PROIZVOD

OSNOVANO 1990.

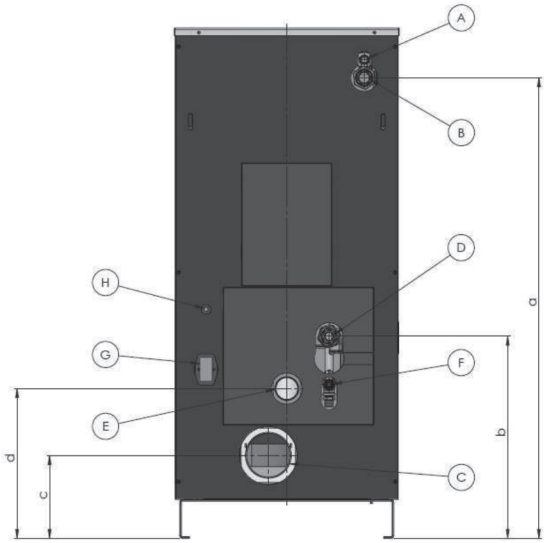
PELLET BOILER USER MANUAL

ELEGANT 27 I 37KW

1. Technical characteristics

DESCRIPTION		Unit of measure	Elegant27	Elegant37
Fireplace power		kw	27	37
Content of water in the boiler		lit	45	96
Drafts required		Pa	10	10
Connecting electric power:				
- in ignition phase		W	450	450
- in working phase		W	150	150
Connection voltage		V	230	230
Frequency		Hz	50	50
Mass of the boiler		kg	260	410
Max. working pressure		bar	2,5	2,5
Max. working temperature		°C	85	85
Flue pipe diameter		mm	120	120
Fireplace dimensions	Width	mm	581	770
	Height	mm	1318	1600
	Depth	mm	845	1045
Connections on the fireplace	Outgoing line	Col	1”	5/4”
	Return line	Col	1”	5/4”
Pellet storage capacity		kg	35*	120

* Possibility of installing an additional pellet storage capacity 65kg

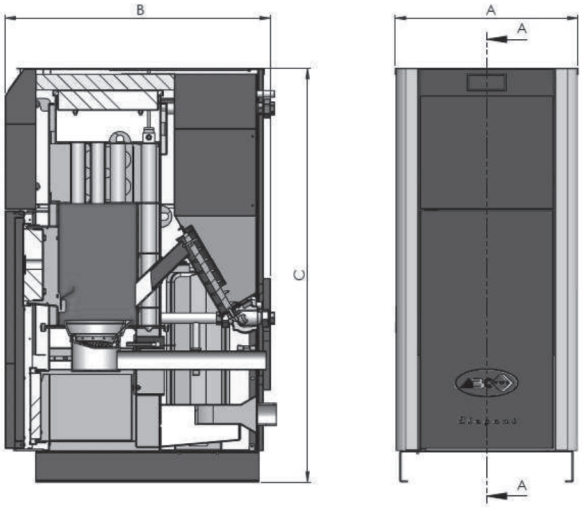


A	Safety valve	1/2” SN 3bar
B	Outgoing line	Hot water 1”- 5/4”
C	Outgoing line	⦰ 120mm
D	Return line	Cold water 1”- 5/4”
E	Fresh air supply connection	⦰ 60,3 mm
F	Taps for filling and emptying	
G	Main switch	
H	Safety thermostat	

Connections dimensions:

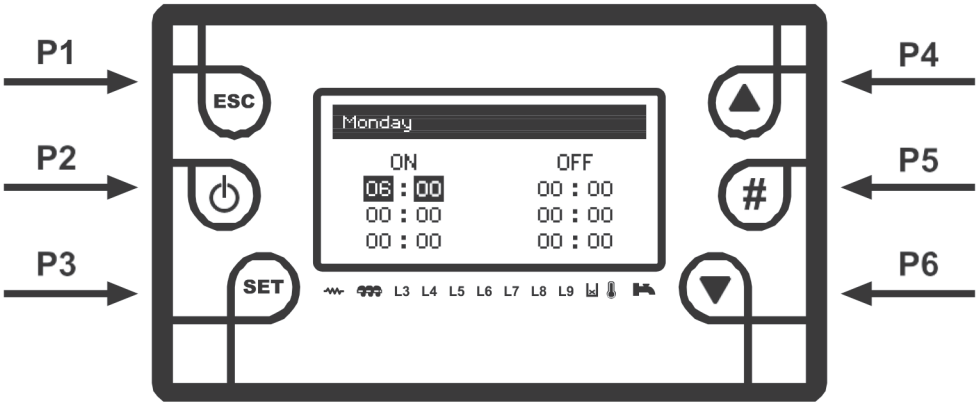
		27kW	37kW
a	Outgoing line	1091mm	1466mm
b	Return line	522mm	580mm
c	Flue pipe connection	215mm	215mm
d	Fresh air supply connection	387mm	442mm

Dimensions:



	Elegant 27kW	Elegant 37kW
A	581mm	770
B	845mm	1045
C	1318mm	1600

2. Display: Functions and usage



Key	Short pressure	Long pressure (3-5 sec)
P1	Menu exit or sub menu exit	-
P2	Chrono function activation in Chrono menu	ON/OFF and alarm reset
P3	Entering the main menu, saving the settings, activating the time setting	Entering the system menu, adjusting the keyboard
P4	Visualization / Increase in value	-
P5	-	Keyboard lock
P6	Visualization / Decrease in value	-

Led lamps	
L1	Heater turned on
L2	Motor – reducer turned on
L3	V2 exit active - Pump
L4	AUX 1 exit active
L5	AUX 2 exit active
L10	Pellets level sensor turned on
L11	Auxiliary entrance active
L12	Micro-switch turned on

3. Alarms

Description	State	Mark
Safety thermostat HV1	Blocked	**Er1**
Open door of the boiler	Blocked	**Er2**
Extinguishing due to lack of flame	Blocked	**Er3**
Extinguishing due to too high temperature in the boiler	Blocked	**Er4**
Extinguishing due to high exhaust gas temperature	Blocked	**Er5**
Encoder error: no signal	Blocked	**Er7**
Encoder error: failed fan regulation	Blocked	**Er8**
Error in the real time	Blocked	**Er11**
Ignition failure	Blocked	**Er12**
Lack of main power	Blocked	**Er15**
RS 485 error in connection	Blocked	**Er16**
Lack of pellets in the depository	Blocked	**Er18**
Error on the micro-switch	Blocked	**Er52**
Anomaly during probe control at ,,,,Check Up,, phase		**Prob**
All alarms are reset by the P2 button long pressing		

4. Visualization

Exhaust Temp:	103
Boiler Temp:	25
Buffer Temp:	25
Fan Speed:	1000
Flame Light:	0
Recipe [nr]:	1
Product Code:	488: 1234

- Exhaust gases temperature
- Temp.of the water in the boiler
- Temp.of the water in the “Buffer”
- Fan speed
- illumination / lightening
- Number of receiving
- Software serial number

5. User menu

This menu is accessed by briefly pressing the 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 the user selects the power and in the second case the system selects the combustion power according to the set temperature

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

5.2 Thermostats

It is used for setting the given temperature in the boiler and / or in Buffer, if installed.

,,Buffer,, thermostat is seen only if **P26=1** and **P42=1**

5.3 Operation mode

This menu selects the fireplace mode: pellet or solid fuel. The fireplace is intended for burning the wood pellets only.

5.4 Recipe

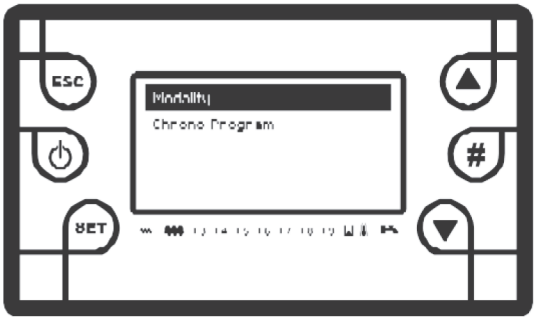
This menu is only visible when the fireplace is in pellet mode and the changeover is not permitted. Only “Pellet recipe” 1 is available.

5.5 Chrono

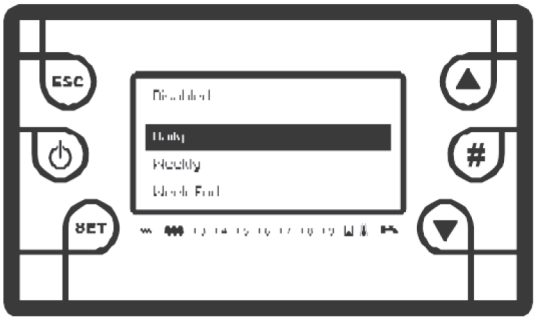
Used to temporarily activation of the ignition and fire extinguishing. Press the P3 button to enter the menu.

5.5.1 Modality

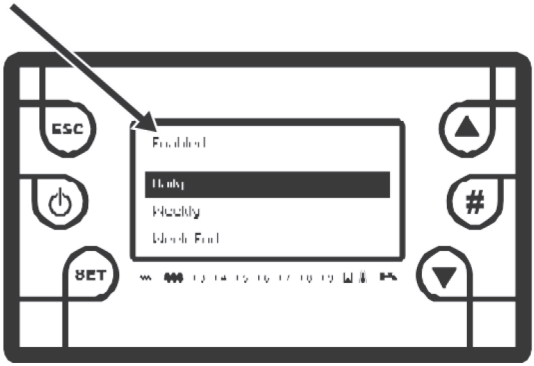
Used to activate and deactivate a program setting



Press the button P3

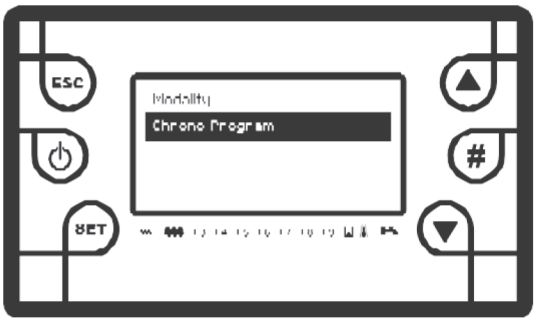


Press the P3 button and select Daily, Weekly or Weekend program with P4 or P6 button. Time programming is activated by pressing the P3 button (the selected field flashes) and then the P2 button. (Disabled changes to Enabled)

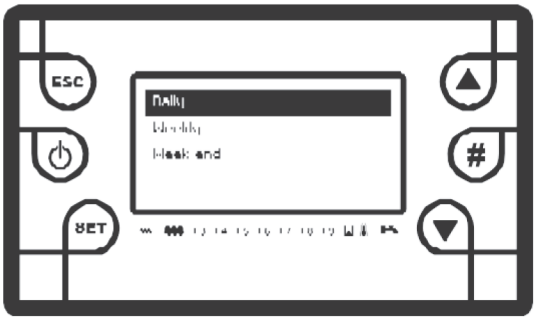


5.5.2 Chrono Program

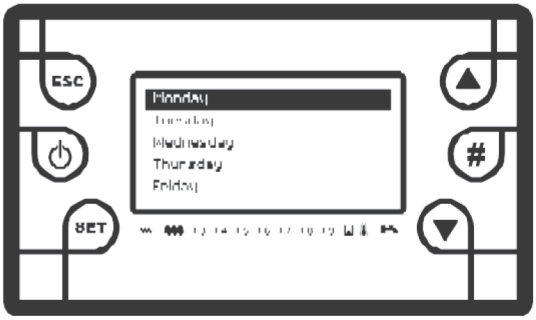
Press the button P1 to go one step back and select Chrono Program



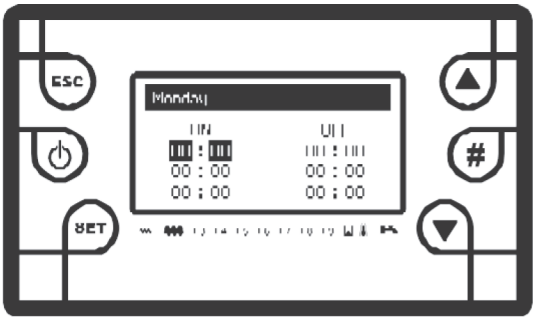
Press P3 to enter the menu



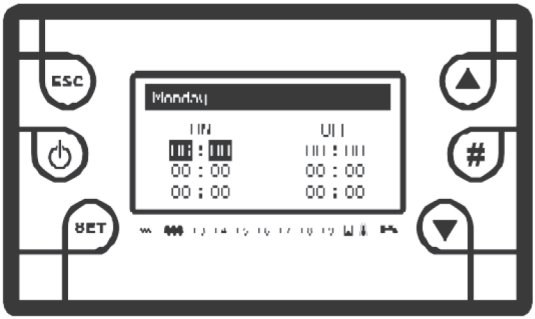
Select Daily, Weekly or Weekend program with P4 or P6 button and then confirm with P3 button



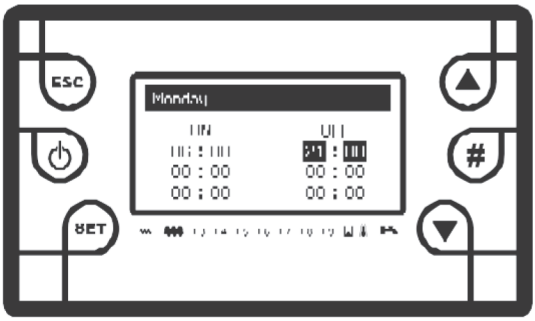
Select a day of the week with the P4 or P6 button and confirm with the P3 button



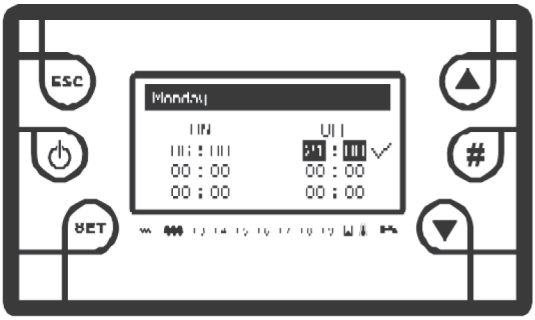
Within each day, there are three programs you can use. Press the P3 button (the selected field flashes) and set the ignition timing (ON) with the P4 or P6 button. After the set time, confirm with the P3 button.



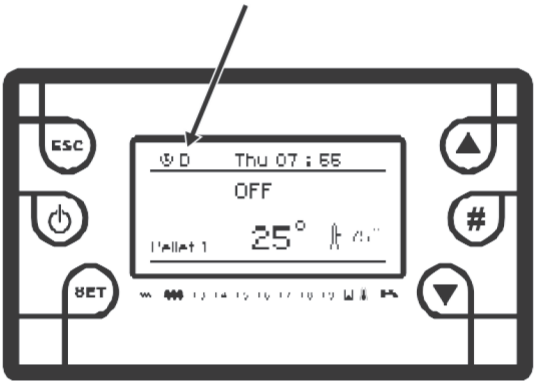
Press the P6 button to go into the field during the fireplace shutdown. Press the P3 button (the selected field flashes) and use the P4 or P6 button to adjust the fire-extinguishing time.



Press the P5 button (“√” symbol appears) and now the time setting for a particular day of the week is activated.



Press the P1 button until the Home screen appears. A symbol will now appear in the upper left corner of the screen to indicate that timing is active.



Programming around midnight
Set the clock to ON for the previous day at the desired time: for example at 8.30 pm
Set the clock to OFF for the previous day at 11.59 pm
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, 6.30 am
The system switches on Tuesday at 8.30pm and shuts down on Wednesday at 6.30am.

5.5.3 Pellets manual filling / Loa

This option activates manual pellet filling by running the gear unit continuously.

Filling stops automatically after 600 seconds or manually by deactivation at any time interval to OFF with the P3 button.

Activation of this function is possible only when the boiler is switched off.

Manual pellet filling is only used when the fireplace is first put into operation or when the pellet is out of storage.

5.5.4 Calibration

This function is used for fine setting the selected combustion power. Correction range -7 to +7

Example:

1. If the set combustion power 3 is not sufficient and power 4 is too large, then a power adjustment of 3 to + 1 or 2 or a power of 4 to - 1 or 2 can be made.

2. Correction may also be carried out when the pellet is of poor quality and has a large ash residue

6. User Menu 2

This menu is accessed by long pressing the P3 button.

6.1 Keyboard settings

6.1.1 Date and Time

This menu adjusts the day, month, year and hour.

6.1.2 Language

Menu to change the language used.

6.2 Keyboard Menu

6.2.1 Learn Menu

This menu is used to load data from the system board.

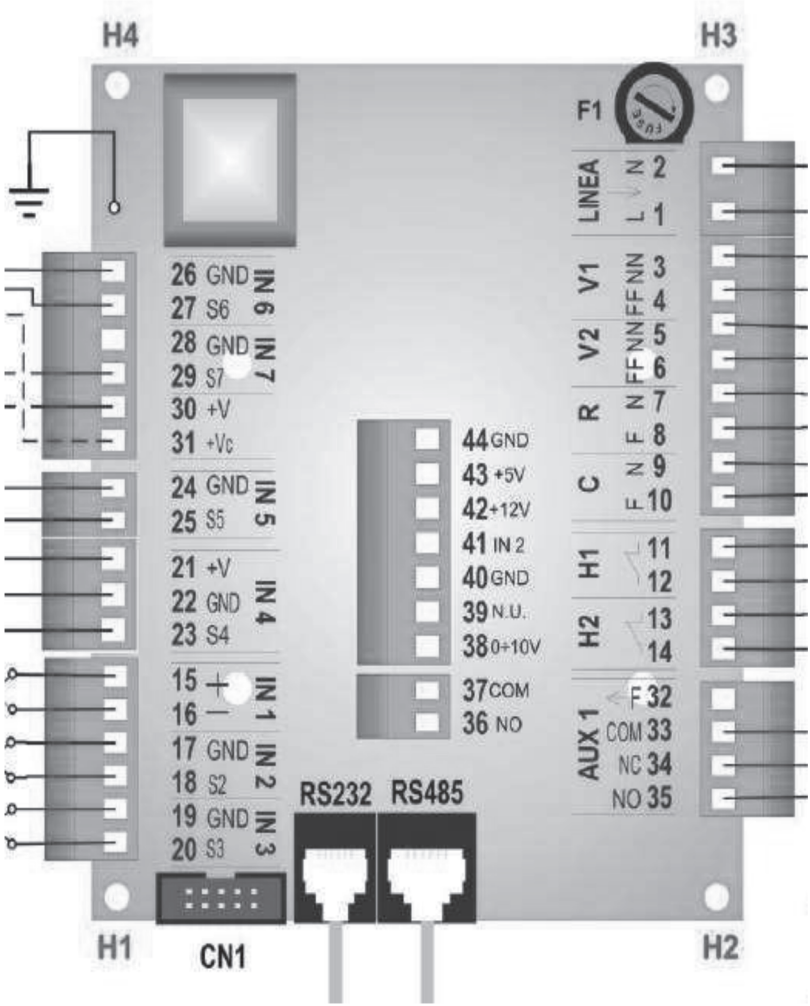
6.2.2. Set the contrast

Menu to set the contrast on the display.

6.3 System menu

This menu is a password protected and can only be used by an authorized repairer.

6.4 Scheme of connecting



PIN		FUNCTIONS	CHARACTERISTICS
1	N	Main line	230Vac± 10% 50/60Hz F1= fuse T5,0A
2	L		
3	N	Fan	Triac regulation max 1A
4	L		
5	N	Configurable output V2- Pump	Triac ON-Off max 1A
6	L		
7	N	Heater	Rele 3A max
8	L		
9	N	Motor – reducer	Triac ON-Off 1A max
10	L		
11		Safety thermostat entrance HV1	Contact ON-Off Normally closed; Bridge if not used
12			
13		Safety thermostat entrance HV2	Contact ON-Off Normally closed; Bridge if not used
14			
15	red	Exhaust gas probe	Termopar K: 500°C Max
16	green		
17		Buffer temperature probe	NTC 10K @25°C 120°C Max
17			
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		Auxil. entrance: Chrono/room thermostat	Contact ON-Off
25			
26	GND	Configurable entrance	Signal 0 / 5V
27	S6		
28	GND		
29	S7	Photo cell	Analog input
30	+5V		
31	+12V		
32	F	Phase	Max napon 5A
33	COM	Configurative auxil.exit	Rele 3A max;
34	NC		
35	NO		
RS 485		Display	
RS 232		Connector RS232	Modem / computer connecting

7. Instructions for use

The Elegant pellet boiler is intended for burning wood pellets. The product is made with the latest technology, of quality and certified materials, welded with modern robotic technology and tested according to standard EN 14785: 2006 so that it meets all the requirements for connection to the central heating system as well as European standards regarding the degree of utilization and emission of harmful particles.

7.1 Important information

* All national, European and local regulations must be complied with when installing the boiler.
* Only original spare parts that are available through an authorized dealer, servicer, or directly at the factory may be used.
* The boiler must not be operated in a flammable and explosive atmosphere. The product should not be used by children or persons with reduced mental or physical abilities, as well as persons with a lack of knowledge and experience, unless they are supervised or trained by a person in charge of their safety. Children must be supervised near the product.

7.1.1 Connecting the boiler to the chiminey

Properly sized and constructed chimney is a prerequisite for safe boiler operation and economical heating. The chimney must be well insulated. The bottom of the chimney must be fitted with a cleaning door. The chimney must be resistant to flue gas condensation.

WARNING:

- Horizontal flue pipe must have a slope of at least 3%.
- The horizontal length of the flue pipes must be minimum and in any case no longer than 3m.
- The number of changes of direction of the flue pipes including the "T" elements must not exceed 4.

7.1.2 Fuel

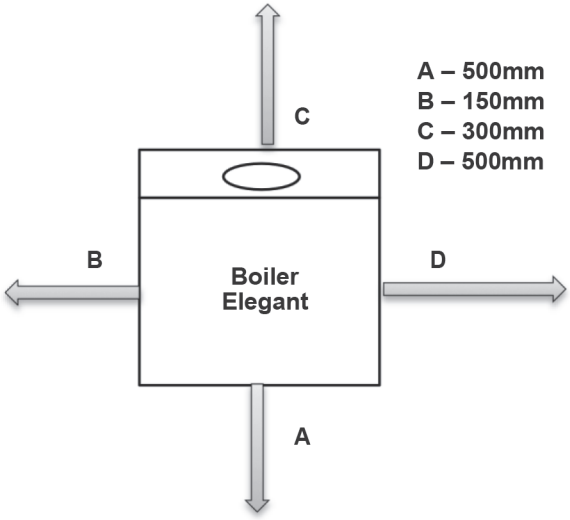
Pellet used should meet the following standards: EN Plus, DIN Plus, ONorm-M-7135 or DIN 51731.

Pellets characteristics:

Humidity	6 – 8%
Diameter	6mm
Length	10 – 30mm
Ash residue	1%

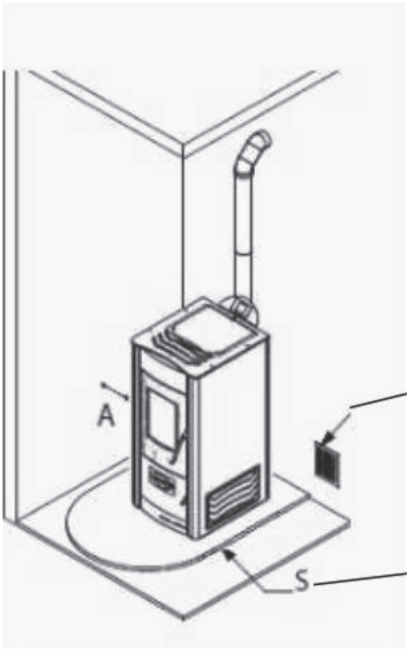
8. Setting the boiler

8.1 Safety distances of the fireplace from the wall and other objects



8.1.1. Fresh air inlet

The space in which the boiler is installed must have an opening for fresh air supply that is sized according to the boiler power. Such aperture must be protected by a safety net or grille. All installation work must be carried out in accordance with applicable national and European standards. The boiler must not operate in a flammable or explosive environment.



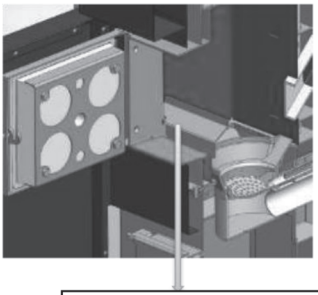
9. First boiler ignition

The Elegant pellet boiler is factory-fitted with a circulating pump, expansion vessel, safety valve, automatic vent. The connection of the furnace to the central heating system is done through the pipes of the thrust and return lines.

*** Before the first starting up of the boiler, check the following:**

- Remove accessories from the boiler (user manual, power cable)
- Connect the boiler to the pipeline and fill it with water
- Unscrew the lid on the vent, which is located under the stove lid
- Connect the smoke outlet to the chimney
- Check that the door is closed properly and that the ashtray is in place
- Check that the flame router * is in place
- Fill the pellet container
- Connect the power cable to the mains (220V) and switch on with the main switch located on the back of the stove
- Fill the worm conveyor with a pellet as follows (there must be a pellet in the tank):

1. Press the “SET” button
2. Select the “LOAD” option
3. Confirm with the button "SET"
4. Select "ON" and confirm with "SET"
5. Monitor the pellet inlet area through the combustion door and wait for the burner to fill and then turn off the function to “OFF”.
6. Be sure to empty the pellet in the burner before starting the furnace, making sure that the burner is properly seated. **NOTE: This function is only used when first commissioning or when the pellet is completely gone (there are no pellets in the conveyor).**
7. Start up the furnace by (5-6 sec) on the P2



Flame router

10. Cleaning and maintenance

***Basic information**

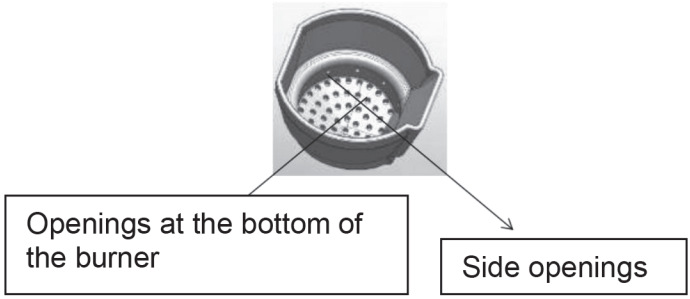
The boiler must be switched off and completely cooled before any cleaning and maintenance work is started.

The cleaning and maintenance intervals of the furnace depend primarily on the quality of the pellet used. The wet pellet contains a large percentage of ash, dust and unburned residues that double the cleaning and maintenance intervals. On this occasion, we would like to emphasize once again that only attested and certified pellets should be used.

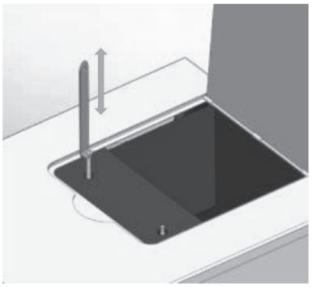
Cleaning has 3 categories: **Daily**, **Weekly** and **Monthly**

***Daily cleaning**

Depending on the quality of the pellets, it is recommended to clean the burner once a day. For the furnace to function smoothly, all openings on the burner must be open and clean.



The ashtray is emptied once a day or less, depending on the intensity of the kiln operation. In order to ensure a smooth transfer of energy to the water, cleaning must be carried out at least once a day. Pulling the levers is performed with accessories for (pulling) the heat exchanger turbulator cleaning. It is necessary to pull the turbulator levers up and down several times (3-4) and pull the turbulator shaker lever back and forth for the Elegant 37kw.



ELEGANT 27kw

ELEGANT 37kw

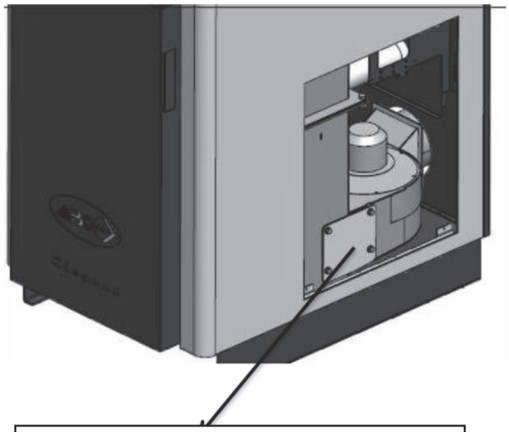
*** Weekly cleaning**

- Clean the combustion chamber and the ash housing from the ash
- It is recommended to vacuum dust and ash from the firebox at least twice a week, using an adequate vacuum cleaner.

*** Monthly cleaning**

REMARK: Clean the boiler only when completely cooled.

- Clean the flue duct once every two months or at the end of the heating season, depending on the mode of operation of the furnace and the quality of the pellet used.



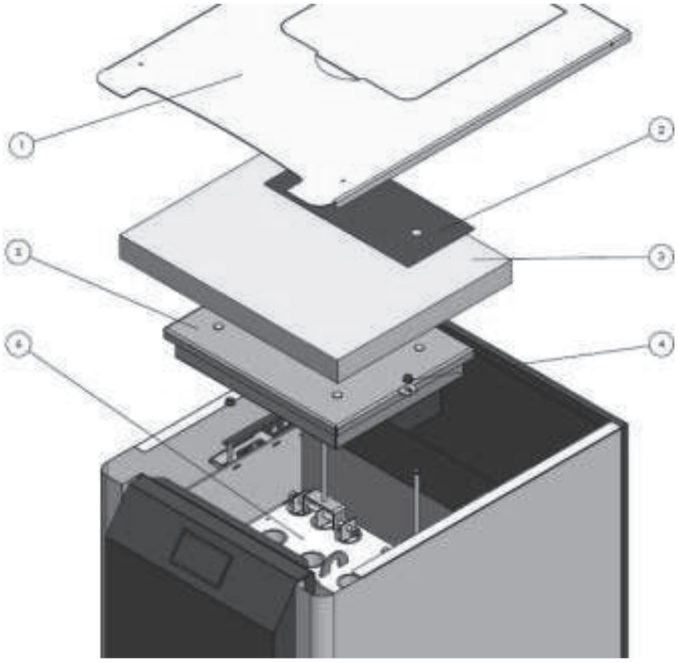
- Clean the ash deposits from the left and right chamber with a vacuum cleaner.
- Return the cover of the cleaning inlet and tighten all 4 screws in order to guarantee security and reliable operation of the furnace. Operation stated below must be done at the end of each season or more often, if needed.
- The gaskets allow the furnace to function properly only when they are undamaged and properly installed
- Gaskets must be checked periodically. If worn or damaged, they must be replaced immediately.
- The flue pipes must be cleaned and vacuumed once during the season or more often if necessary. If there are horizontal lines, the ash residues in the pipes should be cleaned before closing the flue gas passage and causing the oven to stall.

*** Cleaning the pellet store**

Do not refill the pellets unless you have sucked in the residues from the previous amount of pellets consumed (dust, small pellet residues, etc.).

***Tubular heat exchangers cleaning**

Depending on the intensity of the boiler operation, it is necessary to clean the tubular heat exchangers once every two months (or more frequently as needed) as described in the drawing.



1. Boiler cover
2. Rossete of the turbulator
3. Isolation
4. Screws of the cover (2 pcs)
5. Cover
6. Area that should be cleaned from ash
7. After cleaning, replace all parts in reverse order

11. Downtime and troubleshooting

Problem	Possible cause	Troubleshooting
*The pellet does not enter the burner Err 03; Err12	-No pellets in storage - Blocked screw conveyor - Engine gearbox malfunctioning	- Supplement the pellet storage room -Discharge storage and unlock spiral -Replace the gearbox
The fire gradually subsides until completely shut down Err 03; Err02	Missing pellets in storage - The firebox door is not closed - Poor quality pellets - The burner has not been cleaned -Clogged flue pipes -Pressure failure - Fan failure	- Supplement the pellet storage room - Close the door or replace the gasket - Use a certified pellet - Burner openings must be passable -Clean the flue pipes -Replace the pressure switch -Check fan and condenser operation and replace if necessary
Pellet buildup in the burner. Low flame intensity.je Err 03	- Lack of combustion air - Wet pellet - Faulty fan	-Clean the burner so that all openings are open. Check the air inlet hose. - Use a certified pellet -Check the fan and replace if necessary
Ignition failed Err 12; Err 02	- Power outage -The overload does not work (error 02) -Clogged fan casing or flue duct - Burned heater	-Check that the main switch is in the "I" position - Replace the pressure switch -Clean fan housing and flue ducts -Check the heater and replace if necessary

12. Information regarding the boiler disposal and dismantling

Disassembly and disposal of the (old, used) furnace is the sole responsibility of the furnace owner; they must comply with the applicable legal regulations in his/her country regarding the safety and protection of the natural environment. The dismantling and disposal of the furnace may be entrusted to a third party, provided that it is a company authorized to collect and dispose of such materials.

ATTENTION:

Throwing furnaces in public places is a serious danger to humans and animals. In such situations, the owner is always responsible for the injuries to humans and animals.

13. Installation instructions for an additional pellet storage

The ELEGANT 27kw boiler has the possibility of upgrading an additional pellet storage compartment that increases capacity to 100kg of pellets.

The procedure to be followed when installing an additional storage compartment:

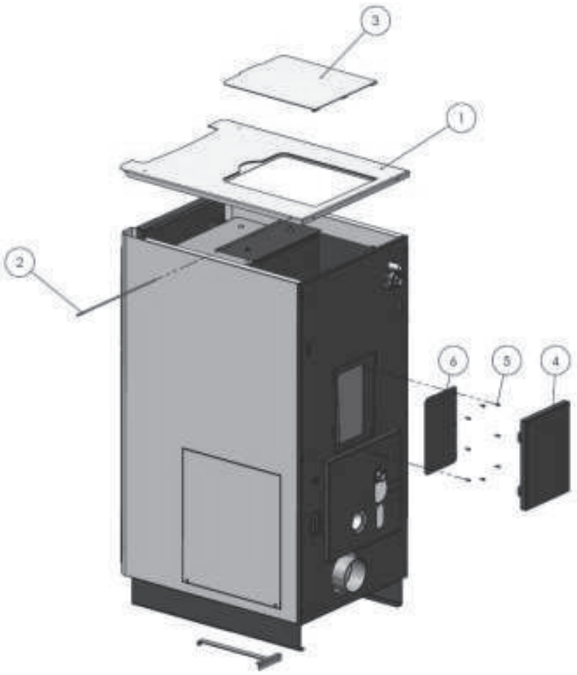


Fig. 1.

- Lift the cover of the boiler 1
- Pull out the hinge shaft on the cover's door 2
- Take off the door of the cover 3
- Replace the cover without the door in place
- Remove the top cover of the rear sheeting 4 by pulling it up and towards you
- Unscrew eight screws 5 on the storage compartment cover 6

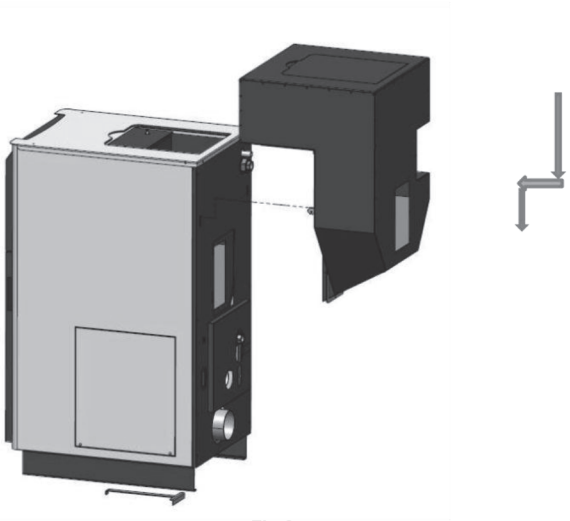


Fig 2.

- Install additional storage on the boiler
- Fit the boiler room so that the openings on the boiler door open with the opening at the additional storage room first
- Align the openings at the back of the boiler with the tabs on the additional storage compartment (2pcs) left and right
- Push the extra storage compartment towards the boiler and down the boiler

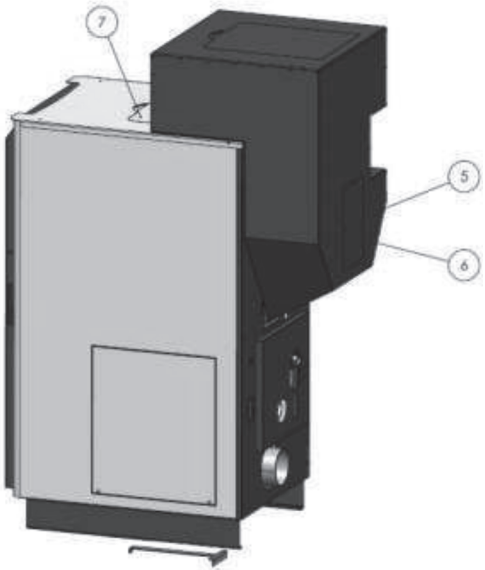


Fig 3.

• Cover of the storage compartment 6 (Fig. 1) now fit in additional storage and tighten screws 5

• Put down the turbulator lever cover 7(Fig. 3)

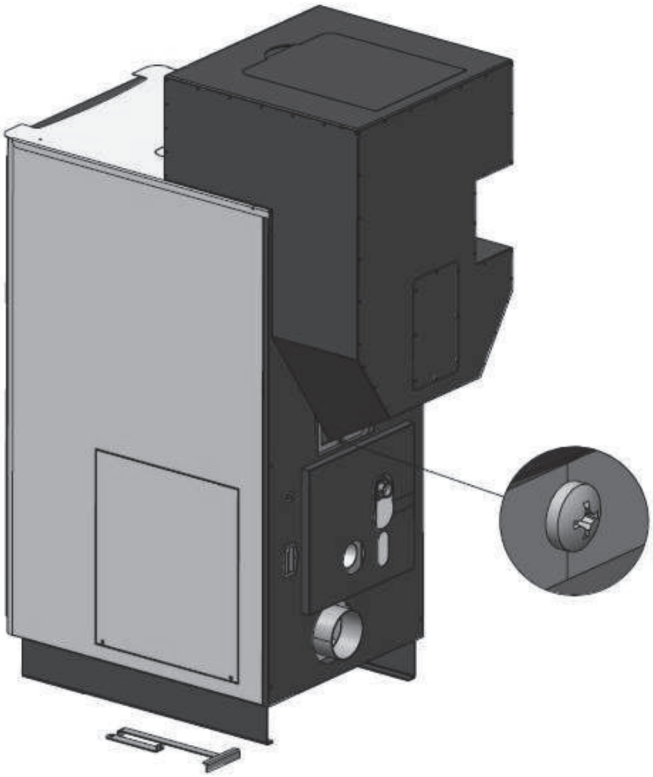


Fig 4.

• tighten the 4.2 x 13 screw to the position shown in Figure 4.

CE Statement of conformity:

Manufacturer: „**ABC PROIZVOD**“ doo
Miloša Obrenovića 2
31000 Užice/ Srbija (Serbia)

Declares that the pellet powered space heating device, named: Elegant, complies with the terms and conditions of CE (Construction Products Directive) EU 305/2011, as well as compliance with the following harmonized standard
EN 303-5/2012

In 2007., **ABC PROIZVOD**“ doo, Užice, introduced the quality management system:
SRPS ISO 9001/ 2008, which is maintained and promoted.

Since 2013., 2 standards more have been introduced:
SRPS OHSAS 18001/ 2008 and
SRPS ISO 14001/ 2005, so the Company has and **INTEGRATED QUALITY MANAGEMENT SYSTEM**, certified by a competent body.

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