

CONTRACTOR®

SERVING PLUMBING, HYDRONIC & MECHANICAL SYSTEMS PROFESSIONALS

PLUMBING | PIPING | HYDRONICS | RADIANT | BATH/KITCHEN | TECHNOLOGY | TOOLS | TRUCKS | GREEN | MANAGEMENT

Pre-Insulated Piping Aids Rise to the Top for Craft Brewer

■ BY KATHERINE BONAMO

In 2011, Tree House Brewing arrived on the craft beer scene with a bang. By 2013, its now-famous "Julius" IPA had cracked *Beer Advocate's* prized Top 250 List. By 2020, Tree House was the largest brewer in Massachusetts outside Boston—without traditional distribution. To this day, the only way to drink Tree House beer is to collect or consume it on site, at one of five New England locations—

➤ **Turn to Brewer, page 18**



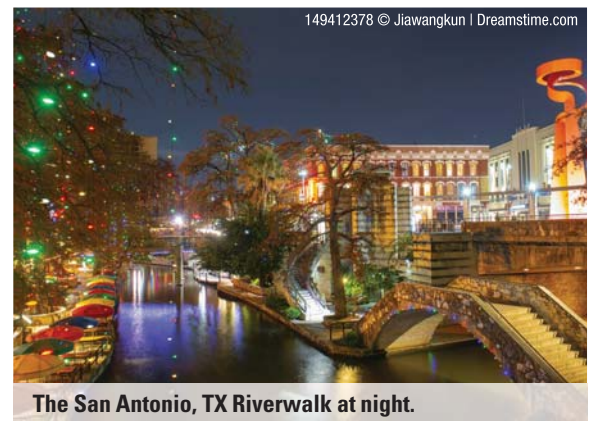
Angela Sampaio, Bob Tedder and Luke Leger visit the Charlton facility.

IAPMO Concludes 94th Annual Education and Business Conference

■ SPECIAL TO CONTRACTOR

SAN ANTONIO, TX — The International Association of Plumbing and Mechanical Officials (IAPMO®) last week conducted its 94th annual Education and Business Conference at the Hyatt Regency San Antonio Riverwalk Hotel. The event was co-located with ASSE International's Annual Meeting and the American Rainwater Catchment Systems Association's (ARCSA) Annual Conference.

➤ **Turn to IAPMO, page 16**



The San Antonio, TX Riverwalk at night.

AHR Expo Announces 2024 Innovation Awards

■ SPECIAL TO CONTRACTOR

The Innovation Awards is an annual competition co-sponsored by the AHR Expo, ASHRAE, and AHRI. The awards recognize the most innovative and original products, systems and technologies showcased at each year's AHR Expo.

Products go head-to-head in the following categories: building



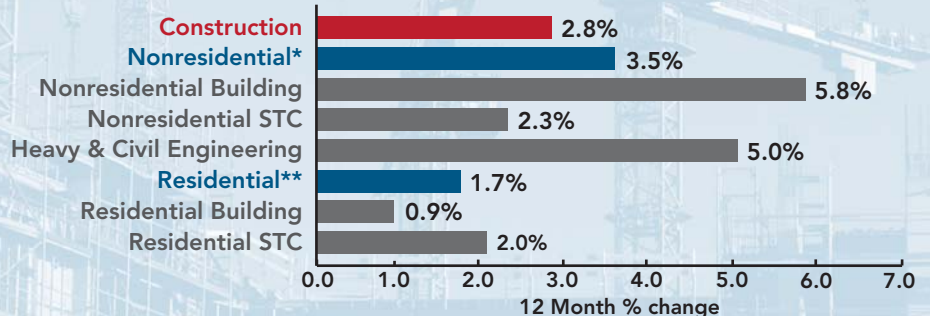
automation; cooling; heating; indoor air quality; plumbing; refrigeration; software; sustainable solutions; tools & instruments;

➤ **Turn to AHR, page 42**

CONTRACTOR INFOCUS

Construction Employment Growth:

September 2022 vs. September 2023



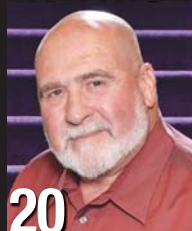
*Includes nonresidential building, nonresidential STC, and heavy and civil engineering

**Includes residential building and residential STC

Source: Bureau of Labor Statistics

ID 10618326 © Marco Richter | Dreamstime.com

IN THIS ISSUE



20
Schwartz on
MANAGEMENT



28
Linhardt on
HYDRONICS



34
Feldman on
TECHNOLOGY

FEATURE

24
Propane Autogas
Offers Versatility, Reliability

PRODUCTS

46 F-150 Lightning PRO



6 **12 Additions to Mega Project Program**
Biden Admin. acts to expand equal opportunities.

22 **Is an ESOP Right for Your Business?**
We talk with Jeff Buettner of ButcherJoseph & Co.

Digital Edition Copyright Notice

The content contained in this digital edition (“Digital Material”), as well as its selection and arrangement, is owned by Endeavor Business Media, and its affiliated companies, licensors, and suppliers, and is protected by their respective copyright, trademark and other proprietary rights.

Upon payment of the subscription price, if applicable, you are hereby authorized to view, download, copy, and print Digital Material solely for your own personal, non-commercial use, provided that by doing any of the foregoing, you acknowledge that (i) you do not and will not acquire any ownership rights of any kind in the Digital Material or any portion thereof, (ii) you must preserve all copyright and other proprietary notices included in any downloaded Digital Material, and (iii) you must comply in all respects with the use restrictions set forth below and in the Endeavor Business Media Privacy Policy and the Endeavor Business Media Terms of Use (the “Use Restrictions”), each of which is hereby incorporated by reference. Any use not in accordance with, and any failure to comply fully with, the Use Restrictions is expressly prohibited by law, and may result in severe civil and criminal penalties. Violators will be prosecuted to the maximum possible extent.

You may not modify, publish, license, transmit (including by way of email, facsimile or other electronic means), transfer, sell, reproduce (including by copying or posting on any network computer), create derivative works from, display, store, or in any way exploit, broadcast, disseminate or distribute, in any format or media of any kind, any of the Digital Material, in whole or in part, without the express prior written consent of Endeavor Business Media. To request content for commercial use or Endeavor Business Media’s approval of any other restricted activity described above, please contact the Reprints Department at (877) 652-5295. Without in any way limiting the foregoing, you may not use spiders, robots, data mining techniques or other automated techniques to catalog, download or otherwise reproduce, store or distribute any Digital Material.

NEITHER Endeavor Business Media NOR ANY THIRD PARTY CONTENT PROVIDER OR THEIR AGENTS SHALL BE LIABLE FOR ANY ACT, DIRECT OR INDIRECT, INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OF OR ACCESS TO ANY DIGITAL MATERIAL, AND/OR ANY INFORMATION CONTAINED THEREIN.

BREAKTHROUGH TECHNOLOGY

"Flexi-Rooter's ClogChopper rips open a hole for the chain knocker to work. It's a great product."

Seth Mikulin • SureFlo Sewer & Drain

Flexi-Rooter®



ClogChopper
with carbide
tip cutter

Flexi-Rooter® featuring ClogChopper® Cutters

Flexi-Rooter uses ClogChopper six-bladed cutters along with chain cutters (with and without carbide tips) to break through the toughest clogs, scale and roots. The cutters then grind up the stubborn stoppages and scour the pipe walls clean.

The rotating shaft is 10 times faster than traditional shafts, yet easy to handle. It's extremely flexible for clearing 2" lines, yet strong enough to cut roots in 4" lines up to 75 feet long. Plus, the foot pedal leaves both hands free to guide it into the drain.

To learn more, visit www.drainbrain.com/Flexi-Rooter, or call the Drain Brains® at 800-245-6200.



MADE IN U.S.A. © 2023 General Wire Spring

The toughest tools down the line.™

General
PIPE CLEANERS

PHCCCONNECT 2023 Held in Cleveland

■ BY STEVE SPAULDING OF CONTRACTOR'S STAFF

CLEVELAND, OH — For three short days in October, the Huntington Convention Center in Cleveland was transformed into the nexus of the plumbing & heating industry as PHCC members and valued industry partners gathered for the association's annual conference, PHCCCONNECT.

The event included an exhibit hall packed with the latest products, services, and technologies the industry has to offer. Just off

► Turn to PHCCCONNECT, page 43



A ribbon cutting for the opening reception, the official start of PHCCCONNECT 2023.

Contractors Gather for Trainings, Networking at Service World Expo

■ SPECIAL TO CONTRACTOR

PHOENIX, AZ — Service World Expo, a networking and training conference dedicated to HVAC, plumbing, electrical, remodeling, and residential home services professionals, convened over 1,200 contractors and staff from across the United States this week to rebound from a surprising summer slump and prepare for upcoming business opportunities with the Inflation Reduction Act, AI, and more.

► Turn to Service World, page 8



A view of the main stage at the Phoenix Convention Center.

Construction Starts Drop 6% as Fewer Megaprojects Move Forward

■ SPECIAL TO CONTRACTOR

HAMILTON, NJ — Total construction starts fell 6% in September to a seasonally adjusted annual rate of \$1.2 trillion, according to Dodge Construction Network. Nonresidential starts lost 4%, residential starts declined 6%, and nonbuilding starts fell 9%.

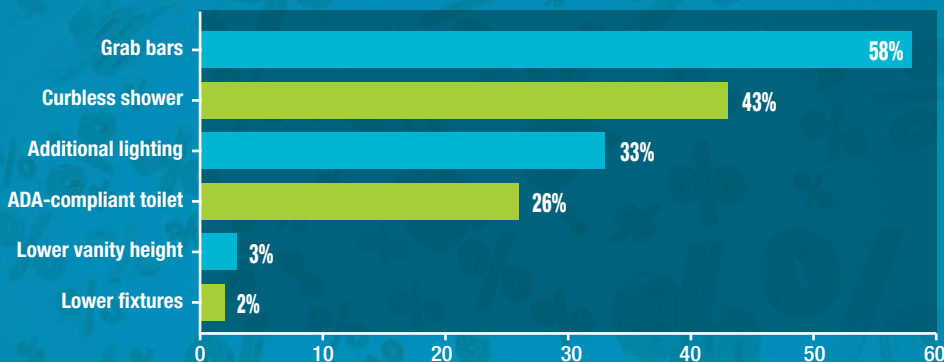
Year-to-date through September 2023, total construction starts were 3% below that

► Turn to Construction, page 45



CONTRACTOR INFOCUS

Top Features Incorporated to Address Aging in Place*



Source: ©Houzz Inc.

Background: Peshkova / iStock / Getty Images Plus

Features & Departments

- 6 Additions to Mega Construction Project Program**
Biden Administration hopes to expand diversity, inclusion.
- 12 Charlotte Pipe Opens New \$460M Foundry**
All construction materials were 100% made in the USA.
- 22 Forum: Is an ESOP Right for Your Business?**
Q&A with Jeff Buettner, Managing Dir. at ButcherJoseph & Co.
- 24 Feature: Propane Autogas**
The alternative fuel can offer versatility, reliability for your fleet.
- 46 Trucks and Truck Accessories**
- 50 Editorial**
Plumbing Industry Snapshots

Columnists

- 20 Management** by Al Schwartz
To Market, or Not to Market? What a Question!
- 28 Hydronics** by Pat Linhardt
My Steam Heating Inspiration
- 34 Technology** by Patti Feldman
Four Field Service Solutions
- 35 Marketing** by Matt Michel
6 Simple Ways to Boost Sales
- 36 Best Practices** by Rachael Plant
5 Tips to Ease the Burden of Large Fleet Management

Editorial Offices

EDITORIAL STAFF
Group Editorial Director-Buildings & Construction
Mike Eby, meby@endeavorb2b.com
Editor-In-Chief
Steve Spaulding, sspaulding@endeavorb2b.com
Editor-At-Large
John Mesenbrink, jmesenbrink@endeavorb2b.com
Contributing Writer
Kelly Faloon
COLUMNISTS
Al Schwartz, Management
Pat Linhardt, Hydronics & Radiant
Patti Feldman, Technology
Matt Michel, Marketing
Art Director, Susan Lakin
Ad Services Manager, Deanna O'Byrne
Production Manager, Sam Schulenberg
Classified Production Designer, Terry Gann
Audience Development Manager, James Marinaccio

ENDEAVOR
BUSINESS MEDIA
Endeavor Business Media, LLC

CEO, Chris Ferrell
President, June Griffin
CFO, Mark Zedell
COO, Patrick Rains
CRO, Reggie Lawrence
Chief Digital Officer, Jacquie Niemiec
Chief Administrative and Legal Officer, Tray Kane
EVP Buildings, DI & Lighting, Lester Craft
EVP Endeavor Business Intelligence, Paul Mattioli
VP, Buildings & Construction, Mike Hellmann
VP, Production Operations, Curt Pordes

CONTRACTOR

VOLUME 68, NUMBER 11

CONTRACTOR (USPS Permit 131-320, ISSN 0897-7135 print, ISSN 2771-6465 online) is published monthly by Endeavor Business Media, LLC, 1233 Janesville Ave., Fort Atkinson, WI 53538.

Periodicals postage paid at Fort Atkinson, WI, and additional mailing offices.

POSTMASTER: Send address changes to Contractor, PO Box 3257, Northbrook, IL 60065-3257.

SUBSCRIPTIONS: Publisher reserves the right to reject non-qualified subscriptions. Subscription prices: U.S. (\$93.75); Canada/Mexico (\$137.50); All other countries (\$150.00). All subscriptions are payable in U.S. funds.

Send subscription inquiries to Contractor, PO Box 3257, Northbrook, IL 60065-3257.

Customer service can be reached toll-free at 877-382-9187 or at Contractor@omedia.com for magazine subscription assistance or questions.

CORPORATE OFFICE: Endeavor Business Media, LLC
30 Burton Hills Blvd, Ste.185, Nashville, TN 37215
800-547-7377, www.endeavorbusinessmedia.com.

Printed in the USA.
Copyright © 2023 Endeavor Business Media, LLC.
All rights reserved.

No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopies, recordings, or any information storage or retrieval system without permission from the publisher.

Endeavor Business Media, LLC does not assume and hereby disclaims any liability to any person or company for any loss or damage caused by errors or omissions in the material herein, regardless of whether such errors result from negligence, accident, or any other cause whatsoever. The views and opinions in the articles herein are not to be taken as official expressions of the publishers, unless so stated. The publishers do not warrant either expressly or by implication, the factual accuracy of the articles herein, nor do they so warrant any views or opinions by the authors of said articles.

In Brief

Uponor participated in the Axel Springer Award 2023 in Berlin, Germany on 17 October 2023. The Axel Springer Award is an annual event that brings together visionary thinkers and top-level decision-makers from various industries. This year's Award was given to Satya Nadella for his outstanding achievements as the CEO of Microsoft.

The Unified Group recently hosted the group's annual Construction Forum. With an overall goal of providing excellence to mechanical contractors throughout the nation, the forum offered a space for members to discuss ways to optimize resources, track projects, navigate issues with GCs and more. The highlight of the event was the member tour of Intech Mechanical's facility.

The **New York State Legislature** is considering legislation, known as the Temperature Extreme Mitigation Program (the "T.E.M.P. Act") which would establish climatic standards in the workplace. Workers would gain protection from temperature extremes during both winter and summer months. Two Bills under consideration, one originating from each chamber, officially known as A.3321, and S. 1604, respectively.

The United Association General President Mark McManus has commended the Biden Administration's announcement of \$7 billion in grants to kickstart the hydrogen revolution in America. Funding these hydrogen hubs signifies millions of work hours for union members and also ensures the jobs created by the grants will feature strong labor protections.

Flushmate®, celebrated Manufacturing Day (MFG Day) on October 6th with a recognition of its commitment to American manufacturing at its state-of-the-art New Hudson, Mich., facility. Flushmate has produced high-quality and reliable pressure-assist technology for over 30 years.

Duravit USA, Inc. has announced a strategic new hire to support the brand's growth trajectory. Chris Chmura joins the team as its new National Accounts Manager, bringing over 15 years of industry experience in the bath fixtures and decorative hardware category.

CONTRACTORmag.com

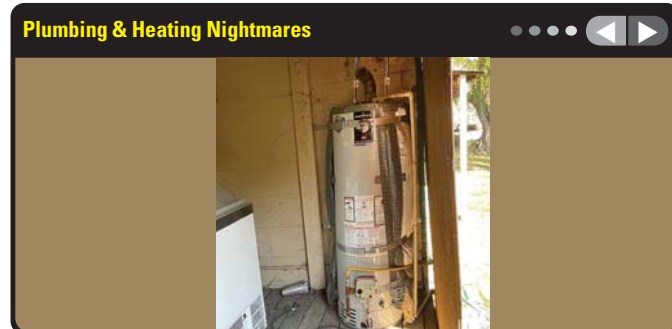
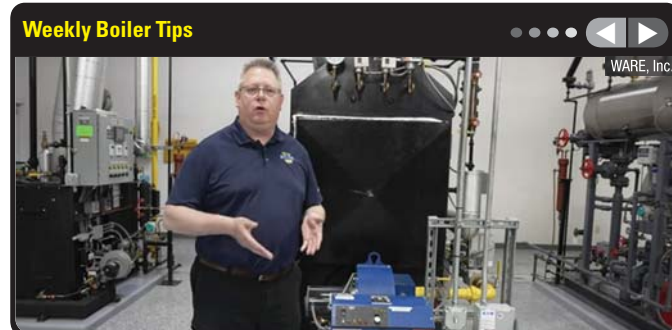
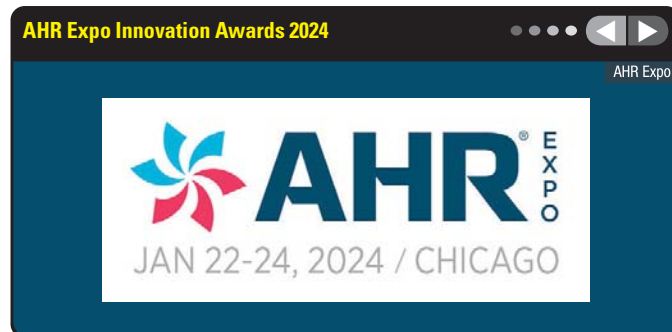
Visit www.Contractormag.com for your daily dose of industry news!

online exclusive

Top Stories

- Leap Partners Expands in FL and TN
- Johnny Unitas Golden Arm Selection Committee Narrows Watch List to Top 25
- Ferguson and ENGIE Collaborate on Renewable Energy Project
- Plumbing Manufacturers International Joins Tomorrow's Workforce Coalition

Videos & Media Galleries



For the latest news on the federal and local response, code and regulation developments, opinions and best practices from industry experts and more, bookmark **CONTRACTOR'S Coronavirus News Page**: www.contractormag.com/covid-19.

How Much Do You Know About Fleet Management?

Take our Quiz and find out!



You could win a \$25 gift card just for taking **CONTRACTOR's** all-new Monthly Plumbing Quiz!

Choose a card from Amazon, iTunes or Cabela's.

Every month the quiz focuses on a different topic, such as green plumbing, the history of plumbing, tools, or PVF.

Test your knowledge and find out what your Plumbing IQ is!



Register now for access to:

- ▶ A surprising secret for contractors to get more time in their day
- ▶ The engine that could: how contractors can produce a solid business plan
- ▶ 8 Simple ways to boost your monthly cash flow

INDUSTRY PERSPECTIVES

- ▶ Want to know what is on the mind of Ed O'Connell, business coach and consultant?
- ▶ Want to know about how to get the flow rates right in hydronics from master trainer Steve Swanson?
- ▶ Want to know what the 14 characteristics are of a professional plumbing company? Matt Michel will tell you.

If so, our Industry Perspectives page is the place for you! Visit Industry Perspectives today at

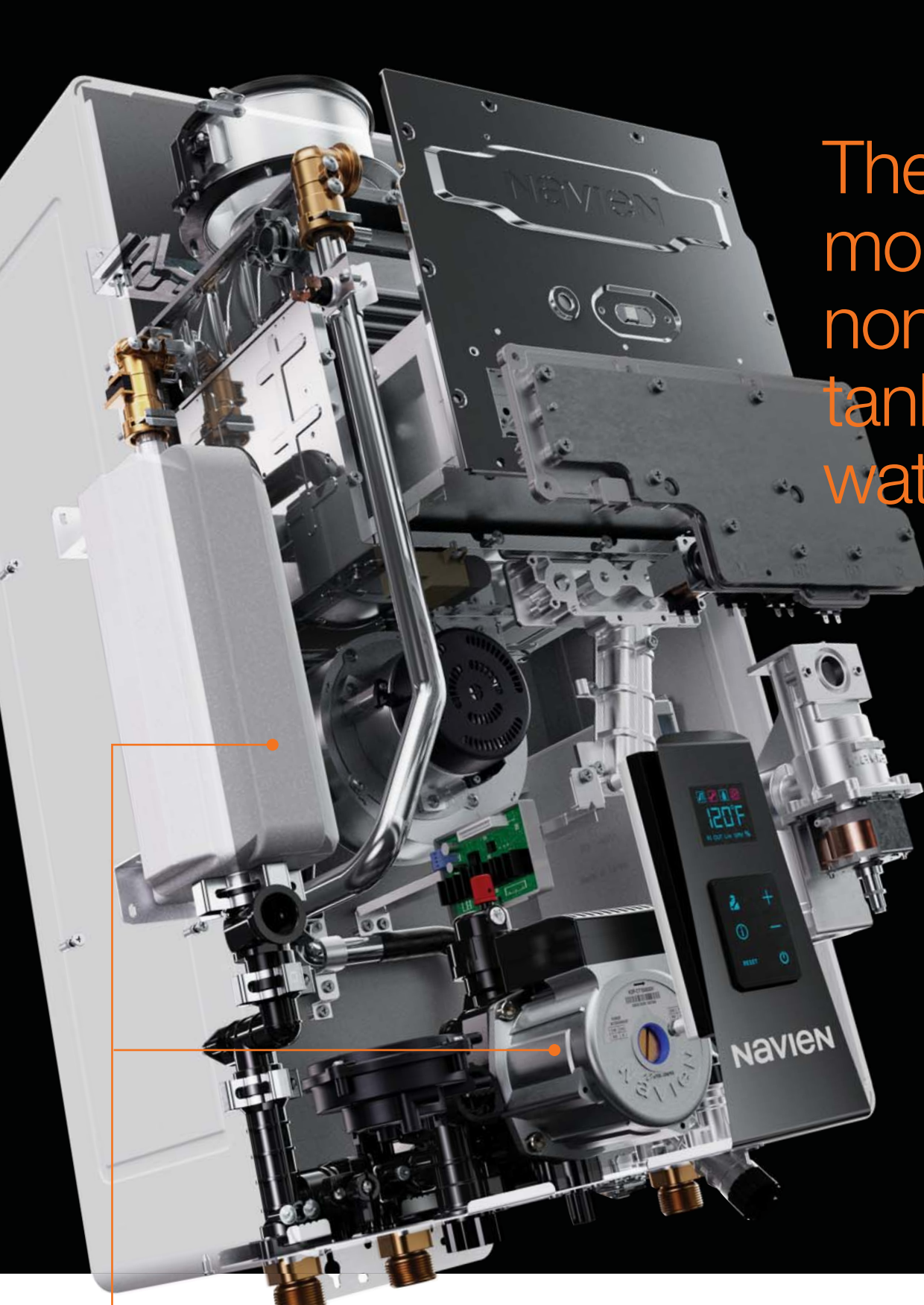
contractormag.com/industry-perspectives-0

Want to converse with experts in the plumbing and hydronics industries? Then check out **CONTRACTOR's Industry Perspectives**, serving up thoughtful, conversational content from the industry experts you have gotten to know so well at www.Contractormag.com.

 stay connected

Follow @contractormag on Twitter





The industry's
most advanced
non-condensing
tankless
water heaters

NEW NHW-A Series

NHW-A non-condensing tankless water heaters are the first and only with ComfortFlow® built-in recirculation pump and buffer tank. Navien is still the only non-condensing tankless manufacturer with NaviTech® stainless steel heat exchanger and burner. To learn more about these incredible products, scan the QR code below, or visit us at navieninc.com.



NHW-AI

NHW-AE

 **navien**

Biden Administration Announces 12 Additions to Mega Construction Project Program

WASHINGTON, DC — The US Department of Labor has announced the designation of additional federally funded construction projects for participation in the Mega Construction Project Program.

Launched by the Office of Federal Contract Compliance Programs in March 2023, the program fosters equal opportunity in the construction trades workforce, helping to expand access to the millions of good-paying jobs being created by the administration's Investing in America agenda.

Megaprojects

The Mega Construction Project Program brings the public and private sectors together on a select group of "megaprojects," for which OFCCP provides contractors and subcontractors compliance assistance to strengthen recruitment, hiring and employment practices. The assistance focuses on removing barriers to opportunity for underrepresented communities including women, people of color, veterans and individuals with disabilities.

Megaprojects are large federal construction projects valued at \$35 million or more—some part of which must be federal funding—and that last more than one year.

For each of these projects, OFCCP engages a wide range of community stakeholders—including unions, community-based organizations, pre-apprenticeship programs and registered apprenticeship programs—to provide contractors with connections to diverse recruitment sources, including in underrepresented and underserved communities, so that projects can fully tap into the local workforce and get the needed talent.

The agency also provides technical assistance on how contractors can foster workplaces free from harassment and discrimination and address ongoing barriers to recruitment and retention. In addition, OFCCP conducts compliance reviews to evaluate contractors' equal opportunity practices.



77274292 © Kmiragaya | Dreamstime.com

Program to expand equal opportunity, diversity in construction trades for jobs on large infrastructure projects.

For the 12 newly designated megaprojects, OFCCP partnered with the Department of Transportation, Department of Energy, General Services Administration and Environmental Protection Agency. OFCCP applied a set of neutral criteria to designate megaprojects from a wider pool of eligible projects. These newly designated projects build on OFCCP's designation earlier this year of 12 megaprojects funded by the Department of Transportation and GSA.

OFCCP looks forward to designating additional megaprojects in the future, potentially including projects funded by the Department of Commerce through the CHIPS and Science Act, as well as projects funded by the Department of the Interior and the US Army Corps of Engineers. The robust participation in this program by a range


of federal agencies demonstrates the whole-of-government approach that the Biden-Harris administration is taking to combat discrimination and advance equal opportunity for all workers and communities.

Expanding Access

"The Biden-Harris administration is committed to expanding equitable access to the good jobs being created across the country thanks to the President's Investing in America agenda," said Acting Secretary of Labor **Julie Su**. "Through the Megaproject Program, the Department of Labor is unleashing its full power to advance equal opportunity for qualified workers of all backgrounds, including those who have been historically left out or left behind."

"President Biden's Investing in America Agenda is creating a new

generation of good-paying careers nationwide and we are working to make sure everyone has a fair shot at those jobs," said Secretary of Transportation **Pete Buttigieg**. "This compliance assistance from the Department of Labor will help ensure that those who have historically been underrepresented in construction and the trades, including women and people with disabilities, are part of the national effort to help build the vital infrastructure we will all need in the coming decades."

"President Biden's historic Investing in America agenda is building a thriving clean energy economy that is delivering high-quality, good-paying jobs in every pocket of the nation whether in the energy sector itself or for the construction projects that support it," said Secretary of Energy **Jennifer M. Granholm**. "The Department of Energy is proud to partner with the Department of Labor to support the Biden-Harris administration's whole-of-government approach to removing barriers to equal employment and expanding opportunities for workers across America." 

GIVE YOUR CUSTOMERS ALL THE CREDIT.



ThermaForce™
Combi Boiler & Boiler

ProTerra® Hybrid
Electric Heat Pump

Maximus™
Super HE Gas

ProTerra® Plug-in
Heat Pump



[Rheem.com/water-incentives](https://www.rheem.com/water-incentives)



Sustainability Standout - This product meets a stringent set of our internally defined sustainability standards.
¹Consult with a tax advisor for complete program details and eligibility requirements.



Contractors Gather for Trainings, Networking at Service World Expo

► Continued from page 3



Jon Dorenbos, former NFL Player and magician, delivers one of the keynote speeches at Service World Expo.

The robust lineup of keynote speakers, breakout sessions, and business

training sessions across four available tracks provided contractors incisive tools and takeaways to bounce back their bottom lines and focus on the upcoming heating season.

Sessions of note included how to benefit from the Inflation Reduction

try peer companies are applying AI in their customer service and other operations to streamline costs and improve business overall..

Keynote speakers provided inspiring anecdotes and poignant insights, including renowned actor and author

industry brands such as Amana, Daikin, Ferguson, Goodman, Lennox, Rheem among others to showcase their latest innovations and services to help add value to contractor businesses.

“Service Expo 2023 was another hit. Our goal is to create an environment where home services contractors of all shapes and sizes can network with fellow contractors, learn about new products and services, receive massive education, and of course, have fun,” said **Tom Peregrino**, President of Service Nation. “We’ve already received overwhelming, positive feedback and are looking forward to Service World Expo 2024 in Orlando.”

Contractors and vendors can visit www.serviceworldexpo.com for more information on Service World 2024, which will be held in Orlando, Florida from October 14-18. **C**

The Expo ran October 3-6, 2023, at the Phoenix Convention Center, and attracted more than 1,200 attendees from around the nation.

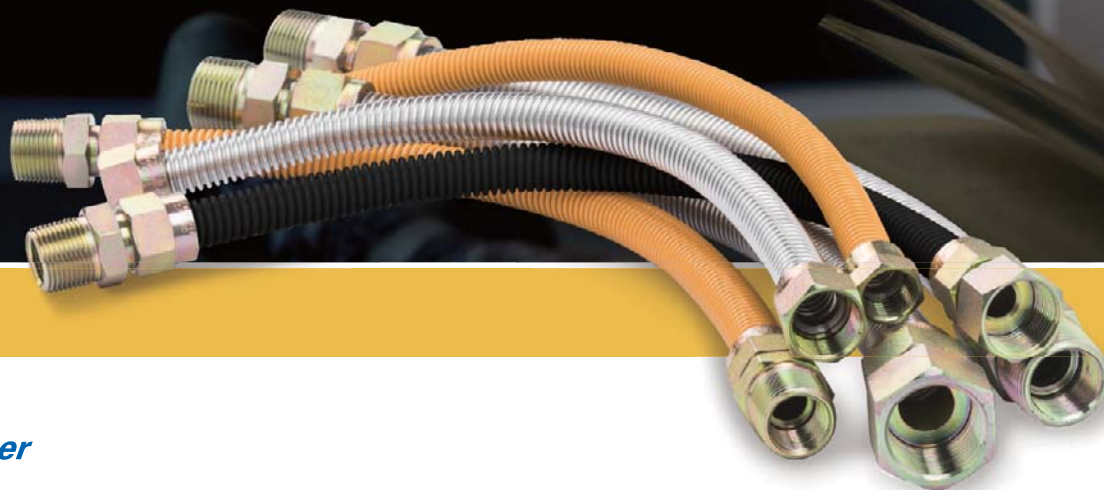
Act of 2022 as states such as Arizona begin to activate around the incentives available to consumers and contractors who serve them nationwide. Also, contractors learned how fellow indus-

Richard Karn, former Philadelphia Eagle and magician **Jon Dorenbos**, and entrepreneur and podcast host **Tommy Mello**. Meanwhile, dozens of exhibitors were present from leading

GAS CONNECTORS

You Can Trust

Easyflex gas connectors are versatile for **fireplaces, stoves, furnaces**, and more. They come in **black or yellow epoxy-coated** versions, with **various sizes and lengths**, and resist corrosion and scaling.



Global Pipe Manufacturer
EASYFLEX®

888.577.8999 • info@easyflexusa.com • www.easyflexusa.com

TRUE INDUSTRY PARTNER

A STRATEGIC PARTNERSHIP YOU CAN COUNT ON

We've worked on DWV plumbing projects just about everywhere, helping solve challenges. When you need a partner that knows the industry, call AB&I. We built our business one pipe at a time.



CAST IRON SOIL PIPE & FITTINGS

Made in the U.S.A. • GOTIRON.com • 800-468-4766

Chip Way Elected President of Plumbing Manufacturers International's 2024 Board of Directors

SEATTLE, WA – Plumbing Manufacturers International members elected Chip Way as president of the 2024 PMI Board of Directors during PMI's 69th Annual Meeting of the Membership. The director of OEM sales at Lavelle Industries, Way succeeds **Sal Gattone**, leader of research and development projects, fixtures, at LIXIL. Gattone will remain on the board as immediate past president. The meeting was held during the PMI23 Manufacturing Success Conference in Seattle.

In addition to Way and Gattone, the other members of the 2024 board will be board vice president **Belinda Wise**, Kerox, Ltd., board secretary/treasurer **Daniel Gleiberman**, Sloan;

and at-large directors **Kevin Campbell**, Moen; **Lowell Lampen**, Kohler Co., **Bob Neff**, Delta Faucet Co.; and **Paige Riddle**, Viega.

"As your president, I will be mindful of the need to keep moving," Way stated. "That in a nutshell is my charge for 2024. To keep PMI moving forward to deliver added resources and ideas to you. To bring attention to the critical issues impacting our companies and industry and to deliver the meaningful consensus-based solutions that are the root strength of PMI."

Way recognized Gattone for his contributions as the 2023 PMI board president. He also announced that the 70th Annual Meeting of the Membership will be held as part of the PMI24

Manufacturing Success Conference from Oct. 21-24, 2024, at the Grand Hyatt Atlanta in Buckhead.


During his state of the association report, PMI CEO/Executive Director **Kerry Stackpole** recognized the contributions of the PMI board, committee leaders, staff, and business support team. He named **Chris McDonald**, principal reliability and compliance engineer, Moen, as the recipient of the PMI Ambassador Award, given each year to an employee of a PMI member company.

The Oct. 23-26 PMI23 meeting earlier featured the inaugural PMI Women's Breakfast, a celebration of the contributions of women to the plumbing manufacturing industry, and the



PMI23 sponsors

Gold
ICC & ICC-ES
Silver
CONTRACTOR
CSA Group Testing & Certification Inc.
IAPMO
PHCP Pros

presentation of the Paul Patton PMI23 Manufacturing Success Award to **Denise Dougherty**, global regulatory manager, Sloan. 



LAKECREST™
BY T&S

Reliability has a new look.

Introducing LakeCrest, a new generation of aesthetic manual faucets from T&S — the perfect balance of pure form, seamless function and genuine reliability. Discover the complete line today at tsbrass.com/lakecrest.

Electrification. Decarbonization. Efficiency.

Geothermal Heat Pump Solutions
from **ClimateMaster**®



climatemaster.com

Discover the Difference



Charlotte Pipe Opens New \$460M Foundry

OAKBORO, NC — Charlotte Pipe and Foundry Company, the nation's leading maker of cast iron and plastic pipe and fittings for plumbing applications, today held its grand opening of a new \$460 million state-of-the-art foundry in Oakboro, North Carolina. Charlotte Pipe's new foundry is situated on 700 acres in Stanly County, about 35 miles east of the cast iron foundry it operated in Uptown Charlotte for more than 100 years.

"Charlotte Pipe has always been committed to investments that will benefit our associates, our customers, and our shareholders," said **Roddey Dowd, Jr.**, vice chairman of the



A bird's eye view of the new facility.

Company's Board of Directors. "While our Uptown Charlotte location has provided stakeholders with a solid platform to deliver outstanding results, our new Oakboro Foundry will allow

a more efficient layout of our plant and equipment and give us the flexibility to expand to meet future needs."

A trusted manufacturer of plumbing systems since 1901, Charlotte Pipe is headquartered in Charlotte and has seven plant locations across the United States that manufacture products distributed around the world. Since its founding, the privately held

Company has invested heavily in capital equipment, environmental control technology, infrastructure and its people to operate an efficient, modern and safe foundry.

Against this backdrop and with a focus on the next 100 years of manufacturing, the Company's Board of Directors decided in April 2019 to replace

Company's associates who will benefit from reduced commute times and increased amenities within their work environment."

Charlotte Pipe's Oakboro Foundry, which became fully operational on September 5, 2023, employs more than 530 associates, and according to Hardison, up to another 500 construction workers were on the Oakboro jobsite each day over three years, working more than 1.2 million hours to open the new plant. All construction materials and supplies for the new foundry were 100% Made in the USA, as are all Charlotte Pipe products.

"At its core, Charlotte Pipe has always been focused on reinvestment in our plants and our people," Hardison said. "The Company is a leader in investing in a local workforce and revitalizing manufacturing in the US, and we also

New foundry in Oakboro, North Carolina, one of the largest, most modern foundries in the world.

its existing Charlotte plant—one of the city's oldest and most well-known businesses—with a new foundry in Oakboro that is one of the largest and most modern foundries in the world. The decision ensures that Charlotte Pipe, a legacy company operating for more than 122 years, will remain deeply rooted in the Charlotte region.

A Generational Project

"A generational project, the relocation and expansion of our legacy foundry is a strategic move by Charlotte Pipe to improve its processes and offerings in ways that will allow the Company to continue serving the plumbing industry and our community for the next 100 years," said **Hooper Hardison**, CEO of Charlotte Pipe.

"The move to Oakboro will spur growth of other businesses, including vendors who supply and support the plant, opening a new window of economic growth for Stanly County," Hardison said. "Even better, the region is already home to many of the

take great pride in producing products that are 100% Made in the USA."

Commitment to Excellence

The new plant mirrors a commitment to excellence that has been a Charlotte Pipe tradition since 1901 and one that guides the Company's plans for generational growth. The facility also embodies Charlotte Pipe's commitment to sustainability. The Company has invested \$58 million in the plant's environmental systems and controls, including an on-site 70,000-megawatt substation that produces enough electricity to power 70,000 single-family homes.

"We're always going to reinvest in our local communities," Hardison said. "Whether it's being a good local partner and steward in the communities we call home or using only the highest-quality raw materials to manufacture our products, you can count on Charlotte Pipe to invest in a manner that allows us to stay competitive over the long term and remain focused on the customers we serve." **C**

WATCO INNOVATOR 901®



**The original.
The best.
The Innovator®**

- Best-selling half kit extends into tub through overflow; tightens securely with retainer nut
- Snap-on Innovator® faceplate—no screws and high flow!
- Eliminates costly behind-tub leaks



Includes orange overflow test membrane and drain test plug; testable up to five floors (22 psi)



Hi-Flo brass strainer body!
Thicker, stronger crossbars provide up to **20% higher flow rates** than traditional four-bar strainers*



Self-aligning overflow ell extends through hole, eliminating leaks




816.796.3900 ■ watcomfg.com

Liberty Pumps®

leading the revolution in grinder technology

Featuring patented U-Slice® cutter technology



Patent: See
LibertyPumps.com/patents



For superior shredding performance



2 hp



1 hp

ProVore®



800-543-2550 - LibertyPumps.com

Copyright © Liberty Pumps, Inc. 2023 All rights reserved.

IAPMO's Viola Elected World Plumbing Council Chair

SHANGHAI, CHINA — **Dave Viola**, CEO of The IAPMO Group of the United States, was elected to a three-year term as chair of the World Plumbing Council (WPC) at the 2023 World Plumbing Conference, concluding last

week in Shanghai, China, and via remote online channels.

Viola carries nearly 30 years of senior management experience within the plumbing and mechanical industry. He joined IAPMO in 2007 and

was promoted to CEO in 2020.

Viola holds a degree in mechanical engineering from Northern Illinois University and has served in such industry capacities as chair of the American Society of Mechanical



**International Association of
Plumbing and Mechanical Officials**

Engineers A112 Committee on Plumbing, Board of Directors of the American Society of Mechanical Engineers Standardization and Testing, founding director of the Alliance for Water Efficiency, the World Health Organization (WHO) Advisory Committee on Water Quality, and the American National Standards Institute (ANSI) Accredited Certification Committee.

World Plumbing Council

Established in 1990 and headquartered in Geneva, the WPC maintains NGO status with the World Health Organization and carries out a mission to unite the world plumbing industry and promote its role in improving public health and safeguarding the environment.

"I'm honored and excited to be called to work continuing the legacy of progress established by my predecessors on behalf of the international plumbing community," Viola said. "Advancing vital goals in workforce development, workplace diversity, spotlighting of skills and generally showcasing the awesome benefits of plumbing to humankind will be a priority for the entirety of my term."

Executive Board Members

Joining Viola on the WPC executive board are Deputy Chair **Kevin Wellman** of England, Secretary/Treasurer **Shayne La Combre** of Australia, and Directors **Tom Bigley** (United States), **Alberto Fossa** (Brazil), **Paddy Kavanagh** (Ireland), **BSA Narayan** (India), **Yongxin Qin** (China), and **Jean Claude Twagirimana** (Rwanda).

The 2023 WPC Conference was attended by just under 2,000 people representing a dozen nations when combining in-person and virtual attendees.

The next WPC will be held in Birmingham, England, in June 2026.



m | A MARCONE COMPANY

YOUR PARTNER FOR PRO PLUMBING SOLUTIONS



One-Stop Shop for Service Repair:

- Tackle plumbing projects efficiently and effectively by finding everything you need in one place
- From repair parts to comprehensive plumbing solutions, we have you covered



Speed of Delivery:

- Offering same-day or next-day delivery
- Orders placed before 5 PM ship same-day ground delivery
- Continuously expanding distribution centers
- New Midwest and West Coast locations coming online to provide quicker estimated times of arrival
- Reduced wait times and faster access to plumbing products



Create an account today at www.marcone.com

m | **marcone**
PLUMBING



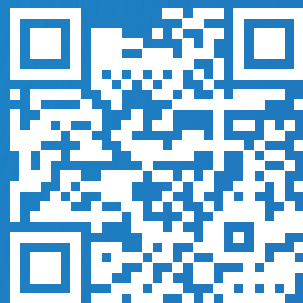
ELEVATE YOUR BUSINESS ...AND THEIRS.

Avalanche[®]

When homeowners are looking for an upgrade, Gerber's Avalanche toilet rises to the occasion:

- Premium QuietClean[®] and KeepClean[™] flushing technologies
- Extra-large footprint – ideal for replacements
- Industry-leading, 15-year warranty

Visit gerber-us.com/avalanche to learn more.
Or scan here:



GERBER[®]

ARCSA International Joins IAPMO

SAN ANTONIO, TX — During a formal signing ceremony at their co-located 19th Annual Meeting and 94th annual Education and Business Conference in San Antonio, Texas, the American Rainwater Catchment Systems Association (ARCSA) officially joined the International Association of Plumbing and Mechanical Officials (IAPMO®). ARCSA will be renamed “ARCSA International,” allowing the organization to maintain its identity while becoming a discrete business unit of The IAPMO Group.

In June, ARCSA’s Board of Directors and membership voted in favor of joining The IAPMO Group, with the co-located annual events providing an ideal backdrop for the finalization.

ARCSA International

Formed by the merger of two Texas-based professional rainwater catchment



Roman Feher and Dave Viola at the signing ceremony.

associations—the American Rainwater Catchment Systems Association and the Texas Rainwater Catchment Systems Association—with the mission to “provide resources and information on

rainwater and stormwater collection to promote the advancement of rainwater conservation and to work with government at all levels in promoting rainwater and stormwater management,”

ARCSA in 2016 was reorganized as a 501(c6) organization and the original ARCSA became the ARCSA Foundation, a 501(c3) organization.

“We believe IAPMO’s sharp focus on water conservation and water security will enable ARCSA to advance the cause of rainwater harvesting on the national and international stages more effectively,” said ARCSA President **Roman Feher**. “We came here a lone wolf and now we’re part of the wolfpack.”

IAPMO

Founded in Los Angeles in 1926, the International Association of Plumbing and Mechanical Officials (IAPMO) has grown to be recognized the world over for its *Uniform Codes*. Through its various business units, The IAPMO Group participates worldwide in product testing and certification, codes and standards development, management systems certification, and education, training and personnel certification.

“IAPMO and ARCSA have long worked toward common objectives from unique positions in the water conservation industry,” said IAPMO CEO **Dave Viola**. “Consolidating our work makes both organizations far more capable stewards of this vital natural resource and the means to capture and utilize it safely.”

In 2012, IAPMO and ARCSA signed a memorandum of understanding to “enhance the wellbeing of people everywhere through the provision of safe, efficient, and affordable rainwater harvesting and plumbing systems and equipment.” The product of this cooperation, ASSE/ARCSA/IAPMO/ANSI Series 21000 was first published as an American National Standard in 2017 to address the increasing number of residential, commercial, and industrial rainwater and stormwater systems being installed nationwide. Updated in 2022, Series 21000 establishes best practices and uniform minimum requirements for qualified designers, installers, and inspectors of viable alternative water systems utilizing captured rainwater or stormwater.

For more information, visit www.iapmo.org and www.arcsa.org.

IAPMO Concludes 94th Annual Education and Business Conference in San Antonio, TX

➤ *Continued from page 1*

Steve Panelli, chief plumbing inspector, city and county of San Francisco, was elected president and **Jeremy Stettler**, coordinator/inspector, Davis School District, Clearfield, Utah, was elected vice president. **Brian Hamner**, plumbing inspector, city of Des Moines, Iowa, will serve as secretary/treasurer. **John Nielsen**, executive officer-program manager, Division of Occupational and Professional Licenses, state of Idaho; **Carlos Flores**, assistant chief plumbing inspector, city of Houston, Texas; **Barry Ramsey**, chief plumbing inspector, St. Louis County, Missouri; and **Kevin Tindall**, president of Tindall & Ranson Plumbing, Heating & Air Conditioning will serve as a district directors.

Fabian Gonzalez, training coordinator of Plumbers and Pipefitters Local 142, served as conference host



Steve Panelli



Jeremy Stettler

and **Jesse Ortiz**, Local 142 president, served as conference chair.

Momentous, Successful


“This was a truly momentous and successful conference, bringing three distinctly venerable industry organizations together for shared purpose and the exchanging of knowledge,” said IAPMO CEO **Dave Viola**. “Congratulations to Steve Panelli, Jeremy Stettler and the other Board of Directors members elected to serve and immense gratitude to Immediate Past President **David Gans** for his incredible leadership during a challenging time in IAPMO’s history.”

The conference was sponsored by Plumbers Local Union 68 Texas Gulf Coast; California State Pipe Trades Council; Southern California Pipe Trades District Council 16; IAPMO

Southern Nevada Chapter; PHCC Kansas; UA Plumbers Local Union 78; Pipefitters Local Union 211; PHCC Nebraska; MINK Pipe Trades; National Inspection Testing and Certification Corporation; Plumbers & Pipefitters Local 9 New Jersey; South Jersey Mechanical Contractors Association (SJMCA); TLD (Timelockdocs); Plumbers Local 322; WATTS; American Society of Plumbing Engineers; and the American Water Works Association.

Essay Competition

Winners of the 13th IWSH Scholarship Essay Competition were announced. First prize was awarded to **Calvin Cao**, Western University, Ontario, Canada, and three runners-up were **Marc-Anthony Dorestan**, Millersville University of Pennsylvania; **Aleksander Penkov**, a Bulgarian studying at Hannibal-LaGrange University, Missouri; and **Seanna Kryger**, George Brown College, Ontario, Canada.

IAPMO’s 95th annual Education and Business Conference will be held in Las Vegas, Nevada, Sept. 22-26, 2024. 



JAN 22-24, 2024



HVACR is changing fast Experience everything new all in one place

- All the latest products + tech
- The connections you need to grow your network
- Best practices to level up as a professional
- And so much more!

Register for free at ahrexpo.com

Pre-Insulated Piping Aids Rise to the Top for Craft Brewer

► **Continued from page 1**

and beer lovers continue to line up for the privilege.

This meteoric rise may look effortless from the sidelines, but hard work and hard decisions faced the brewers at every stage. Brewing for fun in your kitchen (as co-founder **Nate Lanier** did first) is one thing. Brewing for the local community in your friend's barn is another, as the Tree House team discovered when they first started selling to the public. And building your own full-scale professional brewing operation is a different level of effort entirely.

One part of the solution for Tree House was to streamline its physical expansion with COOL-FIT Pre-insulated Piping from GF Piping Systems. Lightweight plastic piping insulated at the factory meant a fast, straightforward install for the contractor. Design advice and training support from GF meant that the brewers could concentrate on what they do best—dreaming up the next Tree House cult favorite.

Building to Last

In its early years, Tree House outgrew one base of operations after another. By 2016, plans were in place to build Tree House's current headquarters. Clocking in at 55,000 square feet, the new facility in Charlton, Mass., would be more than six times the size of the old. Maximum brewing capacity would increase even more dramatically, by a factor of 18. Reflecting the economic heft of this growing concern, the \$18.5M project was supported in part by a \$7.7M bond from MassDevelopment.

Building again in such a short period of time—with the goal of creating a permanent base—gave Tree House the opportunity to reconsider every technical decision in its brewing operation. In this light, one important revision emerged: the choice of piping material for their cooling loop. Tree House had built its first cooling piping system from copper, traditionally regarded as a high-quality option. However, insulating the metal pipes as needed for the glycol loop at Tree House proved more troublesome than expected. Condensation would build up between the pipes and the insu-



Tree House Brewing Company opened a 55,000-square-foot headquarters facility in Charlton, Massachusetts, only six years after its founding. Five years later, the brewery's pre-insulated piping system underwent a significant expansion.



The thermal efficiency of COOL-FIT Pre-insulated Piping ensures consistent temperatures for chilled glycol throughout the cooling loops at Tree House Charlton, even with the facility's chillers located outside.



COOL-FIT Pre-insulated Piping from GF Piping Systems provides leak-free, maintenance-free cooling loops at Tree House Brewing's Charlton facility. Insulation under factory conditions improves efficiency and simplified the installation process.

Easy installation plus thermal efficiency equals win-win solution

lation, undermining efficiency and creating unwanted dripping.

To achieve better results, Tree House chose GF's COOL-FIT Pre-Insulated Piping System for the glycol cooling loops in its new flagship brewhouse. The lighter weight of plastic piping and the design of GF's joining system made installation significantly faster and less costly. Installing the insulation ahead of time under factory conditions simplified the project schedule, with no need for an insulating crew to follow the pipefitters. The factory precision and modern materials also ensured excellent performance at Charlton with virtually no maintenance, even with the brewery's chiller units located outdoors.

"To save the labor time in insulating, to save the money in insulating, and

have a product that's plug and play—it was huge for us," noted Tree House co-founder **Dean Rohan**—a former plumber by trade. "Also: it doesn't rot, it doesn't rust, and it doesn't break."

"Not One Leak Occurred"

Eric Sweet, President of Northeast Process Systems, Inc., handled the latest piping system expansion at Charlton. Explaining that he frequently installs COOL-FIT for brewery applications, Sweet noted the appeal of its thermal performance for this industry. "Any loss of temperature from the chiller to the furthest fermenting vessel is a potential for degraded product," he pointed out. "They couldn't maintain the low temperature on a consistent basis with any other piping system."

Meanwhile, Sweet appreciated the system's thoughtful design from his own point of view. "The preprogrammed weld parameters and the barcode scanner made the joint sealing very simple and very reliable," he explained. Proud to work with his son Tyler on the extensive effort (as his family's fourth generation in the pipefitting business), Sweet reported satisfaction with the results: "We did probably close to 800 joints on this particular project, a good percentage of them probably 22 feet up in the air, and not one leak occurred. So that speaks for itself."

GF had consulted with Tree House on the design, layout, and size of the expansion all along the way, a partnership role that Dean Rohan appreciates. Alluding to frequent support visits from GF technical personnel, Rohan noted that COOL-FIT "doesn't just have a pamphlet or a website that you go to. It feels like we have someone on our side all the time."

More Than Meets the Eye

Creative inspiration was needed to produce Tree House's award-winning beers—but so was engineering excellence in the brewhouse, backed by organizational commitment. If "craft" is where art and science meet, then nothing makes more sense than this craft brewer's swift success. And for just the same reason, nothing is more likely than continued growth to come. **C**

Katherine Bonamo writes on topics in architecture, engineering, and construction for publications throughout the United States.



A NEW STATE-OF-THE-ART FOUNDRY,



125 YEARS

IN THE MAKING

CHARLOTTE
PIPE AND FOUNDRY COMPANY

We've been making high-quality pipe and fittings since 1901, and after more than a century in Uptown Charlotte, we've created one of the world's largest and most advanced cast iron foundries in Oakboro, North Carolina. The manufacturing, technology, and environmental practices used here will allow Charlotte Pipe and Foundry to more effectively serve our customers and the plumbing industry for another 100 years and beyond.

Learn more at CharlottePipe.com/Oakboro-Foundry



by Al Schwartz
PLUMBING CONTRACTOR



To Market, or Not to Market? What a Question!

In the beginning there was the product or service. Those who produced these bartered them for the things that they needed. As time went on, more and more people wanted more and more of the product or service. As the populations increased, more people became producers or provided a service and more products and services were invented to be bartered or traded. At some point in our history—well before the famous Greek marketplace known as the agora—a market appeared.

Maybe it was two farmers from different villages meeting on a trail exchanging gossip when others using the trail decided that they needed what the farmers had with them right then and there. Maybe it was a flint knapper meeting an arrow or spear maker deciding to merge their respective talents. In any case, it is not as important *how* the first marketplace came into being as it is *that* it came into being.

As these marketplaces increased in number, size, and complexity it became increasingly necessary for producers and servicemen to distinguish their products or services from their competitors in order to sell them. Whether offering a better deal, better product, superior craftsmanship, after sale service or the appearance of one or all of these things, the vendors all vied for the customer's business. So marketing became defined not by osmosis or magic, but by the necessity of competition.

What that competition did over thousands of years was to promote better and more focused marketing. A pinpointing of a particular interest or feature of a product or service in order to distinguish it from others like it and to, ultimately, sell more of it than the competitors. Eventually *bigger, better, new, improved* became the clarion call of marketing. Truth and reality were, and are, oftentimes left behind in the headlong rush of bringing in the customers



**As a vendor in today's marketplace,
where do you fit in the greater scheme
of the marketing machine?**

Marketing in the 21st Century

Fast forward to today. Along with the growth of products and services, marketing has reached its zenith. We are being marketed to every second, of every minute, of every day, or 24/7/365 in the common vernacular. Whether referred to as print advertising, billboards, retail, e-tail, spam or electronic media, we are being bombarded incessantly by marketing. We get advertising mail in our mailbox, on our computer and telephone. We see it on buses, cabs, cars, clothing, food packaging, airplanes, submarines and more. There is almost no surface or electron that cannot accommodate some sort of marketing idea.

The advent of platforms, such as Google and Amazon, invade our privacy with "bots" like SIRI and ALEXA. They listen in to our conversations, read or pick at our emails, know which ads we open and which we trash, and generally tailor marketing to a fine point. So, as a vendor in today's marketplace, where do you fit in the greater scheme of the marketing machine, and what can you do to take better advantage of all the opportunities available to you?

Making the Most of It

No matter the size of your company, there are marketing schemes that can benefit your business. The advent of the internet has made it possible for even a one-man shop to reach out and touch potential new clients for little or no money out of pocket. The returns on "e-tailing" are phenomenal and the latest statistics are encouraging even in the present economic downturn.

A company with a little larger budget for marketing can utilize print media in conjunction with radio and the internet to get their message out, but the electronic realm is where the "rubber meets the road."

Still larger shops or those that are a bit more aggressive and less risk averse can use local television ads, adding that venue to the others mentioned above for complete media saturation. A relatively unknown shop in the greater Phoenix area started a TV ad campaign and has become one of the premier service shops in the Valley of the Sun due, largely, to its ad campaign. They maintain that distinction because of their commitment to quality, timely service, but the impetus was that ad campaign on local television. Marketing at work!

Defining your customer base, and selling to them, is the key to having an effective marketing strategy. As an example, a one man shop can usually afford small print ads in local "shopper" papers. This keeps his client base local and gives him the ability to service people in a smaller geographic area. If that shop were to host a web site at a nominal cost per month (less if he were to design the site himself), and place the URL in his print ad as well as his business card and service stickers, he is driving his customers to a place that he can use to sell products and services in a low pressure environment. Adding in discount coupons for services that only web users can get, or putting details of new products or services in the site, the one man shop has developed a marketing strategy that is at once highly cost effective and extremely focused.

Likewise, larger shops can target architects, engineers, project managers and contractors by developing web sites that sell the company's expertise, performance on similar projects, perhaps awards for past performance, stability, bondability or quality. This style of marketing is the wave of the future as more and more of your clientele move further into the internet community.

It is now possible for companies that either never thought of, or could not afford, broad based marketing plans to have very effective, high quality, programs that can focus with laser-like precision on the markets that they desire to penetrate. With so much marketing available for so little money, there is no reason not to give it a try. It's a brand-new day—use it. **C**

The Brooklyn, NY-born author is a retired third generation master plumber. He founded Sunflower Plumbing & Heating in Shirley, N.Y., in 1975 and A Professional Commercial Plumbing Inc. in Phoenix in 1980. He holds residential, commercial, industrial and solar plumbing licenses and is certified in welding, clean rooms, polypropylene gas fusion and medical gas piping. He can be reached at omeletman01@gmail.com.

ADVANTAGE

Introducing The Weil-McLain Advantage™ For Contractors

Advantages That Grow With Your Heating Business

Introducing The Weil-McLain Advantage, a tiered growth and loyalty program for contractor owners, like you. When integrated into your everyday operations, the Weil-McLain Advantage provides a powerful combination of solutions that generate growth and bottom-line results for your business.

An easy-to-use portal is exclusive to Advantage members and provides access to the digital solutions you need to optimize your business performance and expand your team's heating knowledge online — anytime, anywhere. You get VIP tech support, e-learning and a variety of digital tools. Plus, you receive the business recognition and visibility you need to stand out among your competitors as one of the best!



Register at weil-mclain.com/advantage to gain a competitive edge and unlock exclusive business advantages today.



Solutions that Matter™

www.weil-mclain.com

Is an Employee Stock Ownership Plan Right for Your Plumbing Business?

■ BY STEVE SPAULDING OF CONTRACTOR'S STAFF

Employee Stock Ownership Plans (ESOPs) have been in the news (and in the pages of *CONTRACTOR*) more frequently the past few years, and two trends seem to be driving their popularity.

First, as an entire generation of plumbing and heating professionals prepares to retire an ESOP can be an important basis for a succession plan. Second, as the industry continues to struggle to attract skilled workers, an ESOP is one more incentive to help attract trained, quality employees.

But what exactly is an ESOP—and how does it work? What are some factors that could make it right for one business but not for another? How long and involved is the process of setting one up? And what exactly are the tax implications?



Jeff Buettner

For answers, we turned to **Jeff Buettner**, Managing Director at ButcherJoseph & Co. ButcherJoseph is a full-service investment bank that specializes in ownership succession transactions. Buettner has over 20 years of valuation and financial opinion services experience. He has served as a member of the Board of Directors of the National Center of Employee Ownership (NCEO) and is a member of the ESOP Association where he serves on the Valuation Advisory Committee.

CONTRACTOR: *Jeff, thanks for speaking with us today. For our readers*



CONTRACTOR talks with Jeff Buettner, Managing Director at ButcherJoseph & Co. about succession, tax implications and more.

who may be unfamiliar with what an ESOP is and how it works, can you give us the basic run-down?

Jeff Buettner: Essentially it is a structure that allows for employees of an organization to have a participation in the equity of an organization, a sponsoring company in concept. It is a trust that allows for participants to be beneficiaries of that trust, and a structure that allows for them to have an allocation of a sort of stock that gives them the experience of being a direct stockholder.

It's technically a retirement plan that's governed by ERISA [the Employee Retirement Income Security Act], and so a lot of the same types of rules and provisions that pertain to an ESOP also pertain to a 401k. So there's some similarities, but there are also some important differences.

In an ESOP, employees don't contribute any cash out of their paychecks. It is a benefit that the employees get from the company without having to put in any dollars. And then the sole investment of that would be in the employing corporation itself. So that individual would have an investment in just the corporation. It's not allocated across a broad basket of say, mutual funds.

CONTRACTOR: *What are the advantages of an ESOP for a business owner doing succession planning who thinks their employees are the best people to give their company to?*

Jeff Buettner: An ESOP provides an avenue for the owner or the current owner of the organization to sell his or her ownership interest and his or her business through his employees. This is really an opportunity to sell

your business to a trust that provides for a broad-based benefit for all employees. And so, because all employees now have this participation, obviously it can be a valuable tool for that company to retain their employees. And in a contractor-type business model, obviously one of the big assets of your organization is your people and those people that provide services to the customers.

And so having this ownership stake in the business can be a powerful incentive for retaining your employee base. It can also be a very valuable tool for recruiting future employees at all levels of the organization, and it's a very powerful way for your employee base to have a chance to build wealth that otherwise may not be possible just through traditional 401k-type contributions.

It's important to understand that the trust is the owner of the stock. If you have a hundred employees, those hundred employees are beneficiaries of that trust, so they individually don't have individual rights to vote the stock, nor do they have individually opportunities to select management or run the business, so to speak. Those types of governance provisions are still at the senior leadership level and more even specifically at the board level.

CONTRACTOR: *I understand that an ESOP offers some interesting tax incentives?*

Jeff Buettner: Well, number one, there's an opportunity for the selling shareholder through the transition of their business to potentially defer capital gains taxes that would otherwise be due on the sale of the business.

Number two, depending upon the structure that's used, there's an opportunity for the corporation on a go-forward basis to now be owned by a tax-exempt shareholder and therefore be shielded from federal taxes that would otherwise typically be payable

➤ **Turn to Employee Stock, page 40**

Go Green. Get Rewarded.

INTRODUCING



CONTRACTOR REWARDS

We want to reward you for purchasing Taco products. Open to all contractors, this **FREE Rewards Program** enables you to earn reward points on hundreds of eligible Taco residential heating & plumbing products that can be redeemed for thousands of items from tools and electronics to live events and vacations.



ENROLL

Scan QR code below, Sign up at ContractorRewards.com, or call toll-free **1-877-286-7064**

UPLOAD

Use your phone or computer to upload receipts for purchases of Taco products

GET REWARDED

Shop the extensive online REWARDS Catalog



Enroll today to earn **200 BONUS POINTS!**
BONUS CODE: **GreenRewards**
(Use ENTER CODES tab during sign up at ContractorRewards.com)

Taco
Comfort Solutions®
A Taco Family Company

Download the
Contract Rewards APP



For questions or more information on this program, send an email to:
contractorsupport@ContractorRewards.com
or call **1-877-286-7064**.

Propane Autogas Offers Versatility, Reliability for Your Plumbing Fleet

By Candace Roulo





Although electric vehicles are taking center stage in the media you have more options than just hybrid and electric vehicles for your fleet.

As a plumbing company business owner, you understand your fleet vehicles take up a major portion of your budget. You need to know all your options and make the right choices when it comes to optimizing your fleet. Although electric vehicles are taking center stage in the media and many automotive companies have decided to decrease production of internal combustion engine (ICE) vehicles, you have more options than just hybrid and electric vehicles for your fleet.

Propane Autogas vehicles are available from original equipment manufacturers (OEMs) or via converting ICE vehicles to run on propane. There are dedicated propane Autogas vehicles and bi-fuel vehicles. Dedicated propane Autogas vehicles run only on propane, and bi-fuel vehicles can run on either propane or gasoline.

According to the US Department of Energy, bi-fuel vehicles enable the flexibility of using either gasoline or propane Autogas, which typically provides bi-fuel vehicles with a greater range than dedicated propane or gasoline vehicles. However, it is important to understand that the fuel economy of propane Autogas vehicles is slightly lower than gasoline vehicles. Yet, propane Autogas has a higher-octane rating than gasoline. Some OEMs offer optimized engines to take advantage of this higher rating, which can ultimately result in improved performance and fuel economy over non-optimized engines.

Benefits of using propane Autogas for your fleet

A clean-burning alternative fuel, Propane Autogas has been utilized for years to power light-duty, medium-duty, and heavy-duty vehicles. Owners of trade companies have found propane Autogas to be a versatile and reliable solution for their bottom lines.

And if you are a business owner that has sustainability goals, propane Autogas can help you meet those goals too.

Drivetrain produces fewer chemicals: Propane powered vehicles utilize an internal combustion engine, but the combustion of propane does not produce the same amount of harmful chemicals as gasoline or diesel. Plus, they do not require the complex engine aftertreatment to meet emission standards.

Simple to fuel: Propane vehicles are fueled with a nozzle connected to a pump that transfers liquid propane from a large tank into a vehicle fuel tank. Fueling is quick – filling the tank of a propane vehicle takes the same amount of time as refilling a gasoline vehicle.

Extensive infrastructure: Transporting propane from refineries to end user locations costs less than transporting any other fuel source. Plus, propane is non-toxic and non-carcinogenic. According to OEM Off-Highway, an entry level



A service vehicle being fueled with propane Autogas.

Propane Direct Injection Technology Provides Fleet Owners a Low-Emission, High-Efficiency Option

Through a partnership between Stanadyne, Katech, and the Propane Education & Research Council, this new technology will drive the transportation industry further down the path to zero.

WASHINGTON, DC – Fleet owners looking for a low emission, high efficiency, and affordable engine solution will soon have new technology to turn to thanks to a partnership between Stanadyne, Katech, and the Propane Education & Research Council. The innovation combines Stanadyne's direct injection fuel pump and injector system with Katech's vapor lock technology to create the industry's first medium-duty engine system that can deliver propane autogas at a constant 350-bar pressure directly into the engine. It's all part of the three company's combined decarbonization mission.

BREAKTHROUGH SOLUTION

"The direct liquid injection system for high-vapor pressure gases such as propane autogas has been technically elusive until this joint partnership between PERC, Katech, and

them run much more sustainably using renewable fuels," said Stanadyne president David Zimmerman. "The opportunity to partner with PERC and Katech on this initiative aligns with our commitment to developing solutions bridging the significant adoption gap between fossil-fueled propulsion and low-carbon and zero-carbon fueled vehicles."

GREATER RELIABILITY

"This partnership has allowed Katech to focus more directly on the development and advancement of vapor lock systems, propane direct injection engine controls, and future propane direct injection engine applications," said Katech lead engineer Eric Suits. "Collectively, we have produced a truly complimenting control strategy and delivery system necessary to ensure reliable propane direct injection operation under all operating conditions."

The new technology will help fleet owners exceed the ultra-low emissions mandates going into place in 2027. Compared to diesel, propane autogas reduces harmful nitrogen oxide emissions by 96 percent and provides a five to

10 percent reduction in carbon dioxide emissions. The engine technology can also utilize renewable propane, which has a carbon intensity four times lower than conventional diesel.

"In the short term, this engine technology provides



A propane pump.

medium-duty fleet owners with a decarbonization solution to meet their immediate goals," said Gavin Hale, director of business development at PERC. "But the real breakthrough is the long-term impact this will have to provide fleets with exactly what they need—a powerful engine that exceeds sustainability goals and reduces fuel and operation costs to provide the lowest total cost of ownership of any energy source."

To learn more about propane autogas solutions, visit Propane.com/Fleet-Vehicles. 



A section of the Stanadyne 350-bar propane delivery system.

The tests successfully demonstrated that the technology works with existing engines and that propane autogas can be a low-carbon, high-performance replacement for gasoline and diesel engines.

"Internal combustion engines are the workhorses of our economy, and this advancement in technology will help

propane fueling station for a commercial fleet application is \$5,000-20,000. Propane providers may even include the price of the fueling infrastructure into the contracted price per gallon of the fuel, making the capital outlay of the infrastructure affordable.

According to the Propane Education and Research Council (PERC), there are five kinds of refueling styles which include public and private networks. To learn about these different options, associated costs, and how to get started with a propane supplier click here to download the guide.

Emissions and costs are decreased:


When considering tailpipe emissions, propane offers a decrease of emissions over diesel and gasoline, without the need for aftertreatment. Also, cost savings can be large without a big investment. A gallon of propane is approximately half the cost of a gallon of gasoline or diesel. Plus, the price of a vehicle equipped with a propane fuel system is just a small increase over gasoline or diesel power options.

An alternative energy option: According to the PERC website, propane is a low-carbon fuel alternative, producing far fewer emissions than the equivalent amount of electricity generated from the US grid, and it won't contaminate soil or groundwater. It is non-toxic and non-poisonous. Also, advancements are being made for renewable propane sourced from used cooking oil and other waste products. This enables propane to be a carbon-neutral fuel.

How to begin the conversion process

Once you decide that propane is the fuel of choice for your fleet, you then need to convert your ICE vehicles to run on propane. This may sound like a daunting task, but PERC has steps you can follow to make the conversion easy. Visit PERC's website to learn about how to get started converting your ICE fleet vehicles to propane Autogas. Over 60% of the propane Autogas vehicles that are on the road today were converted with a certified aftermarket bi-fuel system.

With a bi-fuel conversion, drivers can switch easily between gasoline and propane Autogas. The vehicle starts on gasoline and can immediately switch to propane Autogas. Drivers who are out of range of a propane Autogas fueling station can simply switch back to gasoline to complete their route or until they locate a propane Autogas station.

Also, remember you have the option of purchasing directly from an OEM a vehicle that runs on propane Autogas. According to LPGas Magazine, Ford, General Motors, Isuzu and Lincoln manufacture Autogas vehicles. Plus, Alliance AutoGas, Campbell-Parnell, Icom North America and Roush CleanTech provide dedicated or bi-fuel propane systems on a variety of vehicles. 

Candace Roulo, a graduate of Michigan State University's College of Communication Arts and Sciences, is a technical writer covering topics in the mechanical contracting, manufacturing and supply chain industries.



Become a tekmar® **CERTIFIED** Smart Boiler Control 294 **INSTALLER**

Running multiple buildings is stressful. Having issues with multiple boiler systems is worse. The tekmar Smart Boiler Control 294 allows your customers to monitor and control boilers across all of their properties - anytime, anywhere!

As a certified installer, you get:

- Preferred Status with tekmar Customers
- Dedicated Expert Support
- Learn & Earn Merchandise
- A Helpful Kit of Promotional Materials
- Empowered, Happy Customers



**Scan to Sign Up to Be a
Certified Installer TODAY.**



tekmar
A WATTS Brand

by Patrick Linhardt

HYDRONICS MANAGER AT CORKEN STEEL PRODUCTS CO.



My Steam Heating Inspiration

This Broomell Receiver was my inspiration for learning as much as I could about steam heating. Someone early in my career dropped it off at the loading dock. I wish I could remember who, so I could give them credit, but you know by now that I don't remember some things at all.

What I do remember is wondering what the heck this thing was, with a gauge glass that isn't connected at the top and a chain dangling from the side. I had an idea that the chain would be connected to the draft doors of a coal fired boiler because I had seen that somewhere before.

What I had never seen before was a gauge glass on a steam system that didn't have a valve on both the top and the bottom. You can clearly see in the photo that the gauge glass only has the wood wheel valve on the bottom. The broken wood wheel just happened after 30 plus years (adds character as they say).

Detective Work

Immediately after seeing this steam artifact for the first time, I went to a set of file cabinets in the first floor warehouse that we called the "Archives." Inside those drawers is a collection of early literature from various boiler and radiator manufacturers, dating back to the very early 1900s. It's one of my favorite places.

I spent a lot of time researching boiler sizes from cryptic boiler model numbers that were relayed to me from contractors in these files. Sometimes it helped them in the replacement boiler sizing process. But they also held literature from manufacturers that made steam specialties, like Broomell.

Sure enough, I found quite a few items, from a sales inspired comparison of Vapor Steam heating systems to Hot Water heating systems to a 40 page book of photos of successful installations across the United States, some of buildings in Cincinnati. I was amazed and inspired.

What you see in the photo controlled the steam pressure in the



A Vapor Heat system invented and patented by Albert P. Broomell.

None of the information about him was in the archives. I found it on the internet for your interest and mine. Part of my job here is to keep you entertained.

Vapor Heat

Broomell didn't make the boilers or the radiators, just the specialties that made them work as a Vapor Heat system. His systems were different because his operated at the very low pressure of 8 ounces. He called it Vapor Heat. This is at a time when most steam heating systems operated at much higher pressures. His sales literature showed vapor gently wafting out of a tea kettle.

While the receiver kept the pressure low, the Broomell radiator valves, piped to the top of the radiator, were adjustable to five different settings. He or his advertising department called them quintuple adjustable. The settings corresponded to the size of the radiator, effectively limiting the amount of steam able to enter the radiator to the size of the radiator. In theory, they only let in enough steam so that all the steam condenses before it leaves the radiator.

Since it was a two pipe system, the air and condensate pass from the radiator at the bottom. He made a device for that also. It has no moving parts and looks something like a typical union elbow used on hot water systems. But


I found this particularly interesting, since I hadn't seen that before.

The draft in the chimney would pull a slight vacuum on the return side to help get the air out of the piping and radiators, allowing the steam to move evenly and quickly to the radiators. This was an innovation that wasn't used by many manufacturers. Not all innovations stand the test of time or the rigors of actual use, but the concept seems very effective.

Innovative Technology

The cars Broomell built were marketed to the wealthy, rather than to the masses like a Ford. In today's numbers, the list price would be \$82,000. Maybe he priced his Vapor Heat system out of the heating business.

The valves and return elbows are compatible with automatic fired boilers, but the receiver cannot be integrated into a modern system. The receiver controlled the pressure by opening and closing the draft doors on a coal fired boiler connected by the chain. As the pressure rose up to 8 ounces, the draft doors would close to decrease the firing rate. It was truly a modulating steam boiler, without the inducer fan assembly in today's mod-con boilers.

It also has a built-in relief valve that dangerously discharges steam straight into the atmosphere, not into a pipe that safely directs it to the floor. If you look closely at the photo, the component that replaced it in an automatic fired system is sitting on the bottom shelf of the display case to the left. A company still in the business, but now with a different name, made the pressure control called the Vaporstat, which operates in ounces of pressure like the Broomell receiver. 

What you see in the photo was invented and patented by Albert P. Broomell, of York PA in 1902.

system. It was invented and patented by **Albert P. Broomell**, of York PA in 1902. This wasn't his first patent and it wasn't his last. His 24 patents ranged from improvements to globe valves to improvements to the spark plugs for automobile engines.

Besides designing and manufacturing the Vapor Heat system of steam heating, he designed and built an automobile, originally the six-wheel Pullman Motor Car. Eventually it became a more conventional four-wheel automobile.

it had a little belly on the bottom to fill with condensate to trap any steam in the radiator and a little hole at the top to allow the air to pass to the dry return.

In his system, the dry return didn't have an air vent. The condensate found its way downhill to the receiver while the air passed to a "condensing radiator" that was hung from the ceiling. The air would pass through it, to make completely sure there wasn't any steam left, before it passed through a pipe that was terminated in the boiler's chimney.

Patrick Linhardt is a forty-year veteran of the wholesale side of the hydronic industry who has been designing and troubleshooting steam and hot water heating systems, pumps and controls on an almost daily basis. An educator and author, he is currently Hydronic Manager at the Corken Steel Products Co.

THE WOODFORD MODEL 22 **HOT/COLD** ANTI-BURST FAUCET:

PREFERRED BY DIRTY DOGS.

Rover doesn't enjoy an ice-cold bath any more than his owners do. The Woodford Model 22 provides year-round hot and cold water outside... and it won't burst in the coldest weather, even if a homeowner leaves a hose attached.*

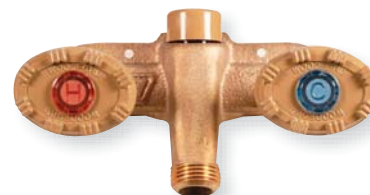
WOODFORD



Excellence. *Always.*

Hot and cold water outside is one of the most requested upgrades by homeowners!

*Model V22
Vertical
configuration*



*Model 22
Horizontal
configuration*

* If installed correctly



**WOODFORD
MANUFACTURING
COMPANY**

800.621.6032

www.woodfordmfg.com



Rheem® Opens New Fort Smith Innovation Learning Center

ATLANTA, GA – Rheem®, a leading global HVACR and water heating manufacturer, celebrated the grand opening of its cutting-edge Innovation Learning Center (ILC) in Fort Smith, Arkansas. The ribbon-cutting event, inclusive of speeches given by Rheem leadership, Senior Vice President and General Manager Rheem US Air Conditioning Division Kevin Ruppelt and Fort Smith-based Rheem Director of Operations Andrew Welch, followed by remarks from Mayor George McGill and an exclusive behind-the-scenes tour of the facility and lab, and company-wide picnic, marked the occasion on Thursday, Oct. 12.

“Today, we not only celebrate the opening of this Innovation Learning Center, but we also commemorate a significant milestone for Rheem, the state of Arkansas, and the city of Fort Smith. This center, spanning over 3,700-square-feet of showroom and classroom space, along with over 7,000-square-feet of conference rooms and office space, stands as a beacon of progress and learning,” said Ruppelt. “This achievement is a testament to the dedication, collaboration, and innovative spirit that defines Rheem.”

Diverse Training Needs

The Fort Smith Innovation Learning Center highlights Rheem’s ongoing commitment to education, innovation and quality. This \$5 million investment in the local community boasts an



The ribbon-cutting ceremony included Rheem executives as well as state and local officials.

impressive 10,000-square-foot facility designed to cater to the diverse training needs of both Rheem’s air conditioning division and water heating division specialists.



The new ILC in Fort Smith, AK.

“We are committed to being active participants in the Fort Smith community. The skills and knowledge gained here will not only benefit our employees but will also be a driving force in strengthening our local economy,” said Welch. “We hope to inspire our local young people to see a future for themselves and their families by working in manufacturing and skilled trades.”

Interactive Learning

This multifunctional center serves as an immersive environment, inviting HVAC and plumbing contractors, wholesalers, specifiers, engineers and others to directly engage

with Rheem’s comprehensive range of residential and commercial HVAC systems, as well as water heating products. The ILC is equipped with cutting-edge technology to facilitate various training sessions, conferences, seminars, workshops, and other events.


The classrooms within the ILC have been meticulously designed to provide interactive learning experiences, equipped with state-of-the-art technology for seamless live audio and

Launch of \$5M training facility features Rheem’s leaders, state and local officials, showcases impact of investment for the trade and local communities

video streaming. Rheem has a specialized hands-on classroom that comes equipped with tools and utility connections, allowing for demonstration installations and diagnostic training.

Supporting the Trades

The launch of the ILC was part of a larger Rheem investment, more than \$20 million, in supporting the growth, learning and development of the trade industry and in the Fort Smith community. Rheem’s Fort Smith facility has been a cornerstone of its US air conditioning business unit and HVAC equipment manufacturing for more than five decades. This substantial commitment seamlessly aligned with Rheem’s overarching 10-year strategy to invest in fostering growth, leading through innovation and fulfilling its commitments to its customers.

For more information on Rheem’s training, visit www.rheemtraining.com. 



Classrooms at the ILC have been equipped with state-of-the-art technology to create an immersive learning experience.





ALTA

What's the easiest way
to set combustion
on a high efficiency boiler?

SKIP IT.

Alta's proprietary
gas adaptive system
makes these adjustments
automatically for you.

Just start it, test it,
and walk away.

Your job gets easier
when you skip a few steps
with Alta.



Scan the QR code
to find out what else
you can skip.

USB  Connect
COMPATIBLE

U.S. Boiler Company

www.usboiler.net

From Rust to Robust: Rasmussen Mech Performs Industrial Boiler Refit

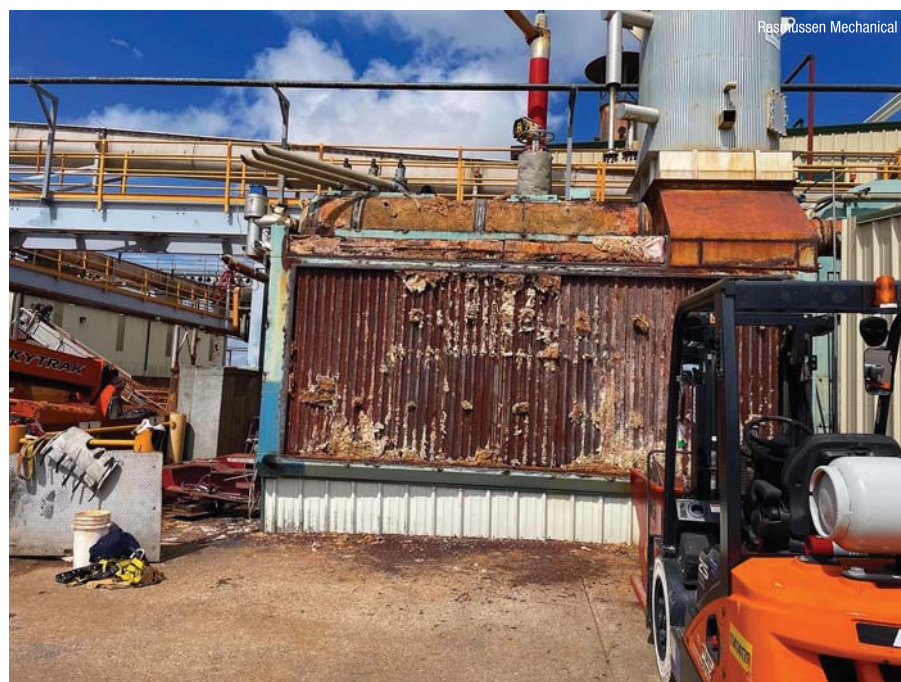
BY JOHN MESENBRINK OF CONTRACTOR'S STAFF

RUSSEL, KANSAS — Large-scale industrial ethanol plants use a lot of steam, especially ones producing 50 million gallons per year. That's why Rasmussen Mechanical Services, Council Bluffs, Iowa was called when damage was

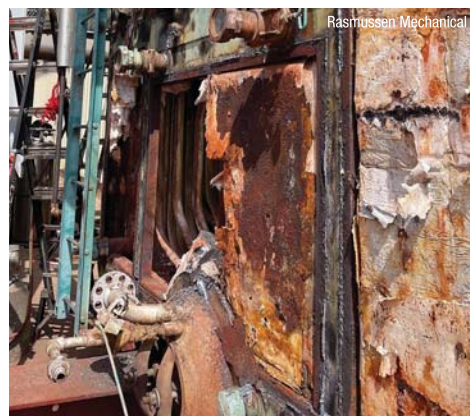
noticed on a package water tube unit.

Rasmussen Mechanical has been in business since 1970, but after acquiring the C. G. Johnson Boiler Co. in 1986 the company made a name for itself in boiler repair and maintenance.

When an annual inspection at an ethanol plant found damage on a rental package water tube unit, Rasmussen Mechanical Services revived the unit into a fully functioning boiler.



A view of the boiler after removing the side walls and most of the insulation.



A rear view of the boiler while removing the walling and insulation.



Part of the rear wall rebuild about midway through with support beams in place.



The rear wall after installing new insulation, a new wall and exterior supports.

Rasmussen currently features a wide service offering that includes temp controls, reliability solutions, mechanical construction and much more, with ten locations serving Iowa, Nebraska, South Dakota, Colorado, and the surrounding area.

Upon further inspection, the boiler was developing hot spots on the rear

wall and side wall. As a result, the project included recasting, new insulation, and new refractory front and rear walls for this unit.

Originally designed as a temporary rental water tube unit, the boiler became a permanent fixture at the ethanol facility. Due to the boiler being

➤ **Turn to Rust to Robust, page 44**

NEW EBOOK FROM CONTRACTOR

WORKFORCE DEVELOPMENT

The workforce crisis is as bad as it has ever been. Call it a perfect storm: older workers retiring, younger people choosing not to enter the trades, and a tight labor market that has contracting firms fighting tooth-and-nail to find and keep the existing skilled hands.

Here is a selection of 5 articles that will help you navigate this labor turbulence and enable you to develop and maintain your 21st century workforce.

<https://www.contractormag.com/learning-resources/whitepapers/whitepaper/21120429/ebook-workforce-development>

CONTRACTOR[®]
LIBRARY

WORKFORCE DEVELOPMENT



Copyright © 2019 by Endeavor Business Media
All rights reserved.

by Patti Feldman
COMPUTER AUTHORITY



Four Field Service Solutions

Medulla Pro software (medullapro.com) optimizes field service management, including dispatching, scheduling, inventory, mobile reporting, work orders, parts, contracts, job checklists, field service tracking, installations, preventative maintenance, and repairs.

Designed to integrate with your CRM, it is scalable, by plan, for businesses ranging in size from Small (up to 20 users), Medium (21-100 users), and Enterprise (unlimited users).

All plans address scheduling and dispatch, with the option for drag & drop scheduling on a map, Gantt chart, or calendar; management; billing, including automatic billing; accounts payable; and reports. The solution includes a mobile app.

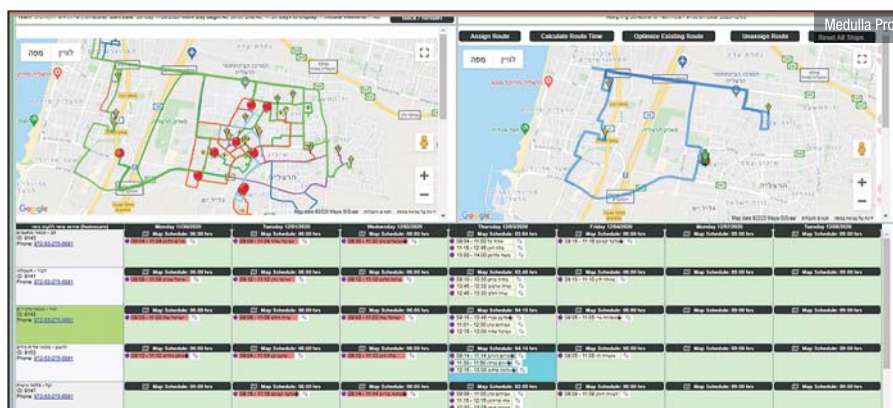
The scheduling and dispatch dashboard provides a mapped real-time view of your workforce. Dispatch can automatically process work orders based on terms of customer contract, warranties, or maintenance agreements while optimizing use of resources (e.g. people, parts, vehicles) including automatically assigning work orders within predefined zones to particular technicians. Dispatch can text a customer an ETA alert when a technician is on the way.

Interactive mobile applications can connect dispatchers to technicians anywhere any time. The technician can issue parts from the vehicle, report labor, write notes, take pictures showing before and after, get a customer signature, and generate and send an invoice.

Centralized document management, in a secure HIPAA compliant platform, enables accessibility online 24/7, including signatures and orders.

Other management features include the ability to organize and track barcode-enabled tools, manage staff availability and vacation days, and track hours spent per work order with daily, weekly, monthly, or annual views. The software also supports staff check-in/check-out and calculation of hours worked, generating input for payroll.

Using the mobile app, technicians can access blueprints, graphic bills of materials, interactive schematics, installation instructions, product service checklists, and other data that



The Medulla Pro weekly scheduling window.

Reviews of Medulla Pro management software, FieldBin management software, the MeasureQuick productivity app and Buddy Punch time clock software.

can enhance productivity.

The *Medium* and *Enterprise* plans add features for purchase order and request management, inventory management, advanced reporting, data migration, and interface with your existing system if feasible.

Pricing: subscription by plan, including separate costs for training, if appropriate.

FieldBin

FieldBin (www.fieldbin.com) cloud based field service management software (with integrated apps for iOS or Android) addresses estimating, scheduling and dispatch on a color coded calendar, with the ability to drag and drop work orders and set up recurring work orders and maintenance/service contracts, employee time tracking with employees able to clock in/out from their smartphone, invoicing and payment processing through integration with Stripe (a payment processing solution) with the ability to capture a customer's digital signature, inventory management for multiple locations, and GPS stamping for location and time tracking.

You can create quotes/invoices from a desktop, laptop, tablet or smartphone and email or text them to customers.

Push alerts include notifying customers by email and text that the technician

is "on the way" and reminding technicians of appointments. Users can set up recurring work orders and maintenance/service contracts. Integrated inventory management sends notifications when inventory level reaches a specific threshold.

You can build your own price book of services for use in estimating and invoices. FieldBin integrates with QuickBooks.

Reporting options include inventory levels, crew productivity including metrics for each crew member, job profit reports, time cost reports, and material cost reports.

Pricing: fee monthly: Basic—single user, Synch—integration to QB up to 5 users, Build—for larger companies (6 to 15 users), plan also available for over 15 users.

MeasureQuick

MeasureQuick (www.measurequick.com) is a productivity app for use on smartphones and tablets. Its primary purpose is to calculate and document HVAC system equipment performance, conduct system diagnostics, and enhance overall efficiency. The software is tailored for technicians who install and service residential and light commercial HVAC systems, simplifying the process of measuring and diagnosing system is-

ues. It is available as a Free version with some premium features for download on Google Play and the App Store.

The software records characteristics of each system for every installation and adjusts for environmental conditions. The Free version offers more than 100 diagnostic notifications, target zones, and the ability to connect with various brands of Bluetooth apps. The Premium version includes advanced diagnostics, data streaming, vital score reports, and unlimited project data and photo storage, as well as CRM integrations.

Pricing: BASIC access: Free, including tools connections and unlimited diagnostics; Premium: fee per system per year, encompassing unlimited projects, remote data streaming, and cloud storage.

Buddy Punch

Buddy Punch Employee Time Clock software with mobile app (www.buddypunch.com) allows employees to clock in/out from different locations using mobile devices.

Using GPS tracking, it offers the option of several different punch methods: username and password; pin/kiosk; facial recognition; and QR code scanning.

The solution is available in three plans, Standard, Pro, and Enterprise, all including job and location tracking, automatic overtime calculations, alerts and reminders, on-demand reporting, webcam photos on punches, and manager permissions.

The Pro plan adds employee scheduling with use of a drag-and-drop schedule builder with available and preferred times, shift trades and covers, schedule templates, schedule notifications, availability management, and early/late/absent reporting. The Enterprise plan adds single sign on and API access.

Buddy Punch allows seamless syncing with QuickBooks and other payroll software.

Pricing: fee per user/per month; Free trial available. **C**

Patti Feldman writes articles and web content for trade magazines and manufacturers of building products. She can be reached at productpad@yahoo.com.

by Matt Michel
MARKETING AUTHORITY



6 Simple Ways to Boost Sales

Want more sales? Contractors often overlook simple steps that they can take to boost sales. Those that do not involve more marketing, more investment, or more work. Here are six.

1. Give Options

Whether you realize it or not, you are always giving options. Even if you only present one solution, you are giving people an option. The option is your solution or someone else's or nothing at all. Doing nothing is almost always an option. When it is not, calling another company is usually on the table.

Three options is the traditional approach. This is good, better, or best. Given three choices, with no urging or effort to upgrade, around 30% of consumers will choose the better or best option even when it costs more. With a recommendation from the field, that number will go up. When people do select a better option, sales increase as well.

Every repair should include three options. They are making a repair, making a replacement, or making an upgrade. It is simple. For example, you might ask, "Would you like to repair, replace, or upgrade your toilet?"

2. Use Simple Pricing

We tend to overcomplicate pricing. Flat rate was a leap forward in simple pricing. Instead of quoting an



Contractors often overlook simple steps that they can take to boost sales.

hourly rate and quoting materials separately, we gave one price. While the flat rate price may not result in higher prices and sales than quoting prices separately, it often does because contractors want a fudge factor for the occasional long job. Thus, flat rate increases sales.

Simple pricing is more than flat rate. Assemble a package and give it a bundled price. For example, instead of simply quoting a storage water heater,

quote a sanitary and safety water heater, which involves a mixing valve so that water temperature in the tank can be maintained at levels that will prevent the formation of Legionella while the mixing valves reduced the temperature of the hot water supplied to the house to minimize scalding.

3. Ask About Add-Ons

Fast food restaurants boosted sales when the order takers began asking,

"Would you like fries with that?" Later, they began offering to supersize drinks. What can you add on your service calls. Would you like a set of undersink water alarms with that?

4. Sell Payments

Empirical research has shown that financed sales are bigger sales. Anytime a repair or product costs more than a few hundred dollars you should consider offering financing so that you can sell on payments, which appear much more affordable to most cash strapped consumers. Then, you can present add-ons by stating that the homeowner can get the add-on for only a few dollars more per month.

5. Raise Prices

Yes, the easiest way to boost sales is to raise prices. Raise prices by five percent and you raise sales by five percent and profit by five percent without any additional effort. For service and repair work, flat rate pricing makes it easy to raise prices.

In an inflationary environment, it is incumbent upon business owners to raise prices to keep up. Otherwise, you are subsidizing your customers. Moreover, given the rate of inflation, price ahead. Raise prices in anticipation that prices will rise over the next six months at the same rate as the past six months.

6. Offer Extended Warranties

Give people a five-year parts and labor guarantee. There are companies that will offer these for you to sell or you can carry the liability yourself. This can be offered separate as an add-on or part of a bundle for a premier or "best" offering.

Hopefully, you have already taken these six simple steps. If not, pick one and execute, then pick another. Instead of complaining about sale, make more sales happen with the same labor and watch your profits soar. **G**

For more information on powerful plumbing performance, check out the Service Roundtable. It is contracting's largest business alliance. Visit www.ServiceRoundtable.com for more information.

BDR Introduces Kim Archer As President, Names Matt MacArthur As Senior VP of Training and Marketing

SEATTLE, WA — Business Development Resources (BDR), a provider of business coaching and training services for the HVAC, plumbing, and electrical industries, announces the elevation of two experienced executives to support the company's continuing mission to empower business owners and their teams for growth and success.

Kim Archer has been named BDR's president and **Matt MacArthur** has been named senior vice president of training and marketing.

Archer had previously served as vice

president of coaching. MacArthur had served as director of training.

Kim Archer

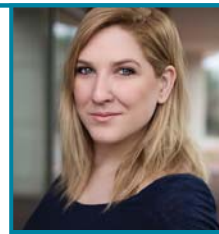
Since joining BDR in 1997 as a dealer consultant, Archer has been the driving force behind the company's highly successful Profit Coach program and Profit Launch business planning workshops. She served as lead trainer for BDR's financial courses and spearheaded the integration of efficient internal systems and technology platforms.

Matt MacArthur

MacArthur, a graduate of Ohio Wesleyan University and the Ohio State University Moritz College of Law, joined BDR in 2001. His team supports BDR's 50-plus business training programs, which over 10,000 contractors and distributors participate in annually. MacArthur also hosts BDR's monthly Prime Resources Podcast and bimonthly Prime Partners Pod.

For more information, visit <https://www.bdrco.com>. **G**

by Rachael Plant
CONTENT MARKETING SPECIALIST FOR FLEETIO



5 Tips to Ease the Burden of Large Fleet Management

Integrated fleet technologies like fleet management software (FMS) can help businesses with large fleets better manage daily operations.

Managing a large fleet comes with a unique set of challenges that—when gone unaddressed—can negatively affect productivity and profitability. With assets scattered across a wide area, keeping track of maintenance, utilization and fuel consumption can quickly become overwhelming. With the right strategies and tools in place, however, businesses can streamline operations, improve efficiency and reduce the burden of managing a large fleet.

1. Establishing a Proactive Maintenance Program

Effective fleet management starts with a strong maintenance program. For large fleets, a proactive approach to maintenance is key. Instead of waiting for assets to break down, establish a preventive maintenance (PM) program based on manufacturer-recommended service schedules, historical service records and regular vehicle inspections. Sticking to a proactive maintenance schedule—especially based on historical vehicle data—helps fleet managers minimize unexpected breakdowns, extend the lifespan of assets and reduce overall maintenance costs, which improves assets' return on investment (ROI) as well as productivity.

2. Automating Maintenance Reminders and Work Orders

Even if you have the best maintenance program in the world, it won't do you any good if it's not adhered to, but keeping track of maintenance schedules and generating work orders manually can be time-consuming and prone to human error. FMS and other fleet technologies automate maintenance reminders and work order generation. Such software can send automated alerts to fleet managers, technicians and drivers, ensuring transparent



Managing a large fleet comes with a unique set of challenges that—when gone unaddressed—can negatively affect productivity and profitability.

communication around what service tasks are needed or scheduled. Automation streamlines the service workflow, including updating in-house inventories when parts are added to work orders, as well as enhances communication and helps managers maintain a well-organized maintenance process for large fleets.

3. Tracking Fuel Consumption and Monitoring Driver Behavior

Fuel is one of the most significant expenses for large fleets. Effectively managing fuel consumption can lead to substantial cost savings. Fleet solutions like FMS integrate with fuel tracking systems, such as telematics and fuel cards, to monitor fuel consumption in real-time and shed light on per-mile operating cost of any fleet asset.

Using fuel reporting in FMS, you can pull reports to better analyze fuel spend as it relates to daily operations, fuel spend by operator (to determine asset or fuel card misuse) and fuel spend by asset (to determine potential mechanical issues and replacement

cycles). This data allows managers to identify fuel inefficiencies, pinpoint potential fuel theft, surface high-consumption vehicles and track driver behavior. Implementing driver training programs based on data insights can further enhance fuel efficiency and reduce operational costs.

4. Embracing Telematics as a Source of Information

Telematics has revolutionized fleet management for large fleets. With assets spread over a wide area, it's crucial to know the exact location and status of each vehicle. Telematics systems allow fleet managers to access real-time location data, vehicle faults and driver performance metrics remotely, empowering them to make data-driven decisions, optimize routes, monitor vehicle health and ensure driver safety.

5. Utilizing Data Analytics and Reporting

Data analytics and reporting play a vital role in optimizing large fleet management. FMS equipped with robust data analytics capabilities can provide

valuable insights into asset utilization rates, performance and overall health. FMS can integrate with numerous other fleet and business solutions to further improve operational insights into productivity, cost and profitability.

Data Consolidation is Key

Integrated FMS allows businesses to collect, consolidate and aggregate data automatically. Easy-to-read reports with custom parameters helps simplify data analysis so managers can quickly source the cause of issues—including downtime and increased fuel consumption—and address those issues in a timely manner. FMS provides data visualizations on a customizable dashboard so you can quickly get the metrics you need without getting bogged down in big data.

Typically, the larger the fleet, the more numerous the stakeholders, and fleet data should be transparent and readily available to those stakeholders. FMS provides custom permissions so fleets can add specific stakeholders as users, allowing them to quickly get the metrics they need for decision-making. Managers can also select specific reports to be automatically emailed at custom intervals to specific stakeholders to ensure everyone has the data they need, when they need it.

Using FMS and other fleet solutions—and establishing and adhering to a proactive maintenance program and utilizing data analytics—fleet managers can easily analyze data trends to identify underutilized assets, detect potential issues early and make informed decisions to optimize fleet operations and resource allocation, leading to improved operational efficiency, cost savings and increased productivity for the entire fleet. **G**

Rachael Plant is a content marketing specialist for Fleetio, a fleet management software company that helps organizations track, analyze and improve their fleet operations. For more info, visit fleetio.com.

by Lynn Karam
FOUNDER AND CEO OF LEK MANAGEMENT INC.



Single Member LLCs: How to Avoid 4 Common Pitfalls

Single member LLCs are one of the most audited entities. As such, the owners of these LLCs must have the foresight to adapt practices which can withstand the scrutiny of governmental authorities. Despite the tremendous daily demands on a contractor of operating their business, it's clear that implementing specific strategies can give an owner peace of mind even in the event of any financial or tax-related inquiries.

1. Receipts, receipts, receipts

First and foremost, make sure to keep and properly store all business receipts, with no exceptions. Vendor payments have been moving to on-line systems such as Zelle, Venmo and Cash apps. Providing statements to show these payments were paid to a person, email or telephone number is not enough. As a business owner, you must provide proof that every payment being claimed has been made for a legitimate business expense. Ink on receipts can fade over time. When storing receipts, we recommend scanning them and storing them on a computer with a backup copy on an external drive or USB. The bottom line is that it is always the responsibility of the business owner to prove the legitimacy of their expenditures.

2. Always choose the correct labor allocation

Business owners must always ensure that they correctly allocate their hired labor sources. To put an exclamation point on why this is so important, we share here a cautionary tale. We recently represented a contractor in a worker compensation audit. They were asked to provide copies of the W-2s and 1099s for all employees and contractors. The business did not have any W-2s to provide but was able to provide the 1099s for the people he hired. When asked for invoices and Certificates of insurance (COI) for the recipients of the 1099s, the owner was ultimately unable to provide the COIs. The failure to provide the documents



Specific strategies can give an owner peace of mind even in the event of any financial or tax-related inquiries.

resulted in a \$61,000 liability to the business.

There are guidelines to determine whether someone should be characterized as an employee or contractor that can be found at: www.irs.gov/businesses/small-businesses-self-employed/independent-contractor-self-employed-or-employee

3. Showing losses consistently

Some business owners are simply tax averse. It's understandable that after working so hard to create a profitable business, some owners are reticent to hand over money to the IRS, State, City, or other local taxing agencies. However, the law is the law. Reporting losses for an extended period of time is an enormous red flag for the IRS and other taxing authorities. Businesses

exist to earn revenue. If you are still operating after years of losses, the IRS has a basis for concern about the legitimacy of the business, and in fact, whether you are pursuing a hobby or operating a business.

Another concern for business owners showing years of losses is the ability to obtain financing. Losses signify the inability to cover the expenses of the business. While there are ways around this, it is an uphill battle. If you find yourself in this situation, it's wise to consult a financial professional to help you create a viable, actionable plan.

4. Making estimated tax payments

When single-member LLCs report profits for a given year, it may result in tax liabilities for the owner; and if the owner

has a tax liability for one year, they may be required to make estimated tax payments for the following year. If there is a tax liability in the second year, the owner may be fined a Penalty: "Failure to make estimated tax payments". Each owner's case is different and we advise business owners to consult with a reputable tax professional to provide practical advice and tax planning services.

If you would like more information, reach out to us at lekmanagementinc.com/contact/.

Founder and CEO of LEK Management Inc., Lynn Karam has two decades of experience in finance, operations, and strategic planning. Karam is an Enrolled Agent authorized by the United States Department of the Treasury to represent clients who are undergoing an audit and to negotiate with the IRS on her clients' behalf. Her success rate in resolving even the most challenging of IRS scenarios has become the cornerstone of her success. As CEO, Karam uses her financial expertise to establish sustainable strategies that result in significant business growth for her clients.

Smart Water Systems and Cybersecurity

SPECIAL TO CONTRACTOR

The development of smart cities and smart communities is expected to increase dramatically over the next few decades, so much so that some reports claim as many as 60% of the world's population may live in smart cities by 2050.

And smart cities mean smart water systems. Plumbers may install IoT water flow sensors to detect changes in pipe flow rates, with systems designed to report metrics frequently and automatically alert if water use changes drastically. This allows teams to quickly locate potential leaks and prioritize repairs based on accurate data.

Temperature sensors deployed to automatically alert teams if water temperatures drop below a predetermined level can mitigate issues regarding burst pipes; smart meters can help tenants more accurately monitor live usage of water resources.

Smart water systems show great potential when it comes to predictive maintenance. IoT sensors can be installed to monitor above and below ground pipes and programmed to analyze typical utility usage. This data is then processed and stored in a cloud-based system to help teams assess how pipes respond to regular use. Data suggests such a process may be able to reduce the frequency of breakdowns by up to 70%, while decreasing downtime by around 50%.

Comprehensive Security

With more communities reliant on smart technology systems to control the operation of essential utilities, building management tools and physical security devices, comprehensive IoT security considerations will become increasingly important.

The frequency and severity of sophisticated cyber attacks has been seen to increase in recent years, with reports claiming the number of recorded cyber attacks rose by almost 40% between 2021-2022, and the average cost of an attack grew by 15% over 3 years to reach \$4.45 million.



To enjoy the many benefits of IoT devices while avoiding the threat of large-scale cyber attacks, IoT security best practices must be adhered to at all times.

To ensure that modern communities and contractors working in the construction industry remain able to enjoy the benefits of IoT devices, without facing the threat of large-scale cyber attacks, IoT security best practices must be adhered to at all times.

Best Practices Zero Trust Policies

Access to all IoT devices such as sensors used to measure utility usage, control security tools and operate building management systems must be protected behind zero trust policies. This means all users (including contractors and tenants) will be required to provide verification each time a device is accessed or adjusted. Pursuing a zero trust approach helps to prevent attacks spreading throughout connected systems by reducing the attack surface available to hackers,

Multi-Factor Authentication (MFA)

Unique user profiles must be created for all contractors, tenants and property owners to help security teams monitor how systems are used. These profiles should be secured using MFA policies, whereby users are expected to produce multiple forms of verification before access to secure systems will be granted. Credentials typically include a combination of one-time access codes, passwords and biometrics, with data suggesting MFA may prevent up to 99% of attacks.

End-to-End Encryption

It's estimated that up to 98% of IoT device traffic is unencrypted, meaning the sensitive data stored within many IoT systems may be vulnerable to cyber attacks. To prevent hackers gaining access to important smart technology systems, teams must ensure that all

communications sent between IoT devices and wider management portals are secured using end-to-end encryption. In short, this ensures data remains unreadable to anyone without authorized access credentials.


Response and Recovery Plans

If IoT systems are compromised, admins must have clear response and recovery plans in place. Roles and responsibilities must be discussed to ensure teams know who's in charge of securing and assessing individual systems, while backups of important data must be readily available to make sure essential systems can be reprogrammed and turned back on as quickly as possible.

Conclusion

Smart technologies and IoT devices are continuing to transform the way modern communities function, enabling contractors to perform tasks with improved efficiency, and helping residents to better manage their utility and property security systems. However, the adoption of IoT devices rises, so too can the security risks associated with large-scale cyber attacks and data breaches.

For contractors, security personnel and residents to safely enjoy the benefits of smart building technologies, IoT security best practices must be followed at all times. Users must be frequently verified, MFA policies must be implemented, data must be encrypted and detailed response and recovery plans must be in place. This way, modern communities can be protected from threats.

For contractors, security personnel and residents to safely enjoy the benefits of smart building technologies, IoT security best practices must be followed at all times. Users must be frequently verified, MFA policies must be implemented, data must be encrypted and detailed response and recovery plans must be in place. This way, modern communities can be protected from threats. 

by Colleen Anderson
TECHNOLOGY AND BUSINESS WRITER



Focus on Your Benefits Plan to Attract Skilled Labor

Skilled labor shortages continue to affect the construction industry. Although the State Construction Unemployment rate went down by 0.1% compared to 2022 and that overall rates remain under 8% nationwide, a skilled labor shortage remains, especially in plumbing and hydronic heating. Some factors causing this include an aging workforce and fewer trade school attendees. This shortage results in structures taking longer to complete, while some projects get canceled entirely. Fortunately, businesses can address the shortage and attract skilled labor by improving the benefits they offer. Here are a few benefits your package can focus on to do just that.

Health Insurance

Plumbing and hydronic heating workers are prone to sicknesses and injuries resulting from fatigue or accidents caused by work. That's why it's essential to provide health insurance that encompasses outpatient and inpatient care. You can further improve this by using insurance plans accepted outside hospitals. That way, coverage extends beyond primary care toward specialized medical services and purchases. Take major retail brands, Eyebuydirect and Walmart. Eyebuydirect accepts vision insurance from various providers. If you offer employees plans from providers like Advantica Insurance Co., they can get discounts on eligible eyewear purchases.

Meanwhile, Walmart provides dental care through its partnership with oral health company quipcare. Here, customers can access dental professional consultations remotely. Offering comprehensive health insurance like this can attract more skilled labor into your ranks, especially if it can be directly used for other health needs like affordable new eyewear and dental care.



34161856 © Monkey Business Images | Dreamstime.com

Address the skilled worker shortage by offering benefits that will attract workers, including health insurance, retirement, and training.

Upgraded Leave Benefits

Manual work in plumbing and hydronic heating is a physically demanding job. If sick leaves aren't paid, employees may force themselves to clock in even if they're feeling unwell. In the long run, this can affect their productivity, performance—and the overall outcome of a project. By implementing a paid sick leave policy, they can regain their health without worries and return to work as soon as possible. You can also consider updating your policy on paid vacations. That can encourage workers to be more proactive about their health and get some rest without

worrying about their pay. Ultimately, taking these steps can attract more skilled workers while improving your current workforce's morale.

Retirement Benefits

Business News Daily reports that over 77% of employees say retirement benefits are among the most important factors they consider when choosing a job. People want to prepare for and ultimately enjoy their retirement after years of hard work—and the plumbing and hydronic heating professionals you want to hire likely feel the same. That's why you should consider

offering retirement benefits like employee stock ownership plans. This enables workers to accumulate company shares, which can increase depending on their employment term. It motivates them to work and stay at your company as they watch their investments grow. When they retire, they sell their shares and receive cash for their value. It's definitely a strategy to consider when updating your benefits to attract more talent.

Training Opportunities

Like other industries, plumbing and hydronic heating are evolving. New technologies are improving the products and services, and workers need to keep up as consumers begin requesting their use. As such, offering training opportunities attracts skilled workers who envision themselves as long-term industry professionals. One area you can offer training in is smart technology. Today, the technology is being installed in more buildings as people demand ways to efficiently use heat and water as well as detect plumbing or heating issues earlier.

As such, the market is set to grow from \$14.37 billion in 2023 to \$33.83 billion by 2030. Such technologies—like smart leak detectors—weren't used in the past, so employees need to learn how to install and maintain them. When you provide training, you prioritize your workforce's professional development—something that can encourage skilled labor to join and stay with your company. **C**

Colleen Anderson is a freelance writer based in Florida. She writes primarily about technology and business, and hopes to find a role covering one or both subjects for an online magazine or journal in the near future.

Is an ESOP Right for Your Business?

► **Continued from page 22**

under other ownership structures. There are some really interesting tax attributes as well from a number of different perspectives.

CONTRACTOR: So, say you think an ESOP might be right for your company, what are the first steps to take?

Jeff Buettner: The first thing is to determine if you've decided to go that route—if you want to sell your business to the ESOP rather than any other buyer. The next step is determine how feasible the structure is for your business. And a big part of that is understanding the value of your company. Part and parcel with that is understanding, well, how is

this ESOP going to finance the purchase of this business from me?

At its core, this is a leveraged buyout and like any other leverage buyout,

through its cash flows, be able to pay the debt that is placed on the company's balance sheet in order to finance the purchase price.

At its core, this is a leveraged buyout and like any other leverage buyout.

you have to be able to support the debt structure that is used to finance this purchase transaction.

A big part of whether or not this structure is feasible isn't just centered around what the company's worth, but is how is the company is going to,

Obviously it's important to look what sort of debt is available, the terms of the debt, the company's projected cash flows, what the annual principle and interest payments on that debt are going to be alongside other cash needs of the business.

Your business probably will have capital expenditure needs, it will probably have working capital needs, you might have, again, strategic initiatives at the board level to grow organically, and you're going to need cash. You might have aspirations at the board level to grow inorganically through acquisitions, in which case you're going to need cash, you're going to need borrowing capacity. So you want to make sure that you can sort of marry all of the productive growth initiatives of the business alongside the fixed charges you're going to be taking on to finance ownership succession.

We tend to try to think about the durability of the structure upfront and then really sort of try to explain and illustrate to the founder or the owner of the business that is selling the company, this is the experience that you can expect initially and over a longer say, five, seven year period of time; here is the experience that the employees can expect initially and over a five or seven year period of time.

CONTRACTOR: Naturally, an owner would want expert advice along the way.

Jeff Buettner: I think the most common forms of ownership succession are selling to private equity or selling to a strategic buyer (typically meaning a competitor). I think the ESOP structure sometimes is a really good fit that goes overlooked because there just aren't a lot of practitioners that feel confident in the nuances of the structure to really sort of dig in.

I think it's important then for owners to make sure that they're being proactive. If the ESOP is not something that someone is mentioning to them, they should be proactive asking about it to make sure that when they're making a decision to sell their company, they have all of the information on the options that exist for their business.

Like anything else, you hate to make a decision on a route not knowing that there was an alternate route that was feasible and competitive and—in some cases—more competitive and more attractive for a lot of reasons. **C**

Harts Services Honors 2023 Hometown Heroes for Service and Sacrifice

TACOMA, WA— Harts Services, a top-rated Pacific Northwest plumbing and electrical company founded in 2013, looks back on another season honoring area veterans and active service members through the Harts Hometown Heroes program in partnership with the Tacoma Rainiers, the AAA affiliate of the Seattle Mariners.

Harts Services recognized seven Hometown Heroes during the Rainiers' 2023 season for their commitment and sacrifice. Each Hometown Hero enjoys a Rainiers game with friends and family from the exclusive Commencement Bank Summit Club courtesy of Harts Services and is introduced to fans from the Cheney Stadium field between innings.

Harts Services also donated \$4,300 to the Wounded Warrior Project at the end of the season—\$100 for every Rainiers home win in 2023.

"We have many service members and veterans in the area, and we're proud to be able to give something back to them," said **Richard Hart**, co-owner of Harts Services.

Between May and September, Harts recognized the following Hometown Heroes:

- **Karin Harnishfeger:** After joining the U.S. Navy in 1995, the first Harts Hometown Hero of 2023 was



Richard Hart presents a check for the Wounded Warrior Project at a Tacoma Rainiers game.

stationed in Kuwait, Japan and Spain as well as multiple locations in the United States during her career. Harnishfeger retired in 2017 as an E8 senior chief.

- **Matthew Westberry:** Staff Sgt. Matthew Westberry's 13 years in the U.S. Marine Corps included deployment in Operation Enduring Freedom.
- **Jacob Sullivan:** U.S. Air Force Sgt. Jacob Sullivan is currently stationed at Joint Base Lewis-McChord. He has been stationed around the United States and Italy during his 14 years of active duty, including deployment in support of Operation Inherent Resolve.
- **Amanda Stambach:** Lt. Col. Amanda Stambach is a veteran of combat tours in Iraq and Afghanistan. Currently stationed at Joint

Base Lewis-McChord, she will retire from the Army in January after 24 years of service.

- **Steve Hice:** Steve Hice joined the U.S. Army on his 18th birthday and was stationed in Germany when the Berlin Wall fell and was later deployed for Operation Desert Shield and Operation Desert Storm. He's been a train conductor in Tacoma for the last 31 years.
- **Selena Coppa:** Sgt. Selena Coppa served eight years in Army intelligence and security command, including deployment in Iraq, before retiring.
- **Wesley Howard:** Wesley Howard served multiple deployments as an aviation electrician on U.S. Navy aircraft carriers during his eight years of service (2000-2008).

Harts Services provides critical plumbing services, including emergency plumbing, bath and kitchen plumbing, water lines, water heater repair and installation, sewer line repair and installation, trenchless sewer repair, drain clearing, sump pump repair and installation, and more.

Harts Services also offers electrical services, including breakers, circuits, outlets, lighting, generators, and more.

For more information, call 253/470-8766 or visit www.hartsservices.com. **C**

New Research on the Effects of Chlorine Dioxide

IRVING, TX — The Plastics Pipe Institute, Inc. (PPI) has released a new technical document that reports on the association's findings about the compatibility of plastic piping materials with chlorine dioxide (CIO2) when used in hot- and cold-water plumbing distribution systems.

Investigation results from the Plastic Pipe Institute now available.

Prepared by PPI's Building & Construction Division, *PPI TN-67 Chlorine Dioxide and Plastic Hot- And Cold- Water Plumbing Distribution Pipes* focuses on the application of chlorine dioxide within buildings and its potential effects on plastic hot- and cold-water plumbing distribution pipe materials.

Chlorine Dioxide

While chlorine dioxide is rarely used as a secondary (i.e., residual) water disinfectant in public potable water systems, in certain types of large facilities such as hospitals, nursing homes, hotels, apartment buildings, and large office buildings, it is sometimes added to plumbing distribution systems to treat or control outbreaks of harmful bacteria such as Legionella. Starting in 2020, a team of experts from PPI member companies began a research project to investigate the potential effects of chlorine dioxide on pressure piping materials CPVC, PEX, PE-RT, PP-R, and PP-RCT.

Extensive Analysis

"Currently, only limited North American industry data is publicly available to predict the impact that chlorine dioxide may have on specific plumbing distribution pipe materials," explained **Lance MacNevin**, P. Eng., director of engineering for PPI's Building & Construction Division. "PPI TN-67 addresses this topic based on data that has been collected through an extensive analysis of published research combined with the experience


and expertise of PPI members."

Chlorine dioxide is a dissolved gas and is highly volatile and efficient as an oxidizing agent for disinfection. It is used in different concentrations than free chlorine or chloramines and has a different mechanism of attack on the

various materials and substances to which it is exposed.

MacNevin continued, "Based on the data that has been analyzed by our association regarding the effects of chlorine dioxide on piping materials in hot- and cold-water plumbing systems, it is

apparent that this compound can be very aggressive to certain piping materials.

Access the full content of PPI TN-67 at <https://plasticpipe.org/common/Uploaded%20files/1-PPI/General%20Literature/Technical%20Notes/PPI%20TN-67/PPI%20TN-67.pdf> 








Our Heating Season Forecast

We can't predict the weather. But we can help you prepare for it. Shop our full inventory of parts and stock up now before the season gets busy. After all, the only thing better than predicting the weather is not needing to.

OCT	NOV	DEC	JAN	FEB
				
PILOT PROBLEMS	"THERE'S A LEAK!"	FAULTY SENSORS	BUSTED BOILERS	"WEIRD NOISES"

200,000+ Products | 450+ Brands | Fast Delivery

Check out our full heating selection, including:

						
Air Eliminators	Gas Valves	Low Water Cutoff	Water Feeders	Boiler Fill Valves	Oil Nozzles	Switching Relays

 **SupplyHouse.com**
Plumbing, Heating & HVAC Supplies

Check out our heating products!



AHR Expo Announces 2024 Innovation Awards

► Continued from page 1

and ventilation. Winners are selected by a panel of third-party ASHRAE member judges who evaluate all award entries based on innovative design, creativity, application, value and market impact. Each year, one of the category winners is selected as the prestigious Product of the Year winner which is announced during the show.

BUILDING AUTOMATION

The 75F HyperStat Split enables contractors to upgrade RTUs with advanced rooftop control with unprecedented ease.

Using only two existing wires from the RTU to the thermostat, HyperStat Split provides dual enthalpy economizer, demand-control ventilation, and VFD control. What's more, an onboard PIR occupancy sensor enhances energy savings with auto away. HyperStat Split's ability to work with the existing two wires provided for a standard temperature sensor while still delivering advanced control sequences demonstrates that hardware can work with existing infrastructure without excessive complexity. Rising demand for IAQ can be met in a user-centric manner.

75F
WWW.75F.IO

COOLING

The DSG compressor has been specifically designed for low pressure refrigerants such as R1234ze with low global warming potential. Applications include chiller systems, with a wide range of compressor capacities available to support unit design requirements. The DSG has been specifically designed for low pressure low global warming potential refrigerants such as R1234ze. These refrigerants would usually require a much larger compressor size to have the same capacity as high pressure (R410A, etc.) refrigerants.

Danfoss
WWW.DANFOSS.COM/EN-US

HEATING

Nextac transforms the PTAC into a tour-de-force of total comfort control. R32, twin rotary inverter compressor, heat pump performance to -10°F, integrated ERV, MERV13, zero air leakage, self-cleaning coils, 27 dB(A) operations, STC of 40, sleek, all-metal, paintable cabinet. No drain is required for cooling or heating. Nextac aims to disrupt the status quo with this new high-efficiency and quality PTAC, making



them more efficient, aesthetically pleasing and adding more insulation for quieter operation and a better seal.

Nextac
WWW.EPHOCA.COM

INDOOR AIR QUALITY

WellStat® is an indoor Air Quality + Energy Management Software platform used by property and facility management teams to responsibly assure healthy air quality conditions, lower operating costs, and increase operating revenue. It is our goal to optimize an asset's performance while



promoting a safer and healthier work environment. WellStat is FCC tested and UL listed. It provides data beneficial for achieving various sustainability certifications (LEED, WELL, RESET certified, US Energy Policy Acts).

WellStat®
WWW.WELLSTAT.IO

REFRIGERATION

The innovative AirGreen-BMIL brine-based DX refrigerant system essentially creates a low dewpoint "heat pump" for cold room applications – providing <26F dewpoint supply air in a single process step. Because of its simplicity and efficiency, this packaged unit design provides up to 50% energy savings while also significantly reducing capital costs. The low temperature brine solution achieves this performance because it simultaneously cools and dehumidifies.

AirGreen
WWW.AIRGREENINC.COM

SOFTWARE

SAM (Skill Advisor and Mentor) is the first AI-powered advisor for the skilled trades. SAM gives teams instant and personalized guidance so they can gain skills faster and more efficiently. Technicians can ask SAM questions and get immediate assistance while they're learning, helping enhance comprehension and sharpen critical thinking.

Interplay Learning
WWW.INTERPLAYLEARNING.COM



SUSTAINABLE SOLUTIONS

Midea's Packaged Window Heat Pump is a window-mounted cold climate air source heat pump, designed for DIY installation and high-performing, energy-efficient heating and



cooling. Developed to support multi-family buildings' transition towards electrification it provides a cost-effective solution for buildings looking to quickly meet future sustainability requirements. Midea's PWHP stands out as a window-mounted unit. Unit performance is 9,000 BTU/hr heating and cooling, with the category's highest

CEER of 16.0, as of the application date, a 2.35 COP @ 17F, up to SEER2 21.8 and HSPF2 11.6.

Midea
WWW.MIDEA

WATER HEATING

A smart, robust solution for small businesses, Triton Light Duty is the most intelligent high efficiency commercial gas water heater on the market. Boasting built-in smart monitoring and precise leak detection, the unit prevents downtime, manages water heater issues, and keeps businesses running smoothly. Perfect for retrofit or new construction. With changing regulations, Rheem designs with sustainability in mind. Triton Light Duty (LD) is designed to promote energy efficiency and environmental responsibility and holds the potential to drive transformative changes in the way water heaters are conceptualized and manufactured.

Rheem
WWW.RHEEM.COM/AHR/

TOOLS & INSTRUMENTS

FLUE-Mate Combustion Analyzer is designed to improve combustion efficiency and safety. This tool is equipped with an integrated manometer, thermometer, CO test, cracked heat exchanger test and provides draft analysis. FLUE-Mate can even generate a QR code that can be scanned with your smart device for a quick analysis report. FLUE-Mate provides a host of useful features.

INFICON
WWW.INFICON.COM

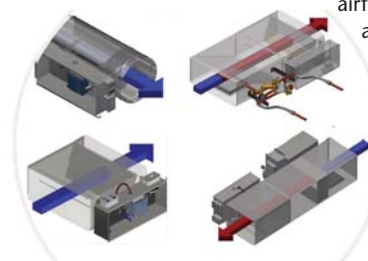


VENTILATION

The SAV-Smart Air Valve is an economical self-commissioning air control solution. Featuring a 100-1 turndown and precision airflow accuracy to within a few CFM operating as low .03"W.G. It matches the ventilation rate to the risk of hazard featuring advanced Demand Control Ventilation & low EUI with a single unit size. The SAV® adds value

and mitigates risk by creating a new simplified value chain by obsoleting fixed orifice plate technology.

HVAC Manufacturing
WWW.HVACMFG.COM



PHCCCONNECT 2023 Held in Cleveland

► Continued from page 3

the exhibit floor, the annual apprentice contest was held, giving a special highlight to the next generation entering the skilled trades.

More than 20 education sessions were offered on topics including workforce development, regulatory challenges, customer service and more. Networking opportunities abounded including the opening reception, Ohio Night—an evening of music and celebration at the House of Blues—and several manufacturer-sponsored events.

And of course, PHCC members gathered to conduct the important business of the association. Before the official start of the event the PHCC held their Executive Committee Meeting. The PHCC Educational Foundation held their Board Meeting and the PHCC National Auxiliary held their Business Meeting both on Wednesday. Friday saw the PHCC's Annual Business Meeting.

Here are some highlights from the show.

Focus on Government Regulation

Mark Valentini, PHCC-NA's Director, Government Affairs and **Charles White**, PHCC's VP, Regulatory Affairs, teamed up for two presentations at the conference.



Sean Smith, who *CONTRACTOR* Magazine sponsored for the plumbing apprentice competition.

The first, *Government Affairs Update: The Chuck and Mark Show LIVE!* was their annual review of the legislative and regulatory environment including the Inflation Reduction Act, gas bans, gas ban *bans*, and the market impact of regulatory proposals.

Continuing where the first session left off, the second, *DOE Standards for Water Heating Products: What Contractors Need to Know* was a panel discussion with Valentini as moderator, **Steve Rossi** of the American Supply Association as presenter, and with White joined on the panel by **Robert Wolfer**, Manager, Government Relations for Bradford White Corp. This session was more granular, discussing the latest government standards for water heaters.

Women in the Industry

The *Women in Industry Luncheon* was a panel discussion that addressed the enormous potential for

women in the plumbing and heating trades, with a focus on outreach, recruitment, retention, and fostering success.

The panel was moderated by **Susan Frew**, Co-Owner and President of Sunshine Home Services in Denver, CO, and a Founding Advisor of the Women in Plumbing & Piping organization. Speakers included **Lara Beltz**, co-owner of Beltz Home Service Co., an electrical, plumbing and HVAC company that has been serving the Northwest Ohio area for 22 years; **Linda Hudek**, Owner of LH Plumbing Services (and *CONTRACTOR*'s Contractor of the Year); **Ashely Martin**, Executive Vice President NIBCO; **Cassie Pound**, co-owner of Quality Heating, Cooling & Plumbing in Tulsa, OK and the Co-Host of the *Power Women of the Trades* podcast; **Angie Snow**, Principal Industry Advisor at ServiceTitan; and **Jacquelyn Lindsey Wynn**, Senior Consultant for Lindsey Brothers, Inc. of Virginia.

Opening Breakfast

The opening breakfast was an opportunity to thank the conference sponsors, including (Diamond) Bradford White, Federated Insurance, InSinkErator, Kohler Co., Milwaukee Tool, (Platinum) Moen, Nibco, Rheem, (Gold) Adrian Steel, A. O. Smith, Delta Faucet, The Home Depot, International Code Council, Scorpion, (Silver) SupplyHouse.com, (Bronze) Hudson Technologies, Merit Brass, Oatey Co., RIDGID, Viega and Zoeller.



Coach Ken Carter talks about life, success and basketball during the Opening Breakfast.

R. Bruce Carnevale, CEO for Bradford White gave a series of remarks that again addressed the extraordinary regulatory environment the industry is currently seeing. "We are engaged and involved," Carnevale said, about the efforts of manufacturers to see reasonable policies put in place. He noted that, given the enormous amount of federal money driving their adoption, almost everyone in the trades owed it to themselves to learn more about heat pumps and how to maintain and install them.

Next came the Instructor of the Year awards, with

Tim Rutledge of Sacramento, CA taking the honors on the plumbing side, and **Brian Millard** taking the award for HVAC/R.

Then came the keynote speech from Coach **Ken Carter**, whose remarkable life story was turned into a feature film in 2005 starring **Samuel L. Jackson**. Carter is now a motivational speaker and the founder of the Coach Carter Foundation, an organization working to improve the lives of young people through education, training and mentoring.

In a moving presentation laced with humor and audience participation, Carter talked about his life growing up in Macomb, MS, with seven sisters and an older brother he idolized. He talked about his family's move to a rough neighborhood in California, and his early successes mentoring young people on and off the basketball court.

Carter offered his own formulas for success and happiness. One that he kept returning to was "reset your preset"—challenge your own, preconceived notions, look for a new perspective on work and on individuals..

He also spoke about the need to set goals, to constantly review those goals, and not be discouraged during the "Wintertime"—those moments of difficulty when our dreams seem unattainable. "Successful people," he said, "will go from one failure to the next enthusiastically."

At the time of this writing, PHCCCONNECT 2023 is in its final day. For a full list of new PHCC officers as well as attendance figures, please look to the next issue of *CONTRACTOR*. **C**



25-2500 cfm Range
Fast, Accurate, Easy, Auto-Range and Zero
Backpressure Compensated Air Balance System
Automatic Density Correction
Custom Tops Made to Order



Shortridge Instruments, Inc.
 7855 E. Redfield Road Scottsdale, AZ 85260
 480-991-6744 Fax: 480-443-1267
www.shortridge.com

Residential Boiler Market Forecast to Reach US\$ 53.1 Billion by 2033

NEWARK, DE — (GLOBE NEWSWIRE) — According to a Future Market Insights (FMI) report, the global residential boiler market size is likely to be valued at US\$ 31.1 Billion in 2023. The increasing demand for tower crane rentals in various end-use industries is driving the market growth. The market is estimated to garner US\$ 53.1 Billion in 2033, recording a CAGR of 5.5% from 2023 to 2033.

The demand for residential boilers

is increasing owing to the growth in residential construction activities in developing regions. The demand for energy-efficient heating solutions is high due to the growing emphasis on energy efficiency and sustainability.

Increasing government regulations and Incentives for reducing greenhouse gas emissions and promoting energy efficiency are driving the adoption of residential boilers with higher efficiency ratings. The increasing government

incentives, tax credits, or subsidies available to homeowners who install energy-efficient boilers, will further stimulate the market.

The increasing technological advances and integration of smart technology in residential heating systems are gaining traction. Smart boilers offer features such as remote control, programmable settings, and energy monitoring, allowing homeowners to optimize their heating usage,

enhance comfort, and save energy.

North America is expected to witness steady growth in the residential boiler market owing to factors like cold climates, a significant number of residential buildings, and the replacement of older boiler systems that have contributed to the demand for Residential boilers. The residential boiler industry in Asia Pacific is witnessing significant growth due to rapid urbanization, population growth, and increasing disposable income in emerging economies.

From Rust to Robust: Rasmussen Mech Performs Industrial Boiler Refit

➤ *Continued from page 32*

operated outdoors, it was exposed to the elements, causing the boiler casing to sweat, which, over time, caused the walls to completely rust out.

“Luckily the boiler pressure parts and internals were found to be in good shape and just the insulation walls were of concern as the boiler was 20 years old,” says **Sam Larson**, Quality Control Manager, Rasmussen Mechanical Services. “The repairs were more cost effective than purchasing and installing a new boiler. With good water treatment, the boiler pressure part should last the customer a long time.”

According to Larson, a five-member crew installed new blanket insulation on the side walls and roof with a 10-gauge steel outer casing. The front wall underwent a complete rebuild and gunite refractory was used for insulation. A new burner cone was then pounded and installed to meet original design parameters for the burner. Next, the rear wall was insulated with a castable refractory, which was poured in two sections—the lower and then the upper. A new $\frac{1}{4}$ ” plate was then installed on the rear wall of the boiler.

Following the rebuild, all boiler piping was reinstalled and refractory cure was performed by Rasmussen Mechanical burner technicians. Before they brought the boiler back online, a combustion




After installing the insulation and new wall, but before installing the exterior support beams.

analysis and safety device testing were performed to optimize operations.

Boilers designed as rentals, like this one, use a blanket insulation on the front and rear walls to reduce weight so they can travel on roads. “The new poured, sprayed and pounded refractory on the front and rear walls will hold up for a much longer time than

the blanket. The refractory should reduce the heat lost through the insulation/refractory to the outer skin casing,” says Larson.

At the time of the installation, despite facing adverse weather conditions such as extreme heat and rain, Rasmussen’s skilled team completed the project in just 24 days. 

Key Takeaways

- From 2018 to 2022, the residential boiler market demand expanded at a CAGR of **4.5%**
- Based on capacity, the below 24 kW segment accounts for a CAGR of **5.3%**
- By application, the apartment segment is expected to expand at a CAGR of **5.4%** during the forecast period
- North America to emerge as a promising residential boiler industry, capturing a CAGR of **5.4%**
- The residential boiler industry in the United Kingdom is predicted to reach **US\$ 3.3 Billion** by 2033
- Asia Pacific is an opportunistic residential boiler market, expected to capture a CAGR of **5.2%** during the forecast period.
- South Korea’s residential boiler industry is predicted to achieve a market revenue of **US\$ 2.7 Billion** by 2033

“The residential boiler market is witnessing notable changes,” says **Nikhil Kaitwade** (Associate Vice President at Future Market Insights, Inc.) “As heating technology advances and sustainability gains prominence, the market is adapting to provide energy-efficient and eco-friendly residential heating solutions, catering to changing consumer preferences and environmental concerns.”

Request a Residential Boiler Market Sample Report at: <https://www.futuremarketinsights.com/reports/sample/rep-gb-15147> 

Construction Starts Drop 6% as Fewer Megaprojects Move Forward

► Continued from page 3

of 2022. Residential and nonresidential starts were down 17% and 7%, respectively; however, nonbuilding starts were up 25% on a year-to-date basis. For the 12 months ending September 2023, total construction starts were unchanged. Nonbuilding starts were 22% higher, and nonresidential building starts gained 3%. Conversely, on a 12-month rolling basis, residential starts posted a 16% decline.

"Risks continue to mount for the construction sector," said **Richard Branch**, chief economist for Dodge Construction Network. "Over the last 12 months, construction starts have essentially froze as rates increased and credit tightened. The industry needs further adjusting as rates are expected to stay higher for longer, along with the potential for higher energy costs and continued political uncertainty. A return to broad-based growth in construction starts is still some time away."

Nonbuilding

Nonbuilding construction starts decreased in September, falling 9% to a seasonally adjusted annual

rate of \$345 billion. Highway and bridge starts lost 15% and environmental public works starts fell 29%. Not all sectors fell, however: miscellaneous nonbuilding starts rose 4%, and utility/gas plant starts gained 14%. Year-to-date through September, nonbuilding starts were up 25%. Utility/gas plants rose

All three major sectors declined in September with residential leading the tumble.

58%, and miscellaneous nonbuilding starts were up 23%. Highway and bridge starts gained 13%, and environmental public works rose 16%.

For the past 12 months ending in September 2023, total nonbuilding starts were 22% higher than that of September 2022. Utility/gas plant and miscellaneous nonbuilding starts rose 35% and 22%, respectively. Highway and bridge starts, in addition to environmental public works starts, were both up 18% on a 12-month rolling sum basis.

The largest nonbuilding projects to break ground in September were the \$4.5 billion Sun Zia transmission line across Arizona and New Mexico, the \$525 million fourth phase of the Cedar Springs wind farm in Converse County, Wyoming, and the \$485 million Prospect Lake Clear Water Center in Fort Lauderdale, Florida.

Nonresidential

Nonresidential building starts fell 4% in September to a seasonally adjusted annual rate of \$459 billion. Commercial starts rose 6% due to strength in data center work (classified as an office structure in the Dodge database) and retail. Institutional starts fell 8% in September despite a healthy gain in education starts, and manufacturing starts declined 13%. On a year-to-date basis through September, total nonresidential starts were 7% lower than that of 2022. Institutional starts gained 5%, while commercial and manufacturing starts fell 6% and 31%, respectively.

For the past 12 months ending in September 2023, total nonresidential building starts were 3% higher than that ending September 2022. Manufacturing starts were 8% lower. Institutional starts improved by 8%, and commercial starts gained 4%.

The largest nonresidential building projects to break ground in September were the \$2.5 billion Hyundai/SK EV battery plant in Cartersville, Georgia, a \$1.1 billion prison in Elmore, Alabama, and the \$1 billion Microsoft data center in Mount Pleasant, Wisconsin.

Residential

Residential building starts fell 6% in September to a seasonally adjusted annual rate of \$394 billion. Single family starts gained 1%, while multifamily starts lost 17%. On a year-to-date basis through September 2023, total residential starts were down 17%. Single family starts were 19% lower, and multifamily starts were down 12%.

For the past 12 months ending in September 2023, residential starts were 16% lower than in 2022. Single family starts were 22% lower, while multifamily starts were down 5% on a rolling 12-month basis.

The largest multifamily structures to break ground in September were the \$385 million first phase of the South Pier Residential Towers in Tempe, Arizona, the \$275 million first phase of the Casa Bella Condominiums in Miami, Florida, and the \$260 million Chapel Block mixed-use development in Philadelphia, Pennsylvania.

Regionally, total construction starts in September fell in the Northeast, Midwest, South Atlantic and West regions, but rose modestly in the South Central.

Watch Chief Economist Richard Branch discuss September Construction Starts in a video that can be viewed at <https://youtu.be/Eo3EBCnpYd0>. 

MONTHLY CONSTRUCTION STARTS

(Millions of Dollars, Seasonally Adjusted Annual Rate)

	Sep 2023	Aug 2023	% Change
Nonresidential Building	\$459,429	\$479,970	-4
Residential Building	394,123	419,842	-6
Nonbuilding Construction	344,801	377,079	-9
Total Construction	\$1,198,353	\$1,276,891	-6

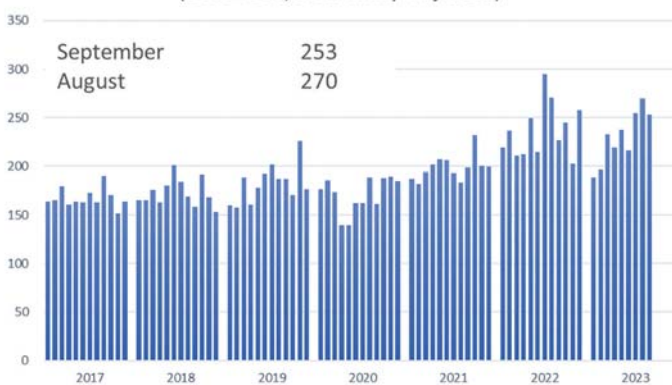
YEAR-TO-DATE CONSTRUCTION STARTS

Unadjusted Totals, in Millions of Dollars

	9 Mos. 2023	9 Mos. 2022	% Change
Nonresidential Building	\$302,442	\$325,129	-7
Residential Building	276,225	331,473	-17
Nonbuilding Construction	242,347	194,130	25
Total Construction	\$821,014	\$850,731	-3

THE DODGE INDEX

(2000=100, Seasonally Adjusted)



AirData Multimeter®

Differential & Absolute Pressure, Temperature
Density Corrected Air Flow and Velocity
English or Metric Units

Up to 2000 Reading Memory with Average, Total,
Minimum, Maximum, & Standard Deviation
Serial Output to Computer or Printer



Shortridge Instruments, Inc.

7855 E. Redfield Road Scottsdale, AZ 85260
480-991-6744 Fax: 480-443-1267
www.shortridge.com

editor's choice

F-150 LIGHTNING FLASH is a tech-forward version of the F-150 Lightning that packages customers' favorite features for less than \$70,000. The F-150 Lightning Flash expands on the XLT model line by adding in-demand tech capabilities, including an extended-range battery, which has a targeted EPA-estimated range of 320 miles, available Ford BlueCruise¹ hands-free highway driving, and a standard 15.5-inch touchscreen for seamless interactions and navigation.

Ford

WWW.FORD.COM



▼ **WEATHER GUARD SADDLE BOXES AND LO-SIDES** come with a 90-degree cover opening for easy access as well as an automotive-style rotary latch for smooth, one-touch opening. Models come in aluminum or steel in a variety of colors to best match your truck. The saddle toolbox also features 12-volt access for electrical up-fits.

Werner Co.

WWW.WEATHERGUARD.COM



▼ **CLASSIC II STEEL SERVICE BODY** has a selection of 'pooched' bumpers that improve traction and give you sure-footed access to the cargo area. Bumpers are galvanized steel for outstanding corrosion resistance. The patented Dual-Pro Seal System increases clear door openings.

Reading Body Works

WWW.READINGTRUCK.COM



▼ **THE PROLIFT LADDER RACK** is easier to operate than comparable drop-down style ladder racks. It offers increased operator safety and can reduce injuries while loading/unloading ladders by eliminating the need to climb on bumpers and tires to reach the roof of the vehicle.

Adrian Steel

WWW.ADRIANSTEEL.COM



▼ **DYNAMIC ROUTING** gives customers the ability to plan the most efficient route in minutes with the push of a button. Users have access to real-world scenarios based on time windows, technician schedules, vehicle capacity, traffic patterns and more.

Workwave

WWW.WORKWAVE.COM



▲ **PRO SERIES TRUCK TOOLBOXES** from Buyers Products are built to withstand the harshest conditions. The rain gutter shields from weather and the locking compression latch secures from theft. Contractors, utility workers and maintenance professionals can rely on the toolbox for durable, reliable and long-lasting use. Available in 12-gauge powder-coated steel or 0.125" smooth aluminum.

Buyers Products

WWW.BUYERSPRODUCTS.COM/CATALOG/TRUCK-BOXES-11/



▲ **THE 2024 TOYOTA TUNDRA** pairs rugged capability with premium comfort and advanced technology. Tundra's available i-FORCE MAX hybrid powertrain generates 437 horsepower and 583 lb.-ft. of torque. Tundra's high-tech systems include an available 14" Audio Multimedia touchscreen.

Toyota

WWW.TOYOTA.COM

▼ **THE 2024 SPRINTER CARGO VAN** offers numerous safety options, such as the Blind Spot Assist Mirror that allows users to see around blind spots. Radar sensors detect approaching vehicles and alert the driver. And Rear Cross-Traffic Alert lets drivers know when a vehicle or pedestrian is crossing behind. The new Sprinter will be available with electronically engaged 4-wheel drive.

Mercedes Benz

WWW.MBVANS.COM



▲ **VENTUROUS TRUCK TOPS** are manufactured using PolyFuseTM Technology, an injection molding process that utilizes a closed-mold system, producing a top that is lighter, stronger, and sleeker than other solutions on the market. Because of the closed mold system, the top can withstand up to 1,500 lb. of static weight and up to 750 lb. dynamic.

LTA Manufacturing

WWW.LTAMANUFACTURING.COM

▼ **TWO-STAGE SERVICE VEHICLE COMPRESSORS** are offered in five different models, designed and tested to meet the demands of various users such as service centers, and construction professionals.

The compressors are powered by 5- to 18-horsepower Honda GX series engines.

Jenny Products

WWW.JENNYPRODUCTSINC.COM



▼ **HARDWIRED HOME LEVEL 2 EV CHARGER** builds on the success of Legrand's entry to the EV charging space earlier this summer with its launch of the Plug-in Home Level 2 EV Charger and Level 2 Commercial EV Charger. Designed to offer a faster, more flexible at-home charging solution, Legrand's Hardwired Home Charger represents the future of non-networked EV charging.

Legrand

WWW.LEGRAND.US



editor's choice

THE FT SERIES LIGHT COMMERCIAL BOILERS from Laars

is available in 301 and 399 MBH sizes. The wall-hung units feature a stainless-steel firetube heat exchanger, operate with up to 10:1 turndown, can be used with either natural gas or propane fuel, and run at an ultra-high 95%+ thermal efficiency. Each FT Series unit is equipped with onboard high- and low-temperature zone control, DHW Smart Priority functionality, BMS compatibility, and can cascade up to four units. Additionally, a sensor actively monitors incoming air for cross-contamination from exhaust flue gases. Can be floor-mounted with an optional stand package.

Laars Heating Systems Co.

WWW.LAARS.COM/PRODUCTS/PRODUCT/COMMERCIAL-WALL-BOILER



► LURA COLLECTION KITCHEN FAUCET from Speakman

and designer Clodagh combines stylish design with pull-down performance. A two-function sprayer provides an aerated stream suitable for everyday use and a spray pattern for wide rinsing. Additionally, the wand automatically reverts to an aerated spray when the faucet is shut off.

Speakman

WWW.SPEAKMAN.COM



► SUPER-VEE DRAIN-CLEANING MACHINE from General Pipe

easily unclogs sink, shower, toilet and laundry lines up to diameters of 3 in. The convenient Slide-Action chuck engages and releases Flexicore cable with a simple push or pull of its Grip-Shield, even while cable rotates.

General Pipe Cleaners

WWW.DRAINBRAIN.COM/SUPER-VEE

► FISHER FIELDVUE DVC7K DIGITAL VALVE CONTROLLER from Emerson

features Advice at the Device technology with embedded computing and analytics that convert raw data into

actionable information within the device. Maintenance personnel can receive data wirelessly.

Emerson Electric Co.

WWW.EMERSON.COM



▼ SERIES E-80SCXL SPLIT-COUPLED CENTRIFUGAL PUMP

features several seal options and the addition of 10 large in-line pumps. The vertical configuration results in a straightforward installation, while its high-head application offers low operating and maintenance costs. It is ideal for higher flow and head applications such as hydronic heating and cooling.

Bell and Gossett/Xylem

WWW.XYLEM.COM



► MULTI-POSITION PRO LADDER

is a 5-in-1 ladder for a variety of uses—as a step ladder, as an extension ladder or on a stairway. Each side of the ladder adjusts up to 7" to provide solid footing on uneven ground. To re-adjust or retract, simply click the pinch-proof yellow lever near the base of the ladder, and safely retract level with one touch.

Werner Co.

WWW.WERNERCO.COM

► SMARTCUT WORK GLOVES from Brass Knuckle

offers ANSI A4 cut resistance. They feature a high-density polyethylene knit shell to provide protection without bulk, a strength-to-weight ratio 8 to 15 times higher than steel, superior grip, moisture protection and a high degree of dexterity.

Brass Knuckle Safety Products

WWW.BRASSKNUCKLEPROTECTION.COM



NHW-AI

NHW-AE

► NHW-A NONCONDENSING TANKLESS WATER HEATERS

from Navien feature the patented ComfortFlow recirculation pump and buffer tank. Available in two configurations: NHW-AI for interior installations and NHW-AE for exterior installations. Both are offered in 160,000 Btu/hr., 180,000 Btu/hr. and 199,900 Btu/hr. sizes.

Navien

WWW.NAVIENINC.COM



► ASSIST PREMIUM TOILET SEAT

is a standard-height plastic toilet seat featuring two built-in support arms that replace the need for wall-mounted brackets near the toilet. It fits both round and elongated toilet bowls, eliminating the guesswork associated with measuring the proper size seat. It also features the commercial STAY•TITE installation system.

Bemis Mfg. Co.

WWW.BEMISMFG.COM

► MINI-MILLHOG PORTABLE PIPE-BEVELING TOOL

is used for machining tube and pipe from 1.25" ID to 6.625" OD that is self-centering with one mandrel covering most of the range. Featuring a working weight of 27.5 lb., the tool provides smooth operation on highly alloyed



stainless steel and heavy wall pipe without using cutting fluids. It includes all clamping components. It is also available with an electric motor.

Esco Tool

WWW.ESCOTOOL.COM

► FLOJET VERSIJET SERIES INDUSTRIAL PUMPS

adds a four-chamber model. The new motor-driven diaphragm pump has been designed to serve industrial applications requiring flow rates of between 3 and 5 gal./min. Replacing the existing Flojet Quad Series, it offers higher pressure capabilities and greater ambient temperature resistance.

Xylem

WWW.XYLEM.COM



Compact. Quiet.

The **NEW** Model 406
Drain Pump



- Small compact size
- Fits in tight areas
- Quiet performance
- Upper and lower inlets
- Attractive appliance-style design



Liberty Pumps[®]

AN EASIER WAY TO CUT PLASTIC TUBING



AutoCutPL[®]



The AutoCutPL[®] plastic tubing cutter quickly produces clean, uncrushed, square cuts – with less effort. Easier to use than conventional plastic tubing cutters, the AutoCutPL cuts plastic tubing in as little as one rotation.

For more information, contact the Drain Brains[®] at 800-245-6200, or visit www.drainbrain.com/autocutpl

© 2022 General Wire Spring

The toughest tools down the line.™ **General**
PIPE CLEANERS

Introducing The Weil-McLain Advantage[™] For Contractors



Tiered Growth And Loyalty Program



Learn more at
www.weil-mclain.com/advantage

WEIL-McLAIN[®]
Solutions that Matter[™]

Classifieds

PRODUCT CATALOG

HODES CO
PROFFERED PLUMBING PARTS

Family Owned and Operated Since 1943

**Free Net Priced
Full Line
Buyers Catalog**

**Free Same
Day Shipping on
Over 10,000
Pro Quality
Plumbing Parts**

**SIX MONTH
PRICE FREEZE**

**1-800-777-6500
www.HodesCo.com**



**To advertise
in Classifieds,
contact**

**Steve
Suarez**



**O: 941+259-0867
M: (816) 588-7372
ssuarez@endeavorb2b.com**

CONTRACTOR[®]

**DECEMBER
ISSUE PREVIEW**

**SPECIAL
COVERAGE** **BEST OF 2023**

**FEATURES,
CASE STUDIES,
COMMENTARIES** **CUSTOMER APPRECIATION
AND RETENTION**
**CONTRACTORS CONTRIBUTING
TO THEIR COMMUNITIES**

**SOLAR, GEOTHERMAL
AND ELECTRIFICATION**

**HYDRONICS /
RADIANT
TECHNOLOGY** **MONTHLY COVERAGE THROUGH
A SPECIAL CALLOUT SECTION**

**PRODUCT
FOCUS** **PRODUCTS OF THE YEAR**
**FIELD MANAGEMENT
SOFTWARE**

ISSUE CLOSE 11/11/23
MATERIALS DUE 11/21/23

FULL LINE NOW AVAILABLE

ALTA



The easiest boiler you'll ever install because it's the most advanced boiler ever made.



Scan for complete Alta info

- "No touch" combustion setup, 5 minute start-up
- Unobstructed 3-side service access
- Instantaneous DHW response (combi models)
- Models: 136, 200 (combi) - 80, 120, 150, 180 (heating)

U.S. Boiler Company

www.usboiler.net

Go Green. Get Rewarded.

INTRODUCING **CONTRACTOR REWARDS**

- Free to all contractors!
- Earn rewards on Taco heating & plumbing products!
- Redeem rewards for thousands of items!







ENROLL
Scan the QR code

UPLOAD
Your Taco receipts

GET REWARDED
Shop the REWARDS Catalog




Enroll today to earn **200 BONUS POINTS!**
BONUS CODE: **GreenRewards**
(Use ENTER CODES tab during sign up at ContractorRewards.com)

Taco
Comfort Solutions[®]
A Taco Family Company

For questions or more information on this program, send an email to:
contractorsupport@ContractorRewards.com
or call 1-877-286-7064.


PROVEN PERFORMANCE NEW MODERN DESIGN



Rheem


Rheem[®] RTGH and RTG Series Tankless Gas Water Heaters

With the same performance both plumbers and homeowners trust, these smaller, lighter units were designed with contractors in mind to make one-person installation and servicing even easier.



Rheem.com/Tankless

Sustainability Standout - This product meets a stringent set of our internally defined sustainability standards.



Make sure you are in front of key decisionmakers



Contact Steve Suarez at ssuarez@endeavorb2b.com to include your company in the next Marketplace section.

Hi Tech HEAT Online Ordering!

Pensotti Hot Water Radiators

- Double Panel Radiators
- Single Panel Radiators
- Horizontal Flat Tube Radiators
- Vertical Flat Tube Radiators
- Towel Bar Warmers



PENSOTTI

Quiet, Comfortable Heating

Radiators are a perfect match for most hydronic heating applications and operate effectively and efficiently with both low and high temperature systems.



hitechheat.com

by Steve Spaulding
EDITOR-IN-CHIEF



Plumbing Industry Snapshots

This year the PHCC's annual conference, PHCCCONNECT, was held in Cleveland. You can read my full write-up of the event starting on page 3. Well, it's not exactly a *full* write up. For one thing, as I sit and write this the event is still going on. I would have liked to have stayed to see the end but I needed to get back to finish up the November issue.

For another thing there was just *so much* going on. It would have taken a five-person team with recording equipment to do the show justice. Me? I'm just one guy with a notepad.

In fact, I was so run off my feet trying to see everything there was to see that I was happy for a minor accident that happened. While on our way back from a factory tour the bus broke down by the side of the road (just a little ways from the Cleveland Zoo) and I had a blissful half hour to just sit and collect my thoughts on the event. So, in no particular order...

Cleveland is a serious plumbing

town. Perhaps it's just because it was an early industrial center for the country, but several major industry manufacturers call it home, including Moen, Merit Brass, RIDGID and Oatey Co. Since none of those companies are di-

increased at an annual rate of 4.9 percent in the third quarter of 2023, according to the advance estimate from the Bureau of Economic Analysis. Or, possibly that just reflects a high demand for plumbers?

A few things I saw and learned at this year's PHCCCONNECT.

rect competitors, they teamed up at the CONNECT show to create a special section of the exhibit hall, "Cleveland Park." They had a white picket fence surrounding their booths, benches, fake grass—it was a nice example of hometown pride.

Next, everybody is busy. Every plumber I talked to, no matter their size or specialty is insanely busy. If one job is winding up another job is gearing up or under way. Maybe that reflects how hot the economy is just now—real gross domestic product (GDP)

Now, plumbers have always struck me as a laid-back group (which is odd, because between hectic job schedules and emergency service calls at all hours in all weather, you would think they would be more stressed out). Still, it isn't like they don't find things to complain about. The difficulty finding new workers—or even new young people to train up—is a common lament. Another is the price of gas. On that broke-down bus I mentioned one plumber was in amazement at the high price of diesel—\$7.00 a gallon in his area. Another contractor, this

one from Texas, was upset that a gallon of regular was nearing \$3.00 (since I live in Chicago, I found it hard to sympathize—but then again, I don't have a fleet to keep running).

And everyone had something to say about government regulation. Whether it was rebates for heat pump water heaters, new efficiency standards from the DOE or new projects spurred by the IRA there were two main sentiments. First, that the feds are pushing higher efficiencies and electrification too hard, too fast, and heedless of the unintended consequences. Second, that there is a LOT of money to be made by contractors who can position themselves to take advantage of the changes.

And I think that's the real value to industry events like CONNECT. To see how things are going with other industry pros, to learn how other businesses are meeting the challenges of these rapidly changing times, and to get the skills and knowledge you need to stay ahead of the curve. **C**

ADVERTISER INDEX

Advertiser	Website	Page
AB&I Foundry.....	gotiron.com.....	9
Charlotte Pipe & Foundry.....	BehindCharlottePipe.com.....	19
Climate Control Group.....	climatemaster.com.....	11
Easyflex, USA.....	www.easyflexusa.com.....	8
ECR International.....	www.dunkirk.com.....	BC
General Pipe Cleaners.....	www.drainbrain.com/Flexi-Rooter.....	IFC
Gerber Plumbing Fixtures.....	gerber-us.com/avalanche.....	15
International Exposition.....	ahrexpo.com.....	17
Liberty Pumps.....	libertypumps.com.....	13
Navien, Inc.....	navieninc.com.....	5
Professional Plumbing Group - Marcone.....	www.marcone.com.....	14

Advertiser	Website	Page
Rheem Water Heating.....	rheem.com/water-incentives.....	7
Shortridge Instruments, Inc.....	www.shortridge.com.....	43, 45
supplyhouse.com.....	supplyhouse.com.....	41
T&S Brass & Bronze Works.....	tsbrass.com/lakecrest.....	10
Taco, Inc.....	contractorrewards.com.....	23
U.S. Boiler Company.....	www.usboiler.net.....	31
United Rentals, Inc.....	unitedrentals.com/ces.....	IBC
Watco Mfg. Co.....	www.watcomfg.com.....	12
Watts Water Technologies, Inc.....	www.watts.com.....	27
Weil-McLain.....	www.weil-mclain.com.....	21
Woodford Mfg. Co.....	www.woodfordmfg.com.....	29

CONTRACTOR

SALES CONTACTS

Associate Publisher & Midwest
Bill Boyadjis
973-829-0648
bboyadjis@endeavorb2b.com

South & West:
Senior Manager, Business Development,
Randy Jeter
908 Electra • Austin, TX 78734
512/263-7280 Cell: 512/426-9145;
Fax: 913/514-6628
rjeter@endeavorb2b.com

East Coast:
Senior Manager, Business Development,
Brian Sack
16 Abilene Lane • Manalapan, NJ 07726
Cell: 732/629-1949;
bsack@endeavorb2b.com

Classifieds/inside sales:
Media Account Executive, Steve Suarez
10955 Lowell Avenue • Overland Park, KS 66210
Cell: 816-588-7372
Office: 941-259-0867
ssuarez@endeavorb2b.com
Director of Sales, Buildings &
Construction Group
Joe Agron
941-200-4778 • jagron@endeavorb2b.com



Preventative Maintenance & Inspections

The Customer Equipment Solutions team at United Rentals specializes in owned equipment repair, maintenance, parts and inspections. Our inspections meet ANSI, OSHA, and CSA requirements so you can protect your investment and safeguard your employees. We can service your owned equipment in the field or at one of our locations and we specialize in medium to heavy-duty equipment, such as scissor lifts, backhoes, mini-excavators, and boom lifts. Our trained technicians can keep your owned fleet operating safely, at peak performance, and according to regulations!

For more information contact CESsupport@ur.com

Call 800.UR.RENTS or visit UnitedRentals.com/CES

Dunkirk - Keeping Families Comfortable.

Introducing our Electric Boiler

100% Efficient, Zero Emissions! No wasted energy and no fossil fuel.

Application Flexibility! Available in 2 or 4 element models:

2 Element (4 capacities from 6 kW to 12 kW)

4 Element (4 capacities from 12 kW to 24 kW)

Ideal for radiant systems, applications requiring special temperature settings and for use as a back-up heat source for solar applications.

Advanced Microprocessor Control: Safely and efficiently controls the elements by monitoring the relay contacts that power the elements. Start-up element is rotated to ensure their longevity.



A Full Line of Condensing Boilers

Save Energy and Money! Automatically modulates the gas input and continuously adjusts to ensure safe, quiet and efficient operation.

High Efficiency and ECO Friendly! Less CO₂ emissions and ENERGY STAR® certified with up to 95% AFUE - qualifying for utility rebates!

Models for Every Application! Wall hung and floor standing models fit any location. Combi models offer domestic hot water and home heating in one appliance. Venting flexibility with approved PVC, CPVC and polypropylene.



Accessories for Every Application

H2O Tanks We offer a full line of stainless steel single/dual coil indirect hot water heaters, storage tanks, buffer tanks and solar tanks.

Hot Water Radiators Radiators are a perfect match for Dunkirk hydronic heating applications and operate effectively and efficiently with both low and high temperature systems.



Panel,
Flat Tube,
Baseboard,
Hot Water Radiators



www.dunkirk.com

Innovative. Efficient. Dependable. Dunkirk