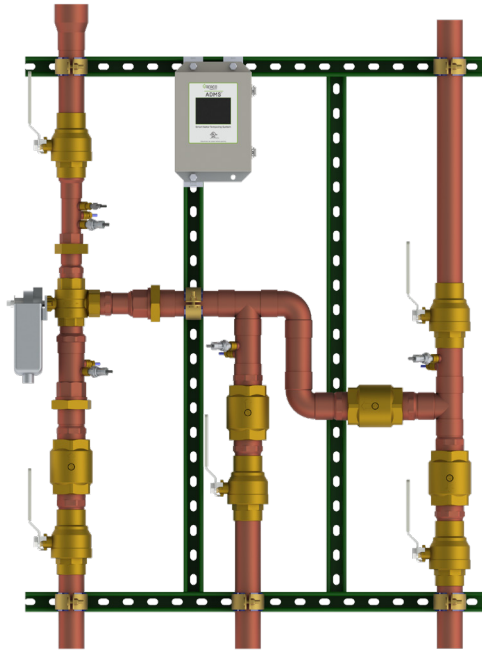


Technical Data Sheet

ADMS™ Smart Water Tempering System



The AERCO Digital Mixing Station (ADMS) is a smart water tempering system that allows temperature controlled distribution of potable hot water throughout the loop. The lead-free¹ ADMS regulates distribution temperature within $\pm 2^{\circ}\text{F}$ in accordance to ASSE 1017 at all flow conditions (including low and zero demand periods) and its temperature setting is field configured without the use of special software and laptop.

The building automation system (BAS) ready ADMS can be configured with strainers, building recirculation pump and Flow/BTU monitor package to allow facilities managers to remotely monitor and control distribution water temperatures along with monitoring of flow and energy consumption. Unlike the traditional thermostatic mixing valves, it is capable of functioning under varying pressure differentials across the inlets.

Features

- Configurable on site without special software and laptop
- Tight temperature control of $\pm 2^{\circ}\text{F}$ in accordance with ASSE 1017
- Control $\pm 2^{\circ}\text{F}$ during periods of low/zero demand
- 3.5" full-color, user-selectable touch screen display
- User programmable high-temperature sanitization mode
- Cold water failsafe with manual override feature to set mixed outlet temperature
- Settings can be adjusted/monitored at the controller or remotely via BACNET or Modbus interface
- Displays pressure, temperature and flow/BTU data
- Pass code protected for security
- User programmable high temperature alarm



Notes

¹ The wetted surface of this product contacted by consumable water contains less than one quarter of one percent (0.25%) of lead by weight.

² With equal pressure

³ Minimum flow when ADMS is installed at or near hot water source recirculating tempered water with a properly sized continuously operating recirculating pump.

⁴ 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.

⁵ Listed without pump

Technical Specification

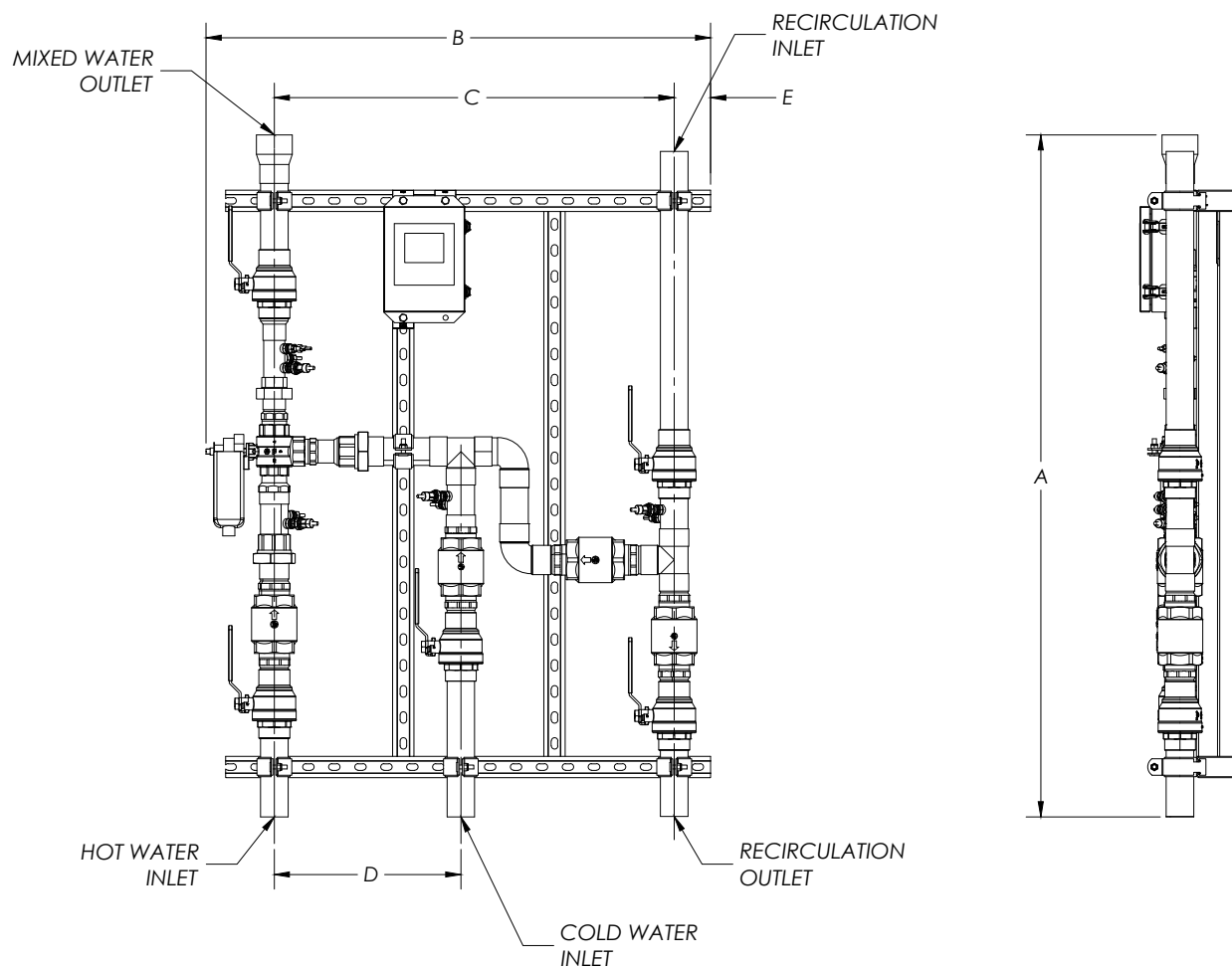
Maximum Operating Pressure	200psi (1379kPa)
Maximum Hot Water Temperature	200°F (93°C)
Minimum Hot Water Supply Temperature ²	2°F (1°C) above set point
Hot Water Inlet Temperature Range	120-180°F (49-82°C)
Cold Water Inlet Range	39-80°F (4-27°C)
Minimum Flow ³	0.5gpm (1.89lpm)
Temperature Adjustment Range ⁴	80-180°F (27-82°C)
Listing /Compliance	ASSE 1017 ⁵ , cUPC ⁵ , NSF ⁵ , CSA 24/UL873
Pump relay	16A @ 250 VAC
Alert relay	5A @ 250 VAC, 5A @ 30 VDC
Input Power	115/230V (ac) $\pm 10\%$ 50/60HZ, 30VA, 1180VA fully loaded

Flow Capacity

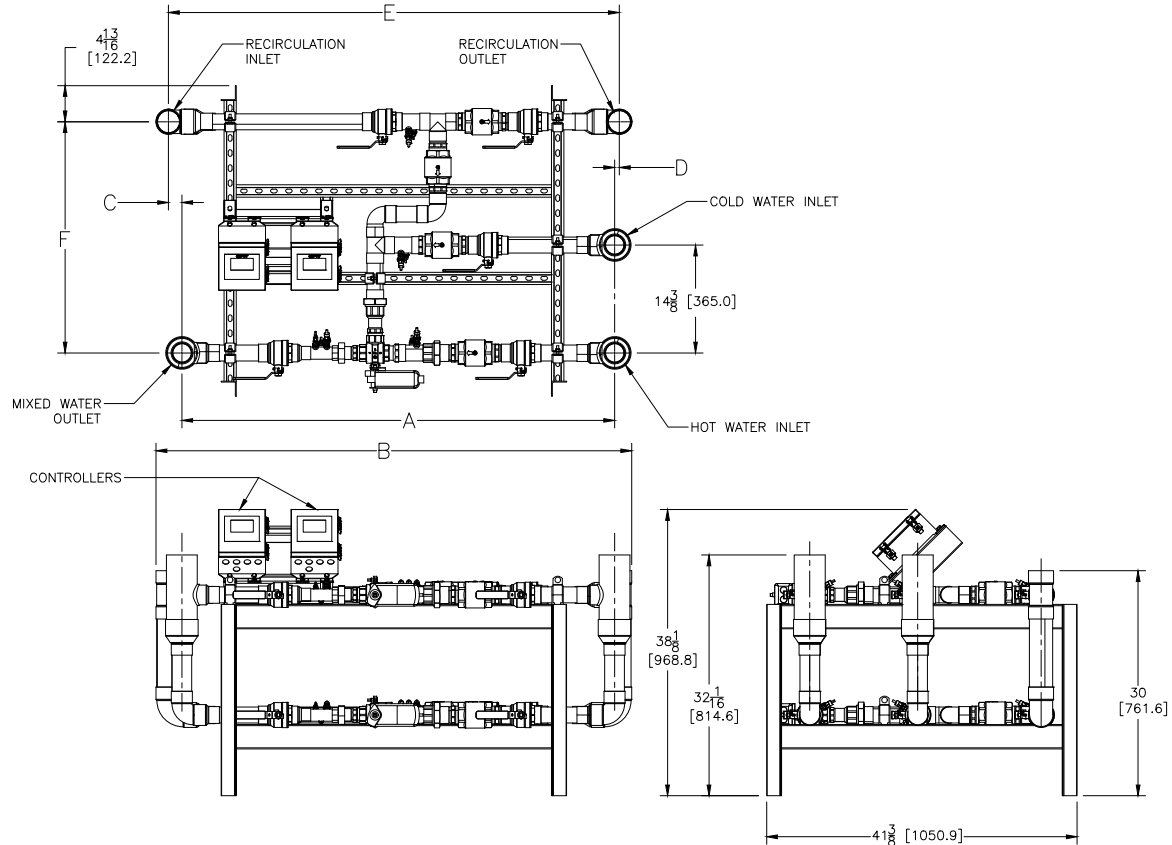
Model	Min System Draw	C_v	Pressure Drop Across Valve			
			5 psi (34 kPa)	10 psi (69 kPa)	20 psi (138 kPa)	30 psi (207 kPa)
ADMS150-S	0.5 gpm (1.9 lpm)	26.88	60 gpm (227 lpm)	85 gpm (322 lpm)	120 gpm (454 lpm)	147 gpm (556 lpm)
ADMS200-S	0.5 gpm (1.9 lpm)	42.70	96 gpm (363 lpm)	135 gpm (511 lpm)	191 gpm (723 lpm)	234 gpm (886 lpm)
ADMS150-D	0.5 gpm (1.9 lpm)	53.57	120 gpm (454 lpm)	170 gpm (644 lpm)	240 gpm (908 lpm)	294 gpm (1113 lpm)
ADMS200-D	0.5 gpm (1.9 lpm)	85.27	192 gpm (727 lpm)	270 gpm (1022 lpm)	382 gpm (1446 lpm)	468 gpm (1772 lpm)
ADMS200-T	0.5 gpm (1.9 lpm)	127.90	288 gpm (1090 lpm)	405 gpm (1533 lpm)	573 gpm (2169 lpm)	702 gpm (2657 lpm)

Dimensions

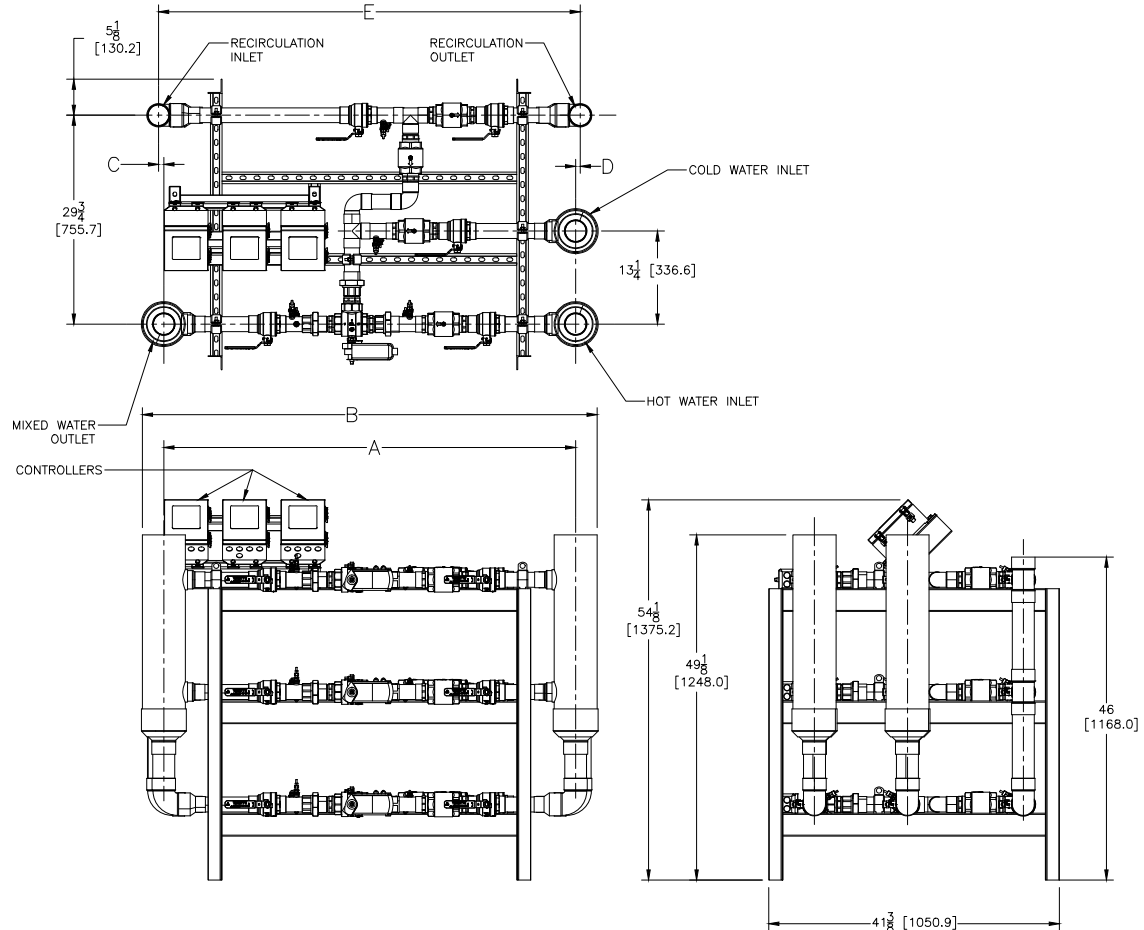
Single Valve - Wall Mounted



Dual Valve - Floor Mounted



Triple Valve - Floor Mounted



Single Valve*

Model	Inlets inch (mm)	Outlet inch (mm)	Return inch (mm)	A inch (mm)	B inch (mm)	C inch (mm)	D inch (mm)	E inch (mm)	Shipping Weight lbs (kg)
S-ADMS150-S1-000-B	2 (50)	2.5 (63)	1 (25)	52.62 (1336)	38.50 (978)	26.25 (667)	14.38 (365)	7.00 (178)	89 (40)
S-ADMS150-S1-010-B	2 (50)	2.5 (63)	1 (25)	52.62 (1336)	38.50 (978)	26.25 (667)	14.38 (365)	7.00 (178)	104 (47.2)
S-ADMS150-S1-100-B	2 (50)	2.5 (63)	1 (25)	76.44 (1941)	38.75 (984)	26.25 (667)	14.38 (365)	7.00 (178)	101 (46)
S-ADMS150-S1-110-B	2 (50)	2.5 (63)	1 (25)	76.44 (1941)	38.75 (984)	26.25 (667)	14.38 (365)	7.00 (178)	116 (52.6)
S-ADMS150-S2-000-B	2 (50)	2.5 (63)	2 (50)	52.56 (1335)	38.88 (988)	30.81 (782)	14.38 (365)	2.81 (71)	110 (50)
S-ADMS150-S2-010-B	2 (50)	2.5 (63)	2 (50)	52.56 (1335)	38.88 (988)	30.81 (782)	14.38 (365)	2.81 (71)	125 (56.7)
S-ADMS150-S2-100-B	2 (50)	2.5 (63)	2 (50)	74.66 (1896)	39.25 (997)	30.81 (782)	14.38 (365)	2.81 (71)	122 (55)
S-ADMS150-S2-110-B	2 (50)	2.5 (63)	2 (50)	74.66 (1896)	39.25 (997)	30.81 (782)	14.38 (365)	2.81 (71)	137 (62.1)
S-ADMS200-S1-000-B	2.5 (63)	3 (76)	1 (25)	54.00 (1372)	38.17 (969)	26.50 (673)	13.50 (343)	6.00 (152)	86 (39)
S-ADMS200-S1-010-B	2.5 (63)	3 (76)	1 (25)	54.00 (1372)	38.17 (969)	26.50 (673)	13.50 (343)	6.00 (152)	108.5 (49.2)
S-ADMS200-S1-100-B	2.5 (63)	3 (76)	1 (25)	74.04 (1881)	38.82 (986)	25.25 (641)	13.50 (343)	7.90 (200)	113 (51)
S-ADMS200-S1-110-B	2.5 (63)	3 (76)	1 (25)	74.04 (1881)	38.82 (986)	25.25 (641)	13.50 (343)	7.90 (200)	135.5 (61.5)
S-ADMS200-S2-000-B	2.5 (63)	3 (76)	2 (50)	54.46 (1383)	38.54 (979)	29.72 (755)	13.25 (336)	3.15 (80)	103 (47)
S-ADMS200-S2-010-B	2.5 (63)	3 (76)	2 (50)	54.46 (1383)	38.54 (979)	29.72 (755)	13.25 (336)	3.15 (80)	125.5 (57)
S-ADMS200-S2-100-B	2.5 (63)	3 (76)	2 (50)	74.46 (1891)	38.54 (979)	29.72 (755)	13.25 (336)	3.15 (80)	129 (59)
S-ADMS200-S2-110-B	2.5 (63)	3 (76)	2 (50)	74.46 (1891)	38.54 (979)	29.72 (755)	13.25 (336)	3.15 (80)	151.5 (68.7)

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

Dual Valve

Model	Inlets inch (mm)	Outlet inch (mm)	Return inch (mm)	A inch (mm)	B inch (mm)	C inch (mm)	D inch (mm)	E inch (mm)	F inch (mm)	Shipping Weight lbs (kg)
S-ADMS150-D3-000-B	4 (101)	4 (101)	3 (76)	57.65 (1464)	63.38 (1610)	1.78 (45)	.63 (16)	60.06 (1526)	30.81 (783)	295 (134)
S-ADMS150-D3-010-B	4 (101)	4 (101)	3 (76)	78.93 (2005)	84.56 (2147)	1.80 (46)	20.64 (524)	60.09 (1526)	30.75 (781)	371 (168)
S-ADMS150-D3-100-B	4 (101)	4 (101)	3 (76)	82.09 (2085)	86.57 (2198)	22.68 (576)	.66 (17)	60.06 (1526)	30.81 (783)	324 (147)
S-ADMS150-D3-110-B	4 (101)	4 (101)	3 (76)	103.43 (2627)	107.76 (2737)	22.37 (568)	20.32 (516)	60.75 (1543)	30.81 (783)	404 (183)
S-ADMS200-D3-000-B	4 (101)	6 (152)	3 (76)	57.81 (1468)	64.19 (1630)	.76 (19)	1.50 (38)	60.07 (1526)	29.75 (756)	311 (141)
S-ADMS200-D3-010-B	4 (101)	6 (152)	3 (76)	79.04 (2008)	84.40 (2144)	1.10 (28)	19.38 (492)	60.75 (1543)	29.75 (756)	392 (178)
S-ADMS200-D3-100-B	4 (101)	6 (152)	3 (76)	79.27 (2013)	85.25 (2165)	19.83 (504)	1.12 (28)	60.86 (1545)	29.75 (756)	374 (170)
S-ADMS200-D3-110-B	4 (101)	6 (152)	3 (76)	100.53 (2553)	105.89 (2690)	19.53 (496)	20.14 (512)	60.86 (1545)	29.75 (756)	452 (205)

Triple Valve

Model	Inlets inch (mm)	Outlet inch (mm)	Return inch (mm)	A inch (mm)	B inch (mm)	C inch (mm)	D inch (mm)	E inch (mm)	Shipping Weight lbs (kg)
ADMS200-T3-000-B	6 (152)	6 (152)	3 (76)	58.66 (1490)	65.07 (1653)	.76 (19)	.65 (17)	60.07 (1526)	510 (231)
ADMS200-T3-010-B	6 (152)	6 (152)	3 (76)	79.97 (2031)	86.38 (2194)	.76 (19)	20.65 (525)	60.07 (1526)	633 (287)
ADMS200-T3-100-B	6 (152)	6 (152)	3 (76)	80.97 (2057)	87.38 (2219)	20.72 (526)	.08 (2)	60.18 (1529)	603 (274)
ADMS200-T3-110-B	6 (152)	6 (152)	3 (76)	102.28 (2598)	87.38 (2219)	20.72 (526)	21.93 (557)	60.18 (1529)	724 (328)

Ordering Information

	ADMS	<div style="border: 1px solid black; width: 40px; height: 20px; display: inline-block;"></div>	<div style="border: 1px solid black; width: 40px; height: 20px; display: inline-block;"></div>	<div style="border: 1px solid black; width: 40px; height: 20px; display: inline-block;"></div>	-	<div style="border: 1px solid black; width: 40px; height: 20px; display: inline-block;"></div>	<div style="border: 1px solid black; width: 40px; height: 20px; display: inline-block;"></div>	-	<div style="border: 1px solid black; width: 40px; height: 20px; display: inline-block;"></div>	<div style="border: 1px solid black; width: 40px; height: 20px; display: inline-block;"></div>	<div style="border: 1px solid black; width: 40px; height: 20px; display: inline-block;"></div>	<div style="border: 1px solid black; width: 40px; height: 20px; display: inline-block;"></div>
Valve Size 150: 1.50" Valve 200: 2.00" Valve		←										
Valve Quantity S: Single Valve D: Double Valve T: Triple Valve		←										
Return Pipe Size* 1: 1" Return 2: 2" Return 3: 3" Return		←										
Flow/BTU Package 0: None 1: Flow/BTU Package**		←										
Strainers 0: None 1: Strainers		←										
Recirc Pump 0: No Pump 1: Factory supplied and installed pump		←										

If the pump option is selected, the following information must be provided on an order.

If customization requires a mounted pump, please note that any pump that exceeds 35 lbs will be shipped loose and must be installed onsite where its weight can be supported.

Pump manufacturer: _____

Manufacturer model and p/n: _____

System head loss: _____

Required flow to maintain recirculation temperature: _____

*1" Return or 2" return are available options for single valve configurations

**Default flow meter diameters are 1.46" for ADMS150 valves and 1.67" for ADMS200 valves for the mixed outlet, and 0.75" for ADMS150 valves and 1.142" for ADMS200 valves for the return. If the non-default-size flow meter is required, consult representative.

Consult representative for additional custom options.

Typical 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 $\pm 2^{\circ}\text{F}$ in accordance with ASSE 1017 and during periods of low/zero demand and feature a user-programmable high temperature alarm. Unit shall feature Feed Forward or Predictive Control which anticipates changes in system demand and adjusts valve pre-emptively to maintain mixed set point. Controller shall be password protected and feature a user-adjustable outlet temperature range of 80 - 180°F and an approach temperature of 2°F.

System shall digitally monitor inlet pressure and temperature, mixed outlet temperature, mixed outlet set point, pressure and flow/BTUs (optional), as well as return temperature without the use of an external module. System shall control an engineer specified recirculation pump based on user-set return temperature limits. Controller shall integrate with building automation systems through Bacnet and Modbus protocols and feature local and remote temperature alarms. System will also feature a user-set and controlled, high-temperature sanitization mode for use as part of user's safe and properly designed thermal bacteria eradication protocol. In the event of a power failure or loss of cold water, system will close the hot water supply. System shall be listed/approved to ASSE 1017, cUPC, NSF and CSA 24/UL873 and should be mounted on a heavy-duty welded strut with corrosion resistance coating and factory tested as a complete unit.

System shall be a ADMSXXX-XX-XXX.

Warning

ADMS™ 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. ADMS'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 ADMS™ as part of a ASSE compliant water distribution system, including point-of-use mixings valves. Installation and adjustment of the ADMS™ 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 ADMS™ 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.



Heating and Hot Water Solutions

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