

HeatMaster[®] 70-100

High performance heating and hot water generator. Can also be used as a stand alone hot water generator capable of operating at an elevated temperature.

Simple, Well Proven Performance

At the heart of the HeatMaster is a stainless steel cylinder through which the flue tubes pass. This is surrounded by a mild steel shell containing the primary water.

The outer shell extends down to the combustion chamber and around the flue tubes. The heat transfer surface is therefore much greater than that of standard direct fired water heater. A circulating pump fitted to the primary circuit moves the water around the tank, heating it faster and maintaining an even temperature across the primary jacket.

The burner fires into the combustion chamber which indirectly heats the stainless steel cylinder containing the DHW. As with all Tank-in-Tanks, this is corrugated over its full height and suspended in the HeatMaster by its hot and cold water connections.

Self-descaling

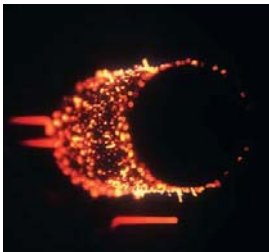
The tank has freedom of movement: its walls expand and contract with the changes in pressure thus preventing scale forming on the walls. Finally, the cold water injected strikes against the bottom of the tank and carries all suspended particles into the system, helping to prevent deposits forming in the tank. This unique self-descaling feature ensures that the boiler always operates with maximum efficiency.

Benefits & Features

- High performance combined boiler and water heater
- Stainless steel Tank-in-Tank design
- Choice of burner:
 - Low-NOx premix gas or LPG (BG2000-S),
 - Forced draught natural gas or LPG
 - Pressure jet 28 sec or 35 sec oil
- Can also be used as a stand-alone water heater
- Anti-Legionellae: hot water stored at a consistently high temperature
- Built-in primary circuit shunt pump
- Fully insulated with rigid polyurethane foam
- Stove enamelled casing
- Control panel including thermostats, combined temperature and pressure gauge, indicators and on/off switch
- Vented or unvented use, with mains pressure SystemPaks available

BG2000-S/70 and BG2000-S/100 Burner

ACV has developed these burners specially for the HeatMaster 70 and 100 models. Part of the BG 2000-S air/gas premix burner range, they have a metal fibre (NIT) flame tube and smooth and near-silent ignition and operation. They are ideal for use in applications where burner noise must be kept to a minimum.



Technical Data

		HeatMaster®70	HeatMaster®70	HeatMaster®100	HeatMaster®100
		Oil	Gas/LPG	Oil	Gas/LPG
Fuel		Oil	Gas/LPG	Oil	Gas/LPG
Burner options	type	Pressure Jet	BG2000-S or Forced draught	Pressure Jet	BG2000-S or Forced draught
Input	kW	69.9	69.9	107	107
Maximum output	kW	63	63	96.3	96.3
Primary capacity	L	108	108	130	130
Total capacity	L	239	239	330	330
Heating surface area	m ²	3.14	3.14	3.95	3.95
Primary circuit pressure drop	mbar	46	46	83	83
DHW tank pressure drop	mbar	45	45	180	180
Flue circuit pressure drop	mbar	0.6	0.6	1.4	1.4
DHW connection (male BSP)	Ø	1"	1"	1"	1"
Primary connection (female BSP)	Ø	1 1/2"	1 1/2"	1 1/2"	1 1/2"
Flue connection	Ø mm	150	150	150	150
Flue connection options	type	B23	B23/C13/ C33/C53	B23	B23/C13/C33/C5
BG2000 air intake connection	Ø mm	n/a	80	n/a	100
Weight empty	Kg	270	270	320	320
Weight full	Kg	509	509	650	650
Minimum working gas pressure	mbar	n/a	20(Nat Gas)/37(LPG)	n/a	20(Nat Gas)/37(LPG)
Gas flow rate	m ³ /h	n/a	7.40(Nat Gas)/2.86(LPG)	n/a	8.99(Nat Gas)/3.47(LPG)
Maximum operating temperature	°C	90	90	90	90

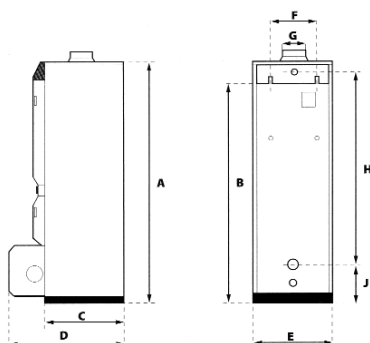
Maximum operating pressure Primary: 3 bar Secondary: 10 bar
 Gas connection - BG2000 S/70: 3/4"
 - BG2000 S/100: 1"

Performance Data

		HeatMaster®70 (all burners)	HeatMaster®100 (all burners)
Litres in first 10 minutes	40°C	646	905
Litres in first 10 minutes	45°C	543	777
Litres in first 10 minutes	60°C	346	514
Litres in first hour	40°C	2133	3172
Litres in first hour	45°C	1794	2680
Litres in first hour	60°C	1219	1813
Continuous flow 40°C	Ltrs/hr	1835	2776
Continuous flow 45°C	Ltrs/hr	1573	2379
Continuous flow 60°C	Ltrs/hr	1067	1665
Reheat time to 60°C	Min	16	13

Note: The above performances are based on the hot water being blended at point of use, with a boiler temperature of 90°C and a domestic cold water inlet of 10°C.

Dimensions



	HeatMaster® 70 Oil	HeatMaster® 70 Gas/LPG	HeatMaster® 100 Oil	HeatMaster® 100 Gas/LPG
A	1743mm	1743mm	2093mm	2093mm
B	1630mm	1630mm	2030mm	2030mm
C	678mm	678mm	678mm	678mm
D	931mm	937(BG 2000)mm	931mm	937(BG 2000)mm
E	680mm	680mm	680mm	680mm
F	390mm	390mm	390mm	390mm
H*	1289mm	1289mm	1693mm	1693mm
J	285mm	285mm	285mm	285mm

*The HeatMaster 100 is currently fitted with two heating flow outlets – the upper connection (recommended) is shown by the dimension H. A second connection (compatible with the previous HM100N) is positioned 365mm lower.