



# Commercial Gas Water Heaters

## FEATURES

The BTN-80 and BTN-100 are equipped with a factory-mounted blower that is pre-wired. This blower produces a pre-ignition draft of make-up air prior to burner ignition and provides more efficient control of heat and helps ensure an adequate supply of make-up air. Prior to ignition, the control proves a working draft.

### FACTORY-INSTALLED BLOWER

- Control proves draft prior to ignition
- No draft hood or barometric damper required
- Blower is factory mounted with a 6-foot power cord: requires 120V, 3 amp or less electrical system connection

### INTELLI-VENT™ GAS CONTROL

- Equipped with nearly indestructible silicon nitride hot surface igniter
- Advanced electronics for more precise control of water temperature
- Easy-to-understand system diagnostics

### RATED AS CATEGORY I APPLIANCE

- Category I appliance: uses standard metal, single-wall or "B"-type vent
- Can be commonly vented with other Category I appliances
- Vent connects directly to blower outlet

### FULLY AUTOMATIC CONTROL SYSTEM

- Auto reset gas shutoff device prevents excessive water temperature
- Adjustable thermostat with 120° - 180°F range
- Gas pressure regulator

### FACTORY EQUIPPED WITH DUAL BURNERS

### GLASSLINED TANK

- Exclusive CoreGard™ anode rods with stainless steel core provide additional corrosion protection

### HANDHOLE CLEANOUT

- Allows easy access to tank interior for cleaning

### CSA CERTIFIED AND ASME RATED T&P RELIEF VALVE

### MAXIMUM HYDROSTATIC WORKING PRESSURE: 150 PSI

### 80% THERMAL EFFICIENCY

### CODES AND STANDARDS

- Design-certified according to ANSI Z21.10.3-CSA 4.3 standards governing storage-type water heaters
- California Energy Commission
- Meets the thermal efficiency and standby loss requirements of the U.S. Department of Energy and current edition of ASHRAE/IESNA 90.1
- Design-certified by Underwriters Laboratories
- Certified for use on combustible flooring
- Complies with Texas Low Nox and Air Quality Management Districts with requirements of less than 40 ng/j

### THREE-YEAR LIMITED TANK WARRANTY

- For complete warranty information, consult written warranty shipped with water heater or contact A. O. Smith

### CONSERVATIONIST® BTN OPTIONS

OPTIONAL LEG KIT TO MEET NSF STANDARD 5  
(Part # 9006645005 BTN 80 & 100)

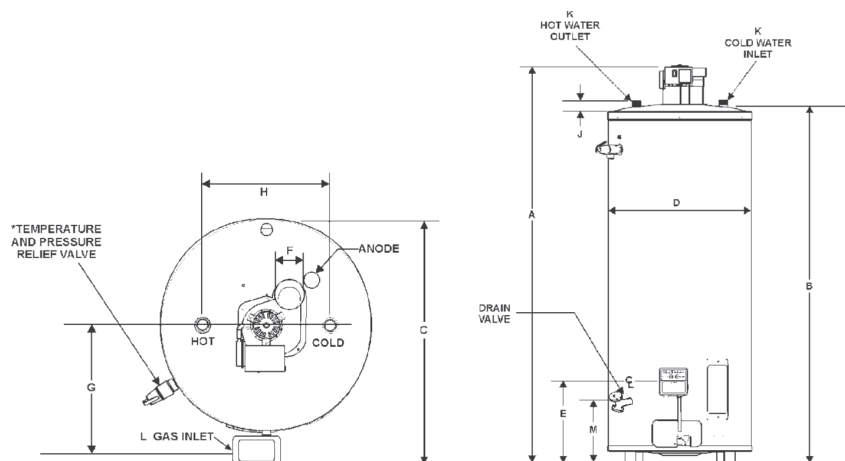
Intelli-Vent™ is a registered trademark of Emerson Electric Company.

## MODELS BTN-80 and BTN-100





# Commercial Gas Water Heaters



**TABLE 1, DIMENSIONS**

MODEL	A	B	C	D	E	F	G	H	J	K	L	M
	in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)
BTN-80	66 5/16 (1684)	58 1/2 (1486)	29 5/8 (753)	25 3/8 (645)	15 (381)	4 (102)	14 (356)	16 (406)	1 1/4 (32)	1 (25)	1/2 (13)	11 15/16 (303)
BTN-100	71 1/4 (1810)	66 1/2 (1689)	30 3/4 (781)	26 1/2 (673)	15 (381)	4 (102)	14 1/2 (368)	16 (406)	1 1/4 (32)	1 1/4 (32)	1/2 (13)	11 15/16 (303)

**TABLE 2, RECOVERY CAPACITIES (based on 80% thermal efficiency)**

Model	Gallon Capacity	Input		U.S. Gallons/Hr and Litres/Hr at TEMPERATURE RISE INDICATED																	
				F°	30°	36°	40°	50°	54°	60°	70°	72°	80°	90°	100°	108°	110°	120°	126°	130°	140°
		BTUH	KW	C°	17°	20°	23°	28°	30°	33°	39°	40°	44°	50°	56°	60°	61°	67°	70°	72°	78°
BTN-80	74	80,000 NAT	23.4	GPH	258	215	193	155	143	130	111	108	97	86	77	71	70	65	62	60	55
				LPH	973	814	731	585	541	490	419	407	368	324	293	269	264	245	233	225	209
		76,000 LP	22.4	GPH	246	205	184	147	136	123	105	102	92	82	74	68	67	61	58	57	53
				LPH	931	776	696	556	515	466	397	386	348	310	280	257	254	231	220	216	201
BTN-100	98	90,000 NAT	26.4	GPH	291	242	218	175	162	145	125	121	109	97	87	81	79	73	69	67	62
				LPH	1104	915	825	662	613	548	473	457	412	367	329	306	299	276	261	253	234
		80,000 LP	23.4	GPH	258	215	193	155	143	130	111	108	97	86	77	71	70	65	62	60	55
				LPH	973	814	731	585	541	490	419	407	368	324	293	269	264	245	233	225	209

Recovery capacity based on 80% thermal efficiency.

**TABLE 3, GAS AND ELECTRICAL CHARACTERISTICS**

MODEL	Manifold Pressure			Electrical Characteristics	
	Type of Gas	Inches W.C.	kPa	Voltz/Hz	Amperes
BTN (80, 100)	Natural Gas	4.5	1.12	120/60	<5
BTN (80, 100)	Propane Gas	10.0	2.49	120/60	<5

All Models: Maximum supply pressure = 14.0 in. W.C. (3.48 kPa)  
Minimum supply pressure, Natural gas = 5" (1.24 kPa). Propane gas = 11.0 in. W.C. (2.74 kPa)  
Minimum pressures must be maintained under both load and no load (static and dynamic) conditions.

## SUGGESTED SPECIFICATION

(Natural or Propane) gas water heater(s) shall be A. O. Smith BTN \_\_\_\_\_ or equal, with a storage capacity of \_\_\_\_\_ gallons, an input rating of \_\_\_\_\_ BTUs per hour, a recovery rating of \_\_\_\_\_ GPH at 100°F rise and a maximum hydrostatic working pressure of \_\_\_\_\_ psi. Water heater(s) shall be supplied with a factory-installed blower and 6-foot power cord; control will prove draft prior to ignition.

Glasslined water heater(s) shall also be protected against electrolytic corrosion by a factory-installed A. O. Smith CoreGard™ anode rod. In addition, water heater(s) shall be equipped with: 1) An Intelli-Vent™ gas control system with silicon nitride hot surface igniter, advanced electronics for more precise control of water temperature, and easy-to-understand system diagnostics. 2) An auto reset gas shutoff device, a gas pressure regulator, CSA Certified and ASME rated T&P relief valve. 3) Certification by Underwriters Laboratories under Volume III tests for commercial water heaters for delivery of 180° water. 4) Design certification according to ANSI Z21.10.3 - CSA 4.3 standards governing storage-type water heaters. 5) Meets the thermal efficiency and standby loss requirements of the U.S. Department of Energy and current edition of ASHRAE/IESNA 90.1. 6) Have a 3-year limited warranty against corrosion as outlined in the written warranty.