



Biomass Boilers With Moving Grate

Power : 195 / 300 / 400 / 550 / 750 / 990 kW

Maximum Moisture Content : 45 to 50%

Manufactured in Denmark to NF-EN 303-5

KSM XXL - Professional Range for Industry and Agriculture

The KSM biomass boiler is a complete system with all components included. The boiler is delivered pre-assembled, electrically wired and ready to start from the factory, ensuring a quick and simple installation on site.

Monitoring and remote management can be achieved through the Internet, communication via Modbus with other controls systems is also available.



Supplied by:
Core Biomass Ltd
Company No. 08880409

COREBIOMASS

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↑ **Construction of a 750kW boiler**, with the following components installed prior to delivery: electrical cabinet, all electric motors, actuators, sensors (O_2 and temperature), frequency converter, differential pressure switches etc. All the components fitted at the factory are electrically tested before shipping.

The only additional items that need to be fitted on site are: air filter, silo extraction equipment and draft fan. All motors and sensors fitted on site are connected to the terminal of the main cabinet supplied with the boiler.



← **The flue pipes are mechanically cleaned** by an automated system during operation of the boiler. Cleaning intervals are programmable.

This system does not use compressed air, no additional costs for the purchase and maintenance of an air compressor.

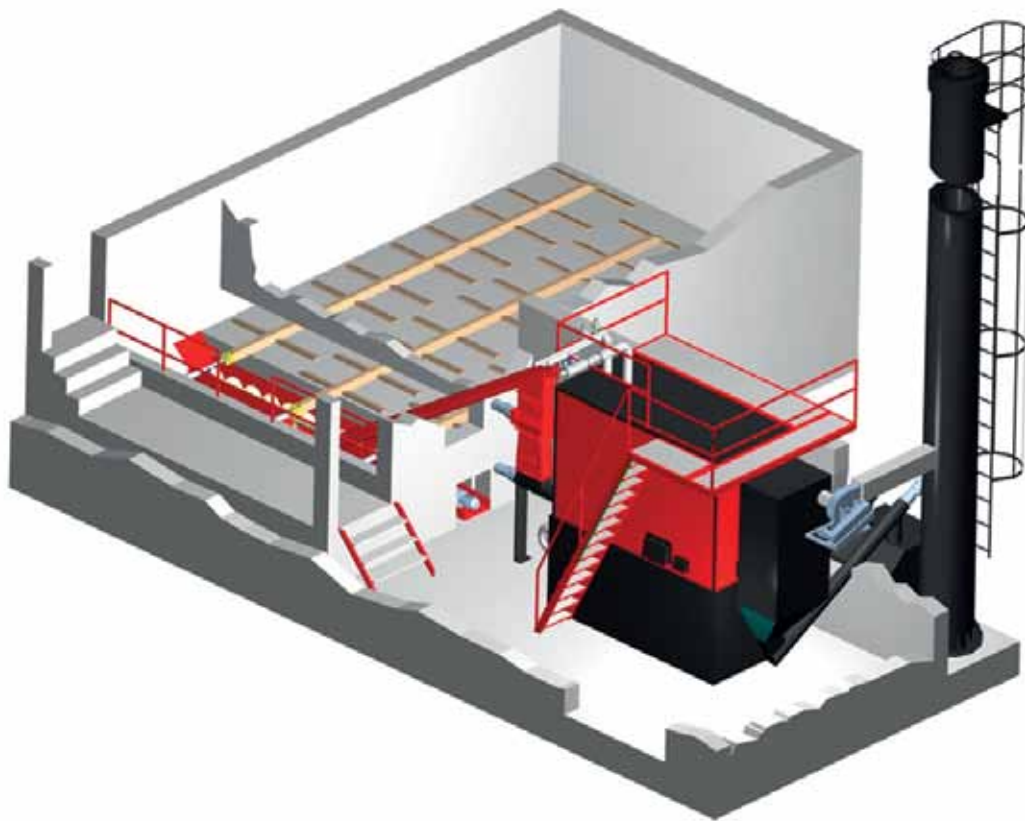
→ **The refractory arch** is built in sections, allowing the burn chamber to be adapted depending on the moisture content of the fuel used. Secondary air nozzles and air flow are adjusted and set from outside. Interchangeable moving cast iron grates can easily be removed and replaced



← **Mechanism to move individual rows of grates**. Each row of grates has an individual actuator, and is individually programmable row by row.

→ **Inverter controlled fans for primary and secondary air**. Automatic de-ashing under the moving grates.





KSM Biomass Boiler Type XXL / 3 passes	195XXL	300 XXL	400XXL	550 XXL	750XXL	950XXL
Rated Power (Pellets)	195kW	300 kW	400kW	550kW	750kW	990 kW
Minimum Operating Output	25%					
Fuels	Wood Chips - Sawdust and Wood Pellets					
Maximum Fuel Moisture	50%					
Maximum Fuel Size	P45/G30		50mm / P63 / G50			
Efficiency	> 90%					
Minimum Vacuum In Furnace	25 Pa	25 Pa	20 Pa	25 Pa	35 Pa	40 Pa
Volume Of Water In Heat Exchanger	820L	820 L	1032L	2070L	2980L	3930L
Test Pressure	9 bar					
Operating Pressure	6 bar					
Water Temperature Range	70-110°C					
Water Resistance In Heat Exchanger	41 mbar	41 mbar	42 mbar	44 mbar	48 mbar	52 mbar
Flue Gas Volume at 130°C	650m³/h	780m³/h	1041m³/h	1325m³/h	1940m³/h	2650m³/h
Flue Diameter	250mm	250mm	250mm	Ø350mm	Ø380mm	Ø400mm
Water Flow Diameter (Left Or Right)	Ø76mm	Ø76mm	Ø76mm	Ø89mm	Ø89mm	Ø89mm
Water Return Diameter (Left Or Right)	Ø76mm	Ø76mm	Ø76mm	Ø89mm	Ø89mm	Ø89mm
Boiler Length	2800mm	2800mm	3200 mm	3250mm	4000mm	4000mm
Boiler + Stoker Length	3800mm	3800mm	4200 mm	4250mm	5000mm	5250mm
Width	1850mm	1850 mm	1850 mm	2050 mm	2050 mm	2250 mm
Height	2400mm	2400mm	2500 mm	2600mm	2750mm	2950mm
Weight	4500kg	4500kg	5500 kg	6500 kg	8300 kg	9400 kg
RHI Compliant	Yes	Yes	Yes	Yes	Yes	Yes

The KSM Boiler is delivered in one piece, ready to use.

The KSM boiler is equipped with one or two feed screws, a large rotating air valve, electrical cabinet, motors, actuators, sensors (O² and temperature), frequency converters and differential pressure switches etc. The unit is pressure and electrically tested at the factory before delivery.

The only additional items that need to be fitted on site are: air filter, silo extraction equipment and draft fan. All motors and sensors fitted on site are connected to the terminal of the main cabinet supplied with the boiler.

The XXL Range requires an external fuel silo and a screw to feed the boiler. The silo extraction system (boilers 400kW to 100kW) is constructed using hydraulic scrapers that lay across the floor of the store, which allows for very large storage volumes (hundreds of m³). These types of silo are very reliable and require minimal maintenance, shutdowns are rare. The system can accept fuels up to P63/G50.

The XXL 300kW can utilise a rotary extractor up to 5 meters in diameter and can accept fuel up to P63/ G50.

All the sensors and motors for the extraction and feeding are controlled by the cabinet supplied with the boiler.

KSM build many boilers into shipping containers, ready for install on site. Once delivered, the system can be up and running within a very short period of time, with only water and electrical connections needed.

Containerised boilers have several advantages: Easily moved after installation, no planning permission required for the structure, higher resale value and fast installation.



PCT 400 control screen



Please note, KSM biomass boilers are designed to burn a wide range of fuels, but it is the responsibility of the customer to correctly set up and operate the boiler should the fuel be changed after commissioning. We cannot guarantee the output of the boiler when fuels other than dry clean wood are used.



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