

Boiler Handbook

Ultimate Guide to the Firebird Range of Oil-Fired Boilers

SUPERIOR HEATING SOLUTIONS
SINCE 1980



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Taking Boiler Efficiency to New Heights

Firebird Products Ltd are market-leading manufacturers of heating products with a proven track record built on the global supply of heating systems. Established in Ireland in 1980, the Firebird name has become synonymous with performance, quality and innovative design.

At the forefront of technology, Firebird are committed to providing cost-effective, energy-efficient heating solutions that not only meet, but easily exceed today's stringent legislative requirements. Historically an oil-fired boiler manufacturer, the product range has been expanded to include air source heat pumps, biomass boilers & stoves, solar thermal and underfloor heating systems.



Why Choose a Firebird Boiler?

Widest Range of Boilers Available – Low NO_x and Blue Flame options

Easy to Install & Service – multiple tapping points, front service access and multi-directional flue options

Low NO_x Emissions – at 60mg/kWh easily exceeds legislative requirements from 2018 and beyond

Low Maintenance – long life serviceable components

Latest Condensate Trap Technology – 316L stainless steel

Pioneering Design Technology – the first UK manufacturer to introduce Blue Flame oil-fired boilers

Market-leading Seasonal Efficiency of 97.4%* – surpasses any other boiler in its class

Reduced Heating Bills – the greater the efficiency, the lower the heating bills

Unbeatable Product Range – widest range of boilers and burner options available in UK, outputs from 12kW – 100kW

Innovative Anti-corrosion Design – location of secondary heat exchanger eliminates potential for corrosion of boiler shell

Proven Track Record – providing heating solutions for nearly 40 years

10 Year Warranty**



* Firebird Blue Supreme™ range, SAP 2005 Seasonal Efficiency. Source: www.ncm-pcdb.org.uk/sap

** Terms & Conditions apply

Research & Development

Firebird are committed to an ongoing programme of Research & Development and continue to lead the industry by providing the most innovative, technologically advanced and energy-efficient heating options available in today's market.

Innovative European Design

The positioning of the secondary heat exchanger in an oil-fired boiler is an important consideration to prevent against any corrosion of the boiler shell. In line with standard European practice, Firebird have designed a complete unit which houses the secondary heat exchanger beneath the primary heat exchanger. By locating this unit at the bottom of the appliance (rather than in the centre), the potential for corrosion of the boiler shell is eliminated.

Durable Construction

All Firebird oil-fired boilers are constructed from premium grade steel (minimum 4mm gauge). Internal models feature a heavy-duty casing, with a polyester-coated finish to provide optimum protection from normal wear and tear.

Extensive Product Range

With over 80 models available in outputs from 12kW to 100kW, Firebird offers the most comprehensive range of oil-fired boilers available for internal, external and boilerhouse applications.

Firebird Training Centres

Firebird offer a comprehensive programme of training courses for installers and service engineers which cover installation, commissioning, service and repair. These are available at Firebird's UK headquarters in Plymouth and at a number of OFTEC registered training centres throughout the UK. The training centre in Plymouth provides the opportunity for training to be given on fully operational Firebird boilers. For further information, please contact Firebird Products Ltd.

Dedicated Service Engineers

All Firebird boilers are supported by both an in-house team and a national network of service engineers. This dedicated support service is available before, during or after the purchase of any Firebird boiler.

Spare Parts

A comprehensive range of spare parts are available through a national network of approved stockists. For further information please contact Firebird Products Ltd.

Delivery

Firebird holds unrivalled stock levels at its UK headquarters to ensure that even the most exacting delivery requirements can be met. Many products are available for next day delivery.



Go Green... Without Costing the Earth

Ecodesign Directive

The Energy-related Products (ErP) Directive (formerly the Ecodesign Directive) is a European initiative put in place to improve the energy efficiency and environmental performance of energy-using products. Under this directive minimum energy efficiency and environmental values for each heating technology are specified. The latest changes implemented during 2018 placed stringent limits on nitrogen oxide (NO_x) emission levels of 120mg/kWh.

This had a great impact on the heating industry as traditional yellow-flame oil-fired boilers no longer complied with these new requirements.

This legislation is applicable to all new installations as well as when existing products are replaced.

The Envirogreen™ Low NO_x Story

Following a three year research and development programme, Firebird launched the Envirogreen™ Low NO_x range of boilers. Designed specifically to meet the stringent environmental requirements of the ErP Directive, this new range delivers advanced boiler technology without any associated price premium.

Firebird are no strangers to innovation having developed the most efficient domestic oil-fired boiler in Europe. Whilst meeting all the environmental criteria, the downside to this particular type of technology is the cost, resulting in a premium priced boiler.

A challenge was therefore set to design a boiler that exceeded the NO_x reduction requirements, offered the same outstanding level of performance, but most importantly remained a cost-effective option for our customers.

Following an extensive research and development programme in conjunction with European burner experts elco, the Envirogreen™ range was borne. Featuring cutting-edge burner technology this new range ticks every box.

- ✓ Exceeds NO_x reduction requirements – 60mg/kWh
- ✓ Performance data listed on the Product Characteristics Database (PCDB)
- ✓ Easy to install and service
- ✓ Cost-effective



Installation is as easy as 1, 2, 3

1x 
Allen Key

2x 
Burner Settings

3x 
Satisfied Customers

- ✓ **Fast & Easy to Install** – main component parts undone with a single Allen Key
- ✓ **Trouble-Free Plug & Play Burner** – key components easily identified by dedicated connectors
- ✓ **Easy to Service & Maintain** – components clearly positioned and accessible
- ✓ **Makes Financial Sense** – no associated price premium
- ✓ **Excellent Cold Start Performance**
- ✓ **Latest Condensate Trap Technology** – with 316L stainless steel
- ✓ **Outstanding Ventilation Performance** – ensures complete combustion

EnvirogreenTM



Firebird Oil-Fired Boiler Product Ranges

Firebird offer three comprehensive product ranges for internal, external and boilerhouse applications.

Envirogreen™

High efficiency boilers featuring the elco Low NO_x burner and patented heat exchanger design.



Enviolite™

High-efficiency eco boilers featuring the elco Low NO_x burner and patented heat exchanger design.



Blue Supreme™

Blue Flame technology at its best – Europe's most efficient domestic oil-fired boiler, incorporating cutting-edge German burner technology; a patented, pioneering Heat Recovery System and a third heat exchanger which extracts more energy from the combustion gases.



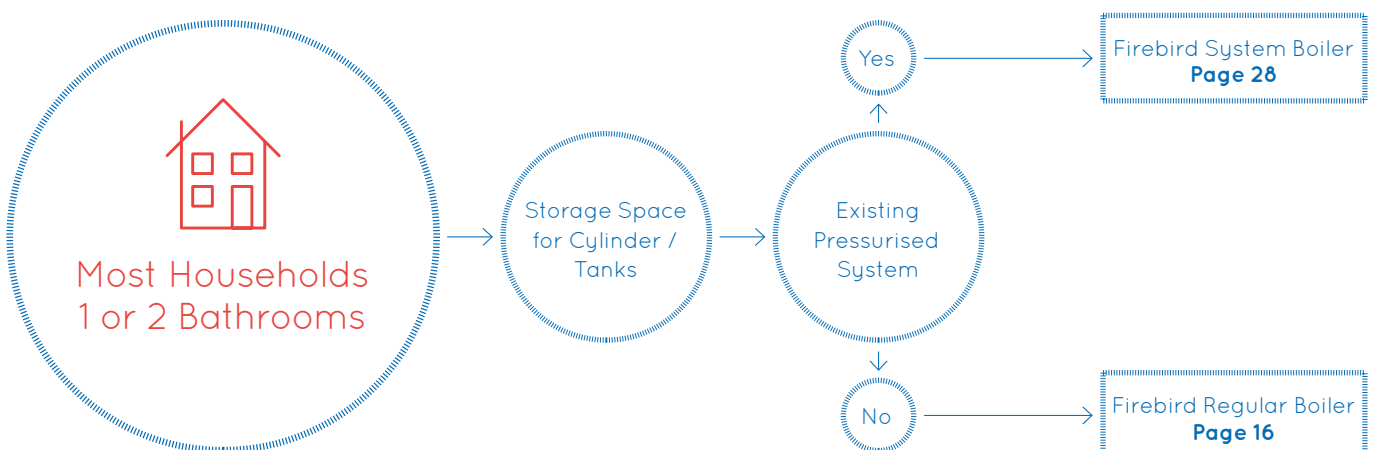
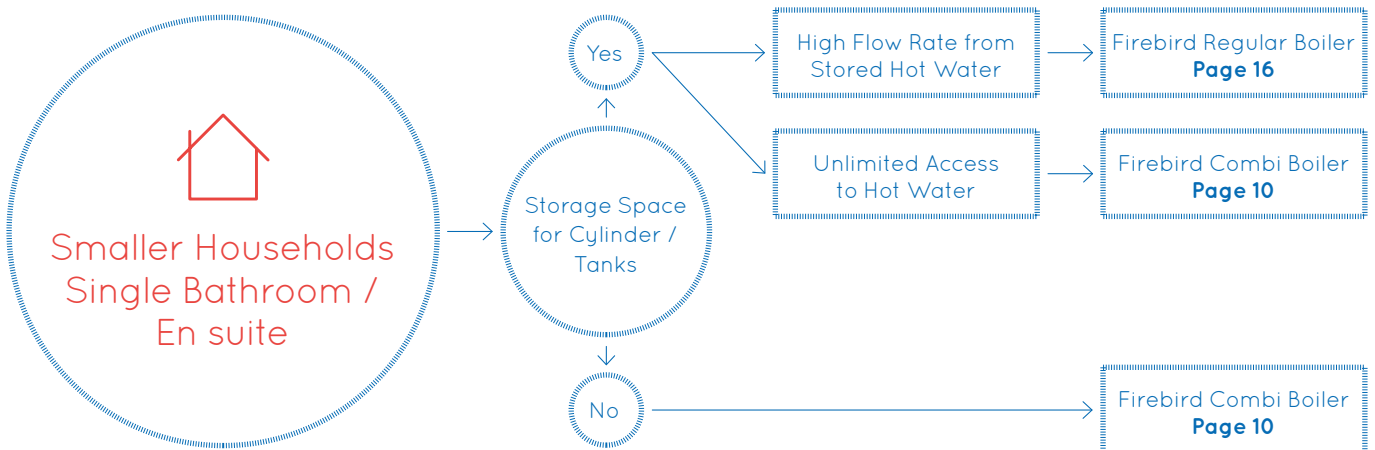
Which Type of Boiler Should I Choose?

There are three main types of boiler typically used in the UK. The type of boiler selected is usually determined by using the following criteria:

1
The size of the property and the number of occupants

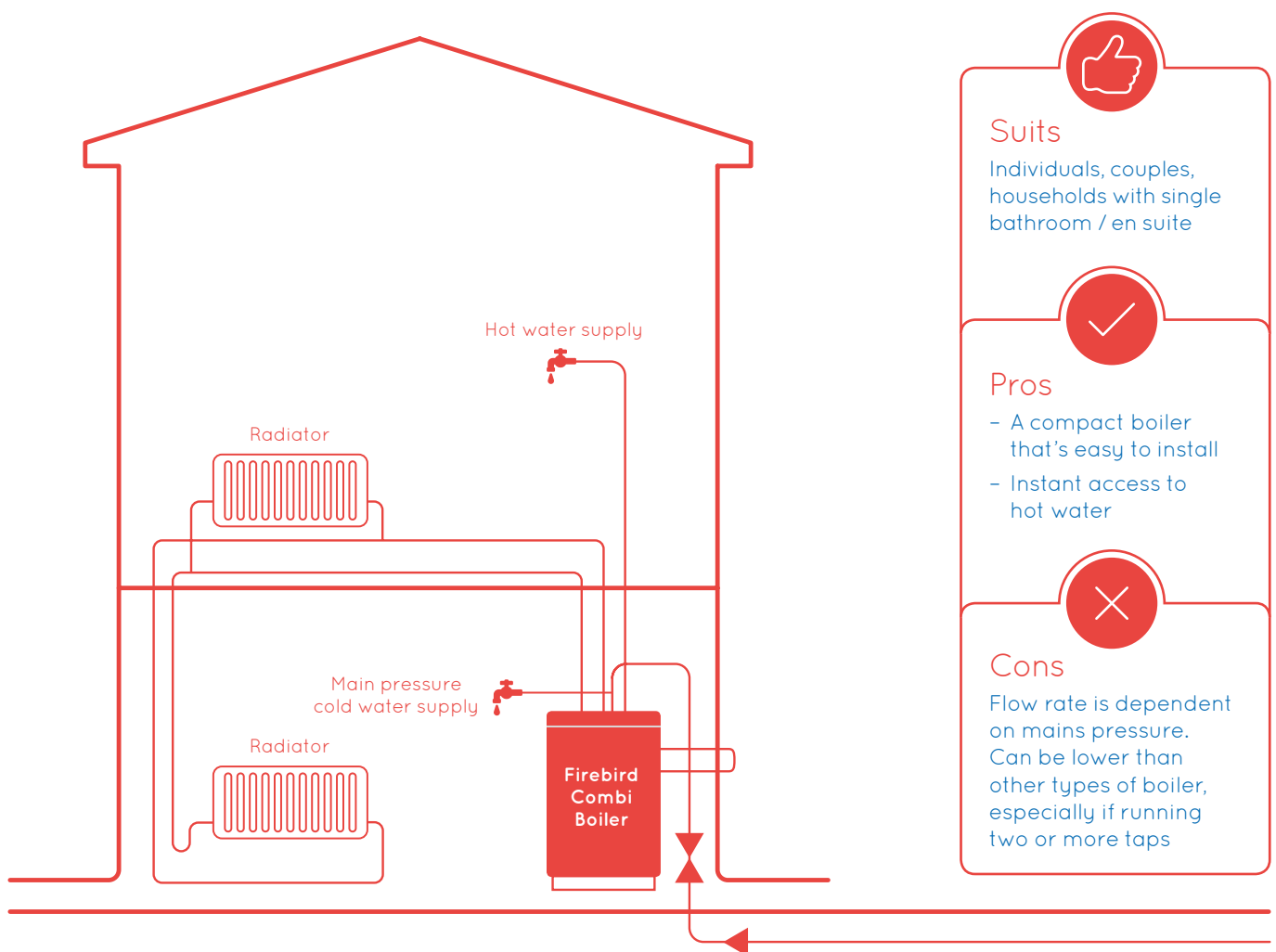
2
The hot water and heating requirements for the property

3
If the property is new build or if there is an existing heating system in place



Combi Boilers

Found in over two thirds of homes in the UK, a Combi (combination) Boiler is an instant domestic water heater and a central heating boiler combined. Water is heated directly via a thermal store when a tap is turned on, saving not only on cost, but also on the space required for a hot water storage tank. Providing instant access to hot water, this type of boiler is particularly suited to smaller households with one bathroom and shower / en suite.



Firebird Combi Boilers are available in the **Envirogreen™** product range, with models for internal and external applications. Instant hot water draw-off is coupled with a rapid reheat of the water store, making the boiler more cost-effective to run due to its high levels of efficiency.

Internal Combi Boilers

The Firebird range of internal Combi Boilers are available in Standard and Slimline widths making them ideal for both new build and retrofit applications. The sleek and stylish new design of the Standard Combi HE, complete with concealed control panel, won't look out of place in any kitchen or utility room. At just under 600mm in width it is easily incorporated into new or existing room configurations.

Features & Benefits

- Low NO_x and Blue Flame options available
 - Excellent hot water performance – up to 20 litres per minute on 35kW models
 - Rapid reheat after hot water draw-off
 - Standard and Slimline models
 - Fully insulated and acoustically designed for ultra-quiet operation
 - Durable casings with a high-quality, food grade* finish
 - PCB controller using highly accurate thermistors
 - No flow switch – water flow is electronically detected
 - Front service access
 - Low pressure switch protects boiler in the unlikely event of system water loss
 - Multi-directional flue options
 - Robust 'positive shut-off' filling loop and check valve*
 - State-of-the-art technology incorporating a single, high-efficiency Grundfos circulating pump ensures outstanding efficiency*
 - High performance Low NO_x and Blue Flame burners complete with full diagnostic control box
 - Models available in outputs of 20kW to 35kW
- * Standard HE models only



Internal Combi Boilers Product Range

Envirogreen™ Combi HE



ERP Rating



Envirogreen™ Slimline Combi



ERP Rating



Envirogreen™ Model	Product Code	Heating Output Max.	Hot Water Flow Rate Ltr/min*	Seasonal Efficiency Rating**	Weight kg	ERP Rating		Dimensions (mm)		
						Heating	Hot Water	H	W	D
Envirogreen™ Combi HE C20	ECE020DLX	20kW	16	93.0	167	A	B	845	595	614
Envirogreen™ Combi HE C26	ECE026DLX	26kW	16	93.0	170	A	B	845	595	614
Envirogreen™ Combi HE C35	ECE035DLX	35kW	20	93.0	173	A	B	845	595	614
Envirogreen™ Slimline Combi C20	ECE020SLM	20kW	12-14	93.0	165	A	B	855	520	600
Envirogreen™ Slimline Combi C26	ECE026SLM	26kW	16	93.0	168	A	B	855	520	600
Envirogreen™ Slimline Combi C35	ECE035SLM	35kW	16	93.0	172	A	B	855	520	600

Firebird Condensate Pump available for use with all Firebird boilers.

* Litres per minute at a temperature of 40°C Δt. Where water demand exceeds this, a flow restrictor is recommended to ensure a water supply at an adequate temperature
 ** ErP 2015 Seasonal Efficiency. Source: www.ncm-pcdb.org.uk/sap



External Combi Boilers

The Firebird range of external Combi Boilers are similar in specification to their equivalent internal models, with the addition of a built-in frost thermostat. There is no requirement to house the boiler in a building, so this option provides an ideal solution if internal space is at a premium. The boilers have removable sides for ease of access to any part of the unit. Piping can be carried out from the back or from underneath.

Envirogreen™

Features & Benefits

- Low NO_x and Blue Flame options available
- Excellent hot water performance – up to 20 litres per minute on 35kW models
- Rapid reheat after hot water draw-off
- Fully insulated and acoustically designed for ultra-quiet operation
- High-quality weatherproof PVC coated casings
- PCB controller using highly accurate thermistors
- Removable sides for ease of access
- Multi-directional flue options
- Robust 'positive shut-off' filling loop and check valve
- State-of-the-art technology incorporating a single, high-efficiency Grundfos circulating pump ensures outstanding efficiency
- Low pressure switch protects boiler in the unlikely event of system water loss
- No flow switch – water flow is electronically detected
- Factory-fitted frost protection stat
- Stainless steel terminal guard
- High performance Low NO_x and Blue Flame burners complete with full diagnostic control box
- Models available in outputs of 20kW to 35kW

External Combi Boilers Product Range

Envirogreen™ Combipac HE



ERP Rating



Envirogreen™ Model	Product Code	Heating Output Max.	Hot Water Flow Rate Ltr/min*	Seasonal Efficiency Ratings**	Weight kg	ERP Rating		Dimensions (mm)		
						Heating	Hot Water	H	W	D
Envirogreen™ Combipac HE C20	ECE020CPK	20kW	16	93.0	200	A	B	945	720	625
Envirogreen™ Combipac HE C26	ECE026CPK	26kW	16	93.0	200	A	B	945	720	625
Envirogreen™ Combipac HE C35	ECE035CPK	35kW	20	93.0	203	A	B	945	720	625

Firebird Condensate Pump available for use with all Firebird boilers.

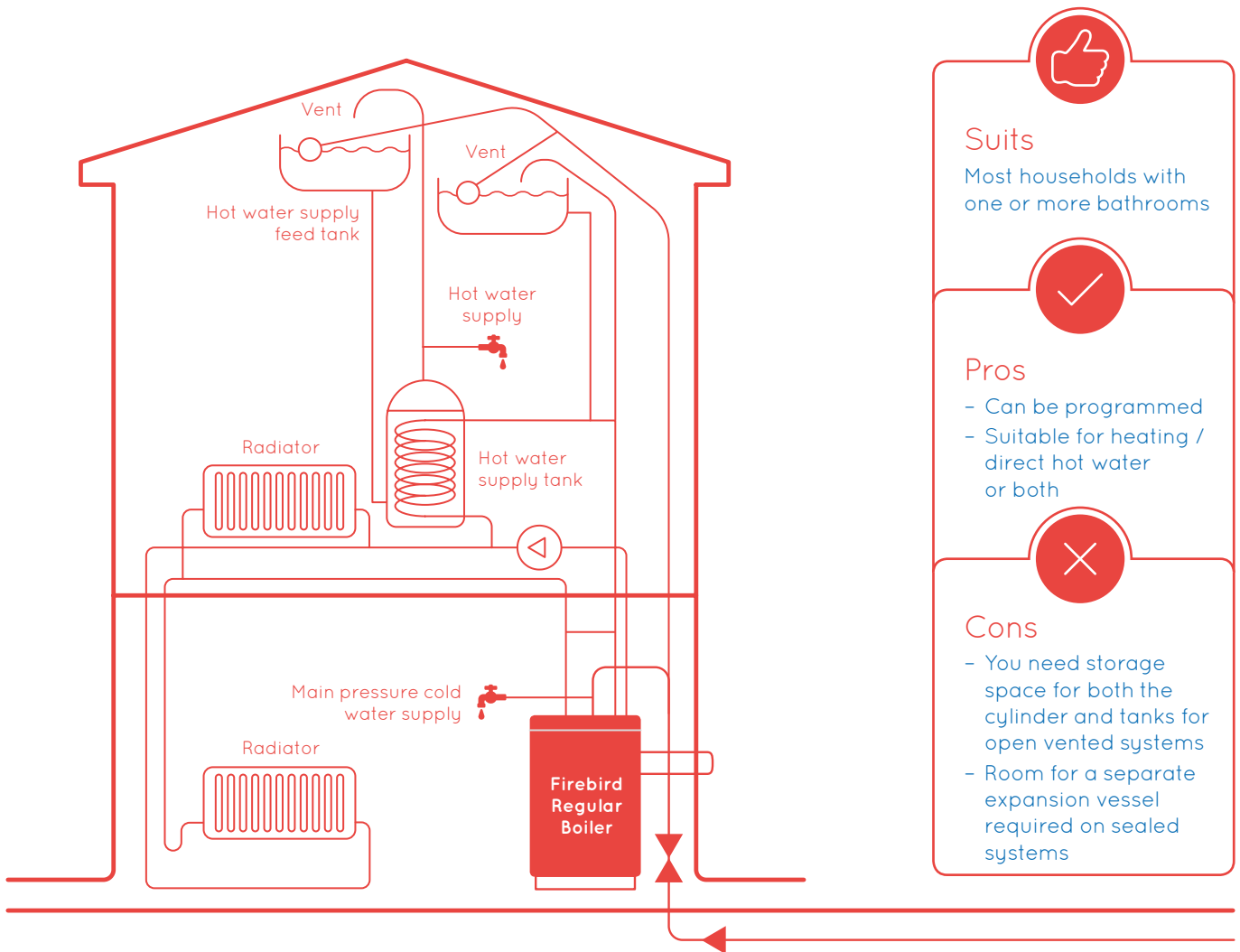
* Litres per minute at a temperature of 40°C Δt. Where water demand exceeds this, a flow restrictor is recommended to ensure a water supply at an adequate temperature
 ** ErP 2015 Seasonal Efficiency. Source: www.ncm-pcdb.org.uk/sap

Regular 'Heat Only' Boilers

Regular Boilers, which are also referred to as a 'heat only', or conventional boilers are generally found in more traditional heating systems. Providing heat for radiators and separate hot water cylinders (usually located in an airing cupboard), they are installed as part of a system. Regular 'heat only' boilers can form part of a sealed system or open vent system.

This type of heating system is particularly suited to larger households, with multiple bathrooms, as hot water is stored in a large volume cylinder capable of supporting multiple tap outlets at the same time.*

Example of an Open Vented System



Firebird Regular Boilers are available in the **Envirogreen™**, **Enviolite™** and **Blue Supreme™** product ranges with models available for internal, external and boilerhouse applications.

* Dependent on system design & capabilities

Internal Regular Boilers

The Firebird ranges of internal Regular Boilers are manufactured with a high-quality, aesthetically pleasing finish that doesn't look out of place in a kitchen or utility room.

Features & Benefits

- Low NO_x and Blue Flame options available
- Compact design – fits under standard kitchen worktop (outputs up to 35kW)
- Fully insulated and acoustically designed for ultra-quiet operation
- Durable casings with a high-quality finish
- PCB controller using highly accurate thermistors with anti-cycling function (outputs up to 35kW)
- Patented heat exchanger design
- Multiple tapping points for ease of installation
- Front service access
- Multi-directional flue options
- High performance Low NO_x and Blue Flame burners complete with full diagnostic control box
- Models available in outputs of 12kW to 100kW



Internal Regular Boilers Product Range

Envirogreen™ Kitchen



Available in
100kW
Output

ERP Rating



Envirolite™ Utility



ERP Rating



Envirogreen™ Model

Envirogreen™ Model	Product Code	Heating Output Max.	Seasonal Efficiency Ratings*	Weight kg	ERP Rating	Dimensions (mm)		
					Heating	H	W	D
Envirogreen™ Kitchen 12-18	EGE018KIT	12-18kW	91.6	115	A	847	345	610
Envirogreen™ Kitchen C20	EGE020KIT	20kW	92.5	125	A	847	442	610
Envirogreen™ Kitchen C26	EGE026KIT	26kW	92.6	128	A	847	442	610
Envirogreen™ Kitchen C35	EGE035KIT	35kW	92.6	131	A	847	442	610
Envirogreen™ Kitchen C44	EGE044KIT	44kW	93.8	210	A	1048	464	852
Envirogreen™ Kitchen C58	EGE058KIT	58kW	93.0	216	A	1048	464	852
Envirogreen™ Kitchen C73	EGE073KIT	73kW	97.4 / 102.8**	242	A	1196	524	851
Envirogreen™ Commercial Utility C100	EGE100KIT	100kW	98.6 / 104.6**	390	A	1249	623	1071

Envirolite™ Model

Envirolite™ Model	Product Code	Heating Output Max.	Seasonal Efficiency Ratings*	Weight kg	ERP Rating	Dimensions (mm)		
					Heating	H	W	D
Envirolite™ Utility CR20	EGE020UTL	12-20kW	90.0	125	A	845	442	610
Envirolite™ Utility CR26	EGE026UTL	20-26kW	90.0	128	A	845	442	610
Envirolite™ Utility CR35	EGE035UTL	26-35kW	92.6	131	A	845	442	610

Firebird Condensate Pump available for use with all Firebird boilers.

* ErP 2015 Seasonal Efficiency. Source: www.ncm-pcdb.org.uk/sap

** Boiler Efficiency Directive (92/42/EEC) full & part (30%) load efficiencies

Blue Supreme™ Utility



Most efficient domestic boiler in Europe.

ERP Rating



Blue Supreme™ Model

	Product Code	Heating Output Max.	Seasonal Efficiency Ratings*	Weight kg	ERP Rating	Dimensions (mm)		
					Heating	H	W	D
Blue Supreme™ Utility C20	EBS020CUT	20kW	97.4	174	A	925	592	780
Blue Supreme™ Utility C26	EBS026CUT	26kW	97.4	174	A	925	592	780

Firebird Condensate Pump available for use with all Firebird boilers.

* SAP 2005 Seasonal Efficiency. Source: www.ncm-pcdb.org.uk/sap

External Regular Boilers

The Firebird ranges of external Regular Boilers are similar in specification to their equivalent indoor models, with the addition of a built-in frost thermostat. There is no requirement to house the boiler in a building, so this option provides an ideal solution if internal space is at a premium. The boilers are available in Standard and Slimline widths, and have removable sides for ease of access to any part of the unit. Piping can be carried out from the back or from underneath.

Envirogreen™ | **Enviolite™** | **Blue Supreme™**

Features & Benefits

- Low NO_x and Blue Flame options available
- Standard and Slimline models
- High-quality, weatherproof PVC coated casings
- Fully insulated and acoustically designed for ultra-quiet operation
- PCB controller using highly accurate thermistors with anti-cycling function (outputs up to 35kW)
- Patented heat exchanger design
- Multiple tapping points for ease of installation
- Factory-fitted frost protection stat
- Removable sides for ease of access
- Multi-directional flue options (except Slimline models)
- Stainless steel terminal guard
- High performance Low NO_x and Blue Flame burners complete with full diagnostic control box
- Models available in outputs of 12kW to 73kW



External Regular Boilers Product Range

Envirogreen™ Heatpac



ERP Rating



Envirogreen™ Slimline Heatpac



ERP Rating



Envirogreen™ Model	Product Code	Heating Output Max.	Seasonal Efficiency Ratings*	Weight kg	ERP Rating	Dimensions (mm)		
					Heating	H	W	D
Envirogreen™ Heatpac 12-18kW	EGE018HPK	12-18kW	91.6	134	A	945	620	625
Envirogreen™ Heatpac C20	EGE020HPK	20kW	92.5	154	A	945	720	625
Envirogreen™ Heatpac C26	EGE026HPK	26kW	92.6	154	A	945	720	625
Envirogreen™ Heatpac C35	EGE035HPK	35kW	92.6	158	A	945	720	625
Envirogreen™ Heatpac C44	EGE044HPK	44kW	93.8	244	A	1074	839	855
Envirogreen™ Heatpac C58	EGE058HPK	58kW	93.0	250	A	1074	839	855
Envirogreen™ Heatpac C73	EGE073HPK	73kW	97.4 / 102.8**	280	A	1200	903	855

Envirogreen™ Model	Product Code	Heating Output Max.	Seasonal Efficiency Ratings*	Weight kg	ERP Rating	Dimensions (mm)		
					Heating	H	W	D
Envirogreen™ Slimline Heatpac C20	EGE020SLM	20kW	92.5	147	A	920	465	760
Envirogreen™ Slimline Heatpac C26	EGE026SLM	26kW	92.6	150	A	920	465	760
Envirogreen™ Slimline Heatpac C35	EGE035SLM	35kW	92.6	153	A	920	465	760

Firebird Condensate Pump available for use with all Firebird boilers.

* ErP 2015 Seasonal Efficiency. Source: www.ncm-pcodb.org.uk/sap

** Boiler Efficiency Directive (92/42/EEC) full & part (30%) load efficiencies

Envirolite™ Heatpac



ERP Rating



Blue Supreme™ Slimline Heatpac



ERP Rating



Most efficient domestic boiler in Europe.

Envirolite™ Model

Envirolite™ Model	Product Code	Heating Output Max.	Seasonal Efficiency Ratings*	Weight kg	ERP Rating	Dimensions (mm)		
					Heating	H	W	D
Envirolite™ Heatpac CR20	EGE020SGV	12-20kW	90.0	131	A	945	720	625
Envirolite™ Heatpac CR26	EGE026SGV	20-26kW	90.0	154	A	945	720	625
Envirolite™ Heatpac CR35	EGE035SGV	26-35kW	92.6	158	A	945	720	625

Blue Supreme™ Model

Blue Supreme™ Model	Product Code	Heating Output Max.	Seasonal Efficiency Ratings**	Weight kg	ERP Rating	Dimensions (mm)		
					Heating	H	W	D
Blue Supreme™ Slimline Heatpac C20	EBS020SLM	20kW	97.4	180	A	930	595	916
Blue Supreme™ Slimline Heatpac C26	EBS026SLM	26kW	97.4	180	A	930	595	916

Firebird Condensate Pump available for use with all Firebird boilers.

* ErP 2015 Seasonal Efficiency. Source: www.ncm-pcdb.org.uk/sap

** SAP 2005 Seasonal Efficiency. Source: www.ncm-pcdb.org.uk/sap

Boilerhouse Regular Boilers

The Firebird ranges of Regular Boilerhouse models are similar in energy output to their equivalent external models and are ideal for installation in a dedicated boilerhouse, garage or outbuilding. Flow and return pipework can be connected on either side of the boiler for retrofit and flexibility.

Envirogreen™ | **Enviolite™** | **Blue Supreme™**

Features & Benefits

- Low NO_x and Blue Flame options available
- Constructed using premium quality steel
- Fully insulated casing minimises heat loss
- PCB controller using highly accurate thermistors with anti-cycling function (outputs up to 35kW)
- Multiple tapping points for ease of installation
- Patented heat exchanger design
- Multi-directional flue options
- High performance Low NO_x and Blue Flame burners complete with full diagnostic control box
- Models available in outputs of 12kW to 100kW

Boilerhouse Regular Boilers Product Range

Envirogreen™ Popular



ERP Rating



Enviolite™ Boilerhouse



ERP Rating



Envirogreen™ Model

	Product Code	Heating Output Max.	Seasonal Efficiency Ratings*	Weight kg (including burner)	ERP Rating	Dimensions (mm)			Burner Depth
					Heating	H	W	D	
Envirogreen™ Popular 12-18kW	EGE018POP	12-18kW	91.6	99	A	684	344	381	202
Envirogreen™ Popular C20	EGE020POP	20kW	92.5	107	A	684	441	381	202
Envirogreen™ Popular C26	EGE026POP	26kW	92.6	112	A	684	441	381	202
Envirogreen™ Popular C35	EGE035POP	35kW	92.6	115	A	684	441	381	202
Envirogreen™ Popular C44	EGE044POP	44kW	93.8	182	A	815	470	531	202
Envirogreen™ Popular C58	EGE058POP	58kW	93.0	190	A	815	470	533	253
Envirogreen™ Popular C73	EGE073POP	73kW	97.4 / 102.8**	210	A	873	530	527	253
Envirogreen™ Popular C100	EGE100POP	100kW	98.6 / 104.6**	300	A	1052	625	746	253

Enviolite™ Model

	Product Code	Heating Output Max.	Seasonal Efficiency Ratings*	Weight kg (including burner)	ERP Rating	Dimensions (mm)			Burner Depth
					Heating	H	W	D	
Enviolite™ Boilerhouse CR20	EGE020SBH	20kW	90.0	107	A	684	441	381	202
Enviolite™ Boilerhouse CR26	EGE026SBH	26kW	90.0	112	A	684	441	381	202
Enviolite™ Boilerhouse CR35	EGE035SBH	35kW	92.6	115	A	684	441	381	202

Firebird Condensate Pump available for use with all Firebird boilers.

* ErP 2015 Seasonal Efficiency. Source: www.ncm-pcdb.org.uk/sap

** Boiler Efficiency Directive (92/42/EEC) full & part (30%) load efficiencies

Boilerhouse Regular Boilers Product Range

Blue Supreme™ Popular



Most efficient
domestic boiler
in Europe.

ERP Rating



Blue Supreme™ Model

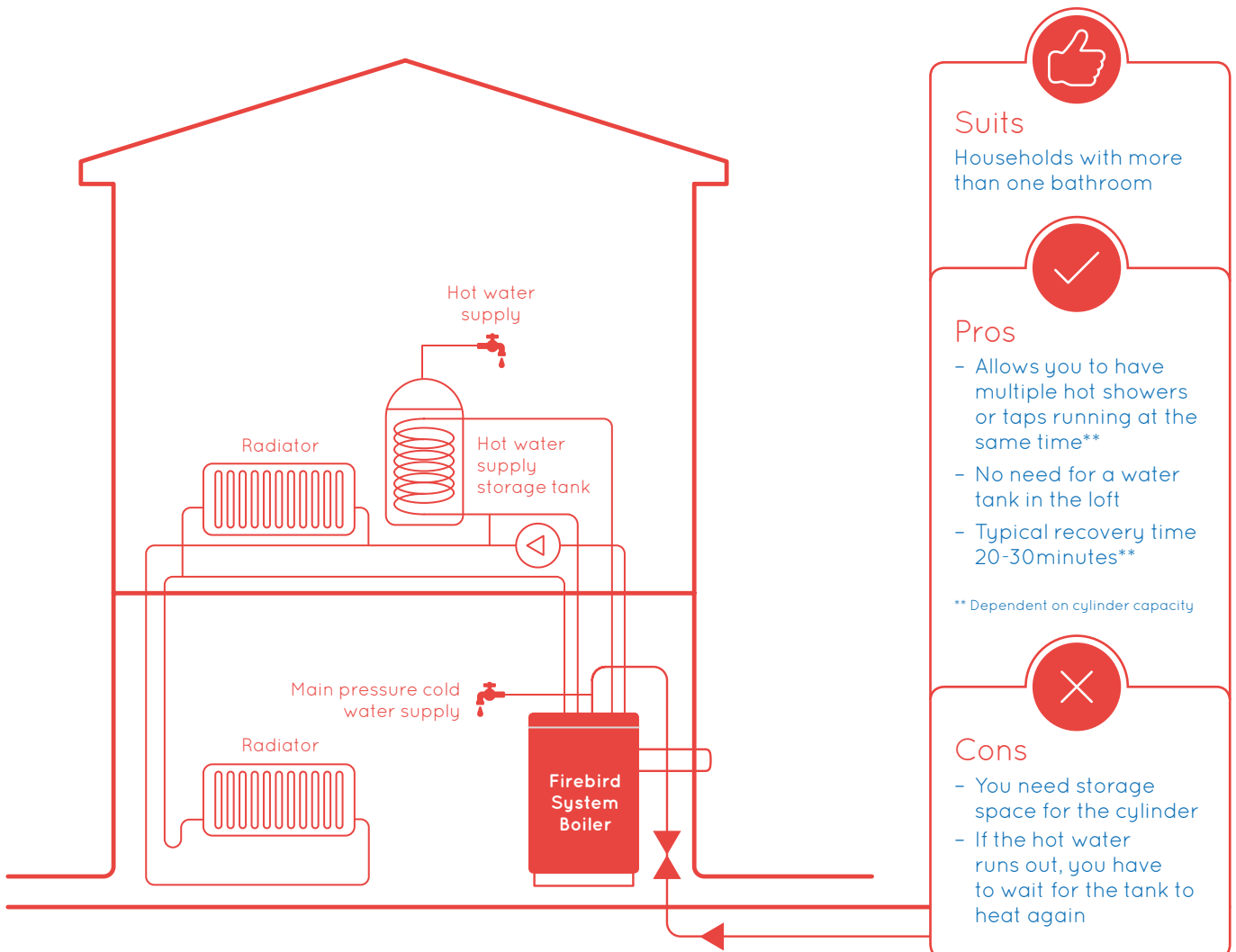
Blue Supreme™ Model	Product Code	Heating Output Max.	Seasonal Efficiency Ratings*	Weight kg	ERP Rating	Dimensions (mm)		
					Heating	H	W	D
Blue Supreme™ Popular C20	EBS020POP	20kW	97.4	175	A	930	595	760
Blue Supreme™ Popular C26	EBS026POP	26kW	97.4	175	A	930	595	760

Firebird Condensate Pump available for use with all Firebird boilers.



Regular System Boilers

A System Boiler, which is also referred to as a 'sealed system boiler', provides central heating and direct hot water via a storage cylinder, which is usually housed in an airing cupboard. Unlike a regular boiler heating system, there is no requirement to have water tanks situated in the loft. System boilers are generally easier to install, as the heating and hot water system components form an integral part of the boiler itself. This type of heating system is particularly suited to households with multiple bathrooms (providing adequate cylinder capacity is installed) as you can have multiple taps, baths or showers running at the same time.*



Firebird System Boilers are available in the **Envirogreen™** product range with models for internal and external applications. A factory-fitted expansion vessel, circulating pump, relief valve, low pressure switch and filling loop come as standard, saving space and installation time.

* Dependent on system design & capabilities

Internal System Boilers

The Firebird ranges of internal System Boilers are manufactured with a high-quality, aesthetically pleasing finish that doesn't look out of place in a kitchen or utility room.

Features & Benefits

- Low NO_x and Blue Flame options available
- Compact design – fits under standard kitchen worktop (outputs up to 35kW)
- Fully insulated and acoustically designed for ultra-quiet operation
- Durable casings with a high-quality finish
- PCB controller using highly accurate thermistors with anti-cycling function (outputs up to 35kW)
- Patented heat exchanger design
- Front service access
- Factory-fitted expansion vessel and circulating pump
- Low pressure switch protects boiler in the unlikely event of system water loss
- Multi-directional flue options
- High performance Low NO_x and Blue Flame burners complete with full diagnostic control box
- Models available in outputs of 20kW to 44kW



Internal System Boilers Product Range

Envirogreen™ System



ERP Rating



Envirogreen™ Model	Product Code	Heating Output Max.	Seasonal Efficiency Ratings*	Weight kg	ERP Rating	Dimensions (mm)		
					Heating	H	W	D
Envirogreen™ System C20	ESE020DLX	20kW	92.5	143	A	844	442	610
Envirogreen™ System C26	ESE026DLX	26kW	92.6	146	A	844	442	610
Envirogreen™ System C35	ESE035DLX	35kW	92.6	149	A	844	442	610
Envirogreen™ System C44	ESE044DLX	44kW	93.8	235	A	1046	660	852

Firebird Condensate Pump available for use with all Firebird boilers.



External System Boilers

The Firebird range of external System Boilers are similar in specification to their equivalent indoor models, with the addition of a built-in frost thermostat. There is no requirement to house the boiler in a building, so this option provides an ideal solution if internal space is at a premium. The boilers are available in Standard or Slimline widths and have removable sides for ease of access to any part of the unit. Piping can be carried out from the back or from underneath.

Envirogreen™

Features & Benefits

- Low NO_x and Blue Flame options available
- Standard and Slimline models
- High-quality, weatherproof PVC coated casings
- Factory-fitted expansion vessel and circulating pump
- Fully insulated and acoustically designed for ultra-quiet operation
- PCB controller using highly accurate thermistors with anti-cycling function (outputs up to 35kW)
- Patented heat exchanger design
- Factory-fitted frost protection stat
- Removable sides for ease of access
- Low pressure switch protects boiler in the unlikely event of system water loss
- Multi-directional flue options (except Slimline models)
- Stainless steel terminal guard
- High performance Low NO_x and Blue Flame burners complete with full diagnostic control box
- Models available in outputs of 20kW to 44kW

External System Boilers Product Range

Envirogreen™ Systempac



ERP Rating



Envirogreen™ Slimline Systempac



ERP Rating



Envirogreen™ Model

Envirogreen™ Model	Product Code	Heating Output Max.	Seasonal Efficiency Ratings*	Weight kg	ERP Rating	Dimensions (mm)		
					Heating	H	W	D
Envirogreen™ Systempac C20	ESE020NKT	20kW	92.5	163	A	945	720	625
Envirogreen™ Systempac C26	ESE026NKT	26kW	92.6	163	A	945	720	625
Envirogreen™ Systempac C35	ESE035NKT	35kW	92.6	166	A	945	720	625
Envirogreen™ Systempac C44	ESE044NKT	44kW	93.8	270	A	1074	839	853
Envirogreen™ Slimline Systempac C20	ESE020SLM	20kW	92.5	147	A	920	465	760
Envirogreen™ Slimline Systempac C26	ESE026SLM	26kW	92.6	150	A	920	465	760
Envirogreen™ Slimline Systempac C35	ESE035SLM	35kW	92.6	153	A	920	465	760

Firebird Condensate Pump available for use with all Firebird boilers.

* ErP 2015 Seasonal Efficiency. Source: www.ncm-pcdb.org.uk/sap

Technical Specification

Envirogreen™, Envirolite™ & Blue Supreme™ Product Ranges

	Envirogreen. Combi Boilers		Envirogreen. System Boilers			Envirogreen, Envirolite. & Blue Supreme. Regular Boilers					
	12-20+20-26	26-35	12-20+20-26	26-35	35-44	12-18	12-20+20-26	26-35	35-44+44-58	58-73	80-100
Heat Output	kW										
Connections											
Heating Flow	22mm	28mm	22mm	28mm	1 1/2" BSP	1" BSP	1" BSP	1" BSP	1 1/2" BSP	1 1/2" BSP	2" BSP
Heating Return	22mm	28mm	1" BSP	1" BSP	1 1/2" BSP	1" BSP	1" BSP	1" BSP	1 1/2" BSP	1 1/2" BSP	2" BSP
Mains Cold Feed (Copper)	15mm	15mm	15mm	15mm	15mm	-	-	-	-	-	-
Hot Water Delivery (Copper)	15mm	15mm	-	-	-	-	-	-	-	-	-
Drain Off Valve	1/2" BSP	1/2" BSP	1/2" BSP	1/2" BSP	1/2" BSP	1/2" BSP	1/2" BSP	1/2" BSP	1/2" BSP	1/2" BSP	1/2" BSP
Safety Pressure Valve Outlet (Copper)	15mm	15mm	15mm	15mm	15mm	-	-	-	-	-	-
Condensate Trap	22mm Stainless Steel		22mm Stainless Steel			22mm Stainless Steel					
Circulating Pump											
	25/60(x2)•	25/60(x2)•	25/60	25/60	25/80	-	-	-	-	-	-
Domestic Hot Water Plate Heat Exchanger	25 plate	31 plate	-	-	-	-	-	-	-	-	-
Integral Expansion Vessel Normal Capacity	12 litres	12 litres	12 litres	12 litres	18 litres	-	-	-	-	-	-
Expansion Vessel Pre-charge Pressure	1 bar	1 bar	1 bar	1 bar	1 bar	-	-	-	-	-	-
Low Pressure Water Switch?	✓	✓	✓	✓	✓	✗	✗	✗	✗	✗	✗
Filling loop Included?	✓	✓	✓	✓	✓	✗	✗	✗	✗	✗	✗
Water Content											
Boiler (Litres)	24	24	24	24	45	24	24	24	43.5	54	75
Primary Tank: Combi/Combipac (Litres)	20	20	-	-	-	-	-	-	-	-	-
Slimline Combi (Litres)	11	11	-	-	-	-	-	-	-	-	-
DHW Guide Performance*											
in litres/min (120 litre draw-off at 40°C ΔT.)	-	-	-	-	-	-	-	-	-	-	-
Combi / Combipac	16	20	-	-	-	-	-	-	-	-	-
Slimline Combi	12/14	16	-	-	-	-	-	-	-	-	-
Flue (Internal Boilers)											
Balanced Flue Assembly (mm)	125 (5")	125 (5")	125 (5")	125 (5")	150 (6")	125 (5")	125 (5")	125 (5")	150 (6")	180 (7")	200 (8")
Max. Low Level Flue Length (metres)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Max. High Level Flue Length (metres)	6	6	6	6	4	6	6	6	4	4	4
Max. Vertical Level Flue Length (metres)	6	6	6	6	4	6	6	6	4	4	4
Integral flues on Heatpac Models	-	-	-	-	-	-	-	-	-	-	-
Heating System (Sealed)											
	Fit in accordance with BS 7047 Part 1, BS 5449, OFTEC standards and all other relevant legislation.										
Max. Operating Pressure	2.5 bar		2.5 bar								
Max. System Pressure Cold	1.5 bar		1.5 bar								
Min. System Pressure Cold	0.5 bar		0.5 bar								
Preset Pressure Relief Valve	3 bar		3 bar								
Mains Water Supply Pressure											
	Min. 1 bar – Max. 10 bar (for user comfort, we recommend pressure at tap to be between 2 and 5 bar). Limescale excess: When over 150/200 ppm, fit appropriate scale reducer.										
Water Side Resistance											
	Flow Rate to give a Nominal Output at 10k Differential					20kW		26kW		35kW	
	Flow Rate Measured (Kg h-1)					1642		2135		2874	
	Waterside Resistance (mbar)					0.18		0.18		0.18	
	Flow Rate to give a Nominal Output at 20k Differential					20kW		26kW		35kW	
	Flow Rate Measured (Kg h-1)					870		1131		1523	
	Waterside Resistance (mbar)					0.19		0.19		0.19	
Pressure Jet Oil Boilers											
Fuel	ELCO FB2 Envirogreen & Envirolite, MHG Blue Supreme										
Electrical Supply	C2 Kerosene										
	230V AC 50Hz 5A										
Frost Thermostats											
	Boiler safety limit, frost and over-run thermostats fitted on all Heatpac Models										
<i>Frost stat fitted to all external models</i>											
Boiler Central heating Control	60°C – 80°C		60°C – 80°C			60°C – 80°C					
Boiler Safety Limit	110°C		110°C			110°C					
Tank (DHW) – Fixed	78°C										
Early Alert – Fixed	87°C										
Over-run – Fixed	93°C		87°C			87°C (Heatpac, Slimline Heatpac & Kitchen only)					

* Where water demand exceeds this, a flow restrictor is recommended. This will ensure water supply at an adequate temperature

• Envirogreen™ Slimline Combi Boilers



Condensing Flue Kits

Firebird Products Ltd offer a comprehensive range of plastic and stainless steel condensing flue kits to complement the extensive range of oil-fired boilers. A flue is a critical part of boiler installation and a necessary requirement to remove gases created during the combustion process. A correctly installed flue will also ensure the clean and efficient operation of the boiler, resulting in optimum boiler performance and a longer design life. An incorrect installation will result in the boiler warranty becoming invalid.



NB: Only Firebird-approved flue kits and accessories may be used on Firebird boilers. Use of unapproved flue kits may invalidate the boiler warranty policy.

Plas-Fit Plastic Flue Kits & Accessories

Firebird was the first oil boiler manufacturer to introduce plastic flue kits to the UK market. The Plast-Fit range of plastic balanced flue kits provides flexibility, ease of installation and an aesthetically pleasing high-quality finish. Available in both Low Level and High Level options, the Plas-Fit flue kits are suitable for use with the **Envirogreen™** and **Enviolite™** ranges of boilers in outputs from 12kW to 35kW.

CPF005HHL



CPF005VHL



PDK005CPF



Product Code	Product Description
12-35kW	KITS (125mm dia)
CPF005KIT	PLAS-FIT Low Level Balanced Flue Kit (1 metre)
CPF005VHL	PLAS-FIT Vertical Balanced Flue Kit (3 metres)
CPF005HHL	PLAS-FIT High Level Flue Kit
12-35kW	ACCESSORIES (125mm dia)
CPF005EXA	PLAS-FIT Extension, 1000mm
CPF005EXB	PLAS-FIT Extension 500mm
CPF455ELB	PLAS-FIT 45 degree Elbow (pair)
CPF905ELB	PLAS-FIT 90 degree Elbow
CPF005WBK	Wall Bracket to suit PLAS-FIT
12-35kW	PLUME DISPERSAL (80mm dia)
PDK005CPF	PLAS-FIT Plume Management Kit
PDK045PBD	80mm Plas-Fit Plume 45 degree Elbow
PDK090PBD	80mm Plas-Fit Plume 90 degree Elbow
PDK005PXA	80mm Plas-Fit Plume 1000mm Extension
PDK005PWB	80mm Plas-Fit Plume Wall Bracket

Stainless Steel Flue Kits & Accessories

The Firebird range of stainless steel flue kits and accessories are suitable for use with the **Envirogreen™** and **EnviroLite™** ranges of boilers. Stainless steel flue kits are available for the following applications:

- Low level flue (including plume dispersal)
- Conventional flue
- High level flue (vertical & horizontal)

Low Level Flue Kits

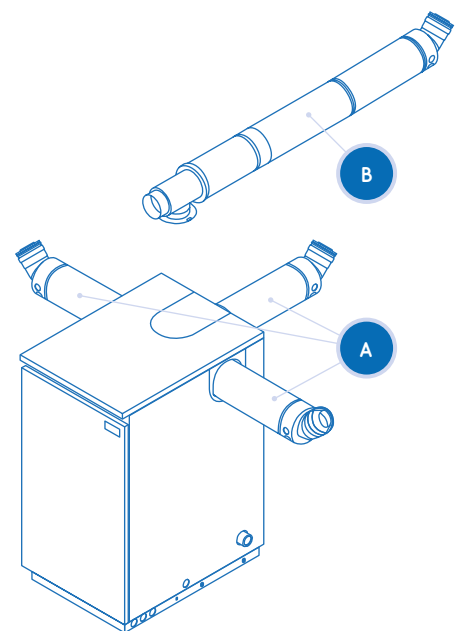
Low level flue kits have become popular in recent years due to their convenient size and ease of installation. When installing a condensing low level flue, consideration should be given to the discharge of the condensate plume. In some circumstances a plume dispersal kit may be necessary.

Product Code	Product Description
20-35kW KITS AND EXTENSIONS (125mm dia)	
A CBF005KIT	Low Level Flue Kit 380-600mm Stainless Steel Guard inc.
A CBF005SKT	Low Level Flue Kit (short) 200-280mm Stainless Steel Guard inc.
B CBF005EXT	450mm Extension for Low Level Flue Kit.
44-58kW KITS AND EXTENSIONS (150mm dia)	
A CBF006KIT	Low Level Flue Kit 380-600mm Stainless Steel Guard inc.
A CBF006SKT	Low Level Flue Kit (short) 200-280mm Stainless Steel Guard inc.
B CBF006EXT	450mm Extension for Low Level Flue Kit.
73kW KITS AND EXTENSIONS (185mm dia)	
A CBF007KIT	Low Level Flue Kit 380-600mm Stainless Steel Guard inc.
A CBF007SKT	Low Level Flue Kit (short) 200-280mm Stainless Steel Guard inc.
B CBF007EXT	450mm Extension for Low Level Flue Kit.

*A – Low Level Flue Kit

All low level flue kits contain:

- Telescopic balanced flue with Venturi Insert
- Terminal Guard
- Deflector Plate
- Silicone Lubricant
- Jubilee Clip for Air Snorkel
- Assembly Instructions

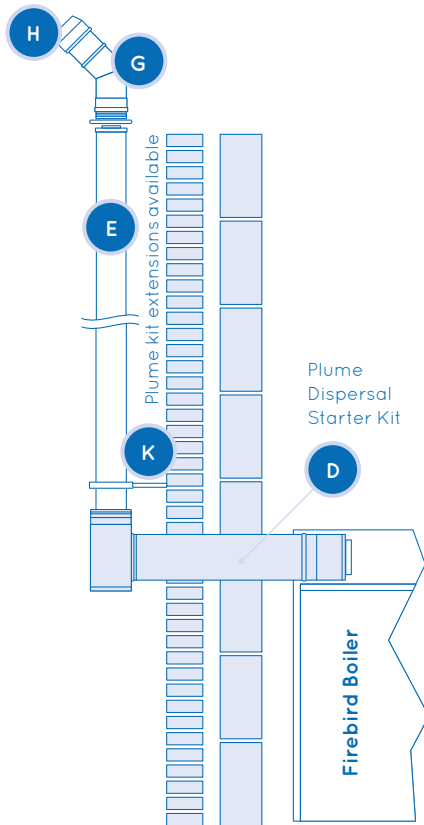


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NB: Only Firebird-approved flue kits and accessories may be used on Firebird boilers. Use of unapproved flue kits may invalidate the boiler warranty policy.

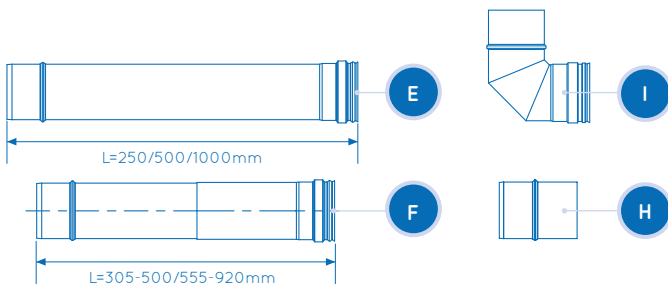
Stainless Steel Flue Kits & Accessories

Plume Dispersal Kits

A plume dispersal kit can be connected to the exhaust terminal of a low level flue in order to discharge flue gases (plume) up, over head height and neighbouring properties. Plume dispersal options can be used with a kit or retrofitted to an existing concentric flue.



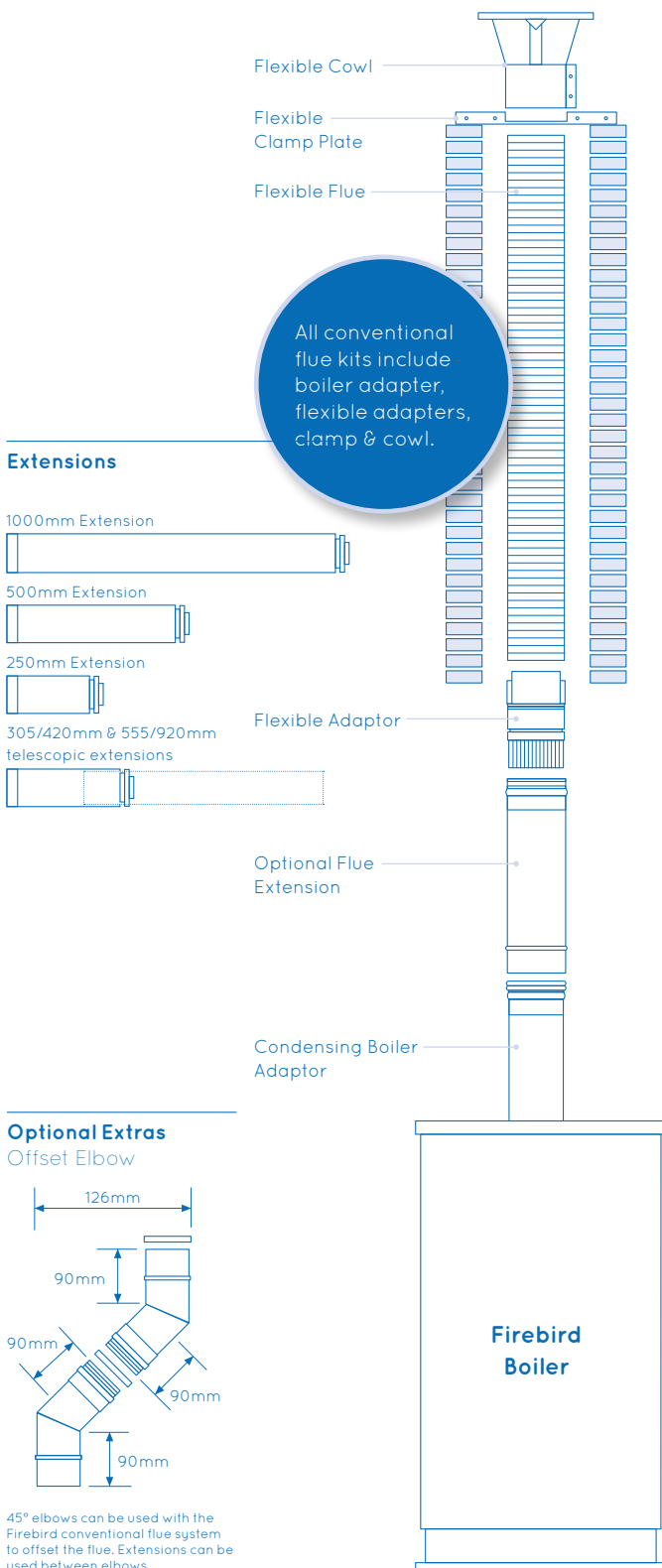
Other components available



Product Code	Product Description
12-35kW KIT AND EXTENSIONS (80mm dia)	
D PDK125KIT	5" Plume Dispersal Balanced Flue Starter Kit
E PDK250KIT	250mm length
E PDK500KIT	500mm length
E PDK1000KT	1000mm length
F PDK420KIT	305/420 adjustable length
F PDK920KIT	555/920 adjustable length
G PDK045BND	45 degree Bend
H PDK000HLE	Terminal Insert
I PDK090BND	90 degree Bend
J PDK000CHC	Cowl
K PDK000WBK	Wall Bracket
PDK080POP	Boiler Plume Flue Adaptor
44-58kW KIT AND EXTENSIONS (100mm dia)	
D PDK150KIT	Plume Dispersal Balanced Flue Starter Kit
E PDK256KIT	250mm length
E PDK506KIT	500mm length
E PDK1006KT	1000mm length
F PDK426KIT	305/420 adjustable length
F PDK926KIT	555/920 adjustable length
G PDK456BND	45 degree Bend
H PDK006HLE	Terminal Insert
I PDK906BND	90 degree Bend
J PDK006CHC	Cowl
K PDK006WBK	Wall Bracket
PDK100POP	Boiler Plume Flue Adaptor
73kW KIT AND EXTENSIONS (125mm dia)	
D PDK180KIT	Plume Dispersal Balanced Flue Starter Kit
E PDK257KIT	250mm length
E PDK507KIT	500mm length
E PDK1007KT	1000mm length
F PDK427KIT	305/420 adjustable length
F PDK927KIT	555/920 adjustable length
G PDK457BND	45 degree Bend
H PDK007HLE	High Level Elbow Terminal
I PDK907BND	90 degree Bend
J PDK007CHC	Cowl
K PDK007WBK	Wall Bracket
PDK125POP	Boiler Plume Flue Adaptor
100kW KIT AND EXTENSIONS (150mm dia)	
D PDK200KIT	Plume Dispersal Balanced Flue Starter Kit
E PDK258KIT	250mm length
E PDK508KIT	500mm length
E PDK1008KT	1000mm length
F PDK428KIT	305/420 adjustable length
F PDK928KIT	555/920 adjustable length
G PDK458BND	45 degree Bend
H PDK008HLE	High Level Elbow Terminal
I PDK908BND	90 degree Bend
J PDK008CHC	Cowl
K PDK008WBK	Wall Bracket
PDK150POP	Boiler Plume Flue Adaptor

Stainless Steel Flue Kits & Accessories

Conventional Flue Kits

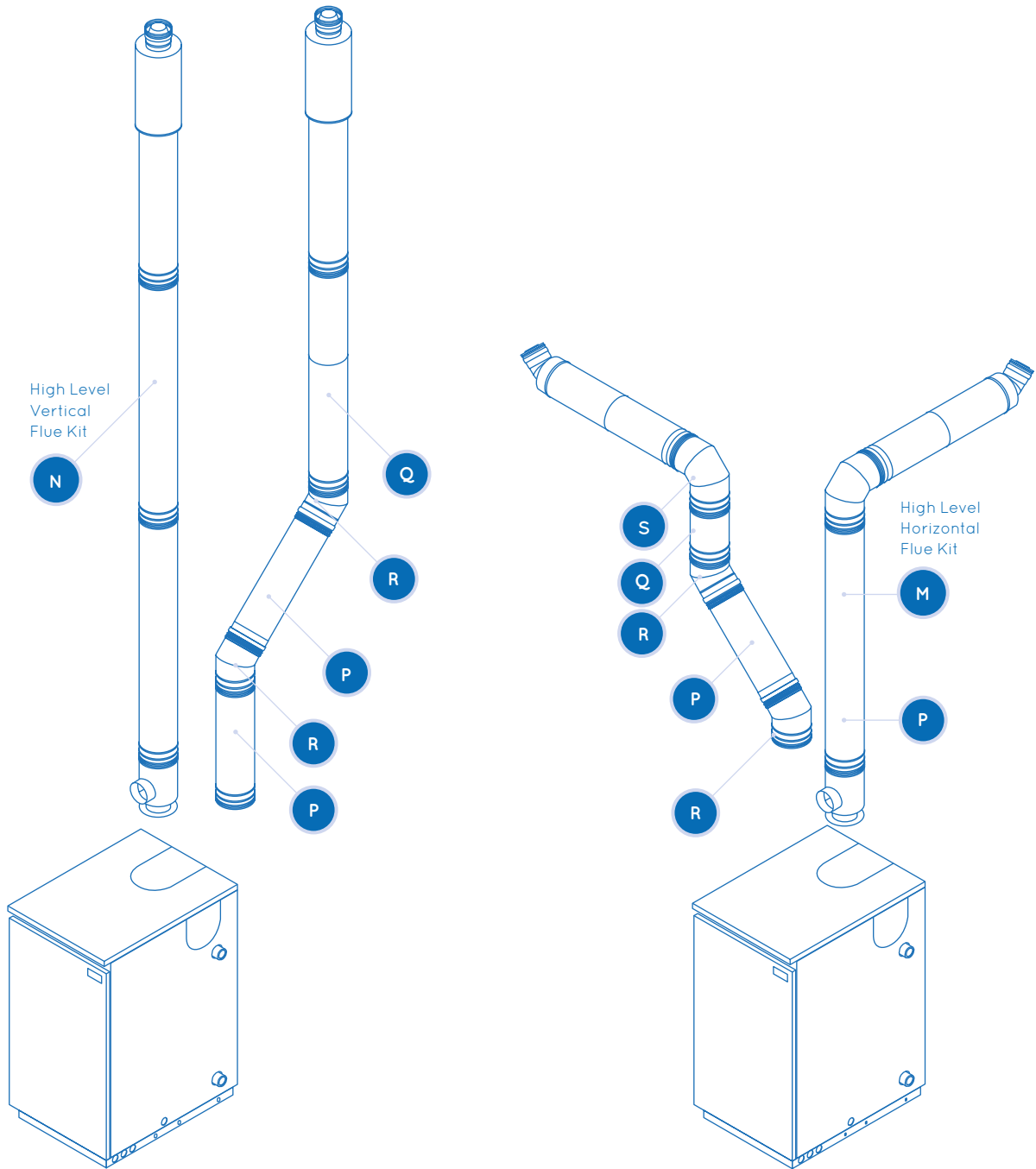


Product Code	Product Description
12-35kW	
KITS & EXTENSIONS (100mm dia) (Kit contents include boiler and flex adaptor, clamp and cowl)	
ECF003KIT	3m Kit
ECF006KIT	6m Kit
ECF008KIT	8m Kit
ECF010KIT	10m Kit
ECF012KIT	12m Kit
ECF014KIT	14m Kit
ECF016KIT	16m Kit
ECF100EXB	1000mm length white
ECF100EXC	500mm length white
ECF100EXD	250mm length white
ECF250ADJ	305/420mm adjustable length
ECF500ADJ	555/920mm adjustable length
ECFO45ELB	45° Bend
ECF100WBK	Wall Bracket
44-58kW	
KITS & EXTENSIONS (150mm dia) (Kit contents include boiler and flex adaptor, clamp and cowl)	
ECF606KIT	6m Kit
ECF608KIT	8m Kit
ECF610KIT	10m Kit
ECF612KIT	12m Kit
ECF614KIT	14m Kit
ECF616KIT	16m Kit
ECF150EXB	1000mm length white
ECF150EXC	500mm length white
ECF150EXD	250mm length
ECF256ADJ	305/420mm Adjustable length white
ECF506ADJ	555/920mm Adjustable length white
ECF456ELB	45° Bend
ECF150WBK	Wall Bracket
73-100kW	
KITS & EXTENSIONS (180mm dia) (Kit contents include boiler and flex adaptor, clamp and cowl)	
ECF706KIT	6m Kit
ECF708KIT	8m Kit
ECF710KIT	10m Kit
ECF712KIT	12m Kit
ECF714KIT	14m Kit
ECF716KIT	16m Kit
ECF180EXB	1000mm length white
ECF180EXC	500mm length white
ECF180EXD	250mm length
ECF257ADJ	305/420mm Adjustable length white
ECF507ADJ	555/920mm Adjustable length white
ECF457ELB	45° Bend
ECF180WBK	Wall Bracket

Stainless Steel Flue Kits & Accessories

High Level & Vertical Flue Kits

High level flue kits are the optimal flue system, as they provide good natural draft and ensure that the flue gases are discharged away from habitable areas.



Product Code	Product Description
12-35kW	
KITS & EXTENSIONS (125mm dia) (White Coated)	
M HLE005HHL	1075mm High Level Horizontal Flue Kit
N HLE005VHL	3 metre Vertical Balance Flue Kit
P HLE005EXA	1000mm High Level/Vertical Extension
P HLE005EXB	500mm High Level/Vertical Extension
P HLE005EXC	250mm High Level/Vertical Extension
Q HLE005EXD	330mm Adjustable Extension
R HLE455ELB	45 degree Bend
S HLE905ELB	90 degree Bend
COF005PFL	Pitch Flashing
COF005FFL	Flat Flashing
HLF005WBK	Wall Bracket
44-58kW	
KITS & EXTENSIONS (150mm dia) (Stainless Steel)	
M HLF006HHL	1075mm High Level Horizontal Flue Kit
N HLF006VHL	3 metre Vertical Balance Flue Kit
P HLF006EXA	1000mm High Level/Vertical Extension
P HLF006EXB	500mm High Level/Vertical Extension
P HLF006EXC	250mm High Level/Vertical Extension
Q HLF006EXD	330mm Adjustable Extension
Q HLF006EXE	555mm/920mm Adjustable length
R HLF456ELB	45 degree Bend
S HLF906ELB	90 degree Bend
COF006PFL	Pitch Flashing
COF006FFL	Flat Flashing
HLF006WBK	Wall Bracket

Product Code	Product Description
73kW	
KITS & EXTENSIONS (180mm dia) (Stainless Steel)	
M HLF007HHL	1075mm High Level Horizontal Flue Kit
N HLF007VHL	3 metre Vertical Balance Flue Kit
P HLF007EXA	1000mm High Level/Vertical Extension
P HLF007EXB	500mm High Level/Vertical Extension
P HLF007EXC	250mm High Level/Vertical Extension
Q HLF007EXD	305mm/420mm Adjustable length
Q HLF007EXE	555mm/920mm Adjustable length
R HLF457ELB	45 degree Bend
S HLF907ELB	90 degree Bend
HLF007WBK	Wall Bracket
100kW	
KITS & EXTENSIONS (200mm dia) (Stainless Steel)	
M HLF008HHL	1075mm High Level Horizontal Flue Kit
N HLF008VHL	3 metre Vertical Balance Flue Kit
P HLF008EXA	1000mm High Level/Vertical Extension
P HLF008EXB	500mm High Level/Vertical Extension
P HLF008EXC	250mm High Level/Vertical Extension
Q HLF008EXD	250mm Adjustable Extension
Q HLF008EXE	500mm Adjustable Extension
R HLF458ELB	45 degree Bend
S HLF908ELB	90 degree Bend
HLF008WBK	Wall Bracket

*M - High Level Horizontal Flue Kit

All high level horizontal flue kits contain:

- Boiler Adaptor
- 1000mm Vertical Length
- 90° Bend
- Jubilee Clip for air snorkel
- Wall Seal
- Silicone Lubricant
- Assembly Instruction
- Horizontal Terminal – 20-35kW = 500mm Fixed, 44-100kW = 300-500mm Adj.

*N - Vertical Flue Kit

All vertical flue kits contain:

- Boiler Adaptor
- Storm Collar
- 2 x Wall Brackets
- Silicone Lubricant
- Jubilee Clip for air snorkel
- Assembly Instructions
- 2 x 1000mm Lengths
- Rain Cowl
- 1000mm length including Terminal

Flue Kits for Blue Supreme™ Boilers

A range of flue kits has been designed specifically for use with the **Blue Supreme™** range of boilers. The flue kits are available for both low level and high level applications, in stainless steel or a white finish.

Product Code	Product Description
20-26kW	KITS & EXTENSIONS
BSF005CBF	Top Outlet Low Level Flue Kit - SS
BSF005WBF	Top Outlet Low Level Flue Kit - White
BSF005HHL	High Level Horizontal Flue Kit - SS
BSF005VHL	High Level Vertical Flue Kit - SS
BSF005WHH	High Level Horizontal Flue Kit - White
BSF005WVH	High Level Vertical Flue Kit - White

BSF005WVH



BSF005WHH



BSF005WBF



BSF005CBF



Firebird Support

Customer Service

Firebird pride themselves on offering the highest levels of customer service possible. The level of service provided is monitored on a regular basis to ensure customers' requirements are always met.



Technical Support

Based at Firebird's UK headquarters, the **Technical Hub** provides customers with a comprehensive technical support package which is designed to make the specification and installation process as simple as possible. For technical support please contact the Firebird Technical Hub on **01752 691177** or **technicalhub@firebird.uk.com**.



Quality

Firebird oil-fired boilers are manufactured in accordance with the highest quality standards including **ISO 9001:2008**. All products undergo rigorous testing procedures by external standards agencies to ensure optimum performance and efficiency. Every product is designed to meet a specific requirement and has been manufactured using premium quality materials to precise standards and tolerances.



Warranty

Firebird oil-fired boilers are covered by a 2-year manufacturers warranty as standard, with extended warranties of up to 10 years available on some ranges. For further information, please contact Firebird Products Ltd. To register your warranty please visit **www.firebird.uk.com**.



Firebird Products Ltd

Phoenix House
Eastern Wood Road
Langage Industrial Estate
Plympton
Plymouth PL7 5ET



T: 01752 691177
F: 01752 691131
E: sales@firebird.uk.com

www.firebird.uk.com

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