ASPE American Society of Plumbing Engineers
SOUTHWESTERN OHIO

# Newsletter

September 2024 Volume 44 Issue 1

***Chapters are not authorized to speak for the Society***

**AFFILIATE SOCIETIES COUNCIL**
**AMERICAN SOCIETY OF PLUMBING ENGINEERS**
**SOUTHWESTERN OHIO CHAPTER**
5100 Springfield Street, Suite 100
Riverside, OH 45431
**www.southwesternohioaspe.org**

**President**
**Andrew M Hemmelgarn, EI, CPD**
KZF Design
andrew.hemmelgarn@kzf.com

**Vice President, Technical**
**Samuel Church**
Campbell Equipent Co.
samuelc@campbellequipment.com

**Vice President, Legislative**
**Jeremy M. Williams, PE, LEED AP BD+C**
Heapy
JMWilliams@Heapy.com

**Vice President, Membership**
**Brian Selander**
StreamKey, Inc.
brian@streamkey.com

**Treasurer**
**Christina B Elliott**
BraHan, LLC
crissy@bra-han.com

**Secretary/Affiliate Liaison**
**William B Berger**
Kohler
bill.berger@kohler.com

**Newsletter Editor**
**John H Fox**
Midwest Spec
jfox@mwspec.com

**Board of Governors Chair**
**Brian C Fraley, CPD, LEED AP**
**Danis**
Brian.Fraley@Danis.com

**Fundraising Chair**
**Andrew T Monnig, CPD**
Heapy
atmonnig@heapy.com

**Chapter AYP Liaison**
**OPEN**

**Chapter WOA Liaison**
**OPEN**

**September CHAPTER MEETING**

**Date:** **TUESDAY, September 17, 2024**

**NEW Location:** **Countryside YMCA**
**1699 Deerfield Rd**
**Lebanon, OH 45036**
**Tel 513.932.1424**

**Cost:** **$20** online

**Schedule:** **11:30PM-1:30PM**

## Behavioral Health Design w/ Willoughby

**Reservations:** Make a reservation and pay for the meeting through the Chapter Website or email Bill Berger at bill.berger@kohler.com or John Fox at jfox@mwspec.com before ***noon*** on **MONDAY, September 16th,** so that a head count can be established. As always, guests are welcome.



**LOOKING AHEAD**

**Chapter Meetings to be held at Countryside YMCA, Lebanon, OH unless noted otherwise.**

**October 18-23, 2024** **ASPE Convention & Expo**

The *ASPE Newsletter* is published by the Southwestern Ohio Chapter of the American Society of Plumbing Engineers. Opinions expressed herein are those of the authors and do not necessarily reflect the views of the Society, the Chapter or the Editor.

## Presidential prose…

Welcome back!

We are already needing to make some program adjustments for the first meeting; instead of Lubrizol we will have Willoughby coming in to present on Behavioral Health Design. Many thanks to the Willoughby team for being so flexible on a last minute request.

As always we are open to programming requests, please reach out to a Board member or submit on the website YOUR ideas for a technical presentation.

The Board is exploring a golf outing of our own. Potentially to be hosted in September 2025, let Andrew know at andrew.hemmelgarn@kzf.com if that piques your interest. Andrew is not a golfer and is trying to learn what it takes to host a successful outing.

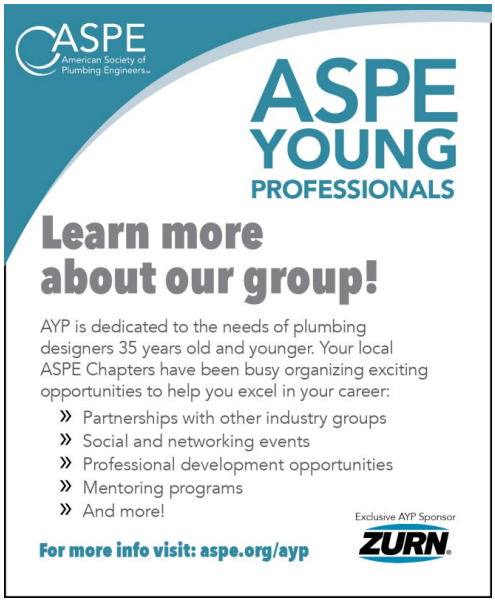
I need to thank the Dayton Dragon's game sponsors: Midwest Spec, Kohler Co, RepSource LLC, BWA South, Lixil, Streamkey, Industrial Sales, Steffens-Shultz Inc, Campbell Equipment, Libb Co, and Preferred Sales. These companies provide invaluable financial backing to our Chapter, please support them. All their line cards are available on our website, *southwesternohioaspe.org*.

Lastly, the ASPE Convention & Expo will be in Columbus in October. This is ASPE's biannual event that brings together thousands of engineers and manufacturers. The last Expo featured over 250,000 square feet of event space, will products ranging the entirety of the plumbing industry. With such easy access to this event (you can drive home at the end of the day if you want) I hope to see great turnout from the Southwest Ohio Chapter.

Upcoming Events:
First meeting of the 2024 & 2025 season – September 17, 2024
ASPE Convention & Expo 2024 – October 18-23, 2024 - Columbus, OH

Thanks for being here, we like having you.

***– Andrew Hemmelgarn***
***President***



**The Southwestern Ohio Chapter would like to wish a**

*Happy Birthday*

**to the following members celebrating their birthday in July or August:**

**Ron Bartley, Rory Beville, Denver Burton, Bobby Davidson, Chrissy Elliott, Mike Felton, Brian Fraley, Jim Huesman, Bill Hutchinson, Steven Meier, Clayton Milner, Paul Rice, Kamden Rottgen, Keith Schloemer, Steven Tate and Jeff Watern**

**And the Chapter would like to wish a**

*Happy Anniversary*

**to the following members commemorating their ASPE anniversary in July or August:**

**Rory Beville, Kyle Gordon, Doug Gregory, Clare Leidenheimer, Steven Meier, Brian Selander, Darrin Thompson and David Wolfe**

**Looking to stay in touch with the Chapter**

**www.southwestern-ohio.aspe.org**

## Technically Speaking…

Technically Speaking

I very much look forward to seeing all your faces again as we get back into the swing of things for the season. As Andrew mentioned we had to call an audible, and we now have Willoughby as our presenter this Tuesday. While behavioral health products are not the only American-made lines produced by Indianapolis-based Willoughby, they certainly are one of the market leaders in the space. This will be our chapter's first foray into design requirements for behavioral health projects in recent history, so I trust it will be informative and spur some productive discourse, and, as always, I look forward to showing of the high caliber of Greater Cincinnati's engineers to our western neighbors.

Kindest Regards,

***– Samuel Church***
***VP, Technical***

## Legislative lingo…

I hope everyone had an enjoyable summer. Not much happening in the legislative realm. Looking forward to the ASPE Expo in Columbus next month!

**ANSI/AAMI ST108:2023 Water for the Sterile Processing of Medical Devices**
One standard that is getting a lot more attention recenly is this ST108:2023. This "new" standard revises and replaces TIR 34 that was more of a "best practice" guide but not yet a standard. To oversimplify the requirements, it basically requires pure water to the final rinse and makeup water to steam generation. You won't find anything in the standard about pure water but it references "critical water" and the quality requirements that have to be met among other things. Best advice is to engage a specialist familiar with the standard to help guide you through case-by-case situations when asked.

***– Jeremy M. Williams PE, LEED AP BD+C***
***VP, Technical***

## Membership musings…

Welcome back everyone! I would say Fall is upon us but the summer weather seems to be hanging around lately and so are many of the leaves. Hopefully everyone is enjoying it while they can. Don't forget the ASPE convention is only about 1 month away and just a short drive to Columbus to go. I am planning to attend on Monday and Tuesday. It's a great opportunity get some of your CEU's and see what's happening in the industry.

Our next chapter event is Tuesday, September 17th on CPVC Piping Systems w/ Lubrizol. I'm looking forward to getting to see everyone again and hear about how your summers went.

Lots of renewals have happened since our last article and we'd like to acknowledge these folks for their continued support to our local chapter: Chris Carter, Brian Fraley, Doug Gregory, Derek Koogler, Kamden Rottgen, Jackson Russo, Ryan Voss, Shane Gosney, Steven Meier, David Wolfe, Carl Christy, Michelle Ens, James Fiorini, Daryn Meadows, Brett Mullins, Pat Murphy, Benjamin Weinberger. Thank you all!

Our total membership is up slightly after a few more renewals have come in over the summer break. We're at 108 members. We have 57 Full members, 18 Associate members, 30 Affiliate members, 2 Life members, and 1 Retired member.

| **Total Membership** | | |
|---|---|---|
| | Sept 23' | Sept 24' |
| Buffalo-Niagara | 41 | 42 |
| Central Indiana | 122 | 132 |
| Central Ohio | 105 | 110 |
| Cleveland | 97 | 97 |
| Eastern Michigan | 104 | 111 |
| Johnstown | 28 | 30 |
| **Kentucky Bluegrass** | 27 | 32 |
| Pittsburgh | 95 | 97 |
| Rochester | 73 | 85 |
| Southwest Indiana | 31 | 38 |
| **Southwestern Ohio** | 103 | 108 |
| Toronto | 109 | 105 |
| Western Michigan | 89 | 87 |
| Region 2 Total: | 1024 | 1074 |

Thanks,

***VP, Membership***

***– Brian Selander***

## Through the pipes…


● **Registration is open for the 2024 ASPE Convention & Expo**

Thousands of plumbing industry professionals will gather in Columbus, OH this fall for the 2024 ASPE Convention & Expo. Will you be one of them? Don't miss this opportunity to make new contacts, discover new technologies, learn new skills, and earn CEUs...all in a few short days. Go to expo.aspe.org to find out which of the industry's top manufacturers will be exhibiting and register today.

● **Multiple Registrations Options Are Available**

While the Full Registration is the only option that provides access to the entire 2024 ASPE Convention & Expo—including the Technical Education Program, Expo, CEUs, Sunday Night Party, and other networking events—ASPE also offers one-day options and Expo-only. Visit expo.aspe.org to register to join us in Columbus this October. We can't wait to see you there!

● We are fast approaching the 2024 Convention and Expo in Columbus, OH in October. But it's not too early to think about **future Conventions, Expos and Technical Symposiums:**

2025 Tech Symposium: September 24-28, Orlando, FL

2026 Convention and Expo: October 8-14, Oklahoma City, OK

2027 Tech Symposium: September 22-26, Minneapolis, MN

● **The ASPE Philadelphia Chapter's Plumbing Design School is back for 2024**

On Mondays at 6:30 pm EDT, starting on September 16, 2024, the Philadelphia Chapter will hold its annual Plumbing Design School virtually. In Plumbing One, learn about local plumbing codes, plumbing math, pumping and fire protection system fundamentals, and more. Plumbing Two will cover sizing fundamentals, master mixing valves, and medical gases/NFPA 99, plus more. Registration is open at aspephilly.org.

● On Thursday, September 26, from 5:00 to 7:00 pm, the Cincinnati Master Plumbers Association (CMPA) will hold its annual **Industry EXPO,** to be held at the CMPA Training Facility located at 11020 Southland Road, Cincinnati, OH 45240. Representatives from many area vendors and supply houses will be present to display and discuss their product lines in an informal setting, with a cook-out dinner available to all. And, there is no admission fee charged.

MedGas Workshop
American Society of Plumbing Engineers

● **Get In-Person ASSE 6060 Training**

You can get the 32 hours of training you need for ASSE 6060 certification at our next in-person MedGas Workshop on September 26-29, 2024 at the Bradford White facility in Grand Rapids, MI. Register now>>


● **Attention Young Plumbing Designers!**

Earning your CPDT credential couldn't be any more convenient this year, as we once again are offering it via remote proctor, which means you can choose the date and time that best fits your schedule between October 28 and November 8. Visit ASPE Pipeline to learn more about our Certified Plumbing Design Technician credential and the 2024 exam>>


● **ASPE's Book of the Month** program continues with **Illustrated Plumbing Codes Design Handbook** (eBook version.

Through September 30, 2024, you can purchase the digital edition for 35% off the regular member price. Just enter the coupon code **welcomefall** when you check out.

The discount is only valid on the digital version of the publication, and the coupon code can only be used once. If you are purchasing multiple items, the discount will be applied only to the assigned publication.

Don't forget to enter the coupon code when you check out to receive the discount.

**● Some Belated Congratulations to Our Newest Chapter!**

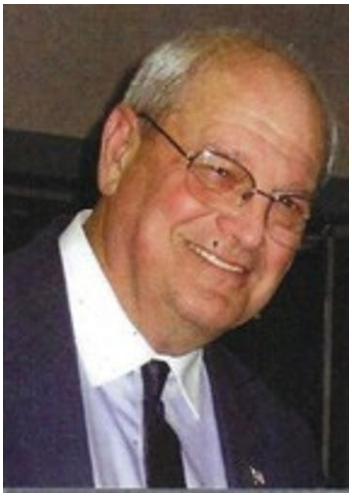
The Society is pleased to announce the formation of ASPE's newest Chapter—the Southern Indiana Chapter. Formerly the Evansville satellite, the Chapter met the requirements of ASPE's Bylaws and the *Policy & Operations Manual* and petitioned for charter, which was approved by the Board of Directors at their July Board meeting. The new Southern Indiana Chapter will hold its charter ceremony in September.

● It is with much regret that we belatedly note the passing of **Gary L. Krebs, Sr.** 83 of Lancaster, OH, who passed away Sunday, May 26, 2024 at his home, surrounded by his loving family. He was a graduate of Lancaster High School Class of 1959 and served his country for four year in the US Marine Corps.

He was a lifetime member of the Plumbers and Pipefitters Local Union #189 and also retired as the Chief Construction Compliance Officer for the State of Ohio. Gary was an active member of the Lancaster Tarhe Lions Club. He enjoyed golfing, playing euchre and spending time with his family.

Gary is survived by his son, Gary L. (Paula Thress) Krebs, Jr. of Lancaster; daughter, Kelly (Mike) Dickson of Baltimore; grandchildren, Andy Dickson of Washington, D.C., Taylor Dickson of Iowa, Adrian Krebs of Florida, and Cameron Krebs of Athens; sisters, Emma Jean Lansing and Donna Gregory both of Lancaster, several nieces and nephews, and his favorite euchre opponent, Michelle Dickson and his beloved cat, Dottie.

He was preceded in death by his loving wife of 53 years, Rose (Balser) Krebs, parents, Henry and Leola (Withem) Krebs and sister, Mary Ann Siler.



**The Board of Directors, Chapter Officers, Board of Governors and membership offer their deepest sympathies and condolences to the Krebs family and friends.**

## Around the water cooler…

With the passage of Labor Day, we have reached the unofficial end of summer. But let not your heart be troubled. For we have more Water Cooler conversations to consider. We start with a Cooler who has a question concerning the application and function of **regulators.** Read on:

● *This may seem silly, but what do you expect a regulator to accomplish when you are asked to provide a "fluid regulator" in a piping system? How do you define a regulator?*

The reason this question was posed was to see how others might respond when asked to provide a regulator valve involved with fluid flow. Fluid is both liquid and gaseous in form. Generally, we would expect a regulator to maintain a lower pressure on the downstream side against a variable upstream pressure. We would expect this regulator to maintain the downstream pressure, regardless of flow or no flow.

However, this is where many of us have never heard of the term "locking" verses "non-locking" regulator. It was a term we learned some

20-years ago, when a project had a boiler explosion associated with 5-psig delivery of natural gas.

In that case, the utility system delivered 20-psig to the building. A meter/regulator assembly on the exterior of the building was intended to step the pressure to the 5-psig building distribution system. And, if the exterior regulator had functioned as designed, there would not have been an issue. But that was not the case, and the 20-psig entered the distribution system.

Internally, there was a pressure regulator on the domestic water heater. It was the locking type in which the downstream pressure was maintained at the desired 11 inches of water column. However, the HVAC engineer was not aware of the two types of regulators: locking and non-locking. So, their specification did not address the specific type of regulator. The manufacturer's representative, in an effort to make their product more competitive provided a locking type of regulator on the pilot portion of the gas train. However, for whatever reason, the main burner regulator was the non-locking type. Non-locking is just another term for flow control. The non-locking regulator only regulates the pressure under flow conditions. When there is no flow, the pressure on the upstream and downstream sides of the regulator are equal.

We guess that some industry professionals anticipated that the boiler controls would compensate for the excess gas flow between no flow and regulated flow and that the building would never see anything greater than the 5-psig per the design. However, that was not the case, and the boiler combustion chamber became pressurized with excess gas until the non-locking regulator drop the pressure back to the design pressure.

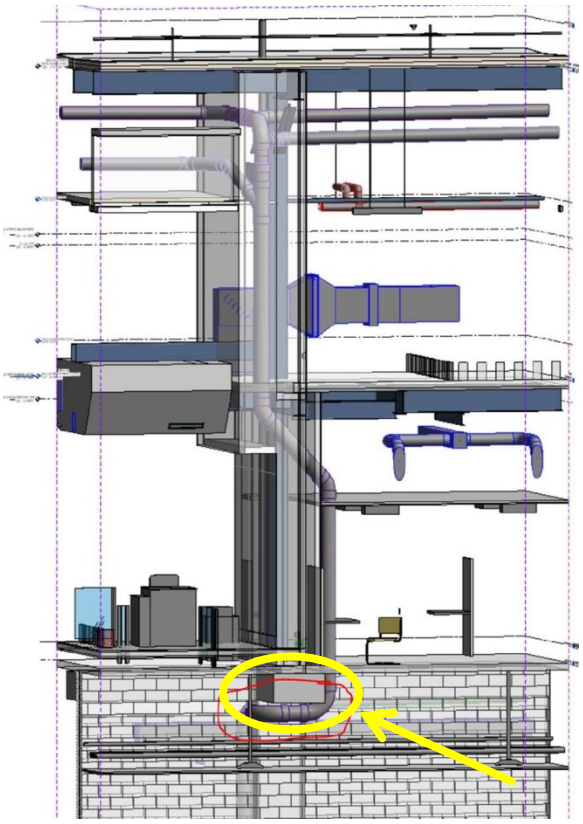
As we should know, one needs the correct fuel/air mixture to ignite the mixture, too little air the burner will not ignite. Additionally, too much gas in relation to the air in the fuel, will not ignite. So, when the non-locking regulator (flow control) dropped the pressure to the appropriate air/fuel mixture, the burner ignited. It also caused the excess gas within the combustion chamber to explode. The explosion blew the access jacketing off of the boiler and wrapped the walls of the combustion chamber and damaged the flue.

So, while most of us know that a regulator is intended to regulate the downstream pressure against a variable upstream pressure, we need to also understand that the regulator needs to be the locking type and not just a flow control.

For those who are just hearing about locking verses non-locking regulators, you might want to update your specification and closely check your submittals.

● Interpreting a plumbing code can sometimes be a difficult, if not extremely complex, exercise. Consider a Cooler with a question on **roof overflow drainage:**

*What is your input on how you interpret the section 1101.12.2.2.2 Combined System of Storm Drainage per the Uniform Plumbing Code (UPC). My mentee was told that once the primary and secondary storm piping are combined (downstream of the last horizontal run below roof), you cannot run it horizontal again (as encircled on the 2nd snippet below) until it goes underground. Can you provide your input on this as the code doesn't literally say that you cannot run it horizontal again not until it goes underground?*



Let's start by taking a look at UPC 1101.12.2.3 as well as some related sections (as always, highlights ours):

**1101.12.2 Secondary Drainage.** Secondary (emergency) roof drainage shall be provided by any of the methods in Section 1101.12.2.1 or Section 1101.12.2.2.

**1101.12.2.2 Secondary Roof Drain.** Secondary roof drains shall be provided. The secondary roof drain shall be located not less than 2 inches above

the roof surface. The maximum heights of the roof drains shall be a height to prevent the depth of ponding water from exceeding that for which the roof was designed as determined by Section 1101.12.1. The secondary roof drains shall connect to a piping system in accordance with Section 1101.121.2.2.1 or Section 1101.12.2.2.2.

**1101.12.2.2.1 Separate Piping Systems.** The secondary roof drainage system shall be a separate system of piping, independent of the primary roof drainage system. The discharge shall be above grade, in a location observational by the building occupants or maintenance personnel. Secondary roof drain systems shall be sized in accordance with Section 1101.12.1 based upon the rainfall for which the primary system is sized,

**1101.12.2.2 Combined System.** The secondary roof drain system shall connect to the vertical piping of the primary storm drainage conductor downstream of the last horizontal offset located below the roof. The primary storm drainage system shall connect to be building storm water sewer that connects to an underground public storm sewer. The combines primary and secondary roof drain systems shall be sized in accordance with Section 1103 based upon double the rainfall fate for the local area.

Understanding the differences between the codes is crucial. As we comprehend it, connecting vertically minimizes the potential for a stoppage. This would differ from the IPC, where the discharge from the secondary system needs to be visible to alert staff to a possible problem with the primary system.

If one were to accept the code text "shall connect to the vertical piping of the primary storm drainage conductor downstream of the last horizontal offset located below the roof," the key wording would be "below the roof." With this in mind, the picture below is not near the roof but on the floor below. Additionally, there appears to be an additional vertical section of piping before turning horizontally into the building storm drain.

In our judgment, the code language is not as clear as it should be. This is where it leaves wiggle room for interpretation. However, part of UPC's reasoning for allowing the primary and secondary drains to interconnect is to minimize the overuse of piping material. As the code states, "below the roof" would keep the interconnection closer to the roof, minimizing the amount of piping. As expected, this allows the vertical interconnection to occur closer to the roof.

If someone were to argue that the vertical interconnection should occur between the encircled offset and the change to horizontal change to the building storm drain, an excessive amount of piping material would be used to extend the interconnection to that point along with the need for more chase space to enclose the piping.

While the AHJ could argue that the last vertical section of the conductor should be the point of interconnection, the code does not specifically mention this. And without specific code language, enforcing that view becomes more difficult, highlighting the need for clear and enforceable guidelines. As the design belongs to the Engineer-Of-Record (EOR), one should be prepared to defend the design with the AHJ.

As a side note, the language found in Section 1101.12.2 does allow for the use of either method. But do not forget that many jurisdictions may take a more restrictive approach and allow only one of the two methods presented. It strikes us that the EOR should verify this upfront with the AHJ to avoid any potential issues later.

Both the AHJ and EOR have the same goal: protecting public health, safety, and welfare. The EOR is the one who holds liability for the design—the EOR's seal and signature on the documents indicates that the design meets the intent of the code.

## Parting thought…

This summer, I went to someplace expensive…the gas station.

***-Maxine from "Crabby Road"***

# LEGIONELLA:

## Don't Manage the Symptoms. Control the Cause!

## We remove Legionella & pathogens *before* they enter your plumbing and mechanical system.

## HIGH-CAPACITY ULTRAFILTRATION


*Point-of-Entry • Point-of-Use • Hot Water Recirc Treatment*

WATER CONTROL
Where NATURE & SCIENCE meet.

- 99.999% removal of Legionella and pathogens (3rd party-verified)
- A firewall for the entire building
- Drastic reductions in nutrients and biofilms
- 300 GPM+, minimal pressure loss
- Self-cleaning, long-lasting, low maintenance
- Automatic membrane integrity verification (Meets strict EPA guidelines)

Rep Source LLC

Rep Source LLC
Reynoldsburg, OH
740-927-6880
RepSourceLLC.com

PROTECT YOUR FACILITY AND LEARN MORE AT WATERCONTROLINC.COM

A TOTAL, STATE-OF-THE-ART HOT WATER SYSTEM, ENGINEERED TO DELIVER A SUPERIOR LEVEL OF USER SAFETY, INFECTION CONTROL AND COMPLIANCE, FROM MECHANICAL ROOM TO THE POINT OF USE.

ARMADA™

THE BRAIN®

ABH

## THE BRAIN® DIGITAL RECIRCULATION VALVE

*Digital hot water temperature control that delivers unparalleled accuracy, stability and safety to mitigate the risk of Legionella and scalding.*

RADA DIGITAL FAUCET

## GAS-FIRED WATER HEATING

*Leading-edge gas-fired institutional hot water generation, built for reliability, efficiency and durability.*

## RADA DIGITAL FAUCETS

*Hands-free, programmable, point-of-use fixtures have The Brain® digital technology built in, and offers thermal disinfection, duty flush, bacterial-resistant design and ASSE 1070 compliance.*

ABH

## SAGE® SMART HOT WATER SYSTEM MONITORING AND REPORTING

*Advanced software provides regular updates, documentation, custom-filtered reports, and real-time alerts for compliance with industry guidelines and Standards of Care.*

PROGRAMMABLE OPERATION AND FLOW CONTROL

SAGE® MONITORING

MERLO ENERGY

Proud local SWO/KY Armstrong Representative
www.merloenergy.com
(800) 362 - 4994

Armstrong

CircuitSolver®
A ThermOmegaTech® brand

# PROUDLY PROVIDING THERMOSTATIC BALANCING SOLUTIONS FOR OVER 10 YEARS


## Hot Water Recirculation

In 2012, CircuitSolver® was developed to conquer the challenges inherent to conventional manual balancing valves. As the market's first **thermostatic balancing valves** used for domestic hot water recirculation, CircuitSolver® balances a system based solely on temperature as opposed to pressure or flow to guarantee hot water at **every fixture.** Dynamically balancing a system, CircuitSolver® ultimately **ended complaints** about the lack of hot water, and eliminated balancing processes and callbacks.

## Cold Water Recirculation

Last year, we implemented our thermal actuator technology into the CircuitSolver® Union Cold Water balancing valves. These valves are installed in domestic Cold Water recirculation systems to mitigate the risk of Legionella and other bacterial growth. Cold water recirculation is becoming more prominent in hospitals to reduce water stagnation and ensure residual chlorine is distributed but can be beneficial to any commercial building that could experience periods of low flow or non-use.


PINNACLESALES

www.pinnaclereps.com

(800) 253-7010