



Electric Heating Systems



**Primus Range**

*Flexible heating for a renewable future*

[www.ehs-heating.com](http://www.ehs-heating.com)



## Why change to electric?

In 2020 renewable resources made up 43% of the total UK electricity supply and overtook fossil fuels as the major source of supply for the first time.

Electric boilers can be run from renewable resources such as wind generated, tidal and solar power which means you can run your boiler completely free of CO<sub>2</sub> emissions. So if you combine electric home heating with a 100% renewable electricity tariff, you know that your heating will be carbon-free.

The UK government has said that no new homes built after 2025 will use natural gas as a fuel, with low-carbon heating systems adopted as an alternative to help lower CO<sub>2</sub> emissions. Britain has also set a target of reaching net-zero carbon emissions by 2050.

An electric boiler is a direct replacement for a gas boiler, so when you convert to electric there is no need to replace existing pipework or radiators.

## What is an Electric Boiler?

An electric boiler uses electricity to generate the heat required to provide the central heating and hot water for a property. The size of the property and hot water requirements will determine the size and type of 'Electric Boiler'.

The size of the electric supply to a property will determine the most efficient boiler to use.

If you have a large property and use a lot of hot water we suggest using a 'System Boiler' coupled to an indirect unvented hot water cylinder. This can also be integrated with a solar PV system, which can provide up to 70% of your annual hot water needs.

For a small property or flat with a single shower and limited space and 'Electric Combi Boiler' is ideal.

Integrating an 'Electric Boiler' with a solar PV system, a well insulated home and 100% renewable tariff will provide you with one of the most eco friendly systems possible.

## What are the benefits of an EHS Electric Boiler?

- ✓ Almost 100% efficient.
- ✓ Easy to Install.
- ✓ Extremely quiet due to very few moving parts.
- ✓ Stylish touchscreen control and display.
- ✓ No flue required so there is no need to place it near an outside wall.
- ✓ Carbon free home heating if used in conjunction with 100% renewable energy tariff.
- ✓ Does not produce carbon monoxide or condensate.
- ✓ Power modulates from 2kw to full power using less energy.
- ✓ Low cost servicing and minimal repairs.
- ✓ Neat and compact design.
- ✓ Compatible with solar PV systems.
- ✓ Electric Boilers are a great back up for Air and ground source heat pumps.
- ✓ No risk of gas leak.

# EHS Electric System Boilers

## Product Specification

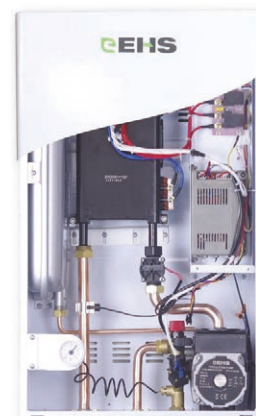
The Primus S range of electric system boilers are designed to provide all of your domestic space heating needs, through a wet central or underfloor heating system. It is a direct replacement for a gas system boiler and there is no need to change any radiators or pipes.

When used in conjunction with an unvented indirect hot water cylinder it can also provide all of your hot water needs for larger and multi bathroom properties. By integrating a timer with the boiler you can use cheaper off peak electricity to heat your water store, thus saving money, balancing the grid and utilising 100% renewable electricity.

- Pre-wired for ease of installation.
- Suitable for use with vented and unvented cylinders.
- Integrated pump and expansion vessel.
- Zero risk of carbon monoxide emission or gas leak.
- No flue required.
- Stylish touch screen operation.
- Minimal moving parts.
- No Mandatory servicing required.
- Flexible siting as no flue is required and it's very compact in size.
- Ideal for integration with solar PV system when used with a cylinder.
- Suitable to use off peak low cost and 100% renewable tariff.
- Recommended to be used with RF or wifi programmable thermostats.



Name	Single Phase					Three Phase		
	Primus 4000S	Primus 6000S	Primus 8000S	Primus 12000S	Primus 14000S	Primus 16000S	Primus 20000S	Primus 25000S
	ALC1-1PSY-4	ALC1-1PSY-6	ALC1-1PSY-8	ALC1-1PSY-12	ALC1-1PSY-14	ALC1-1PSY-16	ALC1-1PSY-20	ALC1-1PSY-25
	4kw	6kw	8kw	12kw	14kw	16kw	20kw	25kw
Voltage	230v	230v	230v	230v	230v	400v	400v	400v
Current (Amps)	17	26	35	52	61	23	29	36
Recommended Breaker (Amps)	32	32	40	63	63	32	32	40
Recommended Cable size	4mm	6mm	6mm <sup>2</sup>	10mm <sup>2</sup>	10mm <sup>2</sup>	3x4mm	3x6mm	3x6mm
Max. Heating Pressure	1.5 bar							
Min. Heating Pressure	0.5 bar							
Max. Flow Temp (C)	80							
Min. Flow Temp (C)	20							
Heating Connection Size	3/4" Male Connector							
PRV Connection Size	15mm							



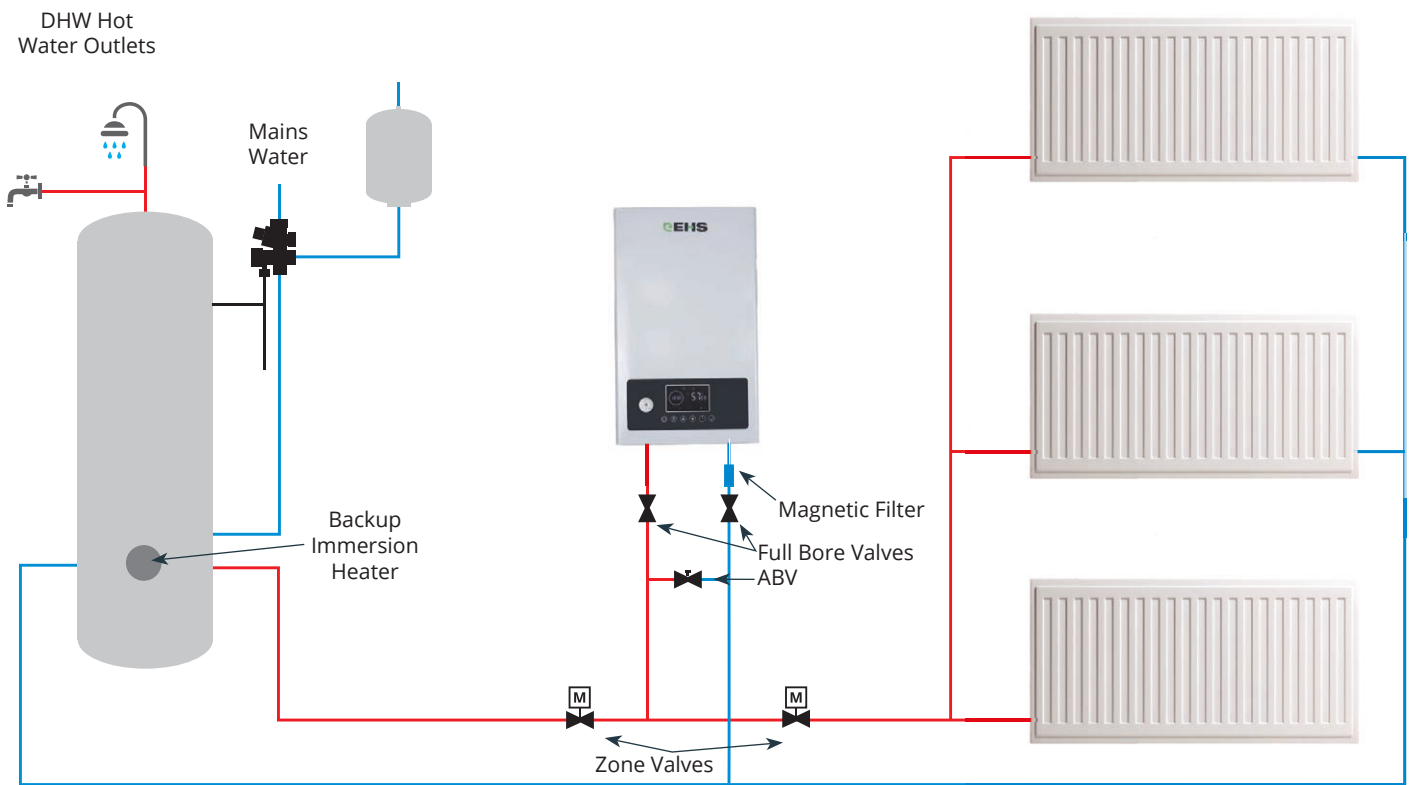
See warranty terms and conditions

## EHS Electric System Boiler Advice

The EHS electric system boilers are designed to work with the following;

- Unvented indirect hot water cylinder.
- Compatible with underfloor heating systems.
- Can be used in conjunction with solar PV.
- Ideal back up for an air source heat pump.

# EHS System Boiler Schematic



## Further Information

EHS Electric System Boilers	Radiator	*Taps	*Shower	*Bath
6kw	✓	✓	✓	✓
8kw	✓	✓	✓	✓
12kw	✓	✓	✓	✓
14kw	✓	✓	✓	✓
16kw**	✓	✓	✓	✓
20kw**	✓	✓	✓	✓
25kw**	✓	✓	✓	✓

\*When used the vented or unvented cylinder

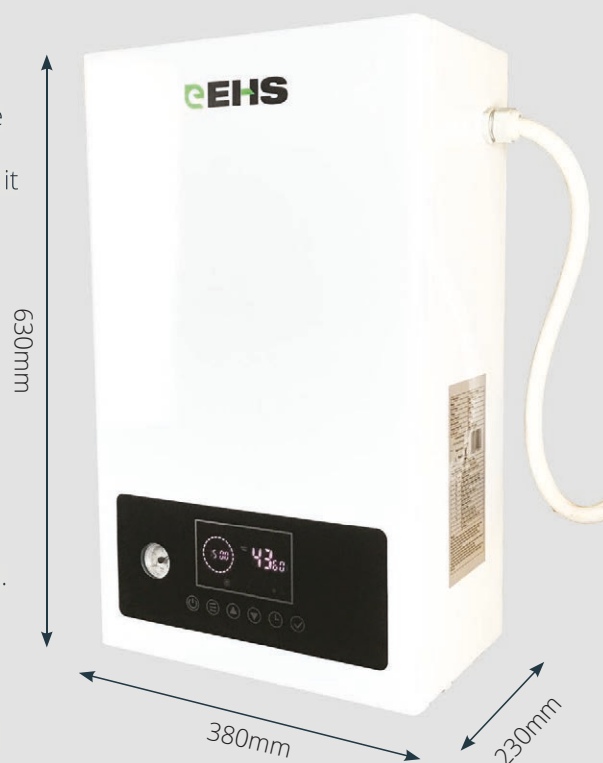
\*\*Three phase supply

# eEHS Electric Combi Boilers

## Product Specification

The Primus C range of electric combi boilers are direct replacements for gas combi boilers used in small flats or dwellings where there is only one bathroom with a shower. There is no need to replace existing pipework or radiators and the boiler can be sited anywhere within the property as it requires no flue.

- Pre-wired for ease of installation.
- Integrated pump and expansion vessel.
- Continuous hot water (flow rates up to 7 l/min on 14.4kw boiler).
- Zero risk of carbon monoxide emission or gas leak.
- No flue required.
- Stylish touch screen operation.
- Near silent in operation.
- Minimal moving parts.
- Minimal servicing and no mandatory annual safety certificate required.
- Flexible siting as no flue is required and it's very compact in size.
- Ideal for flats.
- Ability to use low cost electricity and 100% renewable tariffs.
- Recommended to be used with RF or wifi programmable thermostats.



	Single Phase		Three Phase		
Name	Primus 12000C	Primus 14000C	Primus 16000C	Primus 20000C	Primus 25000C
	ALC1-1PCO-12	ALC1-1PCO-14	ALC1-1PCO-16	ALC1-1PCO-20	ALC1-1PCO-25
	12kw	14kw	16kw	20kw	25kw
Voltage	230v	230v	400v	400v	400v
Amps	52	63	23	29	36
Recommended Breaker	63	63	32	32	40
Recommended Cable size	10mm <sup>2</sup>	10mm <sup>2</sup>	3x4mm	3x6mm	3x6mm
*DHW Flow Rate (L/min)	6	7	8	10	12
Max. Heating Pressure	1.5 bar				
Min. Heating Pressure	0.5 bar				
Max. Flow Temp (C)	80				
Min Flow Temp (C)	20				
HW Connections	1/2" Male Connectors				
Heating Connection Size	3/4" Male Connectors				
PRV Connection Size	15mm				



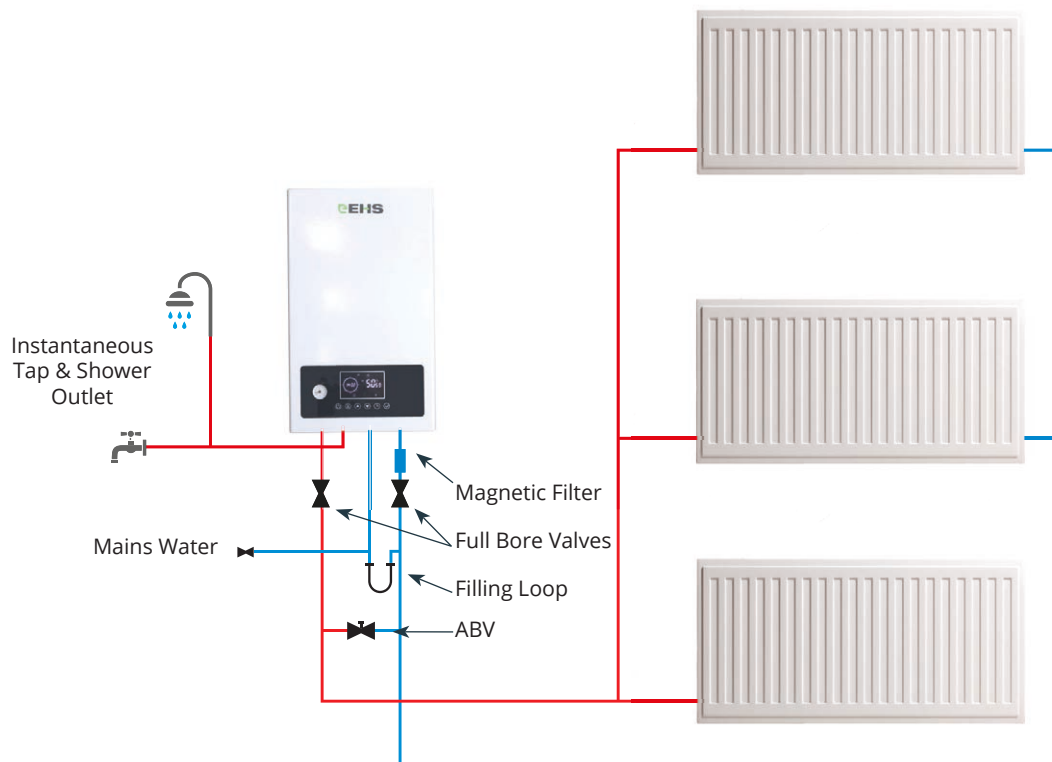
See warranty terms and conditions

\*Flow rate to achieve 30 degree rise in temperature

## EHS Combi Boiler Advice

- Compact units do not require large sized cylinders to supply hot water.
- Three phase units are better suited to applications that require baths.
- Compatible with underfloor heating.
- Ideal back up for air source heat pumps.

# EHS Combination Boiler Schematic



## Further Information

EHS Electric Combi Boilers	Radiator	Taps	Shower	Bath
12kw	✓	✓	✓	Not Recommended
14kw	✓	✓	✓	Not Recommended
16kw**	✓	✓	✓	✓
20kw**	✓	✓	✓	✓
25kw**	✓	✓	✓	✓

\*When used the vented or unvented cylinder

\*\*Three phase supply

## EHS Installation Information

- Electric boilers are almost 100% efficient therefore there is no requirement to oversize the boiler.
- Heat loss calculations should be made in accordance with the latest regulations.
- Most 1, 2 or 3 bedroom properties are suitable for an electric boiler.
- Properties with a high hot water demand are better suited to an indirect cylinder with an 'S' plan configuration.
- When installing an electric boiler always ensure that the electrical supply is sufficient for the boiler output.
- To accommodate off peak electricity tariffs it is recommended that a programmer with a facility for on/off periods is installed.
- Electric boilers are suitable for both volt free, hard wired and wireless thermostats and controls.
- Electric boilers require no mandatory annual maintenance (although EHS recommend regular servicing).
- Due to their compact size and minimal noise output, electric boilers are perfectly suited to smaller homes and flats.

## Eco Friendly Heating

It is important to set up your heating systems as economically and 'eco friendly' as possible and an electric boiler is one of the most flexible ways to make use of the low-cost electricity and 100% renewable electricity tariffs that are on offer. You should consider

- Controlling the boiler with a programmable thermostat.
- Controlling radiators with smart thermostatic radiator valves.
- If you have the space, use a system boiler with an indirect unvented hot water cylinder. If used with a timer, the boiler can heat the cylinder during the night, when the electricity is at it's cheapest and is 100% renewable (you will need to be on an off-peak electricity tariff- Octopus is ideal).
- Installing a solar PV system to help heat the hot water cylinder during the day. Solar can provide up to 70% of your yearly hot water requirements.
- Insulate your home using the best materials.

## Repairs / Servicing

Apart from the pump for the central heating, Electric boilers do not have any other moving parts, which make them easy to service and repair. There is no mandatory service requirement for electric boilers as, unlike conventional gas boilers, there is no danger of carbon monoxide or gas leaks. We do however recommend that the boiler is serviced at regular intervals and this should be at a far lower cost when compared to a normal gas boiler service.

Spare parts are available to order from EHS on a next day delivery service.



Electric Heating Systems



[www.ehs-heating.com](http://www.ehs-heating.com)

tel: 0345 862 8699  
email: [info@ehs-heating.com](mailto:info@ehs-heating.com)