A WATTS Brand

Technical Data Sheet

DigiTemp 2S Digital Water Mixing Valve



DigiTemp 2S is a next-generation digital mixing system engineered for precise, reliable, and secure hot water temperature control in commercial and institutional facilities. Designed as a pre-piped, fully integrated solution with advanced safety features, intuitive on-device configuration, and broad integration capabilities, DigiTemp 2S ensures consistent performance while simplifying installation, commissioning, monitoring, and long-term operation. Enhanced with Nexa connectivity, DigiTemp 2S empowers facility teams with remote insights, energy savings, and system-wide visibility across multiple buildings or campuses.

Precision Temperature Control & Safety

DigiTemp 2S maintains mixed water temperature to within ±2°F in accordance with ASSE 1017, ensuring safe, consistent delivery even in demanding applications. Its built-in high-temperature sanitization mode helps address waterborne bacteria risks, and full-cold valve flow during power loss enhances fail-safe operation. Integrated temperature and pressure sensing across the system supports more accurate monitoring and control.

Intuitive Digital Interface

A full-color touchscreen display gives operators immediate access to configuration, passcode-protected settings, alerts, and a time-stamped error history, with no special tools or external software required.

Integration-Ready for Modern Facilities

With native BACnet MSTP and Modbus support, DigiTemp 2S easily integrates into BAS environments. Its “Works with Nexa” capability adds next-level remote monitoring, alerting, data analytics, and temperature control.

Works with Nexa – Smarter, Safer and More Connected

Nexa provides real-time visibility of valve assets across buildings, enabling proactive alerts, advanced charting, security-controlled access levels, and energy-saving scheduling. Whether you manage one facility or an entire campus, a Nexa-enabled DigiTemp 2S keeps you informed and in control.

works with nexa™

ASSE 1017 · UPC · NSF Certified to NSF/ANSI/CAN 61 & 372

Valve Only

c UL us LISTED E365015 Temp. Ind. and Reg. Equip. · CE

Control Only

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.

Features & Benefits

Valve & Mechanical

- Cutting-edge valve design engineered for long-term reliability
- Factory-assembled, pre-piped system for faster installation and reduced field coordination
- Lead Free construction compliant with lead-free installation requirements
- Integral check valves on hot and cold inlets prevent cross-flow
- Integrated recirculation connections for system-level temperature management
- Full-cold valve flow in case of power failure for added safety

User Interface & Local Configuration

- Full-color touchscreen display
- On-site configurable without special tools or software
- Passcode-protected settings for secure adjustments
- Programmable alerts
- Time-stamped error message history

Temperature Control & Safety

- Programmable set point range: 60°F to 180°F
- Temperature control accuracy: ±2°F in accordance with ASSE 1017
- Integrated digital temperature and pressure sensors on inlets, outlet, and return
- High-temperature sanitization mode to address waterborne bacteria
- Programmable temperature setback schedule

Connectivity & BAS Integration

- Mixed outlet temperature adjustable and monitored locally or remotely
- Remote access via BAS, Wi-Fi, or Ethernet connection to Nexa
- Native support for BACnet MSTP and Modbus protocols
- Wi-Fi security: WPA2-PSK, WPA2-PEAPM-SCHAPv2

Expanded Functionality Through Nexa

- System visibility across multiple campuses/locations
- Visibility into inlet, outlet, and return system conditions
- Remote temperature control for admin-level users
- System alerts via text and/or email
- Configurable alerts based on risk or safety level
- Two security levels for controlled access
- Data logging and auditing for compliance and performance tracking
- Advanced charting of system data points
- Insights into energy usage and load flow
- Energy savings via scheduled temperature setbacks

works with nexa™

Notice: Nexa application is only available for use in Canada and the United States of America.

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

Accessories

SKU	Description	Contents
Extend the Distance Between Controller and Valve		
200005	DT2S 6-foot Cable Extension Kit	Temp, Encoder, and Actuator cables
Keyence Clamp on Flow Sensor Kits to Monitor Mixed Outlet and Recirculation Return Flows		
199996	DT2S Clamp on Flow Sensor Kit, Pipe Size 1/2" – 3/4"	1 Sensor, power adapter, and I/O cable
199997	DT2S Clamp on Flow Sensor Kit, Pipe Size 1" – 1 1/4"	1 Sensor, power adapter, and I/O cable
199998	DT2S Clamp on Flow Sensor kit, Pipe Size 1 1/2" – 2"	1 Sensor, power adapter, and I/O cable
199999	DT2S Clamp on Flow Sensor kit, Pipe Size 2 1/2" – 3"	1 Sensor and I/O cable
200000	DT2S Clamp on Flow Sensor kit, Pipe Size 4" – 5"	1 Sensor and I/O cable

If using Keyence flow sensors, select the sensor based on the size of the pipe it is to be mounted to. Typical sensor locations are on the mixed outlet or recirculation inlet piping. A 120V connection is required for power.
Special made to order options available by request: Actuated valve sequencing, Stainless Steel Shuttle

Control Electrical Specification

Input Power	120/240 V (ac) ±10%, 50/60 Hz, 17 W
Pump Relays (Motor Load)	120/240 V (ac), 10/8 FLA, 50/48 LRA
Alert Relay	120/240 V (ac), 5 A, 1/6 hp
Isolation Valve Relays	24 V (ac/dc), 5 A, Resistive
+5V Capacity	25 mA maximum, Resistive, Class 2
+20V Capacity	20 mA maximum, Resistive, Class 2
Actuator Load	13 W
Pump Proof Demand	24 V (ac) or Short
Operating Temperature	32°F – 122°F (0°C – 50°C)
Wi-Fi	802.11 b/g/n, 2.4 GHz
Listing /Compliance	FCC/ISED, UL 60730-1, UL 60730-2-9, IEC 60730, CE

Specifications

Connection Type	Sweat/Press (Street)
Maximum Test Pressure	250 psi (1793 kPa)
Maximum Operating Pressure	200 psi (1034 kPa)
Maximum Operating Pressure Differential at Inlets	20% of Average Inlet Pressures with Maximum 20 psi (172 kPa)
Temperature Adjustment Range[1]	60°F – 180°F (16°C – 82°C)
Minimum Cold Water Supply Temperature	35°F (2°C)
Maximum Hot Water Supply Temperature	180°F (82°C)
Minimum Cold Water to Set Point Differential	2°F (1°C) below set point
Minimum Hot Water to Set Point Differential	2°F (1°C) above set point
Minimum Flow Demand	0 gpm (0.0 lpm)
Minimum Total Valve Flow Required[3]	3 gpm (11.36 lpm)
Outlet Temperature Accuracy per ASSE 1017	±2°F
Outlet Temperature Accuracy at Recommended Minimum Flow Rates By Valve Size[2]	
VDT2S075VL @ 3 gpm	±2°F
VDT2S100VL @ 3 gpm	±2°F
VDT2S150VL @ 3 gpm	±2°F
VDT2S200VL @ 5 gpm	±2°F
Listing /Compliance	ASSE 1017, cUPC, NSF 61 & 372
Ambient Temperature	32°F – 122°F (0°C – 50°C)
Ambient Humidity	0% – 90% RH noncondensing
Environment	Suitable for Indoor Use Only

[1] Low Temperature Setpoint cannot be less than the cold water temperature. For best operation, hot water should be at least 2°F above desired set point.

[2] With equal pressure.

[3] Minimum flow across the total valve is 3 gpm when installed at or near a hot water source and tempered water recirculation line with a properly sized, continuously operating recirculating pump.

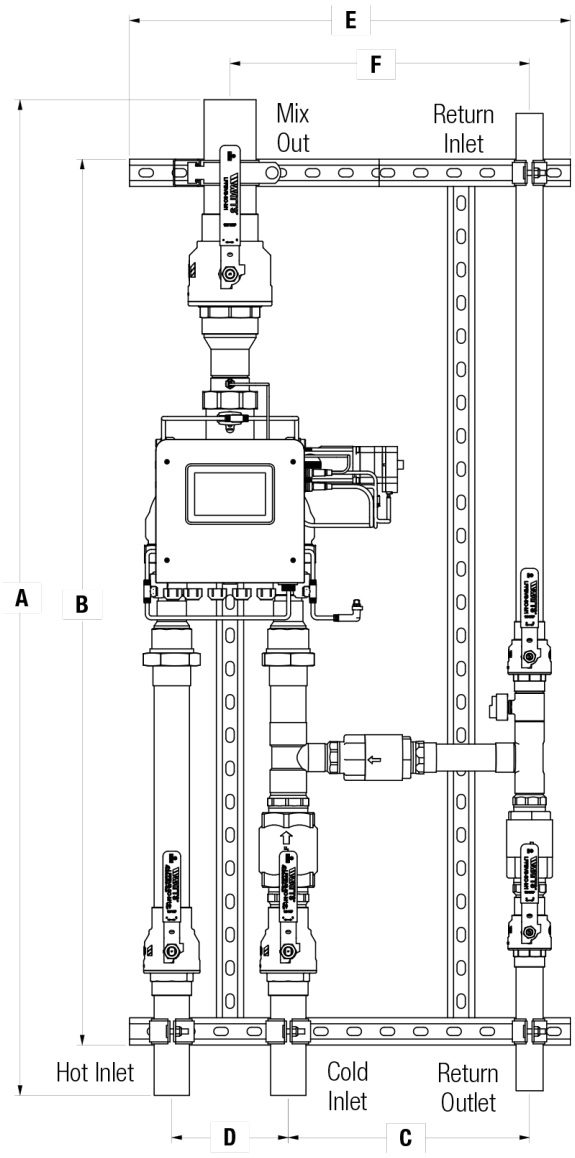
Capacity

Model	System Suffix	Pressure Drop (PSI) 5	10	15	20	30	45	50	Cv	Max Suggested Continuous Use Flow Rate[2] (GPM) (Based on 5 ft/s)	Max Suggested Continuous Use Return Flow Rate[2] (GPM) (Based on 7 ft/s)
VDT2S075	C00LP	33.4	53.6	64.1	74.7	90.4	111.9	122..5	16.9	53.6	18.0
	C0SLP[1]										
	E00LP										38.8
	E0SLP[1]										
VDT2S100	C00LP	49.7	72.3	90.2	102.3	129.1	157.4	168.0	22.9	72.3	18.0
	C0SLP[1]										
	E00LP										38.8
	E0SLP[1]										
VDT2S150	E00LP	76.4	110.1	133.3	153.3	196.8	240.4	247.0	34.8	110.1	38.8
	E0SLP[1]										
	F00LP										67.5
	F0SLP[1]										
VDT2S200	E00LP	98.3	144.4	179.8	211.1	250.8	309.9	324.9	45.7	144.4	38.8
	E0SLP[1]										
	F00LP										67.5
	F0SLP[1]										
VDT2S150	DVH00LP	151.9	218.9	265.1	304.9	391.3	478.2	491.4	69.2	218.9	135.0
	DVH0SLP	147.6	212.4	257.4	296.1	379.0	463.2	476.8	67.2	212.4	
VDT2S200	DVH00LP	195.5	287.2	357.5	419.7	498.9	616.5	646.5	90.8	287.2	
	DVH0SLP	190.7	279.7	347.8	408.0	485.8	600.0	629.3	88.4	279.7	
VDT2S200	TVH00LP	293.0	430.4	535.7	628.9	747.7	923.9	968.9	136.1	430.4	148.6
	TVH0SLP	286.3	427.4	531.8	624.1	742.2	916.9	961.5	135.2	427.4	
		Flow at Pressures (GPM) WITH CHECK									

[1] Strainers on single valve systems are not accounted for in flow rates. Effect on flow rate is dependent on where the strainer is installed.
[2] Velocity recommendation is based on the Uniform Plumbing Code and Copper Development Association, Copper Tube Handbook, and minimizes potential erosion and corrosion in the station piping.

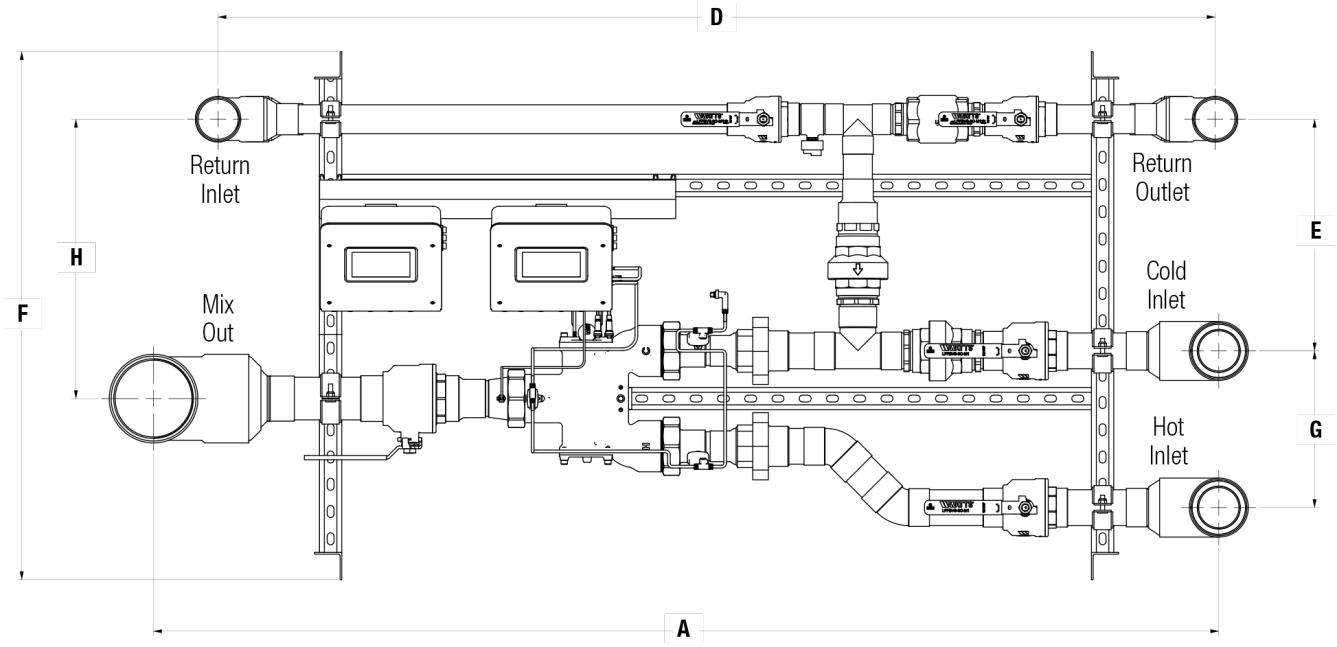
Single Valves Dimensions

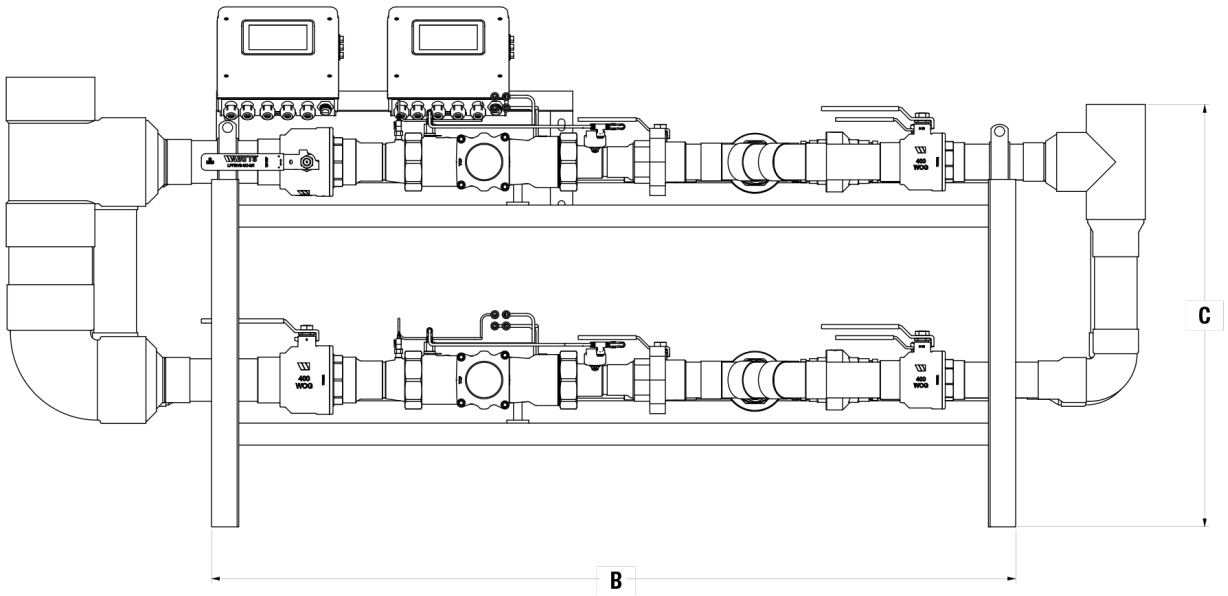
Model	Inlet	Outlet	Return	A	B	C	D	E	F
VDT2S075C00LP VDT2S075C0SLP	1 1/2" (38 mm)	2" (51 mm)	1" (25 mm)	51 1/8" (1299 mm)	45 1/4" (1149 mm)	13 5/8" (346 mm)	6" (152 mm)	24" (610 mm)	16 5/8" (422 mm)
VDT2S075E00LP VDT2S075E0SLP			1 1/2" (38 mm)						
VDT2S100C00LP VDT2S100C0SLP	2" (51 mm)	2 1/2" (64 mm)	1" (25 mm)	57 1/2" (1461 mm)	51 1/4" (1302 mm)	15 1/2" (394 mm)		27" (686 mm)	18 1/2" (470 mm)
VDT2S100E00LP VDT2S100E0SLP			1 1/2" (38 mm)						
VDT2S150E00LP VDT2S150E0SLP		3" (76mm)	1 1/2" (38 mm)	59 7/8" (1521 mm)	53 1/4" (1353 mm)	14 1/2" (368 mm)	7" (178 mm)	26 1/2" (673 mm)	18" (457 mm)
VDT2S150F00LP VDT2S150F0SLP			2" (51 mm)						
VDT2S200E00LP VDT2S200E0SLP	2 1/2" (64 mm)	4" (102 mm)	1 1/2" (38 mm)	68" (1727 mm)	58 1/4" (1480 mm)	17" (432 mm)		30" (762 mm)	20 1/2" (521 mm)
VDT2S200F00LP VDT2S200F0SLP			2" (51 mm)						



Dual Valves Dimensions

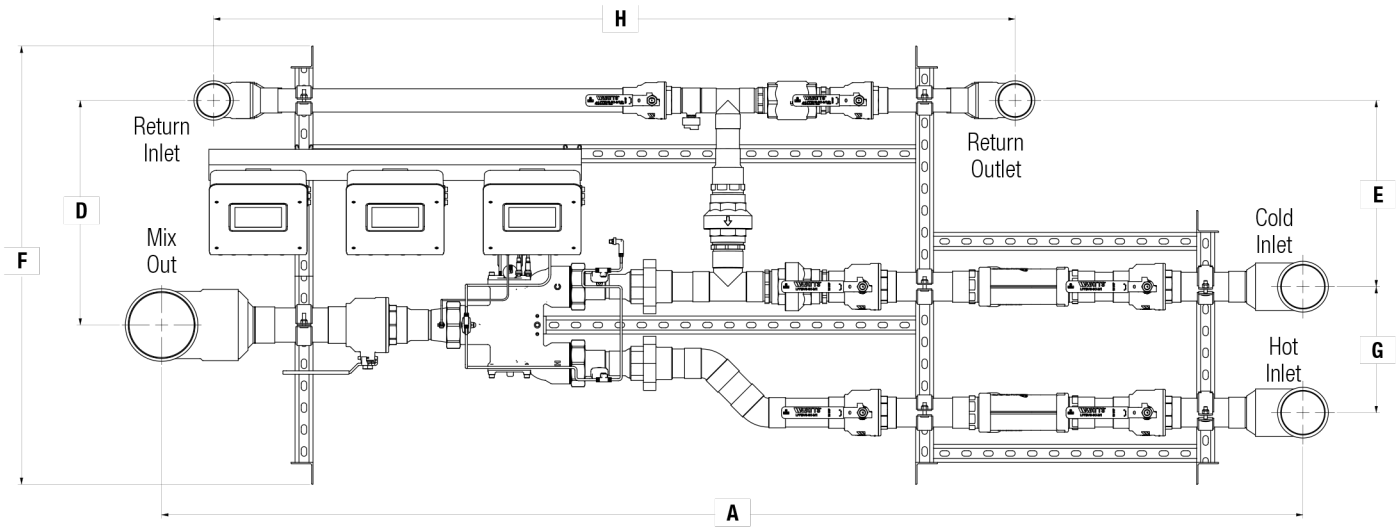
Model	Inlet	Outlet	Return	A	B	C	D	E	F	G	H
VDT2S150DVH00LP	3" (76 mm)	4" (102 mm)	3" (76 mm)	69" (1753 mm)	54" (1372 mm)	30" (762 mm)	68 1/8" (1730 mm)	14 1/2" (368 mm)	30 1/2" (775 mm)	7" (178 mm)	18" (457 mm)
VDT2S150DVH0SLP				88 5/8" (2251 mm)	73 5/8" (1870 mm)				32" (813 mm)		
VDT2S200DVH00LP	4" (102 mm)	6" (152 mm)		78 1/8" (1984 mm)	59" (1499 mm)	31" (787 mm)	73 1/8" (1857 mm)	17" (432 mm)	38 3/4" (984 mm)	11 1/2" (292 mm)	20 1/2" (521 mm)
VDT2S200DVH0SLP				104 1/8" (2645 mm)	84 5/8" (2149 mm)				40" (1016 mm)		

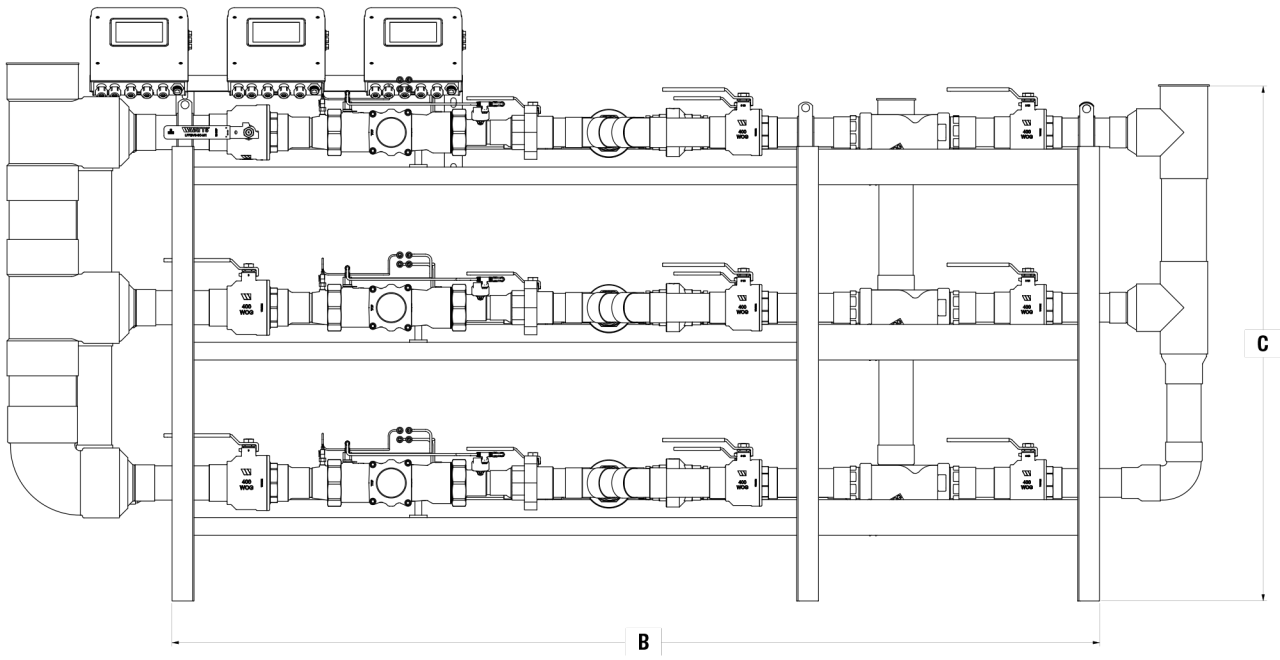




Triple Valves Dimensions

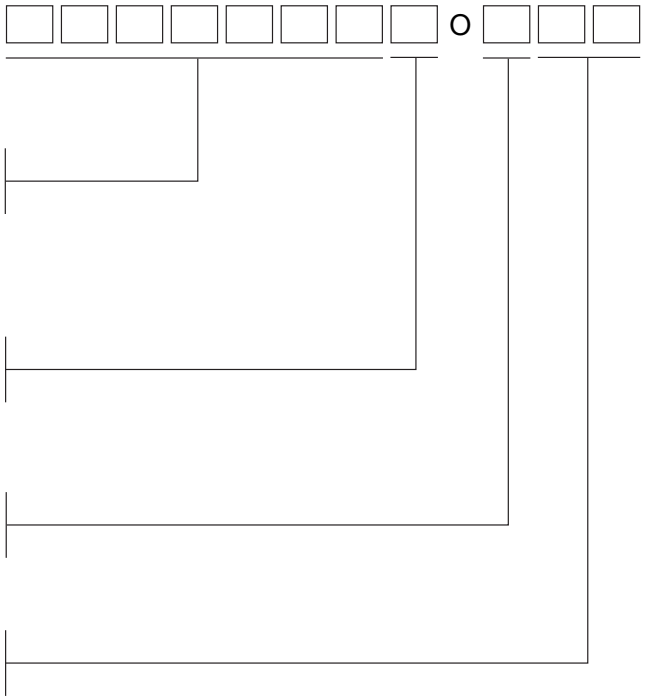
Model	Inlet	Outlet	Return	A	B	C	D	E	F	G	H
VDT2S200TVH00LP	4" (102 mm)	6" (152 mm)	3" (76 mm)	78 1/8" (1984 mm)	59" (1499 mm)	50 3/8" (1280 mm)	20 1/2" (521 mm)	17" (432 mm)	38 3/4" (984 mm)	11 1/2" (292 mm)	73 1/8" (1857 mm)
VDT2S200TVH0SLP				104 1/8" (2645 mm)	84 5/8" (2149 mm)	47" (1194 mm)			40" (1016 mm)		





Ordering Information

Single Valve



Valve	Inlet	Outlet	Ordering Code
VDT2S075VL	1½"	2"	VDT2S075
VDT2S100VL	2"	2½"	VDT2S100
VDT2S150VL	2"	3"	VDT2S150
VDT2S200VL	2½"	4"	VDT2S200

Return Pipe Size

1"	Available for DT2S075 and DT2S100	C
1½"	Available for all valves	E
2"	Available for DT2S150 and DT2S200	F

Strainers*

None	0
Inlet strainers	S

Pump

Less Pump	LP
Pump Assigned by Factory	--

Must Provide Following Pump Information to Factory to Select the Pump:

Pump Manufacturer: _____

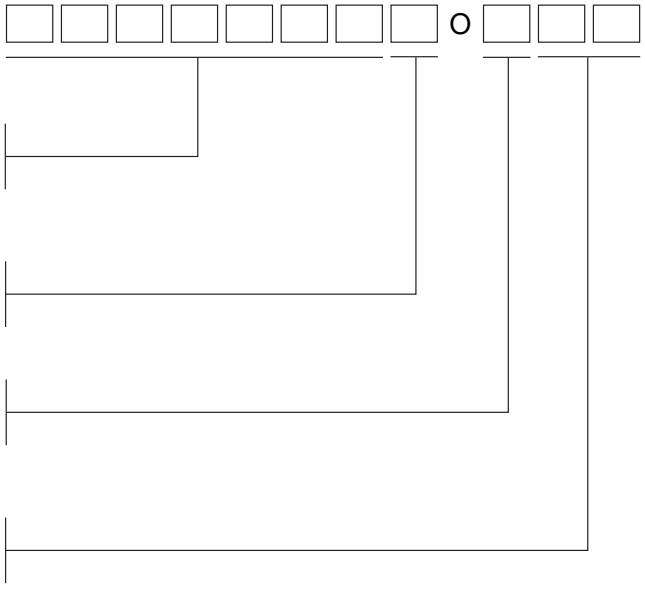
Part/Model Number _____

System Head Loss _____

Required Flow to Maintain Recirculating Temperature _____

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

Multi Valve



Valve	Inlet	Outlet	Ordering Code
VDT2S150VL	3"	4"	VDT2S150DV
VDT2S200VL	4"	6"	VDT2S200DV
VDT2S200VL	4"	6"	VDT2S200TV

Return Pipe Size

3"	H

Strainers*

None	0
Inlet strainers	S

Pump

Less Pump	LP
Pump Assigned by Factory	--

Must Provide Following Pump Information to Factory to Select the Pump:

Pump Manufacturer: _____

Part/Model Number _____

System Head Loss _____

Required Flow to Maintain Recirculating Temperature _____

Specification

Lead free* digital water temperature control and monitoring system shall feature 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. The control shall be password protected and feature a user-adjustable outlet temperature range of 60°F to 180°F with high and low temperature alerts, and an approach temperature of 2°F.

System shall digitally control and monitor mixed outlet temperature. The control 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 admin levels. System shall be capable of sending system alerts by text and/or email and prioritizing alerts based on levels of safety and potential liability. System offers two user levels for security. The control shall be equipped with secure Wi-Fi protocols WPA2-PSK and WPA2-PEAP-MSCHAPv2.

System shall 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 shall also feature high speed actuator with override feature. In the event of a power failure, system shall open full cold supply. In case of a loss of cold water, the system shall close hot water supply.

System shall be listed/approved to ASSE 1017, cUPC, NSF, UL 60730-1, UL 60730-2-9, IEC 60730.

System shall be an PVI DT2S075VL, DT2S100VL, DT2S150VL, or DT2S200VL.

WARNING

Hot water poses a danger of burning or scalding above 110 degrees Fahrenheit. Setting the mixing valve to temperatures over 110 Fahrenheit without the protection of additional point-of-use mixing valves could result in scalding at point-of-use fixtures such as faucets, sinks, tubs, and showers.

The Sanitizing function produces high temperature at all point-of-use fixtures and extreme care must be taken to mitigate against the risk of personal injuries such as burning or scolding, or other property damage. The Sanitization function must only be used for the purposes of sanitizing the system, and never during normal operations or use.

Sanitation times and temperatures should be chosen based on your company's Sanitization Protocol requirements, your plumbing systems characteristics, and sanitation validation data.

Ensure proper time is allotted for proper cooldown of water system after sanitization in order for temperatures to return to normal. Not giving enough time for this cooldown period can also result in scalding at point-of-use devices.

WARNING

DigiTemp 2S system provides user-directed control and monitoring of water distribution systems. The 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 2S system as part of a ASSE compliant water distribution system, including point-of-use mixing valves. Installation and adjustment of the DigiTemp 2S 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 2S system are 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 Installation, Operation, and Maintenance 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 pvi.com.

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Hot Water Solutions

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6-2026

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