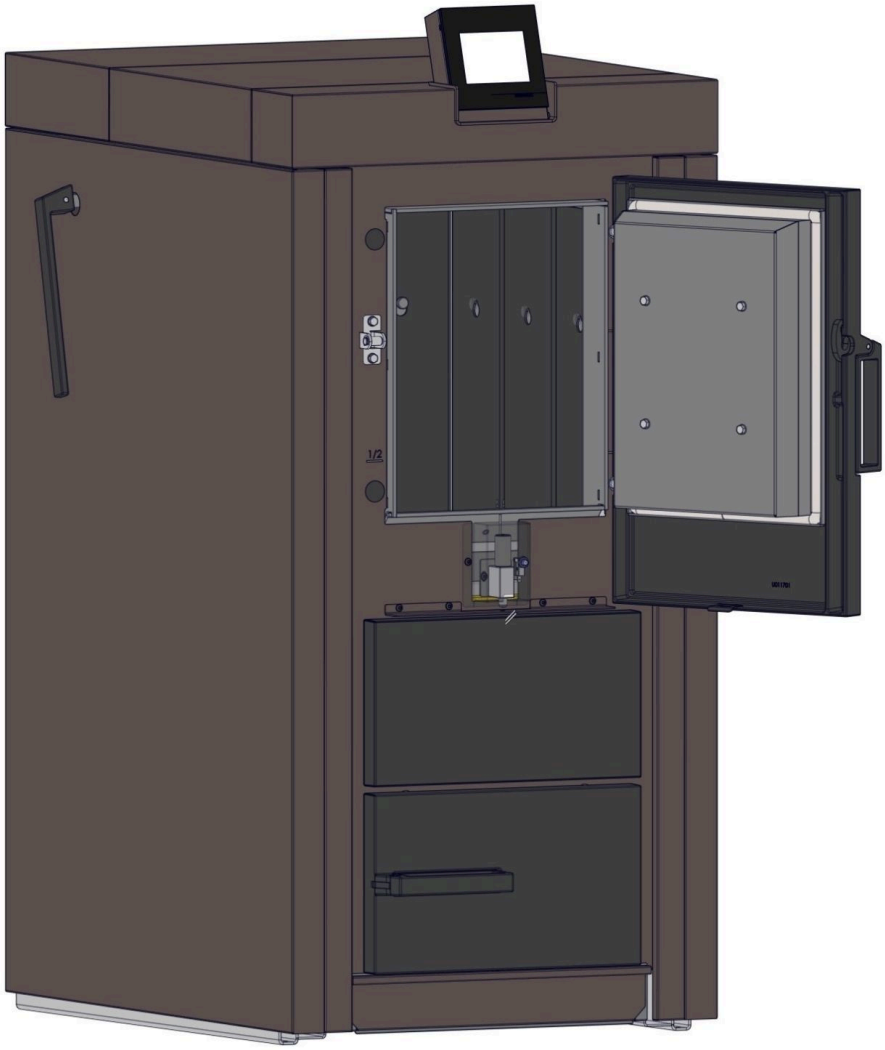
Instructions **for Use**

BRUNNER
Log boiler
BSV 40/50



Contents

1 Introduction

1.1 Purpose of this manual

This document contains information about the BSV 40/50. Among others, you will find here information about:

- Safety and risks
- Assembly, installation and commissioning
- Product description and principles of operation
- Operating instructions and control description
- Cleaning and maintenance
- Fault finding and troubleshooting
- Decommissioning and disposal
- Technical and commercial data

1.2 Target audience

This document contains also information for the User of the heating system.

1.3 Validity of the instructions

This technical documentation is valid for: the BRUNNER log gasification boiler BSV 40/50 from 11/2020.

Ulrich Brunner GmbH reserves the right to make technical changes insofar as they serve technical progress or are required by safety regulations.

1.4 Storage of documents

IMPORTANT

READ CAREFULLY BEFORE USE

KEEP FOR FUTURE REFERENCE

The operator is responsible for keeping this documentation for the BRUNNER log boiler BSV 40/50 and all other applicable documents.

1.5 Symbols and text style rules

1.5.1 Specified symbols

In this documentation, a distinction is made between:

Operating personnel as the **User of the system**, i.e. the end user, which has received instructions from the Contractor and does not necessarily have additional qualifications.

Operating personnel as the **Contractor**, i.e. the qualified professionals, which are entitled to perform the indicated specialist works.

In this document, the following symbols are used:

DANGER
A danger of high risk persists, which leads to severe injury or death, if this endangering situation is not avoided.

WARNING
A danger of medium risk persists, which can lead to severe injury or death, if this endangering situation is not avoided.

CAUTION
A danger of low risk persists, which can lead to minor or moderate injury, if this endangering situation is not avoided.

ATTENTION
There is a certain risk, which can lead to a malfunction or damage of the related system and all devices connected with it, if the indicated notifications are not followed.

NOTE

Additional helpful information

1.5.2 Text style rules

In this document, the following text style rules are in use:

Handling or operating instructions with several steps

Descriptions of operations or actions with several steps, when these steps must be performed in chronological sequence.
1. First working step;
2. Second working step;
3. Third step.

→ Final result

Appearance of on-screen display text in this manual

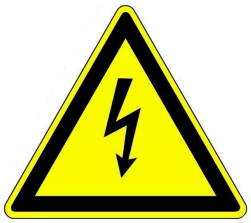
For descriptions of settings performed on the BRUNNER Touch Display, the displayed text is shown as bold letters.

1.6 For your safety

1.6.1 Dangers and safety measures

Assembly, installation and maintenance may only be carried out by a specialist company.

- Only carry out activities that are described in these instructions.



Electric shock
Work on the electrical installation may only be carried out by a qualified specialist company.

- The electrical connections are live. This can lead to an electric shock.
- Observe all applicable regulations.

Risk of injury due to scalding
High water temperatures can lead to scalding. Small children or elderly people can be at risk even at lower temperatures.

- Do not set the hot water temperature of a connected hot water storage tank higher than 65°C.

Avoid damage to the appliance and resulting hazards
Sprays, solvents or cleaning agents containing chlorine, paints, adhesives etc. can cause damage to the appliance under unfavorable circumstances.

Under no circumstances should you make any changes to parts or equipment of the heating system if these changes could impair operational safety.

Risk of frost
If the BSV remains out of operation in an unheated room for an extended period of time (e.g. during the vacations), the water in the pipes may freeze. Freezing water can damage the pipes and cause consequential damage.

- Inform the operator about the frost protection of the heating system.
- Install the BSV in rooms with an ambient temperature of 5 °C to 40 °C.

DANGER
This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children must not play with the appliance. Cleaning and operator maintenance must not be carried out by children without supervision.

1.6.2 Warnings

Warnings in this document are emphasized by pictographs and signal words.
The pictograph and the signal word indicate the type, the source or causes of a certain action. The necessary measures or calls for action are indicated.
The result or purpose is shown as well. These warnings refer to possible misuse of the system, which seems likely based on our experience. The residual risks are indicated too.
The residual risks remain:
- despite the means for integration of safety during construction,
- despite the safety precautions,
- despite the additional protective measures.

For certain points, there are also given some recommendations and instructions on the application of protective measures, including personal protective equipment. Special safety instructions and recommendations are applied for transport, handling and storage. Instructions for safe setup and maintenance include separate protective measures too.

Structure of warnings
The warnings that precede each assembly step, are shown as follows:

Hazard for humans
Type, source and causes of danger

Measures
Calls for action

→ Result or safe use

Hazard for the system
Type, source and causes of danger

Measures
Calls for action

→ Result or safe use

1.6.3 Regulations

When installing, commissioning and maintaining the BSV 40/50 - please note - among other things - the following regulations and guidelines:

Rechtliche Vorgaben:

enum-title
- the legal regulations for accident prevention
- the legal regulations for environment protection
- the provisions of the industry associations
- the “Energy Saving in Buildings” law (Energieeinsparungsgesetz-EnEG)
- the Energy Saving Act (Energieeinsparverordnung-EnEV)
- the Master Fireplace Act (MFeuVo) of the respective Federal Countries (FeuVo)
- the Country Building Code and the list of technical building regulations
- the governmental, regional building codes and boiler room equipment listings.

Standards and Guidelines:

- the relevant safety conditions included in DIN, EN, DVGW, TRI and VDE standard
- EN 12828 Heating systems in buildings - Hot-water heating systems
- BImSchV Federal Immission Control Ordinance
- EN 13384-1 Exhaust systems - heat and flow calculation methods
- DIN 18160-1 Exhaust systems – Part 1: Planning and execution
- EN12831 Heating systems in buildings. Method for calculation of the design heat load
- EN14597 Temperature control devices and temperature limiters for heat generating systems
- DIN 4753 Water heating systems for drinking and process water
- DIN 4109 Sound insulation in buildings, supplementary sheets and permissions
- DIN 1988 Technical rules for drinking water installations (TRWI)
- DIN EN ISO 4126 or TRD 721 - Safety devices for protection against excessive pressure - Safety valves
- Details Norm: DIN VDE 0100-540 VDE 0100-540:2012-06 Setting up low voltage installations
- DIN VDE 0100 Teil 701 DIN VDE 0100-710 Low voltage installations
- DVGW worksheets W551 and W552 Technical measures to reduce the growth of Legionellae
- VDI 2035 Prevention of damage in hot-water heating systems (limestone formation, corrosion)
- VDI 4708 Heating equipment (pressure maintenance, venting, degassing).

1.6.4 Conformity

CE

Hereby we declare as the manufacturer that this product BSV 40/50 complies with the basic guidelines for sale in the EU.

1.6.5 Obligations of our Natural Power Partners

To ensure the proper functioning of the BSV 40/50, observe the following guidelines:

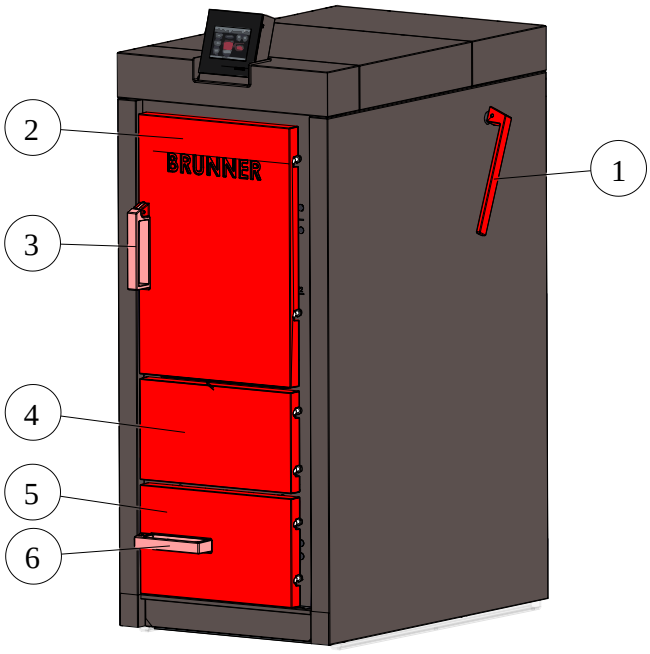
- Perform works only if you have the necessary expertise.
- Perform only such activities, which are indicated or described in this manual.
- Please ask an expert for instructions on the operation and maintenance of the system and potential hazards that may arise during operation.

1.6.6 Surfaces with possible risk of burns

Risk of injury from burns
Contact with hot surfaces of the boiler can lead to burns (see illustration).
- Do not touch the boiler's flue gas pipe, especially if it is not insulated.
- Allow the boiler to cool down and wear protective gloves before removing the ash.
- Allow the boiler to cool down or wear protective gloves before carrying out cleaning and maintenance.
- Ask a specialist to advise you of the possible temperatures of the boiler components (e.g. filling door, operating handles).

During operation

The surface of the boiler becomes hot during operation: see Temperature measurements during operation. Contact with these surfaces can be dangerous for certain people. Handle with care.



Pos.	Designation	Temperature range (approx. °C)
1	Lever for cleaning	54-63
2	Filling chamber door	50-55
3	Handle filling compartment door	44
4	Center front panel	35-40
5	Combustion chamber door	69
6	Handle combustion chamber door	54-63

2 Product description

2.1 Intended use

The BSV 40/50 boiler has been designed and constructed in accordance with the generally recognized rules of technology and the recognized safety regulations.

The log gasification boiler is intended as a heat generator for closed central heating systems and for hot water preparation (in accordance with DIN 4751 and EN 12828).

Intended use also includes compliance with the operating instructions and operating manual associated with the boiler.

The operator of a Brunner boiler is obliged to regularly service and maintain the system in accordance with the Ordinance on Energy Saving Thermal Insulation and Energy Saving Systems Technology in Buildings (Energy Saving Ordinance - EnEV) § 11. We recommend the conclusion of a maintenance agreement between the specialist installer and the operator of the heating system.

Non-intended use:
The boiler is not intended to:
- directly heat drinking water;
- burn fuels other than those specified in the technical documentation.

Non-compliant operation may result in danger to life and limb of the operator or third parties or damage to the boiler. Any other use of the boiler is not permitted. The manufacturer is not liable for any resulting damage to property or personal injury.
Any other use or modifications to the product, including during assembly and installation work, will invalidate any warranty claims.

2.2 Type plate


Ulrich Brunner GmbH
Zellhuber Ring 17-18
D-84307 Eggenfelden

EN 303-5
Prüfstellen-Kennziffer: 0036
Prüfbericht Nr.:

Holzvergaser: BSV 30

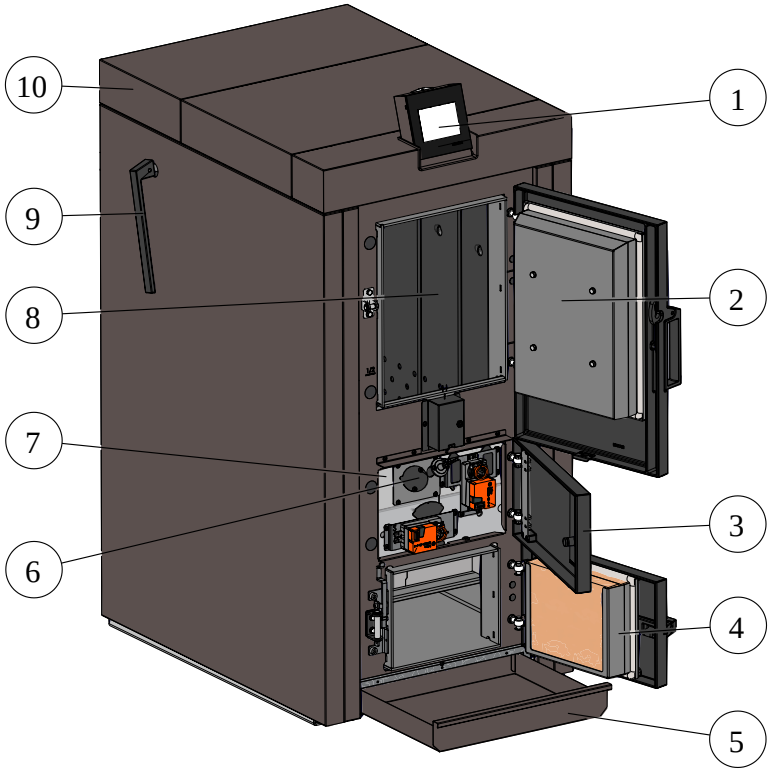
Nennwärmeleistung:	30 kW
Kesselklasse:	3
Brennstoffklasse:	A - Scheitholz
zul. Betriebsüberdruck:	3 bar
zul. Betriebstemperatur:	90°C
Wasserinhalt:	150 Liter
Betrieb:	Heizkessel mit Gebläse
Betrieb:	Unterdruck
Betrieb:	nicht kondensierend
Netzanschluß:	230 VAC, 10 A, 50 Hz
Herstellnummer:	
Hinweis:	Lesen und befolgen Sie die Bedienungsanleitung! Betrieb nur mit Pufferspeicher zulässig!

Illustration 1: Example

The type plate is located on the front of the boiler, behind the center front panel (see also ***Overview of the boiler***).

It contains the following important information:
CE mark;
Recycling symbol;
Manufacturer's data;
Type test number;
Designation;
Nominal heat output;
Boiler class;
Fuel class;
Approved operating pressure;
Approved operating temperature;
Water content of the boiler;
Operating mode;
Required mains connection;
Current manufacturing number of this boiler
and the note regarding the operating instructions and the obligation to connect
to a buffer tank.

2.3 Overview of the boiler



1	User interface (touch display)
2	Filling chamber door
3	Center front panel
4	Combustion chamber door
5	Ash drawer
6	Inspection hole
7	Type plate
8	Filling chamber
9	Lever for cleaning
10	Boiler cladding

2.4 Fuel and water quality requirements

2.4.1 Logs

The BSV 40/50 boiler is designed for the combustion of untreated wood. With the BSV 40/50 boiler, you use wood in the form of logs (fuel in accordance with § 3 of the 1st BImSchV No. 4). The boiler is also ideally suited for use in hot water heating systems.

The fuel should have the following properties:

- Dry, untreated logs with a maximum water content of 20%;
- The firewood is split and adapted to the size of the filling shaft;
- The logs should have a length of approx. 50 cm and an edge length of max. 10 cm.

Wood info

Units of measurement when buying logs

Various units of measurement are used when buying logs. The units used every day are

Solid cubic meter (Fm) (Ster)

A solid cubic meter is one cubic meter of wood without cavities. This corresponds to the size of a cube with edge lengths of 1 m wide, 1 m long and 1 m high.

Cubic meter (Rm)

A cubic meter is one cubic meter of loosely stacked wood, including the cavities. In southern Germany, the term “Ster” is also used for this.

Bulk cubic meter (Srm)

A bulk cubic meter is one cubic meter of loosely stacked wood with cavities.

Comparison of cubic meters - bulk cubic meters

Conversion factors can be used to compare the different units of measurement. The type of wood, i.e. softwood or hardwood, and the length of the billets must be taken into account.

	Bulk cubic meter (Srm) Log length 33 cm	Cubic meter (Rm) Log length 33 cm	Solid cubic meter (Fm) Log length 33 cm
Beech	1,00	0,68	0,42
Spruce	1,00	0,62	0,40
Beech	1,48	1,00	0,62
Spruce	1,62	1,00	0,64
Beech	2,38	1,61	1,00
Spruce	2,52	1,55	1,00

Information on the quality of logs

Heating value of wood depending on the water content

Water content		15	20	30	50
Tree species	**Unit**	**Calorific value**			
Spruce	kWh/kg	4,32	4,02	3,44	2,26
	kWh/Fm	1.926	1.904	1.863	1.713
	kWh/rm	1.348	1.333	1.304	1.199
Pine	kWh/kg	4,32	4,02	3,44	2,26
	kWh/Fm	2.190	2.166	2.118	1.948
	kWh/rm	1.533	1.516	1.483	1.364
Beech	kWh/kg	4,15	3,86	3,30	2,16
	kWh/Fm	2.724	2.692	2.631	2.411
	kWh/rm	1.907	1.885	1.841	1.687
Birch	kWh/kg	4,15	3,86	3,30	2,16
	kWh/Fm	2.568	2.538	2.480	2.272
	kWh/rm	1.789	1.777	1.736	1.591

When using logs, it is essential to ensure that the moisture content is below the legal limit of 25%. 25% water content corresponds to a water content of approx. 20%. Freshly harvested wood must always be dried for one to two years before use - depending on the nature of the storage location and the state of preparation (sawn or split).
There is a difference between the **water content** and the **moisture content of the wood**. The water content is the mass of water in the wood in relation to the total mass of the wood. The moisture content of the wood refers to the mass of water in relation to the dry mass of the wood.

If the fuel is too wet, unnecessary emissions are produced during combustion. In order to maintain an optimum water content of 15 to 20 percent in the wood for combustion, the logs must be stored in a well-ventilated place protected from rain.

The individual logs should be stacked in such a way that air can flow through the wood pile and there is no direct contact with the ground.

The storage period is one to two years, depending on the type of wood and the ventilation of the storage location.

Storing firewood

Storing firewood correctly

1. store your firewood in sunny, well-ventilated areas (south and west sides of your building);

2. create a dry background (pallets or logs);

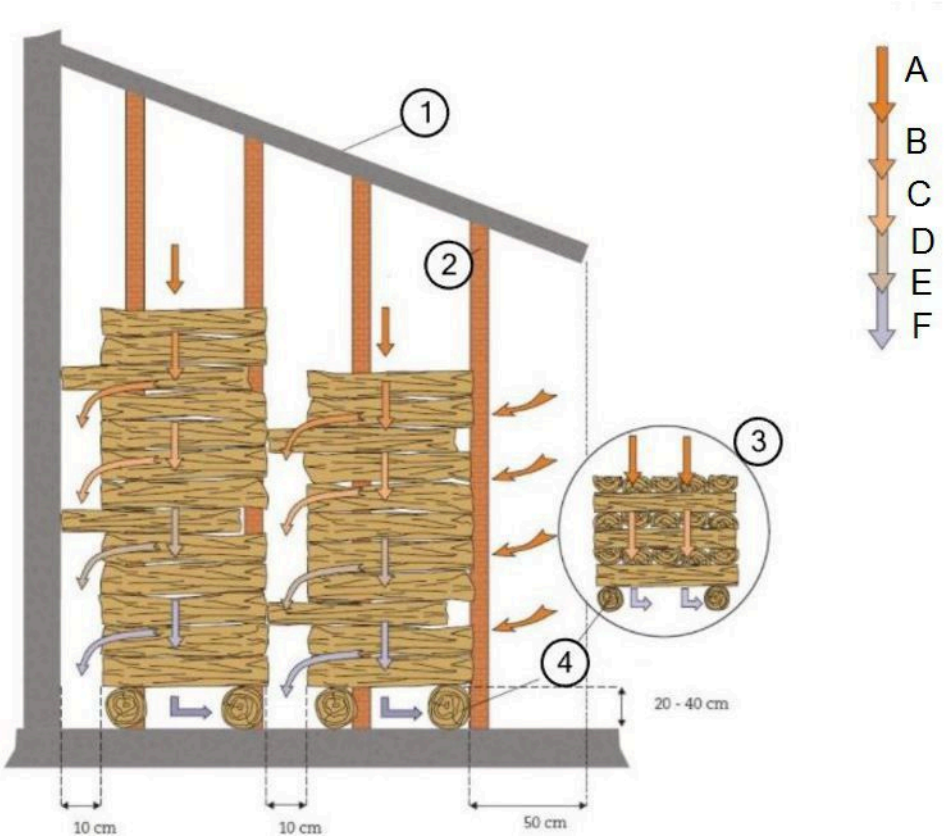
3. store your firewood at least 15 cm from the ground;

4. your firewood dries particularly quickly when stacked crosswise;

5. cover your firewood with a rain cover after the summer drying period;

6. if you store your firewood under a canopy, a house wall or an airy wooden hut, leave a gap of at least 10 cm between the wood and the building wall for ventilation;

7. if possible, store the day's fuel consumption in your heated room.



1	Canopy or roof overhang	3	Stacked without supports (at the edge)
2	Supports	4	Round timber cross bearing

Principle of drying:
The wood surface is heated (A) and the water evaporates (B). The air absorbs the water vapor from the wood surface (C), the air cools down (D), falls downwards (E) and escapes (F).

2.4.2 Heating water

Heating water

In modern heating systems, the quality of the heating water has a significant influence on the functionality and service life of the heating system due to the combination of different heat generators and components such as high-efficiency pumps or modern sensor technology. For this reason, there are corresponding national specifications such as VDI 2035 in Germany, ÖNORM H 5195-1 in Austria and similar regulations.

BRUNNER therefore recommends filling and refilling the heating system with appropriately treated water.

Drinking water analyses for the respective supply area can be requested from the responsible water supply companies.

3 Operation basics

The images shown in the installation and operating instructions (including display views) do not claim to be an exact representation of the displays on your system. These depend on the installed system components, their measurement functions, control variants and set parameters. In some cases, these system parts are not part of the standard versions, but are provided as optional accessories.

3.1 Licenses

For the visualization of our user interface we use an open source operating system, which is subject to different license models.

You can see the licenses used in the software under the menu:
„**Settings**“ → “**Display**“ → “**Licenses/Contact**“

Written Offer
(open source software)

Our product contains software and sourcecode whose rightholders license it under the terms of the GNU General Public License, version 2 (GPLv2), version 3 (GPLv3), the GNU Lesser General Public License, version 2.1 (LGPLv2.1), version 3 (LGPLv3) and other open source software licenses.

If you send us a request for oversending the licensed source code of the software, please use the following address:

Ulrich Brunner GmbH
Zellhuber Ring 17-18
84307 Eggenfelden
info@brunner.de

Upon request, we will send you a CD-ROM with the provided source codes. You have to pay the costs for material, packaging and delivery.

The offer is valid for at least three years from the date of delivery of the product on which the software is installed, and as long as we can offer spare parts and customer service for this product, or from the time of downloading the software from our homepage.
Please include the type of product for which you want to receive the source code in your request.

3.2 Data protection declaration of Ulrich Brunner GmbH

Notes on protecting your personal data

Ulrich Brunner GmbH always endeavors to save and process only the personal data that are necessary and indispensable or that are required to be stored and processed by law.

We strictly adhere to the requirements of the General Data Protection Regulation (GDPR) and the Federal Data Protection Act (BDSG and BDSG new).

We do not pass on personal data to third parties; unless we are required to do so by law or by court order.

Persons under the age of 18 should only transfer personal data to us with the consent of their legal guardians. If there is reason for a complaint, it can be addressed to the responsible state authority.

The required contact details can be found on the website: https://www.lda.bayern.de. If other sources of information or services (websites, apps, etc.) from Ulrich Brunner GmbH are used, the data protection declarations listed also apply.

Purpose of data processing

We only collect, store and process personal data for the express or implicitly agreed purpose. These are e.g. Address data for processing an information request, or for making offers, invoicing etc. or bank data for processing payment transactions. Without an independent declaration of consent, this data is not e.g. used to send as newsletter or similar purpose.

Saving and deleting

We only store personal data for as long as is necessary to fulfill the agreed purpose or as required by law. If the agreed purpose is fulfilled or there is no longer a legal basis for storage, this data will be deleted as far as possible. If deletion is not technically possible, the data will be marked in such a way that further processing is impossible.

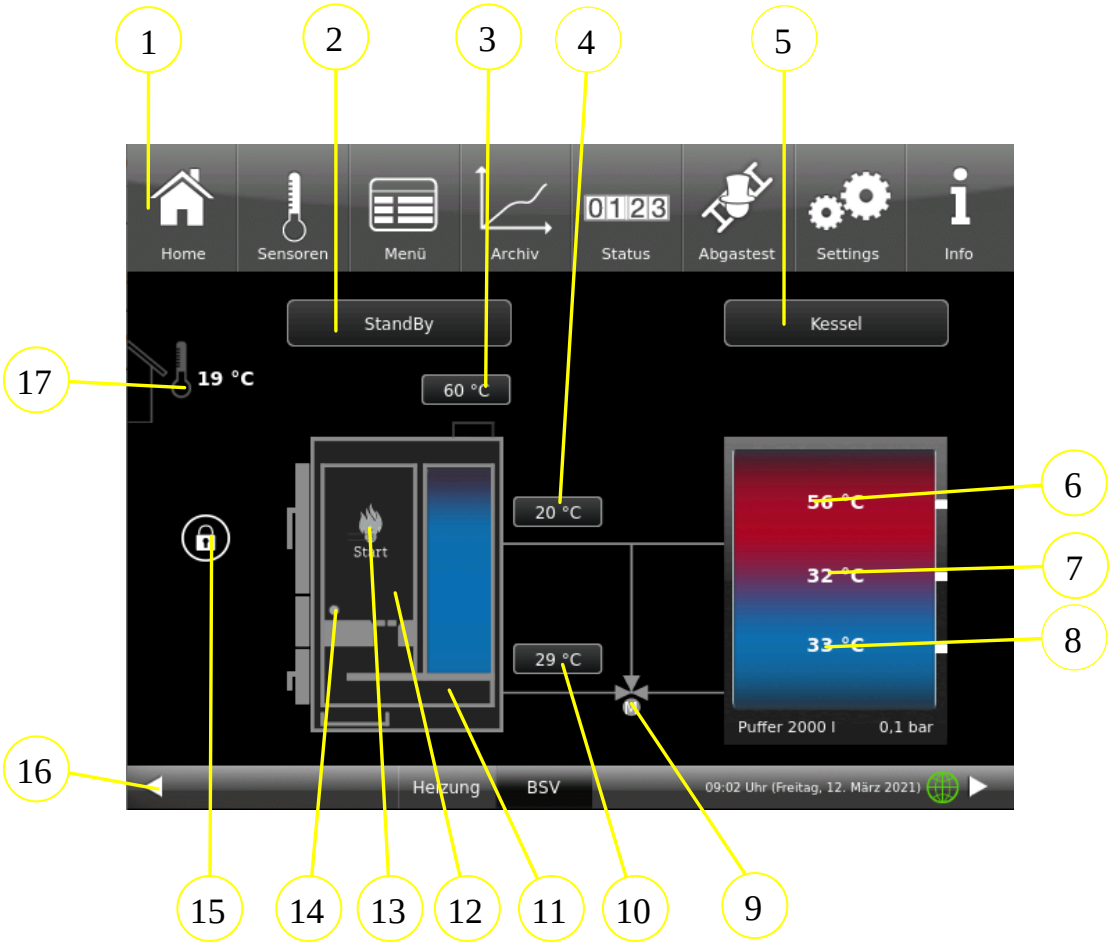
Deletion requests, requests for information, requests for changes or revocation of a declaration of consent can be directed at any time to the data protection officer of Ulrich Brunner GmbH.

Responsible for data processing

Ulrich Brunner GmbH
Zellhuber Ring 17-18
D-84307Eggenfelden
E-Mail: info@brunner.de
Tel.: 08721/771-0

You can contact the data protection officer under: datenschutzbeauftragter@brunner.de.

3.3 Overview of advertisements



No.	Designation	Function
1	Top menu bar	Quick access to the settings
2	Operating status	Display of the current operating status and service displays
3	Exhaust gas temperature	Current temperature of the exhaust gases in °C
4	Boiler flow temperature	Current boiler temperature in °C
5	Status display - buffer	Display of the current operating status and service displays
6	Buffer top - temperature display	Buffer temperatures (temperature sensor) in °C in the relevant areas of the buffer tank (shown in color)
7	Buffer center - temperature display	
8	Buffer bottom - temperature display	
9	Motorized - Return flow boost	Depending on the configured return flow boost, the mixer symbol is displayed differently or hidden
10	Return temperature	Temperature display of the return temperature
11	Combustion chamber	Depending on the current operating status, the flame is displayed in color

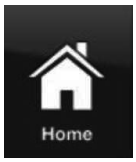
No.	Designation	Function
12	Filling chamber	There are different displays depending on the degree of filling with logs
13	Ignition	Different symbols - depending on the selected ignition type
14	Ignition	depending on the current status - different colors (grey / red)
15	Filling compartment door status (locking)	Different symbols - depending on the current locking status
16	Bottom menu bar	Access to other applications, if available, etc.
17	Outdoor temperature	Display of the outdoor temperature measurement
The measured values displayed may deviate slightly from the actual value.		

3.4 Menu bars

Top menu bar with a black display design

Top menu bar with a white display design

The top menu bar consists of the following buttons:



Home view
is the start page and the starting point for all applications;
This button displays a schematic view of the boiler system.
The fields with texts and values provide information about the current operating mode of the boiler (e.g. operating mode, temperature measurements at various measuring points)

Sensors
In the Sensors view, all sensor values (measured and calculated values) are listed with the associated numerical value, including their unit. A graphic preview is also displayed on the right-hand side of the sensor field.
The following parameters can be read on this page: Boiler output (kW), boiler temperature (ºC), temperature in the combustion chamber (ºC), temperature of the flue gases (ºC); lambda probe (% residual oxygen content); return temperature (ºC) and temperature in the top buffer tank (ºC).

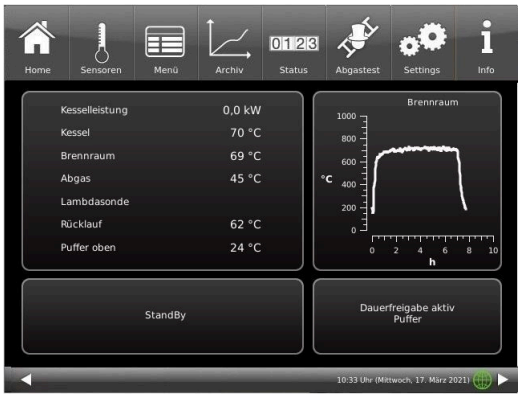
Proceed as follows to select a sensor value:

1. touch the name of the desired value (e.g. combustion chamber) in the left part of the touch display;

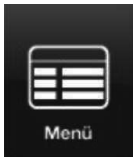
2. for a full view of the graph, touch the area of the graph;

The progression of the selected parameter over time is displayed graphically in the full view.

Note: The scaling automatically adapts to the value and time curve.



The measured values displayed may deviate slightly from the actual value.



Menu

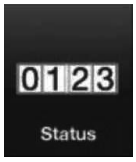
This button enables direct access to the adjustable additional functions (lock boiler; ignition enable; start temperature - see details in the operating instructions) and view of important parameters: the current value and its target value: boiler (°C); return flow (°C); combustion chamber (°C); flue gas (°C); lambda probe (%); output control (%); top buffer temperature (°C); middle buffer temperature (°C) and many more. (are sometimes displayed differently - depending on the connected heating control)

Archive

All recorded graphics can be called up in the archive.

The respective sensor graphs are saved under year/month/day/time.
By selecting the year and the corresponding month, you will receive a list of the entries saved in it (day - time).

Archive navigation: Click **Month** to return to the monthly overview and **Years** to return to the annual overview.
The individual burn-up is selected within the archive window (the selected entry is displayed in orange). Depending on the selected sensor value (orange button), the corresponding graphic is displayed in the preview (the default setting is always “Boiler output”). The saved error messages are always displayed in the message window for all sensor graphics.



Status

This button provides you with an overview of all operating data (e.g. operating hours, amount of heat generated, number of burn-offs, etc.)

Flue gas test

You can use this button to set the boiler for a flue gas measurement or enter the date for this.
You will be reminded 3 or 1 day in advance.
You will receive instructions on the necessary preparatory activities.
The boiler is automatically started at the right time.

The color of this button shows the current status of the “Flue gas test” function: white = inactive; green = active.

Settings
This button enables settings and access to the boiler configuration.

The parameter levels are only accessible via a PIN.

For the operator: PIN code is **9999**

By entering the assigned setup PIN number, the boiler control system recognizes the respective user. Only certain heating control setting options are enabled for the various users.

Enter the PIN number:

After pressing the **Settings** button, the following numeric keypad appears:
By tapping the white-marked numeric keypads, they become active and adopt the subsequently selected number;
Immediately afterwards, press the numbers of your PIN;
Please note the position of the thousands/hundreds/tens/ones of your PIN number.
If you want to delete a number, press **Del;**
If you want to exit the program, press **esc**;
After entering the number, press **O.K.**

→ Advanced settings are now enabled.

Illustration 2: Enter PIN button

Settings logout

You can exit the Settings function area immediately to log in again with a different PIN if required (setup PIN).

All settings made so far are saved.

To exit the Settings function area immediately, proceed as follows:
1. Enter the path:
Settings / **Control panel** / **Settings logout**
2. Tap the **Settings logout** button;
→ The touch display switches to the Home view.

Info
This button is a help function.

If there are error messages, the Info button is highlighted in orange.
In the case of information texts, the button remains gray and the information messages can be acknowledged.

In the lower menu bar, it is possible to switch between applications, if available.

Illustration 3: Lower menu bar BSV without other applications e.g. (without central heating system)

Illustration 4: Lower menu bar BSV with with a central heating unit BHZ or an extension board Basis

myBRUNNER - Status display myBRUNNER (online/offline)
= Display for an existing network connection, regardless of whether WLAN or LAN.

gray globe = display for existing network connection, regardless of whether WLAN or LAN.
blue globe = display for a myBRUNNER connection
green globe = display for a myBRUNNER local connection
no globe = no network

3.5 Details on the symbols and colors of the displays

Filling area

The amount of logs is displayed in the filling area: 100% full to empty:

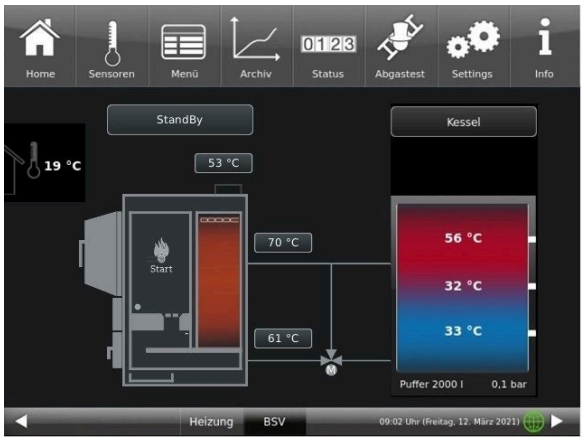
Ignition

Flame image

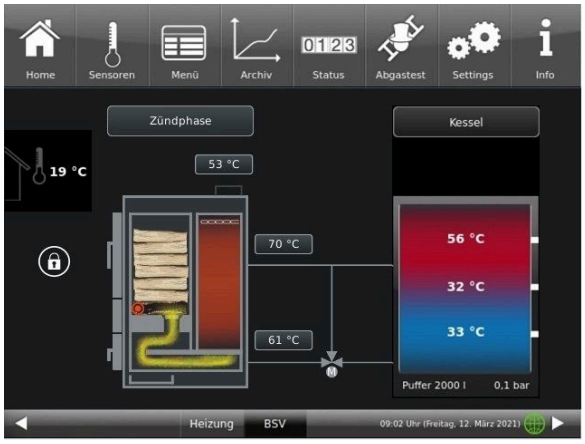
1	Ignition fault
2	during ignition
3	Burn-up
4	Ember monitoring
5	

Door filling chamber

Door open (not locked)



Door closed and locked



3.6 Own settings

3.6.1 Individualization of the display-BSV

The touch display of the BRUNNER systems can be customized with various display options.

This chapter describes all the setting options for the display presentation.

Touch the **Settings** button and enter your PIN code.

Follow the path: **Settings** (PIN code 9999) / **Control panel** / **Settings** and the following window will appear:

Illustration 5: Display-> Example: Setting options

Your settings window for setting the time period for the screen saver to appear appears:

Screensaver appears automatically after .... minutes

1. follow the path in the display:

Settings / Bedienteil / Einstellungen / BS-Schoner nach

2. By pressing on the white highlighted area at **BS-Schoner nach ....** a new window appears:

3. set the desired time - in minutes: a) by tapping **+** or **-**
or
b) by sliding the slider to the right or left

4. press **O.K.** to confirm;
→ The setting is accepted.

Illustration 6: Display customization - screen saver

This setting activates the screen saver after the desired time.

The brightness dof the display

You can adjust the brightness of the touch display to adapt it to the local conditions.

To set the brightness, proceed as follows:
1. Follow the path: Settings / Control panel / Settings / **Brightness**
2. A new window appears by pressing on the white highlighted area under **Brightness**. 3:

3. set the desired brightness:
a) by tapping **+ or -**
or
b) by sliding the slider to the right or left

4. press **O.K.** to confirm.
→ The setting is accepted.

Illustration 7: Display customization - Brightness

You can set **the length of the long signal tone** that sounds in the event of a fault (error message) or information message.

To set the duration of the long tone,
1. Follow the path in the control structure:

Settings / Control panel / Settings / **Long tone**

2. a new window appears when you press the white area next to **Long tone**:

3. set the desired time - in seconds:
a) by tapping + or -
or
b) by sliding the slider to the right or left;

4. press **O.K.** to confirm.
→ The setting is accepted.

Illustration 8: Display customization - Long tone

You can set **the duration of the short signal tone** that sounds in the event of a fault (error message) or information message.
To set the duration of the short tone,
1. Follow the path in the control structure:

Settings / Control panel / Settings / **Short tone**

2. a new window appears when you press the white area next to **Short tone**:

3. set the desired time - in seconds:
a) by tapping + or -
or
b) by sliding the slider to the right or left

4. press **O.K.** to confirm.
→ The setting is accepted.

You can set **the time interval for the repetition of the signal tone** that sounds in the event of a fault (error message) or information message.
To set the duration of the long tone,
1. Follow the path in the control structure:

Settings / Control panel / Settings / **t Sound repetition**

2. a new window opens by pressing on the white area next to**"t Tone repetition"**:

3. set the desired time - in seconds:
a) by tapping + or -
or b) by sliding the slider to the right or left

4. press **O.K.** to confirm.
→ The setting is accepted.

Log out after function

You can set the waiting time after which the touch display should automatically exit the Settings function area if no input is made (Settings log-out).
To set the waiting time, proceed as follows:
1. Follow the path:

Settings / Settings / Control panel / Log out **to**

2. a dialog window appears with the bar display; by tapping **+** or **-** you can navigate through the area

3. tap **O.K.** to confirm the selection.
→ The setting is accepted.

Automatic changeover between summer and winter time

For an automatic changeover between summer and winter time, you can set the time zone in which the installation location of the boiler is located.

To set the **time zone**:
1. Follow the path:

Settings (with PIN code) / Control panel / Settings / **Time zone**

2. a window for selecting the desired time zone appears

3. select the time zone;
4. select **O.K.** to confirm;
→ The setting is accepted.

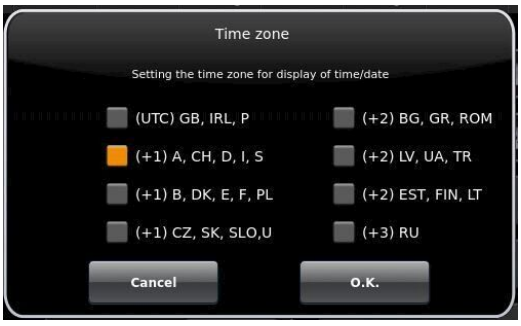


Illustration 9: Display Individualizing time zones

Screensaver

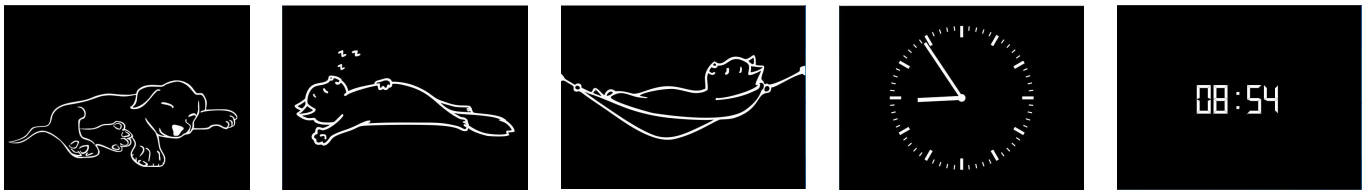
You can change the appearance of the screensaver. You have several options.
To change the screensaver, proceed as follows:
1. Follow the path:

Settings / Control panel / Settings / **Screensaver**

2. a dialog window appears with the options listed. Touch the desired screen saver.

3. press **O.K.** to confirm;
→ The setting is accepted and the desired screen appears.

Examples of screensavers:



Language

You can also change the desired boiler control language after the boiler has been configured. The languages that are not available are displayed darkened.

To change the language setting, proceed as follows:
1. Follow the path:
Settings / Control panel / Settings / Language
2. A dialog window appears with the flags of the respective countries;
3. Press the flag of the desired language;
→ The language setting is applied

4. if the language setting has been changed, the control panel is automatically restarted;

5. press **O.K.** to confirm the restart of the control panel;
→ The control panel is restarted and the language is adopted after the restart.

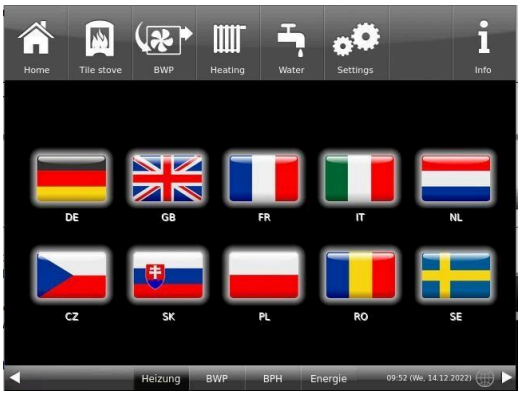


Illustration 10: Display Customization Language

Design

You can change the appearance of the touch display to adapt it to the local conditions. You can select the background color of the display: white / black.

This process takes approx. 1 minute.

To change the appearance, proceed as follows:
1. Follow the path:
Settings / Control panel / Settings / **Design**
2. A selection window appears in which you can select the desired setting**(white** or **black**) by touching it.
3. Tap **O.K.** to confirm

4. please wait until the control unit switches off automatically and then switches on again (approx. 1 minute)
→ The setting is accepted.

Illustration 11: Display design selection

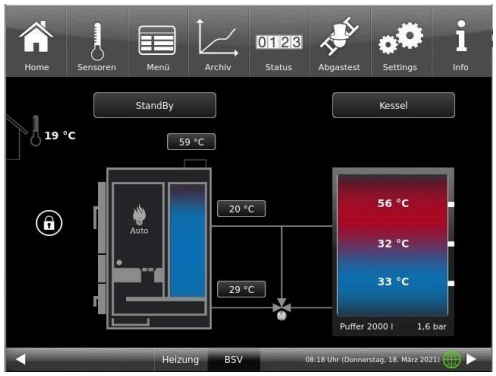


Illustration 12: Black display design

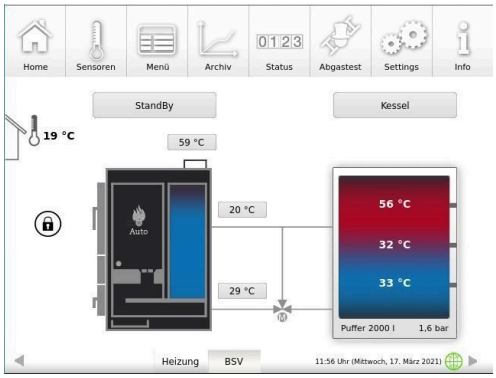


Illustration 13: White display design

3.6.2 Setting the time of ignition

The ignition release function can be used to set the desired parameter or heat generator at which the automatic ignition responds to a heat request.

You can set the time at which the boiler should be ignited.

To change the ignition time, proceed as follows:
1. Tap the **Menu** button;
2. Tap the **Ignition** enable button (highlighted in white);
An additional selection window appears with the ignition variants:
Automatic,
Start and
Do not start.

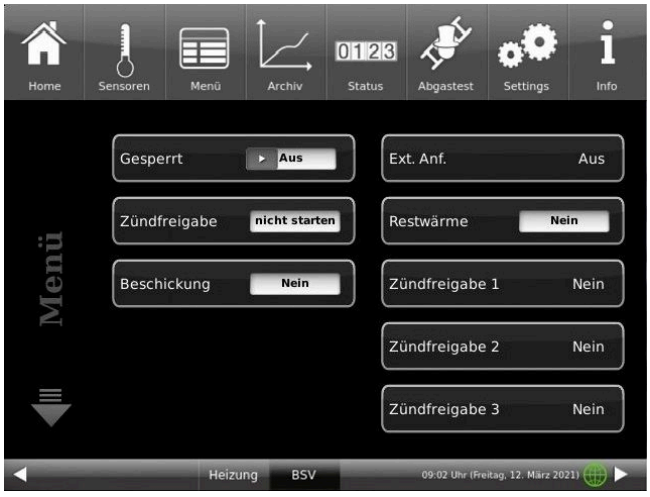


Illustration 14: Ignition enable

3. tap the selection box;
4. tap **O.K.** to confirm;
The setting is accepted.

You can choose between the following ignition variants:
Automatic (recommended): The ignition process is started automatically when heat is requested.
Start: The ignition process is started immediately (one-time heat request). Make sure that the storage tank can absorb the amount of heat generated, as all automatic settings are ignored.
do not start: The ignition process is deactivated / stopped.

Illustration 15: Ignition release selection window

In conjunction with a BRUNNER central heating system or a Basic expansion board:
If several heat generators are present, you can specify the (ecological) sequence in which the heat generators are automatically switched on. A maximum of three heat generators (ignition release 1 to 3) can be stored and only one setting per ignition release.

Ignition enable

The ignition release function can be used to set the desired parameter or heat generator for which the automatic ignition is activated when heat is requested.

In conjunction with a BRUNNER central heating system or a Basic expansion board:
if several heat generators are present, you can specify the (ecological) sequence in which the heat generators are automatically switched on. A maximum of three heat generators (ignition release 1 to 3) can be stored and only one setting per ignition release.

To change the ignition release, proceed as follows:

1. follow the path:

Settings / **Configuration** / **Boiler**

2. the following window appears (the windows with a white background can be set)

3. after confirming with **O.K**., your settings are adopted.

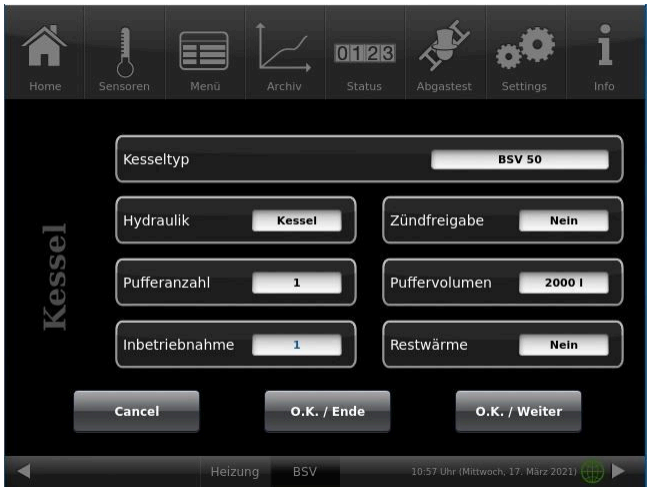


Illustration 16: Display ignition release

Selection option:

No: Automatic ignition is not active or switched off (e.g. emergency operation, manual ignition).

External (ST52): The boiler ignites automatically if, for example, a set minimum temperature of an on-site heat source (e.g. heating center from a third-party manufacturer) is set.

Central heating unit: the BRUNNER central heating unit BHZ or the extension board Basis releases the ignition

On-board central heating unit: The control of the BSV takes over the ignition release.

3.6.3 Residual heat utilization

The aim of residual heat utilization:
The hot boiler water should still be fed to the buffer storage tank after the end of combustion and the boiler pump has been switched off in accordance with its function (cooling loss = buffer storage tank yield). This function can only be carried out if a return flow boost is present.

If residual heat utilization is active, you can specify whether or not the additional yields are fed to the buffer storage tank**(switching**heat utilization**off** or **on**).

1. tap on the **Menu** button and then on **Residual heat**. The selection window appears:
2. Tap on the corresponding box (Off or On)
3. Confirm with OK

→ The setting has been accepted.

Illustration 17: Residual heat utilization

3.6.4 Locking the boiler

The boiler can be locked for cleaning work to prevent hazards.

Selection is only possible (button highlighted in white) if the boiler is in *standby* mode. When locked, all electrical actuators such as the ignition, fan and drives are de-energized.

To lock the boiler, proceed as follows:

1. tap the **Menu** button;

2. touch the light area in the **Locked** field - select **Off** (white background) or **Yes** (orange background);

→ The button display changes to **Yes** (highlighted in orange). The boiler is locked.

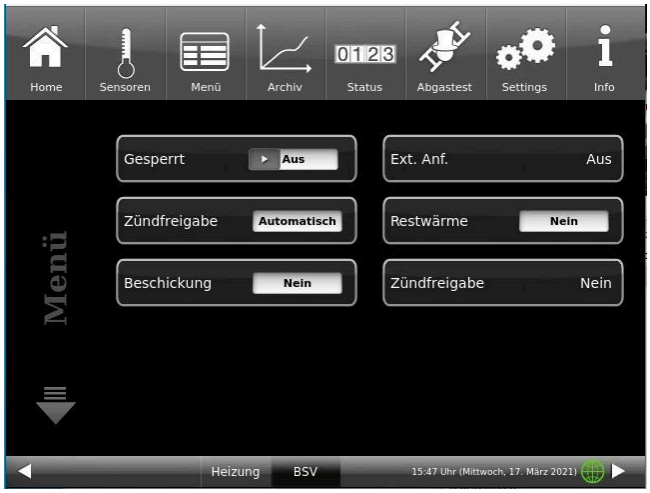


Illustration 18: Display menu page 1

If the boiler is locked and you switch to the **Home** view, the **Manual** cleaning display appears in the info field above the boiler, i.e.: The boiler is locked.

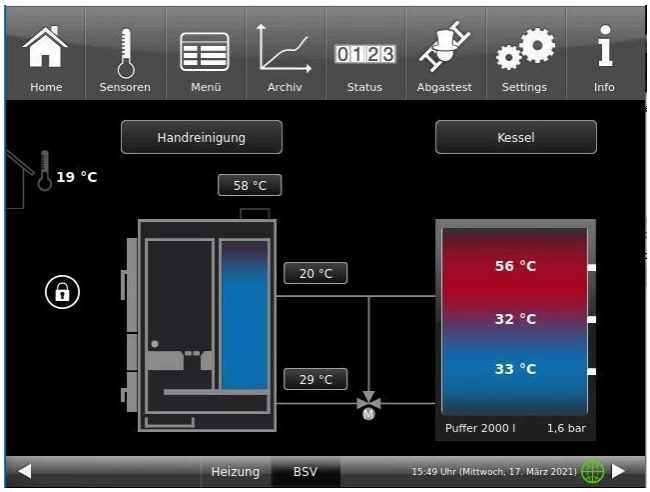


Illustration 19: Home display - Manual cleaning

When the log boiler is locked, the bar display for the cleaning requirement (can be viewed under: **Status** of the menu bar) is automatically reset to zero.

The display for the service requirement is only set by the specialist company after maintenance work has been carried out.

3.6.5 Exhaust gas test

NOTES on preparatory activities:

Clean the boiler approx. 2-3 days before the flue gas measurement by the chimney sweep (according to the chapter “Cleaning the boiler” in the maintenance instructions).

Empty the ash pan.

For the flue gas test, only fill the filling chamber halfway with fuel and only use split, dry wood without excessive bark.

The boiler BSV 40/50 has a chimney sweep button in the menu view. Depending on the color, you can see whether the flue gas test function is active or not:

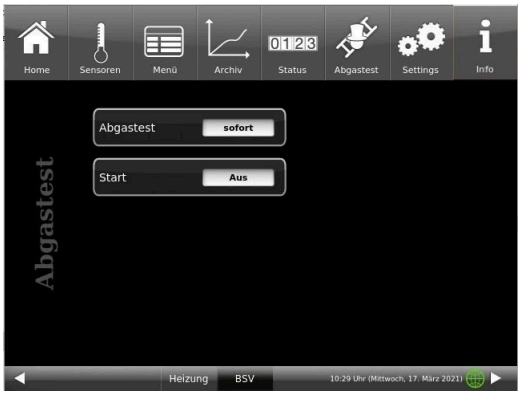
= flue gas test function is inactive

= Function Flue gas test is active

The flue gas test can only be carried out in the following operating states: in *standby, ignition* and *combustion*.

For a manual start
1. Click on the chimney sweep button;
2. Under Flue gas **test**, select: **Immediately;**
3. Under **Start**, select: **On**;

The log boiler is automatically prepared for the flue gas test. If the boiler was in *standby*, the test can be carried out in approx. 60 minutes.



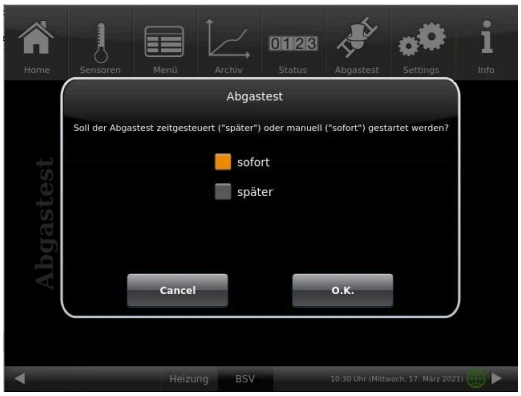
You can cancel a started flue gas test at any time by clicking on **Start: Off**

Do you have an appointment with your chimney sweep to carry out the flue gas measurement? This appointment is also managed by the boiler control unit: the control unit not only prepares the boiler for the specific date and time, but also reminds you 3 days or 1 day in advance that the flue gas test appointment is approaching.

To do this:
1. click on the chimney sweep button (is currently white)

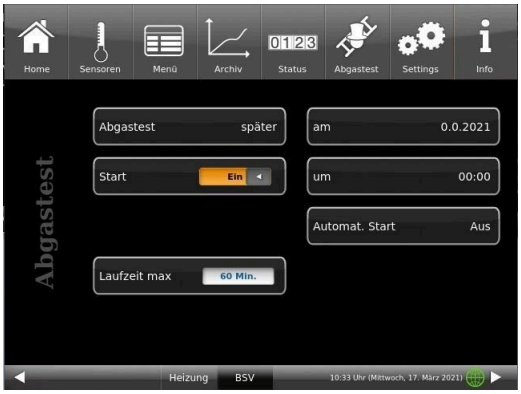
2. for **Exhaust gas test: later** and under **on** enter the date or under **at** enter the time;

3. for **Auto start**: **On**, the boiler starts the preparations automatically; if you select **Off**, the instructions are only displayed.



4. to activate the settings for the flue gas test, click on **Start: On**

The activation of the function for preparing for the flue gas test is indicated by the green color of the chimney sweep.



3 or 1 day before your appointment for the flue gas measurement, you will receive a reminder for the flue gas test appointment:

The appointment for the flue gas measurement has been postponed?
-> set the new appointment in exactly the same way as 1 to 4.

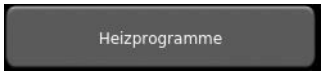
Is the chimney sweep late?
-> extend runtime **max**
If the runtime has expired, the boiler is in normal combustion mode. The flue gas test can then - if necessary - be started **immediately** as long as the burn-up continues.

Note
Ensuring heat dissipation
In conjunction with the BRUNNER central heating system (BHZ) or with the BRUNNER basic extension board, possibly with the EWP heating circuits, all connected heating circuits are set to heat dissipation to ensure heat dissipation (regardless of whether they are enabled or not).

3.6.6 Select heating programs

By tapping the Heating circuit button 

button or the button from the top menu bar 

you can access the Heating programs 

button. The following programs are set at the factory:

		Day mode 1		Day mode 2		Day mode 3	
Program name	Day	Day On	Off	On	Off	On	Off
Family	Mon-Thu	5:30	22:00				
	Fri	5:30	23:00				
	Sat	6:30	23:00				
	Sun	7:00	22:00				
Single	Mon-Thu	6:00	8:00				
	Fri	6:00	8:00				
	Sat	7:00	23:30				
	Sun	8:00	22:30				
Seniors	Mon-Sun	5:30	23:00				
New 1							
New 2							
New 3							
Off	The selected heating circuit is deactivated! Frost protection is activated.						

Individual program requests:
You can enter the desired times and names for each heating circuit and for each hot water program.

Defining a heating program

You can enter your own programs for the existing heating circuits on the display.

1. call up the **heating circuit** menu:
either by clicking on the graphic element of the respective heating circuit from the home view
or by clicking on the “Heating” symbol in the top menu bar and then on the button for the relevant heating circuit;

2. tap on the **Heating programs** field;

Click on the white field

and select your suitable program from the preset programs. Selection options:

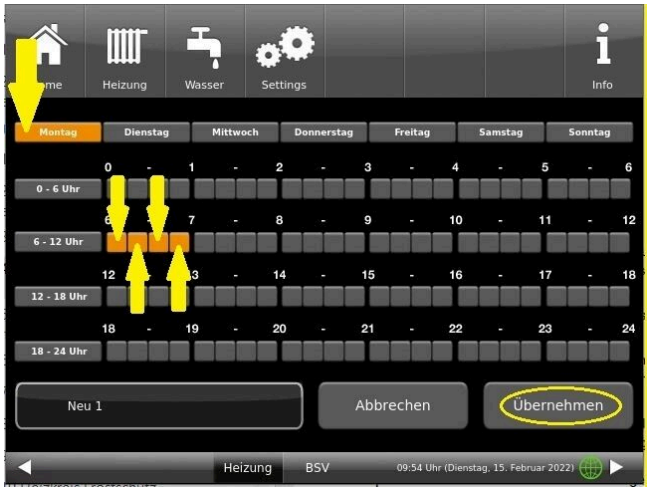
3. to create a new program under **New 1**, **New 2** or **New 3**, tap on the box with the desired day of the week.

You can activate the desired times for each day of the week.

These can also be changed individually by selecting the days of the week. Several days of the week cannot be selected at the same time.

By tapping on the time periods 0-6, 6-12, 12-18 and 18-24, the entire line is highlighted in orange (= heating active) or gray (= heating inactive). Individual boxes can be marked orange or gray by tapping on them.

The factory programs cannot be overwritten.



If you want to change the name of the entered program, tap the button with the previous program name.

A new window with a keyboard appears

Use the keyboard that appears to enter the new program name.

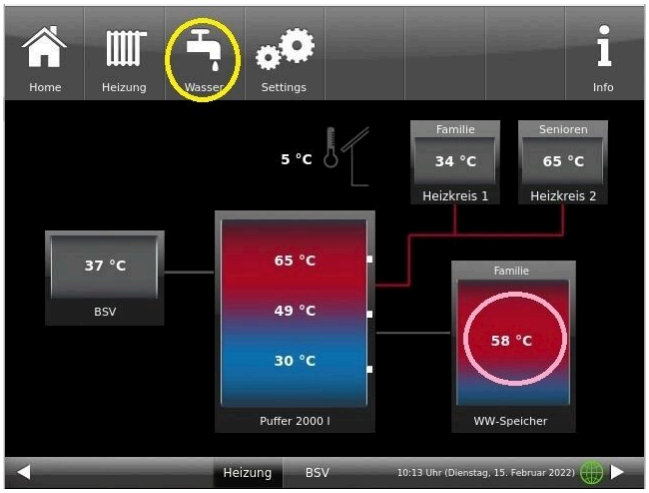
To confirm and accept the new program, tap **O.K.**

→ The new program for heating circuit 1 has been saved under a new name.

3.6.7 Setting the program for hot water

You can select an existing program or enter a new program (similar to “Selecting or creating heating programs”)

Tap on the **Water** button in the top menu bar or on the DHW storage tank button on the home view of the heating system and the button for DHW programs will appear 



3.6.8 Absence time

for one or more heating circuits:

If you are not at home for a longer period of time, i.e. you will not have any heating or hot water consumption, you can select the settings for this period so that energy is saved.
During this time, the selected heating circuits or hot water storage tanks will only operate in frost protection mode. In this way, you can not only save a lot of energy, but also protect your system from frost.

The absence program can be interrupted, cancelled or resumed.

The vacation program is shown on the display. The vacation days are displayed and counted down at the same time.

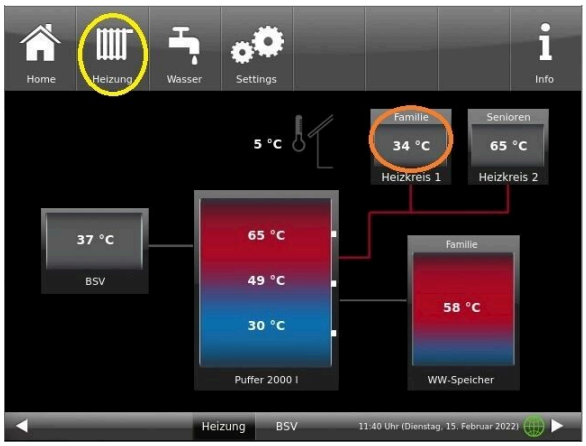
Once the set absence time has elapsed, the system automatically switches back to your program.

The absence program can be set for heating (one or more heating circuits) as well as for hot water. (Here is an example for one heating circuit)

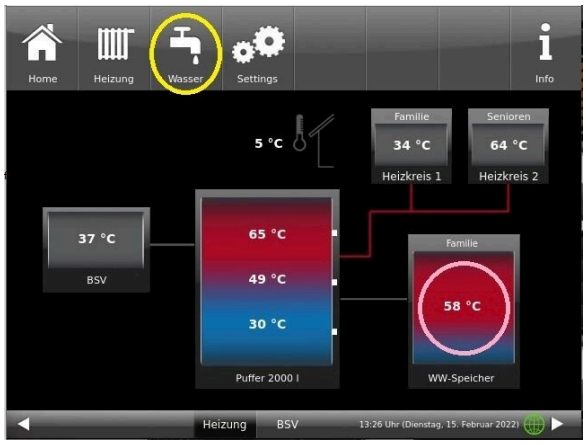
1. for this setting, tap:
Heating button / Heating **circuit 1** (or the relevant heating circuit) / **Absence**

2. tap on the **Absence** field and enter the number of days you will not be at home.

→ The absence has been accepted and is automatically switched on at the set time and switched off later.



If you have installed a hot water cylinder for hot water preparation, you have the option of setting the absence time.
To do this, tap on the hot water tank graphic (button) in the Home view or click on the **water symbol** in the top menu bar / **Absence** button. A sliding bar appears, which you can use to enter the days of absence. Logically, the status display **Off** appears in the header of the hot water tank during the absence time. The remaining active absence time is displayed in the **Water** menu in the **Absence** button (countdown).



3.6.9 Lowering type

Selection of lowering mode - Reduced mode/Night lowering

For each heating circuit you can choose individual lowering types for reduced mode or night lowering mode:

Cooldown protection	Selection of 'T_outdoor' limit for outdoor temperature, where the mode will change between “Disabled” and “Reduced”. This is some kind of Winter/Summer mode switching during night! If this limit is exceeded, the heating circuit will be disabled. Below this limit, the flow temperature is reduced to Night mode level.
Standard	Flow temperature is reduced for Night mode operation. Heating circuit pumps are still running. Parameter: Lowering
Frost protection	The heating circuit is generally disabled at night. Heating circuit pumps are deactivated (Pump 3 (A9) or 4 (A12) off).
Off	No temperature lowering in Night mode

When in Home view, tap on the heating circuit graphic or select the softkey **Heating** and then select the softkey of the relevant heating circuit.

Lowering type is used to determine the behavior of heating circuits during defined “inactive” periods. *Standard* lowering type is used to decrease the normal supply temperature of heating circuits during defined “inactive” periods by 'T_lowering' parameter value.

If ***Frost protection*** is selected, the heating circuit pumps are switched off during “inactive” periods. Just when **Frost protection from** value is exceeded, the pumps are activated again. Heating circuit flow temperature is now controlled without individual heating characteristics. If the temperature exceeds **Frost protection from + dT frost prot.** value, the pumps are switched off

Die Absenkart Auskühlschutz verhält sich eigentlich wie der Frostschutz, mit dem Unterschied, dass hier als Temperaturschwelle 5°C gilt und die Heizkreisvorlauftemperaturen entsprechend der Heizkennlinien geregelt werden.

Parameter	Value (min, max, default)	Description
Lowering mode	Cooldown protection, Frost protection, Standard	Determines the type of flow temperature reduction.
Heating system		Determines the choice of heating curve.
T_lowering	0°C, 100°C, 5°C	FL temperature is reduced by this value during “inactive” periods.
T_outdoor	-20°C, 50°C, 5°C	Threshold value to change between “reduced” mode and “disabled” mode.

3.6.10 Summer/Winter switching

The user can adapt the settings for switching between the Winter and Summer operation modes. For this, tap the **Heating** button from the upper menu bar or the graphic of a specific heating circuit. Then tap the **Summer from** button. Using the sliding bar, set the desired switching temperature.

If the outdoor temperature exceeds the 'Summer from' switching threshold, the relevant heating circuit pumps (A9 or A12) are deactivated. For every heating circuit you can select an individual value for Summer/ Winter switching. There is also an option: to select permanent Summer or permanent Winter operation mode for heating circuits (Parameter, range: *permanent Summer*, 10, ...40, *permanent Winter*).

If the outdoor temperature is lower than selected by more than 1°C, Winter mode will be switched on again.

3.6.11 Heating circuit frost protection

This function is set by the specialist company.

To set the frost protection function, follow the path: Settings (+ PIN entry) / relevant button for heating circuit and / or domestic water / parameter settings for frost protection (... frost ...)

The heating circuit frost protection has priority over all selected settings. As soon as the predefined outdoor temperature threshold in parameter *Frost protection from* (basic setting: 1°C) is reached, the inactive circulation pumps of heating circuits (e.g. HC pump off, because minimal or maximal flow temperatures are exceeded; heating circuit configuration is “OFF”) will be automatically activated with a flow temperature value of Tmin Buffer. If the circulation pumps are already active, this function has no effect.

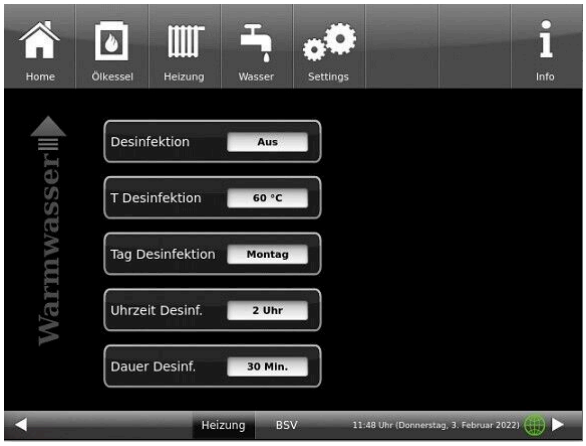
3.6.12 Disinfection

NOTE: Disinfection relates to the connected hot water cylinder. Check the settings in the configuration:

To be able to perform the actions for thermal disinfection automatically, make the following default settings:

T Dis infection (temperature of disinfection);

Execution time: **Disinfection day**; **Disinfection time**; **Disinfection duration**



3.6.13 Communication of the system

The control can send you the information and messages of the system at the current time by e-mail. Therefore: **Settings** / Pin entry (9999) / System (**Anlage**) and switch by arrow to site 2 (Anlage 2). The E-Mail Notification (**E-Mail Benachrichtigung**) button is located here.

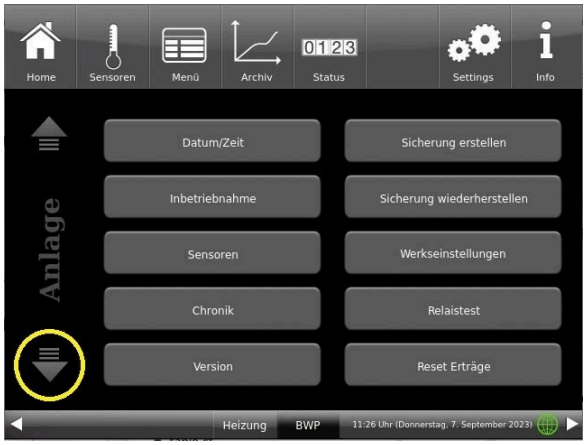


Illustration 20: System/Anlage site 1

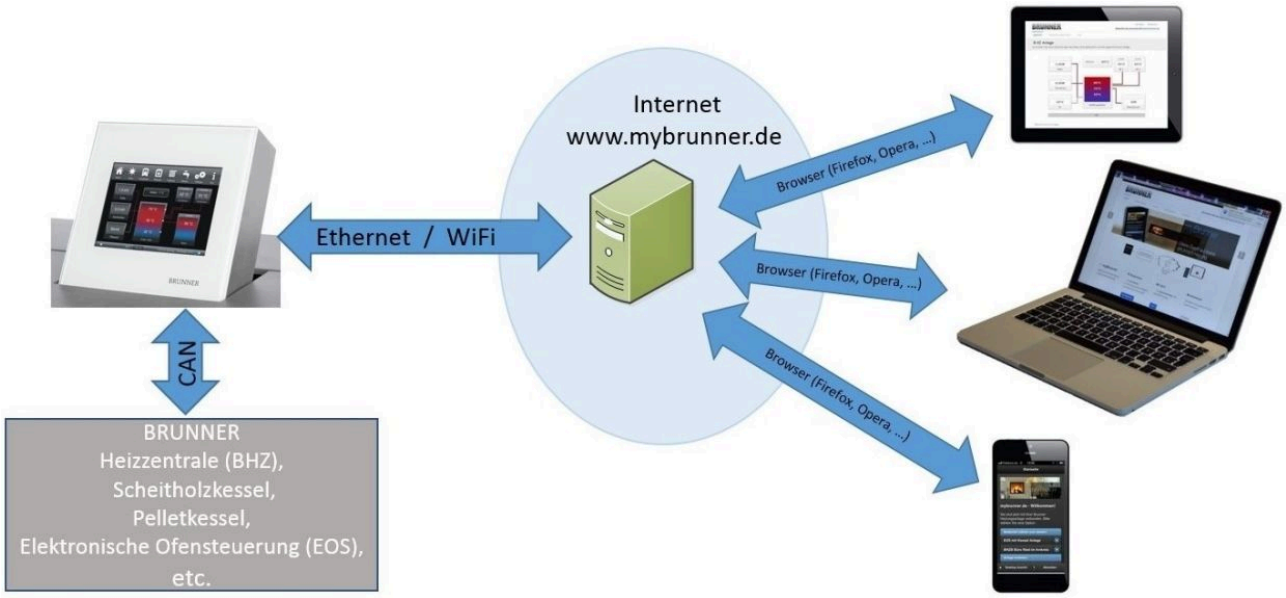
Illustration 21: System/Anlage site 2

If you are the operator (end customer) of the BRUNNER system click on the gray button next to“Kunde”.

The highlighted field turns orange. When clicked the Subject button or Max@mustermann. de a keyboard field appears, using where you can enter your email address.

4 Remote access via myBRUNNER

4.1 Preconditions and instructions



Preconditions for on-line access to your BRUNNER heating
1. You have a BRUNNER heating system with Touch Display;
2. The Touch Display software update status must be Release 4.0 (from December 2013) or higher;
3. A connection between Touch Display and Internet access point (a router) in the building is required. A flat rate (broadband) Internet connection is recommended for reasonable operation.
4. PC/Tablet/Smartphone with access to your personal e-mail account.
5. PC/Tablet/Smartphone with Internet access via web browser to **www.mybrunner.de**

Instructions for registration
Each control panel (Touch Display) can be registered once. You can assign only one e-mail address for a control panel. If the user wants to use a different e-mail address, he/she must delete the registration entry and perform the complete registration process once again (for this, use the **Delete registration** button). The same process, as in the case of changing user.

If a user has many Touch Displays for a heating system, every Touch Display can be connected with myBRUNNER. Every control panel can have a different e-mail address assigned.

With mobile devices such as tablets or smartphones, the embedded browser cannot be used with older Android variants; therefore you should load a current browser like Firefox, Opera, Chrome.

If it is not possible to log in, please check:
1. if the control panel is in Setup mode (Login active)? Before you log in, perform Settings logout function. (Softkeys: **Settings** / **Control panel** / **Settings logout**).
2. if the system clock of the control panel is set? The setting must be exact as possible. The same applies to days of week, time zones and year (see: User Guide / sect. “Individual settings” / sect. “Display customization”)
3. if the system or control panel is now running an update sequence? Please wait until finished and try again.

Instructions for enabling Service access
The access to service functions can be enabled exclusively for heating contractors or BRUNNER service technicians. Mutual access for both categories of servicemen is not possible.

4.2 Connect keypads to the Internet

Operating principle myBRUNNER:

For remote access to the personal heating system via the internet (myBRUNNER), the BRUNNER touch display must be connected to the internet access of the building. There are different options and a wide range of peripheral devices for this purpose.

Network cable (Touch 2.0 and 3.0)

The easiest and most safe solution. A connection between the touch display and internet access in the building (router) via a network cable (terms: patch cable, Ethernet, LAN).

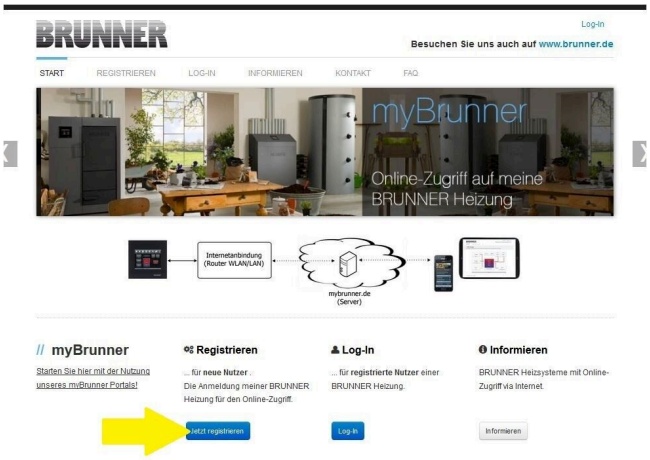
4.3 Set up myBRUNNER

4.3.1 Registration

1. Start the first registration

1.1. Go to **www.mybrunner.de**;

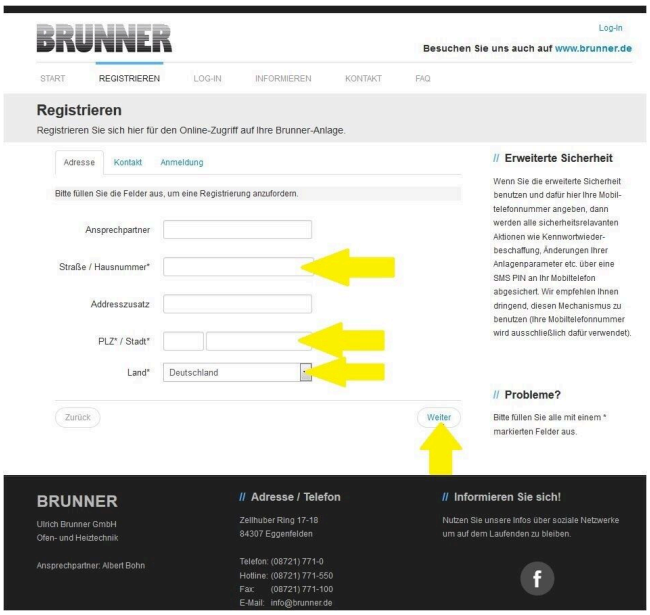
1.2 Click the button **Register now**;



This window/box appears:

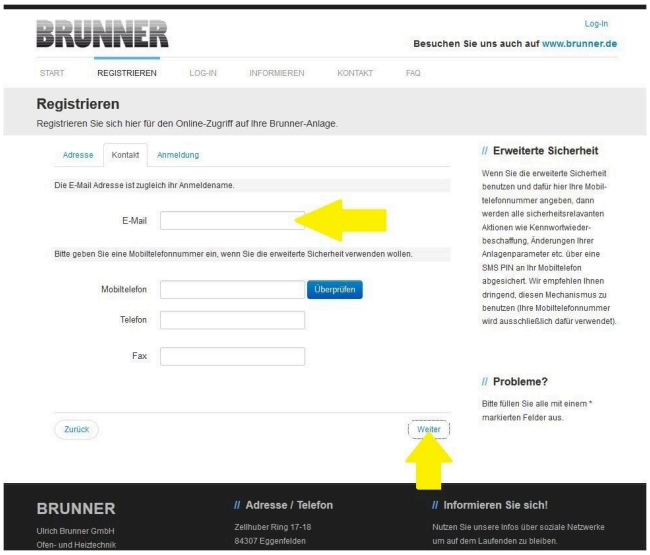
1.3 Enter your contact details (Name, Address); the fields with * are mandatory fields;

1.4 When finished, click **next**;



1.5 Enter a valid e-mail address;

The e-mail address is at the same time your login name!!!

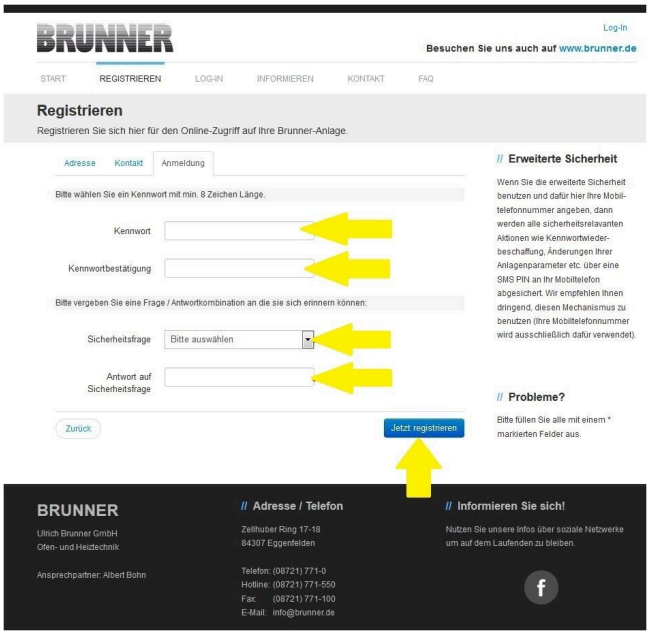


1.6 Optionally - for increased security - you can enter your mobile phone number.

1.7. Click **next** to complete your entries on this page.

1.8 Enter a password;

The password must be at least 8 characters long!!
Please remember this password, as it is used to access your system.
All fields are mandatory!

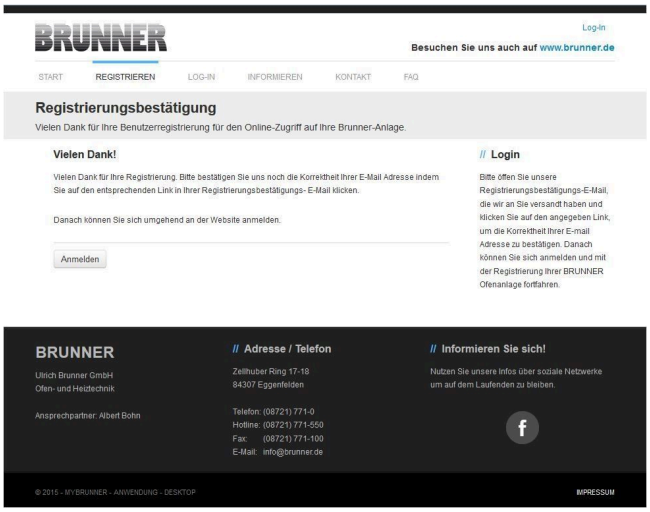


1.9 Select a security question. You can choose between: Your favorite football team? Your favorite travel destination? Your Mother's maiden name? Your favorite movie? Your favorite book? Your favorite pet? Name of your first girlfriend (or boyfriend)? Name of your first pet? Your meaningful year number? Your favorite restaurant?

Please enter a valid answer, which will be used later for confirmation.

1.10 Click the button **Register now** when finished.

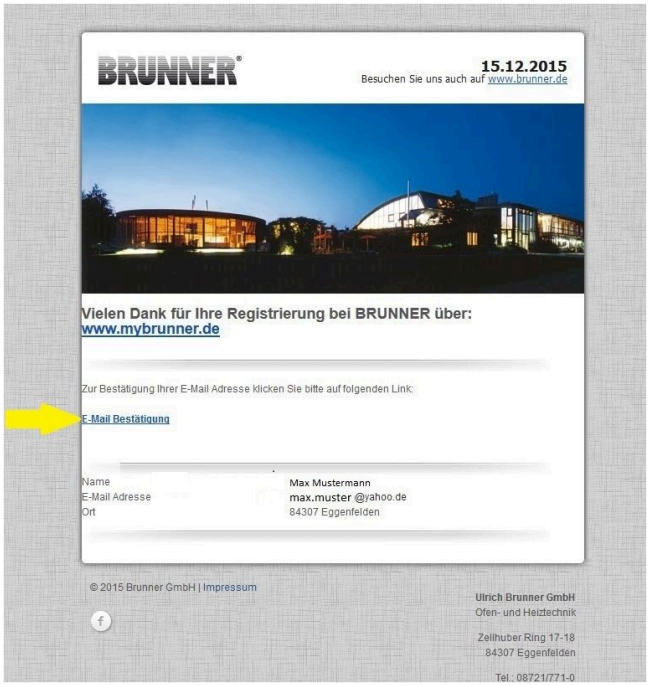
1.11 The details of your registration will be shown:



2. E-mail box - Confirmation of registration

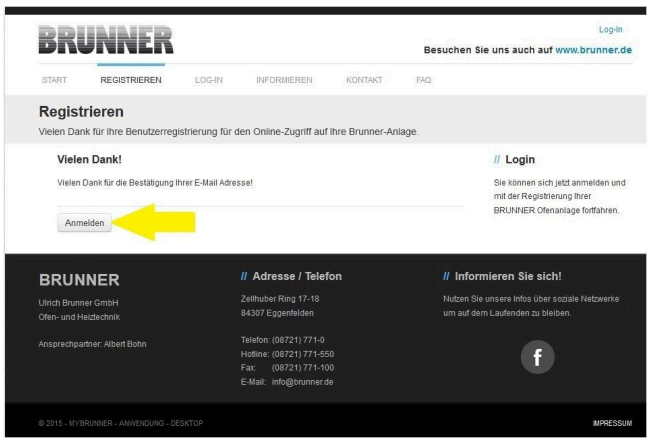
2.1 Open the e-mail from "***websystem***" and subject line: "***Brunner Zentrale Benutzerverwaltung: Registrierungsbestätigung***" (Brunner Central User Administration: Confirmation of registration)

2.2 Click on the link;



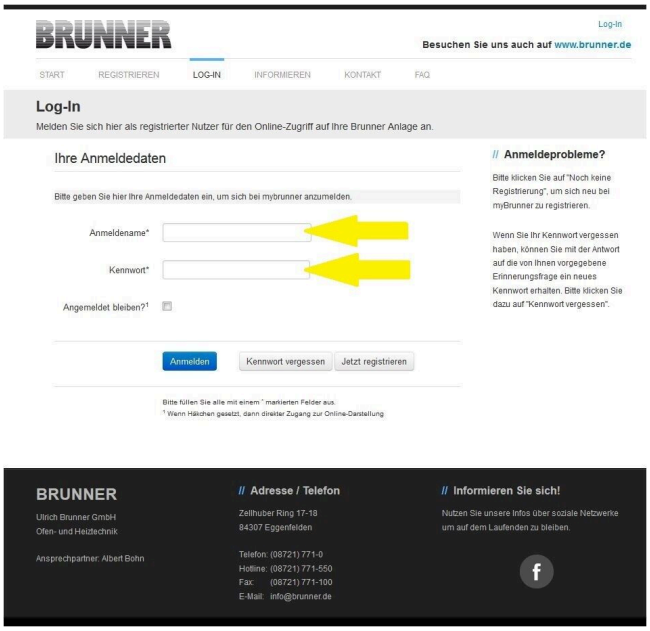
3. Login

3.1 Click **Login**

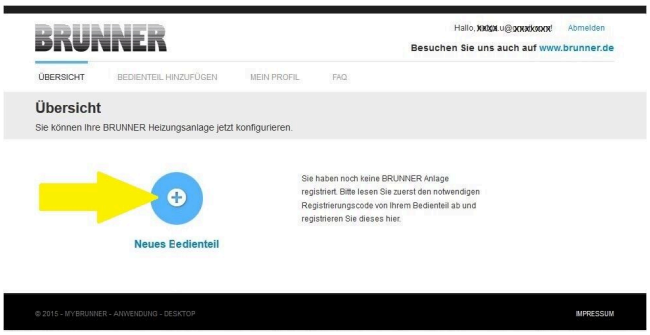


3.2. At Login name enter your email address

3.3 Enter your **password** (entered beforehand and repeat - see 1.8)



3.4 The control unit (touch display) of the Brunner system must be registered. To do this, click the New Control **Neues Bedienteil**.



NOTE:
If you had previously registered a different control unit, click the Add another control unit button **Weiteres Bedienteil hinzufügen**.

4. Activate the network

4.A. Connected via network cable (Touchdisplay 2.0 and/or Touchdisplay 3.0)

To see if the Internet connection is available on the Touch Display, look at the icon (globe) in the lower right corner of the Touch Display. If the Internet connection is available (network active), the globe color is gray.

Illustration 22: Internet connection available (gray globe)

4.1 Click in the upper menu bar on **Settings**

4.2 Enter the PIN Code **9999**

4.3 Click on the control display button **Bedienteil**

4.4 Click on the **myBrunner** button

4.5 Navigate down with the arrow key:

4.B. Connected via WLAN (Touchdisplay 3.0)

To see whether you have an internet connection on the touch display, look at the graphic (globe) at the bottom right of the touch display. If there is an internet connection (network active) the globe is gray.

Illustration 23: Internet connection (gray earth globe)

4.1 Click in the upper menu bar on **Settings**

4.2 Enter the PIN-Code **9999**

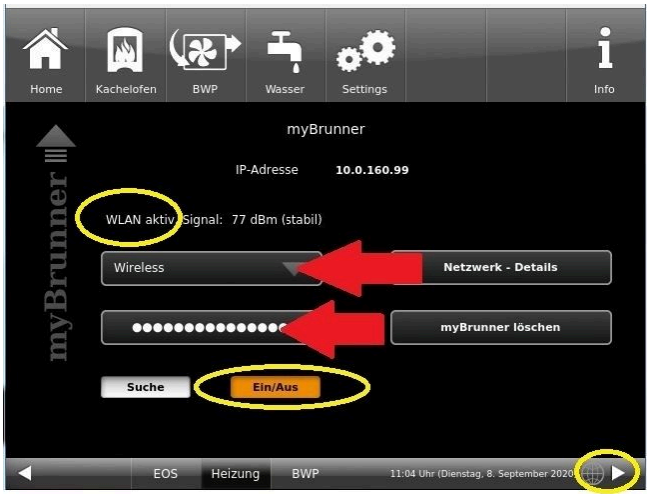
4.3 Click on the display button **Bedienteil**

4.4 Click on the display button **myBrunner**

4.5 Navigate down with the arrow key:

4.6 Set up WLAN:
- Select WLAN name.

if the name you are looking for is not available for the WLAN name, click on search **Suche**



4.7 Enter WLAN-Password and click O.K.

4.8 Navigate up with the arrow key

4.9 Click:

5. Set up mybrunner on Touch Display

5.1 Click:

5.2 Terms and conditions appear.

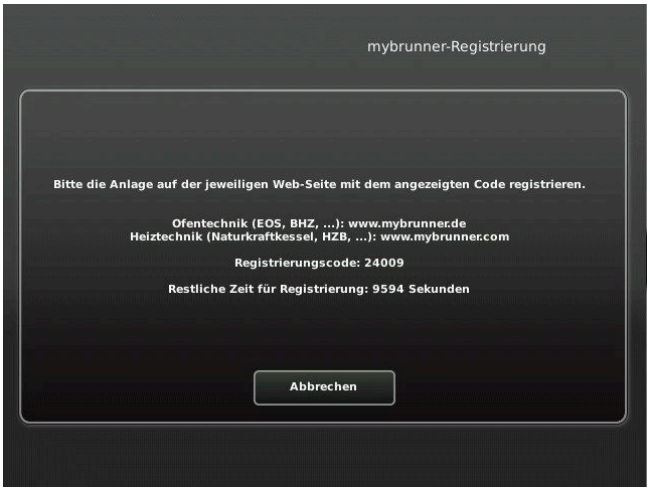
5.3 Read the terms and conditions. Please keep the arrow pressed to scroll. When the arrow is pressed, it turns orange.

5.4 Accept the terms and conditions at the end of the text by accepting **Akzeptieren**. (To do this, scroll the entire text to the end. Only then is the Accept button active).

6. Establish registration code

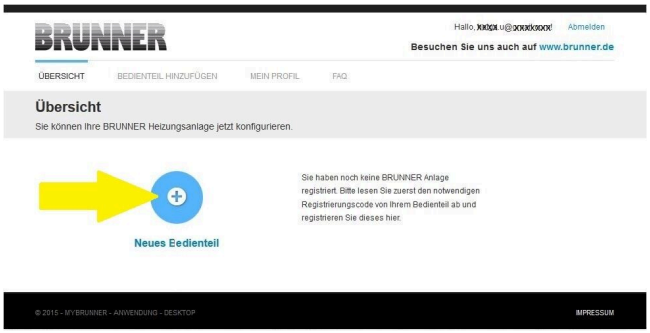
6. The following screen will appear automatically to establish the registration code of the Touch Display (control panel). This number is displayed for 2 hours.

You should use this registration code for your control unit to continue the registration on the PC.

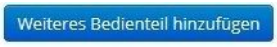


7. Registration of your Brunner system

7.1 The control unit (touch display) of the Brunner system must be registered. To do this, click the New Control Unit button **Neues Bedienteil**.



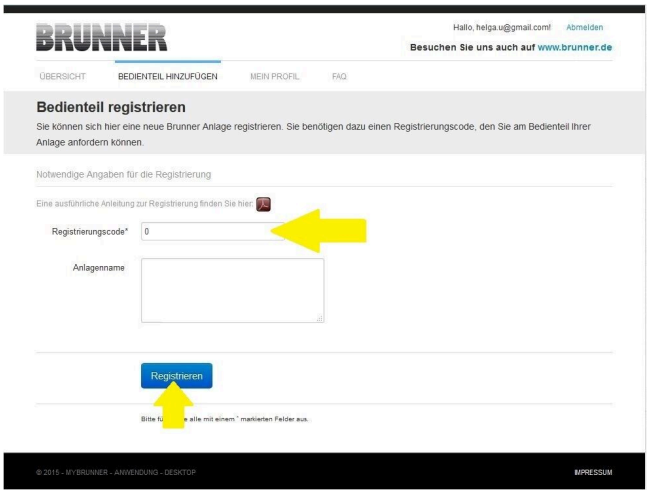
NOTE:
If you had previously registered a different control unit, click the Add another control unit button here. **Weiteres Bedienteil hinzufügen**.



7.2 Im Feld ***Registrierungscode*** die Registrierungsnummer vom Touchdisplay eingeben

7.3 In the system name field ***Anlagenname***, enter your preferred designation for the system.

7.4 Finally click on registration**Registrieren**.



8. Complete registration on Touch Display

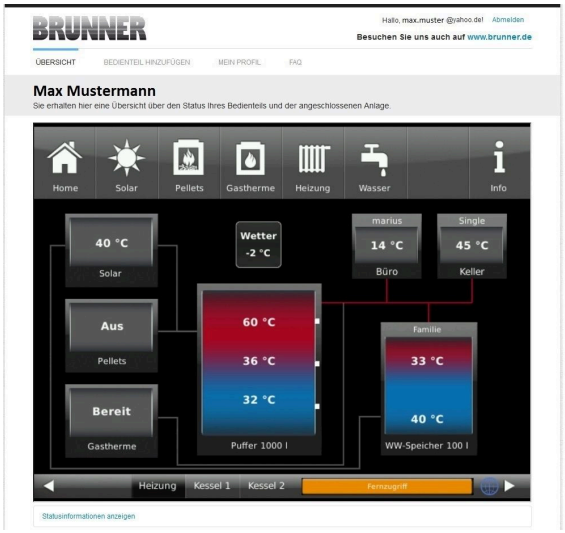
8.1 Confirm the message about successful registration with **O.K.**

8.2 Exit settings (with OK)

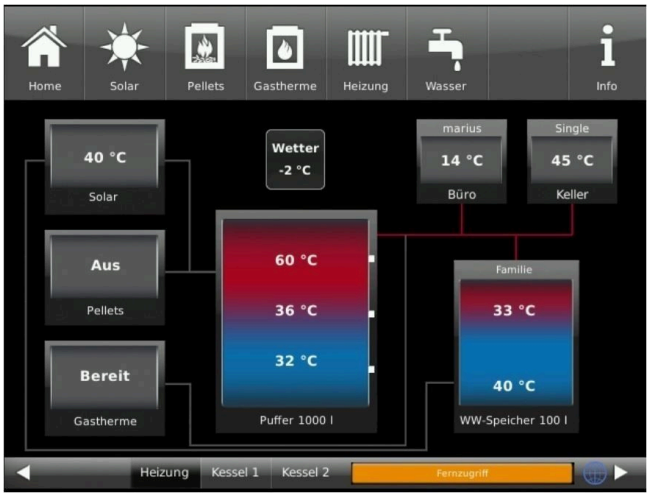
9. On-line access to the control panel from your PC, tablet or smartphone

On your mobile device (notebook, tablet, smartphone etc.) you will see the system overview:

Now you can control all the functions of your system from your mobile device via mybrunner.de. The Parameter sections under Settings are excluded.



During remote access you will see the following identical screen on the Touch Display:



→ The registration process is complete.

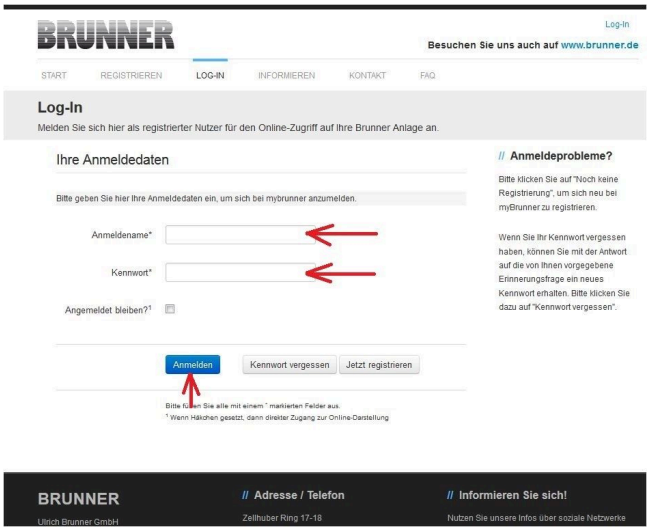
4.3.2 Logging in

On your PC, tablet or smartphone:

1.1 Open **www.mybrunner.de** in your browser

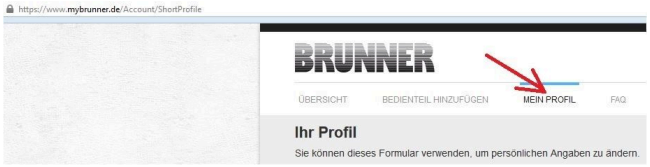
1.2 Enter your valid login name (= your e-mail address entered during registration)

1.3 Enter your password/**Kennwort** (as entered during registration)

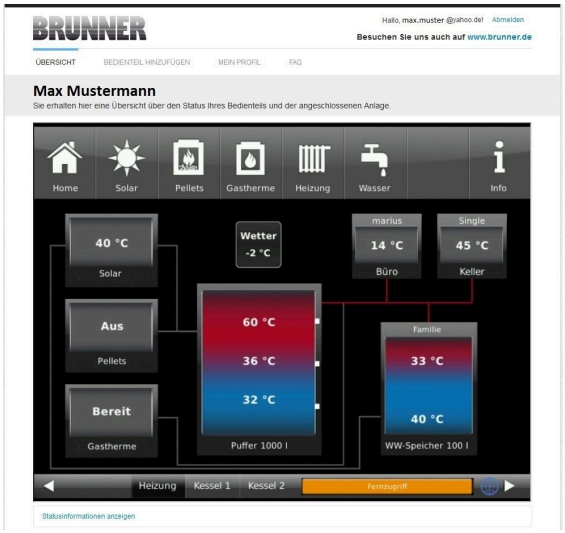


If you have forgotten your password, you can use the **Kennwort vergessen** (forgotten password) button. Here you will be asked to enter your e-mail address and the answer to your selected security question (as displayed above the answer field); Click on **Kennwort anfordern (**request new password**)** and you will receive an e-mail with a new password, which must be entered on the Login page at mybrunner.de, in the “Kennwort” field.

If you want to change your password again, or change your contact data, or apply extended security settings, please go to **Mein Profil (**My Profile).

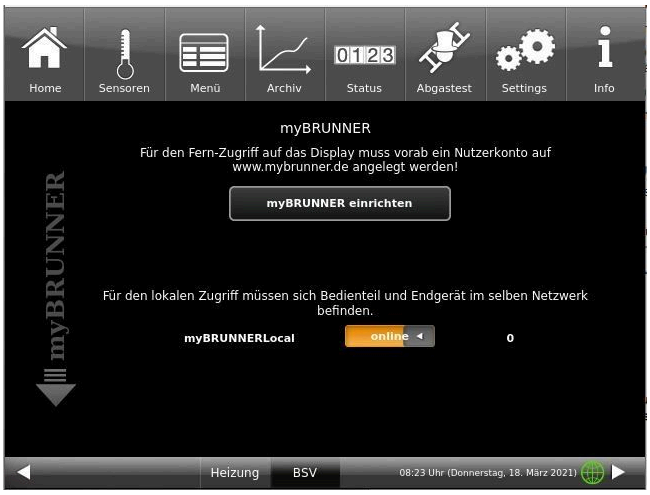


The current overview of your system will appear on the screen of your PC, notebook, tablet or smartphone.

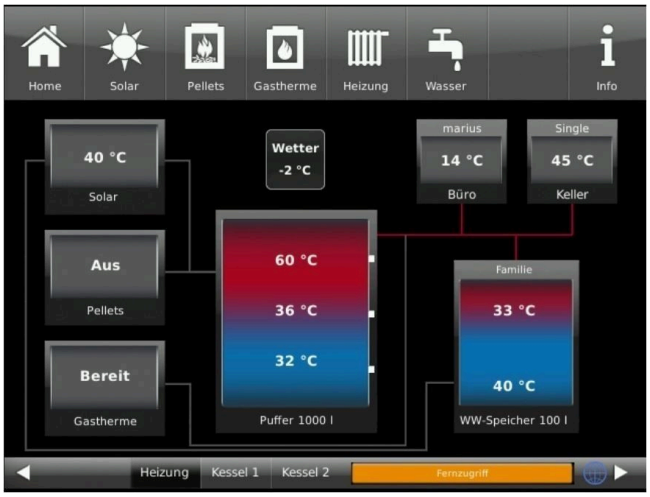


On the Touch Display of your BRUNNER system

To see the myBRUNNER status click: **Settings** + PIN-Code (9999) / **Bedienteil**(=control panel)/ **my-BRUNNER**



When the control panel is in remote control mode, the following will be shown on the Touch Display of your system: orange bar with text **Fernzugriff** *(Remote access*).



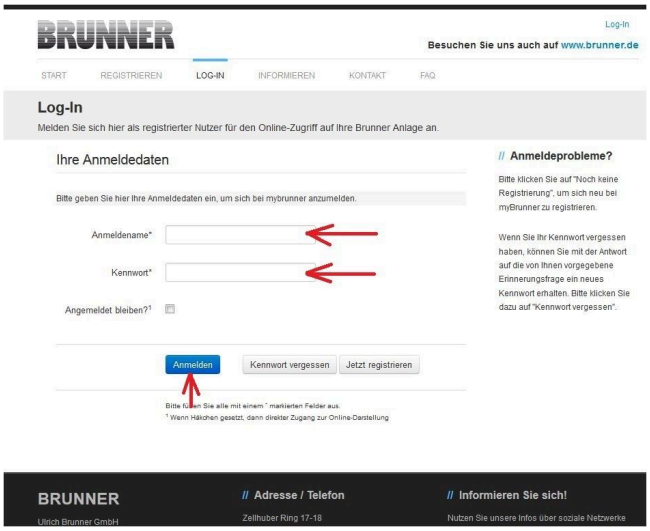
NOTE
The heating system can be controlled only from one device! You can use alternatively: the Touch Display on the system or the overview on your mobile device.

NOTE:
Setting or modification of parameters under **Settings** is not possible via remote access. Exception from this rule is the enabled access for the heating contractor or BRUNNER technicians.

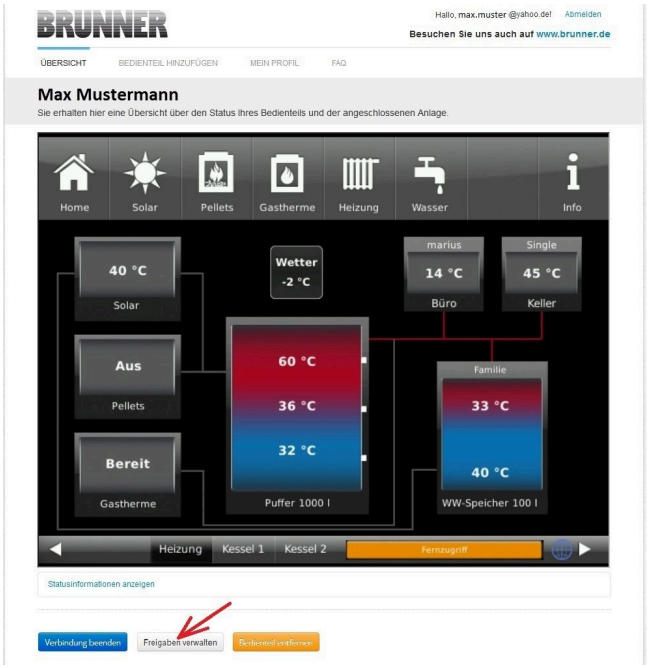
4.3.3 Enabling for Service access

To enable Service access for BRUNNER technicians or a heating contractor, the owner of the system must approve it first. This is done using a fixed Service PIN Code, which is defined in the User account.

1. Log in at **www.mybrunner.de** (see Logging in section above)

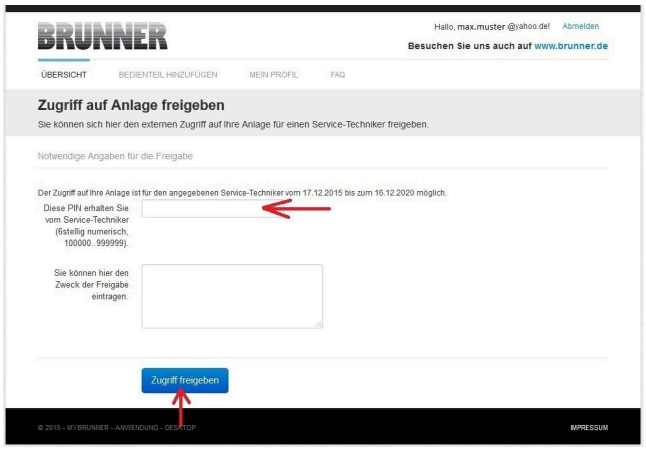


2. Click onto **Grant access to control panel**



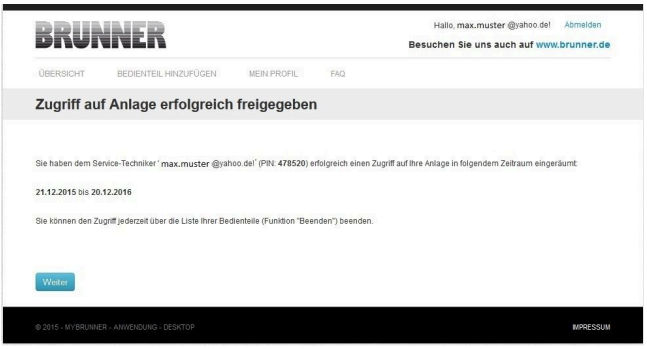
3. You can enter the BRUNNER service code or the code of your tradesman.
The BRUNNER service code = 293068.

Enter this 6-digit numeric PIN code in the first field (PIN) and in the second field (purpose of release) please write your family name and location of the system.

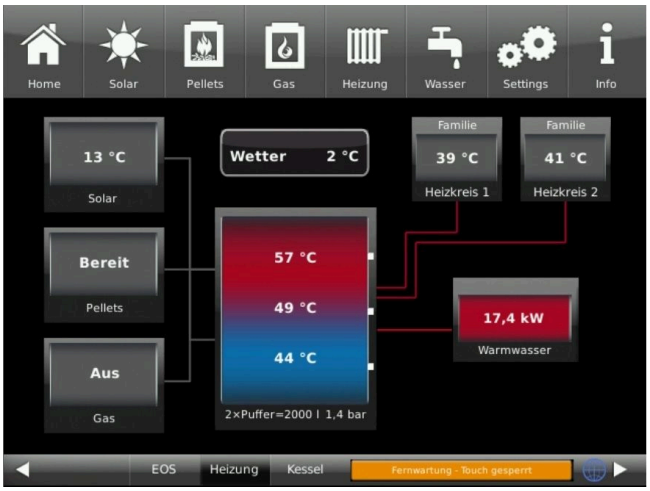


The system operator can revoke the tradesman or BRUNNER service's access to the system at any time.

When access is granted, the following message is displayed:



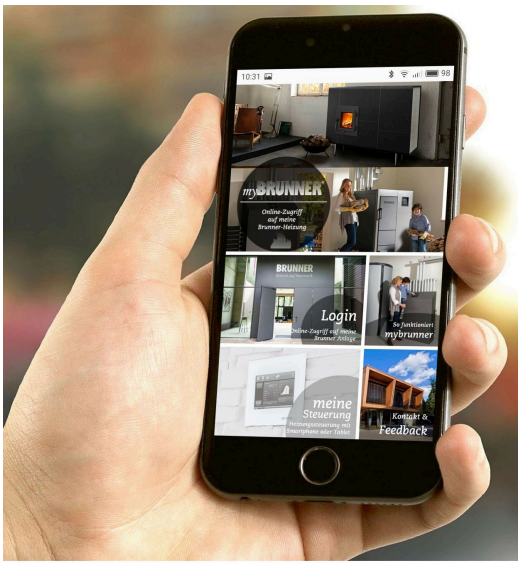
When a contractor has access to your system via myBRUNNER link, you'll see the following on the Touch Display:



4.3.4 Brunner App

The myBRUNNER App makes it easier to access the heating system with smartphones or tablets.

Operation is very easy and self-explanatory. The orientation on the home screen is vertical. The presentation does not go along - but that is set intentionally.



The user can choose from three buttons
-“Login” for login and logout,
- a brief introduction to the functionality of the application software and a contact,
- support- interface for all questions and suggestions about the app.
The fourth button is initially gray when you start the software. Only after entering the user name and the password, it is activated and allows access to the heating control. The customer selects the registered operating unit and makes the desired settings. To leave the view, just click on the “back” button on the mobile device or on the “operating control unit ” on the top left.

Account settings or registration of control panels can not be done with the app. Account settings or registration of control panels can not be done with the app. Both activities are only possible via a browser via mybrunner.de.

4.3.5 Network adverts

	Display with a myBRUNNER connection
	Display for an existing network connection, whether WLAN or LAN.
	Display with a myBRUNNER-local connection
No globe	No network

4.3.6 Synchronisation with network

Wenn myBRUNNER eingerichtet ist, wird die Uhrzeit mit dem Netzwerk automatisch abgeglichen.

If you do not want to have the time synchronization with the network, deactivation is possible. For this:

1. Click on the time in the lower bar
2. A dialog box appears where you click **Network time- synchronization**;

3. the network time synchronization is deactivated;
4. You can now enter the desired time;
5. then click on **Time / Date;**
→ the time and date are displayed in the lower bar according to your setting or on the clock (digital or analog clock) selected as the screen saver.

The disabled time alignment is displayed with a gray box.

The adjustment of the time or date with the BRUNNER network can be activated at any time.

4.4 Set up WLAN

4.4.1 Set up WLAN - during commissioning

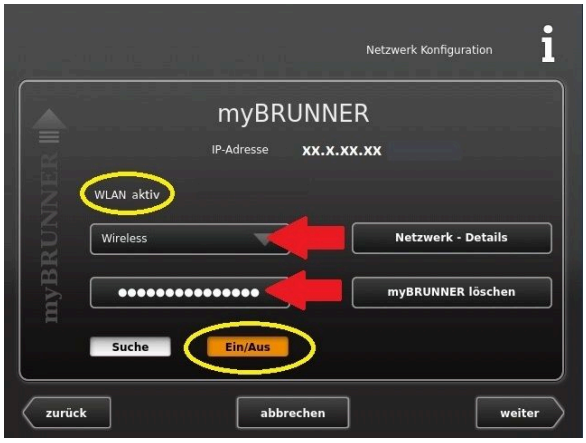
Commissioning is user-defined. This initial process includes the entire BRUNNER network environment and all control boards of the connected devices.

Automatically starting commissioning

1. Initialization
2. Set language
3. Check BRUNNER network connections
4. Set time and date
5. Set myBRUNNER
6. Specify heat generator
7. Specify heat consumer
8. Enter craftsman data
9. End of commissioning

Set up WLAN

During the work steps for phase 5 of commissioning “Set up myBRUNNER”, the following steps are necessary to set up the WLAN:



1. Choose WLAN-Name*
2. Enter WLAN-Password

Attention:

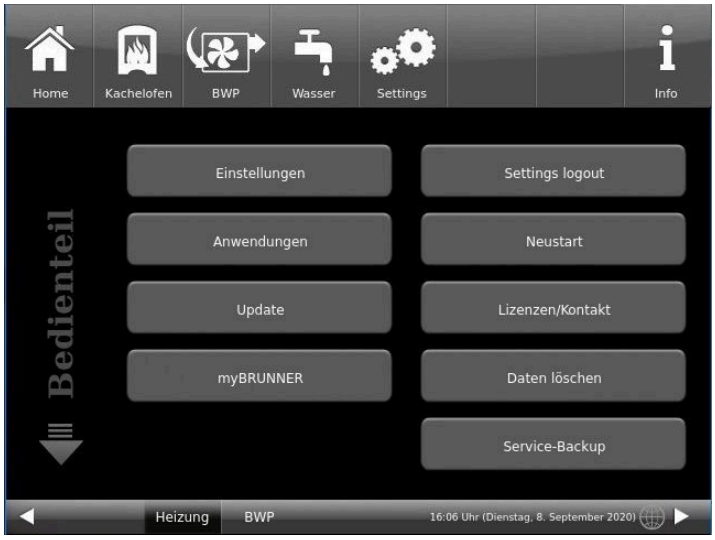
- **Ein/Aus** must be orange
- Check upper left side display indication:

“WLAN aktiv”

*if the name you are looking for is not available for the WLAN name, click on search **Suche**

4.4.2 Activate WLAN

1. Click in the upper menu bar on **Settings**
2. Enter the PIN-Code **9999**
3. Click on the display button **Bedienteil**
4. Click on the display button **myBRUNNER**



5. A dialog window/box appears:

6. Set up WLAN :
6.1. Choose WLAN-Name *

Attention:
- **Ein/Aus** On/Off must be orange
- Check display indication ***"WLAN aktiv***"
- Earth globe: gray

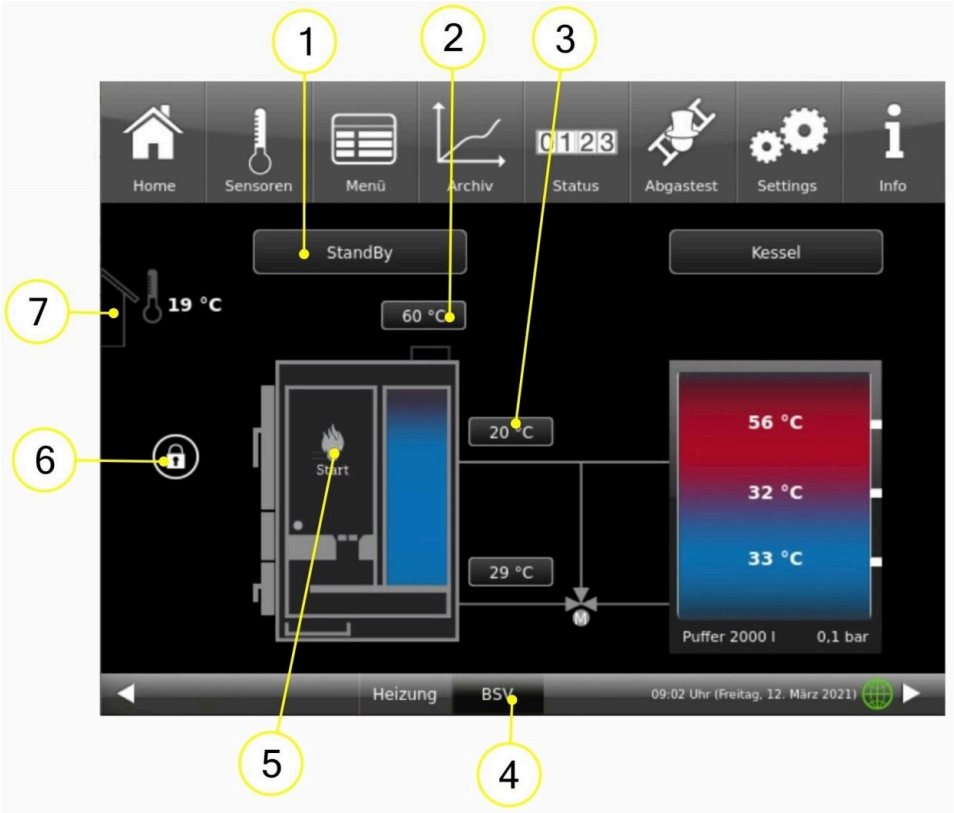
*if the name you are looking for is not available for the WLAN name, click on search **Suche**

6.2. Enter WLAN-pasword

5 Heating up and operation

1. view display

Important displays for heating up on the home view:



1	Operating status of the boiler
2	Flue gas temperature
3	Boiler flow temperature
4	Access to the BSV application
5	Set ignition type
6	Locking of the door
7	Outdoor temperature

If the control system - in addition to the BSV - also links other BRUNNER applications, switch to the Home view of the BSV application (with 4).
Check whether the operating status of the boiler indicates**"StandBy**". If necessary, wait until StandBy arrives.
With 6 - Locking the filling door - you can see whether the boiler door can be opened to load wood.
Read the current temperatures on displays 2 and 3. Depending on the current outside temperature (7) and the desired heat requirement in the following hours, you can decide how much wood to fill the boiler with.

Info

The boiler works not only with a full wood filling chamber, but also with a third or half-filled filling chamber.

Caution! If you want to add more wood to **a hot boiler** : check whether there are any residual embers -> CAUTION Self-ignition possible!

DO NOT top up with a lot of residual embers!

If the boiler is cold: check whether the boiler has already been cleaned or clean the burnout nozzle and the heat exchanger!

Cleaning before each loading of wood

Proceed as follows to remove ash deposits from the burn-out nozzle:

1. make sure that the boiler is in stand-by mode;

2. open the filling door;

3. use the cleaning tool to push the coarse charcoal residues to the side so that the openings of the combustion nozzle are free.

4. check the filling chamber to see if the amount of ash covers the inner opening of the igniter tube. If so, please uncover it.

5. look at the openings for the supply air. If they are covered by ash, remove the ash with the ash shovel and dispose of it appropriately.

→ The burn-out nozzle has been cleaned.

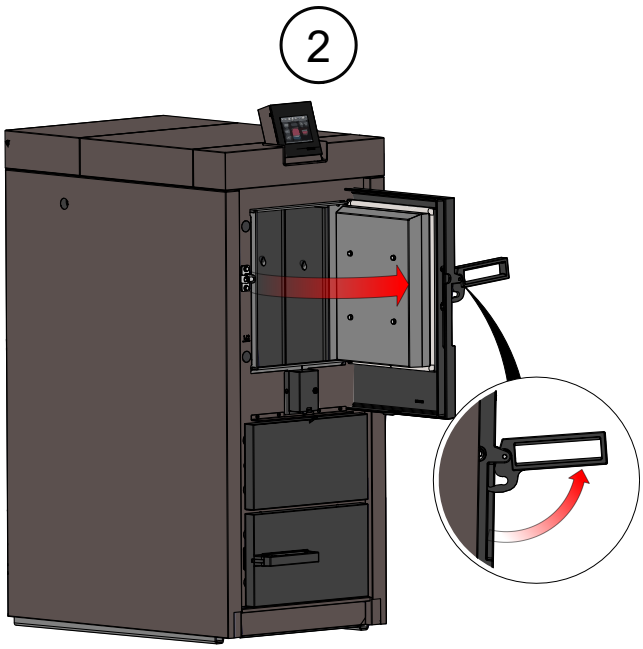


Illustration 24: Open the filling door

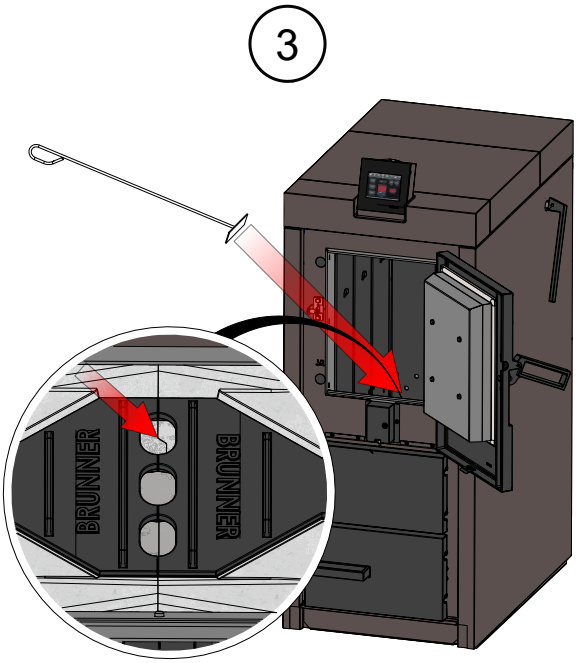


Illustration 25: Openings of the burn-off nozzle

Note

The amount of ash depends on the type of wood used.

Therefore, check the level of ash in the filling chamber and empty it if necessary.

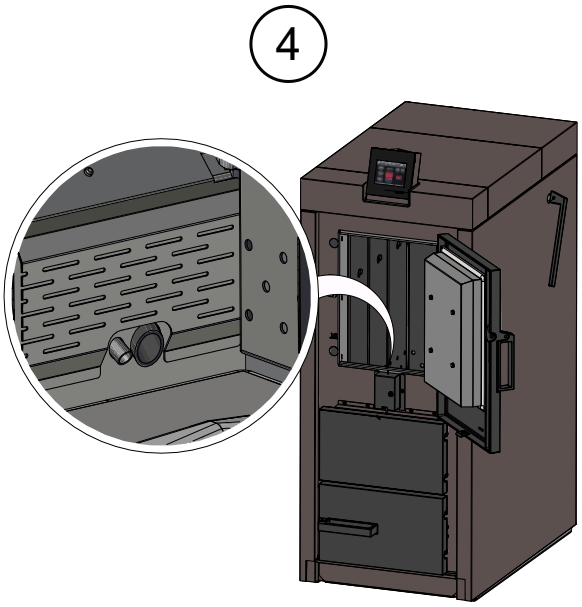


Illustration 26: Igniter tube

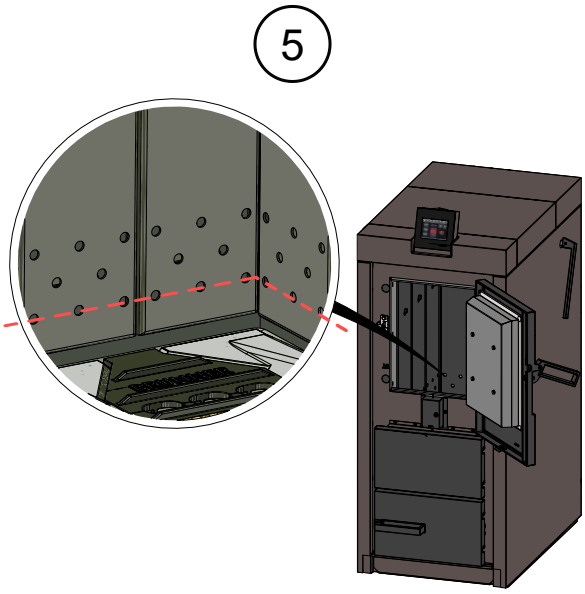


Illustration 27: Maximum height of the ash level

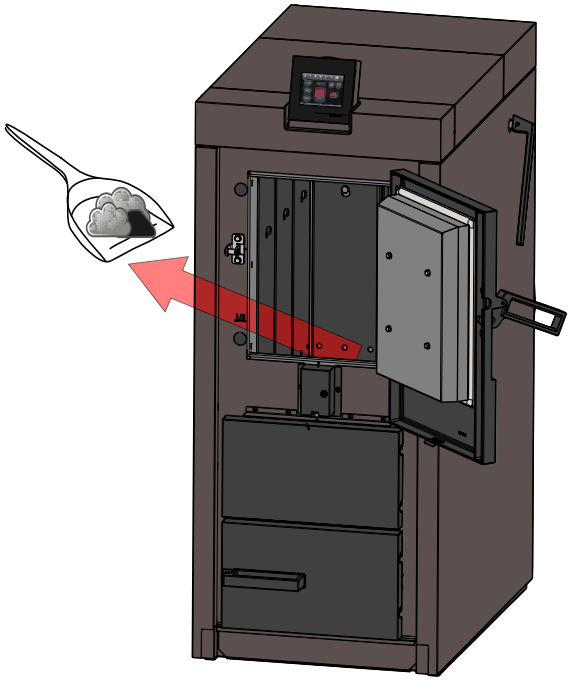
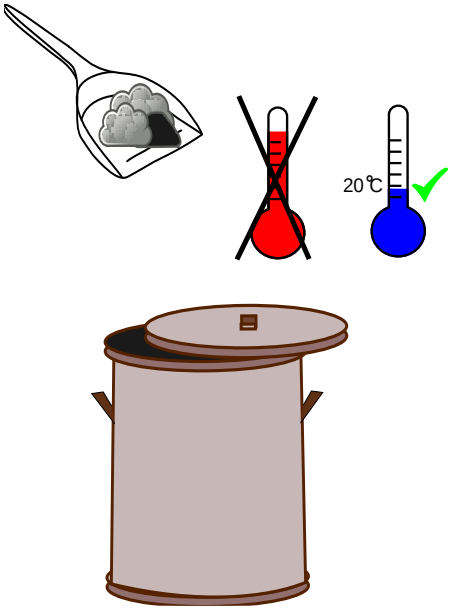


Illustration 28: If necessary: Remove ash



Caution

The ash may be hot or contain embers. The ash should be stored in a non-combustible container. Do not dispose of it until it has cooled down.

Clean the heat exchanger every time you insert wood into the filling chute, i.e. every time you want to start a fire.

To do this, move the operating lever for the heat exchanger cleaning mechanism 10 times.

→ Cleaning is now complete.

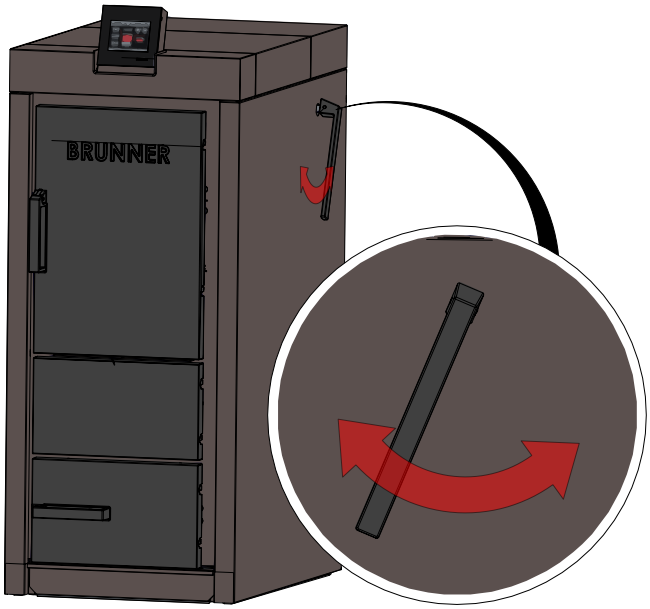
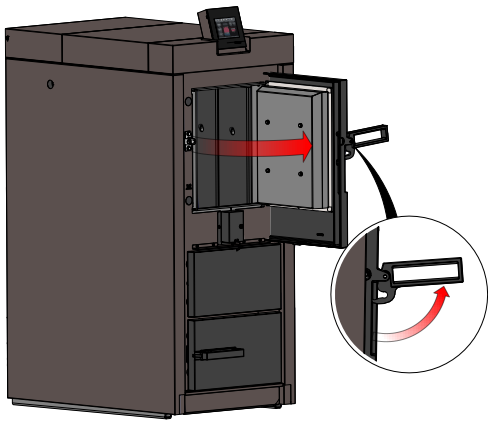


Illustration 29: Cleaning before each firing

Loading wood

1

Once the boiler is in a safe operating state, you can open the loading door.



2

To begin with, load thinner logs. Place the logs with the bark facing downwards.



3

Place a handful of small logs, shavings, wood chips or pellets in the front area of the filling chamber, near the ignition.



4

Place more logs on top: start with thinner pieces, then place larger pieces. Make sure that the side with the bark is facing downwards.

Depending on the heating requirement: Place more logs on top. Larger pieces are possible here. The side with the bark should also be facing downwards.

Info
The boiler not only works with a full wood filling chamber, but also with a third or half-filled filling chamber.

5

Set the ignition mode on the control display.

Ignition settings on the control display

The ignition release function can be used to set the desired parameter or heat generator at which the automatic ignition responds to a heat request.

You can set the time at which the boiler should be ignited.

To change the ignition time, proceed as follows:
1. Tap the **Menu** button;
2. Tap the **Ignition** enable button (highlighted in white);
An additional selection window appears with the ignition variants:
Automatic,
Start and
Do not start.

Illustration 30: Ignition enable

3. tap the selection box;
4. tap **O.K.** to confirm;
The setting is accepted.

You can choose between the following ignition variants:
Automatic (recommended): The ignition process is started automatically when heat is requested.
Start: The ignition process is started immediately (one-time heat request). Make sure that the storage tank can absorb the amount of heat generated, as all automatic settings are ignored.
do not start: The ignition process is deactivated / stopped.

Illustration 31: Ignition release selection window

In conjunction with a BRUNNER central heating system or a Basic expansion board:
If several heat generators are present, you can specify the (ecological) sequence in which the heat generators are automatically switched on. A maximum of three heat generators (ignition release 1 to 3) can be stored and only one setting per ignition release.

Ignition enable

The ignition release function can be used to set the desired parameter or heat generator for which the automatic ignition is activated when heat is requested.

In conjunction with a BRUNNER central heating system or a Basic expansion board:
if several heat generators are present, you can specify the (ecological) sequence in which the heat generators are automatically switched on. A maximum of three heat generators (ignition release 1 to 3) can be stored and only one setting per ignition release.

To change the ignition release, proceed as follows:

1. follow the path:

Settings / **Configuration** / **Boiler**

2. the following window appears (the windows with a white background can be set)

3. after confirming with **O.K**., your settings are adopted.

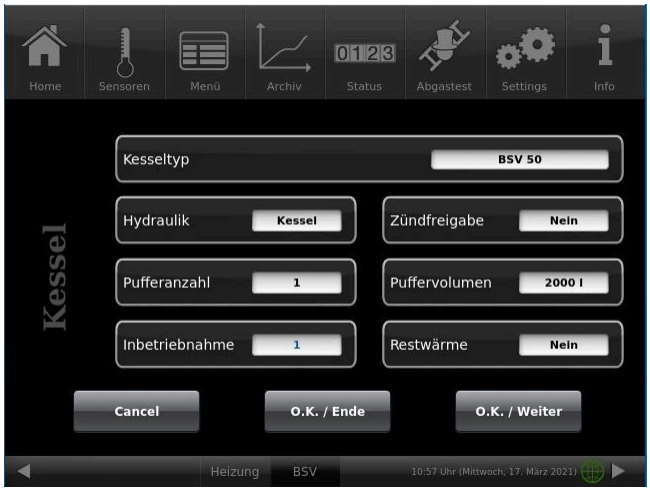


Illustration 32: Display ignition release

Selection option:

No: Automatic ignition is not active or switched off (e.g. emergency operation, manual ignition).

External (ST52): The boiler ignites automatically if, for example, a set minimum temperature of an on-site heat source (e.g. heating center from a third-party manufacturer) is set.

Central heating unit: the BRUNNER central heating unit BHZ or the extension board Basis releases the ignition

On-board central heating unit: The control of the BSV takes over the ignition release.

6 Error messages

6.1 List of error codes and rectification

Error code	Text in Home view	Error text in window	Error description	Note to the operator
KF002	External heat operation	KF002 - External start blocked. Input ST50 closed	External heat operation (e.g. solar system running)	ST50 was closed; no start release; external signal blocked Release Contact specialist company
KF011	Ignition error	KF011 - Ignition unsuccessful. Ignition time exceeded.	Ignition not successful	Check whether ignition can take place: 1. Have wood chips been placed correctly at the ignition? 2. Is there sufficient ignitable material in front of the ignition element? - Place ignitable material in front of the ignition element and repeat the ignition process.
KF013	O2 too low	KF013 - Oxygen value is too low.	Alarm value (D004 low) Only applies in controller mode, otherwise not!	Set lambda parameter to default value
KF014	O2 too high	KF014 - Oxygen value is too high.	Alarm value (D003 high) Only applies in controller mode,	Check whether ignition has occurred; contact specialist company
KF021	Heat dissipation!	KF021 - Heat dissipation activated, mixer fully open and pump 100%; boiler temperature too high	Boiler temperature is above A002 -> Forced heat dissipation activated	Vent the pipes Check the flow rate. If the buffer is too hot, the operator's heating behavior must be changed; possibly checked by a specialist company
KF030	Blocking not possible	KF030 - Boiler cannot be blocked. Flue gas temperature is too high.	Indication on display when function is called up Blocking for cleaning in stand-by	Indication on the display when the Lock function is called up. Blocking only in stand-by at a flue gas temperature below 50°C; wait and allow boiler to cool down further and carry out blocking again;
KF101	STB has responded!	KF101 - STB has tripped. Boiler temperature is too high.	STB function error (reported to processor)	Wait until boiler temperature has dropped below 90°C; unlock STB (press button on circuit board housing - see chapter *Overview*); acknowledge error message; contact specialist company if message repeats.
KF102	Emergency off	Emergency off	if exists: the external switch has been actuated	Emergency stop input must be closed for operation

Error code	Text in Home view	Error text in window	Error description	Note to the operator
KF111	Electrical interlock defective	KF111 - Door switch defective. Input ST54.	Door: NO/NC not within specified time (Note on cable break safety: monitor NO contact!) -> Sensor monitoring	Contact a specialist company
KF112	Close door!	KF112 - Door must be closed for operation.	Door open too long (C151)	Close door and confirm error. If the fault cannot be rectified, the specialist company must be contacted
KF113	Door open - shutdown!	KF113 - Door open - Operation not possible.	Door open too long (C153)	Close door and confirm error. If the fault cannot be rectified, the specialist company must be contacted
KF121	Lambda sensor fault!	KF121 - Lambda fault, error at ST42.	SPI interface reports error or cannot be reached	Contact BRUNNER customer service
KF122	Calibration not possible	KF122 - Lambda calibration not possible. Exhaust gas temperature too high.	Flue gas temp. too high	Allow boiler to cool down further
KF123	Lambda cal. error	KF123 - Automatic lambda calibration was interrupted. O2 fluctuations too high.	Lambda calibration was interrupted	Carry out calibration again (see maintenance instructions/ lambda sensor)
KF124	Lambda cal. error	KF124 - Manual lambda calibration was interrupted. O2 fluctuations too high.	Lambda calibration was interrupted	Carry out calibration again (see maintenance instructions/ lambda sensor)
KF125	Lambda cal. value incorrect	KF125 - Tolerance for calibration value exceeded. Clean lambda sensor. Repeat calibration. Contact specialist company if error message appears again.	D022 Default +/- D026	Perform calibration again
KF131	Boiler sensor defective!	KF131 - Boiler sensor ST34 Short circuit.	Boiler temperature sensor	Contact specialist company
KF132	Boiler sensor defective!	KF132 - Boiler sensor ST34 broken.	Boiler temperature sensor	Contact specialist company
KF141	Flue gas sensor defective!	KF141 - Flue gas sensor ST31 Reverse polarity.	Exhaust gas temperature sensor	Contact a specialist company
KF142	Flue gas sensor defective!	KF142 - Flue gas sensor ST31 broken.	Flue gas temperature sensor	Contact a specialist company
KF151	Return flow sensor defective!	KF151 - Return flow sensor ST32 Short circuit.	Return temperature sensor	Contact a specialist company
KF152	Return flow sensor defective!	KF152 - Return flow sensor ST32 broken.	Return temperature sensor	Contact specialist company

Error code	Text in Home view	Error text in window	Error description	Note to the operator
KF171	Buffer bottom sensor defective!	KF171 - Buffer sensor bottom ST35 Short circuit.	Only for A000 (buffer sensor) Error appears above the buffer.	Contact a specialist company
KF172	Buffer sensor bottom defective!	KF172 - Buffer sensor bottom ST35 broken.	Only for A000 (buffer sensor) Error appears above the buffer.	Contact a specialist company
KF173	Buffer sensor top defective!	KF173 - Buffer sensor top ST36 Short circuit.	Only for A000 (buffer sensor) Error appears above the buffer.	Contact a specialist company
KF174	Buffer sensor top defective!	KF174 - Buffer sensor top ST36 broken.	Only for A000 (buffer sensor) Error appears above the buffer.	Contact a specialist company
KF177	Buffer sensor Center defective!	KF177 - Buffer sensor center ST33 Short circuit.	Only for A000 (buffer sensor) Error appears above the buffer.	Contact a specialist company
KF178	Buffer sensor center Center defective!	KF 178 - Buffer sensor center ST 33 Breakage	Only for A000 (buffer sensor) Error appears above the buffer.	Contact a specialist company
KF 181	Ignition sensor defective!	KF181 - Ignition element sensor ST30 Polarity reversal.	Only with glow wire	Contact a specialist company
KF182	Ignition sensor defective!	KF181 - Ignition element sensor ST30 broken.	Only with glow wire	Contact a specialist company
KF191	Circuit board temperature!	KF191 - Board temperature is too high.	Temperature sensor is fixed on the control board	Contact a specialist company
KF192	T-sensor circuit board defective!	KF192 - Temperature sensor circuit board defective. Temperatures outside the measuring range.	Switching values -20°C /100°C	Acknowledge error on control panel. If error occurs again, contact specialist company
KF241	No flow!	KF241 - Boiler pump (ST10) is active and there is no volume flow (ST56).	Only with boiler pump ON	Contact a specialist company
KF312	PL damper error!	KF312 - Failed to check primary air damper ST44 during operation.	Primary air flap operation error (ST44)	Acknowledge error on control panel. If error occurs again, contact specialist company.
KF322	SL flap error!	KF322 - Failed to check secondary air flap ST43 during operation.	Secondary air flap operation error (ST43)	Acknowledge error on control panel. If error occurs again, contact specialist company.
KF331	Suction fan speed error	KF331 - Deviation in speed of induced draught ST55 is too high.	Failure of induced draught fan	Contact a specialist company

Error code	Text in Home view	Error text in window	Error description	Note to the operator
KF357	Cleaning time interval	Remove ash from the side area and clean the boiler according to the operating instructions.	Cleaning, after acknowledging the message window, the counter clears.	Remove ash from the side area and clean the boiler according to the operating instructions.
KF358	Time interval service	Customer service by your service partner. Service work according to instructions.	Service, after acknowledging the message window, the meter deletes itself.	Contact a specialist company
KF361	T-RL not reached!	KF361 - The setpoint of the return temperature ST32 is not reached.	RL Temperature from boiler pump ON too long A012 too low A013	Contact specialist company
KF362	T-RL too low!	KF362 - Return temperature ST32 is permanently too low.	RL temp permanently too low, connected to A014 or A015	Contact a specialist company
KF601	Hydraulic fuse	KF601 - Hydraulic fuse Si3 defective.	Pumps/mixer	Contact specialist company
KF611	Suction fan fuse	KF611 - Fuse for induced draught fan Si6 defective.	Exhaust fan	Contact a specialist company
KF621	Ignition/heat exchanger cleaning fuse	KF621 - Ignition & heat exchanger cleaning fuse Si5 defective.	Ignition/heat exchanger cleaning	Contact specialist company
KF 631	Drive 1 fuse	KF 631 Fuse Si2 Drive	Suction turbine	Contact specialist company
KF 632	Fuse drive 2 & 3	KF 632 Fuse Si 4	Slide-in, tilting grate motor	Contact specialist company
KF651	Mains 230V fuse	KF651 - Mains fuse 230V Si1 defective.	Complete mains supply, affects all plug contacts	Contact a specialist company
KF661	Fuse 24V DC	KF661 - 24V DC supply fuse Si7 defective.	Complete 24V supply, GUI is also off.	Contact specialist company
KF662	PL & SL Multifuse	KF662 - Multifuse fuse 24V PL & SL has tripped.	Flap actuators	Contact a specialist company
KF663	Multifuse induced draught fan	KF663 -Multifuse Fuse 24V Hall sensor induced draught fan has tripped.	Hall sensor induced draught fan	Contact a specialist company
KF 664	PWM pump Multifuse	KF664 - Multifuse fuse 12V PWM control boiler pump has tripped.	PWM control of boiler pump	Contact a specialist company
KF901	Boiler 1 communication	KF901 - CAN communication 1 was interrupted.		Check CAN cable; check heat requirements (settings under Settings / Configuration / Boiler / Ignition release heat requirement)

Error code	Text in Home view	Error text in window	Error description	Note to the operator
KF902	Boiler 2 communication	KF902 - CAN communication 2 was interrupted.		Check CAN cable; check heat requirements BUS lines (settings under Settings / Configuration / Boiler / Ignition enable heat request)
KF 903	Communication 3	CAN communication 3		Check CAN cable; check heat requirements BUS lines (settings under Settings / Configuration / Boiler / Ignition release heat request)
KF921	Commun. Central heating system	KF921 - CAN communication with the central heating system was interrupted.		Check CAN cable; check heat requirements

6.2 Acknowledging error messages

To acknowledge an **error message**, proceed as follows:
1. tap the **Info** button;
2. in the lower half of the display, press **Reset**
→ The error message has been acknowledged.

If the error is still present, the error message appears again.

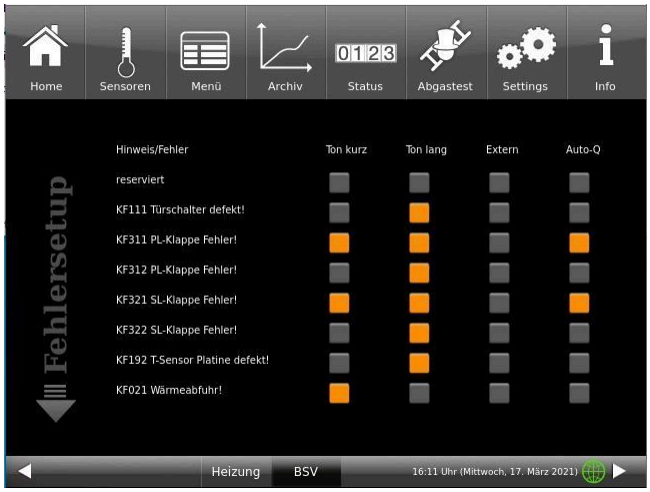
Error messages can only be acknowledged in the top menu bar of the Home view in the Info submenu.

6.3 Error output

INFO: These settings are only possible at BRUNNER level. If required, please contact BRUNNER employees.

5 different signaling scenarios can be selected for each notification or error message. The notification or error message runs through a specific scenario, depending on the error setup setting. This is preset at the factory, but can be changed in consultation.

To do this: 1. follow the path:
Settings(+code input), second page (with arrow pointing down) / Error **output**
2. Click on the relevant box in the line of the information or error message and in the column of the desired signaling method.



Short tone = a short tone* sounds on the display

Long tone = a long tone* sounds on the display

The length of the tone can be set (chapter “Individualizing the display”)
(usual: short tone indicates a note and a long tone indicates an error)

External = the warning is sent to an external device (e.g. cell phone via SMS message); a potential-free relay output ST19 is provided for this purpose. If an error message is present, the ST19 COM-NO output is closed and the message is transmitted.

Auto-Q = there is an automatic acknowledgement if the error is no longer present; the message automatically closes the display window and a reset is carried out (e.g. in the event of overheating PF021).

Note
For the first three settings under Fault setup**(Sound short, Sound long, External**):
If a message or fault is present, the display appears with the fault text or the fault number. This display window can be closed, but this error must first be acknowledged under **Info** / **Reset**. If the reset does not result in the error being acknowledged, the error window appears again on the display.
With the **Auto-Q**: error setup setting, the error or message is acknowledged automatically and the display window closes automatically as the error has been reset automatically.

7 Cleaning and maintenance

Preparing for cleaning
Regular boiler maintenance BSV 40/50 extends the service life of your heating system and ensures safe and trouble-free operation.

Monitor and check the cleaning and maintenance of your boiler.

Note when and by whom cleaning and maintenance is carried out and what should be cleaned. (see chapter “Cleaning intervals”)

DANGER
Fire hazard due to combustion residues

Combustion residues (charcoal, embers, hot ash) can re-ignite after removal.

- Allow ashes and combustion residues to cool sufficiently.
- Only use suitable, non-combustible containers for ash and combustion residues.

Wood ash for composting

Clean wood ash is suitable for composting. It can have a positive effect on the composting process and should be worked into the compost in layers and in small quantities.

7.1 Cleaning intervals

Regular cleaning leads to efficient and low-emission use of the energy used. This protects the environment and saves heating costs - while maintaining a high level of heating and hot water comfort.

	When?	Who?	What?
1	Every time you heat up	the operator	- remove the ash in front of the combustion nozzle with the cleaning tools - move the operating lever of the cleaning mechanism heat exchanger 10 times
2	after approx. 250 operating hours	the operator	Remove ash from the filling chamber and combustion chamber
3	after approx. 2000 operating hours	the specialist company	Maintenance work in accordance with the maintenance contract

We recommend annual monitoring of the system on the basis of a maintenance contract
.
You achieve:
- higher efficiency and a longer service life of the heating system combined with greater operational reliability;
- heating cost savings and conservation of resources through efficient use of the energy used;
- a consistently high level of heating comfort.

Note

On the main page, the **Info** box appears with an orange background.

This shows

- how many **operating hours** have passed, i.e. which cleaning is due;

- what **type of cleaning** is due, i.e. **who** is to carry out the cleaning.

A distinction is made here between the person responsible - i.e. operator or specialist company.

The coloring of the individual boxes results from the operating hours that have elapsed.

Cleaning - concerns the operator

Service - applies to the specialist company

Illustration 33: Display Cleaning intervals

The cleaning work carried out by the operator is described in detail in the relevant section*(cleaning every time wood is added* and *cleaning after several operating hours*).
For the specialist company, the information on cleaning and maintenance work can be found in the chapters of the *service manual*.

An example showing the applicable operating hours:

The figures given mark **the percentage of operating hours set**.

z. E.g. Green boxes = 0 to 60% of the operating hours scheduled for service have elapsed; i.e. 40% of the operating hours remain before you should contact a specialist company for service work.

As soon as the display shows “red”, a pop-up window appears with the corresponding message:

This display indicates **cleaning** by the **operator**.

The main cleaning tasks are also listed.

All the steps required for cleaning can be found in the chapters under *Cleaning the boiler*.

This pending cleaning or **service** will be carried out by a **specialist company**.

Service technician: The **service** message is confirmed as read with **O.K.** and the operating interval is also reset.

Illustration 34: Display with the contact details of BRUNNER Service

You must confirm this process on the display after each cleaning or service work carried out. This is done by tapping the **O.K.** field **.**

If you want to clean before the planned schedule, you can use the display to “lock” the boiler, i.e. bring it into a safe state so that cleaning can be carried out.

1. tap on **Menu**;
2. tap on **Locked**
3. select **On**.

Illustration 35: Display Menu - Boiler locked setting

→ If cleaning is possible, the pop-up window appears:

This locking function means that all parts installed in the boiler are de-energized and cleaning work is possible under safe conditions.

All the steps required for cleaning can be found in the chapter “Cleaning the boiler”.

The service activities for the operator are confirmed as completed by pressing **O.K.** on this button. The corresponding operating hours displays are automatically reset.

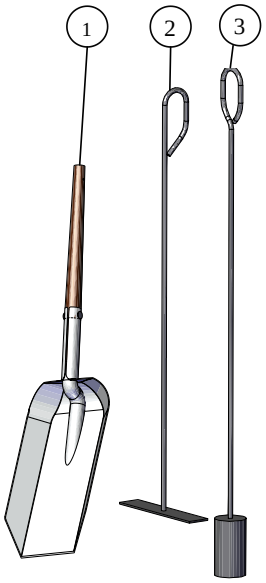
→ If cleaning is not possible, this means that the flue gas temperature is too high.

The message **Manual cleaning is not possible** appears.

Wait until the temperature has dropped. You can then clean the boiler.

In the Boiler - Locked - **No** status, the boiler is in stand-by mode, i.e. it is ready for operation.

7.2 Cleaning tool



The BSV 40/50 comes with 3 cleaning tools:

1. ash shovel
2. ash scraper
3. cleaning brush

The cleaning tool is located inside the filling chamber on delivery.

Please remove it and keep it near the boiler.

7.3 Cleaning the boiler

Caution

- Before starting cleaning work, make sure that the boiler is in a safe operating state.
- Careless movement of the cleaning mechanism can lead to crushing injuries.
- Parts of the boiler and the ash pan may still be hot when emptying.

→ Wear protective gloves.

Observe the following for each cleaning process:

1. make sure that the boiler is in **stand-by mode**(if not, it will automatically enter a safe operating state; this process may take a few minutes).

2. enter the following path to lock the boiler:

Menu / Boiler locked

3. tap on **Locked : On**

4. the display with the window appears:

→ **Manual cleaning** = The boiler is locked for manual cleaning. This message also appears in the Home view.

Illustration 36: Display: Display for safe cleaning

7.3.1 Cleaning every time you add wood

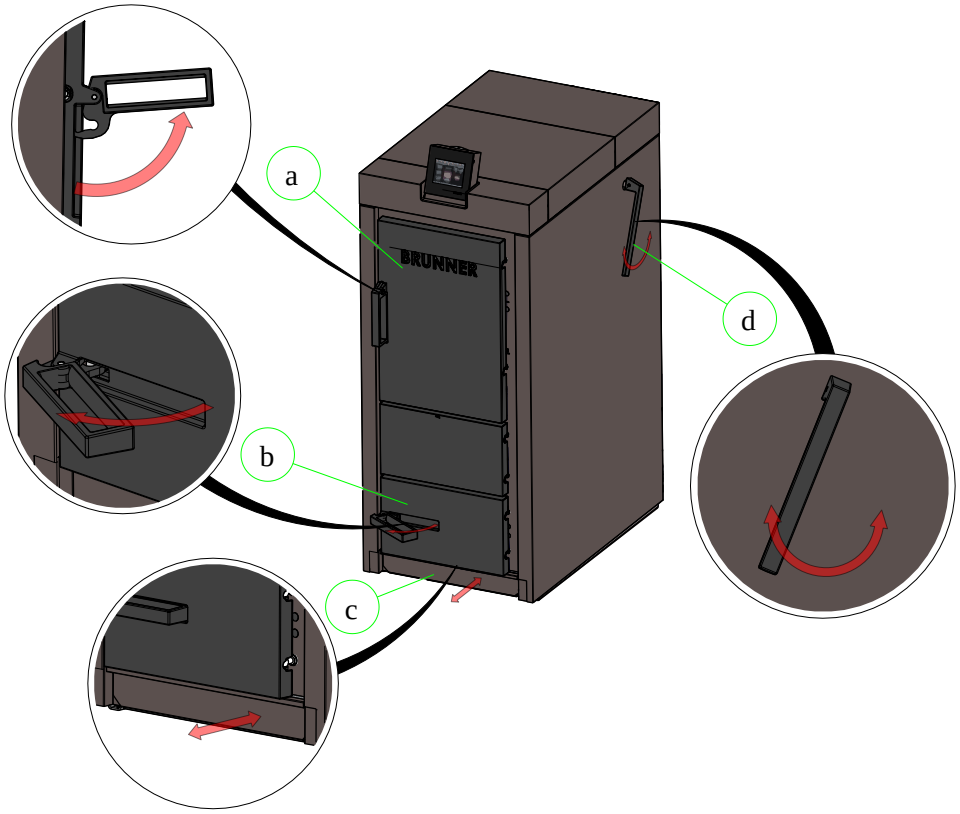
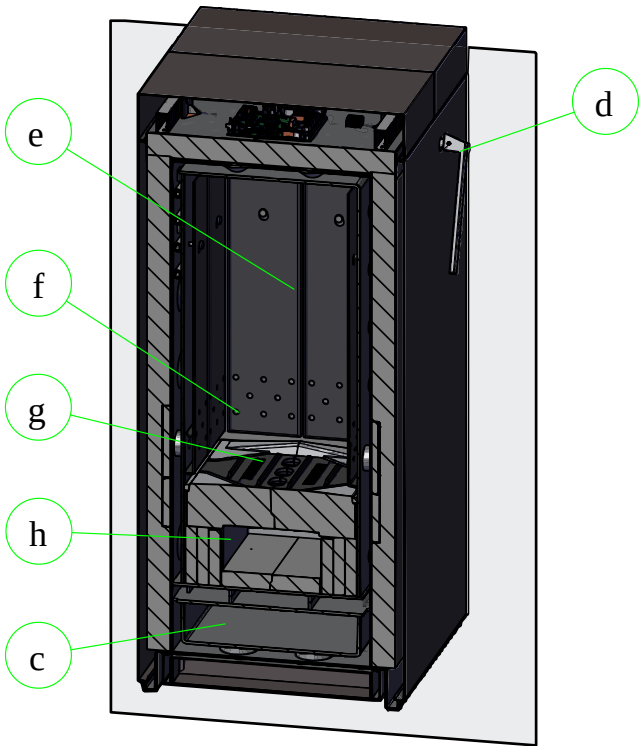


Illustration 37: Important boiler parts during cleaning



a	Filling door
b	Combustion chamber door
c	ash pan
d	Lever for cleaning
e	filling chamber
f	Openings for the supply air
g	Burn-off nozzle
h	Combustion chamber

Illustration 38: Important boiler parts inside when cleaning

A. Steps for cleaning the burn-out nozzle

Proceed as follows to remove ash deposits from the burn-out nozzle:

1. make sure that the boiler is in stand-by mode;

2. open the filling door;

3. use the cleaning tool to push the coarse charcoal residues to the side so that the openings of the combustion nozzle are free.

4. check the filling chamber to see if the amount of ash covers the inner opening of the igniter tube. If so, please uncover it.

5. look at the openings for the supply air. If they are covered by ash, remove the ash with the ash shovel and dispose of it appropriately.

→ The burn-out nozzle has been cleaned.

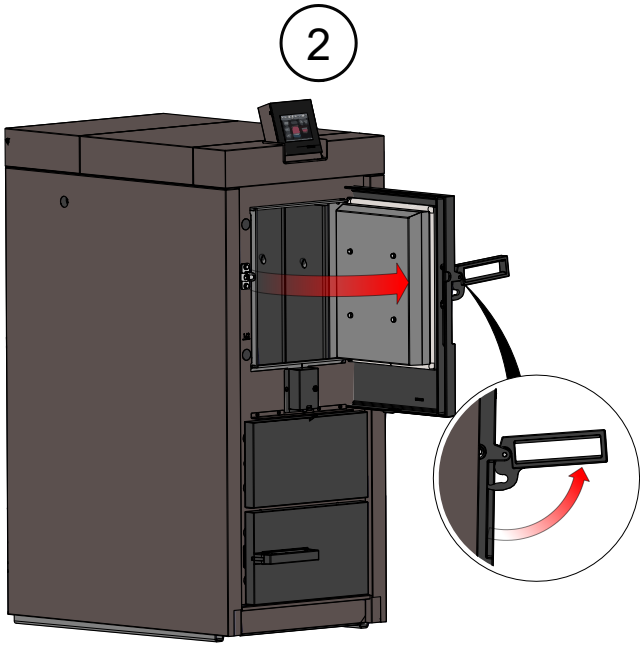


Illustration 39: Open the filling door

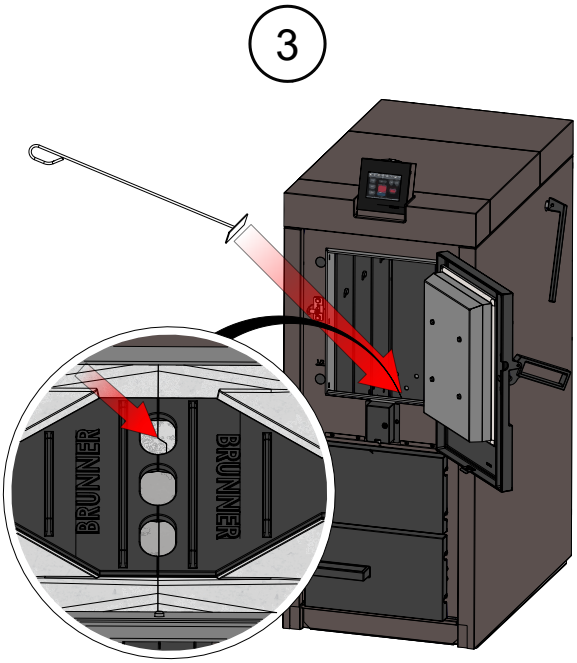


Illustration 40: Openings of the burn-off nozzle

Note

The amount of ash depends on the type of wood used.

Therefore, check the level of ash in the filling chamber and empty it if necessary.

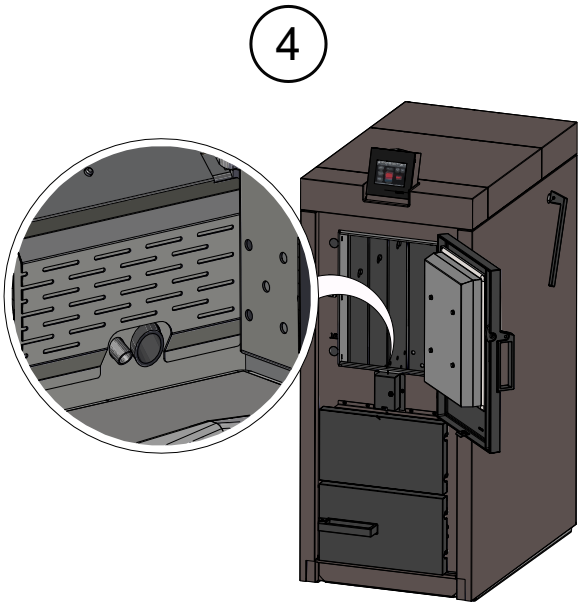


Illustration 41: Igniter tube

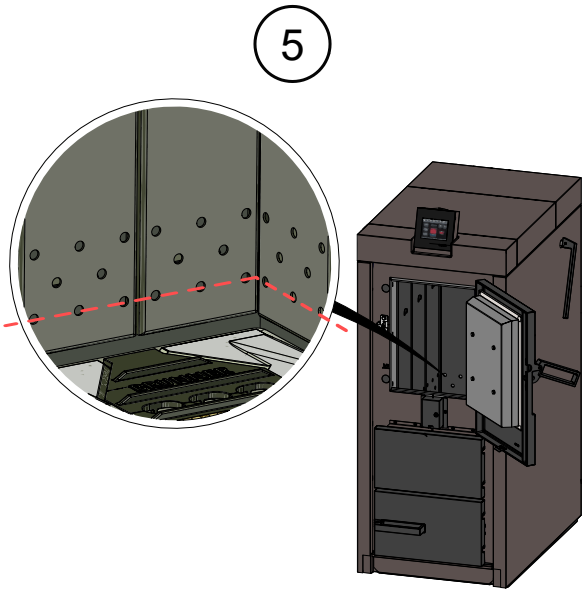


Illustration 42: Maximum height of the ash level

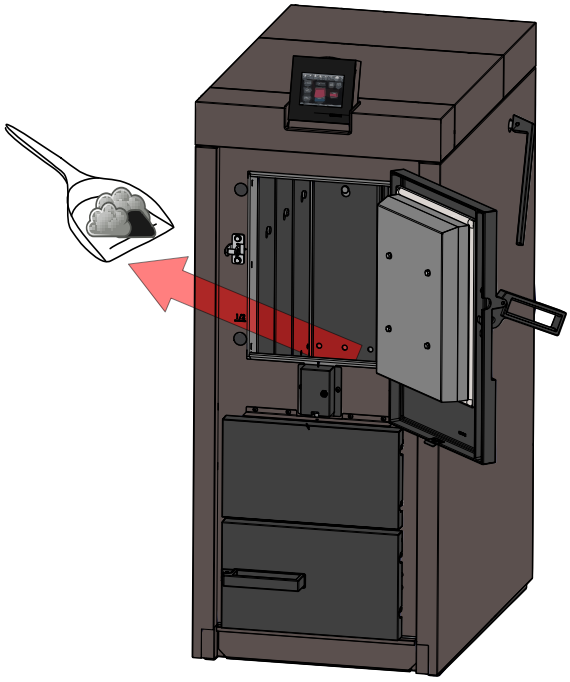
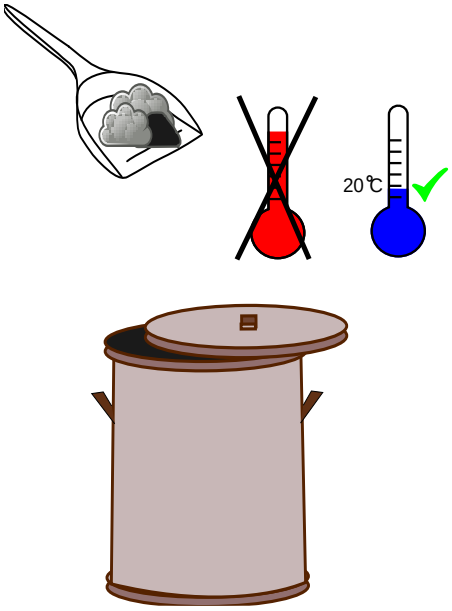


Illustration 43: If necessary: Remove ash



Caution

The ash may be hot or contain embers. The ash should be stored in a non-combustible container. Do not dispose of it until it has cooled down.

B. Cleaning with the operating lever

Clean the heat exchanger every time you insert wood into the filling chute, i.e. every time you want to start a fire.

To do this, move the operating lever for the heat exchanger cleaning mechanism 10 times.

→ Cleaning is now complete.

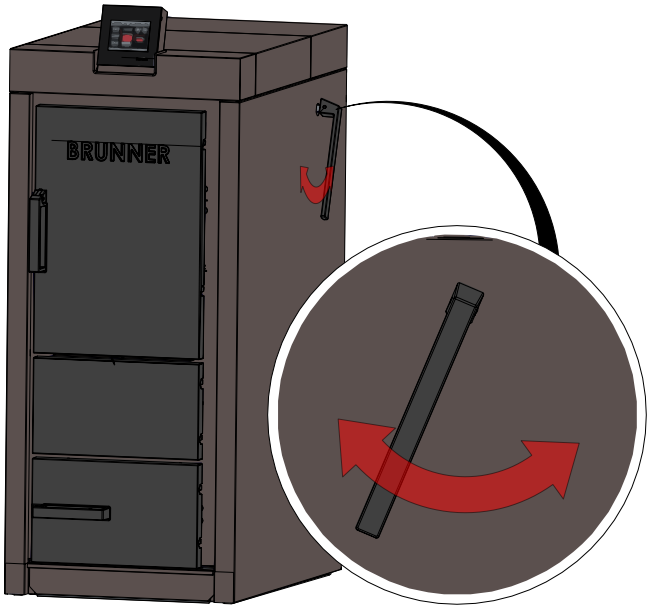


Illustration 44: Cleaning before each firing

7.3.2 Cleaning after several hours of operation

Removing the ash - Cleaning the filling chute

Steps for cleaning the filling chute:

1. make sure that the boiler is in **stand-by** mode;

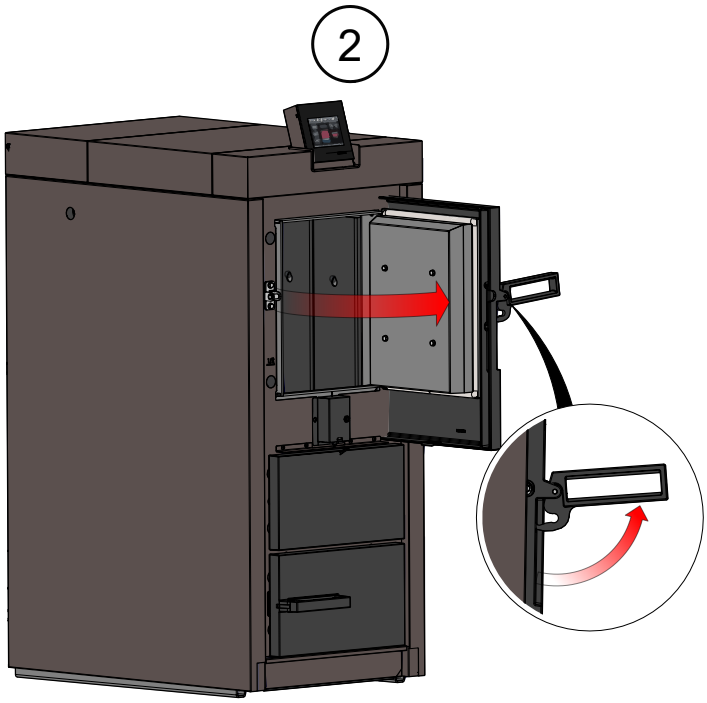
2. open the filling chamber door;

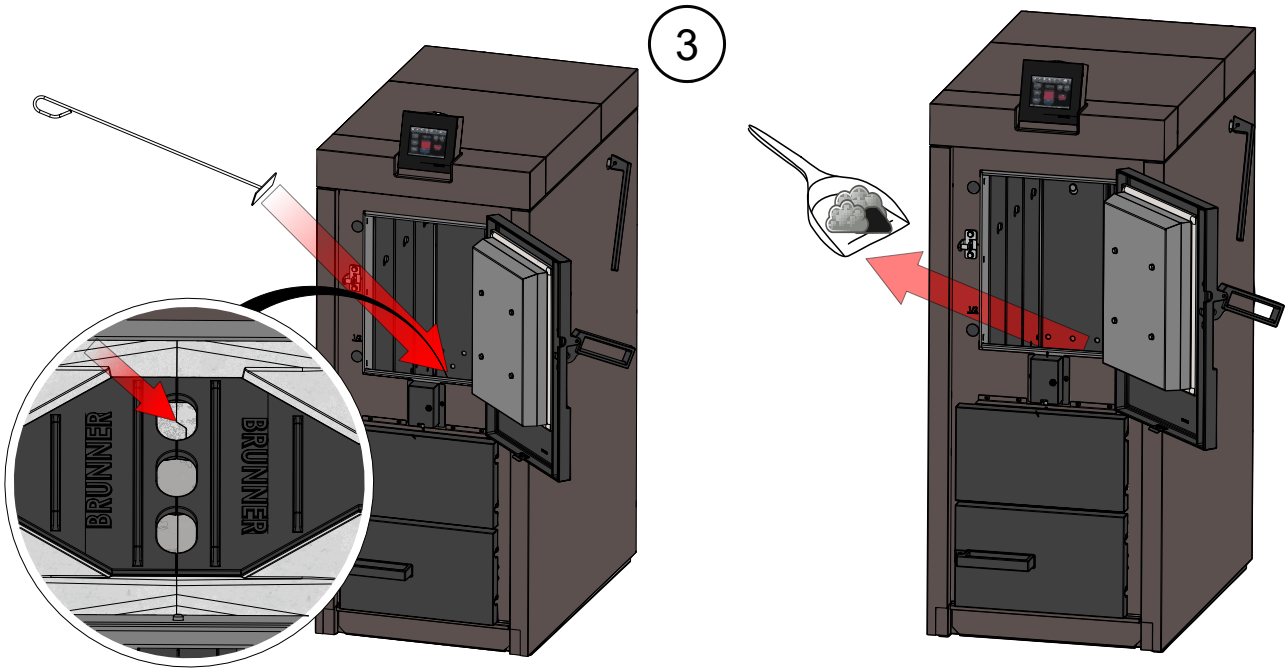
3. remove combustion residues, loose encrustations and ash from the filling chute and from the burn-out nozzle;

4. close the filling chamber door;

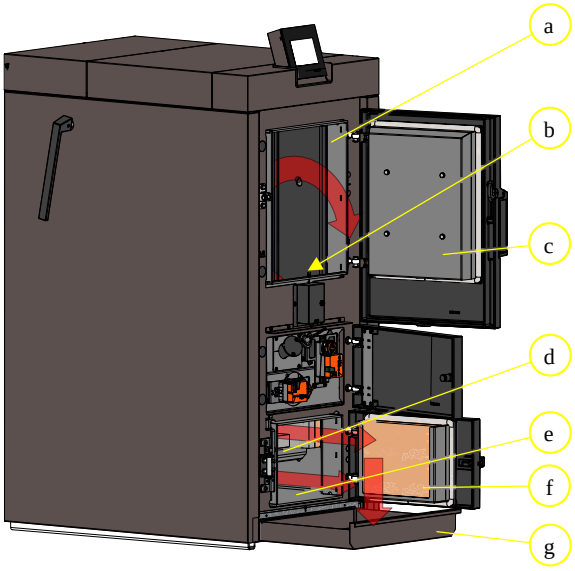
Caution: Store the ash in a non-combustible container or dispose of it when the ash has completely cooled down;

→ Cleaning is complete.





Cleaning the combustion chamber:



a	Filling chamber
b	Burnout nozzle
c	Filling chamber door
d	Combustion chamber stones
e	combustion chamber
f	combustion chamber door
g	Ash drawer

Illustration 45: Important boiler parts for cleaning

1. use the display to check whether approximately 250 operating hours have been completed;

2. make sure that the boiler is in **stand-by mode**(if not, it will automatically enter a safe operating state; this process takes a few minutes).

3. enter the following path to lock the boiler:
Menu / **Boiler locked**

4. tap on **Locked : On**

5. the display with the window appears:

→ **Manual cleaning** = The boiler is locked for manual cleaning. This message also appears in the Home view.

Illustration 46: Display: Display for safe cleaning

Actual cleaning of the filling chute and combustion chamber:

6. make sure that the boiler is in **stand-by mode**;

7. open the filling chamber door;

8. remove combustion residues, loose encrustations and ash from the filling chute and from the burn-out nozzle;

9. close the filling chamber door;

10. pull out the ash pan;

11. open the combustion chamber door;

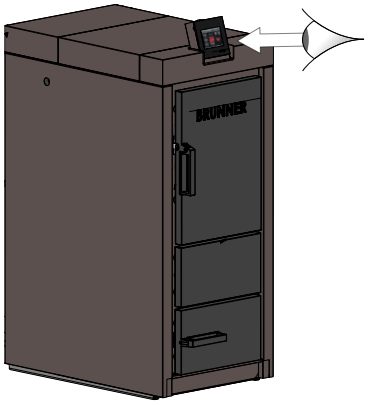
12. remove combustion residues and loose encrustations from the combustion chamber with the ash scraper, also emptying the ash from the combustion chamber stones; use the ash scraper and, if necessary, the shovel for this;

13. remove the ash pan and store the ash in a non-combustible container or dispose of it when it has completely cooled down;

14. close the combustion chamber door and replace the ash pan;

→ Cleaning is complete.

6



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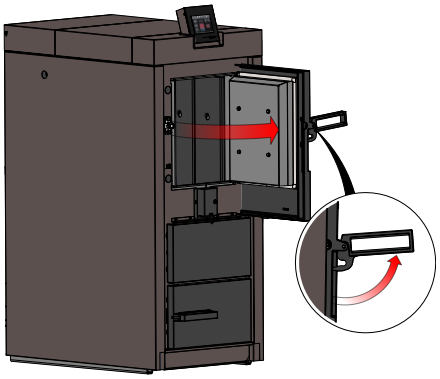

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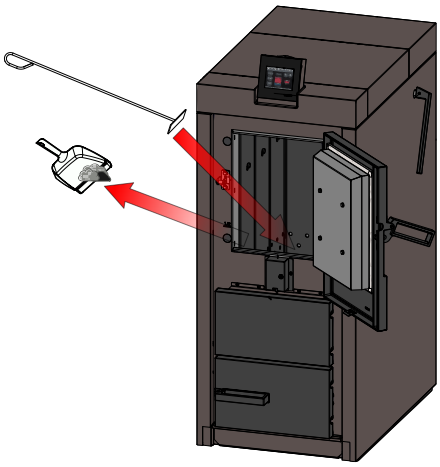

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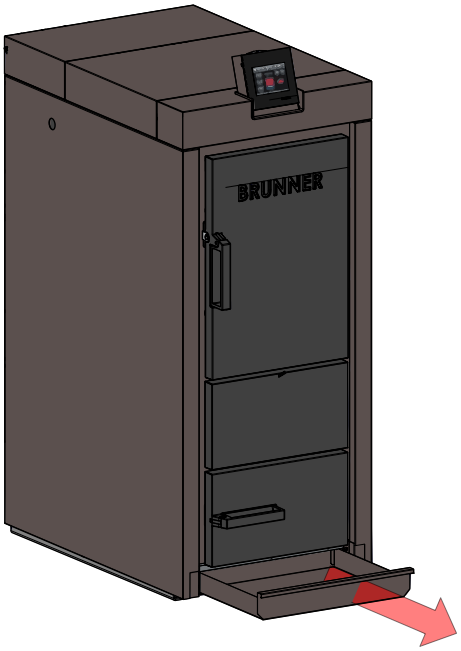

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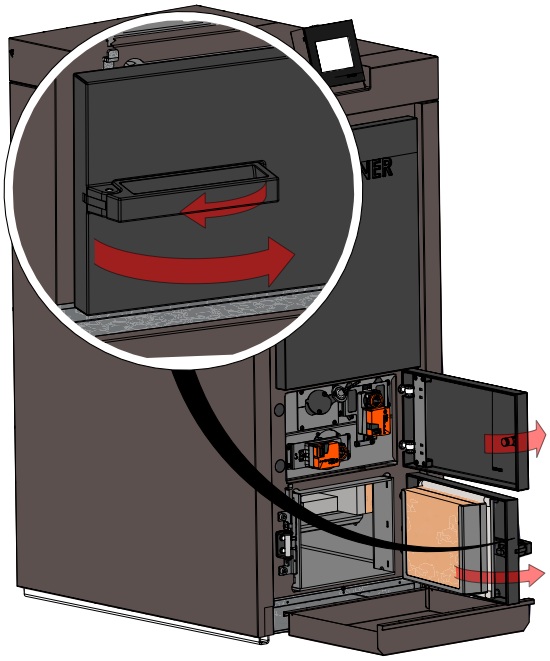
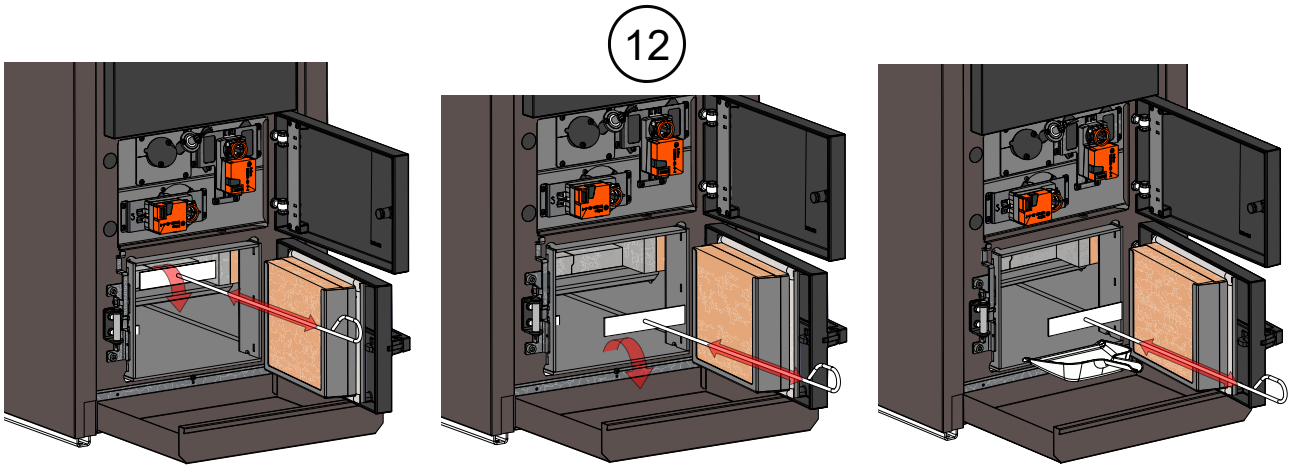




7.3.3 Ash disposal

The ash can be disposed of in the household waste garbage can.
If harmless fuels are used, the ash is a high-quality ash fertilizer and can be used for composting.

In general, the formation of dust clouds should be avoided when handling wood ash. As a precautionary measure, it is advisable to wear a face mask, gloves and safety goggles to prevent the ingestion of dusty ash via the respiratory tract or mucous membranes.

7.4 Operation with electrostatic separator

The **vertical separator set BSV (OTI)** is available as an accessory.

For cleaning and maintenance, follow the manufacturer's instructions - Oekosolve AG.

7.5 Spare parts BSV

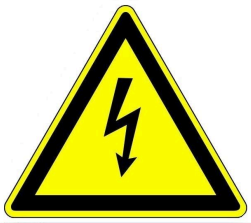
The spare parts booklet is also available on our website:
in the partner area (access data required) athttps://www.brunner.de/partner/ .

You can find a detailed list of spare parts using the QR code:

or with the link:

https://www.brunner.de/11573

8 Decommissioning, disposal



DANGER

Danger to life due to electric shock

The electrical connections of the boiler are live. This can lead to an electric shock.

- Only a qualified tradesman may dismantle the electrical installation.
- Switch off the power supply.
- Secure the power supply against being switched on again.

Danger

Possible personal injury due to improper dismantling

Dismantling the boiler BSV 40/50 requires extensive specialist knowledge.

- Dismantling may only be carried out by an authorized specialist company.

8.1 Disposing of packaging

The specialist company that installed the boiler is responsible for disposing of the transport packaging.

8.2 Temporarily take the boiler out of operation

CAUTION

Possible damage to property due to frost

If the boiler BSV 40/50 is temporarily taken out of operation, there is a risk of frost damage.

- Ensure that the boiler is not damaged by frost.

You can take the boiler out of operation temporarily, e.g. during long periods of absence.

To take the boiler out of operation temporarily, proceed as follows:

1. burn out the boiler and allow it to cool down.

2. disconnect the boiler from the power supply = press the emergency heating switch.

→ The boiler is out of operation.

To put the boiler back into operation, press the emergency heating switch.

If the boiler BSV 40/50 is operated in conjunction with the BRUNNER central heating system (BHZ), the boiler must not be disconnected from the power supply for temporary decommissioning.

An interruption of the mains voltage leads to error messages on the existing operating displays of other heating devices within the BRUNNER network environment (e.g. BRUNNER central heating system (BHZ), EOS tiled stove control unit).

8.3 Decommissioning the boiler

To decommission the boiler permanently (e.g. preparation for dismantling and disposal), proceed as follows:

1. burn out the boiler and allow it to cool down;

2. press the emergency heating switch → to disconnect the boiler from the power supply.

3. drain the boiler completely;

→ The boiler BSV 40/50 is put out of operation.

8.4 Disposing of boilers

The boiler BSV 40/50 and its accessories are largely made of recyclable materials.

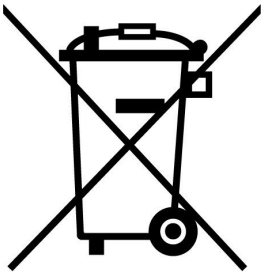
The body of a boiler is made of metal. Boilers also contain valves, seals with plastic and rubber parts and electronic components (e.g. boiler controls, drives, fans, power cables).

Summary of recycled products: Steel (including stainless steel), metal, plastic, plastics, rubber, circuit boards (may contain platinum and beryllium), copper, etc.

Neither boilers nor accessories may be disposed of with household waste.

Observe the applicable national legal regulations for disposal.

Ulrich Brunner GmbH is listed in the EAR Foundation under WEEE no. DE75509764.



9 Technical and commercial data

9.1 Declaration of Conformity BSV

CE

EG-Konformitätserklärung

Hersteller:	Ulrich Brunner GmbH Zellhuber Ring 17-18 D-84307 Eggenfelden	
Produkt:	Scheitholzvergaserkessel	
Typen:	BSV 20, BSV 30 BSV 40, BSV 50	
EU-Richtlinien:	2006/42/EG	(Maschinenrichtlinie)
	2014/30/EU	(EMV-Richtlinie)
	2014/35/EU	(Niederspannungsrichtlinie)
	2011/65/EU	(RoHS-Richtlinie)
	2015/1189/EU	(Richtlinie über Ökodesign-Anforderungen an Heizkessel für feste Brennstoffe)

Angewandte Normen:

EN-303-5: 2012
EN ISO 12100: 2011
EN 60335-2-102: 2016-09
EN 61000-6-1: 2007
EN 61000-6-3: 2007/A1: 2011
EN 61000-3-2: 2014
EN 61000-3-3: 2013

Wir erklären, dass das Produkt in den hier angegebenen Standardausführungen den oben genannten Bestimmungen entspricht.

Eggenfelden, den 14.04.2021

Hubertus Brunner
Geschäftsführer

9.2 Dimension sheet

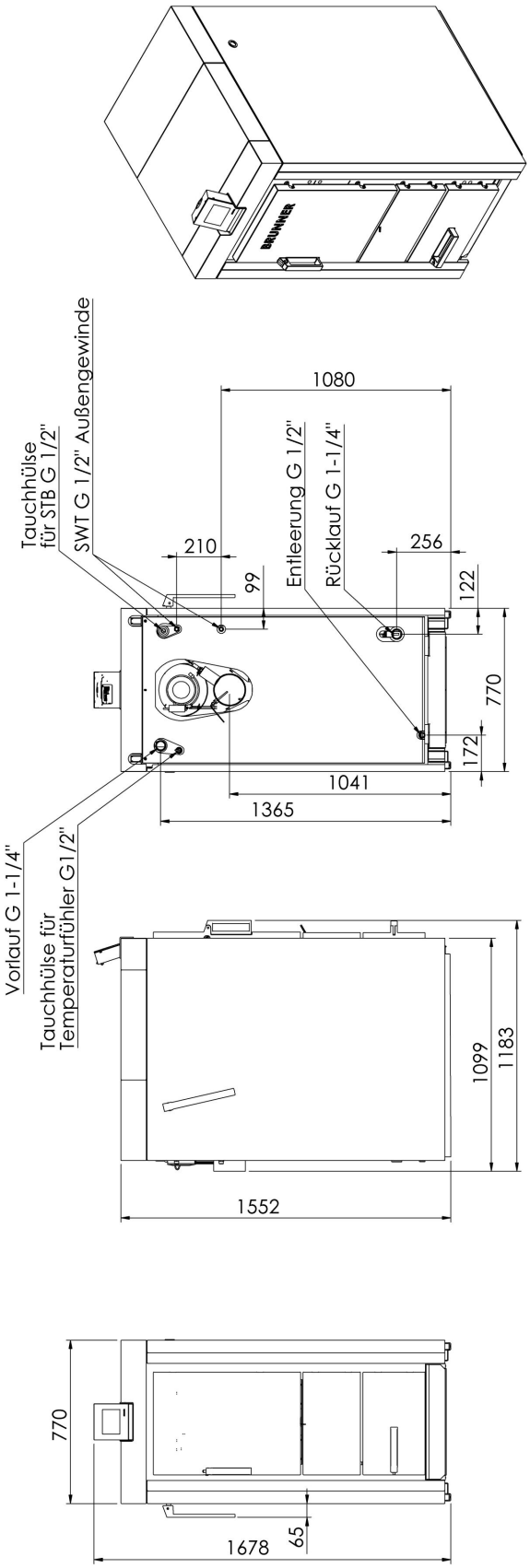
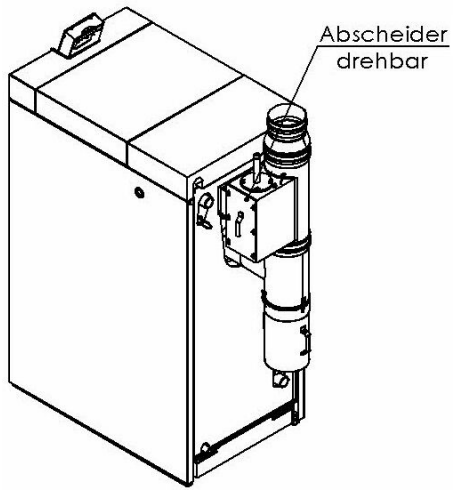
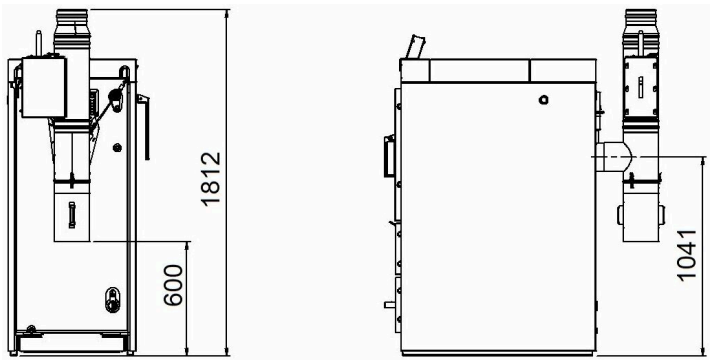


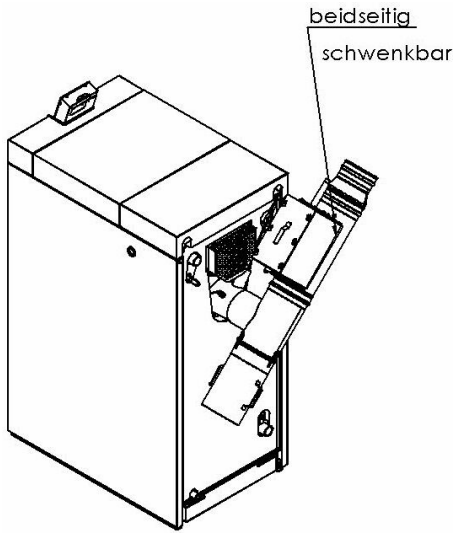
Illustration 47: BSV 40 / BSV 50

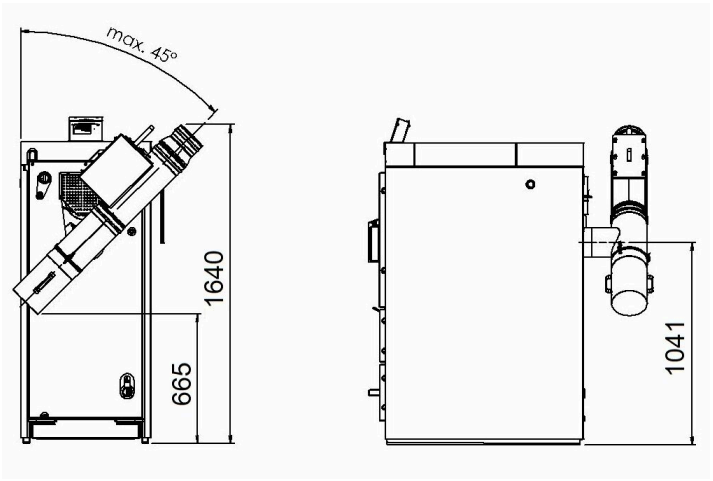
9.2.1 Separator

The BSV separator set (OTI) is available as an accessory for operating the boiler with an electrostatic separator.









9.3 Technical data

BSV 40 und BSV 50

Parameter	Einheit	BSV 40	BSV 50
Nominal heat output	kW	40,0	50,0
Wärmeleistung Teillast	kW		40,0
Kesselwirkungsgrad Nominal heat output	%	92,8	93,8
Kesselklasse (EN 303-5/2012)		5	5
Max. Betriebsdruck	bar	3	3
Maße			
Kesselmaße (BxTxH)	mm	770x1183x1678	770x1183x1678
Einbringmaße (BxTxH)	mm	750x1099x1552	750x1099x1552
Einbringgewicht (ca.)	kg	500	500
Gesamtgewicht	kg	830	830
Füllschachtvolumen	liter	215	215
Brenndauer (bei Nennlast Fichte/Buche)	h	4,5 / 6	3,5 / 5
Füllrauminhalt (ca. Fichte / Buche)	kg	55 / 80	55 / 80
Scheitholzlänge / Füllschachttiefe	cm	50 / 55	50 / 55
Daten zu wasserseitigen Anschlüssen			
Kesselwasserinhalt	liter	170	170
Kesselanschluss VL/RL Ø	DN (Zoll)	IG 32 (1-1/4")	IG 32 (1-1/4")
Leitungsdimension bis BHZ/Pufferspeicher	DN (Zoll)	32/ 5/4"	32/ 5/4"
Puffervolumen Hartholz	liter	4000	4000
Puffervolumen Weichholz	liter	3000	3000
Entleerungsmuffe Ø	DN (Zoll)	IG 15 (1/2")	IG 15 (1/2")
Höhe Entleerung	mm	135	135
max. Kessel-Vorlauftemperatur	°C	95	95
min. Kessel-Rücklauftemperatur	°C	60	60
Höhe Vorlauf	mm	1365	1365
Höhe Rücklauf	mm	265	265
wasserseitiger Widerstand ΔT=10K	mbar	20,1	30,5
Anschluss thermische Ablaufsicherung	DN (Zoll)	AG 15 (1/2")	AG 15 (1/2")
Anschluss Temperaturfühler	DN (Zoll)	IG 15 (1/2")	IG 15 (1/2")

Parameter	Einheit	BSV 40	BSV 50
Daten zur Kaminberechnung (DIN EN 13884-1)			
Abgastemperatur Nominal heat output	°C	140	150
Abgasmassenstrom Nominal heat output	kg/h (g/s)	83 (23)	101 (28)
Höhe Abgasrohranschluss	mm	1041	1041
Abgasrohranschluss Ø	mm	150	150
notwendiger Förderdruck	Pa	5	5
Kohlendioxid CO2-Gehalt	%	15,3	15,3
Mindestabstände (zur Verkleidungsoberfläche) im Raum:			
Wandmindestabstand rechts A	mm	500 (100)	500 (100)
Wandmindestabstand Frontseite B	mm	700	700
Wandmindestabstand links C	mm	100 (500)	100 (500)
Deckenmindestabstand D	mm	400	400
Wandmindestabstand Rückseite E	mm	500	500
resultierende Mindestraumhöhe F	mm	1950	1950
Elektrische Anschlüsse			
Netzanschluss	VAC, A, Hz	230, 10, 50	230, 10, 50
elektrische Leistungsaufnahme	W	52	41
Standby	W	9	9

Emissionswerte

Parameter	Einheit	BSV 40	BSV 50
Emissionen gemäß den Anforderungen für Deutschland-1.BImSchV; bezg. auf 13%O_2			
CO at nominal heat output	mg/m³	38	51
Staub at nominal heat output	mg/m³	6	5
Staub at nominal heat output mit OekoTube-Inside	mg/m³	0,3	0,3
OGC at nominal heat output	mg/m³	1	1
NOx at nominal heat output	mg/m³	96	91
Emissionen gemäß den Anforderungen für die Schweiz -LRV; bezg. auf 13%O_2			
CO at nominal heat output	mg/m³	38	51
Staub at nominal heat output	mg/m³	6	5
OGC at nominal heat output	mg/m³	1	1
NOx at nominal heat output	mg/m³	96	91
Emissionen gemäß den Anforderungen für Österreich-Art.15a; bezg. auf 13%O_2			
CO at nominal heat output	mg/MJ	27	37
Staub at nominal heat output	mg/MJ	4	4
OGC at nominal heat output	mg/MJ	1	1

Parameter	Einheit	BSV 40	BSV 50
NOx at nominal heat output	mg/MJ	66	65

Spezifische Kennwerte

Parameter	ME	BSV 40	BSV 50
zur Berechnung der Erzeuger-Aufwandzahlen nach EnEV bzw. DIN V 4701-10			
Wirkungsgrad im stat. Betrieb		0,93	0,94
Wirkungsgrad im Grundzyklus GZ		0,84	0,85
vom WE bei einem Grundzyklus abgegebene Nutzwärme	kWh	24,4	30,5
Leistungsanteil Heizkreis		1	1
max. Nutzungsleistung im Betrieb Qnmax	kW	40,0	50,0
mittlere Nutzungsleistung im Betrieb QNm	kW	34,8	43,5
Temperaturhysterese	K	20	20
Hilfsenergiebedarf Grundzyklus QHE, GZ	kWh	0,032	0,025
mittlere elektrische Leistungsaufnahme im stat. Betrieb	W	52	41

Angaben gemäß Delegierten Verordnung (EU) 2015/1187	ME	BSV 40	BSV 50
Energieeffizienzklasse		A+	A+
Nominal heat output	kW	40	50
Energieeffizienzindex EEI		122	122
Raumheizungs-Jahresnutzungsgrad	%	82	83
Besondere Vorkehrungen		-	-

Angaben gemäß Verordnung (EU) 2015/1189	ME	BSV 40	BSV 50
Anheizmodus		manuell	manuell
empfohlenes Puffervolumen	liter	4000	4000
Brennwertkessel		nein	nein
Festbrennstoffkessel mit Kraft-Wärme-Kopplung		nein	nein
Kombiheizgerät		nein	nein
ausschließlicher Brennstoff		Scheitholz, Feuchtigkeits-gehalt <=20%	Scheitholz, Feuchtigkeits-gehalt <=20%
sonstige geeignete Brennstoffe		keine	keine
abgegebene Nutzwärme at nominal heat output (P_n)	kW	40,0	50,0
Brennstoff-Wirkungsgrad (η_n)	%	85,9	86,9
Hilfsstromverbrauch bein Nominal heat output (el_{max})	kW	0,052	0,041
Hilfsstromverbrauch im Bereitschaftszustand (P_{SB})	kW	0,009	0,009
Raumheizungs-Jahres-Emissionen (bezg. auf 10% O_2, trockenes Abgas, 0°C, 1013 mbar)			
PM	mg/m³	6	7
OGC	mg/m³	11	1
CO	mg/m³	26	35
NOx	mg/m³	127	128

Prüfung und Freigabe durch Prüfinstitute

Unsere Produkte sind von anerkannten Prüfinstituten ausreichend geprüft und freigegeben worden. Wir übermitteln bei Bedarf gerne die jeweiligen Berichte.

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