The Fusion Range of Electric Boilers

The Ultimate Solution for Electric Wet Central Heating
Our range of Electric Boilers provide complete peace of mind for reliability, performance and safety.

The Fusion range of electric boilers is the most complete in the market today. It offers the perfect solution for properties with no access to a mains gas supply or homes which have gas boiler restrictions e.g. listed buildings and bed-sit sleeping areas. They are also commonly used in rural areas as replacements for oil and LPG boiler systems.

These 100% energy efficient products are traditionally installed by professional heating engineers throughout the UK in typical properties such as apartments, domestic dwellings, holiday homes and light commercial properties.

Because the Fusion Boiler is so reliable and affordable, the range is specified by numerous Social Landlords as the preferred option when replacing storage heaters and other outdated forms of central heating.

The Fusion range has been developed over the years to offer a ‘Plug and Play’ solution to meet the demands of professional installers and the various problems presented by the different property types in the UK. Originally a single Fusion Standard Boiler; the range has grown to meet the increasing demands of Building Regulations and the need for renewable products within the UK.

We are confident that our Fusion boilers will provide the perfect solution for your central heating requirements.

**Fusion Standard/Slimline Boilers**

Ideal for retrofit and new build installations requiring heating only or heating and hot water. Either a direct or indirect cylinder for hot water purposes will be required.

Due to their compact size these system boilers can be easily situated in airing or kitchen cupboards.

All Fusion products can be installed with any type of wet system radiator; but for improved performance and running costs we strongly recommend our Mercury Radiators to complement your system.

The Slimline model requires an expansion vessel which is not supplied with the unit.

**Fusion E10 Combination Unit**

This is a fully packaged unit in a pre-fabricated elegant enclosure complete with all the components required to provide both heating and hot water for retrofit and new build installations.

Generally this unit would be located in a typical airing cupboard, however due to its ‘Plug and Play’ design it can be positioned in any similarly sized area.

This versatile product can be supplied in various outputs and capacities to accommodate most installations.

**E10 Solar Combination Unit**

The Solar version has been designed to meet the ever increasing requirement for renewable technology within the new build market and the energy conscious retrofit buyer.

Built around the proven technology of our Fusion E10 Combination Unit, the E10 Solar Combi has been further developed to include a solar pump station and unvented solar hot water cylinder. With the additional solar components, the SAP rating of the property is increased as the carbon emission profile is reduced.

All Fusion products can be installed in under-floor heating applications.
Unlike most electric boilers, Fusion boilers are designed to eliminate unnecessary external plumbing and pipe work. They are the ideal choice for wet central heating and are also suited to underfloor heating systems.

The Fusion Standard boiler has been engineered to include the pump, auto-air vent, expansion vessel and pressure gauge within the compact casing.

With the exception of the expansion vessel, the Slimline version boasts all the advantages of the Standard model.

This allows both boiler types to be discreetly located in either a cupboard or wall mounted e.g. in the kitchen area.

The sleek design of the Slimline has enabled us to incorporate it within the E10 Combination unit and the outstanding E10 Solar Combination unit.

To ensure maximum efficiency, all Fusion boilers incorporate six stage heating using a single copper heat exchanger: With this unique facility the boiler will modulate so that both electricity consumption and running costs are controlled through all heating cycles.

The easy-to-use control panel allows both the installer and home owner to identify the operating temperatures on the flow and return, system flow rate and kW output of the boiler at any given time.

The control panel also enables the installer to utilise the inbuilt self diagnostic feature during installation or routine maintenance.

The operating temperature of the boiler can be adjusted using the control panel and range from 40 degrees through to a maximum 85 degrees.

Our single phase boiler outputs are 6kW, 9kW and 12kW. The 14.4kW is available for properties that require a higher output. For multiple boiler installations it is also possible to install the boiler in series to suit non domestic situations.

In light commercial properties with a 3-Phase electricity supply, we supply 24kW and 36kW output boilers within the Fusion Standard range.

The complete Fusion range is BEAB Approved guaranteeing you complete piece of mind for the lifetime of your product.
The Fusion Boiler can also be used for heating only installations.

The Fusion Slimline can also be used for heating only installations.

Electronic Features

- Control Panel
- Heating Elements
- Voltage Free Control Connections
- Over Heat Cut-Out
- Printed Circuit Board
- Copper Heat Exchanger
- Circulation Pump
- White Metal Enclosure

S-plan Heating & Hot Water

FUSION STANDARD

- Auto Air Vent
- Cold Feed
- Lock Shield Valves
- Filling Loop
- 2 port valve

Expansion
DHW

S-plan Heating & Hot Water

FUSION SLIMLINE

- Auto Air Vent
- Cold Feed
- Lock Shield Valves
- Filling Loop
- 2 port valve

Expansion
DHW

The Fusion Boiler can also be used for heating only installations.

The Fusion Slimline can also be used for heating only installations.
**Key Features**

**Plumbing Features**
- Automatic Air Vent
- Pressure Gauge
- Expansion Vessel
- Flow & Return Sensors
- Flow Meter
- Pressure Relieve Valve
- Heating Return
- Heating Flow

**Under Floor Heating**

**Control Panel key**
1. Boiler Temperature
2. Return Temperature Indicator
3. Flow Temperature Indicator
4. Pump Indicator
5. Heating Demand Indicator
6. Digital Display
7. Set Point Temperature
8. Flow Rate
9. Power Usage Indicator
Fusion E10 Electric Combination unit

The Fusion E10 Electric Combination unit offers the comfort and convenience of wet central heating and domestic hot water for all domestic properties with no access to mains gas. It is compact in size and has been designed to fit into a standard domestic airing cupboard, making it ideal for a range of properties as there are no flue requirements.

Housed in an elegant enclosure, the Fusion E10 is a fully packaged pre-fabricated unit. It comes complete with the Fusion Slimline Electric Boiler; indirect stainless steel hot water cylinder and is pre-plumbed using the ‘S’ Plan configuration.

The ‘S’ Plan configuration enables you to select ‘heating only’, ‘hot water only’ or both at the same time. As the boiler is also heating the indirect cylinder, the re-heat times for the hot water are superior to that of a traditional electric direct cylinder. The cylinder contains a 22mm stainless steel coil for the main heat source. It also has a back up immersion heater to provide complete peace of mind.

An added feature of our stainless steel cylinder is that no anode is required unlike mild steel variants. This eliminates future maintenance costs as the anode requires to be replaced on a regular basis.

Also incorporated are the expansion vessels required for both the heating and domestic hot water.

The unit is pre-wired with a programmable Controller to provide full control of both the central heating and domestic hot water, and is supplied complete with tundishes and control valves.

The boiler outputs applicable to the Fusion E10 Combination unit are 9kW and 12kW. The 14.4kW is available for properties which require a higher output.

Prior to being fitted in the enclosure the cylinder is coated and insulated with 50mm HCFC & CFC free foam to meet current energy efficiency guidelines.

- Pressure tested to 15 Bar
- Relief valve operates at 7 Bar - 90°
- 3 Bar working pressure
- 22mm domestic and primary connections
- Up to 50 litres per minute flow rate for Domestic Hot Water
**Features**
- Controllable, efficient wet central heating
- Programmable controls to suit off-peak times offered by the Economy 10 tariff.
- Uses standard radiators and thermostatic radiator valves
- Designed as a sealed system
- Domestic hot water from un-vented indirect stainless steel cylinder offering mains pressure hot water
- Cylinder manufactured from duplex stainless steel
- No flue and no fuel tanks required
- Silent in operation
- Front panel indicator to show boiler status
- Soft start approach to avoid power surges
- Integral magnetic filter for boiler protection
- Adjustable controls to determine boiler temperature outputs
- Minimal service and maintenance costs
- No requirement for annual gas safety certificate
- On-site parts and labour guarantee
- 10 year guarantee on the cylinder
- 2 year guarantee on boiler and other controls

**Enclosure key**
1. Enclosure
2. Removable Door
3. Twin Channel Programmer
4. Rear Compartment - Expansion Vessels
5. Fusion Slimline Boiler
6. Rear Compartment - Cylinder
7. Cylinder Stat
8. Wiring Centre
9. Automatic Bypass
10. Domestic hot water Temp-Pressure Relief Outlet
11. Programmer Cable
12. Domestic hot water Outlet
13. Central Heating Pressure Relief Outlet
14. Magnetic Filter
15. Zone Valves
16. Cold Main
17. Immersion Heater
18. Central heating Return
19. Central heating Flow

**Performance Table**

<table>
<thead>
<tr>
<th>Configuration</th>
<th>9kW</th>
<th>12kW</th>
<th>14.4kW</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>150 Litre Cylinder</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time to re-heat after 70% Draw-Off (minutes)</td>
<td>40</td>
<td>30</td>
<td>25</td>
</tr>
<tr>
<td>Time to re-heat from 15C to 60C (minutes)</td>
<td>60</td>
<td>45</td>
<td>38</td>
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<tr>
<td><strong>180 Litre Cylinder</strong></td>
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<td></td>
</tr>
<tr>
<td>Time to re-heat after 70% Draw-Off (minutes)</td>
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<td>40</td>
<td>33</td>
</tr>
<tr>
<td>Time to re-heat from 15C to 60C (minutes)</td>
<td>80</td>
<td>60</td>
<td>50</td>
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</table>
The Solar Combination unit

An acknowledged innovator in the field of electric heating and hot water systems, EHC has developed the ‘Plug and Play’ Solar Combination Unit to meet the ever increasing demand for renewable technology. Based around the highly successful Fusion E10 Combination Unit, the product has been developed further to include a solar pump station and un-vented solar hot water cylinder.

The Solar Combination Unit helps improve the SAP rating of a property as it reduces the carbon emission profile. It is an ideal product for developers and Social Landlords who are increasingly utilising renewable products to comply with current legislative standards.

The EHC Solar Combination Unit is completely Pre-plumbed and Pre-wired with the following equipment:

- Fusion Slimline Electric boiler in sizes 9kW, 12kW and 14.4kW
- 180 litre direct, un-vented, solar cylinder
- Pre-wired programmer and cylinder thermostat
- Pre-fitted pump station
- Intelligent solar management system
- External plumbing kit complete with tundishes and control valve for the incoming water main connection.

The Solar Combination Unit shares all the benefits of the Fusion electric boiler which, when used with the Economy 10 tariff, provides a very cost effective alternative to electric storage heating, oil, solid fuel or LPG systems. It is the perfect solution for properties with no access to mains gas or homes which have gas restrictions and brown field sites. Not only is the unit the ideal choice for conventional wet central heating but is also suited to under-floor heating systems.

Additionally we offer an optional hard wired control system to ensure that you optimise the benefit of hot water gained from your solar system. This will minimize the need to utilise the ‘back up’ immersion heater.

Prior to being fitted in the enclosure the cylinder is coated and insulated with 50mm HCFC & CFC free foam to meet current energy efficiency guidelines.

The cylinder contains a 22mm Stainless Steel Solar coil for the main heat source. It also has a back up immersion heater to provide complete peace of mind.

- Pressure tested to 15 Bar
- Relief valve operates at 7 Bar - 90°C
- 3 Bar working pressure
- 22mm domestic and primary connections
- Up to 50 litres per minute flow rate for domestic hot water.
The Electric Heating Company can assist with the system design when using the E10 Solar Combination Unit.

Features

- Controllable, efficient wet central heating
- Programmable controls to suit off-peak times offered by the Economy 10 tariff.
- Uses standard radiators and thermostatic radiator valves
- Designed as a sealed system
- Domestic hot water from un-vented direct stainless steel cylinder offering mains pressure hot water
- Cylinder manufactured from duplex stainless steel
- No flue and no fuel tanks required
- Silent in operation
- Front panel indication to show boiler status
- Soft start approach to avoid power surges
- Integral magnetic filter for boiler protection
- Adjustable controls to determine boiler temperature outputs
- Minimal service and maintenance costs
- No requirement for annual gas safety certificate
- On-site parts and labour guarantee
- 10 years guarantee on the cylinder
- 2 years guarantee on boiler and other controls
**Technical specifications - Fusion Electric Boiler**

### Fusion Electric Boiler

<table>
<thead>
<tr>
<th>Boiler Range</th>
<th>kW</th>
<th>6kW</th>
<th>9kW</th>
<th>12kW</th>
<th>14.4kW</th>
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<tr>
<td>Pipe Entry From Boilers</td>
<td>Bottom Entry</td>
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<td></td>
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<tr>
<td>Flow and Return Pipes</td>
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<tr>
<td>Min Water Pressure</td>
<td>Bar</td>
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<td></td>
<td></td>
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<td>Max Water Pressure</td>
<td>Bar</td>
<td>3.0</td>
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<tr>
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<td>Dry Weight</td>
<td>Kgs</td>
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<tr>
<td>Electricity Supply</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Load/Current</td>
<td>Amp</td>
<td>26.1</td>
<td>39.1</td>
<td>52.2</td>
<td>62.6</td>
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<tr>
<td>Heating Output</td>
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<td>30.717</td>
<td>40.956</td>
<td>49.147</td>
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<td>Potentionmeter Max Temp Settings (Factory Set)</td>
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<td>Min Temp Setting</td>
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<tr>
<td>Pump Included</td>
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<td>Recommended Pump Settings</td>
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<tr>
<td>Protection</td>
<td>Amp</td>
<td>32</td>
<td>45</td>
<td>63</td>
<td>80</td>
</tr>
</tbody>
</table>

### Controls

**EHC Heating only:**
- EHC Single Channel Heat Pack

**Central Heating & Domestic Hot Water:**
- EHC Twin Channel Heat Pack

Visit our website for 3 phase Fusion Boilers available in 24kW and 36kW.

Disclaimer - All figures are correct at time of printing and may be subject to change.

### Standard boiler dimensions

- Height: 700mm
- Width: 180mm
- Depth: 425mm

### Slimline boiler dimensions

- Height: 660mm
- Width: 180mm
- Depth: 175mm
## Technical specifications - Fusion E10 Combination and Solar Unit

### Fusion E10 Combination Unit

<table>
<thead>
<tr>
<th>Boiler Range</th>
<th>9kW</th>
<th>12kW</th>
<th>14.4kW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heating Output</td>
<td>30,717</td>
<td>40,956</td>
<td>49,147</td>
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<tr>
<td>Electricity Supply</td>
<td>230/240V single phase 50Hz</td>
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<tr>
<td>Load/Current</td>
<td>39.1A</td>
<td>52.2A</td>
<td>62.6A</td>
</tr>
<tr>
<td>Protection Required</td>
<td>45 A</td>
<td>63 A</td>
<td>80 A</td>
</tr>
<tr>
<td>CH Max Temp Setting</td>
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<td></td>
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<td>CH Min Temp Setting</td>
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<tr>
<td>CH Overheat Temperature Protection</td>
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<td>Pump Included</td>
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<td>Pump Settings</td>
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<tr>
<td>CH Flow and Return</td>
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<td>Domestic and Primary Connections</td>
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<tr>
<td>Min Water Pressure</td>
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<tr>
<td>Max Water Pressure</td>
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<tr>
<td>Expansion Vessels</td>
<td>8 Litre</td>
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<tr>
<td>Immersion Heater</td>
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<tr>
<td>Dry Weight 150 Litre</td>
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<td>Dry Weight 180 Litre</td>
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### Fusion E10 Solar Combi

<table>
<thead>
<tr>
<th>9kW</th>
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<tr>
<td>3kW</td>
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</tbody>
</table>

### Domestic Hot Water

| 180 Litre E10 Combination and Solar Unit |
|---|---|---|
| 180 Litre | 160mm |

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**CH - Central Heating**

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As one of the UK’s leading Heating and Hot Water specialists we are able to offer a host of products suitable for almost any application. Our portfolio of products includes Electric Boilers, SEDBUK A Rated Gas Boilers, Low Water Content Wet System Radiators, Premium Chrome Towel Rails and Stainless Steel Unvented Cylinders.

In addition to our wet system range we also offer a selection of high quality combination radiators and fully controllable Aluminium Radiators.

To complete the range of high efficiency products we also offer a selection of Solar-Thermal Panels and Solar-Thermal Cylinders.

For further information regarding our outstanding range please contact us for the product brochure of your choice.