PELLETSHEIZUNGEN

Instructions Touch-Display 1.0 (2/3)

Further instructions for your pellet boiler

Assembly instructions (1/3)

Service manual (3/3)

PAPERO

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.

Contents

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 you 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.

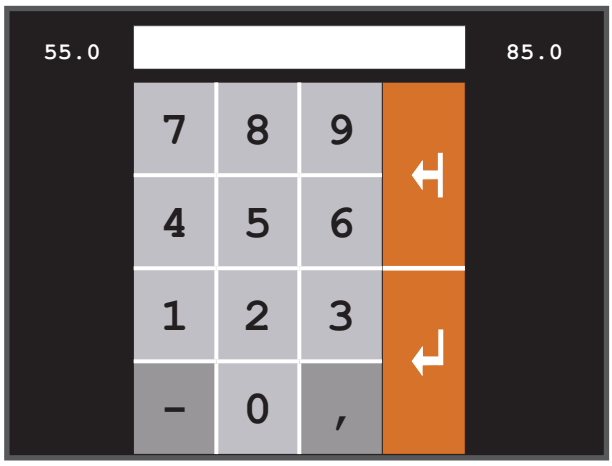
Please do not use any sharp objects to operate the Touch Display panel as you may scratch it.

Non-compliance can invalidate your warranty.

04.00 Open window - data input

Touch
Parameter adjustment

04.01 Data input



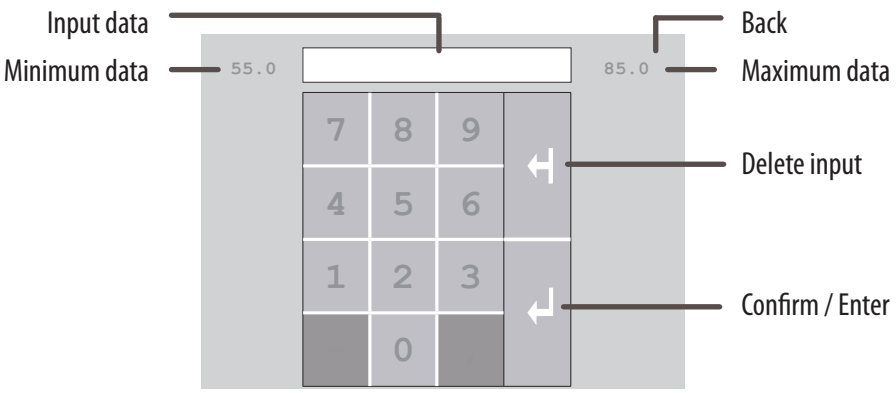
04.03 Detail - description data input

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

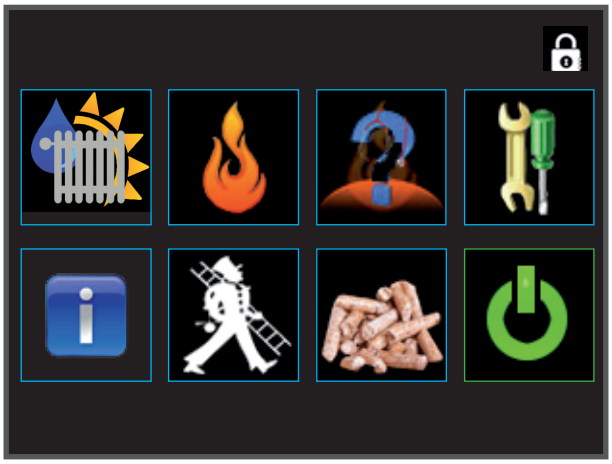
Minimum data
The smallest adjustable data

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 menue 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 HAPERO's After Sales Service.

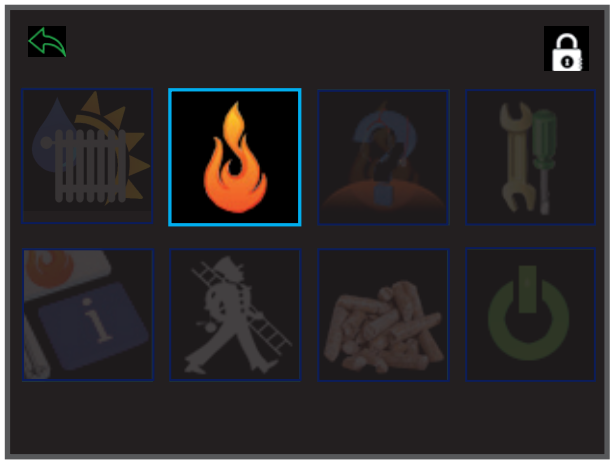
Child proof lock (Standard)
Parametri can not be adjusted (key (0))

Operator platform
Customer Parametri and data protection can be activated. (key (1234))

Professional After Sales Service
After Sales Service Codice (key (1508))

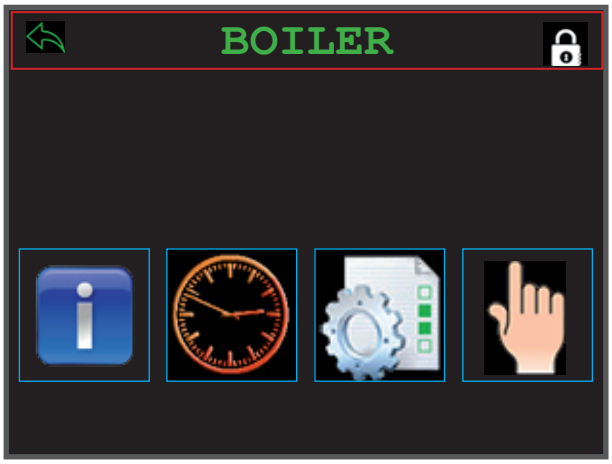
05.02 Touch field / Functions/ Messages

03 Boiler management



03.1 Content overview boiler management (burning/combustion)

05 Menu option boiler management



05.1 Detail - description boiler management

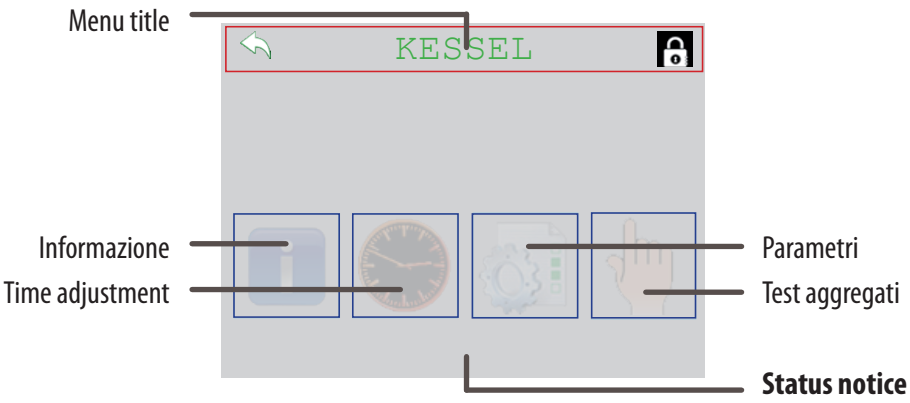
Information
Boiler status, temperatures, running time etc.

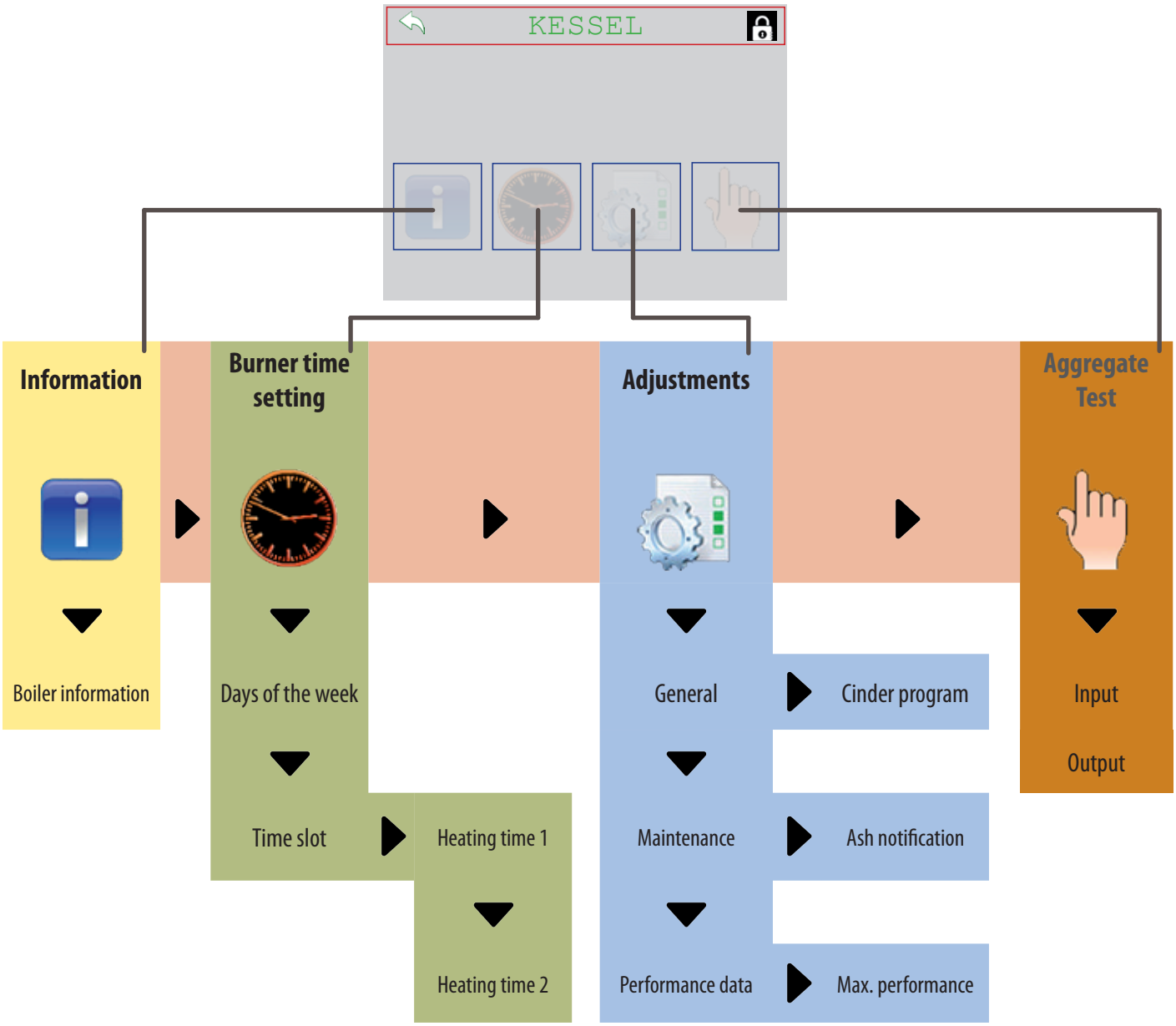
Burner time setting
Burner time setting

Adjustments
Parameter adjustments

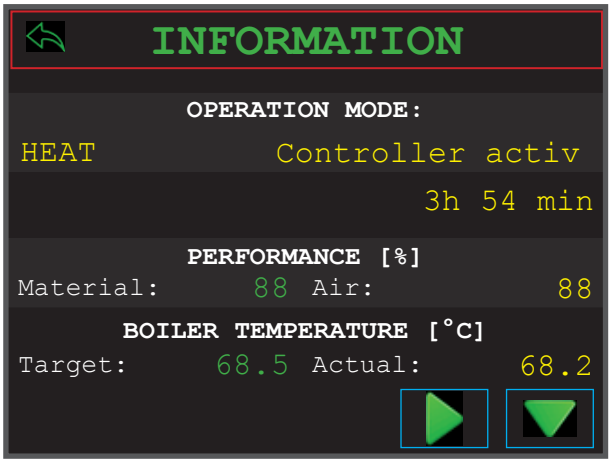
Aggregate test
Motors, suction fan, airmass sensor, igniter etc.

05.2 Touch field / Functions / Messages




KESSEL
Information
Boiler information
Burner time setting
Days of the week
Time slot
Heating time 1
Heating time 2
Adjustments
General
Cinder program
Maintenance
Ash notification
Performance data
Max. performance
Aggregate Test
Input
Output

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]

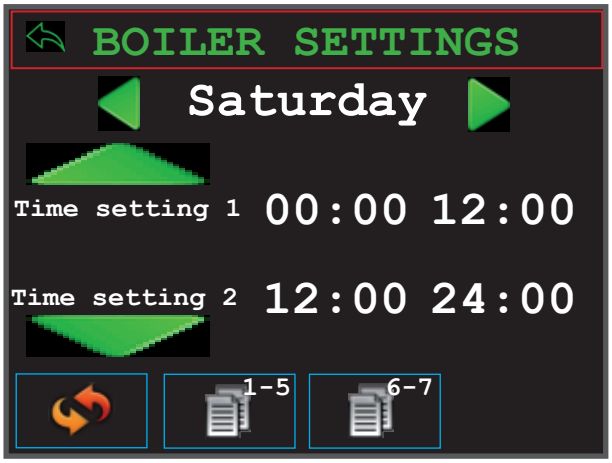
Target:

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.

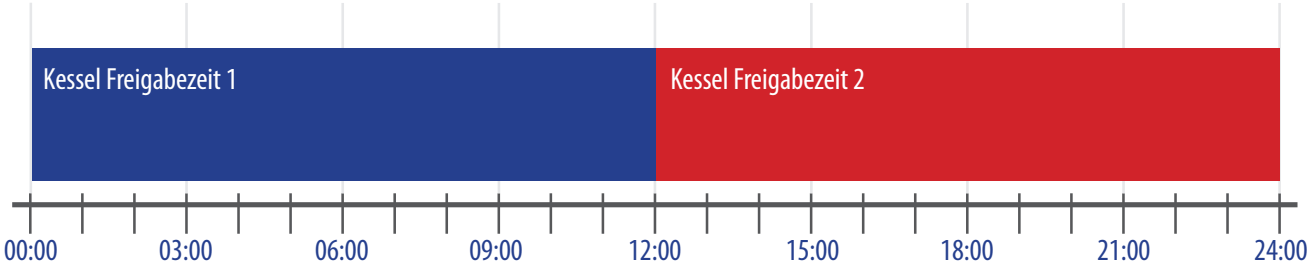
Free function relay 1 / free function relay 2
This time slot is activated by a free function relay.


Standard data
Uploads the standard data for that day

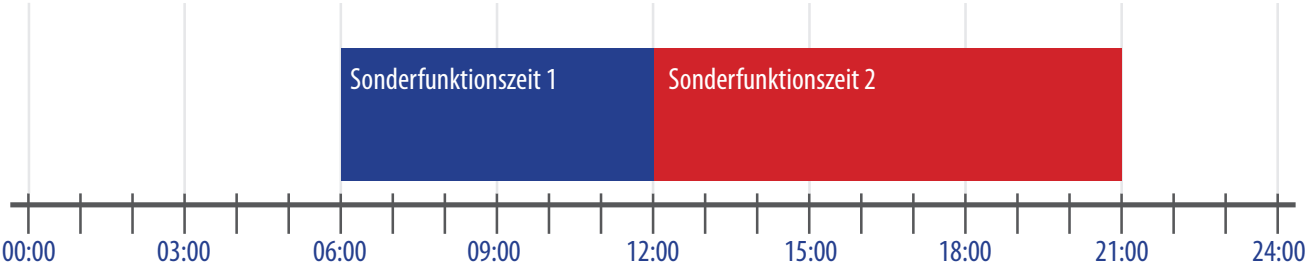
Copying 1 - 5
Copyies that day Monday - Friday

Copying 6 - 7
Copyies that day Saturday and Sunday

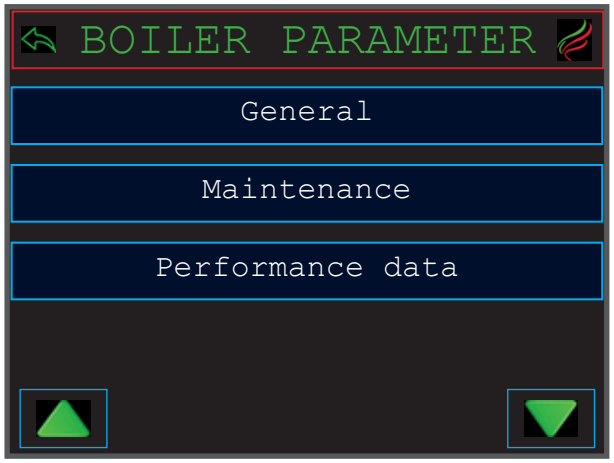
05.2 Time slots - burner time setting



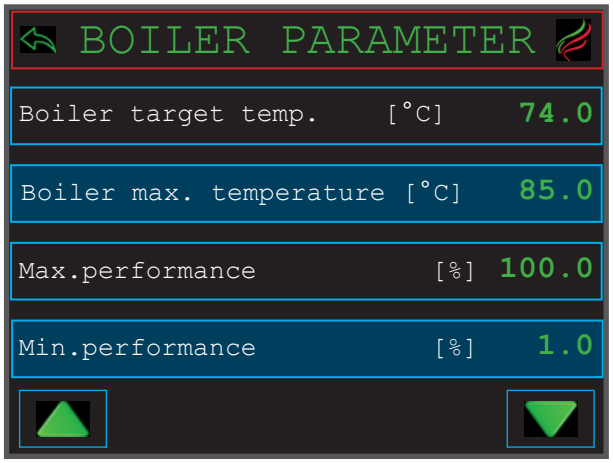
05.2 Time slots - free function relay



05 Menu option adjustments



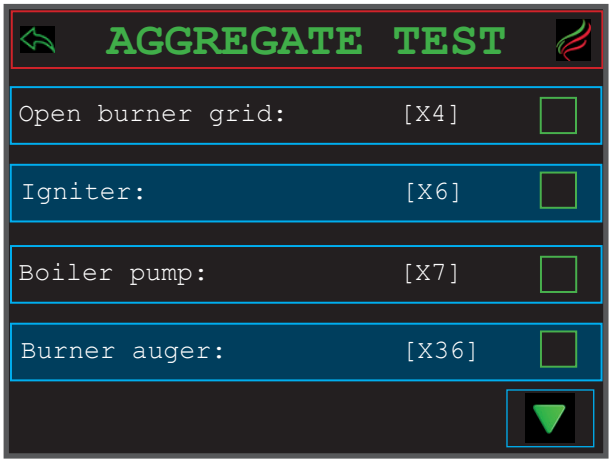
05 Menu platform adjustments



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

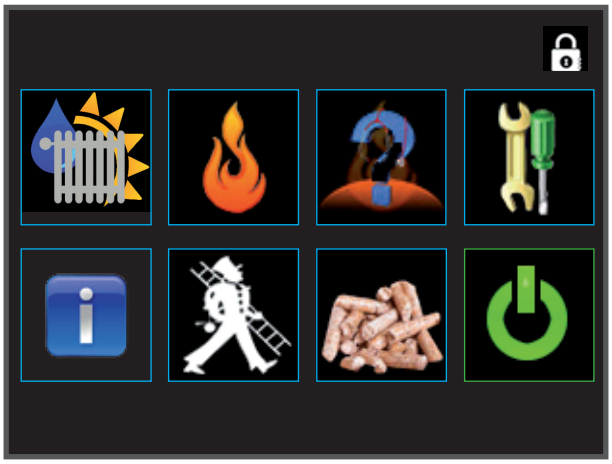
filled box = switched, frame = not switched

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

05.00 Main menu



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.

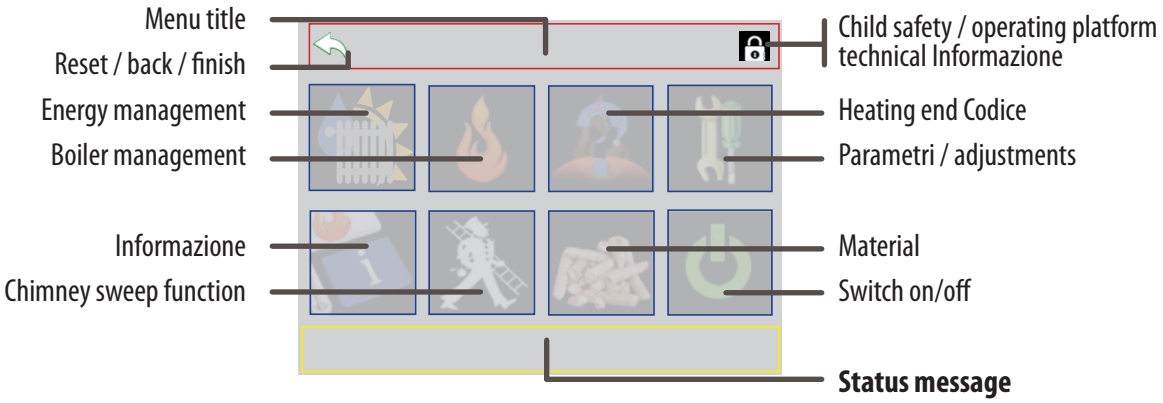
Technical information
Input for the safety key for data protection.
Input of key for extended parametrisation for HAPERO technical support.

Child safety (standard)
Parameters can not be changed (key (0))

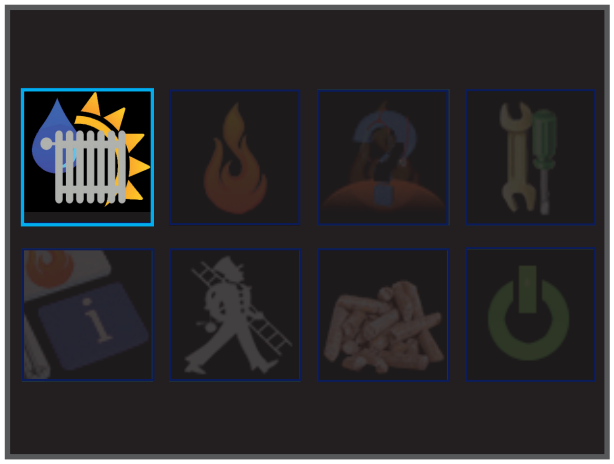
Operating platform
Customer Parametri and data protection can be carried out (key(1234))

Technical Informazione
Technical Informazione Codice (key (1508))

05.02 Touch panels / functions / messages



03 Energy management

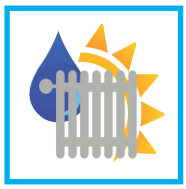


Abbild: „Kessel“ Auswahl HAPERO Touch 1.0

03.1 Content overview heating circuit

03.1 Content overview domestic hot water system

05 Menu option/module option



05.1 Detail - description boiler management

Module option
Choose the module (heating circuit, domestic hot water tank)

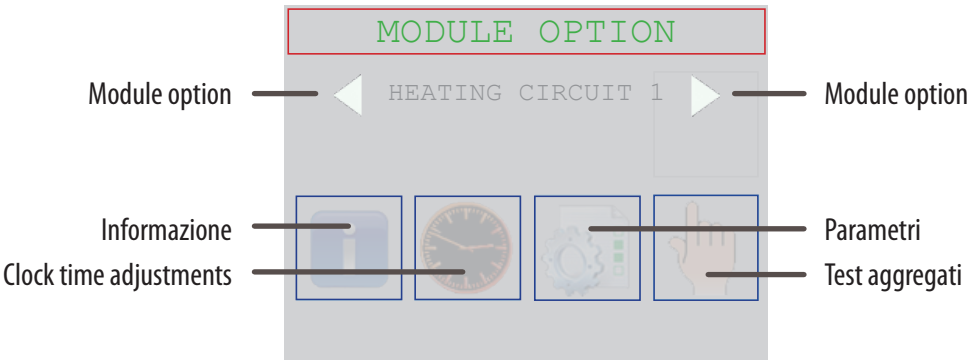
Information
Boiler status, temperatures, running times etc.

Burner time setting
Time setting for burner

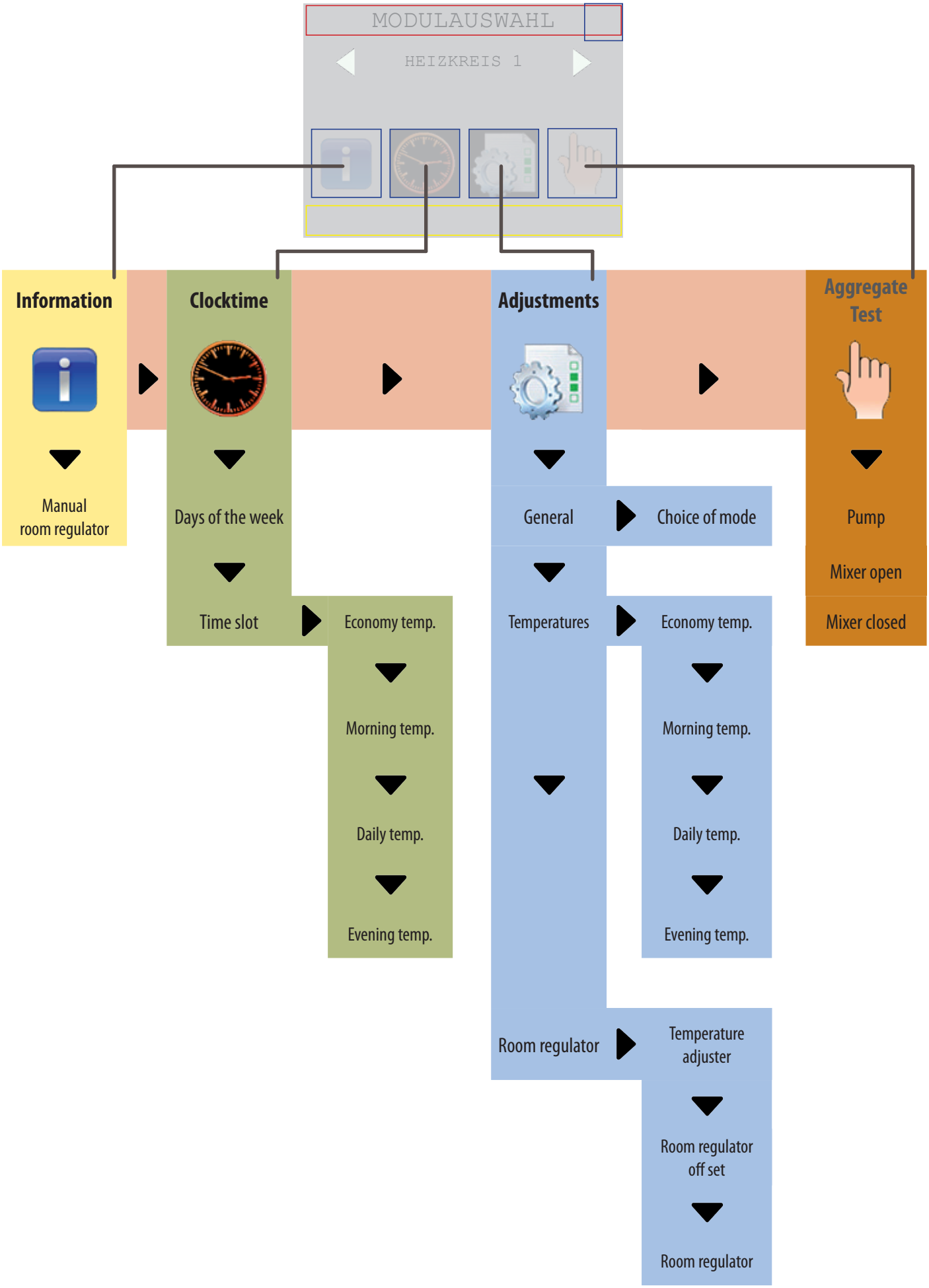
Adjustments
Parameter adjustments

Aggregate test
Motors, suction draught fan, air mass sensor, igniter etc.

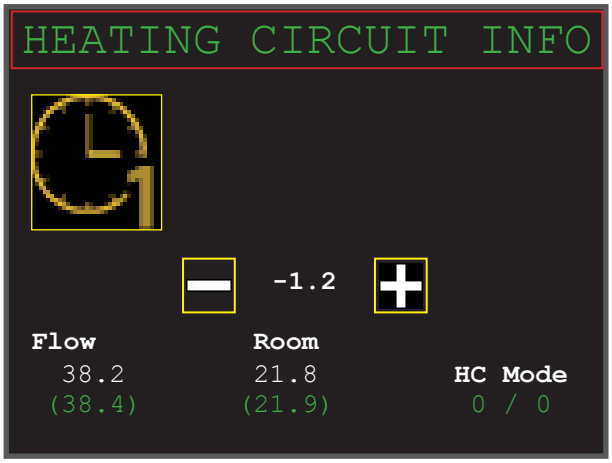
05.2 Touch panel / function / message



Heating circuit



05 Menu option heating circuit information



Abbild: Hauptmenü HAPERO 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.

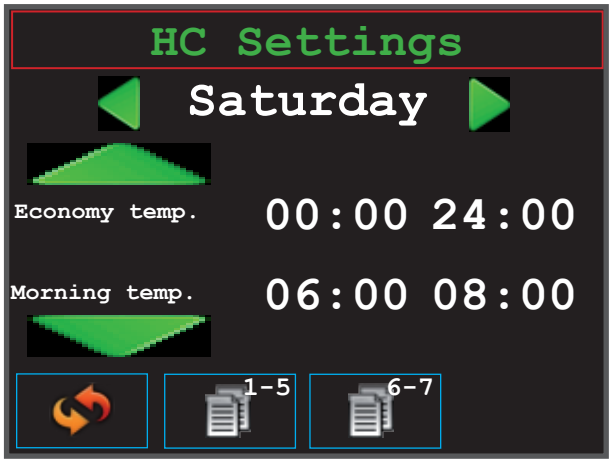
Pre-flow temperature

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)

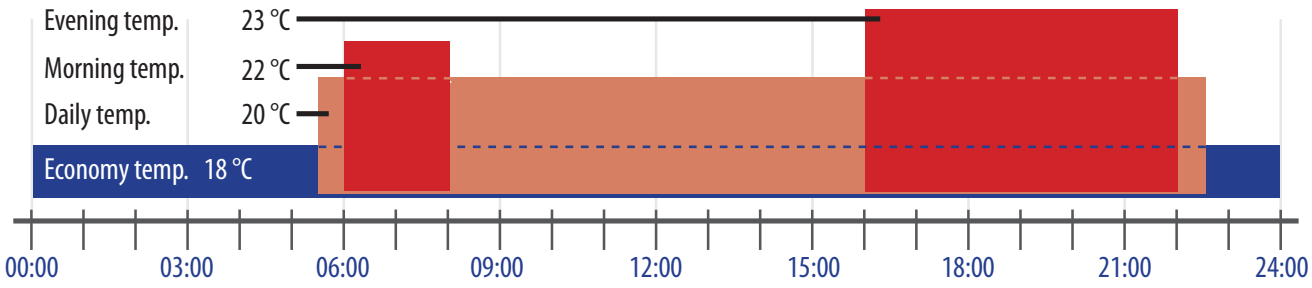
Option time programme 2
Activate the time programme 1 per room regulator or in the menu panel heating circuit information (standard times page 33)

Standard data
Loads the standard data for this day

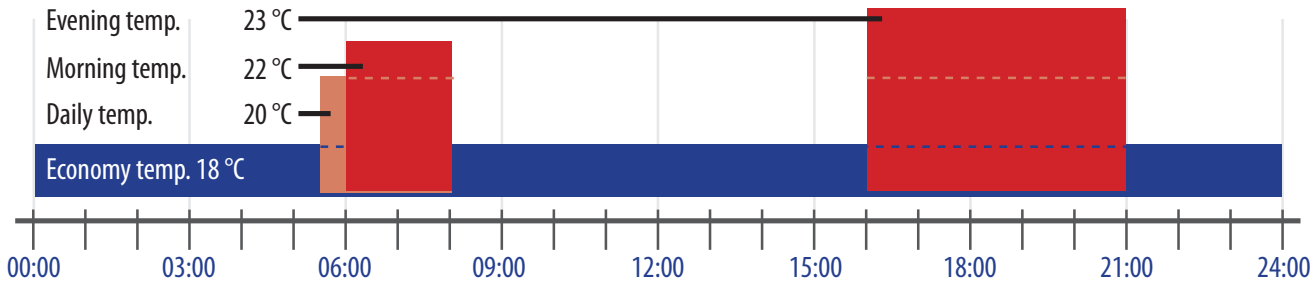
Copying 1 - 5
Copies this day to Monday - Friday

Copying 6 - 7
Copies this day to Saturday and Sunday

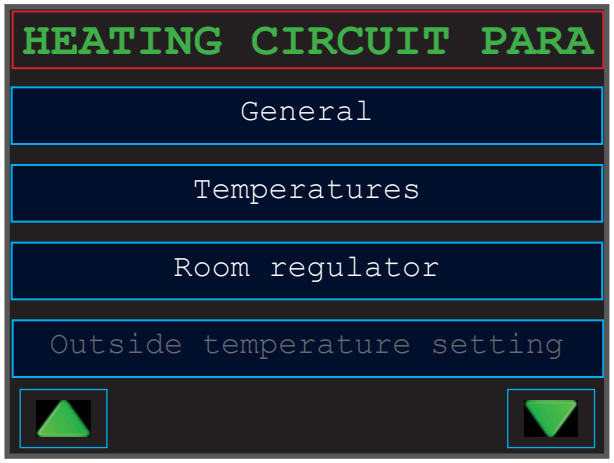
05.2 Time programme 1



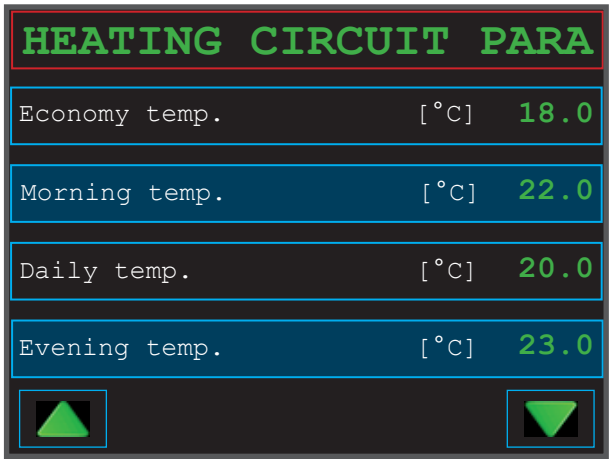
05.2 Time programme 2



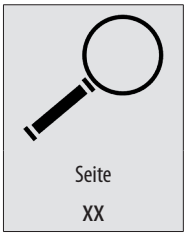
05 Menu option parameter option



05 Menu platform parameter option

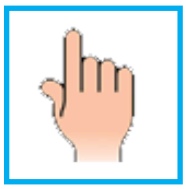


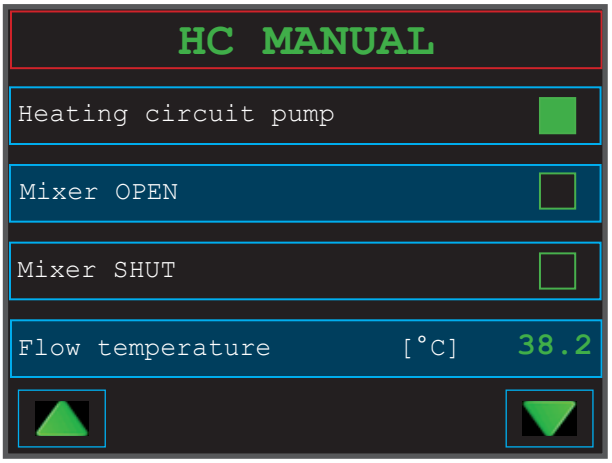
05.1 Detail - description adjustments



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)

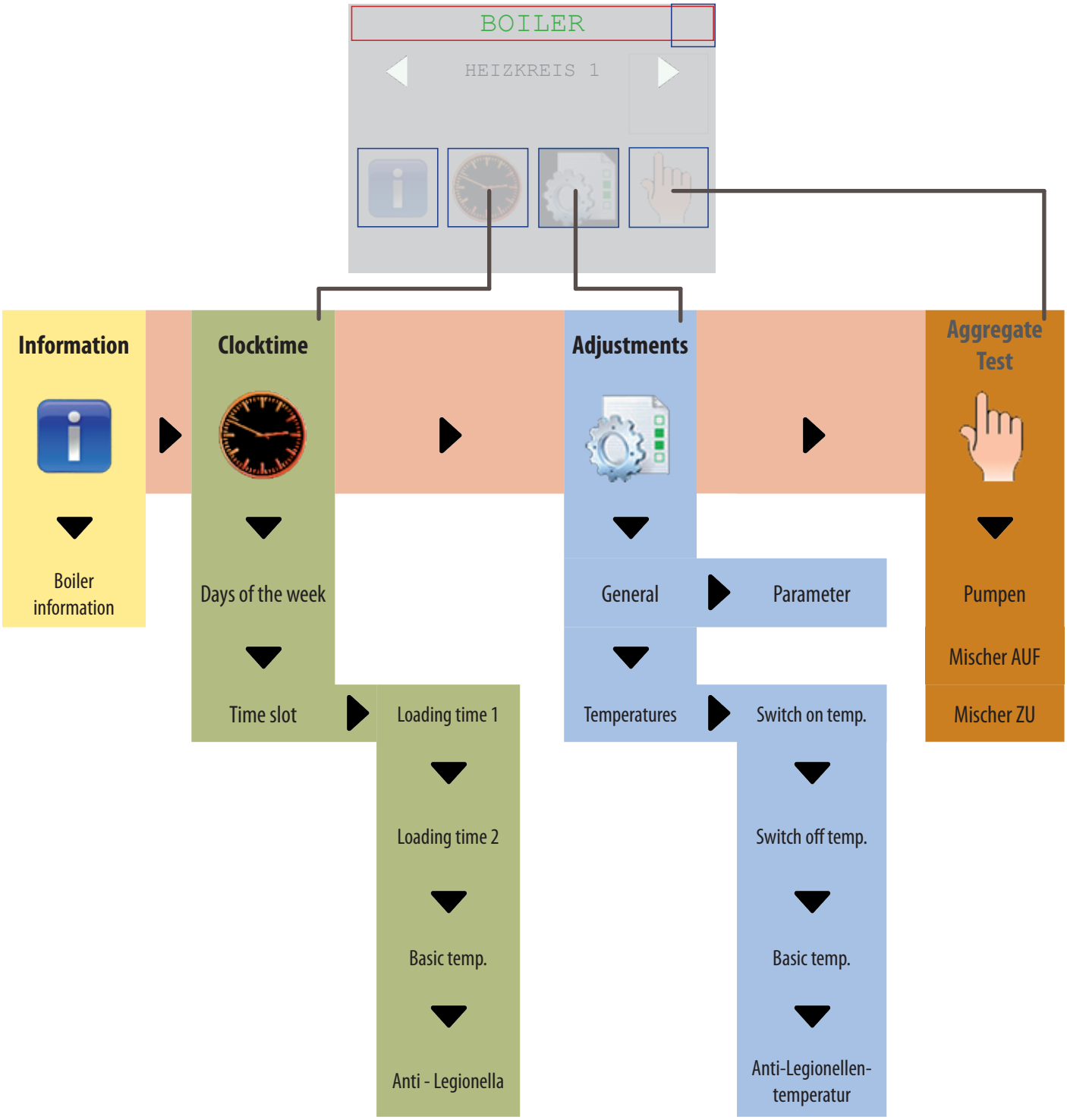
Information
Boiler status, temperatures, running times etc.

Burner time setting
Burner time setting

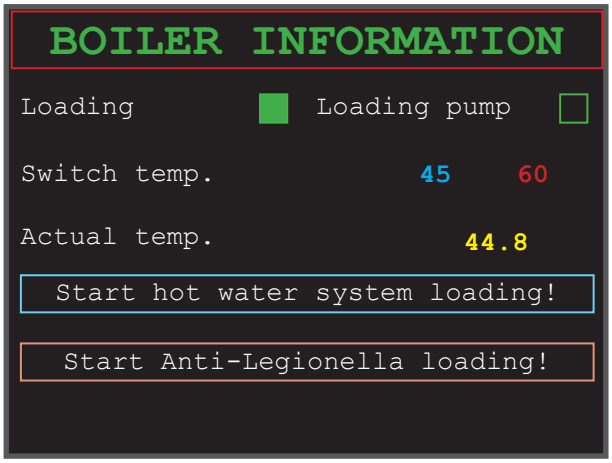
Adjustments
Parameter adjustments

Aggregate test
Motors, suction draught fan, air mass sensor, igniter etc.

Domestic hot water system



05 Menu option information



Abbild: Hauptmenü HAPERO Touch 1.0

05.1 Detail - description menu panel (module option)

Loading function
The function „domestic hot water system loading“ has started

Loading pump
filled in square = connected, blank square = not connected

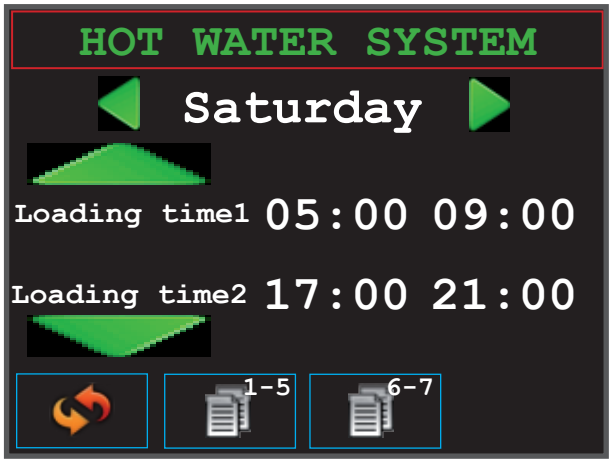
Switch temperature
Switch-on and switch-off temperature

Actual temperature
Current domestic hot water system temperature

Start hot water system loading
The hot water system is being warmed up to switch-off temperature

Start anti-legionella loading!
The hot water boiler system is being warmed up to anti-legionella temperature

05 Menu choice timer setting



Abbild: Hauptmenü BTouch 1.0

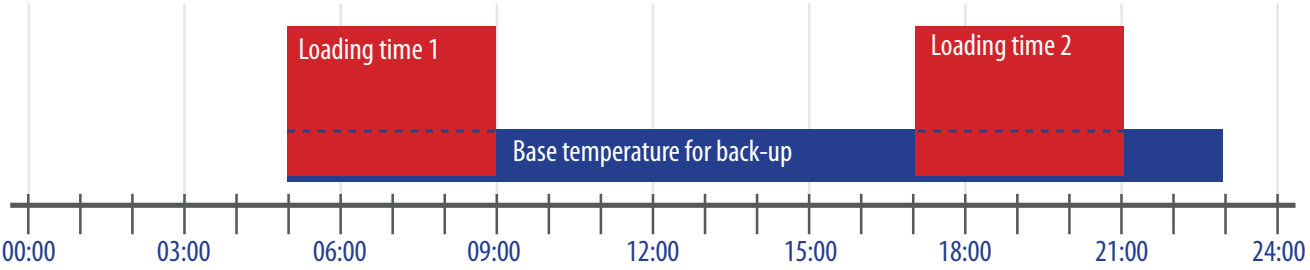
05.1 Detail - description timer setting

Standard data
Loads the standard data for this day

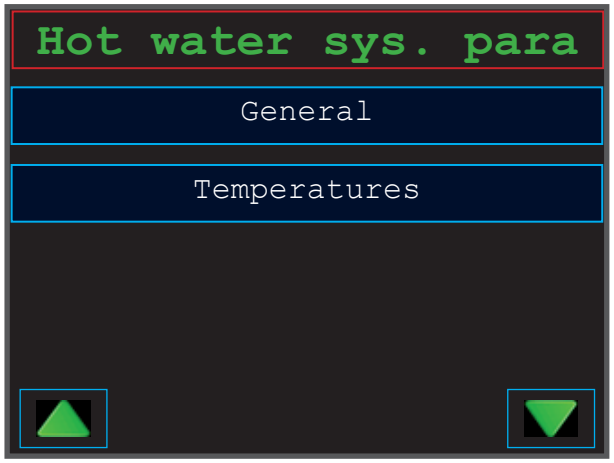
Copying 1 - 5
Copys this day Monday - Friday

Copying 6 - 7
Copys this day Saturday - Sunday

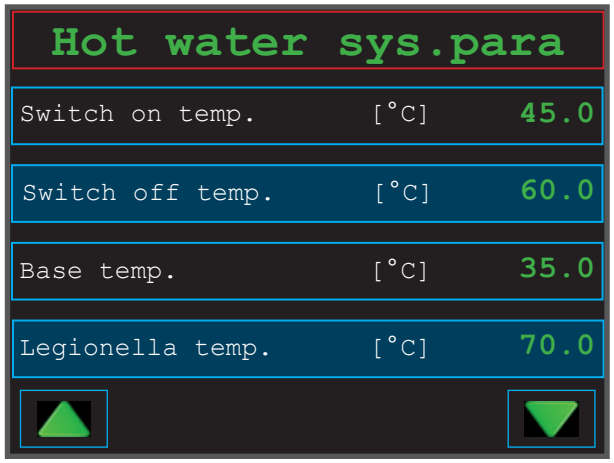
05.2 Setting loading times



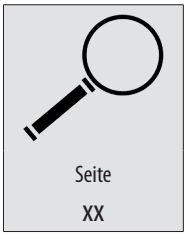
05 Menu platform parameter option



05 Menu platform parameter option

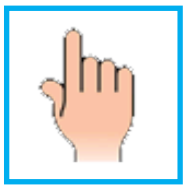


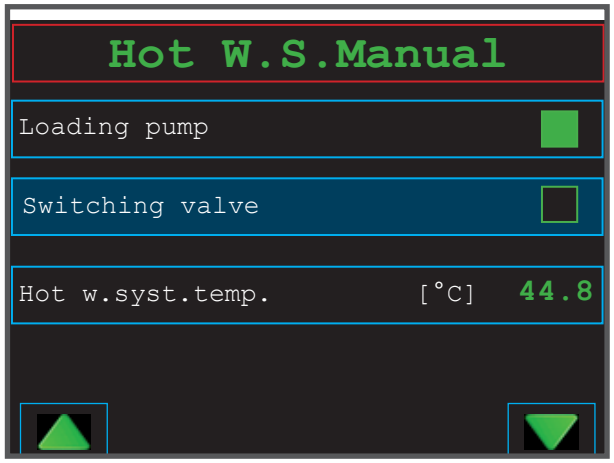
05.1 Detail - description adjustments



All adjustment data and parameter

05 Menu option manual mode / aggregate test

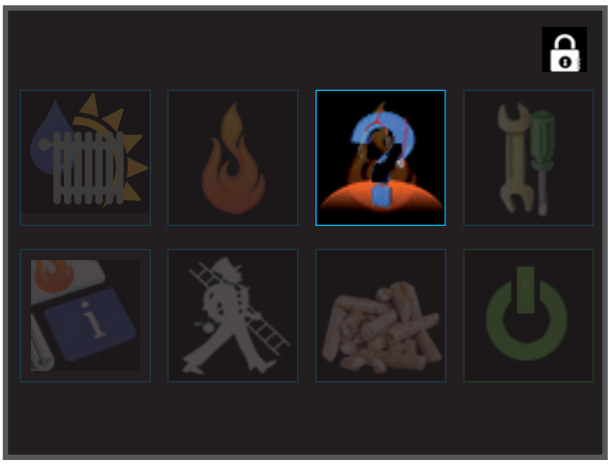




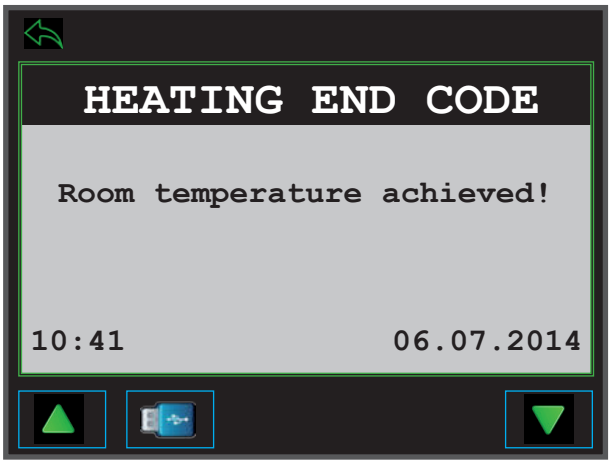
Abbild: Parametermenü B-Touch 1.0

General

14.00 Menu option - heating end - code



14.01 Display heating end - code



14.02 Detail - description heating end code

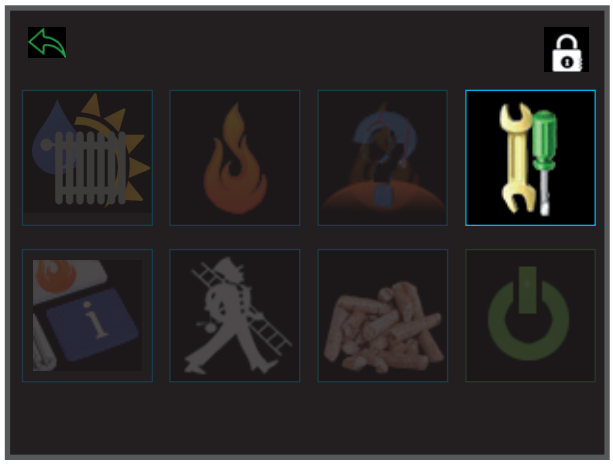
Heating end code

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)

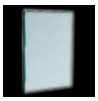
15.00 Menu option - service



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.

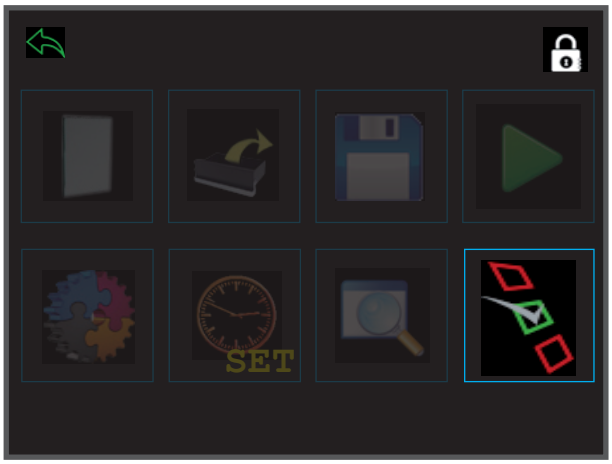
Service platform 2

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

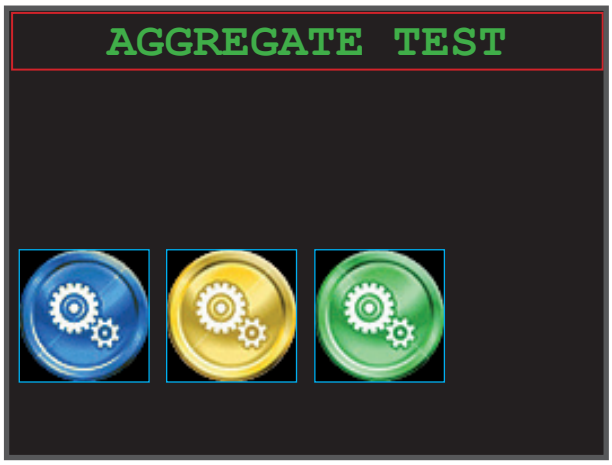
Language option
Choose your preferred language

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.

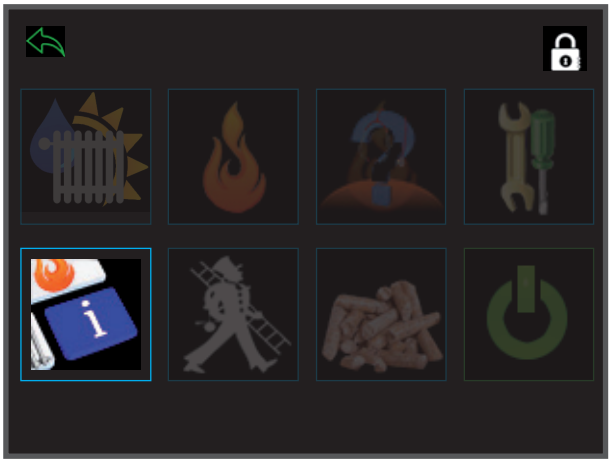
Display of all digital outputs
motors, grate gear drive, igniter, etc.

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

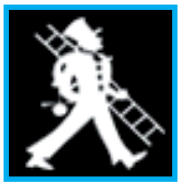
Switching mode digital input
filled in square = connected, not filled in = not connected

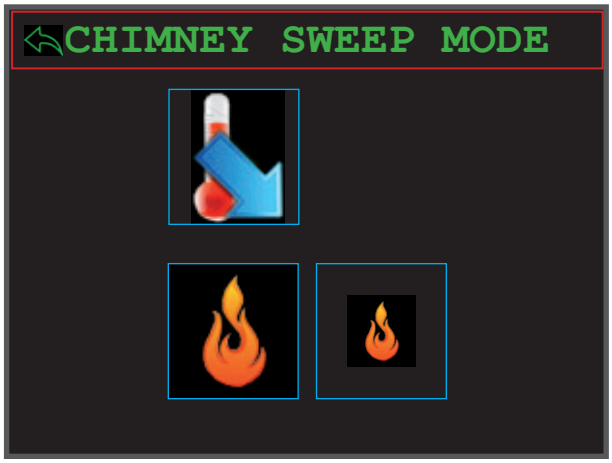
Switching mode digital output
filled in square = connected, not filled in = not connected

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

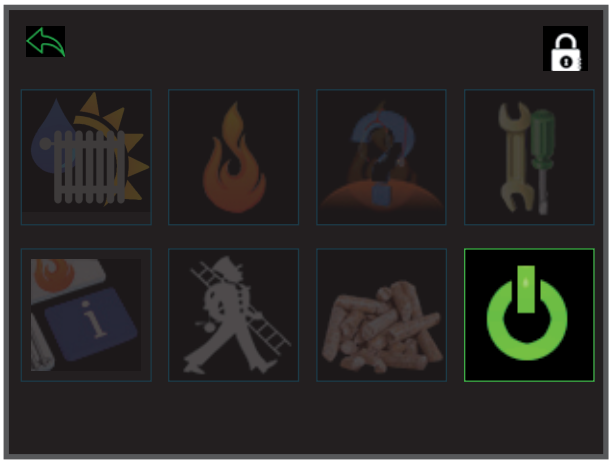
Burner setting time
Pellets fill time

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!

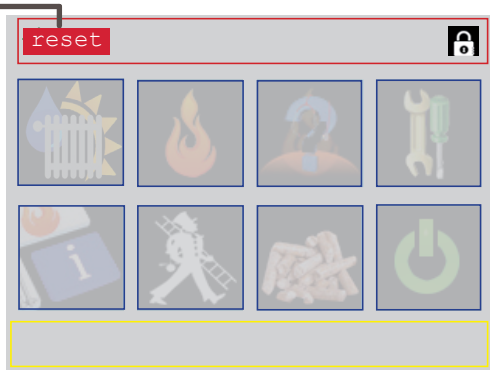
Air mass sensor defect!

Lambda sensor defect!

No connection to the mains supply!

80.01 Re-setting of error message

RESET



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- /operating 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)		☐

After Sales Service

01 Safety rules and guidelines

Please follow all safety guidelines from page 2-3.

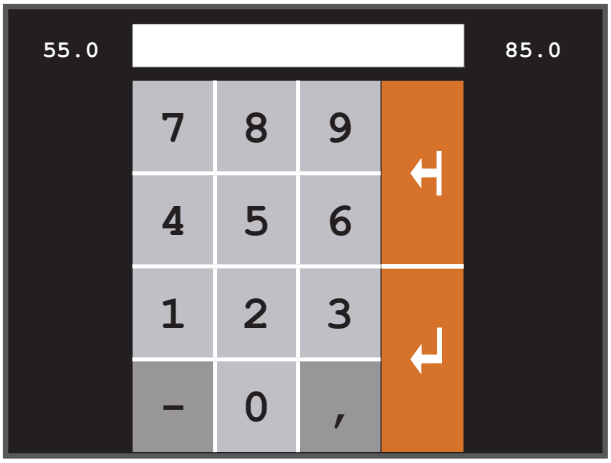
Non compliance of these guidelines may invalidate all warranties and guarantees and could affect the function of your boiler and compromise your safety.

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**

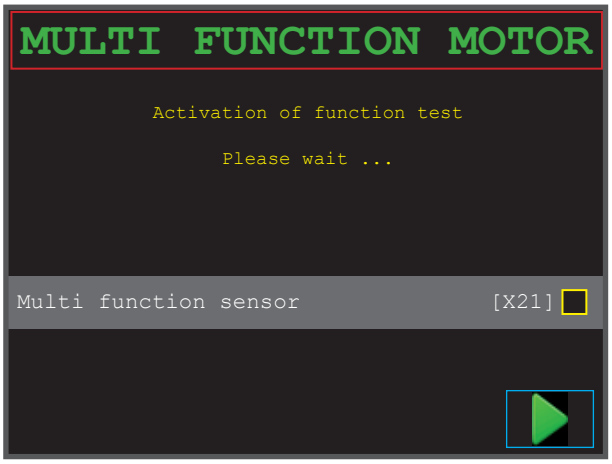
90.00 Start / access

Code

Please enter here code number 660104.

90.01 Commissioning request

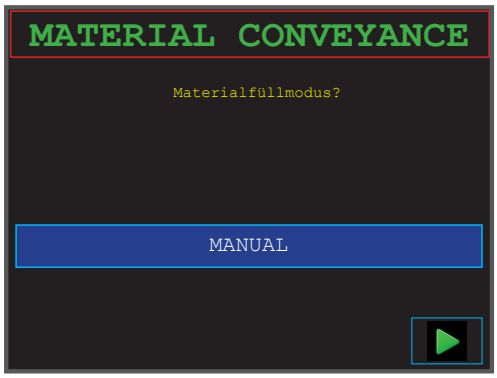
90.02 Checking multifunction sensor



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

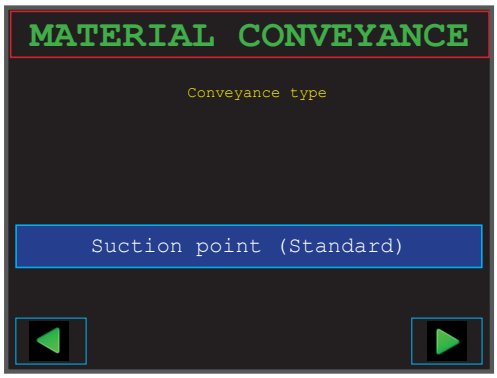
Change your choice: Press choice to change.

AUTOMATIC: The pellets supply to the daily container is automatic.

MANUAL: The pellets filling to the daily container needs to be done manually.

Continue 90.10

90.06 Choice of pellets feeding system

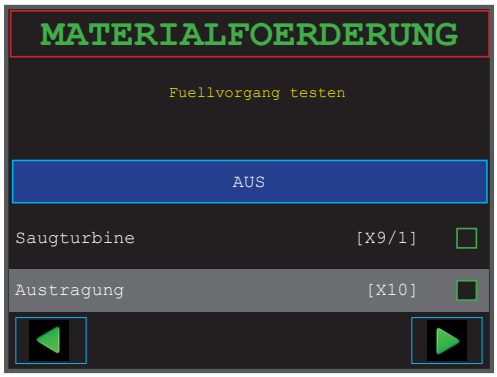


90.07 Choice of room pellets feeding system

Suction point (Standard)	Suitable for HAPERO suction point
Auger feeding capacity < 4 kg	Suitable for HAPERO auger screw
Auger feeding capacity > 4 kg	For auger screws with higher conveyance performance oder suction hose lengths > 20 meters
Mole*	Break/conveyance time ratio

* Mole is a product of company Schellinger

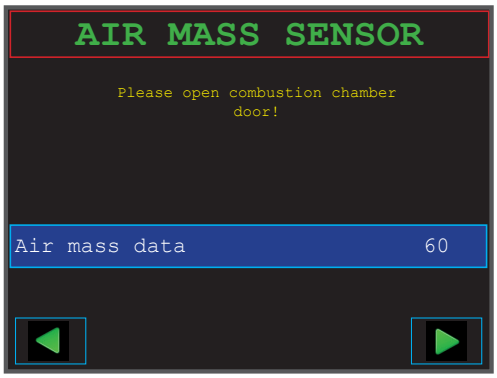
90.08 Test room feeding system / material conveyance



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

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

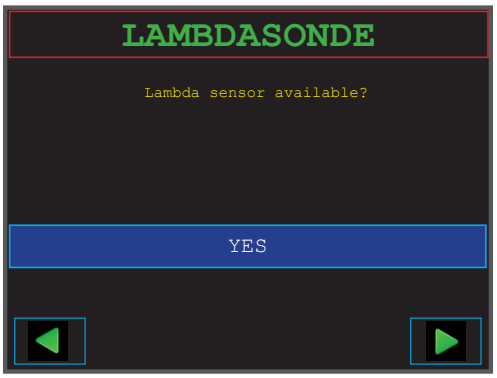
90.10 Air mass sensor test



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



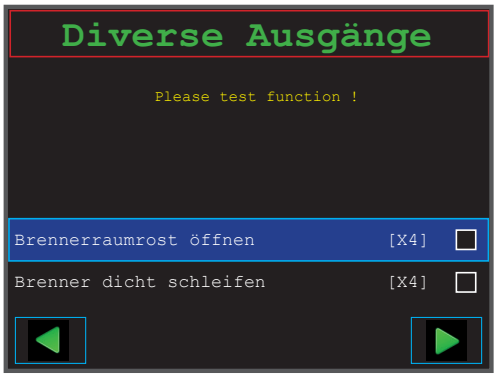
90.15 Lambda sensor choice

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

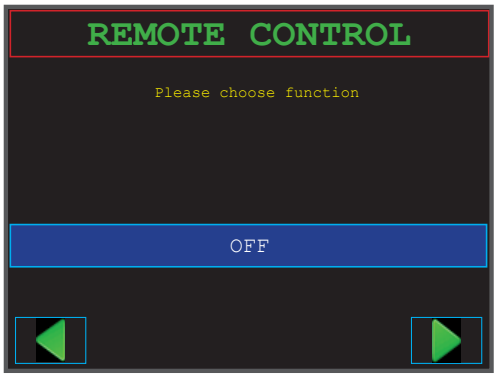
		Positions in assembly instructions page ...
Open burner grid	[X4]	Page 35 (grate drive / Belimo)
Boiler circuit pump	[X7]	Page 19
Igniter	[X6]	Page 19 / 34
Auger screw	[X36]	Page 19 / 35
Suction unit (Belimo)	[X8]	Page 19 / 21
Special function relay	[X11]	Page 19

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

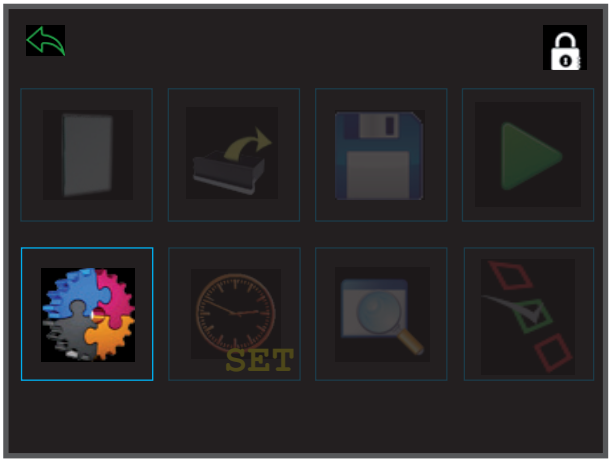
If necessary carry out a commissioning of the energy management.

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

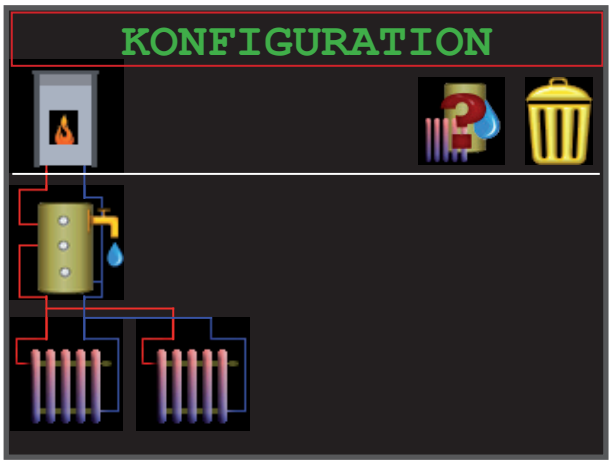
90.00 Automatic configuration of hardware

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

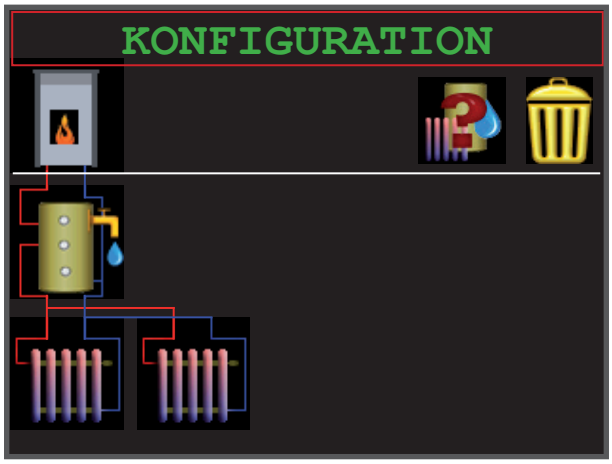
Press the boiler symbol to start the configuration.

05.00 Choice energy managment-configurator

05.00 Display of installed hardware



05.00 Para

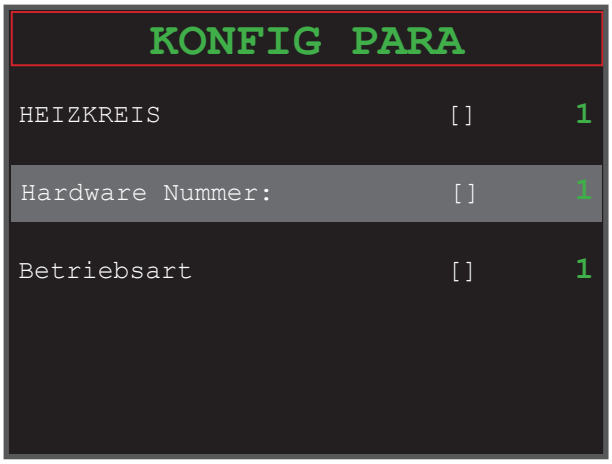


90.00 Types of operational modes

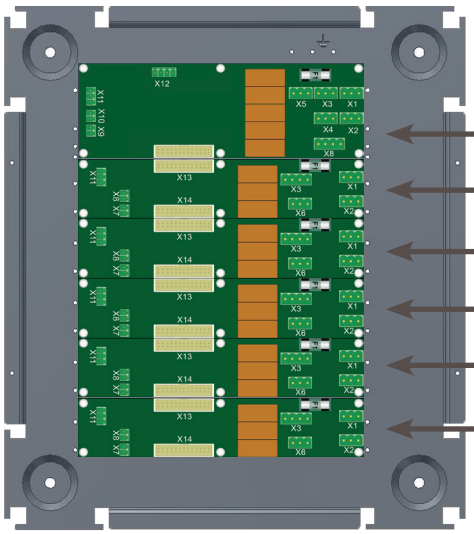
„Press“ the choosen option

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**

05.00 Manual module information



Heizkreisnummer
Puffernummer
Brauchwasserspeichernummer



Energiemanagement Starter Set

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 Kaminabsperrklappe 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 (Micro switch) wireless remote	Adresse 8 (Standard) = Kabelgebundener Raumregler  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	Hysterese zwischen Einschalttemperatur und Ausschalttemperatur
	Performance temperature	Temperatur für das Zeitfenster „Leistungstemperatur“

Technical data

	7 kW living room	15 kW living room	15 kW basement	25 kW basement	35 kW basement
Description	Individual/W Typ HP 01	Balance/W Typ HP 02	Balance/K Typ HP 02	HP 03/K Flash	HP 04/K Flash
Test standard	EN 14785	EN 14785	EN 303 - 5	EN 303 - 5	EN 303 - 5
Boiler class		**3**	**5**	**5**	**5**
Nominal heat input [kW]	8	4,3 - 14,9	3,8 - 14,5	7,6 - 25	7,6 - 35
Degree of efficiency full load [%]	93,4	97,1	95,7	95,4	95,4
Degree of efficiency part load [%]	97,1	97,1	92,8	93,9	93,9
Performance distribution Room / Boiler [%]	100 / 0	20 / 80	0 / 100 | 10 / 90*	0 / 100	0 / 100
Adjustable boiler temperature [°C]		55 - 83	55 - 83	55 - 83	55 - 83
Minimal return flow temperature [°C]		25	25	25	25
Permitted operating pressure [bar]		3	3	3	3
CE Identification	CE	CE	CE	CE	CE
Fuel type	EN-17225-2 A1	EN 17225-2 A1	EN 17225-2 A1	EN 17225-2 A1	EN 17225-2 A1

*Betrieb mit Sichtscheibe

Dimensions					
Overall width [mm]	550	540	540	580 + 310 (A-Box)	580 + 310 (A-Box)
Overall depth [mm]	600	600	600	750	750
Overall height[mm]	1300	1140	1140	1830	1830
Flue tube connection height [mm]	280	940	940	1380	1380
Diameter flue tube connection [mm]	80	80	80	130	130
Height pre- flow [mm]		185	185	1270	1270
Height return flow [mm]		185	185	1270	1270
Total weight [kg]	135	158	158	330	330
Water content [L]		32	32	75	75
Storage tank [L]	66	45	45	90	90

Connections					
Pre-flow [inch]		3/4	3/4	5/4	5/4
Return flow [inch]		3/4	3/4	5/4	5/4
Air vent for the boiler [inch]		1/2	1/2	3/4	3/4

Inspection data					
ΔT = 20 K [mbar]	5,0	5,0	5,0	5,0	5,0
Emission temperature at full load [°C]	120	115	115	140	140
Emission temperature at part load [°C]	55	70	70	80	80
Flue gas output rate at full load [g/s]	5,7	8,7	7,9	21	21
Flue gas output rate at part flow [g/s]	1,4	4,0	3,5	7,2	7,2
CO_2 at full load [mg/Nm^3]	24	37	42	54	54
CO_2 at part load [mg/Nm^3]	72	168	111	138	138
Min. supply pressure [mbar / Pa]	1	1	1	1	1
Max. supply pressure [mbar / Pa]	25	20	20	20	20

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

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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