DigiTemp – Digital Water Tempering System

DigiTemp is a domestic hot water main mixing station for commercial and institutional facilities that intelligently controls and monitors the water recirculation loop. It provides precisely controlled water temperature regulation within ±2°F to ASSE 1017, even during low and zero demand periods.

When paired with a PVI water heater, DigiTemp creates a safe system that helps maintain the appropriate water temperature you select for your facility. It delivers consistent hot water on demand wherever and whenever it is needed, in accordance with building codes. It also supports energy conservation through more efficient water temperature management – and in turn reduces energy costs for greater savings.
Features and Operation

Features

- Configurable on location; does not require factory pre-programming or special software and laptop
- Controls water temperature to ± 2°F in accordance with ASSE 1017
- Control ± 2°F during periods of low/zero demand
- In case of power or cold water failure, valve flows full cold for safety with manual override feature to set mixed outlet temperature
- Settings can be adjusted/monitored at the controller or remotely through BAS (Building Automation System)
- 3.5" full-color, user-selectable touch screen display
- User programmable high-temperature sanitization mode
- Displays pressure, temperature and flow/BTU data
- Pass code protected for security
- User programmable high temperature alarm
- NSF 372 compliant
- Five-year warranty

System Operation with Smart Controller

DigiTemp maintains the recirculation loop temperature by energizing a field-supplied pump when loop temperature drops below a specified return limit and de-energizes the pump when proper loop temperature is re-established.

Its touchscreen control operates a 3-way valve through a high-speed actuator to precisely maintain the selected outlet temperature. 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.

A Sanitization Mode allows buildings with a thermal eradication protocol in place to control water-borne bacteria to deliver a higher water temperature for a pre-set duration to allow building maintenance staff sufficient time to open all of the fixtures.

DigiTemp can be connected to a building automation system (BAS) to provide read access to a range of temperature and pressure measurements and allow adjustment of the outlet temperature setting within a pre-programmed range. BACnet® IP, BACnet® MSTP and Modbus® protocols are all supported. Alert contact relays are included to aid in remote notifications.
Typical Application:
Single-Temperature Tempering

Illustrations are for concept only. Refer to manuals for complete piping details.
Typical Application:
Dual-Temperature System with Tempering

Illustrations are for concept only. Refer to manuals for complete piping details.
Specifications and Capacity

Specifications*

Max Operating Pressure .................. 200 psi (1379 kPA)
Max Hot Water Temp. ...................... 200°F (93°C)
Min Hot Water Supply Temp. .... 2°F (1°C) above set pt
Hot Water Inlet Temp. Range ......120-180°F (49-82°C)
Cold Water Inlet Range .................. 39-80°F (4-27°C)
Min Flow ..................................... 0.5 gpm (1.89 lpm)
Temp. Adjustment Range .............. 80-180°F (27-82°C)
Listing /Compliance ..................... ASSE 1017, cUPC,
NSF, CSA 24/UL873

*Refer to manual for complete details

Capacity

<table>
<thead>
<tr>
<th>Flow Capacity at 50-50 Mixed Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Model</strong></td>
</tr>
<tr>
<td>-----------</td>
</tr>
<tr>
<td>V85</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>V135</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>V85-2</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>V135-2</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>
Ordering Information

Standard Capacity - Single Valve

<table>
<thead>
<tr>
<th>Valve</th>
<th>Inlets (in)</th>
<th>Outlet (in)</th>
<th>Order Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>V85</td>
<td>2” (50mm)</td>
<td>2 1/2” (63mm)</td>
<td>V85-1</td>
</tr>
<tr>
<td>V135</td>
<td>2 1/2” (63mm)</td>
<td>3” (75mm)</td>
<td>V135-1</td>
</tr>
</tbody>
</table>

Return Pipe Size
1”
2”

Flow/BTU Package
None
Flow/BTU Package

Strainers*
None
On inlets

*Strainers ship loose and must be installed by a plumber at the job site

High Capacity - Dual Valve

<table>
<thead>
<tr>
<th>Valve</th>
<th>Inlets</th>
<th>Outlet</th>
<th>Order Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>V85</td>
<td>4” (100mm)</td>
<td>4” (100mm)</td>
<td>V85-2</td>
</tr>
<tr>
<td>V135</td>
<td>6” (150mm)</td>
<td>6” (150mm)</td>
<td>V135-2</td>
</tr>
</tbody>
</table>

Return Pipe Size
3”

Flow/BTU Package
None
Flow/BTU Package

Strainers
None
On inlets

XNP
SNP