

MPC HIGH EFFICIENCY CAST IRON MULTI-PASS COMMERCIAL WATER BOILER



**3 PASS DESIGN
UP TO 87.3%
THERMAL
EFFICIENCY**

PROVEN THERMAL
SHOCK PROTECTION

OIL, GAS OR OIL/GAS
COMBINATION

COMMERCIAL-GRADE
HIGH SILICON
CAST IRON

FROM 4 TO 18
SECTIONS, RATED
AT 500,000 TO 3.6
MILLION BTUs

EXCLUSIVE
OPTIONAL SBC™
BOILER CONTROL
MAXIMIZES
SYSTEM EFFICIENCY



OPTION AVAILABLE
(TO 9PPM)

BURNHAM
Commercial Boilers

MPC MULTI-PASS COMMERCIAL BOILER

MPC Features & Benefits

High Efficiency Commercial Boiler— Best In Class!

- Thermal efficiencies of up to 87% without the use of a secondary, condensing heat exchanger provides for exceptional fuel savings
- Capable of extremely low NOx operation—less than 9 ppm
- Fully compliant with LEEDS® building standards, MPC is the most environmentally friendly commercial boiler on the market

3-Pass Design

- Advanced 3-pass cast iron sections engineered and manufactured in the U.S.A., designed to maximize heating system efficiencies and provide substantial energy savings over single-pass boilers
- MPC sections are assembled with Burnham Commercial's proven cast iron nipple construction that does not degrade with heat, thus eliminating any concerns associated with competitive section sealing techniques
- Advanced high-temperature silicon-coated rope gasket is compressed into a tongue-and-groove area cast into each boiler section to ensure a durable, gas-tight seal between sections

Burner Swing Door

- Left or right opening, provides unobstructed access to the combustion chamber and all flue passages
- Optional cover panels provide a sleek look

American-Made Cast Iron Construction

Burnham Commercial's unique eutectic cast iron has an extremely high silicon content, making it stronger and more flexible

- Offers better thermal shock resistance and greater heat transfer capabilities than other cast iron products

Built-In Thermal Shock Protection

- Designed to operate at unprecedented 80°F minimum return water temperature
 - Minimum supply water temperature is 130°F
 - Maximum water temperature differential (ΔT) of 80°F
- Equipped with integral return water mixing tube (RWMT) that evenly distributes the return water into each section
- No need for external mixing devices or complicated piping, saving installation time and money

New Jacket Design

- Standard 4-inch insulation on all sizes reduces jacket heat loss, reduces boiler room temperatures and helps increase efficiency
- Jacket side panels interlock and mount to the frame without screws
- A concealed chaseway, located in the top panels, hides wiring for a clean, modern appearance

Multiple Burner Offerings

- The MPC is optimized for “full modulating” operation
 - Also available for low-high-low firing
- Application tested and approved for use with Beckett oil and gas burners and Power Flame oil, gas, and gas/oil burners
- Burnham Commercial's SBC module is an available option. SBC comes integrated into the Power Flame or Beckett burner control panel to provide unsurpassed boiler and system control
 - Factory installed SBC modules are UL Listed

UL Listed - A Burnham Commercial Exclusive!

- Only American-made commercial cast iron boiler with UL Listing
- Standard on factory packaged / firetested MPC boilers
- Safety benefit, virtually unmatched in the industry



All MPC cast iron boiler sections are poured at Casting Solutions, LLC in Zanesville, Ohio

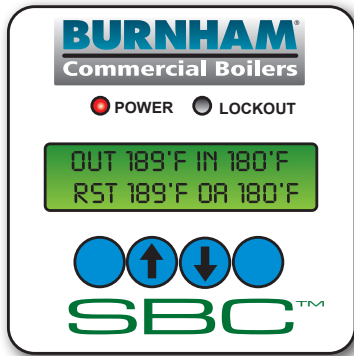


Three-pass cast iron sections are the key to providing the MPC's remarkable efficiency



Each cast iron section is precision machined to tolerances within 0.001 of an inch

SBC INTEGRATED BOILER CONTROL SYSTEM



The Burnham Commercial SBC is a complete boiler monitoring and automation system. Available as an option, this exclusive feature was designed and developed by Burnham Commercial engineers and is available **ONLY** on Burnham Commercial products.

- Designed to maximize system efficiency and minimize energy usage
- Easily connected to building management systems
- Proven control platform
- Fail-safe design ensures boiler operation

Only available from Burnham Commercial!

SBC Exclusives

Advanced Adaptability

- Easily integrated into existing or new building management systems
- Simplified connections available to most building management systems through Modbus® or standard 0-10 volt signals
- Uses sophisticated PID control logic for complete boiler system control
- Performs control functions for both single and multiple boilers

Peer-To-Peer Network

- Includes lead-lag sequencer for up to eight (8) fully modulating boilers
- Capable of auto rotation, outdoor reset and peer-to-peer communication
- “Plug and play” communication by simply connecting a RJ11 telephone line between boilers
- Provides precise boiler coordination by sequencing boilers based on both remote system water temperature and boiler modulation rate
- Boilers are modulated in “unison”, all at the same firing rate to ensure even heat distribution

Fail-Safe System Operations

- Allows continued boiler operation in the event of selected sensor failure or building management system failure

Boiler Monitoring & Diagnostic Displays

- Two-line by sixteen (16) character LCD display
- Automatically presents boiler sequence, alarm, hold and lockout messages
- Diagnostic menu displays the last 10 alarm messages and the boiler return temperature alarm history

Modulation Rate & On/Off Modes

- Controls the boiler modulation and on/off output based on the supply water temperature and an operator adjusted setpoint
- Can respond to remote system water, outside air temperatures, Domestic Hot Water Priority (DHWP) or Energy Management Systems (EMS)

Outdoor Air Temperature Reset

- Saves fuel by reducing the supply temperature of a heating boiler as the outside air temperature increases

Warm Weather Shutdown (WWSD)

- Prevents the boiler, boiler pump and/or the system pump from starting during warm weather

Domestic Hot Water Priority (DHWP)

- Continuous supply of hot water, even during warmer months

System Control Outputs

- Fully integrated automation of mixing valves, boiler pumps, system pumps and standby system pumps
- Controls are field selectable through simple yes/no menu selections

Optional Burnham Commercial Universal Gateway

- Can be connected to a building’s Energy Management System (EMS) using simple menu selections and wiring a 4-20mA input
- Connects to EMS using modbus protocol
- Optional EMS Gateway to BacNet or LonWorks
- Allows EMS controls to adjust either the SBC™ central heating setpoint or the firing rate

MPC SPECIFICATIONS & DIMENSIONS

Specifications

Minimum return water temperature: 80°F
 Minimum supply water temperature: 130°F
 Maximum Delta T: 80°F

Maximum operating temperature: 250°F
 Maximum allowable working pressure (MAWP): 80 PSI

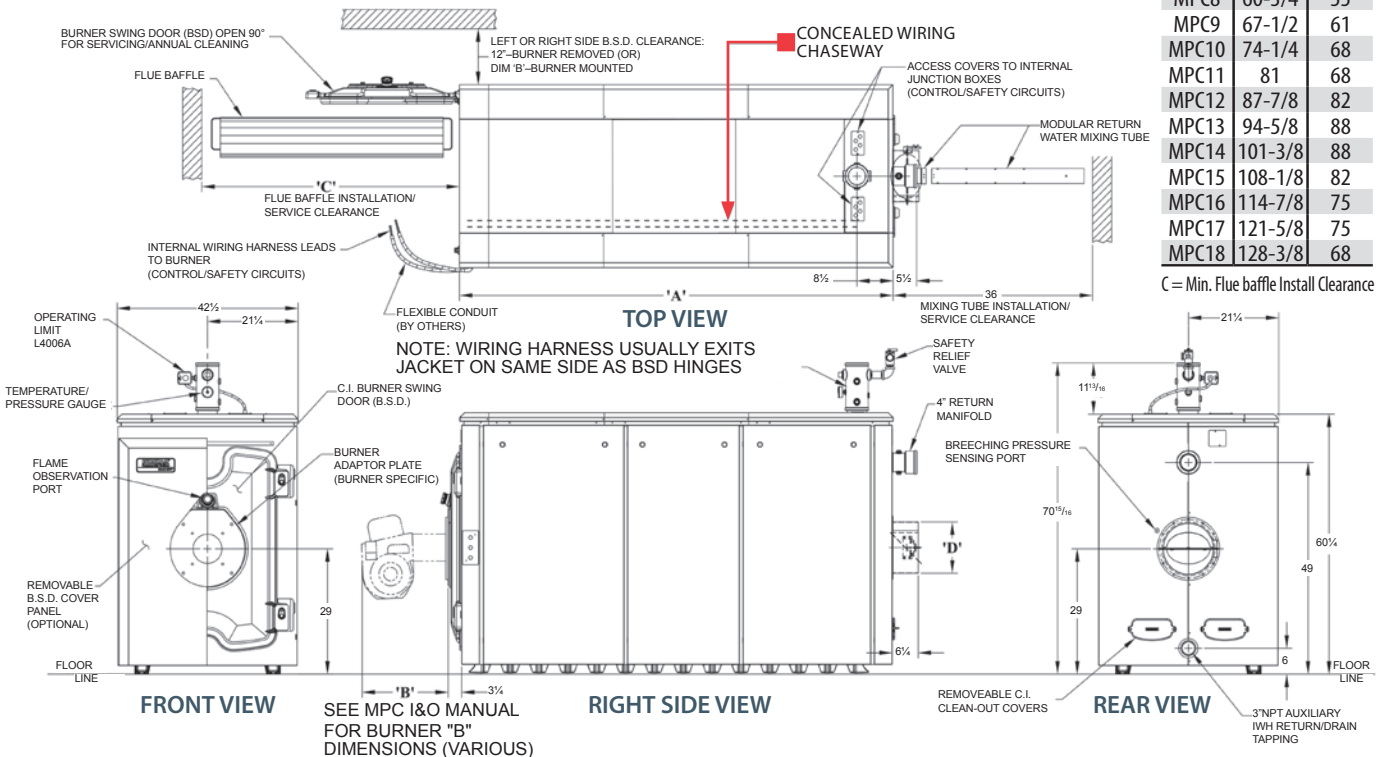


BOILER MODEL	BURNER INPUT			COMBUSTION EFFICIENCY			THERMAL EFFICIENCY		Heating Surface Sq. Ft.	Furnace Volume Cu. Ft.	Press. in Firebox In. W.C.	Vent Diam. 'D' In.	Shipping Weight Lbs.	
	Boiler HP	Oil GPH	Gas MBH	Gross Output MBH	Net I=B=R MBH	Oil %	Gas %	Oil %						Gas %
MPC4	12.7	3.47	500	424	368	89.0	86.3	87.3	84.7	75.0	14.5	0.10	7	2370
MPC5	19.5	5.4	773	652	567	88.8	86.1	86.9	84.3	95.3	18.0	0.19	7	2821
MPC6	25.0	6.9	995	837	728	88.7	86.0	86.8	84.1	115.5	21.6	0.28	8	3272
MPC7	30.5	8.4	1216	1023	889	88.7	86.0	86.7	84.1	135.8	25.1	0.34	8	3733
MPC8	36.1	10.0	1438	1209	1052	88.6	85.9	86.7	84.1	156.1	28.6	0.39	8	4194
MPC9	41.7	11.5	1660	1394	1213	88.6	85.9	86.6	84.0	176.4	32.2	0.45	10	4655
MPC10	47.2	13.0	1881	1580	1374	88.6	85.9	86.6	84.0	196.6	35.7	0.50	10	5116
MPC11	52.8	14.6	2103	1767	1536	88.5	85.9	86.6	84.0	216.9	39.2	0.66	10	5577
MPC12	58.3	16.1	2325	1951	1696	88.5	85.8	86.5	83.9	237.2	42.8	0.82	10	6073
MPC13	63.8	17.6	2547	2137	1858	88.5	85.8	86.5	83.9	257.5	46.3	0.98	12	6544
MPC14	69.4	19.2	2769	2323	2020	88.5	85.8	86.5	83.9	277.7	49.8	1.14	12	7015
MPC15	74.9	20.7	2991	2506	2180	88.4	85.8	86.5	83.8	298.0	53.4	1.30	12	7486
MPC16	80.4	22.3	3213	2692	2341	88.4	85.8	86.4	83.8	318.3	56.9	1.30	12	7957
MPC17	86.0	23.8	3435	2879	2503	88.4	85.8	86.4	83.8	338.6	60.4	1.40	12	8438
MPC18	91.5	25.3	3657	3065	2665	88.4	85.8	86.4	83.8	358.8	64.0	1.50	12	8919

NOTES: • Model No. Suffix: "N" = natural gas-fired; "P" = LP gas-fired; "O" = oil-fired; "C" = combo natural; gas/oil-fired; "D" = combo LP gas/oil-fired

- For high altitudes, ratings should be reduced at rate of 4% per 1,000 ft. (over 1000 ft. for oil / over 2,000 ft. for gas)
- Safety Relief Valve Set Pressure: Standard = 50 PSI; Optional = 30 PSI or 80 PSI
- Casting weights: Front Section: 434 lbs.; Center Section(s): 434 lbs.; Rear Section: 543 lbs.
- Certified to CSA standards: MPC Boilers are certified to CSA B140.7-05 and CSA B140.0-03 standards as well as CAN1-3.1-77.

PAGE 4 Dimensions



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 Phone: 888.791.3790 • Fax: 717.293.5803 • www.burnhamcommercial.com

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