

Series 5B

COMMERCIAL ATMOSPHERIC
GAS-FIRED STEAM BOILER



**401 TO 1950
MBH INPUT**

CAST IRON
SECTIONAL DESIGN

15 PSI STEAM ONLY

ATMOSPHERIC VENT

SUITED TO LOW
CEILING HEIGHT

77% THERMAL
EFFICIENCY



BURNHAM[®]
Commercial Boilers

Series 5B STEAM BOILER

Quality You Can Count On

The Burnham Commercial Series 5B boiler offers heating capacities and features that make it ideal for commercial, institutional and high rise residential heating applications. The rear outlet draught hood is specifically suited to installations with low ceiling heights.

The Series 5B boiler is rated at 15 PSI steam and has a thermal efficiency of 77%, meeting AHRI certification requirements.

American-Made Cast Iron Construction

Burnham Commercial's unique cast iron formula has an extremely high silicon content, making it stronger and more flexible. It offers better thermal shock resistance and greater heat transfer capabilities than other cast iron products.



• MANUFACTURED WITH QUALITY

Casting Solutions operates a state-of-the-art foundry, in Zanesville, Ohio, ensuring quality and availability of boiler sections.



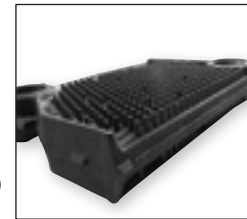
• CAST IRON NIPPLE DIFFERENCE

The gaskets that other manufacturers use to connect boiler sections can break down if they come in contact with oils, boiler flue gases, corrosion inhibitors, pump lubricants, and antifreeze. Burnham Commercial is committed to safety, reliability and durability. That's why the Series 5B uses cast iron nipples instead of gaskets. The Series 5B's cast iron nipples remain unaffected by those elements, ensuring long life and eliminating costly repairs. Cast iron nipples expand and contract with the sections they connect, ensuring the overall integrity of the section assembly.



• HEAT EXCHANGER DESIGN

The cast iron heat exchanger on the Series 5B features a pinned heating surface. These multi-faceted pins allow the heat generated from the combustion process to be transferred to the cast iron from a number of angles, which contributes to the boiler's overall efficiency. A vertical flue design extracts heat while maintaining low draft losses.



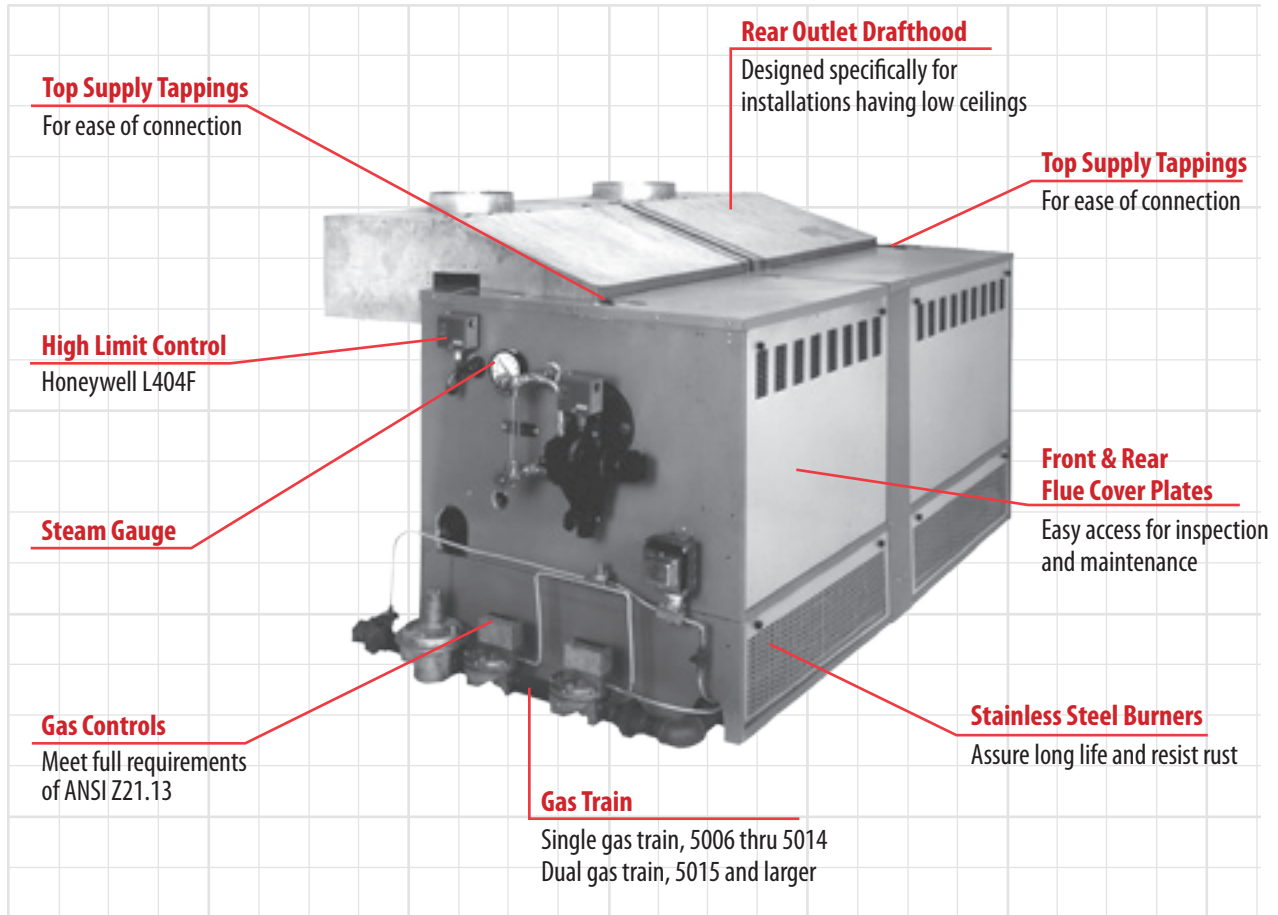
Series 5B: Natural or LP Gas, Steam Only, Cast Iron

Model Number	Gas Input (MBH)	Gross Output (MBH)	Steam Rating Sq. Ft.	Steam (MBH)	Boiler H.P.	Thermal Efficiency
5006B	401	321	1,004	241	9.58	77%
5007B	468	375	1,171	281	11.04	77%
5008B	546	437	1,367	328	12.88	77%
5009B	624	500	1,558	374	14.73	77%
5010B	702	562	1,754	421	16.57	77%
5011B	780	624	1,950	468	18.41	77%
5012B	858	687	2,146	515	20.25	77%
5013B	936	749	2,342	562	22.09	77%
5014B	1,014	812	2,538	609	23.93	77%
5015B	1,092	874	2,729	655	25.77	77%
5016B	1,170	936	2,925	702	27.61	77%
5017B	1,248	999	3,121	749	29.45	77%
5018B	1,326	1,061	3,317	796	31.29	77%
5019B	1,404	1,124	3,513	843	33.13	77%
5020B	1,482	1,186	3,704	889	34.97	77%
5021B	1,560	1,248	3,900	936	36.82	77%
5022B	1,638	1,311	4,113	987	38.66	77%
5024B	1,794	1,436	4,546	1091	42.34	77%
5026B	1,950	1,560	4,975	1194	46.02	77%

Series 5B SUPERIOR QUALITY

Series 5B — Steam Boiler

Maximum Allowable Working Pressure (MAWP): 15 PSI-Steam



Standard Equipment

ALL BOILERS:	Sections unassembled including left and right heater ends; heater opening cover plates; base-burner manifold assembly; one assembly 5006B thru 5014B, two sub-assemblies 5015B thru 5026B; on-off firing gas control assembly; deluxe insulated jacket; rear outlet drafthood.
STEAM TRIM:	15 PSI safety valve, steam gauge, gauge glass set, L404A high limit control, #67 BC2 LWCO.
USA BOILERS:	EI- Electronic control set: one set - 5006B thru 5014B, two sets - 5015B thru 5026B; provides electronic ignition; 100% safety shutoff; electronic supervision of pilot and intermittent pilot operation. Set includes: S8610M ignition control; Q3481B pilot with flame sensor; gas train for 5006B thru 5009B is Robertshaw 7000 DERHC combination gas valve; gas train for 5010B thru 5026B consists of dual V88A gas valves, Q3481B pilot, RV12 pilot regulator, pilot shutoff valve, main gas pressure regulator; 24V transformer furnished with all valve sets.

Optional Equipment

Assembled sections; Firing sequences: Motorized valve type low-high-off and low-high-low or combination diaphragm gas valve/regulator on low-high-low.
Electronic control sets:
OP- manual ignition, continuous pilot flame, with prewired control panel including RM7890A flame safeguard and indicating lights for power on, gas valve on and flame failure;
EP- electronic ignition, intermittent pilot operation, with prewired control panel including RM7890A flame safeguard and indicating lights for power on, gas valve on and flame failure.
CSD-1 and factory mutual components are available, consult factory.



Series 5B SPECIFICATIONS

Series 5B Ratings

Boiler Model (1)	RATING MBH (2) (3)		NET RATING (4) (5)		USA Boiler H.P.	(No.) & Size of Flue Outlets	Breeching Diameter (In.)	RECOMMENDED CHIMNEY SIZE (6)		Approx. Shipping Weight (Lbs.)
	Input	Gross Output	Steam							
			I=B=R Sq. Ft.	I=B=R MBH				Round Dia. In. x Ft.	Rectangular In. x In. x Ft.	
5006B	401	321	1,004	241	9.58	(1) 9"	9	10 x 15	12 x 12 x 15	1,160
5007B	468	375	1,171	281	11.04	(1) 10"	10	10 x 15	12 x 12 x 15	1,340
5008B	546	437	1,367	328	12.88	(1) 12"	12	12 x 15	12 x 16 x 15	1,525
5009B	624	500	1,558	374	14.73	(1) 12"	12	12 x 15	12 x 16 x 15	1,720
5010B	702	562	1,754	421	16.57	(1) 12"	12	12 x 15	12 x 16 x 15	1,895
5011B	780	624	1,950	468	18.41	(2) 9"	14	15 x 15	16 x 16 x 15	2,085
5012B	858	687	2,146	515	20.25	(1) 9", (1) 10"	14	15 x 15	16 x 16 x 15	2,280
5013B	936	749	2,342	562	22.09	(2) 10"	14	15 x 15	16 x 16 x 15	2,460
5014B	1,014	812	2,538	609	23.93	(1) 10", (1) 12"	14	15 x 20	16 x 16 x 20	2,640
5015B	1,092	874	2,729	655	25.77	(2) 12"	14	15 x 20	16 x 16 x 20	2,870
5016B	1,170	936	2,925	702	27.61	(2) 12"	14	15 x 20	16 x 16 x 20	3,070
5017B	1,248	999	3,121	749	29.45	(2) 12"	14	15 x 20	16 x 16 x 20	3,265
5018B	1,326	1,061	3,317	796	31.29	(2) 12"	16	15 x 20	16 x 16 x 20	3,445
5019B	1,404	1,124	3,513	843	33.13	(2) 12"	16	18 x 20	16 x 20 x 20	3,620
5020B	1,482	1,186	3,704	889	34.97	(2) 9", (1) 12"	16	18 x 20	16 x 20 x 20	3,810
5021B	1,560	1,248	3,900	936	36.82	(1) 9", (1) 10", (1) 12"	16	18 x 20	16 x 20 x 20	4,005
5022B	1,638	1,311	4,113	987	38.66	(2) 10", (1) 12"	16	18 x 20	16 x 16 x 20	4,185
5024B	1,794	1,436	4,546	1,091	42.34	(1) 9", (3) 10"	18	18 x 20	20 x 20 x 20	4,530
5026B	1,950	1,560	4,975	1,194	46.02	(3) 10", (1) 12"	18	18 x 20	20 x 20 x 20	4,895

- Boiler Model Prefixes:** K - Knockdown; A - Assembled Sections. **Suffixes:** S - Steam. N - Natural Gas; P - LP Gas. EI - Electronic Ignition; OP - Electronically Supervised Standing Pilot with Control Panel; EP - Electronically Supervised Electronic Ignition with Control Panel. (All Series 5B boiler models reach a combustion efficiency of 77%.)
- Ratings provided are for installations from sea level to 2000 ft. elevation. For altitudes above 2000 ft.: USA—Reduce ratings 4% for each 1000 ft. above sea level. Canada—certified for use at altitudes to 4500 ft. above sea level. Each installation, however, must be authorized by local authorities.
- LP gas ratings reduced 6-1/4% from natural gas ratings.
- Net I=B=R ratings shown are based on normal I=B=R piping and pick-up factor. Steam: 1.333 (5006B thru 5021B), 1.329 (5022B), 1.317 (5024B), 1.307 (5026B).
- Net ratings are U. S. A. only.
- Based on year-round use with 6 ft. breechings and no more than one elbow. Chimney height measured from installation floor line to chimney top. Flue size based on nominal size of unlined chimney. Flue lined with largest flue liner which will fit within these dimensions is constructed to have the same effective flue area. Individual vents—If boiler is equipped with individual vertical vent riser(s) of same size as flue outlet(s) on draft divert(s), these vent(s) should not be less than 5 ft. in height as measured from top of drafthood. For other chimney and breeching combinations, consult the manufacturer.

Note: **Maximum Allowable Working Pressure (MAWP):** 15 PSI Steam

Gas Supply Pressure: Natural Gas - Maximum: 14" W.C.

Minimum: 5.5" W.C. (5009B, 5011B thru 5014B and 5020B thru 5026B)

Minimum: 5" W.C. (5006B thru 5008B, 5010B and 5015B thru 5019B)

LP Gas - Maximum: 14" W.C. - Minimum: 11" W.C.

Not for installation on combustible flooring.

