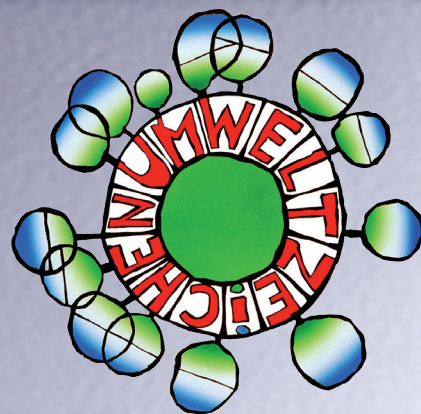




HAPERO

ENERGIETECHNIK GMBH



Valid from July 2013

ADJUSTMENT AND INSTRUCTION SHEET

HP 02 / K 15 kW Balance
HP 02 / K 15 kW Balance
HP 02 / W 15 kW Balance
HP 03 / K 25 kW Flash
HP 04 / K 35 kW Flash

(Pellets basement boiler)
(Pellets living room boiler)
(Pellets living room model)
(Pellets basement boiler)
(Pellets basement boiler)

BALANCE

Warning!

Before initiation and using the pellets boiler the adjustment and instruction sheet has to be read completely!

Please note that, even with switched-off assets certain performances will still work out. To make sure that there is absolutely no electricity left, cut your heater from your Power supply.

Please note that you adhere to your general national and international rules and regulations.

Use original spare parts **ONLY**. Violation makes you lose your guarantee and warranty and moreover affect your safety and functionality of your device negatively.

The owner of the combustion plant or the person entitled to dispose of the combustion plant has to keep the technical documents in order to hand them over to the authority or the chimney sweeper if required.

T.W.I.M.C.

Please be aware of all current building regulations in the country of installment.

INTELLIGENT TECHNOLOGY

All of our products already adhere strictly to the European requirements. It is of our greatest concern to produce your pellets boilers according to the strict international engineer standards, but also with the highest quality according to a specialized Quality management. We attach importance to our final inspection which is carried out by our specialists. However, if any troubles occur, please do not hesitate to contact your specialist dealer or fitter. As it is of our most importance to improve every day and avoid mistakes, we would appreciate informing us about any negative circumstances. Please contact us with your problem under the following address:

meldung@speed.at



Plug & Fire

Certified heating appliances guarantee:

Certified heating appliances which do not have to be deconstructed after delivery to get them into your house.

Certified heating appliances which do not have to be build together at the place of delivery.

Certified heating appliances with nearly no effort for wiring.

Certified heating appliances with nearly no effort for initiation.

Certified heating appliances with cable-free controls.

PRODUCT RANGE



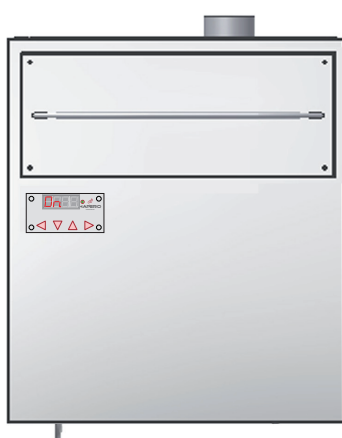
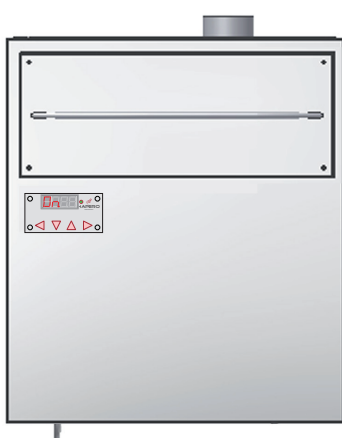
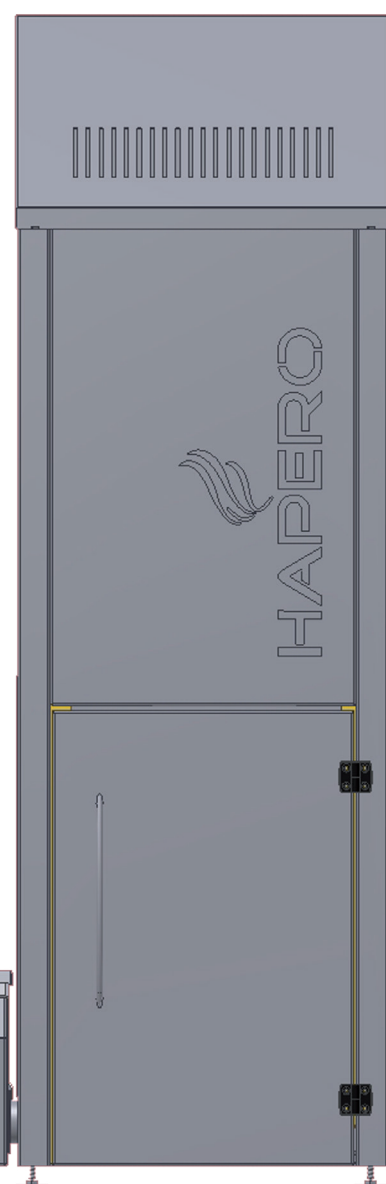
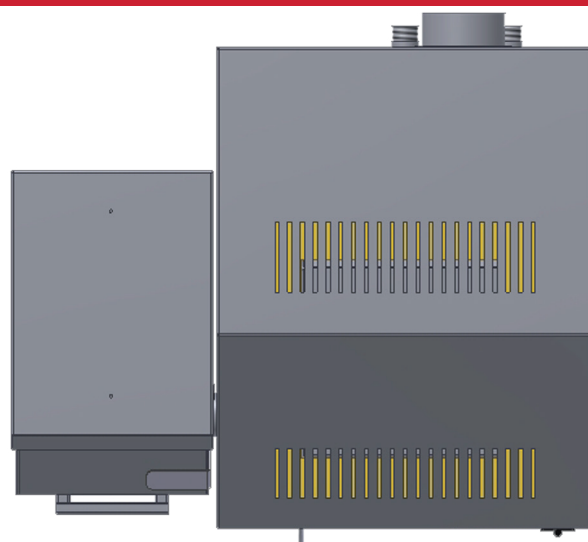
Power range from 1,5 - 15 kW

Information only refers to the 15 kW construction (Living room and basement model)



Power range from 5,0 - 35 kW

Information only refers to the 25/35 kW construction



HP02/W Balance (Living room)

Certified under EN 14785

HP02/K Balance (High quality steel)

Certified under EN 303-5

HP02/K Balance (Basement)

Certified under EN 303-5

HP03/K Flash (Basement)

Certified under EN 303-5

HP04/K Flash (Basement)

Certified under EN 303-5

1. IMPORTANT INFORMATION

Please note that you adhere to your general national and international rules and regulations.

Always carefully read the Adjustment and Instruction sheet before initiating your pellets boiler.

Regarding transport only use licensed carriers with adequate carrying capacity for your heater.

Living space model:

When fuel is burned heat energy is released, which can lead to a strong heating-up of the surface area of the heater, the doors, the glass door, the boiler tube and the face wall of the heater. Any contact with those areas is strongly prohibited without adequate aid like heat protection gloves.

It is important to point the danger out to your children of such a pellets boiler and keep your children away during the heating.

Do not put any non heat protection objects on your pellets boilers or nearby.

Do not dry your clothes on your pellets boilers.

Do not place your hat stand near to your pellets boiler. **FIRE DANGER!**

Do not work with easily flammable or explodeable material in the same room as your boiler while heating.



Please check your pellets boilers on damages and completeness after delivery. Please inform your specialist dealer or fitter about any shortcomings.



The owner of the combustion plant or the person entitled to dispose of the combustion plant has to keep the technical documents in order to hand them over to the authority or the chimney sweeper if required.



Use original spare parts ONLY. Violation makes you lose your guarantee and warranty and moreover affect your safety and functionality of your device negatively.

The carton and the transparency can easily be put to the municipal waste.



ASH REMOVAL



With the 15 kW pellets boiler the ash removal has to be carried out by max 1,000 kg burned pellets. The word „ASH“ on the display indicates the removal in time. The ash in the ash tank is not compressed until it is visually full.



With the 25/35 kW pellets boiler the ash removal has to be carried out by max 5,000 kg burned pellets. With this, no „ASH“ word will appear on the display and you can easily remove the ash during operation.

STORAGE ROOM FILLING



30 minutes before the storage-room filling you have to switch-off the pellets boiler. You may only begin when the display of the operating condition shows standby. (see page 17)



When the ash tank is overfilled a loss of efficiency of the pellets boiler is likely to occur. The ash cannot gather in the ash tank and therefore it will allocate in the chimney draft or the funnel.

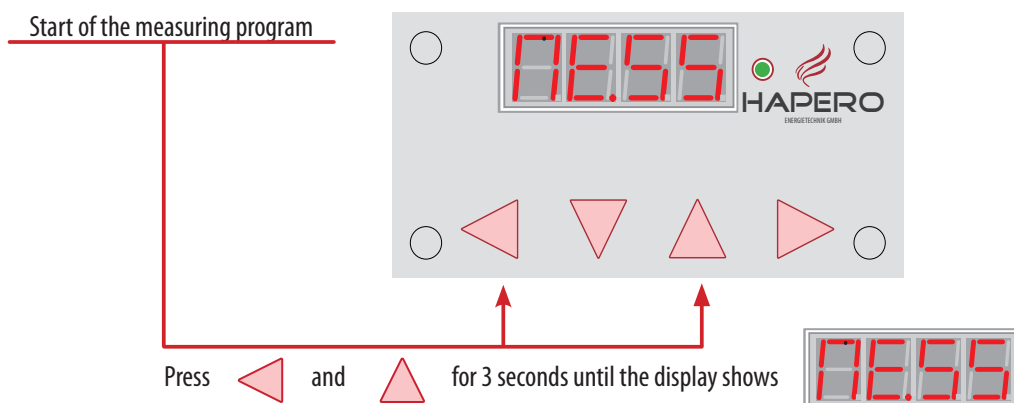


You can read the instructions for the removal of the ash tank of the pellets boiler at page 53 in the Adjustment and Instruction sheet.

MEASURING PROGRAM

In order to measure the pellets boiler you have to start the measuring program. During this program you have two display modes, WAIT and MESS.

A measurement outside of the measuring program is prohibited!



Wait 15 seconds until the display shows either you are allowed to measure or if you have to wait any longer.



The measurement can be carried out.



The measurement **MUST NOT** take place.

In order to end the measurement program press and for 3 seconds or switch-off the boiler.
After completion of the heating the measuring program ends automatically.

2. AUTOMATIC SAFETY FUNCTION

Power blackout – during heating

After a short power blackout the heating adjustments, which the heater had before the blackout, are continued. If the power blackout lasts longer, the pellets boiler starts from the beginning again (Cleaning, material supply, preparation, firing and heating), as long as the temperature demand of the heater loops the boilers or puffers fit.

Power blackout – during starting stage

After a power blackout during the starting stage the start activity is repeated.

Overheating

A safety temperature limiter (STL) switches-off the pellets boiler automatically in case of overheating. However, a overheating can only occur if the pumps drop out, the water pressure in the boiler declines or the hydraulic system cables have any errors. Therefore, after the cooling down of the boiler, you have to push the STL-button per hand to check the pumps in an aggregate test. Moreover, the water pressure of the boiler and the hydraulic system cables have to be checked as well.

Fuse

The device is secured with a main fuse (located on the power section in the inside of the device) in case of a overcurrent. The electric connection has to be carried out by a specialist only. You have to watch out for the grounding of the boiler, the hydraulic system cables and the suction hose.

Please note that every change of the electronic system, a change of the installation, a change of the machine head or a change of the design is strictly prohibited.

The connection of the boiler to the power supply, the suction hose, the holding engine, the heater loops, the boilers and puffers may only be carried out by specialist.

Violation makes you lose your guarantee and warranty and moreover affect your safety and functionality of your device negatively.

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VERSION REFERENCE NOTE

This operating instruction is conform with the following software version or higher. See page 11.

Identification: **1AA** Software version: **0027**

Identification: **C1A** Software version: **0014**

Identification: **4AC** Software version: **0004**

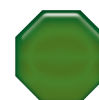
Identification: **A2A/A3A** Software version: **0005**

Errors as well as literal and phrase mistakes excepted, all information without engagement!

LEGEND



Important information



Security advice



Practical advice

3. WOOD PELLETS, WHAT IS IT?

Pellets are manufactured from waste wood which is produced by sawmills or plane factories as well as demolition wood from a forest enterprise. These base products are reduced to small pieces, dried and then compressed to pellets without the use of binding materials.

Specification for high quality pellets:

Data sheet for wood pellets under Austrian standards M 7135, DIN-51731 standard and SWISSPELLET. Suitable according to **EN 14961, Quality class A1**.

(Abridgement from EN-14961-2)

Aperture [mm]	6 (+-1)
Length [mm]	$3.15 < L < 40$ (max. 1% 45)
Fines [mm]	$1\% < 3.15$
Bulk weight [kg / m ³]	> 600
Energy content [MJ / kg]	$16.5 < Q < 19$
Humidity ratio [%]	< 10
Ash content [%]	max. 0.7 - 1.5
Dust content [%]	max. 1 %
Chemical binding material	prohibited
Pollution	none



WARNING: Before entering the storage space make sure efficient air vent is given!

When using a holding screw you have to make sure that NO electrical power is switched-on before entering the storage space.



Types of pellets!

The pellets boiler is able to use different types of pellets as well as different types of fuels. Page 13 gives you the information which types can be used.



The usage of cheap or illegal pellets fuels affects the performance of your pellets boiler and can furthermore lead to an expiration of your warranty, guarantee and with it your product liability. Adhere to the cull burning prohibition!

SLAGGING!

Through polluted pellets slagging can be a problem within the burner. In order to prevent the slagging a slagging program can be started. See page 13 I.P Program line 7.

PELLETS STORING

To assure a smooth and efficient burning of your pellets, it is essential to store the burning fuel as dry and pollution free as possible. During the pellets compress process carbon monoxide is bonded, which is laid off again in the storage space. Sufficient air vent has to be given in the storage space. Buried tanks may only be entered after a carbon monoxide measurement.

WARNING: Waste materials and fluidity must not be burned in pellets boiler!



TECHNOLOGY

The technological advance of your pellets boilers results in long lasting test series in laboratories and practical experience. The practical advantages of your pellets boiler are convincing.

Your pellets boiler is only approved to wood pellets with high quality, produced under the standards M 7135, DIN-PLUS and SWISSPELLET.

The burning of non compact compressed combustibles (Straw, corn, wood chips, garbage) is prohibited!

Violation makes you lose your guarantee and warranty and moreover affect your safety and functionality of your device negatively!



4. COMBUSTION AIR

Every combustion process needs oxygen or air. The combustion air is usually detracted from the room.

Self-sufficient ambient-air air supply:

The pellets boiler can be provided by two separate air hoses, not depending on the ambient air.

Warning: When using the living room model the upper viewing glass cart-ridge seal has to be inserted.

Air extraction from the living room:

With the modern accommodations sometimes air cannot flow in enough through airtight windows and doors. Additional air vent (bathroom or kitchen) can cause troubles. If there is no possibility to supply external combustion air, you should ventilate your room several times during a day to assure good combustion, because bad ventilation can cause low-pressure which results in bad combustion.

Air extraction from the boiler room:

Boiler rooms with a pellets boiler have to conform to the national forces ventilation standards.

SUPPLY OF EXTERNAL COMBUSTION AIR (Self-sufficient ambient-air)

Through the outside combustion air there is no need for separate air ventilation for your accommodation or boiler room, where the pellets boiler is located.

5. OPERATION IN GENERAL

Initiation may only take place if the device is fully assembled and the boiler water filled. Violation makes you lose your guarantee and warranty and moreover affect your safety and functionality of your device negatively.

Is the device used properly, overheating cannot take place. Violation in the usage of the electrical boiler component parts (compressor, engine and electrical control) can shorten the life expectancy.

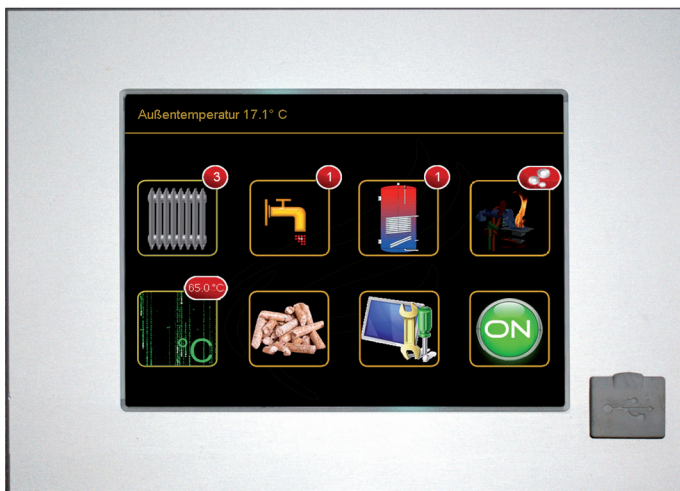
BASIC REFERENCES

The pellets boiler is equipped with a modern, programmable microprocessor control.

The device performances can be adjusted to the user needs at the internal operating panel, which is located on the left hand upper device casing. Adjustments or changes at the control and operation board may be carried out by specialists or skilled service teams only. Violation makes you lose your guarantee and warranty.

TOUCH DISPLAY

Optional for operating the pellets boiler is the possibility of using a Touch-Display (approx. 22 x 19 cm).



You can operate your boiler worldwide, from every place you like and adjust him as you wish.

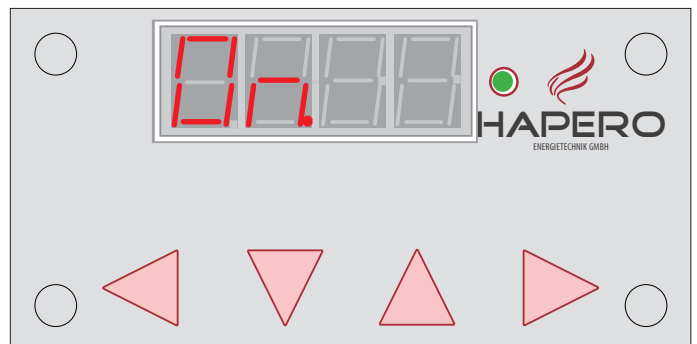
You get access through your PC or any internet-ready terminal.

If you are not using the room controller, time program 1 of the Heater circuit is used.



Cable-free room controller

Easy handling with the best comfort possible guarantees a comforting heat in the whole house.



Control display

The high intelligent Control-Philosophy in the inside of your Hapero pellets boiler is perfectly balanced. The control display is intended for adjustment and parameter operations only.

LED NUMBER - DISPLAY

The LED-display basically shows the time. The information is shown readable after a keystroke on the LED display. It is also possible to show other information permanently on the display.

STATUS DISPLAY (GREEN)

The status display (green LED) shows the current condition of your pellets boilers. If the LED glows, the boiler is switched-on. When switched-off the LED does not glow. If the pellets screw transports the pellets into the burner, the status is changing, the LED is blinking.

6. FIRST STEPS

To make the start as easy as possible with our products your pellets boiler is preprogrammed before delivery.

Before start running your pellets boiler for the first time always check the installation and correct connection of your pellets boiler with your funnel.



Please read the adjustment and instruction sheet carefully before switching-on the pellets boiler.

MATERIAL FILL

With attached room holding:

With attached room holding there is no further action needed.

Without attached room holding:

If there is no automatic room holding, fill the holding tank with pellets before initiation. The pellets sensor located in the pellets holding tank has to be covered. Use a aluminum adhesive foil or switch the parameter menu to "Manual filling" to 1 (as described on page 27)

SWITCH-ON

To switch-on your pellets boiler press  for 3 seconds.

FINISHED!

When heating for the first time with your pellets boiler it might lead to slight noise and smell nuisance. This process has to be carried out while the windows are open.

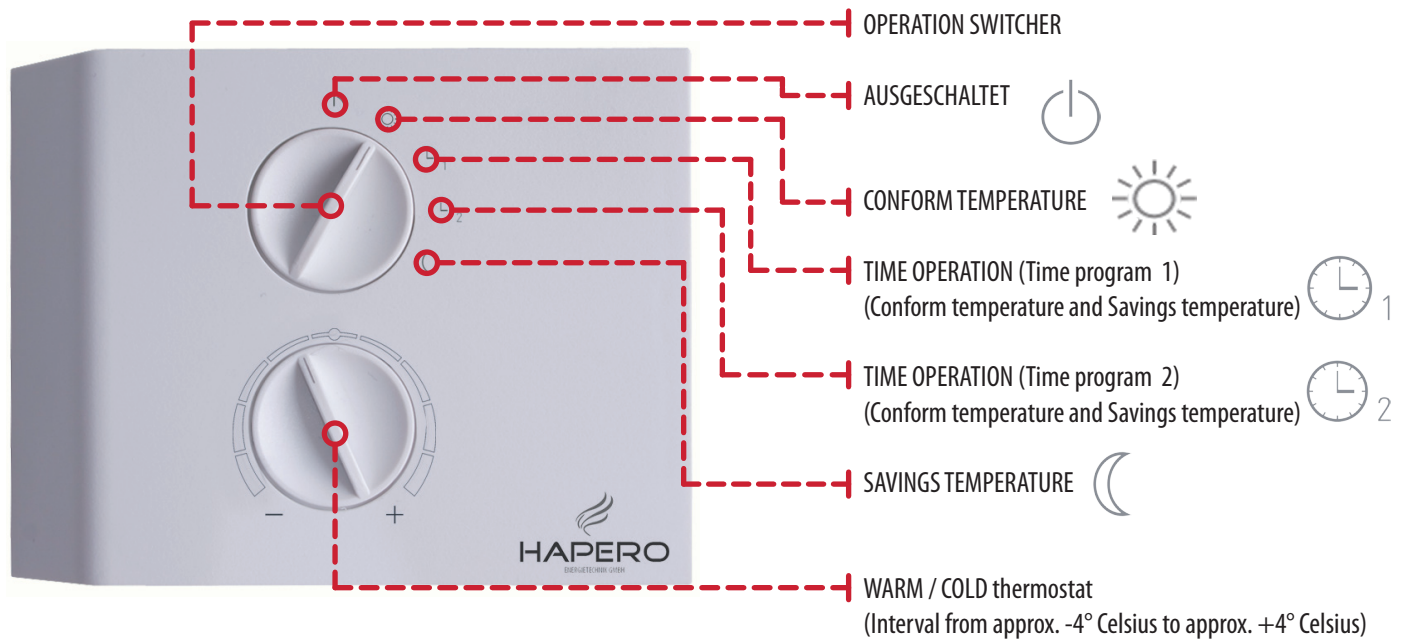


7. THE CABLE-FREE ROOM CONTROLLER

The cable-free room controller is one of the most important control elements. All preset temperature data, times and temperature adjustments can be activated smoothly and convenient. The room controller sends every 20 seconds the adjusted and measured data.

The operating distance covers 30 meters, dependent on the local conditions.

If the operating distance of the room controller is not enough, you can exchange your cable-free model against a cable-board model.



Please note that the cable-free room controller is mounted at the correct assembly stand. Do not mount your room controller next to a source of heat, as the radiant energy can falsify the data.

Through the thermostat/cryostat you adjust your heat to your desired temperature. The operation dial helps you to operate the pellets boiler and Heater circuit very easily.

If you use one or more Heater circuits, the room controller is attached to the respective Heater circuit.

Up to three cable-free room controller can be attached. Through this attachment to the Heater circuit the real temperature is measured and the flow temperature (heater and floor temperature) is rectified.

If the desired temperature is NOT measured correctly from the room controller, the operation can be switched-off, see page 20 "Room controller operations".

SWITCH-OFF

With this operation the Heater circuit or the pellets boiler is switched-off. The anti-freeze protection remains active. (Boiler water 6 ° Celsius)

CONFORM TEMPERATURE

The temperature is permanently regulated.

TIME OPERATION 1

This operation regulates the conform temperature and the energy saving temperature. Within the time window (time program 1) the conform temperature is regulated, without the time window the energy saving temperature.

TIME OPERATION 2

This operation regulates the conform temperature and the energy saving temperature. Within the time window (time program 2) the conform temperature is regulated, without the time window the energy saving temperature.

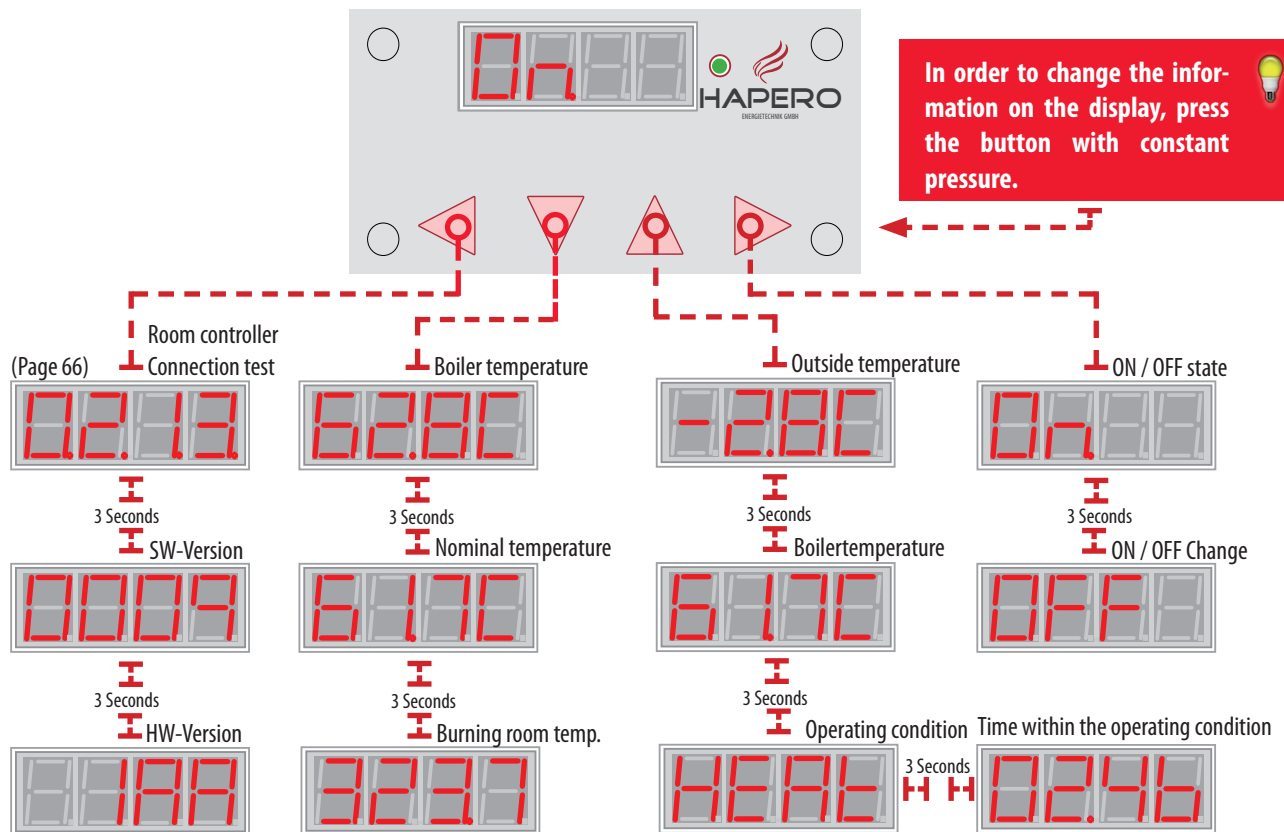
ENERGY SAVING TEMPERATURE

The energy saving temperature (reduced time temperature) is permanently regulated.

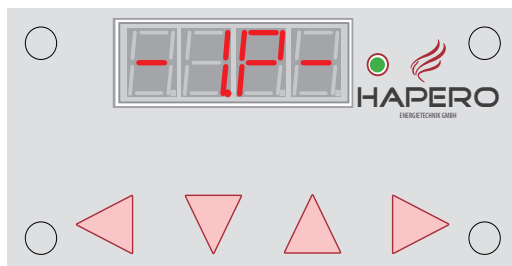


Please note that the cable-free room controller is not mounted next to a source of heat.

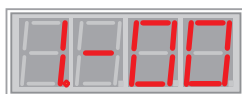
8. KEYBOARD FUNCTIONS



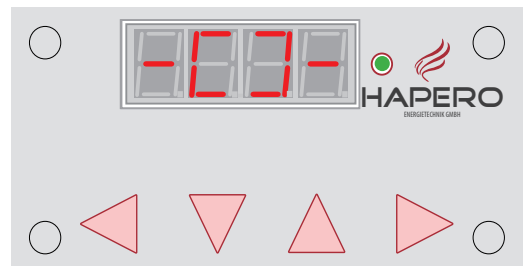
INFORMATION MENU



Press the buttons  and  simultaneously for 3 seconds. The display shows [-I.P.-]. After the 3 seconds you get to the I-Program level.

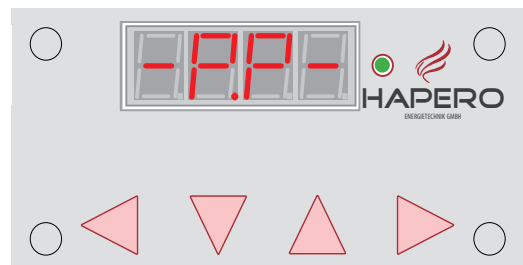


CHANGE OF THE ASH TANK & VIEWING GLASS



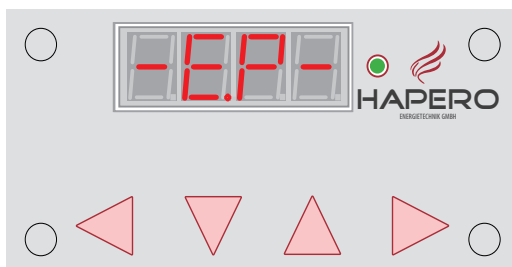
The boiler has to be switched-off and the heating program has to be finished. Press the buttons  and  for 3 seconds. The ventilator runs for 120 seconds. If the boiler should be ready for the change of the viewing glass, the display shows [FAIL].

PARAMETER MENU



Press the buttons  and  simultaneously and after two more seconds additionally the button . The display shows [-P.P.-]. After the 5 seconds you get to the P-Program level. If you should have pressed a wrong button or did not press it for 2 seconds the display shows [FAIL].

TIME AND ENERGY MANAGEMENT MENU



Press the buttons  and  for 3 Seconds. During the holding time the display shows [-E.P.-]. After the 3 seconds you get to the E-Program level.



9. OPERATION OF THE MENU

SWITCH-ON

The display state is shown if the button  is pressed shortly.



Press the button  for 3 seconds and the pellets boiler is switched-on.



SWITCH-OFF

The display state is shown if the button  is pressed shortly.



Press the button  for 3 seconds and the pellets boiler is switched-off.



TIME SETTING

Press the buttons  and  simultaneously for 3 seconds. The display shows



Press the button  You are now in the programming function, program code 01. Press the button  to get to the time setting.



HOURS   MINUTES

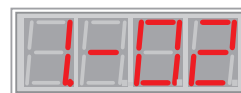
Press  in order to raise the hours. Press  in order to raise the minutes. In order to save the adjusted data press  to leave the P-Menu.

DATE SETTING

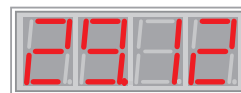
Press the buttons  and  simultaneously for 3 seconds. The display shows



You are now in the programming function, program code 00. Press the button  two times in order to get to the program code 02.

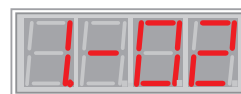


You are now in the programming function, program code 02. Press the button  in order to get to the Day/Month setting.

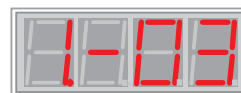


DAY   MONTH

Press the button  in order to raise the days. Press the button  in order to raise the month. In order to leave the Day/Month data press  twice.



You are now in the program code 02. Press the button  in order to get to the program code 03.



You are now in the programming function, program code 03. Press the button  in order to get to Date setting.



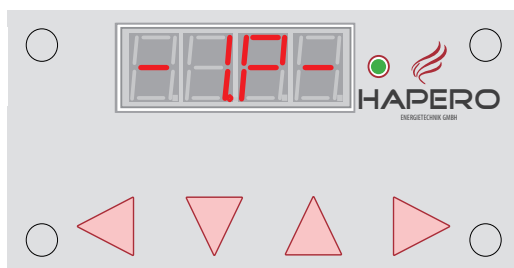
Press  in order to decrease the date. Press  in order to raise the date. In order to leave and save the date settings press  twice.

If your pellets boiler is separated from your power supply more than 14 days, your time and date settings have to be adjusted again. All additional data will stay the same.



10. INFORMATION MENU

INTRODUCTION



Press the buttons  and  simultaneously for 3 seconds. The display shows [-I.P-]. After 3 seconds you get to the I-Program level.



Within this menu you can adjust the date and time and furthermore you have got the information code and the material adjustment. (Chapter material adjustment).

From point 7 you get all the information for your boiler and the energy management.

Press  or  in order to navigate through the menu.

In order to get the information from menu point 1 to 9, press .

From point 7 the information is shown automatically. No adjustments are possible.

The line number as well as the belonging information are listed in the following schedule.

NR.	APPELLATION	INFORMATION
1.	Time	Time setting
2.	Date	Date setting (Month, Day)
3.	Year	Year setting
4.	Day of the week	Display for the day of the week
5.	Material quantity	Quantity = Percentage of the flow rate (Amount is automatically adjusted if REFA = active, page 27)
6.	Typ of pellets	6,0 = 6 mm Aperture of the pellets, 7,0 = Mandelschalen, 8,0 = 8 mm Aperture of the pellets, (Warning, adhere to the Software version)
7.	Information code	The display shows the information with the keypress inactive
8.	Mode	Boiler state: Standby = Stby / Preperation = GO 1 / Fire recognition = GO 2 / Scorching stage = burn / Heating = HEAt / Burning out = StOP
9.	End-of-heating code	1.0 Flame went out 2.0 End of heating time 3.0 Max temperature achieved 4.0 Pellets used 5.0 Heater was switched-off 6.0 Get pellets if Flex time is finished 7.0 No fire recognition 8.0 Ait was not achieved (air quantity sensor) 9.0 External regulation, Performance below 0.3 Volt 10.0 Temperature standards is 0° 11.0 Temperature drifting in the scorching stage is too low 20.0 The minimum boiler temperature was not achieved 22.0 End-of-heating code through external contact 77.0 Time expired for scorching stage 90.0 Combustion chamber overfilling 99.0 Screw safety temperature is OK again
10.	Boiler heating time active	0 = Outside the boiler heating times // 1 = Insided the boiler heating time
11.	Boiler room temperature	Room controller (attached to the boiler) measured temperature
12.	Boiler room controller address	Room controller (attached to the boiler) address (Dip- switch)
13.	Boiler room controller mode	Room controller (attached to the boiler) switch setting 1 - 5
14.	Boiler room controller readjusting	Room controller (attached to the boiler) THERMOSTAT/CRYOSTAT
15.	Boiler room controller battery	Room controller (attached to the boiler) battery terminal voltage
17.	Runtime tank screw	Runtime of the tank screw depending on the REFA
18.	Theoretical performance	Current theoretical performance as per power regulator
19.	Air performance	Current air performance (Preferred)
20.	Material performance	Current material performance (Retightened)
21.	Daytime holding tank file	Current available daytime holding tank file
22.	Daytime holding tank temperature	Daytime holding tank temperature (Safety monitor)
24.	Boiler temperature	Boiler temperature

NR.	APPELLATION	INFORMATION
25.	Burning room temperature	Burning room temperature
26.	Theoretical LM	Air set point
27.	LM Data	Measured air quantity, indicated value 0 - 900,0
28.	Stage blower	Blower output value: 0 - 225 (0 % to 100 %)
25.	Secondary stage blower	Blower output value: 0 - 14,0 (0% to 100%) only with devices ≥ 25 kW
35.	Boiler temperature	Boilertemperature // Press  in order to start boiler charging.
36.	Boiler charging time bottom	When connecting a second boiler sensor (1 enhanced slat X7) it will be used automatically.
37.	Boiler charging time	Hundreds = Boiler charging time // Tens = Boiler basic temperature // Ones = Legionella charging time
38.	Calculated theoretical temperature	Minimum temperature when the boiler is loaded.
39.	Calculated switch-off temperature	Switch-off temperature when the boiler is finished.
40.	Puffer top	Puffer temperature top
41.	Puffer bottom	Puffer temperature bottom
42.	Puffer solar	Solar sensor temperature
43.	Puffer charging time	0 = Outside charging time 1 = Inside charging time
44.	Puffer switch-on temperature	Minimum temperature measured at the top sensor when the puffer switches on
45.	Puffer switch-off temperature	Switch-off temperature measured at the bottom sensor when the puffer switches off
50.	Error code last	Error code 1
51.	Error code next to last	Error code 2
52.	Error code ...	Error code 3
53.	Error code	Error code 4
54.	Error code	Error code 5
55.	Heating end last	Heating end 1
56.	Heating end next to last	Heating end 2
57.	Heating end ...	Heating end 3
58.	Heating end	Heating end 4
59.	Heating end	Heating end 5
62.-63.	Boiler temperature slave 1 and 2	Cascade: Transmitted boiler temperature from slave 1 or rather slave 2
64.-65.	Screw pulses slave 1 and 2	Cascade: Transmitted screw pulses from slave 1 or rather slave 2
66.-67.	Status information slave 1 and 2	Cascade: Transmitted status information from slave 1 or rather slave 2
69.	Outside temperature	Outside temperature
70.	HK1 Heating time active	Time frame 1  Time frame 2 0 = Outside heating time // 1 = Inside heating time
71.	HK1 VL Theoretical temperature	Measured supply temperature
72.	HK1 VL Actual temperature	Measured supply temperaturer
73.	HK1 Theoretical room temperature	Adjusted room temperature
74.	HK1 Actual temperature	Room controller (attached to Heater circuit 1) measured room temperature
75.	HK1 Room controller address	Room controller (attached to Heater circuit 1) address (Dip-switch)
76.	HK1 Room controller mode	Room controller (attached to Heater circuit 1) Switch setting 1 - 5
77.	HK1 Room controller readjustment	Room controller (attached to Heater circuit 1) THERMOSTAT/CRYOSTAT
78.	HK1 Room controller battery	Room controller (attached to Heater circuit 1) battery terminal voltage
79.	HK1 Pump / Mixer	 = Pump is off  = Mixer on Pump is on  = Mixer to Pump is on

Heater circuit 1

NR.	APPELLATION	INFORMATION
80.	HK2 Active heating time	Time frame 1 Time frame 2 0 = Outside heating time // 1 = Inside heating time
81.	HK2 VL Theoretical temperature	Measured supply temperature
82.	HK2 VL Actual temperature	Measured supply temperature
83.	HK2 Theoretical room temperature	Adjusted room temperature
84.	HK2 Actual room temperature	Room controller (attached to Heater circuit 2) measured room temperature
85.	HK2 Room controller address	Room controller (attached to Heater circuit 2) address (Dip-switch)
86.	HK2 Room controller mode	Room controller (attached to Heater circuit 2) switch setting 1 - 5
87.	HK2 Room controller readjustment	Room controller (attached to Heater circuit 2) THERMOSTAT/CRYOSTAT
88.	HK2 Room controller battery	Room controller (attached to Heater circuit 2) battery terminal voltage
89.	HK2 Pump / Mixer	= Pump off = Mixer on Pump is on = Mixer to Pump is on
90.	HK3 Active heating time	Time frame 1 Time frame 2 0 = Outside heating time // 1 = Inside heating time
91.	HK3 VL Theoretical temperature	Measured supply temperature
92.	HK3 VL Actual temperature	Measured supply temperature
93.	HK3 Theoretical room temperature	Measured room temperature
94.	HK3 Actual room temperature	Room controller (attached to Heater circuit 3) measured room temperature
95.	HK3 Room controller address	Room controller (attached to Heater circuit 3) address (Dip-switch)
96.	HK3 Room controller mode	Room controller (attached to Heater circuit 3) switch setting 1 - 5
97.	HK3 Room controller readjustment	Room controller (attached to Heater circuit 3) THERMOSTAT/CRYOSTAT
98.	HK3 Room controller battery	Room controller (attached to Heater circuit 3) battery terminal voltage
	HK3 Pump/ Mixer	= Pump off Mixer on Pump is on = Mixer to Pump is on
100.	Performance 0	Data in hours, Interval 1% - 5% (Single liquidation 3 Seconds, Total liquidation 5 Seconds press)
101.	Performance 1	Data in hours, Interval 6% - 15% (Single liquidation 3 Seconds, Total liquidation 5 Seconds press)
102.	Performance 2	Data in hours, Interval 16% - 25% (Single liquidation 3 Seconds, Total liquidation 5 Seconds press)
103.	Performance 3	Data in hours, Interval 26% - 35% (Single liquidation 3 Seconds, Total liquidation 5 Seconds press)
104.	Performance 4	Data in hours, Interval 36% - 45% (Single liquidation 3 Seconds, Total liquidation 5 Seconds press)
105.	Performance 5	Data in hours, Interval 46% - 55% (Single liquidation 3 Seconds, Total liquidation 5 Seconds press)
106.	Performance 6	Data in hours, Interval 56% - 65% (Single liquidation 3 Seconds, Total liquidation 5 Seconds press)
107.	Performance 7	Data in hours, Interval 66% - 75% (Single liquidation 3 Seconds, Total liquidation 5 Seconds press)
108.	Performance 8	Data in hours, Interval 76% - 85% (Single liquidation 3 Seconds, Total liquidation 5 Seconds press)
109.	Performance 9	Data in hours, Interval 86% - 95% (Single liquidation 3 Seconds, Total liquidation 5 Seconds press)
110.	Performance 10	Data in hours, Interval 96% - 100% (Single liquidation 3 Seconds, Total liquidation 5 Seconds press)
111.	Screw pulses	Data x 10,000
112.	Starting sequences	Data x 10
113.	Pulses ASH	Data x 1,000 = Counter for the message
120.	Screw runtime (-P,P,- Line 44)	Adjusted screw time per pulse
121.	Screw runtime + material quantity	Calculated screw runtime + material quantity adjustment
122.	REFA adjustment data	Calculated REFA data
123.	Screw runtime (actual)	Actual screw runtime including all adjusted data

All the given data from 1 to 9 (apart from 4 = Weekdays) can be readjusted (see chapter menu operation). From line 10 all the information describe the boiler state, adjustment value, Heater circuit, boiler and puffer parametrization.

11. REPORT AND FAULT INDICATION

DISPLAY	ERROR	CAUSE / REPAIR
E. 01	Drive mistake of the multifunctional motor (Sensor or motor)	Checking of the motor and the sensor with an aggregate test The burner has to be checked, the pellets have to be removed!
E. 02	Storage space	Refill the storage space, checking of the hoses if they are blocked
E. 04	No ignition	Remove pellets from the burner, check the fire starter The burner has to be checked, the pellets have to be removed!
E. 05	No ignition (chimney draft is too high)	Remove pellets from the burner, check chimney draft (adjust or attach a chimney draft controller) The burner has to be checked, the pellets have to be removed!
E. 06	LM data under the minimum, no air flow	Checking of the smoke gas stroke The burner has to be checked, the pellets have to be removed!
E. 07	LM data under 70 % for 180 Seconds	Checking of the smoke gas stroke, checking of the ash tank The burner has to be checked, the pellets have to be removed!
E. 08	Cable break, error of the air flow sensor or sensor	Checking of the air flow sensor with an aggregate test (cable break, defect plug connector, defect air flow sensor)
E. 10	Overfilled burner	Cleaning of the burner butterfly valve and checking of the impermeability, check the pull-springs of the burner butterfly valve, check the flue gas tract. Check the redary drive of the burner butterfly valve. The burner has to be checked, the pellets have to be removed!
E. 20	Minimum boiler temperature has not been achieved	Checking of the hydraulic system (Gravitaion brake), new balancing of the external adjustment control. The boiler temperature was under 55 °C for one hour.
E. 50	Sensor break of the combustion space temperature	Checking of the cables and sensor
E. 51	Sensor break of the boiler temperature	Checking of the cables and sensor
E. 77		
E. 80	Decline of the STB	Checking of the hydraulic system
E. 97		
E. 98	Temperature monitoring of the pellets holding tank	Removal of the ash tank. Informing of the customer service! Checking of the daytime holding tank, the burner butterfly valve and the burning chamber!
E. 99	Screw safety temperature Bi-Metal	Contact customer service

RE-SETTING

Please correct the cause of error trigger, do not hesitate to ask your fitter or after sale service.
Switch-on the boiler again, everything runs smoothly again.

INFORMATION OF THE DISPLAY



Removal of the ash tank:

Die display shows [ASCH] if a certain amount of pellets have been burned (approx. 600 kg). Please empty the ash tank (**see page 53**). This is an information for you and no error message.

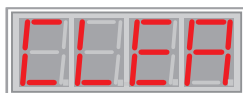


DISPLAY



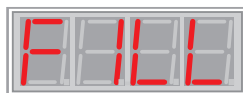
Multifunctional motor:

Positioning of the multifunctional motor



CLEAR:

Cleaning of the burner and heat exchanger



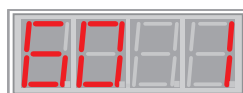
FILL:

Filling of the day tank is carried out
Day tank has to be filled (Hand filling)



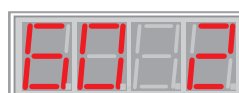
Standby:

The boiler waits for the start activity.



GO 1:

Start activity.



GO 2:

Fire recognition



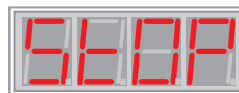
Burn:

Scorching stage



Heat:

Heating mode



Stop:

Burning out
(No error)



Start up:

After a loss of power, if the burning room temperature is over 150° C the boiler starts up.

PC ASSISTED INSTALLATION

Plug & Easy:

In order to relieve the installation as well as the parameterization of your pellets boiler, download Plug & Easy from www.plugandeasy.com and install it on your PC.

System requirement:

Windows XP, Vista, Windows 7,
100 MB hard disc



A-1. BRIEF DESCRIPTION ENERGY-MANAGEMENT

Boiler WITHOUT Heater circuit, WITHOUT puffer, WITHOUT room controller, WITHOUT outside heat sensor

After the boiler is switched-on the boiler starts with 73° Celsius (164.3 Fahrenheit).

Boiler WITHOUT Heater circuit, WITHOUT puffer, WITHOUT room controller, WITHOUT outside heat sensor

After the boiler is switched-on the boiler starts with an adjusted temperature regulated by the Heater circuit 1.

Boiler WITHOUT Heater circuit, WITHOUT puffer, WITHOUT room controller, WITHOUT outside heat sensor

After the boiler is switched-on the boiler starts with an adjusted temperature regulated by the Heater circuit 1. The correction of the boiler temperature is regulated by the room controller. WARNING! The room controller has to be switched-on for heating. The boiler temperature can be reduced over time by the room controller.

Boiler WITH Heater circuit, WITH puffer, WITH room controller, WITH outside heat sensor

After the boiler is switched-on the boiler starts with a temperature calculated by the Heater circuit or puffer. To optimize the energy consumption one chooses the temperature which is necessary to power the Heater circuits.

A room controller attached to a Heater circuit rectifies the flow temperature and the boiler temperature as well.

Boiler management

After the connection of the boiler sensor the boiling management is active. The filling of the boiler takes place after the charging time or rather a surplus of energy during the heating.

Boiler WITHOUT management, external contact (external adjustment control)

After the boiler is switched-on the boiler starts with a temperature of 80 ° Celsius (176 Fahrenheit) if the contact is closed. If the contact is opened, the heating is shut down. (Hydraulic switch is compulsory)

Boiler WITHOUT management, external 0-10 V (external adjustment control)

The boiler starts with a performance standard according to the voltage input. <0.9 V = AUS, 1.0-10.0 V = 1% -100 % capacity. (Hydraulic switch is compulsory)

Cascade connection (2-3 pellets boiler in the network)

The performance standard is preset by the lead boiler. No further adjustments are necessary.

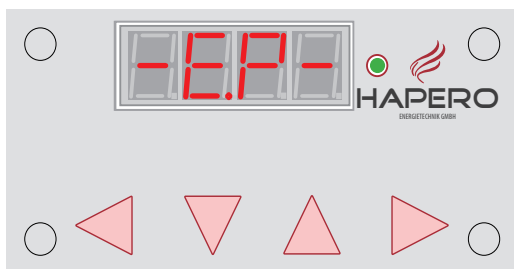
FOR THE EXPERT & THE INSTALLER



ENERGY MANAGEMENT BOILER ADJUSTMENTS

A-2. TIME AND ENERGY MANAGEMENT MENU

INTRODUCTION



Press the buttons  and  for 3 seconds. During the charging time the display shows [-E.P-]. After the 3 seconds you get to the E-Program level.

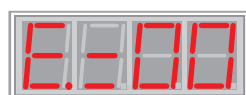


Within this menu you can adjust all time frames and heater circuit parameter as well as conform temperature, energy savings temperature, outside temperature mode et cetera. but also all puffer and boiler charging times. Press  or  in order to navigate through the energy module. Press  in order to get to the submenu.

For configuration examples see page 24. 

Without an active room controller time program 1 is used for the heater circuit.

ENERGY MODULES



Boiler times: Inside the time frame the boiler is ready for heating, outside the time frame no heating takes place.



Heater circuit time 1 from Heater circuit 1: Inside the time frame heating takes place at conform temperature, outside with energy saving temp.



Heater circuit time 2 from Heater circuit 1: Inside the time frame heating takes place at conform temperature, outside with energy saving temp.



Heater circuit time 1 from Heater circuit 2: Inside the time frame heating takes place at conform temperature, outside with energy saving temp.



Heater circuit time 2 from Heater circuit 2: Inside the time frame heating takes place at conform temperature, outside with energy saving temp.



Heater circuit time 1 from Heater circuit 3: Inside the time frame heating takes place at conform temperature, outside with energy saving temp.



Heater circuit time 2 from Heater circuit 3: Inside the time frame heating takes place at conform temperature, outside with energy saving temp.



Puffer charging times: Inside the time frame the puffer is checked for the adjusted temperature, if needed, the puffer gets loaded.



Boiler charging times: Inside the time frame the boiler is checked for the adjusted temperature, if needed, the boiler gets loaded.



Boiler basic temperature time: Inside the time frame the boiler must not fall under the basic temperature, if needed, the boiler gets loaded.



Legionella charging time: Inside the time frame the boiler gets heated at legionella temperature.
WARNING: Danger of scalding!



Filling of the pellets and cleaning times: Inside the time frame you may refill the pellets as you demand.



Time frame for Relay 8: Inside the time frame relay 8 adjustment 10 the potential-free contact gets pulsed. (See page 44).



WEEKDAYS



Monday:

Press  in order to adjust the time to the attached weekday.



Tuesday:

Press  in order to adjust the time to the attached weekday.



Wednesday:

Press  in order to adjust the time to the attached weekday.



Thursday:

Press  in order to adjust the time to the attached weekday.



Friday:

Press  in order to adjust the time to the attached weekday.



Saturday:

Press  in order to adjust the time to the attached weekday.



Sunday:

Press  in order to adjust the time to the attached weekday.



Parameter:

Press  in order to adjust the parameter as well as the temperature and data.

TIME LEVEL



Time level 1 From:

Time adjustment for the chosen energy-model as well as the chosen weekday.



Time level 1 T0:

Time adjustment for the chosen energy-model as well as the chosen weekday.



Time level 2 From:

Time adjustment for the chosen energy-model as well as the chosen weekday.



Time level 2 T0:

Time adjustment for the chosen energy-model as well as the chosen weekday.

TIME SETTING



HOURS MINUTES

Press to get to the hours. Press to raise the minutes.

Copy function: If you wish to use the time for all weekdays, press for 2 seconds. In order to leave the time setting press .

PARAMETER HEATER CIRCUIT



Module:

With this mode you can switch-on or switch-off the heater circuit.

0.0	=	No operation
1.0	=	Automatic operation
2.0	=	Fixed temperature (Room temp. is supply temp.)
3.0	=	Manual operation (Pump management only)



Conform temperature:

The conform temperature is the desired pleasant temperature.



Energy saving temperature:

The energy saving temperature is the temperature, which is desired outside the heating time.



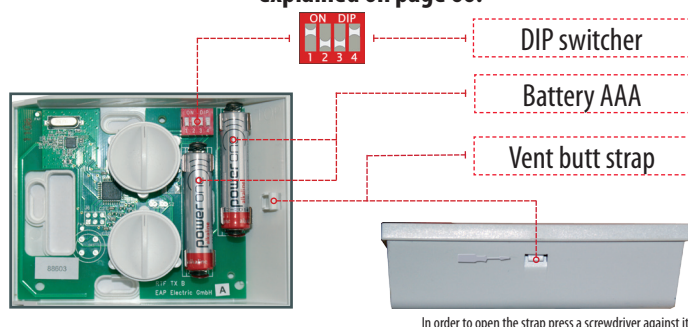
Room controller address:

The cable-free room controller can adjust to 0 to 7 addresses. The address is necessary in order to get the right information for the heater circuit.

Address 0.0	Address 1.0	Address 2.0
Address 3.0	Address 4.0	Address 5.0
Address 6.0	Address 7.0	

After opening the cable-free room controller you see the DIP - Switching block. You can adjust the address from 0 to 7.

Check the room controller operations as explained on page 66.



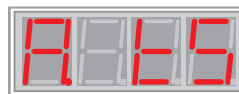
In order to open the strap press a screwdriver against it.



Room controller operation:

Within this operation you can adjust the scope of operation of the room controller.

1.0	=	Total scope of operation
0.0	=	The room temperature is not measured (no main room)



Outside temperature leaded heater circuit-Switch-off:

If the outside temperature exceeds the adjusted temperature the heater circuit automatically switches in the summer operation (no heating).



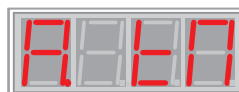
Outside temp. leaded heater circuit-Switch-on:

If the outside temperature undercuts the adjusted temperature the heater circuit automatically switches in the winter operation (Heating).



Supply temperature leaded heater circuit-Switch-off:

If the outside temperature undercuts the measured supply temperature the heater circuit automatically switches in the summer operation (no heating). If a device test is made in the summer, the outside temperature sensor has to be unplugged. (Performance part X17); Thus an outside temperature of -10 °C is adjusted.



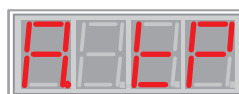
Outside temperature MINUS: ①

The outside temperature data used is measured by the outside temperature curve.



Supply temperature MINUS: ②

The supply data used is measured by the outside temperature curve.



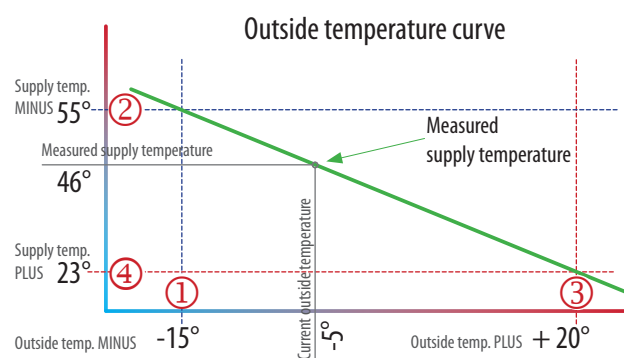
Outside temperature PLUS: ③

The outside temperature data used is measured by the outside temperature curve.



Supply temperature PLUS: ④

The supply data used is measured by the outside temperature curve.



The measured supply temperature of 46° C of your heater or floor heating at -5° C outside temperature.



Supply board (MAX supply temperature):

The max supply temperature of your heater circuits.



Minimal supply temperature:

The measured supply temperature must not undercut the adjusted data.



Supply room temperature multiplier:

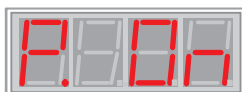
The temperature data, which is necessary to raise the temperature by 1 °C.



Room temperature GSM module:

When activating the X25 contact the current temperature is used as room temperature.

PARAMETER PUFFER



Active puffer:

0.0 = If the energy is used for the heater circuit, the puffer does not get loaded. (For example: Solar puffer during transition time), if the boiler should get loaded, the puffer filling happens through the pellets boiler.

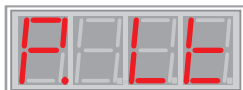
1.0 = Total function



Room temperature heater circuit pump STOP:

1.0 = The heater circuit pump is running during the winter operation all the time.

0.0 = If the measured room temperature should be heightened and the adjusted room temperature exceeded the heater circuit pump is stopped.

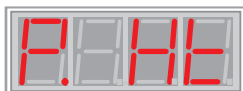


Puffer SWITCH-ON-Temperature:

If the adjusted data is shortcuted (measured with the upper puffer sensor) the puffer gets filled till the Switch-off temperature.

Energiesparpuffer: The switch-on temperature should be relatively low, because the heater circuit adjusts the switch-on temperature by its own. With the switch-on temperature the self adjusted temperature gets lowered additionally.

Standardpuffer: Only this temperature is taken as the switch-on temperature.



Puffer SWITCH-OFF-Temperature:

If the adjusted data is exceeded (measured with the lower puffer sensor) the puffer filling is stopped.

Warning: Even after the switch-off residual heat can be used.

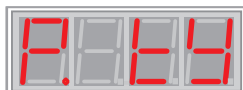
If the switch-off temperature is still not reached, but the boiler is stopped due to cleaning or pellets refilling, the puffer filling only starts after the switch-on temperature is shortcuted.



Puffer solar hysteresis:

When using the 3rd sensor (Solar sensor = PT 1000) the solar pump is activated when the switching temperature is exceeded.

Switching temperature = the temperature on the lower puffer sensor + (the adjusted puffer solar hysteresis). As long as the solar module temperature is higher than the switching temperature, the solar pump is running.



Puffer model:

Data 7.0 = Energy saving puffer

Data 8.0 = Standard puffer

Data 9.0 = Performance puffer

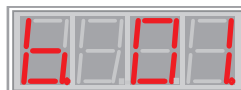


Efficiency puffer regulation:

0.0: During the puffer charging time the puffer is only a boiler water enlargement (80°), outside the charging time it is an energy saving puffer.

1.0: If the puffer is between switch-on and switch-off temperature the theoretical temperature is 65° C, when falling below the switch-on temperature the theoretical boiler temperature is the switch-off temperature + 10° C.

PARAMETER BOILER



Active boiler:

0.0 = Boiler filling is not active

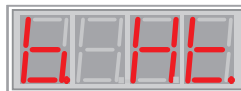
1.0 = Boiler filling is active

2.0 = No rest energy use



Boiler SWITCH-ON-Temperature:

If the adjusted data is shortcuted the boiler filling is activated.

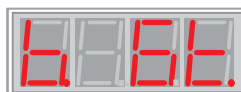


Boiler SWITCH-OFF-Temperature:

If the adjusted data is exceeded the puffer filling is stopped.

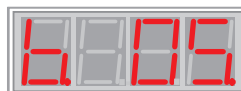
Warning: Even after the switch-off residual heat can be used.

Also if no refilling is required it is possible that during the heating residual heat comes up and therefore the boiler filling starts to happen.



Boiler BASIC-Temperature:

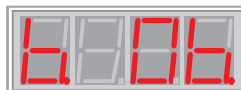
When the adjusted data is shortcuted the boiler filling only takes place till the boiler switch-on temperature in the winter and the boiler switch-off temperature in the summer. As this only happens in the active time frame of energy model 06 outside the boiler charging time (Energy model 05) you have warm water.



Boiler Legionella-Temperature:

During the time frame (Energy model 07) the gets heated to the adjusted temperature.

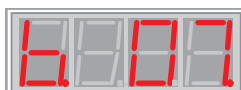
Warning: Danger of scalding!



Boiler operation:

Data 1.0 = Boiler gets loaded even if he is switched-off.

Data 0.0 = No boiler filling takes place.



Boiler special function:

Data 0.0 = No special function

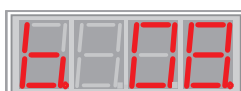
Data 1.0 = Special function on enhanced slot 1

Data 2.0 = Special function on enhanced slot 2

Data 3.0 = Special function on enhanced slot 3

Function 2 Boiler sensor: The function „Second boiler sensor“ can be placed on any heating circuit slot or any empty enhanced slot (X7).

Solar function: The function „Solar temperature spread control“ has to be placed on an empty enhanced slot (X7 and X11). The wiring is the same as with the solar puffer.



Boiler Solar hysteresis:

When using the solar sensor (PT 1000) the solar pump gets activated if the switching temperature is exceeded.

Switching temperature = the boiler temperature (or the measured temperature at the lower puffer sensor) + the measured boiler solar hysteresis.

As long as the solar model temperature is higher than the switching temperature the solar pump is running.



When using the standard puffer WITHOUT heating circuits a room control (address for heating circuit 1) can switch-on and switch-off the puffer charging via the adjusted room temperature. Thus there will be no overheating in the living space.

WARNING:

After the heating of the boiler to legionella temperature the industrial water can scald. Please adjust your water tap to the increased water temperature.



A-3. STANDARD TIMES AND DATA (FACTORY SETTING)

BOILER OPERATION TIME

Weekday	Time frame 1	Time frame 2
Monday	00:00 to 12:00	12:00 to 24:00
Tuesday	00:00 to 12:00	12:00 to 24:00
Wednesday	00:00 to 12:00	12:00 to 24:00
Thursday	00:00 to 12:00	12:00 to 24:00
Friday	00:00 to 12:00	12:00 to 24:00
Saturday	00:00 to 12:00	12:00 to 24:00
Sunday	00:00 to 12:00	12:00 to 24:00

BOILER CHARGING TIMES

Weekday	Time frame 1	Time frame 2
Monday	05:00 to 09:00	17:00 to 21:00
Tuesday	05:00 to 09:00	17:00 to 21:00
Wednesday	05:00 to 09:00	17:00 to 21:00
Thursday	05:00 to 09:00	17:00 to 21:00
Friday	05:00 to 09:00	17:00 to 21:00
Saturday	05:00 to 09:00	17:00 to 21:00
Sunday	05:00 to 09:00	17:00 to 21:00

Solar boiler times:

With the P-Program you can adjust the boiler charging times over the line 61 of the boiler charging times. Press  in order to use the times described below,  in order to use the times described above.

HEATER CIRCUIT-WEEK PROGRAM 1

Weekday	Time frame 1	Time frame 2
Monday	06:00 to 12:00	12:00 to 22:00
Tuesday	06:00 to 12:00	12:00 to 22:00
Wednesday	06:00 to 12:00	12:00 to 22:00
Thursday	06:00 to 12:00	12:00 to 22:00
Friday	06:00 to 12:00	12:00 to 23:00
Saturday	06:00 to 12:00	12:00 to 23:00
Sunday	07:00 to 12:00	12:00 to 22:00

Weekday	Time frame 1	Time frame 2
Monday - Friday	11:00 to 12:00	17:00 to 21:00
Saturday - Sunday	11:00 to 12:00	17:00 to 21:00

BOILER BASIC TEMPERATURE

Weekday	Time frame 1
Monday	05:00 to 23:00
Tuesday	05:00 to 23:00
Wednesday	05:00 to 23:00
Thursday	05:00 to 23:00
Friday	05:00 to 23:00
Saturday	05:00 to 23:00
Sunday	05:00 to 23:00

BOILER LEGIONELLA CHARGING TIME

Weekday	Time frame 1
Monday	00:00 to 00:00
Tuesday	00:00 to 00:00
Wednesday	00:00 to 00:00
Thursday	00:00 to 00:00
Friday	00:00 to 00:00
Saturday	00:00 to 00:00
Sunday	00:00 to 00:00

PUFFER CHARGING TIMES

Weekday	Time frame 1	Time frame 2
Monday	00:00 to 12:00	12:00 to 24:00
Tuesday	00:00 to 12:00	12:00 to 24:00
Wednesday	00:00 to 12:00	12:00 to 24:00
Thursday	00:00 to 12:00	12:00 to 24:00
Friday	00:00 to 12:00	12:00 to 24:00
Saturday	00:00 to 12:00	12:00 to 24:00
Sunday	00:00 to 12:00	12:00 to 24:00

PELLETS FILLING AND CLEANING TIMES

Weekday	Time frame 1
Monday	08:00 to 20:00
Tuesday	08:00 to 20:00
Wednesday	08:00 to 20:00
Thursday	08:00 to 20:00
Friday	08:00 to 20:00
Saturday	08:00 to 20:00
Sunday	08:00 to 20:00

HEATER CIRCUIT IN GENERAL

Parameter	Data
Modus	1.0
Conform temperature	22.0
Savings temperature	20.0
Raumregleraddress	1.0 oder 2.0 oder 3.0
RaumreglerFunction	1.0
Outside temperaturegeführte Heater circuit-Switch-off	23.0
Outside temperaturegeführte Heater circuit-Switch-on	18.0
Minimal Supply temperature	0.0

HEATER CIRCUIT FLOOR HEATING

Parameter	Data
Supply temperature guided heater circuit-switch-off	23.0
Outside temperature MINUS	-15.0
Supply temperature MINUS	45.0
Outside temperature PLUS	+20.0
Supply temperature PLUS	20.0
Supply board (max supply temperature)	50.0
Supply room temperature multiplicator	2.0

HEATER CIRCUIT RADIATORS 55 / 45

Parameter	Data
Supply temperature guided heater circuit-Switch off	23.0
Outside temperature MINUS	-15.0
Supply temperature MINUS	55.0
Outside temperature PLUS	+20.0
Supply temperature PLUS	30.0
Supply board (max supply temperature)	70.0
Supply room temperature multiplicator	4.0

HEATER CIRCUIT RADIATORS 75 / 55

Parameter	Data
Supply temperature guided heater circuit-switch-off	23.0
Outside temperature MINUS	-15.0
Supply temperature MINUS	70.0
Outside temperature PLUS	+20.0
Supply temperature PLUS	35.0
Supply board (max supply temperature)	80.0
Supply room temperature multiplicator	4.5

HEATER CIRCUIT PANEL HEATING

Parameter	Data
Supply temperaturegeführte Heater circuit-Abschaltung	23.0
Outside temperature MINUS	-15.0
Supply temperature MINUS	45.0
Outside temperature PLUS	+20.0
Supply temperature PLUS	30.0
Supply board (Max VL-Temperatur)	50.0
Supply room temperature Multiplikator	2.0

ENERGY SAVING PUFFER DATA

Parameter	Data
Switch-on temperatre	25.0
Switch-off temperature	55.0
Hysteresis (Difference „Lower puffer temperature“solar sensor)	7.0

STANDARD PUFFER DATA

Parameter	Data
Switch-on temperature	60.0
Switch-off temperature	75.0
Hysteresis (Difference „Lower puffer temperature“solar sensor)	7.0

BOILER DATA

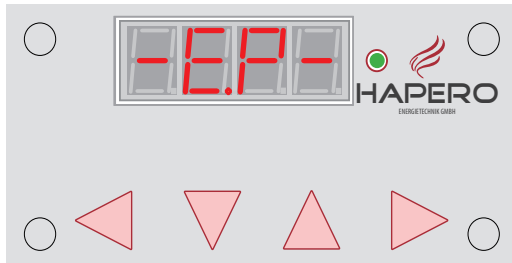
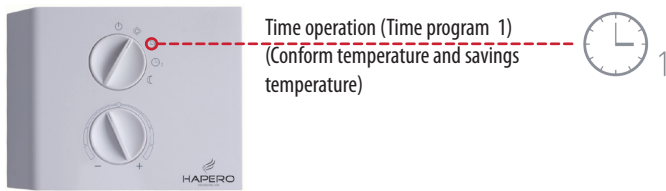
Parameter	Data
Boiler active	1.0
Switch-on temperature	45.0
Switch-off temperature	60.0
Basic temperature	35.0
Legionella temperature	70.0
Boiler operation	1.0
Hysteresis (Difference „Boiler temperature“ solar sensor)	7.0

ABSTRACT BOILER PARAMETER

Parameter	Data
Max heating time (Minutes)	360.0
Boiler max temperature (Celsius)	83.0
Boiler circuit pump ON (Celsius)	55.0
Max pellets transport time (Minutes)	25.0
Heat exchanger - Cleaning time (Minutes)	3.0
Display Code (Time)	2.0
Max performance (Percentage)	100.0
Minimal performance (Percentage) (about 10 % from actual performance)	1.0
Intervall of the rust cleaning (Minute)	60.0

EXAMPLE HEATING TIME

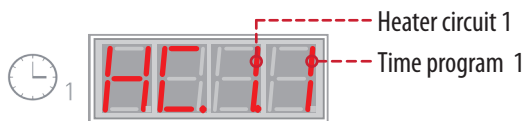
You want to change the heater circuit 1 and the heating time from the time program 1, at Tuesday from 06:00 o'clock to 07:30 o'clock.



Press and for 3 seconds. During the waiting time the display shows [-E.P-]. After the 3 seconds you get to the E-Program level.



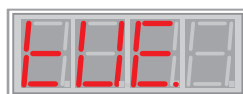
Press and the wished module is shown. In your case [HC.II]



Press in order to get to the weekday adjustments.



Press and the wished weekday is shown. In your case [tUE.] (Tuesday)



Press in order to get to the time frame.



Press in order to get to the time display.



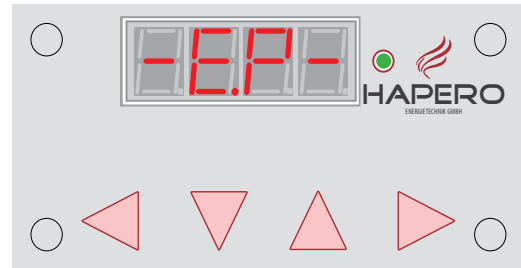
Hours Minutes

Press in order to raise the hours. Press in order to raise the minutes. If you want to leave the time adjustment press (Time frame), (Weekday), (Module), (Ende).

When leaving the menu you can easily switch to other menus too.

EXAMPLE DECLINING TEMPERATURE

You want to change the savings temperature from 20,0° C to 18,5° C.



Press and for 3 seconds. During the waiting time the display shows [-E.P-]. After the 3 seconds you get to the E-Program level.



Press and the wished module is shown. In your case [HC.I.I] or [HC.I.2]



Press in order to get to the weekday adjustments.



Press or and the wished menu is shown. In your case [Para] (for parameter menu)



Press and the parameter menu is shown.



Press and the wished menu is shown. In your case [Lt.=] (for savings temperature)



Press in order to get to the data display.



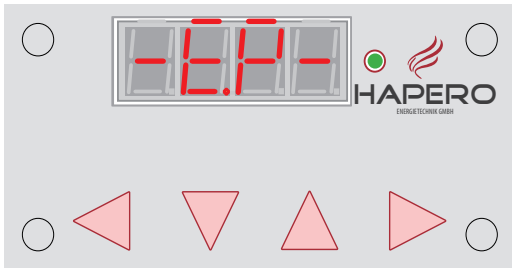
-0,1° C +0,1° C

Press in order to lower the temperature. Press in order to raise the temperature. In order to leave the time setting press (Parameter-menü), (Weekday), (Module), (End).

When leaving the menu you can easily switch to other menus too.

EXAMPLE PELLETS CHARGING TIME

You want to change the end time and the pellets filling time and cleaning time at Wednesday from 20:00 o'clock auf 19:30 o'clock.



Press and for 3 seconds. During the waiting time the display shows [-E.P-]. After the 3 seconds you get to the E-Program level.



Press and the wished module is shown. In your case [E.=08]



Press and you get to the weekday setting.



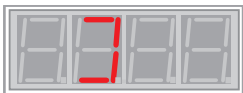
Press and the wished weekday is shown. In Ihrem Fall [UEd.] (für Wednesday)



Press in order to get to the time frame.



Press in order to get to the time frame.



Press in order to get to the time display.

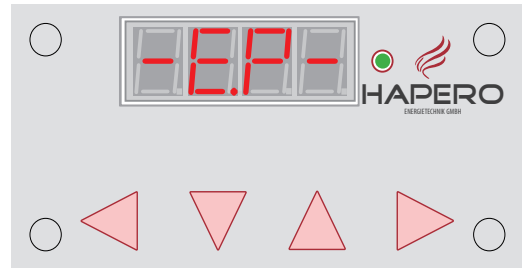


Hours Minutes

Press in order to raise the hours. Press in order to raise the minutes. In order to leave the time setting press (Time frame), (Weekday), (Module), (End).
When leaving the menu you can easily switch to other menus too.

EXAMPLE PUFFER TEMPERATURE

You want change the switch-off temperature from 50,0° C auf 60,5° C.



Press and for 3 seconds. During the waiting time the display shows [-E.P-]. After the 3 seconds you get to the E-Program level.



Press and the wished module is shown. In your case [E.=04]



Press in order to get to the weekday setting.



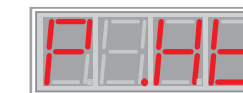
Press or and the wished menu is shown. In your case [Para] (Parameter menu)



Press in order to get to the parameter menu.



Press and the wished menu is shown. In your case [P .Ht] (for Switch-off temperature)



Press in order to get to the data display.

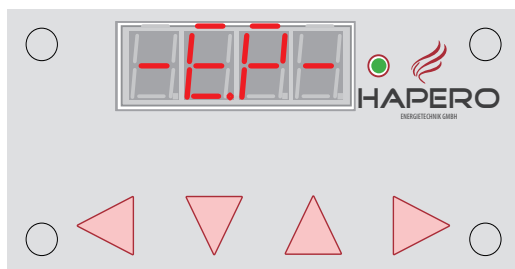


-0,1° C +0,1° C

Press in order to lower the temperature. Press in order to raise the temperature. In order to leave the time setting press (Parameter-menü), (Weekday), (Modul), (End).
When leaving the menu you can easily switch to other menus too.

EXAMPLE BOILER CHARGING TIME

You want to change the end time 2 from the boiler charging time at Thursday from 21:00 o'clock to 22:30 o'clock.



Press and for 3 seconds. During the waiting time the display shows [-E.P-]. After the 3 seconds you get to the E-Program level.



Press and the wished module is shown. In your case [E.=05]



Press in order to get to the weekday setting.



Press and the wished weekday is shown. In your case [thu.] (Thursday)



Press in order to get to the time frame.



Press in to get to the time frame.



Press in order to get to the time display.



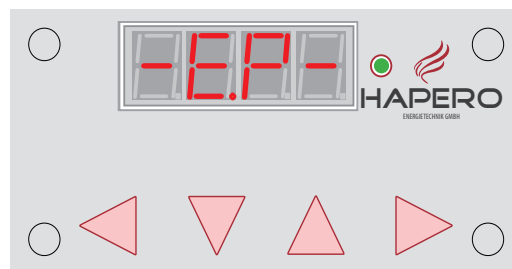
Hours Minutes

Press in order to raise the hours. Press in order to raise the minutes. In order to leave the time setting press (Time frame), (Weekday), (Module), (End).

When leaving the menu you can easily switch to other menus too.

EXAMPLE BOILER TGE MPERATURE

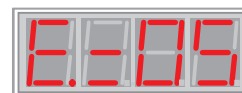
You want to change the switch-on temperature from 45,0° C auf 50,0° C.



Press and for 3 seconds. During the waiting time the display shows [-E.P-]. After the 3 seconds you get to the E-Program level.



Press and the wished module is shown. In your case [E.=05]



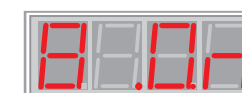
Press in order to get to the weekday setting.



Press or and you get to the wished menu is shown. In your case [Para] (for parameter menu)



Press in order to get to the parameter menu.



Press and the wished menu is shown. In your case [P .Ht] (Switch-on temperature)



Press in order to get to the data display.

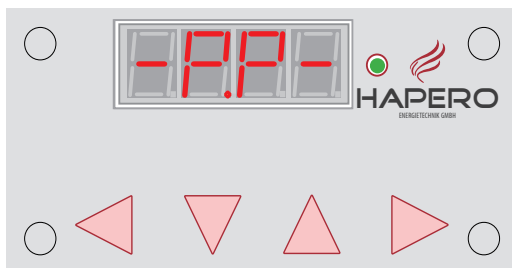


- 0,1° C + 0,1° C

Press in order to lower the temperature. Press in order to raise the temperature. In order to leave the time setting perss (Parameter-menu), (Weekday), (Module), (End).

When leaving the menu you can easily switch to other menus too.

INTRODUCTION



Press and simultaneously. After 2 seconds press additionally . The display shows [-PP-]. After the 5 seconds you get to the P-Program level.

If you have pressed the wrong button or haven't waited the 2 seconds the display shows [FAIL].



WARNING:

The data which have to be adjusted in the parameter menu may only be adjusted after consulting the after-sale-service.

Violation makes you lose your guarantee and warranty and moreover affect your safety and functionality of your device negatively!

In order to reset all adjusted data you have to press on menu line 60.

Die Verspeicherung aller Daten wird erst 15 Sekunden nach dem letzten Tastendruck im Hauptmenü durchgeführt!



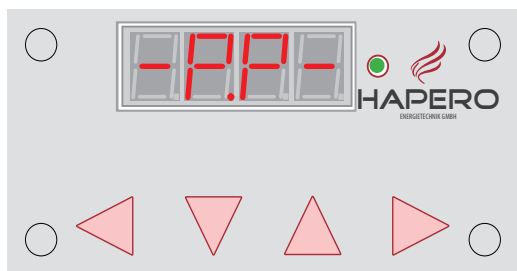
NR.	APPELLATION	INFORMATION
1	Manual filling	0.0 = automatic room holding / 1.0 = manual filling / 2.0 = Message empty (The sensor has to be mounted downwards)
2	Message „ASH“	Data * 1000 from which pellets amounts the message „ASH“ (removal of the ash tank) comes up (only with 15 kW pellets boilers)
3	Pulse pellets boiler	Pulse amount in the holding tank per day
4	Room holding handling time	Data in seconds - Handling time before the beginning of the holding motor
5	Room holding overtravel time	Data in seconds - Overtravel time of the suction turbine after the holding motor stops
6	Room holding transport time	Data in seconds - Operating time während der Holding stage
7	Room holding Dwell time	Data in seconds - Dwell time während der Holding stage
8	Room holding runtime	Data in minutes - Max time till cognition of the material off (Error code 02)
9	Holding type	1.0 = Standard / 2.0 = Suction carriage / 3.0 = GE0plast / 4.0 = Mole (preadjusted parameter with the mole without engagement)
10	Aggregate test	The description is in the chapter aggregate test page 29
9	Chinmey flue barrier active	0.0 = The chimney flue barrier is not activated in the night (no rattle noise) / 1.0 = The barrier is also carried out in the night
12	Boiler circuit pump	Data in Celsius - Switching temperature in the boiler circuit pump
13	Max heating time	Data in Minutes - Max heating time to Burner cleaning
14	Boiler actual temperature	Data in Celsius - Boiler actual temperature without energy management and outdoor sensor
15	Switch-off temperature	Data in Celsius - If the boiler temperature exceeds the switch-off temperature the boiler ends the heating progress
16	Minimal performance	Data in Percent - Min heating performance (about. 30 % from the nominal load)
17	Maximal performance	Data in Percent - Max heating performance
18	HE-Cleaning time	Data in Minutes - Heat exchanger-cleaning time (Multi operation motor)
19	Room controller address „boiler“	Adjustment of the room controller address for the communication between the cable free room controller and the boiler without energy manag.
20	Information code	0.0 = Changing display, 1.0 = No display, 2.0 = Time, 3.0 = Operating status // After 15 seconds within the main menu on the display
21	Air adjustment	Data in Percent - Data from calibration of the air amount sensor
22	REFA active	1.0 = REFA active / 0.0 = REFA not active
23	Max.comb. chamber temp. 100%	Max Combustion chamber temperature für REFA at 80 % Heater performance
25	Burner Prefilltime	Data in Seconds - fill to the burner
26	Insertion time ignit.recognition	Data in Seconds - Pulse pauses for the pellets insertion during the scorching time
27	Air amount ignition recognition	Data in Points - Air amount sensor during the scorching time
28	Ignition recognition	Data in Celsius - Either scorching rising cognition or the Combustion chamber temperature
29	Max Pulses	Max pulse amount at scorching stage
30	Flame off <= 30%	Data in Celsius - When the combustion chamber temperature is shortcuted the flame is recognized as off
31	Flame off 100%	Data in Celsius - When the combustion chamber temperature is shortcuted by 100% the flame is recognized as off
32	Scorching stage time 1 and 2	Data in Seconds - Time for the first scorching stage

NR.	APPELLATION	INFORMATION
33	Performance scorching stage 1	Data in Percent - Air performance and transport performance/4 during the first scorching time
34	Performance scorching stage	Data in Seconds - Time for the scorching stage one and two
38	Rust cleaning motor operating time	Data in Seconds - Total operating time of the rust cleaning motor from start to end
39	Rust cleaning interval	Data in Minutes - Time interval of the rust cleaning during the heating operation
40	Rust cleaning operating time	Data in Seconds - Length of the rust action during the rust cleaning
41	Time of free burning	Data in Minutes - Time interval of the free burning (Selfcleaning) during the heating
42	0 - 10 Volt	0.0 = no function 1.0 = Max output (Boiler set value is 83° C) 2.0 = Specified temperature
44	Screw operating time	Data in Seconds - Length of the screw operation time at the material transport
47	Min combustion chamber temp.	Data in Celsius - Min combustion chamber temperature at 1% Heater performance
48	Power performance	0.0 = Automatic Max performance 1.0 = Instant 100% Performance
48	Boiler circuit stop	0.0 = Standard 1.0 = Boiler circuit pump stop if the boiler is „OFF“ or the room controller =OFF
50	Relay 8 operation	Adjustment of the special features for the potential free contact (Page 44)
51	Switching time relay 8	Data in Seconds - Length of the switching time of the potential free contact „relay 8“
52	Dwell time relay 8	Data in Minutes - Length of the dwell time of the potential free contact „relay 8“
53	Floor HC off	0.0 = Room over temperature (+0.5° C) with floor heating no HC stop, 1.0 = Room over temperature (+0.5° C) HC stop,
54	Sensor options	0.0 = KTY 81/110 Sensor on the expansion band of the boiler sensor, 1.0 = PT1000 sensor on the expansion band of the boiler sensor
55	Offset outside temperature	Data in Celsius - Outside temperature is measured „externally“
56	Energy saving pump	0.0 = No energy saving pump 1.0 = Energy saving pump (ONLY with Plug & Easy)
57	Plug & Easy	0.0 = Off / 1.0 = Plug & Easy is active (see Page 47)
58	Info Module configuration	The same as in line 59 but with no changing after the exit.
59	Module configuration	The configuration of the heater circuit and the puffer are carried out. Please read chapter Module configuration at page 37.
60	Factory setting	The Factory setting gets loaded if you press ▼ or ▲ (The heater circuit parameter are not changed)
61	Boiler charging times (Solar)	Press ▲ and you start the boiler charging time from 11:00 to 12:00, press ▼ and you start the boiler charging time from 05:00 to 09:00
62	Cascade address	0.0 = no cascade, 1.0 = Master boiler, 2.0 = Slave boiler 1, 3.0 = Slave boiler 2
63	Cascade parallel operation	0.0 = Cascade serial production (Master boiler circuit pump for all boilers), 1.0 = Cascade parallel operation (One boiler circuit pump for each b.)
64	Cascade test	4.0 = Master and slave start immediately
65	Country specific settings	The data which has to be adjusted gets adjusted by the after-sale-service.
71	Room control HC 1 correction	Adjust the data which is actually measured in the room by the room control for the heating circuit 1.
72	Room control HC 2 correction	Adjust the data which is actually measured in the room by the room control for the heating circuit 2.
73	Room control HC 3 correction	Adjust the data which is actually measured in the room by the room control for the heating circuit 3.
92	Material type displacement	0.0 = automatic material type displacement 1.0 = no material type displacement with „Overfilled burner“
93	Screw rate	Screw rate 150.0 = Standard / 250 = VMax + 20 % screw rate
95	Max temperature	Safety temperature day tank
96	Max temperature suction	Safety temperature day tank
98	Air emergency operation	5.0 = Emergency operation by breakdown of the air quantity sensor

After the exit of the parameter line 59 the parameter data will be reset to default value!

A-6. AGGREGATE TEST

ENTRANCE



Press  and , after 2 seconds press additionally . The display shows [-P.P.-]. After the total 5 seconds you get to the P-Program level.

IF you have pressed the wrong button or did not wait the 2 seconds your display will show [FAIL].

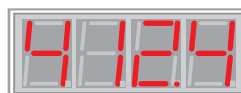
Now press  as long till you get to line 10. Now press  in order to get to the aggregate test.



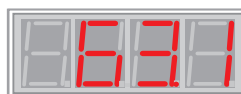
Press  in order to switch the lines in the aggregate test. The lines are analog to the menu (Digital inputs, temperatures, 0-10V Input, Relay output, puffer pump, material screw, suction flue blower, air amount sensor)

TEMPERATURE

[-00.0] means sensor break



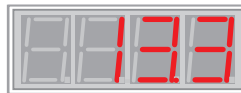
Combustion chamber temperature:
Measured combustion chamber temperature
Performance part X13 2 Pole.



Boiler temperature:
Measured boiler temperature
Performance part X15 2 Pole.



Boiler temperature:
Measured boiler temperature
Performance part X16 2 Pole.



Outside temperature:
Measured outside temperature
Performance part X17 2 Pole.

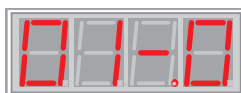
0 - 10 VOLT INPUT



0-10 Volt:
Measured voltage input
Performance part X18 2 Pole.

DIGITAL INPUTS

Data 0 = No digital input
Data 1 = Digital Input



Multi operating drive sensor:
Sensor at the multi operating motor,
Performance part X21 3 Pole.



Bi-metal switcher of the screw channel:
Bi-metal switcher at the transport screw,
Performance part X22 2 Pole.



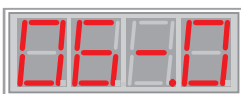
Pellets charging level sensor:
Sensor at the pellets holding tank,
Performance part X23 3 Pole.



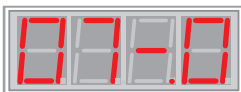
Digital input external contact: (Potential-free)
Contact = Operation, no contact = no operation
Performance part X24 2 Pole.



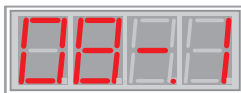
Without operation: Reserve 1
Reserve without operation
Performance part X25 3 Pole.



Without operation: Reserve 2
Reserve without operation
Performance part X26 3 Pole.



Without operation: Reserve 3
Reserve without operation
Performance part X27 3 Pole.



STL:
Safety temperature limiter
Performance part X12 2 Pole.

RELAY OUTPUT

The relay can only switch if the device is switched-off.



Belimo (Rack drive):
With pressure  the relay gets switched
Performance part X4 3 Pole.



Multi operating motor:
Relais kann nicht geschaltet werden
Performance part X5 3 Pole.



Fire starter:
With pressure  the relay gets switched
Performance part X6 3 Pole.



Boiler circuit pump:
With pressure  the relay gets switched
Performance part X7 3 Pole.



Boiler pump:
With pressure  the relay gets switched
Performance part X8 3 Pole.



Suction turbine (Pellets transport):
With pressure  the relay gets switched
Performance part X9 3 Pole.



Storage space screw (Pellets transport):
With pressure  the relay gets switched
Performance part X10 3 Pole.



Potential free contact: (Relay 8)
With pressure  the relay gets switched
Performance part X13 3 Pole.

PUFFER PUMP



Puffer pump: (if existing)

With pressure → relay gets switched
See wiring plan.



Solar pump: (if existing)

With pressure → relay gets switched
See wiring plan.

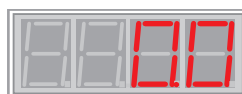
MATERIAL SCREW 24V



Material screw (Holding tank per day - combustion chamber):

With pressure → the screw gets switched 1 time
Performance part X20 4 Pole.

SUCTION FLUE BLOWER



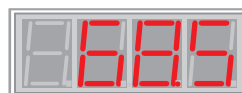
Suction flue blower:

With pressure → rotating speed is risen by 5 points.

With pressure (Me → line 24) the data are recessed.

Performance part X3 3 Pole.

AIR AMOUNT SENSOR



Air amount sensor:

Performance part Connector whit. 5 Pole.

Data when checking:

With an open ash tank and without an ID fan the air amount should be between 13.0 and 18.0.

With a closed ash tank and a running ID fan (Data 225.0) the air amount should be 65.0 minimum.

HEATER CIRCUIT PUMP / MIXER

The relay can be switched during the device is running.



Module place 1 (Pump)

With pressure → the relay gets switched
See wiring plan.



Module place 1 (Mixer OPEN / Solar pump)

With pressure → the relay gets switched
See wiring plan.



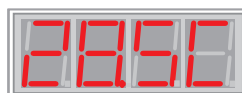
Module place 1 (Mixer CLOSE)

With pressure → the relay gets switched
See wiring plan.



Module place 1 (Supply temperature/Puffer ABOVE)

See wiring plan.



Module place 1 (Puffer temperature BELOW)

See wiring plan.



Module place 2 (Pump)

With pressure → the relay gets switched
See wiring plan.



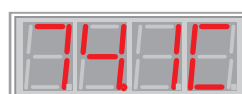
Module place 2 (Mixer OPEN / SolarPmp)

With pressure → the relay gets switched
See wiring plan.



Module place 2 (Mixer CLOSE)

With pressure → the relay gets switched
See wiring plan.



Module place 2 (Supply temperature/Puffer ABOVE)

See wiring plan.



Module place 2 (Puffer temperature BELOW)

See wiring plan.



Module place 3 (Pump)

With pressure → the relay gets switched
See wiring plan.



Module place 3 (Mixer OPEN / Solar pump)

With pressure → the relay gets switched
See wiring plan.



Module place 3 (Mixer CLOSE)

With pressure → the relay gets switched
See wiring plan.



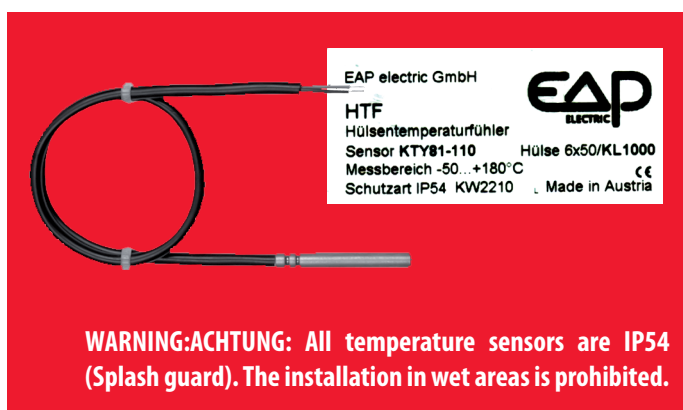
Module place 3 (Supply temperature/Puffer ABOVE)

See wiring plan.



Module place 3 (Puffer temperature BELOW)

See wiring plan.



Please watch out that the boiler tube does not extend into the cross section of the chimney.

It is allowed to use heat resistant sealing material as well as sealing strip or heat resistant silicone only.



WARNING: Please be aware of the regional legal manufacturing specification. Referring to this please contact your master sweep.

For the installation we recommend a specialist. (When self installed, we recommend letting the check and acceptance check done by a specialist) .



FOR THE INSTALLER & THE ELECTRICIAN



INSTALLATION
WIRING
INITIATION

B-1. INSTALLATION OF THE PELLETS BOILER

GENERAL INFORMATION

The device has to be attached to a chimney which is approved to fuel. The chimney has to have an aperture of at least 80 mm.

During the burning the combustion chamber has depression. Through an insufficient chimney flue the smoke gas cleanout could get an over pressure. Therefore it is important to install the flue tube system correctly and air tight.

Avoid using pull-off tubes longer than 2 meters.

Avoid many turnarounds of the flue gas stream of the chimney (e.g. many corners and curves in the flue tube).

It is necessary to build in a cleanout in the flue tube.

Please use our recommended access type in order to achieve the efficiency factor.

In order to avoid a transference of the operating noise from the operating noise of the hydraulic system we recommend a hydraulic connection with a flex arm (at least with 0.5 meter).

EXHAUST SYSTEM / CONNECTION



Implementation!

The flue gas system has to be carried out after the chimney calculation EN 13384. Violation makes you lose your guarantee and warranty and moreover affect your safety and functionality of your device negatively!



Double assignment!

A double assignment is allowable after the EN 13384.

PROCEDURE

1. Measurement and indication of the chimney access
2. Chisel out a hole within a wall (Boring)
3. Sealing of the wall chunk
4. Connection of the pellets boiler with the flue tube to the chimney

Flue limiter: We recommend a flue limiter if you have over 20 pascal chimney flue.

Chimney design: The chimney has to be wetness impartial.

Flue tube connection: The flue tube to the chimney has to be max 3 meter long and has to be at least 10 degree.

Flue tube execution: The exhaust system MUST NOT be **LEAKPROOF** and **ISOLATED**.

SOIL PREDECTION

Assembly space: The fireplace has to be set up on an adequate, fire proofed area. If there is no fire proofed area (Wood, carpet, etc.) one needs a fire proofed basis (Glass, sheet steel, ceramic).

Minimum size of an adequate basis (base plate):

From the combustion chamber opening forward: 15 cm

From the combustion chamber opening to the left and right: 10 cm (each side)

ELECTRICAL CONNECTION

The pellets boiler may only be attached to the 230 Volt electric circuit secured with 16 ampere from an authorised specialist. The average electrical performance amounts during the heating about 7 to 40 watt. During the automatic lighting process (about 5 minutes) it amounts about 250 watt. The connection cable has to be placed in a way that it has no contact with any hot or sharp outer surface of the boiler.

3. HYDRAULIC CONNECTION

Filling and cleanout: The connection for the filling and cleanout of the pellets boiler has to be carried out at the boiler flow.

Hydraulic scheme: The provided hydraulic schemes are only diagrammatic constructions of the control options and have no claim on totality. Be aware of the constructional and local instructions.

Hydraulic filling medium: Water (the ÖNORM H 5195-1 has to be followed)

Return flow increase: Our boilers are constructed in a way that no return flow increases are needed. But you have to be aware of that with external controlling the control of the return flow pump is activated exclusively over the performance part of the pellets boiler. Additionally a hydraulic switch has to be installed.

Air vent: After the filling with the hydraulic liquid the air vent of the pellets boiler is carried out. For this you use a normal heater air-vent key. The boiler air vent valve is located on the front side above the Burner door.

DISTANCES

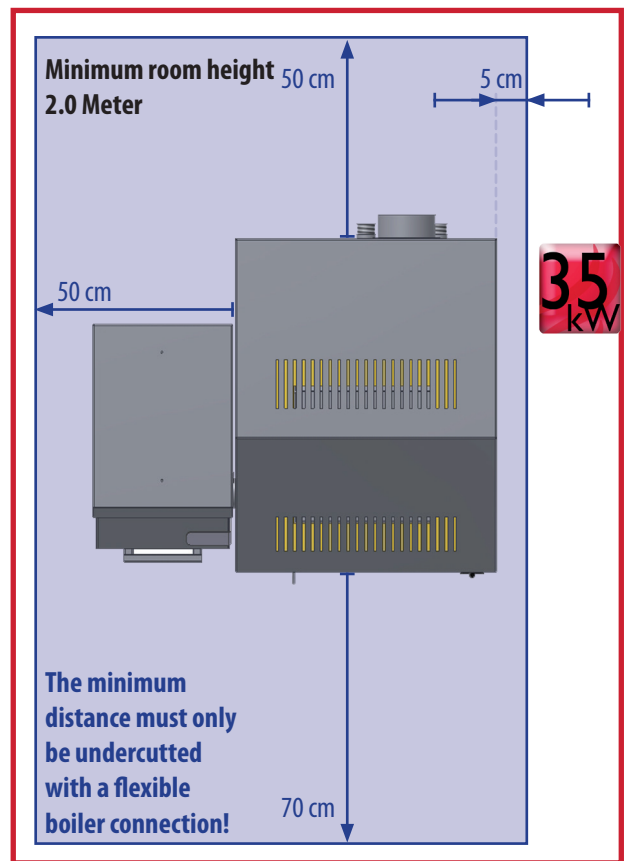
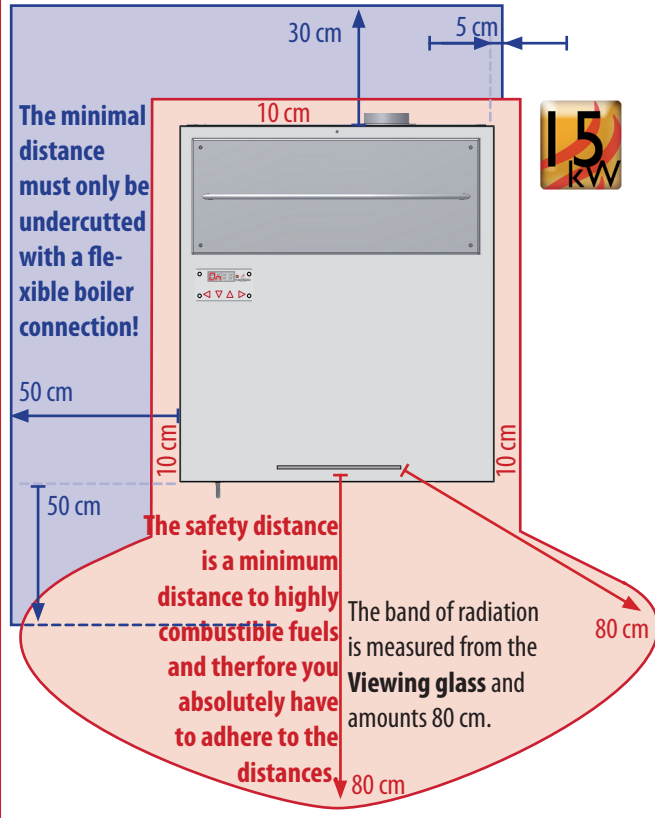
The safety distance is the minimum distance to the easy burning subjects and therefore absolutely important to adhere to it.

In order to carry out the boiler service more easily it is important to adhere to the minimum distances to the left and back side.

SAFETY DISTANCES and MINIMUM DISTANCES of the balance series:

The BLUE area has to be maintained as a min. distance with the installation.

When using a **viewing glass**, you have to adhere to the safety distances to highly combustible objects!



Niche fitting:

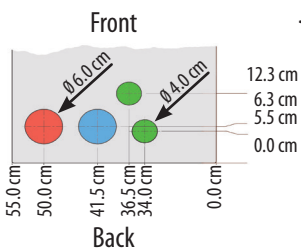
You have to adhere to all safety distances.

The dismantling in case of a service has always to be possible.

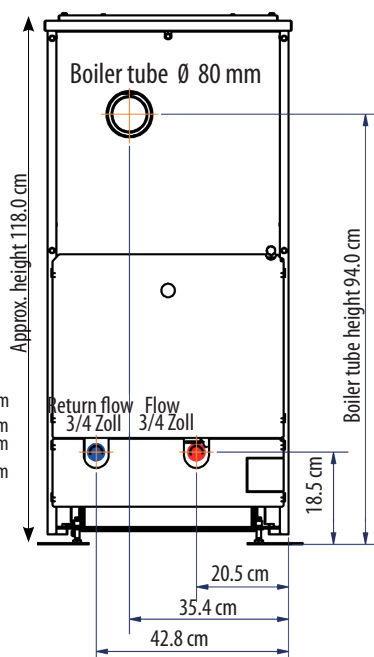


Drill template:

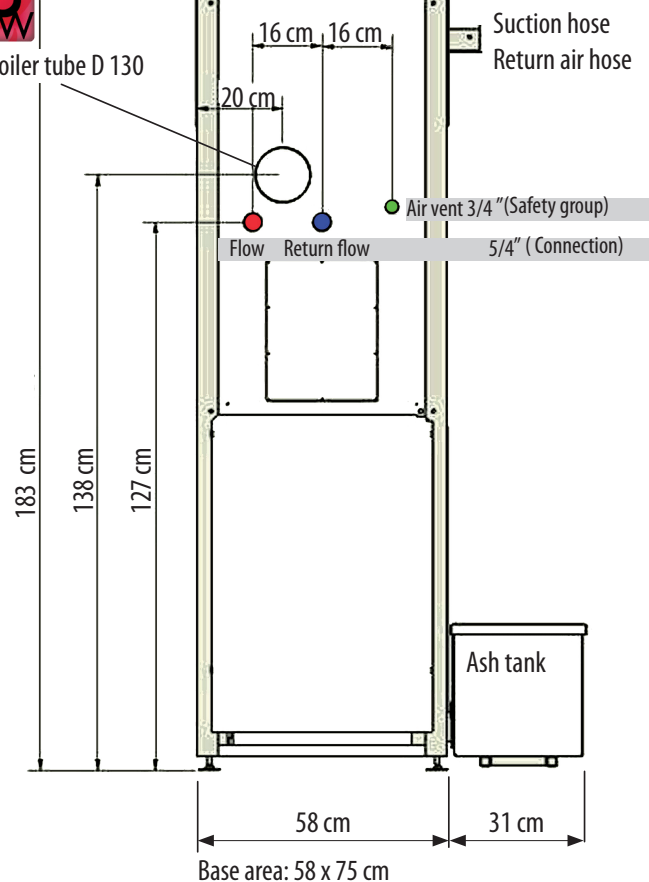
Suction hose,
Return air hose,
Primary air, Secondary air



Base area: 55 x 60 cm



Boiler tube D 130



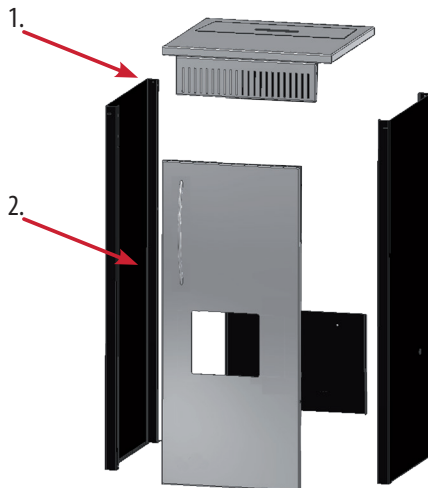
B-2. DEVICE COVERING



WARNING: Only manipulate the device if the pellets boiler is separated from the Power supply.

The casing of the device is pre-assembled.

In order to be able to plug in the power supply or wire the pumps, mixer, sensors and so on you have to remove the right side of the casing.



DISASSEMBLING

In order to remove the side wall you have to remove the screws.

Pull the side wall at the back wall of the boiler.

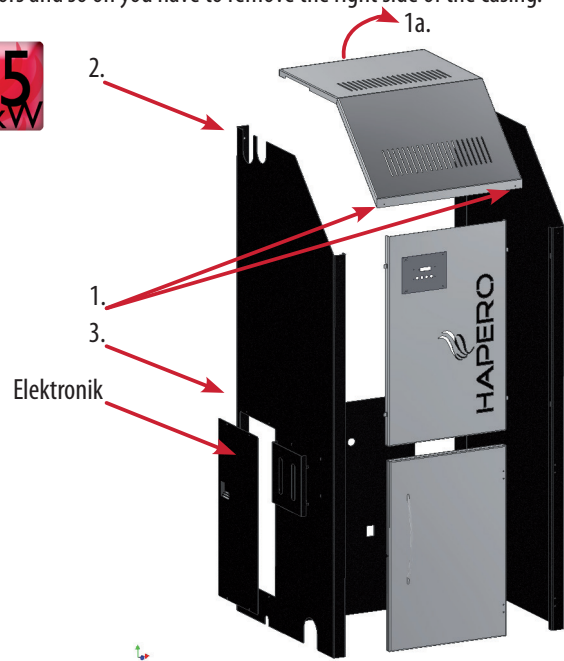
Now you can easily adjust the electrical connection in the inside of the boiler.

Your pellets boiler has to be switched-off and cooled down before you are going to work with it.



The casing of the device is pre-assembled.

In order to be able to plug in the power supply or wire the pumps, mixer, sensors and so on you have to remove the right side of the casing.



ASSEMBLING

Assemble all device parts backwards.

B-3. COMBUSTION AIR

Every combustion process needs oxygen or air. This combustion air is abstracted from the room usually.

Self-sufficient ambient air air-supply:

(Warning, no EN verification after Z-43.11-193)

The pellets boiler can be provided with two separate air hoses with no ambient air.

Warning: With the living room model the top viewing glass cartridge seal.

Air removal from the installation site:

With modern accommodations air cannot stream in enough through tight windows or doors. Additionally extra air vents are a problem (Kitchen or toilet). If you cannot apply external combustion air you should air your room frequently in order to avoid a bad air or an underpressure in the room.

External combustion air supply (Self sufficient air vent)

1. We recommend two equal hoses,
2. Minimum aperture 40 mm,
3. In order to provide enough air vent the air hoses should not be longer than 5 meters and should also be straight. **Both air hoses HAVE TO be of the same length!**
4. If the hose leads out-of-doors it has to end with a downcurve or a wind deflector. If one or more of these terms are not applied the heating performance will be lowered.

Moreover there is the chance that the combustion air can be absorbed from a different room (Basement) in order to get enough air.



Warning: Always close the hoses only at the end of the hoses.

With a higher dust risk (Parquet floor) you should probably get a dust cover.

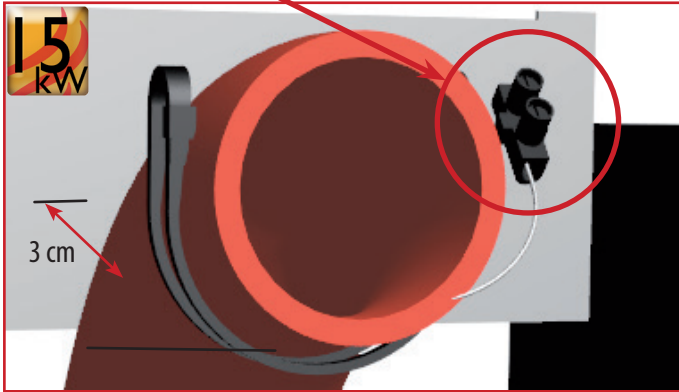


B-4. THE ROOM HOLDING

The holding system has to be constructed according to the instructions of the room holding producer.

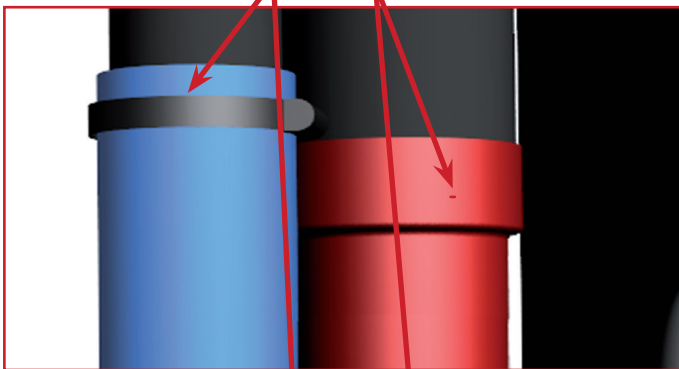
A detailed instruction can be found at page 68.

Please note that the thick walled suction hose gets inserted in the pellets surge tank and therefore you will additionally need about 100 cm more. The thick walled suction hose is moved from below into the insert tube and the pellets daily holding tank (about 3 cm) gets fixed with a binder. The earthing of the hoses has to be connected to the insulating screw joint. Afterwards you pull the rubber sealing over the suction hose.



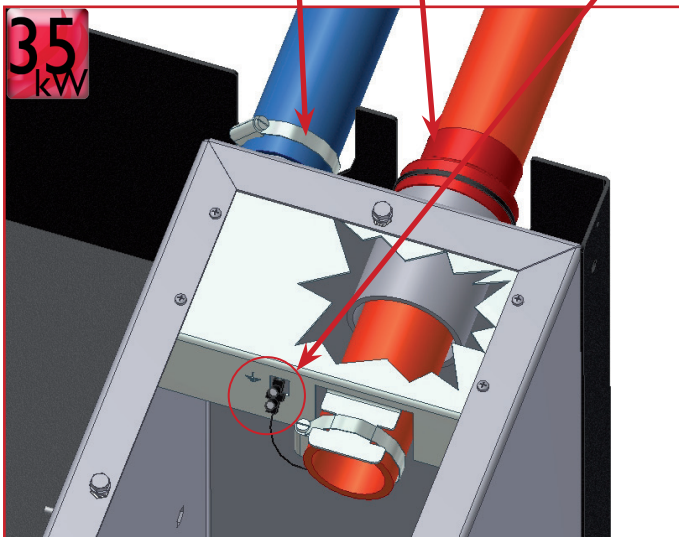
The thin walled return air hose has to be fixed with the hose clip.

Then you have to pull the rubber seal over the suction hose.



The suction and return air hose is inserted sideways and fixed as described above.

The earthing of the hose absolutely has to be connected at the pre-assembled lustre terminal.



The suction turbine is assembled next to the room holding. Please note that the return air hose is attached to the suction turbine. The electrical wiring is layed from the suction turbine to the insulating screw joint over the performance parts.

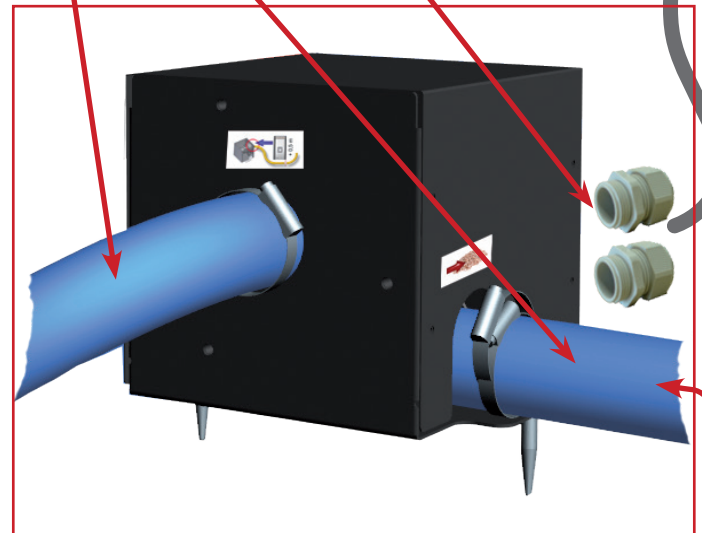
Performance part X 9



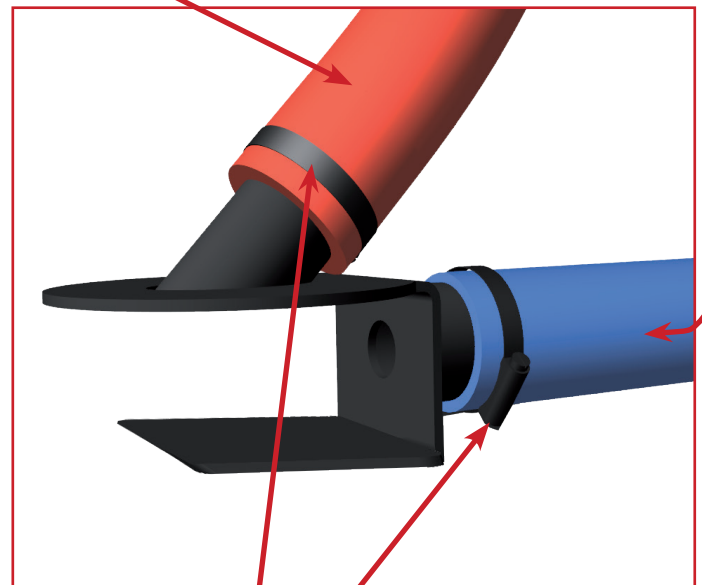
to the boiler (Return air hose)

to the extraction point (Pellets)

Power supply to the boiler (3 x 1,5)



To the boiler (thick walled suction hose)



The hoses have to be fixed with the hose clip.

In order to minimize the impact sound of the suction turbine you should use a rubber base below the suction turbine!



B-5. MODULE CONFIGURATION

An configuration example can be seen on page 38

The instruction for the operation can be found on page 45

0 = No operation or solar module for the boiler

1 = Floor heating

2 = Radiator 55° / 45° C

3 = Radiator 75° / 55° C

4 = Radiator 90° / 70° C

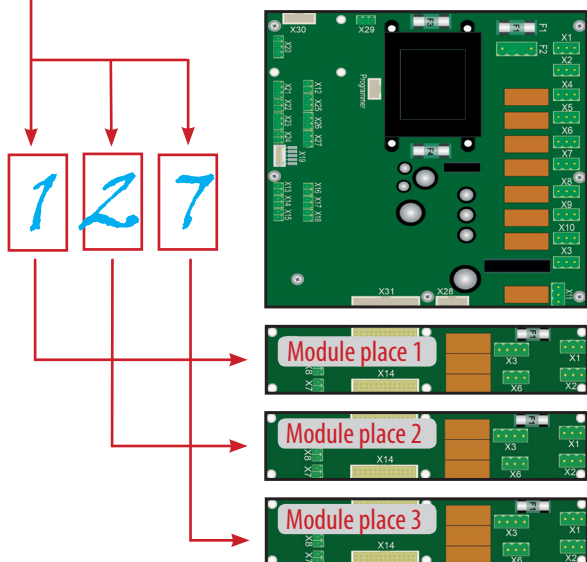
5 = Heat gun

6 = Floor heating

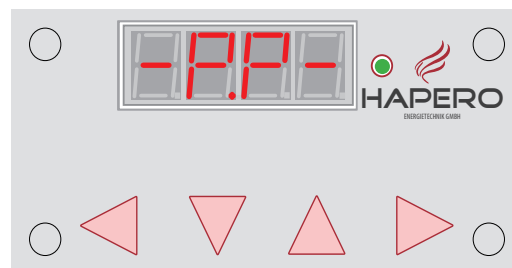
7 = Energy saving puffer

8 = Standard puffer

9 = Performance puffer



ACCESS



Press and for 2 seconds and additionally and the display shows [-P.P-]. After the 5 seconds you get to the P-Program level. If you have pressed a wrong button or did not wait the 2 seconds your display will show [FAIL].

Now press in order to get to line 59. Now press in order to get to the module configuration.



Press and you adjust the allocation to the module place 1.

Press and you adjust the allocation to the module place 2.

Press and you adjust the allocation to the module place 3.

Press in order to get to the data from the selected heater circuit and the puffer.

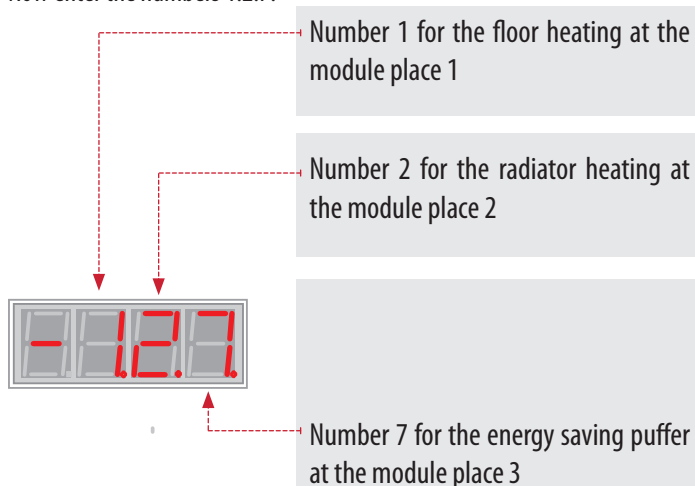
All unnormal adjustments can be changed in the time and energy management menu (Page 19).

CONFIGURATION EXAMPLE

You want to attach 2 heater circuits (Heater circuit 1 is a floor heating and heater circuit 2 are radiators 55° / 45°) and an energy saving puffer. The terminal diagram can be seen in the chapter terminal diagram energy management.

Please go into the parameter menu and navigate to line 59. Press and you get to the module configuration.

Now enter the numbers 1.2.7.



Number 1 for the floor heating at the module place 1

Number 2 for the radiator heating at the module place 2

Number 7 for the energy saving puffer at the module place 3

With an outside temperature from -15° the supply temperature is: 45°, and with an outside temperature +20° the supply temperature is: 20°. Conform temperature is 22°, the savings temperature 20°, with 1° room temperature the supply temperature changes by 2° Celsius.

With an outside temperature from -15° the supply temperature is: 55°, and with an outside temperature +20° the supply temperature is: 30°. Conform temperature is 22°, the savings temperature 20°, with 1° room temperature the supply temperature changes by 4° Celsius.

Example 1: (Puffer switch-on temperature)

The heater circuit needs due to the outside temperature of 43° C a supply temperature (+ 5° C Safety) therefore the switch-on temperature is (43° + 5° =) 48° degree.

Example 2: (Puffer switch-on temperature)

The heater circuit needs due to the outside temperature of 23,5° C a supply temperature (+ 5° C Safety) therefore the switch-on temperature is 30° C, as the puffer switch-on temperature is higher than the calculated switch-on temperature (23,5° + 5° = 28,5°).

Press and the following settings are carried out.

B-6. ELECTRICAL CONNECTION

The feed cable has to be carried out by a specialist after VDE-guidelines with a 3 x 2,5² cable.

Due to the static charge during the pellets transport you have to check the earthing before the operation.

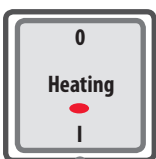
The usage of A classified energy saving pumps is allowed and even recommended.

The power supply has to have a breaker on site.

The supply line has to be carried out through a binder.

Electrical connection

230 V / 16 A



Cable channel
Cable channel

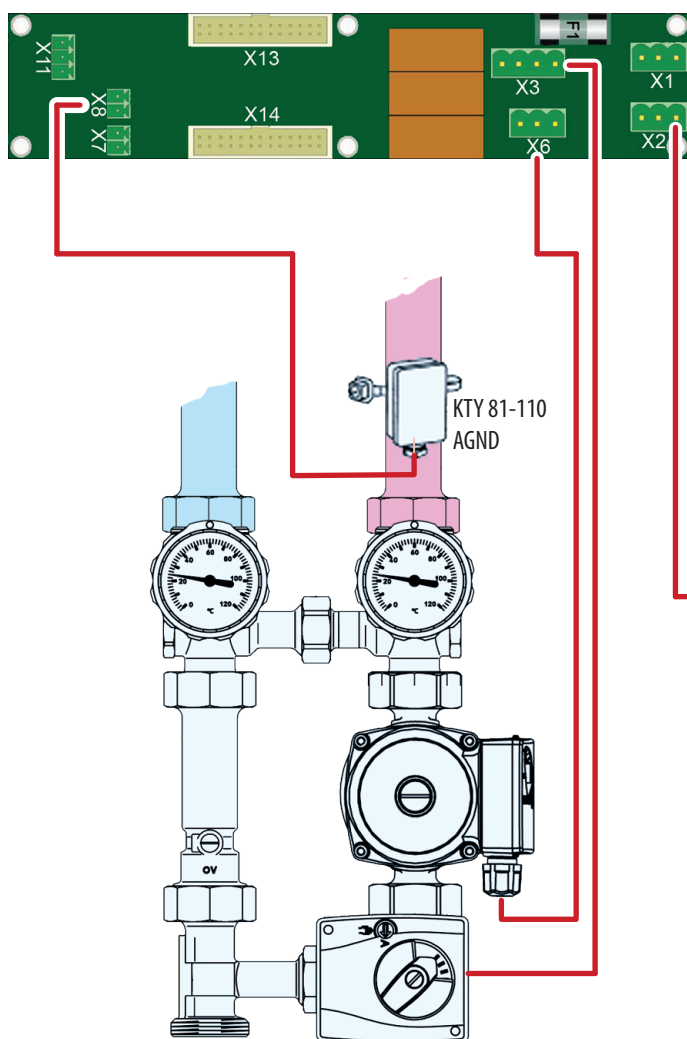
Pull relief through a binder

Boiler earthing

ADHERE the stick direction!

B-7. TERMINAL DIAGRAM ENERGY MANAGEMENT

HEATER CIRCUIT



In order to install the expansion band on the module affix it over the 4 drilling screws directly under the performance part. With the enclosed ribbon cable you connect the performance test with the expansion band. The power supply (X 1) can be used from the performance part (X 2).

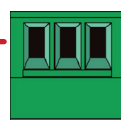


X 11 (Room controller 3-Conductor) (in the room controller)

KTY 81-110
AGND

X 8 (Flow lead)

Protective earth
Neutral line
Phase (L)



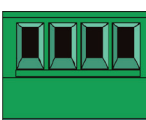
**X 1 / X 2
(Power supply)**

Protective earth
Neutral line
Phase (L) Heater circuit pump



**X 6
(Heater circuit pump)**

Protective earth
Neutral line
Phase (L) Mixer OPEN
Phase (L) Mixer CLOSE

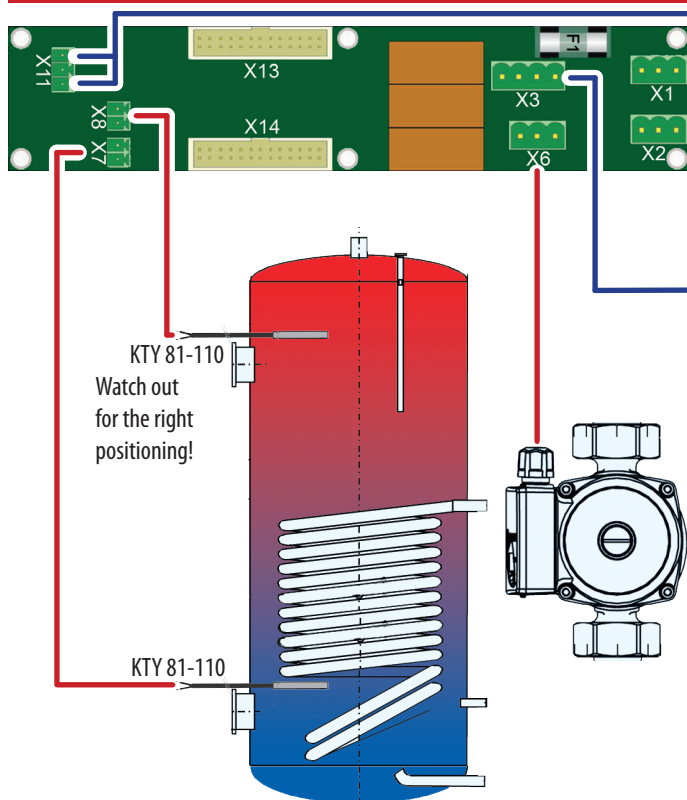


**X 3
(Mixer group)**

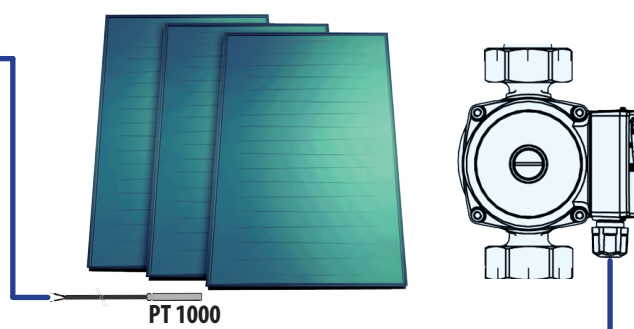
WARNING MORTAL DANGER!

The electrical wiring or manipulation of the device electronics may **ONLY** be carried out by a authorized specialist under the adherence to the national safety regulations!
Violation makes you lose your guarantee and warranty and moreover affect your safety and functionality of your device negatively!

PUFFER / SOLAR OPERATION (BOILER)



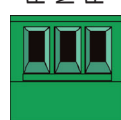
SOLAR PUFFER



KTY 81-110
AGND

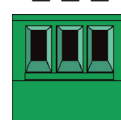
**X 8 (Puffer sensor TOP)
X 7 (Puffer sensor BELOW)**

Protective earth
Neutral line
Phase (L)



**X 1 / X 2
(Power supply)**

Protective earth
Neutral line
Phase (L) Puffer pump



**X 6
(Puffer pump)**

PT 1000
(free)
AGND

X 11 (Solar sensor)

Protective earth
Neutral line
Phase (L) Solar pump 1
Phase (L) Solar pump 2



**X 3
(Solar pump)**

WARNING!

The plug from the performance part and the plug from the expansion band are all wired the same, but the plug direction from the performance part is 180° turned to the expansion band!
Note the symbol!



EXTERNAL PERFORMANCE 0 - 10 V

When exceeding the tension from 2.0 volt the boiler gets started, when undercutting the tension from 1.9 Volt the boiler gets switched-off (from 8.0 Volt the boiler has 80° C). The energy management remains active (Heater circuit, Boiler and Puffer). The boiler circuit pump is not switched if the boiler is standby.

X 18 (External Performance 0-10V) 0 to +10 Volt AGND

EXTERNAL CONTACT

With a bypassed plug (Standard) the boiler is ready, when there is a break the boiler gets switched-off. The energy management still remains active (Heater circuit, Boiler and Puffer). The boiler circuit pump is not switched during the waiting mode.

X 24 (External Contact)

GSM MODULE

When installing the GSM module please follow the instructions in the by-pack kit.

X 25 (GSM)

OUTSIDE TEMPERATURE

Without using the energy management a sensor break from the outside temperature sensor the boiler actual temperature is the adjusted data of the P-Menu line 14.

With the energy management a sensor break the outside temperature sensor is the adopted outside temperature of -10° degree (Emergency operation).

X 17 (Outside temperature KTY 81.110)

BOILER

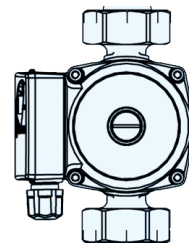
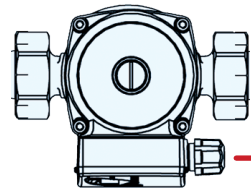
X 16 (Boiler sensor) KTY 81-110 AGND

The access of the boiler pump and the boiler temperature sensor is located at the performance part. The boiler activates automatically as soon as the boiler temperature sensor is connected to the performance part.

BOILER CIRCUIT PUMP

The access of the boiler circuit pump is located at the performance part.

X 7 (Boiler circuit pump)

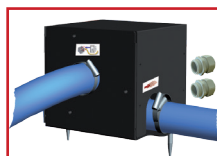


X 8 (Boiler pump)

Phase (L) Pump
Neutral line
Protective earth

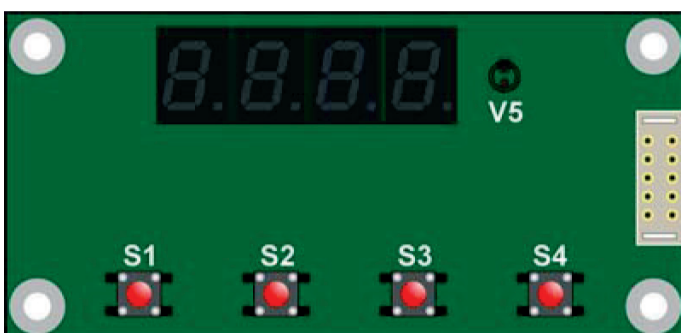
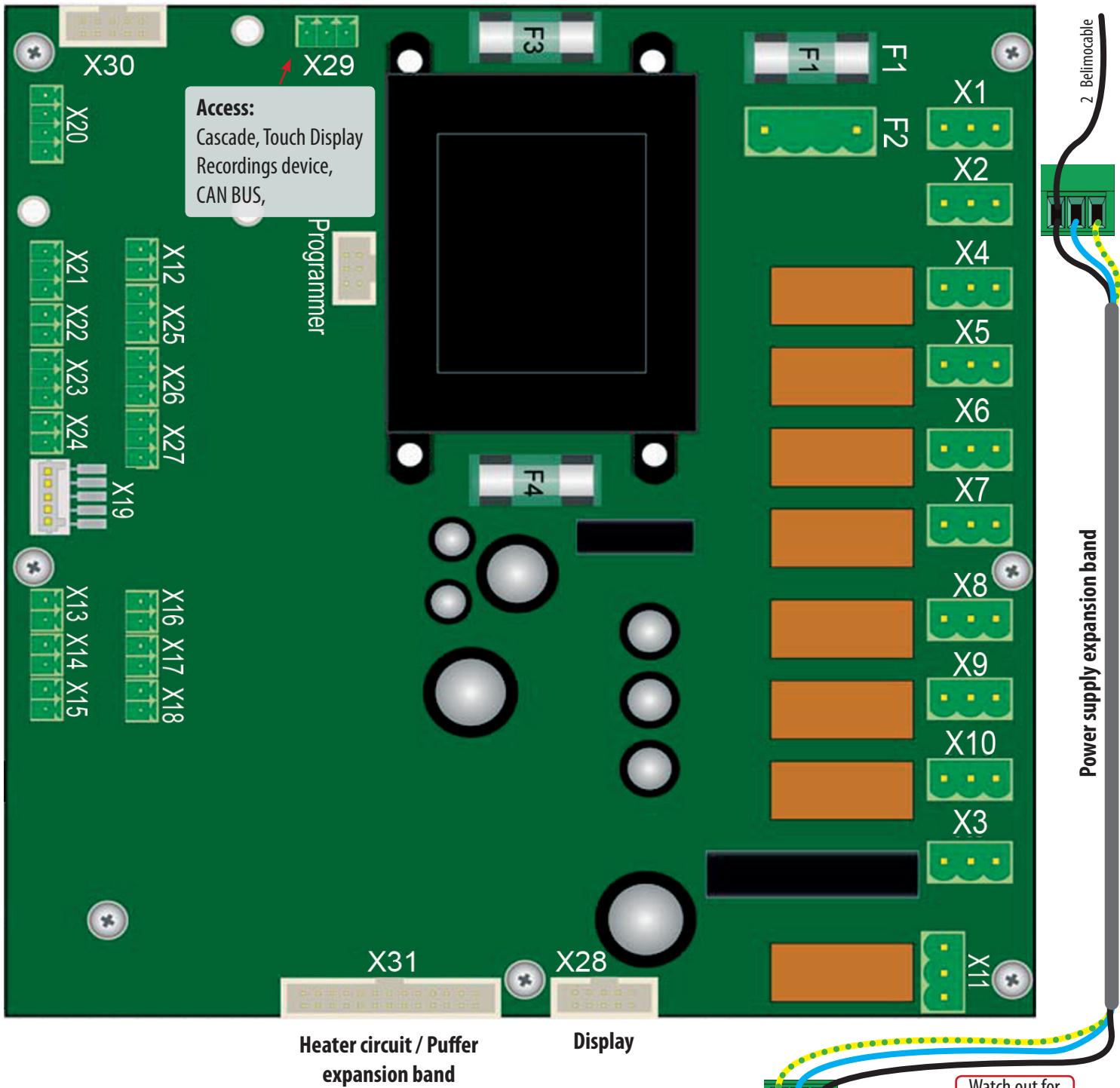
SUCTION TURBINE

The suction turbine is connected on the performance part bearer with the insulation screw joint.

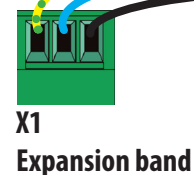


Der Motor der Austragungsschnecke wird am Stecker X 10 angeschlossen.

B-8. TERMINAL DIAGRAM PERFORMANCE PART



Display plate is connected to the performance part plug X28 with the ribbon cable.



WARNING:

Do not carry out the wiring under supply voltage!
Only if the whole wiring has been carried out the access plug X1 (Network assignment 230 V AC) may be plugged in.
Violation makes you lose your guarantee and warranty and moreover affect your safety and functionality of your device negatively!

X29 CAN - BUS			
Pin	Signal	Function	
1	+5	CAN_A-Signal	
2	+5	CAN_B-Signal	
3	GND	Ground-Supply	

X 1 Power supply			
Pin	Signal	Function	
1	L	Power supply	
2	N	Neutral line	
3	PE	Protective earth	

X20 Screw engine			
Pin	Signal	Function	
1	A+	Engine cable A +	
2	A-	Engine cable A -	
3	B+	Engine cable B +	
4	B-	Engine cable B -	

X 2 Supply Expansion band			
Pin	Signal	Function	
1	L	Supply expansion band	
2	N	Neutral line	
3	PE	Protective earth	

X12 STB			
Pin	Signal	Function	
1	+24	Supply +24 V DC	
2	+24	+24 V über STB geschaltet	



X21 Multi functional engine			
Pin	Signal	Function	
1	+24	Supply +24 V DC	
2	DI 1	Access 1: MultiFunctionsm.	
3	GND	GND	

X 4 Rust cleaning engine			
Pin	Signal	Function	
1	L	Relaisausgang Rostmotor	
2	N	Neutral line	
3	PE	Protective earth	

X22 Bi-metal switcher			
Pin	Signal	Function	
1	+24	Supply +24 V DC	
2	DI 2	Access 2: Bimetall Schnecke	

X 5 Multi functional engine			
Pin	Signal	Function	
1	L	Relay exit multi functional eng.	
2	N	Neutral line	
3	PE	Protective earth	

X23 Filling sensor			
Pin	Signal	Function	
1	+24	Supply +24 V DC	
2	DI 3	Access 3: Füllstandsensor	
3	GND	GND	

X 6 Fire starter			
Pin	Signal	Function	
1	L	Relay exit fire starter	
2	N	Neutral line	
3	PE	Protective earth	

X24 External Contact			
Pin	Signal	Function	
1	+24	Supply +24 V DC	
2	DI 4	Access 4: External Contact	

X 7 Boiler circuit pump			
Pin	Signal	Function	
1	L	Relay exit boiler circuit pump	
2	N	Neutral line	
3	PE	Protective earth	

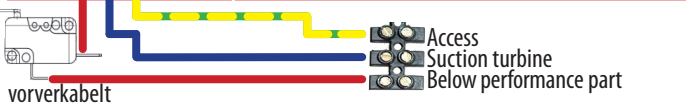
X25 GSM Requirement			
Pin	Signal	Function	
1	+24	Supply +24 V DC	
2	DI 5	Access 5: GSM Modul	
3	GND	GND	

X 8 Boiler Pump			
Pin	Signal	Function	
1	L	Relay exit boiler pump	
2	N	Neutral line	
3	PE	Protective earth	

X19 Air amount sensor			
Pin	Signal	Function	
1	PWM	PWM Air amount sensor	
2	GND	GND	
3	AI 7	Analog access AI7	
4	GND	GND	
5	+24 V	+24 V-Supply	

X 9 Suction turbine (Safety switch)			
Pin	Signal	Function	
1	L	Relay exit suction turbine	
2	N	Neutral line	
3	PE	Protective earth	

X13 Combustion chamber sensor			
Pin	Signal	Function	
1	AI 1-	Analog access NiCr-Ni (K-Typ)	
2	AI 1+	Analog access NiCr-Ni (K-Typ)	



X14/X15 Daily holding tank & boiler temp.			
Pin	Signal	Function	
1	AI3	Analog access KTY81-110	
2	AGND	AGND	

X 10 Storage room screw			
Pin	Signal	Function	
1	L	Relay exit holding screw	
2	N	Neutral line	
3	PE	Protective earth	

X16/X17 Boiler- and Outside temperature			
Pin	Signal	Function	
1	AI4	Analog access KTY81-110	
2	AGND	AGND	

X 3 Induced draught blower			
Pin	Signal	Function	
1	L	Phase - Induced draught	
2	N	Neutral line	
3	PE	Protective earth	

X18 External Performances pre setting 0-10V			
Pin	Signal	Function	
1	AI6	Analog tension 0 ... +10 V	
2	AGND	AGND	

X 11 Relay 8 (potential free Contact)			
Pin	Signal	Function	
1	NC	Normally closed (Opener)	
2	C	Common (Root)	
3	NO	Normally Open (Closer)	

B-9. SAFETY CHANGE

A safety change may only be carried out only by specialists and plugged out 230 V AC-Supply!

Please follow the actual safety regulations and instructions!

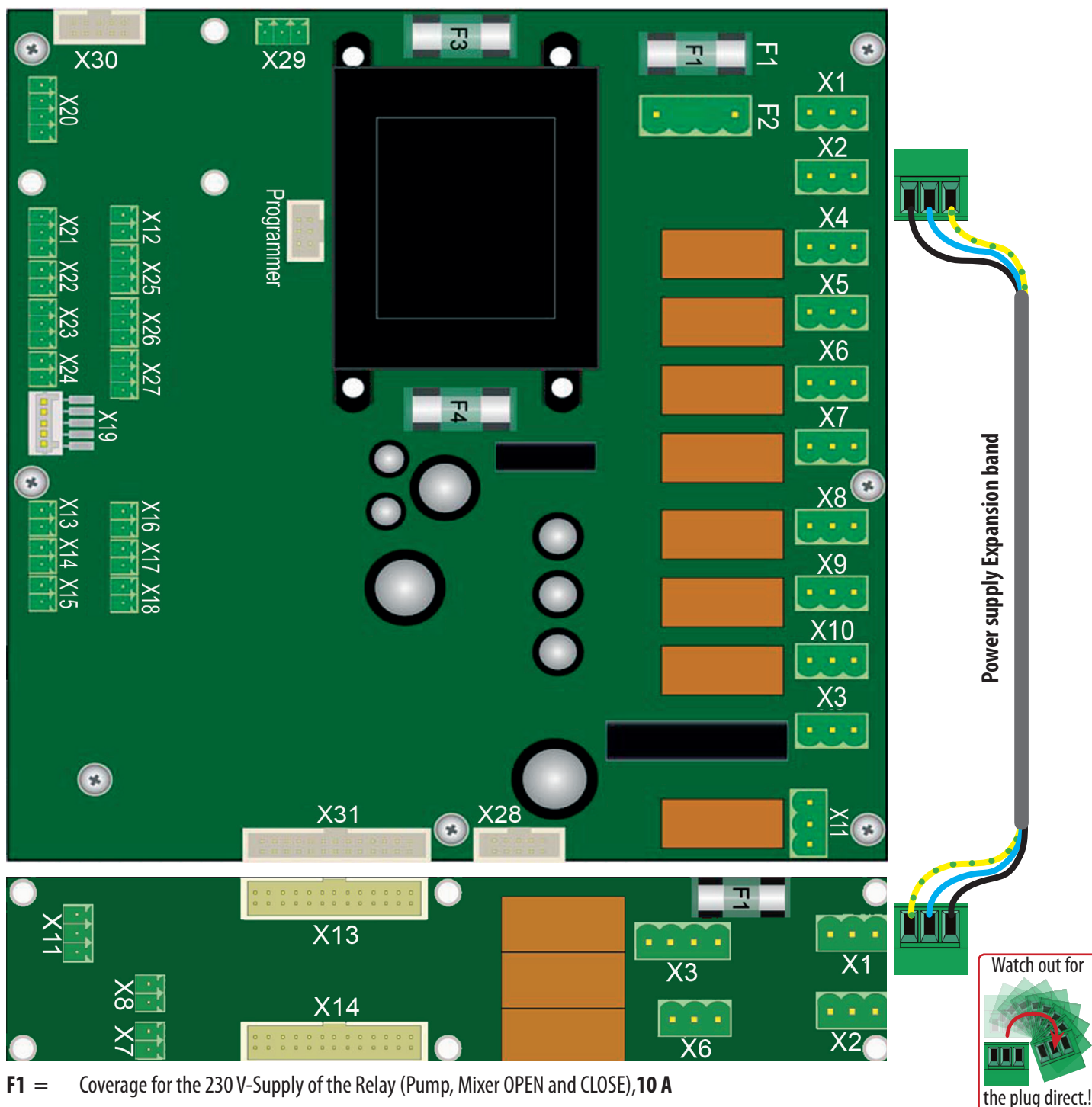
The mains supply for the electronic system as well as all 230 V AC- Electric system are secured with microfuse. Please note the following diagram if you are going to resecure the device:

F1 = Coverage for the 230 V-Supply of the Relay (Suction turbine, Screw engine holding), **10 A**

F2 = Coverage for the 230 V-Supply of the Relay (Cleaning engine burner, Multi functional engine, Fire starter, Return flow pump, Boiler pump) and induced draught blower, **10 A**

F3 = Coverage for the primary side (Electricity access to Trafo) (**230 V AC**), **250 mA**

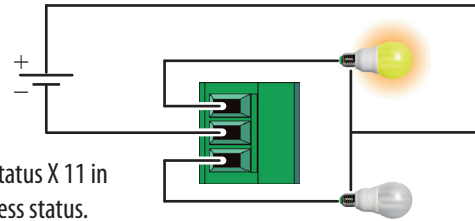
F4 = Coverage for the secondary side (24 Volt Interval of the performance parts) (**18 V AC**), **2,5 A**



B-10. RELAY 8 CONFIGURATION

OPERATION

The Relay 8 is a potential free Contact (16 A). Dependend on the adjustment of the parameter (line 50) in the parameter menu (Description see page 27) the operating mode is differently. The different modes are described below.



Switching status X 11 in the electroless status.

FAULT INDICATION

Set value: 0.0

The relay 8 switches if there is NO failure.

If there is a failure or the boiler gets disconnected from the mains supply the Relay 8 deactivates.

Set value: 1.0

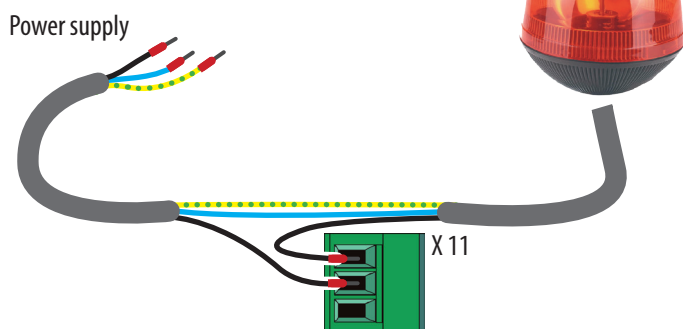
The relay 8 switches if there is NO failure.

If there is a failure then the relay 8 switches-on for three seconds and off for one second.

Set value: 2.0

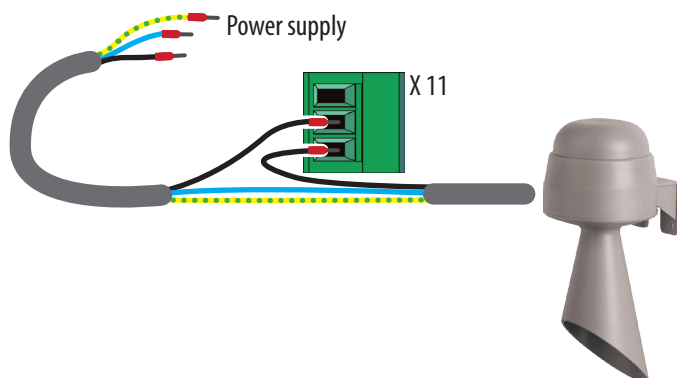
The relay 8 switches if there is NO failure.

IF there is a failure then the relay deactivates for one second.
für eine Second ab.



Set value: 4.0 (Monitoring daily holding tank)

The relay 8 switches only if the temperature of the daily holding tank exceeds 80° Celsius or if the temperature drifting is too high or the screw saftey switcher is released.



PROGRAMMFUNKTIONEN

Set value: 10.0 (Industrial water circulation pump)

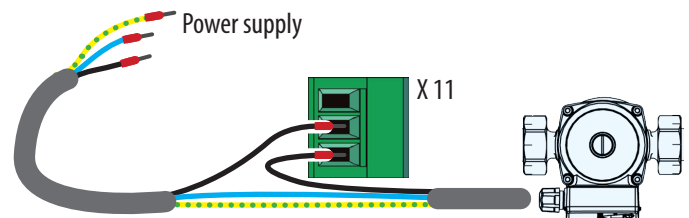
Within a certain time frame the relay 8 clocks after the adjusted switch- and dwell times.

When activating this function there will be more settings to take in hand.

In the parameter menu (Page 27) the switching time at line 51 has to be entered in seconds and the dwell time at line 52 in minutes.

In the time and energy management menu (Page 19) under the point E. 09 the time frame has to be adjusted if the function is active.

Additionally: If the access X 27 gets pushed the relay 8 switches for the duration of the switching time (Line 51).



Set value: 13.0 (GSM Module Conrad GX106)

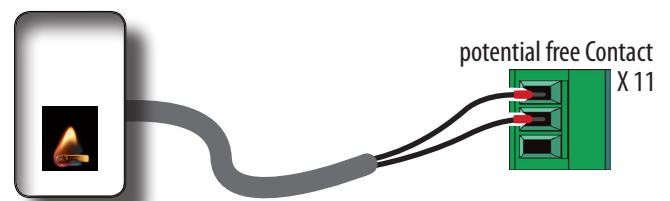
The exact description and wiring can be seen in the enclosed GSM-Module instruction sheet.

Set value: 15.0 (Peak load backup)

If during the „heating“ the minimum temperature has not been reached, the relay 8 switches after a certain waiting time.

When activating this function there will be more setting to take in hand.

In the paramter menu (Page 27) the waiting time at line 52 has to be entered in minutes. As long as the boiler temperature is below the minimum temperature the relay 8 gets closed after the adjusted time. If the boiler temperature falls below the minimum temperature again (Boiler actual temperature - 10° Celsius) the relay 8 gets opened.



B-11. INITIAL OPERATION

1. SITE

Flexible connection: If you have planned to connect the boiler to the hydraulic or the chimney with flexible hoses and chimney modules and you do not want to have the minimum safety distances, at least choose a site where it is possible to move the boiler for service reasons.

Fix connection: Please stick to the minimum distance of 30 cm from the boiler back wall, 5 cm minimum distance of the right side wall and 50 cm of the left side wall. The minimum distance above the boiler should be big enough in order to be able to read the display and work with it.

2. ACCESS OF THE CHIMNEY

Flue limiter: We recommend that you build in a flue limiter when your chimney flue is over 20 pascal.

Chimney construction: The chimney has to be carried out self-sufficient wetness.

Access of the flue tube: The flue tube for the chimney has to be max 3 meters long and has to have at least a 10 degree incline.

Flue tube construction: The exhaust system must not be LEAKPROOF or ISOLATED.

3. HYDRAULIC ACCESS

Hydraulic plans: Our provided hydraulic plans are schematically diagrams of the control possibilities. Please be aware of the local and structural instructions.

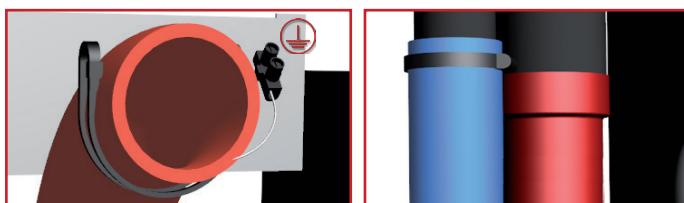
Hydraulic-Fill-medium: Water (Adhere to the ÖNORM H 5195-1)

Return flow increase: Our boilers are designed in a way that there is no need for a return flow increase. But please note that with external controlling the control of the return flow pump is controlled EXCLUDEVLY from the performance part of the pellets boiler. You have to install a HYDRAULIC SWITCH (Boiler circuit - Heater circuit).

Air vent: After the filling of the hydraulic the air vent of the pellets boiler has to be carried out. For this use a usual air vent cleaning key. The boiler air-vent-valve is at the front side above the burner room door.

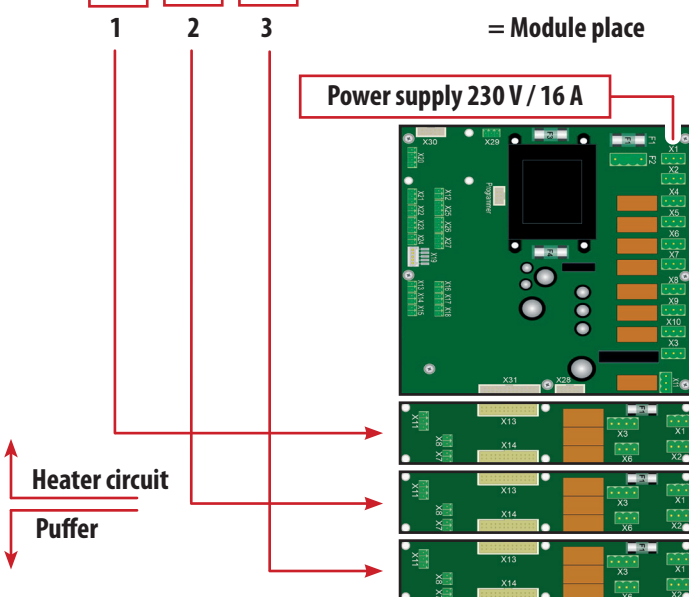
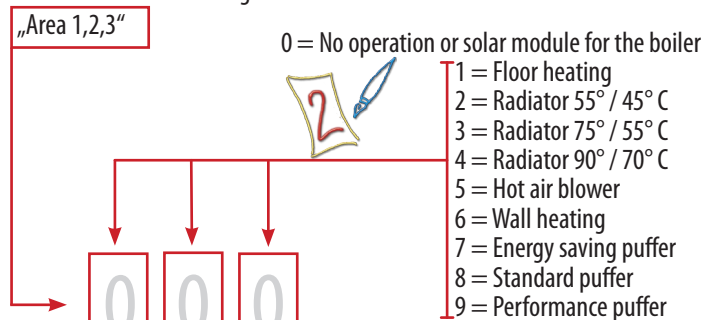
4. ROOM HOLDING

The holding system has to be set up exactly under the directions of the holdings producer. The thick walled suction hose is inserted in the lower insertion tube and gets fixed with a cable clip at the top of the pellets daily holding tank. The earthing of the hoses has to be connected at the pre-assembled insulation screw joint. Afterwards you have to pull the rubber seal over the suction hose. The thin walled return air hose has to be attached with the hose clip at the return air tube, see page 36.

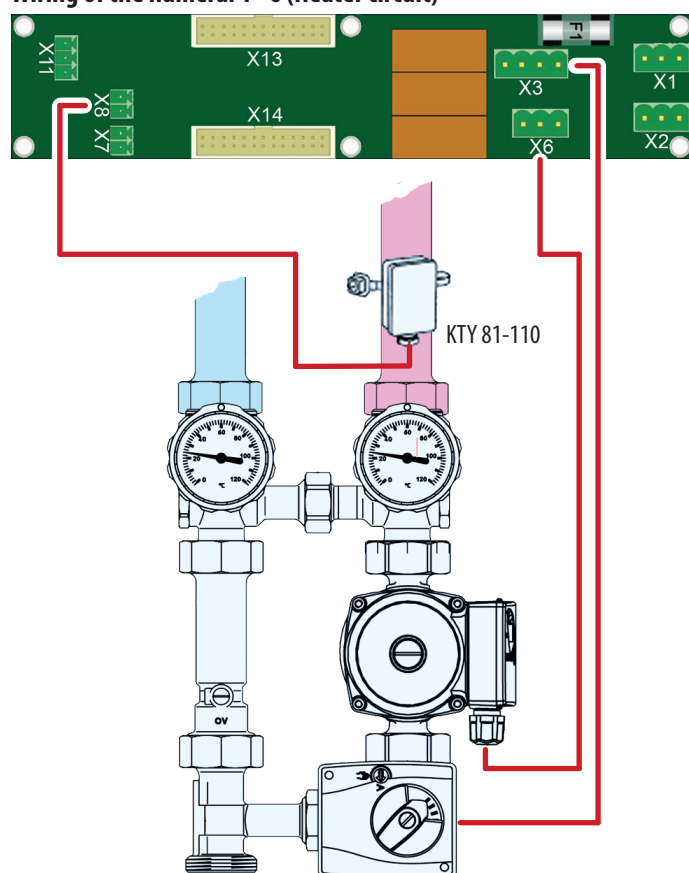


5. ELECTRICAL WIRING

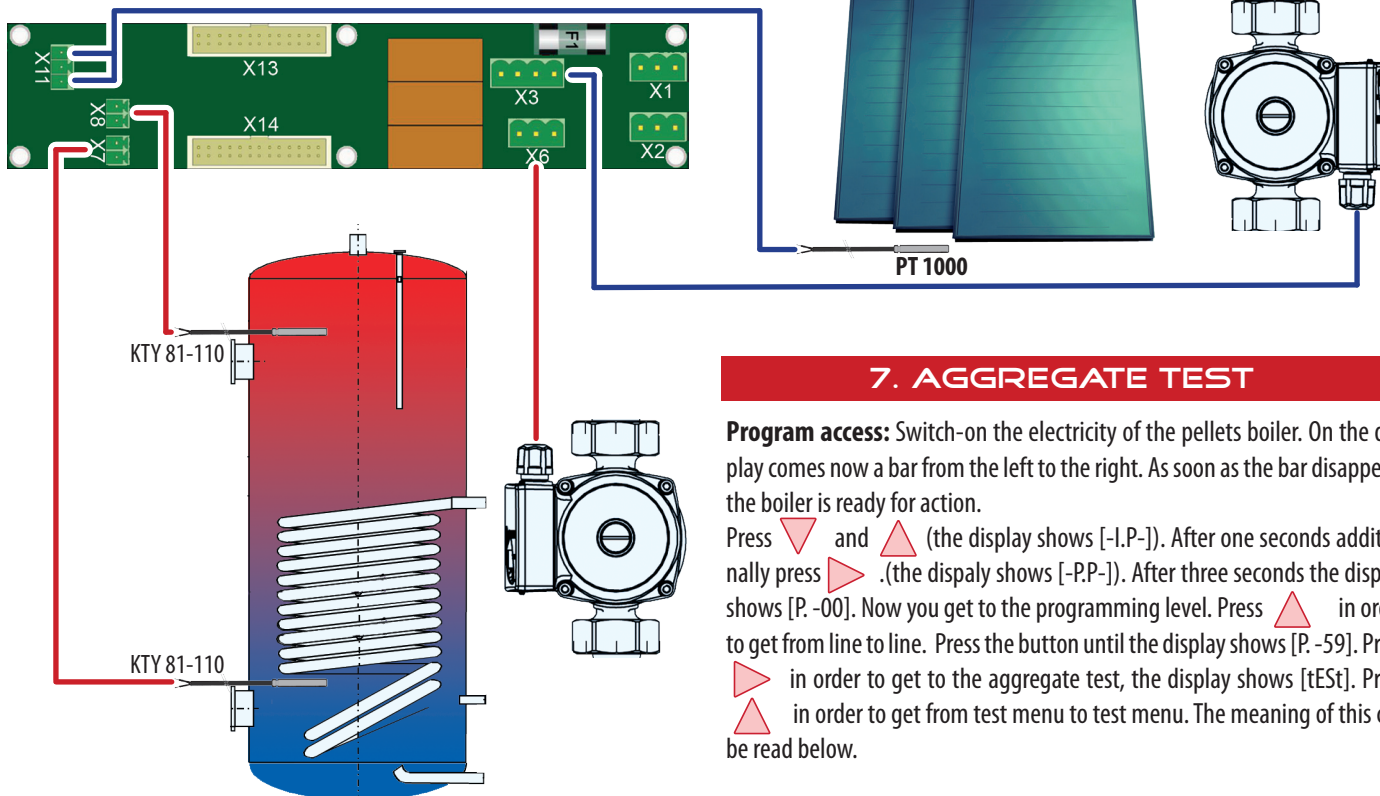
Preperation: In order to find the right wiring method for your connected devices fill in the following



Wiring of the numeral 1 - 6 (Heater circuit)



Wiring of the numerals 7 - 9 (Puffer)



7. AGGREGATE TEST

Program access: Switch-on the electricity of the pellets boiler. On the display comes now a bar from the left to the right. As soon as the bar disappears the boiler is ready for action.

Press ▼ and ▲ (the display shows [-I.P-]). After one seconds additionally press ► (the display shows [-P.P-]). After three seconds the display shows [P.-00]. Now you get to the programming level. Press ▲ in order to get from line to line. Press the button until the display shows [P.-59]. Press ► in order to get to the aggregate test, the display shows [tEst]. Press ▲ in order to get from test menu to test menu. The meaning of this can be read below.

Ausführender: Die elektrische Verkabelung darf ausschließlich von einem konzessionierten Elekrounternehmen durchgeführt werden.

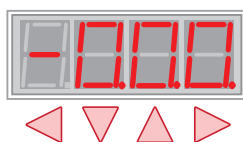
Anschlusspläne: Die genauen Steckerbelegungen und alle weiteren Anschlusspläne finden Sie in der Aufstell- und Bedienungsanleitung auf Page 39.

6. PROGRAMMING

Plug & Fire: In order to make the programming as easy as possible we have made you the „areas 1,2,3“ and we have found all the needed data for the energy management.

Programming access: Switch-on the the electricity of the pellets boiler. The display shows a bar moving from the left to the right. When the bar disappears the boiler is ready to go.

Press ▼ and ▲ (the display shows [-I.P-]). After one second press ► (the display shows [-P.P-]). After 3 seconds the display shows [P.-00]. Now you get to the programming level. Press ▲ in order to get from line to line. Press the button until the display shows [P.-59]. Press ► in order to get to the energy manager menu. The display shows.



Please enter the filled in numbers in the „areas 1,2,3“.

Close the programming through pressing ◀ 2 times. See page 38.

Check the transmission path of the room controller as explained on page 66.

Line nr.	Plug	Description	0 = OFF / 1 = ON
1	X 21	Multi functional sensor	Sensor at the engine motor
2	X 22	Screw temperature	Always ON
3	X 23	Pellets filling status	Sensor in the pellets tank
4	X 24	External Contact	Standard = ON
5	X 25	Reserve 1	
6	X 26	Reserve 2	
7	X 27	Reserve 3	
8	X 12	STB Cognition	Always ON
9	X 13	Combustion chamber temperature	can also be 0.0 sON
10	X 15	Boiler temperature	
11	X 16	Boiler temperature	
12	X 17	Outside temperature	
13	X 18	External temperature requirement (0 - 10 V)	
14	X 4	Rust engine (Belimo)	Press (1= OPEN / 0= CLOSE)
15	X 5	Multi functional engine	No Switch operation (only display)
16	X 6	Fire starter	Press ► (1=ON / 0= OFF)
17	X 7	Boiler circuit pump	Press ► (1=ON / 0= OFF)
18	X 8	Boiler pump	Press ► (1=ON / 0= OFF)
19	X 9	Suction turbine	Press ► (1=ON / 0= OFF)
20	X 10	Storage room screw	Press ► (1=ON / 0= OFF)
21	X 11	Potential free Contact	Press ► (1=ON / 0= OFF)
22		Puffer pump	Press ► (1=ON / 0= OFF)
23		Solar pump	Press ► (1=ON / 0= OFF)
24	X 20	Material screw	Press ► (1=ON / 0= OFF)
25	X 3	Induced draught blower (from 60.0)	Press ► (+ 5)
26		Air amount sensor	With the induced draught blower Data 120.0 should be bigger than Data größer 60.0 sON.

For further information see page 29.

8. ON (TEST RUN)

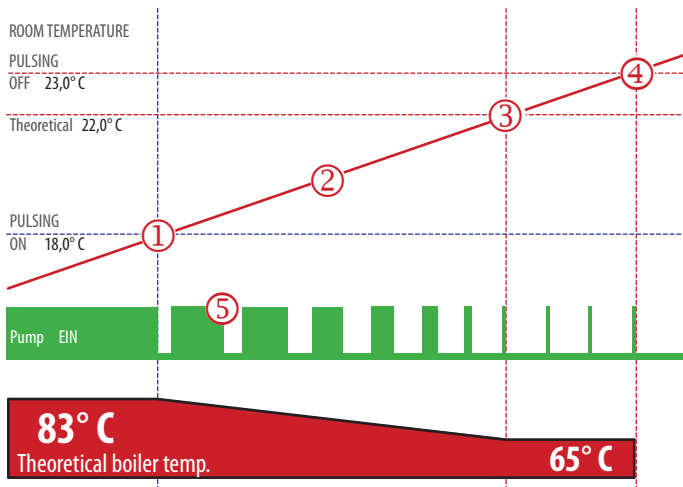
After the switch-on of the boiler (3 seconds ►) the boiler starts with the cleaning. If there is no room holding attached mask the top of the pellets sensor in the pellets boiler with an aluminum adhesive tape. In order to see the heating requirements press ▼ for at least 3 seconds, then the requirement temperature is shown (see page 11). If there stands 0.0, then pull out the two puffer sensors from the puffer during the puffer operation, during heating operation the outside temperature plug X 17 (-10.0° C), or press ► and ▲ for 3 seconds (Chimney sweep function).

OPERATION DESCRIPTION

Plug & Easys is perfect for the use of hydraulic diagrams WITHOUT mixer-groups. Through the special pulsing of the heater circuit pump you can save electricity and purchasing and installation is far more convenient. Due to his control-logic you do not have to adjust anything. The water throughput through the heater system as well as the boiler temperature are dependent on the measured room temperature.

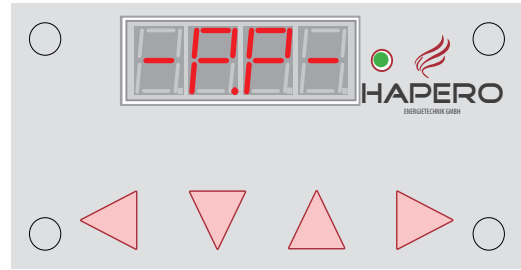
Plug & Easy is immediately ready to go and for all-purpose.

FUNCTIONSPRINZIP



- ① Room temperature below theoretical room temperature - 4°C, the heater circuit pump is switched permanently.
- ② Switch interval between theoretical room temperature - 4°C and THEORETICAL room temperature.
- ③ Adjusted THEORETICAL temperature
- ④ Switch-off temperature = THEORETICAL room temperature + 1°C
- ⑤ Pump pulse

OPERATION ACTIVATION



Press simultaneously and and after 2 seconds additionally . The display shows [-P.P-]. After the 5 seconds you get to the P-Program level.

If you have pressed the wrong button or did not wait the 2 seconds your display shows [FAIL].

Now press as long until you get to the line 57. Now press in order to activate the Plug & Easy Function.

0.0 = Plug & Easy is not active

1.0 = Plug & Easy is active

In order to save the adjusted data, press twice.

Plug & Easy with PUFFER:

Go to the P.P Program as described before.

Now press as long until you get to line 59. Now press .



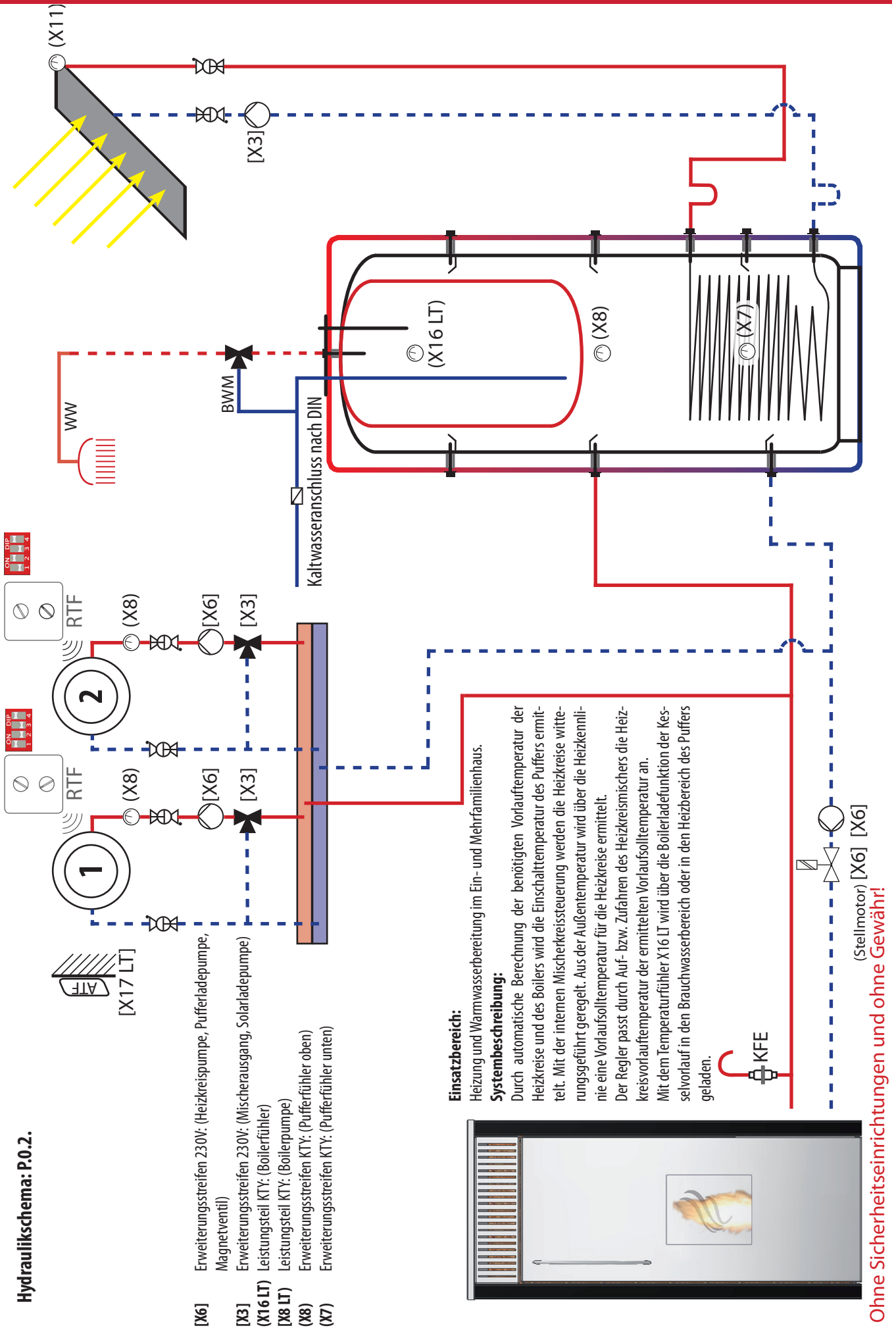
Press in order to adjust the heater circuit type which needs the highest temperature.

- 1 = Floor heating
- 2 = Radiator 55° / 45° C
- 3 = Radiator 75° / 55° C
- 4 = Radiator 90° / 70° C

The area 2 and 3 (described with 0) have to remain 0.

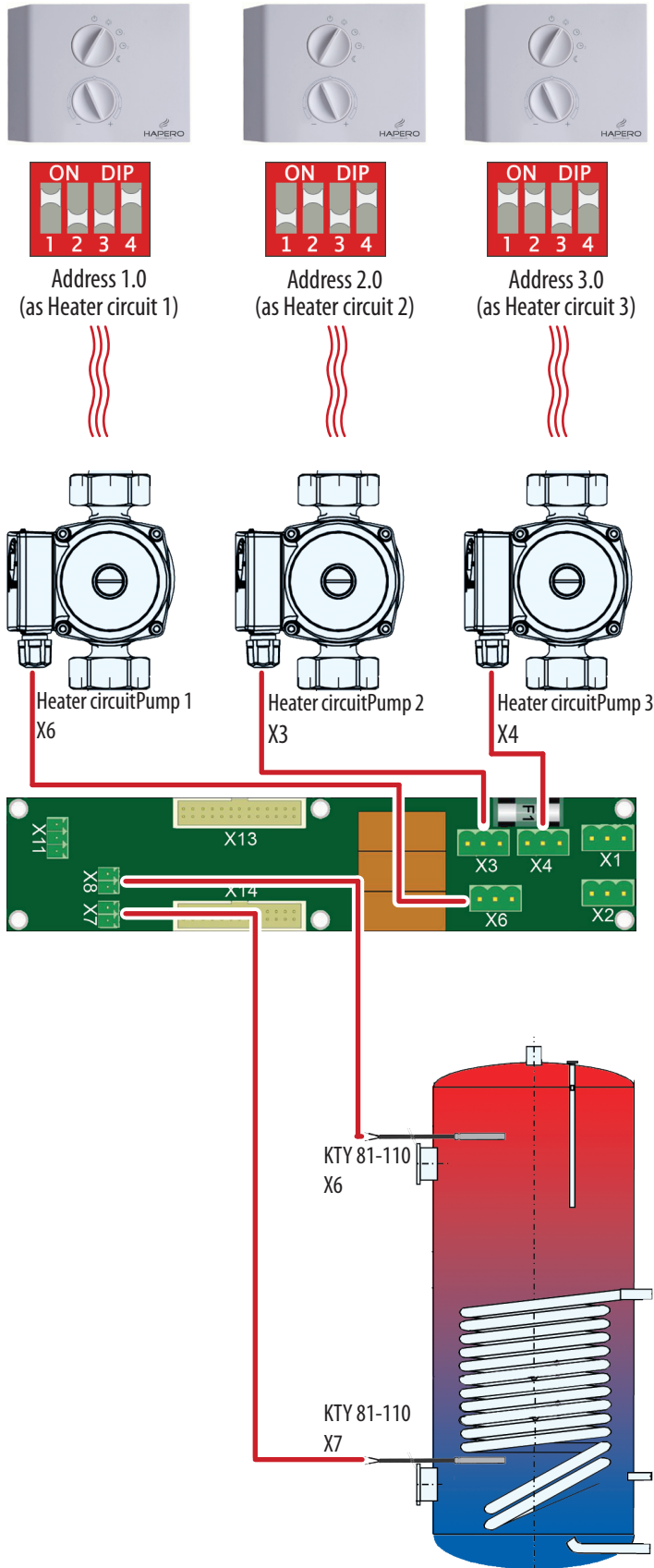
In order to save the adjusted data, press twice.

Hydraulikschemata: P.0.2.

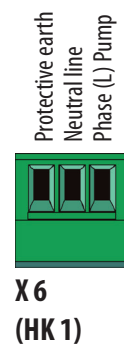
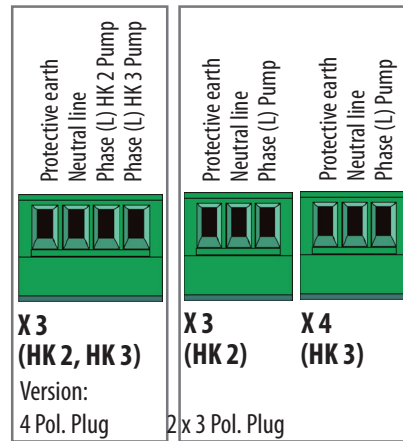
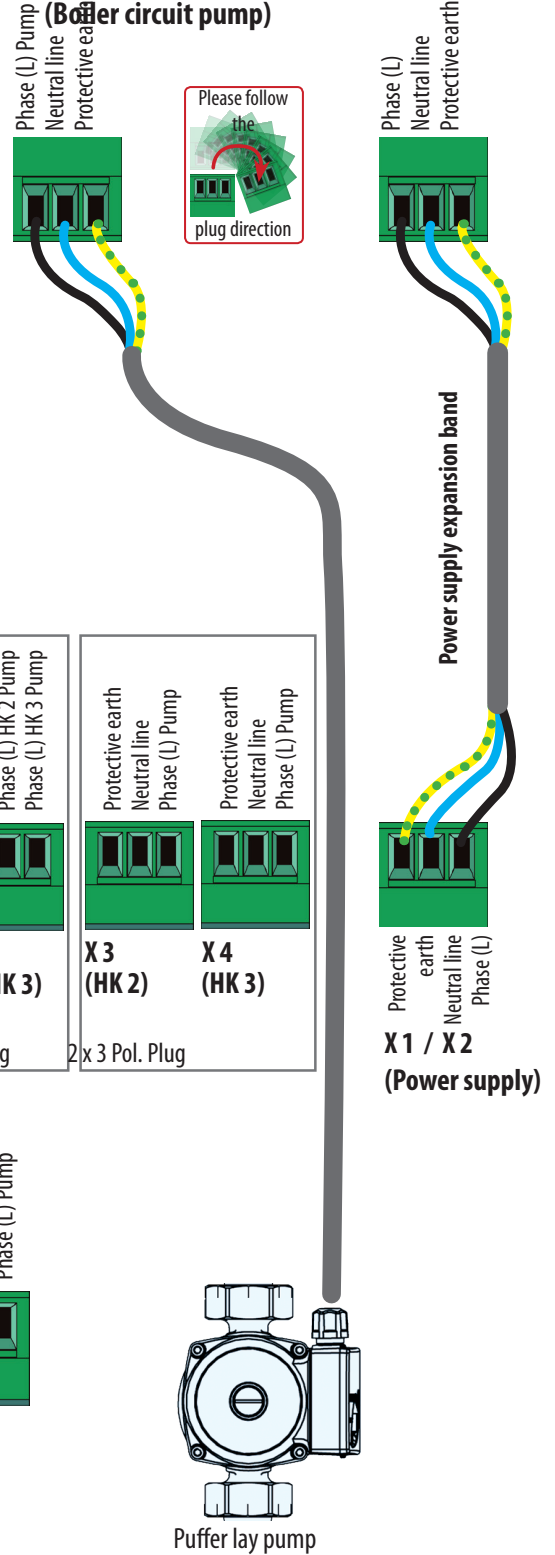


Ohne Sicherheitseinrichtungen und ohne Gewähr!

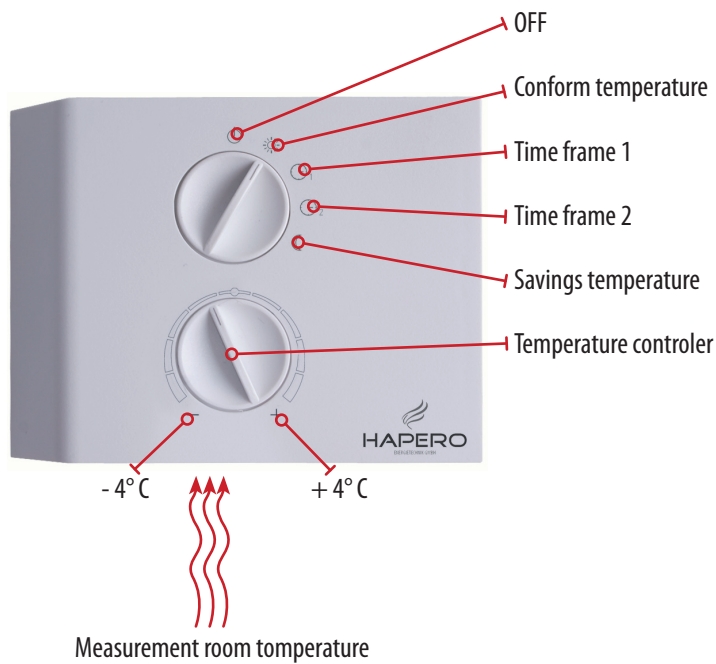
PLUG & EASY WIRING PLAN



Performance part X7 (Boiler circuit pump)



ADJUSTMENT POSSIBILITIES



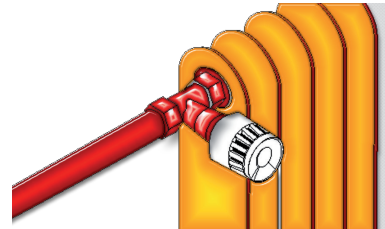
As soon as the boiler is switched-on the cable free control function takes over. Through the selection switch you can switch the boiler on or off. As soon as it is switched-on the boiler regulates the temperature to the conform temperature or the savings temperature. The function of the time frame fully maintains fully within the Plug & Easy. Through the temperature control the room temperature can be increased or decreased.

Please note, that the measured room temperature for the operation from the Plug & Easy is crucial. The room controller **MUST NOT** be installed next to the heat source.

HYDRAULIC ADJUSTMENT

Every heater in your object is bounded one after another in the heater circuit. Conditional on the short pump operating time of the heater circuit pump it can happen, that only the heater which is the closest to the heater circuit pump gets warm water. In order to prevent this effect turn every heater valves to its minimal aperture (hydraulic adjustment).

The achievement is that every heater is tempered the same, even with low pump operating time. The general adjustment of the heater to the room temperature happens automatically.



Turn the heater valve as long as all heaters have the wished temperature. The general adjustment of the heaters to the room temperature happens automatically.

FOR THE CUSTOMER
SERVICE
&
THE INSTALLER



BOILER CLEANING
BOILER MAINTENANCE

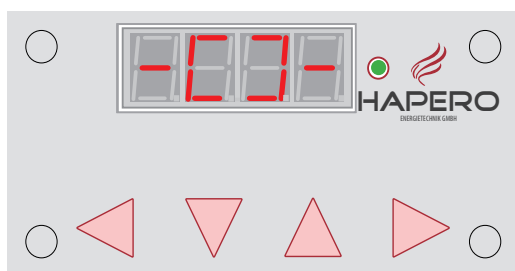
C-1. CLEANING OF THE BOILER

When cleaning our products there is absolutely no need for any tools. The cleaning can also be carried out by the operator.

Please note that you only do the cleaning if the boiler is switched-off and in standby mode.

Always start the cleaning process with the viewing glass exchange.

INTRODUCTIONEINSTIEG



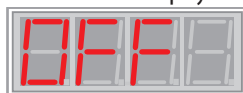
Press  and  for 3 seconds.

If the boiler is **switched-on**, the display shows



for 3 seconds.

After 3 seconds the display shows



or



Please wait as long (max 30 minutes) till the display shows you the release for the ash removal function. (next step).



Press  and  for 3 seconds.



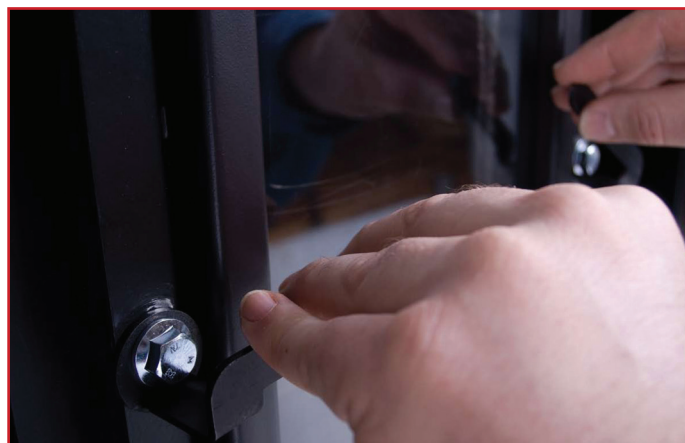
after
3 seconds



The blower runs now for 2 minutes and the ash tank is free for the exchange.

VIEWING GLASS EXCHANGE

During the display shows -[]- the induced draught blower runs with max performance. The viewing glass can still be very hot. Please check the temperature before the exchange and use if necessary safety gloves. It is possible to start the progress a little bit later.



Release the quick clamp by turning the bar bottom-up. This process has always to be carried out at the viewing glass side.



Pull the viewing glass slowly upwards, the remaining dust gets sucked inside. Now you can clean the viewing glass.

Cleaning by hand:

The cleaning of the viewing glass can be carried out with a customary oven cleaner and a soft cloth. Avoid using scouring agents and definite objects in order to not make any scratches in the viewing glass.

Mechanical cleaning:

You can clean the viewing glass in your dishwasher, we recommend a spare viewing glass (Order number 9501). Please position the viewing glass in a way that no definite object can damage the glass during the cleaning. In order to re-assemble the viewing glass please follow the the whole process in reverse order.

ASH REMOVAL

The removal of the ash has to be carried out at max. 1,000 kg pellets. Switch-off the boiler and carry out the operation changing the viewing glass. Please note that even after a few days the ash in the tank can still be very hot. NEVER do the ash removal WITHOUT safety gloves.

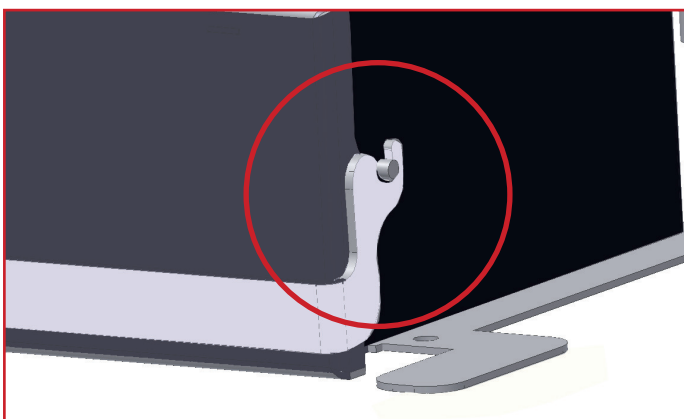


Only if the display shows -[]- the ash tank can be pulled out of the boiler. For this you have to turn the bar bottom-up and pull the ash tank out of the boiler.

Please note that even after a few days there can still be hot ash in the tank. Store the ash temporarily in a fire-proof metal bucket. The ash is a natural product and can easily be thrown away on a compost.



If the ash tank is empty move the tank back into the boiler and turn the bar down.



Make yourself sure that the adjustment pilot entry is in the right position, as shown in the picture, and the bar is turned down.

WARNING!

Always use safety gloves when using the hot parts of the boiler. Glowing ash can still lie in the ash tank after days.

After the viewing glass cleaning and the ash tank removal you have put them back right after the cleaning. The boiler has to be separated from the mains supply (Main switch or switch in the fuse block) The pellets boiler can also start the configuration when switched-off (Safety function, boiler filling, etc.)

WARNING!

The ash can still be hot, therefore you may only throw away the ash in special adequate boxes.

BOX PARTS

When cleaning the box parts only use a soft cloth. When scratches come up please contact an authorized specialist.

C-2. BOILER MAINTENANCE

CHECKUP ONCE A YEAR

We recommend to let your boiler be checked once a year before the heating season by a specialist.

1. Checkup of the flue tube on the leak-tightness and on accumulation of fly ash
2. Checkup on the leak-tightness of the viewing glass and the combustion burner door
3. Checkup on the leak-tightness of the ash tank
4. Checkup on accumulations on the burner butterfly valve
5. Checkup on abrasion of the burner and burner rust
6. Checkup on functionality of the pellets burner butterfly valve
7. Cleaning of the air vent sensor
8. Checkup on functionality of every electrical component
9. Checkup on functionality of the STL (Safety temperature limiter)

CHECKUP OF THE FLUE TUBE

Do a sight check on the flue tube and remove the fly ash from the flue tube. If existent, do a checkup on functionality and free movement of the chimney flue limiter.

COMBUSTION CHAMBER VENT CATRIDGE SEAL

Living room model: Check the silicone catridge seal of the viewing glass on scratches and hardening. If necessary, change the catridge seal.

Basement model: Check the catridge seal of the combustion chamber door on scratches and hardening. If necessary, change the catridge seal.

CATRIDGE SEAL ASH TANK

Check the rubber piping of the ash tank on hardening or pollution. If necessary, change the catridge seal.

BURNER BUTTERFLY VALVE

Start the cleaning of the burner butterfly valve from the ash tank vent. Check the spring balancer of the butterfly valve. If necessary, change the spring or make it stronger.



The burner butterfly valve can be cleaned with for example „3M Scotch-Bride“ in order to remove all fouling.

WARNING!

Always use safety gloves if you are going to touch hot parts of the boiler.

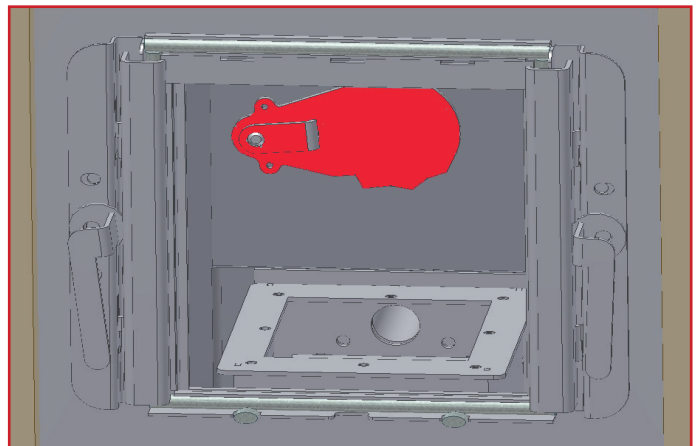
The ash in the ash tank can still be hot even after some days.

The operation of the viewing glass exchange has to be carried out in order to put the multi functional mechanics in the right position. After you separate the boiler from the mains supply. The pellets boiler can also start if switched-off if the configuration is right.



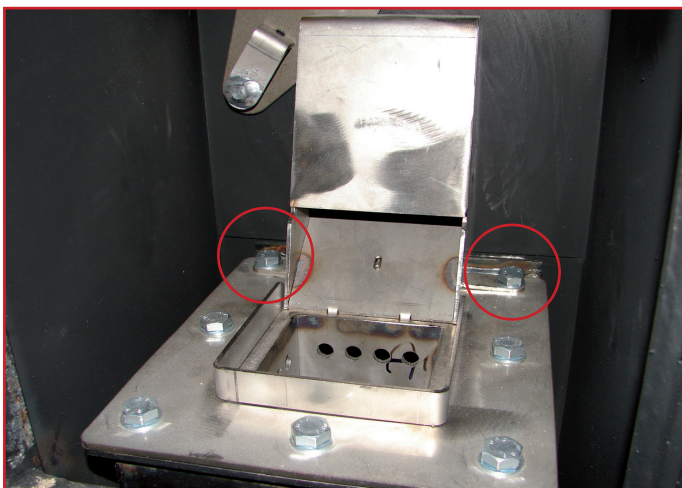
Through these control springs the burner butterfly valve gets pressed to the bottom part of the burner. Wrong catridge sealing lowers the performance and creates a boiler mistake message, see chapter error code.

PELLETS BURNER BUTTERFLY VALVE

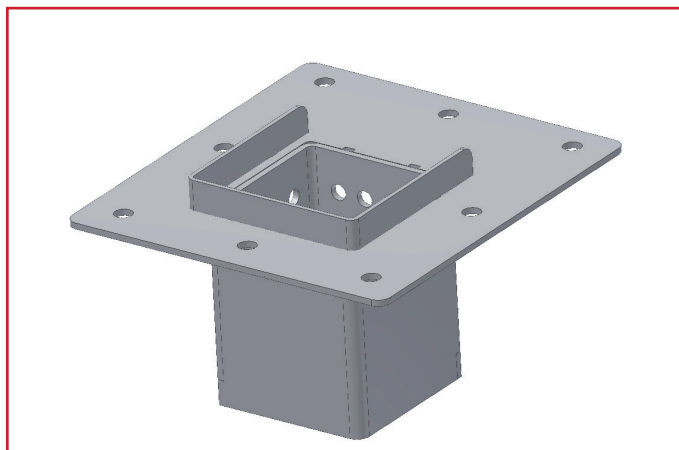


Do the sight check of the pellets burner butterfly valve. The butterfly valve has to touch the burner back wall.

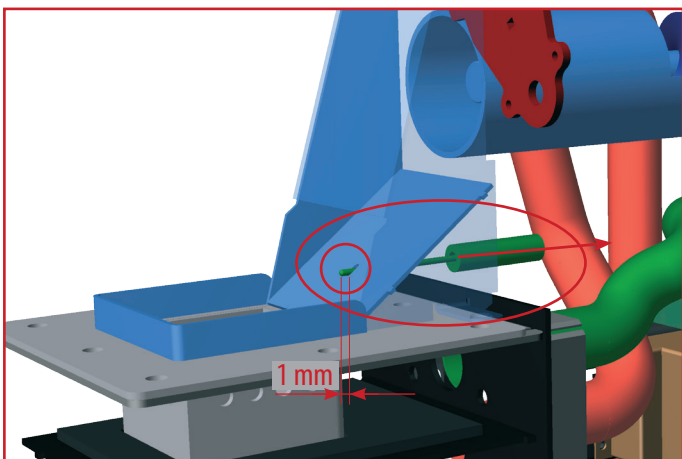
BURNER AND BURNER RUST



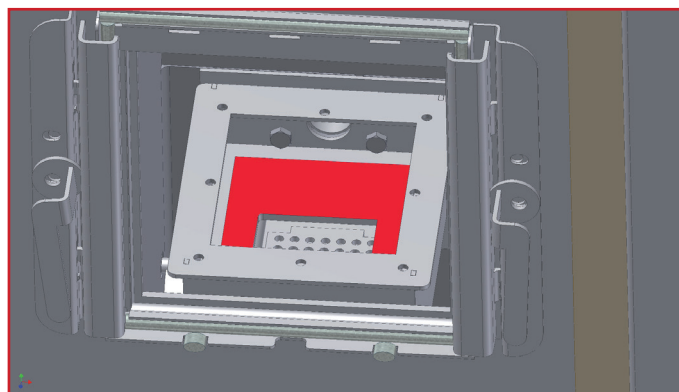
In order to control the pellets gravity chute you have to remove the back burner screws to the left and right.



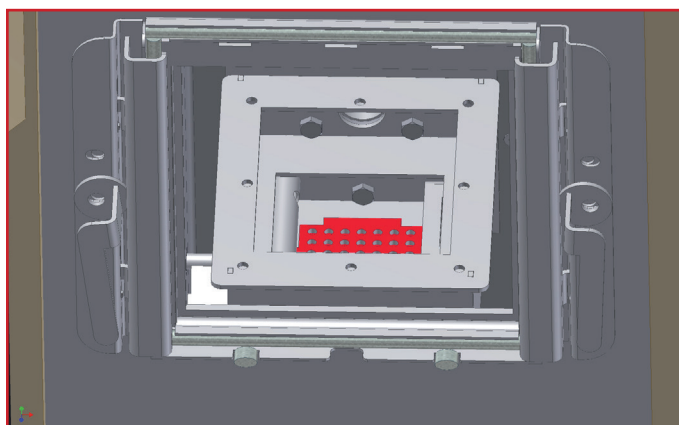
The burner must not have severe abrasions.



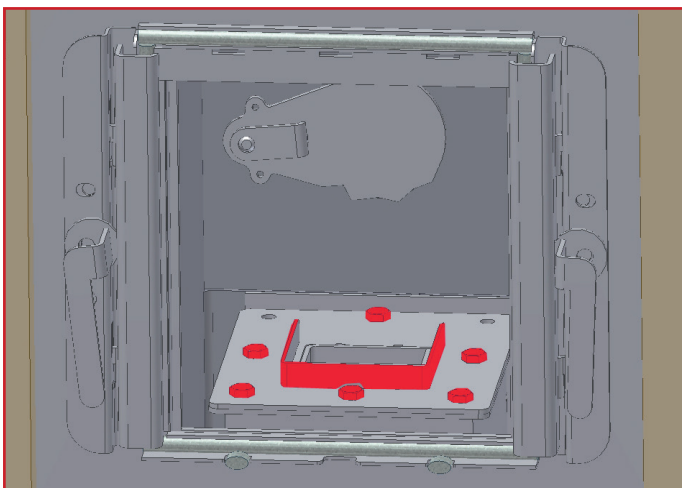
In order to remove the pellets gravity chute pull it to the front to avoid damaging the burning chamber sensor. If you insert the pellets gravity chute again, check if the burning chamber sensor is at the right position. You can loosen and fix the sensor from the back with a winged screw. The burning chamber sensor must not stick out more than max 1 mm at the bottom side.



The seal plate can be lifted. If you build in the burner first insert the seal plate again. It is important that the plating is free from pollution.



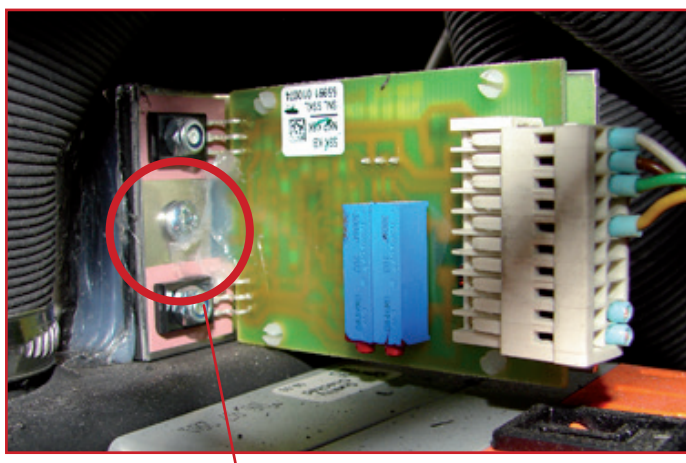
Check the burner rust on abrasions.



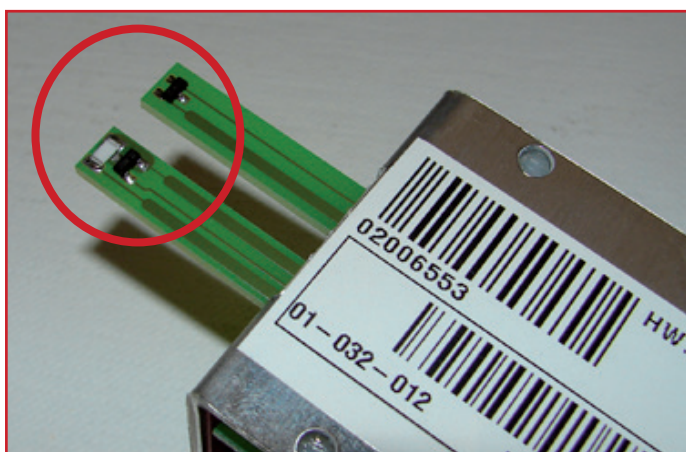
Remove the pellets catcher and the remaining 6 burner screws. You can pull the pellets guide plate to upturn and with the burner insert it is the sameh-rungen nach oben wegziehen.

AIR VENT SENSOR

When using the chimney flue butterfly valve you should clean it every two or three years.



After loosening the screw the air vent sensor can be pulled out from the suction pipe.



Reinigen Sie den Luftmengensensor mit einem weichen Pinsel. Die Bauteile auf dem Sensor müssen frei von Verschmutzungen sein. Setzen Sie die Dichtplatte auf den Luftmengensensor. Danach bauen Sie den Luftmengensensor wieder ein.

STL SAFETY CHECK

The safety temperature limiter is a safety arrangement and therefore has to be checked every year. The STL stops the boiler if the boiler temperature exceeds 95° degree. This can only happen if the pumps give out or if there is a drop of pressure caused by the hydraulic lines. In order to reset the STL you have to turn the casing off at the back wall of the boiler. The STL blocks if the boiler temperature undercuts 70° degree.

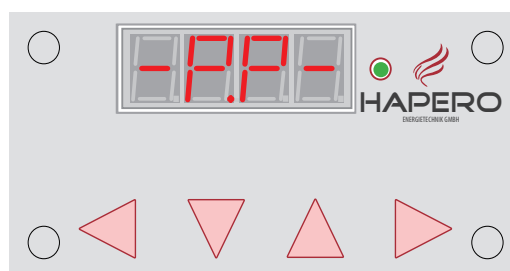
HEATING CIRCUIT WATER

Every 2 years according to the ÖNORM H 5195-1 you have to carry out a checkup of the heating water condition done by a specialist. It is necessary in order to avoid corrosion damages and accumulations. Heating systems with more than 1,500 liter heating water you have to check it once a year. If you make changes, which results in a change of the water content you have to check your heating water after 4 to 6 weeks.

Corrosion damages and accumulations which results of faulty heating water are not under the warranty and guarantee performance.

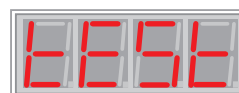
ELECTRICAL COMPONENT

Do the checking of the engine, drive, pumps, temperature sensor and sensors as described in the chapter aggregate test.



Press  and  and after 2 seconds additionally press  for 3 seconds. During the waiting time after pressing  the display shows [-P.P-]. If you have pressed a wrong button or did not wait the seconds the display shows [FAIL]. After the 5 seconds you get to the P-Program level.

Press  in order to get to the line 10. Now press  in order to get to the aggregate test.



For further information see aggregate test page 29.

C-3. CHECK SHEET FOR BOILER MAINTENANCE

In order to relieve the maintenance use the check sheet. Explanatory notes and extra checkups are written down at the end of the sheet. This check sheet and further helpful informational sheets can be found at

meldung@speed.at

Please fill in the year of the maintenance

	Year		Year		Year	
	Conducted	Changed	Conducted	Changed	Conducted	Changed
1. Flue tube sight check						
2. Removal of the flue tube						
3. Adjustment and checking of the flue limiter						
4. Catridge seal of the burner chamber door /Checking of the viewing glass						
5. Checkup on the catridge seal of the ash tank						
6. Checking and cleaning of the butterfly valve						
7. Checkup on the spring balancer o. t. butterfl. valv.						
8. Checkup on the catridge seal of the butterfl. valv.						
9. Chechup on the abrasion of the pellets catcher						
10. Checkup on the abrasion of the burner insert						
11. Checkup on the abrasion of the burner rust						
12. Checkup of the pellets butterfly valve						
13. Cleaning of the air vent sensor						
14. Aggregate test Combustion chamber temperature						
15. Aggregate test Boiler temperature						
16. Aggregate test Boiler temperature						
17. Aggregate test Outside temperature						
18. Aggregate test External Temperature requirement						
19. Aggregate test Belimo OPEN						
20. Aggregate test Multi functional motor						
21. Aggregate test Fire starter						
22. Aggregate test Boiler circuit pump						
23. Aggregate test Boiler pump						
24. Aggregate test Suction tube						
25. Aggregate test Storage room screw						
26. Aggregate test Potential free contact						
27. Aggregate test Material screw						
28. Aggregate test Induced draught blower						
29. Aggregate test Air vent sensor						
30. Checking of the Safety temperature limiter						
31. Checking of the heating water						
32. SOFTWARE UPDATE						

Notes:

Year 1:

Date, Firm, Signature

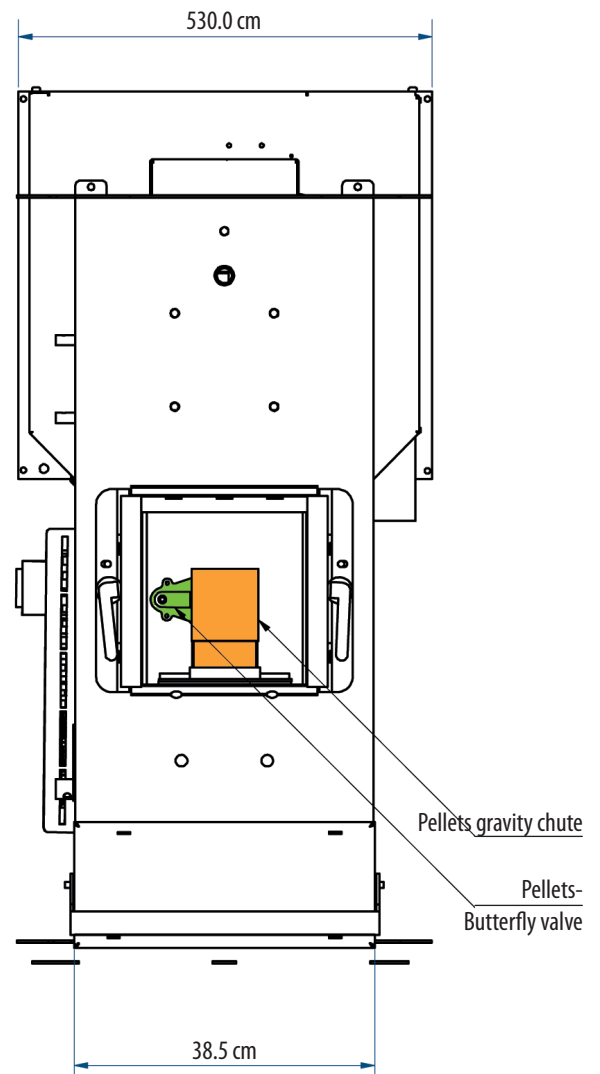
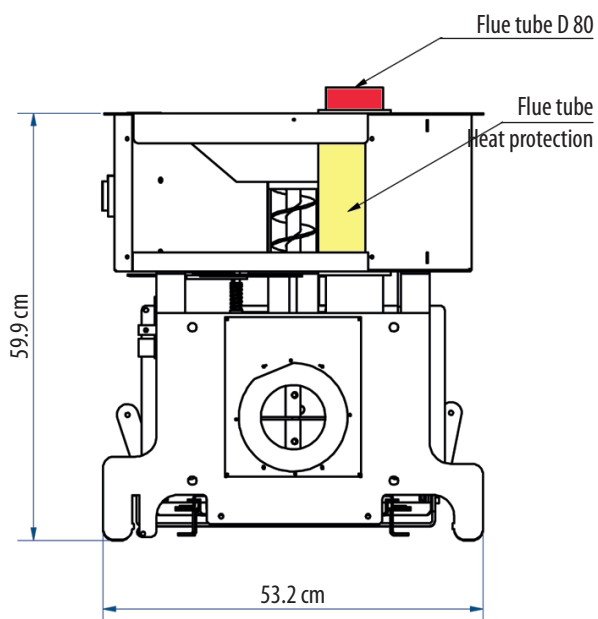
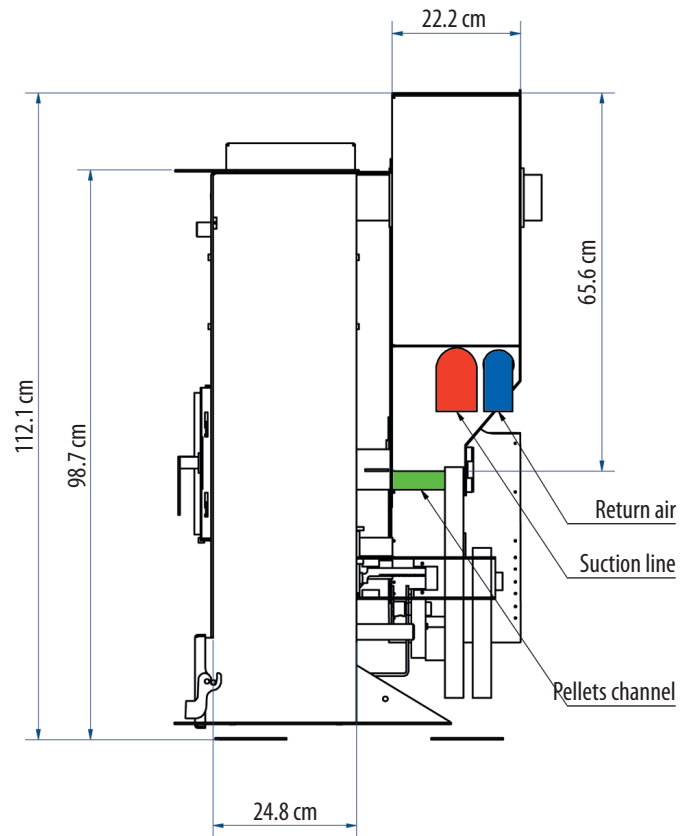
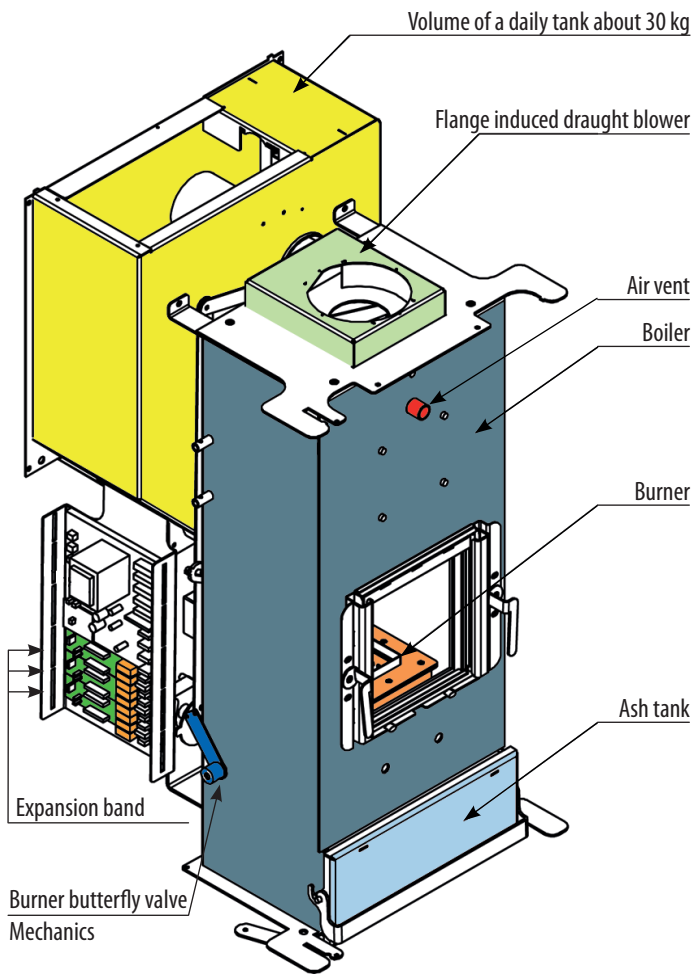
Year 2:

Date, Firm, Signature

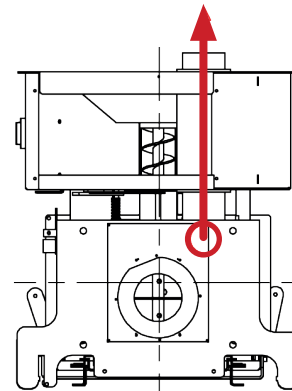
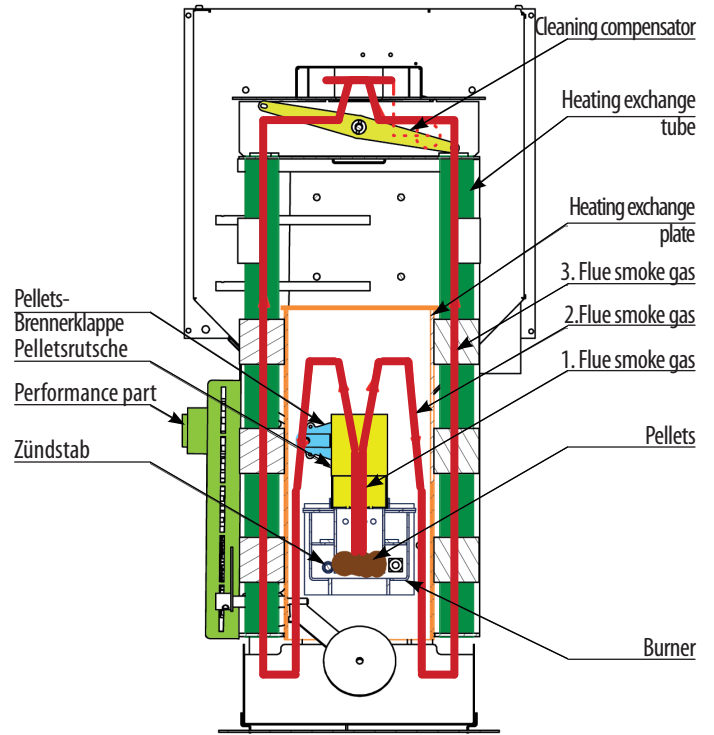
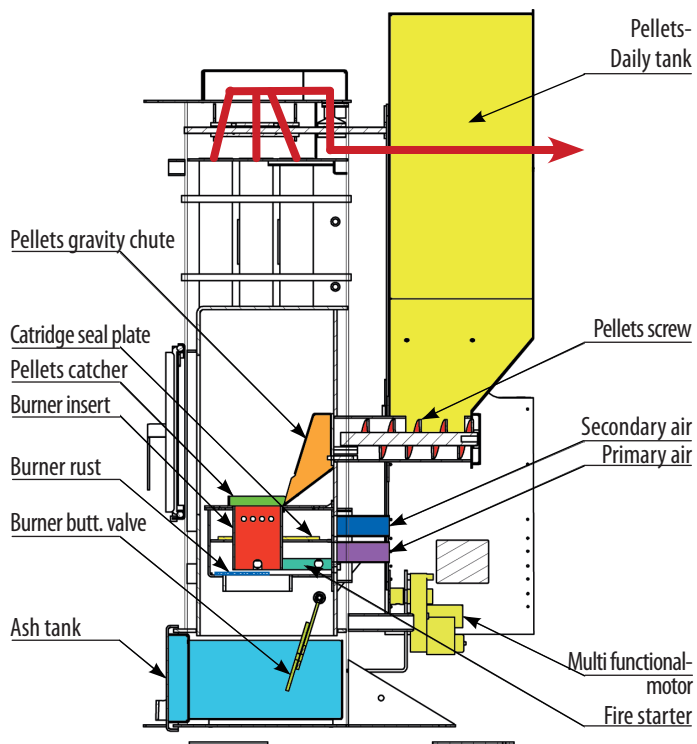
Year 3:

Date, Firm, Signature

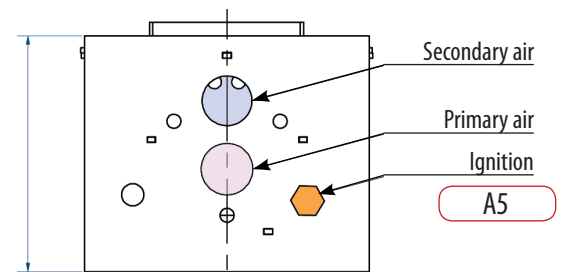
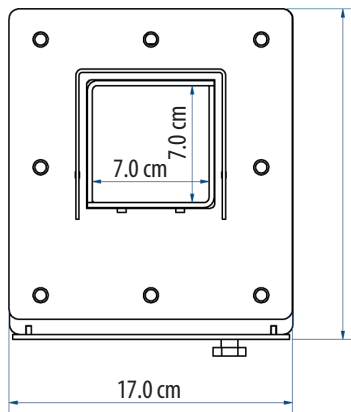
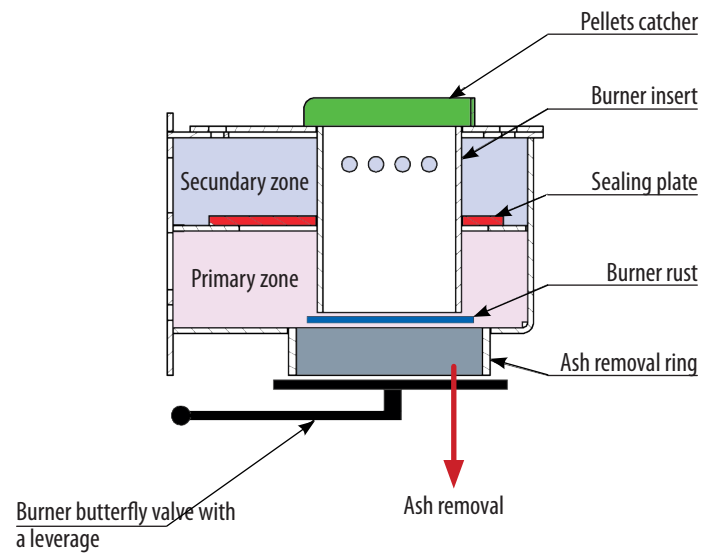
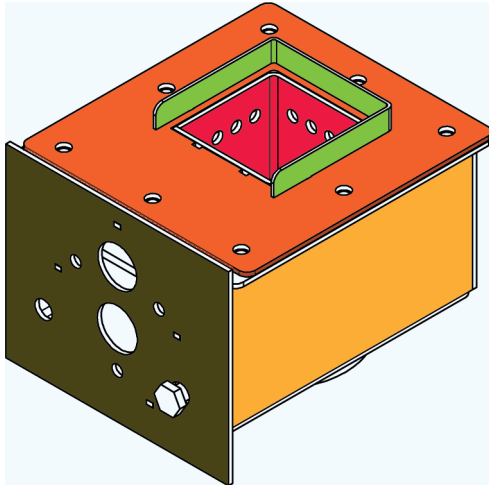
C-4. BOILER SECTIONAL DRAWING



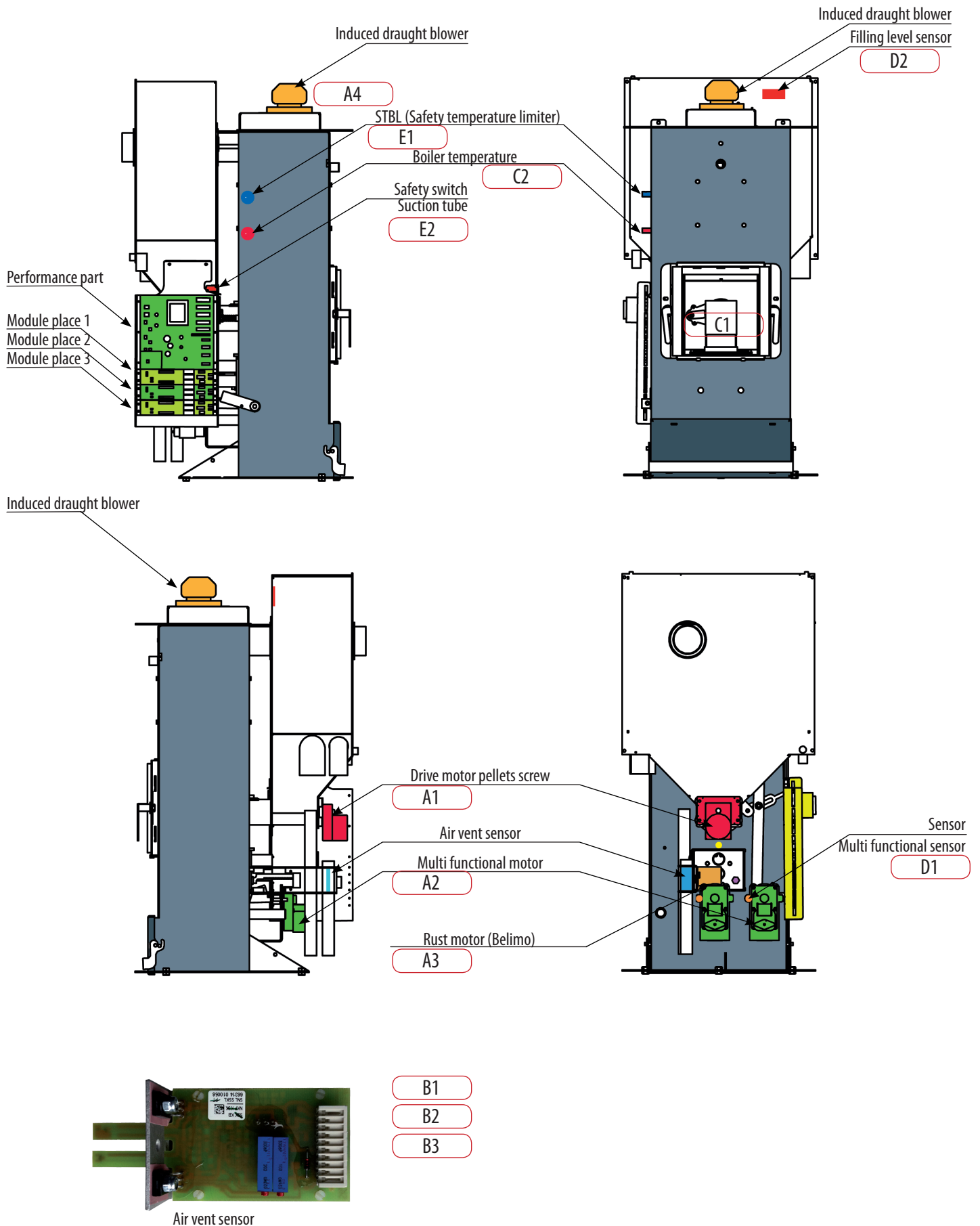
C-5. SMOKE GAS CHANNEL



C-6. THE BURNER



C-7. ELECTRICAL COMPONENT



I need the following information for the initial operation

Job-site, distances to the wall,	Page	33 / 45
Hydraulic access, chimney access,	Page	33 / 45
Initial operation	Page	45
Room holding	Page	36

TIPPS & WHERE DO I FIND WHAT?



Supply temperature THEORETICAL/ACTUAL	Page 14
Room temperature THEORETICAL/ACTUAL	Page 14
Does the pump work? Is the Mixer switching?	Page 14
Room controller mode/Address/Battery voltage	Page 14
Where do I adjust the paramter for the heater circuit?	Page 20
Where do I find an example how it is done?	Page 24

How do I find the theoretical supply temp. from the heater circuit 1?

Alle für den Heater circuit relevanten Informationen finden Sie im Informationsmenü

Heater circuit 1 You get the information from line 70 to 79.

Heater circuit 2 You get the information from line 80 to 89.

Heater circuit 3 You get the information from line 90 to 99.

The order of the information is the following:

HC1/ HC2/ HC3	
70 / 80 / 90	Heating time active
71 / 81 / 91	Theoretical supply temperature
72 / 82 / 92	Actual supply temperature
73 / 83 / 93	Theoretical room temperature
74 / 84 / 94	Actual room temperature
75 / 85 / 95	Room controller address
76 / 86 / 96	Room controller modes
77 / 87 / 97	Room controller temperature adjuster+/-
78 / 88 / 98	Room controller battery voltage
79 / 89 / 99	Mixer (open / close) Pump (on / off)

The heater circuit remains off, how do I find the mistake?

1. The pellets boiler is switched-on (press , the Display has to show „On“).
2. The actual room temperature is above the preadjusted theoretical temperature when using a puffer for adjusting the [P. HP] Parameter (Page 21)
3. Check if at the lines 79/89/99 the heater circuit pump or the mixer are switched. If the display shows activity either the pump should run or you should see if the mixer motor makes some noise. If everything is set up check the power supply to the expansion band, the ribbon cable from the performance part to the expansion band and the safety at the expansion band.
4. Check, if the room controller is active at the lines 76/86/96. The connection from the room controller to the pellets boiler is interrupted if the display shows „0“. In this case the time program 1 is used. If the display shows 1 the heater circuit is switched-off. If the display shows 2 the adjustments of the conform temperature are active. 3 and 4 stagnate the time program and 5 is for the savings temperature.
5. Which room temperature was adjusted? In line 73/83/93 you find your wished temperature. Compare those two data. The measured temperature can be found in the lines 74/84/94. Please note that with too high outside temperatures the measured heater circuit supply temperature

is lower than the „supply temperature guided heater circuit switch-off“ (Page 20) defined temperature the heater circuit is switched-off. Turn the cryostat/thermostat to + and wait about 20 seconds until the data is communicated.

6. Check the outside temperature over the „**Outside temperature guided heater circuit switch-off**“ (Page 20).
7. Checkup on the functionality of the relay exits of the aggregate test (Page 30).

If the adjustment setting of the heater circuit did not start yet, pull the plug (X17) (see page 40) of the outside temperature sensor, remove the battery of the room controller and switch-off the power supply of the boiler to immediately switch it on again (The display shows a moving bar).

If there is still a mistake, carry out the factory setting (Page 28). In the P.P Program you check the line 59 (The numbers have to match the configuration, an example can be seen on page 28) and line 60 (Factory setting boiler parameter).

If the heater circuit still does not operate in a normal way, change the expansion band and do the aggregate test again.

Diagram for the easy rating of the theoretical supply temperature (WITHOUT a room controller with room influence) and standard data after leaving line 59 (P.P Program).

Type	Outside temperature							
	-15°	-10°	-5°	0°	5°	10°	15°	20°
1 Floor heating	45°	41°	38°	34°	31°	27°	24°	20°
2 Radiator 55°/45°	55°	51°	48°	44°	41°	37°	34°	30°
3 Radiator 75°/55°	70°	65°	60°	55°	50°	45°	40°	35°
4 Radiator 90° / 70°	90°	85°	74°	66°	59°	51°	43°	35°
5 Hot air blower	90°	86°	81°	77°	73°	69°	64°	60°
6 Panel heating	45°	41°	38°	34°	31°	27°	24°	20°

Without outside temperature
Plug X17

CHECKING OF THE ROOM CONTROLLER

The clean operation of the room controller is dependent on the radio communication and the room controller to the performance part. This radio communication is dependent on the length of the transmission path or on the iron part of the floor or walls at the job-site. Always check the cable free room controller to its full functionality.

The room controller HAS TO be placed at its final setting up place.

Please insert the battery in the right direction. Go the pellets boiler and get to the information menu, as described in „ACCESS“. Press  as long until you get to line 76 (Heater circuit 1), 86 (Heater circuit 2) 96 (Heater circuit 3). The adjusted mode at the room controller is shown.

0.0 = **No radio communication**

1.0 = Switched-off

2.0 = Conform temperature

3.0 = Time program 1

4.0 = Time program 2

5.0 = Savings temperature



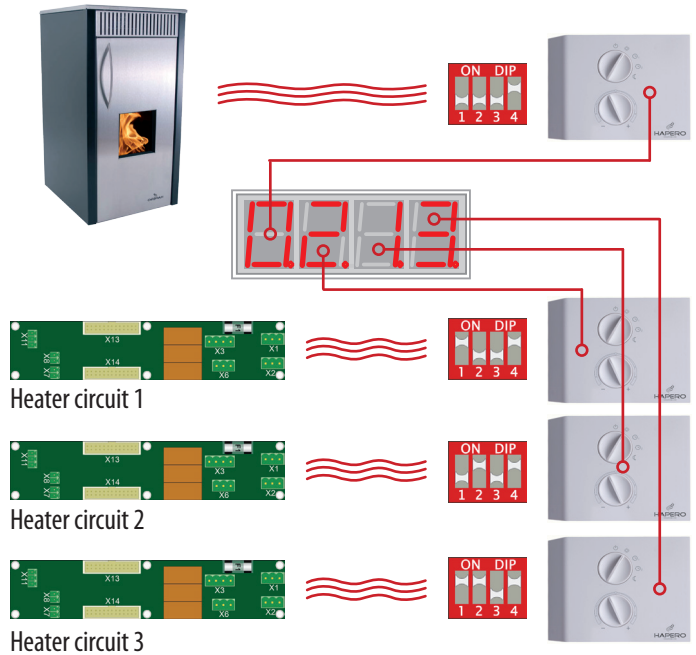
There are no radio communications: The adjustment control is exclusively carried out after the outside temperature and time program 1. Take the room controller and go to the pellets boiler. If a mode data is transmitted after 20 seconds you can assume that your transmission path was too long (You can change the cable free room controller with a normal room controller), or shorten the transmission path. If there is no transmission path even directly next to the pellets boiler check the room controller address of the lines 75, 85 ,95. The display shows the DIP-Switch of the used room controller. Also check the battery for its right polarity and if there is enough voltage. The durability of a „Long Life Battery“ amounts usually 2 to 3 years.

Adjustments of the room controller address for the heater circuit you will find at page 20.

Adjustments of the room controller address for the pellets boiler you will find at page 27.

QUICK CHECKUP

Press  in order to get to the quick view of the room controller connections.



0 = **No connection to the room controller**

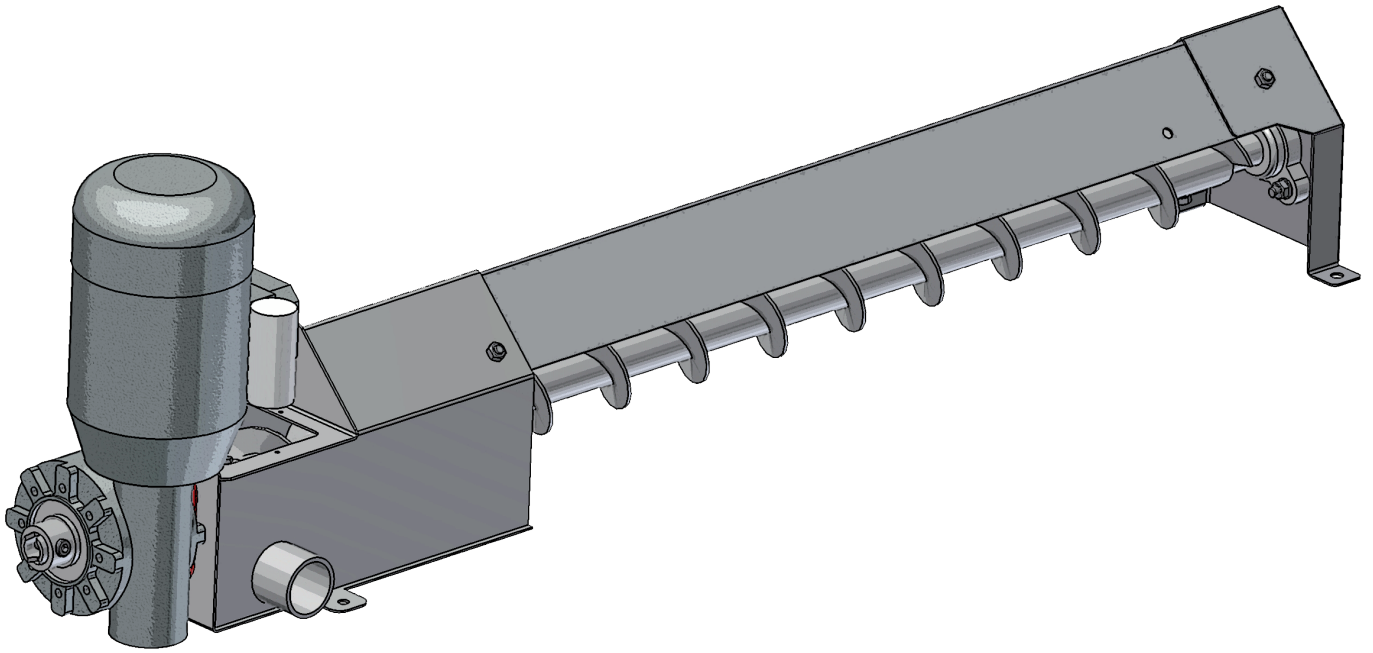
1 = Operation switcher SWITCHED-OFF

2 = Operation switcher Conform temperature

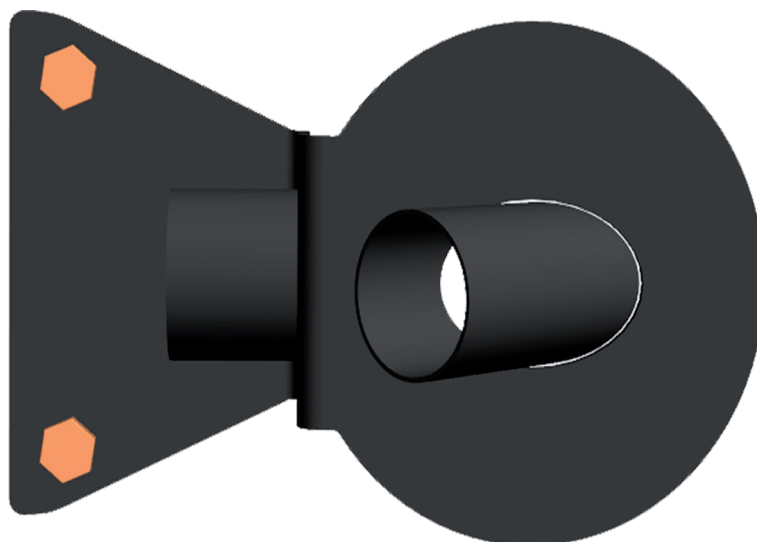
3 = Operation switcher Time operation (Time program 1)

4 = Operation switcher Time operation (Time program 2)

5 = Operation switcher Savings temperature



Holding screw in Module construction (max 4 meter)



Suction probe (Holding contrivance)

ROOM HOLDING



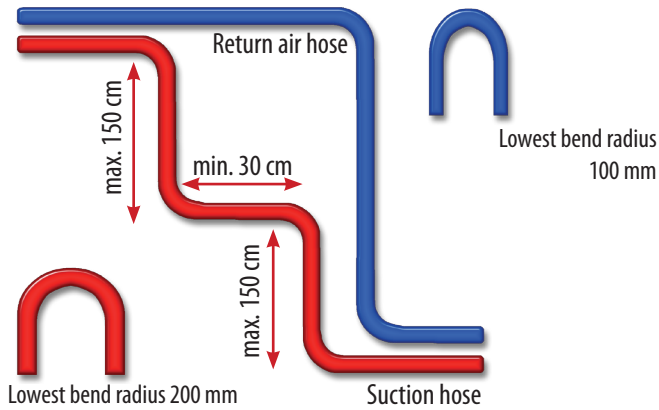
SET UP INSTRUCTION

GENERAL INFORMATION ABOUT THE ROOM HOLDING

When using flexible hoses and air for transporting the pellets it is not only better for the transport from the storage space to the daily tank but also the designing of the storage space is much easier. Nevertheless there are some rules which have to be followed.

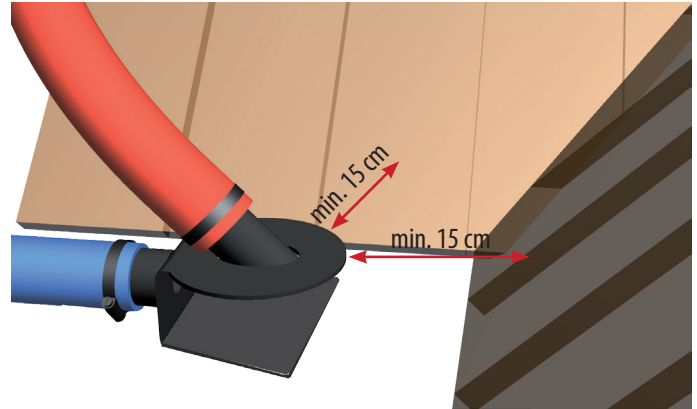
When using a suction point it is not recommendable to use an upstream suction line which is longer than 3 meters. One has to work with storeys because if the suction process is over the pellets fall down and this can lead to a blockage. If you use storeys only those pellets fall down which are in an upstream step of the hose. When using a system like a screw system one does not need the storeys as the suction hose can be sucked out completely.

STOREY DIAGRAM



The storeying of the suction hoses is only with a suction point necessary.

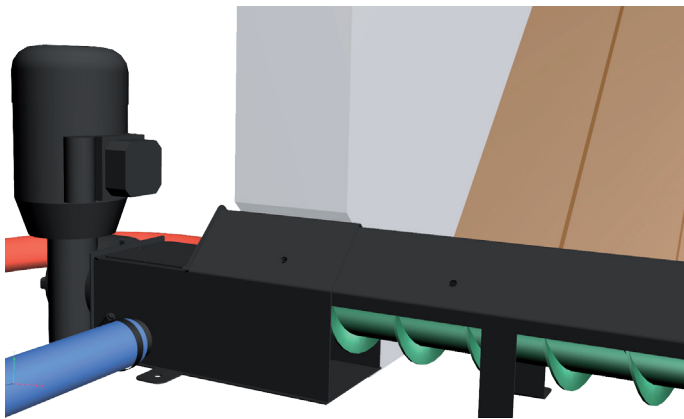
SUCTION POINT-SLANTED FLOOR



The slanted floor has to be build up with at least 45°.

The distance from the border of the suction point to the slanted floor or a wall has to be at least 15 cm.

WALL GROMMET



Screw top:

For using the wall grommet you need a wall opening with 15 cm width and 20 cm height. (Add the height of the wooden board).

Assembled screw:

For the wall grommet you need a wall opening with 25 cm width and 20 cm height (add the height of the wooden board).

With plastering the wall opening you end the process.

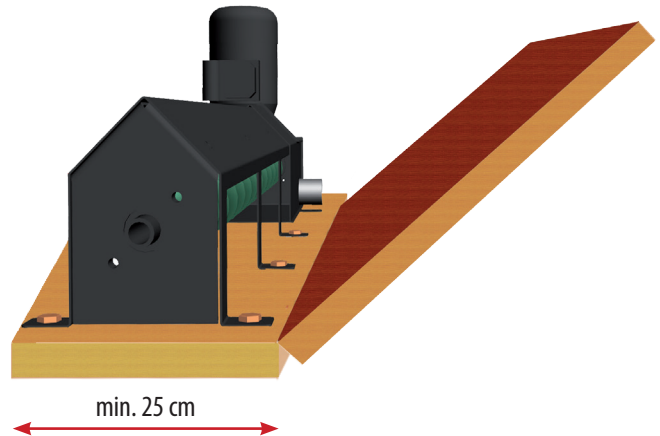
Closing plate: (Optional)

For the wall grommet you need a wall opening with 25 cm width and 25 cm height (add the height of the wooden board).

Assemble the closing plates and close the box section with an adequate filling medium.

WARNING! Please adhere to the local fire control regulations!

SCREW BEVEL BEND



Assemble reference:

Attach a wooden board on the floor (min 25 cm wide). The bevel bend has to be build up with at least 45° and is standing on the wooden board. Assemble the screw right in the middle of the wooden board.

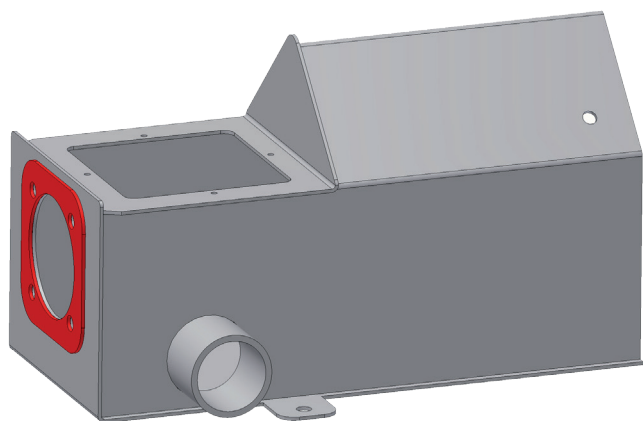
Statics!

Before assembling the bevel bend please inform about the right construction and the needed materials in order to assure the statics of the storage space. (The constructor is solely responsible for resistance and durability of the construction!)

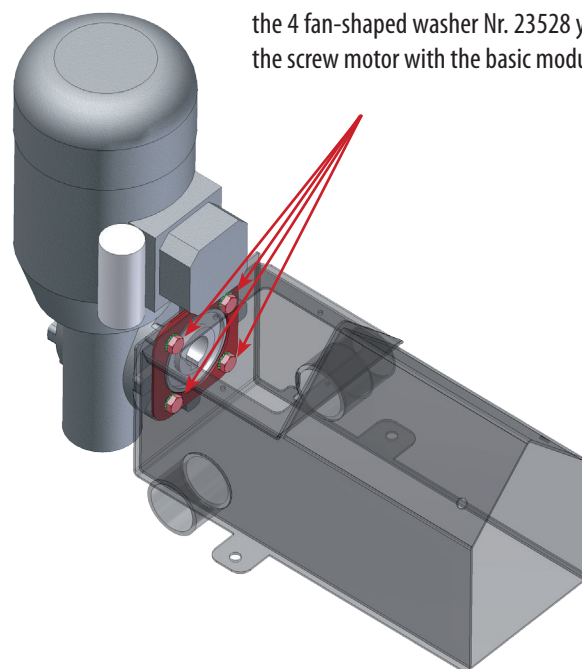


ASSEMBLING OF THE STORAGE SPACE SCREW

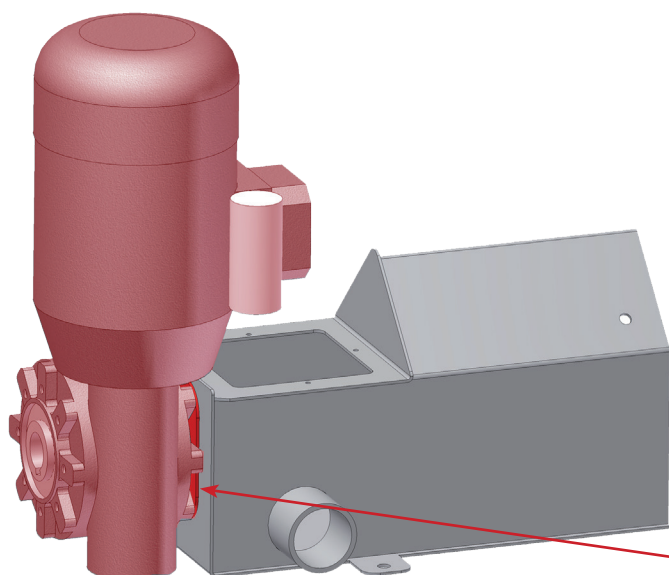
ASSEMBLING BASIC MODULE



Start with the basic module Nr. 201100001.



With the enclosed 4 screws Nr.1011812, the 4 fan-shaped washer Nr. 23528 you fix the screw motor with the basic module.



Incorporate the basic module with the screw motor to the screw top. Do not forget the cartridge seal Nr. 200005022.

HELICAL VANE

Incorporate the screw tube with the helical vane according to the following graph.

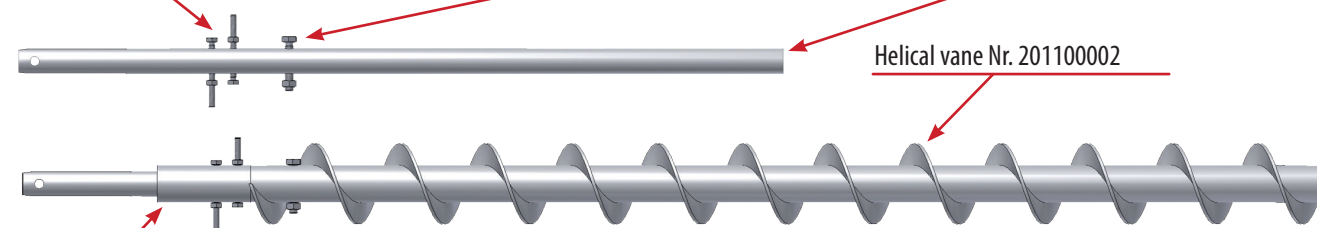
Screws Nr. 1011660 with screw nuts Nr. 21116

Always assemble right opposed

Screw Nr. 1013845 with screw nuts Nr. 21118

Screw tube Nr. 00002012D

Helical vane Nr. 201100002



Part Nr. 200002010D

Continue with the following steps:

Assemble from the basic module:

Assemble of the 1 meter add-on:

Assemble of the 0.5 meter add-on:

Page 71 Break

Helical vane basic module part 2

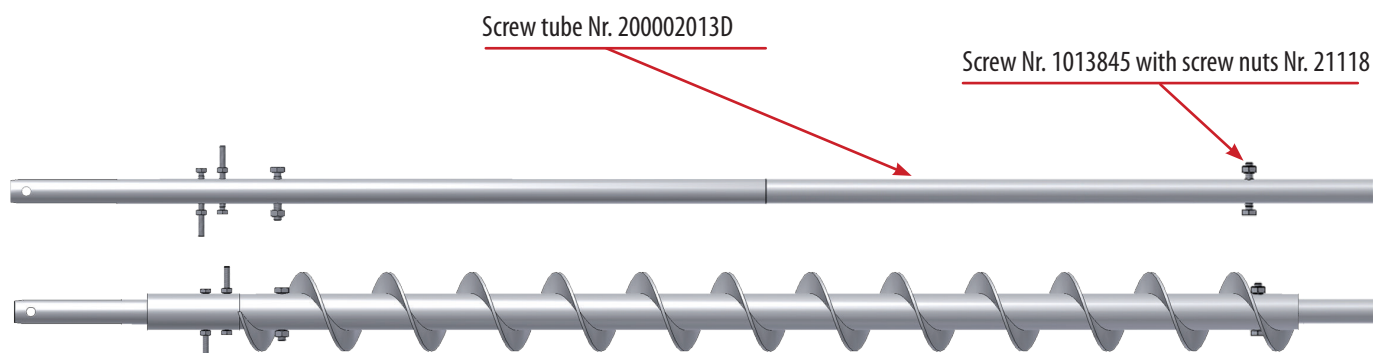
Page 71 Break

Helical vane 1 meter add-on part 2

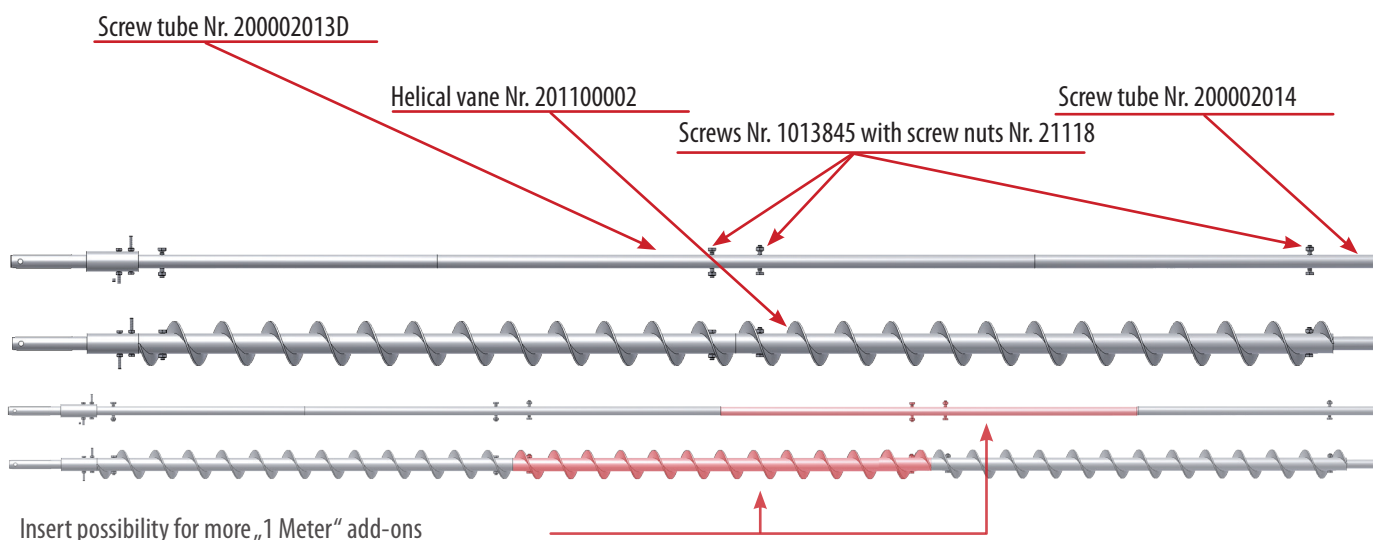
Page 71 Break

Helical vane 0.5 meter add-on part 2

HELICAL VANE BASIC MODULE (PART 2)

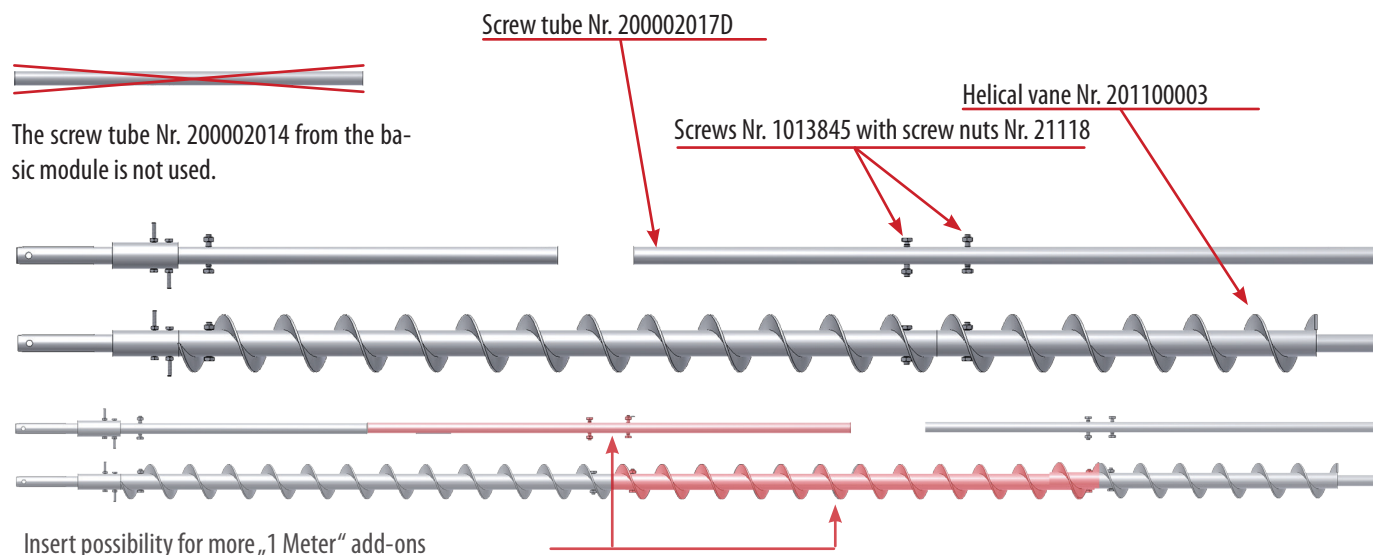


HELICAL VANE „1 METER” ADD-ON (PART 2)



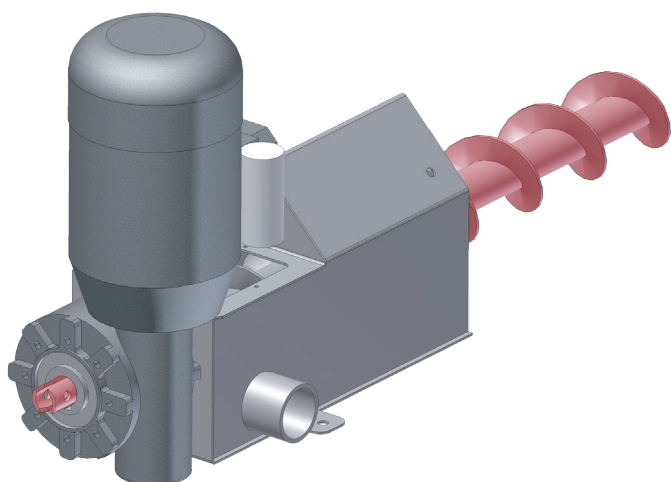
The max vane length must not be longer than 4 meter!

HELICAL VANE „0.5 METER” ADD-ON (PART 2)



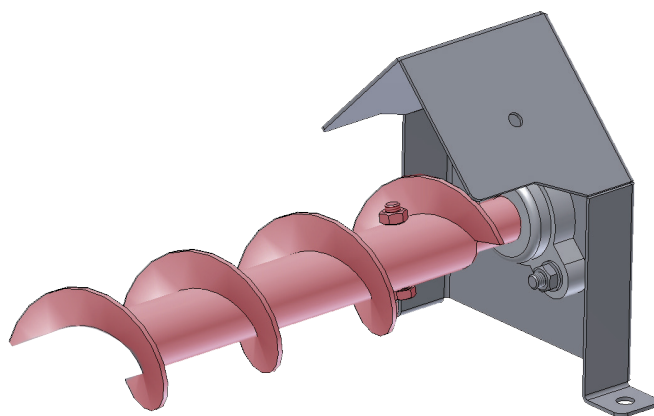
The 0.5 meter add-on can only be used once (Max vane length 3.5 meter)!

SCREW MOTOR

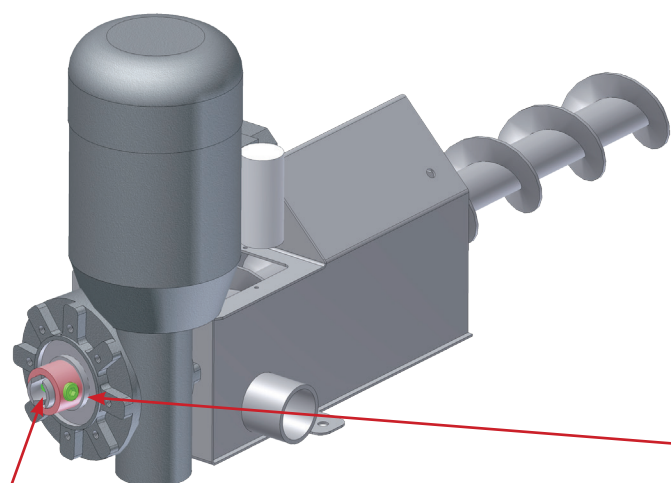


Insert the assembled helical vane into the screw top

ASSEMBLING END PIECE



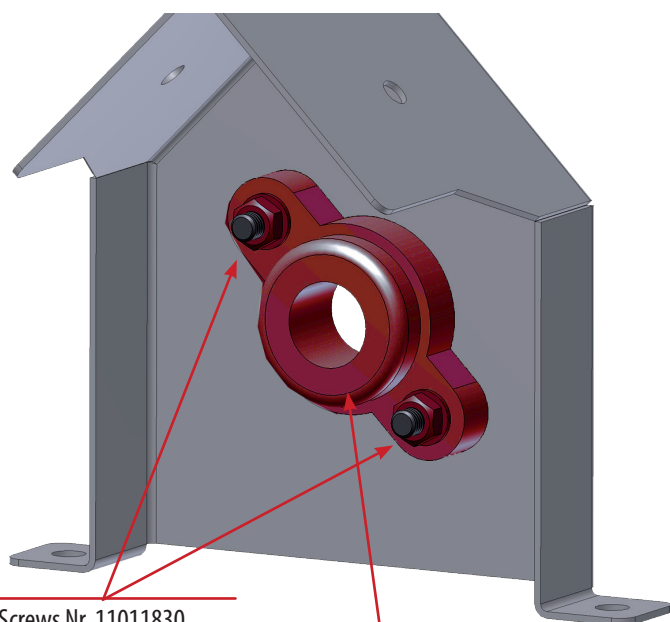
Connect the helical vane with the end piece



1. Push the enclosed clog Nr. 200001020 into the slot
2. Push the ring Nr. 200002011 over the screw end and fix it with the screw Nr. 1151830.

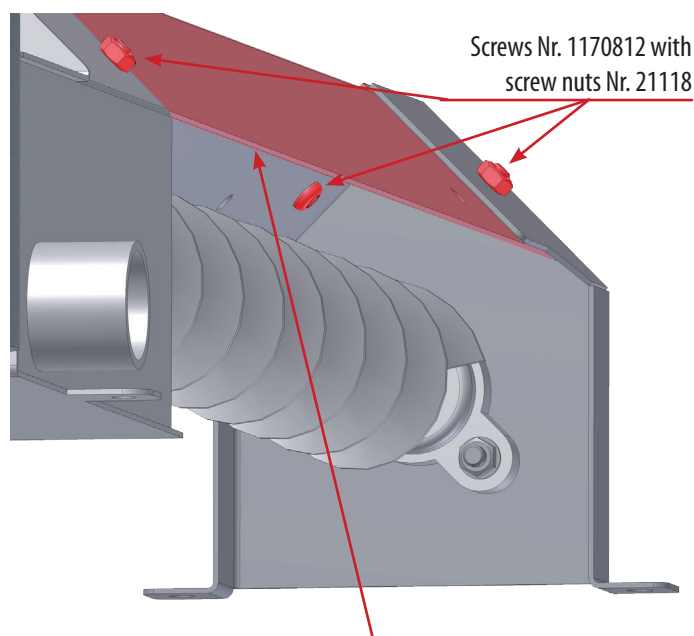
FINAL STORAGE

Prepare the end piece.



Screws Nr. 11011830
Shims Nr. 23018 Storage Nr. EFOM-25
Screw nuts Nr. 21118

SCREW TOP



Screws Nr. 1170812 with
screw nuts Nr. 21118

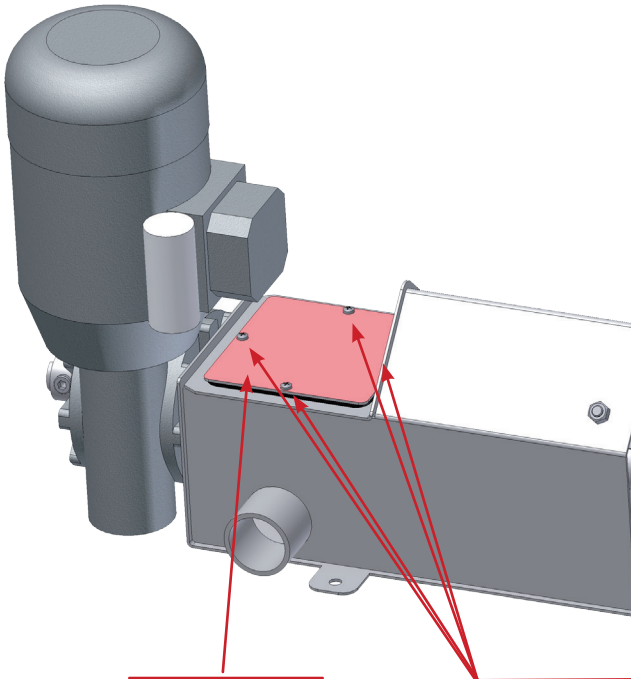
Attach the screw top Nr 200001001D from BELOW.

Plug the screws Nr. 1170812 from the inside to the outside of the borehole of the screw top and tighten them with the screw nuts Nr. 21118 from outside. If you use the add-ons assemble the roof support Nr. 200001002D at the end for the screw top.

The helical vane is build elastically and therefore a bending of the helical vane can happen. In order to avoid the helical vane getting stuck you have to build it up after the instruction.

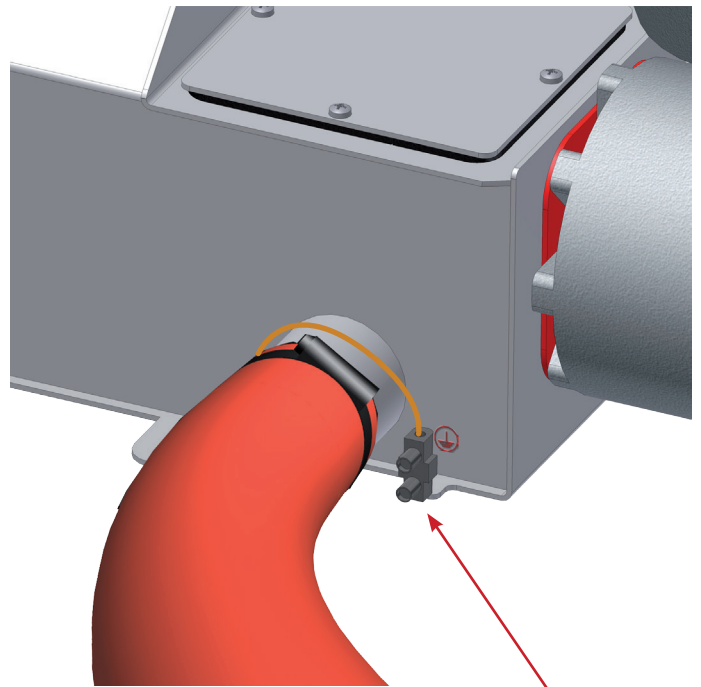


TOP COVER



Screw the top cover Nr. 201100004 with the screws Nr. 13114213 an.

EARTHING

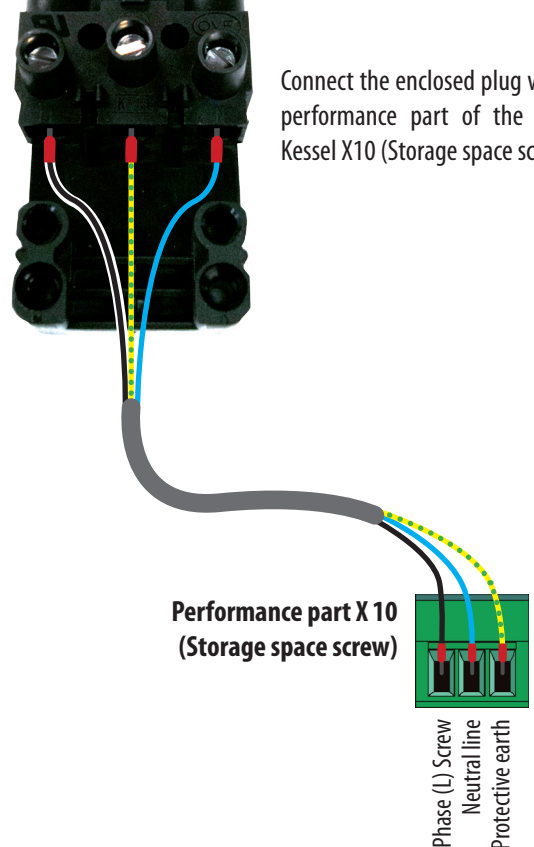


The earthing twist has to be connected to the earthing access.

ELECTRICAL CONNECTION



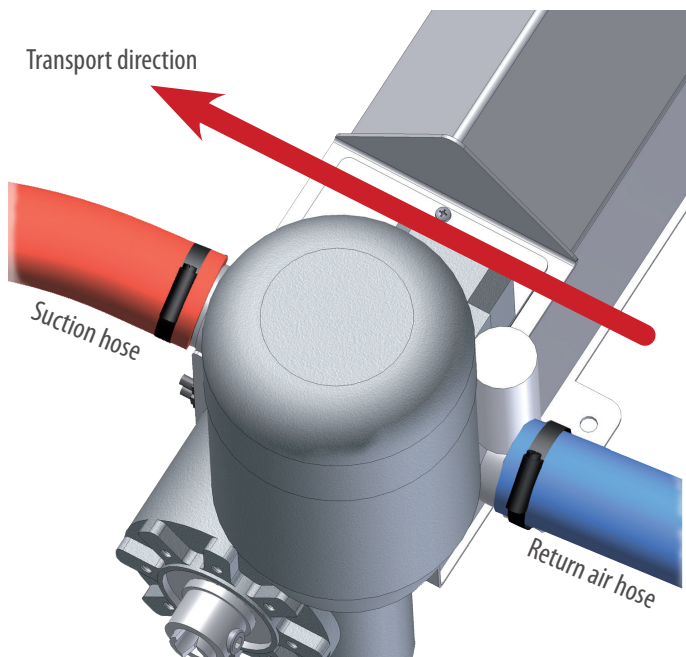
Connect the enclosed plug with the performance part of the Pellets-Kessel X10 (Storage space screw).



Performance part X10
(Storage space screw)

Phase (L) Screw
Neutral line
Protective earth

SUCTION AND RETURN AIR HOSE



First filling:

Before starting with the first filling check the whole storage space on foreign objects.

Follow-up filling:

In order to avoid transport problems through a high dust content in the storage space push the remaining pellets to the screw or suction point before filling again.

Procedure before the filling:

Switch-off the pellets boiler for about half an hour before the arrival of your fuel supplier. About 30 min after the switch-off the filling can be started.

Wood pellets store room < 10t

- **No entrance for unauthorized persons.
Keep children out.**
- **Smoking, open fire and other sources of
fire are strictly prohibited!**
- **The pellet boiler needs to be switched
off a minimum of 1 hour before filling!**
- **The room needs to be aired a min. of 15
minutes before entering.**
- **Dangerous CO-reading possible.**
- **air-inlet and air-inlet lids on the socket
are highly recommended (VDI 3464).**
- **Injury may occur due to loose parts!**
- **Please carry out the filling with great
care!**

art.no.: 8738.00

12/2014

Stick the instruction plate on every storage space door.

GENERAL

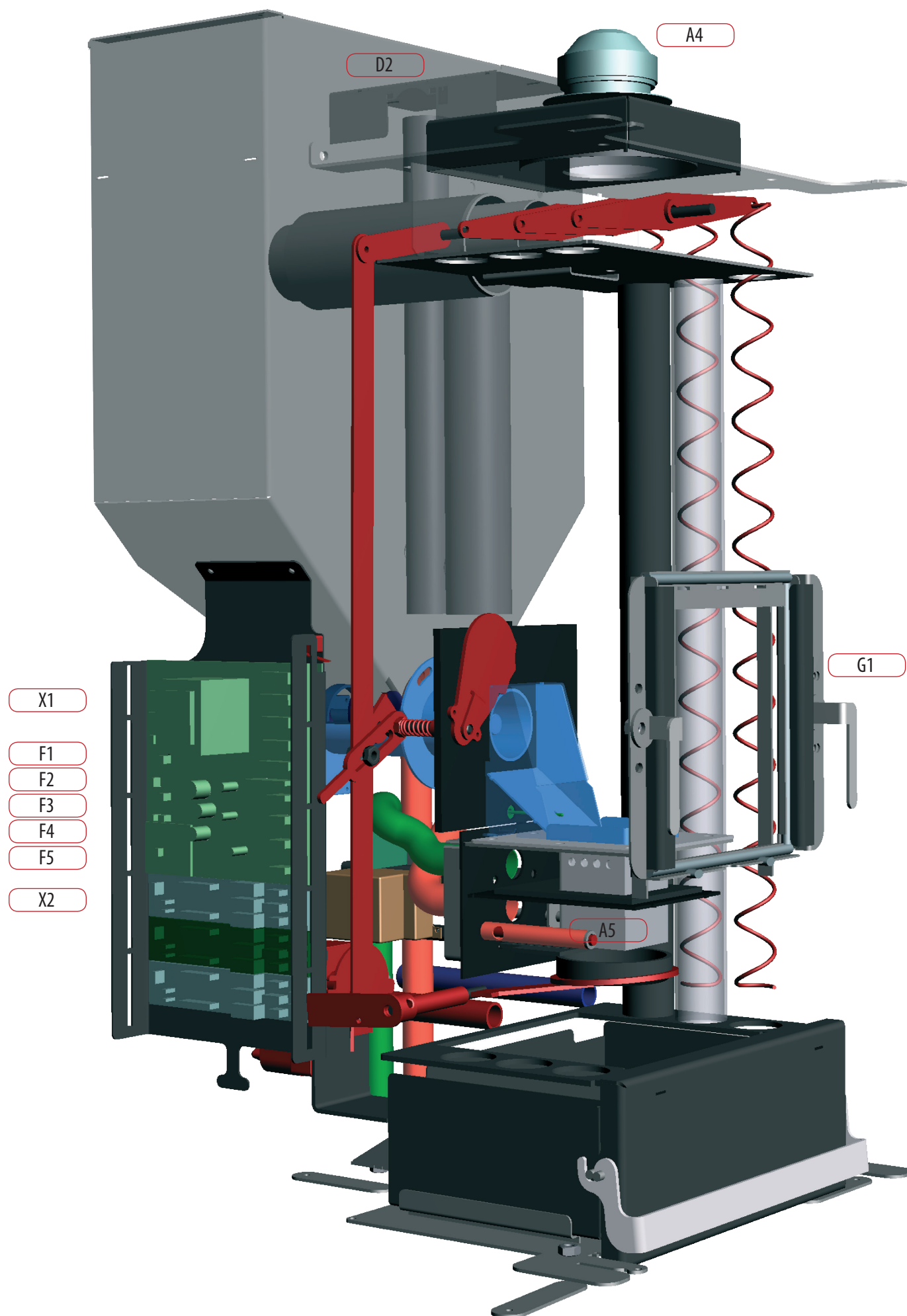


SPARE PARTS TECHNICAL DATA

SPARE PART OVERVIEW

The following accessories and spare parts can be found at your next fitter or specialist.

	Amount	Appellation	Order number
A 1	1	Screw motor finc mechanics 24Volt	7001
A 2	1	Crack pin motor min-1,5 ISG3225ETA	7002
A 3	1	Linear actuation Belimo (150N)	7003
A 4	1	Induced draught blower (incl. cable loop)	7004
A 5	1	Heating catridge (230V / 250W) L-125 mm	7005
A 6	1	Suction turbine	7006
B 1	1	Air mass sensor 2	7007
B 2	1	Cable air mass sensor	7008
B 3	1	Catridge seal air mass sensor	7009
C 1	1	Combustion space sensor CrNi-Cr Type K	7010
C 2	1	Boiler sensor / Supply sensor / Daily tank sensor (KTY 81 - 110)	7011
C 3	1	Outside sensor ATF0 (KTY 81 - 110)	7012
C 4	1	Contact sensor (KTY 81 - 110)	7013
D 1	1	Multi functional motor sensor	7014
D 2	1	Pellets boiler sensor	7015
E 1	1	Safety temperature limiter 100°C	7016
E 2	1	Micredaster Hartmann (MAB1)	7017
E 3	1	Temperature control (Screw 100°C)	7018
E 4	10	Microfuse 10 A / 2,5A / 250mA	7019
E 5	1	Display slide	7020
F 1	10	Phoenix plug 3	7022
F 2	10	Phoenix plug 4	7023
F 3	10	Phoenix plug 2	7024
F 4	10	Phoenix plug 3	7025
F 5	10	Phoenix plug 4	7026
G 1	1	Viewing glass	7027
G 2	5m	Fibre glass tape	7028
G 3	1m	Fibre glass catridge seal 12	7029
G 4	1m	Fibre glass clasfaserCatridge seal 15 x 15	7030
X 1	1	Control Sigmatek incl. Display (HZS 517)	7031
X 2	1	Display with a ribbon cable	7032
X 3	1	Expansion band (Heater circuit or Puffer / Solar)	7033
X 4	1	Radio transmitter 5 channels (Balance)	7034
Z 4	1	AVR Programing adapter	7035



Herstellereklärung
zur Vorlage beim Bundesamt für Wirtschaft und
Ausfuhrkontrolle

der Firma : **HAPERO Energietechnik GmbH**
mit Sitz in: **A-5141 Moosdorf Gewerbepark Ost 3**
(PLZ) (Ort) (Straße)

☒ **Der automatisch beschickte Heizkessel** vom Typ **HP02 / W**

☐ **Der handbeschickte Heizkessel** vom Typ _____

hat bei der Verfeuerung von naturbelassener Biomasse im Sinne von § 3 Abs.1 Nummer 4, 5 und 5a** oder 8* der ersten BImSchV eine(n)

Nennwärmeleistung von	4,3 - 14,9 kW
Kesselwirkungsgrad von	97,1 %
Feuerungswärmeleistung * von	kW
feuerungstechnischen ** Wirkungsgrad von	97,1 %

Emissionswerte:

Folgende Emissionen (bezogen auf 13 Volumen % O₂ im Abgas bei Normzustand)
werden von der Heizanlage abgegeben:

Kohlenmonoxid * (CO) bei Nennwärmeleistung	35	mg/m ³ , (max. 250mg/m ³)
Kohlenmonoxid * (CO) bei Teillast	168	mg/m ³ , (max. 250mg/m ³)
staubförmige* bei Nennwärmeleistung	10	mg/m ³ , (max. 50mg/m ³)
staubförmige* bei Teillast	37	mg/m ³ , (max. 50mg/m ³)

* Bei Einsatz von Brennstoffen nach § 3 Abs. 1 Nummer 8 der 1. BImSchV (Stroh oder ähnliche pflanzlichen Stoffe) in Anlagen mit einer Feuerungswärmeleistung von 100kW oder mehr beziehen sich die Emissionsgrenzwerte auf einen Volumegehalt an Sauerstoff im Abgas von 11%

** feuerungstechnischer Wirkungsgrad bei Holzpelletöfen

Diese Angaben können durch **vorliegende** Gutachten belegt werden.



Datum, Unterschrift 01.11.2010

(Diese Unterschrift kann nur vom Kesselhersteller geleistet werden.)

HAPERO
ENERGIE TECHNIK GMBH

Firmenstempel

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EG - KONFORMITÄTSERKLÄRUNG

Diese Erklärung wird verantwortlich für folgende Hersteller abgegeben:

Unternehmensbezeichnung: **HAPERO Energietechnik GmbH**
Anschrift: **Gewerbepark Ost 3, 5141 Moosdorf, AUSTRIA**
Telefonnummer / Telefax: **+43 7748 68585 - 0 / +43 7748 68585 - 50**
Name des Unterzeichners: **Peter Winkler**
Stellung im Unternehmen: **Geschäftsführer**

Moosdorf

Ort

21.01.2014

Datum

rechtsverbindliche Unterschrift

Wir erklären hiermit, dass die nachfolgend bezeichneten Holzbrikettöfen, Pelletsöfen und Pelletszentralheizungssysteme aufgrund ihrer Konzipierung und Bauart, sowie in der von uns in Verkehr gebrachten Ausführung, den einschlägigen, grundlegenden Sicherheitsanforderungen entsprechen.

Holzbrikettöfen	Pelletsöfen	Zentralheizungssystem
	HP 01 Individual	HP 02 / W Balance (Wohnraum) HP 02 / K Balance (Keller) HP 03 / K Flash (25 kW) HP 04 / K Flash (35 kW)

Es wird bestätigt, dass die bezeichneten Produkte den Vorschriften, insbesondere den Schutzanforderungen entsprechen, die in den Richtlinien der Europäischen Gemeinschaft zur Angleichung der Rechtsvorschriften über die elektromagnetische Verträglichkeit (89/336/EWG) und der Richtlinie zur Änderung der CE-Kennzeichnung (93/68/EWG), sowie dem Gesetz über die elektromagnetische Verträglichkeit von Geräten mit Stand vom 18.09.1998 festgelegt sind.

Diese Erklärung gilt für alle identischen Exemplare des Erzeugers, die nach unseren Entwicklungs-, Konstruktions- und Fertigungszeichnungen und Beschreibungen hergestellt werden.

Die Übereinstimmung der bezeichneten Produkte mit den Vorschriften der o.g. Richtlinien wird nachgewiesen durch die Einhaltung der im Anhang genannten Normen.

Diese Erklärung bescheinigt die Übereinstimmung mit den genannten Richtlinien, beinhaltet jedoch keine Zusicherung von Eigenschaften. Die Sicherheitshinweise der mitgelieferten Produktdokumentation sind zu beachten. Die Anhänge sind Bestandteile dieser Erklärung.

Anhang 3 zur Vergabegrundlage RAL-UZ 111 und RAL-UZ 112

Sehr geehrte Kundin!
Sehr geehrter Kunde!



Zum effizienten und emissionsarmen Betrieb Ihrer Heizanlage beachten Sie bitte folgende Hinweise:

Verwenden Sie ausschließlich die von uns in der Bedienungsanleitung (Seite 10) vorgeschriebenen Brennstoffe.
Nur so kann ein emissionsarmer, wirtschaftlicher und störungsfreier Betrieb Ihrer Heizanlage gewährleistet werden.

Führen Sie in regelmäßigen Abständen die von uns empfohlenen Wartungs- und Reinigungsarbeiten an Ihrer Heizanlage durch. Angaben hierzu finden Sie in der Bedienungsanleitung Seite 39 und Seite 41. Damit gewährleisten Sie nicht nur die Funktionssicherheit der Heizanlage und deren Sicherheitseinrichtungen, sondern auch den effizienten und emissionsarmen Betrieb der Anlage. Die beste Betreuung Ihrer Heizanlage erreichen Sie mit dem Abschluss eines Wartungsvertrages.

Ihr Pelletkessel ist innerhalb eines Leistungsbereiches von 30 % bis 100 % der Nennleistung regelbar. Die Öfen sollten möglichst im mittleren und oberen Leistungsbereich (angepasst auf den jeweiligen Wärmebedarf) betrieben werden, um unnötige Emissionen im Kleinlastbetrieb zu vermeiden. Ideal ist die Kombination mit einem modulierenden Raum- oder Heizungsregler um unnötiges Takten zu vermeiden und möglichst lange Laufzeiten zu gewährleisten.

Aus energetischer Sicht ist ein Pufferspeicher und eine Kombination mit einer Solaranlage zu empfehlen. Damit ist ein effizienter und emissionsarmer Betrieb Ihrer Heizanlage gewährleistet.



IBS - INSTITUT FÜR

BRANDSCHUTZTECHNIK UND SICHERHEITSFORSCHUNG

GES.M.B.H. - STAATLICH AKKREDITIERTE PRÜF- UND ÜBERWACHUNGSSTELLE



Gutachtliche Stellungnahme:

Auf Basis der unter „Grundlagen“ angeführten Verwaltungsakte, Richtlinien und Prüfberichte und unter Berücksichtigung der nachstehend angeführten Rahmenbedingungen kann die automatische Holzfeuerungsanlage mit externer Beschickung der Type „HP 02 BALANCE K“ und der Type „HP 02 BALANCE W“ der **Fa. Hapero Energietechnik GmbH** als **„geeignete Pelletsfeuerungsanlage zur Aufstellung außerhalb von Heizräumen (z.B. Wohnraum)“** eingestuft werden.

**IBS – INSTITUT FÜR BRANDSCHUTZTECHNIK
UND SICHERHEITSFORSCHUNG GESELLSCHAFT M.B.H.**
Staatlich akkreditierte Prüf- und Inspektionsstelle

Ing. J. STOCKINGER
Bereichsleiter Stv. der Prüfstelle

Ing. R. KIBLER
Sachbearbeiter

Dir. Stv. Ing. H. PEHERSTORFER
Zeichnungsberechtigter
Geschäftsführer

AUSZUG AUS DEM ORIGINAL PRÜFBERICHT. NACHZULESEN UNTER WWW.HAPERO.COM

TECHNICAL DATA

Technical data	15 kW Wohnraum	15 kW Keller	25 kW Keller	35 kW Keller
Description	Balance/W Typ HP 02	Balance/K Typ HP 02	HP 03/K Flash	HP 04/K Flash
Test standard	EN 14785	EN 303 - 5	EN 303 - 5	EN 303 - 5
Boiler class	3	3	3	3
Nominal value capacity [kW]	4,3 - 14,9	3,8 - 14,5	7,6 - 25	7,6 - 35
Degree of efficiency full load [%]	97,1	95,7	95,4	95,4
Degree of efficiency part load [%]	97,1	92,8	93,9	93,9
Performance distribution Room / Boiler [%]	20 / 80	0 / 100 10 / 90*	0 / 100	0 / 100
Adjustable boiler temperature [°C]	55 - 83	55 - 83	55 - 83	55 - 83
Minimal return temperature [°C]	25	25	25	25
Allowed operating pressure [bar]	3	3	3	3
CE Identification	CE	CE	CE	CE
Fuel type	nach DIN-51731	nach DIN-51731	nach DIN-51731	nach DIN-51731

Dimensions				
Overall width [mm]	540	540	580 + 310 (A-Box)	580 + 310 (A-Box)
Overall depth [mm]	600	600	750	750
Overall height[mm]	1140	1140	1830	1830
Height smoke tube access [mm]	940	940	1380	1380
Diameter smoke tube access [mm]	80	80	130	130
Height flow [mm]	185	185	1270	1270
Height return [mm]	185	185	1270	1270
Overall weight [kg]	158	158	330	330
Water content [L]	32	32	75	75
Storage tank [L]	45	45	90	90

Connections				
Flow [Toll]	3/4	3/4	5/4	5/4
Return [Toll]	3/4	3/4	5/4	5/4
Air vent of the boiler [Toll]	1/2	1/2	3/4	3/4

Test value				
$\Delta T = 20 \text{ K}$ [mbar]	5,0	5,0	5,0	5,0
Exhaust temperature at full load [°C]	115	115	140	140
Exhaust temperature at part load [°C]	70	70	80	80
Flue gas mass flow at full load [g/s]	8,7	7,9	21	21
Flue gas mass flow at part flow [g/s]	4,0	3,5	7,2	7,2
CO ₂ at full load [mg/Nm ³]	37	42	54	54
CO ₂ at part load [mg/Nm ³]	168	111	138	138
Min. supply pressure [mbar / Pa]	1	1	1	1
Max. supply pressure [mbar / Pa]	20	20	20	20

Electrical power consumption				
Electrical connection	230 V $\geq$ 13 A	230 V $\geq$ 13 A	230 V $\geq$ 13 A	230 V $\geq$ 13 A
Standby [W]	7	7	7	7
Suction turbine during the pellets filling process [W]	1.400	1.400	1.400	1.400
Ignition [W]	257	257	257	257
At 100 % Burner capacity [W]	38	38	47	47



BALANCE

