

Big Bale boilers for wood, straw and other biomass fuels

FARM 2000 BIG BALE BOILERS are designed to be fired on **low density** big round or square bales of straw and cord wood. Stoking is generally carried out once or twice a day using a tractor.

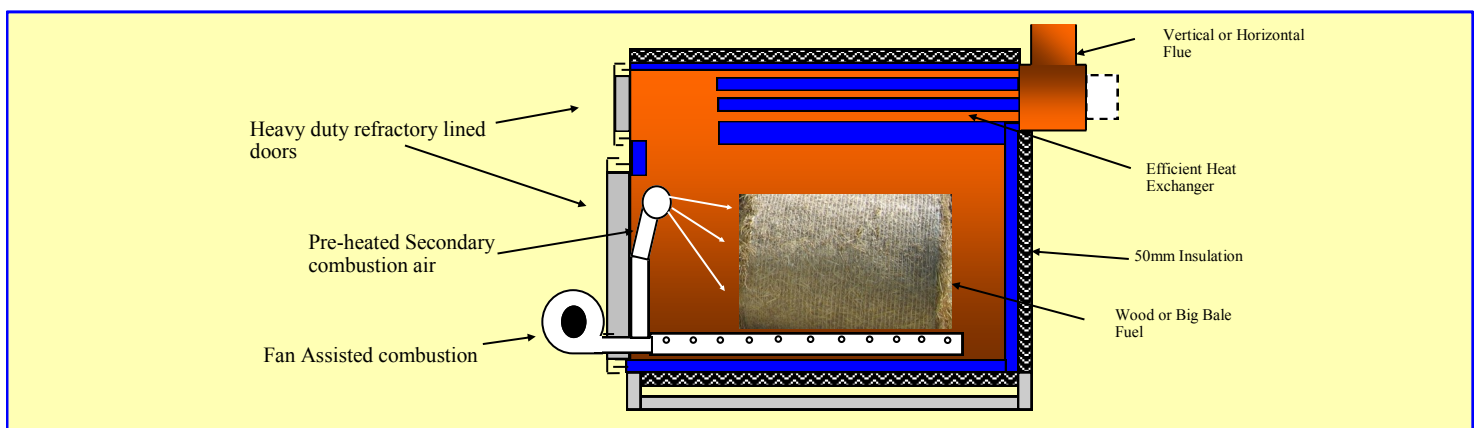
FARM 2000 BIG BALE BOILERS are used for domestic heating where low stoking rates are required, or for agricultural or horticultural heating when higher outputs are needed.

The boiler's thermostatically controlled fan and electronic timer provides efficient combustion and control, while the large water jacket contributes as an accumulator for heat absorption and storage. However an additional accumulator tank must also be included in the heating system.

BIG BALE BOILERS are similar in design to the FARM2000 HT range incorporating a multi-tube heat exchanger for efficient heat transfer. An ash removal scoop for a tractor mounted loader is supplied with the boiler for easy ash removal

BIG BALE BOILERS are not suitable for burning coal or other fossil fuels.

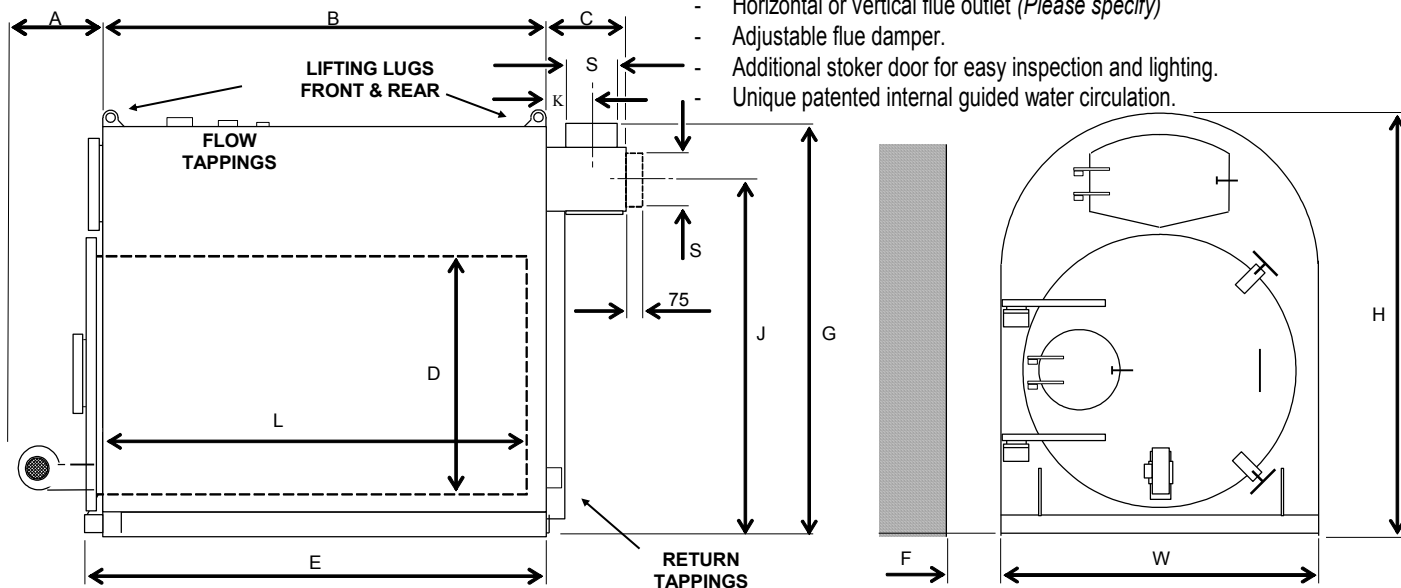
- **Extra Large Combustion Chamber**
For safe stoking with space for the gases to burn.
- **Fan Operation & Pre-heated air**
Rapid heat output from cold start, accurate control.
- **Heavy duty refractory Lined door & 2-stage combustion.**
Clean and complete combustion. Minimum smoke. Smokeless operation achievable with dry straw
- **Multi Tube Heat Exchanger**
Maximum heat output to water and minimal fuel consumption. Low working flue temperature.
- **Large Stoking Door**
Smaller secondary door for safe lighting procedure.
- **Vertical or Horizontal Flue Outlet**
Lower chimney costs, easy cleaning access
- **Patented Water Circulation & Accumulation system**
Prolonged output between stoking periods.
- **50mm Insulation**
Negligible heat loss
- **Designed & Manufactured in UK**
Back-up technical advice and individual attention.



DIMENSIONS AND TECHNICAL DATA

SIZING AND INSTALLATION

The BIG BALE BOILERS are designed for use in open vented indirect hot water heating systems and must be installed according to the current FARM 2000 Installation and Operating Instruction Booklet. Installation into a sealed heating system can however be achieved by using a heat exchanger unit.



FARM 2000 'BB' BOILERS

All boilers are supplied ready for installation and specification includes the following:

- Boiler with all round 50 mm insulation and cladding.
- Pre-wired fan, thermostat and electronic control unit.
- Temperature gauge.
- Integral support frame with skids for easy siting.
- Cleaning tools and instructions.
- Over-ride safety thermostat.
- Horizontal or vertical flue outlet (*Please specify*)
- Adjustable flue damper.
- Additional stoker door for easy inspection and lighting.
- Unique patented internal guided water circulation.

BOILER MODEL		FUEL	BB144/3	BB146/3	BB244/3	BB154/3	BB254/3	BB254H/3
Heat Capacity, Output & Stoking Frequency (Domestic Loads)*	Average Bale Size & Capacity	Quantity	1	1	2	1	2	2
		Diameter	4'	4'	4'	5'	5'	5'
		Depth	4'	6' or QUAD.	4'	4'	4'	4'
		Approx. Weight (kg)	150	200	300	225	450	500
	Approx. Nett Heat Capacity 000Btu(kWh)	1300(390)	1800(520)	2700(780)	2000(585)	4000(1170)	4400(1300)	or 1 Hesston
Typical Domestic Heat Load 000BTU(kW)	1 per day stoking	STRAW	135(40)	165(48)	235(70)	185(54)	325(95)	365(105)
	2 per day stoking	STRAW	235(69)	300(88)	450(132)	375(110)	600(176)	665(195)
	Maximum	LOGS	550(160)	750(220)	810(238)	660(193)	965(283)	1000(293)
Combustion Chamber Length		L	1890	2450	3220	1890	3220	3550
Diameter Combustion Chamber		D	1500	1500	1500	1900	1900	1900
Boiler Height		H	2270	2270	2270	2720	2720	2720
Boiler Width		W	1780	1780	1780	2180	2180	2180
Flue Spigot Inside Diameter		S	308	308	308	308	362	362
Fan Clearance		A	600	600	600	600	600	600
Length		B	2014	2515	3344	2014	3344	3674
Flue Box		C	350	350	350	410	460	460
Total Length		A+B+C	2920	3465	4194	3025	4405	4735
Frame Length		E	2180	2630	3510	2180	3510	3840
Clearance from wall (for door opening)		F	1350	1350	1350	1350	1350	1350
Height to top of Vertical flue spigot		G	2320	2320	2320	2780	2780	2780
Height to Centreline Horizontal Flue Spigot		J	1980	1980	1980	2405	2405	2405
Clearance from Centre of Vertical Spigot to Boiler		K	185	185	185	230	205	205
Flow Tapping (Female Thread) (BSP)		-	3, 2, 1¼	3, 2, 1¼	4, 2, 1¼	3, 2, 1¼	4, 2, 1¼	4, 2, 1¼
Return Tapping (Female Thread) (BSP)		-	3, 2	3, 2	4, 2	3, 2	4, 2	4, 2
Boiler Weight (Dry) (kg)		-	3500	4200	4900	4500	5800	6000
Water Volume (Litres)		-	1600	2200	2800	1900	3500	3700

The above outputs are based on using dry straw with a maximum water content of 16%, and which has been "weathered" for at least a week before baling. For best results use "grey" straw as against "yellow" straw, i.e. straw that has been rain washed and then left to dry (including being turned) before baling at a low to medium density. "Yellow" straw can be used, but lower outputs and higher ash content must be accepted. Straw from sandy soils burns best, and with less ash than straw from clay soils. Big Bale boilers are generally not recommended for use with pallets/scrap wood unless it is clean untreated wood, and the fuel is loaded in small quantities.

An accumulator must be included in the heating circuit. See Installation and Operating Instruction Booklet.

All FARM2000 boilers are manufactured in the UK. Each boiler undergoes quality control and pressure test before despatch.

www.farm2000.co.uk

The right to make amendments without notice is reserved

02/17

1986 Award



Max. Operating Pressure- 1.3 bar



Test Pressure- 2 bar

(Use water/water heat exchangers for pressurised applications)

**Min. draught requirements -6mmwg
Note for conversion 1kW = 3412 Btu/hr**

All Dimensions in mm

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