

Residential space-heater for wood pellet

## HELENA

Small guide for use and maintenance



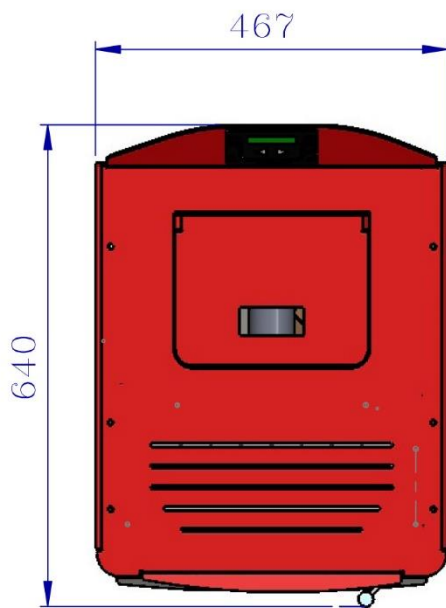
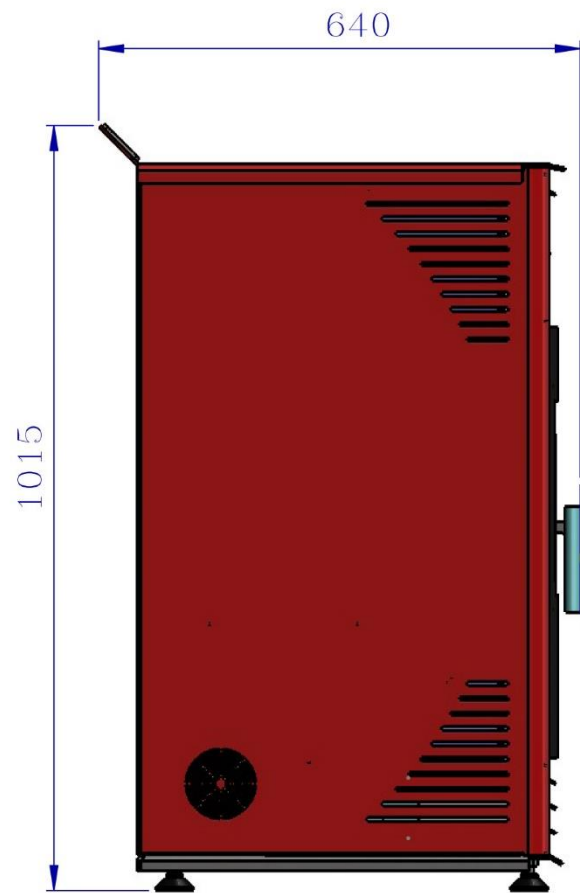
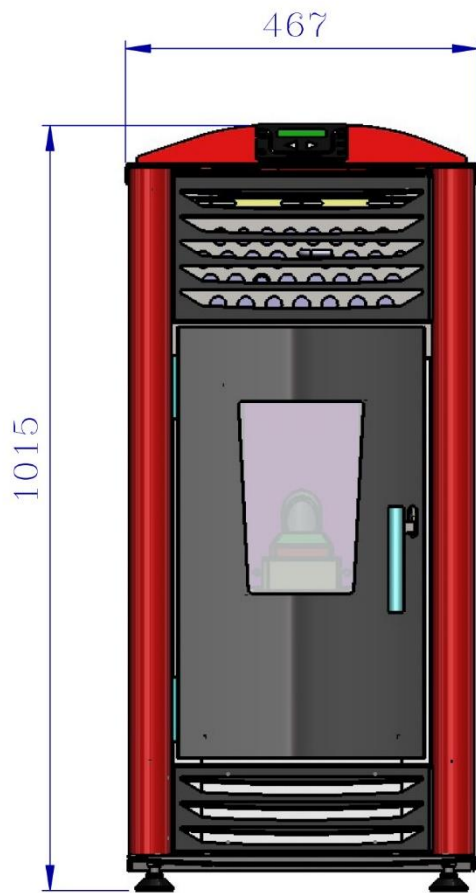
Prhovačka bb, 22310 Šimanovci, Serbia,  
Tél / Fax. +381 22 480404 +381 63 259422  
podrska@termomont.rs www.termomont.rs

October 2023

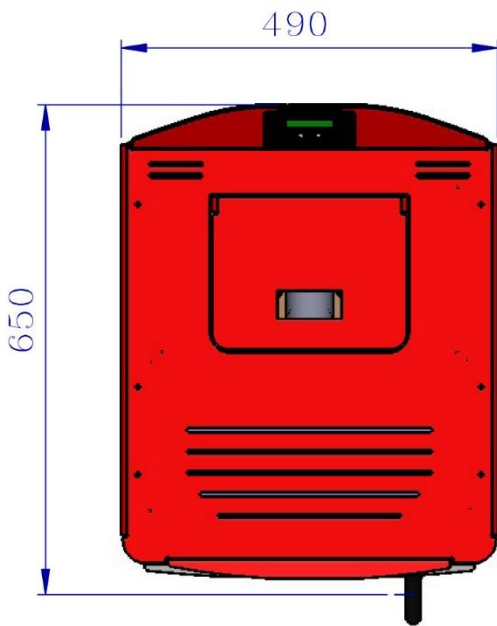
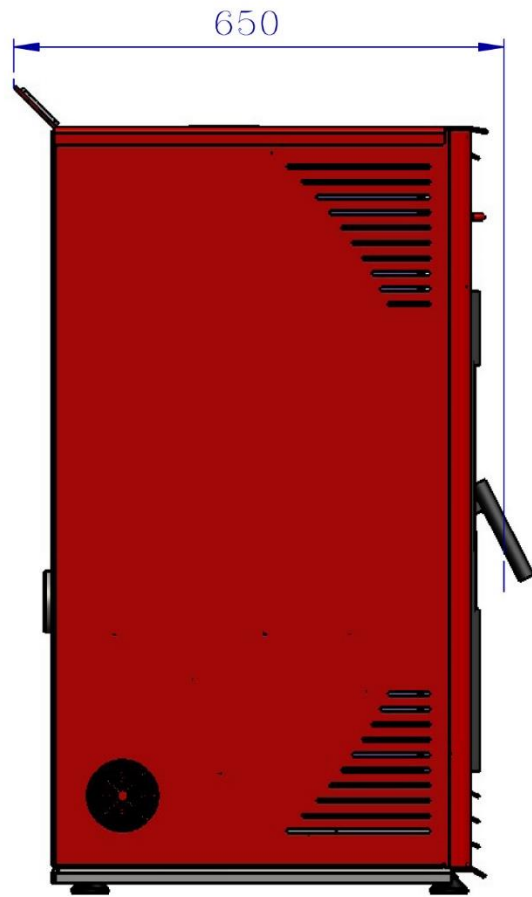
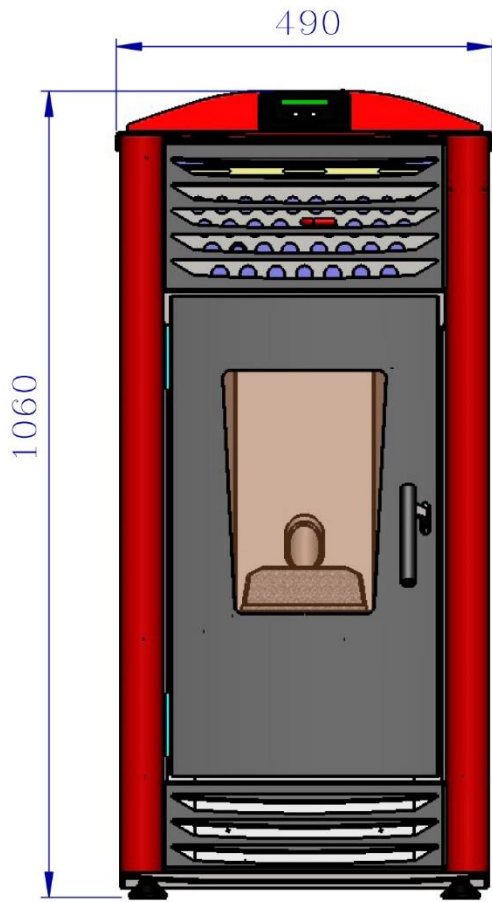
# Contents

<b>1</b>	<b>General product data</b>	<b>2</b>
1.1	Technical data chart .....	3
1.2	Emission values .....	3
1.3	Product description.....	3
<b>2</b>	<b>Parts of the boiler</b>	<b>5</b>
<b>3</b>	<b>Recommendations for boiler shipment and storage</b>	<b>7</b>
3.1	Delivery form.....	7
3.2	Additional information.....	8
<b>4</b>	<b>Introductory notes</b>	<b>8</b>
<b>5</b>	<b>Safety remarks</b>	<b>10</b>
<b>6</b>	<b>Stove installation</b>	<b>10</b>
6.1	Stove placement.....	10
6.2	Connection with a chimney .....	11
<b>7</b>	<b>Boiler cleaning and maintenance</b>	<b>14</b>

# 1 Helena 8 - Size



# Helena 12 - Size



## 1.1 Technical data chart

Type	HELENA 8	HELENA 12
Nominal power	8 KW	12 KW
Fuel consumption at nominal power	max 1,8 kg/h	max 2,7 kg/h
Pellet quality	A1, A2 Ø6, Ø8	A1, A2 Ø6, Ø8
Total weight of the boiler	119 kg	128 kg
Pellet capacity	15 kg	15 kg
Flue gas diameter	80 mm	80 mm
Air inlet opening	50 mm	50 mm
Flue gas temperature at nominal power	143 °C	160 °C
Necessary draught	8 Pa	8 Pa
Connection to electrical network	220 V 50 Hz	220 V 50 Hz
Energy consumption at start-up	400 W	400 W
Energy consumption at steady-state	200 W	200 W
Efficiency	90,8 %	91 %

## 1.2 Emission values

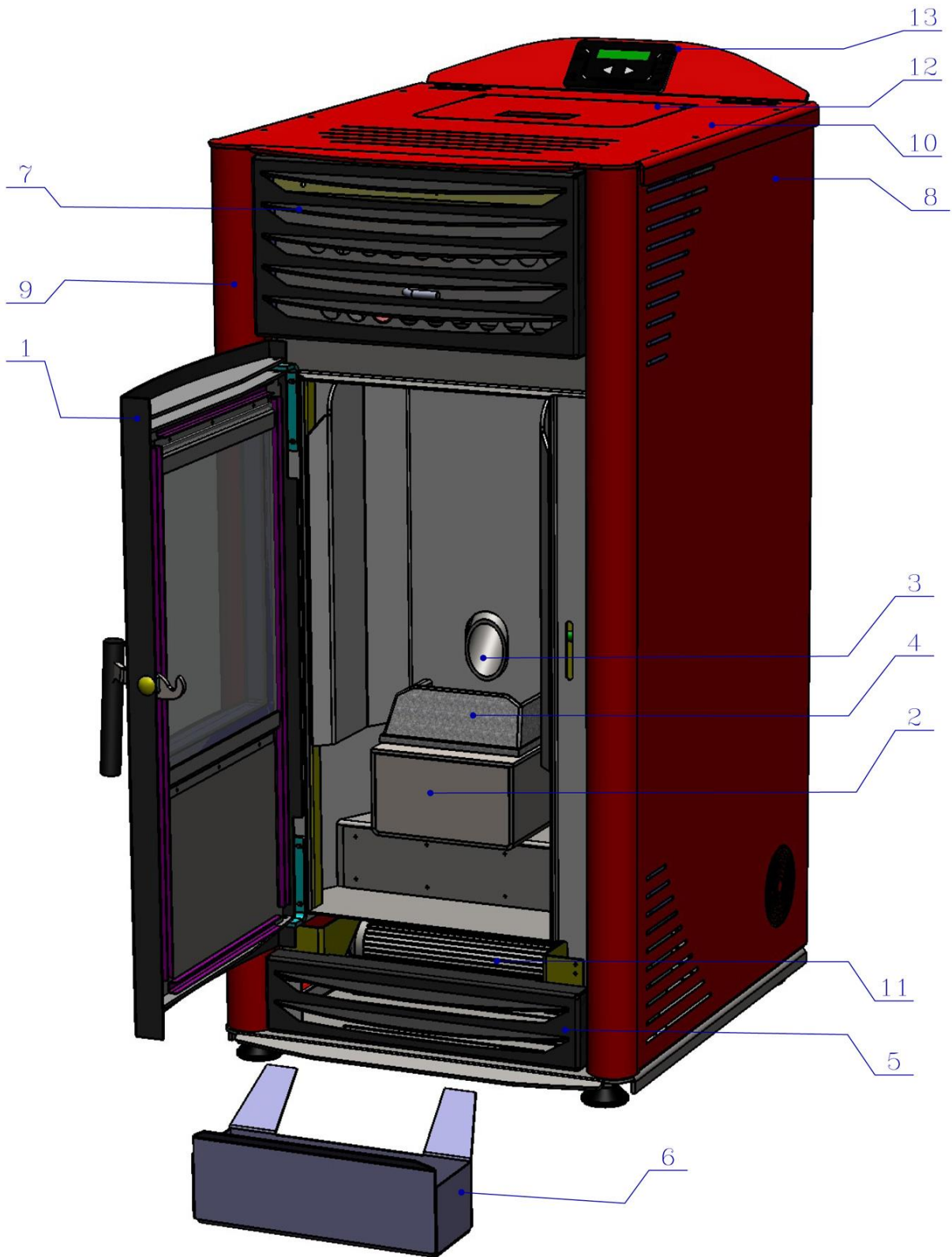
**Helena** wood pellet stove is evaluated according to European Directive 2015 :1189 and its emission values as well as boiler efficiency are officially tested and confirmed to be below prescribed limits.

Seasonals emissions	at 13% O <sub>2</sub>	at 13% O <sub>2</sub>
CO	0,014 %	0,013 %
OGC	40 mg/Nm <sup>3</sup>	55 mg/Nm <sup>3</sup>
NO <sub>x</sub>	188 mg/Nm <sup>3</sup>	195 mg/Nm <sup>3</sup>
Dust	18 mg/Nm <sup>3</sup>	19 mg/Nm <sup>3</sup>
Seasonal efficiency	80,8%	83,2%
Energy efficiency index	121,6	124,2
Energy efficiency class	A+	A+

## 1.3 Description of the product

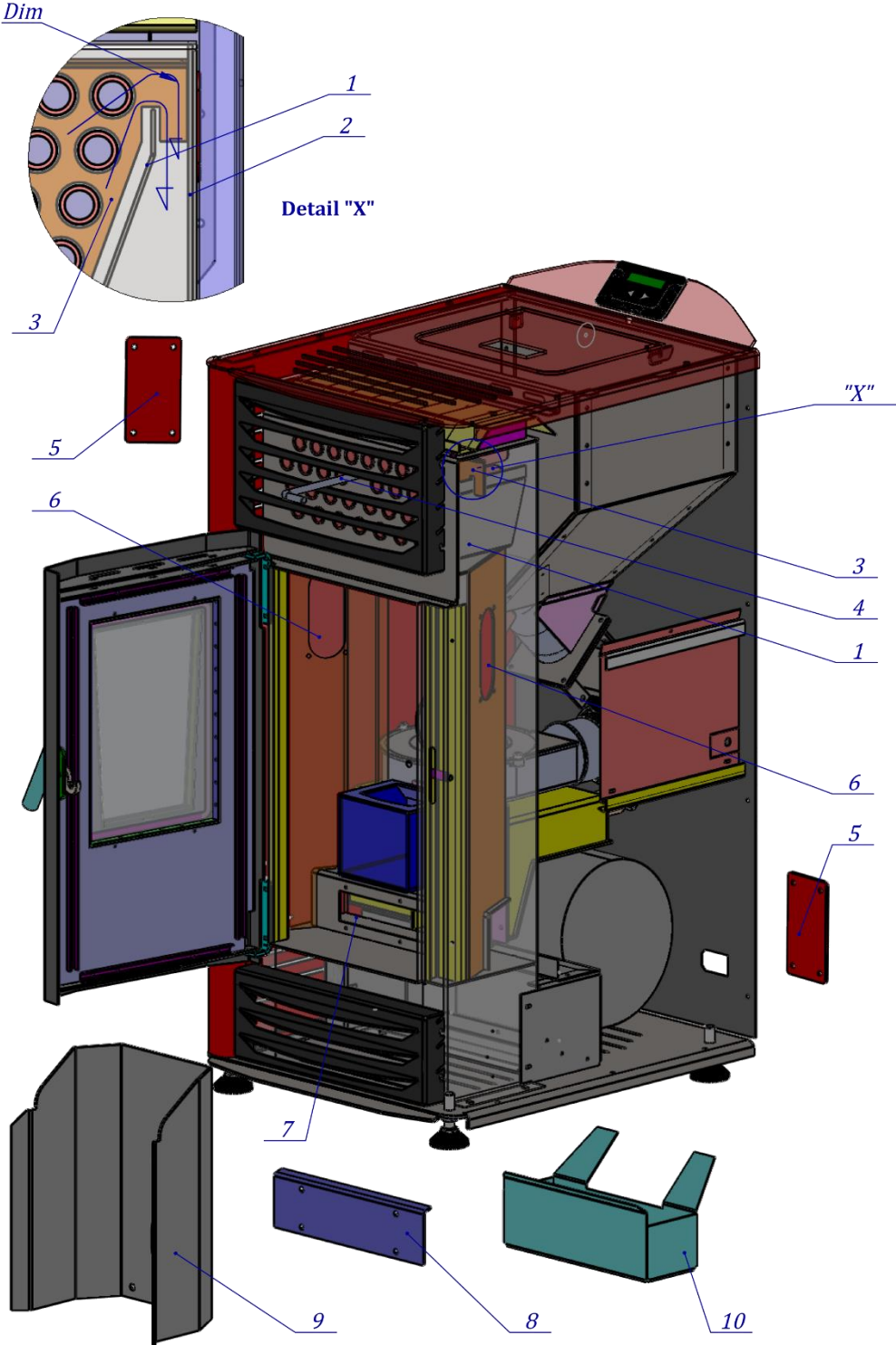
- This product is aimed for living areas. It's a space-heater device so it has no thermal insulation coat. Product dimensions make it suitable for placement in small areas.
- **Helena** wood pellet space-heater is made according to **EN 14785** and fulfills **Ecodesign** criteria 2015:1189.
- This product can only be fed and fired with **wood pellets that fulfill EN 14961 norm**, pellet quality A1 or A2, pellet diameter 6mm or 8mm.
- Ignition, start-up and turning-off are fully automatized. Combustion control is optimized using algorithms such as 'modulation' which automatically decreases pellet dose as the difference between desired and reached temperature is decreasing.
- Boiler regulation is equipped with sensors (ambience sensor, flue gas). Ambience sensor is to detect the room temperature.
- It is also equipped with a dosing gear motors and two fans (ambience and flue-gases)
- Boiler chamber is made by welding 3mm thick steel plates (all surfaces in touch with fire). Other parts are made of 2mm steel.

## 2 Basic parts of the space-heater HELENA



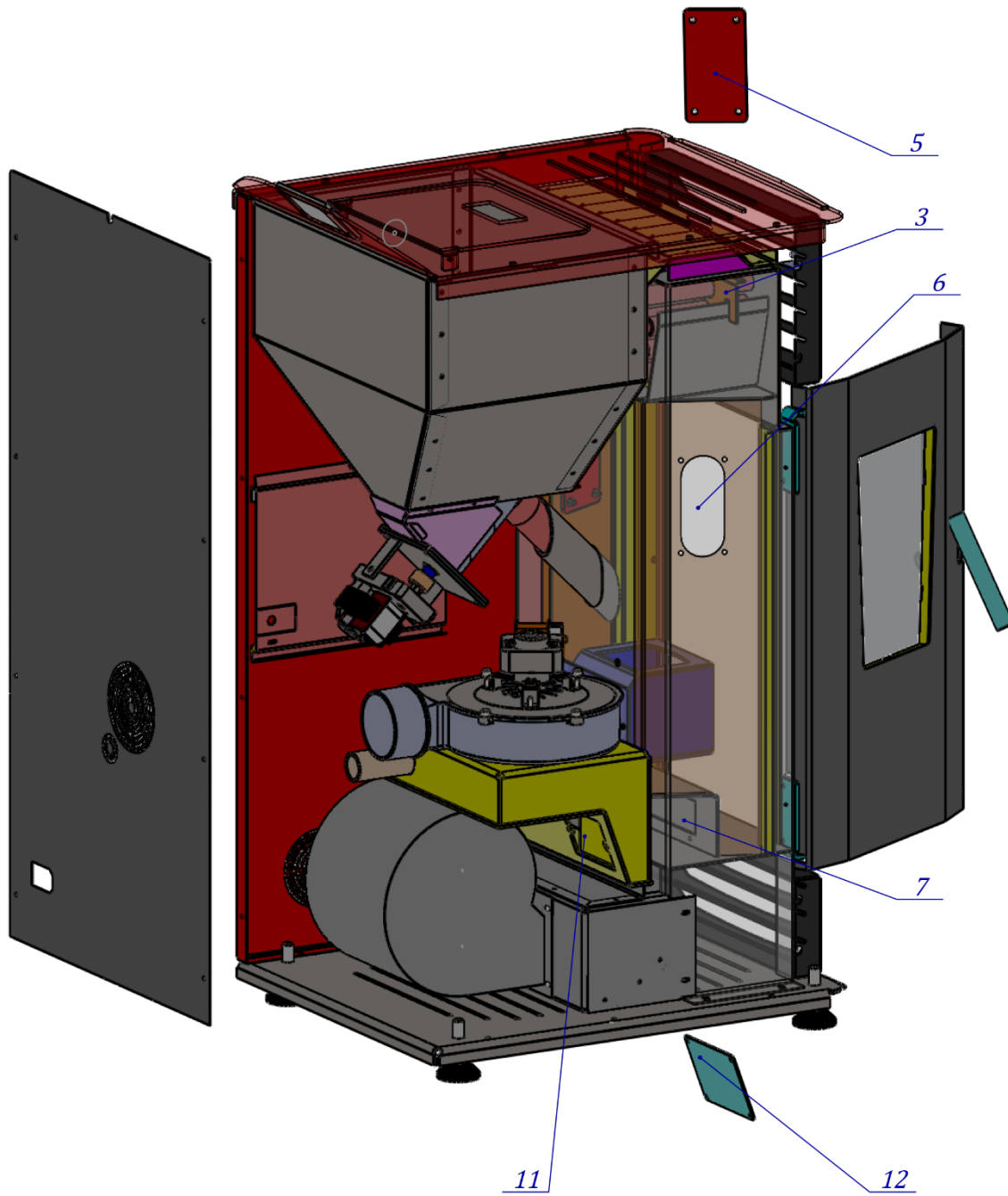
1. Oven door 2. Embedded pellet burner 3. Pellet doser 4. Burner Ring 5. Boiler housing - lower opening  
 6. Ashtray 7. Boiler housing - upper part 8. Boiler housing - left side 9. Boiler housing - right side 10. Boiler housing - upper front part 11. Cover of tubulators handles 12. Pellet magazine cover 13. Boiler housing - display carrier

# Detailed overview of the space-heater HELENA



- 1. Flue-gas stream 3. Turbulator cleaning tool 4. Turbulator cleaning tool handle 5. Upper cover 6. Upper opening
- 6. Ashtray 7. Lower opening 8. Lower covering 9. Flame protection 10. Ash-tray

**Detail "X":** 1. Flue-gas stream (lateral detail view) 2. Outer surface 3. Turbulator cleaning tool



3. Turbulator cleaning tool 5. Upper cover 6. Upper opening  
 7. Lower opening 8. Lower covering 9. Flame protection 10. Ash-tray 11. Fan box opening 12. Cover of the fan box



## 3 Recommendations for shipment and storage

### 3.1 Delivery



Make sure product is during transport always placed in its vertical position.



Turning boiler upside-down can seriously damage the unit.



It is forbidden to stack products.



Product can be stored only in closed area without atmospheric influence. Wet cannot exceed 80%, room temperature should be between 0°C and 40°C.



While unpacking make sure if the paint is scratched somewhere, and that all boiler parts are stable and fixed in its place.

### 3.2 Additional parts and documents



Following parts and documents are delivered along the boiler:

- A cleaning kit
- Energy efficiency label
- Boiler regulation (part of the boiler)



Following parts are not delivered with the boiler:

- Chimney connection elements
- Wi-fi connection kit and remote controller (optional)

## 4 Introductory notes



The end user must strictly follow the guidelines prescribed in this manual. On the contrary, the warranty will not be recognized.



Only permitted fuel for this boiler is wood pellet, EN 14961, quality A1 or A2, diameter 6mm or 8mm.



Clean the pellet stove on a regular base.



Initial operation of the oven is only to be performed by an authorized person (service) and additional fee applies (not in the price of the oven).



Ambience sensor should be placed somewhere suitable to read the room temperature. Please make sure it is not on the surface of the stove.

## 5 Safety remarks



While in use, some parts of the boiler may be hot. Don't touch the boiler without appropriate hand protection against heat.



If some parts of the boiler occur to be damaged it is strictly forbidden to continue using the boiler.



Do not touch electrical cables with wet hands.



Electric connections must be made according to 73/23 CEE i 93/98 CEE and properly dimensioned.

## 6 Oven placement

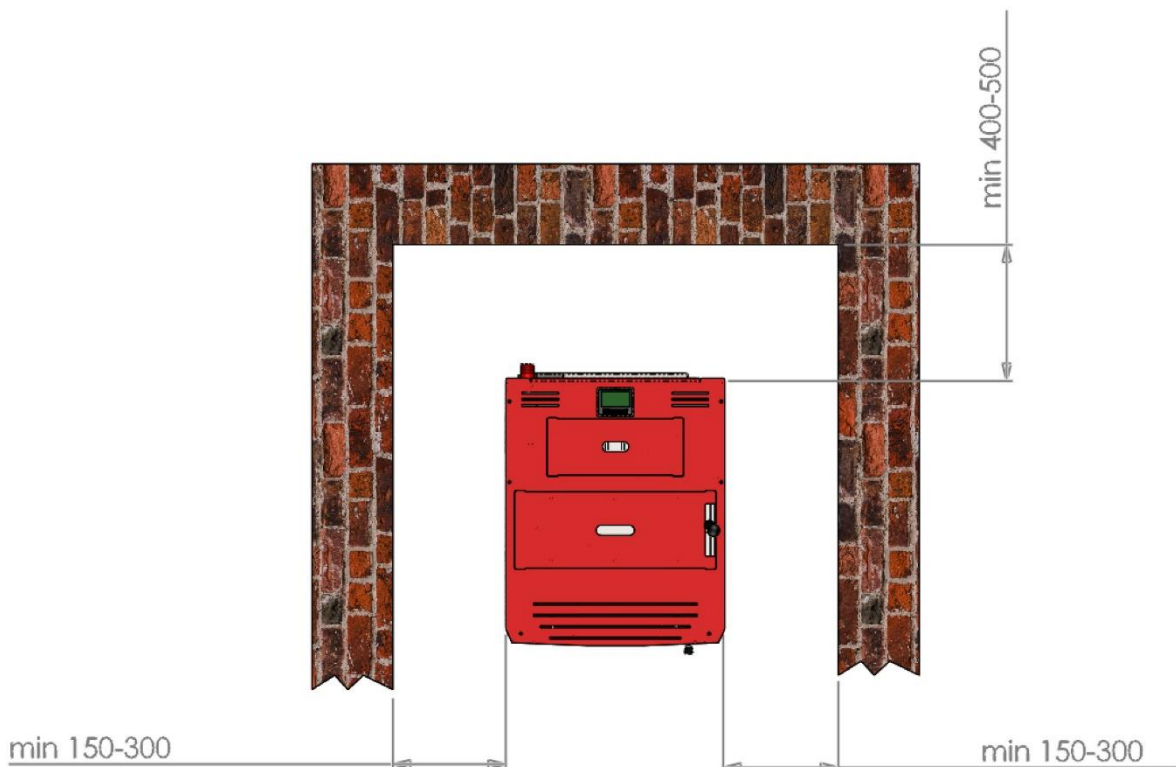
### 6.1 Placement and pellet supply.



Room where heater is placed, must possess windows, minimum surface area of window is given by equation:

$$A (cm^2) = 6 \times P$$

where **P** represents nominal power of the **KW**.





Boiler basement must be stable and made of fireproof material.

Pellet-bag is fed to the oven from above in the designated area.

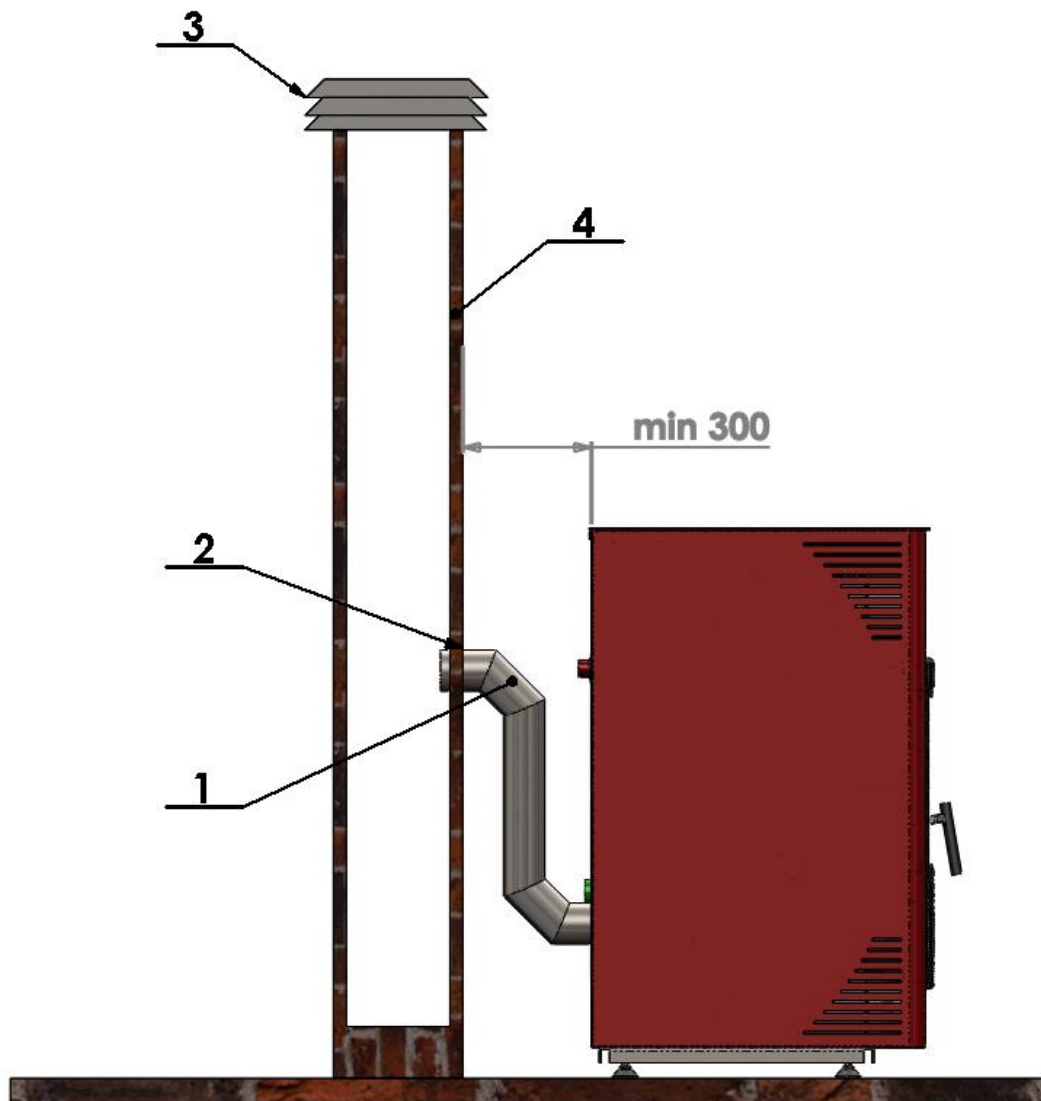


Ambience sensor should be placed somewhere suitable to read the room temperature. Please make sure it is **not** on the surface of the stove.

## 6.2 Connecting to the chimney

Chimney is to be connected as depicted below and it is necessary to clean the chimney **1-2 times per year**.

To reduce heat loss and due to ecological and safety factors, it is essential to have a vertical chimney connected according to the picture and, if conditions allow, the chimney must be of quality (made with ceramic segments thick up to 5 cm). Clean the chimney regularly, at least once or twice a year. The maximum number of elbows between the boiler and the chimney is **2**.



1) Flue pipe 2) Gasket 3) Fireproof protection cap 4) Chimney diameter not greater than 200x200mm with max height 5-6 meters.

## 7 Boiler cleaning and maintenance



If poor quality pellets are used which contain impurities of inorganic origin (earth, sand), these will accumulate over time in the form of “silicone” layers. In this case, the space-heater will not work properly.



Lack of cleaning leads to rapid degradation, i.e. corrosion of certain parts of the boiler, which leads to poor combustion and heat loss.



This product is intended for use with clean wood pellets without additives. The combustion will be of better quality and the life of the burner will be longer.



Before accessing cleaning, the heater must be switched off and all parts must be completely cold.



Use of gloves is obligatory for all operations described.

Regular maintenance is necessary to ensure product functionality and long-life operation. Boiler cleaning consists of following operations:

1. Emptying ash-trail of the boiler
2. Removing ash from the bottom part of the boiler
3. Cleaning of burner pot and the tube bundle
4. Cleaning of the holder of burner pot
5. Cleaning the glass on the door
6. Cleaning of flue ducts
7. Cleaning the fan box

Vacuum ash-cleaner can be used to facilitate this operation (not a part of the product delivery).



**Cleaning the tube bundle** - the outer surface of the tube exposed to an open flame is cleaned. By manually pulling the bar (page 7, pos. 4), the cleaner removes the layer of debris that is on the pipes. Cleaning is done by the user **2-3 times** a week.

**Cleaning the door glass** - The glass on the inside of the door is exposed to open flames. First, the rust is removed with a dry cloth, then the glass is washed from the inside with a glass cleaner. After washing, the surface is wiped with a dry cloth. Glass cleaning has primarily an aesthetic purpose.

**Cleaning of flue ducts** - in the space between the "smoke deflector" and the "outer side" there is an accumulation of solid particles that are in the smoke as a combustion product. Clean through the upper and lower inspection openings with a steel brush on a steel rope. This operation is performed by the user or an authorized service technician once a year at the end of the season. If cleaning is required several times during the year, check the quality of the pellets and the operating parameters of the stove.

**Cleaning the fan box** - cleaning is done through the inspection opening of the fan box, with a manual cleaner. **This operation is performed by the user or an authorized service technician once a year at the end of the season.**

After cleaning, return the covers and seal them with thermostable silicone.

**THANK YOU FOR READING THIS DOCUMENT CAREFULLY - IF YOU HAVE  
ADDITIONAL QUESTIONS FEEL FREE TO CONTACT US OR YOUR LOCAL  
RESELLER.**



Prhovačka bb, 22310 Šimanovci, Serbia  
Tél / Fax. +381 22 480404 +381 63 259422  
podrska@termomont.rs www.termomont.rs