Pelletfiring

englisch

BIOSTAR Complete

Operating instructions

EN-B30-003-V22-0422

GUNTAMATIC

Information on this documentation

Please read through this documentation carefully.

It is intended as a reference document and contains important information on the design, safety, operation, maintenance and care of your heating system.

We are always looking to improve our products and documentation. Any ideas and suggestions you may have will be gratefully received.

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It is important that you pay particular attention to the safety issues highlighted in the text by these symbols.

Subject to printing errors and technical amendments.

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1 INTRODUCTION

BS-01

You have made a good choice with GUNTAMATIC.

We supply you with a product based on many years of boiler-making experience, and it is our most urgent wish that you always enjoy your heating system.

The following instructions should be of use to you during operation and maintenance. Please remember that even the best furnace cannot do without care and maintenance. Therefore, read this operating manual carefully and have the initial start-up carried out by a GUNTAMATIC-authorized specialist. Above all, follow the safety instructions in Chapter 2.

Short description

The BIOSTAR furnace is a modern boiler. The discharge takes place from a storage room by means of a suction system.

Type approval

The firing is designed according to class 5 according to EN 303-5, as well as the agreement of the federal states according to Art. 15a BVG on protective measures for small firing systems and saving of energy. The original type test certificates are available from the manufacturer.

Further Information

The documentation consists of the following documents:

- Planning Document
- Installation instructions
- Operating instructions

If you have any questions, please consult our Customer Support.

2 IMPORTANT NOTES

BS-01

Your boiler has been designed and produced in accordance with the latest technical advances and all applicable safety regulations. Nevertheless incorrect operation, the use of unapproved fuels or the failure to carry out necessary maintenance and repairs can result in personal injury or damage to property. You will avoid dangerous situations by only using the boiler for the purpose for which it was designed and by operating, cleaning and maintaining it correctly. Only start up the heating system when it is in perfectly safe working order.

2.1 INTENDED USE

BS-01

The boiler is designed for heating central heating water and for use as a central heating boiler.

Do not use the boiler to burn rubbish!

Burning rubbish will cause extensive corrosion and consequently to a substantial reduction in the service life of the boiler.

2.2 OPERATE THE HEATING SYSTEM

BS-01

The heating system may only be operated and cleaned by demonstrably trained persons (as per check list). Children, unauthorised persons or persons

Even if the opposite is requested, servicing and repair work may only be carried out by authorised specialists.

2.3 GURANTEE AND LIABILITY

BS-01

Gurantee and liability claims for personal injury and/ or property damage are inadmissible if they are attributable to one or more of the following causes:

- use of the boiler for purposes other than that intended
- failure to follow the instructions, guidance and safety precautions given in the documentation
- incorrect commissioning, operation, maintenance or repair of the boiler
- operation of the boiler when safety systems are inoperative
- unauthorised modifications

2.4 SAFETY INSTRUCTIONS

PC-01

To prevent accidents, small children should not be allowed into the boiler room or fuel storeroom. Please follow the safety instructions below. By doing so, you will protect yourself and prevent damage to your heating system.

Power switch

The power switch must remain switched on at all times and may only switched off when the system is not in operation

Mains plug

Risk of fatal injury from electric shock!

The mains power supply is brought to the boiler via the plug marked Mains. That plug and other components of the system remain live even when the Power switch on the control panel is switched off.

Repair work

Repair work may only be carried out by authorised technichians!

Touching live electrical components can cause fatal injury!

Even when the Power switch is „OFF“ some components of the system are still live.

Therefore, when carrying out repair work it is imperative that the power supply to the heating system is disconnected by means of the „mains plug“ or a circuit breaker

In an emergeny: In the event of an electric shock, disconnect the power supply immediatly. Administer first aid and call the duty doctor

Fault rectification:

If faults occur, the causes must first be eliminated on the basis of the information message on the display (F0…) before resuming operation by means of the “Quit” button.

Modifications

Do not make any unplanned changes to the settings or any modifications to the heating system.

Loss of guarantee entitkement!

Servicing work

Service the boiler regularly or make use of our Costumer Service.

Emptying ash

Glowing embers can cause fires!

Only remove the ash from the boiler or store it in non combustible containers.

Boiler cleaning

Touching hot components can cause skin burns!

The boiler must only be cleaned when it is cold (flue gas temperature < 50 °C)

Flue gas fan

Risk of injury from rotating parts!

The fan must only be removed when it is disconnected from the power supply (unplugged)

Gaskets

Risk of gas poisoning.

It is possible that flue gas could escape if gaskets are damaged.

Have defective gaskets replaced by an authorised technician.

In an emergency: Take the person affected into the open air immediately. Call the duty doctor!

Air supply

Risk of suffocation!

Inadequate air supply can be fatal.

Make sure there is an adequate supply of air.

Note: If there is more than one boiler in the same room, a greater supply of frehs air must be provided.

Flue draught regulator:

Risk of detonation!

A flue regulator with a pressure surge compensator is an essential requirement!

Safety clearances

Fire risk!

Do not store any flamable items in the close vivinity of the boiler.

Follow the local regulations!

When heating

Attention Danger of deflagration!

When the boiler is running please don't open the boiler door or cleaning openings

Fill storage room

Attention poisoning and fire hazard!

The boiler must be switched off when filling the storage room using a blower or pump truck (Prog. OFF)!

Failure to do so can result in flammable and toxic gases entering the storage room!

Enter storage room

Attention danger of death!

All biogenic substances can form gases during storage.

Entering the storage room is therefore only permitted when the storage room is empty (max. 1/5 remaining content) and after at least 2 hours of good ventilation.

Storage rooms with a higher filling level may only be entered by authorized customer service technicians after prior measurement of the air quality in the storage room.

Enter storage room

Attention risk of injury!

Only enter the storage room when the system is switched off! Always disconnect power before entering!

Put a sign on the storage room door!

Keep storage room doors locked!

Anti freeze function

Anti- freeze function

The system can only perform its freezing prevention function if sufficient fuel is available and there are no faults.

Fire extinguisher

Provide a fire extinguisher!

There must be a fire extinguisher placed immediatly outside the boiler room door!

Over temperature

Attention risk of injury!

If the boiler temperature exceeds 100 °C, the boiler room must be vacated immediately!

Under no circumstances may boiler doors or maintenance openings on the boiler be opened!

Plant remote access

Attention risk of injury!

If remote access to the system is activated, for example using an app, GSM module, etc. ... all types of work on the heating system may only be carried out without exception when the heating system is de-energized!

2.5 SECURITY ADVICES FOR THE HEATING SYSTEM

BS-01

Warning of dangerous electric voltage

Warning of rotating components

Warning of hot surfaces

Warning of deflagration

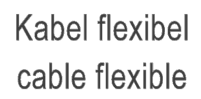
grounding

Observe operating or installation instructions

Separate electric system from the mains

Pull angle plug aside

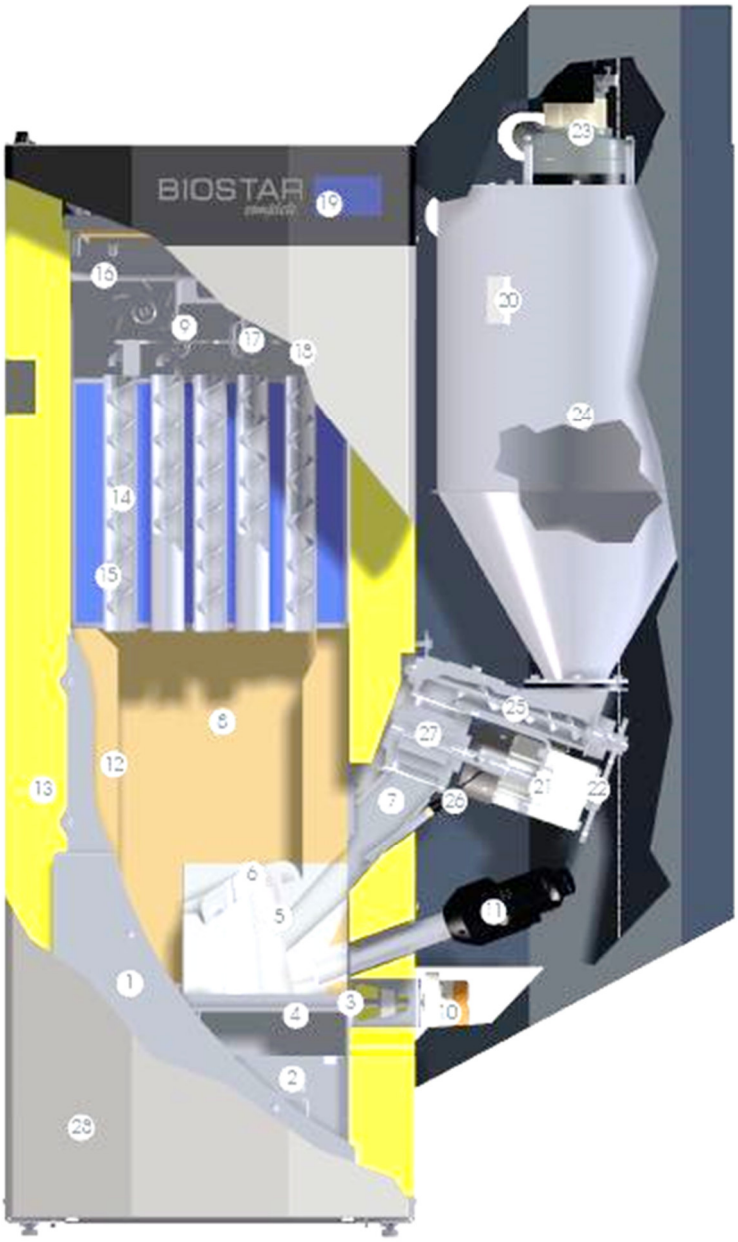
power Supply



Do not use rigid cable for installations

3 SYSTEM COMPONENTS

04



1. Ash box door
2. Cleaning grate
3. Primary air
4. Self- cleaning grate
5. Secondary air
6. Swirl plate
7. Burn- bacl
8. Expansion zone
9. Automatic heat exchanger cleaning
10. Grate cleaner motor
11. Ignition fan
12. Ceramic insulation
13. Overall insulation
14. Helix baffels
15. Tube- type heat exchanger
16. Flue draught fan
17. Flue gas sensor
18. Lambdasond
19. Control unit
20. Sensor-filler level
21. Motor
22. Drive gear
23. suction fan
24. storing box
25. Pellet spiral
26. Sensor-burning monitioring
27. rotary valve

4 SAFETY SYSTEMS

BS-01

To prevent the boiler overheating, the controller reduces the heat output in certain situations. If the boiler still threatens to overheat, the controller responds according to a set of defined safety levels.

Safety level 1 **15°C above specified temperature**

The drive motor Stops the fuel feed system and the flue draught fan shuts down.

Safety level 2 **Boiler temperature above 85°C**

All heating pumps and the cylinder charging pump are switched on to carry heat away from the boiler

Safety level 3 **Boiler temperature above 100°C**

The STL (safety temperature limiter) trips and switches all boiler control functions off while the heating circulation pumps continue to run. The system remains switched off even if the boiler temperature drops back below 90°C. The system must not be started up again until any faults have been rectified and the boiler has been checked.

Power failure The controller, the flue draught fan and all circulation pumps switch of due of electricity if there is a power cut. The glowing fuel bed on the grate continues burn with the natural draught of the flue. As this operating mode is not ideal, a larger amount of ash collechts on the grate as well. As soon as the electricity supply is restored, the controller takes control of the heating system again.

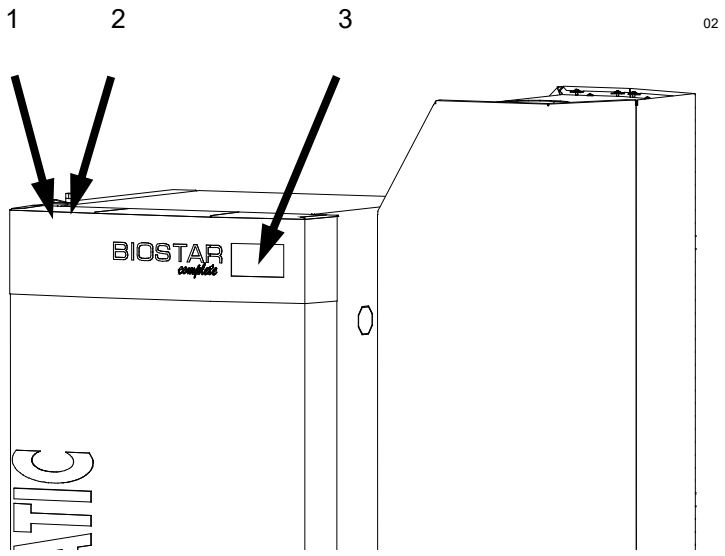
Opening the ash box

- the auger motor Stopps feeding in fuel;
- the suctionblower goes to 100 % extraction speed;
- After the firebox door is closed, normal operation is resumed or re- ignition initiated

5 CONTROL PANEL DESCRIPTION

BS-01

The appliance has a large touch- screen control panel with a meu-based interface. All setting and query options are shown on the display. All setting could be entered by pressing the “buttons” on the touch screen. Any system messages are displayed on the screen.



Power switch (1) Normally remains permanently switched on. The power switch may only be switched off when the system is not in operation.

> The system must be disconnected from the mains by unplugging the power lead when carrying out repairs or servicing work!

STB (2) Excessive temperature trips the safety temperature limiter (STB) located under the cap (2) appliance operation is suspended; if the STL has tripped, identify and eliminate the cause and then press in the STL (button) with a thin object.

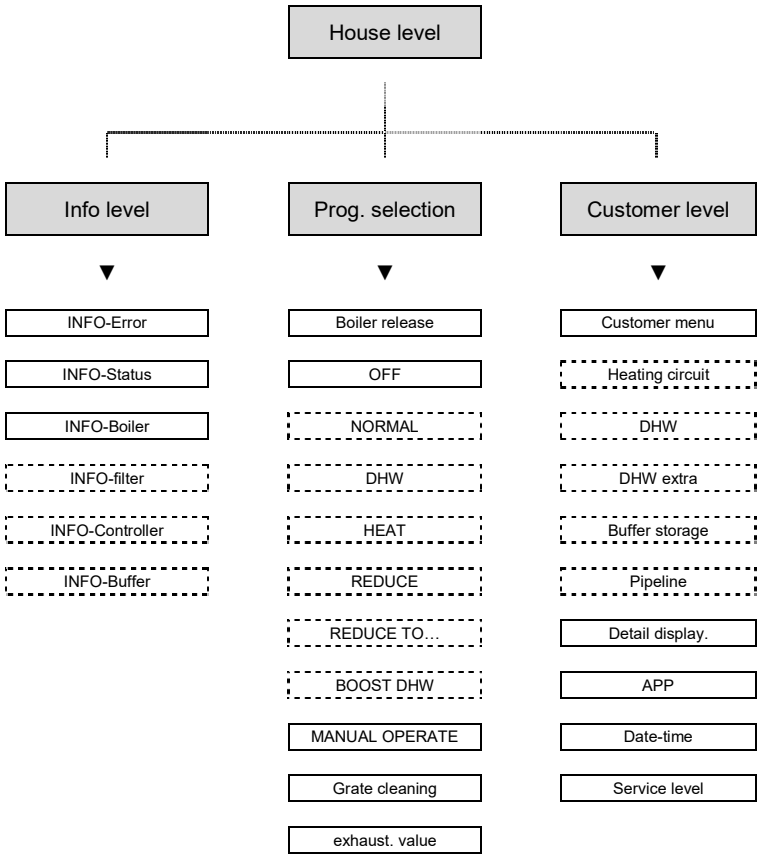
> The system must not be started up again until any faults have been rectified and the boiler has been checked. If necessary, a heating engineer must be called in.

Touch-Display (3) Pressing lightly with your fingertip on the relevant buttons on the display opens the various program levels, menus and submenus. All settings are made directly on the touch-screen display.

> Never use sharp objects such as ball-point pens or the like to operate the touch screen

6 OVERVIEW OF MENU LEVELS

BS-02

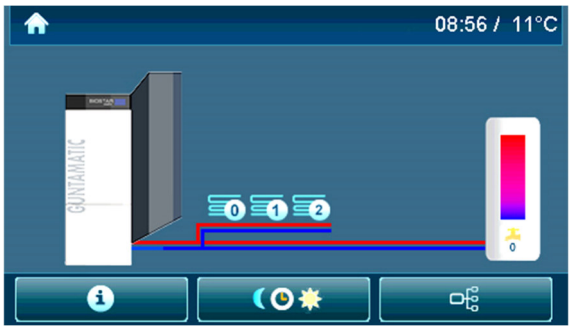


Menus shown with a dashed border only appear if activated on the Commissioning menu.

6.0 HOUSE LEVEL

BS-01

About the selection buttons, you switch to the different levels.



03

Info level

*)

Program selection

see Chapter 6.1

**)

Customer level

see Chapter 6.2

***)

INFO

*) - Error messages, Temperatures, Scold and operational states, Buffer and Heating circles could be requested.

**) - Programmes for boilers and heating circulations could be chosen;
- the boilers release could be broken;

***) - the attitudes for boilers, heating circulations could be changed
- the attitudes in the service area and the parameter menu could just changed from authorised GUNTAMATIC staff.

6.1 PROGRAMMESELECTION

BS-02


Boiler´s clearance ..... on Attitude „OFF“ the boiler didn´t start


* Program OUT ..... Heatingrun turned off


* Program NORMAL..... Heizung und WW-Bereitung eingeschaltet (nach Uhrenprogramm)


* Program WARM WATER ..... heating turned off – WW- Bereitung eingeschaltet (after Watchpr. summer)


* Program HEATING ..... Day and Night heatingrun (Warmwater with watchprogramme)


* Program LOWER..... Day and Night reduced mote (Warmwater with watchprogramme)


* Program LOWER TO ..... Absenkbetrieb bis zu einem bestimmten Zeitpunkt


* RELOAD WARM WATER ..... Duration maximal 90 Minutes


Program MANUAL..... Heatingservice on boilerstarget- or buffertargettrmperature


Grate cleaning..... manual ON and OFF


Emissions measurement ..... Programm for Emissionsmeasure


back to HOUSELEVEL..... look at Chapter 6.0

INFO

* the selection buttons wehre just shown,if a heatingcirculation is actived

6.2 COSTUMER LEVEL

BS-02


Customer menu..... look at Chapter 6.2.1


* Heating circulaton ..... look at Chapter 6.2.2


* Warm water ..... look at Chapter 6.2.3


Buffer storage..... look at Chapter 6.2.4


* Loading pump ..... look at Chapter 6.2.5


* Feed pump..... look at Chapter 6.2.5


Detail screen ..... attitudes, condition and measurement of construction will be shown!


APP..... look at Chapter 6.2.6


Date-time ..... Date and time from the machine could be attituded!


Service level..... look at Chapter 6.2.7


back to house level ..... look at chapter 6.0

INFO

* the selection buttons could just actived in connection with a heating circle;

6.2.1 COSTUMERMENU

BS-03

	Ash empty	after cleaning the Ash the choose the Menüpoint and confirm with „YES“ and „OK“
	Ash warning	hours to the new „Ashewarning“ after confirmation of the Function „Ash emptiing“
1)	* Freigabe HKR	Setting of the long-distance line release on the external heating circuit controller.
	m³ set Counter to 0	turns the m³ Counter to 0
	Attitude m³ Counter	influenced the numberspeed (high Value = quicker count)
	fill the spiral	manueal refill of Stokerchannel (stopps automatically)
	fill the suction construction	manual refilling of storing tank (is stopping automatically)
	Charge lock time	no refilling with storingtank while the OFF time (excepted forcefilling)
2)	Mode	Combustion mode setting
	Language	attiude of countries specific language
	** Boiler´s off time	no heating operation during programmed blocking times
	Filter ash emptied	Select the menu after emptying the filter ash and confirm with YES and OK.
	Ash warning filter	Hours until the next ash warning on the display / the filter ash must be emptied.
3)	Filter operation	Affects filter performance.
	Clean filter	Manual start of the filter cleaning – the boiler switches to run-on mode.

back to the Costumerlevel ..... see Chapter 6.2

INFO

* The button is only visible when programming trunk line operation = LAP.
** The button is only visible if the HP0 output is programmed to None or Z-pump.

1) **Auto** ..... The pipeline pump is controlled fully automatically.
Off ..... The pipeline pump is switched off.
Permanent ..... The pipeline pump runs continuously.

2) **No** ..... Default setting
ECO-ideal ..... Saving mode
Normal ..... Attitude needs more cleaning (attitude just shortly)
a lot of slag ..... Setting for heavy slag formation in the combustion chamber

3) **optimal** ..... 2-stage operation - highest performance of the filter
reduced ..... 1-stage operation - reduced filter performance
disabled ..... Filter disabled - no filter performance

6.2.2 HEATING CIRCUIT

BS-03

4)	Operation pump	Affects the operating status of the heating circuit
5)	* Weather	Automatic or manual activation of multiple clock programs
	** Clock program	Setting the heating and setback phases for the NORMAL heating program
	* Clock program (cold)	Setting the heating and setback phases for the NORMAL heating program
	* Clock program (mild)	Setting the heating and setback phases for the NORMAL heating program
	* Clock program (warm)	Setting the heating and setback phases for the NORMAL heating program
6)	Target temperature day	A room unit is required to control the set room temperature
7)	Target temperature night	A room unit is required to control the set room temperature
8)	*** Room influence	0% - 100% influences the flow temperature / T1°C - T3°C influences the heating circuit pump
9)	Heating curve	Affects the flow temperature – (higher set value = higher flow temperature)
10)	Night off AT	Affects the heating circuit during the setback phase
11)	* AT-Limits cold/mild	Switching threshold for changing between the COLD and MILD clock programs
11)	* AT-Limits mild/warm	Switching threshold for changing between the MILD and WARM clock programs
12)	AT-Shutdown	Affects the heating circuit during the heating phase

back to the costumer level..... look at Chapter 6.2

INFO

* The menu button is only visible if **Multiple clock program** is activated in the commissioning menu.
** When the multiple clock program is activated, this menu button is not visible.
*** The menu button is only visible if the room device/room station is activated in the commissioning menu.

4) **Auto** ..... When the NORMAL heating program is activated, the heating circuit is switched ON and OFF fully automatically according to the heating and setback times set in the clock program. If the outside temperature exceeds the value set in the OT switch-off parameter, the heating circuit switches off.
Off ..... The heating circuit is switched off.
Permanent ..... The heating circuit pump runs continuously (no mixer control).

5) **Auto** ..... Automatic changeover between the multiple clock programs COLD, MILD and WARM depending on the outside temperature. You can set the outside temperature switching threshold for automatic changing of the multiple timer programs in the OT limit COLD/MILD and MILD/WARM menus.
Cold..... Only heating mode according to the COLD timer program.
Mild ..... Only heating mode according to the MILD timer program.
Warm..... Only heating according to the WARM timer program.

6) Control to the DAY SET TEMPERATURE is only possible during the heating phase of the heating circuit and requires a room device/room station assigned to the heating circuit. This automatically adjusts the heating curve so that the desired room temperature can be reached in any weather.
- Without a room unit, heating can only be operated according to a preset heating curve without taking the room temperature into account. Increasing the target day temperature only causes the preset heating curve to be shifted "up".
- If the outside temperature exceeds the value set in the OT switch-off parameter, the heating circuit switches off.

7) Control to the NIGHT-TIME TARGET TEMPERATURE is only possible in the lowering phase of the heating circuit after the outside temperature has fallen below the value set in the Night from AT menu and requires a room device/room station assigned to the heating circuit. This automatically adjusts the heating curve so that the desired room temperature is achieved.
- Without a room unit, only reduced heating operation according to the preset heating curve is possible without taking the room temperature into account. Increasing the night-time target temperature only causes the preset heating curve to be shifted "up".
- If the outside temperature exceeds the value set in the Night off AT parameter, the heating circuit switches off again.

8) **0% – 100%** ..... When the outside temperature is high (plus degrees) and the room temperature is too low, increasing the room influence enables the desired room temperature to be reached more quickly.
T1C° - T3°C ..... If the set room temperature is exceeded by the set value, the heating circuit pump is switched off.

9) A higher heating curve causes a higher flow temperature at the same outside temperature.

10) If the outside temperature set in the Night off AT parameter is not reached during the lowering phase, the heating circuit switches on.
Attention: No frost protection function until the outside temperature set in the Night off AT menu is undershot.

11) Setting of the switching threshold for changing between the clock programs COLD/MILD and MILD/WARM.
Attention: The change between the weather-dependent clock programs depends on the average temperature of the previous day and may take place with a time delay until one day later.

12) If the set outside temperature is exceeded during the heating phase, the heating circuit switches off.

6.2.3 WARM WATER

BS-03

13) Operation pump ..... Setting the SLP pump operating mode.

Clock program WW ..... Setting the hot water charging times for the NORMAL program.

Clock program WW summer..... Setting the hot water charging times for the WARM WATER program.

WW target temperature ..... Setting the target hot water temperature.

14) WW priority ..... Affects the heating circuits during hot water charging.

WW reload ..... Enables one-off hot water charging outside of the programmed charging times.

back to the costumerlevel..... look at Chapter 6.2

INFO

13) **Auto** ..... Automatic hot water loading according to the timer program WW or WW summer.
Off ..... The hot water circuit is switched off.
Permanent ..... The hot water pump (SLP) runs continuously

14) **No** ..... The heating circuits remain in operation during hot water loading.
Yes ..... The heating circuits are switched off during hot water charging.

6.2.4 HP0 Z-PUMP / BUFFER STORAGE / PUMP

BS-02

15) * Operation pump ..... Setting the HP0 pump operating mode.

** Boiler target ..... Adjustment of the desired boiler temperature.

*** Clock program ..... Influences the boiler release when the pump is set.

16) **** Loading program..... Affects the loading status of the buffer.

**** Clock program. buffer..... Affects the boiler release.

**** Buffer target..... Affects the target buffer temperature.

17) **** Buffer min ..... Affects the minimum buffer temperature.

back to the costumerlevel..... look at Chapter 6.2

INFO

* The HP0 menu is only visible after activation in the commissioning menu.
** The button is only visible if the Z-pump or pump function is activated in the commissioning menu.
*** The button is only visible if output HP0 is activated as a pump.
**** Die Menübuttons sind nur bei aktiviertem Pufferspeicher sichtbar.

15) **Auto**..... The pump is controlled automatically.
Off..... The pump is switched off.
Permanent..... The pump runs constantly.

16) **Full**..... The buffer is charged until the target buffer temperature plus excess [Po charging OFF (full)] is reached at the buffer sensor at the top. In addition, the buffer target temperature difference of minus 10°C (Pu charging OFF) must be reached at the bottom buffer sensor so that buffer charging is ended with the status full.
Part..... The buffer is charged until the target buffer temperature plus 10°C increase [Po charging OFF (full)] is reached at the top of the buffer sensor.

17) If the buffer temperature falls below the set min. buffer temperature at the top of the buffer sensor, the buffer is fully or partially loaded again fully automatically according to the set loading program to the set buffer target temperature.

6.2.5 PIPELINE LOADING PUMP / SUPPLY PUMP

BS-01

18) Operation pump ..... Setting of trunk line operating mode.

19) * Loading program ..... Setting of the long-distance buffer loading program.

* Clock program..... Setting the long-distance line operating times.

* Buffer target ..... Setting the target buffer temperature (recommended setting up to a maximum of 70 °C).

20) * Buffer min ..... Setting the lowest temperature at the pipeline buffer TOP (T3).

back to the costumer level..... look at Chapter 6.2

INFO

* The menu buttons are only visible if the long-distance line function LAP is activated in the commissioning menu.

18) **Auto**..... The long-distance line function is controlled fully automatically.
Off..... The trunk line function is switched off.
Permanent..... The pipeline pump runs continuously.

19) **Full**..... The buffer is loaded until the target buffer temperature is reached at the TOP buffer sensor (T3) and the temperature difference to the BOTTOM buffer sensor (T2) is only 10°C (standard setting).
Part..... The buffer is loaded until the target buffer temperature is reached at the TOP buffer sensor (T3).

20) If the set minimum buffer temperature at the TOP buffer sensor (T3) is not reached, the buffer is automatically loaded again according to the set loading program FULL or PARTIAL to the set buffer target temperature.
Attention: The HKR 0-2 release must be ON in the detailed display. (contact FFR on the wall unit).

6.2.6 APP

BS-03

21) Netwok..... Connect to the Internet with YES (Accepted Terms of Use).

22) W-LAN visibility ..... Activation of W-LAN visibility.

Serialnumber..... Enter the boiler serial number.

Key..... Displays the security key recommended by GUNTAMATIC.

Hot water display..... Determines which hot water tank is visualized online.

Chart interval..... Defines the update interval of the online diagrams.

Data update ..... Defines the update interval for the online boiler data.

23) File size recording ..... Specifies the maximum size of the recording file (1 MB = approx. 1 day).

Storage rate recording..... Specifies the interval for saving the recording data.

back to the costumer level..... look at Chapter 6.2

INFO

21) The boiler must be connected to the Internet router using a network cable.

22) If there is no internet connection and activated WiFi visibility, the boiler can be reached internally via the WiFi of the internet router.

23) A recording can be started online on the APP, which is automatically sent to the e-mail address saved under Contacts after the set file size has been reached.

6.2.7 SERVICE LEVEL PROFESSIONAL PARTNERS

BS-01

Attention:
Changes in all menus of the service level may only be made by persons authorized by GUNTAMATIC. Unauthorized changes are not permitted and can lead to serious defects in the heating system and possibly even to life-threatening situations!

	Reset data		look Chapter 6.2.7.1
	Error list	All error messages are saved with date and time!	
	Test program	All system components can be subjected to a function test!	
	Installation		look Chapter 6.2.7.2
24)	Heating circuit parameters	Screed heating	look Chapter 6.2.7.3
24)	Hot water parameters		look Chapter 6.2.7.4
24)	HP0 parameters		look Chapter 6.2.7.5
24)	Long-distance line parameters		look Chapter 6.2.7.6
24)	Return mixer parameters		look Chapter 6.2.7.7
	Plant settings		look Chapter 6.2.7.8
	Parameter menu	Entry and changes only permitted in consultation with GUNTAMATIC!	

back to the COSTUMER LEVEL ..... look at Chapter 6.2

INFO

24) The number of parameters displayed depends on the system configuration.

6.2.7.1 RESETDATA

BS-01

Load customer parameters	Stored customer data can be read in again if necessary.
Save customer parameters	
Load factory parameters	Only changed or new parameters of a new software are loaded.
Reset operating hours	Only the operating hours counter is set to 0.
Reset service time	Only the service time counter is set to 0.
Controller reset	**Danger**: The factory setting is loaded!
Lambda calib. reset	Reset after each lambda probe replacement.

back to the SERVICE LEVEL ..... look at chapter 6.2.7

6.2.7.2 INSTALLATION

02

	Device	Selection	BIOSTAR	
	Typ	Selection	Selection according to type plate	
	Conveyor system	Selection	Flex	
	Filters present	Selection	Yes / no	
	Boiler number	Selection	enter Serialnumber	
25)	Clock programs	Selection	single / multiple	
26)	Heating circuit controller available	Selection	No / CAN-Bus / SY-Bus / Yes	
	• Hot water available	Selection	Yes / no	
	• Operation heating circuit	Selection	Non / Pump / Mixer	
	○ Flow temperature max.	Selection	10°C – 90°C	
27)	○ Heating curve	Selection	0,1 – 3,5	
28)	○ Room device	Selection	No / RFF / RS-Voll / RS-HK / RS-HKR	
29)	• Additional	Selection	No / WWP	
30)	• Operation of long-distance pipeline	Selection	No / ZUP / LAP / ERW	
31)	• Source	Selection	buffer HP0 / buffer 0 / buffer 1 / buffer 2	
32)	Operation HP0	Selection	No / Z-pump / bufferp. / pumpe / SMA	
33)	Sensor HP0	Selection	boiler / HKR0 / HKR1 / HKR2	
	Reflux mixer	Selection	Yes / no	
34)	A1 hose length	Selection	5 m / 10 m / 15 m / 20 m / 25 m	
35)	First filling	Selection	OK / OFF	
36)	Fill snail	Selection	OK / OFF	
	Save customer parameters	Selection	Yes / no	

back to the SERVICE LEVEL ..... look at chapter 6.2.7

INFO

25) **singel** ..... A clock program with up to 3 switching times can be programmed daily for each heating circuit.
multible ..... Three weather-compensated clock programs (COLD, MILD and WARM) with up to 3 switching times can be programmed daily for each heating circuit.
INFO: The change between the weather-dependent clock programs depends on the average temperature of the previous day and may take place with a time delay until one day later.

26) **No** ..... Setting for systems without weather-compensated heating circuit control.
CAN-Bus ..... Activation of the external heating circuit control wall unit Set-MK 261 as HK controller 0.
SYBus ..... Activation of the boiler-internal heating circuit control Set-MKR as HK controller 0.
Yes ..... Activation of the external heating circuit control wall unit set MK-261 as controller 1 or 2.

27) **0,5 – 0,7** ..... Basic setting for underfloor heating.
1,2 – 1,4 ..... Basic setting for radiators.

28) **No** ..... Setting for heating circuits without room unit/room station.
RFF ..... Activation of an analogue room device.
RS-Voll ..... Activation of a digital room station with setting options for all heating circuits.
RS-HK ..... Activation of a digital room station with setting options only for the assigned heating circuit.
RS-HKR ..... Activation of a digital room station with setting options for the entire heating circuit controller.

29) The additional function can only be activated if HC 0, 3 or 6 is programmed to **None**.
WWP ..... Activation of additional hot water tank.

30) **ZUP / LAP** ..... Activate the correct long-distance line function according to the installed system scheme.
ERW ..... Activation of a heating circuit expansion with an additional wall-mounted device Set-MK 261.
Allocation wall device Service level / trunk line 0-2 parameters / source

31) The setting determines from which buffer tank the energy for the long-distance line is drawn.

32) **Z-pump** ..... Setting for systems with heating circuit controller without buffer tank.
Buffer pump ..... Setting for systems with buffer storage.
Pump ..... Setting for systems without a buffer tank and without a heating circuit controller.
SMA ..... Setting for systems with fault message output.

33) Select the controller to which the HP0 buffer tank sensors are connected.

34) With a setting of 0 m, the A1 discharge screw and the A2 discharge fan cannot be tested in the test program.

35) After checking all components in the test program, start filling the pellet storage container for the first time.
IMPORTANT Do not cancel the process manually!

36) Function for manually filling the G1 stoker screw.

- rated capacity The maximum device output (as desired or type series) can be reduced by on-site hydraulic tuning. There is also the option of setting the device output by a trained specialist using the parameter for limiting the maximum flue gas temperature.

6.2.7.3 HEATING CIRCUIT PARAMETERS

BS-04

	Operation	Selection	No / pump / mixer	✓
	Room device	Selection	No / RFF / RS-Voll / RS-HK / RS-HKR	✓
	Mixer running time	Selection	10 – 300 seconds	✓
	Flow temperature min.	Selection	10°C – 90°C	✓
	Flow temperature max.	Selection	10°C – 90°C	✓
37)	Boiler superelevation	Selection	0°C – 20°C	✓
	Pump release temperature	Selection	20°C – 100°C	✓
38)	Parallel offset heating curve	Selection	-10°C – 30°C	✓
	Designation heating circuit	Selection	change possible	✓
	Screed heating	Selection	Yes / No	✓
	• Forward rise ... daily from the start	Selection	0°C – 10°C	✓
	• advance rise after	Selection	1 – 5 Days	✓
	• Screed flow min.	Selection	10°C – 30°C	✓
	• Screed flow max.	Selection	25°C – 60°C	✓
	• Sscreed holding time ... advance max.	Selection	0 – 20 Days	✓
	• Start screed program	Selection	Yes / No	✓

back to the SERVICE LEVEL ..... look at chapter 6.2.7

The screed parameters must be set in consultation with the screed layer!

In principle, it is not possible to comply with the specified target temperatures in continuous operation, but only when using automatic mixers. Compliance with the specified target temperatures cannot be guaranteed 100% - due to various safety circuits and special boiler functions, significant excess temperatures can occur in exceptional cases. If this is problematic in terms of structural damage, the screed must be heated out manually.

37) Increases the boiler setpoint temperature compared to the flow setpoint temperature by the set value.

38) Increases or decreases the set flow temperature by the set value without changing the heating curve.

6.2.7.4 PARAMETERS HOT WATER

BS-05

	Hot water available	Selection	Yes / No	✓
39)	Hot water hysteresis	Selection	1°C – 30°C	✓
	Hot water pump release	Selection	20°C – 90°C	✓
40)	Boiler superelevation	Selection	0°C – 20°C	✓
	Naming the hot water circuit	Selection	change possible	✓

back to the SERVICE LEVEL ..... look at chapter 6.2.7

INFO

39) Is the temperature difference between the start of hot water charging and the end of hot water charging.
Example Hot water target temperature = 60°C / hot water hysteresis = 10°C
If the hot water temperature drops below 50°C, hot water charging begins and ends as soon as the hot water temperature reaches 60°C. Condition: Enabled by the hot water timer program.

40) Increases the boiler setpoint temperature compared to the hot water setpoint temperature by the set value.

6.2.7.5 PARAMETERS HP0 Z-PUMP / BUFFERPUMP / PUMP

BS-02

41)		Operation HP0	Selection	Z-pump / Bufferpump / pump		
		* Release HP0.....	Selection	65°C – 80°C		
42)		** Po-charge ON.....	Selection	0°C – 20°C		
43)		** Po- charge OFF (Full)	Selection	0°C – 20°C		
44)		** Po- charge OFF (Part)	Selection	0°C – 20°C		
43)		** Pu- charge OFF	Selection	0°C – -20°C		
45)		** Delta T pipeline.....	Selection	0°C – 50°C		
		** Difference between boiler and buffer below.....	Selection	0°C – 50°C		
46)		** Sensor HP0	Selection	Boiler / HKR0 / HKR1 / HKR2		
47)		** Additional sensor	Selection	Yes / No		

back to the SERVICE LEVEL ..... look at chapter 6.2.7

INFO

* The menu button is only visible if the buffer pump or pump function is programmed under Operation HP0.

** The menu buttons are only visible if the buffer pump function is programmed under Operation HP0.

41) Activate the correct pump function according to the installed system scheme.

42) In buffer heating mode, the temperature at the top of the buffer sensor must fall below the highest required temperature of a heating or hot water circuit by 6°C (factory setting) for the boiler to start again.

Example: highest requirement temperature = 50°C Boiler start when temperature falls below 44°C at top buffer sensor.

43) The switch-off condition for the loading program FULL is fulfilled at the buffer tank HP0 when using the factory setting at 55°C at the top buffer sensor and 45°C at the bottom buffer sensor.

55°C Buffer TOP temperature	=	Buffer target temperature 55°C	plus	Po-charge OFF (full)	0°C
45°C Buffer LOW temperature	=	Buffer target temperature 55°C	plus	Pu-charge OFF	-10°C

44) The switch-off condition for the PART charging program is met when using the factory setting at 65°C at the top of the buffer.

65°C Buffer TOP temperature	=	Buffer target temperature 55°C	plus	Po-charge OFF (partl)	10°C

45) With (long-distance) lines, for example, a temperature loss caused by the length of the line can be compensated. For example, a setting of 2°C loss causes the setpoint temperature to increase by the set value.

46) Specification of the controller (board) to which the sensors of the buffer tank HP0 are connected.

47) Activation of additional buffer sensors. The buffer management can be extended by up to 3 additional buffer sensors.

6.2.7.6 PIPELINE PARAMETERS

BS-02

48)	Operation pipeline	Selection	No / ZUP / LAP / ERW	✓
	* Release of pipeline	Selection	40°C / 65°C – 80°C	✓
49)	* Po-charge ON	Selection	0°C – 20°C	✓
50)	* Po-charge OFF (full)	Selection	0°C – 20°C	✓
51)	* Po-charge OFF (part)	Selection	0°C – 20°C	✓
50)	* Pu-charge OFF	Selection	0°C – -20°C	✓
52)	** Source	Selection	buffer 0 / buffer 1 / buffer 2 / buffer HP0	✓
53)	Delta T Fern	Selection	0°C – 50°C	✓
	* Source-buffer difference below	Selection	0°C – 50°C	✓

back to the SERVICE LEVEL ..... look at chapter 6.2.7

INFO

* The menu buttons are visible when the long-distance line function LAP is programmed.

** The menu button is visible when the long-distance line function ZUP and LAP is programmed.

48) **ZUP / PUP / LAP** ..... Activate the correct long-distance line function according to the installed system scheme.
ERW ..... Aktivierung einer Heizkreiserweiterung mit zusätzlichem Wandgerät Set-MK 261.

49) During heating operation, the temperature at the top of the pipeline buffer must be 6°C below the highest required temperature of a heating or hot water circuit (factory setting) so that the buffer can be loaded again.

Example: highest requirement temperature = 50°C Start charging when the temperature falls below 44°C at the top buffer sensor.

50) The switch-off condition for the FULL loading program is met at the long-distance line buffer when using the factory setting at 55°C at the top buffer sensor and 45°C at the bottom buffer sensor.

55°C Buffer TOP temperature	=	Buffer target temperature 55°C	plus	Po-charge OFF (full)	0°C
45°C Buffer LOW temperature	=	Buffer target temperature 55°C	plus	Pu-charge OFF	-10°C

51) The switch-off condition for the PART charging program is met when using the factory setting at 61°C at the top of the buffer.

61°C Buffer TOP temperature	=	Buffer target temperature 55°C	plus	Po-charge OFF (part)	6°C

52) Specification of the source from which the energy for the buffer storage is obtained.

53) With (long-distance) lines, for example, a temperature loss caused by the length of the line can be compensated. A setting of, for example, 2°C loss. increases the setpoint temperature by the set value.

6.2.7.7 RETURN MIXER PARAMETERS

PH-02

54)	Operation return mixer	Selection	AUTO	✓
	Return mixer running time	Selection	10 – 300 secunds	✓
	Return temperature target	Selection	40°C – 90°C	✓
55)	Return mixer Delta T	Selection	5°C – 30°C	✓
56)	Return mixer delta T min	Selection	5°C – 30°C	✓
57)	Start relief	Selection	Yes	✓

back to the SERVICE LEVEL ..... look at chapter 6.2.7

INFO

54) **Auto** ..... Variable control of the return temperature with active start-up relief and/or partial load limit.
Fixed ..... Fixed regulation based on the target return temperature set under the RLT target parameter.
open ..... Function for test or emergency operation --- Manually open the RLM bypass line.
close ..... Function for test or emergency operation --- Manually close the RLM bypass line.
OFF ..... Function for test or emergency operation --- Turn off the RLM mixer manually.

55) Specifies the difference (spread) between the boiler setpoint temperature and the boiler return temperature.

56) Determines the minimum difference (spread) between the boiler target temperature and the boiler return temperature after reaching 100% buffer load for partial load control.

Attention: Partial load control only possible with active additional sensors (5-sensor buffer management).

57) When the start-up relief is activated, after the boiler has started, the target return temperature increases by the set value at most, in order to enable the target boiler temperature to be reached more quickly.

6.2.7.8 SYSTEM SETTINGS

02

	Device	Selection	BIOSTAR	
	Typ	Selection	according to nameplate	
	Conveyor system	Selection	Flex	
	Boiler cleaning	Selection	No	
	Boiler number	Selection	according to nameplate	
58)	Heating circuit available	Selection	Yes / No / CAN-Bus / SY-Bus	
59)	Filters present	Selection	Yes / No	
60)	Outdoor sensor	Selection	Yes	
61)	Fuel	Selection	1 / 2 / 3 / OPT	
62)	Clock programs	Selection	Single / multiple	
63)	FW present ... Fotozelle	Selection	Yes	
64)	FW calibrate	Selection	-	
65)	FW correction at Pmin	Selection	100 kOhm	
65)	FW correction at Pmax	Selection	0 kOhm	
66)	Lambda probe	Selection	NGK	
67)	Lambda heating	Selection	AUTO	
68)	Calibrate lambda probe	Selection	OFF	
69)	Lambda sensor correction	Selection	0,0mV	
70)	Lambda probe characteristic	Selection	0,0%	
71)	PC monitoring	Selection	No	
	SD logging ... before exit - Save parameters	Selection	OFF	
	SD data	Selection	-	
	CID data	Selection	-	
	Network ... VISU over network	Selection	-	
	Error messages	Selection	do not disable	
	First filling	Selection	-	
72)	Induced draft	Selection	TAKT	
73)	EC detection	Selection	No	
	Gear G1	Selection	-	
74)	Wing type	Selection	D140 / D150	
75)	Operation KFR	Selection	normal	
76)	Menu structure	Selection	3.1	
77)	Time ABS pump ... 1x weekly	Selection	60 secunds	
78)	HKP forced activation	Selection	85°C	
79)	Residual heat use	Selection	65°C	
80)	HKP Frost TA ... active in the "OFF" program	Selection	-3°C	
80)	HKP Frost TV ... active in the "OFF" program	Selection	3°C	
81)	TÜV function	Selection	-	

back to the SERVICE LEVEL ..... look at chapter 6.2.7

INFO

58) **No** ..... Setting for systems without heating circuit control.
SY-Bus ..... Activation of the boiler-internal heating circuit control Set-MKR as HK controller 0.
CAN-Bus ..... Activation of the external heating circuit control wall unit Set-MK 261 as HK controller 0.
Yes ..... Activation of the external heating circuit control wall unit Set-MK 261 as HK controller 1 or 2.

INFO

59) **Nein** ..... Setting for boilers without an EC filter.
Bj. 2016 ..... Setting for boiler with EC filter and year of construction 2016 on the type plate.
ab Bj. 2017 ..... Setting for boilers with EC filter from year of construction 2017 on the type plate.
Ja ..... Activation of the EC filter on new boilers.

60) **No** ..... Deactivates the outside sensor and gives the controller an outside temperature of 0°C.
Yes ..... Standard setting for weather-compensated heating systems.

61) In the parameter, under OPT, the optimal amount of fuel to be inserted is displayed. In the case of deflagration during heating operation, e.g. For example, try setting a smaller fuel table for troubleshooting. A larger fuel table can lead to incomplete combustion and boiler malfunctions due to increased feed amounts.

62) **single** ..... A clock program with up to 3 switching times can be programmed daily for each heating circuit.
multible ..... Three weather-compensated clock programs (COLD, MILD and WARM) with up to 3 switching times can be programmed daily for each heating circuit.
Attention The change between the weather-dependent clock programs depends on the average temperature of the previous day and may take place with a time delay until one day later.

63) **No** ..... Deactivates the photo sensor and thus the combustion monitoring.
Yes ..... Standard setting for pellet devices.

64) Starts the automatic photo sensor calibration during the operating status Control.

65) Input option for photo sensor correction values in the low load range (Pmin) and in the nominal load range (Pmax).

66) **No** ..... Deactivates the lambda probe.
Bosch ..... Setting for older boilers with Bosch lambda probe.
NGK ..... Setting for new boilers with NGK lambda probe.

67) **Permanent** ..... Setting for older boilers with Bosch lambda probe.
Auto ..... Setting for new boilers with NGK lambda probe.

68) Manual start of the automatic lambda sensor calibration.
Attention This process can take a long time (approx. 30 minutes).

69) The ideal measured value of the lambda probe is -10mV in the test program. Deviations up to a maximum of ± 6 mV are permissible and may be entered as a correction value. If the deviation is greater, the lambda probe must be replaced.

70) After calibrating the lambda probe in the lower measuring range to 0.0%, the probe can be calibrated in the upper measuring range (nominal load range at approx. 10-12% CO2) by adjusting the lambda characteristic.
Example The CO2 value displayed on the boiler at nominal load differs by e.g. 2% in the control measurement using a calibrated emission measuring device (display on the boiler 10%, on the measuring device 12%). The deviation of 2% can be entered in the parameter as a correction value and thus causes the probe to be calibrated in the upper measuring range.

71) **Terminal** ..... Data query via VISU.
DAQ ..... Data retrieval via online recorder (can only be used at the factory).
GSM-Modul ..... Info and control via GSM module.

72) **Takt** ..... Control for naturally aspirated engines with pulsed speed control.
0-10V ..... Control for naturally aspirated motors with 0-10V speed control.

73) **No** ..... Setting for standard naturally aspirated engines.
Yes ..... Setting for EC naturally aspirated motors.

74) **D140** ..... Setting for Biostar 12 and 15.
D150 ..... Setting for Biostar 23.

75) Influences the display of the boiler release menu in the boiler program selection.
Normal ..... Possible selection = AUTO or OFF
Service ..... Possible selection = AUTO, OFF or PERMANENT

76) **3.0** ..... Menu structure without system image on the house level.
3.1 ..... Menu structure with system image on the house level.

77) Anti-blocking system for all pumps, mixers and valves (every Monday at 12 noon).

78) Forced switch-on for all heating circuits and hot water pumps until the boiler or buffer tank falls below 85°C.

79) Pump HP0 on until the boiler temperature falls below 65°C.

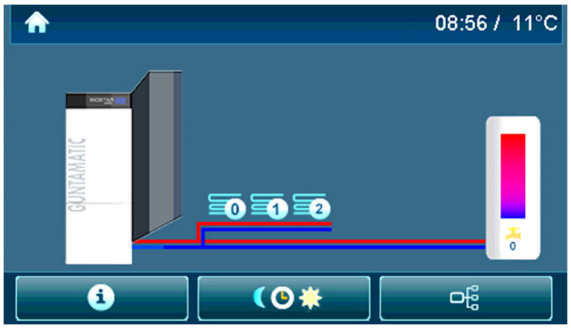
80) If the outside temperature falls below the temperature set in the HKP Frost TA parameter, the frost protection function becomes active. All heating circuit pumps switch on and regulate to the set flow temperature set in the HKP Frost TV parameter.
Attention The frost protection function can fail due to a fault in the boiler! → Provide electric heating element!

81) TEST FUNCTION The boiler temperature is increased until the STB interrupts the function.

7 USER SETTINGS

7.1 HEATING TURN ON / TURN OFF

BS-01



03

press the programmeselection 

▼

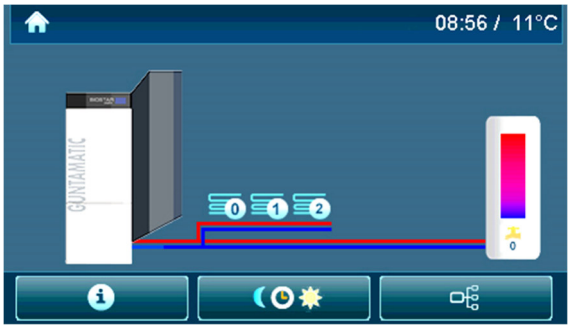
Programme **OUT**.....		Heating and Warmwater turned off
Programme **NORMAL**.....		Heating and Warmwater on
Programme **WARMWATER**		just Warmwater on

some INFO's more for Programme selection ..... look at chapter 6.1

 back to HOUSELEVEL..... look at chapter 6.0

7.2 HEATINGPROGRAMME PROGRAM

For every heatingcirculation there could be up to 3 ON/ OFF switching times installed. With the function „Weekprogramming“ all days in a week could be programmed at the same time.



03

1) press COSTUMER LEVEL

▼

2) press on the heating circulation button

▼

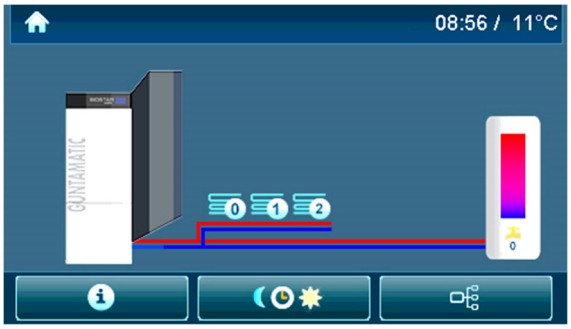
3) press on the watchtime progtamme

▼

- Programme „DAILY“
  (press 1 x to the weekday)
- Programm „WEEKLY“
  (press 2x on the same weekday)

 back to houselevel ..... look at chapter 6.0

Through changing the heating curve, the room temperature could be adapted.
Through a higher heating curve you might reach a higher room temperature.
Change the heating curve just daily and maximum in a tenth area.



03

1) press COSTUMER LEVEL

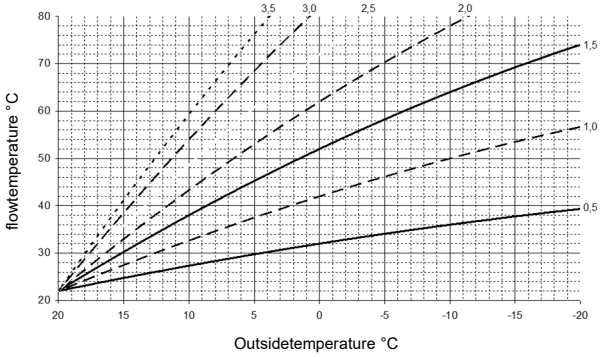
▼

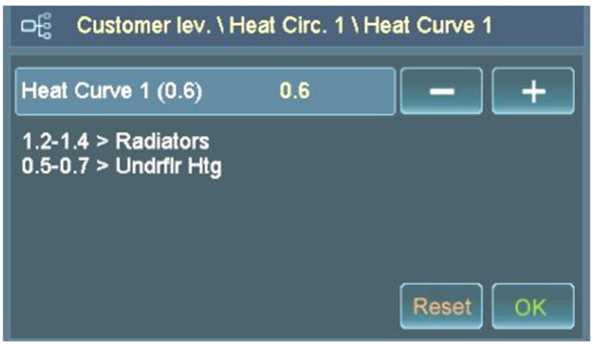
2) press to the heatingbend button

▼

3) press on the heatingcurve button

▼

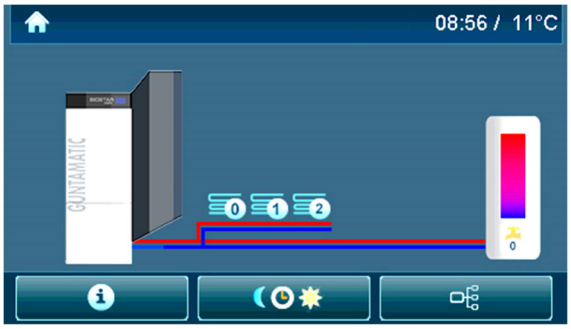




 back to HOUSELEVEL..... look at chapter 6.0

7.4 WARMWATER TEMPERATURE ADJUST BC-01

Through changing the targettemperature the warmwatertemperature could be adapted..



03

1) press COSTUMER LEVEL 

▼

2) press on the warmwaterbutton 

▼

3) press on the targettemperature button 

▼

- „CHANGE" with + or −
- „SAVE“ with OK

 back to HOUSELEVEL..... look at Chapter 6.0

7.5 ROOMCONTROLLER TO ADJUST

BS-01

place of construction

Mount the room construction in an high of 1,5 m on the internal wall. The functionalst room is there, where the occupants are the most of time (for example: living room). In this room it´s forbidden to furnish the thermostatvalve. (open the valves completly).

> The room machine shouldn't stand in an area with strong influence of sun or a cockle stove.

adapt room temperature

The knobs bringst he the oportunity to change the roomtemperature. In the plus area (+) of the menu the roomtemperature could be lifted up to 3 ° C. In the control range the minus (-) temperature could be depressed up to – 3 degrees.

> By turning in the plus (+) or minus (-) area in the menu the detail.

Low: **Heating run OFF**
(if the Outsidetemperature is higher then Parameter „Night out OT")

Heating run ON → to target temperature Night
(wenn die Außentemperatur niedriger ist als der Parameter „Nacht aus AT")

Normal: **Heating and reduced mote**
(after the in the watchprogramme attiuted times)

Heating: **Heat**→ on target temperature Day
(heat Day and Night without reduced mote)

8 OPERATING THE HEATING SYSTEM

BS-01

Initial commissioning — Initial commissioning and basic adjustment of the system may only be carried out by GUNTAMATIC engineers or authorised GUNTAMATIC agents.

Day- to day operation — Clean the heating system precisely according to the instructions in the section Cleaning/Care. The amount of cleaning work required is heavily dependent on the quality of the fuel used and lower-quality fuels may necessitate more cleaning work.

Shutting down the system — The system only needs to be shut down at the end of the heating season, if faults occur or in order to refill the fuel store. To do so, set the system to the programme "OFF" and allow it to cool down for approx. 120 minutes. The system can then be shut down.
If the system is not used for extended periods (summer) also isolate it from the power supply by disconnecting the mains plug in order to prevent unnecessary lightning damage.

Restarting — Before starting up the system again in the autumn/winter, carry out the annual check of the control and safety systems to ensure they are safe and functional. We recommend that you take out a maintenance contract so that the system operates safely and economically.

8.1 CONTROLING OF THE HEATINGCIRCULATION SYSTEM

BS-01

Checking system pressure — The operating pressure is normally between 1 bar and 2.5 bar. If the system pressure is too low, malfunctions may result. If necessary top up the water in the heating system.

Note Completely draining and refilling the system or topping up a system filled with anti-freeze or treated water must only be carried out by a heating engineer.

Topping up the heating system water

- The heating system water must be cold when topping up → make sure the heating system water temperature is below 40°C.
- Add water slowly until the required system pressure is indicated on the system pressure gauge.
- Bleed the heating system.
- Check the system pressure again and add more water if necessary.

Expansion vessel — Check the air pressure in the expansion tank (circa 1,5 bar)
If necessary call a plumber!

Temperature-relief valve — Check the security functions to the right functions
If necessary call a plumber!

Heatungroomlifting — Control the air supply of free passage!
If necessary call a plumber!

8.2 FUEL

8.2.1 PELLETS

BS-04

To achieve a smooth heating of the furnace, the quality of the fuel has to be right. Only with high-quality wood chips should help to ensure a reliable and trouble-free operation of the plant. The price should be evaluated always behind the quality requirements and it is therefore strongly advised to use only good quality.

Important quality criteria:

- solid;
- smooth surface;
- minimal small particle;
- minimal ash decay;
- high smelting point;
- only use recommended fuels;
- tested and recommended with low fines and dust content made from low-potassium, low-nitrogen and low-bark wood quality;

Properties

Calorific value	ca. 4,9 kWh / kg
Bulk weight	ca. 650 kg / m³
Pellet size (length)	5 – 30 mm
Diameter	5 – 6 mm
Water content	8 – 10 %
Fusion point	ca. 1200°C
Ash content.....	< 0,5 %

Quality classes Use just Pellets with **EN 17225-2** Quality class **A1.**

The storing has to occour in an dry condition!

If the pellets are in Contact with water or moisture they swell and disintegrate!

8.3 FILL THE STOREROOM 01

The fuel store can´t be filled when the heater is in service!

Minimum 1 hour before filling, the construction should be turned off!

You have to empty the feed spiral minimum all 3 years!

You have to suct bigger dust quantity!

Firstfilling/ Refilling

Before first fillimng and after every complete emptying of fuil the storeroom couldn´t filled completly. The discharge screw should be filled prior to complete filling of the fuel storage over the entire screw length about 10 cm high with pellets. Thereafter, the fuel storage can be filled up to the maximum fill height.

dumping height

Pellets ..... max. 2,5 m

Emergency filling

If the automatically refilling of pellets isn´t able to run, the store room could be “emergency refilled”:

Before you try to eliminate the error follow the description as you can see in the chapter „Rectifying faults“ or „Replacing fuse“.

approach:

Put he construction to „programme out“and wait till it went to „run out“. Putt he power switch to „0“. Screw the store tunk in above direct and screw it and fill it with bagstuff.

After that, you have to close the dished cover. The shown allertmessage should be receipted. After that you have to attend the at least used heatingprogramme

Hooper

Open the hooper The Machine recognices this and turns the hackchipsspiral off. Turn the ID Fan to the full drive. The container could be filled up to the seal border. Close the Container lid and lock it tightly. The Service will be leaded out automatically. Once a year the Operation will be completed emptied and the dust sediments should be suct completely.

8.4 EMPTYING THE ASH

BS-02

Glowing embers can cause fires!

Only remove the ash from the boiler or store it in non-combustible containers.

Touching of hot parts could lead to skin injury!

Let the boiler cool down minimum a half an hour before cleaning the ash!

Depending on the quality and quantity of uel the ash container must be emptied often. With inferior fuel quality is shortened by the higher proportion of dust in the fuel, the drain interval. The ash in concentrated form. In case of high quality used fuel you can use the ash as mineral fertilizer.

emptying the ash

Put he construction to „Programme out“and let it cool down minimum a half an hour. Then you have to extract and clean the ashtank.

Attention: The Ashton could be hot!

After checking that they are in good condition, reinsert the ash containers and lock them tightly.

Attitude the construction to the at least attituded heatingprogramme.

Resetting the ash warning

If the ash warning is shown on the display, you must empty the ash and reset the ash empty parameter. To empty the ash, proceed as described in the previous point. To temporarily reset the ash warning, switch to the customer menu, select the Ashes emptied parameter and confirm with YES and OK that you have emptied the ash. The length of time until the ash warning appears on the display is preset and can be adjusted in the ash warning parameter.

9 CLEANING/ CARE

BS-02

Attention: Danger of injury!

For safety reasons you must only carry out servicing and cleaning when the heating system is switched off and disconnected from the mains, and has cooled down

Attention: Danger of live!

Servicing work inside the fuel storeroom must only be carried out under the supervision of a second person, who must be outside the storeroom.

boiler

The sophisticated cleaning system on a GUNTAMATIC heating system means that regular cleaning work is substantially reduced. All that is required is regular emptying of the ash.
The flue must be regularly swept. At the same time, the flue connecting pipe, the flue gas box and the boiler heat exchanger should be cleared of fly-ash.

Depending on the load on the heating system, complete cleaning – for which the precise procedure is described in the section "Complete cleaning" – may be required twice a year but should be carried out at least once a year.

Depending on efficiency, and on ash production you have to lead interim and general cleaning, this Stepps are descriped here.
If the heating system is subject to exceptionally high loads, more extensive cleaning may be required.

Cover panel

If there are any Contamination on the cover panel parts and the control elements, you have to eliminate them with a wet rag. For wetting you have to use just solvent free, mild cleaning supplies. Don´t use any cleaning supplies like alcohol, cleaner´s solvent or diluter, cause these cleaning methods could be aggressive and could attack the construction´s surface.

fuel store

The fuelstoreroom and the auger feed´s spiral has to be emptied minimum all 3 years completely (if necaceserry you have to exhaust it), to suspend any Errors on the Feedsystem through sediments.

9.1 INTERMEDIATE CLEANING

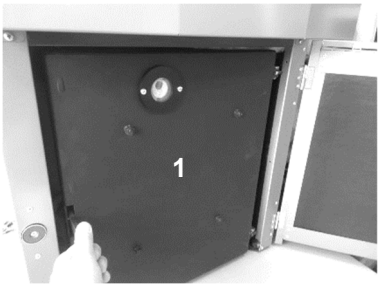
02

Attention Danger of injury!

For safety reasons you must only carry out servicing and cleaning when the heating system is switched off and disconnected from the mains, and has cooled down.

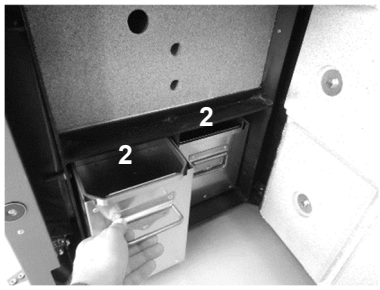
INFO Interim cleaning must be carried out at intervals of between 2 week and 3 months , but minimum every half an year.

Lead the following Steps in the numbered order:



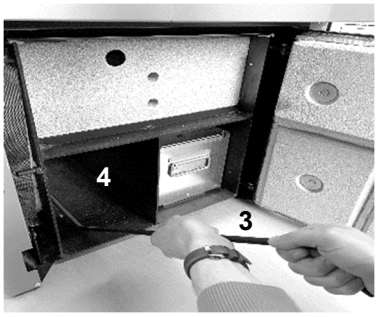
1) Set the system to the programme "**OFF**" and allow it to cool down for at least 1 hours.

2) Open the cover door (1), take of the ash box (2) and empty it.
Risk of burns from hot parts!
Fire danger thoruh rest ember!



3) Peel the bouncing plate with the burningchamber (3) with a poker stick. Insert the poker stick the left ashbox opening (4).

4) On the User menu, start the function "**Clean grate**" (see Section) and allow the stepped grate (5) to clean itself for a few minutes.
Risk of injury from moving parts!



5) The deposite on the grate surface (5) and in the bore have to be scratched with a cleaning construction.

6) Empty the rest ember from the ashbox (6) putt he ash in the ashroom (6) and close it tight.

7) **Attitudes in the costumermenu:**

Put the parameter „emptying the ash“ to „YES“ and confirm with „OK“

9.2 GENERAL CLEANING

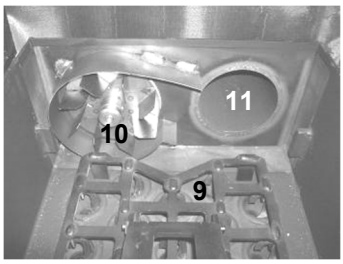
03

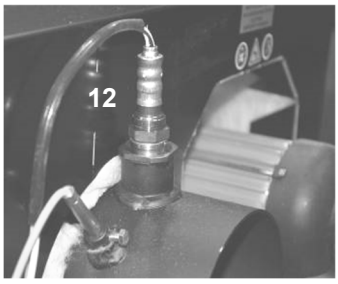
Attention Danger of injury!

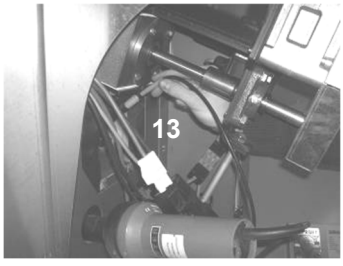
For safety reasons you must only carry out servicing and cleaning when the heating system is switched off and disconnected from the mains, and has cooled down!

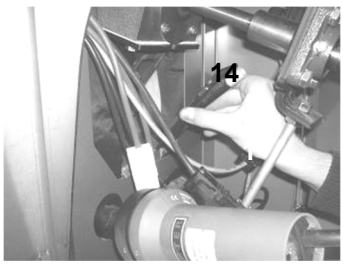
Safety notice!

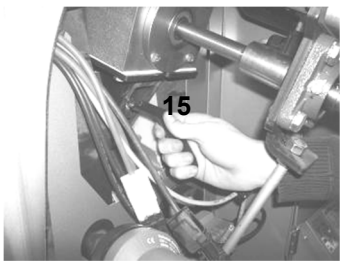
Check the function of the safety valve at least once a year!

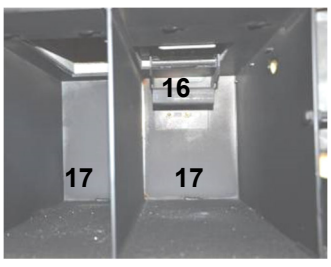












You have to make the generalcleaning twice in one year. The minimum cleaning is anual. For that you have to lead the points 1-7 for intermediated cleaning:

Lead the following Steps in the numbered order:

8) Open the smokegasbox (7) and pull the cover angel (8) in above direction. Suct the ash with an ash suction to the ID Fan (10) between the warmexchangerpipe (9) and the smokegas.
Fire danger through rest ember!

9) Controll the lambdasond (12) to an tight hub, if necaserry built it out and clean it with an soft brush.
Don´t clean the Lambdasond with highairpressure!

10) Take off the foto cell (13) and clean it with an soft cloth. Open the revision lid (14) and check if on the switch surface are any sediments. If necessary clean it with an chamber cleaner.

11) Activate the programme „grate cleaning“ and let the Tipping grate deactivated. At opened tipping grate (5) control the burning chamber, cotroll and if necessary clean it.
Risk of injury from moving parts!

12) Close the tipping grate again (5) and check if the chamber is able to close (16).

13) Remove the restember left and right out of the ashroom (17) with an poking stick. Then out the ashbox inside and close it.

14) Mount the rebuilted boilerparts carefully again, and check the cleaningopenings on tightness.

15) **Attitudes in the Costumermenu:**
Took the parameter „ash emptied“ to „YES“ and confirm with „OK“.

10 INFORMATION MESSAGES/ FAULT CODES

BS-02

	Category	activator	Message	Quit.	cause
F01	**Note**	Input TKS1 open longer than "t safe" (door switch)	Firebox door or ash box open (F01)	Automatic	Door switch defective, connector faulty, door or ash box open
F02	**Fault**	Clippinggrate could go in 200 seconds not in position	Clipgrate could´nt reach gratecontroll (F02)	press **Quit. Button**	ashroom filled, servermotor faultly, connection faultly
F03	**Fault**	„CO2 after“ will be go under in 20 Minutes when starting	Lambdasondenvalue in the Start to high Lambdasondtest! (F03)	press **Quit. Button**	Lambdasond faulty or wrong attituted
F04	**Fault**	Boiler´s temperature to high!	Boiler temperature too high. Check flue draught and boiler sensor. (F04)	press **Quit. Button**	boiler´s function not ok, pumpfunction not ok, boiler´s feeler faulty
F05	**Fault**	smokegassensor > in "Ruler" > after time Param. "X25" > RGT is + ½ KT is smaller Param. "RGTk" bt.30-100%	burningfail fuel, grate, sir slider Controll (F05)	press **Quit. Button**	no Fuel; wrong airattitude; flue draught wrong; smokegassensor faulty
F06	**Fault**	Fotosensor via time „parameter“ Tübf	burning chamber, rust, drophole, hackchips controll! (F06)	press **Quit. Button**	no Fuel; Ignition faultly; smokegassensor not in position
F07	**Fault**	while ignition the Co² value and/ or FW value wouldn´t reached Para: FW Ignit. Para: TZ1-TZ4	Ignition not possible. Check fuel and grate (F07)	press **Quit. Button**	no Fuel; Ignition faulty
F08	**Note**	the filler´s level in the fillingroom will be not go under spiralsrunningtime „LZ G1“ min	Filler levels doesn´t react (F08)	None	Filler levels dusty or faulty
F12	**Fault**	No response from Hall-effect sensor G1 within time "t safe"	Drive motor G1 jammed (F12)	press **Quit. Button**	Fuel chute overfilled gearmotor faulty
F16	**Fault**	STL tripped	Warning STL high-temperature limiter tripped (F16)	Press STB press **Quit. Button**	boilerfunctions not OK, pumpfunctions not ok, boiler´s target not OK, boilers sensor faulty, check covering STB faulty
F19	**Note**	Param. "O2 sensor" or adjusted setting above the limits of param. "mV top" or "mV btm"	lambda sond readings above limits. Test oxygen sensor (F19)	press **Quit. Button**	Lambdasond dirty Lambdasond faulty
F21	**Fault**	Length of an oxygen sensor pause longer than "t stop"	Oxygen sensor pause timeout. Test oxygen sensor. (F21)	press **Quit. Button**	Lambdasond faulty; flue draught wrong; RGT to low
F22	**Note**	Fill level not reached within the time "Outfeed max" .	Fill level not reached.Check vacuum system (F22)	press **Quit. Button**	No fuel, fill level sensor defective, vacuum pipes clogged, vacuum system not air-tight, vacuum unit defective, outfeed motor jammed
F23	**Note (Fault)**	Ash box wasn´t emptied in the attituted cleaning time.	Empty ash box (F23)	press **Quit. Button**	Ash box not emptied or counter not reset after emptying
F40	**Fault**	Speed monitoring induced draft	Saugzug (F40)	press **Quit. Button**	Hall sensor defective Induced draft fan defective
F44	**Fault**	Photo sensor value in "Start" state too low (below 1000 kΩ) "Start" state maximum 20 min	Photo sensor reading too low at takeoff (F44–Check photo sensor)	press **Quit. Button**	Photo sensor not in holder Photo sensor defective

11 FAULT CLEARENCE

BS-02

Fault	Cause/ Function	Remedy
Control panel cannot be switched on	• Power supply disconnected • Fuse blown	• Check external mains plug and/or power supply lead between circuit boards • Check fuse in supply lead and on the control panel circuit board
Smoke escaping into boiler room	• Flue pipe leaking • Flue draught regulator unfavourably positioned • Flue not clear or not providing any draught	• Eliminate leaks • Consult flue installer • Check flue
Heat output too low	• Boiler very dirty • Heating system inadequately balanced • Boiler priority active • Flue draught in chimney flue too low	• Carry out complete cleaning • Balance heating system and heating pumps • Wait until boiler charging has finished or deactivate boiler priority • Increase flue draught in chimney flue if necessary
Detonation	• Detonation is only possible if the firebox is overfilled.	• Carry out complete cleaning or consult engineer if necessary
Difficult limit output	• Flue draught is too great • Wide demand fluctuations on the part of heating system components	• Re-adjust flue draught regulator • Stagger heating system component demand over time
Burning fault	• Lambdaprobe dirty • Lambdaprobe loosley • Lambdaprobe malfunction • burningchannel dirty	• Lambdaprobe cleaning • Lambdaprobe fix • Lambdaprobe renew • clean the burningchannel
STL tripped	• The amount of heat produced cannot be dissipated. A heating pump may have failed or not started up.	• Ensure heat dissipation by switching on pumps, opening mixer valve or turning on hot water taps. • The cause of the boiler overheating must be identified (if it happens frequently a heating engineer should be called in). • Check fuses on the boiler circuit board
Overheating	**Attention!** If the boiler temperature exceeds 100 °C, the boiler room must be vacated immediately! Under no circumstances may boiler doors or maintenance openings on the boiler be opened!	
Fan to noisy	• Fan is dirty • Fan or blade loose • Noise created by bends or rigid connecting pipe junctions with chimney flue • Fan bearing defective	• Clean fan • Eliminate cause • Fit insulators/sleeves • Order replacement motor
Drive motor too noisy	• Noise transmission	• If necessary, place the adjustable feet of the boiler on rubber pads

12 REPLACING FUSES

BS-01

Repair work may only be carried out by authorised technicians.!

Touching live electrical components can cause fatal injury.

Even when the Power switch is "OFF" some components of the system are still live.

Therefore, when carrying out repair work it is imperative that the power supply is disconnected by means of the "mains plug" or a circuit breaker.

1) Set the system to the programme „OFF“ and allow it to cool down for at least 10 minutes.

2) Switch the Power switch to „0“ and unplug the mains plug on the back of the boiler to fully disconnect it from the power supply.

3) Unfasten the controller cover and remove it.

4) Locate the defective fuse with the aid of the wiring diagramme in the installation instructions and replace it.

5) Press in the fuse holder 2-3 mm using a medium sized screwdriver and turn it half a turn antilockwise to release it. The holder and fuse will then pop out a few mm.

6) Remove the blown fuse and replace with a new one.

7) Insert the fuse holder, press it in 2-3 mm and secure it in position by turning half a turn clockwise.

13 PARAMETER CHANGES

BS-01

Nr:	Parameter	Standard	1. changes	2. changes	3. changes

14 HEATING CIRCUIT SETTINGS

BS-01

Heating circuit 0	Heating circuit 1	Heating circuit 2	Hot water 0

15 TO DISPOSE

BS-01

Observe disposal regulations!

Observe the locally applicable regulations for the disposal of waste and machine parts.

Contact your installer or GUNTAMATIC customer service. Dismantling is carried out in the reverse order of assembly.

NOTES

16 DECLARATION OF CONFORMITY

02

CE GUNTAMATIC

Manufacturer

GUNTAMATIC Heiztechnik GmbH
Bruck 7
A-4722 Peuerbach
AUSTRIA

Product

BIOSTAR

We hereby declare that the aforementioned heating boiler in the form we have placed on the market corresponds to the basic safety and health protection requirements of the guidelines and standards listed below. In the event of a subsequent modification of parts of the system or the entire system that has not been agreed with us, this declaration automatically loses its validity.

Guidelines

2006/42/EG	Machinery Directive
2014/35/EU	Electrical equipment for use within certain voltage limits.
2014/30/EU	Electromagnetic Compatibility Directive.
2015/1189	Ecodesign requirements for solid fuel boilers - ecodesign

Norms

ÖNORM EN 303-5	Solid fuel boilers, manually and automatically fed furnaces, nominal heat output up to 500 kW.
ÖNORM EN 60335-2	Safety of household and similar electrical appliances. Particular requirements for gas, oil and solid fuel appliances with electrical connections.

NOTES

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