DigiTemp®
Digital Water Tempering Systems

PVI®
A WATTS Brand

Precise Temperatures for Safety and Energy Efficiency

The DigiTemp family of mixing valves offers digital domestic hot water mixing solutions that intelligently control and monitor tempered water distribution within the building recirculation loop. It provides precisely controlled water temperature regulation within ±2°F in compliance with ASSE 1017 (even during low and zero demand periods).

When paired with a PVI water heater, DigiTemp ensures a safe, precise and consistent hot water distribution system in accordance with the building codes. Through more efficient water temperature management, DigiTemp helps conserve energy thus reducing overall operational expense.

Why Choose a DigiTemp?

✓ **Improved health and safety** of building occupants through the effective mitigation of scalding risks and thermal shock injuries as well as Legionella growth in the domestic hot water system.

✓ **Greater energy efficiency** as the digital water tempering systems support energy conservation through accurate and more efficient water temperature management to help reduce energy costs.

✓ **Save time on operation** by connecting the DigiTemp or DigiTemp Jr to the building automation system to provide read access to a range of temperature and pressure measurements and allow adjustment of the outlet temperature setting.

ASSE 1017 and NSF 372 compliance

±2°F temperature control

Thermal sanitization mode for pathogen mitigation

Automatic fail-cold during power outage

Lowers temperature when the building is unoccupied

Overnight temperature creep prevention
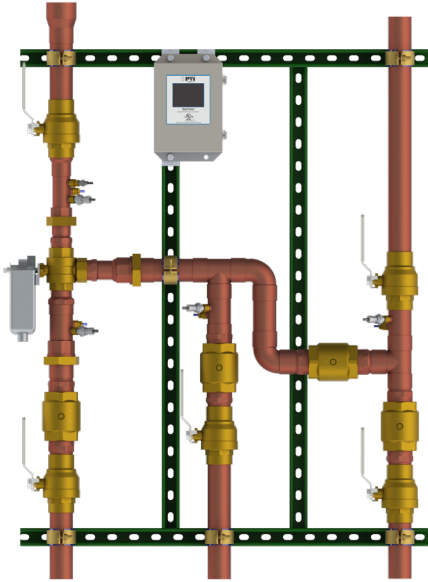
Programmable high-temperature alarm

Connect to BAS for remote read/write

3.5" full-color, configurable touchscreen display

Find the Right DigiTemp for Your Project

5 YEAR WARRANTY

DigiTemp

Ideal for Hospitals, Full/Select Service Hotels, Universities/Colleges, Prisons, Large Offices, and Multifamily.
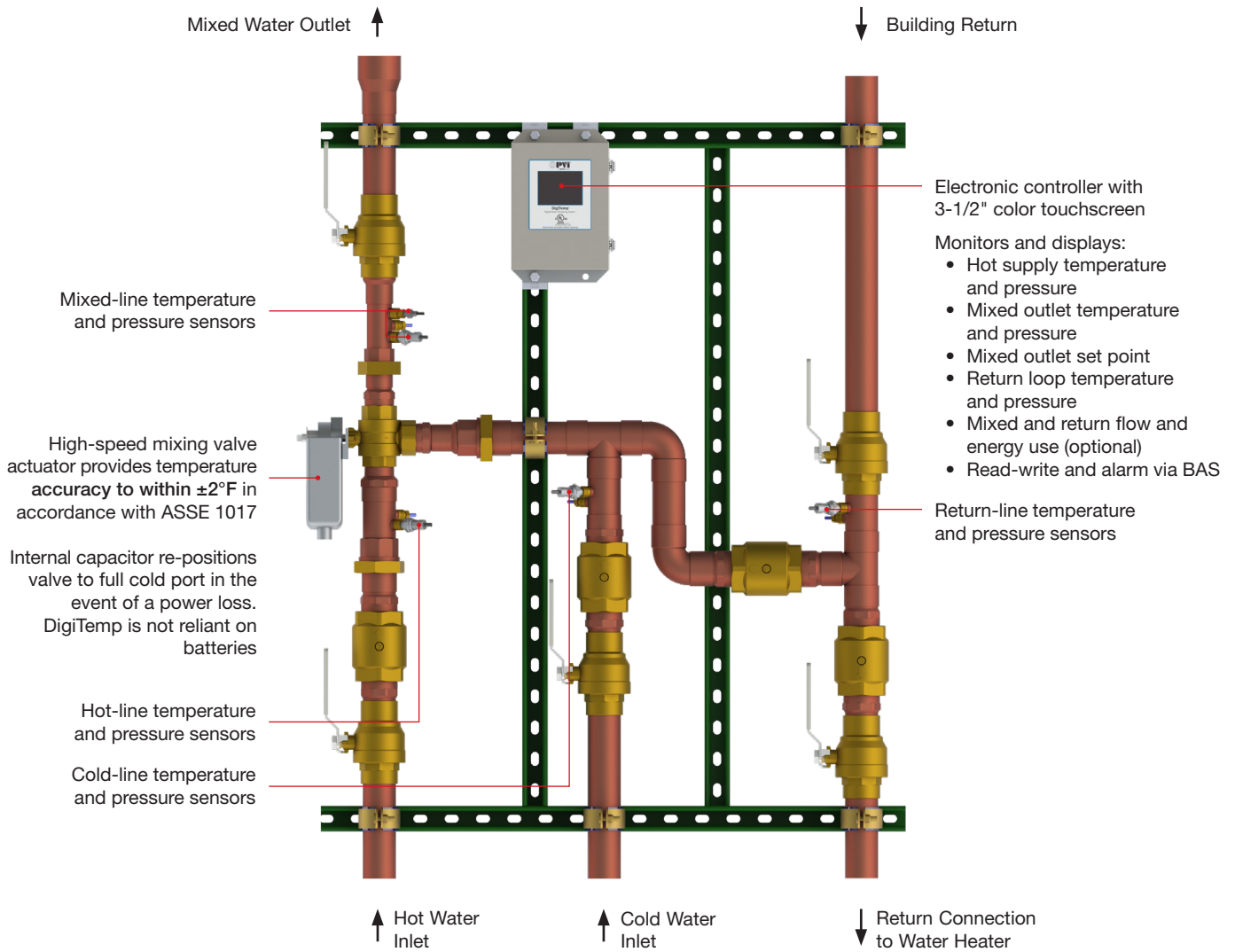
DigiTemp Jr

Ideal for Nursing Homes, Assisted Living, Ambulatory Care, Select Service/Budget Hotels, K-12 Schools, Jails, Offices.

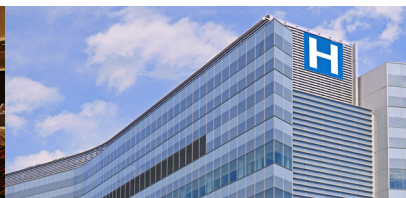| Features	DigiTemp	DigiTemp Jr
Fully Assembled w/Recirculation	✓	X
Capacity (@10psid)	85 gpm (1-1/2") and 135 gpm (2")	23 gpm (3/4"), 55 gpm (1"), 71 gpm (1-1/2") and 125 gpm (2")
Temp Control (±2°F)	✓	✓
Auto-Balancing	✓	✓
Compliance	ASSE, IAPMO, cUPC, BTL, NSF, UL	ASSE, IAPMO, cUPC, BTL, NSF, UL, CE
Native BAS (BACnet and Modbus)	✓	✓
Recirculation Pump	Optional	X
Flow & Energy Monitoring	Optional	X
Sensors (Temperature and Pressure)	Mixed Outlet, Inlet, and Return	Mixed Outlet Temperature only
Temp Limit/Alert	✓	✓
Sanitization Mode	✓	✓
4-Color Touchscreen Controller w/ Passcode Protection	✓	✓

DigiTemp

A skid-mounted DigiTemp features large capacity valves, sensors and a control panel to intelligently monitor, control and deliver mixed water throughout a hot water recirculation loop.

Temperature and pressure sensors are included at key points within the panel to enable an immediate response to changes in fixture demand and supply water conditions. It can be integrated in a building automation system (BAS) to allow facility managers to remotely monitor and control water temperatures.

Mixed Water Outlet

Building Return

Electronic controller with 3-1/2" color touchscreen

Monitors and displays:
- Hot supply temperature and pressure
- Mixed outlet temperature and pressure
- Mixed outlet set point
- Return loop temperature and pressure
- Mixed and return flow and energy use (optional)
- Read-write and alarm via BAS

Mixed-line temperature and pressure sensors

High-speed mixing valve actuator provides temperature **accuracy to within ±2°F** in accordance with ASSE 1017

Internal capacitor re-positions valve to full cold port in the event of a power loss. DigiTemp is not reliant on batteries

Hot-line temperature and pressure sensors

Cold-line temperature and pressure sensors

Return-line temperature and pressure sensors

Hot Water Inlet

Cold Water Inlet

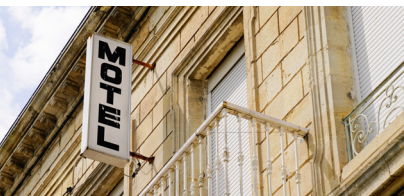Return Connection to Water Heater

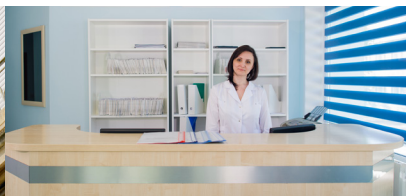Conference Hotels

Large Hospitals

Universities

Also Ideal For:

Prisons
Large Offices
Multifamily

DigiTemp Jr

DigiTemp Jr is designed for light commercial applications that control water temperature to ±2°F in accordance with ASSE 1017. Field configurability, simplified installation, and BAS connectivity make DigiTemp Jr the affordable digital mixing valve upgrade for a wide range of applications.

Fast acting temperature sensor (Mixed Outlet)

High speed actuator with manual override

Three-way lead free ball valve

ASSE 1017, cUPC, CE, UL, BACnet Testing Laboratory (BTL) listed, and NSF approved

DigiTemp Jr control module
- Mobile and web app enabled
- BAS enabled
- NVM (non-volatile memory)
- Touchscreen interface

Valve Only

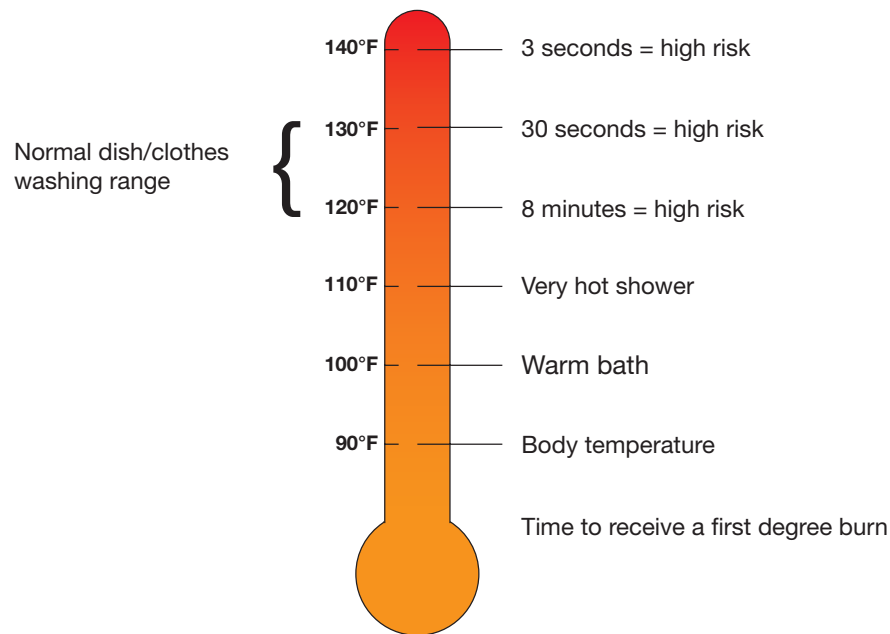Controller Only

Motels

Clinics

Small Businesses

Also Ideal For:

Nursing Homes
Schools
Jails

Prevent Scalding and Thermal Shock Injuries

Uncontrolled and untempered water distribution systems can create high-temperature scalding hazards as well as serious falls or injuries from the thermal shock of rapid and uncomfortable changes in shower water temperature.

DigiTemp allows you to easily select and set a safe water temperature to keep building occupants safe from these types of injuries while providing precisely controlled water temperature regulation within ±2°F in compliance with ASSE 1017.

Scalding Risk at Various Temperatures

140°F	3 seconds = high risk
130°F	30 seconds = high risk
120°F	8 minutes = high risk
110°F	Very hot shower
100°F	Warm bath
90°F	Body temperature

Normal dish/clothes washing range

Time to receive a first degree burn

The Prevalence of Scalding Injuries

- Approximately 5,000 serious injuries from scalding tap water occur every year
- 1,400 of those injuries result in overnight hospital stays and 34 result in deaths
- Tap water burns account for up to 17% of all childhood burns requiring hospitalization
- 85% of these deaths and injuries involve children under 15 and seniors over 65.[1]
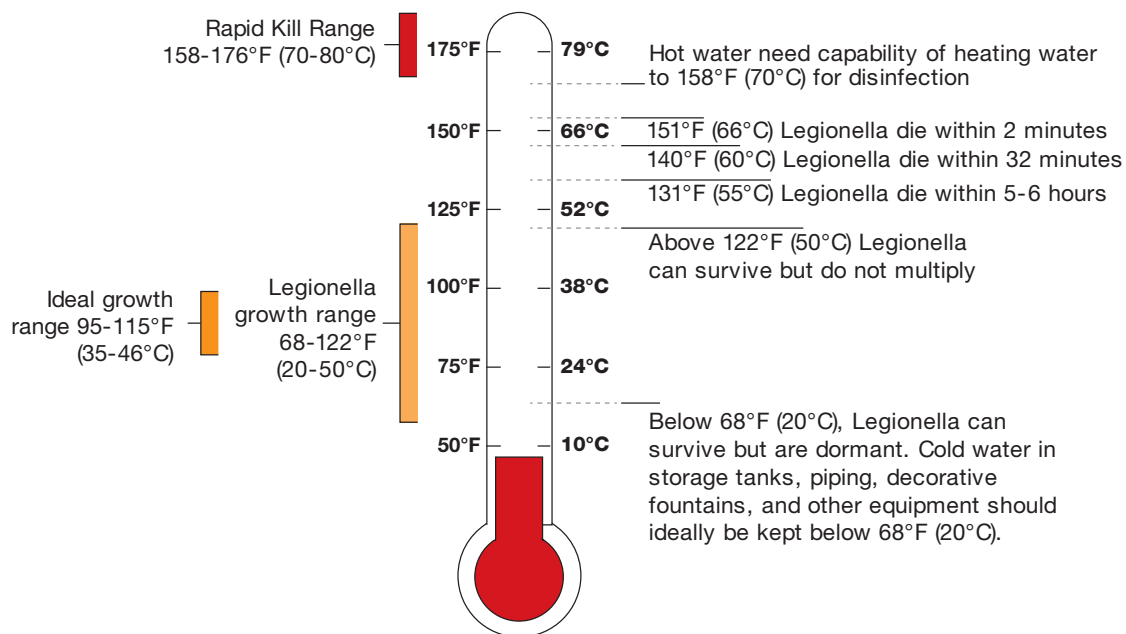
3 Seconds to Scald

Hot water will burn skin at temperatures well below boiling point. In fact, at 140°F, it only takes 3 seconds of exposure to cause a burn that could well require surgery.

Effective Pathogen Mitigation

According to the Centers for Disease Control (CDC), proper maintenance of water temperature in storage and delivery systems is key to preventing illness from waterborne bacteria such as Legionella. This is critical because the number of Legionella cases has increased nearly nine-fold in the last two decades with 10% of cases being fatal.[2]

Insufficiently heated water is a common cause of such outbreaks. DigiTemp provides effective pathogen mitigation through precisely controlled water temperatures that kill harmful bacteria, while keeping building occupants safe from scalding.

Legionella Growth Chart

Rapid Kill Range
158-176°F (70-80°C)

175°F — **79°C** — Hot water need capability of heating water to 158°F (70°C) for disinfection

150°F — **66°C** — 151°F (66°C) Legionella die within 2 minutes
140°F (60°C) Legionella die within 32 minutes

131°F (55°C) Legionella die within 5-6 hours

125°F — **52°C**

Above 122°F (50°C) Legionella can survive but do not multiply

Ideal growth range 95-115°F (35-46°C)

Legionella growth range 68-122°F (20-50°C)

100°F — **38°C**

75°F — **24°C**

50°F — **10°C** — Below 68°F (20°C), Legionella can survive but are dormant. Cold water in storage tanks, piping, decorative fountains, and other equipment should ideally be kept below 68°F (20°C).

Thermal Sanitization

An effective water management program also integrates thermal disinfection which has proven to be highly effective in mitigating the growth of bacteria, protozoa, and viruses found in the inlet water, wastewater, and other media. DigiTemp features a thermal sanitization mode to easily and effectively perform this procedure on a regular basis.

The True Costs of Legionella Outbreaks

Legionella outbreaks cost U.S. facility owners more than $1 billion annually, on average, due to lawsuits, treatment, and lost work hours.[3, 4]

[1]https://cultureofsafety.thesilverlining.com/childcare/tap-water-burns-and-scalds/
[2]National Center for Biotechnology Information (NCBI)
[3]https://www.infectioncontroltoday.com/view/preventing-waterborne-pathogen-transmission
[4]CDC VitalSigns, June 2017

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