

*An rogha is fearr*

# FIREBIRD



## HEATING SOLUTIONS

### PRODUCT GUIDE



**Solar Thermal Systems**



**Condensing Oil Boilers**



**Inset Stoves**



**Biomass & Backboilers**

*Working towards a greener planet*

# Index

Firebird	2
Enviromax Condensing Oil Boilers	3
Condensing Flue Kits & Accessories	11
Boiler Spare Parts	14
Solar Thermal Systems	16
Tanks & Exchangers	21
Inset Stoves	22
Wood Gasification Boiler	24
Wood Pellet Boiler	25
Backboilers	26
Warranty	27

Firebird is proud to declare over 35 years manufacturing in the heating industry, developing some of the most renowned products on the market. Our product range covers everything you need for your heating solution.

From the robust elite manufacturing process, through to the dedicated sales, technical and training teams, Firebird can guarantee the highest quality product and service. In addition, our products are rigorously tested and approved to all relevant European and national standards.

We are all aware that the regulations require us to build more energy conscious houses with respect to

insulation, heating and orientation. This is why Firebird continue to expand its product range. In 2014, we launched Europe's most efficient boiler, the Enviromax Blue Supreme as well as the Blue Flame Enviromax boiler and the smoke exempt wood burning stove. All of these products form part of our BER "A" rated heating solution and are all manufactured in Ireland.

Our technical team are always on hand to advise on the best heating system for your domestic or commercial premises. We have the capability to integrate all our products to one combined system, reducing your energy bills by at least 20% per annum.

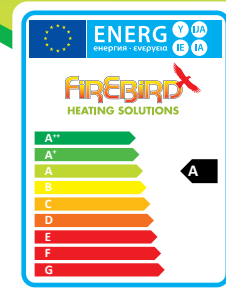
Firebird is ISO-9001 accredited and a long-standing member of OFTEC.



In addition, Firebird products enjoy some of the following accreditations:



# Enviromax Condensing Oil Boilers



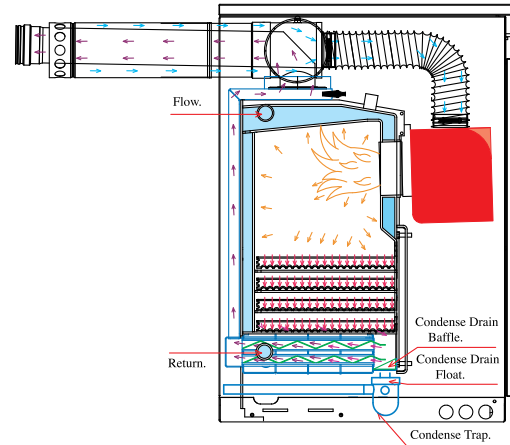
## Features & Benefits

### Erp and HARP A Rated

- A modern, truly condensing boiler that delivers the efficiency promised.
- Up to 25% savings in fuel consumption compared with non-condensing boilers.
- Lower emissions and carbon dioxide.

### Designed as a condensing boiler - not an "add-on"

- The condensing heat exchanger is an integral part of the boiler shell.
- Condenser is located at the bottom of the appliance.
- There is no fear of corrosion.
- Easy to install and service.



## Robust design

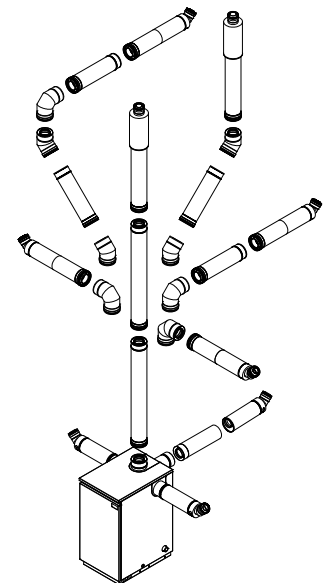
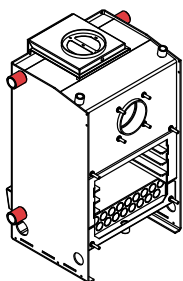
- Enviromax™ boilers are built from premium grade steel with a minimum 4 mm gauge.
- All indoor models have a heavy duty casing with a polyester-coated finish to protect the boiler from normal wear and tear.

## Widest range on the market

- With up to 60 models available, we have something to suit every customer. Ranging from 12kW to 100kW.



## Installer Friendly Features



- 4-tapping points on most boiler models - increases installation options.
- Front service access - easy access to common service parts.
- 7-pin plug - simplifies wiring.
- Optional condensate pump - lifts up to 5m - perfect solution where natural gradient is not available.
- Multi-directional flue options - increases installation options.

# Enviromax Heatpac & Slimline Heatpac

The Enviromax Heatpac range does not need to be housed in a building, thereby reducing cost and labour. The boilers come with removable sides for easy access to any part of the unit. Piping may be carried out from the back or from underneath.

## Features

### Heatpac

- High quality weather-proof PVC-coated casing (outputs up to 58kW).
- Fully insulated to prevent heat loss.
- Patented heat exchanger design.
- 4-tapping points for ease of installation.
- Fitted with frost protection stat.
- Whisper quiet operation.
- Stainless steel terminal guard.
- High performance Riello RDB burner.
- Seven models in outputs from 12kW to 73kW.

### Slimline Heatpac (as above plus the following)

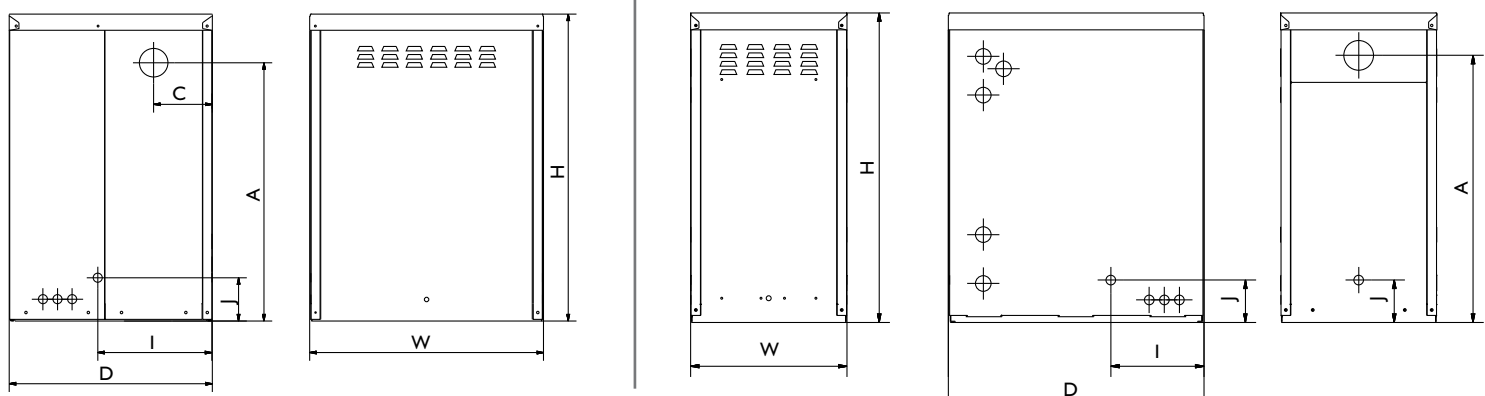
- Only 465mm wide.
- 3-tapping points for ease of installation.
- Three models in outputs from 15kW to 35kW.



## Specification

Model	Sales Code	Weight kg	Dimensions (mm)							
			H	W	D	C	A	I	J	
<b>Enviromax</b>										
Heatpac 12-18kW	CON015HPK	134	945	620	625	180	795	351	133	
Heatpac 12-20kW	CON020HPK	154	945	720	625	180	795	351	133	
Heatpac 20-26kW	CON026HPK	154	945	720	625	180	795	351	133	
Heatpac 26-35kW	CON035HPK	158	945	720	625	180	795	351	133	
Heatpac 35-44kW	CON044HPK	244	1074	839	855	180	936	507	134	
Heatpac 44-58kW	CON058HPK	250	1074	839	855	180	936	507	134	
Heatpac 58-73kW	CON073HPK	280	1200	903	855	180	1039	507	134	
<b>Slimline Heatpac</b>										
Slimline Heatpac 12-20kW	CON020SLM	147	920	465	760	-	794	277	126	
Slimline Heatpac 20-26kW	CON026SLM	150	920	465	760	-	794	277	126	
Slimline Heatpac 26-35kW	CON035SLM	153	920	465	760	-	794	277	126	

## Dimensions (mm)



Heatpac, Systempac, Combipac

Slimline Heatpac

# Enviromax Systempac & Combipac

The Enviromax Systempac and Combipac are external boilers with similar specifications to their equivalent indoor model, with the addition of a built in frost thermostat.

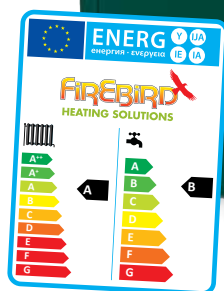
## Features

### Systempac

- High quality weather-proof PVC-coated casing.
- Low pressure switch protects boiler in the event of system water loss.
- Fully insulated to prevent heat loss.
- Patented heat exchanger design.
- Fitted with frost protection stat.
- Whisper quiet operation.
- Stainless steel terminal guard.
- Flue can exit left or right.
- High performance Riello RDB burner.
- Four models in outputs from 15kW to 44kW.

### Combipac

- Excellent hot water performance - over 20 litres/min on 35kW model.
- PCB controller using highly accurate thermistors.
- Rapid re-heat after draw-off.
- High quality weather-proof PVC-coated casing.
- Fully insulated to prevent heat loss.
- Patented heat exchanger design.
- Flue can exit left or right.
- Twin circulating pumps – no diverter valve required
- Fitted with frost protection stat.
- Fully insulated and acoustically designed for ultra quiet operation.
- High performance Riello RDB burner.
- Three models in outputs from 15kW to 35kW.



Systempac

## Specification

Model	Sales Code	Weight kg	Dimensions (mm)						
			H	W	D	C	A	I	J
<b>Enviromax</b>									
Systempac 12-20kW	CSP020NKT	163	945	720	625	180	795	351	133
Systempac 20-26kW	CSP026NKT	163	945	720	625	180	795	351	133
Systempac 26-35kW	CSP035NKT	166	945	720	625	180	795	351	133
Systempac 35-44kW	CSP044NKT	270	1074	839	855	180	936	507	134
Combipac 12-20kW	CCP020000	206	945	720	625	180	795	351	133
Combipac 20-26kW	CCP026000	206	945	720	625	180	795	351	133
Combipac 26-35kW	CCP035000	209	945	720	625	180	795	351	133

Dimension diagram - See page 4



Combipac

# Enviromax Popular

Ideal for installation in a dedicated boiler house, garage or outbuilding.



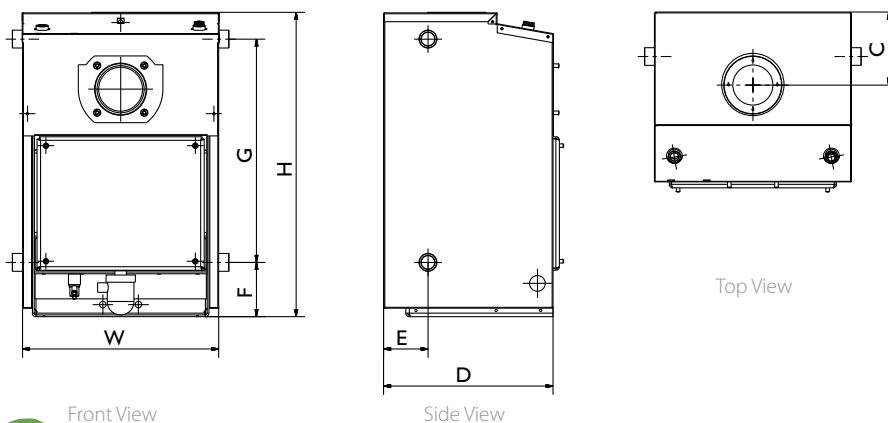
## Features

- Patented heat exchanger design.
- Built from premium quality steels.
- Compact design.
- 4-tapping points for ease of installation.
- Sturdy well insulated casing minimise heat loss.
- High performance Riello RDB burner.
- Eight models in outputs from 12kW to 100kW.

## Specification

Model	Sales Code	Weight kg (incl. burner)	Dimensions(mm)				BURNER DEPTH	C	E	F	G
			H	W	D						
Popular 12-18kW	CPO015RDB	99	684	344	381	202	164	100	122	502	
Popular 12-20kW	CPO020RDB	107	684	441	381	202	164	100	122	502	
Popular 20-26kW	CPO026RDB	112	684	441	381	202	164	100	122	502	
Popular 26-35kW	CPO035RDB	115	684	441	381	202	164	100	122	502	
Popular 35-44kW	CPO044RDB	182	815	470	531	202	154	96	123	620	
Popular 44-58kW	CPO058RDB	190	815	470	531	253	154	96	123	620	
Popular 58-73kW	CPO073RDB	210	873	530	525	253	155	96	123	670	
Popular 80-100kW	CPO100RDB	300	1052	625	745	253	139	112	130	832	

## Dimensions (mm)



Front View

Side View

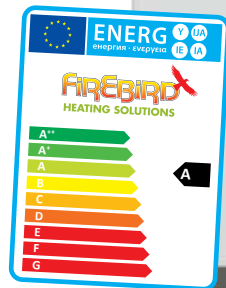
Top View

# Enviromax Kitchen

A high quality finish ensures that this boiler won't look out of place in your kitchen.

## Features

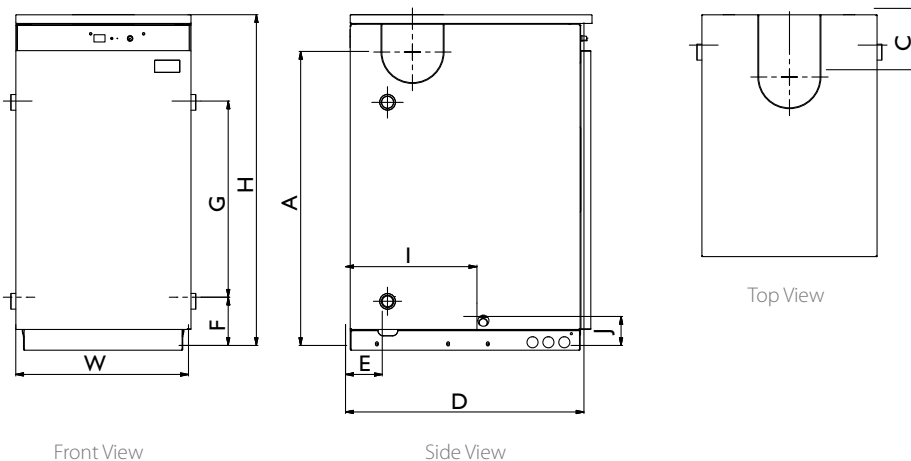
- Compact design - fits under standard kitchen worktop (outputs up to 35kW).
- Hard wearing casings with premium quality finish.
- Patented heat exchanger design.
- 4-tapping points for ease of installation.
- Front service access.
- PCB controller with anti cycling function (outputs up to 35kW).
- Fully insulated and acoustically designed for ultra quiet operation.
- Multi directional flue options.
- High performance Riello RDB burner.
- Optional condensate pump.
- Eight models in outputs from 12kW to 100kW.



## Specification

Model	Sales Code	Weight kg	Dimensions(mm)											
			H	W	D	A	C	E	F	G	I	J		
Enviromax														
Kitchen 12-18kW	CKI015PCB	115	847	345	610	753	157	94	124	502	336	75		
Kitchen 12-20kW	CKI020PCB	125	847	442	610	753	157	94	124	502	336	75		
Kitchen 20-26kW	CKI026PCB	128	847	442	610	753	157	94	124	502	336	75		
Kitchen 26-35kW	CKI035PCB	131	847	442	610	753	157	94	124	502	336	75		
Kitchen 35-44kW	CKI044NKT	210	1046	464	852	914	154	100	125	620	485	86		
Kitchen 44-58kW	CKI058NKT	216	1046	464	852	914	154	100	125	620	485	86		
Kitchen 58-73kW	CKI073NKT	242	1196	524	851	1024	157	100	125	670	484	86		
Commercial Utility 80-100kW	CUT100NKT	390	1249	623	1071	-	158	130	132	832	723	72		

## Dimensions (mm)



# Enviromax System

Factory-fitted expansion vessel and circulating pump saves space and installation time.

## Features

- Compact design - fits under standard kitchen worktop (outputs up to 35kW).
- Low pressure switch protects boiler in the event of system water loss.
- Hard wearing casings with premium quality finish.
- Patented heat exchanger design.
- Front service access.
- PCB controller with anti cycling function (outputs up to 35kW)
- Fully insulated and acoustically designed for ultra quiet operation.
- Multi directional flue options.
- High performance Riello RDB burner.
- Optional condensate pump.
- Four models in outputs from 15kW to 44kW.

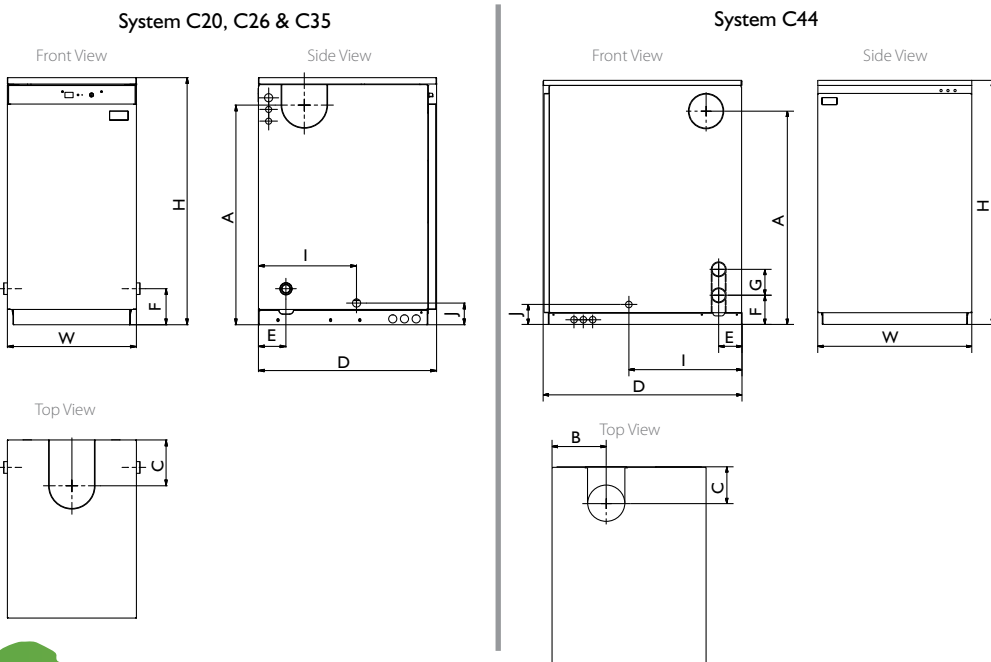


Circulating Pump

## Specification

Model	Sales Code	Weight kg	Dimensions(mm)													
			H	W	D	A	B	C	E	F	G	I	J			
Enviromax																
System 12-20kW	CSB020NKT	143	844	442	610	752	-	157	94	123	-	336	74			
System 20-26kW	CSB026NKT	146	844	442	610	752	-	157	94	123	-	336	74			
System 26-35kW	CSB035NKT	149	844	442	610	752	-	157	94	123	-	336	74			
System 35-44kW	CSB044NKT	235	1046	660	852	914	232	158	100	125	111	485	86			

## Dimensions (mm)





# Enviromax Combi

The Enviromax Combi boiler provides both domestic hot water and central heating water in a single appliance, saving you the cost and space associated with a hot water tank.

## Features

- Excellent hot water performance
  - over 20 litres/min on 35kW model.
- PCB controller using highly accurate thermistors.
- Rapid re-heat after hot water draw-off.
- Compact design - fits under standard kitchen worktop (outputs up to 35kW).
- Hard wearing casings with high quality finish.
- Patented heat exchanger design.
- Twin circulating pump - no diverter valve required.
- Fully insulated and acoustically designed for ultra quiet operation.
- Multi directional flue options.
- High performance Riello RDB burner.
- Optional condensate pump and timer controllers.
- Three models in outputs from 15kW to 35kW.



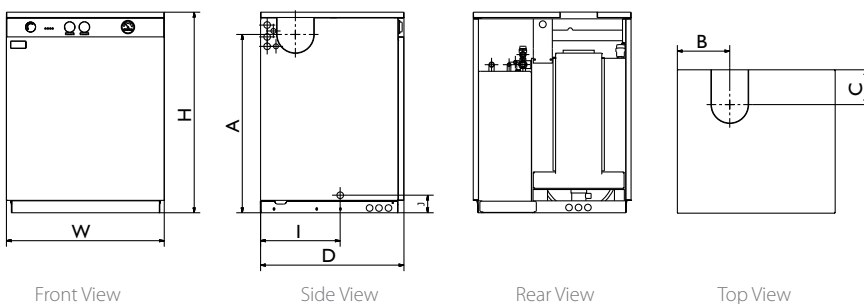
- Temperature Control
- Operation Lights
- Twin Timer Positions
- 7 Pin Plug Power Supply & Timers
- Pressure Gauge



## Specification

Model	Sales Code	Weight kg	Dimensions(mm)							
			H	W	D	A	B	C	I	J
Enviromax										
Combi 12-20kW	CCO020NKT	173	845	665	605	750	220	147	335	75
Combi 20-26kW	CCO026NKT	176	845	665	605	750	220	147	335	75
Combi 26-35kW	CCO035NKT	179	845	665	605	750	220	147	335	75

## Dimensions (mm)



# Technical Specification



Enviromax  
Combi / Combipac



Enviromax  
System / Systempac



Enviromax  
Kitchen / Heatpac / Popular / Slimline Heatpac



Heat Output	kW Max. BTU/h ('000)	12-20+20-26		12-20+20-26			12-18	12-20+20-26	26-35	35-44/44-58	58-73	80-100	
		50-90	90-120	50-90	90-120	120-150	40-60	50-90	90-120	120-200	200-250	270-340	
<b>CONNECTIONS</b>													
Heating Flow		22 mm	28 mm	22 mm	28 mm	1½" BSP	1" BSP	1" BSP	1" BSP	1½" BSP	1½" BSP	2" BSP	
Heating Return		22 mm	28 mm	1" BSP	1" BSP	1½" BSP	1" BSP	1" BSP	1" BSP	1½" BSP	1½" BSP	2" BSP	
Mains Cold Feed (Copper)		15 mm	15 mm	15 mm	15 mm	15 mm	-	-	-	-	-	-	
Hot Water Delivery (Copper)		15 mm	15 mm	-	-	-	-	-	-	-	-	-	
Drain Off Valve		½" BSP	½" BSP	½" BSP	½" BSP	½" BSP	½" BSP	½" BSP	½" BSP	½" BSP	½" BSP	½" BSP	
Safety Pressure Valve Outlet (Copper)		15 mm	15 mm	15 mm	15 mm	15 mm	-	-	-	-	-	-	
Condensate Trap		22 mm PLASTIC		22 mm PLASTIC					22 mm PLASTIC				
<b>CIRCULATING PUMP</b>													
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?		✓	✓	✓	✓	✓	✗	✗	✗	✗	✗	✗	
<b>WATER CONTENT</b>													
Boiler (Litres)		24	24	24	24	45	24	24	24	43.5	54	75	
Primary Tank (Litres)		40	40	-	-	-	-	-	-	-	-	-	
<b>D.H.W. GUIDE PERFORMANCE*</b>													
in litres/min (120 litre draw-off at 40°C Δt.)		16	20	-	-	-	-	-	-	-	-	-	
<b>FLUE (INDOOR BOILERS)</b>													
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")	
Conventional Flue Assembly (mm)		100 id.	100 id.	100 id.	100 id.	150 id.	100 id.	100 id.	100 id.	150 id.	180 id.	180 id.	
Max. Low Level Flue Length (metres)		3	3	3	3	3	3	3	3	3	3	3	
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	
<b>INTEGRAL FLUES ON HEATPAC MODELS</b>													
		-	-	-	-	-	-	-	-	-	-	-	
<b>HEATING SYSTEM (SEALED)</b>													
		Fit in accordance with BS 7074 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			3 bar					
<b>MAINS WATER SUPPLY PRESSURE</b>													
		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.											
<b>WATER SIDE RESISTANCE</b>													
		<b>Flow Rate To Give A Nominal Output At 10k Differential</b>						<b>20kw</b>	<b>26kw</b>	<b>35kw</b>			
		Flow Rate Measured (Kg h-1)						1642	2135	2874			
		Waterside Resistance (mbar)						0.18	0.18	0.18			
		<b>Flow Rate To Give A Nominal Output At 20k Differential</b>						<b>20kw</b>	<b>26kw</b>	<b>35kw</b>			
		Flow Rate Measured (Kg h-1)						870	1131	1523			
		Waterside Resistance (mbar)						0.19	0.19	0.19			
<b>PRESSURE JET OIL BURNERS</b>													
		RIELLO RDB 2.2 up to C44 & RIELLO RDB 4.2 from C58 to C100											
<b>FUEL</b>													
		C2 Kerosene											
<b>ELECTRICAL SUPPLY</b>													
		230V AC 50Hz 5A											
<b>FROST THERMOSTATS</b>													
<b>FROST STAT FITTED TO ALL OUTDOOR MODELS</b>													
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 a water supply at an adequate temperature.

# Condensing Flue Kits & Accessories

Flues are a critical part of a boiler installation. A correctly installed flue will ensure clean and efficient operation of the boiler. Firebird offer a range of high quality stainless steel flue kits that ensure optimum boiler performance and longer design life. Three types are available:

- Low Level Flue
- High Level Flue (Vertical & Horizontal)
- Conventional Flue

**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.**



## LOW LEVEL FLUE KITS

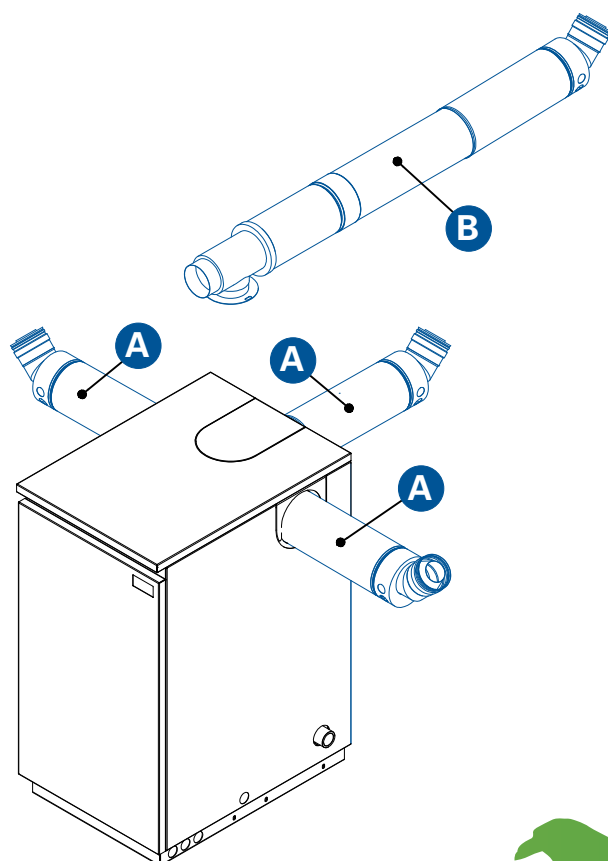
Low level flue kits have become popular in recent years due to their convenient size and ease of installation. When installing a condensing low level flue, consideration should be given to the discharge of the condensate plume as it may cause a nuisance to neighbouring properties. In some cases a plume dispersal kit may be advisable.

Sales Code	Product Description
<b>12-35kW</b>	<b>KITS AND EXTENSIONS (125mm dia)</b>
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
<b>44-58kW</b>	<b>KITS AND EXTENSIONS (150mm dia)</b>
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
<b>73kW</b>	<b>KITS AND EXTENSIONS (180mm dia)</b>
A* CBF007KIT	Low Level Flue Kit 380-600mm Stainless Steel Guard inc.
B CBF007EXT	450mm Extension for Low Level Flue Kit

### \* A - Low Level Flue Kit

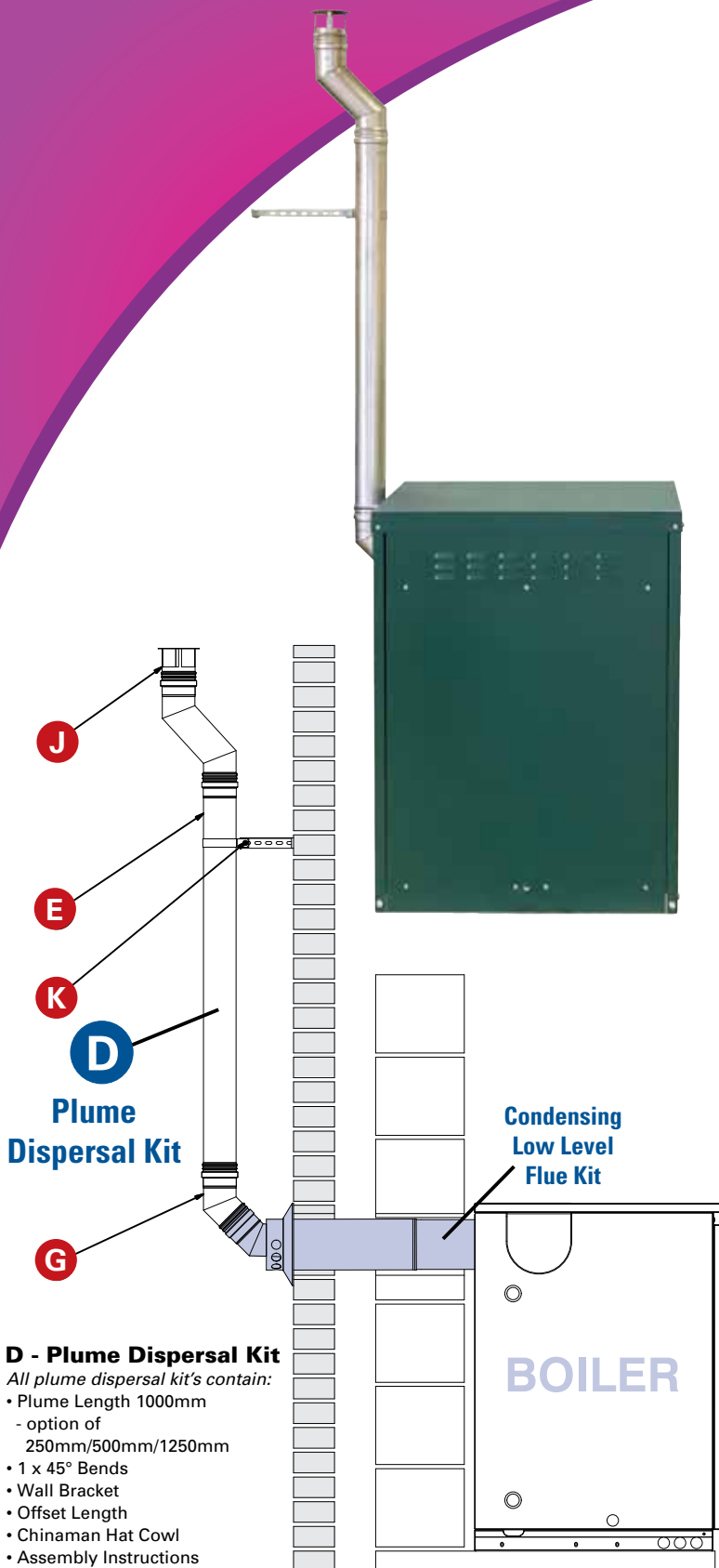
All low level flue kits contain:

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



## 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 either used with a kit or retro-fitted to an existing concentric flue.

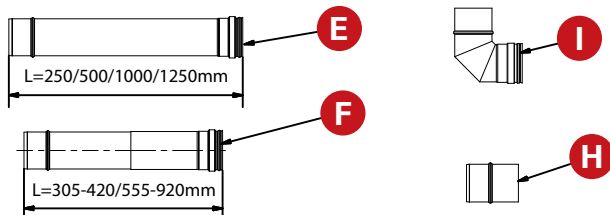


### \* D - Plume Dispersal Kit

All plume dispersal kit's contain:

- Plume Length 1000mm
- option of 250mm/500mm/1250mm
- 1 x 45° Bends
- Wall Bracket
- Offset Length
- Chinaman Hat Cowl
- Assembly Instructions

### Other components available



### Sales Code Product Description

Sales Code	Product Description
<b>12-35kW</b>	<b>KIT AND EXTENSIONS (80mm dia)</b>
D* PDK005SET	Plume Dispersal Kit
E PDK250KIT	250mm Length
E PDK500KIT	500mm Length
E PDK1000KT	1000mm Length
F PDK420KIT	305/420mm Adjustable Length
F PDK920KIT	555/920mm Adjustable Length
G PDK045BND	45 degree Bend
H PDK005TRM	Terminal With Mesh
I PDK090BND	90 degree Bend
J PDK000CHC	Chinaman Hat Cowl
K PDK000WBK	Wall Bracket
PDK080POP	Adaptor

Sales Code	Product Description
<b>44-58kW</b>	<b>KIT AND EXTENSIONS (100mm dia)</b>
D* PDK006SET	Plume Dispersal Kit
E PDK256KIT	250mm Length
E PDK506KIT	500mm Length
E PDK1006KT	1000mm Length
F PDK426KIT	305/420mm Adjustable Length
F PDK926KIT	555/920mm Adjustable Length
G PDK456BND	45 degree Bend
H PDK006TRM	Terminal With Mesh
I PDK906BND	90 degree Bend
J PDK006CHC	Chinaman Hat Cowl
K PDK006WBK	Wall Bracket
PDK100POP	Adaptor

Sales Code	Product Description
<b>73kW</b>	<b>KIT AND EXTENSIONS (125mm dia)</b>
D* PDK007SET	Plume Dispersal Kit
E PDK257KIT	250mm Length
E PDK507KIT	500mm Length
E PDK1007KT	1000mm Length
F PDK427KIT	305/420mm Adjustable Length
F PDK927KIT	555/920mm Adjustable Length
G PDK457BND	45 degree Bend
H PDK007TRM	Terminal With Mesh
I PDK907BND	90 degree Bend
J PDK007CHC	Chinaman Hat Cowl
K PDK007WBK	Wall Bracket
PDK125POP	Adaptor

Sales Code	Product Description
<b>100kW</b>	<b>KIT AND EXTENSIONS (150mm dia)</b>
E PDK258KIT	250mm Length
E PDK508KIT	500mm Length
E PDK1008KT	1000mm Length
F PDK428KIT	305/420mm Adjustable Length
F PDK928KIT	555/920mm Adjustable Length
G PDK458BND	45 degree Bend
H PDK008TRM	Terminal With Mesh
I PDK908BND	90 degree Bend
J PDK008CHC	Chinaman Hat Cowl
K PDK008WBK	Wall Bracket
PDK150POP	Adaptor

# HIGH LEVEL HORIZONTAL & 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.

Sales Code	Product Description
<b>12-35kW</b>	<b>KITS &amp; EXTENSIONS (125mm dia)</b>
M* HLF005HSS	1075mm High Level Horizontal Flue Kit
N* HLF005VSS	3 metre High Level Vertical Flue Kit
P HLF005XAS	1000mm High Level Vertical Extension
P HLF005XBS	500mm High Level Vertical Extension
P HLF005XCS	250mm High Level Vertical Extension
Q HLF005XDS	305mm/420mm High Level Vertical Adjustable Length
Q HLF005XES	555mm/920mm Adjustable Length
R HLF455SLB	45 degree Bend
S HLF905LBS	90 degree Bend
HLF005WBS	Wall Bracket
<b>44-58kW</b>	<b>KITS &amp; EXTENSIONS (150mm dia)</b>
M* HLF006HHL	1075mm High Level Horizontal Flue Kit
N* HLF006VHL	3 metre High Level Vertical 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	305mm/420mm Adjustable Length
Q HLF006EXE	555mm/920mm Adjustable Length
R HLF456ELB	45 degree Bend
S HLF906ELB	90 degree Bend
HLF006WBK	Wall Bracket
<b>73kW</b>	<b>KITS &amp; EXTENSIONS (180mm dia)</b>
M* HLF007HHL	1075mm High Level Horizontal Flue Kit
N* HLF007VHL	3 metre High Level Vertical 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
<b>100kW</b>	<b>KITS &amp; EXTENSIONS (200mm dia)</b>
M* HLF008HHL	1075mm High Level Horizontal Flue Kit
N* HLF008VHL	3 metre High Level Vertical 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	305mm/420mm Adjustable Length
Q HLF008EXE	555mm/920mm Adjustable Length
R HLF458ELB	45 degree Bend
S HLF908ELB	90 degree Bend
HLF008WBK	Wall Bracket

## \* M - High Level Horizontal Flue Kit

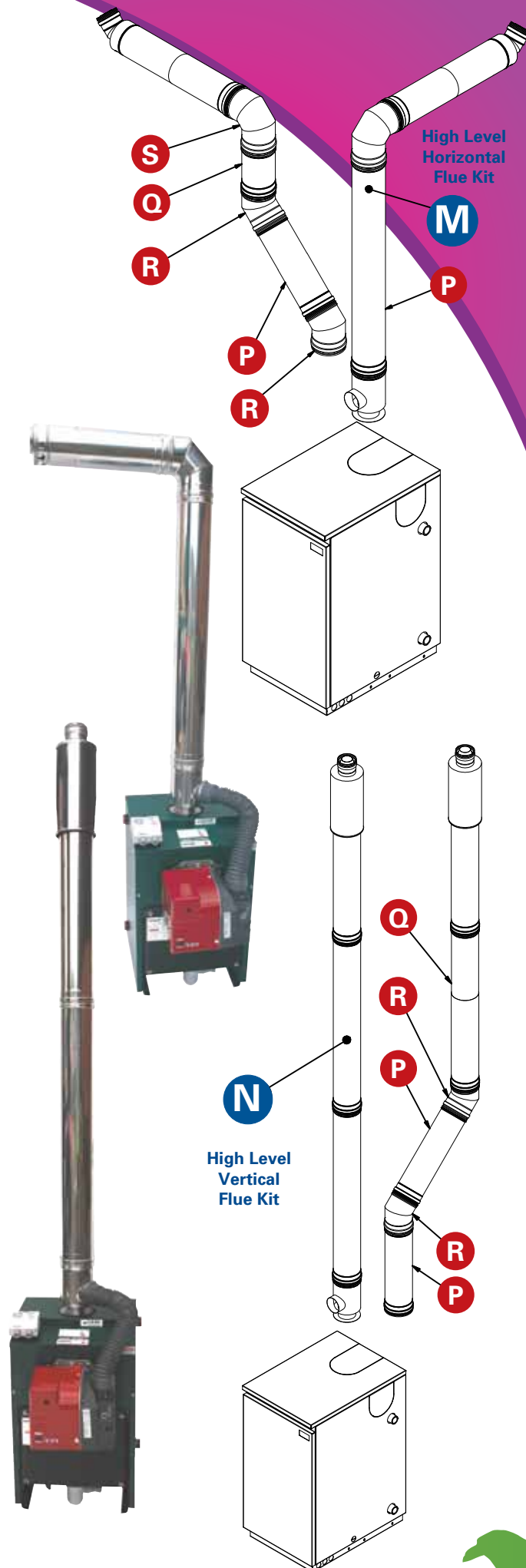
All high level horizontal flue kits contain:

- Boiler Adaptor
- 90° Bend
- Wall Seal
- Assembly Instructions
- 1000mm Vertical Length
- Telescopic Horizontal Section
- Silicone Lubricant

## \* N - High Level Vertical Flue Kit

All high level vertical flue kits contain:

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




# Boiler Spare Parts

Sales Code	Description	Sales Code	Description	Sales Code	Description
<b>Burner &amp; Oil Hose</b>		<b>G Burner Spares</b>		<b>RDB Burner Spares</b>	
BRN070RB2	RDB2.2 Burner, 20kW	ZE20031996	Pump	ZE20030953	Pump
BRN090RB2	RDB2.2 Burner, 26kW	ZE3001156	Control box	ZE3008652	Control Box
BRN120RB2	RDB2.2 Burner, 35kW	ZE3002280	Photocell	ZE3008646	Photocell
BRN150RB3	RDB2.2 Burner, 44kW	ZE3007971	Motor	ZE20071577	Motor & Condenser
BRN200RB4	RDB4.2 Burner, 58kW	ZE3002279	Coil	ZE3008648	Coil
BRN250RB4	RDB4.2 Burner, 73kW	ZE20087025	Capacitor	ZE20071576	Capacitor 4.5uf
ZE3007621	Flexible Oil Hose 600mm - Kerosene	ZE3005787	Gasket	ZE3005787	Gasket
ZE3005720	Flexible Oil Hose 900mm - Kerosene	ZE3020500	Hydraulic Ram	ZE3007513	Electrode
ZE20032005	Flexible Pipe 600mm - Bio & Gas Oil	ZE3005721	Electrode Set - G3B	ZE3008860	Electrode (short head)
ZE20022601	Flexible Pipe 900 mm - Bio & Gas Oil	ZE3008636	Flange		
ZE3003602	Connector 3/8 to 1/4	ZE3000439	Centre Seals		
ZE3009068	Connector 3/8 to 3/8	ZE3000443	10 Pack Drive Coupling		

Sales Code	Description	Sales Code	Description
<b>Thermostat &amp; Electrical Parts</b>			
ACCHPKSTK	Dual Thermostat D5 (Heatpac)	ACC001ORS	Over Run Stat (Combi) (93° C)
ACC000DST	Dual Thermostat P5 (Popular)	ACC000OHS	Overheat Stat (Slimline Heatpac) (87° C)
ACC000EAS	Early Alert Stat (Combi) Pump Over Run Stat (Kitchen & Heatpac) (87° C)	ACC000RTS	Relay Tank Stat (Combi) (78° C)
ACC000RTP	Flow Switch Probe Thermistor (Red)	ACCCOMPKT	Stat Pocket 000949 4 pocket
ACC000TDF	Thermodisc Frost Stat	ACC003PKT	Stat Pocket DIA 15 x 16 3 pocket
ACC000FST	Frost Stat TLM 2557	ACC000WTP	Boiler Thermistor Probes (White)
ACC000LMT	High Limit Stat (Firebird 'S' - Combi Mechanical) (110° C)	ACC000WTP	Tank Thermistor Probes (White)
ACC000TIM	Combi Twin Timer Kit (Combi Mechanical)	ACC000ETM	Combi Twin Timer Kit Electronic
ACC000PCB	PCB Board (Combi)	ACC000BAS	Relay Base 11 Pin
ACC000PSW	Pressure Switch	ACC000CLK	Time Clock
ACC000RLY	Relay 230 Vac	ACC000STA	Control Stat (Firebird 'S' - Combi Mechanical) (50° - 80°C)
ACC075MGF	3/4" Magnetic Filter	ACC000PHX	Phoenix Condensate Anti-Freeze Protection
ACC100MGF	1" Magnetic Filter		

Full lists of spare parts are provided in the boiler manuals.

Sales Code	Description		Sales Code	Description	
<b>Plumbing</b>					
ACCCOMMAC	Air Vent 1/8" Manual		ACC012WSH	Fibre Washer PHE 12.5 x 18.5 x 1.5mm red	
ACCCOMAAV	Air Vent Auto		ACC017WSH	Fibre Washer PHE 17 x 24 x 1.5mm red	
ACC022VAL	Ball Valve - 22mm		ACC015FCV	Filling Loop Check Valve	
ACC000PCV	Check Valve Nylon		ACC000FLH	Filling Loop Hose 400mm	
ACC034MMC	Check Valve 3/4" Brass Male/Male		ACCCOMFSW	Flowswitch, Sika VKX15MIFIREB03	
ACC034MFC	Check Valve 3/4" Brass Male/Female		ACCCOMDCV	Double Check Valve 15mm	
ACC034FMC	Check Valve 3/4" Brass Female/Male		ACC025PHE	Plate Heat Exchanger - 25	
ACCENVPMP	Condensate Pump		ACC031PHE	Plate Heat Exchanger - 31	
ACC000TRP	Condensate Trap		ACCCOMPRG	Pressure Gauge (Combi - System)	
ACCCOMHOS	Expansion Vessel Flexible Hose		ACCCOMSRV	Pressure Release Valve	
ACC012PVL	Expansion Vessel 12 litre		ACC022PIV	Pump Isolating Valve 22mm	
ACC014PVL	Expansion Vessel 14 litre		ACCCOMTMV	Thermostatic Mixing Valve (Combi) 15mm	
ACC018PVL	Expansion Vessel 18 litre				

Description		Sales Code			
<b>Other Parts</b>					
	kW	20/26/35	44/58	73	100
Door Gaskets -	Ceramic	ACC035GSK	ACC044GSK	ACC073GSK	ACC100GSK
Door Gaskets -	Graphite	ACC035GRA	ACC044GRA	ACC073GRA	ACC100GRA

# Solar Thermal Systems

Firebird's range of solar thermal systems is arguably the most extensive on the market and offers customers a wide choice of collectors, system configurations and accessories. Designed and manufactured to Firebird's exacting standards, our solar systems are second to none in terms of performance, durability and efficiency. All our solar systems have been placed through rigorous testing to ensure the highest standards have been achieved.



**CPK7210-N Flat Panel Collector**



**TZ58-1800 Heat Pipe Solar Collector**



**CVSKC-10 Vacuum Tube Collector**

Solar thermal systems can deliver up to 70% of the hot water requirements for an average household in Ireland. Installation of solar energy on a larger scale, ie. commercial, can make a great contribution to commercial energy costs.

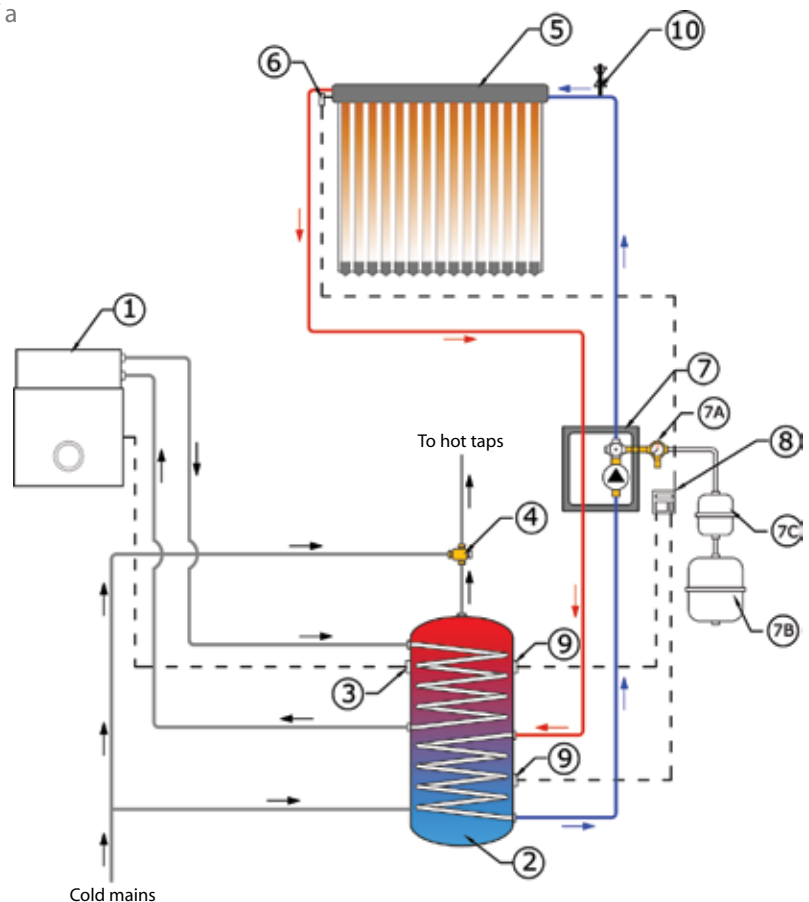
By using solar energy to heat hot water, you will be helping to reduce our dependence on fossil fuels, while improving the energy efficiency and potentially the value of your home. A typical domestic solar hot water system can save in excess of a tonne of CO<sub>2</sub> per annum. In particular, solar energy scores positively with the new BER - Building Efficiency Rating scheme.

1	Firebird Condensing Boiler	7A	Pressure Relief Valve
2	Unvented Cylinder	7B	Expansion Vessel
3	Temp. Sensor (after heating)	7C	Intermediate Vessel (if needed)
4	Mixing Valve	8	Controller
5	Solar Collector	9	DHW Tank sensor
6	Collector Temp. Sensor	10	Air Vent
7	Pump Station		



No. of Persons	No. of collectors	Tank Size (l)
2-4	2 x CPK7210-N Flat Panel collectors 2 x CVSKC-10 Vacuum Tube collectors 30 - 40 TZ58-1800 heat pipes	200
4-6	3 x CPK7210-N Flat Panel collectors 3 x CVSKC-10 Vacuum Tube collectors 40 - 60 TZ58-1800 heat pipes	300

Guide to Solar Thermal Systems available from Firebird.





# Solar Collectors

Firebird offer three collector types to ensure that customers can choose the right collector to suit their installation requirements and budget.

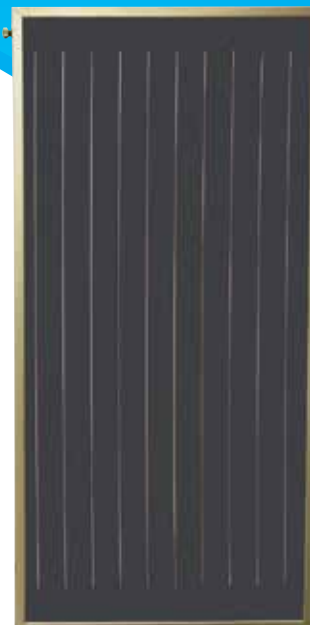
## CPK7210-N Flat Panel Collector

Firebird's CPK7210-N Flat Plate Collector is one of the most efficient collectors in the world, with an optical efficiency of 81.8%. One of the unique features of the CPK7210-N is that the collector base is extruded from a single aluminium sheet thus removing the need for welds, joints or glueing at the corners.

Other features:

- Glass is a special tempered solar glass.
- Absorber is constructed from a single sheet of Tinox™ selective absorber coating.
- Heat transfer pipes behind the absorber are ultrasonically welded along the entire length to ensure optimal heat transfer.
- 50mm of mineral wool insulation.
- Professional finish.

**Sales Code SOL100FPC**



## TZ58-1800 Heat Pipe Solar Collector

The TZ58-1800 Heat Pipe Solar Collectors offer an optimum performance to price ratio. The tubes are highly efficient due to a round shaped absorber design so that they capture the solar energy throughout the day.

Other features:

- High build quality - aluminium manifold design, nickel plated condenser head, borosilicate glass.
- Manifold can be installed initially and the tubes added later during commissioning (avoiding the lifting of heavy items onto the roof).
- Reinforced mounting kit manufactured to Firebird's specification.

**Sales Code SOL820VTS - 20 Tube Set**  
**SOL830VTS - 30 Tube Set**



## CVSKC-10 Vacuum Tube Collector

The CVSKC-10 Vacuum Tube Collector is a U-pipe direct flow evacuated tube, often referred to as a 'Sydney' tube. They are amongst the most efficient solar collector designs due to the CPC reflector aluminium plate placed behind the tubes. It reflects solar radiation back onto the absorber. The CVSKC-10 collector offers optimum performance in terms of the installation footprint. Ten tubes have an incredible aperture area of 1.6m and with a height of only 1.64m, will fit on most restricted roof spaces.

Other features:

- Delivered assembled to cut down installation time.
- Co-axial glass tubes with excellent vacuum ~5 Pascals.
- Transfer manifold insulated with mineral wool insulation.
- Light weight construction for ease of handling.

**Sales Code SOL150VTC**



Technical Specification		CPK7210-N Flat Panel	TZ58-1800 Heat Pipe 20 tube set      30 tube set		CVSKC-10 Vacuum Tube
Outer dimensions:	Height [mm]	2038	2020	2020	1645
	Width [mm]	1039	1825	2655	1115
	Depth [mm]	98	155	155	107
Tube dimensions	Diameter [mm]	-	58	58	37
	Length [mm]	-	1800	1800	1550
Weight	[kg]	38	78	115	31
Gross collector area	[m <sup>2</sup> ]	2.11	3.507	5.005	1.83
Aperture area	[m <sup>2</sup> ]	1.88	1.867	2.791	1.59
Max operating pressure	[bar]	10	6	6	10
Stagnation temperature	[°C]	216	200	200	286
Angle of inclination permitted		15° to 75°	15° to 75°	15° to 75°	15° to 75°
Performance data *					
Zero-loss collector efficiency	$\eta_0$	74.1%	73.4%	73.4%	60.5%
Collector heat loss coefficient, a1	[W/m <sup>2</sup> K]	3.705	1.529	1.529	0.850
Collector performance ratio, a2	[W/m <sup>2</sup> K <sup>2</sup> ]	0.015	0.0166	0.0166	0.010
Absorption		> 95%	> 94 %	> 94 %	> 96%
Emission		< 5%	< 7%	< 7%	< 6%
Annual energy yield	[kWh/m <sup>2</sup> ]	> 525	> 525	> 525	> 529

\* All based on aperture area.

## FIXING OPTIONS

### PITCHED ROOF

All Firebird solar collectors can be installed on a normal slate or tiled roof using our weather-proof aluminium mounting frame kits. Mounting kits are constructed from robust materials and come with easy to follow instructions. Mounting kits for CPK7210-N Flat Plate collectors and CVSKC-10 Vacuum Tube collectors are available for double and single collector configurations. Mounting kits for TZ58-1800 Heat Pipe Solar collectors are supplied for sets of 20 and 30 tubes.

Sales Code	Description	
SOL101FMT	On-roof Mounting Kit	- 2 CPK7210-N Flat Plate collectors
SOL103FMT	On-roof Mounting Kit	- 1 extra CPK7210-N Flat Plate Collector
SOL151VMT	On-roof Mounting Kit	- 2 CVSKC-10 Vacuum Tube collectors
SOL153VMT	On-roof Mounting Kit	- 1 extra CVSKC-10 Vacuum Tube Collector
SOL822KIT	On-roof Mounting Kit	- 20 TZ58-1800 Heat Pipe Solar Collector
SOL832KIT	On-roof Mounting Kit	- 30 TZ58-1800 Heat Pipe Solar Collector



### IN-ROOF

An in-roof installation kit is available for CPK7210-N Flat Plate collectors. Note that in-roof installation is not possible with CVSKC-10 Vacuum Tube collectors or TZ58-1800 Heat Pipe Solar collectors. With an in-roof kit the collectors are set lower on the roof giving a more aesthetically pleasing finish. Our in-roof kit comes with side, top and bottom flashings, collector mounting rails, coach bolts, rubber seals and installation instructions. Available in double and single collector configurations - for tiled and slate roof constructions. For slate roofs, order SOL513SRS and either SOL511TRF or SOL512SRS.

Sales Code	Description	
SOL511TRF	In-Roof Mounting Kit Tile Roof	- 2 CPK7210-N Flat Plate collectors
SOL512TRF	In-Roof Mounting Kit Tile Roof	- 1 extra CPK7210-N Flat Plate Collector
SOL513SRS	In-Roof Soaker Kit Slate Roof	- Soakers Only



### FLAT ROOF INSTALLATION

If solar collectors have to be installed on a flat roof or surface, then a flat roof mounting kit is required. Flat roof kits are available for all collectors and come with mounting frame, coach bolts, rubber seals and installation instructions. Available in double and single collector configurations.

Sales Code	Description	
SOL102FMT	Flat Roof Kit	- 2 CPK7210-N Flat Plate collectors
SOL104FMT	Flat Roof Kit	- 1 extra CPK7210-N Flat Plate Collector
SOL152VMT	Flat Roof Kit	- 2 CVSKC-10 Vacuum Tube collectors
SOL154VMT	Flat Roof Kit	- 1 extra CVSKC-10 Vacuum Tube Collector
SOL174FRK	Flat Roof Kit	- 20 TZ58-1800 Heat Pipe Solar Collector
SOL172FRK	Flat Roof Kit	- 30 TZ58-1800 Heat Pipe Solar Collector



## SOLAR CONTROLLERS & PUMP STATIONS

### CONTROLLER

The Firebird solar controller ensures the efficient operation of the solar system, managing the efficient transfer of the solar energy from the collectors to the water storage tank. The controller is easy to use and displays key system data at the touch of a button, i.e.:

- Collector temperature.
- Upper and lower tank temperatures.
- Activation of solar circulating pump.
- Hours of operation.
- Alternative arrangement layouts.
- Pump speed efficiency.
- Emergency safety shut off.
- Additional anti-freeze functions.
- Easy to use holiday function.
- Anti-legionella control.

*In addition the controller has a second available relay that facilitates features such as:*

- Back-up heat source available for central heating or immersion connection.
- Timer set up for back up heat source heating.
- Surplus energy usage.



### PUMP STATION

The Firebird solar pump station houses the key plumbing components for a solar system including solar circulating pump, non return gravitational valves, flow rate regulator, pressure relief valve, connection for expansion vessel as well as filling points.

Sales Code	Description
<b>SOL405CTR</b>	<b>Deltasol SLL Controller</b>
<b>SOL545PMP</b>	<b>Twin Line HE Pump Station</b>

### EAST / WEST CONTROLLER & PUMP STATION

For East / West installations, a special controller (BS4 Plus) is required along with an extra single line pump station to cater for the additional collector array.

Sales Code	Description
<b>SOL424CTR</b>	<b>Deltasol BS4 Plus Controller, Twin Pump Station &amp; Single</b>



## WATER STORAGE TANKS

The solar twin coil tank is used to store hot water heated by the solar system. The tank has two internal coils, the solar circuit provides heat through the lower coil while the back-up heating system (boiler) will heat the hot water via the upper coil.

Firebird water storage tanks are built from premium quality stainless steel and include an electric immersion as standard.

Sales Code	Description
<b>SOL215TNK</b>	<b>Twin Coil Solar Tank - 215 litres</b>
<b>SOL305TNK</b>	<b>Twin Coil Solar Tank - 305 litres</b>
<b>SOL305TCT</b>	<b>Triple Coil Solar Tank - 305 litres</b>



## SYSTEM COMPONENTS

THE FOLLOWING COMPONENTS MAY BE SUPPLIED AS STANDARD ON CERTAIN SOLAR SYSTEM KITS

### EXPANSION VESSELS

An expansion vessel is necessary to absorb the expansion of the solar fluid when high temperatures are reached in the solar collector. Currently available sizes are 24 and 35 litres.

Sales Code	Description
SOL502EXP	24 litre Expansion Vessel
SOL503EXP	35 litre Expansion Vessel



### SOLAR ANTI-FREEZE

The heat transfer fluid used in a solar circuit is normally a mixture of water and a polypropylene glycol anti-freeze. The glycol anti-freeze also contains an additive to protect against corrosion and evaporates at higher temperatures than water to allow higher system temperatures. Firebird recommends a 40% glycol to 60% water mix to ensure frost protection to circa -25°C.

Sales Code	Description
SOL507VFL	Tyfocor LS Anti-freeze for Tube System



### ACCESSORY KIT - EXPANSION VESSEL

Expansion vessel accessory kit includes check valve, wall bracket and 1 flexi hose.

Sales Code	Description
SOL521PPK	Expansion Vessel Accessory Kit



### ANTI-SCALD MIXING VALVE

Anti-scald (mixing) valve must be fitted close to the hot water outlet of the solar tank so that delivery to the taps does not exceed 48°C.

Sales Code	Description
SOL504MIX	Anti-scald Mixing Valve



### STAINLESS STEEL INSULATED TWIN PIPE

Flexible pre-insulated twin pipe with UV protection sheath for linking collectors to solar tank. Saves considerable installation time and money. (Fittings Included).

Sales Code	Description
SOL010TWP	Insulated Twin Pipe DIN16 – 10m
SOL015TWP	Insulated Twin Pipe DIN16 – 15m
SOL025TWP	Insulated Twin Pipe DIN16 – 25m



### AIR VENT & ISOLATING VALVE

An automatic air vent should be fitted at the highest point in the solar circuit system in order to remove air from the system during commissioning. An isolating valve should be fitted before the air vent and isolated once the system has been commissioned.

Sales Code	Description
SOL530ASV	Air Vent & Isolating Valve



### FLEXI PIPES, 1M

High grade 1m stainless steel flexi pipes which can be connected to the flow and return side of the collector array. This saves the installer having to make complicated pipe bends through the roof of the house. Fittings can be included to connect the pipe to the different solar collector types.

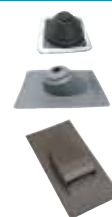
Sales Code	Description
SOL402FPP	1m Flexi Pipe
SOL001ELB & SOL001FEM	Fittings for CPK7210-N Flat Plate Collector
SOL075ELB & SOL075TAP	Fittings for CVSKC-10 Vacuum Tube and TZ58-1800 Heat Pipe Solar collectors



### PIPE FLASHING

The pipe flashings provide a tidy solution for passing solar flow and return pipes through the house roof.

Sales Code	Description
SOL509TRF	Pipe flashing - tiled roof
SOL510SRF	Pipe flashing - slate roof

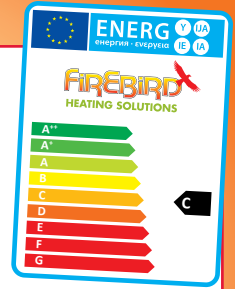


### OTHER PARTS

Sales Code	Description
SOL514FPC	Weather-proof Cover for CPK7210-N Flat Plate Collector
SOL515VTC	Weather-proof Cover for CVSKC-10 Vacuum Tube Collector
SOL000FPS	Solar Filling & Flushing Pump
SOL527RFR	Refractometer
SOL528CFL	Solar Cleaning Fluid, 500ml
SOL000BOV	Blow-off Storage Vessel
SOL010TSV	TSV Lightning Protection (for controller)
SOL526RLY	Auxiliary Relay HR230 (for controller)
SOL000SPP	Solar Paste Kit



# Tanks & Exchangers



## Water Storage Tanks

The solar twin coil tank is used to store hot water heated by the solar system. The tank has two internal coils, the solar circuit provides heat through the lower coil while the back-up heating system (boiler) will heat the hot water via the upper coil.

Firebird water storage tanks are built from premium quality stainless steel and include an electric immersion as standard.



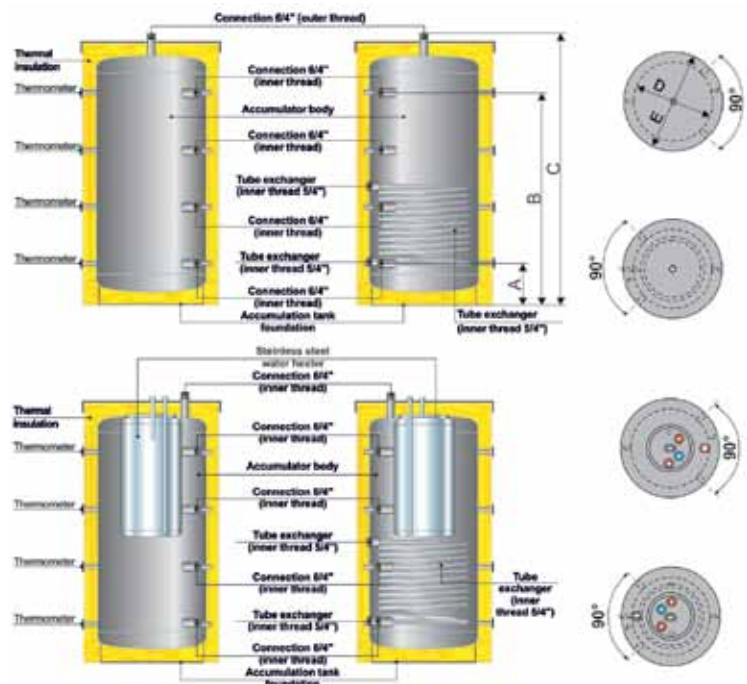
Sales Code	Description
SOL215TNK	Twin Coil Solar Tank - 215 litres
SOL305TNK	Twin Coil Solar Tank - 305 litres
SOL305TCT	Triple Coil Solar Tank - 305 litres

## Firebird Insulated Tanks

Firebird have a new range of tanks to accommodate multi system installations. The tanks are produced to Firebird's highest quality standards and are all fitted with a 120mm insulation jacket.

**Sales Codes: Range:**

A	SOL500TNK	500L Insulated Tank (direct)
B	SOL500SCT	500L Insulated Tank (with single coil)
C	SOL500ITK	500L Insulated Tank in Tank
B	SOL800SCT	800L Insulated Tank (with single coil)
D	SOL800ITK	800L Insulated Tank in Tank (with single coil)
B	SOL1000CT	1000L Insulated Tank (with single coil)
D	SOL1000TK	1000L insulated Tank in Tank (with single



## Accumulation Tank

An accumulation tank must be used in conjunction with the Firebird wood gasification boiler. The recommended sizing is a minimum 50 litres of water storage for every 1 kW of rated output. Firebird recommend a 2,000 litre tank.



Sales Code	Description
WGB200TNK	2000 Litre Accumulation Tank

## Transfer Tanks & Exchangers

Firebird has launched a range of transfer tanks that facilitate multi-system design and retrofits. These include the junction buffer 2-4 box, with 24 litre capacity and the solid fuel heat exchanger, with 22 litre capacity. Both boxes are designed to accommodate multiple heating systems within a typical dwelling. They can also facilitate the integration of an additional system (i.e. stove) into an existing heating unit.



### Firebird Junction Buffer 2-4 Box

- For zone systems, under floor heating and multi-function systems.
- Capacity for integration of new system (e.g. air to water) to link into existing system.
- Reduce boiler cycling issues.
- 4mm steel shell, fully insulated and external green casing as standard.

**Sales Code: ACCJNCBOX**



### Firebird Solid Fuel Heat Exchanger

- Solid fuel/pressurised system integration.
- Easy to install, ground / wall mounted.
- Water volume storage to comply with regulations.
- White case finish.

**Sales Code: ACCSFEXH**

100%  
IRISH



## Inset Stoves

Firebird based their first inset stove on their very first product, the Supreme backboiler. Following on from the overwhelming success of the multifuel backboiler stove, they launched the multifuel dry inset stove. The Firebird inset stove range now consists of three types of inset stoves:

- Multifuel backboiler stove.
- Multifuel dry stove.
- Smoke exempt wood burning dry stove.



### Multifuel Backboiler Inset Stove

*All the comfort of a stove with the benefit of heat to your house as well*

#### Features

- Designed to fit into a standard fireplace.
- Easy to install.
- Clean, easy operation.
- Solid multifuel options.
- Suitable for airtight dwellings where underfloor, external air-in ducting is provided.
- Glass air wash design.
- Enamel option available.
- Up to 12kW heat supplied to dwelling/radiators.
- Reduces your heating bills.
- Available in 12kW and 16kW.
- 5 year warranty.
- HETAS approved.

#### Output

- Up to 81% efficiency.
- Up to 12kW heat supplied to dwelling/radiators.



### Multifuel Dry Inset Stove

*A stove designed for your comfort*

#### Features

- Designed to fit into a standard fireplace.
- Easy to install.
- Clean, easy operation.
- Solid multifuel options.
- Suitable for airtight dwellings where underfloor, external air-in ducting is provided.
- Glass air wash design.
- Up to 8.2kW heat supplied to space (room).
- Available in 6.9kW and 8.2kW.
- 5 year warranty.
- Hetas approved.

#### Output

- Up to 75.6% efficiency.
- Up to 8.2kW heat supplied to space/room.



### Smoke Exempt Wood Burning Dry Stove

*Ideal for a new build and to assist with BER compliance*

#### Features

- Smoke exempt
- Wood burning stove.
- Clean burn technology.
- Easy to install.
- Clean, easy operation.
- Suitable for airtight dwellings where underfloor, external air-in ducting is provided.
- Up to 5kW heat supplied to space (room).
- Glass air wash design.
- 5 year warranty.
- Smoke exempt DEFRA approved.
- Hetas Approved.

#### Output

- Up to 75.9% efficiency.
- Up to 5kW heat supplied to space/room.



# Specification



Dry Inset Stove	Product	Sales Code Matt	Room Output	Efficiency	Weight kg	Height (mm)	Inset Width (mm)	Depth (mm)
	6.9kW	MAX016DRY	6.9kW	74.4%	95	560	406-470	375
	8.2kW	MAX018DRY	8.2kW	75.6%	102.4	560	455-520	375

Smoke Exempt Wood Burning Stove	Product	Sales Code Matt	Room Output	Efficiency	Weight kg	Height (mm)	Inset Width (mm)	Depth (mm)
	5kW	MAX005SED	5kW	75.9%	102.4	560	455-520	375

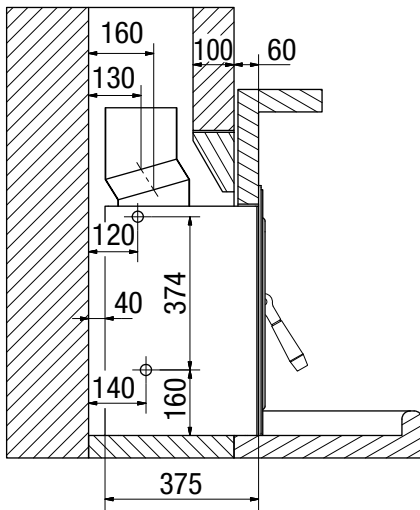
Backboiler Inset Stove	Product	Sales Code Matt	Sales Code Enamel	System Output	Room Output	Efficiency	No. of Standard Radiators	Weight kg	Height (mm)	Inset Width (mm)	Depth (mm)
	12kW	MAX016000	MAX016NML	8.3kW	3.6kW	80%	6	96.6	560	406-470	375
	16kW	MAX018000	MAX018NML	12.1kW	3.6kW	81%	9	105	560	455-520	375

\* Room seal kit available: 16" - ACC016RSK, 18" - ACC018RSK

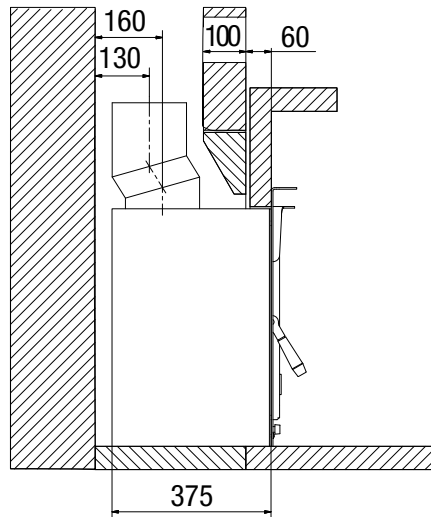
Note: The outline is similar for all stoves. The dimensions for the sockets are not relevant for the dry and smoke exempt wood burning stoves. All dimensions are relevant to stove/boiler section. Outer face framework is not taken into account. Dimensions are measured from pipe socket to socket, ie. 16" from outer pipe connection to outer pipe connection. To comply with Building Regulations and in order for the stove to operate effectively, an air vent and draught of at least 12 Pa is required.

## Dimensions (mm)

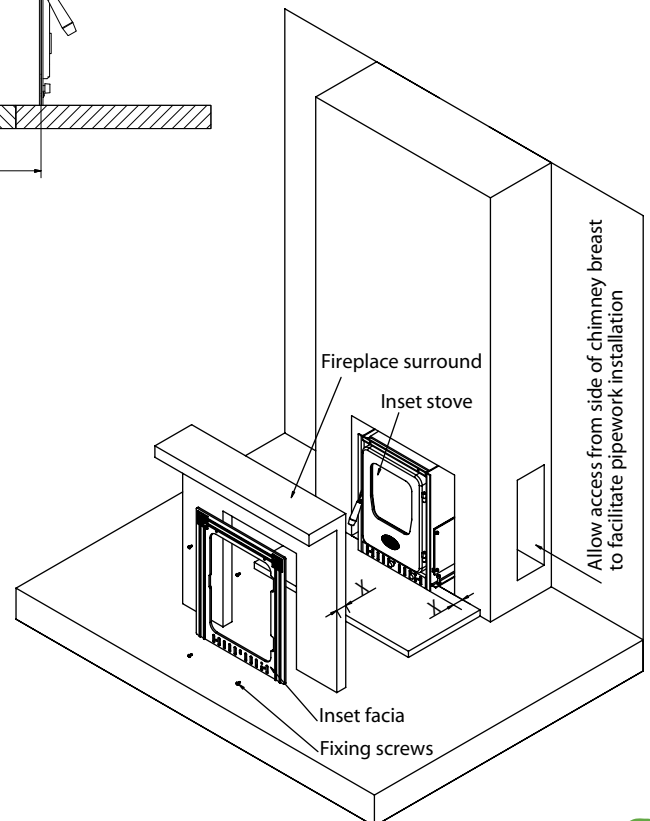
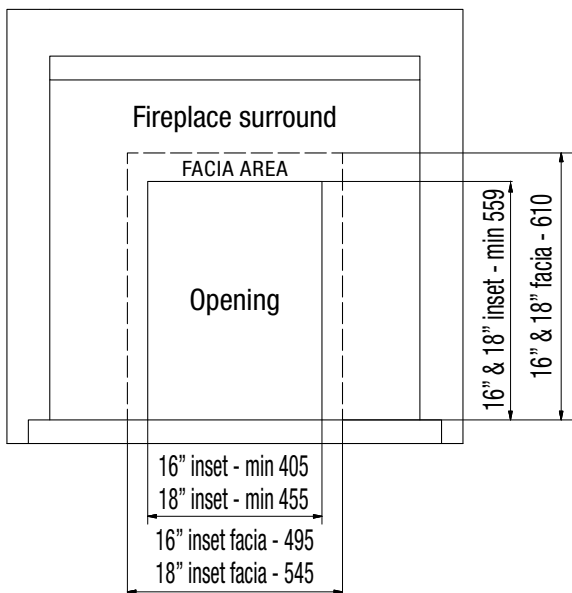
Backboiler Inset Stove



Dry & Smoke Exempt Wood Burning Inset Stove



Backboiler, Dry & Smoke Exempt Wood Burning Inset Stoves



# Wood Gasification Boiler

The Firebird wood gasification boiler represents the very latest in high efficiency wood burning.

Gasification is achieved in wood burning when gases released from the combusting wood are mixed with a regulated supply of oxygen to create a complete oxidation process. This results in extremely high combustion efficiencies and minimal ash waste.

Wood gasification boilers can only be used to burn split logs or wood briquettes. Coal, peat, refuse, etc. can not be used in these boilers. The best woods are hard woods like Ash, Oak & Beech (moisture content must be 20% or less).



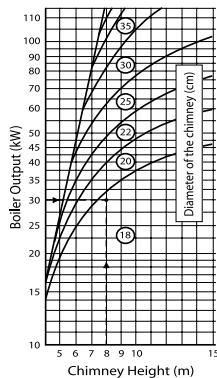
## Accumulation Tank

An accumulation tank must be used in conjunction with the Firebird wood gasification boiler. The recommended sizing is a minimum 50 litres of water storage for every 1 kW of rated output. Firebird recommend a 2,000 litre tank.



## Flue

Having the right draft and flue construction is critical to the operation of the wood gasification boiler. Flue height must be according to the chart (on right).



## Technical Data

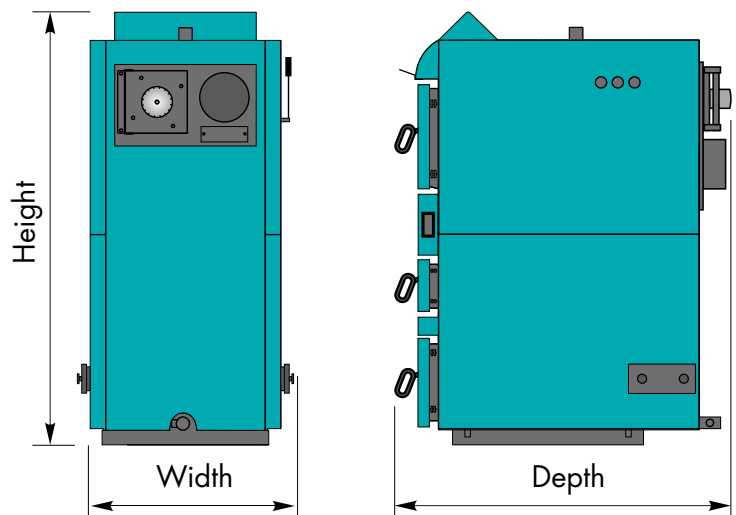
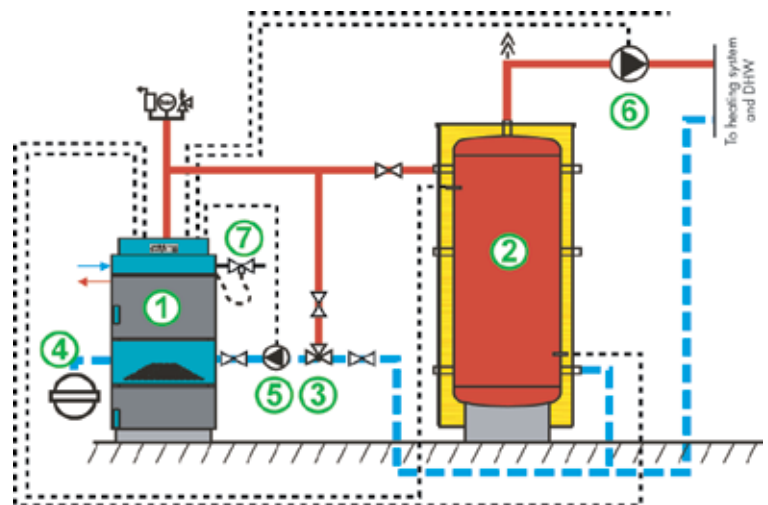
<b>Model</b>		<b>35</b>
<b>Rated thermal output</b>	(kW)	<b>35</b>
<b>Boiler water content</b>	(litres)	<b>96</b>
<b>Boiler weight</b>	(kg)	<b>515</b>
<b>Max. volume of wood</b>	(litres)	<b>144</b>
<b>Max. length of the log</b>	(mm)	<b>550</b>
<b>Flue diameter</b>	(mm)	<b>200</b>
<b>Depth</b>	(mm)	<b>1290</b>
<b>Height</b>	(mm)	<b>1385</b>
<b>Width</b>	(mm)	<b>725</b>
<b>Min. accumulator tank</b>	(litres)	<b>2000</b>

<b>Sales Code</b>	
<b>WGB035BLR</b>	<b>Wood Gasification Boiler 35</b>
<b>WGB200TNK</b>	<b>2000 Litre Accumulation Tank</b>
<b>WGB200KIT</b>	<b>200mm Wood Gas Twin Wall Flue Kit</b>
<b>WGB000PGS</b>	<b>Pump Changing System Ladomat 21</b>
<b>WGB000TSV</b>	<b>Thermal Safety Valve</b>

## System layout

A suggested schematic diagram for a wood gasification boiler can be seen below. For an unvented (pressurised) system, a thermal safety valve must be installed.

- |                                  |                          |
|----------------------------------|--------------------------|
| 1 - Wood Gasification Boiler     | 5 - Boiler Pump          |
| 2 - Accumulation Tank            | 6 - Circulation Pump     |
| 3 - Three Way Thermostatic Valve | 7 - Thermal Safety Valve |
| 4 - Expansion Vessel             |                          |





# Wood Pellet Boiler

Firebird's wood pellet boiler represents the very latest in carbon neutral heating for use in domestic and light commercial applications.

## Features

### High efficiency

Firebird wood pellet boilers have efficiencies in the high 80's due to their highly efficient operation and well insulated boiler shell. The large chamber design ensures that the boiler does not clog up with ash.

### Heating comfort

This wood pellet boiler is fully automatic in its operation. On start up, an electric heater ignites the pellets and the digital controller manages the entire operation. The boiler is fully modulating in that the feed rate of pellets is varied, depending on the boiler temperature and heating demand.

### Ease of cleaning

All maintenance points are easily accessible and a set of cleaning tools and brushes are supplied. The burner is on a hinged door and can be opened by hand. The burner grate, which should be cleaned weekly, is fully retractable.

### Automated control

The digital controller located at the top of the boiler is designed to be user friendly. The main boiler functions can be controlled from here and key system parameters entered.

## Fuel

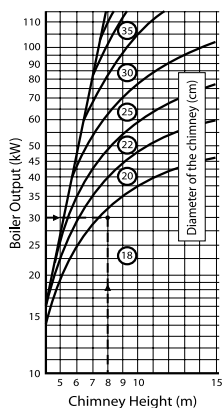
Only certified wood pellets approved to EN14961 may be burned in the Firebird wood pellet boilers. The below fuel characteristics must be adhered to.

- calorific value > 5 kW/kg (18 MJ/kg)
- diameter = 6 mm • max. length = 35 mm
- max. humidity = 8% • max. dust = 0,5%



## Flue

Ensuring the correct size flue is critical to the operation of any biomass boiler. The chart on the right outlines the minimum flue diameter and height required for the different boiler outputs.



## Technical Data

Model		25	35
Rated thermal output	(kW)	25	35
Boiler water content	(litres)	90	101
Boiler weight	(kg)	435	475
Flue diameter	(mm)	150	160
Power supply		230 V AC / 50Hz	

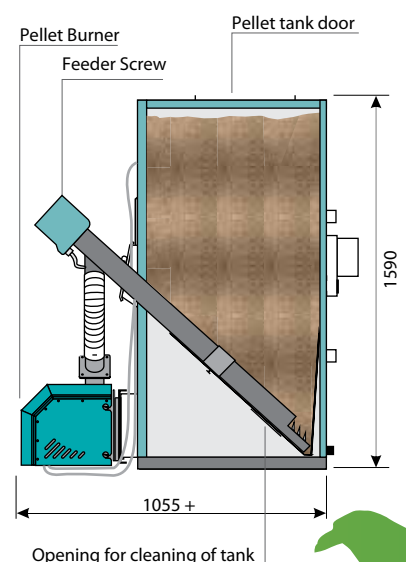
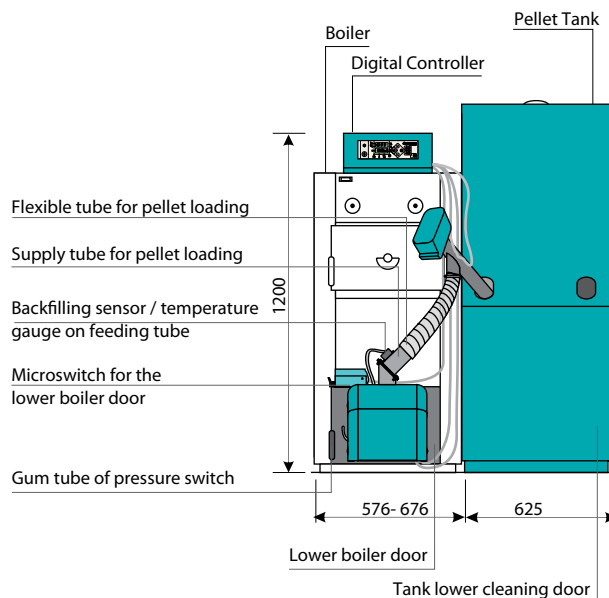
### Outer dimensions (boiler & tank)

	(mm)	1590	1590
Height	(mm)	1590	1590
Depth	(mm)	1055	1055
Width	(mm)	1201	1301

Sales Code  
**Wood Pellet Boiler**  
**Wood Pellet Flue Kit**  
**Wood Pellet Auger & Hopper**

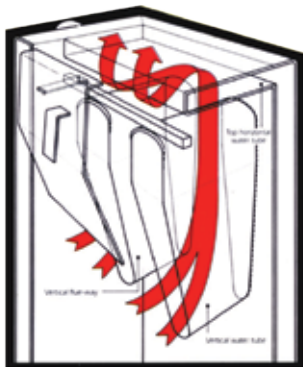
**25**  
**FWP025NKT**  
**FWP025FLU**  
**FWP000FED**

**35**  
**FWP035NKT**  
**FWP035FLU**  
**FWP000FED**



# Backboilers

## Challenger Backboiler



The Challenger backboiler is extremely efficient due to three unique design features:

- a) Simplified straight-through flue-ways. The tapered shape is designed to extend the flame to cover the complete heat exchanger surfaces (see diagram).
- b) Top water tube. This heating tube, positioned horizontally above flue-ways, collects much of the heat which would otherwise be lost into the chimney.
- c) Dry-back, lift-off, radiant panel. Can rise to a higher temperature than the normal type cooled by water.

The Challenger backboiler can be easily cleaned by lifting off the radiant panel. This allows immediate access to the unique layout of flue-ways. Bearing in mind that 1.5mm soot reduces the efficiency by up to 25%.

The Challenger allows balanced performance via the dry-back radiant panel/damper. The panel can rise to a higher temperature than one cooled by water and the increased radiant heat minimises the drop in room-heating when the damper is opened to heat water/radiators.

## Supreme Backboiler

Similar in design to the Challenger, the Supreme backboiler has a higher output due to the increased number of flueways.

### Dimensions

Challenger Backboiler Dimensions			
<b>Height</b>		22 3/8"	(570mm)
<b>Depth</b>		12 3/8"	(317mm)
<b>Width</b>	16" model	20 1/2"	(520mm)
	18" model	22 1/2"	(570mm)

Supreme Backboiler Dimensions			
<b>Height</b>		22 3/8"	(570mm)
<b>Depth</b>		12 3/8"	(317mm)
<b>Width</b>	16" model	20 1/2"	(520mm)
	18" model	22 1/2"	(570mm)
	20" model	24 1/2"	(622mm)
	22" model	26 1/2"	(673mm)

Min. Builders Opening Dimensions			
<b>Height</b>		23"	(585 mm)
<b>Depth</b>		14"	(355 mm)
<b>Width</b>	16" model	25"	(585 mm)
	18" model	27"	(685 mm)
	20" model	29"	(735 mm)
	22" model	31"	(790 mm)

Sales Code **CHALLENGER BACKBOILER**  
**CHL016000** 16" model  
**CHL018000** 18" model

Sales Code **SUPREME BACKBOILER**  
**SUP016000** 16" model  
**SUP018000** 18" model  
**SUP020000** 20" model  
**SUP022000** 22" model

Sales Code **GRATES**  
**GRA016RND** 16" Round Grate  
**GRA016SQR** 16" Square Grate  
**GRA016TPR** 16" Tapered Grate  
**GRA018RND** 18" Round Grate  
**GRA018SQR** 18" Square Grate  
**GRA020RND** 20" Round Grate  
**GRA020SQR** 20" Square Grate  
**GRA022RND** 22" Round Grate



# Warranty

## Complete After-Sales Service

Firebird has always provided their customers with the highest levels of after sales care. All products are supported by a nationwide network of independent service engineers who are regularly trained on our appliances.



## Boiler Passport

An OFTEC co-ordinated "Boiler Passport" booklet is included with every oil boiler shipped from our factory. This passport will stay with the boiler, much like a car's service log book. The commissioning certificate page is on multipart carbon paper and one copy must be completed by an OFTEC registered or competent, qualified engineer and returned to Firebird in the enclosed prepaid envelope within 10 days of commissioning.



## Our Warranty Policy

### OIL FIRED BOILERS

Firebird offers a 5 year warranty on the boiler shell and a 2 year warranty on all other parts from date of installation, provided installation has occurred within 12 months from date of purchase. The 5 year boiler shell warranty consists of labour and parts for the first 3 years and parts only in years 4 and 5. The warranty is conditional on the boiler being commissioned and operated correctly. To validate your warranty, Firebird require that the commissioning certificate page in the Boiler Passport is completed by an OFTEC registered or competent, qualified engineer and returned to Firebird within 28 days of installation and commissioning.

### SOLAR

Firebird offers 5 years warranty on all solar collectors and 2 years warranty on all other parts from date of installation, provided installation has occurred within 12 months from date of purchase.

### INSET STOVES

Firebird offers a 5 year warranty on the inset stove shell and a 2 year warranty on other parts from date of installation, provided installation has occurred within 12 months from date of purchase. The 5 year inset stove shell warranty consists of labour and parts for the first 3 years and parts only in years 4 and 5. The warranty is conditional on the stove being commissioned and operated correctly. To validate your warranty, Firebird require that the warranty registration form (at the back of the instruction manual) is completed by a competent, qualified engineer and returned to Firebird within 28 days of installation and commissioning.

### BIOMASS BOILERS

Firebird offers 5 years warranty on the boiler shell and 2 years warranty on all other parts from date of installation, provided installation has occurred within 12 months from date of purchase.

*Full terms and conditions of Firebird's warranty programme can be viewed on [www.firebird.ie](http://www.firebird.ie)*



[www.firebird.ie](http://www.firebird.ie)

[www.firebird-solar.com](http://www.firebird-solar.com)

*An rogha is fearr*

**FIREBIRD**

**HEATING SOLUTIONS**



*Achieve* **BER A3<sup>+</sup>** *with*  
**Firebird Heating Solutions**



**Heating Irish Homes for over 35 years**

**FIREBIRD HEATING SOLUTIONS LTD.**

Baile Mhic Íre, Co. Cork, P12 HK51, Ireland. **t**:+353 (0)26 45253 **f**:+353 (0)26 45309 **e**:info@firebird.ie

**www.firebird.ie**

PGROI011

Photographs, Illustrations & Specifications. This catalogue was correct at the time of going to print. However, Firebird's policy is one of continuous development. The right is reserved to change specifications, colour, and prices of the models and items illustrated and described in this publication at any time. Whilst every care has been exercised in the production of this catalogue, Firebird cannot accept any liability for errors or omissions. For the latest details always consult Firebird.