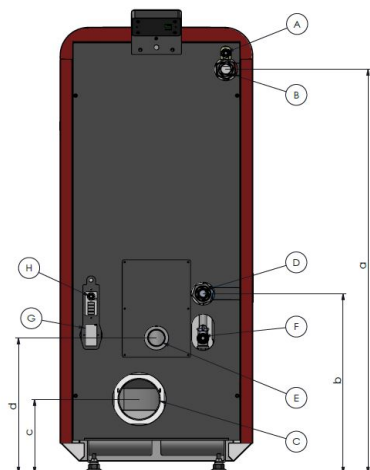




TECHNICAL INSTRUCTIONS
For the use of pellet
stove VESTA



1. Technical characteristics

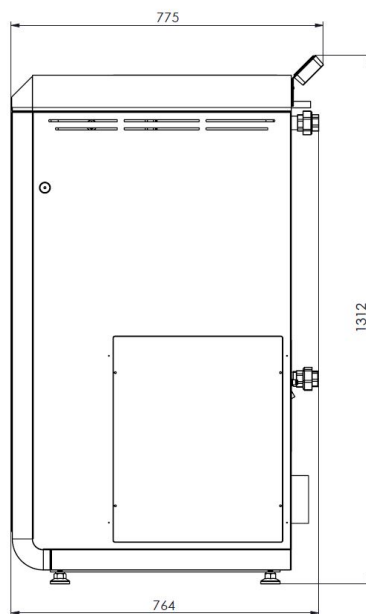
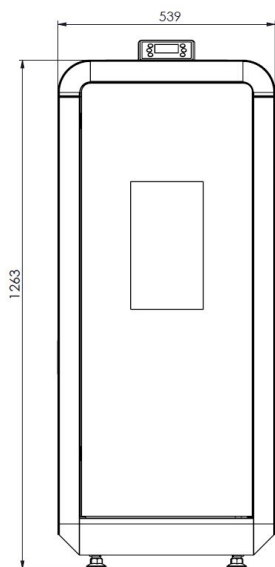
DESCRIPTION		UoM		
Stove power		kw	21	15
Content of water in the stove		lit	25	25
Required draft		Pa	10	10
Input electricity power:				
- during the ignition phase		W	450	450
- during the operation phase		W	150	150
Connection voltage		V	230	230
Frequency		Hz	50	50
Stove mass		kg	220	220
Maximum operating pressure		bar	2,5	2,5
Maximum operating temperature		°C	85	85
Flue pipe diameter		mm	120	120
Stove dimensions	Width	mm	539	539
	Height	mm	1214 (1302)	1214
	Depth	mm	699 (773)	699
Connections at the stove	Outgoing air duct	Col	1"	1"
	Return air duct	Col	1"	1"
Pellet storage capacity		kg	40	40

A	Safety valve	1/2" SN3bar
B	Outgoing air duct	Hot water1"
C	Connection for flue pipe	ø 120mm
D	Return air duct	Cold water1"
E	Connection for fresh air supply	ø 48 mm
F	Filling and discharging tap	
G	Main switch	
H	Safety thermostat	

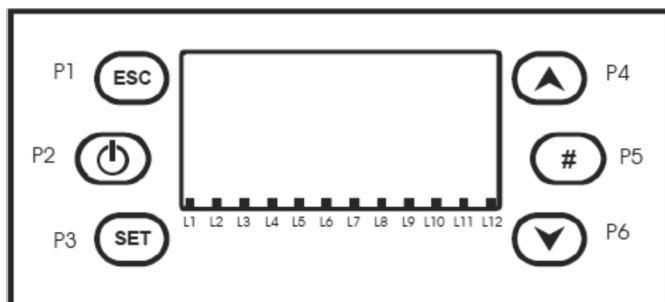
Connections dimensions:

a	Outgoing air duct	1091mm
b	Return air duct	456mm
c	Connection for flue pipe	158mm
d	Connection for fresh air supply	330mm

Overall dimensions:



2. Display: Functions and use



Buttons	Short pressure	Long pressure (3-5 seconds)
P1	Leaving menu or submenu	-
P2	Activation of Chrono function in Chrono menu	ON/OFF and alarm resetting
P3	Entering the main menu, memorising settings, activation of time settings	Entering the system menu, keyboard setting
P4	Visualisation/Increasing value	-
P5	-	Locking the keyboard
P6	Visualisation/Decreasing value	-

Led lamps	
L1	Heater turned on
L2	Engine – redactor turned on
L3	V2 output active - pump
L4	AUX 1 output active
L5	AUX 2 output active
L10	Pellet level sensor turned on
L11	Accessory input active
L12	Micro-switch turned on

3. Alarms

DESCRIPTION	CONDITION	DESIGNATION
Safety thermostat HV1	Blocked	Er1
Boiler door open	Blocked	Er2
Turning off due to lack of flame	Blocked	Er3
Turning off due to too high boiler temperature	Blocked	Er4
Turning off due to too high flue gases temperature	Blocked	Er5
Encoder error: no signal	Blocked	Er7
Encoder error: unsuccessful fan regulation	Blocked	Er8
Real time error	Blocked	Er11
Ignition failure	Blocked	Er12
Lack of main power supply	Blocked	Er15
RS 485 connection error	Blocked	Er16
Shortage of pellet in pellet storage	Blocked	Er18
Micro-switch error	Blocked	Er52
Probe control anomaly identified during "Check-Up" phase		probe
All alarms are reset by long pressing P2 button		

4. Visualization

ExhaustTemp: 103	- Flue gas temperature
Boiler Temp: 25	- Water and boiler temperature
Buffer Temp: 25	- Water temperature in "Buffer"
Fan Speed : 1000	- Fan speed
Flame Light: 0	- Illumination
Recipe [nr]: 1	- Number of receipts
Product Code: 488: 1234	- Software serial number

5. User menu

This menu is accessed by short pressing of P3 button.

5.1 Combustion power settings

In this menu it is possible to adjust the combustion power. The modality can be manual or automatic. In the first case a user chooses the power, while in the other case the system chooses the combustion power compared to the set temperature.

Pellet: 1-2-3-4-5-Auto

5.2 Thermostats

They are used for adjusting the set temperature in the stove, and/or in the "Buffer" if it is installed.

"Buffer" thermostat is visible only if **P26=1 and P42=1**.

5.3 Operation mode

This menu allows for the selection of the stove operation mode: **pellet** or **solid fuel**.

The stove is designed for burning only wood pellet.

5.4 Number of program receipts/Recipe

This menu is visible only when the stove is under the pellet operation regime and the change of recipe is not allowed. Only "**Pellet recipe**"1 is available.

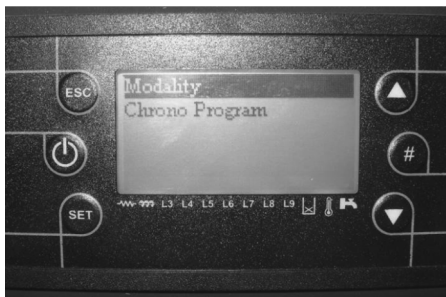
5.5 Time programming/Chrono

It is used for time activation of stove turning on/off.

Press the button P3 to enter the menu.

5.5.1 Modality

It is used for activating and deactivating program setting.



Press button P3



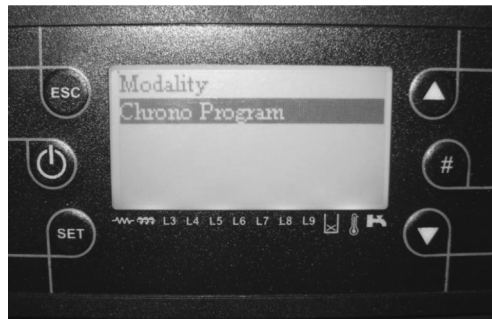
Press button P3 and choose Daily, Weekly or Weekend Program by means of button P4 or P6.

Time programming can be activated by pressing the button P3 (the selected field flashes) and then the button P2 (disabled is changed into enabled).



5.5.2 Time programming/Chrono Program

Press button P1 to go one step back and choose Chrono Program.



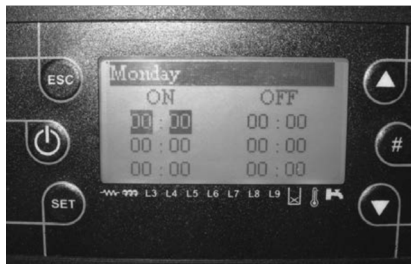
Press button P3 for entering the menu.



Choose Daily, Weekly or Weekend Program with the button P4 or P6 and then confirm it by pressing the button P3.



Choose a day in a week by pressing the button P4 or P6 and confirm by pressing the button P3.

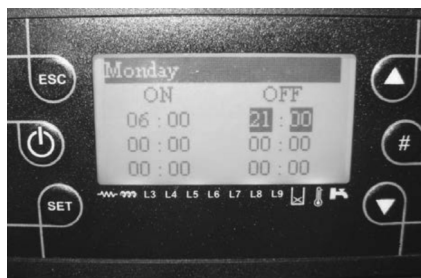


Within each day there are three programs that you may use.

Press the button P3 (the selected field flashes) and set the time of stove ignition (ON) by pressing the button P4 or P6. After setting the time, confirm it by pressing the button P3.

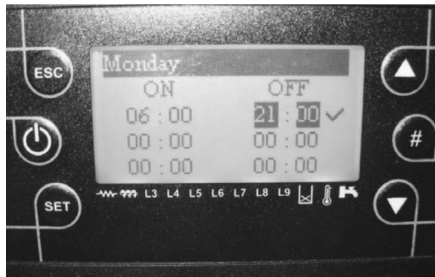


Press the button P6 to enter the field for setting the time of stove turning off. Press the button P3 (the selected field flashes) and set the time for stove turning off by use of button



P4 or P6.

Press the button P5 (the symbol "v" appears) and now time setting for a certain day of the week is activated.



Press the button P1 until the initial screen is shown on the display.

The symbol showing that the time programming is active now appears in the upper left corner.



Programming around midnight

Set the clock to **ON** for the previous day at the desired time: for example at 20.30. Set the clock to **OFF** for the previous day at 23.59.

Set the clock to **ON** for the next day at 00.00.

Set the clock to **OFF** for the next day at the desired time, for example at 6.30.

The system will be turned-on on Tuesday at 20.30 and will be turned-off on Wednesday at 6.30.

5.5.3 Manual loading of pellet/Load

This option activates manual loading of pellet by ensuring that engine redactor operates non-stop.

Filling is stopped automatically after 600 seconds or manually by deactivating at any time interval by pressing **OFF** by use of the button P3.

The activation of this function is possible only if the boiler is turned off (off).

Manual loading of pellet is used only during the initial start-up of the stove or when there is no pellet in the storage.

5.5.4 Adjustment of pellet dosing/Calibration

This function is used for fine adjustment of the selected combustion power. The scope of adjustment from -7 to +7.

For example:

1. If the adjusted combustion power 3 is not sufficient and the power value 4 is too high, in that case the adjustment of power 3 to +1 or 2 or power 4 to -1 or 2 can be used.
2. The adjustment can be made also in the case when pellet is of bad quality and when there is lots of ash residue.

6 User Menu 2

This menu is accessed by pressing the button P3.

6.1 Keyboard settings

6.1.1 Date and Time

In this menu, day, month, year and hour can be set.

6.1.2 Language

The menu for the language used.

6.2 Keyboard Menu

6.2.1 Learn Menu

This menu is used for loading the data from the mother board.

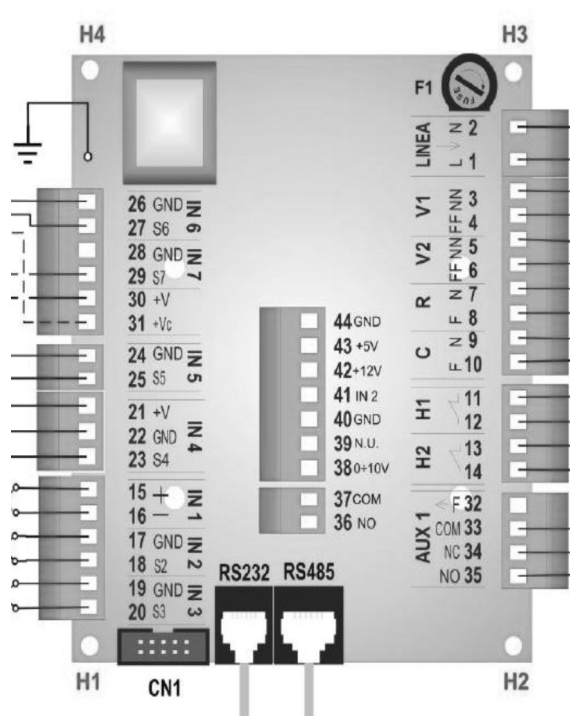
6.2.2. Setting contrast

The menu for setting contrast on the display.

6.3 System menu

This menu is protected by the safety password and may be used only by the authorized servicing agent.

6.4 Connection diagram



Pin		FUNCTIONS	CHARACTERISTICS
1	N	Main duct	230Vac± 10% 50/60Hz F1= fuse T5,0A
2	L		
3	N	Fan	Triac regulation max 1A
4	L		
5	N	Configuration output V2- Pump	Triac ON-Off max 1A
6	L		
7	N	Heater	Relay 3A max
8	L		
9	N	Motor – reductor	Triac ON-Off 1A max
10	L		
11		Safety thermostatinput HV1	Contact ON-Off Normally closed; It should be bridged if not used
12			
13		Safety thermostatinput HV2	Contact ON-Off Normally closed; It should be bridged if not used
14			
15	red	Flue gas probe	Termopar K: 500°C Max
16	green		
17		Buffer temperature probe	NTC 10K @25°C 120°C Max
18			
19		Boiler temperature probe	NTC 10K @25°C 120°C Max
20			
21	+5V	Encoder signal	Signal TTL 0 / 5V
22	GND		
23	S4		
24		Accessoryinput: Chrono/Room thermostat	Contact ON-Off
25			
26	GND	Configurativeinput	Signal 0 / 5V
27	S6		
28	GND		
29	S7	Photo cell	Analogueinput
30	+5V		
31	+12V		
32	F	Phase	Max voltage 5A
33	COM	Configurativeaccessoryoutput	Relay 3A max;
34	NC		
35	NO		
RS 485		Display	
RS 232		Connector RS232	Modem/computer connection

7 Instructions for Use

The pellet stove **Vesta 21** is designed for burning wood pellet.

It is produced by using the state-of-the-art technology and top quality and certified materials, welded by use of the modern robot technology and certified in accordance with the standard EN 14785:2006 in order to meet all the requirements for connecting to the central heating system and all the European standards in terms of utilisation rate and harmful substances emission.

7.1 Important information

- * When installing the stove, all national, European and local regulations must be complied with.
- * Only original spare parts that can be purchased through an authorized dealer, servicing agent or directly at the factory are permitted for use.
- * The stove must not be operated in a flammable and explosive surroundings. The product should not be used by children or persons with reduced mental or physical abilities, as well as by persons with a lack of knowledge and experience, unless they are supervised or trained by the person in charge of their safety. Children must be under supervision if they are in the vicinity of the product.

7.1.1 Connection of the stove to the chimney

Properly dimensioned and constructed chimney is a prerequisite for safe operation of the stove and economical heating. The chimney must be well thermally insulated. A door for cleaning must be installed on the lower part of the chimney. The chimney must be resistant to flue gases condensation.

WARNING:



- * The horizontal duct of the flue pipes must have a slope of at least 3%.
- * The length of the horizontal duct of the flue pipes must be minimal and in any case not longer than 3m.
- * The number of changes in the direction of the flue pipes, including the "T" elements, must not exceed 4.

7.1.2 Fuel

The pellet use must meet the following standards: EN Plus, DIN Plus, ONorm-M-7135 or DIN 51731.

* Pellet characteristics:

Humidity-----6 –8%

Diameter ----- 6mm

Length-----10 –30mm

Ash residue ----- 1%

8 Installation of the stove

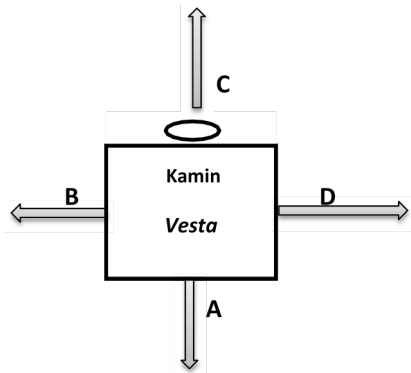
8.1 Safe distance of the stove from the wall and other facilities

A -800mm

B -150mm

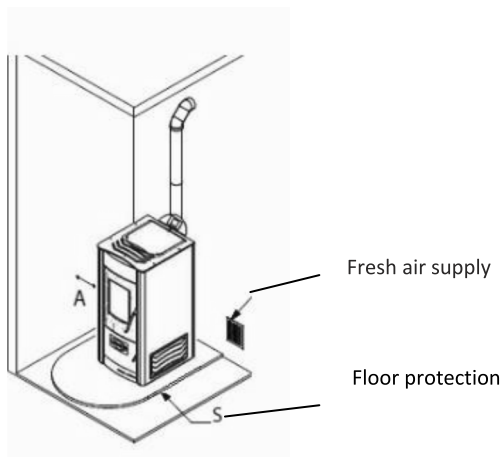
C -300mm

D - 500mm



8.1.1. Fresh air intake

The space in which the stove is installed **must contain a fresh air intake** dimensioned in accordance with the boiler's power. Such an opening must be protected by a protective net or grid. All the installation works must be carried out in accordance with applicable national and European standards. The stove must not be operated in a flammable or explosive environment.



9. Initial start-up of the stove

* Vesta pellet stove is factory fitted with a circulation pump, expansion vessel, safety valve, automatic air vent. Connecting the stove to the central heating system is performed via the pressure and return pipe.

*** Before starting the stove for the first time, check the following:**

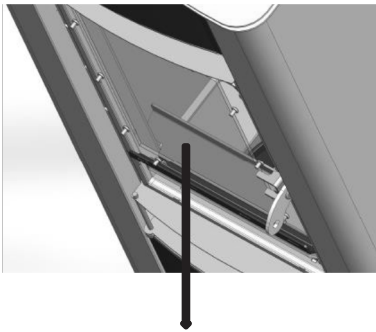
- Remove the stove accessories (instruction manual, power cable).
- Connect the stove to the pipeline and fill it with water.
- Unscrew the cover on the air vent that is located under the stove cover.
- Perform the levelling of the stove with adjustable feet that are mounted on the stand. Factory-made feet are screwed and the stove rests on a metal stand. It is necessary to unscrew the feet and allow the stove to rely on them.
- Connect the smoke duct with the chimney.

- Check that the door is well closed and the ashtray is installed in place.
- Check if the flame deflector* is in place.
- Check if the flue gas deflector* is in place.
- Load the pellet container.
- Connect the power cable to the mains (220V) and switch on using the main switch located on the back of the stove.
- Fill the worm conveyor with pellets as follows (there must be some pellet in the container):

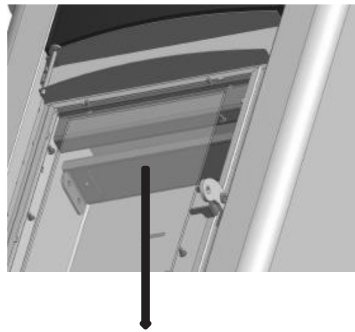
1. Press the SET button
2. Select the option "LOAD" (loading)
3. Confirm with pressing the "SET" button
4. Select "ON" and confirm with "SET" button.
5. Monitor the pellet drop zone in the burner through the fireplace door and wait for the burner to charge and then turn off the function to "OFF".
6. Be sure to empty the pellet in the burner before starting the stove, taking care that the burner is correctly positioned in place. NOTE:

This function is only used during the initial start-up or when the pellet is completely consumed in the container (there is no pellet in the worm conveyor).

7. Start the stove with a long press (5-6 seconds) on the P2 button



Flame deflector*



Flue gas deflector*

10 Cleaning and maintenance

*Basic information



The stove must be turned off and completely cooled before starting any cleaning and maintenance activities.

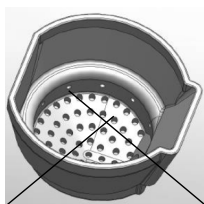
The intervals of cleaning and maintenance of the stove primarily depend on the quality of the pellets used. Wet pellet contains a large percentage of ash, dust and unburned residues that prolong cleaning and maintenance intervals. Please note once again that only the approved and certified pellet should be used.

The stove is equipped with a demountable handle for opening the fireplace door. After closing the door, the handle must be placed next to the stove to prevent the door from opening during operation.

Cleaning is divided into three categories: **Daily, Weekly and Monthly**

* Daily cleaning

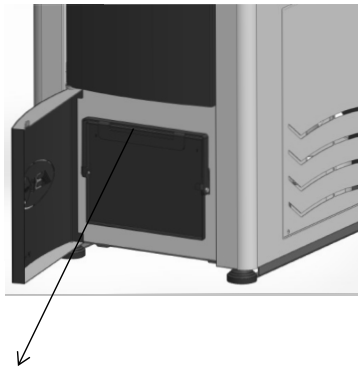
Depending on the pellet quality, it is recommended to clean the burner once a day. In order for the stove to function smoothly, all openings on the burner must be passable and clean.



Openings at the bottom of the burner

Lateral openings

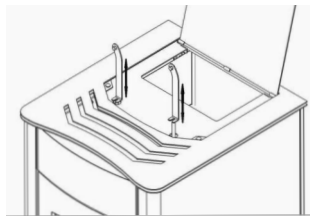
Ashtray is discharged once a day or rarely depending on the stove operation intensity.



Pull the lever towards yourself and downwards

To ensure a smooth transfer of energy to water, the cleaning should be performed at least once a day. Levers are pulled by use of a removable handle, which is also an accessory for (pulling) cleaning of the heat exchangerturbulator.

It is necessary to pull the turbulator blades up and down several times (3-4).



*** Weekly cleaning**

- Clean the fireplace and the burner housing of ash.
- Pull out the flame deflector* upwards and towards yourself.
- It is recommended that the dust and ash should be vacuum cleaned at least once a week by using an adequate vacuum cleaner.

*** Monthly cleaning**

- Flue gas deflector* located in the upper part of the fire place must be taken out and cleaned at least once a month.

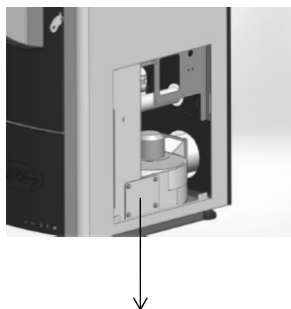
Dismantling is very easy, deflector is pulled upwards and downwards.



NOTE:

The stove must be cleaned only when it is completely cooled down.

- Cleaning of the flue gas duct shall be performed once in two months or at the end of the heating season depending on the operation regime of the stove and of the quality of pellet used.



Cleaning opening cover

- clean ash deposits from the left and right chambers by vacuum cleaner,
- put the cleaning opening cover in place and tighten all four screws.

In order to guarantee the safety and reliability of the stove operation, the operations listed below must be carried out at the end of each season or more often as needed:

- gaskets ensure proper operation of the stove only when they are undamaged and properly positioned,
- gaskets must be checked periodically. In case they are worn or damaged, they must

be replaced immediately,

- Flue pipes should be cleaned and vacuumed-cleaned once during the season or more often if necessary. If there are horizontal ducts, the ash residue in the pipes should be cleaned before closing the flue gas outlet and causing a standstill in the stove operation.

*** Cleaning of the pellet storage**

Do not reload pellet if you have not vacuum-cleaned the residue from the previous amount of the consumed pellet (dust, small pellet residues, etc.)

11. Failures and Troubleshooting

Error	Potential cause	Error elimination
<i>*Pellet does not drop into the burner Err 03; Err12</i>	<ul style="list-style-type: none"> - There is no pellet in the container. - Blocked worm conveyor. - Engine reductor broken down. 	<ul style="list-style-type: none"> - Refill the container with pellet. - Discharge the container and unblock the spiral. - Replace the engine reductor.
<i>Fire is gradually reduced until complete putting out Err 03; Err02</i>	<ul style="list-style-type: none"> - There is no pellet in the container. - Fireplace door is not closed. - Bad quality pellet. - Clogged flue gas pipes. - Pressure switch failure. - Fan broken down. 	<ul style="list-style-type: none"> - Refill the container with pellet. - Close the door and replace the gaskets. - Use certified pellet. - Openings in the burner must be passable. - Clean flue gas pipes. - Replace pressure switch. - Check the fan and condensator operation and replace them if needed.
<i>Pellet accumulation in the burner. Weak flame intensity. Door glass is dirty. Err 03</i>	<ul style="list-style-type: none"> - No air for burning - Wet pellet - Fan broken down. 	<ul style="list-style-type: none"> - Clean the burner so that all the openings are passable. - Check the pipe for air supply. - Use certified pellet. - Check the fan and replace it if needed.
<i>Ignition failure Err 12; Err 02</i>	<ul style="list-style-type: none"> - Power cut. - Pressure switch failure (error02). - Clogged fan housing or flue gas duct. - Burned heater. 	<ul style="list-style-type: none"> - Check if the main switch is in the position "I" - Replace the pressure switch. - Clean the fan housing and flue gas ducts. - Check the heater and replace it if needed

12 Information related to disposal and dismantling of the stove

Disposal and dismantling of (the old, used) stove is the sole responsibility of the owner of the stove. The owner of the stove must comply with the applicable legal regulations in its country regarding safety and environmental protection. The dismantling and storage of the stove can be entrusted to a third party, provided that it is a company authorized to collect and dispose of such materials.



ATTENTION:

Disposal of the stove in public places poses a serious risk to people and animals. In such cases the owner is responsible for injuries incurred by people and animals.



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- 1. Technical characteristics**
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- 3. Alarms**
- 4. Visualisation**
- 5. User menu**
 - 5.1. Increasing combustion power**
 - 5.2. Thermostats**
 - 5.3. Operation regimes**
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 - 7.1.1. Connection of the stove to the chimney**
 - 7.1.2. Fuel**
- 8. Installation of the stove**
 - 8.1. Safe distance of the stove from the wall and other facilities**
 - 8.1.1. Fresh air intake**
- 9. Initial start-up of the stove**
- 10. Cleaning and Maintenance**
- 11. Errors and troubleshooting**
- 12. Information on the disposal and dismantling of the stove**

ATTACHMENT



Conformity Statement:

Manufacturer: **"ABC PROIZVOD"** doo
Miloša Obrenovića 2
31000 Užice/Serbia

Hereby states that the device for room heating using pellet under the name:
Vesta, is in conformity with the terms and conditions of CE (Construction Products Directive) EU 305/2011, and with the following harmonized standard:

EN 14785:2006

The Company **"ABC PROIZVOD"** doo, Užice, introduced the quality management system in 2007:

SRPS ISO 9001/ 2008, which is in place and upgraded.

From 2013 onwards, another two standards were implemented:

SRPS OHSAS 18001/ 2008 and

SRPS ISO 14001/ 2005, thus the company has **the INTEGRATED QUALITY MANAGEMENT SYSTEM in place**, certified by the accredited body.





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