

CircuitSolver Solves Bacteriological Problems

Q&A with ThermOmegaTech about new automatic DHWS balancing valve

Being “first” often sets the bar high. As one of the first manufacturers of a thermostatic balancing valve for domestic hot water systems, ThermOmegaTech’s commitment has not just been to set the bar but also to raise the bar. Since the introduction of its CircuitSolver in 2012, the company has frequently added components, including ball valves, strainers, check valves and ProPress ends to meet customer demand.

In April 2018, the innovation continued with the launch of the CircuitSolver Union Thermal Disinfection thermostatic balancing valve for domestic hot water systems. The union is integral with the valve body, which also has an optional integral check valve. A key feature of the CircuitSolver Union Thermal Disinfection is the new capability to automatically balance a domestic hot water system during a high-temperature flush procedure.

In the following Q&A with ThermOmegaTech, Plumbing Engineer explores the features of the new

product, including its ability to mitigate Legionella and other bacteriological problems.

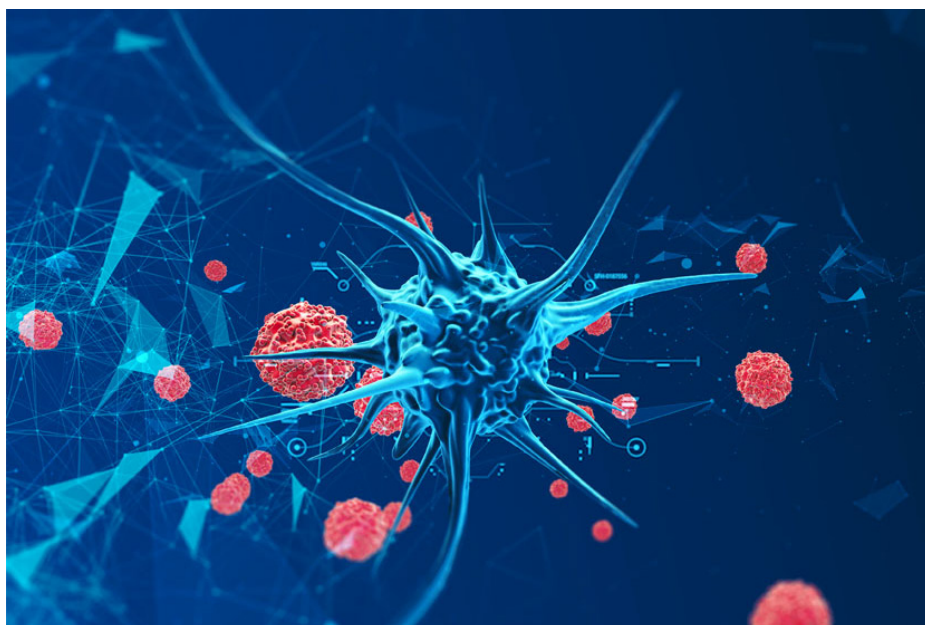
PE: What makes CircuitSolver Union Thermal Disinfection different from other valves on the market?

TOT: It has an all-stainless-steel construction for maximum corrosion resistance and durability. It is NSF61 and NSF372 certified — even though it seems that all components in a domestic hot water system (DHWS) should be certified and most plumbing codes and specifications say they must be, not all balancing valves are certified.

The valve is completely automatic, thermostatically balancing both the standard recirculation temperature as well as the thermal flush cycle. No power, signal or powered actuators are required, as in some other such balancing valves.

ThermOmegaTech’s design is highly resistant to mineral buildup and the adverse effects of debris in the piping system. It is the only tamper-proof thermostatic balancing valve on the market. Other competitive devices are adjustable for several reasons: those manufacturers don’t manufacture their own thermal actuators as ThermOmegaTech does.

They can not be as flexible and offer all the setpoint variations we can, so their valve is adjustable, making it prone to tampering and/or being set to a temperature other than what the

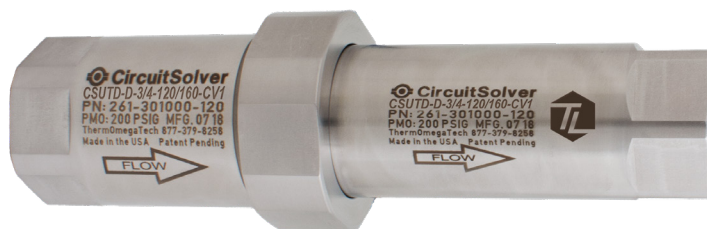


designer specified.

With CircuitSolver Union Thermal Disinfection, the plumbing system designer specifies the desired temperature and the valves are factory-set to that exact setting.

PE: What are the benefits or special features of the CircuitSolver Union Thermal Disinfection that are specific to those designing and specifying thermostatic balancing valves for DHWS?

TOT: CircuitSolver Union Thermal Disinfection brings the benefits of the standard CircuitSolver into thermal flush applications. There is no manual balancing required. It can simply be installed; once the system is turned on, within minutes the building's DHWS is balanced.



Unlike manual balancing valves or fixed-flow devices, CircuitSolver Union Thermal Disinfection will automatically go to full open when high-temperature water (typically over 160°F) is being supply, providing maximum flow for thermal disinfection.

PE: Is there anything innovative about the manufacturing of this thermostatic balancing valve that engineers, designers and specifiers may find interesting?

TOT: CircuitSolver is 100-percent manufactured in the in Warminster, Penn. For maximum durability and corrosion resistance, it is machined from stainless-steel bar stock versus other balancing valves that are typically made from brass or bronze castings.

PE: Is there anything untraditional about this thermostatic balancing valve that may trip up or confuse engineers, designers and specifiers?

TOT: While it should not trip anybody up, some may have concerns about CircuitSolver Union Thermal Disinfection being new and different. It is specified based on desired water temperature rather than flow, which is common for fixed-flow balancing valves.

The purpose of recirculation is to maintain proper water temperature. CircuitSolver Union Thermal

Disinfection is a temperature solution to a temperature problem; it knows the water temperature and automatically adjusts flow as needed to maintain the specified temperature.

This is why CircuitSolver Union Thermal Disinfection can automatically balance the system with no manual intervention needed. Flow control devices try to address temperature by setting a fixed flow indirectly.

PE: The CircuitSolver Union Thermal Disinfection was designed with bacteriological concerns in mind. Why were these concerns important to ThermOmegaTech?

TOT: Being so involved in domestic hot water systems, ThermOmegaTech sees the growing concerns about potential bacteriological problems in these systems.

Legionella control is a very timely topic for most commercial DHWS, especially in facilities for the elderly, sick or anyone with compromised immunity.

With the growing popularity of the original CircuitSolver in these systems, it was only a matter of time before the demand for eliminating the drudgery of manual balancing came together with the need to facilitate a high-temperature thermal disinfection cycle in a convenient, easy-to-install and use device like CircuitSolver Union Thermal Disinfection.

We paid attention to the needs of our stakeholders — hospital facility managers, plumbing design engineers and contractors. We followed the trends in the industry and provided the solution they wanted.

PE: Are there any certification standards for CircuitSolver Union Thermal Disinfection that are especially timely or notable for engineers, designers and specifiers?

TOT: The CircuitSolver Union Thermal Disinfection valves and assemblies are all certified to meet NSF61 and NSF372 requirements for low lead and to assure there is nothing in the product that can contaminate the DHWS.

Learn more about CircuitSolver Union Thermal Disinfection at CircuitSolver.com.