

## LOW NO<sub>x</sub> 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 NO<sub>x</sub> 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 NO<sub>x</sub> 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.

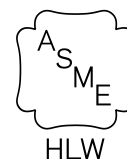
#### WARRANTY

- **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

## BTP(V)-540A through BTP(V)-740A



ASME/CRN

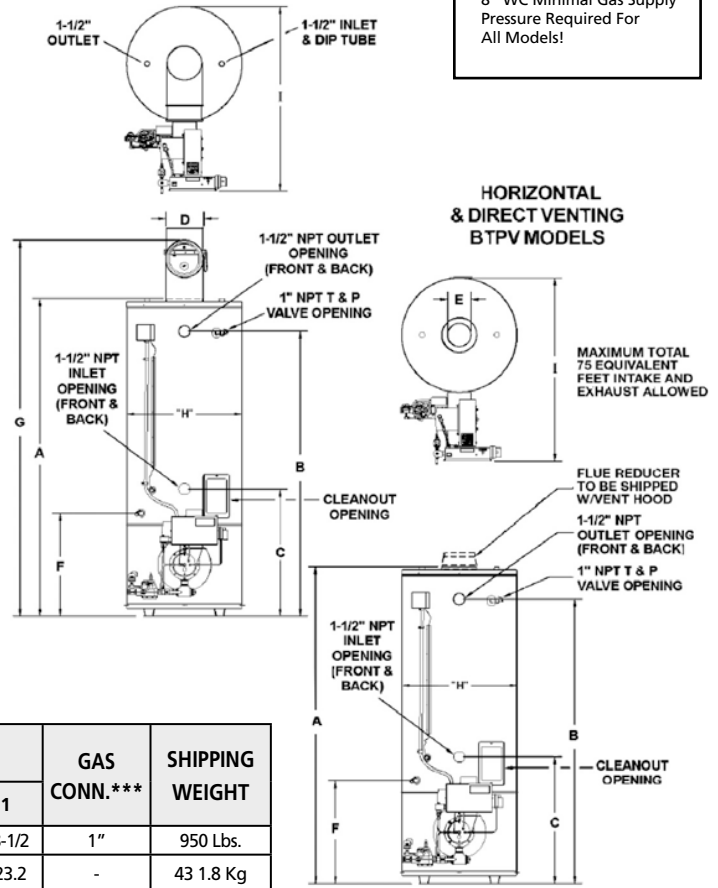


## CAPACITY, INPUT AND RECOVERY

MODEL NUMBER	BTU INPUT PER HOUR	Gallons or Litres	TANK SIZE	FIRST HOUR RATING 100°F RISE	GPH or LPH	RECOVERY-GALLONS PER HOUR AT 100°F TEMPERATURE RISE		
						40°F	100°F	140°F
						4°C	56° C	78°C
BTP 540A BTPV 540A	540,000	US. Gallons	85	583	GPH	1309	523	374
		Litres	321.7	2206.7	LPH	4954.6	1979.6	1415.6
BTP 650A BTPV 650A	650,000	US. Gallons	85	690	GPH	1579	630	450
		Litres	321.7	2611.7	LPH	5976.5	2384.6	1703.3
BTP 740A BTPV 740A	740,000	US. Gallons	85	778	GPH	1794	718	512
		Litres	321.7	2944.7	LPH	6790.3	2717.6	1937.9

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

## STANDARD BAROMETRIC DRAFT CONTROL BTP MODELS



## DIMENSIONS AND WEIGHT - ALL MODELS

Inches or CM	DIMENSIONS									GAS CONN.***	SHIPPING WEIGHT
	A	B	C	D	E	F	G	H	I		
Inches	80-3/4	73	32-1/4	9	26-1/2	26-1/2	93	29-1/2	48-1/2	1"	950 Lbs.
CM	205.1	185.4	81.9	22.9	67.3	67.3	236.2	74.9	123.2	-	431.8 Kg

\*D 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.