



ORLIGNO 200

wood gasification boiler

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Available types [kW]

18

25

40

60

80

96

130

ORLIGNO 200 boilers create a new pathway in wood gasification boiler technology. Unique design as well as a range of design solutions to benefit the ease of use and aid customer satisfaction. Technical data resulting from wood the combustion process meet the most rigorous European norms and provide nearly twice as much heat as traditional boilers or fireplaces.

The appliances can work in open as well as pressurized systems in accordance with current regulations.

The **ORLIGNO 200** boiler can combust wood of various granulation from sawdust to blocks. Shavings and other small pieces should be burnt together with blocks.

Use

ORLIGNO 200 boilers are designed to work in a variety of places. They are most commonly used in detached houses, drying facilities, industrial units and workshops.

Available types are as follows: **18 kW, 25 kW, 40 kW, 60 kW, 80 kW, 96 kW, 130 kW.**

The ORLIGNO 200 boiler can combust wood of various granulation from sawdust to blocks. Shavings and other small pieces should be burnt together with blocks.



Fuel



wood

Use



small/semi
detached house



detached
house



industrial buildings
workshops

The wood gasification process in central heating boilers can be divided into four main phases:

1

Drying and de-gassing wood at a temperature of

2

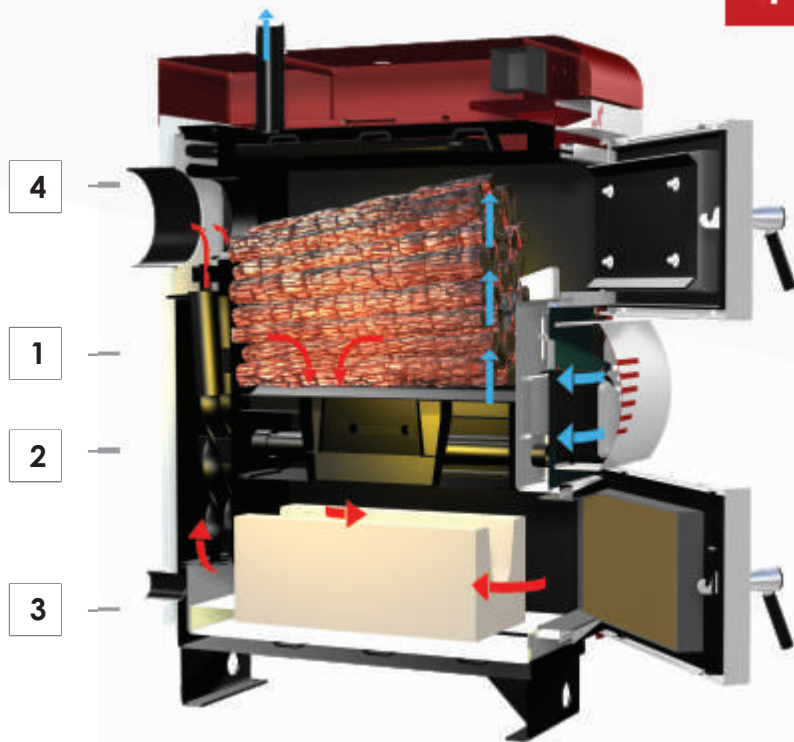
Combustion of the mixture of wood gas and secondary air at a temperature of 560°C.

3

Burning up the flame and heat emission at a temperature of 1200°C.

4

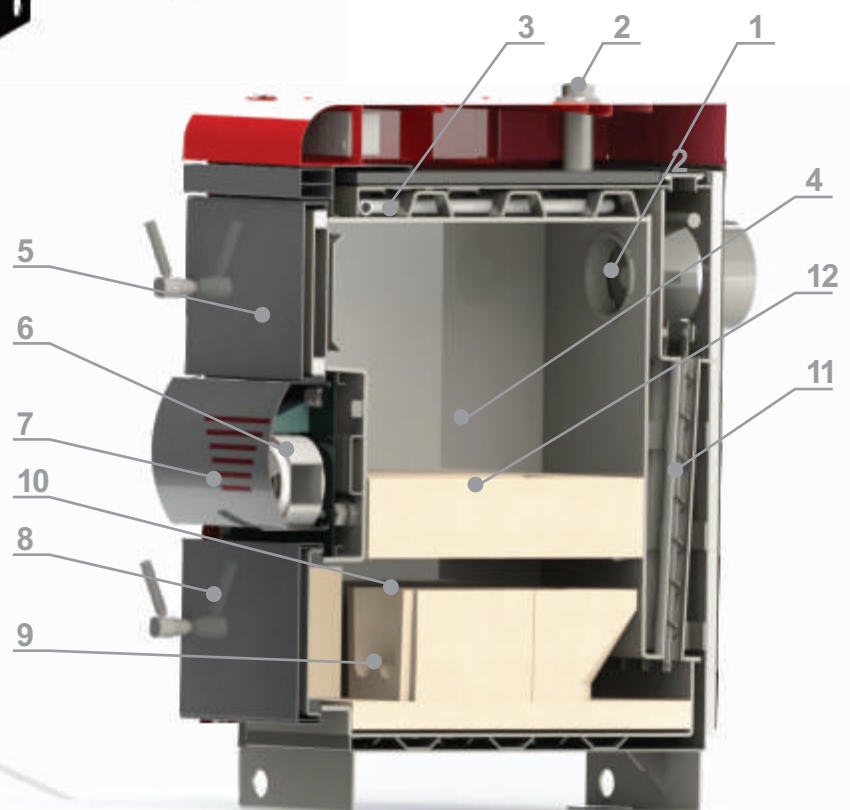
Combustion of the mixture of wood gas and secondary air at a temperature of 560°C.



Gasification process in the boiler

Boiler section

1. Chimney flap
2. Heating water outlet
3. Cooling coil
4. Loading (gasification) chamber
5. Loading door
6. Fan
7. Fan cover
8. Combustion door
9. Firebricks
10. Combustion chamber
11. Heat exchanger with cleaning mechanism
12. Firebed



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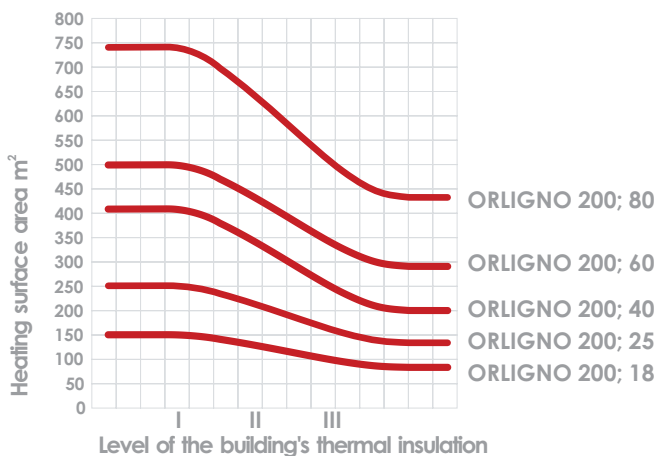
wood gasification boiler

Boiler features



- Up to 91% efficient
- Low maintenance costs
- Large loading capacity
- User-friendly
- Small amount of ash residue
- Length of wood logs:
 - 50cm (18kW, 25kW, 40kW)
 - 75cm (60kW)
 - 100cm (80kW, 95kW, 130 kW)
- Up to 12 hours continuous operation
- Modulated fan power 30-100%
- Adjusted to work in closed systems
- Electronic controller with possibility to connect remote EKOSTER CONTROL
- Made of the highest quality 8mm boiler steel
- Environmentally-friendly
- High temperature-resistant fire bricks
- Back cooling coil tapplings

Choosing the right boiler for the surface:



How do I know which boiler is suitable for me?:

- An installation designer will estimate how much heat will be required in the building.
- The result needs to be increased by 20% (so called boiler over-sizing).
- See the graph opposite for to give an indication of the correct boiler that may be suitable.

Caution!

The graph is for information only and CRANP-KOVO s.r.o. cannot be held liable if a boiler with unsuitable power output is selected.

Technical data

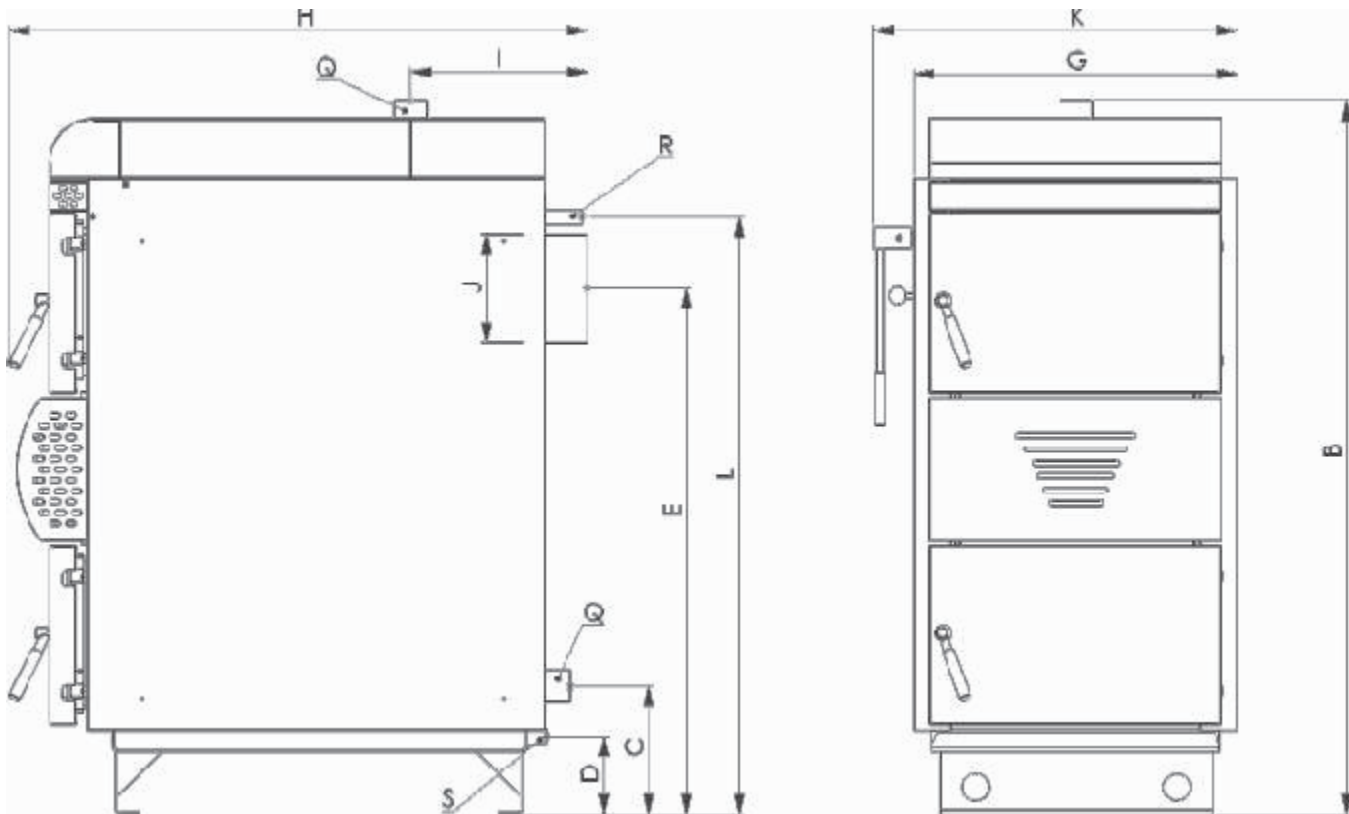
Rated power [kW]		Measured in	18	25	40	60	80	96	130
Efficiency	%	91							
Boiler class (EN 303-5)		5							
ECODESIGN	mm	NO	YES	NO	NO	NO	NO	NO	
Boiler weight	kg	546	546	634	1037	1242	1385	1550	
Water capacity	dm ³	75	75	93	180	205	340	380	
Water capacity	l	75	75	93	180	205	340	380	
Volume of loading chamber	dm ³	120	120	185	310	465	605	605	
Volume of loading chamber	l	120	120	185	310	465	605	605	
Max recommended load height in the chamber		2/3	2/3	2/3	2/3	2/3	2/3	2/3	
Loading hole width/lenght	mm	260/432	260/432	260/432	285/580	285/580	285/580	285/580	
Burning period	h	7-12							
Fuel		wood-A							
Wood logs length	cm	50	50	50	75	100	100	100	
Humidity	%	15-25							
Fuel consumption for power:									
- nominal	kg/h	6,8	8,2	10,1	15,1	19,8	20,3	24,5	
Max working pressure	bar	3							
Minimal return water temperature	°C	60							
Flow resistance	cm								
- t = 20 K	mbar	1,2	1,4	1,6	1,7	1,6	1,5	1,6	
- t = 10 K	mbar	4,0	4,3	4,9	4,9	4,8			
Temperature settings range	°C	60-90							
Protection level of controller		IP40							
Voltage/Frequency/Current	V/Hz/A	230/50/6							
Power consumption at standby	W	2							
Auxiliary power	W	50	50	50	100	100	150	150	
Noisness emissions (acc.to. EN ISO 12100: 2010)		<60							
Exhaust gases parameters (at nominal power):									
- temerature	°C	160	160	160	160	160	170	160	
- stream	kg/s	0,0066	0,0088	0,0144	0,0216	0,0272			
Required chimney draught	mbar	0,15-0,20							
Required chimney draught	Pa	15-20							
Boiler operation conditions at nominal power		underpressure/ no condensation							
Min water pressure in cooling coil	bar	2							
Cooling coil water temperature	°C	10							
Recommended capacity of accumulation tank	l	750-1500	1000-2000	2000-3000	3000-4000	4000-5000	4500-6000	6500-7500	



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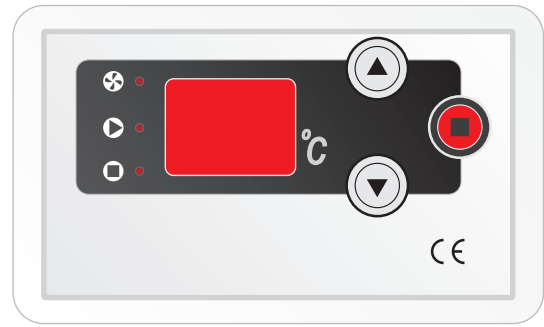
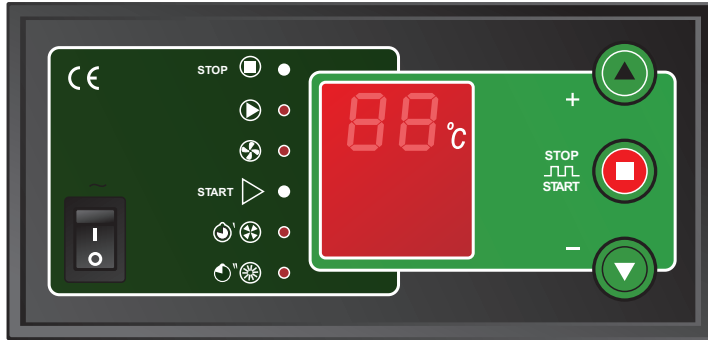
Dimensions



Nominal power output [kW]		18	25	40	60	80	96	130
Hot water outlet (overall height)	B - mm	1315	1315	1575	1555	1555	1845	1845
Return water inlet	C - mm	230	230	220	200	200	209	209
Drain valve height	D - mm	140	140	140	140	140	134	134
Flue height	E - mm	960	960	1210	1160	1170	1441	1441
Casing width	G - mm	600	600	600	740	740	750	750
Overall length	H - mm	1060	1060	1040	1360	1720	1804	1880
Hot water outlet	I - mm	320	320	310	580	610	737	797
Flue diameter	J - mm	200	200	200	210	210	300	300
Overall width	K - mm	670	670	670	810	810	872	872
Cooling coil tappings (height)	L - mm	1100	1100	1330	1310	1300	1576	1576
Hot and return water diameter	Q - inch	2	2	2	2	2	2	2
Cooling coil diameter	R - inch	3/4	3/4	3/4	3/4	3/4	1	1
Drain valve diameter	S - inch	1/2	1/2	1/2	1/2	1/2	3/4	3/4

Controller

EKOSTER controller used in the ORLIGNO 200 boiler



The **EKOSTER control** enables the constant temperature reading of the central heating boiler, adjustment of boiler temperature settings as well as activation and de-activation of control by regular communication with EKOSTER regulator.

The **EKOSTER 2** microprocessor temperature controller is designed to control the heating process and the activation of the circulation pump in the central heating installation.

The innovative built-in alarm system informs the user with a piercing sound if the threshold of 97°C has been reached, if the boiler temperature has dropped below 0°C or if the sensor is damaged.

Controller features

The regulator fulfils the following tasks:

- Maintains the preset boiler temperature through the heating control
- Automatic control turn-off after boiler extinction
- Blocking fan operation when stoking the boiler
- Central heating circulation pump control "COMFORT SYSTEM"- a system that prevents pump blockages when the boiler is not in operation
- Protection from boiler freezing and overheating
- Signalling when the boiler temperature sensor is damaged
- Compatible with EKOSTER control

TECHNICAL DATA

Range of temperatures displayed	-9°C - +99°C
Range of temperature settings	+60°C - +90°C



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