

# Cleaner®

FOR DRAIN AND PIPE CLEANING,  
INSPECTION AND REHABILITATION  
PROFESSIONALS

TOUGH  
JOB / 42

## LEVELING UP

TWO BROTHERS TAKE OVER FATHER'S LONGTIME BUSINESS  
AND SIGNIFICANTLY SCALE UP, WHILE STILL MAINTAINING  
ITS CUSTOMER-CENTRIC PRINCIPLES / 14

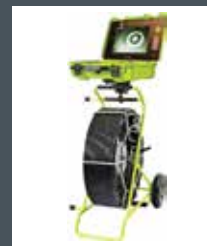
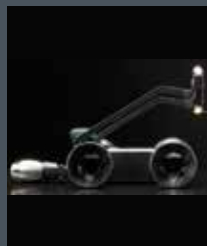
### THE ROOT OF THE PROBLEM

PACIFIC SEWER MAINTENANCE  
TACKLES ROOTS WITH  
ROBOTICS TECH / 28

TV/VIDEO  
INSPECTION  
AND LOCATION  
DIRECTORY / 36

PRODUCT FOCUS

MAINLINE SEWER INSPECTION / 48





**“ I ABSOLUTELY LOVE THE JM-2900 JETTER! IT’S A DEFINITE GAME CHANGER FOR DRAIN CLEANING!”**

**- Mary-Anne Bowcott,  
Westcom Plumbing and Gas Ltd.,  
The Lady Plumber**

## **JM-2900™**

- Economical gas jet is great for maintenance work
- 389 cc (13 hp) engine with low oil shut off
- 3000 psi, 4 gpm pump with Vibra-pulse®
- 200 ft. capacity hose reel with reel brake
- Rides on two flat-free foam core tires and heavy-duty frame

Call the Drain Brains® at 800-245-6200,  
or visit [www.drainbrain.com/jetters](http://www.drainbrain.com/jetters)



© 2024 General Wire Spring

***The toughest tools down the line.™***

***General***  
**PIPE CLEANERS**

# “NUFLOW’S SUPPORT AND TRAINING ARE WAY AHEAD OF THE CURVE.”

## PROfile

### NuFlow Certified Contractor

Brent McDonald’s Rub-a-Dub Plumbing company has dramatically grown since becoming a NuFlow Certified Contractor. By adopting NuFlow’s trenchless technology, they’ve eliminated costly and disruptive excavation projects.

**“I was spending \$60-\$70k a year on subcontractors for tunneling jobs. Then I realized I could spend that money on lining equipment and keep that revenue in-house.”**

The shift to pipe lining has expanded their capabilities, allowing them to tackle larger commercial projects.

**“Now the team prefers lining. We’ve stopped tunneling and we rarely excavate anything. We’ve invested in more equipment that has opened a lot more jobs and larger commercial size projects.”**

NuFlow’s hands-on training and 24/7 support have been instrumental in their success.

**“NuFlow’s support and training are way ahead of the curve. At NuFlow, everyone wants you to get it right.”**



**Brent McDonald**  
Rub-A-Dub Plumbing  
Tyler, TX



**Grow with NuFlow. We Got You.**  
[www.nuflow.com](http://www.nuflow.com) | 866-430-2134

# CONTENTS

SEPTEMBER 2024

## 14 COVER STORY: LEVELING UP

Two brothers take over father's longtime business and significantly scale up, while still maintaining its customer-centric principles. // By Giles Lambertson

## FEATURES

### 28 PROFILE: THE ROOT OF THE PROBLEM

California root control specialists diversify service approach by heavily investing in robotics technology. // By Ken Wysocky

### 36 >> SPECIAL SECTION << TV/VIDEO INSPECTION & LOCATION DIRECTORY

## DEPARTMENTS

### 10 FROM THE EDITOR: ENDLESS GENEROSITY

The industry is full of companies not shy about using their skills to put some good out into the world. // By Kyle Rogers

### 12 @CLEANER.COM

Be sure to check out our exclusive online content.

### 24 MONEY MACHINES: DOWNSIZING

Tiny inspection camera easily navigates small-diameter pipe bends and traps for Michigan contractor. // By Ken Wysocky

### 42 TOUGH JOB: ORANGEBURG PIPE CRISIS

As the outdated pipe material is exceeding its service life expectancy, a West Virginia contractor is stepping up to provide its state an efficient pipe bursting solution. // By Beth Steele

### 46 BETTER BUSINESS: LET'S TALK

A step-by-step guide to navigating difficult conversations in both your business and personal lives. // By Kate Zabriskie

### 48 PRODUCT FOCUS: MAINLINE SEWER INSPECTION

// By Craig Mandli

### 56 CASE STUDIES: MAINLINE SEWER INSPECTION

// By Craig Mandli

### 58 PRODUCT NEWS

Spotlight: New nozzle size adds versatility to Reaper lineup. // By Craig Mandli

### 62 INDUSTRY NEWS



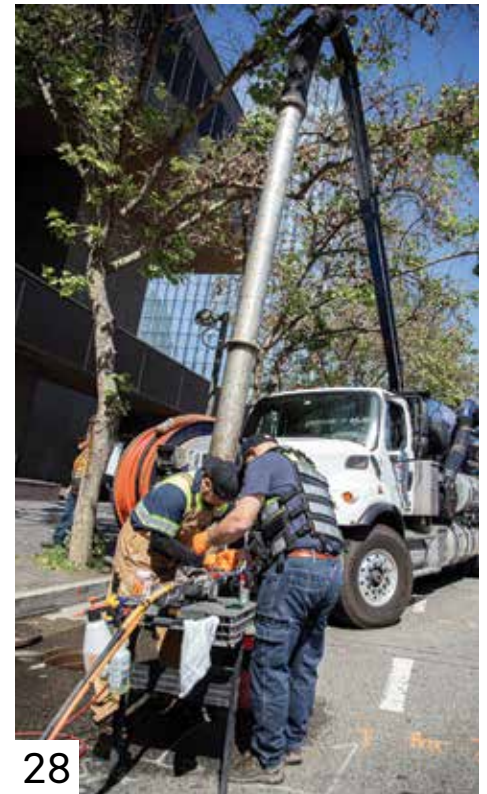
**ON THE COVER** // Pete Peterman launched Peterman Heating, Ventilation and Air Conditioning in 1986. Twenty-five years later, when son Chad joined the company, the firm employed 21 people and was firmly established as a dependable HVAC services provider. Two years following Chad's arrival, another son Tyler came aboard. Today, Chad and Tyler run the show under the name Peterman Brothers, and the company employs 520 people, operates from 10 locations in three states, and in addition to HVAC offers an array of plumbing, drain cleaning and electrical services. (Photography by Marc Leeryk)



42



24



28

coming next month: October 2024  
focus: Pipe Lining Methods and Projects

Profile: Peerless Plumbing, Phoenix, Arizona // Money Machines: UV-cured spot repair //  
Better Business: Inspiring employees

# THE CABLE CENTER • 1-800-257-7209



## CALL FOR USED EQUIPMENT

**\$665**



**MiniRooter Pro-Basic**  
No Cable, No Cutters.  
Call for complete kit availability.

**\$7400**



**SL-GXP-E Camera System**  
7" LCD; USB & Wi-Fi recording;  
GenPak Battery Pack for M-18 battery use  
(battery not included); Counter, Self-Leveling  
Color Camera Head, 200' of push rod.

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

# LET MACHINES HELP YOU PROCESS AND DETERMINE CRITICAL INFRASTRUCTURE

GraniteNet Software is the turn-key Cloud-based platform for public works condition assessment and proactive decision making!



## CUES CLOUD

GIS



ASSET MANAGEMENT



Sync data through the Internet to the Cloud



MANAGE OFFICE TASKS & EDIT INSPECTIONS



PERFORM & VIEW INSPECTIONS / REVIEW TASKS



FIELD INSPECTIONS



MOBILE INSPECTIONS

## AI & DEFECT CODING AS-A-SERVICE



All of your inspection data is available at your fingertips



Get Prescriptive suggestions about what to fix and which method to use

CUES Cloud...fusing AI and Cloud Computing for superior Asset Management!



800.327.7791 | salesinfo@cuesinc.com | www.cuesinc.com

Ask for a demo! <http://gnet.us.com>

3/4"



**NEW SIZE.**  
**MORE PIPES.**  
**BETTER COMPATIBILITY.**

**CUTS 6X FASTER, LASTS 2X LONGER,  
AND USES 6X LESS WATER THAN THE COMPETITION!**



EXPANDED REAPER LINE  
NOW IN 3/4"

BUILT FOR MUNICIPALITIES  
UTILIZING SMALLER TRUCKS/  
TRAILER UNITS































IDEAL FOR 4-10" PIPES



HEX INLET FOR EASIER INSTALLATION



WATCH VIDEO

# ADVERTISER INDEX

 NORTH AMERICA When Quality Matters	ITpipes, LLC.....26
A.R. North America, Inc.....25	J.M. McKinney Co.....27
 ALLAN J. COLEMAN SINCE 1981	Jagco Supply.....59
Allan J. Coleman Co.....22, 35	 Ken-Way Corporation.....26
American Jetter.....59	 LANSAS PRODUCTS Manufactured by Lansas & Sons Inc.
 ARIES	Lansas Mfg. by Vanderlans & Sons Inc.....30, 31
Aries Industries.....17	 MRP
 BLACKHAWK	Milwaukee Rubber Products, Inc.....54
Blackhawk Tech.....47	 minicam
 CAM SPRAY	Minicam Inc.....21
Cam Spray.....12	 MyTana
 WINNELSON COMPANY	MyTana LLC.....33
Central Oklahoma Winnelson.....55	 nuflow
 COAST MANUFACTURING	NuFlow Technologies.....3
Coast Manufacturing.....56	 PEARPOINT
Cua Claws for Resurfacing	Pearpoint Inc.....13
Camera Wheels.....59	 PICOTE
 CUES	Picote Solutions.....35
CUES, Inc.....6, 51	 Rattech
 DURACABLE	Rattech Electronics, Ltd.....44
Duracable Manufacturing Co....45	 ROOT RAT NOZZLES
Dynamic Repairs.....59	Root Rat.....61
 EASY-KLEEN PRESSURE SYSTEMS LTD. MANUFACTURER OF HIGH PRESSURE CLEANING EQUIPMENT	 SPARTAN TOOL
Easy-Kleen Pressure Systems Ltd.....59	Spartan Tool LLC.....back cover
 FORBEST	 Superior SMOKE Flaming & Gas Treatment
Forbest Products Co.....53	Superior Signal Company LLC.....59
 GapVax	 T&T TOOLS
GapVax, Inc.....63	T&T Tools, Inc.....55, 59
 General PIPE CLEANERS	 THE CABLE CENTER
General Pipe Cleaners, div. of General Wire Spring.....2	The Cable Center.....5, 61
 HotJet USA	TRIC Tools Inc.....59
HotJet USA.....59	 TROJAN WORLDWIDE INC.
Hydra-Flex, Inc.....7	TROJAN WORLDWIDE INC....53
Insight Vision, LLC.....19	TruGrit Traction Inc.....9
 IPP	
IPP Solutions, LLC.....11	

 TvbTech	WWETT Show.....57
TvbTech Co., Ltd.....41	<b>Classifieds</b> .....60-61
Vactor Manufacturing.....23	
 VIVAX METROTECH	
Vivax-Metrotech Corp.....39	

## 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](http://www.cleaner.com) | Email: [info@cleaner.com](mailto: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](http://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](mailto:holly.gensler@colepublishing.com).



CLASSIFIED ADVERTISING: Submit classified ads online at [www.cleaner.com/classifieds/place\\_ad](http://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](http://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](mailto:holly.gensler@colepublishing.com).

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

© 2024 COLE PUBLISHING INC.  
No part may be reproduced without permission of the publisher.

cleaner.com



# SEWER CRAWLER



## PARTS & MANHOLE TOOLS



TRACKS



CLEATS



WHEEL KITS



HUB ADAPTERS



WHEELS



MANHOLE TOOLS



PIGTAILS



TIRES

GRITTED WHEELS  
GRITTED TRACKS  
FIBERGLASS POLES  
PIGTAILS & MOTOR CABLES  
JETCAMS & MORE...



WE RESURFACE  
WORN STEEL WHEELS

WITH **NEW GRIT**

[www.trugrittraction.com](http://www.trugrittraction.com)  
407-900-1091





Email me with comments, questions or opinions at [editor@cleaner.com](mailto:editor@cleaner.com)

## ENDLESS GENEROSITY

The industry is full of companies not shy about using their skills to put some good out into the world

**T HIS INDUSTRY IS GENEROUS.** Examples of such efforts are on display with one of this month's profiled contractors, Peterman Brothers in Indianapolis. The story highlights the company's various customer-minded and charitable initiatives.

One program aims to ease the financial pain for homeowners who try to keep a heater or air conditioning unit operating only to be forced into investing in a new one when the fix doesn't do the job. The program lets the customer deduct the cost of the recent repair from the cost of a new unit. Through another program, each month Peterman Brothers repairs a unit — air conditioning, water heater, etc. — or installs a new unit in the home of a family or person facing hardship.

In fact, it was a charitable program that put Peterman Brothers on my radar as a potential profile in the first place. I saw a release in which the company was promoting the voting for its annual Charity Showdown. Peterman Brothers has a maintenance program and a portion of each service call for those program members is donated to charity. The public is able to select the four charities that will receive the proceeds through the Charity Showdown voting each March. Since 2020, it has generated over \$270,000 worth of donations.

Peterman Brothers isn't alone in this. Pennsylvania's Agentis Plumbing comes to mind as it was recently featured in sibling publication *Plumber*. Last year, owner Nate Agentis took a trip to Nicaragua with eight of his technicians to build houses. The mission was organized by a local church and the company donated \$10,000 toward the construction of two houses. The company had plans to take another similar mission trip this year.

Another generous company that has been featured in *Cleaner* and *Plumber* is T 'N G Plumbing in Minnesota. Since 2014, the company has had its Pay It Forward program in which it targets a person or family in need and provides them an array of home improvements, largely focused around bathroom plumbing work, although the projects have grown quite expansive over time. These days, totaling the material and labor donations, the projects often exceed six figures in value.

These are only a few examples. There are many in this industry who showcase their generosity in similar ways.

All of this is to simply say good job. I commend everyone in this industry who on occasion looks beyond the matters of revenue and expenses to give back for the sole purpose of giving back. It of course would be naive to think that there isn't some business benefit to being charitable. It creates a good public image that potentially draws people to want to do business with a company. But that is incidental, not the driving force. This sort of thing can't be faked. If a company is performing a charitable act, it is because they want to, plain and simple.

As Agentis said in the *Plumber* profile a few months ago, "There's more purpose to life than getting a paycheck on Fridays." Enjoy this month's issue. **c**

"You think that if you  
**KEEP HIRING MORE GUYS AND BUYING MORE TRUCKS,**  
you're going to make more money.  
But it doesn't always work out that way.  
**I WAS STRESSED OUT BEYOND BELIEF."**

**BOB BAKER**  
Baker Plumbing  
Calgary, Alberta



Read what **matters** to contractors in every issue of *Cleaner*.  
Subscribe for FREE at [cleaner.com](http://cleaner.com)

## GIVE US FEEDBACK!

We want to know your thoughts about *Cleaner*. What's your favorite section? How can we improve? Email us at [editor@cleaner.com](mailto:editor@cleaner.com).

# 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

**ipp**  
Solutions, LLC





# WORKING WELL UNDER PRESSURE

Building Drain and Sewer Equipment since 1981.

PRICES GOOD THROUGH OCTOBER 1ST OR WHILE QUANTITIES LAST

NEW



### 4008H Power Unit

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

Just Add A Tank! **\$12,719 plus freight**

### 3012H Power Unit

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

**\$13,159 plus freight**

### 4008H Compact Skid

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

(100 GALLON TANK) **\$14,129 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) **\$14,579 plus freight**

NEW



NEW



### RCJ4008H

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

(30 GALLON TANK) **\$8,539 plus freight**

NEW



### LJ4008H

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

(30 GALLON TANK) **\$8,399 plus freight**



### VM4008H

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

(130 GALLON TANK) **\$13,399 plus freight**



### VM3012H

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

(130 GALLON TANK) **\$13,899 plus freight**

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](http://www.camspray.com) | [sales@camspray.com](mailto:sales@camspray.com)

# @Cleaner.com

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



SCAN ME

## WEB SURFING

### Sharing the Best Content

We're always on the lookout for relevant and interesting plumbing and drain cleaning content across the internet and social media. In our e-newsletters, we regularly highlight that

and share what else out there we're reading and watching. For example, this story from NPR that looks at trench cave-in deaths over the past decade — an always important industry issue to keep top of mind. Be sure to sign up for *Cleaner* e-newsletters if you haven't already. >> [cleaner.com/featured](http://cleaner.com/featured)

## CHANGING TIMES

### Digital Documentation Revolutionizing Underground Construction

In the ever-changing landscape of underground construction, digital documentation has become an indispensable tool. From pre-job planning to comprehensive post-job reporting, the advantages are abundant. Cory Maker and Patrick Lyons from Subsite Electronics cover the topic more in this online exclusive. >> [cleaner.com/featured](http://cleaner.com/featured)



## OVERHEARD ONLINE

"Business books can be especially helpful for those who never went to business school and who may be figuring out entrepreneurship on the fly."

— 7 Business Books Worth Checking Out

>> [cleaner.com/featured](http://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](https://facebook.com/CleanerMag)



[twitter.com/CleanerMagazine](https://twitter.com/CleanerMagazine)

SIMPLE.



FAST.



PEARPOINT 

[www.pearpoint.com](http://www.pearpoint.com)

+800.688.8094

[pearpoint.sales.us@spx.com](mailto:pearpoint.sales.us@spx.com)

EASY.

# LEVELING UP

TWO BROTHERS TAKE OVER FATHER'S LONGTIME BUSINESS AND SIGNIFICANTLY SCALE UP WHILE STILL MAINTAINING ITS CUSTOMER-CENTRIC PRINCIPLES

// By Giles Lambertson



## CALL IT AMBITION OR ENERGY, OR MAYBE

a willingness to embrace change. Whatever the reason, family companies under the leadership of a second generation often experience expansion that outstrips the performance of the startup generation. It's as if the first generation lays the foundation and the second builds on it.

"Our father didn't ever want to grow the company," says Chad Peterman, president and CEO of Peterman Brothers, an HVAC, plumbing, drain cleaning and electrical services company in Indianapolis.

Not so for Peterman and brother Tyler.

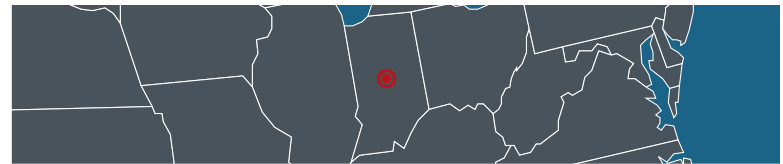
"My brother and I had a vision for creating a large company," he says. "We brought that vision to the company, set out to learn as much as we could from industry peers, and assembled a really good team that shares our vision."

## SET UP FOR SUCCESS

Pete Peterman launched Peterman Heating, Ventilation and Air Conditioning in 1986. Twenty-five years later, when son Chad joined the company, the firm employed 21 people and was firmly established as a dependable HVAC services provider. Two years following Chad's arrival, Tyler came aboard after graduating from college and teamed up with his brother as vice president of

« Tyler and Chad Peterman run the company their father started in 1986 as solely an HVAC company. Today the company also offers plumbing, drain cleaning and electrical services.

✓ Tyler Peterman operates a John Deere mini excavator while laying pipe on a job site alongside employees Tristin Seers and Layne Pulliam.



## Peterman Brothers

INDIANAPOLIS, INDIANA

**OWNERS** Chad and Tyler Peterman

**FOUNDED** 1986

**EMPLOYEES** 520

**SERVICES** Residential HVAC, plumbing, drain cleaning and electrical

**SERVICE AREA** Indiana and parts of Kentucky and Ohio

**WEBSITE** petermanhvac.com

operations. At that point, the company was poised to take a great leap forward.

Today, Peterman Brothers — the name was changed in 2021 — employs 520 people, operates from 10 locations in three states and cleared \$103 million in annual revenue last year, with the expectation of increasing that to \$115-120 million in 2024. Shops are located in Columbus, Bloomington, Lafayette, Muncie, South Bend, Fort Wayne and Indianapolis in Indiana, Lancaster and Mount Vernon in Ohio, and Louisville, Kentucky.

Chad Peterman credits his father with creating a successful business paradigm.

“Our formula for success has been simple: Peterman Brothers is committed to providing the highest level of customer service,” Peterman says. “That was Dad’s focus when he founded the company, and it will remain our focus in the years ahead.”

### COMPLETE HOME SOLUTIONS

Expansion has occurred on several fronts, beginning with services provided. Peterman was asked why plumbing was added to the company’s existing HVAC offerings in

2013 and electrical in 2021. He says it was a combination of entrepreneurial initiative and customer demand.

“Any entrepreneur wants to provide what the customer wants and wants to know how the customer can be better helped,” Peterman says. “On numerous occasions, we already were in a customer’s house on an HVAC call and our tech would be asked, ‘Can you also fix my water heater or my toilet?’ As more and more customers asked for additional service help, we saw there was a need and moved to meet it. Our hope now is that our customers will call on us for whatever home service needs they have.”

The original HVAC service lineup still constitutes some

## SHARING SUCCESS STORIES

Peterman Brothers is big on enabling employees to do their best work. Chad Peterman, president and CEO, has even written a book about it — *The Empowerment Project: Grow Your People, Grow Your Business*. It was released in April.

Peterman says the concept became very clear to him when he and his brother took over their father's business.

"My brother and I came from outside the industry at an early age," he says. "We had to trust others who knew how to do the trade work. Empowerment of our people became a core belief for us."

The attitude mushroomed thereafter.

"As we saw it work, we leaned into it more and more, empowering others to come up with new ideas and to implement them," Peterman says.

Some of the guidelines for empowerment that Peterman espouses in the book include giving employees authority, training them thoroughly and consistently, and emphasizing that mistakes made are opportunities for growth.

Thus empowered — that is, given incentive to take ownership of their performance — employees become more partners than order-takers and begin to prioritize looking after customers. The upshot is that the company grows on the strength of customer satisfaction.

Peterman also authored an earlier book, *You Can't Stop the Growth — How to Build a Culture that Takes Care of Your Customers*. Both books reflect his personal experiences in his company.

"In each book, I incorporate stories from the business, tell of some of the accomplishments of our people and accolades earned by them," Peterman says. "As we get bigger, there will be fewer opportunities for interaction with them. The books are a way for them to understand what we as a company are about and what we believe."



Tristin Seers attaches sections of pipe while Tyler Peterman looks on.

65% of Peterman Brothers service calls, but the newer offerings are gaining momentum.

"Plumbing probably is the second biggest part of the business and then electrical, but electrical has a lot of runway and is likely to take off and catch plumbing in the near future," Peterman says.

With a swelling of services, the company necessarily had to expand its lineup of technicians. To its team of HVAC techs, it added skilled plumbers and drain cleaning technicians as well as electricians. Peterman says all team members are specialists in their respective service area. They are not cross-trained to do a variety of repair work.

"When an HVAC tech is on a service call and a customer says they also have

an issue with a plugged drain, we send a different technician for the second issue," he says.

However inefficient that might seem, it ensures that a customer is being given the highest level of expert service rather than a generic handyman version, Peterman explains.

Peterman Brothers exclusively serves residential customers.

"We used to do a lot of commercial work, but residential and commercial are two very different things. As it relates to our company culture and vision, our desire is to serve homeowners," Peterman says.

The shift away from commercial accounts began in 2015, and the transition to homeowners-only was completed two years ago.

"OUR FORMULA FOR SUCCESS HAS BEEN SIMPLE: PETERMAN BROTHERS IS COMMITTED TO PROVIDING THE HIGHEST LEVEL OF CUSTOMER SERVICE. THAT WAS DAD'S FOCUS WHEN HE FOUNDED THE COMPANY, AND IT WILL REMAIN OUR FOCUS IN THE YEARS AHEAD."

CHAD PETERMAN



» Tyler Peterman joined the family business in 2013, while brother Chad joined a couple years prior.

## EQUIPPED TO WORK

The growing ranks of specialty service technicians of one kind or another means that equipment yards are crowded with more service vehicles.

“We have about 400 service trucks and vans of all shapes and sizes,” Peterman says.

Each vehicle sports the bearded and smiling visages of the two Peterman brothers.

Inside or trailered behind the various service vehicles are venerable brands of equipment, such as Spartan jettors for clearing drainlines, RIDGID and Spartan cameras for video inspections, and Deere excavators to open trenches for repair or replacement of sewer lines.

The company also offers trenchless repair using HammerHead pipe bursting technology. While Peterman Brothers will install whatever brand of water heater desired by a customer, mostly they deal in Bradford White and State Water Heaters.

## HOMEGROWN WORKFORCE

Fast-growing companies like Peterman Brothers sometimes have difficulty staffing their service teams and keeping employees current in service and installation knowledge. In a word, training can be an issue.

Peterman Brothers has attempted to address both training and recruitment challenges by establishing its Top Tech Academy, located on 10 acres on the south side of Indianapolis. The learning center’s 80,000 square feet includes a 5,000-square-foot laboratory.

“That lab is complete with just about anything our techs are going to see in the field,” Peterman says.

It serves two working populations. The academy’s recruiter brings in newbies and introduces them to one of the four areas of service work, thus swelling the ranks of tradespeople at a time when the industry is seeking a new generation of skilled labor.

The facility is also used to keep Peterman Brothers technicians up to date on their skill sets.

“We use the academy to level up our techs, as we call it, to let them refine their skills. The more they know, the better,” Peterman says.



## PIPELINE INSPECTION SYSTEMS



### Complete mainline inspections with unmatched accuracy & efficiency

- ✓ Detailed HD video capture
- ✓ Fits 6"-48" mainlines
- ✓ Instantaneous crawler & camera response
- ✓ Easy operation

Questions about  
Voyager™ HD  
Inspection System?  
**Let's Talk**  
800-234-7205

# ARIES

Waukesha, WI 53186 USA 800-234-7205 [ariesindustries.com](http://ariesindustries.com)

**raising the bar UNDERGROUND**





« Layne Pullium levels a section of pipe while Tyler Peterman operates the John Deere mini excavator.

» Tristin Seers helps install pipe on a job. Peterman Brothers keeps its employees well-trained. One way is through its Top Tech Academy, which includes a 5,000-square-foot laboratory complete with nearly anything techs will encounter out in the field.

“WE USE THE ACADEMY TO LEVEL UP OUR TECHS ... TO LET THEM REFINE THEIR SKILLS. THE MORE THEY KNOW, THE BETTER.”

CHAD PETERMAN

Top Tech students just entering the trades can apply to work with Peterman Brothers while they are still taking coursework. Tuition can be payroll-deducted in small increments. Some of the courses are completed in as few as four months.

“Training is a huge part of what we do,” Peterman says. “We curate training both on the process and leadership side and on the technical side.”

### COMMUNITY-MINDED

Peterman Brothers offers an assortment of customer-centric programs that address various specific issues. Its Repair-Refund program, for example, tries to ease the financial pain for homeowners who make a last-ditch effort to keep a heater or air conditioning unit operating only to turn around and have to invest in a new one when the fix doesn't do the job. The program lets the customer deduct the cost of the recent repair from the cost of a new unit.

“We hope not to use it a lot,” acknowledges Peterman, “but we don't want our customers to have to throw good money after bad.”

The Peterman Protection Club is a maintenance program that helps to educate homeowners about their in-the-home equipment. As an incentive, the program also gives members priority service when something breaks.

“Because the breaks always come when we expect them the least. We want to give customers something they can rely on,” Peterman says.

CONTINUED >>



# THE FUTURE IS IN SIGHT



**Traveler Lite**  
COMPACT, BUDGET FRIENDLY



**Opticam**   
MODULAR PUSH CAMERA



**Iris**   
COMPACT MAINLINE CRAWLER



**RIEZLER**  
Authorized Distributor

 Proudly Made in the USA



600 N Dekora Woods Blvd  
Saukville, WI 53080

Shop Online [GoInsightVision.com](http://GoInsightVision.com)  
or By Phone (800) 488-8177

**WOMEN**  
OWNED



« Peterman Brothers maintains a large fleet of about 400 service vehicles.

» Tristin Seers prepares to level two sections of pipe held in place by Layne Pulliam.



“I SUPPOSE THERE IS SOME BUSINESS THAT IS GAINED BY (OUR CHARITABLE PROGRAMS), BUT FOR ME IT IS ABOUT OUR RELATIONSHIP WITH CUSTOMERS. IT GIVES US AN OPPORTUNITY TO GO OUT AND HELP THOSE IN NEED.”

**CHAD PETERMAN**

It is a popular program, with 30,500 members, and features an underlying charitable element: A portion of each repair call to members is donated to one of four local charities, with members given an opportunity to help select the charities.

And then there is the Peterman Cares program, which is outright charitable in character. It is a means of donating service or equipment to people in need. Each month, Peterman Brothers repairs a unit — air conditioning, furnace, water heater, whatever — or installs a new unit in the home of a family or person facing hardship and nominated for the service.

“We have had a little of everything. People down on their luck. Someone with health issues, or who lost a job. It is cool to see our guys doing the work and the gratitude the customer shows,” Peterman says.

Could the program boomerang on the company, with people taking advantage of the generosity?

“If we get taken advantage of, we still will have helped a lot of people along the way,” Peterman says.

The acts of kindness are not one-of-a-kind. Other companies have similar programs. However, the extent to which Peterman Brothers reaches out is notable. Why do it?

“It is good for the community,” Peterman says. “I suppose there is some business that is gained by it, but for me it is about our relationship with customers. It gives us an opportunity to go out and help those in need.”

## BRIGHT FUTURE

Where does Peterman envision the company being in, say, 25 years?

“I hope I’ll be retired by then,” Peterman says, laughing. He adds that in the next decade or two he wants the company to establish additional offices in other cities and other states — and to do so without losing its customer-centric character.

“It will be tougher, but I hope as we get bigger, we still can be a company whose customers know that when our techs are in their homes, they are our No. 1 priority.” **c**

## FEATURED EQUIPMENT

**BRADFORD WHITE  
WATER HEATERS**  
215-641-9400  
www.bradfordwhite.com

**HAMMERHEAD TRENCHLESS**  
800-331-6653  
www.hammerheadtrenchless.com

**JOHN DEERE**  
800-503-3373  
www.johndeere.com

**RIDGID**  
800-474-3443  
www.ridgid.com

**SPARTAN TOOL LLC**  
800-435-3866  
www.spartantool.com  
(See ad page back cover)

**STATE WATER HEATERS**  
800-365-8170  
www.statewaterheaters.com

# Tired of waiting weeks for your camera repairs?



## SERVICE & SUPPORT

Experience the Difference

### AVAILABLE SERVICES

- Re-terminations of Rods and Cables
- Full Camera Rebuilds and Repairs
- Off the Shelf Spares Requests of Chargers, Skids, Lowering Ropes etc
- Full Proteus Services of Crawler, Camera, CCU, Cable
- CCU Software Updates
- PCB Replacements
- Fault Finding

Minicam provides services at 6 or 12 monthly intervals based on the usage of the tractor systems. With Minicam's **FAST** turnaround, we will get you back up and running sooner.

### LOCATIONS

#### MIDWEST SERVICE CENTER

12600 Newburgh Road, Livonia, MI, 48150

**Phone:** (734) 744 5557

#### NEW ENGLAND SERVICE CENTER

1 Industrial Way, Unit 2, Tynsborough, MA, 01879

**Phone:** (978) 643 0397

#### FLORIDA SERVICE CENTER

2332 Old Combee Rd, Suite 107, Lakeland, FL, 33805

**Phone:** (863) 345 7303

#### CALIFORNIA SERVICE CENTER

703 W. Anaheim Street, Long Beach, CA, 90813

**Phone:** (562) 620 3574

# 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

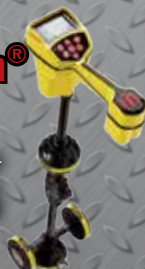
### **NaviTrack® Scout®**

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.



### **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.



### **FLEXSHAFT, K9-306**

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



### **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

**We Have RIDGID Parts!**



**Buy Online at**  
**AllanJColeman.com**

**Authorized SeeSnake Repair Center**  
**THE BEST SERVICE AND FAST TURN AROUND!**

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

# VACTOR®



## A WINNING LINEUP



**Multiple products & configurations**



**IntuiTouch technology**

all cleaning functions are in a single control panel



**Comprehensive Service Support**

National authorized dealer network



**OEM parts and options available**

**For Any Application.** Municipalities and contractors, stormwater management, treatment plants, lift stations, underground utilities— there's a Vactor for your job. And over 100 years of engineering, manufacturing and technical know-how go into each vehicle. Backed by service excellence and the support of the industry's strongest dealer network, we uphold the Vactor promise every day – to be there for the life of your machine.

**intuitive. intelligent. innovative.**



Have questions on equipment or applications?

**ASK OUR EXPERTS**



© 2023 Vactor Manufacturing

## Downsizing

Tiny inspection camera easily navigates small-diameter pipe bends and traps for Michigan contractor // By Ken Wysocky

**T**RYING TO DIAGNOSE problems in small-diameter pipes with lots of bends used to be mission impossible for Robbie Roncelli, general manager of Roncelli & Sons Plumbing, based in the northern Detroit suburb of Romeo.

But courtesy of the MiniFlex inspection camera from Camtronics, working on small-diameter pipes is easy now — as well as more productive and profitable — for Roncelli. His father, Ronald, owns the company.

“Before we bought the MiniFlex, we never could get a camera down, say, a 1 1/2-inch-diameter pipe with bends,” Roncelli says. “We had one camera that we could finesse through a 2-inch straight line, but then it would get stuck in a bend and you’d have to dig it out. And that might be under somebody’s kitchen floor, for example.”

Instead, Roncelli had to resort to the old tried-and-true methods, like pulling toilets or using cleanouts to access drainlines. The latter isn’t always a great option in Detroit, where the housing stock is old and cleanouts often have brass caps that strip or break easily, he explains.

“Then you have to cut them off and rework a new one, which takes more time and adds to the cost for customers,” Roncelli says.

Or he would work blind without knowing what was causing clogs.

“It’s absolutely frustrating when you don’t know what the problem is because you don’t know what’s the right tool to use to get the line flowing again,” Roncelli says. “If I can’t get my eyeballs on your kitchen drainline or shower branch line, how do I know what’s going on? It left us shooting in the dark and that also caused problems for customers because it costs a lot of money to replace a whole kitchen line that’s in a concrete slab floor, for instance, compared to just cleaning it.”

### VIP DRAINLINE ACCESS

The MiniFlex, which Roncelli purchased through Fiberscope.net, a North American distributor and repair center for

## RONCELLI & SONS PLUMBING

ROMEO, MICHIGAN

**OWNER** Ronald Roncelli

**MACHINE** MiniFlex pipeline inspection camera system from Camtronics

**FUNCTION** Cleaning 1 1/2- to 4-inch-diameter pipes while navigating 90-degree bends and P-traps

**FEATURES** High-resolution, 5.6-inch color monitor; standard 50 or 131 feet of cable; built-in 512 Hz sonde; a sapphire-glass, spherical-shaped camera head with 105-degree diagonal viewing capability; a stainless steel camera head housing; 12 LED lights; on-screen footage counter; operates for seven hours on a full charge; flexi-tube camera neck; weighs less than 19 pounds; measures about 15 1/2 inches wide by 18 1/2 inches tall and slightly more than 4 inches deep.

**COST** About \$5,000

**WEBSITE** [www.roncelliplumbing.com](http://www.roncelliplumbing.com)

Netherlands-based Camtronics, eliminates those pain points.

“The beautiful thing is that it can go through kitchen and bathroom sink lines, shower lines — even a toilet P-trap,” Roncelli explains. “I don’t have to pull toilets anymore, which is incredible. We can put the MiniFlex down a sink and inspect the entire main right out to the mainline.”

Furthermore, the MiniFlex is light, compact and portable, which makes it easy to stow in a service vehicle and carry.

“A lot of our other cameras weigh 60 to 70 pounds, which takes a toll on employees if you have to walk through a large parking lot at a shopping mall, for instance,” Roncelli says.

The unit weighs less than 19 pounds and measures about 15



» Robbie Roncelli, general manager of Roncelli & Sons Plumbing, left, with drain technicians Mike Vultagio and Skip Roncelli pose near one of the company work vans with MiniFlex pipeline inspection camera systems.



1/2 inches wide by 18 1/2 inches tall and slightly more than 4 inches deep.

The unit also provides a less tangible but equally important function by differentiating the company from competitors, Roncelli notes.

“I’ve never had a customer tell me another plumber had inspected their smaller lines with a camera,” he says. “So the MiniFlex brings us out on top because we can do things other plumbers can’t. The MiniFlex really shines in smaller lines, especially galvanized, copper or cast iron pipes, which are notorious for getting heavier build-up than PVC pipes.”

### VERSATILE TECHNOLOGY

Roncelli also likes how the small unit’s modular design is packed with features normally not available at a price point of around \$5,000.

“A lot of smaller cameras are like toys compared to this one,” he says.

The battery-powered unit, which can operate for seven hours on a full charge, features a high-resolution, 5.6-inch color monitor; 50 feet of push cable (65-, 98- and 131-foot cables also available); a built-in 512 Hz sonde; 12 LED lights; a sapphire-glass, color



## RTX SERIES PLUNGER PUMPS



### RTX INDUSTRIAL PUMPS

1450 N version 30x80mm solid shaft.  
8-40 GPM at 1500-4350 PSI ratings.  
*Note: Available in 1750 RPM.*



### RTX HYDRAULIC DRIVE PUMPS

Available in 44C-F50 flange & 90C-F54 flange.  
44C-F50 8-24 GPM at 1750-4350 PSI ratings.  
90C-F54 8-40 GPM at 1450-7250 PSI ratings.



### RTX STAINLESS STEEL PUMPS

1450 N version 30mm solid shaft.  
RTX-SS-100.100N 26 GPM at 15000 PSI.  
RTX-SS30.500 8 GPM at 7250 PSI.  
*Note: Available in 1750 RPM.*

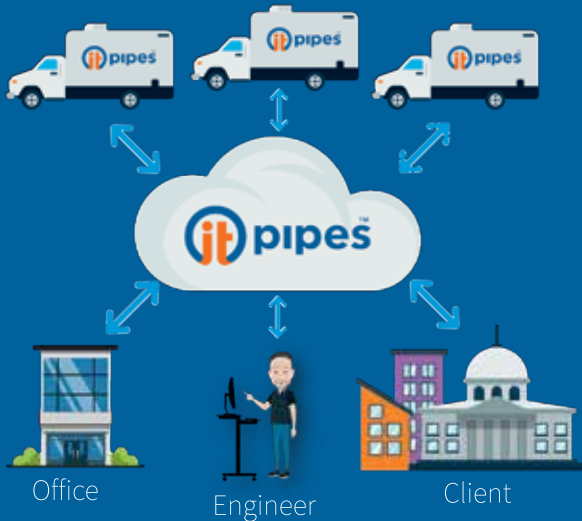


**A.R. North America Inc.**  
140 - 81st Avenue Northeast, Fridley, MN USA 55432  
TEL: +1.800.893.4235 | FAX: +1.800.331.2762  
www.arnorthamerica.com | info@arnorthamerica.com





Pipe Inspections.  
Expedited Workflow.



- Assign
- Review
- Organize
- Deliver

Instantly, from anywhere

[www.itpipes.com](http://www.itpipes.com)

## MONEY MACHINES

“I DON’T HAVE TO PULL TOILETS ANYMORE, WHICH IS INCREDIBLE. WE CAN PUT THE MINIFLEX DOWN A SINK AND INSPECT THE ENTIRE MAIN RIGHT OUT TO THE MAINLINE.”

ROBBIE RONCELLI

camera head with 105-degree, wide-angle view; a stainless steel camera head housing; and an onscreen footage counter.

Videos can be downloaded onto an SD storage card for customers, Roncelli adds.

The unit’s “secret sauce” is a flexible camera neck that allows it to negotiate tight bends, including multiple 90-degree bends in 1 1/2-inch-diameter pipes and P-traps in 1 1/4-inch-diameter pipes.

“We had one job where a plumber ran PVC pipes like spaghetti noodles,” Roncelli recalls. “I could not believe the amount of 90-degree fittings, including a ‘street 90’ plugged right into a regular 90-degree fitting. I don’t know of another camera that would’ve gotten through all that. The camera head is incredibly flexible.”

### SEEING IS BELIEVING

Roncelli first heard about the MiniFlex several years ago at the WWETT Show in Indianapolis. Was he skeptical?

“Absolutely,” he says. “We’d been down this path before with many other sewer cameras.”

But after buying one MiniFlex and using it for several months, Roncelli bought three more.

“There’s now a MiniFlex on each of our service trucks,” he says, noting his company, which employs five people, serves the northern metropolitan Detroit area and focuses primarily on trenchless sewer line rehabilitation along with service and repair plumbing.

“These cameras not only help us make more money, but they help us make more money faster,” he explains. “If I can find a blockage faster and avoid cutting any sink fittings or pulling a toilet, for example, I can give customers a quote faster and get to work faster. And if they don’t want me to do the work, I haven’t wasted a lot of time and can get on to the next job and start making money.”

Knowing the condition of pipes before work begins makes for happy customers — and a successful business, Roncelli adds.

“It’s a game-changer, for sure,” he says. “It saves us a lot of time and saves customers a lot of money. It’s definitely a win-win.”

## 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



### 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](http://www.ken-way.com) • E-mail: [info@ken-way.com](mailto:info@ken-way.com)



**SEWER AND DRAIN  
CLEANING EQUIPMENT**  
[www.jmmckinneyco.com](http://www.jmmckinneyco.com)

**CALL  
(800) 821-7275**

# Superior Image Quality, SUPERIOR RESULTS.

See it all with **RIDGID**



**CS12X Monitor**



Standard SeeSnake Camera



Mini SeeSnake Camera



SR-20 Locator



Scout Locator



CS6X VERSA SeeSnake  
Monitor w/ Wi-Fi



C40 Camera System



M40 Camera System



Micro Drain



MicroReel



Nano Reel

**Main Office**

12710 Yukon Ave.  
Hawthorne, CA 90250  
(800) 821-7275

**Valley Office**

14624 Titus St.  
Panorama City, CA 91402  
(818) 786 - 2527

**San Diego  
Mobile Office**

(661) 312-7809

**Santa Barbara/  
Ventura Mobile  
Office**

(818) 262-6284

**So Cal Outside  
Sales Rep**

(213) 400-4586

# THE ROOT OF THE PROBLEM



CALIFORNIA ROOT CONTROL SPECIALISTS DIVERSIFY SERVICE APPROACH BY HEAVILY INVESTING IN ROBOTICS TECHNOLOGY

// By Ken Wysocky

Scott Gayman learned a valuable lesson in entrepreneurship from his grandfather and father that can be summed up in four words: Nothing ventured, nothing gained.

Gayman's late grandfather, Fred Horne, for example, spent years working with researchers at the University of California-Davis in the late 1960s and early 1970s to develop a product that slows down tree-root growth inside sewers without harming the trees.

In 1979, Gayman's late father, Richard, left a steady job with a nationally known sewer cleaning company and started Pacific Sewer Maintenance using his father's root control product. The business, based in Glendale, California, also pioneered the use of water jetters and pipeline inspection cameras in the sewer cleaning industry in the late 1970s and early 1980s.

After assuming co-ownership of Pacific Sewer Maintenance around 2008, Gayman himself ripped a page from the family's entrepreneurial playbook and invested about \$140,000 in a robotic cutting machine from Sewer Robotics (a brand owned by ID-TEC in the Netherlands) and an ultra-high-pressure, hydro-blasting pump from High Pressure Pumps (HPP, a brand owned by PTC), thus diversifying Pacific Sewer Maintenance's services.

**Pacific Sewer Maintenance**  
GLENDALE, CALIFORNIA

<b>OWNERS</b>	Scott Gayman and Victoria Volmer
<b>FOUNDED</b>	1979
<b>EMPLOYEES</b>	10
<b>SERVICES</b>	Root control, pipe obstruction removal
<b>SERVICE AREA</b>	West Coast for robotics, nationwide for root control
<b>WEBSITE</b>	pacificsewer.net

"I saw a wide market for the technology," says Gayman, 57, the company's CEO. "I'm very pro-robotics, simply because I see it as the next step in maintaining sewer lines. I looked at it as a way to cut out difficult tangles of roots in pipes, which are harder to treat with the foam chemical. We wanted to make sure jobs were done 100% of the time without failure and saw this as a way to make that happen."

But when he traveled to Europe to get training from Sewer Robotics, Gayman saw his vision was too narrow.

» The beginnings of what became Pacific Sewer Maintenance started with Scott Gayman's late grandfather, Fred Horne, and work he did in the 1960s and 1970s developing a root control product.



He learned that the machine could be used in more applications than he initially envisioned, particularly for removing pipeline obstructions.

“I realized we could solve a lot of the problems municipalities face,” he explains. “They were spending a lot of money digging up [obstructed] pipes when they didn’t have to.”

### TECH INVESTMENTS PAY DIVIDENDS

Keeping up with technological investments has been “massively important” to the company’s growth, Gayman says.

For example, Pacific Sewer Maintenance has purchased a total of four robotic cutting machines from Sewer Robotics: one WJ125 module, carried on an R-125 wheeled crawler, and three WJ180 units mounted on R-160 wheeled crawlers. The company also has invested in three ultra-high-pressure water pumps from HPP (they generate either 15,000 psi at 7 gpm or 40,000 psi at 12 gpm); the pumps supply the water for precision jetting/cutting. (The robotic cutters come with a variety of detachable heads for mechanical cutting and water blasting.)

In short, those investments dramatically improved the company’s fortunes, Gayman says.

“I’M VERY PRO-ROBOTICS, SIMPLY BECAUSE I SEE IT AS THE NEXT STEP IN MAINTAINING SEWER LINES. ...

WE WANTED TO MAKE SURE JOBS WERE DONE 100% OF THE TIME WITHOUT FAILURE AND SAW THIS AS A WAY TO MAKE THAT HAPPEN.”

SCOTT GAYMAN

For starters, it spurred Gayman to think about how other advanced technologies could make his root control operations — which already were very successful, with more than 50 million feet of sewer lines treated — even more productive and profitable.

“We were a very traditional company before we bought robotic systems,” he says. “We used very traditional equipment. But after we bought the robotic equipment, I realized how I was holding us back by using the same equipment and processes we always had used.”

For example, Gayman started investing in advanced, more efficient pumps and motors for foam-spraying equipment.



« When Gayman assumed ownership of the company, he started heavily investing in robotics technology. "I looked at it as a way to cut out difficult tangles of roots in pipes, which are harder to treat with the foam chemical," he says.

"The new pumps, for instance, use less energy and are easier to work on and are more functional in the field," he says.

Of course, there's an initial upfront cost for those investments. But they pay dividends down the line by saving the company "considerable amounts of money," Gayman says.

More advanced pumps in foaming systems that used to cost, say, \$5,000 to rebuild or replace now cost about \$800 to rebuild, he says.

### BRANCHING OUT

Part of this knowledge came from branching out and talking to businesspeople outside the sewer industry — companies that spray pesticides, for instance, Gayman says.

**Lansas<sup>®</sup> PRODUCTS**  
Manufactured by Vanderlans & Sons, Inc.



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

“A SINGULAR FOCUS ON JUST ONE SERVICE RESULTS IN YOU ENDING UP WITH NOTHING DURING AN ECONOMIC DOWNTURN. THAT’S WHEN WE GOT INTO ROBOTICS. WE REALIZED WE NEEDED MORE.”

SCOTT GAYMAN

“They told me I was using equipment they used to use in the 1980s,” he says. “I came to the conclusion that these foaming components could be more functional, smaller, more effective [for foaming] and cheaper to run.”

The recession of 2008 and 2009 also played a role in the company’s diversification efforts when about 90% of Pacific Sewer Maintenance’s root control business disappeared in only two months.

“I realized at that point that I was woefully unprepared to deal with that kind of business slow down,” Gayman says. “A singular focus on just one service results in you ending up with nothing during an economic downturn. That’s when we got into robotics. We realized we needed more.”

Root control contracts currently generate about 70% of the company’s revenue while the balance comes from removing pipe obstructions, though the percentages vary year to year, Gayman says.



▲ Pacific Sewer Maintenance has four robotic cutting machines from Sewer Robotics: one WJ125 module, carried on an R-125 wheeled crawler, and three WJ180 units mounted on R-160 wheeled crawlers.

## PIPE PLUGS & PIPELINE TESTING EQUIPMENT



NUCA  
We Dig America



Lodi, California  
800.452.4902 • 209.334.4115

[www.lansas.com](http://www.lansas.com)

LODI • ATLANTA • HOUSTON • CHICAGO



➤ Root control contracts currently generate about 70% of Pacific Sewer Maintenance's revenue while the balance comes from removing pipe obstructions.

Because much of the root control work is centered on long-term contracts, it's a steady revenue generator. For instance, Pacific Sewer Maintenance has been foaming 2.5 million feet of sewer lines in Los Angeles for 11 years.

"Every two years, we return to the same section of pipe we've already treated and start over again," Gayman says. "We're also fortunate because very few companies do this kind of work."

### DEEP INDUSTRY ROOTS

Pacific Sewer Maintenance likely wouldn't exist if not for Horne's inquisitive and innovative nature, which led to his collaboration with UC Davis.

"His big contribution to the process was putting the product into a foam, so users wouldn't have to flood an entire sewer pipe with massive amounts of a chemical," Gayman says. "He had no chemistry background, but was just an all-around brilliant guy."

Horne eventually figured out how to couple an herbicide spray rig with an air compressor, which blew air into the chemical mixture and turned it into foam. He sold the product, which is called Vaporooter, through a business he owned called Arrigation Engineering.

Years later, Gayman entered the sewer cleaning industry by default after working for his father during summers and occasionally on weekends since he was about 15 years old.

CONTINUED >>

## FREE BUSINESS EDUCATION

After co-owning Pacific Sewer Maintenance for several years, Scott Gayman came to a realization that confronts many small-business owners: While he was very adept at his craft, he wasn't nearly as skilled at the business of running a business for maximum efficiency and profitability.

So when Gayman heard about a free course for small-business owners offered by Goldman Sachs called 10,000 Small Businesses, he jumped at the opportunity.

By doing so, Gayman significantly improved at the company, which specializes in controlling root growth in sewers as well as removing obstructions in sewers with high-tech robotic equipment. For example, revenue growth hit 20% last year compared to around 2% in years past, with another 10% increase expected in 2024, according to Gayman.

The course teaches many business fundamentals and is funded by the Goldman Sachs Foundation. It's based on a curriculum developed by Babson College, a top-ranked college for entrepreneurship.

The course is open to any small-business owner, but not everyone gets accepted. People need to apply and then be interviewed. The classes are held one full day a week, either in-person or remotely, for three months, with about 10 hours of homework a week, Gayman says.

"Even though I grew up in the business, I didn't really know much about the business side of it," he says. "This course basically gave me \$15,000-worth of free business education. It has massively improved our marketing efforts and provided me with a better understanding of finances and all the kinds of other things that were outside the operations side of running the business."

After Gayman completed the class, Pacific Sewer Maintenance leaders immediately started to develop a growth strategy, which is a major emphasis in the curriculum. Pacific Sewer Maintenance also hired a firm to update the company's website and its marketing plan, including the design of a new logo.

"We basically began to update and make changes to everything, from our logo to our cost-analysis process," Gayman explains. "I began to focus on the principle of working on the business, not in the business. I was lucky to get into the course. It is a truly challenging and thought-provoking course for business owners looking to grow."





## MS11-NG2 Inspection System

- Clear imagery for 3"-6" lines
- Wireless streaming
- Field replaceable push-rod
- Long battery life



## MS11+ Combo Kit

Interchangeable mini camera head to inspect 1½"-2" lines

# RELIABLE PERFORMANCE.

Trust MyTana's rugged cameras, flexible shaft cleaner, cable machines and jetters to deliver high performance to tackle any job. Our legendary service and support teams give you the power to stay productive.

[www.MyTana.com](http://www.MyTana.com) ■ (866) 948-7576

Financing available, visit [mytana.com/leasing-information](http://mytana.com/leasing-information)  
MyTana LLC 746 Selby Avenue St. Paul, MN 55104 | email: [mytana@idexcorp.com](mailto:mytana@idexcorp.com)





» Pacific Sewer Maintenance is building out a second truck and concentrating on educating potential customers about its robotic cutting capabilities through a marketing campaign.



His job: mapping the cities' sewer systems, he says.

Gayman's father owned Pacific Sewer Maintenance with his two brothers. The brothers sold their interest in the company to Gayman around 2008.

### GROWTH MODE

Looking ahead, Gayman says the company is ready for a growth spurt.

"We've been small for a long time," he says. "It's time to grow. But we're going to be very judicious about it. We don't want to be slapdash about how we grow. Most of our root control work is in Los Angeles, but we're building a

"I like to say my dad gave me two options when I came of age — work for him or work for him," Gayman quips. "College was not in the cards."

After graduating from high school, Gayman worked for several different employers, but kept going back to Pacific Sewer Maintenance to help his father when needed.

foundation and are ready to expand geographically."

Gayman's brother, Todd, who also did root control work, recently retired and Gayman bought his equipment. That positions the company to keep servicing customers in Northern California and Oregon, he says.

"WE'VE BEEN SMALL FOR A LONG TIME. IT'S TIME TO GROW. BUT WE'RE GOING TO BE VERY JUDICIOUS ABOUT IT. WE DON'T WANT TO BE SLAP-DASH ABOUT HOW WE GROW."

SCOTT GAYMAN

"That eventually morphed into working for him full time," he says.

At one point in the late 1980s and early 1990s, Gayman spent four years in Egypt as part of a \$727 million U.S. Agency for International Development project to improve wastewater collection in three cities along the Nile River.

» Pacific Sewer Maintenance currently has 10 employees but is looking to grow in the coming years.



**OLDEST NAME IN THE BUSINESS — Over 115 YEARS OLD**

info@allancoleman.com • www.allancoleman.com

Products Manufactured By **JETTERS**

**Mountable or Portable - Skid/Cart**



9 gpm @ 4000 psi

Products Manufactured By



**Eagle 300 Trailer Jetter**

20 GPM @ 4000 PSI



**DIRECT HIT**

**The C38rs**

The safest way to enter an unknown blockage

**PICOTE** Stocking In Both Locations

**Repair Center for:**

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

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

As for robotic cutting, Pacific Sewer Maintenance is building out a second truck and concentrating on educating potential customers through a marketing campaign. Too often, potential customers only think about hydroblasting to remove obstructions, so getting the word out about Pacific Sewer Maintenance's capabilities is needed to fuel growth.

"People generally don't think of [robotic jetting] for clearing obstructions in pipelines," Gayman says. "So we're working on advertising to educate the industry about this equipment." In the meantime, the company is relying on strong word-of-mouth recommendations from impressed customers.

"Inspectors come by jobs and watch us work and they all say, 'This is pretty amazing,'" Gayman says. "So once they find out it's fast and effective, it becomes more of a regular thing. But getting the word out is the most difficult part." c

### FEATURED EQUIPMENT

**ID-TEC**

503-504-8474  
www.sr-series.com

**PTC WATERBLASTING SYSTEMS**

320-340-6481  
www.ptcitaliana.com

**SEWER ROBOTICS USA**

717-658-4532  
www.sewerrobotics.com

## PICOTE XPRESS COATING SYSTEM

**NEW SYSTEM FOR COATING 1 1/4 - 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!



864-940-0088

sales@picotesolutions.com

PICOTEGROUP.COM/RESELLERS

PICOTEINSTITUTE.COM

	DEALER OF	PIPE DIAMETER	REEL SIZES	RECORDING METHODS	SOFTWARE AVAILABLE	REPAIR FACILITY	REPAIR PARTS	ACCESSORIES	INSPECTION VEHICLES	LOCATION EQUIP.
<p><b>Allan J. Coleman Co.</b> 5725 N Ravenswood Ave., Chicago, IL 60660 773-728-2400 • (f) 773-728-2499 www.allanjcoleman.com shane@allanjcoleman.com See ads on pages 22, 35</p>	RIDGID, General Wire, Electric Eel, UEMSI	1" to 12"	30' to 325'	Flash Drive/USB Thumb Drive, DVR, DVD, SD Card		✓	✓	✓		✓ Electronic
<p><b>ARIES INDUSTRIES, INC</b> <b>Aries Industries</b> 500 Elizabeth St. Waukesha, WI 53186 800-234-7205 • 262-278-1359 www.ariesindustries.com sales@ariesindustries.com See ad on page 17</p>	Aries Industries	6" and up	1' to 1000'	Flash Drive/USB Thumb Drive, SD Card, WinCan Web, 3G or 4G Wi-Fi	✓		✓		✓	
<p><b>Central Oklahoma Winnelson</b> 5037 NW 10th St., Oklahoma City, OK 73127 888-947-8761 • 405-947-8761 (f) 405-947-8761 www.centralwinnelson.com krjones@winnelson.com See ad on page 55</p>	RIDGID	3/4" to 12"	3' to 325'	Flash Drive/USB Thumb Drive, Wi-Fi, SD Card, DVD, Bluetooth	✓	✓	✓	✓		✓
<p><b>CPI Products</b> <b>CPI Products / Cavallero Plastics</b> 1250 North St., Pittsfield, MA 01201 413-443-0925 • (f) 413-443-9586 www.cplproducts.com • mtucker@cplas.com</p>	Roller Skids for All Brands of Push Cameras	3" to 18"					✓	✓	✓	
<p><b>Cua Claws for Resurfacing Camera Wheels</b> 2376 Maize Rd., Twentynine Palms, CA 92277 714-697-8697 www.cuaclaws.com • jerry@cuaclaws.com See ad on page 59</p>	Cua Claws							✓		
<p><b>CUES, Inc.</b> 3600 Rio Vista Ave., Orlando, FL 32805 800-327-7791 • 407-849-0190 (f) 407-425-1569 www.cuesinc.com • salesinfo@cuesinc.com See ads on pages 6, 51</p>	CUES	2" to 200"	100' to 2000'	HDD, Flash Drive/USB Thumb Drive, Wi-Fi, SD Card, Compact Flash, DVR, CD, DVD, Cloud	✓	✓	✓	✓	✓	✓ Pipe/Leak/Valve/Sewer
<p><b>Duracable Manufacturing</b> 300 Ashworth Rd., West Des Moines, IA 50265 800-247-4081 www.duracable.com • sales@duracable.com See ad on page 45</p>	RIDGID, Milwaukee Tool, EasyCam	1-1/4" to 8"	Up to 200'	HDD, Flash Drive/USB Thumb Drive, Wi-Fi, SD Card		✓	✓			✓ Pipe/Leak/Valve/Sewer

DEALER OF	PIPE DIAMETER	REEL SIZES	RECORDING METHODS	SOFTWARE AVAILABLE	REPAIR FACILITY	REPAIR PARTS	ACCESSORIES	INSPECTION VEHICLES	LOCATION EQUIP.
<b>Dynamic Repair</b> 40 Arnot St., Unit 20, Lodi, NJ 07644 973-478-0893 • (f) 973-478-0895 www.dynamicrepairs.biz dynamiccablerepairs@yahoo.com See ad on page 59	GWS, RIDGID, Vision Technology, Insight Vision, Pearpoint, Gator Cam				✓				✓
<b>Fiberscope.net</b> 76 Winn St., Ste. 2B, Woburn, MA 01801 877-613-2210 www.fiberscope.net salesteam@medit.com	Hathorn, Strahl, Medit, Tekworks, Troglotech, Camtronics, Zikmund	3/8" to 80"	1' to 4'	HDD, Flash Drive/USB Thumb Drive, Wi-Fi, SD Card, Compact Flash	✓	✓	✓	✓	✓ Electronic Pipe/Leak/Valve/Sewer
<b>Forbest Products Co.</b> 44130 Old Warm Springs Blvd., Fremont, CA 94538 877-369-1199 www.forbestusa.com sales@forbestcanada.com See ad on page 53	Forbest Products Co.	1" to 10"	65' to 400'	Flash Drive/USB Thumb Drive, SD Card, DVR	✓	✓	✓	✓	✓ Pipe/Leak/Valve/Sewer
 <b>General Pipe Cleaners/ General Wire Spring</b> 1101 Thompson Ave., McKees Rocks, PA 15136 800-245-6200 • 412-771-6300 www.drainbrain.com • info@drainbrain.com See ad on page 2	Gen-Eye	1-1/2" to 10"	100', 200', 300', 400'	Flash Drive/USB Thumb Drive, Wi-Fi, SD Card	✓	✓	✓		✓
 <b>Hathorn Inspection Cameras</b> 255 Shields Ct., Unit C, Markham, ON L3R 8V2 Canada 866-428-4676 • 905-604-7040 (f) 905-604-3400 www.hathorncorp.com sales@hathorncorp.com	HATHORN	1-1/2" to 12"	100' to 500'	Flash Drive/USB Thumb Drive, Wi-Fi	✓		✓		✓ Pipe/Leak/Valve/Sewer
 <b>Insight Vision, LLC</b> 600 N Dekora Woods Blvd., Saukville, WI 53080 800-488-8177 www.goinsightvision.com sales@goinsightvision.com See ad on page 19	Insight Vision, Reizler	2" - 80"	130' to 1000'	HDD, Flash Drive/USB Thumb Drive, Wi-Fi, SD Card	✓	✓	✓		✓ Electronic Pipe/Leak/Valve/Sewer
<b>ITC</b> <b>INSTRUMENT TECHNOLOGY CORPORATION</b> <b>Instrument Technology Corporation</b> 646 Portal St., Ste. 102-1998, Cotati, CA 94931 800-519-1998 • (F) 800-385-5279 www.instecorp.com • mike@instecorp.com	Vivax-Metrotech, SebakMT, Impulse Radar, Stonex	1 1/2" to 8"	16 1/2" to 35"	HDD, Flash Drive/USB Thumb Drive, Wi-Fi, VMC app	✓	✓	✓		✓ Electronic Pipe/Leak/Valve/Sewer
 <b>ITpipes</b> 113 Cherry St., Seattle, WA 98104 877-ITPIPES • 505-341-0109 www.itpipes.com • solutions@itpipes.com See ad on page 26	ITpipes Mobile, ITpipes Web, ITpipes AIC	All	All	HDD	✓				



	DEALER OF	PIPE DIAMETER	REEL SIZES	RECORDING METHODS	SOFTWARE AVAILABLE	REPAIR FACILITY	REPAIR PARTS	ACCESSORIES	INSPECTION VEHICLES	LOCATION EQUIP.
 <p><b>J.M. McKinney Co.</b> 12710 Yukon Ave., Hawthorne, CA 90250 800-821-7275 www.jmmckinneyco.com yexortho@yahoo.com See ad on page 27</p>	RIDGID, Spartan, General Wire, Gortitz, Jettters Northwest	1' to 4"	1' to 4"	HDD, Flash Drive/USB Thumb Drive, Wi-Fi	✓	✓	✓			✓ Electronic
 <p><b>KEG Technologies, Inc.</b> 6220 N Pinnacle Dr., Spartanburg, SC 29303 866-595-0515 • 864-804-6637 www.kegtechnologies.net sales@kegtechnologies.net</p>	KEG Technologies	6" to 32"		HDD, DVR	✓			✓		
 <p><b>Mincam Inc.</b> 12600 Newburgh Rd., Livonia, MI 48150 734-744-5557 www.minicaminc.com info@minicaminc.com See ad on page 21</p>	Mincam PROTEUS, Mincam SOLO PRO+, Hathorn, Sewertronics, Dancutter, RhinoVision	1-1/4" - 85"	100' to 1650'	HDD, Flash Drive/USB Thumb Drive, Wi-Fi, SD Card, Compact Flash	✓	✓	✓	✓	✓	✓ Electronic
 <p><b>MyTana</b> 746 Selby Ave., St. Paul, MN 55104 800-328-8170 • 651-222-1738 www.mytana.com • mytana@idexcorp.com See ad on page 33</p>	MyTana	1-1/2" to 12"	50' to 400'	HDD, Flash Drive/USB Thumb Drive, Wi-Fi		✓		✓		✓ Pipe/Leak/Valve/Sewer
 <p><b>Pearpoint Inc.</b> 39-740 Garand Ln., Unit B, Palm Desert, CA 92211 760-343-7350 www.pearpoint.com pearpoint.sales.us@spx.com See ad on page 13</p>	Pearpoint (USA)	2" to 60"	100' to 1000'	HDD, Flash Drive/USB Thumb Drive, Wi-Fi	✓	✓	✓		✓	
 <p><b>RapidView IBAK North America</b> 1828 W Olson Rd., Rochester, IN 46975 800-656-4225 • 574-224-5425 (f) 574-223-2763 www.rapidview.com • sales@rapidview.com</p>	RapidView IBAK North America	2" to 300"	50' to 2000'	HDD, Flash Drive/USB Thumb Drive, Wi-Fi, SD Card, Compact Flash, DVR, CD, DVD	✓	✓	✓	✓	✓	✓
 <p><b>Ratech Electronics</b> 260-7 Spinnaker Way, Concord, ON L4K 4P9 CANADA 800-461-9200 • 905-660-7072 (f) 905-660-1519 www.ratech-electronics.com sales@ratech-electronics.com See ad on page 44</p>	Ratech	1" to 60"	1' to 1000'	HDD, Flash Drive/USB Thumb Drive, SD Card, Compact Flash, DVR, CD, DVD	✓	✓	✓	✓	✓	✓ Electronic Pipe/Leak/Valve/Sewer



# vCam Inspection Cameras, the clear choice for video inspection.



**vCam Mobile Controller App**

- Record direct to tablet or phone
- Add text and audio to videos
- On the spot file sharing
- Record HD videos and pictures
- vCam-6, MX and Drain compatible



**vCam Mobile Controller App**

**NEW**

**vCam-6 HD  
Standard 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  
Wireless Inspection System**

- Inspect lines from 1.5" to 3"
- Wireless reel used with mobile devices
- VMC App controls all reel functions
- Instantly share files
- Navigate p-traps and toilet traps
- 70 or 100-ft of custom pushrod








Follow Us on Instagram



Visit Our YouTube Channel to See Actual Videos



	DEALER OF	PIPE DIAMETER	REEL SIZES	RECORDING METHODS	SOFTWARE AVAILABLE	REPAIR FACILITY	REPAIR PARTS	ACCESSORIES	INSPECTION VEHICLES	LOCATION EQUIP.
	<b>SPARTAN TOOL</b> Spartan Tool 1618 Terminal Rd., Niles, MI 49120 800-435-3866 www.SpartanTool.com • Sales@SpartanTool.com See ad on page back cover	1" to 8"	100' to 400'	HDD, Flash Drive/USB Thumb Drive, SD Card, WinCan, iCloud		✓	✓	✓		✓
	<b>T&amp;T Tools, Inc.</b> 4470 128th Ave., Holland, MI 49424 800-521-6893 • (f) 800-521-3260 www.mightyprobe.com • sales@mightyprope.com See ads on pages 55, 59									✓
	<b>The Cable Center, Inc.</b> 8318 Olive Blvd., St. Louis, MO 63132 800-257-7209 • 314-993-3099 (f) 314-432-8024 www.thecablecenterinc.com thecablecenterinc@gmail.com See ads on pages 5, 61	General Wire Spring, RIDGID, Electric Eel, Ratch	1" - 10"	65' to 400'	Flash Drive/USB Thumb Drive, Wi-Fi, SD Card		✓	✓		✓ Electronic, Pipe/Leak/ Valve/Sewer
	<b>Trojan Worldwide Inc.</b> 3306 Ella Blvd., Ste. 6, Houston, TX 77018 800-392-4902 • 713-692-1140 www.trojanworldwide.com info@trojanworldwide.com See ad on page 53	Trojan Worldwide Inc.	1-1/2" to 12"	65' to 500'	Flash Drive/USB Thumb Drive, Wi-Fi, SD Card, DVR	✓				✓ Electronic, Pipe/Leak/ Valve/Sewer
	<b>TruGrit Traction Inc.</b> PO Box 2084, Winter Park, FL 32790 407-900-1091 www.TruGritTraction.com info@trugrittraction.com See ad on page 9		4" - 60"	Wi-Fi				✓	✓	
	<b>UEMSI/HTV</b> W209 N17391 Industrial Dr., Jackson, WI 53037 877-389-9999 • 262-665-1980 (f) 262-665-1990 www.uemsi.com • sales@uemsihtv.com	UEMSI / HTV	3" and Up	3'	HDD, Flash Drive/USB Thumb Drive, Wi-Fi, DVR	✓	✓	✓	✓	✓ Electronic
	<b>VIVAX METROTECH</b> Vivax-Metrotech Corp 3251 Olcott St., Santa Clara, CA 95054 800-446-3392 • 408-734-3880 www.vxmt.com • salesUSA@vxmt.com See ad on page 39	vCam Inspection Cameras	1-1/2" to 10"	70' to 400'	HDD, Flash Drive/USB Thumb Drive, Wi-Fi, SD Card	✓	✓	✓		✓ Electronic

# CLEANER IS FREE!

Subscribe or Renew online [www.cleaner.com](http://www.cleaner.com)



# WE ARE LOOKING FOR NEW DEALERS.

**AFFORDABLE & RELIABLE!**



**1080P  
AHD**

**Weight:  
11.8KG**



Easy to Carry



Compact, Rugged and  
Waterproof Design



Convenient  
Transportation



Removable Control box  
with keyboard

<b>Camera Size</b> φ23mm×51mm	<b>Rod Cable</b> φ6.8mm	<b>White LEDs</b> 15pcs	<b>For Pipe Dia</b> 30-150mm
<b>LCD Size</b> 10.1"	<b>Built-in Battery</b> 7 Hours	<b>Text Input</b> Keyboard	<b>Meter Counter</b> Built-in
<b>Resolution</b> 1080P Full HD	<b>Self-leveling</b> Built-in	<b>512hz Sonde</b> Built-in	<b>Cable Length</b> 66ft/100ft/130ft

TVBTECH CO., LTD

[www.tvbtech.com](http://www.tvbtech.com) ■ [www.draincamera.com](http://www.draincamera.com)

Email: [sales@tvbtech.com](mailto:sales@tvbtech.com) ■ TEL:+86-158 89631708

# ORANGEBURG PIPE CRISIS

As the outdated pipe material is exceeding its service life expectancy, a West Virginia contractor is stepping up to provide its state an efficient pipe bursting solution // By Beth Steele

**T**HE WORDS “FIBER CONDUIT” were originally used in the U.S. for a water-resistant composite pipe made of layers of compressed wood pulp and coal tar. Its use began in the late 19th century through about 1970, in applications ranging from water supply and wastewater collection to conduit for telegraph lines, phone lines and electrical service.

Demand for the pipe surged during the building material shortages of the post-World War II market due to the pipe’s relatively long expected service life (up to 50 years) and inexpensive price point. One manufacturer founded to meet demand was based in Orangeburg, South Carolina, giving fiber conduit one of its most widely used nicknames — Orangeburg pipe.

The most recently laid Orangeburg pipe has already been in the ground since about 1970, rendering all extant fiber pipe in use today well past its useful life. The urgent need to replace all the existing fiber pipe is complicated not only by just how widespread its use was during the 20th century, but by how much of that pipe now underlies crowded surface conditions resulting from over a half century of urban sprawl.

## THE IDEAL SOLUTION

Minimally invasive, trenchless replacement techniques such as the pipe bursting method provide an ideal solution.

In March, Three Sixty Solutions based in Lost Creek, West Virginia, introduced the state to its new pipe-bursting pipe replacement services. Its initial project was an excellent demonstration of just how effective the technology and technique are, reducing project impact and expense of what otherwise would have been a major construction project into a two-hour job at less than a tenth of the roughly estimated cost.

Three Sixty Solutions’ utilities division specializes in water, sewer and gas lines. It handles some residential work but most projects are commercial, industrial and municipal public services throughout West Virginia. Founder Brandon Hudkins says he had



It took only 13 minutes to draw the 100-foot length of 4-inch replacement pipe into place using the lateral pipe bursting machine. Power was supplied using a dedicated hydraulic powerpack.

been studying the use of compact, portable pipe bursting systems for four years. The company took on a Shinnston, West Virginia, job that provided no other feasible solutions as its initial pipe bursting project. He consulted with HammerHead Trenchless Technologies for the equipment and training of his crew.

» The crew dug a 4-by-4-foot entry pit to a depth of 3 feet at the street for the job.

<b>COMPANY</b>	Three Sixty Solutions
<b>LOCATION</b>	Shinnston, West Virginia
<b>PROJECT</b>	Replacing a 100-foot length of compromised 4-inch Orangeburg sewer line
<b>EQUIPMENT</b>	HammerHead Trenchless PortaBurst PB30 Gen 2 pipe bursting system

### PROJECT DETAILS

The city of Shinnston needed to replace a 100-foot length of a compromised 4-inch Orangeburg sewer line. The end-user had been experiencing slow drainage for about a year with periodic stoppages and backup. The pipe had now completely collapsed and was broken in places leading to inflow and infiltration problems.

The conventional solution would have been to excavate and extract the failed pipe to replace it with a modern plastic pipe product. But crowded surface conditions left no room for heavy equipment. The house was situated on a slope. Hydroexcavation could be used to expose the pipe. It was about 3 feet below the surface at the street and 11 feet deep at the house, where it entered the basement beneath its cement floor. Space between neighboring structures, however, was only 4 feet. Any excavation posed a risk to the structural integrity of the foundations in such close proximity.

Although the building was surrounded on three sides by other structures, one less risky open-cut alternative would have been to reroute the pipes out the opposite side of the basement. However, this would be a major construction project entailing demolition and consequent restoration of much of the home's basement floor. Trenching the new pipe path would lead it down the block past other residences, turn to follow a side street and return back down the block to connect to the city's wastewater collections system beneath the road.

"We do that kind of work," Hudkins says.

But using the pipe bursting method not only meant they would not have to but that they would complete the job in a fraction of the overall project time and cost.

### GETTING TO WORK

Three Sixty Solutions used a PortaBurst PB30 Gen 2 to do the burst. The PB30 is a compact, modular pipe bursting system providing up to 30 tons of cable-pulling force for in-place replacement of lateral pipes 2 to 6 inches in diameter.

The crew created a 4-by-4-foot entry pit to a depth of 3 feet at the street. Inside the full basement at the pulling end, they cut a



"WE SAVED THEM AT LEAST \$75,000 ON THIS JOB."

BRANDON HUDKINS

similarly sized pit to a depth of 1 foot through the cement floor. It was sufficient room to access the pipe and provide space for the cable pulling unit. No additional excavation was required.

The crew fused up the 100-foot length of 4-inch IPS DR 11 HDPE pipe. Hudkins says DR 11 was "heavier than required for this job" but posed no problem entering the pit despite being a little stiffer than HDPE pipe with thinner walls. Fusing pipe creates a lip inside and outside the joint. The crew removed the lips using a special de-banding tool to eliminate any "speed bumps" and ensure completely unimpeded flow.

The crew fed the pulling machine's 3/4-inch-thick cable through the pipe to the entry pit, where they attached the bursting tool assembly. Behind the assembly they attached the HDPE replacement pipe. Then they began pulling the bursting head through the existing pipe back to the pulling machine. As the tooling progressed, it fractured the existing pipe in situ, pressing the fragments into the surrounding soil while slightly enlarging the hole to glide the new pipe into the exact same path as the original lay of pipe. This eliminated the need to extract and dispose of the fiber pipe, which remained in the ground outside the HDPE.

There was no other impact on the surrounding ground behind the pipe path. The two nearby homes over the pipe's path were completely undisturbed.

Pulling all 100 feet of fused pipe into place — which ran beneath two buildings — took 13 minutes. Service to the end user was

# TOUGH JOB

» The 3/4-inch cable used for the pull was first fed through the 100-foot length of existing pipe.



disrupted for only two hours, from the time the line was opened until it was reconnected.

Total time on site was two and a half days, which Hudkins says would normally be shorter. In addition to preparation for the job and restoration to complete it, time was taken to educate and cross-train the utility team on the application itself and the proper use, care and maintenance of the equipment.

## TRENCHLESS DEMAND

Hudkins anticipated immediate interest for Three Sixty Solutions' new pipe bursting capability, but the amount of demand was still surprising.

"We got it way quicker than what we expected," he says.

Observers who had come to the Shinnston job to watch the technique firsthand included representatives from other West Virginia municipalities. Hudkins was booking future jobs while the

Shinnston job was still underway. As word of its success has spread, he has steadily received bid requests for more work.

## COST COMPARISON

Although the Shinnston job was not bid for open-cut replacement, Hudkins gave a rough estimate of what it might have cost the city in comparison. Equipment and labor costs, up to two weeks of project time, extensive excavation plus basement street demolition, and all associated restoration costs could easily have run \$85,000 or more.

"We saved them at least \$75,000 on this job," Hudkins says. **c**

# LIGHTS, CAMERA, ACTION: THE HD ERA IS HERE



Plumber's Elite  
2" - 10" drainlines



Plumber's Helper Jr.  
1" - 6" drainlines

MAKE YOUR PIPELINE INSPECTIONS CRYSTAL CLEAR WITH THE NEW **RATECH HD SEWER PIPE INSPECTION CAMERAS**

- ✓ 1080p HD self-leveling camera (1.375" dia.), TRUE HD
- ✓ Bright and clear Hi-res in-pipe imaging
- ✓ MP4 recording format
- ✓ Built-in battery cradle for external power using power-tool batteries
- ✓ USB recorder with hard-drive
- ✓ 10.4" HD sunlight-readable LCD
- ✓ Wi-Fi connectivity
- ✓ 100'-400' Premium Gel Rod™ Push cable
- ✓ Keyboard, footage counter, 512Hz sonde
- ✓ Authorized service centers nation-wide
- ✓ 5/8" and 3/4" Hi-res micro camera compatible

**Ratech**  
ELECTRONICS  
Video Pipeline Inspection Systems



Proudly Serving Customers Like You Since 1980

1-800-461-9200 • WWW.RATECH-ELECTRONICS.COM

DURACABLE DALE



WORDS OF WISDOM

WHY FIGHT CLOGS TOMORROW

- WHEN YOU COULD -

PREVENT

THE CLOGS TODAY

BUY 2 CASES  
DRAIN CARE  
GET 1 CASE FREE



PROCLEAN

A CLEANED DRAIN DOESN'T STAY CLEAR FOR LONG. THAT'S WHY PREVENTATIVE DRAIN CARE PRODUCTS KEEP CUSTOMERS HAPPY. DRAIN CARE PRODUCTS KEEP WORKING LONG AFTER THE JOB IS DONE.

OFFER VALID SEPTEMBER 1 - 30, 2024. APPLIES TO PC1 OR PC2 PRODUCTS. NOT VALID WITH OTHER OFFERS OR DISCOUNTS OR ON PREVIOUS ORDERS. SUBJECT TO CREDIT APPROVAL.

DURACABLE.COM



DURACABLE  
— MANUFACTURING CO —

800-247-4081

RIGHT IN THERE WITH YOU.



Kate Zabriskie

## LET'S TALK

A step-by-step guide to navigating difficult conversations in both your business and personal lives // By Kate Zabriskie

*“Another joy of adulting. I’ve got to have one of those thorny conversations. Not fun.”*

Difficult conversations are inevitable at some point in most people’s lives, despite their lack of popularity. Avoiding them only leads to bigger problems down the road. The good news? With a clear framework, tough conversations can strengthen relationships, foster growth and achieve better results.

Whether it’s within the context of your business or your personal life, this step-by-step guide provides a roadmap for navigating challenging dialogues with calm, empathy and assertiveness.

AS THE CONVERSATION PROGRESSES, LOOK FOR AREAS WHERE YOU AGREE OR SHARE SIMILAR GOALS. VALIDATING EACH OTHER’S PERSPECTIVES AND EMOTIONS CAN HELP BUILD TRUST.

### STEP ONE: PREPARE YOURSELF

Before initiating a difficult conversation, take a moment to think about how you feel and why you need to have the conversation. What is the core issue you want to address? What are your goals and desired outcomes? Are you trying to affect a behavioral change, or do you simply want to be right? If the answer is the latter, you may wish to pause before starting a dialogue.

A well-formed goal statement is a good way to outline your intentions and keep your actions in check. For example, you might say to yourself, “I want to discuss the project schedule change that happened without my input. My goal is to be included in the future and find a solution that works for everyone now. I’m not placing blame.”

### STEP TWO: SET THE STAGE

As the saying goes, timing can be everything. Given that fact, schedule a suitable time and location for the conversation. The

goal is to ensure you have privacy and few distractions. For instance, you could say, “I need to discuss something important regarding the project timeline. Can we talk in the conference room at 2 p.m. today?”

### STEP THREE: DESCRIBE THE SITUATION OBJECTIVELY

Once you and the other person are together, it’s time to explain the situation objectively. Stick to the facts without judgment or blame and use “I” statements to express your perspective. “I” statements tend to reduce defensiveness and create an environment of mutual understanding.

Begin with “I feel” to take ownership of your emotions. Describe the behavior or situation objectively and without judgment. Explain the reason behind your feeling. For example: “I feel frustrated that the deadline was moved again without consulting me. I’m now task-saturated and unable to get my project work and other work done by the new milestone. I understand there may be valid reasons for the shifting timeline, and I would appreciate being included in decisions moving forward. This isn’t the first time I’ve been left out of discussions. I would also like to see how we might adjust the current schedule.”

### STEP FOUR: ALLOW THE OTHER PERSON TO RESPOND

After you’ve shared your perspective, listen actively and allow the other person to respond without interrupting. Additionally, ask clarifying questions to ensure you fully understand their point of view and validate the other person’s emotions and experiences. You might say, “I understand that speed was the goal. Can you tell me how I might be included in scheduling decisions in the future?”

### STEP FIVE: IDENTIFY COMMON GROUND

As the conversation progresses, look for areas where you agree or share similar goals. Validating each other’s perspectives and emotions can help build trust and create a foundation for finding a mutually acceptable solution. For instance, you could say, “It seems we both want to deliver a high-quality project, even if we have different views on the timeline and how it gets adjusted.”

# BLACKHAWK

## Trenchless Superstore

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

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

### STEP SIX: PROPOSE SOLUTIONS

Next, collaborate and be willing to compromise while at the same time standing firm on your core needs and boundaries. For example, you might suggest, "What if we extend the deadline by two weeks? That way, we can ensure the project is completed without cutting corners."

### STEP SEVEN: SUMMARIZE AND CONFIRM NEXT STEPS

As the conversation comes to a close, summarize the agreed-upon solution and action items. Express appreciation for the open discussion and the other person's willingness to work through the issue constructively. For example, you could say, "To recap, we'll extend the deadline to allow more time, and you'll provide an additional team member to assist me. Thank you for working through this constructively and for committing to including me to the extent possible when making future scheduling changes."

### STEP EIGHT: FOLLOW UP

It's essential to implement the agreed-upon solution and check in regularly to provide feedback on what's working or if any adjustments are needed. You might follow up by saying, "Now that we've had a week with the new plan, how do you think it's going so far? Is there anything we should tweak or address?"

Difficult conversations may never be easy, but with practice and a commitment to effective communication, they can become opportunities for growth, understanding and stronger connections with those around us. **c**

### ABOUT THE AUTHOR

Kate Zabriskie is the president of Business Training Works Inc., a Maryland-based talent development firm. She and her team provide on-site, virtual, and online soft-skills training courses and workshops to clients in the United States and internationally. For more information, visit [www.businesstrainingworks.com](http://www.businesstrainingworks.com).

### Pipe Lining Materials



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

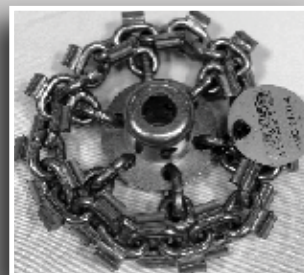
### Point Repair



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

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

### Pipe Cleaning



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

**RENSSI**<sup>®</sup>  
DRAIN CLEANING EQUIPMENT

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

Call for knowledgeable support and fast shipping!

ASK ABOUT YOUR FREE GIFT!

**630-326-9061**

## MAINLINE SEWER INSPECTION

By Craig Mandli

### » INSPECTION CAMERAS/ACCESSORIES

#### 1 // CAN-EX TECHNOLOGIES ZIPCAM 360

The **ZIPCAM 360** from **Can-Ex Technologies** is designed to enhance operational efficiency. Under standard conditions, with a proficient team and no unexpected issues, the camera inspected 1,000 feet of pipeline in 23 minutes and 45 seconds. This test involved filming four segments of pipe and setting up traffic control twice, requiring a single truck relocation. Its ability to perform rapid and thorough inspections significantly reduces the time and labor costs associated with pipeline maintenance. Its advanced design and user-friendly interface allow even novice operators to achieve impressive results, making it a valuable tool for contractors and municipalities alike. **866-858-9703; [www.canex.tech](http://www.canex.tech)**



#### 2 // ELECTRIC EEL EELVISION ELITE

The **EELvision Elite** inspection camera from **Electric Eel** is ideal for inspecting 3- to 10-inch diameter lines. It has a 1.3-inch self-leveling color camera with vivid, adjustable LED lights and a large 7-inch monitor for easy viewing. A sunshield allows for outdoor viewing and protects the monitor in transport. It comes standard with 200 feet of 1/2-inch-diameter premium pushrod, an on-screen footage counter, continuous-display odometer, one-touch recording to a USB and screenshot capability, an extended ergonomic handle to facilitate maneuverability and transport, a heavy-duty metal frame and wheels, a user-friendly control panel, quick start guide tutorial prompts, QR code for manual and support accessibility, a built-in always-on sonde, dual power sources (AC and battery) and a Makita battery port (it also accepts both Milwaukee and DEWALT batteries with a provided adapter). **800-833-1212; [www.electriceel.com](http://www.electriceel.com)**



#### 3 // ENVIROSIGHT VERISIGHT ULTRA

The **Verisight Ultra** from **Envirosight** simplifies workflows while delivering exceptional image quality. It includes a 1080p full HD touchscreen monitor, which records hi-def video and photos to enable quick and accurate identification of blockages, defects and other issues that may compromise the functionality and safety of underground pipelines. Self-leveling pan-and-tilt advanced camera control options are available. It also has a compact and lightweight design for easy maneuverability through tight spaces and uneven terrain. The system offers the ability to perform inspections standing up or on its side for added versatility on uneven ground. It offers the choice of 200 or 330 feet of “built for distance” cables. **866-936-8476; [www.envirosight.com](http://www.envirosight.com)**



#### 4 // EPL SOLUTIONS GVISION V7

The **Gvision V7** from **EPL Solutions** is a ruggedized elite camera system that can be purchased for mainline use with 200, 300 or 400 feet of stiff yet flexible pushrod or a 150-foot mini-camera. Instantly capture video recordings and snapshots with the press of a button and access them anytime within the internal storage. The technician will never have to wonder where a video was taken as geolocation information is automatically attached and displayed on recordings. Add text overlay using the camera reel or a USB keyboard. Copy recordings and snapshots on two USB flash drives at once, or share them using the Gvision app. The app allows the user to remotely control, preview and download video inspections for easy sharing. Users can





capture every detail with the color camera head clearly displayed on a 10.4-inch TruView LCD screen. Add an internal battery for up to six hours of runtime. **714-453-9760; [www.epls-usa.com](http://www.epls-usa.com)**



### 5 // FIBERSCOPE.NET BY MEDIT VIPER PT

The VIPER PT pipe camera from **Fiberscope.net by MEDIT** offers a fully portable, all-in-one design making it easy to transport and set up, allowing users to get to work quickly and without any hassle. The miniature pan-and-tilt camera head measures only 1.1 inch in diameter, providing a comprehensive view of the interior of the pipe. The camera features an HD video sensor, which delivers crystal-clear footage. The system comes with a 98-foot insertion push cable with a pre-attached 512 Hz sonde, making it easy to locate and track the camera head as it moves through the pipe. The control unit features a high-resolution, daylight-readable display. Captured data allows users to refer back to the footage at a later time. Adding text notes also makes it easy to keep track of important details and observations during the inspection. **877-613-2210; [www.fiberscope.net](http://www.fiberscope.net)**



### 6 // GENERAL PIPE CLEANERS GEN-EYE X-POD PLUS

The Gen-Eye X-POD Plus sewer camera system from **General Pipe Cleaners** includes the Gen-Pack battery adapter, Wi-Fi transmitter and an on-screen distance counter as standard equipment. The battery adapter lets you operate the camera system for up to 12 hours in remote locations with limited access to power. Fuse-protected to safeguard your equipment investment, the battery adapter is also available separately. A battery and charger are not included. The built-in Wi-Fi transmitter lets you view and record inspections on a cellphone. Using the system's USB port, you can also archive activity on handy flash drives. The on-screen distance counter shows how far the camera has traveled down a line in feet or meters. Settings can be adjusted for full-size or mini-reel configurations. **800-245-6200; [www.drainbrain.com](http://www.drainbrain.com)**



### 7 // HATHORN H7

The **Hathorn H7** system comes standard with a 7-inch daylight-readable, shatter-resistant LCD monitor with 1,000 candelas per square meter of brightness. It also has an on-board hard drive with 64 GB (upgradable to 128 GB) capacity and USB recording allowing the user to record MPEG4 video and JPEG screenshots. These systems are compatible with 18-volt Milwaukee (or equivalent) batteries for ultimate portability and over 5 hours of runtime on a single charge. All units come equipped with 200 feet of premium cable and a choice of self-leveling camera heads. Optional Wi-Fi video streaming technology is available. **866-428-4676; [www.hathorncorp.com](http://www.hathorncorp.com)**

### 8 // INSIGHT VISION OPTICAM

The **Insight Vision Opticam** is a professional-grade sewer inspection push camera designed for pipe inspections from 3 to 12 inches. The system has a self-leveling color camera head that provides operators with a clear picture of any issues. It includes a large 10.4-inch LCD screen with a footage counter, as well as Wi-Fi streaming to Apple and Android devices. Additionally, it has one-touch recording to USB, a full QWERTY keypad, a built-in microphone and speaker, and an "always on" 512 Hz sonde to locate the problem spot from above ground. It can be powered using AC, DC or a Milwaukee Tool M18 Battery with the Power Tool Battery Adapter, for easy outside, rooftop or new construction inspections. Each system includes a reel cover, 2- and 3-inch skids, an accessory bag, a USB thumb drive, an AC power cord, a DC power cord, and a camera removal tool. **800-488-8177; [www.goinsightvision.com](http://www.goinsightvision.com)**



# PRODUCT FOCUS

## 9 // KEY EQUIPMENT & SUPPLY CO. KEYVISION

The **KeyVision** from **Key Equipment & Supply Co.** is a standard two-camera package (1.0625 and 1.5 inch) with a tool-less camera connection and three Ice Ball Skids for the larger camera and a skid for the smaller camera. It offers one-touch function buttons for quick adjustment and is field-ready. Its front-mounted operation platform allows operators to deploy the camera and pushrod with ease. It includes onscreen text, a 64 GB onboard hard drive, dual USB ports and mirrored recording, voice recording overlay, and wireless connectivity to iOS/Android. It has a lightweight yet durable construction for a long life, and its vertical or horizontal operation allows for deployment in any location. It has powder coat aluminum construction, internal battery operation, 110-volt power operation, and stainless steel camera head construction with a rugged accessories box. **800-325-4323; [www.keyequipment.com](http://www.keyequipment.com)**



## 10 // MILWAUKEE TOOL M18 200-FOOT PIPELINE INSPECTION SYSTEM

The **M18 200-foot Pipeline Inspection System** from **Milwaukee Tool** delivers a clear image, and easy inspections for 3- to 10-inch sewer lines up to 200 feet. Featuring a short 34 mm HDR self-leveling camera head, and the ability to digitally zoom up to 4X and pan, technicians can now see more in drainlines than ever before. An HDR self-leveling camera head allows you to see both up close and further down the line with clarity, reducing washed-out areas and highlighting detail in dark conditions. Its pitch-sensing feature reads and displays pitch on screen for easier diagnosis and more effective reporting. This system features a telescoping handle and wide wheelbase making transportation on and off the job site easier than ever. **800-729-3878; [www.milwaukeetool.com](http://www.milwaukeetool.com)**



## 11 // MYTANA MS11-NG2

**MyTana's** versatile **MS11-NG2** inspection system inspects 3- to 6-inch lines with a self-leveling camera head. Swap in a smaller head included with the optional MS11+ Combo Kit to inspect 1.5- to 2-inch lines. Each head has a 512 Hz transmitter built in. A high-clarity 6.4-inch daylight-readable monitor and all the controls are integrated on the sturdy reel frame for grab-and-go convenience. That's helpful when access points are scattered or hard to reach. Save footage to internal or removable drives, or stream video wirelessly to a mobile device and add voiceover using the built-in microphone. The durable pushrod is available in 150- or 200-foot lengths and can be replaced in your facility. **800-328-8170; [www.mytana.com](http://www.mytana.com)**



## 12 // 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. The 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](http://www.ratech-electronics.com)**



# GO HD WITH CUES

ACHIEVE HIGH-DEFINITION INSPECTION QUALITY AND FULL  
BACKWARDS-COMPATIBILITY WITH YOUR EXISTING CUES EQUIPMENT

## TESTED

to endure the harshest pipeline conditions.

## TRUSTED

by industry experts for reliability.

## PROVEN

to deliver unparalleled performance.



Reach out to your CUES  
Sales or Service Center  
contact for pre-order  
information!



SCAN TO REQUEST A  
FREE DEMO & LEARN  
ABOUT OUR PROMOTION

## EXPERIENCE THE POWER OF CLARITY WITH OUR NEW OZ4-HD CAMERA

- Robust design to withstand harsh conditions, ensuring durability and reliability.
- Upgrade your current fleet to use a 1080p high-definition pan & tilt mainline camera.
- OZ4-HD is backward compatible with an HD Truck Upgrade to work with your existing K2 controls, transporters, cable, and reels.
- Seamlessly switch between standard definition and high-definition cameras without workflow interruptions.
- CUES's GraniteNet Software offers robust support for HD video, ensuring seamless integration and optimal performance when using the OZ4-HD Camera.
- Compatible with industry standards, such as NASSCO's Pipeline Assessment Certification Program (PACP).



Visit Us!  
Booth 519



800.327.7791 salesinfo@cuesinc.com | www.cuesinc.com

## 13 // RIDGID SEESNAKE MICROREEL APX

The **RIDGID SeeSnake microReel APX** is designed to optimize inspections and engineered with a lightweight, compact profile for easy portability. It features bright LED lights with high color accuracy and auto-flip imagery delivering crisp, detailed images and ensuring upright viewing angles in a variety of pipe conditions. Paired with TruSense technology, this tool delivers an in-pipe image with superior clarity, detail and fewer blown-out areas and sections of the pipe that are too dark to see. TiltSense measures the camera's angle and, when connected to a SeeSnake series monitor, the camera can convey the camera's degree of tilt on the monitor — giving professionals a useful indicator of the pitch of the camera in-pipe. It also comes with a built-in kickstand for in-field versatility with multiple configurations for optimal operation. **800-474-3443; [www.ridgid.com](http://www.ridgid.com)**



## 14 // SPARTAN TOOL TRAVEL 4.0

The **Traveler 4.0** from **Spartan Tool** provides the same compact, portable size as previous models but features upgraded and improved components. Plus, it has a pushrod that is more flexible and durable than before, featuring a removable reel to allow you to swap out reels while you are out in the field fast and without problem. The standard camera head is upgraded and includes high-intensity LEDs. An available variety of customizable camera heads are easily interchangeable to provide extra flexibility. It runs on the redesigned Spartan Vision App with a simple-to-use interface and built-in PDF Report Builder. It has upgraded interior electronic components built to stand up to a wide array of harsh environments and deliver better accuracy and resolution. **800-435-3866; [www.spartantool.com](http://www.spartantool.com)**



## 15 // 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 features 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 512 Hz 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. **800-846-2713; [www.subsite.com](http://www.subsite.com)**



## 16 // TROJAN WORLDWIDE C400-DVRF

The **C400-DVRF** mainline camera system from **Trojan Worldwide** has a 2-inch high-definition self-leveling color camera head with a built in 512 Hz transmitter. The large portable reel contains 400 feet of pushrod and a foot counter. The attachable monitor includes a 7-inch LCD screen, DVR recorder and controls for the camera head, and an optional keyboard for text writing. With the 1/2-inch push cable, the user will have the ability to reach long distances and still have the flexibility to navigate multiple turns inside the pipe. The monitor comes in a separate protective case to store the unit when traveling. **800-392-4902; [www.trojanworldwide.com](http://www.trojanworldwide.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



TWR2000 TRAILER JETTER



COLT



PONY



STALLION



VISION-HD 1080P

DIGITAL LOCATOR

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

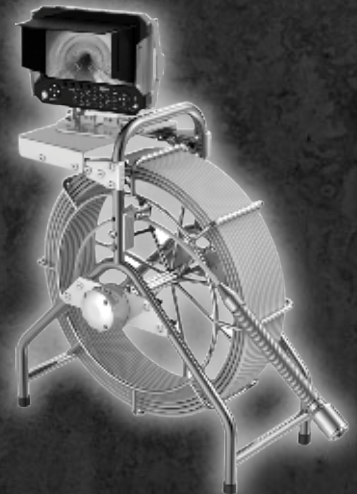
3306-C Ella Blvd, Houston, TX 77018



## 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



## GEAR UP With All Your Equipment Needs



Call Toll-Free  
**1.800.325.3730**  
[www.MilwaukeeRubber.com](http://www.MilwaukeeRubber.com)



17

18



19

### 17 // TRUGRIT TRACTION TRUGRIT STEEL

**TruGrit Steel** crawler wheels from **TruGrit Traction** are now compatible with the **Ibak T66**. Engineered to get you to that next manhole without breaking the bank, they feature solid steel construction brazed with tungsten carbide grit. The weight alone is designed to boost production, while the wide footprint and enhanced pipe contact adds to the effectiveness. They connect directly to the T66 with no need for special hub adapters or hardware. Everything is provided to be up and running immediately, no matter the pipe type or conditions. All wheels can be recoated with new carbide grit, saving even more money. **407-900-1091; www.trugrittraction.com**

### 18 // VIVAX-METROTECH VCAM

**vCam** inspection products from **Vivax-Metrotech** can be used to inspect small-diameter main lines and lateral lines from 3 to 8 inches in diameter, up to 400 feet. The expandable rolling Type-B skid and its additional light kit and stiff heavy-duty pushrod can extend this range. The skid has a minimum diameter of 8 inches and expands up to 10 inches. The additional light kit supplies 6,000 millicandelas of lighting using three AAA alkaline batteries. These systems create crisp, detailed video inspections with audio and text descriptions, footage and date timestamps to submit to customers. **800-446-3392; www.vxmt.com**

### » INSPECTION VEHICLE

#### 19 // CUES, INC.

For municipalities and contractors who need a lateral/mainline or mainline inspection truck fast, **CUES** pre-built trucks are available. They are always in stock and on the lot. They're preconfigured with all the essential **CUES** inspection equipment needed for most jobs, and can be delivered in a fraction of the time. **CUES** can deliver truck(s) three to four weeks from purchase, and often sooner if they have the accessories in stock. **800-327-7791; www.cuesinc.com c**

This is what it would look like if we printed [cleaner.com](http://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](http://www.cleaner.com)

# 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](http://www.centralwinnelson.com)

**CALL TOLL FREE: 888-947-8761**

**T&T TOOLS**

**T&T Tools, Inc.**

Fax: 800-521-3260

Email: [sales@mightyprobe.com](mailto:sales@mightyprobe.com)

**800-521-6893**

[www.MightyProbe.com](http://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

# MAINLINE SEWER INSPECTION

// By Craig Mandli

## SOFTWARE ENHANCES SEWER INSPECTIONS AND CLEANING

**PROBLEM:** Boulder, Colorado, faced several challenges in managing its 388-mile sanitary sewer network. The city’s Utilities Department, responsible for both sanitary and stormwater distribution, relied on two internal crews using CCTV pipe inspection and cleaning trucks. The previous method for allocating work orders was labor-

intensive, with manual data entry increasing the risk of errors. Storing inspection and cleaning media directly on trucks complicated data accessibility, and data transfer via hard drives delayed information flow, limiting timely analysis and decision-making.



**SOLUTION:** In 2019, Boulder partnered with **ITpipes**, integrating ITpipes Mobile and ITpipes Web with Esri ArcGIS. This integration allowed the city to utilize advanced mapping and pipeline analytics visualization technology, providing immediate access to detailed pipe inspection and cleaning data. By leveraging Esri’s Feature Services, Boulder organized its system into distinct geographic zones for more structured evaluations and implemented a three-year inspection and cleaning strategy. ITpipes Mobile facilitated efficient mapping workflows, using GIS attribute data to prepopulate information, eliminating manual data entry errors.

**RESULT:** The integration of ITpipes and Esri ArcGIS transformed Boulder’s sewer inspection and cleaning process. The city experienced significant improvements in data accessibility and accuracy, reducing labor-intensive tasks and minimizing errors. The seamless data transfer and immediate access to inspection and cleaning results allowed for timely analysis and informed decision-making. Boulder now efficiently manages its sewer network, ensuring the maintenance of its infrastructure while supporting its commitment to environmental sustainability and community well-being. **877-487-4737; www.itpipes.com c**

## Manufacturing Drain Cleaning Equipment for over 30 years

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



**TM750**



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



**TM50**



**TM25**

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



**COAST MANUFACTURING**  
THE PROFESSIONAL CHOICE



**541.684.0743**  
www.coastmanufacturing.com



# Save the Date!

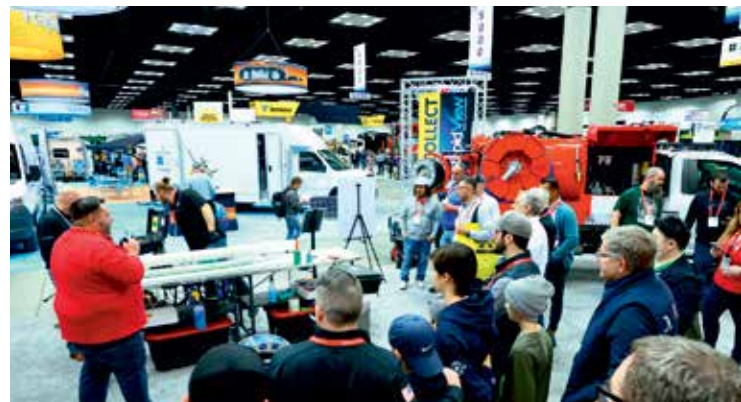
**CONFERENCE:** February 17-20

**EXPO HALL:** February 18-20

Indiana Convention Center



  
wwett<sup>TM</sup>25



## PRODUCT SPOTLIGHT

### NEW NOZZLE SIZE ADDS VERSATILITY TO REAPER LINEUP

By Craig Mandli

When a new product finds success in the industry, it's only natural for the manufacturer to adapt the technology for a wider audience. That's exactly what Hydra-Flex hopes to accomplish by adding a 3/4-inch nozzle to its popular Reaper series.

Hydra-Flex previously only carried Reaper nozzles in 1/4-, 3/8-, 1/2-, and 1-inch sizes. The nozzle is built to cut through roots and other tough blockages, including FOG, in 4- to 10-inch pipes.

"A big factor into why we developed this new size was to expand our reach to smaller municipalities and smaller jetter trucks and trailer units to give them a Reaper solution that is compatible with their specific equipment," says Chad Roberts, industrial sales manager for Hydra-Flex. "It's also a huge benefit for working in smaller mainline pipes that have tighter corners to navigate through. This size opens doors for more end users to utilize a Reaper product in their day-to-day life."

The Reaper sewer jetting nozzle has front-cutting power that outputs a rotating 30-degree cone that matches the width of the pipe to take on blockages from all angles. Its eight 20-degree back jets propel the nozzle easily through the pipe and add a clearing feature to flush out blockages and grime from pipe walls. The nozzles are constructed from premium tungsten carbide and stainless steel for durability and

an extended life cycle. It is easily repairable in less than 10 minutes to extend its life further.

"Our Reaper nozzles operate on high-quality H<sub>2</sub>O," Roberts says. "There is no viscous fluid to change, no specialty tools to use or a maintenance schedule to adhere to. When it is in need of a rebuild, it takes a few wrenches and a few minutes, something that can be easily performed on site to get the jetter back to work fast."

Roberts says that the company developed the line in response to customer requests.

"The voice of the customer is extremely important when developing a product," he says. "We want to make sure we understand all aspects of the issues our users are up against so we can deliver a product that exceeds their expectations."

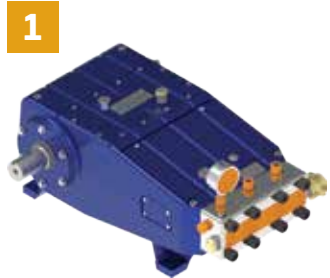
He also says that the feedback has been encouraging.

"Our customers love the performance and reliability of the Reaper," Roberts says. "A lot of them call it their first responder." **952-808-3640; [www.hydraflexinc.com](http://www.hydraflexinc.com)**



#### 1 // JETSTREAM OF HOUSTON 3000 SERIES UNX BARESHAFT PUMP

Jetstream of Houston has increased the maximum power input for its 3000 Series UNx bareshaft pump to 200 hp. To correspond with the boost in horsepower, Jetstream also developed larger plunger sizes for the pump, which is now able to achieve a flow rate of 7.6 gpm at 40,000 psi. This offers contractors greater power for a more diverse range of industrial cleaning and surface preparation jobs, and an ideal flow rate for single-operator setups. The pump can produce pressures ranging from 6,800 to 40,000 psi and offers the ability to quickly change among operating pressures in the field with Jetstream's proven fluid end design. The 3000 Series is a triplex pump featuring three plungers available in varying diameters to produce the optimal flow rate for a full range of waterblasting jobs. **800-231-8192; [www.waterblast.com](http://www.waterblast.com)**



#### 2 // VACTOR NEW 27-INCH VACUUM FOR 2100I COMBINATION SEWER CLEANER

Vactor's 2100i combination sewer cleaner now has the option of a 27-inch vacuum for longer pulls and deeper suction for solid waste. To accommodate the longer vacuum, modifications to the 2100i include reinforcement on the debris body and more structural brackets for the debris body recess. Two silencers help reduce noise for a quieter operation. An additional benefit is it has an additional inlet to keep the blower cool. The IntuiTouch cab controls and IntuiTouch control panel make function as simple as the touch of a button while also combining all cleaning system functions into one control panel. **815-672-3171; [www.vactor.com](http://www.vactor.com)**



**AMERICAN JETTER.COM**

**Up to 67% MORE EFFICIENT**



51T Trailer Jetter Hot or Cold  
18 GPM @ 5000 PSI / 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**

**Superior<sup>®</sup>**

**SMOKE**  
for SEWER TESTING

Reduce Sanitary Sewer Overflows  
with Superior Smoke Fluid Systems



**Smoke Testing**  
The most cost effective method  
to find Sources of Surface Inflow

[www.SuperiorSignal.com/Cleaner](http://www.SuperiorSignal.com/Cleaner)

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

**WOLVERINE**  
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](http://www.youtube.com/easyklean)


**1-800-315-5533**  
[www.easyklean.com](http://www.easyklean.com) - [sales@easyklean.com](mailto: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](http://www.youtube.com/easyklean)

**1-800-315-5533**  
[www.easyklean.com](http://www.easyklean.com)  
[sales@easyklean.com](mailto:sales@easyklean.com)

**Cua Claws**

A Simple Solution for  
Slippery PVC Pipe -  
**23 Years of Service**

We resurface all makes  
of steel transport wheels

CALL JERRY AT **714-697-8697**  
[www.cuaclaws.com](http://www.cuaclaws.com)

OUR BEST SELLING DRAIN LINE JETTER!

**HOTJET II**  
10GPM @ 4000 PSI • 35HP VANGUARD  
Cleans 2-12" Drains with Hot OR Cold Water



TRAINING AND FREE WARTHOG NOZZLE INCLUDED!

OVER 30 YEARS BUILDING QUALITY EQUIPMENT

**HotJetusa**  
**1-800-624-8186**  
[WWW.HOTJETUSA.COM](http://WWW.HOTJETUSA.COM)

PRICES SUBJECT TO CHANGE - CALL FOR CURRENT PRICING

**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  
[dynamicablerepairs@yahoo.com](mailto:dynamicablerepairs@yahoo.com)  
[www.dynamicrepairs.biz](http://www.dynamicrepairs.biz)

**JAGCO SUPPLY**



AMERICAN MADE

**WE HAVE THE NOZZLES**

FOR INFORMATION, CALL  
**281-513-6168**

[www.jagcosupply.com](http://www.jagcosupply.com)

**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](http://www.mightyprobe.com)

# CLASSIFIEDS

see photos in color at [www.cleaner.com](http://www.cleaner.com)

## BUSINESSES

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

## DRAIN/SEWER CLEANING EQUIPMENT

**CCTV trucks & jet vacs for sale.** All REASONABLE OFFERS CONSIDERED!

Go to [www.spands.net](http://www.spands.net) for details and photos OR call **708-475-7117**

C11

## JET VACS



**2017 Gapvax Combination Jet/Vac Recycler Truck,** Kenworth T-880, Cummins Engine, Allison's Transmission, Omsi T-Case, 60K Miles, 3360 Hours, Rebuilt 120GPM Water Pump, 1-1/4" Jet Hose, 1/2" Lateral Reel, Cold Weather Recirculation .....\$649,000 obo  
**Call 317-773-7996**

C09



**2019 Kenworth T880 Vactor 2115** Combination Sewer Cleaner, Vactor 2100 Plus w/ roots 824-18" hg blower, 15-yard debris body, 1,500-gallon of fresh water, 120,218.3 miles, 11,060. 4 hours.....\$315,000.

**Hubert Thompson 603-630-1856**  
or [hubertthompson31@gmail.com](mailto:hubertthompson31@gmail.com)

C09

2024 Freightliner 114SD cab & chassis with a Vacall AJV1215 combination Jet/Vac unit - 12 cubic yard debris & 1,500-gallon water - Roots 824 blower with General 87 GPM @ 2,000 PSI water pump. Stock #14143 (Coming in November) [www.vacuumsalesinc.com](http://www.vacuumsalesinc.com) (888)VAC-UNIT (822-8648) (CBM)

## JETTERS - TRAILER



**The HotJet II®** 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

2023 US Jetting 4018-300 Jet Trailer. Stock# 14107. [www.vacuumsalesinc.com](http://www.vacuumsalesinc.com) (888)VAC-UNIT (822-8648) (CBM)

2008 Mongoose 184 with strong running 66 hp Caterpillar diesel engine, 4,000 psi x 18 gpm pump & 300-gallon tank. 2009 Mongoose 184 has blown engine with lots of quality parts to add to the 2008 unit. Selling units together as package. \$30,000. Call John 720-232-4845 or email [John@rmsjet.com](mailto:John@rmsjet.com). CO (C09)

## JETTERS TRUCK



**1999 International Jet Truck.** Diesel. 226,904 miles. 2004 Harben P type pump with Deutz F3L1011F engine. 4,000 psi, 16 gpm, 300-gallon tank. 170ft of 1/2" hose. 13,588 hours. Local pickup Lorain, OH .....\$22,000  
**419-309-6262**

C09

## PIPE BURSTING EQUIPMENT

Pipe bursting equipment. Hammerhead brand. Includes: Portaburst PB30 Gen 2 downhole unit; extraction cage attachment for PB30; PB13 Hydraulic Power Pack; 160mm Quick Grip Burst Head; 110mm Quick Grip Burst Head; two rolls of 150ft of 3/4" pull cable with a swaged, stud end. \$26,000. Only used on about 10 jobs. Would cost \$36,281 new. Huge discount on equipment that was barely used and is in good working condition. 419-309-6262. Local pickup in Lorain, OH. (C09)

## PIPELINE REHABILITATION



**2023 Perma-Liner Heat Assist Lateral Trailer,** 22' Trailer, lightly used single owner operator. Closing Business, great starter package to get your existing crew running or maybe start up yourself.....\$70,000

**Contact Hubert Thompson**  
**603-630-1856 or**  
**hubertthompson31@gmail.com. NH**

C09

Sewer Pipe CIPP Relining Equipment Complete System, Boiler Truck with shooter, generator, compressor and diesel water pump. Cutter Trucks (Prokasro) - 2, Reefer Trucks - 2, Wet out System complete with 2 pinch rollers, pumps, hydraulic mixtures, vacuum and roller beds, Doosan HP375 Compressor, Shooters/Launcher, Shahzad 780-217-2222. Edmonton, AB (C09)

## 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.vsirentalillc.com](http://www.vsirentalillc.com) (CBM)

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](http://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](http://www.TandTtools.com). Phone 800-521-6893. (CBM)

## TRAILERS



**Complete Pipe Lining Trailer.** Haulmark 24' covered trailer with Flow Liner pipe lining materials for lining 4" and 6" pipes. Comes with the inverter. Located in Waterford, OH. \$39,000 OBO  
**Contact Hailey at Mr. Rooter at 740-525-0366**

C09

## TV INSPECTION



**CUES C550 Inspection Trailer.** Less than 40 hrs on unit, 1,000 ft reel, has both transporters 4" thru 36" capability. Lab top with G-Net advanced. One owner-operator. Great unit for your start up CCTV business or just looking to inspect without tying up a vehicle in the fleet. Note: Push Cam in photo not included. This is brand new equip. \$140,000. NH

**Call: Hubert Thompson**  
**603-630-1856 or**  
**hubertthompson31@gmail.com**  
**for any additional questions**  
**and or inquires.**

C09



**2021 Minicam Proteus mainline CCTV** crawler system - fully functioning and ready to work. Portable control unit and 1,000' on reel. ....\$55,000  
**703-625-0270**

C09

2008 F450 gas cctv and lateral launcher RST, 2 tractors and 2 cameras, 83k miles, clean truck inside and out. Jorge Beltrán: cell - 626-250-1182, email - [jabeltran425@gmail.com](mailto:jabeltran425@gmail.com). CA (C10)

PLACE YOUR AD ONLINE AT [www.cleaner.com](http://www.cleaner.com) - IT'S ALWAYS THERE TO MEET YOUR BUSY SCHEDULE

**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<sup>HOURS</sup>  
TURNAROUND  
ON REPAIRS**

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

THE CABLE CENTER<sup>LLC</sup> OPEN - M-F, 7AM-3:30PM CST St. Louis, MO • 314-993-3099 • [www.TheCableCenterInc.com](http://www.TheCableCenterInc.com)



**2008 Ford E450 1FDXE45SX8DA92087.**  
Cell 561-324-4991. \$100,000. Tri Tec  
cutter / Cues TV

[https://  
www.facebook.com/marketplace/  
item/819856173437947/](https://www.facebook.com/marketplace/item/819856173437947/)

C09

**CAMERA OPERATORS, STOP SPINNING YOUR WHEELS IN GREASY PIPE!** After-market 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](http://www.TruGritTraction.com); [info@trugrittraction.com](mailto:info@trugrittraction.com); 407-900-1091 (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](http://pipetoolspecialties.com) or email [pts4422ilc@gmail.com](mailto:pts4422ilc@gmail.com) (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](mailto:info@alljetting.com), [www.alljetting.com](http://www.alljetting.com). (CBM)

**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.

3/4", 1/2", 1" nozzles come in kit form.



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



[www.rootrat.net](http://www.rootrat.net)



**MADE IN THE USA**

**Cleaner**

AVERAGE MONTHLY CIRCULATION REACHES

**21,000+** READERS!

PLACE YOUR AD ONLINE AT [www.cleaner.com](http://www.cleaner.com)

## Avanti announces director roles, changes to sales team structure

Avanti made recent staff announcements. Chris Hamilton, director — municipal division, will lead strategic initiatives and operations to support grouting projects for municipal/government entities, specifying engineers and municipal contractors. Jacob Swanson, director — geotechnical division, will spearhead and drive initiatives for the geotechnical market, forge strategic partnerships and lead the company's efforts in advancing geotechnical solutions and ensuring project outcomes. Keith Sisson, director — industrial & dealer channel divisions, will oversee the development and execution of strategies to expand Avanti's dealer network, provide training and support and ensure alignment with organizational goals and market demands. Chris Hamilton, director of national accounts, will head the strategic management of key client relationships and business development initiatives on a national scale, helping to drive growth and market expansion. The role involves collaborating cross-functionally to identify opportunities. The directors will still have territory responsibilities for specific states.



## UEMSI/HTV becomes official pipeline camera manufacturer of Road America

UEMSI/HTV announced that it is the official sewer camera manufacturer of Road America, the 4.048-mile racing course nestled

in the hills of Elkhart Lake, Wisconsin. The multiyear agreement will use UEMSI/HTV's American-made inspection camera systems for various needs at the facility, which will also help the company's research and development department refine their cameras for the years ahead.

## PPI announces annual award winners

The Plastics Pipe Institute announced the winners of its Projects and Members of the Year for 2023. The awards were presented during the group's annual worldwide meeting held in Florida, May 13-16, with 348 members attending, including a record number of new members. Projects that won ranged from the largest residential project in New York State to use a geothermal heat-pump system to constructing a fish habitat with HDPE conduit made from recycled content. PPI awarded five winning projects:

- Building and Construction Division Project of the Year — 1 Java Street Geothermal System, Brooklyn, New York, by Versaprofiles Products, Saint-Lazare-de Bellechasse, Canada
- Drainage Division Project of the Year — University of Alabama Stadium Sub Air Drainage System by Prinsco, Willmar, Minnesota
- Energy Piping Systems Division Project of the Year — Baton Rouge Zoo, Evonik Corporation, Piscataway, New Jersey
- Municipal and Industrial Division Project of the Year — South Claiborne Potable Water Transmission Line, New Orleans, AGRU America, Georgetown, South Carolina
- Power and Communications Division Project of the Year — Lake Conroe (Texas) Fish Habitat Project, Petroflex North America, Gainesville, Texas

The following are the Members of the Year for 2023:

- Building and Construction Division Member of the Year — Steve Sandstrum, Borealis
- Drainage Division Member of the Year — Stefan Lupke, president, Corma Inc.
- Energy Piping Systems Division Member of the Year — Dell Doyle, senior technical service and development scientist, Dow Chemical Co.
- Municipal and Industrial Division Members of the Year — Mike Anson, GF Central; Billy Conatzer, McElroy Manufacturing; Jeremy Harris, Plasson USA; and Jeff Wright, GF Central
- Power and Communications Division Member of the Year — Jennifer Reeves, Petroflex North America **c**

HAVE A STORY IDEA?

Email us at [editor@cleaner.com](mailto:editor@cleaner.com)



*Don't miss out!*

# OPEN HOUSE

SEPTEMBER 26 2024

LIVE DEMOS EDUCATION NETWORKING  
FOOD PRIZES AND MORE!



SCAN TO  
REGISTER



MANUFACTURING  
COMBINATION JETVACS  
JETTERS  
JETTER TRAILERS  
HYDRO EXCAVATORS  
AIR MOVERS  
RECYCLE JETVACS  
SKID MOUNTED VAC UNITS

GAPVAX IS THE INDUSTRY FAVORITE FOR VERSATILE, DURABLE CUSTOM-BUILT, QUALITY VACUUM EQUIPMENT. READY FOR ANYTHING, OUR UNITS ARE BUILT TO TACKLE EVEN THE TOUGHEST JOBS. GAPVAX UNITS ARE EASY TO OPERATE AND MAINTAIN WITH LITTLE DOWNTIME. TRULY BUILT BY THE OPERATOR FOR THE OPERATOR, WE KNOW THE IMPORTANCE OF WELL-BUILT, RELIABLE EQUIPMENT. CALL TODAY TO SEE WHAT WE CAN BUILD FOR YOU!



WWW.GAPVAX.COM

888-442-7829 PA

(281) 884-8658 TX



MACHINES  
AS THAT WORK  
HARD  
AS YOU DO



**NOW AVAILABLE**  
in a compact trailer mount



## THE SPARTAN DEFENDER COMBI UNIT

**Everything you need in a compact, efficient footprint.**

The NEW Spartan Defender is a complete all-in-one skid-mounted system. Effective jetting coupled with a powerful vacuum pump puts everything you need to service and clean lines in one compact footprint.

With 3,000 PSI at 10 GPM jetting performance and a powerful suction pump, the Defender is ideal for grease trap maintenance, cleaning and maintaining small septic tanks, and removing waste from live sewers. Its compact footprint and new trailer mount version makes it easy to transport to the job site.

**Don't just clear the line, defend it.**



SCAN ME

**SPARTANTOOL.COM**  
800.435.3866