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Water & Wastewater Equipment,
Treatment & Transport Show

**SHOW
ISSUE**



BORN INTO THE BUSINESS

CLEANING, INSPECTING AND RELINING BECOME
KEY COMPONENTS OF FOURTH-GENERATION
PLUMBER'S BUSINESS SUCCESS **PAGE 22**

MONEY MACHINES

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TOUGH JOB

Utah contractor tackles triple burst

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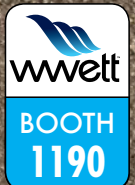
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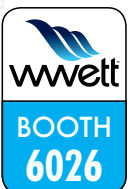
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features

- 22 **Profile: Born Into the Business**
Cleaning, inspecting and relining become key components of fourth-generation plumber's business success.
By Ken Wysocky
- 36 **WWETT Preview: World Health Organization talk slated for WWETT Show**
- 50 **Profile: Diversity Provides Stability**
Mississippi contractor takes a sharp turn and ventures into vacuum and disposal of waste products for new client base.
By Marian Bond
- 84 **Product Focus: Field and Office Technology**
By Craig Mandli
- 88 **Case Study: Field and Office Technology**
By Craig Mandli

departments

- 14 **From the Editor: So Much to See**
The WWETT Show shines a bright light on this industry and the people who keep it moving forward.
By Luke Laggis
- 18 **@cleaner.com**
Be sure to check out our exclusive online content.
- 40 **Money Machines: Pipe-Relining Partner**
Spartan Sidewinder provides power under pressure and boosts productivity for this Phoenix-area contractor.
By Ken Wysocky
- 46 **Safety First: Tracking Accidents**
Employers need to be aware of changes in OSHA's new incident-reporting policy.
By Doug Day
- 60 **Tough Job: Triple Play**
Pipe bursting and custom equipment enable a Utah contractor to separate a combined lateral in a prestigious historic district.
By Scottie Dayton
- 68 **Tech Perspective: Streamlining Service**
Making the change from paper-based operations to tablet-based enterprise software can yield big efficiency gains.
By Mary Shafer
- 78 **Money Manager: The Dash For Cash**
Experts in the fine art of accounts receivable share the latest tips and techniques for getting paid now.
By Erik Gunn
- 94 **Product News**
Spotlight: Drain-cleaning machine resists rust and corrosion.
By Ed Wodalski
- 100 **Industry News**



ON THE COVER:

Matt and Lisa Mertz, owners of Matt Mertz Plumbing, stand outside their shop in Wexford, a suburb of Pittsburgh. The Mertzes struck out on their own in 2004 with just one service truck. In 11 years, the company has grown to 29 employees and 27 trucks. (Photography by Joe Appel)

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Pipe Bursting Methods and Projects

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A

A Corp/Router-Man96

A.R. North America, Inc.36

Advanced Infrastructure Technologies14

ALLAN J. COLEMAN
SINCE 1905

Allan J. Coleman Co.47, 101

AMAZING MACHINERY

Amazing Machinery, Inc.81

AQUA MOLE
TECHNOLOGIES

Aqua Mole Technologies, Inc.100

Arctic Blasters, Inc.96

ARIES INDUSTRIES, INC.

Aries Industries, Inc.97

Arthur Products Co.90

B

BODUS GmbH80

BULLFROG INDUSTRIES, INC.

BullFrog Industries, Inc.32

C

Cable Center, The70, 89

CAM SPRAY

Cam Spray42

CENTRAL OKLAHOMA WINNELSON

Central Oklahoma Winnelson30

Root Rat

Chempure Products Corp.104

CIPP SERVICES, INC.

CIPP Services, LLC19

Cloverleaf Tool Co.30

COAST MANUFACTURING

Coast Manufacturing80

COXREELS90

CPI Products55

CUES

CUES75

D

Doug Meadows Co. LLC100

DRAINBO8

DRAINABLES DIRECT

Drainables Direct67

DURACABLE
Manufacturing Company

Duracable Manufacturing Co.37

Dyna-Flex, Inc.11

Dyna-Vac Equipment66

DynaLiner LLC45

E

Eaton16

Electric Eel

Electric Eel Mfg.16

Envirosight

Envirosight, LLC15

enz usa inc.

Enz USA, Inc.42

F

Solutions

F. S. Solutions20

Forbest Products Co.59

G

GapVax

GapVax, Inc.111

GD
GARDNER DENVER

Gardner Denver Waterjetting Systems57

General PIPE CLEANERS

General Pipe Cleaners2

GORLITZ SEWER & DRAIN, INC.

Gorlitz Sewer & Drain, Inc.71

GUZZLER

Guzzler Manufacturing49

H

Hammelmann Corp.83

HAMMERHEAD

HammerHead Trenchless Equipment95

Hannay Reels
The reel leader

Hannay Reels41

Harben, Inc.91

High Pressure Equipment Co.48

J

J. Hvidtved Larsen US43

Jetstream

Jetstream of Houston85

Jetter Depot98

K

Ken-Way

Ken-Way Corporation98

L

Lansas

Lansas Products26-27

LaPlace Equipment Co.104

Liberty Financial

Liberty Financial Group, Inc.98

LMK TECHNOLOGIES

LMK Technologies31

Logiball, Inc.62

M

MaxLiner USA53

MRP

Milwaukee Rubber Products, Inc.64

Mongoose Jetters by Sewer Equipment69

MyTana

MyTana Mfg. Company, Inc.21

N

NLB Corp.

NLB Corp.29, 58, 77

NozzTeq
Taking Pressure To The Next Level

NozzTeq, Inc.92

Nu Flow32

O

OceanQuip LLC
Specialty Hose & Cable

Oceanquip Cables, LLC39

Olvidium, Inc.8

P

Pearpoint/SPX39

PERMA-LINER INDUSTRIES, LLC

Perma-Liner Industries, LLC9

Petrofield Industries44

PHCC

PHCC-GLAA17

PICOTE
SOLUTIONS

Picote Solutions82

Pipe Lining Supply, Inc.64

Pipeline Analytics

Pipeline Analytics66

Pipeline Renewal Technologies5

PIPELOGIX

PipeLogix, Inc.61

Piranha Hose Products88

Pow-r Mole Sales, LLC74

PRIMELINE

PrimeLine Products, Inc.87

Pulsar 2000
Line Tracer

Pulsar 2000, Inc.48

Q

Quik-Lining Systems, Inc.58

R

RapidView IBAK

RapidView IBAK North America63

Ratech ELECTRONICS

Ratech Electronics, Ltd.93

Real-Tite Plugs, Inc.92

REELCRAFT

Reelcraft Industries, Inc.74

Resiplast US, Inc.92

RIDGID

RIDGID®7

Ritec GmbH90

ROOTX

RootX12-13

RS
Technical Services, Inc.
THE SINGLE SOLUTION

RS Technical Services, Inc.25

RYCOM Instruments, Inc.76

S

SAFETY SEWER DRAIN

Safety Sewer Drain79

SCOOTER

Scooter Video105

Sewer Tool Depot88

Soil Surgeon, Inc.92

SOUTHLAND TOOL MFG. INC.

Southland Tool Mfg., Inc.65

SPARTAN

Spartan Tool, LLC112

STANDARD

Standard Equipment Company107

STONEAGE

StoneAge, Inc.4

Stutes Enterprise Systems33

SubSurface Locators, Inc.58

Supervac 200056

T

T&T TOOLS

T&T Tools, Inc.76

TRIC Tools, Inc.56

TRYTEK

TRY TEK Machine Works, Inc.46

TST Sweden AB79

U

ultraSHORE PRODUCTS

Ultra Shore87

USB - Sewer Equipment Corporation80

V

VAC-CON

Vac-Con, Inc.3

VACALL

Vacall-Gradall Industries73

Vactor Manufacturing38

Vacuum Truck Rentals54

VARCO

VARCO82

VIVAX METROTECH

Vivax-Metrotech Corp.44

VSI Rentals104

W

WATER CANNON

Water Cannon, Inc. - MWBE110

Westmoor Ltd.20

Wohler USA, Inc.72

Woma Corporation103

Marketplace102

Classifieds106

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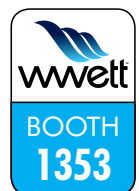
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Luke Laggis
editor@cleaner.com

So Much to See

The WWETT Show shines a bright light on this industry and the people who keep it moving forward

By Luke Laggis

Welcome to the 2015 Water & Wastewater Equipment, Treatment & Transport (WWETT) Show issue of *Cleaner*. I hope you've made it to Indy and are excited to take in everything the show has to offer.

This is the biggest show we've ever put on, and we hope it's the best you've attended.

I'm looking forward to talking to as many of you as possible, getting your feedback, listening to the issues you're facing and hearing your stories. Of course, I'm excited to check out all the new tools, trucks and equipment, too, but it's really your stories I'm interested in.

I've been at the helm of *Cleaner* for three and a half years now. We've profiled 84 contractors in that time, and every one reveals a new twist, a

different focus or a better way of approaching a problem. It's an industry with a surprisingly high level of technology and innovation, yet it's also one driven by so many small family businesses. I enjoy that facet of this industry, and I appreciate that sometimes it's the mom-and-pop shops that figure out how to build a better mousetrap.

That's part of what makes the WWETT Show such a great experience — seeing mom and dad and the kids, all dressed in matching company shirts, checking out new state-of-the-art inspection equipment or kicking the tires on a half-million-dollar hydroexcavator. You don't see that everywhere, and it's a big part of what makes this whole industry such a close-knit family.

That family atmosphere will be on display all week. Whether you're in your hotel, the Convention Center or out to dinner, you'll have no problem striking up conversations with your peers. So take advantage. The insight you gain could help you solve a problem or chart an entirely new course for your business.

You'll have plenty of opportunities to help your business grow and prosper while you're here in Indy. You'll also have plenty of opportunities to relax and enjoy yourself. Make sure all of the following are on your itinerary:

Education Day. You don't have to spend all day in the classroom, but be sure to pick out at least a couple classes that address questions, areas of interest or new opportunities you've been eyeing. The level of instruction is excellent, and knowledge is good for business.

Walking the floor. OK, this one is obvious, but make sure you see everything on the show floor. You don't know where you might find inspiration or the next big profit generator for your business, and there's some pretty cool stuff to see.

Sewer History Exhibit. For the first time, NASSCO and the Arizona Water Association will have their Sewer History Exhibit on display in the main corridor outside the exhibit hall. It's an impressive display of early ingenuity and a great look at how far the industry has come.

Industry Appreciation Party. We're giving away a truck. Cole Swindell and Blackjack Billy are playing. And you can wash it all down with 25-cent tap beer. Enough said. Don't miss out.

It's not easy to boil the whole week down to four items on your itinerary, and really, why would you want to? There's so much more to see and do. Take it all in, and enjoy the show.

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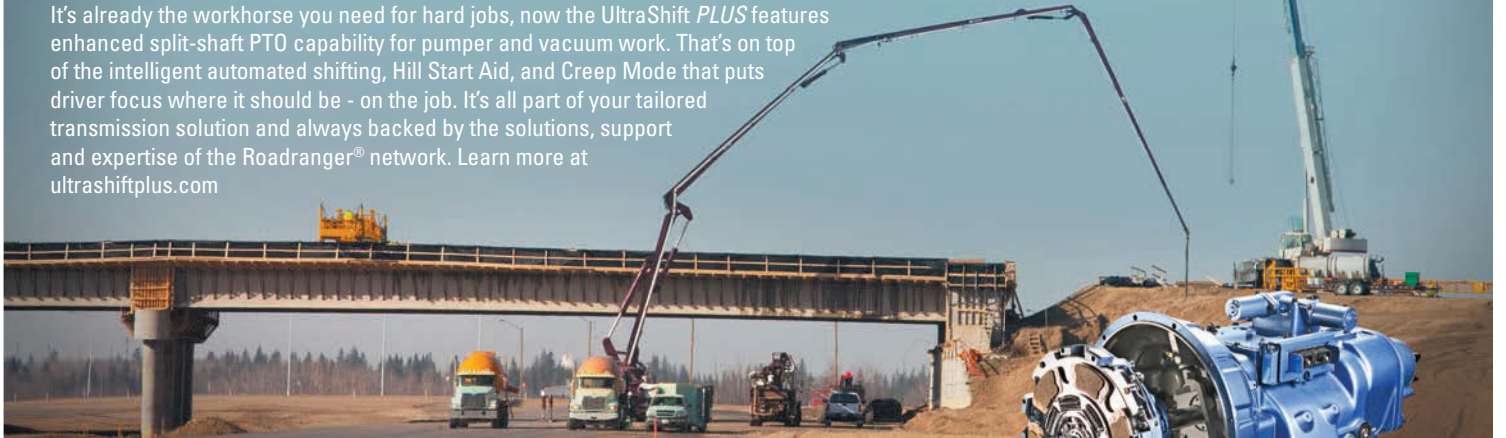
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Since trenchless rehabilitation techniques have grown to become a widely accepted solution for pipeline repair, it's even more important to understand what problems are likely to occur and learn how to quickly solve them.

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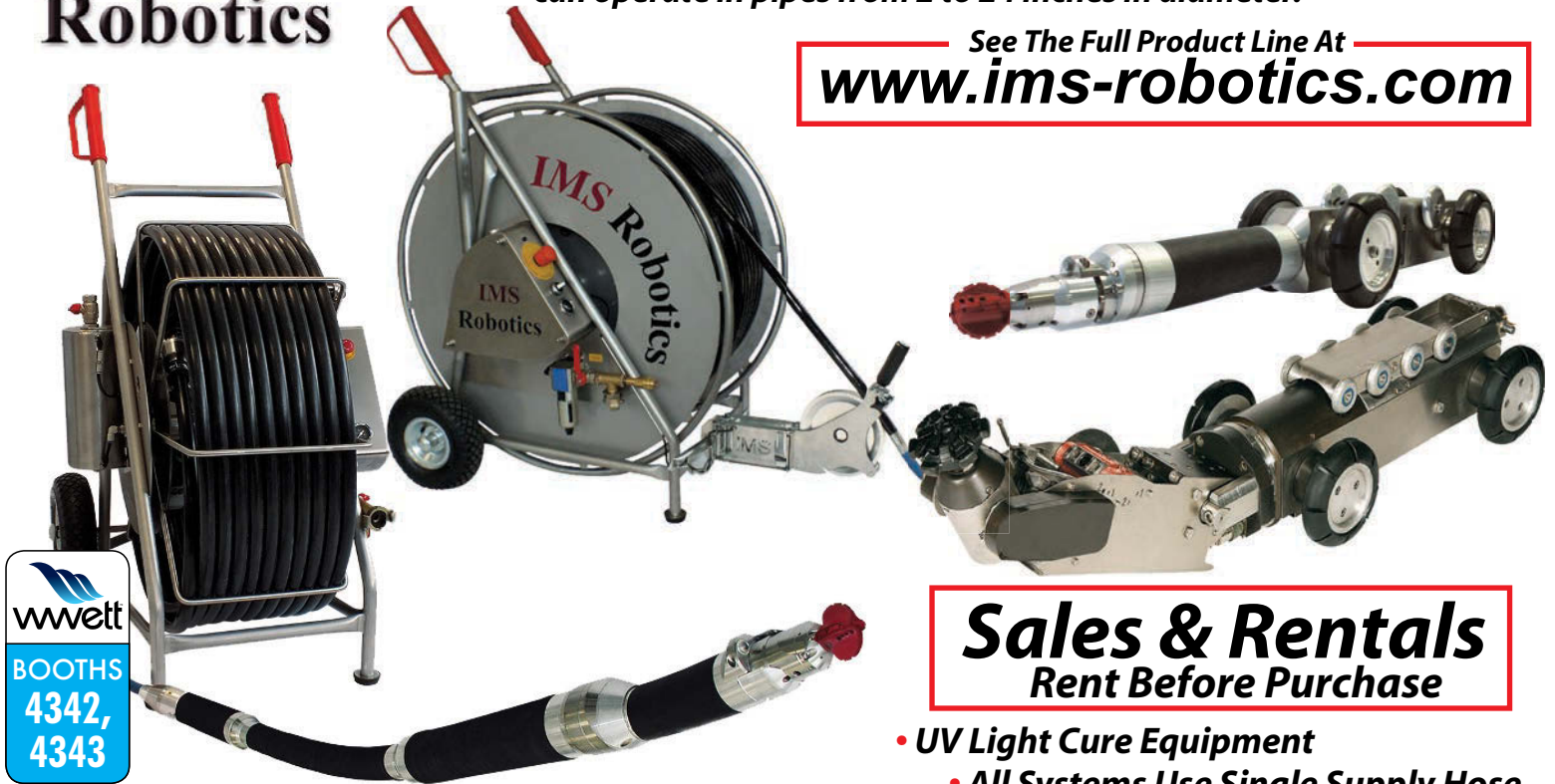


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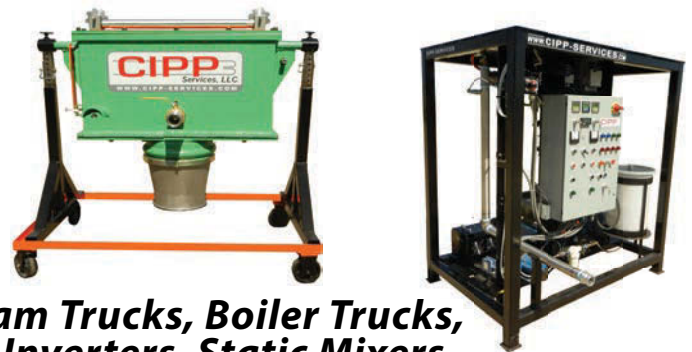
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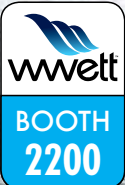
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COVER STORY

Licensed plumbing apprentice Dylan Belfiore, an employee of Matt Mertz Plumbing, runs a Perma-Liner Stinger mini steam unit during the installation of a lateral liner at a home in Wexford, Pa., a suburb of Pittsburgh.



{ BY KEN WYSOCKY | PHOTOGRAPHY BY JOE APPEL }

BORN INTO THE BUSINESS

CLEANING, INSPECTING AND RELINING BECOME KEY COMPONENTS OF FOURTH-GENERATION PLUMBER'S BUSINESS SUCCESS

By almost any measure, Matt Mertz Plumbing Inc. in Wexford, Pa., is a successful business. What else can you say about a drain-cleaning and plumbing firm that generated more than \$6 million in revenue in 2014, employs 29 people, runs 27 trucks and owns about \$2 million worth of equipment, tools and vehicles?

But even a thriving company can always use a new revenue stream, especially if it can leverage an existing customer base. And that's exactly what owner Matt Mertz did almost three years ago when he started offering customers a new service: trenchless pipe relining.

Mertz was already familiar with relining because he periodically hired a subcontractor to do such work for his company. But after a while he decided he'd rather have that piece of the revenue pie instead of giving it away.

"The guy was charging a \$2,000 minimum fee, no matter how long the lining project was," recalls Mertz, 33, a fourth-generation plumber who established his company in 2004. "So when I saw what he was charging just to do, say, 10 feet of pipe from the edge of a property to a sewer mainline, I felt like I had to get in on it. Plus I already had a large customer base for it, with very few competitors."

So far the move into trenchless pipe repair — using a steam-curing system made by Perma-Liner Industries — has paid off handsomely. Pipe relining now contributes almost \$1 million in annual revenue to the company, or about 17 percent of its total 2014 gross revenue, Mertz says.

"We charge anywhere from \$70 to \$200 a foot, depending on the size of the pipe and the condition it's in," Mertz says. "A good rule of thumb is \$100 a foot. The profit margins are very high."

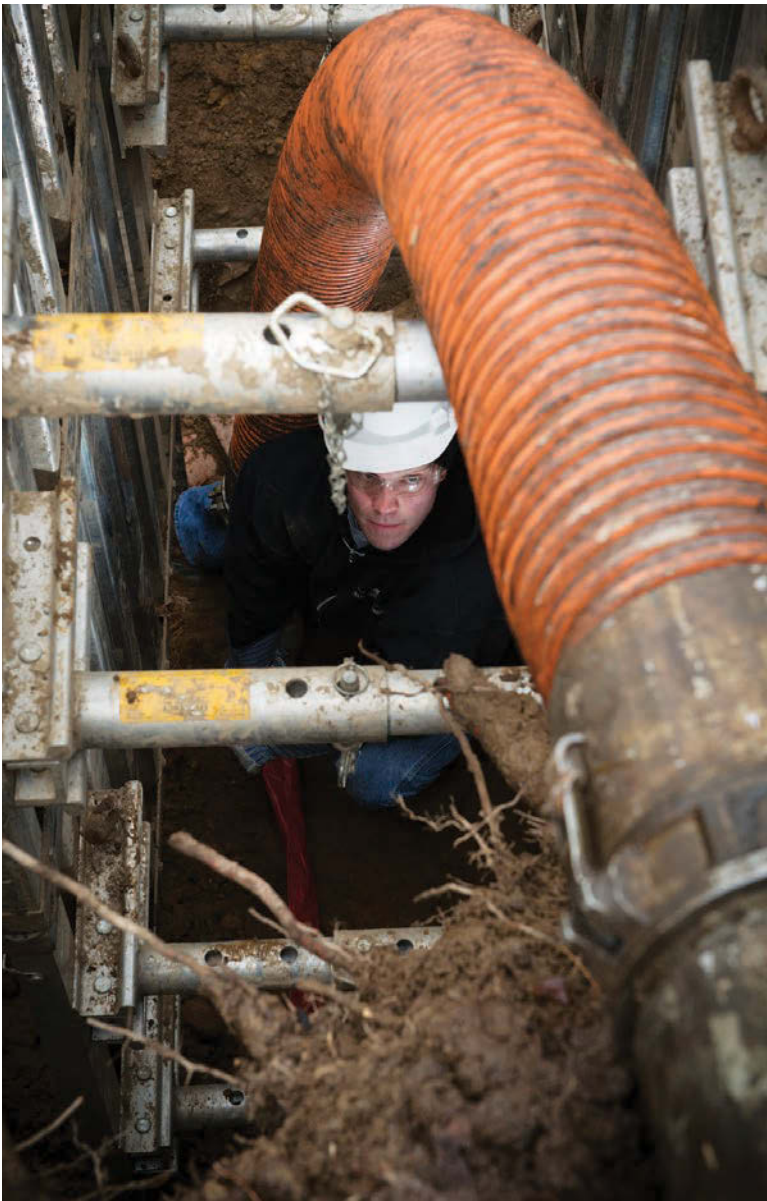
NOTHING VENTURED, NOTHING GAINED

Taking calculated risks on new equipment that can increase productivity and profitability is nothing new to Mertz, a master plumber who employs 12 full-time licensed plumbers and runs five sewer lateral rehab crews. Along with residential drainline cleaning, the diversified company also offers general residential plumbing services.

The company has grown substantially since Mertz struck out on his own. At the time he owned just a service truck, some miscellaneous plumbing supplies and tools, a pipeline camera and a drain snake — and had just \$200 in the bank.



Dylan Belfiore guides the Perma-Lateral inversion unit at the entry pit on a lateral relining job.

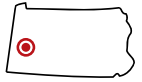


Matt Mertz, owner of Matt Mertz Plumbing, stands in a shoring box while installing a lateral liner for a residential customer.

profile

MATT MERTZ PLUMBING INC., WEXFORD, PA.

OWNER: Matt Mertz
FOUNDED: 2004
EMPLOYEES: 29
SERVICES: General residential plumbing, drain cleaning, residential lateral relining
SERVICE AREA: 50-mile radius around Wexford
WEBSITE: www.matt-mertz-plumbing.com



The company's transition from a one-man band to a thriving, large-scale plumbing and drain-cleaning operation reflects the power of a strong, relentless work ethic; Mertz still routinely works 60-hour weeks. "I've always felt that if I work way more hours than the time I take off, I can't mess up," he says. But it also shows how drain cleaners can benefit from constant reinvestments in productivity-enhancing equipment, establishing good credit, delegating some job duties and differentiating through great customer service.

"Things happened pretty fast," Mertz notes, referring to the company's early years. "I grew because I did a lot of little things differently than other guys. I wasn't afraid to go out late on jobs. I worked hard and was polite to customers. I did very clean work. I take a lot of pride in the finished product. I charged a fair price and worked quickly. And when I hired employees, I only hired guys who felt the same way about jobs that I do."

DEEP PLUMBING ROOTS

It's no surprise that Mertz became a plumber. His great-grandfather, grandfather and father worked as plumbers, and Mertz says he always had an affinity for the work. "It sounds cliché, but plumbing is in my blood," he says.

While working for his father, he earned a journeyman plumber's license in 2003 and a master plumber's license in 2004. (In Pennsylvania, only master plumbers can run a plumbing business.)

Mertz established his own shop in 2004. "I had no choice but to make it a go," he says. "I ran some ads in local newspapers and even pinned flyers on community boards in coffee shops. I did any work I could get and was charging \$50 an hour. I was willing to do anything I could to feed my family ... and finally things started to click. The phone finally started to ring. And all of a sudden I had \$30,000 in the bank."

TRENCHLESS PIPE RELINING PAYS OFF FOR CONTRACTOR

Like many drain cleaners, Matt Mertz, the owner of Matt Mertz Plumbing Inc. in Wexford, Pa., was initially a little leery about expanding into trenchless pipe relining. But once he saw how it's done — and the profits other contractors were making — he decided to invest about \$150,000 in a relining system made by Perma-Liner Industries. He says he's never regretted the move, which now contributes about \$1 million annually to his revenues with more growth expected.

Of course, that didn't happen overnight. Mertz says that even with great training provided by Perma-Liner, it still took about 100 jobs before he felt totally comfortable performing relining jobs, primarily for residential sewer laterals.

"It took a while to get off the ground, but now we're known for it," he notes. "We do relining jobs every week. An average project takes about a day to complete. We go out and remove the house trap, jet the line to remove any debris and televise the line to check its condition. If it's structurally sound, then we install a steam-cured liner.

"Afterward we televise the line again to make sure the liner conforms to the pipe — that there aren't any defects and the liner adheres properly," he continues. "We also burn the video onto a DVD so customers can see what the pipe looked like before and after the relining. I think it's a good idea to show them what they bought for their investment."

Offering relining services also benefits Mertz's company in another way: If a video inspection reveals that a sewer lateral is structurally unsound and not a good candidate for relining, the company — which also does conventional pipeline excavation and rehabilitation — already has a foot in the door to win that work.

Mertz still encounters many people who aren't aware that trenchless pipe relining is an option for ailing laterals. To convince skeptics, he shows them a section of relined terra cotta pipe. "I hand it to them, and once they can see inside it makes a lot of sense," he says. "They also like the fact that we don't have to dig up their yard. Plus we offer a lifetime warranty. We're very confident about our installations."

Mertz gives a lot of credit to his wife, Lisa, the company's vice president. "I couldn't have done it without her," he notes. "She's always been there for me — she's extremely supportive, even though I put in long hours. She helped me get to where we are now. We're a really good team."

TONS OF TOOLS

Running a full-service outfit requires a large fleet of equipment, and Mertz has aggressively purchased tools and machines that improve efficiency and boost profitability.

The company has an arsenal of tools for cleaning drains, including 20 drain cleaning machines, the bulk of which are RIDGID K-60 and K-1500 sectional machines, along with four Spartan Tool Model 300 drum machines. Smaller drains are often cleared with one of a dozen Kinetic Water Rams or

Super-Vee hand-held augers, both made by General Pipe Cleaners. For bigger jobs, crews turn to the Spartan Model 727 (3,000 psi at 4 gpm) wheeled cart jetter, a General Pipe (3,000 psi at 4 gpm) portable jetter, or a Spartan 740 trailer jetter (4,000 psi at 12 gpm). Mertz outfits the business end of the jetters with Warthog and Lumberjack nozzles made by StoneAge and NozzTeq.

For inspection, Mertz relies on M-Spector 360 pipeline cameras from Milwaukee Electric Tool and RIDGID See-Snakes.

There's also a large stable of equipment dedicated to relining and lateral replacement. In addition to the Perma-Liner system, Mertz uses a Viper air compressor from Vanair Manufacturing for inflating liners, and two TT Technologies Grundomat pneumatic "pencil moles" for boring underground lines. Excavation is aided by a fleet of dump trucks, Bobcat skid-steers and mini-excavators, Canycom SC75 tracked hauling buggies, Brute jackhammers

"I grew because I did a lot of little things differently than other guys. I wasn't afraid to go out late on jobs. I worked hard and was polite to customers. I did very clean work. I take a lot of pride in the finished product."

Matt Mertz



Matt and Lisa Mertz, owners of Matt Mertz Plumbing, outside of their shop in Wexford, Pa.

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<< **LEFT:** Master plumber Phil Arena uses a closet auger to open a clogged toilet at a private residence.

>> **RIGHT:** Dylan Belfiore removes a section of pipe below the basement floor of a house before relining the lateral.

by Bosch, an Ingersoll Rand tow-behind air compressor and an assortment of other equipment.

Mertz sums up his ability to afford all this equipment in two words: financing and frugality. At first he relied on a line of credit from a local bank and financing through a national loan company. He focused on making the loan payments on time and saving money.

“I established really good credit,” he says. “No matter how much money I earned, I always made sure I saved some and made the payments. I was never afraid to buy the things I really needed, but I was smart about it, too — I didn’t get in over my head financially. I’d wait until a job required a certain tool or piece of equipment, but made sure I could make money with it afterward, too.

“Now I pay cash for everything,” he adds.

All Mertz Plumbing vehicles look the same: white with maroon lettering, which promotes consistent branding. Furthermore, trucks get checked every week to make sure they’re clean and well-organized, detect damage and determine if they require any routine maintenance.

“I check every truck every week and they sign off that it was washed,” Mertz says. “I’m a neat freak. It’s all about image. If you’re clean and organized, customers will think you’ll do a good job. We charge \$135 for the first hour of service, and it’s easier to charge that kind of rate if our guys go to jobs with a newer model truck that’s clean, well-stocked and doesn’t leak oil on the

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Matt Mertz

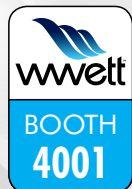


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Licensed plumbing apprentice Joe Pfifer (right) feeds hose from the Spartan 740 trailer jetter to Matt Mertz as he pulls it to the trench to clean and remove roots from a sewer lateral before relining.



driveway. Our guys are also required to be clean-cut, wear a uniform, greet customers at the door and put on shoe booties before they enter a house.”

“I’m a neat freak. It’s all about image. If you’re clean and organized, customers will think you’ll do a good job. We charge \$135 for the first hour of service, and it’s easier to charge that kind of rate if our guys go to jobs with a newer model truck that’s clean, well-stocked and doesn’t leak oil on the driveway.”

Matt Mertz

While it may sound counterintuitive, Mertz says he makes money by offering customers free camera inspections on drain-cleaning jobs. “I’ll go out and inspect a line for free and make the customer a DVD,” he explains. “I get so much work by doing that. We clean 10 to 12 drains a day, and if we have to repair even just two of those, that’s \$12,000 worth of business. Sometimes you give a little to get a lot.”

PLANNING FOR MORE GROWTH

What does Mertz see in terms of future growth? In a word: more. He plans to expand into heating and cooling services and recently hired two employees and bought two new trucks to get started.

On the plumbing end, Mertz’s goal is to eventually run 50 trucks, and after 11 years he’s more than halfway there. “It gets tougher to grow,” he notes. “It’s harder and harder to find good employees.

“But I definitely see more growth ahead,” he continues. “The market is here for the taking.”

No matter what lies ahead, though, Mertz says he’ll always rely on the most valuable lesson he’s learned in the last 11 years: Trust yourself — even if you’re down to your last \$200 in the bank.

“Never doubt yourself,” he emphasizes. “Don’t ever let someone say you can’t do something, because you certainly can. Just keep focusing on moving forward and don’t dwell on the stupid stuff.” **c**

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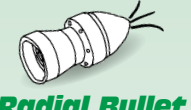
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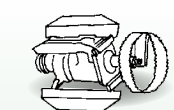
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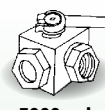
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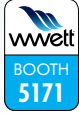
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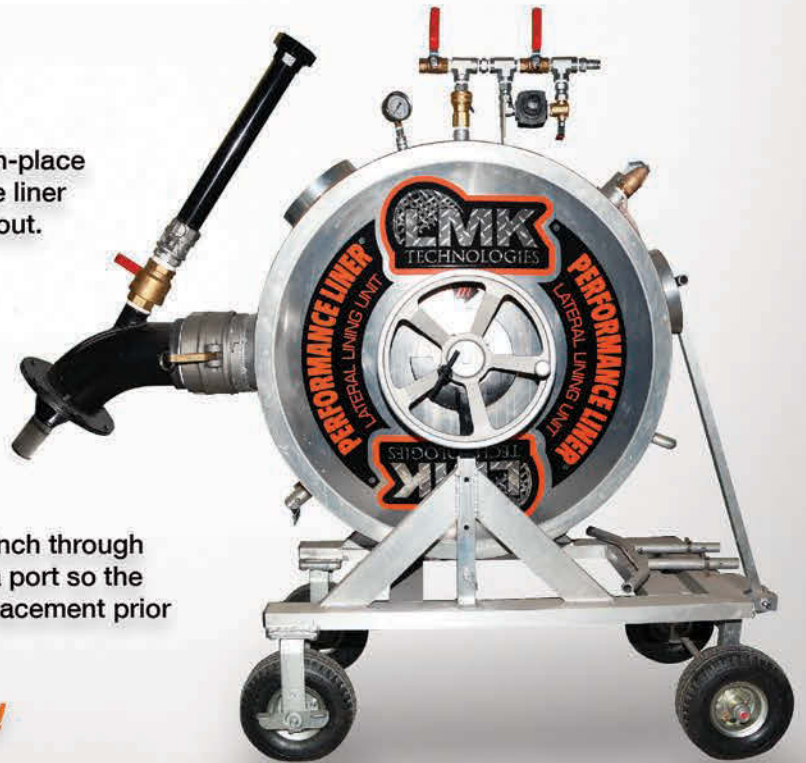
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580 companies - list current as of January 19, 2015.

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World Health Organization talk slated for WWETT Show

The threat of communicable diseases is real for everyone who handles or comes in contact with wastewater. Understanding the risks and taking the necessary precautions is the key to protecting yourself.

Since the ebola virus outbreak in West Africa made headlines, many in the wastewater industry have asked about the potential for a variety of communicable diseases to spread through contact with human waste during the cleaning, maintenance and repair of sanitary drain and sewer lines.

Those questions will be answered at the 2015 Water & Wastewater Equipment, Treatment & Transport Show. Dr. Adrianus Vlugman, World Health Organization senior advisor on water, sanitation and environmental health, will speak Feb. 26 at 1 p.m. in Rooms 133-135 at the Indiana Convention Center as part of an extensive series of WWETT Show speakers and seminars.

Vlugman will provide a general overview covering the survival and life expectancy of communicable diseases in water and wastewater. Among other topics, he will cover:

- Safety precautions to consider when handling water and wastewater.
- The likelihood of communicable diseases to be spread or passed through both centralized wastewater plants and decentralized onsite wastewater systems.
- Whether there is a concern for the spread of communicable diseases through land application of properly treated sewage, biosolids or septage.

The talk on the transfer of communicable diseases is free and open to anyone.

If you would like to attend the WHO program, fill out the online registration form at
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But that's not the only reason you want the Vector name on the combination sewer cleaner you use. With Vector, you get high air flow – enough to power an 8-inch hose, so you can suck up heavy debris, wet or dry. One more thing: Vector is made in America, so parts and service are available at a Vector dealer near you.

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Pipe-Relining Partner

Spartan Sidewinder provides power under pressure and boosts productivity for this Phoenix-area contractor

By Ken Wysocky

When longtime plumber and drain cleaner Randy Rushing decided to diversify his business by getting into pipe relining, he knew he needed a water jetter with the power to restore clogged and dirty pipelines to near-original condition. He opted for a trailer-mounted Sidewinder jetter, made by Spartan Tool, and the owner of Peerless Plumbing Co. in Phoenix says it's a decision he's never regretted.

"I went to the Pumper & Cleaner Environmental Expo International [now the Water & Wastewater Equipment, Treatment & Transport Show] for two years in a row while I was making up my mind," Rushing says. "To do relining, we need a line that's as pristine and free of foreign material as possible ... and the Sidewinder is powerful enough to clean lines to the point that they're 85 to 95 percent of their original inside diameter. It shears tree roots right off."

Purchased in 2008 for about \$35,000, the Sidewinder is used primarily for cleaning sewer and lateral lines (typically 1 1/2 to 10 inches in diameter) prior to relining. A Little Giant pump, built by Franklin Electric, delivers maximum pressure of 4,000 psi at a peak flow of 18 gpm. The unit also features several productivity-enhancing features, including a 350-gallon water tank, an articulating and telescoping hose reel that swivels up to 180 degrees and carries 600 feet of 1/2-inch-diameter hose, automated hose rewinding, an 80 hp Kubota turbocharged diesel engine and remote control operation.

"One thing that really impresses me about the Sidewinder is the ease of maintenance," Rushing notes. "You can access the engine from either side of the unit and easily lubricate all moving parts – no need to lay down on your back and get under it. Everything is accessible, which saves us hours and hours of time over the course of a year and helps us keep it running. Plumbers aren't auto mechanics, so any machine that's easy to maintain and avoids downtime is great."



Peerless Plumbing's Sidewinder trailer jetter from Spartan Tool features a Little Giant pump (Franklin Electric) that delivers maximum pressure of 4,000 psi at a peak flow of 18 gpm.

money machines

- OWNER:** Peerless Plumbing Co., Phoenix
- MACHINE:** Sidewinder trailer-mounted water jetter, made by Spartan Tool LLC
- FUNCTION:** Primarily for cleaning municipal and residential sewer and lateral lines prior to relining
- FEATURES:** A Little Giant pump (4,000 psi at 18 gpm), 350-gallon water tank, articulating/telescoping hose reel with 600 feet of hose, automated hose rewind, 80 hp diesel engine, remote control operation
- COST:** About \$35,000

The articulating reel is particularly handy, Rushing points out, because an operator can always line it up to face a clean-out (or whatever other entry point is being used to clean a line), even if he can't park the jetter in an

Peerless Plumbing uses its Sidewinder trailer jetter primarily for cleaning sewer and lateral lines prior to relining. The unit features several productivity-enhancing features, including a 350-gallon water tank, an articulating and telescoping hose reel that carries 600 feet of 1/2-inch-diameter hose and can swivel up to 180 degrees, an 80 hp Kubota turbocharged diesel engine and remote control operation.



optimum position. “A lot of times you’re parked on a street in front of a commercial building and you can’t face the clean-out squarely,” he explains. “But you can point the articulating reel in whatever direction you want.”

“A lot of times you’re parked on a street in front of a commercial building and you can’t face the clean-out squarely. But you can point the articulating reel in whatever direction you want.”

Randy Rushing

But Rushing really lauds the remote control. It not only allows for quicker water shut-off in emergency situations, it also allows Peerless to operate with only two technicians on job sites instead of three because no one needs to stand at the rear of the vehicle and operate the controls. That, in turn, contributes to the company’s bottom line by reducing labor costs. It also enables Peerless to bid more competitively on jobs — and even save customers some money.

“With benefits, you might be paying a plumber \$30 an hour, and that’s \$240 a day,” Rushing explains. “That may not sound like a lot, but it is when you consider that we do hundreds of jetting jobs a year.”

Along with the Sidewinder, Rushing relies on various styles of nozzles made by Spartan, StoneAge, NLB Corp. and Nu Flow Technologies. He also owns five pipeline inspection systems made by RIDGID, Spartan and Pearpoint/SPX. In addition, he uses an epoxy relining system engineered and manufactured by Nu Flow.

Peerless crews televise lines before and after relining, and Rushing then gives customers a copy of the videos on a small external hard drive. “Believe me, they’re duly impressed,” he says. In fact, he says it’s not unusual for customers to look over a technician’s shoulder and watch the pre- and post-

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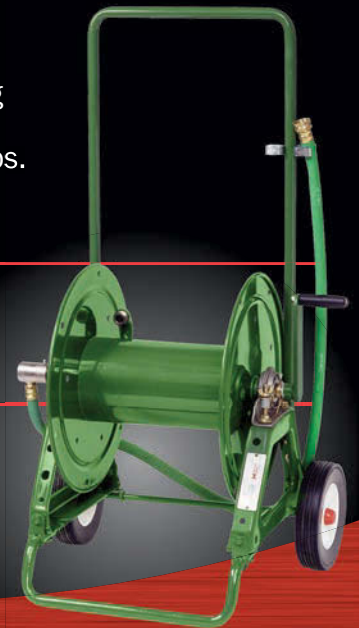
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lining pipe televising on the inspection unit's monitor. Their reaction to the Sidewinder's cleaning ability? "They say, 'Wow, that thing really works!'" Rushing says.

The Sidewinder also enhances the company's image as a progressive, professional outfit, he adds. "When we decided to get into pipe relining, we already had a good reputation as a repiper of copper plumbing lines," Rushing explains. "But when we jumped into epoxy relining, it was almost like starting a new company. The industry was in its infancy then in Arizona, which is a tough place to introduce new products and technologies. But when we pulled up with a truck that had lots of signage on it and that big new jetter behind it, customers were impressed — and they still are."

Rushing concedes that the Sidewinder represented a significant investment for his company, but he says it has paid for itself many times over in the seven years he's owned it. And Spartan's in-the-field service is second to none, he says.

"My wife, Jade, is the boss, and she keeps the books," Rushing says. "And I've never heard one complaint about buying that jetter. It's been a key component in our success in pipe relining. It does everything Spartan said it would do — and even a little more." **c**

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Money Machines, a feature in *Cleaner*, reports on innovative work vehicles that help contractors operate more efficiently, satisfy customers and earn more profit. We'd like to know about your Money Machine — be it a service van, camera truck, jetting rig, vacuum unit or any vehicle that really helps drive your business. To nominate your vehicle for a feature in this column, send an email to editor@cleaner.com. Tell us briefly but specifically what features make it a great producer. And send a picture — because appearance counts. We look forward to seeing your Money Machine.

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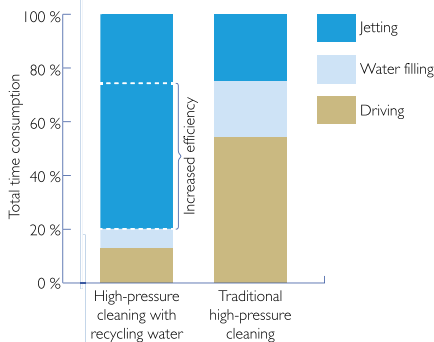
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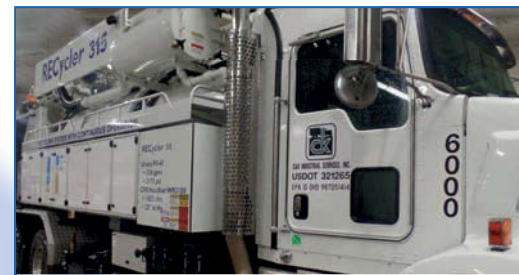
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Tracking Accidents

Employers need to be aware of changes in OSHA's new incident-reporting policy

By Doug Day

As of Jan. 1, 2015, OSHA has made changes to its rules about reporting some injuries and who has to keep safety records. Employers should double-check to see if they are covered by the regulations since some states have their own OSHA program that may or may not have different rules.

All employers in states under federal jurisdiction must report some incidents, even if they are normally exempt from keeping OSHA injury and illness records due to their size or industry. That list has been expanded. The list of exempt industries has also changed.

SERIOUS INCIDENTS

In the past, all employers under federal OSHA jurisdiction were required to report work-related fatalities and the hospitalization of three or more employees. That requirement has been updated so that all such employers must report the following:

- Fatalities (that occur within 30 days of a work-related incident)
- Inpatient hospitalization of one or more employees that occurs within 24 hours of a work-related incident
- Amputations that occur within 24 hours of a work-related incident
- Loss of an eye that occurs within 24 hours of a work-related incident

Fatalities must be reported within eight hours of the employer finding out about them. The other three situations must be reported within 24 hours of the employer finding out.

Reports can be done by telephone to the nearest OSHA office during normal business hours or to the 24-hour OSHA hotline at 800/321-6742 (OSHA). The agency is also developing an online reporting mechanism that will be available at www.osha.gov.

OSHA defines amputation as “the traumatic loss of a limb or other external body part.” It includes “a part, such as a limb or appendage, that has been severed, cut off, amputated (either completely or partially); fingertip amputations with or without bone loss; medical amputations resulting from irreparable damage; and amputations of body parts that have since been reattached.”

Hospitalization does not have to be reported if it is for diagnostic testing or observation only, but OSHA requires reporting all heart attacks resulting from a work-related incident.

Reports are not necessary if the death or injury occurs on a commercial or public transportation system (airplane, subway, bus, ferry, streetcar, light rail or train) or is the result of a motor-vehicle accident on a public street or highway, unless it happens in a construction work zone.

The report to OSHA must include the following information:

- Establishment name
- Location of the work-related incident
- Time of the work-related incident
- Type of reportable event (i.e., fatality, inpatient hospitalization, amputation or loss of an eye)
- Number of employees who suffered the event
- Names of the employees who suffered the event
- Contact person and phone number
- Brief description of the work-related incident

EXEMPT EMPLOYERS

Employers with 10 or fewer employees at all times during the previous calendar year are still exempt from recordkeeping requirements. They are required to report the incidents noted above.

There is also a list of industries that are exempt from recordkeeping requirements due to their injury and illness records — so called low-hazard industries. That list has been updated. To determine if your company is exempt, use the directions at www.osha.gov/recordkeeping2014/records.html.

More details on the new reporting requirements are available at osha.gov/recordkeeping2014. **c**

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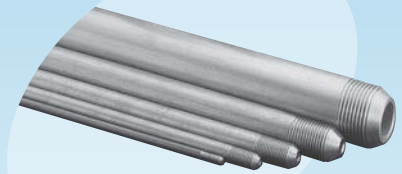
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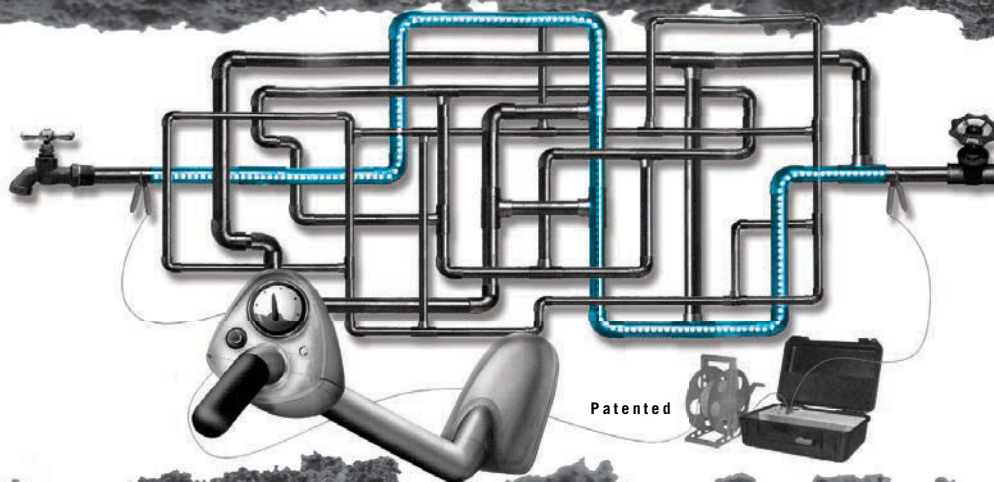
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MISSISSIPPI CONTRACTOR TAKES A SHARP TURN AND VENTURES INTO VACUUM AND DISPOSAL OF WASTE PRODUCTS FOR NEW CLIENT BASE



B&J Vacuum Services pretreatment plant manager Gregory Shavers (left) and operator Richard Begnaud prepare a pump truck before heading out on a job.



The B&J Vacuum Services crew includes (from left) mechanic Terry McIntyre, operator Richard Begnaud, owners Brenda and John May, John May Jr., and plant manager Gregory Shavers.

John May and his wife, Brenda, spent years installing septic tanks and handling portable toilet rentals before their concerns for proper waste disposal led them in an entirely different direction with the opening of B&J Vacuum Services in Gulfport, Miss.

“Through my lifetime, since I was 8 years old, I have seen the issue of proper disposal become more sensitive and the environmental effects and related issues becoming more ugly, particularly in the 1970s and ‘80s,” says John May.

“When we started B&J we believed that by changing our focus in the industry we would be in a position to find answers to the many problems related to waste. We wanted to be problem solvers. We knew there was a need for more regulation. I told my wife we would start the business and if we couldn’t do it right, we would just not do it.”

Their objective was to provide waste material collection for a wide mix of municipal and industrial clients. Working closely with Keith Huber, May sought to develop a vacuum truck that would directly meet his needs and help him achieve his goals.

“I had worked with Keith over the years,” May says. “He built the first portable toilet truck I had — other than those I built myself. Together we could figure things out. He had an analytical mind as to how to make things happen. When I came up with the idea, he said, ‘Let’s put it together.’ We did that and it became the Dominator, his primary seller through the years. We put the vacuum and jet together. That’s what made it so valuable.

“We started out in industrial plants such as DuPont and Chevron,” May says. “We were collecting chemicals, liquid waste, semiliquid waste. The customers were very impressed. They were ecstatic at what we were able to do with that truck. They had spent months trying to determine how to handle this waste. We got jobs that had taken 36 hours to accomplish, and we did it in eight hours. We were saving them lots of money.

profile

**B&J VACUUM SERVICES INC.,
GULFPORT, MISS.**

SERVING MISSISSIPPI, ALABAMA, LOUISIANA

OWNERS: John and Brenda May

ESTABLISHED: 1986

SERVICES: Industrial cleaning, jetting, CCTV, pretreatment plant

CUSTOMERS: Municipal, industrial, military, residential

EMPLOYEES: 4

“But we also had some problems when they would run out of money to bring us in,” he continues. “We would be working 24 hours a day, and suddenly — Bam! — we would be told we had to stop because of the money. That is when we realized we needed to be more diversified.”

May continued to have concerns about proper disposal, noting that if there is no place to take the waste there is no sense in having the truck. After talking with various communities he was able to locate suitable sites for disposal. “The truck is no good without disposal. But you have to take care of the environment as well.”

When local authorities began setting up regulations in 1990, they encouraged May to open a pretreatment plant, which he did. By that time, the landfills were no longer accepting liquid waste. All material had to pass a tank-filtered test.

“I had no idea at that time what I was getting into,” he says. “But it has worked out very well.”

PROPER TREATMENT

A contract with an industrial, government or municipal customer will

John May (right) and camera operator Richard Begnaud retrieve the Cyclops inspection camera from a manhole after inspecting a pipe segment.



generally require that they collect the liquid or solid waste and bring it back to the plant, where May determines what it is and how to properly dispose of it.

“What we do is separate the waste and neutralize it. We check the pH. I can tell if the pH is a 5 or a 7 by the smell. We sometimes have to bring the BOD down and get it where it will pass into the collection agent. I have brought it down to the point where it is as clean as drinking water.”

In one month in the summer of 2014, they had 80,000 gallons in the treatment plant. But nothing leaves the plant until May says it can go. It is then tested by a laboratory, confirming his assessment. B&J holds local, state and federal permits for the pretreatment plant, which is monitored and regularly inspected. Waste is taken to the Harrison County Utility Authority, the Harrison County Development Commission and the Pecan Grove Landfill.

“They had spent months trying to determine how to handle this waste. We got jobs that had taken 36 hours to accomplish, and we did it in eight hours. We were saving them lots of money.”

John May

“We pretreat the waste. Liquid waste goes to the treatment plant. My solid waste goes to the landfill. That includes grease, dirt and rocks. We have enough containment space that we can sit on it until we get it right.

“If you don’t know what you are doing, it can be very expensive. It has to be right.”

As a rule, May does not take waste from outside companies, but does make an exception with contractors he is familiar with. “I don’t consider them as competition, but as ‘co-business owners.’ I will work with them if they have problems, and I’ll help find solutions. I will help.”

DIVERSIFY AND CONQUER

May has diversified into CCTV and cleaning of storm drains, grease traps, drainfields, car wash facilities, elevator shafts, fuel tanks and gas wells.

The menu of services has also expanded to include line repair using the QuickLock Pipe Point Repair by Rausch USA. The system can be sent into the exact location of a problem and locked in place, covering from 6 to 32 inches of pipe. May has become a QuickLock distributor in Mississippi, Alabama and Louisiana.

At one time they offered confined space entry and dealt with hazardous waste, but it wasn’t profitable and after 10 years they got out of that end of the business.

EQUIPPED FOR BUSINESS

May believes people sometimes get into this business without realizing what it takes to make things happen. “If you don’t have that disposal, you will be parking your

John May watches an inspection from the control room of the Cyclops-equipped CCTV van.



truck. You cannot unload without having a place to dump.

"I've had some of my co-business owners [other contractors] ask me how I get results," he says. "I have been fortunate enough to be able to get water out of the ground with my Dominator from 140 to 200 feet deep. Most people cannot do this at 30 feet deep. I just say I'm not in the teaching stage. I've done it."

CONTINUED >>

A FOUNDATION OF FAITH

It's difficult to write about John and Brenda May, owners of B&J Vacuum Services, without talking about their faith and belief in the power of the Almighty. Perhaps the best example was their recovery following the devastation of Hurricane Katrina in August 2005.

"Katrina totally destroyed our building and plant," Brenda says. "There was just one wall standing, and a truck was holding that up. We were out of the area at the time. When we came back we also found our home on the Pearl River with 6 feet of water, and we are 26 feet above the water line. There was nothing in contents to salvage, but the house was recoverable."

John says that when he returned to Gulfport after Katrina hit, he had one pair of pants other than the pair he was wearing. All else was lost.

Brenda says local communities were trying desperately to clean up, and it was utter chaos. "John was going full bore, putting on extra help, getting sewer lines and storm drains clean. If he had 15 extra people working, we wondered how we would pay them. We were not set up for that. But we did it."

There were important decisions to be made about how to use their resources and equipment. John focused on helping the local people as they worked to recover. He put that goal over other opportunities to make money. He says he put his faith in God and moved forward.

Today, all these years later, he can say that although they were literally wiped out, his faith prompted him to get up and get going, and they have recovered and prospered.



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Richard Begnaud retrieves the CCTV camera and crawler from a stormwater pipe.



“I can tell if the pH is a 5 or a 7 by the smell. We sometimes have to bring the BOD down and get it where it will pass into the collection agent. I have brought it down to the point where it is as clean as drinking water.”

John May

Equipment includes a 2000 Vac-Con with a Bean high-pressure pump (3,000 psi/50 gpm) and two Keith Huber Dominator vacuum trucks with Myers high-pressure pumps (2,000 psi/35 gpm) and Battioni vacuum pumps. The company also has a truck-mounted jetter with a Myers pump producing 2,000 psi/65 gpm.

Their CCTV van is a 2006 Dodge Sprinter equipped with a Cyclops inspection camera and software. May runs the CCTV van, along with a helper. He says his employees work hard and he can depend on them to do their job according to company policy.

GET IT DONE RIGHT

B&J’s workload sorts out to about 25 percent municipal work, 35 percent government and 5 percent residential, with the balance in industrial jobs. All of this can fluctuate, however, depending on circumstances.

“That is the reason for diversification,” he says. “In one year to the next, 25 percent can jump to 75 percent. You never know from one year to the next how it will break.”

There is no typical time frame for jobs, but May says they can generally plan a week ahead with the awareness that emergencies can require adjustments.

“We know what we will be doing, but at the same time people get in trouble all the time with sewers. That includes the cities and the mom-and-pop operations as well. We have to keep these events in mind and have a plan. We want an employee who knows what to do to help people. That is critical. Always have one man sitting there with a smiling face to answer the call.”

On scheduled jobs, they can handle three to five projects per day. May says when an emergency requires immediate attention, he can sometimes handle it with a phone call. But his customers know that if he cannot respond he will recommend another contractor to handle the situation.

“Our philosophy is get it done right,” he says. “Sometimes I lay awake at night and think that I sure need to take care of these good folks. Our customers know that if B&J cleans their tank, there is a very little chance there will be an emergency service required.” c

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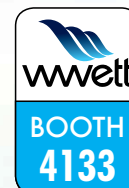
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Triple Play

Pipe bursting and custom equipment enable a Utah contractor to separate a combined lateral in a prestigious historic district

By **Scottie Dayton**

A contractor lowering the basement floor of a historic mansion in Ogden, Utah, inspected the 6-inch clay lateral as part of dropping the plumbing. The pipe was broken.

Most properties on the block are listed on the National Register of Historic Places. The state historical society mandated minimal disruption and no trenching to replace the line.

“The homeowner shared his lateral with two other properties, all equally responsible for what is called a combined lateral,” says Jay Garrett, owner of Utah Pipebursting in Ogden. Garrett, who developed a procedure to replace combined laterals with two separate lines, promised to split this run into three individual lines.

“The job offered many challenges, but the greatest was keeping my nerves in check while trying something I’d never done,” he says. “The first time I tested my new plate design was during the burst.” It pulled a combined 360 feet of 4-inch HDPE pipe flawlessly and saved the homeowners \$23,000 over traditional repairs.

DUE DILIGENCE

Garrett’s three workers used a Rausch camera system to trace the client’s single lateral south under the driveway to a double wye in front of the neighbor’s detached garage. The wye connected to the 6-inch clay combined lateral. It ran west under the garage, the retaining wall behind it and another neighbor’s patio before picking up his lateral at 140 feet.

The pipe then ran 120 feet under home C’s driveway to the sewer in the street, dropping 20 feet in elevation along its total length. The inspection also revealed many cracked or broken sections and root intrusion.

The client’s house and adjacent property – homes A and B – were on the east side of the block, but home C with the third lateral was on the west side of the block. Reaching home C via the backyards was impossible. “Even with the best planning, we still loaded and moved equipment around the block every few hours,” says Garrett. “It stretched prepping to three days.”

The clients also requested that no work be done in their absence. The traveling couple was home for seven to 10 days, then left on business for two to 10 days. “Working within their schedule resulted in three postponements,



Utah Pipebursting owner Jay Garrett attaches two HDPE pipes and the swaged cable to the triangular steel plate he developed for replacing dual laterals simultaneously.

tough job

PROJECT:	Replace combined lateral in historic district
CUSTOMER:	Homeowners, Ogden, Utah
CONTRACTOR:	Utah Pipebursting, Ogden, Utah
EQUIPMENT:	M50 pipe bursting system TRIC Tools 888/883-8742 www.trictools.com
RESULT:	Combined lateral separated

and bad weather caused another delay,” says Garrett. “It put us almost a month behind schedule.”

The other absent homeowners granted permission for Garrett’s crew to work at will. “Having just one house to keep in service overnight was a big plus,” he says.

READY, SET ...

Using a KX161-3S Kubota compact excavator, Garrett broke through concrete driveways and excavated 3- by 5- by 8-foot-deep pits where laterals left homes A and B and at the wye. Another operator using a KX41 Kubota mini-excavator with variable-width undercarriage eased the machine through the security gate and around the side of home C to dig a pit in the back lawn. He also excavated a 5-foot-deep pit at the connection to the combined lateral. All pits required hydraulic shores in the cobble and clay soil.

“The job offered many challenges, but the greatest was keeping my nerves in check while trying something I’d never done. The first time I tested my new plate design was during the burst.”

Jay Garrett

Home C’s driveway was long enough to fuse seven 20-foot sticks of 4-inch HDPE SDR 17 pipe. With the excavator’s help, workers moved two lengths of 140 feet east over the retaining wall, around the garage and into the backyard of home A.

The next day the men set up the cribbing, 1-inch-thick resistance plate and M50 ram (TRIC Tools) with 48 tons of pulling force in the third connection pit. The hydraulic system on the KX161 excavator powered the ram at 6 gpm/3,000 psi.

“We’ve been doing double pulls for years,” says Garrett. “My inspiration for it came from watching horizontal directional drillers. They use a disc with holes for mounting multiple pipes, then the reamer pulls back the assembly.”

Garrett designed a 1-inch-thick triangular steel plate with three holes: one for the burst head with pipe, another for the second HDPE pipe and the third for attaching the 7/8-inch swaged cable rated at 48 tons.

“The raised excavator arm supports the pipes as they must be level with each other at the beginning of the pull,” says Garrett. “After that, the hole created by the burst head holds the pipes in position.”

DOUBLE THE PLEASURE

Garages A and B blocked the workers’ line of sight to the pits, so instead of communicating with hand signals they relied on two-way radios.

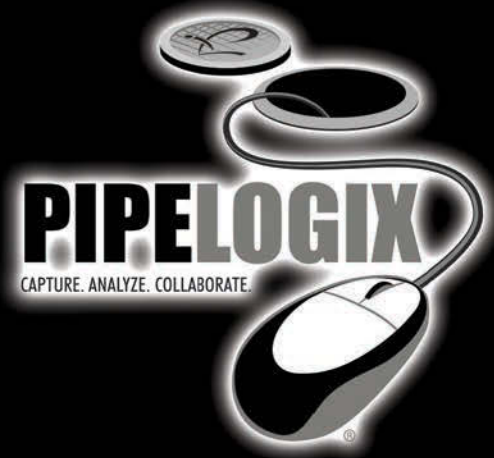
“That elevated the risk of something going wrong during the delay between sending and receiving

transmissions,” says Garrett. “The ram was yanking in a combined 320 feet of pipe at 7 to 8 feet per minute.” The burst required 30 to 35 tons of force.

Once the pipes were in the pit, the crew disconnected the triangular plate and sent the cable upstream to pull in the individual 20-foot-long laterals for homes A and B. They sleeved the 4-inch HDPE pipe inside the original 6-inch clay lines, then connected the runs with PVC wyes.

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Jay Garrett sets up the triangular steel plate for a double pull. For this triple-burst job, he designed a different 1.5-inch-thick steel plate with three holes for mounting pipe and a center hole for bolting it to the burst cone.

A bypass wasn't necessary. "We completed the pulls in two hours and made the connections in four hours," says Garrett. "Then I went home and tried to sleep."

He worried about his untested 9-inch circular steel plate design for mounting the triple pipes and if he had calculated the critical elevation change correctly to prevent bellies from forming in the run as the bundle twisted. "Based on research, I determined a 4.5-foot drop in 120 feet would compensate for one

full rotation every 50 feet," he says. "For that distance, the combined lateral fell 5 feet."

SPLITTING THE ARROW

The 1.5-inch-thick steel plate had three holes for mounting pipe and a center hole for bolting it to the burst cone. "Experience said a 1-inch-thick plate would be sufficient, but I over-engineered it in case the pipe had some drag on it," Garrett says.

The city wanted the 7-foot-square by 8-foot-deep pit at the sewer excavated and backfilled on the same day. "Considering this burst was the pilot test of new equipment, the deadline was additional stress," Garrett says.

After he exposed the sewer connection with the KX161 excavator, the crew set up the ram while Garrett transported the machine to the third connection pit. As others fused three 120-foot lengths of HDPE pipe, Garrett staged them in the backyard of home C. The pipes, pull plate and burst head assembly weighed 300 pounds. To handle the weight, the men wrapped a chain around the bundle to help lower it into the pit.

Garrett positioned the pipes over the top of a 6-foot ladder using the excavator. With the bundle supported, he lined up the burst head before moving the machine to power the ram. This time everyone had an unobstructed line of sight.

Despite the addition of a larger plate and third pipe behind the bursting head, the ram used the same amount of force to pull in a combined 360 feet of pipe at 7 feet per minute. The pipes remained together until the ends passed over the ladder, then they fanned out slightly. During the pull, the bundle rotated 1.5 times.

HOME STRETCH

"Because there was very little flow in the 8-inch clay sewer, we removed a 6-foot length rather than drill and tap it for the two new connections," says Garrett. "We installed three 8-inch PVC wyes, connected all the pipes, backfilled and met the city's deadline."

The following morning, the crew sleeved home C's 60-foot lateral and connected it. "The bursts went well, but I didn't like the bundle rotating," says Garrett. "I'm modifying the original design to correct it." **C**



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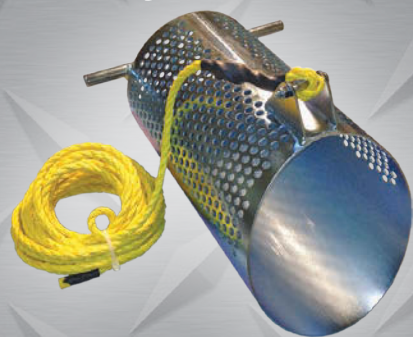
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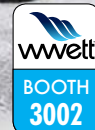
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Streamlining Service

Making the change from paper-based operations to tablet-based enterprise software can yield big efficiency gains

By Mary Shafer

Scott Spencer realized soon after buying Seattle's Jim Dandy Sewer & Plumbing that it was time for a big change in how the administrative side of the business was run. "It's such a redundant process with paper," he says. "So many hands touch each paper with so much paperwork, doing separate data entry on every invoice."

His managers were already using Apple iPhones, and they wanted to find a digital solution they were familiar with, so they decided to move dispatching, invoicing and reporting to software they could run on iPads. After spending some time researching their options, they chose Smart Service.

This routing, scheduling and dispatching software integrates easily with QuickBooks and allows immediate, real-time information on daily productivity for use at the office. The add-on iFleet app extends functionality into the field through tablets for service technicians, which allows them to build work orders and enter job and customer notes, job history, signature capture and more.

He knew preparing his staff for the shift from paper to digital would be critical in getting them to buy in. "Management was directly involved in coming up with the new system," Spencer says. "Our dispatcher and plumbing manager had gone through online tutorials to test three different programs and came up with the final option. We then announced three weeks ahead of time to field and office staff that we were going paperless."

Management initially ran through the process of using Smart Service with the technicians and let them know going back to paper was no longer an option. "Once they saw how really easy it is, it was no problem," says Spencer. "It's incredibly user friendly and intuitive."

"I let all the guys take their iPad home for a week or two, put their email on it and play with it. This let them get used to the new tool before activating the software so they didn't have to take it all in at once. Guys don't like to read directions, so we'll typically do it wrong at first, but the Apple stuff is just so easy to use."

"I knew going in that it would be more expensive to use Apple products, but I thought it would be kind of a 'carrot' to get the guys to accept the 'stick' of change. It gave them something to be proud of, walking into a customer's home with state-of-the-art technology. The bonus is that in areas where we can't pick up a Wi-Fi signal, the iPads can use our iPhone personal hotspots quickly and automatically."

It's easy to like something that just works so well, he says. "I'd say within a day or so even my most resistant guys were doing as well as everyone else."

To leverage the newly open minds, "We went back to the online tutorial and showed them how it would make their jobs easier. We demonstrated how the iPads could be used with voice commands instead of typing, which is faster



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Smart Service is a module-based solution for routing, scheduling and dispatching. It integrates seamlessly with the popular QuickBooks accounting software to make double entry of customer and job data unnecessary. iFleet is the field component module.

and easier. That was a major plus in their minds, not having to fool around with those tiny keyboards."

Technicians are still responsible for the accuracy of their entries, but an office person does proofread them before sending out any customer paperwork. "We worked all that out in the first three months, especially with errors introduced by Autocorrect. We had some good chuckles over those," Spencer recalls.

UPS AND DOWNS

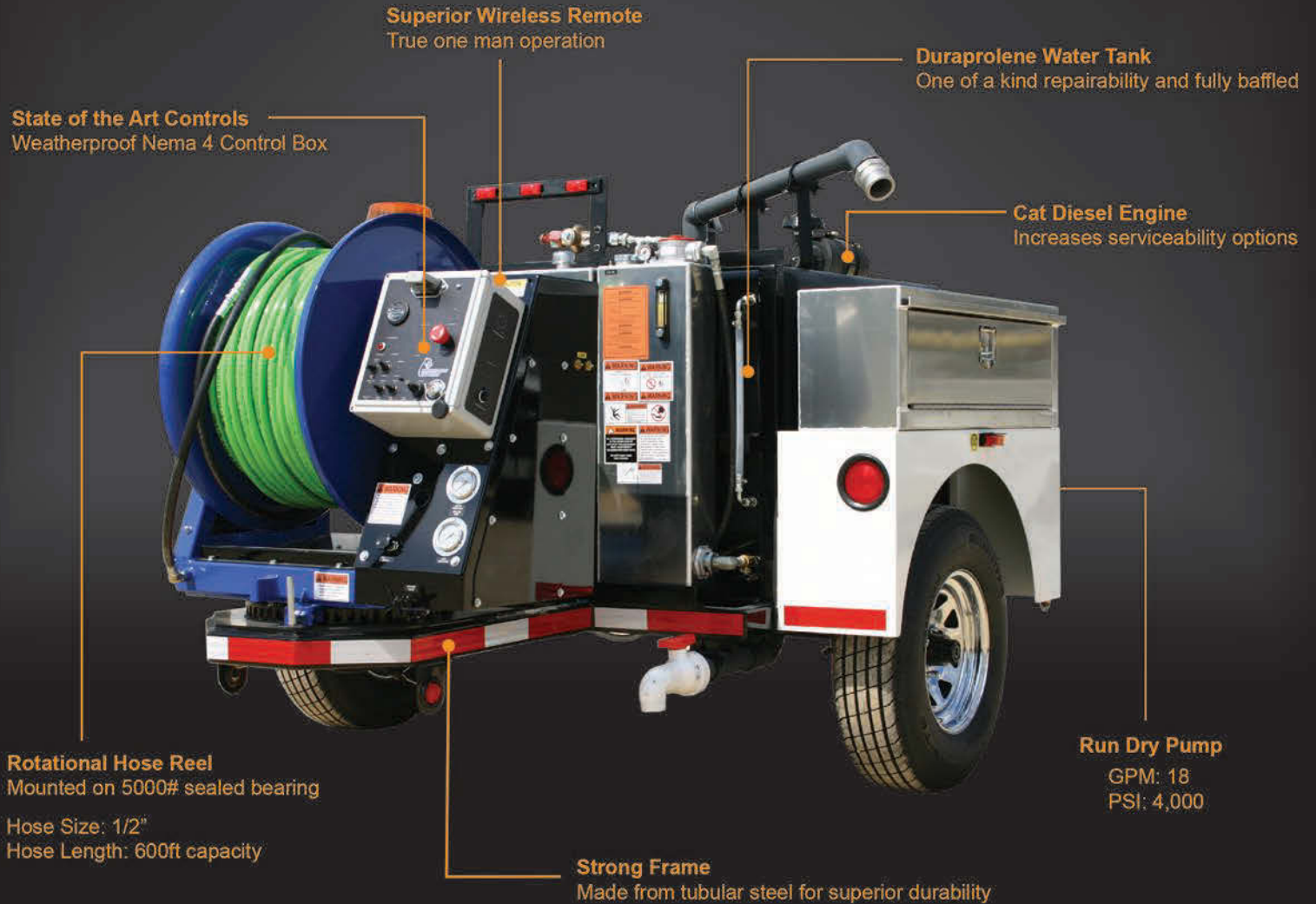
Still, Spencer admits the process wasn't without its rough spots. "A couple guys were scared to death of it and wanted nothing to do with the tablet-based system," he says. "So we wanted to make it something to be proud of. iPads are still novel and carry something of a prestige factor, so we made it clear we were issuing them each a personal iPad that they could also take home to use."

There were, of course, the nuts-and-bolts issues to be expected in the introduction of any new process. "The first two to three weeks we felt like we were constantly on the phone [with Smart Service] making sure we understood everything," Spencer says. But he says that also revealed a positive. "This is one of the biggest advantages of Smart Service — support was really, really good. And the software itself is really reliable. In the first nine months of use we've only had two downtimes of less than three hours each."

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Mostly, it's just been an adjustment away from paper-based idiosyncrasies. The new process mirrors the old one in function, if not implementation. When a call comes in, a dispatcher enters customer data and service call information into the Smart Service program via desktop computer. When entry is complete, Smart Service offers two options: Send out one job at a time to the field technician's iPad or send the whole day's schedule at once.

Management opted for the whole day's information to help technicians plan their time and routes better. They're told to resync after each job in case anything's been knocked out of or added to the job queue.

At the beginning of each day, a technician opens his first ticket on the tablet via the iFleet module, which includes job details and a route map. (Smart Service has GPS routing embedded in the program.) The technician can access all information on each job, including Jim Dandy's history on the property, access points and other pertinent points.

Once on site and having finished the work, the technician completes the invoice, including any notes and photos. Then the customer "signs" the work order using their finger or a stylus on the touch screen to create an electronic signature, which autosyncs with the office-based system. The technician may accept payment or let the customer know they will be billed according to prior arrangements.

At day's end, administrative staff goes through all digital invoices. Everything is proofread and those not already paid are mailed out as paper invoices. The administrator hits a single button to post the day's finished jobs, which closes out those records in the master database.

SWITCHOVER BENEFITS

The software adoption has paid off in many ways, not the least of which is a newfound confidence for Spencer based on the power of real-time communication with the field.

"I was able to buy a second business based on the ability to get every single email sent to me in real-time so I could make instant decisions — notice lost business opportunities, collect credit card payments on time — so no balls got dropped!"

Scott Spencer

"Now I can have a less experienced plumber on a job site who can use the iPad's FaceTime function to call in to the office, literally show the situation [through the onboard camera with video] and be talked through the whole job [by a more experienced technician]," Spencer says. "They can also take still photos of the job site and tag them to an invoice. This can protect us from things such as being accused of, say, water damage or scratching a tub when the damage was actually pre-existing."

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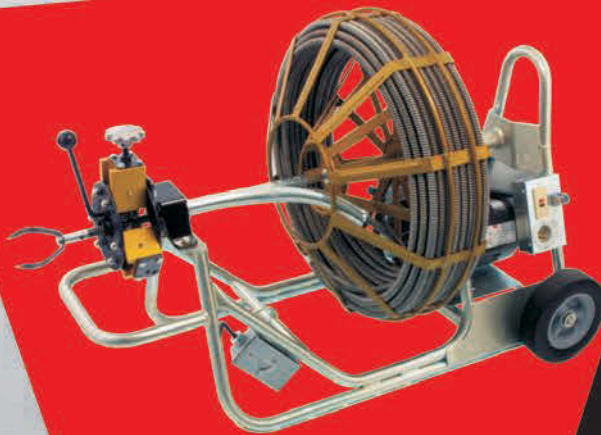


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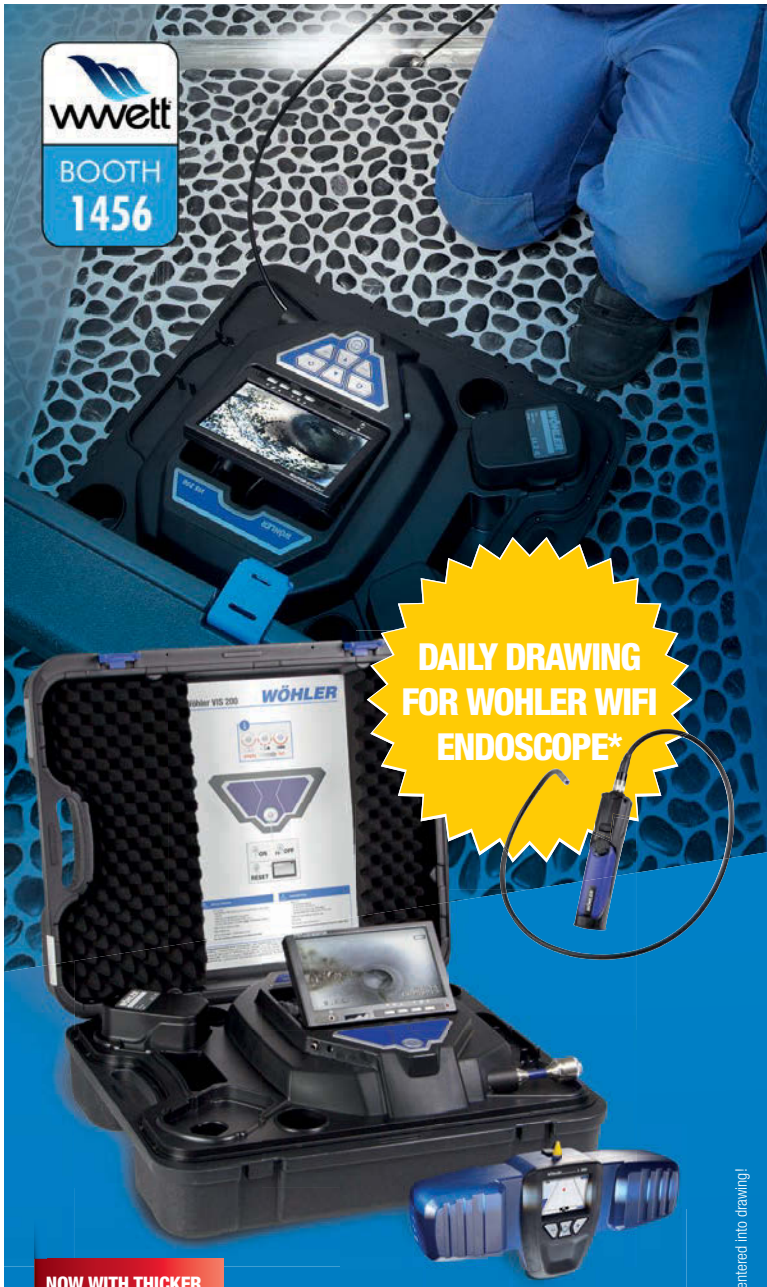
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The switch to the tablet-based system has also had a positive effect back at the office. Due to the elimination of redundant data entry, Spencer was able to move a full-time person to a function he'd long wanted to institute: time-responsive quality-assurance follow-up calls.

"I'm not waiting a week now for the invoice to come in, but now doing those calls within 24 hours," he says. "We know when the guy has logged off the job because the color [of that job's entry] changes on screen. We're actually trying to get it down to an hour after the service call so we can get the best customer feedback."

As a management tool, Spencer says he's never had better in 25 years of running businesses. "Most managers never have direct contact with a customer," he admits. "That's made through the technicians, so this system also functions as an effective training tool. Records are turned in daily so errors can be caught and addressed immediately."

He's also noted a significant uptick in new business opportunities since introducing Smart Service. "I now capture a lot of bids right away, sent to me direct from the field, which allows managers to follow up right away."

UNEXPECTED BENEFITS

So, was the switch worth all the expense and the hassle of forcing the adjustment on himself and his entire staff? Absolutely, Spencer says.

"The software was just over \$1,500, and if I take into account all the hardware and training time, the whole changeover probably cost a total of about \$25,000," he says. "Put into perspective, that's probably a couple of excavation jobs. The system probably paid for itself within the first couple months in found opportunities to sell excavation jobs alone."

He's now confident in making the last step toward taking advantage of the power of the Smart Service program: linking into Jim Dandy's GPS system to tackle routing efficiencies.

This is accomplished through an add-on software module that can be purchased separately, but was embedded in the comprehensive package he originally bought. He'd known at purchase time he'd want to move to using it sooner rather than later, but didn't want to jump into GPS implementation right off the bat.

"You need to task someone with managing, monitoring and routing it. That's a significant investment in training and funding a new position. We didn't want to bite it all off at one time." He's pleased with his decision to let his management and staff settle into a certain level of comfort with the whole concept and operation of the digital system first.

He also appreciates a significant benefit he hadn't consciously anticipated when first deciding to go paperless.

"I was able to buy a second business based on the ability to get every single email sent to me in real time so I could make instant decisions — notice lost business opportunities, collect credit card payments on time — so no balls got dropped. That was a strong factor in convincing the bankers that giving me the loan to buy the second business was a good risk, even though the two business facilities are in separate states."

Of course, every business is different, but Spencer's story is a strong case for all progressive cleaners to consider what a move to a paperless enterprise might mean for their futures. **c**

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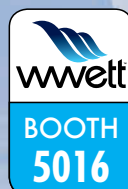
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Erik Gunn is a magazine writer and editor in Racine, Wis. Readers may direct inquiries to him by contacting this publication at 800/257-7222 or emailing editor@cleaner.com.

The Dash For Cash

Experts in the fine art of accounts receivable share the latest tips and techniques for getting paid now

By Erik Gunn

Thanks so much! Great job! Send me your invoice and I'll send you a check!"

But when, exactly, will you get that check? And what to do if you don't get it? Small-business experts can share their wisdom on that essential part of business: getting paid in our brave new world of clicks and tweets.

DELEGATE

First step: Remember that not everything is your job. "Have somebody whose job it is to manage accounts receivable, who feels good when the A/R is well managed and bad if A/R is hanging around. Measure that in collection days," says Tim Berry, founder and chairman of Palo Alto Software and a business-plan expert. And here's another hint: If your business is really small, your collection person doesn't have to be full-time. Try an accounting student from the local community college; verify credentials through the school career placement office.

But Berry also notes that sometimes an unpaid bill isn't just an unpaid bill. "Don't let yourself get cut off from the information that collection problems might give you." Was there a problem? Some unhappy customers might just let the bill slide to the bottom of the pile rather than complain. So you and your collection person, Berry says, should "have safeguards and alerts to separate A/R problems from strategy."

DIGITIZE

Of course, to have accounts receivable you need invoices. "Make it easy, as easy as possible," Berry says. "Send your invoices electronically with a link to the payment facility. Keep it all clickable. The easier the credit card payment, the faster the cash flow."

Maybe you're still in the ink-on-paper world when it comes to the bills you hand out. But going digital can pay dividends.

For the ultimate in right-now invoicing, mobile card readers on smartphones or tablets can produce an invoice, process the payment and email a receipt right on the job site. (Check out this month's Tech Perspective for an example of how going paperless can have a positive impact across your operation.)

Payment systems such as Square (www.squareup.com) charge by the invoice (like a credit card swipe fee) but also offer reports and can generate reminders. Square also offers appointment scheduling and sales reports with variable levels of access for different people in your business and integrates with certain bookkeeping systems. If you're in the market for the organization and analytics Square offers, it might justify Square's slightly higher per-transaction fee.

Intuit (www.intuit.com) offers point-of-sale transactions that tie into

its QuickBooks bookkeeping system; the online payment tool PayPal (www.paypal.com) provides a similar system. QuickBooks will also accept transactions from Square and PayPal.

Amazon.com, the online retailer of absolutely everything (OK, maybe not a hydroexcavator), now offers its own point-of-sale system, Amazon Local Register (localregister.amazon.com). All these systems — just like credit card processors — charge a per-transaction fee.

"Make it easy, as easy as possible. Send your invoices electronically with a link to the payment facility. Keep it all clickable. The easier the credit card payment, the faster the cash flow."

Tim Berry

TAKE PLASTIC

Even without mobile card readers, credit card acceptance is just about essential. "The processing or handling fee for accepting payments by credit card is a small price to pay compared to writing off a bad debt and trying to recover from that loss," says Kim R. Brown, a certified public accountant and principal at Mattina, Kent & Gibbons, P.C.

"The use of credit cards for receipt of payment has dramatically increased, and for good reason. If you accept and process a credit card for payment, you know that if the charge on the card is approved you will receive payment," Brown says.

With credit card acceptance comes inevitable security concerns; it's hard to look at the credit card terminal the same way after reading about data breaches at major retailers like Target and Home Depot.

One route to increased safeguards for customer data lies through EMV cards — short for Europay, MasterCard and Visa, a global standard for integrated circuit cards or "chip cards," as distinguished from the magnetic strip cards most of us have in our wallets. The major card companies now offer chip cards, usually as "chip and PIN cards," requiring the customer to use a PIN at the point of sale rather than signing a receipt.

As an incentive for major banks to issue EMV cards and merchants to invest in the proper point-of-sale equipment to accept them, this October the card networks will institute a fraud-liability shift. If a consumer's card is involved in fraud, liability will fall on the party that didn't upgrade to EMV: either the bank issuing the card or the merchant accepting it. For a FAQ on chip card technology, see www.chasepaymentech.com/faq_emv_chip_card_technology.html.

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STAY IN TOUCH

For regular customers who prefer to pay by check, Berry says, “Keep it on the surface in the relationship with customers and clients, up front, that you need working capital, and getting paid is related.” Prompt communication between your accounts receivable person and a customer lagging with a payment is essential.

“Accounts receivable needs to be monitored very closely,” says Brown. “Statements need to go out timely, and communication with the customer needs to occur when payment terms have been exceeded.”

Berry adds: “Keep it in the context of a good relationship with a client or customer. Nobody pays before a month. Watch for the normal pattern and worry about it when the normal pattern is broken.”

And when that pattern gets broken and your accounts receivable manager reports that the customer is no longer taking calls and you’re considering staking out the customer’s house, Brown says, “Don’t kid yourself; if it is noncollectable, write it off. Carrying a lot of uncollectable accounts on your balance sheet distorts your financial condition.”

In these cases, again, regular communication with your accountant is critical. Brown notes that “if the business is on an accrual basis, you must attempt to collect prior to [any] write off for a tax deduction.”

As always, no single system is perfect for all businesses. Use what works well for your typical customer and your business style — and may all your customers pay in 15 days. **C**

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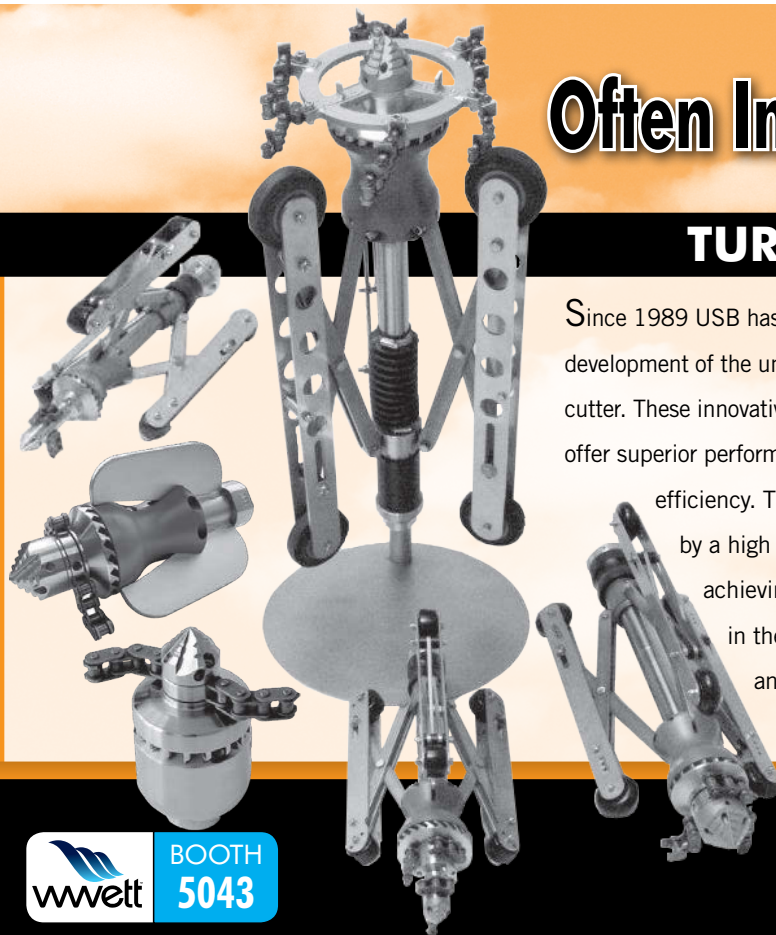


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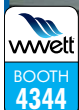
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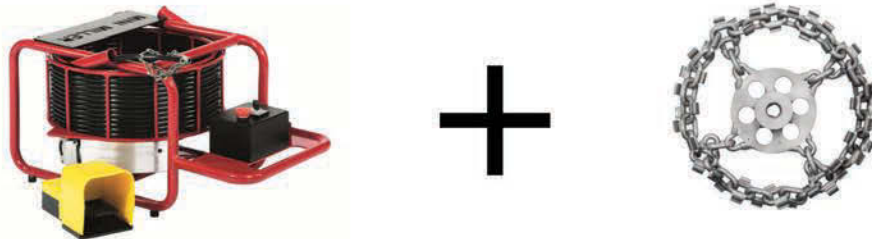
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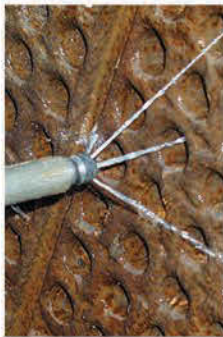
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By Craig Mandli

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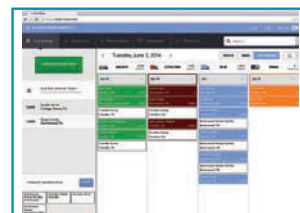
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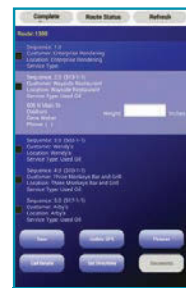
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The **Android App** from **RouteOptix Inc.** allows drivers to key notes regarding locations, change service details, record delivery/pickup details and enter tickets from disposal facilities. The actual location of equipment can be updated with the press of a button. Voice-activated directions are available utilizing Google Maps. Four pictures can be associated with each stop. Any documents produced in the main application, such as work orders and signed receipts, can also be electronically produced and signed for and emailed directly from the device. All activities performed on the device are updated real-time in the office. The actual GPS location of the vehicle is also updated real-time. Live date/time stamps including driver start/end time, mileage and on-site time are also updated, providing accurate production statistics. **866/926-7849; www.routeoptix.com.**



RouteOptix Inc.

XORA STREETSMART

The **StreetSmart** suite of configurable mobile apps and a Web-based management application from **Xora** allow managers and office personnel to analyze performance for efficient decision-making, routing and customer service. Among the mobile apps



Xora

CONTINUED >>

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

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



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

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

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

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

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

Jetstream's Hands-free Waterblast Solutions

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



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are Mileage Manager, which streamlines mileage and expense submission and analysis; Mobile Timesheets, which saves time and reduces errors; Mobile Jobs, to reduce phone tag and manual paperwork; and Mobile Forms, which includes photo and electronic-signature capture capabilities for proof of service. The cloud-based model allows companies of all sizes to integrate the apps with their own back office systems. **877/477-9672; www.xora.com.**

GPS

GPS INSIGHT

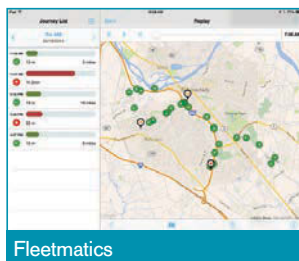
GPS Insight fleet- and asset-tracking software allows management professionals to have complete visibility into mobile operations to reduce costs and drive efficiencies. It tracks delivery trucks and portable restrooms, providing customizable software that allows operators to gather information in a variety of ways. **866/477-4321; www.gpsinsight.com.**



GPS Insight

FLEETMATIC'S REVEAL

The **REVEAL** GPS vehicle-tracking system from **Fleetmatics** is designed to drive savings and improve productivity for virtually any mobile workforce. The cloud-based platform includes native apps for iPhone and Android, providing visibility into field activity and actionable insight into driver behavior and workforce productivity. **704/716-7662; www.fleetmatics.com.**



Fleetmatics

NEXTRAQ FLEET TRACKING SYSTEM

The **NexTraq Fleet Tracking System** provides a cloud-based, comprehensive fleet-tracking solution with Fleet Dispatch that allows an operator to schedule jobs, dispatch them to vehicles and send messages to and from workers in the field, including a drag-and-drop job schedule board that accelerates and simplifies assigning jobs. With a Garmin personal navigation device or the NexTraq Connect mobile app, this information is sent directly to a driver's device. In addition, employees in the field can update job status and vehicle information via the mobile app without having to return to the office. **800/358-6178; www.nextraq.com.**



NexTraq

DISPATCH/INSPECTION SYSTEMS

GPS NORTH AMERICA SMARTFORMS

SmartForms from **GPS North America** transforms traditional paperwork orders and inspections and sales forms into customizable digital forms available on an iOS or Android platform. The program has the ability to capture video, photo, audio, GPS and time stamp entries. It can also barcode scan and automatically integrate with QuickBooks or Excel to complete calculations and immediately dispatch

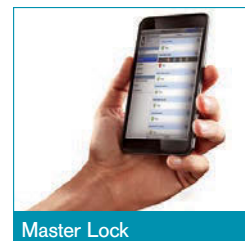


GPS North America

forms to field workers, eliminating the time needed to complete paperwork. **888/760-4477; www.gpsnorthamerica.com.**

MASTER LOCK FIELD ID

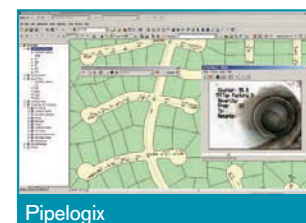
Master Lock Field iD safety compliance software provides cloud-based safety and inspection to manage safety and compliance with the Web, smartphone and tablets. The easy-to-use inspection software combines Web-based and mobile technologies with electronic identification (RFID and barcodes) to improve the efficiency, reliability and reporting of workplace safety management. Manufacturers, distributors, third-party inspectors and end-users worldwide use it to inspect facilities and equipment, perform lockout/tagout procedures, conduct job site audits, manage corrective and preventive actions, improve training/certifications management, and track assets. **800/996-4797; www.masterlockfieldid.com.**



Master Lock

PIPELOGIX GIS

The **Pipelogix GIS** module added to ArcMap lets supervisors view all surveys performed on an asset. The toolbar filters survey data in the master database to highlight pipes with problems and also lets the user select the condition from an exported layer to jump the associated video to the condition for viewing. Seeing the problem where it exists on the pipe makes it easier to schedule repair and cleaning crews. The condition export can be done to a feature class in a geodatabase or to a shape file. A project of surveys in a database can be created in ArcMap using the toolbar. It starts the inspections and the CCTV inspector just completes them. The module is compatible with ArcGIS 9.3.1 through 10.2. **866/299-3150; www.pipelogix.com.**



Pipelogix

RIDGIDCONNECT

RIDGIDConnect streamlines the reporting process, integrates digital media and files into a hosted archive environment, and produces sharable professional reports. It can be used to take notes on the job, utilize digital images or video, and share information with customers or co-workers. Users no longer need to duplicate media, produce one-off reports, and use work time or pay for postage to deliver information to the customer. Utilization of email and the Internet as a delivery vehicle solicits a faster response from customers, who can be reached anywhere in real time with a professional presentation of the findings. Customers can also respond directly in the system, which is instantly emailed and retained as part of the job record. **800/769-7743; www.ridgid.com.**



RIDGID

RITAM TECHNOLOGIES SUMMIT SERVICE REMINDERS

Summit Service Reminders from **Ritam Technologies** allows operators to log customers, multiple job sites and unlimited work orders for each job. Plan for the frequency of service and the program will remind customers that they are due. Reminder cards, labels and callback reports are available. Reminders can be



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Mobile Technician software from **SWRemote** allows technicians to manage a job from start to finish in the field using a mobile device (iPad, iPhone and select Android devices) while linking and updating directly to Successware21 Office Management System in real time. Technicians have access to full customer detail, including history and equipment on site, allowing them to be better informed upon arriving at the customer's location. Once a call is scheduled back in the office, technicians can remotely manage their time card, build invoices, get authorization signatures, take payments, debrief a job and email the final receipt to the customer, all while being connected to the office in real time. 800/299-2079; www.swremote.com. c



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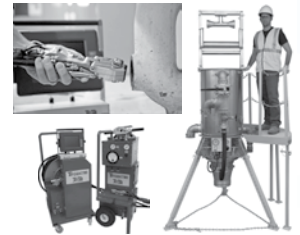
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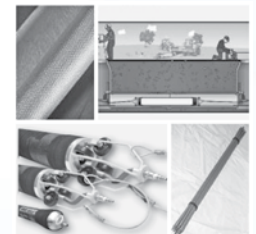
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CASE STUDY

Field and Office Technology

By Craig Mandli

PIPE-CLEANING COMPANY USES REMOTE VIDEO MONITOR SYSTEM TO INSPECT SEWER PIPE

PROBLEM

Quality Pipe Services of Colorado was contracted to clean and inspect sanitary sewer pipe that was designated for CIP lining, which included removal of fixed debris within the pipeline. The fixed debris, mainly mineral deposits, was in each joint at the 9 and 3 o'clock positions. QPS wanted the jetter operator to see a live feed from the CCTV equipment to supplement or eliminate the need for radios or cellphones.



SOLUTION

PURE Software Solutions provided a JetView remote video monitor system that wirelessly streams video from the CCTV equipment up to 1,300 feet away for jetter operators to view on a 10.4-inch daylight-readable monitor. On the first occurrence of debris, the operator was able to view his tool in the line and keep the chains on the debris.

RESULT

Time spent on the job was reduced by roughly 66 percent and water consumption dropped nearly 50 percent. QPS has committed to equipping all its CCTV vehicles with a JetView. 303/867-1414; www.puresoftwareolutions.com. c



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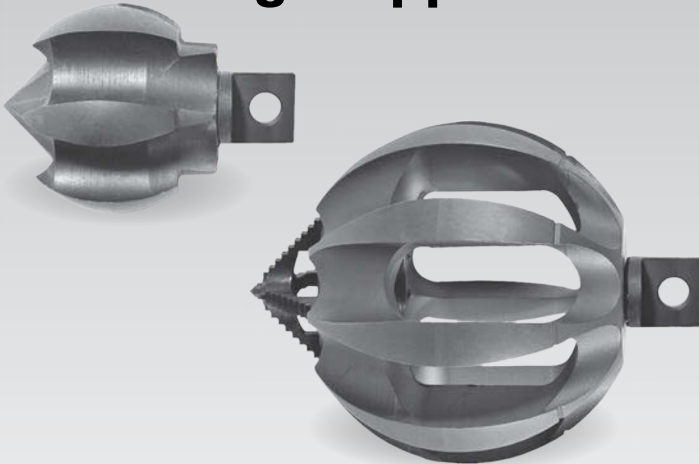
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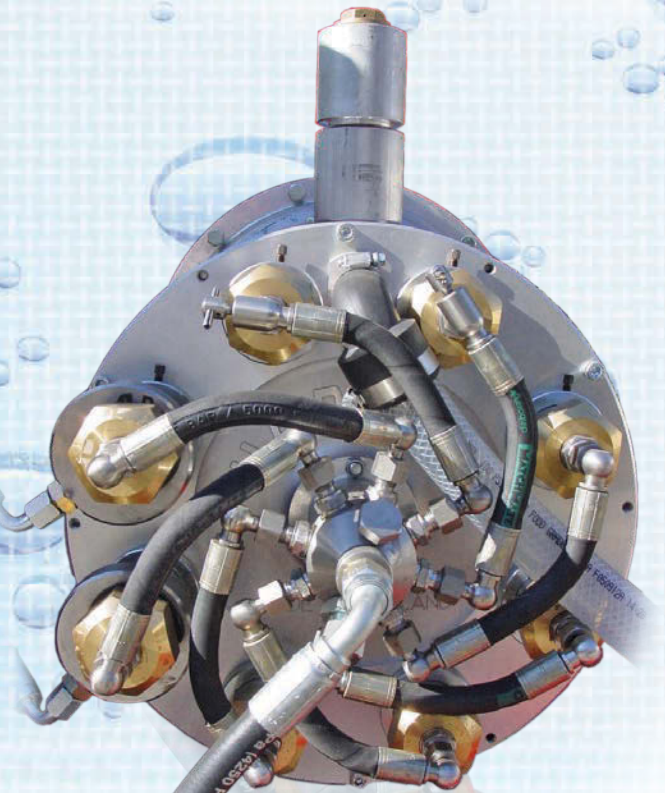


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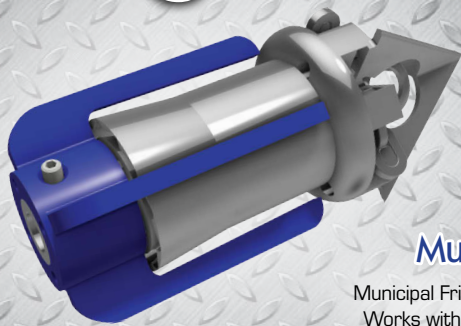
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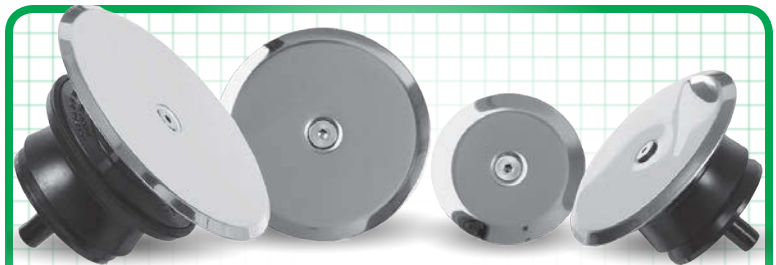
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PRODUCT SPOTLIGHT

Drain-cleaning machine's triple-element cable protects against rust and corrosion

By Ed Wodalski

The D-5 drain-cleaning machine from Electric Eel Mfg., designed for cleaning 3- to 10-inch-diameter sewer lines, features a three-element Tri-Max cable to protect against rust and corrosion.

"The cable has a galvanized aircraft wire inner cable that's protected by a plastic sheath, which keeps corrosion drain chemicals from leaking in," says Mark Speranza, vice president of sales for Electric Eel. "The music wire outer cable adds strength and durability."

The unit is powered by a 1/2 hp capacitor-type motor for removing tough blockages such as tree roots and has a quick-remove continuous cable feeder.

"It's easy to operate," Speranza says. "The auto cable feed automatically feeds and retracts the cable in and out of the line."

Adding to the ease of operation is the air-operated foot switch and 20-foot cord with built-in GFCI to protect the operator against shock. The drain cleaner has a 1/4-inch steel tube frame, loading wheel built



into the five-position handle, continuous belt skids for stair climbing, and 10-inch solid wheels for added maneuverability and stable operation.

Other features include the rust- and dent-resistant high-density polyethylene drum, capable of holding up to 100 feet of 3/4-inch cable, and snap-lock tool connector.

The drain cleaner is available as a kit that includes the D-5 power unit with power cable feed, two 3/4-inch by 50-foot Tri-Max cables, seven cleaning tools, 10-foot anchor cable, 2-foot flex leader, a pair of staple palm leather gloves and tool box. 800/833-1212; www.electriceel.com.



1



2



3



4

1 WATER CANNON PRESSURE WASHERS

Pressure washers from Water Cannon meet or exceed 2014 EPA and California regulations relating to fuel tanks, vents and carbon canisters. The pressure washers feature low-permeation fuel tanks and fuel lines. Fuel caps vent to the engine's air cleaner rather than the atmosphere. Model 17H85 has a Honda GX 690 electric start engine, 15-gallon fuel tank, roll cage protection and triplex plunger pump that delivers 4 gpm and 7,000 psi. 800/333-9274; www.watercannon.com.

2 CLEARSPAN FABRIC BUILDING STRUCTURES

HD Buildings from ClearSpan Fabric Structures are available in gable-, round-style, and hybrid designs. They can be mounted as a freestanding structure or affixed to other foundations. The buildings, beginning at 25 feet wide, have a triple-galvanized structural steel tubing frame and 12.5-ounce high-density polyethylene rip-stop fabric cover. 866/643-1010; www.clearspan.com.

3 GENERAL PIPE CLEANERS INSPECTION SYSTEM WITH WI-FI

The Gen-Eye SDW video inspection and location system from General Pipe Cleaners features a Wi-Fi transmitter inside the command module that sends video to a smartphone or tablet. A free app enables operators to view and record video inspections from a range of 300 to 500 feet. Older SD systems can be upgraded with the Wi-Fi features. Weighing 12 pounds, the inspection system has a 10.4-inch LCD screen, built-in waterproof keyboard, integral SD recorder and heavy-duty Pelican case. 800/245-6200; www.drainbrain.com.

4 E/ONE SEWER SYSTEMS REMOTE PUMP CONTROL

The Iota OneBox telemetry system from E/One Sewer Systems delivers remote control and monitoring of individual grinder pumps from a desktop computer or smartphone. The system integrates into a SCADA network to provide data on tank storage capacities, power failures, blockages and faults. 518/579-3068; www.eone.com.

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7

5 ENVIROSIGHT VIDEO SEWER CLEANING NOZZLE

The JetScan Mini video nozzle from EnviroSight is designed to capture HD video from 6- to 10-inch sewer lines, enabling cleaning crews to select the proper tools, troubleshoot backups, identify buried safety hazards and document cleaning. The nozzle records up to 8 hours of 720p HD MPEG video to an onboard 32GB memory card, which can be removed for viewing on an iPad or other compatible device. **866/936-8476; www.envirosight.com.**

6 OTTO CONTROLS UNIVERSAL JOYSTICK

The G3-A1AS111NNNN universal joystick/grip housing from OTTO Controls, distributed by Peerless Electronics, eliminates the need for tooling

changes. The housing accommodates pushbutton, rocker, toggle and HP Hall effect and HPL proportional outlet series of switches (not included). **800/285-2121; www.peerlesselectronics.com.**

7 MUSTANG-GEHL Z25 COMPACT EXCAVATOR

The Z25 compact excavator from Mustang-Gehl features a canopy/cab operator's station, digging depth of 9 feet, 8 inches, 20.4 hp Yanmar Tier IV diesel engine and bucket breakout force of 4,079 pounds. The excavator is 4 feet, 11.1 inches wide and weighs 5,919 pounds with canopy or 6,216 pounds with cab. It has a hydraulic flow rate of 13.6 gpm paired with high system pressure up to 2,987 psi. **800/628-0491; www.gehl.com. c**

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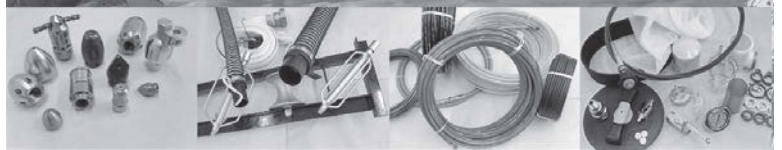


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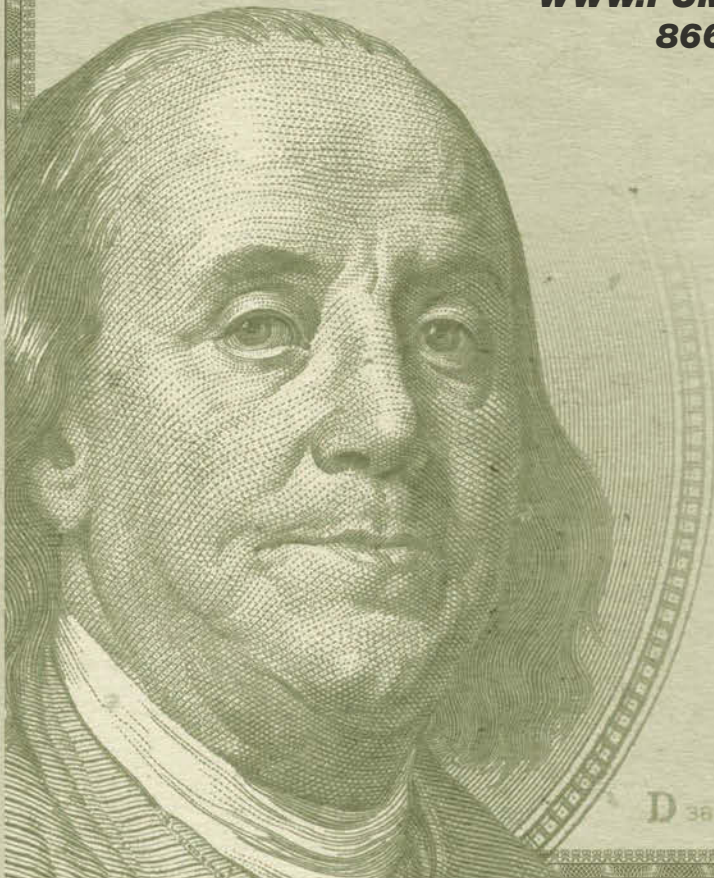
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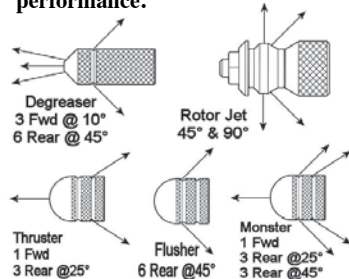
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INDUSTRY NEWS

Sioux names sales and marketing manager

Sioux Corp. named Jesse Hanssen sales and marketing manager. Sioux manufactures industrial application-specific cleaning equipment, water heating and chilling systems, steam generators and related custom equipment.



Jesse Hanssen

Southland Tool certified ISO 9001-2008 compliant

Southland Tool Mfg. received ISO 9001-2008 certification, signifying a commitment to product quality and management principles: customer focus, leadership, involvement of people, process approach, system approach to management, continual improvement, fact-based decision making and mutual beneficial supplier relationships.

Wastequip named among Best Places to Work

Wastequip was named among the Best Places to Work by the *Charlotte Business Journal*. The company was chosen for its open-office environment and community involvement. This is the second consecutive year the company has received the award.

Pipe Restoration Technologies receives patent

Pipe Restoration Technologies, maker of the ePipe product line, received U.S. patent 8887660 for its ePipe system. The patent covers methods and process steps for mapping, cleaning and providing barrier coating to interior walls of piping systems.

Geospatial revamps website

Geospatial Corp. has revised its GeoUnderground website, www.geounderground.com. The revised site enables users to securely gather, share, view and edit geo-referenced information from a laptop, tablet or phone.

Vac-Con conducts food drive

Vac-Con employee owners conducted a peanut-butter-and-jelly food drive and donated nonperishable food items to benefit The Food Pantry of Green Cove Springs, Fla. Donations totaled 527 pounds. **c**

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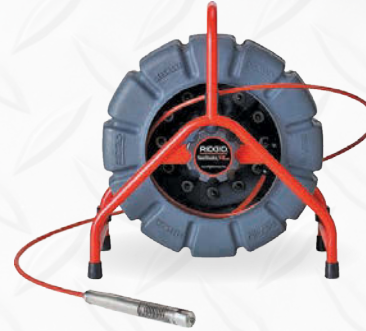
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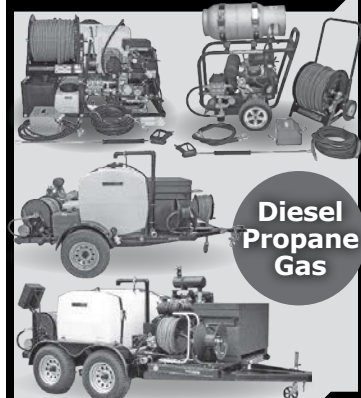
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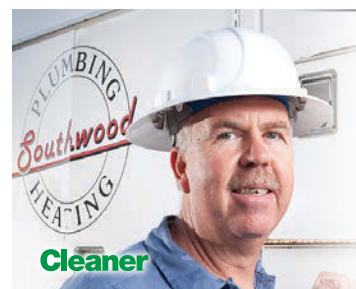
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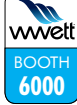
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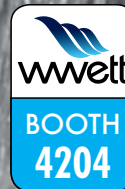


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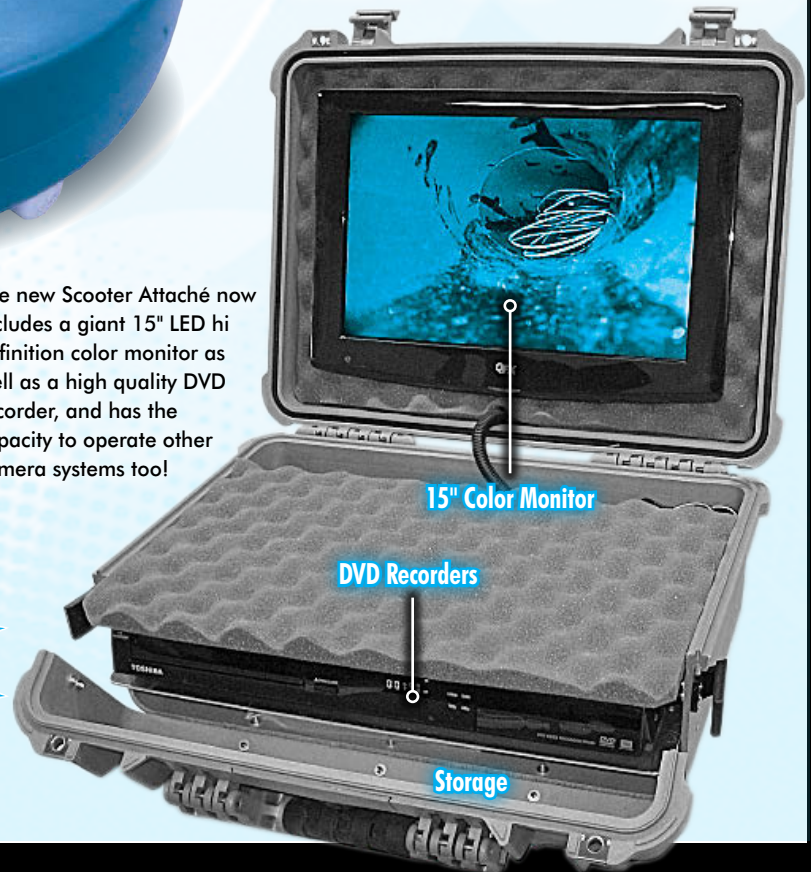


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2002 Sterling LT7501 Vac-Con Model V390LHA combination sewer cleaning truck: Freshly painted white. CAT 3126 - 275hp engine, 3-stage fan, 1,000-gallon water tanks, pump off option available. 10' telescopic boom. FMC water pump - 65gpm @ 3,000psi. Articulating 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)

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

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

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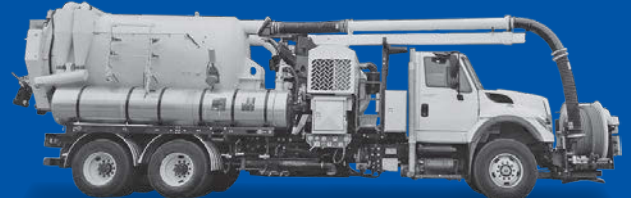
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2006 CAMEL 200, 10.8 Cubic Yard Body, Roots Model 824-16" Hg, Dual Fill System w/ Strainer, 1500 Gallon Water Capacity, 8' Telescoping Boom, 80 GPM @ 2000 PSI Water System, 600' Hose Reel Capacity, Hydro Excavation Accessory Kit, Super Pak Control, 2 Aluminum Tool Boxes- 18"x18"x60", Sterling 7500, 6 Cylinder Diesel Caterpillar Engine, Allison RDS Series 3000/3500, Showing 9,801 Hours and 91,250 Miles



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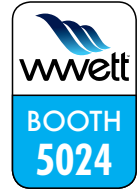
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