

Technical Data Sheet

DigiTemp[®] Jr. Digital Water Mixing Valve

Features

- Control water temperature $\pm 2^{\circ}\text{F}$ in accordance with ASSE 1017
- Programmable set point range 60-180°F (16-82°C) for wide range of temperature
- Lead Free* construction to comply with lead free* installation requirement
- 3.5" full-color, user-selectable touch screen display
- High temperature sanitization mode to address waterborne bacteria
- In case of power failure, valve flows full cold for safety
- Integral check valves on hot and cold inlets to prevent crossflow
- Configurable on location. Does not require factory pre-programming, laptop or special software
- Control module supports BAS (Building Automation System) communication with BACnet MSTP and Modbus protocols. It is native to the unit and does not require an add-on module
- Mixed outlet temperature can be adjusted/monitored at the valve or remotely by BAS (Building Automation System)
- Includes single operating sensor for a mixed outlet temperature reading
- Pass code protected for security
- Programmable hi/lo temperature alert
- Programmable schedule for setback of temperature
- Real time clock for time stamping of error messages



Notice

The information contained herein is not intended to replace the full product installation and safety information available or the experience of a trained product installer. You are required to thoroughly read all installation instructions and product safety information before beginning the installation of this product.

*The wetted surface of this product contacted by consumable water contains less than 0.25% of lead by weight.



Valve Only



Controller Only

Patent No: 10,823,296

Flow Capacity

Model	Minimum System Draw	C_v	Pressure Drop Across Valve						Weight
			5 psi (34 kPa)	10 psi (69 kPa)	20 psi (138 kPa)	30 psi (207 kPa)	45 psi (310 kPa)	50 psi (345 kPa)	
V23NN	0.5 gpm	7.3	16 gpm 61 Lpm	23 gpm 87 Lpm	33 gpm 125 Lpm	40 gpm 151 lpm	49 gpm 185 lpm	52 gpm 197 lpm	14 lb (6 kg)
V55NN	0.5 gpm	17.5	39 gpm 148 Lpm	55 gpm 208 Lpm	78 gpm 295 Lpm	96 gpm 363 lpm	117 gpm 443 lpm	124 gpm 469 lpm	17 lb (8 kg)
V71NN	0.5 gpm	22.5	50 gpm 189 Lpm	71 gpm 269 Lpm	101 gpm 382 Lpm	123 gpm 466 lpm	151 gpm 572 lpm	159 gpm 602 lpm	23 lb (10 kg)
V125NN	0.5 gpm	39.5	88 gpm 333 Lpm	125 gpm 473 Lpm	177 gpm 670 Lpm	216 gpm 818 lpm	265 gpm 1003 lpm	279 gpm 1056 lpm	27 lb (12 kg)

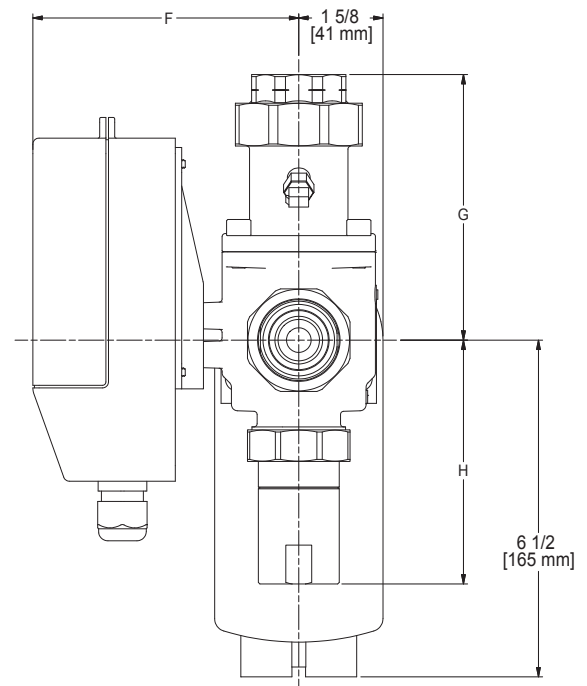
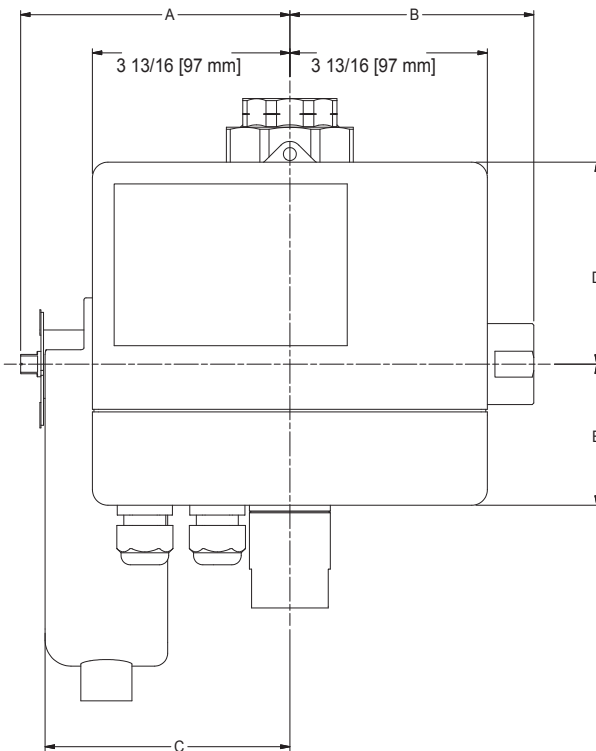
Specifications

Max Operating Pressure..... 200psi (1379kPa)
 Max Hot Water Temperature..... 200°F (93°C)
 Min Hot Water Supply Temp.... 2°F (1°C) above setpoint
 Hot Water Inlet Temp Range.....120-180 °F (49-82°C)
 Cold Water Inlet Range..... 39-80°F (4-26°C)
 Min Flow..... 0.5 gpm (1.89 lpm)

Temp Adjustment Range..... 60-180°F (16-82°C)
 Listing Compliance..... ASSE 1017,cUPC,
 NSF, CSA 24/UL873, BACnet Testing Laboratories (BTL)
 Power.....115-230 V (ac) ± 10%, 50/60 Hz, 20 VA
 Actuator Load..... 24 V (dc), 0.55 A, 13 W

Ambient Temperature 32°F (0°C) to 122°F (50°C)
 Ambient Humidity... 0 - 90 RH non-condensing
 SUITABLE FOR INDOOR USE ONLY

Dimensions



Model	Inlets	Outlet	A	B	C	D	E	F	G	H
V23NN	$\frac{3}{4}$ " (20 mm)	$\frac{3}{4}$ " (20 mm)	$\frac{47}{8}$ " (123 mm)	$\frac{41}{16}$ " (103 mm)	$\frac{43}{8}$ " (110 mm)	$\frac{41}{16}$ " (103 mm)	$\frac{29}{16}$ " (66 mm)	$\frac{43}{4}$ " (120 mm)	$\frac{45}{16}$ " (110 mm)	$\frac{41}{8}$ " (105 mm)
V55NN	1" (25 mm)	$\frac{11}{4}$ " (32 mm)	$\frac{53}{16}$ " (132 mm)	$\frac{411}{16}$ " (120 mm)	$\frac{43}{4}$ " (120 mm)	$\frac{37}{8}$ " (99 mm)	$\frac{23}{4}$ " (69 mm)	$\frac{51}{8}$ " (130 mm)	$\frac{51}{8}$ " (130 mm)	$\frac{411}{16}$ " (120 mm)
V71NN	$\frac{11}{2}$ " (38mm)	$\frac{11}{2}$ " (38 mm)	$\frac{51}{3}$ " (135 mm)	$\frac{61}{4}$ " (159 mm)	$\frac{51}{16}$ " (129 mm)	$\frac{21}{8}$ " (54 mm)	$\frac{41}{2}$ " (114 mm)	$\frac{47}{8}$ " (124 mm)	$\frac{51}{3}$ " (135mm)	$\frac{54}{5}$ " (147 mm)
V125NN	2" (51 mm)	2" (51 mm)	$\frac{52}{3}$ " (144 mm)	$\frac{62}{3}$ " (169 mm)	$\frac{52}{5}$ " (137 mm)	$\frac{21}{8}$ " (54 mm)	$\frac{41}{2}$ " (114 mm)	$\frac{47}{8}$ " (124 mm)	$\frac{52}{3}$ " (144 mm)	$\frac{61}{5}$ " (158 mm)

Ordering Information

Valve Inlets (in) Outlet (in)

V23NN	3/4"	3/4"
V55NN	1"	1 1/4"
V71NN	1 1/2"	1 1/2"
V125NN	2"	2"

* With Equal Pressure

*** Minimum flow when DigiTemp Jr. is installed at or near hot water source recirculating tempered water with a properly sized continuously operating recirculating pump (5 gpm minimum).

**** Low limit cannot be less than the cold water temperature. For best operation, hot water should be at least 2°F above desired set point.

Sample Specification

Lead free* digital water temperature control and monitoring system shall feature 3.5" full-color touchscreen interface which is configurable on location and does not require factory pre-programming. System shall control water temperature to $\pm 2^\circ\text{F}$ in accordance with ASSE 1017 and resist "temperature creep" during periods of low/zero demand. Controller shall be password protected and feature a user-adjustable outlet temperature range of 60-180°F with high and low temperature alerts, and an approach temperature of 2°F.

System shall digitally control and monitor mixed outlet temperature. Controller shall integrate with building automation systems (separate module not required) through BACnet and Modbus protocols and feature local and remote temperature alarms. System will feature a user-set, high-temperature sanitization mode for thermal disinfection of bacteria and a programmable temperature set back feature to improve energy efficiency. System will also feature high speed actuator with override feature. In the event of a power failure, system will open full cold supply. In case of a loss of cold water, the system will close hot water supply.

System shall be listed/approved to ASSE 1017, cUPC, NSF, CSA 24/UL873, and BTL (BACnet Testing Laboratories). System shall be a AERCO DigiTemp® Jr. V23, V55, V71, or V125.

WARNING

DigiTemp® Jr. system provides user-directed control and monitoring of water distribution systems. It is the user's responsibility to select and maintain water temperatures that are safe and appropriate for the water system users and facility. DigiTemp Jr. system's Sanitization mode is intended for use as part of a user-directed, controlled and supervised protocol that has been safely and properly designed. It is recommended to install the DigiTemp Jr. system as part of a water distribution system compliant with local codes. Installation and adjustment of the DigiTemp Jr. system are the responsibility of the owner and installer and must be done by qualified personnel in accordance with the manufacturer's instructions, and complying with all governmental requirements, building and construction codes and standards.

The owner and user of the DigiTemp Jr. system is responsible for selecting and installing the product in an appropriate water distribution system, proper sizing, maintaining proper water quality/condition, and deciding what temperature is safe and appropriate for the water distribution users and facility. Always read and follow User Guide & Instruction Manual and all product warnings and labels, and comply with all governmental and safety requirements.

Notice

A copy of the applicable limited warranty and disclaimers is available in the Installation and Operation Manual by request or via our website.



Heating and Hot Water Solutions

AERCO International, Inc. • 100 Oritani Drive • Blauvelt, NY 10913
USA: T: (845) 580-8000 • Toll Free: (800) 526-0288 • AERCO.com