the hassle of cords or tedious manual options. The unit comes with a 25-foot 5/16-inch cable that is coated with black oxide to help prevent corrosion and a steel inner core for rigidity to feed the snake down the drain. Compatible with replacement cables from a variety of leading manufacturers, the versatile unit accepts 1/4- and 5/16-inch cables up to 50 feet long and 3/8-inch cables up to 35 feet long with an assortment of different ends for various applications available. It has a partially sealed inner drum that makes it easy to remove and change out cables. **800-433-9258; www.dewalt.com.**



system to reduce bearing wear and extend tool life. Its Flexicore cables are made of heavy-gauge wire coiled tightly around a 49-strand, aircraft-type wire rope, and they are heat treated. **800-245-6200; www.drainbrain.com.**

### RIDGID RP 241

The **RIDGID RP 241** is an inline press tool that is 25 percent smaller and 10 percent lighter than its predecessor. An ideal solution for pressing copper, stainless steel, black steel and PEX in hard-to-reach areas, its lightweight, compact design also helps minimize fatigue and maximize productivity. It weighs 7.4 pounds, with battery and jaws, and comes standard with a 12-volt battery that provides over 140 crimps per charge. The tool easily connects to **RIDGID Link**, providing users data on crimps and service history. It offers 180-degree rotation, allowing contractors access to difficult-to-reach areas, and a bolt sensor to detect if the jaw is properly inserted into the tool. It is compatible with all prior **RIDGID** compact series jaws and attachments. **800-769-7743; www.ridgid.com.**



## Tubing

### Legend Valve HyperPure

**HyperPure** flexible plastic hot and cold potable water tube from **Legend Valve** is 100 percent recyclable. It is made using a bimodal resin, which is a polyethylene that does not need to be cross-linked while exceeding rigorous U.S. potable water standards. It is manufactured using **HyperTherm 2399 PE-RT** resin made by **The Dow Chemical** and is available from 1/4 to 2 inches. Sizes from 1/4 to 1 inch are sold in coils and sticks, while 1 1/4-, 1 1/2- and 2-inch sizes are sold in 20-foot lengths. **800-752-2082; www.legendvalve.com.**



### General Pipe Cleaners Power-Vee

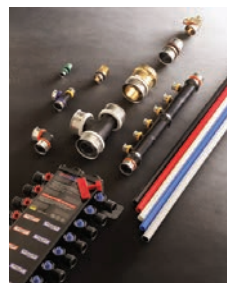


The **Power-Vee** drain cleaner from **General Pipe Cleaners** has a simplified feeding system that is like

having an extra hand in tight and awkward places. Squeeze the lever and the cable feeds at a rate of up to 16 feet per minute. The unit unclogs sinks, tubs, toilets and laundry drains ranging from 1 1/4- to 3-inch diameter and at a distance of up to 50 feet. The automatic feed adjusts to take any cable from 1/4 to 3/8 inch without tools or additional parts. The optional ergonomically balanced **Handy-Stand** turns the unit into a practical countertop or floor machine. The unit has quick-change cable cartridges and a **Dyna-Thrust** bearing

### Viega PureFlow PEX System

The **Viega PureFlow PEX System** provides a complete plumbing solution that's easy to install and will help reduce water waste. Press fittings are available in sizes from 3/8 to 2 inches and have **Smart Connect** technology, which helps identify unpressed



Continued ▶

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connections. Fittings are available in Zero Lead bronze and high-performance polymer, and system-matched tools provide a consistent connection every time. ManaBloc is designed to supply each fixture in a building with its own individual PEX tubing line. It provides centralized control over the entire plumbing system, and fewer fittings behind the wall reduce potential leak points. PEX tubing is a flexible solution manufactured with strict quality control through vertically integrated manufacturing and exceeds the highest industry ratings for UV and chlorine resistance. **800-976-9819; www.viega.us.**

## Water Conditioner

### AquaMotion Aqua-Flash

The **Aqua-Flash** from **AquaMotion** is a recirculation system that delivers hot-water comfort to every faucet, saving a family of five about 15,000 gallons of water a year from being dumped into the drain. It installs in 10 minutes under the sink and doesn't require power or batteries. There is no need for a small hot-water tank with tankless systems. It includes stainless/bronze construction with unions, hose and tee, a pump with 10-foot line cord, 3/4-inch union connection, and timer. It installs on the water heater or below a tankless heater. It is UL listed and NSF/ANSI 372 approved. **401-785-3000; www.aquamotionhvac.com.**




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## Water Heaters

### Navien NPE-A series

**NPE-A** series condensing tankless water heaters from **Navien** are ideal for both commercial and residential applications. They have 1/2-inch gas pipe capability, 2-inch PVC venting, dual stainless steel heat exchangers, ComfortFlow recirculation including pump and buffer tank, field gas convertibility, and an elegant compact design. Up to 16 units can be cascaded together without an external control, and eight units may be common vented. Highly efficient at 0.97 EF or 0.96 UEF, NPE-180A, NPE-210A and NPE-240A are also available with on-demand activation and NaviLink Wi-Fi control. **800-519-8794; www.tanklessmadesimple.com.**



### Rheem Prestige Series

**Prestige Series** condensing tankless gas water heaters from **Rheem** include built-in recirculation to provide homeowners with instant hot water at the tap while reducing water waste. The high-efficiency tankless water heaters deliver continuous hot water, as the built-in recirculation pump pushes water through the heat exchanger in a loop to prevent cold-water bursts. The units are easy to service and install. When installed at the furthest fixture, the crossover valve accessory converts the cold-water line into a recirculation return, eliminating the need to run new plumbing in existing homes. The units are Energy Star certified, with a 0.94 UEF rating. They are 1/2-inch gas line compatible and contain an ultralow NOx burner. Options include up to 100 feet of PVC venting and the ability to common vent two units, creating opportunities for more flexible and versatile installations. **800-621-5622; www.rheem.com.** 







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**FOR THE PRO**

# Residential Plumbing

By Craig Mandli

## Cast-iron pipes updated with new lining



**Problem:** The Masonic Lodge in Mitchell, South Dakota, was constructed in the 1920s, and the drain-waste-vent piping was cast iron. As the pipe was over 90 years old, its service life was nearing its end.

**Solution:** The **Quik Coating System** process from **Pipe Lining Supply** uses a coating of a modified polyurea product that is applied to the pipe in place and addresses the ties without reinstating them, giving the contractor, Coreline of Mitchell, the ability to line pipes that could be lined and coat piping that wasn't a great candidate for lining. The process also allowed diameter changes to be coated from an entry point as well as direction changes without special tooling.

**Result:** The process was up to the challenge to rehabilitate the drain waste and vent that had multiple tie-in lines to the main plumbing stack. With a thorough descaling, the lines were coated using the process in short order. As an example, a 26-foot section of 4-inch pipe was coated with 1/8-inch thick material in a little over an hour total. 888-354-6464; [www.pipeliningupply.com](http://www.pipeliningupply.com).

## Plumber replaces polybutylene system with push-to-connect system



**Problem:** An Atlanta homeowner's existing plumbing system had polybutylene pipes, resulting in leaks and the potential for costly water damage. The homeowner wanted to proactively replace his entire supply plumbing system from meter to fixture, including a repipe of both the hot and cold supply lines.

**Solution:** The plumber, Clint McCannon of Cannon Plumbing, chose **Shark Bite's EvoPEX** system for the repiping job. EvoPEX is a PEX pipe push-to-connect system that eliminates the need to use special tools or crimping, enabling him to quickly and efficiently complete the repipe installation while minimizing disruptions. Since no bulky tools were needed, combined with the flexibility of the PEX pipe, it was easier to make connections in tight spaces, saving additional time and requiring less wall damage, which meant less cost to repair damaged walls. The green indicator on the EvoPEX fittings ensured that they were properly connected, providing peace of mind for the homeowner and significantly reducing the chance of future leaks and potential callbacks.


**Result:** Because the repipe was completed much faster than would have been possible using traditional plumbing methods, the homeowner was able to get back to his normal routine quickly. Likewise, McCannon could get to his next job sooner while feeling confident that he had performed a high-quality, leak-free installation. 877-700-4242; [www.sharkbite.com](http://www.sharkbite.com).

## Company installs condensing boiler hybrid system in new home



**Problem:** A longtime customer in Lancaster, Pennsylvania, brought plans to J & G Heating & Air Conditioning for their new home. They wanted comfort and efficiency, and tasked J & G Heating & Air Conditioning with designing and installing the system.

**Solution:** High-SEER air conditioners were used along with a boiler that would provide hot water to hydronic coils in the ductwork and radiant in-floor tubing. “We chose U.S. Boiler’s new Aspen firetube boiler,” says J & G Heating & Air Conditioning co-owner Jason Sweigart. “The Aspen offers phenomenal efficiency, a 10-1 turndown ratio, and the ability to pipe from the top or bottom of the unit. We use a lot of U.S. Boiler products because they’re made here in Lancaster, and we’ve had great results.” Equipped with Sage2.3 controls, the Aspen is easy to set up. It offers up to 96 percent AFUE and is available from 85 to 399 mBh. The home’s two hydro-air zones require water between 160 and 180 degrees F. The radiant loops need 110 degrees F in tiled areas and 120 degrees F where carpet is present. With wide operating temperatures, having a boiler with a 10-1 turn-down is an advantage.

**Result:** J & G Heating & Air Conditioning completed their portion of the project before deadline. The homeowners have been very impressed by the comfort level and the small gas bills. 717-397-4701; [www.usboiler.net](http://www.usboiler.net). 

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## INDUSTRY NEWS

### Navien expands staff with boiler product manager hire


John Kopf has joined Navien as a boiler product manager. He will be responsible for leading efforts to identify future product needs, assisting in development of new offerings, and building a product portfolio. Kopf has worked for several leading HVAC companies such as S.A. Armstrong, Weil-McLain and Johnson Controls.



### Knipex Tools wins multiple industry awards

Knipex Tools' Universal Grip Pliers won a 2017 Pro Tool Innovation Award in the Hand Tool category, while the Knipex Tools Ear Clamp Pliers won a PTEN Innovation Award and a People's Choice Award in the Hand Tool category. Now in its fourth year, the PTEN Innovation Awards are decided by a panel of judges representing tool professionals from across the United States.

### Bradley launches virtual restroom design tool

Bradley launched its online Virtual Design Tool that assists architects and designers in planning and visualizing restroom designs incorporating the company's hand-washing fixtures, partitions and accessory products. The tool features the selection of four types of restroom environments: corporate interiors, high traffic, institutional and hospitality. Designers are able to invent, or reinvent, restroom spaces from top to bottom with Bradley's products, with multiple color options for walls and flooring selections. 

## CALENDAR

**Feb. 12-14**

**Indoor Environment & Energy Expo (IE3) Show**, Gaylord National Harbor, Oxon Hill, Maryland. Visit [www.ie3show.com](http://www.ie3show.com).

**Feb. 21-24**

**Water & Wastewater Equipment, Treatment & Transport (WWETT) Show**, Indiana Convention Center, Indianapolis. Visit [www.wwettshow.com](http://www.wwettshow.com).

**Feb. 25-28**

**Union-Affiliated Contractors Unity Conference**, Reunion Club of Orlando, Orlando, Florida. Visit [www.phccweb.org](http://www.phccweb.org).

**March 3**

**Flow Expo 2018, Long Beach Convention Center**, Long Beach, California. Visit [www.flowexpousa.com](http://www.flowexpousa.com).

**March 18-22**

**Mechanical Contractors Association of America (MCAA)**, JW Marriott San Antonio Hill Country, San Antonio. Visit [www.mcaa.org](http://www.mcaa.org).

**March 23**

**Illinois Plumbing Heating Cooling Contractors Association EXPO & Education Day**, Drury Lane Conference Center, Oakbrook Terrace, Illinois. Visit [www.ilphcc.com](http://www.ilphcc.com).

**May 8-10**

**National Hardware Show**, Las Vegas Convention Center, Las Vegas. Visit [www.nationalhardwareshow.com](http://www.nationalhardwareshow.com). 



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## Product Spotlight

### A multipurpose leak sealer

By Craig Mandli

**W**hen a leak is discovered, the plumber has to act quickly. Not only must the leak be sealed quickly, the seal needs to be strong and permanent. There's where Plast-aid Multipurpose Repair Plastic can be a solution.

Plast-aid is a two-part plastic repair product with an abundance of potential applications, including plumbing. The product's chemical makeup allows it to bond to compatible plastics. It doesn't simply adhere to, but rather, bonds with compatible plastics on a molecular level, allowing it to essentially become one with the original components.

"Plumbers make up a large percentage of Plast-aid users," says Plast-aid product manager Patrick Martchink. "For over 20 years, Plast-aid has helped plumbers and do-it-yourself enthusiasts alike make repair projects more cost effective and time efficient."

Plast-aid forms a strong, waterproof, durable plastic in about 15 minutes. As it cures, it changes consistency to be used to cast, glue, fill, and form. While it chemically fuses to many plastics such as ABS, acrylic and PVC, and those that become sticky after testing with a drop of Plast-aid liquid, it will not bond to all plastics such as polyethylene or nylon. It mechanically bonds to rough surfaces such as wood, stone and concrete.

It can be colored and tooled, and it has a long shelf life. The kit includes a 4-ounce bottle of Plast-aid powder, a 2-ounce bottle of Plast-aid liquid, a mix stick, mix cup, and

instructions. To use, the plumber simply needs to pour a small amount of powder into the cup, and add the liquid component until the powder is saturated, then mix thoroughly. Artistic acrylic paint can be added to color match repairs.

"When mixed, the powder and liquid components of Plast-aid initially become very runny. Then as it cures, it begins to thicken like glue, putty, and clay and eventually hardens like a screwdriver handle," Martchink says. "The process only takes about 15 minutes and creates an air- and watertight seal to whichever compatible plastic it is bonded to."

Martchink says that new applications for the product continue to be found even more than 20 years after it was first introduced to the market. He feels that plumbers are the perfect fit, though. "With the versatility of Plast-aid, we feel like it should be a fixture in every plumber's toolbox," he says. **970-577-1000; www.plast-aid.com.**



### RIDGID SeeSnake CS12x digital recording monitor with Wi-Fi

RIDGID's SeeSnake CS12x digital recording monitor delivers a large screen for easy viewing, dual battery functionality for maximum run time and Wi-Fi connectivity for footage sharing. The monitor streams and records inspections to any iOS or Android mobile or tablet device with the free HQx Live companion app. It also can save images to a USB drive for post-inspection transfer.



A 12.1-inch, high-contrast display provides crisp, clear images for viewing of footage in daylight. **800-769-7743; www.ridgid.com.**

### SJE-Rhombus EZconnex Float Switch Connection System

The EZconnex quick-release Float Switch Connection System from SJE-Rhombus has a four-port manifold that easily connects one to four EZconnex float switches for level



control applications. Its color-coded wiring pairs and corresponding colored caps make for easy installation and maintenance. The system is rated for temporary submersion, and a dual-seal design protects against water ingress and corrosive gases. It is CSA certified and offers multiple manifold and float-switch cable lengths to suit a variety of applications. **888-342-5753; www.sjerhombus.com.**



### Channellock reversible jaw adjustable wrench

Channellock's reversible jaw adjustable wrench has angled teeth in the jaw to provide a tight grip on plumbing jobs. The chrome wrenches are available in 6-, 8-, 10- and 12-inch sizes. **800-724-3018; www.channellock.com.**

### Water Cannon Inc. - MWBE Easy Start Unloader Plumbing Kit

Water Cannon Inc. - MWBE's Easy Start Unloader Plumbing Kit ensures water goes where it should and keeps excess water inside the pressure washer. The preassembled unit includes a brass valve body with a stainless steel ball and seat. It adjusts from 100 up to 5,650 maximum psi and has an easy-to-adjust ergonomic handle that features a tamper-resistant setting. The kit has two inlet and bypass ports and a built-in easy-start feature so the pump can start without static back pressure. It must be mounted in a vertical position. **800-333-9274; www.watercannon.com.**



### Brasscraft Plumbshop copper push connect fittings

Brasscraft has expanded its Plumbshop line of products with its copper push connect fittings.

The fittings can be used with CPVC, PEX and PE-RT. Installation is easy with no tools, soldering or gluing required. They are formed from copper and have a smooth finish. **877-272-7755; www.brasscraft.com.**

### Bradley Terreon Deep Well Lavatory

The Z8000-2011 compliant Terreon Deep Well Lavatory from Bradley is designed to minimize splashing and aerosolization from the drain trap in hand-hygiene sinks. Ideal for health



care and sanitation applications, the lavatory utilizes a molded, single-piece design featuring integral extra-height splashes to help contain water, minimizing slips, falls and messes. The sink features a design that channels water away from users standing in front of the bowl and toward the extra-height side splash. This helps contain water and bacteria inside the sink and reduces splashing outside of the bowl. It can be equipped with factory-supplied drillings or deck-mounted faucets. **800-272-3539; www.bradleycorp.com.**

### Bosch Thermotechnology Buderus SSB Industrial Boilers

Buderus SSB Industrial Boilers from Bosch Thermotechnology are available in 798 and 1,024 mBh stand-alone units or a 1,024 mBh cascading unit designed to meet demands up to 4,096 mBh, making it ideal for applications such as schools, hotels, office buildings and warehouses. The single-platform design allows for easy installation and startup. The unit features flanged supply and return connections on both sides and a compact footprint, allowing for flexibility in the installation location. Designed for both space heating and domestic hot water, the boiler works with multiple building communication options, including Modbus, BACnet and LonWorks. Standard features include an onboard control with a 7-inch external touch-screen display, system monitoring, outdoor reset and domestic hot water priority. **800-283-3787; www.boschheatingandcooling.com.**



### Taco Comfort Solutions eLink

The eLink from Taco Comfort Solutions is a wireless connectivity platform that provides production information direct to a mobile device or laptop. It uses Near Field Communications technology to get information on Taco Comfort Solutions products and no setup is required. The power of a portable device energizes the NFC tag, eliminating the need for wires or batteries. Each tag provides access to support and vital information specific to Taco Comfort Solutions products, including instruction sheets, replacement parts, CAD drawings, order information, product specs, technical support, catalogs and sales representative information. **401-942-8000; www.tacomfort.com.**



### Novanni Stainless Cristadur sinks

Cristadur granite sinks from Novanni Stainless are fabricated from ultrafine structured material, making for ease of care and a dirt repellent effect. Filth that could be a breeding ground for bacteria finds it difficult to stick to the material's surface. The sink's silky, smooth finish is soft to the touch while offering maximum resistance to dirt and scratches. Cristadur sinks are also antibacterial, easy to clean, UV-stable, food-safe, stain-resistant, as well as extremely tough and impact-resistant thanks to a very high quartz content. **800-661-1795; www.novanni.ca.**



### Presscision PPT pressure test instrument

The Presscision PPT test instrument is a digital test platform for regulatory pressure and temperature testing. Applications include fuel gas lines, drain waste vents, water supply lines, medical gas installations and fire suppression systems. It provides test automation to eliminate human error and subjectivity from the test process, accurate pressure and temperature measurement using certified sensors, permanent recording of comprehensive test data records, and hard-copy test reports generated at the completion of each test. **774-521-9132; www.presscision.com.**



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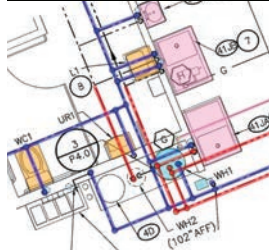
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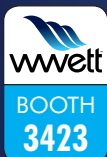


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