

## Quality assured

As part of one of the world's largest heating manufacturing groups, we use our extensive skills and expertise to ensure each of our products are produced to the highest standards. Constant product development and innovative manufacturing practices create first class, quality products, which are constantly being re-affirmed by independent institute tests – so you don't just have to take our word for it.



## Glow-worm

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For general information about Glow-worm and our range of boilers, visit [www.glow-worm.co.uk](http://www.glow-worm.co.uk)



For more information about our range of renewable products, visit [www.renew-ability.co.uk](http://www.renew-ability.co.uk)



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**Glow-worm**

GWULT07/14



**Glow-worm**  
The energy you need

## Ultimate Technical Product Guide



Exclusive to  
City Plumbing

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## Disclaimer

This Technical Guide is intended as a guide only, and should not be used as an alternative to the manufacturers instructions provided at purchase. The information in this guide was correct at the time of going to print. Glow-worm reserve the right to make any modifications to product specifications, or any other details, without prior notification. For further clarification, please enquire in writing to the head office address on the reverse of this brochure.

Visit [www.glow-worm.co.uk](http://www.glow-worm.co.uk) to view and download technical data

# An Introduction to the Ultimate c, h & s

The Glow-worm Ultimate is the new boiler range exclusive to City Plumbing Supplies.

Designed and manufactured at Glow-worm's industry-leading facilities in Belper, Derbyshire; the straightforward boiler range is easy to use & install and is supported with a **FREE 5 year warranty as standard.**

The Ultimate range is available in a choice of 30kW and 35kW combi (Ultimate c) heat only (Ultimate h) and system (Ultimate s) models, and features high DHW flow rates, flexible flue options and a stainless steel heat exchanger (**combi only**) for proven reliability and performance.

The Ultimate boilers have a range of optional system and boiler controls and the pack is complete with standard horizontal flue. All models are available in easy to order installer packs.

Installation and servicing are made straightforward, with an LCD display using standard Glow-worm diagnostics, and easy access to both 24v and 230v wiring compartments.

The Ultimate combination boiler is also LPG compatible with no need for a separate conversion kit.

The Ultimate boiler range is only available from City Plumbing Supplies which have 190 branches nationwide so you're never far from your local branch. City Plumbing Supplies have all the essential Glow-worm products in stock and also have the ability to get rapid delivery from their central distribution centre.

## Key Features & Benefits

- New high efficiency combi boiler designed to meet Building Regulations Part L 2010
- Full range available - combi, open vented, system (with kit)
- UK manufactured in Glow-worm's industry-leading facility
- Stainless steel heat exchanger for proven and reliable performance
- Grundfos pump with daily pump exercise program - **combi only**
- LPG compatible; without the need for a separate conversion kit - **combi only**
- Compatible with wireless Climapro<sub>2</sub> RF programmable room thermostat
- Easy to use and install (Smart wiring centre is required for h & s models)
- LCD display to provide straightforward installer and homeowner interface
- Compatible with Glow-worm's full range of flues & accessories
- Compatible with Glow-worm's range of intelligent controls
- 6 simple pack options
- 5 year warranty as standard

### Dimensions (mm):

740 x 418 x 338mm - 30c/35c  
600 x 375 x 280mm - 24h

### Ultimate 30c/35c

maximum flue lengths:  
Ø60/100 mm Horizontal 6m  
Ø80/125 mm Horizontal 10m  
Ø60/100 mm Vertical 6m  
Ø80/125 mm Vertical 10m

### Ultimate 24h

maximum flue lengths:  
Ø60/100 mm Horizontal 8m  
Ø80/125 mm Horizontal 20m  
Ø60/100 mm Vertical 8m  
Ø80/125 mm Vertical 20m



# Control Compatibility Table

The table below summarises the compatibility of the Glow-worm Ultimate boiler with our range of intelligent controls. See the table below for more detailed control option information.

Appliance	Climastat	Wireless Climapro <sub>2</sub> RF	Wired Outdoor Sensor	Wireless Outdoor Sensor	Glide down analogue timer	Analogue timer	Plug in digital timer	Smart Wiring Centre 2
Ultimate c	✓	✓	✓	✓	✗	✓	✗	✗
Ultimate h	✓	✓	✓	✓	✗	✗	✗	✓
Ultimate s	✓	✓	✓	✓	✗	✗	✗	✓

## Control options

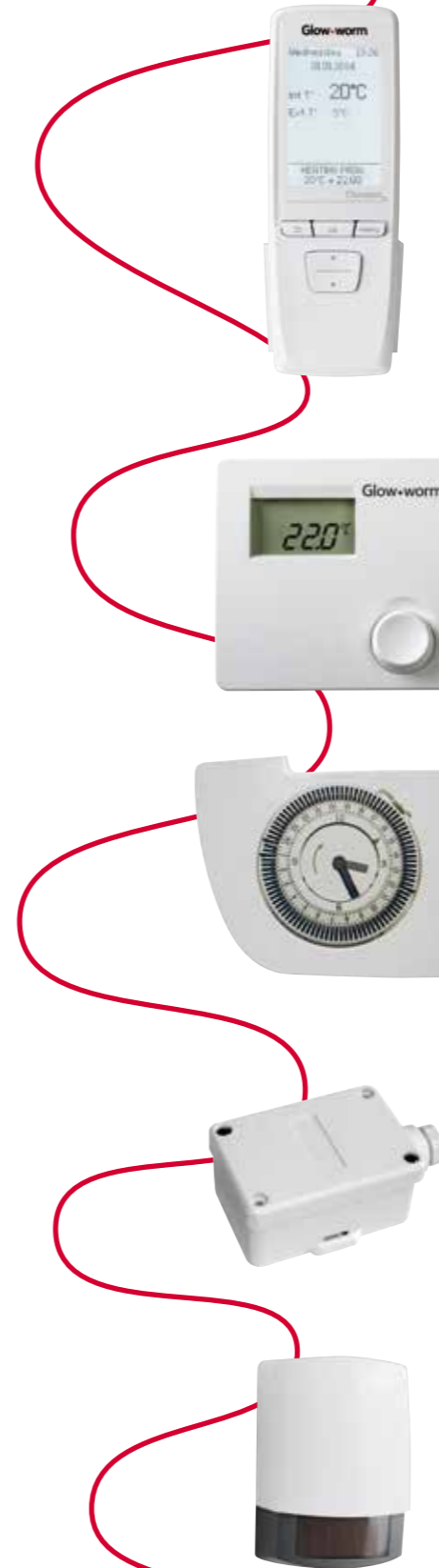
### Ultimate c control options

	Ultimate c	Climastat	Wireless Climapro <sub>2</sub> RF	Wired Outdoor Sensor	Wireless Outdoor Sensor	Plug in analogue or digital timer	Smart Wiring Centre 2
<b>To achieve room compensation you will need:</b>							
Using inbuilt analogue timer	✓	+	✓	✗	✗	✗	✗
or							
Using external controls	✓	+	✗	✓	✗	✗	✗
<b>To achieve weather compensation you will need:</b>							
Using inbuilt analogue timer	✓	+	✓	+	✗	✓	✗
or							
Using external controls (Wired)	✓	+	✗	✓	✓	✗	✗
Using external controls (Wireless)	✓	+	✗	✓	+	✗	✗

### Ultimate 24h/24s control options

	Ultimate h/s	Climastat	Wireless Climapro <sub>2</sub> RF	Wired Outdoor Sensor	Wireless Outdoor Sensor	Smart Wiring Centre 2
<b>To achieve room compensation you will need:</b>						
Using external controls	✓	+	✗	✓	+	✗
<b>To achieve weather compensation you will need:</b>						
Using external controls (Wired)	✓	+	✗	✗	✓	+
or						
Using external controls (Wireless)	✓	+	✗	✓	+	✓

# Glow-worm Controls



## Climapro<sub>2</sub> RF (717948)

Our innovative wireless programmable room thermostat for advanced heating and hot water control any time of the week.

- Two channel wireless programmable room thermostat with time and temperature control of central heating and hot water
- Backlit display provides advanced user control and functionality
- Simple and intuitive to use handheld unit can be wall mounted or portable within the living area
- Capable of room and weather compensation (with outdoor sensor)

## Climastat (118701)

Thermostat (Temperature only)

- Easy to use
- Extra low voltage
- Simple & discreet 2 wire connection
- Wiring polarity not important

## Mechanical Timer (706569)

Programmable analogue timer

- Programmable daily timings and temperature
- Full system control
- Easy and quick to install
- Simple and discreet
- Wiring harness factory fitted in the boiler

## Outdoor Sensor (118704)

Weather compensation sensor (Wired)

- Enables weather compensation
- Wired sensor
- Simple and discreet

## Wireless Outdoor Sensor (717949)

Wireless weather compensation sensor using inbuilt PV cells

- Enables weather compensation when paired with Climapro<sub>2</sub> RF
- Works on indirect sunlight which re-charges the small PV cells
- Simple and quick to install

## Accessories: Plume & condensate solutions

Fully compatible with all Glow-worm boilers, these handy accessories help solve plumbing and condensate issues that can be faced when installing modern condensing boilers.

### Plume Management Kit (Black 778365) (White 778366)

This clever accessory exhausts plume further away from the duct or building openings, reducing the impact of the vapour trail.

The simple piping kit fits neatly onto the horizontal flue and can be extended to a maximum of 6m in length, fitting easily around ledges and other obstacles to achieve the minimum clearance levels required on installations.



### Plume Deflector Kit (Black 425204) (White 425206)

A useful accessory takes the hassle out of flue gas termination by diverting plume left, right or upwards away from problem zones such as adjacent properties or walk ways.

Available in black or white, the Plume Deflector Kit can be installed quickly and simply onto a horizontal flue instead of the standard terminal end piece during or after installation.



### Condensate Pump (411227)

To solve problems associated in locating a suitable outlet to drain condensate from the condensing boiler, the Glow-worm Condensate Pump collects the condensate from the boiler and pumps it to a suitable outlet such as a waste system.

The smallest available in the UK, the Glow-worm Condensate Pump operates at maximum efficiency with the reservoir pump discharging all the condensate when the fill level is reached, rather than a stop/start operation.



### Ridge Tile Terminal (353906)

The Ridge Tile Terminal accessory is designed to make the roof finish look neater and less obtrusive. Available in a black enamel finish, the ridge tile accessory can be fitted to purpose designed flue outlet ridge tiles and provides a quick and easy design solution.



# Hydracyl cylinders & accessories

## Single coil cylinders – for traditional heating systems

An integral part of any regular heat only or sealed system; Glow-worm cylinders are extremely reliable, hard wearing and come complete with a 25 year warranty against perforation of the steel shell.

They are available in four sizes - 150, 205, 250 and 300 litres and manufactured from high grade stainless steel with laser welded seams.







Our cylinders are built with efficiency and performance in mind, and incorporate excellent insulation that achieves heat loss as low as 1.7kWh/24hrs and a high recovery heating coil that reheats the cylinder in as little as 20 minutes.

### Key Features

- Hydracyl available in 150, 205, 250 & 300 litre models
- High grade stainless steel cylinder with laser welded seams
- Maximum performance with minimum fuel costs.
- Insulation exceeds CHeSS Best Practice
- External expansion vessel supplied
- Complies with WRAS and G3 regulations
- Simple controls and wiring box
- Intelligent system solutions when used with Glow-worm appliances and eBUS controls
- Glow-worm 2 year Guarantee
- 25 Year Warranty on cylinder shell. (Subject to water quality, correct installation and annual servicing).



# Glow-worm Ultimate Range

Model	Article number	CPS code (boiler & flue)
 Ultimate 30c	0010015396	117165
 Ultimate 35c	0010015397	117166
 Ultimate 30c with Climapro2	N/A	117167
 Ultimate 35c with Climapro2	N/A	311236
 Ultimate 24h	0010015398	311235
 Ultimate 24s	N/A	699373

## Everything you need for renewables success

The future of energy is renewables, a growing sector now worth £12.5 billion in the UK and estimated to create 300,000 new jobs by 2020. That's why Glow-worm is such a pioneering force within renewables and our Renewability programme has everything you will need to move into this sector with confidence.

Glow-worm's years of experience, expert team and significant investment means that we can offer you the right products, technical support and rewards. So let us be your partner in renewables - we'll help open more doors for your business.



### Training

**We give you the knowledge to enhance your business**

Expertise is vital to renewables success... That's why Glow-worm's renewables training for installers is so popular: relevant, practical, industry-leading training courses delivered at our state-of-the-art Centres of Excellence throughout the UK by fully qualified professionals in a relaxed, informal environment. Best of all, many of these courses are completely free as part of our award winning loyalty programme, Club Energy.

Whether it's product familiarisation or accredited courses, such as MCS, BPEC or G3 Unvented, you can make significant savings when you train through Glow-worm Renewability.

### Service

**We give you the support you need to move into Renewables with confidence**

We've taken our concept of exceptional service even further - by creating a new Renewable Technology Division. Our dedicated team of 10 specialist engineers is the most qualified team currently supporting any manufacturer in the UK. They're also backed up by a fully trained call centre to assist you whenever you're installing Glow-worm products throughout the installation process. Our support and back-up is simply the best in the market - with no additional cost to your business. That means complete peace of mind for you and your customers.

Take advantage of the following services to help support you and your customers throughout the installation process and beyond:

- System design service
- Straightforward on-site delivery
- Assisted on-site commissioning
- On-the-job technical advice
- Assistance with final handover

### Loyalty

**Club Energy offers you the tools you need to develop and manage your business**

Our strong partnerships with loyal installers ensure that your business will grow - alongside ours. It's a philosophy that means we continually listen to your feedback and develop offers to meet your needs. Club Energy, our award-winning installer loyalty programme, is designed to support your business with an extensive range of exclusive member benefits that'll also make your working life easier.

## clubenergy

Not only does Club Energy reward you for every eligible product you buy - it also offers member benefits you won't find elsewhere.

Key loyalty benefits include:

- Cash rewards for Glow-worm product installations
- Business development tools
- Discounted and free training, including MCS\*
- New customer leads
- Priority technical hotline
- Access to manuals, brochures, leaflets

Plus you will also get access to the Plumbing Toolbox, our industry-leading FREE smart phone app designed to help you work smarter!

If you would like to become a member of Club Energy please contact us on:

Club Energy hotline: 0845 275 7018  
 Club Energy website: glow-wormclubenergy.co.uk  
 Club Energy email address: renewability@glow-wormclubenergy.co.uk



Clearly Hybrid  
 Renewables Awards 2011 -  
 Winner of Green Invention of the Year

### Products

**Superb range of proven renewables products**

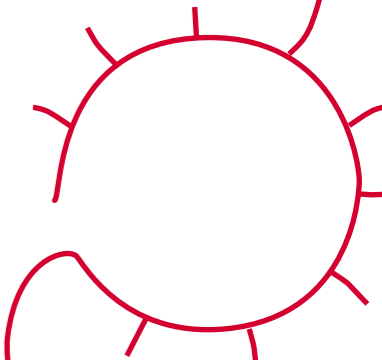
Over 75 years of commitment to top quality, reliability and exceptional durability have made us one of the UK's leading heating manufacturers. We've built our reputation on delivering products which are straightforward, dependable and designed with your customers in mind.

Today, we're at the forefront of the renewables revolution with our outstanding range of renewable technologies which all boast low energy consumption - reducing both fuel costs and carbon emissions for your customers.

All our products combine high performance with easy installation for most types of properties. These ranges are complemented by an industry leading range of domestic boilers, single and twin coiled cylinders and a wide range of intelligent controls to help you create the perfect solution for each customer.

Our products:

- Clearly Hybrid
- Clearly Heat Pumps
- Clearly Solar
- Clearly Heat Recovery



[www.renew-ability.co.uk](http://www.renew-ability.co.uk)

Designed to empower you and your business

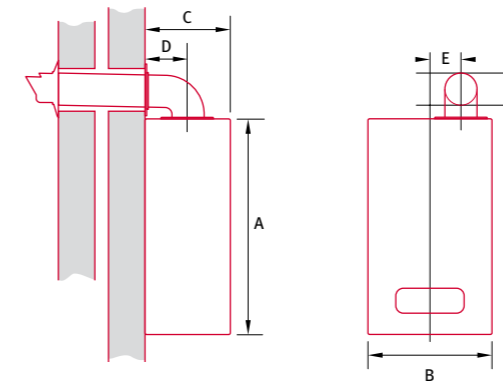
# Specifications

## Ultimate specifications

Ultimate	30c	35c	24h	24s
<b>Size</b>				
Casing dimensions (h w d)(mm)	740/418/338	740/418/338	600/375/280	600/375/280
Weight (lift)	37.7kg	38.3kg	25kg	25kg
<b>Performance</b>				
CH output (kW) Min/Max	5.9/24.5	8.5/30	9.4/24.4	9.4/24.4
DHW output (kW) Min/Max	6.1/30.6	8.7/35.7	N/A	N/A
DHW flow rate storage/combi (l/min. 35°C rise)	12.5	14.6	N/A	N/A
SEDBUK rating 2009	88.8	88.9	88.4	88.4
Nox class 5 (natural gas)	Yes	Yes	Yes	Yes
LPG Compatible	Yes	Yes	No	No
<b>Construction</b>				
Main heat exchanger type	Coiled tube	Coiled tube	Cast	Cast
Heat exchanger material	Stainless steel	Stainless steel	Aluminium	Aluminium
Burner type	Pre-mixed	Pre-mixed	Pre-mixed	Pre-mixed
Fully modulating	Yes	Yes	Yes	Yes
DHW plate heat exchanger	Yes	Yes	N/A	N/A
Integrated hydrobloc	Yes	Yes	N/A	N/A
<b>Installation</b>				
Suitable for sealed systems	Yes	Yes	Yes	Yes
Suitable for open-vent systems	No	No	Yes	Yes
Filling loop	No	No	No	No
Inbuilt automatic bypass	Yes	Yes	No	No
Inbuilt adjustable system bypass	Yes	Yes	No	No
Inbuilt condensate trap/siphon	Trap	Trap	Siphon	Siphon
Inbuilt boiler frost protection	2 stage	2 stage	2 stage	2 stage
Zero compartment ventilation	Yes	Yes	Yes	Yes
<b>Clearances</b>				
Top (mm) (from top of boiler)	150	150	150	150
Side (mm)	0	0	5	5
Bottom (mm)	200	200	150	150
Front (mm) <sup>2</sup>	600	600	600	600
<b>User Interface</b>				
User display	2 digit LCD	2 digit LCD	2 digit LCD	2 digit LCD
Diagnostics	Advanced	Advanced	Advanced	Advanced
User adjustable CH temp control	Yes	Yes	Yes	Yes
User adjustable DHW temp control	Yes	Yes	No	No
<b>Pipes</b>				
Pre-fixing jig	No	No	No	No
Optional spacing frame	No	No	No	No
Water connections	2x22/2x15mm	2x22/2x15mm	2x22mm	2x22mm
<b>Flues</b>				
Max horizontal Ø60/100	6m	6m	8m	8m
Max vertical Ø60/100	6m	6m	8m	8m
Max horizontal Ø80/125	10m	10m	20m	20m
Max vertical Ø80/125	10m	10m	20m	20m
Optional plume management kit Ø60/100	Yes	Yes	Yes	Yes

# Product dimensions

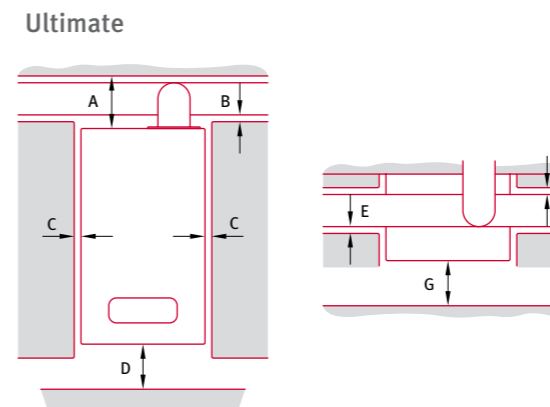
Range	A	B	C	D	E	F	F
	Height	Width	Depth	Flue Outlet position 1	Flue outlet position 2	Ø60/100 Flue diameter	Ø80/125 Flue diameter
<b>Ultimate</b>							
Ultimate 30c (mm)	740	418	338	130	offset <sup>1</sup>	100	125
Ultimate 35c (mm)	740	418	338	130	offset <sup>1</sup>	100	125
Ultimate 24h (mm)	600	375	280	130	offset <sup>1</sup>	100	125



- Notes:**
- 1 Flue is central to the boiler.
  - 2 A removable compartment door can be placed at least 5mm in front of the appliance.

# Product clearances

Range	A	B	C	D	E	F	G
	Top flue	Top	Side	Bottom	Flue#1	Flue#2	Front
<b>Ultimate</b>							
Ultimate 30c (mm)	150	5	0	200	5	5	600 <sup>2</sup>
Ultimate 35c (mm)	150	5	0	200	5	5	600 <sup>2</sup>
Ultimate 24h (mm)	150	5	0	150	5	5	600 <sup>2</sup>



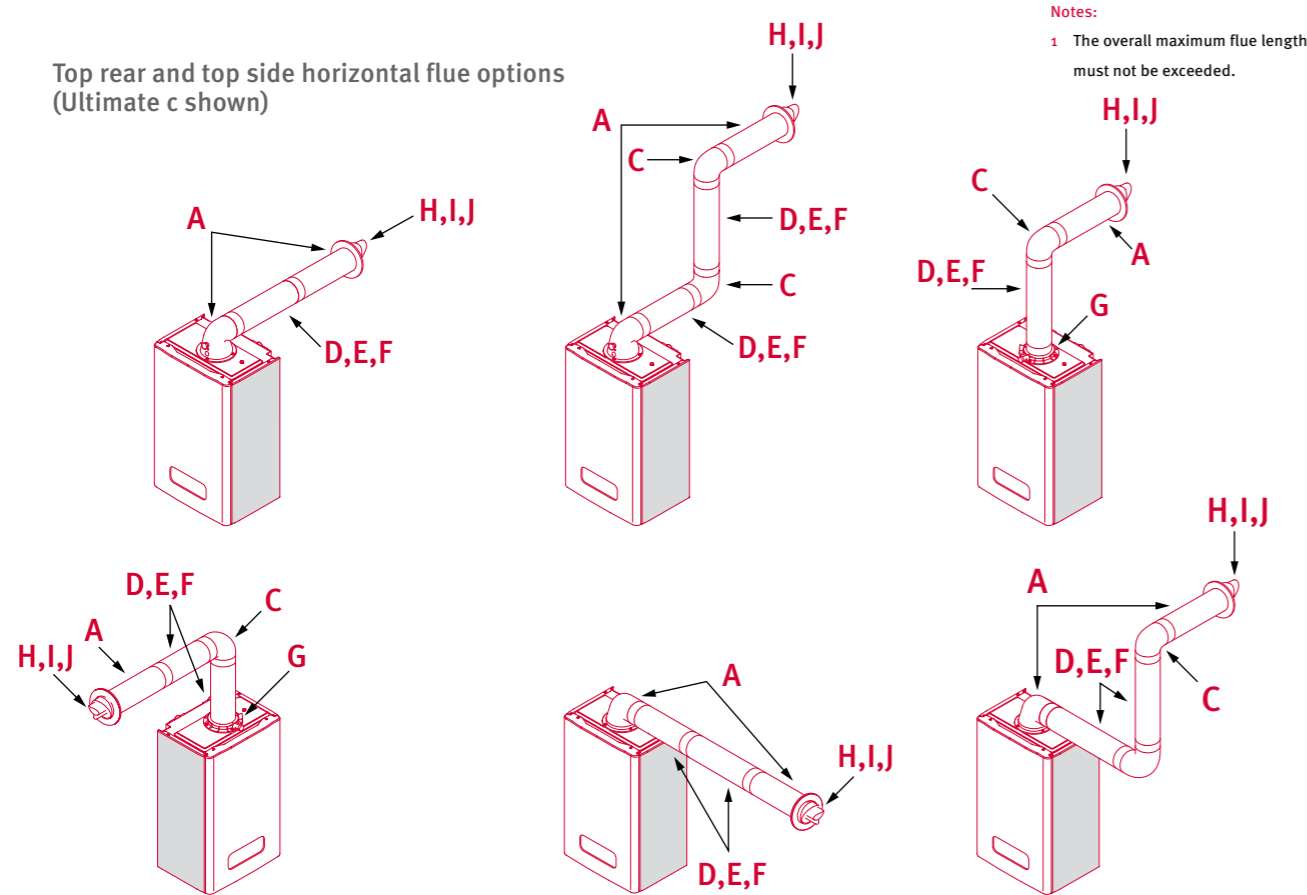
# Horizontal flueing options

## Horizontal flue lengths

The horizontal flueing information below applies to all Glow-worm Ultimate boilers.

Boiler	Ø60/100 Max horizontal	Ø80/125 Max horizontal	Compatible with Plume Management Kit
Ultimate 30c	6m	10m	Yes <sup>1</sup>
Ultimate 35c	6m	10m	Yes <sup>1</sup>
Ultimate 24h	8m	20m	Yes <sup>1</sup>

## Top rear and top side horizontal flue options (Ultimate c shown)



## Horizontal flue accessories

Component	Description	Part Number Ø60/100	CPS Part Number Ø60/100	Part Number Ø80/125
A	Horizontal Telescopic flue	A2043600	778363	0020104551
B	45° Bend (2 off)	2000460485	523772	0020104557
C	90° Bend (1 off)	2000460484	523771	0020104556
D	0.5m Extension (1 off)	2000460481	523768	0020104553
E	1m Extension (1 off)	2000460482	523769	0020104554
F	2m Extension (1 off)	2000460483	-	0020104555
G	Vertical Flue Adaptor	A2024600	-	0020104550
H	Deflector Terminal (Black)	0020060582	-	-
I	Deflector Terminal (White)	0020060583	-	-
J	Black Terminal	A2043700	-	-

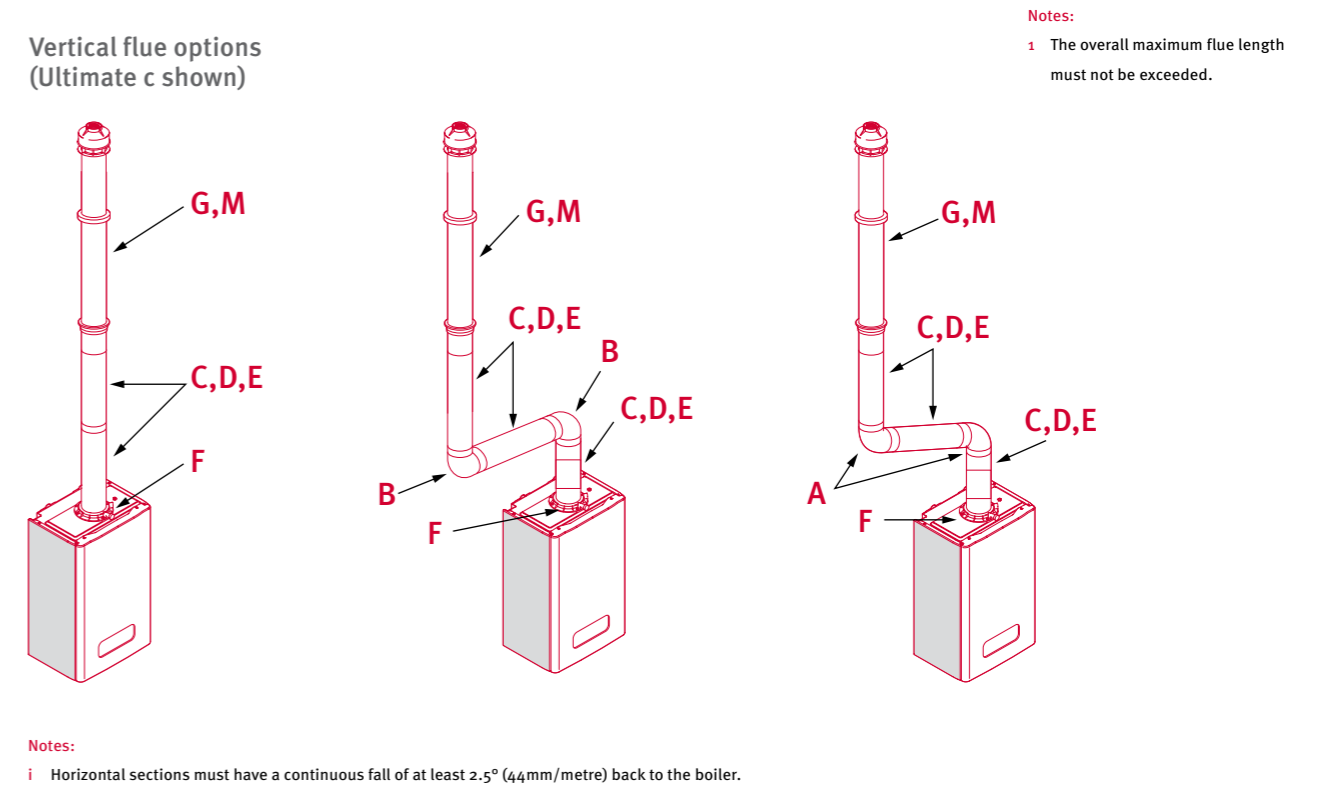
# Vertical flueing options

## Vertical flue lengths

The vertical flueing information below applies to all Glow-worm Ultimate boilers.

Boiler	Ø60/100 Max vertical	Ø80/125 Max vertical	Compatible with Plume Management Kit
Ultimate 30c	6m	10m	Yes <sup>1</sup>
Ultimate 35c	6m	10m	Yes <sup>1</sup>
Ultimate 24h	8m	20m	Yes <sup>1</sup>
Ultimate 24s	8m	20m	Yes <sup>1</sup>

## Vertical flue options (Ultimate c shown)



Notes:  
i Horizontal sections must have a continuous fall of at least 2.5° (44mm/metre) back to the boiler.

## Vertical flue accessories

Component	Description	Part Number Ø60/100	CPS Part Number Ø60/100	Part Number Ø80/125
A	45° Bend (2 off)	2000460485	523772	0020104557
B	90° Bend (1 off)	2000460484	523771	0020104556
C	0.5m Extension (1 off)	2000460481	523768	0020104553
D	1m Extension (1 off)	2000460482	523769	0020104554
E	2m Extension (1 off)	2000460483	-	0020104555
F	Vertical Flue Adaptor	A2024600	553411	0020104550
G	Vertical Roof Terminal	2000460480	523767	0020104552
H	Pitched Roof Flashing	2000460479	523766	-
I	Flat Roof Flashing	2000460478	-	-
J	Sliding Sleeve	2000460487	-	0020104558
K	Fixing Bracket (5 off)	2000460486	-	0020104559
L	Telescopic Extension	A2036900	-	-
M	Ridge Tile Terminal	A2043800	-	-

## Expert support from start to finish

As well as providing durable, reliable products, Glow-worm supports you from the beginning of your installation for years into the future. From design, technical help, extensive training courses and specialist onsite support to a nationwide after sales and spares network, Glow-worm provide you with expert help and support whenever you need it.



## Top-class service

### Technical help

If you are planning or even in the middle of an installation and have a technical question you need answering, simply call our technical help line for a straightforward answer.

### System design

Glow-worm's award winning Design Service is a complete service tailored to suit your individual site requirements. From basic heating designs to more complex solutions using the latest renewables technologies, Glow-worm design uses state of the art CAD technology to provide high quality designs supported by full indemnity cover.

### Full local support

Our nationwide sales team provide installers and specifiers with support and partnership from beginning to end.

### Nationwide after sales service

We are committed to supporting you with technical help and after sales service online, over the telephone and on the road.

All our service engineers are Gas Safe registered and are fully trained on all Glow-worm's models past and present. We have around 250 engineers based across the UK, each carrying over 1,500 different spare parts in their van enabling them to achieve an outstanding 97% first time fix rate.

### Product warranty

All Glow-worm products are designed to exacting industry standards, and are individually tested to ensure reliability. All Ultracom, Flexicom and Ultrapower boilers come with 2 years parts and labour warranty as standard with extended warranty options available. Free 5 year warranty available when claimed through Club Energy.

### Spares

If in the unlikely event a problem occurs and a spare part is needed, then you can rest assured that Glow-worm's market leading spare parts division will have the item you require. Thanks to our commitment towards maintaining functional spare parts, availability is for up to 15 years after the range production ends.

Glow-worm has a nationwide network of over 30 key spares stockists at approximately 450 locations around the UK which means getting hold of a genuine Glow-worm spare part is as convenient as possible. If for any reason the items are not held by the stockist, Glow-worm offers a next day delivery service for emergency orders.

### Online information

If you want standard technical advice information such as installation manuals and flueing information and don't want to spend time on the telephone, visit our website at [www.glow-worm.co.uk](http://www.glow-worm.co.uk) where you will find comprehensive technical information, solutions to common installation system problems and advice on saving energy.

### Always within reach, always there for you

**Head Office**  
01773 824 639

**Literature**  
01773 596 105

**Service Department**  
Boilers  
0330 100 7678

Renewables/  
New Technology  
0330 100 7681

**Installer Technical Support**  
Boilers  
0330 100 7679

Renewables/  
New Technology  
0330 100 7677

**Glow-worm Design Service**  
0116 239 2393

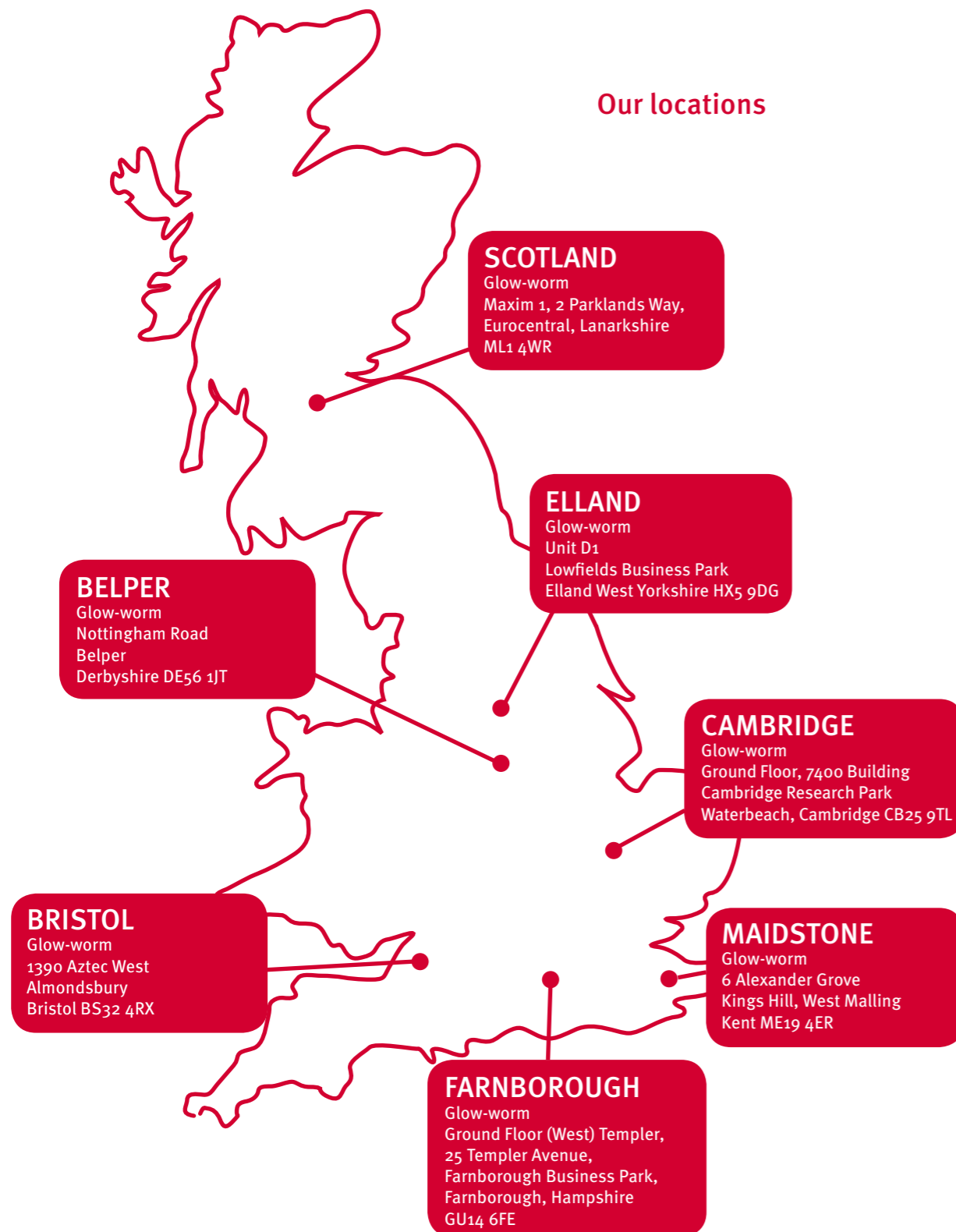
**Training**  
01773 596 156

**Spare Parts**  
01773 596 090

service

# Ultimate training

Quality training available at a Glow-worm Centre of Excellence near you



To book an Ultimate training course please call 01773 596156