# *Engineering Specifiation*

Job Name _____ Contractor _____

Job Location _____ Approval _____

Engineer _____ Contractor's P.O. No. _____

Approval _____ Representative _____

**LEAD FREE***

Works with the Watts® OnSite Mobile and Web App

# IntelliStation® Jr.
## Digital Water Mixing Valve System



Patent No. 10,823,296

### Features

- Control water temperature ± 2°F in accordance with ASSE 1017
- Programmable set point range 60°F to 180°F 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
- Integral check valves on hot and cold inlets to prevent cross flow
- In case of power failure, valve flows full cold for safety
- Configurable on location. Does not require factory pre-programming, lap top 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) or Mobile and Web Apps
- 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
- On board clock for time stamping of error messages
- Wi-Fi enable for software upgrades, temperature monitoring, control and alerts
- Pre-piped system

** The wetted surface of this product contacted by consumable water contains less than 0.25% of lead by weight.*
*** With equal pressure*
****Minimum flow when IntelliStation is installed at or near hot water source recirculating tempered water with a properly sized continuously operating recirculating pump. (5GPM 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.*

ASSE 1017 — *Valve Only*

cULus LISTED E365015 Temp. Ind. and Reg. Equip. — *Controller Only*

### Now available: Mobile and Web App

- Provides monitoring and visibility of mixing valve assets across multiple locations/sub-locations
- Remote temperature control for Owner & Admin levels
- Sends system alerts via text and/or email
- Prioritizes alerts based on levels of safety and potential liability
- Three user levels for security
- Data logging
- Reporting capabilities (PDF and CSV file formats)

**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.

Powers product specifications in U.S. customary units and metric are approximate and are provided for reference only. For precise measurements, please contact Powers Technical Service. Powers reserves the right to change or modify product design, construction, specifications, or materials without prior notice and without incurring any obligation to make such changes and modifications on Powers products previously or subsequently sold.

POWERS™
A WATTS Brand

## Specifications

Maximum Operating Pressure..... 200psi (1379kPa)
Maximum Hot Water Temperature ..... 200°F (93°C)
Minimum Hot Water Supply Temperature** ..... 2°F (1°C) above set point
Hot Water Inlet Temperature Range ..... 120-180°F (49-82°C)
Cold Water Inlet Range ..... 39-80°F (4-26°C)
Minimum Flow *** ..... 0.5gpm (1.89lpm)
Temperature Adjustment Range**** ..... 60-180°F (16-82°C)
Listing /Compliance ..... ASSE 1017, cUPC, NSF, CSA 24/UL873, Bacnet Testing Laboratories (BTL), CE
Weight ..... LFIS075VL-SYS075RTN 42lb (19kg
LFIS100VL-SYS100RTN 44lb (20kg)
LFIS150VL-SYS150RTN 87lb (39g)
LFIS200VL-SYS200RTN 114lb (52kg)
Ambient Temperature ..... 32°F (0°C) to 122°F (50°C)
Ambient Humidity ..... 0 - 90 RH non-condensing
SUITABLE FOR INDOOR USE ONLY

## Technical Specification

Power ..... 115-230 V (ac) ± 10%, 50/60 Hz, 20 VA
Actuator Load ..... 24 V (dc), 0.55 A, 13 W

## Ordering Code

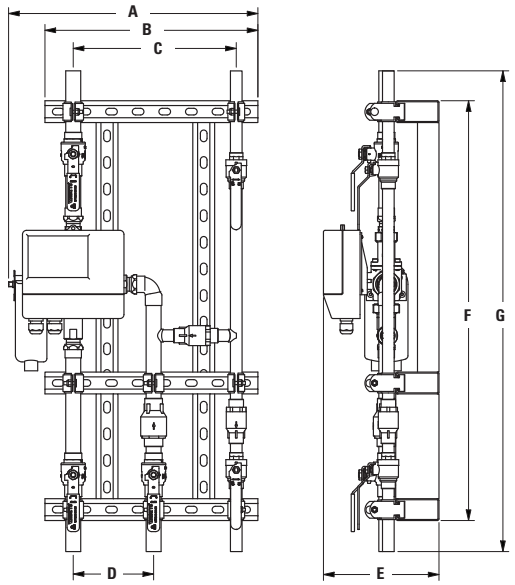
| Valve | Inlets (in) | Outlet (in) | Order Code | |
|---|---|---|---|---|
| LFIS075VL | 1" | 1" | LFIS075VL-SYS075RTN | ☐ |
| LFIS100VL | 1 1/4" | 1 1/2" | LFIS100VL-SYS100RTN | ☐ |
| LFIS150VL | 2" | 2" | LFIS150VL-SYS150RTN | ☐ |
| LFIS200VL | 2 1/2" | 2 1/2" | LFIS200VL-SYS200RTN | ☐ |

## Capacity

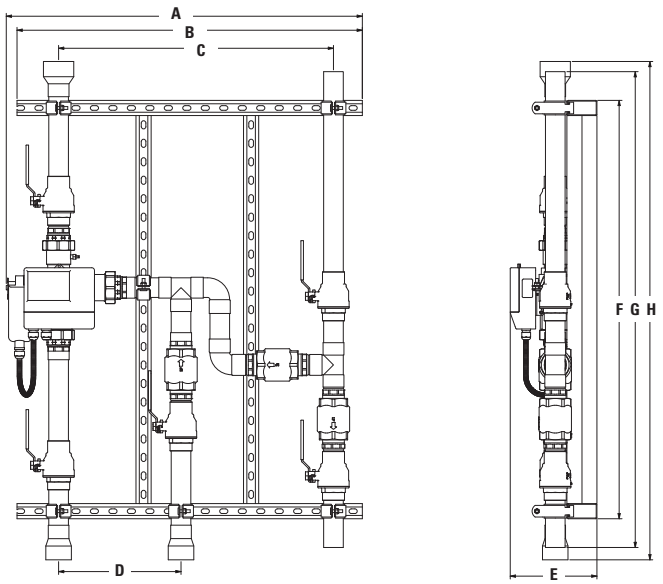
| Flow Capacity at 50-50 mixed ratio | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | Pressure Drop Across Valve | | | | | | |
| Model | Min System Draw+ | cv | 5 psi 34 kpa | 10 psi 69 kpa | 20 psi 138 kpa | 30 psi 207 kpa | 45 psi 310 kpa | 50 psi 345 kpa |
| LFIS075VL | 0.5 | 7.3 | 16 gpm 61 lpm | 23 gpm 87 lpm | 33 gpm 125 lpm | 40 gpm 151 lpm | 49 gpm 185 lpm | 52 gpm 197 lpm |
| LFIS100VL | 0.5 | 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 |
| LFIS150VL | 0.5 | 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 |
| LFIS200VL | 0.5 | 39.5 | 88 gpm 333 lpm | 125 gpm 473 lpm | 177 gpm 670 lpm | 198 gpm 749 lpm | 265 gpm 1003 lpm | 279 gpm 1056 lpm |

+ with a properly sized pump

## Dimensions




**LFIS075VL-SYS075RTN**
**LFIS100VL-SYS100RTN**




**LFIS150VL-SYS150RTN**
**LFIS200VL-SYS200RTN**

| MODEL NO. | INLETS | OUTLETS | RETURN | A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|---|---|---|
| LFIS075VL-SYS075RTN | 1" (25mm) | 1" (25mm) | ¾" (19mm) | 19" (476mm) | 16" (406mm) | 12" (311mm) | 6" (153mm) | 9" (233mm) | 32" (801mm) | 36" (918mm) | - |
| LFIS100VL-SYS100RTN | 1¼" (32mm) | 1½" (38mm) | 1" (25mm) | 21" (533mm) | 17" (441mm) | 14" (356mm) | 7" (185mm) | 9" (233mm) | 34" (868mm) | 39" (1002mm) | - |
| LFIS150VL-SYS150RTN | 2" (51mm) | 2" (51mm) | 1 1/2" (38mm) | 38 11/16" (983mm) | 37 3/8" (949mm) | 27 1/8" (689mm) | 13 3/8" (340mm) | 9 3/8" (238mm) | 45 1/4" (1150mm) | 51 1/4" (1302mm) | N/A |
| LFIS200VL-SYS200RTN | 2 1/2" (64mm) | 2 1/2" (64mm) | 2" (51mm) | 38 1/2" (979mm) | 37 3/8" (949mm) | 29 3/4" (756mm) | 13 1/4" (337mm) | 9 3/8" (238mm) | 45 1/4" (1150mm) | 51 1/2" (1308mm) | 54" (1370mm) |

## Typical 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 +/- 2°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 shall provide monitoring and visibility of mixing valve assets across multiple locations/sublocations. System shall offer the ability to remote temperature control for owner and admin levels. App shall be capable of sending system alerts via text and/or email and prioritizes alerts based on levels of safety and potential liability. System offers three user levels for security.

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.

Valve and controller shall be listed/approved to ASSE 1017, cUPC, NSF, CSA 24/UL873 and BTL (BACnet Testing Laboratories)

System shall be a pre-piped Powers LFIS075VL-SYS075RTN, LFIS100VL-SYS100RTN, LFIS150VL-SYS150RTN or LFIS200VL-SYS200RTN.

**⚠ WARNING**

IntelliStation® 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. IntelliStation 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 IntelliStation Jr. system as part of a ASSE compliant water distribution system, including point-of-use mixings valves

Installation and adjustment of the IntelliStation 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 IntelliStation 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 at www.PowersControls.com.

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