MAC

High Efficiency Wall Mounted Modulating Condensing Boiler
(Combi & Space Heating Models)

- 95% AFUE
- Featuring AI (Artificial Intelligence) Control Technology
  - Recognizes Natural or LP Gas
  - Self-Monitors and adjusts for fuel savings
  - Automatic Commissioning
- Combi or Heating Only Models
- 7:1 Turndown Ratio in DHW Mode
- 5.7:1 Turndown Ratio in Heating Mode
- Warranty Coverage
  - 10-Year Heat Exchanger
  - FREE 2-Year Parts & Labor Warranty*

*Unit must be registered within 60 days from the date of original installation. All terms of Trinity Extended Service Agreement apply.
The Utica MAC High Efficiency Condensing Boiler uses AI Control Technology. The AI Control self commissions and continuously calibrates to ensure maximum efficiency at all times making it the clear choice for consumers looking for the next level in innovative technology.

The AI control measures water temperature, flu gas temperature, flame signal and pressure that can impact the boiler operation and CO levels. The AI control will automatically shut down operation should these values exceed normal operating levels. This provides added protection for you and your family.

**Modulation Ratio** (7:1 DHW mode, 5.7:1 Heating mode)

AI Control automatically modulates the gas input to the burner. During times when the domestic hot water or heating demand is high, the control increases the amount of gas in order to meet the requirement. During times when the load demand is less, the AI control decreases the gas input to only use the amount of fuel necessary.

The MAC Combi model adjusts the firing rate from a high of 153 MBH, down to a low of 22

MBH during a call for DHW. During a call for central heating, both the MAC and the MAH models adjust the firing rate from a high of 125 MBH down to a low of 22 MBH.

AI modulation saves energy by reducing the amount of gas used. Homeowners enjoy comfort, energy savings, and lower utility bills! By automatically modulating the gas input to the heating level that is needed, the boiler system operates at optimum efficiency, resulting in savings for you.

**Control Display**

- Digital Control with Graphic Display
- Boiler Status
- Temperature Display
- Diagnostics
- Automatically Adjusts for Fuel Type and Continuous Calibration

Here at Utica Boilers, we pride ourselves on safety. Though the AI control indirectly monitors CO levels and acts accordingly, it is not a replacement for a CO Detector in your home.
The MAC is an **Intelligent Condensing approach** to residential heat and domestic hot water.

**COMBI MODEL**

- 7:1 Gas Modulation in Combi Mode
- 5.7:1 Gas Modulation in Heating Mode
- Auto Commissioning and Continuous Calibration functions optimize combustion and result in lower fuel bills
- Features 316L Stainless Steel Heat Exchanger and Burner
- Features such as, high limit sensors, pressure relief valve, low water sensor, and system pressure gauge ensure safety and top performance of the unit
- Control Panel features a backlit digital display that indicates boiler status, temperature, and diagnostics
- Pre-heat function
- Built in 2-speed Pump contributes to savings in electrical usage

**HEATING ONLY MODEL**

- 316L SS Heat Exchanger
- Flame Sensor
- 2-Speed Pump
- Digital Display with Backlight
- Pressure Switch
- Combustion Sight Glass
- Ignitor
- DHW Brazed Plate
- Coaxial Flue Connector

**HEATING MODEL WITH OPTIONAL INDIRECT TANK**

Our AI control technology is programmed to recognize an Indirect Tank. Utica Boilers H2O Indirect Hot Water Heaters are available in 30 to 115 gallon capacities and feature 316L stainless steel construction and top connections for an easy installation.

**TOP OF BOILER - BOTH MODELS**

- COAX Vent Connection
- Combustion Air for Optional 2-Pipe Venting

**BOTTOM OF BOILER - HEATING ONLY MODEL**

- 3/4" Gas Inlet Connection and Shutoff Valve
- 3/4" Heating System/Indirect Tank Return Connection
- 3/4" Heating Outlet to Indirect Tank
- 1/2" Condensate Drain Connection
- 1/2" MPT DHW Outlet
- 3/4" MPT DHW Inlet and Outlet
- 3/4" MPT CH Supply
- 3/4" MPT CH Return

**BOTTOM OF BOILER - COMBI MODEL**

- Gas 3/4" PPT
- Drain Connection for Condensate Trap
- DHW Cold Inlet Tap & Manual Boiler Fill (by turning red handle)

The piping connections on the boiler are all straight thread and not tapered. The required adapters are supplied with the boiler for field installation.
# MAC High Efficiency Wall Hung Modulating Condensing Hot Water Boiler

## Dimensional Diagram

### MAC Unit

*See IOM for dimensions on other models.*

<table>
<thead>
<tr>
<th>Dimensional Diagram</th>
<th>Model</th>
<th>Input Rate (MBH) 0-2000 ft.</th>
<th>Heating Capacity (MBH) 0-2000 ft.</th>
<th>Net Rating, Water (MBH) (1)</th>
<th>Vent Diameter O.D. Coaxial (2)</th>
<th>Vent Diameter 2-pipe (2)</th>
<th>AFUE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MAH-125 Heating Only</td>
<td>125,000</td>
<td>113,000</td>
<td>98,000</td>
<td>3.93&quot;</td>
<td>3&quot;</td>
<td>95%</td>
</tr>
<tr>
<td></td>
<td>MAC-150 Heating Mode</td>
<td>125,000</td>
<td>113,000</td>
<td>98,000</td>
<td>3.93&quot;</td>
<td>3&quot;</td>
<td>95%</td>
</tr>
<tr>
<td></td>
<td>MAC-150 DHW Mode</td>
<td>153,000</td>
<td>136,000</td>
<td>N/A</td>
<td>3.93&quot;</td>
<td>3&quot;</td>
<td>95%</td>
</tr>
</tbody>
</table>

(1) Net Water Ratings shown based on piping and pickup allowance of 1.15. Consult manufacturer before selecting boiler for installations having unusual piping and pickup requirements, such as intermittent system operation, extensive piping systems, etc.

(2) Refer to IOM and vent pipe manufacturer’s instructions for equivalent lengths and approved venting materials.

## General Information (See Installation, Operation and Maintenance Manual for complete instructions)

### Clearances

- **Top:**
  - Combustible Materials (Required) (2)
  - Service (2)
- **Left Side:**
  - Combustible Materials: 1.77" (4.5 cm)
  - Service: 1.77" (4.5 cm)
- **Right Side:**
  - Combustible Materials: 1.77" (4.5 cm)
  - Service: 1.77" (4.5 cm)
- **Front:**
  - Combustible Materials: 1.57" (4.0 cm)
  - Service: 17.71" (45 cm)
- **Back:**
  - Combustible Materials: 0" (0 cm)
  - Service: 0" (0 cm)
- **Bottom:**
  - Combustible Materials: 0" (0 cm)
  - Service: 9.84" (25 cm)
- **Combustion Air/ Vent Piping:**
  - Combustible Materials: 0" (0 cm)
  - Service: N/A

### Connections

- **MAC-150 & MAH-125:**
  - 3/4" SWT Adapters Heating System Supply & Return, Gas Connection 3/4" FPT
- **MAC-150 DHW:**
  - 1/2" SWT Adapters Domestic Hot Water (DHW) Inlet & Outlet

### Electrical

- 120 Volts AC, 60 hertz, 1 phase, Less than 12 amps (15 amp circuit recommended)

### Water Content

- 125/150: 0.95 Gallons

### Dimensions/Weights

<table>
<thead>
<tr>
<th>Model</th>
<th>&quot;Width&quot;</th>
<th>&quot;Height&quot;</th>
<th>&quot;Depth&quot;</th>
<th>&quot;Weight&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAC-150</td>
<td>17-23/32&quot;</td>
<td>30&quot;</td>
<td>13-19/32&quot;</td>
<td>103</td>
</tr>
<tr>
<td>MAH-125 Heating Only</td>
<td>17-23/32&quot;</td>
<td>30&quot;</td>
<td>13-19/32&quot;</td>
<td>102</td>
</tr>
</tbody>
</table>

### Standard Equipment

- Boiler Control Module: High Limit/Electronic Ignition Control.
- User Display Interface: Digital Temperature Display with diagnostics and programmable settings.
- Heat Exchanger: Stainless Steel
- 3-Way Water Diverting Valve
- Combustion: Automatically modulating gas valve with 5:1 Turndown for Heating Mode & 7:1 for DHW Mode, Stainless Steel Burner, Direct Spark Ignition, Separate Flame Sensor, 100% shutoff
- Other: Assembled Boiler with Jacket, Induced Draft Fan, Circulator Pump, 30psi Relief Valve, Low Water Pressure Switch, Air Pressure Switch, Temperature/Pressure Gauge
- MAC-150 DHW Model: Stainless Steel Brazed Plate Heat Exchanger

### Options

- Outdoor Temperature Sensor, Indirect Tank Sensor, Floor Stand Kit

### Certifications

- CUS
- ASC
- AHE
- Tested for 43.5 psi. ASME Maximum Allowable Working Pressure

All ratings and specifications subject to change.

PN 240011407 Rev 6/16