

Oil-fired boilers



Your heating and hot water in safe hands.



Central Heating Hub

 **WORCESTER**
Bosch Group

Discover more with Worcester.



A boiler is at the heart of the home...

This brochure will help you make all the right choices for comfort and warmth to reliably meet your needs both now and into the future.

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***“They have great build quality,
good aftersales support and
they’re easy to install.”***

Which? 2015/2016 Survey



By Appointment to
Her Majesty The Queen
Boiler Manufacturer
Worcester, Bosch Group
T/A Bosch Thermotechnology Ltd.
Worcester

In the last few years, new boiler technology has made a huge difference. Old boilers can be as little as 60% efficient, whilst condensing boilers can achieve over 90% efficiency, helping you to reduce fuel bills.

Heating and hot water: the key facts.

Most of us think of central heating as a modern invention but it in fact dates back to a warm air system developed in Roman times. It wasn't until the 1960s, however, that central heating fired by a boiler started to take off and by the early 1980s it was regarded as a basic requirement for UK homes.

Boilers have come a very long way since then. Advances in technology and changes to regulations mean that they are now far more energy-efficient and are much more suited to a variety of homes and lifestyles.

A leap in efficiency

Given that boilers account for about 60%* of a household's annual energy costs, how efficient they are has a big effect on bills. With older oil boilers, a considerable amount of heat that could be used to generate heating and hot water is lost. Generally the older they are, the more heat they lose, making them increasingly expensive to run.

Some very old boilers can only achieve 60% efficiency and even relatively newer ones are only 70-75% efficient, which means that as much as 30%* of your heating and hot water fuel requirement

could be wasted. An added problem is that many of the older boiler types have no proper controls, further reducing your boiler's efficiency.

EFFICIENCY COMPARISON	
Greenstar Heatslave II or Danesmoor	over 90%
Old boiler	up to 60%

In the last few years, new 'condensing technology' has been incorporated into boilers. Essentially this enables some of the heat that would otherwise escape from a boiler to be captured and re-used. As a standard rule the better the boiler quality, the more it captures. For example, our Greenstar condensing boilers are more

than 90% efficient, so over 90p of every £1 you spend on fuel for your boiler is used for your heating and hot water. On top of this, intelligent controls can also make a difference by enabling much smarter, more cost-effective management of your heating and hot water system.

Making it official

To ensure that everyone benefits from boiler efficiency – including the environment – regulations were introduced in 2007 making it compulsory for virtually every newly installed oil boiler to be of a condensing design (typically C-rated or above). Regulations went even further in 2010 and since then all new boilers must now be A-rated (the most energy efficient and environmentally friendly).



* Heating seasonal efficiency figures are SEDBUK 2005. Source: Energy Saving Trust.



Every boiler needs to be maintained and serviced so it makes sense to consider the lifetime running costs along with the initial purchase price.

Lifestyle flexibility

With a wide range of boiler types on the market you can be sure to find one to suit your home and lifestyle. Each boiler has its own installation requirements, so talking to an expert is important. They will look at things like the size of your property, mains water pressure, the number of bathrooms or showers, if you have a loft and whether you want to free up space.

Another consideration is how you use your heating and hot water and if it might change, such as if your family is growing. Gaining expertise from the right company, such as Worcester, will help to make this process simple, whilst also ensuring you receive a boiler that meets all your needs, both now and into the future.

Wise choices

A new boiler will always vastly improve efficiency but it can be a sizeable investment, so it's important to choose wisely. Much like buying any other large appliance, it makes sense to look beyond the purchase price, and to consider the durability of parts and maintenance costs.

The better the boiler quality, the more reliable it will be, so opting for one from an established manufacturer will ensure you receive high performance as well as choice. By discussing everything with experts like your Worcester installer, you'll make certain of the best long-term value for money, giving you financial peace of mind as well as comfort and warmth.

Smaller carbon footprint

Domestic boilers currently account for 21%* of the UK's total CO₂ emissions so the greater their efficiency, the more kind they are to the environment. Greenstar condensing boilers, for example, achieve dramatically reduced emissions of CO₂, making their carbon footprint smaller than the average for boilers of this kind. Carbon emissions – as well as energy bills – can fall even lower if a new boiler links to a solar hot water system or intelligent control.



If you decide to sell your home in the future, you will need to produce an Energy Performance Certificate (EPC). A high-efficiency condensing boiler will boost your EPC rating, making your home more attractive to buyers.

* Source: Energy Saving Trust.



ErP labels are already a common sight on washing machines, televisions and other appliances in electrical retailers. From 2015 these labels now apply to heating products and systems.

Energy related Product (ErP) labelling.

The ErP Directive is a new regulation set by the European Union and is designed to drive improvements in the efficiency and performance of heating and hot water products.

Its purpose is to ensure that you as homeowners are aware of the energy efficiency levels of your heating appliances. The ErP Directive will help the UK and other European governments reduce carbon emissions. This will improve the overall efficiency of UK properties, whilst also helping you to reduce your energy bills.

The ErP regulations cover boilers, water heaters and other heating appliances up to 400kW (a typical domestic boiler ranges from 9-40kW).

What is Energy Labelling?

Energy Labelling involves adding a label to a product. It is your installer's responsibility to ensure that you receive the energy label with the heating appliance they offer you and if they have a showroom that the Energy Label is visible on products.

The new Energy Labelling Directive will introduce new efficiency classes from A++ to G on top of the existing SEDBUK rating for products in the UK.

Most high efficiency boilers fall within the A band, which requires them to achieve more than 90% seasonal efficiency, while renewable technologies such as heat pumps typically sit within the A+ or A++ bands (depending on the temperature they deliver).

More details on ErP and the information which is included on a label can be found at: worcester-bosch.co.uk/ErP

What about controls?

The ErP Directive also includes controls, which are defined using 'classes'. These run from Class 1 (a simple on/off room thermostat) through to Class 8 (multi-sensor room control for use with modulating heating appliances).

Each control class equates to certain percentage uplift in system efficiency e.g. a Class 6 weather compensating control and room thermostat will improve your heating system's efficiency by 4%.

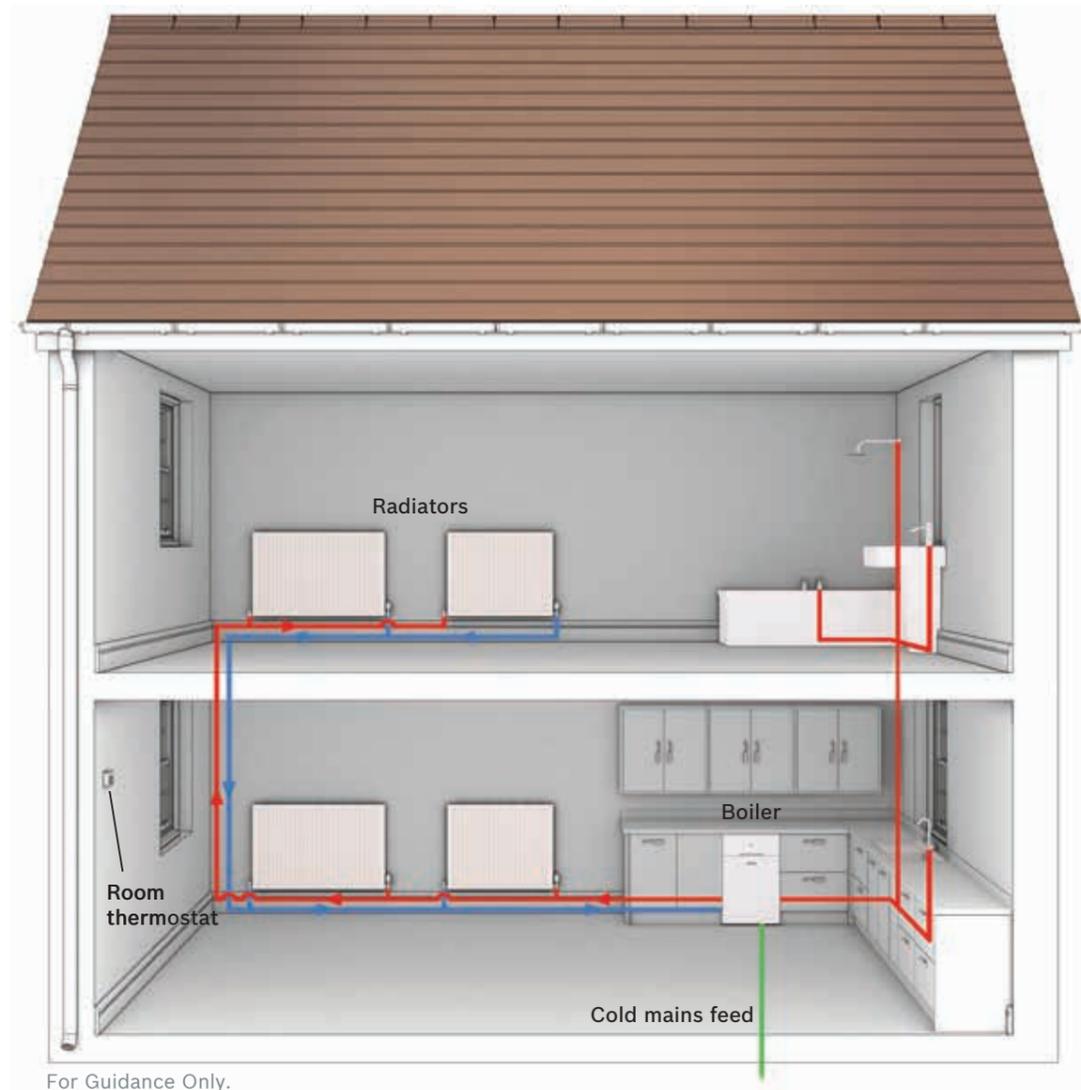


To ensure you benefit from the highest levels of efficiency we always suggest you check that your quote includes an ErP compliant high efficiency boiler.



Which heating and hot water system is best for me and my lifestyle?

Deciding which boiler will make an efficient and practical fit with your home and your lifestyle can be confusing. The following pages explain the main system types, how they work, their advantages, and what kind of homes they work best in.



Typical combination boiler heating system.

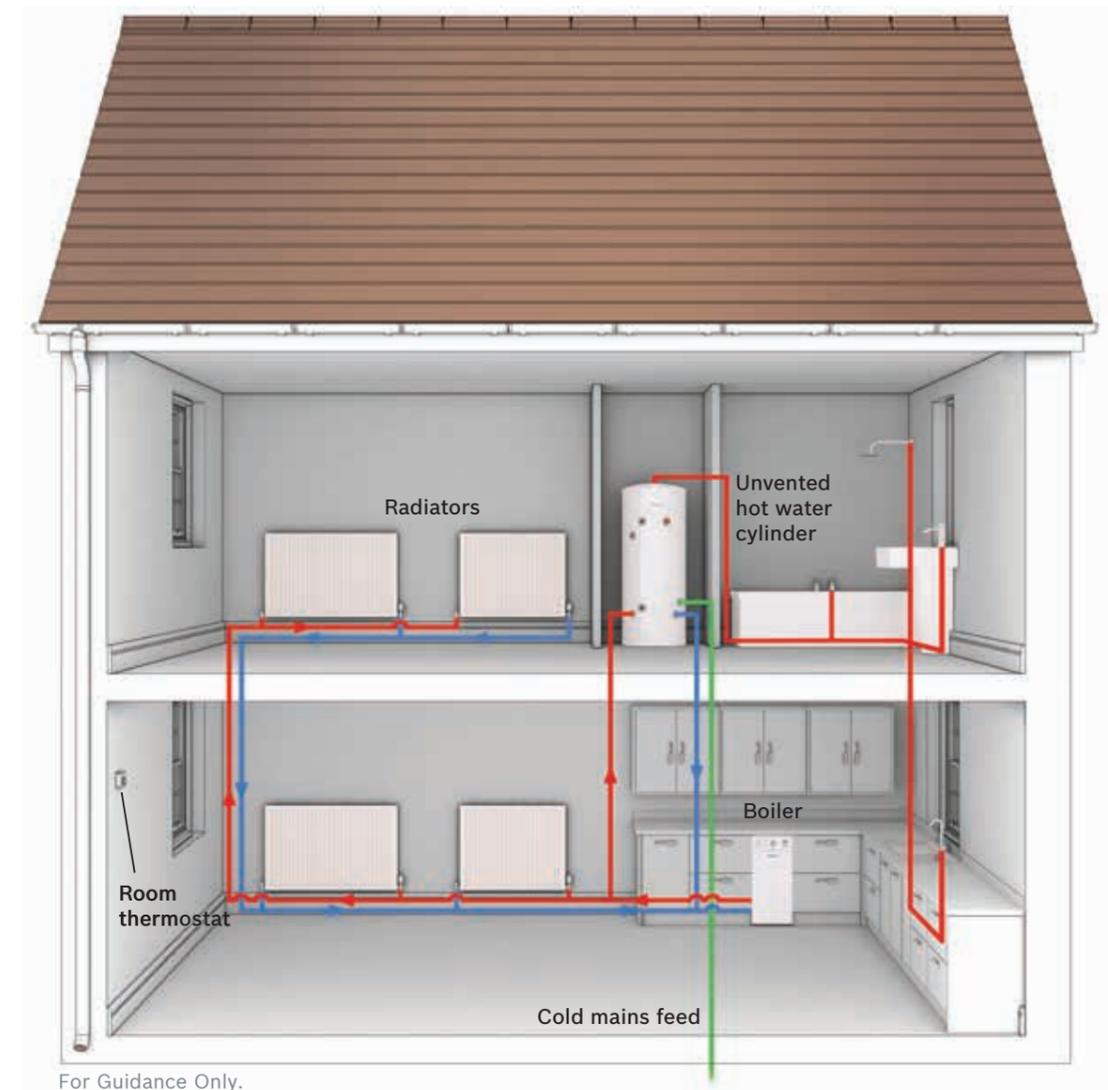
A combination or 'combi' boiler is both a high efficiency water heater and a central heating boiler in a single compact unit. Combi boilers heat water directly from the mains when you turn on a tap, so you won't need a hot water storage cylinder or a cold water storage tank in the roof space. They are also very cost-effective and energy-efficient as water is heated instantly rather than being heated and then stored in a cylinder.

An added benefit is that hot water is delivered at mains pressure, which means that you could get a powerful shower without the need for a separate pump.

Advantages

- Ideal where there is little or no loft space
- No need for a hot water cylinder allows increased living space
- No cold water storage tank frees up a loft for conversion
- No risk of loft pipework freezing
- Less pipework in the home makes installation typically cheaper

Go to pages
19-21 to see the
Greenstar
combi range



Typical system boiler heating system.

System boilers require a cylinder for storing hot water, however the major heating and hot water system components are built into the boiler itself, making it quicker and easier to install.

In addition, there is no need for a tank in the loft, so it can be an option in a home with little or no loft space or where the space is earmarked for a conversion. These boilers are also compatible with solar hot water systems, which deliver environmental benefits as well as lower energy bills.

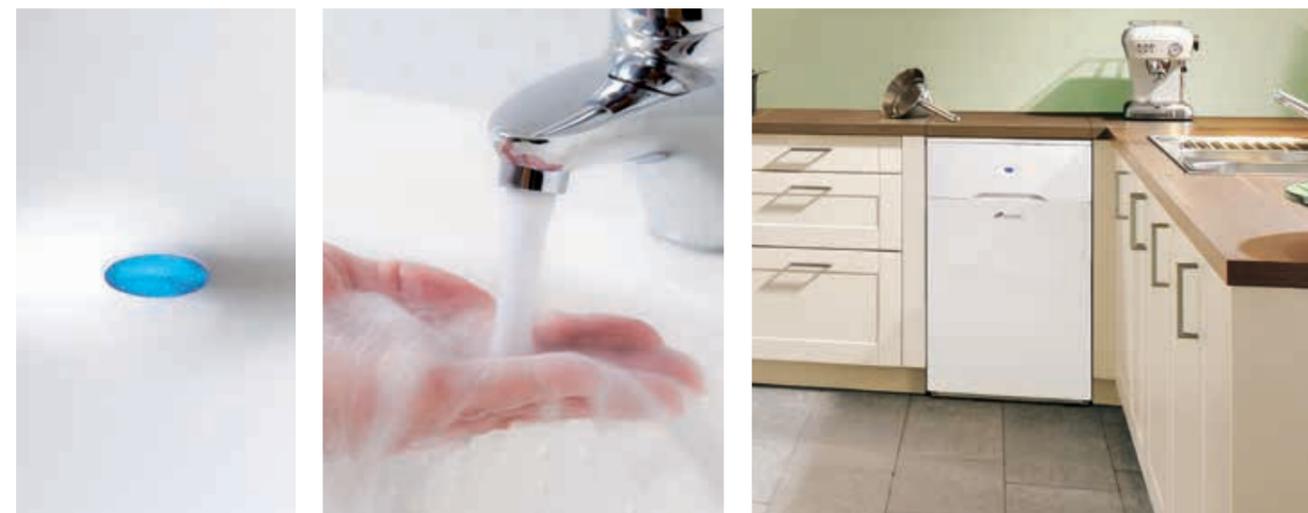
Advantages

- Ideal for homes with more than one bathroom
- Constant supply of hot water to any number of taps at the same time
- No need for a loft tank, freeing up space and eliminating worries about leaks or frost damage
- Built-in components makes installation quicker and neater
- Compatible with solar hot water systems

Go to pages
22-25 to see the
Greenstar
system range



Combi boilers are very reliable as well as highly energy-efficient making them economical to run.



Greenstar combi boilers.

Combi boilers are the most popular heating and hot water solution in the UK. Over 15 million have been fitted across the country and they are now the preferred choice for most householders and installers. Worcester was the pioneer of the combi boiler in the UK, with the Greenstar range developed to suit virtually all homes.

Energy saving and convenient

All Worcester Greenstar combis are designed and manufactured to provide high levels of performance and operating efficiency. This is achieved through features such as the 'keep hot' facility (which ensures hot water is almost instantly available) and the Heatslave II's in-built thermal store which enables the boiler to provide instant hot water for prolonged periods.

What is a thermal store?

A thermal store is a small tank integrated in the Greenstar Heatslave II combi, with the store containing the same water that is found in your radiators. By storing heat within the hot water store, the Heatslave II can instantly heat (via a heat exchanger) the cold water that enters the boiler and then passes to your hot tap or shower, increasing your hot water comfort.

System boilers provide plenty of hot water to multiple taps at the same time and do not need any tanks in the loft.



Greenstar system boilers.

Greenstar system boilers are known for their high quality and reliability, making them robust enough to stand up to the highest of heating and hot water demands.

Efficient and economical

Highly efficient and economical to run, Worcester system boilers incorporate many of the heating and hot water components found in a traditional heating system, making installation less disruptive and neater.

Space saving and attractive

The market leading compact dimensions of Greenstar Danesmoor System boilers means that they can fit perfectly into many locations, with a choice of kitchen, utility and external models allowing your boiler to be installed in a location that suits your lifestyle and property.

Perfect partners

Greenstar Danesmoor System boilers can be used with an optional control to maximise comfort and energy savings, and are also perfectly matched to our comprehensive range of Greenstore hot water cylinders. Choosing a complete Worcester system will ensure you will have a highly efficient solution and give you the opportunity to get a comprehensive 5 year guarantee across your entire system*.

System boilers are also compatible with our Greenskies solar hot water systems, which can be installed at the same time as the boiler or easily retrofitted in the future to reduce your energy bills even further.

* Terms and conditions apply.





Regular boilers meet all the heating demands of every size of home and are an ideal energy-efficient replacement for an existing boiler.



Greenstar regular boilers.

With quality and reliability at the heart of every Worcester regular boiler, they are robust enough to deliver efficient heating and hot water year after year.

Modern efficiencies and choice

With over 90% efficiency, Greenstar regular boilers will help reduce your energy bills and your carbon footprint. They can enhance heating and hot water performance in all sizes of homes, including those with two or more bathrooms, and where mains water pressure is low. For added choice Greenstar regular boilers come in a wide range of models. They are also designed to be installed in a range of indoor and outdoor locations and are suited to a variety of heating requirements.

Solar-compatible

All of our oil-fired regular boilers are compatible with our Greenskies solar hot water systems, which can help you to reduce your energy bills whilst also benefitting the environment.

Super efficient cylinders can help lower your energy bills and carbon emissions. They are highly insulated to reduce heat loss and energy wastage.

Greenstore cylinders – transforming hot water storage.

When a system or regular boiler is installed, there will always be a requirement for a hot water cylinder. Hot water is provided by taking heat from the boiler and pumping it through the central heating system to the cylinder where the heat is transferred via the cylinder's heat exchange coils. This water is then stored ready to be passed through taps and showers when required.

Older, non-insulated cylinders tend to lose a considerable amount of heat and are likely to have a build-up of limescale, which reduces efficiency and makes water heat-up times longer. Even insulated cylinders over 10 years old lose more heat than modern ones.

Greenstore unvented cylinders have been designed to offer significant performance improvements over traditional cylinders. They combine rapid re-heat times with high heat retention and are guaranteed for 25 years*. They also come in a wide range of capacities, from 90 to 300 litres, so you can be sure of a size that's exactly right for your home and lifestyle.



Greenstore unvented cylinders: made for modern living

The Greenstore unvented cylinder range is a perfect complement for Greenstar regular or system boilers. Hot water is supplied at mains pressure for powerful showers and fast bath filling, and multiple taps can be used at the same time without the hot water running out. If your mains water pressure is low, you can still benefit from the high performance, fast re-heat times and energy savings of Greenstore cylinders. A trained Worcester installer will be able to provide solutions to increase your water performance if needed.

Greenstore unvented solar cylinders: the future-proof choice

Greenstore solar-compatible unvented cylinders are specifically designed to work with our Greenskies solar water heating systems. With all the same benefits as our standard unvented range, they enable you to add solar water heating to your system at a later date with no need to replace the cylinder. Available in five capacities, from 150 to 300 litres, they provide highly efficient storage for both boiler and solar-heated hot water.



With 65mm of Expanded Polystyrene, the insulation level on Greenstore cylinders is one of the thickest in the UK market.



Worcester keeps you in control.



Boiler controls make a big difference to your heating system. With our condensing boilers already operating at peak efficiency, our range of controls give you an additional way of boosting your system's overall performance.

The type of boiler you have will affect which type of control you will be able to have in your home. In a system or regular heating system, your choice can be more limited due to the integration of a hot water tank in your system. For this, Worcester offers the ideal solution in the form of the Digital 7-day plug in programmer which allows you to easily adjust your heating and hot water.

However, with the latest range of Heatslave II combi boilers you can go one step further. The Heatslave II series feature

an intelligent pull-out interface which allows you to precisely adjust your heating and hot water as standard. It also enables you to utilise one of our Comfort or Intelligent controls, bringing energy saving and comfort increasing features such as Weather Compensation to oil boilers, something that is typically unavailable for oil boilers in the UK.



Worcester controls are designed to not only enhance a boiler's efficiency but incorporate features that work around your lifestyle.

Controls for a heating and hot water system typically include two main elements: a time clock or programmer and a room thermostat. Here we explain the different types that we offer and what they do. We also highlight what load and weather compensation mean – two key features of Worcester intelligent and smart controls.

Timers and programmers

A boiler timer is a basic device that allows you to set specific times for your central heating system to come on and turn off, with the same times typically repeated every day. A boiler programmer allows you to set your heating (and sometimes hot water) to switch on and off at different times, and on different days of the week.



Digital programmer.

Room thermostats

A room thermostat monitors the air temperature and enables you to set the level you find comfortable. If the room temperature drops below this level, the thermostat switches your boiler on and if it gets too hot in the room, it turns it off.

Programmable room thermostats

A programmable room thermostat is both a boiler programmer and a room thermostat; it allows you to set different room temperatures for different times of the day and night. When programmed correctly, it prevents the system from having to heat your home from a cold start, with the boiler simply 'topping up' the temperature, which saves energy and improves comfort.

We also offer a range of wireless programmable room thermostats. These are a good option if you prefer not to have wires running between your thermostat and boiler or if the boiler is not readily accessible, such as in a loft space or garage.



Programmable room thermostat.

Load compensation

The load compensation feature adjusts the temperature of the heat going to your radiators. When a room is cold the temperature will be high, but as the room warms up and less heat is needed, it lowers the temperature so that comfort is maintained but energy use is reduced.

Weather compensation

The weather compensation feature also adjusts the temperature of the heat going to your radiators. However, it does so in keeping with the outside temperature. An outdoor sensor or an internet location post code search (Worcester Wave only) allows the control to monitor the weather, with the radiators running hotter if temperatures outside drop, ensuring a comfortable home whatever the weather.



Outdoor weather sensor.

Robust, fully insulated cabinets provide complete protection for the boilers and ensure optimum performance even in extreme weather conditions.

Greenstar external oil boilers – the space saving option.

If the floor space in your home is limited or if you prefer to have a boiler that is sited outside, the Greenstar external boiler range is a perfect choice. As highly efficient as indoor models and with a robust, fully insulated cabinet they provide optimum performance even in extreme weather conditions.

The boilers are designed to prevent water, dust and other external elements getting inside, whilst a built-in frost thermostat provides an additional safeguard for all the internal components.

Finished in a muted green colour, the boilers blend in with your garden or outdoor space. A durable anti-corrosion coating makes sure that they keep their pristine looks and their quiet operation means that they won't intrude when you are outside.

For your peace of mind, the boilers and their controls are accessed using a special tool ensuring that the cabinets are tamper-resistant and childproof.

Combi, system or regular boiler choices

Whether you want a combi, system or regular external boiler, there's a Greenstar model to suit your preferences and lifestyle.

The Greenstar Heatslave II External combi boilers come in a choice of three central heating outputs and offer hot water flow rates of up to 22 litres per minute depending on the model. For added flexibility Greenstar Heatslave II External boilers can be used with the Greenstar Comfort controls range, which can be mounted inside your property for complete ease of adjustment.

Greenstar Danesmoor system and regular external boilers are also available in three different central heating output options and are compatible with Worcester Greenskies solar and Worcester Greensource air to water heat pumps for greener, lower cost hot water and heating.



Guaranteed products as well as the help and advice you need for complete peace of mind.



Supporting you from the start.

When you choose Worcester, you'll be in the company of millions of people across the UK who value the quality, reliability and comfort of our boilers.



Our guarantee

Every one of our products is manufactured to the highest quality standards and undergoes stringent and continuous testing.

We want you to have the same confidence in our boilers as we do, which is why they come with a full parts and labour guarantee including a 10 year guarantee* on the primary heat exchanger – the heart of the boiler. We also currently guarantee the boiler as a whole for a minimum of 5 years as standard*.

When you buy one of our boilers, don't forget to register your guarantee, which you can do quickly and easily online at worcester-bosch.co.uk/registration or by telephone on **0330 123 2552**.

Service and support

Whether you are thinking about buying a Greenstar boiler or you've owned one for a long time, we are always here to help.

Our award-winning support team can advise you on any aspect of your boiler. Friendly and knowledgeable, they'll give you all the help you need, from choosing the right controls to technical queries, such as combining your boiler with renewable systems like solar water heating. We also have over 300 service engineers working across the country to ensure that our products always deliver high performance year after year.

We also publish a useful heating and hot water 'handy hints' guide, which includes helpful tips for boilers, radiators, controls and system care. You can download the guide at worcester-bosch.co.uk/handyhints or call our brochure line on **0330 123 9119** for a printed copy.



Greenstar oil-fired boilers come with a 10 year guarantee* on the secondary heat exchanger as standard.



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Cotswold Way, Warndon,
Worcester, WR4 9SW

Useful numbers

Consumer Technical Helpline (Pre & Post Sales)

Tel: 0330 123 3366
Fax: 01905 752741
Email: technical-advice@uk.bosch.com

Brochures

Email: brochure-request@uk.bosch.com
or download instantly from our website
or telephone 0330 123 9119

Customer Service

Service Enquiries

Email: service-enquiries@uk.bosch.com
or telephone 0330 123 9559

Guarantee Registration

To register your Worcester guarantee,
please visit our website
worcester-bosch.co.uk/registration
or telephone 0330 123 2552

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We would love to see your new boiler and heating system.

Follow us on:  [@Heatingyourhome](https://twitter.com/Heatingyourhome)

Tag your boiler pictures with: **#WarmAtHeart**

We are also on:



worcester-bosch.co.uk

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