

Cleaner

FOR DRAIN AND PIPE CLEANING,
INSPECTION AND REHABILITATION
PROFESSIONALS

TOUGH
JOB
/ 48

A NATURAL PROGRESSION

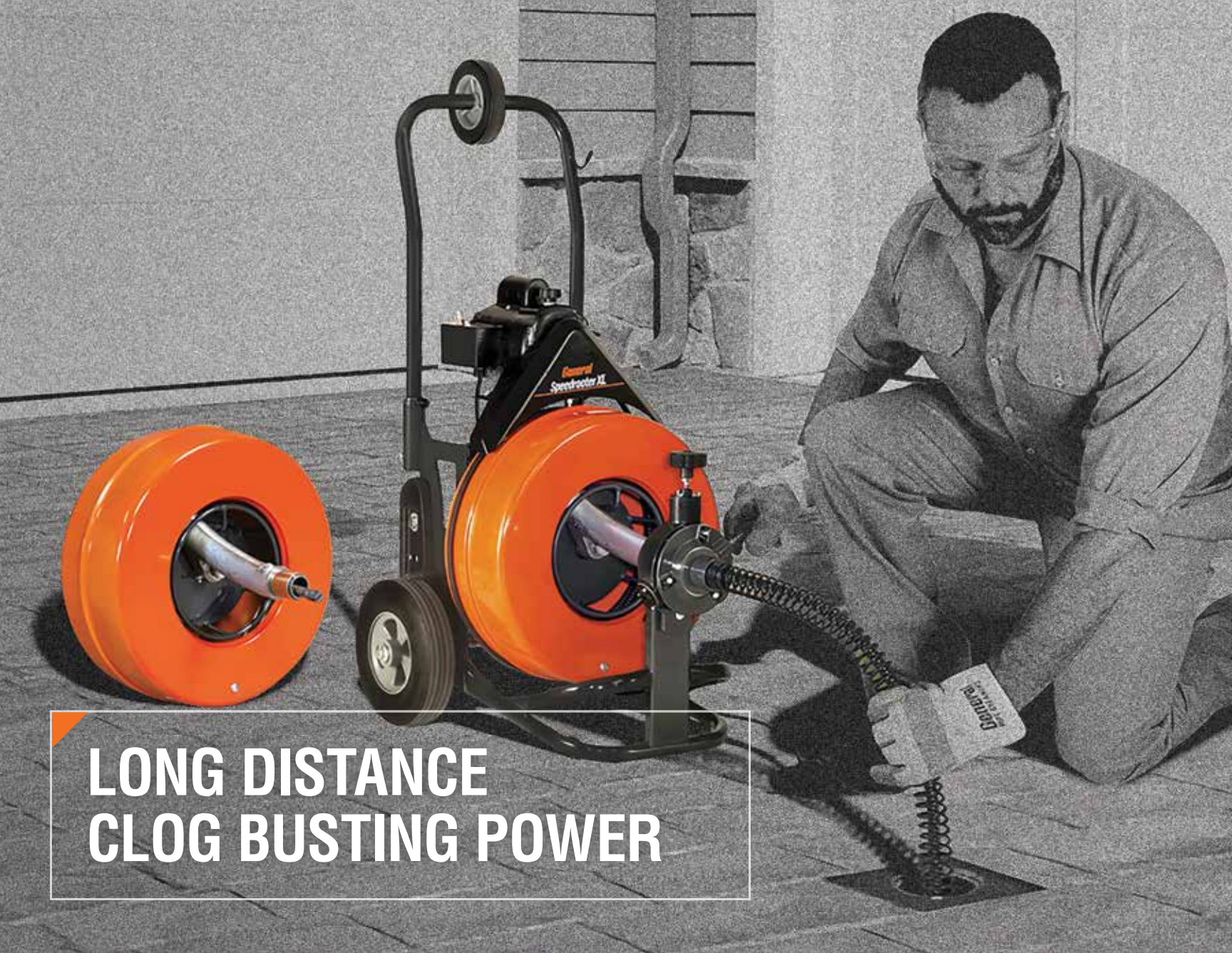
OVER FOUR DECADES, KENTUCKY'S TOM DREXLER PLUMBING HAS EVOLVED FROM A ONE-MAN, ONE-TRUCK PLUMBING SHOP INTO A DIVERSIFIED TRADES SERVICE PROVIDER OPERATING IN MULTIPLE STATES WITH 225 TRUCKS HITTING THE ROAD DAILY / 22

WHEN OPPORTUNITY KNOCKS
BULLDOG CONTRACTORS RESPONDS TO VARIED
CUSTOMER NEEDS IN RURAL TEXAS / 12

PRODUCT FOCUS

BUSINESS DIVERSIFICATION -
SEPTIC PUMPING, PLUMBING / 52





LONG DISTANCE CLOG BUSTING POWER

Speedroooter XL®

With easily interchangeable drums, the Speedroooter XL® gives you long distance clog-busting power in 3" to 10" lines—up to 200 feet. The rugged Speedroooter XL features a powerful 3/4 hp motor to drive the cable down long runs and clear tough stoppages.

The adjustable height, swept back handle and stair climbers provide for easy maneuverability and loading into your truck.

For more information:
Call the Drain Brains® at 800-245-6200,
or visit www.drainbrain.com/XL



MADE IN U.S.A. © 2023 General Wire Spring

General
The toughest tools down the line.™ **PIPE CLEANERS**

“WE’VE GROWN EXPONENTIALLY BY ADDING PIPE LINING TO OUR TOOLBOX.”

PROfile NuFlow Certified Contractor

According to Christian and Lindsey Rushing of Peerless Plumbing/NuDrain Phoenix, “Pipe lining not only saves people’s homes, but it saves them money and their sanity.”

“We grew our revenue during a downturn in the economy. Pipe lining and sewer repair are always needed.”

As a NuFlow Certified Contractor, they take advantage of trainings for their team.

“We send all our technicians to on-site training. They gain an in-depth understanding and they always come back with new tips and tricks to share with the rest of the team.”

NuFlow’s ongoing support has also been a valuable resource for their company.

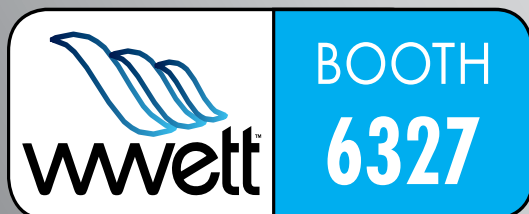
“Honestly, their support is the most valuable resource for us... I’m not just saying that. NuFlow is always there to help us.”

Lindsey highly recommends adding pipe lining with NuFlow Technologies to your list of services.

“100% do it and don’t look back!”

Christian and Lindsey Rushing,
Peerless Plumbing, Phoenix, AZ

SEE WHAT SETS NUFLOW APART.



LIVE DEMOS: Full System Rehabilitation,
Pull in Place Installation, & UV Lining
NEW PRODUCTS & EQUIPMENT

nuflow
WE FIX PIPES

www.nuflow.com
866-430-2134

CONTENTS

DECEMBER 2023

22 COVER STORY: A NATURAL PROGRESSION

Over four decades, Kentucky's Tom Drexler Plumbing has evolved from a one-man, one-truck plumbing shop into a diversified trades service provider operating in multiple states with 225 trucks hitting the road daily. // By Ken Wysocky

FEATURES

12 PROFILE: WHEN OPPORTUNITY KNOCKS

Bulldog Contractors hasn't shied away from shifting gears over the years, responding to whatever customer needs arise in its rural Texas service area. // By Ken Wysocky

DEPARTMENTS

8 FROM THE EDITOR: TIME FOR SOME REFLECTION

As we prepare to close the book on 2023, take a step back to look at your business' big picture and determine if any changes — small or large — are in store. // By Kyle Rogers

10 @CLEANER.COM

Be sure to check out our exclusive online content.

30 BETTER BUSINESS: LASTING LESSONS

Explore these three root causes why training doesn't stick with your crew and make some changes. // By Kate Zabriskie

34 DIVERSIFICATION: SEPTIC SMARTS

Talk to customers about the best type of water softener to use and how the discharge should be handled to protect their septic systems. // By Sara Heger

40 MONEY MACHINES: ONE BIG RIG

Challenging jobs don't faze this super-sized vac truck that's built to last. // By Ken Wysocky

44 DIVERSIFICATION: KOI POND PLUMBING

Designing and plumbing a koi pond requires careful thought and planning from both plumber and owner. // By James Careless

48 TOUGH JOB: OUT TO SEA

Florida's Earth View takes a directional drilling job with a wet exit to install seawater intake lines for a nature center's sea turtle habitat. // By Kyle Rogers

52 PRODUCT FOCUS: BUSINESS DIVERSIFICATION — SEPTIC PUMPING, PLUMBING

By Craig Mandli

64 INDUSTRY NEWS

66 PRODUCT NEWS

Spotlight: Steerable camera nozzle enables cleaning and inspection in one run. // By Craig Mandli



ON THE COVER // Tom Drexler Plumbing, Air & Electric in Louisville, Kentucky, started — as so many have — as a one-man shop. Over four decades, it has grown tremendously and today has over 300 employees. A key part of maintaining that level of staffing has been developing its own training school, Drexler Academy, which the company launched a few years ago. It is advertised as a no-tuition, earn-while-you-learn trade school. And it's been successful at creating a recruiting pipeline for the company. "Half of our licensed plumbers have come from Drexler Academy. We wouldn't even be close to where we are today in our staffing without the academy," says Terry Henson, company president. (Photography by AJ Mast)



coming next month: January 2024
focus: Manhole Inspection and Rehabilitation

Profile: Denver's High 5 Plumbing // Safety First: Working in cold, confined spaces // Tech Perspective: More efficient jetting power

THE BEST EQUIPMENT CHOICE FOR DRAIN CLEANING PROFESSIONALS

WHY SETTLE FOR 18GPM
WHEN YOU CAN GET **20 GPM?**

POWERED BY
YANMAR



**HOT WATER OPTION
AVAILABLE!**

COLD WATER TURBO DIESEL JETTER

59HP TURBO DIESEL
20GPM @ 4,000 PSI
SINGLE OR TANDEM AXLE
BEST PUMP! BEST ENGINE!
BEST WARRANTY!

MORE INFO



SHOW SPECIAL **\$69,995.00**
PLUS TAX & FREIGHT

The **NEW** HotJet USA 2040 Turbo Diesel Jetter offers over 10% more power than regular 18GPM units. The units are Tier 4 Compliant and are super fuel efficient. Yanmar engines are water cooled for maximum efficiency. These units may be mounted on 5'x12' to 5'x16' decks with a choice of single or tandem axle. They will clean up to 24" drain lines.

THE BIG TRUCKS GIVING
YOU STICKER SHOCK?

FOUR MACHINES IN ONE

VAC 'N JET

JETTER :: 10GPM @ 4,000 PSI
HYDRO-EXCAVATOR
VACUUM
POWER WASHER

MORE INFO



SHOW SPECIAL **\$129,995.00**
PLUS TAX & FREIGHT



JETTER / VACUUM COMBO

The HotJet USA Vac'n Jet Series of Vacuum Trailer Jetters are rugged, compact and specially engineered to haul the equipment, spoils load and to clean valve boxes, storm drains, hydro-x and/or clean drain/sewer lines. HotJet USA Vac'n Jet Trailers are equipped with premium tri-plex pumps, 500 gallon spoils tank, Gardner/Denver Vacuum, 4 ton hydraulic dump and features a dual filter centri-clean filter system.



























CALL FOR MORE INFORMATION:
1.800.624.8186
WWW.HOTJETUSA.COM




COME SEE US
AT THE SHOW!



ADVERTISER INDEX

 NORTH AMERICA When Quality Matters	
A.R. North America, Inc.....	47
ALLAN J. COLEMAN SINCE 1984	
Allan J. Coleman Co.....	33, 55
American Jetter	67
	
Apex CIPP Solutions	19
Arctic Blaster, Inc.....	67
BLACKHAWK	
Blackhawk Tech.....	64
BRAWO SYSTEMS GmbH.....	11
	
Cam Spray.....	43
	
Central Oklahoma Winnelson.....	65
	
Coast Manufacturing.....	38
Cua Claws for Resurfacing	
Camera Wheels	67
	
CUES, Inc.	29
	
Duracable Manufacturing Co....	35
Dynamic Repairs	67
	
Easy-Kleen Pressure Systems Ltd.	67
	
EPL Solutions, Inc.	57
	
Forbest Products Co.....	61
	
GapVax, Inc.....	71
	
General Pipe Cleaners, div. of General Wire Spring.....	2

	
HotJet USA.....	5, 67
Hurco Technologies, Inc.....	43
	
IPP Solutions, LLC	9
	
Ken-Way Corporation.....	46
	
Lansas Mfg. by Vanderlans & Sons Inc....	26 & 27
Masterliner Incorporated.....	15
	
MaxLiner.....	17
	
Milwaukee Rubber Products, Inc.	42
Milwaukee Tool.....	39
My 50/50 Rule.....	8
Nexstar Network, Inc.....	31
	
NuFlow Technologies.....	3
	
Pearpoint (USA)	36
	
Picote Solutions.....	32
Pipeline Renewal Technologies.....	25
Pro-Built Tools, Inc.	7
ProCom Headsets.....	41
	
Ratech Electronics, Ltd.	41
	
Roddie Inc.....	47
	
Root Rat.....	32
	
RootX.....	18

	
SPARTAN TOOL	
Spartan Tool LLC.....	72
	
T&T Tools, Inc.....	65, 67
	
The Cable Center	21, 63

	
TROJAN WORLDWIDE INC.	
Trojan Worldwide Inc.....	59
TruGrit Traction Inc.....	67
Vactor Manufacturing.....	37
	
Vivax-Metrotech Corp.....	45
Western Drain Supply	28
WWETT Show.....	20, 51, 70
Classifieds	68-69

Cleaner

FOR DRAIN AND PIPE CLEANING, INSPECTION AND REHABILITATION PROFESSIONALS

Published monthly by COLE Publishing, Inc.
PO Box 220, Three Lakes, WI 54562

In U.S. or Canada call toll-free 800-257-7222
Mon- Fri., 7:30 a.m.-5 p.m. CST

Website: www.cleaner.com | Email: info@cleaner.com | Fax: 715-350-8456

SUBSCRIPTION INFORMATION: A one year (12 issue) subscription to *Cleaner* in the United States or Canada is free to qualified subscribers. A qualified subscriber is any individual or company in the United States or Canada that is involved in the inspection, cleaning, repair and installation of residential and commercial sewer lines. Non-qualified subscriptions are available at a cost of \$60 per year in the United States and Canada/Mexico. Subscriptions to all other foreign countries cost \$80 per year. To qualify, visit www.cleaner.com/order/subscription or call 800-257-7222.

Our subscriber list is occasionally made available to carefully selected companies whose products or services may be of interest to you. Your privacy is important to us. If you prefer not to be a part of these lists, please contact Holly at holly.gensler@colepublishing.com.

CLASSIFIED ADVERTISING: Submit classified ads online at www.cleaner.com/classifieds/place_ad. RATE: No Photo Classified \$25 for 20 words, each additional word \$1. All classified advertising must be PAID IN ADVANCE. DEADLINE: Classifieds must be received by the first of the month for insertion in the next month's edition. PHONE-IN ADS ARE NOT ACCEPTED. Ads may be faxed only when charging to MasterCard, VISA, Amex or Discover. Please supply all credit card information with faxed ads. Be sure to include your phone number (with area code) in your ad. Make checks payable to COLE Publishing Inc. and mail with classified ad to the address above. CLASSIFIED ADVERTISING APPEARS NATIONWIDE AND ON THE INTERNET. Not responsible for errors beyond first insertion.

DISPLAY ADVERTISING: Contact one of our sales staff at 800-994-7990. Publisher reserves the right to reject advertising which in its opinion is misleading, unfair or incompatible with the character of the publication.

DIGITAL REPRINTS AND BACK ISSUES: Visit www.cleaner.com for digital reprint options and pricing. To order back issues, call Holly at 800-257-7222 or email holly.gensler@colepublishing.com.

CONTROLLED CIRCULATION: 21,500 per month. This figure includes both U.S. and international distribution.

© 2023 COLE PUBLISHING INC.

No part may be reproduced without permission of the publisher.



KAYLA BISNETTE

JIM KOSHUTA

cleaner.com



Pro-Built Tools

4002 W MILLER RD STE 100 GARLAND, TX 75041

We Manufacture, Sell, and Distribute Sewer Cameras Across the Globe.

SEWER CAMERAS

A Variety of Models to Choose From

WIFI PB2000ES SERIES

100' - 150'



STARTING AT \$1999

SEWER CAMERA JETTER PACKAGE



2 Sewer Cameras - 1 Control Box - 1 Jetter - 1 Locator
STARTING AT \$8999

PB2000 ULTRA ELITE SERIES

100' - 150'



STARTING AT \$2699

MYCRO ULTRA ELITE SERIES

100' - 150'



STARTING AT \$3148

PB2400ES SERIES

200' - 275'



STARTING AT \$1979

PB3600ES SERIES

300' - 500'



STARTING AT \$3479

Pro-Built Tools is a **FULL** Service Center. We Work On **ALL** Brands, and Offer **FREE** Diagnosis.

ALL SEWER CAMERAS HAVE A 5 YEAR WARRANTY | WE OFFER FLEET PRICING DISCOUNTS

OTHER SEWER PRODUCTS

We carry a large line of Hydro Jetters, Drain Machines, Locating Equipment, Nozzles, Hoses, Drain Cables & Leak Detection



EXPEDITED SHIPPING AVAILABLE

CALL FOR DETAILS (214) 503-0402

www.probuilttools.com



Email me with comments, questions or opinions at editor@cleaner.com

TIME FOR SOME REFLECTION

As we prepare to close the book on 2023, take a step back to look at your business' big picture and determine if any changes — small or large — are in store

WE'RE IN THE FINAL MONTH of the calendar year. You can probably guess where this is going. What lies in wait for you in 2024?

If it's been some time since you did a thorough audit of where your business stands in relation to your goals, now is as good a time as any to step back and take a look at your big picture. It can be easy to get trapped in the groove of your daily operations for long stretches of time, with little consideration of whether you're actually on the correct path for achieving long-term plans.

Is everything on track? Or are some tweaks warranted? Or maybe the business goals you initially had have completely shifted?

Think about those questions as you read this month's issue. December's editorial theme is diversification, so naturally we've profiled a couple of companies that aren't shy about making changes to service offerings or operations as necessary to meet their objectives.

Take Bulldog Contractors out of Jefferson, Texas. It started in 1978 as a home building and remodeling contractor. Today the company handles plumbing, drain cleaning, septic pumping, septic system repair and installation, and electrical work. It's a result of the company continually assessing how to meet two main goals — provide a high level of customer service and work efficiently. Like the company's decision to expand into septic service in 2004. Septic systems are common in Bulldog's rural area and the company found that when customers called with plumbing issues, the odds were about 50/50 that the problem was actually a septic issue, says Jeff Keller, Bulldog's general manager.

"We started pumping and repairing septic systems to better serve our customers and add another service feather to our hat," he says. "Plus it made us more efficient than having to rely on a subcontractor to come out for a septic system problem."

Or consider the company's decision several years ago to stop offering free estimates. Bulldog charges anywhere from \$95 to \$125 for service calls, depending on the person's location. But the charge then gets waived if Bulldog ends up getting hired for the work. Keller took a step back and realized that the free estimate policy was producing a lot of wasted time. A small operational tweak that has since produced big dividends.

"It's one of the best things I ever did," Keller says. "What it does is pre-qualify customers to make sure they're serious. There are too many tire-kickers out there. There were days when I'd literally drive around all day long, doing estimates and not get a single job. You end up wasting so much time dealing with bottom-feeders who only are concerned about the price. You have to value your time."

So take a little time as the year comes to close and think about where you are versus where you want to be and assess whether the things you're doing are helping you get there.

Enjoy this month's issue and the rest of the year. See you in 2024. **c**

**MY
50/50
Rule**

*How I Built Two Successful
Service Businesses That
I Later Sold To Wall Street*

RICHARD BASSOFF

BookBaby

**Don't miss out!
Get your copy on Amazon today!**

Shorten the relining process & save time and money

We have the right tools needed for a successful relining project

- Descalers
- Inspection cameras
- Knocker chains
- Flexible steel shafts
- Spot repair kits



PipeCaster™ Pro

SIPP (Sprayed-in-Place-Pipelining)
Injection casting system for pipe rehabilitation

SCAN QR CODE
TO LEARN MORE

- Cost-Effective
- Plug and play
- No Reinstatement
- Resin cures within minutes
- Ready to ship today



📍 Colorado

P.O. Box 4160
Gypsum, CO 81637

📍 California

5192 Bolsa Avenue, Ste 5
Huntington Beach, CA 92649

- 📞 714-410-0707 ext. 1
- ✉ info@ippsolutions.com
- 🌐 www.ippsolutions.com



@Cleaner.com

Visit the site daily for new, exclusive content. Read our blogs, find resources and get the most out of *Cleaner* magazine.

OVERHEARD ONLINE

“The best workers look for great companies to work for, not just a paycheck. ... Before you even start to hire, you might want to look at your business and leadership and ask if it would qualify as a business that A-players on a dream team would want to be part of.”

— 3 Things to Master if You're Looking to Grow Your Business

>> cleaner.com/featured



EXTRA, EXTRA

Bonus Coverage of October's Profiled Contractors

Check out these extra online-only articles about the two companies featured recently in the October issue, New York's Dr. Rooter and California's Hansen's Plumbing. Read about Dr. Rooter owner Dave Ferrier recalling one of the worst drain cleaning jobs he's ever faced, as well as Hansen's Plumbing owner Cary Hansen highlighting one of his company's most valuable tools. >> cleaner.com/featured



SAFETY SAVVY

Trench Rescue Training Facility Opens in Iowa

Realistic training for first responders is required to achieve successful trench rescues. That was the idea behind a new training facility that opened in October in Urbandale, Iowa, with support from the National Utility Contractors Association. Read more about it in this online exclusive. >> cleaner.com/featured

MONSTER CLOG

Excavator Needed to Clear Massive Root Infestation

A root cluster found in a sewer in South Australia provides a good showcase for the importance of staying on top of root control. Read more about what it took for crews from utility SA Water to remove the blockage. >> cleaner.com/featured



EMAILS AND ALERTS

Visit Cleaner.com and sign up for newsletters and alerts. Get exclusive content delivered right to your inbox and you'll stay in the loop on topics important to you!

JOIN THE DISCUSSION

 facebook.com/CleanerMag

 twitter.com/CleanerMagazine

BRAWO® SYSTEMS

THE REHABILITATION EXPERT FOR PROPERTY AND BUILDING DRAINAGE SYSTEMS

BRAWO® Magnavity SX smart • efficient • strong

NEW



**Innovative
light curing
system,
NRTL certified**

Specifically
developed for use
with BRAWOLINER® and
the vinyl ester resin
BRAWO® LR

WWETT 2024

January 24 – 27, Indianapolis
www.wwettshow.com



Meet us at the German pavilion!

LIVE DEMOS

BRAWO® Magnavity SX
at APEX CIPP Solutions
Booth 6340

Contact

Andrew Marshall

Sales Manager USA

+1-240-796-5007

andrew.marshall@brawosystems.com



BRAWO® SYSTEMS

- 25 years of experience
- The expert for all 4 curing methods



AMBIENT TEMPERATURE

STEAM
LIGHT
HOT WATER



brawosystems-usa.com

Learn more about
BRAWO® SYSTEMS
through our tutorials.

E-mail: contact.usa@brawosystems.com

WHEN OPPORTUNITY KNOCKS

BULLDOG CONTRACTORS HASN'T SHIED AWAY FROM SHIFTING GEARS OVER THE YEARS, RESPONDING TO WHATEVER CUSTOMER NEEDS ARISE IN ITS RURAL TEXAS SERVICE AREA // By Ken Wysocky



« Jeff Keller, general manager of Bulldog Contractors started by his father in 1978, alongside one of the company's employees, Nathan Harrah.

ADAPTING TO CHANGING BUSINESS CONDITIONS IS NOTHING NEW TO BULLDOG CONTRACTORS, A COMPANY IN JEFFERSON, TEXAS, THAT'S BEEN AS TENACIOUS AS THE DOG BREED AFTER WHICH IT'S NAMED.

The business started out 45 years ago as a home building and remodeling contractor, then morphed into a plumbing and drain cleaning company in the early 2000s. Soon after that, the company expanded into septic tank pumping and septic system repairs and installations, then went on to add electrical contracting to its repertoire.

Part of this evolution of services stemmed from the company's remote location in northeast Texas, near the state's border with Louisiana, explains Jeff Keller, general manager for the business, established by his father, Carl, in 1978.

"We provide services to a very rural area, so you have to be diverse and be able to take care of a lot of things," says Keller, 35. "Customers love the one-stop shop aspect."

But the broad array of services also reflects the Kellers' ability to spot and capitalize on underserved market niches, as well as their willingness to make capital investments to serve those markets. It is also a testament to their desire to provide better customer service by avoiding reliance on subcontractors who aren't always available when needed.

The roster of services also opens the door to more business opportunities.



“When I’m in front of customers, I always tell them about all of our services,” Keller says. “When they find out we work in all these different trades, it often leads to other work. We might go to a customer’s home to pump out a septic tank, but maybe they also need a new water heater or new lighting installed. We can handle all kinds of issues in their homes.”

UNEXPECTED BUSINESS DETOUR

Keller’s father founded Bulldog Contractors in 1978. Like many other businesses in the area, the company is named after the local high school’s mascot.

“There are a lot of businesses around here with bulldog in the name,” Keller says.

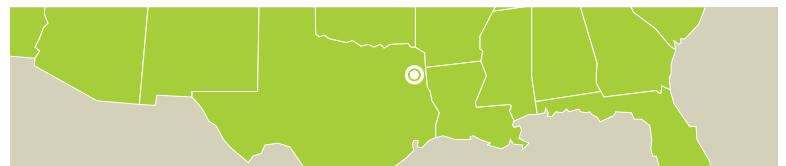
The shift toward plumbing occurred both randomly and unexpectedly when plumbers in a nearby town refused to do work on a remodeling project.

“They didn’t like out-of-town contractors, so they all blackballed my father and wouldn’t work for him,” Keller explains.

That put the elder Keller into full bulldog mode, refusing to back down.

“My dad got so fed up and irritated that he went out and got his own plumbing license,” Keller recalls. “And as it turns out, there’s a lot of money in plumbing. Looking back, it was a good thing we made the change because it led to what we are today. It was 100% a blessing in disguise.”

▲ Jeff Keller and Nathan Harrah inspect a drainline through a clean-out using a RIDGID SeeSnake pipeline inspection camera.



Bulldog Contractors

JEFFERSON, TEXAS

OWNER Carl Keller

FOUNDED 1978

EMPLOYEES 3

SERVICES Service and repair plumbing, drain cleaning, septic pumping, septic system repairs/installations, electrical work

SERVICE AREA 20-mile radius around Jefferson

WEBSITE www.builditlikebulldog.com



▲ Jeff Keller uses a RIDGID FlexShaft machine on a drainline.

» For plumbing and drain cleaning jobs, Bulldog Contractors owns a 2017 Chevrolet Express cutaway van with a 12-foot box body made by Supreme (a company owned by Wabash National) and storage and shelving units built by Hackney.

It also helped that there's only one other licensed plumber in Jefferson, Keller says.

LOGICAL EXTENSION OF SERVICES

The company expanded into septic services in 2004. The move made sense because septic systems are common in the rural area and when customers called with plumbing issues, the odds were about 50/50 that a septic system was the problem, Keller says.

"We started pumping and repairing septic systems to better serve our customers and add another service feather to our hat," he says. "Plus it made us more efficient than having to rely on a subcontractor to come out for a septic system problem."

Most of the time, the company sends out a plumbing service vehicle and a vacuum pump truck on service calls.

"Labor is expensive," Keller says. "So it's cheaper for me to run a second guy in a septic truck alongside me because many of our jobs are 17 to 20 miles away from the shop. It wastes too much

"WE PROVIDE SERVICES TO A VERY RURAL AREA, SO YOU HAVE TO BE DIVERSE AND BE ABLE TO TAKE CARE OF A LOT OF THINGS. CUSTOMERS LOVE THE ONE-STOP SHOP ASPECT."

JEFF KELLER



time to drive back and get a septic truck. It's all about efficiency."

To minimize startup costs, the company bought a used vacuum truck. The Kellers also opted to focus on septic system repairs and installations because the profit margins are better than for just pumping tanks.

"There's little money to be made in septic pumping," Keller says. "The money is in septic repairs and installations. So we dove in headfirst and obtained licenses for installs and repairs along with pumping. It made sense to offer everything, not just pumping."

In addition, pumping tanks often can lead to repairs or even installations if a system is failing, he says.

The business eventually added electrical contracting to its services because septic systems include pumps and controls powered by electricity. Once again, the Kellers decided they could better serve customers by not being tied down by the availability of electricians.

KEYS TO SUCCESS

Three keys to the company's success and longevity are prompt response times, reliability and communication with customers.

"A lot of our customers call us because other contractors don't return their phone calls or don't show up when they say they will," Keller says. "Without communication with customers, you have nothing. I can't tell you how many times I've gone on a service call and people say, 'Are you for real? You showed up when you said you would.' For us, that's the easy part, but I guess it's a difficult thing for a lot of contractors."

Keller also says flat-rate pricing, which the company started using several years ago, has enhanced customer service.

"Telling people the cost upfront puts their minds at ease because they're not sitting there watching the clock and wondering what the bill is going to be," he says. "Flat-rate pricing has been a game-changer for us and customers. We don't do a single job without upfront pricing."

NO FREE JOB ESTIMATES

To bolster profitability, the company doesn't offer free estimates. About 10 years ago, the company started charging \$95 for service calls in town and \$125 for out-of-town calls. The charge gets waived if customers hire Bulldog Contractors to do the work.

"It's one of the best things I ever did," Keller says. "What it does is prequalify customers to make sure they're serious. There are too many tire-kickers out there. There were days when I'd literally drive around all day long, doing estimates, and not get a single job. You end up wasting so much time dealing with bottom-feeders who only are concerned about the price. You have to value your time."

Isn't there some resistance from customers?

"Some do," Keller says. "But I don't want customers like that anyway. If they can't value my time, I can't value theirs. I want to deal with customers who want a job done and done right."

To enhance cash flow, the company also requires customers to pay when jobs are completed.



«Bulldog Contractors takes on a variety of work — service and repair plumbing, drain cleaning, septic pumping, septic system repairs/installations, and electrical work. "We provide services to a very rural area, so you have to be diverse and be able to take care of a lot of things," says Jeff Keller.

MASTERLINER

THE LEADING PROVIDER IN PIPE LINING PRODUCTS

- **Manufacturer of Liners from 3"-96"**
- **Wetout Facility Capable of Handling up to 72" Liners**
- **Polyester, Vinylester & Styrene-Free Resins**
- **5,000 foot Continuous Runs Available**
- **Over 30 Years in Business**

VISIT US AT



masterlinerusa masterliner

1-888-DIG-FREE
www.masterliner.com



INVOICING INNOVATIONS

The pandemic made things difficult for many companies. But for Bulldog Contractors, it also spurred a beneficial change in business operations: the adoption of digital invoicing.

“We went digital during COVID,” says Jeff Keller, general manager. “It seemed like everyone was scared of even touching a piece of paper.”

The solution? Invoice2go, an app-based service that makes it easy for contractors to create professional-looking estimates and invoices; enables fast and efficient online payments via credit cards, debit cards, bank-account transfers or PayPal; stores customer work histories; and tracks the status of invoices.

A subscription-based service, Invoice2go also integrates with QuickBooks accounting software from Intuit.

“I didn’t really want to go digital, but what a difference it makes,” Keller says. “It eliminates so many hassles.”

Keller says he uses the app to quickly create invoices on job sites, then send them to customers via text or email, along with a link they can download and use to pay with a credit card via their cellphones. That capability meshes well with the company’s policy of requiring payment upon job completion, he notes.

Moreover, the system is easy to use, he says.

“I didn’t want anything complicated and this fits the bill,” Keller says.

Gone are the days when technicians used credit card readers that had to be connected to cellphones, then required swiping customers’ credit cards and emailing them receipts.

“We don’t have to do any of that anymore,” he says. “It saves maybe five minutes on every job, but that adds up to a lot of hours during the course of a year.”

Invoice2go also helps the company create a nearly paperless system that improves efficiency.

“I don’t have to keep up with all kinds of paperwork and I don’t have to call the office anymore for customer information because it’s all stored in the app,” Keller says. “We have a separate folder for each customer, so their work histories are easy to find. Everything I need is right there in my hand.”

“It’s insane how much time it saves. If I would’ve known years ago what I know now, I would’ve done it much sooner. I guess sometimes we just don’t like change.”



Nathan Harrah and Jeff Keller use a RIDGID FlexShaft drain machine. The company also uses drain cleaning equipment from General Pipe Cleaners and Milwaukee Tool.

“I don’t have time to chase people down for money,” he says.

EQUIPPED TO WORK

As Bulldog Contractors grew, so did its roster of equipment. On the septic side of the business, the company relies on a 1996 International truck outfitted with a 1,650-gallon steel tank made by Lely Tank & Waste Solutions and a vacuum pump made by National Vacuum Equipment.

To do repairs and system installations (the company only installs a handful of new septic systems a year), as well as replace waterlines and sewer lines, the company also owns a JCB backhoe, a trencher made by Ditch

Witch and a 35-foot flatbed trailer made by McLendon Trailers.

For plumbing and drain cleaning, the company owns a 2017 Chevrolet Express cutaway van with a 12-foot box body made by Supreme (a company owned by Wabash National) and storage and shelving units built by Hackney. The company relies on power tools made by RIDGID and Milwaukee Tool.

For drain cleaning, the company invested in a cart-mounted JM-2900 water jetter (3,000 psi at 4 gpm) from General Pipe Cleaners; a RIDGID K-6200 drum machine (for 3- to 6-inch-diameter pipes); an M18 Drain Snake built by Milwaukee Tool; and a RIDGID FlexShaft drain machine.

“THE MONEY IS IN SEPTIC REPAIRS AND INSTALLATIONS. SO WE DOVE IN HEADFIRST AND OBTAINED LICENSES FOR INSTALLS AND REPAIRS ALONG WITH PUMPING. IT MADE SENSE TO OFFER EVERYTHING, NOT JUST PUMPING.”

JEFF KELLER

The company also relies on a RIDGID standard SeeSnake pipeline inspection camera, a SeeSnake microReel camera and a RIDGID SR-60 SeekTech pipeline locator.

LOOKING AHEAD

Keller doesn't anticipate much growth in the years ahead. More customers now are asking Bulldog to expand into heating and air conditioning work, but Keller says his small crew is too busy to consider such a move.

"If we ever would decide to expand into another trade service, HVAC would be it," he says. "But right now, we're not looking to grow. We're going to stay in our comfortable spot — it's a nice place to be."

As for Keller himself, who's never worked for anyone else except his father, he has no regrets about his career path. He'll eventually become the owner of Bulldog Contractors whenever his father decides to sell it.

"I absolutely love my job," he says. "I don't even look at it as a job."



▲ Nathan Harrah uses a RIDGID toilet auger.

INTRODUCING **GHOSTLINER™**

NOW YOU SEE IT...

THE LATERAL CIPP MARKET'S NEXT MAJOR INNOVATION

GhostLiner becomes transparent during wet-out, reducing UV cure times by up to 50%* while delivering superior physical properties:

- Faster and higher quality cure due to transparency once saturated
- Negotiates pipe bends up to 45 degrees

up to **1/2**
The Cure Time of Traditional CIPP Liners!

INSTALLING CONFIDENCE.



877.426.5948 | MAXLINERUSA.COM



*Results may vary, as cure time is dependent on equipment used and existing pipe conditions.



« Oftentimes one job for a customer leads to more jobs. "When I'm in front of customers, I always tell them about all of our services," Jeff Keller says. "When they find out we work in all these different trades, it often leads to other work.

"TELLING PEOPLE THE COST UPFRONT PUTS THEIR MINDS AT EASE BECAUSE THEY'RE NOT SITTING THERE WATCHING THE CLOCK AND WONDERING WHAT THE BILL IS GOING TO BE. FLAT-RATE PRICING HAS BEEN A GAME-CHANGER FOR US AND CUSTOMERS."

JEFF KELLER

"I'm also grateful for my father's wisdom and support. I look up to him so much. He built this business and provided me with a path to follow. Not many people can say they've worked an entire career in a family business and loved every minute of it. I'm very happy as well as humbled by what this business provides for me and our employees." c

ROOTX® GREASE-X®

GET THE F.R.O.G. OUT
[FATS. ROOTS. OIL. GREASE]

With both RootX® and Grease-X® in your toolkit, F.R.O.G. doesn't stand a chance.

From roots, to fats, oils and grease, RootX® has the products to help you keep municipal lines and laterals clear and flowing, guaranteed.

To purchase RootX®, or to learn more, visit www.RootX.com, or talk to your RootX® representative at 1-800-844-4974.

ROOTX
THE RIGHT SOLUTION. RIGHT NOW.

FEATURED EQUIPMENT

CLEARSTREAM WASTEWATER SYSTEMS, INC. 800-586-3656 www.clearstreamsystems.com	NATIONAL VACUUM EQUIPMENT, INC. 800-253-5500 www.natvac.com
DITCH WITCH 580-336-4402 www.ditchwitch.com	RIDGID 800-474-3443 www.ridgid.com
GENERAL PIPE CLEANERS, DIV. OF GENERAL WIRE SPRING 800-245-6200 www.drainbrain.com (See ad page 2)	ST ENGINEERING HACKNEY, INC. 800-763-0700 www.hackneyservice.com
INVOICE2GO invoice.2go.com	SUPREME CORPORATION 800-642-4889 www.supremecorp.com
JCB NORTH AMERICA 912-447-2000 www.jcb.com	
MILWAUKEE TOOL 800-729-3878 www.milwaukeeetool.com (See ad page 39)	



dancutter usa

PIPE REHAB ROBOTICS

DC SUPER FLEX ROBOTIC CUTTER 82' OR 164' LENGTH

- 360° ROTATION WITH PIVOT
- NAVIGATES BENDS
- ONE-PERSON OPERATION
- HD DISPLAY
- INTEGRATED CAMERA
- JOYSTICK CONTROLS
- PRECISION CUTTING
- FREE TRAINING



Most Advanced
Technology For 3"-6"



HPV HEADSET



ROBOTIC
CUTTING ARM

Unbeatable Navigation
& Reliability



Try the robotic cutters!

Live Cutting & Demos

Booth #6340

Show Specials!

24/7 Ordering
DANCUTTERUSA.COM

Legendary Service
855.997.0524

LIVE DEMOS! SHOW SPECIALS! LIVE DEMOS! SHOW SPECIALS!



Visit us!
Booth #6340



Jan 25-27
Indianapolis



Everything you need for small-diameter pipe rehab!

- Robotic Cutters
- UV Curing
- Lining Materials
- Resins & Rollers
- Spot Repairs
- Electro Fogger



- Drain Cleaning Machines
- Fitting Liners & Packers
- Inspection Cameras
- Inversion Drums/Sluices
- Air Dryers & Compressors
- Spray Systems



APEX CIPP

Get the Apex advantage!

941-300-0441
APEXCIPP.COM



THE PIPELINE TO MORE KNOWLEDGE IS HERE.

Ready to take your expertise in wastewater management to the next level? Join us at The WWETT Show, where knowledge meets innovation and career growth knows no bounds!

The WWETT Show Education Program is an accredited curriculum tailored to professionals at all stages of their careers. Our agenda offers CEUs (continuing education units) and professional development hours (PDHs), industry specific workshops and training courses, networking events and insightful general session classes for both newcomers and seasoned industry veterans.

Outside the classrooms, you have access to Expo Hall brimming with cutting-edge products and service providers, live demos, happy hour events, and our attendee-favorite Welcome Party.

Join us and thousands of professionals in Indianapolis for THE industry event of the year!

 **CONFERENCE: January 24-26**
EXPO HALL: January 25-27
Indiana Convention Center

Using promo code
EB45
When you register today
at wwettshow.com

THE CABLE CENTER • 1-800-257-7209



CALL FOR USED EQUIPMENT

\$665



MiniRooter Pro-Basic

No Cable, No Cutters. Call for complete kit availability.

\$1,000



JM-1000

No Hose, No Nozzles.
Call for complete kit availability.

Free Delivery

\$6,400



SL-GPW-E

200' Standard GenEye
WiFi Pod

Free Delivery

\$2,375



Speedroooter S92-Basic

No Cable, No Cutters.
Call for complete kit availability

WE HAVE COMPLETE USB, SD, X-POD, OR POD SYSTEMS IN STOCK

\$1,700



T-4 Basic

No Cable, No Cutters.
Call for complete kit availability

\$8,800



JM-3080

No Hose, No Nozzles
Call for complete kit availability

\$24,711



Kit

1/2" x 400' Hose
Nozzle Set



Photography by AJ Mast



“Tom Drexler, founder of Tom Drexler Plumbing, Air & Electric, and Terry Henson II, president, at company headquarters in Louisville, Kentucky.”

A NATURAL PROGRESSION

OVER FOUR DECADES, KENTUCKY'S TOM DREXLER PLUMBING HAS EVOLVED FROM A ONE-MAN, ONE-TRUCK PLUMBING SHOP INTO A DIVERSIFIED TRADES SERVICE PROVIDER OPERATING IN MULTIPLE STATES WITH 225 TRUCKS HITTING THE ROAD DAILY

// By Giles Lambertson

IN THE BEGINNING, TOM DREXLER PLUMBING, AIR & ELECTRIC WAS JUST TOM DREXLER PLUMBING. MORE TO THE POINT, IT WAS JUST TOM DREXLER.

Yet when 23-year-old Drexler decided in 1982 that his hometown of Louisville, Kentucky, needed another plumbing shop, he was building on a legacy for he was a fourth-generation master plumber. Even so, he was the first Drexler to hang his name on a company. Today, his eponymous company sits astride the industry in Louisville and all of Kentucky, with customers only needing to remember his name to have his number — Dial 1-Tom-Drexler.

With company growth nowhere near topping out, the Tom Drexler Plumbing legacy continues to build. The one-man, one-truck plumbing shop in the Highlands neighborhood of Louisville has grown into a multistate, multitrades service company with 225 service trucks rolling out each day.

When the company founder opened a branch location in Elizabethtown in fall of 2022 — and Frankfort a few months later

— he talked about “the company’s innovative vision for tomorrow’s value-added service. Navigating the complexity of home service installation, repair and replacement can be challenging and stressful to homeowners and we aim to be a helpful resource.”

A more succinct way to put it is, we are your one-stop shop. A plumbing outlet, yes, but it is, after all, Tom Drexler Plumbing, Air & Electric. And that list of services doesn’t even mention something the firm has offered for 30 years — bathroom remodeling.

“PEOPLE WOULD TELL OUR SERVICE TECHS WHEN THEY WERE WORKING ON A LEAKING FAUCET, ‘GEE, I WISH I COULD CHANGE THE COLOR OF A SINK OR UPGRADE A SHOWER.’ AND SO WE GOT INTO THAT.”

TERRY HENSON



📍 Tom Drexler team members, from left, Lauren Nielsen, Justin Price and Justin Jaco talk about a toilet valve assembly in the company’s training room. Half of the company’s licensed plumbers have come through Tom Drexler’s own training school, Drexler Academy.

Company President Terry Henson II says Tom Drexler Plumbing’s vision for what services to offer its customers developed organically. What he calls “a natural progression.”

ADDING SERVICES

After starting his company, Tom Drexler for years operated just as a plumbing services provider before getting into drain and sewer cleaning. Adding those services was a no-brainer as service calls then and now about clogged home sinks or toilets often turn into unclogging drainlines or sewer lines outside the home.

Drexler took it one step further, though, when he began to remodel bathrooms.

“People would tell our service techs when they were working on a leaking faucet, ‘Gee, I wish I could change the color of a sink or upgrade a shower.’ And so we got into that. We used to do tile work, but we use the acrylic wall systems now,” Henson says.

Today, the company has seven two-person remodeling crews upgrading bathrooms.



Tom Drexler Plumbing, Air & Electric

LOUISVILLE, KENTUCKY

OWNER Tom Drexler

FOUNDED 1982

EMPLOYEES 310 (86 in plumbing and drain cleaning)

SERVICES Residential plumbing services, drain cleaning, sewer line repair, residential bathroom remodeling, furnace and AC repair and replacement, and residential electric services

SERVICE AREA Six-county area surrounding Louisville, with branches in Elizabethtown and Frankfort

WEBSITE www.tomdrexlerplumbing.com

The next swerve into adjacent trades came about a decade ago when Drexler became involved in the best-practices business training and coaching association Nexstar Network.

“When Tom joined that, he was told that he really ought to offer HVAC services,” Henson says, “A year later, he did.”

Eventually, the erstwhile plumbing shop began to offer electrical service work. Explains Henson: “After we added HVAC, sometimes we had to add an electrical circuit or



» Tom Drexler addresses a class at the company's Drexler Academy. The company's basic plumbing training program can be completed in six months. Master plumber certification requires two more years.

» Tony Hommrich, plumbing service install manager, looks at the control panel of a boiler system in the company's training facility.



something for a heating or cooling unit and it progressed from there.”

Today, about 40% of Tom Drexler Plumbing, Air & Electric is plumbing and drains. HVAC work constitutes another 40%, with electricity service and bathroom remodeling each pulling in about 10% of revenue. Of 310 employees at Drexler, 45 are field service plumbers, 20 are installation plumbers, 12 are drain techs and 18 work on sewers.

And who is calling for all these services? “99% are residential customers,” Henson says. “We do a little light commercial, but even that is, say, an attorney’s office adding a shower or something. On the other hand, we do a lot of commercial HVAC work. We really go after that.”

Every plumbing shop has its go-to brands for tools, appliances and fixtures. Drexler plumbers use RIDGID cable machines and cameras and RYOBI (The Home Depot) and Milwaukee power tools. Kohler and American Standard fixtures and Delta faucets are stocked. Bradford White and Navien water heaters are preferred.

Though most service calls are related to leaking pipes and

faucets, water heater installations generate more service call revenue, according to Henson. “We love those water heaters.”

TRAINING THE NEXT GENERATION

Henson joined the company four years ago and today, as president, is mostly responsible for day-to-day operations. His background is in another home service trade, pest control. But despite Drexler’s affinity for service diversification, there are no impending plans to branch out into pest control, Henson says with a laugh. Confined

ON THE MOVE

Companies get bigger for a reason, or for several reasons. Growth doesn't just happen. If it is organic — as opposed to resulting from an acquisition or merger — the fundamentals must support it. Only increasing sales warrant expansion of a company's workforce or its footprint.

Tom Drexler Plumbing, Air & Electric is one such growing company. The leadership team of the Louisville, Kentucky, company has aggressively positioned it to take advantage of sales and customer satisfaction and push ahead toward new sales horizons.

"We are growing as fast as we can grow and having a good time while we're doing it," says Terry Hanson II, company president. "We want to be the biggest and best trade services provider in the Midwest. We already are that in Kentucky, the biggest player in the state."

Henson says the distinction of being the largest plumbing house in Kentucky was achieved about a decade ago. The company now has set its sights on Ohio. A few months ago, the company started operating in the Cincinnati market. Henson mentions the possibility of also opening locations in Indianapolis and Nashville.

Clearly, this is a company on the move. The impetus for the movement is the success Tom Drexler Plumbing, Air & Electric has experienced in Louisville. An indicator of that success is customer satisfaction, which can be measured partly in the number of Google five-star reviews given to the company — more than 11,000 to date.

"We have more five-star reviews than all the other companies in Louisville combined," Henson says.

now mostly to the office overseeing company growth and other administrative aspects, Henson says he can't often visit customers' homes and he misses it.

"I don't get out into the field as much as I used to. I love it out there," he says.

However, Henson does try to meet every morning with service crews who are headed out to the field.

"EVERY DAY OF THE WEEK, ONE OF THE GROUPS OF TRADESMEN HAS A MORNING MEETING AT 7 A.M. ... I TRY TO GET IN THERE EACH MORNING BECAUSE THAT'S WHERE YOU CAN GET THE PULSE OF THE BUSINESS."

TERRY HENSON

Trenchless, mechanical pipe repair and liner end seals

Quick-Lock

Seal live infiltration, cover abandoned lateral connections and add structural stability. NO RESIN NEEDED.

- Install with minimal manpower in under 30 minutes
- Can be lined through or removed
- For 4"-72" lines



**Pipeline
Renewal**
TECHNOLOGIES™

Complete training and support • Unmatched knowledge base

We Help You Fix Pipes www.PipelineRT.com • (866) 936-8476



lanzas[®] PRODUCTS
Manufactured by Vanderlans & Sons, Inc.



**"We Just Made The
BEST Test Plugs
Better!"**

« The management team at Tom Drexler Plumbing at company headquarters in Louisville, Kentucky. From left, Kaita Renwick, director of business development; Mike Wells, regional HVAC director; Heath Murray, Elizabethtown branch manager; Cody Webster, HVAC service assistant manager; Marvis Hall, director of customer service; Josh Toon, sales manager; Mike Fox, electric service manager; Tonya Bryant, warehouse supervisor; Justin Price, drains and camera manager; Lauren Nielsen, plumbing service manager; Tony Hommrich, plumbing service install manager; Rebecca Birchfield, install coordinator supervisor; Todd Ruxer, regional director of operations; Mike Birchfield, production manager; Scott Montgomery, electric service manager; Jason Frost, remodel install manager; Darren Batman, regional plumbing director; Mike Hall, HVAC service assistant manager; and Chris Hardin, HVAC install manager.

“Every day of the week, one of the groups of tradesmen has a morning meeting at 7 a.m. We do a lot of training there, celebrate good news, become more familiar with new equipment and review customer feedback. I try to get in there each morning because that’s where you can get the pulse of the business.”

While the morning training sessions are important, it is the company’s apprenticeship programs that are notable. Tom Drexler heard of a Columbus, Ohio, in-house apprenticeship school operated by another multitrade service company, ECO Plumbers-Electrician-HVAC Technicians. He drove there, talked with company executives and returned to Louisville ready to open his own center.

“We didn’t copy that program, but Tom’s visit catapulted us into the thinking behind it,” Henson says of the beginnings of what became Drexler Academy. The academy was a local response to the industry’s ongoing struggle to attract and retain capable young technicians. The company’s experience is typical for the industry.

“Our typical hiring routine at the time, about four years ago, was that we would look for a laborer, a warehouseman or someone, and hire him,” Henson says. “He would work for six months, become an apprentice and then try to get a license. We were struggling to get

applicants. We were overbooked for service calls and needed bodies.”

The company used a workforce program developed by Nexstar called NexTech. It offers teaching modules and videos for classroom learning. For example, to teach how to install water heaters, the academy instructor would use the training module in the classroom. Academy students then would practice the procedure in-house before finally going out on a service call for an actual water heater installation — with a licensed plumber standing by.

On the second floor of the company facility in Louisville, a classroom was created and a Drexler service manager and master plumber, P.J. Hardin, became the academy’s training manager. He built out a program that could be completed in six months. Master plumber certification requires two more years.

Henson says the company didn’t know what to expect when it publicly announced the creation of Drexler Academy. It advertised the program as a no-tuition, earn-while-you-learn trade school and hoped for the best. The best happened. “When we opened enrollment, the very first day we had 82 applicants,” Henson says.

Out of that first group, Tom Drexler Plumbing came away with 20 plumbers. Once a year — the fourth year of operation is

PIPE PLUGS & PIPELINE TESTING EQUIPMENT



NUCA
We Dig America



Lodi, California
800.452.4902 • 209.334.4115

www.lansas.com

LODI • ATLANTA • HOUSTON • CHICAGO

» Justin Price works on an HVAC unit at the company's training facility.

“HALF OF OUR LICENSED PLUMBERS HAVE COME FROM DREXLER ACADEMY. WE WOULDN'T EVEN BE CLOSE TO WHERE WE ARE TODAY IN OUR STAFFING WITHOUT THE ACADEMY.”

TERRY HENSON

coming to a close — the academy enrolls more plumbing applicants. Eight more graduated in the most recent class. “Half of our licensed plumbers have come from Drexler Academy. We wouldn't even be close to where we are today in our staffing without the academy.”

The company has managed to retain most of its plumbing graduates, though some have moved from residential plumbing to one of the other options. Six months after the inaugural class, an HVAC curriculum was offered. From all of the academy classes, about 80% of graduates are on the Drexler payroll.

The company's surrounding service area includes several counties across the Ohio River in Indiana. The cross-border character of the



service calls could have been a complication for the academy because of differing state regulations on certification of plumbers. However, Indiana and Kentucky reciprocate on honoring trade certificates, so academy graduates can work anywhere in the service area.

A CHANGED COMPANY

Tom Drexler Plumbing, Air & Electric headquarters is just a couple miles down the street in Louisville from where Tom Drexler first set up his shop. But it is a whole different company now than it was in 1982 — a fuller-service company, turning out its own trade techs, operating in three locations and two states.

Pretty much all that the startup company has in common with the present one is its namesake — Tom Drexler. **c**

Western Drain SUPPLY

THE PRO DRAIN CLEANER'S SOURCE FOR EQUIPMENT, SUPPLIES & REPAIRS

CERTIFIED RIDGID AND PICOTE REPAIR CENTER

WESTERNDRAIN.COM
DRAIN CLEANING MACHINES - CABLE - JETTERS
PIPE LINING - CAMERA INSPECTION - TOOLS
1140 N. KRAEMER PLACE | ANAHEIM, CA 92806
(714) 632-0447

FEATURED EQUIPMENT

AMERICAN STANDARD
800-442-1902
www.americanstandard-us.com

BRADFORD WHITE WATER HEATERS
800-523-2931
www.bradfordwhite.com

DELTA FAUCET CO.
800-345-3358
www.deltafaucet.com

THE HOME DEPOT
800-466-3337
www.homedepot.com

KOHLER CO.
920-457-4441
www.kohler.com

MILWAUKEE TOOL
800-729-3878
www.milwaukeetool.com
(See ad page 39)

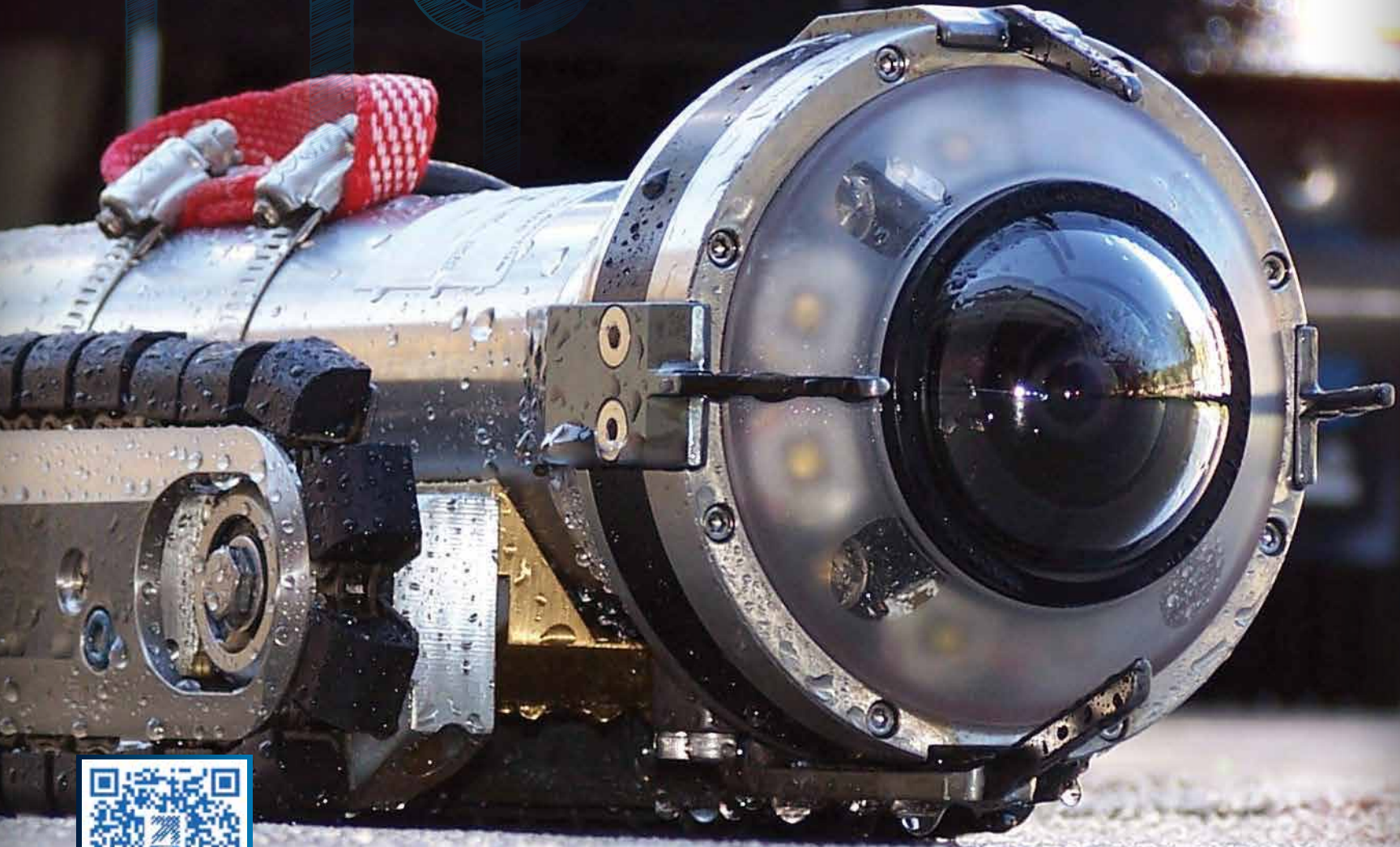
NAVIEN
800-519-8794
www.navieninc.com

NEXSTAR NETWORK
888-240-7827
www.nexstarnetwork.com
(See ad page 31)

RIDGID
800-474-3443
www.ridgid.com

SAVE MORE THAN 50% ON PIPELINE INSPECTION COSTS

GO THE DISTANCE with the CUES DUC Camera. Increase production and decrease costs! The CUES DUC is a high resolution digital CCTV side-scanning camera designed for rapid and detailed condition assessment of your wastewater or stormwater system.



Scan here to request a
FREE demo!





Kate Zabriskie

LASTING LESSONS

Explore these three root causes why training doesn't stick with your crew and make some changes // By Kate Zabriskie

EACH YEAR, BUSINESSES waste thousands of dollars on training that doesn't deliver expected results. Consequently, many company owners or managers determine that either training has no value to their employees, the training facilitators don't know what they're doing, the program designers are out of touch with reality, or all three.

If only the root causes of training failures were as simple as those. Even with willing learners, great content and strong facilitation, a host of problems could keep you from realizing strong returns on those training investments. If your training isn't delivering what you think it should, you may be suffering from one of three major problems that plague organizations large and small.

PROBLEM 1: TRAINING ISN'T PART OF A LARGER LEARNING ECOSYSTEM

Just because people participate in a workshop, it doesn't mean they will change their behavior back on the job. In fact, even if while in class they demonstrate an ability and willingness to do whatever is being taught, all may be lost once participants exit the classroom.

Why does this happen? Good workshops usually fail to deliver because they are treated as a training solution instead of a component of one. In other words, a workshop isn't the answer in itself; rather, it should be part of a larger apparatus or ecosystem.

SOLUTION

Creating a strong learning ecosystem is an ongoing and often complex endeavor. It takes time to build a holistic structure that supports continuous development. That said, start small. For example, ask yourself:

- Prior to training, do managers explain to workers why they will attend a course and how they are expected to use what's learned after the session?
- Will someone with authority in your company (other than the facilitator) launch the session by explaining how the workshop ties into the bigger picture?

- Are there check-in opportunities after training to ensure that participants are implementing new behaviors?
If you answer "no" to any of those basics, do what you need to do to shift those answers to "yes."

Next, think about the incentives you can put in place to encourage behavior change and the barriers you need to remove to encourage success, and the corrective action you will take if what's happening in the classroom isn't replicated on the job.

Once you start thinking holistically and view courses and workshops as a component of learning versus learning in its entirety, you will have taken the first step in getting the most out of your training dollars.

REGARDLESS OF LEVEL, EVERY EMPLOYEE SHOULD HAVE A DEVELOPMENT PLAN AND SOME LEARNING AND GROWTH GOALS THAT CONNECT TO THE BIG PICTURE AND ENHANCE THEIR SKILLS.

PROBLEM 2: CONTINUOUS LEARNING ISN'T PART OF THE CULTURE, AND TRAINING ISN'T TREATED AS A PRIORITY

You have great content, you have a skilled facilitator in place, and half the people scheduled to attend the course don't attend because training isn't a priority.

When training occupies a position of "nice to have" and not "need to have," getting the most from it becomes problematic. This most often happens when people are in survival mode instead of on a growth trajectory. In other words, they are scrambling to get through the work instead of thinking mindfully about the work they're completing and how they're completing it.

In practical terms, if people are always putting out fires and don't regularly ask "What have we learned?" and "How can we improve?," then why should they care about learning new skills?

ABOUT THE AUTHOR

Kate Zabriskie is president of Business Training Works Inc., a Maryland-based talent development firm. Reach her at www.businesstrainingworks.com

SOLUTION

Shifting from a reactive culture to one that is deliberate about its activities takes months or even years. However, it's not difficult to make big strides over time when you begin by asking the right questions up, down and across your workforce.

Start the improvement conversation at multiple levels and at different times. Frequently ask, "What have we learned?" "What do we need to do better next time?" "What do we wish we'd known earlier?" and other such questions after projects, meetings, presentations and so forth. In the rare instances when something goes perfectly, remember there are still questions to ask: "How can we replicate what we just did?" "Why did that work well?" "Is there any reason this approach won't work again in the future?" and so on.

When questioning becomes the norm, the solutions offered via training should have stronger importance and value. For example, if turnover is an issue, a learning organization wants to know why and may ask several questions: "Are we hiring the wrong people?" "Are we expecting too much?" "Is there something better for the same money somewhere else?" "Do our managers not manage well?" "Do

we need to provide people with better tools?" and so on.

Then, when learning and improvement are a priority, you'll hear such things as, "Today is a training day for me. I'll be unavailable until 4 p.m. If you have an emergency, please see my supervisor Melissa. The workshop I'm attending is of top importance and part of my effort to reduce the turnover."

Who can argue with that? The logic sounds right and ties into big-picture improvement goals.

To get larger returns from training, use questioning to drive improvement. The answers will help people connect the dots and understand why training is a priority and not just something they do because it's on the calendar.

PROBLEM 3: FEW ANNUAL DEVELOPMENT PLANS EXIST

The world doesn't stagnate, and your employees shouldn't either. If they're doing their work the same way they were five years ago, and nobody is encouraging or demanding change, why should they care about training or think you care about them?

#MEMBERS FIRST
M1

Be Great – Be Like Tom Drexler.

Hard work and dedication define your business. Just ask Tom Drexler of Tom Drexler Plumbing, Air & Electric. Four decades ago, he was a one-man, one-truck plumbing outfit. Fast forward to today, in 2023, and he's celebrated for building an enduring business, with a team that's all-in.

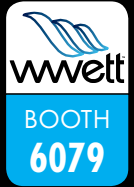
Join us on our mission to turn the world's best tradespeople into the world's best businesspeople.

Learn more at NexstarNetwork.com/contact

PICOTE XPRESS COATING SYSTEM

NEW SYSTEM FOR COATING 1 ¼ - 12" PIPES

- AS LITTLE AS ONE HOUR CURE TIME
- BATTERY OPERATED PUMP SYSTEM
- NEW SUPERIOR RESIN MIXED AT END OF DELIVERY HOSE
- REUSABLE HOSE ELIMINATES WASTE AND SETUP TIME
- USE IN CONJUNCTION WITH PICOTE MILLERS
- MAX RANGE OF 132 FEET
- NOW AVAILABLE TO ORDER!



NEW!



864-940-0088 | sales@picotesolutions.com

PICOTEGROUP.COM/RESELLERS

PICOTEINSTITUTE.COM

RAT OUT YOUR ROOT PROBLEMS



- Uniquely designed nozzles for big sewer line headaches – roots and encrustations in all sorts of pipe.
- Interchangeable heads: chain rotor or cable rotor.
- Simplified service means extra uptime.

¾", ½", 1" nozzles come in kit form.

Call 330.874.4300
to learn more about the nozzle you've been waiting for



www.rootrat.net

MADE IN THE USA



BETTER BUSINESS

SOLUTION

Regardless of level, every employee should have a development plan and some learning and growth goals that connect to the big picture and enhance their skills.

"I want to improve XYZ skill to drive ABC result, and 123 is how I plan to grow," is a quick and easy format to follow when setting development goals and three to five goals is a good number for most people.

Better still, if you can tie those goals to performance reviews, you'll be amazed at the interest people develop in improvement, training and implementing new skills.

As with the other two solutions, start small. If your company, for example, has no development plans, choose one area — such as service technicians — and pilot them.

ACT NOW

Whether you suffer from one, two or all three of the problems described, take action now. When thoughtful goals and development plans are put in place for workers, it is almost impossible not to realize a stronger return on your training dollars. **c**

ALLAN J. COLEMAN

SINCE 1905

Call us today!
 Chicago 773-728-2400
 Phoenix 602-638-0600

5725 N. Ravenswood Ave. • Chicago, IL 60660
 60035 40th St., Ste. #5 • Phoenix, AZ 85042

info@allanjcoleman.com • www.allanjcoleman.com

OLDEST NAME IN THE BUSINESS — OVER 115 YEARS OLD

RIDGID

CS6x)) **VERSA Digital Recording Monitor With Wi-Fi**



- A high and low monitor mounting position and pivoting frame lets users tilt the monitor to the desired angle for optimal viewing. The sunshade remains open in all situations for glare reduction
- 5.7" daylight viewable screen. TruSense™ compatible
- Docks to the Compact 2/C40/M40 camera reels for efficient transport, storage, and operation, and can be used mounted or unmounted
- Operates on one 18 V battery or AC power adapter
- Capture images and video directly to a USB drive
- Stream or Record to an iOS or Android phone or tablet



Digital Self-Leveling Mini Pro

- Digital self-leveling
- High dynamic range (HDR) offers bright, clear in-pipe imaging
- TiltSense displays the pitch in a pipe
- 25 mm camera head

CSx)) **VIA™ Wi-Fi Control Device**



- Compatible with all RIDGID SeeSnake reels when using the RIDGID SeeSnake Standard & Mini CSx Via Mount
- Reliable connectivity between CSx Via and mobile devices with the HQx Live app or HQ software for Windows
- Rapid communication by email, text or upload photos and videos to customers or colleagues in real time



FLEXSHAFT, K9-306

- 3" - 6" Pipes
- Includes: 125' of 3/8" cable and kit
- Faster setup and cleanup, quick cleaning

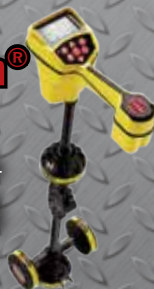
NaviTrack® Scout®

Scout is designed to solve demanding remote transmitter (sonde) locates using multi-directional locating technology.



SeekTech® SR-20

SeekTech uses omni-directional antennas, guidance arrows and an easy to read mapping display.



FLEXSHAFT, K9-204

- 2" - 4" Pipes
- Includes: 70' of 5/16" cable and kit
- Faster setup and cleanup, quick cleaning, and cordless convenience

FLEXSHAFT, K9-102

- 1 1/4" - 2" Pipes
- Includes: 50' of 1/4" cable and kit
- Faster setup and cleanup, quick cleaning, and cordless convenience for additional time savings

Pipe Patch Kits

Pipe Patch Kits enable quick and efficient trenchless point repairs with all required consumables and components packaged together for one-time use. Patch Kits make inventory management easier on your business while ensuring you have all components needed when showing up to a job. Fiberglass patch meets ASTM F1216 requirements and cured patches have a life expectancy of up to 50 years under normal conditions. RIDGID Pipe Patch Kits are designed for 2", 3", 3-4", and 4-6" Packers and at lengths for 32", 3', and 6' repairs.



We Have RIDGID Parts!

Authorized SeeSnake Repair Center

THE BEST SERVICE AND FAST TURN AROUND!

Buy Online at
AllanJColeman.com



If you buy the best, you are only sorry once!

SEPTIC SMARTS

Talk to customers about the best type of water softener to use and how the discharge should be handled to protect their septic systems // By Sara Heger

CHLORIDE LEVELS IN many surface waters are increasing and pose an emerging environmental concern, since elevated chloride levels are harmful to aquatic life in freshwater. Communities across the U.S. have observed surface waters with chloride water quality impairments, and chloride levels in groundwater are also increasing.

A major source of chloride is water softening, although depending on where you live road salt and fertilizers may be larger sources. In homes that have moderately to very hard water, many use water softeners. Water softeners remove hardness which causes scale buildup in pipes, appliances and water fixtures, and deposits on glassware. Ion-exchange water softeners use salt, usually sodium chloride, for recharging. In general, the less salt we are discharging to the environment the better, particularly if the discharge could reach fresh or groundwater.

FIRST QUESTION – IS A SOFTENER NEEDED?

Hardness less than 5-7 grains per gallon (gpg) typically does not need to be softened. With publicly supplied water, the water hardness can be obtained from the water utility or city. Some cities soften the water at the drinking water plant. If data is not available the water should be tested by a professional, or a property owner can buy a kit and test it themselves.

SECOND QUESTION – WHAT KIND OF SOFTENER?

There are two primary types of softeners — time or demand. Older/lower-cost softener regeneration cycles are time-clock

initiated, using electronic timers or clocks to recharge the resin at a preset time and day. This wastes salt and water because they regenerate whether or not it's necessary. Demand softeners use a more sophisticated method called demand-initiated regeneration where regeneration is based on the measured amount of water used. To reduce salt usage, high-efficiency softeners should be

» This is an example of the older technology, a timer-style water softener that uses electronic timers or clocks to recharge the resin at a preset time and day. This wastes salt and water because they regenerate whether or not it's necessary.



THE LESS SALT DISCHARGED FROM WATER SOFTENERS THE BETTER FOR THE ENVIRONMENT AND OUR SEPTIC SYSTEM. WE SHOULD ENCOURAGE PROPERTY OWNERS TO ONLY USE ONE WHEN AND WHERE THEY NEED IT.

IT'S NOT TOO MUCH TO ASK FOR



★ **RELIABLE** ★

DRAIN CLEANING MACHINES

DURACABLE DELIVERS

BUILT **USA** TOUGH



DM30



- 2" TO 6" LINES
- 1/2 HP MOTOR
- POWER CABLE
FEED & RETURN

DURACABLE.COM



DURACABLE
— MANUFACTURING CO. —

800-247-4081

DIVERSIFICATION



« This is an example of an on-demand water softener. With demand systems, if the homeowners are conservative in their water usage, they will use less water and therefore less salt.

used; include one or multiple features highlighted below:

- Efficiency rating of 4,000 grains/lb salt or higher
- Upflow or countercurrent regeneration
- Hardness sensors and water meters
- Variable reserve
- Regeneration with softened water
- Twin tanks

With demand systems, if the owners are conservative in their water usage they will use less water and therefore less salt. Also, not all water needs to be softened. Certainly water used outside the home should not be softened and some properties will only soften hot water or the water for specific appliances, such as water heaters or dishwashers. If the water in the home is high in iron content, it can clog the resin in the softener. A prefilter will

help cut down on salt usage. If the water supply has high chlorine due to being publicly supplied, a chlorine filter will also increase the efficiency of the softener.

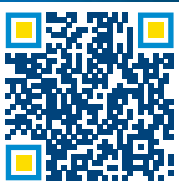
The high efficiency softener should be set for the actual hardness of the water and serviced at the recommended frequency, which will also minimize salt usage and ensure the system is set appropriately and performing. There are other options on the market to reduce hardness and/or minimize scaling, but data about their performance is not yet conclusive.

THIRD QUESTION – IS REGENERATION WATER BAD FOR SEPTIC SYSTEMS?

The amount of brine/regeneration water is typically 30 to 80 gallons per cycle, and in some homes it may only run once or twice

PEARPOINT 

SCAN TO LEARN MORE



flexiprobe™ P540 
PORTABLE VIDEO INSPECTION EQUIPMENT



Simple. Fast. Smart.

www.pearpoint.com

+800.688.8094

pearpoint.sales.us@spx.com



IntuiTouch 

Vactor 2100i Combination Sewer Cleaner

EASY DOES IT

intuitive. intelligent. innovative.

Your toughest sewer-cleaning jobs just got easier, faster and safer. The Vactor 2100i is an operator's dream, with **IntuiTouch**® in-cab controls for all operational systems and for the fully integrated front hose reel station. Industry-leading innovations and features include:

- **Modul-Flex**® design to customize your ideal machine
- **IntuiTouch**® controls for precision, comfort and safety
- Safety interlocks, non-destructive e-stops and boom alarms
- Convenient mid-ship water valve control station
- Pump and blower configurations for your exact needs
- Performance-driven options and upgrades available
- Backed by service excellence and the support of the industries strongest dealer network.

All this power, control and ease of operation is backed by our commitment to keep you up and running with operator training and Vactor's unmatched service and support.

VACTOR
2100i®



Visit [Vactor.com/2100i](https://www.vactor.com/2100i) to learn more.

DIVERSIFICATION

weekly. If the salt is kept to the minimum, the research to date is not conclusive whether problems will be caused. But as discussed, the less salt the better for the environment.

If the water softening system is not efficient or the unit is not operating properly, the amount of salt added to the system may be detrimental to microorganisms in the septic system. In these cases, the concerns include that the regeneration water may:

- Cause an increase in the amount of solid material staying suspended in the effluent of the septic tank. These solids may shorten the life of downstream components.
- Prevent the formation of scum layers (typically composed of fat, oil, grease and soaps) in septic tanks therefore causing more of these materials to travel to downstream components.
- Impact treatment in advanced treatment units such as media filters or aerobic treatment units. Many manufacturers do not allow the generation water to enter their units due to treatment concerns.

FOURTH QUESTION – WHERE SHOULD THE RECHARGE WATER GO?

In cities, the brine drains to the sanitary sewer where it travels to a wastewater treatment plant. Unfortunately, it isn't feasible for most WWTPs to remove chloride, which is dissolved in water. When the levels of chloride are high in the discharge to lakes, rivers and streams, upgrading softeners or removing hardness at the source with lime are typical solutions.

In areas served by septic systems the brine often discharges to the septic system, although this is not generally a recommended practice as large amounts of salt can be detrimental to the system. Since the regeneration water has not been contaminated by bacteria, viruses or organic material, it technically does not need treatment in the septic system. Before considering any of the options below, be sure to check with your local and state regulations to determine legal discharge options.

- The brine can be directed into the collections system of footing drains. This may require the installation of a sump to collect this water. This high salt content can be hard on vegetation.
- The brine can be day-lighted to the surface if it does not directly discharge into a water body.
- The brine can go into a drywell, an old abandoned drainfield, or a small separate section of drainfield with 20-50 feet — typically sufficient (must have some separation to the water table).
- The brine may be rerouted directly to the primary soil treatment system to prevent agitation of the layers in the septic tank or the performance of an advanced treatment system.

FINAL THOUGHTS

Chloride in the softener discharge cannot be treated in a septic system and will eventually end up in surface or groundwater.

In general, the less salt discharged from water softeners the better for the environment and our septic system. We should encourage property owners to only use one when and where they need it, use and maintain an efficient demand-based unit, and route the brine out of the septic system when needed. **c**

Manufacturing Drain Cleaning Equipment for over 30 years

Drain Cleaning Machines | Cables
Blades | Cable Ends | Handgun Cables | Accessories

TM750

TM50

TM25

Fabricated from high quality wire
Most ends & couplings available
All sizes and lengths
Innercore available

Heavy duty construction
The most powerful motor
in the industry
Quick and easy reel changeover
A one year rock-solid warranty

Various shaped and sized blades

THE PROFESSIONAL CHOICE

COAST MANUFACTURING

541.684.0743
www.coastmanufacturing.com

ABOUT THE AUTHOR

Sara Heger, Ph.D., is a researcher and instructor with the Onsite Sewage Treatment Program in the Water Resources Center at the University of Minnesota. She is also a certified septic system designer and service provider.

NEW



M18 FUEL™

DRIVEN TO OUTPERFORM.™

HIGH SPEED CHAIN SNAKE FOR 1-1/2" - 4" PIPES

2819



POWER
TO DESCALE
UP TO 75' OUT



EASIEST, MOST
CONTROLLED
WALL TO WALL CLEAN



CLEAR
150' OF
SCALE
BUILD-UP



M18 FUEL™ is engineered for the most demanding tradesmen in the world. Delivering unrivaled performance in a compact structure, all M18 FUEL™ products feature three MILWAUKEE® exclusive innovations – the POWERSTATE™ Brushless Motor, REDLITHIUM™ Battery Pack and REDLINK PLUS™ Intelligence Hardware and Software – that deliver unmatched power, run-time and durability. Simply put, the M18 FUEL™ High Speed Chain Snake for 1-1/2" – 4" Pipes delivers the power to descale, with instant setup.

M18 FUEL™ High Speed Chain Snake for 1-1/2" – 4" Pipes
2819-22

LEARN MORE



or visit <https://qr.mke.li/2snme>



M18

**PERFORMANCE DRIVEN
TRADE FOCUSED
SYSTEM WIDE**

ONE BIG RIG

Challenging jobs don't faze this super-sized vac truck that's built to last

// By Ken Wysocky

CHRIS PODGURSKI CAN SUM up in only three words why he ordered a custom-built, super-sized GapVax combo vacuum truck that he calls the “baddest machine around.” Bigger is better.

“It’s a monster of a truck,” says Podgurski, owner of Podgurski Corp., a sewer and industrial cleaning and utility installation company based in Canton, Massachusetts, a southwest suburb of Boston. Founded in 1940 by his grandfather, the company employs 29 people, runs six vacuum trucks and serves customers throughout southern New England.

“The tires are bigger,” Podgurski continues. “The blower is bigger. The brakes are bigger. The water pump is bigger. Virtually everything is bigger. And when you make things bigger, they last longer.”

The company took delivery of the HV55 Series truck in January. The cost? A cool \$765,000.

“I did flinch a little,” Podgurski says of the price tag. “But now we have customers that call us and specifically ask for that truck because it can move so much air. It differentiates us in our market, so it was worth the price.”

CAN-DO MACHINE

The truck is used in a variety of applications, from hydroexcavation and removing debris from sewer lines to vacuuming out industrial and commercial tanks to cleaning pipelines or components at municipal wastewater treatment plants.

“You name it, we do it — except for handling hazardous waste,” Podgurski says.

The truck is especially valuable for its ability to work effectively and efficiently on deep, vertical cleaning jobs.

“High cfm rules in this industry,” he says. “Whether we’re doing wet or dry work, we can move so much more air, so our productivity is so much better. This truck is designed for long, deep and sustained pulls.”

As an example, Podgurski cites drainage systems in Boston’s

PODGURSKI CORP.

CANTON, MASSACHUSETTS

OWNER Chris Podgurski

MACHINE Custom-built GapVax HV55 combination sewer vacuum truck

FUNCTION Industrial and municipal sewer and drainline cleaning

FEATURES Peterbilt chassis; 12 1/2-cubic-yard debris tank; 1,200-gallon water tank; blower from HIBON (5,250 cfm); Giant water pump (2,500 psi at 85 gpm); 600 feet of 1-inch-diameter jetting hose; 25-foot-long boom that rotates 330 degrees; front-mounted, articulating hose reel

COST About \$765,000

WEBSITE www.podgurskicorp.com

subway system that the company cleans periodically. The drainlines are 200 feet underground, but that depth doesn’t pose a problem.

“With this truck, we’re not afraid to tackle more challenging jobs that other companies can’t do,” Podgurski says.

Furthermore, it can do both wet and dry vacuuming work, which further enhances its versatility.

“I like to be able to do it all and this truck helps us do that because it can be used for so many different things,” he says.

BIG RED MACHINE

Built on a Peterbilt chassis, the truck features a 12 1/2-cubic-yard debris tank; a 1,200-gallon water tank; a blower from HIBON (a brand owned by Ingersoll Rand) that generates 5,250 cfm of suction; a Giant high-pressure triplex water pump (2,500 psi at 85 gpm) for jetting; another water pump (2,500 psi at 47 gpm) for hydroexcavating; 600 feet of 1-inch-diameter jetting hose; a 25-foot-long,

CONTINUED >>

PROCOM ATLAS PRO

INDUSTRIAL WIRELESS HEADSET

INCREASED PRODUCTIVITY | ENHANCED SAFETY

-  Over 4X the Power of Other Headsets
-  Easy to Use & Extremely Lightweight
-  Highest Audio Quality
-  No Base Station to Hassle With
-  Two-Way Radio Compatible
-  Most Rugged & Durable Design

Designed with the **highest-quality** materials, guaranteed to work **each and every time!**



Protected by U.S. Patent Numbers 11,165,551
11,652,503 and 11,646,858

THE BEST PRODUCT AT THE BEST PRICE!

727-692-8700 | PROCOMHEADSETS.COM



More choices, more solutions, more innovation. That's Ratech.

- One-Touch USB recorder or SD recorder
- 10.4" sunlight-readable LCD
- Built-in Lithium Ion battery
- Wi-Fi connectivity-record direct to smartphone or tablet
- 100'-400' Premium Gel Rod™ Push cable
- 1.375" dia. Self-leveling camera
- Keyboard, footage counter, 512Hz sonde
- 3/4" micro camera compatible
- Pan n' Tilt push camera compatible
- Authorized service centers nation-wide



Control unit can be mounted to reel.

Pan n' Tilt Push Camera
(Includes Reel and Remote Control)

Ratech
ELECTRONICS

Video Pipeline Inspection Systems



For more information on these or other products call toll free:
1-800-461-9200 or 905-660-7072 www.ratech-electronics.com

Upload your inspection videos to [YouTube](https://www.youtube.com) Ask us HOW?

MANUFACTURING SEWER CAMERAS SINCE 1981.

MONEY MACHINES

» Podgurski Corp. uses its GapVax HV55 combination machine for a variety of applications, from hydroexcavation and removing debris from sewer lines to vacuuming out industrial and commercial tanks to cleaning pipelines or components at municipal wastewater treatment plants.



GEAR UP With All Your Equipment Needs



Call Toll-Free
1.800.325.3730
www.MilwaukeeRubber.com

front-mounted telescoping boom that rotates 330 degrees; and a front-mounted, articulating hose reel.

The truck — which employees have nicknamed “Big Red,” a nod to both its size and its eye-catching, fire-engine-red paint job — also features two front steering axles, each with 22,000-pound weight capacity.

“The sheer weight of the truck, especially with the water system and the front-mounted hose reel, required a design with two front axles,” Podgurski explains.

Other features also reflect the truck’s heavy-duty design: a 565 Cummins diesel engine; a 55,000-pound rear-suspension system; and a stainless steel body and debris tank.

“I did that for longevity,” he says. “This truck is not going to rust out, at least not on my watch. A vac truck we used to own was approaching 10 years old, and some of the carbon steel sheet metal was starting to show signs of wear. The stainless steel costs a lot more, but it’s well worth it in the end.”

PRODUCTIVITY AND REVENUE ENHANCER

Podgurski believes that the truck eventually will pay for itself by expanding the company’s markets and increasing productivity. It also decreases operating costs, which will help hasten a good return on investment.

“Now we can do both dry and wet vacuuming, which will generate more business,” he says. “None of our other vac trucks are designed to do both.”

The truck’s ability to perform deep vertical runs also expands the company’s market for vacuum services. At the same time, the blower system is designed to keep the blower cool, so there’s none of the lost productivity typically incurred when operators have to stop and give the blower a break to keep it from overheating, Podgurski notes.

“The truck also features a full duty cycle,” he says. “With the GapVax system, you literally can submerge the tube into waste and it’ll keep pumping until the tank is full — no need to stop. That kind of productivity allows us to charge a premium rate for the truck. And it’s another reason why customers keep asking for this truck.

“It’s definitely a once-in-a-lifetime machine and I believe it will last long after I retire and my son is running the company.” **c**

HURCO TECHNOLOGIES, INC.



The Solution

CAN'T FIND A LEAK?



POWER SMOKER™ 2

- Quickly and safely locate leaks in indoor plumbing systems. Model available for sewer line testing.
- Uses the ONLY tested safe smoke on the market

NEED A VAC THAT DOES IT ALL?

VAC 250



- 250 or 500 gallon units with compact configuration creates easy access to places large hydro excavation systems can't reach.
- Ideal for cleaning out catch basins, potholing, exposing buried utilities, and miscellaneous jobs on property that requires extra care, such as parks and golf courses.
- Years of dependable use provided by top of the line components, including Cat® diesel or Kohler® gas engines, Gardner Denver® blowers, and Giant® pumps.

HURCO TECH.COM
800-888-1436



WORKING WELL UNDER PRESSURE

Building Drain and Sewer Equipment since 1981.

PRICES GOOD THROUGH DECEMBER 15 OR WHILE QUANTITIES LAST

NEW



4008H Power Unit

»8 gpm @ 4000 psi »400' x 3/8" Jet Hose
»800 cc EFI Honda Engine on DC Powered Reel

Just Add A Tank!

\$12,599 plus freight

3012H Power Unit

»12 gpm @ 3000 psi »400' x 1/2" Jet Hose
»800 cc EFI Honda Engine on DC Powered Reel

\$12,999 plus freight

4008H Compact Skid

»8 gpm @ 4000 psi »400' x 3/8" Jet Hose
»800 cc EFI Honda Engine on DC Powered Reel

(100 GALLON TANK)

\$14,199 plus freight

3012H Compact Skid

»12 gpm @ 3000 psi »400' x 1/2" Jet Hose
»800 cc EFI Honda Engine on DC Powered Reel

(100 GALLON TANK)

\$14,599 plus freight

NEW



NEW



RCJ4008H

»8 gpm @ 4000 psi »200' x 3/8" Jet Hose
»800 cc EFI Honda Engine on Manual Reel

(30 GALLON TANK)

\$8,599 plus freight

NEW



LJ4008H

»8 gpm @ 4000 psi »200' x 3/8" Jet Hose
»800 cc EFI Honda Engine on Manual Reel

(30 GALLON TANK)

\$8,499 plus freight



VM4008H

»8 gpm @ 4000 psi »50' x 3/8" Washdown
»690 cc Honda Engine Hose on DC Reel

(130 GALLON TANK)

\$13,299 plus freight



CV4008H-HOT

»8 gpm @ 4000 psi »400' x 3/8" Jet Hose
»690 cc Honda Engine on DC Reel

Call for Quote

TRAILER MODELS AVAILABLE
through 25 gpm @ 4000 psi

All Jets Shown Come with Pulse Valve, 2 Jet Nozzles, Tool Box, Gloves, Safety Glasses, Tip Cleaner, Tiger Tail, Wash Down Trigger Gun with Nozzles.

Pressure Washers & Drain Jetting Equipment

We Build Electric, Gas and Diesel powered models up to 4000 psi, flows up to 40 gallons per minute.

Don't see exactly what you want...

We will custom build exactly what you want!

800-648-5011 | www.camspray.com | sales@camspray.com

KOI POND PLUMBING

Designing and plumbing a koi pond requires careful thought and planning from both plumber and owner // By James Careless

AT FIRST GLANCE, plumbing a koi pond — a backyard body of water stocked with colorful fish — looks simple. You connect the pond, bottom drain(s), skimmer and filters together using pipes and pumps into a continuous closed loop system — just as you would a swimming pool.

Except, this isn't a swimming pool: The need to gravity-feed water from the pond to its mechanical and biological (beneficial bacteria) filters, and then return it to the pond, requires an approach to piping that minimizes friction at all costs. This is why the best koi pond designers use wide-diameter (4-inch or larger) PVC pipes with no angle fittings, and when they need to turn corners, they use 90-degree sweeps or flex pipe.

The science behind designing a low-maintenance, reliably healthy koi pond is enough to fill a book, and much more information than a plumber needs to know. There are many different pond configurations out there, and there are many ways to filter the environment. But as long as the client or contractor has taken the time to select the pumps, filters and other equipment properly as part of an overall pond design — or hired a competent koi expert to do the job for them — all the plumber needs to know is how to connect everything to maximize water flow while minimizing friction.

That said, "I'm not going to lie: It is truly apples and oranges," says Joseph McAuley, a highly skilled, creative journeyman plumber in Ottawa, Canada. He was the one called to fix the plumbing disaster documented below. "In a house where you're doing plumbing, you deal with toilets, sinks and bathtubs and they all work under the



⚡ The best koi pond designers use a wide-diameter pipe, like 4-inch or larger, with no angle fittings. If corners need to be made, they should be 90-degree sweeps or flex pipe. (Photos by James Careless)

same principle. But a pond is completely different. It's still plumbing, but it's like comparing city plumbing to rural plumbing. It's not the same thing."

WHAT NOT TO DO

The initial plumbing job in the koi pond (done by the general contractor who built the pond's concrete container) is a prime example of how not to plumb a koi pond. It was full of errors that drastically reduced the flow of water from the bottom drains to the filters. In a pond, filters remove debris and toxins from the water.

Even though koi ponds use pumps to move the water around, it is imperative to have an efficient gravity-fed system for the filtration process to work.

"This is why you want to create the most streamlined plumbing installation possible, while using the least amount of fittings," says Zac Penn, owner of Deepwater Koi Innovations. "You also want to use sweep fittings wherever possible to reduce the friction loss, while

» In this photo of a koi pond under construction, the first contractor on the job laid the pipe with too many angles, which created friction and less movement of the water to filter the pond. A repipe was required.



using large-diameter pipes is a must because koi ponds need to have the filtration running 24/7 to keep healthy water.” That’s important; pools don’t run 24/7, but ponds do.

McAuley followed all of these principles when he replumbed the koi pond, using minimal fittings and sweeps to maximize water flow. The result: The water management system of this 9,500-gallon koi pond has been working flawlessly for two years, with sufficient gravity-fed flow to keep all of the filters and pumps running optimally.

THE THREE KEYS

NO. 1 – SELECT THE RIGHT PIPE

In some cases, the client may leave it to the plumber to decide what type and size of pipe to use for their koi pond. If they do, be sure to choose PVC over ABS. PVC is stronger and more robust than ABS, which allows it to survive changing weather/temperatures above ground and weight/pressure changes from the soil when buried underground.

“Rigid Schedule 40 PVC pipe is the best option available for koi pond plumbing,” Penn says. “The inside wall of the pipe is



vCam Inspection Cameras, the clear choice for video inspection.



vCam-6 HD Inspection System

- 9.7" HD Display
- 1TB Hard-drive
- 1080p HD Cameras
- 512Hz Sonde
- Locatable Pushrod
- MP4 Recording format
- Works with the Free VMC App
- 3 to 10-inch lines



vCamMX-2 Mini Inspection System

- 512Hz Sonde
- Locatable Pushrod
- High Resolution Cameras
- Direct USB Recording
- MP4 Recording format
- Works with the Free VMC App
- 2 to 4-inch lines



vCamDrain System

- 512Hz Sonde
- 1080p HD 18mm Camera
- Direct Recording to App or USB
- MP4 Recording Format
- Control the Reel via the VMC App
- 1.5 to 3-inch lines



VMC vCam Mobile Controller App

Call us for a no-obligation on-site demonstration! **1-800-446-3392**

Vivax-Metrotech Corporation

3251 Olcott Street,
Santa Clara, CA 95054, USA

✉ SalesUSA@vxmt.com
☎ +1-408-734-1400

📷 Instagram: vivax_metrotech
🌐 www.vivax-metrotech.com

Visit our YouTube channel to see actual videos.



DIVERSIFICATION

smooth for less friction, and the inside diameter of Schedule 40 pipe is the same as what the pipe is labeled.”

As for deciding how to best lay the pipe and what diameter(s) to use?

“Most fitting manufacturers give you a coefficient of drags with respect to their products, which you can use to calculate flow rates,” says Mike Swanson, owner of Koi Acres. “You use this data to do the math by factoring in the pond size by gallon and a desired turnover rate, namely how many gallons per hour that you want to move through the filters to keep the water healthy.”

The recommended turnover rate is usually once/hour if your fish load is one fish/500 gallons.

NO. 2: REMEMBER HEAD PRESSURE

Unlike a house where water flows from top to bottom, water in a pond goes sideways. Filters are installed at or below the water level, and sometimes above. When water has to move up, it creates

“IN A HOUSE WHERE YOU'RE DOING PLUMBING, YOU DEAL WITH TOILETS, SINKS, AND BATHTUBS AND THEY ALL WORK UNDER THE SAME PRINCIPLE. BUT A POND IS COMPLETELY DIFFERENT.”

JOSEPH MCAULEY

head pressure that impedes the water flow, which has to be overcome by using pumps with sufficient gallons per hour capacity.

“For example, a 5-foot-high waterfall will add 5 feet of static head pressure,” says Clayton Arnall, owner of Everything Ponds. “A pressurized filter might add 5 to 10 feet of head depending on how dirty the filter is. The pipe will also add pressure, which is why it’s important to use the right size pipe.”

Fortunately, Everything Koi has created an online tool to calculate head pressure in a pumped system, as well as the water speed in the pipe. It can be found at www.everything-ponds.com/pond-head-pressure.html.

NO. 3: UNIONS ARE A MUST

When a house is plumbed, the connections are done and that’s it, so gluing them in place isn’t a problem. But a koi pond is different: PVC pipe unions are a must for every equipment connection. The reason?

“If we need to replace a pump, valve, or filter, we can unscrew the union and put a new one in place,” say Eric Triplett and Leslie Triplett, owners of The Pond Digger.

FINAL WORDS OF ADVICE

For those plumbers willing to take the plunge, koi ponds can be an interesting and profitable venture, as long as they heed the following advice.

“Check your ego, be open-minded to the uniqueness of koi pond filtration and don’t fly from the seat of your pants,” Penn says. “And if you notice that something in the plans doesn’t look right, then talk to the designer. If a change needs to be made, the pond designer should also be humble and admit that they didn’t have the best idea originally.”

At the same time, “keep it simple,” McAuley says. “Otherwise, the friction loss created by all the extra fittings you put in won’t allow the filters to work properly.” c

KEN-WAY Beats the Others
DAY-IN • DAY-OUT

And they have for over 50 years

KEN-WAY CABLE CLEANERS
for cleaning sewer, drain or process lines
from one to ten inches, up to 75 feet
with the Junior and up to
a full length of 300 feet
with the Model 400



Junior



Model
400

KEN-WAY
Exclusive Built Cables









- Heat Treated
- Inner-Core or Non-Core
- Fit Most Other Brands
- Interchangeable with Most Brands
- Coupling or Blade Holding Types



Leasing plans available. Call for details.
1-800-533-0551

930 ROBERTS ROAD, SPARTA, WI 54656
www.ken-way.com • E-mail: info@ken-way.com

THE FUTURE OF INDUSTRIAL PUMPS BROUGHT TO YOU BY



**ANNOVI
REVERBERI**
The Power of Experience

AR RTD



Industrial

140° F - Max Water Temp
1 1/2" - Inlet Thread
1" - Discharge Thread
110 oz - Oil Capacity

RTD 1000 RPM N VERSION SOLID SHAFT 35MM

MODEL	MAX GPM	MAX L/MIN	MAX PSI	MAX BAR	POWER EBHP	BORE DIA MM	STROKE MM	CRANKSHAFT ID STAMP	WEIGHT LBS.
RTD80-300	21.0	79.5	4350	300	65.0	32	42	4	128
RTD100-200	25.0	94.6	2900	200	49.8	32	42	3	128
RTD100-200SX	25.0	94.6	2900	200	49.8	32	42	3	128
RTD130-160	32.0	121.1	2300	160	50.5	36	42	3	128
RTD130-200H	34.5	115.0	2900	200	68.0	36	42	3	128
RTD160-130	40.0	151.4	1850	130	50.8	40	42	3	128

SX - 180° Rotated Shaft Configuration
H - Nickel Plated

AR RTX



Industrial

140° F - Max Water Temp
1 1/2" - Inlet Thread
1 1/2" - Discharge Thread
76 oz - Oil Capacity

RTD 1450 RPM N VERSION 30 X 80MM SOLID SHAFT

MODEL	MAX GPM	MAX L/MIN	MAX PSI	MAX BAR	POWER EBHP	BORE DIA MM	STROKE MM	CRANKSHAFT ID STAMP	WEIGHT LBS.
RTX30	8.0	30.3	4350	300	23.9	20	23	3	72
RTX50	12.0	45.4	4350	300	35.8	25	23	3	72
RTX60	14.0	53.0	4350	300	41.8	25	28	1	72
RTX70	17.0	64.4	3000	200	33.8	30	23	3	72
RTX85	21.0	85.0	2200	200	31.7	30	28	1	72
RTX-HW85.150N*	21.0	85.0	2200	200	31.7	36	23	1	72
RTX100	24.0	90.8	1800	124	29.8	36	23	3	72
RTX150	39.6	150	1450	100	36.2	40	28	1	72

*HW - includes Hot Water Kit

DD-1 Pit Launch Directional Drill

Bore Glide

Specifications...

- Sewer Laterals
 - Water Lines
 - Communication
 - Electric Conduit
 - Gas
- 22" Wide
 - 57" Long
 - 733 lbs.
 - 8 tons push & pull force
 - 800 lbs, rotational torque



Ride in comfort on this all new pit launch HDD Drill. This new design is much more user friendly for the operator and the excavation foot print is considerably smaller. The DD-1 can also be used in our stackable shoring boxes when you need to go deep.

See it Work!



RODDIE INC.

Phone: 888-406-3821
RoddieUnderground.com
Columbia Falls, Montana

Go where surface launch drills can't go
Patent Pending



NORTH AMERICA
When Quality Matters

www.arnorthamerica.com
763-398-2008

For More Information Contact

Thom Calvin
(763) 398-7564
thomasc@arnorthamerica.com

Randy Rowan
(768) 999-5405
randyr@arnorthamerica.com

OUT TO SEA

Florida's Earth View takes on a directional drilling job with a wet exit to install seawater intake lines for a nature center's sea turtle habitat // By Kyle Rogers

EARTH VIEW IS accustomed to challenging directional drilling jobs. But no matter the obstacles a given job may present, typically the company has a bore with entry and exit pits on land.

So the circumstances were unique when Earth View took on a job for the Gumbo Limbo Nature Center in Boca Raton, Florida, installing new seawater intake lines for the center's sea turtle habitat. The bores began on land, but traveled 1,300 feet exiting offshore in the ocean.

"Most drilling jobs, even if you're doing a water crossing, you're still popping up on land," says Allison Murrell, Earth View's president. "Your entry and exit pits are both on land versus having your exit pit be on a barge out in the ocean. It's definitely very different from a typical job. A lot of the processes are still the same,

COMPANY	Earth View
LOCATION	Boca Raton, Florida
PROJECT	Directional drilling 2 parallel 1,300-foot-long seawater intake lines for the Gumbo Limbo Nature Center's sea turtle habitat
EQUIPMENT	American Augers 440 drilling rig, Cat 323 and Cat 336 excavators

but there are also a lot of different challenges to think about and overcome."

"The concept of completing the drill itself was pretty comparable to everything else we do," adds Joe Townsend, Earth View's drilling superintendent. "It was mostly about the location of the project and the challenges of the terrain and surrounding environment we had to deal with."

GETTING THE JOB

Earth View was founded in 2004 in Naples, Florida, and started out focusing on private utility locates. By 2016, recognizing the need for underground infrastructure solutions different from standard opencut methods, the company branched out into trenchless technologies. Directional drilling and other trenchless services now make up about 60% of Earth View's workload. It does a majority of its work in Florida but also takes on jobs throughout the Southeast U.S.



« Two Caterpillar excavators, a Cat 323 and a 336, operated by Earth View sit on a jack-up barge off the ocean coast near Boca Raton, Florida.

» One excavator was used to break the drill pipe joints loose and unscrew them from the drill string, while the other was used to pull on the drill pipe to maintain tension.



For the Gumbo Limbo Nature Center job, Earth View served as a subcontractor on the drilling work for its sister company Quality Enterprises, a large civil construction company that was awarded the job through a bidding process. That was in 2021, but work was put off until spring the following year to avoid hurricane season.

Toward the end of February 2022, Earth View began mobilizing and most of the work occurred in March.

“The whole thought process there was doing the drilling before hurricane season started back up just because we were going to have a barge and a lot of equipment out in the ocean,” Murrell says.

“We were going to be right in the wave break so it was really weather permitting,” adds Townsend.

TIGHT QUARTERS

The job called for two parallel 1,300-foot bores from the Gumbo Limbo Nature Center under a roadway and beach area, and out into the ocean where a jack-up barge was set up to house necessary equipment and serve as the exit pit. For the new seawater intake lines, 16-inch HDPE was installed. The challenges began immediately.

“Right off the bat it was a difficult project just getting mobilized into the site,” Townsend says. “They had us rig up back behind the nature center, and it was pretty tight. It was a challenge moving all of our equipment into the area to get rigged up to even get started drilling our pilot hole.”

Being right in the middle of a nature preserve, Earth View also had to always be conscious of the site’s environmental sensitivity.

“We definitely had a limited laydown area to work with,” Townsend says. “It takes a lot of support equipment for something like this, so looking at the site, we had to determine how small of an area we could fit all the equipment into.”

UTMOST PRECISION

Using an American Augers 440 drilling rig, each bore took about two weeks from start to finish — completing the pilot bore and pulling in the HDPE pipe. There was little margin for error. The two lines ran parallel, about 20 feet apart out in the ocean to just 10 feet apart where they connected to the new pump station at Gumbo Limbo.

“THAT WAS ONE OF THE MOST CHALLENGING PARTS ABOUT THE PROJECT. WE HAD TO BE VERY PRECISE WITH OUR ELEVATIONS AND OUR HORIZONTAL DISTANCES IN ORDER TO BE ABLE TO FIT THE LINES INTO THIS PRECAST PUMP STATION.”

JOE TOWNSEND

“That was a concern, how close they had to be together with the tight location,” Murrell says.

“That was one of the most challenging parts about the project,” Townsend says. “We had to be very precise with our elevations and our horizontal distances in order to be able to fit the lines into this precast pump station. We have an in-house engineer that helped to design and profile these drills to fit what we needed them to do. There really was no room for error. The numbers had to be hit pretty much dead on otherwise we would’ve missed the elevation at the pump station. There were really tight combination radiuses where we were having to build up and left at the same time right out of the gate, right as soon as the drill started.”

Earth View also had to account for varying formations along the drill path. Crews started the bores with a jetting assembly, but due to a hard layer of coral at the deepest points of the drill — about 48 feet — they had to switch the tooling mid-bore to a mud motor.

“We really didn’t have any consistency to go off of,” Townsend says. “It was really challenging for the driller to be able to change it up as he was drilling to hit the numbers he had to hit. But we had good steering equipment and the right tooling as far as when the decision was made to switch from the jetting assembly to the mud motor. That’s how we were able to complete the bores in a timely manner.”

OCEAN WORK

The job required a lot of work offshore in the ocean itself, presenting unique challenges. A jack-up barge was installed to aid the oceanside portion of the job site.

“We had to pre-plan the length of the studs themselves for the jack-up barge, determining what the tide was going to be like,” Townsend says.

On the barge were two excavators, a Cat 323 and a Cat 336. One excavator had an attachment on it that was used to break the joints of drill pipe loose and unscrew them from the drill string.

“We were push-reaming, so as we were push-reaming and opening this hole up, the drill pipe on the back end of the reamer needed to be broken loose in sections and layed off on a rack we had built on this barge,” Townsend says. “That was so as we were drilling, all the drilling fluids would be going back to the entry pit and not out into the ocean.”

The other excavator was used to pull on the drill pipe and maintain tension.

“During push reamer processes, you can’t do it all with the drill rig itself, so crews would screw a swivel onto the back of every joint of drill pipe, and that excavator would keep tension on the pipe and help keep that drill pipe in line to help keep the hole where it needed to be,” Townsend says.

In addition to the 14 Earth View employees working on the project, there was a team of three divers to provide some assistance on certain aspects of the job. The divers retrieved the steering tooling on the pilot bores. They also helped on the pullback of the HDPE pipe.

“There was a 150-foot-long screen crews bolted to the back of the HDPE product and the screen was drug underneath the seafloor. That’s what filters the seawater throughout,” Townsend says. “The divers dove down to tell us when the back end of the screen was now going into the seafloor and that’s where we would start our count. It was about 90 feet that we had to drag it underneath the seafloor to reach the proper elevation they wanted.”

MID-JOB ADJUSTMENT

Although challenging, the Earth View crews didn’t encounter any problems during the job that required a major audible. They did underestimate one aspect on the first bore though that had them make a change for the second bore.

“We didn’t anticipate how difficult it would be to have 1,300 feet of pipe lined up with the barge and keeping it lined up while the drill was pulling the product into the ground,” Murrell says. “The first time it was difficult having all the pipe floating out in the water. We realized that we had to bring in more support equipment for the second one just to make the process a little bit easier.”

“It was challenging on both bores, but the first one especially was challenging because we really weren’t prepared,” Townsend adds. “We had all the equipment we needed. We just didn’t anticipate the pipe wanting to float out as far as it did, so we had some difficulty there but we were able to keep it under control. Then on that next one we brought in and hooked up a couple more boats to it and kept it in line. It really worked out well.” **c**





Conference: **January 24-26**
 Expo Hall: **January 25-27**
Indiana Convention Center

THE LARGEST EDUCATION PROGRAM IN THE INDUSTRY

The WWETT Show Education Program caters to any and all wastewater professionals! One of this year's most anticipated general sessions, **Trade Associations in the Wastewater Industry**, will be a must-see set piece!

This general session will see key members of **NASSCO, NAWT, NOWRA, and PSAI**, participate in a 60-minute moderated discussion featuring the following topics:

- » **Raising Standards**
- » **Workforce Issues**
- » **Education**
- » **Advocacy**

But wait, there's more! You will have access to an Expo Hall brimming with cutting-edge products, live demos, happy hour events, and our attendee-favorite Welcome Party!

Receive **FREE Exhibit Hall Admission** and a **20% discount** on the accredited conference program.

SESSION SPEAKERS:



Veronica Croiser
 Executive Director
 PSAI



Thomas Groves
 Executive Director
 NOWRA



Sheila Joy
 Executive Director
 NASSCO, Inc.



Kim Seipp
 Owner
 High Plain Sanitation



Joseph Blackman
 Founder
 Vitendo Training Solutions

SESSION MODERATOR:

Register today
 at wwettshow.com
 with promo code

CST18

BUSINESS DIVERSIFICATION - SEPTIC PUMPING - PLUMBING

By Craig Mandli

» CABLE DRAIN CLEANING MACHINES

1 // DURACABLE DM30

The DM30 cable drain cleaning machine from Duracable can be used in a variety of situations. Suited for 2- to 6-inch lines in residential and light commercial settings, the durable machine provides flexibility with cable diameter and length. Machine packages come with 100 feet of DuraFlex 5/8-inch hollow-core cable, and it is easy to swap between 19- and 21-inch reels. It is a midrange sled-style drain machine, powered by a 1/2 hp 200 rpm motor and onboard power cable feed and return. Getting it on site is no problem with its telescoping handle and wide wheels, which give it extra ground clearance and mobility to fit through a narrow 26-inch doorway. 800-247-4081; www.duracable.com



2 // ELECTRIC EEL MODEL C

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



3 // EPL SOLUTIONS SPEEDCUT

EPL Solutions designed the SpeedCut high-speed chain cutter to be a compact, lightweight machine that can reach tight spots while retaining power for tough jobs. It is narrow enough to fit through standard doorways and light enough to be maneuvered and operated by one person. Additional features include an anti-flip SpeedShaft cable designed specifically for drain cleaning, descaling and prepping 2- to 6-inch-diameter pipe for trenchless coating and lining. With its compact design, EPL Solutions uses a clutchless motor that allows the cable to rotate at higher speeds than many other available chain cutters. It only requires a 110-volt, 15-amp outlet for power, so a separate generator is not needed for jobs where electricity is available. The DC motor provides high torque and up to 3,200 rpm at less than 15 amps. It has been tested to run through harsh conditions, and it features variable-speed controls so operators can match the right speed for the job at hand. 714-453-9760; www.epls-usa.com





4 // GORLITZ SEWER & DRAIN MODEL GO 68HD

The Model GO 68HD heavy-duty electric drain cleaning machine from Gorlitz Sewer & Drain is available in two different versions, either with an open steel reel or enclosed polyethylene drum, and it can be outfitted with an optional power feeder. Standard configuration is 150 feet of 11/16-inch hollow-core cable, which should reach most blockages with a single reel. Overall weight of the machine is 185 pounds. Adding a loading ramp and electric winch to any vehicle makes transportation quick and simple. It is designed to clean pipes 3 to 8 inches in diameter. 877-446-7548; www.gorlitz.com



5 // MILWAUKEE TOOL M18 FUEL SEWER SECTIONAL MACHINE

Milwaukee Tool's M18 FUEL Sewer Sectional Machine with CABLE DRIVE Automatic Feed and Retract has the power to clear tough blockages in 2- to 8-inch sewer lateral lines. The POWERSTATE Brushless Motor and REDLINK PLUS Intelligence delivers the power to clear roots up to 200 feet out, providing full power at the maximum capacity of the machine. The sewer cable machine features the CABLE DRIVE Automatic Feed and Retract system. This system reduces user fatigue by eliminating the need to manually pull back the heavy cable from the pipes. An enclosed cable carrier ensures the best protection and mess containment during transportation and can be stacked for easier storage. The sewer sectional is compatible with ONE-KEY, so it can be wirelessly tracked, managed and secured. 800-728-3878; www.milwaukeetool.com



» PLUMBING PRODUCTS

6 // BRADFORD WHITE WATER HEATERS AEROTHERM SERIES

With 50-, 65- and 80-gallon capacity units available, the Bradford White Water Heaters Energy Star-certified AeroTherm Series offers value, efficiency and versatility. They are easy to install and maintain and feature an integrated smart control panel plus five operating modes (heat pump, hybrid, hybrid plus, electric and vacation). Units are fully compliant with California's Title 24 energy-efficiency standards and are eligible for many local and state utility rebates throughout North America. The series includes Vitraglas lining, an enamel formula that provides superior tank protection from the corrosive effects of hot water. 800-523-2931; www.bradfordwhite.com



7 // CHERNE CLOG-BUSTER DRAIN FLUSHER

The Cherne Clog-Buster Drain Flusher unclogs drain pipes in seconds and can attach to a standard 3/4-inch garden hose fitting. Users can remove the aerator from the spigot of the faucet and attach the faucet adapter. When connected to a water source, it will pressurize the seal and deliver a blast of water to free a clog. This will help keep drainlines clean and clear of debris so water can flow freely. While using this product, insert the clog buster as far as possible into the drain and slowly turn on the cold water. This should almost immediately lead to the clog dislodging. The drain flusher also eliminates the need for using chemicals. It is available in three variations of sizes, ranging from 1-2 inch to 4-6 inch. 800-843-7584; www.cherneind.com

8 // OATEY HERCULES SEPTIC-FLOW

Oatey's Hercules Septic-Flow is a concentrated liquid designed to improve the overall efficiency of all types of septic and wastewater systems. Containing billions of super active organisms in each ounce, it has the capability to rapidly complete waste degradation. With the ability to perform under a wide variety of conditions, the product performance is not affected by temperature, pH variations and the presence of household cleaners or disinfectants. It is designed to be used on a regular basis to eliminate backups, odors and corrosion. It is available for purchase in 2-quart containers and can be used in septic tanks, cesspools, dry wells, leach tanks and drainfields. Ultimately, it is meant to extend the life of the entire septic system due to its growth characteristics that increase the rate of respiration of existing septic system bacteria, resulting in a faster reduction of organics in the septic tank, allowing for less frequent cleanings and carry-through of specialized bacteria to better maintain a clean and proper flow in the drainage beds. Regular use allows for growth of sulfide-producing bacteria that slows the bacterial digestive process. 800-321-9532; www.oatey.com



9 // RIDGID PIPE PATCHING SYSTEM

The RIDGID Pipe Patching System is an all-inclusive, start-to-finish solution for faster and simpler trenchless repairs. The versatile system can perform up to 6-foot fiberglass repairs in 2- to 6-inch pipe in straight sections, bends, transitions and P-traps. Easy to add on starter systems include all the basic equipment needed to begin pipe patching while patch kits include all required consumables for a single patch. The entire process can be completed in two hours or less, offers a fast return on investment and is easy to learn. Pipe patching is an efficient, durable repair solution that saves time and labor, while also providing minimal disturbance to landscaping and business productivity making it ideal for residential, commercial and industrial markets. 800-474-3443; www.ridgid.com



» PORTABLE JETTERS

10 // GENERAL PIPE CLEANERS JM-1000 MINI-JET

The combination of General Pipe Cleaners' portable JM-1000 Mini-Jet and high-performance stainless steel braid jet hose offers drain cleaning power in a small package. The jetter is available with stainless steel braid hoses with Teflon core in a variety of lengths. The durable hose also works well with the JM-1450 electric jet. It can be used to clear grease, sand and ice from small lines, sinks, and laundry drains with high-pressure, wall-to-wall water spray. It packs 1,500 psi of cleaning power in a compact package, yet weighs only 23 pounds. Its rugged diamond-plate metal case safely shields the pump and motor assembly from common job site abuse. The stainless steel braid hose design smoothly slides the jet nozzle down 1 1/2- to 3-inch drainlines and more easily navigates tight bends. The 3/16-inch Teflon core also reduces flow resistance, further improving small-line cleaning power. 800-245-6200; www.drainbrain.com





11 // JETTERS NORTHWEST DRAIN INVADER & DRAIN INVADER-X

The Drain Invader & Drain Invader-X from JETTERS NORTHWEST are handy and lightweight 115-volt electric jetters for cleaning small septic lines and indoor/outdoor drains up to 3 inches. They are very compact (about the size of a hand-carry generator) and easy to carry at only 18 pounds. The original Drain Invader is capable of 2,050 psi and 1.4 gpm and runs off a typical 15-amp outlet. The Drain Invader-X has a beefier and quieter brushless induction motor for up to 2,300 psi and 1.5 gpm and is 12 pounds heavier. The motor/pump only runs when the jetting valve is open; just close the valve to stop jetting, and the motor turns off. Open the valve and the jetter re-starts. Jetting hose size options include 50 feet of 1/8-inch poly hose, or UltraFlex 3/16-inch stainless steel jetting hose in 25-, 50-, 75- or 100-foot lengths (with an optional reel). They include three jetting-nozzles (a 1/8-inch Penetrator, Flusher and P-Trap Knucklehead) with a Pelican case, jetting on/off valve, pressure-wash kit with wand/hose/nozzles, a 25-foot power cord with GFI plug, two faucet adapters, and the ability to snap-connect onto an included 2-wheel mobile cart with built-in hose hanger. An optional snap-connect Wall-Mount Kit is available. 877-901-1936; shop.jettersnorthwest.com

ALLAN J. COLEMAN
SINCE 1905

5725 N. Ravenswood Ave. • Chicago, IL 60660
6003S 40th St., Ste. #5 • Phoenix, AZ 85042

Call Us Today! Chicago 773-728-2400
Phoenix 602-638-0600

OLDEST NAME IN THE BUSINESS — Over 115 YEARS OLD

info@allancoleman.com • www.allancoleman.com

Products
Manufactured By



Eagle 300 Trailer Jetter

20 GPM @ 4000 PSI



Stocking In Both Locations

Products
Manufactured By



Mountable or Portable - Skid/Cart

9 gpm @ 4000 psi



The C38rs

The safest way to enter an unknown blockage

Repair Center for:

RIDGID ProPress & SeeSnake, Gen-Eye, Electric Eel, and Hathorn cameras

If you buy the best, you are only sorry once!

We Have RIDGID Parts!



PRODUCT FOCUS

12 // MYTANA MV84

The MV84 jetter from MyTana efficiently cleans and clears 3- to 10-inch lines. It has a robust 800 cc Honda engine that lets the super-duty triplex pump deliver 8 gpm at 4,000 psi. With a dual-cart design and remote throttle control, it lets you jet indoors or access hard-to-reach clean-outs. The jetter cart houses the engine, super-duty triplex pump and supply buffer tank. A separate hose cart is connected with a 50-foot jumper hose and has ball valve flow control. It comes fully equipped with 250 feet of 3/8-inch jetter hose. Attach a specialty nozzle and take on roots. It is easy to load, maneuver, maintain and use. 800-328-8170; www.mytana.com



» PUSH TV CAMERA SYSTEMS

13 // CUES FLEXIPROBE C540C

The flexiprobe C540c portable pipeline inspection system from CUES simplifies operations by automatically creating a survey report, allowing you to concentrate on your inspection tasks. Share your reports quickly and easily via email or the Dropbox file sharing service. Systems consist of six reel configurations with two different cameras to choose from rated for withstanding water pressure of approximately 160 psi or over 300 feet underwater. Each system serves unique applications and a majority of inspection needs within the sewer industry today, from 1 1/2- up to 12-inch pipe. The system is managed by a powerful and intuitive controller with a quick boot-up, an intuitive user interface and a high-definition 10.1-inch TFT display. 800-327-7791; www.cuesinc.com



14 // ENVIROSIGHT VERISIGHT PRO+

Envirosight's Verisight Pro+ smart push camera can be used to complete drain, lateral and cleanout inspections quickly and accurately. The stainless steel self-leveling camera captures up to 90 hours of color footage from pipes 2 inches in diameter and larger, regardless of material. It can snake through multiple bends for maximum range, and its integral tri-band sonde (33 kHz, 512 Hz, 640 Hz) works with almost any locator. The rugged welded-steel coiler comes with 130, 200 or 330 feet of pushrod. The entire system runs for 6 hours off internal rechargeable lithium-ion batteries, or off mains or vehicle power. Its controller offers an 8-inch LCD screen that displays footage in real time and a full QWERTY keyboard for recording observations. Easily navigate and review recorded inspections using the thumbnail gallery, then transfer them via SD card or USB drive. 866-838-3763; www.envirosight.com



15 // ENZ USA CAMERA NOZZLE

The Enz USA Camera Nozzle has a modular design that allows universal use with all nozzle types, such as the eBomb or the eBulldog, and thus guarantees streak-free all-around cleaning in every application. The HD-ready resolution and 12 high-power LEDs deliver high-resolution video footage for quality control, documentation and preliminary inspection. Data management is fully integrated into the system through the Wi-Fi interface and connection to the Enz Cloud. All manholes and channels are automatically mapped on Google Maps with the videos. The nozzle, which is simple, fast and robust, increases productivity without any negative impact on the cleaning performance or quality. 877-369-8721; www.enz.com





16 // HATHORN INSPECTION CAMERAS H12+ COMMAND MODULE

The H12+ Command Module from Hathorn Inspection Cameras comes equipped with a bright, daylight-readable 12-inch screen. Available with Wi-Fi or standard, it provides stunning picture quality, high contrast and 8X digital pan-and-zoom technology. It has menus in three languages (English, French and Spanish), compatibility with all Hathorn reels from 100 to 500 feet, an information bar with text overlay options, two sonde frequencies (512 and 640 Hz) and a large amount of file storage. It comes standard with a 128 GB hard drive which is upgradeable to 512 GB, allowing the user to save MPG videos and JPG screenshots to either the HDD or to a USB stick. Powered by 18V Milwaukee (or equivalent) batteries, it will run up to 4 hours on a single charge. Batteries are sold separately. 866-428-4676; www.hathorncorp.com

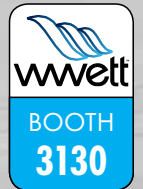


17 // RAPIDVIEW IBAK NORTH AMERICA MICROLITE PUSHROD SYSTEM

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

Next Generation Tools Designed for You

EPL SOLUTIONS Inc.
Thinking Ahead



- SpeedCut® Patented Design • Built-in Oiler • Speed Connector for quick tool changes • 2"-8" Pipes
- Clutchless 0-3200 RPM DC Brushless Motor • Gvision® Camera System with Gvision® Connect

Call us for a quote today!

714.453.9760 • sales@epls-usa.com • www.epls-usa.com



Gvision Connect
Available on the App Store

18 // RATECH ELECTRONICS PLUMBER'S HELPER JR.

The **Plumber's Helper Jr.** pipe inspection system from **Ratech Electronics** is based on a small-scale reel and comes with 100 feet of mini Gel Rod cable, a removable compact command module with 7.1-inch LCD, a built-in battery, and an SD recorder for digital images and video. This mini pipe inspection system is available with a full-spectrum, 1.375-inch, self-leveling color camera; a standard color camera; or any of the company's three micro camera heads — 5/8-, 3/4- or 1-inch diameter. 905-660-7072; www.ratech-electronics.com



19 // SECON EXTREME SERIES

Extreme Series cordless sewer mainline cameras from **SECON** come with two 20-volt DeWALT batteries and a charging station (Milwaukee upgrade available). An 18-volt power supply is included for plug-in operation. They have a Wi-Fi connection to view inspections in real time on personal smart devices as well as an SD card recorder (SD card included). The unit includes a 7-inch color LCD monitor, 512 Hz sonde/transmitter and a stainless steel camera head. They are available with 100 to 300 feet of push cable and are capable of viewing 3- to 12-inch pipe. 702-527-5100; www.seconv.com



20 // SUBSITE ELECTRONICS PUSH CAMERA

When a transporter isn't an option because of pipe size or limited access, the **Subsite Electronics Push Camera** allows operators to complete inspections in the most challenging conditions. Ideal for pipes from 1.5 to 12 inches, it uses single conductor technology with a rigid 1/4-inch fiber pushrod covered with a durable Hytrel jacketing that allows operators to inspect up to 500 feet down the line. Additionally, the 1/4-inch-diameter single conductor cable provides added strength without weight concerns, allowing operators to complete significantly longer inspections without the cable getting twisted or warped. The 1545 camera with an in-line 512Hz beacon allows the operator to easily locate damage and blockage in the pipe. The camera is controlled by a 1575 controller, which features a rugged, durable and reliable enclosure, enabling operators to inspect pipe in the toughest environmental conditions. 800-846-2713; www.subsite.com



21 // VIVAX-METROTECH VCAMMX-2

The **vCamMX-2** from **Vivax-Metrotech** is a portable all-in-one camera to inspect pipes between 1 1/2 and 4 inches. The control module's 8-inch daylight-viewable LCD screen shows the distance of deployed pushrod as well as the current time and date. Recordings are made in MP4 video and pictures in JPEG format directly to a USB thumb drive, then instantly backed up to an SD card. The internal microphone allows audio commentary over recorded video. The pushrod is traceable with the use of an external locator transmitter and is available in 100 or 150 feet. The 512 Hz frequency sonde is standard equipment. It comes with two interchangeable camera heads. The smaller D18-MX camera is fixed position and 0.70 inch in diameter, and the D26-MX is self-leveling and 1 inch in diameter. 800-446-3392; www.vivax-metrotech.com





22

» TRUCK/TRAILER JETTERS

22 // AMERICAN JETTER 58 SERIES INFERNO BURNER HOT JETTER

The 58 Series Inferno Burner Hot Jetter from American Jetter offers up to 67% more efficient heat over traditional burners, according to the maker. This fuel-saving hot water system provides power for grease cutting and deicing, utilizing a 38 hp EFI Kohler gasoline engine with flows up to 20 gpm and pressure to 5,000 psi. The rear speed control reel provides precise cleaning speeds and easy access to the jet hose with the included hose guide. Low-water shut-off stops the engine if the 220-gallon tank runs low. The optional 1-mile open range wireless remote has water ON/OFF, engine shutdown and hose reel control. The heavy-duty square tubing trailer has a 2-inch ball coupler and standard electric brakes. 866-944-3569; www.americanjetter.com



THE PROFESSIONAL'S CHOICE

TROJAN

WORLDWIDE INC.™

PROFESSIONAL GRADE EQUIPMENT THAT GETS THE JOB DONE!
THERE'S NO JOB OUR EQUIPMENT CAN'T HANDLE!





C100-512SL



TWW2000
TRAILER JETTER



COLT



PONY



STALLION



DIGITAL LOCATOR



VISTON-HD
1080P

WE BUILD OUR EQUIPMENT BASED ON THREE SIMPLE CONCEPTS:
DURABILITY, RELIABILITY, & POWER

Sewer Cables **IN-STOCK**
For All Major Brands



REPAIR CENTER

We REPAIR all major brands of sewer & drain cleaning machines, jetting, and inspection equipment.

-Free quotes
-Fast turnaround



800-392-4902

TrojanWorldwide.com

3306-C Ella Blvd, Houston, TX 77018

23 // CAM SPRAY STB3012H

The 3,000 psi **STB3012H** trailer-mounted drain jetter from **Cam Spray** includes a Honda 800 cc EFI gasoline engine with oil alert and hour meter, powering a gearbox-driven plunger pump with ceramic plungers, stainless steel valves, pressure gauge and 80-mesh water filter. The pump is protected by an unloader valve and secondary pop-off. The jetter has a power pulse feature for navigating longer runs and elbows. A DC-powered reel with jet hose has 2-1 clutch for perfect retraction speed and a foot switch for hands-free operation. The industrial coated trailer has 15-inch aluminum wheels, a 5,000-pound axle, electric brakes, 2-inch ball hitch, retractable tongue, rear-mounted lockable tool storage boxes, and a 50-foot washdown hose with pressure wash gun and nozzle. A safety strobe light, tiger tail, bullet and milling nozzle with storage box and tip cleaner, toolbox, safety vest, gloves, backflow preventer and safety glasses are included. 800-648-5011; www.camspray.com



24 // GAPVAX G7 JETTER

The **G7 Jetter** from **GapVax** is built on a heavy-duty, contractor-grade NATM-certified trailer. Several engine choices, including Cummins diesel, are certified and sized appropriately for the water pump combinations. The unit's hose reel is hydraulically powered with a direct-drive gearbox and variable-speed control. The hose reel offers a 3-foot (curbside) articulation from center of bearing, 180-degree rotation and a capacity of 800 feet of 3/4-inch jetter hose. The polyethylene plastic water tank is available in 300, 500, 600 or 700 gallons. The water pump is center-fed for optimum performance. The controller is interlocked with safety features that will show low fuel levels and low water, and is capable of a complete engine shutdown in an emergency. 888-442-7829; www.gapvax.com



25 // HI-VAC O'BRIEN 7000 SERIES HYDRO JETTERS

Hi-Vac O'Brien 7000 Series Hydro Jetters feature a robust frame and a 190-degree rotating hose reel, ensuring convenient access regardless of the trailer's parking orientation. The Tier 3 Kohler Diesel Engine stands out for its quiet operation, enhanced torque and extended lifespan. They include a durable and high-capacity rotomolded polyethylene 700-gallon water tank. With flow rates from 18 to 65 gpm and pressures up to 4,000 psi, these jetters excel in tackling tough lateral lines and culvert cleaning projects. The extended jetting capability on a single tank, powerful engine-pump combinations and resilient construction benefit municipalities, industrial site operators and contractors. 800-752-2400; www.obrienmfg.com



26 // HOTJET USA TURBO DIESEL TRAILER JETTER

HotJet USA is offering a turbo diesel-powered trailer jetter powered by Yanmar. It features 59 hp of power with true 20 gpm at 4,000 psi output in a compact, affordable package, offering 10% more power than regular 18 gpm units. Yanmar-powered units are Tier 4 compliant, are fuel-efficient and use an XL Radiator. The engines are water cooled for maximum efficiency and are easily maintained by a network of service centers nationwide. The jetters may be mounted on 5-by-12 to 5-by-16-foot decks with a choice of single or tandem axle. They are available in cold or hot/cold operation and will clean up to 24-inch drainlines. 800-624-8186; www.hotjetusa.com





27

27 // MONGOOSE JETTERS BY SEWER EQUIPMENT MODEL 184

The Mongoose Jetters by Sewer Equipment Model 184 comes with a run-dry pump offering 18 gpm at 4,000 psi, a tubular steel frame, corrosion-resistant prepainted subassemblies, state-of-the-art controls, strong hose reel and high-quality gas engine. It is suitable for drain cleaning and sewer jetting, remote access locations, mainlines up to 12 inches in diameter, and commercial and industrial lines. The trailer unit comes with a water tank capacity of 300 gallons and standard hose reel capacity of 600 feet of 1/2-inch hose. The trailer setup consists of a 6,000-pound-rated single-axle trailer, and the addition of a wireless remote control system makes this equipment a true one-person operation. It is also available as a van pack or truck-mounted unit. 815-835-5566; www.sewerequipment.com



28

28 // SPARTAN TOOL WARRIOR

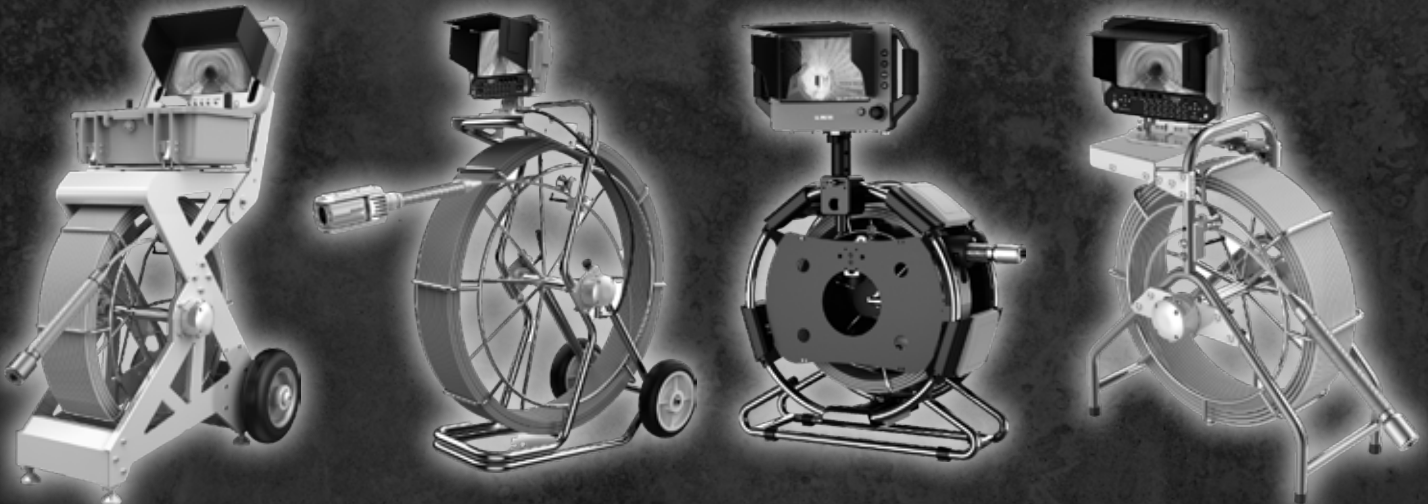
With fiberglass casing to protect and silence the entire machine, Spartan Tool's Warrior trailer jetter provides 4,000 psi at 18 gpm to clear almost any line, according to the manufacturer. The 180-degree pivoting hose reel and optional four-function remote control allow technicians to handle the tightest spots. With pulsation and a full antifreeze system, it is designed to remove tough clogs in any weather. Its design includes room to customize it with a company logo and colors, and it provides a 300-gallon towing capacity. 800-435-3866; www.spartantool.com



FORBEST PRODUCTS CO.

WELCOME TO THE FORBEST HD ERA

High Definition Imaging, with the same Affordability, Customization and Service you are used to.



www.ForbestUSA.com

Western USA:

44130 Old Warm Springs Blvd, Fremont, CA 94538

TF: 1 877 369 1199 P: 510 226 7988

Eastern USA:

810 Interchange Blvd, Newark, DE 19711

Canada:

44 E Beaver Creek Rd, Unit 6, Richmond Hill, ON L4B 1G8

TF: 1 877 369 1199 P: 905 709 6226

PRODUCT FOCUS

29 // SUPER PRODUCTS SUPERJET

The **SuperJet** truck-mounted jetter from **Super Products** is used to blast debris to clear blockages and maintain sewer lines when vacuuming extraction is not required. It uses a strong and smooth single-piston water pump to create consistently high water pressure. Units come standard with rotationally molded polyethylene water tanks in a modular design to accommodate water capacities ranging from 1,080 to 3,240 gallons. They offer standard curbside and street-side fill. The hose reel has 1,000 feet of 1-inch-diameter sewer hose, 200-degree rotation and a digital monitor. This allows operators to work efficiently while positioned out of traffic and away from other hazards. The monitor displays a hose footage count, offers 20 saved settings for hose reel payout and is designed with LED panel lights to enable readability in a variety of environments. 800-837-9711; www.superproducts.com



30 // VAC-CON VJ SERIES

The **VJ Series** of jetters from **Vac-Con** are designed to provide operators with an economical, portable and powerful system in two configurations. The VJ375 offers a 375-gallon water capacity on a single-axle trailer, while the VJ750 offers 750-gallon water capacity on a tandem-axle trailer. Standard features include Tier 4 diesel engine, cold-weather recirculation and air purge system, hydraulically driven hose reel and a reel-mounted, weatherproof electronic control panel. Units are available in multiple water pump pressure and flow configurations. Optional features include gas engine, wireless remote and an antifreeze tank system for cold-weather use. 904-284-4200; www.vac-con.com



31 // VACALL ALLJET

Vacall's AllJet truck-mounted jetter is an easy-to-operate, efficient sewer root maintenance machine. The hydraulically powered triplex plunger water pump is capable of 87 gpm at 2,000 psi with other power options available. The hose reel telescopes out 54 inches from a retracted position and swivels 200 degrees to properly direct the 600-foot jetting hose. It uses a single-engine PTO design and a 1,600-gallon UV-resistant polyethylene water tank. Operator-friendly features include four locking aluminum tool storage cabinets, a rear-view camera, roll-up doors and a washdown system with options including LED lighting packages, an extendable rear canopy and a heating and insulation package inside the all-aluminum rear compartment. 800-382-8302; www.vacall.com



32 // VACTOR RAMJET

The newest model **Ramjet** from **Vactor** provides greater precision, increased storage options and superior cold weather protection, making jobs safer, easier and more efficient for the operator. IntuiTouch controls provide greater precision and enhanced productivity. Improved water plumbing adds even more storage options. It includes an IntuiTouch control system with one-touch activation, low-maintenance Jet Rodder water pump, Park-N-Clean technology for faster setup at the job site, a Modul-Flex design for maximum capacities and optimum weight distribution, a stainless steel water tank that offers greater strength and corrosion protection, and superior cold weather operation that includes separate storage for wet and dry items. 815-672-3171; www.vactor.com





33

» **VACUUM TRUCK/PUMP/ACCESSORY**

33 // CAT PUMPS MODEL 7CP6165CSG1

The Cat Pumps Model 7CP6165CSG1 is ideal for demanding sewer jetting applications. With a performance rating of 8 gpm at 3,500 psi, the combination of high performance, compact footprint and proven longevity helps jetters cut through the most challenging jobs. It converts to a jetting pump by adding a pulsator assembly, which eliminates the danger of deadheading the pump, prolonging the life of the seals and reducing unplanned downtime. A convenient handle allows for a quick changeover from cleaning to jetting modes. It uses an industrial-duty gearbox that attaches directly to 1- or 1 1/8-inch 3,265 rpm gas engines. The gearbox allows for a smaller footprint and features hardened steel helical gears for smooth, quiet operation. The sealed housing provides independent gear lubrication, resulting in thousands of trouble-free hours. 763-780-5440; www.catpumps.com **c**

WE WON'T BE BEATEN ON SEESNAKE PRICING



THE CABLE CENTER

1-800-257-7209

***LARGEST
FACTORY-AUTHORIZED
REPAIR CENTER OF SEESNAKE***

***FULL CATALOG OF RIDGID
REPAIR PARTS AND ACCESSORIES***

***24 HOURS
TURNAROUND
ON REPAIRS***

***NO
SALES TAX
ON OUT-OF-STATE
SALES***

THE CABLE CENTER 1/2 OPEN - M-F, 7AM-3:30PM CST St. Louis, MO • 314-993-3099 • www.TheCableCenterInc.com

BLACKHAWK

Trenchless Superstore

Since 2013, we've been providing the
Best Pricing, Products, Service & Selection.

BlackhawkTechSupply.com ♦ 910 W Wilson St. Batavia, IL 60510



Pipe Lining Materials

- Epoxy & UV Methacrylate Resin
- Stitched Scrim
- 4-D
- SuperFlex
- Flex
- Imperliner
- Scrim Transition Liners
- Cal-Tube
- Remote Start Material
- Accessories



Point Repair

- Packers
- Patch Kits
- Bulk Material
- Premium 3P Silicate in easy to use no-mess bottles
- Starter Packages
- Accessories



Example: 4"x4' Winter Patch Kit \$225

Pipe Cleaning

- High-Speed Cable
- Chain Knockers
- Reinstatement Tools
- Machines



RENSSI[®]
DRAIN CLEANING EQUIPMENT

SPECIAL:
Free standard
shipping on orders
over \$5000
(lower 48 states)

Call for knowledgeable
support and fast shipping!

630-326-9061

INDUSTRY NEWS

Avanti AV-100 chemical grout earns NSF/ANSI/CAN 61 certification

The Water Quality Association has granted certification to Avanti International's AV-100 chemical grout, both in liquid and granular form, confirming its compliance with NSF/ANSI/CAN 61 Standards for Drinking Water System Components. AV-100 chemical grout joins other Avanti products that are NSF/ANSI/CAN 61 tested and certified including: AV-150 Acrylate Gel, AV-202 Multigrout, AV-248-LV Flexseal LV, AV-275 Soilgrout, AV-278 Low Vis Hydro, AV-315 Microfoam, AV-330 Safeguard and Ultrafine SD.

ACPA announces Pipe School 2024

The American Concrete Pipe Association's Pipe School 2024 will be held Jan. 29-Feb. 1 at the Embassy Suites Hotel and Convention Center in Frisco, Texas. The Pipe School will continue the Concrete Pipe Week 2023 theme of "Engineered Strength. Proven Resilience. Undeniable Sustainability." The school will offer attendees more than 70 courses over four days on topics such as resilience, sustainability, installation, inspection, repair, design, production, quality and engineering. Additionally, there will be panel discussions, presentations on pressing transportation issues, and DOT leaders sharing case studies from across the country. A tour of Rinker Materials Grand Prairie plant is also available on Wednesday morning. In conjunction with the Pipe School, the ACPA will host the 2024 Pipe Show, a three-day trade show that connects producers with vendors and partners. For more information on Pipe School 2024, including how to register, visit pipeschool.org.

Asahi/America partners with McElroy to provide welding equipment

Asahi/America has formed a strategic partnership with Tulsa, Oklahoma-based McElroy Manufacturing to provide fusion equipment that is compatible with Asahi/America's thermoplastic piping systems. Asahi/America will offer McElroy-manufactured butt and socket fusion equipment that will be available for rental or purchase. In addition to the fleet of welding equipment, Asahi/America, in partnership with McElroy University, will launch an online welding certification and Learning Management System for contractors and installers who will be operating the equipment. This will be available in early 2024.

GP Sewer launches new website

GP Sewer launched its new and improved website, www.gpsewercam.com, featuring a fresh design and improved navigation. Customers can also view product videos, photos and frame grabs from inside pipes, and connect with GP Sewer's support team for more information on how to get started. **c**

YOUR SOURCE FOR RIDGID®



SeeSnake® TruSense™
Camera Reel



CS12x Digital
Reporting Monitor*



Flexshaft
K9-102, K9-204



SeeSnake® Compact M40
Camera System



CS65x Digital
Reporting Monitor*



SeeSnake® MAX
rM200 Camera
System
*With Wi-Fi



microDrain Reel



CS6xVersa Digital
Recording Monitor*



8% ONE YEAR FINANCING AVAILABLE!
Longer lease rates also available. Call Keith for details.

BUYING A SEESNAKE?

**CALL US FOR
GREAT PRICING &
FREE SHIPPING!**

**WE
WILL NOT BE
UNDERSOLD**

– Call Evenings – Keith: 405-602-9155
and Weekends – Ryan: 719-243-3539

5037 NW 10th • Oklahoma City, OK 73127

www.centralwinnelson.com

CALL TOLL FREE: 888-947-8761

T&T TOOLS

T&T Tools, Inc.

Fax: 800-521-3260

Email: sales@mightyprobe.com

800-521-6893

www.MightyProbe.com

MADE IN THE USA | 30 YEARS OF EXPERIENCE | FAMILY BUSINESS

Call for a **FREE** Catalog



Call for a **FREE** Catalog

HOOKS...

- » Several different styles of heat-treated hooks are available
- » Top Poppers are great to open manhole covers
- » The Handy Hooks allow two handed use

PROBES...

- » Insulated, standard, and specialty soil probes
- » Metal shaft sizes: 3/8" round, 3/8" hex or 7/16" hex
- » Replaceable tips are threaded on and hardened
- » A "slide" allows the handle to pound the shaft into the ground

PRODUCT SPOTLIGHT

STEERABLE CAMERA NOZZLE ENABLES CLEANING AND INSPECTION IN ONE RUN

By Craig Mandli

Inspection and cleaning of a drain system typically requires multiple tools — namely the high-pressure drain cleaner first, followed by the camera inspection.

The VIPER is a pipe and sewer cleaning system that saves time, money and resources by combining the two needs into one unit. NuFlow Technologies is now distributing the German-manufactured units from Envirobot in North America.

Thanks to the full HD live image, the innovative system enables improved knowledge of the cleaning process, thus saving water, fuel and time. Exploring branched pipe systems — such as laterals — is made possible by the steerability of the system. Due to the high tensile force, vertical stacks can also be cleaned and inspected against the flow direction. The entire process, including jetting pressure, inclination, distance counter and more, is continuously documented on a USB thumb drive.

With the switchable forward jetting nozzle, blockages can be cleared quickly. Thanks to the modular design, nozzles can be easily upgraded from the standard cleaning nozzle. In addition, the jetting pressure can be adjusted to suit pipe conditions, so damage such as rinsing out the pipe bed, loosening of liner ends or short liners is effectively avoided.



“We often spent more time on practical tests than in the office, and that’s exactly how it has to be,” says Frank Matt, Envirobot owner. “If a product is as excellent as it can be, economic success is inevitable.”


The VIPER series ranges from the portable VIPER light with a working length of 100 feet up to the VIPER long range that stretches cleaning and inspection up to 250 feet. The camera/nozzle combo fits in pipe as small as 3 inches and can be used in lateral launch operations starting from mainlines as large as 25 inches. Due to the wide range of accessories, the user-friendly systems can be adapted to the most diverse requirements.

The waterproof control panel is milled from an aluminum block and is suitable for use in any weather. It has an extremely bright, high-resolution display to provide a clear view of the cleaning process. The internal pressure monitored HD camera with sensors and integrated front jet nozzle measures only 1 1/2 inches in diameter. Built into a solid stainless steel case with ram protection, it inspects the underworld through a practically indestructible, 1/6-inch-thick sapphire crystal. **866-430-2134; www.nuflow.com**

CLEANER IS FREE

Subscribe/renew online at cleaner.com





Cua Claws
A Simple Solution for Slippery PVC Pipe - **22 Years of Service**
We resurface all makes of steel transport wheels
CALL JERRY AT 714-697-8697
www.cuaclaws.com

OUR BEST SELLING DRAIN LINE JETTER!

HOTJET II
10GPM @ 4000 PSI • 35HP VANGUARD
Cleans 2-1/2" Branches with Hot OR Cold Water



TRAINING AND FREE WAREHOUSE NOZZLE INCLUDED

OVER 30 YEARS BUILDING QUALITY EQUIPMENT

HotJetusa
1-800-624-8186
WWW.HOTJETUSA.COM
PRICES SUBJECT TO CHANGE - CALL FOR CURRENT PRICING

EASY-KLEEN
PRESSURE SYSTEMS LTD.
MANUFACTURER OF HIGH PRESSURE CLEANING EQUIPMENT

SINCE 1982
WOLVERINE
DRY STEAM GENERATORS

DRY STEAM GENERATORS



20/30/40/50 BHP
Up To 2,000,000 BTU
Curing
Thawing
Degreasing
Degassing
Melting
Cleaning & Restoring
Prepping Surfaces for Paint
Purifying
Weed Control

YouTube
www.youtube.com/easyklean
1-800-315-5533
www.easyklean.com - sales@easyklean.com

EASY-KLEEN
PRESSURE SYSTEMS LTD.
MANUFACTURER OF HIGH PRESSURE CLEANING EQUIPMENT

VAN PACK JETTERS
12 GPM @ 3500 PSI



OPEN JETTER TRAILERS GROUNDHOG JETTER



20 GPM @ 4000 PSI
ENCLOSED JETTER TRAILERS (Hot Water)



VACUUM TRUCK HEATERS
440,000 BTU to 4,000,000 BTU



YouTube
www.youtube.com/easyklean
1-800-315-5533
www.easyklean.com
sales@easyklean.com

AMERICAN JETTER.COM

Up to 67% MORE EFFICIENT



51T Trailer Jetter Hot or Cold
20 GPM @ 4000 PSI
76 HP Kohler EFI
FREE Shipping/Delivery



58 Trailer Jetter Hot or Cold
10 GPM @ 4000 PSI
38 HP Kohler EFI
FREE Shipping/Delivery

866-944-3569

T&T Tools, Inc.
800-521-6893

CALL for a FREE Catalog

Many Styles Available

Insulated Soil Probes (for locating) Heat-Treated Hooks (for covers, lids, etc.)

www.mightyprobe.com

DR DYNAMIC REPAIRS

We Repair:
General Wire, Ratch, RIDGID, Hathorn Corp.
Electric Eel, GatorCams, Vision Intruders and Vivax Inspection Cameras, Locators, Command Modules and Cables

New & Refurbished Inspection Equipment For Sale

Rental Equipment Available
Daily & Weekly Rates

Ask About Our 48-Hr. Turn Around Time

INSPECTION CAMERAS ARE OUR ONLY BUSINESS!

973-478-0893

DYNAMIC REPAIRS
40 Arnot St., Unit 20
Lodi, NJ 07644
dynamiccablerepairs@yahoo.com
www.dynamicrepairs.biz

ARCTIC BLASTER

A PROPANE TORCH, 2 GALLONS OF WATER
AMAZING ARCTIC BLASTER
THAT'S ALL YOU NEED TO SEE FAST, SAFE AND ECONOMICAL THAWING RESULTS.

- Thaws pipes above & below ground
- Use on plastic, copper or ABS
- Perfect for roof drains & conduit thawing
- Will have the job done before most thawing devices are ready to work.
- Perfect for Public Works, Plumbers, electricians, Septic Pumps, Drain Cleaners

ARCTIC BLASTERS INC.
SUNDRE, ALBERTA
403.638.3934 • ArcticBlaster.com

TRUGRIT TRACTION

- World's first patented poly carbide wheel
- Solid steel wheels
- Solid steel gritted tracks



We have • Wheels • Tracks
• Wheel kits • Tow cables • Tires
• We can resurface any worn carbide wheels

TruGritTraction.com | 407-900-1091

CLASSIFIEDS

see photos in color at www.cleaner.com

BLOWERS

Cotta (single & dual stage) & OMSI transmission parts. Cloverleaf Tool Co., Sarasota, Florida. Phone 941-739-0707; Email: sales@cloverleaftool.com (CBM)

BUCKET MACHINES



2013 Sewer Equipment bucket machines, new, never used. Also available 2010 Sewer Equipment truck loader and 2005 puller

Contact usedsewerequip@gmail.com C01

BUSINESSES

Small pipe lining and sewer excavating business for sale. Room to expand business in Seattle area. \$350,000.00, for more information, contact nveinc@gmail.com (C12)

BUSINESS FOR SALE that has been featured in Cleaner Magazine. Established 60 year strong Plumbing and Heating Company in San Francisco Bay Area services commercial, and residential clients, including schools, property management, restaurants and hotels. \$1.2-1.5 annual sales. Vehicles, equipment, tools, piping, and extensive parts included in sale. \$850,000. Call Marci at (415) 596-7446. (C12)

Cotta (single & dual stage) & OMSI transmission parts. Cloverleaf Tool Co., Sarasota, Florida. Phone 941-739-0707; Email: sales@cloverleaftool.com (CBM)

27 year old Trenchless pipe/excavation business for sale in Seattle/Tacoma area. Owners retiring. Pipelining/pipe bursting, pipe coating equipment, multiple camera/locating systems, multiple excavators, multiple dump trucks, GPR, utility locating systems, vacuum truck, multiple service trucks and vans, robotic pipe cutter, much more. All equipment and trucks are low hrs. and low miles. 1 acre fenced, paved, commercial property security system with shop and office. All or part with possible owner financing. Owner will train in all aspects. \$1,500,000.00 253-677-1189 (C12)

Kaufman county is the fastest growing county in the U.S. 50 year old aerobic sewage install and maintenance company. Always profitable. Presently has approx 1,250 maintenance customers under contract. Monthly income \$50,000-\$60,000 to install new systems. Owner is older and in poor health, needs to retire. Excellent reputation. Sale includes 5 acres of land, shop, double wide mobile home for office, office equipment, and a full time office manager with experience. Some equipment including backhoe and trencher. This company has no pumper truck. This would be an excellent acquisition for a pumper truck owner who wishes to expand into a rapidly growing market. 469-807-9893. geraldwoodssr49@gmail.com (C12)

www.RooterMan.com. Franchises available with low flat fee. New concept. Visit web site or call **1-800-700-8062.** (CBM)

CABLE MACHINES

Picote Super Midi Miller Excellent condition used only a few times includes many extras. \$3,000.00 920-585-9924 (C12)

EASEMENT SEWER FLUSHER



2004 Sewer Equipment Easement Machine, 1X800 hose, Kubota diesel, new tires & also have a Sewer Equipment easement machine, 1X600 hose, new tires, Onan gas engine and a 2010 Sewer Equipment Track Easement Machine.

Contact usedsewerequip@gmail.com C12

JET VACS



2017 Vacall AJV1215 Freightliner 108SD 22,000mi, Cummins 370HP 3500hr, Allison Auto, 12-yard, 1,500-gallon, 87 GPM @ 2000 PSI General pump, Roots 824 18" blower, 850 PSI wash-down gun, 2000 PSI hydro excavation kit, tank flush out, galvanized debris body, 715 GPM rear trash pump, 600' 1" sewer hose, wired/wireless remote. **Call Brian for pricing 303-898-9475** C12



1995 Vactor 2100 Combination machine w/ newer HR42 blower, 1,500-gallon debris body, 1,500-gallon fresh water tanks, 500' jet hose, hand gun for hydroX, 6 aluminum vac tubes, debris body flusher, International 530, 8-speed Eaton Fuller transmission, 145,097 miles, 6,879 hours. New steel debris body insert. \$28,000.

Call Eric @ 570-336-1088 C12



2006 B-15 AquaTech for sale - 1500 gallon water tanks with a 15 yard debris box. This truck is designed to clean large diameter pipe. It has a 1-1/4 jet hose. It also works great for cleaning lift stations. Its on a 2006 International. Truck has been well maintained. Can send pictures and specs of the truck. ... Asking \$220,000

Contact Joy at Ritter & Ritter Sewer Service (218) 838-9700 C12



2010 Vactor 2100 Plus, 2007 International CAT C13, Hydro-Ex Unit, 12-yard, 80@2500 PSI, 6,300 engine hours, 64,000 miles.

Contact usedsewerequip@gmail.com C12



1997 Ford Vac-Con, jet vac, diesel, 10-yds tank, \$32,000 OBO **845-548-7377** C12

2023 Freightliner 114SD cab & chassis with a Vacall AJV1215 combination unit – 12 cubic yard debris & 1,500 gallon water – Roots 824 blower with General 87 GPM @ 2,000 PSI water pump (coming in August) www.vacuumsalesinc.com (888) VAC-UNIT (822-8648) (CBM)

JETTERS – TRAILER



The HotJetII® is a best-selling hot- and cold-water drainline cleaner featuring a 35hp Vanguard engine by Toyota and delivering 10gpm @ 4,000psi that cleans drains up to 300' and 12" in diameter. The HotJet II® is American made using nonproprietary parts for affordability and ease in serviceability making its return on investment truly impressive. Prices subject to change. Financing available. Contact us for current pricing and availability

800-624-8186;
sales@hotjetusa.com;
www.hotjetusa.com CBM



2009 Ford E350 outfitted with a hot water jetter. Includes Honda GX630 Engine, HP Series pump, 200 gal poly tank, hot box boiler. Many extra hoses for different size pipes. If you are into thawing pipes, this is the cat's meow! More thawing equipment items available. \$35,000.00

920-585-9924 C12



Real nice US Jetting 2016. 2000 psi, 36 gpm, tires like new. Everything works, could use more jetting hose has 180ft on it. Plenty power take. \$16,500

ph. 501-259-7997 C12

PLACE YOUR AD ONLINE AT www.cleaner.com – IT'S ALWAYS THERE TO MEET YOUR BUSY SCHEDULE



2000 Harben Jetter 4016, Hatz diesel engine, 4000 PSI at 12.9 GPM, 500 feet 1/2 hose & 200 feet mini hose, plus extras. 1536 hours, good condition and still working today.\$15,000.00

Dan 920-585-9924 C12

RENTAL EQUIPMENT

Liquid vacs, wet/dry industrial vacs, combination jetter/vacs, vacuum street sweeper & catch basin cleaner, truck & trailer mounted jettors. All available for daily, weekly, monthly, and yearly rentals. **VSI Rentals, LLC, (888)VAC-UNIT (822-8648) www.vsirentalsllc.com** (CBM)

SAFETY EQUIPMENT

Complete Confined Space Entry breathing apparatus. One is an Allegro Continuous-Flow Full face, air respirator system has circulating pump. The other unit hooks to an oxygen tank. Great condition \$ 1,600.00 920-585-9924 (C12)

Dynamic Repairs - Inspection Camera Repairs: 48-hr. turn-around time. General Wire, Ratech, Ridgid, Electric Eel, Gator Cams, Insight Vision, Vision Intruders. Quality service on all brands. Rental equipment available. For more info. call Jack at 973-478-0893. Lodi, New Jersey. **www.dynamicrepairs.biz** (CBM)

TOOLS

T&T Tools: Probes, Hooks. Probes feature steel shafts with threaded and hardened tips. The insulated Mighty Probe™ tested to 50,000 volts. Top Poppers™ open manhole covers easily. Free catalog. **www.TandTtools.com**. Phone 800-521-6893. (CBM)

TV INSPECTION



2017 Ford Transit Subsite Electronics (RST) Camera truck for sale. CLEAN! 22k Miles. Roughly 1250' SINCON Cable, Camera and Transporter, parts, etc. Everything runs and works great. Start working tomorrow. Serious inquiries only!.....\$138,500 OBO.

Email Ashley at ashley@nrtruck.com for more information.

C12

PUMPS

Vactor, General, Myers, Giant & others - New & parts also. Cloverleaf Tool Co., Sarasota, Florida. Phone 941-739-0707; Email: **sales@cloverleaftool.com**. (CBM)

PIPELINE REHABILITATION



2008 Cues T/V Cutter truck. Ford F-650 XL Super Duty Cummins Diesel. Approx 40,000 miles. VanAir under carriage compressor. Great shape. Also have Cues TV cutter trailer and other rehab and sewer maintenance equipment available. Call For more details.

Kelly (608)835-7767 CBM

NEED TRACTION? We make aftermarket gritted/gripping pads for all chain-driven camera transporters. Custom fabrication secured to a high-quality, nickel-plated carbon-steel chain that doesn't stretch. Also have non-gritted pads, wheels, and tires for all different brands. Pad samples upon request. **Pipe Tool Specialties LLC:** 888-390-6794; Fax 888-390-6670; **pipetoolspecialties.com** or email **pts4422llc@gmail.com** (CBM)

TWO Cues MPlus push camera/flash drive with locators. One is a 300' \$ 4,900.00. one is a 200' \$ 3,900.00 These are very good quality cameras. 920-585-9924 (C12)

PEARPOINT — Mainliner buying & selling used equipment. Canada & USA **PEARPOINT MAINLINE EQUIPMENT ONLY.** Will buy complete Pearpoint trucks. Will buy your old system. Do you need parts? 399, 599 reels; 420, 448 tractors: 494 digital and zoom 420 light heads. Call 800-265-4298 or **mainliner2075@hotmail.com** (CBM)

CAMERA OPERATORS, STOP SPINNING YOUR WHEELS IN GREASY PIPE! Aftermarket gritted polymer wheels, steel carbide wheels, gritted and treaded tracks, tow cables, kiel sticks and more. Fitting Aries, CUES, Envirosight, Ibak, Rausch, RST, Schwalm & IDTec. **ORDER TODAY** at **www.TruGritTraction.com**; **info@trugrittraction.com**; 407-900-1091 (CBM)

WATERBLASTING

20,000 - 55,000 psi Sapphire Nozzles, OS4, OS6, OS7 replacements, UHP hoses & replacement parts. Excellent quality & prices. 772-286-1218, **info@alljetting.com**, **www.alljetting.com**. (CBM)

Cleaner
AVERAGE MONTHLY
CIRCULATION REACHES
21,000+
READERS!

This is what it would look like
if we printed cleaner.com
thousands of stories, products and ideas



Get access to everything we can't fit in the magazine. Additional stories, videos, news briefs and other great information that lets you get the most out of *Cleaner*.

www.cleaner.com

JOIN US



PLACE YOUR AD ONLINE AT **www.cleaner.com**



Conference: **January 24-26**
Expo Hall: **January 25-27**
Indiana Convention Center



Welcome to the Water & Wastewater Equipment, Treatment & Transport (WWETT) Show! The largest, most immersive showcase of the latest innovations within the wastewater industry. Every year, we bring together industry experts, cutting-edge technologies, and game-changing services all under one roof.

Join us for 90+ expert-led courses, live show demonstrations, hundreds of interactive booths, engaging networking opportunities, and celebrate with thousands of your industry peers!

Prepare to be blown away as you explore the sprawling exhibition floor, where leading companies unveil their groundbreaking equipment, state-of-the-art machinery, and revolutionary solutions. Witness live demonstrations that will leave you in awe as powerful machines tackle the toughest wastewater challenges with ease, pushing the boundaries of what's possible.

But the excitement doesn't stop there! Engage in thrilling discussions with industry experts and thought leaders who are at the forefront of driving change in wastewater management. Uncover insights, exchange ideas, and discover the future of the industry through captivating presentations, panel discussions, and educational sessions.

Networking takes on a whole new dimension at the WWETT Show. Connect with like-minded professionals, forge new alliances, and tap into a vibrant community of wastewater enthusiasts from around the globe. Share stories, challenges, and successes while building relationships that will propel your career and business to new heights.



EXCLUSIVE
DISCOUNT CODE
CST18

CUSTOM-BUILT INDUSTRIAL & MUNICIPAL VACUUM EQUIPMENT

Thank you for an amazing year!



Merry Christmas!

Thank you for another great year! 2023 had its own challenges and we couldn't have gotten through without our dedicated team, dealers, vendors and customers! Thank you!

We look forward to seeing you at the WWETT Show in Indianapolis and all of the other events coming up in 2024!

For the #1 Choice Manufacturer of custom-built industrial and municipal vacuum equipment, GapVax has what you need!! Check out gapvax.com for more information and keep up to date with us on social media!

GapVax

- AIR MOVERS
- COMBINATION JETVACS
- JETTERS
- SKID MOUNTED VAC UNITS
- HYDRO EXCAVATORS
- RECYCLE JETVACS
- JETTER TRAILERS
- PARTS & ACCESSORIES



 **wwett24**

888-442-7829
JOHNSTOWN, PA

GAPVAX.COM

281-884-8658
LA PORTE, TX

MACHINES
AS THAT WORK
HARD
AS YOU DO



THE NEXT GENERATION
OF INSPECTION CAMERAS

TRAVELER
4.0



TRAVELER
LITE



ASK ABOUT OUR
TRADE-IN PROGRAM!



Introducing the first **FULLY FIELD REPAIRABLE** sewer inspection cameras!



Traveler series cameras use the ALL-NEW, redesigned **Spartan Vision App** with built-in PDF Report Builder! Create a professional report you can send to your customers in minutes. Optimized for tablet and smartphone. Available on iOS and Android devices.



SPARTANTOOL.COM
800.435.3866

VISIT US AT **wwett24** BOOTH 5105