

GC160 SERIES

Best

**Smith**  
RESIDENTIAL BOILERS



**GC160 series**

WALL MOUNTED GAS-FIRED  
RESIDENTIAL CONDENSING  
BOILER

**THE HEATING  
Pros**



## GC160 SERIES

The GC160 series of condensing boilers utilize a patented parallel flow heat exchanger and state of the art premix air/gas modulation firing system for optimal combustion. GC160 series boilers have AFUE ratings of 93% and come in a convenient space saving wall-hung design. Units are offered in both “combi” and “boiler only” configurations.

“Combi” units provide both hydronic heat and semi-instantaneous hot water all in one complete compact package. “Combi” units include as standard features a mounted and wired system circulator pump and expansion tank.

“Boiler only” units are offered with no integral domestic hot water package allowing customers the use of their current hot water supply equipment. “Boiler only” models can be easily piped to an indirect fired storage tank for additional storage capacity.

All units utilize a panel mounted “on-board” electronic control platform that allow for easy set-up and custom system configuration.

GC160 series units are installation and maintenance friendly. All fuel and water utility connections are conveniently located at the bottom of the unit, external to the cabinet for ease of connection and service.

The GC160 is at the top of its class for performance and safety.



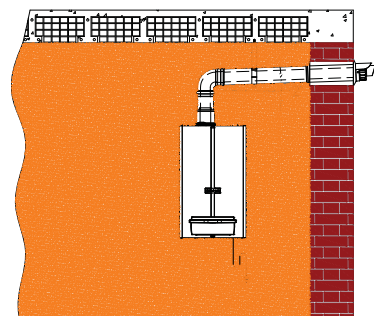
### Domestic Hot Water (“Combi” units only)

Enjoy ample low-cost domestic hot water without the expense of a separate water heater. The GC160’s domestic water coil is integrated into the boiler cabinet and easily removed for annual maintenance. Producing up to 4 gallons per minute, the semi-instantaneous copper coil configuration has plenty of capacity for your hot water needs.



### Venting

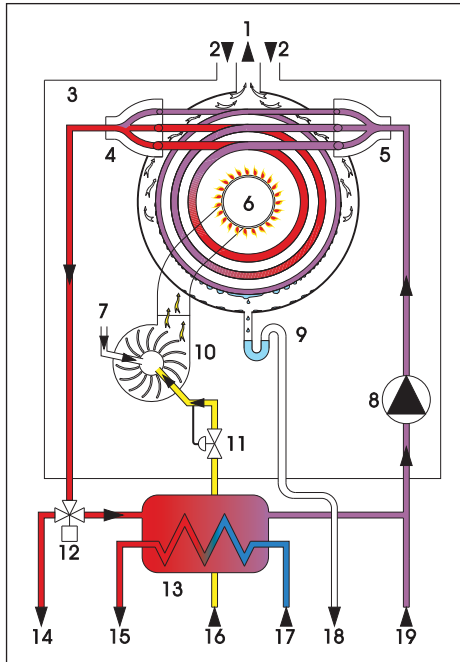
The GC160 series is designed to be used with a concentric vent kit that can be vented either vertically or side-wall for application flexibility. Concentric vent kits allow the use of outside air for combustion, lowering fuel bills by reducing air infiltration. Kits are flexible and easy to install and can be vented up to 70 equivalent feet.



## “Combi Unit”

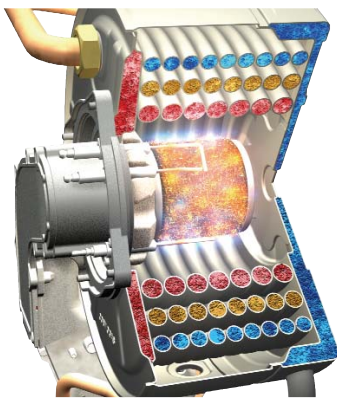


## Operating Schematic



- 1=Flue exhaust
- 2=Air intake
- 3=Sealing chamber
- 4=Heating supply manifold
- 5=Heating return manifold
- 6=Environmentally friendly, premix burner
- 7=Air intake
- 8=Circulator pump\*
- 9=Condensate siphon
- 10=Fan
- 11=Pneumatic gas valve
- 12=Three way valve\*
- 13=DHW heat exchanger\*
- 14=Heating supply
- 15=Domestic hot water\*
- 16=Gas inlet
- 17=Domestic cold water
- 18=Condensate discharge
- 19=Heating return

\* “Combi” only



Patented 316L stainless steel full flow heat exchanger incorporates a tri-parallel flow design that yields high efficiency through even heat transfer and low water pressure drops. This radial flow heat exchanger is manufactured using robotic laser welding techniques for precision construction. “H” stamp ASME code certified.

High efficiency, low restriction cylindrical shaped premix mesh burner and negative pressure gas valve allows a 5 to 1 boiler capacity turndown. DOE rated efficiency of 93% AFUE. Easy to access for scheduled maintenance.



## STANDARD FEATURES (“Combi & Boiler only” units)

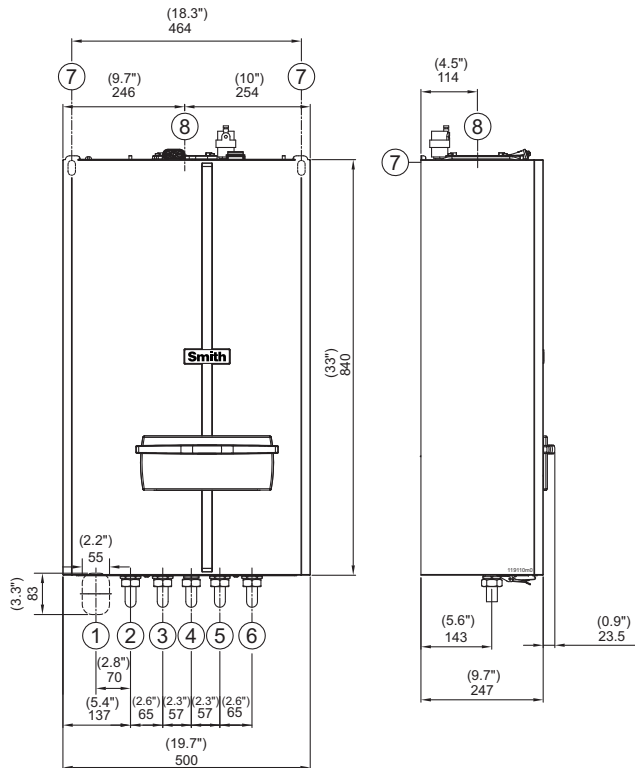
- 93% AFUE
- ASME heat exchanger
- Patented tri-parallel flow stainless steel tubes
- Premix burner technology
- Full 5:1 modulation (30,000 – 160,000 btuh)
- Environmentally friendly – low NO<sub>x</sub> – less than 15 ppm SCAQMD approved
- Space saving wall mount

## GC160 “COMBI” STANDARD FEATURES

- Semi-instantaneous domestic hot water coil (4 GPM)
- Integral system circulator pump
- Integral expansion tank and air vent

# GC160 series

GAS-FIRED CONDENSING RESIDENTIAL BOILER



N°	Description	Connections
		GC160
1	Area for power supply cable	/
2	Heating supply connection	3/4" SWEAT
3	DHW connection	3/4" SWEAT
4	Gas connection	3/4" NPT
5	DCW connection	3/4" SWEAT
6	Heating return	3/4" SWEAT
7	Position for boiler support	/
8	Flue discharge/air intake connection	/

## GC160 Ratings and Engineering Data

Nominal heat input	160,000 Btu/hr
Minimum heat input	30,000 Btu/hr
Efficiency	93%
*DOE Heating capacity is based on standard test specified by the United States Department of Energy.	
* D.H.W. heat output	142,400 Btu/hr
* Semi-Instantaneous D.H.W. production (75°F rise)	4 gal/min
Maximum heating temperature	190°F
Maximum heating pressure	30 Psi
* Maximum pressure of domestic hot water circuit	125 Psi
* Capacity of expansion tank	2.64 gal
Nominal power supply voltage	120/60 V/Hz
Electric power	170 W
Flue gas pipes diameter (split) (polypropylene)	3"
Flue gas pipes max. length (split) (polypropylene)	300 ft equivalent
Flue gas pipes diameter (concentric) (polypropylene)	2.36" / 3.94"
Flue gas pipes max. length (concentric) (polypropylene)	70 ft equivalent
CO contents (0% O <sub>2</sub> with natural gas)	15 p.p.m.
NO <sub>x</sub> contents (0% O <sub>2</sub> with natural gas)	15 p.p.m.
Dimensions LxDxH (approximate)	20" x 10" x 30"
Connections (supply - return - D.H.W. - D.C.W. - gas)	3/4"
Weight	100 lbs

**Smith**  
RESIDENTIAL BOILERS

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A MESTEK COMPANY

\* "Combi" only

In the interest of product improvement, we reserve the right to make changes without notice.

