

PELLETSHEIZUNGEN



Instructions Touch-Display 1.0 (2/3)

Further instructions for your pellet boiler

Assembly instructions (1/3)

Service manual (3/3)





01.6 Important notice



**Before commissioning your boiler please ensure that the safety rules are read (page 2-5).
All guidelines must be fully understood before operating your new boiler.**

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Assembly instructions	HAPERO Assembly instructions (1/3) enclosed with your boiler	
Serviceheft	HAPERO Serviceheft (3/3) dem Pelletskessel beigelegt	



01.01 Used symbols and warnings

Symbol for additional information

Symbol for necessary action

Be aware of potential danger warnings at the beginning of action instructions.



Detail Informazione

You can find detailed Informazione on the specified pages.



Notice

Please follow instructions



Danger

Danger to life or severe injury



Danger

Danger to life or serve injury due to electrocution



Warning

Mild injury can occur



Warning

Slight property damage possible



KW15 – Model series

Notice valid only for 15kw models



KW25/35 Model series

Notice valid only for 25/35 kw models



02.01 Many thanks indeed,

that you have decided to purchase a Hapero product. **Before assembly and installation of your product it is essential to read the instructions carefully.**

Only by correct installation and assembly can damage be avoided. Your pellet boiler will look after you and the environment with optimal function for many years to come.

We can not be held liable for any changes after printing and subsequent printing errors.

We reserve the rights for changes.



The most up-to-date version is available to download at:

<http://www.hapero.com/service-center/downloads/>

02.02 General safety notice



Before installation and use of the pellet boiler the instruction manual needs to be read completely and thoroughly!

- The pellet boiler has to be assembled and installed by a fully licensed technician or tradesman. The pellets boiler is not suitable to be operated by persons (including children) with a physical, sensory or cognitive disability or inexperienced persons, unless a responsible person is present or has given correct instructions. Children have to be supervised at all times, the boiler is not a toy and does have hot surfaces.
- Please disconnect the boiler from the electric supply before carrying out any service work. The emergency switch or the cut-out switch has to be easily accessible. Operating the boiler with damaged wiring is prohibited. If the wiring is damaged, it is imperative to contact a fully licensed tradesman immediately to arrange a repair.
- To guarantee safety technical processes and functions, please only disconnect your pellets boiler in standby mode from the electrical supply.
- Please be aware that even if the pellet boiler is switched off, the mains electrical voltage (pumps, motors, mixers) is active.
- The pellet boiler in switched off mode carries out periodic cleaning and maintenance processes, so even during the summer months should the boiler not be continuously disconnected from the power supply.
- Please switch off the pellets boiler 45 minutes prior to store room filling. The store room filling must only be carried out when the boiler is in standby mode.
- Replacement of damaged or defect parts should only be original HAPERO spare parts.
- Removing, bypassing or overriding any safety and monitoring features is strictly prohibited.
- Only operate the boiler if it is in perfect technical condition.
- Promptly rectify all errors and damages to ensure full safety measures are in place.
- Electrical discharge can cause damage to electronic components.
- Prior to any service work being carried out, we advise that you touch earthed objects for effective static discharge.

02.03 Operating a pellets boiler in the living room



- Burning fuel releases thermal energy, which leads to a hot surface, doors, door handles, viewing glass, flue tube and front surface of the heating device. Refrain from touching those parts without the necessary safety equipment e.g. heat protective gloves. Children must be made aware of the potential danger and kept away at all times whilst boiler is in operating mode.
- Do not place any non-heat proof objects on or near the pellet boiler.
- Do not attempt to dry items of clothing on the pellet boiler.
- Do not place a clothes dryer or similar within the safety distance of the pellet boiler.
- FIRE HAZARD !!
- Do not use highly flammable or explosive substances in the same or adjacent room whilst the pellet boiler is in operation mode.
- Do not place objects on top of the boiler (air vent)
- Sufficient fresh air supply is essential at the assembly site, please ensure adequate ventilation.

02.04 Installation / commissioning



- In all cases the installation must comply with current Building Regulations, Local Authority Byelaws and other specifications or regulations as they affect the installation of the boiler.
- DIN VDE 0100 Guidelines for buildings of power plants upto 1000V
- DIN VDE 0105-100 Operation of electrical sites

It should be noted that the Building Regulations requirements may be met by adopting the relevant recommendations given in British Standards BS 8303, BS EN 15287-1:2007 as an alternative means to achieve an equivalent level of performance to that obtained following the guidance given in Approved Document J.

It is a legal requirement under England and Wales Building Regulations that the installation of the boiler is either carried out under Local Authority Building Control approval or is installed by a Competent Person.

Please note that in Scotland the installation work is subject to the Building Warrant scheme and must be granted a warrant upon completion to the satisfaction of the Local Authority verifier.

02.05 Electric power cut

Electric power cut – during heating mode

All operational functions will be restored after a short power cut. Should the duration of the power cut last longer, the pellet boiler will return to the start-up phase (cleaning, material supply, preparation, ignition and heating) as long as a temperature demand is requested.

Electric power cut – during the starting phase

After a power cut during the start-up phase the starting process will be repeated.

02.06 Maintenance of the pellet boiler

We recommend a maintenance contract between a Hapero certified specialist dealer and the end customer. The warranty of the pellet boiler becomes invalid if periodic maintenance is not carried out.

The correct maintenance increases the stability and the durability of your pellet boiler. It minimises the waste of valuable resources and protects our environment as well as your wallet.

During an automatic cleaning process of the pellet boiler squeaking or scratching noises may develop. These are mechanical sounds and do not indicate any faults or defects.

02.08 CE Identification



It can be confirmed, that the named and described products adhere to all the necessary safety guidelines, especially the guidelines required within the European Union concerning electromagnetic tolerance (89/336/ EWG) and the guidelines for modification of the CE-Description (93/68/EWG) as well as the rules concerning electromagnetic tolerance of devices dated 18.09.1998.

This declaration certifies the agreement of the named guidelines, but does not contain assurance of any quality features. The safety guidelines of the provided product documentation are to be followed. The attachments are part of this declaration.

02.09 Rules / Guidelines

The product as well as the control accessories correlate to the following regulations:

EG-guidelines

- 2004/108/EG electromagnetic tolerance (EMV guidelines)
- 2006/95/EG low voltage guidelines
- 2006/42/EG machinery and equipment guidelines

EN-rules

- EN 14785

02.10 Warranty / guarantee / commissioning / maintenance



Entitlement to warranty specifies the following:

- **Commissioning carried out through a HAPERO certified after sales service**
- **Completion and sending of commissioning confirmation**
- **Annual maintenance according to HAPERO specifications.**



Please ...

- fill in the enclosed confirmation of commissioning and send it to Hapero/Zhaus HAPERO Energietechnik GmbH.
- or fill in the data file „confirmation of commissioning.pdf“ and send it to ibn@hapero.com

... Your benefits!

1. free of charge hotline
2. fast and efficient after sales service
3. free of charge original HAPERO USB-stick
4. lifelong, free of charge software up-date

A new control system software can update features and functions with a USB stick. Data safety of adjusted boiler parameter

Fast transmission of all data

Fast and cost efficient optimising of your pellets boiler

Fast and cost efficient error analysis



Software up-date

The control system software can be up-dated with Plug & Easy (windows PC software)

www.plugandeasy.com



Plug & Easy

Always downloads the latest control system software and supports any software update.

Can convert the control system data (data-logger) into an Excel file.



What are wood pellets

Pellets are produced using chip wood from saw mills as well as waste timber supplied by the Forestry Commission. These natural products will be crushed, dried and pressed into pellets.



Low quality or illegal pellets fuel usage will impair the function of your pellets boiler and can invalidate your warranty, guarantee and the subsequent product liability.

Cinder accumulation!

Using contaminated pellets increases the risk of cinder accumulation in the burner.



WARNING:

Sufficient ventilation is essential before entering the store room area!



WARNING:

Waste products and liquids must not be burned in the pellets boiler!



The only fuel permitted for your pellets boiler are high quality controlled wood pellets, suitable according to **EN 14961-2 quality class A1**. Non-compliance invalidates all guarantees and warranties. Your own safety and the correct function of your device can not be assured.

Pellets storage



Due to the natural combination of resin and oxygen, carbon monoxide can build up. Sufficient ventilation in your pellets store room is essential.

Filling of an external pellets storage



Please switch off your pellets boiler 45 minutes prior to filling your pellets store. Non-compliance can put your own safety at risk and impair the correct function of your device. As a result, all warranties and guarantees will become invalid.

Specification for high quality pellets

Extract from the data record sheet for wood pellets according to EN-17225-2 A1 norm

Origin	- Stem wood - Chemically untreated wood
Diameter [mm]	6 (+ - 1)
Length [mm]	3,15 - 40 (max. 1% 45)
Wood dust percentage [%]	max. 1% (delivered)
Bulk weight [kg / m ³]	min. 600
Heating value per kg	4,6 - 5,3 kWh
Moisture content [%]	max. 10
Ash percentage [%]	max. 0,7
Ash melting temperature [°C]	>1200
Dust percentage [%]	max. 1 %
Mechanical consistency [%]	min. 97,5



02.01 Touch instructions general

- Your operating module is a Touch Display (resistive).
- You can operate the control by touching the glass disc.



Touch

With your finger press the glass surface of the touch display.



Please do not use any sharp objects to operate the Touch Display panel as you may scratch it.

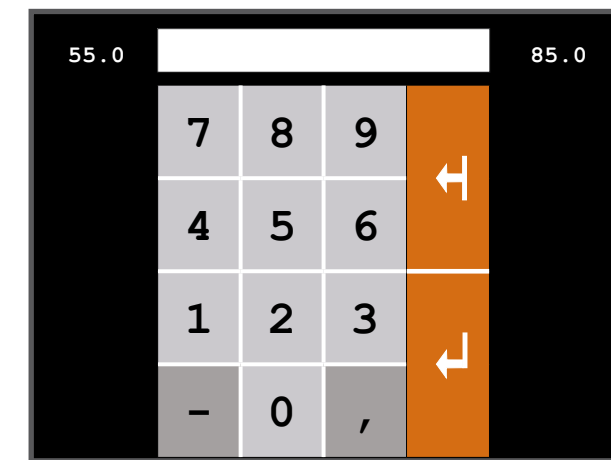
Non-compliance can invalidate your warranty.

04.00 Open window - data input

Touch

Parameter adjustment

04.01 Data input



04.03 Detail - description data input

Standard data

You can display the standard data by double clicking on „input data“

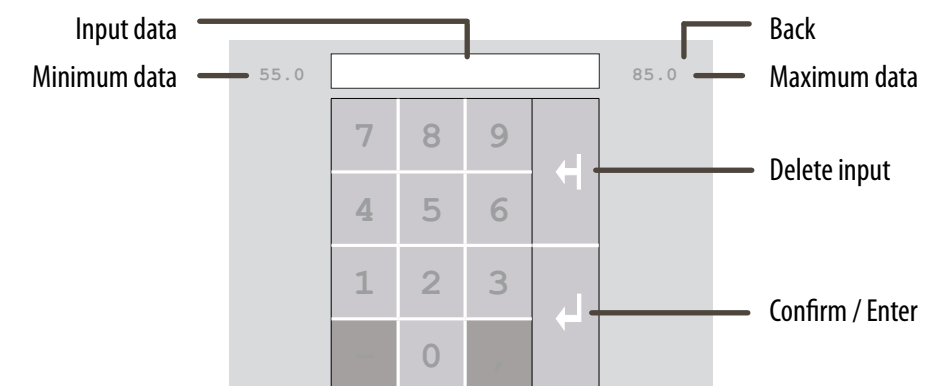
Minimum data

The smallest adjustable data

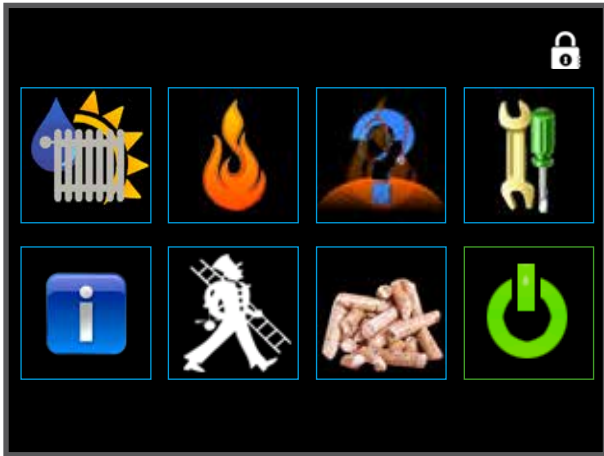
Maximum data

The largest adjustable data

04.04 Touch field / Functions / Message



05.00 Main menu



05.01 Detail - description menu operation

- Display panel / Button**

These are fields on the touch surface, touching activates a new platform/menu/function.
- Menu title**

The menu title displays the current menu.
- Status display/ Status field**

Status messages display the current boiler status. The status field colour is yellow and displays information, the colour red is a warning.
- Back/Finish/Reset**

In each submenu you can find on the top left side the return button.
In the main menu you can acknowledge an error message.
- Professional After Sales Service**

Input for the safety key for data protection.
Input of the key for extended parametrisation of HAPER's After Sales Service.

- **Child proof lock (Standard)**

Parametri can not be adjusted (key (0))
- **Operator platform**

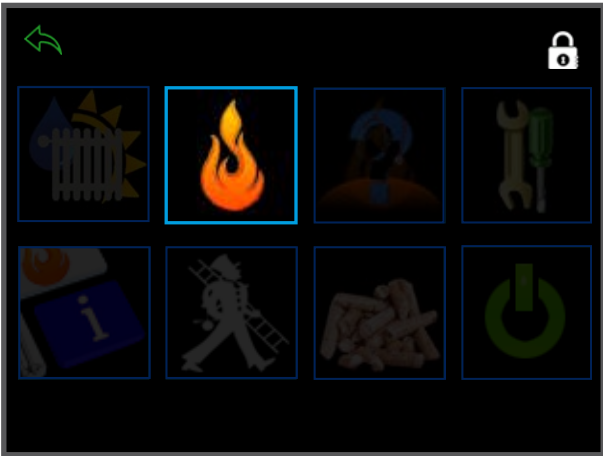
Customer Parametri and data protection can be activated. (key (1234))
- **Professional After Sales Service**

After Sales Service Codice (key (1508))

05.02 Touch field / Functions/ Messages



03 Boiler management



03.1 Content overview boiler management (burning/combustion)

Information menu	Page	10
Menu diagram	Page	11
Time adjustments (boiler times)	Page	12
Adjustments / Parameter input	Page	13
Diagrams	Page	15
Aggregate test / manual operation	Page	16

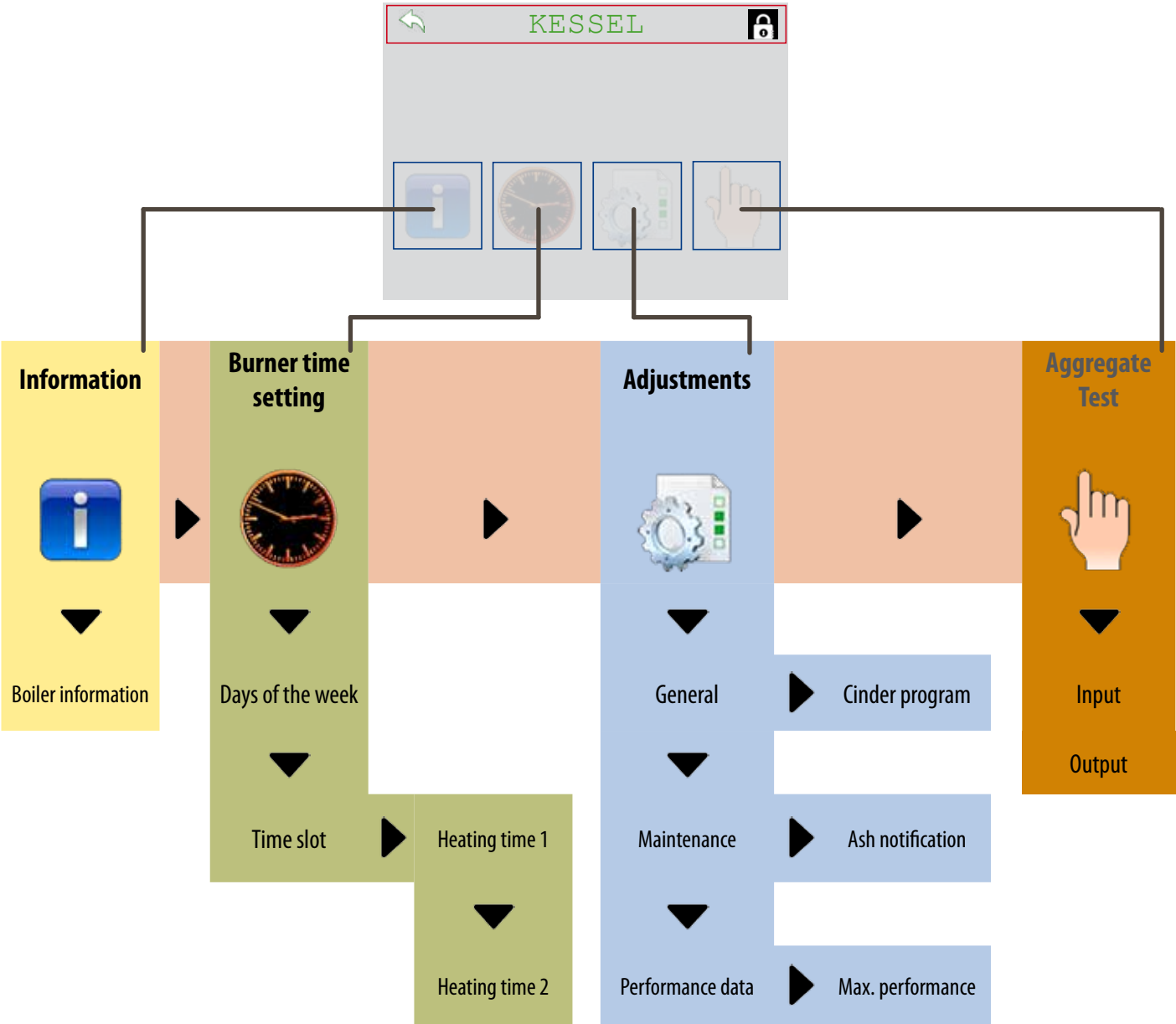
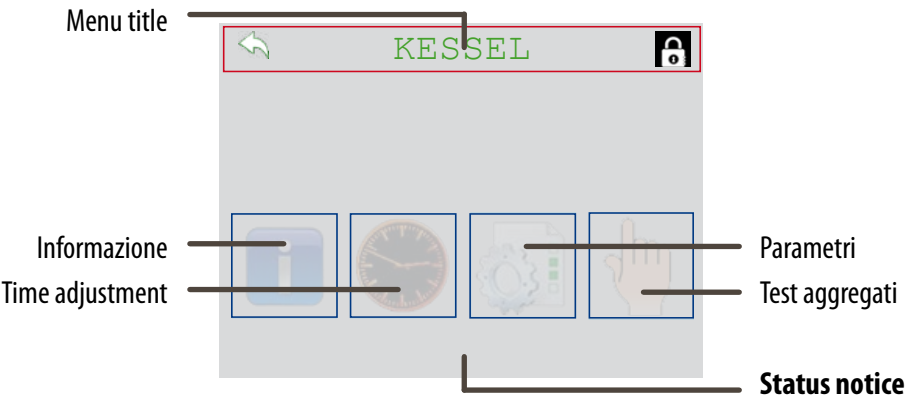
05 Menu option boiler management



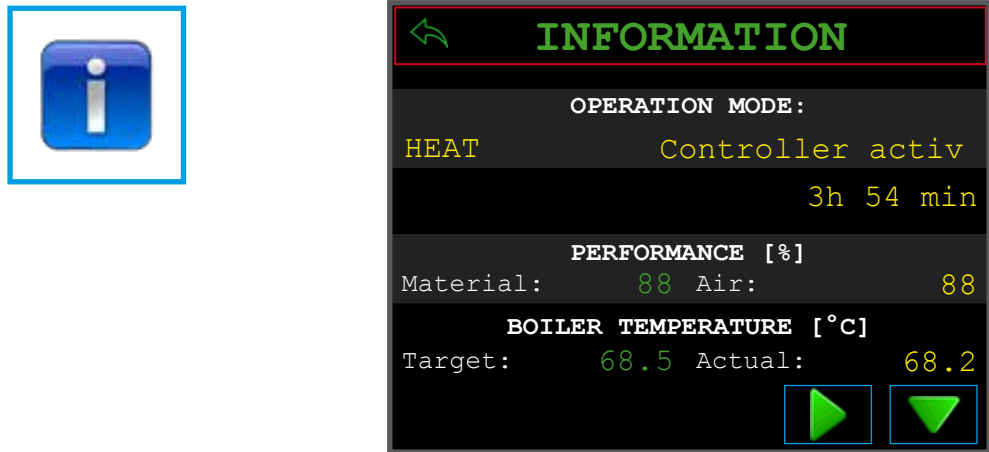
05.1 Detail - description boiler management

- Information**
Boiler status, temperatures, running time etc.
- Burner time setting**
Burner time setting
- Adjustments**
Parameter adjustments
- Aggregate test**
Motors, suction fan, airmass sensor, igniter etc.

05.2 Touch field / Functions / Messages



05
Menu option information



05.1
Detail - description information

Operating status

boiler:

STANDBY	(boiler waiting for a demand)
STARTING	(boiler starting the burning phase)
HEATING	(boiler is in heating mode)
STOP	(boiler ends the burning phase)
PELLETS SUCTION	(boiler automatically fills the daily container)
ERROR	(boiler requires intervention)

Burner:

Standby	(burner waiting for a demand)
Preparation	(burner prepares the starting phase)
Check air	(testing ash can / combustion chamber door closed)
Pre-filling	(fill burner with pellets)
Ignition detection	(burner is waiting for ignition detection)
Pre-burning	(ignition detected)
Ember build-up	(ember build-up)
Control active	(performance control)
Finish burning	(safe finish of the burning phase)
Grid open / closed	(end of the finish burning process)
Cleaning	(cleaning of the heat exchanger and burner is activated)

Performance [%]

material:

Performance of the conveyor auger

air:

Performance of the suction fan

Boiler temperatures [°C]

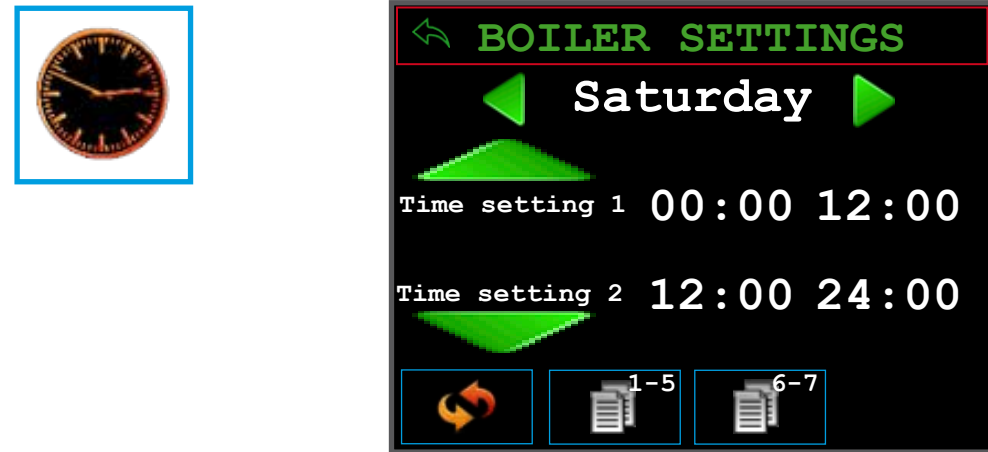
Target:

Calculated and adjusted target temperature of the boiler / energy management

Actual:

measured boiler temperature

05
Menu option burner time setting



05.1
Detail - description burner time setting

burner time setting 1 / burner time setting 2

Within this time slot the burner is enabled. Outside this time slot the burner ends his heating program. The energy management is not affected, pumps and mixers continue to work.

Free function relay 1 / free function relay 2

This time slot is activated by a free function relay.



Standard data

Uploads the standard data for that day



Copying 1 - 5

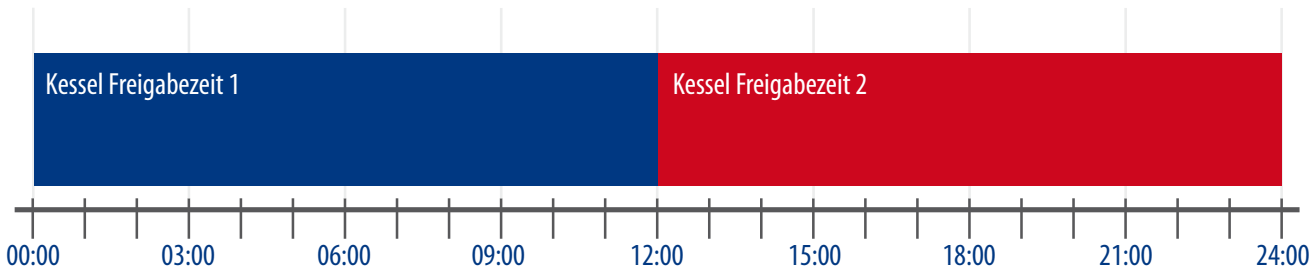
Copies that day Monday - Friday



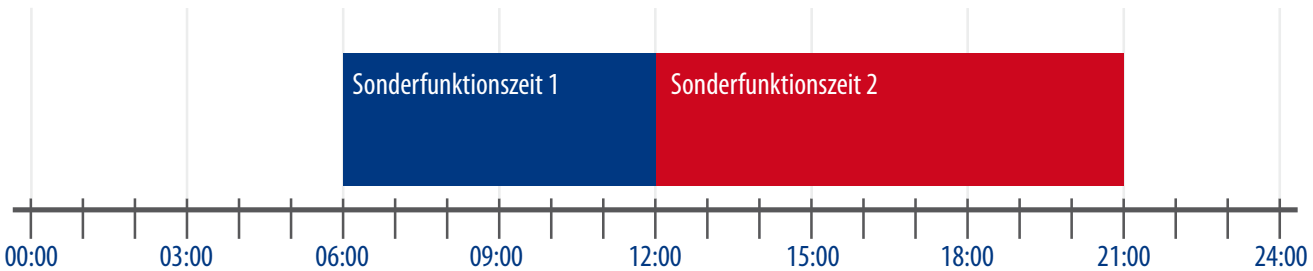
Copying 6 - 7

Copies that day Saturday and Sunday

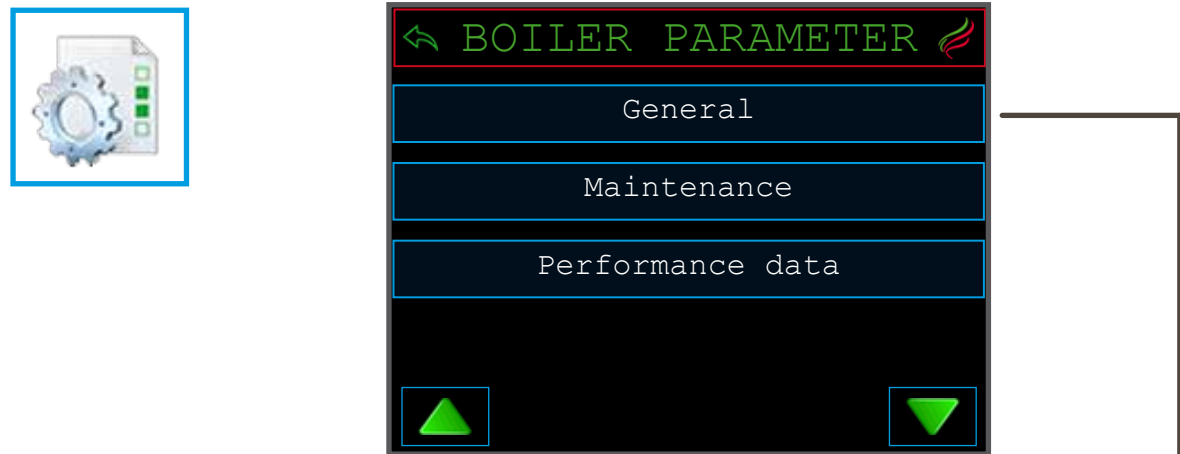
05.2
Time slots - burner time setting



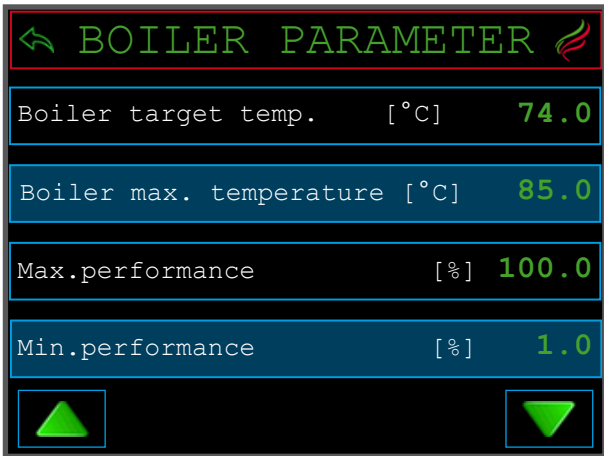
05.2
Time slots - free function relay



05
Menu option adjustments



05
Menu platform adjustments

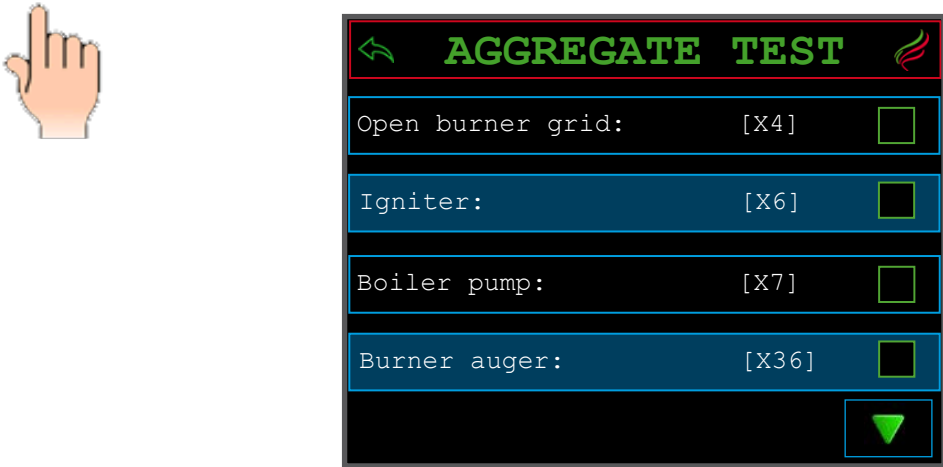


05.1
Detail - description adjustments



All adjustment data and parameter you can find on the following page

05
Menu option aggregate test



05.1
Detail - description aggregate test

- 

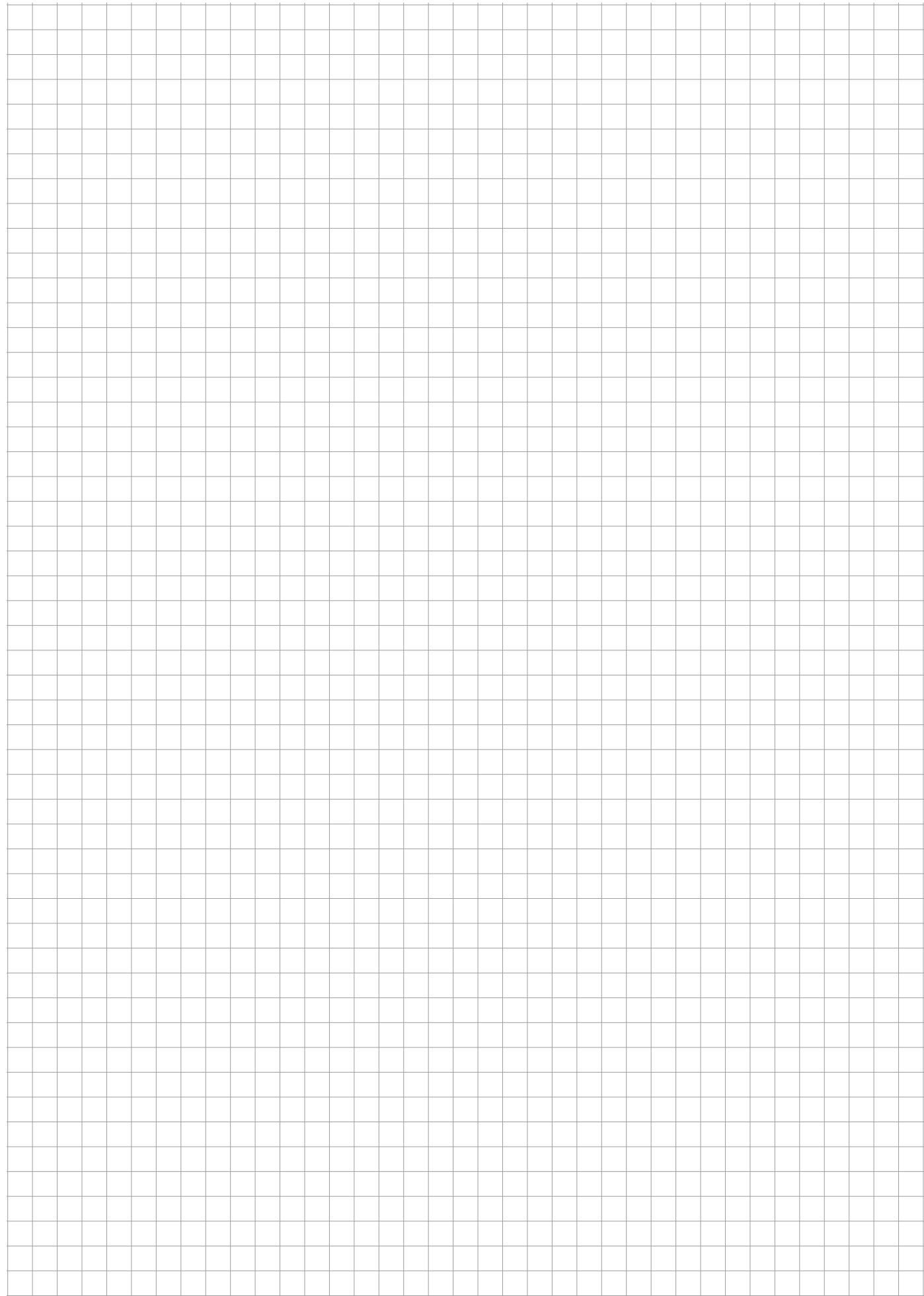
Safety
The aggregate test can only be activated in safe mode.
In standby mode the boiler must be at least in „boiler and burner status“.



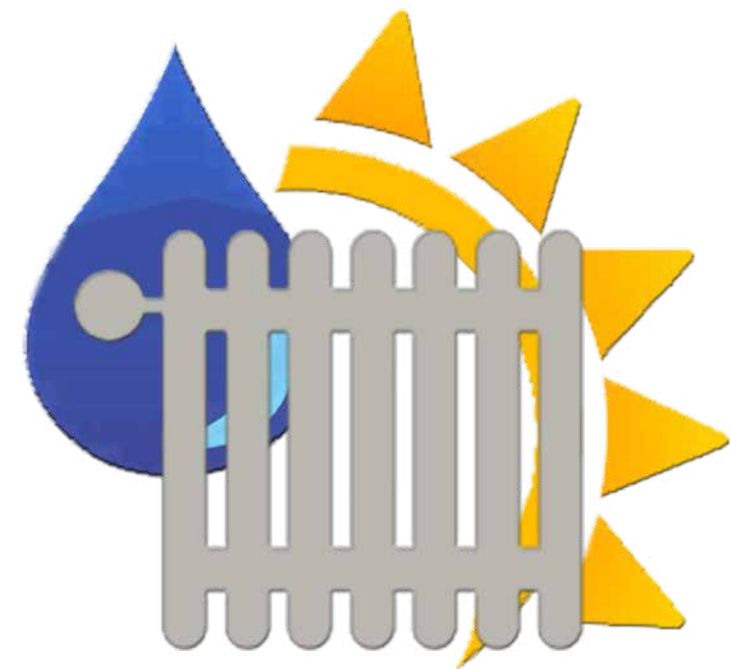
Switch mode
filled box = switched, frame = not switched

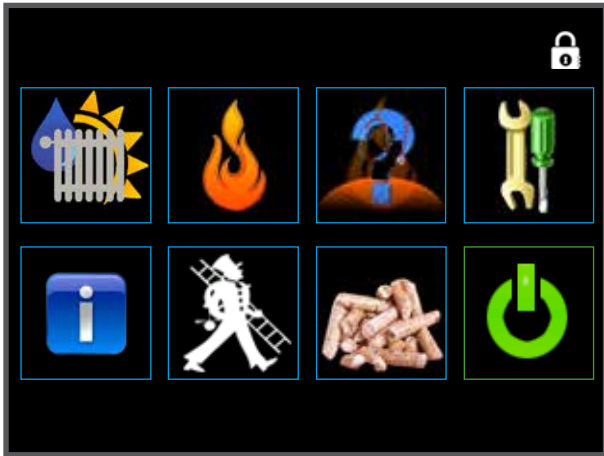


ATTENTION!
By switching aggregates the motors and ignition elements (igniter) are activated. This can lead to injury. Only to be carried out by fully installed cladding components.



Energy management



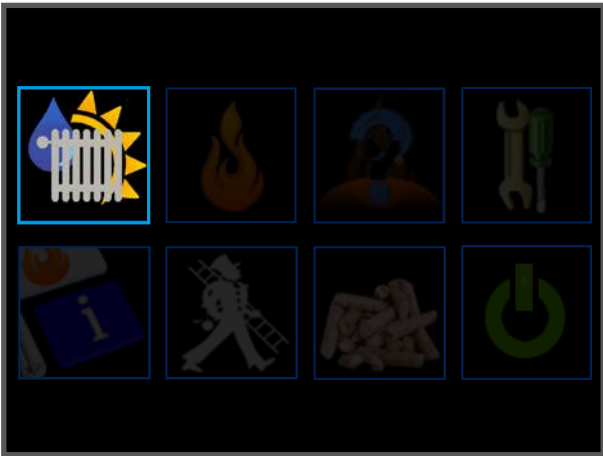
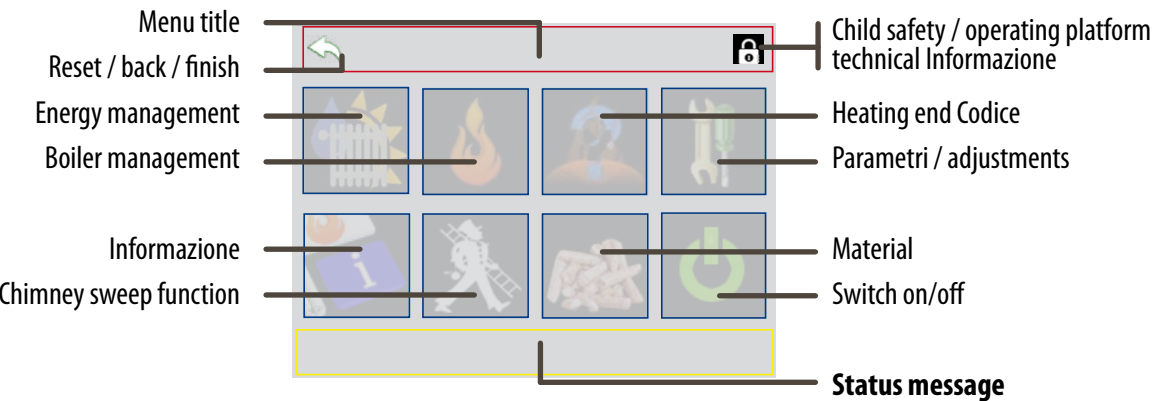


05.01 Detail - description menu instructions

- Display panel**
By touching these panel surfaces, you can activate a platform/menu/function as requested.
- Menu title**
This title is your current panel
- Status message / status field**
Status messages inform you about the current boiler status. The status panel is yellow and displays information. The colour red indicates a warning.
- Return / back / finish /reset**
In each sub-menu you can find on the top left handside the return button. In the main menu you can read an error message.
- Technical information**
Input for the safety key for data protection.
Input of key for extended parametrisation for HAPER0 technical support.

- **Child safety (standard)**
Parameters can not be changed (key (0))
- **Operating platform**
Customer Parametri and data protection can be carried out (key(1234))
- **Technical Informazione**
Technical Informazione Codice (key (1508))

05.02 Touch panels / functions / messages



Abbild: „Kessel“ Auswahl HAPER0 Touch 1.0

03.1 Content overview heating circuit

Information menu	Page	20
Menu diagram heating circuit	Page	11
Time adjustments (heating times)	Page	12
Adjustments / parameter input	Page	13
Diagrams	Page	15
Aggregate test / manual operation	Page	16

03.1 Content overview domestic hot water system

Information menu	Page	20
Menu diagram domestic hot water system	Page	11
Time adjustments (hot water boiler loading times)	Page	12
Adjustments / parameter input	Page	13
Diagrams	Page	15
Aggregate test / manual operation	Page	16

05

Menu option/module option



05.1

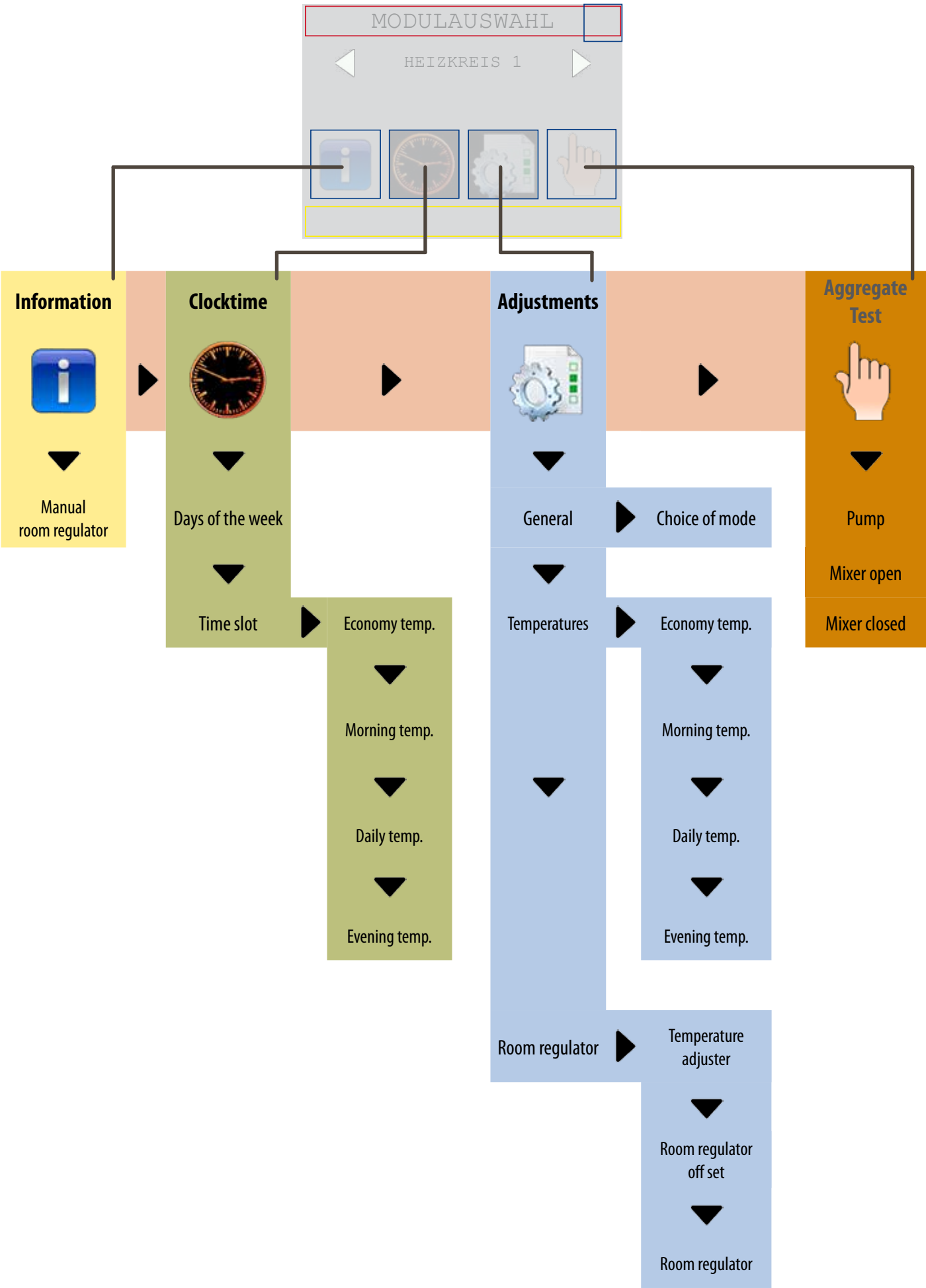
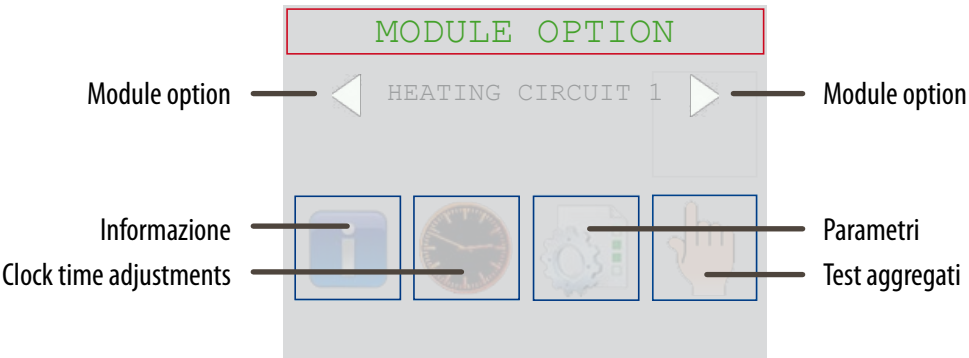
Detail - description boiler management



- Module option**
 Choose the module (heating circuit, domestic hot water tank)
- Information**
 Boiler status, temperatures, running times etc.
- Burner time setting**
 Time setting for burner
- Adjustments**
 Parameter adjustments
- Aggregate test**
 Motors, suction draught fan, air mass sensor, igniter etc.

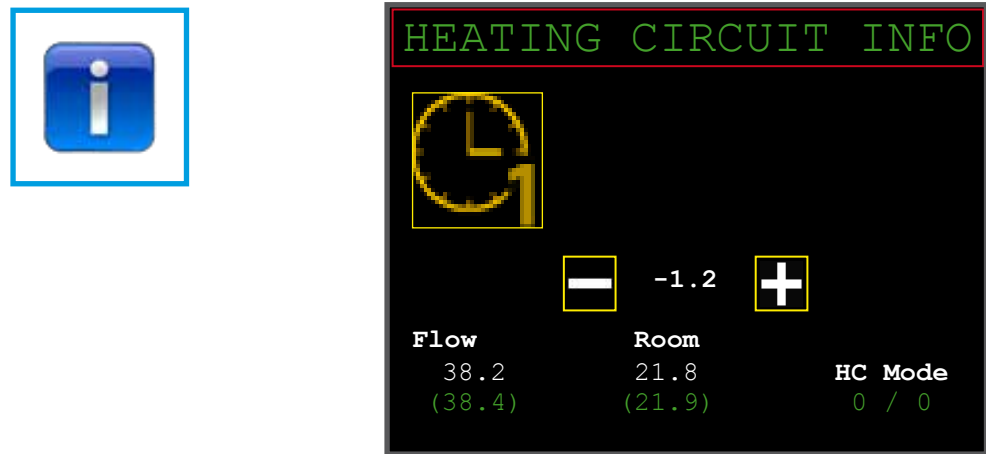
05.2

Touch panel / function / message



05

Menu option heating circuit information



Abbild: Hauptmenü HAPER0 Touch 1.0

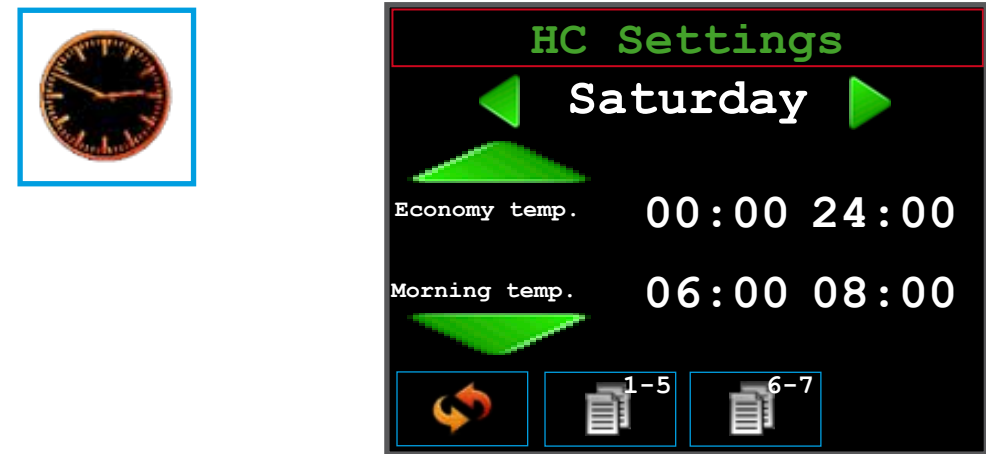
05.1

Detail - description menu panel (module option)

- Room regulator mode**
When using a room regulator the adjusted position will be displayed. If you do not use a room regulator you can choose the required position per touch.
- Room temperature adjuster**
Choose the required room temperature. Please be aware that this corrected data is for all temperatures connected to this heating circuit.
- Pre-flow temperature**
The target and actual temperature is displayed.
- Room temperature**
The target and actual temperature is displayed, if a room regulator is being used.

05

Menu option time programme



Abbild: Hauptmenü BTouch 1.0

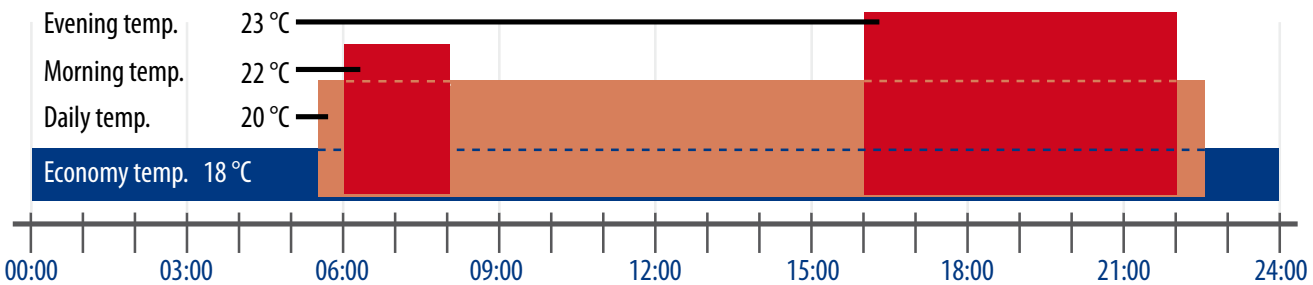
05.1

Detail - description menu slot (module option)

-  **Option time programme 1**
Activate the time programme 1 per room regulator or in the menu panel heating circuit information (standard times page 33)
-  **Option time programme 2**
Activate the time programme 1 per room regulator or in the menu panel heating circuit information (standard times page 33)
-  **Standard data**
Loads the standard data for this day
-  **Copying 1 - 5**
Copies this day to Monday - Friday
-  **Copying 6 - 7**
Copies this day to Saturday and Sunday

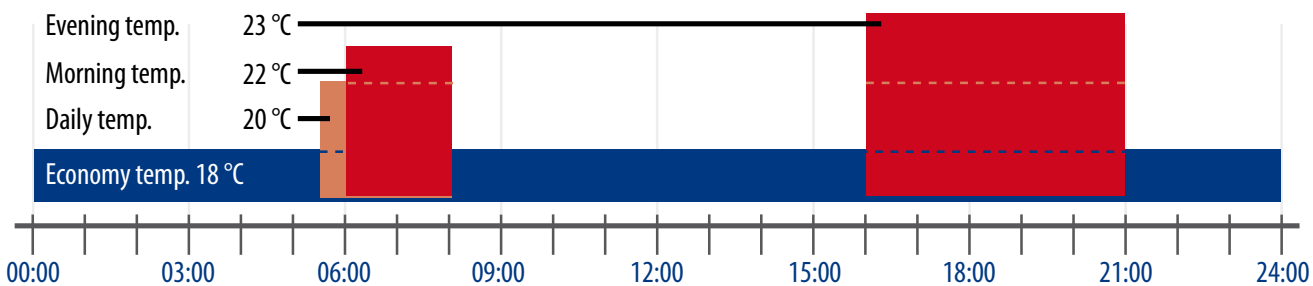
05.2

Time programme 1

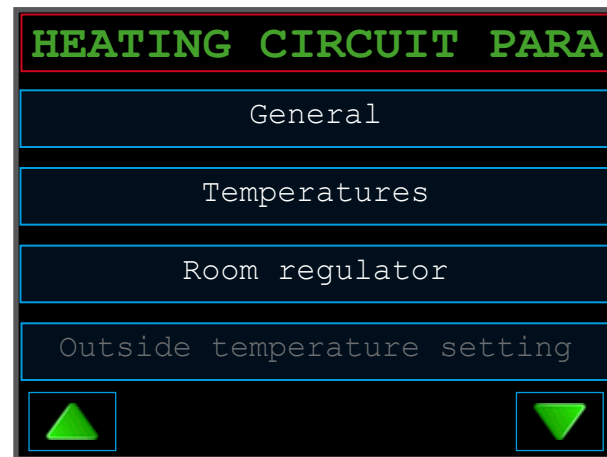


05.2

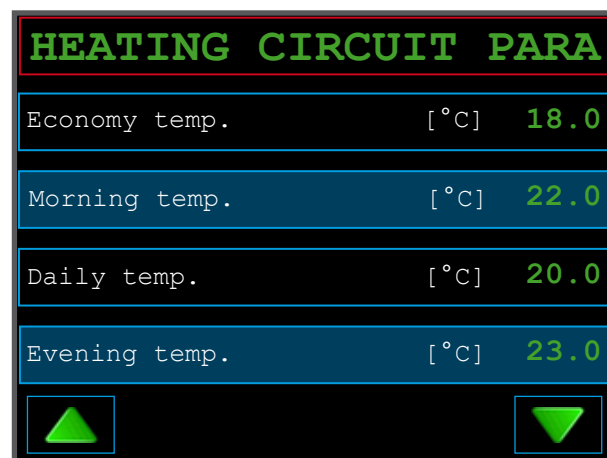
Time programme 2



05 Menu option parameter option



05 Menu platform parameter option

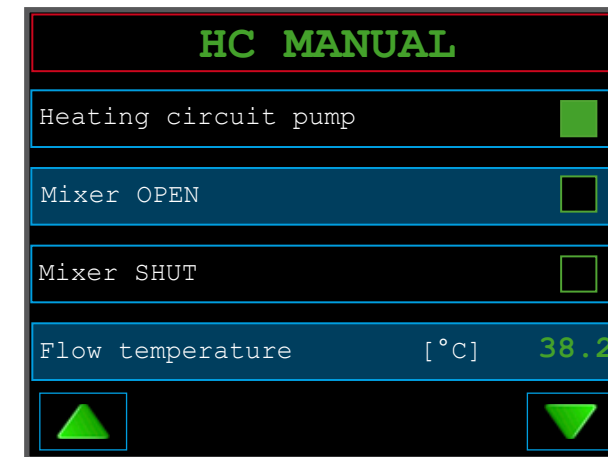
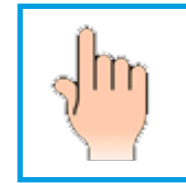


05.1 Detail - description adjustments



All adjustment data and parameter you will find under the page mentioned below

05 Menu option manual mode / Aggregate test



Abbild: Parametermenü B-Touch 1.0

05.1 Detail - description menu panel (manual mode/ aggregate test)

General

The manual function (aggregate test) can be carried out any time.



Switch status

filled square = connected, unfilled square = not connected

Heating circuit pump

Switches the relay for the heating circuit pump.

Mixer OPEN

Switches the relay for the mixer to open, if mixer was closed, then this status will finish.

Mixer CLOSED

Switches the relay for the mixer closed, if mixer was open, then this status will finish.

Pre-flow temperature

The current pre-flow temperature is displayed.

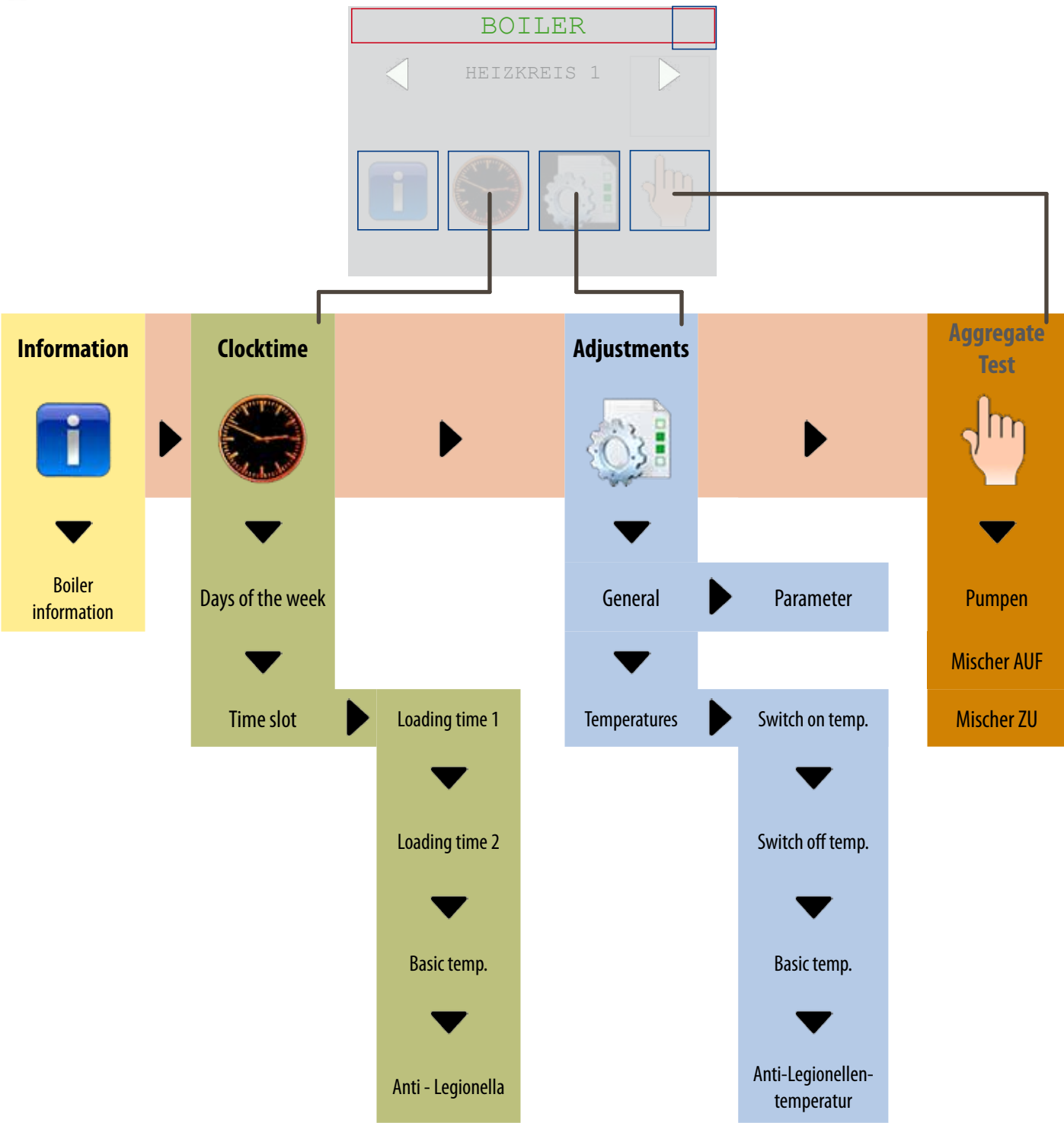
05 Menu option / domestic hot water system



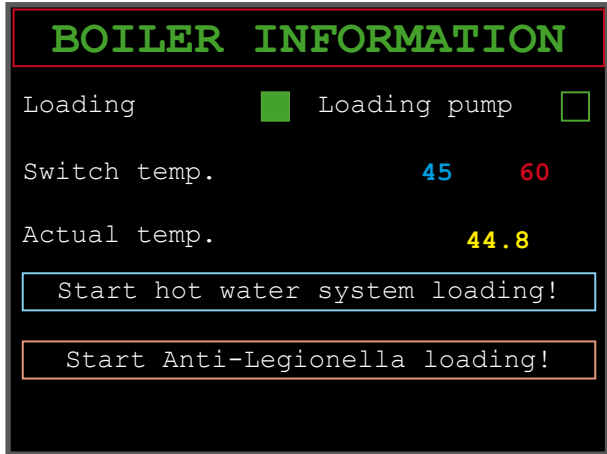
05.1 Detail - description boiler management



- Module option**
Choose the modules (heating circuit, domestic hot water system)
- Information**
Boiler status, temperatures, running times etc.
- Burner time setting**
Burner time setting
- Adjustments**
Parameter adjustments
- Aggregate test**
Motors, suction draught fan, air mass sensor, igniter etc.



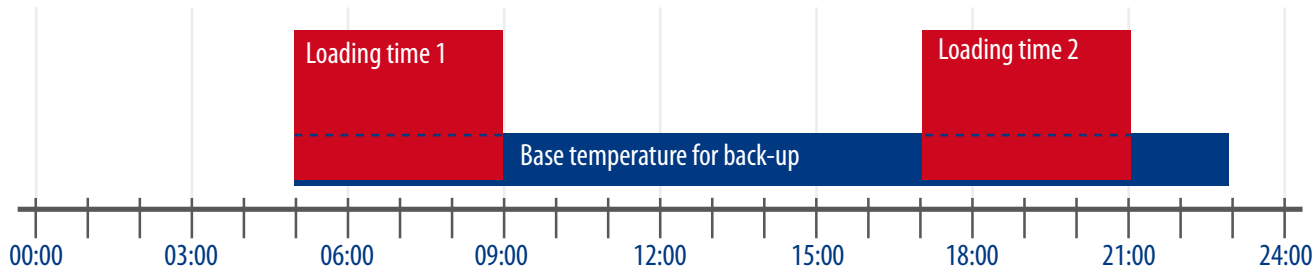
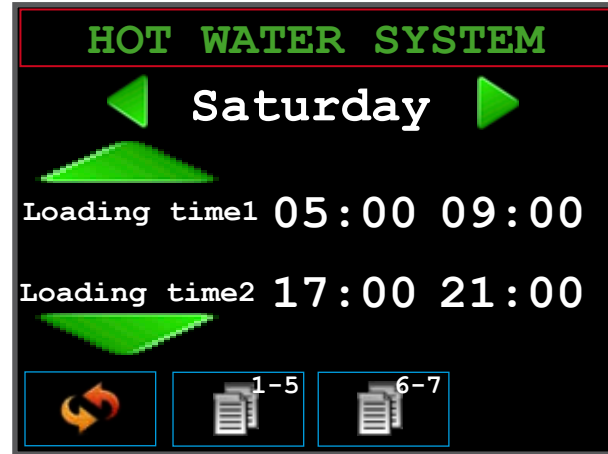
05 Menu option information



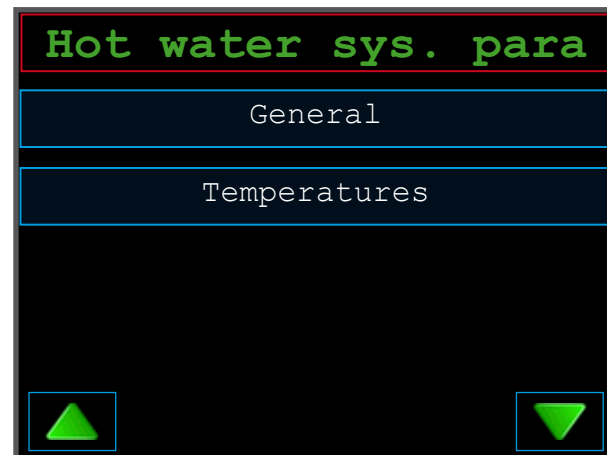
Abbild: Hauptmenü HAPERO Touch 1.0

05.1 Detail - description menu panel (module option)

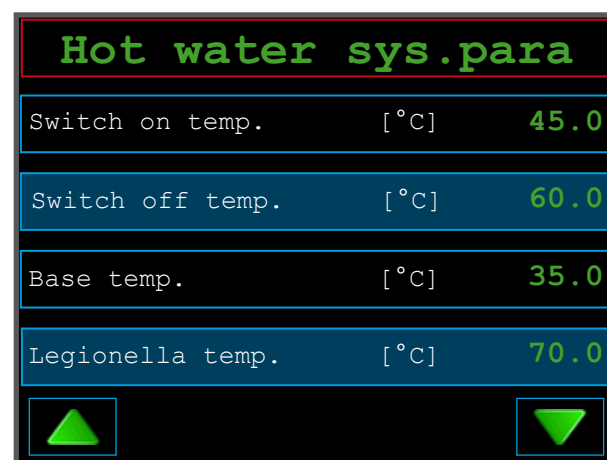
Loading function



05 Menu platform parameter option



05 Menu platform parameter option

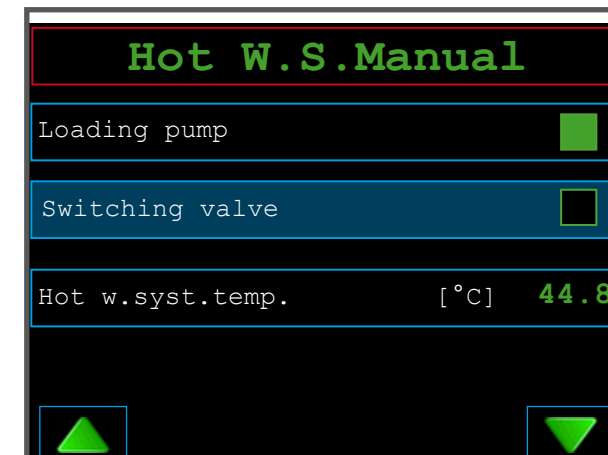
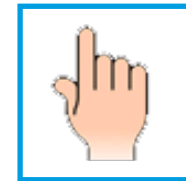


05.1 Detail - description adjustments

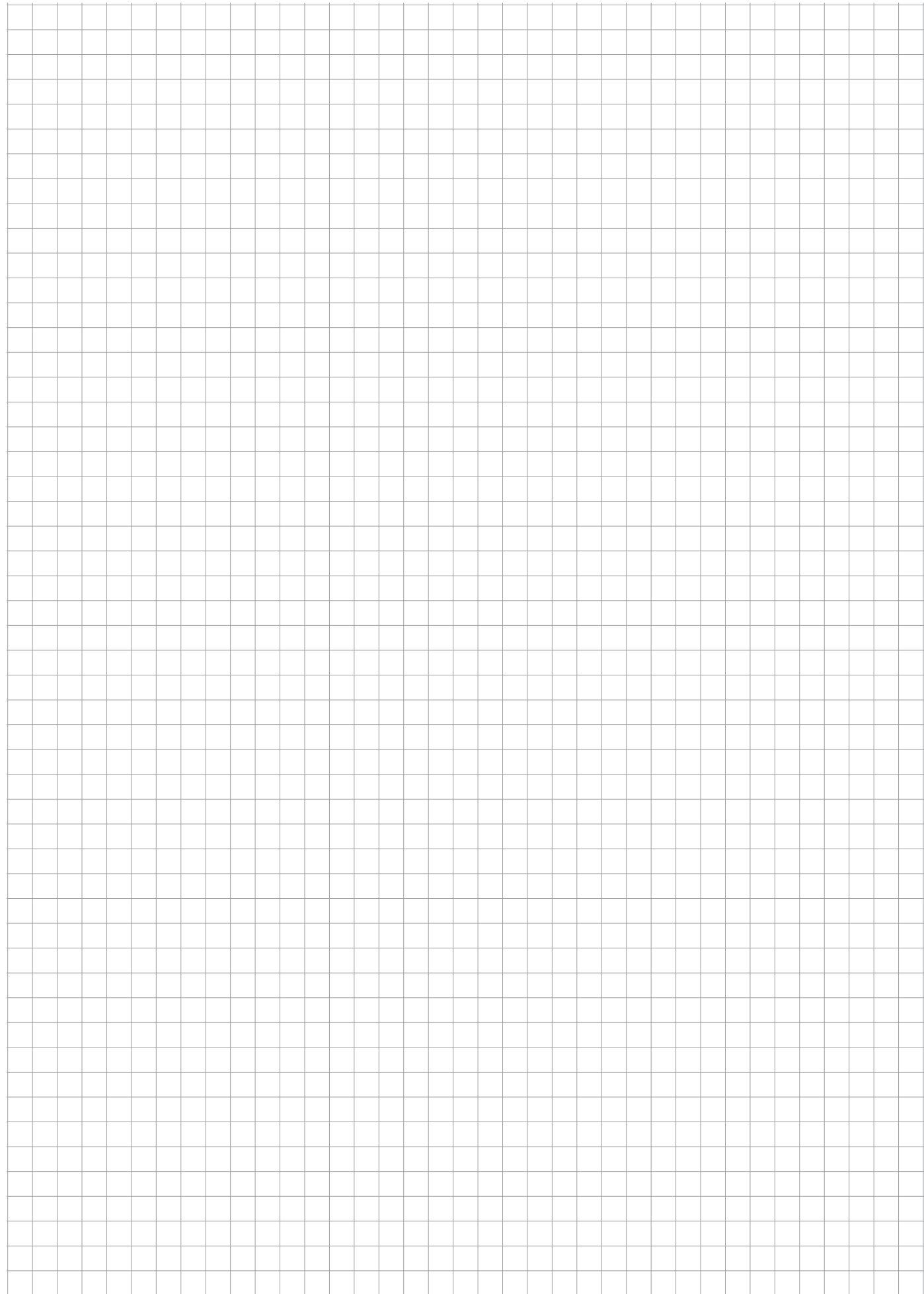


All adjustment data and parameter

05 Menu option manual mode / aggregate test



Abbild: Parametermenü B-Touch 1.0

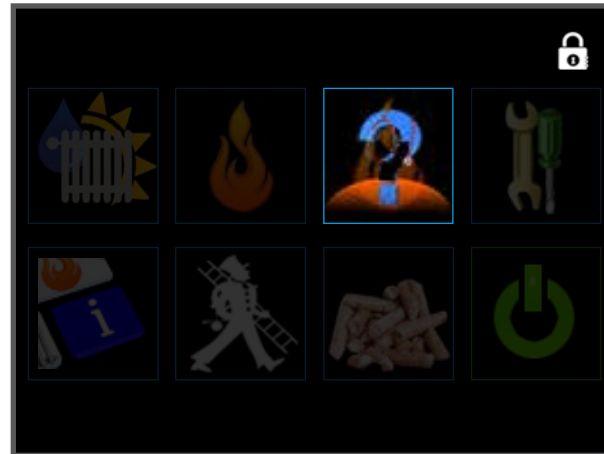


General

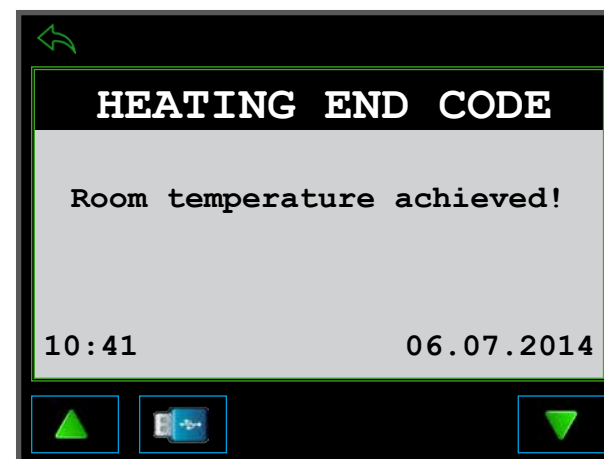




14.00 Menu option - heating end - code



14.01 Display heating end - code



14.02 Detail - description heating end code

Heating end code

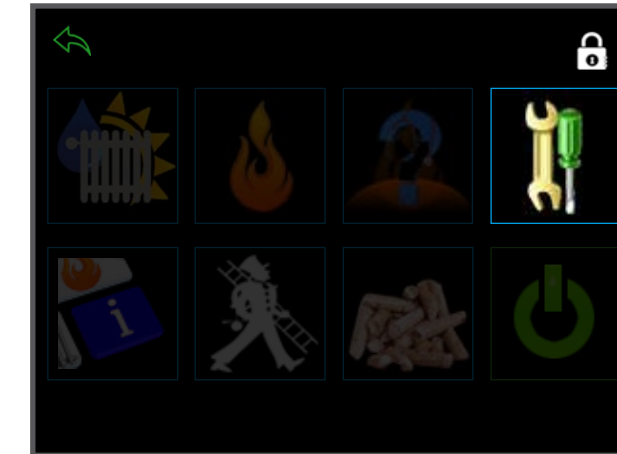
The heating end code describes, why the boiler ended the last heating process. This code is not valid for the actual heating process.

Data logging

After connecting the USB stick, you are able to copy and save the heating process information relating to the heating end code. (system analysis)



15.00 Menu option - service



15.01 Menu platform service



15.02 Detail - description service platform

Service platform 1



Change viewing glass

Activate the viewing glass change- Program how to release viewing glass for cleaning purposes. Further details you will find on page 40.



Ash removal

Activate the ash removal programme to unlock and empty the ash can. Further details you will find on page 41.



Data protection platform

Save all adjusted parameter onto a USB-stick and re-set all the adjusted parameter from the USB-stick or before a boiler commissioning. For data protection please activate the security key 1234 in „After Sales“



Parametri data protection

Loads all Parametri readings from the boiler onto a SD-Memory card.



Parametri data protection re-set

Loads all Parametri readings from the SD-Memory card to the boiler.



Parametri data protection using a HAPERO-USB stick

Loads all Parametri from the boiler onto a USB-stick.



Parametri data protection re-set

Loads all Parametri from the USB-stick to the boiler



2 Service platform
activate the second service platform



Clocktime and date
Set clocktime and date



System info
Current software and hardware versions



Aggregate test
See next page



Automatic configuration of the energy management
This function is explained on page 58 and can only be activated with an After Sales code.

Service platform 2



Lambda sensor - calibration
Initiate the automatic Lambda sensor calibration by following the instructions on the display.



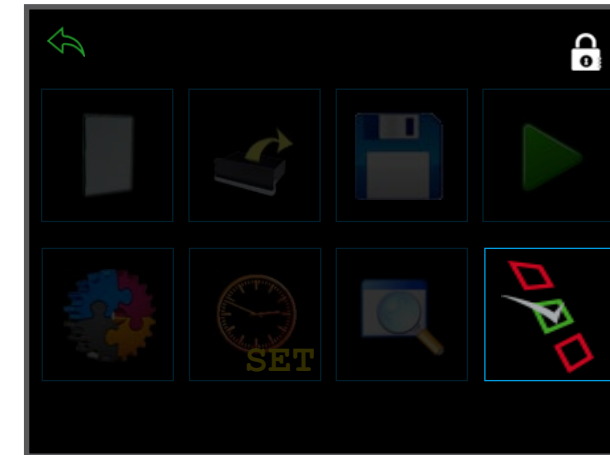
Language option
Choose your preferred language



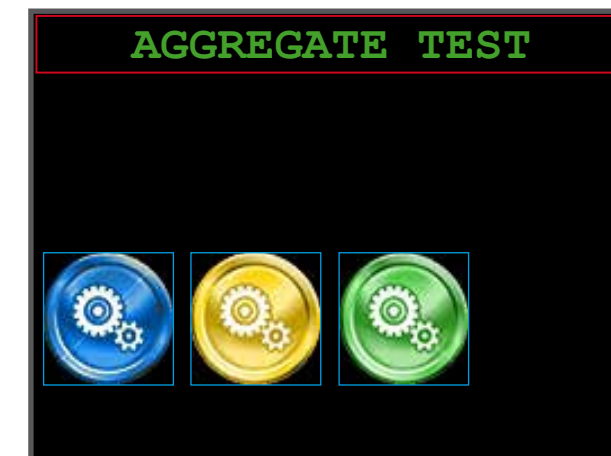
Boiler service
Confirmation that a boiler service has been carried out.



16.00 Menu option - aggregate test



16.01 Menu option test groups



16.02 Detail - description aggregate test



Display of all analogue inputs
temperatures, air mass sensors, 0-10 Volt, etc.



Display of all digital inputs
filling level sensor, external contact, multifunction sensor etc.



Display of all digital outputs
motors, grate gear drive, igniter, etc.



Aggregate test After Sales Service
This aggregate test can only be carried out with an After Sales Service code.



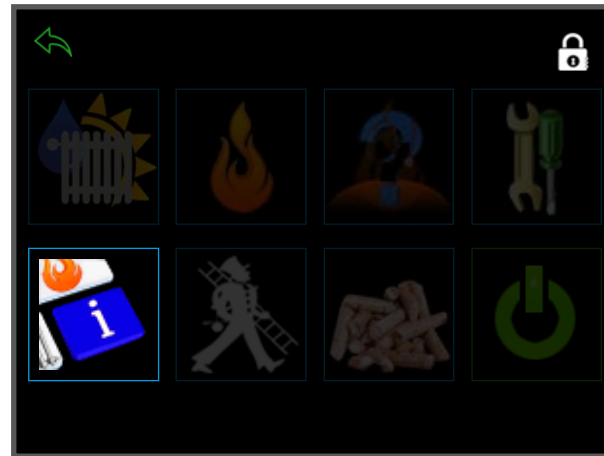
Switching mode digital input
filled in square = connected, not filled in = not connected



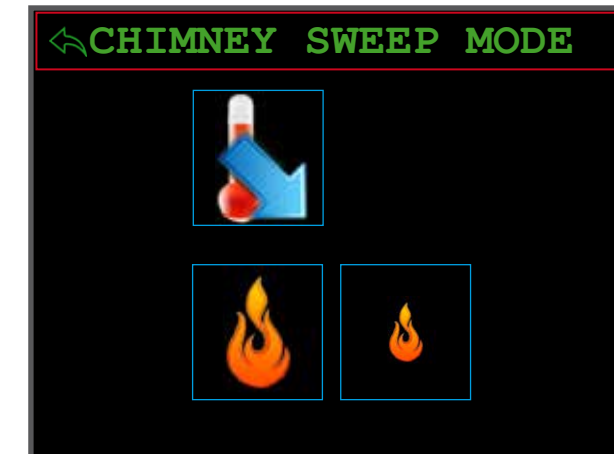
Switching mode digital output
filled in square = connected, not filled in = not connected



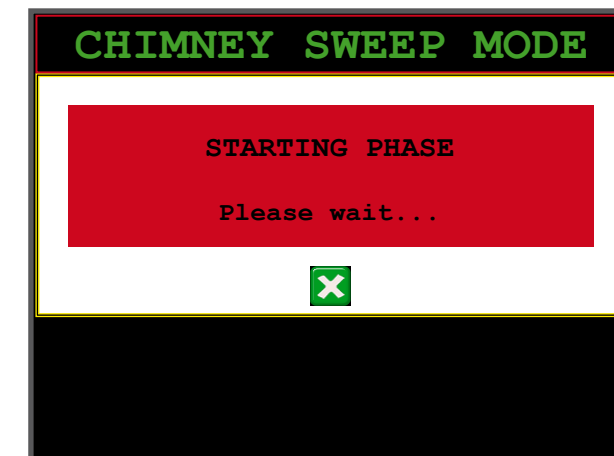
15.00 Menu option - service



16.01 Menu chimney sweep function



16.01 Menu enabling the reading process



16.02 Detail - description chimney sweep mode



Preparation

The boiler ends the heating programme, distributes any excess energy from the buffer if applicable. Whilst the chimney sweep function is being carried out, increased radiator and hot water system temperatures are possible.



Large flame = method for reading nominal load

Small flame = method for reading part load



READING

A reading (emission / dust) must only be carried out if „READING & CARRY OUT NOW“ is displayed.



Interruption

Interruption of the reading method but carry on with the chimney sweep mode.

An interruption of the chimney sweep mode



05 Menu option boiler management

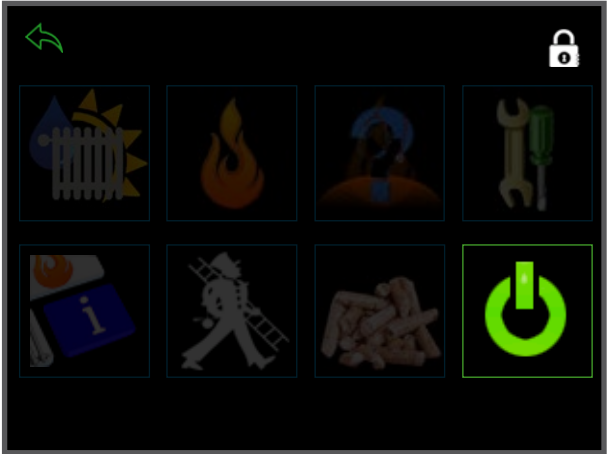


05.1 Detail - description boiler management

- Information**
fill quantity daily container / ash tray / ash box
- Burner setting time**
Pellets fill time
- Adjustments**
Parameter adjustments
- Aggregate test**
Pellets feeding system
- Auger screw filling**
Fill auger screw with pellets when dailer container is empty (after ignition error)



15.00 Menu option - service



20.01 Detail - description switch on and off

- Switch on**
The boiler runs until room target temperature is reached.
- Switching off**
The boiler ends his heating programme and does not re-start
-  **Anti freeze function**
Only when boiler is switched on
 - when room regulator is switched off



80.00 Error message

A malfunction or error requires attention.
Follow the instructions on the Touch Display.
Rectify the malfunction and re-set.



When an error message is displayed (After Sales Service symbol) please contact your After Sales Service without further delay.

- Max. pellets suction time exceeded.
- Duration pre-burning phase exceeded.
- No ignition !
- (START) air quantity not OK !
- (HEATING) air quantity not OK !
- Daily container flap open!
- Temperature in pellets tube too high!
- Combustion chamber temperatures for too long extremely high!
- Burning stop
-  Burner auger continued duration!
-  Sensor break combustion room temperature!
-  Sensor break pellets tube!
-  Air mass sensor defect!
-  Lambda sensor defect!
-  No connection to the mains supply!

80.01 Re-setting of error message



81.00 Window - service



81.01 Detail - description service (follow display text)

-  Advance notice
-  Currently due
-  Time period exceeded



Commissioning of the boiler



05.1 Commissioning

Procedure for a professional commissioning
We recommend the following steps on our checklist to ensure a correct commissioning.

Checklist for commissioning			Page	■
Carry out assembly according to assembly instructions in leaflet 1/3				
1.	Air supply:	Purification of air supply for combustion air	11	☐
2.	Minimum gaps:	Establish assembly site (safety and minimum gaps)	13	☐
3.	Flue connection:	Carry out flue connection	12	☐
4.	Hydraulic:	Connect hydraulically, fill and ventilate	16	☐
5.	Electricity supply:	Prepare electricity supply and connect pellet boiler	18	☐
6.	Pellets feeding system:	Prepare pellets feeding system mechanically and activate power supply	20	☐
7.	Energy management:	Install starter set energy management, wiring of CAN BUS connection	23	☐
8.		wiring of heating circuit, domestic hot water system, buffer and solar	25	☐
9.	Electricity supply:	Activate the heating switch		
Inbetriebnahme laut Bedienungsanleitung Heft 2/3 durchführen				
10.	Boiler commissioning	Carry out commissioning incl. aggregate test	44	☐
11.	Energy management Commissioning	Carry out commissioning incl. aggregate test	44	☐
12.	Control	Switch on heating and check combustion and energy management		☐
13.	Enclosed	Operating manual / assembly instructions		☐
14.	Training	Operators or representatives procedure store room filling		☐
		Operators or representatives for necessary inspection and cleaning tasks		☐
		Operators or representatives for control system (adjustments /customer- /ope- rating platform		☐
24.	Adjustment	Parameter of customer platform per customer's request		☐
25.	Enclosed	HAPERO Service manual		☐
26.	Confirmation	Confirmation of the commissioning in the service manual (guarantee)		☐

1.	Page
2.	Page
3.	Page
4.	Page
5.	Page
6.	Page
7.	Page
8.	Page
	Page
	Page
	Page

Boiler commissioning

01 Safety rules and guidelines

Please follow all safety guidelines from page 2-3.

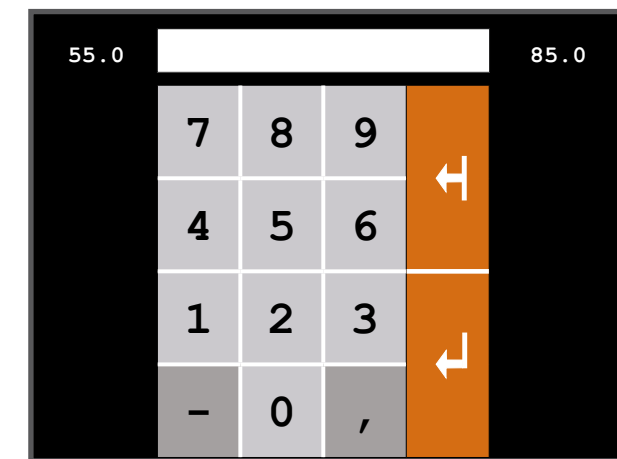
Non compliance of these guidelines may invalidate all warranties and guarantees and could affect the function of your boiler and compromise your safety.

01 Electronic parts and components

Electrical parts e.g. main board, heating circuit or buffer strips must not be exposed to water or any form of liquids.

Should any water/liquid damage occur, all guarantees and warranties become invalid with immediate effect. The function and safety of the boiler after water/liquid damage can no longer be guaranteed and the affected components must be replaced without delay.

07 Access code



01 Code



Child safety protection (standard)

Parameters can not be altered

0



Operator platform

Customer parameter and data re-set protection can be activated

1234



After Sales Service

After Sales Service code

1508



Guided boiler commissioning

👉 This procedure re-sets all boiler parameters / adjustment data back to standard data

660401

90.00 Start / access

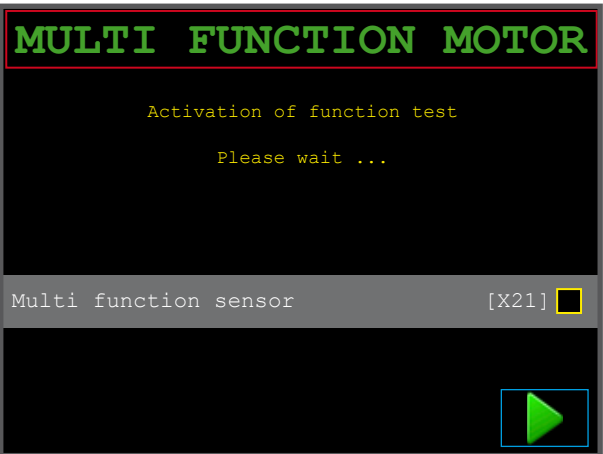


Code
Please enter here code number 660104.

90.01 Commissioning request



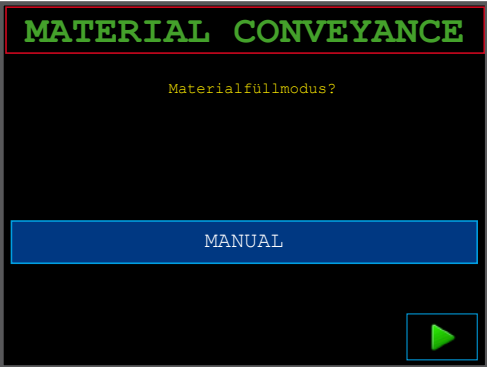
90.02 Checking multifunction sensor



90.03 Multifunction sensor

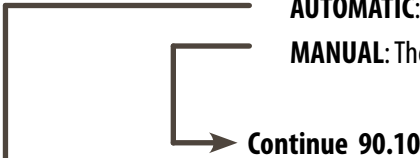
Please wait until the identification of the multifunction sensor and the positioning of the multifunction motor is completed.

90.04 Choice of material-filling mode

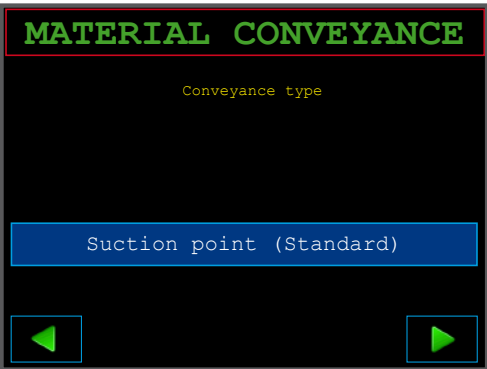


90.05 Material filling mode

Change your choice: Press choice to change.
AUTOMATIC: The pellets supply to the daily container is automatic.
MANUAL: The pellets filling to the daily container needs to be done manually.



90.06 Choice of pellets feeding system



90.07 Choice of room pellets feeding system

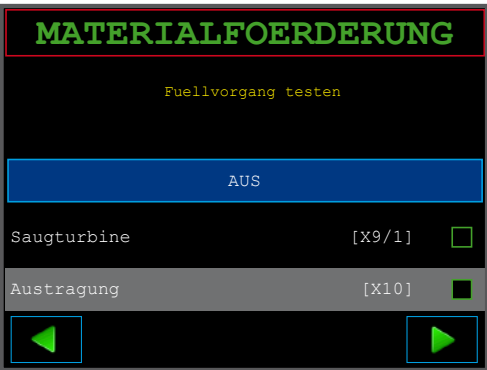
Suction point (Standard)
Auger feeding capacity < 4 kg
Auger feeding capacity > 4 kg

Mole*
 * Mole is a product of company Schellinger

Suitable for HAPER0 suction point
 Suitable for HAPER0 auger screw
 For auger screws with higher conveyance performance
 oder suction hose lengths > 20 meters
 Break/conveyance time ratio

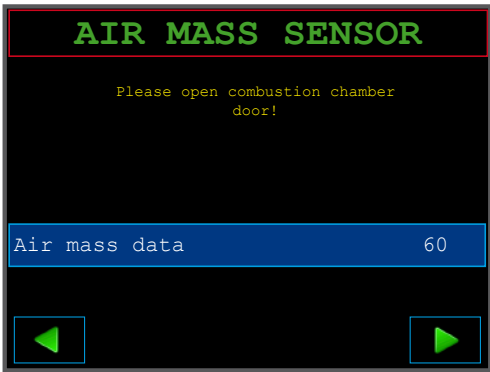
90.08 Test room feeding system / material conveyance

Saugturbine
Beachten Sie, dass die Unterdrucksicherung erst freigegeben werden muss (Dauer ca. 2 Minuten)



EIN
Testet die Austragung (Freigabe Unterdrucksicherung, Saugturbine **und** Austragungsschnecke)

90.10 Air mass sensor test

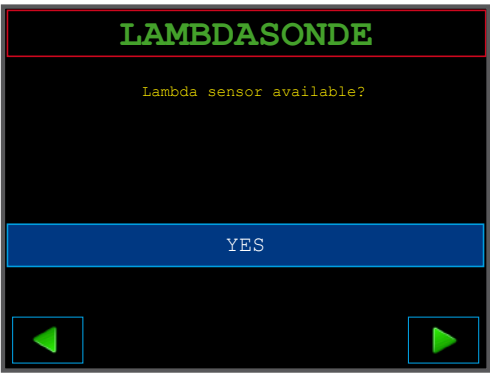


90.11 Data platform



Open combustion chamber door	ventilator 0%	Data range should be between 50 and 70
Closed combustion chamber door	ventilator 0%	Data range should be between 70 and 105
Closed combustion chamber door	ventilator 100%	Data should exceed 245

90.14 Lambda sensor test / rest oxygen



90.15 Lambda sensor choice

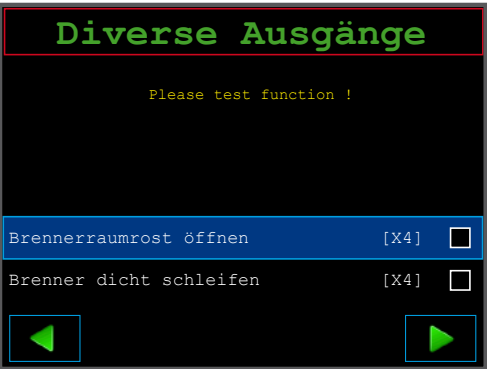
NO	No Lambda sensor installed
YES	Lambda sensor installed

90.15 Lambda sensor calibration



calibrated	Lambda sensor calibration lasts 5 minutes
------------	---

90.16 Test aggregates



90.17 Various options

Positions in assembly instructions page ...

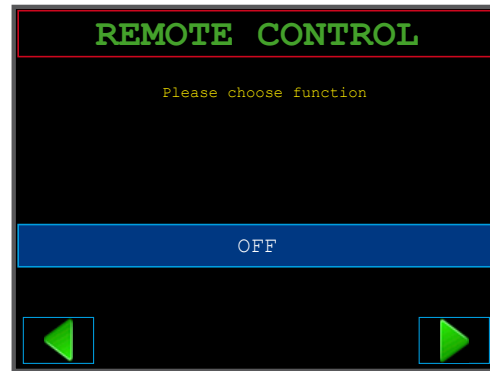
Open burner grid	[X4]	Page 35 (grate drive / Belimo)
Boiler circuit pump	[X7]	Page 19
Igniter	[X6]	Page 19 / 34
Auger screw	[X36]	Page 19 / 35
Suction unit (Belimo)	[X8]	Page 19 / 21
Special function relay	[X11]	Page 19

90.18 Temperatures

Combustion chamber temp.	[X13]	Page 19
Boiler temperature	[X15]	Page 19
Pellets tube temperature	[X14]	Page 19
Outside temperature	[X17]	Page 19
FAIL	Display missing sensor / sensor break	



90.19 Remote control



90.20 Remote control 0 - 10 Volt

OFF	Internal energy management is active (buffer, heating circuits, domestic hot water system)
Temperature data 0 - 10 V	Energy management is not active
Performance data 0 - 10 V	Energy management is not active

90.20 Remote control external contact

The control with external contact (potential free) is always possible.
External control via external contact is only possible if used with HAPERO hydraulic schemes T.E.1.0 / T.E.1.1 / T.E.2.0. The target temperature of the boiler has to be adjusted in „boiler adjustments“). The boiler will always be delivered with closed contact (wired cable loop X24).

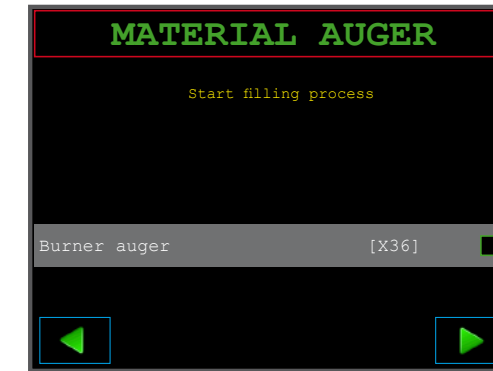
Closed contact	The boiler can function without interruption.
Open contact	Boiler ends the heating programme and waits until contact is closed.

90.21 Digital outputs

External burner setting time



90.22 Auger tube filling



90.23 Auger tube filling

Fill the auger tube with pellets
The filling process will be interrupted automatically after 60 seconds.
The filling process can be interrupted immediately by pressing the panel.

90.24 END



90.25 Completion

If necessary carry out a commissioning of the energy management.

90.00

Start / Access

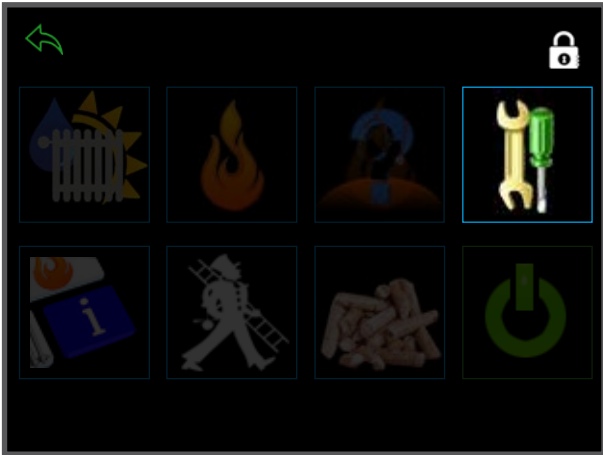


Code

Enter here your code 1508.

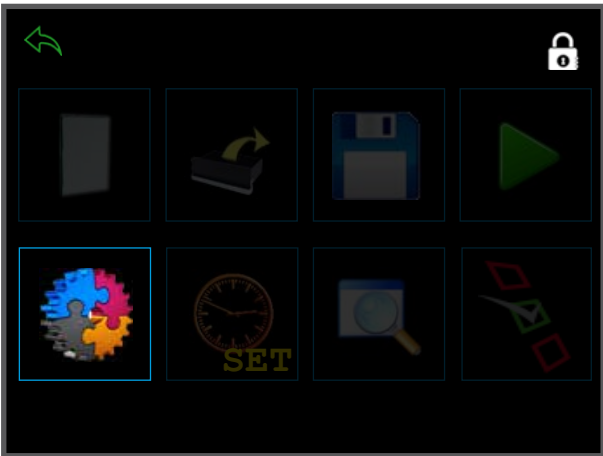
05.00

Choice menu service



05.00

Choice energy management configurator



05.00

Choice energy management



90.00

Automatic configuration of hardware



The automatic configuration can only be carried out, if the BUS connection from the main board to the energy starterset was correctly activated without voltage connection.
See assembly instructions Page 23

Press the boiler symbol to start the configuration.

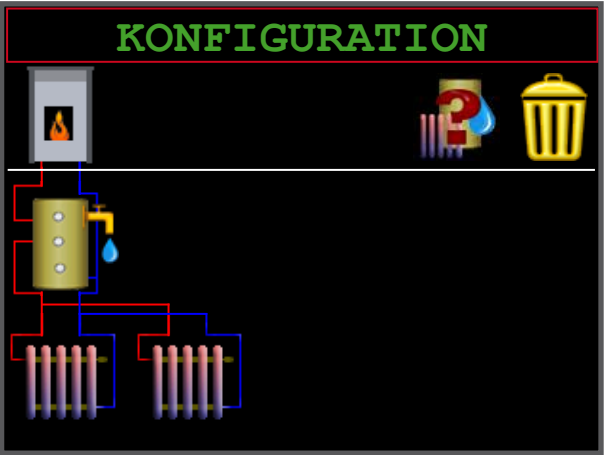
05.00

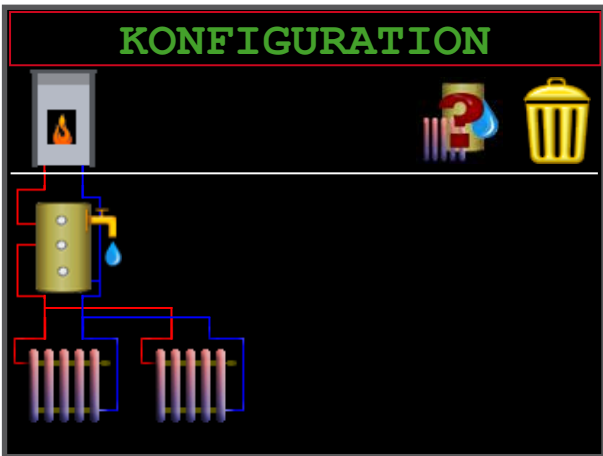
Choice energy managment-configurator



05.00

Display of installed hardware





90.00 Types of operational modes

„Press“ the choosen option

- Heating circuit
- Under floor heating

1
- Radiators 55/45

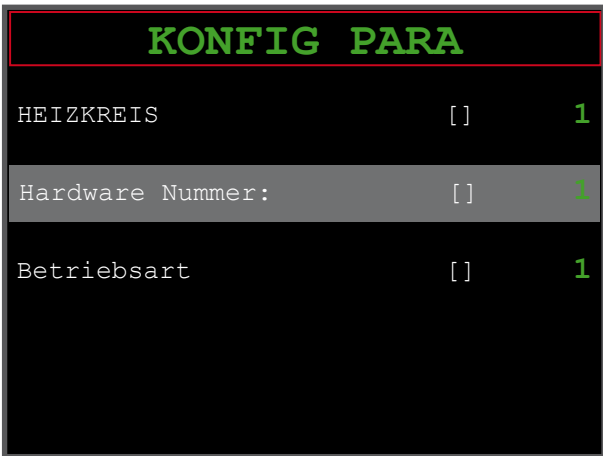
2
- Radiators 75/55

3
- Radiators 90/75

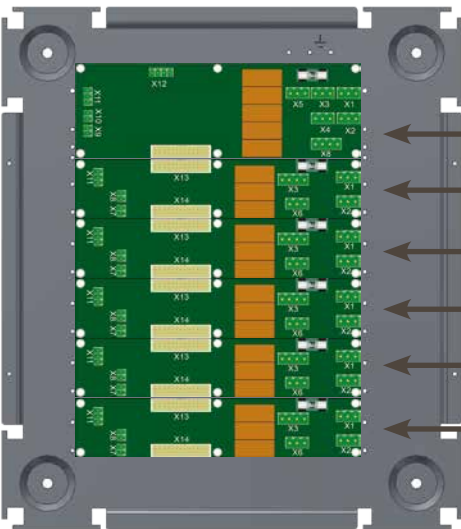
4
- Hot air fan

5
- Wall heating

6



Heizkreisnummer
Puffernummer
Brauchwasserspeichernummer



- 90.00 Hardware Nummer
- 1 (HZS 532-1)
- 2 (HZS 533-1 / HZS 534 / HZS 535)
- 3 (HZS 533-1 / HZS 534 / HZS 535)
- 4 (HZS 533-1 / HZS 534 / HZS 535)
- 5 (HZS 533-1 / HZS 534 / HZS 535)
- 6 (HZS 533-1 / HZS 534 / HZS 535)

90.00 Save data



To save the chosen configuration please leave the menu.

90.00 Detailed parametrisation of heating circuits / buffer / domestic hot water tank

The module parametrisation can be adjusted as described on page 10.
A detailed description of parameters you can find on the following pages.

100.00 Detail - Description parameter

	Displayed parameter on operating platform.
	Displayed parameter with After Sales Service.

100.01 Boiler General

Cinder programme	Bei häufiger Schlackebildung kann das Schlackeprogramm aktiviert werden
Air mass sensor	Abschalten des Luftmassensensors aktiviert das Notprogramm
Special function	Code für die Sonderfunktion des Sonderfunktionsrelais
Pump switching point	Temperatur für die Freigabe Kesselkreispumpe (Rücklaufhochhaltung)

101.02 Boiler Wartung

Ash notification	Takte bis zur Aschenladenmeldung
Time until flue lock	Zeit bis nach der Reinigung die Kaminabsperrrklappe geschlossen wird

101.04 Boiler Lambdaregler

Lambda sensor active	Deaktivierung der Lambdasonde
----------------------	-------------------------------

101.04 Boiler Performance data

Boiler target temperature	Kessel Solltemperatur wenn kein Energiemanagement verwendet wird (Externkontakt)
Boiler maximum temperature	Kessel Ausschalttemperatur
Maximum performance	Maximale Kesselleistung
Minimum performance	Minimale Kesselleistung
REAF management	Aktivieren des REAF Management (nur ohne Lambdasondenregelung)
REAF reference temperature	Referenztemperatur (Brennraumtemperatur)

102.01 Heating circuit General

Choice of module	[AUS]	Heizkreis deaktivieren
	[HAND]	Der Zustand wie im Handbetrieb ausgewählt bleibt bestehen
	[AUTOMATIK]	Automatikbetrieb (Standard)
	[Fixbetrieb]	Raumtemperatur = Vorlauftemperatur
HC OFF below pre-flow temperature		Bei unterschreiten der berechneten Vorlauftemperatur wird der Heizkreis ausgeschaltet

102.02 Heating circuit Temperatures

Economy temperature
Morning temperature
Daily temperature
Evening temperature
HC OFF with outside temperature
HK ON below outside temperature
Frost protection temperature
Room temperature GSM
max. flow temperature
min. flow temperature
Multipl. pre-flow <> room

102.03 Heating circuit Room regulator

Room regulator Offset			
Additional measuring mode			
room regulator address		Adresse 8 (Standard) = Kabelgebundener Raumregler	
(Micro switch) wireless remote		 Adresse 0	 Adresse 1
		 Adresse 2	 Adresse 3
		 Adresse 4	 Adresse 5
		 Adresse 6	 Adresse 7

102.04 Heating circuit Aussenkurve

Outside temperature (Minus)
Pre-flow temperature (Minus)
Outside temperature (Plus)
Pre-flow temperature (Plus)

102.05 Heating circuit Mixer regulator

Mixer valve switch	Mischeransteuerung (AUF / ZU) vertauschen
--------------------	---

103.01 Domestic hot water tank General

Function	[AUS]	Brauchwasserspeicher deaktivieren
	[HAND]	Der Zustand wie im Handbetrieb ausgewählt bleibt bestehen
	[AUTOMATIK]	Automatikbetrieb (Standard)
Position 2nd sensor		
Legionella function		
Summer time mode		

103.02 Domestic hot water tank Temperatures

Switch-on temperature	
Switch-off temperature	
Basic temperature	Temperatur für das Zeitfenster „Grundtemperatur“
Anti-Legionella temperature	Temperatur für das Zeitfenster „Anti-Legionellentemperatur“
Increase	Anforderung + „Erhöhung“ = Kessel Solltemperatur / min. Puffer Einschalttemperatur

103.02 Buffer Temperatures

Switch-on temperature	
Switch-off temperature	
Increase	Anforderung + „Erhöhung“ = Kessel Solltemperatur
Hysteresis	Hysteresse zwischen Einschalttemperatur und Ausschalttemperatur
Performance temperature	Temperatur für das Zeitfenster „Leistungstemperatur“



66

PELLETSHEIZUNGEN



HAPERO Pellet-Living room stove 7kW
Art. No. 1010.00



HAPERO Pellet-Living room boiler 15kW
Art. No. 2030.02



HAPERO Pellet-Living room boiler 15kW
Concrete cladding, Art No 2030.01



HAPERO Pellet-boiler 15kW
Art. No. 2020.01



HAPERO Pellet-boiler 15kW XL
Art. No. 2020.02



HAPERO outdoor biobox 15kW
Art. No. 2035.00



HAPERO Pellet-boiler 25kW & 35kW
Art. No. 2040.01 & 2045.01



HAPERO Cascade 70kW
Art. No. 2049.01



HAPERO Cascade 105kW
Art. No. 2050.01

Article number: 8794

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