Commercial Gas Water Heaters

LOW NOx POWER BURNER MODELS

FEATURES
BTP and BTPV commercial water heaters offer precise power burner performance for commercial applications, plus the flexibility of conventional atmospheric venting, sidewall venting or direct venting. To help ensure optimum performance, A. O. Smith provides a FREE professional start-up that is required on the BTP and BTPV models.

VENTING OPTIONS
- BTP models designed for conventional atmospheric vertical venting. Barometric draft regulating damper provided. Order Vent Kit Part # 9500007350.
- BTPV models designed for horizontal atmospheric sidewall venting or direct venting, using optional vent kits.
  - For sidewall venting order Vent Kit Part # 9500007229.
  - For direct venting order Vent Kit Part # 9910001005.

LOW NOx POWER GAS BURNER (NATURAL GAS ONLY)
- Pre-mix design with internal Flue Gas Recirculation (FGR)
- Safety features include internal blocked flue sensor, separate pilot system, internal thermal cutoff and anti-flashback barrier

FULLY AUTOMATIC CONTROLS
- Including safety shut-off, high-temperature limit control
- Dual thermostat, adjustable from 120° F to 180° F

DRAFT EQUALIZING COMBUSTION CHAMBER
- Patented dome system ensures optimum flue loading and efficient heat transfer by balancing pressure inside combustion chamber

ASME TANK CONSTRUCTION ON ALL MODELS
- Rated working pressure: 160 PSI

CSA CERTIFIED AND ASME RATED T&P RELIEF VALVE

GLASSLINED TANK WITH MULTIPLE ANODE RODS
- For optimum protection against tank corrosion

FLAME INSPECTION PORT/HANDHOLE CLEANOUT
- For easy cleanout of sediment from tank bottom

HIGH ALTITUDE INSTALLATION
- Adjustable air intake damper easily reset for high-altitude installation by authorized start-up agent

CODES AND STANDARDS
- Meets the thermal efficiency and standby loss requirements of the U.S. Department of Energy and current edition of ASHRAE/IESNA 90.1
- Complies with SCAQMD Rule 1146.2 and other air quality management districts with similar requirements for low NOx emissions. The BTPV 540 and 650 meet the requirements of SCAQMD 1146.2 of 14 ng/J or 20ppm and other districts having the same requirements. The BTPV 740 meets code requirements for Texas and other areas of California requiring 30ppm.

WARRANTY
- Factory Start-Up is required for activating warranty and assuring maximum operating performance. Contact your local sales representative or Authorized Start-Up Agent to arrange a FREE Certified Start-Up.
- Three-year limited tank warranty
- For complete warranty information, consult written warranty shipped with water heater, or contact A. O. Smith

Revised October 2012
CAPACITY, INPUT AND RECOVERY

<table>
<thead>
<tr>
<th>MODEL NUMBER</th>
<th>BTU INPUT PER HOUR</th>
<th>Gallons or Litres</th>
<th>TANK SIZE</th>
<th>FIRST HOUR RATING 100°F RISE</th>
<th>GPH or LPH</th>
<th>RECOVERY-GALLONS PER HOUR AT 100°F TEMPERATURE RISE</th>
</tr>
</thead>
<tbody>
<tr>
<td>BTP 540A</td>
<td>540,000</td>
<td>US. Gallons 85</td>
<td>583</td>
<td>GPH</td>
<td>1309</td>
<td>523 374</td>
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<tr>
<td>BTPV 540A</td>
<td></td>
<td>Litres 321.7</td>
<td>2206.7</td>
<td>LPH</td>
<td>4954.6</td>
<td>1979.6 1415.6</td>
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<tr>
<td>BTP 650A</td>
<td>650,000</td>
<td>US. Gallons 85</td>
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<td>GPH</td>
<td>1579</td>
<td>630 450</td>
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<tr>
<td>BTPV 650A</td>
<td></td>
<td>Litres 321.7</td>
<td>261 1.7</td>
<td>LPH</td>
<td>5976.5</td>
<td>2384.6 1703.3</td>
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<tr>
<td>BTP 740A</td>
<td>740,000</td>
<td>US. Gallons 85</td>
<td>778</td>
<td>GPH</td>
<td>1794</td>
<td>718 512</td>
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<tr>
<td>BTPV 740A</td>
<td></td>
<td>Litres 321.7</td>
<td>2494.7</td>
<td>LPH</td>
<td>6790.3</td>
<td>2717.6 1937.9</td>
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</tbody>
</table>

Based on 80% Thermal Efficiency. To compensate for effects of high altitude above 2,000', recovery ratings should be reduced approximately 4% for every 1,000 feet above sea level.

Current Draw (120V, 60Hz, 1 Phase): 6.0 Amps

DIMENSIONS AND WEIGHT - ALL MODELS

<table>
<thead>
<tr>
<th>Inches or CM</th>
<th>DIMENSIONS</th>
<th>GAS CONN.***</th>
<th>SHIPPING WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
</tr>
<tr>
<td>Inches</td>
<td>80-3/4</td>
<td>73</td>
<td>32-1/4</td>
</tr>
<tr>
<td>CM</td>
<td>205.1</td>
<td>185.4</td>
<td>81.9</td>
</tr>
</tbody>
</table>

*O dimension is for atmospheric vent size (BTP models).
**E dimension is for direct and sidewall vent size (BTPV models).
***Minimum gas supply pipe is 1-1/2". See Reference Manual, Table 7 for gas supply pipe size. BTPV heaters are available in Natural gas only.

SUGGESTED SPECIFICATION

Water heater(s) shall be A. O. Smith Model ____________ or equal, with maximum storage capacity of 85 gallons, an input rating of _________ BTU/Hr., a recovery rating of ___ GPH at 100°F temperature rise, and minimum thermal efficiency of 80%. Heater(s) shall meet the thermal efficiency and standby loss requirements of the U.S. Department of Energy and current edition of ASHRAE/IESNA 90.1, comply with SCAQMD Rule 1146.2 (BTPV 540 and 650 only) and other air quality management districts with similar requirements for s. In addition, heater(s) shall: 1) Include a powered gas burner, redundant main gas valves, gas pressure regulator and flame inspection port. 2) Include a e. and be so marked for a maximum working pressure of 160 PSI. 5) Have a glass-lined steel tank with multiple anodes for corrosion protection, and polyurethane foam insulation. 6) Tank shall have a 3-year limited warranty against corrosion as outlined in the written warranty. Venting: BTP heater(s) shall be supplied with a Barometric Draft Regulator for conventional atmospheric venting. BTPV heater(s) shall be supplied with an optional vent kit allowing for horizontal sidewall venting or direct venting. Burner and Controls: Burner(s) shall be pre-mix design, with internal FGR and thermal cut off, separate spark pilot ignition system, integral blocked flue sensor, glass view port, main gas regulator, automatic gas valve, manual test cock and manual gas shutoff. Burner(s) must be factory-installed, tested and started by an A. O. Smith Authorized BTP Start-up Agent before being placed into operation.