



MODEL SW1A+

TECHNICAL DATA SHEET

A-PLUS STEAM FIRED COMMERCIAL WATER HEATER

The AERCO SW1A+ water heater is designed to satisfy potable water heating needs in commercial and institutional environments. The packaged system incorporates real-time, load tracking and responsive controls to maintain accurate hot water temperatures under diversified loads. And AERCO's unique heat exchanger design increases operating efficiency, simplifies maintenance and promotes long life.

Packaged with either electronic or pneumatic controls, the heater maintains outstanding temperature control when operated under constant load conditions with variances held to $\pm 4^{\circ}\text{F}$ under normal load changes. An integrated load monitoring system and high-turndown steam control valve deliver accurate temperature control without the need for storage tanks, blending valves or other temperature averaging components. When packaged with the electronic control system, the heater can be remotely monitored and/or fully integrated with BAS software.

A parallel stack of helically wound coils form a cross counter-flow heat exchanger – one of the most efficient designs available for domestic water heating. This sub-cooling design eliminates wasteful flash losses because all Latent Heat, and much of the Heat of the Liquid, is transferred from the steam. Condensate outlet temperatures of $\leq 190^{\circ}\text{F}$ can be expected. A simple union orifice eliminates the need for a trap.

The baffle-free, flexible coils of the heat exchanger continuously expand and contract with changing water and steam temperatures. The self-descaling nature of this automatic action eliminates the need for periodic, acid cleaning or tube scraping. The free floating design eliminates stress so effectively that, where water quality is especially harsh, the SW1A+ can be quickly and easily "thermal shocked" as part of a routine maintenance plan. All water wetted parts are copper or copper alloy materials – the best choice of materials to further ensure longevity.

The unit's semi-instantaneous design (steam in tubes and water in shell) is compatible with low or high steam pressures. Installation is easy because the small footprint (2 ft²) fits through a standard doorway. Tight temperature control, high thermal efficiency, low maintenance, longevity and overall reliability make the AERCO A-Plus the most logical choice for any commercial or institutional water heating installation.

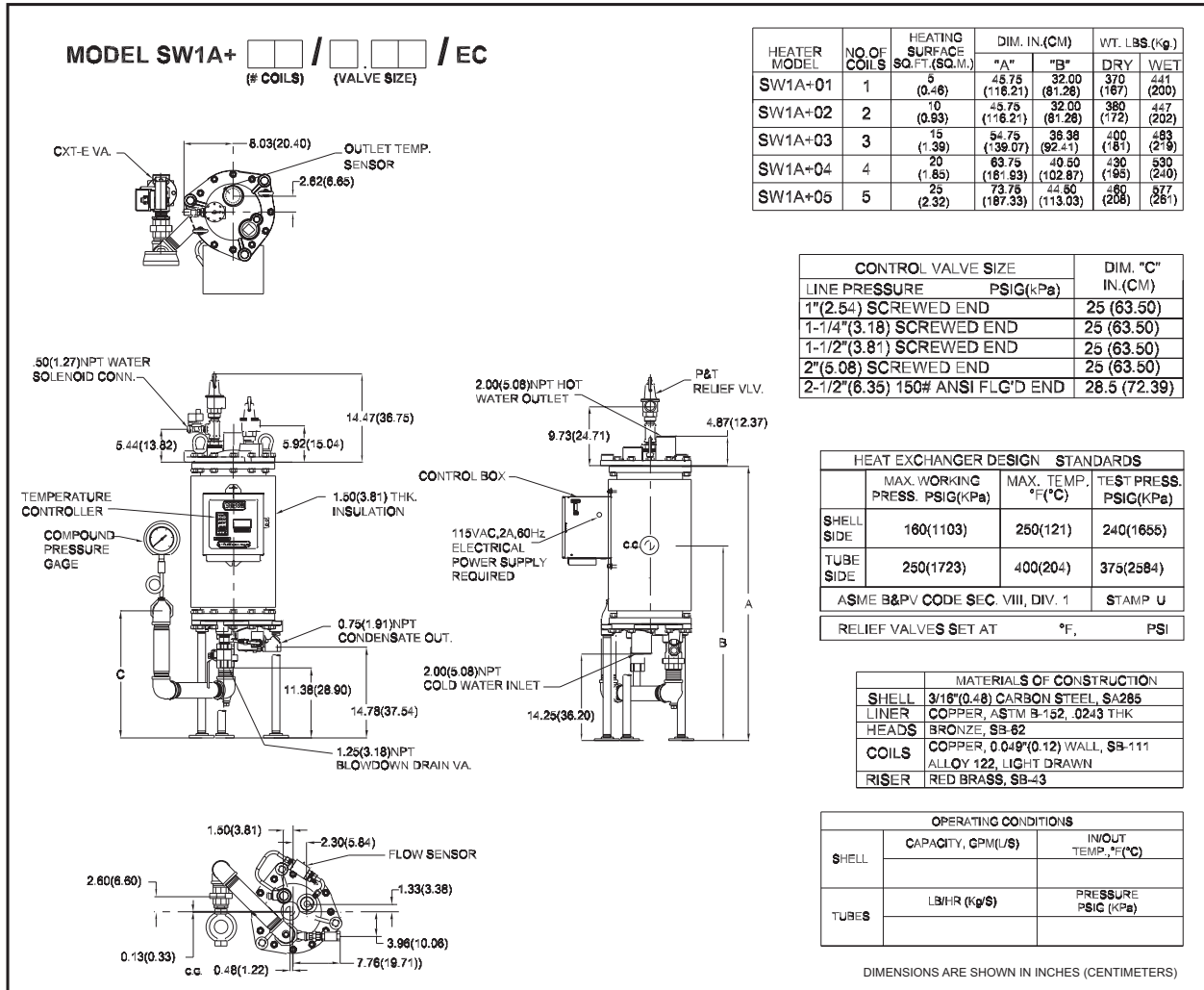
SW1A+ FEATURES

- Accurate Temperature Control $\pm 4^{\circ}\text{F}$
- Choice of Electronic or Pneumatic Controls
- Compact Foot Print $\leq 2\text{ ft}^2$
- Automatic Self-Descaling
- Automatic Condensate Subcooling
- Fully Modulating Variable Steam Input
- No Trap or Storage Tanks Required
- Low Surface Temperature
- ASME- B&PV Code Sec. VIII, Div. 1 Stamped
- All Copper or Copper Alloy Wetted Surfaces
- 10-Year Warranty on Complete Hx*
- 20-Year Warranty on Pressure Vessel and Integral Demand Anticipator*
- Supports a Variety of Applications
 - 5 to 150 PSIG Steam Supply
 - Intermittent Water Flow Rates Up to 115 GPM
 - Set Point Range 50°F to 205°F
 - 160 PSIG ASME Working Pressure Certified
 - Single or Multiple Installation
 - Ideal for New or Retrofit



*Consult AERCO website or Engineering Manual for complete warranty details.

DIMENSIONS



SW1A+ SPECIFICATIONS

w/ Electronic Controls

w/ Pneumatic Controls

| | | |
|--|-------------------------------|-------------------------|
| Shell Side Pressure Drop | 4PSIG @ max. rated flow | 4PSIG @ max. rated flow |
| Ambient Operating Temperature | 0°F to 131°F | 0°F to 131°F |
| Electrical Requirements | 120/1/60 1 Amp | 120/1/60 1 Amp |
| |220/1/50 1 Amp | |
| Standby Amperage Draw | 1 Amp | 0.1 Amp |
| High Limit "Tripped" Amperage Draw | 1.5 Amp | 0.5 Amp |
| Max. Continuous Water Flow Rate | 55 GPM | 55 GPM |
| Max. Intermittent Flow Rate | 115 GPM | 115 GPM |
| Max. Steam Supply Pressure | 150 PSIG | 150 PSIG |
| Max. Shell Side Operating Pressure | 150 PSIG* | 150 PSIG* |
| Adjustable Temperature Control | up to 205°F | up to 230°F |
| Adjustable High Limit Control | up to 250°F | up to 250°F |
| Water Connection Outlet | 2" FNPT | 3" FNPT |
| Water Connection Inlet | 2" FNPT | 2" FNPT |
| Air Consumption | N/A | 0.10 scfm@25PSIG |
| Air Supply Min. Requirements | N/A | 25 PSIG |
| Air Supply Max. Requirements | N/A | 30 PSIG |

* Standard 150 PSIG, 210°F P&T relief valve supplied; consult AERCO representative for higher settings.

AVAILABLE OPTIONS

0.065" thick copper or copper-nickel tubing for increased corrosion resistance
Dry contacts for remote "High Limit Tripped Status" indication
Pressure gradient monitoring system can be provided in lieu of double wall construction where codes allow

Specifications are subject to change. Consult website or contact AERCO