

# Pellet boiler ORLIGNO 400



ISO 9001   ISO 14001

Compliant with EN 303 - 5 norm





## Biomass - the curse of energetics or the only fuel of the future?

The real threat of depleting world resources, alternative sources of solid fuels, forces research laboratories to search for the new sources of energy in order to satisfy the energetic appetite of human population. It seems that the only way to solve the current situation in a rational way is the use of renewable energy sources. In relation to this phrases like 'energetic plants', 'energetic plantations', 'wind power stations', etc., are mentioned more and more often. In the last decade a rapid development of biomass combustion technology is observed. Boilers ranging from a few kW to a few hundred MW are produced to heat detached houses, residential areas and cities. The efficiency of these boilers is often over 90% and the emissions of harmful gases are comparable to the emissions of the best oil and gas boilers with the advantage that the CO balance for biomass equals zero. The level of automatics in even small boilers allows recognising them as appliances which require minimal human input as they are equipped in fuel feeding, ash removal and combustion process control automatic circuits. The boiler prices are decreasing and starting to be comparable to the oil installations prices. Maintenance costs in the case of biomass do not exceed 30% of the maintenance costs linked with oil. Moreover, biomass is a renewable fuel, it does not contain sulphur, it derives from the post-production waste and it can be cultivated for the sake of energetics only.

One of the most popular natural fuels is pellet, in other words a material which comes from natural wood waste, mainly sawdust and wood shavings, sawmill and carpentry waste, but sometimes using wood bark, hay, sun flower and other organic materials all of which are compressed together. Thanks to the usage of such materials we encounter the ecological biomass. Pellets can take the form of granulated globules or cylinders with various diameters and length. Pellets have got a low humidity (the best one 8%-12%), little amount of ash is created in the combustion process thanks to which using them is convenient and clean.



# Pellet boiler

## ORLIGNO 400

- ❑ Fuel: wooden pellet.
- ❑ Efficiency: up to 92%.
- ❑ Energetic class: A-A.
- ❑ Max working temp. 80°C.
- ❑ Modulated burner operation.
- ❑ Water content fitted for hydraulic flows.
- ❑ Max. working pressure 2,5 bar.
- ❑ EN 303-5 class 3.

### Reliant and cost-saving heating

Orligno 400 is one of the most dependable boiler on the market. Orligno's 400 burner perfectly fits for year-round use. It starts and stops similarly to gas and oil boilers depending on heat demand. Controller is 100% modulating but unlike in gas boilers it doesn't starts and stops so often. Automatic ignition in stainless steel burner and modulated power assures efficient operation whole year.

### Safety

Orligno 400 is fully protected against uncontrolled temperature increase and burn back through mounted thermic sensor on burner's body and elastic chute pipe.

**Controller** is 100% modulating. Fuel and air feeding is constantly monitored and matched for actual heat demand.

Boiler works perfectly with accumulation tank selected according to 1 kW = 50l.



2 warranty for boiler thickness



# Pellet boiler ORLIGNO 400

1. Motoreducer
2. Elastic, chute pipe
3. Feeder
4. Controller
5. Metal connector
6. Pellet tank
7. Burner's handles
8. Burner
9. Lever for burner cleaning

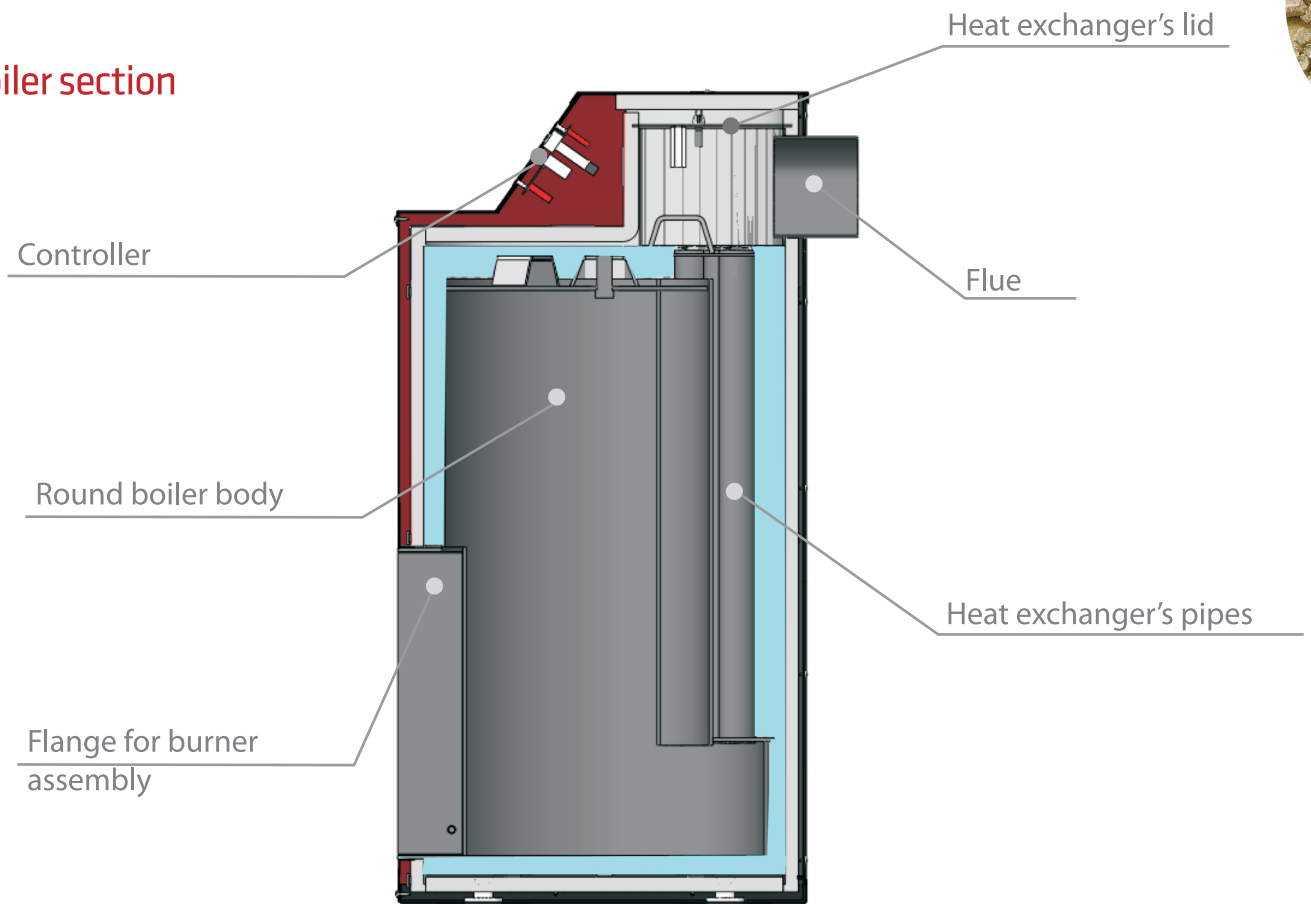


| Technical data                   |             |         |         |
|----------------------------------|-------------|---------|---------|
| Power                            | Measured in | 16 kW   | 30 kW   |
| Height                           | mm          | 1070    | 1196    |
| Width                            | mm          | 550     | 599     |
| Depth                            | mm          | 550     | 550     |
| Flue                             | Ø mm        | 150     | 150     |
| Fuel                             |             | pellets | pellets |
| Power range                      | kW          | 3,9-16  | 8-30    |
| Efficiency                       | %           | 89,4    | 91,8    |
| Boiler class acc. EN 303-5       |             |         | 3       |
| Max temp.                        | °C          |         | 80      |
| Min return temp.                 | °C          |         | 60      |
| Max working pressure             | bar         |         | 2,5     |
| Chimney draft                    | Pa          |         | 10      |
| Tank capacity                    | l           |         | 450     |
| Burning period                   | h           | 90      | 70      |
| Fuel consumption – nominal power | kg/h        | 4       | 6       |
| Fuel consumption – minimal power | kg/h        | 0,9     | 1,75    |
| Exhaust gases – nominal power    | °C          | 145     | 170     |
| Exhaust gases – minimal power    | °C          | 80      | 84      |

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## Boiler section



**Orligno 400** package contains boiler, controller, metal connector, elastic chute pipe, feeder with motoreducer and pellet tank.



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# Pellet boiler ORLIGNO 400



Compact burner's construction - burner inserted into burning chamber



Burner body - stainless steel



Lever for burner cleaning



Handles for burner fixing

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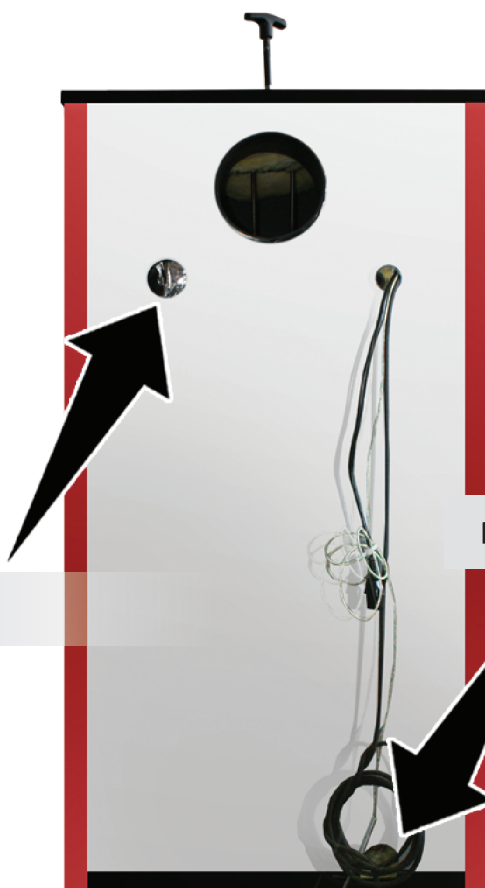
# Pellet boiler ORLIGNO 400



Cleaning mechanism lever (option) - replaceable with turbulators



Flue



Hot water outlet

Return from installation

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