TEMPERING SOLUTIONS

Haws Integrated® provides standardized and customized tempered water solutions for complete ANSI compliance.

Haws Integrated®

ENGINEERED SOLUTIONS® FOR SAFETY

SOLUTION SPECIFIC ENGINEERING

Quality, reliability and value are driven by our knowledgeable safety thought leaders. As a best-in-class emergency response provider for more than 50 years, Haws Integrated® makes it easy for customers to fulfill their needs by offering comprehensive services for an effortless emergency solution, giving peace of mind that you are making the smartest, safest decision for your facility.

Haws Integrated designs, builds and manages standard and custom-engineered industrial safety response systems that provide tempered water for emergency wash installations.

SERVICES INCLUDE:

- Project Planning and Requirements Discovery
- Regulatory Compliance Consulting
- Specification Development and Translations
- Detailed Engineering and Customized Design
- System Build and Factory Acceptance Testing
- Complete Site Integration including Start-Up Services and On-Site Training
- System Maintenance Testing and Management
- Third-Party Certification Coordination

CUSTOMERS INCLUDE:

- 3M
- AKZO Nobel
- BASF
- BP
- Chevron
- Conoco
- Dow
- DuPont
- Eastern Petrochemicals (SHARQ)
- Exxon Mobil (Onshore, Offshore, Chemical)
- IBM
- Momentive Chemical
- Nova Chemicals
- Vale Inco
- RockTenn

ENGINEERING, PROCUREMENT & CONSTRUCTION FIRMS:

- Bechtel
- CH2M Hill
- Fluor
- Foster Wheeler
- Jacobs
- JGC
- M & W
- Petrofac
- Samsung
- Snamprogetti
- SNC Lavalin
- Tecnicas Reunidas
- Technip
- Toyo
- Worley Parsons

HAWS® SERVICES

EMERGENCY RESPONSE MAINTENANCE, REPAIRS, AND COMPLIANCE

RELIABLE PRODUCT COMMISSIONING

From new installations to existing systems, we assist in design, installation, testing, troubleshooting, and operation, providing complete and thorough services according to product operational requirements.

EXTENSIVE ANSI Z358.1 COMPETENT INSPECTOR TRAINING

Onsite and online step-by-step ANSI compliance education and training to help your team better understand the value and importance of compliant equipment.

COMPREHENSIVE ANSI Z358.1 ANNUAL INSPECTIONS

In-depth, onsite evaluation and testing to assess your facility's compliance to ANSI requirements. Robust reporting and detailed recommendations provided to bring your site to compliance with the ANSI Z358.1 Standard.

PREVENTATIVE MAINTENANCE

All-inclusive services to guarantee accurate cleaning, inspection, and replacement of necessary parts and/or units to ensure proper functionality and longevity of equipment.

REPAIRS AND UPGRADES

Onsite repairs and/or upgrades by experienced and knowledgeable ANSI compliant emergency shower and eyewash experts.

WHY *HAWS INTEGRATED?*

SAFETY STANDARD EXPERTISE
Immediate access to regulatory requirement experts

COST MINIMIZATION
Early project design and specification involvement to reduce costs and change orders

SITE INTEGRATION
Safety system incorporation with existing operations and controls

STANDARDS COMPLIANCE
Project evaluation and analysis for ongoing ANSI compliance

COMPLETE SOLUTION
Thorough and comprehensive custom emergency response system

CONTINUOUS SUPPORT
On-going project life-cycle support and maintenance services

PROJECT CERTAINTY
Knowledgeable, solution specific experience

ARE YOU ANSI COMPLIANT?

EMERGENCY EYEWASH AND SHOWER EQUIPMENT COMPLIANCE

Published by International Safety Equipment Association, ANSI Z358.1 establishes minimum performance and use requirements for eyewash and shower equipment.

SIGNIFICANT REQUIREMENTS FOR *SIMULTANEOUS USE* INCLUDE:

- Eyewash must deliver a minimum of 0.4 gallons per minute (1.5 LPM) or 3 gallons per minute (11.4 LPM) for an eye/face wash
- Drench shower must deliver a minimum of 20 gallons per minute (75.7 LPM)
- Must be capable of simultaneous use
- Must deliver tepid flushing fluid, defined as 60°-100° F (16° - 38° C)

WHY TEPID WATER? Providing The Right Water Temperature Will Provide a Comfortable Flushing Environment and Encourage a Full 15-Minute Flush To:

- Help cool burns
- Help prevent hypothermia
- Help prevent chemical absorption
- Minimize further injury

FOR MORE ANSI COMPLIANCE INFORMATION, VISIT www.Hawsco.com

AXION® MSR

AXION MSR CAN SOLVE THE 3 MOST COMMON COMPLIANCE ISSUES BY PROVIDING:

- **Simultaneous Flow**
- **Non-Injurious Controlled Flow**
- **Even Eyewash Flow Patterns**

AXION®'s ground-breaking designs continue to change the emergency response landscape by offering the only *medically superior response*® solution in the industry.

ANSI / ISEA Z358.1

REQUIRES THAT A CONTROLLED FLOW OF FLUSHING FLUID IS PROVIDED AT A VELOCITY LOW ENOUGH TO BE NON-INJURIOUS TO THE USER.

AXION® EYE/FACE WASH

INJURY REDUCTION

The trademarked inverted eye/face wash water streams gently flush contaminants away from sensitive glands and ducts that surround the eye, adding protection to valuable organs to reduce unnecessary injury.

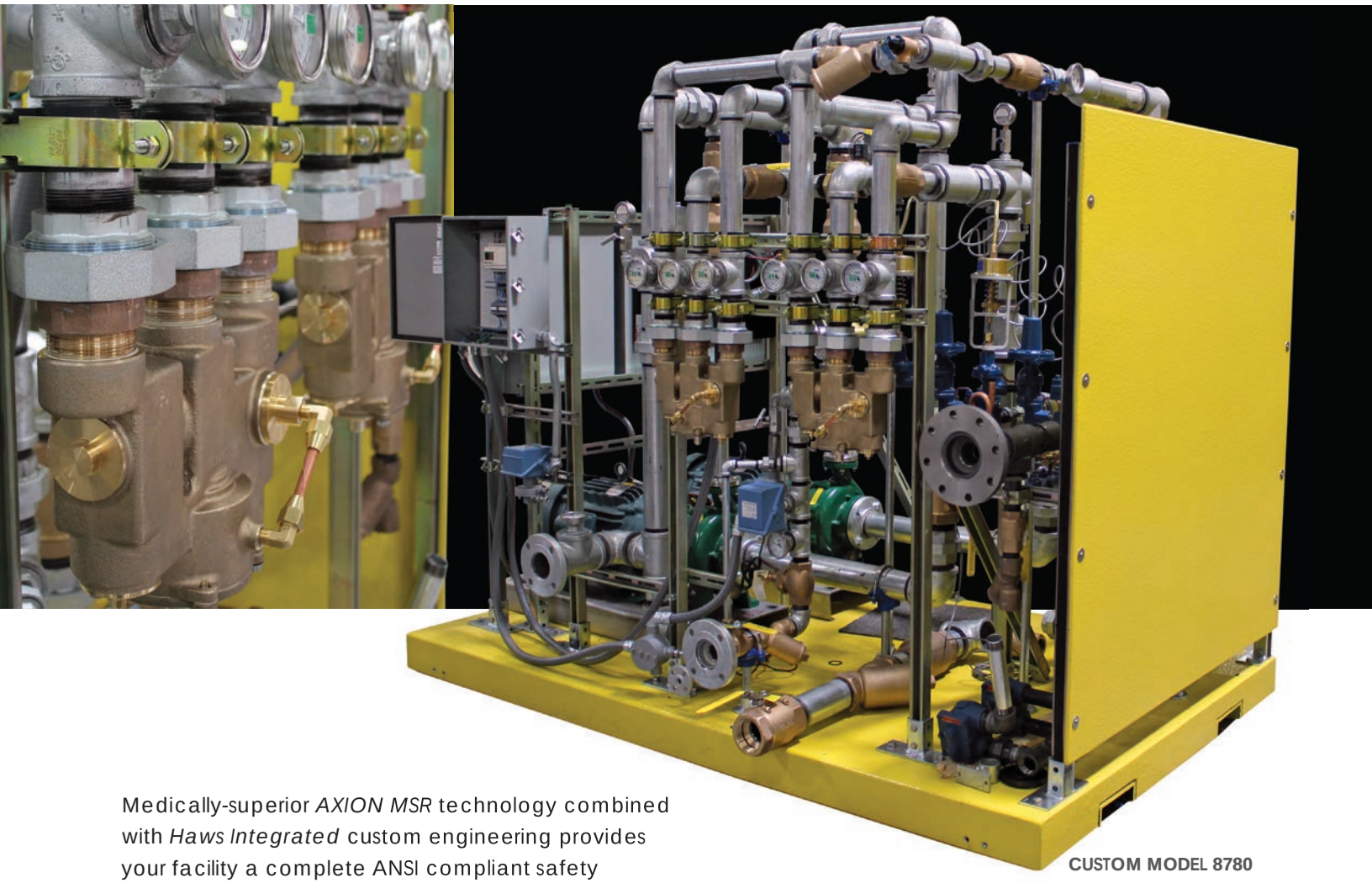
INTEGRAL FLOW CONTROL

Predictable eye/face wash stream heights and laminar flow provide consistent pressure for greater user comfort. Flow controls within the showerhead regulate the flow rate to ensure water is available for the eye/face wash to allow for simultaneous use.

VICTIM COMFORT

The hydrodynamic showerhead design minimizes the strong physical pressure by releasing smaller discreet droplets and spinning the water inlet makes the distribution even across the entire footprint of the flow.

AXION® MSR: THERMOSTATIC MIXING VALVES



CUSTOM MODEL 8780

Medically-superior *AXION MSR* technology combined with *Haws Integrated* custom engineering provides your facility a complete ANSI compliant safety response system.

AXION® VALVES

INJURY REDUCTION

Redundant anti-scald protection with internal cold water bypass and positive shut off helping reduce further injury.

INCREASED VICTIM COMFORT

Wax-based thermostat technology for fast response time with reliable temperature control.

FAIL-SAFE PROTECTION

Highest cold water bypass flow rate in the industry and lowest internal pressure drop to guarantee functionality.

FLOW CAPACITIES OF MIXING VALVES

MODEL	INLET	OUTLET	MINIMUM FLOW	INTERNAL COLD WATER BY-PASS AT 30PSI DROP	PRESSURE DROP										
9201E	1-1/4"	1-1/4"			1	2	5	10	15	20	25	30	45	60	PSI
					.069	.138	.345	.689	1.03	1.38	1.72	2.07	3.10	4.13	BAR
			1	20	6	8	13	18	22	25	28	31	38	44	GPM
			4	76	22	30	48	68	83	96	107	117	144	166	L/MIN
9201EFE	1/2"	3/4"			1	2	5	10	15	20	25	30	45	60	PSI
					.069	.138	.345	.689	1.03	1.38	1.72	2.07	3.10	4.13	BAR
			1	10	2	3	5	7	9	10	11	12	15	17	GPM
			4	38	8	12	19	26	32	37	41	45	56	64	L/MIN
9201EW	1/2"	1/2"			1	2	5	10	15	20	25	30	45	60	PSI
					.069	.138	.345	.689	1.03	1.38	1.72	2.07	3.10	4.13	BAR
			1	4	2	3	4	6	7	8	9	10	12	14	GPM
			4	14	7	10	16	22	27	31	34	38	44	53	L/MIN
9201H	1"	1-1/4"			1	2	5	10	15	20	25	30	45	60	PSI
					.069	.138	.345	.689	1.03	1.38	1.72	2.07	3.10	4.13	BAR
			1	20	6	8	13	18	22	25	28	31	38	44	GPM
			4	76	23	30	49	68	83	95	106	117	144	167	L/MIN
9202E	1-1/4"	1-1/4"			1	2	5	10	15	20	25	30	45	60	PSI
					.069	.138	.345	.689	1.03	1.38	1.72	2.07	3.10	4.13	BAR
			1	50	14	20	32	45	55	64	71	78	95	110	GPM
			4	299	53	76	121	170	280	242	269	295	360	416	L/MIN
TWBS.EWE	1/2"	3/4"			1	2	5	10	15	20	25	30	45	60	PSI
					.069	.138	.345	.689	1.03	1.38	1.72	2.07	3.10	4.13	BAR
			1	10	2	3	5	7	9	10	11	12	15	17	GPM
			4	38	8	12	19	26	32	37	41	45	56	64	L/MIN
TWBS.HF	2"	2"			1	2	5	10	15	20	25	30	45	60	PSI
					.069	.138	.345	.689	1.03	1.38	1.72	2.07	3.10	4.13	BAR
			1	79	14	20	32	45	55	64	71	78	95	110	GPM
			4	299	53	76	121	170	280	242	269	295	360	416	L/MIN
TWBS.SHE	1-1/4"	1-1/4"			1	2	5	10	15	20	25	30	45	60	PSI
					.069	.138	.345	.689	1.03	1.38	1.72	2.07	3.10	4.13	BAR
			1	50	13	19	30	43	52	60	68	74	91	105	GPM
			4	189	49	72	114	163	197	227	257	280	344	397	L/MIN








PERFORMANCE SERIES

WATER TEMPERING SOLUTIONS

The Performance Series provides ANSI Z358.1 compliant tempered water solution options with reduced lead time and price by offering standardized configurations to meet your decontamination needs. With multiple tank, electrical and blending capability options, the Performance Series will be sure to have your complete solution. All units are built and pre-tested for immediate usage.

FEATURES:

- Standard & Customizable Configurations
- Reduced Lead Time
- Price and Resource Efficient
- CSA Certified for ANSI Z358.1 Compliance
- CSA Hazardous Location Certifiable
- Enhanced Maintenance Safety Features
- Fully Assembled and Engineer Tested
- Advanced Victim Comfort with AXION® MSR Technology
- Anti-Scald and Anti-Freeze Protection
- Full-Flow Cold Water Bypass
- Standard Electrical Systems in Various Voltages

TEMPERED WATER: PERFORMANCE SERIES

Model **8710**

Outdoor, heated, tempered water shower and eye/face wash system. This 5' x 9' (1.52 x 2.74 M) fiberglass enclosure uses a 20 GPM (75.7 LPM) AXION® showerhead, a 3 GPM (11.4 LPM) AXION® eye/face wash, and a 3 GPM (11.4 LPM) drench hose.

Additional features include:

- Internal space heater for 70°F (21°C) internal booth temperature control
- Built-in UV protection
- Audible and visible alarms
- Spring-loaded, self-closing doors
- Internal hot water supply
- Scald and freeze protection
- Advanced programmable monitoring control system
- Electrical system is easily adapted to voltages upon request
- Available operating temperature range: -40°F to 100°F (-40°C to 38°C)

Model **8720**

Outdoor, overhead tank, tempered water shower and eye/face wash system for use in remote areas with no water supply. This 4.6' x 4.5' (1.4 x 1.37 M) fiberglass enclosure uses a 20 GPM (75.7 LPM) AXION® showerhead and a 3 GPM (11.4 LPM) AXION® eye/face wash.

Additional features include:

- 450-gallon (1703 L) fiberglass gravity-fed water tank
- Suitable for use in Seismic Zone C
- Built-in UV protection
- Plug-n-play with quick electrical disconnects
- Internal space heater for 70°F (21°C) internal booth temperature control
- Audible and visible alarms
- Spring-loaded, self-closing doors
- Scald and freeze protection
- Advanced programmable monitoring control system
- Electrical system is easily adapted to voltages upon request
- Available operating temperature range: -40°F to 100°F (-40°C to 38°C)

Model **8730**

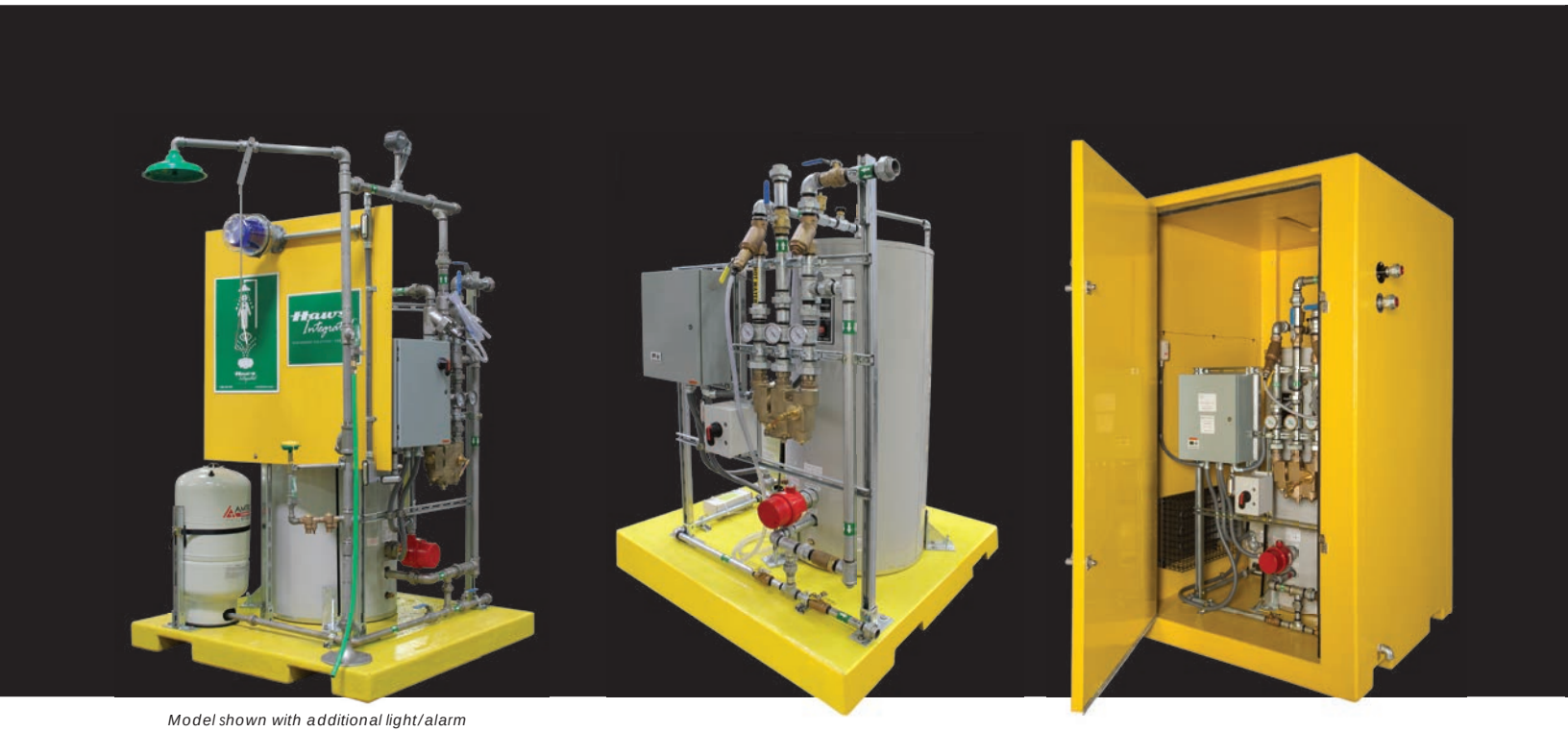
Outdoor shower and eye/face wash system. This 5' x 4' (1.52 x 1.22 M) fiberglass enclosure uses a 20 GPM (75.7 LPM) AXION® showerhead, a 3 GPM (11.4 LPM) AXION® eye/face wash, and a 3 GPM (11.4 LPM) drench hose.

Additional features include:

- Internal space heater for 70°F (21°C) internal booth temperature control
- Built-in UV protection
- Audible and visible alarms
- Spring-loaded, self-closing doors
- Scald and freeze protection
- Advanced programmable monitoring control system
- Electrical system is easily adapted to voltages upon request
- Available operating temperature range: -40°F to 100°F (-40°C to 38°C)

ALL PERFORMANCE SERIES MODELS HAVE MULTIPLE TANK AND ELECTRICAL OPTIONS AVAILABLE

TEMPERED WATER: PERFORMANCE SERIES



Model shown with additional light/alarm

Model **8760**

Skid-mounted tempered water shower and eye/face wash system. This 5' x 5' (1.52 x 1.52 M) unit uses a 20 GPM (75.7 LPM) AXION® showerhead, a 3 GPM (11.4 LPM) AXION® eye/face wash, and a 3 GPM (11.4 LPM) drench hose.

Additional features include:

- Audible and visible alarms
- Internal hot water supply
- Advanced programmable monitoring control system
- Electrical system is easily adapted to voltages upon request
- Available operating temperature range: 40°F to 100°F (4°C to 38°C)

Model **8780**

5' x 5' (1.52 x 1.52 M) Water tempering skid supplying tempered water to single or multiple showers and/or eyewashes.

Additional features include:

- Scald protection
- Electrical system is easily adapted to voltages upon request
- Advanced programmable monitoring control system
- Available operating temperature range: 40°F to 100°F (4°C to 38°C)

Model **8785**

5' x 5' (1.52 x 1.52 M) Fiberglass, outdoor water tempering booth supplying tempered water to single or multiple showers and/or eyewashes.

Additional features include:

- Internal space heater for 70°F (21°C) internal booth temperature control
- Built-in UV protection
- Scald and freeze protection
- Advanced programmable monitoring control system
- Available operating temperature range: -40°F to 100°F (-40°C to 38°C)

TANK and ELECTRICAL OPTIONS

MODEL	8710	8730	8760	8780	8785	8720
TANK SIZES						
Model .21 / 119 Gal.	X	Unit does not have a tank	X	X	X	Standard with 450-gal. (1703 L) tank
Model .22 / 120 Gal. ASME	X		X	X	X	
Model .23 / 330 Gal. ASME	X		X	X	X	
Model .25 / 200 Gal. AMSE	X		X	X	X	
ELECTRICAL OPTIONS						
Model .31 / NEMA 4	X	X	X	X	X	X
Model .32 / CL1 DIV2	X	X	X	X	X	X

INSTANTANEOUS HEATERS

ELECTRIC WATER HEATERS

FEATURES:

- Uses a high-capacity flow meter with inlet and outlet temperature sensors to maintain set temperature points
- Thermo-Optical sensor for protection against entrained air or improper commissioning
- Eliminates the need for thermostatic mixing valves
- Up to 6 heating cartridges and up to 12 direct heating elements with molded-in termination rods
- Compact power uses up to 21kW per heating chamber
- On-board diagnostics with digital LCD display
- 208V & 480V heaters are UL listed to ANSI/UL 499 standard; 600V heaters are UL listed to CSA22.2 No.88 standard
- Rated Pressure: 150 psi

Model **9326**

Model **9321** – **NEMA 1, Indoor Tankless Water Heater**
- Compact unit enclosed in a powder-coated, cold-rolled steel NEMA 1 rated cabinet
- Compact size measures 18" x 27" x 11" (45.7 x 68.6 x 27.9 cm)
- Designed for wall-mounted, indoor installation

Model **9326 – NEMA 4, Indoor Tankless Water Heater**
- Enclosed in a powder-coated, cold-rolled steel NEMA 4 rated cabinet
- Unit measures 30" x 24" x 13.5" (76.2 x 70 x 34.3 cm)
- Freeze protection option in temperatures down to -30°F (-34°C)

Model **9327 – NEMA 4X, Indoor Tankless Water Heater**
- Enclosed in a 304 or 316 stainless steel NEMA 4X rated cabinet
- Unit measures 30" x 24" x 13.5" (76.2 x 70 x 34.3 cm)
- Freeze protection option in temperatures down to -30°F (-34°C)

STEAM WATER HEATERS

Replaces hot water tanks when pressurized steam is available. When an emergency shower or eyewash is activated, water flow opens a steam control valve. The steam enters a brazed plate heat exchanger, instantly heating the water. An ASSE 1071 certified AXION® thermostatic mixing valve blends hot and cold water to produce an output of 80°F (27°C) tepid water. The steam valve will remain closed should there be a loss of water pressure.

Model **9400 – AXION® Steam Tankless Water Heater**
- Provides 3 to 25 GPM (11 to 95 LPM) of tepid water
- Operates on typical plant steam pressure, 45 - 60 PSIG (3 - 4 BAR) is recommended

Model **9400LPS – Low-Pressure AXION® Steam Tankless Water Heater**
- Provides 3 to 25 GPM (11 to 95 LPM) of tepid water
- Low-pressure system operates on typical plant steam pressure,15-30 PSIG (1-2 BAR)

AXION® TEMPERED WATER...

THE MEDICALLY SUPERIOR RESPONSE®

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