

Cleaner

FOR DRAIN AND PIPE CLEANING,
INSPECTION AND REHABILITATION
PROFESSIONALS

LESSONS
FROM A
SUPER BOWL
CHAMP / 8

LINING UP OPPORTUNITIES

CCSI BRANCHES OUT WELL BEYOND ITS INDUSTRIAL
CLEANING ORIGINS AND OHIO BOUNDARIES TO BECOME
A DIVERSIFIED UNDERGROUND INFRASTRUCTURE FIRM
WORKING ACROSS THE COUNTRY / 12

LEAP OF FAITH

COMPANY MAKES SUCCESSFUL SHIFT
FROM PLUMBING TO DIRECTIONAL
DRILLING AND PIPE BURSTING / 24

PRODUCT FOCUS

PIPE BURSTING METHODS AND PROJECTS / 44





**WHEN YOU
NEED AN
EXTRA HAND**

The Power-Vee®



© 2024 General Wire Spring

When a drain cleaning job puts you in a tight spot, using the Power-Vee is like having an extra hand. Just squeeze the feed lever and the Flexicore® cable spins into the line at up to 16 feet per minute. Retracting the cable is just as easy.

An indispensable tool for any Pro, the Power-Vee, with its quick-change cable cartridge system, durable metal and Dyna-thrust bearings, easily clears sinks, tubs and laundry drains.

Upgrade from manual feed machines. Have a Power-Vee ready for your next tight spot. It puts power in the palm of your hand.

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

The toughest tools down the line.™

General
PIPE CLEANERS

“NUFLOW IS THE WHOLE PACKAGE.”

Everything you need to start a successful pipe lining business.

PIPE LINING TECHNOLOGIES

- NuCure Cold Cure UV
- NuDrain CIPP
- NuTube Inversion

SUPPORT AND RESOURCES

- The 24/7 support that NuFlow is famous for
- Hands-on technical training from Apprentice to Master
- Tablet with custom jobsite quality assurance software

ACCESS TO NUFLOW CENTRAL

Online portal that features hundreds of hours of training courses and video content, “Ask an Expert” forum, sales and marketing tools, business resources, as well as support from the entire community of NuFlow Certified Contractors.



Mike Lomonaco,
Lomonaco Coast Plumbing
San Clemente, CA



www.nuflow.com
866-430-2134

CONTENTS

APRIL 2024

12 COVER STORY: LINING UP OPPORTUNITIES

CCSI branches out well beyond its industrial cleaning origins and Ohio boundaries to become a diversified underground infrastructure firm working across the country. // By Kyle Rogers

FEATURES

24 PROFILE: LEAP OF FAITH

Idaho company successfully shifts from a plumbing focus to a heavy emphasis on directional drilling and pipe bursting work. // By Ken Wysocky

DEPARTMENTS

8 FROM THE EDITOR: CHOOSING TO COMMIT

A motivational speech from a four-time Super Bowl champ lays out a playbook for finding success. // By Kyle Rogers

20 SAFETY FIRST: GOTTA KEEP IT VENTILATED

Forced air ventilation may be needed when occupying hazardous confined spaces, and you can calculate the required amount based on square footage and air exchanges per hour standards. // By Rick Pedley

32 MONEY MACHINES: REDUCING RISK

Robotic tube cleaners boost productivity and operator safety on challenging industrial jobs. // By Ken Wysocky

36 MONEY MANAGER: FEELING A LOAN?

If you're soon going to be in the market for some new equipment, here is what you need to know about the current lending environment. // By Joan Koehne

40 TECH PERSPECTIVE: AN AI REVOLUTION

A business can deploy artificial intelligence tools in a number of helpful ways, from improving customer interactions to providing insights about operational efficiency. // By Rick Agajanian

44 PRODUCT FOCUS: PIPE BURSTING METHODS AND PROJECTS

By Craig Mandli

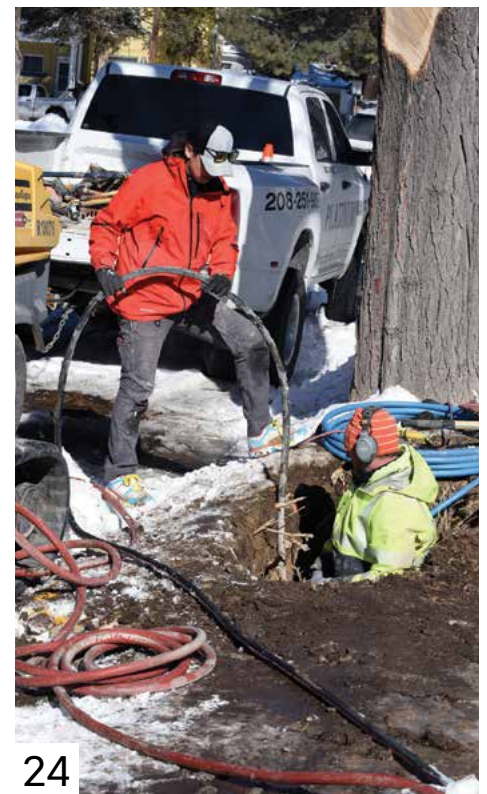
52 PRODUCT NEWS

Spotlight: Chain snake offers cleaning ability in various-sized lines // By Craig Mandli

58 INDUSTRY NEWS



ON THE COVER // CCSI, headquartered in Cincinnati, Ohio, started in 1982 as a small, general industrial cleaning company. Just a few guys in a van. Today, that is significantly different. The company has diversified services to include cross-bore work, hydroexcavation, sewer maintenance and inspections, and most recently pipe lining. And CCSI has over 100 employees spread out across the country. "We've grown into a big company, but we still try to maintain that small, family feel to it," says Jon Parnell, operations manager. (Photography by James D. DeCamp)



coming next month: May 2024
focus: Residential and Commercial Sewer and Pipe Maintenance

Profile: Colin the Plumber, Rochester, New York // Tech Perspective: Busting jetter myths //
Legal Adviser: Managing workers' comp

INSPECT SMARTER

Overwhelmed by your sewer inspection workload? Don't be. Our platform boosts productivity, automates workflows, and delivers world-class decision support.



DOUBLE DOWN ON YOUR INSIGHT



Envirosight inspection systems integrate seamlessly with WinCan, the world leader in sewer asset management, analytics and AI. Together, Envirosight and WinCan deliver an assessment technology platform with innovative capabilities and enhanced workflows that bridge the gaps between inspection crews, data experts and managers.





























Part of the  iPEK solutions platform




See how our solutions work together. Schedule a field demo by scanning the code or visiting envirosight.com/demo



(888) 936-8476

ADVERTISER INDEX

 NORTH AMERICA When Quality Matters	
A.R. North America, Inc.....	22
ALLAN J. COLEMAN SINCE 1906	
Allan J. Coleman Co.....	33, 47
American Jetter	56
BLACKHAWK	
Blackhawk Tech.....	53
BRAWO SYSTEMS GmbH.....	21
 CAM	
Cam Spray.....	51
 FAT PUMPS	
Cat Pumps	29
 WINNELSON COMPANY	
Central Oklahoma Winnelson	55
 ROUNDER MASTER	
Coast Manufacturing.....	42
Cua Claws for Resurfacing Camera Wheels	56
 CUES	
CUES, Inc.	35
 DURACABLE	
Duracable Manufacturing Co.....	39
Dynamic Repairs	56
 EASY-KLEEN PRESSURE SYSTEMS LTD. MANUFACTURER OF HIGH PRESSURE CLEANING EQUIPMENT	
Easy-Kleen Pressure Systems Ltd.	56
 ENVIROSIGHT	
Envirosight LLC.....	5
 FORBEST	
Forbest Products Co.....	49
 GapVax	
GapVax, Inc.....	59
 General PIPE CLEANERS	
General Pipe Cleaners, div. of General Wire Spring.....	2
 HAMMERHEAD	
HammerHead Trenchless.....	23
 HotJet USA	
HotJet USA.....	56
 ipp	
IPP Solutions, LLC.....	11
JDC	38
 Ken-Way	
Ken-Way Corporation.....	53
 LANSAS PRODUCTS	
Lansas Mfg. by Vanderlans & Sons Inc.....	16 & 17
 MAXLINER	
MaxLiner.....	27
 MRP	
Milwaukee Rubber Products, Inc.	43
 minicam	
Minicam Inc.....	7
 nuflow	
NuFlow Technologies.....	3
PE Equipment.....	51
 PEARPOINT	
Pearpoint (USA)	47
 PICOTE	
Picote Solutions.....	8
Pipeline Renewal Technologies.....	15
Pow-r Mole Trenchless Solutions.....	43
 Ratech	
Ratech Electronics, Ltd.	10
Reline America.....	37
 ROOT RAT NOZZLES	
Root Rat.....	55
 SPARTAN TOOL	
Spartan Tool LLC.....	60

 T&T TOOLS	
T&T Tools, Inc.....	56, 57
 THE CABLE CENTER	
The Cable Center	31, 57
TRIC Tools, Inc.....	49
 TROJAN WORLDWIDE INC.	
TROJAN WORLDWIDE INC.....	10
TruGrit Traction Inc.....	19

 VAC-CON www.vaccon.com	
Vac-Con, Inc.	9
 VIVAX METROTECH	
Vivax-Metrotech Corp.....	41
Warthog Nozzles by StoneAge.....	38
Classifieds	54-55

Cleaner

FOR DRAIN AND PIPE CLEANING, INSPECTION AND REHABILITATION PROFESSIONALS

Published monthly by COLE Publishing, Inc.
PO Box 220, Three Lakes, WI 54562

In U.S. or Canada call toll-free 800-257-7222
Mon- Fri., 7:30 a.m.-5 p.m. CST

Website: www.cleaner.com | Email: info@cleaner.com | Fax: 715-350-8456

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

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

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

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

DIGITAL REPRINTS AND BACK ISSUES: Visit www.cleaner.com for digital reprint options and pricing. To order back issues, call Holly at 800-257-7222 or email holly.gensler@colepublishing.com.

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

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









KAYLA BISNETTE



JIM KOSHUTA

Orange is the new Green



Minicam has designed and manufactured the tried and trusted Verisight® Pro push camera for over 10 years. The rugged, feature-rich system that you've depended on to keep you working, now ships in orange. It's time to show our true color!

Go orange today.

Systems start at just \$10,850

We service all SOLO PRO+® and Verisight® Pro systems using original manufacturer parts

Call us to arrange a free no obligation SOLO PRO+ demonstration

Minicam Inc, 12600 Newburgh Road, Livonia, MI, 48150

Email: info@minicaminc.com Phone: (734) 744-5557



minicaminc.com



Email me with comments, questions or opinions at editor@cleaner.com

CHOOSING TO COMMIT

A motivational speech from a four-time Super Bowl champ lays out a playbook for finding success

I'M SITTING AT THE COLE PUBLISHING booth at the WWETT Show in Indianapolis as I write this.

Moments ago, I listened to the opening keynote speech delivered by Rocky Bleier, a former NFL running back who played on Pittsburgh Steelers teams of the 1970s that won four Super Bowls. Although an avid football fan, I'm a bit young to have much knowledge about that era, so Bleier's story was mostly new to me. The main beats are that after college at Notre Dame, the Steelers drafted Bleier in 1968. After his rookie season, he was part of another draft — this time by the U.S. Army.

He served in Vietnam, where he sustained injuries in both legs, first a bullet from enemy fire and then shrapnel from a grenade. While recovering in a hospital in Tokyo, doctors told him his football-playing days were over. But Bleier returned to the Steelers and gradually worked his way back into playing shape. By 1974, he was finally playing significant snaps again, serving as primary running back Franco Harris' No. 2, for a Steelers team that won its first Super Bowl. He maintained his role, helping the Steelers win three more Super Bowls to close out the decade.

In sharing his story, Bleier's message that he homed in on for the WWETT Show crowd was a simple one of commitment. In life, there are two choices: Commit to continually learning and work hard at trying to get better, or don't do any of that. So really, there's only one choice, he said, because why would the decision be to not try to improve?

Bleier recounted what Steelers coach Chuck Noll said when he first arrived in Pittsburgh, after the franchise had seen basically zero success for close to four decades. The team's problem, Noll said, was that they weren't any good. That's not to say that they couldn't become good, but they had to come together and truly commit to improvement — learn, exploit strengths and take advantage of every opportunity.

Here at the WWETT Show, I know I'm surrounded by contractors who are committed to improving their businesses and their lives. If they weren't, they wouldn't have bothered to come in the first place. This is a place to learn, to look for opportunities.

Another story that Bleier shared: When he was recovering from his war injuries, in the bed next to him was a triple amputee. This man was in far worse shape than Bleier, yet every day Bleier said he maintained a positive attitude and worked at getting better. The man made that choice, despite his condition. Bleier was inspired by this man while he worked to return to football. It took some time, but Bleier committed and each season he got a little stronger, a little better in some way. Then one day he found himself a key cog of the Steelers' Super Bowl-winning machine.

So I hope you make that same choice for yourself and your business — the only choice there is to make.

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

PICOTE XPRESS COATING SYSTEM

NEW SYSTEM FOR COATING 1¼ - 12" PIPES

- AS LITTLE AS ONE HOUR CURE TIME
- BATTERY OPERATED PUMP SYSTEM
- NEW SUPERIOR RESIN MIXED AT END OF DELIVERY HOSE
- REUSABLE HOSE ELIMINATES WASTE AND SETUP TIME
- USE IN CONJUNCTION WITH PICOTE MILLERS
- MAX RANGE OF 132 FEET
- NOW AVAILABLE TO ORDER!

864-940-0088
sales@picotesolutions.com
PICOTEGROUP.COM/RESELLERS
PICOTEINSTITUTE.COM



VAC·CON

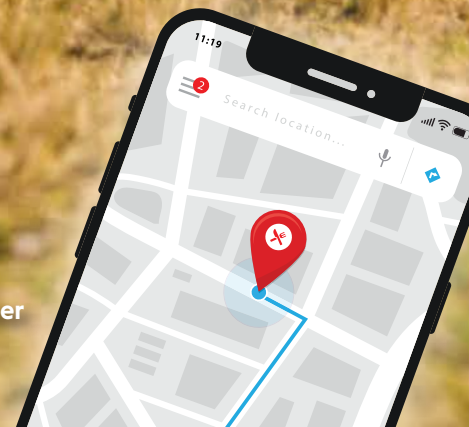
www.vac-con.com



At Vac·Con we believe in providing our customers quality, reliable machinery for their municipal, industrial, and utility markets worldwide.

From day one, our mission has been to design and build the most powerful and reliable machines in the industry, pushing the envelope year after year with unrivaled innovation. Visit your local dealer to learn why you should have Vac-Con in your fleet.

Find a dealer near you.
www.vac-con.com/dealer



LIGHTS, CAMERA, ACTION: THE HD ERA IS HERE



Plumber's Elite
2" - 10" drainlines



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

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

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

Ratech
ELECTRONICS
Video Pipeline Inspection Systems



Proudly Serving Customers Like You Since 1980

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



THE PROFESSIONAL'S
CHOICE

TROJAN

WORLDWIDE INC.™

PROFESSIONAL GRADE EQUIPMENT
THAT GETS THE JOB DONE!
THERE'S NO JOB OUR EQUIPMENT
CAN'T HANDLE!



C100-512SL



TWW2000
TRAILER JETTER



COLT



PONY



STALLION



VISION-HD
1080P

DIGITAL
LOCATOR

WE BUILD OUR EQUIPMENT
BASED ON THREE SIMPLE CONCEPTS:

DURABILITY, RELIABILITY, & POWER

Sewer Cables **IN-STOCK**
For All Major Brands



REPAIR CENTER

We REPAIR
all major brands
of sewer & drain
cleaning machines,
jetting, and
inspection equipment.

-Free quotes

-Fast turnaround

800-392-4902

TrojanWorldwide.com

3306-C Ella Blvd, Houston, TX 77018

Shorten the relining process & save time and money

We have the right tools needed for a
successful relining project

- Descalers
- Inspection cameras
- Knocker chains
- Flexible steel shafts
- Spot repair kits



PipeCaster™ Pro

SIPP (Sprayed-in-Place-Pipelining)
Injection casting system for pipe rehabilitation

SCAN QR CODE
TO LEARN MORE

- Cost-Effective
- Plug and play
- No Reinstatement
- Resin cures within minutes
- Ready to ship today



Colorado

P.O. Box 4160
Gypsum, CO 81637

California

5192 Bolsa Avenue, Ste 5
Huntington Beach, CA 92649

714-410-0707 ext. 1
info@ippsolutions.com
www.ippsolutions.com

ipp
Solutions, LLC



LINING UP OPPORTUNITIES

CCSI BRANCHES OUT WELL BEYOND ITS INDUSTRIAL CLEANING ORIGINS AND OHIO BOUNDARIES TO BECOME A DIVERSIFIED UNDERGROUND INFRASTRUCTURE FIRM WORKING ACROSS THE COUNTRY // **By Kyle Rogers**

CHAMPION CLEANING SPECIALISTS HAS A NAME INDICATIVE OF BOTH ITS ORIGINS AND ITS EVOLUTION.

Incorporated in 1982, the Cincinnati-based company operated for many years as just that — a cleaning company.

“It was more a small, general industrial cleaning company,” says Jon Parnell, operations manager. “A van and maybe four or five guys. Just general cleaning in the Cincinnati area.”

But in the years since, the company’s “specialties” have significantly expanded. The company’s branding these days — CCSI — aims to drop that “cleaning” phrasing to show that it is much more diversified in its service capabilities: cross-bore work, hydroexcavation, sewer maintenance and inspections, and most recently pipe lining.

“A couple years ago, we abbreviated it down to the CCSI,” Parnell says. “It’s shorter and stands out a little more. It’s on our website. When you see our trucks go down the road, it’s CCSI. We once did a large cross-bore project for an energy company. When our contact brought the bill to his boss, he saw Champion Cleaning and thought they were paying \$1.5 million to an agency for dry cleaning. So there you go. If we’re going to do things like line pipe, we need to get away from saying ‘cleaning.’”

And it’s no longer just a few guys in a van. CCSI has over 100 employees working in areas across the country.

“We’ve grown into a big company, but we still try to maintain that small, family feel to it,” Parnell says.

ALWAYS EVOLVING

Today, brothers Pat and Chris Kurtz own CCSI. They purchased it from the company’s founder, their father Kevin, in 2009.



Champion Cleaning Specialists Inc. (CCSI)

CINCINNATI, OHIO

OWNERS Pat and Chris Kurtz

FOUNDED 1982

EMPLOYEES 125

SERVICES Cross bore pre- and post-job inspections and legacy work, hydroexcavation, sewer maintenance and CCTV inspections, pipe lining

SERVICE AREA Across the country, with offices in Cincinnati; Burlingame, California; Charlotte, North Carolina; and St. Louis, Missouri

WEBSITE www.crossbores.com

That ownership transfer also largely coincides with how CCSI has transitioned away from being just an industrial cleaning company. The company purchased its first vacuum and CCTV inspection trucks in the early 2000s and began doing some sewer projects around Cincinnati. By about 2007, CCSI had started teaming up with local Duke Energy gas line installers to do pre- and post-job inspections as cross-bore awareness became more prevalent.

“We really kicked off with Duke Energy in 2009 and started to work directly with them,” Parnell says. “Then we just continued to grow from there.”

Hydroexcavation work came into the picture more in 2010.

Steve Nichols works with one of CCSI's vac trucks. The company's fleet includes units from Vector, Guzzler, Hi-Vac and Kaiser Premier.





« Scott Oliver and Nick Mason work on a hydroexcavation job in Monroe, Ohio.

» CCSI's hydroexcavation work picked up more significantly around 2010.



The hydroexcavation mixed in well with the other work CCSI had been doing for energy companies.

It was around 2010 that CCSI also started branching out more beyond the Cincinnati area, first in other areas of Ohio and gradually across the country. In 2012, CCSI began doing cross-bore contracts for Pacific Gas and Electric and eventually

opened a California office. Energy company contracts have also caused CCSI to establish offices in St. Louis, Missouri, and Charlotte, North Carolina.

“Signing multiyear contracts with energy companies forced us to open these various offices,” Parnell says. “In the beginning we used to have everyone from Cincinnati travel wherever to work, but as we have grown in these other areas, we’ve hired people from those areas.”

When Parnell first joined the company in 2006 as a general laborer, he was one of about 20 employees. Now across all the markets CCSI works, the company employs more than 100.

MANAGING THE TEAM

Managing a large team spread out across the country has its challenges. Employee hiring and retention can be a struggle, Parnell says.

“It’s harder now than it was,” he says. “We go through maybe three people to find one good person. It’s the work ethic more than anything. The work we do is hard. It’s in the elements and it can be hard to find a person willing to do that work.”

“WE’VE GROWN INTO A BIG COMPANY, BUT WE STILL TRY TO MAINTAIN THAT SMALL, FAMILY FEEL TO IT.”

JON PARNELL

“We had combo units, but we didn’t do a lot of hydroexcavation at the time. It really wasn’t a big thing,” Parnell says. “But then there was an incident that required a safe way to dig and we were contracted for the work.”

There was concern about an underground nitrogen gas line leaking into a manhole after a worker who entered the manhole died. CCSI had to expose a roughly mile-long stretch of the line in search of the leak.

“We ended up finding the leak,” Parnell recalls. “At the time we had three Vactor 2100s. Then we brought in one rental and another company we had assist us brought in two. We purchased another Vactor after that and the hydroexcavation work kicked off from there. We saw the profit that could be made. We weren’t doing much hydroexcavation at all before that.”

CCSI does many of the employee satisfaction standards, from annual holiday parties to bonuses.

“We just try to be fair,” Parnell says. “If we get an emergency call and guys have to come in the middle of the night and work till the afternoon the next day, we’ll give them a bonus on their paycheck. Whatever we need to do to keep them happy.”

The growth necessitated hiring a human resources manager a few years ago.

“That has been very beneficial,” Parnell says.

One initiative the human resources manager set up is a company culture committee.

“We try to meet twice a month or at least once a month,” Parnell says. “It’s all the area managers from across the country and myself coming together to discuss what we can do to make employment better here. We do it on Zoom. That’s been a lifesaver.”

The culture committee recently put out a survey to solicit feedback from employees on things CCSI could be doing better. Anything related to employee satisfaction can come up in a meeting, Parnell says, like a recent discussion about options for company-wide outings or events.

GETTING IN THE LINING GAME

Another new initiative for the company in the past few years was the establishment of a business development group. An outcome of that group’s work has been CCSI’s addition of pipe lining to its service menu.

“For a long time, about 75% of our business was cross-bore work for gas companies,” Parnell says. “But if something happens to one of these gas companies, that’s a big part of our business. So we’re trying to equal this out some to where the cross-bore work isn’t as much of the total.”

CCSI got its pipe lining division launched in 2023, so it’s still in its infancy.

“We’re looking to split more evenly across the board with all the divisions,” Parnell says. “To estimate it, we’re 65% cross bore at the moment, 20% sewer maintenance and hydroexcavation, and the remainder is lining. We brought someone on Jan. 1, 2023, with a lot of lining experience, and we just started purchasing equipment and bidding on projects. We expose pipe throughout the country, and

with what we’ve been seeing we thought lining would be a good fit.”

Building a reputation in a competitive lining market has been one of the biggest challenges so far for CCSI.

“The equipment was expensive, but that’s natural,” Parnell says. “One of the hardest things is we are somewhat known for all these other services — cross bores, hydroexcavation — but we’re not really known for the lining yet. So when we’re putting together these lining



Trenchless rehab equipment that delivers high-performance.

Service and support teams that give you the knowledge and power to stay productive.

**REPAIR
RELINE
REINSTATE**

Contact us anytime to request a demo or for purchase, leasing or rental information.

Pipeline Renewal TECHNOLOGIES™

www.PipelineRT.com | (866) 936-8476





« Operations manager Jon Parnell says managing a large team spread out across the country has its challenges, but initiatives like the company's culture committee have helped maintain employee satisfaction.

“We don't have the references. We have some now, but at first we didn't have any and you end up doing some work not for free necessarily, but mostly just in order to get some references built up. But with the person we hired, he's been doing it for 30 years, so he's helped make the transition easier.”

Some of CCSI's previous work in its other service areas has also helped.

“One lining job we got here locally in Cincinnati was given to us because of previous work we did for this customer,” Parnell says. “It's a trust thing. We bid it and got the work done successfully.”

CCSI has regularly had a presence at the WWETT Show over the years, which played a part in the company's foray into pipe lining.

“It's a must-do,” Parnell says. “We'll usually have eight to 10 people go in a given year. Logistically it's easy for us to attend being in Indianapolis. It's always great seeing all the new technology and

“WE GO THROUGH MAYBE THREE PEOPLE TO FIND ONE GOOD PERSON. ... THE WORK WE DO IS HARD. IT'S IN THE ELEMENTS AND IT CAN BE HARD TO FIND A PERSON WILLING TO DO THAT WORK.”

JON PARNELL

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



**“We Just Made The
BEST Test Plugs
Better!”**

equipment. It was a big part of looking at the lining options and then finally making a decision.”

Rush-Overland custom-built CCSI's Gen II steam unit lining truck. The company uses systems from MaxLiner and United Felts.

EQUIPPED TO WORK

The rest of CCSI's equipment roster includes about 50 lateral launch CCTV inspection trucks from RauschUSA and Aries Industries.

The vacuum truck fleet includes 12 Vactor 2100s, four Guzzlers and an Aquatech (Hi-Vac), as well as some units from Kaiser Premier.

“Some jobs we've had to go 200 to 300 feet off the road. So we've been able to utilize a hydrovac with the water, and then we take a Guzzler truck that we can run the flex hose off the 200 to 300 feet, be in the middle of the woods and still hydroexcavate down,” Parnell says. “We've noticed that some of these dedicated hydroexcavation trucks can't pull the distance.”

SEEKING SERVICE BALANCE

“I don't think they foresaw it getting this big,” Parnell says of CCSI owners Pat and Chris.

But through the growth, CCSI has still maintained a certain ethos that was in place when the company was much smaller.

WHEN IT PAYS TO RENT

The traditional line of thinking is that ownership always trumps renting. But whether it's home real estate or heavy equipment, the truth is renting can have benefits depending on the circumstances.

CCSI has a significant amount of equipment that it owns, but in the past couple years the company has also started to regularly maintain some rentals, finding it helpful in certain situations, says Jon Parnell, CCSI operations manager.

“If we're testing the market on a piece of equipment and don't want to deal with a lot of issues, we're looking to rent versus purchase because we see it as more cost-effective,” Parnell says. “If a rental goes down, you can just take it back in.”

CCSI also likes rentals for out-of-town work that takes equipment far away from its home bases and in-house mechanics.

“We have some full-time mechanics, but with how many pieces of equipment we have they're quite busy,” Parnell says. “The problem is some of the fixes can be super minor, but it still shuts down the truck. If you're out of town working, it's hard to send a mechanic there or get the truck back to the shop. So we've found that when we're working out of town, it can work better to rent the truck.”

PIPE PLUGS & PIPELINE TESTING EQUIPMENT



NUCA
We Dig America



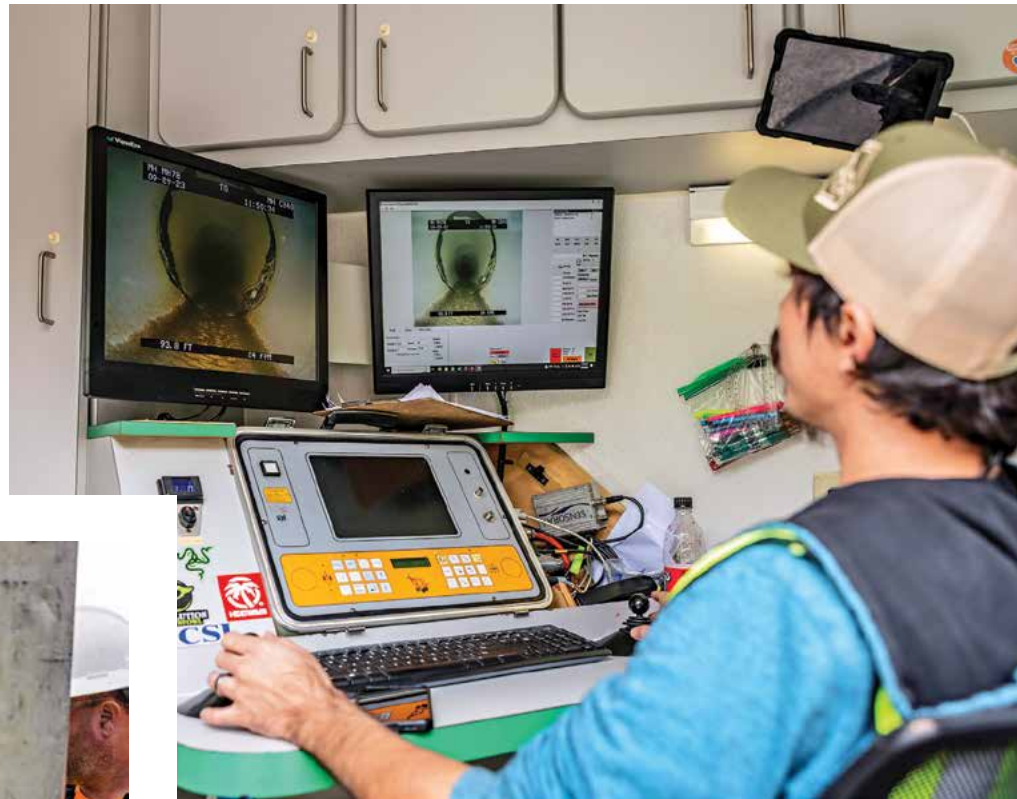
Lodi, California
800.452.4902 • 209.334.4115

www.lansas.com

LODI • ATLANTA • HOUSTON • CHICAGO

» Joe McIntire runs an inspection camera through a stormwater line on a job in Springboro, Ohio. CCSI uses inspection systems from RauschUSA and Aries Industries.

» Nick Mason, Scott Oliver and Steve Nichols change out pressure heads on the spray wand during a hydroexcavation job.



“He’s very involved too like Pat and Chris were,” Parnell says. “Pat and Chris provided a good example of dedication. We’re appreciative of all the people working for us, and they’ve been a big part of the growth. It seems like when people come to CCSI, if they fit, they stay.”

Going forward, Parnell says the short-term plan is to focus on getting the pipe-lining division well established because long-term the goal is to have a healthy balance among all of CCSI’s service offerings.

“We’d like to get it to where the lining and all the industrial vac services make up 50% and the cross-bore work makes up 50%,” Parnell says. **c**

Although semi-retired now, Pat and Chris have been active owners who for many years were very hands-on and putting in five-day work weeks regularly, Parnell says.

“Through networking, I know owners from other companies and you’re meeting them on the golf course. That type,” Parnell says.

“WE EXPOSE PIPE THROUGHOUT THE COUNTRY, AND WITH WHAT WE’VE BEEN SEEING WE THOUGHT LINING WOULD BE A GOOD FIT.”

JON PARNELL

“But Pat and Chris were here every day, five days a week. One would come in 7 a.m. to 5 p.m. and the other would be here 10 a.m. to 7 p.m., every day. They were involved in every aspect of the company.”

The brothers remain involved in some decisions but have passed on a lot of company oversight and leadership to people like Parnell and CCSI President Lincoln Stephenson.

FEATURED EQUIPMENT

ARIES INDUSTRIES

800-234-7205
www.ariesindustries.com

GUZZLER MANUFACTURING

815-672-3171
www.guzzler.com

HI-VAC CORPORATION

800-752-2400
www.hi-vac.com

KAISER PREMIER

970-542-1975
www.kaiserpremier.com

MAXLINER

877-426-5948
www.maxlinerusa.com
(See ad page 27)

RAUSCHUSA

877-728-7241
www.rauschusa.com

UNITED FELTS

276-656-1904
www.unitedfelts.com

VECTOR MANUFACTURING

815-672-3171
www.vector.com



SEWER CRAWLER

**PARTS &
MANHOLE
TOOLS**



**GRITTED WHEELS
GRITTED TRACKS
FIBERGLASS POLES
PIGTAILS & MOTOR CABLES
JETCAMs & MORE...**

**WE RESURFACE
WORN STEEL WHEELS**

**WITH [NEW
GRIT]**

www.trugrittraction.com
407-900-1091



GOTTA KEEP IT VENTILATED

Forced air ventilation may be needed when occupying hazardous confined spaces, and you can calculate the required amount based on square footage and air exchanges per hour standards /// By Rick Pedley

CONFINED SPACES WITH POOR VENTILATION trap dangerous gases and particulate matter in the atmosphere, exposing workers to potential respiratory infection, illness or even death.

If the area is known to be hazardous, workers must use a forced air blower to replace the air and reduce the risk of asphyxiation. However, many safety managers and cleaning crews struggle to properly ventilate spaces by failing to calculate the air exchange rate per cubic foot.

No two confined spaces are exactly alike. Some don't have enough ventilation to create a safe atmosphere, while others have none, making them unfit for prolonged human occupation. Variations in size, shape and the overall threat level determine how much circulation is needed to comply with specific regulations.

Currently, OSHA doesn't regulate air exchange requirements in confined spaces, leaving state occupational health and safety organizations to set and implement these standards, which vary based on region and industry.

Workers face unique hazards when occupying these spaces. They are often asked to venture near or inside areas that rarely see the light of day. Toxic chemicals and gases floating through the air along with the lack of oxygen can put workers' health at risk when working in basements, crawl spaces, sewers, tunnels and other confined spaces.

Here's a guide to selecting the right ventilation equipment for the job.

CALCULATING VENTILATION REQUIREMENTS

Forced air ventilation is required in confined spaces with a known hazard, including the possibility of a flash fire or explosion or the spread of toxic gases and debris, both of which can lead to oxygen depletion.

If the space is hazardous, the safety manager should refer to the state's confined space requirements for more information, specifically the required number of air exchanges per hour, notated as ACH. This figure represents the number of times the air needs to be replaced inside the confined space every 60 minutes. If the ACH is five in your

NO TWO CONFINED SPACES ARE EXACTLY ALIKE. ... VARIATIONS IN SIZE, SHAPE AND THE OVERALL THREAT LEVEL DETERMINE HOW MUCH CIRCULATION IS NEEDED TO COMPLY WITH SPECIFIC REGULATIONS.

state and industry, the air should be exchanged five times per hour.

Use this formula to calculate how much ventilation is needed in a confined space:

$$cfm = (Cubic\ Volume \times ACH) / 60$$

Measure the work site to calculate the cubic volume of air in the space. Multiply the volume by the ACH. Divide by 60 to calculate the total cfm ventilation requirement.

For example, if the ACH is six, this means the air must be exchanged six times per hour. If the space in question measures 5,000 cubic feet, you would multiply this by six to get 30,000 cfm. Then you would divide that by 60 to get 500 cfm.

SELECTING A FORCED AIR BLOWER

The safety manager needs to ensure the forced air blower circulates the air at or above the required cfm. The device should list this figure in the user manual and specifications.

The blower should be from a reputable seller or manufacturer, which will offer a seal of approval from Underwriter's Laboratories or the Canadian Standards Association.

A crew should consider other factors affecting air circulation when using this equipment and before entering the work site. If hazardous air is being removed, the blower exhaust should lead out of the space without blocking the exit or entry. Large ventilation equipment can overwhelm the local breaker panel. The safety manager should ensure the outlet and electrical system can produce the necessary voltage while accounting for other projects connected to the grid.

Radial fans blow air in a circular motion with the exhaust 90

CONTINUED >>

BRAWO® SYSTEMS

THE REHABILITATION EXPERT FOR PROPERTY AND BUILDING DRAINAGE SYSTEMS

BRAWO® UVPox US

NEW

The advantages of BRAWO® UVPox US

- Positive fit in the old pipe with no penetration or infiltration of water behind
- High installation reliability due to extremely long processing time
- Optical check using colored resin
- Targeted, fast curing
- Styrene-free and low-odor
- Curing with our light curing systems (UV or LED-light)

The first pigmented light curing epoxy resin optimized to work with BRAWOLINER®.

BRAWO® Magnavity **sx**

smart • efficient • strong

**Innovative light curing system,
NRTL certified**

- Specifically developed for use with BRAWOLINER® and the light-curing epoxy resin BRAWO® UVPox US
- Very good bend flexibility, 87° possible from 4" (DN 100)



brawosystems-usa.com

Learn more about BRAWO® SYSTEMS through our tutorials.

Contact

Andrew Marshall

Sales Manager USA

+1-240-796-5007

andrew.marshall@brawosystems.com



THE FUTURE OF INDUSTRIAL PUMPS BROUGHT TO YOU BY



**ANNOVI
REVERBERI**
The Power of Experience

AR RTD



Industrial

140° F - Max Water Temp
1 1/2" - Inlet Thread
1" - Discharge Thread
110 oz - Oil Capacity

RTD 1000 RPM N VERSION SOLID SHAFT 35MM

MODEL	MAX GPM	MAX L/MIN	MAX PSI	MAX BAR	POWER EBHP	BORE DIA MM	STROKE MM	CRANKSHAFT ID STAMP	WEIGHT LBS.
RTD80-300	21.0	79.5	4350	300	65.0	32	42	4	128
RTD100-200	25.0	94.6	2900	200	49.8	32	42	3	128
RTD100-200SX	25.0	94.6	2900	200	49.8	32	42	3	128
RTD130-160	32.0	121.1	2300	160	50.5	36	42	3	128
RTD130-200H	34.5	115.0	2900	200	68.0	36	42	3	128
RTD160-130	40.0	151.4	1850	130	50.8	40	42	3	128

SX - 180° Rotated Shaft Configuration
H - Nickel Plated

AR RTX



Industrial

140° F - Max Water Temp
1" F - Inlet Thread
1/2" F - Discharge Thread
76 oz - Oil Capacity

RTD 1450 RPM N VERSION 30 x 80MM SOLID SHAFT

MODEL	MAX GPM	MAX L/MIN	MAX PSI	MAX BAR	POWER EBHP	BORE DIA MM	STROKE MM	CRANKSHAFT ID STAMP	WEIGHT LBS.
RTX30	8.0	30.3	4350	300	23.9	20	23	3	72
RTX50	12.0	45.4	4350	300	35.8	25	23	3	72
RTX60	14.0	53.0	4350	300	41.8	25	28	1	72
RTX70	17.0	64.4	3000	200	33.8	30	23	3	72
RTX85	21.0	85.0	2200	200	31.7	30	28	1	72
RTX-HW85.150N*	21.0	85.0	2200	200	31.7	36	23	1	72
RTX100	24.0	90.8	1800	124	29.8	36	23	3	72
RTX150	39.6	150	1450	100	36.2	40	28	1	72

*HW - includes Hot Water Kit

SAFETY FIRST

» Forced air ventilation is required in confined spaces with a known hazard, including the possibility of a flash fire or explosion or the spread of toxic gases and debris, both of which can lead to oxygen depletion.



» Variations in a confined space's size, shape and the overall threat level determine how much circulation is needed to comply with specific regulations.



degrees from the inlet. Axial fans blow in a straight line. Axial fans are larger and consume more power but provide higher cfm than radial fans. A crew may opt to use an engine-powered radial fan if an outlet can't be found. Axial units can't accommodate engines and generally rely on electric power.

Depending on the layout, the blower may not distribute the incoming air evenly throughout the space. Turns, corners, dead ends, and hard-to-reach areas may have higher concentrations of hazardous gases or reduced oxygen. It may also be necessary to add ductwork to circulate the air evenly to achieve the required ACH. Ducts with 90-degree bends reduce airflow, thus lowering the estimated cfm. It's important to see how the blower was rated in order to determine whether these variances were considered.

Choosing a blower that exceeds the necessary cfm when using ducts and working in irregularly shaped confined spaces is best.

Once the blower is up and running, the crew should test the air using a gas monitor to see if the hazard has been remediated. **c**

ABOUT THE AUTHOR

Rick Pedley, PK Safety's president and CEO, joined the family business in 1979. PK Safety, a supplier of occupational safety and personal protective equipment, has been operating since 1947. Visit pksafety.com.



NORTH AMERICA
When Quality Matters

www.arnorthamerica.com
763-398-2008

For
More
Information
Contact

Thom Calvin
(763) 398-7564
thomasc@arnorthamerica.com

Randy Rowan
(768) 999-5405
randyr@arnorthamerica.com

HAMMERHEAD®
TRENCHLESS

OUR SYSTEMS YOUR SOLUTION



WHEN IT COMES TO REHABILITATING AGING AND DETERIORATING PIPES, WE'VE GOT YOU COVERED.

Our industry leading lateral rehab system drowns out the competition. We test all our products in the field and when paired together they are elite in every standard. We're here to help you do more, in less time, with less interference. When you choose HammerHead you're choosing **integrated solutions, with superior results.**

Dominate your projects at: hammerheadtrenchless.com

LEAP OF FAITH

IDAHO COMPANY SUCCESSFULLY SHIFTS FROM A PLUMBING FOCUS TO A HEAVY EMPHASIS ON DIRECTIONAL DRILLING AND PIPE BURSTING WORK // By Ken Wysocky



J.D. and Tana Christensen never intended to do horizontal directional drilling when they founded Platinum Plumbing in Pocatello, Idaho, in 2007.

But the fact that directional drilling now generates a majority of the company's revenue underscores the value of pivoting to new markets when opportunity knocks and diversifying services. It also reflects the importance of taking calculated business risks and being the first to invest in advanced technology — such as directional drilling machines and a pipe bursting system — to enter emerging markets.

“It was a big-gulp moment,” Tana says about the roughly \$40,000 the company, which does business as Platinum Directional Drilling, spent on a Vermeer D7x11 HDD machine from Vermeer Corp., plus another \$45,000 or so for a Vermeer mud-mixing machine and a flatbed trailer. “We were into it for around \$85,000 all told. It took a huge leap of faith. But J.D. had every confidence that it would work out. And it did.”

Today, directional drilling generates about 65% of the company's revenue, excavation and pipe bursting contribute around 20%, and plumbing service and repair work contributes the rest. The company's primary services are drilling boreholes for new residential water-service lines, pipe bursting to install

« Tana and J.D. Christensen, owners of Platinum Plumbing in Pocatello, Idaho, started as a small plumbing operation in 2007 but have since diversified services.

new residential sewer laterals and small plumbing repairs.

“The only reason we still do small-service plumbing is to stay busy on slower days, especially in winter,” Tana says. “It’s nice to keep some cash flow going.”

PLUMBING CAME FIRST

Directional drilling was not even a microscopic blip on the Christensens’ radar when they established Platinum Plumbing, so-named because platinum — a dense metal with a high melting point — represents something valued, rare and tough, Tana explains.

J.D. got into the plumbing field because he had family in the industry and enjoyed the constant variety and the physical aspects of the work. After he graduated from high school, J.D. worked for a plumbing company in Pocatello, where he completed his apprenticeship.

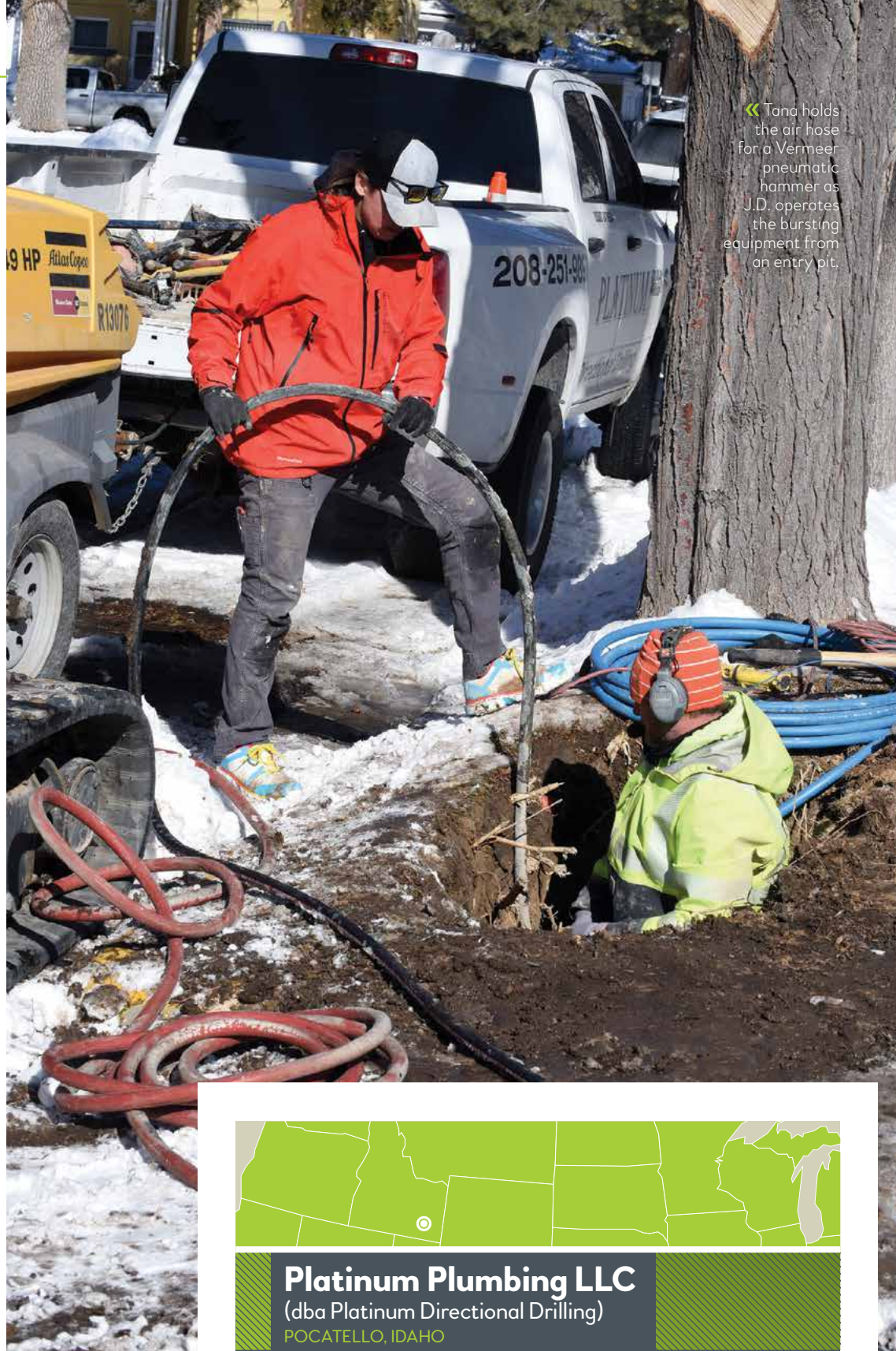
Looking for a change of scenery after working for that company for six years and earning his journeyman’s and contractor’s license, J.D. left the plumbing field altogether to avoid competing with his former employer. Instead, he embraced the home-construction trade and then became a state plumbing inspector — the youngest one in the state at the time.

“But he hated it — didn’t like the office work,” Tana says.

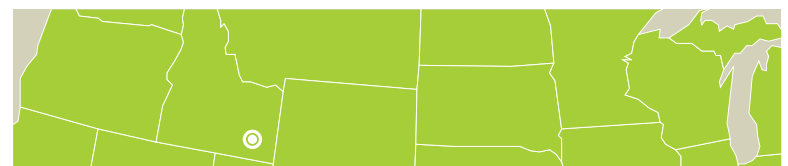
So J.D. went back to home construction before eventually founding Platinum Plumbing.

“It was very scary because we didn’t know anything about starting, owning or running a business,” Tana says. “We did a lot of reading and talking to other business owners who were willing to share information. The Southeast Idaho Small Business Development Center also was very helpful.”

Things started out slow and small, with about 75 jobs the first year, mostly small repairs obtained through word-of-mouth references from family and friends. J.D. did some rough-in and trim-out plumbing for new-home builders, but soon stopped doing that because it was so time-consuming he couldn’t do the kind of small service and repair jobs needed to build a business, Tana says.



« Tana holds the air hose for a Vermeer pneumatic hammer as J.D. operates the bursting equipment from an entry pit.



Platinum Plumbing LLC

(dba Platinum Directional Drilling)

POCATELLO, IDAHO

OWNERS J.D. and Tana Christensen

FOUNDED 2007

EMPLOYEES 3

SERVICES Directional drilling, excavation, pipe bursting, service and repair plumbing

SERVICE AREA Southeast Idaho

WEBSITE www.platinumboring.com

» Directional drilling projects encompass about 65% of Platinum Plumbing's revenue these days.

» Technician Charli Christensen unspools waterline and feeds it to her father, J.D., on a project installing waterline at a new home. They communicate using Eartec wireless headsets.



“QUIT JUST ISN'T IN J.D.'S VOCABULARY. YOU CAN'T BE RISK-AVERSE AND SUCCEED IN THIS BUSINESS.”

TANA CHRISTENSEN

“We were trying to grow a customer base through service work, so being available to do that kind of work was a big deal,” she notes.

HEADING UNDERGROUND

The company pivoted to directional drilling in 2012 when a customer asked if there was a way to replace a leaking water-service line without disrupting his well-manicured front yard. J.D. then saw a contractor using a directional drill to install a fiber-optic line.

“He asked the contractor if he could hire him to drill a new water-service line,” Tana says. “He agreed to do it and it worked very well. And J.D. went out and bought a Vermeer directional drill.”

Learning how to use the machine required a “huge” learning curve that included lots of reading, watching YouTube videos and trial and error, she says.

“A month or two after buying it, we lost a 16-inch reamer and four rods in sandy soil in an area north of Pocatello,” Tana recalls. “The next day we lost a drill head under a garage at a home in Pocatello, about 8 feet underground. Thankfully, we had everything insured and the insurer came through.”

NO TURNING BACK

At that point, a discouraged Tana wanted to quit, but J.D. declined, noting the company had too much money invested to turn back.

“Quit just isn’t in J.D.’s vocabulary,” she says. “You can’t be risk-averse and succeed in this business.”

The takeaways from the experience? Success requires a lot of grit, faith and perseverance, Tana notes.

“And you need good business insurance,” she adds.

An invaluable employee — Zach Hall — also contributes greatly to the company’s growth and success, Tana says.

“Zach has been pivotal in our growth,” she says. “He is a stellar employee that we are extraordinarily lucky to have. He has grown, changed and emerged with us into the business we are today. That wouldn’t be an easy ask for anyone, but he’s done it with the same faith and confidence that we’ve put into the business since the beginning.”

GAINING TRACTION

Slowly but surely, the company has established a customer base. One key to success was being the first business in southeast Idaho to own a directional drill as well as the only one to own one for quite a while. Moreover, the high cost deterred competitors from entering the market, Tana says.

Another boost came from cities that started to replace their mainline water pipes on certain streets — around 20 to 30 houses at a time — and providing affected customers with an allowance to replace their water-services lines at the same time.

“The first job like that came about two years after we bought the drill,” Tana notes. “Then we bid on one in a town north of Pocatello where the ground was mostly lava rock. We learned so much on that job (see sidebar) that we felt we could build the world after finishing it. Those projects were a huge boost for us — they basically jump-started our directional drilling business. No one else had a directional drill and customers loved the fact that we didn’t have to dig up their front yards.”

By now, Tana estimates the company has drilled boreholes for more than a thousand waterlines.

“We get many referrals for jobs that other companies don’t want to do because they’re technical, messy and hard,” she explains.

“WE GET MANY REFERRALS FOR JOBS THAT OTHER COMPANIES DON’T WANT TO DO BECAUSE THEY’RE TECHNICAL, MESSY AND HARD. PEOPLE KNOW THAT IF A DIFFICULT JOB HAS TO GET DONE THAT WE’RE GOING TO DO IT.”

TANA CHRISTENSEN

UNITED TO DELIVER BIG

MAXLINER®

INNOVATIVE TRENCHLESS LATERAL AND VERTICAL REHAB SOLUTIONS

UNITED FELTS
A VORTEX COMPANY

MAXLINERUSA.COM

VISIT US AT NO-DIG BOOTH 306



➤ The team at Platinum Plumbing includes, from left, owners J.D. and Tana Christensen, and technicians Charli Christensen and Zach Hall.

“People know that if a difficult job has to get done that we’re going to do it.”

EQUIPMENT SUPPORT

Performing such work requires a comprehensive array of equipment. The backbone of the business is a Vermeer D23x30 directional drilling machine (30,000 pounds of pullback force and 24,000 pounds of thrust).

The company has also invested in a Vermeer mud-mixing system to mix drilling mud; a Vac-Tron Equipment-built LP555 industrial vacuum truck used for excavating in smaller, hard-to-access areas; Bobcat E45 and E88 mini-excavators; a Ford F-650 dump truck with a dump bed by Scelzi Enterprises; a Vermeer mini skid-steer; two Norstar Co. 14-foot Iron Bull dump trailers; and two flatbed trailers from Felling Trailers.

The company also relies on a Portaburst pipe bursting system from

HammerHead Trenchless (a Toro company); a Vermeer hole hammer piercing tool; pipeline inspection cameras from Milwaukee Tool and RIDGID; a DigiTrak F5 locator from Digital Control; a Chevrolet cut-away box van with a box body by Supreme Corp.; and two Dodge pickup trucks (3500s).

The company uses Housecall Pro business management software for invoicing customers.

The Portaburst pipe bursting system, purchased about four years ago, enabled the company to further diversify its services. It all started when customers started asking if the company could do trenchless sewer lateral replacements.

At the time, J.D. still did conventional opencut line replacements. But then he encountered one customer with an unusually deep sewer line and a lot of trees in the yard.

LESSONS LEARNED

It seems like most contractors encounter an unusually challenging job that either changes the fortunes of their company or teaches them an important lesson that helps propel the business forward.

For J.D. and Tana Christensen and their business Platinum Plumbing that pivotal project occurred in 2013, around a year after the company morphed from a mostly plumbing-oriented business into a directional drilling firm.

The company won a bid to drill boreholes for 66 residential water-service lines in Idaho Falls. At that point, the Christensens felt they had enough experience to do the job.

“We figured we’d done this enough to handle the project,” says Tana. “In our bid, we said we could finish the job in 45 days.”

That confidence diminished a bit when it took three days to drill only 10 feet for the first service line, using the company’s second directional drilling machine, a D20x22 unit from Vermeer Corp. The problem? Solid lava rock — a totally unexpected obstacle, Tana says.

“The contractor who hired us had dug a test hole, but it happened to be right where there wasn’t any rock,” she explains.

A Vermeer rep told the Christensens that they needed to use a roller-cone bit to grind through the rock. The bits cost about \$2,500 apiece and wear out quickly; the company ended up buying six. At times, the Christensens also had to use a duckbill attachment to steer the drill bit and move it back on course.

Fortunately, after drilling boreholes for roughly half of the homes, the rock diminished and gave way to more sandy conditions. Still, it took about 2 1/2 months of 16-hour days, six days a week, to complete the project, Tana says.

“To say it was the job from hell would be the understatement of the century,” she says. “It was awful. We didn’t see our kids very much for months. But once you start, there’s no turning back.”

The good news: The primary contractor who hired Platinum agreed to pay more to compensate for the extra time on the job.

“We didn’t make as much money as we thought we would, but it still was a profitable job,” Tana says.

Furthermore, the couple learned a few valuable lessons: Avoid drilling work in Idaho Falls. Provide two bids on all projects — one for rocky conditions and one for nonrocky conditions. And buy a bigger directional drilling machine, which the company did when it invested in a Vermeer D23x30 (30,000 pounds of pullback force and 24,000 pounds of thrust).

“Plus we now know how to work better in rocky conditions,” Tana notes. “In this business, you learn something new every day.”

CONTINUED >>

ENGINEERED WITH YOUR BUSINESS IN MIND

For over half a century, market leaders have trusted Cat Pumps to keep their businesses up and running. Built with the highest quality seals, materials and components, our pumps are designed to minimize non-scheduled maintenance and costly downtime, helping your equipment stay in the field meeting your customers' needs.

From hydro excavating to sewer jetting, our pumps' unmatched reliability makes it clear why Cat Pumps is the choice of industry professionals worldwide. Contact us today to learn more!



7CP6185CS
8 GPM | 3500 PSI



1560
9 GPM | 4000 PSI



2560/2560BH
16 GPM | 3000 PSI



3560
20 GPM | 4000 PSI
25 GPM | 3000 PSI



Cat Pumps. Performance you can count on.

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

© 2023 Cat Pumps All Rights Reserved. 23118 5/23



The Pumps with Nine Lives



« Technician Zach Hall disconnects an air hose from a Vermeer pneumatic hole hammer.

» J.D. cuts pipe during a shower installation. The company still takes on traditional plumbing work, but less so these days.



“PIPE BURSTING JOBS HAVE REALLY PICKED UP. THERE ARE A LOT OF AGING ORANGEBURG PIPE LATERALS THAT ARE STARTING TO FAIL AROUND HERE.”

TANA CHRISTENSEN

“So we bought the Portaburst pipe bursting system, which by now has turned into another primary source of revenue,” Tana says. “Pipe bursting jobs have really picked up. There are a lot of aging Orangeburg pipe laterals that are starting to fail around here.”

SUCCESSFUL CONVERSION

Does Tana ever look back and marvel at how far the company has come since it bought its first HDD machine?

“I sure do,” she says. “It’s astounding. We basically went from nothing to a full-fledged business — it’s crazy. Some days it feels like a great success. But on other days, it feels like a huge burden because what we now pay monthly in bills is more than all the money we made in our first year in business. So with that level of liabilities, you have to carefully decide what you want for your business — find that balance between growing and standing pat — knowing where to put on the brakes.”

The couple would like to keep growing, but like so many contractors today, it’s difficult to find the employees needed to do that — people with good work ethics and a willingness to adhere to high standards for customer service and quality work, Tana says.

“We’re in a kind of in-between mode right now,” she says. “We’re trying to decide if we want to grow and hire people, then weed them out as best we can and then add another service truck, or stay where we are, which is working just fine. But overall, we’d like to grow the company. In the beginning, J.D.’s goal was to provide for our family. Now he’d like to help provide for other families.” c

FEATURED EQUIPMENT

BOBCAT CORPORATE

800-743-4340
www.bobcat.com

DIGITAL CONTROL, INC.

800-288-3610
www.digitrak.com

EARTEC CO.

800-399-5994
www.eartec.com

HAMMERHEAD TRENCHLESS

800-331-6653
www.hammerheadtrenchless.com
(See ad page 23)

HOUSECALL PRO

858-212-0245
www.housecallpro.com

MILWAUKEE TOOL

800-729-3878
www.milwaukeetool.com

RIDGID

800-474-3443
www.ridgid.com

SUPREME CORPORATION

800-642-4889
www.supremecorp.com

VAC-TRON EQUIPMENT

352-728-2222
www.vactron.com

VERMEER CORPORATION

www.vermeer.com

THE CABLE CENTER • 1-800-257-7209



CALL FOR USED EQUIPMENT

\$665



MiniRooter Pro-Basic

No Cable, No Cutters. Call for complete kit availability.

\$1,000



JM-1000

No Hose, No Nozzles.
Call for complete kit availability.

Free Delivery

\$6,400



SL-GPW-E

200' Standard GenEye
WiFi Pod

Free Delivery

\$2,375



Speedroooter S92-Basic

No Cable, No Cutters.
Call for complete kit availability

WE HAVE COMPLETE USB, SD, X-POD, OR POD SYSTEMS IN STOCK

\$1,700



T-4 Basic

No Cable, No Cutters.
Call for complete kit availability

\$8,800



JM-3080

No Hose, No Nozzles
Call for complete kit availability

\$24,711



Kit

1/2" x 400' Hose
Nozzle Set

THE
CABLE
CENTER

HOURS - MONDAY-FRIDAY, 7AM-3:30PM CST

8318 OLIVE BLVD. • ST. LOUIS, MO 63132 • 314-993-3099 • thecablecenterinc.com

REDUCING RISK

Robotic tube cleaners boost productivity and operator safety on challenging industrial jobs

// By Ken Wysocky

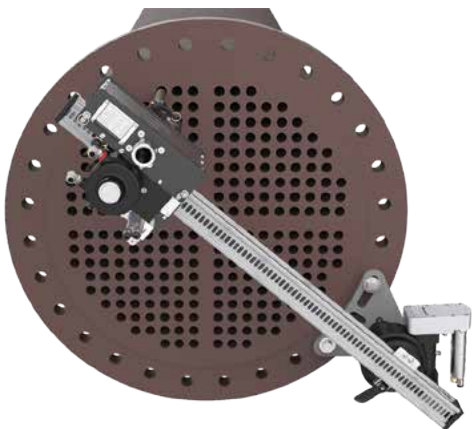
ONLY THREE MONTHS AFTER Ian Stewart purchased a ProPositioner lance tube cleaner in 2019, he ordered a second machine. And roughly six months later, he invested in yet another one.

That's a powerful testament to the benefits provided by the robotic machines made by StoneAge. The high-tech workhorses tick off a lot of boxes, including significantly reduced labor requirements, dramatically safer working conditions, better and more consistent tube cleaning, and substantial increases in productivity and profitability, says Stewart, who co-owns ESP&P Industrial Services in Kingsport, Tennessee, with his brother, Stuart. Their father, Ed, established the company in 1986.

"They also make it easier to hire people and keep them on board," Stewart says. "We used to run these tubes by hand and if guys are eating dirt and water every day, they're much less apt to stick around. If someone can find an easier job, they'll take it.

» One of the benefits is a reduction in manpower. It takes only one or two people to run the machines, which can be set up in about 15 minutes by experienced workers.

✓ The ProPositioner (now called the Compass Positioner) is used to robotically clean bundles of clogged tubes in heat exchangers as well as process pipes filled with hard deposits.



ESP&P INDUSTRIAL SERVICES

KINGSPORT, TENNESSEE

OWNERS Ian and Stuart Stewart

MACHINES ProPositioner lance tube cleaners from StoneAge

FUNCTION Cleaning heat-exchanger tubes and process piping

FEATURES Multiple mounting configurations; lightweight components, all weighing less than 35 pounds for easy transport; quick-connect hoses and quick clamps for easy assembly; positioner's radial motion from a single connection point enables access to all tubes without any remounting; can clean horizontal, vertical and enclosed tubes.

COST From \$43,000 to \$55,000, depending on configurations

WEBSITE www.espindustrialservices.com

ALLAN J. COLEMAN

SINCE 1905

Call us today!
 Chicago 773-728-2400
 Phoenix 602-638-0600

5725 N. Ravenswood Ave. • Chicago, IL 60660
 60035 40th St., Ste. #5 • Phoenix, AZ 85042

info@allanjancoleman.com • www.allanjancoleman.com

OLDEST NAME IN THE BUSINESS — OVER 115 YEARS OLD



FLEXSHAFT, K9-306

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



FLEXSHAFT, K9-204

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

FLEXSHAFT, K9-102

- 1 1/4" - 2" Pipes
- Includes: 50' of 1/4" cable and kit
- Faster setup and cleanup, quick cleaning, and cordless convenience for additional time savings

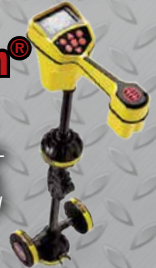
NaviTrack® Scout®

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



SeekTech® SR-20

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



Pipe Patch Kits

Pipe Patch Kits enable quick and efficient trenchless point repairs with all required consumables and components packaged together for one-time use. Patch Kits make inventory management easier on your business while ensuring you have all components needed when showing up to a job. Fiberglass patch meets ASTM F1216 requirements and cured patches have a life expectancy of up to 50 years under normal conditions. RIDGID Pipe Patch Kits are designed for 2", 3", 3-4", and 4-6" Packers and at lengths for 32", 3', and 6' repairs.



RIDGID®

CS6x) VERSA Digital Recording Monitor With Wi-Fi



- A high and low monitor mounting position and pivoting frame lets users tilt the monitor to the desired angle for optimal viewing. The sunshade remains open in all situations for glare reduction
- 5.7" daylight viewable screen. TruSense™ compatible
- Docks to the Compact 2/C40/M40 camera reels for efficient transport, storage, and operation, and can be used mounted or unmounted
- Operates on one 18 V battery or AC power adapter
- Capture images and video directly to a USB drive
- Stream or Record to an iOS or Android phone or tablet



Digital Self-Leveling Mini Pro

- Digital self-leveling
- High dynamic range (HDR) offers bright, clear in-pipe imaging
- TiltSense displays the pitch in a pipe
- 25 mm camera head

CSx) VIA™ Wi-Fi Control Device



- Compatible with all RIDGID SeeSnake reels when using the RIDGID SeeSnake Standard & Mini CSx Via Mount
- Reliable connectivity between CSx Via and mobile devices with the HQx Live app or HQ software for Windows
- Rapid communication by email, text or upload photos and videos to customers or colleagues in real time

We Have RIDGID Parts!



Buy Online at
 AllanJColeman.com

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

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

“IT USED TO TAKE A SMALL ARMY OF PEOPLE AND A LOT OF SKILL TO CLEAN HEAT EXCHANGERS. BUT THESE MACHINES HAVE LARGELY TAKEN LABOR OUT OF THE EQUATION, WHICH GIVES THE ABILITY TO KNOCK OUT MORE JOBS AT ONE TIME.”

IAN STEWART

“Labor is difficult to find, but you can always find someone interested in working with technology. You can run these things with a cellphone. Some of our guys who have been doing this for years always tell me, ‘Man, I wish they would’ve had these 15 or 20 years ago.’”

ESP&P Industrial Services employs 28 people and serves customers throughout eastern Tennessee, North and South Carolina, Virginia, Kentucky and Georgia. Its primary service is industrial cleaning.

The ProPositioner (now called the Compass Positioner) is used to robotically clean bundles of clogged tubes in heat exchangers as well as process pipes filled with hard deposits, Stewart says.

“You can either mount it on a single pipe or use the positioner to attach it to a heat exchanger, where it traverses the face, cleaning tube by tube,” he explains.

BENEFITS ABOUND

The ProPositioners also reduce manpower needs, which allows the company to do significantly more jobs per day than it otherwise could. It now takes only one or two people to run the machines, which can be set up in about 15 minutes by experienced workers, compared to a crew of eight to 10 people previously, Stewart says.

“It used to take a small army of people and a lot of skill to clean heat exchangers,” he notes. “But these machines have largely taken labor out of the equation, which gives the ability to knock out more jobs at one time. I’d say that initially we saw at least a 50% increase in revenue in this particular line of work because we could put more people on other jobs.”

Furthermore, employees no longer perform the risky task of jetting the tubes manually. It’s dangerous work, given that the NLB Jetstream and Hammelmann hydroblaster water pumps the company uses with the ProPositioners can generate pressure of up to 43,000 psi and flow as high as 40 gpm.

“That lance can blow out back into you when you hit something really hard, so that safety aspect is huge,” Stewart says. “Plus doing it manually just wears people out. But the machines never get tired — it’s a really great thing.”

The positioning system is run by air pressure; ESP&P Industrial Services uses Atlas Copco air compressors.

A CONSISTENT CLEANING

The ProPositioners also clean at an even rate of speed that workers can’t achieve while grappling with a high-pressure device.

“Humans just can’t clean tubes at a specific rate like these machines can,” Stewart says. “It’s just very difficult to stay consistent. And customers really appreciate it when you can give them a better and more thorough cleaning all the way to the end of a tube — from tip to tip.”

Stewart recalls one heat exchanger the company cleans regularly that has 500 tubes clogged with rock-hard calcium, which he says is a “real bear” to clean.

“We used to have to fight that thing so bad, and the fear of that lance jumping back out at them made our guys work it really slow,” he explains. “That job used to take us about a week.”

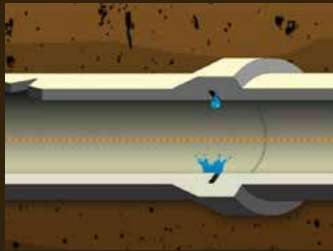
But using the ProPositioners shaved the cleaning time down to about 24 hours.

“You talk about a cost savings for customers,” Stewart says. “But the people who really appreciate the ProPositioners the most are the guys who used to operate tube lance machines by hand. They treat these machines like they’re babies.” **c**

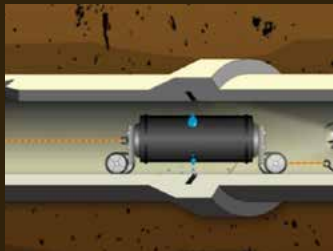
CLEANER IS FREE!
Subscribe/renew online at cleaner.com



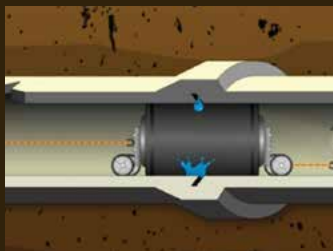
QUICK 5-STEP PROCESS



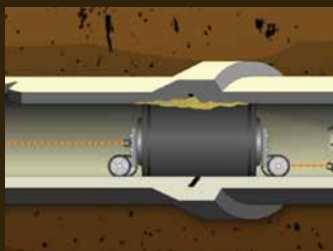
1 CCTV locates defect in pipe



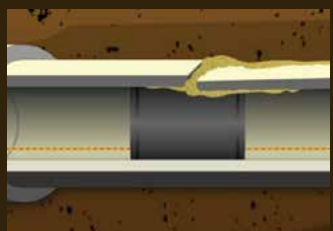
2 Packer and repair sleeve pulled into place



3 Packer inflated and sleeve installed

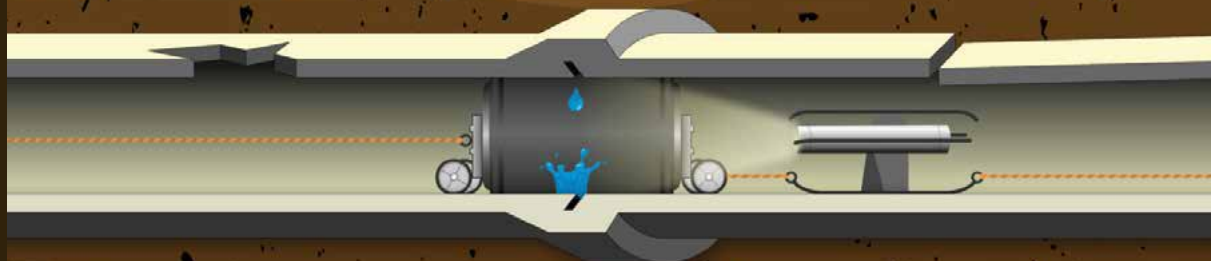


4 Packer deflated while grout fills void



5 CUES LOCK mechanical sleeve permanently installed

STRUCTURAL POINT REPAIR in 5 QUICK STEPS



CUES LOCK

SAVE TIME AND MONEY WITH CUES LOCK

- Structural point repair systems for stand-alone spot repairs in pipes 6"-108"+ in diameter
- Repair sleeve lengths are available from 12"-36"
- Point repair can be used with CIPP
- CUES LOCK can be installed in as little as 30 minutes
- CUES offers sales/support and stocks repair sleeves at our service locations nationally
- Low cost start-up and requires very little equipment
- Works with any CCTV system and can be used in any pipe material
- 100 year service life and 50 year half life

Call today to see how you can save money and avoid digging!



To learn more, contact the CUES LOCK Product Manager:
Jake McLean | Regional Sales – N. Florida
Office: 800.327.7791 | Mobile: 407.750.7994
Email: jmclean@cuesinc.com



www.cuesinc.com

800.327.7791

salesinfo@cuesinc.com



Joan Koehne

FEELING A LOAN?

If you're soon going to be in the market for some new equipment, here is what you need to know about the current lending environment // By Joan Koehne

HAVE YOU PRICED OUT new equipment lately? Talk about sticker shock.

Equipment prices jumped during the pandemic — sometimes 30% to 40% — and remain high. Interest rates climbed also. Loan rates previously at 5% increased to as much as 9.75% in 2023, says Jim Thomas, owner of Key Commercial Corporation, a St. Louis, Missouri-based commercial equipment finance and leasing organization that serves mom and pop businesses with five trucks or fewer.

“EQUIPMENT PRICES ARE STICKY. THEY DON'T COME DOWN AS FAST AS THEY GO UP.”

KEVIN MCGINN

When interest rates are high, borrowing money becomes more expensive, and businesses find it more difficult to obtain financing. Although the future of interest rates remains uncertain, the Federal Reserve forecasted three rate decreases in 2024. Kevin McGinn, senior vice president of Commercial Credit Group, says that successful organizations have learned to adapt to the higher cost of doing business in the past few years.

“Interest rates may come down, but I wouldn't count on it,” he says. “I wouldn't plan your business model based on those forecasts, either.”

Commercial Credit Group is a Charlotte, North Carolina-based organization providing commercial equipment financing for construction, manufacturing, transportation and waste companies.

“Equipment prices are sticky,” McGinn continues. “They don't come down as fast as they go up. It's something that everyone has to deal with.”

McGinn and Thomas recommend the following lending strategies for contractors considering the purchase of a truck or large equipment soon.

DETERMINE WHAT YOU CAN AFFORD

Because of the higher cost of borrowing money, McGinn encourages contractors to only buy the equipment that they absolutely need.

Likewise, Thomas encourages contractors to purchase equipment that's suited for the job.

“Buy equipment that's going to hold up, that will do the job and serve you for the four or five years you're going to finance it for,” Thomas says.

He advises contractors to think about cash flow when purchasing equipment.

“Let's say [a contractor] has a contract to pump 20 septic tanks for a mobile home park. He knows how much that's going to generate, and he needs a truck. Now he knows what he can afford to spend, and that's what he's looking to purchase,” Thomas says.

NEGOTIATING LOAN TERMS

In recent years, McGinn says he has seen contractors lock in longer terms. Instead of a five-year term, they might finance a truck or other equipment purchase for six or seven years.

“That's one way to keep their monthly payments down,” McGinn says.

But if a lender accepts longer terms, sometimes the lender requests more collateral in return.

Key Commercial Corporation offers 36-, 48- or 60-month financing. Thomas advises contractors to forecast how long the equipment will be in service when negotiating interest rates. A truck with 30,000 engine hours, a gas engine and high-maintenance moving parts might not last for 60 months.

MAINTAINING EQUIPMENT

One way to avoid purchasing new trucks and equipment is to keep your current equipment operational by maintaining it well.

“A lot of companies buy equipment more often than they need to because they don't maintain their existing fleet. They just let it run

down,” McGinn says. “It’s true that it does cost more to maintain equipment, but in the long run, it’s a less expensive trade-off.”

Investing in older, used equipment instead of new equipment also saves money. Thomas works with lenders who are quick to finance used equipment.

“My best rates come from a bank in Indiana, and they have no fear of older trucks,” he says. “They’re interested in the kind of business, the kind of bank account the customer has, and his personal credit.”

PERSONAL AND BUSINESS FINANCES

To improve the ability to secure a loan, McGinn advises clients to get their finances in order. Contractors with accurate financial statements have more leverage when negotiating the terms of a loan. Lenders typically ask borrowers to complete a credit application and provide several financial documents, including personal tax returns.

Because personal and business finances are so closely related, Thomas advises clients to attend to their personal financial obligations.

“The best advice I can give to someone starting a business is to take care of your personal credit,” he says.

BE PROACTIVE

Good equipment, new or used, is harder to find than it was five years ago.

“The supply chain, especially on chassis, is still an issue,” McGinn says.

With equipment being scarce, if contractors wait too long to start working with a lender, the equipment may be gone by the time they secure financing.

“If it took me a week to get someone financed, the dealer probably sold it to someone else,” Thomas says. “I had that happen a lot in the last year or so.”

“The earlier you start on the financing side, the better,” McGinn adds.

RAISE CUSTOMER RATES RESPONSIBLY

To account for rising expenses, contractors may decide to raise their rates. Although

consumers are familiar with today’s higher prices for goods and services, contractors still need to be careful about raising prices. They don’t want to lose customers or sales. McGinn advises contractors to be upfront with clients, phase-in price increases gradually, and maintain



ELEVATE PIPELINE REHAB SUCCESS with a single call

The process of installing liners can be complicated and fraught with risk but our customized equipment and liners, training, 24/7 support, coupled with our proprietary Quality Tracker System™, make ALPHALINER® UV-GRP liners easier to install.

The results are simple to see:

- greater efficiency and productivity
- minimal risk-management concerns
- less community disruption
- exceptional ROI

Successful rehab projects are just **ONE call away!**

RELINE
A M E R I C A
866.998.0808
relineamerica.com

We design and engineer it. We make it. We support it...and you.



Make safety an important part of every project.

TeamJDC.com | 800.336.4369

CELEBRATING
50 YEARS.

MONEY MANAGER

quality of products and services. People will pay more for quality.

“As long as you’re providing the service, those price increases are a lot easier to pass along,” McGinn says. “If your service is just adequate, and you go to one of your customers and say you’re bumping up the price, it gives them more incentive to start looking elsewhere.”

Before bidding on a long-term project, contractors should carefully assess the current and future economy and the cost of doing business, he adds.

“You can’t rely on old models you may have used when forecasting your revenues and expenses,” McGinn says. “You have to adjust those percentages. What’s equipment debt going to cost? What’s fuel going to cost? All of those items need to be re-evaluated.”

KEEPING CASH FLOW HIGH

High interest rates can put a strain on a contractor’s cash flow and affect the timing of adding or replacing trucks or large equipment to the fleet. But by following these business finance recommendations, contractors can still expand their fleet, replace equipment and increase output while keeping cash flow high. **c**

AUTOBOX PRO

with Compass Positioner
(formerly known as ProPositioner)

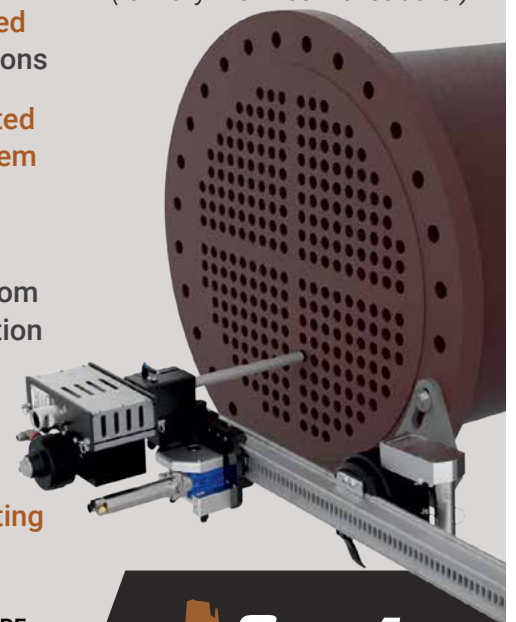
Perfect for **limited access** applications

Remotely operated positioning system for single-lance tube cleaning

Radial motion from a single connection point enables operator to access all tubes in most bundles **without remounting**



SCAN HERE
FOR MORE INFO



STONEAGE
ENGINEERING THE POWER OF WATER

WWW.STONEAGETOOLS.COM

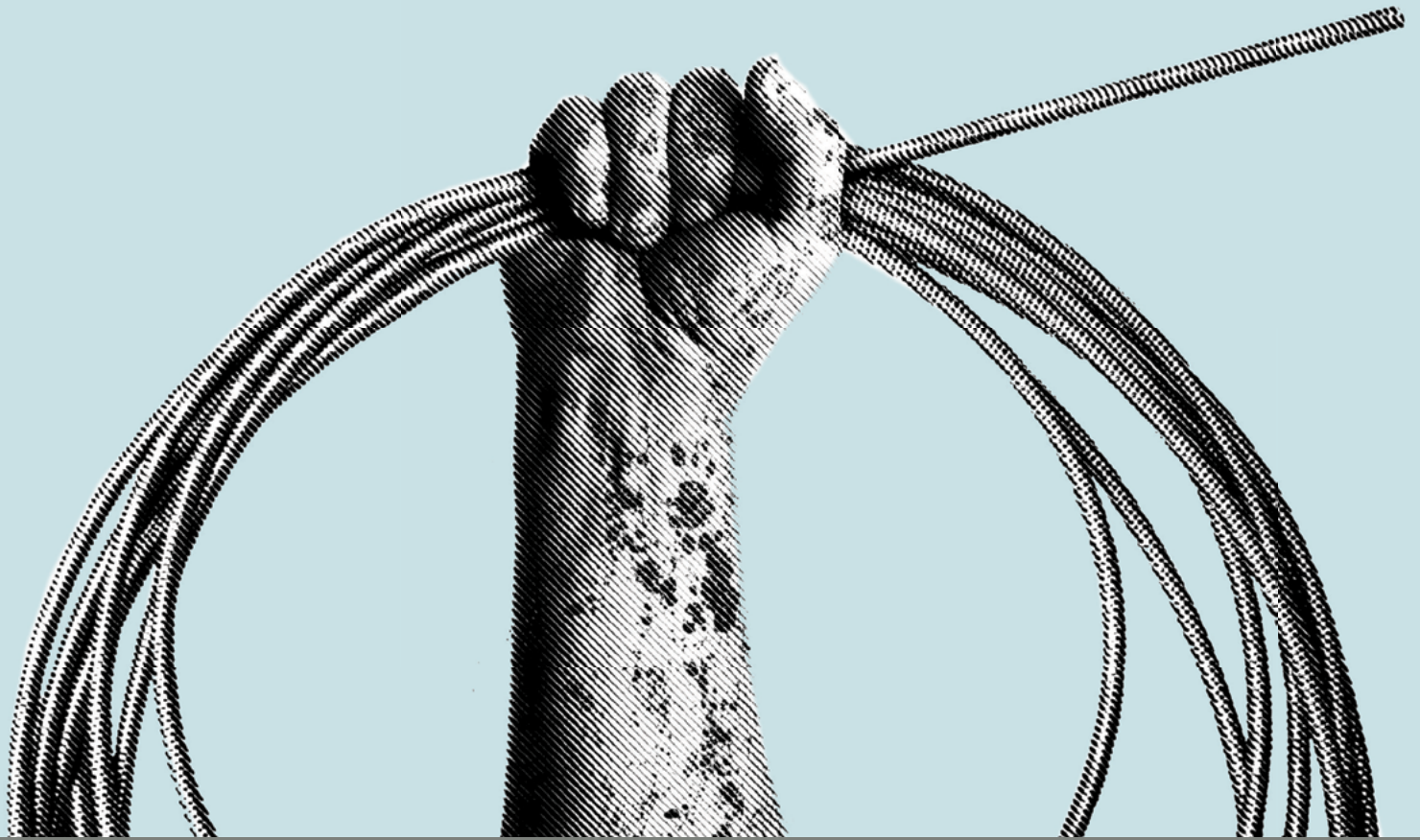
GET READY TO

.....

DECLARE VICTORY OVER THE DRAIN

=====

WITH **DURAFLEX** DRAIN CABLE FROM **DURACABLE**, YOU'VE GOT THIS.



800-247-4081

DURACABLE.COM



DURACABLE
MANUFACTURING
— CO —

FIND THE
RIGHT CABLE

READ OUR
BLOG

.....

RIGHT IN THERE WITH YOU.

.....



Rick Agajanian

AN AI REVOLUTION

A business can deploy artificial intelligence tools in a number of helpful ways, from improving customer interactions to providing insights about operational efficiency // By Rick Agajanian

ARTIFICIAL INTELLIGENCE HAS been a trending topic of conversation across almost every global industry.

As businesses look for opportunities to cut costs and increase productivity, many are looking toward AI as a magic bullet to revolutionize operations, both in the office and out in the field.

While in reality, field service companies will need to look to a tech partner to take advantage of AI in a way that also protects data security, it's still important to understand at a basic level how AI has the possibility of transforming field service operations.

TRANSFORMING CUSTOMER RELATIONSHIPS

Customer experience is one of the most important aspects of field service work. No matter the type of services your business provides, a sizable portion of revenue probably comes from repeat and referral business. This is especially true for field service businesses, which are built on word-of-mouth recommendations and their technological equivalent — digital reviews. Positive customer satisfaction is key to gaining those reviews and recommendations.

Especially as more and more people move their purchasing activities online, your future customers are relying on other people's recommendations to influence who they trust to complete services in their homes and businesses. AI can be used as a tool to help improve your online presence and other areas of your business that directly influence customer satisfaction.

With AI-powered chatbots, for example, you can more efficiently triage requests from customers, even providing initial responses without manual intervention from anyone on your team. It's possible that AI could also help predict proactive and preventive maintenance down the road using customer data and information from service histories — preventing the severity of future work while increasing your pipeline of regular maintenance work.

As services requiring a technician are often costly and disruptive to a customer's day-to-day life, it's not uncommon for a customer to react negatively to the need for service, even if the service itself is adequate. That's why it's extra important to have a solid customer service plan in place to mitigate dissatisfaction where you can. While a knee-jerk response might be to think about integrating more chatbots into your communication channels, AI can also be used to better equip your field-based team members with the tools they need to handle customer situations while out in the field.

For example, businesses could work with tech partners to leverage generative pre-trained transformers, or GPTs, as a type of internal learning center. From there, technicians could access manuals, instructions, data or even safety guidelines for more hazardous jobs and use the information to approach every job in a very targeted way. While this may still not please a customer who is unhappy with their upcoming bill, it does ensure each technician has the tools they need to ensure a job can be completed quickly, efficiently and to a high-quality standard.

BACKEND OPERATIONS

Often we're seeing different industries look toward AI as a means to streamline repetitive tasks, reduce errors and cut down manual labor, all in the name of critical benefits like cost savings and increased productivity. When we look at a field service company's back office team, this has the potential to help in a lot of areas.

Take resource allocation as an example. In the same way AI could be used as a tool to help predict maintenance, it could be used to help improve customer service. There are some opportunities to use

THERE IS ... HUGE POTENTIAL FOR AI TO HELP
BUSINESSES MAKE SENSE OF HEAPS OF DATA. ...
EVEN A SMALLER COMPANY MANAGES DATA ...
TO BRING ALL OF THIS INFORMATION TOGETHER
IN A WAY THAT PROVIDES MEANINGFUL INSIGHTS
INTO PATTERNS, TRENDS AND EXPLANATIONS
IS NO SMALL FEAT.

those same predictive analytics to forecast resources needed before requests for work are actually received. By understanding peak times of service, common service requests and historical service logs, AI could eventually help you understand when you'll need certain supplies, equipment or even labor on hand to meet demand. This can also help inform your procurement strategy, ensuring you're managing inventory according to your available cash flow in a way that makes sense.

There is also a huge potential for AI to help businesses make sense of heaps of data. Across field service industries, we're finding a growing demand from companies to better understand what their data is telling them. Two main drivers are pushing this need: a desire to operate more efficiently and customers demanding more proof of service, transparency and accountability from their contracts.

Even a smaller company manages data across customer service logs, inventory, scheduling, equipment maintenance and financial management. To bring all of this information together in a way that provides meaningful insights into patterns, trends and explanations is

no small feat. AI can help by sifting through massive amounts of data very quickly.

There is a caveat here. Many AI tools are public, which runs the risk of content replication, data breach or misuse. As such, sensitive data — company or customer data — should not be input into a public AI tool. AI should only be used for analytics if it is properly set up to process your data in a private, secure format.

SAVING COSTS

There's always a concern around profitability in field services. Inflation has increased expenses, shrinking already tight profit margins. Even as some industries price up, there's an inherent risk of customers feeling priced out of services, especially as the general population experiences decreasing per capita disposable income. So it's important to look to technology as a form of labor-saving equipment. Anywhere you can create efficiencies, improve response times and shave costs can help protect profit margins.

When looking specifically at AI, think about how it can make



vCam-6 HD Inspection System



vCamMX-2 Mini Inspection System



**vCam Inspection Cameras
the clear choice for video inspection**

Call us for a no-obligation on-site demonstration! **1-800-446-3392**

Vivax-Metrotech Corporation

📍 3251 Olcott Street, Santa Clara, CA 95054, USA

☎ +1-408-734-1400

✉ SalesUSA@vxmt.com

🌐 www.vivax-metrotech.com



Visit our YouTube channel to see actual videos

your employees' jobs easier, giving them more time to scale output. If it can be used to streamline customer inquiries and support, analyze customer data or support your sales outreach, that all translates to money and resources saved down the road. Even something as seemingly simple as using AI to summarize notes from a meeting can save valuable time.

A DIGITAL WORLD

While the topic of AI feels new and shiny, in actuality, a digital transformation has been going on in service-related industries for many years. It's important to remember that AI isn't the only tool available to help make your business more efficient. AI uses intelligence to analyze data and make informed decisions. But there have been tools in the market using advanced intelligence, turning intelligence into actions and creating workforce efficiencies for many years:

- Scheduling and route planning — Software tools can already use predefined rules to create optimized schedules based on historical data and incoming requests. From this, route optimization can ensure multiple technicians are routed to

their scheduled appointments with the most efficient drive and service time, increasing customer satisfaction while reducing windshield time and resource waste.

- Resource allocation and job costing — Software tools can already manage inventory, track supplies and forecast for future procurement needs. There are tools that specialize in job costing to help provide actual visibility into the profitability of each contract, so companies can prioritize labor and resources accordingly. Dynamic scheduling can also help control labor costs, while highlighting jobs at risk of additional resources, like overtime labor.
- Customer experience — Software tools leverage customer relationship management systems to manage, track and nurture leads and customers throughout your sales process. Combining CRMs with tools like integrated AI-powered chatbots and centralized hubs to manage customer communications and interactions — no matter if that interaction is an email, webchat or phone call — can ensure a seamless customer experience while also working to gain you new business.
- Data-driven insights — Software tools often include out-of-the-box reporting and analytic tools to help provide visibility into your business and make sense of it. This type of analysis also happens within the software itself, rather than opening proprietary information to public AI channels.
- Workflow optimization — One of the key benefits of using a software tool to digitally transform your business is that they are often built in industry-specific formats. Different software can cater to the unique needs of each, working to automate industry-specific tasks and workflows for greater efficiency. Depending on the scope of the software, these can include the bare minimum tasks you need to run your business — things like scheduling, managing employee time off, reporting, mobile accessibility, route optimization — to all-encompassing software that is designed to handle even more aspects of your company, such as financial management, human resources, sales, marketing and more.

While it will be exciting to see how AI helps shape this landscape further, the truth is that there is a digital transformation already well underway within field services. The trick to success is adopting proven technology now, so your business can scale and grow as future innovations make even more possible. **c**

Manufacturing Drain Cleaning Equipment for over 30 years

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



TM750



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



TM50



TM25

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



Various shaped and sized blades




COAST MANUFACTURING

541.684.0743

www.coastmanufacturing.com

ABOUT THE AUTHOR

Rick Agajanian is chief product officer for WorkWave, a leading provider of SaaS software solutions that support every stage of a field service business' life cycle. For more information, visit www.workwave.com.

HOOK UP

With All Your
Equipment
Needs



Call Toll-Free
1.800.325.3730
www.MilwaukeeRubber.com

Follow Cleaner on



[facebook.com/
CleanerMag](https://facebook.com/CleanerMag)



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



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



POW-R MOLE TRENCHLESS SOLUTIONS

www.powrmole.com

SINCE 1956



PD-33M

LATERAL PIPE BURSTING MACHINE

Replaces pipe from
2" – 6" in diameter

Non-slip, cylinder-
activated jaws prevent
cable damage

60,000 pounds
of pulling force

Easily disassembled
and reassembled
for manhole and
basement applications

Small footprint of
only 20" x 20"

FOR INFORMATION CALL: **800-344-6653**

STEERABLE • COMPACT • ECONOMICAL • PRODUCTIVE

PIPE BURSTING METHODS AND PROJECTS

By Craig Mandli

» HORIZONTAL DIRECTIONAL DRILLING

1 // AMERICAN AUGERS DD600

The DD600 maxi-rig directional drill from **American Augers** is equipped with a 755 hp Stage V/T4F/T3 CAT C18 engine that does not require diesel exhaust fluid, making it the only machine of its kind in this class. The simple exhaust system increases uptime and reliability, eliminating daily job site struggles with DEF. Additionally, the 755 hp engine allows for higher demand loads without challenging the engine capacity, and the Stage V engine classification meets emission standards for engines in Europe. The weight meets standard transportation requirements, meaning no special permits are required. It can also be transported without removing the wrenches, saving hours in assembly and disassembly time. A hydraulic catwalk helps expedite the time required to set up and tear down, as well as the number of people it takes to do so. 800-324-4930; www.americanaugers.com



» HYDROEXCAVATION

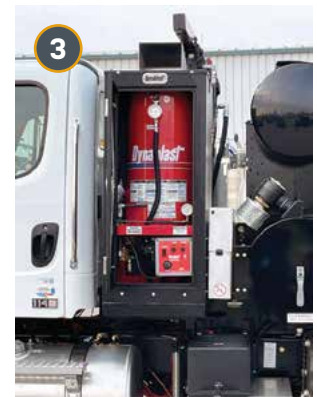
2 // DITCH WITCH WARLOCK W12

The Warlock W12 from Ditch Witch is a PTO-driven vacuum excavator that offers dual 600-gallon saddle tanks and a 12-cubic-yard debris tank, bringing increased capacity and performance to the job site. Available with a 5,000 cfm blower and 27 inches Hg of vacuum power, it helps operators take on bigger jobs and maximize job site uptime. 580-336-4402; www.ditchwitch.com



3 // DYNABLAST CAB420FLS-12V

The Dynablast CAB420FLS-12V water heater produces 420,000 Btu with an output temperature of 175 degrees F at 5 gpm to work in colder climates and for improved digging in clay-filled areas. All models come with Edison Testing Laboratories certification for safety, which also includes certification on the coil for higher efficiency and heat transfer, stainless steel target plate for increased coil life and designed with serviceability in mind with momentary override control. Its full cabinet design and 24-by-24-inch footprint are compatible with compact installations. 905-867-4642; www.dynablast.ca



4 // ENZ USA HYDRO X

The Hydro X nozzle from Enz USA is available in 3/8-inch NPT or 1/2-inch connecting threads, and it can function at up to 5,000 psi with flow as low as 8 gpm. It combines a powerful, oscillating water jet with a high debris removal rate. A tungsten carbide front jet ensures a longer life than ceramic jets can offer. For quick and easy maintenance, a repair kit is available. Due to the nozzle's simplicity, repairs can be made quickly and efficiently in the field with little downtime. For the operator's safety, a plastic cover provides protection against harsh and sensitive environments. 888-369-8721; www.enz.com





5 // GAPVAX HV33

Designed to safely transport water and debris in urban areas, the **GapVax HV33** is shorter, smaller and more compact than its predecessor. It is 30 feet long overall on a medium-duty chassis and includes a 600-gallon water tank, 6-cubic-yard debris body, 6- or 8-inch top-mounted telescoping boom with a 14- to 17.5-foot reach, 4,000 cfm power and an inverted, full-opening tailgate. 888-442-7829; www.gapvax.com



6 // HAAKER EQUIPMENT TRUVAC HXX

The **TRUVAC HXX** hydroexcavation truck, distributed by **Haaker Equipment**, utilizes pressurized water to break up soil and a powerful vacuum system to simultaneously extract debris, exposing pipes without causing damage. Its precision allows for a more accurate assessment of pipeline conditions, ensuring optimal planning for subsequent procedures. This equipment also excels in densely populated or confined urban areas, where space constraints demand a meticulous approach. Its nondestructive nature not only enhances safety but also accelerates project timelines by mitigating the need for extensive restoration. 800-200-3432; www.haakerunderground.com



7 // HI-VAC X-13

Contractors, municipalities and utility service providers depend on **Hi-Vac X-13** hydroexcavators to safely and efficiently trench for new sewer and wastewater lines with minimal disturbance to surrounding areas. They combine surgically precise hydroexcavating power with low-maintenance components that help minimize downtime. Simple, intuitive controls and quick access to all critical systems mean jobs get done faster. A 13-cubic-yard debris tank, up to 24,500-pound payload capacity and 1,140-gallon freshwater capacity, help reduce the number of costly job site returns. Power is provided by a 5,800 cfm, 27-inch Hg high-performance blower and a run-dry water pump that delivers 20 gpm at 2,500 psi. The 360-degree, top-mounted boom provides full accessibility in every direction, and a heavy-duty hydraulic vibrator provides fast and efficient unloading of the debris body. Designed for safe and easy operation, it only requires a short learning curve. 800-752-2400; www.x-vac.com



8 // HOTJET USA VAC'N JET SERIES

The **HotJet USA Vac'n Jet Series** of vacuum trailer jettors are compact and specially engineered to haul equipment and the spoils load, perform hydroexcavation, and clean valve boxes, storm drains and drain/sewer lines. They feature hot and/or cold water operation with a choice of engine options ranging from 23 to 70 hp and gas or diesel operation. They are equipped with premium triplex pumps, a 500-gallon spoils tank, up to 440-gallon water tanks, Gardner/Denver vac/blowers, a 4-ton hydraulic dump and a dual filter centri-clean filter system. They can also be custom engineered and designed to meet specifications. 800-624-8186; www.hotjetusa.com

9 // HYDRA-FLEX RIPSAW HD

The **Ripsaw HD** from **Hydra-Flex** is designed for the hydroexcavation industry to make potholing and digging easy. The 0-degree front stream rotates at an 18-degree cone of coverage, creating optimal angles to get jobs done quicker while using less water. It utilizes flow-straightening technology to ensure all water particles flow along one smooth path to create an efficient and powerful impact force. Built with heavy-duty coating, stainless steel housing and tungsten carbide wear surfaces, its long-lasting, premium components stand tall against frost, shale, rocky soil and more. Its coating is nonconductive, which provides extra safety for both users and underground utilities. It is designed to be repairable — not replaceable — to extend the nozzle's life so you're back up and running in only 10 minutes. 952-808-3640; www.hydrflexinc.com



10 // PACIFIC TEK AIR KING

The **AIR KING** air and hydroexcavation trailer from **Pacific Tek** is available with a 500- or 800-gallon-capacity debris tank made of carbon steel and sandblasted then powder-coated inside and out. It employs a 185 cfm compressor with 100 psi output connected to an air wand allowing the operators to return the spoils collected in the debris tank to the ground. The system also has a pressure washer system (4 gpm at 3,500 psi) in case the operators want to hydroexcavate for faster or deeper digs. A simple three-way valve selector switch is situated on the curbside of the trailer for easy toggling from vac to air to hydroexcavator functions. The trailer itself is made of carbon steel and is sandblasted then powder-coated like the debris tank. Options include a telescoping vacuum hose boom, reverse flow feature, LED work lamps, spare tire and mount, and a tool storage box. 800-884-5551; www.pacific-tek.com



11 // RAMVAC BY SEWER EQUIPMENT HX-12

The **HX-12** hydroexcavator from **RAMVAC by Sewer Equipment** has a 12-yard debris tank and a heated, secured equipment locker that contains the entire water system, including water tanks, for cold-weather application and tool security. This machine touts a directional discharge system with the ability to offload debris back into the excavation site when done, without the mess of dumping the tank. This system also allows operators to blow any obstructions out of the dig hose and get back to work. It includes a long-range wireless remote, NEMA 4 electrical system, an 800,000 Btu water heater and a three-stage cyclonic filtration system. The standard 4,400 cfm blower will match the performance of larger blower machines while delivering fuel economy with the ability to go up to 5,400 cfm. The series offers debris capacities from 3 to 15 cubic yards while maintaining a short overall footprint. 888-477-7638; www.ram-vac.com



12 // RIVAL HYDROVAC T7 TANDEM AND T10

The **T7 Tandem** from **Rival Hydrovac** was designed primarily to be loaded with debris and drive within legislated road limits with most types of debris on board. The unit comes standard with a scale that reads real-time weights in the cab and on the wireless remote. The T10 is built with the same features and operating system, but with larger capacities and components. It is for both utility and industrial work. It is available in three chassis layouts to meet weight restrictions in a given area. An air compressor option allows for excavating with air when required, while a truck-mounted coring system allows for removal of hard surfaces prior to nondestructive excavating. 403-550-7997; www.rivalhydrovac.com



CONTINUED >>

PEARPOINT



SCAN TO LEARN MORE



Simple. Fast. Smart.

flexiprobe™ P540
PORTABLE VIDEO INSPECTION EQUIPMENT

www.pearpoint.com

+800.688.8094

pearpoint.sales.us@spx.com

ALLAN J. COLEMAN
SINCE 1905

5725 N. Ravenswood Ave. • Chicago, IL 60660
6003S 40th St., Ste. #5 • Phoenix, AZ 85042

Call Us Today! Chicago 773-728-2400
Phoenix 602-638-0600

OLDEST NAME IN THE BUSINESS — Over 115 YEARS OLD

info@allancoleman.com • www.allancoleman.com



DIRECT HIT

The C38rs

The safest way to enter an unknown blockage



Products Manufactured By



Eagle 300 Trailer Jetter

20 GPM @ 4000 PSI

Products Manufactured By JETTERS NORTHWEST

Mountable or Portable - Skid/Cart



9 gpm @ 4000 psi

PICOTE Stocking In Both Locations

Repair Center for: RIDGID ProPress & SeeSnake, Gen-Eye, Electric Eel, and Hathorn cameras

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

We Have RIDGID Parts!



13 // SUPER PRODUCTS MUD DOG 700

Mud Dog 700 vacuum excavators from Super Products are designed to meet the challenges of compact, urban projects as well as large-scale excavation projects. They offer a compact footprint for excavation in urban environments while maximizing payload and maintaining the power and precision that larger units offer. The unit features a 7-yard debris body and 600-gallon water tank. This model comes standard as a dump body with an electric vibrator offering a 50-degree dump angle with the capability of dumping into a 48-inch container. Additionally, it is equipped with a rear-mounted, extendable, 8-inch-diameter boom that reaches 18 feet, has 270-degree rotation and pivots 10 degrees downward, which minimizes job site restoration and eliminates traffic congestion near roads. 800-837-9711; www.superproducts.com



14 // VAC-CON MUDSLINGER MS800

The Mudslinger MS800 trailer-mounted hydrovac from Vac-Con is designed to provide the same power, suction and capacity of a truck hydroexcavator on a portable, pull-behind trailer. It includes the choice of Tier 4 diesel or gas engine options providing up to 1,190 cfm and 16 inches Hg with a PD blower and 325 gallons of water. It has an 845-gallon debris tank and a 9-foot boom with 24 inches of hydraulic extension providing a full range of motion. It is designed to be a standalone unit, but can also provide support to construction, HDD and public utility fleets. A variety of applications include daylighting, potholing, culvert and manhole cleaning, and utility locating. 904-284-4200; www.vac-con.com



15 // VACALL ALLEXCAVATE AND ALLEXCAVATE2

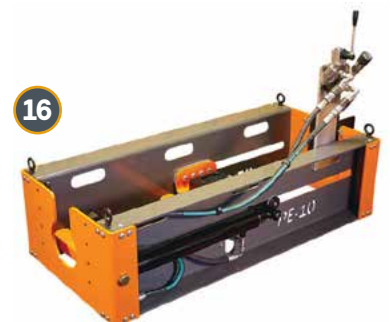
Vacall AllExcavate and AllExcavate2 machines feature standard intelligent controls and easy startup operation. Both models are designed to efficiently remove dirt around utility lines and foundations. Water pumps generate 24.5 to 120 gpm and pressures to 3,000 psi. The AE2 model adds air excavation at 185 cfm and dual psi of 110 and 150. Water system, wand, control panel, tools and worker apparel are protected in a heated compartment. An AllSmartFlow CAN bus control system features a programmable LCD that monitors engine, water flow, air pressure and vacuum performance for precise boom and reel adjustments. Aluminum water tanks with lifetime warranty carry 1,000 to 1,300 gallons. Galvanized debris tanks have a supreme finish and are available with 8-, 10- and 13-cubic-yard capacities. They use one engine to power the chassis and excavation functions, designed to reduce service and operation costs. 800-382-8302; www.vacall.com



>> PIPE BURSTING TOOLS

16 // PE EQUIPMENT PE-10

The PE-10 from PE Equipment is a multifunction trenchless machine, primarily built for water and lead line replacement, utilizing a single chassis with interchangeable modules, and a no-weld structural design. The modular chassis allows it to perform the functions of multiple machines, providing speed and flexibility when on job sites with difficult situations typically requiring multiple machines. The no-weld structural design allows for the replacement of any part by the user. It has the ability to change functions from a pipe bursting to rod-pushing module in 10 minutes. It has a small footprint under 4 by 2 feet, along with a lightweight chassis that can be carried by two people. It has a fast push/pull speed, capable of up to 13 feet per minute depending on conditions. 406-499-8136; www.pe-equipment.com



CONTINUED >>



TRIC®

For trenchless replacement of pipes from 2" to 12" diameter, including upsizing, TRIC puts the most power and value in the smallest package. Call or visit our web site or social media to learn more.

888.883.8742

www.trictools.com

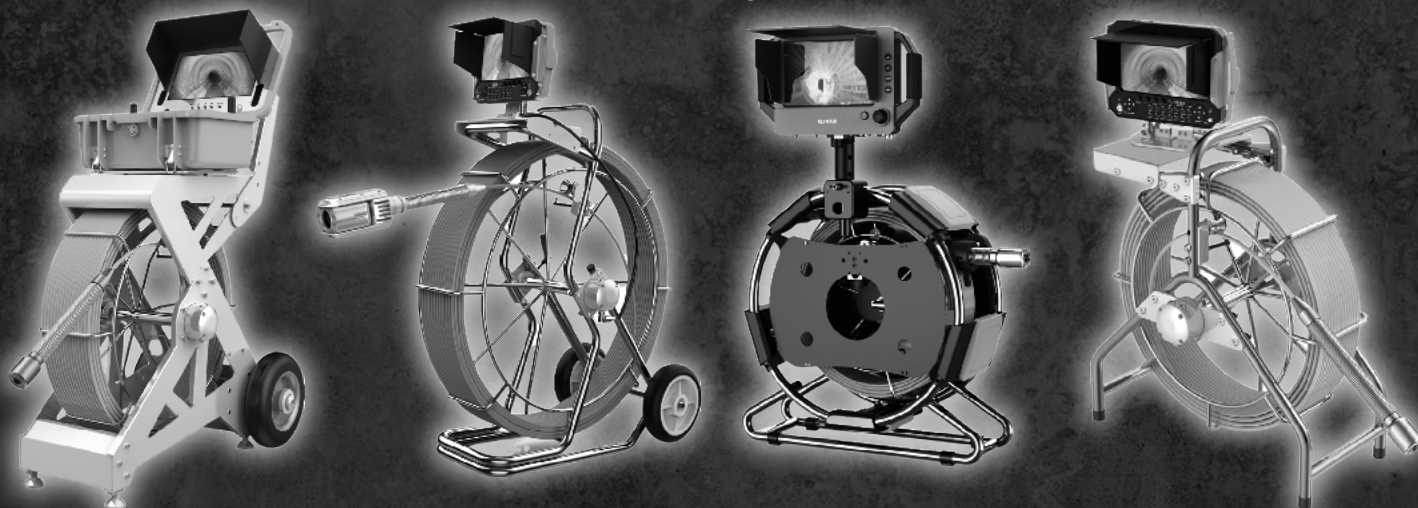
[instagram.com/trictoolstech](https://www.instagram.com/trictoolstech)

FORBEST

FORBEST PRODUCTS CO.

WELCOME TO THE FORBEST HD ERA

High Definition Imaging, with the same Affordability, Customization and Service you are used to.



FORBEST

www.ForbestUSA.com

Western USA:

44130 Old Warm Springs Blvd, Fremont, CA 94538

TF: 1 877 369 1199 P: 510 226 7988

Eastern USA:

810 Interchange Blvd, Newark, DE 19711

Canada:

44 E Beaver Creek Rd, Unit 6, Richmond Hill, ON L4B 1G8

TF: 1 877 369 1199 P: 905 709 6226

17 // POW-R MOLE TRENCHLESS SOLUTIONS PD-33M

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



18 // RODDIE R8

The R8 pipe bursting system from RODDIE is easy to use and lightweight, can be set up vertically or horizontally and can also be adjusted to use three different size cables. This unit can replace 1-, 2-, 3-, 4-, 6- and 8-inch pipes with ease and speed. Inexpensive cable-grabbing inserts last 70 to 120 jobs, which reduces costs. High-quality tool steels on articulating bursting heads promote rare resistance for long-lasting service. The pulling rate is 8 feet per minute and is hydraulically powered from your tractor, providing a pulling force of 30 tons. The wireless remote system is reliable and has a signal strength that moves through any cellar wall. Maintaining the system is simple, as the user only needs to rinse off and re-grease six Zerk fittings. 888-406-3821; www.rodddieunderground.com



19 // TRIC TOOLS X30

The versatile X30 pipe bursting system from TRIC Tools features a revised pulling bridge design plus cylinder body refinements that make it lighter and stronger than previous models. The latest HC14 hydraulic power-pack delivers over five times the speed of previous pumps used with earlier equipment. Recent improvements include heavy-duty wheels and frame, double-acting handles for extra portability in difficult field situations, a wireless remote control, and a special circuit to power hydraulic tools such as jack-hammers, trash pumps and concrete saws. 888-883-8742; www.trictools.com



>> SHORING

20 // NATIONAL TRENCH SAFETY ULTRASHORE

UltraShore aluminum excavation shielding from National Trench Safety has a lightweight, yet robust design that streamlines the installation process and provides excellent lateral pressure resistance protecting workers in excavations up to 12 feet deep. Its modular pin-together design facilitates quick and simple modifications to accommodate many situations, enhancing adaptability on the job site. The system's efficient assembly, disassembly and reconfiguration contribute to substantial time savings. Accessories include wheel kits for effortless maneuvering in a trench, legs to hold the shield off the bottom of the excavation, spring-operated end panels to shield up to four sides, stacking panels to increase shield height, and custom-built panels and struts to accommodate special applications. 832-200-0988; www.ntsafety.com



LEAD WATER LINE SOLUTIONS

Pipe Burst
and
Rod Push
service lines with
One Machine



- Push/Pull rate:
13' per minute
- Rod Push/Pipe Burst
up to 3" water lines

Simple
Modular
Effective
Trenchless Waterline
Rehabilitation



PE
EQUIPMENT
www.pe-equipment.com
406-499-8136

CAM *Spray* **WORKING WELL UNDER PRESSURE**

Building Drain and Sewer Equipment since 1981.

PRICES GOOD THROUGH MAY 1ST OR WHILE QUANTITIES LAST

NEW



4008H Power Unit

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

Just Add A Tank!

\$12,719 plus freight

3012H Power Unit

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

\$13,159 plus freight

4008H Compact Skid

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

(100 GALLON TANK)

\$14,129 plus freight

3012H Compact Skid

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

(100 GALLON TANK)

\$14,579 plus freight

NEW



NEW



RCJ4008H

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

(30 GALLON TANK)

\$8,539 plus freight

NEW



LJ4008H

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

(30 GALLON TANK)

\$8,399 plus freight



VM4008H

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

(130 GALLON TANK)

\$13,399 plus freight



VM3012H

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

(130 GALLON TANK)

\$13,899 plus freight

TRAILER MODELS AVAILABLE
through 25 gpm @ 4000 psi

All Jets Shown Come with Pulse Valve, 2 Jet Nozzles,
Tool Box, Gloves, Safety Glasses, Tip Cleaner, Tiger Tail,
Wash Down Trigger Gun with Nozzles.

Pressure Washers & Drain Jetting Equipment

We Build Electric, Gas and Diesel powered models
up to 4000 psi, flows up to 40 gallons per minute.

Don't see exactly what you want...

We will custom build exactly what you want!

800-648-5011 | www.camspray.com | sales@camspray.com

PRODUCT SPOTLIGHT

CHAIN SNAKE OFFERS CLEANING ABILITY IN VARIOUS-SIZED LINES

By Craig Mandli

The free space on your work truck is limited. So having to carry the appropriate chain snake to deal with clogged lines of various sizes isn't necessarily ideal. Neither is running back to the shop if you don't have the right snake with you. Fortunately, Milwaukee Tool is offering the ability to clear clogs in more drainlines at larger capacity with the M18 FUEL High Speed Chain Snake for 1 1/2- to 4-inch pipes.

"Currently, users are forced to invest in multiple chain snakes to clear all line sizes they encounter, requiring a large investment and taking up more space on their van," says Lauren LaBreck, product manager for Milwaukee Tool. "Our M18 FUEL High Speed Chain Snake has the capability to clear clogs in 1 1/2- all the way to 4-inch drainlines, along with 75 feet of cable to tackle clogs farther down the line."

Delivering full power at max distance, the chain snake can descale up to 75 feet out. It features a variable-speed dial and durable electronic foot pedal for more control in the line, along with a mechanical clutch to protect the cable in the application. The partially enclosed drum allows for mess containment and easy access for cable cleaning and field repair. The telescoping handle paired with the durable wheel base gives users the portability needed for easy transportation. With the power to complete multiple jobs on one charge, the unit can clear up to 150 feet of scale build-up when paired with the included M18 REDLITHIUM HIGH OUTPUT HD 12.0 battery packs.

"This allows users to do the job that historically required two tools,



with just one — setting a new standard in productivity," LaBreck says. "As a part of our M18 system, the battery technology allows drain cleaning professionals to eliminate the hassle of extension cords, finding electrical outlets, and unreliable drill connections, providing access to power anywhere."

As a partner product to the high-speed chain snake, Milwaukee also launched 1 1/2-, 2-, 3- and 4-inch standard chain knockers, as well as 1 1/2-, 2-, 3- and 4-inch carbide chain knockers, both for 5/16-inch chain snake cable. The standard chain knockers are optimized to clear grease and soft blockages and are best used in PVC, clay or fragile pipes. The carbide chain knockers can tackle scale buildup, hard deposits, grease, and tough blockages and are best used in cast iron and other hard-walled pipes. All the new chain knockers have a rust-guard coating and feature stainless steel set screws for corrosion resistance. **800-729-3878; www.milwaukeetool.com**

1 // SUPERIOR SIGNAL 5E FLEX BATTERY-POWERED SMOKE BLOWER

Superior Signal's 5E FLEX battery-powered smoke blower is designed for smoke-testing building plumbing and laterals to quickly find faults, odors, leaks and inflow. The 5E FLEX is compatible with leading 18- to 20-volt tool batteries utilizing a high-quality power adapter. The 5E FLEX smoke blower integrates with existing electric toolsets or can run off any 12- to 24-volt DC power source. Smoke-testing is a cost-effective solution ideal for hard-to-find faults in commercial, residential and municipal facilities. While the 5E blower is popular for a variety of plumbing applications, it is also particularly useful in testing sewer laterals, showing where a fault or leak may occur on private property. Made in the USA, the 5E FLEX comes with an 8-foot industrial grade hose. Used with 1A or 2B Superior smoke candles, it creates 4,000 or 8,000 cubic feet of smoke respectively. Superior Smoke candles are also sold in convenient SealPac cans that extend shelf life. **732-251-0800; www.superiorsignal.com/crflex**



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

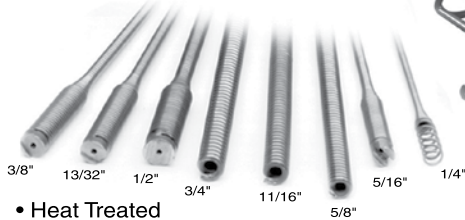
And they have for over 50 years

KEN-WAY CABLE CLEANERS

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



KEN-WAY Exclusive Built Cables



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



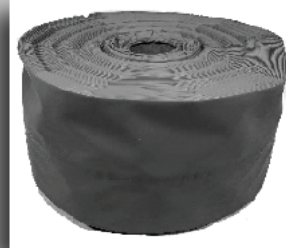
Leasing plans available. Call for details.
1-800-533-0551

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

BLACKHAWK Trenchless Superstore

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

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



Pipe Lining Materials

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



Point Repair

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



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

Pipe Cleaning

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



RENSSI[®]
DRAIN CLEANING EQUIPMENT

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

Call for knowledgeable
support and fast shipping!

630-326-9061

2



2 // STONEAGE SENTINEL OS2 TECHNOLOGY CONTROLLER

The Sentinel OS2 can lessen the burden of training new operators with its user-friendly setup and enhanced user interface. And it takes fewer technicians on the job with Sentinel OS2's automated features like boundary clean and obstacle avoidance. The latest operating system comes installed on all new Sentinel-enabled systems, like the AutoBox 1L and AutoBox 3L. Along with the simplified user interface, OS2 uses machine learning to become more intelligent and accurate as it goes, so you can swap your setup time for cleaning time. The controller now displays a real-time visual diagram of the tube sheet, enabling efficient cleaning without requiring a direct line of sight. And the OS2 can automatically steer around plugged tubes and other obstructions during cleaning, preventing equipment damage. 866-795-1586; www.stoneagetools.com c

CLASSIFIEDS

see photos in color at www.cleaner.com

BLOWERS

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

BUSINESSES

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

Business For Sale: Sewer cleaning, plumbing and sewer repairs/service business. Owner is retiring, been in business since 1975. All equipment goes, trucks, sewer jetting, backhoes, trailers, dump trucks etc. Located in Eastlake, Ohio. 440-946-6405 (C04)

CATCH BASIN CLEANER



1991 Mack CS3 Stetco new batteries. Works every day.\$18,000.00
631-960-1550 C04

DRAIN/SEWER CLEANING EQUIPMENT

CCTV trucks & jet vacs for sale. Prices reduced. Prices reduced for a quick sale.

Go to www.spands.net for details and photos OR call Mark at **708-475-7117** C06

JET VACS



2009 International Vactor 2100 12YD PD Blower 80 gpm @ 2000, Automatic, Hydroexcavator. We can ship worldwide.....\$44,900.00
1-800-627-0778 C03



Vactor 2116 on 1991 Ford L8000. 173K Miles. Vactor 2-stage fan, 100GPM@2000psi pump. 1300 gals aluminum water tanks, 16-yard stainless steel debris body, and hydraulic rear door. 7.8L L6 Ford Turbo Diesel. Cummins 6BT Diesel Rear auxiliary engine. Allison Automatic transmission.....\$65,000 OBO.
860-274-7338 C04



2016 VacAll AJV1215 Jet/Vac Truck with 12 yard debris body and 1500 gal of water. 87 Gal/min @ 2000 PSI General pump and 824 Roots 18" Blower. \$250,000 Contact Kyle for additional pictures or questions.
kyle@accujetiowa.com
515-505-0755 C05



1997 Ford Vac-Con. Jet vac. Diesel. 10-yds tank.....\$32,000 OBO.
845-548-7377 C04

2024 US Jetting 4018-300 Jet Trailer. Stock# 14080. www.vacuumsalesinc.com (888)VAC-UNIT (822-8648) (CBM)

2024 Freightliner 114SD cab & chassis with a Vacall AJV1215 combination unit – 12 cubic yard debris & 1,500 gallon water – Roots 824 blower with General 87 GPM @ 2,000 PSI water pump (coming in August) Stock# 14098 www.vacuumsalesinc.com (888)VAC-UNIT (822-8648) (CBM)

JETTERS – TRAILER



2013 747-FR2000 Sewer Equipment Jet Trailer, CAT Diesel, 40 GPM @2000 PSI, Myers Pump, 700 gallon water tank, new 3/4"x600'x2500 PSI hose.
Contact
matt@midwestvacproducts.com
or call 618-781-3138 C04



The HotJet® is a best-selling hot- and cold-water drainline cleaner featuring a 35hp Vanguard engine by Toyota and delivering 10gpm @ 4,000psi that cleans drains up to 300' and 12" in diameter. The HotJet II® is American made using nonproprietary parts for affordability and ease in serviceability making its return on investment truly impressive. Prices subject to change. Financing available. Contact us for current pricing and availability
800-624-8186;
sales@hotjetusa.com;
www.hotjetusa.com CBM



2004 US jet trailer 4000/18 In good working condition. Brand new 500' of hose. Still working today.....\$18,000
631-960-1550 C04

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

PIPE BURSTING EQUIPMENT

TRIC X30 pipe bursting system with 4 ft. head-compatible with 2",3",4", and 6" head. Brand new-purchased 3 years ago-never out of crate due to pandemic conditions and health issues. Bought new at \$38,948. Will sell for \$32,690. Contact Roto-Rooter Plumbing Service, Potsdam, NY Email danbronson@nny.com (C04)

PIPELINE REHABILITATION



2008 Cues T/V Cutter truck. Ford F-650 XL Super Duty Cummins Diesel. Approx 40,000 miles. VanAir under carriage compressor. Great shape. Also have Cues TV cutter trailer and other rehab and sewer maintenance equipment available. Call For more details.

Kelly (608)835-7767 CBM

POSITIONS AVAILABLE

Long Island/NYC based DRUG FREE Contracting Company seeking Operators experienced in sewer system cleaning of pipelines and structures. Must have understanding of sewer systems with ability to read and understand construction drawings. OSHA 10 hour and Confined Space Training Certifications required. Clean CDL Class B required, mechanical background a plus. Email resume to: employeeinfo10@gmail.com (C04)

PUMPS

Vactor, General, Myers, Giant & others – New & parts also. Cloverleaf Tool Co., Sarasota, Florida. Phone 941-739-0707; Email: sales@cloverleaftool.com. (CBM)

RENTAL EQUIPMENT

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

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

TOOLS

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

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

YOUR SOURCE FOR RIDGID®



**SeeSnake® TruSense™
Camera Reel**



**CS12x Digital
Reporting Monitor***



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



**SeeSnake® Compact M40
Camera System**



**CS65x Digital
Reporting Monitor***



**SeeSnake® MAX
rM200 Camera
System
*With Wi-Fi**



microDrain Reel



**CS6xVersa Digital
Recording Monitor***



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

BUYING A SEESNAKE?

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

**WE
WILL NOT BE
UNDERSOLD**

– Call Evenings **Keith: 405-602-9155**
and Weekends – **Ryan: 719-243-3539**

CALL TOLL FREE: 888-947-8761

5037 NW 10th • Oklahoma City, OK 73127

www.centralwinnelson.com

TV INSPECTION



2008-2018 Ibak, Cues, Aries Mainline and lateral equipment and trucks available.

Contact **Eric King 765-242-9103** or **eking@midwest-tech.net**

C05

CAMERA OPERATORS, STOP SPINNING YOUR WHEELS IN GREASY PIPE! After-market gritted polymer wheels, steel carbide wheels, gritted and treaded tracks, tow cables, kiel sticks and more. Fitting Aries, CUES, Envirosight, Ibak, Rausch, RST, Schwalm & IDTec. **ORDER TODAY** at www.TruGritTraction.com; info@trugrittraction.com; 407-900-1091 (CBM)

NEED TRACTION? We make aftermarket gritted/gripping pads for all chain-driven camera transporters. Custom fabrication secured to a high-quality, nickel-plated carbon-steel chain that doesn't stretch. Also have non-gritted pads, wheels, and tires for all different brands. Pad samples upon request. **Pipe Tool Specialties LLC:** 888-390-6794; Fax 888-390-6670; pipetoolspecialties.com or email pts4422llc@gmail.com (CBM)

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

WATERBLASTING

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

RAT OUT YOUR ROOT PROBLEMS



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

- Uniquely designed nozzles for big sewer line headaches roots and encrustations in all sorts of pipe.
- Interchangeable heads: chain rotor or cable rotor.
- Simplified service means extra uptime.

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



www.rootrat.net



**MADE IN
THE USA**

PLACE YOUR AD ONLINE AT www.cleaner.com

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

VAN PACK JETTERS

12 GPM @ 3500 PSI



OPEN JETTER TRAILERS GROUNDHOG JETTER



20 GPM @ 4000 PSI

ENCLOSED JETTER TRAILERS (Hot Water)



VACUUM TRUCK HEATERS

440,000 BTU to 4,000,000 BTU



YouTube
www.youtube.com/easyklean

1-800-315-5533

www.easyklean.com

sales@easyklean.com

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

WOLVERINE
DRY STEAM GENERATORS



20/30/40/50 BHP

Up To 2,000,000 BTU

- Curing
- Thawing
- Degreasing
- Degassing
- Melting
- Cleaning & Restoring
- Prepping Surfaces for Paint
- Purifying
- Weed Control

YouTube
www.youtube.com/easyklean

1-800-315-5533

www.easyklean.com sales@easyklean.com

OUR BEST SELLING DRAIN LINE JETTER!

HOTJET II

10GPM @ 4000 PSI • 35HP VANGUARD

Cleans 2-12" Drains with Hot OR Cold Water



TRAINING AND FREE WARTHOG NOZZLE INCLUDED!

HotJetusa
1-800-624-8186
WWW.HOTJETUSA.COM

PRICES SUBJECT TO CHANGE - CALL FOR CURRENT PRICING

DYNAMIC REPAIRS

We Repair:

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

New & Refurbished Inspection Equipment For Sale

Rental Equipment Available
Daily & Weekly Rates

Ask About Our 48-Hr. Turn Around Time

INSPECTION CAMERAS ARE OUR ONLY BUSINESS!

973-478-0893

DYNAMIC REPAIRS

40 Arnot St., Unit 20
Lodi, NJ 07644

dynamiccablerepairs@yahoo.com
www.dynamicrepairs.biz



Cua Claws

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

We resurface all makes of steel transport wheels

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

T&T Tools, Inc.
800-521-6893



CALL for a FREE Catalog

Many Styles Available

Insulated Soil Probes (for locating)

Heat-Treated Hooks (for covers, lids, etc.)

www.mightyprobe.com

AMERICAN JETTER.COM



Up to 67% MORE EFFICIENT



51T Trailer Jetter Hot or Cold
20 GPM @ 4000 PSI
76 HP Kohler EFI
FREE Shipping/Delivery



58 Trailer Jetter Hot or Cold
10 GPM @ 4000 PSI
38 HP Kohler EFI
FREE Shipping/Delivery

866-944-3569



cleaner.com

- > Classifieds
- > E-zines
- > Product Categories

MORE?!

Cleaner

More Stories at Cleaner.com/featured
See what's not in print!

T&T TOOLS

T&T Tools, Inc.

Fax: 800-521-3260

Email: sales@mightyprobe.com

800-521-6893

www.MightyProbe.com

MADE IN THE USA | 30 YEARS OF EXPERIENCE | FAMILY BUSINESS

Call for a **FREE** Catalog



Call for a **FREE** Catalog

HOOKS...

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

PROBES...

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

WE WON'T BE BEATEN ON SEESNAKE PRICING



THE CABLE CENTER

1-800-257-7209

***LARGEST
FACTORY-AUTHORIZED
REPAIR CENTER OF SEESNAKE***

***FULL CATALOG OF RIDGID
REPAIR PARTS AND ACCESSORIES***

***24 HOURS
TURNAROUND
ON REPAIRS***

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

THE CABLE CENTER 1/2 OPEN - M-F, 7AM-3:30PM CST St. Louis, MO • 314-993-3099 • www.TheCableCenterInc.com

Electric Eel celebrating 85th anniversary

Electric Eel Mfg., based in Springfield, Ohio since 1939, is celebrating its 85th year in 2024 as manufacturer of professional drain and sewer cleaning equipment. Known as the originator of the Model C dual cable sectional drain cleaner, Electric Eel steadily grew and expanded its product line over the years at its Ohio manufacturing facility. Electric Eel's current product line includes a wide range of electric- and gas-powered sectional drain cleaning machines, drum-style machines, high-pressure water jetters, pipeline inspection camera systems and locators.

Matt Timberlake to lead Applied Felts after Vortex acquisition

Matt Timberlake will assume the role of president at Applied Felts following its acquisition by Vortex Companies. With over 30 years' experience in the underground utility sector, Timberlake brings extensive experience and strategic acumen to lead Applied Felts, including MaxLiner and FerraTex Solutions, into a future marked by growth and success. He joined the Vortex executive team in 2019 after the acquisition of Ted Berry Co., his family business. Timberlake previously served as the senior vice president of Shared Services, and played a crucial role in enhancing efficiency and transparency across product and service divisions.



Matt Timberlake

Scorpion and ServiceTitan enter into strategic partnership

Scorpion, a provider of digital marketing solutions for local businesses, and ServiceTitan, a software platform built to power the trades, announced a strategic partnership. The collaboration will position Scorpion as the sole preferred digital marketing partner for ServiceTitan, and ServiceTitan as Scorpion's sole preferred software

partner for home services. Scorpion and ServiceTitan will work together to develop new product offerings to help businesses attract more leads, acquire more customers and generate repeat business. ServiceTitan includes the Aspire and FieldRoutes platforms.

Reline America launches new website, look and logo

Reline America launched its new website and updates to its branding and product line. The new website features a user-friendly interface and provides visitors with easy access to information about Reline America's products and services. In addition, the website also includes an educational blog section, where visitors can learn more about the latest trends and advancements in the trenchless pipe rehabilitation industry. The blog will be regularly updated with informative articles and resources to help customers make informed decisions about their pipe rehabilitation needs. Along with the new website, the company is also unveiling a fresh new look and logo. The updated branding reflects the company's commitment to innovation and excellence in the industry.



Michael Hoffmaster



Trey Hesselschwardt

OBIC announces new promotions

Dustin Schlachter, CEO and chief visionary officer of OBIC, announced several staff updates. Michael Hoffmaster was promoted to vice president of business development. He previously served as director of business development. Trey Hesselschwardt was also promoted to director of corporate training. Hesselschwardt previously shared his responsibilities between OBIC and Advanced Rehabilitation Technology overseeing safety and certified installer training for many years. He will report directly to Schlachter. **c**

Get new content right to your inbox!



www.Cleaner.com/alerts

HAVE A STORY IDEA?

Email us at editor@cleaner.com

CELEBRATING 35 YEARS OF THE #BESTTRUCKSINTHEBUSINESS



GapVax®

GapVax custom builds to meet YOUR needs. Industrial vacuum equipment built FOR THE OPERATOR, BY THE OPERATOR. Air movers, hydro excavators, combination jetvac, recycle jetvac, trailer jettors, skid mounted vacuum units, parts and accessories - we've got what you need! Give us a call today to request a demo or speak with a sales manager!

Stay up to date with us on social to see where we're going next!

281-884-8658
LA PORTE, TX



GAPVAX.COM

888-442-7829
JOHNSTOWN, PA



NEW PRODUCT ANNOUNCEMENT COMING SOON!!! STAY TUNED!!

MACHINES
AS THAT WORK
HARD
AS YOU DO



OFTEN IMITATED
NEVER
DUPLICATED



MODEL 727



MODEL 100



MODEL 1065



MODEL 300



MODEL 717

You need tools you can count on to get the job done.

Only one name in the industry is known for tools that don't quit, even after quitting time. Spartan Tool is proud to outfit the toughest professionals in the industry who rely on our machines to get to job done, time after time.

payments as low as

\$95
per month*



SCAN ME

Work now, pay later.

Work now, pay later with payments as low as \$95 per month on cable machine packages and cart jettors from Spartan Tool. Start making money immediately when you finance your cable machine package through our partners at Apex Commercial Capital. *Prices before tax and shipping. Subject to credit approval.

SPARTANTOOL.COM
800.435.3866