

Cleaner

FOR DRAIN AND PIPE CLEANING, INSPECTION AND REHABILITATION PROFESSIONALS

AUGUST 2019
CLEANER.COM

MONEY MANAGER / 30
JUST BUSINESS / 36
SAFETY FIRST / 64



CLEANING CANADA'S
BIGGEST PIPES
/ 40

CASE
STUDY
/ 76

A UNITED TEAM

SIBLINGS PARTNER UP TO EXPAND THEIR
PLUMBING BUSINESS WITH THE HELP OF
ANOTHER INDUSTRY VETERAN / 20

WATERBLASTING/
WATERJETTING
DIRECTORY / 54



PRODUCT FOCUS
WATERBLASTING & WATERJETTING CLEANING AND ACCESSORIES / 66



Tight Space Specialist

The Power-Vee® with Power Cable Feed

When a drain cleaning job puts you in a tight spot, using the Power-Vee is like having an extra hand to make the job easier. Just squeeze the feed lever and the cable spins into the line. Retracting the cable is just as easy.

This compact tool feeds tough Flexicore® cables at up to 16 feet per minute. Convenient quick-change cartridges make cable switching quick, clean, and easy.

It's time to upgrade from manual feed machines. Have a Power-Vee ready for your next tight spot.

It puts power in the palm of your hand.



Call the Drain Brains® at 800-245-6200 or 412-771-6300, or visit www.drainbrain.com/powervee.

General

PIPE CLEANERS



The toughest tools down the line.™

© General Wire Spring 2019

Functional FLEXIBILITY

Your day-to-day work changes.

Your equipment shouldn't have to.

VAC•CON RECYCLER



A true combination machine provides you with a choice depending on the job at hand. Vac • Con® combination machines are now available with an optional Water Recycling package to allow you more time, efficiency, and flexibility at the jobsite.



BOOTH #834
the **Water** **AUG**
expo **28**
29
In MIAMI!

Find Your Dealer!

www.vac-con.com/dealer-search/



VAC•CON

Schedule Your Demo

904.284.4200

STONEAGE TRAINING

For Industrial Cleaning Professionals

NOW BOOKING!



STONEAGE OFFERS THE ONLY TRAINING CURRICULUM THAT GOES BEYOND THE BASICS OF SAFE WATERJETTING.

We offer extensive training on the science and techniques that underpin successful high-pressure cleaning, and the best practices for selecting and operating equipment in all common industrial cleaning applications.

- Increase workforce safety, productivity and retention
- Meet plant safety requirements and bid more jobs
- Reduce risk and costly downtime
- Training can be tailored specifically to your company's needs



WWW.STONEAGETRAINING.COM

CALL OR GO ONLINE TO BOOK TODAY!

 **+1 (970) 259-2869**

UNSTOPPABLE

M O M E N T U M



With power, versatility and agility, the ROVER X sewer crawler has won a reputation that's larger than life. Behind it stands the industry's broadest network of service and support centers—each committed to delivering unrivaled uptime and low cost-of-ownership.

It all adds up to ROVER X being the world's most trusted crawler. Schedule a demo today and see why.



Envirosight

(866) 936-8476 • www.envirosight.com

inspection crawlers | zoom survey cameras | video nozzles | push cameras | manhole scanners | inspection trucks | data management



ON THE COVER

Rod Ray asked his sister Sunshine Ray to join him as a co-owner of the family business, Atlas Plumbing, to help bring their marketing to the next level. The two have grown the business to a team of 18 and expanded their services with the help of industry veteran Pete Rios. (Photography by Eric Arnold)

COMING IN SEPTEMBER

Mainline Sewer Inspection

TECH PERSPECTIVE: Developing great CCTV technicians

BETTER BUSINESS: Why one-on-one meetings work

MONEY MACHINES: A custom jetting truck enables year-round work

CONTENTS

August 2019

FEATURES

- 20 **Profile:**
A United Team
Siblings partner up to expand their plumbing business with the help of another industry veteran.
By Giles Lambertson
- 40 **Profile:**
Built to Serve
Manitoba contractor tackles large-diameter pipe cleaning jobs with an unconventional equipment strategy.
By Ken Wysocky

DEPARTMENTS

- 12 **From the Editor:**
Face Problems Head-On
There are always unexpected challenges, but how you handle them makes all the difference.
By Kim Peterson
- 14 **@cleaner.com**
Be sure to check out our exclusive online content.
- 30 **Money Manager:**
Don't Leave Money on the Table
Whether or not you negotiate your purchases, fostering good rapport with trusted suppliers is good for business.
By Joan Koehne
- 36 **Just Business:**
Standing Out
Distinguish yourself from your competitors by taking your service to the next level.
By Michael Williams
- 50 **Money Machines:**
A Monument to Dependability
Even after 16 years of service, a trailer jetter nicknamed Old Faithful keeps bustling through clogs and bolstering revenue.
By Ken Wysocky
- 54 **Waterblasting/Waterjetting Directory**
- 60 **Tech Perspective:**
Pinpoint Small Leaks
Gas detection systems can offer precise and reliable detection of water leaks.
By Jared Raney
- 64 **Safety First:**
First Line of Defense
Job hazard analysis can be the best guide to put crews on the safest path.
By Jared Raney
- 66 **Product Focus:**
Waterblasting and Waterjetting Cleaning and Accessories
By Craig Mandli
- 76 **Case Study:**
Waterblasting and Waterjetting Cleaning and Accessories
By Craig Mandli
- 78 **Product News**
Product Spotlight: Compact hydrovac delivers economical performance.
By Craig Mandli
- 82 **Industry News**

PERMA-LINERTM
INDUSTRIES, LLC.

**ZERO
DIGTM**
**Trenchless
PIPE REPAIR**

**Did you
know?**

**The family of InsigniaTM Hydrophilic Gasket
Seals is compliant with ASTM F2561, F3240
and F2599 for all CIPP lining**

PERMA-LATERALTM LINING

- ✓ Industry-Leading, Compliant Technology
- ✓ Multiple installs per day
- ✓ Work Year-Round, Increased Productivity
- ✓ Ease of Use
- ✓ #1 Selling Small Diameter Pipe Relining System
- ✓ Proudly Made in the USA

**INSIGNIATM HYDROPHILIC
GASKETS**



TO LEARN MORE
1-866-336-2568

ZERO DIG CIPP TRENCHLESS TECHNOLOGY
WWW.PERMA-LINER.COM

NEW

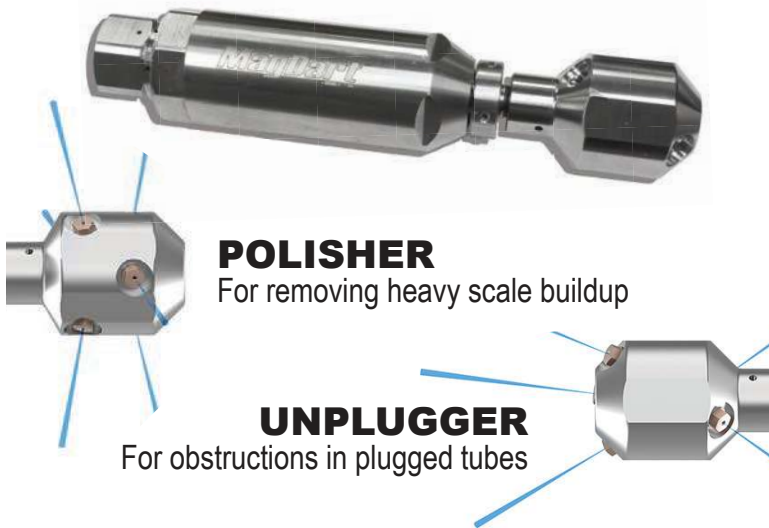
MagDart™ X40

40K PSI PIPE CLEANING/UNPLUGGING TOOL FROM JETSTREAM



Maximum Pressure. Maximum Performance.

Jetstream's MagDart™ X40 is a 43,500 psi (3000 bar), self-powered rotating nozzle with two options for head configuration:



POLISHER

For removing heavy scale buildup

UNPLUGGER

For obstructions in plugged tubes

Jetstream
Subsidiary of Federal Signal Corporation

FS Solutions

waterblast.com/magdart

1-800-231-8192 | sales@waterblast.com

Jetstream parts, accessories and rentals are also available through FS Solutions, with 13 convenient U.S. locations

© 2019 Jetstream of Houston, LLC. Jetstream™ and MagDart™ are trademarks of Federal Signal Corporation.

 <p>LOWERED</p> <p>'02 KW/VACTOR COMBO UNIT (145P) Cat C-10, Allison auto, 80gpm 2,000 psi rodder pump, roots blower, 1"x800' hose reel, brand new cyclone, new ECM</p>	 <p>REDUCED</p> <p>'07 VOLVO/VACTOR COMBO UNIT (302P) Volvo, combo unit, 175K miles, 6,500 hrs, jet/vac Vactor 2100</p>
 <p>\$55,000</p> <p>'12 INTERNATIONAL POWER WASHER TRUCK (984) International maxforce, 31.2K miles, Kerr Triplex pump-2000psi/30gpm, four 1/2" hand gun reels, 900,000BTU burner, 1,750 gal. water capacity</p>	 <p>SOLD</p> <p>'15 FREIGHTLINER HOT WATER/JETTING TRUCK (828) Cummins, 20.5K miles, cold weather unit- Sewer Equip Co of America, Myers Triplex pump-2000psi/80gpm, boiler, 700,000 BTU,</p>
<p>ENTERTAINING ALL OFFERS We will take all inquiries seriously</p>	
<p>MITCH (231) 258-7309 MitchH@AmericanWaste.org Visit our website www.AmericanWaste.org and click on the "For Sale" tab to view more pictures and info.</p>	

Cleaner

FOR DRAIN AND PIPE CLEANING, INSPECTION AND REHABILITATION PROFESSIONALS

Published monthly by COLE Publishing, Inc.

1720 Maple Lake Dam Rd., PO Box 220, Three Lakes, WI 54562

Call toll-free 800-257-7222 | Outside of U.S. or Canada call 715-546-3346

Mon- Fri., 7:30 a.m.-5 p.m. CST

Website: www.cleaner.com | Email: info@cleaner.com | Fax: 715-546-3786

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

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

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

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

REPRINTS AND BACK ISSUES: Visit www.cleaner.com for options and pricing. To order reprints, call Jeff Lane at 800-257-7222 (715-546-3346) or email jeff.lane@colepublishing.com. To order back issues, call Nicole at 800-257-7222 (715-546-3346) or email nicole.labeau@colepublishing.com.

CIRCULATION: Circulation averages 26,000 copies per month. This figure includes both U.S. and international distribution.

© 2019 COLE Publishing Inc.

No part may be reproduced without permission of the publisher.



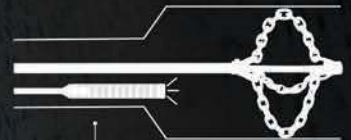
Kayla Bisnette Jim Koshuta

FLEX YOUR VISION

NEW

ABILITY TO KEEP YOUR
INSPECTION CAMERA IN-PIPE
WHILE YOU CLEAN WITH

FlexShaft™



K9-204
Capacity: 2" to 4"
Length: 70' of $\frac{5}{16}$ " cable



K9-102
Capacity: 1 $\frac{1}{4}$ " to 2"
Length: 50' of $\frac{1}{4}$ " cable

RIDGID® FlexShaft™ Machines deliver wall-to-wall clean with astonishing speed. Lightweight and portable, FlexShaft Machines can be operated with your SeeSnake® inspection camera in the line while you run it. Fully clear scale and soft blockages faster with FlexShaft Machines.

Learn more at RIDGID.COM/FLEXSHAFT

RIDGID


EMERSON

©2015 RIDGID, Inc. The RIDGID logo is a registered trademark of RIDGID, Inc. in the U.S. and other countries. All other trademarks belong to their respective holders. Drill not included.

ALLAN J. COLEMAN
SINCE 1905

Allan J. Coleman Co.	27, 83
American Waste	8
Arthur Products Co.	16
Boatman Industries, Inc.	80
Cable Center, The	48, 61



Cam Spray	45
-----------	----



Cat Pumps	63
Central Oklahoma Winnelson	28
CESCO	11



Coast Manufacturing	16
CONEXPO-CON/AGG	52



CUES	69
------	----



Drainables Direct	77
-------------------	----



Duracable Manufacturing Co.	19
-----------------------------	----



Envirosight, LLC	5
------------------	---



Enz USA, Inc.	18
---------------	----



F. S. Solutions	31
-----------------	----



Formadrain Inc.	37
-----------------	----



GapVax, Inc.	91
--------------	----



General Pipe Cleaners/General Wire Spring	2
---	---



GI Industries, Inc.	23
---------------------	----



Giant Industries	17
------------------	----



Gorlitz Sewer & Drain, Inc.	53
-----------------------------	----



Guzzler Manufacturing	75
-----------------------	----



Hammelmann Corp.	29
------------------	----



Jetstream of Houston	8
----------------------	---



KEG Technologies, Inc.	65
------------------------	----



Keith Huber Corporation	71
-------------------------	----



Ken-Way Corporation	28
---------------------	----



Lansas Mfg. by Vanderlans & Sons	46-47
----------------------------------	-------



LaPlace Equipment Co. Inc.	38
----------------------------	----



Milwaukee Rubber Products, Inc.	62
---------------------------------	----



Mongoose Jetters by Sewer Equipment	33
-------------------------------------	----



MyTana Manufacturing	13
----------------------	----



NLB Corporation	15
-----------------	----



NozzTeq, Inc.	38
---------------	----



Pearpoint	57
-----------	----



Perma-Liner Industries, LLC	7
-----------------------------	---

Picote Solutions	25
------------------	----

Pipe Lining Supply	12
--------------------	----

Piranha Hose Products	18
-----------------------	----



RapidView IBAK North America	79
------------------------------	----



Ratech Electronics, Ltd.	16
--------------------------	----



Reelcraft Industries	26
----------------------	----



RIDGID	9
--------	---



Root Rat	28
----------	----



RUGID	88
-------	----



Sewer Equipment Company of Nevada	51
-----------------------------------	----



Sonetics	49
----------	----



Southland Tool Mfg. Inc.	39
--------------------------	----



Spartan Tool, LLC	92
-------------------	----



StoneAge, Inc.	4
----------------	---



T&T Tools, Inc.	48
-----------------	----



Trio-Vision LLC	89
-----------------	----



Trojan Worldwide, Inc.	34
------------------------	----



UEMS/HTV	73
----------	----



Ultra Shore	18
-------------	----



Vacall	35
--------	----



Vac-Con	3, 59
---------	-------



Vivax-Metrotech Corp.	43
-----------------------	----



Water Cannon, Inc. - MWBE	90
---------------------------	----



Westmoor Ltd.	34
---------------	----



Zoom Drain Franchise Company	58
------------------------------	----



Marketplace	84-85
-------------	-------



Classifieds	86-87
-------------	-------



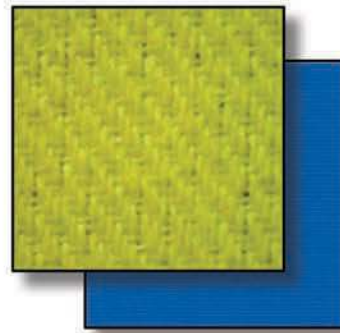
**JOIN
THE CONVERSATION.
THE CAMARADERIE.
THE COMMUNITY.**

Cleaner

- facebook.com/CleanerMag
- twitter.com/CleanerMagazine
- youtube.com/CleanerMagazine
- linkedin.com/company/cleaner-magazine

PPE for Waterjetting

Protection against Possible Injury from High Pressure Water Blasting



- Kevlar inner layers
- Custom colors and logos
- Complete suits or available separately



Aqua Safe Hose Shroud
Various styles, any size, any length



AquaSafeSuits.com

Face Problems Head-On

There are always unexpected challenges, but how you handle them makes all the difference

Not every job goes from start to finish without a hitch. I know that all too well. I've had a variety of challenges putting together issues of *Cleaner*: missing photos, late submissions, even a contractor who pulled out of a feature profile at the last minute because he sold his business. That's great for him, but not for my production timeline.

PIPELINE SUPPLY

YOUR NO DIG SOLUTION!
IDEAL SOLUTIONS FOR PLUMBERS AND DRAIN CLEANERS

THIS OR THAT

BEFORE

AFTER

CONTACT US TODAY
888-354-6464
info@pipelineliningsupply.com



Kim Peterson

But despite all the shuffling of schedules and a little stress behind the scenes, you would never know there was a problem if I wasn't telling you. You still get the glossy finished product in your hands each month.

That's how it should be for your customers as well. You'll always have hard days, but your customers expect that when they call you, you will be there on time and fix the problem. They just want results.

So what do you do when something goes wrong on a job? Maybe you have a customer's lawn dug up and still can't locate the exact problem. Or a couple employees get sick or quit on you at the same time and you're short-handed. All three of your trucks break down in the same day. Your camera stops working and you have to send it in for repairs right before a big inspection job was scheduled to start.

There are a million things that can go wrong. What matters is how you handle them.

Your customers are depending on you, and your reputation is on the line. So often we hear that great service and the customer experience are just as important as cost when choosing a service provider. So you need to deliver on your word.

Give a discount on the landscaping fee if someone's yard is torn up for longer than you promised. If you're short-handed, you and your available employees might work overtime for a week or two in order to follow through on your commitments. When your camera or jetter is out of commission, rent a replacement or hire a subcontractor with the necessary tools if you can't reschedule the work.

The best thing to do during a crisis on the job is face it head-on and figure out a solution as quickly as you can. Hopefully you can solve the problem before the customer is even aware there's an issue. Something as simple as calling someone in on his or her day off or renting equipment might be all it takes. But if the solution will require more time than you'd like, be upfront with the customer immediately. Tell them the situation, and then explain what you're doing to fix it. If a job requires an inspection and your new camera isn't getting delivered until tomorrow, let them know they are your first priority the second the camera is in your hands. Most people will be accommodating and understanding when they know you're doing everything you can to make it right.

There will always be setbacks, but how you face those challenges sets the tone for the rest of the job. The work will get back on track as long as you're proactive about finding a solution.

I hope you enjoy this month's issue. **c**

AS VERSATILE AS YOU ARE

Want a single machine to tackle the many challenges you face in a workday? The new M745 Workhorse cleans drain *and* sink lines, and lets you throttle speed to get the job done fast, safely and completely.



MULTIPLE SIZES

Imagine—a machine that cables drains 1.5" to 4". It's easy to swap the M745's drain reel and available sink line reel quickly and without tools. That means less equipment to haul and less upkeep.



MULTI-SPEED

With speed adjustable from 100 to 300 rpm, the M745 lets you feed and retract cable faster, snake confidently through bends, and vary the force of sidewall contact. Built-in torque protection enhances your safety and helps extend cable life.



MyTana

(866) 948-7576 ■ www.mytana.com

@Cleaner.com

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

TOOL TIPS

Safe Digging Begins With Good Utility Locating

Utility locating ahead of an excavation project is important if you want to maintain a safe job site and avoid line strikes. Of course, those efforts won't be of much help if you're not locating properly. Check out this refresher on how to effectively use an electromagnetic locator published back in April for National Safe Digging Month.

>>cleaner.com/featured



KING CLOG

Utility Discovers 115-Ton Concrete Sewer Blockage

Over the years, many instances of “fatbergs” have made headlines — large FOG-based sewer clogs requiring a lot of manpower to remove. If you missed the latest headline about a particularly massive sewer clog, read about it in this online exclusive. London's Thames Water began dealing with a 330-foot-long, 115-ton blockage back in April, this time made of concrete instead of FOG. >>cleaner.com/featured



FLEET MANAGEMENT

Software Improves Driver Safety

Almost four decades into business, the Bill Howe Family of Companies in San Diego continues to look for ways to improve. One of the most recent implementations is software for its 160-vehicle fleet that monitors driver behavior and produces vehicle service alerts. In this online exclusive, learn more about the benefits the company has received through the software.

>>cleaner.com/featured

“When you cut corners to try to stay the low-cost provider, it means you attract a lower quality workforce doing lower quality work. Eventually you'll be remembered for the poor quality work you provided long after the cheaper price you gave.”

— Do You Charge Enough For Your Services?
>>cleaner.com/featured



Emails and Alerts

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

Join the Discussion



facebook.com/CleanerMag



twitter.com/CleanerMagazine

RUNS STRONGER. RUNS LONGER.



DEPENDABILITY MATTERS.

For over thirty years, NLB pumps have set the standard for reliability and durability. If you're looking to increase your productivity and profitability, look to NLB Corporation.



LEADING WATER JET TECHNOLOGY™

NLB 350 HP Pump



(248) 624-5555 | NLBCORP.COM

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

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

Ratech
ELECTRONICS

Video Pipeline Inspection Systems



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



Control unit
can be
mounted
to reel.

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

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

MANUFACTURING SEWER CAMERAS SINCE 1981.

ARTHUR PRODUCTS CO.
CD-MAX™ YOUR NOZZLE!



From this?



To THIS !!!



Professional-Grade Drain Cleaning Machines, Cables & Accessories



Drain Cleaning Machines

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

Cables

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



COAST MANUFACTURING

www.coastmanufacturing.com

541.684.0743

GIANT

When Performance Under Pressure Matters



- *Custom Units
- *Fits in a truck bed
- *4.5 GPM @ 15,000 PSI
- *7 GPM @ 10,000 PSI
- *10 GPM @ 7000 PSI

Giant Pumps: Built to Last

419-531-4600
www.giantpumps.com

enz® High Pressure Lineup

A BETTER CHOICE for Tube Cleaning

**BEST
UNPLUGGING
NOZZLE**



**BEST
POLISHING
NOZZLE**



Industrial Cleaning Solutions
up to 2500 bar/36,000 psi



CALL 1 877 ENZUSA1
For a dealer near you
www.enzusainc.com

enz® usa inc.
1585 Beverly Ct., Unit 115 | Aurora, IL 60502

ultra *ultra* *ultra*
LIGHT – VERSATILE – SAFE

ultraSHORE
P R O D U C T S



Quick to Install.
As light as 130lbs.



Roll Your Own.
Optional wheel kit.



Stacks easily with
2' & 4' high panels.

This is What Aluminum Shoring Was Meant to be!

SCA
SAFETY CORPORATION OF AMERICA
1-800-683-8837

1-800-SH-ORING
CALL TOLL-FREE NATIONWIDE • 1-800-746-7464
www.shoring.com

Need Jetting Hoses?



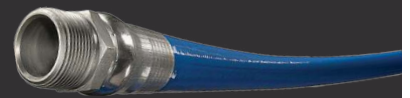
Piranha® Standard High Pressure Sewer Cleaning Hoses



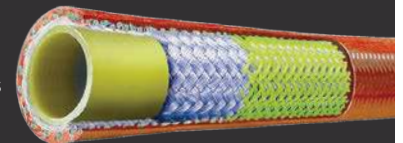
Piranha® Slither™ High Pressure Sewer Cleaning Hoses



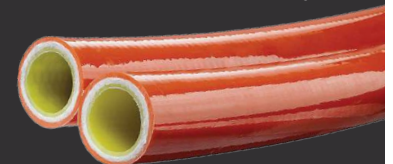
Jetting/Lateral Line Hoses



Large Diameter Hoses Up To 1-1/2"



Piranha Armor Belt® Sewer Cleaning Hoses



Twin/Multi Lines

For samples, literature and more information contact us at

PIRANHA
HOSE PRODUCTS, INC.
A Kuriyama Group Company

Piranha Hose Products, Inc.,
Cadillac, MI
1-800-250-5132
www.piranhahose.com

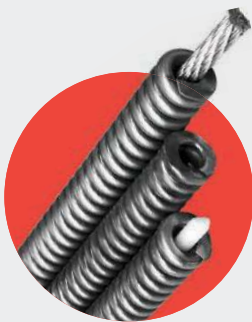
DURACABLE DALE



WORDS OF WISDOM

— WHEN YOU'RE ON SITE —
ANYTHING
////////// CAN HAPPEN. //////////

AND WHEN IT DOES, WE'VE GOT YOUR BACK.



CABLES



BLADES



MACHINES



DRAIN CARE
PRODUCTS

DURACABLE.COM



DURACABLE
— MANUFACTURING CO —

877.244.0556

WANT PROMOTION INFORMATION? JOIN OUR MAILING LIST ONLINE OR BY PHONE



A UNITED TEAM

Siblings partner up to expand their plumbing business with the help of another industry veteran

By Giles Lambertson // Photography by Eric Arnold

« Atlas Plumbing employees (from left) Thomas Brunner, Peter Rios, Xavier Garcia and Adan Villa set up for a lateral lining job with a Perma-Liner inversion drum.

Atlas Plumbing founder Bob Ray learned the trade as a teenager by working with his father before opening his own shop in Las Vegas in 1980. He kept busy for the next 30 years solving traditional plumbing issues in homes and commercial kitchens. But when his children assumed leadership of the company, Atlas Plumbing began to evolve.

When Bob Ray's son, Rod, became a co-owner in 2011, he immediately began to enlarge the company from a three-man operation. Like his father, Rod Ray started his unofficial plumbing internship as a teenager, "if you count drilling holes and digging ditches." With a good foundation in the trade, at age 35 he was ready to move the company to another level.

"I began to grow the company as Dad was getting ready to retire. I knew I was a really good plumber, but I realized I needed a partner to make this company succeed," he says. Ray turned to his sister, Sunshine Ray, two years younger, who leapt at the opportunity to join him. The family partnership is going well. "She probably is the best business decision I ever will make in my life."

When Sunshine came aboard four years ago, she drew upon her marketing degree to begin a makeover of the Atlas Plumbing image. A throwback website design was created featuring a Lucille Ball-like character whom the Rays fondly dubbed Alice. A new company slogan was launched emphasizing

service. Coordinating uniforms for service techs making house calls were introduced, featuring either vintage overalls or a gray shirt, suspenders, a bow tie and a hat.

As consequential as these branding efforts were, something even more transformative occurred two years later after Ray met industry veteran Pedro "Pete" Rios. "Since Pete has come on, I have never done so much sewer work in my life," he says. Rios has been instrumental in repositioning Atlas Plumbing as a trenchless pipe repair company.

"Since Pete has come on,
I have never done so much
sewer work in my life."

Rod Ray

FOSTERING GROWTH

Rios is a California transplant and previously worked for a family-owned plumbing and drain cleaning business in Los Angeles. He, too, grew up in the industry, learning the retail aspects of commercial and institutional plumbing, performing sewer and drain cleaning work, and eventually pipe bursting and relining — "a little bit of everything," he says.

He brought his expertise to Nevada and, one January morning, found himself in a Henderson plumbing supply house at the same time as Ray. Ray was there to talk about buying a trailer jetter and the easygoing Californian eavesdropped.

Atlas Plumbing

LOCATION: Henderson, Nevada

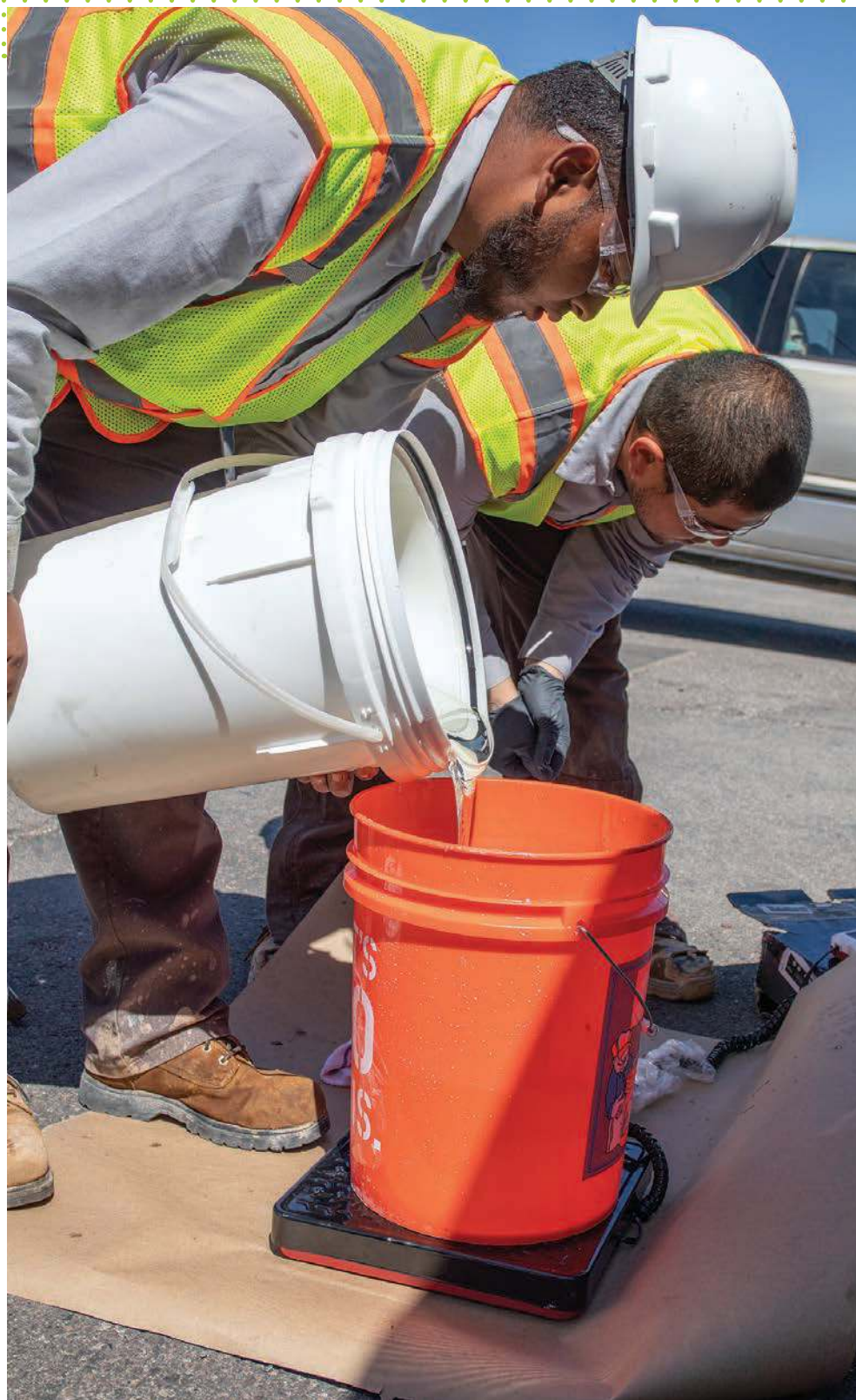
OWNER: Rod Ray and Sunshine Ray

EMPLOYEES: 18

SERVICES: Drain cleaning, pipe inspection, pipe lining, hydrojetting, plumbing repair and installation, gas line repair, water treatment, backflow inspection, leak detection

SERVICE AREA: Las Vegas Valley

WEBSITE:
www.atlasplumbinglv.com



“Do you mind if I join this conversation?” he recalls asking. “It sounds like you want to get into jetting because you have restaurant accounts. You can invest in a \$50,000 trailer jetter, but a smaller compact machine will do what you want to do most of the time and you can get it for under \$9,000.’ I just started laying it out for him.”

The chance encounter at the store turned into a two-hour discussion during which Rios suggested how much Ray could charge



➤ Xavier Garcia loads the calibration tube into the inversion tube with assistance from Thomas Brunner.

◀ Garcia (left) pours epoxy while Adan Villa watches the scale to ensure proper amounts of each compound are mixed.

in various situations and gave him other business management advice. A few months later when Rios realized his employer was not on a growth trajectory, he remembered Ray and called to offer his services.

Today, Atlas Plumbing is on the move thanks to the uniting of the Rays’ vision with Rios’ experience and enthusiasm. “It is amazing how the energy level changes when Pete walks into a room,” Ray says.

The Rays are fully committing to trenchless work. In February, the trio attended the Water & Wastewater Equipment, Treatment & Transport (WWETT) Show in Indianapolis and came away with CIP inversion equipment from Perma-Liner Industries. “The training and the customer service are phenomenal. Its pricing is in the middle range for a starting package. The reliability of the system is unquestioned,” says Rios, and “working with the company is a great experience.”

EFFORT AND EXPERIENCE

The company’s first relining attempt was a Farmers Insurance claim at a home where sewage backed up overnight while a family slept. “They woke up to a lagoon,” Rios says. The team started early in the day, clearing the line and preparing it for a new liner. Rios says he could tell early on that the effort would be successful.

“Before you even put the calibration tube into the line to hold



the pressure inside the liner, you know it is going to go well if the liner goes into the pipe smoothly. If the liner goes in smoothly, the tube is going to go in. From the moment the resins are being mixed for the liner to the moment the inversion material is in the pipe is the critical time,” he says. It all came together beautifully on that initial job. “We had high-fives all over the place.”

“We have two guys with tons of experience in relining,” says Ray, referring to Rios and Hugo Barahona, Rios’ nephew, who also came to Atlas Plumbing from California. Barahona is certified by Perma-Liner and has relined 50,000 linear feet of pipe in his career. This experience is what separates Atlas Plumbing from other plumbing houses in the valley.

In the past if a customer needed a pipe relined, Ray would call a qualified company — usually from California — to subcontract the job. “It was happening weekly,” Rios recalls. Now Atlas Plumbing is soliciting other area plumbing companies as a local relining services provider, and Rios thinks they will become a dominant force in the valley. “I truly believe in my heart that Atlas Plumbing is going to be the tip of the spear of the relining industry here in Las Vegas.”

“I truly believe in my heart that Atlas Plumbing is going to be the **tip of the spear of the relining industry here in Las Vegas.**”

Pedro “Pete” Rios

The Army called us...



JETTER MEETS CABLE MACHINE... END OF STORY



GI INDUSTRIES

GI Industries Inc.
800-724-1944 • www.giind.com • sales@giind.com
Owned/Operated and Made in the U.S.A.



▲Xavier Garcia uses a RIDGID SeeSnake CS6x camera to inspect the existing line.

THE NEXT STEP

The Atlas Plumbing equipment yard has a different mix of machines now. Besides the Perma-Liner equipment, Atlas Plumbing service vans now carry Picote Solutions Mini Millers and chains to scour lines. A cart-mounted Gorlitz Sewer & Drain GO 4200 jetter (3,200 psi, 8 gpm) with a Warthog nozzle (StoneAge) is the team's choice for root and sludge removal.

The company's trailer-mounted Spartan Tool 758 jetter pushes out 12 gpm and can be operated by one person, but the primary line-clearing tool is a truck-mounted Gorlitz GO 3500 jetter with 300 feet of 3/8-inch hose. To inspect lines and document cleaning and repairs,

the Atlas Plumbing crew uses a Spartan PROvision 2.0 camera system, a RIDGID SeeSnake CCS6X attached to a 200-foot pushrod reel, and a RIDGID Scout unit.

Techs roll out on calls in one of 10 service trucks. Displaying the company's new logo and promotional material on the truck bodies is one of Sunshine's next projects. Missing from this lineup of equipment is a hydrovac truck, which the Rays rent as needed. "That's the next step," Sunshine says.

Rios advocates old-fashioned hand-digging, anyway. "If we need an excavator or vac, we rent one," he says. "Mostly we use good old elbow grease. An excavator can make a mess and hand-digging is more precise. I've done this for so long that I've used every method. The least invasive is the vacuum truck, but even with that, soil gets dumped and you're having to bring soil back in."

The Rays cross-train techs so they can perform any of the company's services, but a dedicated crew performs the CIPP work. Even there, other techs are rotated in and out occasionally so they can familiarize themselves with the relining process. "I want everyone to be knowledgeable," Ray says.

This inclusive management of technicians is one way Ray hopes to win the loyalty of employees. Staff longevity is his goal. "I want people to come to Atlas Plumbing for a career. I want people to retire from here. I want to create a career path so technicians will come and stay for 15 or 20 years. This is where my sister and I are taking the company."

Las Vegas joins the trenchless revolution

Fixing or replacing underground pipe without tearing up lawns and streets is a solution that's been around too long to be called new. Yet CIPP lining is just now getting traction in and around Las Vegas, a metropolitan area of more than 2 million people.

Several factors seem to have combined to slow the rollout of CIPP repair solutions in the Las Vegas Valley, according to Pedro "Pete" Rios, sales supervisor and trenchless expert at Atlas Plumbing in Henderson, Nevada. The first is the dismal quality of the valley's water.

"The water is so hard that I've seen it snap plastic, wear out glue and ruin water heaters," Rios says. "And water softeners discharge acidic water into the sewer, so cast iron doesn't last either. In Los Angeles, we were replacing sewer lines from the 1950s. Here, residential sewer lines from the '80s are failing because of the water's acidic content."

The caustic situation adversely influenced valley governing

boards. They were reluctant to give the go-ahead to CIP lining solutions for fear they wouldn't withstand the corrosive fluids flowing in the pipes. "They wouldn't approve it, and the common reason I was given was, 'I don't know why,'" says Rod Ray, co-owner of Atlas Plumbing.

In fact, the liners are up to the task. The high-grade resin-soaked-and-cured liners inserted into pipes have proven to resist deterioration from high temperatures and corrosive agents including acids.

Authorities eventually were persuaded that the liners are indeed capable of handling the valley water. It helped that a CIP system's representative came to town and met with regulatory officials to demonstrate the resilience of the company's lining product.

With approval finally given, sewer repair and replacement firms, including Atlas Plumbing, are busy introducing the CIP revolution to Las Vegas Valley communities.



⤴ The Atlas Plumbing team, decked out in the retro-inspired uniforms co-owner Sunshine Ray incorporated as part of the company's marketing efforts.



PICOTE **POWER+** BECAUSE TOUGH JOBS NEED EVEN TOUGHER TOOLS

Multi-use machine for 3" to 12" pipes:

- Heavy duty descaling
- Lateral cutting

REMOVE:

- Roots
- Concrete
- Collapsed & Failed CIPP Liner
- Metal
- Limescale

Powerful 3-phase 400v

Range of tools for cast iron, clay and PVC pipes



CALL: 708 267 6366 | SALES@PICOTESOLUTIONS.COM

WWW.PICOTESOLUTIONS.COM



Made
in USA

Photo courtesy of Tellus
Underground Technologies



Did you know...

Reelcraft can build to your specs?



Jetter reels



Multiple
fluid paths

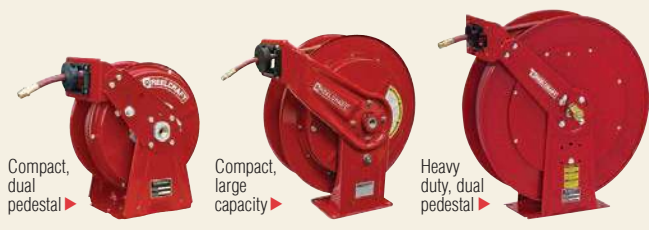


Reelcraft's Capabilities

- ✓ Built to your exact needs
- ✓ Very few size and weight constraints
- ✓ Special finishes/paint options
- ✓ Various drive types
- ✓ Wide range of pressures
- ✓ No minimum quantities

To learn more visit us at
www.reelcraft.com/custom

Full line of rugged, spring retractable reels



Compact,
dual
pedestal

Compact,
large
capacity

Heavy
duty, dual
pedestal



REELCRAFT®

www.reelcraft.com

800-444-3134



Pete Rios uses a roller to evenly
impregnate the liner with epoxy.

RELINING IS THE FUTURE

Residential plumbing still accounts for 75% of Atlas Plumbing service calls, but underground cleaning and repair work is the future. Revenue from cleaning and relining pipes has doubled from a year ago. Regular cleaning customers include Denny's and Popeyes restaurants that serve Las Vegas casinos and clog kitchen pipes with sludge 24/7. As for relining, the crew is honing its skills on laterals 3 to 4 inches in diameter, occasionally taking on 6-inch pipe. Their longest job to date is 57 feet.

"In the next couple of years, I want to get to the point where we can do pipe up to 36 inches in diameter. I want us to get good at it so we can do the bigger stuff," Ray says. He adds that they will eventually give pipe bursting and other trenchless solutions a try. "I'm looking at some pull-in-place products. There are situations where I don't see inversion working."

Where all this evolution will take Atlas Plumbing isn't clear yet, but Ray is eyeing upstate Nevada as an expansion target for the company. And he's keeping an eye on his 12-year-old daughter. "She helps stock and get trucks organized. I took her on a couple of relining jobs. If someone in the family is to become a fourth-generation part of the business, I'd say it would be Hailey." c

featured equipment

GORLITZ SEWER & DRAIN, INC.

877-446-7548
www.gorlitz.com
(See ad page 53)

PERMA-LINER INDUSTRIES, LLC

866-336-2568
www.perma-liner.com
(See ad page 7)

PICOTE SOLUTIONS

708-267-6366
www.picotesolutions.com
(See ad page 25)

RIDGID

800-769-7743
www.ridgid.com
(See ad page 9)

SPARTAN TOOL

800-435-3866
www.spartantool.com
(See ad page 92)

STONEAGE, INC.

866-795-1586
www.stoneagetools.com
(See ad page 4)

ALLAN J. COLEMAN

SINCE 1905

Call us today!
773-728-2400

5725 North Ravenswood Avenue • Chicago, IL 60660 • info@allanjcoleman.com • www.allanjcoleman.com

OLDEST NAME IN THE BUSINESS — OVER 114 YEARS OLD

SeeSnake® TruSense™ Camera Reel

- High dynamic range (HDR) offers bright, clear in-pipe imaging
- TiltSense displays the pitch in a pipe



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

FLEXSHAFT, K9-204

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



RIDGID

CS6x)) Digital Recording Monitor With Wi-Fi



- Wi-Fi and Bluetooth
- Direct-to-USB recording for fast, efficient documentation of inspection jobs
- Water-resistant keypad for direct control of essential camera and monitor functions
- Daylight viewable display for a crisp, clear in-pipe image
- SeeSnake HQ Software to edit, archive, and deliver reports via print, DVD, or online
- On-screen keyboard for basic titling and text entry
- CS6 will dock in the RM-200 Max or operate as a stand alone monitor

CS12x)) Monitor

- Wi-Fi and Bluetooth
- Large High Resolution 12.1" display
- Dual Battery Power – two batteries can be installed for maximum runtime
- Capture images and video directly to a USB drive
- Stream or Record to an iOS or Android phone or tablet



K-5208 Sectional Machine



- 3/4 HP motor spins 7/8" and 1 1/4" Sectional Cable at 700 RPM
- 71% Smaller Footprint and 35% Less Weight than comparable RIDGID® Sectional Machine
- Clean 2" to 8" drain lines, up to 200'
- Adjust the clutch size without any tools to accommodate 7/8" and 1 1/4" Sectional Cables

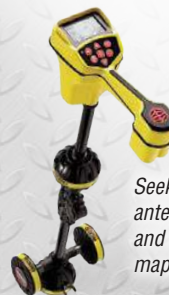


NaviTrack® Scout®

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

SR-24 Line Locator with Bluetooth® and GPS

- Omnidirectional antennas
- Large display • Built-In GPS
- Bluetooth® technology
- Smartphone/Tablet App
- Can trace any frequency from 10 Hz to 35,000 Hz



SeekTech® SR-20

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

We Have RIDGID Parts!

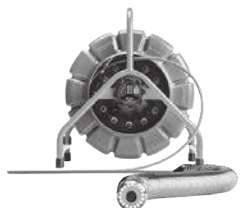
Authorized SeeSnake Repair Center
THE BEST SERVICE AND FAST TURN AROUND!

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



Buy Online at
AllanJColeman.com

YOUR SOURCE FOR RIDGID®



**SeeSnake® TruSense™
Camera Reel**



**SeeSnake® Compact 2
Camera Reel**



microDrain Reel



**Flexshaft
K9-102, K9-204**



**SeeSnake®
MAX rM200
Camera System**



**CS12x Digital
Reporting Monitor***



**CS65x Digital
Reporting Monitor***



**CS6x
Digital
Recording
Monitor***

*With Wi-Fi

CENTRAL OKLAHOMA
Winnelson
COMPANY

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 and Weekends –
Keith: 405-602-9155**

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

5037 NW 10th
Oklahoma City, OK 73127

www.centralwinnelson.com

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



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



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

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

RAT OUT YOUR ROOT PROBLEMS

Root Rat nozzles are uniquely designed to
make short work of big sewer line headaches
– chewing up roots and encrustations in all
kinds of pipe. Interchangeable heads use the
chain rotor for major obstructions and the
cable rotor for less aggressive problems.

Simplified service
means extra uptime.



3/8", 1/2", 1" nozzles
come in kit form.



SEE IT IN ACTION

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



Patented • Made in USA • www.rootrat.net

AS VARIABLE AS YOUR HIGH PRESSURE APPLICATIONS!

HAMMELMANN®



Just a call away to rent:

281-842-9450

Power rating: up to 1070 hp

Op. pressures: up to 50,000 psi

Flow rates: up to 165 gpm

- No uncontrolled leakage
- No water to ground
- Packing free design
- Hermetic seal bellows
- Most reliable



SAFE, SIMPLE, VERSATILE



ZERO LEAKAGE OF WATER TO GROUND

- No uncontrolled leakage from pump
- Packing free fluid-end
- 95% fluid efficiency
- 100% of bypass water is recycled through system



WIRELESS CONTROL SYSTEM

- Wireless remote to promote operator safety (350 ft) range
- System available in Ex design
- Low maintenance and highly reliable



ELIMINATE NOISE POLLUTION

- Engineered sound dampened container solutions
- Low noise emission (< 78 dB at 25 ft)
- Less stress during operation
- Stationary or mobile units



HAMMELMANN DAYTON

+1 937-859-8777

436 Southpointe Drive
Miamisburg, OH 45342
USA



HAMMELMANN HOUSTON

+1 281-842-9450

402 HWY 146 South
La Porte, Texas 77571
USA



APP FOR NOZZLE CALCULATION

Free app for iOS, Android, Blackberry
and your browser

Water Jetting Calculator:
hammelmann.com/app

Don't Leave Money on the Table

Whether or not you negotiate your purchases, fostering good rapport with trusted suppliers is good for business

By Joan Koehne

Contractors rely on vendors to supply a wide range of products, everything from paper clips to a 4,000-gallon vacuum truck. But how can you be sure you're receiving the best value for products and services? To ensure a company's long-term prosperity, the buying side of the business — not just the selling side — needs to be managed profitably. Choosing the right vendor is an important buying decision.

"You have to find somebody you can trust, who doesn't try to sell you something you don't want and helps you find what you do want," says Tom Frank, of Tim Frank Septic Tank Cleaning in northeast Ohio.

"You want someone who doesn't push extra stuff you don't need. That's a waste of time."

Vendors should stand behind their products and provide service after the sale, Frank says.

"If they're giving me a good price and good service and they have what I need, then it's worth working with them."

"You have to find somebody you can trust, who doesn't try to sell you something you don't want and helps you find what you do want."

Tom Frank

Treating vendors like business partners — not adversaries — is the key to maintaining solid relationships with suppliers, says Rick Perrin, partner in the consulting firm B2B CFO in Madison, Wisconsin. He also advises contractors to purchase from more than one vendor.

"Always have two primary vendors for whatever you do. That way, you always have a backup vendor if you need one," he says. Purchase 60% to 70% of products or services from a primary vendor and 30% to 40% from a secondary vendor, he says. This arrangement keeps the first one honest and the second one eager for more business. Having two vendors for a specific product or service creates an environment that's conducive for negotiating.

"Many, many things are negotiable. Be creative," Perrin says. Aside from negotiating on price, vendors can negotiate on delivery, financing, staff training or other perks.

SHOP AROUND

High Plains Sanitation Service in Strasburg, Colorado, put its negotiating strategies to work at the 2019 Water & Wastewater Equipment, Treatment & Transport (WWETT) Show when the company was looking for a new pumper truck. It purchased a 4,000-gallon aluminum pump truck with a chassis manufactured by Freightliner and a tank from Progress Tank.

Kim Seipp, co-owner of High Plains Sanitation Service, says her husband and son-in-law, Jeff Seipp and Jeff Nicoll, did a lot of comparison shopping before making the purchase. They narrowed their options to three trucks and met with the sales reps to discuss features, price and delivery. Kim Seipp describes the ensuing negotiations as back-and-forth conversations, not high-intensity bargaining.

"There are a couple of things they negotiated. One of the things they were able to get was aluminum wheels, as opposed to steel," she says. The aluminum wheels keep the truck lighter, which was an important feature for High Plains Sanitation Service. The trade-off for aluminum occurred toward the end of negotiations, when the deal was nearly finalized.

"By this time, the guys are into it for well over \$100,000, so the company is willing to say, 'Yeah, we can give you that.'"

When it comes to negotiating, contractors should know their limitations and know when it's time to walk away, Seipp says. You should take your time making a purchase and not feel intimidated about asking for a better deal.

"Once you've connected with someone ... and you're going to spend a good deal of money, then the vendors are willing to work with you and give you some discounts," she says. The more money that's involved, the more leeway the vendors have to offer deals.

With over 600 exhibitors at the WWETT Show, there's plenty of buying and selling going on.

Jody Forest, owner of Forest Septic in central Iowa, regularly attends the WWETT Show to learn about products and services and

CONTINUED >>



AUTOMATED & NO MAN ENTRY

CLEANING SOLUTIONS FOR THE

TANK & TERMINAL INDUSTRY



World Leader in Vacuum & Waterblasting Equipment

**Contact your local FS Solutions facility for more info
on vacuum, waterblasting & no man entry equipment**
fssolutionsgroup.com | guzzler.com | waterblast.com



© 2019 FS Solutions Group. All Rights Reserved.

connect with pumpers working in the field. He switches vendors based on what he sees at the show, plus recommendations from other pumpers.

When he purchased his last two vacuum trucks from Pik Rite, the purchasing process was easy. He says he used the same straightforward approach with Pik Rite that he likes his customers to use with him.

"I told them what I wanted, and really, pricing wasn't discussed much because of their reputation. I trust them," Forest says. "They have to make money, also."

MAINTAINING RELATIONSHIPS

Negotiating with vendors isn't a routine practice for Frank, either.

"We don't do a lot of negotiating with our customers and so, therefore, I don't expect my vendors to negotiate with me," he says. "I'm relying on them giving me the best price they can give me."

For Chris Larson, vice president of operations at C&L Water Solutions in Littleton, Colorado, buying decisions are less about negotiating and more about maintaining relationships. Vendors don't want to work with someone who consistently tries to beat them up on price or nickel and dime them after the sale, Larson says.

Yet that doesn't mean you shouldn't negotiate on the big-ticket items, he says. Maybe the vendor will throw in something for free, like a hitch on a truck or an upgrade to a tire package.

"Just ask them, 'Can you help us out here?'"

If you're familiar with what your competitor is paying for a product or service, ask the vendor for that same price, he says.

Once C&L establishes a solid relationship with a supplier, it's unlikely to change — unless there are issues with customer service. When a vendor is no longer providing the service you need, it's time to look into other options, Larson says. Another indicator that it may be time to switch is when product reps change frequently. With consistency comes the knowledge and experience you need when issues pop up.

Suppliers should be integrated into your company as much as possible, as an essential partner in the business, Larson says.

When you speak with a vendor, remember that you're talking to another human being, not simply a means to an end. "Don't treat them like a cog in the wheel," he says.

The wastewater and sewer industry has a limited number of suppliers for some of its key materials. Mergers and acquisitions have reduced the number of vendors even more. While contractors are benefiting from the lower prices offered by the larger corporations, the contractors also have fewer vendors to choose between. This is just one more reason to be on good terms with suppliers — so you continue to receive the products and services you need without interruption.

Ongoing communication is essential, Perrin says. It's important to schedule an annual pricing review with key vendors and touch base when prices fluctuate. Talk with your suppliers about passing along any price reductions they receive, and ask them to confirm price increases before they bill you.

Perrin also suggests collaborating with vendors to find ways to reduce costs. Can you replace expensive materials with less expensive ones? Lower your freight costs by choosing a different carrier or using your own trucks to transport products? Earn discounts by buying in bulk or paying promptly? All of these savings add up over time.

"The vendors know the equipment and parts better than anybody and can provide recommendations that should be helpful," Perrin says.

Vendors often have pricing tiers, based on volume purchased. The more you buy, the greater the discount. If a vendor doesn't have pricing tiers, contractors should ask for price reductions as their volume increases, Perrin says.

"Sometimes the price is fairly fixed, but if you're in business and you're not negotiating, you're leaving money on the table."

A spirit of collaboration between contractors and vendors can increase the profit margin for both partners. Vendor relations boil down to one thing: creating reciprocal business relationships in which everyone benefits. **c**

Cleaner is FREE!
Subscribe/renew online at cleaner.com





Quality, Simplicity and Reliability in a single machine.

Superior Wireless Remote
True one man operation

State of the Art Controls
Weatherproof Nema 4 Control Box

Duraprolene Water Tank
One of a kind reparability and fully baffled

Gas Engine
Eliminates noise and complicated
emissions systems

Rotational Hose Reel
Mounted on 5000# sealed bearing

Hose Size: 1/2"
Hose Length: 600ft capacity

Strong Frame
Made from tubular steel for
superior durability

Run Dry Pump
GPM: 18
PSI: 4,000

MONGOOSE MODEL 184

Other units and configurations can be found on sewerequipment.com/mongoose-jetters

**GAS ENGINES
NOW STANDARD
NO NEED FOR TIER IV**

Mongoose Jetters delivers industry leading high pressure jetting equipment that is simple and purposefully built for the plumbing contractor market. Quality, service and a wide variety of equipment and options keep our customers operational and profitable. Mongoose Jetters stands behind its promise to provide customers with...

"SERIOUS MACHINES FOR A SERIOUS BUSINESS"

Contact Us for Updated Pricing Details

877.735.4640

Mongoose Jetters is a Sewer Equipment brand

Sewer Equipment : 1590 Dutch Road, Dixon, IL 61021

Products subject to change without notification. Actual products may not be an exact match to product as shown.

www.sewerequipment.com/mongoose-jetters/





TROJAN WORLDWIDE INC.™

**** PACKAGE DEAL ****

Purchase either Camera System with a Locator and receive 15% off your total.



C200-DVRF Camera System

1" Self-Leveling Color Camera Head
w/ Adjustable LED Lights

Built-in 512Hz Transmitter

Built-in Foot Counter

200' Durable Push Rod

7" LCD

USB or SD Card
Recording w/
USB Adapter

Built-in Battery (7hr Life)
Includes A/C Adapter for
Charging and Direct
Power.



**3"-6"
Lines**

\$3195



* Includes 2 Skids

C100-512SL Camera System

1" Self-Leveling Color Camera Head
w/ Adjustable LED Lights

Built-in 512Hz Transmitter

Built-in Foot Counter

115' Durable Push Rod

7" LCD

USB or SD Card Recording
w/ USB Adapter

Built-in Battery (7hr Life)
Includes A/C Adapter for
Charging and Direct Power



Now Featuring
10x Zoom

**1.5"-4"
Lines**

\$2295



* Includes 2 Skids

* Comes with Protective Case

800-392-4902

TrojanWorldwide.com

3306-C Ella Blvd, Houston, TX 77018

RUGGED & RELIABLE

Performance By Design

Made in USA

Ideal For Grease Trap Service



ProVac

Industrial Pumpout System

Designed, Machined & Assembled in the USA



ELECTRIC POWERED



ProChock - Transport Hold Down

Simply the BEST!!



GASOLINE POWERED

Visit Us At: www.westmoorltd.com

Westmoor Ltd., 906 West Hamilton Ave, Sherrill, NY 13461

PHONE: 1-800-367-0972



In Milwaukee, a massive project to replace lead water pipes poses a huge challenge ...

But Vacall AllExcavate machines are able to simplify the solution

AllExcavate hydro excavators by Vacall are calmly addressing the urgent need to replace over 18 miles of water service mains in Milwaukee. Operators appreciate the easy startup and operating procedures, using exceptional Vacall jet-vac power to dig down 15 feet, expose lead water pipes and clear the area for new pipes.

See the video and read about our success in Milwaukee. Then call for facts and a demo.

See the video on the NEW Vacall web site:

Vacall.com/Milwaukee
800-445-4752

VACALL™
DRIVING INGENUITY





Michael Williams

Standing Out

Distinguish yourself from your competitors by taking your service to the next level

By Michael Williams

Standing out is more than just showing up in the morning. You have to show up and be seen. It's about providing better service than anyone else, being something that the customer has never experienced before.

I'll tell anyone that my company Just Drains does that every day — from the way we dress, the way we pull up to a job site, even the way we knock on the door. Standing out has made Just Drains become a force to be reckoned with in this industry.

Here are my tips for making sure your company stands out too.

1. Always look the part. Make sure your equipment and vehicles are always clean and in tiptop shape. We do a check of trucks and uniforms every morning. This also means always making sure you and your crews are crisp and clean, even if you have to change several times a day. We keep at least four extra uniforms on our trucks because our guys always have to look sharp when they present themselves to a customer.

It's very important for your employees to always be well groomed and look the part because they are on the front line, so to speak. They are what people see first. Their uniform shirt and pants should always be ironed and look crisp. This is the real world; you don't have a second chance to make a first impression.

I also suggest doing drug testing on a regular basis to make sure everybody is on the same page and keeps their priorities in line with yours.

2. Branding plays an important role in this also — use recognizable colors, create a memorable logo and come up with a name that's catchy. If you want to stand out, always remember that less is more when you're coming up with designs. Also, your phone number must be front and center. Customers should be able to see your phone number even before your company name. If you have the opportunity, purchase a business phone number with repeating numerals or a "vanity" number that will be easy for customers to remember.

When it comes to business cards, less is more. What I mean is that a lot of times business cards are too cluttered with information. Our business card is straight to the point. You must let the customer know what you do and how to reach you — that's it. A business card that is too busy will not keep the customer engaged and a lot of times it will just end up in the trash. It's very important not to use the cheapest business card either. Don't forget: First impressions are lasting impressions. You must spend money when needed. It's also very important to use both sides of your business card. If you ever see a Just Drains card, you will see that we use both sides, but the business card is not cluttered and it is high quality.

We keep at least four extra uniforms on our trucks
because our guys always have to look sharp when
they present themselves to a customer.

3. Always speak clearly and slowly enough so your customers can understand you. Explain how you will fix their problem in simple terms and not in industry-speak. Encourage your customers to ask questions so as to make them comfortable with the process.

4. Always engage your customers with eye contact when you're speaking with them. Look directly at the person, because it conveys honesty. When you're looking at a customer, it shows not only that you're engaged in the conversation and paying attention, but also that you respect them.

It's a good idea to practice this with role-playing. In the office or shop, pretend to be the customer and have your technicians come up and act like they're waiting on you. It's very important to talk to the customer and not at the customer. Eye contact means everything. If you have employees who have problems talking or engaging with customers, it will hurt your business — and I guarantee it will hurt your bottom line. I don't care how good a mechanic or technician is if they do not know how to interact with customers. Your team must have good people-skills because at the end of the day, without the customers, we don't have a job to do. A lot of companies think that the customer needs them; no, we need the customer.

Your technicians and plumbers must always respect the customer's home. Make sure they wear the proper booties on their feet, and most definitely make sure your technicians always clean up after themselves. They must make the property better than it looked before they



came. I can't stress that point enough. So often I see companies that leave a job filthy and the customer may not say anything — they just won't ever call you back.

5. Always position your vehicle where it can be seen when you park at a work site. That truck or van is your rolling billboard, so let it work for you when you're on the job. Ring the doorbell and then stand back about 5 feet, so not to be directly on top of the customer when they open the door. This also gives them reassurance when they look through the peephole to see who is at the door. Always present your business card or company ID when introducing yourself to your residential client.

6. Aside from being professional — at all times, not just some of the time — it's also very important for you and your crew to be very knowledgeable about what you do.

You have to know everything about your industry. This is one way to be beyond the competition. Being average just doesn't cut it. Make sure your team is always learning by going to seminars and training.

7. This industry is very physical. So many times I have people apply to be on my team but quickly realize they aren't in good enough shape to thrive in this industry. Drain cleaning work is so physically demanding and requires that you be in shape because a majority of the time you will be lifting, walking, climbing, pulling and crawling — so your stamina and strength should be at 100%.

At the end of the day, being able to deliver on the promise of solving a problem quickly and efficiently is what it's all about. **c**

ABOUT THE AUTHOR

Michael Williams is a high-energy, highly motivated drain cleaner and businessman. He is the owner of Just Drains LLC in Philadelphia, providing drain cleaning and plumbing services in the tri-state area. Williams welcomes calls from others in the industry. If you have questions for him or topic suggestions for this column, he can be reached at 215-879-8459.

HAVE A
STORY IDEA?

Email us at editor@cleaner.com

Who ELSE Wants to know about the lateral lining system that's been perfected since 1994?

- Formadrain is an industry leader that has set the standard for lining systems for a quarter of a century
- We have delivered flawless lateral lining and spot repair jobs across the continent and in any job environment imaginable - more times and for more years than many other systems have existed
- From the invention of steam curing to the release of DURAPOX™ - the world's first epoxy liner with a 60-day open time - Formadrain continues to set the standard

**We Welcome you to Discover
Formadrain in 2019**

www.Formadrain411.com

(888) 454-4269 or bruce@formadrain.com

Beyond
buckets
and blades.

digDIFFERENT

FIND OUT HOW.

FREE subscription at digdifferent.com



Forbest Products Co.

Portable Color Sewer/Drain Camera

FB-PIC3188SD-65/100/130

- 1" Waterproof Color Camera Head
- 65'/100'/130' Cable & Reel
- 7" LCD Color Monitor w/USB & SD Recording

Starting At:
\$550



200FT/300FT/400FT Camera System & Multi-Frequency Locator

FB-PIC3288T-200/300/400

- 9mm 200FT/300FT/400FT Cable & Reel w/Meter Counter
- 1 1/2" Self Leveling Color Camera Head or Pan Tilt 360°/180° Color Camera Head
- Spring Kit with or without Built-in 512HZ Sonde
- 10" LCD Color Control Station w/USB & SD Recording
- 3.5" LCD Display with Backlight
- Frequency: 512HZ; 1K; 33K, 83KHZ
- High Precision of Depth and Currency Management
- Built-in GPS, Generate the Picture Drawing Automatically
- Working Depth: 20'

NEW



Combo Price
Starting At:
\$4,390

Mini Color Sewer/Drain Camera

FB-PIC3188DN-C13

- 1/2" Waterproof Color Camera Head That Can Go Through 1 1/2" P-Trap
- 30' Cable & Reel
- 7" LCD Color Monitor w/USB & SD Recording

Promo Price:
\$755



Portable Layflat Color Sewer/Drain Camera

FB-PIC3188XX-C23/C23T/CD23/CD23T

- 1" Waterproof Color Camera Head with Options of Self-Leveling Feature or Built-in 512HZ Sonde Transmitter
- 5.2mm 130' Cable & Reel w/Meter Counter
- 7" LCD Monitor w/USB & SD Recording & MIC
- Heavy Duty Waterproof Case Fixed on the Stainless-Steel Reel
- One Package Ready to GO and Easy Operation with the Steady Structure

Options :

- 1) Self-Leveling Function
- 2) Built-in 512HZ Sonde Transmitter

Starting At:
\$1,199



Western USA:

44130 Old Warm Springs Blvd, Fremont, CA 94538

TF: 1 877 369 1199

Eastern USA:

701 Dawson Dr, Newark, DE 19713

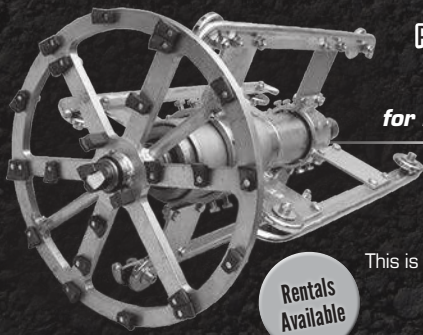
P: 510 226 7988

Canada:

9040 Leslie St. Unit 1, Richmond Hill, ON L4B 3M4

TF: 1 877 369 1199 P: 905 709 6226

Don't Dig, Rent Today



Paikert®

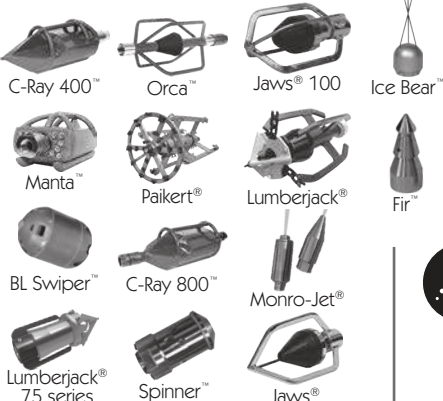
*Equipment Engineered
for Long Lasting Performance™*

Hydro-Torque Impact Cutter
that can remove hard deposits
with strength of up to 5000 PSI.
This is the go to cutter when all else fails.

Rentals
Available

**CALL TODAY
FOR AN
ON-SITE
DEMONSTRATION**

Contact Us For A **FREE DVD**



NozzTeq®
Taking Science To The Sewer™

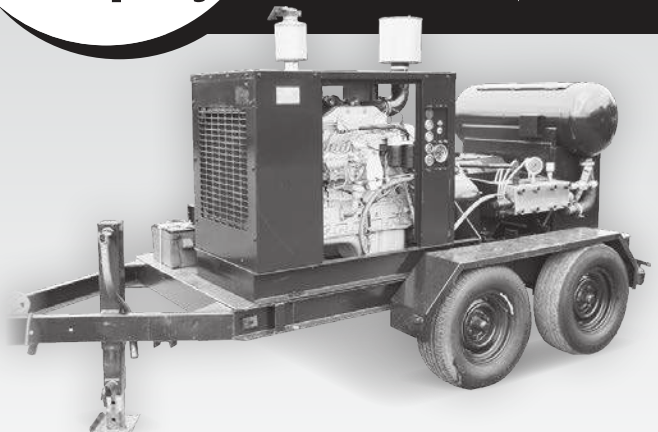
www.nozzteq.com
1.866.620.5915

LaPlace Equipment Company

CALL 985.652.5210

FOR YOUR WATERBLAST PROJECT SOLUTIONS
WWW.H2OBLAST.COM

RENTAL, SALES & SERVICE



UNITS FOR SALE:

JETSTREAM 3620

- CUMMINS "B" ENGINE
- THEROTICAL 20K @ 12.9GPM
- TRAILER MOUNTED WITH DAY TANK

JETSTREAM 4220

- 20K @ 20GPM
- B/W T-300**
- 10K @ 16GPM

SOUTHLAND TOOL MFG. INC.

Building Innovative Tools for Municipalities



**SOLUTIONS TO SEWER
CLEANING THROUGH:**
CONCEPT
DESIGN
PRODUCTION



Manhole Tools • Debris Baskets • Vac-Traps • Root Saws • Calcium Cutters • Sewer Rods
Handy Clams • Nozzle Extensions • Deep Vac Tube Holder • Grabbers Claws and Hooks
Diamond Tap Cutters • Fiberglass Poles • Hydraulic Cutters • Top Manhole Rollers • Sewer Spoons
Continuous Rod • Carbide Saw • Vacuum Coupling • Reducers • Hydro Excavation



1430 N. Hundley St
Anaheim, CA 92806

ph: 714.632.8198
fax: 714.632.8228

YouTube

www.SouthlandTool.com

BUILT TO SERVE

Manitoba contractor tackles large-diameter pipe cleaning jobs with an unconventional equipment strategy

By Ken Wysocky // Photography by Joel Boily



On the surface, the name Uni-Jet Industrial Pipe Services provides a straightforward explanation of what the company does for clients across Canada. Nothing complicated — what you see is what you get.

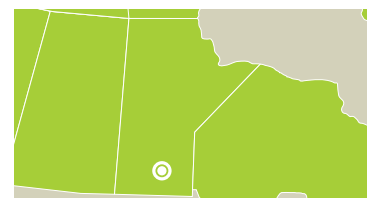
But in fact, because of the work the company primarily performs — and the equipment it uses — the company stands as an outlier in the pipeline cleaning and inspection industry.

First of all, the Winnipeg, Manitoba-based company focuses mostly on large-diameter pipes, typically larger than 36 inches in diameter and up to 10 feet in diameter — pipes so big that most companies don't have the required expertise or equipment to clean them, says Shane Cooper, the company's operations manager.

There's also the fact that Uni-Jet builds its own vacuum trucks and truck-mounted water jetters and hydroblasters in a 7,000-square-foot fabrication shop outfitted with welding and cutting equipment and staffed with three welders and three mechanics. The company buys truck chassis and major components such as pumps and blowers, then custom-fabricates almost everything else behind the cab, Cooper says.

Moreover, that's not just an occasional machine here and there. Since owners Morris Baziuk and his wife, Ursula Baziuk, founded the company in 1979, employees have built nearly 75 units. That includes 35 jetter trucks, 18 vacuum trucks, seven camera vans, four hydro blasters and nine tanker trucks, says Ryan Slagerman, contract coordinator.

This large fleet of equipment positions the company to handle a variety of difficult pipe cleaning jobs from Alberta to Nova Scotia, though the bulk of its business occurs in Manitoba and western Canada, Cooper says.



Uni-Jet Industrial Pipe Services

LOCATION: Winnipeg, Manitoba

OWNERS: Morris and Ursula Baziuk

FOUNDED: 1979

EMPLOYEES: 55

SERVICES: Pipeline cleaning and inspection, industrial cleaning, hydroblasting and hydroexcavation

SERVICE AREA: Canada

WEBSITE: www.unijet.ca



« Shane Cooper, operations manager at Uni-Jet Industrial Pipe Services in Winnipeg, Manitoba.

The equipment has thrust the company into a leadership position in a niche market. “We’ve developed a good reputation for large-diameter pipe cleaning in Canada,” he says. “We’ll go anywhere for the right job. Once people learn about us and our capabilities, we are the go-to company.”

In addition, the cleaning and inspection work also provides added value for municipalities by helping them manage their infrastructure assets. As a result of Uni-Jet’s work, municipalities can better prioritize which sections need repairs and upgrades, as well as determine the best technology to use to make those repairs or upgrades, Cooper says.

BUILT BY NECESSITY

Self-fabricating machines is no simple endeavor. It takes time (about six to nine months to build a vacuum truck, for instance)

and specialized skills (everything from engineering to welding). And it requires significant upfront capital expenditures for things such as raw materials, labor and fabricating equipment.

So why would a company want to go through all that? In Morris Baziuk’s case, the answer was simple: He wanted to focus on cleaning large-diameter pipes, and the “off-the-shelf” equipment available at the time couldn’t get the job done.

“Morris recognized early on that there were a lot of companies doing sewer cleaning and inspections,” Cooper explains. “But there were more opportunities in large-diameter pipes because no one else was doing it — no one else had the capability.

“It was very specialized work and required a lot of capital investment as well. When he couldn’t find what he was looking for from traditional manufacturers, it triggered the thought that we should make our own equipment, designed to meet the demands of what he wanted to do.”

The topography in Manitoba contributes to the need for unusually powerful vac trucks and jetters. “Because the terrain is so flat, there’s not a lot of grade on the pipes. So the sewers tend to get fairly dirty.”

Educating skeptical customers

One of the biggest challenges Uni-Jet Industrial Pipe Services faces is convincing clients that their large-diameter lines actually can be cleaned. Often enough, other contractors that aren't experienced enough or equipped to handle large-diameter pipe jobs tell municipal officials that cleaning those lines just isn't possible, says Shane Cooper, operations manager for the Winnipeg, Manitoba-based business.

Amid all this misinformation, Cooper's job is to convince them that the jobs definitely are doable — even if they repeatedly hear differently from other contractors.

"Sometimes we just have to go out and show them with a demonstration that educates them about our capabilities for sewer cleaning and inspections. It's easier for potential clients to understand when they can actually see the large volumes of water we can move with our flushers (jetters) at a very high pressure and the large amount of debris we can pull from sewers with our vac trucks."

As an example, Cooper cites a project in Edmonton, Alberta, where three different contractors had failed in their efforts to clean a 2,800-foot-long segment of 48-inch-diameter sewer pipe in advance of a sliplining project. The cleaning was complicated by the fact that manholes for the line, which ran through a golf course and environmentally sensitive tracts of land, were up to 1,500 feet apart.

"They were going to abandon the project," Cooper says. After a word-of-mouth referral, city officials invited Uni-Jet to make a case for giving the cleaning project another go. To get the work, Cooper made a bold promise.

"We gave them a guarantee that if we couldn't do the work, they wouldn't owe us a cent," Cooper says. "That's what we had to do to convince them to give us a try."

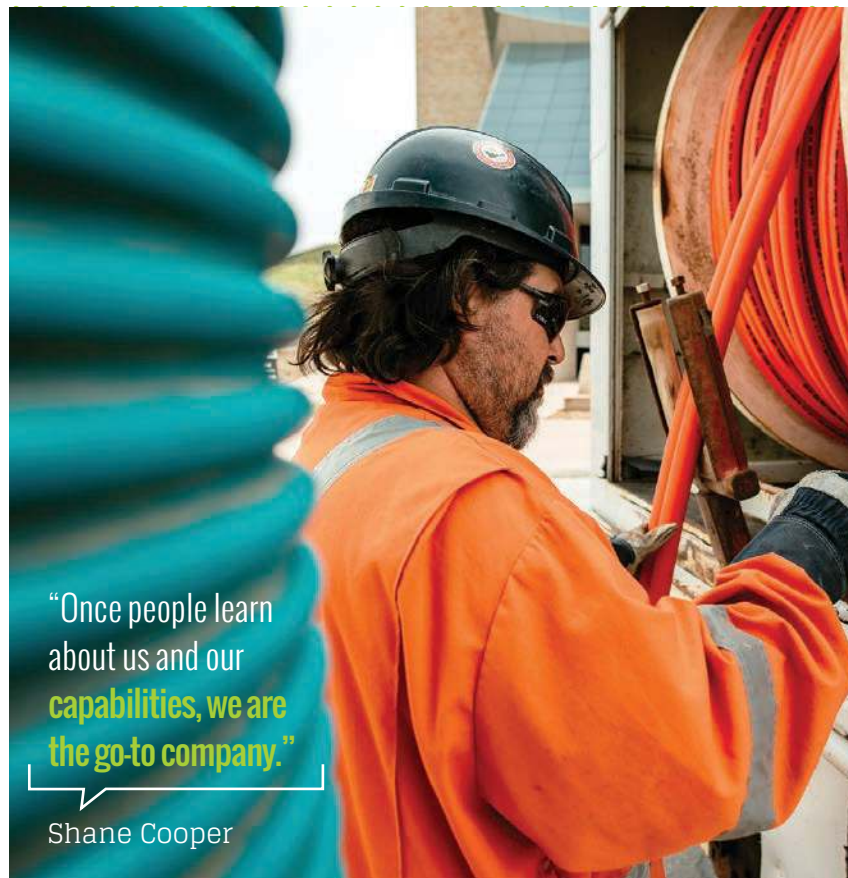
That may seem like a big gamble for a business to take, especially since the job site was 1,000 miles away from Winnipeg. As such, the project included significant mobilization and demobilization costs.

But Cooper says he was confident in the company's capabilities. "We know our guys and our equipment. We sent a supervisor with more than 25 years' experience to look at the job. He came back and said, 'Yes, we can do it.' And if he says we can do it, I know we can do it."

The supervisor was correct. Uni-Jet crews finished the job in eight days. The powerful cleaning ability of the custom-made jetting trucks made the difference, Cooper says.

"The other contractors simply didn't have enough power to pull that much debris while using access points that were so far apart," Cooper explains. "Sure, you get line-loss (pressure drops) when you're working long distances like that.

"But we compensate for that by over-powering the pumps so we can still bring all that debris back to the access point. This job was a perfect example of educating customers — showing them that a job everyone else said couldn't be done can, in fact, be done."



"Once people learn about us and our capabilities, we are the go-to company."

Shane Cooper

As such, Baziuk specifically designed the jetter and sewer trucks to handle tough cleaning jobs. The vacuum trucks, for instance, accommodate 10-inch-diameter Tigerflex hoses from Kuriyama of America, as opposed to conventional 8-inch-diameter hoses. That allows operators to pull more volume, which increases productivity — a competitive advantage, Cooper says.

"We can suck up bigger and heavier debris from the bottom of a pipe than a truck you'd buy off the shelf. And we use more powerful blowers to compensate for the larger-diameter hose."

Moreover, the trucks feature a patented separation tank that allows for the vacuum unit to pump off liquids back into the sewer without shutting down the vacuum operation. This allows for longer, continuous vacuum times — critical for effective large-diameter pipe cleaning.

Furthermore, the jetting trucks are equipped with extra-large water tanks and powerful pumps. This allows for greater pressure and flow as needed, which means fewer passes required to clean out lines. That, in turn, fuels better productivity and profitability. "Being able to work more efficiently is a big competitive advantage," Cooper says.

By fabricating its own equipment, the company is also able to continually make improvements based on immediate feedback from employees. "There's certainly trial and error involved — we learn something from each truck we build and try to make the next one better."

In addition, the trucks are designed to work during harsh Canadian winters.



▶ Clint Buors (left) and Shawn Staska set up one of their custom-built jet/vac trucks to clean a pipe.

◀ Staska operates the controls of a jet/vac truck on a cleaning job.



**VIVAX
METROTECH**

Locate and Inspect with Speed, Accuracy and Confidence



Full HD
1080p

vCam-6 HD Inspection System

- 9.7" Anti-glare HD Display
- 1TB Hard drive
- 1080 HD Cameras
- 512Hz Sonde
- Locatable Pushrod

vCamMX-2 Mini Inspection System

- 512Hz Sonde
- Locatable Pushrod
- High Resolution Cameras
- Direct USB Recording

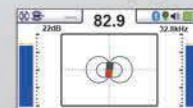
vCam Live View APP

- Add text to the vCam screen
- Add text to recording video or pictures
- Switch between HD and SD video stream
- Edit files in the phones/tablets operating system
- Share via iOS sharing features (email, text message, DropBox, OneDrive)



vLoc3-Cam Sonde and Utility Locator

- Directional arrow guidance
- Locates sondes and pushrod
- Graphical user interface
- Optional Bluetooth connectivity
- 4.3" Full-color display



**Call us for your no obligation
on-site demonstration!**

Vivax-Metrotech Corporation

3251 Olcott Street, Santa Clara, CA 95054, USA

Toll Free: 800-446-3392 Phone: +1-408-734-1400 Email: sales@vxmt.com www.vivax-metrotech.com



» Clint Buors uses a remote to raise the boom on the jet/vac truck.

POWER AND PRODUCTIVITY

The vac trucks are built primarily on International truck chassis and are mostly used to clean sewer lines in tandem with the jetters. They feature Roots tri-lobe blowers (Howden) coupled with debris tanks ranging in size from 11 to 14 cubic yards, Slagerman says.

Most of the jetting trucks are built on International and Ford chassis, along with a few Kenworths, Peterbilts and Western Stars. They're primarily used to clean up to 10-foot-diameter sewers. All the jetting trucks rely on Pratisoli POMPE pumps supplied by Dynablast; flow and pressure specs range from 18 gpm at 4,000 psi to 250 gpm at 2,200 psi. "The larger flusher trucks hold 3,000-gallon water tanks," Slagerman says.

In certain applications, self-fabricated tanker trucks — mostly International chassis outfitted with recycled aluminum fuel tanks, with capacities ranging from 3,000 to 4,500 gallons — carry water to job sites to eliminate time-consuming and profit-killing refill trips.

In addition, the company runs eight camera trucks, typically built on Ford F-450s with four-wheel drive. "We do a lot of remote-access work, plus we contend with heavy snowfalls," Slagerman says, explaining the need for four-wheel drive.

The company uses Pearpoint inspection camera systems from Radiodetection for main-line inspections and also owns a Panoramo manhole inspection camera system made by RapidView IBAK North America.

For heavy-duty industrial cleaning of tanks and pipelines at steel mills, mines, paper mills and the like, the company fabricated four truck-mounted hydro jetters, built on International chassis and featuring pumps made by Jetstream of Houston.

MEETING BIG CHALLENGES

A complicated, \$23 million pipe lining project for Halifax Water in Halifax, Nova Scotia, exemplified the skills Uni-Jet brings to the table. The project involved lining about 2 1/2 miles of 48-inch-diameter concrete and clay sewer pipe with an Insituform Technologies felt CIPP system made by Aegion. Uni-Jet was hired to clean and inspect the sewer lines prior to lining them in 2017.

The project was even more complex because

"We can suck up bigger and heavier debris from the bottom of a pipe than a truck you'd buy off the shelf."

Shane Cooper

the pipes varied in shape. Not only that, the project had to be completed within a very aggressive time frame — essentially one construction season — in order to qualify for government funding. A project of this magnitude could easily have taken several years, Cooper says.

In addition, the sewer lines largely ran through the backyards of million-dollar homes and only 33 to 49 feet from the Northwest Arm, an environmentally sensitive inlet off the Atlantic Ocean that's also a popular recreational area.

"It was one of the toughest jobs we've ever been a part of, but also one of my favorites," he says, noting the sewer line was installed in 1917 and had never been cleaned. "It was a true showcase of what I believe are some of the top contractors and engineers in this field."

Uni-Jet crews spent about three months on the project and removed approximately 915 cubic yards of debris from the lines. "We had our premier people on the job." Despite numerous technical challenges, the project was completed on schedule.

The biggest challenge for Uni-Jet was cleaning a 3,000-foot-long stretch of pipe, with the only usable access points being manholes on each end. "It was the longest shot on the entire project," Cooper explains. "On average, the line was about 20% full of debris — sludge, pieces of broken pipe and so forth.

"The difference-maker here was our two large flusher (jetting) trucks, generating pressure and flow of 2,200 psi at 250 gpm and 2,900 psi at 240 gpm, respectively," he adds. "This is the kind of project for which they were built."

Because the jetting trucks aren't equipped with hoses long enough to reach the entire 3,000 feet and to avoid pressure loss that can accompany longer hose runs, the cleaning shot was broken into two phases. In the first stage, crews working from the upstream manhole cleaned in reverse, heading 1,000 feet downstream, then pulling debris back to the upstream manhole, where one of Uni-Jet's vacuum trucks sucked it out. "Fortunately, the grade was fairly flat."

In the second stage, crews were able to work in a more conventional fashion, setting up at the downstream manhole, cleaning upstream and pulling debris downstream. "We did it in stages — chunked away at it in about 50-foot increments because of the debris levels," Cooper says. "I couldn't tell you how many passes it took, but it was a major undertaking."

To perform the last cleaning runs of about 2,000 feet, crews pushed out a full reel of 1,300-foot-long, doubled (fused) 1 1/4-inch-diameter hose, disconnected it, then connected another 1,300-foot-long hose to the one in the sewer line and pushed it out as well.



Pressure Washers & Drain Jetting Equipment

**We Custom Build
Machines To
Your Specifications!**

800-648-5011

www.camspray.com

sales@camspray.com

Van and Truck Mount Models Available
See All The Features And Specifications At CamSpray.com

STB Series

Trailer-Mounted Drain Jets



- DC-Powered Jet Hose Reel and 4-Nozzle Set
- Pressure Gauge & Hour Meter
- Electric Start with Low Oil Shutdown
- Pumps Handle Fluids Up To 160°
- Lockable Tool and Storage Boxes
- 150' Garden Hose on Manual Reel
- 300 Gallon Tank with Low Water Shut Off
- Gearbox Drive Triplex Plunger Pump with Ceramic Plungers and Stainless Valves
- Trailer with Industrial Painted Finish and 15" Aluminum Wheels

STB4012K \$21,699

- 12 G.P.M. @ 4000 PSI
- 999 CC Kohler • 400' x 1/2" Hose

STB3015K \$20,999

- 15 G.P.M. @ 3000 PSI
- 999 CC Kohler • 400' x 1/2" Hose

STB2712K \$15,399

- 11.5 G.P.M. @ 2700 PSI
- 689 CC Honda • 400' x 1/2" Hose

STB3708K \$14,999

- 8 G.P.M. @ 3700 PSI
- 689 CC Honda • 300' x 3/8" Hose

STB4007K \$12,999

- 7 G.P.M. @ 4000 PSI
- 689 CC Honda • 300' x 3/8" Hose



**TT4025HZ-35
\$55,399**

- Produces 25 Gallons Per Minute at 4000 PSI
- 74 HP EPA Tier 4 Final Compliant Hatz Turbo Intercooled Diesel Engine
- Hydraulic Slide Out Swivel Reel with 500' x 5/8" Hose
- Air Purge Valve and 18 Gallon Anti-Freeze Tank and Freeze Protection
- Heavily Constructed Trailer with 2" x 4" Steel Tube Box Frame
- 26 Gal Fuel Tank Gives Hours of Run Time on a Single Fill
- Wireless Remote to Control Throttle Up and Down, Water Valve and More
- 350 Gallon Tank with 2" Hydrant Fill
- Features 150' Wash Down Hose and Front-mounted & Over-fender Tool Boxes

MORE?!

Cleaner

More Stories at Cleaner.com/featured

See what's not in print!



"Our biggest obstacle is convincing clients that this kind
of work on large-diameter pipes can be done -
and we're here to do it."

Shane Cooper

« Clint Buors, Shane
Cooper and Shawn Staska
on the job in Winnipeg.

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

AVAILABLE
2019

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



"This, too, was a challenge," he says, even with the trucks' hydraulic-powered payout and rewind capability. "I think it took about 1 1/2 hours just to pay out that 2,000 feet of hose."

To inspect the pipe, crews were able to use alternative entry points along the line that the jetting trucks couldn't use.

ABUNDANT WORK

Even though Uni-Jet has grown considerably in the 40 years since its inception, Cooper believes there's room for more of the same. "I still believe this is a growth industry," he says. "As asset management becomes more prominent in the government sphere, this type of work will become much more important."

"These older systems need to be inspected to determine their condition and what's needed to keep them maintained. And that happens through cleaning and inspection. It helps municipalities target their rehab dollars toward the most critical pieces of infrastructure."

Given how much infrastructure there is and how much of it has reached the end of its useful life cycle, Cooper expects his crews to stay busy for the foreseeable future.

"We're not likely to run out of work soon," he says. "There are tons of large-diameter pipe out there — we could be busy for years just in Winnipeg alone. Our biggest obstacle is convincing clients

that this kind of work on large-diameter pipes can be done — and we're here to do it." **c**

featured equipment

AEGION CORP. RATION H

800-234-2992
www.aegion.com

HOWDEN

800-557-6687
www.howden.com/roots

INSITUFORM TECHNOLOGIES

800-234-2992
www.insituform.com

JETSTREAM OF HOUSTON

800-231-8192
www.waterblast.com
(See ad page 8)

JOHN BROOKS COMPANY LIMITED

(DYNABLAST)
888-881-6667
www.dynablast.ca

KURIYAMA OF AMERICA, INC.

847-755-0360
www.kuriyama.com

PEARPOINT

800-688-8094
www.pearpoint.com
(See ad page 57)

RADIO DETECTION CORPORATION

877-247-3797
www.spx.com/en/radiodetection

RAPIDVIEW IBAC NORTH AMERICA

800-656-4225
www.rapidview.com
(See ad page 79)

The Lansas 5-Line



PROUD MEMBER OF
NUCA
We Dig America



1320 South Sacramento Street
Lodi, California 95240
800.452.4902 • 209.334-4115
www.lansas.com

LODI • ATLANTA • HOUSTON • CHICAGO

T&T TOOLS

T&T Tools, Inc.

Fax: 800.521.3260

Email: sales@mightyprobe.com

800.521.6893
www.MightyProbe.com

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

THE CABLE CENTER
1-800-257-7209

LARGEST
FACTORY-AUTHORIZED
REPAIR CENTER OF SEESNAKE

FULL CATALOG OF RIDGID
REPAIR PARTS AND ACCESSORIES

QUESTIONS
About A PRODUCT
Or Want To
PLACE AN ORDER?

TEXT 314-482-1058
And We'll Get Back To You
IMMEDIATELY.

24
HOUR
TURNAROUND
ON REPAIRS

FREE
DELIVERY
ON ALL
CAMERA
KITS



TOTALLY CONNECTED.

WE'LL
BEAT ANY
WRITTEN
QUOTE ON
ALL CAMERA
KITS

BUY
ONLINE!

THE CABLE CENTER · 8318 OLIVE BLVD. · ST. LOUIS, MO 63132 · 314-993-3099 · www.thecablecenterinc.com

NOW THERE'S A BETTER WAY TO COMMUNICATE

If you're shouting to be heard, pushing buttons to talk, or relying on hand-signals to interpret actions— it's time to put on a Sonetics wireless headset and **EXPERIENCE THE BIG DIFFERENCE.**

Sonetics®

Hear what's important.

soneticscorp.com/public-works
877.959.9189



A Monument to Dependability

Even after 16 years of service, a trailer jetter nicknamed Old Faithful keeps busting through clogs and bolstering revenue

By Ken Wysocky

For sheer durability and power, it's tough to beat the track record established by the Harben 4014 E Series trailer-mounted water jetter owned by Zurn Plumbing Services in Atlanta.

The company bought the machine in 2003. Since then, it's racked up thousands of hours of service and has yet to meet its match in terms of sewer line blockages, says Matt Zurn, veteran drain cleaner and plumber who co-owns the company with family members.

"At the time, my dad, Ted, really liked the design of the P-style radial piston diaphragm pump," says Zurn, who's been with the company since 2004. "It's been a great machine. We use it multiple times a week.

"We've had pretty much zero issues with it in 16 years. I'm sure we've been a little abusive with it over time. ... Jetting is really hard on components. But other than hoses breaking and replacing the muffler, nothing major has ever gone wrong with it. We've never burned up an engine or had to rebuild the pump or anything like that."

In fact, technicians fondly refer to the machine as Old Faithful, a testament to its power — 4,000 psi and up to 13.4 gpm — and longevity.

POWER TO SPARE

As for power, Zurn cites a job a couple of years ago when employees ran into what turned out to be the mother of all clogs: a 10-foot-long root ball in a 6-inch-diameter residential lateral line in the Atlanta area. "The root was growing in an area that would've been massively expensive to excavate, not to mention very destructive to the resident's yard," Zurn recalls.

"The nozzle actually got stuck for a while. The roots were long and stringy and got wound around the nozzle. Once that happened, there was no turning back: We either had to finish the job or start digging up the line."



✓ Zurn Plumbing Services technician Matt McCormick with "Old Faithful," the 16-year-old Harben trailer jetter that is a permanent, reliable fixture of the company's pipeline clearing arsenal.

ZURN PLUMBING SERVICE

ATLANTA

OWNERS: Matt Zurn and family members

MACHINE: 4014 E Series trailer-mounted water jetter made by Harben

FUNCTION: Emergency pipeline waterjetting and scheduled line maintenance

FEATURES: 300-gallon water tank; P-type radial piston diaphragm pump (4,000 psi at 13.4 gpm); hydraulically powered pivoting hose reel that carries 500 feet of 1/2-inch-diameter hose; and a 50 hp DEUTZ diesel engine

COST: About \$35,000 (in 2003)

WEBSITE: www.zurnplumbing.com

Zurn opted for the former option and thanks to the Harben's power, it turned out to be a good decision. He says a crew kept at it for eight or nine hours total and used about 1,200 gallons of water in the process.

"We were sweating bullets for a while, but we just kept going after it and finally busted through," he says. "It was awesome. And we saved the customer a lot of money."

The metro Atlanta area has kept Zurn Plumbing busy since it was established in 1985. The company employs about 30 people and runs 16 service vehicles; its primary offerings are plumbing service and repair work, drain cleaning and pipe lining, using Perma-Liner Industries CIPP technology.

For drain cleaning, the company also owns a propane gas-powered Brute jetter (4,000 psi at 9 gpm) and an Eagle 600 trailer jetter (4,000 psi at 18 gpm), both built by Jetters Northwest.

Technicians also use nozzles made by StoneAge (Warthogs) and Enz Technik AG. They also use "jiggler" nozzles for breaking up concrete, Mole penetrator nozzles for flushing scale out of cast iron pipes and a Solo chain tool, all made by Nuova ConTec and sold by Jetter Depot in Cummings, Nuova ConTec's exclusive North American distributor.

CONFIDENCE IN A MACHINE

The Harben generates more revenue in two ways. First, using larger, more specialized and expensive equipment allows the company to charge customers a higher hourly rate. "They understand that; we don't get much pushback," he says.

Moreover, it expands business opportunities because other plumbing shops that don't have jetters will hire Zurn Plumbing as a subcontractor. "They ask us to come in an unmarked truck to do jetting for them," he says.

But one of the best benefits stems from simply not turning down work for fear that a job is too big. Zurn is always confident the machine will perform, which enables the company to tackle jobs it might not otherwise consider.

"We have just as much confidence in this machine today as we did the day we bought it. At the end of the day, when we roll out with that machine, I know it's going to work. I've never seen it fail to get the job done." c

To nominate your vehicle for a feature in this column, send an email to editor@cleaner.com. Tell us briefly but specifically what features make it a great producer. And send a picture – because appearance counts. We look forward to seeing your Money Machine.

"We keep the Harben behind the truck most of the time
because the chances of selling drain jobs are much
better if the technician has it with him."

Matt Zurn

DON'T LEAVE HOME WITHOUT IT

The company relies on the Harben jetter primarily for clearing stoppages in residential and commercial lines and cleaning lines prior to pipe lining. It's also used to clean pipelines as part of quarterly scheduled maintenance contracts with shopping malls, Zurn says.

"It's inconvenient at times because with a trailer, it's sometimes hard to park. But we keep the Harben behind the truck most of the time because the chances of selling drain jobs are much better if the technician has it with him. Depending on the time of day here in Atlanta, we could get a job 5 miles from the shop, but it might take 30 to 45 minutes to get there and then another 30 to 45 minutes to get back to the customer. So if the jetter is right there, it gets used.

"We work in a lot of old commercial buildings with a lot of scale built up in cast iron pipe, and it does a great job," he adds.

The jetter is easy to maintain, requiring only periodic oil changes for the engine, pump and gearbox. "If you take care of it, it's a rock-solid machine."

COMPLETE PARTS & SERVICE made in the • Fast Shipping
WE DIAGNOSE & SERVICE ALL BRANDS **USA** • Call Us For A Quote

NO BENCH FEE
FREE DIAGNOSIS

(702) 527-5100
LIVE TECH SUPPORT • PARTS & ACCESSORIES
AVAILABLE FOR ALL EQUIPMENT
WWW.SECONV.COM

SECON-EXTREME CORDLESS
STARTING AT **\$2,293**

EXTREME JET
GAS ENGINE PORTABLE
JETTERS PRICES
STARTING AT **\$2,599**

SEWER CAMERA & LOCATOR PACKAGES AVAILABLE

TRAILER JETTERS STARTING AT \$26,999

SECON-4000T

702-527-5100 **WWW.SECONV.COM**

DON'T SEE
SOMETHING
YOU REQUIRE
FOR A JOB?
ASK US!!

MADE IN THE USA

MADE IN THE USA

THE ONLY HEAVY METAL SHOW YOU NEED TO SEE

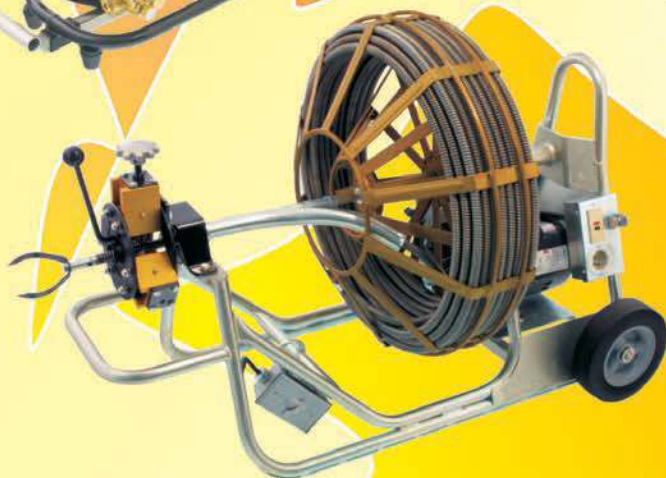
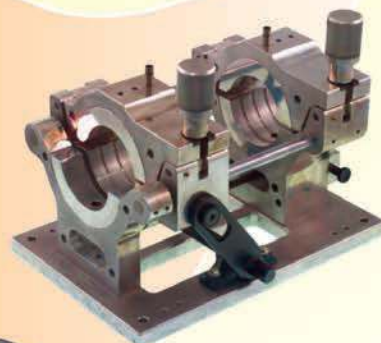


**NORTH AMERICA'S LARGEST
CONSTRUCTION TRADE SHOW**
CONEXPOCONAGG.COM
MARCH 10-14, 2020 | LAS VEGAS, USA



GORLITZ SEWER & DRAIN INC.

Norwalk Blvd. Santa Fe Springs, Ca. 90670



**MACHINES
FEEDERS
CABLES
RAMPS
CONNECTORS
LEADERS
CHUCKS
ENDS
RETRIEVERS
SPLICES
AUGERS**

**JETTERS
NOZZLES
HOSES**

**TRENCHLESS
PIPE SYSTEMS**

**SOCKET
FUSION KITS**

Engineering, Dedication, Quality, Sales and Service All In One Stop!

www.gorlitz.com

Email: sales@gorlitz.com



f GORLITZ on Facebook



Tel: (562) 944-3060

Fax: (562) 944-7630









WATERBLASTING/ WATERJETTING DIRECTORY 2019

		JETTER									PUMP		
		Jetter Manufacturer	Jetter Distributor	PRESSURE RANGE	Under 3,000 PSI	3,000 to 6,000 PSI	6,000 to 40,000 + PSI	TRANSPORT METHOD	Hand Portable	Truck/Trailer	Stationary	Pump Manufacturer	Pump Distributor
 All Jetting Technologies, Inc. SEE AD ON PAGE 85	ALL JETTING TECHNOLOGIES, INC. 2740 SW Martin Davids Blvd., Palm City, FL 34990 772-286-1218 • (f) 772-286-0069 www.alljetting.com • info@alljetting.com					✓						✓	✓
SEE ADS ON PAGES 27, 83	ALLAN J. COLEMAN CO. 5725 N Ravenswood Ave., Chicago, IL 60660 773-728-2400 • (f) 773-728-2499 www.allanjcoleman.com • info@allanjcoleman.com		✓		✓	✓			✓	✓			✓
SEE AD ON PAGE 85	AMERICAN JETTER 6908 Pine Grove Rd., Knoxville, TN 37914 866-944-3569 • 865-524-4647 • (f) 865-247-5105 www.americanjetter.com • andy@americanjetter.com	✓			✓				✓	✓			
 ARTHUR PRODUCTS CO. an LSO Mfg Company SEE AD ON PAGE 16	ARTHUR PRODUCTS CO. 1140 Industrial Pkwy., Medina, OH 44256 800-322-0510 • 330-725-4905 • (f) 330-722-2698 www.arthurproducts.com • apc@apclsq.com				✓	✓	✓						✓
 BOATMAN INDUSTRIES INC. SEE AD ON PAGE 80	BOATMAN INDUSTRIES 7355 Airport Blvd., Houston, TX 77061 713-641-6006 www.boatmanind.com • eric.boatman@boatmanind.com		✓		✓	✓	✓			✓	✓		✓
SEE AD ON PAGE 85	BULLFROG INDUSTRIES LLC 2420 Astarita Way, Lexington, KY 40509 888-890-1555 www.flushafrog.com • sales@flushafrog.com	✓			✓				✓				
 CAM SPRAY SEE AD ON PAGE 45	CAM SPRAY 520 Brooks Rd., Iowa Falls, IA 50126 800-648-5011 • 641-648-5011 • (f) 641-648-5013 www.camspray.com • sales@camspray.com	✓			✓	✓			✓	✓	✓		
SEE AD ON PAGE 28	CENTRAL OKLAHOMA WINNELSON 5037 NW 10th St., Oklahoma City, OK 73127 888-947-8761 • 405-947-8761 • (f) 405-947-1934 www.centralwinnelson.com • krjones@winnelson.com		✓		✓				✓			✓	
 CESCO/AQUAMISER SEE ADS ON PAGES 11	CESCO/AQUAMISER 7251 Cross Country Rd., Charleston, SC 29406 843-760-3000 www.AquaMiser.com • www.BlastAndPaint.com chris.fulmer@aquamiser.com	✓			✓	✓	✓		✓	✓	✓	✓	✓
SEE AD ON PAGE 77	DRAINABLES DIRECT 1703 Toll Gate Dr., Maumee, OH 43537 800-421-4580 www.draincables.com • sales@draincables.com		✓		✓	✓			✓				✓
SEE AD ON PAGE 19	DURACABLE MANUFACTURING 300 Ashworth Rd., West Des Moines, IA 50265 877-244-0556 • (f) 515-223-4220 www.duracable.com • sales@duracable.com		✓		✓								
SEE ADS ON PAGES 84, 85	EASY KLEEN PRESSURE SYSTEMS LTD. 41 Earnhardt Rd., Sussex Corner, NB E4E 6A1 Canada 800-315-5533 www.easykleen.com • sales@easykleen.com	✓	✓		✓	✓	✓		✓	✓	✓	✓	✓




WATERBLASTING/ WATERJETTING DIRECTORY 2019

	Jetter Manufacturer	Jetter Distributor	JETTER			TRANSPORT METHOD	Hand Portable	Truck/Trailer	Stationary	PUMP		
			PRESSURE RANGE	Under 3,000 PSI	3,000 to 6,000 PSI					Pump Manufacturer	Pump Distributor	Waterblasting/ Waterjet Accessories & Equipment
 ELECTRIC EEL MFG. 501 W Leffel Ln., Springfield, OH 45501 800-833-1212 • 937-323-4644 • (f) 937-323-3767 www.electriceel.com • info@electriceel.com	✓			✓			✓					
 ENZ USA INC. 1585 Beverly Ct., Unit 115, Aurora, IL 60502 877-369-8721 • 630-692-7880 • (f) 630-692-7885 www.enzusainc.com • salesusa@enz.com				✓	✓	✓						✓
 EPL SOLUTIONS, INC. 1330 W Collins Ave., Orange, CA 92867 714-453-9760 www.epls-usa.com • sales@epls-usa.com		✓		✓	✓	✓	✓	✓	✓		✓	✓
GARDNER DENVER, INC. 1800 Gardner Expy., Quincy, IL 62305 800-580-3569 • 800-580-5388 www.waterjetting.com					✓	✓		✓	✓	✓		✓
 GENERAL PIPE CLEANERS 1101 Thompson Ave., McKees Rocks, PA 15136 800-245-6200 • 412-771-6300 www.drainbrain.com • info@drainbrain.com	✓			✓	✓		✓	✓				
GIANT INDUSTRIES, INC. 900 N Westwood Ave., Toledo, OH 43607 800-245-6200 • 412 www.giantindustries.com • sales@giantpumps.com	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓
 GORLITZ SEWER & DRAIN, INC. 10132 Norwalk Blvd., Santa Fe Springs, CA 90670 562-944-3060 • (f) 562-944-7630 www.gorlitz.com • sales@gorlitz.com	✓	✓		✓	✓		✓					✓
 HAMMELMANN 436 Southpointe Dr., Miamisburg, OH 45342 800-786-4935 www.hammelmann.com • mail@hammelmann.com												✓
HANNAY REELS 553 State Rte. 143, Westerlo, NY 12193 877-467-3357 • 518-797-3791 • (f) 518-797-3259 www.hannay.com • reels@hannay.com												✓
 HOT JET USA 1477 Heritage Crest Way, Riverton, UT 84065 800-213-3272 • 801-545-0777 • (f) 801-545-9132 www.hotjetusa.com • sales@hotjetusa.com	✓				✓		✓	✓	✓			
 JETSTREAM OF HOUSTON 5905 Thomas Rd., Houston, TX 77041 800-231-8192 • 832-590-1300 www.waterblast.com • sales@waterblast.com								✓				✓
KEN-WAY CORPORATION 930 Roberts Rd., Sparta, WI 54656 800-533-0551 • 608-269-3752 • (f) 608-269-8129 www.ken-way.com • info@ken-way.com		✓		✓			✓					
LAPLACE EQUIPMENT COMPANY 167 Jaubert Ln., LaPlace, LA 70068 985-652-5210 • (f) 985-652-4252 www.h2oblast.com • sales@h2oblast.com						✓						✓

WATERBLASTING/ WATERJETTING DIRECTORY 2019

		JETTER									PUMP			
		Jetter Manufacturer	Jetter Distributor	PRESSURE RANGE	Under 3,000 PSI	3,000 to 6,000 PSI	6,000 to 40,000 + PSI	TRANSPORT METHOD	Hand Portable	Truck/Trailer	Stationary	Pump Manufacturer	Pump Distributor	Waterblasting/ Waterjet Accessories & Equipment
SEE AD ON PAGE 33	MONGOOSE JETTERS BY SEWER EQUIPMENT 1590 Dutch Rd., Dixon, IL 61021 877-735-4640 www.mongoosejetters.com • sales@mongoosejetters.com	✓			✓	✓				✓			✓	✓
 SEE AD ON PAGE 13	MYTANA MANUFACTURING COMPANY, INC. 746 Selby Ave., St. Paul, MN 55104 800-328-8170 • 651-222-1738 • (f) 651-222-1739 www.mytana.com • mytana@mytana.com	✓			✓				✓	✓				✓
SEE AD ON PAGE 15	NLB CORP. 29830 Beck Rd., Wixom, MI 48393 800-227-7652 • 248-624-5555 www.nlbcorp.com													✓
 SEE AD ON PAGE 38	NOZZTEQ, INC. 1949 Calumet St., Clearwater, FL 33765 866-620-5915 • 727-223-4979 • (f) 603-413-6744 www.nozzteq.com • info@nozzteq.com						✓							✓
 SEE AD ON PAGE 18	PIRANHA HOSE PRODUCTS 2500 Weigel St., Cadellac, MI 49601 800-250-5132 • 231-779-4390 • (f) 231-779-4399 www.piranhahose.com													✓
SEE AD ON PAGE 26	REELCRAFT INDUSTRIES, INC. 2842 E Business Hwy. 30, Columbia City, IN 46725 800-444-3134 • 260-248-8188 • (f) 260-248-2605 www.reelcraft.com • reelcraft@reelcraft.com													✓
	RELIABLE PUMPS 5404 Cedar Crest, Houston, TX 77087 713-640-2718 • (f) 713-551-1721 www.reliablepumps.com • info@reliablepumps.com	✓			✓	✓	✓			✓		✓		✓
 SEE AD ON PAGE 9	RIDGID® 400 Clark St., Elyria, OH 44035 800-474-3443 www.RIDGID.com • rtccustomerservice@emerson.com	✓			✓	✓			✓					✓
 SEE AD ON PAGE 28	ROOT RAT 148 Canal St., Bolivar, OH 44612 800-288-7873 • 330-874-4300 • (f) 330-874-4448 www.rootrat.net • chempure@gmail.com	✓			✓	✓			✓	✓		✓		✓
	SHAPE MATERIAL REMOVAL 702 S Persimmon Dr., Tomball, TX 77375 888-997-1483 www.shapematerialremoval.com bob.frankish@shapematerialremoval.com					✓	✓					✓		✓
 SEE AD ON PAGE 92	SPARTAN TOOL LLC 1506 W Division St., Mendota, IL 61342 800-435-3866 www.spartantool.com • sales@spartantool.com	✓			✓	✓			✓	✓	✓			✓
SEE AD ON PAGE 4	STONEAGE, INC. 466 S Skyline Dr., Durango, CO 81303 866-795-1586 • 970-2559-2869 • (f) 970-259-2868 www.stoneagetools.com • sales@stoneagetools.com													✓
	SUPER PRODUCTS LLC 17000 W Cleveland Ave., New Berlin, WI 53151 800-837-9711 • 262-789-7100 www.superproductsllc.com • info@superproductsllc.com	✓				✓				✓				✓

WATERBLASTING/ WATERJETTING DIRECTORY 2019

Jetter Manufacturer	Jetter Distributor	JETTER						PUMP		
		PRESSURE RANGE	Under 3,000 PSI	3,000 to 6,000 PSI	6,000 to 40,000 + PSI	TRANSPORT METHOD	Hand Portable	Truck/Trailer	Stationary	Waterblasting/ Waterjet Accessories & Equipment
SEE ADS ON PAGES 48, 61	THE CABLE CENTER 8318 Olive Blvd., St. Louis, MO 63132 800-257-7209 • 314-993-3099 • (f) 314-432-8024 www.thecablecenterinc.com • thecablecenterinc@gmail.com	✓	✓	✓			✓	✓	✓	✓
	TRIPLER SPECIALTY 6925 W Beaver St., Jacksonville, FL 32254 800-356-9661 • 904-786-1826 • (f) 904-786-0911 www.triplerspecialty.com • ram@triplerspecialty.com	✓	✓	✓			✓	✓		✓
 SEE ADS ON PAGES 3, 59	VAC-CON, INC. 969 Hall Park Rd., Green Cove Springs, FL 32043 904-284-4200 www.vac-con.com • vns@vac-con.com	✓	✓					✓		
 Subsidiary of Federal Signal Corporation	VACTOR MANUFACTURING 1621 S Illinois St., Streator, IL 61364 800-627-3171 • 815-672-3171 www.vactor.com • sales@vactor.com						✓			✓
 SEE AD ON PAGE 90	WATER CANNON, INC. 4300 W Lake Mary Blvd., Lake Mary, FL 32746-2449 800-333-9274 • (f) 888-928-9274 www.watercannon.com • sales@watercannon.com	✓	✓	✓			✓	✓	✓	✓

PEARPOINT



flexiprobe™ P540c

Simple. Fast. Smart.

Visit www.pearpoint.com or call **800.688.8094** for more information

CUES

"I USED TO HATE MY TECHS."

"As a former military member, I knew I wanted a company that ran like clockwork, one that didn't require me to do everything myself for it to be done right. I just couldn't get it there. I was sure my employees were the problem. I actually hated them! Then, one change ... changed everything.

We developed procedures and put operations manuals in place to create a systems-driven company. One that's profitable, runs without me being there every day, and is focused on developing our great team members and their careers. Talk about 180 degrees! It took us a long time to get there, and it was hard, but it doesn't have to be difficult for you. That's why we decided to provide franchise opportunities with ZOOM DRAIN."

Jim Criniti
CO-FOUNDER, ZOOM DRAIN



Jim Criniti & Jason Criniti
OWNERS & CO-FOUNDERS

At ZOOM DRAIN we've solved the problems that hold you back—implementing procedures and operations manuals, and finding and developing great team members. Franchises are now available in select cities. **Interested?**



ZOOM DRAIN

Call Ellen Rohr at 833-682-9666 or visit zoomdrain.com/franchising

This offering is made by prospectus only. ©ZOOM DRAIN



GET
EMAIL NEWS
ALERTS FOR
Cleaner

Go to cleaner.com/alerts and get started today!

C70

HD Video Cleaning Nozzle

A **Nozzle** Idea

The Sewer Robotics C70 video nozzle features 8 cleaning jets, battery pack, LED lighting, WiFi, and self-leveling HD camera for video recording and jetting 6" to 40" pipelines.

Video is recorded on an SD-card inside the nozzle and downloaded to the included tablet via integrated WiFi as soon as the nozzle has returned to the manhole.

Specifications

Scope of Use:	6" - 40" Diameter Pipelines
Jet Angle:	20 Degrees
Hose Connection:	1.25", 1", .75" Fitting
Flow:	40 - 170 GPM
Pressure:	2,000 - 4,000 PSI
Battery Runtime:	8+ Hours
Video Memory:	8+ Hours

Features

- Auto Upright HD Camera
- 7 Pressure Switched LEDs
- 8 Exchangeable Jet Inserts
- Double Sapphire Lenses
- Wireless Video Downloading
- Rugged Tablet with GPS
- Fully Submersible
- Cleaning Assessment Software (optional)



The Kit - What's Included

- C70 Nozzle with HD Camera and LED lights
- Protective Case
- Tablet with GPS
- Pipeline Viewing Software
- Jet Inserts
- Battery Charger

Sold Exclusively Through **VAC-CON** in North America

CALL US TODAY FOR A QUOTE!

888 • 781 • 7971

Email the Team Directly at

Partsdepartment@vac-con.com

www.vac-con.com

888 • 781 • 7971

Pinpoint Small Leaks

Gas detection systems can offer precise and reliable detection of water leaks

By Jared Raney

Pumping hydrogen into a pressurized pipe might sound like a recipe for the next Hindenburg disaster, but if done right, it can be an effective leak detection tool.

Tracer gas systems, which utilize either a hydrogen-nitrogen blend or pure helium, offer an uncommon solution that may be exactly the reliable option your company needs to step up its leak detection services.

While it has some potential limitations and isn't the most convenient tool out there, it is precise and can detect smaller leaks than nearly any other method.

HOW IT WORKS

Similar to smoke testing, tracer gas systems work by adding gas to an isolated section of pipe and seeing what surfaces. Metaphorically speaking at least — the gas isn't visible, so technicians walk along the length of the line with a gas detector.

"Essentially, you're pumping helium right through the line, and wherever the leak is, it'll come out of the pipe there and rise to the surface so we can detect it with a hand-held meter that picks up concentrations of the gas," says Peter Viola, owner of Underground Surveying in Brookfield, Connecticut.

Because it is measured with a digital sensor, it eliminates some of the human error and ambiguity that naturally comes along with other methods.

The biggest drawback of tracer gas is that it requires the pipe in question be emptied and isolated, a time-consuming process that requires some plumbing know-how.

"Our guy who does it was a plumber for 10 years, so that definitely helps out; whereas, if somebody comes in without the plumbing experience, they're going to be handicapped in what they can do," Viola says. "It's definitely something that if you're just hiring guys off the street with minimal knowledge, they are going to have a little more



▲ A leak in a high-pressure waterline is exposed after detection and excavation.

trouble doing this particular service than teaching them acoustics, because it requires a little handiwork at times."

On the other hand, if you have a plumber who can do the setup, the leak detection process itself can be done with less training than methods like acoustic.

"A lot of beginners find it a lot easier to use gas than listen for a leak," says Brian Moss, owner of RJM Equipment Sales, a dealer of utility equipment.

There are systems that utilize 100% helium or a mix of 5% hydrogen and 95% nitrogen. The low percentage of hydrogen makes it noncombustible. Some systems can use either gas. The concentration of helium or hydrogen makes the gas easier to detect and the method more effective. But it's also resource intensive. Some will mix their helium with air, but it is a balance between cost and effectiveness.

"Those are both lighter-than-air gases, so the molecules are going to work their way to the surface," Moss says. "I haven't compared them side by side, but I think they both work just as well, because while the hydrogen is diluted to 5%, the sensors will detect it to lower levels because it's more reactive. Another important difference is that quite often suppliers don't have helium available, and it's more expensive. With hydrogen, you do have to plan ahead a little bit and have it mixed for you."

"A lot of beginners find it a lot easier to use gas than listen for a leak."

Brian Moss

CONTINUED >>

THE CABLE CENTER • 1-800-257-7209



**Largest Factory-Authorized Camera Repair Center with 24-Hour Turnaround -
FULL CATALOG OF GENERAL WIRE SPRING PARTS AND ACCESSORIES**



**General
Speedrooter 92™**
Basic Unit w/PowerFeed.
No cables, no cutters

\$1475
FREE DELIVERY



Gen-Eye X-POD
Gen-Eye USB® Inspection
System with Flash Drive

\$6060
FREE DELIVERY



**BUY
ONLINE!**

TheCableCenterInc.com



Standard Wi-Fi Pod
200' Color

\$5300
FREE DELIVERY



DRZ-PH
Basic Unit w/PowerFeed.
No cables, no cutters

\$680
FREE DELIVERY

QUESTIONS
about a
product
or want to
place
an order?

TEXT
314-482-1058
and we'll get
back to you
immediately.



**Gen-Eye
Micro-Scope2**
100' Unit w/USB Recording

\$1799
FREE DELIVERY



JM-1000B
The lightweight,
compact mini-jet gives
you 1500 psi
of cleaning power,
yet weighs just 23 lbs.

\$895
FREE DELIVERY



JM-2900
Basic Unit.
No hoses, no nozzles

\$2745
FREE DELIVERY

FREE FREIGHT ON ALL CAMERA KITS



12" Plastic Axial Blower

The ONLY 12" Plastic Blower With A Canister On The Market!

FREE AIR	ONE 90° BEND	TWO 90° BENDS
1842 cfm 28 lbs.	1004 cfm 1 hp	933 cfm 110/220 V AC 50/60 Hz

The polyethylene housing and canister assembly are designed to be light weight and super quiet. Made of corrosion, UV and chemical resistant polyethylene in "safety orange." The quick-connect clipping system allows attaching the canister to the input side for powerful extraction or output side for ventilation. Plus molded carrying handle and 25' of PVC coated vinyl and polyester ducting which stores within the storage canister.

GasAlert Systems



The MicroClip Gas Detectors



The Quattro Multi-gas Detectors.

MRP
MILWAUKEE RUBBER PRODUCTS

Call Toll-Free
1.800.325.3730
www.MilwaukeeRubber.com



» A technician runs a helium detector across a gas infused waterline to pinpoint the location of a leak.

» The M300D is a three-in-one locator that can listen for water leaks, detect hydrogen and locate plastic pipe.



BEST USES

Most commonly used for residential and small commercial applications, it can become tricky for large systems because the section to be tested has to be cleared and pressurized. Commercial and municipal customers usually don't like shutting off service, even briefly.

Despite requiring some setup, it can be a faster method than smoke testing, or even listening, depending on the experience of the technician. Viola says it usually takes his team about an hour to perform this service on standard residential jobs.

The systems aren't bulky in and of themselves, but carrying the necessary amount of gas to job sites can be cumbersome. Both the initial investment and buying gas for each job make this a relatively costly option.

Locale can influence the decision, as it is best for areas with deeper lines and a prevalence of nonmetallic pipes.

"We find it's a good tool to use when you have plastic pipes, because if you're doing acoustics, you have to know exactly where the line is; but if you have a plastic pipe and you can't get the exact location, sometimes that's OK with tracer gas," Viola says. "If you have a rough idea and you pump the gas in, it's also going to show you where the line is, so it can actually help you locate the line when at times you can't find it. So that's just another little advantage to using it sometimes."

Viola's company started out with just acoustic leak detection but found that due to the atmospheric limitations and difficulty with inexperienced staff, it wasn't reliable enough on its own.

"We had so many failures with acoustics early on — some of it was just learning the service ourselves, getting the ear, getting used to hearing the leaks," he says. "But at the same time, we realized that acoustic definitely has its limitations, so we were just trying to reduce the limitations that we had, to give us a better chance of finding leaks. Often, where other methods fail, you end up using tracer gas and it works; it does the job." c



Running Strong For Over 50 Years

For over half a century, market leaders have trusted Cat Pumps to keep their businesses operating. When they see Cat Pumps blue, they know they're getting the industry's most trusted products.

Performance Range:

.13 – 240 gpm (.49 – 908 lpm)

100 – 10,000 psi (6.9 – 689 bar)



660
10 GPM to 3000 PSI



3560
25 GPM to 3000 PSI
20 GPM to 4000 PSI



1580
12 GPM to 3000 PSI

#1 for a reason: Performance you can count on.
Contact Cat Pumps for more information.

www.catpumps.com | info@catpumps.com | (763) 780-5440



The Pumps with Nine Lives

First Line of Defense

Job hazard analysis can be the best guide to put crews on the safest path

By Jared Raney

For some contractors, safety means supplying employees with personal protective equipment and trusting them to avoid hazards — but careful planning before the job is much more effective in ensuring employees' protection.

"We're always going to provide PPE to our employees, but we don't want that to be the first line of defense for hazards, because a lot more can go wrong," says Mike Fisher, executive vice president of service and risk for Therma. "You just open yourself up to more risk if you're relying solely on PPE."

Therma has a robust safety program that utilizes job hazard and job safety analyses — the golden standard of hazard mitigation in service industries.

A job hazard analysis, in short, is a step-by-step breakdown of any given job or task, with the goal of identifying potential dangers and mitigating them.

"Identify the hazards of each step — what can potentially go wrong, what are the possible consequences, how could it happen?" Fisher says. "Then a big part of the JHA is looking at any potential contributing factors that could occur."

"We always look at other ways to control those hazards that don't involve just adding personal protective equipment."

Mike Fisher

Some people use job safety and job hazard analysis interchangeably, but Therma differentiates the two, using JSAs for every job and JHAs for specific high-risk tasks like confined space or working from heights.

"A JSA is done anytime anybody goes out and performs any kind of work. It's going to be the job itself, and the JHA would apply to the hazardous task," Fisher says. "They have to go through a kind of checklist. Does it involve a confined space; does it involve

anything unusual in terms of fall protection? If it doesn't, then they continue on and complete their JSA: Identify the steps involved in the work, specific hazards that need to be addressed — traffic control, protecting the public, those types of general terms — then list out what the mitigation measures are. If, during the course of their evaluation, they say, 'OK, now we've got to enter this confined space,' then a specific JHA would be written for that part of the work."

GOOD PRACTICES

OSHA does not require JHAs, but says in its JHA guidance literature, "One of the best ways to determine and establish proper work procedures is to conduct a job hazard analysis. A JHA is one component of the larger commitment of a safety and health management system."

A guide from OSHA recommends JHAs be conducted for jobs with high injury or illness rates; with potential for severe or disabling injury or illness, even without a history of accidents; where human error could lead to accident or injury; jobs new to employees or that fall under new procedures; and complex jobs requiring written instruction.

Many sources agree that including employees in the process — specifically those employees who will be physically providing the labor — is essential to successful job hazard analysis and mitigation.

It's a sentiment reflected in Therma's JHA form: "A copy of this JHA will be kept at the work site available for review upon request. This JHA will be reviewed by all workers prior to the start of activities. Should conditions change, all work is to stop until those conditions are addressed in the JHA."

Fisher says that's one of the things they're trained to do. "One of the main things about our JHA process is anytime there's any kind of change in conditions, whether it's equipment or whatever it might be, they have to stop and redo the JHA. That's one of our policies. And it's more than just redoing the JHA: They have to then sit down and review the changes with the workers who are involved."

Included in typical JSA/JHA forms are tables with three columns: the operation, potential hazards and mitigation actions.

"It's a step-by-step planning process, so essentially we walk through the tasks that are involved for that part of the work," he says. "For example, if it's a confined-space entry where we're going into a manhole, we have to include air monitoring, confined-space entry process, ventilation, hazards of the actual space itself, and making sure the appropriate, trained people are on standby and proper notification has been done, in terms of notifying your rescue services and the office itself."

“You have to look at all those parts and pieces, and then lastly, how likely is it that an actual hazard could occur? You’re looking at the personnel involved — the training, their experience level — so you have to look at the human factor, along with the environment that you’re working in,” Fisher says. “That’s where you’re relying on the experience of the supervisor, collaborating with the safety professionals, and that’s how you’re going to determine the likelihood that a hazard would occur.”

A company of 900 employees, Therma has its own safety department, with seven safety specialists working under Fisher. They are involved in all safety planning, especially with hazardous tasks.

“The safety department needs to be involved in the planning. Specifically, when we talk about confined space, the safety department has to be involved and actually present at entry; they supervise the work,” Fisher says. “It’s kind of like a ‘go/no-go’ checklist: Have you identified the safety department; have you done your proper notifications for our policy and procedure?”

Outside of JSAs and JHAs, like many other large contractors, Therma requires reporting of accidents and near-miss incidents. These reports are then consulted and referenced in JSAs/JHAs for similar job conditions.

BREAKING IT DOWN

“The first thing to always analyze if there is a safer way to perform that particular step. If you need to cut a piece of pipe, well, look at the tool you’re using: Are you using a power tool, or can you use a hand cutter for cutting copper instead of a reciprocating saw? That would be an example of identifying a safer way to do something,” Fisher says. “Do you really need to go into this space at all? If you need to visualize something, can you drop one of our robotic cameras down there and do the inspection rather than putting somebody in the space?”

Beyond simply avoiding the hazard, there are three categories of hazard mitigation: engineering, administrative and equipment.

“We always look at other ways to control those hazards that don’t involve just adding PPE. For example, if there is an atmospheric hazard, one way of controlling it would be putting a crew member in a respirator.” Fisher, however, says the company doesn’t take that approach. “We look at any engineering controls we can apply first, because they are going to be the most reliable. Like providing ventilation of that space, so you engineered the hazard out of it. If you can’t use an engineering control, then we look at an administrative control.”

OSHA identifies the following administrative controls:

- Written operating procedures, work permits and safe work practices

- Exposure time limitations (used most commonly to control temperature extremes and ergonomic hazards)
- Monitoring the use of highly hazardous materials
- Alarms, signs and warnings
- Buddy system
- Training.

“Can we maybe schedule the work for where that hazard isn’t present when we perform the work? That would be kind of the administrative control when it comes to scheduling,” Fisher says. “And then lastly would be PPE.”

Putting all these steps on paper may seem like just another bureaucratic hassle, but employers have an obligation to ensure workers make it home after every job, and a little due diligence is a small price to pay for peace of mind. **c**



KEG Technologies, Inc.
6220 North Pinnacle Drive
Spartanburg, SC 29303
Toll Free: 866-595-0515



Rambo



Torpedo

NOZZLES

Complete Line of Tier 1, 2 & 3 Nozzles

Offering a wide range
of nozzles: Cleaning,
Axis, and Duce
Great options for destroying
roots, grease and
mineral deposits!



Chain
Cutter



Disinfection
Systems



Floor
Cleaner



Inspection
Systems

Sales@kegtechnologies.net · www.kegtechnologies.net

Waterblasting and Waterjetting Cleaning and Accessories

By Craig Mandli



HOSES

1 / ALL JETTING TECHNOLOGIES PARKER HANNIFIN TOUGHJACKET

Parker Hannifin TOUGHJACKET water blast hoses, distributed by All Jetting Technologies, are designed to eliminate the need for an additional PVC sleeve and reduce the hose weight by up to 16%. This allows for ease of handling, improved productivity and reduced operator fatigue. They have polyurethane jackets, are tested to DIN EN 1829-2 standards, and exceed the abrasion resistance and durability of standard PVC-covered assemblies by more than 100%. ColorGard technology means the primary hose jacket is a different color than the abrasion-resistant WJTA-compliant colored outer jacket to provide easy visual identification of abrasion issues, allowing for efficient inspections and reducing unscheduled downtime. 772-286-1218; www.alljetting.com.

2 / KURIYAMA OF AMERICA ALFAGOMMA WATER BLAST HYDRAULIC HOSE

The Alfagomma water blast hydraulic hose from Kuriyama of America is made with an oil- and water-resistant synthetic rubber tube. The reinforcement is four high-tensile steel spirals, and the cover is oil-, water- and ozone-resistant synthetic rubber. The hose is designed for very high-pressure waterjetting service. The WATERBLAST WB 10 Series hose provides 10,000 psi service for I.D. sizes 06, 08, 12

and 16. The WATERBLAST WB 15 Series hose provides 16,000 psi for the dash 08 I.D. size and 14,500 psi for the dash 12 I.D. size. The WATERBLAST WB 20 hose provides 20,000 psi service for the dash 08 I.D. size. 847-755-0360; www.kuriyama.com.

HOSE REELS

3 / COXREELS HP1125 SERIES

The high-pressure HP1125 Series from COXREELS have proven operating pressures up to 5,000 psi, with an external fluid path configured with an electroless nickel-plated steel 90-degree full-flow NPT swivel inlet and chemical-resistant Aflas seals to handle the most demanding tasks in any high-spraying circumstance. They include a sturdy, one-piece, all-welded A-frame base for maximum stability; permanently lubricated pillow block bearings; low-profile outlet riser; and open drum slot design to provide a noncrimping, flat, smooth hose wrap. This high-pressure option is available for 1/2- and 3/4-inch models. 800-269-7335; www.coxreels.com.

4 / HANNAY REELS HDD 6300 SERIES

HDD 6300 Series reels from Hannay Reels are designed for front bumper jetting applications. This series is constructed with a heavy-duty spool and frame, along with a direct-drive hydraulic motor that uses a planetary gearbox for increased power. It holds up to 1,000 feet



5



6



7



8

of 1-inch I.D. jetter hose. An optional swivel mount makes this the ideal reel for front-mounted jetter truck operations. They include thick discs and base plate for strength and rigidity, a rolled drum to handle long lengths of hose and 3-inch square tubing frame construction for over-road durability. 877-467-3357; www.hannay.com.

5 / REELCRAFT INDUSTRIES SERIES PW7000

Series PW7000 hose reels from Reelcraft Industries have been fitted with a nickel-plated, carbon steel Aflas-sealed swivel specifically for pressure-wash applications. The reel can hold up to 50 feet of 3/8-inch I.D. hose. Its rigidity, compact design and nearly impervious powder-coat finish make it suitable for outdoor, all-weather and truck-mount applications. The guide arm adjusts to seven positions for ceiling, wall, truck, bench or pit mounting. The reel comes in standard red, but several other colors are available upon request. 800-444-3134; www.reelcraft.com.

NOZZLES

6 / ENZ USA UC LINE

The UC Line with CrossJet Technology from Enz USA offers a complete line of high-pressure solutions for tough industrial cleaning projects. The nozzles are suitable for cleaning tubes such as heat exchangers in nuclear power plants or in the sugar industry. This CrossJet Technology offers ideal cleaning performance with lower leakage and long durability. The nozzles are available up to 22,000 psi. They are available in 9, 13, 18, 22 and 28 mm sizes. 877-369-8721; www.enz.com.

7 / HAMMELMANN RD MASTERJET

The RD MASTERJET nozzle from Hammelmann has HPS sealing technology and adjustable-speed rotation. It is designed for use with shotguns, robotic lance systems or replacement of any rotating tool. It is lightweight at 2.2 pounds and has a compact, ergonomic design that's 2.2 inches in diameter and 6.5 inches long. It can be used at operating pressures up to 46,500 psi with optimum internal flow allowing the pump's total performance to be used. It has a versatile universal nozzle hub for working with nozzles with two or four inserts. Nozzle inserts are countersunk in the nozzle carrier with blast-back shields. Speed is controlled by an infinitely variable magnetic brake. It can be used for cleaning and washing, expansion joint removal, coating and paint removal, blasting pipe externals, paint booth grid and skid cleanup, superstructure surface preparation, heavy machinery cleanup and surface preparation. 800-783-4935; www.hammelmann.com.

8 / NOZZTEQ BL SWIPER

The BL Swiper sewer nozzle from NozzTeq is available in 1/2-, 3/4- and 1-inch sizes and is made of stainless steel inside with a poly body outside that makes it safe to use in lined, imperfect and sensitive pipes. Its stainless steel tubes loop the water around a system along air channels that increase airflow and jet stream length in the pipe. The design reduces revolutions per minute and pressure at the truck and thus at the nozzle to reduce the amount of blown toilets. It can be used on 4- to 12-inch lines with all pull-behind jetting units. 866-620-5915; www.nozzteq.com.



9



10



12



11

9 / SEWER PRO SHOP BLUESTAR TWISTER

BLUESTAR Twister and Twister Plus nozzles from Sewer Pro Shop are made of high-grade stainless steel and are equipped with ceramic nozzle inserts. They utilize optimized 3D hydromechanics where the water coming from the pressurized sewer hose is used in its entirety for cleaning purposes. The Twister is a highly efficient hydrodynamic tool to remove heavy obstructions caused by grease, roots, mineral deposits or other solid organic material from 8- to 24-inch sewer lines, with the Twister Plus operating in 28- to 36-inch lines. The nozzles can also be used with recycled water. They require no maintenance and have been designed to be extremely operator-friendly for the municipal and industrial markets. 877-864-9394; www.sewerproshop.com.

PORTABLE JETTERS

10 / ELECTRIC EEL EEL-JET EJ3000

The EJ3000 from Electric Eel can clean 2- to 8-inch-diameter lines up to 300 feet. It offers 3,000 psi at 4.7 gpm and a 13 hp overhead valve engine for smooth, quiet running and dependable operation with electric start available. It has a 2-1 gear reduced triplex pump with pulsation for longer life, a 300-foot-capacity hose reel, a heat shield to protect the hose and convenient nozzle storage on the unit. Its steel nozzles penetrate and clean tough clog problems from drainpipe walls with a variety of spray angles. Throttle back control automatically adjusts engine speed. It comes with a low-tone muffler for quiet operation and 12-inch pneumatic tires on a rugged steel base for easy maneuverability. 800-833-1212; www.electriceel.com.

11 / GENERAL PIPE CLEANERS JM-2900 JET-SET

The JM-2900 Jet-Set gas-powered water jet from General Pipe Cleaners/General Wire Spring can quickly clear grease, sand and ice in 4- to 8-inch drainlines, according to the manufacturer. It is designed to be light and maneuverable, and it is driven by a 13 hp Honda engine connected directly to a 3,000 psi, 4 gpm triplex pump. Vibra-pulse helps the hose slide around tight bends in small lines and down long runs. A 200-foot-capacity hose reel with reel brake is mounted on a heavy-duty frame with two 10-inch flat-free foam-core tires. It has a thermal relief valve to protect the pump from heat damage, along with a backflow check valve and inlet filter. An optional spray wand is available. 800-245-6200; www.drainbrain.com.

12 / GORLITZ SEWER & DRAIN MODEL GO 1500A SERIES

The Model GO 1500A Series jetter from Gorlitz Sewer & Drain has a functional frame construction with a carrying handle, reel accessory tube, retractable pull handle and phenolic 4-inch wheels for easy transportation to the job site. All models come with a custom-built, dual-capacitor, 2 hp electric motor drawing 19.8 amps at full load. The duplex ceramic plunger pump with dual pulsation will generate more than 1,500 psi at 2.1 gph to clear tough stoppages or open frozen pipes. The unit is supplied with one 1/8-inch-by-50-foot-long trap hose to clear drainlines 1 1/2 to 3 inches in diameter. The hose and reel connections are provided with quick-disconnect fittings to simplify operation. The reel accessory tube accepts an optional hose reel for compact hose storage and operation. 562-944-3060; www.gorlitz.com.

CONTINUED >>



50+ years of
industry experience;
qualified experts on hand

One-stop shop for all
CCTV pipeline inspection
equipment needs

Cost effective
solutions for any job,
BIG or SMALL

Customer service &
support on hand to keep
you up and running

CUES manufactures CCTV pipeline inspection systems designed to accommodate various locations and conditions found in sanitary and storm sewers ranging from 4"-200" in diameter. CUES can help you to meet these challenges with a full line of standard and customized units, including truck and portable-mounted systems, transporters, cameras, asset inspection software, and more. Call today for a free demo and learn how CUES can help you GO THE DISTANCE!

PIPELINE INSPECTION EQUIPMENT, ASSESSMENT SOFTWARE, AND REHABILITATION SOLUTIONS

800.327.7791 | salesinfo@cuesinc.com



www.cuesinc.com ◀

13



14



15



16



13 / MYTANA MFG. M30 MAXBLAST

The M30 MaxBlast gas-powered jetter from MyTana Mfg. maximizes portability without sacrificing cleaning power and efficiency. This mainline jetter's 390 cc Honda motor with electric start blasts through blockages with 4.5 gpm at 3,000 psi in 1 1/2- to 6-inch lines. It includes a 10-amp recharge system and thermal pump protection to keep users safe, and a detachable hose reel leaves exhaust outside during indoor jetting. With 1/8- and 3/8-inch hoses, it combines all the power of a mainline jetter with the convenience of a medium-line jetter. It comes with stair glides and 10-inch pneumatic tires with swivel castors with locks, so it's easy to load, maneuver, disassemble and use. 800-328-8170; www.mytana.com.

14 / RIDGID KJ-1350

The RIDGID KJ-1350 water jetter propels a highly flexible hose through 1 1/4- to 4-inch lines, blasting through sludge, soap and grease blockages. As users pull the hose back, it power scrubs the line, flushing debris away and restoring drainlines to free-flowing capacity. A working pressure of 1,350 psi and flow of 1.4 gpm provides fast, effective cleaning of lines. It comes standard with a 1.5 hp motor that draws a maximum of 14 amps, can run on most standard 115-volt circuits, and is CSA and UL standards approved. Simply guide the hose into the drain while the thrust propels the hose down the line. Activate the pulse action to easily navigate difficult bends and traps, and utilize the pressure control valve for quick and easy pressure adjustment. An optional H-10 cart makes for easy job site transport. 800-769-7743; www.ridgid.com.

15 / SPARTAN TOOL CADET

The Cadet portable electric jetter from Spartan Tool can effectively clean the entire circumference of the line and make quick work of grease and soft clogs. The triplex plunger pump with electric motor provides a true 1,500 psi at 0.75 gpm, or 700 psi at 2.0 gpm; and at just 14 by 22 1/2 by 9 inches, it leaves plenty of room in a work truck for more equipment. 800-435-3866; www.spartantool.com.

TRUCK/TRAILER JETTERS

16 / CAM SPRAY CV SERIES

The CV Series cargo van drain jet from Cam Spray uses diesel-fired hot water to add additional jetting power. Several models are available up to 4,000 psi and 12 gpm. Its triplex plunger pump with power pulse valve provides an extra push when needed. Air purge and recirculation can be used in the tank for freeze protection. Its 5-gallon fuel tank provides hours of runtime on a single fill. A heavily built powder-coated frame has a full deck and 130-gallon water capacity. Its 12-volt DC reel with 2-1 clutch drive allows for free spooling and powered hose return. It is controlled by push button or foot switch. Accessories include a four-nozzle set, storage box, tip cleaner, tiger tail, safety shield, rubber gloves, high-visibility safety vest, 50-foot washdown hose and trigger gun. 800-648-5011; www.camspray.com.

CONTINUED >>



HUBER DAYS

HUBER & PAC-MAC SPRING EXPO

Thank You!

**TO ALL OUR
SPONSORS
FOR MAKING
HUBER
DAYS 2019
A GREAT
SUCCESS!**



HUBER



pac-mac



Commercial Credit Group



INDUSTRIAL CLEANING EQUIPMENT
RENTAL, SALES AND SERVICE



VACUUM PUMPS
Reliability Redefined™

OLD RAVEN

WE WORK HARDER

MASPORT
VACUUM PUMP SYSTEMS



MORO USA Inc
More than a Pump Company

NVE
National Vacuum Equipment, Inc.



GENERAL PUMP



TRUCKWORX

VAC2GO
A VACUUM TRUCK RENTAL COMPANY

EMPIRE TRUCK SALES

KEITHHUBER.COM • 1-800-334-8237



18



20



17



19



21

17 / EASY KLEEN PRESSURE SYSTEMS GROUNDHOG JETTER

The Groundhog Jetter from Easy Klean Pressure Systems is designed to blast through clogged pipes with a 35 hp Vanguard engine providing 12 gpm at 3,500 psi. It is compact and easily transported in a pickup truck or van, with trailer options available. It includes a fully welded, powder-coated 2-inch steel tube frame, drilled and tapped, which houses the 200-gallon water tank. It comes with an accessible breather and 10-gallon fuel tank, General Pump with gearbox drive, 12-volt powered hose reel with 300 feet of 3/8-inch jetter hose, hose guides, super swivel and foot-pedal control, emergency shut-off valve and an hour meter. Optional remote features include hose reel-in, motor off/speed control and pressure on/off. 800-315-5533; www.easyklean.com.

18 / GAPVAX GJET

The GJet truck jetter from GapVax offers 500- to 3,000-gallon stainless steel water tank options and 40 to 100 gpm water pump options along with a front-mounted hose reel, various toolbox options, room for a vice or crane, and 10-foot tube trays. 888-442-7829; www.gapvax.com.

19 / HOTJET USA VAC 'N JET SERIES

The HotJet USA Vac 'n Jet Series of vacuum trailer jettors are rugged and compact, are engineered to haul equipment and spoils load, can clean valve boxes and storm drains, and can hydroexcavate and/or clean drain/sewer lines. They offer hot- and/or cold-water operation with a choice of engine options ranging from 13 to 66 hp and gas or diesel operation. They are equipped with premium triplex pumps, a 500-gallon spoils tank, 200-gallon water tank, Gardner Denver vac/blowers, 4-ton hydraulic dump and centri-clean filter system. They can also be custom engineered and designed to meet specifications. 800-624-8186; www.hotjetusa.com.

20 / MONGOOSE JETTERS BY SEWER EQUIPMENT MODEL 254

The Mongoose Jetters by Sewer Equipment Model 254 comes with a Mongoose run-dry pump at 25 gpm at 4,000 psi, a tubular steel frame, corrosion-resistant prepainted subassemblies, state-of-the-art controls, a strong hose reel and high-quality gas engine. It has a tank capacity of 300 to 600 gallons, standard hose reel capacity of 500 to 600 feet of 5/8-inch hose and a minimum 74 hp gas engine (or optional diesel engine equivalent). This truck-mounted unit allows for many chassis options depending on specific preferences. The addition of a wireless remote-control system makes this equipment a true one-man operation. This model is suitable for drain cleaning mainlines up to 24 inches in diameter, remote access locations, and commercial and industrial lines. 877-735-4640; www.sewerequipment.com.

21 / VAC•CON HOT SHOT

The Hot Shot high-pressure water jet machine from Vac•Con is designed for removing stones, bottles, cans, grease, sludge and other debris from sanitary sewer and/or storm drainlines. Engineered for one-person operation, all high-pressure water and hose reel controls are located at the front of the machine for ease of operation and increased safety. Models are available with 1,000- and 1,600-gallon water tanks. Options include variable flow, articulating hose reel, polyethylene water tanks, 30 gpm at 3,000 psi water pump system, auxiliary engine or hydrostatic drive, cold-weather recirculation system, side-mounted toolboxes, air purge system, hose footage counter, arrow board, strobe lights, inspector cam, high-pressure spray bar, hose rewind guide, 600 psi handgun system with 25 feet of hose, and a selection of nozzles. 855-336-2962; www.vac-con.com.

CONTINUED >>

EXPRESS

**WI-FI COLOR PUSH CAMERA SYSTEM
(PATENT PENDING)**



- No monitor box (PCU) needed
- Records video and snapshots to your **Smartphone or Tablet**
- Runs on 12 volt battery pack, containing USB-charging port for smartphone or tablet
- 200' Standard Reel, 100' Mini Reel also available
- Standard with nylon-jacketed ultra-stiff gel cable
- Customer serviceable cable termination - **unique only to UEMSI/HTV**
- Field replaceable cable - **unique only to UEMSI/HTV**
- Ask about other available options



**DURA
TUBE™**

- Dura Tube™ is available in custom lengths and end combinations in 6" and 8" styles
- Dura Tube is 28% more dent resistant than conventional aluminum vacuum tubing
- All Dura Tube orders ship within 48 hours - **unique only to UEMSI/HTV**
- Dura Tube offers the most customer-friendly pricing - **unique only to UEMSI/HTV**

UEMSI/HTV

PIPELINE HOSE, PARTS & INSPECTION EQUIPMENT

W209 N17391 Industrial Drive - Jackson, WI 53037

(877) 389-9999 / uemsi.com



22



23



24



25



26

22 / VACTOR RAMJET 850 SERIES

The RamJet 850 Series truck jetter from Vactor has a choice of front or rear hose-reel locations and productivity-enhancing options. An integral aluminum rear shroud with heavy-duty, see-through Lexan windows is available. Large service access doors on both sides of the shroud enable easy greasing, maintenance and service. The rear shroud keeps the hose and components warm and protected for quick setup and cleaning in extremely cold conditions. It comes standard with a certified flow of 0 to 80 gpm at a variable pressure up to 2,500 psi at the hose reel to clean any size line. An optional JetRodder water pump-heated cabinet keeps the pump and plumbing covered and protected. 815-672-3171; www.vactor.com.

23 / VECTOR TECHNOLOGIES VECJET

The VecJet line of powerful, compact trailer-mounted jetter machines from Vac•Con, in cooperation with Vector Technologies, features a high-pressure water jet system with a Vac•Con hose reel. They come standard with a 99 hp Kubota diesel engine, a 500- or 700-gallon water tank, 500 feet of 1/2- or 3/4-inch jetter hose, and water flow of 25 gpm at 4,000 psi or 40 gpm at 3,000 psi. 800-832-4010; www.vector-vacuums.com.

24 / WATER CANNON 19K02

The 19K02 commercial-duty 225-gallon, 12-volt, tank-fed, self-contained, skid-mounted, hot-water cleaning system from Water Cannon Inc. - MWBE can be permanently mounted in a truck bed or trailer or moved to multiple locations or trucks with minimal effort. It arrives ready for use, serving up powerful performance and helping users complete jobs rapidly at remote job sites or when on the move at any location with or without an external water source. 800-333-9274; www.watercannon.com.

WATER PUMP

25 / CAT PUMPS 4DX SERIES

The Cat Pumps 4DX Series high-pressure pump comes with premium DC electric motors for on-the-go pressure wash power. The pump and motor assemblies provide 1 to 3 gpm at pressures from 400 to 1,000 psi and operate on any standard direct current source. Convenient integrated unloaders accurately set and maintain system pressure. Reliable and easy to service, the built-in unloaders divert water flow during bypass, reducing load on pump and motor and increasing system life. Crankcase oil is prefilled so pumps are ready to use out-of-the-box. Multiple build-to-order configurations are available. 763-780-5440; www.catpumps.com.

WATER BLASTER

26 / JETSTREAM OF HOUSTON TWINFORCE

The Jetstream of Houston TwinForce dual pump, 650 hp water blast system comes with a John Deere Tier 4 engine and is designed for high-flow applications including industrial cleaning, surface preparation and hydrodemolition. It is built around the versatile UNx fluid end water blast system. With the interchangeable UNx fluid end design, operating pressures from 8,000 to 40,000 psi can be changed in minutes. 800-231-8192; www.waterblast.com. **c**

TOTAL CLEANING SOLUTIONS



WE'VE GOT YOU COVERED

Start to finish, Federal Signal is your single source for multiple maintenance solutions. Guzzler® vacuum trucks, Elgin® industrial application sweepers and Jetstream's line of high pressure water blasters, will help ensure your plant never stops performing.

For more information on your industrial cleaning solutions, head to [FederalSignal.com](https://federalsignal.com) to find your local Guzzler, Elgin or Jetstream® representative.



*PM-10 Certified



GUZZLER
Subsidiary of Federal Signal Corporation

ELGIN
Subsidiary of Federal Signal Corporation

Jetstream
Subsidiary of Federal Signal Corporation

©2019 All Rights Reserved. Guzzler®, Elgin® and Jetstream® are registered trademarks of Federal Signal Corporation.

rdickens@federalsignal.com | 1.815.672.3171 | federalsignal.com/our-companies

Waterblasting and Waterjetting Cleaning and Accessories

By Craig Mandli

FAILED CIPP LINER REMOVED WITH WATER JET CUTTING ROBOT

PROBLEM / Water infiltration during the curing process of a CIPP liner, installed inside an 18-inch host pipe in Northampton, Massachusetts, resulted in a failed liner with a massive shark fin in the bottom. The triple-layered and partially uncured liner was 200 feet long and had to be removed to eventually repeat the lining of the pipe segment.

SOLUTION / For accurate and fast removal of the liner with the shark fin at the bottom, the Sewer Robotics USA WJ180 water jet cutting robot was sent down the manhole and into the pipeline. The operator first identified the best cutting strategy, using the robot's live camera situated just behind the nozzle, and used the system's controls to deliver the right amount of pressure, the angle to the pipe surface and the distance to the liner/pipe. The operator then applied the high-pressure water blast — in this case 14,500 psi — directly to the CIPP liner to cut it into pieces without adding damage to the host pipe.

RESULT / The 200 feet of failed liner was successfully cut into small pieces, which were then jettied to the manhole where they were hand-cut into smaller pieces and finally removed from the pipeline. The clear pipe was then relined. 717-658-4532; www.sewerrobotics.com. **c**





Featured in an article?

Make the most of it!

REPRINTS AVAILABLE

We offer:

- Hard copy color reprints
- Electronic reprints

Visit cleaner.com/order/reprint
for articles and pricing

If it inspects, protects and clears, it's here.

With thousands of items available, you can get everything from augers to The VALOR® drain cleaning machine. What we don't have, we can order and ship in a few days.

Draincables Direct: one-stop convenience.



Follow us on:    YouTube

800.421.4580
DRAINCABLES.COM

SPOTLIGHT

Compact hydrovac delivers economical performance

By Craig Mandli

Making an investment in a large hydrovac truck may not be an appropriate economic choice for contractors who aren't specializing in that type of work. But the popularity of hydroexcavation continues to increase, and if sewer contractors want to compete, having hydroexcavation capability can be an additional path to profit. That's where a unit like the T-70 Twister trailer-mounted hydrovac from Tornado Global Hydrovacs can make sense.



"The T-70 Twister was designed to be operated by one person and is operator friendly," says Terry Rawn, hydrovac field and operations specialist for Tornado Global Hydrovacs. "The T-70 has most of the capabilities of a large unit in a small, economical package. It was also designed to allow the operator to tow it with a multiuse vehicle."

The trailered units can be used to expose damaged waterlines or other more delicate utility lines — including electric and gas — and it comes in multiple configurations specialized for the job at hand.

"This unit can actually be built on a trailer, chassis or skid," Rawn says. "The slope tank eliminates the lift hazard and creates more cubic feet per minute while the larger boom, wireless control and remote make it operator-friendly. It even has light flushing capabilities and can be used for cleaning out catch basins."

The T-70 Twister has a 6-cubic-yard debris tank and is capable of holding 720 gallons of freshwater. It is powered by a Tier 4 Final, 74 hp Cummins diesel engine and has an industrial positive displacement blower capable of 1,200 cfm at 15 inches Hg. The water pump is capable of up to 5.6 gpm at 3,500 psi. The trailered unit has operator controls on the rear and is capable of wireless operation. It can also be easily hauled with vehicles that require a CLD to operate.

According to Rawn, Tornado Global Hydrovacs designed the unit as an answer to customer requests for a compact, easy-to-operate hydrovac option. Feedback from users in the field has been excellent.

"I've had so many customers say, 'It's about time someone built this' and that it outperforms the competition," Rawn says. "We designed it to be comparable to the small to midrange truck units but with a much lower overhead." 877-340-8141; www.tornadotrucks.com.



1 PICOTE SOLUTIONS MINI CLEANER

The Mini Cleaner from Picote Solutions is a high-speed pipeline cleaning system aimed at the domestic drainage and plumbing markets. The unit has a flexible two-part shaft with a rotating inner core where the cleaning heads are attached. The stationary outer casing ensures the operator's hands do not make contact with rotating parts during cleaning operation, improving safety and flexibility. The durable outer casing is also flame, abrasion and chemical resistant with a high continuous service temperature. The whole unit weighs 58 pounds so it can be easily transported. The Mini Cleaner also has the flexibility to handle multiple 90-degree bends, even in smaller-diameter pipes. 219-440-1404; www.picotesolutions.com.

2 RIDGID SEESNAKE CAMERAS WITH TRUSENSE

SeeSnake cameras with TruSense technology from RIDGID include a high-dynamic-range image sensor that expands the camera's range. This allows for a greater ratio of bright and dark areas to be displayed in the same image at the same time without reducing visibility, resulting in fewer blown-out areas and sections of the pipe that are too dark to see. TiltSense is an on-camera inclinometer that is included on the cameras with TruSense technology. The inclinometer measures the camera's angle, and when connected to a CSx series monitor, the camera can convey the degree of tilt on the monitor display, providing a useful indicator of the pitch of the camera in-pipe. The cameras are available in self-leveling models, which keep the image upright, and non-self-leveling models. 800-769-7743; www.ridgid.com.

CONTINUED >>

Have you solved a
tough pipe rehab project
with a **creative solution?**

September Fest 2019

September 11th & 12th
Rochester, Indiana



There is still time!
REGISTER NOW!
Register at:
www.rapidview.com

FREE Technical Training!

2 days of hands-on learning

If you are a member of our family of customers or just someone in the market for pipeline inspection or rehabilitation equipment, SeptemberFest 2019 is a free event you shouldn't miss! We pride ourselves on providing free, hands-on training in repair and maintenance to our users.

Experience guided demonstrations of more advanced repairs, where we tear equipment down to its components and discuss troubleshooting and strategies for extending the life of your equipment. Take part in live demonstrations of new technologies, and discuss best operational practices with our experts and your peers. We hope you can join us! Register at www.rapidview.com



Visit our website for full schedule of classes and for registration!

Push | High Def | Mainline | Lateral Launch | 3D Mapping | PANO 4K Scanner | Rehabilitation | Software
(800)-656-4225 | www.rapidview.com | Past Proven. Future Ready.

IBAK Inspection Equipment Manufacturing is Certified ISO 9001:2015 and ISO14001: 2015.



FINEST SELECTION OF USED BLASTERS

We Carry All Major Brands

100-600 Horsepower
0-40,000 PSI

713-641-6006
www.boatmanind.com

SOLD

Sell your equipment in *Cleaner* classifieds

Reach over 26,000 potential buyers each month when you list your equipment in the classified section. Plus, your listing is placed automatically online at the *Cleaner* website. In addition, your ad will be placed in the *Pumper e-Trader*, an electronic magazine that is e-mailed to readers. That's three ways to move your equipment out of the yard!

Why wait?

Go to
Cleaner.com/classifieds/place_ad



Scan the
code
with your
smartphone.

product NEWS



3



4

3 CUES LOCK NO-DIG SEWER REHABILITATION PRODUCT LINE

CUES LOCK includes structural point repair systems designed to be used for stand-alone spot repairs or to enhance quality and simplicity of CIPP relining. The LOCK products are easy to install, require very little equipment and most repairs can be carried out in live sewer operating conditions. It does not require digging or external point repair. The line includes stents to bridge holes, voids, cracks and weakened/broken sections in pipes; structural and sealer sleeves to restore damaged areas to full structural strength and seals infiltration; and end sealers to seal the annular space between the CIPP liner and the host pipe at the pipe ends. 800-327-7791; www.cuesinc.com.

4 WATER CANNON WET SANDBLASTING KIT

The wet sandblasting kit from Water Cannon Inc. - MWBE is designed to remove unwanted surface contamination such as rust, scale, loose paint, barnacles and debris. The sand and high-pressure water work together using venturi siphon technology to more safely clean metals, concrete and other similar surfaces. The kit quick-connects to the end of a commercial pressure washer wand and works on 3,000 to 6,000 psi systems. It automatically draws sand through a 26-foot, reinforced, lightweight feed hose using an engineered self-venting pickup tube. The venturi siphon technology eliminates the need for an air-feed system or other heavy and bulky equipment. 800-333-9274; www.watercannon.com. **c**

Share your tough pipe story with
25,000 other professionals

Send a note to editor@cleaner.com or call 800-257-7222



I'm proud of my industry.

I belong to an elite group of business people who keep homes and communities safe, clean and healthy. My colleagues and competitors are true professionals who care about their work and about customers' welfare. Members of this industry are some of my greatest role models and best friends.

I work with the greatest people in the world.

Lead the way

*For your customers,
your industry,
and your business*

Draincables Direct welcomes new inside sales rep

Draincables Direct added inside sales representative Kyle Sell to its Millbury, Ohio, location. Sell has previous experience working in sales and distribution positions.



Kyle Sell

Pipe Lining Supply celebrates 15th anniversary

Pipe Lining Supply is celebrating its 15th anniversary. The company was founded on Jan. 1, 2004, by Linda Heisler. Her primary focus was the CIPP industry in the California area. Two years later, her husband, John Heisler, joined the company, bringing expansive knowledge of the industry including CIPP lateral lining, pipe bursting, horizontal directional drilling, pipe coating, sewage lining, open-cut and cover, and water and sewer utility work. In 2017, the company introduced its AIPPR Quik-Coating System, designed for drain, waste and vent piping. The company has also expanded its market nationwide, and its team includes technical experts across the U.S.



I Make America joins Super Products at groundbreaking

I Make America, the Association of Equipment Manufacturers' national grassroots campaign, joined Super Products for the groundbreaking of the new Super Products facility, which took place on April 26. I Make America is the Association of Equipment Manufacturers' signature program building grassroots support and advocating for pro-manufacturing policies that create and sustain jobs across America. A number of company executives and local elected officials spoke at the event, including Mike Vanden Heuvel, Super Products president; Jeff Leonard, Alamo Group executive vice president; and Wisconsin State Sen. Steve Nass.

Madewell Products hires Donald Rigby

Madewell Products announced that Donald Rigby has joined the company. In a newly created position, Rigby will drive education and engagement within new and existing contracting partners, engineers and owners. Formerly vice president of Marketing and Education with Avanti International, Rigby will continue active participation in NASSCO, North American Society for Trenchless Technology and Water Environment Federation organizations.



Don Rigby

GapVax launches new website

GapVax announced it completed its rollout of a new website. The site design is mobile responsive and works on a variety of screen sizes, from smartphones and tablets to traditional desktop computers. The improved www.gapvax.com contains concise product information and easy-to-use navigation; conversational quoting process; more useful tools for those who shop for and own GapVax products and services; a product-centric focus on helping users accomplish key activities such as identifying the right machine for their use or locating a dealer; and easy spec-to-spec comparisons across GapVax models. The site features 20 new pages and hundreds of full-screen images of GapVax products. **c**

Can't get
enough
Cleaner?



Since 1984 *Cleaner* has been telling your story. Read past issues to relive the articles, news and events of the drain and pipe rehabilitation industry.

Visit www.cleaner.com to read past issues

ALLAN J. COLEMAN

SINCE 1905

Call us today!
773-728-2400

5725 North Ravenswood Avenue • Chicago, IL 60660 • info@allanjcoleman.com • www.allanjcoleman.com

Turn ANY push camera into a Jetter Camera with the JetCam Adapter.

JetCam Adapter

JetSonde Nozzle Jetter Hose



CPI Products Camera Skids

The Universal Roller Skid

The Universal Roller Skid allows you to use your push camera in ways that were not previously possible.

- For 6" - 18" pipelines.
- Keeps camera centered.
- Maneuvers through 90° corners.
- Increases depth range.
- Improves vision & lighting.
- Faster inspection.
- Protects push camera.

The Mini Roller Skid

- For 4" - 6" pipelines.
- Maneuvers through corners.
- Great with cast iron pipes.
- Improves vision.



Warthog® Nozzles



WD



WGP



WG Classic



WH



WHP



WS



WT



WV



WGR SWITCHER™
NORTHERN IL ONLY

Repair Center for: RIDGID SeeSnake, Gen-Eye, Radiodetection, Electric Eel, Vision Technology & Insight Vision Cameras – Fast Turnaround Time



Mountable or Portable - Skid/Cart
9 gpm, 4000 psi



Eagle 300
300 gallon, 18 gpm, 4000 psi



Eagle 150
150 gallon, 9 gpm, 4000 psi



Eagle 200
200 gallon, 12 gpm, 3000 psi

Products
Manufactured By



OLDEST NAME IN THE BUSINESS
— Over 114 YEARS OLD —

Over 30 years building quality equipment!

HotJetusa®

OUR MOST VERSATILE JETTER!
FULLY LOADED! PRICE INCLUDES DELIVERY!*



WITH PAYMENTS AS LOW AS **\$565.00**
*\$2,995.00 SALE PRICE WITH 20% DOWN O.A.C.

35 HP Vanguard Engine • 10GPM @ 4,000 PSI
Cleans 2-12" Drains with Hot OR Cold Water
*Delivery to lower 48 States Only - CALL FOR DETAILS

1-800-213-3272
www.hotjetusa.com

EPL SOLUTIONS
Thinking Ahead



GVISION CAMERA SYSTEM

- Extremely Durable
- Compact
- Self-Leveling
- 512Hz
- 200'-400' Pushrod
- Daylight - Viewable

714.453.9760
www.EPLS-USA.COM

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

GROUNDHOG JETTER

OPEN JETTER TRAILERS



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



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

DYE TRACERS




Solutions for:

- Infiltration
- Septic Systems
- Cross Connection
- Leaks and more...

BRIGHT DYES
Division of Kingscote Chemicals

www.brightdyes.com • 1-800-394-0678

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




VAN PACK JETTERS

35 HP Vanguard
12 GPM @ 3500 PSI



STOP SPINNING YOUR WHEELS!

MAKER OF THE WORLD'S FIRST
POLYMER & CARBIDE GRIT HYBRID WHEEL



**STEEL & POLYMER
CARBIDE GRITTED WHEELS**
GRITTED & TREADED TRACKS
TRANSPORTER TOW CABLES
FITS MOST MAJOR BRANDS

407-537-0742 | TruGritTraction.com

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
1-800-315-5533
www.easyklean.com sales@easyklean.com

RUGID



= Thank You!

Hand-selected Wisconsin sausage and jerky delivered in a 20-qt. **RUGID** cooler.

\$199.99 Delivered

Meaty-Delivery™
meaty-delivery.com
833-777-8443

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



Heater Package Available



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

Cleaner
FOR DRAIN AND PIPE CLEANING, INSPECTION AND REHABILITATION PROFESSIONALS

It's your magazine.
Tell us your story.

At Cleaner, we're looking for service companies with interesting stories to tell. If you'd like to share your story, send us a note at editor@cleaner.com.

Let Us Build Your
JETTER



Diesel Propane Gas

Hot or Cold


AMERICAN JETTER.COM
866-944-3569

The Crap Shooter - Sewer Jetter

4 Units To Choose From
1500-2000 PSI Power Unit
50'-75' High Pressure Jetter Hose


BULLFROG INDUSTRIES **888.890.1555**
FlushAFrog.com

PIPE TECH USA



Internal Pipe Coating System

- Sets in seconds, not hours or days like epoxy
- Coats from 100 mil to 300 mils in one pass
- Structural



Before After

▶ Watch A Video Of This Process

877-507-0861 • PipeTechUSA.com

dR DYNAMIC REPAIRS

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

New & Refurbished Inspection Equipment For Sale

Rental Equipment Available
Daily & Weekly Rates

Ask About Our 48-Hr. Turn Around Time

INSPECTION CAMERAS ARE OUR ONLY BUSINESS!

973-478-0893

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

Ajt
All Jetting Technologies, Inc.
772-286-1218

SUPPLYING THE ESSENTIALS IN THE UHP SURFACE PREPARATION INDUSTRY

AT AFFORDABLE PRICES



Parker

- couplers and fittings
- pneumatically driven rotating jet lance
- numerous types of heat treated sapphire nozzles & tips
- variety of pump replacement parts
- distributor of Parker Hannifin hoses

Family owned and operated

Ajt
Email: info@alljetting.com
Phone: 772-286-1218
www.alljetting.com

"Our customers come first"



Cua Claws

A Simple Solution for Slippery PVC Pipe -

18 Years of Service

We resurface all makes of steel transport wheels

CALL JERRY AT 714-697-8697
www.cuaclaws.com


INDUSTRIAL-GRADE PRESSURE WASHERS



WATER CANNON .COM 35
800.333.9274


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

WILDCAT HEATERS
VAC TRUCK HEATERS



Install ready heaters for vacuum and hydro vac trucks. Rugged heavy gauge cabinets and frames for durability even in severe road conditions.

Up To 10,000 PSI
Up To 2,000,000 BTU
120 or 12 Volt Available



1-800-315-5533
www.easyklean.com sales@easyklean.com

THE "ORIGINAL" LIQUID SMOKE



Turbo Fog M45:

- Versatile
- Light Weight
- Compact
- Creates Dense Smoke

TURBO-FOG
Since 1977

www.turbo-fog.com • 1-800-394-0678

GET EMAIL NEWS ALERTS FOR **Cleaner**

Go to **cleaner.com/alerts** and get started today!

We're Everywhere You Are.



mswmag.com

classifieds

see photos in color at www.cleaner.com

BLOWERS

Cotta (single & dual stage) & OMSI transmission parts. Cloverleaf Tool Co., Sarasota, Florida. Phone 941-739-0707; Email: sales@cloverleatool.com (C10)

BUSINESSES

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

COMPUTER SOFTWARE

FreeServiceReminderSoftware.com, FreeServiceDispatchSoftware.com, FreeRouteManagementSoftware.com. (C08)

DRAIN/SEWER CLEANING EQUIPMENT



Seattle Pumps Big-Brute 3508 hydro-jetter 8gpm/3,500psi hydro-jetter w/ Warthog 300' x 3/8" mainline. 200' x 3/8" remote reel. 50' x 1/4" remote reel for small drains - never used. 100' x 7/8" supply hose. "Warthog" jetter head, 4 piece jetter heads. Purchased from Seattle Pumps as a cart model and has been mounted on a trailer, I can convert it back to a cart model if interested. Single-axle trailer. \$7,995

360-961-5308, WA C08



RapidView IBAK Panorama SI Manhole inspection system in Ford Transit Connect van. Demoed a few times but has never been rented. Call or email for more information.

800-892-7831, WA
sales@swsequipment.com C08

Used and rebuilt cable machines in stock: RIDGID K-7500, K-40, K-60, K-1500, Spartan #1064, #300, #100, Electric Eel model #C machines. The Cable Center: 800-257-7209. (CBM)

JET VACS



2002 Kenworth/Vactor combo unit (145P) Cat C-10, Allison auto., 80gpm/2,000psi rodder pump, Roots blower, 1" x 800' hose reel, brand-new cyclone, new ECM. \$75,000

Contact Mitch 231-258-7309;
MitchH@AmericanWaste.org C08



2007 Volvo/Vactor 2100 combo unit (302P) 175k miles, 6,500 hrs. \$89,000

Contact Mitch 231-258-7309;
MitchH@AmericanWaste.org C08

1990 Vac-Con/International. 466 engine with Allison transmission. 88k miles, 6,500 hrs. Recently replaced fan, tires, rear door, and PTO. 1,000-gallon freshwater with 80gpm @ 2,000psi. FMC pump. 15-yard debris box. \$22,500 OBO. 972-754-5279 (C10)

2001 Vac-Con VPD42HA/1300 sewer-cleaning unit mounted on a Sterling LT9501 with 131395 miles. 380hp Cat C12 in-frame rebuild at 101115 miles. Fuller 10-speed manual transmission, 120gpm FMC Quintuplex water pump, recent reman 165hp Cummins 8.3 auxiliary engine, recent reman Roots/Dresser 827 blower, cold-weather recirculation, 16-cubic yard-debris tank, 1,300-gallon water tank, 30' x 8" aluminum telescoping boom tube (great for catch basins), 500' x 1-1/4" hose on articulating reel. \$40,000. Call Mark 708-475-7116, IL (CBM)

2011 Vac-Con V390LHA combination cleaning truck. Low miles, great condition. 1998 Vactor 2110-36PD ex-city owned, low miles See details of these units and CCTV inspection trucks at www.empireequip.com. Contact Craig at 714-639-8352. (CBM)

2007 Volvo with a Vactor 2115 combination unit. (Stock# 5903C). **(888) VAC-UNIT (822-8648); www.vsirentalsllc.com** (CBM)

Submit your classified ad online!
www.cleaner.com/classifieds/place_ad

JETTERS-TRAILER



The HotJet® 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. Priced at \$32,995 including freight to the lower 48 states, the HotJet II® is American made using nonproprietary parts for affordability and ease in serviceability making its return on investment truly impressive. Financing available.

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



Completely refurbished 1997 trailer-mounted sewer cleaning machine. 550-gallon water tank, FMC water pump 40gpm at 2,500psi, 500' x 3/4" hose, rotating hose reel. Isuzu diesel engine, tandem axle, new tool box. Ready to work. Located in North Texas. \$15,200

Call 281-770-6714 C08

JETTERS-TRUCK



2011 Ford F550, 4x4, diesel. US Jetting 4018 with Hatz diesel silent pack. Super clean! Ex-city, work-ready unit. \$25,900

800-627-0778 C08

LIST YOUR EQUIPMENT IN
THE PAGES OF **CLEANER!**
**[www.cleaner.com/
classifieds/place-ad](http://www.cleaner.com/classifieds/place-ad)**



2012 International power washer truck (984) International MaxxForce, 31.2k miles, Kerr Triplex pump - 30gpm/2,000psi, four (4) 1/2" hand gun reels, 900,000 BTU burner, 1,750-gallon water capacity. \$55,000

Contact Mitch 231-258-7309;
MitchH@AmericanWaste.org C08



2016 Sewer Equipment Company of America Model 800 HPR-TV ECO Jet Truck. This unit was a well taken care of demo with low miles (10,131 miles). Freightliner M2 106 chassis, Cummins ISB 6.7 w/250hp diesel engine, Allison 3000 RDS auto. transmission. 33,000 lb. GVWR. FE Meyers pump 65gpm @ 2,000psi, 1,500-gallon water tank. Dual telescoping hose reels- 500' umbilical cord @ 2,500psi, 600' of 1" @ 2,500psi hose. TV System: Self-leveling color TV camera, 4" jet pod skid, color monitor, DVR w/removable SD card. 6", 8", & 12" Jet Pod TV skids, auto level wind on reel, digital "Smart Counter", drain valves for water pump, 50' washdown system with retractable reel, fill-hose storage rack, lighting package, wireless remote control pendant, air-purge system, etc. Price: \$189,900. Contact Gavin Singleton @ Nixon-Egeli Equipment Co.

909-930-1822, CA
gsingleton@nixonegeli.com C08

LOCATORS

Used RIDGID NaviTrack, Gen-Eye Model 100 and Goldak Model 4400. The Cable Center 800-257-7209. (CBM)

Cleaner
AVERAGE MONTHLY
CIRCULATION REACHES
25,000+
READERS!

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

PIPELINE REHABILITATION



New TryTek lateral cutter. Original price \$56,000. Selling for \$38,000. Full TryTek warranty.

Call 267-249-3774, PA C08



NEWLY REFURBISHED 2011 RUSH Steam Unit for sale. JD Brule Equipment is selling a fully-refurbished and painted 2011 Kenworth T370 6-speed manual. 33,000 GVW Rush steam unit, available immediately. The unit has brand-new coil, Cat 6gpm water pump, switches, safety limits and controls. Chassis has 69,000 kms and 5,800 hrs. Asking price is \$265,000 USD + applicable taxes. If interested, please contact Adam Russel:

613-293-1965, ON C08

CIPP Lining Trailer and Equipment. 2013 20-foot double-axle trailer. Gasoline 20-gallon air compressor with separate 30-gallon storage tank. Electric wet-out table. Work table with toolbox. Permaliner large inverter, Permaliner 4-inch and 6-inch inversion heads and caps. Intro hoses, air tanks with regulators, air hoses, and other tools and supplies. Trailer has everything needed to install CIPP liners in 4" and 6" lines. Will deliver for additional fee. Training available if needed for additional fee. Photos available. \$35,000 OBO. Call or text 423-313-1546 (C08)

LIST YOUR EQUIPMENT IN
THE PAGES OF **CLEANER!**
[www.cleaner.com/
classifieds/place-ad](http://www.cleaner.com/classifieds/place-ad)

POSITIONS AVAILABLE

GapVax, Inc., a nationally recognized manufacturing business, is seeking a talented, highly motivated individual to fill a full-time Sales Position in the Midwest (Iowa based preferred) region. GapVax is the leading manufacturer of industrial and municipal vacuum units and hydroexcavation units in the United States. We provide the most reliable, comprehensive, and efficient mobile vacuum units in the industrial and municipal markets. Specifications of the position are listed on our website, www.gapvax.com, click on the Now Hiring link in the left hand column. Send resumes to or betty@gapvax.com or 575 Central Avenue, Johnstown, PA 15902. (CBM)

PUMPS

Honda model WP40X, 8 hp, 4" with hoses. Honda 4 hp, 2" pump with hoses. The Cable Center: 800-257-7209. (CBM)

RENTAL EQUIPMENT

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

SERVICE/REPAIR

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

TOOLS

Bosch Brute hammer drill with cart irons. The Cable Center: 800-257-7209. (CBM)

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

RIDGID model #300 with stand, RIDGID tri-stand vises, RP 330 ProPress kit. The Cable Center: 800-257-7209. (CBM)

TRAILERS

2006 SECA Model TGV -2600 jet vac, excellent condition, 975 hrs. \$17,500 OBO. Contact fturk@granturk.com (P08)

TV INSPECTION

USED Envirosight ROWVER Sewer Inspection Crawler: Overhauled with new parts and ready to run. Includes automatic cable reel, pan/tilt/zoom camera, steerable 6-wheel-drive tractor with various wheel sets, controls, and accessories. Call for pricing 973-252-6700. (CBM)

NEED TRACTION? We make aftermarket gritted/gripping pads for all chain-driven camera transporters. Custom fabrication secured to a high-quality, nickel-plated carbon-steel chain that doesn't stretch. Also have non-gritted pads, wheels, and tires for all different brands. Pad samples upon request.

Pipe Tool Specialties LLC: 888-390-6794; Fax 888-390-6670; pipetoolspecialties.com or email pts4422llc@gmail.com (CBM)

2002 CUES CCTV inspection truck. Ford F550 SuperDuty, 7.3 diesel engine with 71k miles, 16' box. Onan 7.5 HDK diesel generator with 3k hours. CUES reel with approximately 1,000' of cable, CUES 1208 PCU. Call Mark for more information. \$45,000 OBO. 708-475-7116, Chicago area (CBM)

CAMERA OPERATORS, STOP SPINNING YOUR WHEELS IN GREASY PIPE! Aftermarket gritted polymer wheels, steel carbide wheels, gritted and treaded tracks, tow cables, kiel sticks and more. Fitting Aries, CUES, Envirosight, Ibak, Rausch, RST, Schwalm & IDTec. **ORDER TODAY** at www.TrugritTraction.com; info@trugrittraction.com; 407-537-0751 (CBM)

Used SeeSnake Camera Systems in all sizes; Used General Wire Spring Camera Systems in all sizes; Used machines in all sizes. We want your trade! The Cable Center: 800-257-7209. (CBM)

Aries CCTV Inspection Truck: 2002 Ford E350, 5.4 Triton V8, 59,484 miles. Aries PCU, Dell operating system. New Onan commercial 7,000-watt generator. Pipe Tech pipeline inspection software, camera and transporter negotiable. Call for more information and more pictures. \$15,500. Mark 708-475-7116, IL (CBM)

2014 Envirosight Rover X 1,600' long-range camera system. Includes automatic cable reel with 1,600' of cable, RX130 crawler, RC90 PTZ camera, DCX5000 desktop controller (lateral launch ready), wireless remote, and 6-8" rubber wheels. Equipment was municipal-owned and has been overhauled at a factory authorized repair facility. This equipment is ready to go to work. Call Brian for pricing and pictures. 303-898-9475 (C08)

Used and rebuilt camera kits in stock: RIDGID Mini Compact, Mini Color, Standard Self-Leveling, General Gen-Eye I, II and III, Aries Seeker, and SRECO kits. The Cable Center: 800-257-7209. (CBM)

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

CUES CCTV Inspection Truck: 2000 Freightliner MT45 walk-in, Cummins 5.9, 71,086 miles. CUES PCU, Dell operating system, truck-mounted CUES grouting system. Onan 10.0 GenSet diesel generator. Software, camera and transporter negotiable. Call for more information and more pictures. \$19,500. Mark 708-475-7116, IL (CBM)

VACUUM EQUIPMENT



3,300-gallon Wet/Vac: 2014 Freightliner Coronado SD with 77,932 miles; Detroit DD13 engine with 5,553 hours. Manual transmission. Two Becker liquid-ring pumps 440cfm each. Vacuum and pressure modes. Ledwell 3,300-gallon DOT412 tank, full-opening tailgate, hydraulic-powered body and tailgate lift.

888-442-7829
mhughes@gapvax.com C08

WATERBLASTING

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

If you are using an
800 NUMBER
in your ad, be sure it can be used
in all areas nationwide.

Cleaner
AVERAGE MONTHLY
CIRCULATION REACHES
25,000+
READERS!



Durable Gear for Extreme Conditions



WEATHERTIGHT™

HANDGUN CASES



Water Resistant or Waterproof
Models Available

9" Case

Details: PVC Exterior, Floats

16" Case

Details: PVC Exterior, Floats

COMPOUND BOW CASE



Water Resistant or Waterproof
Models Available

Bow Case

Details:
PVC Exterior, Floats

GUN CASES



44"x 15" Case

Details:
PVC Exterior, Floats



48"x 10" Case

Details:
PVC Exterior, Floats



54"x 10" Case

Details:
PVC Exterior,
Floats

Water Resistant or Waterproof
Models Available

HIGH PERFORMANCE COOLERS



Shown in Snow

20 Quart Cooler

Size: 21.25 x 13.75 x 14.25
Capacity: 30 cans no ice



Shown in Surf

35 Quart Cooler

Size: 22.5 x 16.25 x 16.25
Capacity: 48 cans no ice



Shown in Sand

45 Quart Cooler

Size: 27 x 16 x 16.25
Capacity: 64 cans no ice



Shown in Sky

60 Quart Cooler

Size: 28.5 x 18.375 x 18
Capacity: 95 cans no ice



Shown in Slate

75 Quart Cooler

Size: 34.25 x 18.375 x 18
Capacity: 117 cans no ice

WWW.RUGIDGEAR.COM

833-777-8443 | SERVICE@RUGIDGEAR.COM

RUGID DEALERS:

Archer's Pro ShopCotter, AR
Archery Country.....Austin, TX
BlackOvis.comWest Valley City, UT
Buck Rub Outfitters, LTD.Pewaukee, WI
Buck Mountain Sports.....Vergennes, VT
Forestry Suppliers, Inc.....Jackson, MS

G4 Archery, LLCHillsboro, OR
Gable Sporting GoodsDouglasville, GA
Mark's OutdoorsBirmingham, AL
MDR ArcheryShelby Township, MI
Northland Clothing Co.Three Lakes, WI
Rogers Sporting GoodsLiberty, MD

ScheelsJohnstown, CO
Specialty Tool & SupplyGreenville, NC
Straightline Sports.....Steamboat Springs, CO
The Reel ShotAppleton, WI
Wilderness ArcheryRocklin, CA

The Total Package

Plug-N-Play
Mainline Inspection Kit



- ✓ Competitively Priced
- ✓ Versatile
- ✓ Complete

You really can have it all **for a lot less** than you think.

Two steerable crawlers inspect 6" to 60" diameter lines

Pan & Tilt Zoom color camera

All-in-one touch screen controller/laptop

Motorized drum with 1000' of cable

AssetDMS NASSCO Certified PACP data collection software

Portable and flexible—loads and fits easily on a pickup, trailer or ATV, can also be truck mounted

available thru
HGACBuy.com
THE SMART PURCHASING SOLUTION

trio-vision

CALL US NOW
to schedule a Demo

800.443.3761
www.trio-vision.com



Delivered Price – Quantity Discounts

WaterCannon.com 1.800.333.9274 (WASH) en Español: 1.800.917.9274

Hydraulic Driven 20 GPM Up to 5000 PSI



Portable Electric - Low RPM



3.5 GPM, 3500 PSI, 7.5 HP

Portable Gas 4000 PSI



Honda Kohler Lifan

Car And Truck Detailer



Auto-Stop/Start - Complete with Reel 100' Hose

Hot Water Portable 420 cc Gas



4 GPM, 4000 PSI, 120 Volt

Hot Water Portable 440 cc Gas



4 GPM, 4000 PSI, 120 Volt

Hot Water Portable Honda 389 cc



4 GPM, 4000 PSI, 120 Volt

Hot Water Portable 440 cc



4 GPM, 4000 PSI, 12 Volt

Hot Water Portable Honda 389 cc



4 GPM, 4000 PSI, 12 Volt

Indoor Electric 5 to 50 HP



208/440/575 Volt Up to 15000 PSI

Hot Water Portable – Electric



3.5 GPM, 3500 PSI, 7.5 HP

Hot Water Electric Powered – Oil Fired



Up to 50 HP, Up to 8000 PSI

Electric Heated – Electric Motor



High Capacity, 10 GPM Up to 5000 PSI

7000 PSI Gas or Diesel Powered



Industrial Package Hose Reel

Hot Water 150° F – 6'x6"



225 Gallon, Gas and Diesel

Portable Auto/Truck Detailer



Yard duty Trailer – 100 Gallon

Diesel Engine - Diesel Burner



Up to 10 GPM, 11,500 PSI

Hot Water LP Natural Gas Oil Fired



Up to 2,000,000 BTU's 20 GPM

Cabinet Hot Water Heaters



12 or 120 Volt – Up to 2,000,000 BTU's 20 GPM

Customizable Jetter Packages



12 GPM – 3500 PSI

Orlando | Phoenix | Minneapolis | Hattiesburg | Melbourne | Toronto | Bogota | International: 1-321-800-5763

Industry Trained Staff available from 8:30 a.m. to 6:00 p.m. weekdays E.S.T.

MWBE



OPEN HOUSE • SEPT 26 • JOHNSTOWN, PA



Combo JetVacs • Recycle JetVacs
Hydro Excavators • Air Movers
Jetters • Skid Mounted Vac Units
Parts & Accessories

#BESTTRUCKSINTHEBUSINESS

30 SAME
OWNER
UNMATCHED
QUALITY
YEARS SUPERIOR
PERFORMANCE

888-442-7829 Johnstown, PA

281-884-8658 La Porte, TX

www.gapvax.com

MACHINES THAT WORK AS HARD AS YOU DO

the Cadet

Save on space, not on power.

It's time to call in the Cadet. This portable electric jetter will clean the entire circumference of the line and make quick work of grease and soft clogs. The triplex plunger pump with electric motor gives you a true 1,500 PSI at 0.75 GPM, or 700 PSI at 2.0 GPM, and at just 14" x 22½" x 9" it leaves plenty of real estate in your work truck for more Spartan Tool equipment.



SPARTAN
— SINCE 1943 —

CABLE MACHINES | VIDEO INSPECTION | HYDRO JETTERS

1618 Terminal Road
Niles, MI 49120

Shop Online SpartanTool.com
or By Phone **800.435.3866**

**WOMEN[™]
OWNED**