



HEATING SOLUTIONS

# A New Era of Environmental Excellence for the Burner Retrofit Market

New Modern  
Technology



Old Burner to  
be Replaced



- ✓ Environmentally Friendly
- ✓ Saves money on running costs
- ✓ Easy to service and maintain
- ✓ Clean burning blue flame technology

- X Less efficient and not good for the environment
- X Time consuming to service
- X Yellow flame



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

 ENVIRONMENT

 INNOVATION

 TECHNOLOGY

# Firebird **elco** Retrofit Burner

✓ **Environmentally Friendly**

Future proof for low NOx emissions, the Firebird by Elco burner tests show results as low as 60 mg/kWh easily beating the ERP directive 2018 of 120 mg/kWh.

✓ **Trouble Free Plug & Play**

Key components easily identifiable by dedicated connectors.

✓ **Saves Money on Running Costs**

The clean burning light blue flame and efficient settings means using less liquid fuel, good for the environment and costing less to run.

✓ **Fast & Easy to Install**

Factory pre-set, require only minor adjustments, remove and adjust key components with a single allen key.

✓ **Easy to Service & Maintain**

All parts are easy to access thanks to a dedicated servicing position.



**Setting new Standards for Low NOx Burner Technology**



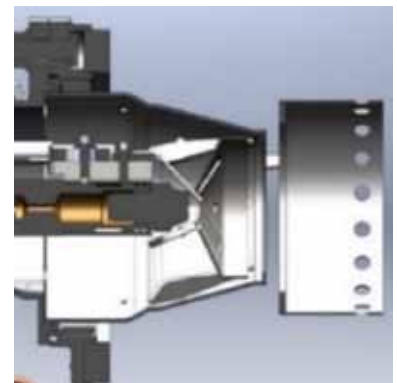
**Go Green Without Costing the Earth**



Fast & Easy to Install.



Dedicated Servicing Position.



Combustion Head.



**Retrofittable on the full Firebird condensing and standard efficiency range.**

# Riello/Ecoflam to **elco** Conversion Table

Fuel Type	Riello/Ecoflam		Elco			
	Burner Model		Sales Code	Burner Model	Nozzle Size	Pump Pressure
Kerosene Only	RDB 2.2 C12 /18	=	BRN018RET	FB2 18 K LN	0.40x80sf Fluidics	9.3 bar/135 psi
	RDB 2.2 C12/18 K DGT					
	RDB 2.2 C20/70K	=	BRN020RET	FB2 20 K LN	0.50x80es Danfoss	9.8 bar/142psi
	RDB 2.2 C20/70K DGT					
	RDB 2.2 C26 /90K	=	BRN026RET	FB2 26 K LN	0.65x80es Danfoss	9.3 bar/135 psi
	RDB 2.2 C26/90K DGT					
	G3B /90					
	G5X C (hp only) /90					
	Ecoflam Max 1 & 4	=	BRN035RET	FB 2 35 K LN	0.85x60es Danfoss	8.6 bar/ 12.5psi
	RDB 2.2 C35/120k					
G5F						
	RDB 2.2 C35/120K DGT					

Kerosene / Diesel Setup for kerosene	RDB 2.2 C44/150 K	=	BRN044RET	FB 2 44 K LN	1.10.60es Danfoss	10.3 bar/150psi	
	G5 T						
	G7 150K						
		RDB4.2 C58/200K	=	BRN058RET	FB 2 58 K LN	1.50x60s Danfoss	7.8 bar/113psi
		RDB4.2 C73/250K	=	BRN073RET	FB 3 73 K LN	2.00x60s Danfoss	7.0 bar/101psi
		RDB4.2 C100/310K	=	BRN100RET	FB 3 100 K LN	2.50x60s Danfoss	9.50 bar/137psi

Diesel Only	RDB2.2 R 70 D	=	BRN020RETD	FB 4 R 20 LN	0.50x80s Danfoss	10.00 bar/145psi
	RDB 2.2R 90D	=	BRN026RETD	FB 4 R 26 LN	0.60x80H Danfoss	10.50 bar/152psi
	RDB 2.2 120 D	=	BRN035RETD	FB 4 R 35 LN	0.75x60s Danfoss	11.50 bar/167psi
	RDB 2.2 150 D	=	BRN044RETD	FB 4 R 44 LN	0.85x60H Danfoss	14.00 bar/203psi

- Conversion chart only applies to burners fitted on Firebird boilers.
- \* FB 4 burners are set up for Diesel fuel.
- FB 2 burners are factory set for Kerosene and can easily be converted to Diesel (44-100kW only).
- FB 3 burners are set up for Kerosene and can be easily converted to Diesel.

This document has been prepared to provide technical guidance for the benefit and safety of the owners of Firebird boilers choosing to fit an Elco burner in place of a Riello or Ecoflam burner.

### Burner Dimensions

Burner	A	B	C	D	E
18kW	215	163	106	288.5	Ø83
20kW	215	163	106	288.5	Ø83
26kW	215	163	106	288.5	Ø83
35kW	215	163	106	288.5	Ø83
44kW	215	163	118	296.5	Ø83
58kW	215	163	118	296.5	Ø83
73kW	272	200	150	348	Ø90
100kW	272	200	150	348	Ø90

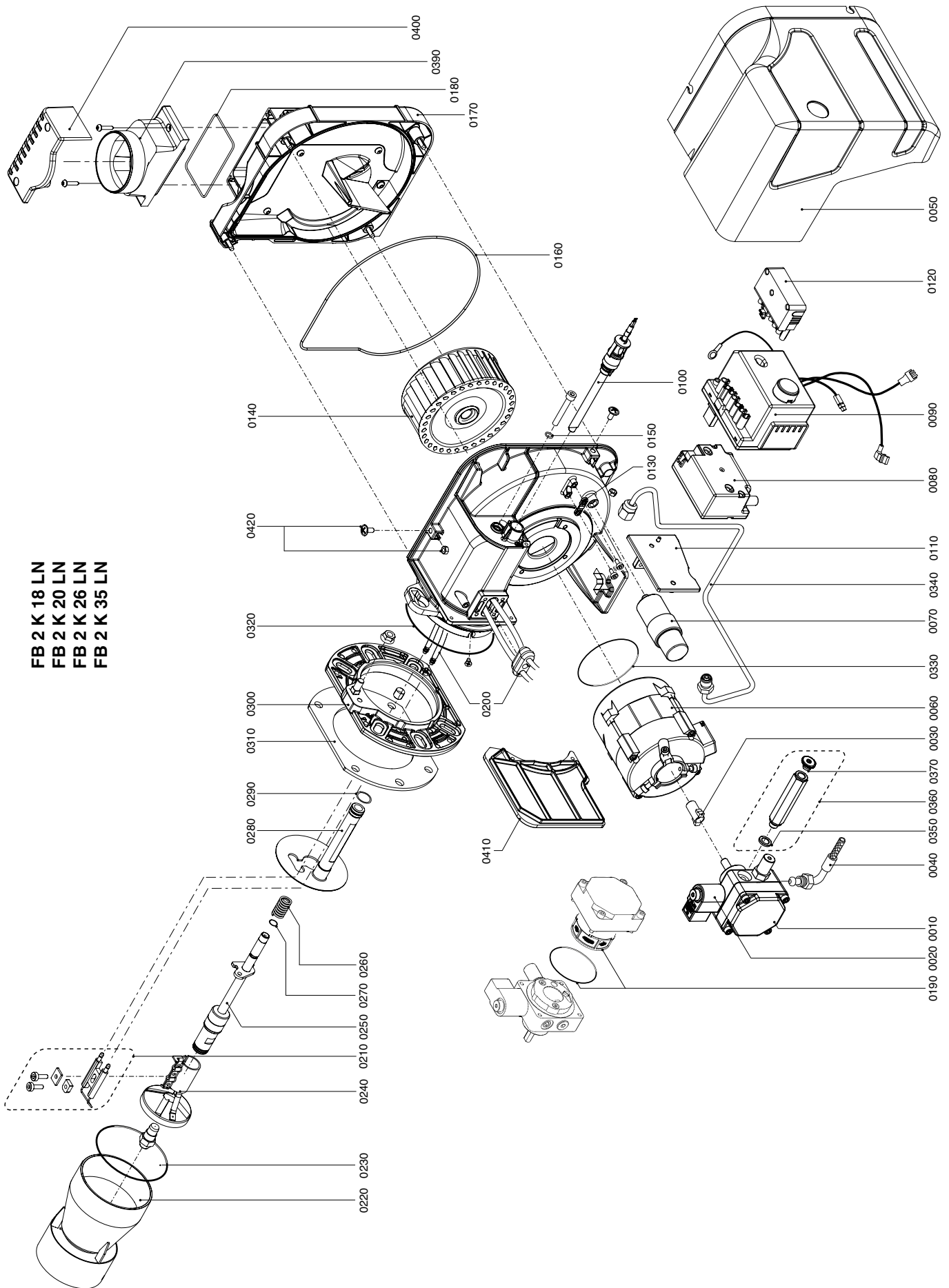
### Burner Electrical Connections

7 PIN PLUG TERMINALS

L1	Switched Live
Earth	Earth
N	Neutral
T1-T2	Looped *factory fitted
S3	Lockout Lamp

Please note that Elco burners sold for replacement will have a 7 pin plug supplied on the control box for the installer to wire to the burner.

# Spare Parts



FB 2 K 18 LN  
 FB 2 K 20 LN  
 FB 2 K 26 LN  
 FB 2 K 35 LN

# Spare Parts

Diagram Number	Elco Part Number	Description	S/ Kit Qty	FB 2 K 18 LN	FB 2 K 20 LN	FB 2 K 26 LN	FB 2 K 35 LN
				3146022	3146023	3146024	3146025
0010	65327227	Danfoss Bfp 11 R3 (without coil)	1	x	x	x	x
0020	65327245	Danfoss Coil	1	x	x	x	x
0030	65327229	Elco Coupling (pack of 3)	1	x	x	x	x
0040	65327230	Elco Flexible Oil Line	1	x	x	x	x
0050	65327231	Burner Cover		x	x	x	x
0060	65327232	Elco Motor + Capacitor	1	x	x	x	x
0070	65327233	Elco Capacitor 4uf	1	x	x	x	x
0080	65327234	Fida Transformer	1	x	x	x	x
0090	65327235	Elco Control Box	1	x	x	x	x
0100	65327236	Elco Photocell QRB1B	1	x	x	x	x
0110	65327240	Support		x	x	x	x
0120	65327237	Male 7 Pin Plug		x	x	x	x
0130	65327241	Clamp (set of 5)		x	x	x	x
0140	65327280	Fan (12 to 20kW) only	1	x	x		
0140	65327239	Fan (26 to 35kW) only	1			x	x
0150	65327224	O Rings (pack of 5)	1	x	x	x	x
0160	65327223	Air Inlet Cover Gasket (pack of 3)	1	x	x	x	x
0170	65327279	Air Inlet Cover (12, 18 and 20kW only)		x	x		
0170	65327283	Air Inlet Cover (26 - 35kW models only)				x	x
0180	65327247	O Rings under Air Snorkel (pack of 3)	1	x	x	x	x
0190	65327228	Danfoss Oil Pump Filter		x	x	x	x
0200	65327284	Elco Ignition Cables (1 x set)	1	x	x	x	x
0210	65327285	Elco Electrodes	1	x	x	x	x
0220	65327286	Blast Tube (12, 18, 20 and 26kW)		x	x	x	x
0220	65327200	Blast Tube (35kW only)					x
0230	65327201	Blast Tube O Ring		x	x	x	x
0240	65327202	Diffuser (18kW)		x			
0240	65327203	Diffuser (20, 26 and 35kW)			x	x	x
0250	65327287	Nozzle Holder		x	x	x	x
0260	65327206	Spring (pack of 3)		x	x	x	x
0270	65327210	Rod O Ring (Pack of 3)		x	x	x	x
0280	65327281	Air Disc (18kW)		x			
0280	65327211	Air Disc (20kW)			x		
0280	65327282	Air Disc (26kW)				x	
0280	65327294	Air Disc (35kW)					x
0290	65327213	Air Disc O ring (pack of 5)		x	x	x	x
0300	65327289	Flange (18, 20, 26 and 35kW)	1	x	x	x	x
0310	65327290	Gasket (18, 20, 26 and 35kW)	1	x	x	x	x
0320	65327216	O Ring		x	x	x	x
0330	65327222	Motor Gasket Seal (Pack of 5)	1	x	x	x	x
0340	65327217	Innerassembly Pipe from Pump to Nozzle		x	x	x	x
0350	65327205	Gasket		x	x	x	x
0360	65327242	Extended Pressure Port		x	x	x	x
0370	65327243	Threaded Pressure Port		x	x	x	x
0390	65327225	Snorkel		x	x	x	x
0400	65327226	Conventional Flue Cover		x	x	x	x
0410	65327291	Front Panel		x	x	x	x
0420	65327209	Cover Screw Group		x	x	x	x

# Why Choose a Firebird by Elco Burner?

1x  
Allen Key



2x  
Burner Settings



3x  
Satisfied Customers



## Installer

- ✓ **Trouble-Free Plug & Play Burner**  
Key components easily identified by dedicated connectors.
- ✓ **Fast & Easy to Install**  
Main component parts undone with a single Allen key.
- ✓ **Easy to Service & Maintain**  
Components clearly positioned and accessible.
- ✓ **Makes Financial Sense**  
No associated price premium.
- ✓ **Standard Firebird Digital Control Box**  
Reliable and simple to use with handy reset button.
- ✓ **Excellent Cold Start Performance.**
- ✓ **Powerful Ignition System**  
With separate powerful transformer.
- ✓ **Low Smoke, Clean Burn Reduces Carbon Build-up**  
Both on burner combustion head and boiler.
- ✓ **Excellent Combustion Robustness**  
CO<sub>2</sub> level factory-set at an optimum 12.5% ensures highest levels of efficiency.
- ✓ **100% 'Burner Test Fired' to 12.5% CO<sub>2</sub> Levels.**
- ✓ **Outstanding Ventilation Performance**  
Ensures complete combustion.
- ✓ **Latest Danfos Pump Technology**  
Up to 100m suction capacity.
- ✓ **Single-Forge Combustion Head.**



## Environment

- ✓ **Low NO<sub>x</sub> Compliant**  
Exceeds current requirements of the second phase of the Ecodesign Directive.
- ✓ **Superior Flue Gas Recirculation**  
Significantly reduces NO<sub>x</sub> emissions.
- ✓ **Extremely Low Carbon Monoxide (CO) Emissions.**
- ✓ **Low Electrical Consumption.**



## Homeowner

- ✓ **Makes Financial Sense**  
Increased operating efficiency saves fuel and reduces bills.
- ✓ **Ultra-Reliable**  
No error prone complex parts.
- ✓ **Helping the environment.**



# Firebird Product Range



RANGE COOKER



SOLAR



OIL FIRED BOILERS



AIR SOURCE HEAT PUMPS



STOVES

Contact us for more information.



## 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

Our Technical Team 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 Team on **026 45253** or **service@firebird.ie**



## QUALITY

All Firebird products are produced to the highest quality standards and are put through rigorous testing procedures by external standards agencies. Every product is designed to meet a specific requirement and has been manufactured using premium quality materials to precise standards and tolerances.



## WARRANTY

Firebird provides a comprehensive, conditional warranty of 2 years on the burner from date of installation, provided installation has occurred within 12 months from date of purchase. The 2 year burner warranty consists of parts only. Consumable components, the nozzles and the oil hose are excluded. Full details on the warranty programme, terms and conditions can be viewed on **www.firebird.ie**

*An rogha is fearr*



# FIREBIRD

## HEATING SOLUTIONS

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