

# The **Greenstar CDi** gas-fired condensing regular & system boiler series

Technical and specification information



Voted Domestic Heating Product of the Year in 2005 & 2006

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Bosch Group



Worcester, Bosch Group headquarters

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Working together for many years, heating professionals and Worcester have been making a real difference in hundreds of thousands of homes across the UK. We are recognised as a market leader in high efficiency, condensing boiler technology and are also committed to providing renewable energy solutions.

As part of the Bosch Group, our products are designed and manufactured to provide the high levels of quality and reliability which are synonymous with the Bosch name throughout the world.



We're a leading British company, employing more than 1,800 people at our headquarters and manufacturing plants in Worcester and at Clay Cross in Derbyshire, including a nationwide network of over 300 Service Engineers and over 60 technically-trained Field Sales Managers.

As part of Europe's largest supplier of heating products, Worcester, Bosch Group has the UK-based resources and support capability to offer you the value-added solutions we feel you deserve.

*"At Worcester we recognise the vital role you, our customer, has in the specification and installation of 'A' rated, energy efficient appliances in homes across the UK. We will continue to invest in our products, people, facilities and added value services such as training, to give you the support you require in providing a total solution for your customers' comfort."*

Richard Soper,  
Managing Director, Worcester, Bosch Group

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## The Greenstar CDi condensing regular & system boiler series



It's often said that you can't please everybody all of the time – but the advanced new series of Greenstar CDi Conventional and system condensing boilers from Worcester has so much to offer that it's already disproving such a notion.

Here is a ground-breaking range of energy-saving boilers which is very good news for the environment and excellent news for specifiers, developers, installers and consumers alike.

### HE stands for Higher Efficiency and for Highly Cost Effective

The Greenstar CDi condensing boilers have an average annual efficiency (SEDBUK value) of over 90%, efficiently producing heat for your heating and/or hot water system. Other types of boiler achieve around 78% efficiency. Therefore, compared with a new conventional boiler, Greenstar CDi condensing boilers can cut heating and hot water bills and it's cheaper to run than an older boiler.

Hence SEDBUK Band A ratings for all models in the new Greenstar CDi condensing range.

Greenstar CDi condensing boilers deliver this energy-saving performance by ingeniously recycling exhaust gases to extract and re-use the latent heat – a highly efficient use of energy which also significantly reduces carbon dioxide emissions into the atmosphere.

To all these major benefits you can add yet more: superlative Worcester quality and reliability; a range of outputs to satisfy the heating demands of a range of households; and truly exceptional all-round value for money.

## The Greenstar CDi regular & system series at a glance

	30CDi Conventional	40CDi Conventional	30CDi System
<b>Output kW</b>	7.7kW	9.4kW	7.7kW
<b>Min to DHW</b>			
<b>Max</b>	30kW	40kW	30kW
<b>Primary temperature control</b>	•	•	•
<b>Modulating control</b>	•	•	•
<b>Natural gas</b>	•	•	•
<b>LPG</b>	•	•	•
<b>Electronic ignition</b>	•	•	•
<b>SEDBUK band</b>	A	A	A

Features	Benefits
Aluminium silicon heat exchanger	High efficiency
SEDBUK Band A	High efficiency – money saving
Wall mounting jig	Allows pre-fabrication of system
Compact dimensions	Space saving, ease of siting
Anti-cycle control	Energy saving
Electronic ignition	Energy saving
Built-in frost protection	Money saving, economical protection
Multi-directional fluing	Siting flexibility
No ventilation grilles required for compartment installations	Money and labour saving
Fault finding diagnostics and service modes displayed	Time saving
Operational status indicator	Consumer friendly
Class 5 NOx levels	Environmentally friendly
Variable pump speed*	Automatically adjusts to meet system flow demand
Intelligent System Package*	No electrician required
Pump seizure protection*	Prevents call backs

\*30CDi System boiler only

# The Greenstar CDi condensing regular & system boiler series

The Worcester Greenstar CDi Conventional is a wall-mounted, gas-fired condensing 'heating only' or regular boiler. The appliance combines, within one casing, a cast-aluminium heat exchanger, fan, gas valve and other electronic and mechanical equipment necessary to provide central heating.

It is particularly suited to an older system which may not sustain the higher pressures a system or combi boiler operates under. With a feed and expansion cistern in the roof space, any 'topping up' of the system is automatic, unlike a sealed system which requires manual filling.

The Greenstar 30CDi System boiler is a compact and highly efficient unit giving all the heating and hot water required, with significant savings on running and installation costs. The Greenstar 30CDi System boiler incorporates all the major components built-in, including an expansion vessel and modulating pump. All components are pre-wired, pre-plumbed and pre-tested for greater reliability as well as quicker and neater installation.

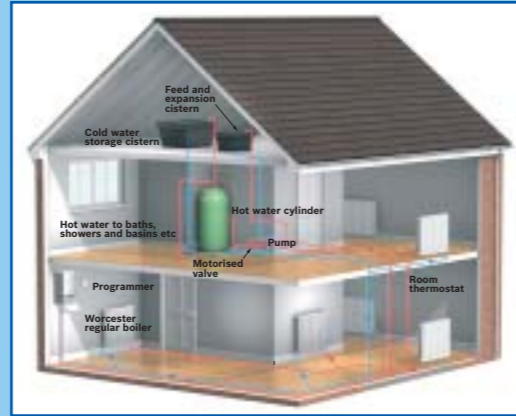
A condensing boiler is more efficient due to its ability to extract more heat from the flue gases normally lost to the environment through the flue system.

All the Greenstar CDi models use the same Aluminium-Silicon heat cell with an extra large surface area.

As the flue gases pass through the heat exchanger this extra surface area cools the flue gases to around 55°C whereupon the latent heat within, which would normally be lost to the atmosphere, is instead released and applied to the system.

It is this ability to extract as much heat as possible from the gas it burns that gives the Greenstar CDi series an exceptionally high level of operating efficiency.

This higher efficiency is recognised within section L of the Building Regulations, subsequently achieving a higher SAP or NHER rating.

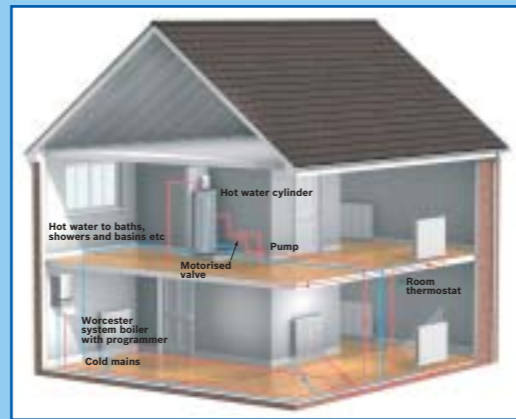


**Regular boiler layout**



**System boiler layout**

(System boiler with low pressure hot water cylinder)



**System boiler layout**

(System boiler with unvented hot water cylinder)

## The CDi regular and system series design benefits in operation

Whenever a demand for DHW or CH is made, the boiler's electronic control system is energised and the burner electronically ignites via a flame ionisation system.

The pre-mix burner automatically adjusts to the set level. The flow temperature of the boiler is then maintained at the customer setting by the fascia mounted variable control. Should the system requirements reduce during operation (TRVs closing down, etc.) and the flow temperature exceed the customer setting then the burner will modulate downwards to match the system demand level. Should the flow temperature continue to rise then the burner will be de-energised and the control system will go into an anti-cycle mode and not allow the appliance to re-fire for a set period.

## Options

### Fluing

The Greenstar CDi series features 2 different sizes of multi-directional RSF flue systems, 100mm or 125mm.

The flue can be run horizontally or vertically with additional 90 or 45 degree in-line bends allowing changes of route or direction, providing an extremely flexible and versatile fluing system enabling the appliance to be sited virtually anywhere.

More details are shown on page 18.

## Versatility

### Gas

The Greenstar CDi regular and system series are available for use with both natural gas and LPG.

### Controls

The Greenstar CDi Conventional series features:

- Power on/off switch.
- Variable temperature control selector.
- An integral fascia with status display lights and a digital display which also operates as a fault diagnosis display.
- DHW control for use with Intelligent System Package\*.



Greenstar CDi System model

\*30CDi System boiler only

# Optional plug-in controls for the Greenstar 30CDi System boiler when used with optional diverter valve kit

The Greenstar 30CDi System boiler is available with a comprehensive range of easy-to-use controls. All fascia mounted controls offer simple plug-in connection to the boiler circuit board.



### **DT20RF digital RF thermostat with twin channel programmer**

A wall-mounted RF room thermostat with digital display, combined with a twin channel digital timer in the boiler fascia. The fascia mounted programmer benefits from automatic time and date setup, automatic summer/winter time changeover and a backlight for use in low light conditions.



### **DT20 twin channel digital programmer**

A versatile, easy-to-learn, 7 day, digital programmer offering up to 3 on/off settings per day. The programmer has a host of innovative features including automatic setup, which sets the correct time and date at power-up, automatic summer/winter time changeover and a green backlight for use in low light conditions.



### **DT10RF digistat**

A familiar wall-mounted 24 hour programmable RF digital thermostat combined with a fascia mounted single channel programmer to time the hot water cylinder. The programmer includes a built-in receiver for the room thermostat and all of the functionality of the DT20.



### **DT10RF optimiser**

A seven day digital programmable RF thermostat with a seven day programmer/ receiver in the boiler fascia. The transmitter is the tried and tested optimiser as available with other Worcester boilers. The optimum start feature, where the thermostat delays the firing of the boiler until necessary, is a useful energy-saving option.



### **Intelligent system package (30CDi System only)**

An optional package for Greenstar CDi system boilers. The combination of the TD200 text display and RT10 room thermostat with a built-in diverter valve motor provides an intelligent control upgrade with easy-to-use features. Please note this cannot be used on under-floor heating. The RT10 is not available separately.



Part of the Intelligent System Package, the TD200 text display is a seven day programmer. It is easy-to-use with automatic time and date setup, automatic summer/winter time changeover and a backlight for use in low light conditions. Three on/off periods can be set per day. The TD200 can be fascia mounted or hard wired outside the boiler using the optional wall mounting socket. The TD200 features an easy-to-use full text display providing more information than standard digital controls. A hard wired room thermostat is available to provide optimum start functionality. The TD200 is not available separately.



A hard wired optimising room temperature controller with digital display for use with the TD200. The display shows current and desired temperature and an advance button allows the user to move to the next heating switch point on the TD200.



### **Wall mounting socket**

A Worcester branded wall mounting socket which allows the TD200 to be hard wired away from the boiler.

## Increased SAP ratings

As well as the CDi models achieving very high SAP ratings for dwellings, the addition of the optimising temperature controller further increases these ratings as well as being part of the recommended best practice, as covered by the CHES design standard.

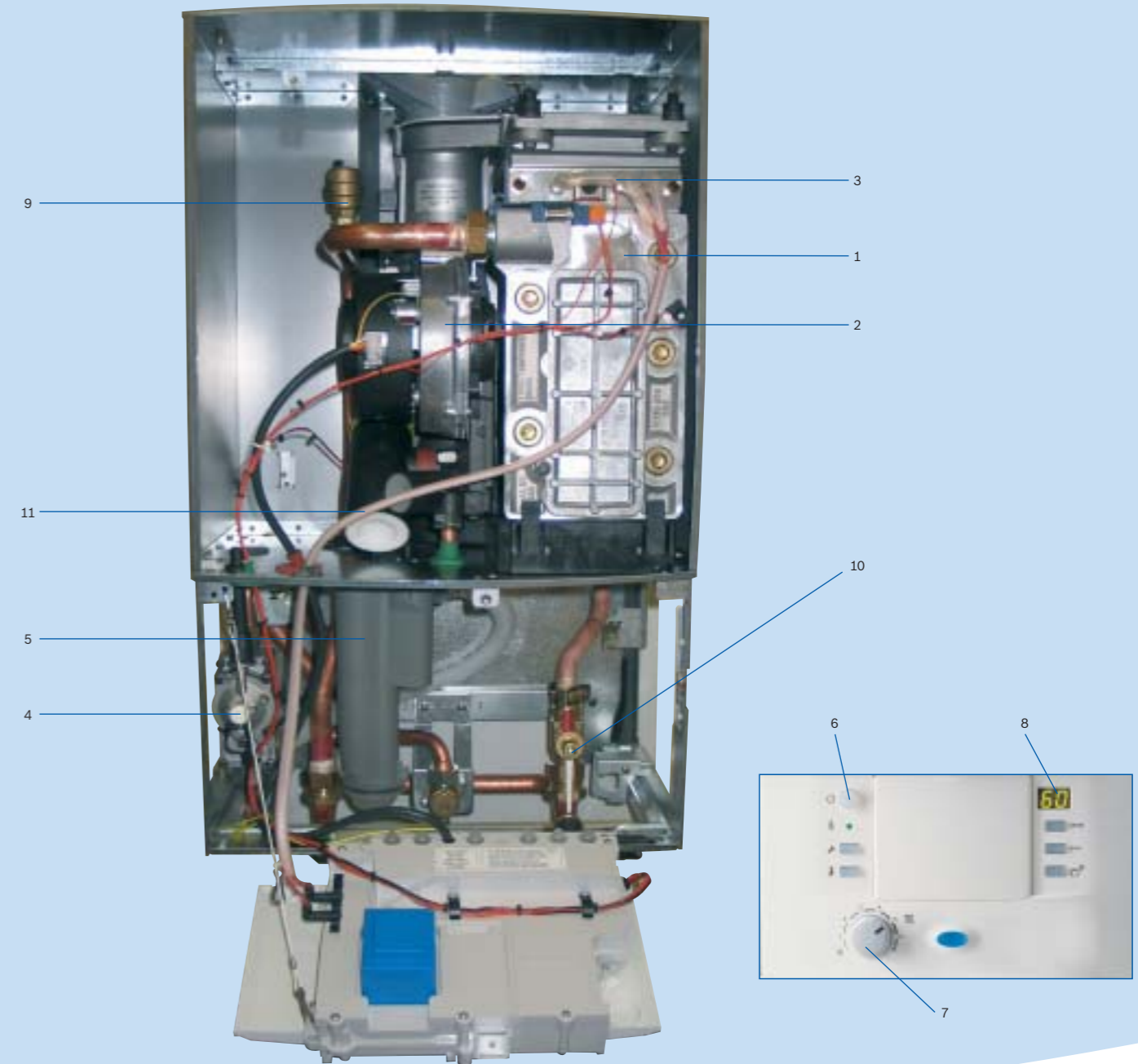


TD200 text display

## Technical data – Greenstar CDi regular & system series

Model	Greenstar 30CDi Conventional	Greenstar 40CDi Conventional	Greenstar 30CDi System
Height (mm)	760 (max)	760 (max)	760 (max)
Width (mm)	440	440	440
Depth (mm)	360 (max)	360 (max)	360 (max)
Weight – dry (kg)	39.5	39.5	46.5
SEDBUK value %/band	90.3%/Band A	90.2%/Band A	90%/Band A
Heating flow/return connections	22mm compression	22mm compression	22mm compression
Condensate connection	22mm plastic pipe	22mm plastic pipe	22mm plastic pipe
Gas connection	22mm compression	22mm compression	22mm compression
Output to central heating kW (Btu)	7.7 - 30 (26,272 - 102,360)	9.4 - 40.8 (32,073 - 139,210)	7.7 - 30 (26,272 - 102,360)
Wall mounting jig	•	•	•
Plug-in timers	-	-	• (optional)
Optimising room temperature controller	-	-	• (optional)
Intelligent controls	-	-	• (optional)
Modulating pump	-	-	•
Fault diagnostic display	•	•	•
Flow and return pipes supplied to allow pipes behind installation	•	•	•
Max. vertical flue (mm) (100mm dia) inc. terminal	9,400	4,900	9,400
Max. vertical flue (mm) (125mm dia) inc. terminal	18,500	16,000	18,500
Max. horizontal flue (mm) (100mm dia)	7,900	2,600	7,900
Max. horizontal flue (mm) (125mm dia)	18,500	12,500	18,500
NOx classification	Class 5	Class 5	Class 5
PRV connection	N/A	N/A	15mm compression

## The Greenstar CDi Conventional condensing boiler – inside story

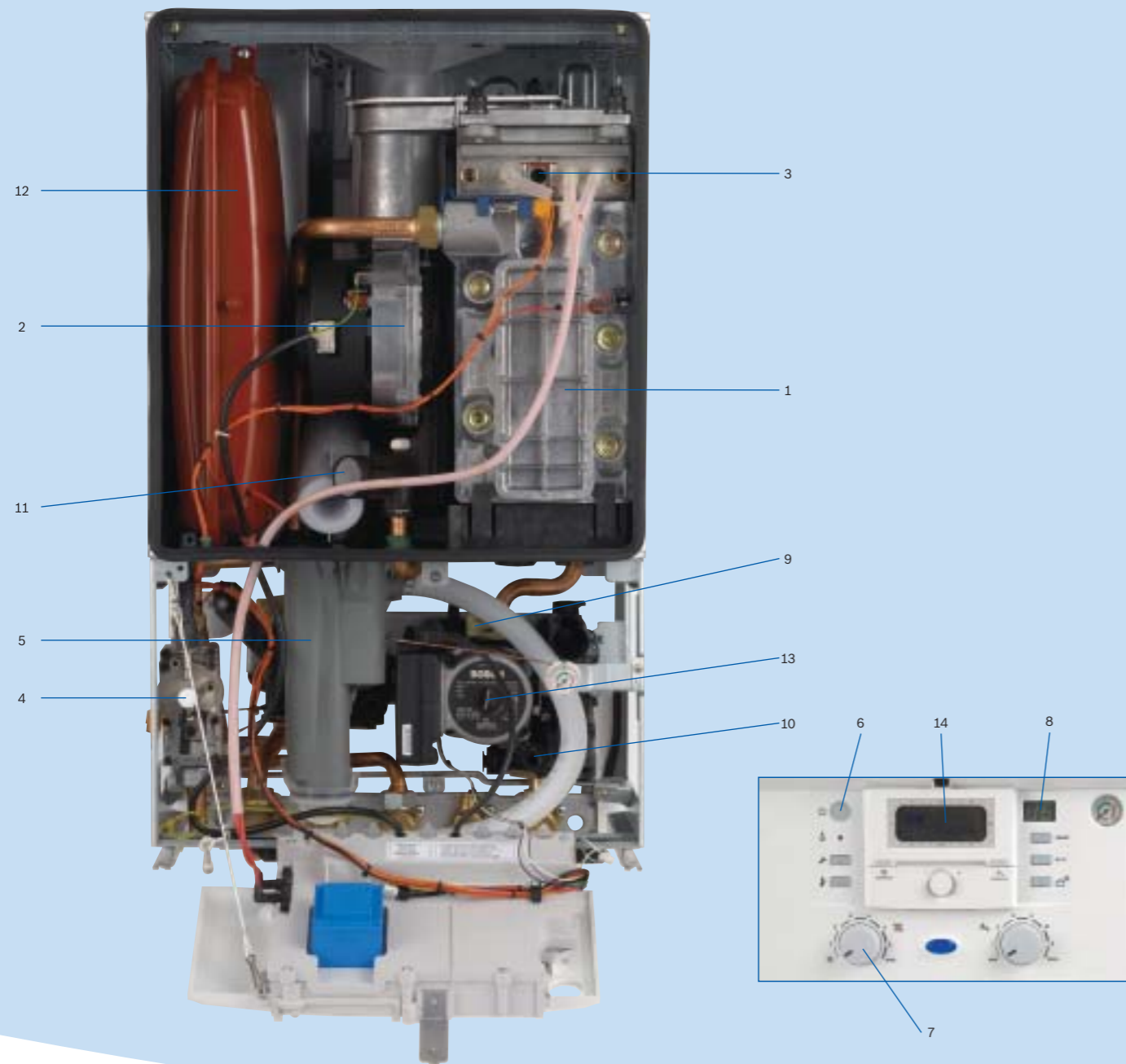


### Key to components

- 1. Aluminium/Silicon WB5 Heat Exchanger
- 2. Pre-mix Fan
- 3. Down Firing Low NOx Burner
- 4. Gas Valve
- 5. Syphon
- 6. On/Off Button
- 7. Temperature Control

- 8. Digital Display
- 9. Auto Air Vent
- 10. Drain Point
- 11. Air/Gas Adjustment Screw

# The Greenstar 30CDi System condensing boiler – inside story



## Key to components

- |   |                              |
|---|------------------------------|
| 1. Aluminium/Silicon WB5 Heat Exchanger | 8. Digital Display           |
| 2. Pre-mix Fan                          | 9. Auto Air Vent             |
| 3. Down Firing Low NOx Burner           | 10. Drain Point              |
| 4. Gas Valve                            | 11. Air/Gas Adjustment Screw |
| 5. Syphon                               | 12. Expansion Vessel         |
| 6. On/Off Button                        | 13. Modulating Pump          |
| 7. Temperature Control                  | 14. Plug-in Control          |

# Installing the Greenstar CDi regular & system boiler series

The Greenstar CDi range is designed for connection to a traditional heating and hot water system. The major benefits of the Greenstar CDi regular or system boilers are:

- The boiler is compatible with S and Y plan systems
- The boiler comes supplied with a wall mounting bracket
- WB5 cast aluminium/silicon heat cell
- A syphonic condensate trap is pre-plumbed within
- Built-in pump and expansion vessel\*
- No feed and expansion cistern in the loft space\*
- Less pipework\*

Greenstar CDi boilers are exceptional for their number of additional time saving installation features:

- Built-in frost protection for boiler
- Built-in fault finding diagnostics
- Automatic gas pressure adjustment
- Highly versatile multi-directional fluing system
- Combined ignition and control board means fewer connections
- Pre-fabricated pipes allowing top exit from the boiler
- A rigid 22mm compression gas connection eliminating the need for pre-fabricating the gas pipe onto the isolating valve
- The large output range capability of the appliances

## Siting of appliance

### General

The appliances are not suitable for external installation.

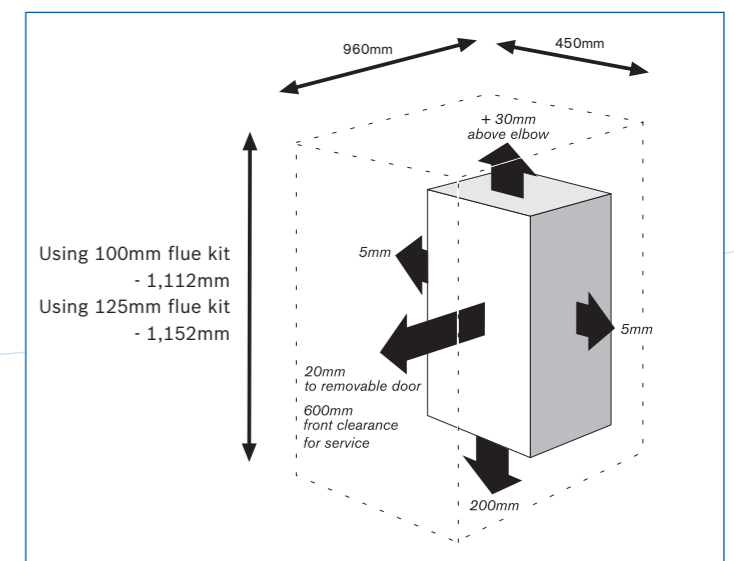
The wall on which the boiler is to be mounted should be capable of supporting an overall weight of approximately 50kg.

The wall does not require special protection. However, if the appliance is to be fitted in a timber frame building the guidelines laid down in BS 5440:Part 1:2000 and the gas installer manual Chapter 11, "Gas in Timber Frame Housing" should be adhered to.

The appliances may be installed into an airing cupboard if required. Use a non-combustible perforated material (max. hole sizes of 13mm) to separate the boiler from the airing space.

### Clearances

The minimum clearances shown opposite should be allowed for installation and servicing, and are also the minimum clearances required for installation into an unventilated compartment (see below).



\*30CDi System boiler

## Compartment installation

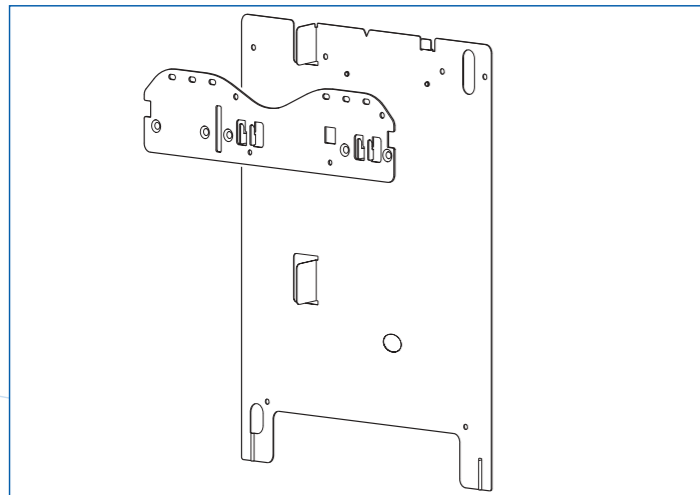
The appliance may be installed in any room, although particular attention is drawn to the requirements of the IEE regulations applicable and in Scotland the electrical provisions with respect to installation in a room containing a bath or shower.

- The room in which the appliance is installed does not require a purpose provided air vent.
- If the appliance is installed in a cupboard or compartment with dimensions that allow the minimum clearances shown in the siting of appliance section above, then no ventilation is required.

## Wall preparation

The drawing shows the new CDi wall mounting jig which enables a simple and straightforward method of attaching the boiler to the wall surface. The new wall mounting jig has additional optional fixing points and provides improved engagement.

After fixing the jig to the wall, the appliance can be lifted onto the jig and the union connections tightened. The pipework can be routed behind the boiler without the need for an additional wall spacing frame.



## Condensate disposal

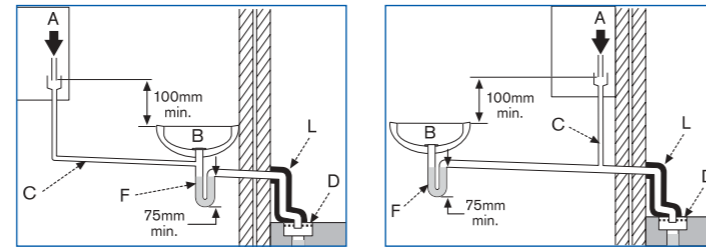
All condensing boilers generate condensate discharge which needs to be piped away from the appliance via a plastic pipe.

The amount of condensate generated depends on the efficiency and operating status of the appliance. This can be up to 2 litres of condensate water an hour.

## Condensate termination and route

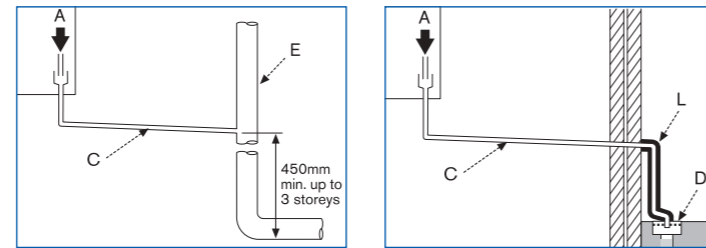
The condensate connection on Worcester appliances is in 22mm plastic. The pipe should be extended and directed away from the appliance with a constant minimum fall of 3 degrees or 50mm in every metre.

The condensate pipe can terminate into any one of five areas:



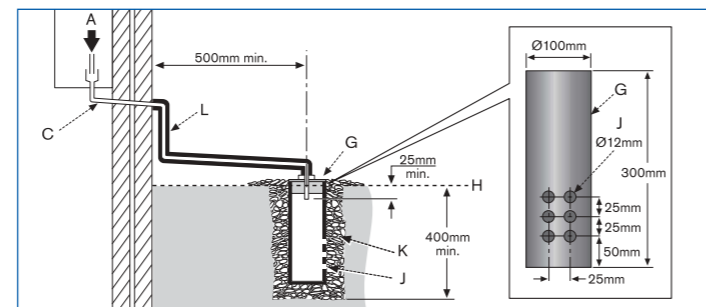
Internal sink/  
washing machine drain

Internal waste drainage system



Soil and vent stack

External drainage system



External condensate absorption point  
(unsuitable for clay soil types)

- |   |   |
|---|---|
| A Condensate from boiler syphon/trap      | G 300mm x 100mm dia sealed plastic tube         |
| B Sink with integral overflow             | H Ground level                                  |
| C 22mm dia plastic condensate pipe        | J Drainage holes 50mm facing away from building |
| D External drain or gully                 | K Limestone chippings                           |
| E Internal soil and vent stack            | L Weather resistant insulation                  |
| F Serviceable condensate trap (75mm min.) |   |

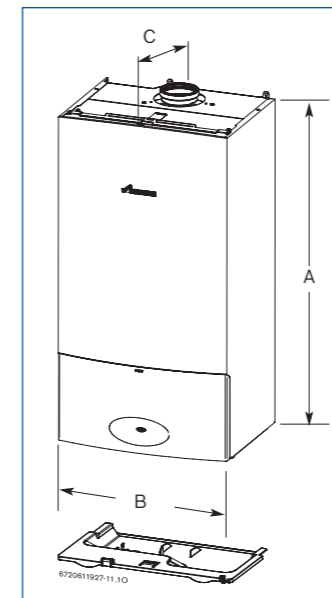
## External condensate pipework

All Worcester condensing boilers have within a syphonic condensate trap. Rather than the condensate constantly dripping into the discharge pipe, the condensate is collected into a trap which releases it in 100ml quantities. This will help prevent freezing occurring.

Wherever possible the condensate discharge pipework should be routed and terminated internally. Should this not be possible, and the only available route is external, the following conditions should be observed:

- The pipework length should be kept to a minimum and the route as vertical as possible
- Where pipework could be subjected to extreme cold or wind chill, a weather proof insulation should be used.  
**Alternatively, the condensate pipework could be increased to a minimum 32mm without the requirement to insulate.**

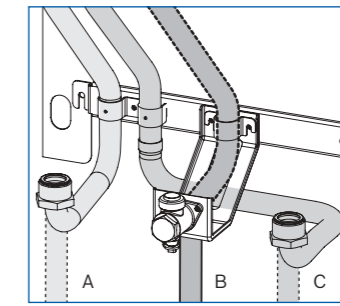
## Pipework connections and casing dimensions



Cabinet dimensions (mm)	
A	750*
B	440
C	360

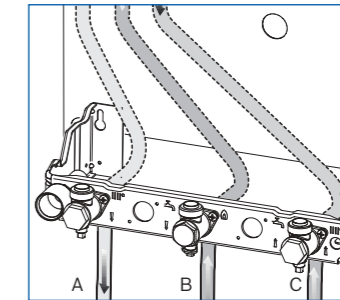
\*760mm to top of casing front.

## Greenstar CDi Conventional



Pipework connections		
A	Flow	22mm
B	Gas inlet	22mm
C	Return	22mm

## Greenstar CDi System



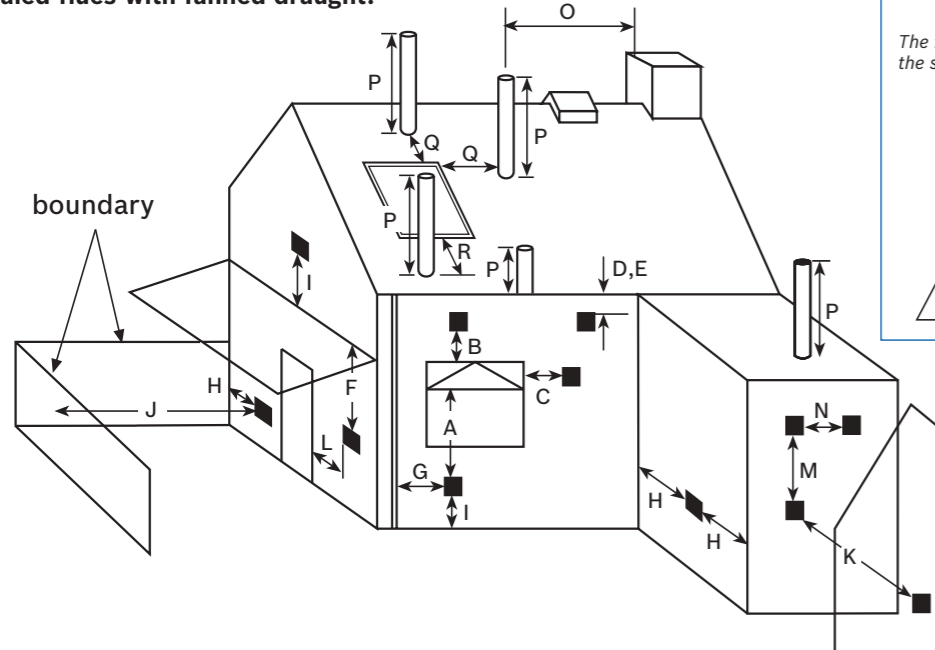
Pipework connections		
A	Flow	22mm
B	Gas inlet	22mm
C	Return	22mm



# Flue terminal positioning

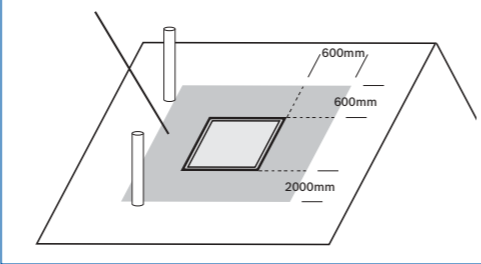
## RSF horizontal and vertical

Minimum dimensions of flue terminal positions for balanced room sealed flues with fanned draught:



### Terminals adjacent to windows or openings on pitched and flat roofs

The flue should not penetrate the shaded area



The flue system must be installed and terminated in accordance with the recommendations of BS 5440:Part 1.

### Key to illustration

Terminal position	Min. distance (mm)
A <sup>1</sup> Directly below an opening, air brick, opening windows etc	300
B <sup>1</sup> Above an opening, air brick, opening window etc	300
C <sup>1</sup> Horizontally to an opening, air brick, opening window etc	300
D Below gutters, soil pipes or drain pipes	75
E Below eaves	200
F Below balconies or car port roof (lowest point)	200
G From a vertical drain pipe or soil pipe	150
H From an internal or external corner or to a boundary alongside the terminal	300**
I Above ground, roof or balcony	300
J From a surface or boundary facing the terminal	600**
K From a terminal facing the terminal	1,200
L <sup>2</sup> From an opening in the car port (e.g. door, window) into the dwelling	1,200
M Vertically from a terminal on the same wall	1,500
N Horizontally from a terminal on the same wall	300
O From a non-combustible vertical structure on the roof	*
P Above intersection with the roof	*
Q Adjacent to windows or openings on pitched and flat roofs	600
R Below windows or openings on pitched roofs	2,000

<sup>1</sup> In addition, the terminal should not be nearer than 150mm (fanned draught) to an opening in the building fabric formed for the purpose of accommodating a built-in element such as a window frame.

<sup>2</sup> Not recommended.

\*See instructions supplied with vertical flue kits.

\*\*Care should be taken to ensure terminal siting does not cause a nuisance to adjacent properties.

### General position

1. The terminal must not cause an obstruction nor the discharge a nuisance. Particular care should be exercised with regards to the plumbing of the flue gases and any increase in noise levels.
2. If a terminal is fitted less than 2 metres above a surface to which people have access, then a guard must be fitted. A terminal protective guard is available from Tower Flue Components, Vale Rise, Tonbridge. Tel: (01732) 351555. The terminal guard must be securely fixed to the wall using suitable plugs and corrosion resistant screws. The guard must be symmetrically positioned about the terminal assembly and spaced such that there is a gap of 50mm between the end of the terminal and the guard.
3. In certain weather conditions, a white plume of condensation will be emitted from the flue terminal and siting where this could be a nuisance, i.e. near security lighting, should be avoided.
4. The air inlet/outlet duct and the terminal of the boiler must not be closer than 25mm to any combustible material. Detailed recommendations on protection of combustible materials are given in BS 5440:1.

## Boiler location & clearances

### Bathrooms

The boiler can be installed in zones 2 or 3.

If a mechanical or RF mechanical timer or text display with room thermostat (IP 20 only) is fitted the boiler can only be installed in zone 3.

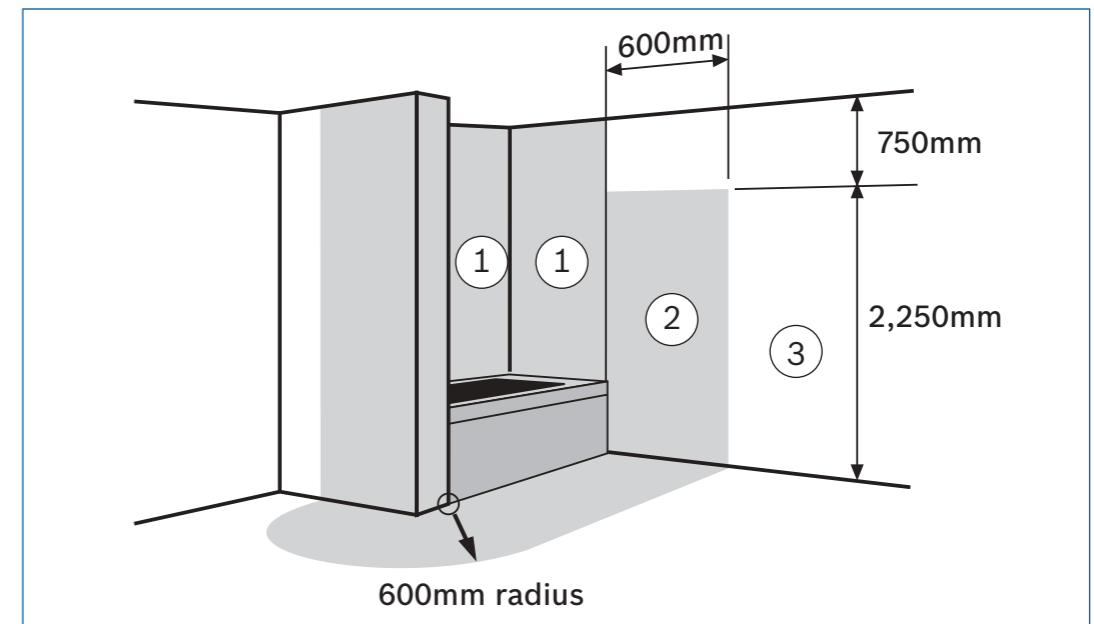
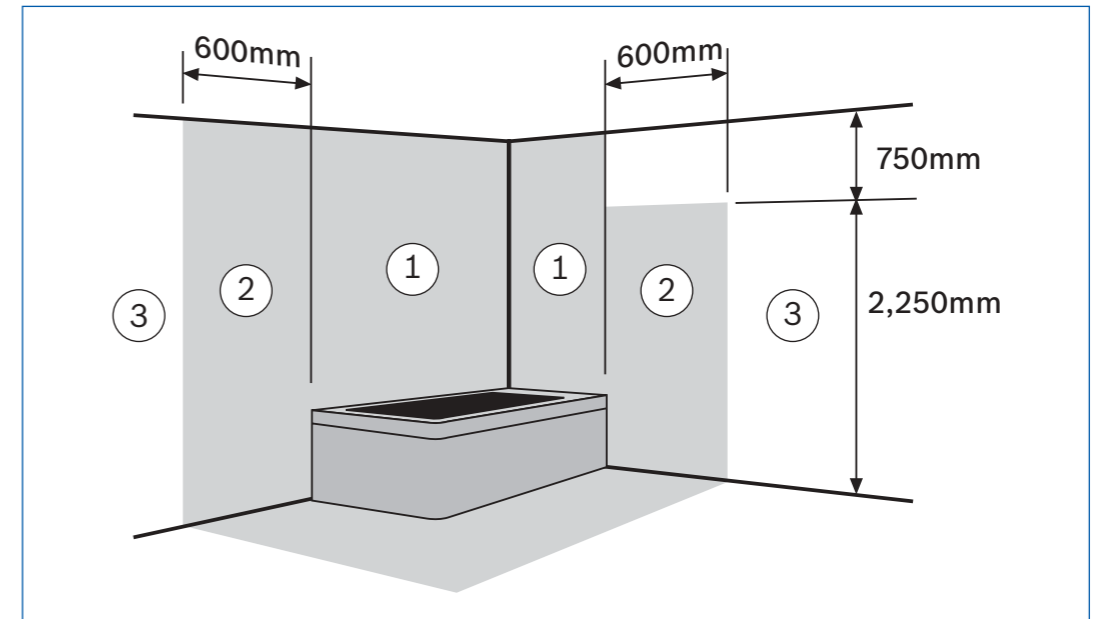
A non mechanical timer can be installed in zone 2.

See IEE wiring regulations. (See Technical Data for IP ratings).

**IMPORTANT:** any switch or appliance control using mains electricity must not be able to be touched by a person using the bath or shower.

Electrical switches, fused spur and socket outlets must not be situated in the bathroom.

All pipework to the appliance must be cross bonded.



# Greenstar CDi regular & system boiler series horizontal fluing options

The Greenstar CDi series has the choice of 2 differently sized horizontal RSF flue systems, a 100mm diameter telescopic flue kit and a 125mm diameter kit. Both systems have different maximum lengths. Options 1 to 6 detail the permissible lengths.

## Horizontal RS flue



Flue diameter	100mm	125mm
Minimum flue length	350mm*	250mm
Maximum flue length		
30CDi Conventional	7,900mm	18,500mm
40CDi Conventional	2,600mm	12,500mm
30CDi System	7,900mm	18,500mm

### 100mm dia standard telescopic flue kit

Comprises:

- 1 x flue turret elbow
- 570mm (100mm dia) of flue duct

**Part No. 7 716 191 082**

### 125mm dia standard flue kit

- 1 x flue turret elbow
- 1,030mm (125mm dia) of flue duct including terminal (as measured from centre of flue outlet)

**Part No. 7 719 002 350**

\*Can be cut to 130mm. Please refer to instructions.

## Accessories

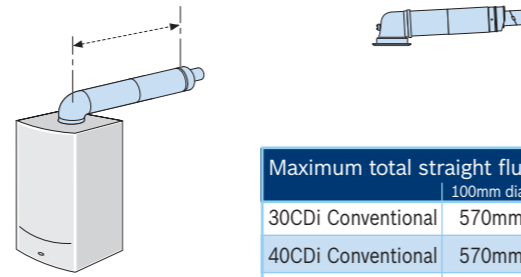
	Worcester Part No.	
	100mm dia	125mm dia
Extension Flue Kit (1,000mm)	7 716 191 083	7 719 001 892
90° Bend	7 716 191 084	7 719 001 891
45° Bend	7 716 191 085	7 719 001 899
Vertical Flue Adaptor Kit	7 719 002 432	7 719 002 433
Support Bracket Kit	7 716 191 092	-

The following criteria should be noted when planning the installation.

- The concentric flue system must be inclined at 3° (50mm per metre) from the appliance, to allow condensate to drain back into the boiler.
- Because the appliance operates at high efficiency a white plume of condensation will be emitted from the terminal. Care must be taken when selecting the flue terminal position.

### Option 1

Standard horizontal flue assembly



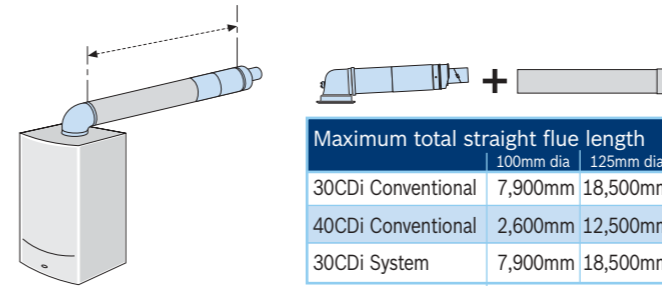
	Maximum total straight flue length	
	100mm dia	125mm dia
30CDi Conventional	570mm	1,070mm
40CDi Conventional	570mm	1,070mm
30CDi System	570mm	1,070mm

### Flue components required

Flue Diameter	Description	Quantity	Worcester Part No.
<b>30CDi Conventional</b>			
60/100mm	Standard Telescopic Flue Kit	1	7 716 191 082
125mm	Standard Flue Kit	1	7 719 002 350
<b>40CDi Conventional</b>			
60/100mm	Standard Telescopic Flue Kit	1	7 716 191 082
125mm	Standard Flue Kit	1	7 719 002 350
<b>30CDi System</b>			
60/100mm	Standard Telescopic Flue Kit	1	7 716 191 082
125mm	Standard Flue Kit	1	7 719 002 350

### Option 2

Extension flue horizontal



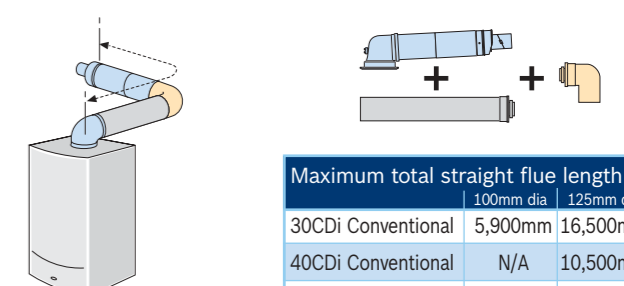
	Maximum total straight flue length	
	100mm dia	125mm dia
30CDi Conventional	7,900mm	18,500mm
40CDi Conventional	2,600mm	12,500mm
30CDi System	7,900mm	18,500mm

### Flue components required

Flue Diameter	Description	Quantity	Worcester Part No.
<b>30CDi Conventional</b>			
60/100mm	Standard Telescopic Flue Kit	1	7 716 191 082
60/100mm	1,000mm Extension Kit	up to 8	7 716 191 083
125mm	Standard Flue Kit	1	7 719 002 350
125mm	Flue Extension	up to 18	7 719 001 892
<b>40CDi Conventional</b>			
60/100mm	Standard Telescopic Flue Kit	1	7 716 191 082
60/100mm	1,000mm Extension Kit	up to 3	7 716 191 083
125mm	Standard Flue Kit	1	7 719 002 350
125mm	Flue Extension	up to 12	7 719 001 892
<b>30CDi System</b>			
60/100mm	Standard Telescopic Flue Kit	1	7 716 191 082
60/100mm	1,000mm Extension Kit	up to 8	7 716 191 083
125mm	Standard Flue Kit	1	7 719 002 350
125mm	Flue Extension	up to 18	7 719 001 892

### Option 3

Extension flue horizontal using a second 90° bend



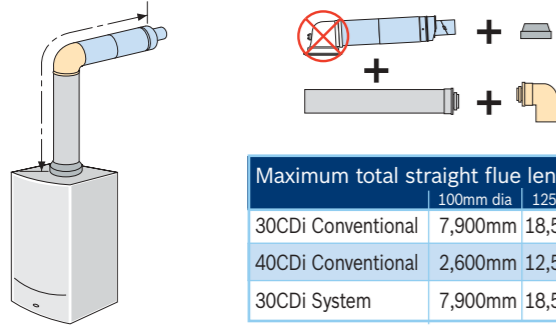
	Maximum total straight flue length	
	100mm dia	125mm dia
30CDi Conventional	5,900mm	16,500mm
40CDi Conventional	N/A	10,500mm
30CDi System	5,900mm	16,500mm

### Flue components required

Flue Diameter	Description	Quantity	Worcester Part No.
<b>30CDi Conventional</b>			
60/100mm	Standard Telescopic Flue Kit	1	7 716 191 082
60/100mm	1,000mm Extension Kit	up to 6	7 716 191 083
60/100mm	90° Bend	1	7 716 191 084
125mm	Standard Flue Kit	1	7 719 002 350
125mm	Flue Extension	up to 17	7 719 001 892
125mm	90° Bend	1	7 719 001 891
<b>40CDi Conventional</b>			
125mm	Standard Flue Kit	1	7 719 002 350
125mm	Flue Extension	up to 11	7 719 001 892
125mm	90° Bend	1	7 719 001 891
<b>30CDi System</b>			
60/100mm	Standard Telescopic Flue Kit	1	7 716 191 082
60/100mm	1,000mm Extension Kit	up to 6	7 716 191 083
60/100mm	90° Bend	1	7 716 191 084
125mm	Standard Flue Kit	1	7 719 002 350
125mm	Flue Extension	up to 17	7 719 001 892
125mm	90° Bend	1	7 719 001 891

### Option 4

Extension flue horizontal and upwards

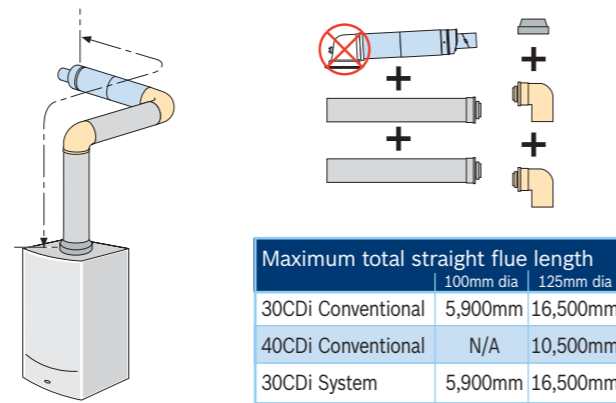


#### Flue components required

Flue Diameter	Description	Quantity	Worcester Part No.
<b>30CDi Conventional</b>			
60/100mm	Standard Telescopic Flue Kit	1	7 716 191 082
60/100mm	1,000mm Extension Kit	up to 8	7 716 191 083
60/100mm	90° Bend	1	7 716 191 084
60/100mm	Vertical Flue Adaptor	1	7 719 002 432
125mm	Standard Flue Kit	1	7 719 002 350
125mm	Flue Extension	up to 19	7 719 001 892
125mm	90° Bend	1	7 719 001 891
125mm	Vertical Flue Adaptor	1	7 719 002 433
<b>40CDi Conventional</b>			
60/100mm	Standard Telescopic Flue Kit	1	7 716 191 082
60/100mm	1,000mm Extension Kit	up to 3	7 716 191 083
60/100mm	90° Bend	1	7 716 191 084
60/100mm	Vertical Flue Adaptor	1	7 719 002 432
125mm	Standard Flue Kit	1	7 719 002 350
125mm	Flue Extension	up to 13	7 719 001 892
125mm	90° Bend	1	7 719 001 891
125mm	Vertical Flue Adaptor	1	7 719 002 433
<b>30CDi System</b>			
60/100mm	Standard Telescopic Flue Kit	1	7 716 191 082
60/100mm	1,000mm Extension Kit	up to 8	7 716 191 083
60/100mm	90° Bend	1	7 716 191 084
60/100mm	Vertical Flue Adaptor	1	7 719 002 432
125mm	Standard Flue Kit	1	7 719 002 350
125mm	Flue Extension	up to 19	7 719 001 892
125mm	90° Bend	1	7 719 001 891
125mm	Vertical Flue Adaptor	1	7 719 002 433

### Option 5

Extension flue upwards and horizontal using a second 90° bend

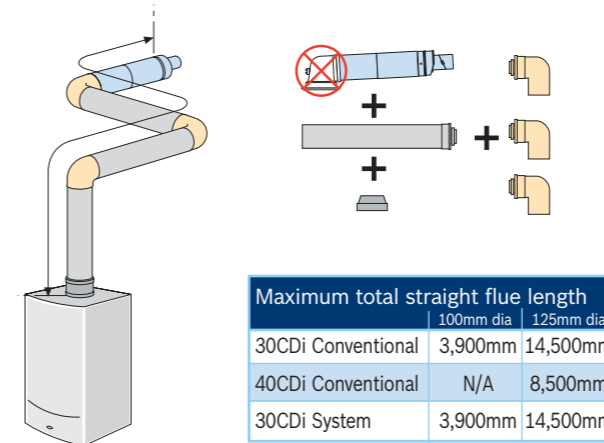


#### Flue components required

Flue Diameter	Description	Quantity	Worcester Part No.
<b>30CDi Conventional</b>			
60/100mm	Standard Telescopic Flue Kit	1	7 716 191 082
60/100mm	1,000mm Extension Kit	up to 6	7 716 191 083
60/100mm	90° Bend	1	7 716 191 084
60/100mm	Vertical Flue Adaptor	1	7 719 002 432
125mm	Standard Flue Kit	1	7 719 002 350
125mm	Flue Extension	up to 18	7 719 001 892
125mm	90° Bend	2	7 719 001 891
125mm	Vertical Flue Adaptor	1	7 719 002 433
<b>40CDi Conventional</b>			
125mm	Standard Flue Kit	1	7 719 002 350
125mm	Flue Extension	up to 12	7 719 001 892
125mm	90° Bend	2	7 719 001 891
125mm	Vertical Flue Adaptor	1	7 719 002 433
<b>30CDi System</b>			
60/100mm	Standard Telescopic Flue Kit	1	7 716 191 082
60/100mm	1,000mm Extension Kit	up to 6	7 716 191 083
60/100mm	90° Bend	1	7 716 191 084
60/100mm	Vertical Flue Adaptor	1	7 719 002 432
125mm	Standard Flue Kit	1	7 719 002 350
125mm	Flue Extension	up to 18	7 719 001 892
125mm	90° Bend	2	7 719 001 891
125mm	Vertical Flue Adaptor	1	7 719 002 433

### Option 6

Extension flue upwards and horizontal using a third 90° bend



#### Flue components required

Flue Diameter	Description	Quantity	Worcester Part No.
<b>30CDi Conventional</b>			
60/100mm	Standard Telescopic Flue Kit	1	7 716 191 082
60/100mm	1,000mm Extension Kit	up to 4	7 716 191 083
60/100mm	90° Bend	3	7 716 191 084
60/100mm	Vertical Flue Adaptor	1	7 719 002 432
125mm	Standard Flue Kit	1	7 719 002 350
125mm	Flue Extension	up to 17	7 719 001 892
125mm	90° Bend	3	7 719 001 891
125mm	Vertical Flue Adaptor	1	7 719 002 433
<b>40CDi Conventional</b>			
125mm	Standard Flue Kit	1	7 719 002 350
125mm	Flue Extension	up to 11	7 719 001 892
125mm	90° Bend	3	7 719 001 891
125mm	Vertical Flue Adaptor	1	7 719 002 433
<b>30CDi System</b>			
60/100mm	Standard Telescopic Flue Kit	1	7 716 191 082
60/100mm	1,000mm Extension Kit	up to 4	7 716 191 083
60/100mm	90° Bend	3	7 716 191 084
60/100mm	Vertical Flue Adaptor	1	7 719 002 432
125mm	Standard Flue Kit	1	7 719 002 350
125mm	Flue Extension	up to 17	7 719 001 892
125mm	90° Bend	3	7 719 001 891
125mm	Vertical Flue Adaptor	1	7 719 002 433

# Greenstar CDi regular & system boiler series vertical fluing options

The Greenstar CDi series have the choice of 2 differently sized vertical RSF flue systems, 100mm and 125mm. Both systems have different maximum lengths. Options 1 to 3 detail the permissible lengths.

## Vertical RSF flue

Flue diameter	100mm	125mm
Flue terminal assembly diameter	135mm	135mm
Maximum flue length (inc. terminal)		
30CDi Conventional	9,400mm	18,500mm
40CDi Conventional	4,900mm	16,000mm
30CDi System	9,400mm	18,500mm
Flue terminal assembly length	1,140mm	1,365mm

## Vertical balanced flue kit

Comprises:

- 1 x flue terminal assembly
- 1 x weather sealing collar
- 1 x fire stop spacer
- 1 x vertical adaptor

**Part No. 7 719 002 430 (100mm dia)**

**Part No. 7 719 002 431 (125mm dia)**

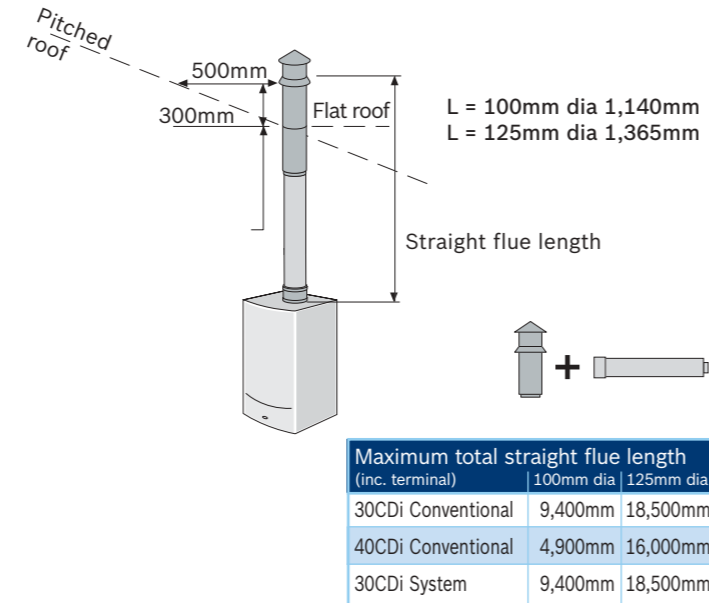
## Accessories

	Worcester Part No.	
	100mm dia	125mm dia
Extension Flue Kit (1,000mm)	7 716 191 083	7 719 001 892
90° Bend	7 716 191 084	7 719 001 891
45° Bend	7 716 191 085	7 719 001 899

Note: The roof flashing is not supplied by Worcester.

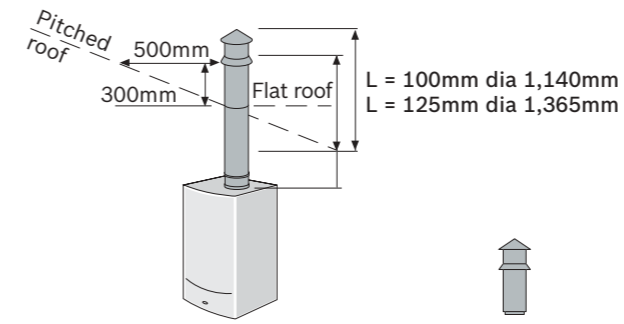
## Option 1

Vertical balanced flue system maximum height



Flue components required			
Flue Diameter	Description	Quantity	Worcester Part No.
<b>30CDi Conventional</b>			
100mm	Vertical Flue Kit	1	7 719 002 430
100mm	Flue Extension	up to 9	7 719 002 349
125mm	Vertical Flue Kit	1	7 719 002 431
125mm	Flue Extension	up to 18	7 719 001 892
<b>40CDi Conventional</b>			
100mm	Vertical Flue Kit	1	7 719 002 430
100mm	Flue Extension	up to 5	7 719 002 349
125mm	Vertical Flue Kit	1	7 719 002 431
125mm	Flue Extension	up to 16	7 719 001 892
<b>30CDi System</b>			
100mm	Vertical Flue Kit	1	7 719 002 430
100mm	Flue Extension	up to 9	7 719 002 349
125mm	Vertical Flue Kit	1	7 719 002 431
125mm	Flue Extension	up to 18	7 719 001 892

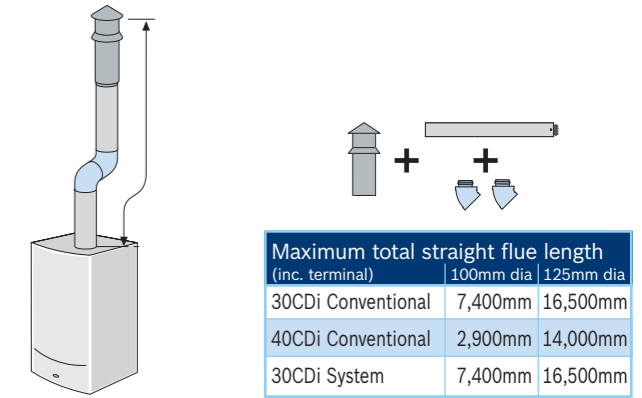
## Minimum height



Flue components required			
Flue Diameter	Description	Quantity	Worcester Part No.
<b>30CDi Conventional</b>			
100mm	Vertical Flue Kit	1	7 719 002 430
125mm	Vertical Flue Kit	1	7 719 002 431
<b>40CDi Conventional</b>			
100mm	Vertical Flue Kit	1	7 719 002 430
125mm	Vertical Flue Kit	1	7 719 002 431
<b>30CDi System</b>			
100mm	Vertical Flue Kit	1	7 719 002 430
125mm	Vertical Flue Kit	1	7 719 002 431

## Option 2

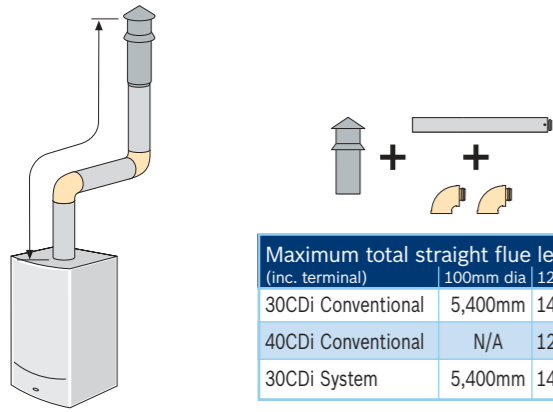
Vertical balanced flue system with two 45° bends



Flue components required			
Flue Diameter	Description	Quantity	Worcester Part No.
<b>30CDi Conventional</b>			
100mm	Vertical Flue Kit	1	7 719 002 430
100mm	Flue Extension	up to 8	7 719 002 349
100mm	45° Bend	2	7 719 002 347
125mm	Vertical Flue Kit	1	7 719 002 431
125mm	Flue Extension	up to 17	7 719 001 892
125mm	45° Bend	2	7 719 001 899
<b>40CDi Conventional</b>			
100mm	Vertical Flue Kit	1	7 719 002 430
100mm	Flue Extension	up to 3	7 719 002 349
100mm	45° Bend	2	7 719 002 347
125mm	Vertical Flue Kit	1	7 719 002 431
125mm	Flue Extension	up to 14	7 719 001 892
125mm	45° Bend	2	7 719 001 899
<b>30CDi System</b>			
100mm	Vertical Flue Kit	1	7 719 002 430
100mm	Flue Extension	up to 8	7 719 002 349
100mm	45° Bend	2	7 719 002 347
125mm	Vertical Flue Kit	1	7 719 002 431
125mm	Flue Extension	up to 17	7 719 001 892
125mm	45° Bend	2	7 719 001 899

**Option 3**

Vertical balanced flue system with two 90° bends



Maximum total straight flue length (inc. terminal)	100mm dia	125mm dia
	30CDi Conventional	5,400mm
40CDi Conventional	N/A	12,000mm
30CDi System	5,400mm	14,500mm

Flue components required			
Flue Diameter	Description	Quantity	Worcester Part No.
<b>30CDi Conventional</b>			
100mm	Vertical Flue Kit	1	7 719 002 430
100mm	Flue Extension	up to 7	7 719 002 349
100mm	90° Bend	2	7 719 002 348
125mm	Vertical Flue Kit	1	7 719 002 431
125mm	Flue Extension	up to 16	7 719 001 892
125mm	90° Bend	2	7 719 001 891
<b>40CDi Conventional</b>			
125mm	Vertical Flue Kit	1	7 719 002 431
125mm	Flue Extension	up to 13	7 719 001 892
125mm	90° Bend	2	7 719 001 891
<b>30CDi System</b>			
100mm	Vertical Flue Kit	1	7 719 002 430
100mm	Flue Extension	up to 7	7 719 002 349
100mm	90° Bend	2	7 719 002 348
125mm	Vertical Flue Kit	1	7 719 002 431
125mm	Flue Extension	up to 16	7 719 001 892
125mm	90° Bend	2	7 719 001 891

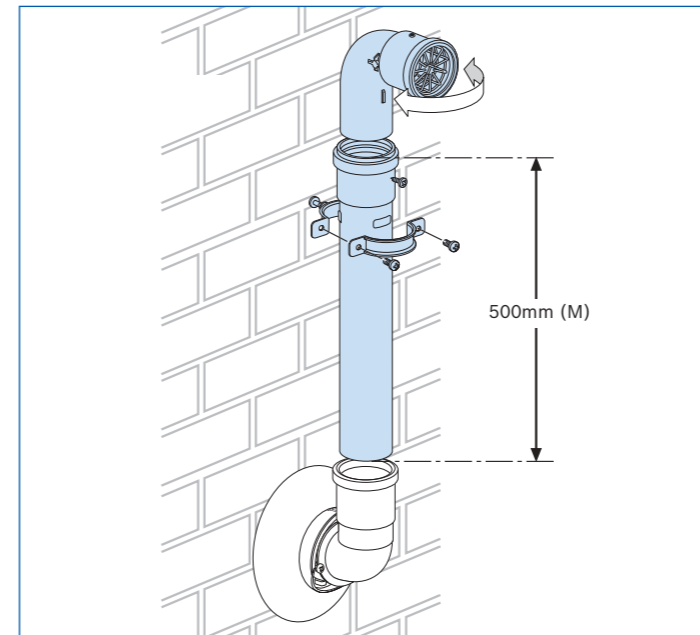
# Plume management system options

## Plume management system

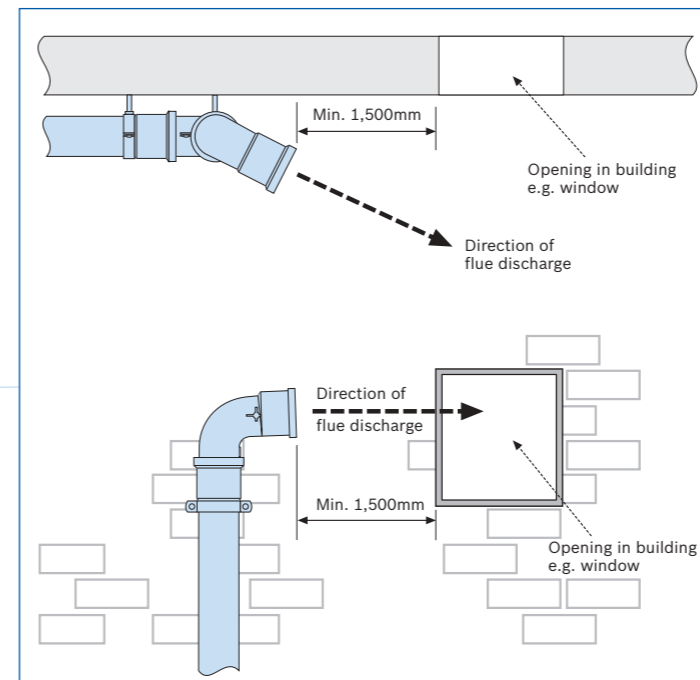
### Standard plume management system

The flue terminal outlet has built-in stops to limit rotation for horizontal fluing to allow condensate to run back into the boiler for safe disposal. Do not attempt to force beyond the limit stops.

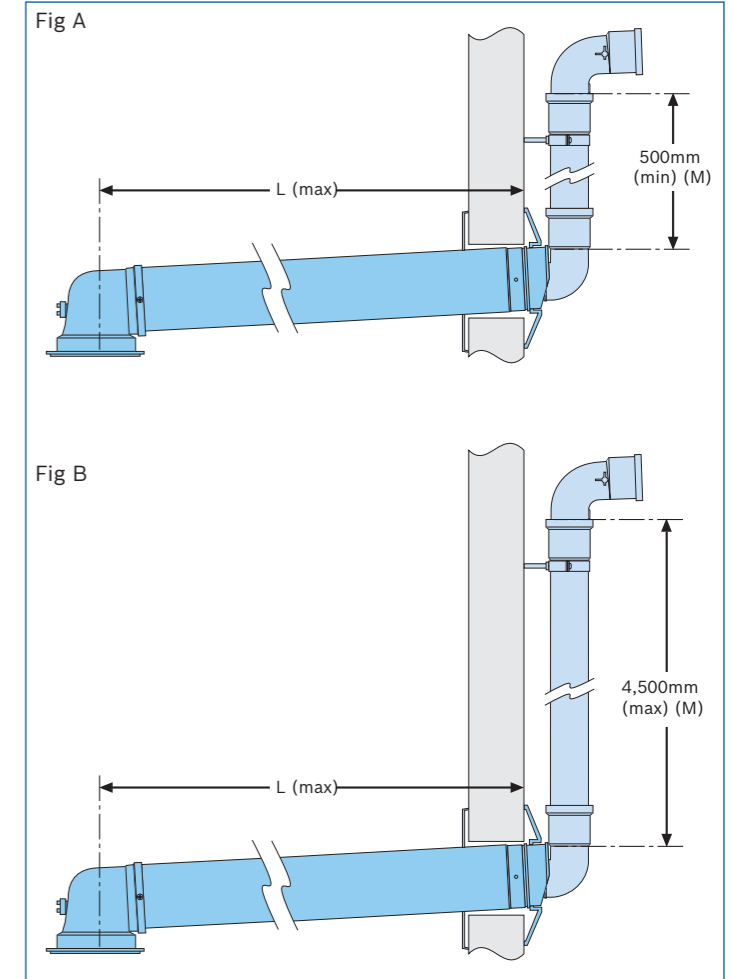
All plume management sections must rise by at least 173mm per metre (10°) from the terminal to ensure that condensate flows back into the boiler.



**Re-directing flue discharge from a 60mm dia plume management outlet**



## Condensfit II telescopic flue and plume management system measuring



Effective straight flue lengths for telescopic flue with plume management		
Model	Fig. A Max. straight flue length (L) with min. plume management length (M)* (mm)	Fig. B Max. straight flue length (L) with max. plume management length (M)* (mm)
30CDi Conventional**	5,450	2,650
40CDi Conventional**	600	N/A
30CDi System**	5,450	2,650

**NOTE:**  
**Plume management minimum straight length = 500mm**  
**Plume management maximum straight length = 4,500mm**  
**\*\*For every additional 1,000mm of plume management length (M), reduce flue length (L) by 700mm – see figures A and B.**

**100mm dia horizontal telescopic flue lengths with a 60mm dia plume management system**

The maximum effective straight flue lengths (L) are stated opposite for the relevant appliance together with the minimum and maximum lengths (M) of the plume management system connected, these lengths must not be exceeded.

**60mm dia plume management system**

To ensure that the maximum total straight flue length along the plume management route is not exceeded the following should be added to dimension (M):

- 1,500mm for each extra 90° bend
- 750mm for each extra 45° bend

For plume management options with 60mm dia extensions refer to pages 26 – 28.

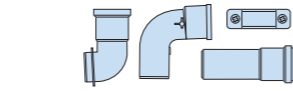
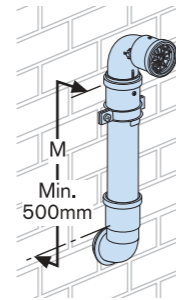
**Example, Greenstar 30CDi:**

Required plume management length (M) is 2,500mm, which is kit (500mm) plus 2 x 1,000mm extensions. Therefore, flue length (L) must be reduced by 2 x 700mm, giving a maximum allowed straight length (L) of:

Maximum possible straight flue length	7,000mm
Required length of plume management	-2,500mm
Minus reduction factor of 2 x 700mm	-1,400mm
Maximum available straight flue length	3,100mm

**Option 1**

Plume management system



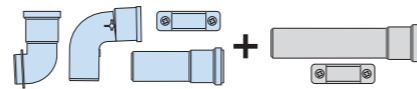
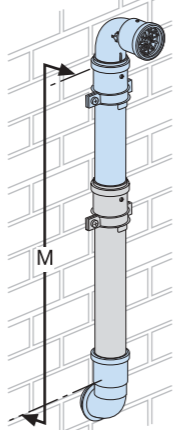
Maximum total straight plume length 60mm dia	
30CDi Conventional	500mm*
40CDi Conventional	500mm*
30CDi System	500mm*

Flue components required			
Flue Diameter	Description	Quantity	Worcester Part No.
<b>30CDi Conventional</b>			
60mm	Plume Management Kit	1	7 716 191 086
<b>40CDi Conventional</b>			
60mm	Plume Management Kit	1	7 716 191 086
<b>30CDi System</b>			
60mm	Plume Management Kit	1	7 716 191 086

**\*NOTE: You must refer to the table on page 25 to calculate your horizontal flue lengths and plume management length.**

**Option 2**

Plume management system with extensions



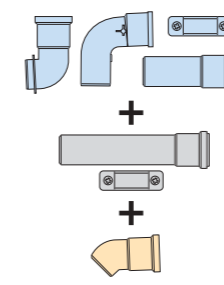
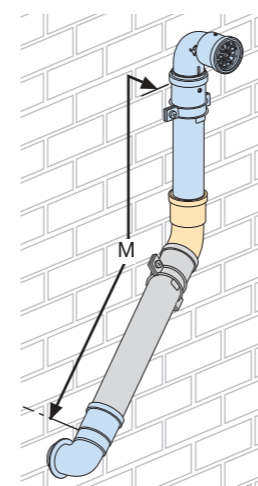
Maximum total straight plume length 60mm dia	
30CDi Conventional	4,500mm*
40CDi Conventional	N/A
30CDi System	4,500mm*

Flue components required			
Flue Diameter	Description	Quantity	Worcester Part No.
<b>30CDi Conventional</b>			
60mm	Plume Management Kit	1	7 716 191 086
60mm	1,000mm Extension	up to 4	7 716 191 087
<b>30CDi System</b>			
60mm	Plume Management Kit	1	7 716 191 086
60mm	1,000mm Extension	up to 4	7 716 191 087

**\*NOTE: You must refer to the table on page 25 to calculate your horizontal flue lengths and plume management length.**

**Option 3**

Plume management system with extensions and 45° bend



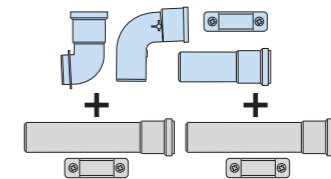
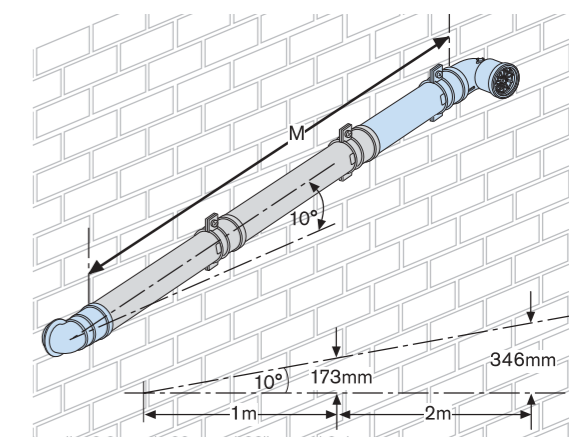
Maximum total straight plume length 60mm dia	
30CDi Conventional	3,750mm*
40CDi Conventional	N/A
30CDi System	3,750mm*

Flue components required			
Flue Diameter	Description	Quantity	Worcester Part No.
<b>30CDi Conventional</b>			
60mm	Plume Management Kit	1	7 716 191 086
60mm	1,000mm Extension	up to 4	7 716 191 087
60mm	45° Bend	1	7 716 191 089
<b>30CDi System</b>			
60mm	Plume Management Kit	1	7 716 191 086
60mm	1,000mm Extension	up to 4	7 716 191 087
60mm	45° Bend	1	7 716 191 089

**\*NOTE: You must refer to the table on page 25 to calculate your horizontal flue lengths and plume management length.**

**Option 4**

Plume management system with angled termination



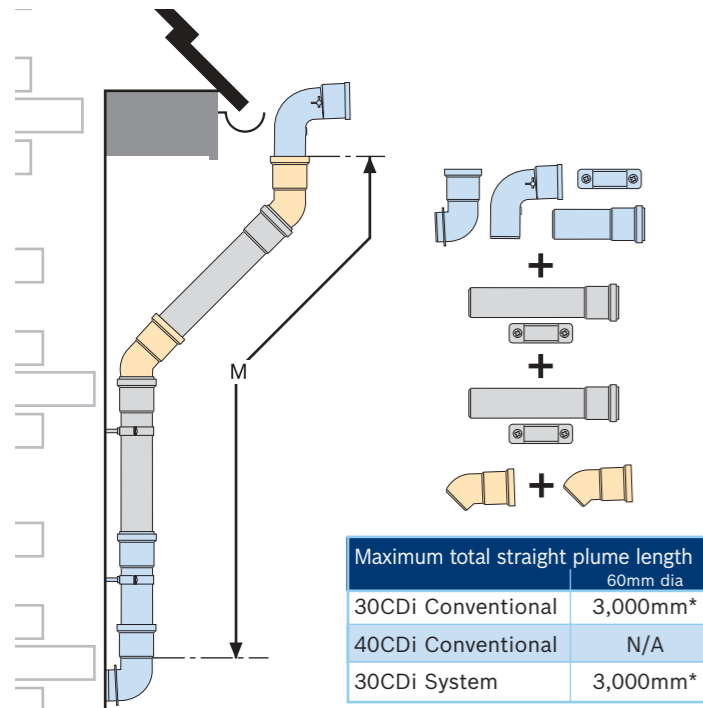
Maximum total straight plume length 60mm dia	
30CDi Conventional	4,500mm*
40CDi Conventional	N/A
30CDi System	4,500mm*

Flue components required			
Flue Diameter	Description	Quantity	Worcester Part No.
<b>30CDi Conventional</b>			
60mm	Plume Management Kit	1	7 716 191 086
60mm	1,000mm Extension	up to 4	7 716 191 087
<b>30CDi System</b>			
60mm	Plume Management Kit	1	7 716 191 086
60mm	1,000mm Extension	up to 4	7 716 191 087

**\*NOTE: You must refer to the table on page 25 to calculate your horizontal flue lengths and plume management length.**

## Option 5

Plume management system with extensions and 45° bends



### Flue components required

Flue Diameter	Description	Quantity	Worcester Part No.
<b>30CDi Conventional</b>			
60mm	Plume Management Kit	1	7 716 191 086
60mm	1,000mm Extension	up to 3	7 716 191 087
60mm	45° Bend	2	7 716 191 089
<b>30CDi System</b>			
60mm	Plume Management Kit	1	7 716 191 086
60mm	1,000mm Extension	up to 3	7 716 191 087
60mm	45° Bend	2	7 716 191 089

**\*NOTE: You must refer to the table on page 25 to calculate your horizontal flue lengths and plume management length.**

# Installation requirements

Installation of the Greenstar CDi series must be in accordance with the relevant requirements of the Gas Safety (Installation Use) Regulations (as amended), current IEE Wiring Regulations, local Building Regulations, Building Standards (Scotland) regulations and bylaws of the local Water company and Health and Safety Document No. 635 (Electricity at Work Regulations 1989).

It should be in accordance with the relevant recommendations of the following British Standards:

BS 6798; BS 5449; BS 5546:1; BS 5440:1; BS 5440:2; BS 6891.

Gas Safety (Installation and Use) Regulations. All gas appliances must be installed by a CORGI registered person in accordance with the above regulations. Failure to install appliances correctly could lead to prosecution.

The manufacturer's notes must not be taken in any way as overriding statutory regulations.

### Sealed primary systems

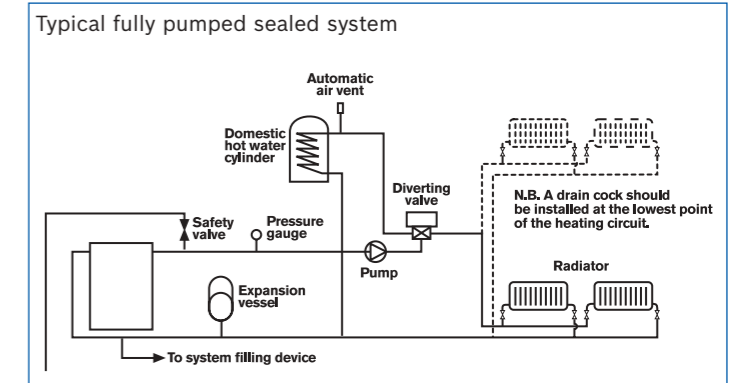
The appliance is fitted with a manual reset high limit thermostat and is suitable for use with a sealed primary system.

The system should be installed in compliance with the requirements of BS 5449: Part1. The system must be fitted with a spring loaded safety valve set to operate at 3bar (45 psi) and the pipe connections made through the system must be capable of sustaining a pressure of up to 3bar.

Manual air vents should be fitted at any high points in the system.

The following is a list of major items which must be fitted to the system:

1. Safety valve – 3bar
2. Pressure gauge – 0 - 4bar
3. Expansion vessel
4. Automatic air vent



### System filling and make-up

To comply with the Water Authority requirements, the system should be filled via a temporary hose connection to the mains cold water supply, with a double check valve assembly and test point fitted to the mains water side of a temporary circuit.

### Valves and joints

It is very important that all valves and joints are able to sustain a working pressure of up to 3bar (45psi). Particular care should be exercised when fitting radiator valves and only those of high quality to BS 2767:10 should be used. All other valves and fittings should comply with BS 1010.

Loss of water pressure from a sealed system will require recharging with fresh water and consequential introduction of air. Air is highly corrosive and will considerably reduce life expectancy of radiators, pumps etc.

### 30CDi System diverter valve kit

The 30CDi System boiler can be adapted to house an in-built diverting valve. The optional valve motor kit allows the user to control the supply of heat to the hot water cylinder from the boiler.

### Plastic pipework

The use of plastic pipework is acceptable. However, some plastics are permeable to oxygen and must be avoided. Only pipework with a polymeric barrier should be used. Please note that the first 600mm of pipework connected to the boiler must be of copper or steel.

### Open vented primary systems

The Greenstar CDi Conventional\* series is designed for connection to an open vented fully pumped heating and hot water system.

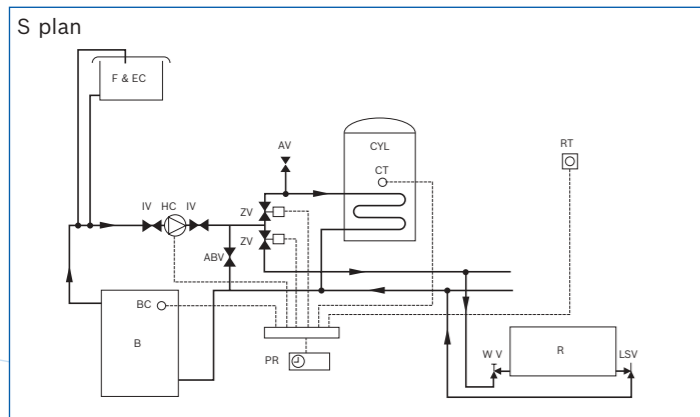
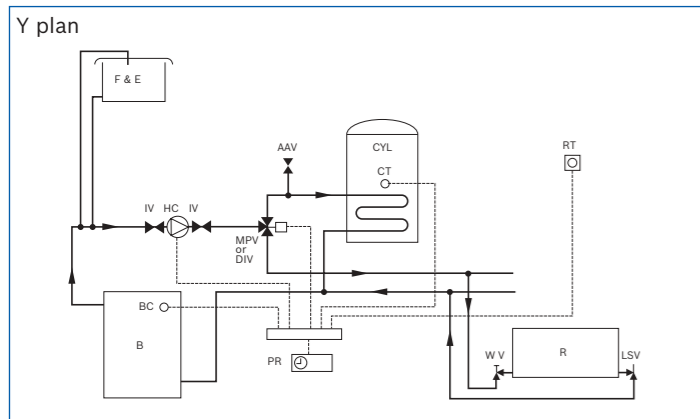
The following points are for guidance only. The system installation should be carried out in accordance with BS 5449:Part1.

The feed and expansion pipes must rise continuously from the appliance and must be of the minimum diameter shown below.

The cistern must be arranged to provide a minimum static head of 0.25 metres above the top of the highest point in the heating circuit.

Air in the appliance is expelled through the vent pipe or dissipated into the system. Manual air vents should be fitted at any high points in the system.

*\*30CDi System not suitable for open vent*



### Air supply

Worcester Greenstar CDi boilers are room sealed appliances; the room in which it is installed does not therefore require a purpose provided combustion air vent.

### Natural gas supply

The appliances when on a full output demand will require up to 3.2m<sup>3</sup>/hr (30kW) or 4.4m<sup>3</sup>/hr (40kW) of gas. The gas meter and supply pipes must be capable of supplying this quantity of gas in addition to the demand from any other appliance being served. It is important that a gas supply pipe of at least 22mm diameter is used. Under no circumstances should the size of the gas supply pipe be less than that of the appliance inlet connection. The meter outlet governor should be capable of ensuring a dynamic pressure of 20mbar (8in wg) at the appliance. Particular consideration should be given to the resistance to gas flow created by elbows, bends, etc. Pipe work should be sized to overcome this resistance and details of this are given in the table below.

	Total length of gas supply pipe (m)			Pipe diameter (mm)
	3	6	9	
Gas discharge rate m <sup>3</sup> /h	2.9	-	-	15
	8.7	5.8	4.6	22
	18.0	12.0	9.4	28

Approximate additional length to be allowed (natural gas)

Elbows or tees		90° bends	
Metres	Feet	Metres	Feet
0.50	2	0.3	1

### Propane gas supply

The Greenstar CDi series is available in a propane gas version. The appliance when on a hot water or full output demand will require up to 2.4kg/h (30kW) or 3.3kg/h (40kW) of gas. The gas tank or bottles must be capable of supplying this quantity of gas at a nominal pressure of 37mbar (14.8in wg) at the appliance. The table below shows the propane gas discharge through varying lengths of pipe and the resistance to flow created by elbows, bends, etc. Pipe work should be sized to overcome this resistance.

	Total length of gas supply pipe (m)			Pipe diameter (mm)
	3	6	9	
Gas discharge rate m <sup>3</sup> /h	1.5	1.01	-	15
	8.0	5.2	4.2	22
	15.9	8.9	8.3	28

Approximate additional length to be allowed (LPG)

Elbows or tees		90° bends	
Metres	Feet	Metres	Feet
0.6	2	0.3	1

### Electricity supply

A 3amp fused three pin plug and unswitched shuttered socket outlet (both complying with BS 1362) or preferably a double pole isolator with a contact separation of 3mm in all poles supplying the appliance should be used.

The appliance electrical circuits are also protected by an internal 2amp fuse. The appliance must be earthed.

### Warranty

Worcester Greenstar CDi appliances are offered with a full 2 year guarantee\* on parts and labour, a 10 year warranty\* on the primary heat exchanger and a 5 year warranty\* on the plate heat exchanger. Ongoing service may be arranged through the Worcester Customer Service Department.

*\*Subject to conditions.*



# Greenstar CDi series accessories

**DT20 twin channel digital programmer\***



**Worcester Part No. 7 716 192 038**

**DT20RF digital RF thermostat with twin channel programmer\***



**Worcester Part No. 7 716 192 041**

**DT10RF digistat\***



**Worcester Part No. 7 716 192 039**

**DT10RF optimiser\***



**Worcester Part No. 7 716 192 040**

**Vertical flue adaptor (100mm dia)**



**Worcester Part No. 7 719 002 432**

**Vertical flue adaptor (125mm dia)**



**Worcester Part No. 7 719 002 433**

**Support bracket kit (100mm dia)**




**Worcester Part No. 7 716 191 092**

**Plume management kit (60mm dia)**



**Worcester Part No. 7 716 191 086**

**Intelligent system package\***



**Worcester Part No. 7 719 002 824**

**Text display wall mounting socket\***



**Worcester Part No. 7 719 002 718**

**RS telescopic flue kit (100mm dia)**



**Worcester Part No. 7 716 191 082**

**Horizontal flue kit (125mm dia)**



**Worcester Part No. 7 719 002 350**

**Extension (100mm dia, 1,000mm)**



**Worcester Part No. 7 716 191 087**

**90° bend (60mm dia)**



**Worcester Part No. 7 716 191 088**

**45° bend (60mm dia)**



**Worcester Part No. 7 716 191 089**

**Vertical BF kit (100mm dia)**



**Worcester Part No. 7 719 002 430**

**Vertical BF kit (125mm dia)**



**Worcester Part No. 7 719 002 431**

**RS extension kit (100mm dia, 1,000mm)**



**Worcester Part No. 7 716 191 083**

**1m extension (125mm dia)**



**Worcester Part No. 7 719 001 892**

**45° bend (100mm dia)**



**Worcester Part No. 7 716 191 085**

**45° bend (125mm dia)**



**Worcester Part No. 7 719 001 899**

**90° bend (100mm dia)**



**Worcester Part No. 7 716 191 084**

**90° bend (125mm dia)**



**Worcester Part No. 7 719 001 891**

*Note: For information on the Condensfit II Telescopic Flue System and Plume Management Kit, please see dedicated flue Technical and Specification leaflet 8 716 112 174.  
\*30CDi System only*



# A complete after-sales service

As part of the worldwide Bosch Group, Worcester strives to maintain the highest possible standards of after-sales care.

In addition to the no-nonsense parts and labour warranty applicable to all Worcester boilers, you and your customers have the assurance that every Worcester boiler is manufactured to both the appropriate British and European standards.

## Worcester Contact Centre

Should you require support, our fully trained Contact Centre staff, based at our head office in Worcester, are ready to take your calls. Whatever your query our contact centre operators along with our nationwide team of engineers are ready to help you.

## Boiler Protection Options

If you do not offer annual service and maintenance contracts please refer your customers to the Worcester Service Centre:

**Tel: 08457 256 206**  
**Fax: 01905 757 536**

## Contact Centre

**Tel: 08457 256 206**  
**Fax: 01905 754 701**

## Opening Times

Monday – Friday: 7.00am – 10.00pm  
Saturday: 8.00am – 5.00pm  
Sunday: 9.00am – 12 noon

## All the technical advice you need

### Spares

Genuine replacement parts for all Worcester boilers are readily available from stock, on a next day delivery basis. For more information please call your local stockist.

### Customer Technical Support

The Worcester Technical Helpline is a dedicated phone line – committed to providing a comprehensive service to complement the brand name and quality of our boiler products. Our experienced team of technical experts provides the answers to queries of a technical nature across the entire Worcester range.

Worcester also has a pre-sales department, which provides assistance in selecting a boiler system to suit a particular application, along with full guidance on installation. As well as this we will also assist in finding a recommended installer. For more information please contact the Technical Hotline or alternatively visit our website where literature can be downloaded [www.worcester-bosch.co.uk](http://www.worcester-bosch.co.uk)

### Technical

**Tel: 08705 266 241**  
**Fax: 01905 752 741**

### Opening Times

Monday – Friday: 7.00am – 8.00pm  
Saturday: 8.30am – 4.00pm



# The very best training programmes from Worcester

Worcester has always placed great emphasis on technical support and training for installers and service engineers. Today this need is greater than ever. The differences between a combi, conventional and system boiler are substantial, and the technology of each continues to advance at a rapid pace.

To ensure the highest levels of competence and expertise in the installation of all Worcester products, the company runs intensive training courses for installers, commissioning engineers and engineers involved with servicing and fault finding.

## Courses available

Our training facilities offer a number of courses suitable for the installer and commissioning engineers, and a more in-depth course for the servicing and fault finding engineers.



## Training Centres throughout the UK

Worcester's network of regional training centres are strategically located across the country and include the 'A' Rated Training Academy at the company's headquarters. This facility has recently been extended to include an oil-fired appliance workshop and a renewable energies workshop in addition to the extensive gas-fired training facilities.

In addition to these outstanding facilities there are centres at Clay Cross in Derbyshire, Rochester in Kent and Bangor in Northern Ireland. Further 'A' Rated Academies are open at West Thurrock in Essex and Bradford in West Yorkshire as well as additional training opportunities available throughout the UK. Please phone 01905 752526 for more information about a course near you. Each course is run by specialist trainers and is superbly equipped to deliver a combination of classroom theory and practical hands-on experience that's second to none.

## College-linked Learning

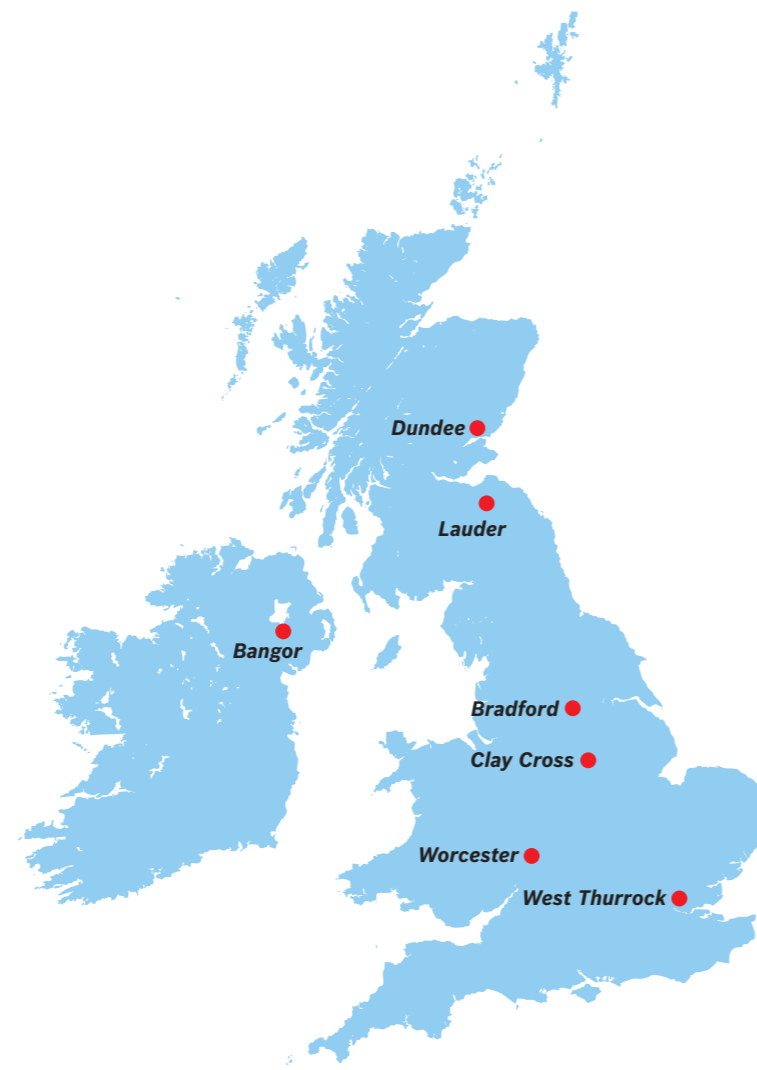
A number of the UK's leading proactive technical colleges are equipped with Worcester products and offer excellent practical tuition on a more local level.

## Distance Learning

Worcester has produced a selection of Distance Learning CD ROMs/DVDs which are packed with information. Call 01905 752556 for your copies.

**Get on course for a more profitable future now.**

**Call now for more information  
01905 752526**



[www.worcester-bosch.co.uk](http://www.worcester-bosch.co.uk)

# Worcester training courses

Worcester training courses	
<b>Greenstar CDi, Highflow 440 and HE Plus gas-fired condensing combi boilers</b>	
Models covered	Greenstar 27/30/37/42CDi Greenstar Highflow 440
Duration	1 day
<b>Greenstar i Junior and Si gas-fired condensing combi boilers</b>	
Models covered	Greenstar 24/28i Junior Greenstar 25/30Si
Duration	1 day
<b>Greenstar system and regular gas-fired condensing boilers</b>	
Models covered	Greenstar 12/15/18/24Ri Greenstar 30/40CDi Conventional Greenstar 30CDi System Greenstar 12/24i System
Duration	1 day
<b>Standard efficiency boiler course: i/Si/CDi (non condensing)</b>	
Models covered	24/28i Junior 24/28Si II 24/28/35CDi
Duration	1 day
<b>Greenstar Camray high efficiency condensing oil-fired boilers</b>	
Models covered	Greenstar Camray Greenstar Camray Utility Greenstar Camray Utility System Greenstar Camray External
Duration	1 day
<b>Greenstar Danesmoor &amp; Heatslave high efficiency condensing oil-fired boilers</b>	
Models covered	Greenstar Danesmoor Greenstar Utility Greenstar Heatslave Greenstar Heatslave External
Duration	1 day
<b>OFTEC Training</b>	
<b>OFTEC 101</b>	
Covering	Domestic/Light Commercial Pressure Jet Commissioning and Servicing
Duration	3 day course (2 days training plus 1 days assessment)
<b>OFTEC 105e</b>	
Covering	Domestic/Light Commercial Pressure Jet Boiler Installation
Duration	1 day assessment
<b>OFTEC 101 &amp; 105e</b>	
Covering	Domestic/Light Commercial Pressure Jet Installation, Commissioning and Servicing
Duration	3 day course (2 days training plus 1 days assessment comprising 2 theory and 1 practical)
<b>OFTEC 600a</b>	
Covering	Oil Tank Installation and Associated Controls
Duration	1 day assessment course
<b>OFTEC 101/105e/600e</b>	
Covering	Domestic/Light Commercial Pressure Jet Boiler Installation, Commissioning, Servicing and Oil Tank Installation and Associated Controls
Duration	4 days (2 days training and 2 days assessment)

<b>Certificate in Energy Efficiency for Domestic Heating Course</b>	
Covering	Key elements of energy-efficient heating and hot water systems and products, compliance with the latest Building Regulations, how condensing boilers work and how they differ to non condensing products.
Duration	1 day
<b>Unvented Cylinder Course</b>	
Covering	All G3 Regulations for the Installation, Servicing and Commissioning of Unvented Cylinders. The course includes recognised accreditation by Logic Certification.
Duration	1 day
<b>Greenskies Solar System</b>	
Covering	Installation, Commissioning and Servicing The course includes recognised accreditation by Logic Certification for eligibility of low carbon buildings programme funding.
Duration	2 days
<b>Greenstore Heat Pumps</b>	
Covering	Installation, Commissioning and System Design
Duration	2 days



## Useful numbers

### Sales

Tel: 01905 752640  
Fax: 01905 456445

### Spare Parts

Tel: 01905 752576  
Fax: 01905 754620

### Technical (Pre & Post Sales)

Tel: 08705 266241  
Fax: 01905 752741

### Service

Tel: 08457 256206  
Fax: 01905 757536  
Livingston (Scotland)  
Fax: 01506 441687

### Training

Tel: 01905 752526  
Fax: 01905 752535

### Literature Line

Tel: 01905 752556  
or download instantly  
from our website

[www.worcester-bosch.co.uk](http://www.worcester-bosch.co.uk)



The Council for  
Registered Gas  
Installers



INDUSTRIAL  
ASSOCIATE



In partnership with



energy saving trust™



The mark of quality for domestic heating

Worcester, Bosch Group is a brand name of BBT Thermotechnology UK Ltd.

This leaflet is accurate at the date of printing, but may be superseded and should be disregarded if specification and/or appearances are changed in the interest of continued improvement. The statutory rights of the consumer are not affected.

Part No. 8 716 109 919c (08/07)



BBT1253



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