

EFFICIENT & ECONOMICAL COMMERCIAL GAS-FIRED HOT WATER HEATING



SERIES 8B



HEATING CAPACITIES
212 TO 475 MBH OUTPUT



SERIES 8B COMMERCIAL ATMOSPHERIC GAS-FIRED HOT WATER BOILER

Maximum Working Pressure: 50 PSI

Adaptable to Any Job

The Burnham® Commercial Series 8B boiler provides outstanding single and multiple boiler performance and reliability. The boiler can be arranged for space heating or combination space heating and domestic hot water heating with the use of an Alliance™ indirect-fired water heater. The compact design and one inch minimum side clearance make the Series 8B ideal for modular and multiple boiler installations*. Large homes, multi-family dwellings, small businesses and office complexes are typical applications for the Series 8B boiler.

Cast Iron Dependability

The Series 8B boiler is constructed with durable cast iron sections. Cast iron has the unique ability to absorb and transfer heat

quickly and efficiently while providing unmatched durability. The pinned heating surface and vertical flue design extracts maximum heat while maintaining low draft losses. This results in higher efficiencies and lower fuel costs.



The Cast Iron Nipple Difference

Burnham Commercial's Series 8B boiler sections are joined with quality cast iron nipples that last the life of the boiler. They expand and contract along with the



sections they join ensuring the integrity of the entire section assembly. Cast iron nipples resist petroleum based chemicals, including corrosion inhibitors, pump lubricants, and antifreeze, and they do not break down from contact with boiler flue gases, all of which can deteriorate the gaskets commonly used in some competitors' boiler assemblies.

Features Beyond the Standard

A flame roll-out switch and blocked vent switch are standard equipment on all Series 8B boilers. The flame roll-out switch senses temperature in the vestibule and the blocked vent switch senses temperature at the flue outlet.

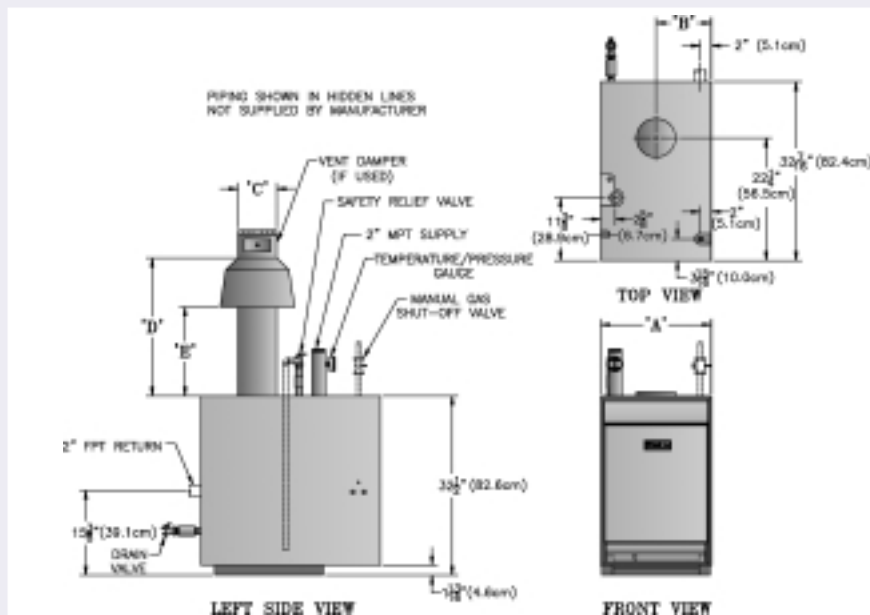
The switches will safely shut down the boiler in the event the boiler, chimney or venting system becomes blocked or restricted.

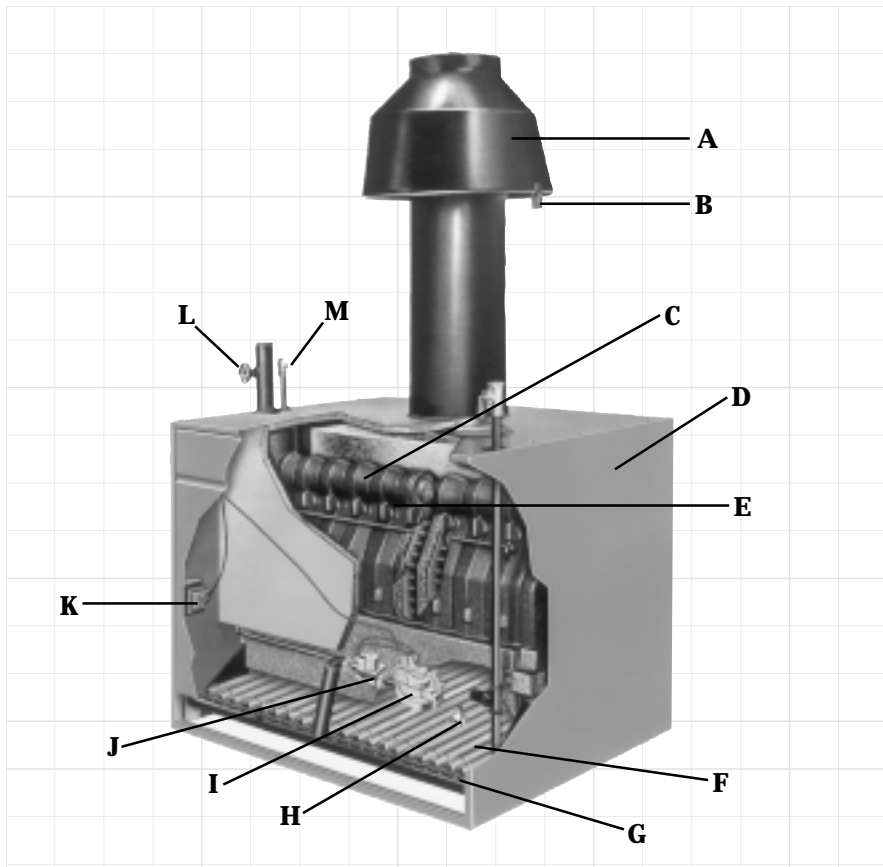
Dimensions (in inches)

Boiler Number	A	B	C	D		E	
				USA	Canada	USA	Canada
805B	20	10	7	24-3/4	24-3/4	16-1/8	16-1/8
806B	23-3/4	11-7/8	8	27-3/4	25-3/4	18	16
807B	27-1/2	13-3/4	9	28-3/4	25-3/4	18	16
808B	31-1/4	15-5/8	9	30-3/4	26-5/8	20	16
809B	35	17-1/2	10	33-1/2	26-3/8	22	15
810B	38-3/4	19-3/8	10	33-1/2	26-3/8	22	15

*Minimum recommended side-to-side clearance for modular/multiple boiler applications is one inch or as required by local authorities. New EP and OP electronic control sets are designed to mount on top of the boiler and does not affect side clearances. When equipped with IRI (Industrial Risk Insurers) controls, the gas train will mount along the right side of the boiler, requiring 18" service clearance.

*Please refer to the Modular/Multiple Boiler and Controls literature and Modular manual for detailed installation information.





- A. Top mounted draft hood
- B. Blocked vent switch (BVS)—All sizes
- C. Rugged cast iron nipples join sections
- D. Deluxe insulated jacket
- E. Durable cast iron sections for long life
- F. Aluminized steel burners—provide optimum air flow for high combustion efficiency, smooth and quiet light-off and long life
- G. Factory assembled gas manifold with plugged test tapping saves installation time and money
- H. Flame roll-out switch (FRS)—All sizes
- I. 100% step-opening gas valve—redundant type on EI
- J. Solenoid valve—standing pilot version only
- K. 50 VA voltage transformer
- L. Pressure temperature gauge
- M. Safety relief valve

Modular or Multiple

ASME Section IV differentiates between modular and multiple boiler installation. According to ASME, a modular boiler system consists of individual modules with a maximum input of 400 MBH each. Each module is to be equipped with a pressure temperature gauge, safety relief valve and drain valve. The modules are to be manifolded together on site without any intervening stop valve. The modular boiler assembly is to be equipped with a common temperature limit control, low water cutoff, makeup water connection, provision for thermal expansion and supply and return stop valves.

Multiple boiler installations require a stop valve in the supply and return pipe connection of each boiler. Each boiler needs to be equipped with a pressure temperature gauge, two temperature limit controls, safety relief valve, and drain valve. Boilers over 400 MBH must also include an automatic low water cutoff. Sizes 805, 6 and 7 can be installed as modular or multiple boilers. Sizes 808, 9 and 10 are to be installed as multiple boilers. In both cases, minimum recommended side-to-side clearance is one inch or as required by local codes.

Commitment to Quality

Burnham Commercial, America's Boiler Company, has earned a reputation for dependability and quality. For single or multiple applications, the Series 8B is right for your next job.

SPECIFICATIONS



SERIES 8B RATINGS* Natural and LP Gas



BOILER NUMBER (1)	RATINGS		I=B=R NET RATING WATER MBH	MINIMUM NATURAL GAS PRESSURE (INCHES)		MINIMUM RECOMMENDED CHIMNEY SIZE ROUND DIA. (In.) X HT. (Ft.)	WATER CONTENT (Gal.)	APPROX. SHIPPING WEIGHT (Lbs.)
	INPUT MBH	GROSS OUTPUT MBH		24V	EI			
805B	264	212 (4)	184	N/A	4.5	7 X 15	11.9	700
806B	330	264	230	4.5	4.5	8 X 15	13.9	780
807B	396	317	275	5.0	4.5	9 X 15	15.9	885
808B	462	370	321	N/A	4.5	9 X 15	17.9	990
809B	528	422	367	N/A	5.0	10 X 15	19.9	1095
810B	594	475	413	N/A	5.0	10 X 15	21.9	1206

*Ratings shown are for installations at sea level and elevations up to 2,000 feet. For elevations above 2,000 feet, ratings should be reduced at the rate of four percent (4%) for each 1,000 feet above sea level.

- When ordering use prefix P for packaged and K for knockdown. Use suffix NSP for natural gas, standing pilot; NEI for natural gas, electronic ignition; PSP for LP gas, standing pilot; PEI for LP gas, electronic ignition.
- Net I=B=R ratings shown are based on normal I=B=R piping and pickup allowance of 1.15. Consult the manufacturer for installations having unusual piping and pickup requirements such as intermittent system of operation, extensive piping systems, etc.
- 15 foot height is measured from top of drafthood to top of chimney.
- DOE heating capacity. Furnished with electronic ignition and vent damper. AFUE is 80.1%.

Maximum allowable working pressure: 50 PSI (30 PSI optional). Water only.

Standard Equipment

Cast Iron Section Assembly	Blocked Vent Switch (BVS) - All Sizes
Deluxe Insulated Jacket	Flame Roll-Out Switch (FRS) - All Sizes
100% Shut-off Gas Controls	L4080D High Limit Control
Boiler Drain Valve	PS851M Probe LWCO - 808B-810B only
50VA Transformer and Junction Box	High Limit Control with Manual Reset - L4006E (in addition to L4080) - Packaged Boilers Only
Aluminized Steel Burners	Electronic Ignition on 805B, 808B-810B for Natural or LP Gas
1" Gas Connection	24V Standing Pilot on 806B, 807B for Natural or LP Gas
2" Supply And Return Connections	Pressure Temperature Gauge
50 PSI Safety Relief Valve	

Packaged units are shipped packaged and wired. The relief valve, pressure temperature gauge, boiler drain valve, drafthood and LWCO and vent damper (when furnished) are shipped in separate cartons. **Knockdown units** are shipped with sections assembled and mounted on the base with manifold and burners installed. Controls, trim, jacket and vent damper (when furnished) are shipped separately.

Optional Equipment

30 PSI Safety Relief Valve	Electronic Control Sets to meet CSD-1 and IRI
Electronic Ignition on 806B and 807B (standard on 805B, 808B-810B)	Vent Damper - 806B thru 810B (standard on 805B), available on standing pilot and electronic ignition models only - not available with Electronic Control Sets.
Intermittent Circulation (24V)	Combustible Floor Shield

NOTE: NOT FOR DIRECT INSTALLATION ON COMBUSTIBLE FLOORING. A HEAT SHIELD IS REQUIRED AND AVAILABLE FOR COMBUSTIBLE FLOOR INSTALLATION AND CONCRETE INSTALLATION WHICH IS OVER A MATERIAL THAT IS SUBJECT TO MELTING (PVC, PEX RADIANT TUBING ETC.). NOT FOR INSTALLATIONS ON CARPET, EVEN WITH A HEAT SHIELD.

