

# 8,000,000 Btu/hr BOILER / WATER HEATER

Features and Components

Specifications and Dimensions Table

Submittal Drawings

Performance Charts

GMI 8M  
Input 8000000 BTU/hr  
Industrial and Commercial  
Stainless Steel Boilers / Water heaters

Maximum Pressure = 160PSI  
Maximum Working Temperature = 210 ° F



### Key Features

- A. Widest range of temperature rise ( $\Delta T$  up to 170 °F) with 20 year thermal shock warranty
- B. Lowest inlet water temperature; any temperature above freezing without any damage to the heat exchanger assembly
- C. Most efficient condensing boiler/water heater (up to 98% efficiency)
- D. Super low NOx emission (down to 10 ppm)
- E. Extremely low operating noise and vibration levels
- F. Most accurate operating temperature controller with accuracy of + 1 °F
- G. Standard BMS connections
- H. Full stainless steel construction of heat exchanger, casing, headers and ball valves
- I. Flexible exhaust location
- J. Sealed combustion
- K. Direct vent

### Superior Material

- A. High grade stainless steel 316/316L for heat exchanger, headers, ball valves and water connections and 304 stainless steel sheet metal for casing
- B. Low maintenance costs

### Superior Performance

- A. Cutting edge heat exchanger design
- B. Radial pulse combustion
- C. Highest efficiency at full capacity
- D. Modulating burner



### **Standard Components**

- A. Complete standard gas train assembly
- B. High temperature limit cut-off with manual reset
- C. ASME-approved safety pressure relief valve
- D. Pressure gauge
- E. Digital operating temperature controller
- F. Low water cut off
- G. Gas pressure switch
- H. Air proving switch (air pressure switch)

### **Standard Warranty**

- A. 10 year prorated warranty
- B. 20 year thermal shock warranty

### **Optional Features**

- A. Sealed combustion
- B. Boiler sequencing controller
- C. BAC net communication interface
- D. Ultra-low NOx (less than 10 ppm), CO (less than 5 ppm) burner
- E. Paddle less flow switch
- F. CSD.1, IRI, FM codes compliance capability

## GMI 8M SPECIFICATIONS AND DIMENSIONS

Input	Btu/h	8,000,000
Output	Btu/hr	7,600,000
Boiler Efficiency @ full load	%	95.0
Fuel		Natural Gas
Electrical Rating	V/PH/Hz/ A	208-230/460/575/3/60, less than 12 amps
Heating surface	Ft <sup>2</sup>	1039.0
Boiler Shell Dimensions		
- Width	Inches	68.125 ± <sup>1</sup> / <sub>4</sub>
- Depth	Inches	56 ± <sup>1</sup> / <sub>4</sub>
- Height	Inches	68.5 ± <sup>1</sup> / <sub>4</sub>
Overall Dimensions		
- Width	Inches	68.125 ± <sup>1</sup> / <sub>4</sub>
- Depth	Inches	102.5 ± <sup>1</sup> / <sub>4</sub>
- Height	Inches	89.5 ± <sup>1</sup> / <sub>4</sub>
Shipping Weight <sup>1</sup>	Lbs	5200
Supply/Return Connections	Inches	4 - Stainless Steel Flange, ANSI 150 lbs
Water content	USG	165.0
Gas connection	Inches	2.5 NPTF
Gas inlet pressure	Inches WC	28 to 56
Flue connection	Inches	24 O.D.
Flue duct material		Stainless Steel (air tight, corrosion resistant)
Air supply connection	Inches	N/A
Maximum working pressure	psig	160
Maximum working temperature	Degrees F	210
Minimum inlet water temperature		Any temperature above (32°F)
Recommended flow rate <sup>2</sup>	USG/min	152 ( For ΔT= 100F)
Minimum service clearance	Inches	Top 24, Front 36 <sup>3</sup> , Back 24, Floor 0
Minimum clearances to combustibles	Inches	Top 40, Front 40, Back 24, Left Side 24, Right Side 24, Floor non-combustible

1. Dry weight of unit

2. Above flow rate is for typical boiler condition. For each case, please consult engineering.

3. Clearance from front of the burner.

# GMI-8M Boiler

2007 ASME BOILER & PRESSURE VESSEL CODE  
SECTION IV.

HTP	MAWP	TEMP
240 PSI	160 PSI	210° F

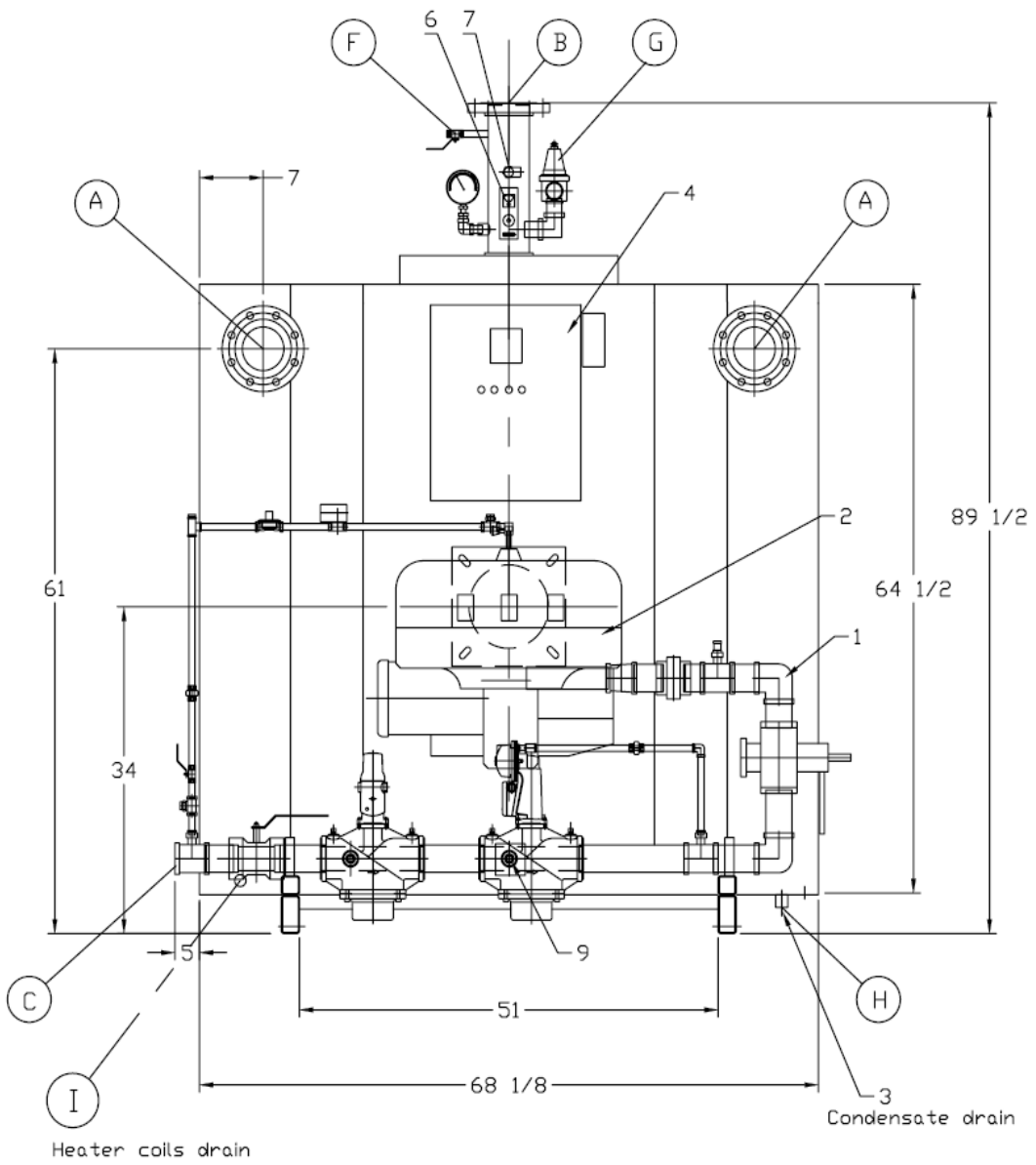
Name	Connection	Size	Type	Qty.
A	Water Inlet , S.S	4"	FLG.	2
B	Water Outlet , S.S	4"	FLG.	1
C	Gas Inlet (28"-56")	2.1/2"	NPTF	1
D	Exhaust Connection, S.S.	ø24" OD		1
E				
F	Air Connection Valve, Brass	3/8"	NPTF	1
G	Pressure Relief Valve, Brass	1-1/2"	NPTF	1
H	Condensate connection	1"	NPT	1
I	Coil Drain Valve, Brass	3/4"	NPTF	1

Item	Qty.	Description	Initial
1	1	Boiler Housing Assembly	_____
2	1	Burner Assembly	_____
3	1	Condensate Drain	_____
4	1	Control Panel Assembly	_____
5	1	Low Water Cut off	_____
6	1	Temperature High Limit	_____
7	1	Temperature Sensor	_____
8	1	Flow Switch (Installed by Other)	_____
9	1	Pressure Switch	_____

Approximate Weight (Empty)	5200 LB
Water Capacity	165 US GAL

SCALE: NTS	GASMASTER INDUSTRIES LTD.
DATE: NOV. 15, 2010	7480 MacDonald Road, Delta, BC Canada
DRAWN: SHARON TAN	Boiler Assembly - Parts list
CHK: RAMESH	
APPROVED: BS	SHEET: 1/4    Dim. : Inch

# GMI-8M Boiler



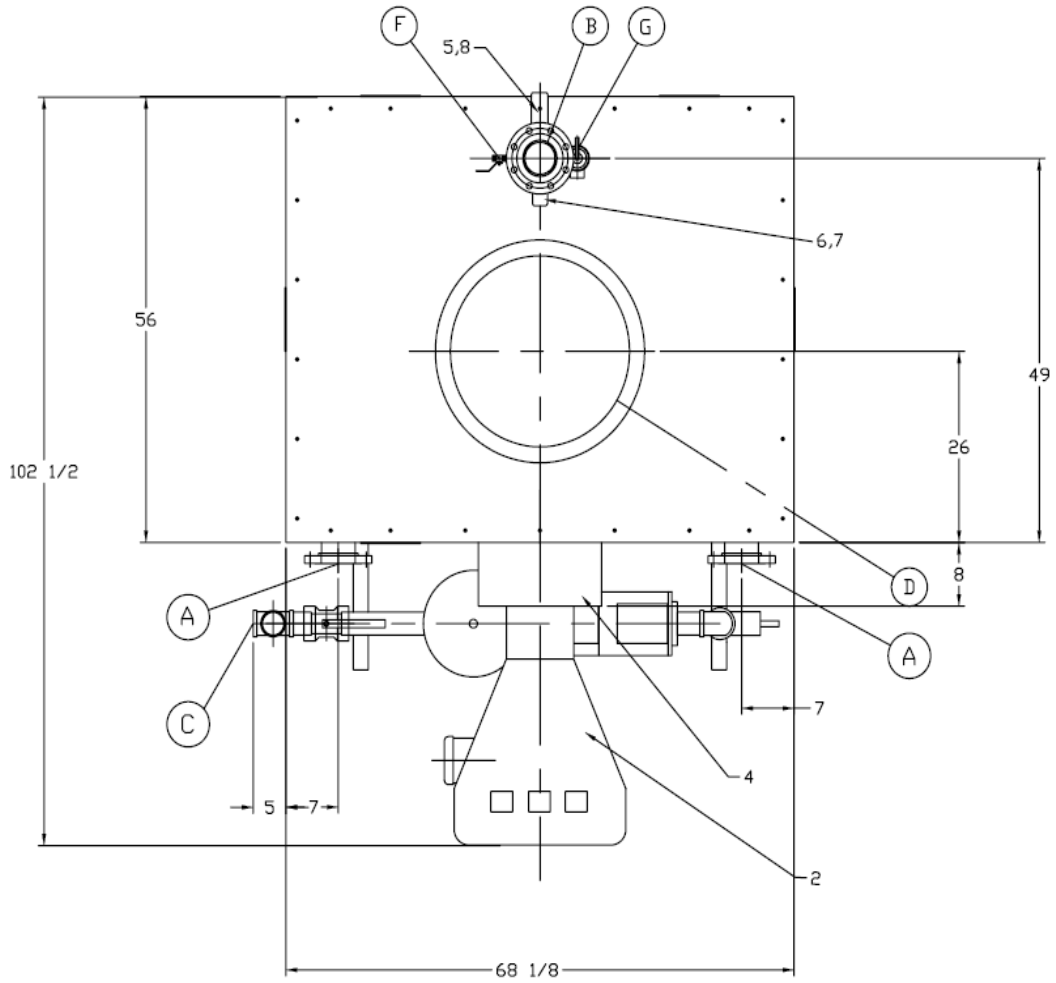
SCALE: NTS
DATE: Nov. 18, 2010
DRAWN: Sharon Tan
CHK: Ramesh
APPROVED: BS

GASMASTER INDUSTRIES LTD.  
7480 MacDonald Road, Delta, BC Canada

Boiler Assembly - front view

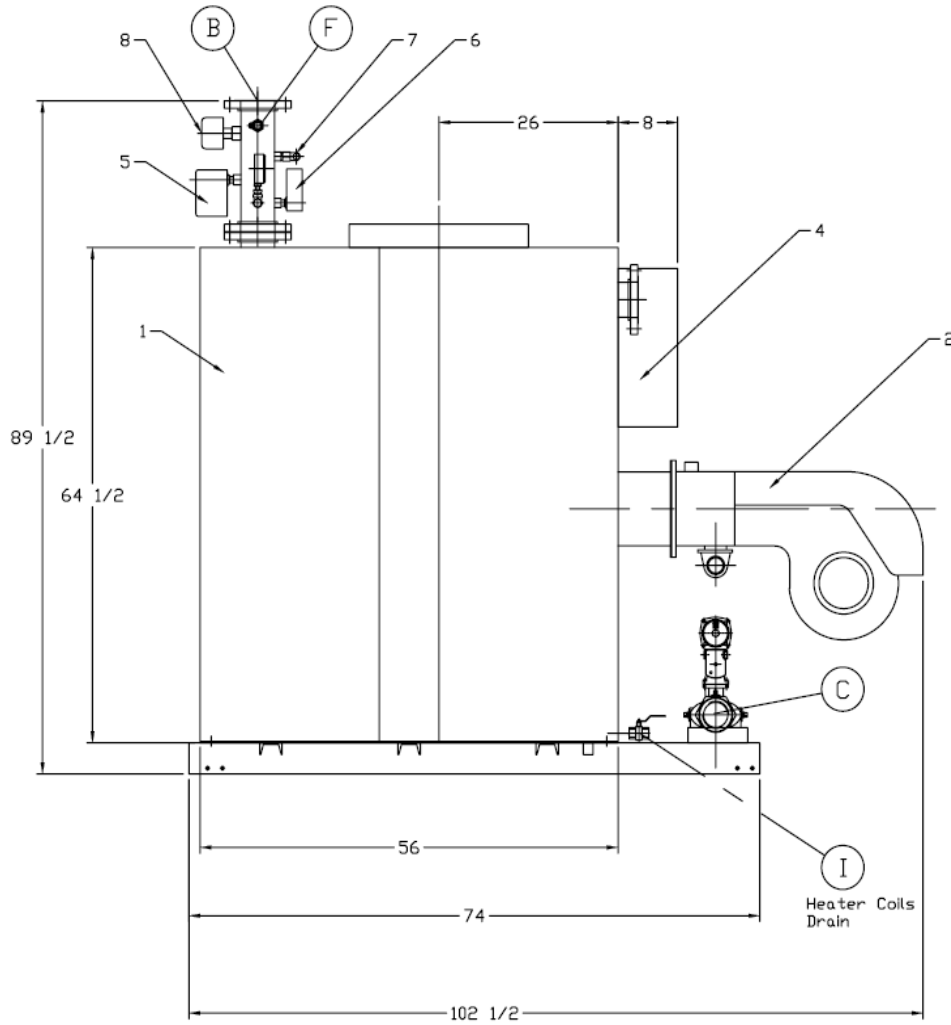
SHEET: 2/4 Dim. : Inch

# GMI-8M Boiler



SCALE: NTS	GASMASTER INDUSTRIES LTD.
DATE: Nov. 18, 2010	7480 MacDonald Road, Delta, BC Canada
DRAWN: Sharon Tan	Boiler Assembly - top view
CHK: Ramesh	SHEET: 3/4 Dim. : Inch
APPROVED: BS	

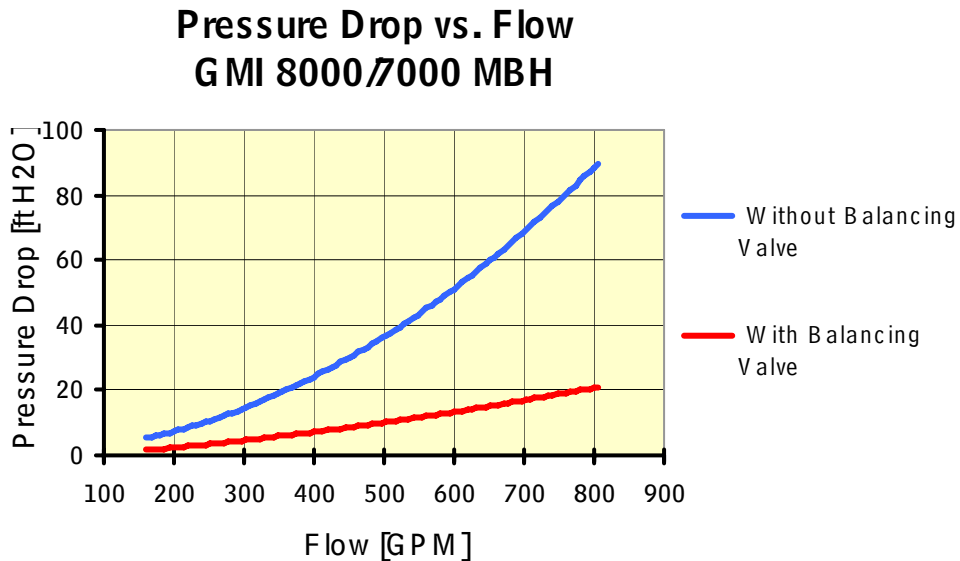
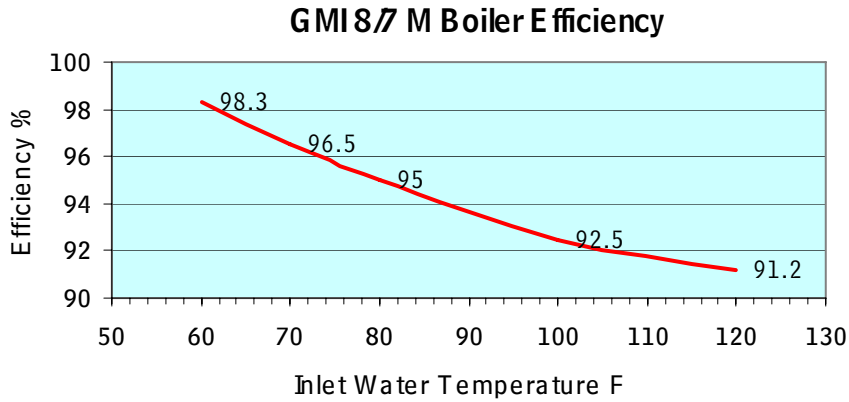
# GMI-8M Boiler



SCALE: NTS	GASMASTER INDUSTRIES LTD.	
DATE: Nov. 18, 2010	7480 MacDonald Road, Delta, BC, Canada	
DRAWN: Sharon Tan	Boiler Assembly - side view	
CHK: Ramesh	SHEET: 4/4	Dim. : Inch
APPROVED: BS		

## Superior Performance

Gasmaster boilers/water heaters offer the highest efficiency rating in the industry. The certified efficiency range accordance to ANSI Z21.13 (latest addendum) is 92% - 99.8% depending on the return water temperature. In addition to this super high efficient performance, Gasmaster products offer the cleanest and the most environmentally friendly operation without any need for add on or peripheral components. Gasmaster boilers/water heaters operate at NOx levels of below 15ppm, with some models having NOx concentration as low as 6ppm.



## **Unique Benefits**

Unlike conventional boilers/water heaters, Gasmaster's GMI 8/7M boilers/water heaters are capable of running with an inlet water temperature as low as 1 degree above freezing point while still providing the outlet water temperature that your system needs. This enables you to have a greater than 100 °F difference throughout GMI 8/7M boilers/water heaters! Not only can Gasmaster boilers/water heaters handle low inlet water temperatures, but these low temperatures actually provide efficiencies greater than 98% while keeping low levels of CO and NOx. The superior performance of Gasmaster boilers/water heaters is guaranteed by a non-prorated 5 year corrosion and 7 year non-prorated thermal shock warranty for all products.

The CO levels generated by the burner are less than 40ppm, and NOx levels less than 10ppm.

The throttling mechanism of Gasmaster's GMI 8/7M boilers/water heaters offers virtually infinite modulation capability throughout the operating range of the product. This mechanism reduces the on/off cycles by over 90%; therefore, cold starts and associated pre purge periods are almost eliminated, contributing to the boiler's high efficiency.