Operating Manual

BioWIN

Pellet central heating boiler

Windhager Zentralheizung

www.windhager.com

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Important information for system operators

Dear Heating System Owners,

We would like to congratulate you on your new environmentally friendly boiler system. With the purchase of this high-quality product by WINDHAGER ZENTRALHEIZUNG, you have selected a system that provides more comfort and optimised fuel consumption while utilising an environmentally friendly means of saving resources. Your boiler was manufactured under strict ISO 9001 certified standards, was subjected to extensive tests and all its components are recyclable.

On the following pages we have provided specific information and important tips regarding system operation, unit functions and cleaning. Please pay close attention to these instructions. Familiarity with the material in this document will allow you to enjoy long-term operation of the unit. We wish you all the best with your WINDHAGER boiler!

Cordially,

WINDHAGER ZENTRALHEIZUNG

1.1 Safety precautions

The boiler and related accessories are state of the art and meet all applicable safety regulations.

Your boiler and all accessories operate using 230 V AC electrical current. Improper installation or repair can pose the danger of life-threatening electrical shock. Installation may be performed only by appropriately qualified technicians.

Caution symbols

Please take careful note of the following symbols in this Operating Manual.

Ignoring the warnings identified can lead to **personal injury**.

Ignoring the warnings identified can lead to **malfunction of, or damage to the boiler or heating system**.

1.2 Fuel

The boilers are designed to burn the following fuels:

Pellets according to ÖNORM M7135 or DIN*plus*.
Significant criteria based on the standards are as follows:

Diameter 6 mm	Length 80% between 15 – 30 mm
Smooth surface	Density at least 1.1 kg/dm3
Residual moisture content max. 10%	Energy content min. 18 MJ/kg = 5 kWh/kg (in water-free condition)
Ash content max. 0.5%	Abraded particles max. 2.3%
Chemical/synthetic binding agents are strictly prohibited	No impurities from varnish or paint residues, etc.

The pellets must be stored in a dry place so that they can be transported without problems and in order to achieve trouble-free operation with optimum combustion and at maximum efficiency.

Important information for system operators

1.3 Start-up and maintenance

Please permit Windhager Customer Service or have one of our customer service PARTNERS put your new boiler into service. In this way, all functions of the new unit will be thoroughly checked; you will also benefit from the detailed information provided by the system installer. Installation by a qualified technician as well as the maintenance required by the guarantee limitations and undertaken by WINDHAGER Customer Service or a customer service partner will guarantee the optimal use and service life of your boiler system. This is the only way to assure the benefits of this technologically advanced boiler and guarantee safe, environmentally friendly and energy-saving system operation.

The following preconditions must be met before you order the initial start-up:

1.) Boiler installed correctly.
2.) System fully wired up electrically.
3.) System rinsed, filled and vented – heat consumption must be possible.
4.) Boiler connected to domestic water and filled.
5.) Sufficient quantity of fuel available (pellets, split logs, oil or gas).
6.) The customer must be present during start-up.

The initial start-up cannot be carried out if any of these points are neglected. The customer will be charged for any unnecessary costs arising as a result.

Start-up and maintenance by WINDHAGER Customer Service or a customer service partner are part of the guarantee requirements of the enclosed "guarantee limitations".

Note: During the first few weeks after start-up, condensation can occur in the combustion chamber, ash pan and on the heating surfaces. This has no effect on the function and service life of the boiler.

1.4 Functional test

EN 12828 and ÖNORM B8131 require that the function of the system and related safety equipment be checked and certified yearly by a qualified technician (installer, heating system contractor).

At two-year intervals, the heating water condition must be checked (ÖNORM H 5195-1) by a heating expert (installer) (see FireWIN installation instructions – Heating water); this is to prevent corrosion and sediment accumulation in the heating system and boiler. For systems using more than 1,500 litres of water (e.g., systems with accumulator tanks), this inspection is required on an annual basis.
In the event of repair work requiring a change of water in the heating system, the heating water is to be checked within 4 to 6 weeks after such work.
Corrosion and sediment resulting from improper heating water are not covered by the guarantee and warranty.

Important information for system operators

1.5 Filling the pellet store

The pellet flue-connected stove must be switched off **correctly** at least 15 minutes before the store is filled – Fig. 2.

Press the ON/OFF button. Never switch off using the emergency OFF switch!

Pressing one of the six buttons firstly switches just the lighting and display on. The boiler is only switched off when the button is pressed for the 2nd time. Wait until burnout mode has finished (not indicated on the display) and open the combustion chamber doors.

During filling, negative pressure is created in the pellet store and this can cause burn-back in the pellet boiler. Therefore, the boiler must be stopped from operating during the filling procedure.

Tip: To prevent negative pressure arising in the pellet boiler, remove the inspection cover (Fig. 3) and leave open during the filling process.

Fig. 2 Switching off BioWIN

Fig. 3 Opening inspection cover during the filling process

1.6 Sources of danger

1.6.1 **Power failure** (or if the blower is not running)

Do not open the combustion chamber door, there is an increased risk of deflagration when opening the combustion chamber door. A self-test is performed following a power failure during combustion and then operation is continued automatically.

1.6.2 Burner pot

Never fill the burner pot with pellets by hand. Excessive combustion material in the burner pot means that the pellets will not be ignited optimally. Too much low temperature carburisation gas will be generated and this can lead to deflagration.

1.6.3 Entry to pellet storage room, storage container

Under unfavourable circumstances, elevated concentrations of dangerous gases can build up in pellet storage rooms (e.g. carbon monoxide). If these concentrations are allowed to build up over long periods of time, they can represent a danger. Although there is no danger under normal circumstances, such cases cannot be ruled out entirely.

– When you are working in filled pellet storage rooms, always have another person stand outside the store as a safeguard. Always ventilate the pellet store thoroughly before entering.
– In stores that are difficult to access or only accessible from above (e.g. underground tanks), the person entering the store should be secured in addition.
– Keep children away from the pellet store!

Do not enter non-ventilated storage rooms (in particular underground tanks).

Operation

2.1 Functional description, function elements and operating controls

The BioWIN pellet boiler and the Modular Energy System MES or the REG standard control combine to form a perfect unit. The BioWIN automatically fires when the control system signals a heating requirement. Following "purging" (safety function), ignition starts and the pellet metering auger switches on. The burner pot is automatically filled with pellets. When flame formation has been detected (thermocontrol sensor), the boiler enters flame stabilisation mode and then control mode (modulation mode) and keeps to the specified boiler temperature setpoint (between 60 °C and 75 °C). The boiler enters burnout mode if the heat consumed drops below the minimum nominal thermal output or no heating requirement is signalled by the control system. The blower continues to run until the burner pot has cooled down.

2.1.1 BioWIN Klassik

The reserve supply container is loaded by hand. The heating surfaces are cleaned manually using the cleaning lever. The cleaning residues from the heating surfaces and the combustion residues from the burner pot drop into the ash pan.

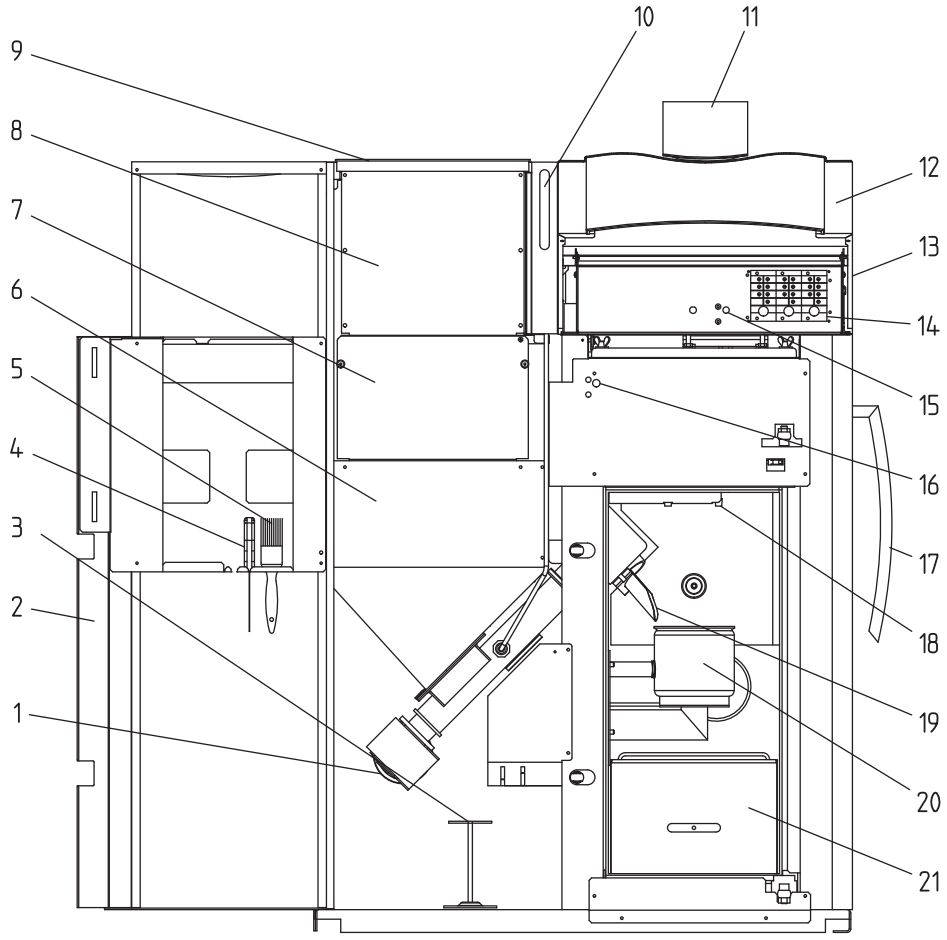


Fig. 4 BioWIN Klassik without combustion chamber door and with open cladding door

1	Auger motor	12	Cladding cover, at front
2	Cladding door	13	Cladding cover, at rear
3	Cleaning tool/cone removal tool	14	MES modules
4	Spatula	15	Safety thermostat for boiler temperature
5	Cleaning brush	16	Safety thermostat for auger tube
6	Pellet reserve supply container	17	Lever for cleaning heating surfaces
7	Inspection cover, bottom	18	Baffle plate
8	Inspection cover, top	19	Down chute
9	Cover for pellet reserve supply container	20	Burner pot
10	Level indicator for water tank	21	Ash pan
11	InfoWIN operating unit		

2.1.2 BioWIN Premium

Version as BioWIN Klassik, but in addition with fully automatic pellet feed

The pellet feed uses a maintenance-free suction turbine to fill the BioWIN reserve supply container fully automatically with pellets from a pellet storage room or storage container. The pellet feed is switched on by the lower fill level switch (proximity switch) in the reserve supply container or at the end of the enable time or the beginning of the start time, and runs for as long as the reserve supply container is full. Filling is not started if the boiler is in heating operation or the feed has been blocked by the control unit (not during the enable time e.g. at night). If the boiler is operating when filling is necessary, the boiler switches to burnout mode.

Switching between suction probes 1, 2 and 3 is fully automatic. The system changes to the next suction probe after the reserve supply container has been filled a certain number of times. This means the storage room is evenly emptied to a large extent.

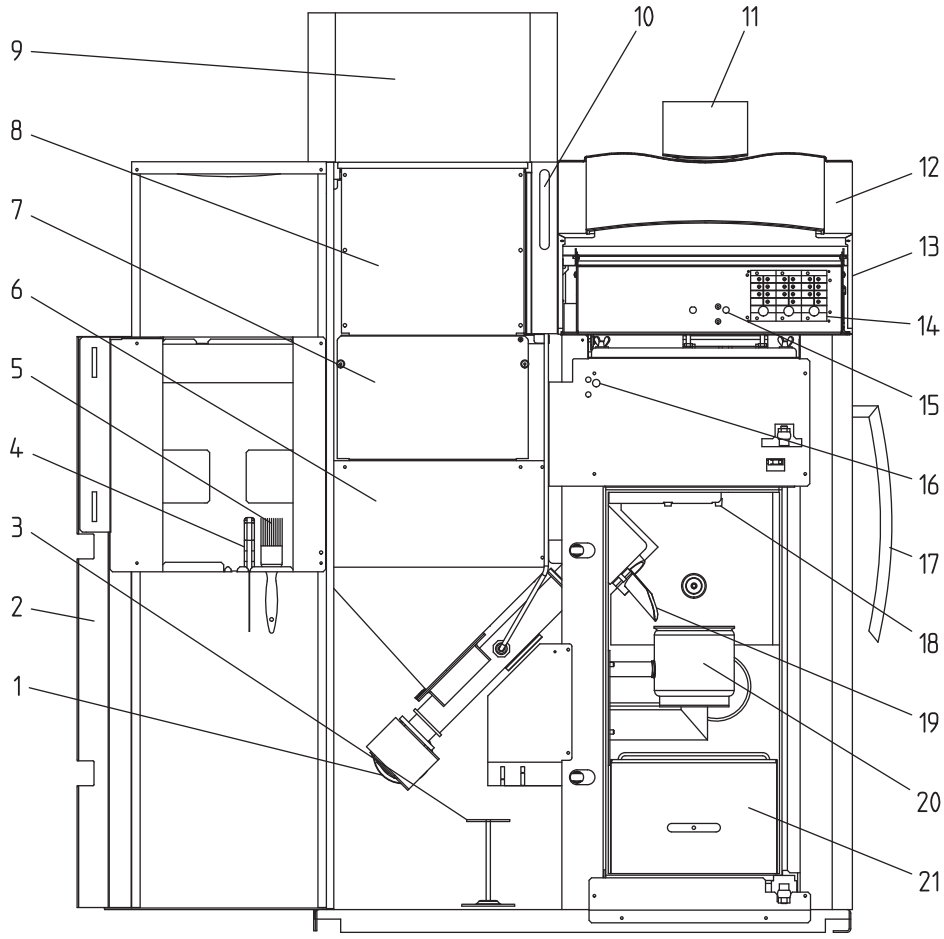


Fig. 5 BioWIN Premium without combustion chamber door and with open cladding door

1 Auger motor
2 Cladding door
3 Cleaning tool/cone removal tool
4 Spatula
5 Cleaning brush
6 Pellet reserve supply container
7 Inspection cover, bottom
8 Inspection cover, top
9 Fully automatic pellet feed
10 Level indicator for water tank
11 InfoWIN operating unit
12 Cladding cover, at front
13 Cladding cover, at rear
14 MES modules
15 Safety thermostat for boiler temperature
16 Safety thermostat for auger tube
17 Lever for cleaning heating surfaces
18 Baffle plate
19 Down chute
20 Burner pot
21 Ash pan

2.1.3 BioWIN Exklusiv

Version as BioWIN Premium, but in addition with fully automatic heating surface cleaning and ash removal

Fully automatic heating surface cleaning:

A motor moves the heating surface cleaning system vertically and the heating surfaces remain clean.

Fully automatic ash removal:

During fully automatic ash removal, the ash is transported out of the combustion chamber and the heating surfaces in the side ash container under the supply container using a motor and auger. Pellets only have a low ash content (approx. 0.5 %). The container therefore only needs emptying 1–4 times a year.

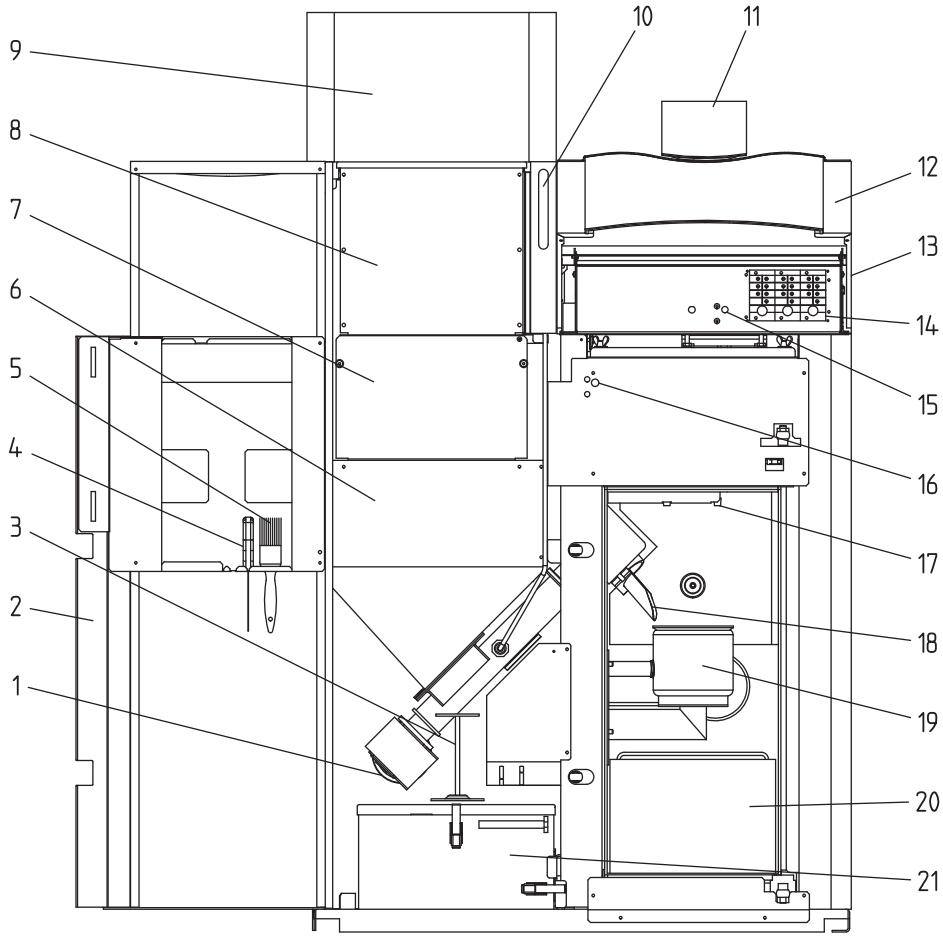


Fig. 6 BioWIN Exklusiv without combustion chamber door and with open cladding door

1 Auger motor
2 Cladding door
3 Cleaning tool/cone removal tool
4 Spatula
5 Cleaning brush
6 Pellet reserve supply container
7 Inspection cover, bottom
8 Inspection cover, top
9 Fully automatic pellet feed
10 Level indicator for water tank
11 InfoWIN operating unit
12 Cladding cover, at front
13 Cladding cover, at rear
14 MES modules
15 Safety thermostat for boiler temperature
16 Safety thermostat for auger tube
17 Baffle plate
18 Down chute
19 Burner pot
20 Ash deflector
21 Ash container

Operation

2.2 Check before initial start-up

a) System pressure (heating water pressure):
The system must be filled and vented. With the system cold, pressure should be at least 1.0 bar (maximum 1.8 bar). If you have any questions, your installer will gladly answer them.

b) Ventilation:
Please make sure the boiler room is well ventilated. The air supply must be as free of dust as possible.

c) Flue:
Please have the chimney sweep check the flue, and, if necessary, clean it.

d) Water tank:
For level check in water tank for burn-back safeguard – see page 43.

2.3 Filling the reserve supply container

2.3.1 BioWIN Klassik – Manual filling

Open reserve supply container cover and fill reserve container up to max. 1 cm below the edge.
Close the cover.

2.3.2 BioWIN Premium and Exklusiv – fully automatic filling

The reserve supply container is filled by the fully automatic pellet feed. WINDHAGER Customer Service or the customer service PARTNER will perform the first fill (start-up), take the boiler and its pellet supply into service and familiarise the customer with the operation and cleaning of the boiler, with reference to the Operating Manual.

Operation

2.4 InfoWIN

The InfoWIN is an indication and operation unit on the boiler.

It consists of a large full text display, an ON/OFF button with an LED signal lamp indicating Operation (green) or Malfunction (red), a button for manual operation / chimney sweeper function as well as four individual menu buttons. The function of each menu button is displayed on the Menu line.

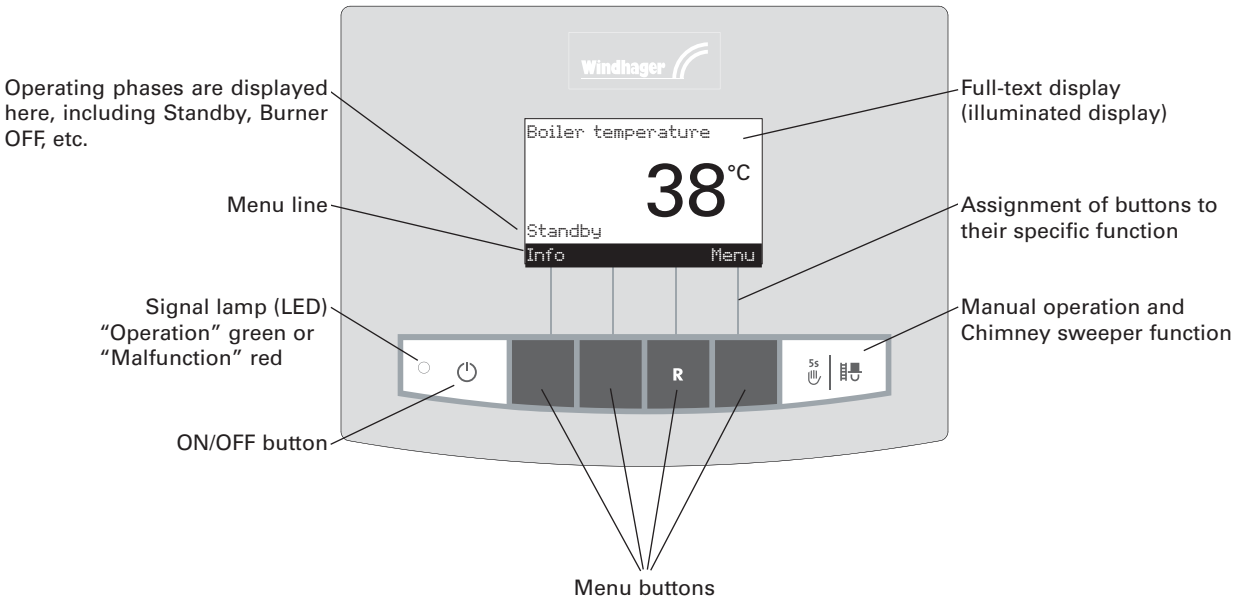


Fig. 7 InfoWIN

The various operating modes are displayed on InfoWIN together with the corresponding operating phases.

The following **operating modes** exist:

- OFF
- ON (with self-test, lighting ON, lighting OFF)
- Pellet feed
- Solid fuel / buffer mode
- Manual operation
- Chimney sweeper function
- Shut-down procedure

The individual operating modes also have different **operating phases**

The following **operating phases** exist:

- Standby, display OFF
- Purging
- Ignition phase
- Flame stabilisation
- Modulation mode
- Burnout
- Burner OFF
- Switch off heat generator

2.5 Operating modes

2.5.1 OFF mode

The boiler is switched off when in OFF mode. The display and all buttons, with the exception of the *ON/OFF* button, do not function. The LED on the InfoWIN does not light up – Fig. 8.

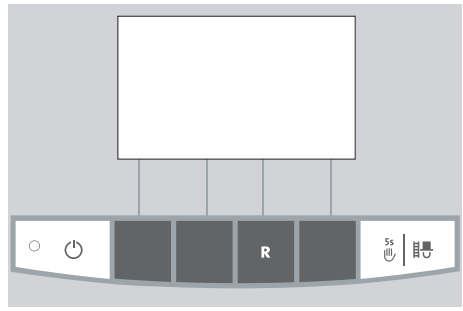


Fig. 8 OFF mode

2.5.2 ON mode, lighting ON, self-test, lighting OFF

Press the ON/OFF button, lighting and display are switched on and the self-test starts automatically – Fig. 9.

Self-test:

Sensors, switches and motors are checked during the self-test.

After a successful self-test, the display shows an operating phase and the boiler water temperature (standard display). The LED control lamp lights up green and the desired functions can be selected using the buttons – Fig. 10.

If the self-test was unsuccessful, an information message (e.g. information, fault, alarm) is displayed (see sections 4.3 and 4.4).

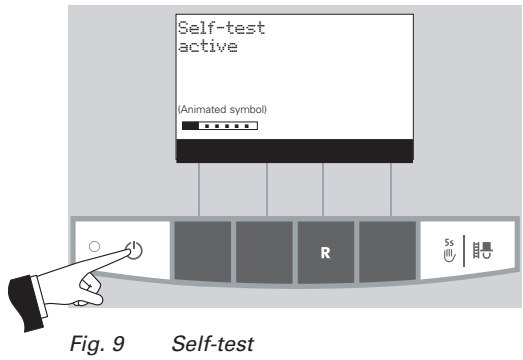


Fig. 9 Self-test

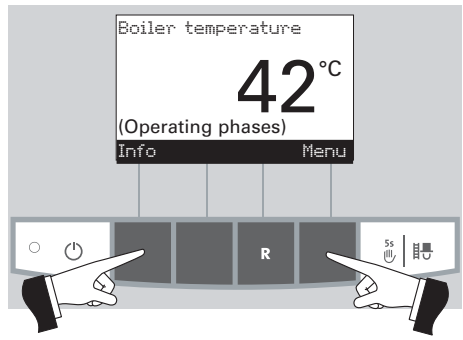


Fig. 10 Standard display

Lighting ON/OFF

The display lighting switches off automatically after 10 min. (Fig. 11). Pressing one of the six buttons switches the lighting on again for 10 min.

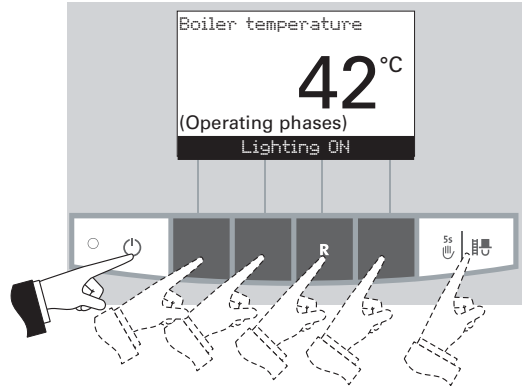


Fig. 11 Display lighting ON

InfoWIN identifies and stores the various operating modes and states. Once the system is switched on, other operating modes may also be displayed instead of the standard display, such as manual operation, solid fuel or accumulator tank operation; malfunctions are also displayed. These operating modes and states are described later in these instructions.

2.5.3 Pellet feed

Pellet feed – burnout

Pellet feed from the storage room into the reserve supply container has been requested. Combustion is stopped. Pellet transport into the burner pot is stopped, the Induced draught fan continues to run until all the remaining pellets have been burned and the burner pot has cooled down – Fig. 12.

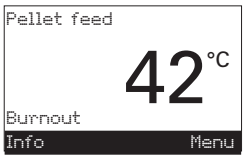


Fig. 12

Pellet feed in operation

The pellet feed is in operation. Pellets are supplied from the storage room into the reserve supply container. The burner is locked – Fig. 13.

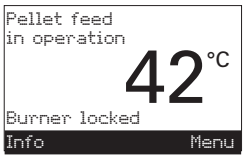


Fig. 13

2.5.4 Solid fuel / buffer mode

If the BioWIN pellet boiler is combined with a solid fuel boiler or an accumulator tank, the WVF or BUL module integrated in the control panel automatically switches over between pellet and solid fuel/buffer mode.

Combustion of the BioWIN is stopped when the WVF or BUL module sends the request to switch over to solid fuel/buffer mode – Fig. 14.

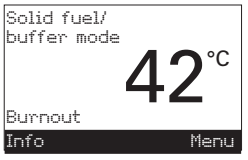


Fig. 14

Following this, the system switches over to solid fuel/buffer mode and the BioWIN burner is locked – Fig. 15.

If the pellet boiler is switched off using the ON/OFF button on the InfoWIN, an automatic switchover to solid fuel/buffer mode is performed in conjunction with a WVF module. Once the InfoWIN unit is switched on, the pellet boiler can be locked out for a maximum of 15 minutes due to switch-over delays. This is displayed by InfoWIN – Fig. 15.

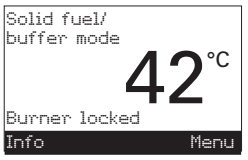


Fig. 15

After an hour in solid fuel/buffer mode, the display is shut down fully, only the green LED is lit up. The display is switched back on by pressing a button or when there is a heating requirement.

Operation

2.5.5 Manual operation

Note: Manual operation cannot be started in "solid fuel/buffer mode". Manual operation must not be started if an installed solid fuel boiler is operating (heated up). Manual operation may be started if there is no solid fuel boiler installed or if this is not operating but only the accumulator tank is active. In this case, first set the operating mode switch on the WVF module to relay test 2 or on the BUL module to relay test 1 (see WVF or BUL module operating manual).

Pressing one of the six buttons switches the lighting and display on. Manual operation starts if the *Manual operation / chimney sweeper function* button is pressed for more than five seconds – Fig. 16. This sets the boiler temperature to the setpoint fixed for manual operation (standard value 60 °C). The current automatic setting is not affected by this. The lighting is switched off after the lighting timer has counted down (10 min.); the function or display remains unchanged.

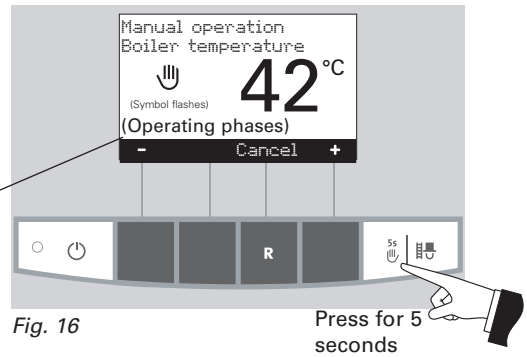


Fig. 16

Pressing the *Cancel* button or *Manual operation / chimney sweeper function* button terminates the function – Fig. 22. The boiler returns to automatic operation.

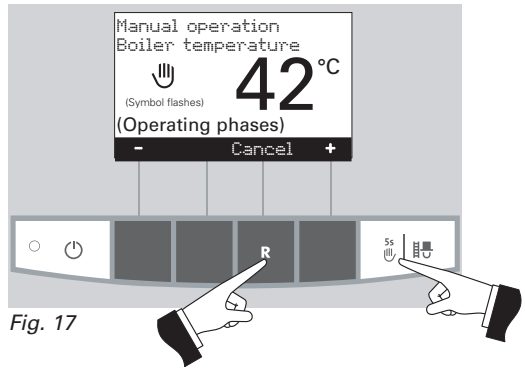


Fig. 17

Setpoint adjustment for manual operation

By pressing the *+* or – button the display switches to the setpoint adjustment mode – Fig. 18. Using the *+ or* – button can change the setpoint in 1 K steps. The temperature set in this mode is not permanently saved. The original set temperature is used once manual operation ends.

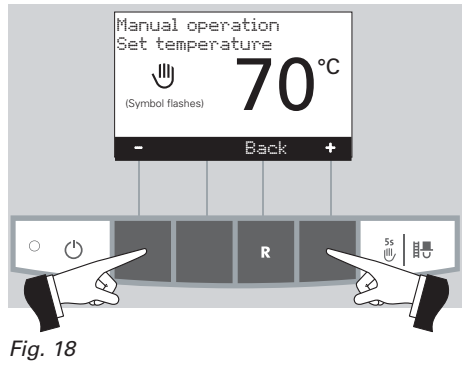


Fig. 18

After pushing the *Return* button (Fig. 19) or after waiting 45 seconds, the screen returns to its previous display.

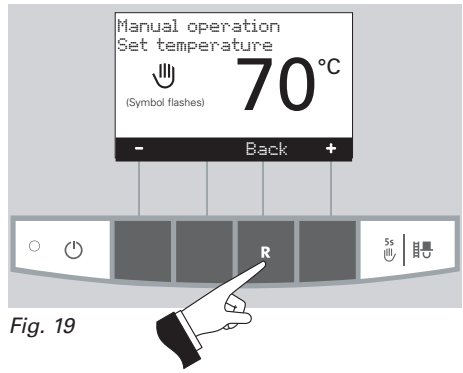


Fig. 19

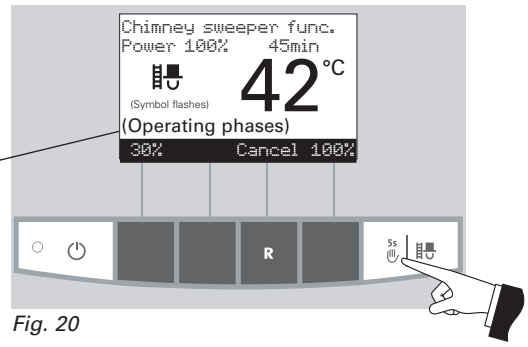
Operation

2.5.6 Chimney sweeper function

This function aids the performance of legally-required emissions testing.

Note: The chimney sweeper function cannot be started in "solid fuel/buffer mode". The chimney sweeper function must not be started if an installed solid fuel boiler is operating (heated up). The chimney sweeper function may be started if there is no solid fuel boiler installed or if this is not operating but only the accumulator tank is active. In this case, first set the operating mode switch on the WVF module to relay test 2 or on the BUL module to relay test 1 (see WVF or BUL module operating manual).

A short press of the *Manual operation / chimney sweeper function* button switches on the lighting and display. Pressing the button again starts the chimney sweeper function – Fig. 20. The boiler temperature is set to approx. 60 °C for 45 min.



The various operating phases are displayed here, including Burner in operation, Burner OFF, etc.

Fig. 20

Pressing the corresponding menu button enables the boiler to be operated with 30 % or 100 % output – Fig. 21. The lighting is switched off after the lighting timer has counted down (10 min.); the function or display remains unchanged.. Only the lighting is switched on when the button is first pressed.

The operating time is reset to 45 min. when the *Manual operation / chimney sweeper function* button is pressed again.

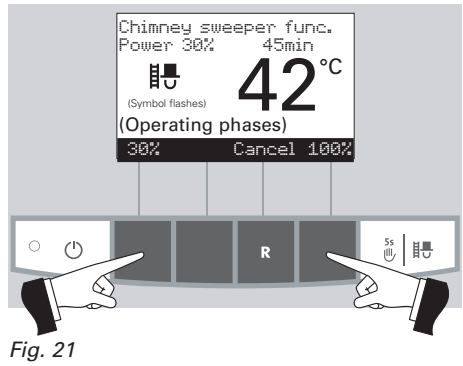


Fig. 21

The chimney sweeper function ends

– when the *Cancel* button is pressed – Fig. 22.
– automatically after about 45 minutes.

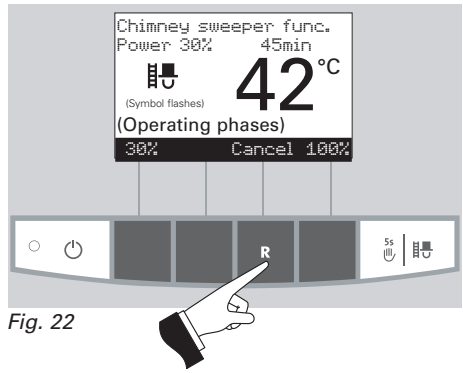
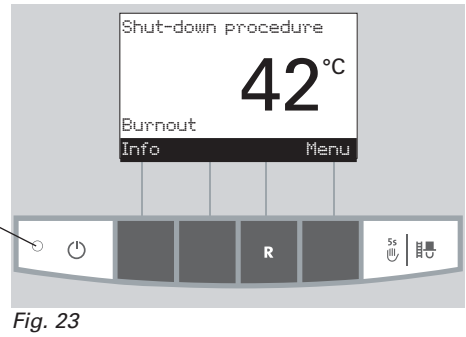


Fig. 22

2.5.7 Shut-down procedure

The boiler is switched off - Fig 23.



The green LED flashes

Fig. 23

Operation

2.6 Operating phases

2.6.1 Standby

During this operating phase, the controls do not transmit requests for heat. The burner is switched off and the boiler temperature setpoint is 0 °C – Fig. 24.

After an hour in standby mode, the display is shut down fully, only the green LED is lit up. The display is switched back on by pressing a button or when there is a heating requirement.

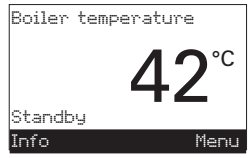


Fig. 24

2.6.2 Purging

The Induced draught fan runs, the combustion chamber of the BioWIN is flushed through with fresh air. This phase can last several minutes before the burner fires – Fig. 25.

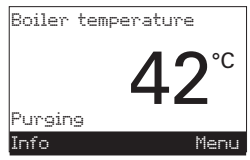


Fig. 25

2.6.3 Ignition phase

The Induced draught fan runs, pellets are transported into the burner pot and are ignited. When flame formation is detected, the system switches over to flame stabilisation – Fig. 26.

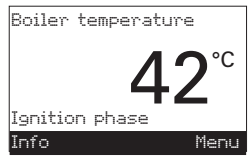


Fig. 26

2.6.4 Flame stabilisation

Following the ignition procedure, even combustion is established and then the system switches over to modulation mode – Fig. 27.

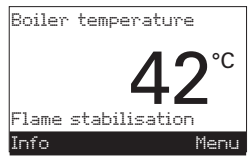


Fig. 27

2.6.5 Modulation mode

The burner is in modulation mode. The output is infinitely varied between 30 % and 100 % – Fig. 28.

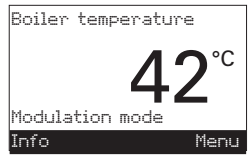


Fig. 28

2.6.6 Burnout

Combustion is stopped. Pellet transport into the burner pot is stopped, the Induced draught fan continues to run until all the remaining pellets have been burned and the burner pot has cooled down – Fig. 29.

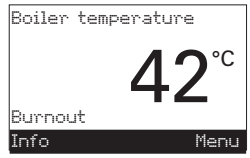


Fig. 29

2.6.7 Burner OFF

There is a heating requirement from the control system, but the boiler temperature (actual value) is higher than the boiler temperature setpoint. This means combustion is stopped and the burner is switched off – Fig. 30.

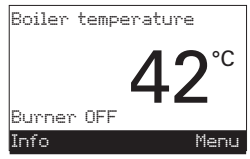


Fig. 30

2.7 Information text

Pressing the *Info* button calls up the most important BioWIN information – Fig. 31.

The *arrow* buttons select and display sub-menus – Fig. 32. Pressing the *Back* button (Fig. 33) or waiting 45 seconds returns to the standard display.

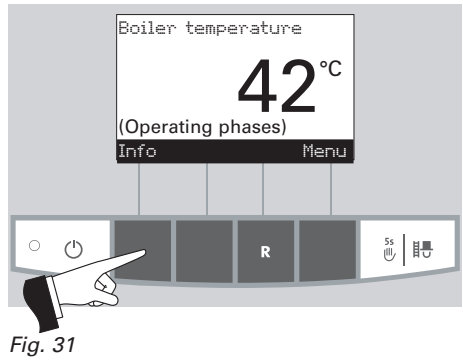


Fig. 31

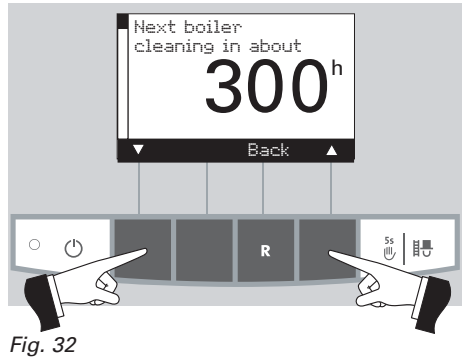


Fig. 32

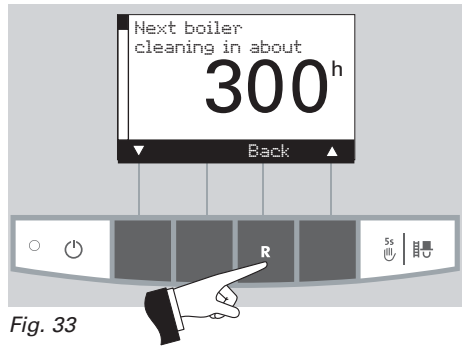


Fig. 33

The following **information texts** exist:

- Next boiler cleaning in about [h]
- Operating hours [h]
- Total pellet consumption [t]
- Flue gas temperature [°C]
- Boiler temperature setpoint [°C]
- Current boiler output [%]
- Switch/buffer temperature
- Display module software version
- Firing automate software version
- Boiler model

2.7.1 Next boiler cleaning

Display of the operating time in hours remaining until the next boiler cleaning – Fig. 34.

Note: The operating time remaining until the next boiler cleaning depends on the operating method and is constantly recalculated. Therefore, there may be deviations from the normal operating hours.

Fig. 34

2.7.2 Operating hours

The total number of burner operating hours is displayed – Fig. 35.

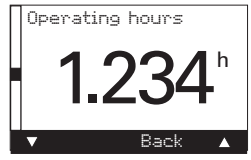


Fig. 35

2.7.3 Total pellet consumption

The total amount of pellets consumed is displayed in tonnes - Fig. 36.

Note: The "Total pellet consumption" is a calculated value and can differ from the actual value by ±15%.

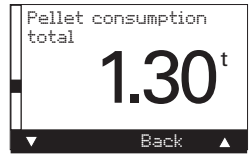


Fig. 36

2.7.4 Flue gas temperature

This function displays the current flue gas temperature – Fig. 37.

The flue gas temperature is measured directly on the flue outlet. It may therefore deviate from a standard measurement.

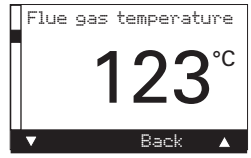


Fig. 37

2.7.5 Boiler temperature setpoint

The display indicates the boiler temperature setpoint as calculated by the control system. This setpoint is used to control the burner – Fig. 38.

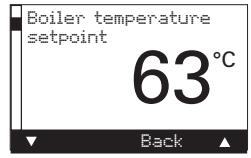


Fig. 38

2.7.6 Current boiler output

The current boiler output is displayed in %. The boiler output (modulation mode) can be set from 30 % to 100 % – Fig. 39.

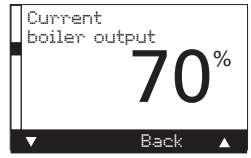


Fig. 39

2.7.7 Switch/buffer temperature

The switch/buffer temperature is not displayed for an individual BioWIN boiler. The current switch/buffer temperature is only displayed for a BioWIN cascade (system with 2 or 3 BioWINs) – Fig. 40.

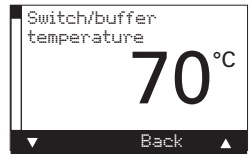


Fig. 40

2.7.8 Display module software version

The current software version of the display module (InfoWIN) is displayed – Fig. 41.

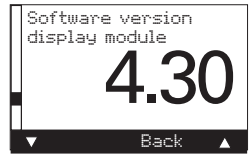


Fig. 41

2.7.9 Firing automate software version

The current software version of the firing automate (main PCB) is displayed – Fig. 42.

Fig. 42

2.7.10 Boiler model

With an individual BioWIN boiler, the boiler model is always displayed and 0 is always displayed as the boiler – Fig. 43.

With a BioWIN cascade (system with 2 or 3 BioWINs), the boiler model and boiler name of the pellet boiler are displayed – Fig. 43.
Boiler 0 = 1st boiler
Boiler 1 = 2nd boiler
Boiler 2 = 3rd boiler

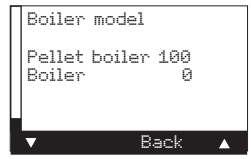


Fig. 43

2.8 Menu guide

Pressing the *Menu* button changes the menu display to the Operator level or the Service level – Fig. 44.

Use the *arrow* buttons to select the Operator level or Service level (Fig. 45) and confirm with the *Choose* button – Fig. 46.

The menu item or sub-menu item is exited by pressing the *Back* button (Fig. 47) or after a delay of 45 seconds.

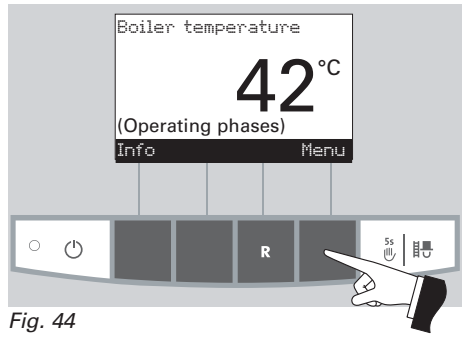


Fig. 44

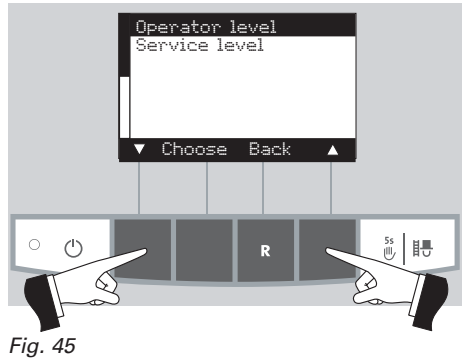


Fig. 45

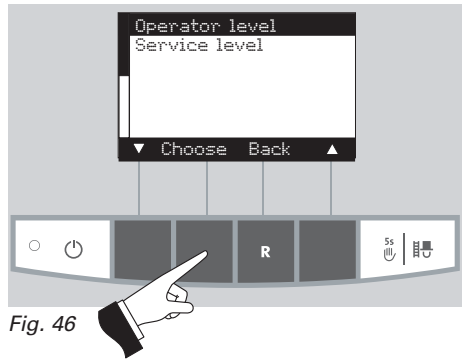


Fig. 46

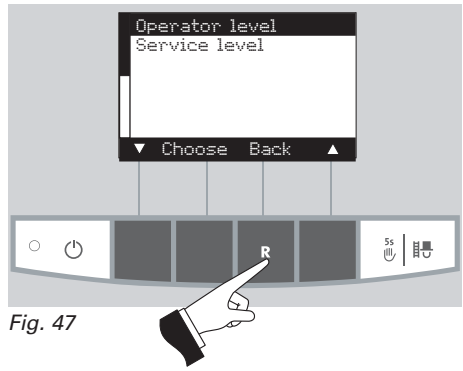
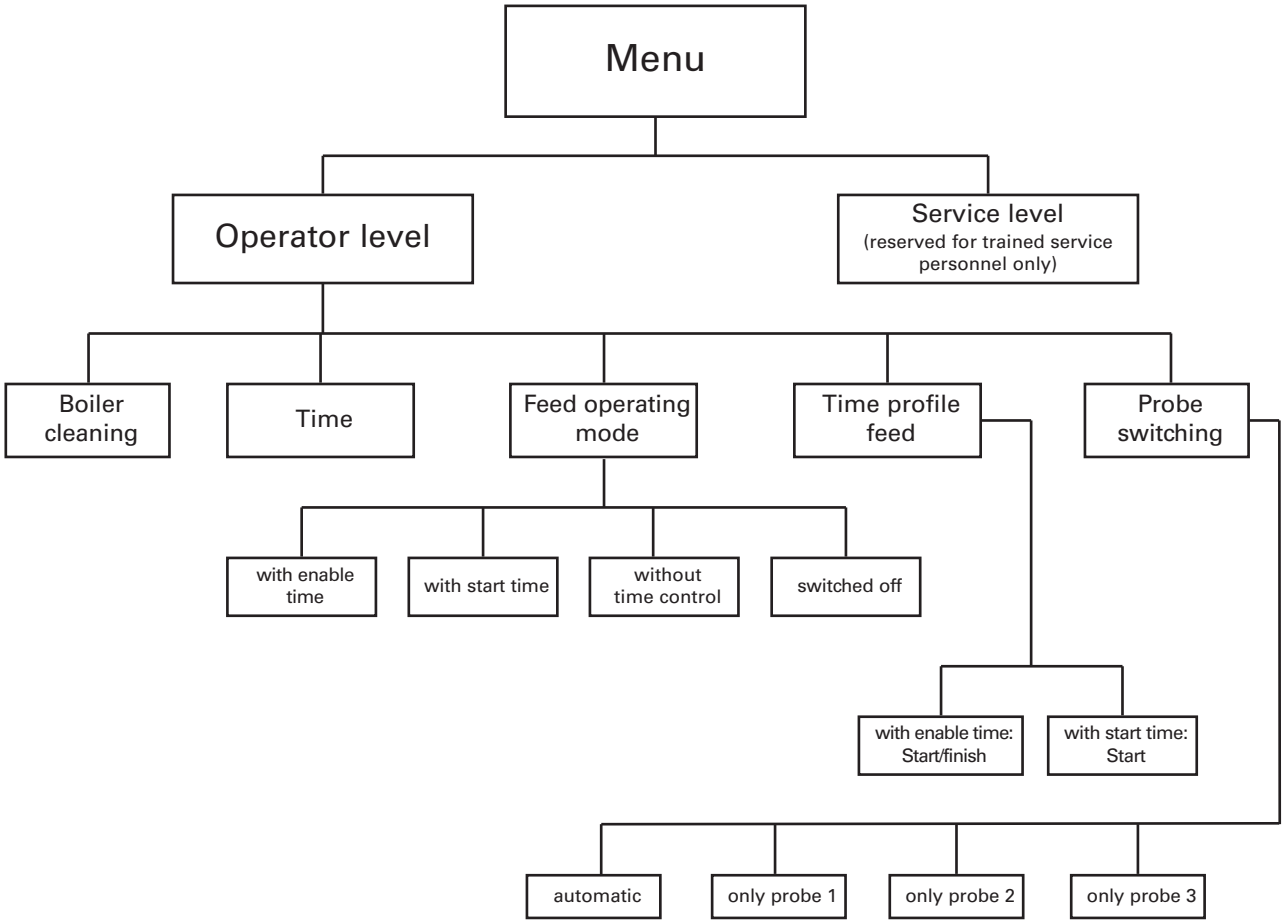


Fig. 47

Only trained service personnel may perform system modifications on the Service level.

Operation

Menu structure:



[1] This is only displayed if there is a feed system fitted and this has been set in the service level by trained service personnel.

2.8.1 Operator level

Pressing the *Menu* button changes to the “Operator level” and “Service level” – Fig. 48.

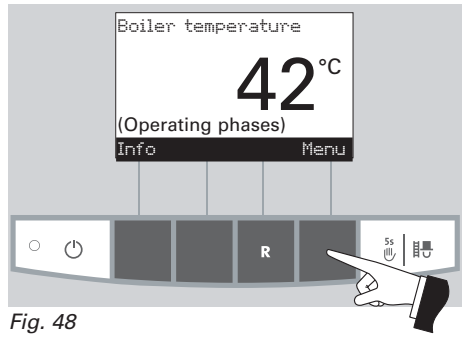


Fig. 48

The *Arrow* buttons select the “Operator level”; the *Choose* button confirms the choice – Fig. 49.

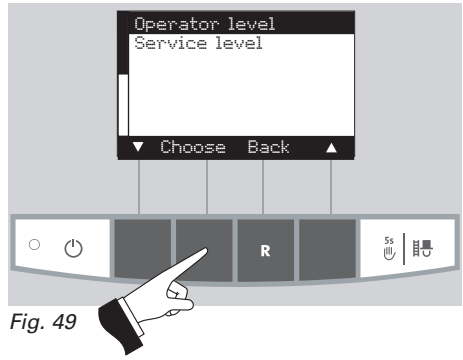


Fig. 49

On the Operator level, use the *Arrow* buttons to select the required sub-menu (Fig. 50); the *Choose* button confirms the choice.

Adjusting the:
boiler cleaning: see section 2.8.1.1
time: see section 2.8.1.2.
feed operating mode: see section 2.8.1.3.
time profile feed: see section 2.8.1.4.
probe switching: see section 2.8.1.5.

Note: The menu items “Feed operating mode”, “Time profile feed” and “probe switching” are only shown if a feed or probe switching function is provided and activated on the service level.

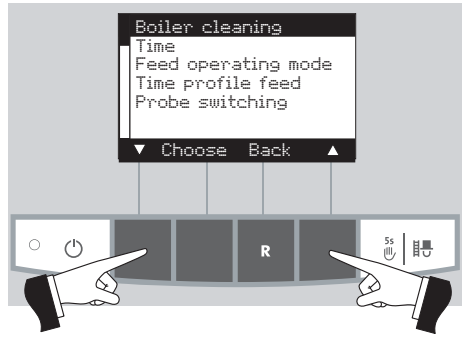


Fig. 50

The menu item or sub-menu item is exited by pressing the *Back* button (Fig. 51) or after a delay of 45 seconds.

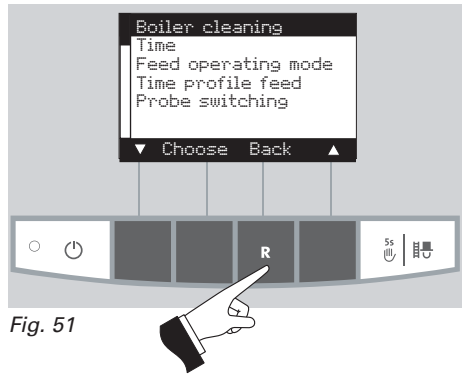


Fig. 51

2.8.1.1 Boiler cleaning – Resetting the cleaning request

After boiler cleaning has been performed (section 3.1), boiler cleaning must be confirmed so that the operating time until the next boiler cleaning is restarted.

Without cleaning boiler cleaning must **not** be reset.

Pressing one of the six buttons switches the lighting and display on – Fig. 52.

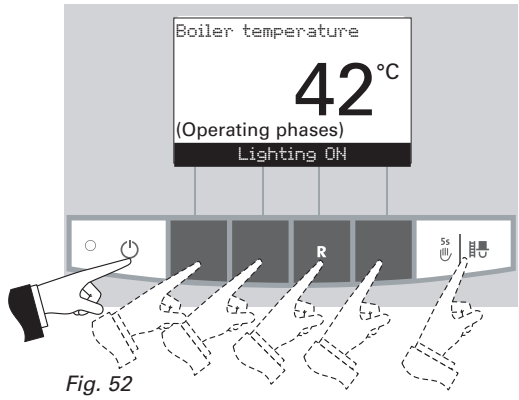


Fig. 52

Press the *Menu* button – Fig. 53.

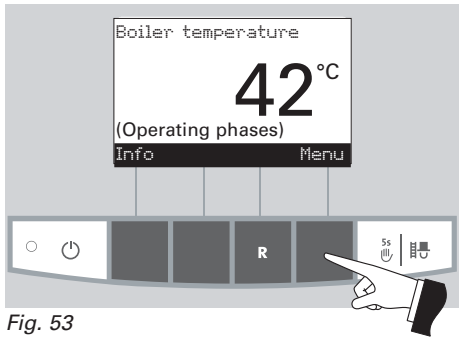


Fig. 53

Confirm the selected menu item “Operator level” by pressing the *Choose* button – Fig. 54.

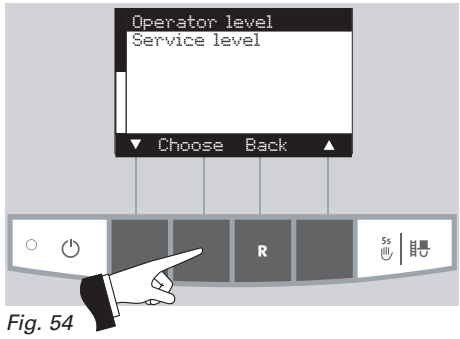


Fig. 54

The *arrow* buttons select the “Boiler cleaning” sub-menu – Fig. 55.

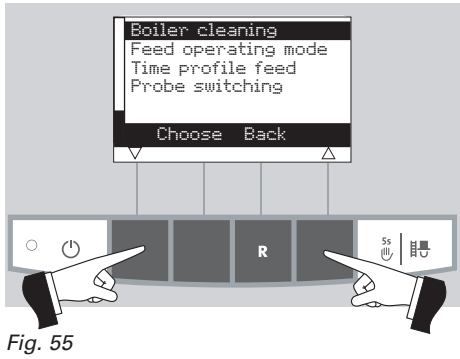


Fig. 55

Confirm the selected “Boiler cleaning” sub-menu by pressing the *Choose* button – Fig. 56.

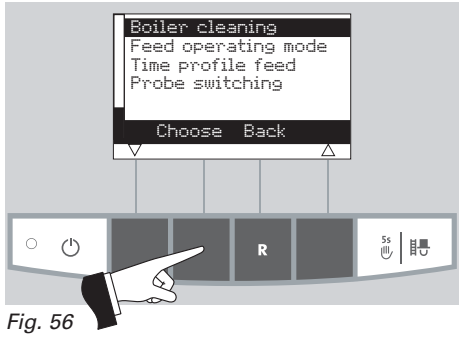


Fig. 56

Operation

Pressing the *Yes* button resets the boiler cleaning – Fig. 57. The display shows "Saving parameter value" for a few seconds (Fig. 58) and then changes back to the previous level – Fig. 59.

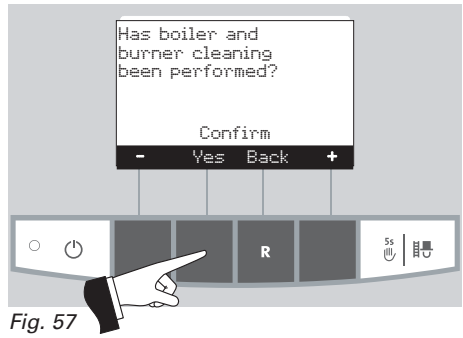


Fig. 57

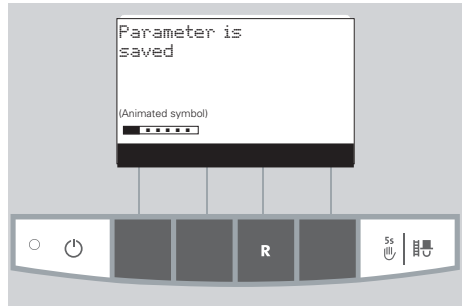


Fig. 58

The menu item or sub-menu item is exited by pressing the *Back* button (Fig. 59) or after a delay of 45 seconds.

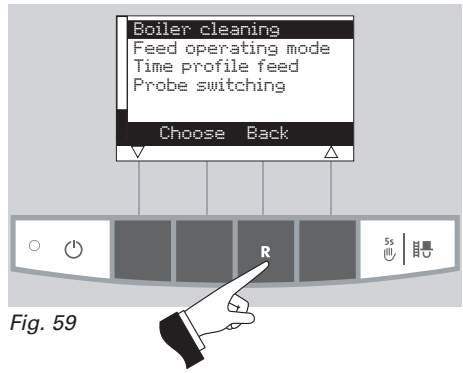


Fig. 59

Operation

2.8.1.2 Setting the time

This time is used for the time control of the pellet feed and for automatic heating surface cleaning.

If the BioWIN is operated with an MES control, the time is automatically adopted from the module and the time set here is overwritten.

If the BioWIN is operated with REG standard control, the time must be set here too.

Pressing one of the six buttons switches the lighting and display on – Fig. 60.

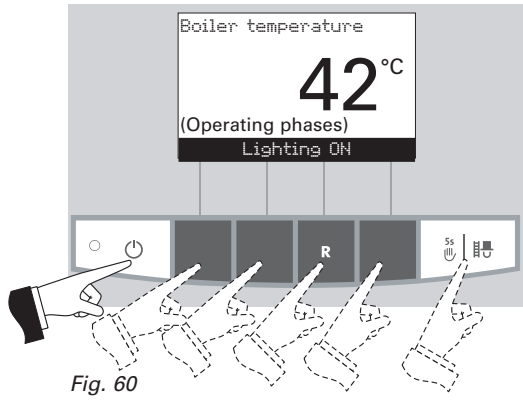


Fig. 60

Press the *Menu* button – Fig. 61.

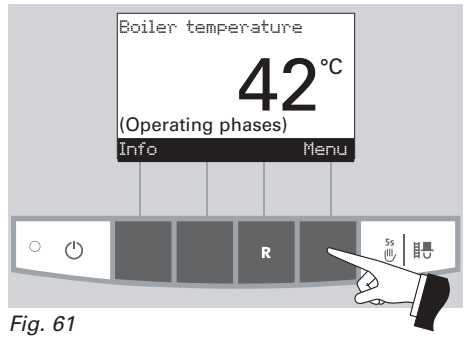


Fig. 61

Confirm the selected menu item “Operator level” by pressing the *Choose* button – Fig. 62.

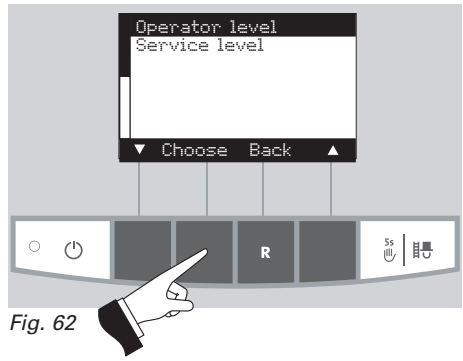


Fig. 62

Confirm the selected “Time” sub-menu by pressing the *Choose* button – Fig. 63.

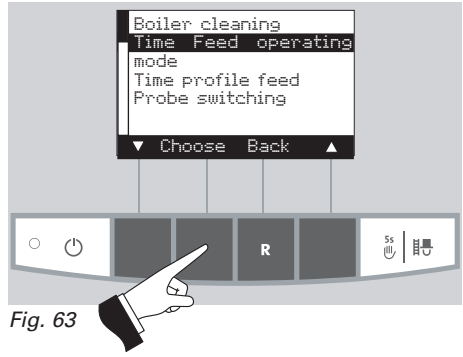


Fig. 63

The *arrow* buttons set the required time – Fig. 64.

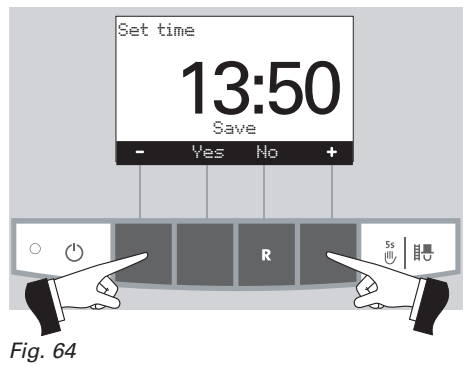


Fig. 64

Operation

Pressing the *Yes* button saves the changed time – Fig. 65. The display shows “Saving parameter value” for a few seconds (Fig. 66) and then changes back to the previous level – Fig. 67.

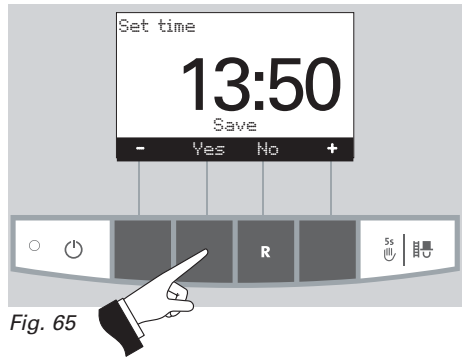


Fig. 65

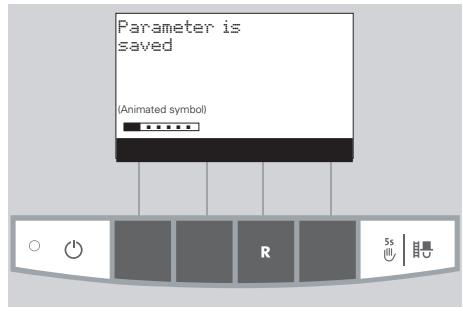


Fig. 66

The menu item or sub-menu item is exited by pressing the *Back* button (Fig. 67) or after a delay of 45 seconds.

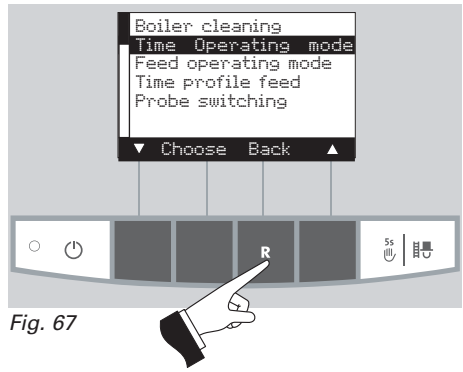


Fig. 67

2.8.1.3 Setting the feed operating mode[1)]

This menu item sets:

– whether the feed is switched off, or
– whether the feed should fill the pellet boiler with or without time control.

Pressing one of the six buttons switches the lighting and display on – Fig. 68.

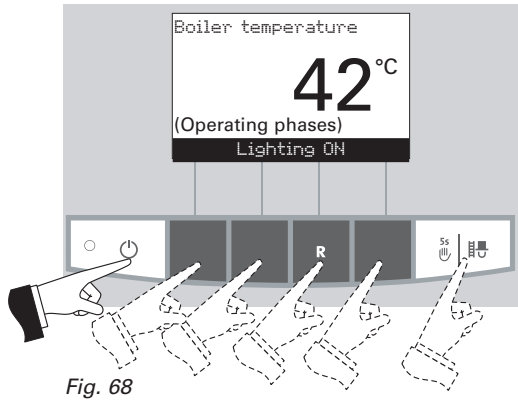


Fig. 68

Press the *Menu* button – Fig. 69.

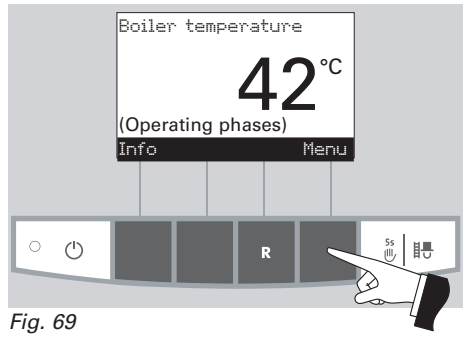


Fig. 69

Confirm the selected menu item “Operator level” by pressing the *Choose* button – Fig. 70.

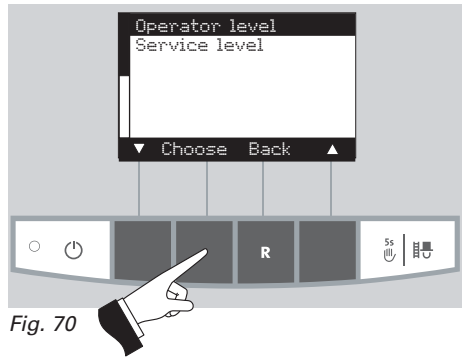


Fig. 70

The *arrow* buttons select the “Feed operating mode” sub-menu – Fig. 71.

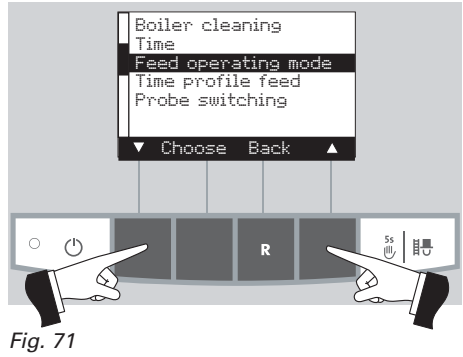


Fig. 71

Confirm the selected sub-menu “Feed operating mode” by pressing the *Choose* button – Fig. 72.

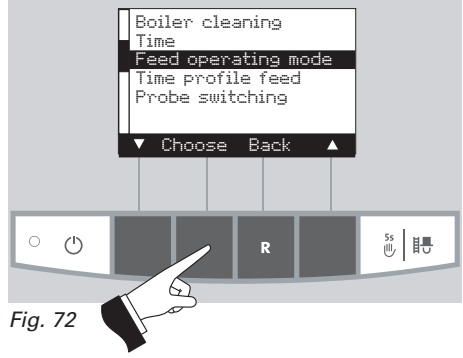


Fig. 72

[1)] This is only displayed if there is a feed system fitted and this has been set in the service level by trained service personnel.

Operation

The **factory setting** for the "Feed operating modem" menu item is **"switched off"**.

without time control: Select this if the feed noise (suction turbine) cannot be heard or is not disruptive in the living area.

Functional description: The pellet feed is automatically switched on if required at any time.

with start time: Select this if you want the feed to start at the same time every day.

Functional description: The reserve supply container is filled every day if required at the set time (see page 28). Interim fills are also performed if the filling amount is not sufficient for 24 hours.

with enable time: Select this if the feed noise (suction turbine) can be heard or is disruptive in the living area.

Functional description: The pellet feed is enabled during a time period that can be set (see page 29) and is automatically started at this time if required. The reserve supply container is refilled full at the end of the enable time, if required.

Tip: A complete fill sucks in about 25 kg of pellets. The pellets required during the blocked time must not exceed this value!

Burning duration with 50 kg pellets	
BioWIN	Burning duration at nominal output
BW 100	19 h
BW 150	14 h
BW 210	10 h
BW 260	8 h

It is only ever possible to select one menu item at a time. The "time profile feed" corresponding to this selected menu item can then be set in section 2.8.1.3

The *arrow* buttons select the required sub-menu – Fig. 73.

Pressing the *Yes* button saves the changed "Feed operating mode" – Fig. 74. The display shows "Saving parameter value" for a few seconds (Fig. 75) and then changes back to the previous level – Fig. 76.

The menu item or sub-menu item is exited by pressing the *Back* button (Fig. 76) or after a delay of 45 seconds.

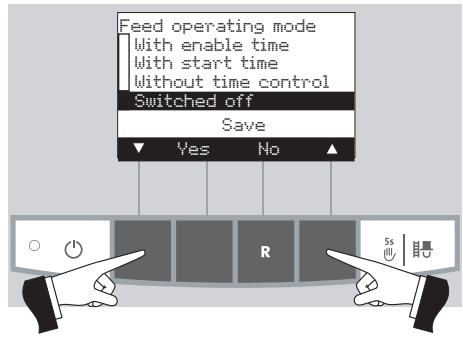


Fig. 73

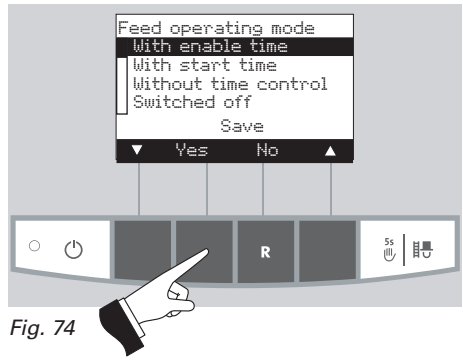


Fig. 74

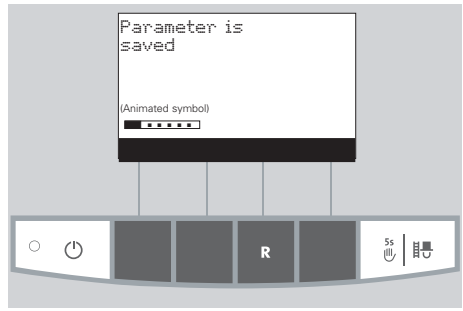


Fig. 75

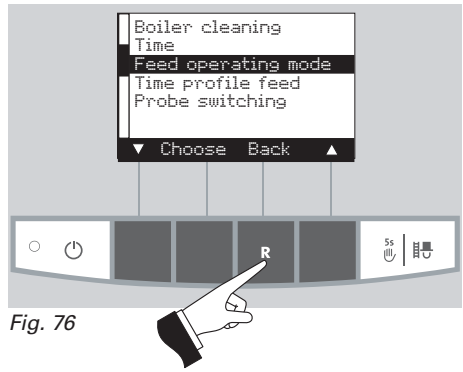


Fig. 76

2.8.1.4 Setting the time profile feed[1)]

The “Time profile feed” menu item displays the corresponding setting option depending on the setting in the “Feed operating mode” menu item (see section 2.8.1.3).

Setting: “With enable time” see page 29
Setting: “With start time” see page 28
Setting: “Without time control” or “switched off” see page 30

Pressing one of the six buttons switches the lighting and display on – Fig. 77.

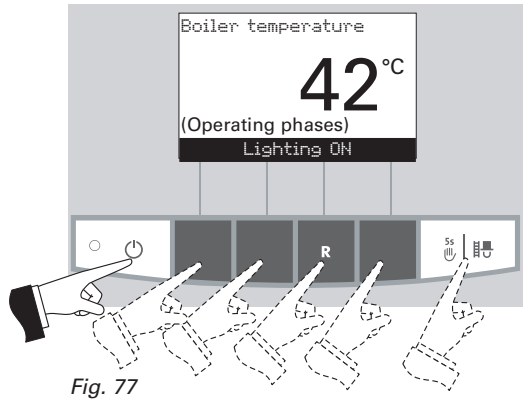


Fig. 77

Press the *Menu* button – Fig. 78.

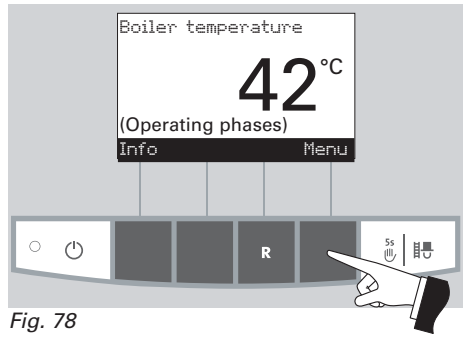


Fig. 78

Confirm the selected menu item “Operator level” by pressing the *Choose* button – Fig. 79.

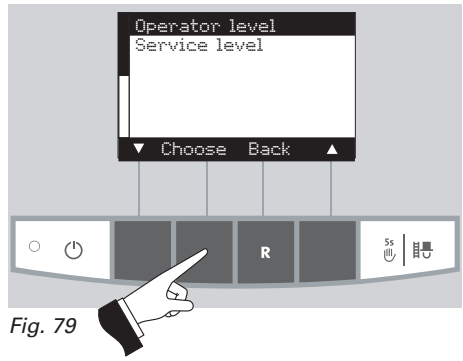


Fig. 79

The *arrow* buttons select the “Time profile feed” sub-menu – Fig. 80.

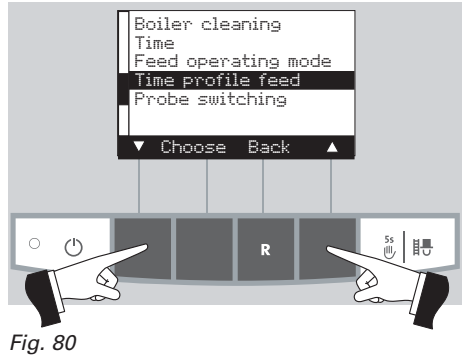


Fig. 80

Confirm the selected sub-menu “Time profile feed” by pressing the *Choose* button – Fig. 81.

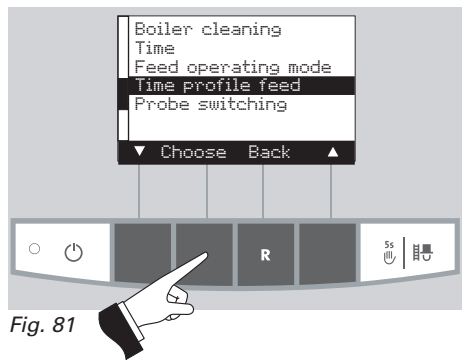


Fig. 81

[1)] This is only displayed if there is a feed system fitted and this has been set in the service level by trained service personnel.

Operation

“with start time”

A time can be set here in the “Time profile feed” menu item for filling the reserve supply container if the “with start time” setting is active in the “Feed operating mode” menu item (see section 2.8.1.3). The reserve supply container is filled every day at the set time. Interim fills are also performed if the filling amount is not sufficient for 24 hours.

Factory setting “feed start time”: Start 20:00

Pressing the *+* or – buttons changes the time in 1 min steps – Fig. 82.

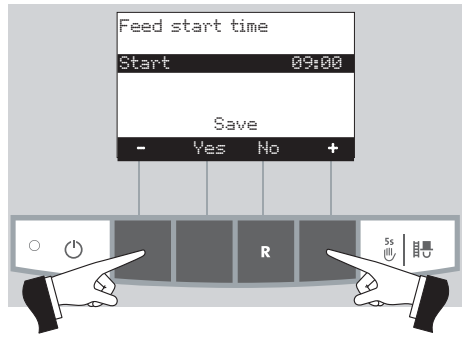


Fig. 82

Pressing the *Yes* button saves the changed time – Fig. 83. The display shows “Saving parameter value” for a few seconds (Fig. 84) and then changes back to the previous level – Fig. 85.

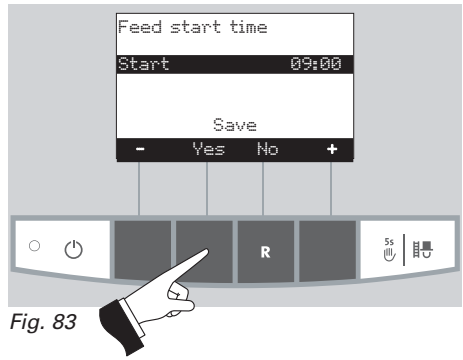


Fig. 83

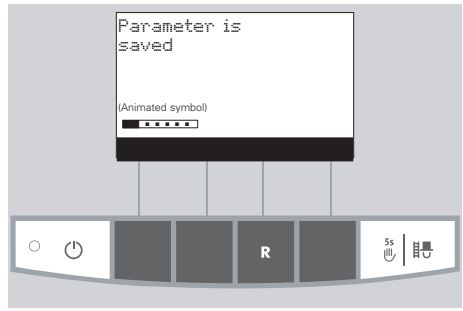


Fig. 84

The menu item or sub-menu item is exited by pressing the *Back* button (Fig. 85) or after a delay of 45 seconds.

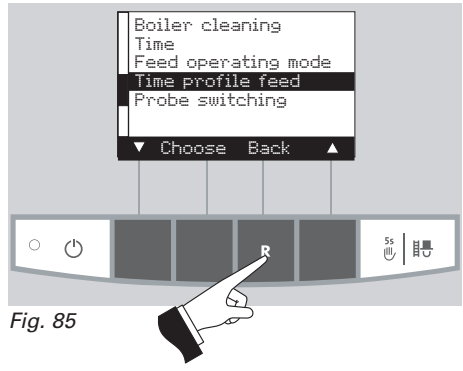


Fig. 85

Operation

“with enable time”

The start and end of the enable time can be set here in the “Time profile feed” menu item if the “with enable time” setting is active in the “Feed operating mode” menu item (see section 2.8.1.3).

Factory setting “feed enable time”: Start 07:00
End 22:00

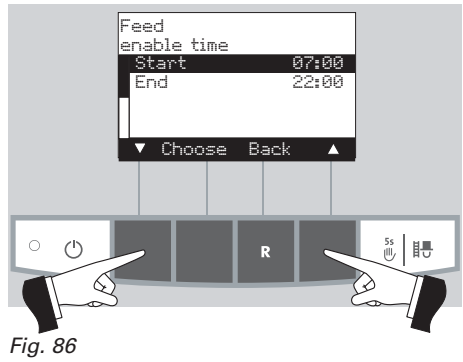


Fig. 86

The *arrow* buttons select the “Start” or “End” times to be changed – Fig. 86.

Confirm the selected time by pressing the *Choose* button – Fig. 87.

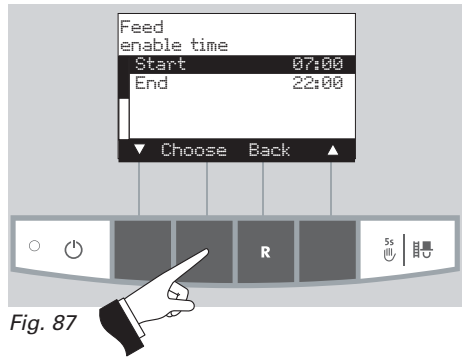


Fig. 87

Pressing the + or – buttons changes the time in 15 min steps – Fig. 88.

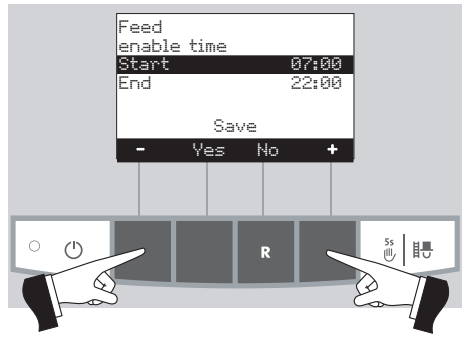


Fig. 88

Pressing the *Yes* button saves the changed time – Fig. 83. The display shows “Saving parameter value” for a few seconds (Fig. 90) and then changes back to the previous level – Fig. 91.

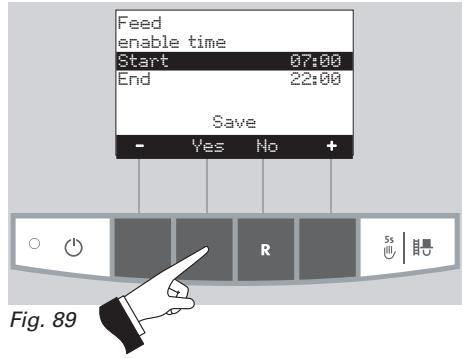


Fig. 89

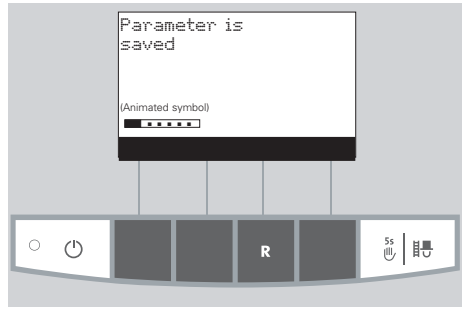


Fig. 90

The menu item or sub-menu item is exited by pressing the *Back* button (Fig. 91) or after a delay of 45 seconds.

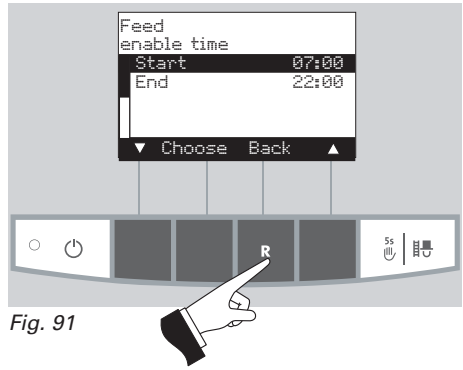


Fig. 91

“without time control” or “switched off”

No setting is possible here in the “Time profile feed” menu item if the “without time control” or “switched off” setting is active in the “Feed operating mode” menu item (see section 2.8.1.3) – Fig. 92.

The menu item or sub-menu item is exited by pressing the *Back* button (Fig. 92) or after a delay of 45 seconds.

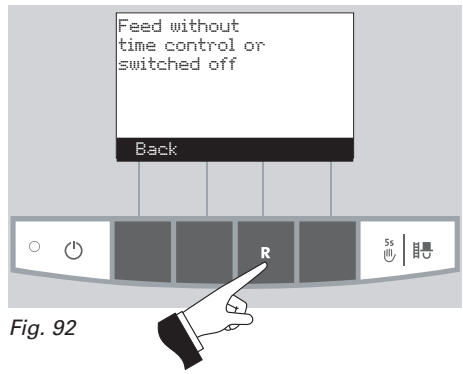


Fig. 92

2.8.1.5 Setting probe switching[1)]

If BioWIN is equipped with a fully automatic pellet feed, it is possible to set here which probe is used for sucking pellets from the pellet storage room. There are four different setting options:

- automatic: removal from all 3 probes, automated switching.
- only probe 1: removal from only probe 1, no switching
- only probe 2: removal from only probe 2, no switching
- only probe 3: removal from only probe 3, no switching

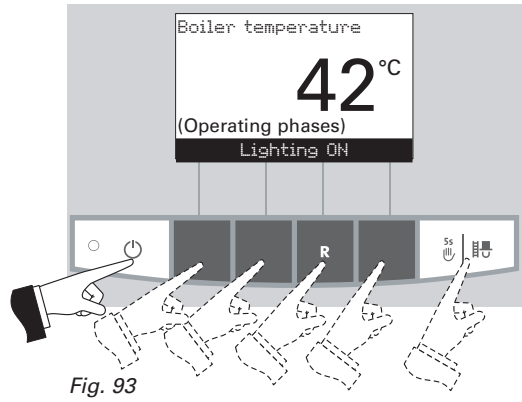


Fig. 93

Note: If "Pellet feed system, operation with 2 probes" is set in the service level, the option of "Removal from only probe 3" is not displayed here.

Pressing one of the six buttons switches the lighting and display on – Fig. 93.

Press the *Menu* button – Fig. 94.

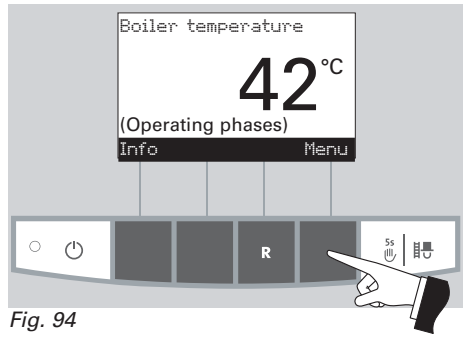


Fig. 94

Confirm the selected menu item "Operator level" by pressing the *Choose* button – Fig. 95.

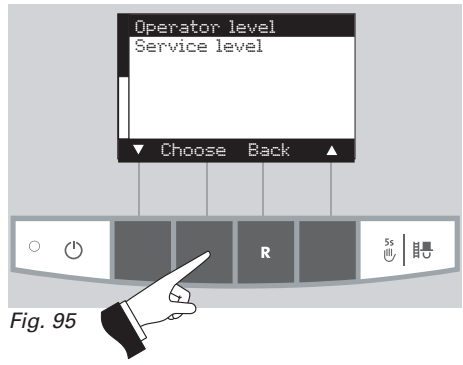


Fig. 95

The *arrow* buttons select the "probe switching" sub-menu – Fig. 96.

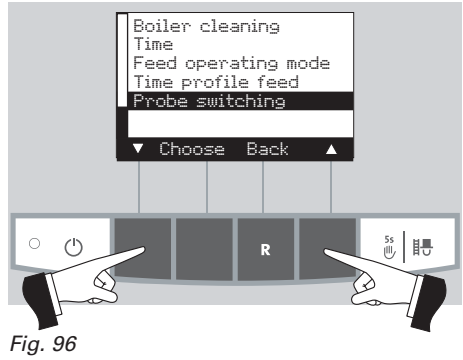


Fig. 96

Confirm the selected "probe switching" sub-menu by pressing the *Choose* button – Fig. 97.

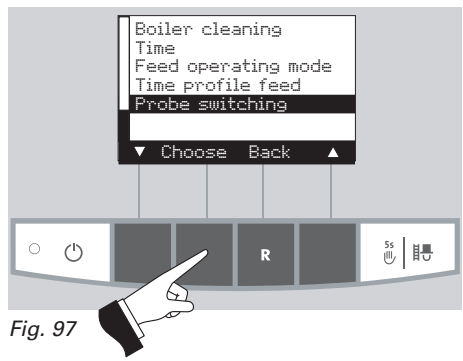


Fig. 97

[1)] This is only displayed if there is a feed system fitted and this has been set in the service level by trained service personnel.

Operation

The *arrow* buttons select the probe switching – Fig. 98.

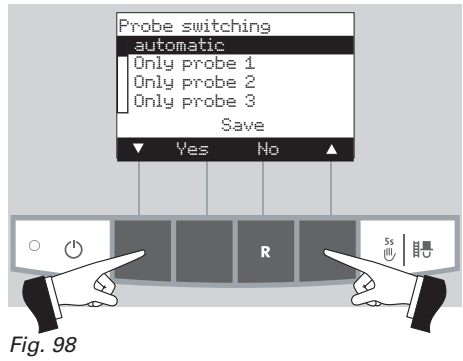


Fig. 98

Pressing the *Yes* button saves the changed probe switching – Fig. 99.The display shows "Saving parameter value" for a few seconds (Fig. 100) and then changes back to the previous level – Fig. 101.

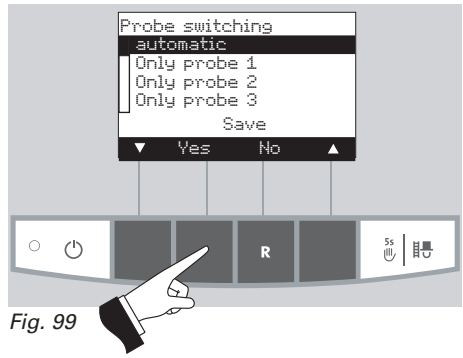


Fig. 99

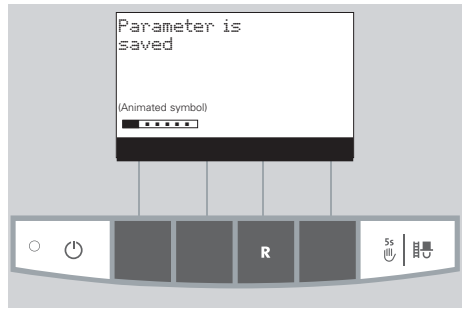


Fig. 100

The menu item or sub-menu item is exited by pressing the *Back* button (Fig. 101) or after a delay of 45 seconds.

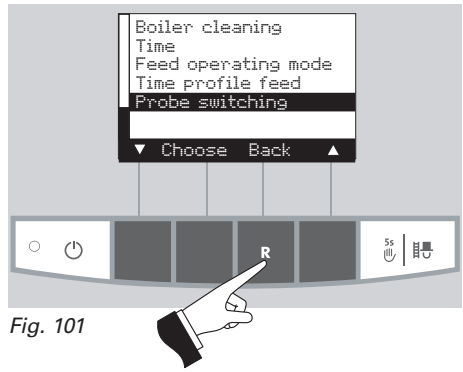


Fig. 101

2.8.2 Service level

System parameters, start-up and actuator test can be displayed, performed and/or modified on the Service level.

Changes on the Service level may be performed only by trained service personnel (directions for setting, see the BioWIN Installation instructions)

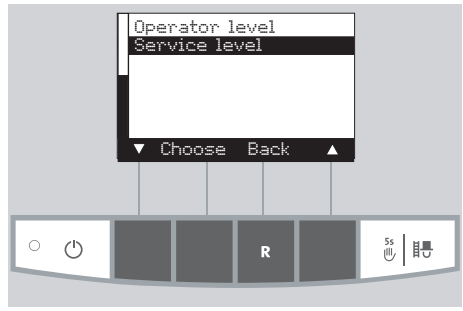


Fig. 102

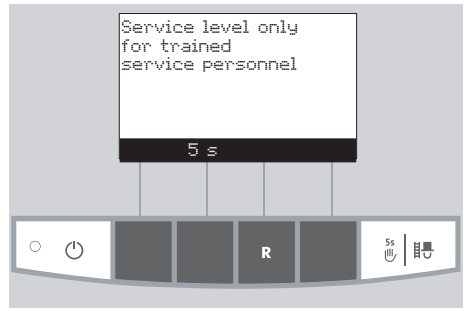


Fig. 103

The menu item or sub-menu item is exited by pressing the *Back* button (Fig. 104) or after a delay of 45 seconds.

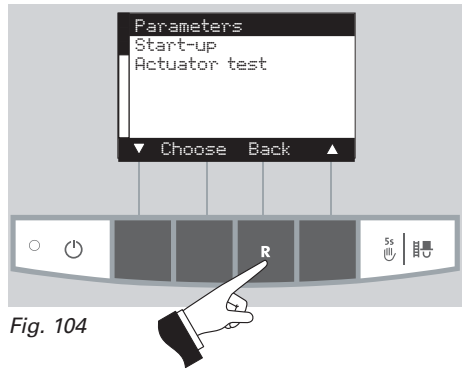


Fig. 104

2.9 Heating system operation

2.9.1 BioWIN with MES system control

Switching on – automatic operation:

1. Press the ON/OFF button on the InfoWIN panel, the lighting and display are switched on, the signal lamp lights green and a self-test is performed (see also section 2.5.2). After a successful self-test and if a setpoint is transferred by the system control, the BioWIN automatically starts operation.
2. Set the operating mode switch(es) on the MES control module(s) to "Automatic operation". The system operation (setting temperatures and operating times) is performed using the analogue or digital user module (installed in the living area) – for more details, please refer to the MES and user module instructions.

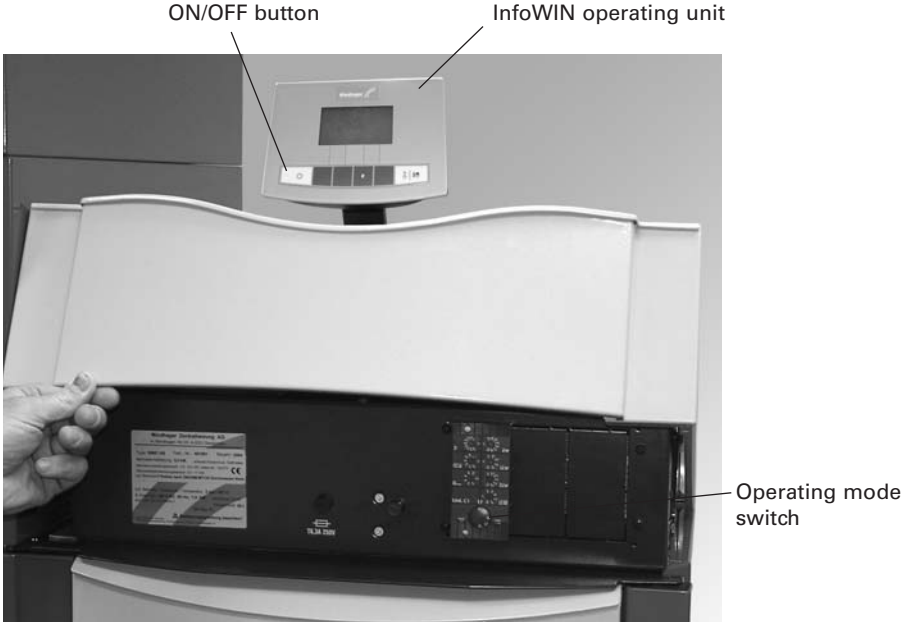


Fig. 105 BioWIN with MES system control

Digital user module FB 5210

Analogue user module FB 5410

For operation of the MES and related user modules, please see their respective Operating instructions.

Switching off:

1. Set the operating mode to "Standby" using the analogue or digital user module (installed in the living area).
2. If the boiler has been out of service for an extended period during the summer months, press the ON/OFF button on the InfoWIN unit.

The anti-freeze function is not active when the boiler is shut off.

Chimney sweeper function:

This is operated using the InfoWIN unit – see section 2.5.6.

Emergency operation:

In the event the system control fails, selecting the "Manual operation" mode using the MES control module and InfoWIN unit (see section 2.5.5) will activate emergency operation to maintain heat and hot water.

2.9.2 BioWIN with REG standard control

Switching on – automatic operation:

1. Press the ON/OFF button on the InfoWIN panel, the lighting and display are switched on, the signal lamp lights green and a self-test is performed (see also section 2.5.2). After a successful self-test and if a setpoint is transferred by the system control, the BioWIN automatically starts operation.
2. Set both manual switches to the "Automatic" position.
3. Set the operating mode switch on the REG standard control unit RAM 786 to "Automatic operation". The REG standard control unit RAM 786 (installed in the living area) is used to operate the system (set the desired temperature and operating times) – please refer to the separate Operating instructions.

   The time must also be set on the InfoWIN (see section 2.8.1.1). This time is used for the time control of the pellet feed and for automatic heating surface cleaning.

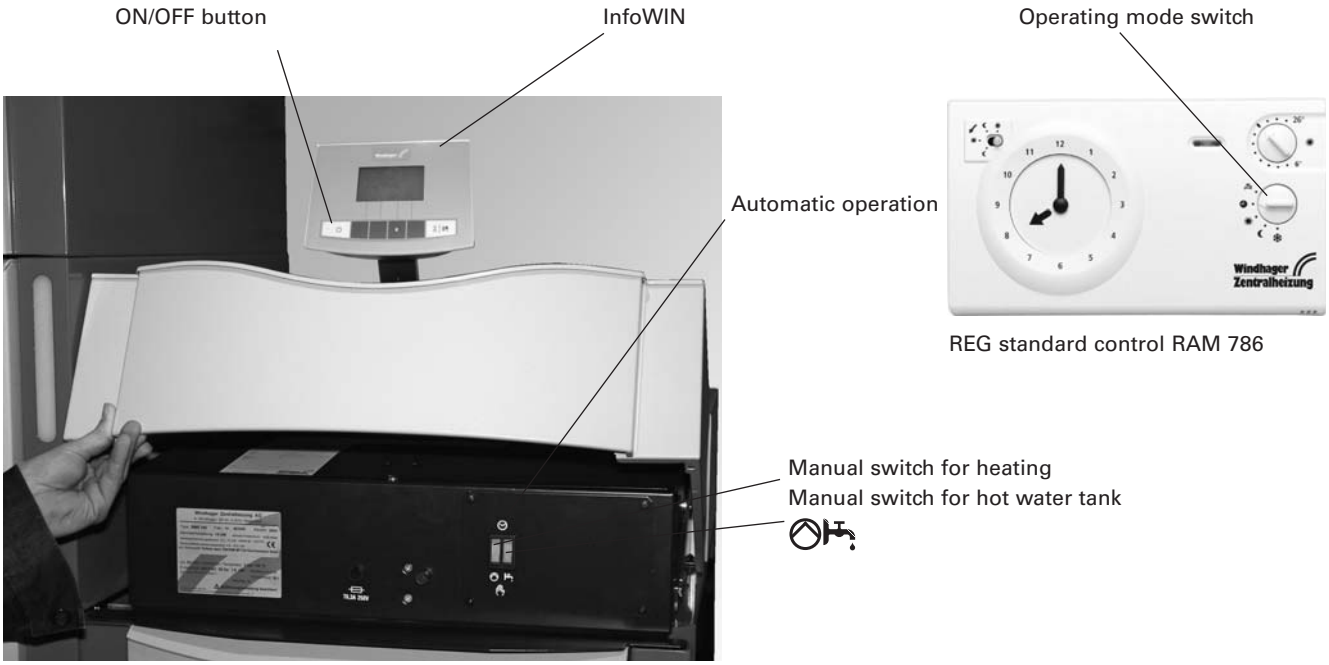


Fig. 106 BioWIN with REG standard control

Switching off:

1. Set "Standby" operating mode on the REG standard control unit (installed in the living area).
2. If the boiler has been out of service for an extended period during the summer months, press the ON/OFF button on the InfoWIN unit.

The anti-freeze function is not active when the boiler is shut off.

Chimney sweeper function:

This is operated using the InfoWIN unit – see section 2.5.6.

Emergency operation:

If the system control fails, setting the two manual switches on the boiler control panel and using the button on the InfoWIN unit (see section 2.5.5) will activate emergency operation to maintain heat and hot water.

Operation

How to switch to emergency (manual) operation

Heating emergency operation:

1. There must be power to the boiler. The unit is switched on (otherwise, press the ON/OFF button on the InfoWIN unit).
2. Select "Manual operation" on the InfoWIN unit – see section 2.5.5.
3. Set the manual switch to the "Heating manual operation" position.
4. Also set the motorised mixing valve to manual operation and select the desired flow temperature. The boiler temperature will be maintained at the selected temperature (60 to 75 °C). **Exercise caution if you have underfloor heating.**

Emergency operation of boiler reservoir with feed pump:

1. There must be power to the boiler. The unit is switched on (otherwise, press the ON/OFF button on the InfoWIN unit).
2. Select "Manual operation" on the InfoWIN unit – see section 2.5.5.
3. Set the manual switch to the "Hot water tank manual operation" position.
4. Once the desired hot water temperature has been reached, set the manual switch to the "Hot water tank automatic operation" position.

Emergency operation of boiler reservoir with charging valve:

1. There must be power to the boiler. The unit is switched on (otherwise, press the ON/OFF button on the InfoWIN unit).
2. Select "Manual operation" on the InfoWIN unit – see section 2.5.5.
3. Set both manual switches and to the "Manual operation" position.

Care, cleaning and maintenance

Clean the boiler cladding and keyboard foil with a moist cloth as needed. In the event of heavy soiling, use soapy water or diluted suds (do not use strong cleaners or sharp cleaning instruments).

A clean boiler saves fuel and protects the environment. Therefore always clean your boiler as required!

Your Windhager expert PARTNER can provide you with a practical cleaning set, comprising: High-quality vacuum cleaner, magnetic flashlight, gloves, apron. This will enable you to clean more quickly and conveniently.

3.1 Overview of intervals between cleaning (maintenance)

The BioWIN is equipped with a cleaning and ash removal interval display. The "*Clean boiler and burner*" cleaning request is displayed on the InfoWIN and must be reset after cleaning/ash removal has finished – see section 2.8.1.1.

A clean boiler saves fuel and protects the environment. Therefore always clean your boiler as required when the cleaning and ash removal request is displayed.

The cleaning and ash removal intervals may be reduced or extended depending on the pellets used (e.g. ash proportion), the power consumed by the heating system (frequently switching on and off) and the boiler size of the BioWIN (10 to 26 kW).

Annual maintenance is required in addition to cleaning. This is performed by WINDHAGER Customer Service or the customer service PARTNERS and is a prerequisite of the guarantee limitations.

Note for cascade installations (installation with 2 or 3 BioWINs): When cleaning, only the boiler that is actually going to be cleaned need be shut down, the other boiler(s) may continue to operate.

<table>
<tr><th>Cleaning and ash removal intervals</th><th>BioWIN Klassik</th><th>BioWIN Premium</th><th>BioWIN Exklusiv</th></tr>
<tr><td>Display
"Clean boiler and burner"

Information 580
Fault 390</td><td colspan="2">Operate the heating surface cleaning lever
Frequent use of the lever increases efficiency (see section 3.2)

Empty the ash pan
(see section 3.3)

Clean combustion chamber and burner pot
Note: The burner only needs cleaning after every 3–4 cleaning requests.
(see sections 3.5 and 3.6)

Confirm boiler and burner cleaning
(see section 2.8.1.1)</td><td>Empty ash container
(see section 3.4)

Clean combustion chamber and burner pot
(see sections 3.5 and 3.6)

Confirm boiler and burner cleaning

(see section 2.8.1.1)</td></tr>
<tr><td>at least once per heating season</td><td>Blower wheel/blower box
(see section 3.7)

Exhaust pipe to flue
(see section 3.8)

Water tank level
(see section 3.9)

Reserve supply container
(see section 3.10)</td><td colspan="2">Blower wheel/blower box
(see section 3.7)

Exhaust pipe to flue
(see section 3.8)

Water tank level
(see section 3.9)

Supply container and feed unit flap
(see section 3.10)

Storage room/storage container
(see section 3.11)</td></tr>
</table>

Care, cleaning and maintenance

3.2 Cleaning heating surfaces (BioWIN Klassik and Premium)

Optimum efficiency is achieved when the heating surfaces are cleaned as often as possible using the cleaning lever.
Note: In the BioWIN Exklusiv, this cleaning is undertaken fully automatically several times a day).
The cleaning lever should be moved back and forth several times **before** emptying the ash pan at the latest – Fig. 107.

Fig. 107 Actuating lever for cleaning heating surfaces

3.3 Emptying the ash pan (BioWIN Klassik and Premium)

Do not open the combustion chamber door during operation. Always switch the boiler off first with the ON/OFF button and wait until burnout mode has finished.

– Switch off the BioWIN with the ON/OFF button on the InfoWIN (Fig. 108) and wait until the display has gone out.
– Open the combustion chamber door, turn the ash pan handle anti-clockwise – Fig. 109.
– Take out ash pan (Fig. 110) and empty.

Assembly:

– Slide in ash pan and turn handle clockwise until stop is reached.
– Close the combustion chamber door, switch the BioWIN back on with the ON/OFF button.

Fig. 108 Switching off BioWIN

Fig. 109 Turning handle to the left

Fig. 110 Removing ash pan

Care, cleaning and maintenance

3.4 Emptying ash container (BioWIN Exklusiv)

– Switch off the BioWIN with the ON/OFF button on the InfoWIN (Fig. 111) and wait until the display has gone out.
– Pull handle on ash container out until stop is reached so that the side openings in the ash container are sealed – Fig. 112.
– Loosen the bottom right bracket fastener (Fig. 113), slide container slightly to the left and pull out – Figs. 114, 115.
– Emptying ash container – Fig. 116.

Assembly:

– Refit container by working through these steps in reverse order.
Important: Slide ash container handle all the way back in.

When reinstalling the ash container and cover, check they are in the correct position and are sealed – danger of inleaked air!

Fig. 111 Switching off BioWIN

Fig. 112 Pulling out handle

Fig. 113 Opening the bracket fastener

Fig. 114 Moving container slightly to the left

Fig. 115 Taking out container

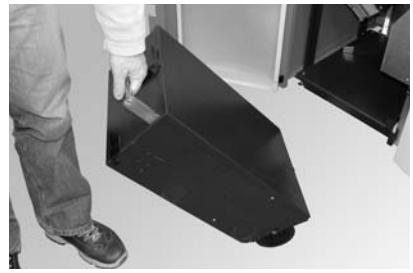


Fig. 116 Emptying ash container

Care, cleaning and maintenance

3.5 Combustion chamber (baffle plate, thermocontrol sensor)

Do not open the combustion chamber door during operation. Always switch the boiler off first with the ON/OFF button and wait until burnout mode has finished. It is essential to let the combustion chamber cool down before cleaning.

– Switch off the BioWIN with the ON/OFF button on the InfoWIN (Fig. 117) and wait until the display has gone out.
– Raise baffle plate at rear and guide it out at a downwards pointing angle – Fig. 118, Taking out the baffle plate and removing fly ash
– If necessary, remove fly ash from the thermocontrol sensor. The thermocontrol sensor is located in the combustion chamber behind the baffle plate – Fig. 119.

Assembly:

By working through these steps in reverse order.

Fig. 117 Switching off BioWIN

Fig. 118 Cleaning the baffle plate

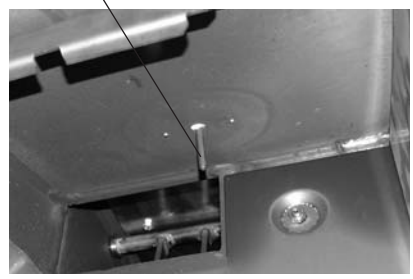


Fig. 119 Cleaning the thermocontrol sensor

3.6 Burner pot

Do not open the combustion chamber door during operation. Always switch the boiler off first with the ON/OFF button and wait until burnout mode has finished. It is essential to let the boiler cool down before cleaning.

Before cleaning with a vacuum cleaner, check that there are no longer any embers in the combustion residue!

Clean the burner pot if the secondary air holes or the holes in the primary air pin are partially blocked or there is a malfunction displayed with the prompt to clean the burner pot.

– Lift out the cone (3) using the cleaning tool (1) – Fig. 120, 121, 122.
– Use the spatula to scrape off the deposits from all sides of the cone (3), however in particular on the underside.
– Vacuum out the burner pot, remove the primary air pin (4) and carefully clean the holes with a small screwdriver or drill bit if necessary (holes must be clear).
– Raise the grate plate (5) from below through the base of the burner pot and remove it. Use the spatula to scrape ash residues off the grate plate (5) and the hole in the middle.

  Tip: Use water to soften hard residues, or soak the grate plate in water before scraping it clean.
– Turn the cleaning tool (1) to scrape off combustion residues in the base of the burner pot – Figs. 120, 121, 122. The pipe for the primary air pin serves as a guide for the cleaning tool – see detail in Fig. 122. Use the spatula to scrape out the edges in the base of the burner pot until they are clean. All secondary air holes (6) in the burner pot must be clear, clean them with a small screwdriver or drill bit if necessary.
– Use a vacuum cleaner to vacuum combustion residues out of the burner pot. Vacuum the ash out of the primary air tube (in the middle of the burner pot).

The glow ignition is located in the primary air tube so avoid shaking the burner pot violently – risk of breakage!

Care, cleaning and maintenance

BioWIN 100

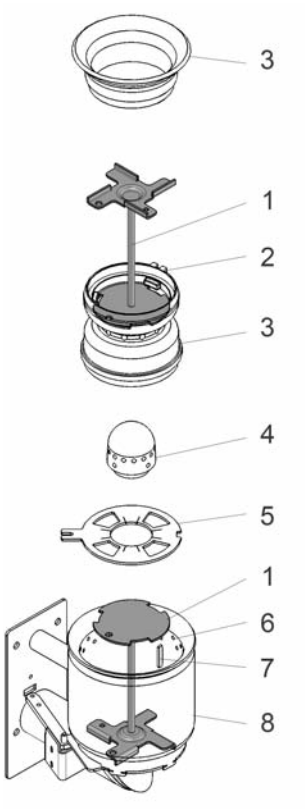


Fig. 120 BioWIN 100

1 Cleaning tool or cone removal too
2 Guide groove for the lock the Cone in the burner pot
3 Cone
4 Primary air pin
5 Grate plate
6 Secondary air holes
7 Lock for cone
8 Lock for cone

BioWIN 150

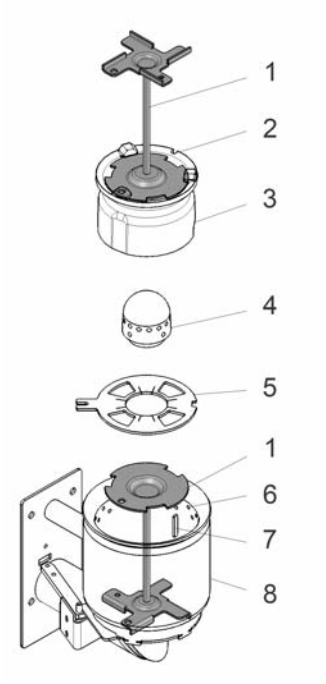


Fig. 121 BioWIN 150

BioWIN 100/150

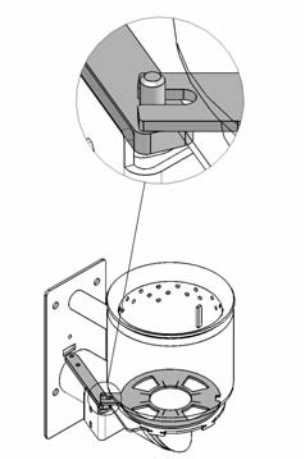


Fig. 123 BioWIN 100/150

BioWIN 210/260

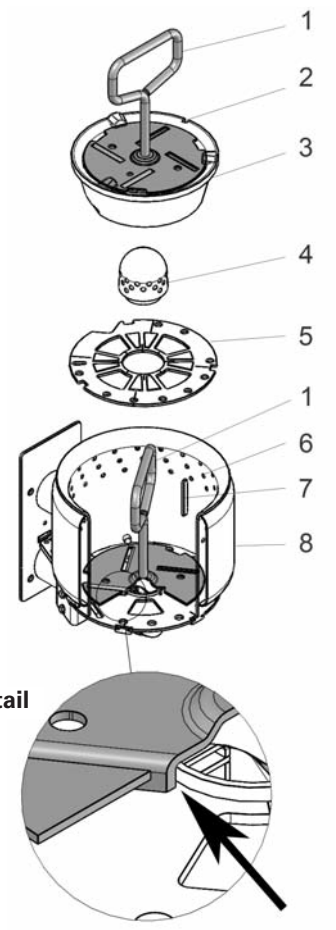


Fig.122 BioWIN 210/260

BioWIN 210/260

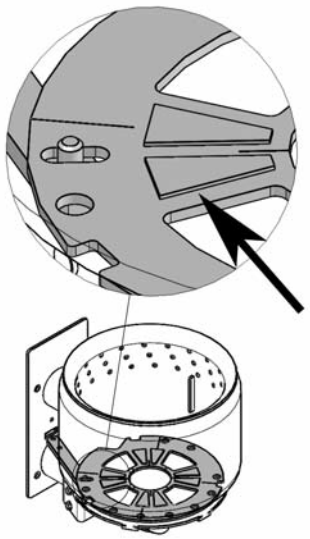


Fig. 124 BioWIN 210/260, Grate plate with embossing pointing upwards

Assembly:

– Insert the grate plate (5), making sure the projection/opening of the grate plate (5) projects through the driver of the driving rod and rests fully on the bottom grate plate – Figs. 123, 124.

Important: Before inserting the primary air pin (4), once again vacuum out the primary air tube in the middle of the burner pot. Make sure there is no debris in the tube (damage to the ignition element!).

– Insert the primary air pin (4) (Groove must engage in anti-twist device).

– Place the cone (3) into the burner pot using the cleaning tool (1). The guide groove (2) of the cone must engage in the lock (7) – Figs. 120, 121, 122.

3.7 Blower wheel, blower box

The blower is automatically checked and cleaned as part of the maintenance by WINDHAGER Customer Service or the customer service partner.

– Switch off the BioWIN with the ON/OFF button on the InfoWIN (Fig. 126) and wait until the display has gone out.
– Fold up complete control panel – Fig. 127.
– Disconnect the blower plug – Fig. 128.

Fig. 126 Switching off BioWIN

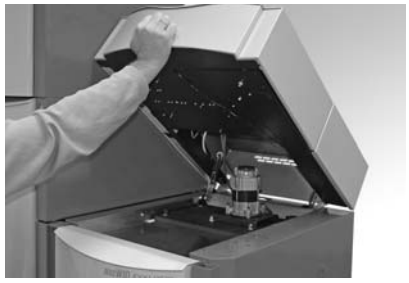


Fig. 127 Folding up control panel

Fig. 128 Disconnecting the blower plug

– Unscrew four wing nuts from the blower box and raise the complete blower unit – Fig. 29.
– Clean fly ash with a vacuum cleaner.
– Raise blower box at front and take out – Fig. 130.
– Vacuum top parts of coasting surface or use a cleaning brush to clean them – Fig. 131.

Fig. 129 Unscrewing blower unit

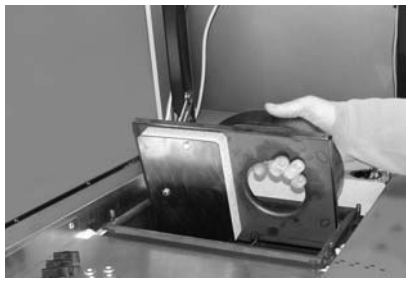


Fig. 130 Taking out blower box

Fig. 131 Cleaning the coasting surfaces

– Clean the blower wheel using a spatula – Fig. 132.

Assembly:

By working through these steps in reverse order.

– Insert blower box.
– Mount the blower unit. **Important:** Tighten the wing nuts diagonally across so that the blower cover makes a good seal.
– Connect the blower plug.
– Raise locking arm for control panel (Fig. 133) and fold down control panel.

Fig. 132 Cleaning the blower wheel

Fig. 133 Loosening locking arm

Care, cleaning and maintenance

3.8 Exhaust pipe to flue

Check the exhaust pipe to the flue for dirt and clean at least once a year.

3.9 Water tank level

Regularly check the water tank level and top up with water if necessary (pprox. 8 litre). Water level must not fall below the min. mark – Fig. 136.

– To fill the water tank, slide up front cladding on the feed unit and remove – Fig. 134.
– Remove plug from water tank and top up – Figs. 135, 136.

Assembly:

By working through these steps in reverse order.

Fig. 134 Removing the cladding

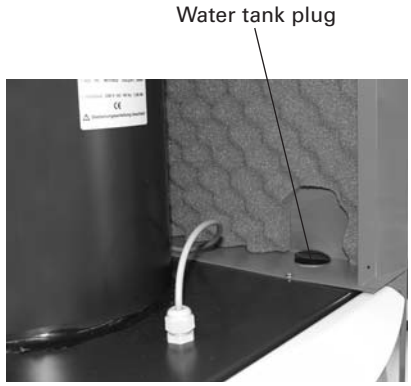


Fig. 135 Water tank plug

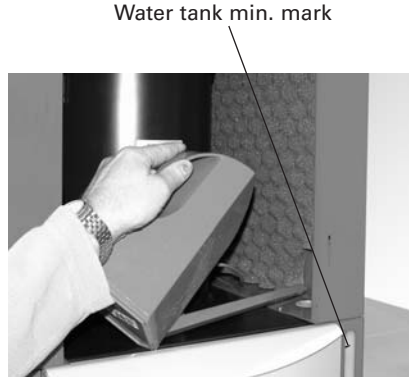


Fig. 136 Filling water container

Care, cleaning and maintenance

3.10 Cleaning supply container (BioWIN Klassik, Premium and Exklusiv) and feed unit flap (BioWIN Premium and Exklusiv)

It is necessary to clean the reserve supply container and/or flap in the feed unit if too much dust has collected or there are foreign bodies in the reserve supply container.

Cleaning and/or checking the feed unit flap:

– Switch off the BioWIN with the ON/OFF button on the InfoWIN (Fig. 137) and wait until the display has gone out.
– Open the cladding door.
– Place a container for the pellet at the front.
– Remove both knurled screws and carefully take off the bottom inspection cover. Pellets may gush out depending on how high a level of them there is - Fig. 138.
– Remove pellets and dust using from reserve supply container.
– Remove dust in feed unit and on flap, check flap for ease of movement – Fig. 139. Full surface of flap must make contact with feed unit. Telltale on proximity switch must light up brightly when flap is closed.

Assembly:

By working through these steps in reverse order.

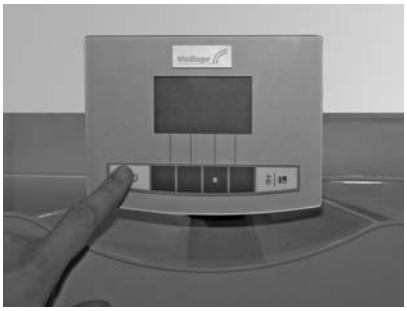


Fig. 137 Switching off BioWIN

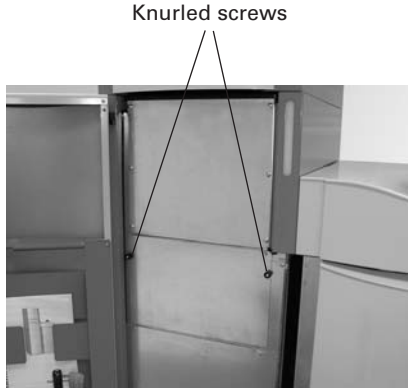


Fig. 138 Removing the knurled screws

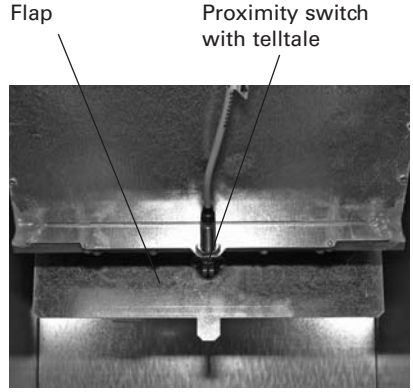


Fig. 139 Feed unit flap

3.11 Pellet storage room or storage container (BioWIN Premium and Exklusiv)

When entering the pellet storage room or storage container do not stand on the pellets around the suction probe.

Before filling the pellet storage room or storage container, check the following:

- whether the storage room is free of foreign bodies.
- whether a lot of dust has settled on the floor over time.
  Please note: A layer of dust on top of the pellets is normal because dust present migrates to the surface when the pellets gush out during removal.
- whether pellets have swelled up against the wall if the storage room is not fully dry.

Tip 1: Pellet dust is totally organic and can therefore be disposed of as organic waste.

Tip 2: Leading pellet suppliers recommend fully emptying the storage room every 2–3 years. You can deactivate automatic changeover between the three suction probes using the InfoWIN (see section 2.8.1.4). This allows you to fully empty the storage room for one probe (i.e. 1/3 of the storage room). You can then continue heating with the other two suction probes. If you perform this task every year with a different want, you will "replace" your entire supply of pellets every 3 years.

Troubleshooting

The BioWIN pellet boiler is self-monitoring during operation. All deviations from normal operation are displayed on the InfoWIN by information, fault or alarm messages. If one of these messages appears, the LED lights up red, an information, fault or alarm symbol flashes, an information code is displayed along with a brief description in full text – Fig. 140.

Pressing the *Info* button (Fig. 140) displays the related information text (Fig. 140). To exit the information text menu, press the *Back* button (Fig. 141) or wait 45 seconds and the information, fault or alarm message is displayed again – Fig. 140.

With almost all messages, it is necessary to press the *Reset* button after rectifying the cause of the information, fault or alarm message. In these cases, "Reset" is displayed in the menu line – Fig. 140.

If "Reset" is not displayed in the menu line, the boiler starts operating again automatically after the cause of the information, fault or alarm message has been rectified.

Pressing the *Test* button changes to the actuator test immediately– Fig. 142. This function is only intended for trained service personnel (directions for setting, see the BioWIN installation instructions). Pressing the *Back* button (Fig. 143) exits the actuator test.

All safety functions are deactivated during the actuator test!

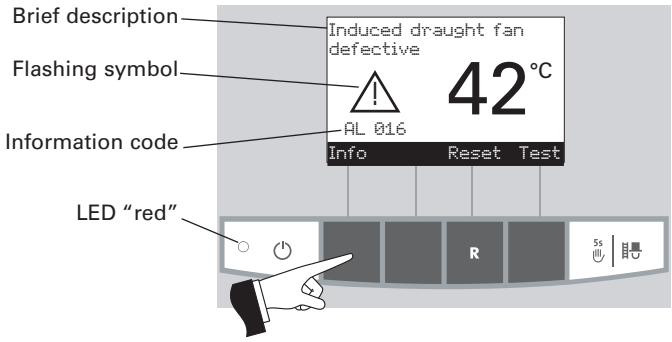


Fig. 140

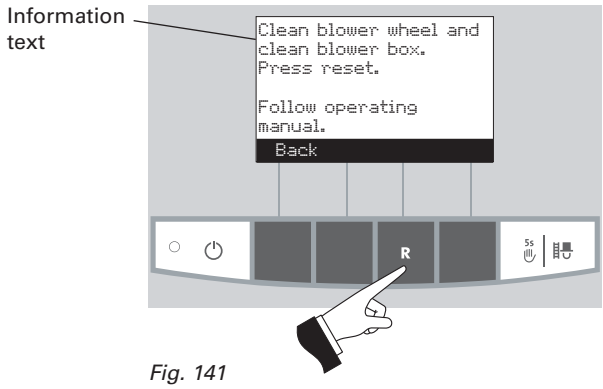


Fig. 141

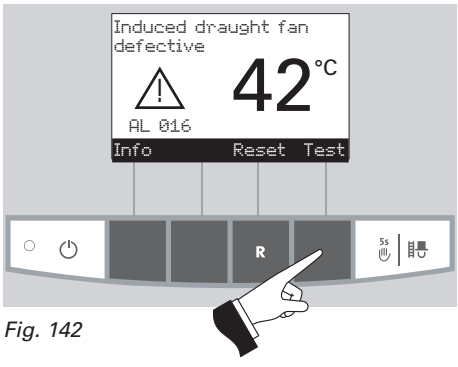


Fig. 142

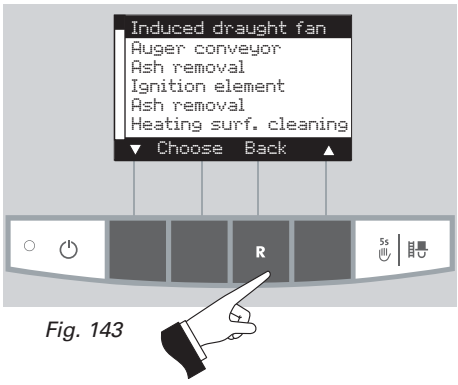


Fig. 143

If you wish to call WINDHAGER Customer Service or your customer service PARTNER due to a malfunction, please first make a note of the following data from the rating plate:

- Model
- Factory number
- Year of manufacture
- Fault or alarm message

The rating plate is located on the front of the control panel under the cladding cover – Fig. 144.

Fig. 144 Rating plate

Troubleshooting

4.1 No display on InfoWIN

Code	Display on InfoWIN	Cause/remedy
–	**No display, LED not lit up** Boiler is off, cannot be switched on with the ON/OFF button.	a) No electricity, check the cable to the device and the building fuse. b) No electricity, device fuse blown – check and replace if necessary - see Fig. 146. c) Mains power plug loose or poorly or not connected together during installation – check and connect together firmly if necessary - Fig. 145 d) Inform Windhager Customer Service or a heating technician.

4.2 IN – messages

Code	Display on InfoWIN	Cause/remedy
IN 581	**Re-fill fuel** Integral fuel hopper is almost empty. Re-fill pellets.	Boiler continues to heat until the remaining fuel quantity has been consumed. a) BioWIN Klassik (without feed): Fill fuel into the fuel container (see section 2.3). b) BioWIN Premium/Exklusiv (with feed): Feed is switched off in "feed operating mode" (see section 2.8.1.3). In "Feed operating mode" menu item, set to "with enable time", "with start time" or "without time control".
IN 582	**Integral fuel hopper empty** Integral fuel hopper empty. Top up pellets. Burner is locked.	a) BioWIN Klassik (without feed): Fill fuel into the fuel container (see section 2.3). b) BioWIN Premium/Exklusiv (with feed): Feed is switched off in "feed operating mode" (see section 2.8.1.3). In "Feed operating mode" menu item, set to "with enable time", "with start time" or "without time control".
IN 590	**Remove ash** **Confirm cleaning** Remove ash, confirm cleaning.	Note indicating that the pellet boiler must be cleaned in the next 50 operating hours (see sections 3.2 to 3.6). Following cleaning, cleaning must be confirmed on the InfoWIN operator level (see section 2.8.1.1).
IN 595	**Combustion chamber door open** Combustion chamber door is open, burner locked.	Close the combustion chamber door.

4.3 FE – messages

Code	Display on InfoWIN	Cause/remedy
FE 238	**Feed is not sucking any pellets** Check pellet supply in storage room and feed hose. Press reset.	No pellet feed is possible. The boiler does not operate. a) No pellets at the suction probe – Set "probe switching" to "automated" or select another probe (see section 2.8.1.5). Press the Reset button b) Feed hose blocked at the cyclone intake or entry to the changeover unit – clear it. Press the Reset button. c) Inform Windhager Customer Service or a heating technician. **Emergency operation:** Switch off the feed unit (see section 2.8.1.3). Fill the reserve supply container with pellets by hand, boiler is allowed to continue operating without feed.

4.3 FE – messages

Code	Display on InfoWIN	Cause/remedy
FE 239	**Probe switching defective** Check the changeover unit. Press reset.	No pellet feed is possible. The boiler does not operate. Press the Reset button. If the fault reoccurs after a reset, inform Windhager Customer Service or a heating technician. **Emergency operation:** Switch off the feed unit (see section 2.8.1.3). Fill the reserve supply container with pellets by hand, boiler is allowed to continue operating without feed.
FE 281	**Flue gas temperature sensor defective** Check the flue gas temperature sensor and connections.	It is not possible to display the flue gas temperature. No effect on operation. Replace the flue gas temperature sensor, inform Windhager Customer Service or a heating technician.
FE 381	**Integral fuel hopper empty** Time programme blocking feed. Change enable time in menu/operator level.	Feed is outside the enable time. Enable time for the feed has been set too short, which means the pellets in the reserve supply container are used up and the feed is blocked. Extend the enable time for the feed in the "Feed operating mode" menu item (see section 2.8.1.3) or operate "with start time" or "without time control".
FE 382	**Pellet feed flap does not close** Check the flap and switch in the feed unit. Press reset.	The boiler does not operate. a) Flap not shutting – clean flap (see section 3.10). It must be making full contact with the feed unit. Telltale on proximity switch of feed unit must light up brightly when flap is closed. Press the Reset button. b) Mains plug on feed unit is loose or not snapped in, connect up plug firmly – Fig. 145. c) Fill level switch (proximity switch) in the reserve supply container defective – inform Windhager Customer Service or a heating technician. d) Inform Windhager Customer Service or a heating technician. **Emergency operation:** Switch off the feed unit (see section 2.8.1.3). Fill the reserve supply container with pellets by hand, boiler is allowed to continue operating without feed.
FE 390	**Remove ash** **Confirm cleaning** Remove ash, confirm cleaning.	The pellet boiler must be cleaned (see sections 3.2 to 3.6). Following cleaning, cleaning must be confirmed on the InfoWIN operator level (see section 2.8.1.1).

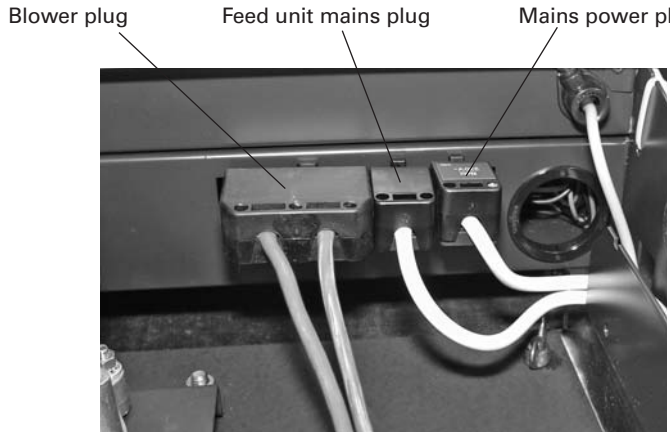


Fig. 145 Plug – rear of control panel

Troubleshooting

4.4 AL – messages

Code	Display on InfoWIN	Cause/remedy
AL 005	**Ash removal defective** Ash removal defective or sticking. Cleaning the burner pot. Press reset.	Ash removal motor no longer moves or no longer reaches the end position, boiler switches to burnout mode. a) Burner contamination; close combustion chamber doors, press reset button; once the alarm message is rectified, clean the burner pot as described in section 3.6. ⚠ The glow ignition is located in the primary air tube so avoid shaking the burner pot violently – risk of breakage! If the alarm message remains active, clean the burner pot as described in section 3.6. Note: Grate plate at top can only be raised and removed when closed. If the grate plate is not fully closed, vacuum it out. Close combustion chamber door, press reset button, if the alarm message remains in place, repeat the process or inform Windhager Customer Service or a heating technician. b) Grate plate not inserted correctly or check correct installation position (see section 3.6.). c) Motor for ash removal defective, inform Windhager Customer Service or a heating technician. d) Limit switch defective, inform Windhager Customer Service or a heating technician.
AL 006	**Auger conveyor motor defective** Auger conveyor motor defective Press reset.	Boiler enters burnout mode, Induced draught fan is stopped immediately. a) Press the Reset button. If the malfunction recurs immediately after a short period, or recurs at regular intervals, contact Windhager Customer Service or your heating technician. b) Renew the auger conveyor motor, inform Windhager Customer Service or a heating technician.
AL 016	**Induced draught fan defective** Clean blower wheel and clean blower box. Press reset.	The actual speed is different from the nominal speed. The boiler switches to burnout mode. a) The blower wheel and blower box are dirty, clean (see section 3.7). Press the Reset button. b) Blower plug is loose or not snapped in, connect up plug firmly – Fig. 145. c) Renew the Induced draught fan motor, inform Windhager Customer Service or a heating technician.
AL 037	**Pellet feed flap does not open after feeding** Check the flap in the feed unit. Press reset.	No pellet feed is possible. The boiler does not operate. a) Flap in feed unit not opening automatically – clean flap and check for ease of movement (see section 3.10). Press the Reset button. b) Feed unit suction turbine no longer switching off, disconnect mains plug from feed unit (see installation instructions in Service and repair work section). Inform Windhager Customer Service or a heating technician. **Emergency operation:** Switch off the feed unit (see section 2.8.1.2). Fill the reserve supply container with pellets by hand, boiler is allowed to continue operating without feed.
AL 062	**Air intake/exhaust flap defective** Air intake/exhaust flap defective or not opening. Check flap. Press reset.	External air choke (optional) does not open. a) Check the air choke, press the Reset button. b) Inform Windhager Customer Service or a heating technician.
AL 071	**Safety/emergency switch open** Check switch position of safety / emergency switches.	Boiler enters burnout mode, however the blower does not run. Switch on emergency heating/OFF switch.

Troubleshooting

4.4 AL – messages

Code	Display on InfoWIN	Cause/remedy
AL 076	**Boiler sensor defective** Check the boiler sensor and connections. Press reset.	The boiler switches to burnout mode. a) Press the Reset button. If the malfunction recurs immediately after a short period, or recurs at regular intervals, contact Windhager Customer Service or your heating technician. b) Renew the boiler sensor, inform Windhager Customer Service or a heating technician.
AL 078	**Thermocontrol sensor defective** Check the thermocontrol sensor and connections. Press reset.	The boiler switches to burnout mode. a) Press the Reset button. If the malfunction recurs immediately after a short period, or recurs at regular intervals, contact Windhager Customer Service or your heating technician. b) Renew the thermocontrol sensor, inform Windhager Customer Service or a heating technician.
AL 114	**Switch/buffer sensor defective** Check the switch/buffer sensor and connections on the cascade module.	The boiler switches to burnout mode. a) Check the switch/buffer sensor and connections on the cascade module. b) Renew switch/buffer sensor, inform Windhager Customer Service or a heating technician.
AL 128	**No flame formation in control mode** Clean boiler and burner. Press reset.	The flame goes out in modulation mode. The boiler switches to burnout mode. a) Clean the burner and the boiler. Check the exhaust pipe to the flue and clean it if necessary. Press the Reset button. b) Burner component (e.g. grate disc) not inserted correctly after cleaning – check installation position. c) Check the ash container (see section 3.4) and cover are in the correct position and are sealed – danger of inleaked air. Press the Reset button. d) An excessive amount of dust in the pellets is emptying the auger. (However, in the intervening period, pellet feed may have been started) ⇒ Empty the reserve supply container completely (see section 3.10) and remove the dust. The alarm message AL 171 may light on up to 2 occasions until the boiler starts operating again. Acknowledge with the Reset button. e) Auger conveyor jammed due to a foreign body, clean the reserve supply container (see section 3.10) and remove the foreign body through the opening above the auger, refill the reserve supply container. The alarm message AL 171 may light on up to 2 occasions until the boiler starts operating again. Acknowledge with the Reset button. f) Inform Windhager Customer Service or a heating technician.
AL 133	**Safety temperature shut-down** Check the system and filling pressure. Press Release button on boiler.	Boiler temperature is above 100 °C, boiler enters burnout mode, Induced draught fan is switched off immediately. a) Check the water level or pressure in the heating system – re-fill, bleed the air. b) Air in the heating system – bleed air. c) The heat pump or boiler feed pump is sticking or is defective – start pump manually or have it repaired. Once the boiler water temperature falls below 90 °C, remove the cover, press the Release button of the safety thermostat B7 firmly – Fig. 146. If the malfunction occurs after a short period, or recurs at regular intervals, contact Windhager Customer Service or your heating technician.

Fig. 146 BioWIN control panel cladding raised, combustion chamber door open

4.4 AL – messages

Code	Display on InfoWIN	Cause/remedy
AL 135	**Excess temperature on auger tube** Check fill level in water tank. Press release button behind comb. chamber door.	Boiler enters burnout mode and transports pellets into combustion chamber. a) Check level in water tank (see section 3.9), if there is no water in the tank (burn-back safeguard triggered) inform Windhager Customer Service. b) Check the burner, remove all pellets from the burner pot. c) Open combustion chamber door, remove the cover from the safety thermostat auger tube press the Release button firmly (see Fig. 145). If the ignition does not function first time (AL 171), press the Reset button (pellets in the auger conveyor will have been damaged due to the higher temperature).
AL 171	**Maximum heating time exceeded** Clean burner pot. Press reset.	No flame formation when heating up. Heating-up procedure is cancelled. a) Clean the burner pot (see section 3.6), empty the ash pan or ash container (see section 3.3). Confirm cleaning (see section 2.8.1.1). Press the Reset button. b) An excessive amount of dust in the pellets is emptying the auger. (However, in the intervening period, pellet feed may have been started) ⇒ Empty the reserve supply container completely (see section 3.10) and remove the dust. The alarm message AL 171 may light on up to 2 occasions until the boiler starts operating again. Acknowledge with the Reset button. c) Auger conveyor jammed due to a foreign body, clean the reserve supply container (see section 3.10) and remove the foreign body through the opening above the auger, refill the reserve supply container. The alarm message AL 171 may light on up to 2 occasions until the boiler starts operating again. Acknowledge with the Reset button. d) Ignition defective, inform Windhager Customer Service or a heating technician.
AL 187	**No communication with firing automate** Check linkage of firing automate and connections. Press reset.	The boiler switches to burnout mode. a) Check the connection cable or InfoWIN plug connection to the firing automate, inform Windhager Customer Service or a heating technician. b) Connect the firing automate, inform Windhager Customer Service or a heating technician.
AL 188	**Internal error occurred** **ErrorCode 188 xxx** **Current TableID 4 xxx**	Internal communication error. The boiler switches to burnout mode. A reset is performed automatically after 1 minute if this error occurs. If the malfunction occurs after a short period, or recurs at regular intervals, contact Windhager Customer Service or your heating technician.
AL 195	**Combustion chamber door opened during operation** Door is not allowed to be opened unless the burner is switched off. Close the door. Press reset.	The boiler switches to burnout mode. Close the outer door. Door may only be opened if the burner is switched off. Press the Reset button. **Failure to observe this point may result in components in the combustion chamber be damaged due to peaks in temperature!**

Declaration of conformity

for the BioWIN pellet boiler series

Issued by: WINDHAGER ZENTRALHEIZUNG Technik GmbH
Anton-Windhager-Strasse 20
A-5201 Seekirchen

Subject of the declaration:
BioWIN pellet boiler series in the configuration variants BWK, BWP, BWE

The appliances comply with the requirements in the following documents:

Document no.	Title
98/37 EC	Machinery Directive
73/23 EEC	Low-Voltage Directive
89/336 EEC	EMC Directive
89/106/EWG	Construction Products Directive

Standard	Edition
EN 303-5	1999
EN 60335-1	2001
EN 61000-6-1	2001
EN 61000-6-3	2001

Seekirchen, 27.3.2009

WINDHAGER ZENTRALHEIZUNG
Technik GmbH

Johann Thalmaier, Board of Directors

Guarantee and warranty limitations

The guarantee and warranty limitations require that the boiler and related accessories be properly installed and started up by WINDHAGER Customer Service or Customer Service PARTNER; otherwise the manufacturer's guarantee will not be honoured.

Malfunctions resulting from improper operation or adjustment as well as use of poor or not recommended fuel types are not covered by the guarantee and warranty. Further, the warranty shall be void if equipment other than those provided by WINDHAGER are installed. The special warranty restrictions for your system are available in the "Warranty Conditions" folder supplied with your boiler.

Start-up and regular maintenance following the terms of the "Warranty Conditions" will assure safe, environmentally friendly and economical operation of your system. We recommend that you obtain a maintenance service contract.

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Wärme in Perfektion.

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