



BURNER
ATTACK® PELLET BURNER
AUTOMATIC 8–30 kW



INSTRUCTIONS FOR USE



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Content

Important information	3
Technical description	3
Dimensions / Contents of delivery	4
Technical data	5
Voltage and energy consumption.....	5
Description of function	6
How to use the pellet burner	7
Menu buttons and their functions.....	7
How to change settings of the pellet burner:.....	7
Indications on display	8
Emergency mode.....	8
Menu Indications.....	9
Production settings	10
Generally accessible menu:.....	10
Advanced menu.....	10
Comeback to the production settings	11
Regulation of the pellet dosing	11
How to install the pellet burner.....	12
Burner start.....	13
Burner stop.....	13
Emergency stop.....	13
Installation of the room thermostat	13
Cleaning and maintenance	14
Troubleshooting	15
Possible causes of faults.....	16
Decomposed view	17
Spare parts Codes of spare parts	18
El. scheme of connection, burner PELH30A.....	19
Endings and connections, fuses	20
Accessories.....	20
Contact person and electrotechnician	21
Service record	21
Advanced menu.....	22
Record about installation for warranty claim.....	27
Record about installation for warranty claim (for seller).....	29

Important information

Please, read this manual before starting the burner. The burner has to be installed by the approved and trained technician.

Keep this instruction manual at a suitable place in the boiler room. We recommend to keep it in a plastic cover and to hang it on a visible place on the wall to be reached by a technician, who will do the service in your boiler room.

The PELH30A device for pellet burning, has to be connected to the boiler that *is suitable for heating with solid fuel*. Boiler door and connections between the boiler and the chimney have to be airtight.

Overpressure in the combustion chamber has to be min. 5 Pascal (0,5mm of the water column, resp. 0.05hPa).

The PELH30A appliance is intended for combustion of the wood pellets and it must not be used for combustion of other fuel types.

The PELH30A device can be installed only in the boiler room, in conformity with prescriptions of the local fire protection / construction institute.

Warning sign

The warning sign will appear in this manual to prevent possible risk by breaking the instructions. In this manual, two types of the warning signs are used:



WARNING points out the dangerous situations by breaking the essential measures.



NOTE points out the less safe actions that may lead to the safety threat or to damage of property.

Technical description

The PELH30A works on basis of the fuel feeding by the *principle of falling*, when the pellets fall by from the pellet feeder through the inlet hose and the inlet tube on the grate, where they are burned.

The PELH30A has an electrical ignition that automatically lights the pellets fallen on the grate. Ignition begins only after the thermostat gives instruction to burner.

PELH30A has an own built-in thermostat. Its temperature sensor has to be inserted into suitable case in water jacket of the boiler (*See the picture*). The *on- and off-temperature* is adjustable via menu buttons of the burner. Information about actual operation data is given on display.

NOTE: Head of the boiler temperature sensor must not be treated with a contact liquid or paste.

The PELH30A is set in production to the output range of 14-30 kW and three degrees of output: 1 (14 kW), 2 (22 kW) and 3 (30 kW).

The selected output degree is displayed during the operation. It is possible to set the output via the menu buttons of the burner and the information on display. The range of output can be changed in two levels - from 8 to 12kW and from 14 to 30kW - according to this there are three degrees of output from 8 to 12 kW or from 14 to 30kW in the advanced menu.

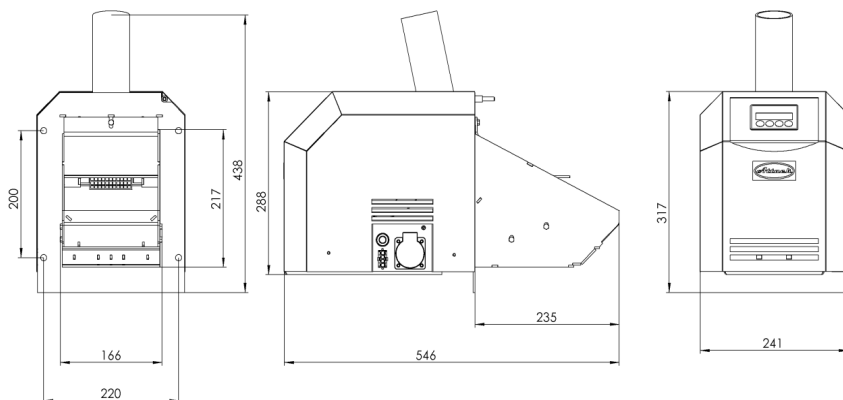
The PELH30A has an own self-cleaning mechanism of the grate. When the thermostat reaches the adjusted off-temperature, the burn-out cycle begins and afterwards, the grate moves out to be cleaned by scraping. This enables longer time of use, without need to remove the burner from the boiler. The amount of pellets which can be combusted before the ash is removed, is determined by the size of the boiler's ashtray. The burner is equipped with the control system that regulates gear of the ash removing feeder.

Convictional parts of the boiler have to be cleaned in regular intervals to keep the high efficiency of heating.

The PELH30A is intended for combustion of the wood pellets with diameter of 6-10 mm.

The burner PELH30A is made in conformity with the industrial norms and prescriptions and it was tested and approved in conformity with the directives about the low voltage appliances as well as with the directives about the electromagnetic interference.

Dimensions / Contents of delivery



The PELH30A is delivered in a paper box filled with polystyrene to improve stability. If the box is damaged, check the burner for possible damage by transport. Claim of the damage by transport has to be registered by a spediteur.

The paper box ought contain the following items:

- 1 pc. Burner PELH30A
- 1 pc. Inlet tube with emergency thermostat of back-burning
- 1 pc. External temperature sensor for the boiler temperature

Technical data

Model	PELH30A
Fuel	Wood pellets, 6-10 mm
Mode	8 – 12 kW; 14 – 30 kW
Scale of output	8 - 30 kW, graduated by 2 kW
For boilers with the heat chamber up to	3 m ²
Weight	22 kg

Main voltage	Main current	Hz
~230V	10A fuse	50



WARNING The electrical installation has to be done by a certified electrotechnician. The main cables can be replaced only by an authorized electrotechnician.

Voltage and energy consumption

Component	Mains/Volt	Min./Max. Voltage	Fuse
Display	5V DC	1 W	-----
Ventilator	230V~	15-58W	800mA
Circuit plate	230V~		-----
Grate cleaning	24V DC	10-50W	Being switched
Ignition	230V~	600W	6.3A
External pellet feeder	230V~	15-220W	1A
Ash removing	230V~	15-220W	1A

Description of function



NOTE: The PELH30A works with the built-in digital thermostat, resp. with additional room thermostat. In both cases, the burner has to be connected through fuse against boiler overheating.

Normal start-up

When the thermostat gives instruction to the burner, the ventilator starts and the photocell controls the fire. If there is no fire, then comes the instruction to blow the burner through. Afterwards, pellets start to fall into the burner within the period stated by the control system and the ignition is activated.

After the phase of fuel feeding for ignition is finished, the control system waits for signalization of fire from the photocell.

When the photocell recognizes the fire, small amounts of pellets fall within *the transition period*. Duration of this depends on the output level set on the burner. Pellet supply is gradually increased, until the necessary fuel amount for the required output is achieved. This amount is further delivered into the burner, until the operation thermostat gives instruction to stop.

This signal stops the pellet inlet, while ventilator continues to supply the air into the burner.

When the photocell recognizes burn-out of pellets, the blow-through of the burner begins.

According to the adjusted delay, the burner is cleaned after the fuel burns out - the grate moves out towards the scraper and the ash with the unburned elements falls through the front wall of the burner's bottom into the ashpan.

After the grate slides back, the burner waits for the new signal from thermostat.



NOTE: the unit for the grate moving is very strong and it might cause a threat. Never put any body parts or foreign articles into the burner, while it is working.

Normal start-up, when there is still fire in the burner

If the photocell recognizes the fire during the beginning phase (e.g. after the short-time current shortage), the control system directly begins the transition-phase and the pellet burner continues to operate as by normal start. (see above)

Normal start-up, when the control system does not recognize the fire

The normal start-up process follows, also when the control system does not receive the fire signal. Shortly after, the system begins the new start-up trial with fuel amount reduced for ignition by approximately 45%. This amount can be reduced within the whole ignition period. These parameters are adjustable only by the trained person in service menu. If the second trial fails, all functions are turned off and the alarm is activated. This alarm is indicated on display.



NOTE: Make sure that the sufficient flue gas temperature was reached. It has to be at least 60°C - one meter under the chimney top. If the temperature is lower, consult it with your chimneyer. The flue gas temperature lower than 60°C during the combustion process increases risk of the chimney damage by condensation.

How to use the pellet burner

The pellet burner needs air for combustion, so the boiler room has to have the air channel. The air channel for the air inlet must have at least the same surface as the chimney and it must be opened. The pellet burner must not be started, until it is safely approved that the smoke can freely go through the boiler and the chimney into the environment.

Pellets are supplied into the PELH30A by the external feeder connected to the pellet container. For better function and the most balanced feeding, the feeder should be fixed under the angle of 45°. The feeder should be able to feed at least cca 10 kg of pellets per hour of the continuous operation / demand for pellet supply.

Pellets have to be stored in a well ventilated room without moisture or in a specially adjusted container.



NOTE: The PELH30A consists from the components of high quality that must not be replaced with the spare parts of lower quality. If the components are replaced with other than the original spare parts, the validity of warranty expires.

Menu buttons and their functions

Functions of the burner are set via the menu buttons under the display. (see also options of settings under the **Production settings**, below).

How to change settings of the pellet burner:

„S“ Menu/Enter: For activation of further records and ENTER/SAVE of the changes.

„-“ For comeback in menu and reduction of the adjustable values.

„+“ For advance in menu and increasing of adjustable values.

„ESC“ Exit/Escape: For exit from menu without saving the new values.



Values that can be set by the user are given in the following schedule:

MENU	Explanation
EFFECT ADJ.	Required output degree (1, 2 or 3)
PELLET-TRIM	Setting of the pellet ration supplied
LOG	Record of faults for control purposes
FINAL COMBUST.	Instruction to burner for burn-out
MENU/ ADVANCED	Access into service menu via code

Indications on display

Emergency mode

PAUS.	
OFF	FC: 0 %

Nothing in the burner is started, burner waits for the signal from thermostat to start.

Thermostat starts.

Step 1 Test blow-through

TEST BLOWING	
ON	FC: ? %

The fan starts to operate and when the photocell recognizes the value under 5%, the program continues.

Step 2 Fuel ration for heating up

IGNITION 1	
ON	FC: ? %

The fuel ration for heating up is supplied into the burner and program waits for the „fire“ signal from photocell.

Step 3 Transition phase

TRANS. PHASE	??KW
	FC: ? %
ON	

The transition phase begins, when the photocell and the control system recognize the fire. Small, gradually increased amounts of pellets are feeded into the burner, until the required pellet ration is achieved.

Step 4 Combustion

COMBUST.	??KW
ON	FC: ? %

The combustion phase runs, until it is interrupted by the thermostat.

Step 5 Burn-out

FINAL-COMBUST.	
OFF	FC: ? %

The thermostat interrupted the combustion phase and the burner begins the phase of burning-out.

Step 6 Cleaning

SCRAPING	
OFF	FC: 0 %

The grate moves out and when it is out completely, the fan runs at full rotations, until the grate moves back.

Step 7 Ash removal

ASH AUGER	
OFF	FC: 0 %

After expiration of the set period (e.g. 6 hours), the burner starts auger for ash removing for adjusted time (e.g. 3 minutes).

Step 8: Comeback into the standby mode.

Menu Indications

PAUS.
OFF FC: 0 %

The burner is in the standby mode.

Press the "S" button.

EFFECT LEVEL
ENTER EXIT

Here you can change the burner output. Level 1 = 8 (14) kW, 2 = 10 (22) kW, 3 = 12 (30) kW.

The range and the levels of output are adjustable in the advanced menu.

Press the "+" button.

PELLET-TRIM
ENTER EXIT

Here you can set the pellet amount to be supplied. It is not necessary, if the correct pellet weight was set in the Pellet dosing in the service menu.

Press the "+" button.

FINAL-COMBUST
ENTER EXIT

If you wish to clean the burner or to interrupt the operation from other reasons, press the „S“ button, and the burn-down mode begins. To restart the burner after ash removing, press the „S“ button.

Press the "+" button.

LOG
ENTER EXIT

This internal setting can be helpful by troubleshooting, if the burner stops and the alarm is activated. The last 10 different error codes are recorded. For more information about the error codes, see the „Troubleshooting“.

Press the "+" button.

MENU/ADVANCED
ENTER EXIT

To enter into the advanced menu you need password (code) and it is necessary to know the program functions of the burner.

Production settings

Generally accessible menu:

Menu	Settings	Option	Adjustable
Effect level	1 = 14 kW	1, 2, 3	8-30 kW
Pellet-trim	95 %	50-200 %	50 – 200 %
Final combustion	90 sec.		10-600 sec.
Log	10 – 26	Not adjustable	Not adjustable
Advanced menu	Random number	+ 5	Not adjustable

” Log ” means, that the control system saves last 10 error codes. See also the „Troubleshooting“.

Advanced menu

Advanced menu	Production settings	Min. – max.	Unit
Effect adj.	1, 2, 3, 8, 10, 12, 14, 22, 30,	8 – 12 14 - 30	kilowatt kilowatt
Ignition setting	90%	50 – 300 %	%
Test-blow time	15	0-60	sec.
Transition phase	240-480	60 - 600	sec.
Transition pellet-trim	15	10-50	%
Clean-blow time	45	10 - 600	sec.
Ash auger Run	3	0 – 10	Min.
Interval	6	1 - 200	Hour
Max. comb. time	360	0 - 1080	Min.
Anti-cycling	10	0 - 60	Min.
Modulation effect	75	0 – 100	%
ΔT	10	1 - 100	K
Photocell (sensitivity)	50	40-80	%
Thermostat	External	Extern./Intern./Comb. with room thermostat	
Cleaning active	1	0, 1	
Start if thermostat	Turns off	Turns on/off	
Language *)	ENGLISH		
Effect span	1	0 (8-12), 1 (14-30)	
Stoker adj. heat.	46	45-50	10xkwh/kg
amount	1100	0 - 2000	g/6 min.
Fan factor	95	10 - 500	%
Stoker time	0		hour
Menu/ Test		Auto/Manual	
Menu/ Setting		See Advanced	
Menu / Log	Saves the error codes	See Advanced	

*) Languages: Slovak, English, German, Italian, French, Polish.

How to change production settings

To change the settings, select the required menu/parameters. By pressing the „+“ button, change the actual values. O: ...shows the actual temperature, N: ...can be changed to the new value.

It is possible to increase the values by „+“ and to decrease them by „-“. By the „S“ button is the change confirmed and saved. If you do not wish to save the values, press the „ESC“ button (Exit/Escape).

Please, do not make any changes, until you have not read this manual.

Example:

EFFECT ADJ.

O: 1 N: 2

Comeback to the production settings

To reset the production settings, select the advanced menu and enter the password (code number after „O“+5). Then, select the Menu/Setup and press the „S“ button. This starts the reset of the production settings.

Here you can also save your own settings, in the following way: by pressing the „+“ button go to „Save settings?“ and save your settings by the „S“ button. Exit menu by the „ESC“ button.

Regulation of the pellet dosing

Before starting-up the burner, it is necessary to set the pellet supply through the parameter of the „Stoker Adj.“ in the Advanced menu. Thermostat cannot start the heating while the settings are being made.

Firstly, set the parameter of the „heat value“ to the value given by your pellet supplier. If the supplier gives 4,8kWh/kg, set the parameter to 48, etc.

Now, put the plastic bag around the opening of the pellet feeder. Then, confirm by the „S“ button and keep the instructions. Weigh the pellets fallen into the plastic bag, put their weight in gramms via the „+/-“ buttons and press the „S“ to save the values. This setting has to be done within 15 minutes, otherwise the burner switches to the stand-by mode. Weigh the pellets very exactly!

After setting of the above mentioned parameters, the control system automatically sets all the parameters relative to the pellet feeding.

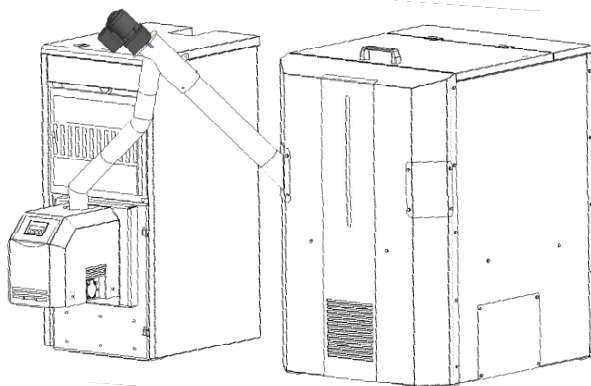
How to install the pellet burner

The pellet burner PELH30A can be installed only by a qualified, specifically skillful personnel.

The door mounted on the boiler from production has to be exchanged for the *burner door*.

Fix the burner on the door by the delivered screws and nuts. Connect the inlet pipe to the pellet feeder under the required angle. Fix the inlet pipe into stable position and fasten the clamping screws.

Undo the internal door from the boiler and put the partition of the combustion chamber into the upper chamber.



Install the pellet container and the pellet feeder. There should be a height gap between the feeder's opening and the inlet pipe of min. 400 mm. In the horizontal position there should be a gap between the inlet pipe and the feeder's opening of min. 1500 mm (i.e. not vertically aligned).

Fill the container with pellets and connect the feeder into the mains socket (230V~). Let the feeder run, until you reach the continual pellet feeding. We recommend to fix a plastic bag to the feeder's opening to collect the falling pellets. Disconnect the feeder from the mains socket. Install the inlet hose between the feeder's opening inlet pipe and adjust the length of the hose.

Hose should not be straight, nor too incurved, to prevent pellets from sticking and cumulating. Connect feeder into burner's socket.

Burner start

By turning the boiler's main switch on, is the burner automatically turned into the stand-by mode. Burner is put into operation by turning the burner's switch on. Following the demand for heat supply, is the burner ignited and burns pellets, until the thermostat gives instruction to stop.

The burner is alternatively controlled by the thermal boiler sensor connected to TS1 inlet on the right upper side of the circuit board. Make sure, that connection is fixed into its position. The electrical fuse protects the burner against the overvoltage (pic.).



Burner stop

The burner stops by the turn-off-signal of the boiler thermostat, by turning off the burner's switch (stand-by mode, or via *Burn-down = Final combust.*) initiated per menu.

Emergency stop

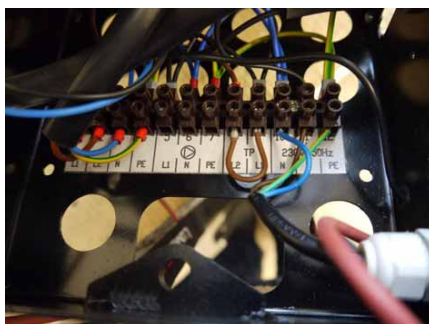


NOTE:

In case of emergency, the burner can be turned off by the main boiler switch and by plugging-out the boiler's mains cord from the mains socket.

Installation of the room thermostat

Disconnect the connectors that are plugged into the control electronics. Undo the holder with control electronics and plug the conductors of the room thermostat. Disconnect the interconnection cable from the terminal (Pos. 8 and 9) and connect the cables of the room thermostat. Then, mount the holder with control electronics back and plug the connectors.



Cleaning and maintenance

It is necessary to clean the burner after every consumption of 2000 kg of pellets. It is based on presumption, that the quality pellets are being burned.

Furthermore, it is recommended to sweep exchanger's parts of the boiler at least twice a month.

Clean the pellet inlet into the burner by a brush for bottles or other suitable tool.

Scrape the ignition board and the grate and clean the holes in the grate.



NOTE:

Keep ash in closed containers from non-flammable material.

Maintenance once a year or in a case of need (by a qualified person)

Start the *burn-down* by the menu buttons and wait, until the fuel in the burner burns-out. Turn the burner off by the burner switch and by the main switch, plug out the mains cord of the boiler from the mains socket. Open the door with burner to cca 90°.

Put down the burner cover and wipe the photocell by a rag and a soft abrasive agent (tooth paste).

Be carefull by the flat cable of display and buttons!

Clean the air wings of the fan. The most suitable way is to blow them with compressed air.

Screw out the scrape and ignition board.

Clean the space behind the ignition board.

Scrape ignition board and scraper.

Brush the grate utterly and clean the holes in the grate.

7. Mount all the parts back.

8. Clean the container and the pellet feeder from dust and small dirts.

9. Check state of the inlet hose for pellets.

10. Put the pellet feeder into operation by plugging of the feeder's mains cord into the mains socket (230V~) to fill it with pellets.

11. Set the amount of pellets to be supplied.

Troubleshooting

Burner turned off.

Check, which alarm is displayed.

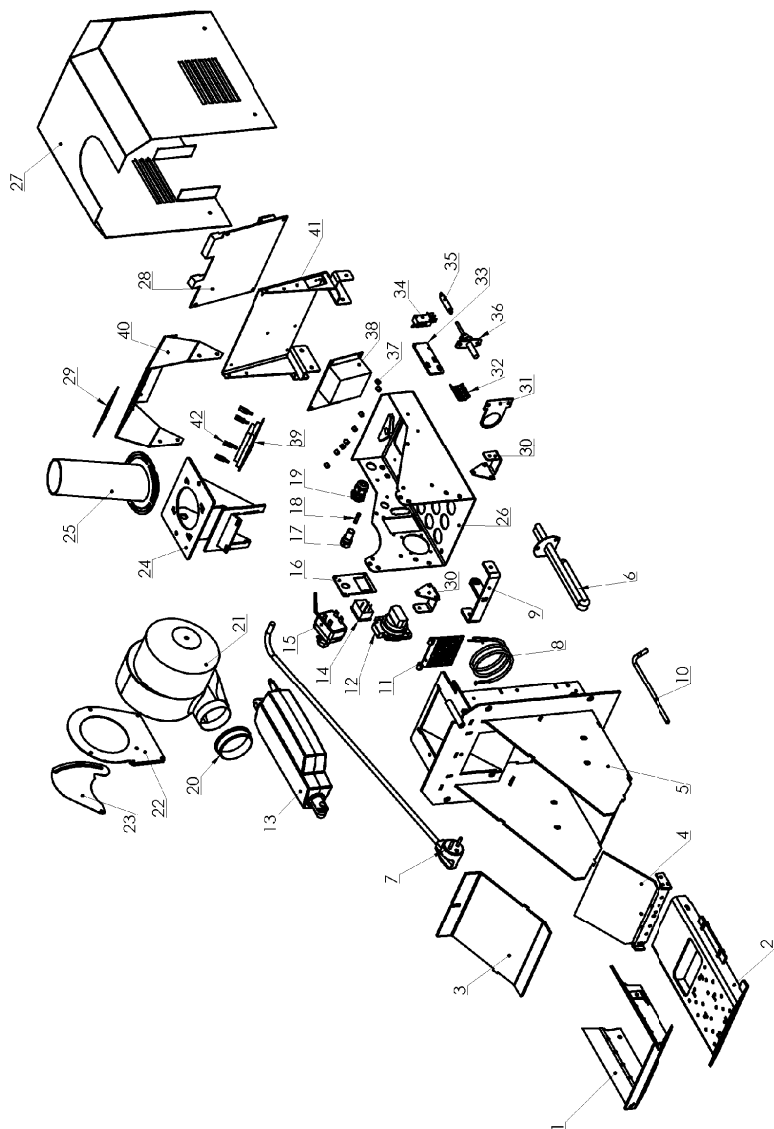
If the display is black and without text, check the thermal fuse of the boiler. If there is no error, probably is just the burner's thermal fuse turned off. To start again, turn the power supply into the burner off, remove the cover and press the small button between the connections of the fuse of overheating. The thermal fuse is placed directly in the fuel-inlet tube. After restart, mount the cover back and turn on the energy supply. Thermal fuse of the burner is switched off at the temperature of 93°C.

Signal text on display	Explanation	Error code at recording
ERROR: IGNITION FAILED		10
ERROR: FIRE LOST DURING COMBUSTION	Extinction by heating, restart failed	11
ERROR: FIRE SENSOR	Faulty photocell, abnormal light	12
ERROR: CIRCUIT BOARD OVERHEATED	Temperature under the cover is too high	13
ERROR: TEMPERATURE SENSOR „TOO LOW“	Faulty thermal sensor of the built-in operation thermostat	14
ERROR: TEMPERATURE SENSOR „TOO HIGH“	Faulty thermal sensor of the built-in operation thermostat	15
ERROR: OPTO-SWITCH	Faulty circuit board	16
ERROR: FAN ALWAYS ON	Ventilator rotates, when it is not supposed to	18
ERROR: FAN STOP	Ventilator is stopped, when it is not supposed to be	19
ERROR: FAN SLOW	Ventilator rotates too slowly	20
ERROR: IGNITION 1	First ignition trial failed	21
ERROR: STOCKER	Pellet feeder is not connected to the burner	22
ERROR: BURN-DOWN FAILED	Photocell recognizes signal also 15 minutes after setting „Burn-down“	23
ERROR: LIGHT LOST DURING BURNING	Photocell does not recognize fire, restart failed	24
ERROR: SCRAPER NOT OPERATING	Fault in circuit board of scraper or in grate gear	25
ERROR: SCRAPER JAMMED	Grate moves too slowly	26

Possible causes of faults

Error code	Possible cause	Actions to correction
10	Feeder does not supply enough of pellets. Empty pellet container. Faulty ignition fuse. Faulty ignition spiral. Photocell needs to be cleaned.	Set the pellet ration. Fill the container. Replace the fuse. (6.3A). Replace the spiral. (48 Ω +/- 5%). Clean the photocell.
11	Feeder does not supply enough of pellets. Empty pellet container. Faulty ignition fuse. Faulty ignition spiral. Photocell needs to be cleaned.	Set the pelletration. Fill the container. Replace the fuse. (6.3A). Replace the spiral. (48 Ω +/- 5%). Clean the photocell.
12	Short circuit or other fault of the photocell.	Replace the photocell.
13	Too high temperature in the boiler room.	Prevent from the heat leakage.
14	Faulty sensor of thermostat	Replace the sensor.
15	Faulty sensor of thermostat	Replace the sensor.
16	Faulty circuit board	Replace the circuit board.
18	Ventilator runs, while the burner is in pause mode.	Replace the circuit board.
19	Ventilator does not run, when it should.	Change the ventilator fuse (800mA); check the connections; replace the ventilator
20	Ventilator runs too slowly	Clean the ventilator; replace the ventilator
21	First ignition trial failed	Set the pellet ration.
22	Pellet feeder missing	Connect the pellet feeder
23	Incorrect pellet supply	Set pellet ration.
24	Incorrect amount of pellets supplied. Faulty photocell	Set the pellet ration. Replace the photocell.
25	Cleaning does not work	Check the connection between the circuit board of scraper and the main circuit board.
26	Cleaning is slow	Clean the grate

Decomposed view

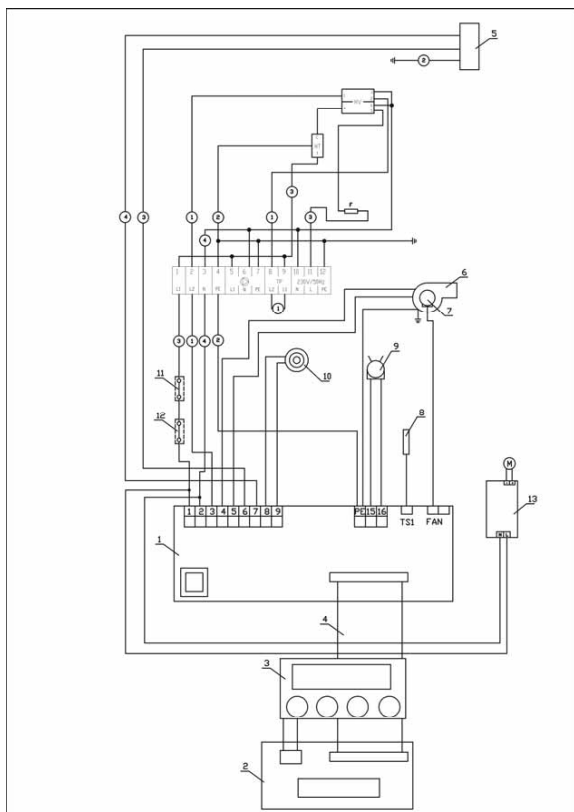


Spare parts

Codes of spare parts

1.	H30940A	Scraper
2.	H30920B	Burner grate
3.	H30001	Cover of the burner's hearth
4.	H30930A	Ignition plate
5.	PELH30900	Burning chamber
6.	H30980	Ignition coil
7.	TS091	Flex-cable
8.	H30016E	Cabling
9.	H30921A	Grate clamping
10.	H30118C	Rod of the end-switch
11.	H30009	Pellet brake
12.	TH31	Socket
13.	H30810	Grate gear
14.	TH23A	Switch
15.	OT19C	Blocking thermostat
16.	PELH30842	Plate of regulation
17.	TH05A	Fuse casing
18.	TH06B	Fuse
19.	TS094A	Transition
20.	PR15	Silicone cuff
21.	H30982	Ventilator
22.	H30952	Holder of the ventilator
23.	H30012A	Screen of suction
24.	H30961B	Reduction of fuel supply
25.	H30960A	Pellet supply
26.	PELH30830A	Burner bin
27.	H30701B	Cover of the burner
28.	H30806	Control board
29.	H30808	Control panel
30.	H30008	Cover with holder
31.	H30002	Sealing flange
32.	TS118L	Flat cavity
33.	H30003A	Holder of switch
34.	H30804	End-switch
35.	H30014	Spring
36.	H30803	Photocell
37.	HV65	Distance tube
38.	H30807	Board of grate
39.	H30809	Board of display
40.	H30970A	Pad of display
41.	H30951B	Pad of electronics
42.	H30820	Plastic pin

El. scheme of connection, burner PELH30A

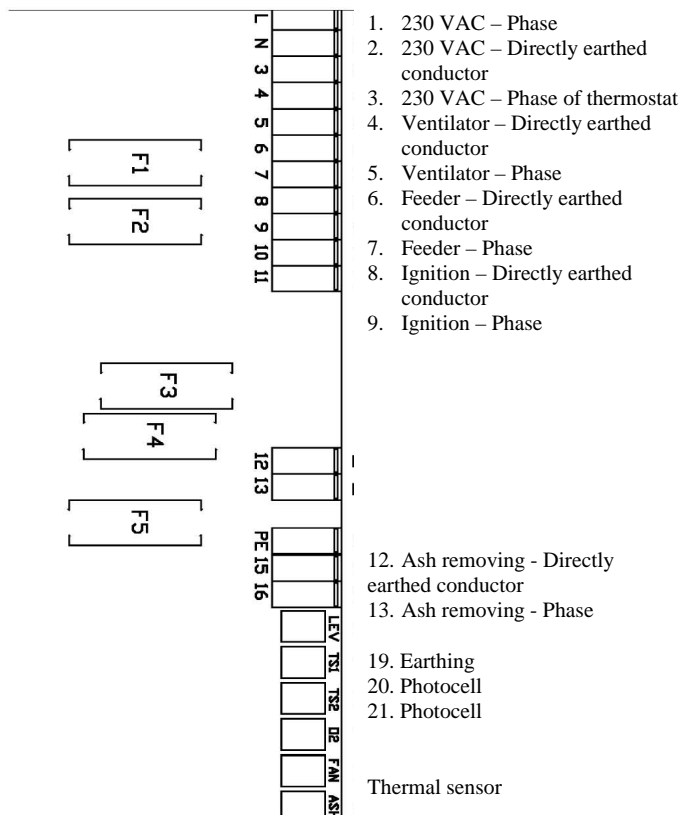


Colour marking of conductors

- 1 – Brown
- 2 – Yellow-green
- 3 – Black
- 4 – Blue

- 1 – Main electronics
- 2 – Display electronics
- 3 - Display
- 4 – Data cable
- 5 – Plug for feeder
- 6 - Ventilator
- 7 – Sensor of ventilator rotations
- 8 – Boiler temperature sensor
- 9 - Photocell
- 10- Coil
- 11 – End-switch
- 12 – Thermal fuse
- 13 – Board of grate

Endings and connections, fuses



Placing and sizes of fuses

F1 = F800mAL250V	for ventilator
F2 = F1AL250V	for feeder
F3 = T6.3AL250V	for ignition
F4 = N/A	
F5 = F2AL250V	for gear of ash removing

Accessories

Name	Number
Pellet container, 350l	PEL9600
Pellet feeder, 1.5 m long	PED150
Pellet feeder, 2.5 m long	PED250

Contact person and electrotechnician

Date of installation	
Installed (by whom):	
Address-street	
ZIP Code, City	
Telephone	
Cell phone	

Service record

[illegible]

Advanced menu

The following data/parameters are adjustable by a qualified person only.

All the points of the advanced menu are available by pressing “S”. The actual setting is permanently displayed in the left bottom corner under „O:“ (time/value), whereas the new value is displayed in the right bottom corner under „N:“ (time/value).

To increase and decrease time or values, press the buttons „+“ and „-“. To confirm and save the new values, press „S“. To exit without saving, press „ESC“.

By enter into the advanced menu, add 5 to the displayed random number. Example: it can be “18” on both for „O:“ and „N:“. Now press „+“, until „N:18“ is changed to „N:23“, then press „S“. This enables access into the advanced menu.

For example:

MENU/
ADVANCED

O: 18 N: 23

Old

New

Output setting:

EFFECT ADJ.

ENTER > EXIT

Here you can select from three outputs used like the „ACTUATOR OUTPUTS“ as ACTUATOR OUTPUTS in the generally accessible menu (8-30 kW).

After pressing the „S” by displayed „EFFECT ADJ.” is in the left upper corner displayed „OUTPUT 1 (kW)”. In the left bottom corner will be „O:14” (i.e. the actual value of the actuator output in kW).

To change the actuator output, press the „+” button, until the required value is displayed in the right bottom corner, i.g. „N:18”. If you press „S” now, this new value (18 kW) will be saved for the output level 1. After this, the output level 2 is displayed („OUTPUT 2”) and it can be set to the required value. If it will not be changed, press „S” to save the value indicated on display, i.g. „N:22”, i.e. the output level 2 (OUTPUT 2) will be 22 kW.

If you wish to let the display without saving the changes, press „ESC”.

Setting of ignition:

IGNITION
SETTING

ENTER

< > EXIT

Here you can adjust the ration of fuel for ignition in %; this value was automatically calculated adequately to the weight given in the Feeder setting - amount.

By pressing the „S” button, the „Ignition amount 1” is displayed in the left upper corner. Changes are made in %, the starting amount

was pre-set to 170 g. If you increase this amount to 110%, the starting amount will be changed to 187 g.

If the first trial of the burner ignition fails, the Ignition amount 2 is activated, which is pre-set from production to 45% from 170g, i.e. 76,5g.

Setting of time of the test blow-through

TEST BLOWING
ENTER
< > EXIT

Time of the test blow-through defines the time, within which will be the boiler and the chimney ventilated before beginning the combustion (10-100 seconds).

For boilers, at which there is tough to achieve their draught, it is recommended to increase the time of test blow-through. From production it is set to 15sec.

Setting of the transition period:

TRANS. PHASE
ENTER
< > EXIT

Here you can select the duration since the first recognizing of the fire up to the feeding of full amounts of pellets, adjusted by the actuator output.

There are two parameters of the transition phase: the first is 14 kW and the second is 30 kW. The time set by the first parameter determines, how long it will take to achieve 14 kW, time of the second parameter determines time to achieve 30 kW since the fire is recognized. The lower the required output is, the shorter is the period necessary to achieve it.

Setting of the fuel supply during the transition phase:

TRANS. FEED.
ENTER
< > EXIT

Here you can set the fuel amounts that are feeded during the transition phase, since the fire is recognized until the burner achieves the output of 14 kW.

Set the required amount to be feeded into the burner after the fire recognition. The supplied amount will be gradually increased with every ration during the stated period. From production it is set to 15% from the full ration for 14kW.

Time setting of the cleaning by blow-through:

CLEANBLOW
TIME
ENTER
< > EXIT

The cleaning by blow-through is activated, when the thermostat switches off and the value recorded by the photocell decreases under 12 %.

Setting of the ash removing:

ASH AUGER
ENTER
< > EXIT

The ash removing is activated automatically in the intervals set from 1 up to 200 hours for the stated period.

Setting of the maximum burning time:

COMBUST. TIME
ENTER
< > EXIT

By this parameter it is possible to set the maximum time of the continuous burner operation.

Setting of the minimum duration of the break between the burn-down and the ignition:

MIN. PAUSE
TIME

ENTER
< > EXIT

This parameter ensures, that it comes to the next burner ignition only after the stated time, not immediately after the burn-down.

Setting of the time of the blow-through ckening:

MODULATION.

ENTER
< > EXIT

By the stated value of ΔT , before achieving the required boiler temperature, the boiler output decreases automatically to the pre-set level.

Setting of the photocell sensibility:

PHOTOSENSOR

ENTER
< > EXIT

Here you can set the photocell sensibility, i.e. the value of light in (%), to which should the system react as to the fire. It should not be necessary to set the light sensibility, if the correct photocell is installed. The setting from production is: 50%.

Selection of the thermostat:

THERMOSTAT

ENTER
< > EXIT

Here you select the required thermostat: the external boiler thermostat or the burner thermal probe, or combination with the room thermostat.

If you use the burner thermal probe, it is possible to set 2 parameters. Firstly, select the *starting temperature*, save the value

by pressing the „S“ button, then you can change the *stop temperature*. By repeated pressing of „S“ you save this value as well. The burner will now work in the range of the actually set temperature values. There should be difference between the starting and the stop temperature of at least 5 °C.

Grate cleaning:

SCRAPER

ENTER
< > EXIT

By this parameter you can set, if the grate cleaning will be activated and when it has to be turned on – before the ignition or after the burn-down.

Language selection:

LANGUAGE

ENTER
< > EXIT

There is an option to select the following languages: Slovak, English, German, Italian, French, Polish.

Setting of the output range:

EFFECT SPAN

ENTER
< > EXIT

The burner can operate in the output range of 8 – 12 kW, or 14 – 30 kW, according to the range selected by this parameter.

Adjustment of the pellet dosing:

FEEDER
ADJUST.

ENTER
< > EXIT

= The most important parameter of the control system! Here you can set the pellet ration supplied by the feeder at the full operation. To set the pellet ration, you need a plastic sack and a very exact weighing machine. After entering into the parameter, you have to set the Heat value (kWH/kg) as the first. Then, the text „Put on the sack“ is displayed (pellet feeder should be filled with pellets up to

the bore). Put the sack on the feeder and press the „S“ button.

Check countdown on display now, while the feeder works for 6 minutes. Then, enter the weight of the pellets fallen by pressing „+“ and „-“ buttons and confirm/save by „S“ button.

Ventilator setting:

VENTILATOR.

ENTER
< > EXIT

By this parameter it is possible to adjust the flue gas adequately to the flue gas analyzer for the content of CO and O2 in flue gas.

Operation time of the feeder:

Here you can see, how long did the pellet feeder work. You can use it to calculate the energy consumption, etc.

OPERATION
TIME OF
FEEDER.

ENTER
< > EXIT

Test:

MENU/TEST

ENTER
< > EXIT

To be used by troubleshooting. Here you can manually or automatically control the components.

This function is very helpful by troubleshooting with particular components. In the manual mode you can test every component individually, by pressing „S“ for start and „ESC“ for stop. For step

forwards to the required part, press „+/-“. They are displayed in the following order:

Ventilator (during the test of ventilator, the displayed rotations per minute should stabilize at 2000);

Pellet feeder (start/stop by the buttons „S“/„ESC“);

Ignition coil (activated by „S“ and stopped by „ESC“);

Grate (moves out by „S“ and moves back by „ESC“. Here you can see, how many mA are consumed by unit during the shift, which should not exceed 1800 mA - limit to start the error „Grate blockage“).

Other displayed options:

Current temperature, if the thermal probe is connected; current photocell value; shows light (On/Off); closing of this application.

Settings:

MENU/SETUP

ENTER

< > EXIT

The settings made during the installation are stored here, or it is possible to reload the production or the installation settings.

Three main options are accessible: Loading of settings, Saving of settings and Production settings.

- „Loading of settings“ - means, that you can reset the original settings
- „Saving of settings“ - stands for the final input of the burner settings, made by the installer. This eases browsing of settings, if it would come to too many parameter changes.
- „Production settings“ - are the original settings, that can be reloaded again.

Log:

LOG

ENTER > EXIT

All the errors are saved and displayed here, together with the frequency of their incidence. Also the final number of the ignition trials is here to be read.

There are four options: number of errors, number of the first ignitions, number of the second ignitions, the newest errors

- „Number of errors“ - displays every error code individually, e.g. E-CODE 10(X). See the page 17 for codes and explanation.
- „Number of the first ignitions“ - displays, how many times did the ignition run.
- „Number of the second ignitions“ - displays, how many second ignition trials were made by burner (i.e. how many times did first trial fail).
- „Last errors“ - displays the codes of errors in the order according to their incidence. It eases the troubleshooting.

Record about installation for warranty claim

Date of installation: 20.....-.....-.....

Installed in :..... Telephone:.....

Street:..... Fax:.....

ZIP Code and City:Cell phone:.....

.....

Installed on boiler:

Trademark:..... Model:.....

Pellet burner:..... Serial number:.....

Pellet feeder:

Trademark:..... Length:.....

Serial number:.....

Settings of pellet burner:

Menu	Production settings	Options of settings	Set to
Output level	1 = 14kW	1, 2, 3	
ON/OFF temperature	ON 72 °C, OFF 82 °C	Difference min. 5 °	
Pellet ration	95 %	50 – 200 %	
Advanced menu	Random nr. + 5	No	No
Pellet ration	1100 g/6 Min.		
Energy content	48 kW/10 kg	45 – 60	

Installed by:.....

Telephone:..... Fax:.....

Contact person:.....

This copy is for customer.

Record about installation for warranty claim (for seller)

Date of installation: 20.....-.....-.....

Installed in : Telephone:.....

Street:..... Fax:.....

ZIP Code and City:Cell phone:.....

.....

Installed on boiler:

Trademark:..... Model:.....

Pellet burner:..... Serial number:.....

Pellet feeder:

Trademark:..... Length:.....

Serial number:.....

Settings of pellet burner:

Menu	Production settings	Options of settings	Set to
Output level	1 = 14kW	1, 2, 3	
ON/OFF temperature	ON 72 °C, OFF 82 °C	Difference min. 5 °	
Pellet ration	95 %	50 – 200 %	
Advanced menu	Random nr. + 5	No	No
Pellet ration	1100 g/6 Min.		
Energy content	48 kW/10 kg	45 – 60	

Installed by:.....

Telephone:..... Fax:.....

Contact person:.....

This copy is for installer.

Please, make copy also for seller and send it there.



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*ATTACK, s.r.o. producer reserves the right to change technical parameters and dimensions of
boilers without previous warning.*