



# CELSIOR

“Combi” Boiler



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## “Combi” Gas-Fired Boiler

**Celsior, Embassy’s latest wall-mounted combination boiler and water heater offers the highest near-condensing performance efficiencies available today.**

Celsior’s innovative high operating boiler design is fully-modulating and completely packaged with operating efficiencies of 85%. All units have built-in circulator pumps, expansion tanks and air eliminators for ease of installation and service.

Instantaneous domestic hot water production of over 4 GPM provides enough hot water for today’s multi-faceted lifestyles. Celsior uses the AquaGuard filter system which prevents impurities from entering the domestic water heat exchanger for superior performance and durability.

Loaded with features, Celsior boilers are equipped with ionisation ignition systems and an electronic control interface that continuously monitors system performance to seamlessly meet the demands of both heating and domestic hot water production.

Celsior’s easy-to-use integrated control panel is simple and intuitive for ease of set-up. It’s LED diagnostic system shows operational performance and can be used for accurate troubleshooting as well.



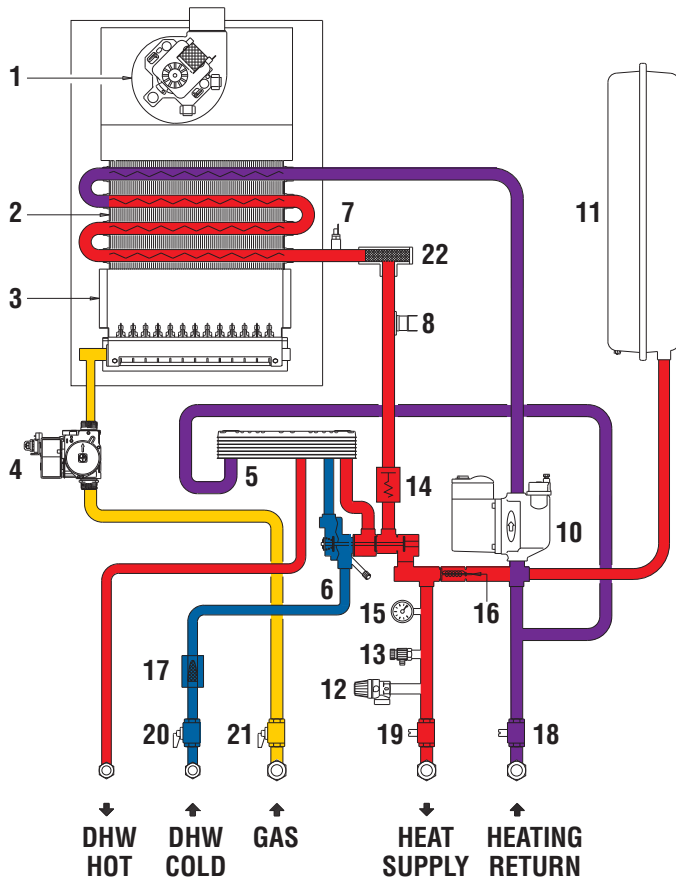
### Standard Features

- Full Modulation
- 85% Operating Efficiency
- Copper-Fin Primary Heat Exchanger
- Flow switch & Freeze Protection
- Integrated Pump, Expansion Tank & Air Separator
- 3-Way Valve
- Side-Wall Vent Kit
- Isolation Valve Kit
- 4 GPM Instantaneous DHW
- AquaGuard Filter System
- Natural or LP Gas

### List of Functions/Instruments

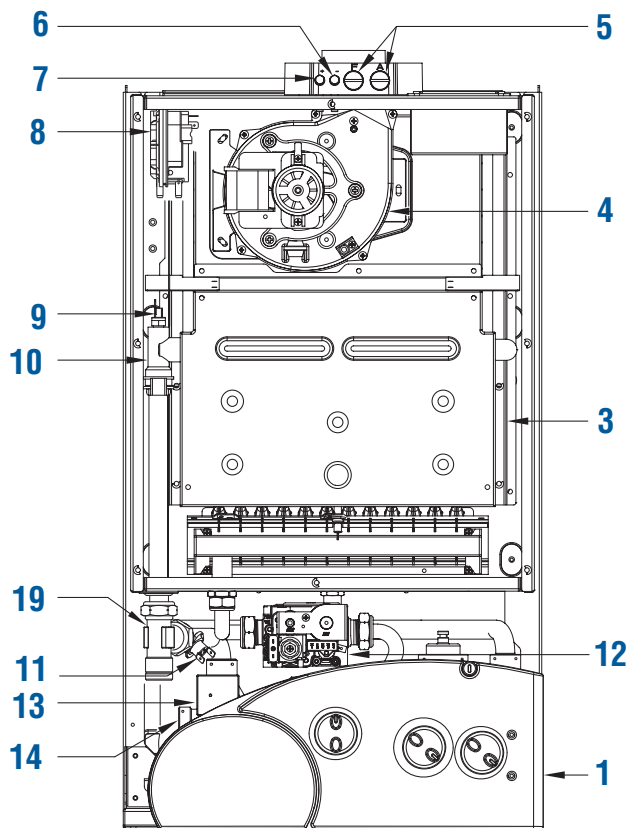
- 1 Tridicator
- 2 Time programmer seat
- 3 Rotary switch  
(off, summer, winter, chimney sweep)
- 4 D.H.W. potentiometer (86-140°F / 30-60°C)
- 5 C.H. potentiometer (104-176°F / 40-80°C)
- 6 Red LED: irregular and/or incorrect operation
- 7 Green LED: fixed: power is on -  
flashing: autodiagnosis modey





### Operating Schematic

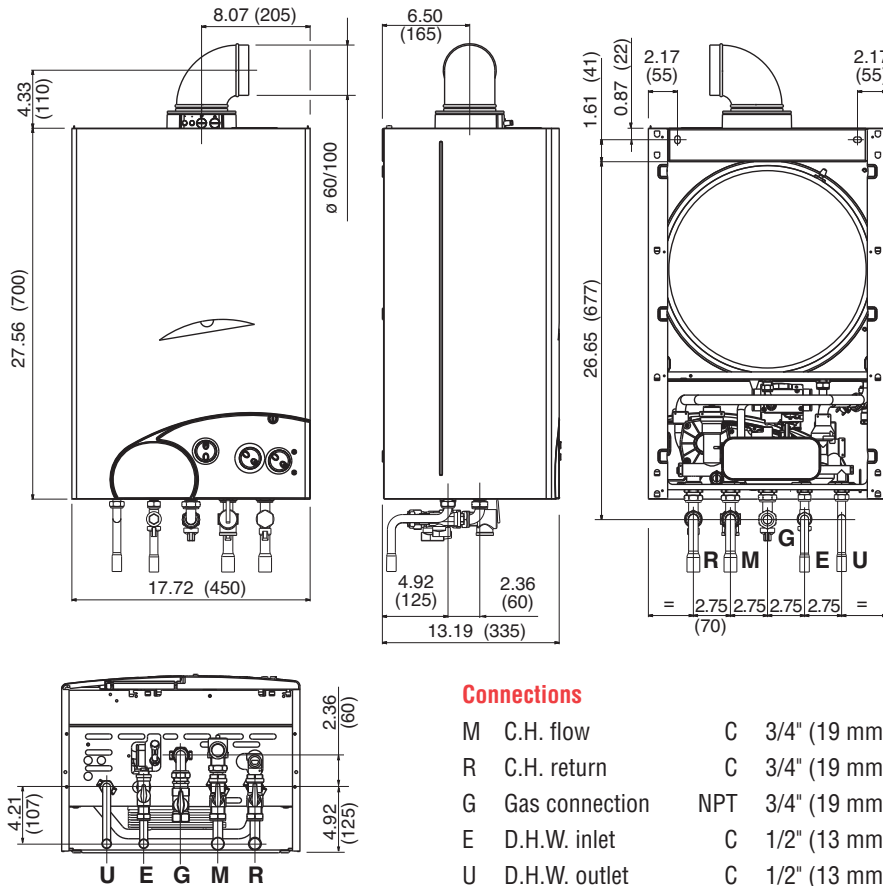
- 1 Fan
- 2 Main heat exchanger
- 3 Combustion chamber
- 4 Gas valve
- 5 D.H.W. heat exchanger
- 6 Divertor valve
- 7 Heating sensor (SM)
- 8 212°F (100°C) safety thermostat
- 10 Pump with automatic air vent
- 11 Expansion tank
- 12 Safety valve
- 13 Boiler discharge heating supply
- 14 Water flow switch
- 15 Tridicator
- 16 Automatic by-pass
- 17 D.H.W. filter
- 18 Heating return cock
- 19 Heating supply flow cock
- 20 D.H.W. cock
- 21 Gas supply cock
- 22 Aqua Guard Filter System



### Key Components

- 1 Control panel
- 3 Combustion chamber
- 4 Fan
- 5 Combustion analysis intakes
- 6 Negative pressure intake
- 7 Positive pressure intake
- 8 Smoke pressure switch
- 9 Heating sensor (SM)
- 10 Main heat exchanger
- 11 212°F (100°C) safety thermostat
- 12 Gas valve
- 13 Water switch
- 14 Divertor valve
- 15 Aqua Guard Filter System

## Dimensional Data



## Ratings and Engineering Data

		<b>Natural Gas</b>	<b>Propane Gas</b>
<b>Maximum input</b>	Btu/h (kW)	133,800 (39.2)	120,000 (35.2)
<b>Minimum input</b>	Btu/h (kW)	79,200 (23.2)	72,700 (21.3)
<b>Maximum output</b>	Btu/h (kW)	111,700 (32.7)	106,300 (31.1)
<b>Minimum output</b>	Btu/h (kW)	66,900 (19.6)	60,700 (17.8)
<b>Water content</b>	Gal (l)	2.1 (8)	2.1 (8)
<b>Electrical power consumption</b>	W	165	165
<b>Maximum C.H. pressure</b>	psi (bar)	43.5 (3)	43.5 (3)
<b>Maximum C.H. temperature</b>	°F (C)	185 (85)	185 (85)
<b>Expansion vessel capacity</b>	Gal (l)	2.1 (8)	2.1 (8)
<b>Expansion vessel precharging pressure</b>	psi (bar)	14.5 (1)	14.5 (1)
<b>C.H. setting range</b>	°F (C)	104-176 (40-80)	104-176 (40-80)
<b>D.H.W. setting range</b>	°F (C)	86-140 (30-60)	86-140 (30-60)
<b>Continuous D.H.W. flow rate <math>\Delta t</math> 54°F (30°C)</b>	Gal/min (l/min)	4.09 (15.5)	3.89 (14.7)
<b>Minimum D.H.W. flow rate</b>	Gal/min (l/min)	0.63 (2.4)	0.63 (2.4)
<b>Minimum D.H.W. pressure</b>	psi (bar)	7.3 (0.5)	7.3 (0.5)
<b>Maximum D.H.W. pressure</b>	psi (bar)	125 (8.6)	125 (8.6)
<b>Vent category</b>		III	III
<b>Weight</b>	lb (kg)	88.2 (40)	88.2 (40)



This product is certified to the California Energy Commission in accordance with California law. Massachusetts Board of Plumbers and Gas Fitters Approval Code C1-0611-394.