WORCESTER GAS PRODUCT SPECIFICATION





Greenstar Utility ErP+ 32/50 and 50/70



5 Year guarantee with Worcester Filter

Outputs up to 70kW

Easier installation, servicing and maintenance.

Reduced lift weight of 220kG

Cross firing burner, reduced need for de-aerator.

New dimensions. H: 1098mm x W: 598mm x D: 795mm

Full panel coverage

New flue systems

Riello Low Nox Burner





New Guarantee Periods

Boiler	Standard Guarantee	Guarantee with Filter
Greenstar 8000	8	10
Greenstar Si and CDi Compact Greenstar I and iSystem Greenstar Ri and Ri Compact	7	8
Worcester 2000	5	6



Effective from 1st January 2020





BS7593:2019

Installation of Filters

A filter should be installed to protect system components. However, it should never be regarded as an alternative to system cleaning and flushing.

Simplified Cleaning

There continue to be only three recommended methodologies; powerflushing, mains pressure, and gravity with circulation pump.

Maintenance

Where an inline filter is present, it should be serviced annually and as part of a recommissioning process. Inhibitor should be re-dosed at five-year intervals. Alternatively, a full lab test can be used to verify ongoing protection.

Biocidal and Frost Protection

Inhibited antifreeze should be used in systems liable to freezing. Biocidal products should be considered for all systems, especially those designed to run at lower temperatures (below 60°).

Testing

Concentration of chemicals and water cleanliness should be checked after commissioning, following work that could have altered dilution of system protection, and annually for the life of the system.

Protection of Cooling Systems

The scope has widened to include open vented or sealed cooling systems in individual domestic premises.





BS7593:2019













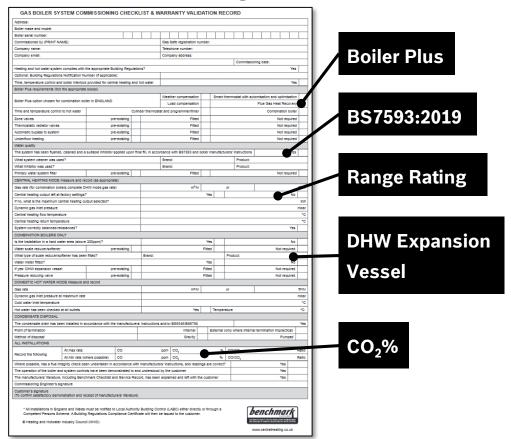


MC10+

ADEY

Benchmark

Commissioning



Servicing

	SERVICE & INTER It is recommended that your bo interim work record is complete	oller and heating sys	WORK RECO	RD loed and mai	intained, in line with manufacturer	s' instructions, and	that the appropriate s	ervice /
	Service provider	cord (as below), plea	ise ensure you have c	arried out the	e service as described in the manu	ufacturers' Instructio	ons. Always use the	
	SERVICE/INTERIM WORK	ON BOILER	Date:		SERVICE/INTERIM WORK	ON POILER	Date	
	Engineer name:	Company name:	Eaggrophia Dute.		Engineer name:	Company name:	zappopras Curc.	
	Telephone N°	Gas Safe registrat	ion Nº		Telephone N*	Gas Safe registrat	ion NP	
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			00/00+		Min rate CO ppm		corco.	
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	Engineer name:	Company name:			Engineer name:	Company name:		
	Telephone Nr:	Gas Safe registrat			Telephone N*:	Gas Safe registrati		
			00/002		Max rate CO ppm		CO/CO ₂	
	Min rate CO ppm	CO ₂ %	CO/CO ₂		Min rate CO ppm	CO ₂ %	COICO ₂	
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	*All installations in England Competent Persons Schem © Heating and Hotwater Ind	ne. A Building Regulat			ntrol (LABC) either directly or throug be issued to the customer.	ph a	benchma	





2.0 PRODUCT OVERVIEW





Worcester Bosch manufactures **94** models of **condensing** gas boiler; including **combination**, **system** and **regular** boiler variations in **NG** or **LPG**





Product Overview Wall Hung Product Ranges







Greenstar i



Greenstar Compact



Greenstar 8000 Lifestyle





Product Overview Price vs Features





NEW

Product Overview Floor Standing Product Ranges







Greenstar FS CDi Regular





3.0 COMBI BOILERS





Product Overview Worcester 2000

6 Year Guarantee with Worcester Filter

Reduced Noise 43dB(a)

New C6 Heat Exchanger

Vertical Pipe Connections for Quick Install

Internal Condensate Route Only*

300 Series Digital Display

Includes Boiler+ compliant Comfort+ II RF

H: 724mm x W: 400mm x D: 300mm



A Worcester Bosch boiler at a **price** that is more competitive across the industry, while keeping **quality** and **reliability** at the core of its design.





Product Overview Worcester 2000



Models	ErP	DHW (40°C ΔT)	СН	Max. Horizontal Flue (100mm)	Max. Vertical Flue (100mm)
GC2000 25	94%	25kW 9.0 l/min	20kW	9,000mm	12,000m
GC2000 30	94%	30kW 10.8 l/min	20kW	9,000mm	12,000m



Product Overview Greenstar | ERP

8 Year Guarantee with Worcester Filter

WB6 Heat Exchanger

Single Front Panel

Large Siphon

Clear Information Display

Low Lift Weight

H: 710mm x W: 400mm x D: 330mm



Our Greenstar i combi boiler is the replacement for the wellestablished award-winning Greenstar i Junior, which has been installed in over 1 million homes across the UK.





Product Overview Greenstar I ERP Combi Models



Models	ErP	DHW (40°C ΔT)	СН	Max. Horizontal Flue (100mm)	Max. Vertical Flue (100mm)
25 i ErP	94%	25kW 9.0 l/min	24kW	4,600mm	6,000mm
30 i ErP	94%	30kW 10.8 l/min	24kW	4,600mm	6,000mm

Available in NG and LPG





Product Overview Greenstar Compact

8 Year Guarantee with Worcester Filter

WB7 Heat Exchanger

Cupboard fit

LCD Display

Front access to components

H: 690mm x W: 390mm x D: 280mm



A Worcester Bosch boiler with a host of design features for ease of installation, use and servicing and can also fit within a standard kitchen cupboard.





Product Overview Greenstar Compact Models



Models	ErP	DHW (40°C ΔT)	СН	Max. Horizontal Flue (100mm)	Max. Vertical Flue (100mm)
25 Si Compact ErP	94%	25kW 9.0 l/min	24kW	6,000mm	6,000mm
30 Si Compact ErP	94%	30kW 10.8 l/min	24kW	6,000mm	6,000mm
28 CDi Compact ErP	94%	28kW 10.0 l/min	24kW	6,000mm	6,000mm
32 CDi Compact ErP	94%	32kW 11.5 l/min	24kW	6,000mm	6,000mm
36 CDi Compact ErP	94%	36kW 12.9 l/min	24kW	6,000mm	6,000mm

Available in NG and LPG





Greenstar 8000 Lifestyle







8000 Life

8000 Style

10 Year Guarantee with Worcester Filter

Outputs up to 50kW

Easier installation, servicing and maintenance.

Reduced Lift Weight

Simple Switch from CDi Classic

Reduced Noise

One Screw Case Removal

Front Access PRV

H: 780mm x W: 440mm x D: 365mm





Product Overview Greenstar 8000 Models



Models	ErP	DHW (40°C ΔT)	СН	Max. Horizontal Flue (100mm)	Max. Vertical Flue (100mm)
GR8000i 30 C	94%	30kW 10.7 l/min	30kW	17,000mm	21,000mm
GR8000i 35 C	94%	35kW 13.0 l/min	35kW	10,000mm	14,000mm
GR8000i 40 C	94%	40kW 14.3 l/min	35kW	11,000mm	15,000mm
GR8000i 45 C	94%	45kW 15.3 l/min	35kW	8,000mm	12,000mm
GR8000i 50 C	94%	50kW 17.9 l/min	35kW	9,000mm	12,000mm

Available in NG and LPG
Available as Life or Style version
Style version available in Black or White





Product Overview Greenstar Highflow CDi

7 Year Guarantee with Worcester Filter

WB5 Heat Exchanger

Fits underneath a kitchen worktop

Heat Bank

Condensate Pump

H: 850mm x W: 600mm x D: 600mm



Our Greenstar Highflow CDi combi is a well-established floor-standing combi boiler that is renowned for their industry-leading DHW flow rates of up to 25 litres/min.





Product Overview Greenstar Highflow CDi Models



Models	ErP	DHW (40°C ΔT)	СН	Max. Horizontal Flue (100mm)	Max. Vertical Flue (100mm)
Highflow 440CDi	92%	20.0 l/min	29kW	4,000mm	6,400mm
Highflow 550CDi	92%	25.0 l/min	31kW	4,000mm	6,400mm

Available in NG and LPG

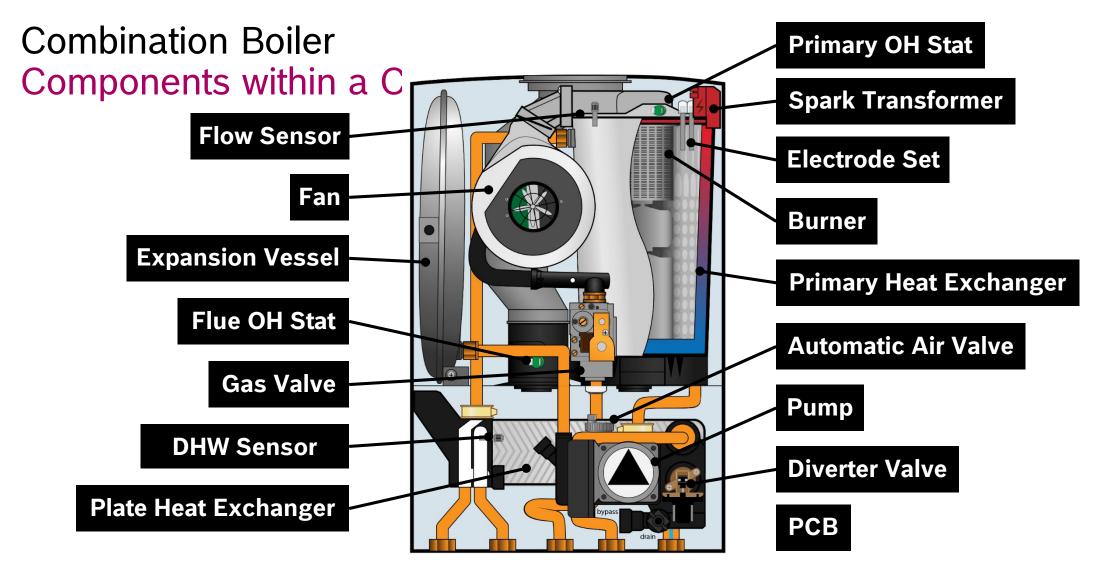




COMBIBOILER COMPONENTS











Basic Principles

Components

Primary Heat Exchanger

Gas Valve

Diverter Valve

Pump



Fan

Pump







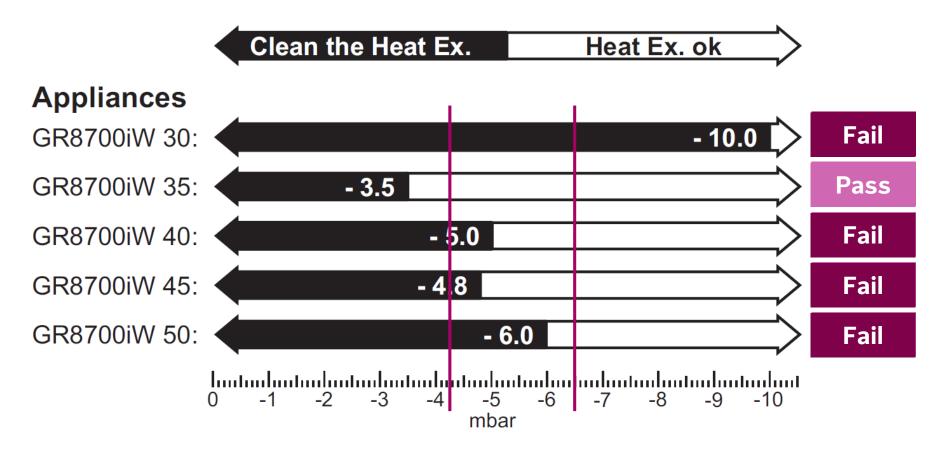
Fan







Testing Negative Fan Pressure Test







Diverter Valve

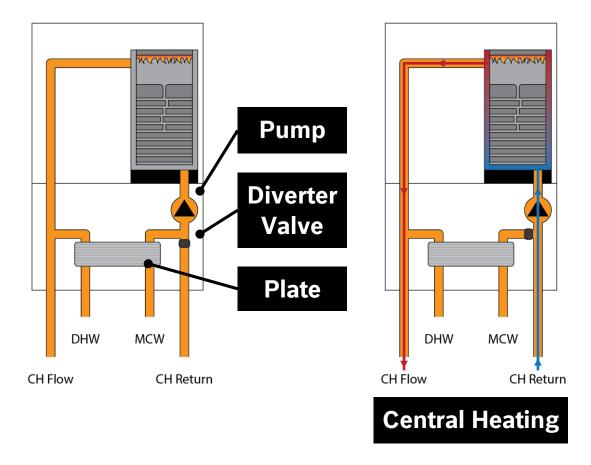


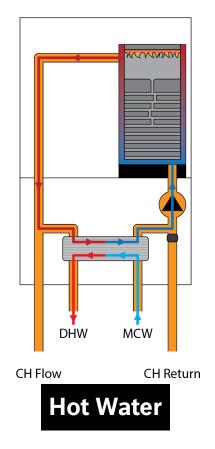




Boiler Operation

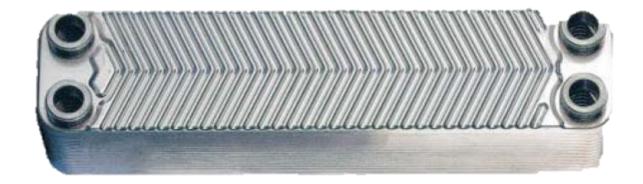
Basic Combi Boiler





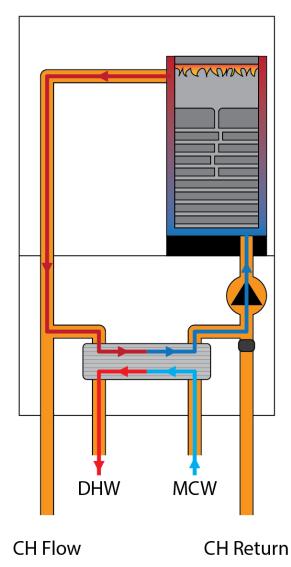




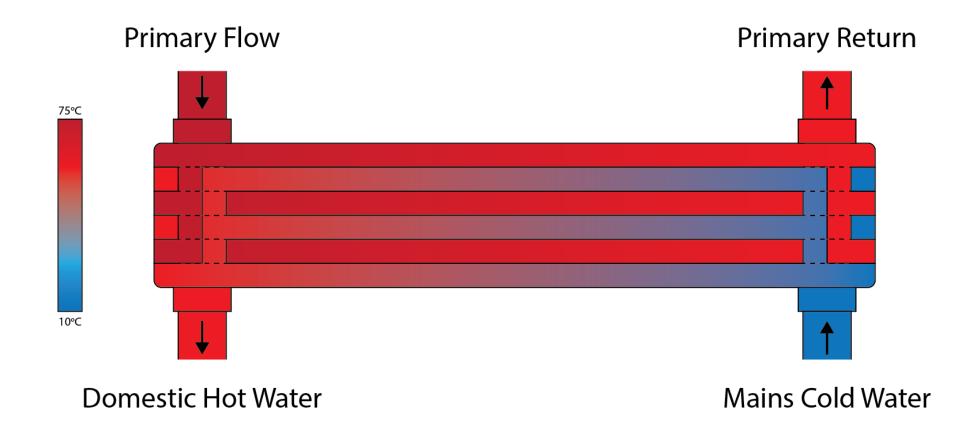














Gas Valve







Primary Heat Exchanger

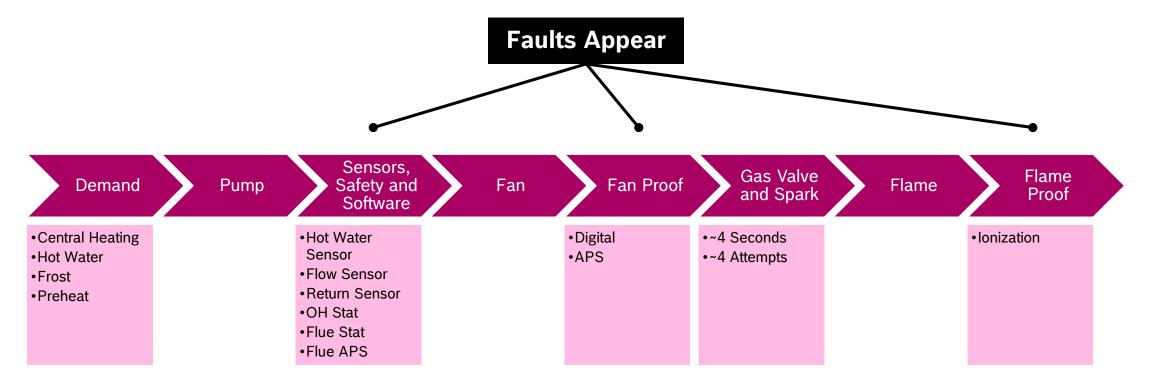








Ignition Sequence

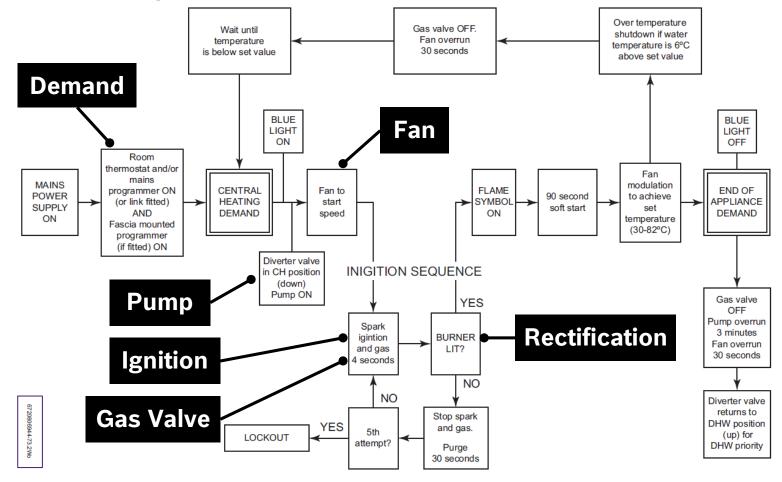






Ignition Sequence

I ERP Combi Example

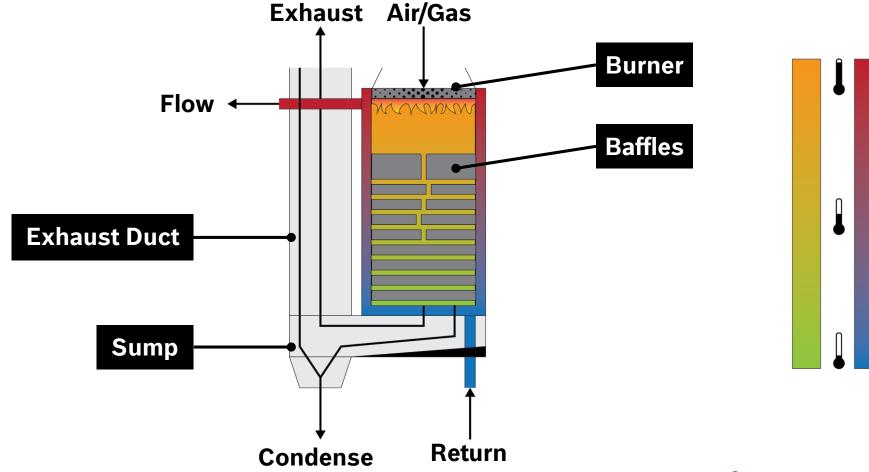






Boiler Operation

Primary Heat Exchanger







Boiler Operation Storage Combi Oper

Heat Bank Hot

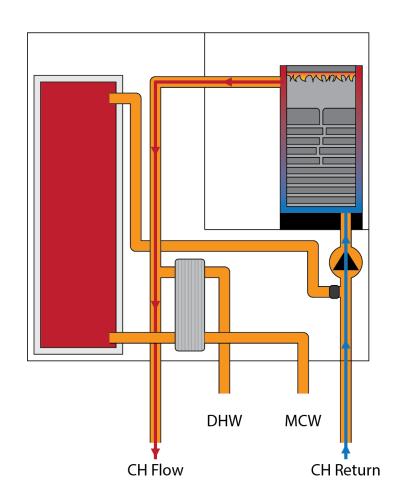
It is a store of energy in

Heat Bank Depleted

During a long hot water demand the heat bank may fully deplete.

Once depleted only the burner is heating the water, which results in lower hot water capability.

Plate Heat Exchanger





Heat Bank In Use

Central Heating

During a heating demand a storage combi behaves just like a normal combi boiler.





Any Questions?





4.0 SYSTEM BOILERS





Greenstar iSystem Models



Models	ErP	СН	Max. Horizontal Flue (100mm)	Max. Vertical Flue (100mm)
9 iSystem ErP	94%	9kW	4,600mm	6,400mm
12 iSystem ErP	94%	12kW	4,600mm	6,400mm
15 iSystem ErP	94%	15kW	4,600mm	6,400mm
18 iSystem ErP	94%	18kW	4,600mm	6,400mm
21 iSystem ErP	94%	21kW	4,600mm	6,400mm
24 iSystem ErP	94%	24kW	4,600mm	6,400mm

Available in NG and LPG





Greenstar iSystem Compact Models



Models	ErP	СН	Max. Horizontal Flue (100mm)	Max. Vertical Flue (100mm)
27 iSystem Compact ErP	92%	24kW	6,000mm	6,000mm
30 iSystem Compact ErP	92%	24kW	6,000mm	6,000mm

Available in NG and LPG





Greenstar 8000 System Models



Models	ErP	СН	Max. Horizontal Flue (100mm)	Max. Vertical Flue (100mm)
GR8000i 30 S	94%	30kW	17,000mm	21,000mm
GR8000i 35 S	94%	35kW	10,000mm	14,000mm

Available in NG and LPG
Available as Life or Style version
Style version available in Black or White





Sealed Heating System System Boilers





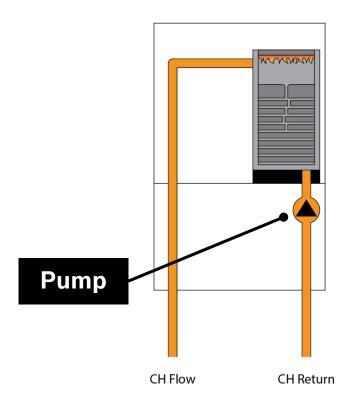


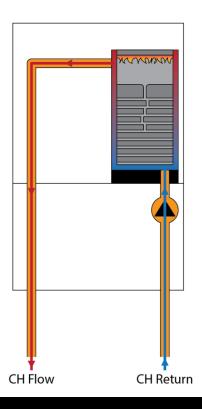




Boiler Operation

Basic System Boiler





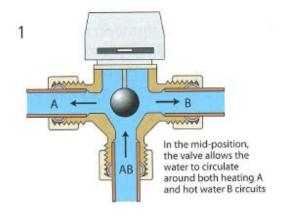
Central Heating or Hot Water

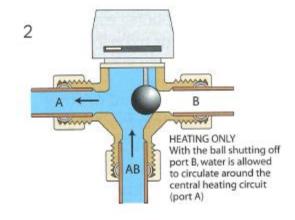


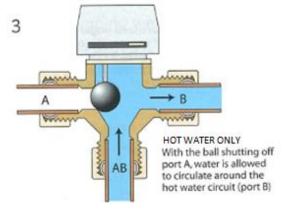


System Controls Mid Position Valve







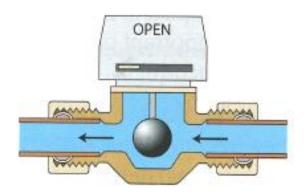


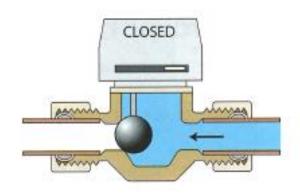




System Controls
2 Port Zone Valve











Any Questions?





5.0 REGULAR BOILERS





Product Overview Greenstar Ri Models



Models	ErP	СН	Max. Horizontal Flue (100mm)	Max. Vertical Flue (100mm)
9 Ri ErP+	92%	9kW	4,600mm	6,400mm
12 Ri ErP+	92%	12kW	4,600mm	6,400mm
15 Ri ErP+	92%	15kW	4,600mm	6,400mm
18 Ri ErP+	92%	18kW	4,600mm	6,400mm
21 Ri ErP+	92%	21kW	4,600mm	6,400mm
24 Ri ErP+	92%	24kW	4,600mm	6,400mm

Available in NG and LPG





Greenstar Ri Compact Models



Models	ErP	СН	Max. Horizontal Flue (100mm)	Max. Vertical Flue (100mm)
27 Ri Compact ErP	92%	27kW	6,000mm	6,000mm
30 Ri Compact ErP	93%	30kW	6,000mm	6,000mm

Available in NG and LPG





Greenstar 8000 Regular Models



Models	ErP	СН	Max. Horizontal Flue (100mm)	Max. Vertical Flue (100mm)
GR8000 30 R	94%	31kW	17,000mm	21,000mm
GR8000 35 R	94%	35kW	10,000mm	14,000mm
GR8000 40 R	94%	40kW	11,000mm	15,000mm
GR8000 45 R	94%	45kW	8,000mm	12,000mm
GR8000 50 R	94%	50kW	9,000mm	12,000mm

Available in NG and LPG Available as Life version only





Greenstar FS CDi Regular Models



Models	ErP	СН	Max. Horizontal Flue (100mm)	Max. Vertical Flue (100mm)
FS 30CDi Regular	92%	30kW	4,000mm	6,400mm
FS 42CDi Regular	92%	41kW	4,000mm	6,400mm

Available in NG and LPG





Open Vent Heating System Regular Boiler









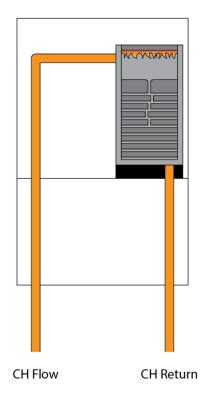
8000 R

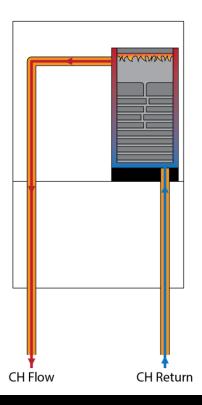




Boiler Operation

Basic Regular Boiler





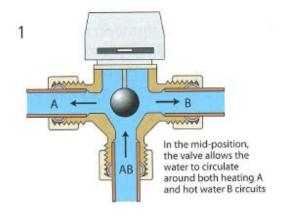
Central Heating or Hot Water

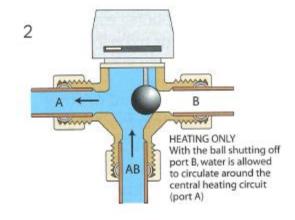


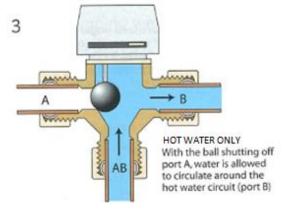


System Controls Mid Position Valve







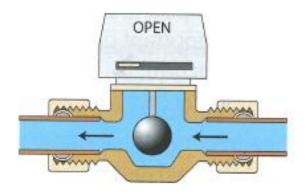


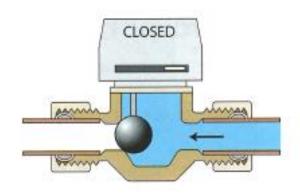




System Controls
2 Port Zone Valve











Any Questions?





6.0 CONTROLS





Worcester controls are designed for ease-of-use and installation with our combination boilers to suit homes with one heating zone.

With accessories they can be used with our system and regular boilers too.





Controls Glossary

Communication

Hard-wired

Physical connection via wire

Fitted

Fits within or on the boiler

RF

Radio frequency

On/Off

On or Off

EMS

Intelligent communication

Function

Timer

Single channel time control

Programmer

Multi-channel time control

Thermostat

Room temperature control

Receiver

RF communication module

Programmable Thermostat

Time and room temperature

Features

Load Compensation

Burner control

Digital

Display screen

Mechanical

Pegs or tappets

Automation

Habit learning

Weather Compensation

Flow temperature control

Optimisation

Early start and system learning

Wi-Fi

Connects to home router

Smart

Remote access or automates and optimises





Controls Boiler Plus









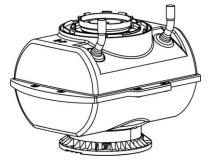
If you're in England... and you install a combi boiler... you must fit a time and temperature interlock... plus one additional energry saving measure.



Weather Compensation



Smart Control



FGHRS

60% OUTPUT

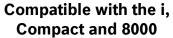
Load Compensation

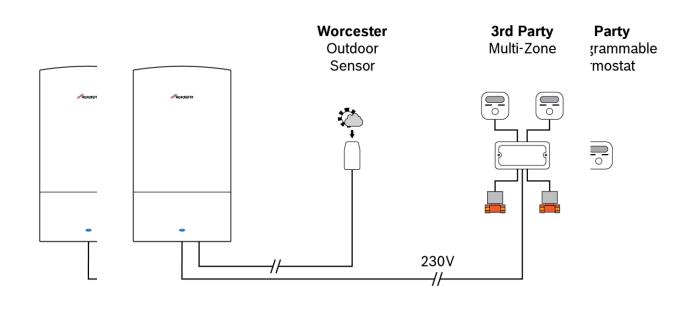




Outdoor Weather Sensor







Mechanical







Compatible with the i and Compact

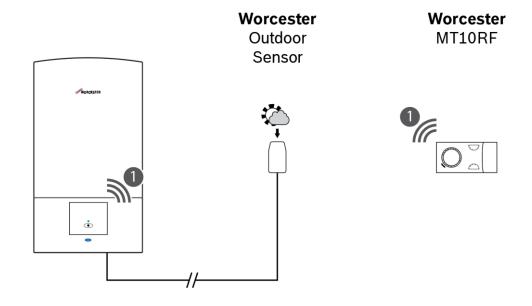


Compatible with the i and Compact





Mechanical Example Scenario







Mechanical Range







Compatible with the 8000



Compatible with the 8000





Digital Range





Comfort

Fitted Programmer

Compatible with the i, Compact and Highflow CDi





Comfort I RF

Fitted Programmer
Receiver and RF Digital
EMS Load Compensating
Thermostat

Compatible with the i, Compact and Highflow CDi





Comfort II RF

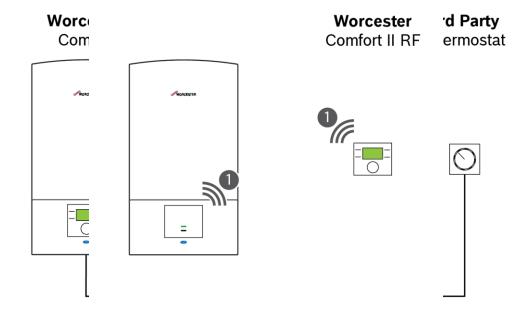
Fitted Receiver and RF
Digital EMS Load
Compensating
Programmable Thermostat

Compatible with the i, Compact and Highflow CDi





Digital Example Scenarios







Controls Digital Range



Fitted Programmer

Compatible with the 8000 Style





Comfort+ Stat RF

Fitted Receiver and RF
Digital EMS Load
Compensating Thermostat

Compatible with the 8000





Comfort+ I RF

Fitted Programmer
Receiver and RF Digital
EMS Load Compensating
Thermostat

Compatible with the 8000 Style





Comfort+ II RF

Fitted Receiver and RF
Digital EMS Load
Compensating
Programmable Thermostat

Compatible with the 2000 and 8000





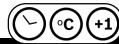
Smart Range











Bosch EasyControl

Hard-wired EMS Load Compensating or Weather Compensating Smart Programmable Thermostat

Compatible with the 2000, i, Compact, 8000 and Highflow CDi



RF Programmable Thermostatic Radiator Valve Accessory Bosch EasyControl RF Key

Fitted Receiver Accessory

Compatible with the 2000 and 8000

Bosch EasyControl Table Stand

Accessory

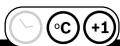
Compatible with the 2000 and 8000





Intelligent Range





Sense I

Hard-wired Digital EMS Load Compensating Thermostat

Compatible with the i, Compact, 8000 and Highflow CDi





Sense II

Hard-wired Digital EMS
Load Compensating or
Weather Compensating
Programmable Thermostat

Compatible with the i, Compact, 8000 and Highflow CDi



MS100 and MS200

Hard-wired EMS Solar Modules

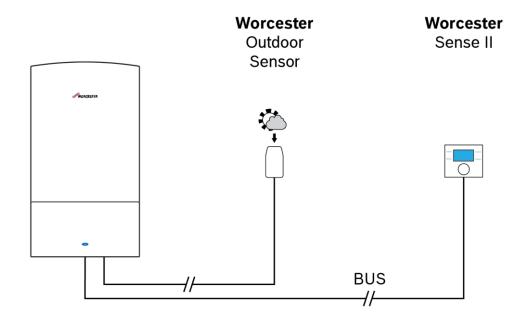
Compatible with Sense II used inconjunction with boilers fitted with Internal Diverter Valve Kit





Controls

Intelligent Example Scenarios







Controls

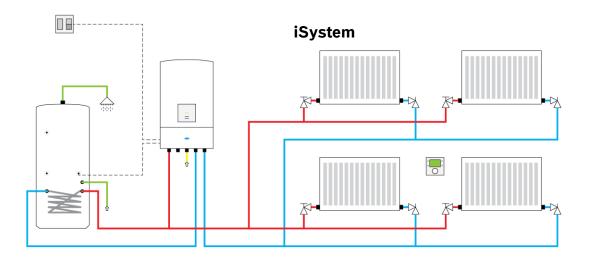
Internal Diverter Valve

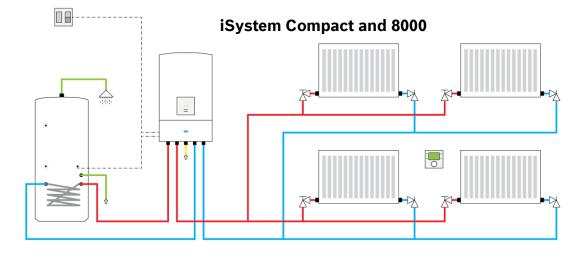


Internal Diverter Valve Kit

Allows the use of Worcester controls on system boilers. Convenient for gravity hot water to sealed system conversions. Different CH and DHW temperatures for higher efficiencies

Versions for the i, Compact and 8000









Controls

Greenstar Wiring Centre





Greeenstar Wiring Centre

Hard-wired EMS wiring centre.

Allows the use of Worcester controls with regular and system boilers using traditional S or Y Plan setups. Eliminates the need for a pump over-run cable to the boiler for regular boilers.

Compatible with the i and Compact ranges of system and regular boiler using the Comfort II RF.





7.0 ACCESSORIES





Accessories

Extended Greenstar System Filter Range



Brass System Filter
~10 Radiators
1-3 Bed Dwelling



Mini System Filter
~10 Radiators
1-3 Bed Dwelling

22mm System Filter
~15 Radiators
3-4 Bed Dwelling

28mm System Filter ~20+ Radiators 5+ Bed Dwelling





Accessories Cylinders



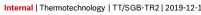
Single Coil	Volume	Twin Coil	Volume	Height
SC-90	931	-		835mm
SC-120	123l	-		1,035mm
SC-150	1611	TC-150	157 l	1,285mm
SC-180	1911	TC-180	187l	1,490mm
SC-210	216	TC-210	2111	1,655mm
SC-250	2461	TC-250	2411	1,860mm
SC-300	2921	TC-300	2871	2,155mm





Greenstore Twin Coil

All the benefits, but with an additional coil for solar hot water heating.

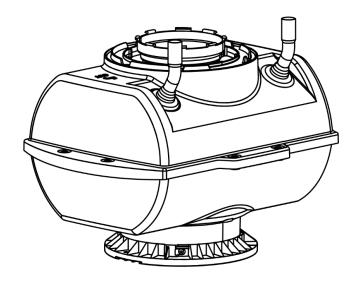


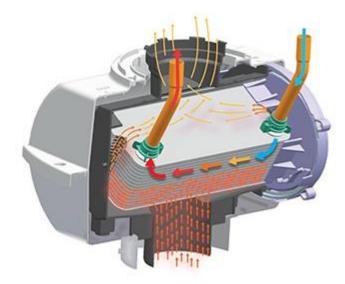


flow rates and outstanding re-heat

performance.

Accessories Greenstar Xtra







Greenstar Xtra (FGHRS)

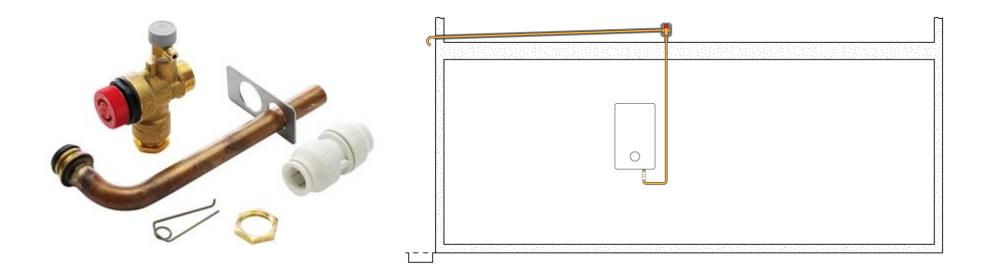
Flue Gas Heat Recovery System increases hot water efficiencies

Compatible with the i and Compact





Accessories Remote PRV Kit



Remote PRV Kit
Kit for high level PRV discharge options

Versions for the i and 8000





Accessories Filling Links



Keyed Filling Link
Cost effective

Compatible with the i, Compact and 8000



Keyless Filling LinkEasy to use

Compatible with the 2000, i, Compact and 8000



Intelligent Filling Link
Hassle-free

Compatible with the 8000





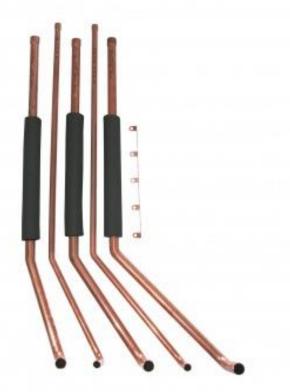
Accessories Rear Piping Kits



Rear Piping Kit

Time saving kit for rear piping a boiler

Versions for the i, Compact and 8000







Accessories Condensure



Zero running costs

No moving parts

No pipe insulation

Can be installed on new or existing installations

Suitable for Gas or Oil

Can be attached to 22mm heating flow pipe

Tested at -15°C for 48hrs





9.0 QUESTIONS





THANKYOU TRAINING@UK.BOSCH.COM 0330 123 0166



