The AERCO DW+ 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 can be fueled using steam.

Packaged with either electronic or pneumatic controls, the heater maintains outstanding temperature control when operated under constant load conditions with variances held to ±2.2°C under normal load changes of up to 25% of water heater capacity. An integrated load monitoring system and high turndown 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.

The DW+ is constructed of double-wall tubing — two distinct, copper tube walls separate the potable water from the heat transfer medium via a vented air gap. This continuous air path is atmospherically vented through a clearly labeled, visible, leak detection port. Unit construction meets all double-wall heat exchanger requirements as set forth by BOCA (National Plumbing Code), IAPMO (Uniform Plumbing Code) and NAPHCC (National Standard Plumbing Code) the three national associations which reference double-wall requirements. All water wetted parts are 304 stainless steel, virgin Teflon, copper or copper alloy – the best materials available for longevity in even the most aggressive potable water supplies.

The unit’s semi-instantaneous design (steam in tubes and water in shell) is compatible with low or high steam pressures. And installation is easy because of its small footprint (0.37 m²) and doorway size. Tight temperature control, low maintenance, longevity and overall reliability make the AERCO DW+ the most logical choice for any commercial or institutional water heating installation.

**Features**

- Accurate temperature control ±2.2°C
- Compact footprint <0.37 m²
- Fully modulating variable primary input
- All stainless, TFE, copper or copper alloy wetted surfaces
- UL-listed as Double-wall Heat Exchanger for potable hot water use
- ASME- B&PV Code Sec. VIII, Div. 1 Stamped
- 20-year warranty on pressure vessel and integral demand anticipator
- Supports a variety of applications
  - 0.34 to 3.6 bar steam supply
  - Set point range 10°C to 96°C
  - Single or multiple installation
  - Ideal for new or retrofit
  - ASME Working Pressure Certified
    - 12.8 bar for DW-24 & DW-68
    - 12.4 bar for DW-45
Dimensions

**MODEL SWDW-24 / [VALVE SIZE] / EC**

<table>
<thead>
<tr>
<th>CONTROL VALVE SIZE IN (CM)</th>
<th>DIM &quot;A&quot; IN./CM</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.00&quot; (2.54) SCREWED END</td>
<td>25.9 / 65.8</td>
</tr>
<tr>
<td>1.25&quot; (3.18) SCREWED END</td>
<td>25.6 / 65.0</td>
</tr>
<tr>
<td>1.50&quot; (3.81) SCREWED END</td>
<td>25.7 / 65.3</td>
</tr>
<tr>
<td>2.00&quot; (5.08) SCREWED END</td>
<td>27.2 / 69.1</td>
</tr>
<tr>
<td>2.50&quot; (6.35) 150# ANSI FLANGED END</td>
<td>31.4 / 79.8</td>
</tr>
<tr>
<td>3.00&quot; (7.62) 150# ANSI FLANGED END</td>
<td>32.3 / 82.0</td>
</tr>
</tbody>
</table>

![Diagram of the equipment with dimensions and annotations.](image)

- **3" NPT HOT WATER OUTLET**
- **115 VAC, 2A, 60 Hz POWER SUPPLY REQUIRED**
- **TEMP. CONTROLLER**
- **DOUBLE WALL TUBE LEAK DETECTION PORT (NOT TO BE PLUGGED)**
- **3/4" NPT PLUGGED DRAIN**
- **2" NPT CONDENSATE OUTLET**
- **FLOAT & THERMOSTATIC STEAM TRAP (BY OTHERS)**
- **PRESSURE GAUGE**
- **84.28 [214.56]**
- **CXT-E VALVE**
- **VACUUM BREAKER**
- **2 1/2" NPT STEAM INLET**

**HEAT EXCHANGER DESIGN STANDARDS**

<table>
<thead>
<tr>
<th></th>
<th>MAX. WORKING PRESSURE PSIG (KPa)</th>
<th>MAX. TEMP. °F °C</th>
<th>TEST PRESS. PSIG (KPa)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SHELL SIDE</td>
<td>185 (1276)</td>
<td>400 (204)</td>
<td>278 (191) COLD</td>
</tr>
<tr>
<td>TUBE SIDE</td>
<td>52 (359)</td>
<td>300 (149)</td>
<td>500 (3447)</td>
</tr>
</tbody>
</table>
MODEL SWDW-24 / 4.00 / EC

CONTROL VALVE SIZE IN (CM)
4.00" (10.18) 150# ANSI FLANGED END

Dimensions

HEAT EXCHANGER DESIGN STANDARDS

<table>
<thead>
<tr>
<th></th>
<th>MAX. WORKING PRESSURE, PSIG (kPa)</th>
<th>MAX. TEMP. °F (°C)</th>
<th>TEST PRESSURE, PSIG (kPa)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SHELL SIDE</td>
<td>185 (1276)</td>
<td>400 (204)</td>
<td>278 (197)</td>
</tr>
<tr>
<td>TUBE SIDE</td>
<td>52 (359)</td>
<td>300 (149)</td>
<td>500 (3447)</td>
</tr>
</tbody>
</table>
Dimensions

### MODEL SWDW-45 / [ ] / EC

**CONTROL VALVE SIZE IN (CM) VS. DIM "A" IN./CM**

<table>
<thead>
<tr>
<th>CONTROL VALVE SIZE IN (CM)</th>
<th>DIM &quot;A&quot; IN./CM</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.00&quot; [2.54] SCREWED END</td>
<td>34.3 / 87.2</td>
</tr>
<tr>
<td>1.25&quot; [3.18] SCREWED END</td>
<td>34.5 / 87.7</td>
</tr>
<tr>
<td>1.50&quot; [3.81] SCREWED END</td>
<td>34.2 / 87.2</td>
</tr>
<tr>
<td>2.00&quot; [5.08] SCREWED END</td>
<td>35.0 / 88.9</td>
</tr>
<tr>
<td>2.50&quot; [6.35] SCREWED END</td>
<td>40.1 / 101.9</td>
</tr>
<tr>
<td>3.00&quot; [7.62] 150# ANSI FLANGED END</td>
<td>40.8 / 103.8</td>
</tr>
<tr>
<td>4.00&quot; [10.18] 150# ANSI FLANGED END</td>
<td>35.9 / 91.2</td>
</tr>
</tbody>
</table>

**HEAT EXCHANGER DESIGN STANDARDS**

<table>
<thead>
<tr>
<th></th>
<th>MAX. WORKING PRESSURE, PSIG (kPa)</th>
<th>MAX. TEMP, °F (°C)</th>
<th>TEST PRESS., PSIG (kPa)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SHELL SIDE</td>
<td>180 (1241)</td>
<td>250 (121)</td>
<td>270 (1862) COLD</td>
</tr>
<tr>
<td>TUBE SIDE</td>
<td>52 (359)</td>
<td>300 (149)</td>
<td>500 (3447)</td>
</tr>
</tbody>
</table>

**Diagram:**
- OUTLET TEMP. SENSOR
- 3" NPT HOT WATER OUTLET
- 115 VAC, 2A, 60 HZ POWER SUPPLY REQUIRED
- 1/2" NPT VALVE TRAP CONNECTION
- VACUUM BREAKER
- PRESS. GAUGE
- STEAM INLET
- FLOAT & THERMOSTATIC STEAM TRAP (BY OTHERS)
- P & T RELIEF VALVE
- 1/2" WATER SOLENOID
- P & T RELIEF VALVE
- 4 X 0.75 [Ø 1.91] HOLES
**Dimensions**

**Model SWDW-68** / [ ] / [ ] / EC

(VAUE SIZE)

<table>
<thead>
<tr>
<th>CONTROL VALVE SIZE IN (CM)</th>
<th>DIM &quot;A&quot; IN./CM</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.00&quot; (2.54) SCREWED END</td>
<td>34.3 / 87.2</td>
</tr>
<tr>
<td>1.25&quot; (3.18) SCREWED END</td>
<td>34.5 / 87.7</td>
</tr>
<tr>
<td>1.50&quot; (3.81) SCREWED END</td>
<td>34.2 / 87.2</td>
</tr>
<tr>
<td>2.00&quot; (5.08) SCREWED END</td>
<td>35.0 / 88.9</td>
</tr>
<tr>
<td>2.50&quot; (6.35) SCREWED END</td>
<td>40.1 / 101.9</td>
</tr>
<tr>
<td>3.00&quot; (7.62) 150# ANSI FLANGED END</td>
<td>40.8 / 103.8</td>
</tr>
<tr>
<td>4.00&quot; (10.18) 150# ANSI FLANGED END</td>
<td>35.9 / 91.2</td>
</tr>
</tbody>
</table>

**3"NPT HOT WATER OUTLET**

**115 VAC, 2A, 60 HZ POWER SUPPLY REQUIRED**

**TEMP. CONTROLLER**

**PRESS. GAUGE**

**STEAM INLET**

**CXT.E VALVE**

**VACUUM BREAKER (STEAM TO WATER)**

**FLOAT & THERMOSTATIC STEAM TRAP (BY OTHERS)**

**4" 150# FLANGE CONDENSATE OUTLET**

**DOUBLE WALL TUBE LEAK DETECTION PORT (NOT TO BE PLUGGED)**

**3/4" NPT PLUGGED DRAIN**

**RECIRC. PUMP**

**3"NPT COLD WATER INLET**

**HEAT EXCHANGER DESIGN STANDARDS**

<table>
<thead>
<tr>
<th></th>
<th>MAX. WORKING PRESSURE, PSIG (kPa)</th>
<th>MAX. TEMP. °F (°C)</th>
<th>TEST PRESS, PSIG (kPa)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SHELL SIDE</td>
<td>185 (1276)</td>
<td>350 (177)</td>
<td>278 (197)</td>
</tr>
<tr>
<td>TUBE SIDE</td>
<td>52 (359)</td>
<td>300 (149)</td>
<td>500 (3447)</td>
</tr>
</tbody>
</table>

**DIM "A" SEE TABLE**

**1/2" NPT VALVE TRAP CONNECTION**

**24.00 [60.96]**

**21.00 [53.34]**

**19.50 [49.53]**

**16.50 [41.91]**

**4 X 0.75 [Ø1.91]**

**HOLE**

**3.50 [8.89]**

**3.50 [8.89]**

**6.94 [17.63]**

**3.52 [8.93]**

**92.13 [234.00]**
Specifications

w/ Electronic Controls
Shell Side Pressure Drop: 0.48 bar @ max. rated flow
Ambient Operating Temperature: -18°C to 55°C
Electrical Requirements: 120/1/60 5 Amp / 220/1/50 5 Amp
Standby Amperage Draw: 2.5 Amp
High Limit “Tripped” Amperage Draw: 3.0 Amp
Max. Continuous Water Flow Rate
  DW-24: 473 LPM
  DW-45 or DW-68: 473 LPM
Max. Intermittent Flow Rate
  DW-24: 681 LPM
  DW-45 or DW-68: 946 LPM

Available Options
Dry contacts for remote “High Limit Tripped Status” indication. Pressure Relief Valves set up to 12.4 bar for high rise installations.

Weight
  DW-24: 340 kg (dry); 376 kg (wet)
  DW-45: 522 kg (dry); 576 kg (wet)
  DW-68: 612 kg (dry); 689 kg (wet)
Max. Allowable Working Pressure [tube side]: 3.6 bar
Max. Shell Side Operating Pressure: 11.72 bar*
Adjustable Temperature Control: up to 96°C
Adjustable High Limit Control: up to 121°C
Water Connection Outlet/Inlet
  DW-24: 76.2 mm MNPT / 76.2 mm MNPT
  DW-45 & DW-68: 76.2 mm MNPT / 76.2 mm MNPT
Shell Volume [gal]
  DW-24: 9.6
  DW-45: 14.5
  DW-68: 20.2

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