

# Hydroflame®

Flame-effect fan convectors that run off the central heating system, but with all the visual appeal of a real fire – a beautiful feature in any room. Efficient, cost effective and totally safe, with no harmful discharges. Ideal for children and the elderly because there are no flames or hot surfaces. Available in Inset or Freestanding and a choice of eye-catching designs. Hydroflame Classic and Elite can be supplied with an attractive choice of trims and complementary fireplace surrounds.



Model	Room Size Guide* (m <sup>3</sup> )	Heat Output at 80°C		Heat Output at 75°C		Heat Output at 70°C		Heat Output at 65°C	
		Normal kW (Btu/h)	Boost kW (Btu/h)	Normal kW (Btu/h)	Boost kW (Btu/h)	Normal kW (Btu/h)	Boost kW (Btu/h)	Normal kW (Btu/h)	Boost kW (Btu/h)
<b>Hydronic</b>									
Inset (Classic & Elite)	43	1.5 (5100)	2.0 (6800)	1.3 (4600)	1.8 (6200)	1.2 (4100)	1.6 (5500)	1.1 (3700)	1.5 (5100)
Freestanding (Classic & Elite)	43	1.5 (5100)	2.0 (6800)	1.3 (4600)	1.8 (6200)	1.2 (4100)	1.6 (5500)	1.1 (3700)	1.5 (5100)
<b>Hydronic/Electronic (Dual)</b>									
Inset Dual (Classic & Elite)	43	1.5 (5100)	2.0 (6800)	1.3 (4600)	1.8 (6200)	1.2 (4100)	1.6 (5500)	1.1 (3700)	1.5 (5100)
		1.5	-	1.5	-	1.5	-		
Freestanding Dual (Classic & Elite)	43	1.5 (5100)	2.0 (6800)	1.3 (4600)	1.8 (6200)	1.2 (4100)	1.6 (5500)	1.1 (3700)	1.5 (5100)
		1.5	-	1.5	-	1.5	-	1.5	-

Model	Room Size Guide* (m <sup>3</sup> )	Heat Output at 60°C		Heat Output at 55°C		Heat Output at 50°C		Heat Output at 45°C	
		Normal kW (Btu/h)	Boost kW (Btu/h)	Normal kW (Btu/h)	Boost kW (Btu/h)	Normal kW (Btu/h)	Boost kW (Btu/h)	Normal kW (Btu/h)	Boost kW (Btu/h)
<b>Hydronic</b>									
Inset (Classic & Elite)	43	0.9 (3200)	1.3 (4500)	0.8 (2600)	1.1 (3900)	0.7 (2300)	1.0 (3500)	0.6 (2000)	0.9 (3000)
Freestanding (Classic & Elite)	43	0.9 (3200)	1.3 (4500)	0.8 (2600)	1.1 (3900)	0.7 (2300)	1.0 (3500)	0.6 (2000)	0.9 (3000)
<b>Hydronic/Electronic (Dual)</b>									
Inset Dual (Classic & Elite)	43	0.9 (3200)	1.3 (4500)	0.8 (2600)	1.1 (3900)	0.7 (2300)	1.0 (3500)	0.6 (2000)	0.9 (3000)
		1.5	-	1.5	-	1.5	-		
Freestanding Dual (Classic & Elite)	43	0.9 (3200)	1.3 (4500)	0.8 (2600)	1.1 (3900)	0.7 (2300)	1.0 (3500)	0.6 (2000)	0.9 (3000)
		1.5	-	1.5	-	1.5	-	1.5	-

Model	Room Size Guide* (m <sup>3</sup> )	Heat Output at 40°C		Sound Levels		Trim Colour	Flame-Effect Only
		Normal kW (Btu/h)	Boost kW (Btu/h)	Normal (dBA)	Boost (dBA)		
<b>Hydronic</b>							
Inset (Classic & Elite)	43	0.5 (1700)	0.8 (2600)	27	43	Brass or Chrome	•
Freestanding (Classic & Elite)	43	0.5 (1700)	0.8 (2600)	27	43	Brass or Chrome	•
<b>Hydronic/Electronic (Dual)</b>							
Inset Dual (Classic & Elite)	43	0.5 (1700)	0.8 (2600)	27	43	Brass or Chrome	•
		1.5	-				
Freestanding Dual (Classic & Elite)	43	0.5 (1700)	0.8 (2600)	27	43	Brass or Chrome	•
		1.5	-				

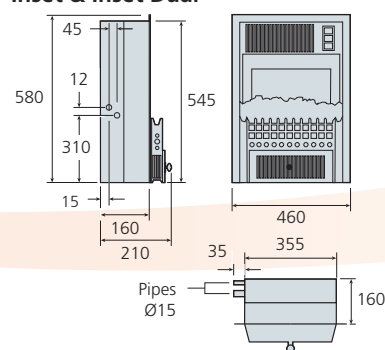
■ In hydronic mode    ■ In electric mode

\*Room sizes given in cubic metres for general guidance only based on normal heat output (80°C) for domestic applications - always calculate heat losses. Heat outputs tested in accordance with BS 4856 using entering water temperature. Fan-only option operational only when central heating system is switched off. Dual models include an electric element which in electric heating mode will emit 1.5kW of heat. Sound levels measured at 1.5m.

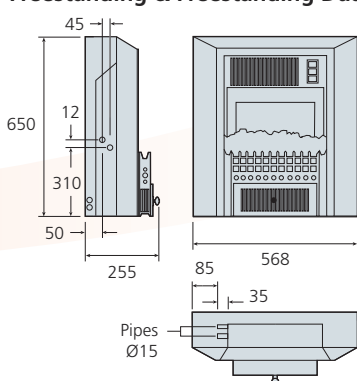
Model	Flow & Return Connections	Mains Cable	Transformer	Flexible Hoses	Isolating Valves	Fused Spur	Power Consumption		Water Capacity (Litres)
							Normal (Watts)	Boost (Watts)	
<b>Hydronic</b>									
Inset (Classic & Elite)	15mm	2.0m	n/a	•	•	3A	29	36	0.36
Freestanding (Classic & Elite)	15mm	2.0m	n/a	•	•	3A	29	36	0.36
<b>Hydronic/Electric</b>									
Inset Dual (Classic & Elite)	15mm	2.0m	n/a	•	•	10A	29	36	0.36
Freestanding Dual (Classic & Elite)	15mm	2.0m	n/a	•	•	10A	29	36	0.36

■ In hydronic mode ■ In electric mode

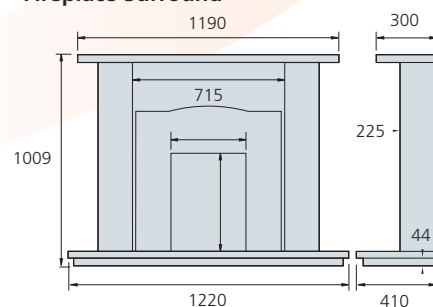
### Inset & Inset Dual



### Freestanding & Freestanding Dual



### Fireplace Surround



All dimensions in mm

### Hydroflame® Classic & Elite

Connects to and runs from your central heating system (hydronic mode)

#### Installation

- Inset model designed for a recess 400mm x 550mm high
- Unit must be earthed
- Suitable for two-pipe central heating systems only
- Surface temperature of the casing complies with the safety requirement DHSS DN4

#### Commissioning

Check water temperature is hot enough to activate low temperature cut-out device (LTC)

#### Controls

Two rocker switches - normal/off/boost, flame-effect on/flame-effect off

Variable low temperature cut-out device factory set to energise fan at approximately 40°C. Set temperature can be adjusted higher or lower during installation

Built-in room thermostat

### Hydroflame® Dual Classic & Elite

Connects to and runs from your central heating system (hydronic mode), but also includes an electric heating element for use when the central heating is switched off

#### Installation

- Inset Dual model designed for a recess 400mm x 550mm high
- Unit must be earthed
- Suitable for two-pipe central heating systems only
- Surface temperature of the casing complies with the safety requirement DHSS DN4

#### Commissioning

Check water temperature is hot enough to activate low temperature cut-out device (LTC)

#### Controls

Three rocker switches - normal/off/boost, hydronic/electric, flame-effect on/flame-effect off

Variable low temperature cut-out device factory set to energise fan at approximately 40°C. Set temperature can be adjusted higher or lower during installation

Built-in room thermostat



Cream with cream back plate and hearth



Yew with black back plate and hearth



Yew with cream back plate and hearth



Antique Oak with black back plate and oak hearth



Antique Oak with cream back plate and oak hearth

### Hydroflame® design options

Model Type	Trim Colour	
	Brass	Chrome
<b>Hydroflame Elite</b>		
Inset	•	•
Inset Dual	•	•
Freestanding	•	•
Freestanding Dual	•	•
<b>Hydroflame Classic</b>		
Inset	•	•
Inset Dual	•	•
Freestanding	•	•
Freestanding Dual	•	•



Freestanding Classic Chrome



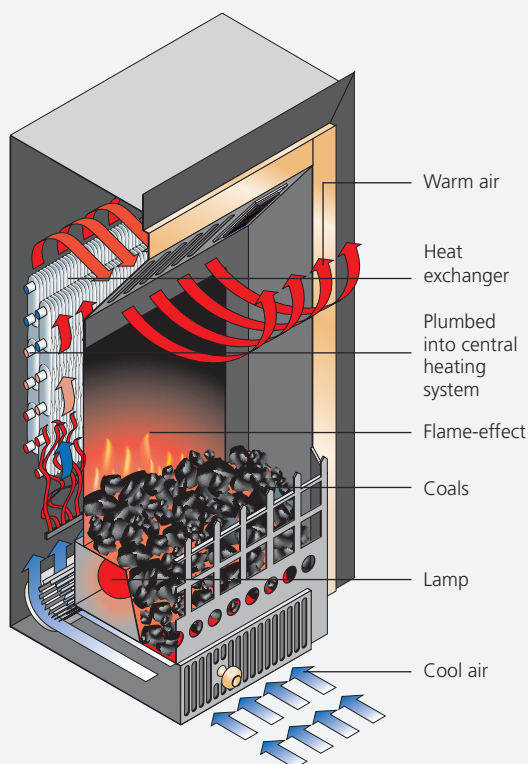
Freestanding Classic Brass



Freestanding Elite Brass



Freestanding Elite Chrome



## How Hydroflame® works

Hot water from the central heating system passes through a heat exchanger and transfers its heat to the aluminium fins.

Cooler air is drawn in at floor level and used to create the flame-effect. The air is heated as it passes over the heat exchanger, a patented process that creates a realistic flame-effect, and then expelled gently back into the room.

This gives a more even temperature and will heat a room in much less time than a traditional panel radiator.

The fan will not come into operation until the central heating system water passing through the heat exchanger reaches 40°C (or the temperature set by the installer). This ensures that cooler air is not circulated at start up and allows Hydroflame to switch on and off automatically in conjunction with the central heating system.

Flame-effect fan convectors are energy efficient and in the home will add less than £10.00\* to your annual heating bill.

Dual models include an electric heating element – ideal in spring and summer when you may need a quick warm up but the central heating system is switched off.

Note: \*based on electricity charged at 15p/kWh.

## Features & benefits

### Completely safe

Hydroflame is safe because it uses water from the central heating system to produce heat.

- No independent gas supply needed
- No flue gases are produced – so a flue and CO detector are not required
- No live flames, hot coals or elements
- Low surface temperatures
- No special ventilation required
- Hidden fixings for extra security
- No minimum room size

### A beautiful focal feature in the room

Stylish and attractive appearance characterises Hydroflame's innovative design.

- Fit on any internal or external wall surface, into a fireplace opening, or in front of a fireplace surround
- Can be used simply to replace an existing panel radiator
- Can show a comforting flame-effect with or without the heating being switched on

### Simple controls

Operating Hydroflame could not be simpler.

- Clearly labelled, easy action rocker switches
- Easy to use by elderly or infirm people

### Minimal running costs

Hydroflame has a unique method of operation that brings significant savings on running costs.

- Operates as part of the central heating system, where average usage on normal heat output will add less than £10.00 a year to annual heating bills (excluding any separate use of the electric heating element on Dual models). See table of running costs.

### Environmentally friendly

Hydroflame has less of an impact on the environment than electric, gas or open fire alternatives.

- No harmful gases expelled to the atmosphere
- Automatic response to water temperature, providing the correct amount of heat when needed
- Thermostatically controlled
- Slower fan speed for flame-effect only reduces energy consumption
- Energy saving light bulb

### Easy to install

Hydroflame is economical and straightforward to install

- No gas supply or flue required – fix to any wall, internal and external
- No chimney or flue liners required
- Inset models fit standard fireplace openings – no need for a replacement surround
- Flexible hoses, isolation valves and pre-wired electric cable supplied as standard
- Connects to standard central heating pipe work

For full installation instructions refer to the Hydroflame Installation & User Guide, which is available on request; or download it from [www.smiths-env.com](http://www.smiths-env.com)

### Low maintenance

Cost effective and convenient.

- No need for annual servicing or safety checks – so no access to the property is required
- Easy to change the lamp
- Easy for homeowner to clean the filter system

### Very low water content

Each Hydroflame has a very low water content of 0.36 litres, around 5% of the water content of an equivalent output steel panel radiator.

### Hydroflame® running costs

(Models fitted with 11W energy-saving long-life bulb)

Annual Usage (Hours)	Running Costs (£)		
	11W Bulb	29W Fan	Annual Total
1100	1.82	4.79	6.60
1300	2.15	5.65	7.80
1700	2.81	7.39	10.20
2500	4.13	10.87	15.00

### Assumptions

Electricity charged at 15p per kWh.  
Hydroflame operating on normal - 1.5kW heat output.  
Excludes use of electric heating element.