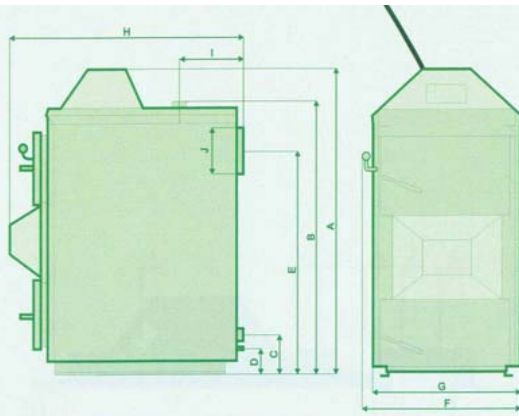


Boiler dimensions



Boiler dimensions scheme

Boiler type	ORLAN	25	40	60	80
Power range	kBtu	85	137	205	275
Weight	Lb	1280	1390	2070	2712
Height	A inch	51.5	59	60.5	60.5
Height of heating water exit	B inch	48.5	56	56.5	56.5
Height of heating water entry	C inch	8.3	6.0	7.9	7.9
Height of outlet valve	D inch	5.1	2.7	5.1	5.1
Height of chimney flue	E inch	37.4	50.0	45.7	45.7
Width including handle	F inch	24.8	24.8	30.3	30.3
Width including casing	G inch	23.6	23.6	29.1	29.1
Depth	H inch	41.1	41.1	53.5	52.7
Hot water exit	I inch	12.6	12.6	24.0	24.0
Diameter of chimney flue	J inch	8.0	8.0	8.0	8.0
Diameter of hot water exit	inch	2.0	2.0	2.0	2.0
Diameter of hot water entry	inch	2.0	2.0	2.0	2.0
Kind of connection	-	thread	thread	thread	thread
Diameter of drain valve	inch	0.5	0.5	0.5	0.5
Water capacity	Gal	20	25	47	54
Volume of loading chamber (gasification)	Ft ³	4.14	6.5	10.9	16.4
Power consumption	W	50	50	100	100
Moisture of wood:					
- recommended	%		15 - 25		
- acceptable	%		10 - 35		
Maximum log diameter	inch	7	7	7	7
Maximum length of logs	inch	20	20	25	39
Average flue gas temperature	F		340		
Max. working pressure	PSI		25		
Required chimney draught	Inches		.06 - .08		
Voltage / frequency	V/Hz		120V/60Hz		

Authorized Dealer:



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EKO LINE BOILERS

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Orlan

ECOLOGICAL HEATING BOILERS

UTILIZING WOOD GASIFICATION TECHNOLOGY

Wood gasification proces

Gasification process occurs as follows:

1. Drying and heating wood until the release of gasses (hydrogen and carbon monoxide).
2. Burning of gas mixture in lower chamber at 2200°F.
3. Transfer of the flue gasses to the heat exchanger on the back of the boiler.
4. Ejecting the gasses through the chimney pipe.
The best indicator of successful wood gasification is the lack of smoke exiting the chimney.

STAGE 1
Wood drying and breakdown into gasses

STAGE 2
Burning of mixed wood gases with secondary air

STAGE 3
Releasing heat trough heat exchanger

STAGE 4
Ejecting combustion gasses through smoke stack



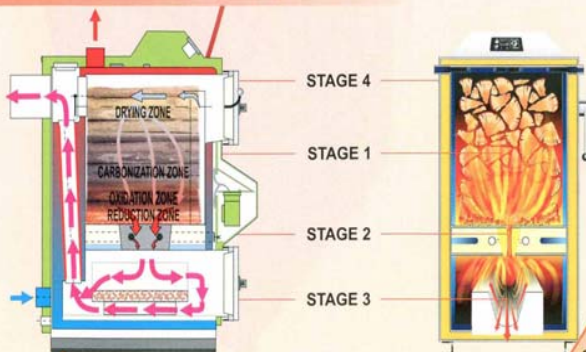
Wood as a fuel

Wood is a renewable resource like solar, water or wind power. They are all energy sources, which never become depleted, unless improperly managed. Wood is also a fuel, which may be stored and preserved without energy loss. Wood storing reduces its moisture and simultaneously increases its heating value (energy volume, which may be used up during burning process).

Modern boilers utilizing wood in gasification processes use energy contained in wood with efficiency that is three times higher than traditional boilers. Smoke and other emissions are cut to a very low level, making our boilers very nature friendly.

ORLAN boilers are adapted for burning of any kind of wood ranging from sawdust to chunks of wood. The best way to achieve recommended wood moisture is to cut the timber during springtime, and let it season in a shed or under a tarp.

Burning Zones

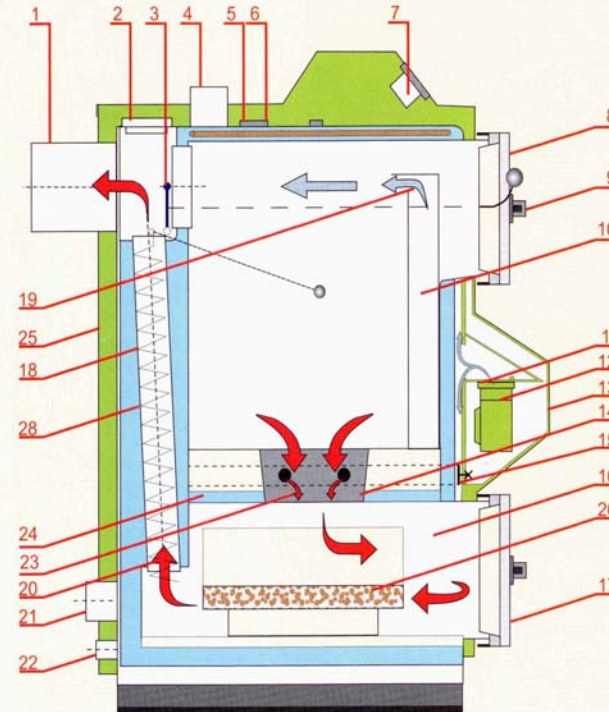


Best moisture for gasification should be in 20% range.

Wood too dry (less than 15%) or too wet (more than 25%) will reduce boiler efficiency.

Raw wood moisture ranges from 60% (wood cut in winter) to 80% (cut in summer). Most favorable wood moisture is obtained after 12-18 months of storing.

Boiler construction



1. Chimney flue outlet
2. Heat exchanger cleaning cover
3. Chimney flap
4. Hot water exit
5. Thermometer sensor
6. Safe guard thermometer sensor
7. Boiler controller
8. Upper door
9. Closing/opening door handle
10. Loading chamber (wood gasification)
11. Fan flap
12. Fan
13. Fan casing
14. Nozzle (refractory)
15. Secondary air adjustment
16. Combustion chamber
17. Lower door
18. Smoke tube heat exchanger
19. Primary airflow
20. Flue gas exit
21. Heating water entry
22. Drain valve
23. Secondary airflow
24. Water grate
25. Thermal insulation
26. Ash pit

Boiler construction