Operation manual
Pellet Boiler
Classic 12-22

HARGASSNER
HEIZTECHNIK DER ZUKUNFT

Follow and store this manual

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Contents

Dear customer!

You've chosen an innovative wood biomass boiler from Hargasssner. The boiler from Hargassner Ges mbH is a state of the art product and manufactured to the latest production standards. We are very pleased about your decision and guarantee that you've chosen a reliable quality product.

However, as important as the products' high performance is, a professional installation, commissioning and service is just as crucial. Supportive are attached hydraulic schematics, and connections- and installation drawings. To ensure a long service life, exactly read and follow this operation manual. High costs for reparation and long downtimes may be prevented.

Keep this manual within easy reach.

The operating manual is intended to help:

- become familiar with the boiler
- and to use it for its intended purpose.

This operation manual contains important information in order to operate the boiler

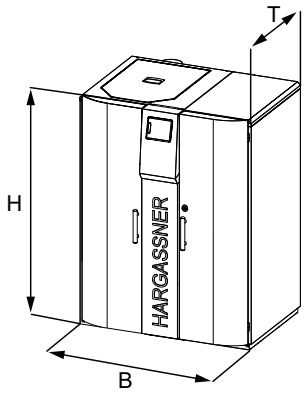
- safely
- appropriately
- efficiently
- and economically

Guidelines within this manual will:

- Prevent hazards
- Reduce breakdowns and wear
- Increase the reliability and service life of the boiler

Chapter I: Technical Data

1 Dimensions



Designation	Description	Value	Unit
B	Total width	1165	mm
T	Total depth	775	mm
H	Total height	1470	mm
	Total weight	300	kg

2 Intended purpose

This automatic wood pellet boiler is designed to heat water only. Only fuels permitted by Hargassner may be burned in this boiler. Only use the boiler if it is in technically perfect condition. Rectify errors immediately.
The appropriate operation also covers observation of all items of this operation manual and the carrying out of inspection- and maintenance works.

3 Fuel quality

Only use fuels that comply with **EN ISO 17225-2** (replaces ÖNORM EN 14961-2).

W A R N I N G

- ☞ Only use released and permitted fuels
- ☞ Always consult Hargassner before using new fuels.
  - ☞ Have their compatibility with the boiler checked by Hargassner.

3.1 Wood Pellets (A1)

Ensure these quality standards are adhered to when wood pellets are ordered and delivered.

- Least possible dust content
- Wood pellets with a hard and shiny surface
- 100% natural wood, no additives, etc.
- Wood pellet class **A1** defined in **EN ISO 17225-2:2014** and **ÖNORM M 7136**

Calorific value	Density	Diameter	Length	Fine material rate
≥ 4.6 kWh/kg	600 - 750 kg/m³	6 ±1 mm	3.15 - 40 mm	≤ 1%

3.2 Inadmissible fuels

- Fuels with water content >35%
  - ↳ Formation of condensate
  - ↳ Increased corrosion in the boiler
- Paper / Cardboard
- Chip boards, impregnated timber
- Black coal, brown coal or lignite
- Waste
- Plastics

4 Execution of the boiler room

Boiler room must executed according to legislation in your country.

⇨ See "Design of the boiler room" in the installation manual

- Keep the boiler's air openings free.
- Do not store any flammable materials in the boiler room.
- Execute the boiler room in frost-proof condition.
- fireproof, plane and solid floor- and ceiling construction
- In accordance with regulations, have the main heating switch installed by an electrician (depending on building regulations).
- Fire extinguisher

5 Design of the fuel storage room

Design your pellet fuel storage room in accordance with local regulations (e.g. ÖNORM M 7137 or VDI 3464).

⇨ See "Design of the fuel storage room" in the installation manual

- Only install metal fill pipes, electrically grounded and connection to atmosphere.
- Pay attention to noise protection
- Protection against moisture, water and dust.
- Correctly position impact protection mat(s) and install slant floor.

D A N G E R

Danger of suffocation due to odorless carbon monoxide in the storage room

- Ventilate sufficiently before entering the fuel storage room
- Keep window/door open during stay
- Position second person outside to supervise

Dust explosions in the storage room due to the explosive combustion of dust (pellet dust)

- Pay attention to proper grounding of the pellets transportation tubes
- No motors in the fuel storage room
  - ☞ Except agricultural buildings
- No other source of ignition (e.g. light) in the storage room
- No electrical equipment (e.g. light switch) in the storage room
- No welding works in dusty environment

6 Execution of heating circuits

The heating circuits must be designed correctly for optimum operation of the boiler.

⇨ Authorised heating diagrams: See heating diagrams enclosed.

The layout of the heating circuits' accumulators, pumps and mixers has to be designed according to legislation by the installer.

7 Flue pipe - chimney connections

Description	Unit	Classic 12	Classic 14	Classic 15	Classic 22
Nominal heating output	KW	12.0	14.9	15.0	22.0
Flue gas temperature	°C	150	150	150	150
CO_2	%	14			
Mass volume	kg/Sec	0.0071	0.0082	0.0088	0.0129
Necessary pressure	Pa	2			
Flue draft max. limit	Pa	10			
Diameter of flue pipe connection	mm	130			
Water resistance dT 10°	mbar	6.2	7.2	7.7	18.3
Water resistance dT 20°	mbar	2.0	2.3	2.5	3.8

8 Electrical supply

⇨ See according to enclosed electrical manual

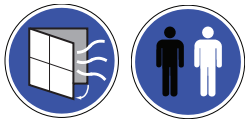
Electrical energy	Characteristics	Unit
Voltage	230	V ± 5 %
Frequency	50	Hz ± 5 %
Fuse	13	A
Power consumption	47	W

- The electrical connection may only be established by a licensed and authorised electrician and must be done in accordance with the enclosed electrical manual.
- Attach a lockable main power switch outside of the boiler room (depending on building regulations).
- Max. prefuse **13 A** (C characteristic)
- It is absolutely imperative that the intrinsically safe cables are **permanently installed**
  - Use suitable mechanical components
- in-phase connection **L** and **N** (see electrical manual)
- Connect potential equalisation
- Use highly flexible cables (e.g. **H05VV-F**)

Chapter II: Safety regulations

1 General safety advices

1.1 Obligation to instruct, external personnel, children



D A N G E R

Risk of death, injuries, damage from inappropriate installation

- Observe the safety instructions of the boiler and in the operation manual!
- Read the user manual PRIOR to commissioning.
  ☞ In the cladding door is a storage compartment

Incorrect actions by unauthorized individuals

- Works on the boiler through qualified and experienced personnel only.
- Decide who is responsible for managing the boiler.
- Keep external, unauthorised and untrained people away from the boiler and the fuel storage room
- No transfer of control entry codes
- Observe legal minimum age of personnel.
- Place prohibition sign in front of boiler room door and fuel storage door.

Risk of suffocation due to odourless carbon monoxide

- Ventilate sufficiently before entering the fuel storage room
- Keep window/door open during stay
- Always have a second person outside to supervise.

Work on electrical parts of the boiler may only be carried out by an electrician and in compliance with the electro-technical rules and standards.

Work on hydraulic systems may only be carried out by personnel with specialised knowledge and experience in heating engineering and pipework construction.

1.2 Special measures prior commissioning through the operator

- Licensing requirements for safe operation and accident prevention regulations must be observed!
- Do execute verifications prior first start up.
  ⇨ See „Checks prior commissioning“ on page 12.
- Do execute verifications prior commissioning.
  ⇨ See „Inspections prior starting up the boiler“ on page 13.

2 Remaining risks

The following residual risks must be given special consideration when the boiler is operated properly and in accordance with its intended purpose:

D A N G E R

Burns from hot surfaces or boiler components

- Switch off the boiler and let it cool down before carrying out any maintenance or servicing work
- Do not grasp into the boiler during operation.
- Wear heat resistant gloves.
  - ☞ The ash in the ash box does save heat.
- Put ash in closed, not-flammable vessels only.
  - ☞ Do not empty hot ash into dustbin

Scalds from sprinkling, hot water

- Check hoses, lines and connections periodically for leakages, wear and tear or any other damage!
- Rectify damages immediately.
- Before performing any maintenance work on the water circulation system, depressurise the boiler.
- Check, if all valves are in correct position.

D A N G E R

Dust explosion due to electro-static charging in the fuel storage room

- Pay attention to proper grounding of the pellets transportation tubes
- No motors in the fuel storage room (acc. to country-specific regulations)
  - ☞ Except agricultural buildings
- No other source of ignition (e.g. light) in the storage room
- No electrical equipment (e.g. light switch) in the storage room
- No welding works in dusty environment

D A N G E R

Burns from explosive combustion of residual gases (CO) in the combustion chamber

- Open the maintenance door carefully.
  - ☞ Slightly in the beginning.
  - ☞ Keep your body and face away from the maintenance door.
- Do not open the maintenance doorduring or straight after a power blackout.
  - ☞ The risk of deflagration increases significantly after uncontrolled conditions. (e.g. power loss)
- Do not open the maintenance door during heating operation.

D A N G E R

Risk of injury due to moving parts

- Omit access to augers or motors at operating boiler.
- Do not perform any work on the boiler when any person is in the danger zone
  ☞ Secure / lock fuel storage room
- Only clean the augers and remove blockages using suitable tools and when the main power switch is turned off.
- Wear safety shoes
- Observe fuel storage room sticker!

D A N G E R

Electric shock from contact with live terminals

- Observe information signs.
- Before starting work, check that no voltage is present using a voltmeter

D A N G E R

Poisoning and danger of suffocation due to flue gases in the boiler room / building

- Check boiler doors and seals for leaks.
- Burning treated wood (paint, varnish, impregnation) results in toxic ash.
  ☞ Avoid skin and eye contact

W A R N I N G

Risk of injury due to unexpected operating statuses

- During manual mode no monitoring of limit switches or motors is performed.
  ☞ Only run the augers backwards briefly (two seconds maximum).
- Manual mode is only allowed to be executed by trained staff.

3 Measures in case of danger

3.1 Fire in the boiler room

❒ Switch-off main switch prior any fire-fighting operations
↳ Disconnect main power supply
❒ Switch-off the boiler and unplug the unit from the mains

3.2 After power loss

During the power failure, do not open the boiler's doors or reach into it.
☞ Danger of deflagration
☞ Danger of crushing through augers
After the electrical supply is switched on again, the control starts in **Heat up** mode and monitors the flue gas temperature.
↳ As the flue gas temperature increases, the boiler will heat up and control the transfer of heat according to the preset parameters.

3.3 Leak in heating water system (no water)

If the water pressure is too low, not enough heat is being transferred from the boiler to the heat circuits, HWT and accumulator.
↳ Danger of boiler overheating
❒ Turn off the boiler.
❒ Fix leakiness
❒ fill / refill water system
❒ Check water pressure

3.4 Leak in the boiler (smoke escaping)

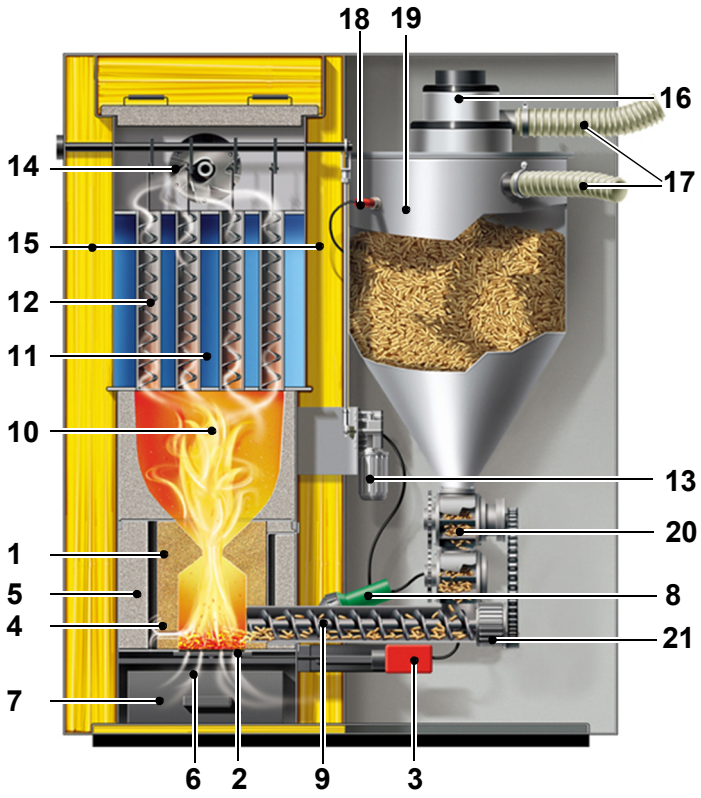
❒ Turn off the boiler.
❒ Check the seals of the doors and cleaning covers, and have them replaced.

3.5 Auger blockage(s)

Do not touch the augers.
☞ Danger of crushing at sudden release of blockages
❒ Briefly run the blocked augur backwards in manual mode (two seconds max.).
↳ Danger of squeezing of fuel in the auger
❒ Only clean the augers and remove blockages using suitable tools and when the main power switch is turned off and locked

Chapter III: Operation

1 Overview of components



Pos.	Description
1	Fully refractory-lined combustion chamber
2	Sliding grate
3	Motor for sliding grate
4	Secondary air stream with inlet openings
5	High-temperature insulation plates
6	Primary air
7	Ash box
8	Ignition
9	Stoker auger
10	Circulation zone
11	Heat exchanger
12	Turbulators
13	Automatic heat exchanger cleaning
14	Exhaust fan
15	Full insulation
16	Wood pellet vacuum turbine
17	Pellet-tubes
18	Fuel indicator
19	Pellet day hopper
20	Double rotary valve
21	Drive unit
22	Lambda sensor

The boiler consists of the combustion chamber and the heat exchanger, and controls the combustion air with the exhaust fan.
The lambda sensor consistently monitors the flue gases. The integrated sensors monitor the temperatures of the boiler and the flue gas. The turbulators clean the heat exchanger through a rod. The boiler cleans itself at regular intervals using the de-ash system. The ash extraction auger transports the fly ash and the grate ash into the ash box. The ignition of the pellets takes place through the automatic Ignition.

1.1 Function

- Fuel transport from the storage room
- Transport of the fuel into the combustion chamber
- Ignition and combustion of the fuel
- Control of energy transfer to the water based system
- Cleaning of the boiler and the ash extraction into the box
- Evacuation of the flue gases

2 Prior to commissioning

D A N G E R

Death, injuries or damage due to missing, defective or bypassed safety devices or boiler parts

- Check safety devices and boiler parts carefully for proper and intended function
- Safety devices should not be modified or bypassed
- In case of a malfunction or defect, perform repair measures immediately.
- Place, position and function of all safety devices must be known

W A R N I N G

Danger of crushing from moving parts in the vicinity of the fuel extraction system, ash extraction system and combustion grate

- Make sure that no persons stay in any danger zone
- Do not reach into any reachable mechanical parts.
- Do not stand on the boiler system.
- Make sure that no foreign parts (tools, etc.) remain within any boiler component

D A N G E R

Commissioning by untrained or unauthorised personnel Risks due to unforeseeable operating conditions

- The switch-on / first start-up must be carried out by **Hargassner Ges mbH or specially trained staff**.

2.1 Checks prior commissioning

- Safety on-site and plumbing and electrical installations
- Installation of the boiler
- Check all necessary components
  - Check they are secure, that each component is functioning correctly, that the motors are rotating in the right direction, etc.
  - Check the combustion chamber lining is positioned correctly.

2.2 Start of commissioning

Once the boiler has been installed properly and all the required safety devices have been checked, the boiler can be commissioned in accordance with the commissioning checklist in the commissioning book.

A T T E N T I O N

The boiler must be commissioned by an engineer with a Hargassner commissioning certificate. The completed commissioning checklist must be sent back to Hargassner with the commissioning number within 30 days of the commissioning, **otherwise the warranty becomes void**. A copy remains in the commissioning book on-site.

2.3 Customer instructions

- Explain cleaning and maintenance intervals
- Explain inspections prior to any fuel refill
- Explain how to operate the boiler and resolve issues.

2.4 Restart boiler

Once the commissioning process has been completed, the boiler can be started for the first time. Please proceed as follows:

❒ Switch the boiler to manual operation

☞ Use parameter no. 8 to fill the day hopper in manual mode.

↳ Prevents an error due to missing fuel

❒ Switch the boiler to **Auto** or **HWT** mode.

☞ Boiler starts automatically when hot water is needed

2.5 Air flow slider settings

☞ The air flow slider above the ash box is set at the factory.

☞ Classic 12 - 15: one hole line open

☞ Classic 22: all holes lines open

2.6 Inspections prior starting up the boiler

❒ Check the water pressure in the boiler, heat, HWT and accumulator circuits.

❒ Pay attention to the display for notifications (error messages and boiler status).

❒ Rectify any errors.

❒ Check and lock fuel storage room

2.7 Filling the fuel storage room

W A R N I N G

Fire hazard

Danger of flue gas being suctioned out of the boiler

☞ Make sure you switch off the boiler before blowing pellets into the storage room!

Protect fuel against moisture

3 Control panel

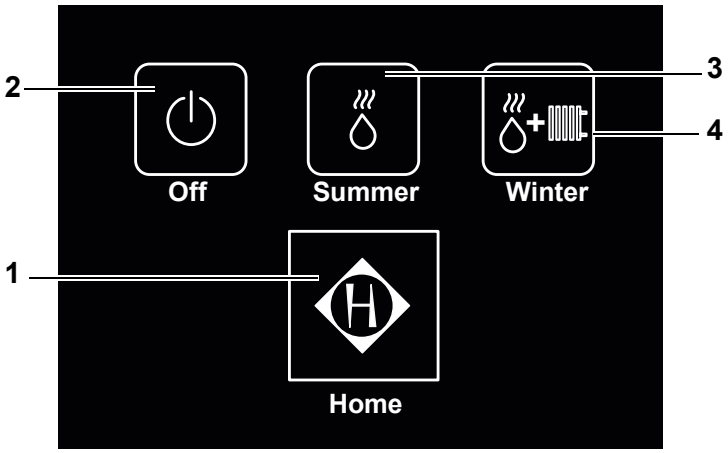
D A N G E R

Wrong operation of the control

Risk of injury, damage to the boiler from unpredictable operating modes

- Only trained staff should operate the control unit
- Access to all functions of the control is protected by codes in the control unit
  - ☞ Service settings and installer settings
  - ☞ Codes may not be forwarded to unauthorised staff

3.1 Home screen



Pos.	Description	Function
1	Standard menu	Changes from **Home** to **standard menu** ⇨ See „Standard menu view“ on page 16.
2	Operating mode **Off**	Quick select button for operating mode **Off** ⇨ See „Operating modes“ on page 17.
3	Operating mode **Summer**	Abbrev. button for operating mode **Summer** (HWT mode)
4	Operating mode **Winter**	Abbrev. button for operating mode **Winter** (Automatic mode)

☞ After the time set in the "No. 02 Display settings" setup parameter has elapsed, the controller automatically switches to the home screen.

3.2 Touch screen

The control panel is designed as a touch screen.
☞ Handling through finger pressure on the display.

❒ Scroll through the menu with 

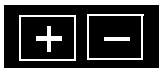
❒ To return to the previous menu, press  **Standard**

❒ To return to the standard menu, press  **Standard** (you may have to press twice)
☞ Possible from every menu

❒ Activate the operating mode by pressing the 

Function selection button

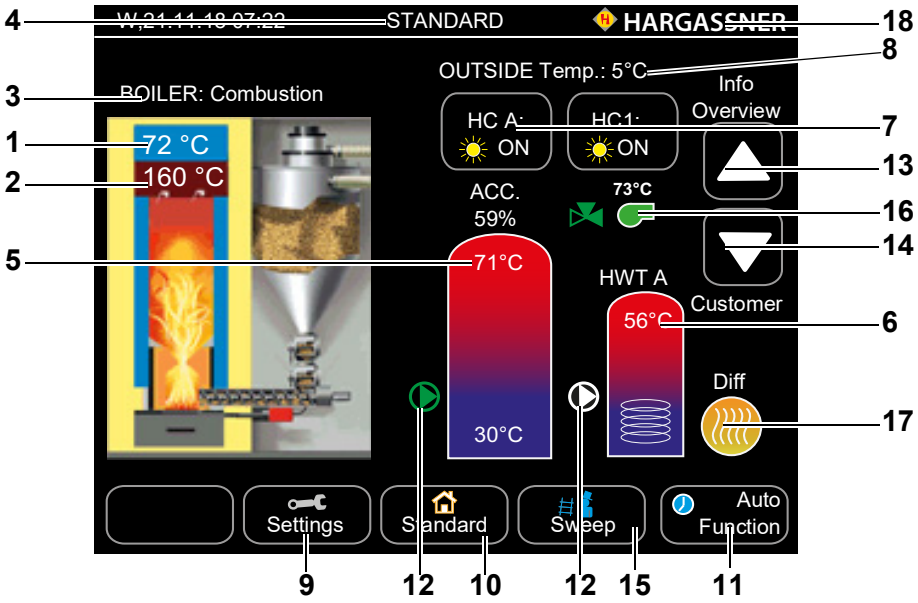
❒ Press the field to activate the input field
↳ Values are displayed in **red**

❒ Change the active values: 
↳ Values flash **red**
↳ Buttons flash **green**

❒ To enter or save any changes, press 

❒ You can go straight to the customer parameters by pressing the relevant graphic in the standard menu.
☞ Possible with the boiler, accumulator, HWT, external boiler and heat circuit graphics

3.3 Standard menu view



Pos.	Description	Function
1	Boiler temperature	Display of the current boiler temperature
2	Boiler-flue gas temperature	Display of the current flue gas temperature
3	Status display of the boiler	⇨ See „Boiler's status indicators“ on page 18.
4	Status display of the control unit Display of the current menu name	• Description of the active menu • Error (flashes red) / warnings (yellow) • Current position in menu tree • **Boiler Stop** in days
5	Temperature display in accumulator (if available) Display accumulator filling volume in [%]	Current temperatures (top, mid, bottom) of accumulator sensors Currently filled heat capacity
6	HWT temperature indicator	Display of the current water temperature in the HWT
7	Status display of heating circuits	• Off Heat circuits switched off • Sun - Heat circuits in day mode • Moon - Heat circuits in reduced mode • Frost - Heat circuits in frost protection mode
8	Display of outside temperature	Outside temperature measured at outside sensor
9	Settings	Takes you to the customer, installer and service settings and to the controller's setup menu.
10	Standard	Displays the standard menu. You can switch directly to the Standard menu from any menu. After 10 minutes of no activity, the display automatically switches back to the **Standard** display menu.
11	Function	Choose operation mode of the boiler. ⇨ See „Operating modes“ on page 17.
12	Pump	Operation mode of the pump Green: pump is running; white: pump has stopped
13	Info	• Switching to the Info menu
14	Customer	• Switching to the customer settings
15	Chimney sweep	By pressing the Sweep button, a special Boiler status programme is started to measure the flue gas consistency
16	External heat boiler	Status display of external boiler (if available) Green: released; white: locked
17	Differential control	Pressing the symbol will take you to the differential control info page.
18	Hargassner logo	Press on the logo to display the boiler data

4 Operating modes

- **Automatic (Auto):** The standard mode in which the heating system is operated according to the pre-set temperature and on/off times.

- **Hot water (HWT):** The heating system is only used to ensure the hot water supply, not to heat any floor heating system or radiators.
  - ☞ No control of the heat circuits (except for the frost protection function)
  - ☞ Pumps **Off** and mixers **Closed**

- **Switch off (Off):** The heating system is switched off - with the exception of the frost protection function. The control unit still shows all necessary information.
  - ☞ No control of the heat circuits (except for the frost protection function)
  - ☞ Pumps **Off** and mixers **Closed**

- **Manual operation (Manual):** Allows various actions to be carried out manually, such as manual activation of individual pumps and mixers. Also shows additional information and values.
  The standard display is retained in the Automatic, HWT and OFF operating modes.

- **Sweep button:** The button for the chimney sweep to manually switch the boiler **On** or **Off** during emission tests.
  The following options are available:
  - ☞ **Full load:** If an accumulator is connected, press this button to have the control unit automatically change to full load measurement.
  - ☞ **Empty accumulator:** Press this button to switch off all programmed control functions of the boiler. The boiler operates at full load, assumes very low outside temperatures and tries to transport as much as possible heat into the heating system. All regulating devices like thermostatic head valves and automatic control valves have to be opened manually to ensure that the required amount of heat is transferred. This function ends automatically after 2 hours. If the chimney sweep button is pressed and no accumulator is connected, the control offers two options: **full load measurement** or **part load measurement**. All programmed control functions of the boiler are switched off in part load measurement. The boiler controls up to 100% (full load) combustion. After 15 min. full load - the heat output is reduced to 50% (part load). After 5 min. part load, the **"Chimney sweep Start measuring"** message is displayed.

- **Heater OFF:** Button for switching heater off. Heater can be switched off immediately or at a preset time.
  - ☞ Control of the heating circuits with pumps and mixer continues; only firing is switched off.

5 Boiler's status indicators

The boiler control uses the temperatures and flue gas values to detect the status of the boiler.

Off
The boiler switches off if there is no demand from the heat circuits or HWTs or if the accumulator takes care of the demand.

Ignition monitoring
Fuel is being transported into the combustion chamber and the boiler monitors if an autonomous ignition is possible due to residual embers.

Ignition
The electric ignition starts and the fuel is ignited.

Combustion
The boiler controls the induced draft fan's output (air volume) according to the heat demand and required boiler temperature, and the optimum fuel amount according to the lambda sensor signal.
☞ Combustion output range from 30 - 100 %

Burnout
The boiler controls the burnout according to the O2 content and the set minimum and maximum burnout times.

Slumber mode
If the heat demand drops below the minimum boiler output, the status changes to slumber mode.

Deashing in x min
if the maximum combustion time is exceeded, no more fuel is added and the boiler burns out.

Deashing
The grate is opened and closed twice. The generated ash drops down into the ash box. The boiler returns to the required status afterwards.

Pellets fill in
If the minimum auger run time and the set suction time are reached, or the maximum auger run time is exceeded, the filling will be started after the displayed time.

Refill pellets

The vacuum turbine is started up and the day hopper is filled with wood pellets again. The boiler subsequently returns to the required status.

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6 Info - menu

❒ Press 

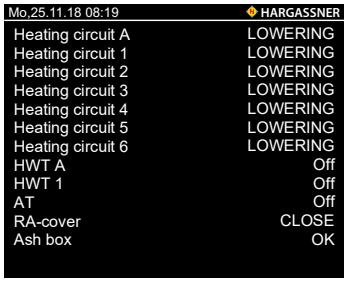
in the **Standard** menu

❒ Use arrows to move within the menu 

Target: Adjustment value / set value
Is: current value (position)

❒ In the respective info menu, press the  symbol to go straight to the settings.

6.1 Info Overview



Shows an overview of heat circuits, HWTs' and any other components of the individual heating system.

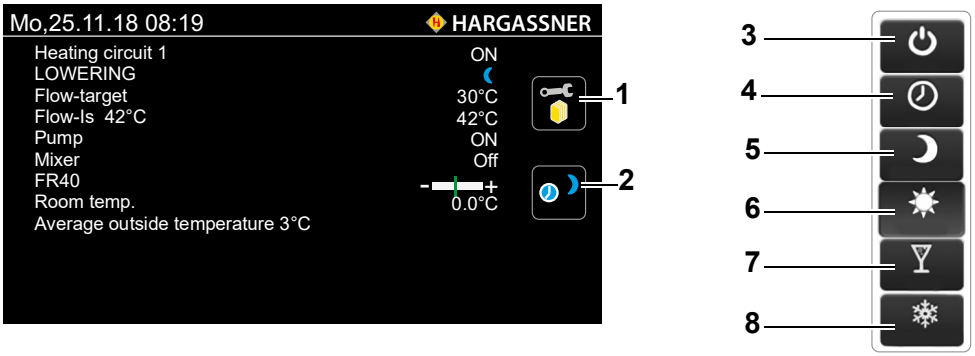
6.2 Info District line pump (FLP)

If a heat circuit has a district line, the status of the district line pump is shown on this page (green = **On**, white = **Off**).

6.3 Info Heat Circuits

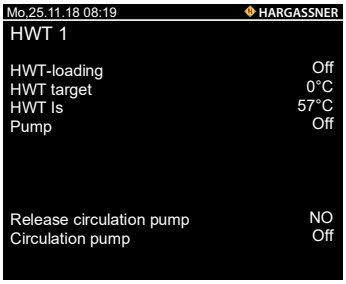
Shows the status of the heat circuits. One heat circuit is displayed per page. If there are several heat circuits, several info pages are available in the menu. If the mixer pump is running, this is indicated as text and by a green arrow icon.

❒ Use the symbol next to the heat circuit **(1)** to call up the configuration pages.
❒ You can also press the heat circuit button directly to go to the first heat circuit page
☞ If a FR25, FR35 or FR40 is used, it is shown in an additional line
❒ Select the heating mode using the heating mode symbol **(2)**.



Pos.	Description	Function
1	Heat circuit configuration	The button next to the corresponding heat circuit is used to jump to the setting options in the configuration pages
2	Heating mode configuration	The button is used to enter the pop-up menu for selecting the heating mode
3	Heat circuit Off	The heat circuit is switched off (except for the frost protection function)
4	Heat circuit Automatic	The heat circuit runs according to the timer programme's settings.
5	Heat circuit continuous setback	The room temperature is continuously being heated to the preset room temperature (reduction/setback mode)
6	Heat circuit continuous heating	The room temperature is continuously being heated to the preset room temperature (heating mode)
7	Party mode	The heat circuit heats the room temperature to the set value (heating mode) and switches back to the automatic timer programme during the next heating cycle (or after 24 hours at the latest)
8	Reduction/setback mode	The heat circuit is reduced to the pre-set room target temperature (reduction/setback mode) and returns to the automatic timer programme during the next heating cycle (or after 24 hours at the latest)

6.4 Info Boiler



Info page about the HWT status

- HWT-loading
- Setpoint temp.
- Actual temperature
- HWT fill level display

- Pump status

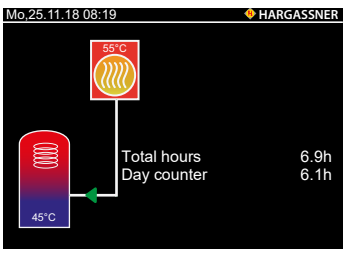
If more HWT are parametrised, more info pages are also available. The symbol besides the HWT pump shows if the pump is running or not (green=on, white=off)

☞ Use the HWT icon to access the HWT setting options in the configuration pages

- Button **One-time charge** 

☞ Press the button to recharge the HWT once to its set temperature

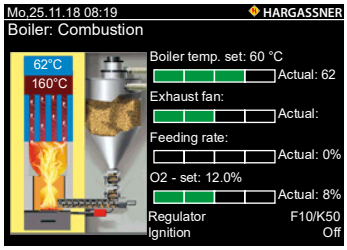
6.5 Differential control information



Info page about the current status of differential control

- Differential control operating hours
- Total / day
- Current heat source temperature
- Current temperature at differential sensor (S2)

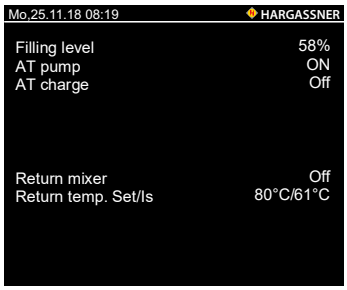
6.6 Info Boiler



Info page about the current set / actual values of the boiler

- Current status of the boiler
- Water temperature in the boiler
- Exhaust fan speed in % of maximum
- Currently necessary fuel rate
- Flue gas oxygen value in % - measured on the lambda sensor
- Current temperature in the combustion chamber (flue gas temperature)
- Firebed level sensor position (Tongue)
- Ignition active / not active

6.7 Info AT



Info page about the current actual values of the accumulator

- Accumulator fill level display

☞ Filling level: 80 % = red

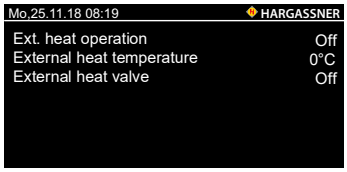
☞ Filling level: 30 % = blue

☞ Filling level between 30 % and 80% = blue/red 

- Return temperature Set / Is = Temperature of boiler return
- Button **One-time charge** 

☞ Press the button to recharge the accumulator once to its set temperature

6.8 Info External heat



Info page about the current values of the external heat

- External heat operation indicator (**On**/**Off**)
- Current external heat sensor temperature
- External heat valve indicator (**On**/**Off**)

6.9 Consumption - info

Info page about the current overall consumption

- Only displayed if the pellet consumption display is activated in the installer settings

6.10 Info Trend

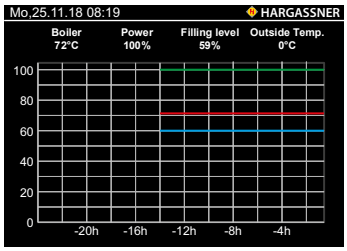
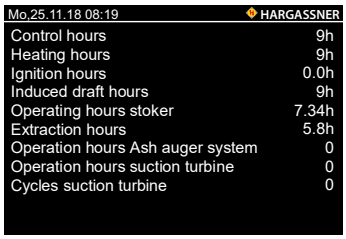


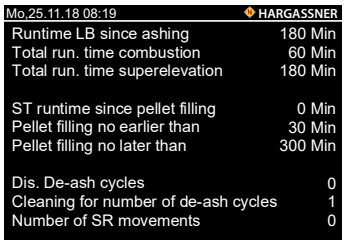
Diagram of the last 24 hours

- Boiler temperature
- HWT temperature
- Power
- Accumulator filling level

☞ The timeline can be set for activated service settings

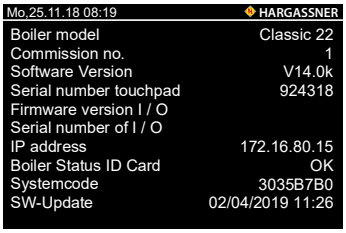
6.11 Info Counter





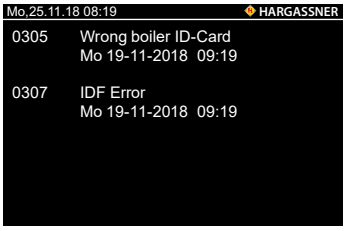
Overview about current operation hours

6.12 Info serial number



Overview of the relevant boiler data

6.13 Info fault



Overview of current errors

☞ Once the fault is rectified, the error message is no longer shown

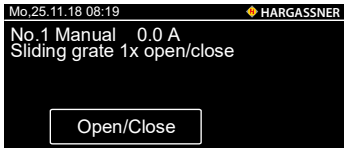
7 Manual operation

	WARNING
	Risk of injury due to unexpected operating statuses • During manual mode no monitoring of limit switches or motors is performed. ☞ Reverse operation of augers max. 2 [Sec.] • Manual mode is only allowed to be executed by trained staff

Manual operation is used to:
- check all electrical functions
- check equipment after an error manually

❒ To activate the function, press or press and hold the button.
❒ To deactivate the function, press again or release the button
☞ To activate continuous operation (max. 2 minutes), double-click the button when the service settings are activated.

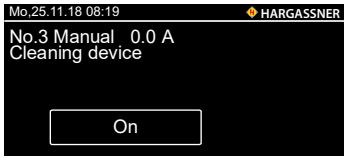
Only the selected function is activated. All other functions are inactive.



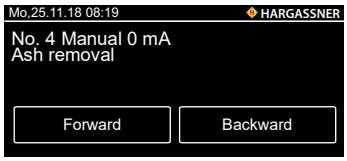
No. 1 Function check on the sliding grate
- Pressing the button opens and closes the sliding grate once.

☞ Generated ash drops down into the ash box.
☞ Press the button after each time the boiler is cleaned.

No. 2 Function check on the sliding grate
- Pressing the button either opens or closes the sliding grate once.

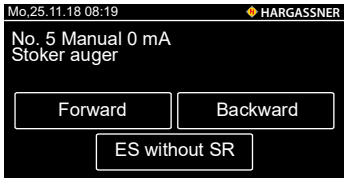


No. 3 Function check on the cleaning device
☞ The grate opens completely and the cleaning motor starts running.
☞ Press the button again to end the function check. The cleaning motor will move to its final position and the grate will close.



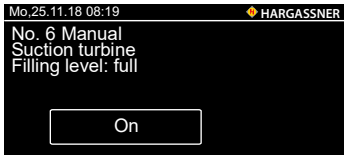
No. 4 Function and rotation check of ash extraction motor
- Manual Forward or Backward of the motor

☞ Press Backward button only **briefly**

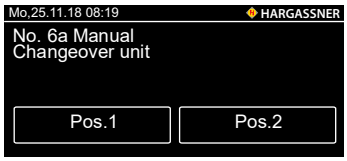


No. 5 Function and rotation check of stoker auger motor
- Manual Forward and Backward to fill the stoker auger

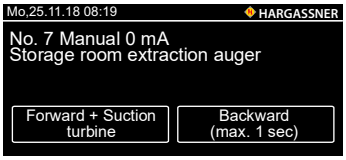
☞ Press Backward button only **briefly**
☞ The stoker auger is only available without sliding grate when the service settings are activated.



No. 6 Functional test of vacuum turbine



No. 6a Function check on the changeover unit



No. 7 Function and rotation check of storage room extraction motor

- Manual Forward and Backward of the motor to clear any blockages

☞ Manual Forward also starts the suction turbine.

☞ Only press the Backward button **briefly** (maximum 1 second).

No. 8 Filling the day hopper

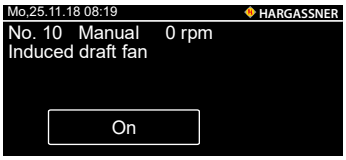
☞ Must be filled at restart

☞ The indication limiter switches the turbine automatically off

No. 9 Function check of ignition

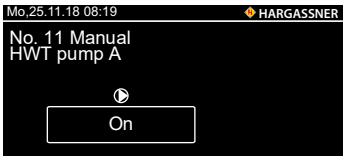
☞ After a maximum of 1 minute, the coil should be hot

☞ After 3 minutes the ignition coil switches off



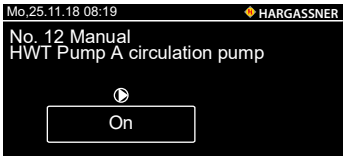
No. 10 Function check on the exhaust fan

☞ Maximum speed approx. 2600 rpm



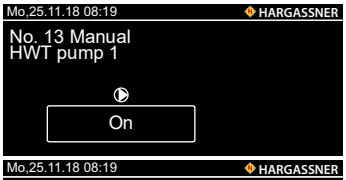
No. 11 Function check or manual operation of HWT loading pump 1

☞ Only possible when heat circuit control board **HC A** is connected



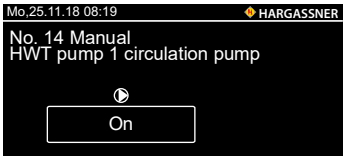
No. 12 Function check or manual operation of circulation pump HWT A

☞ Only possible when heat circuit control board **HC A** is connected



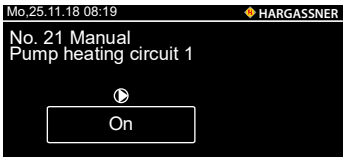
No. 13 Function check or manual operation of HWT loading pump 1

☞ Nos. 15 and 17 for HWT pumps 2 and 3 only possible when **HKM 1** and **HKM 2** are connected



No. 14 Function check or manual operation of circulation pump HWT 1

☞ Nos. 16 and 18 for circulation pumps HWT 2 and 3 only possible when **HKM 1** and **HKM 2** are connected



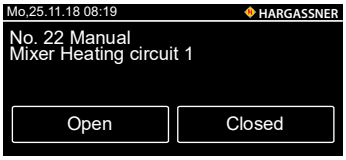
Function check or manual operation of heat circuit pumps

No. 19 for heat circuit pump A (**HC A**)

Nos. 21 and 23 for heat circuit pumps 1 and 2 (**Boiler**)

Nos. 25, 27 and 29 for heat circuit pumps 3 and 4 and external heat circuit pump 2 (**HKM 1**)

Nos. 30, 32 and 34 for heat circuit pumps 5 and 6 and external heat circuit pump 3 (**HKM 2**)



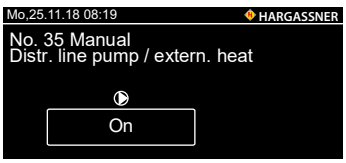
Function and rotation check of heat circuit mixer

No. 20 for heat circuit mixer A (**HCA**)

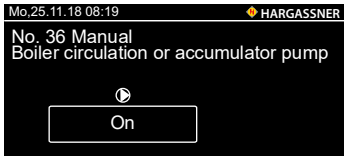
Nos. 22 and 24 for heat circuit mixers 1 and 2 (**Boiler**)

Nos. 26 and 28 for heat circuit mixers 3 and 4 (**HKM 1**)

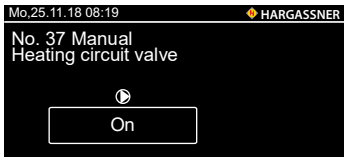
Nos. 31 and 33 for heat circuit mixers 5 and 6 (**HKM 2**)



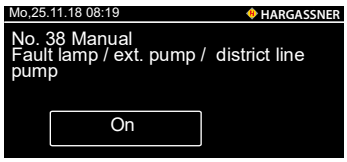
No. 35 Function check or manual operation of district line pump or booster pump



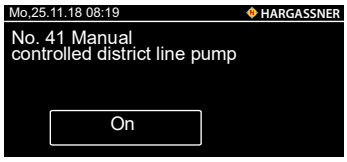
No. 36 Function check or manual operation of the parametrised pump
- Boiler circulation pump
- AT pump



No. 37 Function and rotation check on the heat circuit valve

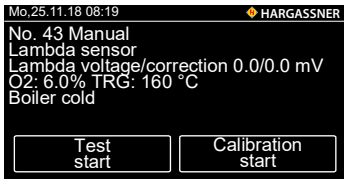


No. 38 Function check or manual operation of the fault lamp, external pump or district line pump



No. 41 Function check or manual operation of the pump for the controlled district line

No. 42 Function and rotation check of the mixer for the controlled district line

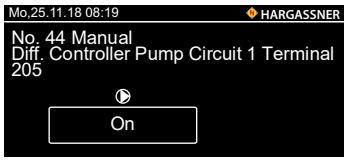


No. 43 Test lambda sensor
- Function check only possible at a flue gas temperature (TRG) below 50°C

❒ Press **Test start**.

☞ After approx. 5 minutes the voltage of the sensor should be around -7.0 mV

☞ Values between -2 and -12 mV are within the tolerance range.



No. 44 Function check or manual operation of the differential control pump

☞ Only when a differential controller is connected

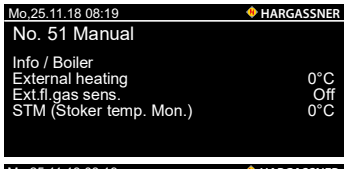
No. 44b for pump heat source

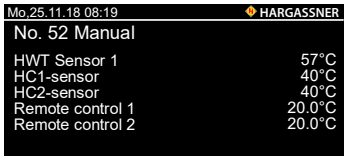
No. 44c for valve/ return mixer

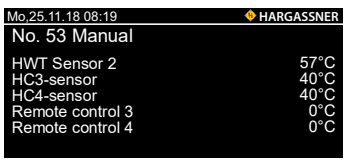
No. 45 for differential controller 2

No. 50 - 53 Display of the current sensor values

☞ Acc. to parametrised heating system







8 Settings menu

Press the Set button in the standard display to access the Settings menu.

- Customer
- Installer
- Service
- Setup

8.1 Customer

This button leads to configuration pages, which are also available via the Standard menu

⇨ See „Settings menu“ on page 31.

8.2 Installer

Extended settings of the boiler. Only available for the registered installer and Hargassner service personnel. The parametrisation depends on the heating system configuration.

Code: 33

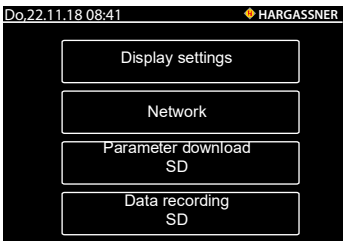
⇨ See „Installer settings“ on page 37.

8.3 Service

Enables trained service personnel to change parameters. The parametrisation depends on the heating system configuration.

Note: Installer and Service menu are protected by a PIN code. Only service personnel may change them, as the parameters may impair the functionality of the heating system if poorly selected.

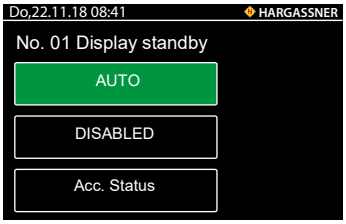
8.4 Setup



The following setting options are available:

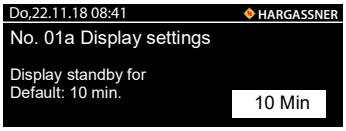
- Display settings
- Network settings
- Parameter download (SD)
- Data recording (SD)

8.4.1 Display settings



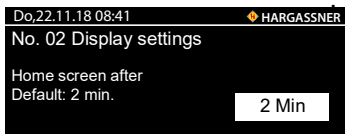
No. 01 Display standby

☞ Activates or deactivates the standby mode.



No. 01a Display settings

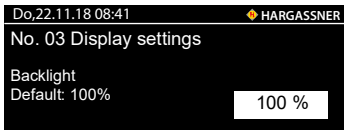
☞ Display switches to standby mode after preset time



No. 02 Display settings

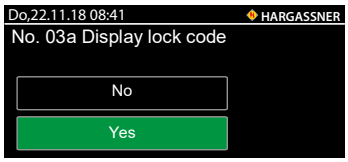
☞ Display switches to the HOME screen after the set time

☞ Setting 0 deactivates this function.



No. 03 Display settings

☞ Set display backlight (10% - 100%)



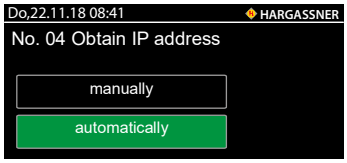
No. 03a Display lock code

☞ Select whether you want to enter a code to lock the display

No. 03b Display lock code

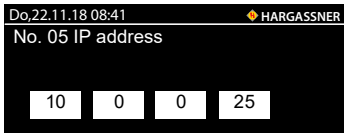
☞ Enter 4-digit lock code

8.4.2 Network settings



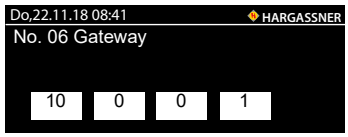
No. 04 Obtain IP address

☞ Select whether you want to generate the IP address manually or automatically



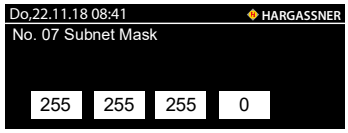
No. 05 IP address

☞ Manual entry of the IP address



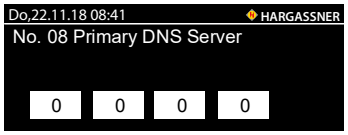
No. 06 Gateway

☞ Manual entry of the gateway



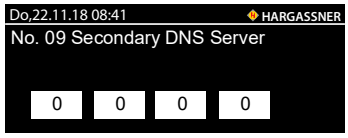
No. 07 Subnet mask

☞ Manual entry of the Subnet Mask



No. 08 Primary DNS Server

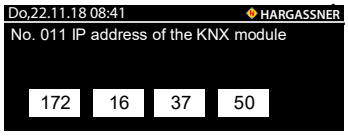
☞ Manual entry of the Primary DNS Server



No. 09 Secondary DNS Server

☞ Manual entry of the Secondary DNS Server

No. 010 Display of the Name of Device



No. 011 IP address of the KNX module

8.4.3 Parameter download (SD)

- ☞ Save the set parameters to SD-Card inserted
- ☞ Press **Save parameters**

8.4.4 Data recording (SD)

- ☞ Additional saving of current boiler data on the SD card
- ☞ To finish the protocol - press **Stop SD Logging**

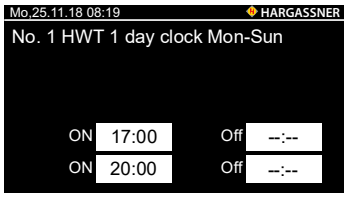
9 Customer settings

- ❒ In the standard menu, press the **Setup** button and then press the **Customer** button.
- ❒ Select your desired setting value with the arrow button.
- ❒ Select the values by touching the fields highlighted in white
  - ↳ The font colour of the parameters changes to **red**
- ❒ Press the **+** and **-** buttons to set the desired values - the display flashes.
  - ☞ Press and hold the **+** and **-** buttons to adjust the values quickly.
- ❒ Confirm the set value with the green checkmark

9.1 HWT control

☞ The day clock is set to weekly clock and the number of blocks is changed in the installer settings (parameter D9 + D10)

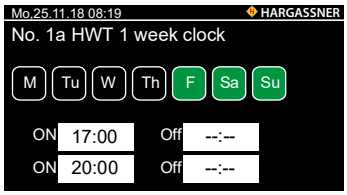
9.1.1 Day clock



No. 1 HWT 1 day clock Mon-Sun

☞ Setting the loading times of the boiler using the day clock

9.1.2 Week clock



No. 1a HWT 1 week clock

Setting the loading times of the boiler using the weekly clock

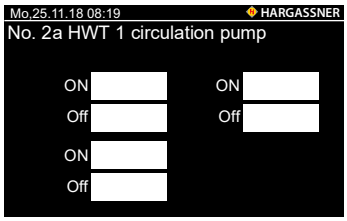
☞ Selected day = green

9.1.3 Setpoint temperature

No. 2 HWT 1 - Setting the HWT set temperature

☞ HWT loading is done only during the set **loading times**

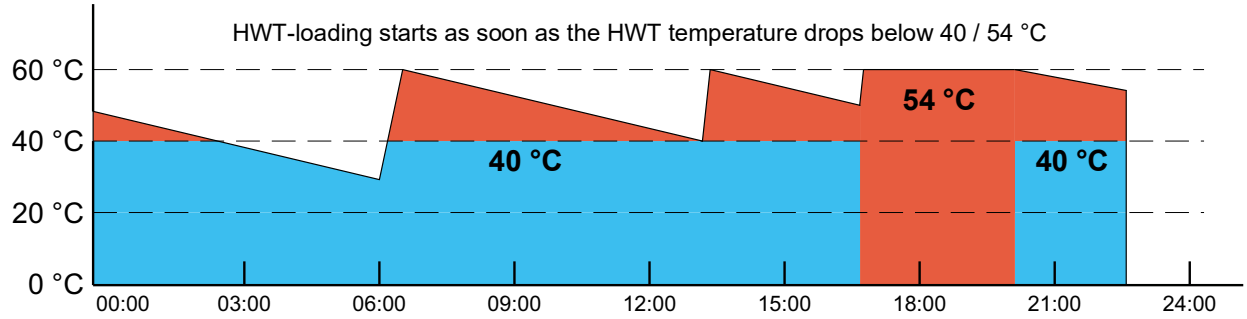
9.1.4 Circulation pump



No. 2a HWT 1 circulation pump

☞ Setting the switching times of the circulation pump (if available)

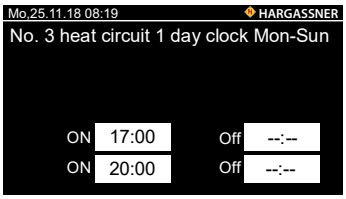
HWT temperatures as per factory setting



9.2 Control of heat circuits

☞ The day clock is set to weekly clock and the number of blocks is changed in the installer settings (parameter D9 + D10)

9.2.1 Day clock

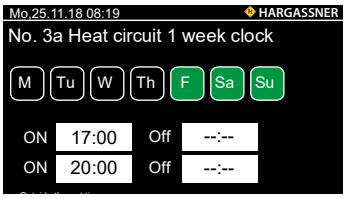


No. 3 heat circuit 1 day clock Mon-Sun

- Setting the heating times using the day clock

☞ The selected times are the same for all weekdays

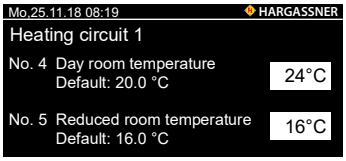
9.2.2 Week clock



No. 3a Heat circuit 1 week clock

- Setting the heating times using the weekly clock

9.2.3 Room temperature

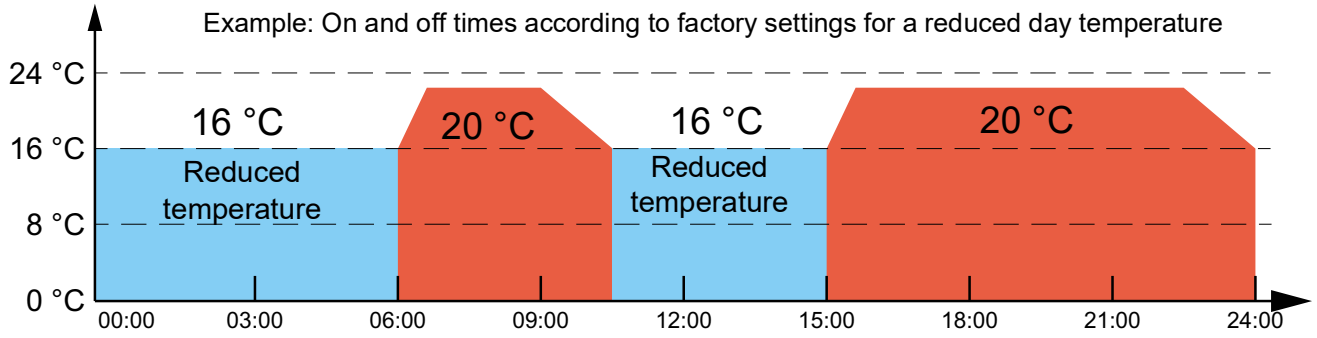


No. 4 Day-room temp. / No.5 Setback/reduced room temperature

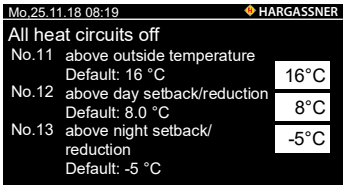
- Set the desired room temperature

☞ Range of the day room temp.: 14 °C - 26 °C

☞ Range of the setback/reduced room temperature: 8 °C - 24 °C



9.2.4 Outside temperature shut-down



- Setting the temperatures for the outside temperature shut-down

☞ Three possible thresholds depending on the heating programme and time

No. 11 All heat circuits off via outside temperature

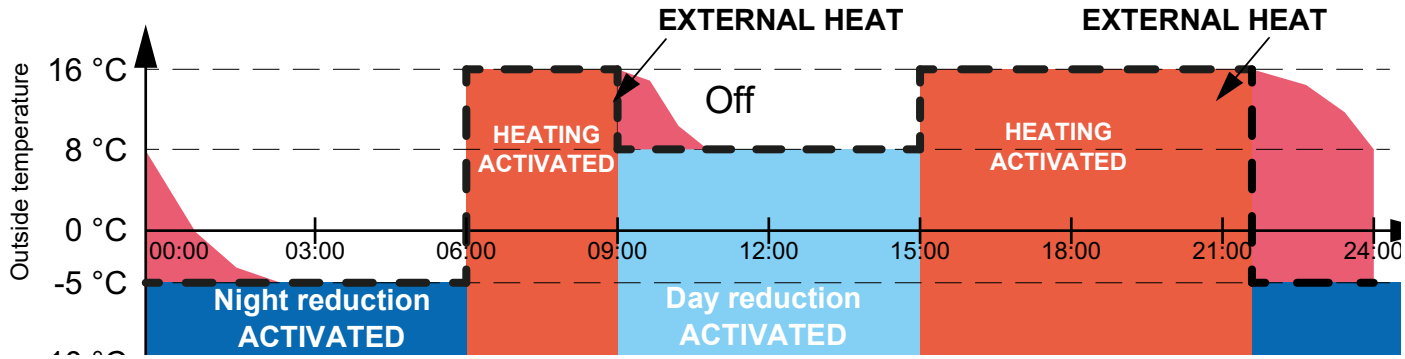
☞ If the average outside temperature exceeds the set value, the heat circuits will be switched off (summer shut-down).

No. 12 All heat circuits off day reduction

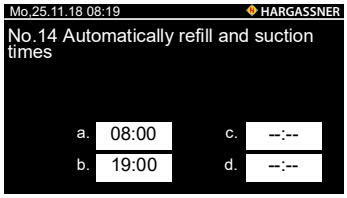
☞ If the average outside temperature exceeds the set value during the day reduction time, the heat circuits will be switched off.

No. 13 All heat circuits off night reduction

☞ If the average outside temperature exceeds the set value during the night reduction time, the heat circuits will be switched off.



9.3 Pellet filling times

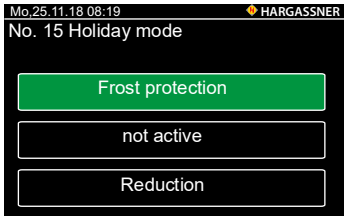


No. 14 Pellet filling

- Setting the pellet filling times in the day hopper

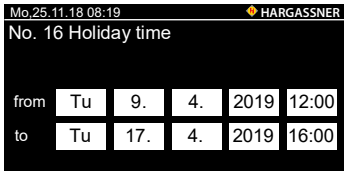
9.4 General settings

9.4.1 Holiday mode



No. 15 Holiday mode

- Setting the holiday mode function



No. 16 Holiday time

- Setting the holiday time during which holiday mode is activated

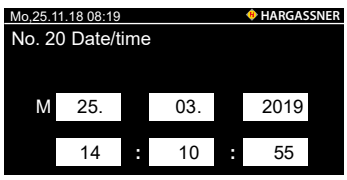
9.4.2 Starting deashing

No. 18a Start deashing

☞ Only active if parameter D50 is set to **available** in the installer settings

- Press the **Yes** button to start the deashing and cleaning process.

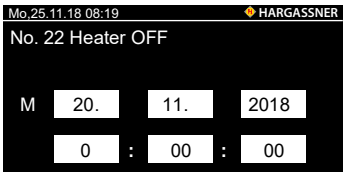
9.4.3 Date / Time



No. 20 Date/time

- Setting the date and time

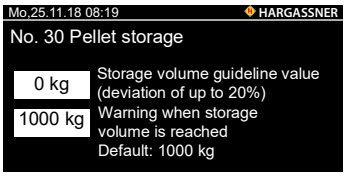
9.4.4 Heater off



No. 22 Heater Off

- Setting the date and time when heater is switched off (e.g. when the chimney sweep is registered)

9.4.5 Pellet consumption display

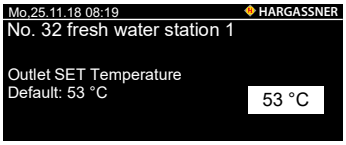


No. 30 Pellet storage

☞ Only active if parameter D1f is set to **available** in the installer settings

☞ Deviations of up to 20% possible

9.4.6 Fresh-water station



No. 32 Fresh-water station

- Setting the maximum temperature of the hot water at the tapping point

☞ Only active if parameter C3 in the installer settings is on **Accumulator / Fresh-water station**

9.5 Parameter list Customer settings

9.5.1 Extension module 0

Menu	Description	Factory:	Modbus address
1	HWT 1 day clock Mon - Sun	ON 17:00 OFF 20:00	2001
1a-g	HWT 1 weekly Mo/Tu/We/Th/Fr/Sa/Su	ON 17:00 OFF 20:00	2005 - 2035 (intervals of 5)
2	HWT 1 Set temperature	60°C	2040
2a	Circulation pump HWT 1	ON 06:00 11:00 16:00 OFF 08:00 13:00 20:00	2041
3	Heat circuit 1 day clock Mon - Sun	ON 06:00 15:00 OFF 09:00 22:00	2050
3a-g	Heating circuit 1 weekly Mo/Tu/We/Th/Fr/Sa/Su	ON 06:00 15:00 OFF 09:00 22:00	2055 - 2085 (intervals of 5)
4	Heat circuit 1 Day-room temperature	20.0°C	2090
5	Heat circuit 1 Reduction temperature	16.0°C	2092
6	Heat circuit 2 day clock Mon - Sun	ON 06:00 15:00 OFF 09:00 22:00	2094
6a-g	Heating circuit 2 weekly Mo/Tu/We/Th/Fr/Sa/Su	ON 06:00 15:00 OFF 09:00 22:00	2098 - 2128 (intervals of 5)
7	Heat circuit 2 Day-room temperature	20.0°C	2133
8	Heat circuit 2 Reduction temperature	16.0°C	2135

9.5.2 Heat circuit board HC A

Menu	Description	Factory:	Modbus address
HP1	HWT A daily Mon-Sun	ON 17:00 OFF 20:00	2140
HP 1a-g	HWT A weekly Mo/Tu/We/Th/Fr/Sa/Su	ON 17:00 OFF 20:00	2145 - 2175
HP 2	HWT A Set temperature	60 °C	2180
HP 2a	Circulation pump HWT A	ON 06:00 11:00 OFF 08:00 13:00	2185
HP 3	Heating circuit A daily Mon-Sun	ON 06:00 15:00 OFF 09:00 22:00	2190
HP 3a-g	Heating circuit A weekly Mo/Tu/We/Th/Fr/Sa/Su	ON 06:00 15:00 OFF 09:00 22:00	2195 - 2225
HP 4	Heat circuit A Day-room temperature	20.0 °C	2230
HP 5	Heat circuit A reduction-room temperature	16.0 °C	2237

9.5.3 Extension module HKM 1

Menu	Description	Factory:	Modbus address
H 1	HWT 2 day clock Mon - Sun	ON 17:00 OFF 20:00	2240
H 1a-g	HWT 2 weekly Mo/Tu/We/Th/Fr/Sa/Su	ON 17:00 OFF 20:00	2245 - 2275
H 2	HWT 2 Set temperature	60°C	2280
H 2a	Circulation pump HWS 2	ON 06:00 11:00 OFF 08:00 13:00	2281
H 3	HWT 3 Day clock Mo-Su	ON 06:00 15:00 OFF 09:00 22:00	2286
H 3a-g	Heating circuit 3 weekly Mo/Tu/We/Th/Fr/Sa/Su	ON 17:00 OFF 20:00	2291 - 2321
H 4	Heat circuit 3 Day-room temperature	20°	2326
H 5	Heat circuit 3 Reduction temperature	16°	2328
H 6	HWT 4 Day clock Mo-Su	ON 06:00 15:00 OFF 22:00 09:00	2330
H 6a-g	Heating circuit 4 weekly Mo/Tu/We/Th/Fr/Sa/Su	ON 17:00 OFF 20:00	2335 - 2365

Menu	Description	Factory:	Modbus address
H 7	Heat circuit 4 Day-room temperature	20°	2370
H 8	Heat circuit 4 Reduction temperature	16°	2375

9.5.4 Extension module HKM 2

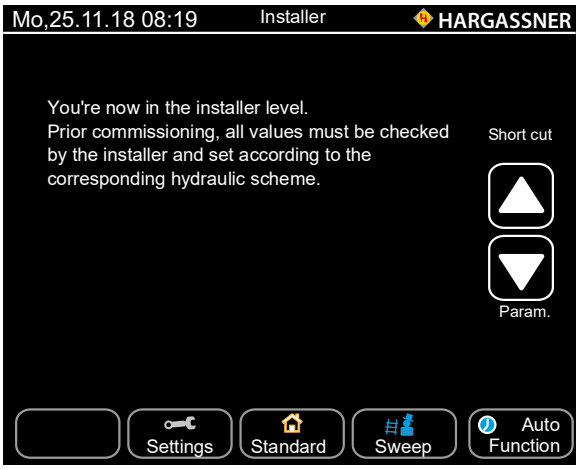
Menu	Description	Factory:	Modbus address
H 11	HWT 3 Day clock Mo-Su	ON 17:00 OFF 20:00	2380
H 11a-g	HWT 3 weekly Mo/Tu/We/Th/Fr/Sa/Su	ON 17:00 OFF 20:00	2385 - 2415
H 12	HWT 3 Set temperature	60°C	2420
H 12a	Circulation pump HWS 3	ON 06:00 11:00 OFF 08:00 13:00	2421
H13	Heat circuit 5 day clock Mon - Sun	ON 06:00 15:00 OFF 09:00 22:00	2426
H 13a-g	Heating circuit 5 weekly Mo/Tu/We/Th/Fr/Sa/Su	ON 17:00 OFF 20:00	2431 - 2461
H 14	Heat circuit 5 Day-room temperature	20°C	2466
H 15	Heat circuit 5 Reduction temperature	16.0°C	2468
H 16	Heat circuit 6 day clock Mon - Sun	ON 06:00 15:00 OFF 09:00 22:00	2470
H 16a-g	Heating circuit 6 weekly Mo/Tu/We/Th/Fr/Sa/Su	ON 06:00 15:00 OFF 22:00 09:00	2475 - 2505
H 17	Heat circuit 6 Day-room temperature	20.0°C	2510
H 18	Heat circuit 6 Reduction temperature	16.0°C	2512

If "Outside temperature shut-down - separated" is chosen (installer settings no. D12), different temperatures can be set for each heat circuit.

Menu	Description	Factory:	Modbus address
No. 11	Heating off at outside temperature over	16°	2514
No. 11a-h	Heat circuit 1 - A and ext. HC off at outside temperature	16°	2515 - 2522
No. 12	All heat circuits off at day reduction temp. over	8°	2523
No. 12a-g	Heat circuit 1 - A off at day reduction	8°	2524 - 2530
No. 13	All heat circuits off at night reduction outs. temp. over	-5°	2531
No. 13a-g	Heat circuit 1 - A off at night reduction	-5°	2532 - 2538
No. 14	Automatically fill for suction times	ON 08:00 00:00 OFF 19:00 00:00	2540
No. 14a	Automatically fill for suction times	ON 07:00 14:00 OFF 19:00 00:00	2545
No. 14b	Automatically fill for suction times	ON 21:00 00:00 OFF 00:00 00:00	2550
No. 15	Holiday mode	not active	2555
No. 15a-g	Holiday mode heat circuit 1 - A	not active	2560 - 2590
No. 16	Holiday time	from... - to...	---
No. 16a-g	Holiday time heat circuit 1 - A	from... - to...	---
No. 18a	Start deashing	No	---
No. 20	Date / Time		---
No. 21	Release rem. maintenance	not released	2595
No. 21a	Automatically deactivate rem. maintenance release	1 h	2600
No. 22	Heater off	from... - to...	
No. 30	Pellet storage	1000 kg	

10 Installer settings

❒ In the standard menu, press the **Setup** button and then press the **Installer** button
❒ Release by entering the code: 33



❒ Use the arrow key to select the desired setting values

☞  Takes you straight to the parameter groups

☞  Selects all parameters

❒ Select the values by touching the fields highlighted in white
↳ The font colour of the parameters changes to red
❒ Press the **+** and **-** buttons to set your desired values - the display flashes.
☞ Press and hold the **+** and **-** buttons for to adjust the values quickly.
❒ Confirm the set value with the green checkmark

10.1 Parametrising the heat circuits and HWT

Standard parameters (on the boiler control board):
- Heat circuit 1 (No. A1 - No. A9)
- Heat circuit 2 (No. A11 - No. A19)
- HWT 1 (No. B1 - No. B8)

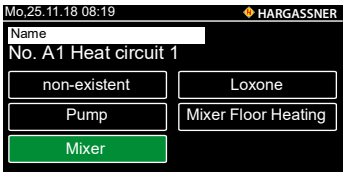
Extension module 1 (HKM1):
- Heat circuit 3 (No. A21 - No. A29)
- Heat circuit 4 (No. A31 - No. A39)
- HWT 2 (No. B11 - No. B18)

Extension module 2 (HKM2):
- Heat circuit 5 (No. A41 - No. A49)
- Heat circuit 6 (No. A51 - No. A59)
- HWT 3 (No. B21 - No. B28)

Heat circuit board (HC A)
- Heat circuit A (No. A61 - No. A69)
- HWT A (No. B31 - No. B38)

☞ The parameters of the heat circuits, HWTs, extension modules and the heat circuit board are only displayed when hardware is connected.

10.2 Parameter A - heat circuits

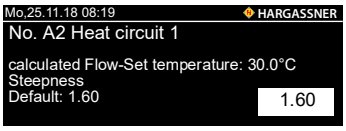


No. A1 Heating circuit **1** and **2** when using the extension module **0**
5 options:

- Heat circuit not available
- Heat circuit with pump
- Heat circuit with pump and mixer motor for radiator heat circuit
- Heat circuit control by Loxone
- Heat circuit with pump and mixer motor for floor heat circuits

☞ If No. A1 is set to **not available**, then No. A2 to No. A6 are not displayed

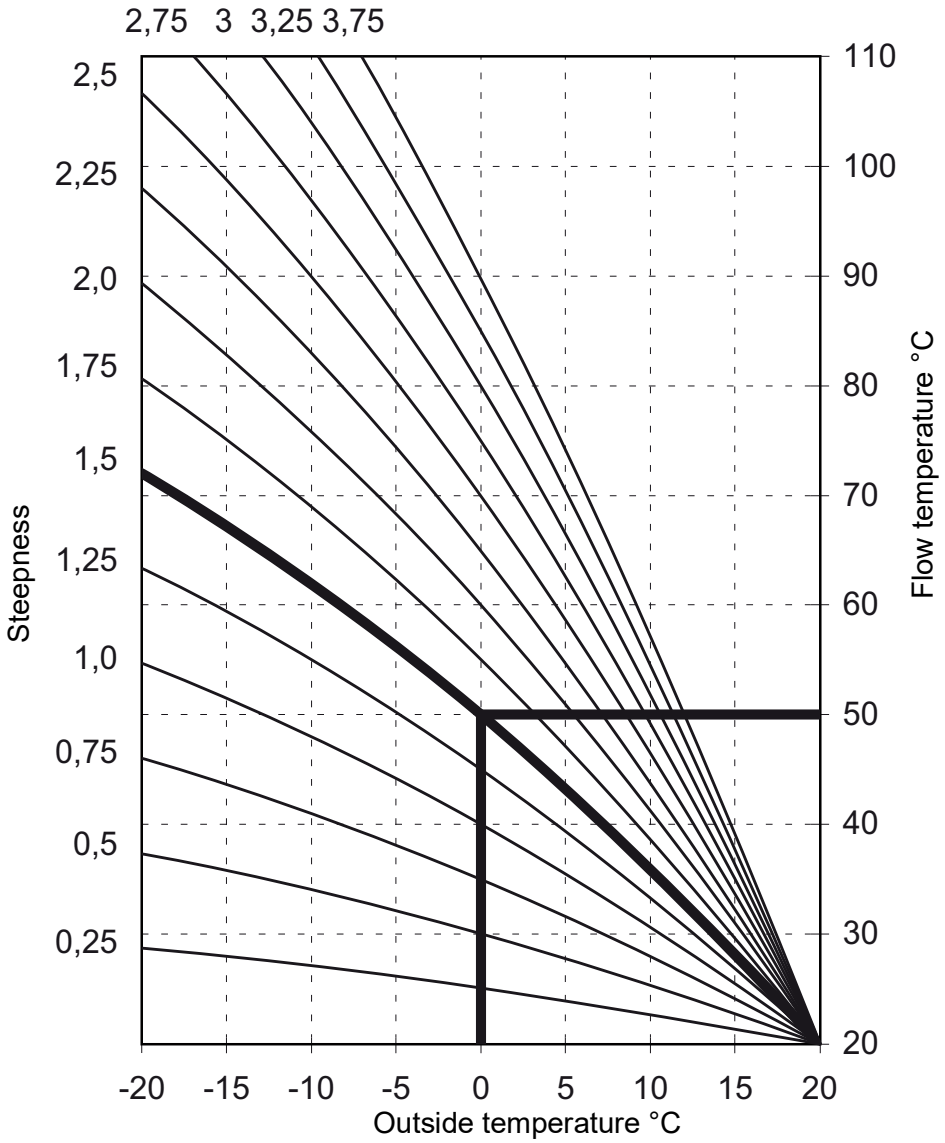
❒ Press **Name** to name each heat circuit separately, (e.g. Living room).



No. A2 Steepness
Describes the relationship between flow and outside temperatures (see heating curve)

- Range: 0.2 - 3.5
- Recommended settings:
  - Floor heating: 0.3 - 1.0
  - Radiator heating: 1.2 - 2.0
  - Convector heating: 1.5 - 2.0

☞ Change in small steps only and for a longer period



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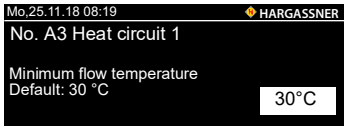
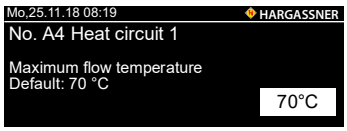


No. A3 Minimum limit for heat circuit 1 flow temperature

☞ This flow temperature won't be underrun in heating or reduction mode

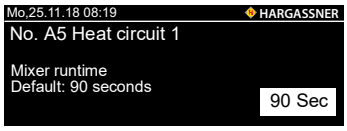
☞ Range: 1 - 80 °C



No. A4 Maximum limit for heat circuit 1 flow temperature

☞ This flow temperature won't be overrun in heating or reduction mode

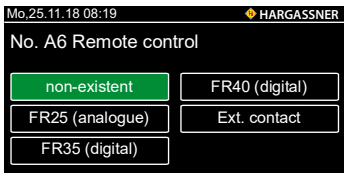
☞ **Floor heating:** Integrate an additional electromechanical thermostat which interrupts the power supply to the relevant heat circuit pump



No. A5 Numerical input of the actual value (see mixer type plate)

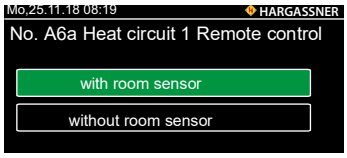
☞ Duration from closed to open condition

☞ Range: 10 - 300 Sec.



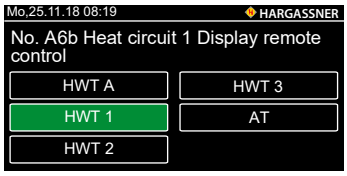
No. A6 Heat circuit **1** and **2** remote control **,** 5 setting options:

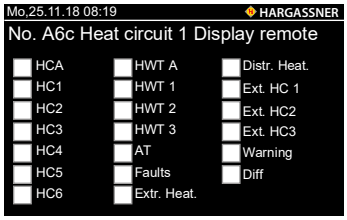
- non-existent
- Heat circuit with analogue remote control FR25
- Heat circuit with digital remote control FR35
- Heat circuit with digital remote control FR40
- External switch contact



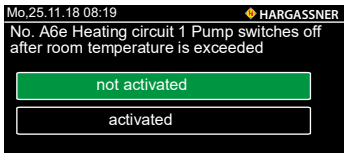
No. A6a / b / c The remote control may be installed with or without a room sensor

- Heat circuit with analogue remote control **FR25 without room sensor**
  - No automatic adjustment of the room temperature
  - Wire FR25 at **terminals 1 and 3**.
- Heat circuit with analogue remote control **FR25 with room sensor**
  - Automatic adjustment of the room temperature
  - Wire FR25 at **terminals 1 and 2**.
- Heat circuit with digital remote control **FR35** or **FR40**
  - ☞ If **FR35** is set, parameter **A6b** appears
  - If **FR40** is set, parameter **A6c** appears



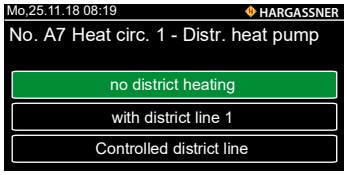


- If **FR40** is set, parameter **A6c** appears

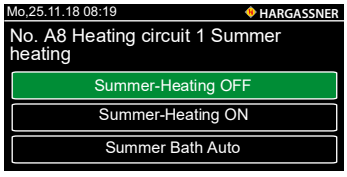


No. A6e Pump switches off after room temperature is exceeded

- **Not activated**: Standard heat circuit control
- **Activated**: If the room temperature (set temperature) is exceeded by the set value (No. M6 service parameter), the heat circuit pump switches **Off** and the mixer is **Closed**
  - ☞ Pump and mixer switch **On** again when the room temperature drops below the set room temperature by the preset value (service parameter M6a).



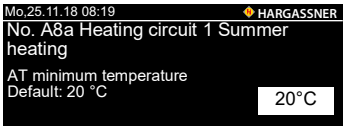
No. A7 Activate district line pump when heat circuit pump 1 is running



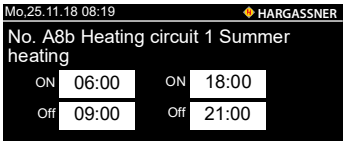
No. A8 Activation of summer heating function of the corresponding heat circuit

☞ Heat circuit will be switched on (depending on timer settings) if accumulator is on temperature

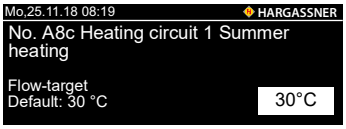
- ☞ Is only activated in menu **HWT**
- ☞ If **On** is selected, parameters **A8a - A8c** appear



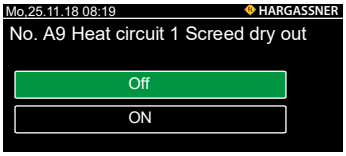
No. A8a Enter the AT minimum temperature



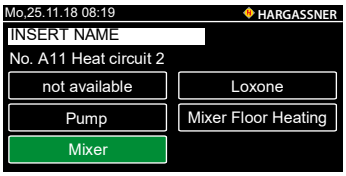
No. A8b Enter the switch-on and switch-off times



No. A8c Enter flow set temperature

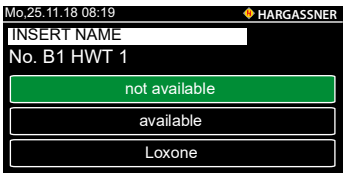


No. A9 Activation of screed heating function of the corresponding heat circuit
☞ If **On** is selected, parameters **A9a - A9f** appear



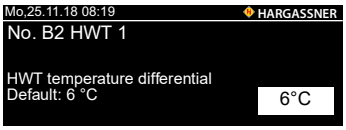
A11: Second additional heat circuit on the control panel
A21, A31: When using an extension module **1**
A41, A51: When using an extension module **2**
A61: When using a heat circuit board **A**
Setting options: See heat circuit 1 **(A1 - A9)**

10.3 Parameter B - HWT

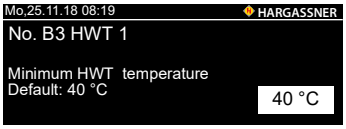


- No. B1 HWT 1 setting on **available**
  ☞ Control of HWT 1
- HWT 1 setting on **Loxone**
  ☞ Control of HWT 1 by the Loxone controller
- Parameter No. B1 on **Not available**
  ☞ If No. B1 is set to **Not available**, Nos. B2 to B6 are not displayed.

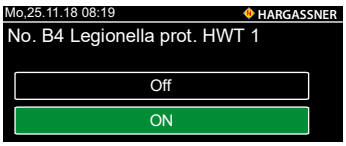
❒ Press on **Name** to name each HWT separately



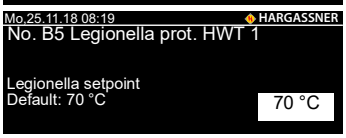
No. B2 HWT 1 switch difference
☞ Value at which the HWT is switched on below the set minimum temperature
☞ Range: 1 - 40 °C



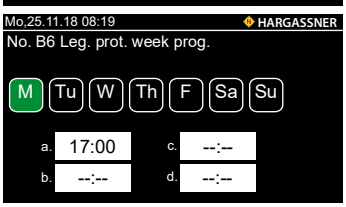
No. B3 Lower HWT limit temperature
☞ If the HWT temperature drops below the preset value, HWT loading starts within the set time (installer setting no. B90) regardless of the HWT time programme (customer setting no. 1).
  • Range: 1 - 80 °C



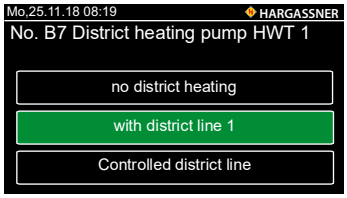
No. B4 Activate the Legionella protection programme



No. B5 HWT set temperature for legionella protection
☞ Temperatures of 70 °C or above for more than 3 minutes will kill all legionella in the HWT.

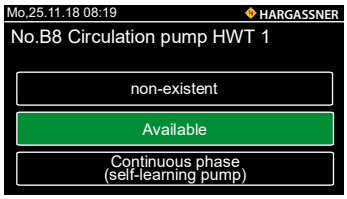


No. B6 Leg. prot. week prog.
☞ Green = active
☞ Start legionella protection during HWT loading only



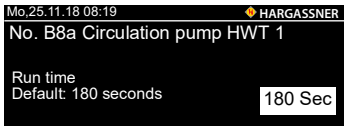
No. B7 District heating pump HWT 1

☞ Activate district line pump when HWT Pump 1 is running



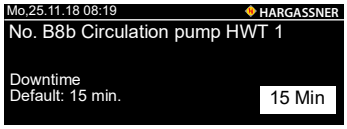
No.B8 Circulation pump HWT 1

☞ The circulation pump can be set for each HWT parametrised on the controller.

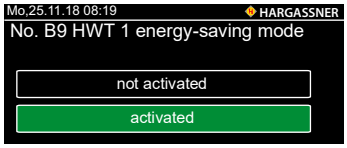


No. B8a Run time circulation pump HWT

☞ The run time depends on the length of the heating pipes and on the heat loss (insulation) in the line

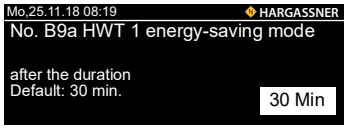


No. B8b Downtime Circulation pump HWT



No. B9 Energy saving mode

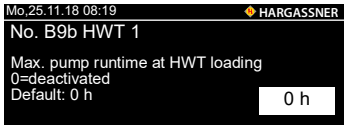
- **Not activated**: The HWT is loaded in accordance with the settings in the customer parameters
- **Activated**: The HWT is loaded regardless of the loading times if the following criteria are met for the set length of time (**No. B9a**) before setback/reduction:
  - HWT has nearly reached its minimum temperature
  - Outside temperature is higher than the temperature for day reduction
  - Boiler is in lower partial-load operation (minimum output + 10%)



No. B9a Switch-on time energy saving mode

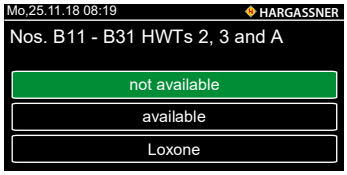
☞ The HWT is loaded when the following criteria have been met for 30 minutes **before** reduction:

- Outside temperature above 16 °C (customer setting no. 5)
- HWT temperature below 50 °C (installer setting no. B3 (40 °C) + 10 °C)
- Boiler heat output below 60% (service setting no. K1 50% + 10%)



No. B9b Maximum pump runtime when HWT loading

☞ Factory: 0 h (=deactivated)



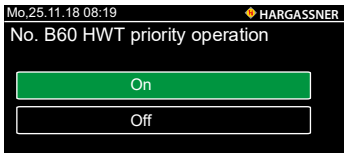
No. B11-B39: Additional HWT

B11 - B19: When using an extension module **1**

B21 - B29: When using an extension module **2**

B31 - B39: When using a heat circuit board **A**

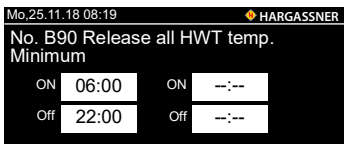
☞ Setting options: See installer settings **B1 - B9**



No. B60 HWT priority operation for quick HWT loading

☞ For heat circuits with pumps, the heat circuit pumps are switched off throughout HTW priority operation. No heat is transferred from the boiler to the heat circuits

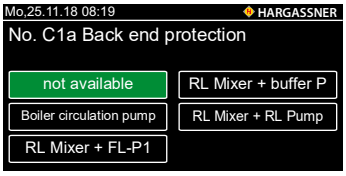
☞ For heat circuits with mixers and pumps, the heat circuit flow temperatures are reduced throughout priority operation



No. B90 HWT loading outside the loading times

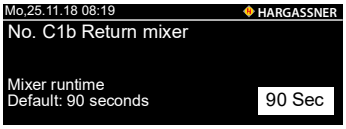
☞ When the HWT temperature drops below the minimum HWT temperature (installer setting **B3**)

10.4 Parameter C - Accumulator



No. C1a Back end protection

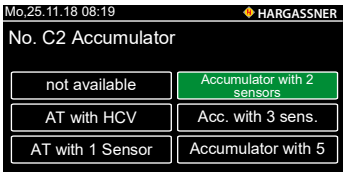
- Back end protection not available
- Boiler circulation pump
- Return mixer with district heating pump 1
- Return mixer with accumulator loading pump
- Return mixer with return pump (low loss header)



No. C1b Mixer runtime

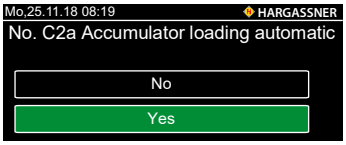
☞ Specifying the actual mixer run time

☞ Range: 10 - 300 sec.



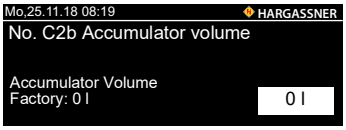
No. C2 Accumulator

- non-existent
- Accumulator with heat circuit valve
  - ☞ For low-temperature heat circuits, (e.g. floor or wall circuits)
- Accumulator with 1 sensor
  - ☞ For a hydraulic scheme with accumulator unloading control
- Accumulator with 2 sensors
  - ☞ For a hydraulic scheme with loading and unloading control
- Accumulator with 3 or 5 sensors
  - ☞ For an accumulator diagram with loading (partial-load operation) and unloading control



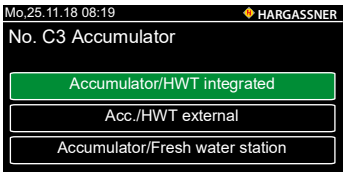
No. C2a Accumulator loading automatic

☞ Specify whether the accumulator should be loaded automatically.



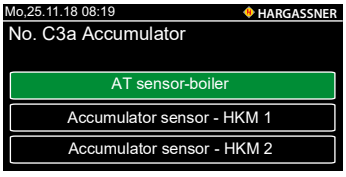
No. C2b Accumulator volume

☞ Set the accumulator volume in litres.



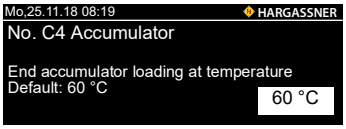
No. C3 Accumulator

- Accumulator/HWT integrated
  - ☞ Accumulator tank with HWT integrated (domestic hot water coil or external domestic hot water heat exchanger)
- AT / HWT externally (external HWT)
  - ☞ For on-site differential control between accumulator and HWT, set to **AT (HWT internal)**
- Accumulator / Freshwater station



No. C3a Accumulator sensor selection

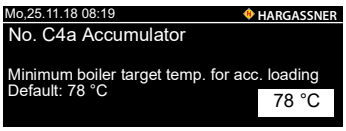
- Acc. in the boiler room: Select **AT sensor-boiler**
- Acc. next door (HKM): Select **Accumulator sensor - HKM 1-2**



No. C4 End AT loading (measured on accumulator sensor below)

☞ Only displayed when installer setting **C2** is set with **2, 3** or **5 sensors**

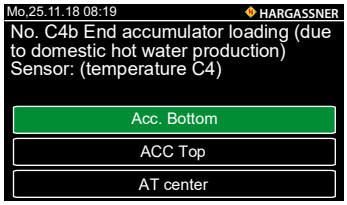
☞ If heat is requested, the accumulator is loaded to its set temperature **C4** = 60 °C (bottom accumulator sensor).



No. C4a Accumulator

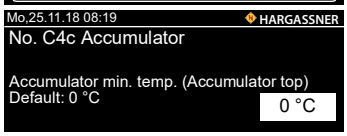
☞ Presetting the boiler set temperature for accumulator loading

☞ Only displayed when installer setting **C2** is set with **2, 3** or **5 sensors**



No. C4b End AT loading when temperature (parameter C4) has been reached on the selected sensor

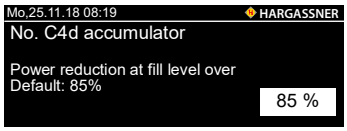
☞ Only displayed when installer setting **C2** is set with **2, 3** or **5 sensors**



No. C4c AT minimum temperature

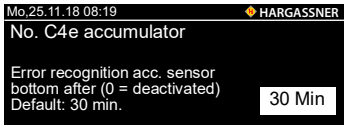
Lower accumulator limit temperature

☞ When the accumulator temp is below the set value (accumulator sensor top), AT loading starts



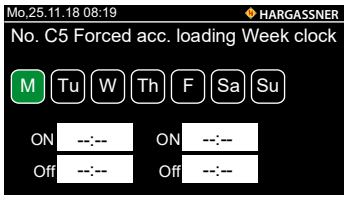
No. C4d Accumulator power reduction

☞ When the preset accumulator filling level is reached, the boiler's power is reduced.



No. C4e Accumulator error recognition

☞ A warning is issued when the mixer is completely open for the preset time and the temperature at the bottom accumulator sensor is 11 °C below that of the return sensor.



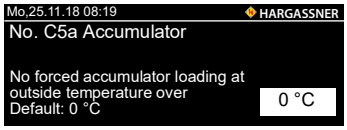
No. C4 Accumulator

☞ Setting the time for accumulator forced loading

☞ Displays only if parameter **C2** is set to **AT with 2 sensors** or **AT with 3 sensors**

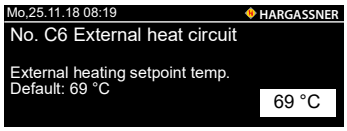
☞ Accumulator forced loading at the set time and activated set temperature

☞ E.g. for peak loads in the morning (e.g. 4:00 - 10:00)



No. C5a Accumulator forced loading

☞ No accumulator forced loading when the set outside temperature is exceeded

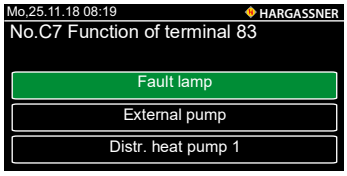


No. C6 External heat circuit

☞ Adjusting the boiler set temperature for an activated external heat circuit

☞ If the value is changed and parameter **C7** is set to **external pump**, then adjust the service-parameter **L5** = 50 °C as well

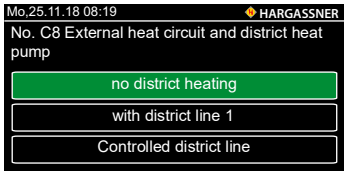
☞ L5 ca. 5 - 10 [°C] less than **C6a**



No.C7 Function of terminal 83

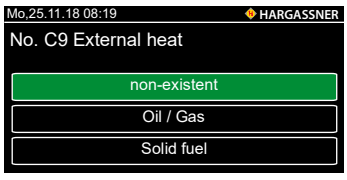
☞ Set the function of the output at terminal 83 on the main board.

- Fault lamp
  - ☞ Lights up for all faults
- Pump external heat circuit
  - ☞ Boiler is heated to the temperature set in parameter **C6**
  - ☞ External heat circuit pump is switched on at release temperature (service setting **L5**)
- District line pump
  - ☞ District line runs when a heating circuit or HWT pump parametrised for **district line** is switched on



No. C8 External heat circuit and district heat pump

☞ District heating pump runs if one of the referred pumps run



No. C9 External heat

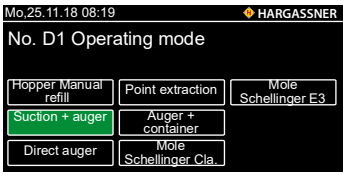
- non-existent
- Oil/gas boiler
- Solid fuel boiler

10.4.1 Fresh-water station

The **C45** to **C51** installer settings are only activated when the **C3** installer setting is on **Accumulator / Fresh-water station**.

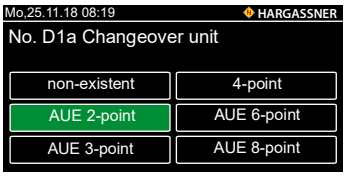
⇨ To specify these settings, see the FWS fresh-water station operation manual.

10.5 Parameter D - General



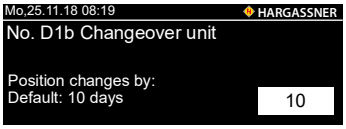
No. D1 Setting the pellet boiler's operating mode

- Day hopper is filled manually
- Day hopper is automatically filled via auger and vacuum turbine
- Boiler is automatically filled by the direct auger
- Day hopper is automatically filled via point suction extraction
- Day hopper is filled by the direct auger
- Day hopper is filled automatically by the **Schellinger** external extraction system

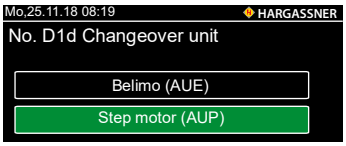


No. D1a Changeover unit for feeding wood pellets

- non-existent
- 2-point / 3-point / 4-point / 6-point / 8-point



No. D1b Position changeover unit

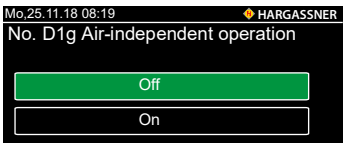


No. D1d Set the changeover unit's system

- Belimo (AUE)
- Step motor (AUP)

No. D1f Switch on the automatic pellet consumption display

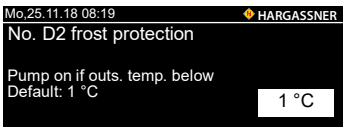
☞ If **available** is selected, customer parameter no. 30 and the extended **Info/ pellet consumption display** info page are also enabled.



No. D1g Air-independent operation

☞ Set, if the boiler is manufactured for air-independent operation

☞ Indicated on the type plate



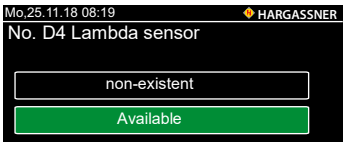
No. D2 frost protection

☞ Heat circuit pumps are switched on when the value drops below the set value

☞ Heat circuits with mixers are adjusted to the **D3** parameter temperature.

No. D3 frost protection

☞ Flow temperature when parameter **D2** is not reached



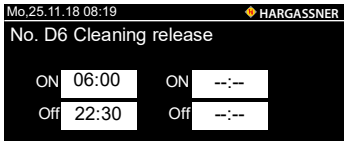
No. D4 Lambda sensor

☞ Specify whether or not the boiler is equipped with a lambda sensor.

☞ If the lambda sensor is defective, this setting can be changed to **Not available**.

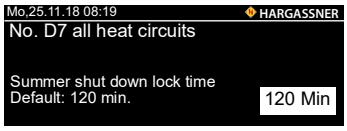
No. D5 Changeover day setback/reduction

☞ Switchover point at which time the outside-temperature reduction logic changes from night to day settings (customer settings 12 and 13)



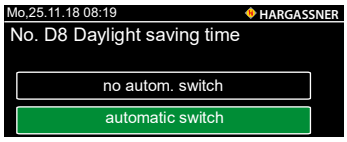
No. D6 Cleaning device

- ☞ Automatic cleaning is only performed within the set time.
- ☞ Irritating noise during the cleaning



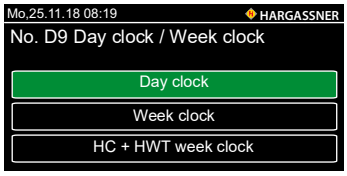
No. D7 Summer shut down lock time/ All heat circuits
Duration of the switch-off delay for summer switch-off

- ☞ If the outdoor temperature rises above 16 °C for the duration of the set time (customer setting no. 11), the boiler switches off.



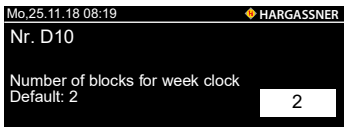
No. D8 Daylight saving time

- ☞ Automatic changeover from summer to winter time



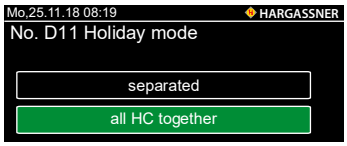
No. D9 Day clock / Week clock

- ☞ Display day or weekly clock in the customer settings
  - Day clock: Heat circuits and HWT on day clock
  - Weekly clock: Heat circuits on weekly clock, HWT on day clock
  - HC+HWT week clock: Heat circuits and HWT on week clock



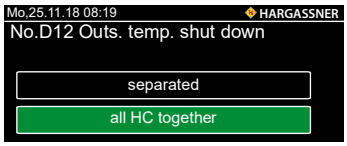
No. D10 Number of blocks for week clock

- ☞ Display in the customer settings
- ☞ Range: 1 - 7



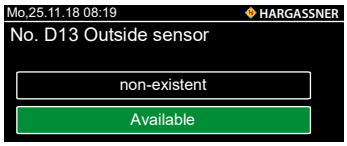
No. D11a Holiday mode

- ☞ Switch off all the heat circuits together or separately.



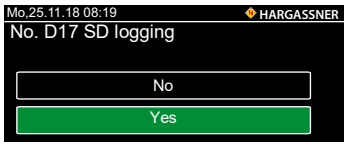
No.D12 Outs. temp. shut down

- ☞ Outdoor temperature thresholds individually or for all heat circuits together



No. D13 Outside sensor

- ☞ Set whether an outside sensor is available
- ☞ Set to **not available** for active, external heat circuits

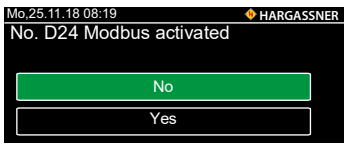


No. D17 SD logging

- ☞ Only visible when a DS card is inserted
- ☞ Records the boiler's measurement data

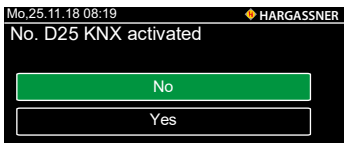
No. D23 Info / Trend

- ☞ Specify whether the graphical representation of records in the **Info / History** menu field should be shown.



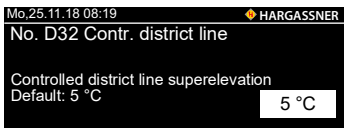
No. D24 Modbus activated

- ☞ Specify whether a Modbus is available.
- ☞ Only visible when a Modbus ID card is inserted



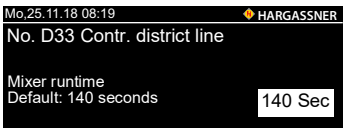
No. D25 KNX activated

- ☞ Specify whether a KNX building controller is available.
- ☞ Only visible when a KNX ID card is inserted



No. D32 Contr. district line

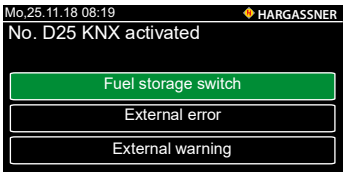
- ☞ If there is a demand from a heat circuit - parametrised on a controlled district line - then the flow temperature of the district line is increased by the set value



No. D33 Controlled distr. heat line

☞ Mixer run time from the closed to the open status

☞ Range: 10 - 300 sec



No. D40a Function of terminals 41 and 42

☞ Set the function of the input at terminals 41 and 42 on the main board.

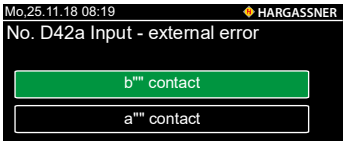
- Fuel storage switch
- External error
- External warning

No. D41 Text1 external error

☞ Text of the external error output on the display

No. D42 Text2 external error

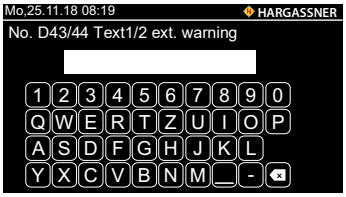
☞ Text of the external error output on the display



No. D42a Input - external error

☞ Set whether the external input is "b" contact or "a" contact

- If open with no current: "a" contact
- If closed with no current: "b" contact

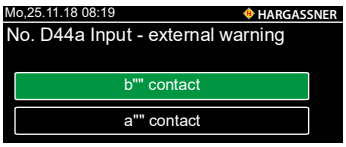


No. D43 Text1 external warning

☞ Text of the external error output on the display

No. D44 Text2 external warning

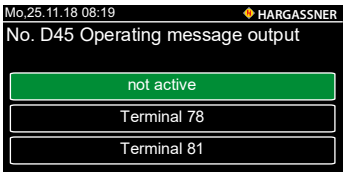
☞ Text of the external error output on the display



No. D44a Input - external warning

☞ Set whether the external input is "b" contact or "a" contact

- If open with no current: "a" contact
- If closed with no current: "b" contact

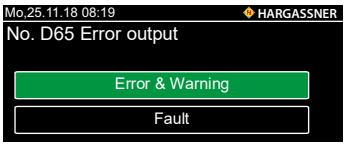


No. D45 Operating message output

☞ If lambda heating is active, an operating message signal is issued at the set terminal.

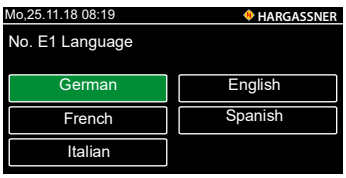
No. D50 Manual pellet de-ash customer

☞ Set whether de-ashing is carried out manually



No. D65 Error output

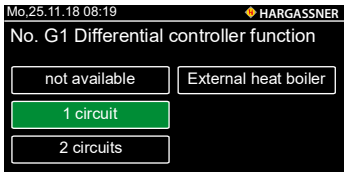
10.6 Parameter E - languages



No. E1 Language

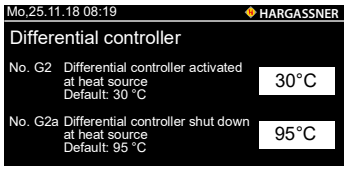
☞ Language selection

10.7 Parameter G - differential control



No. G1 Differential controller function

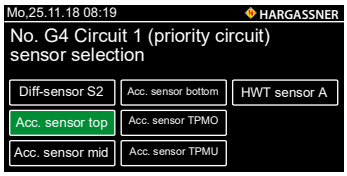
- non-existent
- 1 circuit
- 2 circuits
- External heat boiler



No. G2 / G2a Differential controller active / Differential controller switch-off

No. G2b Differential controller activated at external heat boiler

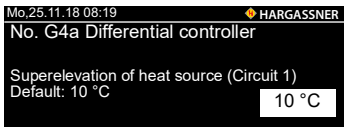
☞ Set at which temperature (sensor S1) the differential control should become active



No. G4 Circuit 1 (priority circuit) sensor selection

☞ Set which sensor should be used for differential control

- Differential sensor S2
- Accumulator sensor top / mid. / bott.
- Accumulator sensor top mid / bott. mid
- HWT sensor A

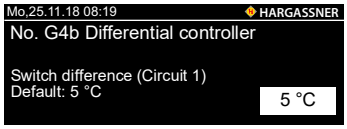


No. G4a Differential controller superelevation

☞ Set at which temperature the differential control should become active

☞ Circuit 1 is activated when the sensor temperature (S1) is higher than the temperature at the parametrised sensor (installer setting G4) by the preset value.

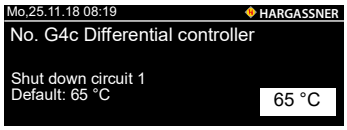
☞ Range: 1 - 50 °C



No. G4b Differential controller Switch difference

☞ Indicate what the differential temperature between the two sensors being used has to be. If it has dropped below, circuit 1 is activated.

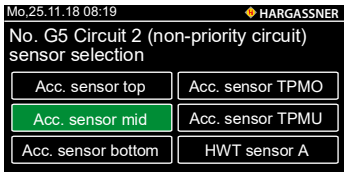
☞ Range: 1 - 50 °C



No. G4c Differential controller Shut down

☞ Set from which temperature the differential controller should be deactivated

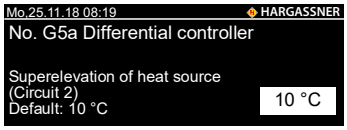
☞ Range: 10 - 95 °C



No. G5 Circuit 2 (non-priority circuit) sensor selection

☞ Set which sensor should be used for differential control

- Accumulator sensor top / mid. / bott.
- Accumulator sensor middle top / middle bottom
- HWT sensor A

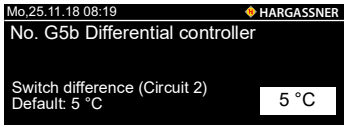


No. G5a Differential controller Superelevation

☞ Set at which temperature the differential control should become active

☞ Circuit 2 is activated when the sensor temperature (S1) is higher than the temperature at the parametrised sensor (installer setting G5) by the preset value.

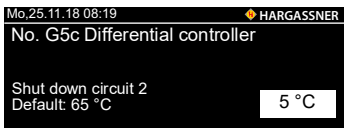
☞ Range: 1 - 50 °C



No. G5b Differential controller Switch difference

☞ Indicate what the differential temperature between the two sensors being used has to be. If it has dropped below, circuit 2 is activated.

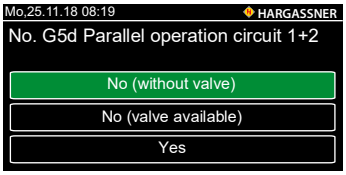
☞ Range: 1 - 50 °C



No. G5c Differential controller Shut down

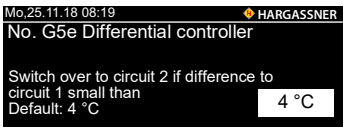
☞ Set from which temperature the differential controller should be deactivated

☞ Range: 10 - 95 °C



No. G5d Parallel operation circuit 1+2

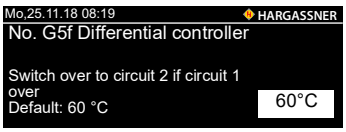
- No (without valve)
- No (valve available)
- Yes



No. G5e Differential controller switch-over circuit 2

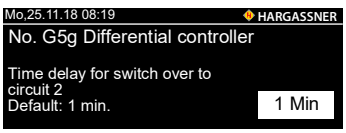
☞ Set from which temperature difference (circuit 1) on the lower-level circuit 2 is switched over

☞ Range: 1 - 20 °C



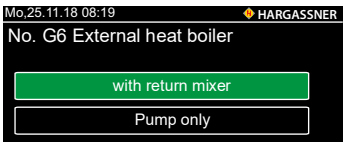
No. G5f Differential controller switch-over circuit 2

☞ Set from which temperature (circuit 1) on the lower-level circuit 2 is switched over



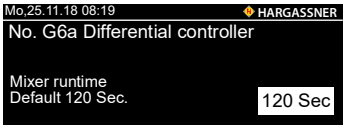
No. G5g Differential controller Time delay for switch-over

☞ Setting the time delay for switch-over



No. G6 External heat boiler

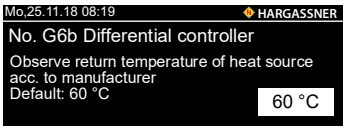
☞ Specify whether differential control of the external heat boiler should be carried out using the mixer or the pump.



No. G6a Differential controller Mixer run time

☞ Set the external heat boiler's mixer run time

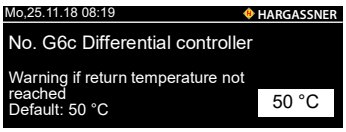
☞ Range: 10 - 300 Sec.



No. G6b Differential controller Return temperature

☞ Set the external heat boiler's return temperature

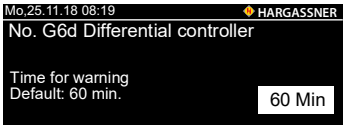
☞ Observe manufacturer's instructions



No. G6c Differential controller Warning Return temperature

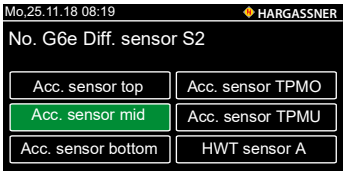
☞ Set below which return temperature of the external heat boiler a warning is issued

☞ Observe manufacturer's instructions



No. G6d Differential controller Time for warning

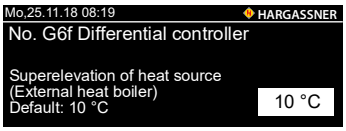
☞ Set how long the return temperature of the external heat boiler has to be below the set value for a warning to be issued.



No. G6e Differential sensor S2 External heat boiler

☞ Set which sensor should be used for differential control

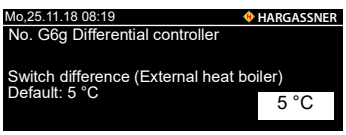
- Accumulator sensor top / mid. / bott.
- Accumulator sensor middle top / middle bottom
- HWT sensor A



No. G6f Differential controller Superelevation Heat source

☞ Set from which temperature superelevation the differential controller is to become active

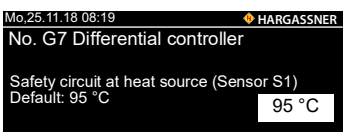
☞ Range: 1 - 50 °C



No. G6g Differential controller Switch difference

☞ Set from which temperature difference between the two sensors being used must be switched

☞ Range: 1 - 50 °C



No. G7 Differential controller Safety circuit

☞ If the preset temperature is reached at the parametrised sensor, all the outputs on the differential controller board will be switched off.

☞ Range: 80 - 105 °C

☞ If 95 °C is exceeded at a sensor (excluding S1), then differential control will be deactivated to prevent damage to the pumps

11 Optional remote controls

Using a remote control makes it easy to adjust the room temperature and also the heating and reduction settings. The heating temperatures and times can be set and changed with the FR35 and FR40 digital remote controls. One heat circuit may be parametrised per remote control, which can be parametrised with or without a room temperature sensor.

- 1 heat circuit or extension control board (**HC A** digital remote controls only)
- 2 heat circuits per extension module (**HKM 0 - 2**)
- 2 heat circuits per heat circuit controller (**HKR** 0 - 15)

11.1 Digital remote control FR40

With the FR40, all the heat circuit functions available on the boiler can be set from wherever the remote control is in the user's living space.

Operation modes:

Off

The heat circuit is switched off (except for frost protection).

AUTOMATIC

The heat circuit is operated according to set times.

REDUCTION (in automatic mode)

The heat circuit is in permanent reduced mode.

HEATING (in automatic mode)

The heat circuit is in permanent heating mode.

PARTY (heating on a single occasion)

The heat circuit switches to permanent heating mode on a single occasion and automatically reverts to automatic mode at the next preset heating time.

REDUCTION (reduction on a single occasion)

The heat circuit switches to permanent reduced mode on a single occasion and automatically reverts to automatic mode at the next preset heating time.

Fine adjustment of room temperature:

+: Increase of up to 3 °C

- Decrease of up to 3 °C

11.2 Digital remote control FR35

Auto Function

The remote control is also available in a wireless version.
The following selection options are available on the remote control only when the boiler is in **Automatic** mode:

- Selection of the heat circuit's operating mode
- Selection of modes at remote control

Operation modes:

Off

The heat circuit is switched off (except for frost protection).

AUTOMATIC

The heat circuit is operated according to set times.

REDUCTION (in automatic mode)

The heat circuit is in reduced mode.

HEATING (in automatic operation)

The heat circuit is in permanent heating mode.

PARTY (heating on a single occasion)

The heat circuit switches to permanent heating mode on a single occasion and automatically reverts to automatic mode at the next preset heating time.

REDUCTION (reduction on a single occasion)

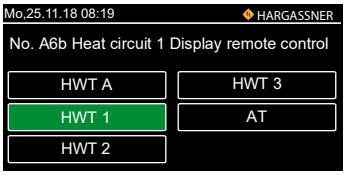
The heat circuit switches to permanent reduced mode on a single occasion and automatically reverts to automatic mode at the next preset heating time.

Fine adjustment of room temperature:

/ Increase / decrease by 2 or 3 °C

Fault lamp:

Lights up if an error occurs on the boiler



Display-Parameters:

Select which temperature should be shown on the remote control (FR35)

- HWT temperature 1 - A
- Accumulator fill level

11.3 Analogue remote control FR25 (only on HKM- or HKR heat circuits)

The following selection options are available on the remote control only when the boiler is in **Automatic** Auto Function mode:

Selecting the operating status of the heat circuit with the rocker switch

The heat circuit switches to permanent reduced mode.

The heat circuit switches to day / week mode.

The heat circuit switches to permanent heating mode.

Fine adjusting the room temperature with the rotary knob

Increase / Reduction by 3 °C

Fault lamp:

Lights up if an error occurs on the boiler.

Chapter IV: Cleaning, Maintenance


D A N G E R

Risk of injury due to moving parts

- Omit access to augers or motors at operating boiler.
- Fix and lock the ash box on the boiler correctly
- Do not perform any work on the boiler when any person is in the danger zone
  ☞ Secure / lock fuel storage room
- Only clean the augers and remove blockages using suitable tools and when the main power switch is turned off and locked
- Wear safety shoes
- Observe fuel storage room sticker

D A N G E R

Electric shock from contact with live terminals

- Observe information signs.
- Disconnect power supply prior any cleaning or maintenance works.
  ☞ Switch-off and lock main switch



D A N G E R

Risk of injury from reaching into the danger zone when recommissioning

- After triggering the main power switch, do not carelessly reach into the danger zone
- Before carrying out any work on the boiler and its equipment, turn off the main power switch and prevent it from being turned on again by securing it with a padlock. Keep the key with you for the duration of your work. Hand out the key for a lock to the person in charge only.
- Rectify error.
- Check at re-commissioning that no person is in any danger zone.


D A N G E R

Risk of burning from inflammable materials

☞ Do not spray any inflammable sprays on hot surfaces.
(e.g. lubricate moving parts in the combustion chamber)
  ☞ Spray drops can cause explosive fire
- Do not use any inflammable lubricants
- Let boiler (combustion chamber) cool down

Risk of fire in the vacuum cleaner

- Let ash cool down prior to vacuum-cleaning

A T T E N T I O N

Formation of dust and smoke due to boiler leakages

- Clean sealing surfaces with industrial alcohol and a dry and soft (scratch-free) cloth only
- Make sure the cleansing material is evaporated before commissioning

Dirt and boiler breakdown due to escaping ash

- Empty and clean according to the maintenance instructions.
- If the ash box is overfilled, ash may escape from the box.
- Ash box must be positioned correctly and locked on both sides

☞ At regular operation small cracking may occur in the refractory.
These are stress cracks that form an expansion joint.
This cracking is important and does not lead to any functional impairment. As a result, there is no right to claim under guarantee.

☞ The specified cleaning and maintenance intervals are absolutely necessary for safe and clean operation of the boiler.
Observe the state regulations and resulting chimney sweep's inspection and sweeping intervals dictated by these regulations.

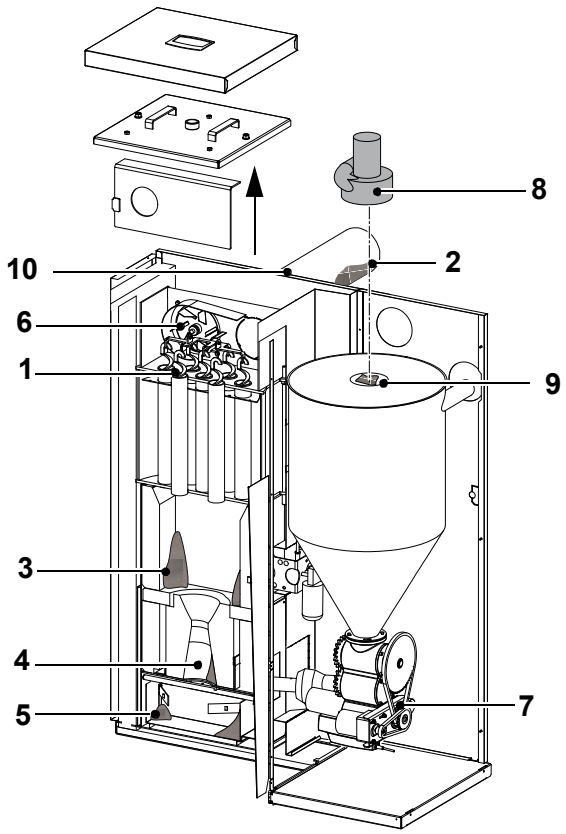
1 Maintenance contract

If you sign a maintenance contract with Hargassner, the cleaning and maintenance takes place during the annual service performed by personnel authorised by Hargassner.
Depending on your country's regulations, a service must be carried out by the manufacturer regularly (every one to three years). This service has to be carried out by personnel trained and authorised by the manufacturer.

☞ In order to perform at its best, the boiler must be cleaned extensively.
- At least once a year
- After a set number of operating hours in the event of an error

☞ The cleaning intervals will change or shorten depending on the composition of the fuel and if low-grade material is used

2 Cleaning and maintenance

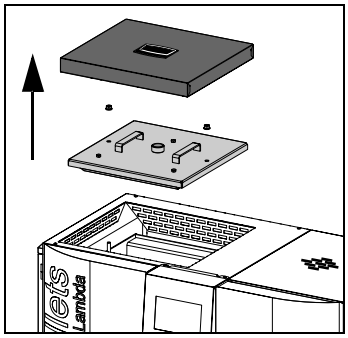


Pos.	Tasks of maintenance	Interval (a = annually[a])
1	Tap off the turbulators and clean the turbulator space	1x a
2	Clean flue pipe	2x a
3	Clean post-combustion chamber with poker (visual check via inspection glass)	1x a (as required)
4	Clean combustion chamber with poker	1 x a (as required)
5	Remove ash box and clean out the ash under the grate	1x a
6	Dismount exhaust fan and clean housing and impeller	1x a
7	Grease stoker chain and check chain tension	1x a
8	Clean pellet vacuum turbine	1x a
9	Clean the pellet vacuum turbine filter.	1x a
10	Disconnect, remove and clean the lambda sensor	1x a
11	Ash box emptying	as required

a. At least once annually, at the latest after 4000 full-load hrs, 8000 partial-load hrs or after a message has appeared on the control panel

☞ Boiler monitoring and cleaning intervals are based on the operation hours and fuel quality.
Observe country-specific regulations and the inspection and sweeping intervals dictated by these.

2.1 Preparation for service and cleaning



- ❒ Switch off boiler at the control (BCE) (**Off** operating mode)
- ❒ Let boiler cool down.
- ❒ Disconnect the boiler from the power supply (**Off** main switch)

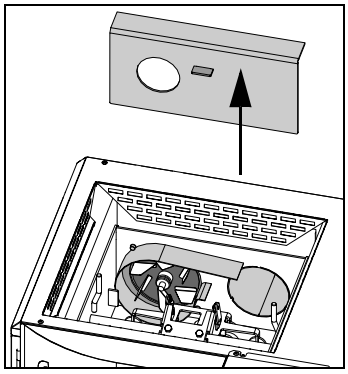
- ❒ Remove the upper left cover lid.
- ❒ Loosen the two fixing points on the heat exchanger maintenance lid and pull the lid up to remove it.

2.2 Cleaning the lambda sensor

- ❒ Disconnect sensor and unscrew
- ❒ Place sensor head down
- ❒ and remove dirt with a soft cloth
  - ☞ Debris falls down

	N O T E
☞	• Do NOT "tap" the sensor! • Do not blow off with compressed air • Do not touch the sensor with sharp items and do not use any chemicals for cleaning (brake cleaning fluid, etc.)

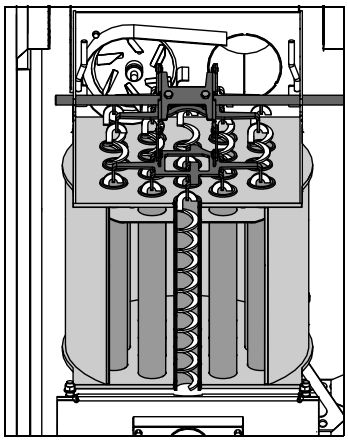
2.3 Cleaning the exhaust fan and the flue pipe



- ❒ Remove baffle
- ❒ Clean flue pipe
- ❒ Clean housing and impeller of the exhaust fan
  - ☞ Fasten impeller while cleaning

- ☞ Do not clean with compressed air

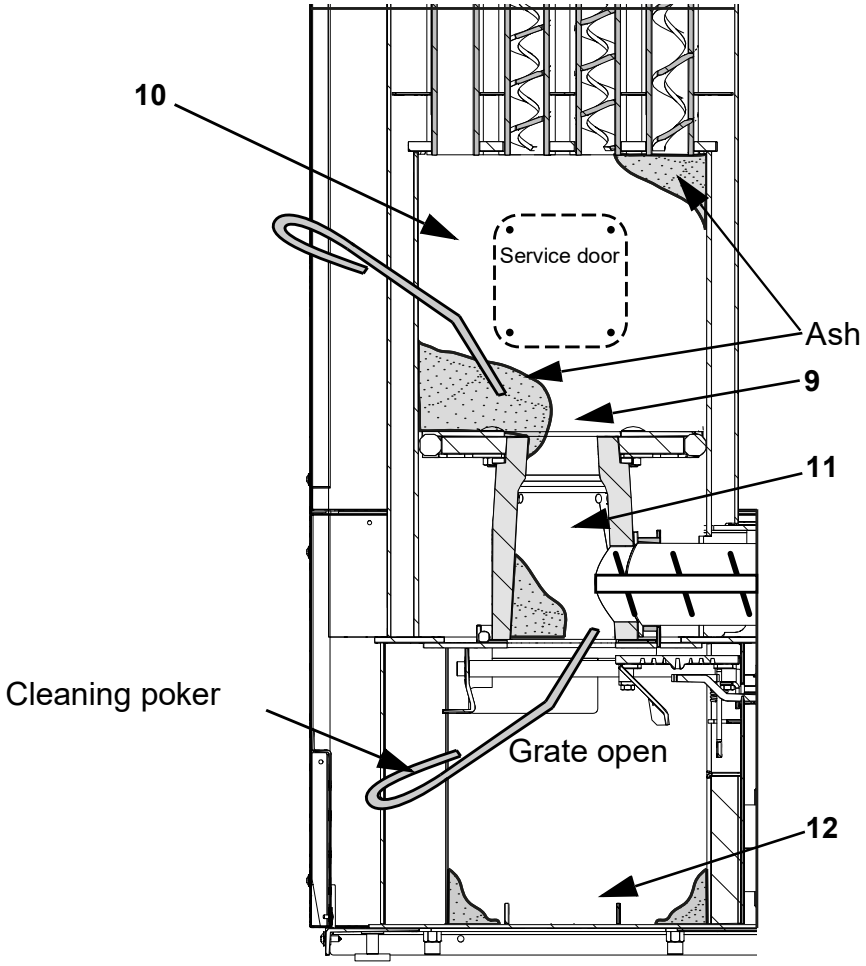
2.4 Cleaning the turbulators and the turbulator space



- ❒ Tap off the turbulators and clean the turbulator space

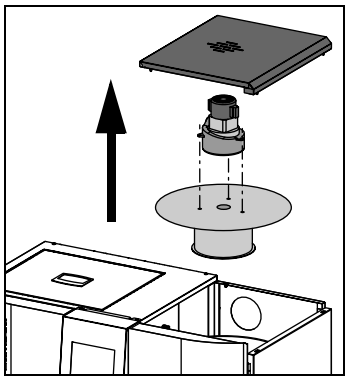
2.5 Cleaning the combustion chamber and post combustion chamber

	N O T E
☞	**Clean combustion chamber when exhaust fan is running** ☞ Ash can be whirled up during cleaning, which can be sucked out through the running exhaust fan ☞ Less dirt in the boiler room



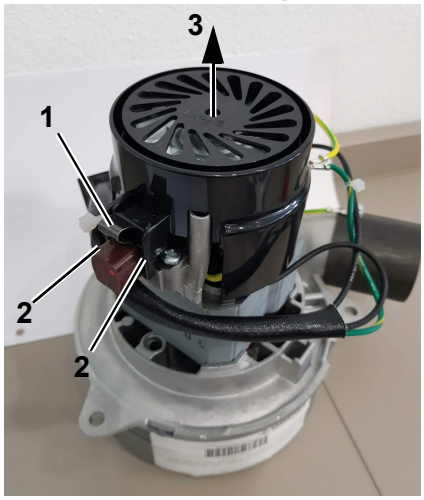
- ❒ Select function No. 2 in **Manual** mode and press the **Open** button until the sliding grate opens.
- ❒ Open left cover door
- ❒ Check flame concentration hole **(9)** (opening in refractory through which the flame enters the post combustion chamber)
  - ↳ If the flame concentration hole is jammed or the post combustion chamber **(10)** is very dirty - disassemble the front maintenance door (M6 cap nuts) and clean the post combustion chamber with the cleaning poker
- ❒ Remove ash box and clean combustion chamber **(11)** with cleaning poker
- ❒ Cleaning the ash box **(12)**

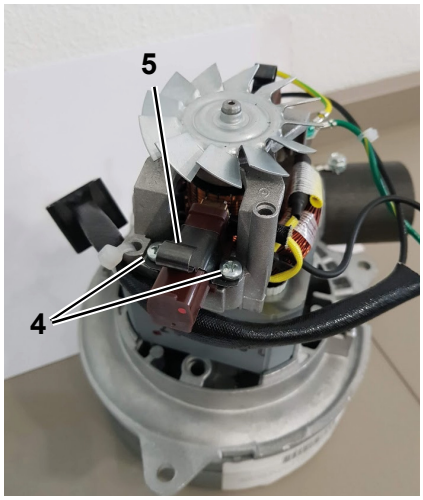
2.6 Cleaning the vacuum turbine

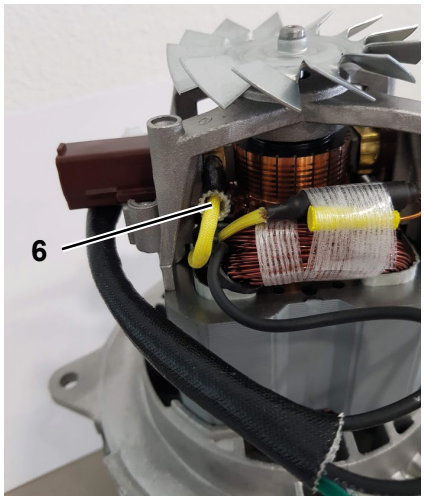


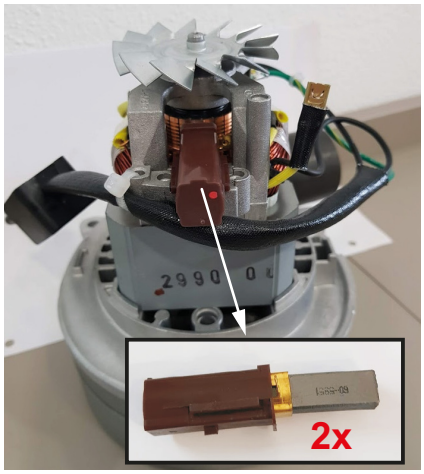
- ❒ Remove upper right cover lid (pinned)
- ❒ Disconnect plug of the vacuum turbine
- ❒ Loosen hose clamp and remove return air hose from the vacuum turbine.
- ❒ Loosen tension ring from day hopper
- ❒ Remove lid and vacuum turbine upwards.
- ❒ Loosen the vacuum turbine's fixing points and remove them from the cover
- ❒ Remove dust and deposits from the sieve, vacuum turbine and return air hose
- ❒ Re-assemble the boiler after cleaning

2.7 Replacing the carbon brushes of the vacuum turbine









- ❒ Push the clamps **(1)** apart on the housing.
- ❒ Press the clamps **(2)** on the carbon brushes apart with a screwdriver and remove the housing cover **(3)**.
- ❒ Remove the screws **(4)** and the retaining plate **(5)**.
- ❒ Remove the flat receptacle **(6)**.
- ❒ Replace the carbon brushes (two pieces) with new ones.
- ❒ Re-assemble the unit in reverse order.

2.8 Emptying the ash box

- ❒ Empty the ash box at the regular intervals
  - ☞ The control shows **"Empty ash box"** on the display
  - ☞ If the ash box is not emptied, the boiler is switched off after approx. 1 week - and displays "**Ash box overfilled**"
- ❒ Unlock the ash box on the boiler using the key (applies to AIO boilers only)
- ❒ Pull out the ash box to the front
- ❒ To re-position and lock the ash box, proceed in reverse order
  - ❒ Close the ash box completely and ensure that it is firmly locked
- ❒ Clear the error on the display after emptying the ash box

3 Disposal information

3.1 Disposal of created ash

❒ Ash must be disposed of according to your national waste management regulations (Austria: AWG Waste Management Act)
  ☞ If natural wood is used as a fuel, the ash can be used as a high-quality mineral fertilizer
☞ **Attention:** Watch out for ember pockets

3.2 Disposal of wear and spare parts

❒ Wear and spare parts must be disposed of according to your national waste management regulations (Austria: AWG Waste Management Act)
  ☞ Only use spare parts from Hargassner or spare parts approved by Hargassner

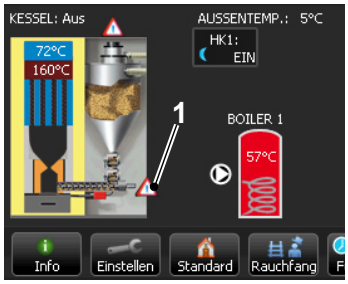
3.3 Disposal of boiler components

❒ Ensure environmentally compatible disposal in accordance with country-specific regulations (Austria: AWG Waste Management Act)
❒ Recycling materials may be used again after cleaning and separation.
  - Boiler
  - Room auger
  - Insulation material
  - Electro- and electronic parts
  - Plastics

Chapter V: Troubleshooting

	ATTENTION
	**Injuries or damage to the boiler due to deviations from regular operation** • Contact the installer / Hargassner immediately in case of higher power consumption, higher temperatures, more vigorous motor vibrations, unusual noises or smells, the release of safety devices, etc. • Perform mandatory maintenance and inspection tasks regularly

1 Error display



Error messages are displayed on the touch screen.

☞ A warning triangle appears in the standard menu at the position where the error occurs **(1)**

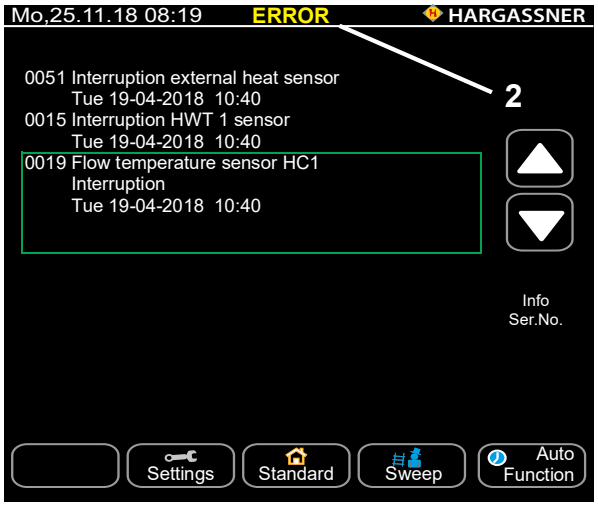
☞ Yellow triangle = warning

☞ Red triangle = error

The following instructions to rectify the errors are addressed to the operator of the boiler.

If it is not possible to rectify the error through the operator, the installer / Hargassner must be informed.

2 Retrieving the error list



❒ If error messages occur, press **Error (2)**.

☞ Display of error list (latest errors)

3 Acknowledging and rectifying an error

❒ After rectifying the error, press the  button

3.1 List of error messages and parameter lists

⇨ See "Service manual"

Chapter VI: Appendix

	N O T E
	**Please be advised that we are not responsible for damages or malfunctions resulting from non-observance of the manual.**

1 Copyright notice

1.1 Special measures prior commissioning through the operator

Licensing requirements for safe operation and accident prevention regulations must be observed!
Work on hydraulic systems must be carried out only by personnel with specialised knowledge and experience in hydraulics.

1.2 Liability

The **wood biomass boiler** is built and tested in accordance with the latest state of the art and recognised safety regulations and is therefore safe to operate. However, improper use may cause lethal hazards for the operator or third parties or may damage the unit and other property.

The **wood biomass boiler** must only be used in a technically perfect condition and in accordance with its intended use with safety and danger in mind. Especially errors tending to affect the safety shall be cleared immediately.

Liability for the function of the **wood biomass boiler** shall be borne by the owner or user insofar as the device has been used by Hargassner Ges mbH without the necessary knowledge, has been improperly used, serviced or repaired or has been handled in a manner that does not conform to proper use.
In the interest of the continuous development and improvement of our products, we reserve all rights to make technical changes to the information contained in our printed material.
These kinds of changes, errors and misprints do not constitute grounds for any claims for damages.
Only original Hargassner spare parts and accessories must be used.
In addition to the guidelines in this operation manual, please follow general guidelines for safety and accident prevention. The manufacturer, Hargassner Ges mbH , shall not be liable for direct or consequential damage resulting from failure to observe the technical instructions, guidelines and recommendations. The vast experience of **Hargassner Ges mbH**, latest production technology and highest quality standards guarantee the reliability of this boiler system. **Hargassner Ges mbH** is **not** liable for the safe function of the **wood biomass boiler**in case it is **not** handled or used according to its intended use.

The customer has NO warranty claims:

- if heating fuel is missing wrong or of poor quality
- if damages occur through incorrect assembly, misuse or lack of maintenance
- if the installation manual and operation manual is NOT observed
- for defects that do not affect the performance of the system. E.g.: Paint defects,....
- for damages arising from force majeure like fire, flooding, lightning stroke, electrical surge, power loss, ...
- if a non-licensed installer or non-licensed plumber installs the product
- for damage caused by air pollution, heavy dust, aggressive vapours, oxygen corrosion (non diffusion-tight plastic tubing), installation in inappropriate rooms (laundry room, hobby room, ...) or continued use despite the occurrence of a defect

For the correct reparation, maintenance and service, or any other error not mentioned in this manual, **Hargassner Ges mbH** has to be contacted prior any works on the plant.
Warranty and liability of the general terms and conditions of **Hargassner Ges mbH** are not to be extended because of hints pointed out in this manual.
The **safety instructions** in this manual must be observed. Only use Hargassner spare parts or equivalent spare parts that have been approved by **Hargassner Ges mbH**. Constant technical innovations mean that we reserve the right to modify the design of our products and services without notice.
If you have any queries, please be sure to quote the **serial number** of the **wood biomass boiler**.

We hope you will be satisfied with your **wood biomass boiler** from Hargassner.

Declaration of Conformity

HARGASSNER
HEIZTECHNIK DER ZUKUNFT

Manufacturer:	**HARGASSNER Ges mbH** **Anton Hargassner Strasse 1** **A - 4952 Weng** **AUSTRIA** The manufacturer is also the party authorised to put together the accompanying technical documents.
Type of machine:	**Boiler for solid fuels with automatic loading**
Type:	**PELLET BOILERS** **Classic 9-22, Classic Lambda 25-60** **Also available with a fuel extraction system**RAS 150-500, RAPS, PWB(N)
Standard:	**From 25.04.2016**
The manufacturer hereby declares that the products mentioned above comply with the regulations laid down in the following European directives: Directives:	• Machinery Directive 2006/42/EC • Low Voltage Directive 2014/35/EU • EMC Directive 2014/30/EU
Conformity with the guidelines is verified through the manufacturer's compliance with the relevant requirements, which are laid down in the following standards among other places: Standards:	• EN 303-5:2012 Heating boilers for solid fuels, manually and automatically stoked, nominal heat output of up to 500 kW • EN ISO 12100:2013 Safety of machinery - General principles for design - Risk assessment and risk reduction • ÖNORM EN 12828:2014 Heating systems in buildings - Design for water-based heating systems
Place, date:	Weng, 25.04.2016
Name: Signature: Function:	Dr Johann Gruber ..... Head of Development

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