

The logo features a stylized orange sun with rays on the left, partially overlapping the text. The text "ASPE" is in a large, bold, blue sans-serif font. Below it, "TechSymposium" is in a smaller blue font, and "2021" is in a bold orange font.

ASPE

TechSymposium2021

September 22-26 // San Diego Marriott Mission Valley

A large, stylized orange sun with rays is positioned in the bottom right corner of the page, partially cut off by the edge.

PROGRAM GUIDE

When you need to flex some serious muscle, bring out the big guns.



Edge
HP IRON

Step up to the new Edge HP Iron for aggressive DWV applications.

SEE THE DETAILS AT CHARLOTTEPIPE.COM/EDGEHPIRON

CHARLOTTE
PIPE AND FOUNDRY COMPANY
You can't beat the system.

ADVERTISER INDEX

Charlotte Pipe	2
Watts Water	5
Rinnai	12
Zurn	12
AIRCOM	15
Nyle Water Heating Systems	17
NuFlow Technologies	19
Watts Water	21
Guardian Equipment	23
AB&I Foundry	25
Husky	26
Preferred-MFG	28
AGF Manufacturing	29
Apollo Valves	30
Armstrong Fluid	31
Asahi/America Inc.	34
CISPI	35
Jomar Valve	38
Georg Fischer	41
Navien	42
IAPMO	43
Colmac Water Heat	43
Corzan Piping Systems	44
Zoeller	44
Oatey	45
HoldRite	46
WCC	46
QuantumFlo	47
Reed	47
Reliable	48
IntelliHot	48
SeeWater	49
Elkay	49
T&S Brass	50
Taco Comfort Solutions	50
CircuitSolver	51
Viega	51
Towle Whitney	52
Uponor	52
Omega Flex	53
Franke	56
Ecco	56
Tyler	57
Caleffi	58
Evac	59
Navien	59
Niagara	60
Ipex	60
LiquiTech	61
Liberty Pumps	61
NIBCO	62
MIFAB	62
Kohler	64
Bradford White	64
Copper Development Association	65
Morris Group	67
McWane Plumbing Group	68

TABLE OF CONTENTS

Welcome from the ASPE President	4
General Info:	
San Diego Marriott Mission Valley	6
Registration Hours	6
Badges	6
No Smoking	6
Photo, Video, & Audio	6
No Commercialism	6
Tech Symposium Evaluation	6
2021 Host Committee	6
2021 Tech Symposium Co-Chairs	6
About ASPE:	
2020-2022 ASPE Board of Directors	7
ASPE Staff	7
Schedule of Events	8 & 9
Education Sessions Schedule	10 & 11
Education Committee	10 & 11
How to Obtain Your CEUs	11
Sessions	14–23
Speakers	28–41
Special Events:	
Product Show	54
Welcome Party	54
ASPE Lunch & Awards Ceremony	55
AYP Networking Event	55
AYP Leadership Academy	55
Product Show Floor Plan	66

WELCOME to the 2021 ASPE Tech Symposium!



Dear 2021 ASPE Tech Symposium Attendee,

Welcome to San Diego! ASPE's Board of Directors thanks you for joining us for our first in-person national ASPE event in two years. We hope you enjoy seeing your ASPE friends once again and find the 2021 Tech Symposium to be a very valuable experience, both professionally and personally.

The industry's manufacturers have been very supportive of ASPE in the past year, and I'd like to thank our generous Sponsors/Exhibitors who helped sell out the Product Show in record time. The Product Show will be two days once again, so you have twice the time to mingle with our Sponsors/Exhibitors to learn all about their new products and services. Please be sure to thank them for their support of ASPE and the plumbing engineering profession.

We once again are holding an ASPE Young Professionals (AYP) Leadership Academy, sponsored by Zurn. It is called "Dynamic Tools to Lead at Every Level" and will help participants learn how to bring out the best in themselves and team members. The speaker has a lot of fun, interactive activities planned, so I'm sure it will be a very exciting day. AYP also is hosting a networking event for attendees 35 years old and younger, which will be held at Park & Rec.

On Friday evening I invite all attendees to join us at the Welcome Party sponsored by Charlotte Pipe & Foundry Co. We will be gathering by the pool at the host hotel for light snacks and drinks, where everyone can get reacquainted and make new ASPE friends.

The Technical Education Program, the cornerstone of our Tech Symposium, will be held on Friday through Sunday. Each of the 40 sessions is presented by experts in their fields who are eager to share their knowledge with you. Don't forget to submit the quiz at the end of each session you attend so you can get CEUs for your CPD or CPDT recertification or PE license. You can find information on how to do this later in this show guide.

Several of our committees will be holding meetings on Friday and Saturday mornings, and I encourage all attendees to participate in at least one or two to learn about the exciting initiatives these groups are planning. Also, on Saturday we will be honoring our outstanding ASPE Chapters and members during the Lunch & Awards Ceremony.

In closing, I'd like to thank our amazing Staff for all of their hard work in planning this year's Tech Symposium, as well as our San Diego Host Chapter for their hospitality. I also want to thank our Co-Chairs, Grant Schaffer, LEED GA, and Anthony Wikum for their dedication to our Tech Symposium.

I hope you have a very enjoyable and educational time in San Diego at the 2021 ASPE Tech Symposium!

A handwritten signature in black ink that reads "Carol L. Johnson". The script is fluid and cursive, with a large, stylized 'C' at the beginning.

Carol Johnson, CPD, LEED AP, CFI, FASPE
2020-2022 ASPE President

Upgrade to a Smarter Solution

Introducing a smarter, safer digital mixing valve



IntelliStation® Jr.

New to the IntelliStation® family, the IntelliStation® Jr. is the smart mixing valve that keeps you covered and connected through the native BACnet and Modbus protocols.

Features:

- Programmable set point range 60°F to 180°F
- Control water temperature +/- 2°F in accordance with ASSE 1017
- High temperature sanitization mode mitigates the risk of waterborne bacteria
- In case of power failure, flows full cold for enhanced safety
- Manual override in the event of prolonged power loss
- Large, intuitive, touch screen display allows valve configuration in minutes. Does not require factory pre-programming, lap top or special software.
- Wi-Fi enabled for software upgrades

PowersControls.com/IntelliStationJr



Scan to learn more

POWERS™
A **WATTS** Brand

GENERAL Info

SAN DIEGO MARRIOTT MISSION VALLEY

All 2021 ASPE Tech Symposium events, except the AYP networking event, will be held at our host hotel, the San Diego Marriott Mission Valley. The San Diego Marriott Mission Valley hotel is the ideal gateway to experience the best of San Diego. You can enjoy easy access to Old Town, or hop on the Rio Vista Trolley and explore Mission Bay, SeaWorld, and Downtown San Diego, including Petco Park and the Gaslamp Quarter. The hotel offers numerous amenities and services, from views and casual dining at DEN to a fully equipped fitness center and outdoor pool with a waterfall.

BADGES

A 2021 ASPE Tech Symposium badge must be worn at all times while attending program sessions or participating in Symposium events.

TECH SYMPOSIUM EVALUATION

ASPE is interested in your thoughts about this year's Tech Symposium. After the event, please take a few minutes to fill out the brief survey at aspe.org/evaluation to share your thoughts with us so we can better plan future events.

PHOTOGRAPHIC, VIDEO, AND AUDIO EQUIPMENT

The use of cameras, video equipment, and audio recorders during program sessions is prohibited.

REGISTRATION DESK

LOCATION: Main lobby of the San Diego Marriott Mission Valley

HOURS:

Thursday, Sept. 23 1 – 7 P.M.

Friday, Sept. 24 7 A.M. – 3 P.M.

Saturday, Sept. 25 ... 7 A.M. – 3 P.M.

Sunday, Sept. 26 7 – 10:30 A.M.

NO SMOKING

ASPE meetings are conducted in a smoke-free environment. Smoking is prohibited in the San Diego Marriott Mission Valley, including in the meeting rooms and at all meal functions. Smoking is permitted only outside the hotel.

NO COMMERCIALISM

All speakers receive and must sign a copy of ASPE's policy statement on commercialism. In general: All forms of commercialism and the use of or reference to proprietary information in any ASPE technical publications and Convention, Tech Symposium, and seminar programs shall be prohibited. For purposes of ASPE publications and presentations, commercialism shall be defined as the use or inclusion of any written, verbal, or visual materials or information that endorses, recommends, or otherwise refers to, directly or implicitly, any organization, product, or service that might be perceived to be for the promotion or commercial advantage of an organization, product, or service.

2021 HOST COMMITTEE MEMBERS

SAN DIEGO CHAPTER:

Anthony Wikum
Juan Contreras, CPD
Scott Newton
Liza Cusimano, CPD
Sunghoon Chung, EIT
Martin Trim, PE, GPD, LEED AP
Chrissy Hamm
Grant Schaffer, LEED GA
Renee Hampton

TECH SYMPOSIUM CO-CHAIRS

Grant Schaffer, LEED GA
Anthony Wikum

Join the Conversation!

Visit ASPE at bit.ly/

ASPEFacebook,
twitter.com/ASPEorg,

and **instagram.com/aspe_org**

and get up-to-the-minute

updates on Society

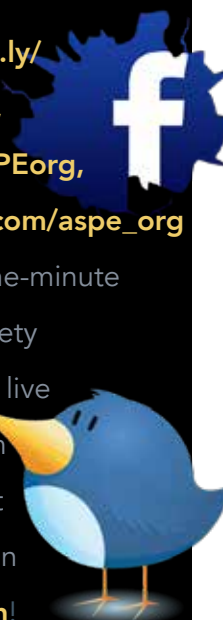
happenings and live

Tech Symposium

highlights. Don't

forget to mention

#2021ASPETech!



ABOUT ASPE

The American Society of Plumbing Engineers (ASPE) is the international organization for professionals skilled in the design, specification, and inspection of plumbing systems. ASPE is dedicated to the advancement of the science of plumbing engineering, to the professional growth and advancement of its members, and to the health, welfare, and safety of the public. The Society disseminates technical data and information, sponsors activities that facilitate interaction with fellow professionals, and, through research and education, expands the base of knowledge of the plumbing engineering industry. ASPE members are leaders in innovative plumbing design, effective material and energy use, and the application of advanced design techniques throughout the world.

For more information, visit [ASPE.org](https://aspe.org).

2020-2022 ASPE BOARD OF DIRECTORS

President:

Carol Johnson, CPD, LEED AP, CFI, FASPE

Vice President, Technical:

Vincent (Vinny) Falkowski, PE, PMP, CCM

Vice President, Education:

Jim Zebrowski, PE, CPD, FASPE

Vice President, Legislative:

Brianne N. Hall, PE, CPD, LEED AP BD+C, GGP

Vice President, Membership:

Jason S.A. McDonald, CPD

Vice President, Affiliate:

Thomas P. Sharp

AYP Liaison:

Nicholas Hipp, CPD

Treasurer:

Blair Minyard, PE, CDT, CPD

Region 1 Director:

Donald Keith, CPD, FASPE

Region 2 Director:

Steve J. Kormanik, CPD, GPD

Region 3 Director:

Curtis A. Ray, Jr., CPD, FASPE

Region 4 Director:

Duane D. Lease, PE

Region 5 Director:

Bryan Hutton, CPD

ASPE STAFF

Executive Director/CEO:

Billy Smith, FASPE

Managing Director/Director of Meetings:

Cliff Reis

Sr. Director of Technical & Regulatory Affairs:

Ramiro Mata

Director of Affiliate Relations & Education:

Brian Henry

Director of Information Technology:

Richard Albrecht

Director of Communications & Publications:

Gretchen Pienta

Senior Manager of Finances & Administration:

Eitan Gauchman

Manager of Education & Certification:

Nichole O'Connor

Manager of Graphics & Website Design:

Nadine Saucedo

Membership Coordinator:

Racquel Rodriguez

Membership & Chapter Meeting Coordinator:

Lisa Gonzalez

SCHEDULE of Events

* Indicates an event for which pre-registration was required.

WEDNESDAY, SEPTEMBER 22		
8:00 A.M. - 5:00 P.M.	Board of Directors Meeting	Sierra 5
THURSDAY, SEPTEMBER 23		
8:00 A.M. - 12:00 P.M.	Board of Directors Meeting	Sierra 5
8:00 A.M. - 3:00 P.M.	ASPE Young Professionals Leadership Academy* <i>Sponsored by Zurn</i>	Balboa 1-2
1:00 - 7:00 P.M.	Symposium Registration	Hotel Lobby
4:00 - 8:00 P.M.	ASPE Product Show	Rio Vista Ballroom & Pavilion
8:00 - 10:00 P.M.	Women of ASPE Social - TBD (<i>open to all attendees</i>)	
FRIDAY, SEPTEMBER 24		
7:00 - 9:00 A.M.	Continental Breakfast	Rio Vista Ballroom
7:00 A.M. - 3:00 P.M.	Symposium Registration	Hotel Lobby
8:30 - 9:30 A.M.	COMMITTEE MEETINGS	
	- Membership	Cabrillo Salon 1
	- Legislative	Cabrillo Salon 2
	- ASPE Young Professionals	Sierra 5 & 6
9:45 A.M. - 1:15 P.M.	ASPE Product Show & Lunch	Rio Vista Ballroom & Pavilion
1:30 - 3:00 P.M.	EDUCATION SESSIONS:	
	- Responding to Crisis: Best Practices for Shutting Down & Reopening Buildings	Cabrillo Salon 1
	- Hydronic Expansion Tanks for HVAC & Plumbing Applications	Balboa 1 & 2
	- Copper: A Key Element in Sustainable & Resilient Design	Santa Fe 3 & 4
	- Firestop Pre-Con for Plumbing Engineers	Sierra 5 & 6
	- Backflow Prevention Assemblies in Fire Protection Systems	Cabrillo Salon 2
3:15 - 4:45 P.M.	EDUCATION SESSIONS:	
	- 2021 International Plumbing Code Significant Changes	Cabrillo Salon 1
	- Design of Sitewide Natural Gas Distribution Systems	Balboa 1 & 2
	- Water Treatment for Commercial Humidification	Santa Fe 3 & 4
	- Firestop Installation for Plumbing Engineers	Sierra 5 & 6
	- Tech Top 5-The Most-Asked Questions (and Answers) from Reliable Auto Sprinkler Tech Services Staff	Cabrillo Salon 2
6:00 - 8:30 P.M.	ASPE Welcome Party - <i>Sponsored by Charlotte Pipe & Foundry</i>	Poolside
SATURDAY, SEPTEMBER 25		
7:00 - 9:00 A.M.	Continental Breakfast	Rio Vista Ballroom
7:00 A.M. - 3:00 P.M.	Symposium Registration	Hotel Lobby
7:30 - 8:45 A.M.	COMMITTEE MEETINGS	
	- Design Standards	Sierra 5 & 6
	- Education	Cabrillo Salon 1
	- Long Range Planning	Balboa 1 & 2
	Women of ASPE - Canceled	Cabrillo Salon 2

SATURDAY, SEPTEMBER 25 *(continued)*

9:00 - 10:30 A.M.	EDUCATION SESSIONS:	
	- A Detailed Review of the ASSE 1087 Standard	Cabrillo Salon 1
	- Applying Roof Drain Flow Rates in System Design	Balboa 1 & 2
	- Value Engineering Cast Iron Soil Pipe and Thermoplastics for DWV Applications	Santa Fe 3 & 4
	- Selecting the Right Water-Based Fire Protection System	Sierra 5 & 6
	- Nitrous Oxide, Nitrogen, & Carbon Dioxide Medical Gases	Cabrillo Salon 2
10:45 A.M. - 12:15 P.M.	EDUCATION SESSIONS:	
	- Extending the Water Demand Calculator to Commercial & Institutional Buildings	Cabrillo Salon 1
	- Vacuum Plumbing for Safe, Sustainable & Future-Ready Plumbing Design	Balboa 1 & 2
	- New Design Concepts in Response to Crises: Balancing Sustainability & Water Safety	Santa Fe 3 & 4
	- Designing DWV Systems with Cast Iron Soil Pipe	Sierra 5 & 6
	- Fire Protection Special Hazards & Hazard Analysis	Cabrillo Salon 2
12:15 - 1:45 P.M.	ASPE Lunch & Awards Ceremony	Rio Vista Ballroom
2:00 - 3:30 P.M.	EDUCATION SESSIONS:	
	- Decoding Plumbing Codes	Cabrillo Salon 1
	- Designing Booster Systems - ASPE Chapter 5 Method	Balboa 1 & 2
	- Applications for Smart Water Management in Commercial Buildings	Santa Fe 3 & 4
	- Cast Iron Coatings for Aggressive DWV Applications	Rio Vista Pavilion
	- New Innovations in Med Gas Piping - Changes Found in NFPA 99	Cabrillo Salon 2
3:45 - 5:15 P.M.	EDUCATION SESSIONS:	
	- Cast Iron Coatings for Aggressive DWV Applications	Cabrillo Salon 1
	- PP-RCT for Building Services Piping	Balboa 1 & 2
	- Oil Separators vs. Grease Interceptors Design & Sizing - Taking the Mystery Out	Santa Fe 3 & 4
	- Automatic Auxiliary Drains: New Innovations in Freeze Protection	Sierra 5 & 6
	- Becoming a Solution Provider	Cabrillo Salon 2
6:30 - 9:30 P.M.	ASPE Young Professionals Networking Event* <i>(off-site) Sponsored by Zurn</i>	Park & Rec

SUNDAY, SEPTEMBER 26

7:00 - 8:30 A.M.	Continental Breakfast	Rio Vista Ballroom
7:00 - 10:30 A.M.	Symposium Registration	Hotel Lobby
8:45 - 10:15 A.M.	EDUCATION SESSIONS:	
	- CSST Gas Piping Systems Code Compliance & Sizing	Cabrillo Salon 1
	- Fuel Oil-Handling Systems for Generators & Boilers	Balboa 1 & 2
	- Containerized Water Treatment & Plumbing Design	Santa Fe 3 & 4
	- Water Heater Venting Fundamentals	Sierra 5 & 6
	- Self-Regulating Variable-Speed Fire Pump Units – Better, Simpler & More Cost-Effective	Cabrillo Salon 2
10:30 A.M. - 12:00 P.M.	EDUCATION SESSIONS:	
	- Emerging Contaminants in Drinking Water – Issues & Answers - Canceled	Cabrillo Salon 1
	- Water Heating Design in the Modern World	Balboa 1 & 2
	- Hot Water Distribution Temperatures, Legionella Control & the Need for Enhanced Scald Prevention Tactics	Santa Fe 3 & 4
	- What's Old Is New Again: The Environmental & Operational Benefits of R744 Heat Pump Water Heaters	Sierra 5 & 6
	- Leading Intentionally: A Young Professional's Guide to Developing Their Personal Leadership Vision in Construction & Beyond	Cabrillo Salon 2

EDUCATION Sessions

	Cabrillo Salon 1	Balboa 1 & 2	Santa Fe 3 & 4
	CODES & STANDARDS/ WATER QUALITY	SYSTEM DESIGN	SUSTAINABILITY/ CONSTRUCTION DISCUSSION
Friday, September 24			
1:30 - 3:00 P.M.	Responding to Crisis: Best Practices for Shutting Down & Reopening Buildings	Hydronic Expansion Tanks for HVAC & Plumbing Applications	Copper: A Key Element in Sustainable & Resilient Design
3:15 - 4:45 P.M.	2021 International Plumbing Code Significant Changes	Design of Sitewide Natural Gas Distribution Systems	Water Treatment for Commercial Humidification
Saturday, September 25			
9:00 - 10:30 A.M.	A Detailed Review of the ASSE 1087 Standard	Applying Roof Drain Flow Rates in System Design	Value Engineering Cast Iron Soil Pipe and Thermoplastics for DWV Applications
10:45 A.M. - 12:15 P.M.	Extending the Water Demand Calculator to Commercial & Institutional Buildings	Vacuum Plumbing for Safe, Sustainable & Future-Ready Plumbing Design	New Design Concepts in Response to Crisis: Balancing Sustainability & Water Safety
2:00 - 3:30 P.M.	Decoding Plumbing Codes	Designing Booster Systems – ASPE Chapter 5 Method	Applications for Smart Water Management in Commercial Buildings
3:45 - 5:15 P.M.	Cast Iron Coatings for Aggressive DWV Applications	PP-RCT for Building Services Piping	Oil Separators vs. Grease Interceptors Design & Sizing– Taking the Mystery Out
Sunday, September 26			
8:45 - 10:15 A.M.	CSST Gas Piping Systems Code Compliance & Sizing	Fuel Oil-Handling Systems for Generators & Boilers	Containerized Water Treatment & Plumbing Design
10:30 A.M. - Noon	Emerging Contaminants in Drinking Water – Issues & Answers Canceled	Water Heating Design in the Modern World	Hot Water Distribution Temperatures, Legionella Control & the Need for Enhanced Scald Prevention Tactics

EDUCATION COMMITTEE

Eric Spencer Baum, PE
Robert Bernstein, CPD
Jose Francisco DeHoyos, CPD, FASPE
Donald R. Ditter, CPD, GPD
Jonathan Michael Franzese, PE, P.Eng,
CPD, GPD

Tony J. Furst, MEd, CPD, LEED AP
Mark Girgenti
Chris L. Graham, CPD, FASPE
Nicholas John Hipp, CPD
Carol L. Johnson, CPD, LEED AP, CFI, FASPE
Mike Alan LeMaster

Chelsea Nicole Moussouni, EIT, CPD
Kazi Nasir
Eric L. Reese, CPD, GPD
Daniel Dmitri Sverdlov, CPD, GPD,
P.Eng, LEED AP, CPMA
Donald A. Taylor, CPD, GPD

Sierra 5 & 6	Cabrillo Salon 2
SPECIALTY DESIGN	FIRE PROTECTION, LIFE SAFETY & MORE
Firestop Pre-Con for Plumbing Engineers	Backflow Prevention Assemblies in Fire Protection Systems
Firestop Installation for Plumbing Engineers	Tech Top 5 – The Most-Asked Questions (and Answers) from Reliable Automatic Sprinkler Technical Services Staff
Selecting the Right Water-Based Fire Protection System	Nitrous Oxide, Nitrogen, & Carbon Dioxide Medical Gases
Designing DWV Systems with Cast Iron Soil Pipe	Fire Protection Special Hazards & Hazard Analysis
Cast Iron Coatings for Aggressive DWV Applications	New Innovations in Med Gas Piping – Changes Found in NFPA 99
Automatic Auxiliary Drains: New Innovations in Freeze Protection	Becoming a Solution Provider
Water Heater Venting Fundamentals	Self-Regulating Variable-Speed Fire Pump Units–Better, Simpler & More Cost-Effective
What's Old Is New Again: The Environmental & Operational Benefits of R744 Heat Pump Water Heaters	Leading Intentionally: A Young Professional's Guide to Developing Their Personal Leadership Vision in Construction & Beyond

EDUCATION COMMITTEE CHAIR

Christopher Phillips, CPD, GPD

ASPE VICE PRESIDENT, EDUCATION

James T. Zebrowski, PE, CPD, FASPE

How to Obtain Your CEUs

VISIT

education.aspe.org/2021tech where you'll see the available sessions for you to earn CEUs

- Login on the upper right-hand corner of the page.
- Complete the learning assessment and evaluation for each session you attended to earn CEUs.
- Attendees have until October 10, 2021 to complete the learning assessments and evaluations to receive CEUs and certificates.

Don't see any sessions listed? Make sure you're logged in!

SENSETM



Rinnai®

Rinnai's Tankless Water Heaters are engineered to provide nothing less than unparalleled comfort, convenience and reliability.

- Delivery of hot water whenever it is needed — even for simultaneous use
- Energy-efficient performance for monthly energy savings
- Compact, space saving design
- Vertically integrated — all key components are manufactured by Rinnai


Rinnai Commercial Water Heating Solutions are the perfect fit for commercial customers that are looking for significant savings on energy costs, longer product life, and reliable, endless hot water.




- 100% Sizing guarantee
- 48-hour sizing turnaround
- 90% within 24 Hours
- Pipe Diagrams and Material List
- Design Review Pre Install
- System Engineering Support
- On-Site Support Available




Visit rinnai.us | rinnai.ca






Up to Code



Easy Install



Z100 FloForce

THERE IS NO EQUAL

The first of its kind – Z100 FloForce High Performance Roof Drain optimizes flow at lower depths.

Our engineers collaborated with industry partners, calculated possible enhancements, prototyped model after model, and tested and validated each iteration in our US-based facility to deliver the most innovative drain on the market.

- Flow curve data available on all spec sheets
- Flow data allows engineer to meet requirements of IPC code
- Parabolic design promotes flow efficiency
- Unique dome and gravel guard design maximize drainage
- Tested to meet ASME A112.6.4



Reach your roof's flow potential,
visit Zurn.com

ZURN.COM
US 1.855.ONE.ZURN CANADA 1.877.892.5216



INDIANAPOLIS // SEPTEMBER 16-20

The **2022 ASPE Convention & Expo** is the only event tailored to plumbing system designers, engineers, specifiers and contractors.

Discover more
than 350 global
companies
displaying the latest
plumbing products,
technologies and
services

Attend 30+
educational
sessions across five
different tracks and
earn CEUs just for
walking the show
floor

Connect with
thousands of
industry peers,
make new business
contacts, and have
fun!

expo.aspe.org



CODES & STANDARDS/WATER QUALITY

Responding to Crisis: Best Practices for Shutting Down and Reopening Buildings

Friday, Sept. 24 | 1:30 – 3:00 P.M.

Christoph Lohr, PE, CPD, LEED AP BD+C, ASSE 12080

In 2020, due to COVID-19, economies were shut down around the world and buildings were left vacant. This session will review the scientific concerns of stagnant water and some of the solutions that the AWWA/IAPMO Manual of Best Practices determined for potable water systems based on the best available information. Upon completing this session, engineers will have a plethora of ideas on how to improve their designs and specifications and will understand the limitations of the guidance in this document.

2021 International Plumbing Code Significant Changes

Friday, Sept. 24 | 3:15 – 4:45 P.M.

Jim Cika

This session will present the significant changes from the 2018 International Plumbing Code (IPC) to the 2021 IPC. The information presented will allow for the application of these new code requirements to design, plan review, and/or inspection. This session is designed for building department staff, architects, engineers, designers, contractors, homeowners, and all other interested individuals.

A Detailed Review of the ASSE 1087 Standard

Saturday, Sept. 25 | 9:00 – 10:30 A.M.

Tina Donda and Ryan Prince

The ASSE 1087 standard was added to the plumbing code as

of 2021. Because it is such a new standard, few engineers, regulators, or inspectors have much, if any, knowledge regarding its contents. The goal of this session will be to educate attendees about why the standard was issued and what the different sections of the standards are, as well as explain the tests covered under each section. The discussion will also include a section on the significance of the reference standards and what types of things an engineer should not expect the standard to cover.

Extending the Water Demand Calculator to Commercial & Institutional Buildings

Saturday, Sept. 25 | 10:45 A.M. – 12:15 P.M.

Steven Buchberger, PhD, PE, Natascha Milesi Ferretti, MSc, PE, Gary Klein, Toritseju Omaghomi

The plumbing industry was recently introduced to IAPMO's Water Demand Calculator (WDC) for estimating peak indoor demand in residential buildings fitted with water-conserving fixtures. The WDC is the first significant codified modification to Hunter's curve in 80 years. The WDC has been shown, both in the U.S. and Australia, to mitigate the problem of oversizing residential plumbing systems when compared to Hunter's method. This session will outline the next steps in the evolution of the WDC to estimate peak water demands. The panel will review Hunter's Curve, demonstrate the benefits of using the WDC probability methods to update Hunter's curve using real examples of projects, identify the challenges (and opportunities) to applying the WDC to commercial and institutional buildings, identify the types of buildings that are

classified as commercial and institutional buildings, and discuss the scope of work necessary to implement a national survey of peak water use in commercial and institutional buildings. In addition, knowing that reduced demand requires reduced pipe sizes, the panel will explore the effect of pipe sizes on the relationship between reduced flow and pressure loss in indoor plumbing systems.

Decoding Plumbing Codes

Saturday, Sept. 25 | 2:00 – 3:30 P.M.

John Nance

Plumbing codes can stump even the best engineer. In this session on plumbing codes for exterior commercial water systems, the presenter will discuss what each code entails, why it matters, and how to be in compliance. The session will cover differences between ASSE 1011, 1052, 1019, and 1057; ASSE and IAPMO audit processes; and lead-free requirements.

Cast Iron Coatings for Aggressive DWV Applications

Saturday, Sept. 25 | 3:45 – 5:15 P.M.

Mike LeMaster

This session will provide a short history of cast iron soil pipe and will briefly discuss joining methods. The majority of the session will cover various enhanced coatings and aggressive DWV situations. The session will conclude with a hands-on demonstration on cutting and maintaining the integrity of the enhanced coating during installation.

CODES & STANDARDS/WATER QUALITY

CSST Gas Piping Systems Code Compliance & Sizing

Sunday, Sept. 26 | 8:45 – 10:15 A.M.

**Jonathan D. Sargeant, LEED AP
BD+C, and Robert Torbin, PE**

Corrugated stainless steel tubing (CSST) is a highly resilient piping system designed and tested for use in the conveyance of natural gas and propane in both residential and commercial installations. All piping systems depend on proper code-compliant design and installation

practices to ensure satisfactory performance and longevity of the system. This session will educate the design engineer on the nature and benefits of CSST. It will address proper installation practices designed to mitigate common threats, including forces of nature. It will also discuss different sizing techniques available to the engineer, including hybrid pressure systems and the advantages of those systems.

Emerging Contaminants in Drinking Water Issues and Answers **(CANCELED)**

Sunday, Sept. 26 | 10:30 A.M. – 12 P.M.

Peter Cartwright, PE

This session will address two classes of emerging drinking water contaminants: PPCPs and microplastics. It will describe them in detail and discuss methods to reduce their concentrations in water supplies or to mitigate possible effects on human health.



YOUR COMPRESSED
AIR SOLUTION

aircom
PIPING SYSTEM

WWW.AIRCOM.US.COM

MADE IN ITALY

Hydronic Expansion Tanks for HVAC & Plumbing Applications

Friday, Sept. 24 | 1:30 – 3:00 P.M.

Kenneth Rutherford

This session will cover the origin, function, and application of expansion tanks used for HVAC comfort heating/cooling and potable hot water plumbing applications. It will review tank sizing and selection considerations as well. In conclusion, hydropneumatic tanks used in water booster stations will be highlighted.

Design of Sitewide Natural Gas Distribution Systems

Friday, Sept. 24 | 3:15 – 4:45 P.M.

Paul L. Baker, PE, CPD, GPD, LEED AP BD+C

NFPA 54 and the International Fuel Gas Code provide minimal guidance with respect to sizing and selecting pipeline materials and sizes on a campus setting. On some sites, like a military base or an industrial complex, natural gas arrives at a central “gateway” from the utility supplier, and it is up to the engineer to select all of the pipeline materials and pipe sizes. The codes do not provide charts or tables for selecting pipe sizes, and hardly any tables are published to compare with sizing results. This session will outline relevant code and reference materials, discuss gas pressure regulators and their purpose, review relevant piping materials, discuss the accuracy of various flow and pressure drop equations, and finally outline what items need to be discussed with the natural gas supplier.

Applying Roof Drain Flow Rates in System Design

Saturday, Sept. 25 | 9:00 – 10:30 A.M.

Matt Lawrence

Gravity roof drain flow rates have been a frequent topic of discussion within the industry since new verbiage around roof drain sizing was introduced within certain codes. Although this is an exciting step forward, questions remain about how to properly size roof drains based on these new code requirements and the roof drain flow rate. This session will help bridge the gap between theoretical calculations vs. testing data and applying it to roof drain system design. This data-intensive session will focus on educating the engineering community on the importance of flow testing and how it will change their system design. This session will also include visuals and videos of testing, flow data in various scenarios (piping, options, etc.), and system sizing guidelines and examples.

Vacuum Plumbing for Safe, Sustainable & Future-Ready Plumbing Design

Saturday, Sept. 25 | 10:45 A.M. – 12:15 P.M.

Sher R. Adler and Tom Zinn

The COVID pandemic has underlined the critical need for safe, healthy, flexible, and future-proof or future-ready buildings. Plumbing design has always played a significant role in ensuring health, safety, and sustainable design. This session will outline the use of vacuum plumbing systems for enhancing safe and sustainable design that responds to the need for quick, cost-effective, repurposed use of space. Vacuum plumbing offers an affordable method for adding drainage or making change

in the plumbing layout with minimal risk or disruption. This session will provide an introduction to vacuum plumbing design, sizing, layout, and operational requirements. It will illustrate the ease of plumbing renovation and remodel and the ways in which vacuum plumbing contributes to future-proofing plumbing design using specific project examples.

Designing Booster Systems—ASPE Chapter 5 Method

Saturday, Sept. 25 | 2:00 – 3:30 P.M.

Edward Ross

This session will cover booster system design in accordance with Plumbing Engineering Design Handbook, Volume 2, Chapter 5, 2018–2019 edition. Attendees will learn about the proper sizing methods to eliminate oversizing; application of the 80/20 Rule of booster pumping operation; ASHRAE 90.1, 10.4.2, and how it applies to domestic water pressure boosters; the 70% Pump Redundancy Method; hydro-tanks; the proper use of PRVs in buildings with booster systems; and sizing the domestic pressure booster appliance to the building's physics and characteristics.

PP-RCT for Building Services Piping

Saturday, Sept. 25 | 3:45 – 5:15 P.M.

Robert Marsiglia, CPDT

This session will provide an overview of PP-RCT pipe certifications, material and installation costs, designing for pressure and temperature capabilities, insulating properties and benefits, energy efficiency regarding comparative pumping pressures and flow rates, and LEED consideration, and green

Fuel Oil-Handling Systems for Generators & Boilers

Lee Carnahan and Len Swihart

will cover small systems, such as remote fill systems, all the way up to large mission-critical systems, such as hospitals and data centers. The session will review design development, key questions, time-saving rules of thumb, and different options to achieve the owner's goals.

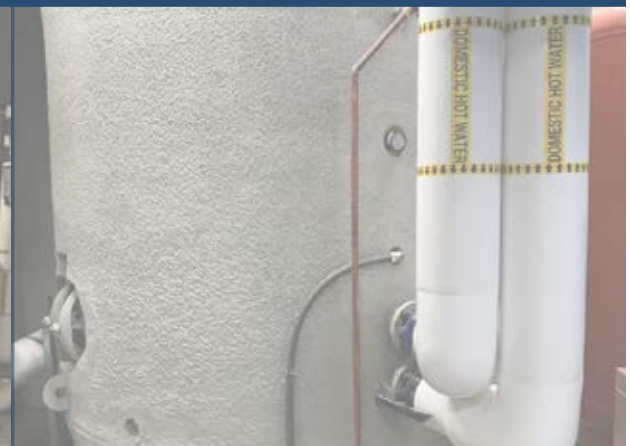
Sunday, Sept. 26, 10:30 A.M. – 12 P.M.

This session will explain how to calculate the hot water demands for common commercial

applications. Typical assumptions for hot water demands based on fixture type and application use will be covered. The presenter will show step-by-step calculations for real-world applications, discuss the pros and cons of tank vs. tankless water heaters, and explain where these water heaters perform best and their general requirements for operation. Lastly, there will be an overall cost comparison breakdown between tank and tankless water heaters based on purchase price, installation, and operation cost.



Complete Water Heating Solutions



Storage Tanks

Heat Pump Water Heaters



Complete Skid Solutions

SUSTAINABILITY/CONSTRUCTION DISCUSSION

Copper: A Key Element in Sustainable & Resilient Design

Friday, Sept. 24 | 1:30 – 3:00 P.M.

Harold Moret

This session will help attendees gain a better understanding of how copper enables our world to work more efficiently, its contribution to resilient construction and infrastructure, and responsible production. The presenter will use up-to-date imagery to support the discussion.

Water Treatment for Commercial Humidification

Friday, Sept. 24 | 3:15 – 4:45 P.M.

Brian Soderholm

This presentation will provide a brief overview of different types of commercial humidification systems, their individual feedwater quality requirements, and the methods available for meeting these requirements. The discussion will begin by defining water “purity” and explaining how it is measured. Then it will spell out minimum feedwater quality levels for electrode, isothermal, and adiabatic humidification. In addition to broadening their knowledge of these different humidification technologies, attendees can expect to learn how water softeners work and the basics of RO/DI (reverse osmosis/deionization). They will also leave with a broadened knowledge of the many different components needed to construct a functional high-purity water system. Finally, they will learn about pure water distribution piping, system disinfection, system sizing, and the benefits of prefabricated equipment.

Value Engineering Cast Iron Soil Pipe and Thermoplastics for DWV Applications

Saturday, Sept. 25 | 9:00 – 10:30 A.M.

Paul Tully

This session will compare cast iron soil pipe and thermoplastics for DWV applications and review the items that a specifier needs to consider when selecting between the two most common DWV piping materials. At the end of this session, participants will have a working knowledge of the capabilities and limitations of CISP and PVC; be able to match the requirements of the building’s DWV system to the capabilities of the material considered; understand the related costs associated with the material beyond the acquisition cost; and understand the issues, consequences, and potential liabilities with a less-than-optimal material selection.

New Design Concepts in Response to Crisis: Balancing Sustainability & Water Safety

Saturday, Sept. 25 | 10:45 A.M. – 12:15 P.M.

Christoph Lohr, PE, CPD, LEED AP BD+C, ASSE 12080, Tom Ruggiero, Jana Summey, and Greg Swafford CPD, GPD

As a result of the COVID crisis in 2020, there was a rise in awareness of the need for the flushing of domestic water systems. However, concerns of water shortages have not gone away. Rather, there is real concern that flushing protocols may exacerbate water supplies. Is it possible to balance both sustainability and safety in the realm of water? This panel discussion will provide a broad overview of a new concept: plumbing resiliency. Several concepts, both familiar and new, will be presented. These new design concepts will be evaluated in detail, in reviewing some of the critical components. By combining new technologies in innovative ways is it possible to create

a water system that is sustainable, safe, efficient, and affordable that can overcome challenging conditions? The panelists will explain why this is possible and hope participants will come away from the session with new ideas to build more resilient plumbing systems.

Applications for Smart Water Management in Commercial Buildings

Saturday, Sept. 25 | 2:00 – 3:30 P.M.

Adam Bartman

This session will explain how traditional plumbing design standards can be transformed to provide added value using connected (IoT) technology. The presenter will walk through the current challenges of traditional water systems operations, focusing on commercial and multifamily (MDU) buildings. He will then describe the traditional plumbing design standards compared to solutions and tactics to apply for a better design using connected (IoT) technology and recommend three applications where available market IoT technology can add value to building owners, occupants, and service providers.

Oil Separators vs. Grease Interceptors Design & Sizing —Taking the Mystery Out

Saturday, Sept. 25 | 3:45 – 5:15 P.M.

Silvano Ferrazzo

This session will discuss similarities and differences in the design, sizing, and performance of grease interceptors and oil/water sediment separators. Although grease interceptors and oil separators can often appear similar, they have different performance criteria and often offer different options and accessories to enhance performance, separation efficiency, and even maintenance.

SUSTAINABILITY/CONSTRUCTION DISCUSSION

Attendees will learn about design and sizing differences and how they can affect performance and environmental compliance.

Containerized Water Treatment & Plumbing Design

Sunday, Sept. 26 | 8:45 – 10:15 A.M.

Mark Girgenti

As the rapid pace of construction and retrofitting of buildings has grown, the need for equipment additions that can be seamlessly integrated into the construction planning without impacting the building's structure and operation has grown. This is especially true of the need for clean rooms, high-end process equipment, or critical infrastructure that cannot afford to be down for long-term construction. This session will examine the benefits of and how modular

plumbing systems can be integrated into a building without impacting the building's structure or operation. This will include how these system are designed, the necessary condition for the system to be fully containerized, building and utility hookups, as well as the cost and schedule impact analysis. This will be explored in a couple of case studies to highlight how these types of system are implemented from the ground up, including a special look at pharmaceutical and healthcare requirements during the COVID-19 pandemic.

Hot Water Distribution Temperatures, Legionella Control & the Need for Enhanced Scald Prevention Tactics

Sunday, Sept. 26 | 10:30 A.M. – 12 P.M.

James E. Dipping, PE, CPD, GPD, LEED AP BD+C, ARCSA AP

The industry is shifting away from low-temperature hot water distribution systems as awareness of Legionella in plumbing systems rises. With this comes an increased risk of scalding, so the typical mindset of temperature control must shift. Gone are the days of low-temperature circulation and no point-of-use temperature control. Significant attention must be paid to distribution temperatures, recirculation temperatures, hot water return pump calculations, and fixture applications. Because of this, a high level of knowledge is needed for ASSE-rated devices. Engineers must have familiarity with the rating, applications, and best practices associated with protecting the public from scalding.

THE LEADER OF INSIDE THE BUILDING PIPE SOLUTIONS



At NuFlow, we develop safe and effective pipe replacement solutions for in-building plumbing systems. All our technologies undergo third-party testing for compliance with ASTM, NSF, ICC and IAPMO requirements. With over 20 years industry experience, NuFlow is a brand you can trust.

nuflow
WE FIX PIPES

www.nuflow.com

1-800-834-9597

SEWER & DRAIN • POTABLE WATER • FIRE SUPPRESSION • LEAD • GAS

Sessions

SPECIALTY DESIGN

Firestop Pre-Con for Plumbing Engineers

Friday, Sept. 24 | 1:30 – 3:00 P.M.

Sharron Halpert

It doesn't matter if the team self-performs firestop or subs it out to a specialty firestop contractor—they are still responsible for making sure firestop is done right. A little planning before starting a job can make all the difference, and this session will show how. Attendees will receive key pieces of information that will help reduce headaches for teams that self-perform the firestop. The information will also be valuable if the team prefers to sub the work out because it will help reduce the risk of change order opportunities since the common issues will be planned out. If teams want to build better, they have to plan projects better.

Firestop Installation for Plumbing Engineers

Friday, Sept. 24 | 3:15 – 4:45 P.M.

Sharron Halpert

This session is for those whose head hurts when they hear the word "firestop." It will discuss the common firestop issues found and how to avoid them. Many attendees will have projects that require special inspection of firestop, so the session will touch on how this can impact the project for better and for worse. Applying the information shared in this discussion will reduce liability and help teams build better, whether they self-perform the firestop or sub the work out to a specialty firestop contractor.

Selecting the Right Water-Based Fire Protection System

Saturday, Sept. 25 | 9:00 – 10:30 A.M.

Cecil Bilbo

This session will ensure that attendees know the 13 different types of water-based fire protection systems available for use on projects. Combining additional options for enhancing a system's performance can lead to a wide spectrum of efficiencies. The session will discuss how these systems impact the building commissioning (BCx) process and the total cost of ownership. Attendees will participate in exercises meant to improve their application of enhanced parameters in choosing the right systems. Through these exercises, attendees will also have a chance to show and improve their skills in a team-based environment.

Designing DWV Systems with Cast Iron Soil Pipe

Saturday, Sept. 25 | 10:45 A.M. – 12:15 P.M.

Laura Loziuk and BJ Shrader

This session will provide an overview of cast iron DWV and its relevancy as a proven, sustainable, long-term noncombustible material. The session will discuss the relevant codes and standards for DWV systems and the manufacturing of cast iron, as well as the advantages of using cast iron where combustibility is a concern. The long-term cost advantages of choosing the right materials for the right application are key for a proper design and a satisfied building owner.

Cast Iron Coatings for Aggressive DWV Applications

Saturday, Sept. 25 | 2:00 – 3:30 P.M.

Mike LeMaster

This session will provide a short history of cast iron soil pipe and will briefly discuss joining methods. The majority of the session will cover various enhanced coatings and aggressive DWV situations. The session will conclude with a hands-on demonstration on cutting and maintaining the integrity of the enhanced coating during installation.

Automatic Auxiliary Drains: New Innovations in Freeze Protection

Saturday, Sept. 25 | 3:45 – 5:15 P.M.

Jim McHugh

NFPA requires auxiliary drains (also called low-point drains or drum drips) for each section of trapped pipe in dry or preaction fire-protection systems. Auxiliary drains that collect water need to be emptied to prevent freezing and must be accessible. These drains are often field-assembled and inaccessible or otherwise improperly maintained, which causes false system trips that create unnecessary liability and cost thousands in repair and damage. This session will explore automatic, heated auxiliary drains that solve this problem by maintaining and draining themselves. The heated cabinet ensures that they will not freeze while collecting greater volumes of water. Automated draining processes ensure that the drains are always properly maintained, even if they go forgotten.

Water Heater Venting Fundamentals

Sunday, Sept. 26 | 8:45 – 10:15 A.M.

Keith Kuliga Jr.

This session will help attendees:

- Understand the basic principles of combustion and venting of gas appliances.
- Describe the four different venting categories.
- List common problems with venting gas water heaters.
- List the products of gas combustion.
- Give examples of proper water heater vent configurations.

What's Old Is New Again: The Environmental & Operational Benefits of R744 Heat Pump Water Heaters

Sunday, Sept. 26 | 10:30 A.M. – 12 P.M.

Andrew Macaluso

As electrification and decarbonization initiatives continue to grow throughout North America, there is increased scrutiny on the refrigerants being used. Heat pump water heaters powered by R744, better known as CO₂, provide a way to address ever-evolving energy savings and low-GWP requirements. This session will explore low-GWP CO₂ refrigerants that can provide high performance under a wide range of operating conditions. This rapidly growing product category offers many unique benefits. This session will examine the factors driving the adoption of R744-powered heat pumps, the keys to a transcritical refrigeration cycle, options for maximizing performance, strategies for applying this technology, and opportunities to integrate them with other ecofriendly water heating systems.



THE DETECTION GROUP®

A WATTS Brand



Is Your Building Protected?

Protecting buildings from
costly water leak damage

Commercial • Corporate • Multifamily

50 Million
square feet
monitored

\$60 Billion
of protected
real estate

30,000
sensors
operating

415-941-LEAK (5325)
www.thedetectiongroup.com

FIRE PROTECTION, LIFE SAFETY & MORE

Backflow Preventer Assemblies in Fire Protection Systems

Friday, Sept. 24 | 1:30 – 3:00 P.M.

John A. Denhardt, PE, CWBSP, FSFPE

Fire protection systems served with potable water usually require a backflow prevention assembly to be installed to protect the potable water supply. However, the installation of a backflow prevention assembly in a fire protection system can cause issues that need to be recognized and addressed for the system to operate properly. The type of backflow prevention, physical location, type of control valves, friction loss, forward flow test requirements, and supervision of the control valves need to be addressed during the design phase of the project. Failure to confront these issues may cause project delays, cost overruns, and systems that do not comply with the installation standards. Changes to NFPA 13 (2022): Standard for the Installation of Sprinkler Systems that affect backflow prevention assemblies will be presented in this session.

Tech Top 5—The Most-Asked Questions (and Answers) from Reliable Automatic Sprinkler Technical Services Staff

Friday, Sept. 24 | 3:15 – 4:45 P.M.

Alan Larson, CET, CFPS

This session will review the five most-asked categories of questions received by Reliable Automatic Sprinkler Co. Technical Services staff. The questions will be posed to attendees using an interactive PowerPoint that includes access to a phone app that the attendees can download via quick code.

(Attendees are not required to do this if they do not wish to.) The app will allow everyone to see the percentage of answers from the crowd, and then answers will be discussed.

Nitrous Oxide, Nitrogen, & Carbon Dioxide Medical Gases

Saturday, Sept. 25 | 9:00 – 10:30 A.M.

Stephen E. Howe, PE

Nitrous oxide is used in anesthetic machines to initiate anesthesia with this gas before the administration of a more powerful anesthetic. Nitrogen is used at high pressure to operate surgical tools. Carbon dioxide is typically used to inflate or suspend tissues during surgery and is also used in laser surgeries. This session will discuss all three of these medical gases, first by taking a look at high-pressure cylinders and the manifolds. There are important considerations involved in their location, layout, and piping to the hospital. The session then will move to medical gas outlets. The designer will locate the outlets according to regulations and coordination with the medical facility and the architect. Lastly, the session will go over sizing the manifolds and associated equipment and finish up with sizing the piping.

Fire Protection Special Hazards & Hazard Analysis

Saturday, Sept. 25 | 10:45 A.M. – 12:15 P.M.

Vincent Thomas Favale, PE, CFPS

This session will explore the different types of fire protection special hazards, including water and non-water-based systems. The extinguishing methods for all of the systems will be detailed, as well as how special hazard systems are

selected. Hazard analysis of new special hazards will be exposed in key new areas such as Li-ion battery protection, offshore, and on-shore wind farms, high-voltage renewable energy transformers, solar farms, and other forms of renewable energy.

New Innovations in Med Gas Piping—Changes Found in NFPA 99

Saturday, Sept. 2 | 2:00 – 3:30 P.M.

Steve Bradshaw, Mathis Carlson, Kyle Jussel, and Sam Perron, MAT, ASSE 6010 & 6050

This panel discussion will discuss the changes and new medical gas piping technologies found in the 2018 edition of NFPA 99. With the introduction of the 2018 edition of NFPA 99 came new items in medical gas systems that had never before been included. The panel will look at how the new items are already benefiting facilities from the perspectives of design and engineering, installation, and hospital compliance.

Becoming a Solution Provider

Saturday, Sept. 2 | 3:45 – 5:15 P.M.

Edwin Gonzalez, CPD, ASSE/IAPMO/ANSI 12080 Certified

This session will describe the strategy of a business model extension by engineering firms and manufacturers, adding offerings of first services, product performance, and potential solutions for the client. It will discuss the potential benefits and challenges of applying a solution provider business model. Benefits include creating stable revenue, higher margins, and closer relationships with clients. Challenges include changing the value proposition to service and solutions,

FIRE PROTECTION, LIFE SAFETY & MORE

changes in organizational culture, team goals, competence, technology, and objectives.

Self-Regulating Variable-Speed Fire Pump Units—Better, Simpler & More Cost Effective

Sunday, Sept. 26 | 8:45 – 10:15 A.M.

Tony J. Furst, MSED, CPD, LEED AP

This presentation will discuss the benefits of using variable-speed pumps in fire system design, followed by a brief overview of NFPA 20 (2019) Section 4.8, detailing the requirements of self-regulating variable-speed fire pump units, as well as any upcoming changes in the 2022 edition. Attendees will learn about

emerging technologies specifically surrounding the self-regulating variable-speed fire pump unit. Finally, attendees will learn how cloud-based technology and analytics will allow for predictive maintenance and improve fire system reliability.

Leading Intentionally: A Young Professional's Guide to Developing Their Personal Leadership Vision in Construction & Beyond

Sunday, Sept. 26 | 10:30 A.M. – 12 P.M.

Devin A. Abellon, PE, and Michelle Gbur

This session is an interactive workshop centered around creating strong leadership values to make

a positive impact in one's work and personal life. Attendees will walk through a process aimed at developing the leadership vision that will serve as their guiding light throughout their career by being intentional and focused via thought-provoking guidance in this 90-minute segment. Each participant will determine what makes a strong leader, how to show up in their personal brand with these core values as their guiding principles, and opportunities to align with their personal mission statement in big and small ways. Whether leading in the plumbing or construction industry, at home, or in our communities, strong leaders are at the forefront of those who move the needle. This workshop will show attendees how to do it well.



Guardian

EMERGENCY EYEWASH & SHOWER TECHNOLOGY

Guardian Equipment
1140 N North Branch St
Chicago, IL 60642

312 447 8100 TELEPHONE
312 447 8101 FACSIMILE
gesafety.com

Why Settle for Pretty Good?

Introducing Guardian's New Thermostatic Mixing Valves for Emergency Equipment

Guardian Equipment is pleased to introduce our new line of thermostatic mixing valves for emergency eyewash and shower equipment. These valves offer better performance and more standard features than any other valves on the market.

High Capacity Guardian valves deliver the highest flow rates in the industry. In an emergency, contaminants are rinsed away quickly and completely.

Fast Response Time Guardian valves respond to changes in water temperature instantly, protecting the safety of the user.

High Supply Pressure Differential Most emergency equipment TMVs require the hot and cold water pressures to be within 5 – 10%. Guardian valves provide the required flow and temperature even with differential pressures of up to 25%.

Low Profile Guardian valves have a slim profile. They can be installed in a standard 3-5/8" partition wall or any other tight space. Valves can also be installed in surface mounted or recessed cabinets.

More Standard Features Valves include a temperature gauge, wall mounting bracket, lockable shutoff valves and stainless steel basket filters as standard.

For more information, visit gesafety.com or contact your local Guardian representative.



Visit us in San Diego
Booth 702

AFFILIATE Sponsors

Please Thank These Affiliate Sponsors of ASPE



Look for the ASPE Logo from Our Affiliate Sponsors

For more information on becoming an ASPE Affiliate Sponsor, contact:
 Brian Henry, ASPE Director of Affiliate Relations
 847-296-0002 x235 | bhenry@aspe.org



WE'VE GOT YOU COVERED FROM COAST TO COAST



Proudly Made in the U.S.A.—Since 1906

CAST IRON SOIL PIPE & FITTINGS

ABIFoundry.com • 800-GOT-IRON

THE NEW NORMAL

316 STAINLESS STEEL



**Fight corrosion with the
new Husky CR 7000.**



Husky now offers an amazing super-duty 316 stainless steel coupling* for corrosive applications. Usage for this corrosion resistant coupling includes, but is not limited to:

**Underground
Parking garages
Tunnels**

**Bridges
Near waterways
Rooftops**

**Exposure to sea salt air
Indoor pools
Condensation areas**

*The Husky shield color is Black. Husky couplings are made in the U.S.A. This coupling meets the heavy-duty ASTM C1540, FM 1680 and ASTM C564 standards.

AMERICA'S MOST TRUSTED HIGH-PERFORMANCE COUPLINGS

951-372-2732 • Anaco-Husky.com • 1001 El Camino Ave. • Corona, CA 92879



2021 Sponsors

ASPE Thanks the Following Sponsors of the 2021 ASPE Tech Symposium

PLATINUM SPONSOR



CHARLOTTE
PIPE AND FOUNDRY COMPANY



GOLD SPONSOR



SILVER SPONSOR



RELIABILITY BUILT IN™



BRONZE SPONSOR



MEET THE Speakers



Devin A. Abellon, PE
Devin Abellon is the Business Development Manager for Engineering Services at Uponor North

America. Prior to joining Uponor, he was the Managing Principal of LSW Engineers Inc. in San Diego. He has more than 25 years of experience in the HVAC and plumbing industries with a focus on high-performance and sustainable building design and construction. He is a registered Professional Engineer and has been active in both ASPE and ASHRAE. He has held several leadership positions within ASHRAE at the local

chapter, region, and society level and currently serves on the ASHRAE Board of Directors as the Region X Director and Regional Chair, Handbook Subcommittee Chair for ASHRAE TC 6.5 and as a facilitator for ASHRAE's Leadership Academy.



Sher R. Adler
Sher Adler is Senior Sales Engineer for AcornVac, Inc. and has 28 years of mechanical/plumbing design experience. She

began designing vacuum plumbing systems in 2007 for a national retailer and since that time has been a champion of its use as a cost-effective

method to address challenging sites and to provide speed to market with future flexibility. Sher joined AcornVac in 2018. She has three adult children and seven grandchildren. She enjoys nature and fishing in her free time.



Paul L. Baker, PE, CPD, GPD, LEED AP BD+C

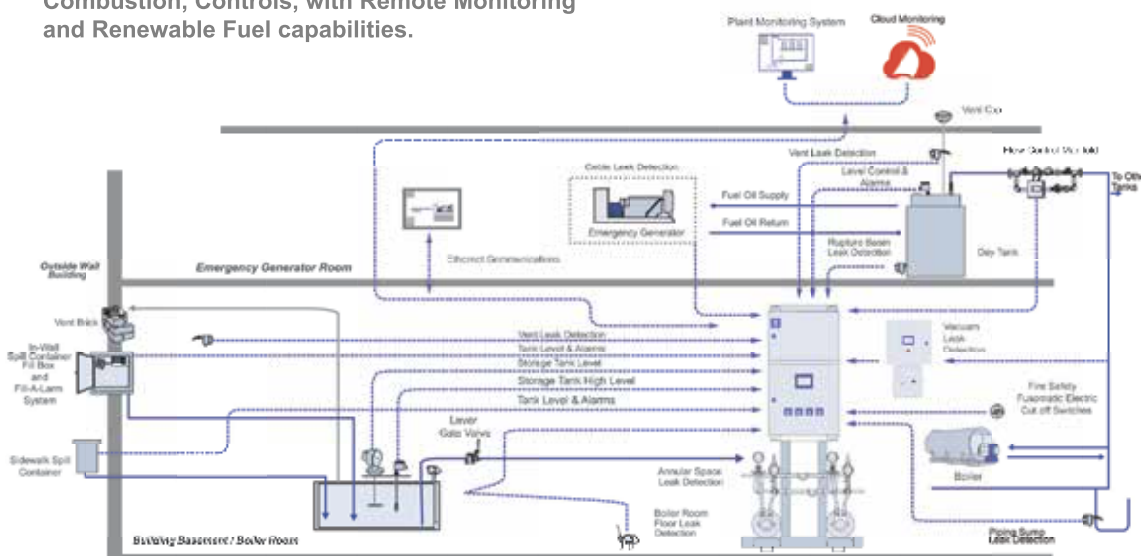
Paul Baker is a Senior Mechanical Engineer with Jacobs in Fort Worth, Texas. A

graduate of Lehigh University in 1975, he has more than 40 years' experience in the HVAC and plumbing fields. He has been an ASPE member since 2006 and is registered as a Professional

PEOPLE. PRODUCTS. RESULTS.

PREFERRED UTILITIES MFG CORPORATION

Fuel Handling System Management, Combustion, Controls, with Remote Monitoring and Renewable Fuel capabilities.



31-35 South Street, Danbury, CT 06810 | (203) 743 - 6741 | www.PREFERRED-MFG.COM

MEET THE Speakers

Engineer in nine states. Paul has written five articles on high-pressure natural gas distribution in Plumbing Engineer magazine as well as an article on natural gas at high altitudes. He also was the Technical Editor for ASPE PEDH Volume 4 in 2020/2021 and also has contributed to ASPE PEDH Volumes 1, 2, and 3.



Adam Bartman

Adam Bartman, a second-generation Red Seal-endorsed plumber from Toronto, began his career working

alongside his father every summer from ages 14 to 18. Utilizing his plumbing experience and passion for technology,

he co-founded reed (reedwater.io) to bring plumbing systems online, helping landlords and service providers manage water at commercial properties.



Cecil Bilbo

Cecil Bilbo is the President of the Academy of Fire Sprinkler Technology in Champaign, Illinois. He has 36 years of

experience in the fire sprinkler industry. He is the father of three adult children and a grandfather to six. He is newly remarried, which brought three new stepsons. Formerly, Cecil worked in contracting and CAD software development. He also created a degree

program for fire sprinkler designers. Cecil is a member of the Fire Protection Research Foundation's Sprinkler Advisory Council and sits on the following NFPA committees: NFPA 3, 4, 13, 14, 25, 72, 88A, 101, 170, and 5000. He is also the author of many textbooks and magazine articles. Cecil was named FPC Magazine's 2011 Person of the Year.



Steve Bradshaw

Steve Bradshaw is the Founder and CEO of Evergreen Medical Services Inc., a 70-employee

medical gas and environmental services

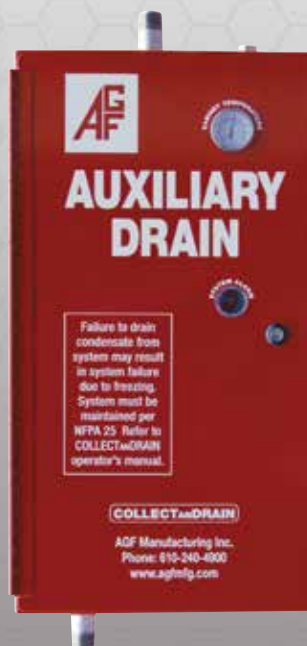
AUTOMATED AUXILIARY DRAINS NEW INNOVATIONS IN FREEZE PROTECTION

COLLECT_{and}DRAIN[®]

M5500

The NEW AGF Model 5500 is a fully automated auxiliary drain that features motorized supply and drain valves that operate according to draining provisions required by NFPA 25. The Model 5500 can be operated on-demand by the push of a button (locally or remotely) or by its hands-free, **fully automatic mode** which will operate the drain automatically when the float switch senses the drain is full.

The AGF Model 5500 also provides freeze protection for colder climates. Stop replacing auxiliary drains that freeze and break with auxiliary drains that freeze and break by upgrading to a Model 5500, and make maintenance as easy as pushing a button, or not.



**To Learn More Visit
AGF in Booth #611**



AUTOMATIC AUXILIARY DRAINS
New Innovations in Freeze Protection

Presented By: Jim McHugh
Saturday, Sept. 25th: 3:45-5:15 PM

www.agfmfg.com

MEET THE Speakers

company working for more than 1,000 medical facilities and contractors in the U.S. Steve has worked as a Medical Gas Systems Consultant since 1991 and specializes in piped medical gas systems consulting, education, inspections, testing, repairs, and design. He worked for hospitals while based in New York, Pittsburgh, and North Carolina. Steve earned a B.S. in Mechanical Engineering from North Carolina State University, and his credentials include ASSE/NITC Certified Medical Gas Systems 6010 Installer, 6020 Inspector, 6030 Verifier, 6035 Oxygen Bulk Verifier, 6040 Medical Gas Maintenance, 6050 Instructor, and MGPHO CMGV®. Steve is a current VP of MGPHO.



Steven Buchberger, PhD, PE

Steven G. Buchberger is a professor of Civil and Environmental Engineering at

the University of Cincinnati. His research deals with urban water resources and hydrology, with recent emphasis on estimating peak water demands in buildings including development of IAPMO's Water Demand Calculator. Since joining the UC faculty in 1988, Steve has advised 65 graduate students, authored more than 130 archived publications, and directed \$11 million in research projects. He is a founding member of the ASCE Premise Plumbing

Modeling Task Group. Three of his students have won national best paper awards from the American Society of Civil Engineers. Steve earned his PhD in Civil Engineering at the University of Texas at Austin and is a Registered Professional Engineer in the State of Colorado.



Mathis Carlson

Mathis Carlson is a Technical Sales Engineer for MediTrac, the leading manufacturer of corrugated medical gas

tubing. MediTrac is a revolutionary, first-of-its-kind product, approved by NFPA 99 for medical gas piping systems. As a



customer service (704) 841-6000
apollovalves.com



**integrated
piping systems**

MEET THE Speakers

Technical Sales Engineer, Mathis assists in medical gas system design and sizing, technical support, training, and general medical gas information. Prior to joining MediTrac, Mathis spent 12 years working as a medical gas verifier and instructor after working as a plumber specializing in medical gases for 10 years. Mathis holds multiple ASSE medical gas certifications including 6005 Specialist, 6010 Installer, 6020 Inspector, 6030 Verifier, 6035 Bulk Verifier, 6040 Maintenance, and 6050 Instructor. He also maintains his ASME IX brazing certification and Master Plumber license. In addition, he holds the MGPHO CMGV certified medical gas verifiers credential. Mathis is currently serving on the board of directors for the Medical Gas Professional Healthcare Organization (MGPHO).



Lee Carnahan

Lee Carnahan has been working exclusively with fuel oil-handling systems since 2006, both on the contracting side and the

manufacturing/sales side. Throughout those 15 years, Lee's top priority has been working with mechanical and plumbing engineers to assist in system design, efficiency, and reliability, as well as specification development. Lee has been a guest speaker at many ASPE Chapters over the years and was a past ASPE Technical Symposium speaker in Orlando. Lee is also trained in OSHA safety and excavation safety, and he is a graduate of the University of California.



Jim Cika

Jim Cika is Director, PMG Technical Resources for the International Code Council, where he serves as a subject-

matter expert to the plumbing, mechanical, and fuel gas codes. He represents ICC in federal and state coalitions, task forces, committees, and councils where expertise in I-Code subjects is required. Jim has more than 20 years of experience in the manufacturing and construction industry, where he has served as a chief technical expert for regulatory, product standards, building code, and product engineering matters.



ARMSTRONG

New Self-Regulating, Variable Speed Fire Pump Technology

THE HEART OF FIRE SAFETY NOW HAS A BRAIN

Self regulates to accommodate changing suction pressures

Allows more flexibility in sprinkler piping design / layout

Better, more reliable performance

Transparency of performance from your device

ARMSTRONG FLUID TECHNOLOGY®

MEET THE Speakers



John A. Denhardt, PE, CWBSP, FSFPE

John August Denhardt is Vice President of Engineering and Technical Services for AFSA.

He is responsible for strengthening AFSA's engineering and technical approaches to meeting member, industry, and operational priorities, with an emphasis on service, quality, and integrity. Denhardt is a Professional Engineer (PE) registered in the District of Columbia as well as Delaware, Maryland, Pennsylvania, and Virginia. He is a NICET Level III in Automatic Sprinkler System Layout and Inspection and Testing of Water-Based Systems and an NFPA Certified Water-Based Systems Professional (CWBSP). A native of Maryland, Denhardt holds a Bachelor of Science degree in Fire Protection Engineering from the University of Maryland in College Park. He is a member of the NFPA 13 Sprinkler Discharge Committee, a Fellow in the Society of Fire Protection Engineers, and sits on the University of Maryland Department of Fire Protection Engineering's Board of Visitors.



James E. Dipping, PE, CPD, GPD, LEED AP BD+C, ARCSA AP

James Dipping is the Director of Plumbing

Engineering at ESD and has more than 24 years of experience in the plumbing design and construction industries. James' main responsibilities include training development/engineering standardization, specification maintenance, design programming, project management/team leadership,

client relations, and quality control for all of ESD's market verticals. James is a licensed Professional Engineer in Illinois, Indiana, and Wisconsin. He spoke at the ASPE Tech Symposium in 2013 and has published several articles in many industry magazines on various topics related to plumbing engineering.



Tina Donda

Tina Donda, Vice President of IAPMO R&T's Water Systems program, is responsible for daily operations of IAPMO R&T's

product certification program for water treatment products. She has been with IPAMO since 2015. Tina has two decades of experience in this arena. Her background includes nearly 15 years of previous experience with the Water Quality Association, where she managed the product certification program and was instrumental in building the program from the ground up. Tina holds a B.S. in Business Management and Marketing from Pennsylvania State University.



Vincent Thomas Favale, PE, CFPS

Vincent Favale is an Associate at WSP in New York City and an Adjunct Instructor at

NYU SPS in NYC. He brings more than eight years of professional experience to the firm. Vincent's experience covers a broad range of commercial facilities. His professional experience includes plumbing, fire protection, and life safety designs for large-scale projects, and he specializes in special hazards and special projects, most notably in alternate energy applications, such as

offshore wind farms, energy storage systems (Li-ion batteries), and solar systems. Vincent earned a Master of Science degree in Fire Protection Engineering from Worcester Polytechnic Institute in Worcester, Massachusetts. Vincent has several certifications in the industry, including a PE in Mechanical Thermal Fluids design, a PE in Fire Protection, a Certified Fire Protection Specialist (CFPS) from NFPA, and a level II Water-Based Fire Protection Systems layout from NICET. Vincent is actively involved in the NFPA, ASPE, the National Fire Sprinkler Association (NFSA), and the Society of Fire Protection Engineers (SFPE).



Silvano Ferrazzo

Silvano Ferrazzo has a strong engineering background with more than 30 years of experience in working with engineering management and design, product

management, product development, and regulatory authorities in the U.S. and Canada. Silvano is an active ASPE member, a member of the PDI Board of Directors, and an active participant in code development with ASME, ICC, and CSA standards. As an active presenter throughout North America, Silvano brings a practical, down-to-earth approach to discussions on a variety of topics critical to the engineering community, for both seasoned veterans and new employees just starting their careers. Since joining Zurn's Site Works team, Silvano has been instrumental in providing leadership in sales, education, and training and innovative commercial development solutions to better serve the engineering community in projects ranging from oil and grease management to flow-through trench drain innovations.

MEET THE Speakers



Natascha Milesi Ferretti, MSc, PE

Natascha Milesi Ferretti is a Mechanical Engineer at the U.S. National Institute of

Standards and Technology. Natascha was actively involved in the NIST Appliance Program—a congressionally mandated program to develop testing and rating procedures for residential appliances conducted for the U.S. Department of Energy. She has extensive experience conducting laboratory tests and works with both national and international stakeholders and standards-making organizations. Her current research is in two areas: 1) on building commissioning for improved energy performance and 2) establishing the measurement science to better understand the pressure vs. flow relationships for premise plumbing in buildings.



Tony J. Furst, MSED, CPD, LEED AP

Tony Furst has been in the HVAC and plumbing industry his entire life. His father was a mechanical

contractor in the Dayton, Ohio area, so Tony grew up learning the industry. He has a Bachelor of Science in Mechanical Engineering from the University of Dayton and a Master of Science in Education from Michigan State University, as well as maintaining his CPD credential. Tony was an Application Engineer, a Consulting Engineer, and a Design/Build Engineer before joining Armstrong Fluid Technology where he is the U.S. Director of Application Engineering. His responsibilities cover all of Armstrong's product line in HVAC,

plumbing, and fire protection. Tony is active in both ASPE and ASHRAE and is currently serving on ASPE's Education Committee.



Michelle Gbur
Michelle Gbur is a professional speaker and the author behind michellegbur.com, a website dedicated to self-growth,

intentional leadership, and helping others improve their mental wellness. Michelle coaches others on how to live their best lives with practical tips on personal development, anxiety management, self-compassion, processing trauma, and manifesting their wildest dreams. She has a Bachelor of Engineering in Mechanical Engineering, along with certifications in stress management, energy healing, and ayurvedic medicine. She works in Nashville as an AEC Sales Engineer representing plumbing manufacturers in beautiful Music City.



Mathias German

Mathias German earned a B.S. in Mechanical Engineering from Gannon University in 2013 and worked as an

Applications Engineer with Chromalox Inc. for four years. This work entailed system design, equipment selection, and custom parts design in electric resistance heating applications ranging from small-scale residential to large-scale industrial. Mathias joined Rheem in 2017 as an Applications Engineer, where he is primarily responsible for selecting and designing natural gas, propane, and electric water heaters for use in commercial and industrial

applications. Mathias has been a member of ASPE since 2017.



Mark Girgenti

Mark Girgenti is the Director of Design Engineering for Burt Process Equipment, an environmental process

equipment firm. Mark has spearheaded the design, integration, project management, and construction of water treatment equipment for wastewater, rain harvesting, graywater, and high-purity water systems in the government, institutional, and pharmaceutical industries in the United States and abroad. As an upcoming engineer with more than 10 years of experience, and from his years of study and publication record in chemical system design, Mark brings a unique understanding to these projects from a process engineering and chemistry perspective as opposed to the traditional mechanical approach.

Mark has been a speaker at numerous green building and plumbing technical symposiums across the country and internationally, including the Boston Green Table Discussion, ASPE Chicago and Houston Chapter Symposiums, and ASPE Tech Symposiums. He was also a speaker at the CIPH 2014 exposition as well as numerous ISPE (International Society of Pharmaceutical Engineers) events. He has written several journal articles on water treatment technologies. He has been a member of the ASPE Young Professionals board since its inception and has also served as a member of ASPE's Education Committee as well as a Vice President of the ASPE Research Foundation. Mark holds a bachelor's degree in chemical engineering from Rensselaer Polytechnic Institute and a M.S. in Chemistry. He is actively involved in academic circles as a

MEET THE Speakers

professional member of the graduate advisory committee for Southern Connecticut State University and also serves as a volunteer faculty member.



Edwin Gonzalez, CPD, ASSE/IAPMO/ANSI 12080 Certified

Edwin Gonzalez is a Piping Systems

Specialist at GF Piping Systems. He has been in the plumbing design industry for more than 30 years, starting as a drafter for an engineering firm in Wethersfield, Connecticut, and quickly learning plumbing design. His experience includes plumbing systems

design for major commercial work, multifamily, hospitality, healthcare, and institutional facilities. He also has 15 years of experience working for a mechanical contractor in Central Florida. He is experienced in CAD and REVIT. Edwin has done presentations on water automation at many ASPE Chapters, was a panelist at the Emerging Water Technology Symposium, and also wrote an article on the need for plumbing systems to be more dynamic and resilient to deal with today's challenges. His certifications include ASPE's CPD and ASSE/IAPMO/ANSI 12080 Certified Legionella Water Safety and Management Specialist. Edwin has been involved with the Central Florida ASPE Chapter for many years, where he has served as a former Chapter President and is still involved

as a board member for the Central Florida Chapter.



Sharron Halpert

Sharron Halpert has been responsible for quality control on projects valued over \$18 billion, which means she

has covered roughly 25 million square feet of project space in the last 12 years alone. For the last 20 years, she has been troubleshooting firestop issues on everything from a nuclear power plant to sports stadiums, hospitals, telecommunications, mega-resorts, and more. She is a voting member of ASTM and a member of the International

AsahitecTM PP-RCT PLUMBING AND HVAC PIPING SYSTEMS

CORROSION- AND MAINTENANCE-FREE PIPING SYSTEMS



Find us in
MasterSpec[®]
a product of The American Institute of Architects

CERTIFICATIONS:

- ASTM F2389 – Standard PP Specification
- ASTM F2023 – Oxidative Resistance Test
- NSF/ANSI-14 – Plastic Piping Systems
- NSF/ANSI-61 – Drinking Water System Components
- Uniform Plumbing Code – (F2389)
- Uniform Mechanical Code – (F2389)
- CSA B137.11 – Standard Canadian PP Specification

COMPLIANCE WITH:

- ASME B31.3 (Process Piping)
- ASME B31.9 (Building Services Piping)

ASAHI-AMERICA.COM | 800-343-3618 | ASAHI@ASAHI-AMERICA.COM | BOOTH #306



MEET THE Speakers

Firestop Council. She was selected by Rutgers to teach New Jersey building inspectors and sub-code officials. She has presented at ICC, AIA, and SFPE conferences and events across the U.S. and as far away as Saudi Arabia. A former kindergarten teacher, Sharron teaches professionals how to apply this new (traditionally boring) information in real-world field conditions in an entertaining way.



Stephen E. Howe, PE

Stephen Howe studied at Northeastern University in Boston and received a degree in Civil

Engineering. He is a registered New York State Professional Engineer and has PE licenses in New York, Georgia, Missouri, Ohio, and South Carolina. Currently retired, he is employed at the New York State Education Department as an Associate Mechanical Construction Engineer, where he reviews plans for K-12 schools for code compliance in the mechanical plumbing and electrical disciplines. Stephen has been a member of ASPE for more than 30 years. On the national level, he served as President of the ASPE Research Foundation and is a member of the Education Committee. He presented a paper at an ASPE Convention on Legionella and has given training seminars in New York, South Carolina, and Michigan. He also presented a seminar on sanitary and

stormwater systems at the ASPE Tech Symposium in Orlando.



Kyle Jussel

Kyle Jussel is currently the President of Medical Air Systems and Medical Air Testing & Service in Denver. As a

second-generation medical gas systems specialist, he grew up in the industry and has witnessed its evolution into what it has become today. After graduating from Colorado State University, Kyle immediately went to work obtaining the remaining credentials necessary to succeed in his field (listed below). As a medical gas systems verifier and



FIRE HYDRANTS & CAST IRON SOIL PIPE



HAVE MORE IN COMMON THAN YOU THINK.

**Don't value engineer life safety
out of your DWV Plumbing System.**

Visit the Cast Iron Crew at
booth 303 to learn more.



CISPI.ORG/FIRE-RESISTIVE-BENEFITS

MEET THE Speakers

instructor, Kyle is dedicated to the safety, education, and continued development within the industry. He also currently serves as President of the Medical Gas Professional Healthcare Organization (MGPHO) as well as the Membership Chairperson for the Colorado Association of Healthcare Engineers & Directors. Kyle's credentials are:

- ASSE 6010 Medical Gas Systems Installer
- ASSE 6020 Medical Gas Systems Inspector
- ASSE 6030 Medical Gas Systems Verifier
- ASSE 6035 Bulk Medical Gas/ Cryogenic Fluid Central Supply Systems Verifier
- ASSE 6040 Medical Gas Systems Maintenance Personnel
- ASSE 6050 Medical Gas Systems Instructor
- Credentialed Medical Gas Verifier (CMGV)



Gary Klein

Gary Klein, President of Gary Klein & Associates Inc., has been intimately involved in energy efficiency

and renewable energy since 1974. Gary has a passion for hot water: getting into it, getting out of it, and efficiently delivering it to meet customer's needs. He is also an advocate of right-sizing plumbing systems. After serving 19 years with the California Energy Commission, he has provided consulting on sustainability since 2008, with an emphasis on the water-energy-carbon connection. Gary received a B.A. from Cornell University in 1975 with an Independent Major in Technology and Society with an emphasis on energy conservation and renewable energy. IAPMO recognized his efforts in 2014 by presenting him with their Green

Professional of the Year award. In 2015 the Department of Energy awarded him the Jeffrey A. Johnson Award for Excellence in the Advancement of Building Energy Codes.



Keith Kuliga Jr.

Keith Kuliga is the Commercial Product Manager for Bradford White Water Heaters. Keith's responsibilities include oversight

of Bradford White's commercial product portfolio within the U.S. market. He is a product professional who educates various customer groups about commercial product solutions. Keith is instrumental in the development of new features and products within Bradford White's commercial product portfolio. Keith began his career at Bradford White more than nine years ago and has had various roles within the organization including water heater sales, Senior Product Analyst, and Assistant Product Manager—Residential and Commercial Products.



Alan Larson, CET, CFPS

Alan Larson has more than 30 years of experience in fire protection, including more than 12 years

with Reliable Automatic Sprinkler Co. Inc. He has familiarity with contracting, fire protection engineering, design, and manufacturing. Alan currently serves as an alternate on the NFPA 75 Committee on Electronic Computer Systems, and he served as a member of the NFPA 13D and 13R Committee on Residential Systems from 2005–2008. Alan graduated from Ferris State University in 1984 with a degree in Architectural

Technology and is a NICET Level III certified fire sprinkler designer and an NFPA Certified Fire Protection Specialist (CFPS).



Matt Lawrence

Matt Lawrence is a Director of Engineering and Product Management with 12+ years of progressive experience

at Zurn Industries. He has driven innovation and delivered solutions to field engineers in the construction industry to address continuously changing codes, streamline installation, and enhance overall product effectiveness and longevity.



Mike LeMaster

Mike LeMaster is the Field Technical Service Representative for Charlotte Pipe in the west and was a high school teacher for 10

years before entering the stormwater industry in 2000. Since then Mike has participated in many projects in the water treatment, waterworks, and plumbing industries and has experience bringing new technologies to the marketplace. Mike holds an M.A. Ed. in Curriculum Design from Gonzaga University and lives in the Seattle area with his wife Yolanda.



Christoph Lohr, PE, CPD, LEED AP BD+C, ASSE 12080

Christoph Lohr has more than a decade of experience in designing

MEET THE Speakers

plumbing systems for healthcare, laboratory, hospitality, sports, and university projects. He has a reputation as a results-oriented expert. Christoph's current responsibilities as Vice President of Strategic Initiatives for IAPMO are to identify long-term, high-impact projects, develop a business case for them, bring resources to bear, and execute them for maximum results. Christoph's professional activities in the industry extend into multiple volunteer associations, for which he has also assumed leadership roles setting strategy and direction for teams including ASPE's Phoenix Chapter, ASPE, ASPE's Legionella Working Group, ASHRAE 514, PIPE Trust of Arizona, and IAPMO's Safe Building Reopening Best Practices, among others. It is with this mindset that Christoph looks to find holistic solutions that positively impact public health and safety, particularly in the world of water and plumbing.



Laura Loziuk

Laura Loziuk is a Technical Service Manager for McWane Plumbing Technical Services. She has a bachelor's

degree in Civil Engineering from Florida Atlantic University. Laura is a member of the ASPE Philadelphia Chapter Board of Directors. She is also an active member of WOA, IAPMO, ICC, and ASTM. She has been active in the construction industry for 12 years.



Andrew Macaluso

Andrew Macaluso is the Product Manager, Systems Solutions at Watts Water Technologies,

Heat and Hot Water Solutions Division. Andrew has led the introduction of many cutting-edge technologies, including the newest commercial heat pump water heating technologies. He is an ardent advocate for highly efficient, environmentally friendly technologies and is passionate about applying those technologies where they can have the greatest impact. Andrew holds a Bachelor of Science in Mechanical Engineering from Columbia University and is an active ASPE member.



Robert Marsiglia, CPDT

Rob Marsiglia is the National Business Development Manager (Commercial

Products) for Asahi/America. Rob has more than 35 years of experience with metallic and nonmetallic piping and valve systems for commercial, industrial, and sanitary/high-purity applications. He holds an associate's degree in Mechanical Technology and a bachelor's degree in Mechanical Engineering. He has published articles on thermoplastics, including using PP-RCT to improve pumping efficiency. Rob is a member of ASPE and ASHRAE and lives in Northern, New Jersey.



Jim McHugh

Jim McHugh and his family have been involved in the fire sprinkler industry since the founding of AGF and the introduction

of the AGF TESTANDRAIN® valve. Currently serving as President of AGF Manufacturing Inc., Jim is responsible for the development, introduction, and manufacture of specialized valves and

unique products specifically designed for the fire sprinkler industry. He is a member of NFSA, NFPA, SFPE, ASPE, and AFSA. Jim also serves on the Membership Committee for NFSA and the Manufacturers/Suppliers Council for AFSA. Jim is a strong proponent of domestic manufacturing, and he looks forward to serving the fire sprinkler industry and continuing the tradition of service started by his father, George McHugh III.



Harold Moret

Harold Moret is the Project Manager for the Copper Development Association Inc. (CDA). His responsibilities

include providing training and technical assistance to architects, contractors, engineers, and others interested in the uses and benefits of copper and copper alloy materials for building construction. He also provides engineering and architectural assistance, technical development (codes and standards), and installation training to designers, specifiers, installers, state plumbing inspectors, and building officials. Harold has more than 30 years of professional experience in the building and plumbing and mechanical fields. He is an active member of AIA, ASPE, PHCC, UA, ACCA, and state inspector groups. His dedication, knowledge, and long experience in the building trade industry serve him well as an educator.



John Nance

John Nance has led product development at PRIER, a plumbing manufacturing company, since January 2018.

MEET THE Speakers

Before joining PRIER, John worked at two other organizations that tapped his skills in design and manufacturing engineering. He has experience in ASSE, ASME, and ANSI standards and previous experience in NFPA codes based on fire suppression and explosion protection. John is currently involved with the ASSE working group to define codes including the latest publication of 1011, 1052, 1019, and 1057. He routinely shares his knowledge with various ASPE Chapters and the industry. John earned a Mechanical Engineering degree from Missouri University of Science and Technology. In his spare time, he enjoys fishing and managing his Rippertail fishing lure company.



Toritseju Omaghomi

Toritseju Omaghomi graduated from the Environmental Engineering program at the University

of Cincinnati where she developed IAPMO's Water Demand Calculator as part of her Doctoral Dissertation. Her research interest includes water conservation, modeling, and integrated engineering of water resources at a regional and household scale. Her current research involves predicting peak water demand in buildings to rightly size indoor plumbing systems.



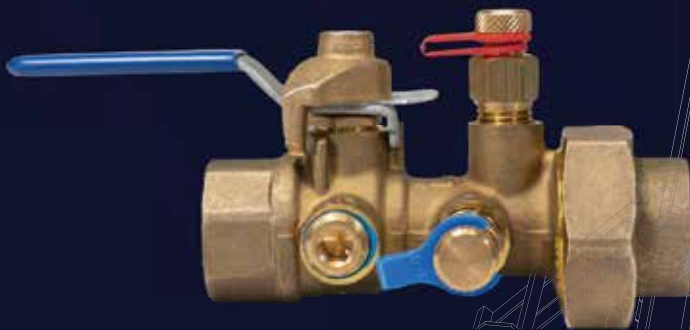
Sam Perron, MAT, ASSE 6010 & 6050

Sam Perron worked in commercial plumbing for several years and began installing

medical gas in the early 2000s. After earning a teaching degree and working in public education for a little over a decade, he returned to the medical gas field. He has been working in the Boston area as a medical gas installer and trainer since 2016 and holds ASSE 6010 Medical Gas Systems Installer and ASSE 6050 Medical Gas Systems Instructor certifications.

BALANCE WITH EASE

- FLOW AS LOW AS 0.12 GPM
- BUY AMERICAN ACT APPROVED
- NSF 61 CERTIFIED



WWW.JOMARVALVE.COM • CSR@JOMAR.COM • (586) 268-1220
DISCOVER MORE ABOUT OUR BALANCING VALVES: [HTTPS://JOMAR.INFO/ASPE21TS_BV](https://jomar.info/ASPE21TS_BV)

CASPE CEU PROVIDER



MEET THE Speakers



Ryan Prince

Ryan Prince is the Director of Product Certification for the Water Systems Group at IAPMO R&T, where he has

held that role for the past two years. He previously worked for GE Appliances, where he was the Principal Program Manager in charge of all water filtration new product launches. He has been involved in the water filtration industry since 2015; previously, he held various roles throughout the appliance business with the majority of his experience in refrigerator ice and water systems. He graduated in 2005 from Rose-Hulman Institute of Technology with a B.S. in Mechanical Engineering.



Edward Ross

Edward Ross is Vice President of Sales for QuantumFlo Inc. and has more than 30 years of experience in the plumbing

and HVAC industries, from heavy equipment operation to owning a manufacturer representative firm. For the last eight years, he has been employed by QuantumFlo Inc., starting in the position of RSM North. Edward has traveled and spoken to many ASPE Chapters throughout the United States and Canada, and he presented at the ASPE Tech Symposium in Pittsburgh in 2019. He has been affiliated with ASPE since 1998 and is a prior Officer for the Johnstown Chapter. He has a B.S. in Business Administration and an MBA in International Business and Finance from Point Park University in Pittsburgh.



Christina Rowe, MSOL

Christina Rowe is the Founder of The Collaborative and Co-Founder of The Remote Leader Project and is a highly

respected expert in the fields of organization development, collaborative leadership, team communication, and engagement. Her academic qualifications, advanced certifications, and decades of experience make her a sought-after resource for boards of directors, executives, and managers in a wide range of industries, most frequently working with medical specialties. Christina's experience is underpinned by a master's degree in organizational leadership with a focus in successful strategic cultures. She also holds accreditation from Gallup, the world's preeminent institution for strength-based leadership. With a keen ability to swiftly identify the dynamics, strengths, and interactions of teams and leaders, Christina is a powerful resource for organizations looking to improve their team effectiveness by advancing their productivity, communication, and overall team bond.



Tom Ruggiero

Tom Ruggiero has a B.S. in Electrical Engineering and an M.S. in Engineering Management from Drexel

University. He has 35+ years of experience in industrial automation, fluid power, and plumbing/HVAC. Tom has held webinars and written articles on domestic hot water system balancing. He is a member of ASPE, the Fluid Power Distributor Association, Association of High-Tech Distributors,

GPAEE—Greater Philadelphia Association of Energy Engineers, and School District of Philadelphia STEM Planning Committee.



Kenneth Rutherford

Kenneth Rutherford is an ASHRAE member engineer with 38 years of commercial HVAC product

experience. He worked for six years as an educator with the Indiana Vocational Technical College, elevating the knowledge and skills of Indiana contractors. Kenneth started his career with Amtrol in 2006 as a Territory Engineer and currently holds the position of Sr. Analyst—Commercial Products, providing national engineer support relating to Amtrol commercial products. He has provided ASPE Chapter with continuing education instructional courses on expansion tanks for more than a decade.



Jonathan D. Sargeant, LEED AP BD+C

Jonathan Sargeant entered the industry after earning a B.A. in Economics in 1990. Throughout

his career, Jonathan has focused on product specification and standards and code development, working for a manufacturer's representative, manufacturers, and a trade association. Currently Jonathan is engaged in the code development process at the state and national levels and regularly conducts educational classes on the installation of corrugated stainless steel tubing (CSST) systems with a concentration on the changing requirements for electrical bonding and

MEET THE Speakers

grounding. Jonathan also participates, as a company representative, in the development of standards and model codes, and is a member of the ANSI LC 1 Technical Subcommittee.



BJ Shrader

BJ Shrader has worked with the McWane Plumbing Group for four years. Prior to that, he served as a global account

manager for a large information technology company for more than 10 years. In his time at McWane, he has worked with more than 40 ASPE Chapters, speaking at multiple monthly meetings and professional organization conferences. BJ has worked as an education resource for plumbing designers in 26 states in the eastern United States.



Brian Soderholm

Brian Soderholm is President of WCC, also known as Water Control Corporation, based in Ramsey, Minnesota.

He has a B.A. in Economics from Kalamazoo College and an MBA from the University of Minnesota. He has more than 25 years of experience in the construction and installation of commercial water treatment systems all around North America. This year, Water Control is celebrating 50 years in the water treatment and conditioning industry, specializing in engineered systems for commercial, institutional, and industrial applications. This includes pure water, water recycling, pathogen control, softening, and specialty filtration packages. Brian is the proud

father of three children, is blessed to live with the love of his life, and enjoys snowmobiling, hunting, running with his dog, and drinking good beer.



Jana Summey

Jana Summey has more than 20 years in the AEC industry. Her experience includes directing education, training,

marketing, and business development efforts at leading MEP and AE firms and manufacturers. Jana currently leads LiquiTech's education and strategic projects. Her prior six years were spent at Watts Water, where she led strategy and market and product development for the healthcare vertical and waterborne pathogen risk management. Jana received two bachelor's degrees from Drury University and earned her MBA at the University of Missouri—Kansas City.



Greg Swafford, CPD, GPD

Greg Swafford has been a Plumbing Designer, Project Manager, and Plumbing Department

Leader at MEP consulting firms for nearly 20 years. As Technical Sales Manager for GF Piping Systems, Greg leads the technical sales team of piping systems specialists. He is responsible for the growth and oversight of the U.S. commercial water market segment through business development, product development, and the creation of technical resources. In addition to his work with GF Piping Systems, he is committed to advancing public health and safety by volunteering within

industry organizations. He currently serves as Affiliate Liaison for ASPE's Region 5 and as a committee member of ASHRAE SPC 514.



Len Swihart

Len Swihart has been working on combustion systems for more than a year since retiring from the Marine Corps in 2020.

Len provides assistance to mechanical engineers with design development and specification design for boiler systems, ultra-low NOx burners, burner control systems, and complete boiler combustion systems. Len also assists plumbing engineers with design development and specification design for fuel oil-handling systems up and down the West Coast.



Robert Torbin, PE

Robert Torbin has worked for more than 35 years in the development of innovative fuel gas piping systems and

related technologies. He has a B.S. in Mechanical Engineering from Northeastern University and an M.S. in Mechanical Engineering from WPI. He is a Registered Professional Engineer and serves as a member of several national standards committees including the CSST ANSI LC-1 TSC, the CSA Manual Valve TSC, and the press connections ANSI LC-4 TSC. Robert is also a voting member of the NFPA 54 Technical Committee. He is the author/co-author of more than 100 technical reports, journal articles, and conference papers, including many on gas distribution research. Robert lectures

to numerous gas industry organizations and plumbing, mechanical, electrical, and fire inspector groups every year.



Paul Tully

Paul Tully is a Field Technical Representative for Charlotte Pipe and Foundry Co. He has been in the plumbing industry for

more than 30 years, working with many facets of the construction industry. In his current role, his primary focus is educating engineers, designers, contractors, and code officials on products, specifications, and industry trends, as well as resolving jobsite issues. Paul graduated from the University of North Texas with a BBA in Strategic Management. He is based in the Dallas area and currently serves the south central and Rocky Mountain states. He has made numerous presentations to ASPE, IAPMO, and PHCC chapters and local building official groups.



Tom Zinn

Tom Zinn is Director of Engineering for AcornVac Inc. and has 40+ years of professional engineering

experience. He's developed a strong expertise in vacuum plumbing system design, systems controls engineering for water supply, and wastewater processing and treatment. Tom enjoys history, his cabin in the mountains of Southern California, his wife, three sons, six grandchildren and mentoring the engineering community and clients in the practical use of vacuum plumbing systems.

GF Piping Systems

+GF+

Smart Water Management for the 21st Century

Connect to the future with Hycleen™ Automation System

- Perfectly balance recirculating loops
- Automate flushing of stagnant water lines
- Optimize water & energy use
- Minimize Legionella Risks
- Support ASHRAE 188 compliance
- Stay connected anywhere

NEW!



gfps.com

GF Piping Systems
9271 Jeronimo Road, Irvine, CA 92618
Phone (714) 731-8800 • Toll Free (800) 854-4090 • e-mail: us.ps@georgfischer.com



*Navien NPE Series is the best selling condensing tankless water heater according to BRG.

It's easy to **spot** why Navien will be the best selling condensing tankless...**again**

High efficiency –
up to
0.96 UEF
and up to
15:1 TDR

2" PVC up
to 75 feet
and 1/2" gas up to
24 feet

Durable dual
stainless
steel heat
exchangers

ComfortFlow®
NPE-A2
internal buffer
tank and
recirc pump

Optional
NaviCirc™
- easy to
install with
no recirc
return loop
needed

EZNav™
multi-line
control with
built-in
intuitive
software

Built-in
HotButton®
on-demand
capability

New Navien NPE-2

High efficiency condensing tankless water heaters
The best just got even better

To learn more visit Navieninc.com



The leader in condensing technology...does it again.

YOUR VOICE AND VOTE STRENGTHEN THE UNIFORM CODES

**PRESCRIPTIVE CODES WRITTEN AND
APPROVED BY PLUMBING ENGINEERS**

Be part of the code development and adoption process to protect the health and safety of your communities. **Join Today!**

www.iapmomembership.org



HEAT PUMP WATER HEATERS

AIR SOURCE



WATER SOURCE



CXS SUPERVISOR



PRE-PACKAGED TANK SKIDS



COMPLETE WATER SYSTEMS

- NSF61 CERTIFIED
- 160°F+ HOT WATER
- 4 TO 23+ TON CAPACITIES

800-926-5622 WWW.COLMACWATERHEAT.COM SALES@COLMACWATERHEAT.COM



PIPING SYSTEMS AND SO **MUCH MORE.**

CORZAN® CPVC FOR COMMERCIAL PLUMBING AND HYDRONIC HVAC PIPING SYSTEMS

- Fast, easy installation
- Resistant to corrosion and biofilm buildup for lasting performance
- Lower cost of ownership
- Backed by industry-leading installation and compatibility support

Learn why engineers, contractors, plumbers and building owners rely on Corzan Piping Systems: www.corzanplumbing.com/aspe

CORZAN®
PIPING SYSTEMS

2019 Lubrizol Advanced Materials, Inc., all rights reserved. All marks are the property of Lubrizol Advanced Materials. Lubrizol Advanced Materials is a Berkshire Hathaway company.
19-0195222



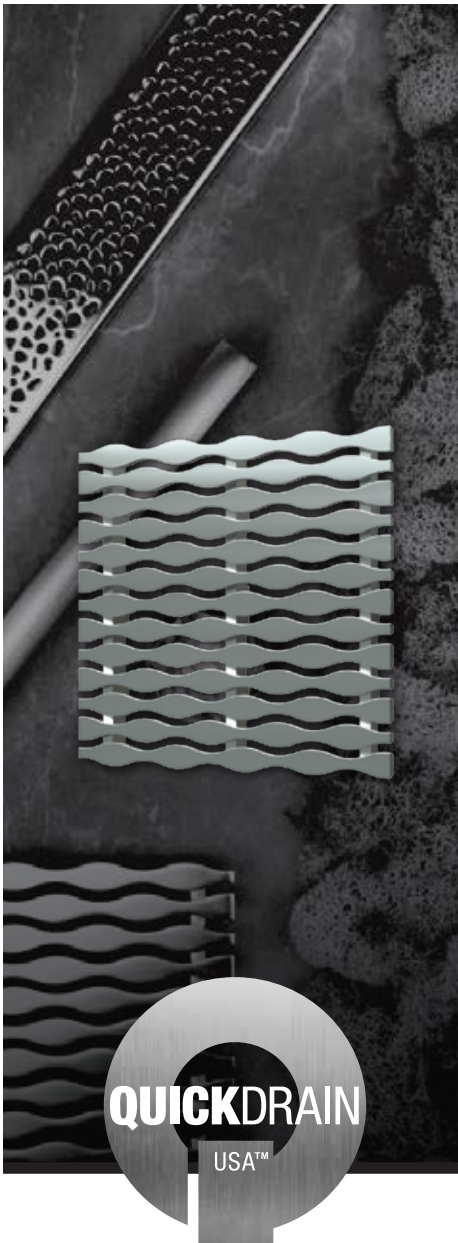
Based in the United States, Zoeller Company is one of the oldest family-owned manufacturers of submersible pumps, systems, and controls for moving and treating water. With Zoeller, you'll find the highest dependability backed by a family commitment to each of our customers.

With over 95% of our products being made in the USA using a majority of US content, Zoeller Pump Company and Zoeller Engineered Products are proud of their American heritage and US commitment.

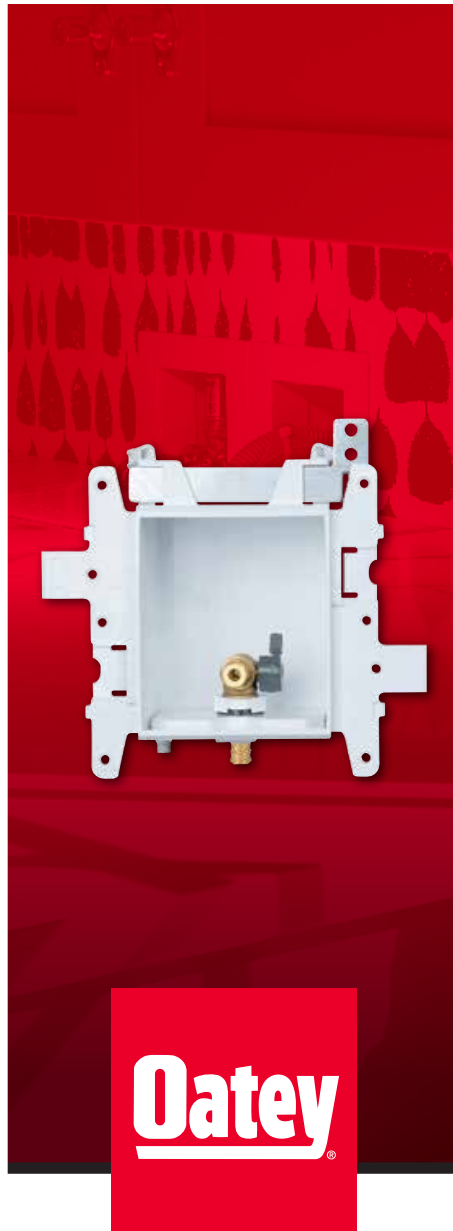


**KEEPING JOBS IN AMERICA
FOR OVER 80 YEARS**





SquareDrain
Shower Drain



MODA Supply
Box System



ADA Compliant
Tubular Covers

The **Leading Innovators** in
the Plumbing Industry

Thank you for your Partnership!



We support you in more ways than one.

Many know us for our pipe supports, but HoldRite has also innovated firestopping with code certified firestopping solutions that are easy to install and save time on the jobsite.

holdrite.com



AN RWC BRAND
RWC

50 YEARS OF PACKAGED HIGH-PURITY WATER SOLUTIONS

 **WCC**
CELEBRATING

50
ANNIVERSARY
1971 - 2021

JOIN US FOR
Cupcakes & Cocktails
Cheers to 50 Years!
ASPE TechSymposium
Booth #500
Thurs, Sept 23 @ 5:30pm

Providing Legionella and Pathogen Control

- High-Purity Water
- Legionella & Pathogen Control
- Water Reclamation
- Filtration & Softening
- Integrated Controls
- Custom Documentation & 3D Modelling

watercontrolinc.com



Booster Sizing Can Be Complicated
That's Why There's calQflo®

Go with the 'Flo to San Diego!

[Create Your **FREE** Account]



**conQver Booster System Sizing
With the World's Most Intelligent
Online Sizing Software**

- ▶ Plug & Play Sizing and Selection Eliminates Guesswork
- ▶ All Systems Designed and Sized in Accordance with ASPE Design Handbook, Vol. 2, Chapter 5, 2018-2019
- ▶ 100% Online & Accessible Worldwide
- ▶ Guaranteed Sizings for Domestic Water Booster & Water Reclamation Systems
- ▶ Completely **FREE!** Unlimited Specifications, Save Your Work & Access it 24/7



calQlate'd Energy Savings

20-50% ENERGY SAVINGS OVER STANDARD SIZING

QuantumFlo, Inc. | www.QuantumFlo.com/calQflo
Find **Your** QuantumFlo Rep: www.QuantumFlo.com/Reps



FIXTURE CONNECTIVITY

The only platform for connected commercial plumbing systems.

reed provides a full solution of software, hardware and services to help commercial & multi-family buildings operate efficiently.

Cloud-connected hardware platform to connect the leading brands of plumbing fixtures.

- Cloud Connectivity
- Water Conservation
- Risk Management



Scan for more

reed



Tough Enough for Earthquakes Tough Enough for You



Built in Liberty, SC
by Reliable®

OSHPD Seismic Preapproved PrePaK® systems provide the protection you expect and need during the critical time following a seismic event.

PrePaK® system features:

- 2"–8" Model DDX Valve with preaction, low-pressure dry-pipe, or deluge trim
- Available South-Tek Systems N2Blast® FPS-900RS Nitrogen Generator (900-gallon system capacity)
- Water supply and drain connections on both sides and at common centerlines for simple installation of multiple units
- UL Listed as a unit (not including nitrogen generator)
- FM Approved as a unit (with or without nitrogen generator)
- OSHPD Special Seismic Certification Preapproval up to $S_{DS}(g)=2.5$ and $z/h=1$

Visit Us at Booth #607!

reliablesprinkler/prepak.com

Reliable®

WATER HEATER FAILURE FORECASTER

**Smartify your water heater
and predict remaining life**

\$499

10 LOCATIONS



**We can help determine the
remaining life of your water
heaters, and help plan CapEx.**

- We send you our smart device, telliBot_ai (to each of your locations)
- Easy, 10 minute DIY install, no special tools needed.
- It monitors existing water heaters (any make & model).
- After 10 days, simply send us the box, we issue a health report for all of your monitored units.



OIL SMART®

Pump Water, Not Oil.

The Oil Smart® system, when combined with a manual sump pump, will automatically pump water without the risk of pumping oil into the environment. Additionally, the system alerts maintenance or building personnel in the event of a high oil or high water condition. Installation of the Oil Smart® system allows you to comply with Elevator Code ASME A17.1 and state/federal regulations while reducing the risk of adverse publicity, fines, and expensive cleanup costs.

- Same-Day Quotes
- Same or Next-Day Shipping
- 24/7 Customer Service & Technical Support
- UL Certified Manufacturing Facility
- Assembled in the USA
- Five-Year Limited Warranty



OIL SMART® HIGH LIQUID ALARM

DEDICATED OUTLET

REFER TO PLANS FOR CONNECTION

PIPE AND PIPE FITTINGS

ELEVATOR SHAFT WALL

SUMP COVER

CHECK VALVE
LIQUID SMART® ALARM SENSOR

OIL SMART® PUMP SWITCH
SUMP PUMP

PUMP START

PUMP STOP

DISCHARGE PIPE

SUMP PIT

SEE WATER Inc.

1.888.733.9283
www.seewaterinc.com

CASPE
American Society of
Plumbing Engineers

UL
698A

UL
508A

c UL us

SA

CE



Dart Canyon® Farmhouse Workstation Sink
ELDSSF33279DBG



ezH2O® Bottle Filling Station
LZS8WSLP

ELKAY®

**Innovative sinks and drinking solutions
that meet the needs of everyone.**

elkay.com



THE FEATURES YOU NEED. A BRAND YOU CAN TRUST.

Whether you work in a hospital, manufacturing facility, office park or school, T&S has a plumbing product made specifically for you, with the features you need to do your job right.

With robust, sturdy and proven-reliable construction, you'll find that T&S is a brand you can trust.

So the next time you're looking for the right plumbing product, consider one from the manufacturer with a 70-year history: T&S Brass.



RELIABILITY BUILT IN™

expanding a **stainless** reputation



VR Series is NSF/ANSI 61 & 372
Commercial Hot certified

- Everything you love about Taco Comfort Solutions' high-efficiency ECM circulators – now in stainless steel!
- Easy-to-use ECM – from 44 watts to 2HP.



Visit us at booth #409!

www.TacoComfort.com

Perfect Your Design

Simplify DHWS Design With  **CircuitSolver**
a ThermOmegaTech® brand



*More Options.
Less Callbacks.
Balancing Perfected.*



CircuitSolver® is a one-size-fits-all thermostatic balancing valve that automatically and continuously balances a DHWS, with options to fit any design. Pre-assembled configurations feature integrated unions, balancing valves, strainers, and more, so your designs will have fewer leak points than ever.

Visit Us At The ASPE Tech Symposium Booth #203 or CircuitSolver.com

Viega ProPress®

CALL FOR IT
BY NAME

Don't get squeezed by cut-rate imitations.



Explore the benefits of **Press Technology** at Booth # 613



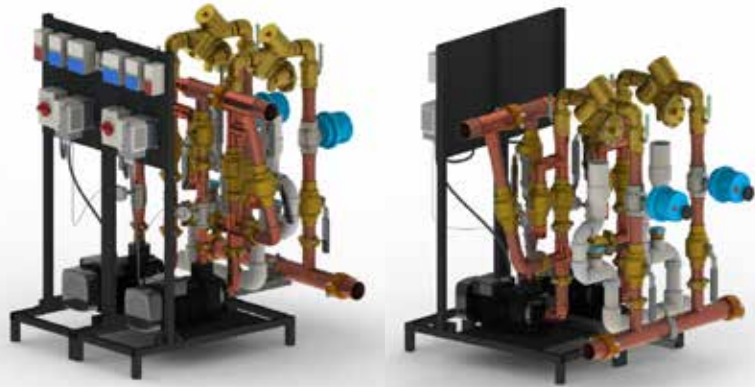
viega


GEN-5 BOOSTER PUMP AND RP PLATFORM

With optional Flood Control, Pump Bypass, and Meter Test Tees

Our unique designs are VALUE ENGINEERED SOLUTIONS.

- Mitigate Biofilm that Harbors Legionella
- Simplify the Mechanical Room
- Lower Total Installed Cost
- Save Space



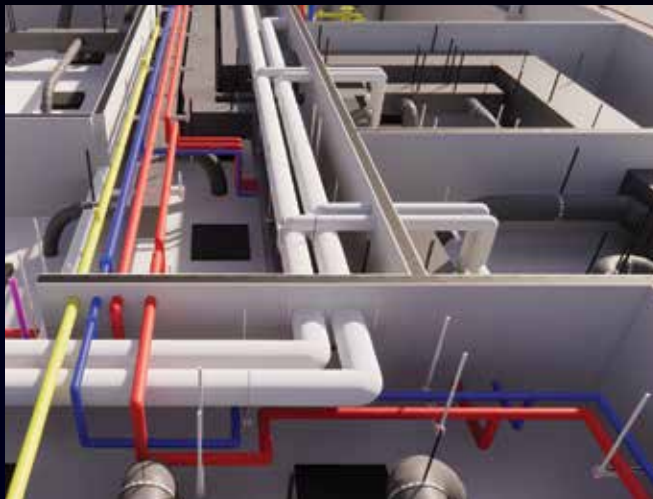
 A Veteran-Owned Company

TOWLE-WHITNEY.COM
800-807-9827

Smarter system designs with Uponor Construction Services

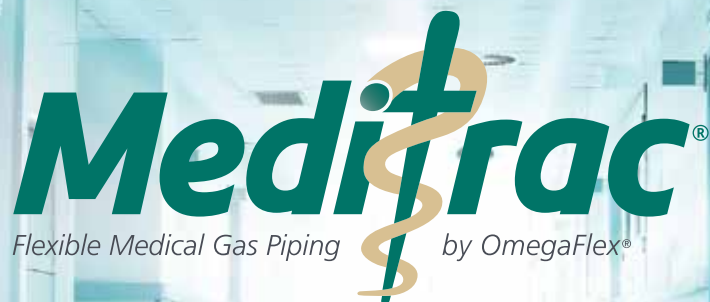
Expand into new opportunities for your plumbing and mechanical projects.

Learn more at
uponor.com/ASPE2021



uponor

**Moving
> Forward**



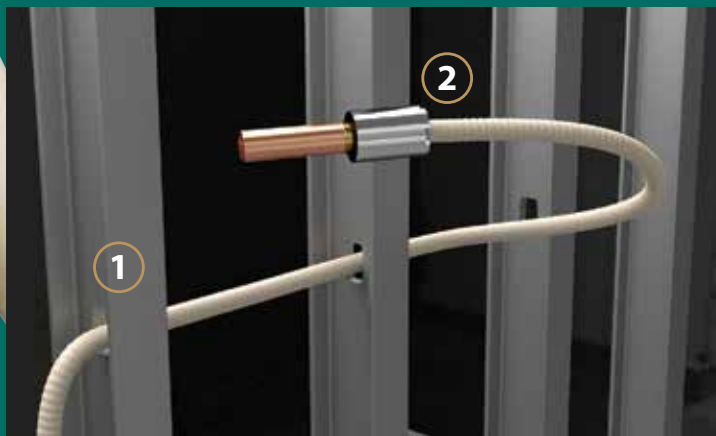
Better Just Got Bigger

Innovation from end to end.

MediTrac® introduces the world's first corrugated copper alloy tubing that comes in long, continuous, bendable lengths for up to 70% fewer fittings, up to 80% less hot work, and up to 5 times faster installation without closing your facility. It's the inside track for lower costs, less risk, and up to 55% cost savings*.

- Available in long continuous lengths
- MediTrac® fully complies with NFPA 99-2018

Now
available
in 1 1/2"



1. Copper alloy tubing jacketed with fire-retardant plenum-rated polyethylene.

2. Fittings supplied in a variety of transition connections for easy attachment to traditional copper tube systems and direct connection to piping system components.

* Typical installations reveal total cost savings of 55% or more.

meditrac.us
1.800.355.1039

© Omega Flex, Inc. 2021

OmegaFlex®

OmegaFlex, Inc.
451 Creamery Way
Exton, PA 19341
1-800-671-8622
ISO 9001 Registered Company
MTUS 615 Rev 10/20

SPECIAL Events

PRODUCT SHOW

Thursday, September 23 | 4:00 – 8:00 P.M.
Friday, September 24 | 7:00 A.M. – 1:15 P.M.
Rio Vista Ballroom & Pavilion



Join your fellow attendees and our Sponsors/Exhibitors at the two-day 2021 ASPE Tech Symposium Product Show. On Thursday, light snacks and drinks will be provided while you browse the new products and innovations, and on Friday morning you can wake up with coffee and breakfast while you chat with our Exhibitors. Stick around on early Friday afternoon for some lunch before heading off to the technical education sessions of your choice. To see a listing of the exhibitors and their booth location, visit page 66.

PRODUCT SHOW GRAND-PRIZE GIVEAWAY

All full registrants will receive a ticket for our Product Show grand-prize giveaway, provided by **McWane Plumbing Group**. On Thursday, drop your card in the giveaway box, and the winner will be announced at the end of the night. You must be present to win.



McWane Plumbing Group grand-prize giveaway! Includes AB&I Foundry RTIC 45-quart hard cooler that holds up to 36 cans or 40 pounds of ice; AB&I and McWane Plumbing Technical Services RTIC water bottles; Husky and Tyler Pipe baseball caps; and AB&I, Husky, and Tyler t-shirts.

WELCOME PARTY

Friday, September 24
6:00 – 8:30 P.M. | San Diego
Marriott Mission Valley Pool

Sponsored by

CHARLOTTE
PIPE AND FOUNDRY COMPANY



To welcome you to the 2021 ASPE Tech Symposium, the Friday Night Party/Reception Presented by Charlotte Pipe will be held at the San Diego Marriott Mission Valley Hotel. During this relaxing evening by the pool you will be able to meet up with old friends and build new relationships before hitting the town for dinner and other entertainment. Downtown San Diego and the Gaslamp Quarter are just a short trolley ride away.

*Ticketed event. Pre-registration was required.

AYP LEADERSHIP ACADEMY*

Sponsored by



Dynamic Tools to Lead at Every Level

Presented by Christina Rowe, MSOL

Thursday, September 23 | 8:00 A.M. – 3:00 P.M. | Balboa 1-2

Engineering complex, dynamic systems in a world of budgetary constraints and rapidly evolving systems can be difficult, but the right skills and experience make that work manageable. The same is true of your leadership. Having the right skills and tools makes ALL the difference in creating the desired outcomes. Navigating the complexities of teams in the workplace can be daunting without them, and in this workshop you will learn proven strategies for bringing the best out in yourself and in team members, communication styles, structuring effective expectations and boundaries, navigating change and growth, and tools that enable challenging conversations to be productive and empowering.

The workshop will cover:

- **Tools for Difficult Conversations:** Managing tough conversations with your reports and managers is always a challenge, and learning how to best handle these situations is crucial for developing solid leaders in our firms.
- **Expectations and Boundaries:** Being able to balance satisfying the needs of your team at the same time as satisfying your individual needs is a problem for everyone. There always seems to be a loser and a winner. This discussion will help you find ways to make everyone a winner.
- **Valuing Team Members:** Having the ability to review your peers and provide praise or constructive comments is a skill that everyone can improve. The same goes in reverse: being able to receive the same comments and praise. You will learn how to recognize the positives and challenging values that your team brings to the table. Showing/ knowing where your strengths are and that you are a valued team member will assist everyone in improving their craft.

This workshop will not be a boring, sit-in-your-chair parade of slide decks. It will flow from topic to topic with interactive exercises that actively implement these skills to showcase exactly how powerful a mindful approach to workplace skills can be. During this workshop we will coach and practice real-life applications. You can expect to leave with a toolkit full of skills that build opportunities to thrive in your career.

ASPE YOUNG PROFESSIONALS NETWORKING EVENT*

Sponsored by



Saturday, September 25
6:30 – 9:30 P.M.

ASPE Young Professionals is hosting an evening networking event at Park & Rec in University Heights. Unwind with your peers after an intense day of technical education with games, drinks, snacks, and fun!

ASPE LUNCH & AWARDS CEREMONY

Saturday, September 25
12:15 – 1:45 P.M.
Rio Vista Ballroom

Join your fellow attendees at this special lunch where the ASPE Board of Directors will distribute 2019-2020 membership awards to ASPE Chapters and Members.

Visit booth #608 to learn more about the latest in Healthcare Solutions and tools to specify it.



CARMEN GONZALEZ
Regional Sales Manager
Commercial Business
*Western USA
Franke*



PHIL HOUSTON
Specifications Account
Manager
*West Coast
ATS Spec Solutions*

Pictured above:
Franke Medi-flo sink with infection prevention
technology and Division 10 accessories



ECCO

EQUIPMENT CONTROLS COMPANY

INNOVATIVE SOLUTIONS
DRIVEN BY EVERYDAY CHALLENGES

Equipment Controls Company has a long history of providing solutions focused on
advancing innovative gas systems design...



**PRODUCT
VERSATILITY**
+ RELIABILITY

**REGULATOR
SIZING**
+ SELECTION
FOR INDUSTRIAL-COMMERCIAL
APPLICATIONS

ASPE
American Society of
Plumbing Engineers™

CEU TRAINING COURSES
REGISTER AT LINEPRESSUREREGULATOR.COM

**DESIGN
SOLUTIONS**
FOCUSED ON
**GREEN
TECHNOLOGIES**

For information on our product lines and services, visit our website at
linepressureregulator.com • Toll Free: 800.554.1036

AMERICAN MUSCLE

TYLER TOUGH



TylerTough.com | 800.527.8478
11910 County Road 492, Tyler, TX 75706

COMPLETE THERMAL LEGIONELLA CONTROL SYSTEM



Caleffi's innovative total thermal solution for control of safe and sanitary domestic hot water combines three main components: LEGIOMIX® digital mixing valve, delivering highly accurate mixed water temperature 24/7, it is the only digital mixing valve in North America that can execute thermal disinfection automatically by a calendar schedule or manually by the touch of a button; ThermoSetter™ thermal recirculation balancing valves featuring a bypass option for disinfection; and SinkMixer™ 4-port anti-scald valves for reliable point-of-use safety. **CALEFFI GUARANTEED.**





Cleantech Solutions.
Anywhere.



DON'T LET SIR ISAAC NEWTON LIMIT YOUR FUTURE

Evac's vacuum plumbing solution saves on costs,
space and installation time when compared to traditional gravity-based systems.

If you're looking for a flexible and robust solution that simplifies design and construction,
saves water and offers unmatched hygiene and safety benefits, then look no further.

The answer is Evac. The proof is out there.

Visit us at **ASPE Tech Symposium 2021 – San Diego, CA – Booth #103.**

www.evac.com

NPE-2 Series tankless water heaters

The best in high efficiency
ultra condensing tankless
just got even better

Learn more at **Navieninc.com**



ComfortFlow®
NPE-A2 internal
buffer
tank and recirc
pump



EZNav™
multi-line
control with
built-in
intuitive
software

High efficiency
up to
0.96 UEF
and up to
15:1 TDR

2" PVC up to
75 feet
and
1/2" gas up to
24 feet



Durable
dual
**Stainless
Steel**
heat
exchangers



Navien

THE LEADER IN CONDENSING TECHNOLOGY

SERIOUS PLUMBING FOR SERIOUS PROFESSIONALS

LIBERTY™

- 3" Flapper Technology
- MaP Score 800g
- 1.28 GPF

SABRE™

WITH STEALTH TECHNOLOGY*

- Vacuum Assist Flush
- MaP Score 1,000g
- 1.1 GPF & 1.28 GPF



SHADOW™

WITH STEALTH TECHNOLOGY*

- Vacuum Assist Flush
- MaP Score Up To 1,000g
- 0.8 GPF & 1.28 GPF



BARRON™

- Pressure Assist Flush
- MaP Score 1,000g
- 1.0 GPF & 1.28 GPF



Come visit us at
the ASPE Tech
Symposium 2021 at

**Booth
#407**

LET'S BUILD SOMETHING TOGETHER

With more than 60 years of experience in thermoplastics, IPEX is one of North America's largest producers of high-durability plastic pipe and fitting systems.

The IPEX Advantage:



Integrated
Total Piping
Solutions



Responsive
Product Support:
Applications
Engineers



Lightweight and
Easy to Install
Products



Technical Support
is available:
BIM/ARCAT



IPEX Group of Companies

ipexna.com


IPEX
by aliaxis

There is only ONE design to ensure safe drinking water



Scan to
learn more

LiquiTech Multi-Barrier water treatment
solution is that solution—which includes both
hot and cold water.

 **ASPE** TechSymposium2021

Booth #406

LiquiTech
innovation in water security®

www.LiquiTech.com

SMARTER & SAFER WATER STARTS HERE. IT STARTS NOW.

Leaders in factory engineered systems.



Grinder Systems
Solids Handling Systems
Effluent Systems
Simplex
Duplex
Triplex
Quadplex



Liberty Pumps®

A Family and Employee Owned Company

800-543-2550

www.LibertyPumps.com

EPS

Engineered Pump Systems

Order a Liberty EPS and you'll get the assurance of the complete system arriving to the job-site with factory matched components - pump, panel, basin, internal piping, guide rails, floats - all from one source. With an almost unlimited number of basin and panel options - we can customize a system for your specific application.

Need it fast?

Specify a pre-designed system from Liberty! Pre-designed systems are available and ready to ship in 24 hours. Consult factory for more information on our pre-designed packages.

X-Series™

Explosion-proof models
available for hazardous
locations!

Copyright © Liberty Pumps, Inc. 2021 All rights reserved.



NIBCO®
585HP
HIGH PERFORMANCE BALL VALVE



**Laser
Welded.**

**When
Performance
Matters.**

NIBCO.COM/585HP

- Patented Laser-Welded Design
- 1000 CWP, 150 SWP
- 10 Year Warranty



MIFAB®

HYDROMAX®
SIPHONIC DRAINAGE

Stop by and visit us at Booth 101!

Less is more.

Learn how you can use less
pipe work with siphonic drainage.

- Siphonic drainage delivers a substantial cost savings VE to any project.
- A siphonic design can dramatically reduce labor/install costs.
- Siphonic storm drainage uses half the diameter of pipe of traditional gravity drainage.
- Pipework on a siphonic system runs dead level flat, there is zero pitch.

For over 30 years, MIFAB
has been manufacturing
products that serve the
public good, keeping the
public water supply clean.

Learn more at
www.mifab.com



Have you checked out ASPE Connect yet?

It's one of ASPE's greatest member benefits!

Our online community, ASPE Connect, is an invaluable resource to help you get expert advice and new insights on your design, career advancement, and product questions. And it's available only to ASPE members!

It's like having a brainstorming session with the world plumbing community.

- Paula Leatherman, CPD, FASPE

How to Get Started

1. **Visit**
connect.aspe.org



2. **Sign in.** Your ASPE Connect login information is the same as your login for ASPE.org and ASPE Education. Once you are signed into one site, you are signed into all of them.



3. **Build your profile.** Help your fellow ASPE members get to know you by including a headshot, bio, education, and career history.



4. **Go to the Open Forum** and browse the discussions to add your thoughts to an ongoing conversation or start a new discussion.

Get Connected Today! connect.aspe.org



THE BOLD LOOK
OF **KOHLER**

Booth 604

Join KOHLER
in booth to
learn more on
how they are
reinventing the
commercial
space.

LAARS
Heating Systems Company

BRADFORD WHITE
WATER HEATERS

NST NILES
STEEL
TANK



WHATEVER THE COMMERCIAL NEED | **WE HAVE THE SOLUTION.**

Bradford White and its family of companies have solutions for ALL of your commercial needs:

FOR EFFICIENCY: Bradford White eF Series® Ultra High Efficiency Commercial Gas Water Heaters.

FOR FAST REPLACEMENT: Bradford White ElectriFLEX Series® Commercial Electric Water Heaters.

FOR TOUGH ENVIRONMENTS: Laars Commercial & Industrial Tankless Electric Water Heaters powered by Keltech™.

FOR LARGE OUTPUT WITH A BOILER: Laars Plate Semi-Instantaneous Double Wall Plate Water Heater.

FOR ANY SIZE CUSTOM STAINLESS STEEL VESSELS: Niles Steel Tank Alloy Works.

Built to be the Best® | Learn more at bradfordwhitecorporation.com

©2021, Bradford White Corporation. All rights reserved.

VISIT US
AT BOOTH
401

COPPER: Keeps Drinking Water Safe

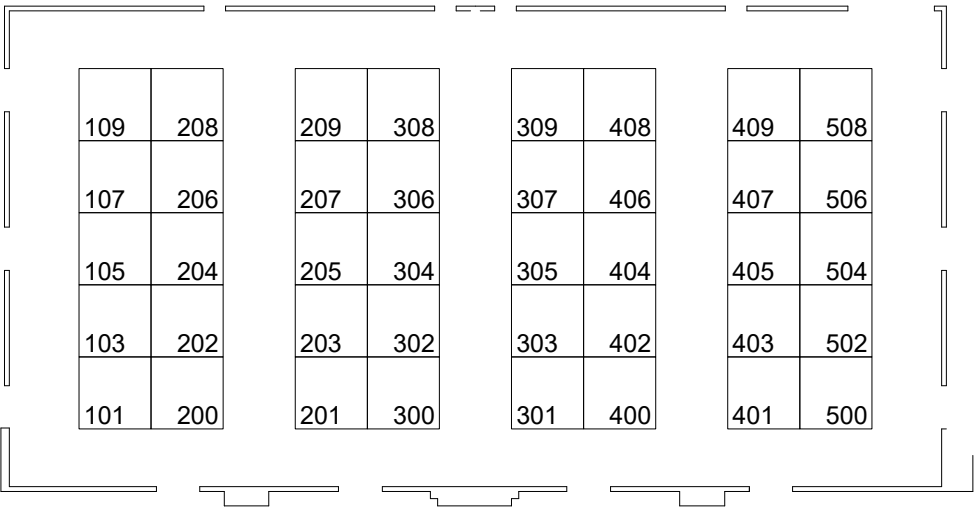
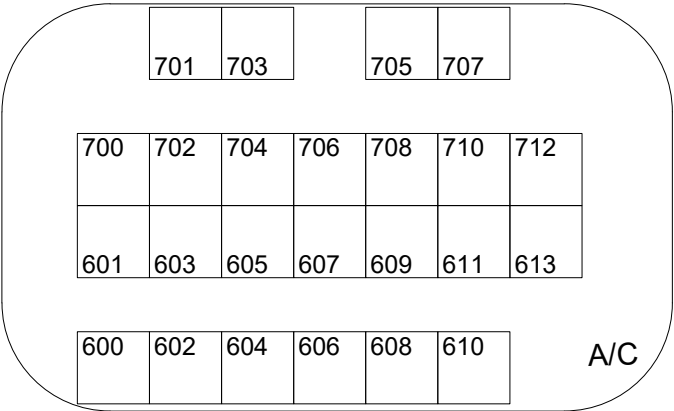
- ✓ **99.9% Copper** – doesn't leach dangerous chemical compounds.
- ✓ **Impermeable** – prevents outside chemicals from penetrating tube wall and contaminating water.
- ✓ **Fire Resistant** – will not burn or give off smoke containing toxic fumes.
- ✓ **Safe** – is an essential micronutrient necessary for good health.
- ✓ **Built to Last** – proven durability for decades of performance.
- ✓ **Resource efficient** – can be recycled over and over without loss to its beneficial properties or down-cycling.

What other material can say the same...

PRODUCT SHOW Floor Plan

EXHIBITOR..... BOOTH NUMBER

MIFAB	101	Corzan/Lubrizol	307	Kohler	604
EVAC North America	103	Elkay	308	Reed Water	605
Preferred-MFG	105	Jomar Valve	309	Spears Manufacturing	606
AIRCOM	107	JR Smith	400	Reliable Automatic Sprinkler	607
NuFlow Technologies	109	Bradford White	401	ATS/Franke	608
Charlotte Pipe	200	Intellihot	405	Colmac Water Heat	609
QuantumFlo	201	LiquiTech	406	Towle Whitney LLC	610
ThermOmegaTech	203	IPEX USA	407	AGF Manufacturing	611
Oatey	205	Georg Fischer	408	Viega	613
RWC	206	Taco Comfort Solutions	409	Armstrong Fluid	700
See Water	207	WCC	500	Equipment Controls	701
T&S Brass	208	NIBCO	502	Guardian Equipment	702
Uponor	209	Navien	504	Caleffi	704
McWane Plumbing Group	300	Zurn	506	Copper Development Association ...	705
IAPMO	301	Zoeller Company	600	Watts Water	706
CISPI	303	Nyle Water Heating Systems	601	Liberty Pumps	708
Rinnai	305	Omega Flex Inc	602	Niagara	710
Asahi/America Inc	306	Apollo Valves	603	Victaulic	712



Morris Group International's CONTINUING EDUCATION

Our divisions offer training opportunities for you, via our CEU Courses, opportunities for one-on-one training sessions, and educational videos in the Morris Group University Video Library.



Vacuum Plumbing for "Future-Ready" Design

AIA Course Number: GAR22C

Learn how to future-proof your facility with vacuum plumbing. Sign up in-person at ASPE or for a webinar session at acornvac.com/ceu or greence.com/Course_Sponsors/AcornVac-Inc



909-902-1141
info@acornvac.com
acornvac.com



Training on Your Schedule

Learn about how Smith labor-saving and prefabrication products can help your project in this customized webinar. Sign up at jrsmith.com/smith-webinar



334-277-8520
sales@jrsmith.com
jrsmith.com



Conserving Water and Energy

AIA/CES Info: Course Number AEC1363

Learn how to reduce costs while improving health and safety conditions. Sign up for the webinar at chronomite.com/ceu or aecdaily.com



626-937-4270
info@chronomite.com
chronomite.com



Train on Thermostatic Mixing Valves

Learn all about thermostatic mixing valves in this helpful & informative webinar. Sign up by contacting us using the information below.



626-336-4561
acorncontrols@acroneng.com
acorncontrolvalves.com



Visit the Morris Group University Video Library
university.morrisgrouponline.co





PLUMBING
TECHNICAL SERVICES

VALUE ENGINEERING: QUALITY NEVER GOES OUT OF STYLE

**Learn more about the benefits of
using a cast iron plumbing system.**



Don't Value-Engineer the Quality Out of Your System

Don't value-engineer the performance out of your next DWV plumbing project. Consider the true cost of installation when comparing piping solutions.

Reach out to your local Tech Services rep to schedule a time to go over the ASPE approved CEU Value-Engineering Considerations presentation.

McWanePlumbingTechServices.com/contact