Commercial Condensing Water Heater

**AMP**

**THermal Solutions**

400-1000 MBH

**ASME**

**ETL**

**Intertek**

**HLW**

**UP TO 98% EFFICIENT**
EFFICIENCY MEETS SERVICEABILITY

The AMP Condensing Water Heater Series (AMPW) from Thermal Solutions delivers efficiency and powerful output with unprecedented space saving innovation in a service friendly design. Available in 400, 500, 650, 800, and 1000 MBH input levels, all models are 97% Thermal Efficient and modulate at 10:1 firing rate. The 316L stainless steel heat exchanger features cavernous internal circuits with commercially sized tubes that promote self-cleaning and flushing of waterside particulates.

WATER HEATER ADVANCEMENT
Commercial grade tubes, nearly twice the size of competitive models, promote self-cleaning and flushing of particulates.

SPACE SAVING INNOVATION
We moved the burner from the traditional bottom to the side and reduced required install height by 46%. Models 400-1000L fit through standard doorways and are compact for easy maneuvering. All models can be Field Knock Down, with dimensions and instructions for disassembling and re-assembling on site if required. Designed to fit, AMP 400-1000L models can be stacked on their respective sizes with mounting brackets only (no racking needed). Outdoor models are available on AMPW 400-1000L sizes. Outdoor models can be stacked or set up with zero clearance on one side.

SERVICEABLE
The AMP commercial condensing water heater platform is focused on service, reliability, and longevity. All AMP models provide complete access to burner and combustion chamber. Gas burns clean but can greatly diminish heat transfer over time if not cleaned. Cleanings can be completed with ease, ensuring new, out of the box efficiency is maintained throughout the life of the product.

10:1 TURNDOWN
Reliability is our cornerstone and that means answering each and every call for more domestic hot water. We take additional measures, so you don't have any missteps. Extensive 50+ mile per hour wind tests at our vent outlet ensure the reliability of this Thermal Solutions product.

VENTING
Cat II or IV venting for either individual or common (engineered) venting systems. Capable of up to 200 equivalent feet of vent in stainless steel, polypropylene or CPVC.
**Intuitive Icon Navigation**

“Touch” and move through our control menus effortlessly. Whether it be commissioning with the “Quick Setup” menu, pinpointing fault codes with corrective actions in seconds or seamlessly connecting to an EMS. Extensive data archives with graphical displays are available to evaluate performance and make value-added adjustments to maximize heater efficiency.

**Self-Guiding Diagnostics**

Troubleshooting issues has never been this easy! The industry-leading fault identification and correction feature allows the service technician to quickly drill down on the issue, with cause and corrective measures.

**Unmatched Archives**

With the largest collection of stored operational data (4 months), no stone is left unturned when it comes to evaluating a heater’s performance and pinpointing adjustment for improvement. The heater’s onboard energy management system is a true step above all others!

**Peer-To-Peer Sequencing**

Unique control logic uses both temperature and firing rate of the connected s to sequence up to eight units in unison to optimize system efficiency. Included dual RJ45 connections make peer-to-peer and/or simultaneous EMS communications (ModBus Standard / Other Protocols Optional) a snap without the need of a separate splitter.

**USB Data Sharing**

Make room on the tool belt for a flash drive as the USB data sharing port has become another important device to have in commissioning (upload/download settings from one to the next), servicing (download data and email file to factory for assistance) and analyzing operation (historical info can be downloaded & saved in .CRV formatted files).

**SIMPLIFIED WIRING AND SERVICEABILITY**

Low and high voltage fused printed circuit boards (PCB) simplifies wiring, enhances serviceability & troubleshooting with easy to read labeling, and provides electrical protection (spare fuses located on PCB for quick replacement). Other connections include: 120/1/60 voltage and pumps (system & domestic hot water); alarm; auto & manual reset external limits; enable/disable; DHW demand; 4-20mA remote; sensors (outdoor, remote and DHW); EnviraCOM thermostat; low water cutoff; and flow switch.

**TANKS & PACKAGING**

AMP Water Heaters are commonly paired with storage tanks. Tanks are available to suit all applications: vertical or horizontal orientation; glass, epoxy or cement-lined; metal jacketing and insulation, sprayed foam insulation or bare exterior; and in various shell materials (i.e. stainless steel). Shipped separately for field installation or skid mounted as a factory package.

Visit www.ThermalSolutions.com to find out more!
## AMPW STANDARD EQUIPMENT (400-1000L MODELS)

<table>
<thead>
<tr>
<th>Pressure Vessel Design</th>
<th>Water tube stainless steel heat exchanger</th>
<th>ASME Section IV-certified, “IV-DW” stamp</th>
<th>MAVIP 160 PSIG &amp; design temp 210°F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Five year limited heat exchanger warranty</td>
<td>Ten year limited pressure vessel warranty</td>
<td>One year parts and burner warranty</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Combustion Design</th>
<th>Stainless steel pre-mix burner</th>
<th>Low NOx emissions (&lt;10 ppm); Full modulation, 1:1 turn-down</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural gas or LP gas</td>
<td>4” wc to 14” wc inlet gas pressure</td>
<td>8” wc LP min</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Venting</th>
<th>CFVC, Polypropylene or stainless steel materials acceptable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air intake</td>
<td>Sealed combustion or room air</td>
</tr>
<tr>
<td>Category II or IV venting</td>
<td>Individual or common (engineered) venting systems</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Concert Control*</th>
</tr>
</thead>
<tbody>
<tr>
<td>High limit w/ manual reset safety temperature control</td>
<td></td>
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</tbody>
</table>

## AMPW OPTIONAL EQUIPMENT

- External high limit w/ manual reset safety switch
- Alarm buzzer w/ silencing switch
- Remote 4-20mA contacts
- EMS interface contacts
- Peer-to-peer communication contacts
- Remote Header sensor contacts
- DHW demand contacts
- 24 V AC enable/disable sensor contacts
- PCB fused connections
- High voltage printed circuit board (PCB)
- Printed Circuit Board (PCB)

### Specifications, Dimensions, & Ratings

<table>
<thead>
<tr>
<th>Models</th>
<th>Input Min (MBH)</th>
<th>Input Max (MBH)</th>
<th>Gross Output (MBH)</th>
<th>DHW Recovery (GPH)*</th>
<th>“A” Length (In)</th>
<th>“C” Height (In)</th>
<th>Gas / LP Conn. (In)</th>
<th>Supply Conn (In)</th>
<th>Return Conn (In)</th>
<th>Vent/Air Intake Size (In)</th>
<th>Approx Shipping Weight (Lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMPW-400</td>
<td>40</td>
<td>400</td>
<td>388</td>
<td>470</td>
<td>37-3/4</td>
<td>26-3/8</td>
<td>38-1/2</td>
<td>3/4 NPT</td>
<td>2</td>
<td>2</td>
<td>4</td>
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<tr>
<td>AMPW-650</td>
<td>65</td>
<td>650</td>
<td>631</td>
<td>764</td>
<td>53-7/8</td>
<td>26-3/8</td>
<td>38-1/2</td>
<td>1NPT</td>
<td>2</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>AMPW-800</td>
<td>80</td>
<td>800</td>
<td>776</td>
<td>941</td>
<td>53-7/8</td>
<td>26-3/8</td>
<td>38-1/2</td>
<td>1NPT</td>
<td>2</td>
<td>2</td>
<td>6</td>
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<tr>
<td>AMPW-1000L</td>
<td>100</td>
<td>1000</td>
<td>970</td>
<td>1176</td>
<td>53-7/8</td>
<td>26-3/8</td>
<td>38-1/2</td>
<td>1NPT</td>
<td>2</td>
<td>2</td>
<td>6</td>
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* Based on 40° F to 140° F temperature rise

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