



*AERCO's
SmartPlate™
Line of Water
Heaters*

*The Leader in
High Efficiency Innovation*

AERCO
Heat You Can Bank On

A NEW APPROACH TO WATER-TO-WATER HEATING

AERCO has revolutionized the concept of brazed plate and plate and frame potable water heating with the introduction of our SmartPlate™ line of single- and double-wall water heaters. SmartPlate water heaters were specifically engineered to complement today's condensing boilers in low temperature applications to promote system-wide energy efficiency. And unlike competitive products, SmartPlate heaters incorporate special features and ancillary components that set a new standard for fully-packaged, turn-key solutions. Easily installed in any combination space/DHW heating system, you can count on SmartPlate heaters to maintain accurate temperature control under diversified loads without the need for storage tanks.

- **Accurate temperature control**
- **Maximizes energy efficiency**
- **Advanced electronic controls**
- **Integrated safety shut-off system**
- **Easy to install and maintain**
- **Long lasting durability**
- **Fully packaged solution**
- **Ships fully assembled**
- **Compact <10 ft² footprint**
- **Supports 2-way and 3-way applications**
- **Single- and double-wall configurations**





“Uniquely designed to work with condensing boilers to maximize system efficiency.”

PRECISE TEMPERATURE CONTROL

Sensors located at the potable water inlet and outlet provide feed forward and feedback temperature signals to SmartPlate's PID controller and fast acting electronic control valve to deliver accurate temperature control under diversified loads without storage tanks or blending valves.

- **±2°F under steady state conditions**
- **±4°F under normal load changes**
- **±10°F from NO load to FULL load**
- **Return to set point within 30 seconds**
- **Full open to full close in 2 seconds**
- **Integrated "fail safe" safety shut-off system**
- **No blending/mixing valves or storage tanks required**



AERCO's state-of-the-art electronic controller can be remotely monitored and/or fully integrated with BAS software via Modbus communications protocol to control and/or poll important operating parameters of the heater including operating set point, outlet temperature, peak temperature, average temperature, low temperature and more! Operating parameters for the heater are entered directly to the digital controller – just "set and go."

Importantly, SmartPlate heaters incorporate a safety shut-off system that operates independently of the unit controller in the event of an over-temperature condition or power loss at the facility.

DESIGNED TO MAXIMIZE SYSTEM EFFICIENCY

Widely recognized as the most thermally efficient water-to-water heat exchangers available for potable water heating, SmartPlate heaters incorporate a stainless steel, brazed plate (single-wall) or plate and frame (double-wall) style heat exchanger applied in a counter flow design. As a result, SmartPlate heaters can utilize boiler water as little as 5°F above the desired DHW temperature. They are ideal for use in low temperature systems!

- **Eliminate waste associated with overheating DHW and then "mixing down" to safe temperatures**
- **Low supply water temperatures maximize boiler plant efficiency**
- **Pair with condensing boilers to further increase fuel savings**
- **Minimize radiant losses throughout the system**
- **A lower system set point produces far less scale for increased thermal efficiency, reduced maintenance and a longer heater life**
- **Minimize over temperature conditions and potential for scalding**



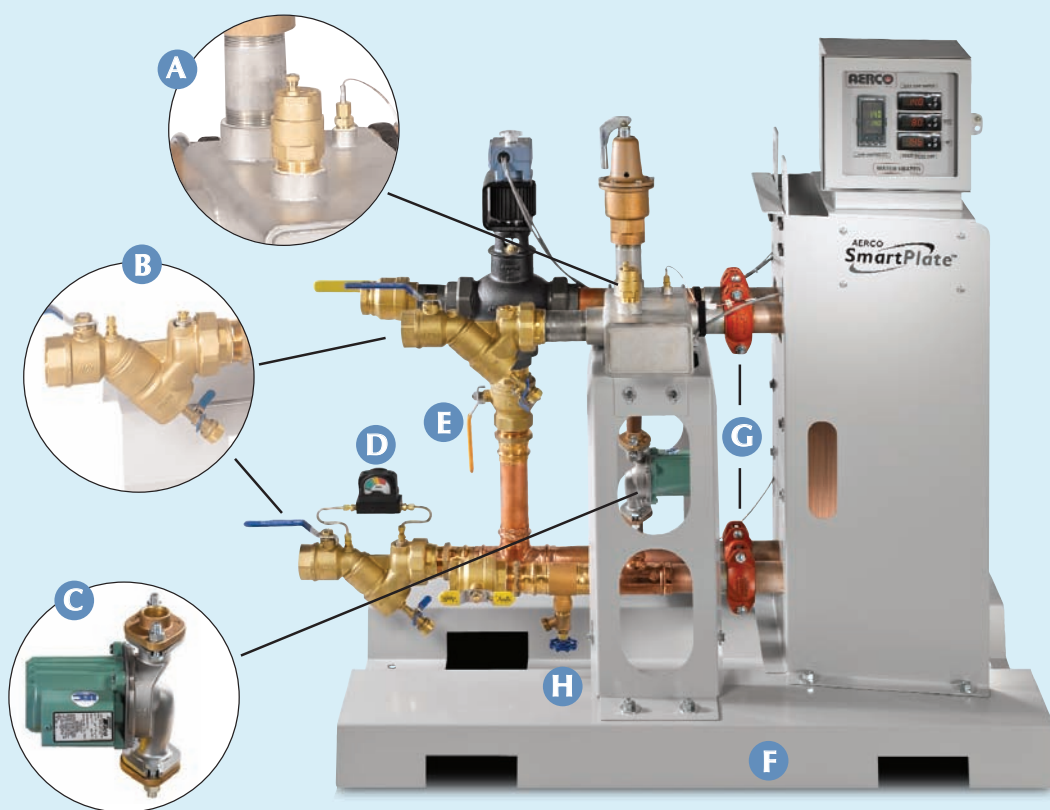
Single-Wall, Brazed Plate Heat Exchanger



Double-Wall, Plate and Frame Heat Exchanger

FULLY PACKAGED TO SIMPLIFY INSTALLATION AND MAINTENANCE

Designed to be a truly turn-key solution, AERCO has packaged each SmartPlate heater with a host of ancillary components you just won't find in other water heaters on the market. Despite a modest <10 ft² footprint and under 5' height, each heater includes a control panel and sensors, three-way electronic control valve, potable water side circulator with clean out connections, DHW drain valve, as well as shut-off valves and inlet strainers on both the boiler water and DHW sides to simplify maintenance for the life of the equipment. And to ensure longevity, all water wetted parts are stainless steel, copper or copper alloy materials. Simple to install, each unit ships fully assembled on a uniquely designed, easy-to-move base with single point header connections for domestic hot water, cold water, boiler water inlet, boiler water outlet and electrical power supply. Units can be applied in 2-way or 3-way operation with controller facing to the left, right or back sides of the unit.



- A** **Air Vent/Clean-Out Connection** for air elimination and to input de-liming solution when cleaning is required.
- B** **Shut-off Valves & Inlet Strainers with Integral Blow-down Valve** for easy maintenance of both the boiler water and DHW sides of the unit.
- C** **Potable Water Side Circulator** maintains constant flow through the heat exchanger at velocity required to retard scale drop-out and circulate de-liming solutions when cleaning is required.
- D** **Differential Pressure Gauge** at boiler inlet to alert if strainer is becoming clogged.
- E** **Switch to 2-Way Operation** using manual shut-off connected to the 3-way control valve.
- F** **Easy-Lift Base** can be moved with pallet jack or forklift from any side for easy installation.
- G** **Hx Disconnect Fittings** make removal of the heat exchanger fast and easy.
- H** **Drain Valve** on DHW side for easy maintenance.



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