Envirosep has led the way in packaged systems by offering designs and manufacturing integrated solutions for fluid handling, heat transfer and energy recovery for over 20 years. We strive to provide the most cost effective and energy efficient semi-instantaneous water heater systems to our customers.

Our packaged semi-instantaneous water heater system designs have proven to be a benchmark solution with outstanding reliability and robust construction for the most challenging commercial or industrial environments. Our systems are specifically engineered and manufactured for use in closed loop steam-to-hot water or unfired steam-to-hot water applications.

**FEATURES & BENEFITS**

- The *envirosep* semi-instantaneous water heater systems are factory manufactured, tested and UL-listed ensuring quality and NEC code compliance
- Sole source manufacturing responsibility, just one manufacturer to coordinate
- The *envirosep* semi-instantaneous water heater systems are cost effective, offering fixed costs and on-time delivery coordinated with site, factory controlled environment means no weather delays
- The *envirosep SIWH* semi-instantaneous water heater system may be configured for unfired steam-to-hot water using plate & frame heat exchangers to fit your application
- Each unit is custom-engineered to meet specific system requirements
- Factory operational and hydrostatic testing is performed prior to shipment, therefore minimal site testing is required
- Speeds up installation and start-up which provides significant savings to contractors, engineers and facility owners

**STANDARD DESIGN INCLUDES:**

- ASME, stainless steel hot water buffer tank with U-stamp
- Self-contained, pilot-operated or pneumatic modulating steam control valves
- High temperature cut-off switch, for independent source steam isolation
- Secondary high temperature purge system, with blowdown controls
- Internal circulation pump
- Inlet steam condensate removal
- Float & thermostatic steam trap
- Outlet temperature indication
- Safety relief valves
- Removable tube sections (*envirosep SIWH*)
- Pump/trap with receiver (*envirosep NSIWH*)

**envirosep SIWH OPTIONAL COMPONENTS:**

- PLC system controller with touch screen
- NEMA 7/9 explosion-proof rating
- Plate & frame heat exchangers
- Stainless steel main headers
- System recirculation pumps
- Auto system flow activation
- Steam-powered or electric condensate pumps
Unfired Steam-to-Hot Water

**envirosep SIWH**

The **envirosep SIWH**, Semi-Instantaneous Water Heaters are specifically designed and manufactured for hot water systems with intermittent loading. The system is designed to heat water, on-demand; and a small storage tank is utilized to buffer sudden surges, resulting in accuracy to +/- 3°F. An internal circulation pump is provided to obtain an even temperature profile throughout the tank volume. The **envirosep SIWH**, Semi-Instantaneous Water Heater may be manufactured to include a system recirculation pump, which is recommended for maintaining hot water loop temperature. Electrical controls may be provided with PLC programmable controllers or simple, relay logic.

Closed Loop Steam-to-Hot Water

**envirosep NSIWH**

The **envirosep NSIWH** Negative Pressure Semi-Instantaneous Steam-To-Water Heater is a manufactured, ready-to-install system designed to address the requirements of commercial potable water heating systems. Designed for high thermal efficiencies under varying load patterns, this system utilizes a fully modulating variable pilot-operated temperature control valve capable of handling steam pressures ranging from 5 to 150+ psig. This system operates below 0 psig*, delivering a reduction in energy consumption of 15-20%. Capable of handling a wide range of water flowrates and temperatures, while being custom-tailored to your specific site needs, makes this system an ideal choice for either new or retrofit installations.

* Note: Under most service conditions which are typical to potable water service.

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**TECHNICAL DATA**

### SIWH TYPICAL SPECIFICATIONS

<table>
<thead>
<tr>
<th>Specification</th>
<th>Range</th>
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</thead>
<tbody>
<tr>
<td>Steam Pressure</td>
<td>5 to 150 psig</td>
</tr>
<tr>
<td>Hot Water Temperature</td>
<td>50 to 250°F</td>
</tr>
<tr>
<td>Standard System Flow Rate</td>
<td>5 to 500 gpm</td>
</tr>
<tr>
<td>Standard Power</td>
<td>460/3/60 V</td>
</tr>
<tr>
<td>Working Pressure</td>
<td>100 to 150 psig</td>
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<tr>
<td>Working Temperature</td>
<td>&lt; 250°F</td>
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### NSIWH TYPICAL SPECIFICATIONS

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<tbody>
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Envirosep maintains certifications that keep us current with the latest industry standards and ensure first class quality. Our certifications include:

- Unfired Pressure Vessels
- Pressure Piping
- Miniature Unfired Pressure Vessels
- National Board
- Repairs and/or Alterations
- Process Piping & Power Piping
- State of New York OTCR (NY)

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