

Cleaner

FOR DRAIN AND PIPE CLEANING, INSPECTION AND REHABILITATION PROFESSIONALS

APRIL 2016

ANYTHING TO SUCCEED

CAREFUL, CALCULATED EXPANSION HELPS BUILD
MARKET SHARE AND STABILITY FOR SMALL-TOWN
CLEANING CONTRACTOR **PAGE 22**



MONEY MACHINES

Custom jetter clears lines faster

TECH PERSPECTIVE

Take care of your bursting tools

SAFETY FIRST

Damage prevention requires planning

Gen-Eye Prism[®]

Why Pay Extra?



Why pay extra for a monitor and recording device when you already own one? The new Gen-Eye Prism pipe inspection system lets you use

your own tablet or Smartphone to view your inspection and record it. The Wi-Fi transmitter inside the Prism sends video to your device held securely in the expandable cradle on top of the unit.

For more info: www.drainbrain.com/prism

The Prism offers all the features of a full-size inspection system in a compact package including on-screen distance counter, nine page titler, and date and time stamp, plus a Power Port to keep your device charged during inspections.

For more information, call the Drain Brains[®] at 800-245-6200 or 412-771-6300, or visit www.drainbrain.com/prism.

General
PIPE CLEANERS

The toughest tools down the line.[™]

© General Wire Spring 2016



SHOWS NO
MERCY
EXCEPT TO
BURIED

GAS lines
INTERNET
HUBS AND
CABLE wires



The power and control of the VAC•CON X-Cavator™ keeps municipalities up and running.

The X-Cavator™ handles your toughest and tightest excavation applications. Its powerful vacuum and high-pressure water system will excavate to the power of X to get the job done right. The X-Cavator™ enables you to locate and safely excavate around valuable utilities without damaging them. There is no application too tough for the X-Cavator™, and you can order yours with specific options to handle those special excavation jobs you are expecting. [GO ON-LINE TO LEARN MORE.](#)

VAC-CON.COM

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

 **VAC•CON**
MORE POWER TO YOU

A HOLDEN INDUSTRIES Company

WGR SWITCHER™



SWITCH FROM CLEANING TO FLUSHING
WITHOUT EVER LEAVING THE PIPE.



SEE HOW IT WORKS:
WWW.STONEAGETOOLS.COM/SWITCHER

WARTHOG
SEWER NOZZLES BY **STONEAGE**®

1-866-795-1586 • WWW.SEWERNOZZLES.COM

Proudly Manufactured in the USA 

An instant, wireless View into any sewer.



Sewer assessment—it's essential to prioritizing CCTV and maintenance work, planning cleaning and rehab, and achieving compliance. Controlled wirelessly with a touchscreen tablet, the patented new **Quickview airHD** camera lets you look inside any sewer with:

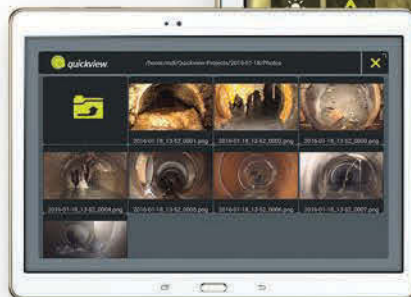
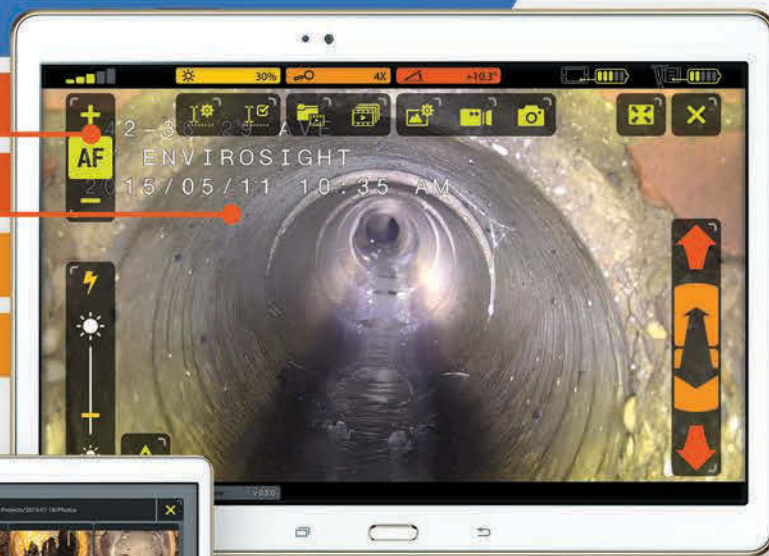
No cables at all!

Touchscreen control

Detailed HD video

In-manhole centering

Motorized tilt



Full wireless control, viewing, recording, annotation, playback and sharing capabilities.

©2016 EnviroSight. All rights reserved. Quickview and EnviroSight names/logos are trademarks of EnviroSight. Patents 6,538,732 and 7,009,698; others pending. Specifications subject to change without notice.

Phased Assessment Strategy for Sewers (PASS) starts with zoom assessment. This FREE white paper explains why: envirosight.com/pass



get a **demo**

EnviroSight

envirosight.com/airhd • (973) 252-6700

Full range of underground infrastructure inspection equipment, service and rentals.



features

- 22 **Profile: Anything to Succeed**
Careful, calculated expansion helps build market share and stability for small-town cleaning contractor.
By Ken Wysocky
- 36 **Profile: Opening Up Opportunity**
Service diversification helps Illinois entrepreneur guide her company along a path of steady growth.
By Marian Bond



departments

- 12 **From the Editor: The Cleaner Family is Strong**
A week at the WWETT Show highlighted the character and strength of this industry.
By Luke Laggis
- 16 **@cleaner.com**
Be sure to check out our exclusive online content.
- 30 **Tech Perspective: Take Care of Your Pipe Bursting Tools**
Pre-job inspections and regular maintenance can keep your equipment working hard for many years.
By Kyle Rogers
- 46 **Better Business: Being Liked is Serious Business**
Follow these 10 simple steps for repairing and protecting your online reputation.
By Kate Zabriskie
- 50 **Money Manager: Family Financing**
Proceed slowly and cautiously when it comes to borrowing money from relatives.
By Erik Gunn
- 54 **Safety First: Damage Prevention Begins With Planning**
Safe pipe bursting requires thorough understanding of surrounding utilities and soil conditions.
By Matt Timberlake
- 56 **Money Machines: The Right Combination**
Texas contractor's custom PipeHunter water jetter boosts productivity with hot water and higher pressure.
By Ken Wysocky
- 60 **Product Focus: Pipe Bursting Methods and Projects**
By Craig Mandli
- 66 **Case Studies: Pipe Bursting Methods and Projects**
By Craig Mandli
- 70 **Product News**
Spotlight: HotJet III trailer-mounted jetter provides versatility.
By Luke LeNoble
- 73 **Industry News**

COMING IN MAY 2016

ISSUE FOCUS:

Residential and Commercial Sewer and Pipe Maintenance

- **MONEY MACHINES:** CUBE system mobilizes inspection
- **TOUGH JOB:** Lining project provides lessons
- **TECH PERSPECTIVE:** Keep the pressure on



ON THE COVER:

Fayette Drain & Sewer Service owner Mark Vice stands outside the company shop in Fayette, Alabama. Vice has built his business around a diverse menu of services, including drain cleaning, residential plumbing and septic pumping. (Photography by Jeff and Meggan Haller)

TWO SOLUTIONS FOR LATERAL REHABILITATION

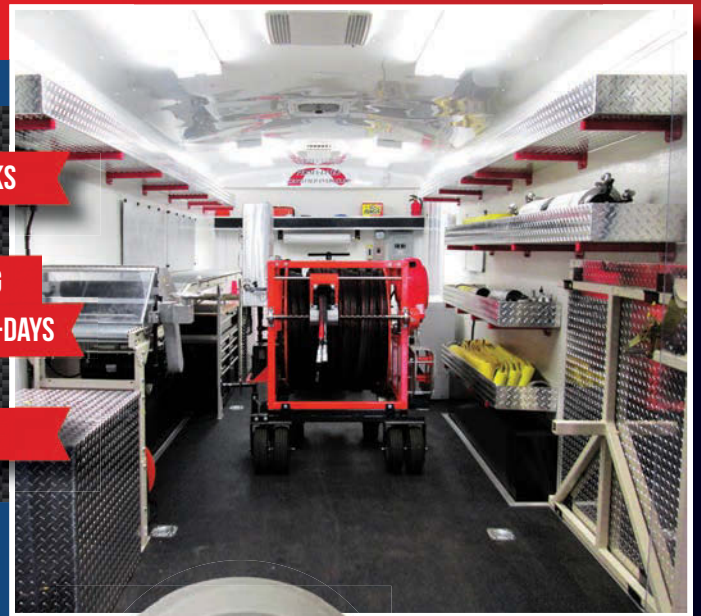
PERMA-LATERAL™ LINING

REHABILITATING RESIDENTIAL HOME
LATERALS TO MAIN SEWER.
PATENTED TECHNOLOGY.



INNERSEAL™

REHABILITATING TEE AND WYE CONNECTIONS
FROM THE CITY SEWER MAIN TO RESIDENTIAL
SEWER LATERALS. PATENTED TECHNOLOGY.
MEETS ASTM F2561-11.



TURN-KEY BOX TRUCKS

ZERO DOWN FINANCING
NO PAYMENTS FOR 90-DAYS

TURN-KEY TRAILERS



AFTER



AFTER



LIVE DEMOS

APRIL 27 - SEATTLE
MAY 4 - CHICAGO
MAY 18 - PHILADELPHIA

PERMA-LINER™
INDUSTRIES, LLC.

www.perma-liner.com

CALL
1-866-336-2568
TO LEARN MORE





bodus gmbh

Pipe Technology

4344



Pneumatic GRIPPER



AIR-HEATER



Cutter MICRO



... from practical people
for practical people

www.bodus-usa.com

TRYTEK
MACHINE WORKS, INC.

3" to 6" Lateral Cutter

NEW!
TRYDENT 80
Cutter System

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



www.trytek.com

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

Serving the industry for over **25 years**

Cleaner

FOR DRAIN AND PIPE CLEANING, INSPECTION AND REHABILITATION PROFESSIONALS

Published monthly by COLE Publishing, Inc.

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

Call toll-free 800-257-7222 | Outside of U.S. or Canada call 715-546-3346
Mon-Fri, 7:30 a.m.-5 p.m. CST

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

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

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

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

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



Kayla Bisnette Jim Koshuta

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

CIRCULATION: Circulation averages 26,460 copies per month. This figure includes both U.S. and international distribution.

© 2016 COLE Publishing Inc.

No part may be reproduced without permission of the publisher.



GET SOCIAL WITH Cleaner

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

WEQFAIR
Wastewater Equipment Fair

SEPTEMBER 12-13, 2016
WISCONSIN STATE FAIR PARK,
MILWAUKEE, WISCONSIN

wwett
WATER & WASTEWATER EQUIPMENT, TREATMENT & TRANSPORT SHOW

FEBRUARY 22-25, 2017
Indiana Convention Center,
Indianapolis, Indiana
www.wwettshow.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.**

Guzzler products are serviced and supported by FS SolutionsSM

A

A.R. North America, Inc.21

ALLAN J. COLEMAN
SINCE 1905
Allan J. Coleman Co.31, 71

AMAZING MACHINERY
Amazing Machinery, Inc.19

AQUA MOLE
Aqua Mole Technologies, Inc.76

ARIES
INDUSTRIES, INC.
Aries Industries, Inc.49

B

BODUS GmbH8

C

Cable Center, The20, 77

CAM
Cam Spray64

CENTRAL OKLAHOMA WINNELSON
Central Oklahoma Winnelson44

CIPP SERVICES, INC.
CIPP Services, LLC68

CLOVERLEAF TOOL CO.
Cloverleaf Tool Co.76

COAST MANUFACTURING
Coast Manufacturing12

CUES
CUES43

DRAINABLES DIRECT
Drainables Direct67

DURACABLE
Manufacturing Company
Duracable Manufacturing Co.17

ELECTRIC EEL
Electric Eel Mfg.68

ENVIRO-SIGHT
Envirosight, LLC5

ENZ USA INC.
Enz USA, Inc.18

F. S. SOLUTIONS
Forbest Products Co.58

GAPVAX
GapVax, Inc.79

GENERAL PIPE CLEANERS
General Pipe Cleaners2

GORLITZ SEWER & DRAIN, INC.
Gorlitz Sewer & Drain, Inc.33

GUZZLER
Guzzler Manufacturing9

HAMMERHEAD TRENCHLESS EQUIP.
HammerHead Trenchless Equip.59

ISUZU TRUCK
Isuzu Commercial Truck of America13

JETSTREAM
Jetstream of Houston35

KEN-WAY CORPORATION
Ken-Way Corporation18

LANSAS PRODUCTS24-25

LaPlace Equipment Co.48

MAXLINER USA15

MILWAUKEE RUBBER PRODUCTS, INC.51

MONGOOSE LETTERS BY SEWER EQUIPMENT29

MYTANA MFG. COMPANY, INC.55

NLB CORP.
NLB Corp.53

NOZZTEQ
NozzTeq, Inc.52

OCEANQUIP CABLES, LLC57

PERMA-LINER INDUSTRIES, LLC7

PICOTE SOLUTIONS58

PIPELINE ANALYTICS14

PIPELOGIX, INC.66

Pow-r Mole Sales LLC47

PRIMELINE PRODUCTS, INC.57

PULSAR 2000, INC.48

QUIK-LINING SYSTEMS, INC.52

R.S. TECHNICAL SERVICES, INC.39

RAPIDVIEW IBAK NORTH AMERICA65

RATECH ELECTRONICS, LTD.34

ROOT RAT48

ROOTX11

SCOOTER VIDEO41

Sewer Equipment Co. of Nevada42

SOUTHLAND TOOL MFG., INC.21

SPARTAN TOOL, LLC80

STONEAGE
StoneAge, Inc.4

T&T TOOLS, INC.34

Trenchless Solutions, Inc.18

TRIC Tools, Inc.28

TRYTEK
TRY TEK Machine Works, Inc.8

TST Sweden AB44

ULTRA SHORE47

VAC-CON
Vac-Con, Inc.3

VACALL
Vacall - Gradall Industries45

VARCO14

VIVAX-METROTECH CORP.52

VSI Rentals28

WATER CANNON
Water Cannon, Inc. - MWBE78

Westmoor Ltd.20

Marketplace 72-73

Classifieds 74-76

Have you seen the Cleaner E-Zine?



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



ROOTX



**“GREASE-X DOES
WHAT IT USED
TO TAKE US
WEEKS TO DO.”**

Chad Hunter
Bullhead City, AZ Sewer Utility

THE RIGHT SOLUTION. RIGHT NOW.

Chad Hunter and his crews in the City of Bullhead City Arizona's Sewer Utility had their hands full. Trying to deal with six feet of grease in their lift stations, it was taking their vacuum trucks weeks to get the job done.

Then they started using Grease-X, the proven, easy-to-use way to get rid of fat, oils, and grease. (FOG) Grease-X emulsifies FOG from lift stations and you use Grease-X with your crews, your equipment, and on your own schedule.



GREASE-X



Ready to find out more?

Email us at rootx@rootx.com, or give us a call at 1-800-844-4974.

www.rootx.com



Luke Laggis
editor@cleaner.com

The *Cleaner* Family is Strong

A week at the WWETT Show highlighted the character and strength of this industry

By Luke Laggis

It was great seeing so many of you at this year's Water & Wastewater Equipment, Treatment & Transport Show. I always feel like it's the living embodiment of this magazine, where all the people, stories and equipment are brought together and celebrated.

This year's show drew one of the largest crowds in the show's history. Total attendance climbed to over 14,400, and the number of exhibiting companies reached 599, an all-time high.

I saw a lot of husband-and-wife teams walking around at this year's WWETT Show. There were a lot of families, everyone in matching shirts, representing their businesses, and maybe less consciously but possibly more importantly, who they are: strong families with integrity and work ethics. Businesses with a moral compass.

I saw both of the husband-and-wife teams featured in the March issue of *Cleaner*. I hadn't met either in person before, but there they were, sitting in classrooms, walking the show floor, doing whatever they could to make their businesses stronger. Call it a team-building exercise. Call it a vacation if you want, but they were there to make their businesses stronger. They were taking advantage of opportunities to learn and grow. I like seeing that. It's what this magazine is all about.

Both feature profiles in this month's issue of *Cleaner* are about husband-and-wife teams as well — Mark and Melissa Vice of Fayette Drain & Sewer Service in Fayette, Alabama, and Ashley and Chris Hartness of All Around Pumping Services in Cortland, Illinois.

In some ways I think running a family business is more difficult and more complicated than running a Fortune 500 corporation. In a bigger company you might have bigger issues, higher stakes and consequences that impact more people, but in a small business, in your business, it's often just you. All the decisions, all the responsibility, all the success and all the blame land squarely at your feet. And in addition to the business operations, there are family dynamics to balance. Issues in one realm can easily bleed over into the other. It's hard to lock up and leave business matters behind, especially when the office is right across the driveway from your house and you can see your service vans from the living room window.

I've been in that position, where going home at the end of the day simply meant climbing a flight of stairs. I've played different roles on a lot of teams, from youth sports, to captain of my high school hockey team, different jobs I've had, running a family business, coaching, marriage and more. I served many of those roles well, and in some I failed miserably. But I can tell you none felt more significant than running a business my mom built, that had supported my family and felt more like home than anywhere I'd ever lived.

Putting the team first isn't always the easiest thing to do, because it takes everything you've got. Running a family business takes even more. But that's nothing new to you; it's simply what you do. I just thought it deserved some recognition.

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

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
1.800.541.7015

HAVE AN ISSUE YOU CAN'T SEEM TO FIGURE OUT?

TIPS FOR MAINTAINING YOUR JETTER?

THOUGHTS ON PRODUCT COMPARISONS?

Post a question or comment on the Cleaner Discussion Board to engage fellow colleagues. Create a user name and join the discussion!

>>> www.cleaner.com <<<

INTRODUCING THE NEW ISUZU FTR

Class 6 Medium Duty Truck



Visit your local Isuzu dealer for details.

WWW.ISUZUCV.COM

ISUZU FTR

ISUZU
TRUCK

Vehicle shown with optional equipment, some equipment is dealer installed. The FTR model shown is a prototype and Isuzu Commercial Truck of America, Inc. reserves the right to make changes or discontinue at any time, without notice, colors, materials, equipment, specifications and models. The Isuzu FTR expected to go into production mid-2017. This vehicle is assembled from component parts manufactured by Isuzu Motors Limited and by independent suppliers who manufacture such components to Isuzu's exacting standards for quality, performance and safety. Truck body represented herein is a product of Morgan Corporation. Please see your authorized Isuzu truck dealer for complete details.

Copyright © 2016 Isuzu Commercial Truck of America, Inc.

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

www.pipelineanalytics.com • (877) 626-8386



ORDER TOLL FREE
866-872-1224

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



SOURCE KEY
04C16

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.



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.

PREMIUM PIRHANA SEWER HOSE

	DESCRIPTION	500 ft	600 ft
3/4"	Premium Pirhana Orange 2500psi	\$1,095.00	\$1,314.00
1"	Premium Pirhana Orange 2500psi	\$1,285.00	\$1,540.00
3/4"	Premium Pirhana Blue 3000psi	\$1,154.00	\$1,385.00
1"	Premium Pirhana Blue 3000psi	\$1,485.00	\$1,780.00

NEW VARCO JETTERFLEX LATERAL LINE / JETTER HOSE

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

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

	50'	75'	100'	150'	200'	250'	300'	350'	400'	450'	500'	550'	600'
1/8"	\$15.28	\$21.25	\$26.38	\$37.49	\$48.60	\$56.74	\$66.88	\$77.02	\$87.15	\$97.31	\$107.45	\$117.58	\$127.72
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"	\$29.85	-	\$55.85	\$81.82	\$107.77	\$126.38	\$150.52	\$174.65	\$198.77	\$222.89	\$247.02	\$271.15	\$295.28
3/8"	\$62.08	\$91.28	\$105.54	\$151.12	\$215.06	\$259.57	\$304.05	\$347.48	\$382.09	\$425.75	\$469.43	\$513.11	\$556.77
1/2"	-	-	\$186.69	-	\$353.97	-	\$505.85	-	\$660.02	-	\$815.97	-	\$972.66



MAX

RESPONSIBILITY.

Max out your capabilities with our complete CIPP solution:

- High performance resins that are economical and ecologically-friendly
- Compact equipment for laterals, verticals and hard-to-reach pipes
- Supplies, liners and resins made by the world's leading manufacturers
- Quality felt liners that curve, stretch and accommodate up to 90° bends
- Custom solutions with 4-6" transitions for any liner length or complexity

MAXLINER



276.656.1225

maxlinerusa.com

@Cleaner.com

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

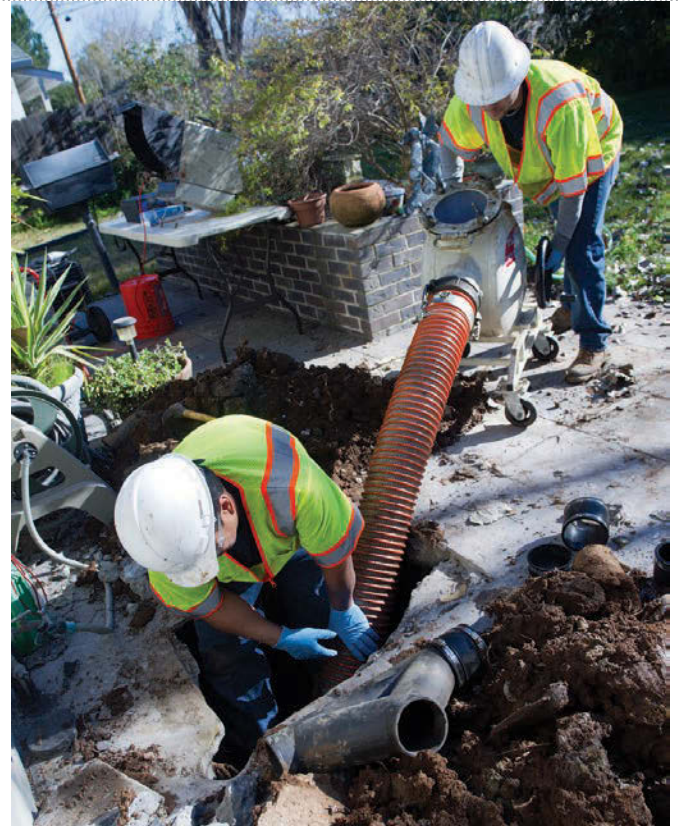


MINIMUM REQUIREMENTS

14 Steps to Ensure Safety Around Trenches and Excavations

Safety expert David Dow provides a comprehensive yet easy-to-read list that simplifies OSHA's general requirements and will help your crew plan for and greatly reduce dangers around the job site.

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



BASIC COVERAGE

Insurance: What Do Cleaning Contractors Need?

From embezzlement protection to worker's comp, understand the various policies out there, and make sure your company is adequately covered. It could save your business.

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

OVERHEARD ONLINE

“Referrals are important because you don't have to compete on price. If you're getting a knee replacement, you aren't concerned with cost; you just want the best doctor. Many people don't think of their business that way.”

— Boost Your Business With More Referrals

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



GOING RATE

When Circumstances Call for Extra Fees

Determining when to charge additional fees for drain cleaning services is never easy. Explaining these charges to the homeowner adds another dimension to the conversation. Contractors discuss pricing, best business practices and how they've dealt with some common (and not-so-common) circumstances among their residential customers. [>>cleaner.com/featured](http://cleaner.com/featured)



Emails and Alerts

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

Join the Discussion



Find us on Facebook at facebook.com/CleanerMag



or Twitter at twitter.com/CleanerMagazine

MACHINE TRADE-IN SPECIAL



Send in a photo of an old machine and get
25% off a new one plus **FREE SHIPPING!**

Call Duracable Manufacturing for details. Must provide a photo of an old machine to receive the discount. Offer valid 4/1/16 - 4/27/16. Cannot be used with any other offer. Must mention promo# 532.

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

Duracable
Manufacturing Company

YOUR TOUGHEST JOBS START & END WITH ENZ!

★ A TOOL FOR EVERY PIPE CLEANING APPLICATION ★



- ★ ROTATING NOZZLES WITH SPEED CONTROL
- ★ CHAIN FLAIL HEADS FOR ROOT CUTTING
- ★ IMPACT DRILLING CUTTER HEADS FOR CUTTING CONCRETE
- ★ VIBRATING ROTOJETS

Enz golden jet is the leader in sewer and pipeline cleaning equipment, offering a versatile, durable and economical line of virtually maintenance-free products, which outperform the competition time and again.

3 6 9 - 8 7 2 1
CALL 1 * 877 * ENZUSA1

to learn how easily Enz Golden Jet Nozzles can fit into your existing operation.



1585 Beverly Ct., Unit 115 • Aurora, IL 60502

www.enz.com



STRONG, FAST AND ENGINEERED TO LAST!

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

And they have for over 50 years

KEN-WAY CABLE CLEANERS

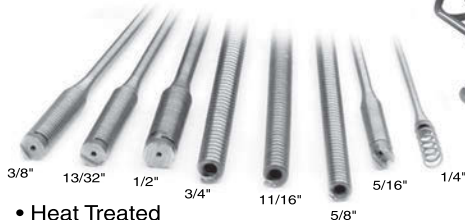
for cleaning sewer, drain or process lines from one to ten inches, up to 75 feet with the Junior and up to a full length of 300 feet with the Model 400



Junior

Model 400

KEN-WAY Exclusive Built Cables



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



Leasing plans available. Call for details.

1-800-533-0551

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

AVOID HIGH START UP COSTS...RENT!

CIPP EQUIPMENT & MATERIALS
SALES | RENTALS | TRAINING

- Shooters
- Packers
- Cutters
- Trailers
- Training
- Materials
- Boilers
- Refrigerated Delivery



www.trenchless-inc.com



267.812.5855 | 1.855.LINE.TSI

We travel coast to coast for training and labor support!

AMAZING MACHINERY

Your Equipment SUPERSTORE Since 1995

Introducing the
All New

Viztrac MAX

- 9" Color Flat Screen LCD in ABS Case
- Includes 12V Lithium-ion Battery (8-10 Hour Life)
- Built-in Digital Recorder with Remote Control
- Records to SD Card (4GB SD Card Included)
- Quality High Resolution Color Camera
- Camera Vision Angle Up to 60 Degrees
- 1.375 Inch Diameter "Easy Push" Camera Head
- Built-in 512Hz Sonde Transmitter (8-15 Feet)
- Stainless Steel Camera Body with Sapphire Lens
- Waterproof Camera Head
- 6 Super-Bright White LED Lights with Dimmer
- 12" Steel Spring Leader
- 3/8" or 1/2" Super Slick Push Cable
- Choose 100-225-foot Cable Length
- Heavy Duty Powder Coated Storage Reel
- Warranty: One Year Parts and Labor

FREE Freight

**8-HOUR,
12-VOLT
BATTERY**



**STARTING AT
\$2395.00**

6 Months, No Interest!



Get 6 Months to Pay on Purchases of \$99 or More.

Choose PayPal Credit® at Checkout. Subject to Credit Approval.



Complete Details At

www.AmazingMachinery.com

1-800-504-7435

3807 Old Tasso Rd. • Cleveland, TN 37312

RUGGED & RELIABLE

PROFESSIONAL GRADE EQUIPMENT

Made in USA

Ideal For Grease Trap Service



Simply the BEST!!



ELECTRIC POWERED

RUGGED



ProVac
Industrial Pumpout System
Designed, Machined & Assembled in the USA



ProChock - Transport Hold Down



GASOLINE POWERED

RELIABLE



www.westmoorltd.com

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

TEL (800) 367-0972

THE CABLE CENTER 1-800-257-7209

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

**24
HOUR
TURNAROUND**

**FREE
FREIGHT
ON ALL RIDGID
CAMERA
KITS**

RIDGID's 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™



**CALL FOR
SPECIAL
PRICING ON
ALL CAMERA
KITS!**

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

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



COVER STORY

Sister's
PARKING
ONLY

Jeff Goree (left) and Josh Jackson snake a drain through an outside clean-out while Fayette Drain & Sewer Service owner Mark Vice watches.

ANYTHING TO SUCCEED

CAREFUL,
CALCULATED
EXPANSION HELPS
BUILD MARKET
SHARE AND STABILITY
FOR SMALL-TOWN
CLEANING
CONTRACTOR



MAN DOESN'T LIVE ON BREAD ALONE, AND THE PRINCIPLE BEHIND THAT OLD ADAGE HOLDS TRUE FOR DRAIN CLEANERS, TOO.

IT'S DIFFICULT TO SURVIVE ON JUST
DRAIN WORK – ESPECIALLY IN SPARSELY
POPULATED AREAS THAT OFFER FEWER
SERVICE OPPORTUNITIES.

That's why Fayette Drain & Sewer Service in Fayette, Alabama, also pumps out septic tanks. And cleans grease traps. And installs natural gas lines. And provides commercial and residential plumbing service, just for good measure.

"Fayette is a small town, so to survive you have to do a little bit of everything," says Mark Vice, who co-owns the company with his wife, Melissa. "So if it's got water running through it, we go after it. The thought of calling someone else to do something that I can provide to our customers is awful."

The Vices started the company in 2000 with a primary focus on drain cleaning. A year or so later, Mark got his master plumber's license and started doing residential and commercial plumbing work. A few years after that, Vice started pumping out septic tanks and grease traps. There were several reasons for the last move. First of all, he already had septic pumping experience. Second, there was only one other competitor in the area at the time. Moreover, the profit margins were good. And last but not least, he didn't want to be too reliant on one service sector.

The strategy has paid dividends. Today, Fayette Drain generates about 35 percent of its revenue from drain cleaning, another 35 percent from septic system and grease trap services (including system installations) and the rest from plumbing services. And thanks to its diverse customer base, the company has grown steadily since its inception. The company now employs 12 people and owns a sizeable fleet of equipment that includes two vacuum trucks, two mini-excavators, a trailer-mounted water jetter, numerous drain cleaning machines and several video inspection systems.

BY KEN WYSOCKY

PHOTOGRAPHY BY JEFF AND MEGGAN HALLER

profile

FAYETTE DRAIN & SEWER SERVICE INC. FAYETTE, ALABAMA

FOUNDED: 2000

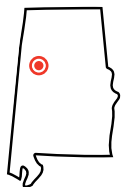
OWNERS: Mark and Melissa Vice

EMPLOYEES: 12

SPECIALTIES: Septic tank pumping, septic system installations, plumbing and drain cleaning

SERVICE AREA: 60-mile radius around Fayette

WEBSITE: www.fayettedrainandsewer.com



Mark Vice (left) talks about the day's work orders with Justin Simmons and Shawn Leonard in the Fayette Drain & Sewer shop in Fayette, Alabama.



The Fayette Drain & Sewer Service team includes (from left) Justin Simmons, Jerry House, Melissa Vice, Harrison Kummer, Mark Vice, Will Byers, Jamarcus Hughes, Russell Oswalt, Josh Jackson, Shawn Leonard and Jeff Gore.

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



**MANHOLE
 VACCUUM TESTING**

Lansas has a full line of vacuum testing components and kits available.

21" - 27"
 Multi-Size
 Vacuum Test Head
 and Super Vac™.



"SMART BOX™" LINE ACCEPTANCE TEST KIT

From plugs to panels we manufacture all components needed for line acceptance and leak locating.



JOINT TESTER

We have joint testers available in single and double bladder designs for pipe sizes 24" - 144". These units are available in high and low pressure models for use in pipe lines which allow up to 5% deflection.

SST PLUGS

Single Size Test Plug (SST) with smart air test triple hose.



"I bought a used pump truck for \$20,000 in 2002 and it's still running," Vice says. "There's no telling how many thousands of dollars it's earned."

Like every major equipment purchase Vice makes, he approached the vacuum truck investment with caution. "I'm always sure I have the business before I buy equipment," he says.

"Fayette is a small town, so to survive you have to do a little bit of everything. So if it's got water running through it, we go after it. THE THOUGHT OF CALLING SOMEONE ELSE TO DO SOMETHING THAT I CAN PROVIDE TO OUR CUSTOMERS IS AWFUL."

Mark Vice

He started out by asking the owners of fast-food chain restaurants if they'd hire him to clean their grease traps if he bought a vacuum truck. After he received verbal commitments from about a dozen businesses, he bought the truck. "I put the math together and figured out how many customers it would take to enable me to make the payments," he explains. "At that point, I figured any septic work would be a bonus.

"I got into septic work because I did it when I worked for a Roto-Rooter franchise," he adds. "So I knew how to do it and I knew there was a market for it. I always had intended to do it ever since I first went into business, but I had to wait until I felt comfortable enough to make that investment."



Fayette Drain & Sewer's trailer jetter from US Jetting provides extra muscle on tough drain cleaning jobs.

PERSEVERANCE PAYS OFF

There was a time when buying trucks and equipment seemed like a pipe dream to Vice, who worked in a cotton mill for about 11 years before taking a job as a technician at the Roto-Rooter operation. He worked there for four years, gaining valuable experience. When the franchise encountered



CUSTOM JOINT TESTER

This joint tester was designed and built for a water project near Phoenix, Arizona.

Each joint of this 21' diameter pipeline was tested at 32 PSI.

*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 1-832-831-4458

www.lansas.com



Josh Jackson (left) and Jeff Goree feed cable into an outside clean-out while cleaning a drainline at a local business in Fayette, Alabama.



MORE EQUIPMENT EQUALS LESS SUBCONTRACTING, HIGHER PROFITS

To maximize revenue, Fayette Drain & Sewer Service co-owner Mark Vice prefers to avoid subcontracting work whenever possible. As such, part of his business model includes buying more than one machine or piece of equipment whenever possible.

“If I have one excavator on a pipe replacement job, for example, and I get another call for a job that requires an excavator, I can’t stand the thought of pulling that first excavator off and sending it to the other job and having nothing for an emergency backup,” he says. “As I went along, I wanted two sets of trucks, two excavators and so forth so there’d always be a backup.

“When you’re in the emergency service business, that’s where you make your money,” he adds. “If there’s a whole building shut down and a customer says, ‘I need you now,’ I want equipment at my disposal so we can do timely and quality work. I don’t want to have to depend on someone else to be there for me when I need it.”

A wide array of equipment also ensures additional revenue streams. “After most jobs, I’ve made money off unclogging a drainline, I’ve made money on televising the line and, if needed, I’ve made money digging up the drainline and replacing it.”

Vice also continually reinvests in equipment that improves efficiency, such as RIDGID SeeSnake pipeline inspection cameras. The cameras save valuable time by helping technicians accurately diagnose drainline problems and find exactly where the problem is located. “It turns potentially large jobs into smaller jobs, which significantly reduces the cost to customers by eliminating all the guesswork,” he says. “It also allows you to develop the best plan for a repair.”

The SeeSnake also helps Vice get more work referrals from small municipalities around Fayette, for whom his company does work. “The city officials we work for know people in their towns and recommend us to their customers,” he says. “If you keep those city guys happy, they’ll keep sending you more and more work.”

“I knew one thing, though: I didn’t want to go back and work in a factory again. **I LOVED SERVICE WORK AND DEALING WITH PEOPLE.** ... I was driven by my fear of going back to a plant.”

Mark Vice

financial trouble, he decided to strike off on his own.

“I bought a service van and some used drain cleaning equipment and started going door to door in Fayette, handing out business cards and begging for work,” he recalls. “I was flat broke at the time and was lucky to find a banker who loaned me \$7,000 to buy the van and drain machines.

“I did a lot of footwork — and a lot of praying,” he says. “I gave out 3,000 business cards my first year alone and asked people if there

was anything I could do for them. I even painted someone’s house because we didn’t have enough plumbing work.” After three months, Vice had just \$700 left in a checking account and was seriously questioning his business prospects. “I knew one thing, though: I didn’t want to go back and work in a factory again. I loved service work and dealing with people. ... I was driven by my fear of going back to a plant.”

Then fate intervened with a cold spell that generated a lot of work repairing broken lines.



Justin Simmons loads PEX pipe into a work truck at the shop.

Huber and a 350 cfm pump made by Power-Flo Pumps & Systems.

The company also owns two Kubota mini-excavators, a Caterpillar backhoe/loader, two dump trucks with chassis made by Mack Trucks and Chevrolet and dump bodies built by Ox Bodies, a trailer-mounted water jetter (4,000 psi at 18 gpm) made by US Jetting, three Chevrolet service vans with Knapheide KUV bodies and two Chevrolet service trucks. Each service van is equipped with three Duracable drain cleaning machines, a RIDGID SeeSnake pipeline inspection system and a locator made by Pipehorn Utility Tool Co.

Of course, all the great machinery in the world isn't worth much without good people running it. Vice says that Fayette Drain provides a high level of customer satisfaction through great employees and a rather simple philosophy: always answer the phone.

"When people can't flush their toilet (because of a backup), they want someone and they want someone right away," Vice explains. "So when they call, they want to talk to someone, not an answering machine. ... They want to be assured that someone is going to come and fix their problem."

As such, Fayette Drain contracts with a 24-hour answering service that runs from 5 p.m. to 7 a.m. "It's a great investment," he says. "If people get an answering machine when they call, most times they're probably going to call someone else. You have to value every phone call because every time you miss one, you miss out on at least \$100 in work. The answering

service costs about \$160 a month, so it easily pays for itself with, say, one septic tank pumping job."

Looking back, Vice says that despite those tough early years, he has no regrets about starting his own business. "When you start something from scratch, you eat, breath and sleep it," he says. "It's basically all I do, other than family and God. If I could do it all over again, I still wouldn't do anything else." **C**

"If people get an answering machine when they call, most times they're probably going to call someone else.

YOU HAVE TO VALUE EVERY PHONE CALL BECAUSE EVERY TIME YOU MISS ONE, YOU MISS OUT ON AT LEAST \$100 IN WORK."

Mark Vice

After six months, Vice had made enough money to pay off the \$7,000 loan. And things took off from there. "Business just exploded," he says. "I couldn't believe it. People who I'd given business cards to just started calling with jobs. We're thankful that the Lord sent us a hard freeze."

By 2008, the company employed about five workers, then six. Vice expanded into industrial cleaning and apartment complex work. As the company's reputation grew, he pushed for more commercial business. "Residential work is great, but it's very unpredictable," he points out. "You might get 10 calls today and just two tomorrow and 15 two days from now. But apartment complexes and restaurants provide steadier work. You're not going to pump a lot of septic tanks when it's dry, but you'll pump out grease traps whether it's wet or dry."

Vice says he tries to get commercial customers — especially the owners of restaurants and apartment complexes — to buy into the concept of scheduled maintenance cleanings because they're easier to schedule than emergency calls. He does not ask for formal signed contracts, just verbal agreements. "We want customers to be able to drop us at any time if they're not happy with our work," he explains. "We don't want them to feel trapped by a written contract — just pleased with our service."

EQUIPMENT MATTERS

The company currently owns two vacuum trucks. Abernethy Welding & Repair built Vice's newer truck on a 2012 International chassis. It features a 2,500-gallon steel tank and a Jurop/Chandler water-cooled pump. The other truck, a 1991 International, features a 2,500-gallon steel tank built by Keith

more info

Pipehorn Utility Tool Co.
800/952-3710
www.pipehorn.com

Abernethy Welding & Repair, Inc.
800/545-0324
www.abernethywelding.com

Power-Flo Pumps & Systems
877/247-8677
www.powerflopumps.com

Chandler Equipment
800/342-0887
www.chandlerequipment.com

RIDGID
800/769-7743
www.ridgid.com

Duracable Manufacturing
Company
877/244-0556
www.duracable.com
(See ad page 17)

Roto-Rooter Corporation
800/848-3375
www.rotorooter.com

Keith Huber Corporation
800/334-8237
www.keithhuber.com

US Jetting, LLC
800/538-8464
www.usjetting.com

Right Fit.

Our footprint is small, but our impact is big. We're TRIC Tools Inc., the company that introduced trenchless home sewer replacement to America. Call or visit us on the web to learn how TRIC can be the right fit for you.

TRIC
PIPEBURSTING PRODUCTS



www.trictools.com | 888.883.8742

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

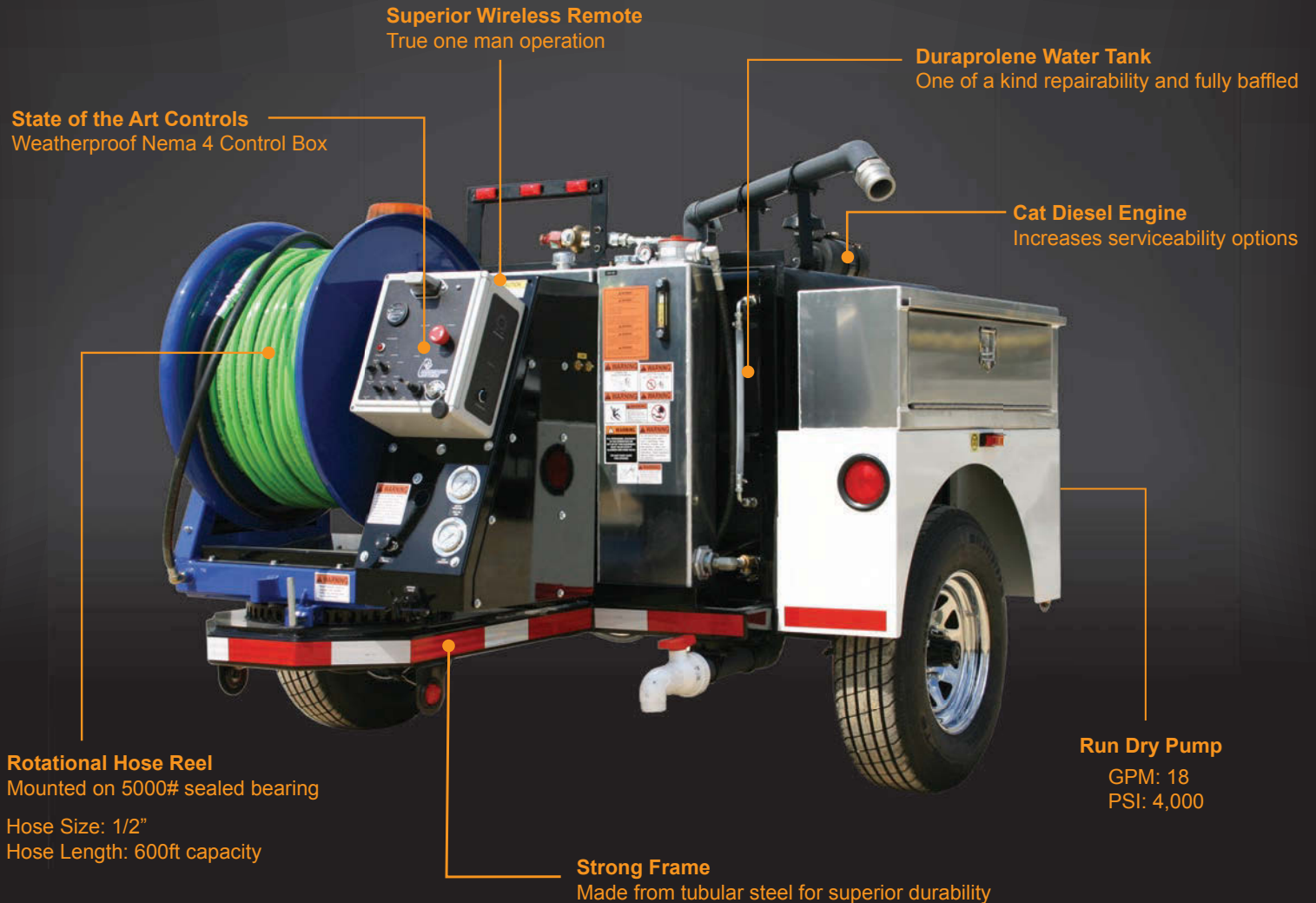
Scan the QR code with your smartphone



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



Designed by you. **Built** for you.



Superior Wireless Remote
True one man operation

State of the Art Controls
Weatherproof Nema 4 Control Box

Duraprolene Water Tank
One of a kind repairability and fully baffled

Cat Diesel Engine
Increases serviceability options

Rotational Hose Reel
Mounted on 5000# sealed bearing
Hose Size: 1/2"
Hose Length: 600ft capacity

Run Dry Pump
GPM: 18
PSI: 4,000

Strong Frame
Made from tubular steel for superior durability

above unit MONGOOSE MODEL 184

Other units and configurations can be found on mongoosejetters.com

Everyone has a story to tell. At Mongoose, our story is quite simple. Our products are born out of the necessity to deliver a premium quality, long lasting product which in return will prove to be extremely cost effective and profitable for your business.

Is a manufacturer selling you an idea or image rather than a piece of machinery that's built to last? At Mongoose, we insist customers review our equipment in detail to see the quality of construction in every unit. There should be no doubt that a you are making the right decision when purchasing a Mongoose unit.



<< LEFT: A worker stows rods from a pneumatic pipe bursting system as the new pipe is pulled into place. Pneumatic bursting systems use an air compressor to operate the bursting tool, so maintaining the air hose is critical.

ABOVE: Pipe bursting reduces the need for traditional digging considerably, but every job still requires at least one pit. If the pit isn't properly set up and prepared, you could easily damage your equipment.

Take Care of Your Pipe Bursting Tools

Pre-job inspections and regular maintenance can keep your equipment working hard for many years

By Kyle Rogers

According to the International Pipe Bursting Association, open-cut excavation can typically be reduced by at least 85 percent and sometimes as much as 95 percent when employing pipe bursting. And since it's a complete pipe replacement rather than a simple pipe rehab, it can be an attractive option when the job calls for it.

Here are some maintenance tips to keep in mind so your pipe bursting tools can stay a boon for your business and not become a headache.

1. Beware of a compromised cable

Prior to tackling a job, it's important to inspect the length of the cable and look for any strands that are broken or frayed. Not only could an issue with the cable shut down a job, it's also a safety concern.

"We're mainly referring to static bursting, where you're pulling a great deal of force on either a cable or a rod string, depending on the model you're using," says Brian Kelly, owner of Pow-r Mole. "If a rod string breaks or a cable parts, there are inherent safety issues. For example, the smallest machine we make pulls at 30 tons, and if any of those rod strings or cables part, that energy gets released."

If there are portions of a cable that are frayed, it should be cut off at that point and re-terminated as a shorter cable or replaced with a brand-new one, Kelly says.

2. Preventing premature cable wear

To avoid cable wear, Kelly recommends taking good care of the jaw assembly.

"You don't want worn jaws because that's your first point of contact on pulling all that force," Kelly says. "And on cable machines, most will have a sheave, essentially a pulley, and that should always be inspected to make sure it's greased properly and turning with ease."

With a rod string, Kelly says operators should keep all threads clean to prevent excessive wear or damage. "And during the pipe bursting process, you should make sure all those threads marry up properly and completely."

3. The pipe-gripping system

The end result of a burst should be a new pipe pulled into place. That's why the pipe-gripping system is an important maintenance item. "You should make sure that's all lubricated properly and in good working order so you never lose the pipe that you're pulling in," Kelly says.

CONTINUED >>

ALLAN J. COLEMAN

SINCE 1905

Call us today!
773-728-2400

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



JM-1000

**Special pricing
on all
General jetters,
cameras and
machines**

**CALL FOR
GENERAL
SPECIALS**



JM-2900

Warthog® Nozzles



WD

WGP

WG Classic

WH

WHP

WS

WT

WV

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

UPGRADE your camera system to the GVISION. A Better System



Visit 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

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

JetCam Adapter

JetSonde Nozzle

Jetter Hose



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

OLDEST NAME IN THE BUSINESS
— Over 100 YEARS OLD —

PHCC MEMBER

4. Know the job

One of the best maintenance practices for pipe bursting tools is having a thorough understanding of the job that awaits you in order to head off any opportunities for equipment damage in the first place.

“Prior to performing the bursting process, identify any potential issues or areas like concrete pipe repairs that you could get stuck at,” Kelly says. “That’s why doing a video inspection is important, as well as gathering knowledge from people who have worked with that system, whether it’s the municipality or a property owner.”

If you fail to identify such issues, you could be in store for an equipment breakdown.

“You need to know where there may be unbreakable repairs in a pipe because if you come to an immovable object and pull and pull, obviously something has to give,” Kelly says. “You could either stall completely or if you have a slightly compromised cable, you could pull until you overstretch it and break the cable. If you know where there’s an issue, you can stop immediately, dig at that point to resolve the situation, and then continue on with the burst. Acquiring knowledge is the most important factor in bursting.”

“You need to know where there may be unbreakable repairs in a pipe because if you come to an immovable object and pull and pull, obviously something has to give.”

Brian Kelly

5. The right machine

In addition to having sufficient knowledge about the job at hand, it’s vital that operators also know what tools they’ll need to successfully complete the job.

“If you’re just running, say a standard non-fracturable pipe blade setup and you run into a valve, you could potentially damage your tooling because it won’t be strong enough to break through a valve. You’re going to have to run a specialized slitter,” says Ryan Ley, service manager for HammerHead Trenchless Equipment.

Even if equipment damage doesn’t come into play, not having the right machine for a job can hurt your business’ bottom line.

“For example, more compact soils will need a bit larger bursting machine as far as static force than you would need with a standard soil,” Kelly says. “So if you have a lot of shells or rock, you may need a larger piece of equipment than you’re normally accustomed to for that diameter of pipe and material. Soil conditions can affect the profitability of a job greatly.”

6. Keep a simple routine

“Bursting equipment should always be cleaned thoroughly after each job, brought back into a shop environment, and all fittings and connections appropriately greased,” Kelly says. “Anything to prevent excessive wear, just like any mechanical piece of equipment.”

The main wear items that will need to be replaced from time to time are the rod string or cables and the jaw assembly. Staying on top of the inspection of those items and a simple post-job maintenance routine can go a long way

toward equipment longevity. “For our equipment, we’ve had people use it for 15 to 20 years with no issues whatsoever,” Kelly says.

7. Power source recommendations

In static bursting, you’re going to have a hydraulic power source running the equipment. Kelly says the maintenance for the power source is straightforward.

“Hoses are important to inspect to make sure there’s not excessive wear so they don’t burst and expel hot hydraulic oil. Then there’s changing the oil in the engines and changing filters. I would always point to the manufacturing specs for the maintenance schedules because it varies depending on what the manufacturer uses, whether it’s Honda or Kohler or a Deutz diesel. They’re all on different schedules.”

8. Inspect air hoses

With a pneumatic bursting system, you’ll be running an air compressor to operate the bursting tool. One of the most important items to maintain is the air hose.

“Always be checking your air hoses to make sure nothing has rubbed through, that there are no holes,” says Ley. “It’s especially important on longer jobs, because the more air leakage you have the less performance you’re going to get at the other end of the tool.”

During a job, Ley says operators should make sure air hoses aren’t encountering any sharp edges or rubbing on anything that would produce a leak. He also notes that oftentimes operators overlook the connections between hoses.

“You connect the hoses together and there’s a gasket in there,” Ley says. “A lot of times there can be a leak there and people don’t really think about that because they have a big enough air compressor to get the job done. But you actually do lose some performance if you have air leaking out of connections. I’ve seen that quite a bit.”

9. Keep the bursting hammer oiled

During a burst, Ley says it’s important to make sure your tool is getting enough oil.

“Our equipment is actually designed so that if you need to, you can keep a tool running, bypass the tank on the oiler, and just keep filling it up with oil. You never want to run out of oil during a burst.”

That’s because oil can help prevent other maintenance issues.

“Typically, with pneumatic bursting, when you start seeing the hammer decrease in power is when you would do a service job on it,” Ley says. “But if it’s a well-oiled machine, and depending on the conditions, you may not have to change the wear rings in the hammer for quite some time.”

10. Pit prep

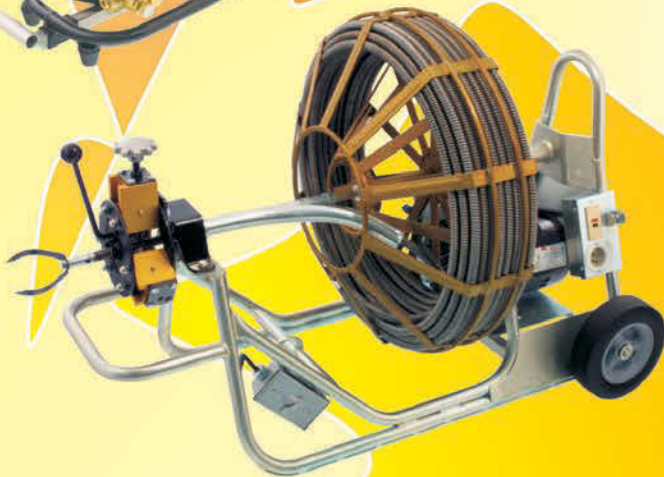
Though pipe bursting reduces the need for traditional digging considerably, every job will require at least one pit. That can play into equipment maintenance as well.

“If the pit is not well prepared and just thrown together, you could easily damage your equipment,” Ley says. “People will use the pit wall as a load plate, and if that’s not properly shored it could cave in. Then the machine could move around and create more of a headache for everyone, as well as being a safety issue.” **C**



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



T&T Tools, Inc.

Fax: 800.521.3260

Email: sales@mightyprobe.com

800.521.6893

www.MightyProbe.com



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

35 YEARS

MULTIPLE INSPECTION SOLUTIONS, ONE PROVIDER: RATECH.

Ratech is an industry leader in the development, manufacturing and servicing of CCTV systems and equipment. From wifi, tablets, iPhone and Android solutions to DVD, USB, SD, and more, Ratech offers more flexibility and reliable products than anyone else. So no matter the problem, Ratech has an innovative solution. And has for over three decades.

Elite SD or USB



Mini Crawler with Pan n' Tilt



Mini Peek System



New design cable reel with mounting bracket



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



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

Upload your inspection videos to YouTube Ask us HOW?

Ratech ELECTRONICS

Video Pipeline Inspection Systems

Blast More



Away.

Introducing Jetstream's 650hp TwinForce™ and 600hp 6000 Series Water Blasters

Our two new high flow, high horsepower water blasters pack a punch with up to 650 HP and have the power and reliability to make your job easier. They also come with the Jetstream® RightStart® training program as well as nationwide service support, parts and accessory availability, and water blasting application expertise - so you can focus on your business and increasing productivity.

To learn about how Jetstream can improve your productivity, call 800-231-8192 or visit www.waterblast.com.



A proud member of the Federal Signal Family.

© 2015 Federal Signal Corporation

www.waterblast.com 1.800.231.8192

Jetstream® TwinForce™ and RightStart® are registered trademarks of Jetstream of Houston, LLP.

PROFILE

ALL AROUND
815-756-1707
866-267-9099
PUMPING SERVICE

OPENING UP OPPORTUNITY

SERVICE DIVERSIFICATION HELPS ILLINOIS ENTREPRENEUR

GUIDE HER COMPANY ALONG A PATH OF STEADY GROWTH

All Around Pumping owner Ashley Hartness and her husband, Chris, outside the company shop in Cortland, Illinois.

EVERY BUSINESS OWNER HAS A STORY. FOR ASHLEY HARTNESS, OWNER OF ALL AROUND PUMPING SERVICES, THAT STORY BEGAN IN 2006

WHEN SHE PURCHASED A 1992 INTERNATIONAL PUMP TRUCK – SIGHT UNSEEN – WITH MONEY BORROWED FROM HER PARENTS. HER HUSBAND, CHRIS, TOOK POSSESSION OF THE TRUCK IN TOLEDO, OHIO, AND A BUSINESS WAS BORN.

By 2015, Hartness' company had grown to 13 employees, four big trucks, two trailer jetties and all the tools needed to support a full menu of services.

THE LAUNCH

Hartness started the company working from a bedroom office. At the time, she prepared handwritten postcards for mailing and drove around the area looking for places with septic systems. She was also busy taking care of the couple's three small children and working part time for a preschool and a tax office.

Chris, who had experience in the industry, continued his outside job and handled All Around clients on evenings and weekends — sometimes with his wife as a second hand and occasionally with the kids in the truck. It was a struggle, but they didn't give up.

During their first two years, the economy dipped, but Hartness says she didn't notice because the business was so young and she was too busy and focused on making it successful.

By 2008, Chris had left his outside job to devote his time to the company.

"You just see things work, and I had done everything I could to get our name out there," Hartness says. "I continue with some of the basic things I did originally. For our advertising, I did the postcards, and I am still doing that. The other day, I sent out 30,000 cards that I designed. We have built this company with the basics, and in 2012 we moved out of the house and into a rented property."

The company recently purchased an adjoining 2 acres and is in the process of building a 98- by 60-foot building with office space and six garage bays.

CASTING A NET

"What stands out for me as the smartest overall move was in 2012 when we spent money to have our website built," she says. "That was a very positive thing. It opened us up to so many opportunities — to truly be the 'All Around' company."



Cooper Wallace (left) jacks a septic tank while Floyd Griffin pumps it out. Sewer and septic systems in local trailer parks have provided a good source of business for All Around Pumping.

profile

ALL AROUND PUMPING SERVICES INC.
CORTLAND, ILLINOIS

OWNER: Ashley Hartness
ESTABLISHED: 2006
SERVICES: Hydroexcavation, sewer cleaning and repair, septic cleaning, installation and repair
SERVICE AREA: 75-mile radius of Cortland, Illinois, and will travel to Chicago
CUSTOMER BASE: Residential, plumbers, trailer parks, colleges, hospitals, commercial, contractors, car washes
WEBSITE: www.allaroundpumping.com



All Around is located in Cortland, Illinois, 78 miles west of Chicago, and Hartness says her equipment goes into the city at least once a week to service restaurant grease traps. That business came primarily from the website.



Cooper Wallace (left) and Cody Hinrichs set up the enclosed Spartan trailer jetter before cleaning a septic tank.

“It was just amazing when we saw the activity from the website,” she continues. “It’s doing its job. When people go online looking for pumping, our name pops up. We are ‘All Around.’ People call us.”

Plumbing companies make up a significant piece of the pie, accounting for at least 25 percent of the company’s work. Other large clients include hospitals, colleges and federal government facilities.

Their customer list also includes several trailer parks in the area, which are on either septic systems or a sewer system. These commercial entities are not managed by the city, so they maintain their own infrastructure. In many instances, All Around has service agreements with the parks, depending on the client’s budget.

“We will maintain their sewer mains, and sometimes manholes get clogged up,” Hartness says. “We have picked up more of the trailer park business since Chris made the suggestion in 2010. He saw the potential of making money with low overhead, and that was what prompted us to buy the first hydro jetter.”

Although Hartness has been aggressive in the company’s expansion, she is also cautious about moving into new services. She has been reluctant to move into relining and pipe bursting because she doesn’t want to branch out hastily into other technology.

BUYING POWER

For Hartness, a new equipment purchase boils down to whether she will lose money by not having it.

“That is my criteria,” she says. “Right now I am losing money because I

Floyd Griffin packs up the vacuum hose after pumping out a septic tank.

>> **RIGHT:** Cooper Wallace finishes jetting a septic tank on the edge of a mobile home park in DeKalb, Illinois.



“It was just amazing when we saw the activity from the website. It’s doing its job. **WHEN PEOPLE GO ONLINE LOOKING FOR PUMPING, OUR NAME POPS UP.”**

Ashley Hartness

don’t have enough equipment. This is a busy season for us, and I, unfortunately, cannot make everybody happy because I am booked solid. So I have to think about buying more equipment.”

The current equipment list includes:

- 2015 Peterbilt built out by Imperial Industries with a 4,000-gallon tank, National Vacuum Equipment blower, and an onboard water jetter
- 2013 Peterbilt by Imperial Industries with a 3,600-gallon hydraulic hoist tank and National Vacuum Equipment blower
- 1992 International with a 2,500-gallon tank and Jurop/Chandler pump
- 2001 Vactor jet/vac truck with a 15-yard body and 6,000 cfm Roots blower
- 2014 Mercedes Sprinter Van for hauling equipment
- 2015 Spartan Tool Ultimate Warrior trailer jetter (5,000 psi/18 gpm) with a 600-gallon freshwater tank
- 2008 Spartan Sidewinder trailer jetter (4,000 psi/18 gpm) with a 300-gallon freshwater tank
- RIDGID camera with built-in sonde and a RIDGID locator for locating tanks
- 2015 Bobcat E326 backhoe

Built to withstand the toughest handlers

rugged, dependable, powerful
CCTV inspection technology



cameras | tractors | vehicles | systems

1800.767.1974 @www.rstechserv.com

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

conductor
THE SINGLE SOLUTION



The All Around Pumping crew includes (from left) Cooper Wallace, Floyd Griffin, Ashley Hartness, Chris Hartness and Cody Hinrichs.

She prefers to purchase rather than lease.

"I understand how leasing works, but I feel it is a waste of money on my end. I would rather own something," she says. "Even at the end of two years, if it is not working out the way I need it, I can sell and get some money back somehow. Each piece of equipment you buy makes you money. Even if you buy a piece of equipment for \$40,000 and only use it four times in six months, you look at the profit you made on that. Plus you have to think about keeping your guys employed and busy. You have to run the numbers. How much do you lose on it in those six months? What is your goal?"

To protect their investments, the Hartnesses put great emphasis on equipment maintenance. Her husband handles routine procedures, and much of her stock is still under warranty. She has developed a daily vehicle inspection policy — or DVI — that includes a checklist for each driver. The checklist goes through everything from tire pressure to proper fluid levels to equipment inventory, including a helmet, safety vest, glasses and gloves.

"Chris, in his past work, had been required to give a similar report, and we adopted the idea," she says. "We learn from what other companies have done and incorporate ideas. I got tired of a driver forgetting something needed on a job and losing time getting outfitted properly."

BUSY AS BEAVERS

While much of the work is routine after 10 years in business, interesting and unusual projects pop up occasionally, like the time they got a call from a local plumbing company to help out at a railroad yard.

"Underneath the railroad tracks was a 48-inch culvert that let water pass to both sides," says Chris Hartness.

A beaver family had built a dam inside the culvert, stuffing it full of branches and trees. The railroad company was not allowed to kill or trap the animals, so the critters had to be relocated in another manner.

"Another company had tried to dig out all of the trees and branches with a backhoe, but could only reach so far," Chris says. "They cleared it out as best they could and were going to have us start on the job the following day with

CONTINUED >>

BUILDING A BETTER REPUTATION

Ashley Hartness had planned on being an elementary school teacher. While in college, she worked in the offices of a general contractor, which taught her how an office should be run. Her husband, Chris, had served in the military and worked for a drain cleaning company after he was discharged. That combined experience helped them succeed with their new business.

The business started out in residential septic service, and evolved into expanded procedures. In 2008, Hartness purchased a hydro jetter, which expanded the business into clearing leachfield lines and clogged outlet pipes and taking care of catch basins for car dealerships. The business was becoming a one-stop shop.

The business benefited from little local competition, but it was still a grass-roots effort for Hartness as she got word out.

Community outreach has been important for the company. All Around provides grease trap maintenance to the local Meals on Wheels organization, as well as hydrojetting when needed. They donate services to other charities, sometimes just charging fuel expense. Sometimes, they even deliver Meals on Wheels using their own vehicles.

Hartness says that providing a necessary service in a positive way has brought her and Chris great joy.

"The whole sewer cleaning industry has a negative connotation," she says. "With our new equipment, and our guys looking professional and speaking to the customer with knowledge, we provide a good image. That is something we are very proud of."

She enjoys seeing her employees take pride in their work.

"We have a good employee retention record because our employees have the right equipment and are doing the best they can," she says. "All Around cannot go wrong."

SCOOTER

VIDEO
INSPECTION SYSTEMS

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

We are celebrating our

25TH ANNIVERSARY

With A **25% OFF** SALE as a THANK YOU to our customers

Tired Of Squinting
At A Tiny Monitor?

Get An Attaché
With A **15" LED**
Hi-Def
Monitor

"Simplify your life!"

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



The new Scooter Attaché 1+ now includes a giant 15" LED hi definition color monitor as well as a high quality SD/DVR recorder, and has the capacity to operate other camera systems too!



800.772.6165

www.tvinspection.com

"I understand how leasing works, but I feel it is a waste of money on my end. I WOULD RATHER OWN SOMETHING. Even at the end of two years, if it is not working out the way I need it, I can sell and get some money back somehow."

Ashley Hartness

our Vactor and the 10-inch hydro jetter. When we showed up, the busy beavers had moved back all of the trees and rebuilt their homes overnight."

All Around ran a jetter and cleaned out the 48-inch pipe. Then they broke up the trees and branches so the beavers couldn't rebuild their home. The railroad and plumbing companies were happy with the results. The beavers? Not so much.

STRONG MANAGEMENT

Responsibility for beaver evictions and other fieldwork falls to Chris, who also supervises the technicians. He answers the technical questions and holds the pumper and system installer licenses.

Ashley manages the whole operation from the office. She says she has succeeded in a male-dominated profession by building a system of respect within her business.

"I believe you treat people as you want to be treated," she says. "Whenever I hire someone, that is the first thing I say. This is not a glamorous industry,



Cody Hinrichs carries vacuum hose to a septic tank he was called to pump.

but you don't have to see it as a negative. Our equipment is in good shape, our workers dress nicely in a uniform with a collared shirt — something we provide — and I, as the boss, dress professionally."

Her technicians, some of whom have worked at the business for several years, are always willing to train a new hire. She looks for someone with some plumbing experience.

"You need to know how gravity works and how the flow is going to happen with lines if you are hydrojetting," she says. "You need to be two steps ahead when working with this equipment, as it can be very dangerous. You have to have some education on it.

"My management style is definitely open door," she adds. "I talk to the guys every day — every single employee. All of our employees have a company cellphone, and if I don't speak verbally, I will at least send a text. I'll ask the status of the job or send information. I might even send a joke or forward a good comment from a customer. Anything to let them know I care."

During winter, she often hosts a slow cooker Friday lunch, serving pulled pork or chili.

"They don't actually call me 'Mom' ... but they appreciate I care," Hartness says.

For those just starting out in a business, she has one final nugget of advice: Be sure someone answers the phone.

"Chris and I are successful because I knew how to run the office and he knew how to do the fieldwork," she says. "But I needed to be in that office. There is so much paperwork, and you need someone handling promotion and advertising, which lets the person in the field do that part of the job." **C**

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

more info

Chandler Equipment
 800/342-0887
www.chandlersequipment.com

Howden Roots
 877/363-7668
www.howdenroots.com

Imperial Industries, Inc.
 800/558-2945
www.imperialind.com

National Vacuum Equipment, Inc.
 800/253-5500
www.natvac.com

RIDGID
 800/769-7743
www.ridgid.com

Spartan Tool, LLC
 800/435-3866
www.spartantool.com
 (See ad page 80)

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



EFFICIENT LATERAL REINSTATEMENT SOLUTIONS

CUES CCTV Trucks with Self-Propelled Lateral Reinstatement Cutters

CUES offers TV/Cutter inspection vehicles with Schwalm Self Propelled Cutters for lateral reinstatement services, removal of protruding taps, and brush finishing existing cuts.

» The Schwalm Talpa FSR 2060 is designed for pipelines with diameters of 8" and above. By appropriately spreading its wheels and adding extra weights, it can be used in sewers with a pipe diameter of up to 24".

» The Schwalm Talpa FSR 1330 Cutter/Robot is utilized in 6"-12" diameter pipelines. Both units provide substantial torque to work efficiently in all types of liners, including GRP structural lining systems.



Schwalm Sewer Rehabilitation Cutters / Robots

"The Standard of the Industry"



800.327.7791 • www.cuesinc.com • salesinfo@cuesinc.com

WATERJET PROTECTION

PROTECTIVE CLOTHING - WITH THE STRONGEST FIBER IN THE WORLD!



**NEW! Available in
FR OUTER MATERIAL**



PROTECTION LEVEL 1000
 ○ SINGLE 2000 bar/30000 psi
 ○ AUTOC 2000 bar/30000 psi
 ○ C.C. WARMG-SEC

PROTECTION LEVEL 2000
 ○ SINGLE 2000 bar/30000 psi
 ○ AUTOC 2000 bar/30000 psi
 ○ C.C. WARMG-SEC

- + **VENTILATION AVAILABLE**
GOOD WORKING CONDITIONS!
- + **FR OUTER MATERIAL**
AVAILABLE TO ORDER
- + **MAXIMUM PRODUCTIVITY**
FAST AND EASY GEAR UP!
- + **PROTECTION UP TO 43500 PSI**
- + **CE CERTIFIED**
VERIFIED PROTECTION



Find US distributors, News, Movies and E-catalogues, at:

WWW.TST-SWEDEN.COM

YOUR SOURCE FOR RIDGID

CENTRAL OKLAHOMA

Winnelson
COMPANY



**CS6 Digital
Recording
Monitor**



**CS10 Digital
Recording Monitor
with Flash Drive**



**LT1000 Laptop
Interface System**

**SeeSnake®
Compact 2
Camera
Reel**



**SeeSnake® MAX rM200
Camera System**

DVDPak



microDrain Reel

8% ONE YEAR FINANCING AVAILABLE!

Longer lease rates also available. Call Keith for details.

BUYING A SEESNAKE?

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

**WE
WILL NOT BE
UNDERSOLD**

- Call Us Evenings and Weekends -

Keith: 405-602-9155 &

Jim: 405-205-3974

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

5037 NW 10th
Oklahoma City, OK 73127

www.centralwinnelson.com

Expect more with more standard advantages like smart controls

With Vacall AllExcavate hydro excavators, optimum productivity and ease of use is standard – not an option. AllSmartFlow smart controls on every machine help to conserve water during high-performance jet/vac digging around utilities and water lines or cleaning frac tanks and vessels. Single-engine efficiency also helps conserve fuel and reduce emissions, while options like a cold weather compartment make an easy-to-operate machine even more comfortable.

Call 800-382-8302 to learn why nothing works like a Vacall.

GREEN
THAT WORKS



DIG SMARTER



VACALL.COM/ALLEXCAVATE



Being Liked is Serious Business

Follow these 10 simple steps for repairing and protecting your online reputation

By Kate Zabriskie

“The worst service experience ever! The technician showed up two hours late and never even apologized. His boots were dirty, he left mud on my carpet and the floor drain in my basement is still backing up. DO NOT EVER CALL THESE PEOPLE!!!!”

“If you are offered a job at this place, run! Do not walk to the nearest exit. This company is an asylum. I have never worked with a more dysfunctional group of people in my life.”

“There are a lot of fake reviews on this site. Anyone who has ever hired these people knows they’re never on time and they’re always trying to upsell you on some expensive repair you don’t need.”

Ouch! Those hurt.

And there it is, right there in black and white for anyone and everyone to see — the naked truth: what someone thinks of your product, your service or your organization.

Bad reviews can bite, wound and sting. Worst of all, a mountain of them can appear in a matter of seconds. Social media: It’s a wonderful thing, until it turns against you.

So, what’s a person to do when his or her online reputation is suffering at the hands of others? Plenty.

Step one: Take a deep breath. You can fix it. Not overnight, but you can fix it.

Step two: Get over any hurt feelings or embarrassment, and do it quickly. The people who complained have done you a great favor. It’s now up to you to decide if negative reviews are going to be the kiss of death or a wake-up call.

Step three: Uncover everything that is being said about you. If you found a bad review in one place, there are probably others. You will need to spend a few hours researching yourself online. Start Googling and take notes of what you find and where. A word of caution: Resist the urge to respond to anything. Be strategic, not impulsive. You will need a game plan before typing a word.

Step four: Automate. Sign yourself up for Google Alerts at www.google.com/alerts. If new content mentioning your company shows up online and Google sees it, the search engine will send out an automatic alert letting you know. There are also a variety of free and paid services that will monitor online search terms and any major review sites for mentions, and will quickly notify you if new information about you is posted. If you are serious about managing your online reputation, these services are extremely valuable.

Step five: Once you have a good picture of your online grade, get ready to roll up your sleeves and start problem-solving. If your employees are rude, train them. If your work didn’t meet a customer’s standards, fix it. If people hate working for you, investigate. Unless you are the victim of competitor sabotage, what you are reading is probably based in truth. If needed, revisit step two.

Uncover everything that is being said about you. If you found a bad review in one place, there are probably others.

Step six: Involve your team and communicate your improvement plan. You will reach your goal faster if everyone in your organization understands what it is and is working toward it.

Step seven: When you are interacting with people, ask them what they think. You already know some of them have no problem sharing their opinions with the world, so they will probably be willing to candidly tell you the good, bad and ugly. Asking your customers for help can prove extremely beneficial.

“We are working hard to improve. Would you be willing to talk to me for a few minutes? Thank you. What two or three things could we have done differently in order to make your experience with us better?”

If at all possible, have these conversations verbally. You may be surprised by the quantity and quality of information you are able to quickly gather.

Step eight: Once you have a clear sense of what is going on with your business and are on the road to smoothing out the rough spots, get back to the reviews. It’s time to answer them.

First, thank the reviewer for letting you know about a problem and include something good about yourself, too.

“Thank you for your feedback, and I’m sorry your experience with us wasn’t what you expected. We’ve fixed a lot of plumbing problems in our five years of business, and we want all our customers to be satisfied with our service.”

Second, describe what you have done to prevent the issue from occurring again.

“We’ve taken a few steps to prevent what happened to you from happening to another customer. Since your visit, our staff has had weekly training sessions to improve their service skills.”

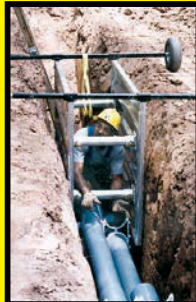
Third, ask the person to give you a second chance.

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

"Please call on us again if any plumbing issues arise. I think you will be pleasantly surprised. My name is Karl. If you ask for me when you call, I'll make sure you're well taken care of."

Resist the urge to be snarky, judgmental or to correct your customers. Yes, some customers are wrong — however, pointing that out will not help. Lots of people are going to be watching how you respond to others. Take advantage of the opportunity to be polite, helpful and solution-focused. People who rely on the reviews can often tell when other customers are being difficult. If you are gracious in your dealings with them, you will win in the long run.

Step nine: Ask your happy customers to post reviews. Over time, your average will improve. Obviously, this approach only works if you are indeed making changes and removing the causes of bad evaluations. If you are not, prepare for more of the same reviews you've gotten in the past, because they're coming. You simply cannot turn off the social media tap.

Step 10: As tempting as it may be, do not post fake reviews or go to a service to get others to do the same. Apart from the fact that it's dishonest, it's also dangerous. If you get caught, you will look even worse than you did before. Instead, get busy writing more content to post on your site, press release sites, and other appropriate places. The more that you have out there, the less visible bad comments will be.

Followed closely, this 10-step plan for a reputation overhaul could earn you five stars. **c**

ABOUT THE AUTHOR

Kate Zabriskie is the president of Maryland-based talent development firm Business Training Works.



**TRENCHLESS
SOLUTIONS**

www.powrmole.com

SINCE 1956

NEW



PD-33M

MODULAR PIPE BURSTING MACHINE

Replaces pipe from
2" – 6" in diameter

Non-slip, cylinder-
activated jaws prevent
cable damage

60,000 pounds
of pulling force

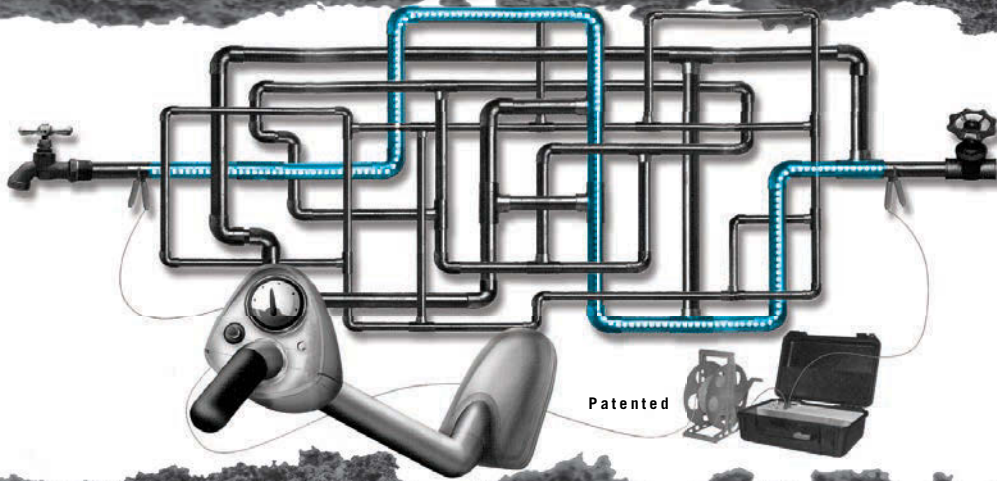
Easily disassembled
and reassembled
for manhole and
basement applications

Small footprint of
only 20" x 20"

FOR INFORMATION CALL: 800-344-6653

STEERABLE • COMPACT • ECONOMICAL • PRODUCTIVE

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 jsml@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.

This Is The Nozzle You've Been Waiting For

*Patented
Root Rat  **root cutter nozzle**

1/2"
7-35 gpm/1500-10,000 psi

3/8"
3-10 gpm/2000-7500 psi

3/4-1"
40-160 gpm/1500-4000 psi

Custom Built Jetters
Hot or cold water jetters from 4 gpm at 4000 psi, skid or cart frames or small trailer systems.

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

"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

MADE IN THE USA

WE SELL AND SERVICE
COLD WATER JETTERS

WE SELL PARTS, PUMPS,
UNLOADERS, HOSES, JET TIPS, ETC.

Visa, Mastercard, Discover, AmEx Accepted

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

www.rootrat.net

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

NEW!

MORE WITH LETS

LETS6.0



Now you can quickly inspect laterals with the new LETS 6.0 operating in 6-inch to 30-inch diameter mainlines. This completely upgraded system can increase your productivity and uptime:

- Fast camera launching with improved contoured chute
- Efficient 135-degree with-the-flow launch angle
- More power to traverse pipe against flow
- Pan & Tilt camera with self-cleaning lens
- Rear view camera

Keep your crews moving. Get more with LETS.

ARIES
INDUSTRIES, INC.

See what you're missing.

www.ariesindustries.com
(800) 234-7205





Erik Gunn is a magazine writer and editor in Racine, Wisconsin.

Family Financing

Proceed slowly and cautiously when it comes to borrowing money from relatives

By Erik Gunn

So it's time to get a new truck. "And it's only \$120,000," you whisper to yourself when you've pulled all the information together.

Unless you've been *really* lucky, you're not going to pay cash in full for it. Not to say you couldn't afford to, but the fact is, if you can afford the cost of borrowing, even for a short time, it often makes sense to use credit and avoid tying up too much cash that you might need for other expenses — especially unexpected ones.

So the next step is financing. Vendors, of course, have financing programs. And your business bank is usually the ideal source for a truck loan.

But those involve paperwork. And there may be any number of reasons that the loan officer looks at you sideways and decides you don't quite qualify for their lowest rate — even if your credit score and repayment record are spotless.

Then along comes your wealthy Uncle George. He's always been kind of proud of how you've built your business with your own two hands.

So there you and he are at the WWETT Show looking at a beautiful new truck. And when Uncle George offers to lend you the money for it on the spot, it's hard not to shout "YES! THANK YOU!" right away, shake Uncle George's hand, and place your order with the vendor right then and there.

But should you take the money?

PROCEED SLOWLY

Rob deJong is managing partner with the Milwaukee, Wisconsin, law firm of Rose & deJong, where he handles all kinds of transactions for small- to mid-market companies. His advice? Think twice.

"Loans between family members are fraught with potential downfalls," deJong points out. "I would tell Uncle George to make the loan only if a complete loss wouldn't change his view of the borrower and it wouldn't change his life."

His cautionary stance applies to both sides of the deal. "I would tell Mr. Business Owner to decline out of hand if he could borrow the money from a bank or financial institution," deJong says.

The reality, though, is that these transactions happen — a lot. Then what?

LAWYER UP

Suppose Uncle George has money to burn and is willing to take the risk — and that you are comfortable letting Uncle George be your loan officer. What's the next step?

"Everyone needs a lawyer because they have different, conflicting interests," deJong says. "But at the very minimum, Uncle George needs someone who can draw up a legally binding agreement."

Yes, it's tempting to skip the paid advice. After all, it seems so straightforward — five years to repay, 9 percent interest — how complicated can it be?

Answer: You don't even know — and the protection you buy by employing an attorney in the deal is inexpensive insurance.

"Documenting a loan like this is a relatively easy, low-cost thing for a lawyer to do," deJong points out. "On the other hand, doing it incorrectly can be costly for both borrower and lender."

The contract should provide for certain kinds of protection for both you

"Loans between family members are fraught with potential downfalls. I would tell Uncle George to make the loan only if a complete loss wouldn't change his view of the borrower and it wouldn't change his life."

Rob deJong

and Uncle George, deJong explains.

"The documentation should be crystal clear that the money is owed with any deductions and the principal accelerates upon a default in a regular payment," he explains. "It should also provide that Uncle George can add his legal fees to the total if he has to sue to collect payment."

CHECK THE MARKET

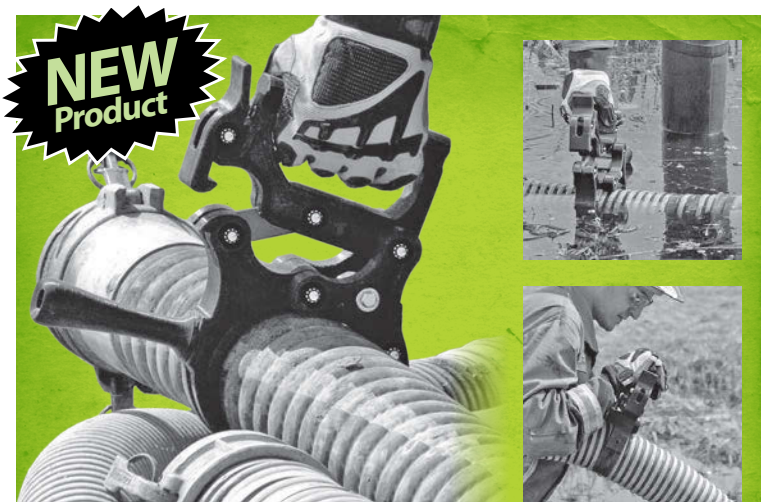
Before you get an agreement drawn up, both you and Uncle George should have an idea of fair interest rates and a reasonable time for repayment. Check with your local bank and credit union.

The agreement also needs language that's clear on what the loan collateral is and on the general terms of the loan. "The collateral — a lien on the truck in this case — must be properly documented," says deJong.

We'd hate to think we'd have to look for fine print in a transaction with a relative — but deJong warns, "Also, watch out for any prepayment penalties, should Mr. Business Owner decide to pay off the loan early."

Another good reason to involve a lawyer is state-by-state differences concerning the terms of business loans. "For business transactions (as opposed to consumer transactions), there is no limit on the amount of interest to be charged in Wisconsin," deJong offers as an example.

Every state will have slightly different provisions, and the underlying assumption is often that business owners need fewer protections than ordinary consumers. (Sound familiar? Remember that a recent Money Manager column



Hose Handle

Hose and Pipe Handle • One handed tool
 Snaps on and off hose/pipe easily • Does not conduct heat or cold
 • High levels of strength and durability



Rain Gear & Boots



Safety Clothing



Hose & Couplings

***We Can Service All Your Needs
 & ALL In One Place***

Call For A
FREE
 Catalog
 Today!

MRP 1.800.325.3730
 MILWAUKEE RUBBER PRODUCTS www.MilwaukeeRubber.com

pointed out certain federal credit card consumer protections don't extend to businesses.)

COVER THE 'WHAT IFS'

Last, but hardly least, what happens if you can't repay the money?

For any other lender, the typical remedy is that if you get too far behind on your payments, you lose the collateral. So if Uncle George has taken a strictly business approach to your deal — as, arguably, he should — he'd have the right to take away the truck.

So, as with any other lender, you want to be sure he can't take away any of your other assets. That includes business assets and any personal assets, such as your house. To guard against that, the loan absolutely should be made to your business, not to you personally. And that also means there should be

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
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

**Battioni®
Pagani
Pompe**

Power
at your service

no personal guarantee.

"If the loan is to an entity like a corporation or limited liability company, the obligation to repay the loan stays with the entity," says deJong.

The contract should also make clear that the new truck is the only collateral included. None of your other equipment or supplies should be mentioned.

All of which adds up to this: You might think borrowing from a relative would involve a lot less bureaucracy and paperwork. But if you do it right, it won't — and a lot of that bureaucracy and paperwork is for everyone's protection.

So — borrow from a family member? In general, you're going to be better off just saying no. But if everything adds up to tell you that, yes, that's really the best option, then make it as businesslike a transaction as possible.

Good luck, and happy truck shopping! **c**

VIVAX
METROTECH
vCamMX
Inspection Camera

- 8" Daylight Readable LCD
- Locatable Pushrod and Sonde
- Internal Li-ion Rechargeable Battery
- 1" Self-leveling Color Camera
- 18mm High Resolution Camera
- Interchangeable Camera Heads

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

Your TRUSTED Lateral Lining Manufacturer!

**Quik-Lining
 Systems**



★ ★ ★
CALL TODAY!
605-695-6778
 ★ ★ ★

Quik-Lining Systems offers a revolutionary line of Lateral Lining Inversion Equipment for the installation of *Cured In Place Pipe*.



Our equipment saves
TIME and MONEY

Can be used in even the most
 confined spaces!

CONTACT US FOR MORE INFORMATION // 605-695-6778

WWW.QUICKLINING.COM
 E-MAIL // JOHN@QUICKLINING.COM

NEW

VERSATILITY



Manta™ 350 RC

A bottom Cleaner
 with exchangeable
 back plates and
 accepts recycled water

Equipment Engineered for Long Lasting Performance™

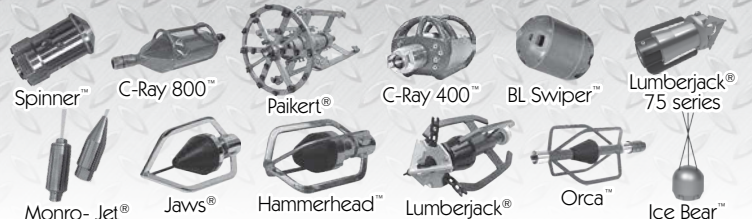


CALL
 FOR A
**FREE
 DVD**



NozzTeq®
 Taking Science to the Sewer!®

www.nozzteq.com
 Toll Free 1.866.620.5915



NLB 225 Series: the most flexibility yet in a convertible water jet unit



225 Series
up to 350 hp



With a simple conversion you can use the same pump unit for many different jobs.

Choose from 42 combinations of pressure, flow and horsepower

If you need one water jet pump unit to handle many different jobs, you can't beat the NLB 225 Series. Its eight convertible models cover a pressure range from 4,000 to 40,000 psi, with flows from 6 to 82 gpm. You also get a choice of diesel engines: 200, 235, 275, 300, or 350 hp.

Built on the same platform as the NLB 125, 325, 605, and 1005 Series, these workhorse units have all the same advantages: reliability, fast conversion and easy maintenance. And with NLB's exclusive UltraGreen™ package, they even reduce emissions and operating costs.

With the NLB 225 Series, you can be more versatile — and more productive. For details, visit www.nlbcorp.com, or call at 1-800-441-5059.

325 Series
up to 400 hp



125 Series
up to 145 hp



605 Series
up to 600 hp



1005 Series
up to 1,000 hp



The Leader in High-Pressure
Water Jet Technology

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 • e-mail: nlbmkgt@nlbusa.com

Damage Prevention Begins With Planning

Safe pipe bursting requires thorough understanding of surrounding utilities and soil conditions

By Matt Timberlake

In all forms of utility construction, damage prevention must be a part of the entire process to ensure a successful and safe process. From planning through execution, the entire project team and all stakeholders must play an active role in preventing damage to buried utilities inside a project area.

Pipe bursting is a well-established method of trenchless pipeline renewal. The process involves pulling a steel bursting head through an existing pipe, which fractures it from within and simultaneously installs a new pipe of the same or larger inner diameter in its place.

Pipe bursting is commonly used to replace buried water, sewer, gas and storm lines, and can reduce traditional excavation of a pipeline project by as much as 90 percent. The benefits from a damage prevention standpoint are obvious, since there is a dramatic reduction in excavation, where most utility strikes and damage occur. However, unlike some methods of trenchless rehabilitation, it does include mechanical excavation.

In order to accomplish a replacement by pipe bursting, there will be a number of strategically located excavations that serve a number of purposes, including insertion of the new pipe, location of the pipe bursting equipment and reconnection of service connections like sewer laterals or water services.

LOCATING UTILITIES

During project planning, it is essential that all utilities are properly located and marked to show location, type of utility, size, pipe material and depth. This will allow the project team to plan for temporary utility relocation or conflicts. Geotechnical reports showing actual conditions inside the existing trench and groundwater levels should be provided when possible prior to the project bid.

Unlike horizontal directional drilling, which installs a new pipe where one does not exist, pipe bursting is replacing a pipe that was previously installed in a trench; therefore, the geotechnical reports should be representative of the backfill and bedding of the pipe to be replaced.

SERVING THREE FUNCTIONS

As the new pipe is installed, a pipe bursting head serves three main functions as it is pulled through the ground. First, it fractures the existing pipe from the inside by applying a radial force created either by a static pull force or a pneumatically driven tool. Second, the existing conduit is expanded approximately 20 percent larger than the new pipe's outside diameter. Lastly, and simultaneously, the new pipe is pulled in behind the bursting head.

As the head travels through the ground, the earth must either compress or displace to receive the head and new pipe. Depending on the type of soil and the volumetric displacement of the head, forces will be transferred to an area immediately surrounding the pipe.

A part of the construction plan should include the anticipated "potential impact zone" of the pipe burst, and all utilities inside of that zone should be located and exposed or relocated if they become damaged. In many cases,

It is everyone's responsibility to promote construction safety and to use best practices when working belowground.

utilities that may conflict with the potential impact zone are "potholed" by use of vacuum excavation, which exposes them and either confirms they are outside of the potential impact zone or allows for the pipe bursting head to pass by safely, at which time the hole is then simply refilled.

In most cases, soil compaction and/or displacement is directed upwards from the crown of the existing pipe. The potential impact zone can be easily calculated and is shown in detailed plans.

EVERYONE'S RESPONSIBILITY

In order to anticipate the potential impact zone, there are three major factors taken into consideration: the inside diameter of the existing pipe to be replaced, the outside diameter of the new pipe that is being installed and the geotechnical conditions found inside the existing trench. By subtracting the inside diameter from the outside diameter and converting to a potential impact zone, a safe and successful pipe burst can be both planned and executed.

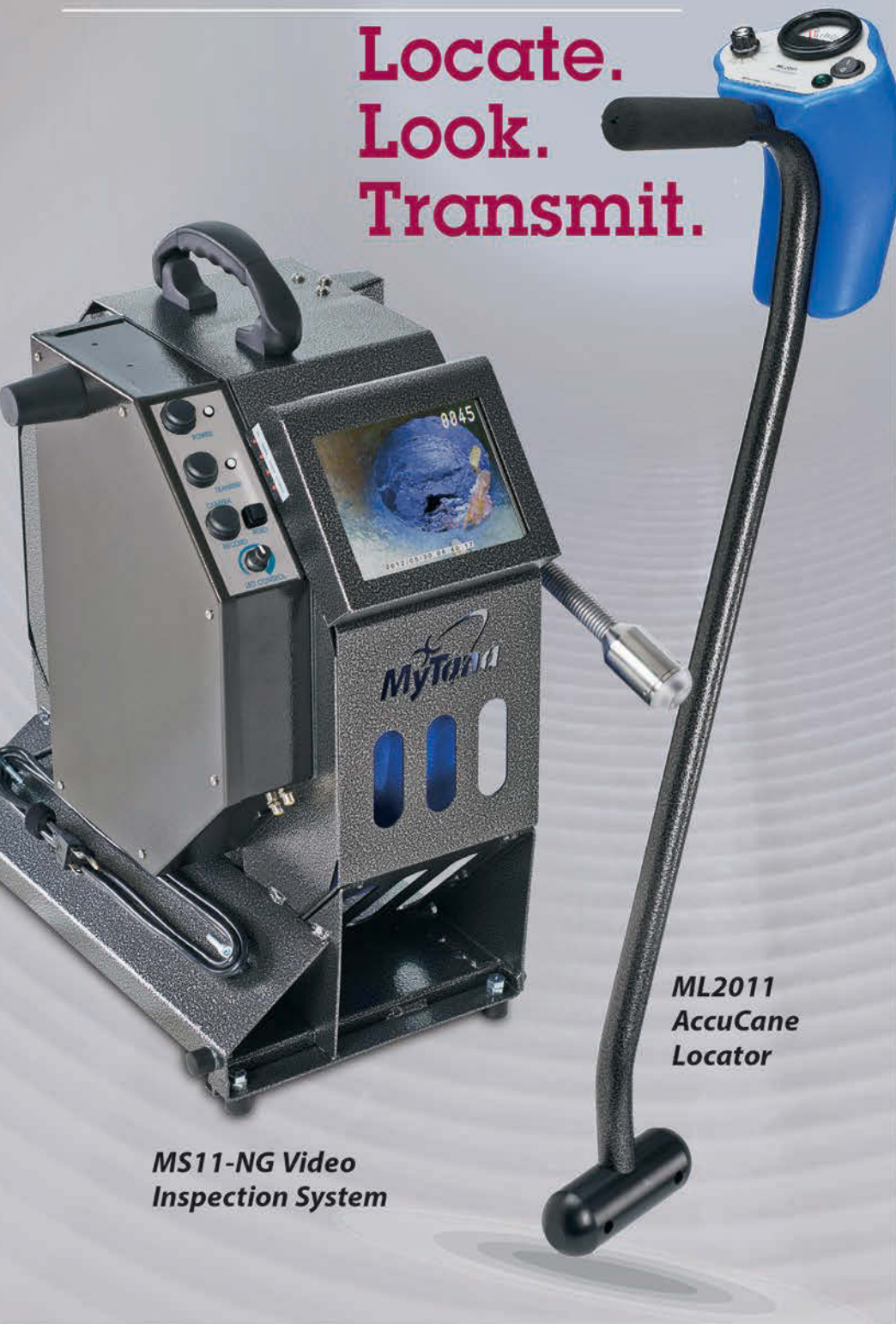
It is everyone's responsibility to promote construction safety and to use best practices when working belowground. Although pipe bursting does not open a trench for the entire length of a utility replacement, it does create forces belowground that require proper damage prevention practices be followed. **C**

ABOUT THE AUTHOR

Matt Timberlake is president of Ted Berry Company and a member of the International Pipe Bursting Association Leadership Team. He can be reached at matt@tedberrycompany.com.

Best in Show

Locate. Look. Transmit.



**MS11-NG Video
Inspection System**

**ML2011
AccuCane
Locator**

**MS11-NG Inspection
System + ML2011 Locator**
Unbelievable everyday price!

Call **800-328-8170** or visit
www.MyTana.com for details!

MS11-NG Mid-Sized Video Inspection System

State of the art system sends images
and video directly to your
tablet or smartphone!


- 512 Hz transmitter is built in to 1½" dia. camera head
- Suitable for 3"- 4" lines
- 150' of mid-sized push rod



Everything for the sewer and drain
cleaning professional. 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)



Black Plumbing technicians Jay Gardner (left) and Cole Sisco use a customized PipeHunter hot-water jetter to clean sewer lines at Dyess Air Force Base outside of Abilene, Texas.

MONEY MACHINES

The Right Combination

Texas contractor's custom PipeHunter water jetter boosts productivity with hot water and higher pressure

By Ken Wysocky

A customized PipeHunter hot-water jetter built by Underground Inc. is helping a Texas drain cleaning and plumbing contractor clean clogged lines faster, increasing both profits and productivity.

The “secret sauce” for increased efficiency with this trailer-mounted jetter, owned by Abilene-based Black Plumbing, actually consists of two components. One is a boiler that heats water up to 180 degrees F to more effectively clear out clogged lines. The second is a pump that generates higher pressure and lower flow than conventional jetters. The unit’s pump, made by Giant Industries, generates pressure of 3,800 psi and flow of 8 to 10 gpm instead of a more conventional 2,000 psi at 24 gpm configuration, says Darrin Black, the company’s owner.

“A jetter with 2,000 psi at 24 gpm just doesn’t work for our applications,” Black explains. “Whether we’re working on a 3-inch- or 10-inch-diameter line, that combination of 3,800 psi and 8 to 10 gpm is very effective.” How effective? “One day, my son, Chris, was driving in Abilene when he saw a city truck along the road. He stopped to visit with the guy who runs the sewer department, who said he and his crew had been there for seven hours trying to unclog a sewer mainline. Chris asked them to let him give it a try, and he had it unstopped in 10 minutes.

“I attribute its efficiency to using a smaller 3/8-inch-diameter hose and higher pressure and lower flow — it turns the jetter into more of a piercing tool,” Black adds. “It creates more of an opportunity to break loose whatever is in there. Unless there are extenuating circumstances, like a collapsed line, I’d say we’re able to clear lines 100 percent of the time.”

money machines

- OWNER:** Black Plumbing Inc., Abilene, Texas
- MACHINE:** Customized PipeHunter trailer-mounted jetter, made by Underground Inc.
- FUNCTION:** Cleaning commercial, industrial and municipal pipelines
- FEATURES:** 650,000 Btu boiler, 525-gallon water tank, 3,800 psi/10 gpm Giant pump, 600-foot-capacity hose reel, Caterpillar diesel engine
- COST:** About \$70,000

Black praises Underground representatives for sitting down with him and designing a machine that fits his needs. “They were open to understanding what we needed, not what they wanted to sell us,” he says. Along with a heavier-duty chassis, the unit features the aforementioned boiler (650,000 Btu); a 525-gallon water tank, big enough to minimize costly stops for water refills; a Caterpillar diesel engine; and a hose reel that can hold 600 feet of 3/8-inch-diameter hose.

Technicians at Black Plumbing use the jetter in a wide variety of line-cleaning applications, ranging from industrial cleaning and commercial kitchens to colleges, malls and apartment complexes. “We also do a lot of work for municipalities,” notes Black, whose company services six different towns within roughly a 140-mile radius around Abilene. “A bunch of these little towns have sewer mains, but they don’t have the resources to own large sewer cleaning equipment. So they outsource that work.

“We can also use the jetter as a pressure washer to clean our vehicles or

Down time is expensive.

DO YOU HAVE A SPARE CABLE IN THE TRUCK?



AFTERMARKET CONNECTORS • CABLES

[ALL cables and connectors are individually inspected and tested before shipment.]

REASONABLE PRICES

Seacon/
Turck



OceanQuip LLC
ORCA TOUGH CABLES

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

wash off parking lots,” he adds. “It’s a very versatile piece of equipment.”

The ability to clean lines faster with hot water has helped Black Plumbing establish a firm foothold in the area’s drain cleaning market. When the company isn’t working for clients, it’s working as a subcontractor for other area plumbing companies that don’t have the same technological resources, Black says.

“Hot water cleans lines like they’ve never been cleaned before,” he explains. “If you run cold water down a grease trap line, you’re not completely cleaning the line — you’re still leaving behind residual grease. But hot water does such an effective job of cutting through grease. When we run a camera down a line after cleaning it, the line looks like brand new.”

For really tough cleaning jobs — and especially while preparing pipes for relining with cured-in-place pipe technology — Black says his crews use rotating chain-flail devices, made by Picote Solutions. The scouring tool attaches to the jetter nozzle and does an especially thorough job of removing pipe scale while the jetter flushes debris downstream, he explains.

Black paid about \$70,000 for the PipeHunter jetter. That’s a significant investment, for sure, but he says the machine easily paid for itself. Moreover, the benefits of investing in advanced equipment that keeps customers satisfied — and employees busy — are priceless.

“We’re always trying to stay ahead of the curve, keep up with technologies and provide great service for our customers,” Black says. “We embrace the things that are new and exciting and that improve profitability. I always want to be sure I’m doing everything I can to ensure I keep our employees busy — and to do that, I have to bring the newest technology to the table for those guys.” **C**

SHOW US THE MONEY (MACHINE)

To nominate your vehicle for a feature in this column, send an email to editor@cleaner.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"



NozTeq Sewer Cleaning

- 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



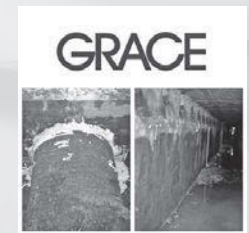
Epoxytec Manhole/Wetwell Rehabilitation

- 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

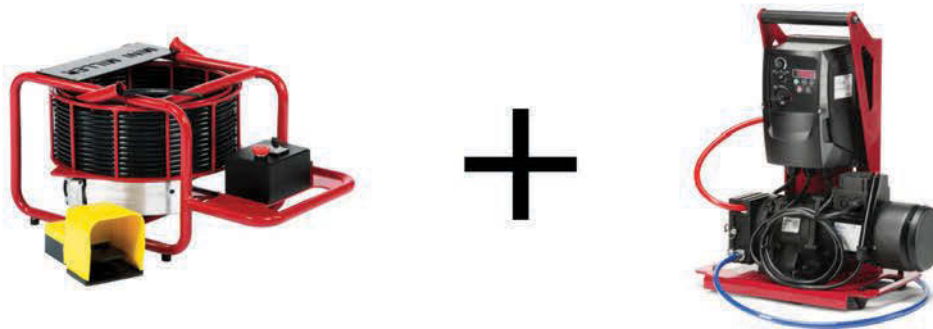
www.PrimeLineProducts.com

877-409-7888 407-772-8131



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

Picote Coating System A simple way to renew small diameter drains



Locate your reseller at picotesolutions.com or call **219 440 1404** for further information.

NEW: Picote Worldwide Training Center now open in Anderson, SC.

THE SMART CUTTER™



PRODUCT OF THE YEAR 2012



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 Inspection Camera System

FB-PIC3188SD

\$550

- Specs:
- 7" Color LCD Control Station with SD Card Recorder
 - 1" Color Camera Head with 512HZ Built-in Sonde for Option
 - 65'/100'/130' Cable Reel Available for Choice
 - Heavy-duty Waterproof Case



Layflat Pipe Inspection Camera

FB-PIC3588A/3588BT

- 7" LCD Control Station with Built-in USB Flash and SD Card Recorders and Li-Ion Battery
- 3/8" 150' /200' 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)



Mini Self-leveling Color Camera Head

CHD-C26/CHDT-C26



- 1" Mini Self-leveling Color Camera Head
- 512 HZ Built-in Sonde Transmitter for Option
- Compatible with All Forbest Cable Reel and Control Station

Potable Color Sewer/Drain Camera

FB-PIC3188A/3188DN

- Specs:
- 65'/100'/130' 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 130' Cable & Reel w/Meter Counter



Mid-Range Pipe Inspection Camera

FB-PIC3388UT/3388MT

- 200' 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



FB-R2012

Specs:

- Frequency: 512HZ
- Operation Mode: NORM/NOISE CONTROL
- Power Supply: 6*AA
- Current: < 55mA
- Sensitivity: NEAR/FAR
- Continuous Adjustable
- Output Intensity: LCD 15 Levels
- Retractable Poles for Easy Use

512HZ Locator

NEW



Promo Price: **\$499**

Luxury Portable Sewer/Drain Camera

FB-PIC4188M/4188H

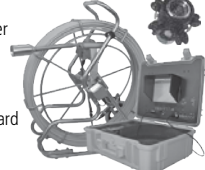
- Specs:
- 130' Cable & Reel w or w/o Meter Counter
 - Color Camera Head w/Built-in 512HZ Sonde Transmitter
 - 10" LCD Monitor w/DVR & MIC
 - Recording with USB Flash Drive & SD Card
 - Heavy-duty Waterproof Case



Long Range Pipe Inspection Camera

FB-PIC3288T/3488T

- 300'/400' 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: 44130 Old Warm Springs Blvd. Fremont, CA 94538 Tel: 510 226 7988 Toll Free: 1 877 369 1199

www.forbestusa.net

Canada: 9040 Leslie St. Unit 1, Richmond Hill, ON L4B 3M4 Tel: 905 709 6226 Toll Free: 1 877 369 1199

Email: forbestusa@gmail.com

PIPE BURSTING PROS DEPEND ON HAMMERHEAD®

“ We worked very closely with HammerHead Trenchless Equipment in the development of their new 100XT static pipe bursting system, and we couldn't be happier with the final result. It's fast, reliable, and backed by customer support that has always been quick to respond when we have a question. Municipalities are catching on to the advantages of pipe bursting, and our 100XT positions us to take advantage of pipe bursting's growing popularity.”

MARK DIMICHELE,
Owner, D & D Water & Sewer, Canton MI



**EQUIPMENT.
EXPERTISE.
SUPPORT.**

HammerHead Equipment products and expertise take the guesswork out of pipe bursting. And legendary factory support puts even the toughest pipe bursting jobs within your reach.



Find your local dealer at
hammerheadtrenchless.com
or call 800-331-6653



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

Pipe Bursting Methods and Projects

By Craig Mandli

EXCAVATION EQUIPMENT

JOHN DEERE 210G LC

The **210G LC** excavator from **John Deere** is equipped with a Tier 4 Final engine and meets strict emission standards. It has a 159 hp certified Tier 4 Final PowerTech PVS 6.8 L engine. Operators don't have to worry about diesel particulate filter (DPF) cleaning, as it occurs automatically with no impact to machine operation. It has ideal total fluid economy (diesel fuel and DEF). The DEF tank is located near the toolbox, within the steps to the service platform. The tank has an integrated spill guard that drains any DEF spillage outside the machine and is conveniently located near the fuel tank to save time during daily service. The nine-pin diagnostic connector was moved into the cab to reduce diagnostic testing time for technicians. A single-side ground-level fluid filter service moves the engine oil, fuel and hydraulic pilot oil filters to ground level on the right side of the machine. Handrails help maintain contact when climbing the upper structure to service the engine, improving service accessibility and security. **800/503-3373; www.johndeere.com.**



John Deere

KEITH HUBER KNIGHT PD

The **Knight PD** air-mover from **Keith Huber** is capable of 6,100 cfm and incorporates deep vacuum with the ability to pressure off-load. The Huber Master Control allows the operator to switch easily from wet to dry product with no downtime. Its wet/dry diverter valve filtration, deep vacuum loading and high air conveyance are designed to help move sludge and dry product. **800/334-8237; www.keithhuber.com.**



Keith Huber

UTILICOR TECHNOLOGIES MC-450 MINICOR CORING ATTACHMENT

The **MC-450 Minicor Coring Attachment** from **Utilicor Technologies** fits skid-steers as well as Ditch Witch SK 850 and Vermeer S800XT mini track loaders. This powerful keyhole coring attachment helps perform quick and efficient pavement core cuts, which are commonly used for daylighting or potholing purposes. It cuts pavement cores up to 18 inches in diameter for keyhole repair applications.



Utilicor Technologies

Due to its narrow width, coring in tight spaces or up close to buildings or other structures is also possible. Simple, intuitive controls ensure ease of operation, and quick connection to the auxiliary hydraulic system makes for simple installation, allowing the operator to plug and play and be ready to core in a matter of minutes. Integrated water tanks allow for multiple cores to be cut in a single fill. **888/572-6666; www.utilicor.ca.**

VOLVO CONSTRUCTION EQUIPMENT EC160E

The **EC160E** crawler excavator from **Volvo Construction Equipment** incorporates a Volvo Tier 4 Final D4 engine, providing an 8 percent improvement in fuel efficiency and 5 percent improvement in tractive force and engine power compared to previous-generation models. The hydraulic system is optimized to operate in harmony with the engine, working alongside a fully electronic control system. It has an advanced eco mode, reducing power loss and improving controllability and response time. Eco mode works in tandem with the main control valve and machine software to ensure efficient electronic pump control. The optional automatic engine shut-off feature can intuitively power off the engine when the machine is inactive for a preset amount of time. **828/650-2000; www.volvo.com/constructionequipment.**



Volvo Construction

HORIZONTAL DIRECTIONAL DRILLING

MELFRED BORZALL FASTBACK

The **FastBack** system from **Melfred Borzall** allows for direct pullbacks without removing the drill head or installing a backreamer. It is ideal for fiber installation where space is a concern. It includes the FastReam housing – used in place of a reamer to enlarge the hole during pullback – and an Eagle Claw, Iron Fist or blades fitted for the Eagle Eye, the Iron Eye, the Quick Link or the Quick Swivel. Once the pilot bore is complete, simply attach the FastBack tool and pull the product in one direct pullback. It is made to complete multiple short bores per day and increase production, minimize excavation and restoration costs, and save time on bores. **800/833-1252; www.melfredborzall.com.**



Melfred Borzall

HYDROEXCAVATION

DITCH WITCH FX65

The **FX65** vacuum excavator from **Ditch Witch** has an advanced airflow of 1,215 cfm, 20 percent more than the FX60 model. Powered by a 74 hp turbocharged Deutz diesel engine, it is designed for super-size cleanup jobs. Equipped to meet the requirements of virtually any job size, it is available with



Ditch Witch

500-, 800- or 1,200-gallon vacuum tanks and 200-, 300- or 500-gallon water tanks. It has an advanced three-stage filtration system with a cyclonic filter, which cleans the air prior to reaching the filter. **800/654-6481; www.ditchwitch.com**.

FOREMOST FVS1000 HYDROVAC

The **FVS1000 Hydrovac** from **Foremost** is a compact unit designed to maneuver easily in urban environments while maintaining the same standards of productivity as the company's larger models. It is mounted on a tandem-axle chassis and holds 1,000 gallons of freshwater and 7 cubic yards of debris. All working components are housed in a 42-inch aluminum, heated, insulated and lighted van body. A Robuschi RB-DV125 PD blower provides 4,000 cfm and full vacuum. The boom is 8 inches and operated by an Omnex wireless controller, which allows for control of vehicle rpm, the wash system, off-loading and vacuum functions. The water system has a CAT 3560 wash pump, capable of 3,000 psi and 20 gpm, and is heated by a 740,000 Btu diesel-fired boiler. Off-loading is performed via a sloped debris tank, assisted by a washout system powered by a high-volume centrifugal pump. **403/295-5800; www.foremost.ca**.



Foremost

GAPVAX HV-55

The **HV-55** hydroexcavator from **GapVax** has a 12 1/2-cubic-yard debris body and water tanks from 400 to 1,400 gallons. It comes with a PD blower rated at 5,250 cfm and 28 inches Hg. Its filtration design includes five cyclones that prolong the life of the filter bags and eliminate the threat of material entering the vacuum pump. The tailgate is fully opening, field-adjustable and has four fail-safe, individually adjustable locks that ensure a complete seal. Options include interior polymer coating, a cold-weather package, sludge pump, wireless remotes, washdown system and a stainless steel body. **888/442-7829; www.gapvax.com**.



GapVax

HOT JET USA HOTJET II XTREMEFLOW II

The 550-gallon **HotJet II XtremeFlow II** from **Hot Jet USA** is available with 300- and 500-gallon vacuum units for hydroexcavation and can be skid- or trailer-mounted for reliability and ease of operation. Two separate power units power the hydroblaster equipment and the vacuum, allowing for easy service and operation. Hydroblaster systems are available from 4 to 10 gpm, with psi ranging from 2,000 to 7,000. The unit can be run with either hot or cold water, with hot-water systems proven to blast through frozen conditions. The vacuum systems run from 18 to 35 hp with gas power plants and from 26 to 68 hp with diesel power plants. Waste tanks are available from 200 to 800 gallons and can be mounted on a skid platform to mount on a vehicle or trailer, or in a complete turnkey trailer package. **800/624-8186; www.hotjetusa.com**.



Hot Jet USA

HURCO TECHNOLOGIES VAC 250 AND 500

VAC 250 and 500 units from **Hurco Technologies** are a portable solution for potholing and exposing buried utilities. They use a Gardner Denver 14 Hg PD vacuum pump and a Giant 4,000 psi, 4.2 gpm high-pressure water pump. The pitched-angle tank eliminates mechanically complicated lift and dump systems for faster and more efficient debris unloading. The 97-gallon water tank sits under the debris tank, balancing the load over the center of the axle, resulting in little change on tongue weight and ensuring a safe towing configuration. All units can be configured to meet specific needs, including auxiliary hydraulics and water heaters. All are powder-coat painted. **800/888-1436; www.hurcotech.com**.



Hurco Technologies

HYDRA-FLEX RIPSAP

The **Ripsaw** rotating nozzle from **Hydra-Flex** was designed specifically for the rugged demands of hydroexcavation projects. It blasts a 0-degree water jet at up to 3,200 psi while rotating at an optimized speed to form an 18-degree cone-shaped spray pattern. Its concentrated stream results in greater impingement, allowing operators to dig faster while also using less water. These heavy-duty, high-impact nozzles are constructed with stainless steel housings and tungsten carbide wear surfaces to withstand harsh environments and provide long life. A non-conductive urethane coating on the nozzle body protects the user and sensitive underground assets. It is available in multiple nozzle sizes, with repair kits available to extend the nozzle's life and lower operating costs. **952/808-3640; www.hydraflexinc.com**.



Hydra-Flex

MCLAUGHLIN MEGA VX200

The **McLaughlin MEGA VX200** 6-inch truck-mounted vacuum excavator series gives utility contractors productive potholing with the capacity and power they need to stay on the job longer. The flexible, modular design enables contractors to customize the 6-inch vac to suit their job site needs. It has spoil tank capacities ranging from 1,200 to 3,000 gallons and a standard option of 800 gallons of freshwater. It has a 6-inch hose width with a 3,200 cfm blower at 18 inches Hg. It is powered by a 200 hp John Deere Tier 3 engine. Its three-stage cyclonic filtration system allows for both wet and dry vacuum excavation, and the cam-over hydraulic rear door provides a 360-degree positive seal to keep fluids securely in the debris tank. **800/435-9340; www.mclaughlinunderground.com**.



McLaughlin

NOZZTEQ MONRO-JET

The **MONRO-JET** hydroexcavation nozzle from **NozzTeq** combines the power of a solid stream pencil jet with the large coverage of a fan jet. Its circular water jet motion generates tremendous power at modest gpm rates, allowing the operator



NozzTeq

to move faster whether hydroexcavating, surface cleaning or cleaning sewer lines. It can be used for other types of surface cleaning such as concrete, steel, castings and large surface areas including line removal from runways. It can be modified for internal pipe cleaning of sewers and pipes of all types. It has an orbital design that increases performance at a lower gpm rate and pressures as high as 36,250 psi. **866/620-5915; www.nozzteq.com.**

PETROFIELD INDUSTRIES TORNADO F2

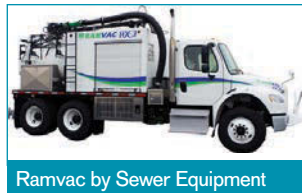
The **Tornado F2** from **Petrofield Industries** is a compact unit designed to maneuver easily in urban environments while maintaining the standards of a larger unit. This tandem-axle-mounted hydrovac holds 7 cubic yards of debris and 1,000 gallons of water. All components are housed in a 42-inch heated, lit and insulated van body. The Robuschi blower and silencer cube provides a quiet unit with full vacuum. It comes with a Cat 3560 water pump, a 980,000 Btu boiler and sloped floor off-loading that eliminates the dangers of dumping on uneven ground and overhead power lines. **877/340-8141; www.tornadotrucks.com.**



Petrofield Industries

RAMVAC BY SEWER EQUIPMENT HX-3

The **HX-3** truck-mounted hydroexcavator from **Ramvac by Sewer Equipment** is the smallest model in the Ramvac truck family, but is equipped with large productivity features. This unit offers a 3-cubic-yard debris body, and a 0 to 10 gpm at 2,500 psi water system, all in a temperature-controlled enclosure with a compact footprint, NEMA-rated electrical system, debris blow-off system and a fully hydraulic power train. **877/735-4640; www.ram-vac.com.**



Ramvac by Sewer Equipment

RING-O-MATIC 550 HICFM VACEX HYDROEXCAVATOR

The **Ring-O-Matic 550 HiCFM VacEx Hydroexcavator** comes with a 50 hp CAT diesel engine and 1,000 cfm Gardner Denver positive displacement blower for potholing, sewer jetting, sump and catch basin cleaning, HDD job site support and mud management, construction site cleanup, and environmental cleanup. The Cyclo-Jet 2-in-1 Pothole Excavator attachment can safely dig a 3-foot hole in 30 seconds, making it ideal for contractors looking to locate underground utilities quickly and safely. **800/544-2518; www.ring-o-matic.com.**



Ring-O-Matic

SHELLVAC EQUIPMENT 2600 SERIES COMBINATION HYDROVAC

The **2600 Series Combination Hydrovac** from **SchellVac Equipment** is designed to serve construction, energy and utility industries. The system is mounted on a tridem chassis and is equipped with a 6,400 cfm Robuschi PD blower direct-powered by a Namco transfer case. The water jetter system consists



SchellVac Equipment

of a 3560 CAT 20 gpm, 4,000 psi pressure pump, 980,000 Btu boiler and 1,200-gallon water capacity. The complete water system is installed in an insulated and heated aluminum body. The hoisted 15 1/2-cubic-yard debris body includes a dual cyclone plus cartridge filtration system. It has a full-open rear door with hydraulic locks, an 8-inch remote-controlled telescopic boom with a 27-foot reach when fully extended and a load-sense hydraulic system. **877/336-0081; www.schellvacequipment.com.**

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

SOUTHLAND TOOL MFG. HYDROEXCAVATOR ATTACHMENT

The **Hydroexcavator Attachment** from **Southland Tool Mfg.** is a lightweight attachment for the end of a suction tube that allows the operator to connect a 1-, 3/4- or 1/2-inch sewer hose to blast away at dirt and rocks, suck up the wet mixture and dig holes. Suction tube sizes come in 6- and 8-inch diameters, and with a choice of flange, including Vactor, Vac-Con, Camel, Vacall and Aquatech. The all-welded steel wet ring comes with four, six, eight or 10 jets. All are 0 degrees and pointed slightly away from the center of the suction tube. An 8-inch-long Kanaflex hose is bolted to the end of the excavator to protect utility lines. At just 13 inches long and under 20 pounds, the unit is easily carried on a truck. **714/632-8198; www.southlandtool.com.**



Southland Tool Mfg.

STONEAGE HYDRO-X TOOLS

The **Hydro-X** line of hydroexcavation tools from **StoneAge** offers four options for accessing utilities and precisely excavating an area with high-pressure water. Tool configurations include a single hard-hitting jet head for accurate digging, a dual-jet head that divides a pump's power into a wider jet path and a triple-jet pattern that delivers a wide swath for fastest material removal. The 60-inch single-jet lance provides extra reach for digging deep, focused holes. The tools use high-quality, long-lasting carbide nozzles and are capable of up to 5,000 psi and 12 gpm. **866/795-1586; www.stoneagetools.com.**



StoneAge

SUPER PRODUCTS MUD DOG 1200

The **Mud Dog 1200** from **Super Products** is a 12-yard-debris-capacity hydroexcavator with a rear-mounted boom capable of a 19- to 27-foot reach, 335-degree rotation, and a 45-degree upward and



Super Products

25-degree downward pivot, allowing crews to achieve greater work area access and deeper digging without stopping production to reposition the truck. Its easy-to-use ejector plate unloading technology and tilt unloading ensures that liquids in the debris tank are cleared quickly and efficiently even when unloading in an upslope/nose-down position. The Acculevel load-sensor system offers precise debris tank level measurement. **800/837-9711; www.superproductsllc.com.**

US JETTING JET VAC 500

The **Jet Vac 500** combination unit from **US Jetting** is compact and requires no CDL. It is easy to operate and has a low profile with nothing above the cab. It can be mounted on a Ford F-550 chassis or similar truck. As a truck unit, it is capable of high-lift dumping. It is also available as a tandem trailer-mounted unit with a 500-gallon debris tank, 250-gallon freshwater tank, and a 3,000 psi at 10 gpm jetting package. It comes with 300 feet of 3/8-inch hose and a set of basic nozzles. It has a HATZ Tier 4 Final water-cooled diesel engine, a PD blower and a 4-inch suction hose. Both the blower and the jetter are hydraulically driven, allowing for better control and delivery of power. With high-velocity tips, the customer has the capability of hydroexcavation. **800/538-8464; www.usjetting.com.**



US Jetting

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 up to a 1/2 mile away. The boom rotates 270 degrees. **855/336-2962; www.vac-con.com.**



Vac-Con

VACALL ALLEXCAVATE

Vacall AllExcavate hydroexcavation models have three boom and intake hose or tube options, including a boom design using a heavy-duty full-length rubber hose that is durable yet flexible with a gum rubber lining that runs from the turret on the debris tank out to the pickup point, a steel tube-in-tube boom and intake that connects to an identical rubber hose elbow that leads to the pickup point, or the original steel tube-in-tube with steel elbow boom and intake tube. Its strong vacuum capabilities generate 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 where mass excavation is not possible. **800/382-8302; www.vacall.com.**



Vacall

VECTOR HXX HYDROEXCAVATOR

The **HXX HydroExcavator** from **Vector** provides up to seven hours of continuous operation with onboard water. Standard variable-flow water systems allow lower water flow, resulting in less operator fatigue and a cleaner, more precise digging process. The systems also allow for up to 25 gpm for those projects requiring higher water flow capabilities. For safer operation around utilities, DigRight Technology allows the operator to select the maximum desired working water pressure for their application based on vacuum excavation best practices. This selection will limit the water pump from exceeding site, industry or customer maximum pressures to ensure a safe and nondestructive method of excavation. It also reduces wear and tear on the water system, extending the life of the product. Its boom turret design provides increased vertical range of motion for improved operator performance and productivity, enabling the operator to complete most applications with only one dig tube, eliminating the need for additional vacuum tubes. **800/627-3171; www.vactor.com.**



Vactor

X-VAC X-6 HYDRO EXCAVATOR

The truck-mounted **X-6 Hydro Excavator** from **X-Vac, A Product of Hi-Vac Corporation**, has a 6-cubic-yard debris tank and can store 570 gallons of freshwater with an option for a capacity of 1,000 gallons. The adjustable triplex water pump exerts up to 3,000 psi and is set independently of the blower speed. Vacuum systems range in size from 2,600 cfm at 27 inches Hg vacuum to 3,400 cfm at 16 inches Hg vacuum. Its 6-inch vacuum hose exposes any type or size of underground utility, especially in residential areas where space is tight and crews want to avoid blocking residential streets. **740/374-2306; www.x-vac.com.**



X-Vac

PIPE BURSTING TOOLS

HAMMERHEAD TRENCHLESS EQUIPMENT HYDROBURST 100XT

The compact **HydroBurst 100XT** static pipe bursting system from **HammerHead Trenchless Equipment** provides 99 tons of pulling force. With a tethered remote control, the streamlined unit pays out rod quickly due to its automated rod-spinning assembly and the design of its hydraulic cylinders. The unit weighs 3,200 pounds and is 39 inches high by 30 inches wide. It can replace pipes up to 16 inches in diameter, yet is compact enough to use with pipes as small as 4 inches. The water-cooled PP4500 hydraulic power pack with a 72.7 hp Kubota engine pumps hydraulic fluid at up to 43.5 gpm and 4,500 psi. In 50-ton mode the unit directs all hydraulic fluid to two of the cylinders, which then can move twice as fast as in 100-ton mode. **800/331-6653; www.hammerheadtrenchless.com.**



HammerHead

POW-R MOLE SALES MODEL PD-33M

The **Model PD-33M** pipe bursting machine from **Pow-r Mole Sales** is designed to replace existing underground pipes from 2 to 6 inches in diameter. Its nonslip cylinder-activated jaws prevent cable damage, while providing 60,000 pounds of pulling force. It offers a cost-effective alternative to open-cut excavation, which reduces customer disruption and increases company profits. The process replaces the existing pipe with a fused HDPE pipe, which eliminates all joints and allows the operator to pull through bends such as 45-degree fittings. This system is modular and can be easily disassembled and reassembled for manhole and basement applications. With a compact design and very small footprint of only 20 by 20 inches, this unit can be used in tight locations. **800/344-6653; www.powrmole.com.**



Pow-r Mole Sales

SPARTAN TOOL UNDERTAKER

The **UnderTaker** pipe bursting system from **Spartan Tool** can help replace existing sewer laterals with new, seamless, high-flow HDPE 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 quickly position for any job, with minimal disruption to the customer's yard or business, allowing the customer full use of their facilities quickly. **800/435-3866; www.spartantool.com.**



Spartan Tool

TRIC TOOLS MINI-MAX

The **Mini-Max** pneumatic head driver from **TRIC Tools** fits inside either a 6- or 8-inch PE cap, and is both head driver and pipe puller in one. Taking full advantage of a pulling cable under load, it unleashes stored tension to achieve results. Compact soils, dresser couplings and even ductile iron can be defeated with the right bursting head armed with a loaded cable as ammunition and a rapid-fire hammer as the trigger. The hammer operates efficiently with only 60 to 75 cfm of air at 100 psi. It is easily slipped into place after the PE cap is fused onto the replacement pipe. **888/883-8742; www.trictools.com.**



TRIC Tools

www.cleaner.com

classifieds, editor's blog, discussion forums and more!

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

We will custom build to your specifications

www.camspray.com 800-648-5011

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.**



American Shoring

ULTRA SHORE

Ultra Shore is made of a specially corrugated lightweight aluminum. It is easy to use and lightweight enough for one person to lower a single pair of assembled panels into an excavation. All panels can be used horizontally or vertically and are stackable. This allows them to be safe for bury depths up to 12 feet, even in class C soils. Spring-loaded end panels allow for three- and four-wall applications. Leg kits and wheel kits add the versatility many plumbers, municipalities and utility companies require to meet OSHA regulations. **800/746-7464; www.shoring.com. c**



Ultra Shore

Our technology pushes the industry.



INTRODUCING
NANO

While the NANO® is capable of traveling in pipelines as small as 2" in diameter, you will not be giving up power or flexibility. The NANO® has many of the same features of the larger ORION Zoom including: laser measurement, integrated location transmitter, bright LED lights, pressure regulation and full pan and tilt functionality. Use this amazing camera on your pushrod, tractor or lateral launch system!



(800)-656-4225 | www.rapidview.com

Ever feel abandoned by your tech support?

Real time issues deserve real time answers.

PIPELOGIX® Tech Support is a real person on the other end of the phone that talks you through your problem and gets you working as quickly as possible.

Call today to learn more about the industry's best after-sales support program for pipe survey pros! (Just ask our customers.)

866.299.3150 • WWW.PIPELOGIX.COM



Our Business Partners:



Pipe Bursting Methods and Projects

By Craig Mandli

MULTI-YEAR WATER MAIN PIPE BURSTING PROGRAM ENABLES UPSIZING OF WATER MAIN

PROBLEM

In 2008, as part of its ongoing asset management plan, the City of Billings, Montana, designated a 520-linear-foot, 8-inch cast iron water main on 3rd Avenue North near 10th Street for replacement due to extensive deterioration.

SOLUTION

The city elected to pipe burst the existing line and upsize to a 12-inch-diameter line using **Fusible C-900** pipe from **Underground Solutions**.



RESULT

Following the success of this pipe bursting pilot project, Billings has embarked on a long-term pipe bursting program to rehabilitate aged cast iron water mains. Since the initial pilot project, over 18,000 linear feet of Fusible C-900 pipe has been installed by pipe bursting, with additional replacement phases slated for the future. City officials estimate they have saved over 20 percent versus conventional dig-and-replace construction methods. "Pipe bursting not only saves the taxpayers money, but greatly reduces the construction footprint and impact to streets and the surrounding community," says Scott Emerick, superintendent of the Public Works Department's Distribution and Collections Division. "We have had a very good track record using fusible PVC pipe for our water main replacement program." 858/679-9551; www.undergroundsolutions.com.

DIFFICULT PIPE BURSTING PROJECT ENABLES SEISMIC UPGRADE

PROBLEM

The Marin Municipal Water District in Marin County, California, needed to improve the seismic reliability and capacity of a major cast iron water main that supplies communities in southern Marin County. Access for the project was challenging. The existing pipe ran from a water tank on top of a hill, down the hillside where it tied into another mainline, supplying water from the tank to area residences and beyond. The pipe was located in a narrow, unimproved right-of-way surrounded by homes.



SOLUTION

A **Grundocrack** pneumatic pipe bursting system from **TT Technologies** was used to burst the existing 14-inch cast iron pipe and replace it with the new 22-inch HDPE. Pneumatic pipe bursting was chosen because of its inherent capabilities and because of its small footprint compared to other options. The choice of HDPE was made for seismic resistance and its compatibility with the pipe bursting process. Additionally, fusion-welded pipe is well-suited for pressure applications because there are no requirement for joints or restraints.

RESULT

The pipe bursting run was successfully completed in one continuous 400-foot pull. Bursting started out at 1 to 2 feet per minute but slowed considerably during the pull as a result of the difficult, dry soil conditions. In addition to difficult soil conditions, bell joints in the existing pipe were located approximately every 18 feet throughout the length of the run, adding complexity to the challenging operation. 800/533-2078; www.tttechnologies.com. c

RIDGID

2016

ENDS 4.30.16

SPRING FLING



LOCATORS



PRESS TOOLS



CAMERAS



DRAIN CLEANING

FREE TOOLS WITH QUALIFIED PURCHASES
ORDER TODAY

CALL **800.421.7580** FOR DETAILS OR GO TO
DRAINABLES.COM TO DOWNLOAD THE FLYER.



DRAINABLES
direct

THE ELECTRIC EEL® MODEL C DRAIN & SEWER CLEANER...

BEATS THE DRUM!

TRIED & TRUE, BETTER THAN NEW...

This Powerful Sectional Drain Cleaner Outperforms Drum-Style Machines

- Redesigned Quick-Connect Snap-Lock Cable Couplings
 - No Down Time From Broken or Kinked Cables
 - More Power and Twice the RPMs
 - Less Cable and Tool Breakage
 - 8' & 10' Sectional Cables
 - Easy Transport By One Person
 - Lower Maintenance and Much More
 - All For \$100's Less!
- Don't Miss A Beat... Call Today!**



Fold down handle allows easy transport, storage and use in crawl spaces.

Cleans 3"-10" diameter lines up to 200 ft.

Redesigned **Quick-Connect** snap-lock cable coupling allows cables to connect easier and quicker than ever. Now standard on all Electric Eel® sectional dual cables, regular and heavy duty, and totally compatible with all cables currently in use.



PATENT PENDING

Electric Eel®

1-800-833-1212 www.electriceel.com

DRAIN CLEANING TOOLS FOR PROFESSIONALS

Replace Perkadox 16 With Perkadox 26

Comply With The New NFPA Regulations Effective Jan 1, 2016



Manufacturing & Sales Of Specialised Equipment For The Cured-In-Place Pipe Lining Market

Automated Catalyst Blending Unit



- ▶ Economical Method For Compliance
- ▶ Direct Connection To Catalyst Pump
- ▶ Password Protected Control Panel
- ▶ Computer Controlled Processing
- ▶ Digital Recording Of All Processes
- ▶ Continuous Batching Capability

The Automated Catalyst Blending Unit (ACBU-2015) is designed to use Perkadox 26, a flake form of Perkadox 16 used within the cured-in-place pipe lining industry. The blending process raises a resin sample to the melting point of the Perkadox 26 flake allowing the flake to dissolve into solution. The unit then cools the catalyst solution for use in static mixers during the liner wetout process. Perkadox 26 is a Class 3 material, Perkadox 16 is currently listed as a Class 3 material but will become a Class 1 material on January 1, 2016 thus requiring new safety handling & costly storage procedures.

- Steam Trucks
- Hot Water Boiler Trucks
- Air & Water Inversion Units
- Mainline & Lateral Robotic Cutters
- Diamond & Carbide Cutting Tools
- Static Mixing Systems
- Wetout Tables
- Hydraulic Liner Loading / Unloader Trailers
- Training Programs
- Equipment Lease & Rentals

sales@cipp-services.com Call (815) 712-8708

Parts, Parts, & More Parts



Direct to You.

When you need parts in a hurry there is one source to remember – FS SOLUTIONS®. FS Solutions centers stock thousands of parts for all makes and models of vacuum trucks, waterblasting equipment and hydro-excavators. And FS SOLUTIONS is the authorized genuine OEM parts distributor for JETSTREAM®, GUZZLER®, and VACTOR® HXX®.

Parts are available at nationwide locations for pick up or quick shipment.



A proud member of the Federal Signal Family.

FS Solutions® Vactor® HXX® Jetstream® and Guzzler® are registered trademarks of Federal Signal.

www.fssolutionsgroup.com 1.800.822.8785

© 2015 Federal Signal Corporation

PRODUCT SPOTLIGHT

HotJet III trailer-mounted jetter provides versatility

By Luke LeNoble

The HotJet III trailer-mounted water jetter from Hot Jet USA runs on two 36 hp Vanguard engines and delivers hot or cold water at 20 gpm/3,850 psi for cleaning lines from 2 to 24 inches in diameter.

“Time is money and money is time, and when you’re on a job and you don’t know what you’re running into, you need to be able to have a rig on site to battle whatever it is you’re up against,” says Elle Eyre, a dedicated relationship manager at Hot Jet USA. “The HotJet III is perfect for that, and it opens up more opportunities for guys who have been just sticking to residential drainlines. That’s really the best benefit of it, the opportunity it provides to the operator because they can take on just about anything.”

Operators can control the jetter via a wireless remote from up to 300 feet. Features include 500 feet of 1/2-inch hose, 300 feet of 3/8-inch hose and 100 feet of washdown hose (1/4-inch line is included for laterals as well as 10 feet of safety leader hose).

“The sewer hoses are all included in the package,” Eyre says. “It also comes complete with a set of four nozzles for each size of hose. All our nozzles are custom-drilled to maximize torque so it can pull the hose down the pipe much more effectively.”



The unit is built on a heavy-duty 5- by 14-foot tandem axle, diamond-plate trailer. A 330-gallon water tank is standard, with an optional upgrade to two tanks for a total of 660 gallons. It also features an antifreeze winterization system — including a 12-gallon antifreeze tank — air purge and complete system recirculation.

“You can run a single engine, either hot or cold, and get 10 gpm at 3,850 psi running the 3/8-inch line,” Eyre says. “Plus it has a 1/4-inch jumper reel on there, so you’ve got a satellite reel — you can go from 2- to 12-inch lines on a single engine.”

“It’s our most versatile unit, especially if you’re a smaller operation and you’ve got one guy out there,” she says. “We want to minimize downtime and maximize production. With hot water you can get jobs done faster, and the more jobs you can get done in a day, the more money you can make.” 800/624-8186; www.hotjetusa.com.



1



2



3

1 WATER CANNON POLY DRIVE PRESSURE WASHERS

Poly drive pressure washers from Water Cannon are made for commercial and industrial cleaning applications. Features include laser-aligned Gates poly drive belt system, flat-free oversized tires, powder-coated steel frame, onboard 15-gallon fuel tank, GX Honda twin-cylinder gasoline engine and removable roll cage with hose reel platform and 200-foot-capacity. Accessories include tank-feed plumbing on 8 gpm model, gun/wand assembly with quick connects, 50-foot high-pressure hose with quick connects and four color-coded QC spray nozzles. 800/333-9274; www.watercannon.com.

2 SHERMAN & REILLY PINTLE EYE TRAILER CONFIGURATION

Sherman & Reilly Inc., a Textron company, enhanced the towing ability of its

Revolution Series transmission equipment product line with the addition of a pintle eye trailer configuration for use with line trucks. The platform provides reductions in overall weight, allows for a small field and storage footprint, and can be found on the T-7212-P Bullwheel Tensioner, PTR-7230S-P Split Model Puller/Tensioner/Reconductor and RC-2500X-P Powered Reel Carrier. 800/251-7780; www.sherman-reilly.com.

3 JOMAC ALL-ALUMINUM SERVICE BODY FOR THE FORD TRANSIT CHASSIS CAB

Featuring a payload capacity of up to 4,500 pounds, the Ford Transit Body by JOMAC is an all-aluminum, fully optimized service body for the Ford Transit Chassis Cab that is lighter and offers over 30 cubic feet of additional storage space compared with other models. 800/755-4488; www.jomacmtd.com. **c**

ALLAN J. COLEMAN

SINCE 1905

Call us today!
773-728-2400

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

OLDEST NAME IN THE BUSINESS — Over 100 YEARS OLD

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



RIDGID®

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



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



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



MR-10 Magnetic Locator

- Quickly locate buried iron or steel objects
- Ergonomic rugged design includes carrying case and batteries
- Highly sensitive instrument with audio and visual feedback
- AutoNull feature blocks out nearby metallic interference such as an automobile



SeekTech® SR-20

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



NaviTrack® Scout®

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

Authorized SeeSnake Repair Center

THE BEST SERVICE AND FAST TURN AROUND!

We Have RIDGID Parts!

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

DR DYNAMIC REPAIRS

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

**New & Refurbished Inspection
Equipment For Sale**

**Rental Equipment Available
Daily & Weekly Rates**

Ask About Our 48-Hr. Turn Around Time

**INSPECTION CAMERAS
ARE OUR
ONLY BUSINESS!**

973-478-0893

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

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

DYE TRACERS

Solutions for:

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

BRIGHT DYES
Division of Kingscote Chemicals

www.brightdyes.com • 1-800-394-0678

ERICKSON Tank & Pump



WE TAKE TRADES


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!

T&T Tools, Inc.

800.521.6893

CALL for a **FREE Catalog**
Many styles Available



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

www.mightyprobe.com

SPRING SALE

SEWER TOOL DEPOT

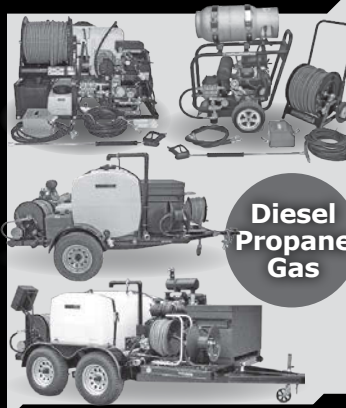
Tools To Meet All Your Sewer Needs



Manhole Tools
Rodding Tools
Nozzle Extensions
Ball Valves & More


sales@sewer-tool-depot.com
www.sewer-tool-depot.com

Let Us Build Your **JETTER**



Diesel Propane Gas

AMERICAN JETTER.COM
866-944-3569



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

Over 25 years of building quality equipment

HotJetusa®

DRAIN LINE JETTING EQUIPMENT

Most Versatile Jetter On The Market!



- 35 HP Vanguard
- Remote Control
- Cleans Drains from 2"-12"

On Sale For Only \$24,995!

Fully loaded! Call for details!

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

CONFINED SPACE ENTRY PACKAGE ONLY \$2,995



- 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

OBLITERATE ROOTS

OBLITIROOT

SEWER LINE
FOAMING ROOT KILLER

Up to 3x the active ingredient

www.olvidium.com (877) 477-5338

GET EMAIL NEWS ALERTS FOR **Cleaner**

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

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!



www.TrenchlessAmerica.com
Toll Free 1 877 411 7473

ROTATING TURBO NOZZLES



\$39.99 4500 PSI



Made in Italy
Industrial Duty

watercannon.com
800.333.9274

THE "ORIGINAL" LIQUID SMOKE

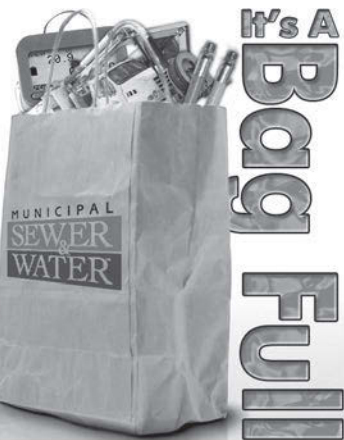


Turbo Fog M45:

- Versatile
- Light Weight
- Compact
- Creates Dense Smoke



www.turbo-fog.com • 1-800-394-0678



mswmag.com

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

The COMPLETE CCTV Sewer Inspection System from CYCLOPS ELECTRONICS

The CYCLOPS Vehicle Mounted Color TV System comes with choice of color camera and transporter.

The Economical Valu-Pac Color System is easily rolled on its own wheels and transported by pickup or van.



PORTABLE OR MOUNTED ON YOUR CHOICE OF VEHICLE



CYCLOPS ELECTRONICS, INC.
Manufacturer of Quality Sewer TV Systems Since 1978
123 Commerce Ave. | Boerne, TX 78006 | Phone: 830-249-9756
E-mail: cyclopstv@gvct.com | www.cyclopstv.com



Every day is Earth Day™

"When we have a large rain storm there is so much infiltration into the sewer system, sewage treatment plants can be flooded. And if this overflows into the bay you have a problem. There are huge fines for dumping sewage into the bay, and a lot of cities have been going through inspecting and even doing grants for homeowners to upgrade their sewers."

Dennis O'Halloran
An Original Environmentalist
President, Southwood Plumbing & Heating, San Bruno, Calif.
COLEpublishing cleaner.com • 800.257.7222
Proudly Serving the Environmental Service Industry Since 1979

INDUSTRY NEWS

InfoSense recognized for rapid growth

InfoSense was recognized by the *Charlotte Business Journal* as the No. 1 fastest-growing company in the city at the North Carolina publication's annual Fast 50 Awards ceremony in December. The event ranks the top 50 firms based on their annual revenue growth percentages over the last three years. InfoSense has seen revenue grow 465 percent each year, on average, during that period.

TRIC Tools hosts Israeli trenchless technology firm

TRIC Tools hosted Meiri Technologies, a trenchless technology company in Tel Aviv, Israel, on Oct. 12-13, 2015. Meiri was one of the first companies in the Middle East to license Insituform's CIPP technology for trenchless repair of pipelines.

Ditch Witch founder Ed Malzahn dies

Ed Malzahn, founder of Ditch Witch, a Charles Machine Works company, died Dec. 11, 2015. He was 94. Malzahn is credited with changing the way utility infrastructure is installed and maintained when he launched the first service line trencher, the Ditch Witch DWP, in 1949, from a small machine shop in Oklahoma. Today, the company employs more than 1,500 workers and has more than 175 dealerships and branches serving 195 countries.



Ed Malzahn

Aclara completes acquisition of GE's electricity meters business

Aclara completed the acquisition of GE Energy Management's Grid Solutions subdivision Dec. 21. Terms of the transaction were not disclosed. The acquisition includes GE Meters' global headquarters in Somersworth, New Hampshire, as well as facilities in Chicago and Bilbao, Spain. It also includes more than 300 employees in these locations, as well as other employees located in North and South America, Asia and the United Kingdom. As part of the transaction, Aclara also acquired an intellectual property portfolio of active patents and patent applications.

Envirosight appoints sales partner for Pacific Northwest

Envirosight named True North Environmental Equipment as its exclusive sales partner for EnviroSight equipment in Oregon, Washington and Alaska effective Dec. 7. The partnership gives True North exclusive rights to sell EnviroSight's sewer inspection technology throughout the Pacific Northwest.

TT Technologies launches new website

TT Technologies launched a new comprehensive trenchless website. Responsive design allows users to view the website from mobile devices and get information on tools, methods, parts and accessories from the job site. The website is designed to be a trenchless pipe replacement resource for contractors, engineers and municipalities.



Armstrong Equipment partners with Greenleaf Incorporated

Armstrong Equipment formed a partnership with Greenleaf Inc. that includes Greenleaf's exclusive line of GatorLock cam-lever hose couplings. **C**

BUSINESSES

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

Fully-equipped Long Island, NY cesspool cleaning company for sale. Established 50+ years serving Nassau & Suffolk Counties with excellent reputation and high-repeat customer base. 516-993-0446 (C04)

Roto-Rooter franchise for sale in Northeast AZ. Navajo and south Apache Counties. In business 27 years, owner wants to retire. Qualified buyers only, will carry paper with large down. Turnkey business, three vans, pump truck, John Deere backhoe and a lot more. 928-537-3123 (C05)

CATCH BASIN CLEANERS



2004 Sterling Camel Hydrovac - One owner, 46,000 miles, \$50,000. **2006 Sterling Camel Hydrovac** - One owner, 41,289 miles, \$135,000.

916-747-3819, CA C05

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 2016 Peterbilt 348 cab and chassis. (Stock #13634A-D) **www.VacuumSalesInc.com, (888) VAC-UNIT (822-8648).** (CBM)

1996 Ford with a Presvac 3,500-gallon, carbon steel, DOT vacuum tank with a Masport pump. (Stock #1829V) **www.VacuumSalesInc.com (888)VAC-UNIT (822-8648)** (CBM)

JETTERS-TRAILER



Xtreme Flow Trailer Jetter Hot/Cold! Model# HJ2TA8536, tandem axle trailer, 35 hp Vanguard 10 gpm @ 3,850 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



Jetter Trailer for Sale: 2,000psi @ 60gpm, 6-cylinder gas motor, Myers D65-20 pump, hose included (min. 400' of 1" hose). In good condition...\$12,000

586-752-5808, MI C04

2000 John Bean Trailer Jet: 35gpm @ 2,000psi. 400-gallon tank, 400' new hose. \$11,000 OBO. 231-325-0052 or 734-365-4035. (CBM)

US Jet 18gpm, 4,000psi. 300-gallon tank, 380 hrs. Dump gun and nozzle included. Great machine - Ready to make money! \$15,425. Contact Tim 832-473-7222 (C04)

JETTERS-TRUCK



1993 GMC 1-ton Jetter: 35gpm FMC pump, 3/4" hose, 500-gallon plastic tank. Excellent cold-weather machine.\$11,900 OBO
Other jet trucks and trailers available.

608-835-7767, WI CBM



2004 International 4400 with Allison automatic transmission - Hard to find automatic transmission. 35,000 lb. GVWR truck, low miles, 62,450 hrs., 1300 body: Sewer Equipment of America jetter with 6.8-liter John Deere power 6068 Tech engine, Sewer Equipment 800 HPR. 1500-gallon water capacity Duraprolene water tank. \$58,000

Call 617-901-8801, MA C04

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



2005 Vac-Con combination truck, Sterling, auto., tandem axle, hydroexcavation, hi-dump, 12-yd. debris. ... \$55,000 OBO

Call 317-773-7996, IN C05



2005 Vac-Con VPD4211LHA/1300 on International 7400: DT466 engine, Allison auto transmission, 88,640 miles. Deutz 138hp auxiliary engine, long telescopic boom, hydrostatic drive, articulating 600' x 1" hose reel. 1,300-gallon water tanks, 11-yard tank, 80gpm Roots 827PD blower. New final filter assembly recently installed. Well-maintained with records. \$50,000

Mark 708-475-7100, IL CBM

Bought a new truck and my wife won't let me keep this one. 2000 Vactor 2100 on an International single-axle chassis. Well-maintained. Water pump rebuilt with "new water barrel". \$50,000. bob@cromwellmechanical.com (C04)



1999 Vac-Con combination truck, International, Int. engine, Allison transmission, 9-yd. debris, single axle. \$12,000 OBO

Call 317-773-7996, IN C04



2011 Vactor 2100/2011 International: 51,000 miles. 6,600 engine hours and 3,200 blower hours. 12-yard debris tank. 16" PD blower. HX kit included. \$200,000

Dave 916-442-5400, CA C05

Vac-Con industrial machine mounted on a pre-owned 2006 Sterling cab and chassis. (Stock #8593C) **www.VacuumSalesInc.com (888) VAC-UNIT (822-8648)** (CBM)

Vactor 2100 body parts unit with blower on a 2005 Sterling (no engine & transmission) (Stock# 0311V) **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)

2000 Vactor 2100 Series: 10-yard, 15" Holmes HR42 PD blower. 1,000-gallon water tanks, 60gpm @ 2,000psi. Sterling chassis, 106,000 miles, 6,600 engine hours, 1,065 cleaner hours. Ex-municipal. Complete maintenance history available. \$45,000. Call Brian 303-898-9475. (C04)

2001 Vactor, Freightliner FL80, CAT, 2 fans, 80gpm @ 2,500psi, 2,000 gallons, Hydroexcavation package. Multi Flow, Cold-weather package, many other options. Great shape, recent service done on chassis and body. Ready to work. \$65,000. Call Dave Marshall 866-744-9921 (C04)

2002 Vac-Con Sterling 21,703 hours. Front axles 20,000, mid 20,000, rear 20,000. Gross axles 60,000. Side motor Cummins. Good running truck. New tires. Asking price \$45,000 USD. 905-809-1478 (C04)

2015 Camel Western Star 1200 combo truck, 824 blower, ejector plate, 12-yard debris tank, 80gpm @ 2,000psi water system, 1,500-gallon freshwater, 600' of 1" jet hose. Low hours and miles, some factory warranty left. For pic and more info call Jeff 317-258-4900 (C06)

2009 Vactor 2103, International chassis, standard transmission, 88k miles, PD blower. \$68,000. Ready to work. Call Bill at 813-489-3108. (C07)

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 (CBM)

LEASE/FINANCING

Quick and easy financing for new or used equipment — without all the headaches. **Credit is not an issue.** We have working capital available for commercial equipment purchases \$20,000 to \$2,000,000. **BSG Services** - Call 866-259-5370 or email bsgfin@earthlink.net (CBM)

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)

LOCATORS

Used RIDGID NaviTrack, Gen-Eye Model 100 and Goldak Model 4400. 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)

Cleaner
AVERAGE MONTHLY
CIRCULATION REACHES
26,460
READERS!

PIPE BURSTING EQUIPMENT



HammerHead HG-12 winch unit includes 6-inch pneumatic hammer, 7-inch pneumatic hammer, 8-inch head, 10-inch head, 500 ft. of air hose, and oiler unit. This machine has 180 hours and is in excellent shape - ready to work! More pictures upon inquiry. Priced to sell. \$85,000

216-276-6036, OH C04

PIPELINE REHABILITATION

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 heat-cure Quikshot pipe-lining system with manual calibration roller and absolutely everything needed for lining 4" - 6" sewers. Includes electric-start air compressor with 15hp Kohler motor and 150' x 3/4" hose. \$12,000. 626-252-1679 (C04)

Used 3 times, Nuflow pull-in-place pipe-lining equipment with 2" - 6" lining material and resin to do full linings or spot repairs. 626-252-1679 (C04)

MaxLiner CIPP unit: Complete with compressor and heating system. Trailer-mounted. \$6,000 FIRM. 818-231-0417 or 818-704-1413 (C07)

POSITIONS AVAILABLE

Looking for Utility Operator/Crew Leader to work in metro and rural Minnesota as well as outlying areas. Preferred requirements: Experience running televising equipment including lateral launch systems with PACP certification and knowledge and operation of combination jet-vac trucks. Please apply even if knowledge-based requirements are not fully met. Looking for future team members to have a positive attitude and a self-starter mentality with the ability and comfort to lead other team members. We offer negotiable, very competitive wages based on experience. Retirement plan and health insurance is available. Call 507-388-1945 or email resume to swenner@empire-pipe.com. Come help us make a better future for yourself and our team. (C04)

CCTV Operator needed. 50 to 60 hrs. per week. Work in Florida and South Carolina. CUES and Rausch CCTV. \$19 to \$25 per hr. Call Bill at 813-489-3108. (C06)

Experienced Vactor sewer cleaning, CCTV, grout truck operators. Florida, Georgia, Carolinas. Willing to travel, drug tested. Brian 561-234-9533 Ken 706-825-6913 Justin 561-398-1122 (C06)

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. (CPMGBM)

PUMPS

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

New F.E. Myers DP80-20 RH Drive - \$13,529; D65-20 RH Drive - \$12,353. Other models available. Cloverleaf Tool Co. 941-739-0707 www.cloverleaftool.com (CBM)

RENTAL EQUIPMENT

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

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

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)

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

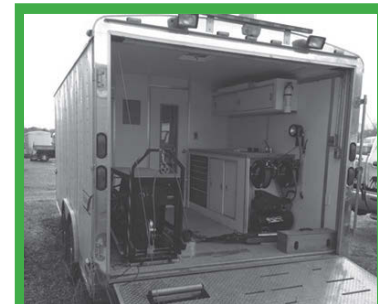
Bosch Brute hammer drill with cart irons. The Cable Center: 800-257-7209. (CBM)

TRAILERS - VACUUM/TANKER

2002 Super Products Camel 3-cubic-yard vacuum trailer with a Roots 412 blower package. (Stock# 0197C) www.VacuumSalesinc.com (888) VAC-UNIT (822-8648) (CBM)

Pre-owned 2002 Peterbilt 379 cab and chassis with a 5,460 U.S. Gallon carbon-steel vacuum tank trailer. Complete with a RFL100 vacuum pump package. (Stock# 1193C) www.VacuumSalesinc.com (888) VAC-UNIT (822-8648) (CBM)

TV INSPECTION



2004 UEMSI Main Line TV System, track transporter, 1,000' reel, pan/tilt camera, computer & software, trailer with a/c, generator & air compressor. \$29,950

334-693-9507, AL C04

USED EnviroSight ROVER System: Brand new RC90 camera. Cable reel (SN 360570) has new power supply, motor, clutch, cable (656') and winding rollers. 125 crawler (SN 0260768) has new top plate, side plates, axles and seals, plus new control board compatible with rear-view camera accessory (not included). CCU (SN 0160981) with new power card, new 56V card, new +/-26 card, and new card. Control pendant (SN 0492645) is compatible with RC90 camera and R225 crawler. \$27,500. Call 973-252-6700. (CBM)

Pearpoint explosion-proof inspection system, 2000 Isuzu diesel box truck, 16,374 miles, generator 2,670 hours. Two complete Pearpoint Type 420 tractors with Type 494 heads, P599 cable drum, various size light attachments, one spare 494 head, one remote auxiliary counter wheel, spare wheels, brushes, and parts included in tool box. \$39,000. 412-384-9327 (C06)

TV INSPECTION

PEARPOINT — Mainliner buying & selling used equipment. Canada & USA PEARPOINT MAINLINE EQUIPMENT ONLY. Will buy complete Pearpoint trucks. Will buy your old system. Do you need parts? 399, 599 reels; 420, 448 tractors: 494 digital and zoom 420 light heads. Call 800-265-4298 or mainliner2075@hotmail.com (C04)

2001 Chevy 2500 TV Van: 30,000 miles. RST camera and tractor. POSM software, \$35,000. Pictures upon request @ cdscar@aol.com 916-747-3819 (C05)

Pearpoint Flexi-coiler p571 mk2 pushrod system (attached monitor) with p455 explosion-proof Twinview Flexiprobe color digital camera - auto-uprighting head. Two available. \$13,200 per unit. 412-384-9327 (C06)

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)

2006 CUES CCTV Chevy 2500 High Cube. Steerable transporter pipe ranger. OZ II camera gold cable. New PCU, new computer. Rebuilt Onan generator. Engine replaced 40k ago. New paint, tires and seats. \$55,000. Call Bill at 813-489-3108. (C04)

2008 Ford E-350 RST TV Van: POSM, Omni 3, Washdown system. Approximately 1,200' of single conductor, 5.5 Onan Gen Set, in-closter. Great shape and READY to make money. Needs nothing. \$72,000 Firm. Dave 214-536-2915 in Dallas area (C06)

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

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)

Submit your classified ad online!

It's quick and secure!

www.cleaner.com/classifieds/place_ad

VACUUM LOADERS



2005 GapVax HV56: Articulating boom, 15-yd. debris, hydroexcavation, new engine!, Volvo chassis and engine, Eaton-Fuller transmission, 27" Hibon

..... \$80,000 OBO

317-773-7996, IN

C05

WANTED

Wanted to Buy: Vactor 2100s and late model Guzzlers. Cash. 800-336-4369. (CBM)

WATERBLASTING

AIR PREHEATER CLEANER EQUIPMENT FOR SALE. Gardner Denver PCT-2000-P. Two complete systems available. Like new, only used twice. \$19,000 each or \$35,000 for both. 903-758-9166 (C05)

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)

WATER JETTING EQUIPMENT: We sell, repair and retrofit water blasters. Visit us at: www.waterjettingequipment.com or phone 714-259-7700. (CBM)

40,000 psi Sapphire Nozzles, UHP hoses & replacement parts. Excellent quality & prices. 772-286-1218, info@alljetting.com, www.alljetting.com. (CBM)

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

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

Inside The Pipe "GRIPPER" Tool



**Easy To Use Pneumatic Tool
For Grabbing Objects
in Sewers & Ventilation systems**

- Makes 90° Bend in 4" Pipe
- Air Powered (15psi) Operation up to 82' Standard or Longer Distances Possible (Option)
- Fast & Simple Maintenance
- "No" detection needed
- Camera Hook Up Optional
- Easy In/Out using Fiberglass Push Rods, Cable or Sectional Rods
- 2.16" dia. x 9.45" length - Weight 10#
- Pliers Teeth Grabbers Optional

Cost \$2400.00 + Freight

CLOVERLEAF Tool Co.®

"Quality Products at Affordable Prices"
P. O. Box 110757 • Bradenton, Florida 34211 USA
Toll Free: 800-365-6583
Tel: 941-739-0707 • Fax: 941-739-0001
www.cloverleaftool.com • email: sales@cloverleaftool.com

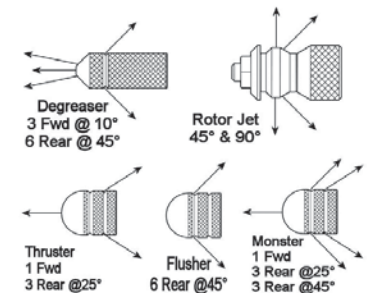


CUSTOM DRILLED NOZZLES

SEWER SQUAD PREMIUM KIT™

A Value Priced Nozzle Kit

• Each nozzle is custom drilled to match your pump's flow and pressure specs for optimized nozzle performance.



NPT Size	Price	Savings*
1/8"	\$224	\$37
1/4"	\$254	\$44
3/8"	\$294	\$52
1/2"	\$373	\$67
3/4"	\$500	\$93

*Compared to individual prices

• Each nozzle is made with heat treated 416 stainless steel for superior corrosion and wear resistance, and rated up to 10,000 psi.

• Most orders shipped within one business day.

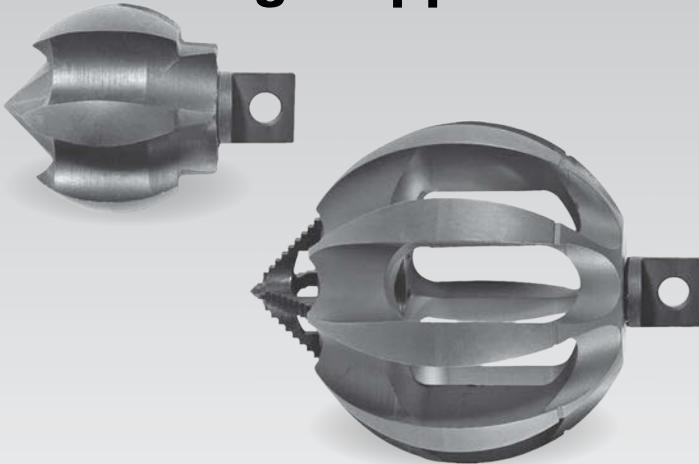
• 100% satisfaction guarantee.

CALL TOLL FREE: 877-457-2782
North Royalton, OH 44133 • www.aquamole.com • Fax: 440-237-2987



**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

FREE FREIGHT ON ALL CAMERA KITS



Pressure Washers, Replacement Engines, Pumps, Parts & Accessories

FLASH SALE

FREE DELIVERY
On Sale Priced Items

NOZZLES

QC 4 PACK



ADJUSTABLE TURBO



ROTATING 4K



UP TO 20 GPM



REPLACEMENTS

TRIGGER 4K



TRIGGER 5K



RECOIL



26.4GPM@1800PSI



ACCESSORIES

JETTER KIT



HYDROEXCAVATION WANDS



SURFACE CLEANER ROLL CAGE FRAMES



WASHERS

HONDA 4200 PSI JETTER



5000 PSI & REEL



HOT WATER



DIESEL HOT WATER



WaterCannon.com

30
YEARS OF
SERVICE

1.800.333.WASH (9274)



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



**PERFORMANCE.
RELIABILITY.
QUALITY.
SERVICE.**

Those are just a few things GapVax® provides along with **Custom-built** Combination JetVacs, Hydro-Excavators, Air Movers, Skid-mounted Vacuum units and a full line of parts and accessories to fit your needs.. We give you versatility and unmatched performance. Give us a call today to schedule a demo!



GapVax®



www.gapvax.com

TEXAS LOCATION
281-884-8658

HEADQUARTERS
888-442-7829

SPARTAN TALKS TOUGH.

Bob Griffith, New Jersey
SPARTAN REP SINCE 2001

**“I WAS ABLE TO GET
THERE AND GET HIM
WHAT HE NEEDED.”**



SPARTAN
FOR TOUGH CUSTOMERS.
SINCE 1943

I remember a call I got a little while back. This customer had an UnderTaker and had it on a pipe replacement job, and his client happened to be holding an outdoor event the day he was there to do the job. On top of that, it wound up he needed help with a part unexpectedly or else he was going to have to go ahead and dig up the lawn. But I was close enough that I was able to get there and get him what he needed without ever disrupting his client's event.

Tough Customer Preferred Product: The UnderTaker.™

Lets you replace 4" – 6" pipes with minimal disturbance to trees, landscaping, streets and sidewalks. A compatible water-line splitter for replacing galvanized or copper water lines is also available.

