

# Cleaner

FOR DRAIN AND PIPE CLEANING, INSPECTION AND REHABILITATION PROFESSIONALS

www.cleaner.com | APRIL 2015

## OPEN TO OPPORTUNITY

BROTHERS BUILD BUSINESS WITH QUALITY  
WORK, CAREFUL INVESTMENT AND A FOCUS ON  
THE GROWING MUNICIPAL MARKET **PAGE 20**

### MONEY MACHINES

SeeSnake opens new revenue stream

### TECH PERSPECTIVE

Build the best pipe rehab team

### SAFETY FIRST

Situational awareness can prevent accidents

# Gen-Eye SDW<sup>®</sup>

with WiFi inside 

## New Enhancements, Added Versatility

General's beefed up Gen-Eye SDW video pipe inspection and location system now features a

- Larger, 10.4" LCD screen.
- Built-in waterproof keyboard.
- Integral SD recorder.
- WiFi transmits video to tablet or smartphone.
- All in a new, heavy-duty Pelican case.

For details, contact the Drain Brains<sup>®</sup> at 800-245-6200 or 412-771-6300, or visit [www.drainbrain.com/geneye](http://www.drainbrain.com/geneye).



See what you've been missing: [www.drainbrain.com/geneye](http://www.drainbrain.com/geneye)

**General**  
PIPE CLEANERS

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



© General Wire Spring 2014

ONE OF THE 1ST  
VAC·CON TRUCKS - 1986

ONE OF THE LATEST  
VAC·CON TRUCKS

BETWEEN  
THESE  
*two* TRUCKS ARE

6,500

OTHERS  
STILL *running*  
WORLDWIDE

Each truck is supported by our robust dealer network, customer service and comprehensive on-line training.

Our manufacturing records date back to the first unit produced in 1986. We have the capabilities of providing you with technical service documents and parts for every single unit we have produced. Whether you have questions about parts or technical service, well-trained and dedicated personnel are standing by throughout the Vac-Con® network of dealers and service providers to assist you. [GO ON-LINE TO LEARN MORE.](#)

[VAC-CON.COM/worldwide](http://VAC-CON.COM/worldwide)

VAC·CON IS A SUBSIDIARY OF HOLDEN INDUSTRIES, INC., A 100% EMPLOYEE-OWNED COMPANY.



A HOLDEN INDUSTRIES Company

**NEW!**

# **WARTHOG** **WHR MAGNUM**

**HIGH PERFORMANCE.  
LESS MAINTENANCE.  
LONGER LIFE.**

THE NEWEST TOOL IN THE  
WARTHOG MAGNUM SERIES

**NOW FOR 6-18  
INCH PIPES!**

- Operates **4x** longer between maintenance intervals
- Effectively handles dirty or recycled water
- Highest quality carbide nozzles
- Quick, easy field maintenance and head changes
- Streamlined body moves easily through pipe bends
- Long life centralizer with individually replaceable fins

## **TOOL OVERVIEW:**

- Pressure ..... Up to 8000 psi (550 bar)
- Flow ..... 16-50 gpm (60-190 l/min)
- Pipe Size ..... 6-18 in. (150-450 mm)
- Inlet ..... 1/2" or 3/4" NPT/BSPP



**WARTHOG**  
SEWER NOZZLES BY **STONEAGE**®

1-866-795-1586 • [WWW.SEWERNOZZLES.COM](http://WWW.SEWERNOZZLES.COM)

Proudly Manufactured in the USA



underground  
understood



# Pipe Inspection's All-star Lineup

new

### preferred build-outs

We've analyzed the most popular inspection vehicle configurations and geared up to deliver them faster and more affordably. Order with confidence knowing your build-out reflects industry preferences.



updated

### crawlers

Pan/tilt SAT is updated with new controls, drive train and camera; new RX400 crawler inspects pipe up to 10" dia.



new

### pan/tilt push camera

Reaching as far as 330' into laterals, VeriSight Pro 360 tilts ±135 degrees and pans 360.



new

### video nozzle

Now view lines up to 24" with JetScan extension rollers, and record up to 16 hours of footage.



ROVER X dominates our industry—it's the most agile, capable crawler out there, with a single system letting you perform CCTV, lateral launch, side scanning and laser profiling in any size line.

But let's face it, even a performance crawler like ROVER X isn't always the best way to see inside pipe. That's why EnviroSight has pioneered game-changing technologies like zooming and video nozzles, and why we've perfected the push camera.

Ultimately, Underground Understood is about having the best equipment to answer any inspection challenge. **Schedule a free on-site demo and find out what it means to go all-star.**



www.envirosight.com • 973.252.6700

inspection technology • asset strategies



20

## features

- 20 Profile: Open to Opportunity**  
Brothers build business with quality work, careful investment and a focus on the growing municipal market.  
By Ken Wysocky
- 38 Profile: Thinking Outside The Trench**  
Northern California's Miksis Services leverages strong supplier relationships and creative problem-solving to stake out 'go-to' status.  
By Mary Shafer
- 62 Product Focus: Pipe Bursting Methods and Projects**  
By Craig Mandli
- 68 Case Study: Pipe Bursting Methods and Projects**  
By Craig Mandli



### ON THE COVER:

A-1 Sewer and Drain owners and brothers Jason (left) and Josh Franke have built their South Dakota-based business from a small septic pumping operation with a few pieces of used equipment to a 13-person shop with a \$1.5 million fleet focused primarily on the municipal market. (Photography by Kevin Eilbeck)



38



62

## departments

- 12 From the Editor:**  
**WWETT Recap - Thanks For Being Part of Something Great**  
The 2015 WWETT Show brought the industry's best people, education and equipment together, along with a huge party and a free truck.  
By Luke Laggis
- 16 @cleaner.com**  
Be sure to check out our exclusive online content.
- 32 Money Machines: Vision Test**  
Drainline video inspection camera brought new revenue streams into view for South Dakota contractor.  
By Ken Wysocky
- 50 Money Manager: A Key to Success**  
Key person insurance helps your business survive when someone critical to its success moves on – or passes on.  
By Erik Gunn
- 54 Tech Perspective: Build the Best Pipe Rehab Team**  
Take advantage of these 5 no-nonsense ways to encourage cooperation and quality work.  
By Kim K. Lewis
- 58 Safety First: Beware – and Be Aware**  
Workers must remain alert to what is going on around them to stay safe on the job site.  
By Doug Day
- 70 Industry News**
- 72 Product News**  
Product Spotlight: GPR system locates metallic, nonmetallic targets.  
By Ed Wodalski

## COMING IN MAY 2015

### ISSUE FOCUS:

#### Residential and Commercial Sewer and Pipe Maintenance

- **TOUGH JOB:** Rehab contractor goes deep underground
- **MONEY MACHINES:** Hydroblaster delivers when others fall short
- **TECH PERSPECTIVE:** Keep your sewer equipment clean

# ZERO DOWN.

# PERMA-LINER™ INDUSTRIES, LLC.

# NO PAYMENTS FOR 90-DAYS.

## PERMA-LATERAL™ LINING SYSTEM

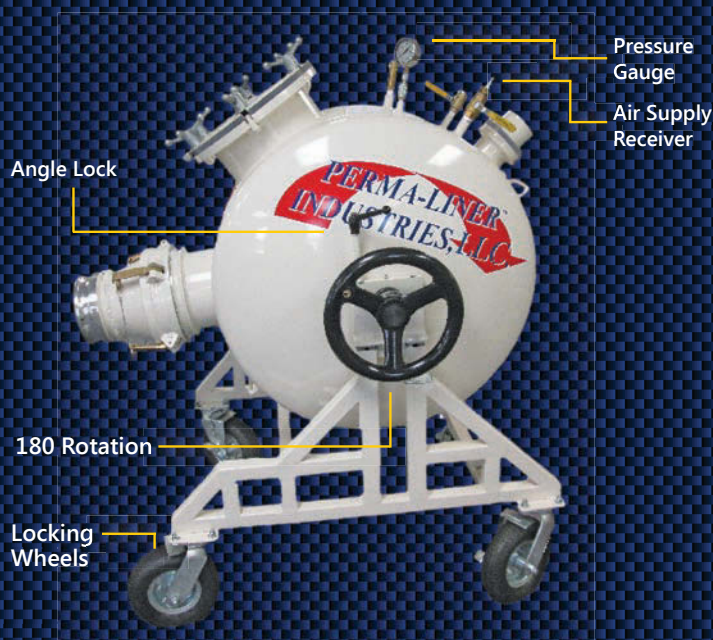
THE BEST SELLING SMALL DIAMETER PIPE LINING  
SYSTEM IN NORTH AMERICA

REPAIRS CRACKED  
OR BROKEN PIPES  
WITHOUT EXTENSIVE  
EXCAVATION

ELIMINATES ROOTS  
AND INFILTRATION

BRIDGES MISSING PIPE  
SECTIONS / STAND  
ALONE REPAIR

PATENTED  
TECHNOLOGY



COVERED BY US PATENT NOS. 8,590,575;  
7,343,937; 7,448,413; 7,588,055; AND 7,753,081



### ILLINOIS DISTRIBUTION FACILITY NOW OPEN

This location will allow for the convenience of on-site pick up and local delivery, as well as prompt next day service for all of the Midwest region and 2-day shipping for the Northeastern United States. This facility will offer full stocking of CIPP materials and equipment. Direct 24-hour assistance will also be available to all Certified Perma-Liner™ Installers.

CALL 1-866-336-2568 FOR MORE INFO

[www.perma-liner.com](http://www.perma-liner.com)

1-727-507-9749 Int'l 1-866-336-2568 Toll Free

info@perma-liner.com

Financial and credit qualifications  
for zero down financing



# Special on Winter Jackets

www.MilwaukeeRubber.com



**\$49.95\***

**75-1301 Yellow**  
PU coated, polyester lined, fully taped seams and a zip-out liner. Waterproof. Detachable hood, elastic ribbed waist and cuffs with inside and outside pockets.  
**Sizes M - 6XL.**

**\$49.95\***



**CSJC-306OR Orange**  
PU coated, polyester lined, fully taped seams and a zip-out liner. Waterproof. Detachable hood, elastic ribbed waist and cuffs with inside and outside pockets.  
**Sizes M - 5XL.**



**\$69.95\***

**75-1381 Yellow**  
Eight wearing options including a CL3 zip-out liner or CL2 vest. Jacket and liner have removable sleeves. Six pockets, fleece collar, detachable hood, radio handset straps, ID pocket badge holder and many more features. Waterproof.  
**Sizes M - 6XL.**

\*Tall sizes available on some styles for an additional \$6.

Jackets meet ANSI/ISEA 107-2010 CL3 standard.



Call Toll-Free  
**1.800.325.3730**

# 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](http://www.cleaner.com) | Email: [info@cleaner.com](mailto: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](http://www.cleaner.com/order/subscription) or call 800-257-7222.

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

**CLASSIFIED ADVERTISING:** 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](http://www.cleaner.com) for options and pricing. To order reprints, call Jeff Lane at 800-257-7222 (715-546-3346) or email [jeff@colepublishing.com](mailto:jeff@colepublishing.com). To order back issues, call Nicole at 800-257-7222 (715-546-3346) or email [nicole@colepublishing.com](mailto:nicole@colepublishing.com).

**CIRCULATION:** Circulation averages 27,756 copies per month. This figure includes both U.S. and international distribution.

© 2015 COLE Publishing Inc.

No part may be reproduced without permission of the publisher.



Kayla Bisnette Jim Koshuta



- [www.facebook.com/CleanerMag](http://www.facebook.com/CleanerMag)
- [www.twitter.com/CleanerMagazine](http://www.twitter.com/CleanerMagazine)
- [www.plus.google.com](http://www.plus.google.com)
- [www.youtube.com/CleanerMagazine](http://www.youtube.com/CleanerMagazine)
- [www.linkedin.com/company/cleaner-magazine](http://www.linkedin.com/company/cleaner-magazine)



## WATER & WASTEWATER EQUIPMENT, TREATMENT & TRANSPORT SHOW

EDUCATION DAY: Feb. 17, 2016  
EXHIBITS OPEN: Feb. 18 - 20, 2016

Indiana Convention Center  
[WWW.WWETTSHOW.COM](http://WWW.WWETTSHOW.COM)

## XTremely Fast & Easy PACP Surveys

**MUNIXS**  
PACP SURVEY SOFTWARE

This Xtremely simple and affordable solution is an excellent choice for those new to pipe survey reporting and data collection.

Create data CDs and DVDs within the program to share your movies, pictures and reports without any installation of third party program.

A built-in wizard to guide the user through the required fields and survey process to eliminate the guesswork.



Call Today for a Free Online Demo or More Info **866.299.3150** | [www.munixs.com](http://www.munixs.com)





Introducing the newest weapon  
in the war on roots.



## **THIS CHANGES EVERYTHING.**

Once again, RootX® has changed the game of root control. Introducing the FDU 300 applicator— better in every way and engineered to make applying RootX® to mainlines faster, easier, and more effective than ever. It works with your existing jetter equipment, so there is no expensive equipment to buy, no costly upgrades, and no waiting to get on a contractor's schedule.

Within a month after applying RootX®, roots are dead and decaying — keeping your lines flowing for up to 36 months. Guaranteed.\*

**Now, more than ever, RootX® is the Right Solution. Right Now.**

**To find out how you can put the FDU 300 into your root control arsenal, visit [www.RootX.com](http://www.RootX.com), or talk to your RootX® representative at 1-800-844-4974.**



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



\*visit [www.rootx.com/municipalities/guarantee](http://www.rootx.com/municipalities/guarantee) for details.

**A**

A.R. North America, Inc. ....70

Advanced Infrastructure Technologies .....12

**ALLAN J. COLEMAN**  
SINCE 1905

Allan J. Coleman Co. .... 13, 43

**AMAZING MACHINERY**

Amazing Machinery, Inc. ....37

**ARIES INDUSTRIES, INC.**

Aries Industries, Inc. ....25

**B**

BODUS GmbH .....18

**C**

Cable Center, The ..... 56, 69

**CAM SPRAY**

Cam Spray .....33

**CENTRAL OKLAHOMA WINNELSON**

Central Oklahoma Winnelson .....48

**Root Rat**

Chempure Products Corp. ....77

**CIPP SERVICES, INC.**

CIPP Services, LLC .....81

Cloverleaf Tool Co. ....48

**COAST MANUFACTURING**

Coast Manufacturing .....28

**CUES**

CUES .....29

**D**

**DRAINABLES DIRECT**

Drainables Direct .....30

**DURACABLE**  
Manufacturing Company

Duracable Manufacturing Co. ....61

DynaLiner LLC .....67

**E**

**Electric Eel**

Electric Eel Mfg. ....52

**Envirosight**

Envirosight, LLC .....5

**enz usa inc.**

Enz USA, Inc. ....36

**F**

**Solutions**

F. S. Solutions .....36

Forbest Products Co. ....46

**G**

**GapVax**

GapVax, Inc. ....83

**General PIPE CLEANERS**

General Pipe Cleaners .....2

**GORLITZ SEWER & DRAIN, INC.**

Gorlitz Sewer & Drain, Inc. ....47

**GUZZLER**

Guzzler Manufacturing .....11

**H**

**HammerHead**

HammerHead Trenchless Equipment .....35

**Hi-Vac Corporation**

Hi-Vac Corporation .....49

**J**

**Jetstream**

Jetstream of Houston .....31

**K**

**Ken-Way Corporation**

Ken-Way Corporation .....77

**L**

**Lansas Products**

Lansas Products ..... 33, 40-41

LaPlace Equipment Co. ....56

**M**

**MRP**

Milwaukee Rubber Products, Inc. ....8

**MyTana**

MyTana Mfg. Company, Inc. ....75

**N**

**NLB Corp.**

NLB Corp. .... 19, 46

**NozzTeq**

NozzTeq, Inc. ....51

**O**

**OceanQuip LLC**

Oceanquip Cables, LLC .....18

Olvidium, Inc. ....33

**P**

**PERMA-LINER INDUSTRIES, LLC**

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

Petersen Products Co. ....56

Petrofield Industries .....57

**PICOTE SOLUTIONS**

Picote Solutions. ....60

**Pipeline Analytics**

Pipeline Analytics .....60

Pipeline Renewal Technologies .....71

**PIPELOGIX**

PipeLogix, Inc. ....8

**PRIMELINE PRODUCTS, INC.**

PrimeLine Products, Inc. ....27

**Pulsar 2000 Line Tracer**

Pulsar 2000, Inc. ....30

**Q**

Quik-Lining Systems, Inc. ....28

**R**

**RapidView IBAK North America**

RapidView IBAK North America .....59

**Ratech Electronics, Ltd.**

Ratech Electronics, Ltd. ....17

**RootX**

RootX .....9

**RS Technical Services, Inc.**

RS Technical Services, Inc. ....23

RYCOM Instruments, Inc. ....18

**S**

**Safety Sewer Drain**

Safety Sewer Drain .....51

**Scooter Video**

Scooter Video .....55

Sewer Equipment Co. of Nevada .....14

**SOUTHLAND TOOL MFG. INC.**

Southland Tool Mfg., Inc. ....53

**SPARTAN TOOL, LLC**

Spartan Tool, LLC .....84

**STONEAGE**

StoneAge, Inc. ....4

**T**

**T&T TOOLS, INC.**

T&T Tools, Inc. ....28

**TRIC TOOLS, INC.**

TRIC Tools, Inc. ....14

**TRYTEK**

TRY TEK Machine Works, Inc. ....58

TST Sweden AB .....57

**U**

**UltraShore PRODUCTS**

Ultra Shore .....14

**V**

**VAC-CON**

Vac-Con, Inc. ....3

**VACALL**

Vacall-Graddall Industries .....15

**VARCO**

VARCO .....52

**VIVAX METROTECH**

Vivax-Metrotech Corp. ....34

VSI Rentals .....45

**W**

**Water Cannon**

Water Cannon, Inc. - MWBE .....82

Westmoor Ltd. ....34

**Marketplace** ..... 76

**Classifieds** ..... 78

E-ZINE • E-ZINE • E-ZINE

Have you seen the **Cleaner E-Zine?**



Go to **cleaner.com** to view the e-zine.

E-ZINE • E-ZINE • E-ZINE

**Cleaner** It's FREE! Subscribe online at [www.cleaner.com](http://www.cleaner.com)



# Your Guzzler comes with a pit crew



Guzzler is a registered trademark of Guzzler Manufacturing.  
©2015 All Rights Reserved.

When you buy a Guzzler®, you get more than the toughest, most reliable industrial vacuum truck in the business. You also get the full backing of the Guzzler team – for parts and service, round-the-clock support, training, consulting and industry expertise. Think of us as the pit crew dedicated to taking care of you and your truck. We can even help you expand your business by exploring new markets and applications for your Guzzler truck. With your Guzzler pit crew, the competition can eat your dust.

**For a demo or to meet your Guzzler pit crew,  
call 800-627-3171 or visit [www.guzzler.com/pitcrew](http://www.guzzler.com/pitcrew).**

*Guzzler products are serviced and supported by FS Solutions<sup>SM</sup>*



Luke Laggis  
editor@cleaner.com

# Thanks For Being Part of Something Great

The 2015 WWETT Show brought the industry's best people, education and equipment together, along with a huge party and a free truck

By Luke Laggis

I hope you were able to attend this year's Water & Wastewater Equipment, Treatment & Transport Show. If you didn't, you missed a great opportunity.

This year's show drew one of the largest crowds in the show's history. Attendance was up 10.4 percent over last year to 9,474, and the number of exhibiting companies was up 12.9 percent to 597, an all-time record.

But it wasn't just one of the biggest shows we've ever put on; it was also the best, starting with Education Day. Attendance was up and classrooms were standing room only for some sessions. The *Nozzles, Nozzles, Nozzles* class, taught by Duane Johnson of Affordable Pipeline Services, was jam-packed Monday afternoon. People were holding the doors open and listening from outside.

The attention paid to that class, and a conversation I had with one of

the other presenters, brought home an important point: No matter how much technology advances and no matter how savvy some industry veterans become through their years of experience, there are still new things to learn about some of the most basic services you provide, and there is a constant influx of new people who are seeking this knowledge in order to do their jobs effectively and progress within the industry.

In a more general sense, it also reinforced something I've said before in this space: It's the overall education — the networking, connections, classes and conversations — that make the show so valuable. As one exhibitor told me, this is the event. Everything and everyone is here, and if you want to grow in this industry you need to be here.

New equipment can help you do your job more effectively and efficiently, but you can't learn anything from a cable machine. That's not to say the displays of tools, trucks and equipment aren't an impressive and valuable part of the show — they are the show — but it's the people you meet, the conversations, the advice and the knowledge in that building that can transform your business. And it's difficult to walk out of the Indiana Convention Center when it's over without feeling like you're part of something important, progressive and respected.

In recent years, the show has also taken on a more international feel, with exhibitors from 14 countries and attendees from 52, including every continent except Antarctica. And while there's more for pumpers and cleaners than ever, there are also more classes and exhibitors geared toward the municipal market. The name change is a reflection of that, and it opens up the show to more people, more technology and more ideas, all of which benefit you.

The name change also marked our 35th anniversary, and all attendees and exhibitors were entered for a chance to win a tricked-out Chevy truck to help commemorate the event. Max Silva of Warren Environmental was the lucky winner. Silva opted for \$35,000 cash instead of the truck so he could pay off his student loans, which was fitting in many ways since education is such a huge component of what we do.

The 2015 WWETT Show is certainly one Silva and many others will never forget. If you weren't able to attend, now is the time to put next year's show on your calendar. And be aware we're shifting the days so it'll be easier for all you business owners to attend.

The 2016 WWETT Show will be held Wednesday, Feb. 17 through Saturday, Feb. 20 at the Indiana Convention Center in Indianapolis. We plan to make it even better, with more of everything you need to make your business or utility stronger.

It was a pleasure meeting so many of you in Indy, and I hope even more of you will be able to make it next year.

Enjoy this month's issue. **c**

**Advanced**  
Work Horse Nozzles

Is Actively Seeking Dealers In Prime Geographies

Contact us

Featuring the industry leading Near Diamond Hard (NDH™) Conical Ceramic Jets

**Advanced Infrastructure Technologies, LLC**  
Toll Free: **1-844-NOZZLES**  
(1-844-669-9537)  
**www.advancedworld.com**  
Interested Dealers please contact [JP@AdvancedWorld.com](mailto:JP@AdvancedWorld.com)

Advanced Workhorse Nozzles are manufactured in Germany and the USA

Protected Geography Policy · Aggressive Demo Promotions · Personalized Catalogs

# 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 100 YEARS OLD

### 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



### NaviTrack® Scout®

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



### SeeSnake® Mini Camera Reel

- 1 1/2" to 6" Lines up to 200'
- New Self-Leveling Camera Head
- Built-In 512 Hz Sonde
- Metal Frame and Rugged Drum

### SeekTech® SR-20

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



### CS65 Digital Reporting Monitor

- One touch recording
- 1 TB internal hard drive
- 6.5" Daylight viewable LCD display
- Water-resistant keyboard
- SeeSnake HQ Software



### SeeSnake® CS6 Digital Recording Monitor

- 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



### SeeSnake® MAX rM200 Camera System

- Next Generation Push Cable and Improved Reel Mechanics
- Ultra Compact Camera Head
- Transport Enhancements
- Docking System
- Self-Leveling Camera Head



# RIDGID®

**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!**

# Pipebursting saves time, money, trees, roads, driveways, lawns, gardens, steps, sidewalks, & more.

Oh, yes, and it's also quite profitable.

What you see here is trenchless replacement of a home sewer lateral using the TRIC X30, made by the company that introduced lateral bursting to the utilities industry. Now municipalities all over America are making lateral replacement a priority, and most of these replacements are done by pipebursting. If any of this sounds close to home for you, call us at TRIC to learn more.



**TRIC**

888.883.8742

www.trictools.com

made in the **USA** Sewer Equipment Company of Nevada

Complete Parts & Service

- AMERICAN MADE
- Fast Shipping
- Call Us For A Quote

**(702) 527-5100**

Sewer Camera & Locators  
Packages Starting at \$2,199  
3 Year Warranty

Gas Engine Portable Jetters  
Prices Starting at \$2,699

Mainline & Mini Cameras  
Prices Starting at \$1,399  
3 Year Warranty

Electric Mini Jetters  
Prices Starting at \$1,199

Live Tech Support • Parts & Accessories  
Available For All Equipment  
www.sewerequipmentcompanyofnevada.net

**WE REPAIR ALL BRANDS OF SEWER CAMERAS**

*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!**



1-800-683-8837

**1-800-SHORING**

CALL TOLL-FREE NATIONWIDE • 1-800-746-7464

**www.shoring.com**



# THE VACALL *AllExcavate* COMPETITIVE **EDGE**

Vacall AllExcavate hydro excavators feature superior water pressure and vacuum forces to efficiently excavate around water lines, sewer lines and other underground utilities. The AllExcavate hydro excavator uses a single chassis engine to also provide power for vacuum and jetting functions – a design that slashes fuel consumption, reduces emissions and lowers cost.

Does your hydro excavator have...

- ▶ Standard CAN bus Smart Controls
- ▶ Lifetime warranty on debris body
- ▶ Lifetime warranty on aluminum water tank
- ▶ Cold-Weather heated cabinetry
- ▶ Durable powder coating paint

LEARN MORE AND REQUEST A DEMO  
[VACALL.COM / ALLEXCAVATE](http://VACALL.COM / ALLEXCAVATE)  
800-382-8302



VACALL GRADALL



HGACBuy



# @Cleaner.com

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



## GREASE TRAP EMERGENCY!

When 3-year-old Wyatt Scharenbroch stumbled into a restaurant grease pit recently in Grand Chute, Wisconsin, his parents were shocked, scared, and thankful he survived. While prevention is the key, having restaurant clients establish a regular maintenance and cleaning schedule is equally important and can help owners avoid additional problems.

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

### INSIDE LOOK

## Underneath Arlington National Cemetery

Replacing pipelines underneath a national landmark that sees 11,000 visitors per day is no easy task. Find out how Murphy Pipeline crews were able to replace nearly 39,000 feet of water lines at Arlington National Cemetery with minimal disruption to the park's visitors or its pristine grounds.

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



### OVERHEARD ONLINE

“When I bring this equipment to a job, that means they have a problem.

I'm the guy they call on a Sunday night, and I have to get halfway across the state of Florida to take care of an emergency — That's the business that I've built.”

— 7,000th Vac-Con Unit Comes to WWETT Show  
>>[cleaner.com/featured](http://cleaner.com/featured)



### 2015 WWETT SHOW

## By the Numbers ...

This year marked the 35th anniversary of the Water & Wastewater Equipment, Treatment & Transport Show. By all accounts, it was among the most successful shows yet, and we have the numbers to prove it. From record Indy attendance to the number of beer kegs consumed, here's a look at the highlights from this year's WWETT Show. >>[cleaner.com/featured](http://cleaner.com/featured)

## Emails and Alerts



Visit [Cleaner.com](http://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



Find us on Facebook at [facebook.com/CleanerMag](https://facebook.com/CleanerMag)  
or  
Twitter at [twitter.com/CleanerMagazine](https://twitter.com/CleanerMagazine)



# PUTTING INNOVATION WHERE IT BELONGS - IN THE PALM OF YOUR HAND.

**Ratech now adds a wi-fi interface to its arsenal of innovation.**

Always at the forefront in the development, manufacturing and servicing of CCTV systems and equipment, Ratech adds to the growing list of ways you can view and record CCTV video pipeline inspections with their NEW wi-fi interface. Safe, secure, and delivering on the promise of quality and durability industry professionals have demanded from Ratech for over three decades.



Elite SD or USB



Mini Crawler with Pan n' Tilt



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



# Ratech

## ELECTRONICS

Video Pipeline Inspection Systems

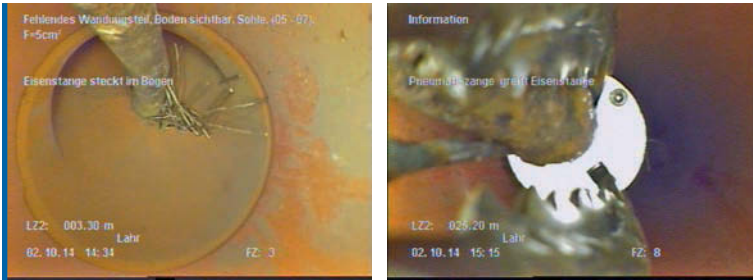
For more information on these or other products call toll free: 1-800-461-9200 or 905-660-7072  
[www.ratech-electronics.com](http://www.ratech-electronics.com)

Upload your inspection videos to **YouTube** Ask us HOW?



 Follow us on Twitter @RatechCam

**bodus' pneumatic GRIPPER –**  
*the only one that grabs*  
*everything out of the sewer*



In early October one of our customers was called for help: the basement wall of a private house in Germany was soaked for no apparent reason. After a thorough camera inspection they found an iron rod in a 4" rainwater pipe in about 9' to 11' depth. This iron rod perforated a 90°-bend of a rain downpipe and another 0.16' of that iron rod was stuck in the ground. Since there were no other access options nor excavation or trenches have been possible, they needed another solution.

Fortunately, the customer had **bodus gmbh's pneumatic gripper** on tap. With this gripper and the special shark teeth pliers the iron rod could have been grabbed and pulled out of the downpipe.

Thanks to this fast and efficient problem solving the customer pulled off the renovation of the damaged pipe with an extremely flexible inliner as a follow-up order.



0049 176 2033 8571  
**www.bodus.ch**

**Get Plugged In**

AFTERMARKET CONNECTORS • CABLES



*ALL* cables and connectors are individually inspected and tested before shipment.

REASONABLE PRICES

Seacon/  
Turck



504 738 7833 p/f • jfowler307@aol.com  
**www.OceanquipLLC.com**

**SONDE**



- Exceptional penetration with a 25 to 30 foot range
- Length: 3.7"  
Diameter: 0.85"
- Available in 512Hz, 640Hz, 8kHz or 33kHz
- Rugged design in an impact resistant compound
- Rounded heads and tails prevent hang-ups
- Operates on 1 AAA
- Made in the U.S.A.
- Low price of \$250.00



800-851-7347  
**www.rycominstruments.com**

**UltraGreen™ from NLB**

# ***Introducing the cleanest water jet power you can buy (or rent)***



**UltraGreen™**

## **EPA compliance and lower operating costs**

Talk about a win-win: new UltraGreen™ water jet pump units from NLB cut emissions to near-zero, and typical users can **save over \$12,000 a year**.

UltraGreen units have Tier 4-compliant engines that meet the new EPA standards, reducing NOx and particulate matter by 90% or more. And since they use far less fuel, your operating costs are also dramatically lower.

Tier 4 certification isn't required everywhere yet, but

it will be. Get out in front with an UltraGreen water jet unit, available for sale or rent at all six NLB regional branches. Ask about our trade-in programs for older NLB units, too.

NLB already has over 350 low-emission units in the field, reducing costs while enhancing our environment. Give your business a competitive edge — call 800-441-5059 today.

 **NLB Corp.** *The Leader in Water Jet Productivity*

29830 Beck Road, Wixom, MI 48393  
MI: (248) 624-5555, IN: (219) 662-6800, NJ: (856) 423-2211,  
LA: (225) 622-1666, TX: (281) 471-7761, CA: (562) 490-3277  
[www.nlbcorp.com](http://www.nlbcorp.com) • e-mail: [nlbmkgtg@nlbusa.com](mailto:nlbmkgtg@nlbusa.com)



COVER STORY

# OPEN TO OPPORTUNITY

BROTHERS BUILD BUSINESS WITH QUALITY WORK, CAREFUL INVESTMENT AND A FOCUS ON THE GROWING MUNICIPAL MARKET

BY KEN WYSOCKY | PHOTOGRAPHY BY KEVIN EILBECK





A-1 Sewer and Drain technicians Christian Lewis (left) and Duane Rosekrans set up to clean a sewer line with a Vac-Con jetting truck.

# IT'S OFTEN SAID THAT IT'S NOT ALWAYS HOW YOU START THAT COUNTS, **BUT HOW YOU FINISH.**

A good example is A-1 Sewer and Drain in Rapid City, South Dakota, which by any measure started out small in 2000. That's when Jason Franke started the venture with just a small cable machine, an old jetting truck once owned by the City of Los Angeles and a used Ford pumper truck for cleaning septic tanks.

But the company steadily grew by recognizing emerging markets for other services — especially sewer cleaning and inspections, along with trenchless pipe relining

— then capitalizing on those opportunities by making careful investments in equipment.

Today, the company — now owned by Jason, 36, along with his younger brother, Josh, 34 — is a fully diversified business, offering services that include commercial and municipal pipeline cleaning and inspections and septic tank cleaning, along with trenchless pipeline rehabilitation. The company also recently built a 9,600-square-foot shop and runs a large fleet of equipment that represents about a \$1.5 million investment, including three combination jet/vac trucks, a jetter truck, camera truck, two septic pumping trucks and a pipe relining system.

The firm now employs 13 people and services a wide geographic area that includes all of South Dakota and parts of Nebraska, North Dakota and Wyoming. About 90 percent of the company's sales stem from municipal projects with the remainder coming mostly from cleaning septic tanks — quite a switch from the firm's early days, when septic tank services dominated.

The Frankes' success story underscores the importance of embracing change and taking calculated risks to enter new markets, while at the same time being financially conservative and not growing so fast that things spin out of control.

"We experienced pretty steady growth in all aspects of our business," Jason says, referring to the company's early years. "Everything kept expanding. We hired more people and replaced equipment as needed. We were where we wanted to be profit-wise. We saw what happens when companies grow too fast. We've seen too many businesses go under by expanding too fast — hiring too many employees at once or buying too much new equipment.

## profile

### **A-1 SEWER AND DRAIN INC., RAPID CITY, SOUTH DAKOTA**



- OWNERS:** Josh and Jason Franke
- FOUNDED:** 2000
- EMPLOYEES:** 13
- SPECIALTIES:** Cleaning and inspecting commercial and municipal pipelines, trenchless pipe relining and septic tank pumping
- SERVICE AREA:** South Dakota and parts of Nebraska, North Dakota and Wyoming
- WEBSITE:** [www.a1-seweranddrain.com](http://www.a1-seweranddrain.com)
- ASSOCIATIONS:** National Association of Sewer Service Companies (NASSCO)



A-1 Sewer and Drain project manager Zac Hansen (left) and assistant Jeff Warrior prepare to lower a CUES OZII camera into a manhole for an annual assessment of an 8-inch collection line.

“We always looked at what we owed on trucks and equipment and never took too large a leap,” he continues. “If we wanted a new vac truck but could only afford a refurbished unit, we went with the refurbished truck. We never took too large a risk.”

### **NEW EQUIPMENT KEYS GROWTH**

Investments in new equipment were critical to the company’s success. In 2004, with growth somewhat stymied by an already competitive market for cleaning septic tanks, Jason noticed more and more requests for sewer cleaning and inspections.

“We were seeing a lot of demand for roadwork — cleaning out culverts and storm sewers — and the closest contractor with a combination vacuum truck was 360 miles away,” recalls Josh, who joined the company in October 2001. “Development was really booming, so a lot of roads were being built. And cities and towns were pushing to get existing infrastructure cleaned and inspected.”

Intrigued, Jason and his late father, Jack, who ran a plumbing outfit where Jason worked before striking out on his own, attended the Pumper & Cleaner Environmental Expo. That’s where they decided to invest in a factory refurbished Vac-Con truck.

“The show opened their eyes to all kinds of different things — trucks, tools and jetter heads — equipment with a lot of potential,” Josh recalls. Unfortunately, the truck was heavily damaged in an accident on the way to Rapid City, so Jason ended up buying another refurbished Vac-Con once used by the City of Chicago.

“At \$140,000, it was a big investment — we financed it, with some help from Vac-Con,” Josh continues. “But right after it was delivered, Jason scored a contract to clean 25 miles of sewer lines.”

### **PIPE RELINING PROVIDES A PROFIT CENTER**

After a little more than 10 years in business, the brothers felt comfortable about the company’s status. Business volume was growing steadily and the company was profitable.

Yet both had the feeling that with the right opportunity, they could take things to another level. And because

A-1 Sewer and Drain project manager Zac Hansen keeps an eye on the CUES monitor while inspecting an 8-inch sanitary sewer line. The inspection system utilizes Granite XP data collection software.



the market for cleaning and televising sewers was getting more saturated, it was unrealistic to expect exponential growth from expanding those services.

In the timing-is-everything department, that's when the brothers noticed that more and more financially strapped municipal agencies were putting out bids for lucrative trenchless pipe relining projects, attracted by substantially lower costs compared to open trench pipe replacement and repairs. "We were astonished to find what these entities were spending on relining," Jason says.

**"We still see open trench projects where a street might be closed for a month. But in one day, we can shoot three blocks of sewer line with a new liner, cook it, cool it, then reinstate the laterals. It really saves a lot of money for towns that are having trouble budgeting for any kind of repairs."**

Josh Franke

Realizing that demand for such service would only increase due to aging sewer systems, they began looking at various pipe relining systems. After a false start with one manufacturer, the brothers last year invested about \$500,000 in a cured-in-place pipe system from CIPP Services.

From a business standpoint, the results have been as astonishing: an increase in sales of more than 100 percent from 2013 to 2014.

"The equipment we purchased from CIPP Services enables us to be more efficient and gives us the ability to install any size liner, from 6-inch-diameter to 72-inch-diameter lines," Josh explains. "The CIPP equipment helps us double our production, which in the end doubles our profit."

A 2000 Mack box truck carries the system's essential components: a 150 hp steam generator made by Clayton Industries; a boiler that heats water to 180 degrees; a Multiquip generator; and a 1,000 cfm diesel air compressor made by Atlas Copco CMT. The company also purchased a 2006 Freightliner Classic XL that pulls a 53-foot reefer trailer made by Carrier Corp. The trailer carries wet liners to job sites from an Illinois wet-out facility owned by Fast Pipe Lining, a sister company of CIPP Services.

## go ahead... take a QUICKPeek

NEW  
product

### PORTABLE POWERFUL PUSH CAMERA

- ✓ inspect 2" -10" diameter lines up to 300' in length
- ✓ high resolution, low lux self-levelling color camera
- ✓ fully locatable with 512Hz in-line transmitter
- ✓ 7" LCD monitor with protective sunshield
- ✓ AC/DC input
- ✓ keyboard for annotation
- ✓ video/audio I/O
- ✓ microphone
- ✓ battery power option



**Want a field demo or more info on the QUICKPeek System? Call or visit us online today.**

**RS** Technical Services Inc.  
Design and Manufacture of Video Pipeline Inspection Systems

1800.767.1974

@www.rstechserv.com



SMALL DIAMETER PIPE INSPECTION





## A-1 PURCHASES EQUIPMENT STRATEGICALLY

After a little more than 10 years in business, brothers Jason and Josh Franke — the owners of A-1 Sewer and Drain Inc. in Rapid City, South Dakota — felt comfortable about the company's status. Business volume was growing steadily and the company was profitable.

In 2005, A-1 Sewer purchased a Vac-Con jetter truck built on a 2005 Sterling Acterra chassis with a 1,600-gallon water tank and a pump made by FMC Technologies (50 gpm at 3,000 psi). Once again, the timing was opportune: At the time, few contractors in the area owned large, high-pressure water jetters, and it was more cost-effective for municipalities to hire companies to perform preventive maintenance work on sewer lines than buy their own equipment, Jason points out. Those factors pointed to one thing: another business opportunity.

"A lot of our early growth came through doing preventive maintenance work for municipalities," he says. "When you see an opportunity, you have to go for it."

The company's fleet of equipment has grown considerably since the early days. Its inventory now includes:

- Two Vac-Con combination trucks: one built on a 1996 Ford L8000 and the other on a 2001 Sterling chassis. Both feature a 12-cubic-yard debris body, a 1,300-gallon water tank, a three-stage Vac-Con blower (8,000 cfm) and an FMC water pump (one rated at 50 gpm/3,000 psi and the other at 80 gpm/2,000 psi).
- A Vactor combination truck built on a 2001 Freightliner chassis with a 12-cubic-yard debris body, a 1,200-gallon water tank, a two-stage blower (4,500 cfm) and a piston water pump (80 gpm at 2,000 psi), both made by Vactor.
- A camera truck built by CUES on a 2008 Chevrolet panel van and equipped with two OZII optical-zoom, pan/tilt pipeline cameras with Ultra Shorty crawler transporters.
- Two pumper trucks used for septic tank cleaning: a 2002 Peterbilt with a 3,500-gallon steel tank built by Transway Systems with a 400 cfm Masport pump, and a 2001 Mack truck with a 5,000-gallon steel tank built by House of Imports and a 550 cfm pump made by Jurup/Chandler.
- Three TRY TEK Machine Works lateral reinstatement cutters carried in a trailer pulled by a 2009 Chevrolet 1-ton pickup truck.
- A CUES ProData 2000 camera carried in a trailer pulled by a 2009 Chevrolet 1-ton pickup truck.
- A Yamaha Rhino all-terrain vehicle used to carry tools on job sites where larger vehicles can't gain access.
- Manhole rehabilitation products made by Parson Environmental Products.

The staff at A-1 Sewer and Drain in Rapid City, South Dakota, includes (from left) Shannon Franke, Jonah Vincent, Jeff Warrior, Albert Lewis, Dalonda Franke, Jason Franke, Christian Lewis, Joshua Franke, Josh Hansen, Zac Hansen and Duane Rosekrans.

In simple terms, the CIPP Services system uses compressed air to install a resin-impregnated pipe liner, which is then cured with steam. After it hardens, which takes about two hours, crews reinstate lateral lines. Then the pipe is good for another 50 or more years, Jason says.

"We use a design software from CIPP Services that calculates how thick the liner needs to be," Josh explains. "We can rehabilitate pipes for 50-plus years for 70 to 80 percent cheaper than open trench techniques — plus we don't have to tear up streets or utilities.

"We still see open trench projects where a street might be closed for a month," he continues. "But in one day, we can shoot three blocks of sewer line with a new liner, cook it, cool it, then reinstate the laterals. It really saves a lot of money for towns that are having trouble budgeting for any kind of repairs."

CONTINUED >>



S I M P L E

C O N T R O L L E D

R E L I A B L E

# LIGHTING THE WAY.

INTRODUCING  
**ANACONDA**  
UV CURING SYSTEM

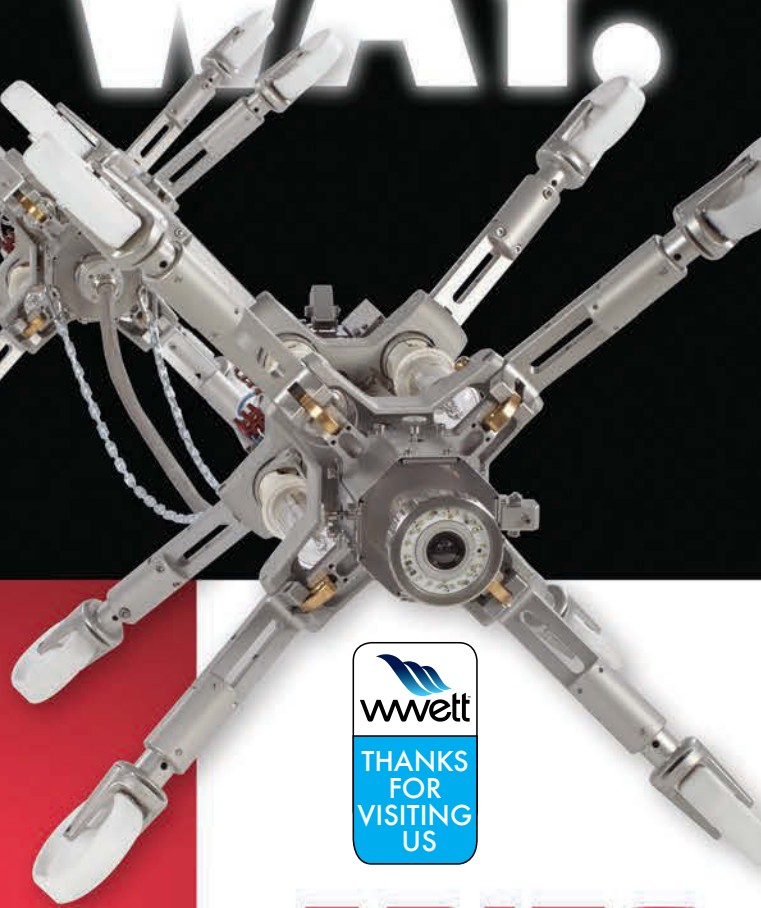
The Anaconda UV Curing System from Aries Industries lights the way to fast set-up and installation. You get uniform curing with one-third less time than steam-cured processes.

Controlled UV light train speed ensures consistent lining installation. CCTV video inspection of the liner before and during the cure allows any sags and wrinkles to be corrected.

With no need to invert the liner, UV curing requires less equipment and smaller crews. No hot water usage eliminates the steam truck for less fuel consumption. With no cooling time, lateral reinstatement can start immediately.

The Anaconda provides an enlightened solution to sewer renewal and profitability. Contact Aries today to learn more.

© Aries Industries, Inc. 2015



**ARIES**  
INDUSTRIES, INC.

See what you're missing.

[www.ariesindustries.com](http://www.ariesindustries.com)  
(800) 234-7205





**ABOVE:** A-1 Sewer and Drain's Duane Rosekrans (left) and Christian Lewis feed an 8-inch liner into a custom-built CIPP Services continuous inverter on a sewer lining project.

**>>RIGHT:** Rosekrans operates the controls and keeps a close eye on the hose reel while cleaning a sewer line.

Josh points out that contractors need to do their homework and make sure there's a market for relining services before investing in the equipment. "We clean and televise anywhere from 250 to 300 miles of sewer lines per year around here, so we know the state of the local infrastructure," he says. "The relining equipment represents the largest investment we've ever made. But our first job, which involved relining an 8-inch-diameter sewer pipe that ran under a school, paid for all of it."

### **HARD WORK PAYS OFF**

Getting to where the Frankes are today wasn't easy, the brothers note. It required a lot of hard work and persistence, especially during tougher times.

"At times, trying to keep up with demand was a struggle," Josh says. "But we kept taking on work and upgrading our equipment. Just that one purchase of the first Vac-Con combo truck enabled us to do so much more work in a day. But for a long time it seemed like we were just trading in money for more equipment.

"As we got more experienced, we made sure we had enough contracts in place — enough work — to pay for the equipment before we purchased it," he adds. "Business can definitely be a gamble, but you can make it a calculated gamble."



“As we got more experienced, we made sure we had enough contracts in place – enough work – to pay for the equipment before we purchased it. Business can definitely be a gamble, but you can make it a calculated gamble.”

Josh Franke

Being a family-owned-and-operated business gives the company a competitive advantage, Jason says. The employees are a close-knit group and the business is small enough for the brothers to easily keep tabs on what's going on in the office and out in the field. Providing top-notch customer service is also key, he notes.

“We never leave a job half done,” he says. “If it ends up costing us more money to do a job right, we'll do it so that we still have a loyal customer at the end of the project. One of biggest things that helped us grow is the quality of our work.”

## more info

**Atlas Copco CMT**  
800/732-6762  
www.atlascopco.us

**Chevrolet**  
www.chevrolet.com

**CIPP Services, LLC**  
815/712-8708  
www.cipp-services.com  
(See ad page 81)

**Clayton Industries**  
630/588-8482  
www.claytonindustries.com

**Crete Carrier Corporation**  
800/998-4095  
www.cretecarrier.com

**CUES**  
800/327-7791  
www.cuesinc.com  
(See ad page 29)

**Fast Pipe Lining, Inc.**  
815/712-8708  
www.fastpipelining.com

**FMC Technologies, Inc.**  
281/591-4000  
www.fmctechnologies.com/fluidcontrol

**Ford Commercial Vehicles**  
313/322-3000  
www.ford.com/trucks

**Freightliner Trucks -  
A Div. of Daimler Trucks NA**  
800/385-4357  
www.freightlinertrucks.com

**House of Imports**  
305/691-4778  
www.vacuumtruckusa.com

**Jurop/Chandler**  
800/342-0887  
www.chandlerequipment.com

**Mack Trucks, Inc**  
610/709-2623  
www.macktrucks.com

**Masport, Inc.**  
800/228-4510  
www.masportpump.com

**Multiquip, Inc.**  
800/421-1244  
www.multiquip.com

**Parson Environmental Products, Inc.**  
800/356-9023  
www.parsonenvironmental.com

**Peterbilt Trucks**  
800/473-8372  
www.peterbilt.com

**Sterling Truck Corporation**  
www.sterlingtrucks.com

**Transway Systems Inc.**  
800/263-4508  
www.transwaysystems.com

**TRY TEK Machine Works, Inc.**  
717/428-1477  
www.trytek.com  
(See ad page 58)

**Vac-Con, Inc.**  
855/336-2962  
www.vac-con.com  
(See ad page 3)

**Vactor Manufacturing**  
800/627-3171  
www.vactor.com

**Yamaha Motor Company**  
www.yamahamotorsports.com



# One Stop Shopping for Your Trenchless Needs!

## 24/7 Support / Free Training



- Cured in Place Pipe**
- Quik Shot 3"-8" Lateral Lining
  - Try Tek CWP 6"-18" Mainline Lining
  - Ambient, Hot Water or Steam Cure Available
  - Epoxy, Silicate, or Polyester Resins



- Try Tek Robotic Cutters**
- Trydent 80 Cutter 3-6" Lines
  - Legacy Cutter 6-15"



- NozzTeq Sewer Cleaning Nozzles & Root Cutters**
- Lumberjack
  - Predator Series



### PrimeLiner Sectional Lining Equipment & Supplies

- Materials sold in Bulk
- Pipe Repair Kits available



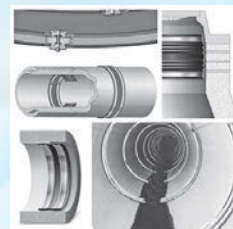
### Cherne PipeLine Plugs & Testing Equipment

- Test Balls/Muni-Balls
- Air Testing
- Smoke Testing



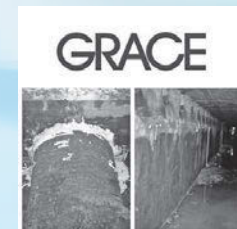
### Epoxytec Manhole/Wetwell Rehabilitation

- DIY Products
- CPP
- Uroflex



### Trelleborg/NPC Pipe Seals

- Internal Joint Seals
- External Joint Seals
- Liner End Seals
- Chimney Seals



### DeNeef Chemical Grouting

- Mainline Grouting
- Sealing underground Structures
- Wellpoint Grouting



**www.PrimeLineProducts.com**  
877-409-7888 407-772-8131



# T&T Tools, Inc.

Fax: 800.521.3260

Email: sales@mightyprobe.com

# 800.521.6893

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



Call for a FREE Catalog

Call for a FREE Catalog



### HOOKS...

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

### PROBES...

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

# Quik-Shot

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

## CIPP AUTOMATION

Simplifying the lateral sewer line rehabilitation process through patented automation.



- » Reduce Material Costs
- » Reduce Labor Costs
- » Simple to Set Up
- » Simple to Operate
- » No extra material handling found in other processes
- » No need to pass on longer line rehabilitation
- » No sleepless nights worrying about failure



### CALL TODAY

for the nearest training and support outlet facility to get you up and running.

### Quik-Lining Systems

714-296-5262  
[www.quiklining.com](http://www.quiklining.com)

# COAST MANUFACTURING

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](http://www.coastmanufacturing.com)  
1.800.541.7015

# INSPECT WHERE THE OTHERS CANNOT GO

## LAMP II

Lateral & Mainline Probe II  
with Lateral Pan & Tilt Camera

PAN & TILT INSPECTION OF ALL LATERAL  
CONNECTIONS, WITH OR AGAINST THE FLOW!  
SIMULTANEOUS PAN, TILT & ZOOM  
INSPECTION OF MAINLINES!



Lateral Pan & Tilt Camera



THANKS  
FOR  
VISITING US

- Enter reverse wyes with the flow! Navigate through multiple “wyes”, bends, and sweeps!
- Self-leveling camera, 360 degree continuous pan and tilt capabilities
- Built-in wiper system keeps the camera lens clean
- Built-in multi-frequency sonde transmitter
- Simultaneous pan, tilt & zoom inspection of mainlines!

Contact CUES for a discussion & demonstration!

800.327.7791 • [www.cuesinc.com](http://www.cuesinc.com) • [salesinfo@cuesinc.com](mailto:salesinfo@cuesinc.com)



Launches in all laterals with or against the flow in 6" pipe and larger!

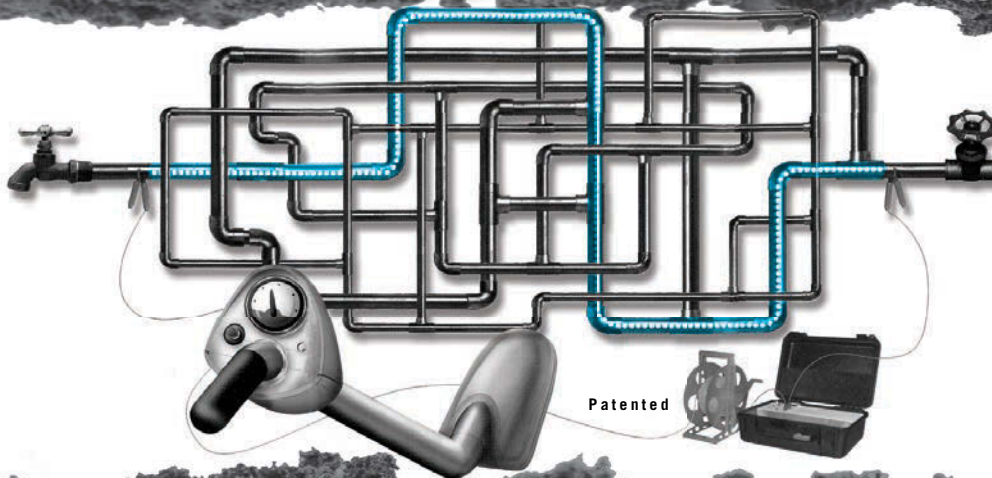
# ORDER RIDGID TODAY

- LOCATORS
- HAND TOOLS
- VIDEO INSPECTION
- DRAIN CLEANING MACHINES
- SECTIONAL CABLES & ACCESSORIES

 **DRAINCABLES**  
*direct*

**FULL LINE DISTRIBUTOR!**  
800.421.4580 • DRAINCABLES.COM

# Pulsar 2000 Line Tracer



**Locate Lines  
Locate Water Leaks  
Training Video**

*It's a jumble out there.*

***www.Pulsar2000.com***  
DISTRIBUTORS WANTED



The **Pulsar 2000** line tracer is designed primarily to locate metallic pipes. The Pulsar 2000 is a directional line tracer. Connect the Pulsar's powerful and unique transmitter to your target pipe and locate only that pipe. Locating can be accomplished under floors, in walls and in ceilings. The Pulsar 2000 does not require grounding.

**Leak detection personnel...** The Pulsar 2000 is a must have locator. Now you can quickly identify the pipe location, thereby reducing the search area of the leak.

**100% satisfaction guarantee...** We are so sure that you will see the time saving benefit of the Pulsar 2000, we will let you return it for a full refund if you are not satisfied. If

you want to learn more about the Pulsar 2000 and our leak locating equipment, please call 1-888-752-5463 or e-mail [jsmll@aol.com](mailto:jsmll@aol.com) for a free demonstration video or CD and references of satisfied customers.

We have been using the **Pulsar 2000** along with the XL2 fluid detector and Geophones since January 1989 in our leak locating business. Our leak locates are **accurate 95% of the time**, but I can honestly say, the line we trace is always there. Our equipment is user-friendly and requires very little training, as you will see on the video. Purchase the **Pulsar 2000** line tracer, XL2 fluid detector and Geophones, and start locating leaks immediately.

# Jetstream's hands-free waterblast solutions deliver improved operator safety, productivity

Provides broadest offering of hands-free cleaning solutions and training in the industry



Jetstream of Houston, LLP, a leading manufacturer of industrial high-pressure waterblasting equipment, parts and accessories, continues to invest and grow in providing industrial cleaning contractors with the most productive hands-free solutions available. By partnering with the leading manufacturers of automated tools and robotics – including Aquajet Systems, Peinemann, StoneAge and Terydon, Jetstream offers the industry's best total equipment solutions for such hands-free, high-pressure waterblasting applications as hydrodemolition, pipe cleaning, surface cleaning and preparation, tank and vessel cleaning and tube cleaning.

“These strategic partnerships enhance Jetstream's product offering and provide customers with greater access to category-leading specialty equipment and accessories that enhance operator safety and productivity and help contractors perform their jobs more profitably,” said Joe Varca, business unit director at Jetstream. “The collaboration with these well-known automation partners, combined with our nine FS Solutions authorized retail support and rental centers across the United States, enables Jetstream to better meet our customers' needs for total hands-free solutions, including the purchase and/or rental of Jetstream waterblasting equipment, parts, accessories, training and service support.”

With the goal of reducing the number of workplace fatalities and injuries related to improper use of high-pressure waterblasting and providing a safer environment for equipment operators, Jetstream is developing and delivering hands-free waterblasting solutions and training to industrial cleaning contractors. As part of the initiative, Jetstream's experts consult with customers, visiting job sites to identify the right hands-free waterblasting solutions for the location.

“Jetstream and FS Solutions can demo, sell and rent the broadest offering of hands-free cleaning solutions in the industry, including automated and robotic tools and accessories.” Varca said.

**WE'RE NOT  
QUITE HERE  
YET.**

**BUT WE'RE CLOSE.**

Though Jetstream is the industry leader, we're constantly looking for new ways to advance hands-free automated operations. We've partnered with the leading manufacturers in the industry to offer the broadest line of hands-free waterblasting solutions. We have cutting-edge automated and robotic tools as well as accessories. We also have the most experienced application experts in the business for all of your consulting and productivity solutions. Contact Jetstream or your local FS Solutions and Jetstream rental center today.

## Jetstream's Hands-free Waterblast Solutions

Jetstream manufactures high-pressure waterblasting equipment operated at pressures up to 40,000 psi for a wide range of applications, including industrial cleaning and surface preparation. Backed by strong after sales service and support, Jetstream product offerings include a complete line of skid- and trailer-mounted pump units, control guns, valves, hoses, replacement parts and nozzles.



A proud member of the Federal Signal Family.

© 2014 Federal Signal Corporation



www.waterblast.com 1.800.231.8192

# Vision Test

Drainline video inspection camera brought new revenue streams into view for South Dakota contractor

By Ken Wysocky

One of the smallest machines owned by Sewer Duck Inc., a drain cleaning operation in Aberdeen, South Dakota, also happens to be one of its most valuable assets: a RIDGID SeeSnake pipeline inspection system. In fact, owner Jeff Goldade considers it one of the better investments he's made since he bought the company from his father in 1996.

That's quite a compliment, given that Goldade owns more than \$300,000 worth of vehicles and equipment. That inventory includes 11 pieces of drain cleaning equipment made by General Pipe Cleaners (a division of General Wire Spring Co.) and a RIDGID K-7500 drain cleaner. But pound for pound, the SeeSnake — which Goldade bought about four years ago — delivers the goods, particularly in terms of boosting profitability, efficiency and customer service.

**“A video inspection provides me with great visual proof that a problem exists. And after we clean a line, we also can prove we resolved the problem. Seeing is believing ... an inspection gives customers peace of mind that I'm not feeding them a line.”**

Jeff Goldade

At a total cost of about \$10,000, the SeeSnake — which features a stainless steel color camera head and a color, high-resolution monitor — represents a significant investment. (That price includes two reels, one with 90 feet of push cable used for inspecting small waste lines, and the other with 200 feet of push cable used for examining larger-diameter lines from clean-outs to the street.) But as the sayings go, sometimes you have to spend money to make money, and you get what you pay for — two philosophies that Goldade heartily endorses.

“I know it's expensive, but without the SeeSnake, I can't do a great job or provide the service my customers deserve,” he explains. “A video inspection provides me with great visual proof that a problem exists. And after we clean a line, we also can prove we resolved the problem. Seeing is believing ... an inspection gives customers peace of mind that I'm not feeding them a line.”

The SeeSnake boosts profitability by providing Sewer Duck with an additional revenue stream. Goldade typically charges a flat fee for a video inspection on top of a drain cleaning charge. He also charges \$100 to



Sewer Duck technician Jeremy Sitter inspects a bathroom drainline with a RIDGID SeeSnake pipeline inspection system.

**money machines**

- OWNER:** Sewer Duck Inc., Aberdeen, South Dakota
- EQUIPMENT:** RIDGID SeeSnake pipeline video inspection system
- FUNCTION:** Residential and commercial drainline inspections
- FEATURES:** Color camera head and monitor, two push cable reels
- COST:** About \$10,000

perform line inspections for homeowners who want to know the condition of their sewer line; the inspection results help them determine if they need to purchase special insurance that protects them against line breaks.

In addition, Goldade says he's receiving more and more calls from engineers who want existing drainlines inspected prior to, say, remodeling projects. Or they want new drainlines examined to be sure they're installed properly; in the latter cases, the inspection also protects contractors from liability issues if problems occur later on. For that kind of work, Goldade charges by the hour.





# OBLITIROOT

Kills roots  
Prevents regrowth

www.olvidium.com  
(855) 782-4534

“Once we were asked to inspect new sewer lines installed for a major big-box retailer in town,” he recalls. “We found a collapsed line that they fixed before the store opened.”

Moreover, video inspections reduce callbacks to redo drain cleaning jobs because technicians can see if a line is completely cleaned before they leave a job site. “Most times we won’t warranty our work if the customer doesn’t agree to get the line inspected after we’re finished,” Goldade says. If a clog occurs again in a line that a customer declined to have inspected, Goldade says he’ll clean the line again — usually for free — but charge the customer for a video inspection.

In addition, Goldade says he receives a fair amount of work from plumbers who realize they can save time and money by having him use the SeeSnake in conjunction with a RIDGID sonde unit to pinpoint the exact location of a broken drainline. The camera head includes a transmitter that sends high frequency radio signals that the sonde detects. When the camera head reaches a line break, a reel counter tells the operator how far down the line the break is located, and the sonde can then determine the depth of the pipe.

“Before, a plumber would start busting out concrete at the clean-out,” Goldade explains. “Now we can pinpoint where the break is and start busting concrete at that location. And when it comes to busting out concrete in a basement, a smaller hole is much better than a large hole.”

Goldade lauds the SeeSnake for its durability and reliability while working under tough conditions. “It takes a lot of wear and tear,” he notes. The unit also offers another less tangible but equally important benefit: Its high-tech capabilities impress customers and enable Goldade to charge a premium rate for his company’s services.

“We’re the most expensive drain cleaner in our area, though not by very much,” he says. “I don’t want to be the cheapest guy and can’t afford to be, either. I have a lot of overhead costs from buying nice equipment to paying competitive salaries and benefits.”

“But more often than not, a customer is more willing to pay a higher price if they see you’re using new, advanced equipment and driving clean, well-maintained vehicles,” he adds. “Over time, customers learn their lesson — that having a job done right the first time is cheaper in the long run.” **c**

## SHOW US THE MONEY (MACHINE)

Money Machines, a feature in *Cleaner*, reports on innovative work vehicles that help contractors operate more efficiently, satisfy customers and earn more profit. We’d like to know about your Money Machine — be it a service van, camera truck, jetting rig, vacuum unit or any vehicle that really helps drive your business. To nominate your vehicle for a feature in this column, send an email to [editor@cleaner.com](mailto: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.

Working well under pressure!

## Pressure Washers and Drain Jetting Equipment

Skid and truck mount models up to 7000 psi

Portable Hot and Cold Water Diesel Powered Models

Hot and Cold Trailer Models  
Up to 7000 psi  
Flows up to 40 gpm  
Powered Reels  
Diesel powered models

THANKS FOR VISITING!

www.camspray.com 800-648-5011

We will custom build to your specifications



# Lansas®

First in Business Worldwide

## FOAM APPLICATOR



Originally designed in 1975 by Gerald J. Vanderlans for Fred Horn of A Irrigation Eng. Co., Inc. The foam applicator is an integral part of the application of herbicidal foam used for the treatment of root intrusion in sewer lines.

PATENT #3874926

**VANDERLANS & SONS, INC.**

LODI, CALIFORNIA

(800) 452-4908 • (209) 334-4115 • [www.lansas.com](http://www.lansas.com)

# Professional Grade Equipment

Ideal For Grease Trap Service



Vacuum Technology

Est. 1939

Designed, Machined & Assembled in the USA



**PRO-VAC**

**INDUSTRIAL PUMPOUT UNIT**



**ELECTRIC POWERED**



**GASOLINE POWERED**



THANKS FOR VISITING US

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

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

TEL (800) 367-0972



**VIVAX  
METROTECH**

**vCam-5**  
Inspection Camera



THANKS FOR VISITING US

- 8" Daylight Readable LCD
- Wi-fi and RS232 Interface
- Stainless Steel Construction
- Locatable Pushrod and Sonde
- Self-Leveling Color Camera Heads
- Internal Li-ion Rechargeable Battery

Training Provided Free of Charge

Please call us to schedule an on site, no obligation demonstration!

Vivax-Metrotech Corporation

3251 Olcott Street, Santa Clara  
CA 95054, USA

Toll Free: +1-800-446-3392  
Tel: +1-408-734-1400

Fax: +1-408-734-1415  
Email: sales@vxmt.com



# **TRENCHLESS** is a puzzle we solve daily

## **WE CAN FIT ALL THE PIECES TOGETHER FOR YOU.**

You could get your liner, epoxys and resins from one guy. Your wet-out table and inversion drum from someone else. Maybe another company has a pipe-inspection camera that looks like it would work, and yet another outfit has some cutters that you could use. Of course, if you need pipe-bursting equipment, you talk to a totally different guy... Or you could just let the Trenchless experts at HammerHead put it all together for you. The best products. Bonafide expertise. All from a single source that has been earning your trust for over 25 years.



**HEAD ON OVER TO [WWW.HYDRALINER.COM](http://WWW.HYDRALINER.COM) TO LEARN MORE ABOUT HAMMERHEAD'S COMPLETE TRENCHLESS LINE-UP.**

**MOLING | RAMMING | BURSTING | HDD ASSIST | WINCHES | CIPP**

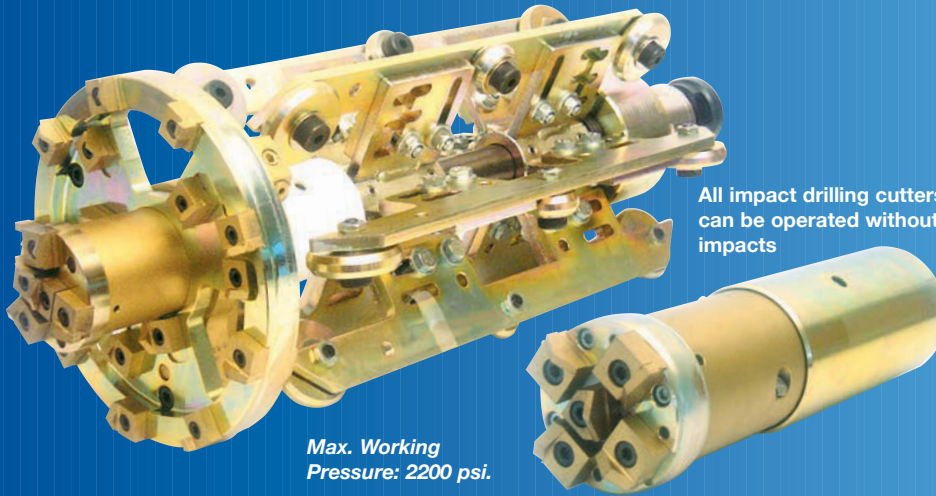
# enz golden jet<sup>®</sup>



THANKS FOR VISITING US

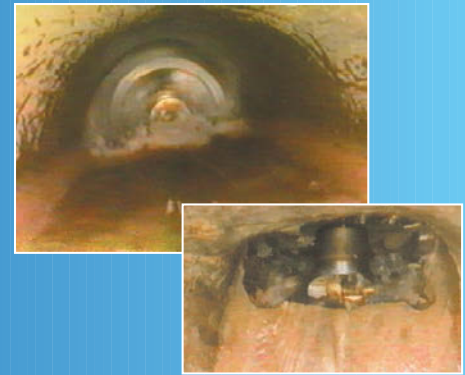
## PERCUSSION MILLING CUTTERS beat even the toughest challenges!

These tools are a radical innovation for milling-off deposits in pipes. The *enz golden jet*<sup>®</sup> impact drilling cutters are designed to remove the most stubborn deposits like concrete, injection cement, calcareous layers, etc. Provided with carbide-tipped teeth, the beating cutter head mills off everything with a cadence between 600-3000 impacts per minute.



Max. Working Pressure: 2200 psi.

All impact drilling cutters can be operated without impacts



- Higher capacity than all marketable cutters
- Long edge life
- Easy handling
- Very low maintenance cost
- Rugged construction
- Range of application: ø4" - 24"



1585 Beverly Ct., Unit 115 • Aurora, IL 60502  
Tel. (630) 692-7880 • Fax (630) 692-7885  
[www.enzusainc.com](http://www.enzusainc.com)



## Quality Used Trucks Available for Immediate Delivery



### 2007 Mack with 2012 Guzzler CL Truck ID #56434

- 246,335 miles with 10,698 engine hours
- 425 horsepower
- 60 bag filtration with air cannon
- Single mode filtration
- 14" SS liquid level float ball shutoff
- 5300 CFM 28" vacuum blower
- Blower discharge temperature gauge
- Omsi transfer case



### 2006 Jetstream Water Blaster | Water Blaster ID #06105

- Model 3600
- Cummins 5.9L engine
- 173 horsepower
- 3600 pump
- #6 plungers
- Tank inlet filtration system
- Hydraulic trailer brakes
- Hydro-throttle
- 40,000 PSI @ 6.8 GPM
- Note: hours unverifiable



### 2009 Int. 7600 with 2010 Vector HXX | Truck ID #72091

- Cat C-13 engine
- Fuller FRO-15210C transmission
- Mileage: 109,287 Hours: 4,612
- 430 horsepower
- GVWR: 66,000; front 20,000; rear 46,000
- 20 GPM Cat pump
- 8702 Hibon blower
- 12 yard debris box

Interested? Call John Stafford, FS Solutions Used Equipment Sales Manager (815) 341-3512 for pricing or visit [fssolutionsgroup.com](http://fssolutionsgroup.com) for a complete listing of used equipment

# AMAZING MACHINERY

Your Equipment SUPERSTORE Since 1995

## Viztrac® AM100-100



**ONLY**  
**\$1495.00**

- 20' Reel w/ 100' of 3/8" Cable
- 7" Color LCD Display
- Heavy Duty Powder Coated Frame

~~\$1895.00~~  
FREE Freight

## J/E4040HA-CKIT2



**ONLY**  
**\$1495.00**

- 4000 psi @ 4.0 gpm w/Pump
- GX390 Honda OHV Engine
- 150' x 1/4" Hose w/Remote Hose Reel
- 3 Nozzles/Ball Valve/Aqua Pulse

~~\$1895.00~~  
FREE Freight

**BUY BOTH**  
**\$2895.00**

**6 Months, No Interest!**



Get 6 Months to Pay on Purchases of \$99 or More.  
Choose Bill Me Later® at Checkout. Subject to Credit Approval.



Complete Details At  
[www.AmazingMachinery.com](http://www.AmazingMachinery.com)

**1-800-504-7435**  
3807 Old Tasso Rd. • Cleveland, TN 37312

PROFILE



NORTHERN CALIFORNIA'S MIKSYS SERVICES LEVERAGES STRONG SUPPLIER  
RELATIONSHIPS AND CREATIVE PROBLEM SOLVING TO STAKE OUT 'GO-TO' STATUS



BY MARY SHAFER | PHOTOGRAPHY BY LEZLIE STERLING

# THINKING OUTSIDE THE TRENCH

**M**iksis Services of Healdsburg, California, learned early that you don't stay in this business more than three decades by finding your comfort zone and staying there.

Co-owner Gary Miksis has moved his company forward for nearly 35 years by staying ahead of the curve on new technologies, building a team he can rely on, and partnering with like-minded equipment and material suppliers to support a progressive approach to problem-solving.

**“A contractor is not going to make it with just a hammer and a toolbox. You have to offer a variety of services to make you a viable competitor.”**

Gary Miksis

Resourcefulness and adaptability are the key traits of a successful cleaning contractor in today's demanding market, he says. “A contractor is not going to make it with just a hammer and a toolbox. You have to offer a variety of services to make you a viable competitor. For example, we offer four different methods of pipe lining to cover a wide range of customer needs.

Some characteristics [of each method] cross over into others, but you must understand the qualities as well as the limits of each one to decide on the appropriate solution to a given circumstance.”

After studying art in the California University system, Miksis found work as a San Francisco drain cleaning subcontractor in 1978. He opened his own business on April Fool's Day 1981. The company

Ben Robles of Miksis Services assists another crew member deep inside a 24-inch water main during a point repair for the City of Benicia, California.

Gary Miksis, co-owner of Miksis Services, on the job site of a water main repair.



Miks Services crew members wet out a fiberglass composite liner with polyresin for a point repair.



# lansas<sup>®</sup> PRODUCTS

MANUFACTURED BY VANDERLANS AND SONS, INC.



High & Low  
Pressure  
Joint Tester



"Smart Box"<sup>™</sup> Line  
Acceptance Test Kit



"Super Vac"<sup>™</sup>  
Manhole Vacuum Testing



Vacuum Test Plate  
with Protective Cover



## MIKSIS SERVICES INC.

**OWNERS:** Gary and Barbara Miksis

**YEARS IN BUSINESS:** 34

**EMPLOYEES:** 16

**AREA SERVED:** Northern California (north of Monterey)

**SERVICES:** Municipal, industrial and residential wastewater maintenance and repair services; pipeline locating; cleaning/jetting; combination vacuum loading; digester, tank, pond and bypass pumping; CCTV investigative assessment; smoke and gravity leak testing; pipe bursting; CIPP pipeline and point repair; manhole rehabilitation

**AFFILIATIONS:** California Water Environment Association (CWEA)

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

grew as he got his plumber's and general engineering licenses, but it was when he gave reign to his more artistic impulses that Miksis Services really gained momentum.

### TRENCHLESS TAKES OVER

"We kind of evolved from the inside out," he recalls. "Back in the pre-CCTV days when we were running cables down lines to try to locate blockages, well ... your imagination grows regarding what's happening down there. Thoughts were different then. Instead of saying, 'We're just going to cut this open,' we were always approached by customers asking if we could find the problem and fix it without digging up a line. Digging became a last resort. We would first try the different cables and blades to do whatever we could to avoid it." So moving to trenchless was a natural growth path for Miksis.

They started out doing CIPP point repairs in the early '90s. "There were no real lining 'systems' then," he recalls. "It was called Eco-Liner, based on something the manufacturer saw in Sweden." At an industry trade show, Miksis met some people who had developed a PVC deform/reform technology that eventually morphed into DynaLiner.

"I got a contract with the Navy at a submarine base for an industrial waste line, to replace terracotta line that had been backfilled with copper slag from their ship-blasting work. It involved so much time [to dispose of the potentially toxic waste], they asked for point repairs only, a manhole-to-manhole repair."

Miksis searched for technology solutions and finally found Thad Frisco — son of Ben Frisco of AquaTech in Cleveland — through an ad in *Cleaner* magazine. The two collaborated on the project using Frisco's Ecoliner materials and process, an expensive trial-and-error operation that ended up creating a break-even scenario financially for Miksis. "It was worth it just to try it out and see if it would work," he says without regret. "We ended up becoming their West Coast installer."

### TECHNOLOGY EVOLVES

Though Ecoliner worked for that particular application, Miksis kept his eyes open for a more dependable system for larger jobs, though he still uses the now-improved Ecoliner for point repairs. Again, he networked at industry shows and met Bob Ward of TES, on Colorado's western slope near Aspen.

"He was bench testing above-ground CIPP liners," Miksis remembers. "He and I got together and developed our own system that improved the carriers, epoxy combinations and composite fabrics. We shared notes and resources and had independent testing done on our combined products. This was before there were other established systems. We tried to make the best product possible. I ended up getting a patent on my carrier and have sold it to other people."



is announcing the opening of our  
**NEW Houston, Texas, location.**  
We're growing along with you to help  
you meet the needs of your business.



AR™ Plugs



High Pressure  
Plugs ~ to 150 PSI



Multi-Size Domeheads™  
Front and Back Plugs

*Custom Designs Are Always™ Available*

**VANDERLANS AND SONS, INC.**

California 1-800-452-4902

Atlanta 1-770-509-9309

Chicago 1-800-452-4902

Houston 1-832-804-6932

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



Miksis has a master's degree in 3-D sculpture. Having made 3-D molds, he was aware of the dangers of resin poisoning involved in the CIPP liner process. "I knew I wanted to stay clear of working with styrene-based resins in trenchless, so everything we do with CIPP is epoxy-based, and with PVC there's no issue at all."

Miksis now works with the MaxLiner system from Applied Felts. "They have a really nice product with good selection," he says. "And there's no middleman; we work direct with the factory."

At first he was attracted by the simplicity of the system. "Originally you only needed a pipe elbow and mixing drill and no other fancy, dedicated equipment. Though the equipment needed has evolved, we still install the old school way, inverting the resin-impregnated felt into a line."

The company moved up to rehabilitating laterals and short mainlines, and for larger-diameter pipe up to 120 inches, Miksis now uses the centrifugally cast concrete-based Permaform Centripipe.



**ABOVE:** The Miksis Services crew includes (from left) Ben Robles, Gary Miksis, TJ Sales, Manuel Lemos, Geoff Ensign and Fritz Betschart.

**BELOW:** Miksis crew members (from left) Geoff Ensign, TJ Sales and Ben Robles roll a polyresin-coated fiberglass liner onto an inflatable plug for a point repair.



**"Originally you only needed a pipe elbow and mixing drill and no other fancy, dedicated equipment. Though the equipment needed has evolved, we still install the old school way, inverting the resin-impregnated felt into a line."**

Gary Miksis

#### MOVIN' ON UP

In the early '90s, Miksis Services won a bid on a sanitary sewer emergency cleaning and maintenance contract for the nearby naval base. Based on successful results, the contract was extended for multiple years. Word-of-mouth endorsements brought in other military work that continues to this day. Though trenchless pipeline rehabilitation forms the foundation of the company's success, Miksis couldn't perform that work without another key piece of technology.

"By far, the video camera is most pivotal to our business," he says with conviction. "It is the introduction to our customers' problems, and the results of the video dictate which options are available to complete the project." The video inspection itself is not a money-maker for the company, Miksis reveals. "The cost of the video work is incidental to the client and often is included in the overall project. Competition in the video inspection market has reduced the fees we can charge to the point that it is break-even at best."

Still, CCTV work is an absolutely necessary step in getting to the profit centers, and Miksis depends on a close relationship with his supplier, RS Technical Services, to maintain those profits.

"I was Rod Sutliff's first customer before he developed his first CCTV," Miksis says. "I bought a used Cyclops camera with a Vidicon tube from a guy in San Rafael and met Tom Sutliff at 3T in Santa Rosa through him. Tom introduced me to his dad, who was able to fix it for me. I told him if he ever wanted to manufacture dedicated CCTV cameras, I'd buy one. Soon after that, he did start designing and manufacturing push cameras. I was their first customer and have been with them ever since. I've either bought or been the guinea pig for every piece of equipment they've ever manufactured."

CONTINUED >>

# ALLAN J. COLEMAN

## SINCE 1905

Call us today!  
773-728-2400

5725 North Ravenswood Avenue • Chicago, IL 60660 • [info@allanjcoleman.com](mailto:info@allanjcoleman.com) • [www.allanjcoleman.com](http://www.allanjcoleman.com)



## UPGRADE your camera system to the GVISION. A Better System



Visit [www.eplsolutions.net](http://www.eplsolutions.net)  
for more details.

### GVISION

Gvision V3 is a universal monitor capable of recording from a variety of camera reels. View the screen in the blaring sunlight or in the shade with no visible difference.

This ruggedized monitor records onto flash drives, hard drives, and an iPhone®, iPad®, or iPod Touch®. Connect to the A/V in/out connector to use DVD-RECs and other compatible recorders.



Ask what the  
**GPLAYER**  
can do for you?



JetSonde Carriers - P-Trap Cable Sonde Carriers



A specialized sonde for locating cast iron and non-metallic pipe 20+ feet deep.

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



JetCam Adapter

JetSonde Nozzle

Jetter Hose

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



Special pricing  
on all  
General jettors,  
cameras and  
machines



## Warthog® Nozzles



With a Purchase of 1/2" or Larger Nozzles  
Receive a FREE Service Kit through 3/31

**OLDEST NAME IN THE BUSINESS**  
**— Over 100 YEARS OLD —** PHCC MEMBER



Miksis Services workers (from left) Ben Robles, Manuel Lemos and TJ Sales insert an inflatable carrier with a polyresin-coated fiberglass composite point repair liner into a 24-inch water main.

## OUTFITTED FOR SUCCESS

Miksis Services runs RS Technical CCTV trucks, including a 2001 Ford F350 4x4 van, a 2001 Ford F350 NBVC van, two 2010 and one 2013 Mercedes-Benz Sprinter vans, and a 2014 Ford Transit Connect Mini Inspection System they consider their real “money maker.”

**“By far, the video camera is most pivotal to our business. It is the introduction to our customers’ problems, and the results of the video dictate which options are available to complete the project. The cost of the video work is incidental to the client and often is included in the overall project.”**

Gary Miksis

These trucks use Infrastructure Technologies pipeline software to process video from RS Technical Services inspection equipment, including OmniEYE II, TrakStar, OmniStar Probe, Lateral Launch and 1545 portable cameras and a DeepStar Probe well camera. These are deployed on RST Tractors, including a Steerable Storm Drain, TransStar II, Mighty Mini, EP Standard Mainline and ProTrak.

This imaging equipment is supplemented by several Ratech Elite Series push camera systems, an Aries CCTV system with lateral launcher carried in a 2001 Isuzu box van, a 2009 Inuktun long-range camera/sonar system (5,280 feet of fiber optic cable and 2,000 feet of copper cable), and a 2012 Mercedes-Benz Sprinter instrumentation and control truck.

Pipe cleaning is accomplished using a fleet of three Vactor 2100 industrial loader combination trucks, model numbers 1645, 1650 and XPS. These work alongside five Camel jet/vac trucks manufactured by Super Products with Myers pumps and Roots blowers (GE Water & Process Technologies).

These are accompanied by two small-diameter, 500-foot-capacity trailer jettors, a 2011 Eagle 300 (Hot Jet USA) with a 4,000 psi pump and a non-branded 4,000 psi unit; several Harben 4016 truck and trailer jettors; a Harben Century 10-20 Water Blaster Trailer; and a Sherman Hose Reel Trailer (available with T95) long-range (up to 1,800 feet) cleaning system.

Several other vehicles and systems for spill response, point repair, pipe locating, loading, dewatering and storage round out an impressive equipment inventory.

## RESOURCEFUL AND CREATIVE

Miksis Services has developed a reputation for being resourceful and creative in solving customers’ problems. Miksis says this has always been part of his business approach, though it wasn’t necessarily a conscious business strategy.

“It’s always been shooting from the hip, I guess,” he says. “The main challenge on any job arises, and we figure out our options. At the university, I took some basic engineering courses, but I think my art training equipped me to have an open mind about other potential solutions or approaches than we or others have maybe tried before.”

The contractor and his team are frequently approached by customers with unique and/or challenging conditions in search of possible solutions. In one such case recently, a large CMP culvert directing a seasonal creek beneath a roadway and part of two residences was discovered to be in poor condition. The municipality was concerned that the pipe might fail if it had to endure another winter.

The culvert was constructed of two different sizes of pipe (48- and 54-inch) with their ends butted together but lacking any mechanical binding. Dirt was falling into the pipe where the ends had worked apart during normal ground shifting, and it was relatively deep inside the pipe. Sinkholes were forming above, and if they didn't do anything, the repercussions would be disastrous: a potential roadway collapse and the undermining of at least one of the homes' foundations.

"At the time, we were only able to rehab pipe up to 36-inch diameter," Miksis recalls. "We combined materials and methods we already used along with a new technique called spin casting that can jump sizes."

This process involves the aforementioned Centripipe, developed by Permaform, which is similar to a cement grout containing fiberglass fibers and plasticizers. Thickness of the centrifugally cast product is controlled by adjusting the speed of the winch dragging the sled on which the spinner is mounted.

According to Miksis, this process works well for any pipe shape. "It's all done with calculations. You go back in and measure the internal diameter when you're done to make sure you've got a uniform application. It almost turns a corrugated metal host pipe into a concrete form, in which you manufacture a concrete pipe *in situ*. The results are just dynamic. In this way, we were able to rehabilitate the storm drain before winter began." **C**

## more info

**3T Equipment Company Inc.**  
800/969-3001  
www.3tequipco.com

**APIM Permaform**  
800/662-6465  
www.centripipe.com

**Aries Industries, Inc.**  
800/234-7205  
www.ariesindustries.com  
(See ad page 25)

**Cyclops Electronics, Inc.**  
830/249-9756  
www.cyclopestv.com

**Dynaliner LLC**  
970/948-7401  
www.dynalinerllc.com  
(See ad page 67)

**Ford Commercial Vehicles**  
313/322-3000  
www.ford.com/trucks

**GE Water & Process Technologies**  
866/439-2937  
www.gewater.com

**Harben, Inc.**  
800/327-5387  
www.harben.com

**Hi-Vac Corporation/Aquatech**  
800/800-1016  
www.hi-vac.com  
(See ad page 49)

**Hot Jet USA**  
800/213-3272  
www.hotjetusa.com  
(See ad page 76)

**Infrastructure Technologies - ITpipes**  
505/341-0109  
www.itpipes.com

**Inuktun Services, Ltd.**  
877/468-5886  
www.inuktun.com

**Isuzu Commercial Truck of America**  
866/441-9638  
www.isuzucv.com

**MaxLiner USA**  
877/426-5948  
www.maxlinerusa.com

**Mercedes-Benz**  
www.mbsprinterusa.com

**Pentair - Myers**  
888/416-9513  
www.femyers.com

**Ratech Electronics, Ltd.**  
800/461-9200  
www.ratech-electronics.com  
(See ad page 17)

**RS Technical Services, Inc.**  
800/767-1974  
www.rstechserv.com  
(See ad page 23)

**Sherman & Reilly Inc., a Textron Co.**  
800/251-7780  
www.sherman-reilly.com

**Super Products LLC**  
800/837-9711  
www.superproductsllc.com

**Vector Manufacturing**  
800/627-3171  
www.vector.com

# VSI Rentals, LLC.

51 Stone Road Lindenwold, NJ 08021  
888-VAC-UNIT Fax: 856-627-3044

**2014 Peterbilt 348** cab & chassis with a 3,200 U.S. gallon, carbon steel, D.O.T. certified 412 vacuum tank; dump type with full open rear door and a Presvac PVB 750 vacuum-pressure pump.

**6 Available**  
**Price by Request**



**2002 GMC**, dual steer truck mounted, large capacity sweeper with dual sweep gear and catch basin cleaner unit  
**Price by Request**

**2014 Freightliner** truck mounted combination vacuum and jetter units  
**3 Available**  
**Price by Request**



**2014 Freightliner** truck mounted, industrial wet/dry vacuum loaders with 27" Hg blowers  
**4 Available**  
**Price by Request**

Scan the QR code with your smartphone



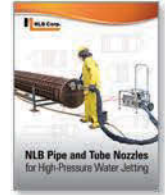
**All Units Available For Rent or Purchase**  
**888-VAC-UNIT**

# Over 200 tube cleaning nozzles, available NOW from NLB

What's better than a huge selection? A huge selection with same-day availability. NLB has tube and pipe nozzles in 5 popular styles, with drill patterns that give you over 200 choices. All attach easily to flex lances, rigid lances or semi-automated Saflex™ units. We offer:

- standard, button, multi-row, evaporator, or rodder nozzles
- custom drill patterns
- left-hand or right-hand threads

For the nozzle you need, when you need it, call 800-441-5059. Or download our catalog at <http://www.nlbcorp.com/products/accessories/nozzles/pipe-tube/>.



**NLB Corp.** The Leader in Water Jet Productivity

29830 Beck Road, Wixom, MI 48393  
 MI: (248) 624-5555, IN: (219) 662-6800, NJ: (856) 423-2211  
 LA: (225) 622-1666, TX: (281) 471-7761, CA: (562) 490-3277  
[www.nlbcorp.com](http://www.nlbcorp.com) • e-mail: nlbmtkg@nlbusa.com



## FORBEST INSPECTION CAMERA SYSTEMS



### WHY BUY FORBEST

- Our products are the most easy devices to use and record with both USB and SD cards;
- Our products are reliable and the most affordable;
- We offer the lowest service cost and the shortest turn-around.

#### Economic Color Sewer/ Drain Camera

FB-PIC3188/3188D-65

- Specs:
- 65FT Cable & Reel
  - Waterproof Color Camera Head
  - 7" LCD Monitor w/ or w/o DVR & MIC
  - Aluminium Case



#### Layflat Pipe Inspection Camera

FB-PIC3588A/3588BT

- NEW
- 7" LCD Control Station with Built-in USB Flash and SD Card Recorders and Li-Ion Battery
  - 3/8" 150FT/200FT Cable & Reel w/Electronic Meter Counter
  - Crawler for easier push
  - 7/8" Stainless Steel Color Camera Head w/Built-in 512HZ Sonde Transmitter for 3588A (1.5" Self leveling Head w/ Built-in 512HZ Sonde Transmitter for 3588BT)



#### Pan-Tilt 360°/180° Camera System

FB-PIC3688B

- NEW
- Specs:
- 400FT Cable & Reel w/Meter Counter
  - Pan-Tilt 360°/180° Color Waterproof Camera Head w/Manual Zooming
  - 7"/10" LCD Monitor w/DVR & MIC.
  - Recording with USB Flash Drive & SD Card
  - Crawler for easier push **Starting at \$5,190**



#### Portable Color Sewer/Drain Camera

FB-PIC3188A/3188DN

- Specs:
- 65FT/100FT/130FT Cable & Reel
  - Color Camera Head
  - 7" LCD Monitor w or w/o DVR & MIC
  - Heavy Duty Waterproof Case
  - Option 1: upgrade to Color Camera Head w/Built-in 512HZ Sonde Transmitter
  - Option 2: upgrade to 130FT Cable & Reel w/Meter Counter (New)



#### Mid-Range Pipe Inspection Camera

FB-PIC3388UT/3388MT

- 200FT Cable & Reel w or w/o Meter Counter
- Self Leveling Camera Head w/Built-in 512HZ Sonde Transmitter
- 10" LCD Monitor w/DVR & MIC
- Recording with USB Flash Drive or SD Card
- Heavy Duty Waterproof Case
- Crawler for easier push



#### 512HZ Locator

FB-T2011-Locator

- NEW
- Specs:
- Frequency: 512HZ
  - Operation Mode: NORM/NOISE
  - Power Supply: 6\*AA
  - Current: < 100mA
  - Sensitivity: NEAR/FAR
  - Continuous adjustable
  - Output Intensity: LCD 15 levels



Promo Price: \$499

#### Luxury Portable Sewer/Drain Camera

FB-PIC4188M/4188H

- Specs:
- 130FT Cable & Reel w or w/o Meter Counter
  - Color Camera Head w/Built-in 512HZ Sonde Transmitter
  - 10" LCD Monitor w/DVR & MIC
  - Recording with USB Flash Drive & SD Card
  - Heavy Duty Waterproof Case



#### Long Range Pipe Inspection Camera

FB-PIC3288T/3488T

- 300FT/400FT Cable & Reel w/Meter Counter
- Self Leveling Camera Head w/ Built-in 512HZ Sonde Transmitter
- 10" LCD Monitor w/DVR & MIC
- Recording with USB Flash Drive or SD Card
- Heavy Duty Waterproof Case
- Crawler for easier push



US: 44110 Old Warm Springs Blvd. Fremont, CA 94538 Tel: 650 757 4786 Toll Free: 1 877 369 1199

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

Canada: 800 Denison St. Unit 10, Markham ON L3R 5M9 Tel: 905 604 6226 Toll Free: 1 877 369 1199

Email: [forbestusa@gmail.com](mailto:forbestusa@gmail.com)



# 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



# Pipeline Cleaning & Maintenance Equipment *for*



## JETTERS & JET VACS

### Penetrators

- 1/4"-15° .....\$24.00
- 3/8"-15° .....\$33.00
- 1/2"-25° .....\$46.00
- 1/2"-25°LT .....\$49.00
- 3/4"-12° .....\$59.00
- 3/4"-12°LT .....\$69.00
- 1"-12° .....\$72.00
- 1"-12°LT .....\$84.00



### Aluminum Sand

- 3/4"-24° .....\$141.00
- 1"-17°/24° .....\$156.00
- 1"-24° .....\$141.00



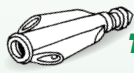
### Swivel Joints

- T-M® Style
- 90° or Straight, 6000 psi
- 3/4" & 1" .....\$198.00
- 1-1/4" .....\$210.00
- 1-1/2" .....\$560.00
- 2" .....\$807.00



### Aluminum Grease

- 3/4" or 1"-17° .....\$125.00



### Truder

- 3/4" or 1"-17° .....\$350.00



### Shark

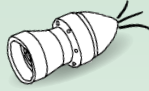
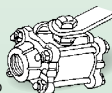
- 1" .....\$495.00
- 1" Big Shark .....\$610.00

### Stainless Steel Nozzles

- 1/8" .....\$37.00
- 1/4" .....\$41.00
- 3/8" .....\$45.00
- 1/2" .....\$57.00
- 3/4" .....\$91.00
- 1" .....\$116.00

### Ball Valves

- Dyna Quip® Style
- 3000 psi
- 1" .....\$227.00



### Radial Bullet

- 3/4"-18° or 35° .....\$50.00
- 3/4"-18°/24° .....\$53.00
- 1"-18° or 30° .....\$69.00
- 1"-15° or 30° .....\$69.00
- 1-1/4"-18 or 35° .....\$85.00



### Steel Sand

- 1"-12° .....\$73.00

### NEW Storm/Culvert Floor Cleaner Nozzles

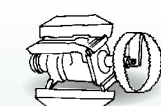
### Parker & Piranha Jetter Hose

- 1/8"-1-1/4"



### Saw Blades

- 4" - 18"
- NEW Chain Root Cutters
- 4"-48", All Stainless Steel, No Lubrication



### Root Cutter Assemblies

- Skid Mounted
- w/flat blades .....\$1175.00
- w/concave blades .....\$1198.00
- w/spiral blades .....\$118.00
- Donut Mounted
- w/flat blades .....\$1125.00
- w/concave blades .....\$1160.00
- w/spiral blades .....\$1160.00
- Lateral Mounted
- w/flat blades .....\$1020.00
- w/concave blades .....\$1075.00
- Assemblies come with one ea. of 6, 8, 10 and 12" blades, saw blades, hub, skids, etc.

### Sewer Hose Guides

- TigerTail™ Style
- 3" x 36" .....\$38.00
- 2" x 36" .....\$38.00
- with 24' rope



### Clamps

- Power Clamps
- 8" .....\$13.00
- 3"-6" available
- King Clamps
- 8" .....\$29.75
- 4"-6" available
- Bandlock® Clamps
- 8" .....\$24.00
- 3"-6" available
- Quick Clamps
- 8" .....\$26.50
- 3"-6" available



### Hycon® Valves

- 2 & 3-way Ball Valves
- 5000 psi
- 1/2" 2-way .....\$65.00
- 3/4" 2-way .....\$89.00
- 1" 2-way .....\$119.00
- 1-1/4" 2-way .....\$226.00
- 4500 psi
- 3/8" 3-way .....\$115.00
- 1/2" 3-way .....\$160.00
- 3/4" 3-way .....\$180.00
- 1" 3-way .....\$190.00
- 1-1/4" 3-way .....\$440.00
- 2" 3-way .....\$690.00



- HD Washdown Gun
- 25 gpm @ 850 psi
- 1/2" Inlet .....\$185.00

Pipe/Sewer Plugs • Hose Reels • Aluminum Intake Tubes  
Kanaflex™/Rubber Debris Hose • Full Line Of Warthog Nozzles



### Cloverleaf® TOOL CO.

SARASOTA, FLORIDA • PHONE: 941-739-0707 • FAX: 941-739-0001

Toll Free: 800-365-6583  
[www.cloverleaftool.com](http://www.cloverleaftool.com)

Full Catalog Online with Prices



MANY OTHER STYLES, SHAPES & SIZES AVAILABLE

CALL FOR OUR COMPLETE CATALOG WITH PRICES

## YOUR SOURCE FOR RIDGID

CENTRAL OKLAHOMA

# Winnelson

COMPANY

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

### BUYING A SEESNAKE?

CALL KEITH  
FOR SHOW  
SPECIALS

WE  
WILL NOT BE  
UNDERSOLD

FREE SHIPPING!

- Call Us Evenings and Weekends -

Keith: 405-602-9155 &

Jim: 405-205-3974



LT1000 Laptop Interface System



CS10 Digital Recording Monitor with Flash Drive



microDrain Reel

SeeSnake® Compact 2 Camera Reel



DVD Pak



CS6 Digital Recording Monitor



SeeSnake® MAX rM200 Camera System



CALL TOLL FREE: 888-947-8761

5037 NW 10th  
Oklahoma City, OK 73127

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



# DIG SMART DIG SAFE



- OPERATOR-FRIENDLY
- SIMPLE MAINTENANCE
- VERSATILE
- EASY OPERATION
- MAXIMUM EFFICIENCY
- GLOBAL SALES & SUPPORT

**X-VAC**<sup>®</sup>  
HYDRO EXCAVATOR  
A Product of Hi-Vac<sup>®</sup> Corporation

800.752.2400 ▪ 740.374.2306 ▪ [www.X-Vac.com](http://www.X-Vac.com)



Erik Gunn is a magazine writer and editor in Racine, Wisconsin. Readers may direct inquiries to him by contacting this publication at 800/257-7222 or emailing editor@cleaner.com.

# A Key to Success

Key person insurance helps your business survive when someone critical to its success moves on – or passes on

By Erik Gunn

**H**ow many hats do you wear? General contractor, site director, head mechanic, substitute driver, payroll manager – for many of you, that’s just before lunch.

What would happen to your business if something happened to you?

Or maybe you’re lucky enough to have a couple of indispensable people on your payroll: the mechanic who understands the machinery better than the people who made it; the salesperson who always knows the perfect way to close a sale and who knows every potential customer in your community.

How do you preserve what you’ve worked so hard to build? How do you keep the whole works from collapsing if you or the miracle workers on your payroll die suddenly?

**Key person insurance is designed to compensate your business when a key person, whether that person is an owner, partner or employee, dies. It is, in essence, a form of life insurance for your business.**

As with other potential disasters, the first line of defense is insurance – in this case, key person insurance.

According to the Insurance Information Institute, a “key person” in a business is someone whose special knowledge and skills contribute significantly to the income of the business. Key person insurance (or key employee insurance) is designed to compensate your business when a key person, whether that person is an owner, partner or employee, dies. It is, in essence, a form of life insurance for your business.

## HOW IT WORKS

For most of us, a life insurance policy is meant to provide funds to pay off the mortgage, send children to college and maybe give the surviving spouse a financial cushion for a few months or a year or two. For your business, a key person insurance policy can pay for:

- Searching for and hiring a replacement, whether that means a general manager, a hydroexcavator whisperer or a top-notch salesperson;
- Temporary expenses incurred while you (or the people you leave behind) figure out what happens next: an office manager and job scheduler to keep the crews working, a part-time accountant to deal with invoicing and payroll, maybe a salesperson to work the booth at WWETT;
- Compensating the business for lost goodwill, sales contacts or income

when it suddenly finds itself without the insured’s contacts and name recognition;

- Buying back shares in the business from a shareholder’s family member who has inherited a piece of the business but not the interest or business acumen;
- Extra outside repair costs when machinery isn’t running and can no longer be quickly repaired in-house, as well as lost income for every day the sewer camera isn’t in a pipe taking pictures.

All of that translates – maybe a bit fuzzily, but translate it does – into cash that a key person policy can provide.

A life is still being insured, but the business owns the insurance, pays the premiums and is typically the beneficiary.

## KEY THINGS TO KNOW

Most commonly key person insurance is *life insurance*, in the usual forms – term or permanent – with the usual considerations: Term insurance is usually cheaper, doesn’t build cash value and can’t be borrowed against; permanent (or whole life, or universal life, or variable life) insurance builds cash value and can be used as security for a loan but has higher premiums.

Key person insurance can also be *disability income insurance*, which pays if the insured becomes disabled and is unable to perform his or her job. Work with your insurance broker carefully to balance the cost of the insurance premiums with the covered conditions – if the policy pays when the insured is unable to perform usual and customary duties for the position (rather than being unable to perform any job), the premiums will likely be higher, but your peace of mind will be greater.

You, for example, might be able to sit in a chair and make phone calls, but if you need to be on job sites and talking to customers and crews in order to be effective, you’ll want a policy that pays if you can’t be active. A disability income insurance policy will pay a percentage of the disabled person’s earned income; if that person is a partner or a sole proprietor, the policy can pay office expenses (rent, utilities, salaries, depreciation).

## INDEPENDENT ADVICE

By the way, about that insurance broker: Make sure the broker works with more than one company (and thus can shop your policy around). You’re more likely to get a better deal. It’s also helpful to ask for the ratings on the policies you’re offered (that is, the assessment from one of the rating agencies – Fitch, Moody’s, A.M. Best or Standard & Poor’s) as well as asking the agent exactly what the ratings mean.

The ratings aren’t uniform either in application or appearance – a “superior” from Moody’s is Aaa while a “superior” from A.M. Best is A++, and the agencies may differ in their evaluations.

# No Maintenance Or Oil!



NozzTeq<sup>®</sup>  
Spinner<sup>™</sup>

**TIRED OF REBUILDING?**  
Let us solve your spinner problems with low maintenance and No Oil Solution.



**Equipment Engineered for Long Lasting Performance™**



CALL FOR A  
**FREE DVD**



NozzTeq<sup>®</sup>

Taking Science to the Sewer!™

www.nozzteq.com

Toll Free 1.866.620.5915



BL Swiper™



C-Ray 800™



Paikert®



C-Ray 400™



Lumberjack®  
75 series



Monro-Jet®



Jaws®



Hammerhead™



Lumberjack®



Orca™



Ice Bear™

# SAFETY SEWER DRAIN



- Safety Risk Reduced
- Professional Image
- Less Mess
- Contamination Reduced
- Pays For Itself
- Easy To Use



Scan this QR Code with your smartphone app reader to see a video on how to use this product.

Ingalls, Michigan

**906.753.4002**

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

If your business has a board of directors, you may need a resolution from your board to purchase key person insurance for a principal or employee. As with any matters involving board resolutions, consult a lawyer familiar with your corporate structure and business plan.

Ask the broker how your business interruption policy dovetails with key person insurance. The fire that destroys your office and records might also injure or kill someone, but you want to be able to get up and running as soon as possible. Find out what the short-term cash prospects would be under those kinds of circumstances and which policy will help you the most in specific situations.

## TAX CAUTIONS

Two tax policies to keep in mind:

- Key person premiums, like any life insurance premiums, are not tax-deductible.
- Key person death benefits paid to a business are typically not taxable, as long as certain conditions are satisfied. The business must give the employee written notice that the policy is being purchased and that the business is the beneficiary; the employee must also give written consent for the purchase. Make sure there's a form, separate from the policy, for notice and consent; your insurance broker or your accountant should be able to help here.

Before you pick up the phone to call your insurance broker, though, plan a session with your accountant for an overview of your business affairs to guide your conversation with the broker. You're looking for answers to questions such as:

- How much is the business bringing in now?
- How do things look in the next six months, next year, next five years?
- Do you expect close competition (making a good salesperson vital), or

are you in a safe market with reliable customers? (Congratulations!)

- What are the salaries of the people you depend on most heavily? Are they expecting healthy raises in the next couple of years? If you had to hire someone from a competitor, would you have to pay more than you're paying your employee?

You probably have a good sense of the answers to these questions, but having the most accurate numbers on a piece of paper in front of you will be necessary.

These conversations can help you think about how to value not just the business as a whole, but your contribution to the business: your time, your talent, the goodwill that's built into your presence as well as the contributions from important employees. You're looking for the answer to "How much money does the business lose if something happens to this person?"

Conversations with an insurance broker can result in additional expenses, and no one likes to reduce their bottom line. No question, here, though, that a small bite of expense now can save major expense (and real business loss) later. Consider the premiums an insomnia cure. Needless to say, we hope that no readers (or business heirs) ever need the proceeds of those policies.

As always, seek advice from your own accountant, banker or insurance broker, particularly where tax consequences are concerned. **c**



Join over 9,800 of your colleagues who already get great content delivered right to their inbox with the Cleaner e-newsletter.

[www.cleaner.com/newsletter](http://www.cleaner.com/newsletter)

# THIS DRUM CAN'T BE BEAT!

## Model D-5

The rugged Electric Eel Model D-5 drain and sewer cleaner combines professional quality and affordability in a continuous cable drum machine for cleaning 3" -10" diameter lines up to 100 ft.

The high density polyethylene drum and belt guard will not rust or dent and holds up to 100 ft. of 3/4" diameter Tri-Max cable. Three sealed heavy-duty ball bearings support the drum and a thick wall guide tube extends wear. The D-5 is powered by a heavy-duty 1/2 H.P. capacitor-type motor to provide more torque, and the power feed and drum can be quickly removed.

**Additional features include:** Large 10" solid wheels for easy maneuvering and stabilization while in operation; extra strength 1-1/4" steel tubing framework; 5 position height adjustment on handle; wheel brake; continuous belt skids and loading wheel built-in to handle; GFCI on 20 ft. line cord; and an air operated foot switch for easy operation. **Contact us today! Find out more about why the D-5 is the drum that can't be beat!**



**Electric Eel** 1-800-833-1212  
www.electriceel.com

**DRAIN CLEANING TOOLS FOR PROFESSIONALS**



ORDER TOLL FREE  
866-872-1224

SHOP 24 HOURS A DAY 7 DAYS A WEEK  
ONLINE AT WWW.VARCOPLUMPER.COM



SOURCE KEY  
04C15

Comes on Plastic Reel - For No Extra Charge! No Cardboard to Get Wet! Smaller sizes and lengths do not come on reel - check with your customer service rep for details.

### VARCO LATERAL LINE/WATER JETTER HOSE

VARCO Branded and MADE IN THE USA;

We get it for cheaper, so we can sell it for cheaper.

- Lateral line hose has become the standard for the septic industry.
- Polyether-urethane cover provides exceptional cut, abrasion and fungus resistance.
- Sizes from 3/8" up to 1", Working pressures up to 4800psi.

**SHOW SPECIAL!**

**SAVE 20%**

#### PREMIUM PIRHANA SEWER HOSE

	DESCRIPTION	500 ft	600 ft
3/4"	Premium Pirhana Orange 2500psi	\$1,145.55	\$1,357.65
1"	Premium Pirhana Orange 2500psi	\$1,291.00	\$1,540.00
3/4"	Premium Pirhana Blue 3000psi	\$1,142.96	\$1,287.39
1"	Premium Pirhana Blue 3000psi	\$1,357.16	\$1,700.97



NEW  
VARCO  
JETTERFLEX

PREMIUM  
PIRHANA  
SEWER HOSE

PROUDLY  
MADE IN  
THE USA

#### NEW VARCO JETTERFLEX LATERAL LINE / JETTER HOSE

4000 psi rated • Safety Green - Pressure Tested • Precoupled assemblies MXM pipe thread fittings

**SAVE 15%**

\*3/16" ON CLOSEOUT SPECIAL - SAVE 25%

	50'	75'	100'	150'	200'	250'	300'	350'	400'	450'	500'	550'	600'
1/8"	\$13.24	\$18.41	\$22.87	\$32.49	\$42.12	\$49.17	\$57.96	\$66.75	\$75.53	\$84.33	\$93.12	\$101.91	\$110.69
3/16"*	\$21.23	\$26.95	\$33.60	\$44.89	\$56.84	\$68.80	\$80.75	\$92.71	\$104.66	\$116.63	\$128.58	\$140.54	\$152.50
1/4"	\$25.87	-	\$48.40	\$70.91	\$93.40	\$109.53	\$130.45	\$151.36	\$172.27	\$193.17	\$214.08	\$235.00	\$255.91
3/8"	\$53.80	\$79.11	\$91.87	\$130.97	\$186.39	\$224.96	\$263.51	\$301.15	\$331.15	\$368.99	\$406.84	\$444.69	\$482.53
1/2"	-	-	161.80	-	\$306.77	-	\$438.40	-	\$572.01	-	\$707.17	-	\$842.97

# SOUTHLAND TOOL MFG. INC.

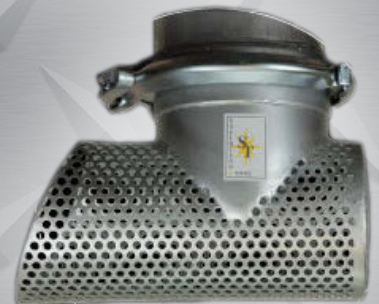
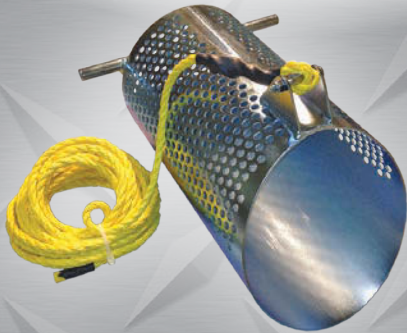
*Building Innovative Tools for Municipalities*



## 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 Saws



1430 N. Hundley St  
Anaheim, CA 92806

ph: 714.632.8198  
fax: 714.632.8228

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



# Build the Best Pipe Rehab Team

Take advantage of these 5 no-nonsense ways to encourage cooperation and quality work

By Kim K. Lewis

**O**wning a pipeline rehabilitation and inspection business can be fun and rewarding. I have been involved in building — or helping build — a number of businesses for more than 25 years, so I've learned a thing or two about what makes pipe rehab crew workers tick.

From manhandling heavy tunneling tools and rigging up pipe bursting equipment to measuring grout and setting liners, many of your crew members are jacks-of-all-trades. But with all those individual skills, each worker is only one cog in the well-oiled pipe rehab machine. Nothing works well or truly becomes great without teamwork.

So, let's take a look at five areas that are vital to the growth of your team.

**You invest in pipe bursting machines, excavators, inspection tools and lining equipment. So shouldn't you invest as much time into the operators who use and run that expensive gear?**

## SET A GOOD EXAMPLE

This is serious stuff. As the leader, all eyes are on you. Your employees will do as you do and not as you say. You have to be committed to the task at hand and have a well-laid-out plan to build your company, and you must have everyone on the same page to accomplish that.

Culture is a word I hear used incorrectly all the time. Your technicians are hard-working laborers, and they all have one thing in common — they're dedicated to you and your team. It's a culture of like-minded individuals. Attracting dedicated, like-minded people is the best way to build a team that has a uniform goal. The best way to accomplish any plan is with employees who are excited and believe in the challenge.

## FREEDOM

The entrepreneurial spirit is built on freedom. Your team members give you a lot of their time, and it can be backbreaking and thankless work at times, so it is vital to reward them by being lenient when it comes to letting them make choices and decisions. Bottom line: Be proud of their accomplishments.

Show them that they have abilities beyond what they may think and support them in every way to step out of their comfort zones. For instance, if your pipe bursting technician has a knack for writing, let him use those skills to blog for your company website. Perhaps you don't think the two skill sets go hand in hand, but the technician's talent might surprise you.

## COMMUNICATE THE DREAM

Many — or maybe most — people are terrible communicators. To attract and keep the best people, you have to effectively share your long-term company goals so workers know what's in it for them. Why should they get out of bed in the morning to come work for you?

Tell them, show them, work with them — and make that dream become reality. Do this relentlessly and eventually your team will carry larger portions of the load and breathe new life into the company. It's easy to talk. It's difficult to get people to listen.

## INVEST IN YOUR PEOPLE

You invest in pipe bursting machines, excavators, inspection tools and lining equipment. So shouldn't you invest as much time into the operators who use and run that expensive gear?

Don't pause. Employees are worth the investment of time and money, and actions speak louder than words. Help them be better. Send them to night school, provide regular training sessions on industry updates and cutting-edge technologies, and visit other contractors to see how they operate their pipeline rehabilitation teams.

Another bonus? Engaged employees perform better, and they're more willing to go out of their way for the greater good of the company.

## BE SINCERE

It's obvious when someone cares about the work they do. Communicate what you want out of each of your workers, and they will help make your company successful.

Don't just ask your workers questions. Listen to their responses.

So, whether you're expanding your menu of pipeline rehabilitation services or just jumping on the rehab bandwagon, reliable manpower is vital to your success.

## THE TOOLS YOU NEED

Of course, even the best teams can't get the job done without good tools. Check out this month's Product Focus to learn more about the tools and equipment that will help you get the job done. **C**

## ABOUT THE AUTHOR

Kim K. Lewis is chairman and CEO of LiquiForce Services in Kingsville, Ontario.

# SCOOTER

VIDEO  
INSPECTION SYSTEMS

20843 Santa Lucia • Tehachapi, CA 93561 • Fax: 661.822.8917

**"Simplify your life!"**

SCOOTERS ARE EASY TO USE, TOUGH AND DEPENDABLE.  
**DON'T LEAVE THE SHOP WITHOUT ONE.**

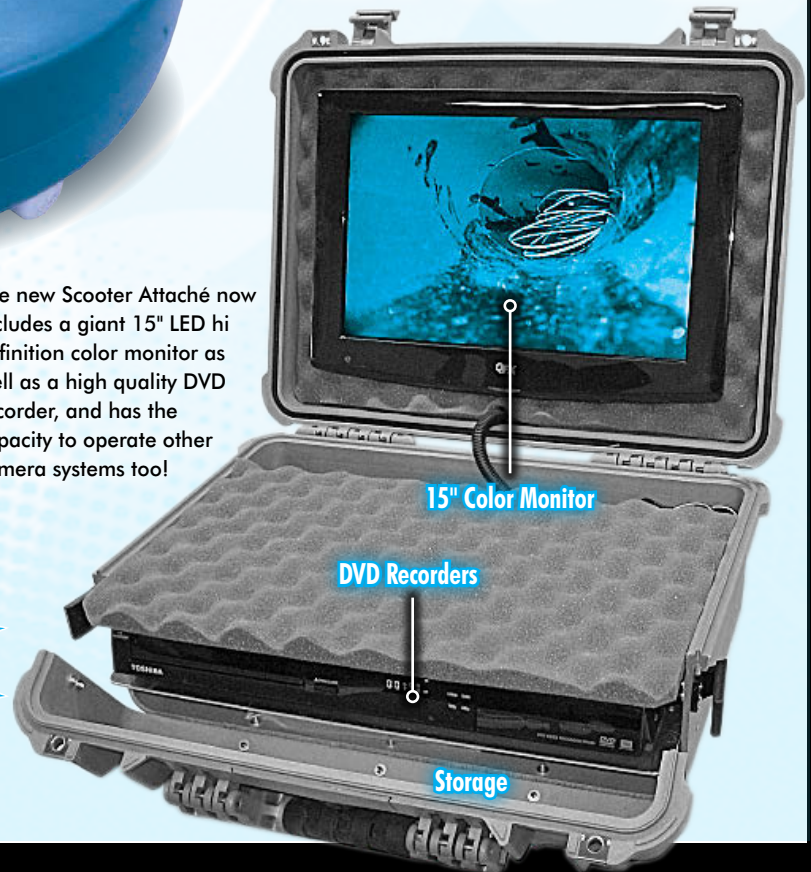


**Tired Of Squinting  
At A Tiny Monitor?**

Get An  
Attaché  
With A

**15" LED**  
Hi-Def  
Monitor

The new Scooter Attaché now includes a giant 15" LED hi definition color monitor as well as a high quality DVD recorder, and has the capacity to operate other camera systems too!



**SPECIAL  
PACKAGE**

**Scooter 200**

Color, Attaché DVD, Locator Transmitter, Voice Over

**Complete Package**

**\$4,995**

**800.772.6165**  
[www.tvinspection.com](http://www.tvinspection.com)



# THE CABLE CENTER 1-800-257-7209

MIDWEST'S LARGEST FACTORY AUTHORIZED REPAIR CENTER FOR GATORCAM, GEN-EYE & SEESNAKE

**24**  
HOUR  
TURNAROUND

FREE  
DELIVERY  
ON ALL RIDGID  
CAMERA  
KITS

## RIDGID's NEW CS10 Digital Recording Monitor

- USB Thumb Drive
- 12.1" Daylight Readable Display
- Multi Mode Recording  
take snapshots, record full video & lean video
- Software Integrations  
with SeeSnake HQ & RIDGIDConnect™



• THE CABLE CENTER • 8318 OLIVE BLVD. • ST. LOUIS, MO 63132 • 314-993-3099 •

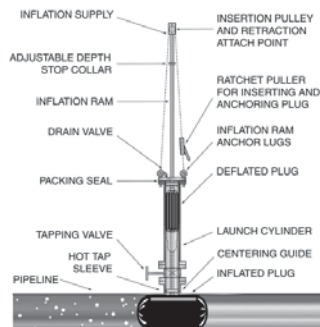
## Petersen® Pipe Plugging Systems



Pipe Plugs and Packers for all your Pressure, Chemical, and Temperature Requirements. Call us to quickly customize a pipe plug or plugging system for your specific application.



### Economical Hot Tap Plugging Systems



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

**Petersen** PRODUCTS COMPANY  
Serving Professionals Since 1916

PHONE 800.769.4973 OR 262.692.2416  
FAX 800.669.1434 OR 262.692.2418

# LAPLACE EQUIPMENT

RENTALS, SALES & SERVICE

- **WATERBLASTERS:**  
PRESSURE TO 40K,  
FLOW TO 100 GPM
- WATER JETTING TOOLS
- HYDRO-MOWERS
- 3D NOZZLES
- ROTATING NOZZLES
- HIGH PRESSURE HOSES
- LANCES
- FITTINGS
- TIPS
- SUPPLIES
- EXPERIENCED TEAM FOR PLANNING, TRAINING & SETUP



CALL  
985.652.5210  
FOR YOUR  
WATERBLAST  
PROJECT  
SOLUTIONS  
[WWW.H2OBLAST.COM](http://WWW.H2OBLAST.COM)



# WATERJET PROTECTION

PROTECTIVE CLOTHING - WITH THE STRONGEST FIBER IN THE WORLD!



+ PROTECTION UP TO 43500 PSI

+ CE CERTIFIED  
VERIFIED PROTECTION

+ FAST AND EASY GEAR UP  
TO MAXIMIZE PRODUCTIVITY!

+ RESISTS WATER AND DIRT  
KEEPS OPERATORS  
DRY AND LIGHT!

PROTECTION LEVEL 10/28  
SINGLE 1000 bar/15000 psi  
ROTOR 2800 bar/40000 psi  
CE 89/686/EEC

PROTECTION LEVEL 20/30  
SINGLE 2000 bar/30000 psi  
ROTOR 3000 bar/43500 psi  
CE 89/686/EEC



UNIQUE PROTECTION EQUIPMENT

For US distributors and e-catalogues, please visit:

**WWW.TST-SWEDEN.COM**



**PETROFIELD  
INDUSTRIES**



## INDUSTRIES

- Oil & Gas
- Municipal
- Utilities
- Construction

## APPLICATIONS

- Safe Exposure of Utility Lines
- Line and Pipe Excavation
- Equipment Cleaning
- Shoring
- Trenching
- Keyhole Excavation

## FEATURES

- 0-3000 psi Wand Pressure
- Incredible Vacuum Power
- Wireless Remote Control
- 26 ft. Boom with 342° Radius
- Hydraulic Powered Mud Sweep
- Positive Displacement Blowers
- Centralized Grease Manifold
- Divided Tank for Debris and Water

**THE WORLD'S BEST HYDROVAC**



sales@petrofield.com



www.tornadotrucks.com



1.877.340.8141

# Beware – and Be Aware

Workers must remain alert to what is going on around them to stay safe on the job site

By Doug Day

A short scene in a recent episode of a hit TV cop show had little to do with the plot but did illustrate a safety issue that is often overlooked. Wanting to question a man about a murder, two detectives went to his workplace and found him several stories up on a scaffold painting a factory wall.

Unable to get his attention, the two cops played rock-paper-scissors to see which one would get on a lift and go up to question the man. That was the first safety lesson, by the way. The attractive female cop lost the bet because she ignored operational experience — the fact that her partner always picks rock.

The bigger issue, and our main point, is that the man was completely oblivious to a pair of armed officers screaming at him from below. He was a few stories up, facing an expansive brick wall and wearing earbuds as he rocked out to his favorite tunes. He had no clue that anything unusual was happening. Later, unaware that the detective was standing next to him on the lift, the worker jumped in surprise when she poked him in the back and he nearly fell from the scaffold.

It's called situational awareness, or SA. The guy was unaware of anything going on around him. What if someone was trying to warn him of danger. Totally innocent in the plot of the show (the long-lost illegitimate son did it), he could easily find himself an unfortunate victim of a completely avoidable workplace accident.

There are many definitions of SA, many of them rather complex ...

- “The perception of elements in the environment within a volume of time and space, the comprehension of their meaning and the projection of their status in the near future.” (Endsley, 1995)
- “A state achieved when information that is qualitatively and quantitatively determined by given configuration as suitable for

assumed role is made available to stakeholder by engaging them in appropriate information exchange patterns.” (Sorathia, 2008)

And some quite simple ...

- “What you need to know not to be surprised.” (Jeannot, Kelly, & Thompson, 2003)
- “Knowing what is going on so you can figure out what to do.” (Adam, 1983)

The Health and Safety Executive, the United Kingdom's workplace safety body, explains it like this: “Often there is so much ‘going on’ in your working environment or you become so absorbed in your own thoughts that you fail to spot those things that could pose a serious threat to your health and safety.”

But SA goes beyond watching for changing conditions. If you are supposed to fix a leaking pump but there is no evidence of a leak, maybe you're at the wrong pump. Is the person you're working with today new to the job? You may have to slow down and do some coaching along the way. Have you or your team become complacent about quality or safety? Maybe it's time to brush up your human performance tools.

In its SA training, the Coast Guard points out that 40 percent of navigational accidents are due to the loss of situational awareness. Its tactics for preventing it:

- Be alert for deviations from standard procedures.
- Watch for changes in the performance of other team members.
- Be proactive; provide information in advance.
- Identify problems in a timely manner.
- Show you are aware of what's going on around you.
- Communicate effectively.
- Keep abreast of the mission status.
- Continually assess and reassess the situation.
- Ensure that all expectations are shared for complete awareness by the whole team.

Situational awareness. It really comes down to paying attention to what you're doing. **c**

TRYTEK
3" to 6"  
Lateral Cutter

  
 Thanks For Visiting Us

**NEW!**  
**TRYDENT 80  
Cutter System**

- > For interior or exterior relined pipes
- > Access pipe systems through clean-out ports or rooftop vents
- > Navigate standard 90 degree elbows in 3" pipe
- > Includes 100' of hose reach



Contact us for more information:  
**Phone: 717-428-1477**  
 Fax: 717-428-2865  
 Email: [trytek@trytek.com](mailto:trytek@trytek.com)  
 250 N. Main St.  
 Jacobus, PA 17407 USA

---

Serving the  
industry for over  
**25 years**

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

All New!!

Plumber magazine

Exclusively serving residential and commercial  
plumbing contractors and franchisees

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



 THANKS FOR VISITING US



**One size fits all.**

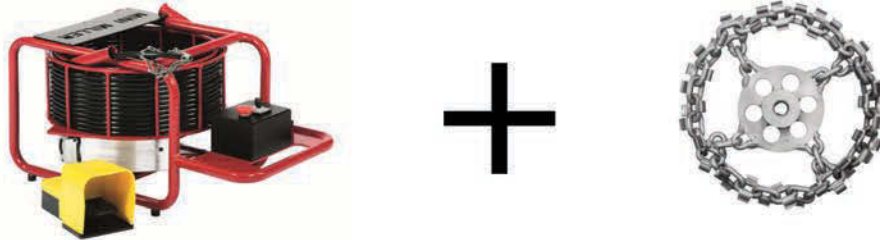
**One Tractor to inspect 5" to 300" diameters.**

(800)-656-4225 | [www.rapidview.com](http://www.rapidview.com) | Past Proven. Future Ready.



WHY DO LESS WHEN YOU CAN **ACHIEVE** SO MUCH MORE?

**Picote Millers & Chains** Easy & efficient cleaning of cast iron drains & sewers



Locate your reseller at [picotesolutions.com](http://picotesolutions.com) or call **219 440 1404** for further information.

Thank you for visiting us at the WWETT 2015 in Indianapolis, Feb. 24 - 26, 2015.

THE SMART CUTTER™



PRODUCT OF THE YEAR 2012

collaborate · understand · deliver

## Demand More from Your Data.



It's what our industry has been waiting for—the power to share inspection results in real-time via the cloud, scale for big data, visualize system-wide condition with GIS, plan/track field operations via Google Maps, and generate high-level deliverables like heat maps, budgetary proposals and 3D system models.



real-time  
**insight**

sold & supported by:

[www.pipelineanalytics.com](http://www.pipelineanalytics.com) • (877) 626-8386



# MACHINE TRADE-IN SPECIAL



Send in a photo of an old machine  
and get **30%** off a new one.

Call Duracable Manufacturing for details. Must provide a photo of an old machine to receive the discount. Offer valid 4/1/15 - 4/28/15. Cannot be used with any other offer. Must mention promo# 474.

**BUILT**  
**U.S.A.**  
**TOUGH**



**Just give us a call at 877-244-0556.**

The one-stop source for all your plumbing and drain cleaning needs – Duracable Manufacturing. Or visit us on the web at [www.duracable.com](http://www.duracable.com)

**Duracable**  
Manufacturing Company

# Pipe Bursting Methods and Projects

By Craig Mandli

Pipe bursting technology can renew aging and deteriorated pipes while saving resources and time. Here are several systems and tools used in the process, along with horizontal directional drilling and the excavation, hydroexcavation and shoring tools used to prepare entry points.

## EXCAVATION EQUIPMENT

### DOOSAN DX63-3

The **DX63-3** compact conventional tail-swing excavator from **Doosan Infracore America Corporation** provides 11.6 inches of tail-swing overhang, designed to deliver over-the-side lifting performance without increasing the overall weight. With an operating weight of 13,779 pounds and a bucket force of 9,731 ft-lbs, the 59.4 hp unit digs to depths of 13 feet, 6 inches. It has a blade float that enables operators to smoothly grade, level or backfill materials. Its auto-shift drive system transitions between high and low range, allowing operators to focus on the direction and speed of travel. Auto-idle helps reduce fuel consumption. It has ergonomic multifunction joystick controls, a color LCD instrumentation panel, extended grease intervals and four tie-down points. **770/831-2200; www.doosanequipment.com.**



Doosan

### HITACHI ZX210LC-5

The **ZX210LC-5** utility-class excavator from **Hitachi** has an efficient Isuzu EPA Interim Tier 4 (IT4)/EU Stage IIIB engine. Three work modes let the operator choose the digging style that fits the job, and grouped service points allow for quick maintenance. Operator comforts include smooth, low-effort controls and a spacious cab with wide door for easy access. It comes with the ZXLink Ultimate remote monitoring system, which provides machine information to maximize productivity and keep operating costs low. **866/973-0394; www.hitachiconstruction.com.**



Hitachi

### HYUNDAI CONSTRUCTION EQUIPMENT AMERICAS R220LC-9A

The 49,640-pound **R220LC-9A** excavator from **Hyundai Construction Equipment Americas** has a maximum dig depth of 20 feet, 5 inches, and a bucket breakout force of 29,980 pounds. It has a low-emission, low-noise, 157 hp Cummins Interim Tier 4/Stage IIIB QSB6.7 engine and a hydraulic system to provide the operator with super fine touch and controllability. A variable-speed fan clutch, two-stage auto deceleration system and economy mode help conserve fuel and reduce environmental impact. It has heated seats, roomy interior, enhanced climate control system, advanced audio system with USB player, AM/FM stereo, MP3 capabilities and hands-free Bluetooth. **877/509-2254; www.hceamericas.com.**



Hyundai

### INNOVATIVE EQUIPMENT TMX

The **TMX (Towable Mini Excavator)** from **Innovative Equipment** attaches to a 1/2-ton pickup truck, van and other light-duty tow vehicle to travel to multiple jobs in a single day. It can be towed at 55 mph and the driver does not need a CDL. It is capable of 6,600 pounds of digging force and an 8-foot dig depth, and offers a zero-turn radius and an unobstructed view of the bucket, which can also function as a loader up to just over 7 feet. It has a 72-inch, four-way blade and hydrostatic drive with a 21-degree blade tilt that is efficient on uneven grades and finish grading. The 140-degree swing radius enables digging next to walls or other obstructions. It has business-class seating for operator comfort, multifunction joystick controls, steel fuel and oil tanks, and flexible oil-resistant plastic parts. It is available in diesel and gas models. **888/359-3002; www.iequipt.com.**



Innovative Equipment

### JOHN DEERE 190G W

The **190G W** wheeled excavator from **John Deere** has a 159 hp certified Interim Tier 4 Isuzu engine mated to the Powerwise III hydraulic engine management system with three productivity modes. High productivity mode delivers more power and faster hydraulic response to move a greater amount of material. Power mode delivers smooth and balanced metering for normal operation and Economy mode reduces top speed and helps save fuel. The Power Dig button gives the operator extra hydraulic power to increase productivity. It has a top speed of 21 mph and advanced rubber tires that are easy on paved surfaces. It has cooled exhaust gas recirculation for reducing NOx and a diesel particulate filter and diesel oxidation catalyst to reduce particulate matter. A variety of boom, blade, outrigger and bucket options are available. The short wheelbase makes it adept in close quarters. For work close-up, a two-piece boom is available. The spacious cab comes with an easy-to-navigate, enhanced multi-language LCD monitor. **800/503-3373; www.johndeere.com.**



John Deere

## KOBELCO CONSTRUCTION MACHINERY USA SK350LC

The 82,200-pound Tier IV Final SK350LC excavator from Kobelco Construction Machinery USA is powered by a 270 hp HINO engine that delivers as much as a 10 percent reduction in fuel consumption when compared to a Tier III machine. It incorporates both selective catalytic reduction and self-cleaning diesel particulate filter systems to provide low operation costs. It has a digging force of 50,600 pounds, a digging depth of 24 feet, 10 inches, a suggested 0.875- to 2.75-cubic-yard bucket range and a swing speed of 10.0 rpm. 281/888-8430; [www.kobelco-usa.com](http://www.kobelco-usa.com).



Kobelco

## VOLVO CONSTRUCTION EQUIPMENT EC250E

The EC250E crawler excavator from Volvo Construction Equipment delivers a 5 percent improvement in fuel efficiency over past models. This efficiency is not only due to the Tier 4 Final/Stage IV-compliant engine, but also a range of features that optimize flow and minimize pressure losses in the hydraulic system. The ECO mode automatically reduces fuel consumption without any loss of performance in most operating conditions. The operator has the ability to manually control flow to the hydraulics using the integrated work mode system. To reduce idle time, the unit can be equipped with optional automatic idling and auto engine shutdown systems. When a machine's controls are inactive for a preset amount of time (between three and 20 seconds), engine speed is reduced to idle. When a machine has been motionless for five minutes, the engine automatically turns off. 828/650-2000; [www.volvo.com/constructionequipment](http://www.volvo.com/constructionequipment).



Volvo

## HORIZONTAL DIRECTIONAL DRILLING

### POW-R MOLE SALES MODEL P1-6RT

The P1-6RT Mechanical Rod Turner from Pow-r Mole Sales integrates with the PD-6 Thrust Boring Machine and P1 Pusher Box to help install sewer pipes on grade and more accurately steer the bore to the target. It eliminates the need for pipe wrenches to turn the rods, making steering safer and more productive. It creates 4,500 ft-lbs of torque, allowing the operator to steer the boring machine up to 200 feet. Quick disconnect hoses allow for fast and easy removal of the unit. 800/344-6653; [www.powrmole.com](http://www.powrmole.com).



Pow-r Mole Sales

## HYDROEXCAVATION

### CUSTOM BOOM ELBOWS

Custom Boom Elbows manufactures both 70- and 90-degree boom elbows available for a range of hydroexcavating and municipal sewer work vehicles. Both have a 25.1-inch circumference and 8-inch diameter



Custom Boom Elbows

with flanged ends. All models are built with a 1/2-inch wall thickness for longevity and endurance. 604/835-0199; [www.customboomelbowsbc.com](http://www.customboomelbowsbc.com).

### DITCH WITCH MV800

The MV800 mud vacuum excavator from Ditch Witch is designed for cleanup on horizontal directional drilling job sites. Its commercial-grade, 31 hp Briggs & Stratton Vanguard gas engine has electric start and a high-capacity remote air intake filter. Its filtration system includes an integrated carryover chamber that eliminates contaminants before they reach the blower. It has an 800-gallon spoils tank with optional reverse flow and hydraulic door to easily remove spoils. It is available with an optional water system with a 100-gallon water tank and adjustable pressure up to 3,000 psi for soft excavation tasks such as potholing utilities. 800/654-6481; [www.ditchwitch.com](http://www.ditchwitch.com).



Ditch Witch

### FAST-VAC SHUTTLE

The 16-cubic-yard Shuttle roll-off/lift-off vacuum loader from Fast-Vac has all the capacities and functionality of a truck-mounted vacuum but without the maintenance of a truck. They are ideally suited for refuse applications, industrial cleanups and spills. Multiple units may be in field service and moved with only a single truck. 262/878-0756; [www.fast-vac.com](http://www.fast-vac.com).



Fast-Vac

### FOREMOST 2000

The 2000 model hydrovac from Foremost is mounted on a tridem or quad-axle chassis and comes with 2,000-gallon water tanks, 13-yard debris bodies and a 70-inch aluminum, heated, lit and insulated van body providing ample storage room, a shelving unit and microwave on the driver's side. It is available with either a standard Robuschi RB-DV125 blower or optional Robuschi RB-DV145. The water system includes a CAT 3560 wash pump, 740,000 Btu boiler and full winterization package. The 26-foot rear-mounted extendable boom is controlled by a wireless Omnex controller, which also allows for control of the off-loading, vacuum, wash and vehicle rpm functions. This boom is stored on the rear fender with the dig tube attached for convenient digging to 18 feet prior to adding any extension pipe. 403/295-5800; [www.foremost.ca](http://www.foremost.ca).



Foremost

### GAPVAX HV55 HYDROVAX

The HV55 HydroVax wet/dry unit from GapVax is constructed of ASTM A572-grade 50 steel and has a 12 1/2-cubic-yard debris body and water tank options ranging from 400 to 1,400 gallons. Its positive displacement vacuum pump is rated at 5,250 cfm with 28 inches Hg. Its design prolongs the life of the filter bags and eliminates the threat of material entering the vacuum pump. The tailgate is fully opening with a field-adjustable hinge and dual cylinders, and has four fail-safe, individually adjustable locks that ensure a complete seal. Options include a cold-weather recirculation package, sludge pump, auger unloading system,



GapVax

CONTINUED >>

body pressurization system, remote pendants and wireless remotes, high rail package, and stainless steel body. 888/442-7829; [www.gapvax.com](http://www.gapvax.com).

### HBD/THERMOID TRANSPORTER

**Transporter** oilfield vacuum hose from **HBD/Thermoid** is designed for the transfer of crude oil, brine water, drilling mud and diluted solutions of hydrochloric acids and diesel fuels. It has a special fuel- and oil-resistant NBR/SBR blended compound that meets all RMA IP-2, Class B Oil Resistance requirements. The reinforcement of multiple synthetic textile cords with a dual-wire helix enables it to have a constant working pressure of 150 psi regardless of hose I.D. It is rated at full vacuum and will operate effectively in -30 to 180 degrees F. It is available in 100-foot lengths and can be made to order. 800/543-8070; [www.hbdthermoid.com](http://www.hbdthermoid.com).



HBD/Thermoid

### HI-VAC CORPORATION X-15

The **X-15** hydroexcavator from **Hi-Vac Corporation** virtually helps eliminate the risk of underground utility strikes. It performs hydroexcavation along with vacuum excavation, potholing and daylighting. Easy operation and simple maintenance provide for maximum efficiency on the job. It combines a state-of-the-art water pump and vacuum technology to create ideal vacuum excavation power. 740/374-2306; [www.x-vac.com](http://www.x-vac.com).



Hi-Vac Corporation

### HYDRA-FLEX RIPSAW

The **Ripsaw** rotating hydroexcavation nozzle from **Hydra-Flex** allows operators to dig faster while using less water. Its optimized stream quality results in greater impingement with higher digging speeds. These heavy-duty, high-impact nozzles operate at up to 3,200 psi and are constructed with stainless steel housings and tungsten carbide wear surfaces to withstand harsh environments and provide long life. Non-conductive urethane coating on the nozzle body protects the user and sensitive underground assets. 952/808-3640; [www.hydraflexinc.com](http://www.hydraflexinc.com).



Hydra-Flex

### KEITH HUBER CORPORATION KNIGHT PD

The **Knight PD** air-mover from **Keith Huber Corporation** uses a Robuschi RB-DV145 blower capable of 6,176 cfm. The Huber Master Control allows the operator to control all functions with the push of a button from one centralized location, including a separate baghouse and cyclone clean-out. It has a 3,000-gallon carbon steel tank with 5/16-inch shell, a DOT-approved boom mount, centrifugal nine-stage cyclone, hydraulically operated full-opening rear door with integrated safety cylinder valve, tank-mounted hydraulic vibrator, 53-degree dump angle, 6-inch discharge valve (mechanical or air operated), 6-inch intake valve with internal standpipe, rear work lights, LED running lights, a backup alarm and grounding reel. Options include ASME/DOT 412, pressure off-load, Huber Lock rear door, hydraulically operated boom with 22 feet of reach and wireless operation, and a Hammerhead Armor front bumper. 800/334-8237; [www.keithhuber.com](http://www.keithhuber.com).



Keith Huber Corporation

### LMT SMART-DIG HX4000

The **Smart-Dig HX4000** modular hydroexcavator from **LMT** can be mounted on a wide variety of new or used truck chassis. Its compact design is ideal for smaller, single-axle trucks, providing increased maneuverability and overall efficiency. It has an onboard 85 hp Kubota diesel engine to eliminate wear and tear on truck power. The Tuthill blower provides 1,300 cfm of airflow combined with a 3,000 psi Udor water blaster and 675 gallons of freshwater. It has an easy-to-use fully hydraulic rear door and wireless remote control telescoping boom. A 445,000 Btu diesel-powered water heater is available for colder climates. 800/545-0174; [www.vaxteel.com](http://www.vaxteel.com).



LMT

### NLB CORP. 10125D

The **10125D** high-pressure water jet pump unit from **NLB Corp.** is typically operated at 10,000 psi and a flow rate of 17.5 gpm, but easily convertible to pressures as low as 6,000 psi and as high as 40,000 psi. It has a continuous duty six-cylinder diesel engine and is trailer mounted for easy transport to job sites with four-wheel electric brakes, heavy-duty axles and full DOT lighting package. All operating controls, including pressure gauge, rupture disc and bypass valve, are mounted on a separate accessory manifold. 248/624-5555; [www.nlbcorp.com](http://www.nlbcorp.com).



NLB Corp.

### NOZZTEQ MONRO-JET F-4

**MONRO-JET F-4** nozzles, distributed by **NozzTeq**, combine the power of a solid-stream pencil jet with the large coverage of a fan jet. Their orbital design circular water jets generate power as high as 36,250 psi at modest gpm rates. They can be used for hydroexcavation and other types of surface cleaning such as concrete, steel, castings and large surface areas including line removal from runways. They can be modified for internal pipe cleaning of sewers and pipes of all types. 866/620-5915; [www.nozzteq.com](http://www.nozzteq.com).



NozzTeq

### POLSTON APPLIED TECHNOLOGIES PAT 360-HD

The **PAT 360-HD** combination truck from **Polston Applied Technologies** is designed to remove sand, grit and other debris in difficult cleaning situations. It utilizes the Polston Process and COMBINATION 3 technology (a combination of jetter, vacuum and downhole pump) to provide a complete, stand-alone cleaning system. It utilizes four 8-inch hydraulic pumps (each pumping 2,500 gpm), enabling it to pump/separate sand and water at up to 10,000 gpm. It delivers up to 1,100 hp, providing maximum power to each of the components and the ability to remove submerged debris and handle low-viscosity fluids. It can perform in surcharged conditions, allowing the facility to remain online. It has an extra long hydraulic knuckleboom crane with up to 49 feet of reach from the center and 180-degree rotation to access hard-to-reach places. 844/765-7866; [www.polstonprocess.com](http://www.polstonprocess.com).



Polston Applied Technologies



## PRESVAC HYDROVAC

The **Hydrovac** hydroexcavator from **Presvac** is designed for cold-weather operation and is available in a version in full compliance with DOT collection and transportation of hazardous materials. The high-vacuum blower allows extraction of all types of soils, gravel, rock, clay, water and silt material. A knockout feature in the debris tank minimizes carryover. Modular filtration configured to the blower size provides blower protection and minimal maintenance. It comes with a heavy-duty 8-inch boom up to 25 feet long with six-way hydraulic power and wireless controls for all boom functions, water pump (soft start), vacuum breaker and truck engine speed. **800/387-7763; www.presvac.com.**



Presvac

## RAMVAC BY SEWER EQUIPMENT HX-12

The **HX-12** conventionally sized hydroexcavator from **Ramvac by Sewer Equipment** has a 12-yard debris tank so the operator doesn't need to leave a big job to unload the material frequently. Its temperature controlled environmental chamber and directional discharge system enable the off-load of debris back into the excavation site when finished, without the mess of dumping the tank. It comes with a long-range wireless remote, NEMA 4 electrical system, a 400,000 Btu water boiler, a three-stage cyclonic filtration system, and efficient 3,000 cfm blower. It is available with a RamAir air excavation system to avoid adding water to a problem area. **800/323-1604; www.ram-vac.com.**



Ramvac by Sewer Equipment

## SOIL SURGEON

The **Soil Surgeon** hydroexcavating tool fits any sewer combination truck equipped with a telescopic 6- or 8-inch boom. The tool has a 1-inch water connection. The operator controls water pressure and power with truck controls. It has a 6-foot Tuff Tube with handles to guide the unit down for potholing or side to side for trenching. Six jets boring inward cut the soil, while six boring outward bring the tube down. **949/363-1401; www.soilsurgeoninc.com.**



Soil Surgeon

## STONEAGE HYDRO-X

The **Hydro-X Lance Assembly** from **StoneAge** is a hydroexcavation jetting tool that can be used to locate utilities and precisely excavate an area with high-pressure water. Jetted with a single replaceable OC1H 1/4 NPT carbide nozzle, this 60-inch lance with a 1/2 NPT male connection gives extra reach for digging deep, focused holes. The assembly includes a guard and collar system to protect the nozzle. **866/795-1586; www.stoneagetools.com.**



StoneAge

## SUPER PRODUCTS MUD DOG 1200

The **Mud Dog 1200** 12-yard hydroexcavator from **Super Products** has a standard water tank capacity of 1,000 gallons and a pump rated at 14 gpm at 3,000 psi. Its 8-inch positive displacement vacuum system offers airflow rated at 5,800 cfm and 28 inches Hg. It has a rear-mounted,

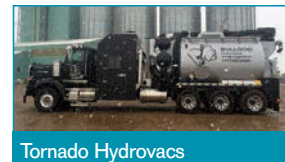


Super Products

8-foot telescoping boom capable of a 19- to 27-foot reach, 335-degree rotation and a 45-degree upward and 25-degree downward pivot allowing operators to achieve a larger work area and dig deeper without the need to halt operation to reposition the truck. It has easy-to-use ejector plate unloading technology, and its tilt unloading ensures that liquids in the debris tank are cleared quickly and efficiently even when unloading in an up-slope/nose-down position. **800/837-9711; www.superproductsllc.com.**

## TORNADO HYDROVACS F4 SLOPE

The **F4 Slope** hydrovac from **Tornado Hydrovacs** holds 13 cubic yards of mud and more than 2,100 gallons of freshwater. It includes a water boiler and a 3,600 to 6,300 cfm positive displacement vacuum blower to pull spoils to the tank via a boom. The boom has a 342-degree rotation and a 26-foot reach. All critical components are housed in an insulated and heated aluminum van body. Its mud sweep empties the tank without hoisting, which eliminates the dangers of dumping on uneven ground and around overhead power lines. **877/340-8141; www.tornadotrucks.com.**



Tornado Hydrovacs

## TRANSWAY SYSTEMS HV-64

The **HV-64** all-season hydroexcavator from **Transway Systems** has a direct-drive Robuschi RB-DV145 6,400 cfm blower with 27 inches Hg. Its hydraulically driven Giant Lp600 water pump delivers 10 gpm at 6,000 psi with the 1,200-gallon HDPE water tank and a 425,000 Btu diesel-fired burner. One diesel-fired heater prevents the water pump and water tank compartments from freezing. The blower, silencers and water system are contained within a walk-in insulated acoustical enclosure, reducing sound levels to the surrounding area. The 3,000-gallon debris tank has a hydraulically operated hoist and full-open rear door with hydraulic door locks. The 26-foot, hydraulically operated 8-inch suction boom is equipped with a joystick and wireless remote control. **800/263-4508; www.transwaysystems.com.**



Transway Systems

## VACALL ALLEXCAVATE

**AllExcavate** hydroexcavators from **Vacall** are available with three boom and intake hose or tube options. The first boom design uses a heavy-duty full-length rubber hose that is durable yet flexible with a gum rubber lining that runs from the turret mounted on the debris tank out to the pick-up point. The second uses a steel tube-in-tube boom and intake that connects to an identical rubber hose elbow that leads to the pick-up point. The original steel tube-in-tube with steel elbow boom and intake tube is also available. The unit generates up to 27 inches Hg and up to 5,800 cfm. Used in combination with the machine's high-power waterjetting forces, it can effectively loosen and remove dirt and other material from around utility lines and foundations. **800/382-8302; www.vacallindustries.com.**



Vacall

CONTINUED >>

## VACSTAR 800

The **VacStar 800** vacuum excavator allows the spoils tank to be emptied in a controlled and safe manner. The rotary vane pump provides a strong vacuum for great depths, distance and speed. It allows the operator to vacuum and pothole up to 200 feet from the unit, easily permitting backyard and previously inaccessible work areas. It is designed to clean out manholes, catch basins, wash pits, valve and meter boxes; wash equipment and property; and safely locate utilities. Damage to buried utilities is avoided using high-pressure water to dig in all types of soil. **319/656-3434; www.vacstar.com.**



## VECTOR MANUFACTURING HXX PRODIGY

The **HXX Prodigy** vacuum excavator from **Vector Manufacturing** is mounted on a 33,000-pound gross vehicle weight Class 7 truck chassis. It has a user-friendly control system identical to the controls used on the full-sized HXX HydroExcavator and a standard extendable boom with 320-degree rotation that provides full coverage of the working area. An optional telescopic boom is also available. It hydroexcavates soil with jets of up to 10 gpm at rates from 1,500 to 2,500 psi. It has a 16-inch Hg, 3,200 cfm positive displacement blower with a filtration system that can handle both air (185 cfm at 150 psi) and water (10 gpm at 2,500 psi) without a bag house. The variable-pressure triplex pump allows the operator to adjust water pressure with the push of a button. An air excavation system is available for applications where dry digging is preferred. It is available with a PD system. The blower and 6-inch hose provide increased performance. **800/627-3171; www.vector.com.**



## VERMEER BY MCLAUGHLIN MEGA 2000

The **MEGA 2000** skid-mounted vacuum excavator from **Vermeer by McLaughlin** can pothole for existing utilities, then remove drilling fluids from larger and longer bore projects. The larger-capacity spoils tank allows the contractor to stay on the job and reduce the need for time-consuming dumping. It has a 99 hp Kubota diesel engine with a 1,200 cfm blower, with a 2,000-gallon spoils tank and 925 gallons of freshwater. The upgraded MEGA 2600 is paired with a power pack, providing additional suction power with a 23-inch Hg DEEP blower for increased fluid management capabilities, plus a 300-gallon freshwater tank. **864/277-587; www.mclaughlinunderground.com.**



## VAC-CON X-CAVATOR

The easy-to-operate **X-Cavator** from **Vac-Con** comes with a hydrostatic drive that uses the chassis engine to eliminate the need for PTO, clutch and gearbox operation. It offers water systems up to 4,000 psi, and a mobile wireless remote control enabling the operator to work the chassis engine rpm, boom, automatic vacuum breaker, dump controls and hydraulic door locks from remote areas up to a half mile away. The boom rotates up to 270 degrees. **855/336-2962; www.vac-con.com.**



## PIPE BURSTING TOOLS

### GUARDAIR UTILITY AIRSPADE 4000 SERIES

The **Utility Airspade 4000 Series** from **Guardair Corporation** harnesses compressed air to safely uncover burst



pipes and underground utility lines without harm. Its supersonic nozzles generate laser-like jets that move at twice the speed. With non-sparking, brass nozzles and electrically insulated, 4-foot fiberglass barrels rated to 300 kV, it maximizes job site safety and minimizes operator fatigue. Its ergonomic handles have full-size plastic-coated grips with openings to accommodate linesmen's gloves. Dead-man triggers ensure safe operation, and trigger guards prevent accidental activation. It has retractable stabilizer bars and integral pressure gauges. **800/482-7324; www.guardaircorp.com.**

### RODDIE INC. LATERAL PIPE BURSTING MACHINE

The lightweight lateral pipe bursting machine from **RODDIE Inc.** slides apart into two components of 50 and 60 pounds that can be lowered and reassembled by hand in the excavated pulling pit. In most cases this machine is powered and operated by a mini-excavator or bobcat tractor. It is capable of a pulling force of 30 to 50 tons, and can be used on 4-, 6- and 8-inch sewer laterals, but can also replace 1- to 4-inch water services. **888/406-3821; www.pipeburstingamerica.com.**



### SPARTAN TOOL UNDERTAKER

The **UnderTaker** pipe bursting system from **Spartan Tool** will replace existing sewer laterals with new seamless, high-flow, high-density polyethylene pipe from 2 to 6 inches in diameter. The system sets up quickly without any tools and handles up to three 45-degree bends in the existing pipe. No component weighs over 70 pounds, so it's easy to position for any job. All is done with minimal disruption to the customer's yard or business and in little time, allowing customers full use of their facilities quickly. **800/435-3866; www.spartantool.com.**



### TRIC TOOLS X30

The small, lightweight **X30** pipe bursting unit from **TRIC Tools** is ideally used to replace 4- and 6-inch sewer laterals. It is designed for home sewer bursting of 1- to 6-inch lines and weighs less than 85 pounds. Cylinders cycle quickly with matching high-pressure hydraulic power packs, resulting in fast job completion. Complete down-hole assembly consists of puller, pulley base and resistance plate. The compact unit has a monolithic, gun-drilled hard aluminum cylinder body for simplicity and easy maintenance, and a steel pulling bridge for extra reliability and longevity. **888/883-8742; www.trictools.com.**



CONTINUED >>

# PVC "Fold & Form" Pipeline Rehabilitation System



You Found The Problem...

Dynaliner Has The Solution

## DynaLiner...

- is chemically resistant.
- Is non-toxic and requires no on the job site chemicals or mixing. It will not harm the environment!
- has a smaller installation footprint and uses less energy resources to install than our competitors.
- has the quickest install time on the market today.
- works with low pressures which reduce the risk of damage the host pipe. It's safer to install!
- requires no digging.
- is precisely manufactured to design specifications at a modern production facility with full Quality Control.
- is manufactured from 3" to 36" diameters.



3" - 12" Diameter



C-Shape

15" - 36" Diameter



H-Shape

For Relining of:

- Metal, Clay or Concrete

Call Us For Special or Difficult Applications Like:  
 Uneven Connections,  
 Corroded and Broken Pipes,  
 Jump Sizes and Bends.

**Don't Wait**

The Problem only gets worse with time!

Call or Email for more information

**TODAY!**

Located in the North East?

New North East Distributor  
**Pipe Liner Supply, LLC.**

Contact Pipe Liner Supply, LLC at 1-518-857-7420 for Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, Vermont, Virginia & West Virginia.



DynaLinerLLC.com • [info@dynalinerllc.com](mailto:info@dynalinerllc.com) • Tel: (205) 314-2498

## SHORING

### AMERICAN SHORING SLIDE RAIL SHORING SYSTEM

The Slide Rail Shoring System from American Shoring can be used in a number of configurations, including for bore pits under roadways, streams or other obstacles. The sheeting system can be used at depths up to 30 feet and is installed with an excavator with no need for special equipment. The system can also be equipped with a doghouse panel to accommodate the casing pipe. 800/407-4674; [www.americanshoring.com](http://www.americanshoring.com).



American Shoring

### PRONAL-USA SMARTSHORE

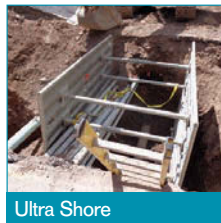
The SmartShore shoring system from Pronal-USA is PE certified to be in compliance with OSHA Standard 29 CFR part 1926, subpart P. It is approved for type A, B and C60 soils at depths up to 6.5 feet. It is made of puncture-resistant material and is easy to handle at 28 pounds. Its design allows two people to set up a trench box in under 10 minutes. It requires minimum storage space and is flexible and adaptable to most types of excavations. 386/310-1558; [www.pronal-usa.com](http://www.pronal-usa.com).



Pronal-USA

### ULTRA SHORE

The Ultra Shore shoring system is made of specially corrugated aluminum with lightweight trench shields. All panels can be used horizontally or vertically and are stackable. Users can easily close off one or both ends with quick-release, spring-loaded end closure panels. One person can lower a single pair of assembled panels into an excavation. The unit conveniently transports in a pickup and is safe for bury at depths to 12 feet, even in class C soils. Optional features like leg or wheel kits are available to take full advantage of OSHA regulations. 800/746-7464; [www.shoring.com](http://www.shoring.com). c



Ultra Shore

# Pipe Bursting Methods and Projects

By Craig Mandli

## PIPE BURSTING ENABLES REHABILITATION OF WASTEWATER LINES COMPROMISED BY EARTHQUAKES

### PROBLEM

A string of devastating earthquakes that began in 2010 in Christchurch, New Zealand, either destroyed or damaged most wastewater systems in the town and surrounding foothills. Years after the quakes, there are still hundreds of miles of gravity-fed clay sewer laterals that need rehabilitation or replacement.



### SOLUTION

Pipe bursting has proven to be not only one of the quickest techniques, but one of the least intrusive to landscape and property and lowest in overall cost. John Grant, general manager of Ditch Witch New Zealand, the HammerHead Trenchless Equipment distributor for New Zealand, has supplied 30 PortaBurst units. The 30-ton pipe bursting systems can be used to replace 2- to 6-inch lateral pipes. The units break down into three components and can be easily packed into rugged job sites in the hills. The compact unit is easy to transport and position while fully assembled and can be used at confined residential access points.

### RESULT

Grant says that while his customers were at first just using the PortaBurst for replacing pipe under footpaths and driveways and around other utilities, they began choosing it for jobs that didn't require it. 800/331-6653; [www.hammerheadtrenchless.com](http://www.hammerheadtrenchless.com). c

**Cleaner**  
FOR DRAIN AND PIPE CLEANING, INSPECTION AND REHABILITATION PROFESSIONALS  
WWEIT SHOW ISSUE  
BORN INTO THE BUSINESS  
CLEANING, INSPECTING AND REPAIRING BECOME KEY COMPONENTS OF FOURTH-GENERATION PLUMBERS BUSINESS SUCCESS PAGE 28  
MONEY MACHINES  
TOUGH JOB  
TECH PERSPECTIVE

**FREE**  
Subscription  
[www.cleaner.com](http://www.cleaner.com)

→ GET  
EMAIL NEWS  
ALERTS FOR  
**Cleaner**

Go to  
[cleaner.com/alerts](http://cleaner.com/alerts)  
and get started today!

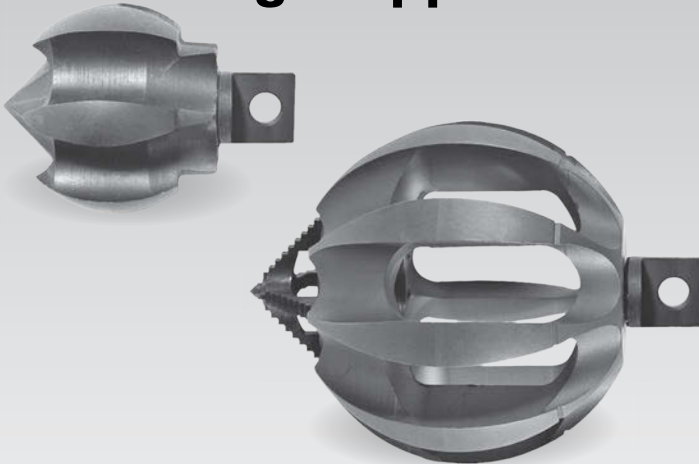
# THE CABLE CENTER • 1-800-257-7209



**24 HOUR TURNAROUND - MIDWEST'S LARGEST FACTORY AUTHORIZED  
REPAIR CENTER FOR GEN-EYE, GATORCAM & SEESNAKE**



## ClogChopper™



- Multi-function cutting tools
- Six self-sharpening blades
- Risk-free pipe damage
- Maneuvers around tight bends
- Safe cleaning on metal, plastic and clay pipes
- Variety of sizes
- Connector options for most drain cleaning machines

**CALL FOR PRICING!**

## NEW Gen-Eye Hot Spot™ Pipe Locator



- Easy to read display – Icons lead you to your target and auto backlight lets you locate in dimly lit areas.
- Total field antenna array – Allows you locate from any direction.
- Line direction compass – Tells you the lay of the pipe.
- Industry's most rugged locator – Rated IP65, the industry's highest, it is dust and dirt proof and water resistant.
- Superior Battery Life – Batteries lasts twice as long as other brands.
- Expanded Frequencies – Locates two sonde frequencies, two power frequencies and four line frequencies.
- Upgradeable Software – Use the USB port to upgrade software in the field.

**CALL FOR PRICING!**



**General J-2900**  
Basic Unit Machine Only

**\$2745**  
FREE DELIVERY



**General J-1450**  
Portable Jetter  
Basic Unit Machine Only

**\$1540**  
FREE DELIVERY



**Mini-Rooter XP™**  
Basic Unit – No cable cutters  
or power feed

**\$580**  
FREE DELIVERY



**General Speedroooter 92™**  
Basic Unit – No cable cutters  
or power feed

**\$1160**  
FREE DELIVERY



**ANNOVI  
REVERBERI**  
High Performance Pumps



## Jetter and Washdown Pumps



RTP 7.9-10 GPM @ 7250 - 8700  
RTF 36-40 GPM @ 1500  
RTJ 18.5 GPM @ 4000

Professional Strength  
Specialty Pumps

*"The First Choice When  
Quality Matters"*



RTX Pumps  
Model #s 30-50-70-85-100  
7.9 - 26.4 GPM  
1450 - 4350 PSI

AR North America  
[www.arnorthamerica.com](http://www.arnorthamerica.com)  
[info@arnorthamerica.com](mailto:info@arnorthamerica.com)  
(763) 398-2008

## Rotary Vane Vacuum Pumps

Since 1952

- Septic Tanks and Slurry
- Sewage Pipes
- Sanitary
- Oil Field Industries
- Milk and Water Tankers
- Agricultural



MEC II 13500



WPT 720

For More Information, Contact  
[info@bppna.com](mailto:info@bppna.com)



**Battioni®**  
Pagani  
Pompe

**Power**  
at your service

# Beyond buckets and blades.

**digDIFFERENT**

**FIND OUT HOW.**

FREE subscription at [digdifferent.com](http://digdifferent.com)

## INDUSTRY NEWS

### Advanced Drainage Systems opens distribution yard

Advanced Drainage Systems opened a stocking/distribution yard in Alviso, California. The yard is the third California location for ADS.

### Sioux Corp.'s pressure washers receive certification

Sioux Corp.'s electric-motor-driven, industrial cold-water pressure washer received third-party certification by ETL to UL and CSA safety standards. The washers now meet UL 1776 and CSA C22.2 #68 safety regulations and the requirements of OSHA regulation 1910.399. Nonexplosive electric-motor-driven models meet UL508A and CSA C22.2 #14-10 requirements.

### Hanson Pipe & Precast names vice president

Hanson Pipe & Precast named Cory R. Mayo vice president of operations. He succeeds Greg Minter who retired after 33 years.

### Nu Flow relocates Houston office

Nu Flow relocated its Houston regional office to 499 West 38th St. The new site is four times larger than the previous office and warehouse.

### HammerHead names UK distributor

HammerHead named Mammoth Equipment of Cambridgeshire, England, its distributor for trenchless equipment in the U.K. and Ireland.

### Electric Eel offers instructional video

The Ace and Ace 2 pipeline inspection camera systems instruction video is available on the Electric Eel Mfg. website, [www.electriceel.com/ecam\\_ace-ace2\\_instructionalvideo.htm](http://www.electriceel.com/ecam_ace-ace2_instructionalvideo.htm).

### InduSoft receives automation software award

InduSoft received the *Automation Inside* 2014 Readers' Choice Award for its Web Studio in the Best Automation Software category. InduSoft was selected from among 26 automation products based on reader votes.

### Legacy Equipment names general manager

Legacy Equipment Co. hired John Webster as general manager. Legacy rents hydroexcavators, industrial vacuum trucks, sewer cleaning trucks and other specialized equipment.

### Hi-Vac launches industrial division website

Hi-Vac Corp. launched new websites for its Hi-Vac and UltraVac brands. Product sections are divided between stationary and portable units and include specifications, literatures, photos and videos. An aftermarket services portal provides quotes for repairs and/or rebuilds.

### Mathey Dearman names factory representative

Mathey Dearman named Rizzo & Associates, managed by Marc Rizzo, as a factory representative for Arizona, California, Hawaii and Nevada.

### Klein Tools receives brand award

Klein Tools was named Best Hand Tool Brand for 2014 by *Tools in Action* readers. Klein was chosen from among 17 brands. **c**

# lateral inspection takes a **new** direction

Inspecting and cleaning sewer laterals requires the agility to navigate bends, branches and obstructions. The new patent-pending JetCam 40 combines powerful propulsion, positive steering and bidirectional jetting to view laterals from any main line or clean-out.

Propelled by high-pressure water (1), JetCam 40 snakes past multiple bends to capture live footage as it cleans. A side jet on the camera is aimed remotely to steer through branches (2) and levitate over debris (3), and a forward jet can be pulsed to clear blockages (4).

JetCam 40 is ideal for locating cross-bores (5), pipe failures and blockages, all while jetting lines clean. It operates off most any high-pressure water source, including power washers and combination trucks. Demo it now and experience lateral maintenance that's agile, portable and affordable.



**JETCAM™ 40**

**sign-up**

for a demo\*

**Pipeline Renewal  
TECHNOLOGIES™**

[www.pipelinert.com](http://www.pipelinert.com) • (973) 252-6700

\* limited spots available

an **Envirosight** company

Patents pending.

©2015 Pipeline Renewal Technologies. All rights reserved. JetCam is a trademark of Pipeline Renewal Technologies.

PRODUCT SPOTLIGHT

**Ground-penetrating radar system locates metallic, nonmetallic targets**

By Ed Wodalski

The UtilityScan ground-penetrating radar (GPR) system from Geophysical Survey Systems Inc. (GSSI) locates metallic and nonmetallic targets, including plastics, cementitious materials and fiberglass. It can also detect trench lines if a pipe is obscured.

“Ground-penetrating radar can detect pipes without tracer wire or those that cannot be traced with electromagnetic locators,” says Peter Masters, applications specialist for GSSI. “Having the ability to quickly and effectively locate pipe enables users to finish jobs faster and complete more jobs during the day.”

GSSI recommends using GPR in conjunction with other locating technologies, such as electromagnetic locators, metal detectors, sondes and even leak locating equipment to confirm pipe locations: The more information that can be collected, the better the decision.

Like any technology, GPR has certain limitations, Masters says. In particular, GPR antenna penetration is affected by soil type.

“Sandy soils are generally better; clay soils are generally more difficult,” he says. “The best way to find out if GPR is effective in your area is to check the USDA soils map.”

Pipe depth and pipe diameter is also a consideration.

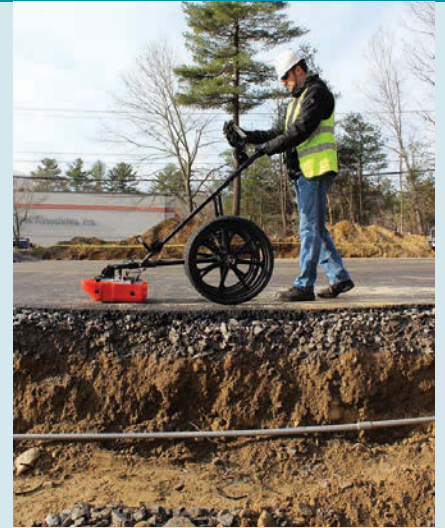
“The deeper the pipe, the larger it needs to be for the GPR to be effective,” Masters says. “As a general rule, GPR can find all types of pipe material. However, we do use a pipe diameter-to-depth ratio as a guideline for what users can expect to see. The ratio is roughly 1 inch in diameter for every foot deep a pipe is buried – 2-inch pipe at 2 feet,

4-inch pipe at 4 feet.”

The scan offers real-time data collection with backup cursor and cross-hair cursor to accurately find targets. It can also store and replay data.

“Typically, three components make up a GPR system: the control unit, the GPR antenna and the survey wheel to measure distance,” Masters says. “GPR is looking for any point where the electromagnetic properties of the materials change. As the operator walks over the area, the GPR system sends low-power radar waves into the subsurface. The control unit then records the strength and time required for the return of the reflected signals. Subsurface variations like pipes, wire, tanks and voids will cause significant reflections, which appear on the screen in real time, enabling the operator to identify both horizontal and depth positioning of buried utilities.”

The system is available in three models. The entry level UtilityScan LT is designed for easy use, while the multifunction UtilityScan offers 2-D and 3-D data collection and display. It can operate with a range of antennas for scanning soil or concrete structures. The UtilityScan DF has a dual-frequency antenna for near-surface resolution, traditional depth ranges, an intuitive interface and display options. 603/893-1109; [www.geophysical.com](http://www.geophysical.com).



1

**1 ELECTRIC EEL DUAL CABLE SECTIONAL DRAIN CLEANER**

The Model C dual cable sectional drain cleaner from Electric Eel Mfg. cleans tree roots and other tough blockages in 3- to 10-inch-diameter sewer lines. The drain cleaner has 200 feet of 1 1/4-inch self-feeding dual cable in 8- or 10-foot sections. 800/833-1212; [www.electriceel.com](http://www.electriceel.com).



2

**2 GENERAL PIPE CLEANERS POWER-VEE DRAIN CLEANER**

The Power-Vee drain cleaner from General Pipe Cleaners has an automatic feeding system that delivers cable at a rate of 16 feet per minute. Designed for cleaning up to 50 feet of 1/4- to 3-inch-diameter pipe, the feed can adjust to take cable from 1/4 to 3/8 inches without tools or additional parts. 800/245-6200; [www.drainbrain.com](http://www.drainbrain.com).





3



4



5



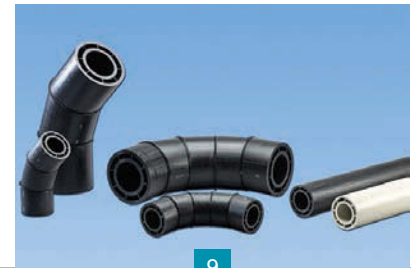
6



7



8



9

### 3 FLUID CONSERVATION SYSTEMS PRESSURE CONTROLLER

The electronic controller for pressure reducing valves (PRVs) from HWM and available through Fluid Conservation Systems provides detailed multi-port PRV control without a flowmeter, either by flow or by time, together with intelligent closed-loop control. The controller permits immediate control of pressure within a distribution network and automatically adapts to network changes and events by analyzing data from up to three critical points. **800/531-5465; www.fluidconservation.com.**

### 4 PEERLESS VEHICLE POWER DISTRIBUTION MODULES

The HWB Series of hard-wired modules from The Cole Hersee Division of Littelfuse Commercial Vehicle Products and distributed by Peerless Electronics are designed to be used with 280 style components (mini-fuses, relays, diodes, resistors). **800/285-2121; www.peerlesselectronics.com.**

### 5 MCELROY LOW-FORCE FUSION MACHINE

The Acrobat 160 low-force fusion machine from McElroy Manufacturing is designed for use with 63 mm to 160 mm polypropylene pipe. The machine can be configured from four to three jaws without tools. Features include a hydraulic power unit and inserts for common butt-fused polypropylene pipe sizes, and a data logger to document key parameters. The facer and heater can be loaded from the top or bottom in the three-jaw configuration. **918/836-8611; www.mcelroy.com/fusion.**

### 6 HONDA POWER PORTABLE WATER PUMPS

WT Series portable water pumps from the Honda Power Equipment Group are designed for dewatering construction sites as well as removing water contaminated with leaves, debris, stones and other waste materials. The

WDP diaphragm pump moves wastewater containing up to 2.4-inch solids and can discharge 80 gpm. It has a 118 cc GX 120 OHV commercial-grade engine, 3-inch suction and discharge ports, spring-loaded connecting rod, rock channel and oil alert. **678/339-2600; www.powerequipment.honda.com.**

### 7 MAXLITE LED VAPOR-TIGHT FIXTURES

DLC-listed LED vapor-tight fixtures from MaxLite are designed to replace fluorescent strip lights in garages and stairwells. The 50-watt lights deliver 4,197 lumens and exceed the Illuminating Engineering Society's (IES) foot-candle recommendations for parking areas, driving lanes and stairwell compliance. Available in 4-foot lengths, the light fixtures have a one-piece, noncorrosive polycarbonate body that protects the light source from dust, dirt and vandalism. **973/244-7300; www.maxlite.com.**

### 8 WATER CANNON INDUSTRIAL PRESSURE WASHER

The 17K12 industrial pressure washer from Water Cannon delivers 12 gpm, 2,800 psi and 33,600 effective cleaning units (ECUs). Features include a Kohler CH750 electric start 30 hp twin cylinder gasoline-powered engine, 15-gallon long run fuel tank, roll cage protection, poly chain drive, TSF Series General triplex plunger pump, 50-foot hose, trigger gun, wand, quick-connect nozzles and disconnects. **800/333-9274; www.watercannon.com.**

### 9 ASAHI/AMERICA DOUBLE-WALL PIPING

Poly-Flo co-extruded double-containment piping system from Asahi/America is available in black PE and euro gray PP-R for applications where thermal expansion and contraction are present. The complete piping system includes pressure, drainage and machined fittings. The SDR-designed system operates up to 150 psi at 68 degrees F and is available in 1- by 1-1/2-inch, 2- by 3-inch and 4- by 6-inch sizes. **800/343-3618; www.asahi-america.com.**



10



11



12



13



14



15



16

## 10 HANNAY HEAVY-DUTY 6000 SERIES HOSE REELS

Heavy-duty 6000 Series hose reels from Hannay Reels are designed for spray, waterblasting and sewer-cleaning applications. Manual reels include crank rewind with pinion brake. Power reels feature gear-driven crank rewind or chain and sprocket drive. Bronze or aluminum swivel joint and stainless steel hub assembly and riser are available. **877/467-3357; [www.hannay.com](http://www.hannay.com).**

## 11 GUZZLER VACUUM LOADER CAMERA SYSTEM

The High-Rail vacuum loader three-camera system option from Guzzler Manufacturing provides the operator with enhanced visibility while the unit is vacuuming on railroad tracks and in switchyards. The camera system includes a 7-inch, weatherproof LCD monitor and cameras mounted on the front and sides of the vacuum truck to provide a wide, real-time view, even in extreme weather conditions. The operator can simultaneously monitor the view from each camera on the LCD screen. **800/627-3171; [www.guzzler.com](http://www.guzzler.com).**

## 12 VERMEER TIER 4 HORIZONTAL DIRECTIONAL DRILL

The D100x140 Navigator horizontal directional drill from Vermeer features a 275 hp Tier 4 Final Cat diesel engine, 100,000 pounds of thrust/pullback, 14,000 ft-lbs of rotational torque and rotational speed of 203 rpm. The drill is available with the InSite asset management system, DigiTrak Aura display and 15- or 20-foot rod options. **641/628-3141; [www.vermeer.com](http://www.vermeer.com).**

## 13 LIGHT RING LED MANHOLE SAFETY LIGHT

The manhole safety light from Light Ring has eight LED lights powered by a lithium ion battery with five-hour charge. It can also be plugged directly into a vehicle power source. The aluminum ring fits standard manhole openings. An adjustable ring fits multiple sizes. A detachable downrigger protects cables and jetter hoses. **877/941-2833; [www.lightringinc.com](http://www.lightringinc.com).**

## 14 SPIRE METERING VORTEX FLOWMETER

The 602VF vortex flowmeter distributed by Spire Metering Technology is designed for accurate, low-maintenance flow measurement in gas, steam and liquid applications. **888/738-0188; [www.spiremt.com](http://www.spiremt.com).**

## 15 SNAP-ON HEAVY-DUTY DIAGNOSTIC SYSTEM

The Pro-Link heavy-duty diagnostic system from Snap-On Industrial Brands is designed for light diesel to Class 8 commercial trucks. Features include the ability to read and clear fault codes, access trip data to monitor vehicle and driver performance, create health reports and view live data to verify performance. The diagnostic system has an 8.5-inch glass color touch screen that automatically adjusts brightness for indoor and outdoor use, 8-foot cable, solid state drive to store data and software updates, carrying case, battery pack and 120-volt AC power adapter. **800/446-7404; [www.snaponindustrialbrands.com](http://www.snaponindustrialbrands.com).**

## 16 BUCKHORN PIPELINE PRESSURE TEST PUMP

The TPS80D pipeline pressure test pump from Buckhorn Pumps is designed to deliver a flow rate of 500 gpm and 350 feet of head down to 40 gpm at a discharge pressure of 0 to 3,000 psi (hydrostatic test). The pump package includes a Cat C4.4TA or Perkins 1104D-E44TA engine, MCM 250 4 by 5 by 14 centrifugal pump, FMC Technologies/Bean L114 triplex pressure pump, and FMC Technologies positive sealing check valve and auxiliary piping. **254/965-2555; [www.buckhornpumps.com](http://www.buckhornpumps.com).** c

Cleaner is FREE!  
Subscribe online at [www.cleaner.com](http://www.cleaner.com)

# The Contractor's Package



## Everything you need—one package.


Includes our Upright Electric, Jetter, and Video Inspect/Locate/Leak Detect packages shown.

- **M888** (for 3-10" lines) and **M661** (for 1¼" - 3" lines) cable machines
- **M30** (mainline) and **M20** (sinkline) jetters
- **NGX10** (for 3 - 8" lines) and **MSA-NG-PCAM** (for 1½" - 3" lines) Next Generation cameras
- And much more

MyTana is your ONE Source for all the tools the sewer and drain cleaning professional needs. *And* personal customer service to help you—in the shop or in the field.

# MyTana

**1.800.328.8170**  
**www.MyTana.com**

 Made in the U.S.A.



Request your **FREE, FULL LINE** catalog today!  
**1.800.328.8170**



CABLE MACHINES – JETTERS – PUSH CAMERAS FOR MAIN LINES AND DRAIN LINES • LOCATORS • RELATED PARTS • ACCESSORIES  
Factory Direct Customer Service Competent • Polite • Clear (M–F 7am - 5pm CST)

# **DR** DYNAMIC REPAIRS

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

**New & Refurbished Inspection  
Equipment For Sale**

**Rental Equipment Available  
Daily & Weekly Rates**

Ask About Our 48-Hr. Turn Around Time

**INSPECTION CAMERAS  
ARE OUR  
ONLY BUSINESS!**

**973-478-0893**

**DYNAMIC REPAIRS**  
40 Arnot St., Unit 20  
Lodi, NJ 07644  
dynamicablerepairs@yahoo.com  
www.dynamicrepairs.net

**CONFINED SPACE ENTRY PACKAGE ONLY \$2,995**

THANK YOU

- 4-Gas Air Monitor
- 7' Tripod
- 3-Way Fall Protection
- Work Winch
- Full Body Harness

Add a Blower with 15' of duct for only \$350!  
Add a 5 Minute Escape Respirator for only \$500!

**MTECH. 800.362.0240**  
www.mtechcompany.com

**T&T Tools, Inc.**  
**800.521.6893**

CALL for a FREE Catalog

Many styles Available

THANK YOU

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

**www.mightyprobe.com**

Over 25 years of building quality equipment

# HotJetUSA®

DRAIN LINE JETTING EQUIPMENT

**Most Versatile Jetter On The Market!**

THANK YOU



- 35 HP Vanguard
- Remote Control
- Cleans Drains from 2"-8"+

On Sale For Only **\$24,995!**

**Fully loaded! Call for details!**

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

# Superior SMOKE

For SEWER TESTING

Superior Smoke Fluid Systems  
Smoke Candles • Smoke Blowers

THANK YOU

MADE IN USA




**Superior Smoke Testing**  
The Most Cost Effective Method to Find Sources of Surface Inflow

SuperiorSignal.com/Cleaner

# Waterblaster Rentals & Sales

Houston, Texas



**Boatman Industries**

1K to 50K psi  
60 hp to 1000 hp  
Waterblasters & Accessories  
Used Equipment Sales

**713-641-6006**  
www.boatmanind.com

# HONDA ENGINES DELIVERED PRICE



GX120QX - 4HP **\$375**  
GX160QX - 5.5HP **\$375**  
GX200QX - 6.5HP **\$399**  
GX270QAG - 9HP **\$579**  
GX390QA - 13HP **\$599**

Specify Red & White or Black

Un contacto en Español: llama al: **800.786.9274**

GSPARTS.COM

# ERICKSON Tank & Pump



**509.785.2955**  
CALL FOR UPDATED LIST OF EQUIPMENT  
WWW.ERICKSONTANK.COM

**Masport®**  
PUMPS & QUALITY COMPONENTS

800 Rd. P.5 S.W. / Quincy, WA 98848  
fax: 509.785.3770  
e-mail: sales@ericksontank.com  
"TANKS" FOR YOUR BUSINESS!

WE TAKE TRADES

**You'll get friendly service when you let us repair your equipment**



> We service push rod reels, cameras and command modules. We repair most brands.

> We understand when your equipment is broken, you are losing Big Bucks! We give fast and quality service.

> We are an authorized service center for General Wire, Ratch, Vision and Ridgid.

> Your equipment is very expensive and we would be happy to supply references on our quality work. Just call Terry or Stan!

Electronic Repair Co. • 205-836-0454 • servicewithasmile.com

# You Can Install Sewer and Water Lines (Without Digging A Trench)

**Pipe Genies Do It All!**  
Ductile & Cast Iron, Clay & Concrete, ABS, PE & PVC

**Pipe Genies Pull Any Pipe!**  
System Power From 20 Tons to 240 Tons!  
(Rated for 1/2" - 30" Pipe)

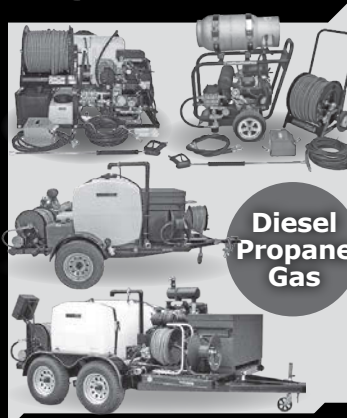
**Pipe Genies Work Anywhere!**  
The Most Compact Systems Available!

We have everything you need to get started making profits with pipe bursting!

AMERICAN PIPE GENIE

**www.TrenchlessAmerica.com**  
Toll Free 1 877 411 7473

# Let Us Build Your JETTER



**Diesel Propane Gas**

**AMERICAN JETTER.COM**  
**866-944-3569**

It's A **Big Full**



MUNICIPAL SEWER & WATER

**mswmag.com**

- > Classifieds
- > Used Equipment
- > E-zines
- > Product Categories

**Factory Direct Special!** **FREE SHIPPING**

**WEDGE Service Replacement Tool**  
**Only \$495!**

includes: Wedge, 75' cable & grip  
 3/4" & 1" copper connectors add \$99 • 3/4" & 1" PE connectors add \$99



**Footage**

Call us toll free: 1-888-737-3668

**DYE TRACERS**

**Solutions for:**

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

**BRIGHT DYES**  
 Division of Kingscote Chemicals



NSF Certified to ANSI/NSF 60

www.brightdyes.com • 1-800-394-0678

**Cua Claws**

A Simple Solution for Slippery PVC Pipe - **The Right Wheels**

We now resurface all makes of steel transport wheels

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



**Water Jets for rent**

vwelt THANK YOU



- Units from 4,000 to 40,000 psi, including convertibles
- 60-600 hp, diesel or electric
- Rent, buy or lease
- 6 convenient branches: MI, IN, NJ, LA, TX, CA

NLB Corp. 1-800-441-5059  
 www.nlbcorp.com

**THE "ORIGINAL" LIQUID SMOKE**

**Turbo Fog M45:**

- Versatile
- Light Weight
- Compact
- Creates Dense Smoke

**TURBO-FOG** Since 1977



vwelt THANK YOU

www.turbo-fog.com • 1-800-394-0678

Join A National Brand: www.RooterMan.com

**ROOTER-MAN**

*"To The Rescue"*

NO ROYALTY ON PERCENTAGE OF SALES

Franchise Package \$3,975

AS SEEN ON TV


RESERVE YOUR EXCLUSIVE TERRITORY • Call 1-800-700-8062



**This Is The Nozzle You've Been Waiting For**  
 \*Patented

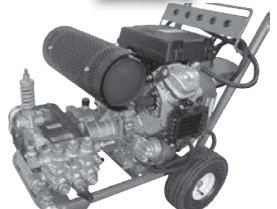
**Root Rat** **root cutter nozzle**

**Root Rat Combo Kit**



3/4" - 1" root rat combo kit. Use a reducer adapter to go from 1" to 3/4".

**Custom Built Jetters**



Hot or cold water jetters from 4 gpm at 4000 psi to 12 gpm at 4000 psi, skid or cart frames or small trailer systems.

"The Root Rat is the easiest and most versatile root cutter nozzle I have ever used. The Root Rat works where other nozzles fail."  
 Tim Jones, owner of Eastern Sewer Jetting

vwelt THANK YOU

MADE IN THE USA

**3/4-1"** **3/8"** **1/2"**

40-160 gpm/1500-4000 psi    3-10 gpm/2000-7500 psi    7-35 gpm/1500-10,000 psi

**WE SELL AND SERVICE COLD WATER JETTERS**  
 WE SELL PARTS, PUMPS, UNLOADERS, HOSES, JET TIPS, ETC.

**CHEMPURE PRODUCTS CORP.**  
 1-800-288-7873 • 330.874.4300  
 www.rootrat.net

Visa, Mastercard, Discover, AmEx Accepted

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

And they have for over 50 years

**KEN-WAY CABLE CLEANERS**

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

**Junior** **Model 400**



**KEN-WAY Exclusive Built Cables**

3/8" 13/32" 1/2" 3/4" 11/16" 5/8" 5/16" 1/4"

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

**KEN-WAY CORPORATION**

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

## 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. (C04)

## DRAIN/SEWER CLEANING EQUIPMENT

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)

## HAZARDOUS WASTE UNITS

New 3,200 U.S. gallon, carbon steel, DOT certified 407/412 vacuum tank; dump type with full open rear door and a Presvac PVB-750 vacuum-pressure pump installed on a 2015 Peterbilt 348 cab and chassis. (Stock #13587C-E) **www.VacuumSalesInc.com, (888) VAC-UNIT (822-8648).** (CBM)

## JETTERS-TRAILER



**Xtreme Flow Hot/Cold Jetter!** Model #HJ2TA8536, tandem axle trailer, 35 hp Vanguard 8.5 gpm @ 3,600 psi, 325-gallon water tank, 300' hose, General Pump. List \$36,995. On sale for \$32,995. Fully loaded!

**800-213-3272**  
**www.hotjetusa.com** CBM

US Jetting 4018 skid-mounted jetter. 2005 with 146 hrs. 300-gallon tank. Hose reel w/500 ft. hose. Custom-built wheeled dolly. C/W Deutz F3L2011, 3-cycle diesel. \$15,000. 970-653-8588 (C04)

2008 GMC PipeHunter: John Deere rear engine, 700-gallon poly water tank, 3/4" jet hose, Giant pump. Ken's Truck & Equipment: [www.khtrucks.com](http://www.khtrucks.com) 972-938-1905 or 214-632-5277 (CBM)

2008 Ford PipeHunter: 7844TMV. 1/2" hose. Giant jet pump 14.2gpm @ 4,000psi. Tuthill blower, 1/2-yd. debris tank. John Deere rear engine. 294 hrs. Ken's Truck & Equipment: [www.khtrucks.com](http://www.khtrucks.com) 972-938-1905 or 214-632-5277 (CBM)

## JETTERS-TRUCK



**Pipehunter.com Jet Truck** (pre-owned) 4,000psi @ 20gpm. A great looking, operating and dependable piece of equipment.

**239-821-2596**  
**Rod@marcoplumbing.com** CBM



**1993 GMC 1-ton Jetter:** 35gpm FMC pump, 3/4" hose, 500-gallon plastic tank. ....\$14,500 OBO  
Other jet trucks and trailers available.

**608-835-7767, WI** PBM

Jack Doheny Supplies Inc. offers a full range of late model combo units and DOT industrial vacuum loaders. Call us @1-800-3DOHENY. (CBM)

## JET VACS



**2001 VacCon PD** 2001 Vac-Con jet vac combo: CAT 3126 engine, Roots 824 PD blower, Allison automatic, 55,000 miles. 600 ft. 1" hose, 2,000psi @ 80gpm, 1,200-gallon water tanks, 12-yd. debris tank. Cummins 4BT rear engine, rear strobes, arrow board on rear. Debris body flush system. 8" telescoping boom. Excellent condition. ....\$80,000 OBO

**Kyle 515-360-8582, IA**  
**kyle@accujetiowa.com** C05



**2002 IHC Diesel Vactor 2100 Sewer Combo:** 85,000 Original Miles, IHC DT-530, 275hp Diesel, Allison Auto Transmission. 10-Cubic-Yard Vacuum Dump, 1,500-Gallon Water Tank, PD Blower. **RELEASED FROM LOCAL MUNICIPALITY.** Stock# 14754-49 ..... \$139,500

**Call Us - We Deal Nationwide**  
**Al Asher and Sons, Inc.**  
**855-885-2295**  
**www.alasher.com** C04



**2001 VacCon** jet vac combo International chassis: Navistar engine, 3-stage fan, Allison automatic, 65,000 miles. 600 ft. 1" hose, 2,000psi @ 80gpm, 1,200-gallon water tanks, 11-yd. debris tank. 3,200 hours on aux. engine, rear strobes, arrow board on rear. Debris body flush system. 8" telescoping boom. Truck engine overhauled summer of 2014. Excellent condition. \$50,000 OBO

**Kyle 515-360-8582, IA**  
**kyle@accujetiowa.com** C06



**2006 International Vac-Con:** 80gpm, 3-stage fan, 12-yd. debris tank, 90,829 miles, 1,031 hrs. Pony motor 1,960 hrs. .... \$135,000

**Call 877-389-2227, IN** C04

1991 Volvo Camel 200: Tandem axle. Great condition. Ready for work. \$25,000. Green Bay, WI. 920-655-7302 or 920-866-9109. (CBM)

2007 Mack Guzzler: Damaged, rear unit new in 2011. Ingersoll Rand Air Solutions Hibon model SIAV 8702 blower. Ken's Truck & Equipment: [www.khtrucks.com](http://www.khtrucks.com) 972-938-1905 or 214-632-5277 (CBM)

2006 International Vactor 2112\15: 9,300 hours, SW: 05-07V-9443, Vactor jet pump 80gpm @ 2,000psi. 600' 1" new hose. 800' hose reel capacity. Pump-off system. Ken's Truck & Equipment: [www.khtrucks.com](http://www.khtrucks.com) 972-938-1905 or 214-632-5277 (CBM)

2001 Vactor 2100 Series hydro-vacuum truck. 3,700cfm @ 28" Roots 1016 blower. Cold-weather package & much more. 970-653-8588 (C05)

2006 International Vac-Con, CAT pony motor, 3-stage fan, 12-yard tank, 1,300-gallon water tank. \$88,000. Call Jeff Brooks @ 317-258-4900. (C05)

2005 Kenworth Vactor 2115: 15-cubic-yard hopper, 1,500-gallon water capacity. Roots 1024 Ras-J 18" blower 80gpm/2,500psi water system. 800' x 1" sewer hose/2,500psi. 2005 Kenworth T800, CAT C-470hp, tri-axle chassis. Eaton-Fuller manual transmission with push axle. \$193,000. Call Jeff Brooks @ 317-258-4900. (C05)

1998 Volvo GapVax: Stk# 2301, VIN# 4VHJCB JF8WN857157. Stainless steel tank, N-14 Cummins, 9-speed Fuller transmission, Roots 27" blower. Ken's Truck & Equipment: [www.khtrucks.com](http://www.khtrucks.com) 972-938-1905 or 214-632-5277 (CBM)

2002 International Guzzler: 54,000 miles, 10-speed, 27" Roots blower. Stainless steel tank. Stk# 2300. Ken's Truck & Equipment: [www.khtrucks.com](http://www.khtrucks.com) 972-938-1905 or 214-632-5277 (CBM)

2009 Sterling Vac-Con: VPD3616LHAEN S\N: 09085083. 3,975 main engine hours. Bean jetting pump. Roots 824 RCS blower, 16-yard debris tank. New aluminum extension tubes. Hydraulic-driven jetter pump. Ken's Truck & Equipment: [www.khtrucks.com](http://www.khtrucks.com) 972-938-1905 or 214-632-5277 (CBM)

2002 Sterling LT7501 Vac-Con Model V390LHA combination sewer cleaning truck: Freshly painted white. CAT 3126 - 275hp engine, 3-stage fan, 1,000-gallon water tanks, pump off option available. 10' telescopic boom. FMC water pump - 65gpm @ 3,000psi. Articulating hose reel with 600 feet of new 1" hose. 84,316 miles. Located in Orange, CA. \$79,900. Contact Craig: 714-639-8352. Additional details at [www.empireequip.com](http://www.empireequip.com) (CBM)

Pre-owned 2002 Sterling LT 9500 cab and chassis with a Clean Earth Safe Jet Vac 1015 Combo Unit. (Stock #3876C) **www.VacuumSalesInc.com, (888) VAC-UNIT (822-8648).** (CBM)

Vac-Con V390LHA combination unit with Roots 827 blower, 1999 International Model 2554 cab and chassis. (Stock #3918C) **www.VacuumSalesInc.com, (888) VAC-UNIT (822-8648).** (CBM)

Vac-Con industrial machine mounted on a pre-owned 2004 Sterling cab and chassis. (Stock #8593C) **www.VacuumSalesInc.com (888) VAC-UNIT (822-8648)** (CBM)

2006 Volvo cab & chassis with a Vactor 2110 combination vacuum loader and high-pressure sewer cleaning system. (Stock #3483C) **www.VacuumSalesInc.com (888) VAC-UNIT (822-8648)** (CBM)

## LEASE/FINANCING

**North Star Commercial Credit:** Commercial loans for trucks or equipment. Flexible purchase programs to fit your budget. 21 years in the industry. Contact **Tom Myers - 877-804-2274.** (CBM)

"Lease to Own" financing of new or used sewer and drain equipment with early pay-off. Alpine Equipment Funding is a direct source of funding that understands your equipment needs. We are not brokers and will give you a quick response. Call 800-640-8660 (C04)

## LOCATORS

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

## MISCELLANEOUS

StairKing Power Truck DC-66. Never used. 850lb. capacity. Great for sewer equipment up & down stairs. Includes battery and charger. \$1,200. Call 414-961-2548. (P04)

Titan 8000 series, high performance, RIDGID 8000 Zero-Gravity. The Cable Center: 800-257-7209. (CBM)

## NOZZLES

**SAPPHIRE NOZZLES** for UHP, laser-etched, heat treated, excellent quality, fantastic savings! 772-286-1218. info@alljetting.com; www.alljetting.com. (CBM)

Chemical cleaning trailer of tractor trailer: 3 open top tanks, all stainless, two heat exchangers, 2 CAT pressure pumps. \$35,000. More information available willhamilton01@gmail.com (C05)

## PARTS & COMPONENTS



Units, nozzles, hoses, accessories and safety gear. From High Flow 65 GPM Units to High Pressure 6,000 PSI Units and everything in between. The best products and the best advice in the business.

**800-538-8464 | 770-740-9917**  
**www.usjetting.com** (CBM)

## PIPE BURSTING EQUIPMENT

Complete pipe bursting equipment. Accommodates 4" to 6" pipe. 100 feet capability. Good condition. Email chadl@foxph.com or call Chad Lindley at 206-767-3311 for more information. (C04)

New 50-ton TRIC pipe bursting equipment complete with 300 feet of 7/8" cable. Down hole unit 12-inch base, 8-inch head. M50 hydraulic puller. Cost \$38K, will sell for \$32,000. 415-883-3676 ask for Mike. (C06)

## PIPELINE REHABILITATION



**2005 Freightliner Boiler Truck:** 220K miles, Cleaver Brooks Model CBE200-125 diesel fire-steam boiler. 2008 Ingersoll Rand compressor and Doosan generator. This unit is all plumbed and ready for work. \$79,000. Please email for any additional info: C05  
**casbury@californiatrenchless.com**

TRIC trenchless pipe burster - 25 ton. c25 Ram. 5.5hp hydraulic pump. 4" fusion machine. 4" and 6" bursting heads. 100-ft. and 150-ft. cables. \$14,500. Pictures can be emailed. fodajamin@gmail.com. 740-333-7731 (C05)

One trade-in model of Pipe Genie heavy-duty, pipe bursting equipment. Excellent condition, looks new, 30-ton, 100 feet cable, full 2-year warranty. 877-411-7473. (CBM)

Complete Max Liner ambient and hot water cure system. All in good working order. Does not include tow-behind compressor. \$14,900. Buyer pays all shipping. pgalligani@rooterman-capecod.com 508-430-4000 (C06)

Complete Quikshot ambient cure lining system, 30cfm air compressor and Picote cutting system. \$14,900. Buyer pays all shipping. info@quikpipes.com 626-252-1679 (C04)

## POSITIONS AVAILABLE

FULL-TIME POSITION AVAILABLE. Sewer and drain technician. Experience preferred in the drain-cleaning field. Youngstown, OH. 330-757-3140 daytime. (C04)

USG is a growing Pennsylvania-based company seeking CCTV, grouting, jet/vac, CIPP, HDD, lateral rehab and manhole rehabilitation technicians. Applicants should have a minimum of 1 year experience in the industry. We are an EOE offering great pay, relocation subsidy and steady work. Send resumes to HR@usginc.net, Fax: 717-737-6093 or USG HR Department, 1304 Slate Hill Road, Camp Hill, PA 17011 (C04)

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 Lthomas@gapvax.com or 575 Central Avenue, Johnstown, PA 15902. (CPMGMB)

## 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.vsirentalsllc.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. (CBM)

## TOOLS

RIDGID model #300 with stand, RIDGID tri-stand vises, RP 330 ProPress kit. 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 man-hole covers easily. Free catalog. **www.TandTtools.com.** Phone **800-521-6893.** (CBM)

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

Ritchie Yellow Jacket Recovery System & BULLET 7 cfm pump. The Cable Center: 800-257-7209. (CBM)

## TV INSPECTION



**1999 Ford E450 Hi-Cube CUES TV truck.** Reduced!! \$27,000. If interested, please call for more info and photos.

**904-284-2141, FL** C04



**2004 Ford/RST E-450 CCTV Van:** Omni 3 zoom with track transport, Trakstar zoom with transport, Omni 2 with wheel transport. Extra wheels, tracks and extensions up to 36 inch pipe, Storm Drain Patrol wagon, 1,800 feet of new single conductor cable, Windows 7 Pro computer. Everything for \$70,000.

**Call Aaron 916-442-5400, CA** C04

## TV INSPECTION

2003 Ford Aries TV Inspection: Stk# 2168, V10 Triton gas engine. Honda motor powers rear unit. One (1) camera. Ken's Truck & Equipment: www.khtrucks.com 972-938-1905 or 214-632-5277 (CBM)

CUES 1999/1987 grout inspection trucks – both under 60,000 miles. Tracked crawlers, electric winches, Onan generators. Both ex-municipal vehicles with little usage. \$30,000 and \$25,000 respectively. Contact Joe 419-408-1060. (C05)

**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 1-800-265-4298 or mainliner2075@hotmail.com (C09)

1999 Ford E250 Saturn III pipe inspection van: TR2000 tractor, ST700 micro camera and much more. 52k miles. Local gov't retired. www.shumatetruckcenter.com 813-877-6638 (C05)

2000 Ford E350 CUES Prodata 2000 inspection van: 72,000 miles, roof air, 7kw Onan, TV & video monitor, camera, reel and cable & much more. Government retired. \$26,999 OBO. www.shumatetruckcenter.com 813-877-6638 (C04)

Slightly-used IBAK Portable Inspection System: T76 tractor, T66 tractor, elevating device, Orion pan and tilt camera, KT180 cable drum, ZSW75 light ring, BK 3.5 controller, multiple wheel sets. Asking \$62,500. Pat 630-514-5765 (C04)

**NEED TRACTION?** We make aftermarket more aggressive pads and chain assemblies for all chain-driven camera tractors. Custom, dependable, double-hole fabrication secured to high quality carbon steel chain, or just pads and rivets. Samples upon request. **Pipe Tool Specialties LLC:** 888-390-6794; Fax 888-390-6670; www.yourtractionpads.com or email pts4422@yahoo.com (CBM)

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)

## VACUUM LOADERS

FOR SALE: Guzzler and SuperSucker air movers; Wet vacs; Hydraulic submersible pumps; Air compressors; Sandblast systems; 5,500-gallon dump tank trailers. Call 502-551-0158 for more info. Cash buyer of used equipment. (C06)

## WANTED

Wanted to Buy: Vactor 2100's and late model Guzzlers. Cash. 800-336-4369. (CBM)

WANTED: Used CUES TV truck. No grout units please. Age is not important. 303-277-1112 (C05)

## WATERBLASTING



Like new **2006 NLB bundle blaster:** 34 hrs., Isuzu engine, powered rollers. Doghouse with a/c. Perfect condition. .... \$155,000 USD  
**250-203-4742, BC** C09



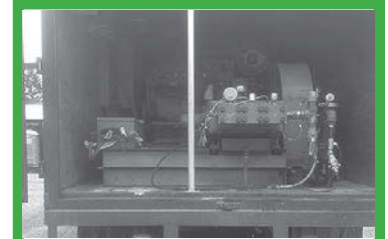
**Butterworth high-pressure pump:** 20k @ 17gpm, on trailer with new filter. Series 40 engine 235hp...\$35,000 USD  
**250-203-4742, BC** C09

**WATER JETTING EQUIPMENT:** We sell, repair and retrofit water blasters. Visit us at: www.waterjettingequipment.com or phone 714-259-7700. (CBM)

Jetstream waterblaster: 350hp Cummins engine, 4200 Series pump with 15k @ 25gpm or 10k @ 52gpm. Packing included. Recent fluid end rebuild. Lots of extra parts. 970-653-8588 (C04)



**NLB 10150** in back of a 1995 GMC Top kick. Excellent pump and set up. ....\$45,000 USD  
**250-203-4742, BC** C06



**Two (2) Butterworths:** 20k @ 17gpm. Series 40 engines in Ford cab overs. Onboard water tank. ....\$45,000 USD  
**250-203-4742, BC** C09

Gardner Denver T-375M: Bare Shaft pump. Gardner Denver T450M Bare Shaft pump. Gardner Denver TF-375M 21 gpm @ 10,000 psi. Gardner Denver TX-450HB 21gpm @ 20,000 PSI. Gardner Denver TF-450MB 52gpm @ 10,000 psi. NLB 10-200. 34 gpm @ 10,000 psi. HT-150S 25 gpm max 10,000 psi max, Shell Side Machine, Wheatley 165: 30 gpm @ 10,000 psi. Wheatley 125 with aluminum bronze fluid end. Boatman Ind. 713-641-6006. View @ www.boatmanind.com. (CBM)

40,000 psi Sapphire Nozzles, UHP hoses & replacement parts. Excellent quality & prices. 772-286-1218, info@alljetting.com, www.alljetting.com. (CBM)

FOR SALE: Diesel water blasters; Jet rod truck; Jet rod trailers. Call 502-551-0158 for more info. Cash buyer of used equipment. (C06)

# SOLED

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.

If you are using an

# 800 NUMBER

in your ad, be sure it can be used in all areas nationwide.

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



# All-In-One STEAM TRUCKS

Custom Built Steam and Hot Water Trucks For Sale, Lease or Rent.



- 150 HP Steam Generator
- 750 CFM Air Compressor
- 25 KVA - 3 Phase Generator
- Chemical Injection System
- 1100 Gallon Fresh Water Tank



- Enclosed Control Room
- 24' Enclosed Body
- 3 Side Roll-up Doors
- 160 Cubic Feet Of Storage
- Underbody Hose Storage
- Water Softener System

See Our Full Product Line & Watch Videos at [www.cipp-services.com](http://www.cipp-services.com)

# All-In-One AIR INVERTERS

## Continuous Air Inversion No Deflation To Steam Cure



- Units Available For 3" to 72" Diameter CIPP Liners.
- Apply Heat Within Minutes After Inversion
- Pressurized Internal Gland Lubricating System On All Units
- Rental Units Available
- Professional Training & Support

Small Diameter Lining Equipment & Materials



Phone: 815-712-8708 • E-mail: [sales@cipp-services.com](mailto:sales@cipp-services.com)



# Pressure Washers, Replacement Engines, Pumps, Parts & Accessories



Jetter Package 4 GPM @ 4200 PSI



Hydraulic Pressure Washer - 26 GPM Pump



Power Take-Off Pressure Washers



Electric 180° Auto Stop/Start



Custom Built Electric Packages



LP Gas Powered Pressure Washers



Hot Water Trailer Packages



Portable Generator 6500 Watt



Honda-Powered Generator



Powerful Generator 9000 Watt



Overhead Valve Recoil Engines



2" & 3" Water Pumps

**WaterCannon.com**

**30**  
YEARS OF SERVICE

**1.800.333.WASH (9274)**



Honda-Powered Trash Pumps



Honda-Powered Compressors



Vanguard Hot Water Pressure Washers



Custom Pump Assemblies



Mag Wheel Under Carriage Cleaner



3"-24" Stainless Steel Spinners



Locking Safety Quick Connects



Pressure Washer Hoses



Stainless Steel Hose Reels



Industrial Trigger Gun Assemblies



Under Carriage Cleaner



Car Wash Booms & Parts



Truck Wash Components



Duct & Chute Cleaning Spinners



3 Story Telescopic Wands



Wide Swath Cleaning for All Surfaces



Air Recovery Works on Walls



Cleans on Walls and Floors



Clean Indoors with No Mess



Air Recovery System Cleaner



Versatile Hand Controlled Cleaning



Air Recovery Avoids Run Off



Air Recovery Graffiti Removal



Surface Cleaners Save Time

**Industry Trained Staff** available from 8:30 a.m. to 7:00 p.m. weekdays E.S.T.

Water Cannon, Un contacto en Espanol: llama al: 1.800.917.9274

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

Water Cannon  
is proud to be a  
**MWBE**

# GapVax®



SPECIAL THANKS  
TO ALL WHO STOPPED BY  
TO SEE US AT THE SHOW  
& OUR EMPLOYEES FOR ANOTHER  
GREAT YEAR!

MANUFACTURING INDUSTRIAL VACUUM TRUCKS  
HYDRO EXCAVATORS  
COMBINATION JETVACS  
SKID-MOUNT VACS  
AND MORE SINCE 1989  
PLUS PARTS &  
ACCESSORIES



QUALITY. CUSTOM-BUILT  
TOP PERFORMANCE.

888-442-7829 WWW.GAPVAX.COM

NEW WEBSITE - NEW TEXAS LOCATION - NEW GULF COAST SALES REP



# A SIGHT TO BEHOLD.



Now  
Available for  
Android



**SPARTAN**  
FOR TOUGH CUSTOMERS.  
SINCE 1943

The future is at your fingertips with Sparvision 200, a state-of-the-art pipe-inspection camera designed with you in mind. Featuring a wireless retina-display iPad® 4 as its screen, the Sparvision 200 offers full tablet computer features like instant snapshots, on-screen drawing and a touch keyboard for captions. With the Wi-Fi-enabled iPad, simply send the photo or video you shot directly to the customer and store your copy right on the tablet. The Sparvision 200 offers a self-leveling color camera, a 512 Hz locating beacon and a 200' high-efficiency, super-slick push rod. Plus, the entire unit is powered in the field with an on-board battery so you can take it anywhere. **If you're looking for the best, look no further.**

CONTACT US TODAY | 800.435.3866 | SPARTANTOOL.COM