Shower Safety Solutions

Prevention of scalding and the enhancement of facility excellence.

Proven superior valve technology

Protects against injury and liability exposure

ASSE 1016 Type T/P total protection

Complete range of valve solutions

Serving hotel, healthcare, education, commercial and residential markets since 1891.

POWERS™

a division of Watts Water Technologies, Inc.

Know the facts about hotel shower safety.

Avoid the growing risk of guest scalding, thermal shock and facility liability.

Scalding-related injuries are rising.

This trend is expected to continue with the increasing number of retiring baby boomers who are now expanding the travel and lodging market.

Your hotel is likely at risk.

In a recent survey of over 300 guest rooms in leading hotels, 53.1% produced hot water at 125°F and above — water capable of causing first-degree burns. All of these showers used pressure balancing type valves.

Thermal shock is a related trend.

According to the Plumbing Manufacturers Institute (PMI), thermal shock is the physical reaction of a person to a rapid and uncomfortable change in shower water temperature. The danger of thermal shock is that your guests' sudden movements away from the excessively hot water can cause falls and serious injuries.

Many hotel shower valves provide inadequate protection.

This is because many hotel shower and lavatory hot water systems rely upon common pressure balancing type valves, which are incapable of sensing water temperature.

Pressure balancing valves must be maintained.

The minimal protection these valves provide against scalding and thermal shock is dependent upon your expenditure for limit stop inspections and possibly ongoing seasonal adjustments.

Valve manufacturers have warned of the risk.

You may not have known about the risks of scalding and thermal shock associated with pressure balancing type valves. However, manufacturers' warnings are typically contained within the plumbing instructions packaged with each valve – instructions often discarded with the box.

In a survey of 350 hotel showers, every shower tested posed the risk of first-degree burns to guests.

140°F and above	20	12.2%
125°F and above	164	53.1%
115°F and above	309	88.3%

Manufacturers' Warnings

The following statements from pressure balancing valve manufacturers are typically found inside their valve packaging.

"**WARNING**: This shower system may not protect the user from scalding when there is a failure of other temperature controlling devices elsewhere in the plumbing system."

"CAUTION: Due to season temperature change of cold water supply, the temperature limit must be readjusted accordingly to maintain the desired maximum discharge temperature."

"CAUTION: This valve does not automatically adjust for inlet temperature changes, therefore someone must make the necessary Rotational Limit Stop adjustments at the time of the installation and further adjustments may be necessary due to seasonal water temperature change. YOU MUST inform the owner!"

Customers' Warnings

The following are just a few actual internet postings by hotel guests evaluating the quality and safety of their stays at several leading hotels.

"The water went from extremely cold to scalding hot… I had to jump out of the shower before getting burned." — **TripAdvisor.com**

"The water was scalding hot in the shower. It burned my hand. The front desk gave ointment when my husband asked for first aid. Nothing else was said or done." — **TravelPost.com**

"The shower water was nothing but scalding hot…" — **TravelPost.com**

"I have to give this the poorest rating because the water is SCALDING HOT. I couldn't even let the kid's shower alone. I called the front desk and got the usual 'We know, but that's what it takes to have enough hot water.' That's no excuse." — **Hotels.About.com**

The Problem

The design principle of pressure balancing valves has not changed for over seventy years. These valves are not designed to sense temperature changes and so do not provide true temperature regulation.

Pressure balancing valves can provide some level of protection against scalding — when handle limit stops are adjusted seasonally. However, the cost of seasonal limit stop adjustments is a maintenance burden you may prefer to avoid. **Take for example, a 500-room facility. With twice-annual seasonal adjustments, and allowing just 10 minutes per valve and an hourly rate of $25 per hour, the annual cost for setting the limit stops would be $4,166.**

In addition to a lack of pressure balancing valve limit stop maintenance, other reasons for exposure to scalding may include the following: increased boiler temperature due to guest complaints of no hot water; a system's master tempering valve may be oversized or malfunctioning; or a tempered water circulating loop may not be properly designed.

An Example of Maintenance Costs for Pressure Balancing Valves

- 500-room facility with twice-annual seasonal adjustments
- Allowing just 10 minutes per valve at an hourly rate of $25 per hour
- Annual cost for setting the limit stops would be… **$4,166.00**

- ***Pressure balancing valves react to water pressure changes only. They are not designed to sense temperature changes and so do not provide true temperature regulation.***
- ***Pressure balancing valves can provide some level of protection against scalding — when limit stops are adjusted seasonally.***
- ***Pressure balancing valves do not provide complete protection when coupled with upstream thermostatic valves (master mixers) in the event of a valve failure.***

The Solution

Also known as combination valves, Type T/P valves meet ASSE 1016's most stringent performance requirements for both temperature and pressure changes. However, widespread specification of Type T/P valves has been impeded by their relatively higher cost — until now.

Now, Powers HydroGuard® Type T/P valves provide the highest protection for your guests, at a lower cost.

- ***Powers HydroGuard T/P valves feature proven, superior valve technology that meets ASSE 1016 Type T/P total protection.***
- ***Deliver water at safe temperatures to the bather for the highest prevention of guest scalding and thermal shock.***
- ***Available in a variety of configurations, they cost hundreds of dollars less than traditional T/P Type valves and are very close to the cost of basic Type P valves.***
- ***Require no seasonal adjustments of the limit stop, saving potentially thousands of dollars by eliminating maintenance costs over the life of a system.***

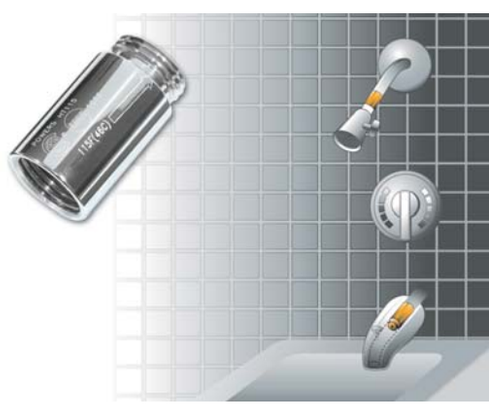
ASSE 1016 Hierarchy of Protection

Valve Type	Description	Protection Against Hot Water Increases	Protection Against Supply Pressure Fluctuations Up to 50%
Type T/P	Both temperature and pressure regulation	**YES**	**YES**
Type T	Thermostatic for temperature and some pressure regulation	YES	NO
Type P	Pressure balancing for pressure regulation	NO	YES

Choose the tempering valve solution that's right for your

Retrofit/Upgrade

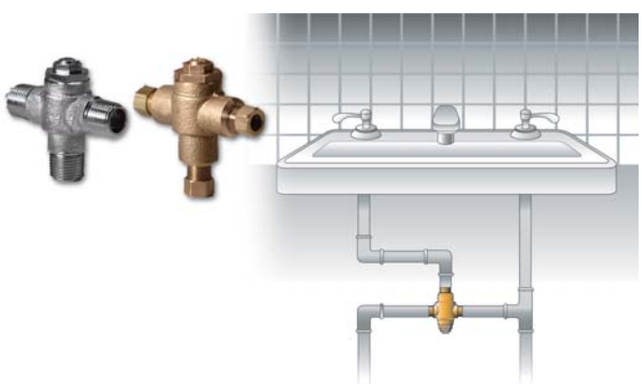
ScaldStop™ Valve



Quickly retrofit your shower, tub or lavatory applications with our ScaldStop high temperature shut-off valve. Water flow is reduced to a trickle if the temperature reaches 115°F. The valve simply threads onto an existing shower arm and is housed inside the tub spout itself. Both install in minutes without the need for special tools.

Retrofit/New Installation

e480 T/P Valve



Upgrades to ASSE 1016 T/P and ASSE 1070 protection can also be done by changing out your current pressure balance type valves to Powers HydroGuard® T/P tempering-pressure valves.

New Installation

e700 T/P Valve

Upgrade the safety of your shower application by installing Powers combination T/P temperature-pressure valves.

Retrofit/New Installation	Before	After
Temperature Protection	NO	✔
Pressure Protection	✔	✔
Reduced Liability	NO	✔

guest applications.

Mechanical Room Retrofits and Upgrades

e430 Master Tempering Valve

Safe protection against scalding begins in the mechanical room and can be achieved system-wide, by retrofitting at the boiler with a Powers HydroGuard® Master Tempering Valve. The valve meets the ASSE 1017 standard for centralized tempering of high capacity water delivery applications.

1430 Single-Valve Hi-Lo

Better protection is provided system-wide by upgrading at the boiler with a Powers HydroGuard® Single-Valve Hi-Lo solution. The valve also meets the ASSE 1017 standard for centralized tempering for high capacity systems, with the added ability to regulate temperature at very low flow rates.

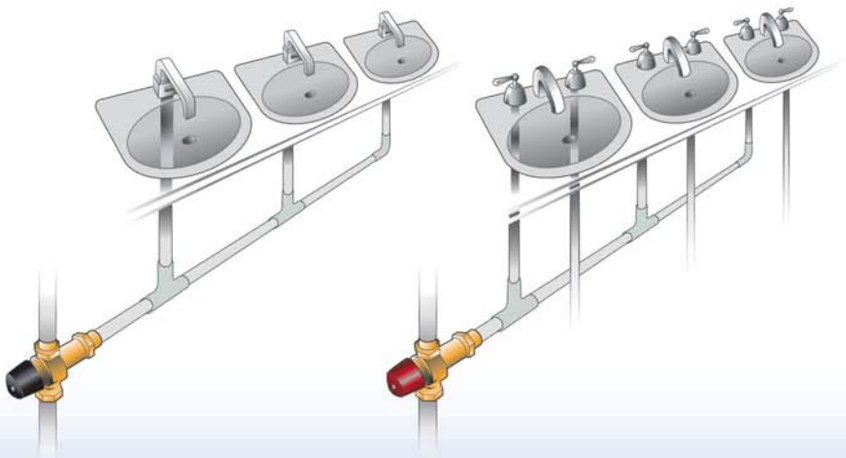
POWERSTATION™
Water Tempering Recirculation Systems

The best protection for your system can be achieved by installing a PowerStation at your boiler. This solution incorporates a Single-Valve Hi-Lo and provides high capacity water tempering, low flow temperature control, and the recirculation of your system all in one fully assembled and factory tested package.

Public Restrooms

Lavatory Series Tempering Valves

Public restrooms also need anti-scalding measures for guest protection. Here, Powers can provide valve options for either ASSE 1016, ASSE 1069 or ASSE 1070 water tempering.



Over a century ago

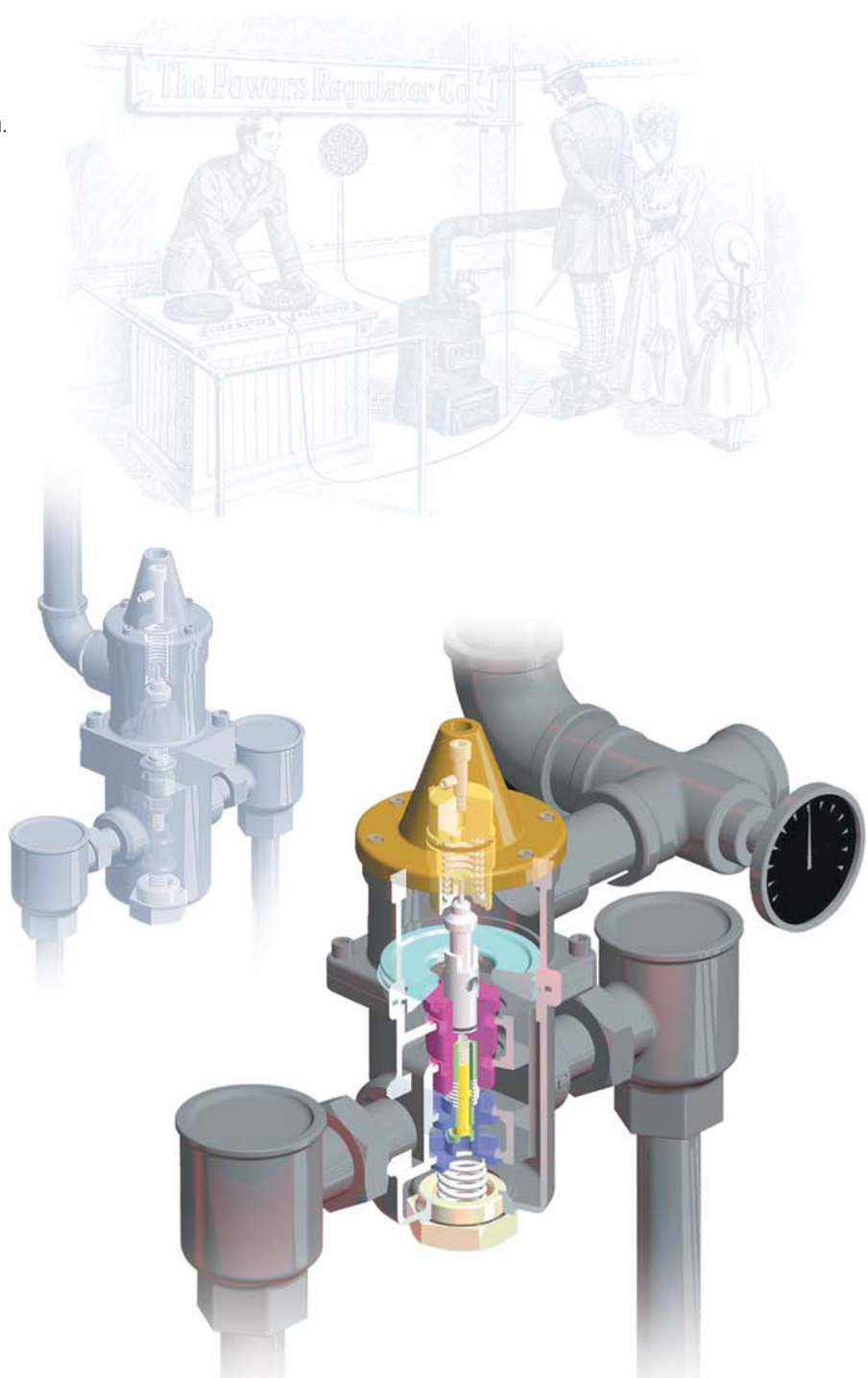
smarter, better and safer water tempering ideas began to flow.

During Chicago's World Columbian Exposition in 1893, the first Powers gradual acting, vapor disk thermostat was unveiled, along with such life-changing inventions as long-distance phone lines, the first adding machine, and the first gas-powered motorcar in America.

Founded in 1891 by William Penn Powers, the Powers Regulator Company began its history of innovation and leadership in water temperature control.

Twenty years earlier in 1874, Joseph Watts, an inventor and entrepreneur, set up shop in Lawrence, Massachusetts. A skillful machinist and brass finisher, Mr. Watts amassed 18 patents and pioneered the first pressure reducing valves, used to regulate water, steam and air in textile mills. In the decades that followed, Watts became the most recognized and respected name in plumbing; and Powers went on to establish the major milestones in water tempering innovation. Always mindful of each other's contribution to the industry, the two companies expanded the possibilities of water management throughout the 20th century.

Today, after a combined 247 years of innovation, Watts and Powers are united as one company.



WATTS®
WATER TECHNOLOGIES

The one and only leader in water tempering technology, we have begun our second century together with a renewal of our long-time commitment to you: Smarter, better and safer water tempering ideas are flowing your way.

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