

# User manual ETAtouch Software



## Expert



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## Getting to know the control system

Instead of buttons, the touchscreen is operated using icons directly on the screen.

In order to familiarise yourself with how to operate the system, tap once on the  icon on the left of the screen.

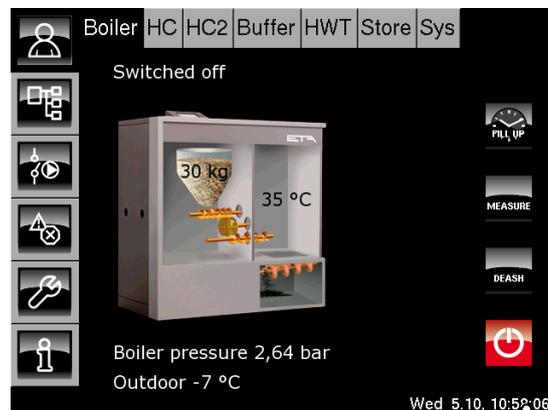
The touchscreen only displays those function blocks that are required and configured to work with your heating system.

You can use the horizontal buttons **Boiler**, **Buffer**, **HC**, **HWT** ... to flick between the individual function blocks (FUBs).

These instructions contain descriptions of all the function blocks of the ETAtouch software.

## Adjusting the date and time

Tap on the date or time at the bottom right-hand corner of the touchscreen.



A screen appears for adjusting the date and time:



## Moving on the touchscreen

Use the **horizontal buttons** to select the individual **function blocks (FUBs)** of the heating system.



The **vertical buttons** are used to open the **different views** for the selected function block (FUB):



**Overview** of the selected function block.

**Text menu** for adjusting the parameters of the selected function block

**I/O list** allowing experts to assign inputs and outputs

**Error messages** for the selected function block

**Toolbox** for experts

**INFO Help**

Tap on the [Day], [Month], [Year] or [Time] fields to alter the settings.

Once a field has been filled in by entering numbers, the cursor automatically moves to the next field.

**DEL** deletes the number to the left of the cursor.

**Cancel** closes the screen without saving the changes.

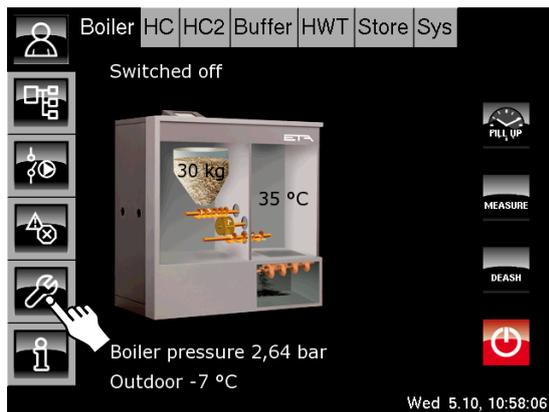
**Accept** saves changes and closes the screen.

## Changing the language

It is possible to change the language on the screen.

### Switching to the toolbox

Press the  button to switch to the toolbox.



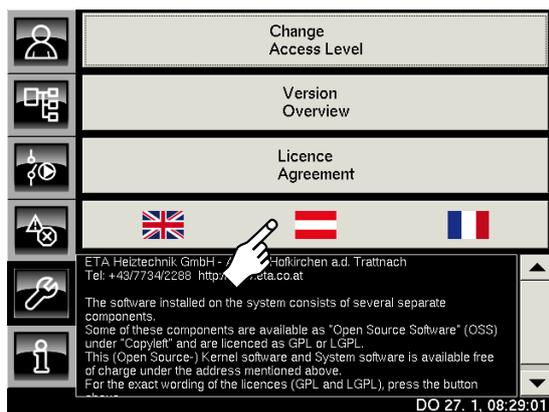
### Selecting a language

Select the language you require and confirm by pressing the  button.



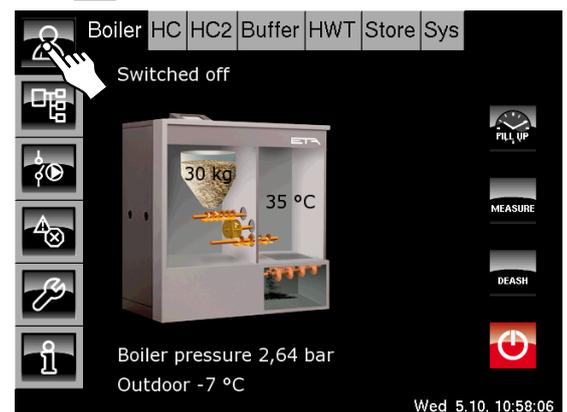
### Tapping the button with the flag symbols

Tap the button with the flag symbols to go to the language selection screen.



### Back to overview

Press  to return to the boiler overview screen.



## Changing the names of the function blocks

The names of the function blocks can be changed at any time in order to make them clearer to you.

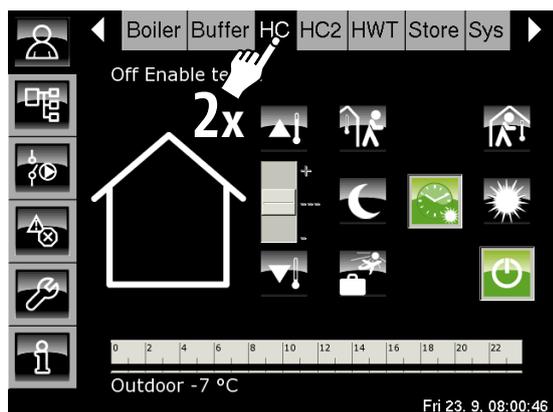
For example, the names of the heating circuits HC, HC2 etc. can be changed to ground floor, upper floor, parents, living room or similar.

### Example: Renaming HC1 "Ground floor"

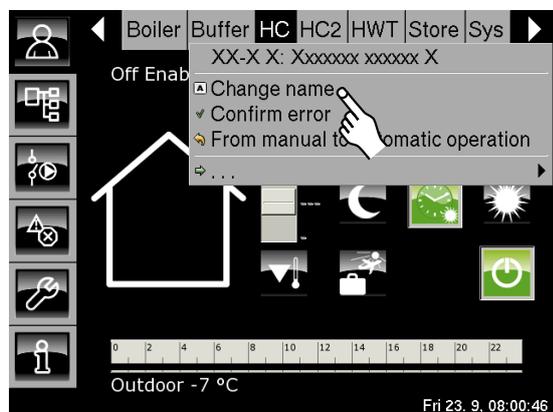
Even though this example uses a long name, it is best to choose short names so that you can reach all the function blocks without having to use the arrow buttons.

### Selecting heating circuit 1

Double-tap **HC** to rename this function block.

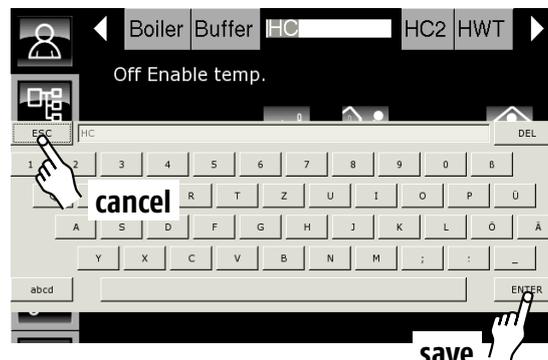


A small screen appears for this function block.



Tap the [Change Name] button. An on-screen keyboard appears.

### Changing the name using the keyboard



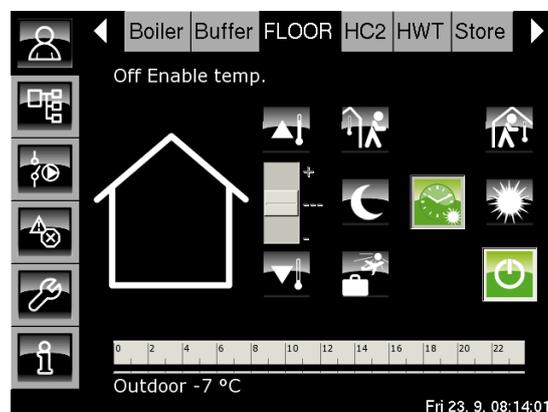
Use the keyboard to enter the new name for heating circuit 1, in this example: FLOOR.

Then press the **ENTER** button to save the new name.

The **ESC** button cancels the renaming process and changes back to the previous name.

HC has now been renamed "FLOOR".

The names of all the function blocks can be changed at any time.



## Message

This icon in the function block buttons indicates a message. Messages do not interrupt operation of the boiler, nor must they be confirmed.

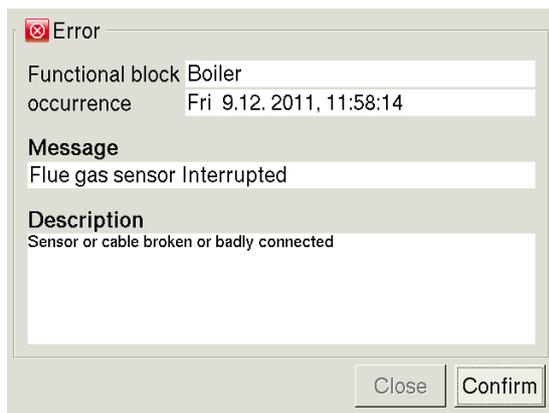
For example, they may indicate that the ash box needs emptying or inform the user of events outside normal operation, e.g. in summer, the pump anti-blocking protection begins every Saturday at 12 pm.

## Warning

This icon indicates a warning. Warnings are issued when a function that is not essential to active operation fails. A warning can be confirmed before the error is resolved. However, it will continue to be shown until the cause of the error has actually been dealt with.

## Error, Alarm

This icon indicates an alarm. Alarms are issued for errors that halt operation. Some alarms can be confirmed before the error is resolved. However, they will continue to be shown until the cause of the error has actually been dealt with. Some alarms cannot be confirmed until the error has been successfully resolved. The display windows for such alarms can be removed using the [Confirm later] button.



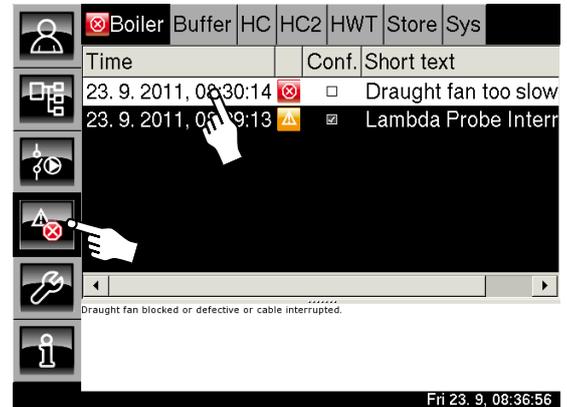
## !!! Restart after an alarm !!!

 Once the error has been resolved and the alarm has been confirmed, the boiler or the affected heating circuit must be switched back on using the on/off button . Once they are switched on, the  button lights up green.

## Displaying an error

Press the  button to go to the list of errors for the current function block.

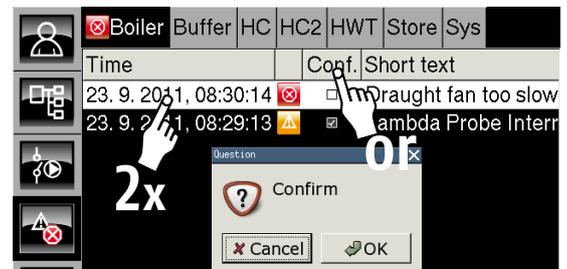
If an **alarm or warning** occurs in **any function block**, this button changes the icon to  (Alarm) or  (Warning).



By **selecting a line**, you can view a **help text** at the bottom of the screen.

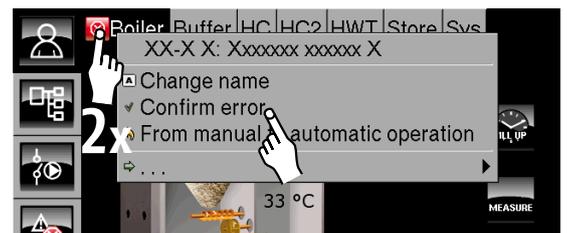
## Confirming an error

Select the line and **double-tap** or **press the Quit button**. A confirmation window appears. Press **"OK"** to **confirm** the message and delete it from the list. Press [Cancel] to close the window without confirming the error.



## Confirming all errors

**Double-tap** on a function block to bring up a menu where you can confirm all errors by tapping **[Confirm errors]**.



## Function block text menus

There is a "text menu" for each function block. This view shows the current parameter settings. It also allows the user to make changes.

### Opening the text menu

Select the desired function block, e.g. by tapping **Boiler**. Next, change the view to "text menu" by pressing the  button.

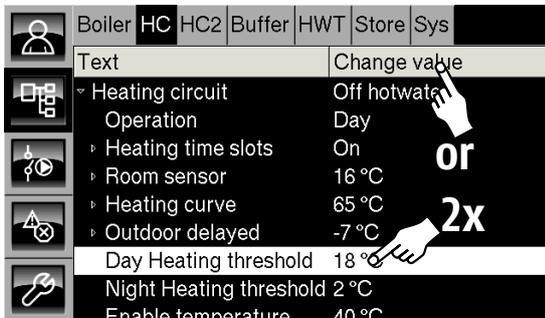
The text menu for the selected function block appears. The individual parameters for the selected function block are displayed.

Lines preceded by ▷ have a submenu, which can be opened by tapping the line. The submenu can be closed again by tapping the upper-level line that is marked with ▾.

### Modifying parameters

It is possible to modify certain parameters in order to adapt the heating to your needs. Tap these parameters to select them. The **Value** field changes and the **Change value** button appears.

**Change** the parameters by **double-tapping** on the line, or **select the line and press the Change value** button.



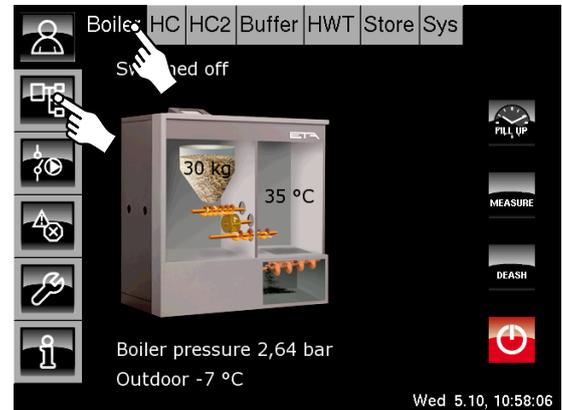
**In case of doubt, consult an expert before making any changes.**

 Only modify parameters if you know what their function is. Read through the corresponding section of the user manual before making changes. If the explanation of the relevant function given in the manual is not sufficient for your purposes, confer with an expert.

### Example: Displaying the boiler counters

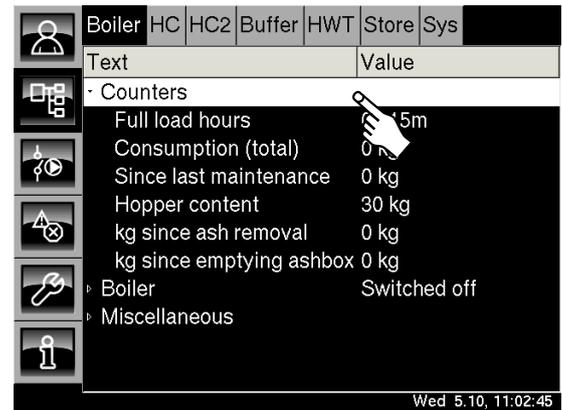
Tap the **Boiler** button to open the "Boiler" function block.

From the overview screen, press the  button to go to the text menu.

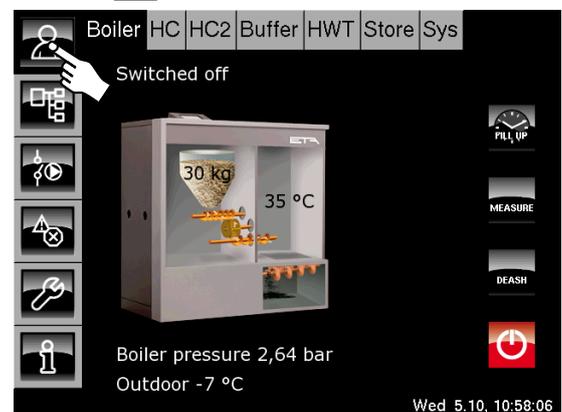


The boiler text menu appears.

Tap the **[Counters]** line. The submenu opens and the boiler counters are displayed.



Press the  button to return to the overview.



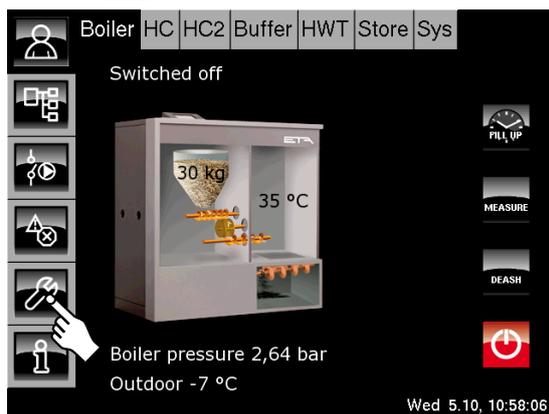
## Service access

The software is divided into several access levels. When the boiler starts up, "Customer level" is activated automatically. On this level, users can adapt the controls to their needs without the risk of incorrectly adjusting the system configuration set by the expert.

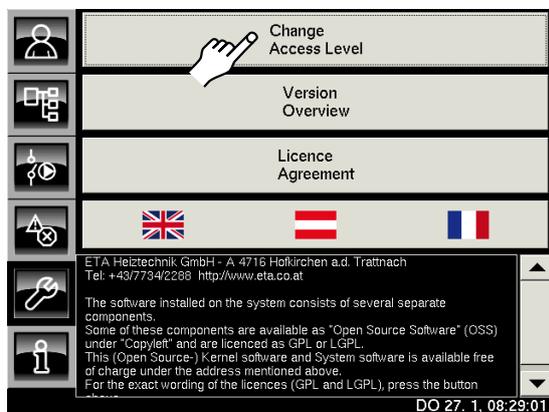
 Changing the access level to "Service" takes you to the "Service" level. An expert must enter the service password "135" in order to alter the controls on this level. If you are not professionally qualified to service the boiler, please contact an expert before making any changes on the Service level.

## Switching to the access level "Service"

Press the  button on the screen.

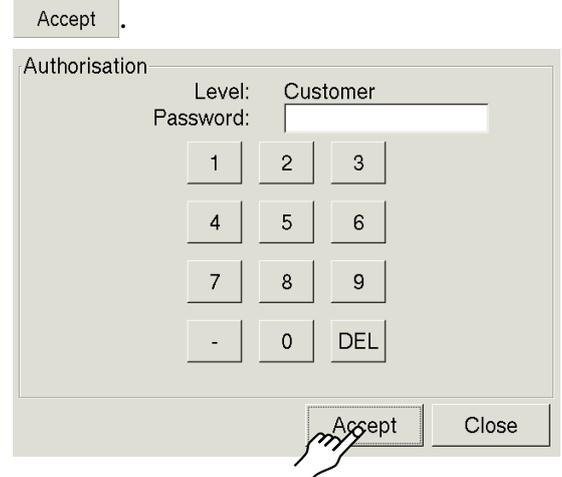


Tap the [Change Access Level] button. A screen appears for entering the password.



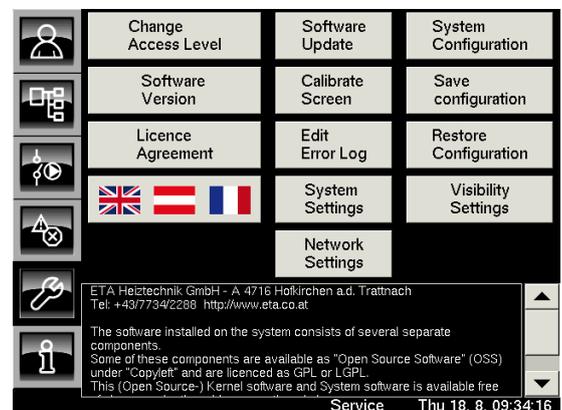
## Entering the service password

Enter the password for the Service level and press



## Access level "Service" activated

You are now on the access level "Service". The word "Service" is now also displayed at the bottom of the screen.



If you are not professionally qualified to service the boiler, please contact an expert before making any changes on the Service level.

Press  to return to the boiler overview screen.

## Hiding function blocks, changing the order

Individual function blocks can be hidden on the touchscreen. This makes it impossible to see or select these FUBs, and is useful, for example, if you do not wish the boiler FUB to be displayed on an additional touchscreen.

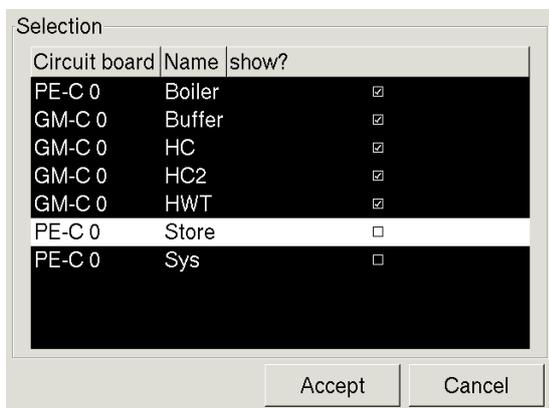
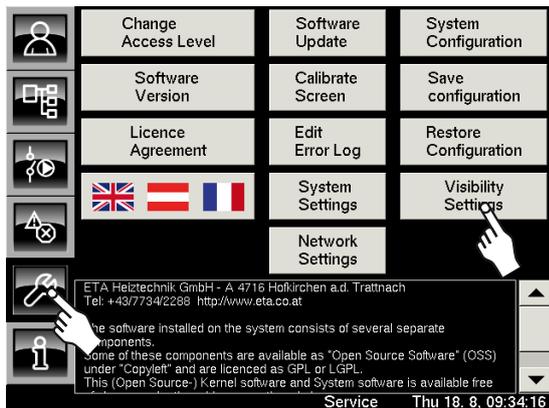
It is also possible to change the order of the displayed function blocks. This allows you to move FUBs that are used more often, such as the boiler and the hot water tank (HWT), to the front.

Hiding FUBs and changing their order can be done directly via the touchscreen in question.

## Hiding function blocks

Using the access level "Service", go to the toolbox by pressing .

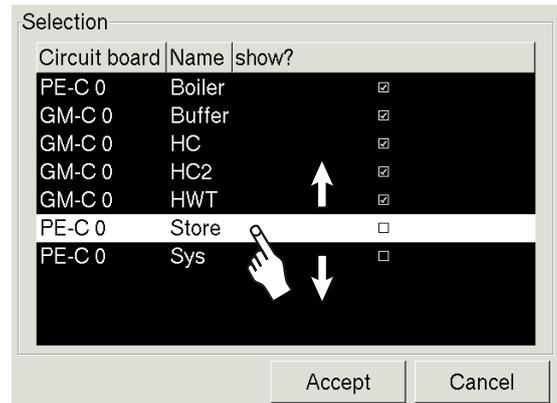
Tap the [Visibility Settings] button. An overview of all the configured function blocks appears.



All the FUBs marked with  are displayed. If you tap on an FUB, the icon changes to  and the selected FUB is hidden.

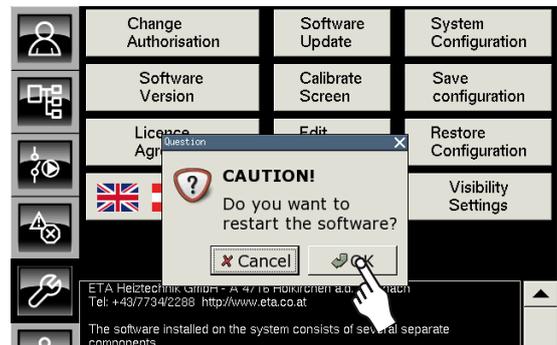
## Changing the order of the function blocks

If you wish to change the order of the FUBs, tap the name of the desired FUB and then, keeping your finger pressed on the screen, drag the FUB up or down.



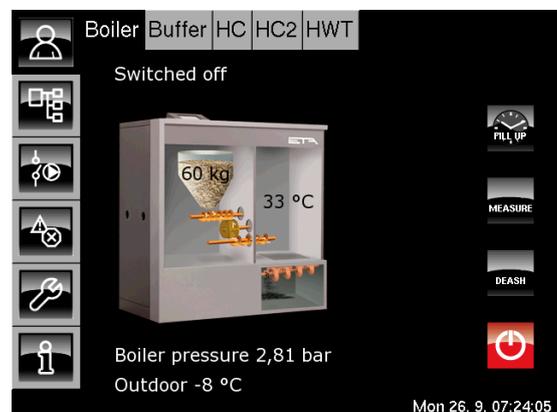
Press **Accept** to save.

An on-screen notice appears asking you to restart. Press **OK** to confirm.



Once the system has restarted, only the unhidden function blocks will be displayed.

Follow the same method to show function blocks.



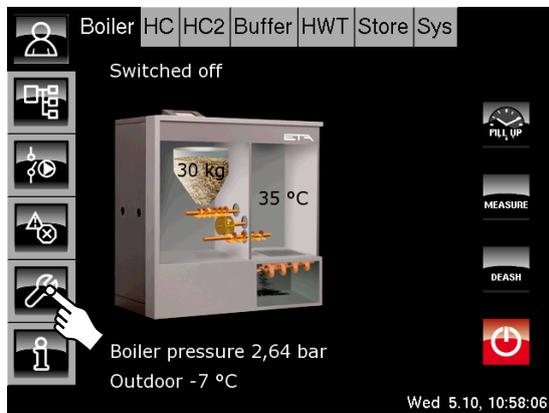
## Which software is installed on the boiler?

This manual is based on the latest version of **software version 1.20.0**.

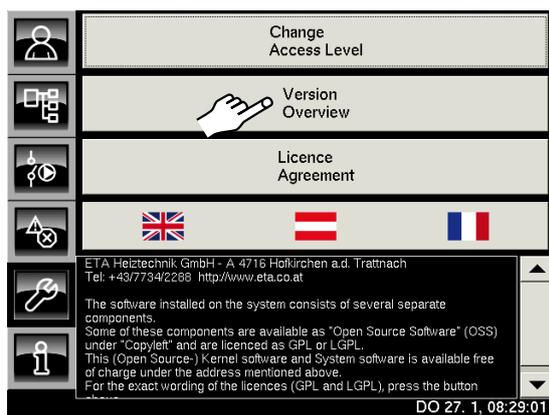
If your boiler has an earlier version of the software installed on it, it is possible to update the software (see page 12 onwards).

## Checking the current boiler software version

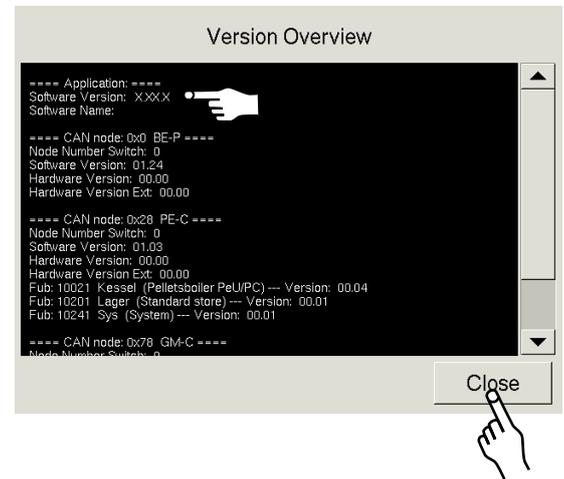
From the overview screen, press the  button to go to the toolbox.



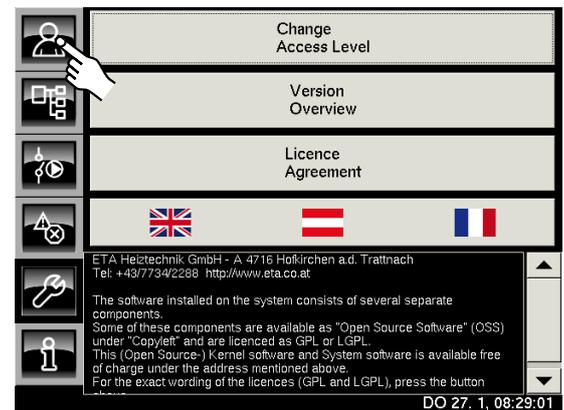
The toolbox screen opens. Tap the [Version Overview] button.



The first lines show which version of the software you have installed.



Use the  button to close the screen and display the toolbox.



Press  to return from the function block to the overview.

## Installed software lower than 1.16.0

If the installed software version is lower than 1.16.0, the software must be **updated** to the latest **full version** (ending x.xx.0). Only once this is complete is it possible to update to the latest software version (e.g. 1.20.1).

## Installed software lower than 1.16.0

If the installed software version is lower than 1.16.0, the software must be **updated** to the latest **full version** (ending x.xx.0). Only once this is complete is it possible to update to the latest software version (e.g. 1.20.1).

## Updating software with an additional touchscreen

As a rule, a software update should **always be performed on all components** of the system, e.g. **the boiler, touchscreen and control extensions**.

## Saving the latest software onto a USB flash drive

Download the latest software from the login area at [www.eta.co.at](http://www.eta.co.at). End customers will find a link for downloading the latest software version in their personal login area at <[www.meinETA.at](http://www.meinETA.at)>.

Copy the files directly to the **main directory of the USB flash drive** (not into a folder).

The stick should have at least 1 GB of free space.

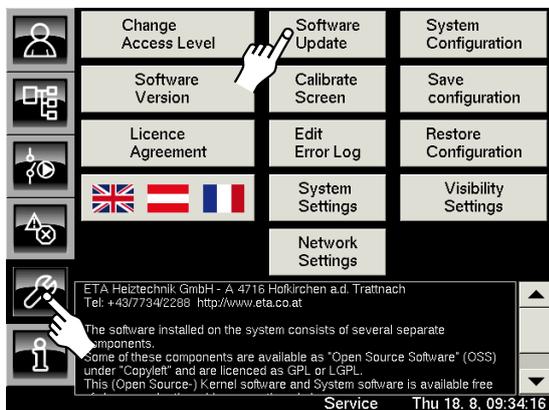
## Plugging the USB flash drive into the boiler

Plug the USB flash drive into the **USB port** on the boiler. On **PU** and **PC** boilers, this is located on the inside of the touchscreen casing. On **PE-K** and **HACK** boilers, it is located on the underside of the touchscreen casing.

## Opening the toolbox

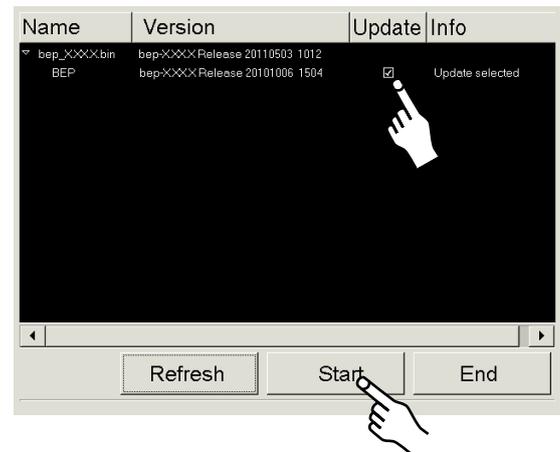
Using the access level "Service", go to the toolbox by pressing .

Press the [Software Update] button.



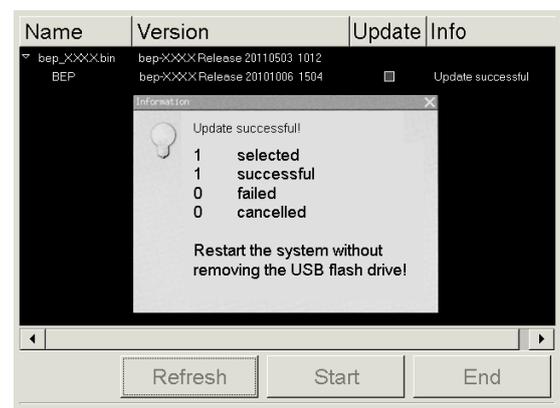
A screen opens and the control system compares the installed software with the version on the USB flash drive. If the **version on the USB flash drive is more up-to-date**, this is indicated by the message **"Update available"**. Tap the [Update] box to select the update.

If the **USB flash drive is not recognised**, a message appears. If this happens, remove the USB flash drive, re-insert it and press the **[Refresh]** button to restart the check.



Press  to copy the new software.

The ETAtouch control system will display a screen to indicate whether the update has been copied successfully or if it has failed.



## Restarting the boiler, leaving the USB flash drive plugged in

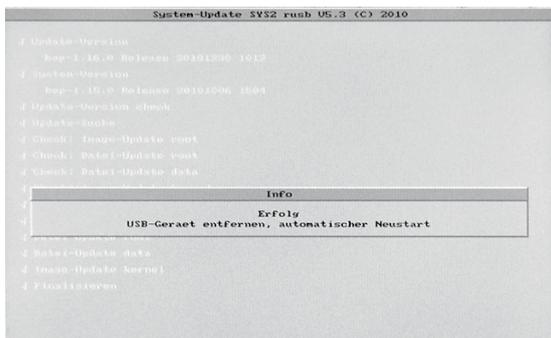
Leave the **USB flash drive plugged in** and switch off the boiler at the **main switch**.



**Do not switch the boiler back on until the LED has gone out**

 Only switch the boiler back on once the **touchscreen LED has gone out**. This is the only way to ensure that the control system is depowered.

After switching back on, the update is configured in the boiler's control system. This process will take a few minutes. Progress is indicated on-screen. Once complete, the message "Remove USB device, automatic restart" appears.



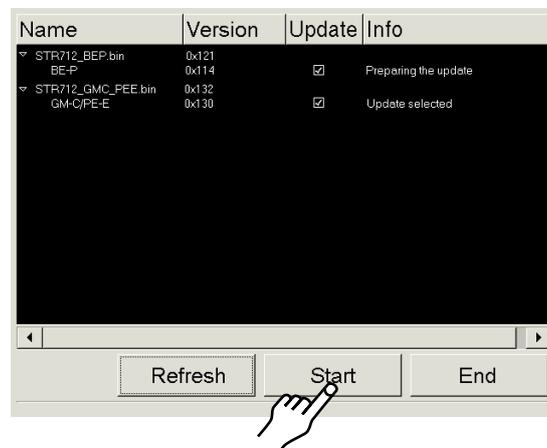
**If an error message appears**, the boiler must be restarted. Do not unplug the USB flash drive during this process. Once the boiler is switched off, do not switch it back on again until the LED has gone out.

## Removing the USB flash drive, restarting the boiler

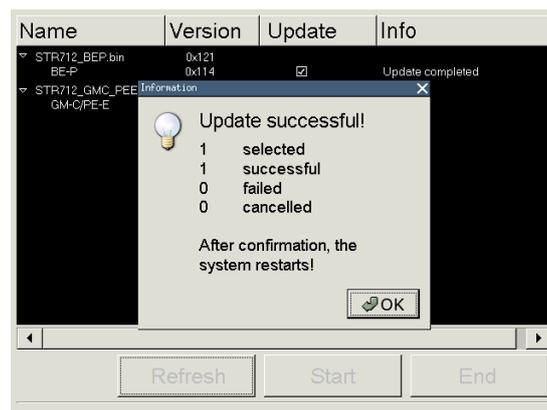
When the message "Remove USB device, automatic restart" appears, remove the USB flash drive.

After a 5-second delay, the boiler automatically restarts.

Once the boiler has restarted, a screen appears to install the update:



Press **Start**. The update installation begins and a window appears with the following information:



## Restarting the boiler, completing the update

 Switch off the boiler **at the main switch** and **do not switch it back on again until the LED has gone out**. The system restarts with the new software version. Once this is done, turn the boiler back on.

## Monitoring functionality after an update

 Even if the system configuration and personal settings have not been changed during the course of an update, the functionality of the control system should be monitored after an update. In extremely rare cases, the new software may not automatically adopt all the same settings as the previous system.

## Reading the error log

Any errors that occur are displayed on the touchscreen for the corresponding function block with different icons (Alarm , Warning  and Message ).

Once errors have been resolved, these messages are deleted from the list of errors ( button).

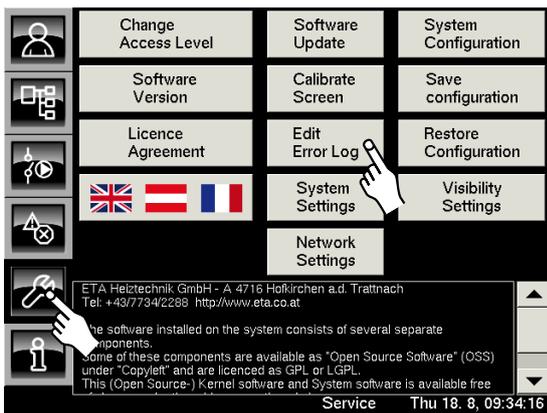
However, all error messages remain saved in the touchscreen's error log and can be recalled when needed.

 The access level "Service" is required in order to display the error log.

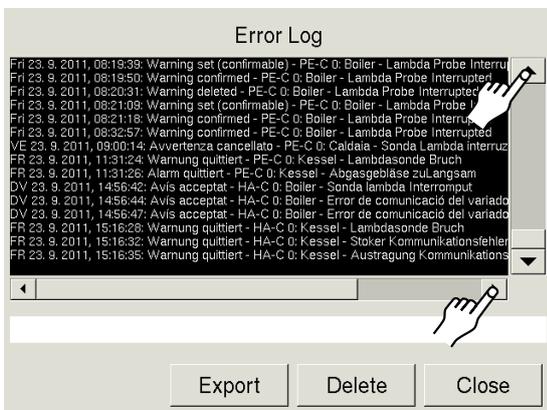
## Displaying the error log

Using "Service", go to the toolbox by pressing .

Press the [Edit Error Log] button.



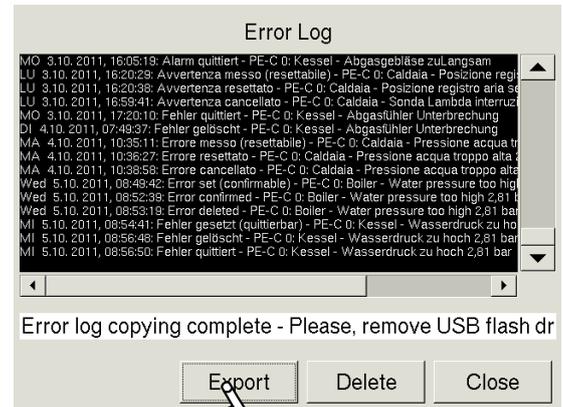
The error log is displayed and can be scrolled through using the scroll bar.



## Saving the error log onto a USB flash drive

The error log saved on the touchscreen can also be saved onto a USB flash drive.

To do this, plug the USB flash drive into the boiler's USB port and press the  button.

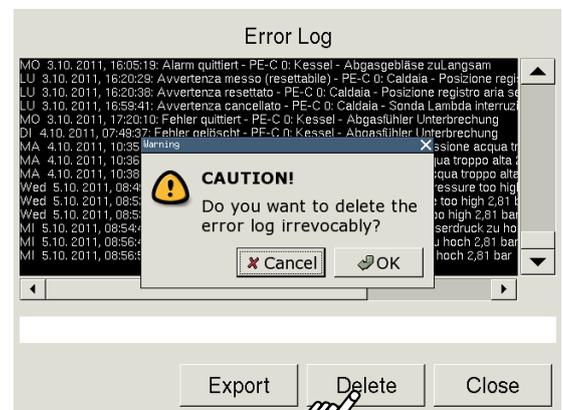


Once the error log has been copied, the message [Error log copying complete - ...] appears. Remove the USB flash drive and press  to open the toolbox.

## Deleting the error log

The  button can be used to completely delete the error log on the touchscreen.

 Before deleting the error log, save a backup of it onto a USB flash drive, print it out and keep it near the boiler.



## Why measure emissions?

It is a requirement for the carbon monoxide (CO) emissions of every boiler to be measured periodically. In Germany, this periodical measurement must also include a dust measurement.

There are several aspects of this that could go wrong, resulting in incorrect measurements even though the boiler fully and consistently complies with these limits when operating in accordance with the relevant standards.

## 2 to 3 days before measurement, the boiler and boiler tube must be cleaned thoroughly

The chimney sweep will contact the owner of the boiler when the measurement is due to take place. The boiler and boiler tube must be cleaned thoroughly 2 to 3 days before the measurement takes place. Once this is complete, the heating can continue to be used as normal.

 This delay between cleaning and measurement is necessary in order to allow dust disturbed during cleaning to settle again. If the chimney sweep measures unsettled dust, the dust reading will be higher than normal and thus inaccurate.

 **Under no circumstances clean the boiler and flue tube on the day of the measurement!**

## If possible, switch the boiler off before measurement

If possible, **switch the boiler off 3 to 5 hours** before measurement using the on/off button .

## Ensure that there is sufficient heat consumption and then switch the boiler back on

Open all the radiator valves and turn the radiator thermostats to maximum.

Finally, switch the boiler back on using the on/off button (  button lights up green).

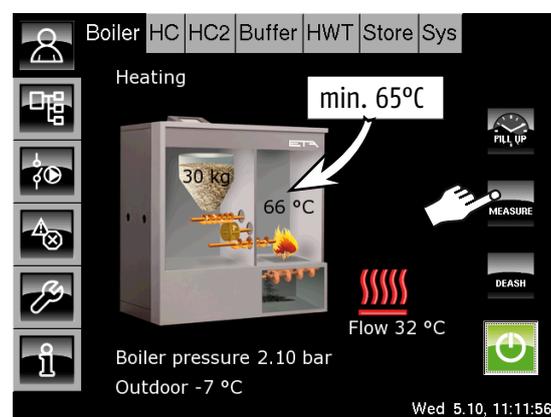
## Boiler temperature at least 65°C

 Before emission measurement, **pellet boilers** must have been **heating for at least 15 minutes**, and the **boiler temperature must be at least 65°C**.

**Wood chip boilers** must have been **heating for at least 30 minutes**, and the **boiler temperature** must be **at least 65°C**.

## Switching the boiler to emission measuring mode

Press  to switch the boiler to emission measuring mode. This button lights up green to confirm the change.



The boiler is now run at **full load for 30 minutes**. The control system ensures that sufficient heat is channelled to the heating circuits and the hot water tank.

## Wait for 5 to 10 minutes, then measure the emissions

 Once emission measuring mode has been activated, **wait for 5 to 10 minutes** until the boiler has reached the required operating temperature and stable combustion can be guaranteed. Then carry out the **emission measurement**.

## After the measurement

Switch the boiler back to normal mode by pressing  again.

If this button is not pressed, the boiler will automatically switch back to normal mode after 30 minutes.

## Accessing the ETAtouch control system via LAN

 With software version 1.20.0 or higher, data from the ETAtouch control system can be viewed via the touchscreen's LAN interface.

This gives the user the option of integrating this ETAtouch control data into an existing control system.

### Requirements

Any customer can enable LAN access themselves. To do this, they need to **register** once at **<www.meinETA.at>** (see page 175

The touchscreen must have **software version 1.20.0** or higher installed on it. For details of how to check the software version and perform an update, see page 11 onwards.

Just as for ETAtouch remote control, the **touchscreen** must be connected **to the Internet** in order to enable LAN access (see page 175 onwards).

### ETAtouch remote control already registered at <www.meinETA.at

 If the boiler is already registered at <www.meinETA.at>, a **LAN access application** can be made immediately (see opposite).

### Not yet registered at <www.meinETA.at>

 LAN access is only granted to registered customers and can be applied for at <www.meinETA.at>. If you are not yet registered, follow the same steps as for registering ETAtouch remote control:

- Request login data -> see page 175
- Connect network cable and check settings -> see page 175 onwards
- Register the touchscreen -> see page 177 onwards

### Enabling LAN access is a 2-stage process

The registered customer logs in at <www.meinETA.at> using their login data and applies to have LAN access enabled in the "Application for LAN access" menu by pressing .

Once the application has been confirmed (message appears), LAN access can be activated on the touchscreen.

To do this, switch to the access level "Service" in the "System Settings" menu and press

 to activate LAN access.

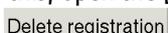
### ETAtouch remote control can be switched off

If so desired, ETAtouch remote control can be switched to "Off" once LAN access has been activated (see page 181).

LAN access is not affected by the operating state of remote control.

 However, if **remote control registration is deleted** (see page 185), **LAN access** is then also **automatically deactivated**.

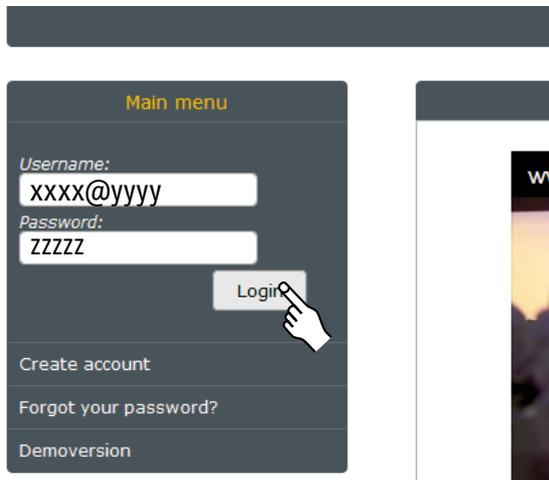
### If LAN access is no longer needed

 It can **only be deactivated by deleting remote control registration**. To do this, open the [System Settings] menu and tap the  button.

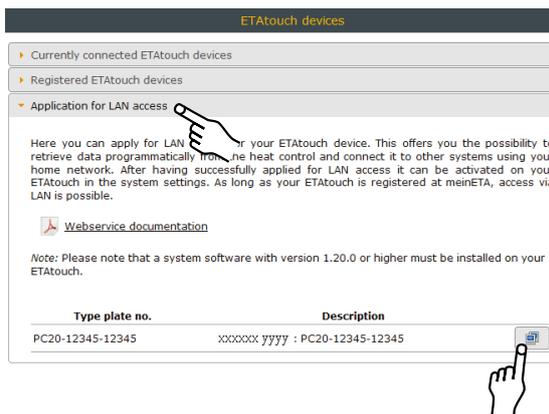
However, if you do this, you will no longer be able to operate the touchscreen remotely. If the function is still needed, the touchscreen must be re-registered. To do this, press  and enter your login data (see page 177 onwards).

## Applying for LAN access at <www.meinETA.at>

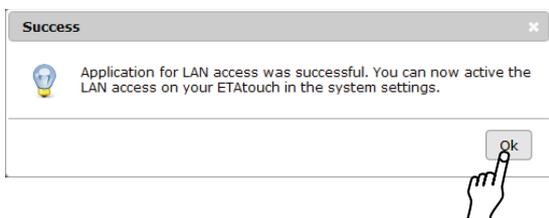
Log in to the homepage <www.meinETA.at> using your personal login data.



Select the [ETAtouch devices] menu and open the [Application for LAN access] submenu.



Press  to apply for LAN access. Once access has been confirmed, a message appears.

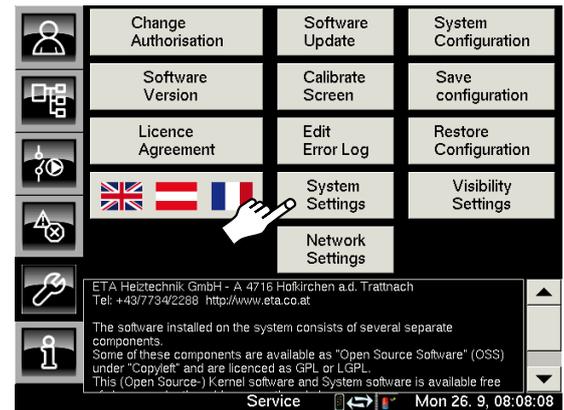


The next step is to activate LAN access on the touchscreen.

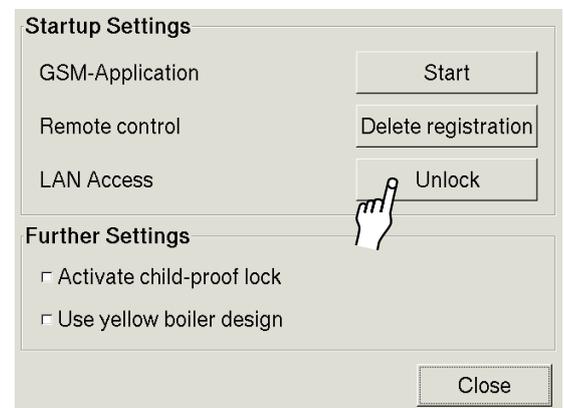
## Activating LAN access on the touchscreen

 LAN access can only be activated on the touchscreen if you have already applied to enable this function at the homepage <www.meinETA.at>.

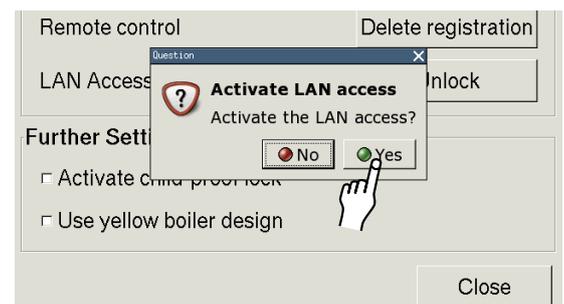
Using the access level "Service" press the  button to switch to the toolbox and tap [System Settings] to open it.

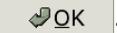


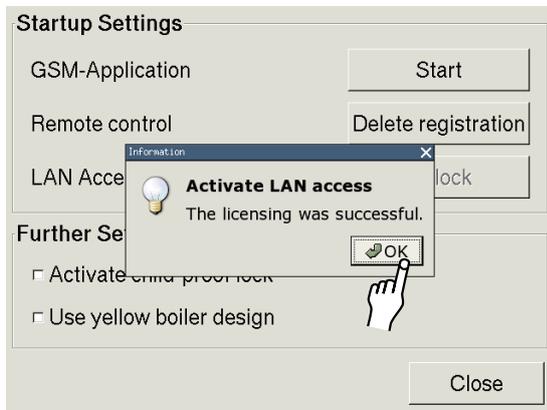
Press  to activate LAN access.



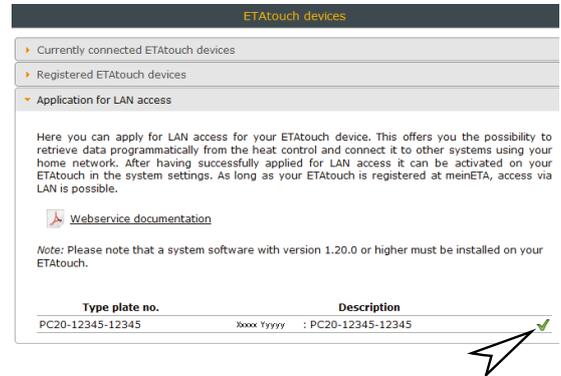
Confirm the query.



Once access has been enabled, an on-screen notice appears. Close this by pressing .



The activated LAN access is shown by the  icon on the <www.meinETA.at> homepage in the submenu "Application for LAN access".

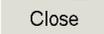


It is now possible to access the control data for the ETAtouch control system via LAN.

 Via this LAN interface, each user is only able to view the data for their own touchscreen. Even if you are authorised to access more than one boiler via the "Partner network" at <www.meinETA.at>, you will still only be able to view the data for your own touchscreen.



LAN access is now activated.

Close the [System Settings] menu by pressing the  button. The display returns to the toolbox.

### If LAN access is no longer needed

 It can **only be deactivated by deleting the remote control registration**. To do this, open the [System Settings] menu and press the  button.

However, if you do this, you will no longer be able to operate the touchscreen remotely. If the function is still needed, the touchscreen must be re-registered. To do this, press  and enter your login data (see page 177 onwards).

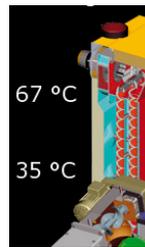
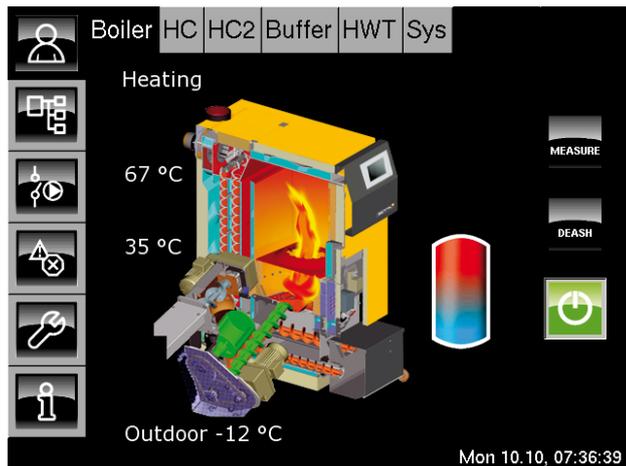


## "Boiler" overview

Tap  and **Boiler** to open the "Boiler" overview screen.

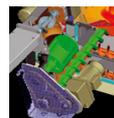
The overview screen shows you at a glance the current operating state of the boiler and your heating system.

You can switch the unit on and off, de-ash, and measure emissions from this overview screen.



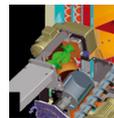
**Current boiler flow temperature**

**Current boiler return temperature**



**Stoker screw in operation**

The stoker screw and rotary valve are displayed in green when they are turning in the discharge direction.



**Metering screw in operation**

The metering screw is displayed in green when it is turning in the discharge direction.



**On/off button**

This button is used to switch the boiler on and off.

 Green = On

 Red = Off



**Deash button**

This button is used to begin the removal of ash from the boiler.



**Emission measurement**

This button switches the boiler to full load mode for a period of 30 minutes. The boiler will then begin to run at full load. The heat will be channelled into the hot water tank and the heating circuits. After 30 minutes, the boiler automatically returns to the original mode.

This button is also used to start **the floor agitator turning in order to fill the store.**



**Buffer storage tank**

Displayed when the boiler is channelling heat into the buffer storage tank.

**Outdoor -12°C**

**Current outside temperature**

The current outside temperature is measured by the built-in outside temperature sensor.

**Heating** **Current operating mode**

This line shows the current operating mode of the boiler. Below is a list of the possible modes:

### Switched off

The boiler is switched off.  
The on/off button  is lit up red.

### Warm Start

The boiler is attempting to start a new heating cycle using only the embers remaining in the combustion chamber. The electrical ignition is not used.

### Igniting

The fuel is ignited using the electrical ignition.

### Heating

The boiler is in heating mode and is channelling heat to the consumers.

### Ember burnout

At the end of a firing phase, the fuel that is still on the grate is burnt off. No more fuel is conveyed into the boiler.

### Ash box missing

The ash box is not connected. The position switch for the ash box is not pressed.

### Ready

After burnout, the boiler is switched on and standing by for a heating demand.

### Ash removal

The grate tips up and the turbulators move to clean the heat exchanger. The ash screws transport the ash from the boiler to the ash box.

### Failure

A malfunction has occurred, preventing the boiler from heating. The cause can be found in the list of error messages.

### Failure during ash-removal

The ash screw has been switched off due to excessive current consumption. This may be due to the ash box being full or the ash screw being blocked by foreign objects.

Empty the full ash box, then start a new deashing sequence by pressing  or . If the ash box was not full or the malfunction recurs, the foreign object blocking the ash screw must be found and removed.

### Ember burnout - Error

Due to a malfunction, the current firing phase has ended with a burnout.

### Ember burnout - External Stop

Due to an external lock-out (Stop command), the current firing phase has ended with a burnout.

### Locked

Heating not possible, as the boiler has been locked externally (Stop command).

### Calibrating lambda probe

The lambda probe is calibrated automatically. Whilst in this mode, heating is not possible.

### Emptying stoker

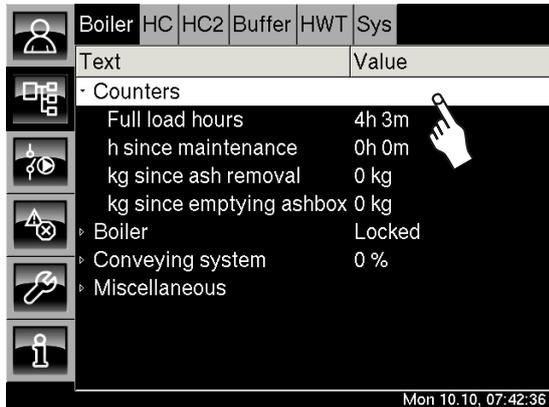
At the end of a firing phase, the fuel slot runs empty in order to empty the stoker.

## Displaying counters

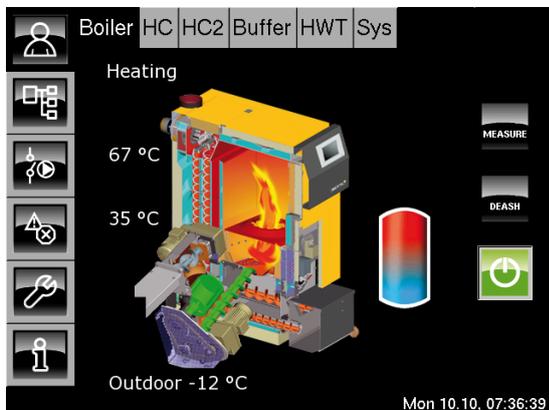
Press the **Boiler** and  buttons to go to the boiler text menu.

Tap the [Counters] line.

The submenu opens, displaying a list of the current counters.



Press the  button to return to the overview.



## What do you need to consider when changing fuel type?

The control system displays a choice of fuels: wood chips, wood pellets and Miscanthus (see also Terms and Conditions of Warranty).



If the fuel is changed, the control system must also be set to the new fuel type. **Depending on fuel type, different parameters** are saved and automatically adjusted **for combustion and ash removal**.

It is also necessary to **set the firebed level sensor** and the **flue gas recirculation function**.

## Flue gas recirculation

Very dry fuels (e.g. pellets, joinery waste material, Miscanthus) require the optional **flue gas recirculation**. The **"Flue gas recirculation" parameter must be set to "Yes"** for the control system to be able to use such fuels (for more information, see page 24).



If the fuel type is set to "Wood pellets", the "Flue gas recirculation" parameter is also automatically set to "Yes".

## Water content and density of fuel

Average water content and density values for each fuel type are already stored in the system. If the fuel is changed, these parameters are also changed at the same time.



If you know the water content and density of the fuel you are using, you must adjust these values (for more information, see page 23). With the aid of the lambda probe this enables optimum control of combustion right from the start. Otherwise, it may take several days for the control system to make the necessary adjustments and reach optimum combustion control.

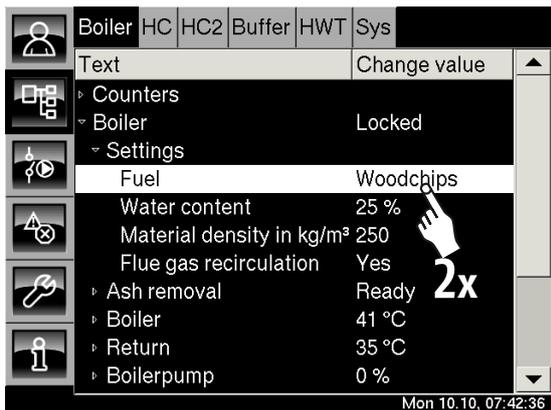
## Changing fuel

Press the buttons **Boiler** and **☰** to go to the text menu.

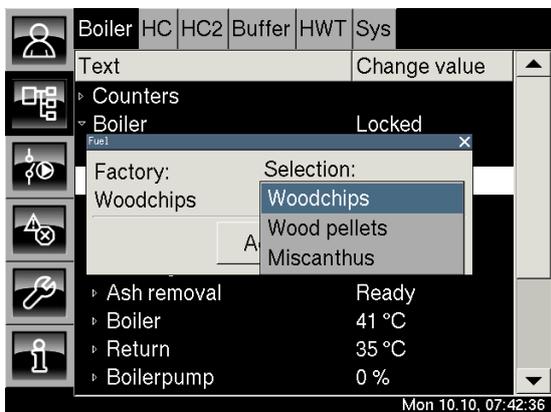
Tap the [Boiler] line and, in the submenu, tap [Settings].

The display shows the current fuel type and the settings for water content and density.

Double-tap on the [Fuel] line.



A fuel selection window appears.



Select the new fuel type and press **Accept**.

The water content and density are changed to the average values stored for the selected fuel type.

Press **☰** to return to the boiler overview.

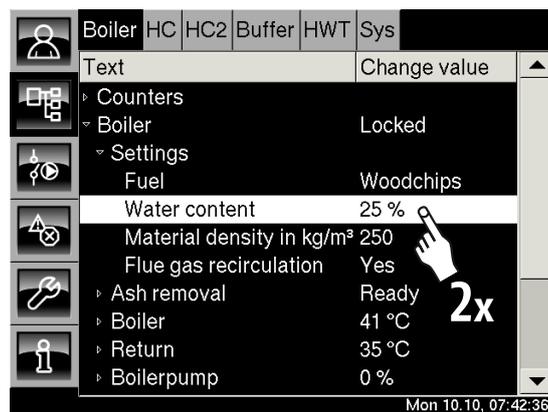
## Adjusting water content and density

If you know the water content and density of the new fuel type, you must adjust the corresponding parameters in the text menu.

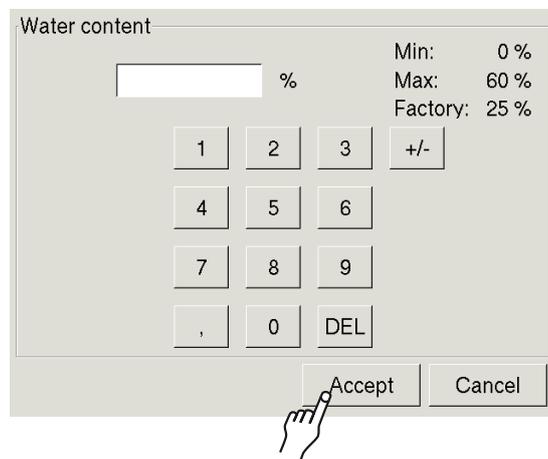
Tap the buttons **Boiler** and **☰** to go to the text menu.

Tap the [Boiler] line and, in the submenu, tap [Settings]. The display shows the current water content and density settings.

Double-tap on the [Water content] line.



A selection window appears.



Enter the water content of the new fuel and press **Accept**.

Follow the same procedure to adjust the density.

Press **☰** to return to the boiler overview.

## What does flue gas recirculation do?

For very dry fuels (e.g. pellets, joinery waste material, Miscanthus), optional flue gas recirculation is required in order to lower the combustion temperature.

If shut-off in the recirculation pipe of the flue gas recirculation system has been installed or removed, the flue gas recirculation function must likewise be switched either on or off in the control system.

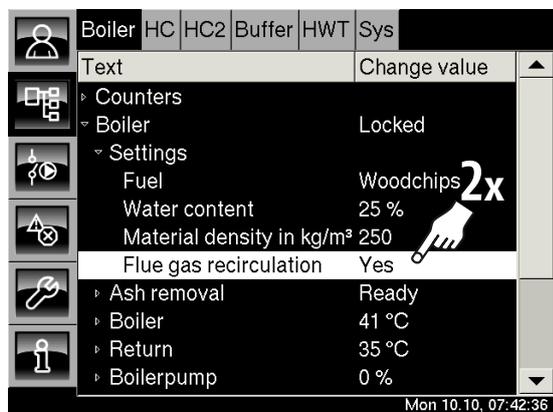
 If the fuel type is set to "Wood pellets", the "Flue gas recirculation" parameter is also automatically set to "Yes".

## Adjusting flue gas recirculation

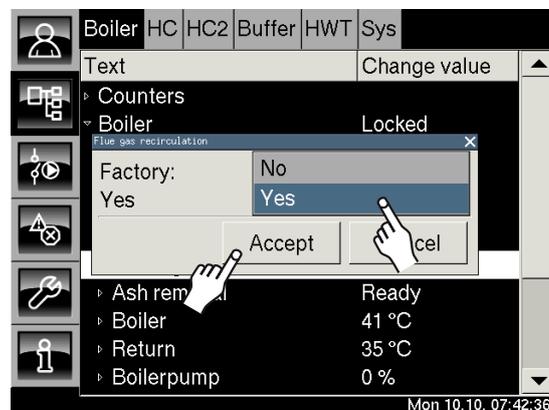
Press the buttons  and  to open the text menu.

Tap the [Boiler] line and, in the submenu, tap [Settings].

Double-tap on the [Flue gas recirculation] line.



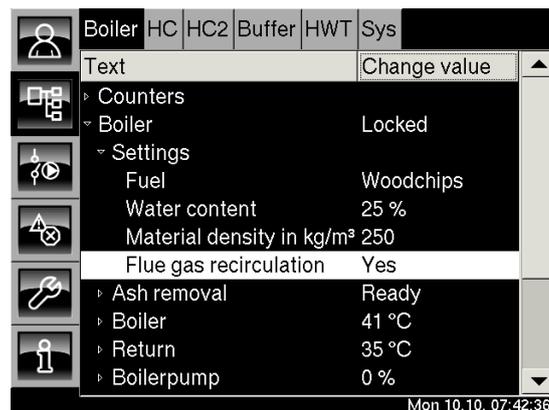
A selection window appears.



Set flue gas recirculation to [Yes] and press

.

The text menu display appears again.



Press  to return to the boiler overview.

## Maintenance counter

The boiler requires regular maintenance each time a certain amount of fuel has been consumed. As such, a maintenance counter has been installed to send a message to the screen when a defined fuel level has been reached.

Once maintenance is complete, the maintenance counter must be reset to zero.

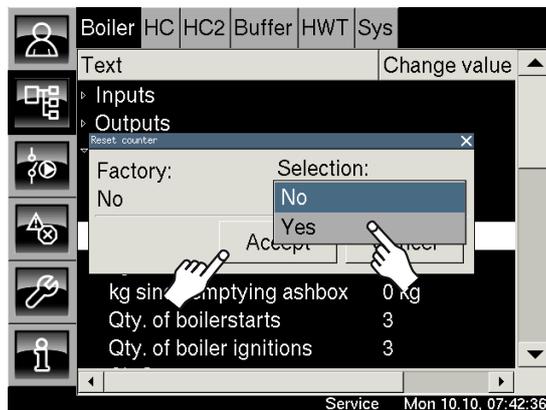
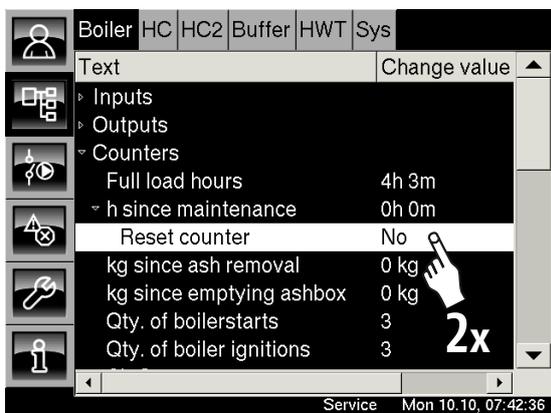
 The access level "Service" is required to do this.

## Resetting the maintenance counter

Using the access level "Service", press the **Boiler** and  buttons to open the text menu.

Tap the [Counters] line and, in the submenu, tap [h since maintenance].

Double-tap on the [Reset counter] line. A selection window opens.



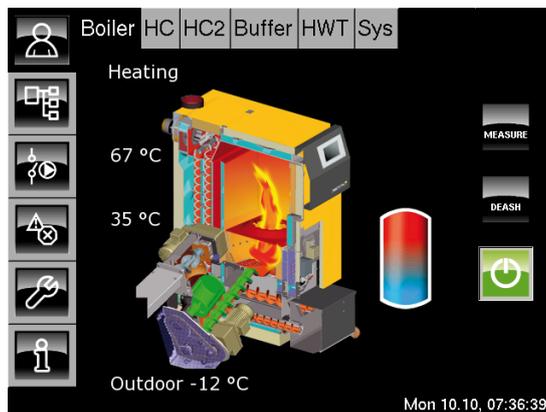
Select [Yes] and press the **Accept** button to confirm.

The value [h since maintenance] is set to zero and the maintenance counter is reset.

## Switching the boiler back on

Press  to return to the boiler overview.

Switch the boiler back on using the  button. Heating begins automatically if required.



## Deashing the boiler

When the heat exchanger is being cleaned, the stroke mechanism of the turbulators is tensioned against a spring and then released. The noise generated by the beating of the turbulators and the creaking of the ash screws can be transferred into the house as structure-borne noise via the floors and walls.

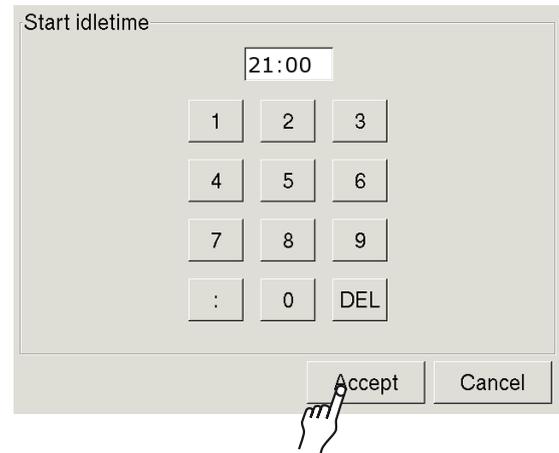
## The purpose of ash removal idletime

It is possible to select a time after which the boiler should not be de-ashed. This prevents potential noise pollution during the night. The duration of this idletime can be altered using the "Duration idletime" parameter.

 The latest possible time should be chosen to begin the idletime. Likewise, the duration of the idletime should be as short as possible, otherwise the combustion chamber may become excessively soiled, thus reducing the efficiency of the boiler.

 The factory setting for the start of idletime is 21:00.

A settings screen opens:



Enter the new time to start the idletime. After this time, the boiler will not perform ash removal for the length of time specified by the "Duration idletime" parameter.

Press **Accept** to save.

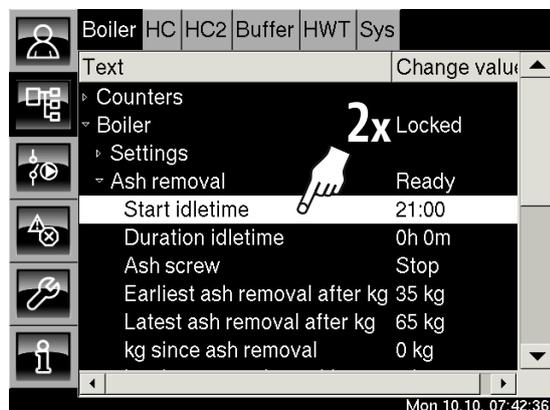
The boiler text menu display appears again.

## Adjusting the ash removal idletime

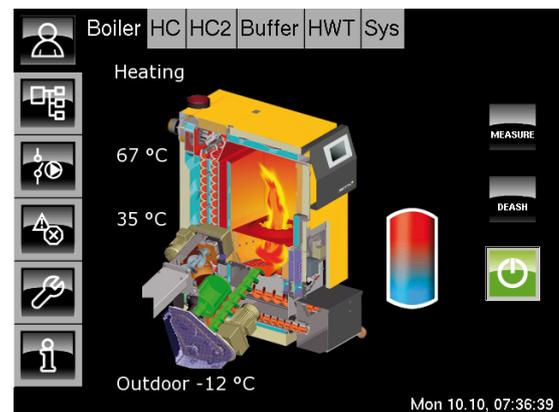
Press the buttons **Boiler** and  to go to the text menu.

Tap the [Boiler] line and, in the submenu, tap the [Ash removal] line.

Double-tap the [Start idletime] line.



Press  to return to the boiler overview.



## Duration of ash removal idletime

From the **start of the idletime** (= "Start idletime" parameter), **boiler ash removal is locked**. This period of time is defined by the "Duration idletime" parameter.

Make the duration of the idletime as short as possible, otherwise the combustion chamber may become excessively soiled, thus reducing the efficiency of the boiler.

 For this reason, the factory setting for the idletime is zero.

## Do not set excessively long idletimes

The **maximum idletime depends on the fuel being used and the intervals between ash removal operations**. If the fuel type requires that ash removal be performed at very short intervals, it is only possible to set similarly short idletimes.

### Values for normal fuel:

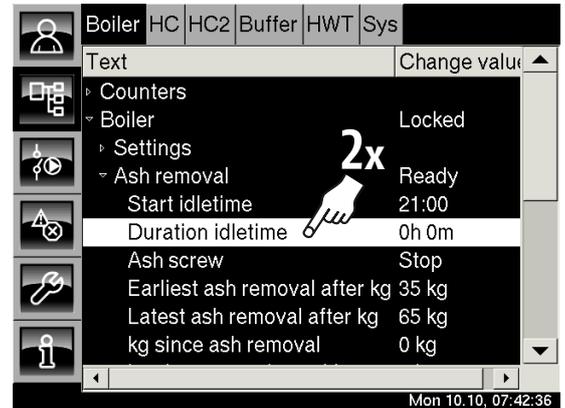
Maximum Duration idletime	Fuel		
	Wood chips	Wood pellets	Miscanthus
20 - 49 kW: Not longer than:	8 h	10 h	1.5 h
63 - 200 kW: Not longer than:	6 h	8 h	1.2 h

## Adjusting the duration of the idletime

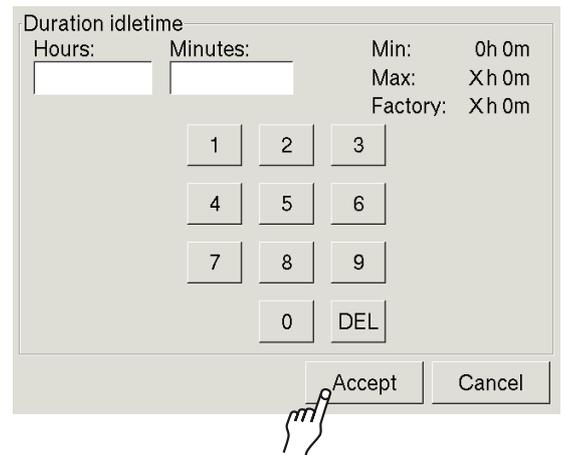
Press the buttons **Boiler** and  to go to the text menu.

Tap the [Boiler] line and, in the submenu, tap the [Ash removal] line.

Double-tap on the [Duration idletime] line.



A settings screen opens:



Enter the idletime duration and press **Accept**.

The boiler text menu display appears again.

Press  to return to the boiler overview.

## The deashing interval depends on the fuel type

The deashing interval defines how much fuel must be consumed before automatic ash removal begins. During this process the grate tips up and the ash that falls off is transported to the ash box by the ash screws.

The deashing interval depends on the type of fuel being used. The higher the ash content of the fuel (e.g. if there are large pieces of slag in the ash box), the shorter the deashing intervals must be.

The parameters "Earliest ash removal after kg" and "Latest ash removal after kg" define the boiler's deashing interval.

## Before altering the interval

Check the following points before altering the deashing interval:

- Is the correct fuel type set? -> page 23
- Does the boiler have flue gas recirculation? -> page 24
- idletimes for ash removal -> page 26 onwards



The deashing interval should only be altered after consultation with an expert or ETA Customer Service.

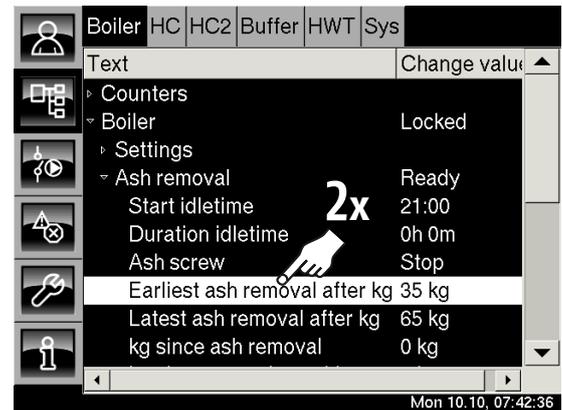
## Deashing interval factory settings

	Wood chips	Wood pellets	Miscanthus
20 – 49 kW:			
At earliest after:	25 kg	35 kg	5 kg
At latest after:	50 kg	60 kg	10 kg
63 – 90 kW:			
At earliest after:	35 kg	55 kg	9 kg
At latest after:	65 kg	90 kg	15 kg
130 kW:			
At earliest after:	45 kg	90 kg	11 kg
At latest after:	100 kg	150 kg	19 kg
200 kW:			
At earliest after:	70 kg	140 kg	17 kg
At latest after:	155 kg	230 kg	30 kg

## Changing the "Earliest ash removal after kg" setting

Press the buttons **Boiler** and  to go to the text menu.

Tap the [Boiler] line and, in the submenu, tap the [Ash removal] line. Double-tap on the [Earliest ash removal after kg] line.



A settings screen opens:



Enter the new value and press **Accept**. The text menu display appears again.



Use the same method to alter the parameter "Latest ash removal after kg".

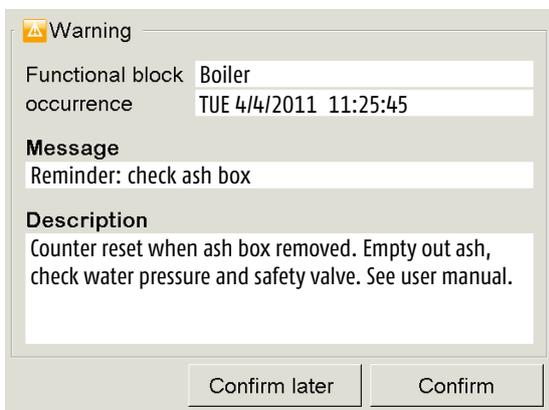
Press  to return to the boiler overview.

## "Empty ash box" reminder

The ash box must be emptied regularly. In the control system, you can enter a fuel consumption level, so that a reminder to empty the ash box will appear once this amount of fuel has been consumed.

Since the **ash content depends on the type of fuel being used**, the **default value** is set to **0 kg**. With this setting, **the reminder does not appear on the screen**, and the **ash box filling level** must be checked manually at regular intervals.

 However, the parameter can be changed at any time as soon as you have some experience of your fuel consumption rate.

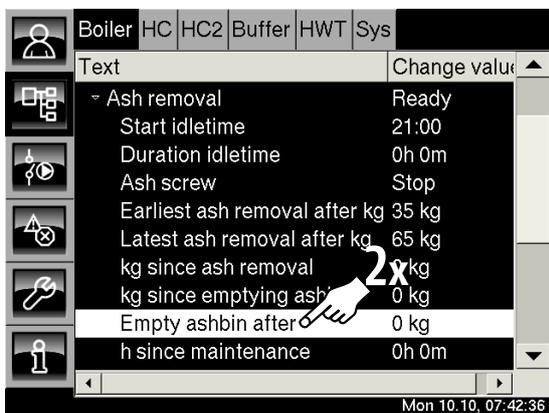


## Changing the "Empty ashbin after" setting

Press the buttons **Boiler** and  to go to the text menu.

Tap the [Boiler] line and, in the submenu, press the [Ash removal] line.

Double-tap the [Empty ashbin after] line.



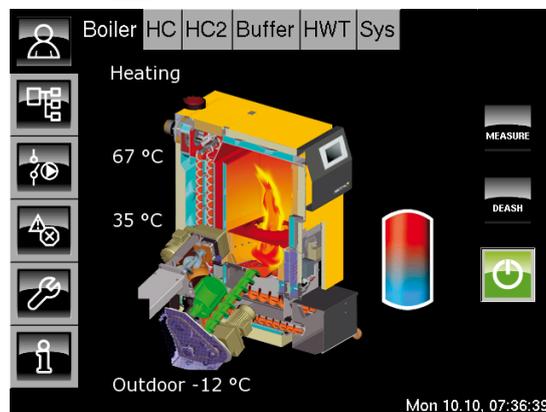
A settings screen opens:



Enter the new value. If the value is set to zero, this message will no longer appear.

Press **Accept** to confirm.

Press the  button to return to the overview.



## Automatic calibration of the lambda probe

The boiler's built-in lambda probe checks the residual oxygen content of the flue gas and uses this to control the combustion. In order to ensure that this works correctly, the boiler automatically calibrates the lambda probe at regular intervals (factory setting: every 500 h).

## Calibrating the lambda probe with the "Additional calibration" software function

 The access level "Service" is required for calibration.

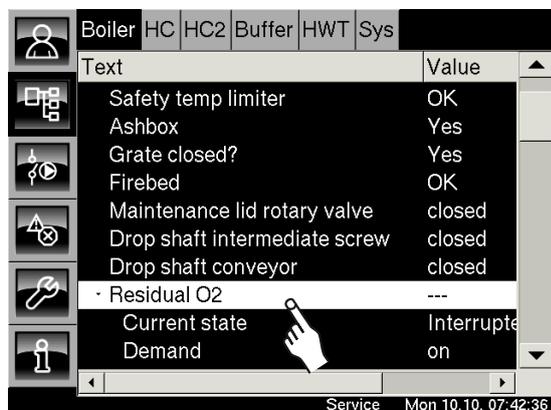
If you wish to perform an additional calibration between the automatic intervals, you can start the calibration using the software function "Additional calibration". When this is activated, the boiler automatically stops heating, de-ashes and rinses the boiler with fresh air using the draught fan. The residual oxygen content is then measured and the lambda probe is automatically calibrated to the set value.

The calibration process takes approx. 1.5 – 2 hours.

## Opening the boiler text menu

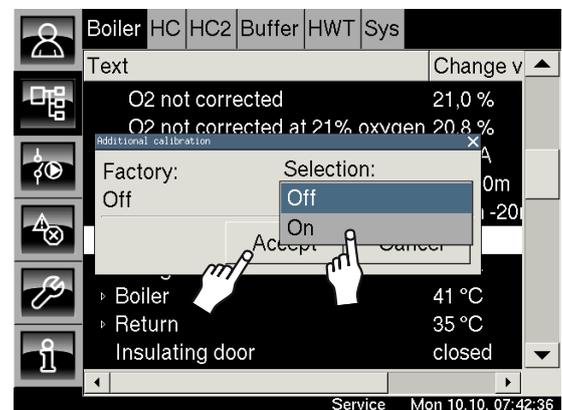
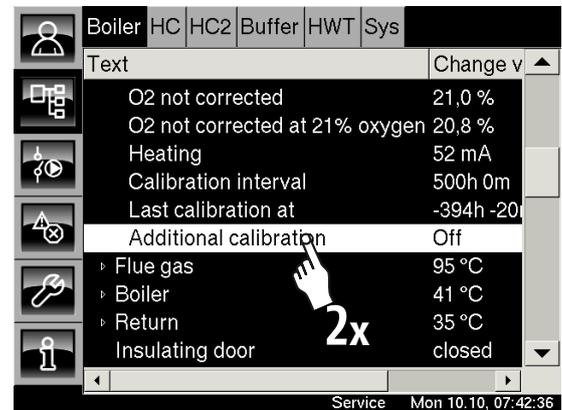
Using the access level "Service", open the text menu by pressing **Boiler** and .

Tap the [Inputs] line. In the submenu, tap the [Residual O2] line.



## Starting the "Additional calibration" function

In the submenu, scroll down and double-tap on the [Additional calibration] line.



In the selection window that appears, press the [On] button and confirm with **Accept**.

## The lambda probe is calibrated automatically

The control system will now automatically calibrate the lambda probe.

 After 100 hours, the control system will automatically re-calibrate the probe.

## In the overview

Press  to return to the boiler overview. The boiler is now in **Calibrating lambda probe** mode.

Once calibration is complete, the boiler automatically returns to operation and begins heating as required.

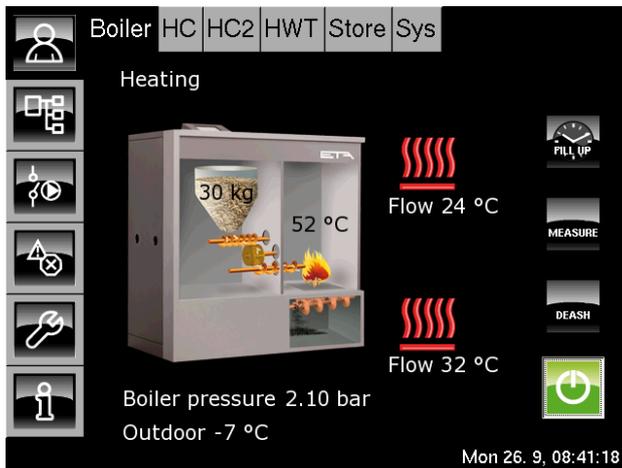


## "Boiler" overview

Press  and **Boiler** to open the "Boiler" overview screen.

The overview screen shows you at a glance what operating state the boiler and your heating system are in.

You can switch the unit on and off, de-ash and define the fill-up time from this overview screen.



### On/off button

This button is used to switch the boiler on and off.

 Green = On

 Red = Off



### Deash button

This button is used to begin deashing of the boiler.



### Emission measurement

This button switches the boiler to full load mode for a period of 30 minutes. The boiler will then begin to run at full load. The heat will be channelled into the hot water tank and the heating circuits. After 30 minutes, the boiler automatically returns to the original mode.



### Fill-up time

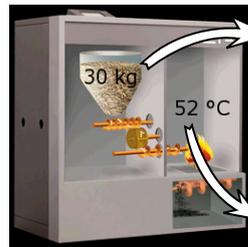
This button can be used to set the latest time at which the boiler's storage tank is completely filled up. This prevents refilling during the night. This time applies for every day of the week.

### Boiler pressure 2.10 bar Current boiler pressure

The current water pressure in the heating system is displayed. The pressure is measured in the boiler.

### Outdoor -7°C Current outside temperature

The current outside temperature is measured by the outside temperature sensor.



### Current pellet stock

in the boiler storage tank. Maximum pellet stock for Pu7-15: 30kg / PC20-32: 60kg

### Current boiler temperature



### Heating coil for heating circuit or buffer

This is displayed when the boiler is supplying directly to the **heating circuit or the buffer**. The temperature displayed is the flow temperature for the consumer in question.



### Heating coil for 2<sup>nd</sup> internal heating circuit (PU7-15 only)

Is **only displayed** if the 2<sup>nd</sup> internal heating circuit is installed and configured. The second heating coil appears with the flow temperature when the boiler is supplying heat to the 2<sup>nd</sup> heating circuit.



### Hot water tank (PU7-15 only)

The hot water tank is displayed on the right of the boiler when the boiler is supplying heat to the hot water tank.

**Heating** Current operating mode

This line shows the current operating mode of the boiler. Below is a list of the possible modes:

**Switched off**

The boiler is switched off.  
The on/off button  is lit up red.

**Warm Start**

The boiler attempts to ignite the pellets without the electrical ignition using only the remaining embers and the heat stored in the combustion chamber.

**Igniting**

The pellets are ignited using the electrical ignition.

**Heating**

The boiler is in heating mode and is channelling heat to the consumers.

**Ember burnout**

At the end of a firing phase, the pellets that are still on the grate are burnt off.

**Ready**

After burnout, the boiler is switched on and standing by for a heating demand.

**Ash box missing**

The ash box is not connected. The position switch for the ash box is not pressed.

**Ash removal**

The grate tips up for self-cleaning, and the turbulators move to clean the heat exchanger. The ash screws transport the ash from the boiler to the ash box.

**Failure**

A malfunction has occurred, preventing the boiler from heating. The cause can be found in the list of error messages.

**Failure during ash-removal**

The ash screw has been switched off due to excessive current consumption. This may be due to the ash box being full or the ash screw being blocked by foreign objects.

Empty the full ash box, then start a new deashing sequence by pressing  or . If the ash box was not full or the malfunction recurs, the foreign object blocking the ash screw must be found and removed.

**Ember burnout – Error**

Due to a malfunction, the current firing phase has ended with a burnout.

**Ember burnout – External Stop**

Due to an external lock-out (Stop command), the current firing phase has ended with a burnout.

**Locked**

Heating not possible, as the boiler has been locked externally (Stop command).

**Calibrating lambda probe**

The lambda probe is calibrated automatically. It is not possible for the unit to heat whilst in this mode.

**Ash removal stop aspirator**

The suction process used to fill the boiler storage tank is interrupted in order to de-ash the boiler.

**Standby fill up**

Pellets are sucked into the storage tank so that the boiler can attempt to ignite. It is not possible for the unit to heat whilst in this mode.

**Stop fill-up**

The suction process used to fill the boiler storage tank is interrupted in order to ignite pellets and start up the boiler.

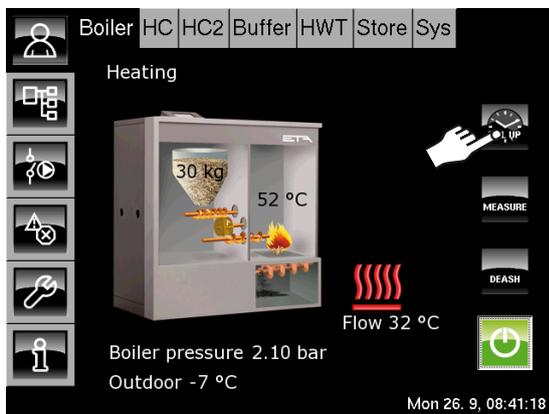
## Defining the fill-up time

It is possible to adjust the latest time for filling up the storage tank before night time, in order to prevent disturbances. This time applies for every day of the week.

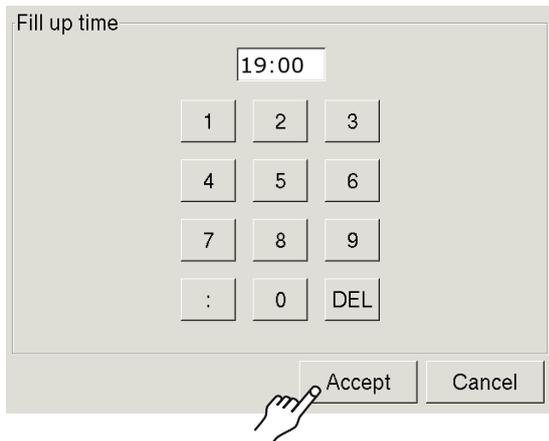
 The factory setting for this time is 19:00. This prevents refilling during the night.

## Changing the fill-up time

Tap the  button. A screen appears for setting the time.



Enter the new fill-up time.



Press the  button to save the new time. The fill-up time has now been changed. The new time applies for every day of the week.

## "Fill up pellets" function

The "Fill up pellets" function can be used to fill up the boiler's storage tank regardless of the current filling level.

This function is available in the boiler text menu.

## Filling up the storage tank separately

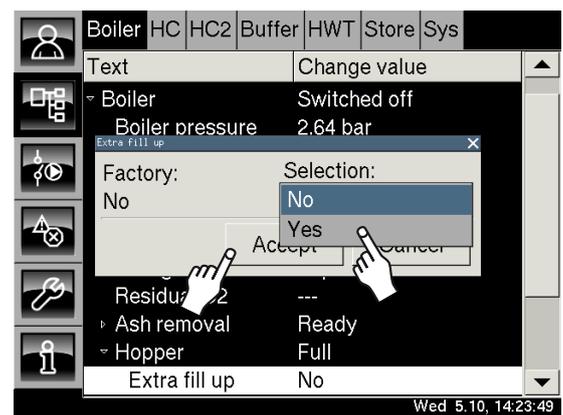
Press the buttons  and  to go to the boiler text menu.

Tap the [Boiler] line and, in the submenu, tap the [Hopper] line.

Double-tap on the [Extra fill-up] line.



A selection window appears.



Select [Yes] and press . The fill-up process begins and the storage tank is filled up.

Press  to return to the boiler overview.

## Maintenance counter

The boiler requires regular maintenance each time a certain amount of pellets has been consumed. As such, a maintenance counter has been installed to send a message to the screen when a defined fuel level has been reached.

Once maintenance is complete, the maintenance counter must be reset to zero.

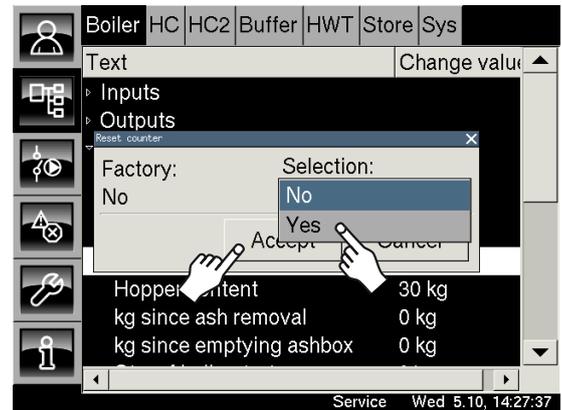
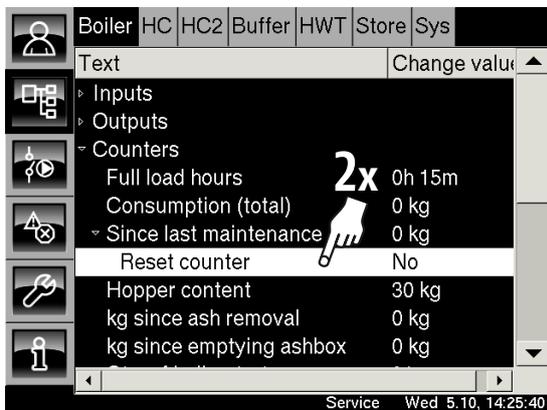
 The access level "Service" is required to do this.

## Resetting the maintenance counter

Using the access level "Service", press **Boiler** and  on the screen to open the boiler text menu.

Tap the [Counters] line and, in the submenu, tap [kg since maintenance].

Double-tap on the [Reset counter] line. A selection window opens.



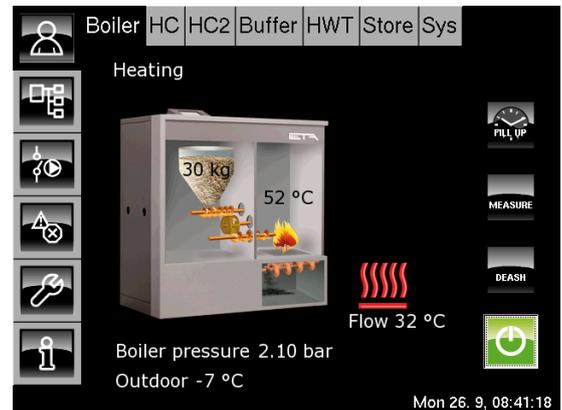
Select [Yes] and press the **Accept** button to confirm.

The value [h since maintenance] is reset to zero and the maintenance counter is reset.

## Switching the boiler back on

Press  to return to the boiler overview.

Switch the boiler back on using the  button. Heating begins automatically if required.



## Adjusting the ash removal idletime

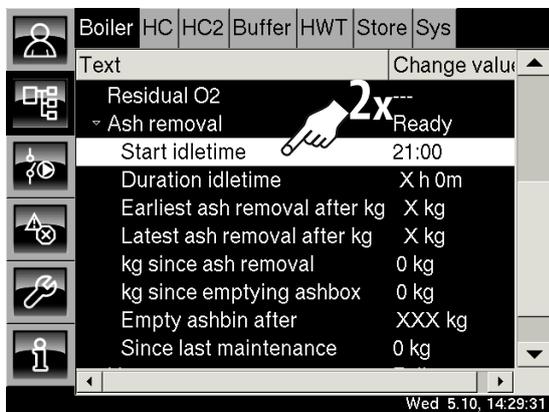
The "Start idletime" parameter is used to select the time from which the boiler ceases to de-ash. The time for which ash removal is locked can be altered using the "Duration idletime" parameter. The "Start idletime" time applies for every day of the week.

 The factory setting for this is 21:00.

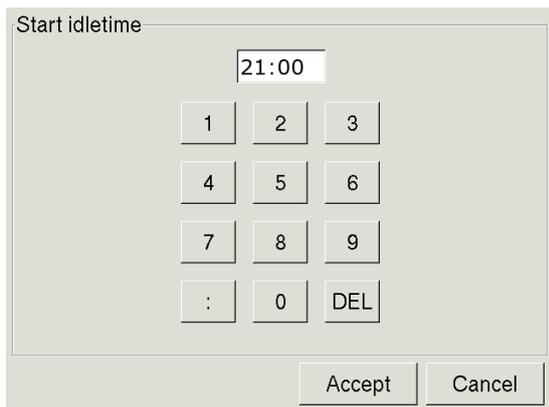
Press the buttons **Boiler** and  to go to the text menu.

Tap the [Boiler] line and, in the submenu, tap the [Ash removal] line.

Double-tap the [Start idletime] line.



A settings screen opens:



Enter the new time and press **Accept** to save changes.

Press the  button to return to the overview.

## Adjusting the duration of the idletime

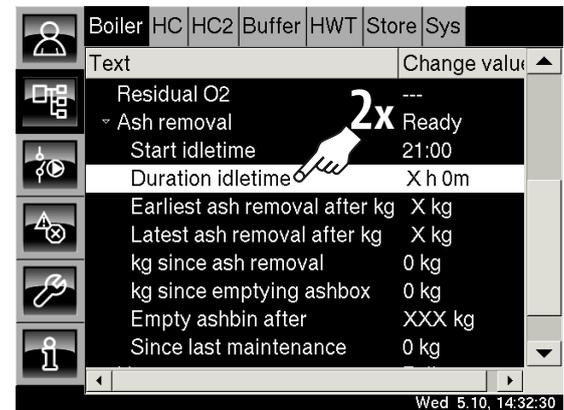
The duration of the idletime for ash removal can be altered using the "Duration idletime" parameter. This duration applies for every day of the week.

 The factory setting is 10 hours.

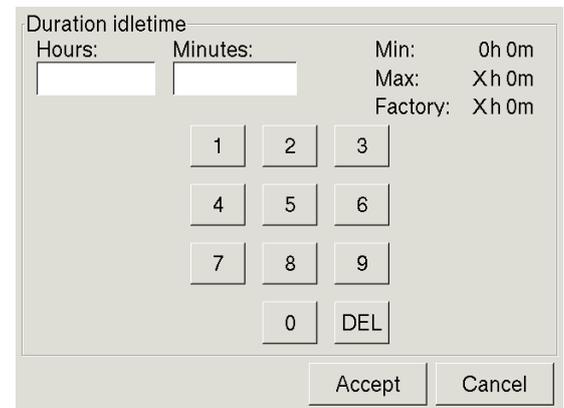
Press the buttons **Boiler** and  to go to the text menu.

Tap the [Boiler] line and, in the submenu, tap the [Ash removal] line.

Double-tap on the [Duration idletime] line.



A settings screen opens:



The duration of the idletime can now be changed. Press **Accept** to confirm.

Press the  button to return to the overview.

## Deashing interval

Once a defined amount of pellets has been consumed, the control system automatically de-ashes the boiler. The ash is transported from the combustion chamber to the ash box.

The parameters "Earliest ash removal after kg" and "Latest ash removal after kg" define the boiler's deashing interval. Ash removal is performed at a point between these two limits.



The deashing interval should only be altered after consultation with an expert or ETA Customer Service.

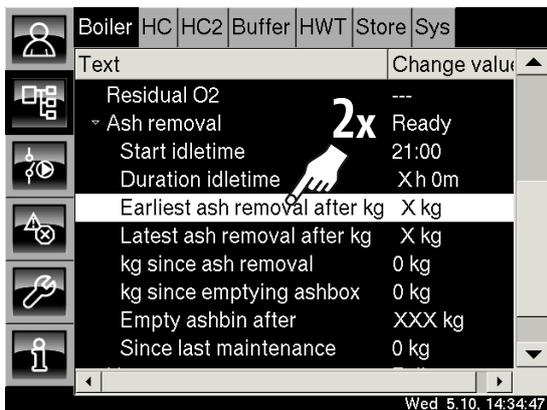
## Deashing interval factory settings

	PU 7-11	PU 15	PC 20-32
At earliest after:	15 kg	18 kg	30 kg
At latest after:	25 kg	30 kg	50 kg

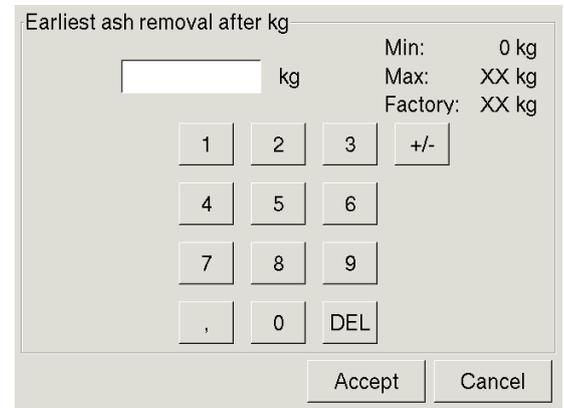
## Changing the "Earliest ash removal after kg" setting

Press the buttons **Boiler** and **Text** to go to the text menu.

Tap the [Boiler] line and, in the submenu, tap the [Ash removal] line. Double-tap on the [Earliest ash removal after kg] line.



A settings screen opens:

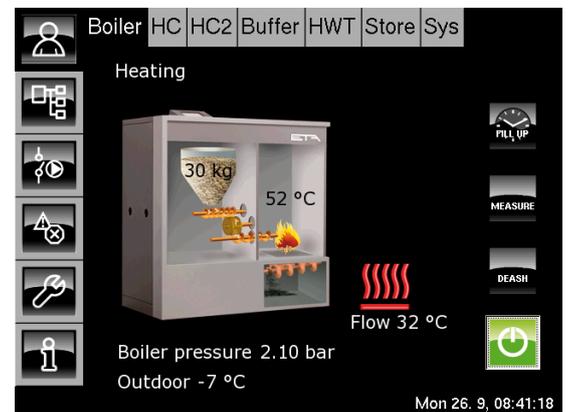


Enter the new value and press **Accept** to confirm.



Use the same method to alter the parameter [Latest ash removal after kg].

Press the **Boiler** button to return to the overview.

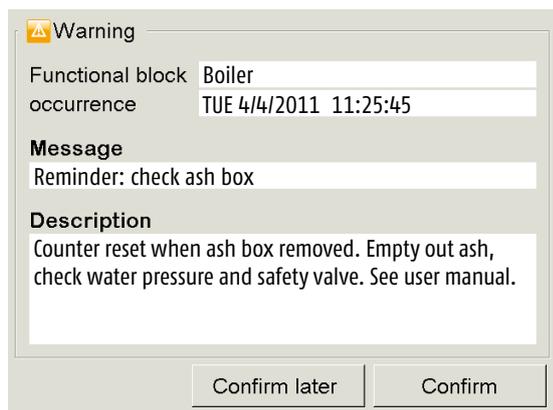


## "Empty ash box" reminder

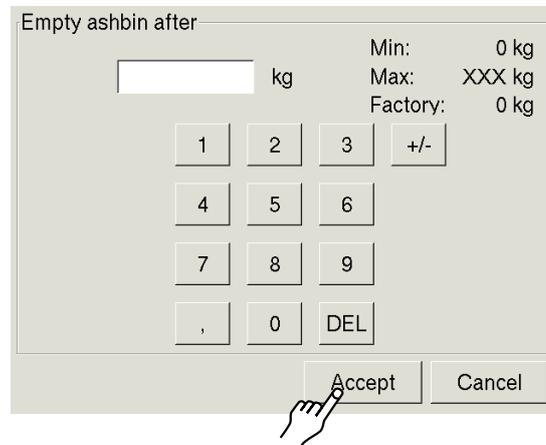
The ash box should be emptied regularly. As such, the factory settings contain a pellet consumption level at which a reminder to empty the ash box appears.



If the ash box is only part full after this time, the value in the "Empty ashbin after" parameter can be increased. If the value is set to zero, the message will no longer appear. The filling level must then be checked manually at regular intervals.



A settings screen opens:



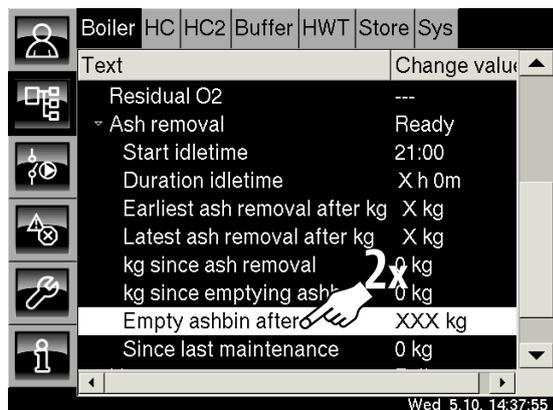
Enter the new pellet consumption value after which a reminder will appear to empty the ash box, then press **Accept** to confirm.

## Changing the "Empty ashbin after" setting

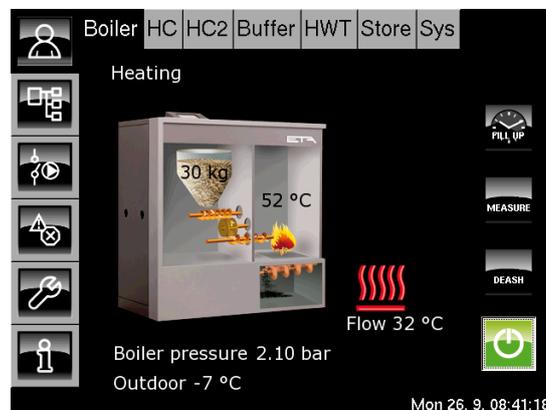
Press the buttons **Boiler** and **Menu** to go to the text menu.

Tap the [Boiler] line and, in the submenu, tap the [Ash removal] line.

Double-tap the [Empty ashbin after] line.



Press the **Home** button to return to the overview.



## Automatic calibration of the lambda probe

The boiler's built-in lambda probe checks the residual oxygen content of the flue gas and uses this to control the combustion. In order to ensure that this works correctly, the boiler automatically calibrates the lambda probe at regular intervals (factory setting: every 500 h).

## Calibrating the lambda probe with the "Additional calibration" software function

 The access level "Service" is required for calibration.

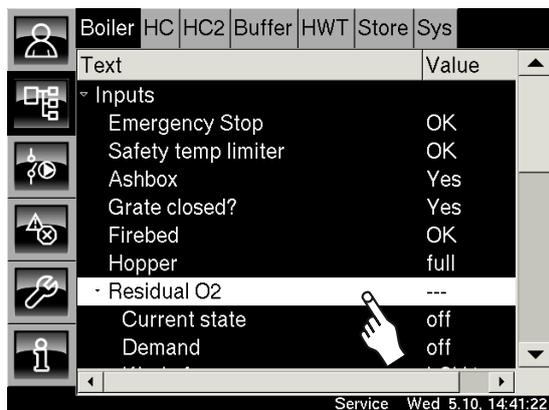
If you wish to perform an additional calibration between the automatic intervals, you can start the calibration using the software function "Additional calibration". When this is activated, the boiler automatically stops heating, de-ashes and rinses the boiler with fresh air using the draught fan. The residual oxygen content is then measured and the lambda probe is automatically calibrated to the set value.

The calibration process takes approx. 45 minutes.

## Opening the boiler text menu

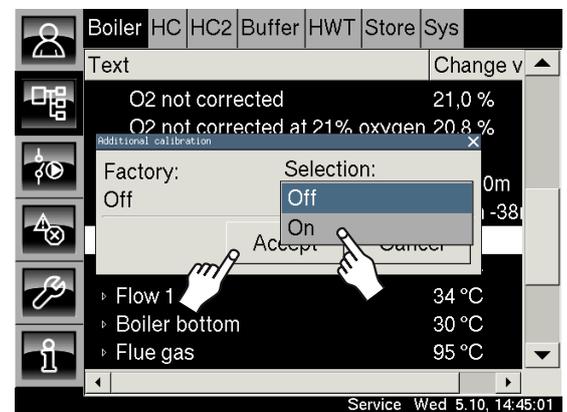
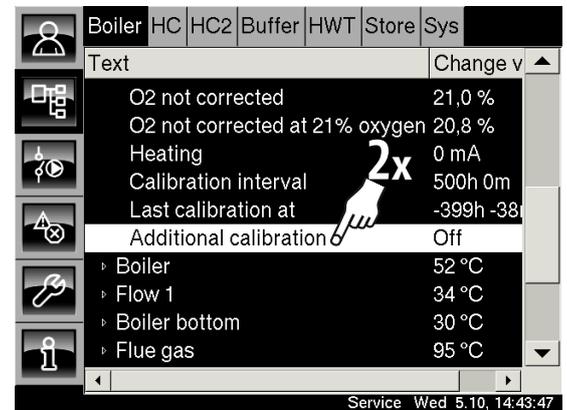
Using the access level "Service", open the text menu by pressing **Boiler** and .

Tap the [Inputs] line. In the submenu, tap the [Residual O2] line.



## Starting the "Additional calibration" function

In the submenu, scroll down and double-tap on the [Additional calibration] line.



In the selection window that appears, press the [On] button and confirm with **Accept**.

## The lambda probe is calibrated automatically

The control system will now automatically calibrate the lambda probe.

 After 100 hours, the control system will automatically re-calibrate the probe.

## In the overview

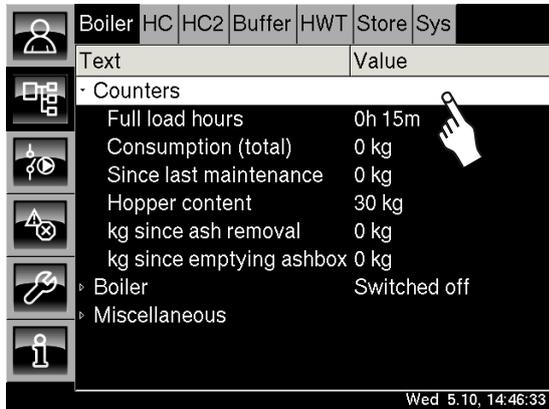
Press  to return to the boiler overview. The boiler is now in **Calibrating lambda probe** mode.

Once calibration is complete, the boiler automatically returns to operation and begins heating as required.

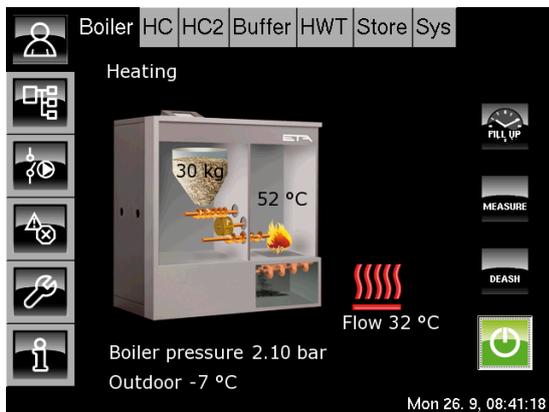
## Displaying counters

Press the buttons **Boiler** and  to go to the boiler text menu.

Tap the [Counters] line. The submenu opens, displaying a list of the current counters.



Press the  button to return to the overview.





## "Boiler" overview

Press  and **Boiler** to open the "Boiler" overview screen.

The overview screen shows you at a glance what operating state the boiler is in. You can switch the unit on and off, de-ash, measure emissions and define the fill-up time from this overview screen.



### Emission measurement

This button switches the boiler to full load mode for a period of 30 minutes. The boiler will then begin to run at full load. The heat will be channelled into the hot water tank and the heating circuits. After 30 minutes, the boiler automatically returns to the original mode.



### Current pellet stock

In the boiler storage tank. The maximum pellet stock that can be stored is 60 kg.



### Current boiler temperature

### Current return temperature



### On/off button

This button is used to switch the boiler on and off.

 Green = On

 Red = Off



### Buffer storage tank

Displayed **only on systems with a buffer storage tank**. The buffer storage tank is displayed when the boiler is **charging the buffer**.



### Deash button

This button is used to begin deashing of the boiler.



### Fill-up times

This defines two times at which the storage tank will be filled.

However, the boiler can still refill the pellets in-between these times if necessary. These times apply for every day of the week.



### Heating coil

Only shown if **no buffer** is installed. The heating coil appears as soon as the boiler charges the **heating circuit or the hot water tank**.

### Outdoor -6°C

### Current outside temperature

The current outside temperature is measured by the built-in outside temperature sensor.

**Heating** Current operating mode

This line shows the current operating mode of the boiler. Below is a list of the possible modes:

**Switched off**

The boiler is switched off.  
The on/off button  is lit up red.

**Standby fill up**

Pellets are sucked into the storage tank so that the boiler can attempt to ignite. It is not possible for the unit to heat whilst in this mode.

**Stop fill-up**

The suction process used to fill the boiler storage tank is interrupted in order to ignite pellets and start up the boiler.

**Warm Start**

The boiler is attempting to start a new heating cycle using only the embers remaining in the combustion chamber. The electrical ignition is not used.

**Igniting**

The fuel is ignited using the electrical ignition.

**Heating**

The boiler is in heating mode and is channelling heat to the consumers.

**Ember burnout**

At the end of a firing phase, the fuel that is still on the grate is burnt off. No more fuel is conveyed into the boiler.

**Ash box missing**

The ash box is not connected. The position switch for the ash box is not pressed.

**Ash removal stop aspirator**

The suction process used to fill the boiler storage tank is interrupted in order to de-ash the boiler.

**Ready**

After burnout, the boiler is switched on and standing by for a heating demand.

**Ash removal**

The grate tips up and the turbulators move to clean the heat exchanger. The ash screw transports the ash from the boiler to the ash box.

**Failure**

A malfunction has occurred, preventing the boiler from heating. The cause can be found in the list of error messages.

**Failure during ash-removal**

The ash screw has been switched off due to excessive current consumption. This may be due to the ash box being full or the ash screw being blocked by foreign objects.

Empty the full ash box, then start a new deashing sequence by pressing  or . If the ash box was not full or the malfunction recurs, the foreign object blocking the ash screw must be found and removed.

**Ember burnout - Error**

Due to a malfunction, the current firing phase has ended with a burnout.

**Ember burnout - External Stop**

Due to an external lock-out (Stop command), the current firing phase has ended with a burnout.

**Locked**

Heating not possible, as the boiler has been locked externally (Stop command).

**Calibrating lambda probe**

The lambda probe is calibrated automatically. It is not possible for the unit to heat whilst in this mode.

## Defining the fill-up times

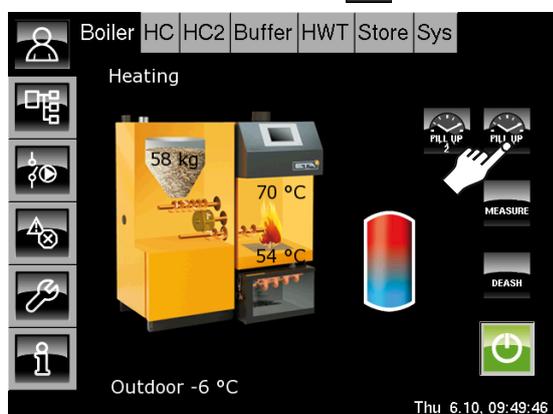
In the overview, the  and  buttons can be used to define the two times at which the storage tank is filled up.

However, the boiler can still refill the pellets in-between these times if necessary. These times apply for every day of the week.

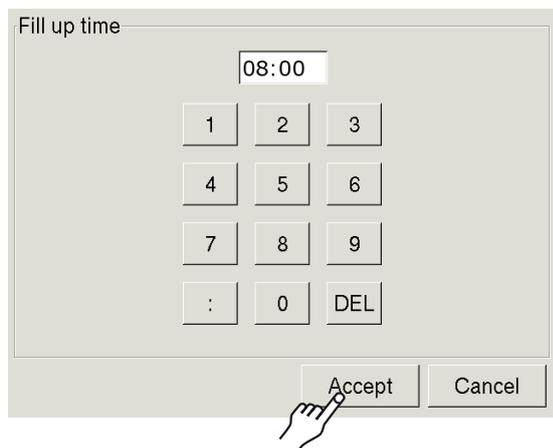
 In the factory settings, Time 1 is set to 8:00 and Time 2 is set to 19:00.

## Changing fill-up time 1

In the overview screen, tap the  button.



A settings screen opens:



Enter the new time and press . The time has now been changed. The new time applies for every day of the week.

 Follow the same procedure to adjust fill-up time 2 .

## "Fill up pellets" function

The "Fill up pellets" function can also be used to fill up the boiler's storage tank regardless of the current filling level.

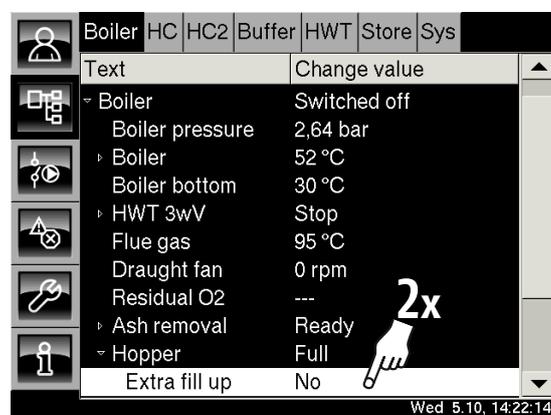
This function is available in the boiler text menu.

## Filling up the storage tank separately

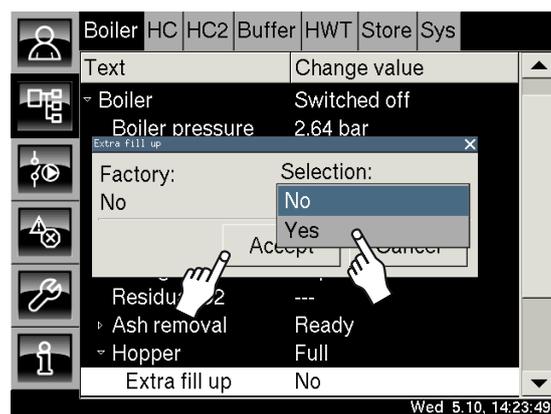
Press the buttons  and  to go to the boiler text menu.

Tap the [Boiler] line and, in the submenu, tap the [Hopper] line.

Double-tap on the [Extra fill-up] line.



A selection window opens:



Select [Yes] and press . The fill-up process begins and the storage tank is filled up.

Press  to return to the boiler overview.

**Maintenance counter**

The boiler requires regular maintenance each time a certain amount of pellets has been consumed. As such, a maintenance counter has been installed to display a message on the screen when a set fuel level has been reached.

Once maintenance is complete, the maintenance counter must be reset to zero.

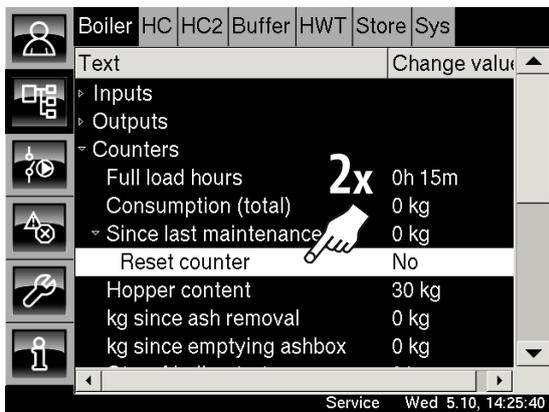
 The access level "Service" is required to do this.

**Resetting the maintenance counter**

Using the access level "Service", press **Boiler** and  on the screen to open the boiler text menu.

Tap the [Counters] line and, in the submenu, tap [kg since maintenance].

Double-tap on the [Reset counter] line. A selection window opens.



Select [Yes] and press the **Accept** button to confirm.

The value [kg since maintenance] is now set to zero and the maintenance counter is reset.

**Switching the boiler back on**

Press  to return to the boiler overview.

Switch the boiler back on using the  button. Heating begins automatically if required.



Boiler PE-K

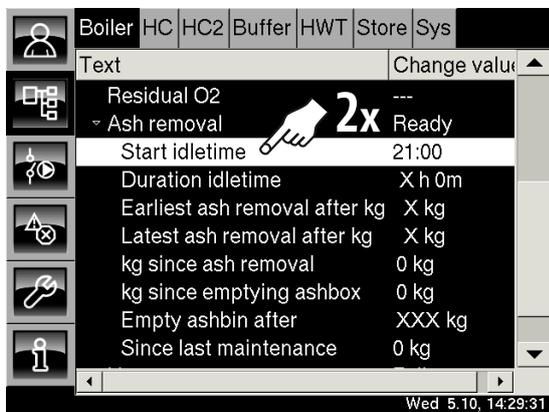
## Adjusting the ash removal idletime

The "Start idletime" parameter is used to select the time from which the boiler ceases to de-ash. The time for which ash removal is locked can be altered using the "Duration idletime" parameter. The "Start idletime" time applies for every day of the week.

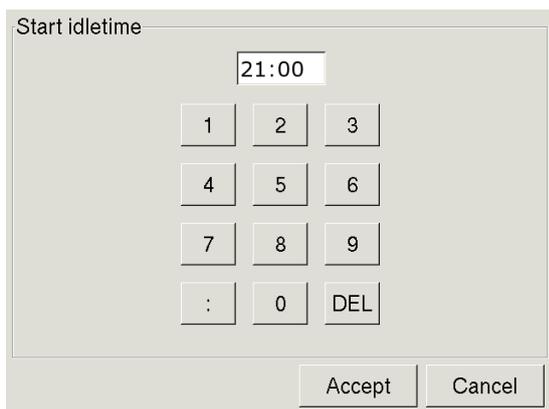
The factory setting for this is 21:00.

Press the buttons **Boiler** and to go to the text menu.

Tap the [Boiler] line and, in the submenu, tap the [Ash removal] line.  
Double-tap the [Start idletime] line.



A settings screen opens:



Enter the new time and press **Accept** to save changes.

Press the button to return to the overview.

## Adjusting the duration of idletime

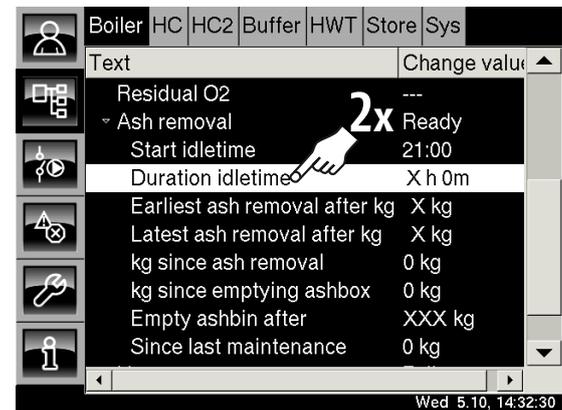
The duration of idletime for ash removal can be altered using the "Duration idletime" parameter. This adjustable duration applies for every day of the week.

Maximum idletime duration depends on the boiler, and should be kept as short as necessary.

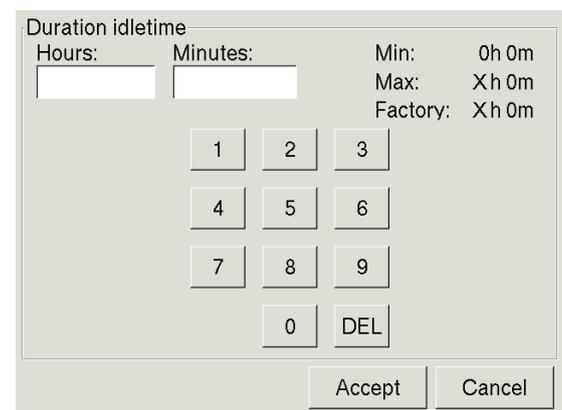
	35 - 50 kW	70 - 90 kW
<b>Maximum duration</b>	10 hours	8 hours

Press the buttons **Boiler** and to go to the text menu.

Tap the [Boiler] line and, in the submenu, tap the [Ash removal] line.  
Double-tap on the [Duration idletime] line.



A settings screen opens:



The duration of the idletime can now be changed. Press **Accept** to confirm.

Press the button to return to the overview.

## Deashing interval – Description

Once a defined amount of pellets has been consumed, the control system automatically de-ashes the boiler. The ash is transported from the combustion chamber to the ash box.

The parameters "Earliest ash removal after kg" and "Latest ash removal after kg" define the boiler's deashing interval. Ash removal is performed at a point between these two limits.



The deashing interval should only be altered after consultation with an expert or ETA Customer Service.

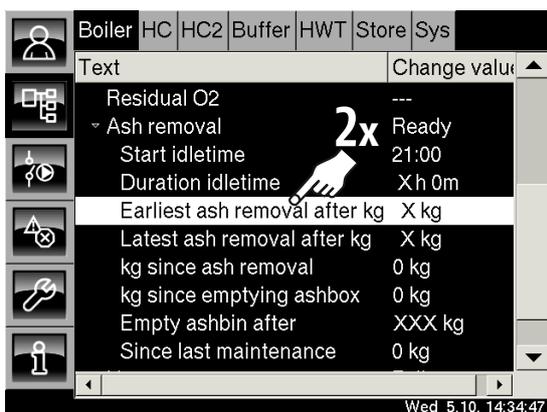
## Factory settings for deashing interval

	20 – 49 kW	63 – 90 kW
At earliest after:	35 kg	55 kg
At latest after:	60 kg	90 kg

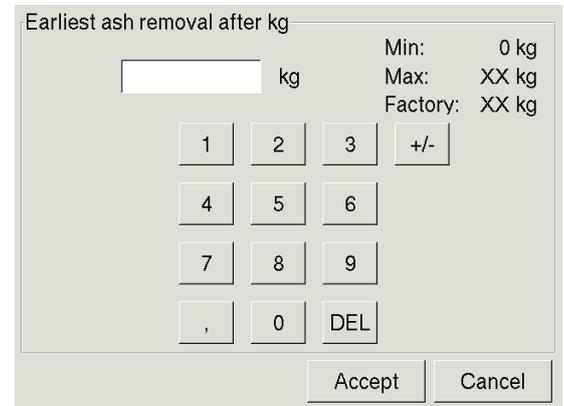
## Changing the "Earliest ash removal after kg" setting

Press the buttons **Boiler** and to go to the text menu.

Tap the [Boiler] line and, in the submenu, tap the [Ash removal] line. Double-tap on the [Earliest ash removal after kg] line.



A settings screen opens:



Enter the new value and press **Accept** to confirm.



Use the same method to alter the parameter [Latest ash removal after kg].

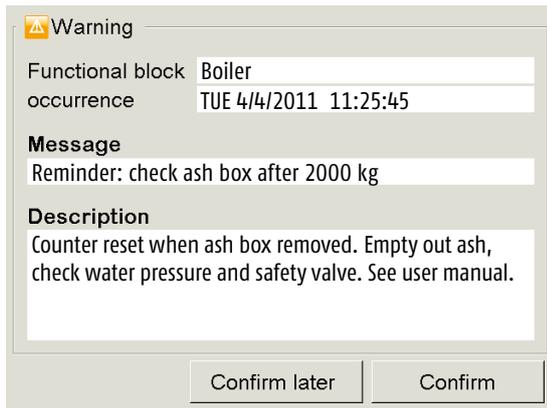
Press the button to return to the overview.



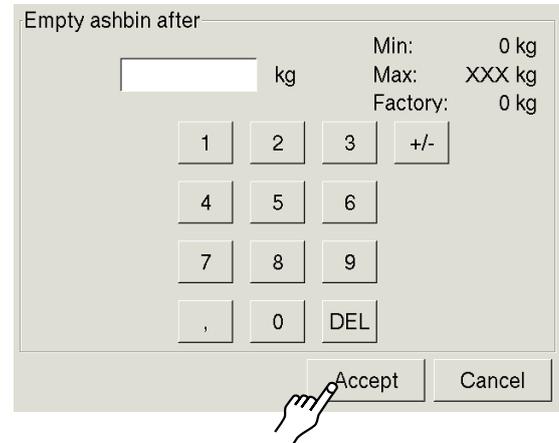
## "Empty ash box" reminder

The ash box should be emptied regularly. As such, the factory settings contain a pellet consumption level of 2000 kg, at which a reminder to empty the ash box appears.

If the ash box is only part full after this time, the value in the "Empty ashbin after" parameter can be increased. If the value is set to zero, the message will no longer appear. The filling level must then be checked manually at regular intervals.



A settings screen opens:



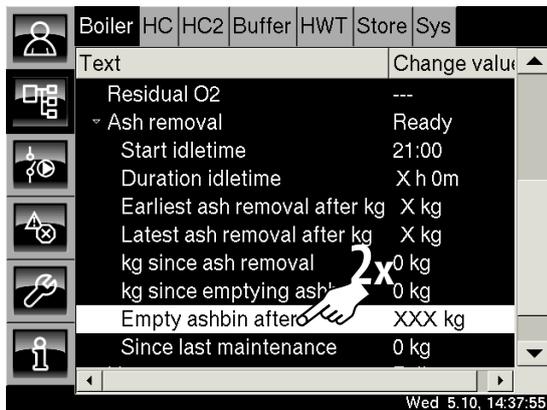
Enter the new value. If the value is set to zero, this message will no longer appear on the screen. Press **Accept** to confirm.

## Changing the "Empty ashbin after" setting

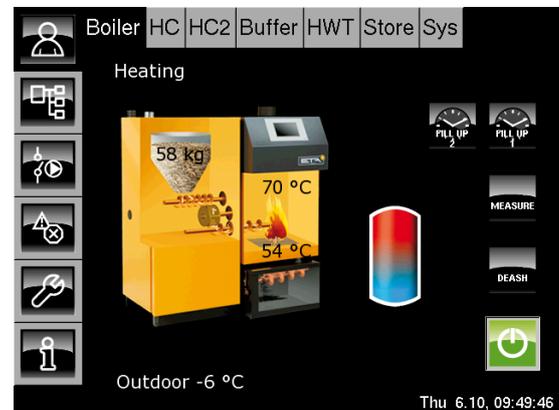
Press the buttons **Boiler** and **Settings** to go to the text menu.

Tap the [Boiler] line and, in the submenu, tap the [Ash removal] line.

Double-tap the [Empty ashbin after] line.



Press the **Home** button to return to the overview.



**Automatic calibration of the lambda probe**

The boiler's built-in lambda probe checks the residual oxygen content of the flue gas and uses this to control the combustion. In order to ensure that this works correctly, the boiler automatically calibrates the lambda probe at regular intervals (factory setting: every 500 h).

**Calibrating the lambda probe with the "Additional calibration" software function**

 The access level "Service" is required for calibration.

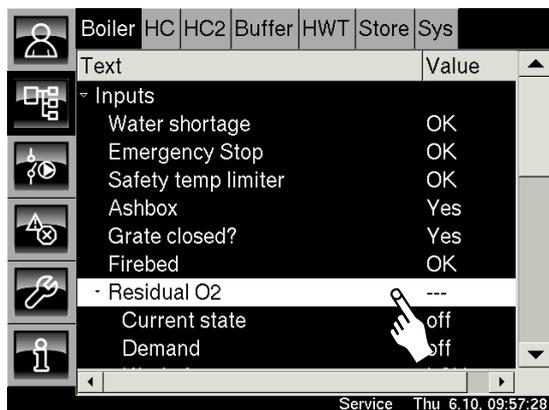
If you wish to perform an additional calibration between the automatic intervals, you can start the calibration using the software function "Additional calibration". When this is activated, the boiler automatically stops heating, de-ashes and rinses the boiler with fresh air using the draught fan. The residual oxygen content is then measured and the lambda probe is automatically calibrated to the set value.

The calibration process takes approx. 45 minutes.

**Opening the boiler text menu**

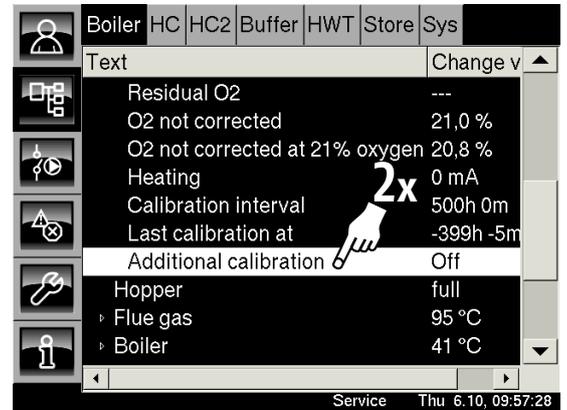
Using the access level "Service", open the text menu by pressing **Boiler** and .

Tap the [Inputs] line. In the submenu, tap the [Residual O2] line.



**Starting the "Additional calibration" function**

In the submenu, scroll down and double-tap on the [Additional calibration] line.



In the selection window that appears, press the [On] button and confirm with **Accept**.

**The lambda probe is calibrated automatically**

The control system will now automatically calibrate the lambda probe.

 After 100 hours, the control system will automatically re-calibrate the probe.

**In the overview**

Press  to return to the boiler overview. The boiler is now in **Calibrating lambda probe** mode.

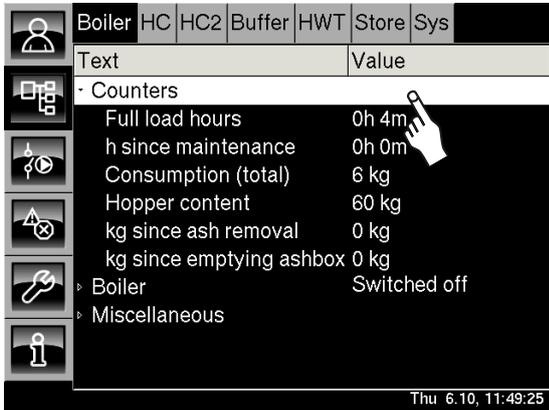
Once calibration is complete, the boiler automatically returns to operation and begins heating as required.

Boiler PE-K

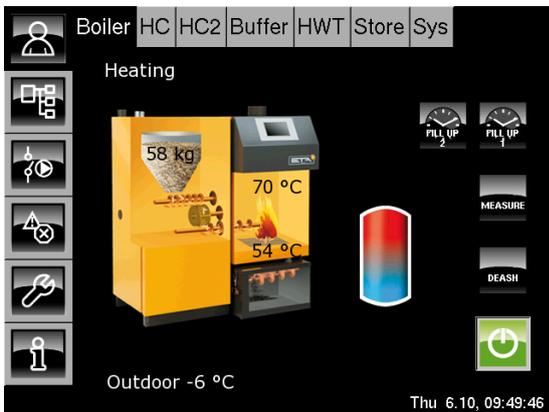
## Displaying counters

Press the buttons **Boiler** and  to go to the boiler text menu.

Tap the [Counters] line. The submenu opens, displaying a list of the current counters.



Press the  button to return to the overview.





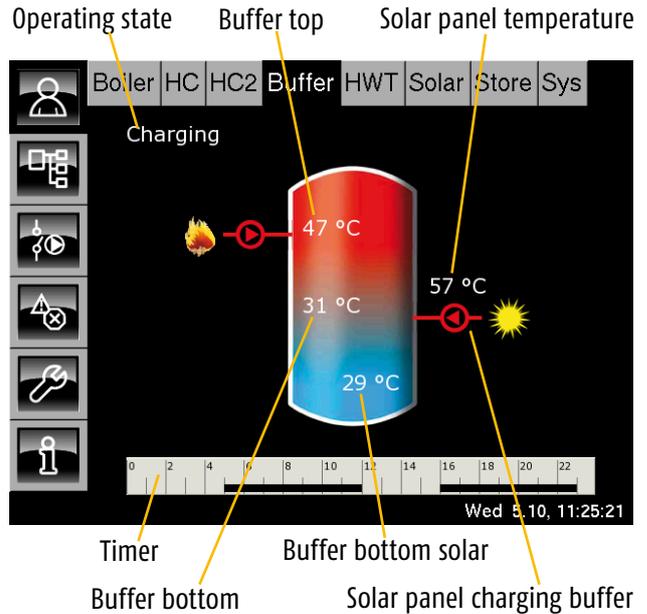
## “Buffer storage tank” overview

Press and to open the “Buffer” overview screen.

The overview shows the current temperatures and the operating state of the buffer. If the buffer is a combination tank (buffer with built-in hot water tank), the hot water temperature is also displayed.

The display also shows the charge from a solar heating system.

A timer can be used to set the charging time slots for the buffer. Combination tanks with internal water heat exchangers, suspended hot water tanks or fresh water modules from another manufacturer also have a timer for the hot water.



## How the buffer works

For each day of the week, **3 time slots** can be set during which the boiler **can charge the buffer**. Within a time slot, the control system uses the current demands of the consumers to calculate the required temperature in the buffer (= “Buffer target 1” temperature).

The buffer is charged by the boiler until the current temperature at the top of the buffer **“Buffer top” exceeds the calculated “Buffer target 1” temperature** and the **set “Buffer bottom off” temperature has also been exceeded**. The operating state of the buffer changes to **“Charged”**.

If there is no demand from the consumers, the buffer is charged to the adjustable “Buffer top Min” temperature.

A **minimum temperature** for the top part of the buffer can be set using **“Buffer top Min”** in the text menu. The buffer storage tank is then kept at this minimum temperature within the set time slot.

How to adjust the charging **time slots** is described on **page 58**. How to change the **“Buffer top Min”** and **“Buffer bottom off”** temperatures is described on **page 60** and **page 61**.



### Current “Buffer top” temperature

If this temperature falls below the calculated “Buffer target 1” temperature, the boiler starts up in order to charge the buffer.

### Current “Buffer bottom” temperature

If this temperature exceeds the set “Buffer bottom off” temperature, the boiler is switched off.



### Charging by the boiler

This icon is displayed when the buffer is being charged by the boiler.

With a **“combination tank”**, the icon is shown at the top of the buffer when hot water rapid charge is active. If the buffer is only charged below the hot water area, this icon appears in the middle of the buffer.



### Charging by the solar heating system

This icon for solar charging indicates that the buffer is being charged by the solar heating system. The current solar panel temperature is shown above the icon.

### Timer for buffer charging time slots

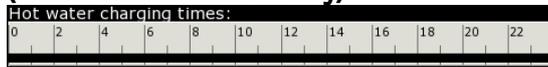


This timer shows the adjustable **charging time slots for the buffer for the current day of the week**.

If you tap the timer, a screen appears for adjusting the three time slots per day.

This timer only applies when the buffer is being charged by the boiler, and not by a solar heating system which may be connected.

### Timer for hot water charging time slots ("combination tanks" only)



This second timer on a combination tank shows the adjustable **hot water charging time slots** for the current day of the week.

If you tap the timer, a screen appears for adjusting the three time slots per day.



### Extra charge ("combination tanks" only)

This button on combination tanks allows the top buffer volume to be charged to the set hot water temperature outside the time slot.

### Charging Current operating mode

This line shows the current operating mode of the buffer. Below is a list of the possible modes:

#### Demanding

The buffer demands heat from the boiler. If the boiler is switched on, this causes the furnace to start.

#### Charging

The boiler is supplying heat to the buffer.

### Charged

The buffer is charged to the "Buffer target 1" temperature and the "Buffer bottom" temperature has exceeded the adjustable "Buffer bottom off" temperature.

### Extra charging ("combination tanks" only)

The "Extra charge" button has been pressed in order to activate extra charging for a combination tank outside of a time slot. The top area of the combination tank is charged (combination tanks with built-in hot water systems only).

### Heat dissipation

After firing, residual heat from the boiler is channelled to the buffer or, if the boiler overheats, heat from the boiler is transferred to the buffer so the boiler can be cooled.

### Freezing protection

A temperature sensor in the buffer has fallen below the freezing protection temperature (factory setting: 10°C).

### Off Timer

Buffer not currently charging, as the current time is outside the set time slots on the buffer timer.

### Solar priority

Solar priority is active. The current time is within one of the set time slots for solar priority, and the outside temperature is currently higher than the "priority temperature" (factory setting: 10°C).

### Sensor failure

A temperature meter in the buffer is damaged. View the list of error messages to find out which sensor is affected.

## Different overviews depending on configuration

The way the buffer and the temperatures are displayed on the screen differs depending on the configuration of the heating system.

The different possible displays are described on the following pages.

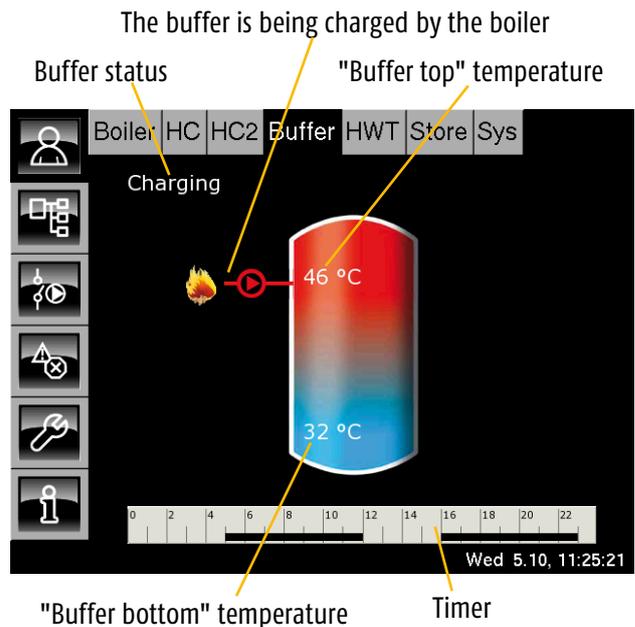
Buffer

### Overview: "Buffer" only

This overview shows only the "Buffer top" and "Buffer bottom" temperatures.

The timer can be used to set 3 different time slots for buffer charging. Tap the timer to open a screen in which you can set the time slots.

If the  icon is displayed, the buffer is being charged by the boiler.



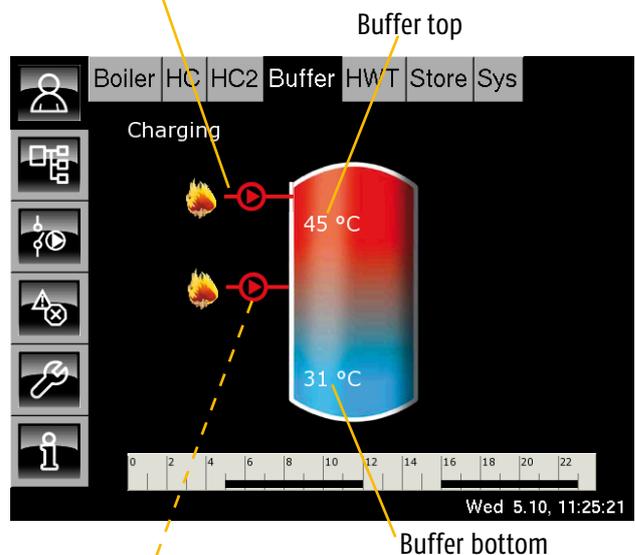
### Buffer with "hot water rapid charge"

 The **hot water rapid charge** can **only** be configured on **PU 7-15 and PC 20-32 boilers**.

The  icon for buffer charging is shown at the top of the buffer when hot water rapid charge is active. The top section of the buffer is charged to supply hot water more quickly.

If hot water rapid charge is not active, the  icon is shown in the middle of the buffer, and the middle of the buffer is charged.

"Hot water rapid charge" is active.



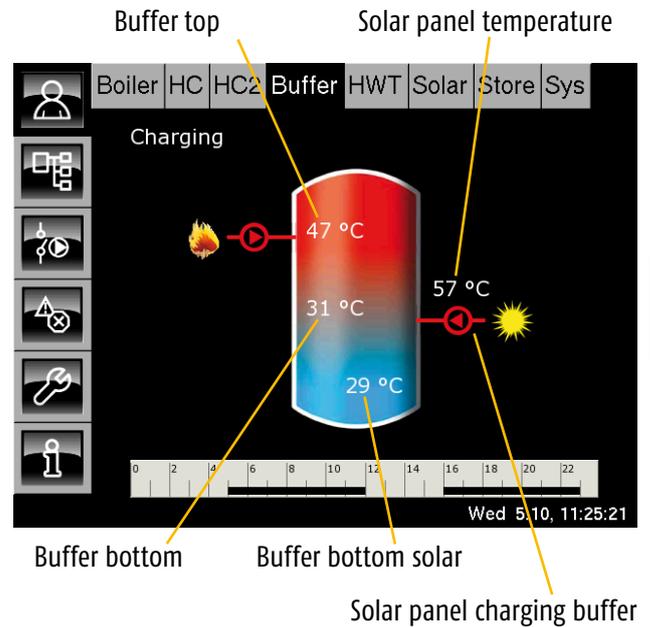
"Hot water rapid charge" is **not** active. The buffer charging icon is shown in the middle.

## Buffer with a solar heating system

If the current "solar panel" temperature is **5°C** (factory setting) **higher than** the "buffer bottom solar" temperature, the solar heating system begins to charge the buffer.

The icon for solar charging  appears together with the current solar panel temperature.

If the solar panel temperature falls **below** the "Buffer bottom solar" temperature, the solar collector pump is switched off.



## Buffer with solar heating system and "stratified charging valve"

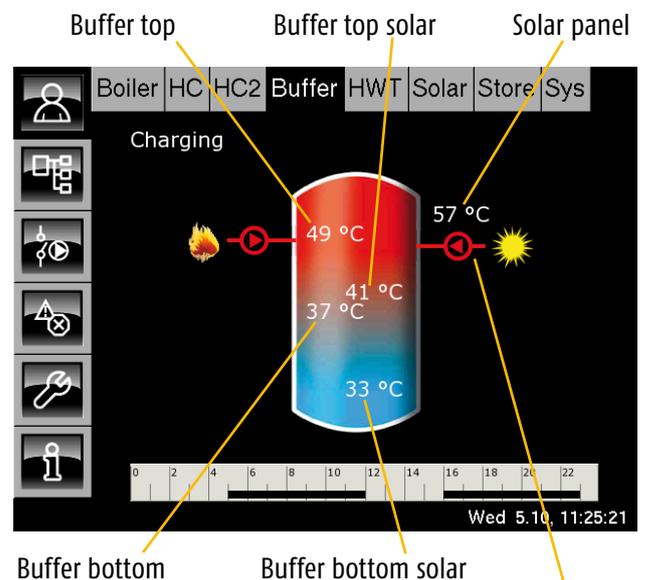
The stratified charging valve **toggles solar charging between the top and bottom sections of the buffer**. With this function, the temperatures "Buffer top solar" and "Buffer bottom solar" are continually compared with the current solar panel temperature.

"Bottom" is always charged first. If the "Solar panel" temperature is **higher** than the "Buffer top solar" temperature, the stratified charging valve switches to "Top".

Once the "Buffer target" temperature has been reached, charging switches to "Bottom" until the "Buffer target" temperature is **also exceeded in the bottom section**.

The normal rule of priority then once more becomes effective.

The icon for solar charging  is shown at the top or in the middle of the buffer, depending on the position of the stratified charging valve.



**Solar panel charging top section of buffer.**  
The stratified charging valve is in the **top** position.  
**Icon in the middle = bottom section of buffer being charged.**  
The stratified charging valve is in the **bottom** position.

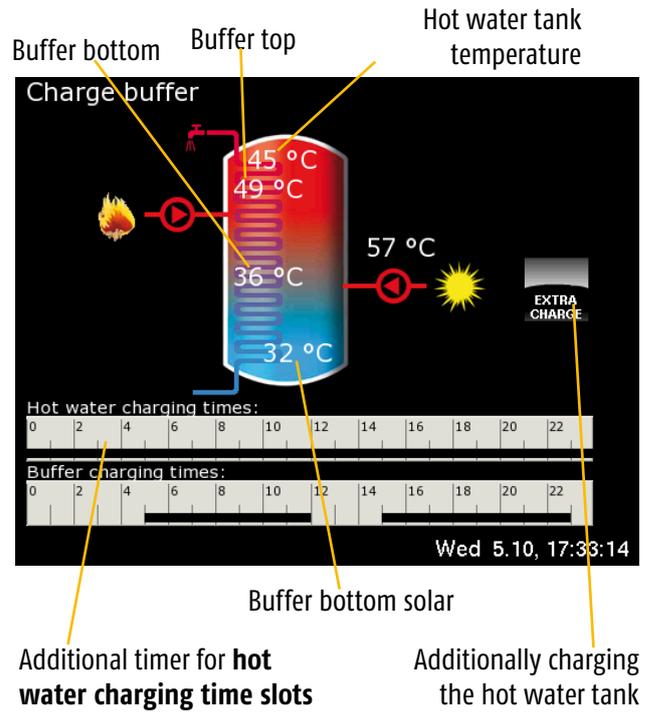
## Combination tank with a solar heating system

There are different types of combination tank. There may be a hot water tank in the top buffer section, an internal water heat exchanger may be integrated throughout the entire height of the buffer, or a fresh water module from another manufacturer may be installed.

For **all these variants**, the overview **always shows an internal water heat exchanger**, and the **hot water temperature** is shown **at the top of the buffer**.

The built-in "Hot water charging time slots" timer can be used to set 3 different time slots for the hot water supply (see page 59 for more information).

The "Extra charge" button  can be used to charge the top section of the buffer in order to supply hot water outside of the time slots.



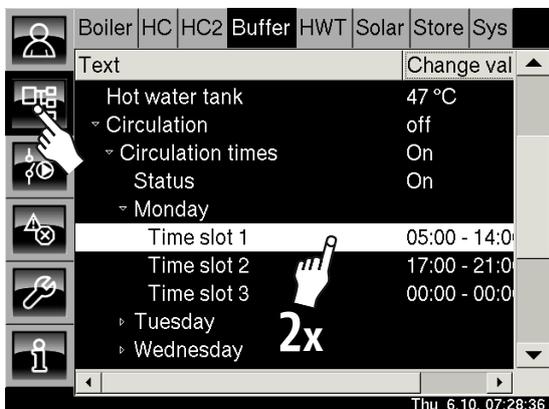
### Switching times for circulation pump only adjustable in the text menu for combination tanks

With combination tanks, there is also the option of activating a circulation pump. There is no timer in the overview for the circulation pump. Switching times for the circulation pump must be adjusted in the text menu.

From the "Buffer" overview screen, press the  button to go to the text menu.

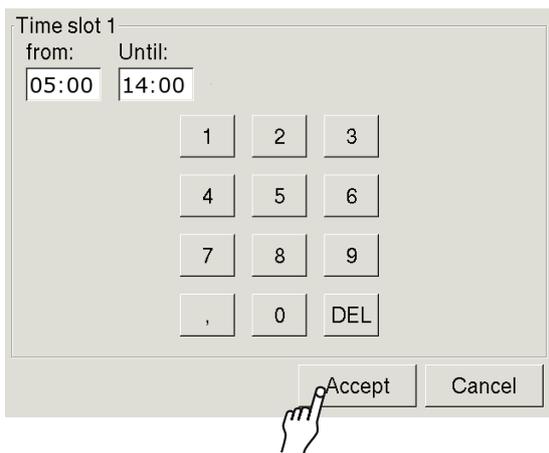
Tap the [Hot water tank] line and, in the submenu, tap the [Circulation] line.

Tap the [Circulation times] line. Time slots for the circulation pump can only be adjusted on an individual basis for each day of the week.



Double-tap the desired time slot (or select the line and press the **Change value** button).

A screen appears for setting the time slot:



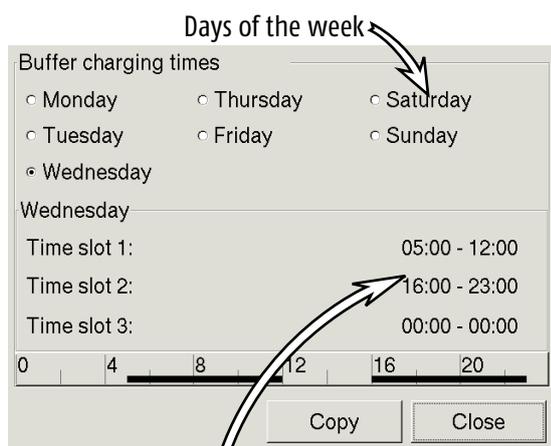
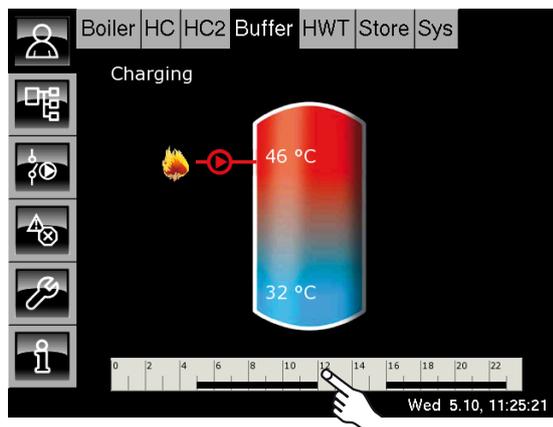
Time slots for the circulation pump can now be changed.

Press **Accept** to save the new settings. Use the same method to adjust the time slots for all other days of the week.

## Adjusting buffer charging time slots

The timer can be used to set 3 different time slots for buffer charging for each day of the week. The boiler will only charge the buffer within a time slot, except for "heat dissipation".

In the "Buffer" overview, tap the timer. A settings screen opens:



3 adjustable time slots for each day of the week

## Selecting a time slot

Tap the [Time slot 1] line. The time setting screen opens.



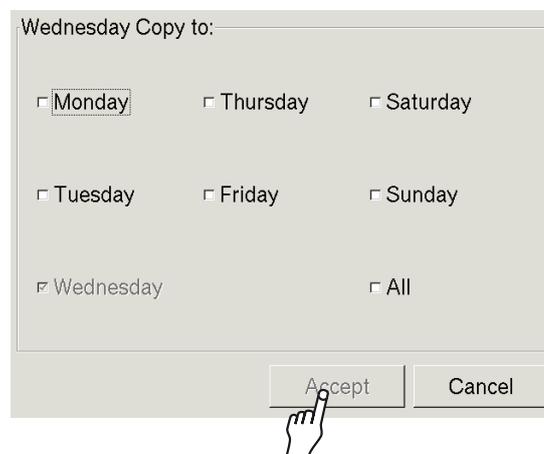
The buffer charging time slots can now be changed.

Press **Accept** to save the new settings. Use the same method to adjust the other time slots.

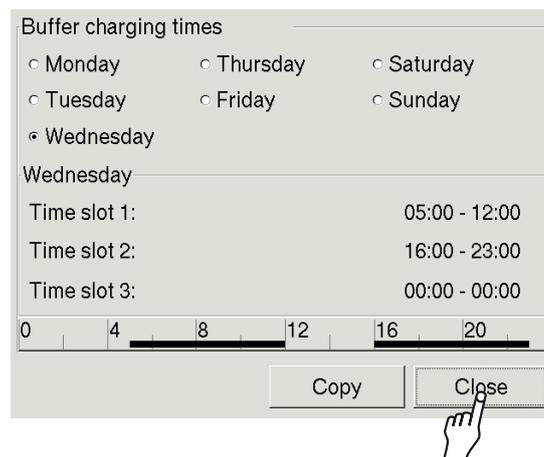
## Copying time slots to other days of the week

Once the time slots have been adjusted, they can also be adopted for other days of the week.

To do this, press **Copy**. A screen appears for selecting a day of the week:



Tap to select the desired day of the week or [All] and then press **Accept**. The time slots are adopted for the selected days.

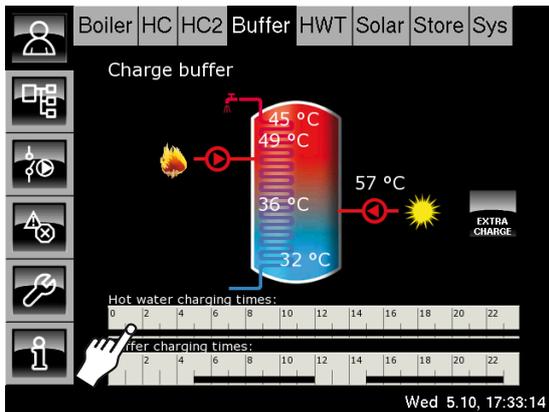


Finally, press **Close**. The "Buffer" overview reappears.

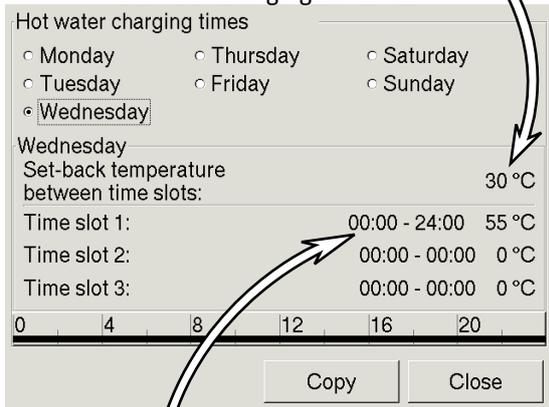
**Adjusting hot water charging time slots and temperatures for a combination tank**

With a combination tank, the built-in "Hot water charging time slots" timer can be used to set 3 different time slots and temperatures for the hot water supply for each day of the week.

Tap the "Hot water charging time slots" timer.



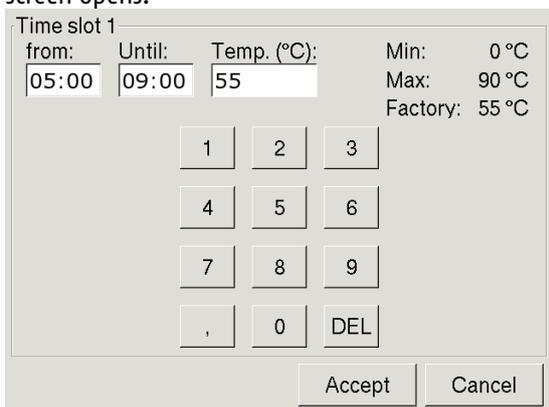
Reduced hot water temperature between charging time slots



3 adjustable time slots for each day of the week, with different temperatures.

**Selecting a time slot**

Tap the [Time slot 1] line. The time setting screen opens:



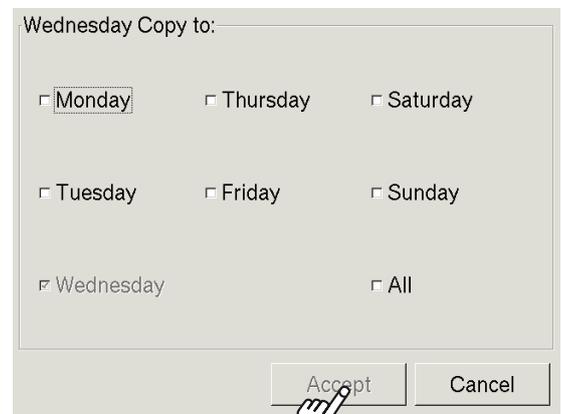
Here you can change the hot water charging time slots and hot water temperatures.

Press **Accept** to save the new settings. Use the same method to adjust the other time slots.

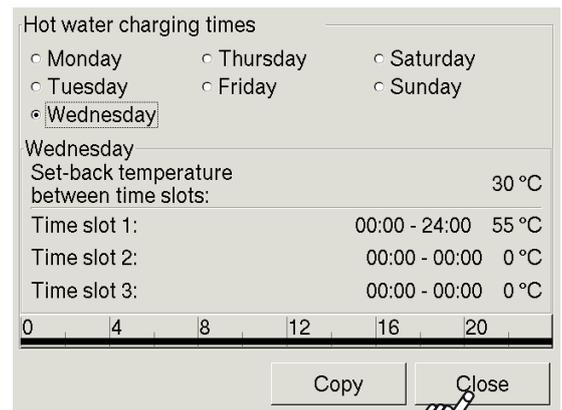
**Copying time slots to other days of the week**

Once the time slots have been adjusted, they can also be adopted for other days of the week.

To do this, press **Copy**. A screen appears for selecting a day of the week:



Tap to select the desired day of the week or [All] and then press **Accept**. The time slots are adopted for the selected days.



Finally, press **Close**. The "Buffer" overview reappears.

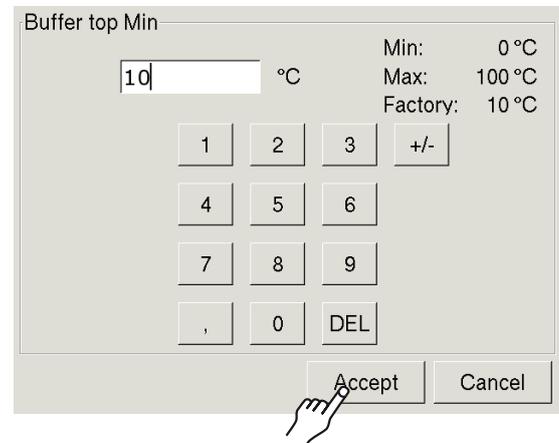
## Minimum temperature "Buffer top min"

The minimum temperature in the buffer is defined by the parameter "Buffer top min". This minimum temperature is maintained in the buffer within the set time slots.

 The factory setting for the "Buffer top min" temperature is 10°C. The higher this temperature is set, the larger the heat reserve in the buffer. However, higher temperatures in the buffer also reduce the solar yield, as the buffer is **kept at "buffer top min" temperature** using energy from the boiler, even if there is no demand from the consumers.

A high "Buffer top min" is required for **fan heater systems** and for **heat storage** in cases of high hot water consumption.

A settings screen opens:



Select the new minimum temperature and press

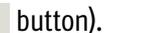
 .

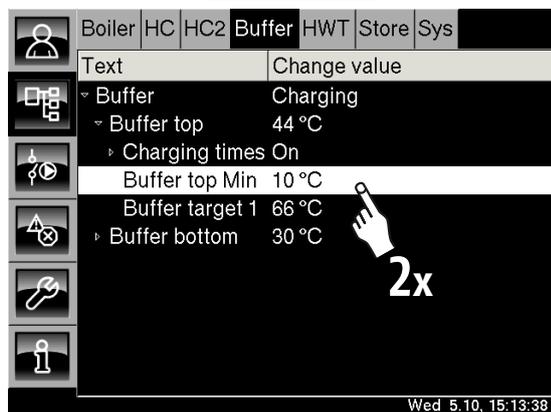
The "Buffer" text menu appears again.

## Changing the "Buffer top min" temperature

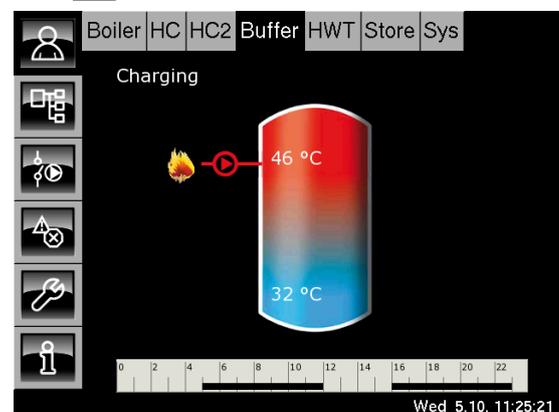
Press the buttons  and  to open the text menu.

Tap the [Buffer] line and then, in the submenu, tap [Buffer top].

Double-tap the [Buffer top min] line (or select the line and press the  button).



Press  to return to the "Buffer" overview.



## "Buffer bottom off" switch-off temperature

The adjustable "Buffer bottom off" temperature is used to stop the boiler charging the buffer. As soon as the **"Buffer bottom"** sensor reaches the adjustable "Buffer bottom off" temperature, the boiler stops charging the buffer.

 The factory setting for the "Buffer bottom off" temperature is 40°C.

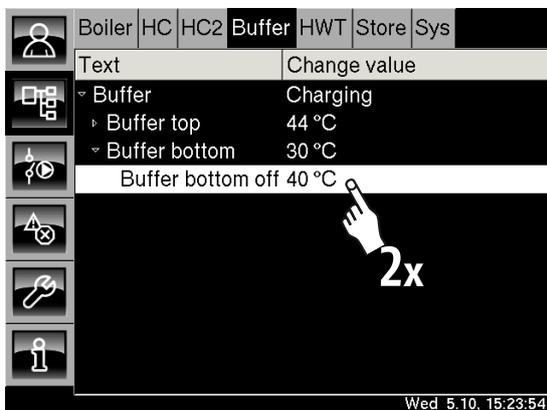
A high **"Buffer bottom off"** is required for **fan heater systems** and for **heat storage** in cases of high hot water consumption.

## Changing the "Buffer bottom off" temperature

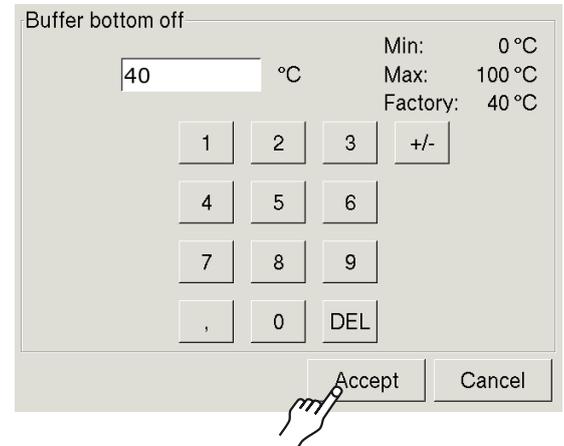
Press the buttons  and  to open the text menu.

Tap the [Buffer] line and then, in the submenu, tap [Buffer bottom].

Double-tap on the [Buffer bottom off] line (or select the line and press the  button).



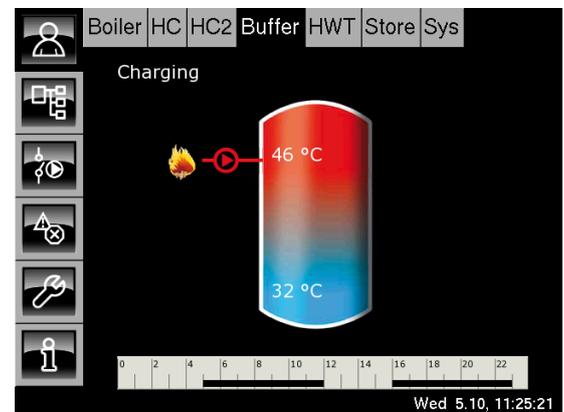
A settings screen opens:



Select the new minimum temperature and press .

The "Buffer" text menu appears again.

Press  to return to the "Buffer" overview.



## The "Switch-on difference" parameter

With a combination tank, this parameter controls how far the **current "Hot water tank" temperature** can **fall** before the **hot water tank demands heat from the buffer again**.

 The factory setting for this parameter is 15°C. As such, the current hot water temperature can fall 15°C below the set value during the time slot. The hot water tank does not demand heat from the buffer or boiler unless this happens.

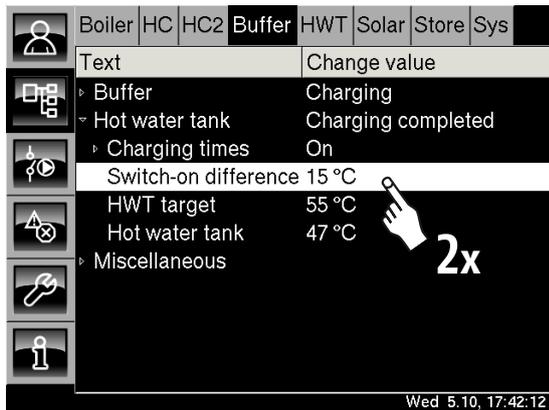
Buffer

## Changing the "Switch-on difference"

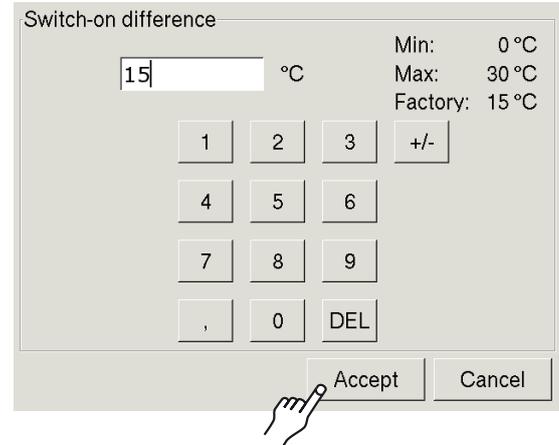
Press the buttons **Buffer** and  to open the "Buffer" text menu.

Tap the [Hot water tank] line. The submenu opens.

Double-tap on the [Switch-on difference] line (or select the line and press the **Change value** button).



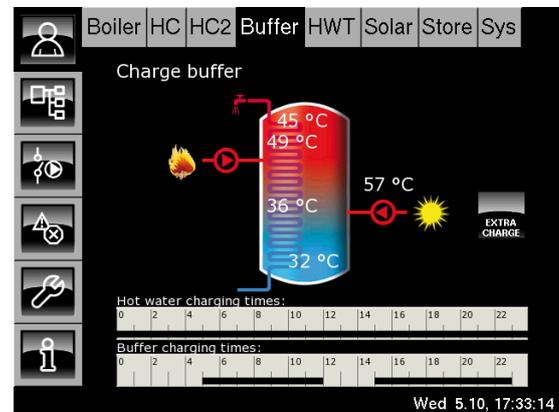
A settings screen opens:



Enter the new "Switch-on difference" value and save by pressing **Accept**.

The text menu display appears again.

Press  to return to the "Combination tank" overview.



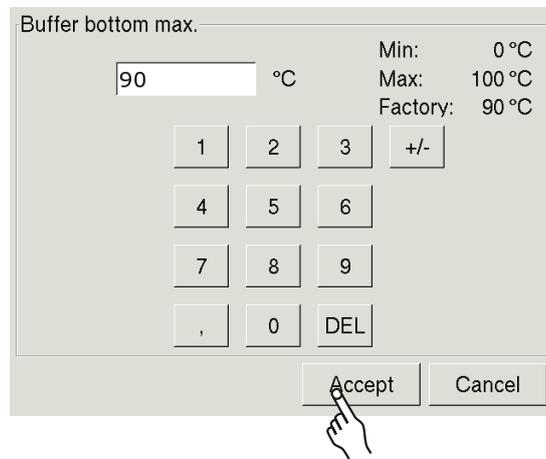
## "Buffer bottom max." switch-off temperature (solar heating systems only)

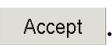
The "Buffer bottom max." switch-off temperature can only be set if the **solar heating system is charging the buffer**. The adjustable temperature sets a **threshold for how much the buffer can be charged by the solar heating system in order to prevent the buffer from overheating**.

If the "Buffer bottom solar" sensor reaches the adjustable "Buffer top max." temperature, the **solar collector pump** on the solar heating system is **switched off**.

 The factory setting for the "Buffer bottom max." temperature is 90°C.

A settings screen opens:

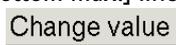


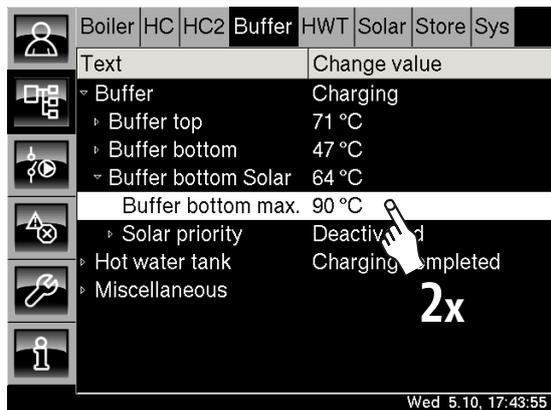
Enter the new temperature and press . The text menu display appears again.

## Changing the "Buffer bottom max." temperature

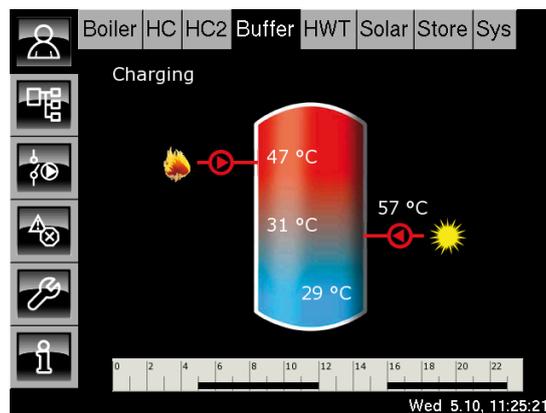
Press the buttons  and  to open the text menu.

Tap the [Buffer] line and then, in the submenu, tap [Buffer bottom solar].

Double-tap on the [Buffer bottom max.] line (or select the line and press the  button).



Press  to return to the "Buffer" overview.



## "Solar priority" – Description

The "Solar priority" function is used to give the solar heating system the opportunity to charge the buffer storage tank (or combination tank) without firing up the boiler.

The duration for the "Solar priority" function is set using two time slots.

If the "Solar priority" function is no longer needed, it can be switched off.

### 1st time slot: "high from" to "middle from"

The first time slot applies from the "high from" time to the "middle from" time. The **boiler is locked** during this period.

This means that the **boiler is not fired up to charge the buffer**, even if the solar heating system is not supplying any heat.

### 2nd time slot: "middle from" to "End of priority"

In the second time slot, from the "middle off" time to "End of priority", **the boiler can charge the buffer** as soon as the solar heating system stops supplying heat for **longer than 3 minutes** (factory setting, = solar collector pump stops running for longer than 3 minutes).

### Example:

The buffer's timer is set so that the buffer can demand heat from the boiler 24 hours a day. Solar priority is active from:

1<sup>st</sup> time slot = 5:00 – 10:00

2<sup>nd</sup> time slot = 10:00 – 16:00

=> Between 5:00 and 10:00, only the solar heating system is allowed to supply the buffer with heat.

If not enough solar heat is supplied, the temperature in the buffer will fall.

=> Between 10:00 and 16:00, the boiler can start to charge the buffer as soon as the solar heating system has not supplied any heat for longer than 3 minutes.

=> After 16:00, the boiler can charge the buffer at any time, regardless of whether or not the solar heating system is supplying heat.

## Adjusting time slots for solar priority

The time slots for the solar priority are defined by the parameters "high from", "middle from" and "End of priority".

The two time slots can be adjusted via the buffer text menu. The section below only describes how to change the "high from" parameter.

Use the same method to change the "middle from" and "End of priority" parameters.

 Factory settings for the two time slots:

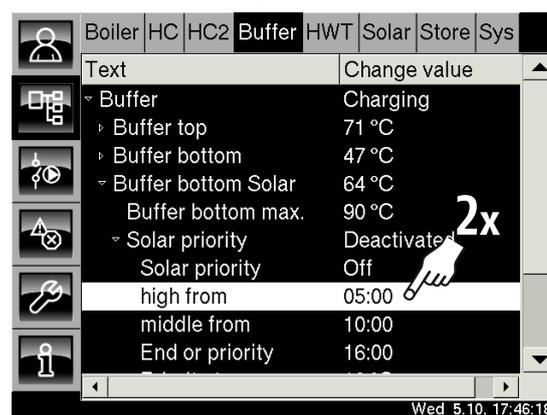
"high from"	05:00
"middle from"	10:00
"End of priority"	16:00

## Setting the "high from" parameter in the text menu

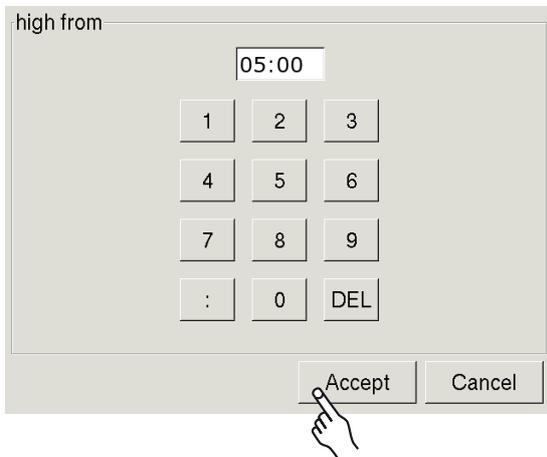
Press the buttons **Buffer** and  to open the "Buffer" text menu.

Tap the [Buffer] line and, in the submenu, tap the [Buffer bottom solar] line.

Select the [Solar priority] line and, in the submenu, double-tap the line [high from].

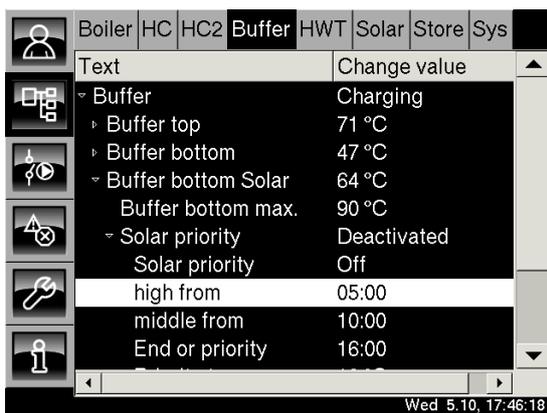


A window appears for changing the time.



Enter the new time and press **Accept** to save changes.

The text menu display appears again.



### Changing the time for "middle from" and "End of priority"

Use the same method to change the "middle from" and "End of priority" parameters.

### Solar priority can be switched off

If the "Solar priority" function is no longer needed, it can be switched off.

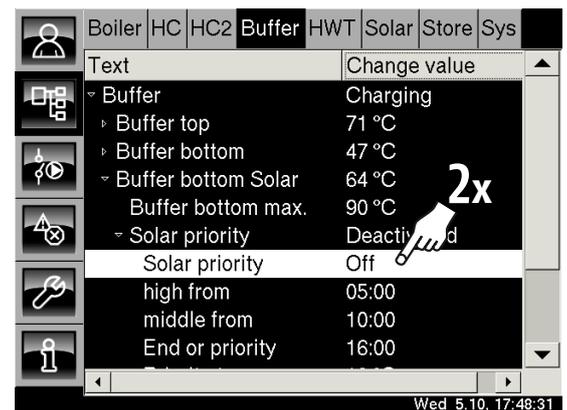
If this function is switched off, the boiler is fired up if the **temperature falls below "Buffer target 1"**, regardless of whether or not the solar heating system is supplying heat.

### Switching the "Solar priority" function on and off

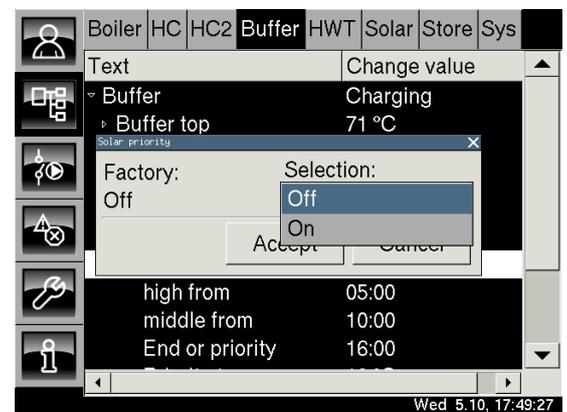
The function is switched on and off via the buffer text menu. Press **Buffer** and to open the buffer text menu.

Tap the [Buffer] line and, in the submenu, tap [Buffer bottom solar].

Select the [Solar priority] line and, in the submenu, double-tap [Solar priority].



A selection window appears for switching solar priority on and off.



Select the desired option and press **Accept**.

Press to return to the "Buffer" overview.

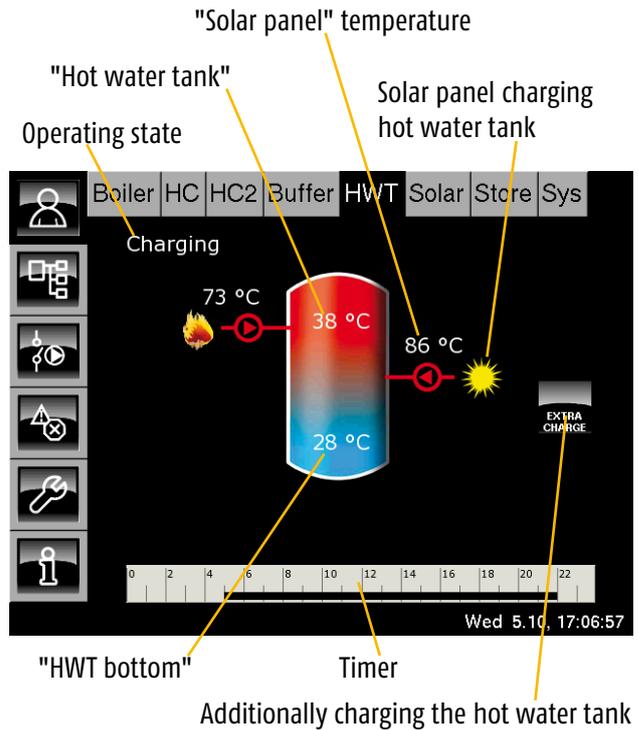
## "Hot water tank" overview

Press  and **HWT** to open the "Hot water tank" overview screen.

The timer can be used to set 3 time slots with different hot water temperatures charging the hot water tank for each day of the week (see page 70).

If a circulation pump is installed, the operating times of the circulation pump are set using the additional "Circulation times" timer (see page 71).

The  button is used to charge the hot water tank to the highest set temperature in all time slots on all days of the week, regardless of the current time slot.



## How the hot water tank works

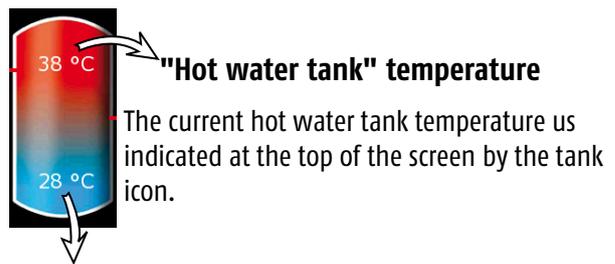
The timer is used to adjust the time slots and the hot water temperatures. The hot water tank is **only charged to the selected temperature within the time slot**.

During a time slot, **charging begins** for the hot water tank as soon as the **current "Hot water tank" temperature falls more than 15°C below the temperature set in the timer** (= Factory setting for "Switch-on difference" parameter). The hot water tank then demands heat from the buffer or boiler.

The buffer or boiler supplies heat **until the current "Hot water tank" temperature reaches the temperature set in the time slot**. Once this has happened, the hot water tank is in the **"Charged" operating state**.

If a **second temperature sensor** is installed in the bottom section of the hot water tank (= **"HWT bottom" temperature**), **charging ends** as soon as "HWT bottom" reaches the set **"HWT bottom off" temperature**.

 For details on how to adjust the **"Switch-on difference"** and the **"HWT bottom off"** temperature, see page 72 and page 73.



### "HWT bottom" temperature ("HWT bottom" and "Solar" only)

This is only shown if a second temperature sensor is installed in the bottom of the tank.



### Charging the hot water tank

This icon is displayed when the hot water tank is being charged by the buffer or boiler. The displayed temperature is the "Buffer top" temperature.



### Charging by the solar heating system

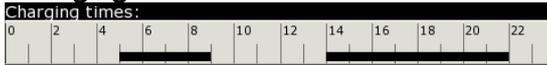
This icon is displayed when the hot water tank is being charged by the solar heating system. The displayed temperature is the solar panel temperature.



## Extra charging the hot water tank

This button is used to charge the hot water tank to the highest set temperature in all time slots on all days of the week, regardless of the current time slot.

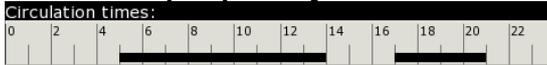
## "Charging time slots" timer



This timer is always shown on the display. It indicates the **time slots** for the **hot water supply** for the **current day of the week**.

Tapping this timer brings up a screen where it is possible to set 3 time slots with different hot water temperatures for each day of the week.

## Timer for circulation times ("circulation pumps" only)



This timer is only displayed if a "circulation pump" has been configured. The **operating times of the circulation pump** are shown for the current day of the week.

Tapping this timer brings up a screen where it is possible to set 3 time slots for each day of the week.

## Charging Current operating mode

This line shows the current operating mode of the hot water tank. Below is a list of the possible modes:

### Demanding

The hot water tank demands heat from the buffer or boiler. If the boiler is switched on (and the buffer, if present, is not warm enough), heating begins.

### Charging

The hot water tank is being charged by the boiler or buffer.

### Charged

The hot water tank has been charged to the set "HWT target" temperature.

### Delay

The hot water tank has been charged to the set "HWT target" temperature. The hot water tank continues running for a short while.

### Extra charging

The "Extra charge" button has been pressed to charge the hot water tank outside the time slots.

### Heat dissipation

After firing, the residual heat from the boiler is channelled to the hot water tank or, if the boiler overheats, the heat from the boiler dissipates to the hot water tank in order to cool the boiler down.

### Freezing protection

A temperature sensor in the hot water tank has fallen below the freezing protection temperature (factory setting: 10°C).

### Off Timer

The current time is not within any of the timer's time slots. The hot water tank is not being charged.

### Sensor failure

A temperature meter in the hot water tank is damaged. View the list of error messages to find out which sensor is affected.

## Different overviews depending on configuration

The way the hot water tank and the temperatures are displayed on the screen differs depending on the configuration of the heating system.

The following pages show the possible displays for the overview.

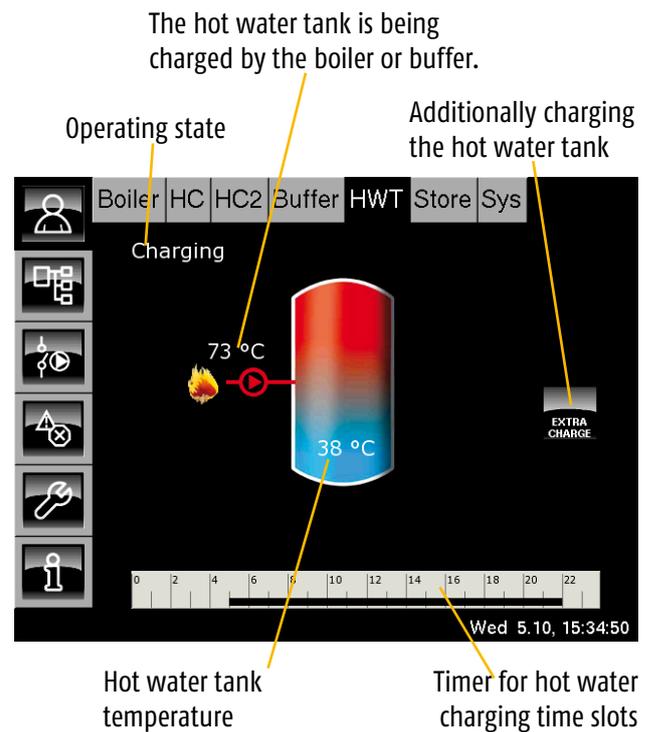
### Overview with hot water tank only

If the  icon is displayed, the hot water tank is being **charged by the boiler or buffer and is currently at the temperature displayed.**

The timer can be used to set 3 time slots with different hot water temperatures for each day of the week.

**Tapping on the timer** brings up a screen where these **time slots** can be set (for more information, see page 70).

The  button is used to charge the **hot water tank** to the highest set temperature in all time slots on all days of the week, **regardless of the current time slot.**

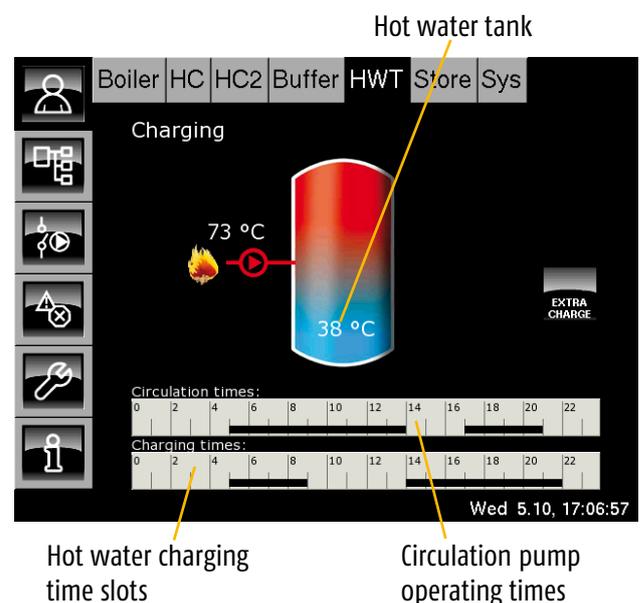


### Hot water tank with "circulation pump"

The second timer in the overview, "**Circulation times**" is used to set the operating times of the circulation pump.

The "Charging time slots" timer is used to adjust the time slots for the hot water supply.

**Tapping on the timers** brings up a screen where the **time slots** can be set (see page 70 and page 71).

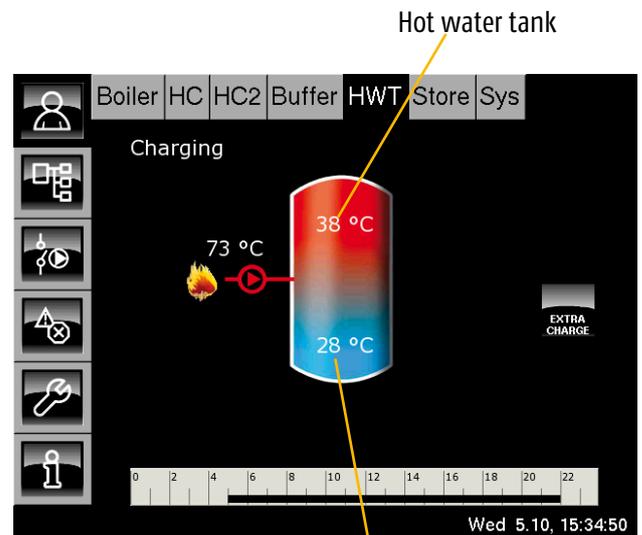


## Hot water tank with "HWT bottom"

If there is a second temperature sensor installed in the bottom of the hot water tank, this temperature is shown at the bottom of the hot water tank. This "HWT bottom" temperature is used for switching off charging.

It is also possible to configure a circulation pump. If this option is chosen, a second timer appears in the overview for the operating times of the circulation pump.

**Tapping on the timer** brings up a screen where the **time slots** can be set (see page 70 and page 71).



"HWT bottom" temperature

## Hot water tank with "Solar"

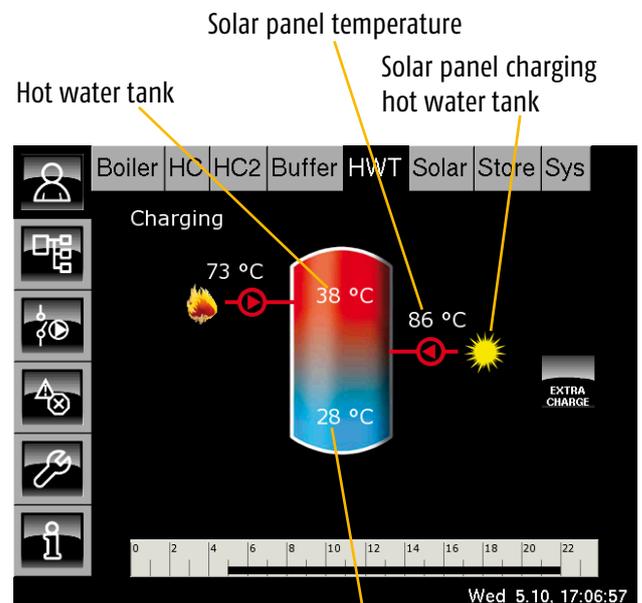
If the solar heating system is charging the hot water tank, the  icon is displayed. The displayed temperature is the solar panel temperature.

The **hot water tank is charged** if the temperature at the **solar panel is 5°C higher** (factory setting) than the "HWT bottom" temperature.

**Solar charging stops** as soon as the "HWT bottom" temperature is higher than the solar panel temperature.

It is also possible to configure a circulation pump. If this option is chosen, a second timer appears in the overview for the operating times of the circulation pump.

**Tapping on the timer** brings up a screen where the **time slots** can be set (see page 70 and page 71).

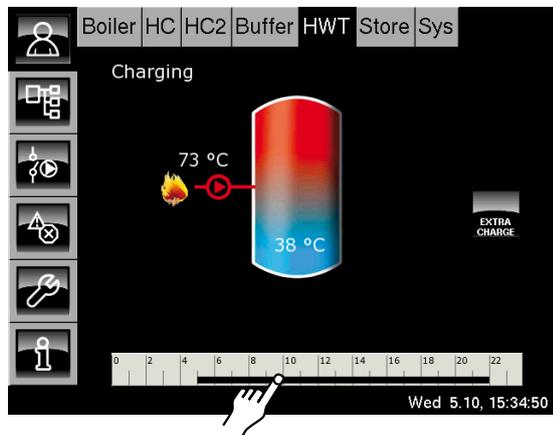


"HWT bottom" being used to control the solar heating system

## Adjusting charging time slots and temperatures

The timer can be used to set 3 different time slots and temperatures for the hot water supply for each day of the week.

To do this, tap the "Charging time slots" timer.



Days of the week

Reduced hot water temperature between charging time slots

Hot water charging times

- Monday
- Tuesday
- Wednesday
- Thursday
- Friday
- Saturday
- Sunday

Wednesday

Set-back temperature between time slots: 30 °C

Time slot 1:	00:00 - 24:00	55 °C
Time slot 2:	00:00 - 00:00	0 °C
Time slot 3:	00:00 - 00:00	0 °C

3 adjustable time slots for each day of the week, with different temperatures.

## Selecting a time slot

Tap the [Time slot 1] line. The time setting screen opens:

Time slot 1

from: 05:00 Until: 09:00 Temp. (°C): 55

Min: 0 °C Max: 90 °C Factory: 55 °C

1 2 3

4 5 6

7 8 9

, 0 DEL

Accept Cancel

It is now possible to change the charging time slots and the hot water temperatures.

Press **Accept** to save the new settings. Use the same method to adjust the other time slots.

## Copying time slots to other days of the week

Once the time slots have been adjusted, they can also be adopted for other days of the week.

To do this, press **Copy**. A screen appears for selecting a day of the week:

Wednesday Copy to:

Monday  Thursday  Saturday

Tuesday  Friday  Sunday

Wednesday  All

Accept Cancel

Tap to select the desired day of the week or [All] and then press **Accept**. The time slots are adopted for the selected days.

Hot water charging times

- Monday
- Tuesday
- Wednesday
- Thursday
- Friday
- Saturday
- Sunday

Wednesday

Set-back temperature between time slots: 30 °C

Time slot 1:	00:00 - 24:00	55 °C
Time slot 2:	00:00 - 00:00	0 °C
Time slot 3:	00:00 - 00:00	0 °C

Copy Close

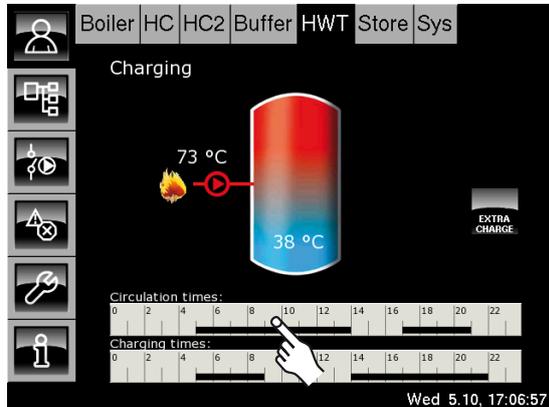
Finally, press **Close**.

The hot water tank overview reappears.

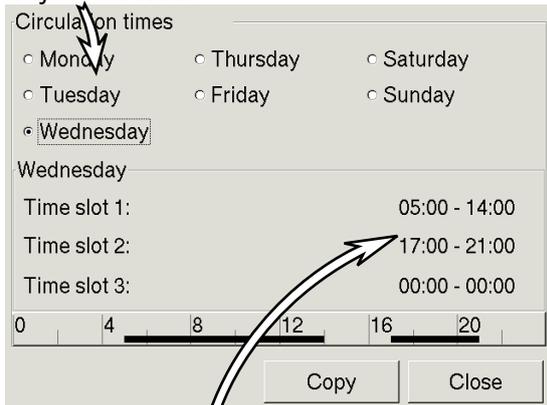
## Adjusting circulation times

The "Circulation times" timer can be used to set 3 different time slots for the operating times for each day of the week.

To do this, tap the "Circulation times" timer.



## Days of the week



3 adjustable time slots per day of the week for the operating times of the circulation pump

## Selecting a time slot

Tap the [Time slot 1] line. The time setting screen opens:



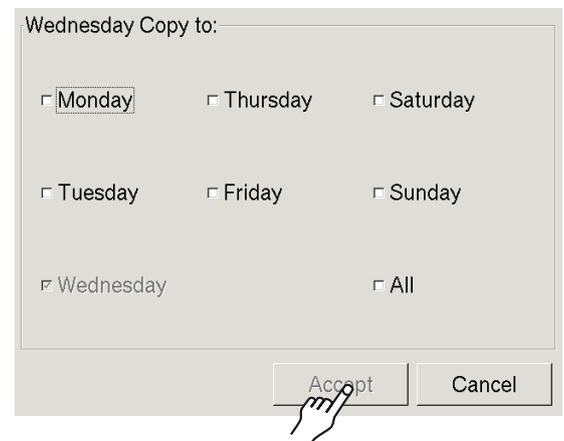
The operating times of the circulation pump can now be changed.

Press **Accept** to save the new settings. Use the same method to adjust the other time slots.

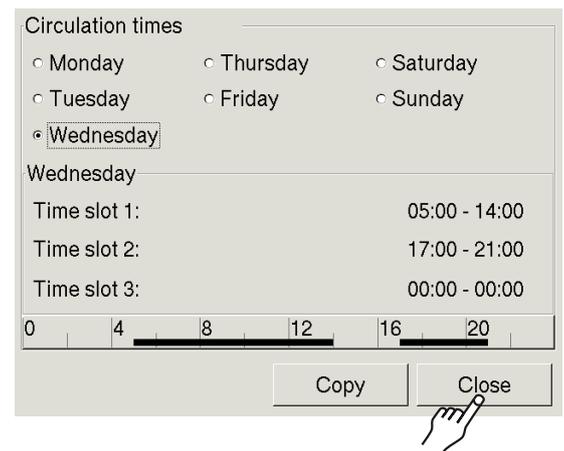
## Copying time slots to other days of the week

Once the time slots have been adjusted, they can also be adopted for other days of the week.

To do this, press **Copy**. A screen appears for selecting a day of the week:



Tap to select the desired day of the week or [All] and then press **Accept**. The time slots are adopted for the selected days.



Finally, press **Close**.

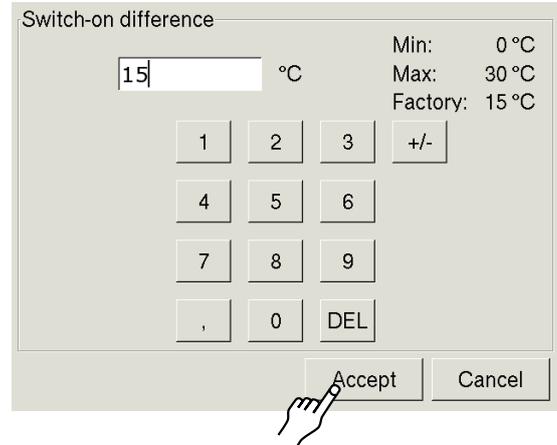
The hot water tank overview reappears.

## The "Switch-on difference" parameter

This parameter controls how far the current "Hot water tank" temperature can fall before the hot water tank demands heat from the buffer again.

 The factory setting for this parameter is 15°C. The current hot water temperature can fall 15°C below the set value during the time slot. The hot water tank does not demand heat from the buffer unless this happens.

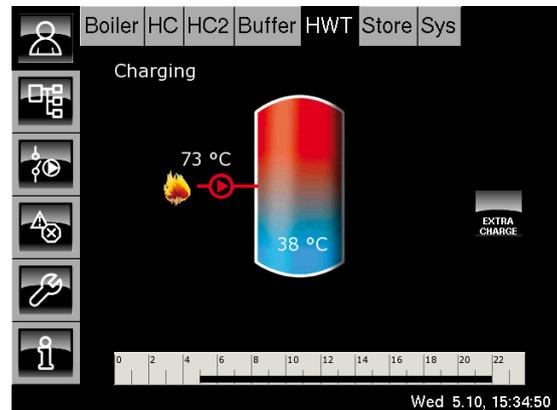
A settings screen opens:



Enter the new "Switch-on difference" and press **Accept** to save changes.

The text menu display appears again.

Press  to return to the "Hot water tank" overview.

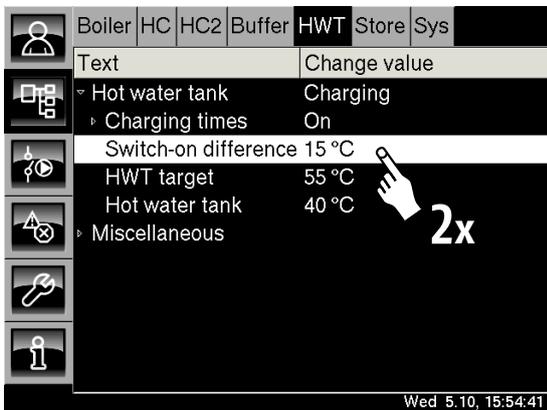


## Changing the "Switch-on difference"

Open the "Hot water" text menu. Press **HWT** and .

Tap the [Hot water tank] line. The submenu opens.

Double-tap on the [Switch-on difference] line (or select the line and press the **Change value** button).



## "HWT bottom off" parameter

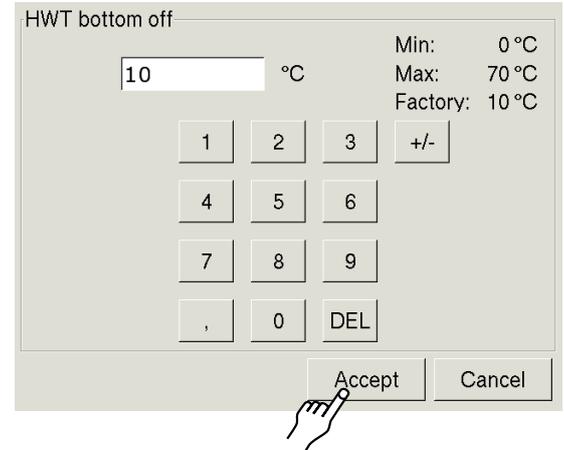
 The parameter "HWT bottom off" is only displayed if there is an additional temperature sensor installed in the bottom of the hot water tank.

The "HWT bottom off" parameter is used to set the temperature **after which the hot water tank will no longer be charged**.

As soon as the "HWT bottom" sensor reaches the adjustable "HWT bottom off" temperature, charging of the hot water tank stops.

 The factory setting for the "HWT bottom off" temperature is 10°C.

A settings screen opens:



Enter the new "HWT bottom off" temperature and press **Accept** to save.

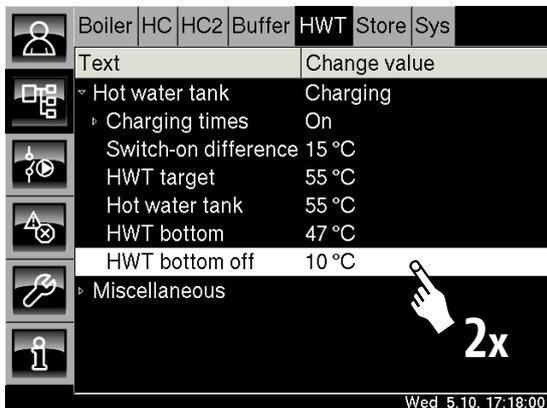
The text menu display appears again.

## Changing the "HWT bottom off" temperature

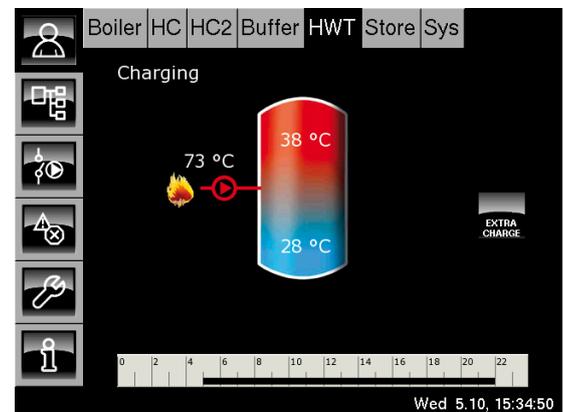
Open the "Hot water tank" text menu. Press **HWT** and .

Tap the [Hot water tank] line. The submenu opens.

Double-tap the line [HWT bottom off] (or select the line and press the **Change value** button).



Press  to return to the "Hot water tank" overview.



## "Heating circuit" overview

Press and to open the "Heating circuit 1" overview screen.

Each heating circuit has its own function block (HC2, HC3...).

In the overview of the selected heating circuit, the on/off button can be used to switch the heating circuit on and off.

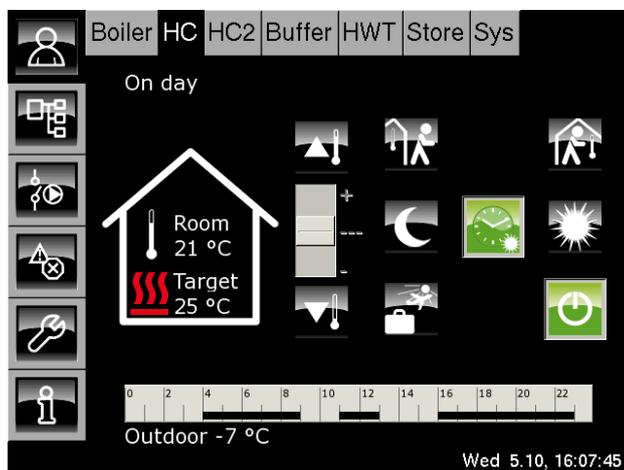
The timer can be used to set 3 different time slots for each day of the week. If there is a room sensor installed, you can also adjust the desired room temperature.

If not, a slider on the overview screen allows you to adjust the room temperature.

## "Day" and "Night" mode

During the time slots, the heating circuit is in "Day" mode.

Outside the time slots, the heating circuit is in "Night" mode.



## Heating circuit on/off

This button is used to switch the heating circuit on and off.

The boiler has a separate on/off button.



Green = Heating circuit on



Red = Heating circuit off



## Slider

The slider is **only shown if there is no room temperature sensor installed**. The slider can be used to change the room temperature by approx. +/- 5°C.

Please bear in mind that this substitute function cannot replace the precision of a room sensor.

## Timer



The timer shows the set **heating time slots for the current day of the week**. Tapping this timer brings up a screen where it is possible to set **3 time slots for each day of the week**.

If a **room sensor is installed**, the desired **room temperature** can be set for each time slot. Likewise, the reduced room temperature (set-back temperature) between the heating time slots can also be adjusted.

Within a set time slot, the heating circuit will be in "Day" mode. Outside of the time slots, it will be in "Night" mode.

If the heating circuit is operated in "Auto" mode ( button), **this button changes the icon** depending on whether the heating circuit is running at "Day" or "Night" temperature.



## Current room temperature (room sensor only)

**Only displayed if a room sensor is installed for this heating circuit.** This displays the current room temperature as measured by the room sensor.



## Current flow temperature

The current target flow temperature for the heating circuit is only displayed if the heating circuit is switched on and in operation.

## Outdoor -13°C Current outside temperature

The current outside temperature is measured by the built-in outside temperature sensor.



### Constant "Day" mode

This button can be used to switch the heating circuit to constant "Day" mode (button lights up ).

If a room sensor is installed, the temperature will be regulated to the **highest room temperature** set for that day in the timer. If there is no room sensor, the heating circuit runs using the **heating curve "Day"**.

"Auto" and "Night" modes can be ended by pressing the button.



### Constant "Night" mode

This switches the heating circuit to constant "Night" mode so that it runs at the set-back temperature (button lights up ).

If there is a built-in room sensor, the temperature is regulated to the set-back temperature that is set in the timer. If the unit does not have a room sensor, the heating circuit runs using the **heating curve "Night"**.

"Auto" and "Day" modes can be ended by pressing the button.



### "Auto" mode

"Auto" mode automatically switches between "Day" and "Night" mode. Within a set time slot, the heating circuit will be in "Day" mode. Outside of the time slots, it will be in "Night" mode.

The **"Auto" display changes the icon** depending on whether the heating circuit is currently in "Day" or "Night" mode.



"Day" mode



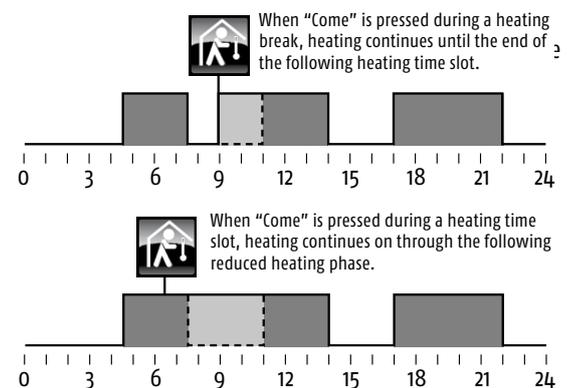
"Night" mode



### Come

This function is **only available in "Auto" mode**. Regardless of the current time slot, pressing the button (when you come home) **switches the heating circuit to "Day" mode** (button lights up ) until the next set time slot.

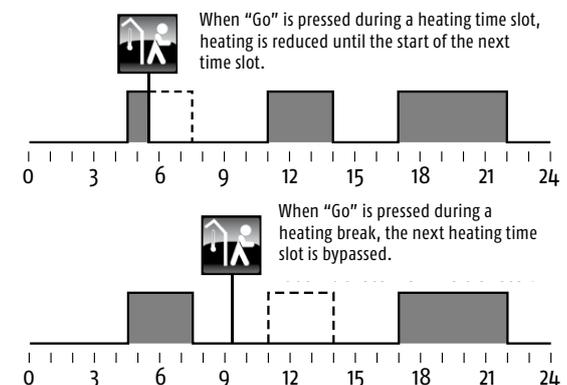
If the unit has a built-in room sensor, the heating circuit is regulated to the set room temperature. If there is no room sensor, the heating circuit runs using the heating curve "Day".



### Go

This function is **only available in "Auto" mode**. Regardless of the current time slot, pressing the button (when you go out) switches the heating circuit to "Night" mode (button lights up ) until the next set time slot.

If the unit has a built-in room sensor, the heating circuit is regulated to the stored set-back temperature. If there is no room sensor, the heating circuit runs using the heating curve "Night".





## Holiday mode

The "Holiday" button is used to set a period for which the **selected heating circuit** will run in "Night" mode.

Any adjustments made to the room temperature also influence the "Day" temperature, and thus the temperature for heating up at the end of the holiday. As such, it is best not to adjust the room sensor for holiday set-back.

If you wish to reduce the room temperature, you can set an individual "set-back temperature" in the timer. During **"Holiday" mode, the lowest of all the "set-back temperatures" in the timer is the one that applies.**

## On Night

The heating circuit is **outside of the timer's time slots** and in **"Night" mode**.

The flow temperature of the heating circuit is regulated using the "Heating curve night".

If the unit has a built-in room sensor, the temperature is regulated to the stored "set-back temperature". The switch can be in either the "Auto" or the "Night" position.

## Holiday On

The heating circuit is switched on and in holiday mode (= constant "Night" mode). It remains in this state until the "End of holiday" date.

## On Delay

The heating circuit is no longer demanding any heat and is in delay mode. The boiler pump is still running for a short time in order to channel the heat out of the boiler.

## On Freezing room

The heating circuit is in operation because the current room temperature is below the freezing protection temperature (10°C).

## On Freezing flow

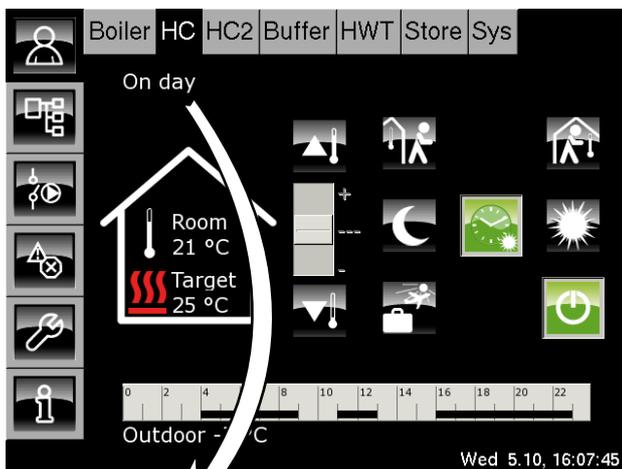
The heating circuit is in operation because the current flow temperature is below the freezing protection temperature (10°C).

## On Heat dissipation

The heating circuit is in operation in order to cool the boiler by dissipating excess heat. Also displayed during emission measurement.

## On Overtemperature

The heating circuit is in operation because the boiler is running at overtemperature. The heating circuit is running at the highest set flow temperature in order to dissipate the heat from the boiler (overheating protection).



## On Day Current operating mode

This line shows the current operating mode of the heating circuit. Below is a list of the possible modes:

### On Day

The heating circuit is **within one of the timer's time slots** and in **"Day" mode**.

The flow temperature of the heating circuit is regulated using the "Heating curve day".

If the unit has a built-in room sensor, the temperature is regulated to the highest room temperature set for the time slot. The switch can be in either the "Auto" or the "Day" position.

## On Screed

The heating circuit is in operation; the screed drying program is being run.

## Off Enable temp.

The heating circuit is still switched off because the boiler is not yet able to supply sufficient heat. The enable temperature for the heating circuit has not yet been exceeded.

## Off Target day

The heating circuit is switched off. The target flow temperature calculated from the heating curve "Day" is below the room temperature as measured by the room sensor.

If the unit does not have a room sensor, the calculated target flow temperature is below 18°C.

## Off Target night

The heating circuit is switched off. The target flow temperature calculated from the heating curve "Night" is below the room temperature as measured by the room sensor.

If the unit does not have a room sensor, the calculated target flow temperature is below 18°C.

## Off Target holiday

The heating circuit is within the set holiday time, and thus switched off.

The target flow temperature calculated from the heating curve "Night" is below the room temperature as measured by the room sensor.

If the unit does not have a room sensor, the calculated target flow temperature is below 18°C.

## Off Room day

The heating circuit is within a time slot, but switched off. The current room temperature is higher than the set "Room target" temperature by at least the "RoomOffDiff" temperature.

## Off Hot water

The heating circuit is switched off because the hot water is currently being heated.

## Off Room night

The heating circuit is switched off and outside the set time slots. The current room temperature is higher than the stored set-back temperature by at least the "RoomOffDiff" temperature.

## Off Room holiday

The heating circuit is within the set holiday time, and thus switched off. The current room temperature is higher than the stored set-back temperature by at least the "RoomOffDiff" temperature.

## Off Outside day

The heating circuit is switched off. The current outside temperature is higher than the set temperature for "Day Heating threshold".

## Off Outside night

The heating circuit is switched off. The current outside temperature is higher than the set temperature for "Night Heating threshold".

## Off Outside holiday

The heating circuit is within the set holiday time, and thus switched off. The current outside temperature is higher than the stored set-back temperature.

## Off Summer

The heating circuit is switched off. The only active functions are the freezing protection and the boiler pump's "anti-blocking protection", which runs at midday every Saturday.

## Off Sensor failure

The heating circuit is switched off due to a defect in the flow temperature sensor.

## Setting the heating time slots

The heating circuit timer can be used to set 3 different time slots for the heating for each day of the week.

 If the unit has a room sensor, a target room temperature can also be set for each time slot. Likewise, the reduced room temperature (set-back temperature) between the heating time slots can also be adjusted for each day of the week.

### "Day" mode

During a set time slot, the heating circuit is in "Day" mode.

If a room sensor is installed, this regulates the heating circuit to the set target room temperature for the time slot.

If there is no room sensor, the flow temperature of the heating circuit is calculated using the heating curve.

### "Night" mode

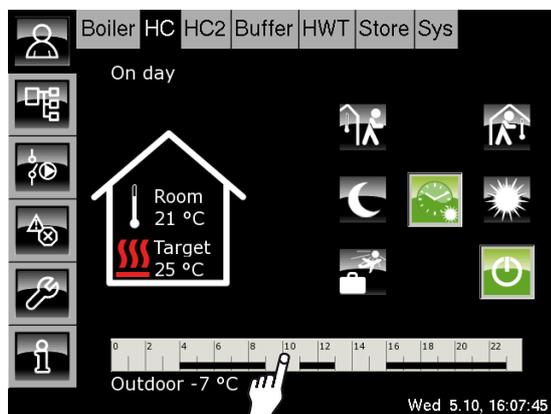
Outside the time slots, the heating circuit is in "Night" mode.

If a room sensor is installed, this regulates the heating circuit to the stored "set-back temperature" for the time slot.

If there is no room sensor, the flow temperature of the heating circuit is calculated using the heating curve.

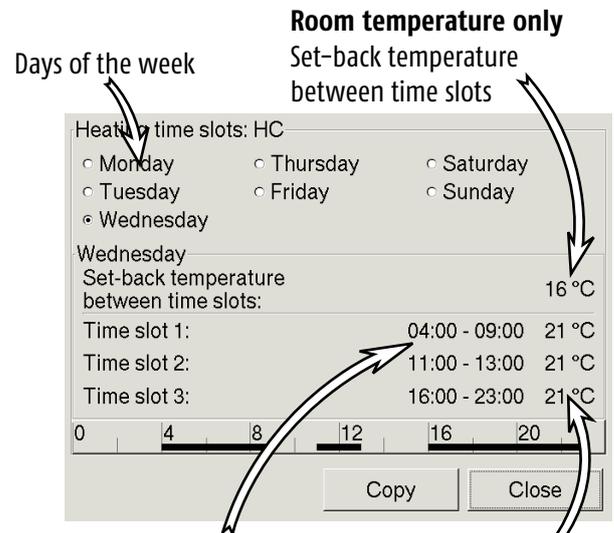
### Adjusting the timer (with room sensor)

In the overview for the selected heating circuit, tap the timer. The screen for setting the timer opens.



### Overview of current time slots

The current day of the week is selected automatically. The set time slots for the current day of the week are shown on the screen.



3 adjustable time slots for each day of the week

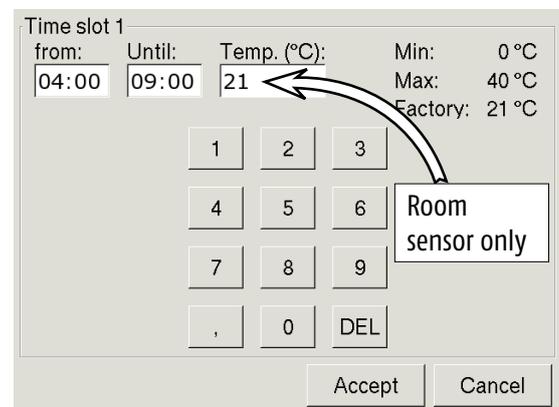
Target room temperature room sensor only

### Selecting a time slot

Tap the [Time slot 1] line. The time slot setting screen opens.

The times for "Day" mode can now be altered.

 If the unit has a built-in room sensor, the target room temperature can also be set.



Press **Accept** to save the new settings. Use the same method to adjust the other time slots.

## Copying time slots to other days of the week

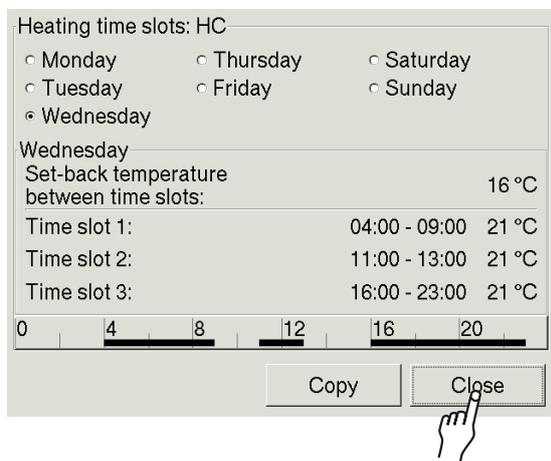
Once the time slots have been adjusted, they can also be adopted for other days of the week.

In the time slot overview screen, tap the  button. A screen appears for selecting a day of the week:



Tap to select the desired day of the week or [All] and then press . The time slots are adopted for the selected days.

The new time slots are displayed.



Finally, press .

The heating circuit overview reappears.

## "Holiday" function

With this function, the  button can be used to switch the heating circuit to **constant "Night" mode for an adjustable time period**. This setting only ever applies for the selected heating circuit.

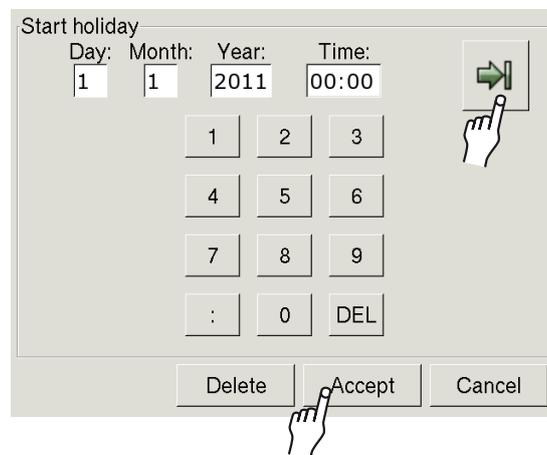
 The **hot water supply** from the hot water tank or the fresh water module is **not affected by the "Holiday" function**.

For "Holiday" mode, the heating circuit is regulated to the lowest set-back temperature set in the timer. If you wish to reduce the temperature for the "Holiday" time period, you can set an individual set-back temperature in the timer.

Adjusting the room sensor also affects the "Day" temperature when heating up at the end of the holiday. As such, it is best not to adjust the room sensor for holiday set-back.

## Setting a "Holiday" time period

In the "Heating circuit" overview screen, tap the  button. A screen opens:



Enter the time for the beginning of your holiday. The  button can be used to switch between the "Start" and "End" of the holiday.

Enter both times and press .

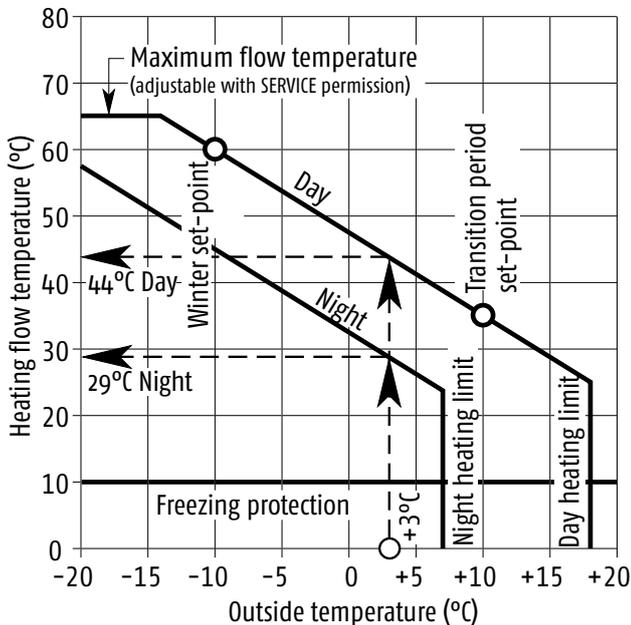
The heating circuit overview reappears.

## The heating curve

The heating curve **controls the flow temperature** for the **"Day"** and **"Night"** modes of the heating circuit in question. **During a set time slot**, the heating circuit is in **"Day"** mode. **Outside** the time slots, the heating circuit is in **"Night"** mode.

**Each heating circuit has its own heating curve**, as underfloor heating requires different settings to radiator heating.

The **diagram** shows a **heating curve** for radiator heating. If the control settings have been adapted to your system, **lower heating curves** may be set for **underfloor heating** and **higher heating curves** for radiator heating.



### Maximum flow temperature

This limit protects your heating system. Underfloor heating is usually limited to 45°C, while radiators with metal pipes can take temperatures up to 85°C.

## Heating curve "Day"

During a set time slot, the heating circuit is in "Day" mode. The heating curve for "Day" mode can be adjusted using the parameters "Flow at -10°C" and "Flow at +10°C". The control system uses these parameters to plot a line: the heating curve "Day".

The heating curve "Day" and the current outside temperature are used to calculate the required flow temperature for the heating circuit. Example:

- at +3°C outside temperature => 44°C flow
- at -5°C outside temperature => 54°C flow

 If the unit has a room sensor, the calculated flow temperature is corrected. The actual flow temperature may be higher or lower.

## Heating curve "Night"

Outside the set time slots, the heating circuit is in "Night" mode.

The heating curve "Night" is set back from the heating curve "Day" by the adjustable value "Set-back". The heating curve "Night" and the current outside temperature are used to calculate the required flow temperature.

## Factory settings for the heating circuit

 With **software versions 1.20.0** and higher, the system configuration for the heating circuit offers the user a choice between **underfloor and radiator heating**.

This choice pre-sets some of the parameters in the heating circuit. For information on these parameters and their **factory settings**, see page 82.

## The parameter "Day Heating threshold"

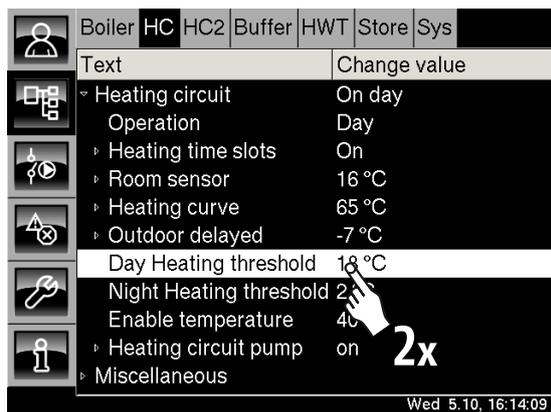
With the "Day Heating threshold" parameter, an outside temperature is set which, when exceeded, will result in the heating circuit being switched to "Day" mode.

 The factory setting for this parameter is 18°C. The **"Day Heating threshold"** can be **set differently for each heating circuit.**

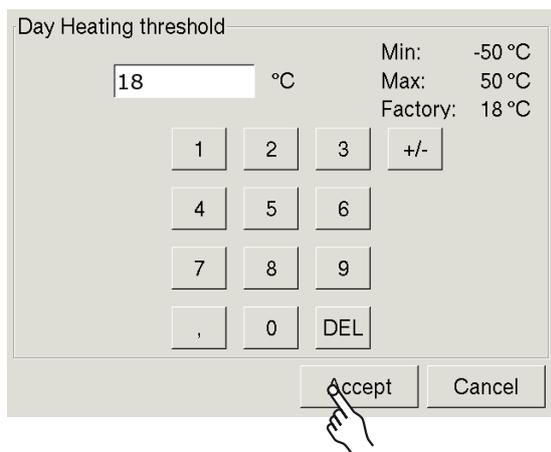
## Changing the parameter "Day Heating threshold"

Press  to open the text menu for the selected heating circuit.

Tap the [Heating circuit] line to open the submenu. Double-tap on the [Day Heating threshold] line (or select the line and press the **Change value** button).



A settings screen opens:



Enter the new heating threshold for "Day" mode. Press **Accept** to save the new value.

Press  to open the "Heating circuit" overview.

## The parameter "Night Heating threshold"

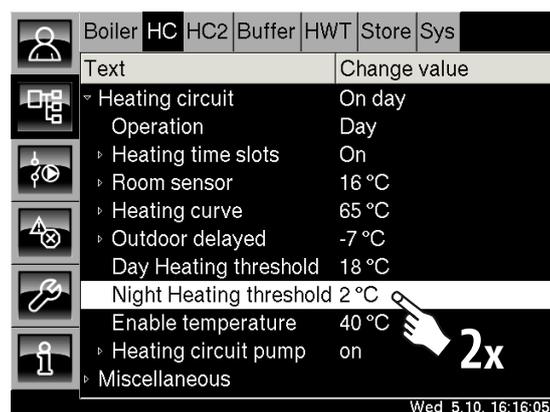
If the heating circuit is in "Night" mode, an outside temperature is set which, when exceeded, will result in the heating circuit being switched off.

 The factory setting for this value is 2°C. The **"Night Heating threshold"** can be **set differently for each heating circuit.**

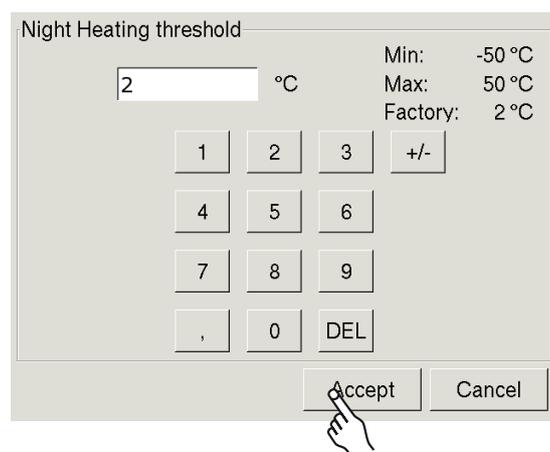
## Changing the parameter "Night Heating threshold"

Press  to open the text menu for the selected heating circuit.

Tap the [Heating circuit] line to open the submenu. Double-tap on the [Night Heating threshold] line (or select the line and press the **Change value** button).



A settings screen opens:



Enter the new heating threshold for "Night" mode. Press **Accept** to save the new value.

Press  to open the "Heating circuit" overview.

## Adjusting the heating curve

If the heating circuit is always too warm or too cold, the **flow temperature** must be adjusted. This can be done using two parameters: **"Flow at -10°C"** and **"Flow at +10°C"**.

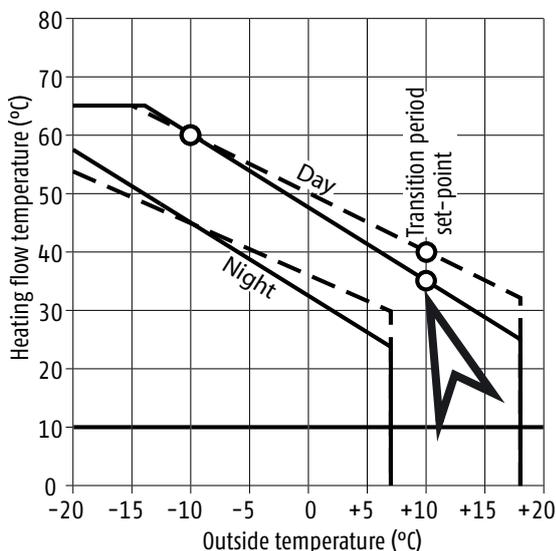
### No large jumps in temperature

Do not set any large jumps in temperature when adjusting "Flow at +10°C" and "Flow at -10°C":  
 For **underfloor heating**, never more than **2°C**  
 For **radiators** never more than **4°C**

 You may need to alter the flow temperatures again after one or two days, but working in small steps will help you to set the heating circuits more precisely, thus saving energy.

### During the transition period -> "Flow at +10°C"

If the heating circuit is always too warm or too cold during the **transition period** (spring and autumn), **only** the flow temperature for **"Flow at +10°C"** is **reduced or increased**.



 Do not change the flow temperature "Flow at -10°C" during the transition period.

## Factory settings for the heating circuit

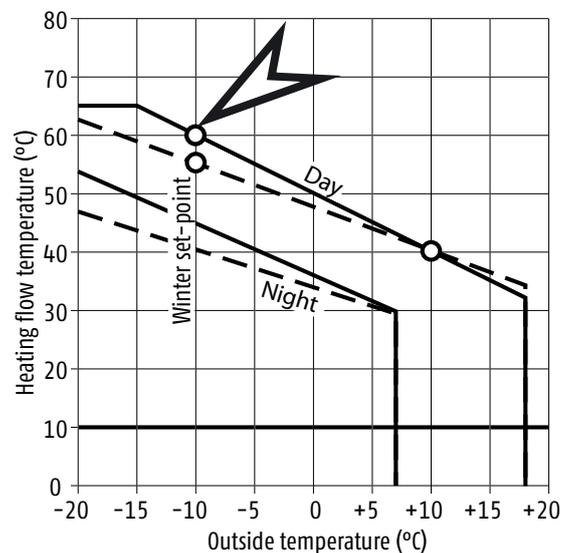
 With **software versions 1.20.0** and higher, the system configuration for the heating circuit offers the user a choice between **underfloor and radiator heating**.

This choice pre-sets some of the parameters in the heating circuit. These parameters and their factory settings can be seen in the table below:

Preset	Underfloor	Radiator
Max flow	45°C	65°C
Flow at -10°C	33°C	55°C
Flow at +10°C	25°C	35°C
Set-back	3°C	15°C
Enable temperature	25°C	40°C
Room effect	1°C	4°C

### In winter -> "Flow at -10°C"

If the heating circuit is always too cold or too warm **in winter**, **only** the flow temperature **"Flow at -10°C"** is **increased or reduced**.



 Do not change the flow temperature "Flow at +10°C" in winter.

## Adjusting the heating curve for outside temperatures above 0°C -> Changing "Flow at +10°C"

If the heating circuit is always too cold or too warm in the **transition period**, the flow temperature "Flow at +10°C" is increased or reduced.

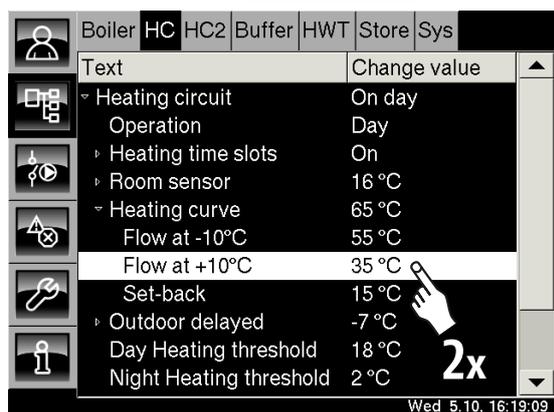
### No large jumps in temperature

 For underfloor heating, never more than 2°C  
For radiators, never more than 4°C

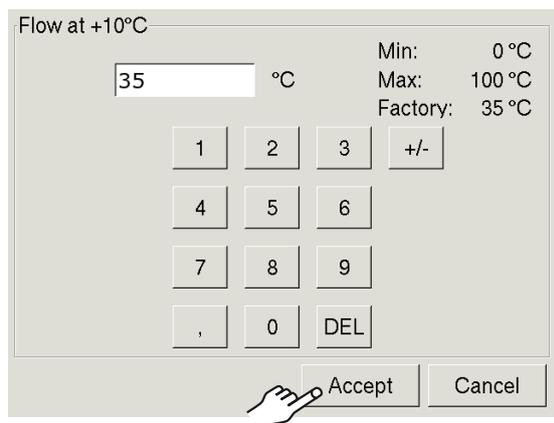
Press  to open the text menu for the selected heating circuit.

Tap the [Heating circuit] line and, in the submenu, tap the [Heating curve] line.

Double-tap on the [Flow at +10°C] line (or select the line and press the **Change value** button).



A settings screen opens:



Enter the new flow temperature for this heating circuit. Press **Accept** to save the new value.

The text menu for the selected heating circuit is displayed. Press  to open the "Heating circuit" overview.

## Adjusting the heating curve for outside temperatures below 0°C -> Changing "Flow at -10°C"

If the heating circuit is always too cold or too warm in **winter**, the flow temperature "Flow at -10°C" is increased or reduced.

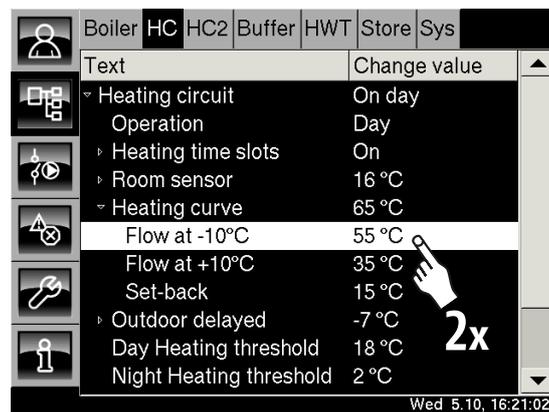
### No large jumps in temperature

 For underfloor heating, never more than 2°C  
For radiators, never more than 4°C

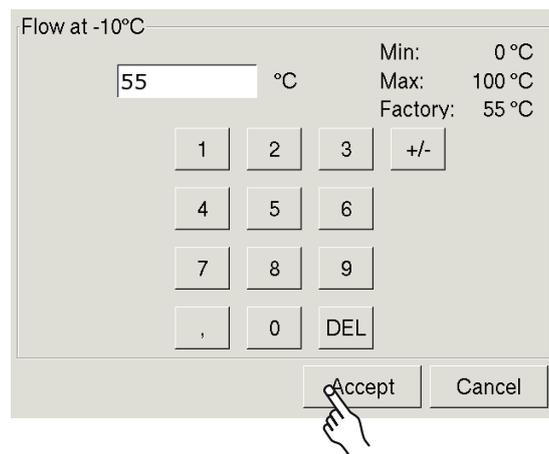
Press  to open the text menu for the selected heating circuit.

Tap the [Heating circuit] line and, in the submenu, tap the [Heating curve] line.

Double-tap on the [Flow at -10°C] line.



A settings screen opens:



Enter the new flow temperature for this heating circuit. Press **Accept** to save the new value.

The text menu for the selected heating circuit is displayed. Press  to open the "Heating circuit" overview.

Heating circuit

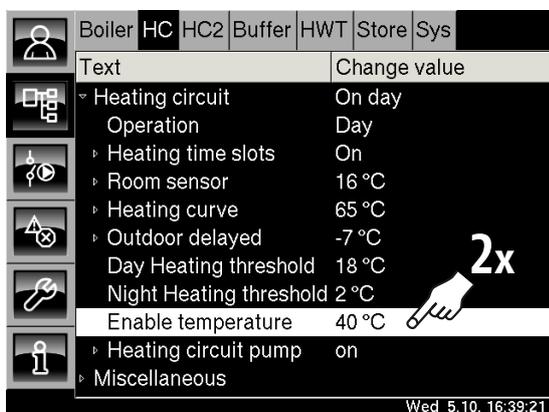
## Setting the parameter "enable temperature"

The heating circuit pump does not start until the energy source (buffer or boiler) has exceeded the "enable temperature". You can give a heating circuit priority by setting the "enable temperature" lower than that for all the other heating circuits in the system.

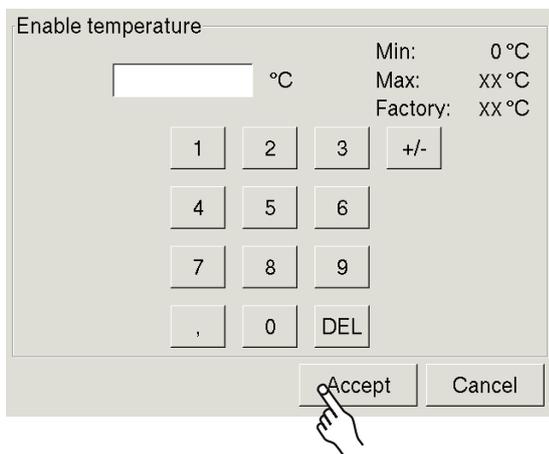
## Opening the heating circuit text menu

Press  to open the text menu for the selected heating circuit.

Tap the line [Heating circuit] and, in the submenu, double-tap the line [Enable temperature].



A settings screen opens:



Enter the new enable temperature for this heating circuit. Press  to save the new value.

The text menu for the selected heating circuit is displayed. Press  to return to the heating circuit overview.

## The parameter "Set-back"

If the unit does not have a room sensor, the parameter "Set-back" is used to adjust the night mode. The control system subtracts the "Set-back" parameter from the heating curve "Day" to get the heating curve "Night".

Outside the time slots set in the timer, the heating circuit is in "Night" mode, and runs using the heating curve "Night".

 The factory setting for this "Set-back" is 15°C.

 The **"Set-back" can be adjusted for each heating circuit**. The following steps are the same for all heating circuits.

## Do not use large set-backs

Do not overuse "set-back", as much higher air temperatures will be required to ensure comfort in the morning if the walls have cooled down too much overnight. In addition to reducing comfort, this also wastes the energy saved overnight.

Depending on the "Flow at -10°C" temperature and the type of heating circuit used (radiator or underfloor heating), the following guidelines apply for the set-back:

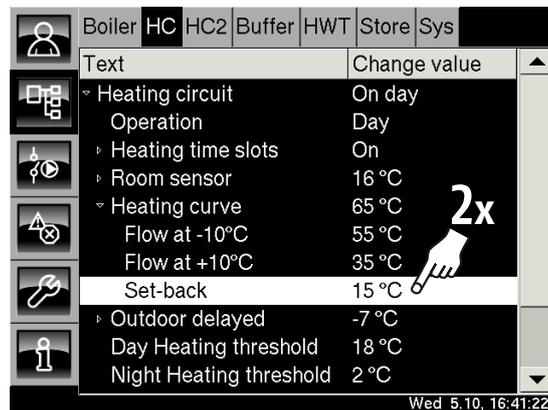
Temperature	Radiator			Underfloor
	40°C	60°C	80°C	
Flow at -10°C	40°C	60°C	80°C	30-40°C
Set-back	5-8°C	10-15°C	15-22°C	3-5°C

## Changing the parameter "Set-back"

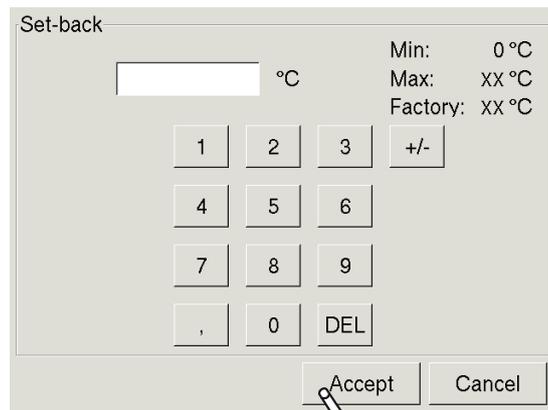
Press  to open the text menu for the selected heating circuit.

Tap the [Heating circuit] line and, in the submenu, tap the [Heating curve] line.

Double-tap on the [Set-back] line.



A settings screen opens:



Enter the new temperature difference for the "Set-back". Subtracting the "Set-back" from the heating curve "Day" gives you the heating curve "Night".

Press  to save the new value. The text menu for the selected heating circuit is displayed once more.

Press  to return to the heating circuit overview.

## "Hot Water Priority" – Description

If the heating circuit and the hot water tank demand heat at the same time, the "Hot Water Priority" function can be used to switch off the heating until the hot water is heated up.

 The factory setting for "Hot Water Priority" is "Yes".

## Hot water priority set to "Yes"

First, the hot water tank is heated up and the heating circuit is switched off and put in "Off hot water" mode. Once the hot water tank is charged, the selected heating circuit is supplied with heat again.

## Hot water priority set to "No"

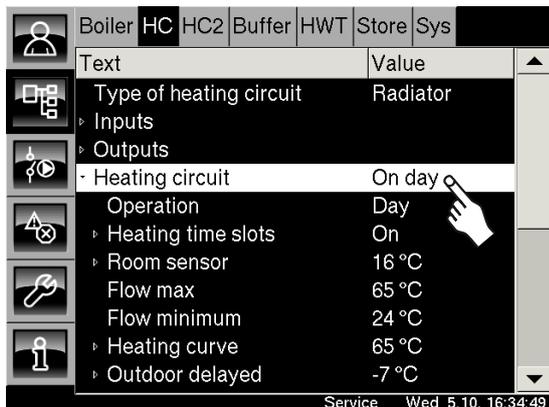
The hot water tank and the heating circuit are supplied with heat simultaneously. As such, it takes longer for the hot water tank to charge.

## Changing the parameter "Hot Water Priority" in the text menu

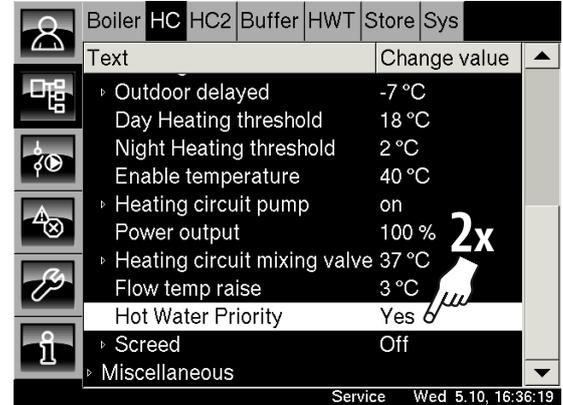
 The access level "Service" is required to change the parameter "Hot Water Priority".

Using the access level "Service", press  to open the text menu for the selected heating circuit.

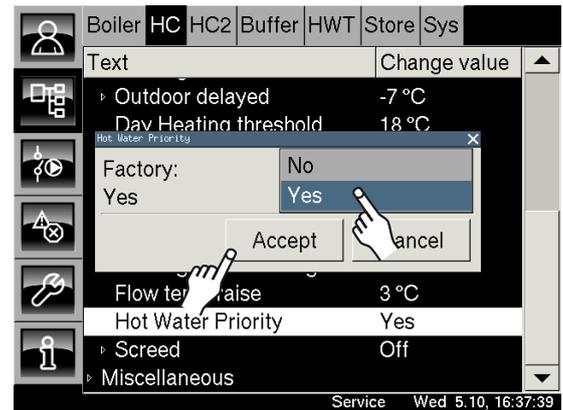
Tap the [Heating circuit] line to open the submenu.



Scroll down and double-tap the line [Hot Water Priority].

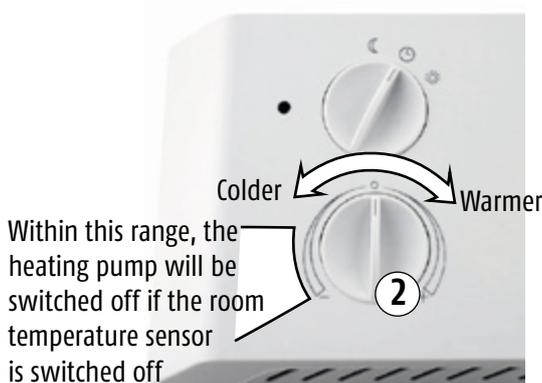
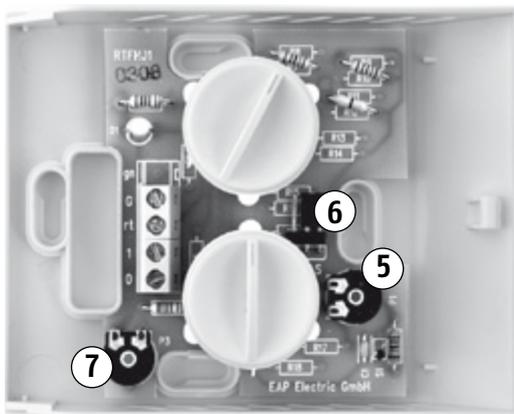
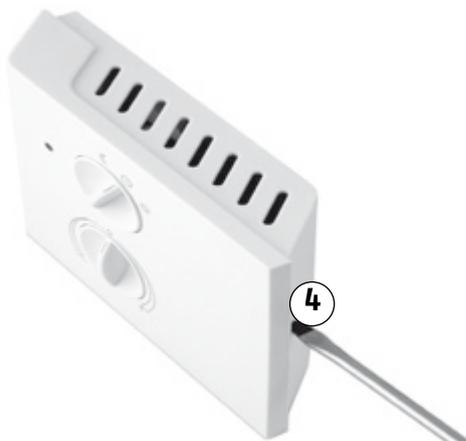


A selection window appears for turning "Hot Water Priority" on and off.



Select the desired setting and press .

Press  to return to the heating circuit overview.



## Night-Clock-Day

The switch (1) can be used to set the following operating modes:

- = NIGHT or set-back mode
- = AUTOMATIC switching between DAY and NIGHT
- = DAY or heating mode, even when the outside temperature exceeds the set heating threshold.

## Switching off the heating

During the transition period, the heating circuit can be switched off by turning the switch (1) to the position. Correspondingly, turning the switch to the or position switches on the heating circuit.

## Changing the room temperature

The control knob (2) is used to increase or reduce the desired room temperature by up to 5°C.

The actual room temperature is only displayed in the "Heating circuit" function block if the control knob (2) is in the middle position. A desired increase in temperature will be deducted from the room temperature measured by the room sensor, while a reduction will be added to it.

## "Malfunction" indicator light

LED (3) flashes red = WARNING or ALARM present.

## Adjusting the room sensor

Open the cover by pressing in the latch (4), and turn the control knob (2) to the middle position.

The measured room temperature can be adjusted using potentiometer P1 (5). The room temperature is displayed in the overview of the "Heating circuit" function block.

## Switching off the room sensor function

If the room sensor is in a room that is heavily affected by extraneous influence, e.g. the kitchen or a living room with a tiled stove, the room sensor must be switched off (see below). If the room sensor is switched off, the control knob (2) affects the flow temperature directly. If the temperature is set back by 3°C or more (factory setting) using the control knob, the heating circuit pump is switched off.

Switching off the room sensor function:

Open the cover and move the jumper (6) from the right-hand "S" position (sensor) to the left-hand "F" position (fixed). The target temperature and the set-back temperature in the "heating circuit" function block must be set to 21°C. The fixed temperature in the room sensor must be also be adjusted to 21°C, using potentiometer P3 (7).

## "Solar heating system" overview

Press  and  to open the "Solar heating system" overview screen.

### How the solar heating system works

The operation of the solar heating system is controlled by switching the solar collector pump on and off.

The **solar collector pump is switched on** as soon as the adjustable "**Solar panel Min**" temperature has been **exceeded** and the solar panel is **5°C warmer** than the "**Buffer bottom Solar**" temperature.

**The solar collector pump is switched off** as soon as the temperature **falls below** the adjustable "**Solar panel Min**" temperature and the solar panel is **colder** than the "**Buffer bottom Solar**" temperature.

In order to prevent the heating system from overheating, solar charging stops as soon as the buffer reaches the maximum temperature "Buffer bottom max" (factory setting: 90°C).

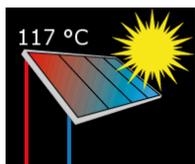
The hot water tank is charged at maximum to the "HWT max" temperature (factory setting: 60°C).

### Solar with "Buffer" OR "Hot water tank"

The "Solar" overview only shows the tank to which the solar heating system is connected. For more information, see following pages.

### Solar with "Buffer" AND "Hot water tank"

If both tanks (buffer and hot water) are charged by the solar heating system, the overview shows both tanks. The arrangement of the lines indicates which tank is currently being charged (for more information, see page 90).



### Solar heating system in operation

The icon for the sun and the red and blue lines show that the solar heating system is in operation. The solar panel temperature is displayed.

**Outdoor -6°C** **Current outside temperature**



### Solar heating system not supplying heat

The solar heating system is not currently supplying any heat. Only the current solar panel temperature is displayed.

### On **Current operating mode**

This line shows the current operating mode of the solar heating system. Below is a list of the possible modes:

#### Off Cold

The solar heating system is switched off because the solar panel is colder than the temperature in the buffer ("Buffer bottom solar") or the hot water tank ("HWT bottom").

#### Off Charged

The solar heating system is switched off because the buffer has reached the "Buffer bottom max" and/or the hot water tank has reached the "HWT max" temperature.

#### Off Hot

The solar heating system is switched off because the solar panel temperature has exceeded the "Solar panel max" temperature.

#### On

The solar heating system is switched on and the solar collector pump is in operation.

#### Delay (external heat exchanger only)

The solar heating system has been switched off. The solar collector pump is on standby and the secondary pump will keep running for a short while.

#### Emergency operation (external heat exchanger only)

There is a defect in the "Secondary flow" or "Solar return" temperature sensor. The solar heating system will keep running, but will only be controlled by the solar panel temperature sensor.

#### Failure

The temperature meter at the "Solar panel" is damaged.

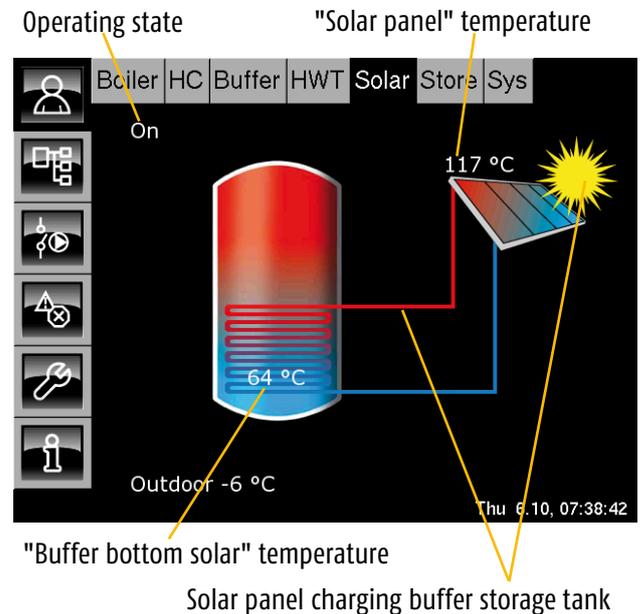
### Solar with "Buffer storage tank"

If the solar heating system is connected **to the buffer**, the **"Solar" overview displays the buffer storage tank**.

#### Function

Solar charging begins in the morning, as soon as the solar panel has **exceeded** the **"Solar panel min"** temperature and is **5°C warmer** than the **"Buffer bottom Solar"** temperature.

Solar charging ends as soon as the buffer has reached the **maximum "Buffer bottom max" temperature of 90°C** (factory setting).



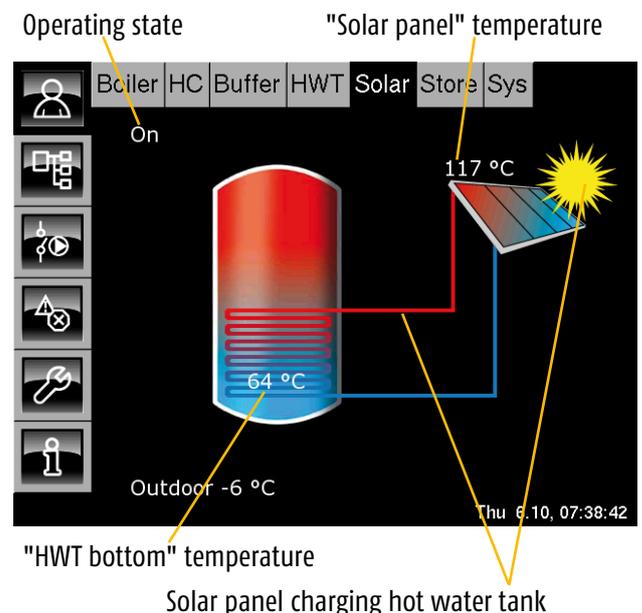
### Solar with "Hot water tank"

If the solar heating system is connected **to the hot water tank**, the **"Solar" overview displays the hot water tank**.

#### Function

Solar charging begins in the morning, as soon as the solar panel has **exceeded** the **"Solar panel min"** temperature and is **5°C warmer** than the **"HWT bottom"** temperature.

Solar charging ends as soon as the hot water tank has reached the **maximum "HWT max" temperature of 60°C** (factory setting).



## Solar with "Buffer" and "Hot water tank"

If **both tanks (buffer and hot water)** are connected to the solar heating system, a **changeover valve or a separate solar collector pump for each tank is required.**

### Function

The control system **treats the hot water tank as the "primary tank"**. The **buffer** is treated as the **"secondary tank"**.

Solar charging begins in the morning, as soon as the solar panel has **exceeded the "Solar panel min"** temperature and is **5°C warmer** than the temperature in the **primary tank**.

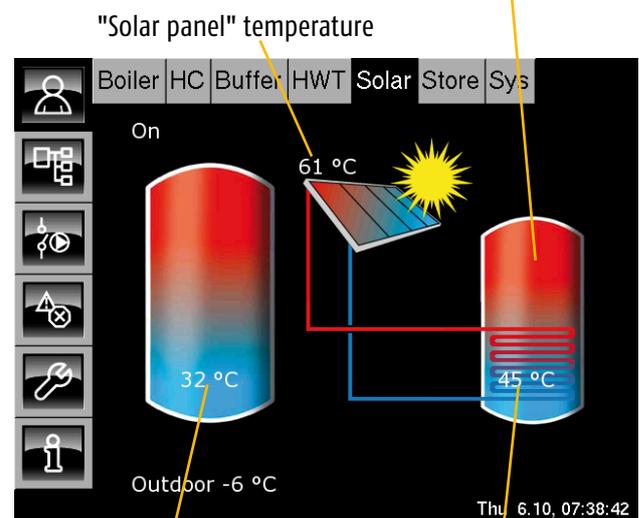
The primary tank is always charged first. As soon as the solar charging goes into standby during the **adjustable minimum time** (see page 99), the **tank that is currently the coldest is charged** from then on, as long as the "Solar panel" temperature exceeds the "Buffer bottom solar" or "HWT bottom" temperature.

While **the primary tank is being charged**, the **solar output is also measured**. If the system switches to the secondary tank, the control system takes note of this output.

If **this output is exceeded** by an adjustable percentage **during secondary mode**, charging automatically switches **back to the primary tank**.

Once the **primary tank has reached** the maximum temperature **"HWT Max" of 60°C** (factory setting), solar charging **switches to the buffer** until it reaches the temperature **"Buffer target 1"**.

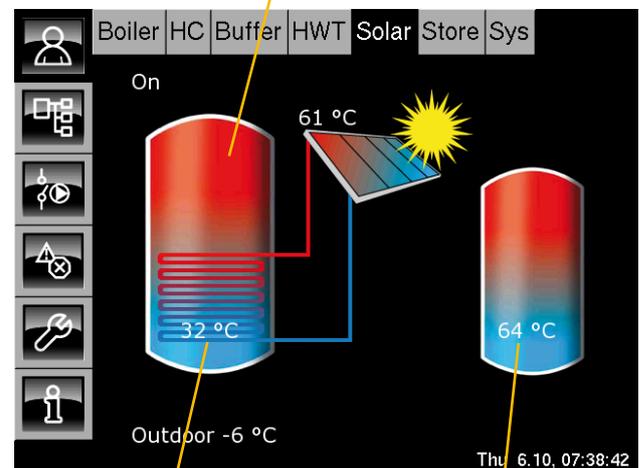
Solar panel charging **primary tank (HWT tank)**



"Buffer bottom solar"

"HWT bottom"

Solar panel **charging secondary tank (buffer)**



"Buffer bottom solar"

"HWT bottom"

### Solar and buffer with 2 coils and changeover valve

If a buffer storage tank with 2 coils is installed, the **changeover valve on the buffer** is used to **toggle the buffer's solar charging between the two coils**.

#### Function

Solar charging begins in the morning, as soon as the solar panel has **exceeded** the **"Solar panel min"** temperature and is **5°C warmer** than the **"Buffer top Solar"** temperature.

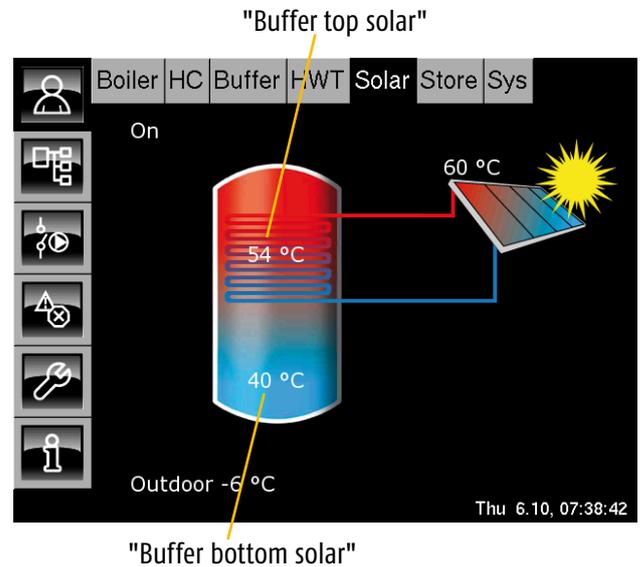
**The top section is charged first.** If the solar charging goes into standby during the **adjustable minimum time** (see page 99), the system attempts to **charge the bottom section**.

While **the top section** is being **charged**, the **solar output** is also **measured**. If the system switches to the bottom section, the control system takes note of this output.

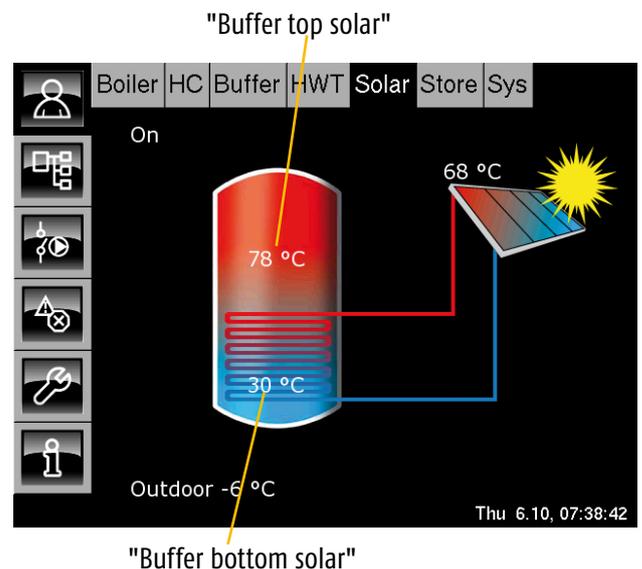
If **this output** is **exceeded during secondary mode** by an adjustable percentage, **charging automatically switches back to the top section**.

**As soon as** the calculated temperature **"Buffer top Solar 1"** has been **reached for the top section of the buffer**, the system **switches to the bottom section** and continues to charge the buffer **until the bottom section of the buffer reaches the maximum temperature "Buffer bottom max"** (factory setting: **90°C**).

#### Coil in top section of buffer being charged



#### Coil in bottom section of buffer being charged



## Solar with external heat exchanger

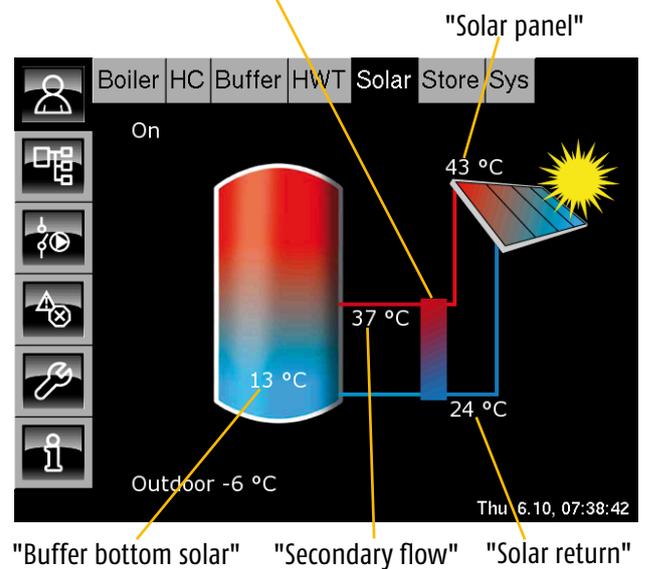
 The solar heating system with external heat exchanger can only be configured using an additional control extension.

### Function

Solar charging begins in the morning, as soon as the solar panel has **exceeded** the **"Solar panel min"** temperature and is **5°C warmer** than the **"Buffer bottom Solar"** temperature.

**Solar charging stops** as soon as the temperature **"buffer bottom solar"** is higher than **"Secondary flow"**.

### External heat exchanger charging the buffer



### Solar with external heat exchanger and stratified charging valve

 The solar heating system with external heat exchanger and stratified charging valve can only be configured using an additional control extension.

#### Function

Solar charging begins in the morning, as soon as the solar panel has **exceeded** the **"Solar panel min"** temperature and is **5°C warmer** than the **"Buffer bottom Solar"** temperature.

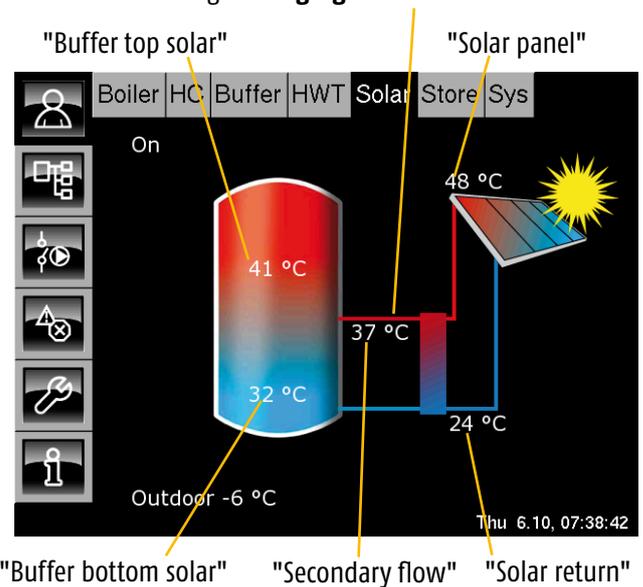
In solar heating systems with an external heat exchanger, **the bottom buffer volume** is charged **first**. The stratified charging valve is then in the **"Bottom"** position. **Solar charging stops** as soon as the temperature **"Secondary flow"** is **lower than "Buffer bottom solar"**.

If the **"Secondary flow"** temperature is **higher than "Buffer top solar"**, the **changeover valve** switches **up**.

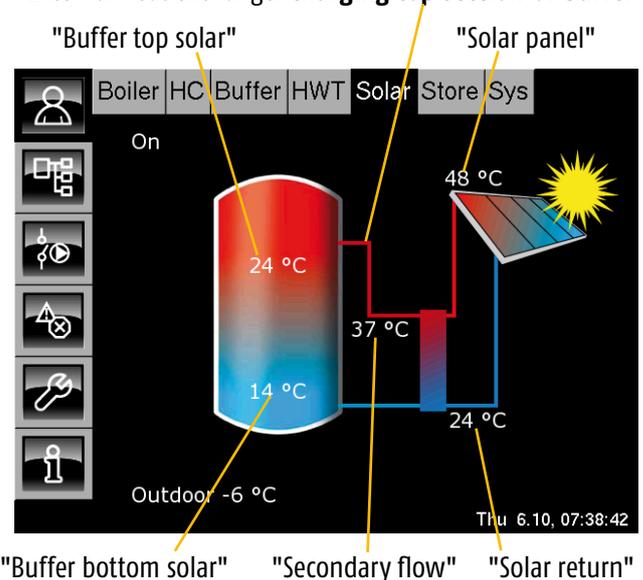
If the **"Secondary flow"** does not reach the current **"Buffer top solar"** temperature, the **changeover valve** switches back **down** and charges the bottom buffer volume.

Once the top section of the buffer reaches the calculated **"Buffer top solar 1"** temperature, the valve **switches down** and the buffer continues to be charged until the bottom section reaches the maximum **"Buffer bottom max"** temperature of **90°C** (factory setting).

#### External heat exchanger charging bottom section of buffer



#### External heat exchanger charging top section of buffer



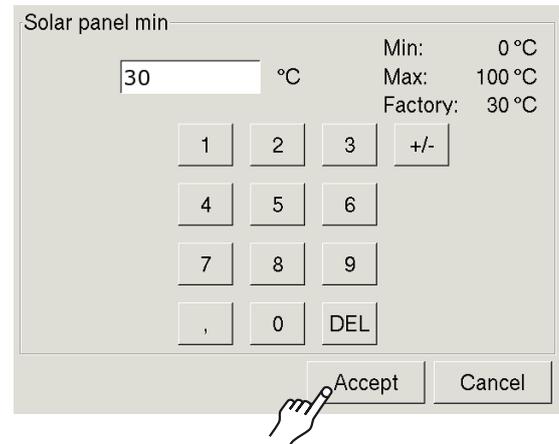
## "Solar panel min" temperature

This adjustable temperature can be used to control enabling of the solar collector pump, and thus the start temperature of the solar heating system. The solar collector pump is not switched on until the solar panel reaches thus temperature, at which point the solar heating system can start to supply heat to the buffer or the hot water tank.

The **"Solar panel Min"** temperature should **not be set too high**, in order to ensure that at least the bottom sections of the tanks are heated when solar radiation is low. The optimum range is between 30°C and 50°C.

 The factory setting for the "Solar panel min" temperature is 30°C.

A settings screen opens:



Enter the new minimum temperature "Solar panel min" and press **Accept** to save changes.

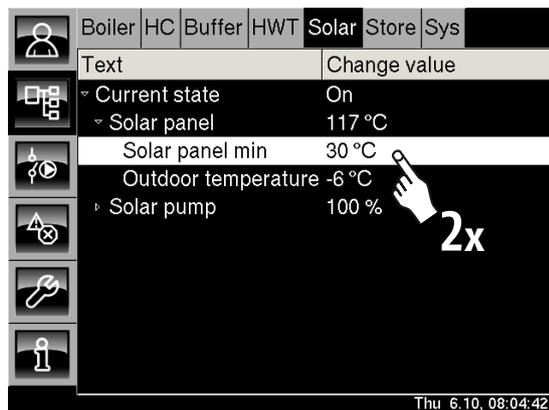
The solar heating system text menu is displayed.

## Changing the "Solar panel min" temperature

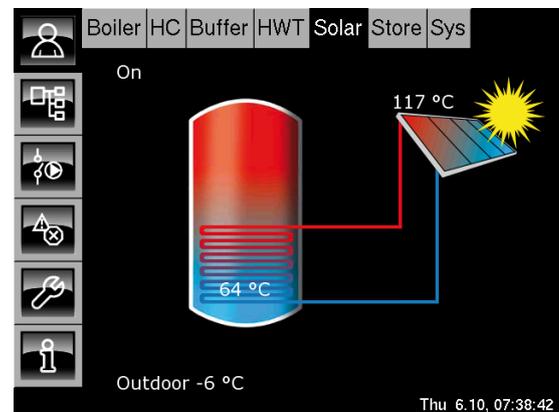
Press  and **Solar** to open the text menu for the solar heating system.

Tap the [Current state] line and, in the submenu, tap [Solar panel].

In the submenu, double-tap the line [Solar panel min].



Press  to open the solar heating system overview.



## Solar heating system heat flow meter

The "Heat flow meter" option can be used to calculate the amount of heat supplied by the solar heating system. The supplied amount of heat is shown in the solar heating system text menu.

### Requirements for the heat flow meter

In order to calculate the amount of heat supplied by the solar heating system, you must know the **glycol content** of the solar heating system.

Likewise, a **flow rate meter** must be installed in order to determine the flow rate at 100% solar collector pump speed.

Both values must be entered in the control system in order for it to calculate the amount of heat.

 The access level "Service" is required to adjust the settings.

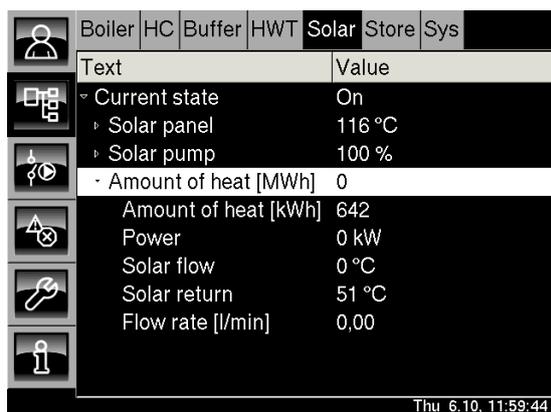
### Reading the heat flow meter

The amount of heat supplied by the solar heating system is displayed in the solar heating system text menu.

Press  and  to switch to the text menu.

Tap the [Current state] line and, in the submenu, tap the line [Amount of heat (MWh)].

The current count is displayed.



### Message in function block

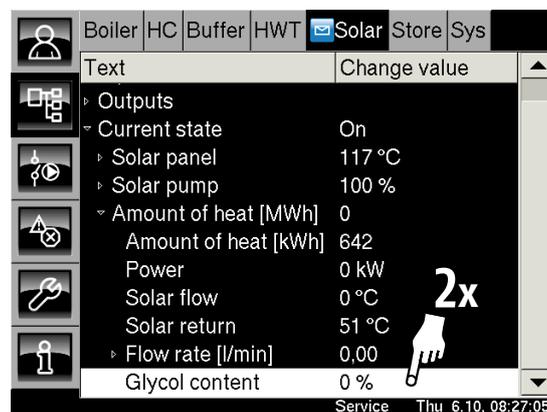
If the parameters "Glycol content" and "Flow rate at 100%" are blank, a message  is displayed in the FUB . This message is deleted once the parameters have been entered.

### Entering the glycol content of the solar heating system

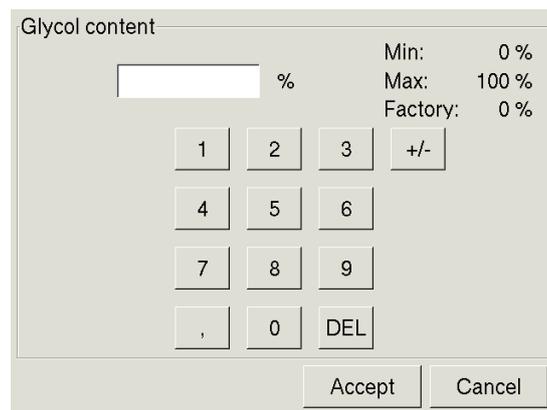
Using the access level "Service", press the buttons  and  to open the text menu.

Tap the [Current state] line and, in the submenu, tap the line [Amount of heat (MWh)].

Double-tap the [Glycol content] line.



A settings screen opens:



Enter the glycol content of the solar heating system and press  to save changes.

## Flow rate of the solar heating system

In order to calculate the supplied amount of heat, the **flow rate at 100%** solar collector pump speed is read from the **flow rate meter**.

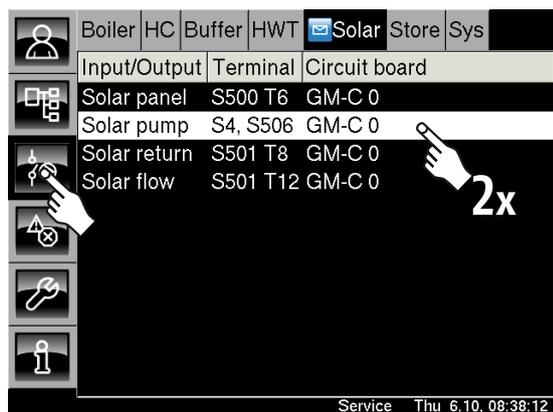
This value is entered in the text menu in the **parameter "Flow rate at 100%"**.

 In order to determine this flow rate, the **solar collector pump must be commissioned manually**. The access level "Service" is required to do this.

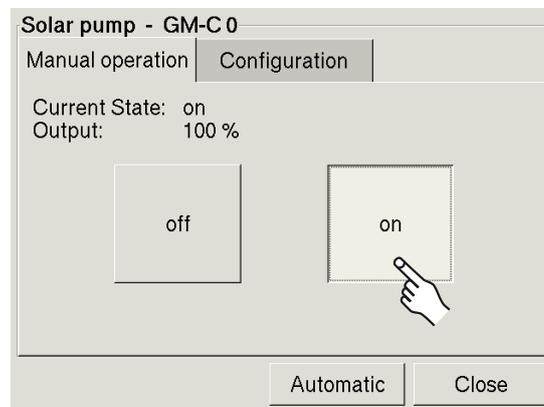
## Manually commissioning the solar collector pump

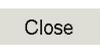
Using the access level "Service", press  and **Solar** to open the list of inputs and outputs for the solar heating system.

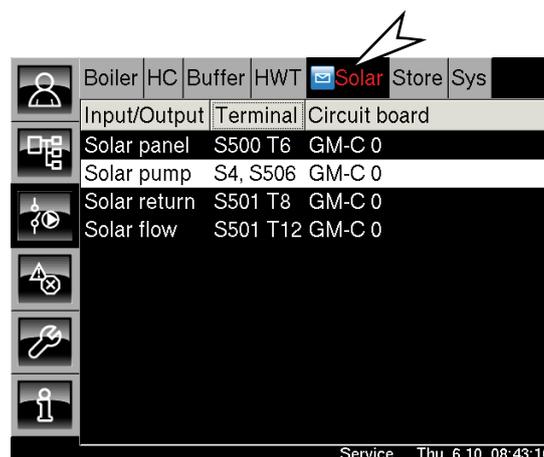
Double-tap or select the [Solar pump] line and press **Terminal**.



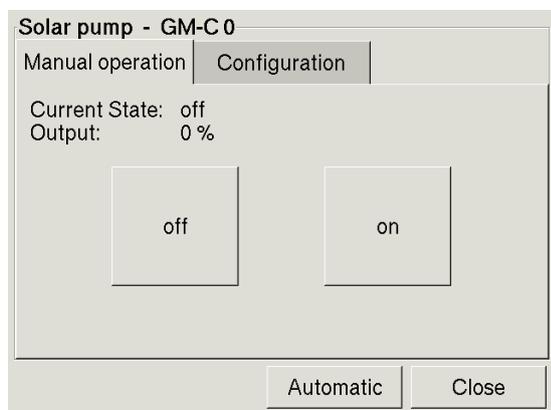
Press  to manually commission the solar collector pump.



Once this is done, press  to exit the screen for adjustments.



A screen for adjustments opens.



 The function block **Solar** is **displayed in red** to indicate that a **parameter has been changed manually**.

## Reading the flow rate

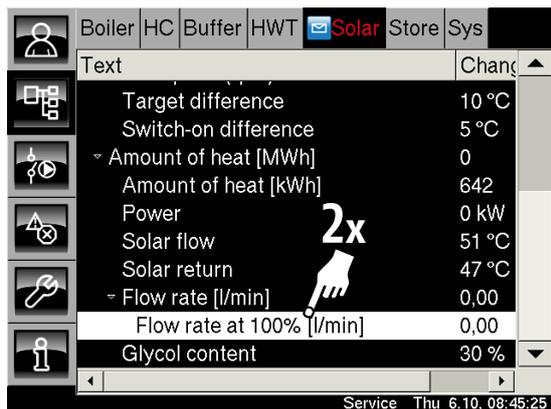
Now, with the solar collector pump switched on, read the flow rate of the solar heating system from the flow rate meter.

## Entering the flow rate

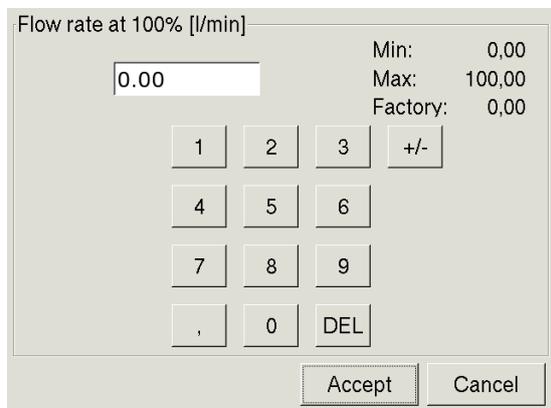
Press  to open the solar heating system text menu and select the [Current state] line.

Next, tap [Amount of heat (MWh)] and tap the [Flow rate (l/min)] submenu to open it.

Double-tap the [Flow rate at 100% (l/min)] line.

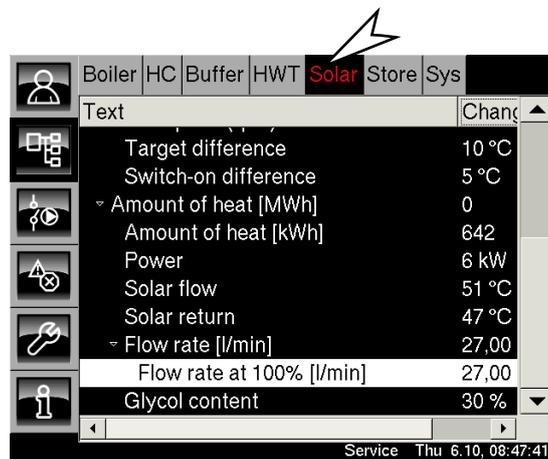


A screen for adjustments opens.



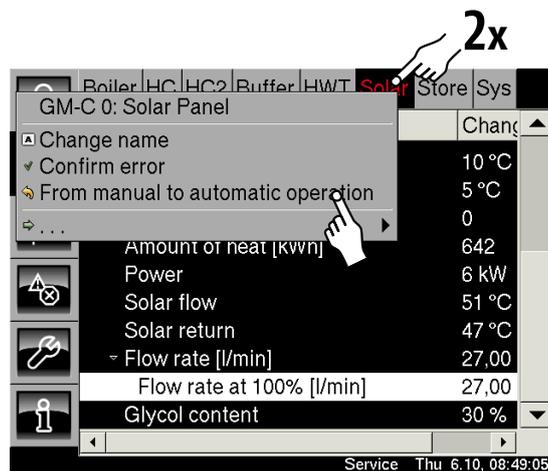
Enter the flow rate and press  to save.

Once the flow rate has been entered, the message  in **Solar** is automatically deleted.



## Switching the solar collector pump back to automatic

Switch the solar collector pump back to automatic mode by double-tapping the FUB **Solar**. A small screen appears.



Tap **[From manual to automatic operation]**.

This sets all parameters in the FUB **Solar** back to automatic mode.

Press  to return to the solar heating system overview.

## The "Target difference" parameter – Description

The parameter "Target difference" is used to define the difference in temperature between the solar panel and the tank (buffer or hot water tank) to which it is connected.

 A high **temperature difference between the solar panel and the tank** creates a higher working temperature, so the required hot water temperature is reached more quickly than is necessary. The price for quicker hot water is a larger solar panel loss.

 With a **smaller temperature difference**, the speed of the solar collector pump remains high. This means that more water is transported by the solar panel, but it is only heated to a lower temperature. A smaller temperature difference keeps the working temperature of the solar panel low, thus minimising loss. This provides a higher yield.

 The factory setting for the "Target difference" is 10°C.

## Regulating the "Target difference"

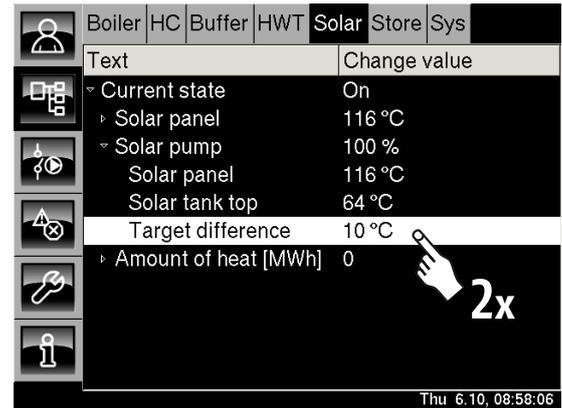
The "Target difference" is regulated and maintained by **setting the speed of the solar collector pump**. This is managed in such a way that the current **temperature difference** between the **"Solar panel" and the "HWT bottom" or "Buffer bottom Solar"** matches the set "Target difference".

## Changing the "Target difference" parameter

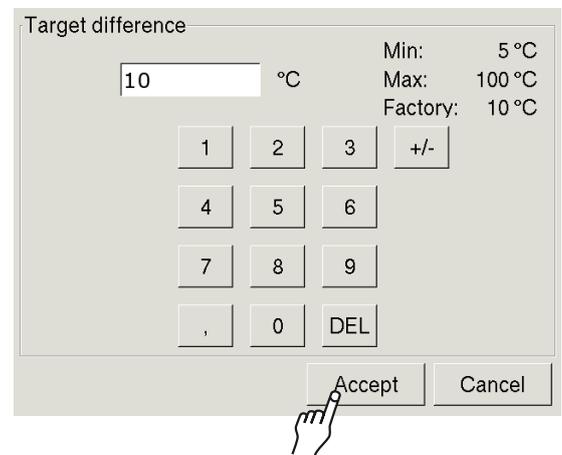
Press  and **Solar** to open the text menu for the solar heating system.

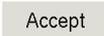
Tap the [Current state] line and, in the submenu, tap the [Solar pump] line.

Double-tap on the [Target difference] line.



A screen for adjustments opens.



 Only increase the "Target difference" in small steps. Enter the desired value and press  to save.

The solar heating system text menu is displayed.

Press  to return to the solar heating system overview.

**The "Minimum time" parameter – Description**

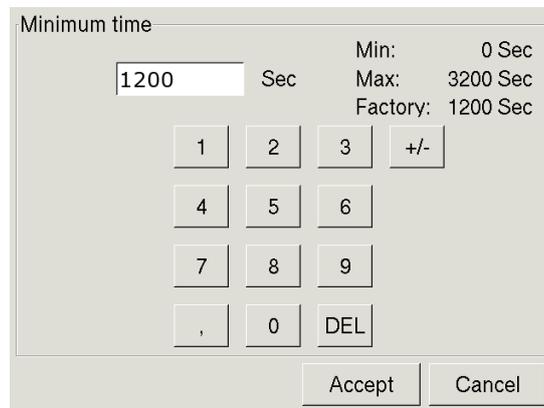
 The "Minimum time" parameter only exists either if two tanks (buffer and hot water) are connected to the solar heating system or if a buffer with 2 coils is installed.  
The system's controls must be configured accordingly.

The "Minimum time" parameter is used to set **the minimum time period for which a certain tank or coil is solar charged.**

If **solar charging** goes into **standby after** the set **"Minimum time"**, the changeover valve switches to the colder tank or coil.

 The factory setting for the minimum time is 1200 seconds.

A settings screen opens:



Enter the "Minimum time" and press  to save.

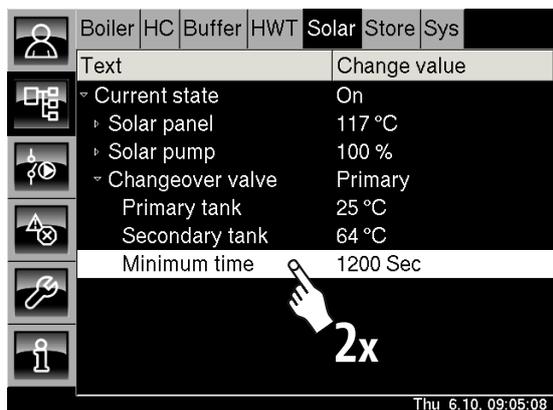
The solar heating system text menu is displayed.

**Changing the "Minimum time" parameter**

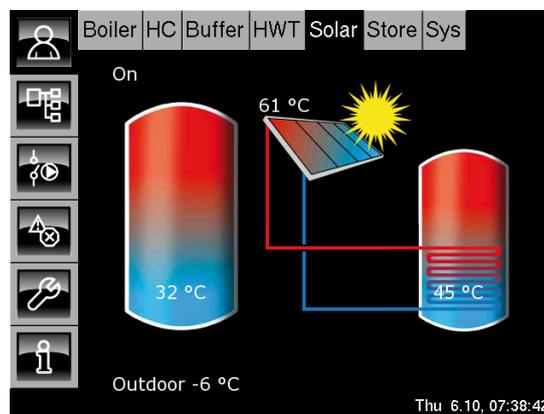
Press  and **Solar** to open the text menu for the solar heating system.

Tap the [Current state] line and, in the submenu, select [Changeover valve].

Double-tap the [Minimum time] line.



Press  to open the solar heating system overview.



## "Fresh Water Module" overview

Press  and  to open the "Fresh Water Module" overview screen.

The heat exchanger of the fresh water module (FWM) heats hot water hygienically, exactly at the moment you need it.

The FWM is installed on the ETA buffer and supplied with hot water from the buffer.

The fresh water temperature and the stand-by times for the fresh water module can be adjusted (see page 104).

 The **maximum possible fresh water temperature** is **5°C lower than** the currently displayed "Buffer top HW" temperature.

If a circulation pump is also installed, circulation times, runtime and breaks can also be adjusted (see page 106 onwards).



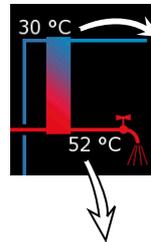
### "Buffer top HW" temperature

The **maximum fresh water temperature** is **5°C lower** than the displayed "Buffer top HW" temperature.



### Water tap

The water tap is displayed if **fresh water** is **currently** being **drawn off**.



### Primary return temperature

from the fresh water module's heat exchanger to the bottom section of the buffer.

### Current fresh water temperature

The current fresh water temperature at the output of the heat exchanger is displayed.

### Timer



The timer can be used to set 3 time slots with different fresh water temperatures for each day of the week.

**Within these time slots, the FWM can demand heat from the buffer** in order to heat the fresh water.

### Timer for circulation times ("circulation pumps" only)



Only displayed if a "circulation pump" is also installed.

The operating times of the circulation pump are shown for the current day of the week. Tapping this timer brings up a screen in which 3 time slots can be set for each day of the week.

Fresh water module

"Buffer top HW" temperature

Operating state

"Primary return" temperature

61 °C

30 °C

52 °C

"Hot water" temperature

Timer for FWM stand-by

Fresh water currently being supplied

Thu 6.10, 13:46:42

**operating** **Current operating mode**

This line shows the current operating mode of the fresh water tank. Below is a list of the possible modes:

**Ready**

The fresh water module is ready, but there is currently no demand for fresh water.

**Operating**

The fresh water module is in operation; fresh water is being drawn off. The water tap icon appears in the overview.

**Buffer cold**

Fresh water is being supplied, but the buffer is not supplying sufficient heat to heat the fresh water to the set target temperature.

The "Buffer top" temperature will no be used as the new fresh water target temperature and reduced by the value "Buffer top – target diff."

**Primary return too hot**

The fresh water module is supplying fresh water, but the target temperature has been reduced because the primary return temperature is too high.

**Failure**

There is a malfunction. One of the temperature meters in the fresh water module is damaged.

## "Fresh water module" overview

The overview shows the buffer and the heat exchanger of the fresh water module.

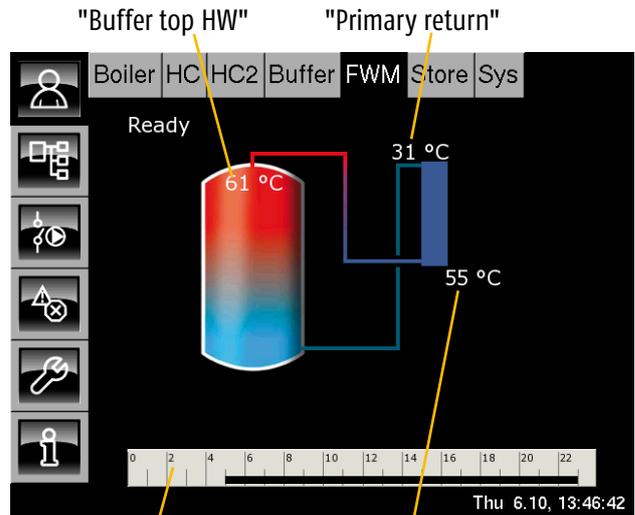
The "Primary return" temperature for the used hot water that flows from the heat exchanger back to the buffer is shown at the top of the heat exchanger. The current "Fresh water" temperature is shown at the bottom of the heat exchanger.

If the **water tap** is displayed, **fresh water is currently being drawn off**. The **maximum possible fresh water temperature** is **5°C lower than** the currently displayed **"Buffer top HW"** temperature.

If the **buffer is warm** enough, the **hot water temperature set** in the timer is supplied. If the **buffer is cold**, the current **fresh water temperature** will be **5°C lower than the "Buffer top HW"** temperature.

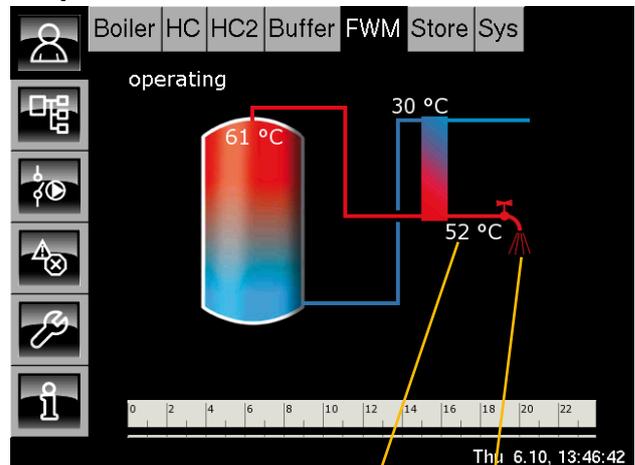
**Tapping the timer** allows the user to set **3 time slots with different fresh water temperatures** for each day of the week. Within these time slots, the fresh water module can demand heat from the buffer in order to heat the fresh water (see page 104).

## Ready



Current "fresh water" temperature  
Timer for FWM stand-by

## In operation



Current "fresh water" temperature  
Fresh water currently being supplied to consumers

## Fresh water module with circulation pump

If a circulation pump is installed for fresh water circulation, the additional **"Circulation times" timer** is displayed in the overview.

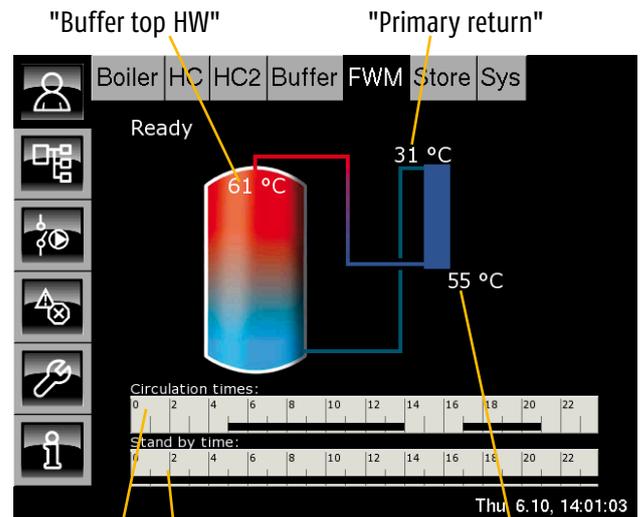
**Tapping this timer** allows the user to adjust the **operating times for the circulation pump** (for more information, see page 106).

The **"Stand-by time" timer** can be used to set **3 time slots with different fresh water temperatures** for each day of the week. Within these time slots, the fresh water module can demand heat from the buffer in order to heat the fresh water. Between the time slots, the stored (lower) set-back temperature is provided. For details on adjusting the settings, see page 104.

 If the **water tap** is displayed, **fresh water is currently being drawn off**. The **maximum possible fresh water temperature** is **5°C lower than** the currently displayed **"Buffer top HW"** temperature.

If the **buffer is warm enough**, the **hot water temperature set** in the timer is supplied. If the **buffer is cold**, the current **fresh water temperature** will be **5°C lower than the "Buffer top HW"** temperature.

### Ready

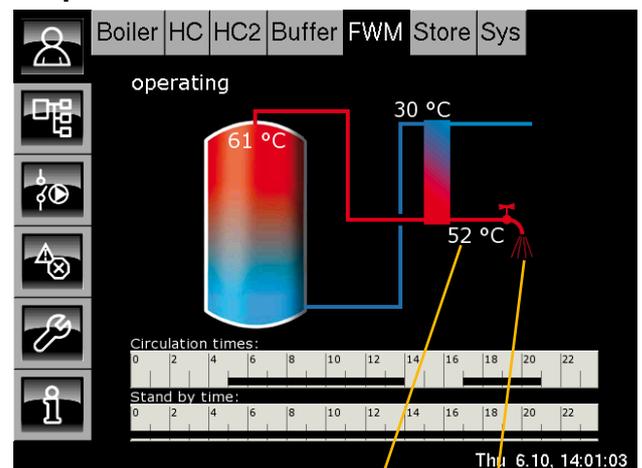


Current "fresh water" temperature

Timer for FWM stand-by

Timer for circulation pump operating times

### In operation



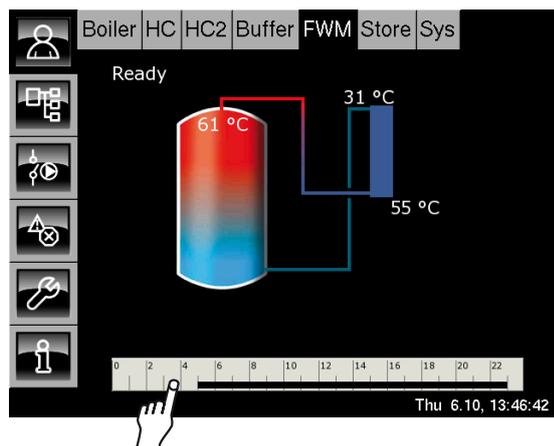
Current "fresh water" temperature

Fresh water currently being supplied to consumers

## Adjusting stand-by times and fresh water temperatures

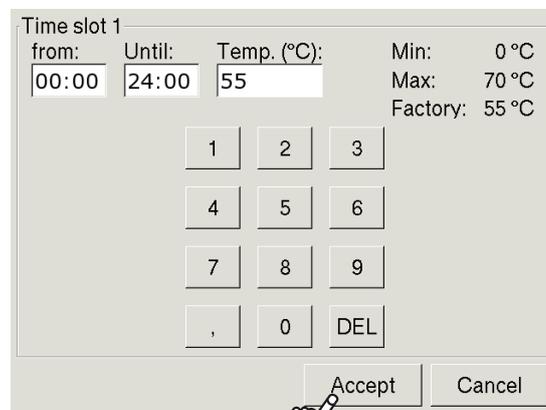
3 time slots with different fresh water temperatures can be set for each day of the week. Outside these time slots, a (lower) set-back temperature is set.

In the overview screen, tap the timer.



## Selecting a time slot

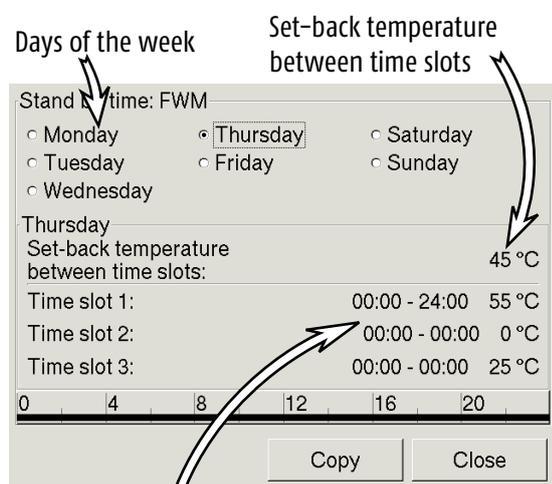
In the overview, tap the [Time slot 1] line. The settings screen opens:



It is now possible to change the stand-by times and the desired fresh water temperatures.

Press **Accept** to save the new settings. Use the same method to adjust the other time slots.

The settings screen opens:

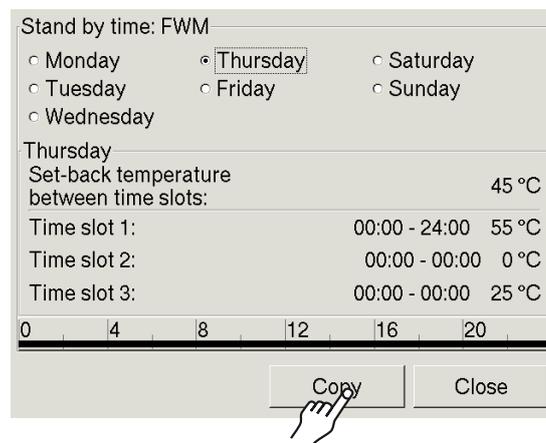


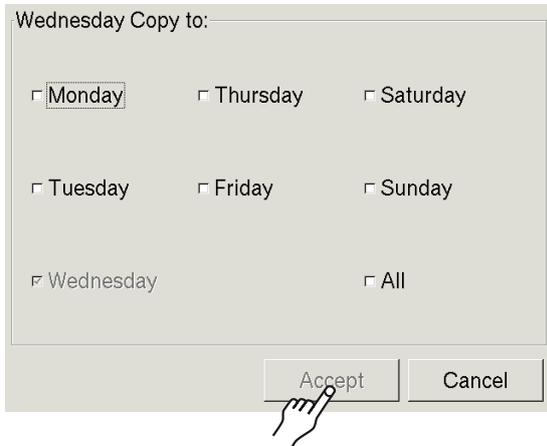
3 adjustable time slots for each day of the week, with different fresh water temperatures.

## Copying time slots to other days of the week

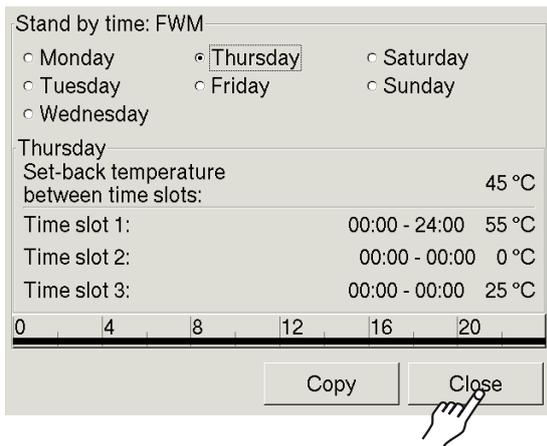
Once the time slots have been adjusted, they can also be adopted for other days of the week.

To do this, press **Copy**. A screen appears for selecting a day of the week:



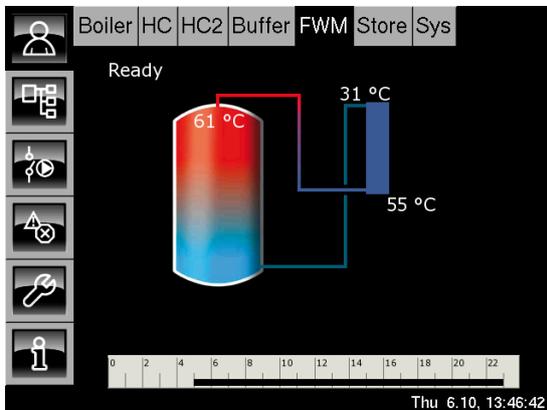


Tap to select the desired day of the week or [All] and then press **Accept**. The time slots are adopted for the selected days.



Finally, press **Close**.

The "Fresh water module" overview reappears.

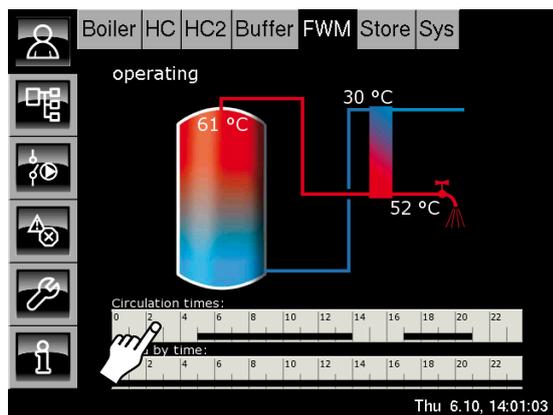


## Adjusting the operating times for the circulation pump

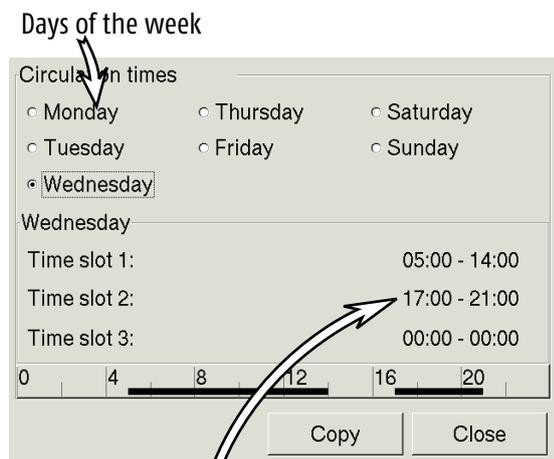
If a circulation pump is installed for fresh water circulation, it is possible to adjust the circulation times for the pump.

The "Circulation times" timer can be used to set 3 different time slots for the operating times of the circulation pump for each day of the week.

Tap the "Circulation times" timer.



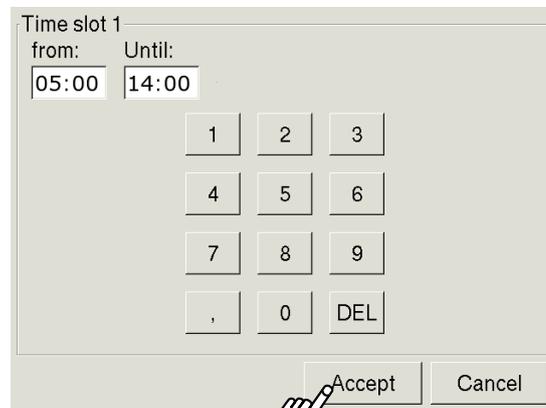
The settings screen opens:



3 adjustable time slots per day of the week for the operating times of the circulation pump

## Selecting a time slot

In the overview, tap the [Time slot 1] line. The settings screen opens:



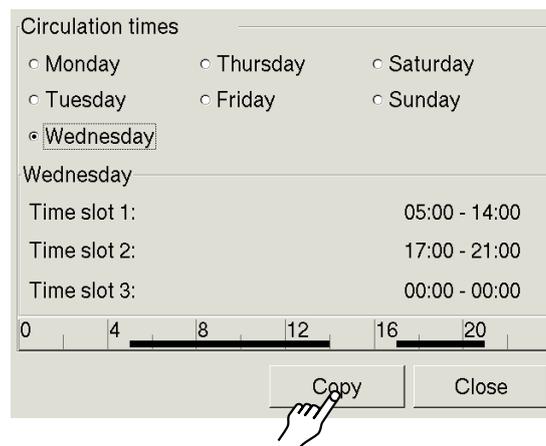
The operating times of the circulation pump can now be changed.

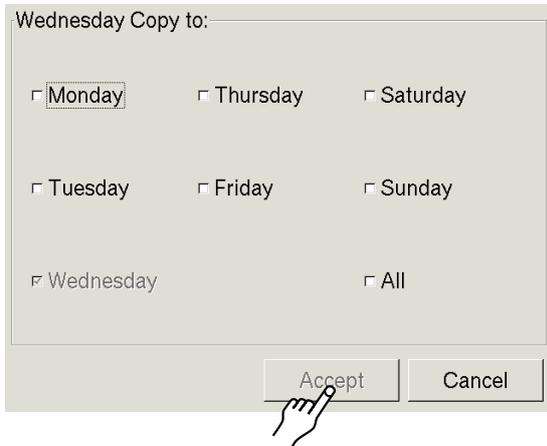
Press **Accept** to save the new settings. Use the same method to adjust the other time slots.

## Copying time slots to other days of the week

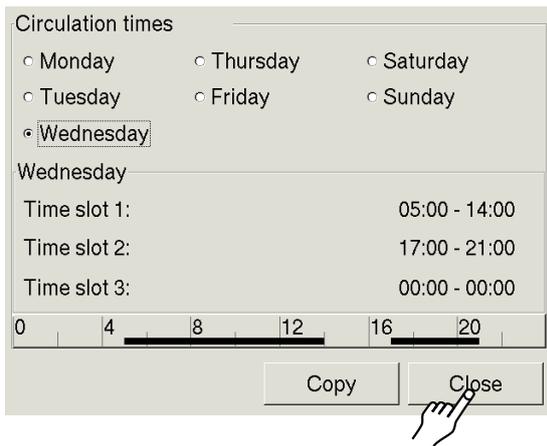
Once the time slots have been adjusted, they can also be adopted for other days of the week.

To do this, press **Copy**. A screen appears for selecting a day of the week:



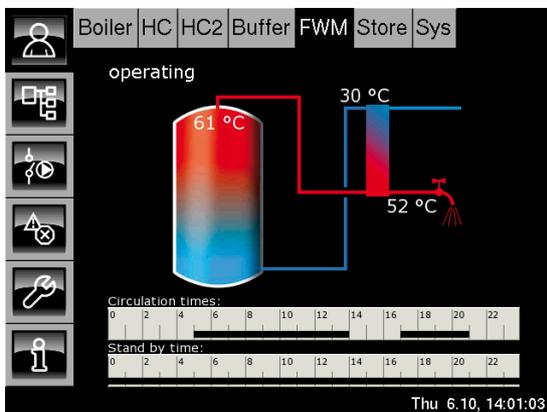


Tap to select the desired day of the week or [All] and then press **Accept**. The time slots are adopted for the selected days.



Finally, press **Close**.

The "Fresh water module" overview reappears.



## The "Circulation operating times" parameter

If a circulation pump is installed, the "Circulation operating times" parameter is used to **set the duration of a circulation pump cycle**.

**Once the cycle is complete, the circulation pump is switched off** for the duration of the set "Circulation break".

The "Circulation operating time" **only** applies **within** a set time slot.

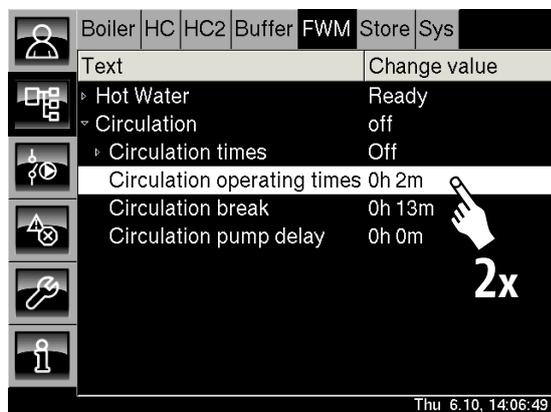
 The factory setting for "Circulation operating times" is 2 minutes.

## Adjusting "Circulation operating times"

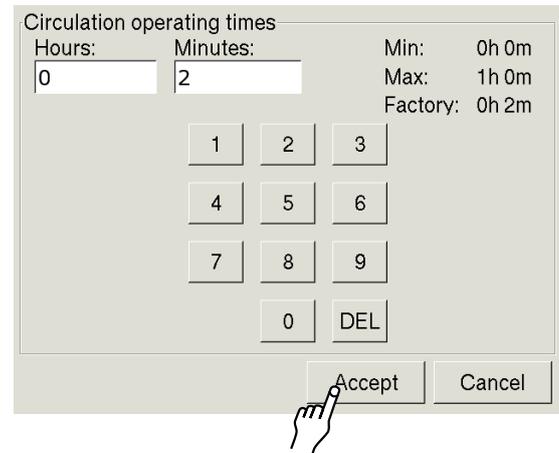
Press  and **FWM** to open the "Fresh water module" text menu.

Tap the [Circulation] line to open the submenu.

Double-tap the [Circulation operating times] line.



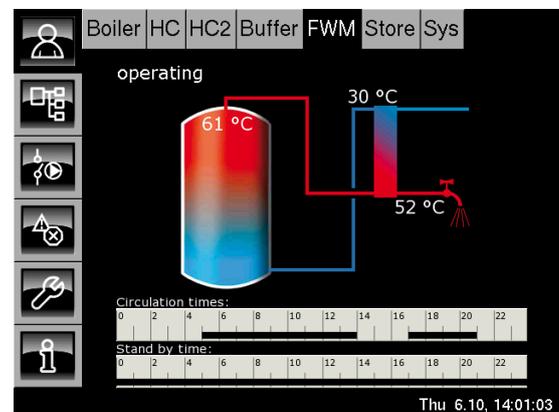
A settings screen opens:



Enter the new operating time for the circulation pump.

Press **Accept** to save the new value. The text menu display appears.

Press  to open the "Fresh water module" overview.



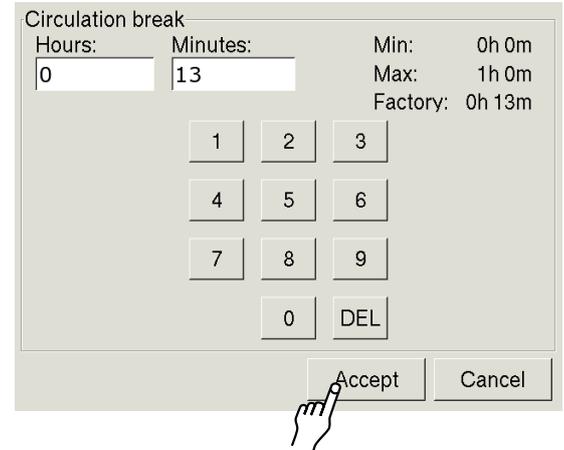
## The parameter "Circulation break"

The "Circulation break" parameter is used to set the **break between two operating times** for the circulation pump.

The "Circulation break" **only** applies **within** a set time slot.

 The factory setting for the "Circulation break" is 13 minutes.

A settings screen opens:

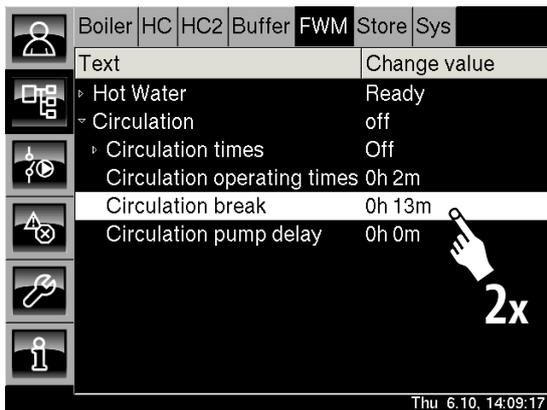


## Adjusting the "Circulation break"

Tap  and **FWM** to open the "Fresh water module" text menu.

Tap the [Circulation] line to open the submenu.

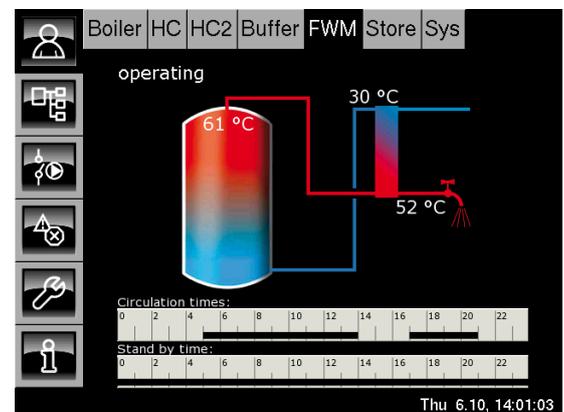
Double-tap the [Circulation break] line.



Enter the break for the circulation pump.

Press  to save the new value. The text menu display appears.

Press  to open the "Fresh water module" overview.



## The "Circulation pump delay" parameter

Between the set time slots for the circulation time, **a circulation pump cycle can also be started by turning on a hot water tap.**

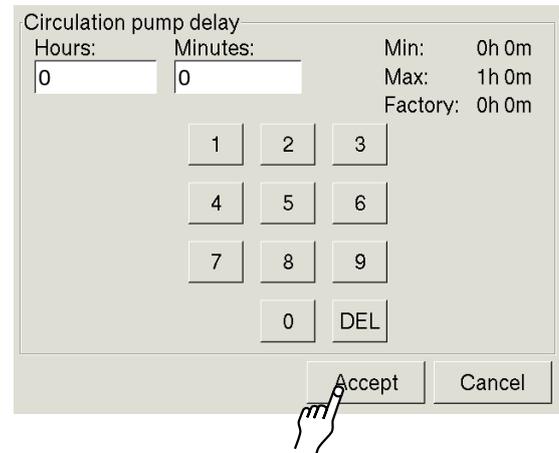
The adjustable **"Circulation pump delay"** parameter can be used to set the corresponding **circulation pump runtime** (recommended: 2 minutes).

The **circulation pump starts up** as soon as the **flow switch signals that a flow is present.** After such a cycle, the circulation pump is locked for at least 30 minutes.

 The "Circulation pump delay" operating time **only applies outside the set time slots.**

Within the time slots, the "Circulation operating times" parameter regulates the runtime of the circulation pump.

A settings screen opens:



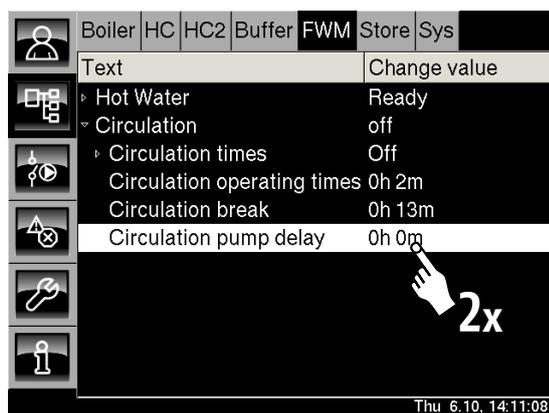
Enter the new operating time for the circulation pump.

Press **Accept** to save the new value. The text menu display appears.

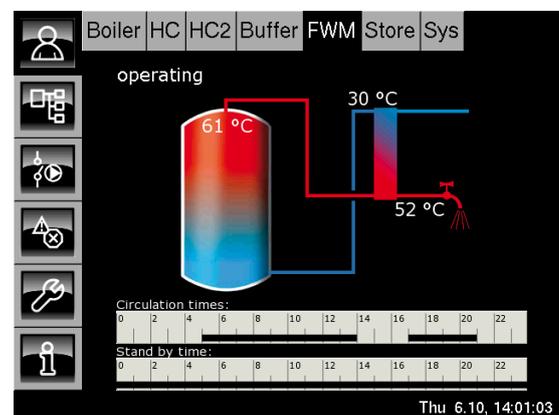
## Adjusting "Circulation pump delay"

Press  and **FWM** to open the "Fresh water module" text menu.

Tap the [Circulation] line and, in the submenu, double-tap the [Circulation pump delay] line.



Press  to open the "Fresh water module" overview.





## "Pellet store" overview

Press  and **Store** to open the "Store" overview screen.

This function block is used to control pellet feeding **by discharge screw** or a **single suction head**.

After a delivery of pellets the new stock quantity can be entered as a value for calculating the stock level. However, the actual stock in the store is not measured.

Instead, the consumption calculated using the discharge parameters is simply subtracted from the stock quantity. **As such, the actual stock level may differ from this calculation by +/- 15%.**



### Enter stock

This button can be used to enter the new stock quantity after a delivery of pellets.

### 3758 kg in pellet store **Stock**

The calculated stock of the pellet store is displayed here. It is not measured. It is simply calculated using the discharge parameters, and may differ from the actual stock by +/- 15%.

### Off **Current operating mode**

This line shows the current operating mode of the pellet conveying system. Below is a list of the possible modes:

#### Off

The conveying system is not in operation. There is no demand from the boiler.

#### Start

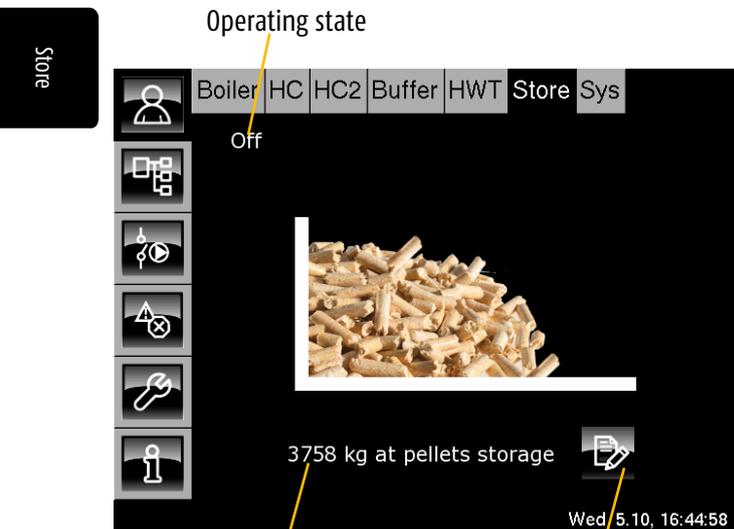
The boiler is demanding pellets and the aspirator is starting up.

#### Aspirator warm up

The boiler aspirator is in operation. After the "Aspirator warm up" period, the discharge screw in the pellet store starts up.

#### Fill up

The boiler aspirator and the pellet store discharge screw are in operation. Pellets are being conveyed to the boiler.



Operating state

Off

3758 kg at pellets storage

Wed 5.10. 16:44:58

Enter stock quantity

Current stock, may differ from actual stock by +/- 15%

## Aspirator delay

The discharge screw is switched off and the boiler aspirator keeps running for the "Aspirator shut-off" period in order to rinse the hoses.

## Aspirator delay M

The maximum fill up time has been exceeded; the aspirator will keep running for a short while.

## Aspirator delay F

There is a problem with the discharge screw; the aspirator will keep running for a short while.

## Error fill up time

It was not possible to convey pellets to the boiler. The pellet store may be empty, or the hoses may be blocked.

At the end of the adjustable "Fill up time max", pellet feeding is shut off.

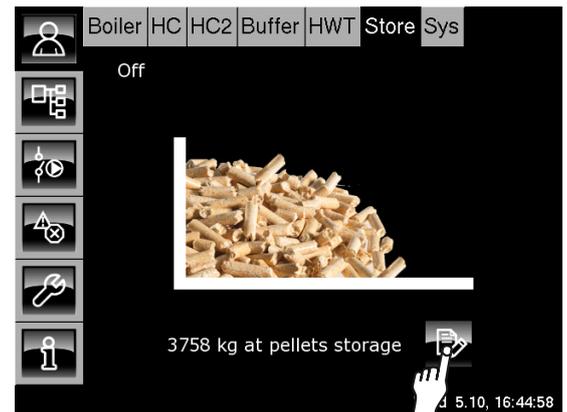
## Error Conveyor

There is a problem with the discharge screw. This has been detected due to overcurrent, warming or insufficient current consumption.

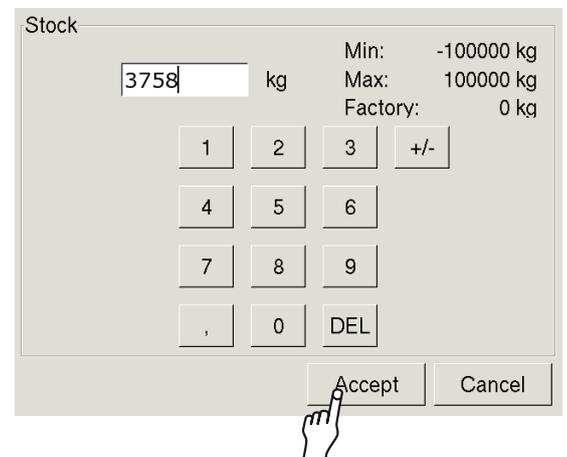
## Entering new stock level after a delivery of pellets

After the store has been filled with pellets, the new stock quantity should be entered. This way, the control system is always able to calculate the approximate pellet stock level.

In the overview screen, tap the  button.



A screen opens:



Enter the new stock quantity and press  to save.

The display returns to the overview.

## "Pellet store" overview

Press and **Store** to open the "Store with switching unit" overview screen.

In this function block, a **pellet conveying system** is controlled **using a switching unit and 2 or 3 suction heads**.

The individual suction heads can be manually selected, locked and enabled.

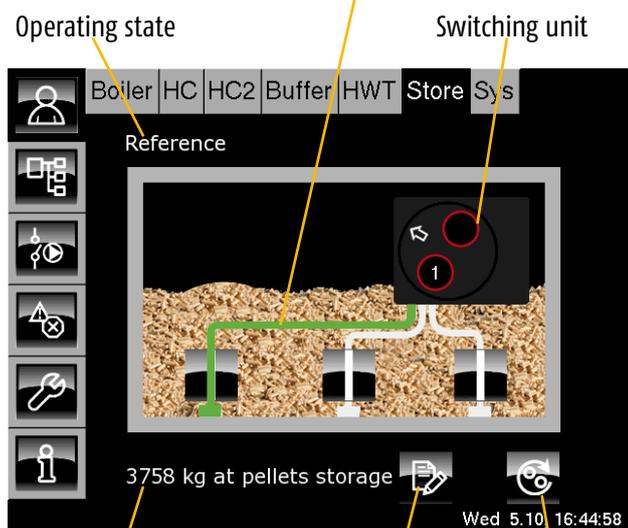
The **conveying and rinse modes** are indicated by a **green line** between the suction head and the switching unit.

If it is not possible to convey pellets from a suction head, the switching unit automatically switches to **rinse mode**. The conveying hose will now channel in back air in order to dislodge any blockages in the conveying hose or suction head.

After a delivery of pellets, the new stock quantity can be entered as a value for calculating the stock level. However, the actual stock level in the store is not measured.

Instead, the consumption calculated using the discharge parameters is simply subtracted from the stock quantity. **As such, the actual stock level may differ from this calculation by +/- 15%.**

Green line between switching unit and suction head = pellets are being conveyed from this suction head



Current stock, may differ from actual stock by +/- 15%

Entering stock quantity

Manually switching between suction heads



### Enter stock

This button can be used to enter the new stock quantity after a delivery of pellets.

### 3758 kg in pellet store **Stock**

The calculated pellet stock level is displayed. It is not measured. It is simply calculated using the discharge parameters, and may differ from the actual stock by +/- 15%.



### Suction head enabled

This suction head is enabled. Pellets are being conveyed from the suction head to the switching unit.

Tap this suction head to lock it (= icon).



### Suction head locked

This suction head is locked. It is not possible to convey pellets using this suction head.

Tap this suction head to enable it again (= icon).



### Manually switch to next suction head

Pressing this button manually switches the switching unit to the next free suction head.



### Switching unit switches automatically

Once the maximum fill up level (= parameter "Switching at") has been reached, the switching unit automatically switches to the next enabled suction head.



### Suction head 1 conveying

Pellets are being conveyed from suction head 1.



## Suction head 1 rinsing

Suction head 1 is being rinsed using a reverse air blast.



## Suction head 2 conveying

Pellets are being conveyed from suction head 2.



## Suction head 2 rinsing

Suction head 2 is being rinsed using a reverse air blast.



## Suction head 3 conveying

Pellets are being conveyed from suction head 3.



## Suction head 3 rinsing

Suction head 3 is being rinsed using a reverse air blast.

## Reference Current operating mode

This line shows the current operating mode of the pellet conveying system. Below is a list of the possible modes:

### Off

The pellet conveying system is not in operation. There is no demand from the boiler.

### Ready

The switching unit has reached the position for conveying from a suction head. Filling up will now begin.

### Drive

The switching unit is switching between suction heads.

### Fill up

Filling up has started and pellets are being conveyed.

### Rinse

The switching unit has switched to rinse mode. The conveying hose is now channelling in back air in order to dislodge any blockages in the conveying hose or suction head.

### Overtime

It was not possible to fill up the storage tank within the set "Fill up time max". The pellet store above the suction head may be empty or the hoses may be damaged.

### Empty

After rinsing of all suction heads, followed by attempted conveying of pellets, it was not possible to fill the storage tank. The pellet store may be empty or the hoses may be damaged.

### Reference

The switching unit is moving to its reference point.

### Stop

Filling up has been stopped.

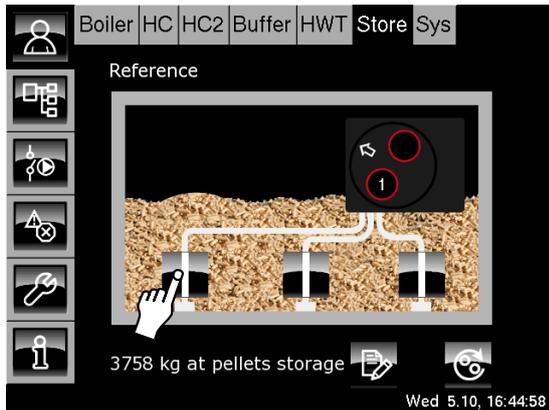
### Locked

All suction heads have been locked. Conveying is thereby prevented. At least one suction head must be enabled.

## Locking/enabling a suction head

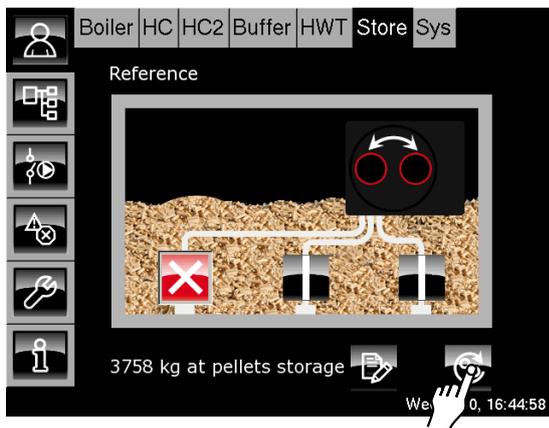
If the store above a suction head is empty or if a suction head is damaged, it can be locked. The switching unit will then no longer select this suction head.

Tap the corresponding suction head to enable or lock it.



## Manually switching between suction heads

Pressing  manually switches between the enabled suction heads.



Depending on the position of the switching unit, the following icons are displayed in the overview:



### Switching unit switching suction head

Once the maximum fill up level (= parameter "Switching at") has been reached, the switching unit automatically switches to the next enabled suction head.



### Suction head 1 conveying

Pellets are being conveyed from suction head 1.



### Suction head 1 rinsing

Suction head 1 is being rinsed using a reverse air blast.



### Suction head 2 conveying

Pellets are being conveyed from suction head 2.



### Suction head 2 rinsing

Suction head 2 is being rinsed using a reverse air blast.



### Suction head 3 conveying

Pellets are being conveyed from suction head 3.



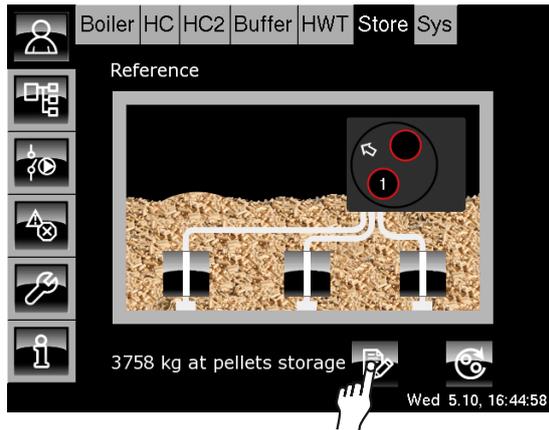
### Suction head 3 rinsing

Suction head 3 is being rinsed using a reverse air blast.

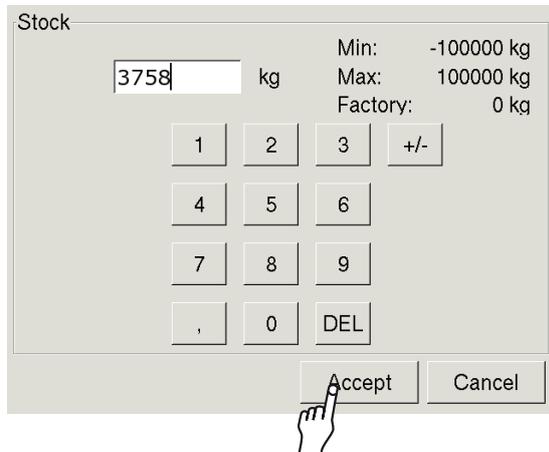
## Entering new stock quantity after a delivery of pellets

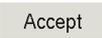
After the store has been filled with pellets, the new stock quantity should be entered. This way, the control system is always able to calculate the approximate pellet stock level.

In the overview screen, tap the  button.



A screen opens:



Enter the new stock quantity and press  to save.

The display returns to the overview.

## The "Switching at" parameter

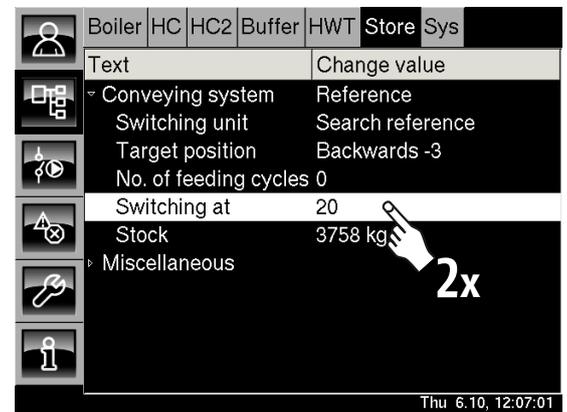
This parameter is used to define how often pellets are conveyed from a suction head before the switching unit switches to the next suction head.

 The factory setting for this value is 20.

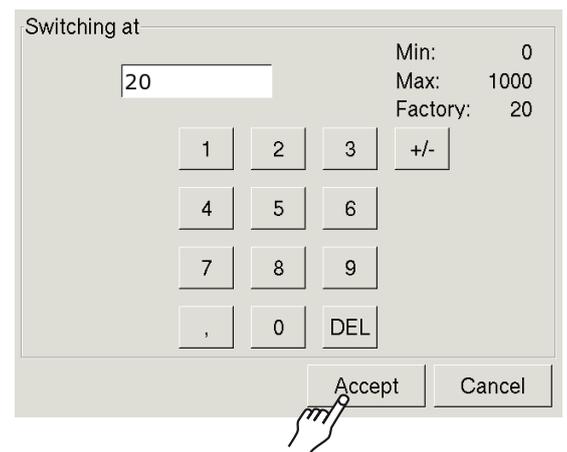
## Changing the "Switching at" value

Press the  and  buttons to go to the text menu.

Tap the [Conveying system] line. In the submenu, double-tap the line [Switching at].



A screen for adjustments opens.



Enter the new value and press  to save.

Press  to return to the overview.

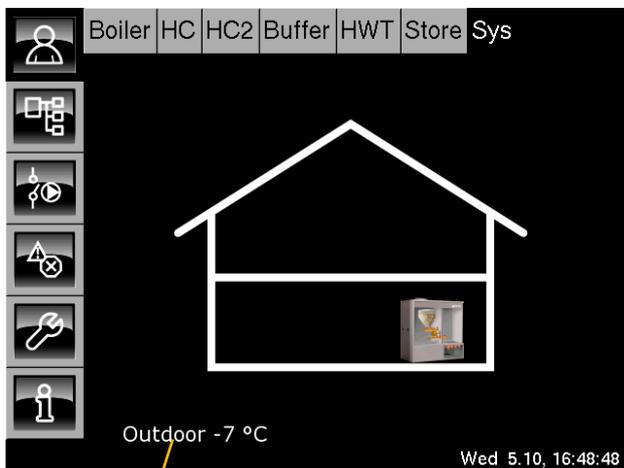
## "System" overview

Press  and  to open the "System" overview screen.

This function block (FUB) makes common values such as the current outside temperature measurement available to other function blocks. However, special functions such as a thermostat, malfunction messages or displaying 5 additional temperatures can also be activated.



All changes made to the System FUB should only be carried out by an expert.



Current outside temperature

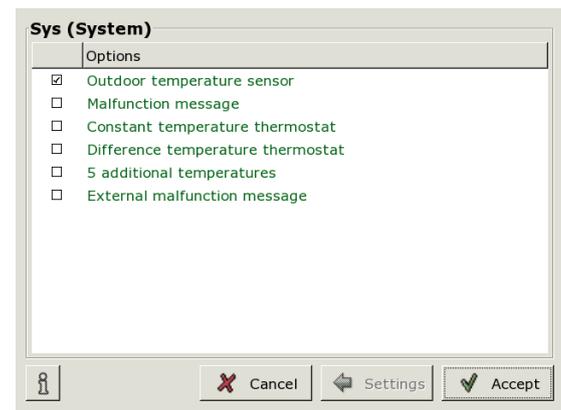
## Adding special functions

If some of the special functions (see following pages) are required, these can be added in the Options section of the FUB .

To do this, open the existing system configurations and add these options in the System FUB.



**Software versions 1.19.0 and higher include an assistant for configuring the system.** If configuration has been carried out using the assistant, all subsequent changes can only be made using the assistant.



There is a separate set of instructions, entitled "Commissioning assistant", for configuring the system using the assistant.

## Special functions in the FUB Sys

### Malfunction message

If a malfunction occurs in one of the control system's FUBs (boiler, heating circuit, buffer...), one of the circuit board outputs is used to **switch a connected device**.

Example: A warning light is switched on when a malfunction occurs.

### Constant temperature thermostat

A circuit board output is switched as soon as an assigned temperature sensor **exceeds an adjustable temperature**. The temperature and switching status are only displayed in the text menu.

Example: Additional boiler in the heating system. The pump for this boiler is switched on as soon as the boiler reaches 60°C.

### Difference temperature thermostat

This special function is used to switch an output on the circuit board if the temperature sensor on the warmer side, "**Hot thermostat**", exceeds an adjustable "Enable" temperature and an adjustable "Thermostat difference" compared to the colder side, "**Cold thermostat**", has been reached.

The temperatures and switching status are only displayed in the text menu Sys.

Example:

An additional hot water tank is supplied by the buffer.

If the buffer has exceeded the "Enable" temperature, and the buffer is warmer than the hot water tank by at least the "Thermostat difference", the charging pump is switched on.

### 5 additional temperatures

**Up to an additional 5 temperature sensors** can be connected to the control system. The temperatures are only shown in the text menu.

### External malfunction message

If an **external device**, such as an additional boiler, central vacuum cleaner or water supply, issues its own **malfunction message** this can be **integrated into the ETAtouch control system's malfunction message**.

## "Malfunction message"

In the **Sys** overview, a **warning light** is displayed.

If this **warning light** lights up **RED**, there is **at least one malfunction** in a function block.

If the **warning light** lights up **GREEN**, there are currently **no malfunctions**.

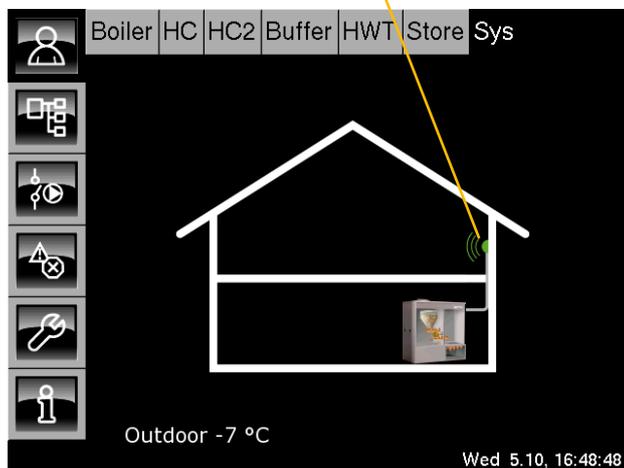
## Observe maximum output

This malfunction message can also be indicated by a light or horn (max. 250 W, 230 V).

The device requiring switching must not exceed the **maximum output for the PCB outputs**.

This output information can be seen in the circuit diagrams in the instructions for the boiler.

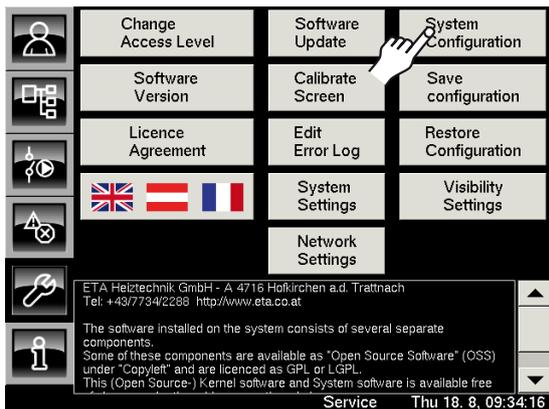
RED = Malfunction message  
GREEN = No current malfunction messages



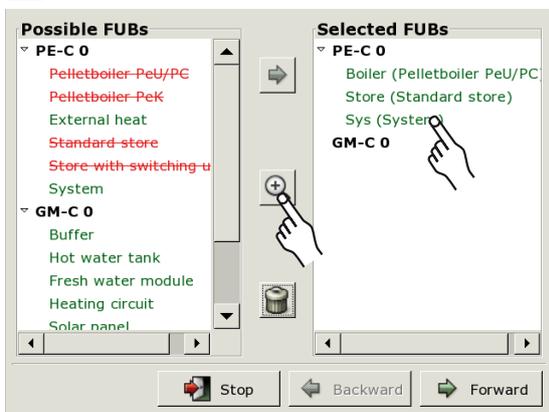
## Adding the special function "Malfunction message"

 This section describes how to add the function using the assistant.

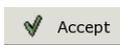
Using the access level "Service", open the toolbox and press [System Configuration]. Confirm the notice.

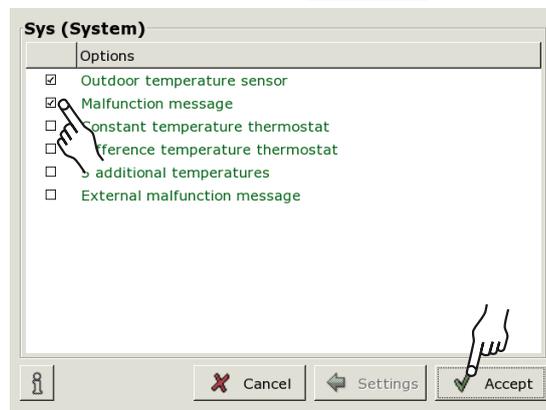


In the overview, select the [System] FUB, then press  to option the options for this FUB.



 The appearance of the overview for the selected FUB differs depending on the system configuration.

In the [System] FUB, tap the "Malfunction message" option to add it, then press  to save.

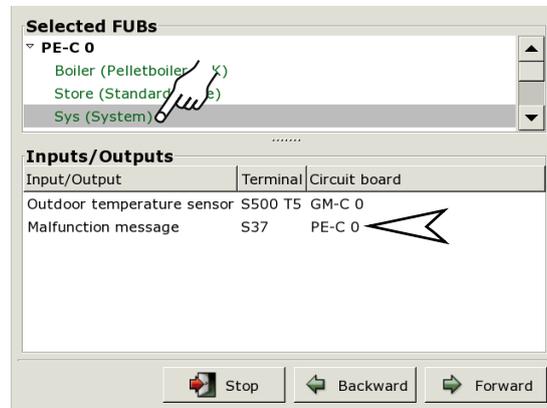


 Continue the configuration, but do not make any further changes!

## Viewing the assigned terminal

 During configuration, the Inputs/Outputs screen already shows the allocated terminal for the malfunction message device.

Tap the [System] FUB to view the assigned terminal.



Now connect the device to the assigned terminal. Once this is complete, continue the configuration and install the device.

 Once this is complete, a **backup** can be created for the new configuration. For more information on this, see the separate "Commissioning assistant" instructions.

## "External malfunction message"

In the **Sys** overview, a **warning light** is displayed.

If an **external device**, such as an additional boiler, central vacuum cleaner or water supply, issues its own **malfunction message**, can this signal be linked with the malfunctions of the boiler.

 The "Malfunction message" function must also be selected in order to allow use of the special "External malfunction message" function.

If this **warning light** lights up **RED**, there is **at least one malfunction** in a function block.

If the **warning light** lights up **GREEN**, there are currently **no malfunctions**.

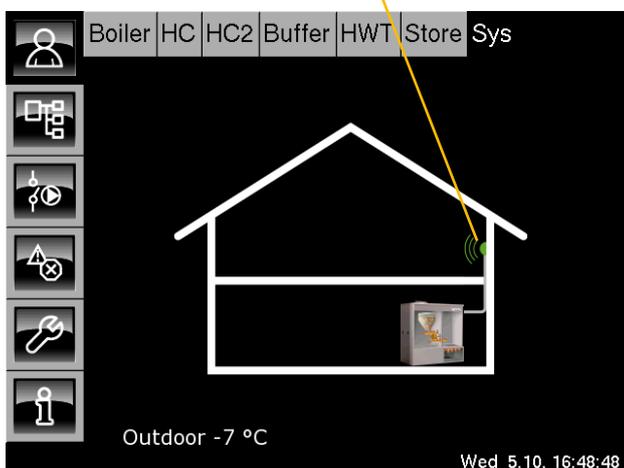
## Observe maximum output

This malfunction message can also be indicated by a light or horn (max. 250 W, 230 V).

The device requiring switching must not exceed the **maximum output for the PCB outputs**.

This output information can be seen in the circuit diagrams in the instructions for the boiler.

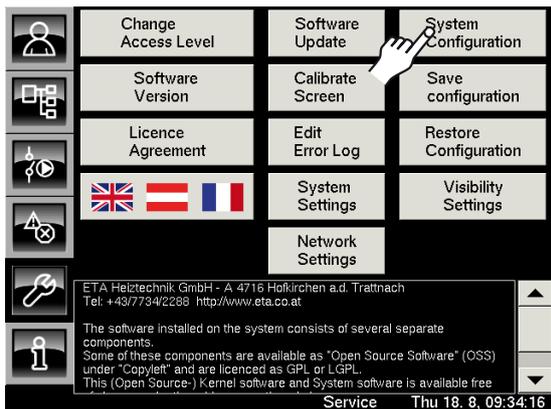
RED = Malfunction message  
GREEN = No current malfunction messages



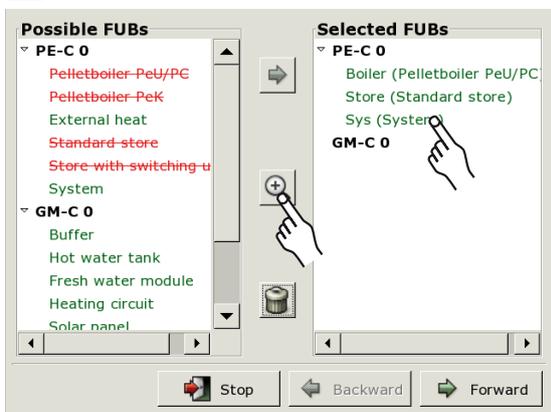
## Adding the special function "External malfunction message"

 This section describes how to add the function using **the assistant**.

Using the access level "Service", open the toolbox and press [System Configuration]. Confirm the notice.

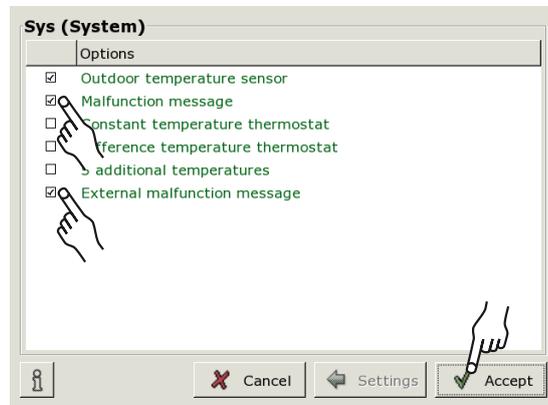


In the overview, select the [System] FUB, then press  to select the options for this FUB.



 The appearance of the overview for the selected FUBs differs depending on the system configuration.

In the [System] FUB, tap the "Malfunction message" and "External malfunction message" option to add them, then press  to save.

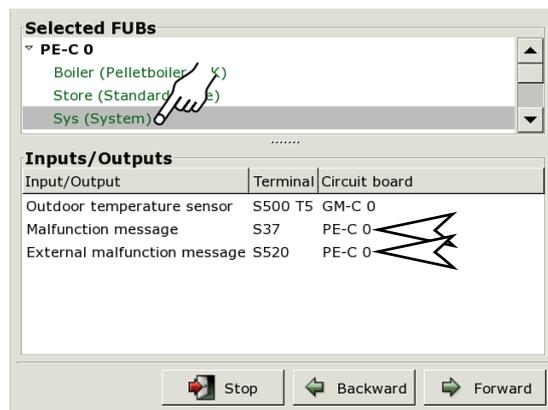


 Continue the configuration, but do not make any further changes!

## Viewing the assigned terminals

 During configuration, the Inputs/Outputs screen already shows the allocated terminals for the external malfunction message signal and the device.

Tap the [System] FUB to view the assigned terminals.



Now connect the device and the external signal to the assigned terminals. Then continue the configuration and install the device.

 Once this is complete, a **backup** can be created for the new configuration. For more information on this, see the separate "Commissioning assistant" instructions.

## Constant temperature thermostat

One of the PCB's outputs is switched when the **"Thermostat temperature"** (+hysteresis) **exceeds** the **"constant temperature"** (+hysteresis).

As soon as the "Thermostat temperature" is lower than the "Constant temperature", the output is switched off again.

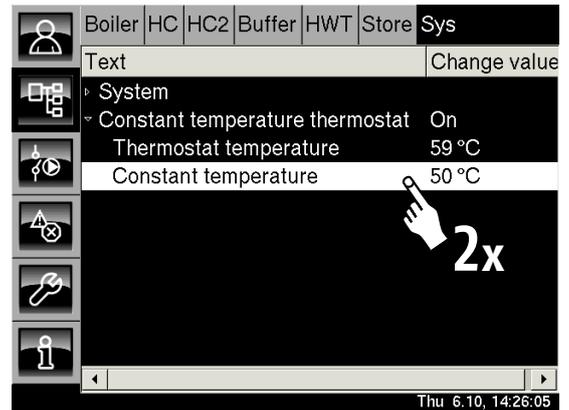
Example: Additional boiler in the heating system. The pump for this boiler is switched on as soon as the boiler reaches 60°C.

 The **constant temperature and hysteresis** are **adjustable** (for more information, see the following page). The temperatures and switching status are only displayed in the text menu **Sys**.

## Setting the "constant temperature"

Press **Sys** and **⏏** to open the text menu.

Tap the [Constant temperature thermostat] line and, in the submenu, double-tap [Constant temperature].

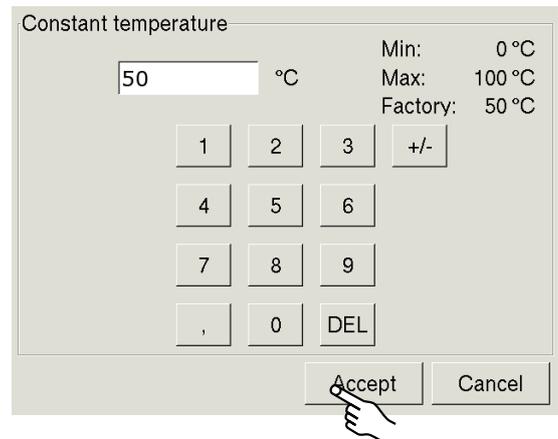


## Observing maximum output

The device requiring switching must not exceed the **maximum output for the PCB outputs**.

This output information can be seen in the circuit diagrams in the instructions for the boiler.

A settings screen opens:



Enter the new "Constant temperature" and press **Accept**.

The text menu display appears again.

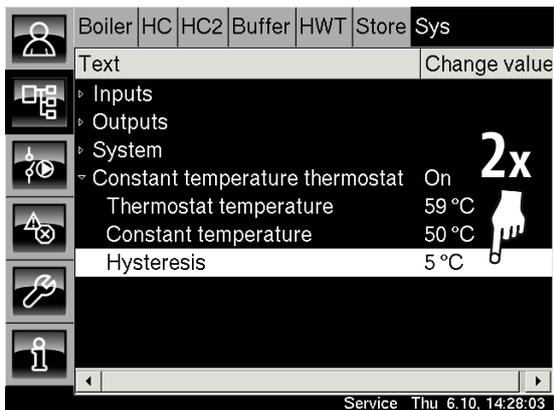
## Setting the "hysteresis"

 The hysteresis is used to define the additional temperature that is used as the tolerance range. **In addition to the constant temperature, the thermostat temperature must also exceed the hysteresis** in order to switch the output. This prevents the output from clocking.

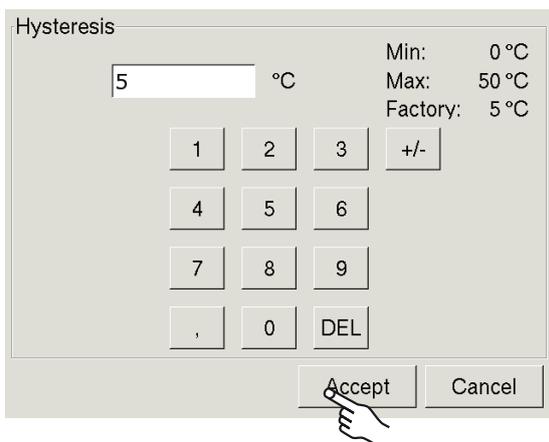
**The factory setting for the hysteresis is 5°C.**  
The access level **"Service"** is required in order to change this.

Press **Sys** and  to open the text menu.

Tap the [Constant temperature thermostat] line and, in the submenu, double-tap [Hysteresis].



A settings screen opens:

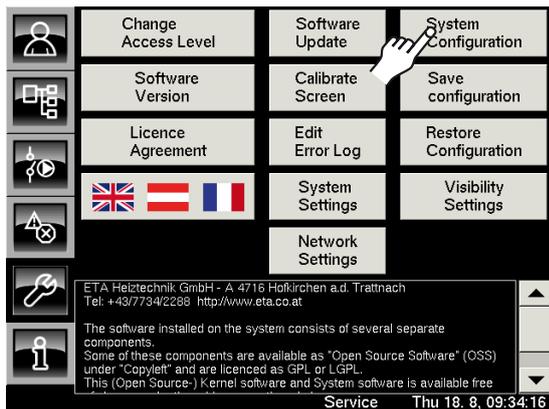


Enter the desired hysteresis and press **Accept**.  
The text menu display appears again.

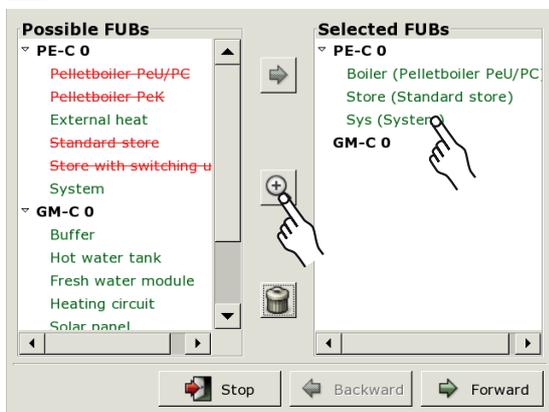
## Adding the special function "Constant temperature"

 This section describes how to add the function using **the assistant**.

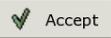
Using the access level "Service", open the toolbox and press [System Configuration]. Confirm the notice.

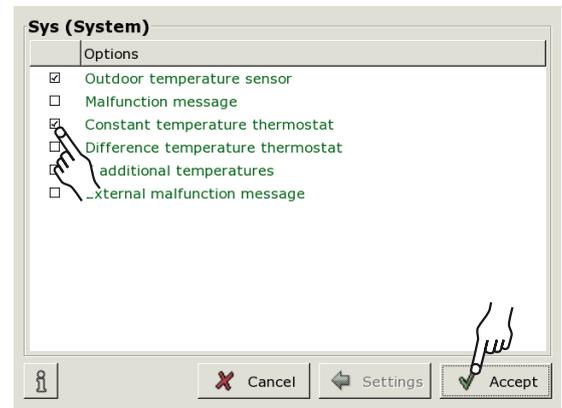


In the overview, select the [System] FUB, then press  to select the options for this FUB.



 The appearance of the overview for the selected FUB differs depending on the system configuration.

Tap the "Constant temperature thermostat" option to add it, then press  to save.

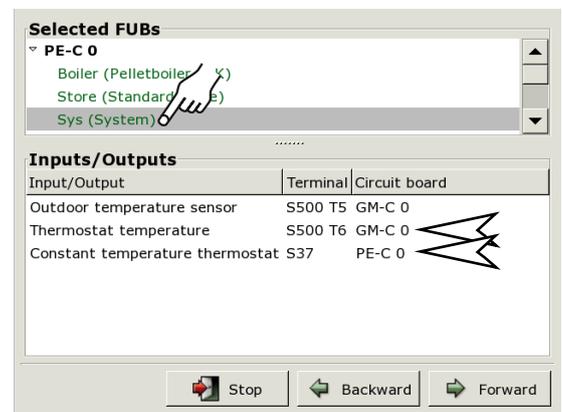


 Continue the configuration, but do not make any further changes!

## Viewing the assigned terminals

 During configuration, the Inputs/Outputs screen already displays the assigned terminals.

Tap the [System] FUB to view the assigned terminals.



Connect the temperature sensor and the device requiring switching to the assigned terminals. Once this is complete, continue the configuration and install the device.

 Once this is complete, a **backup** can be created for the new configuration. For more information on this, see the separate "Commissioning assistant" instructions.



## "Differential temperature thermostat"

This special function is used to switch an output on the circuit board if the temperature sensor on the warmer side, "**Hot thermostat**", exceeds the "Enable" temperature and the adjustable "**Thermostat difference (+hysteresis)**" compared to the colder side, "**Cold thermostat**", has been reached.

The temperatures and switching status are only displayed in the text menu **Sys**.

Example:

An additional hot water tank is supplied by the buffer. If the buffer has exceeded the "Enable" temperature, and the buffer is warmer than the hot water tank by at least the "Thermostat difference", the charging pump is switched on.

## "Hot thermostat" temperature sensor

The "**Hot thermostat**" sensor is used to measure the higher temperature, and must therefore be installed on the **heat producer**.

## "Cold thermostat" temperature sensor

The "**Cold thermostat**" sensor is used to measure the lower temperature, and must therefore be installed on the **heat consumer**.

## Observing maximum output

The device requiring switching must not exceed the **maximum output for the PCB outputs**. This output information can be seen in the circuit diagrams in the instructions for the boiler.

## The "Enable temperature" parameter

The "Enable temperature" defines the minimum temperature that the **temperature sensor** on the warmer side, "**Hot thermostat**", **must exceed**. Only once this has happened does the control system begin to measure the difference between the "Hot thermostat" and "Cold thermostat" sensors.

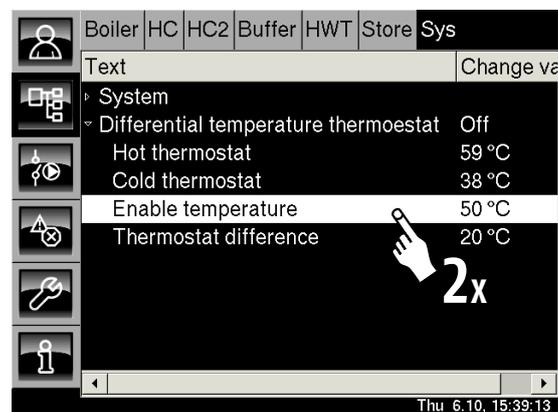
 The factory setting for this is 50°C.

## Changing the "Enable temperature"

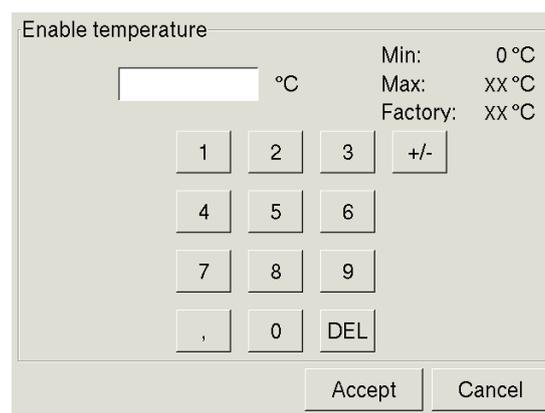
Press **Sys** and  to open the text menu.

Tap the [Differential temperature thermoestat] line.

Double-tap the [Enable temperature] line.



A settings screen opens.



Enter the new enable temperature and press

**Accept**.

Press  to return to the overview screen.

## The "Thermostat difference" parameter

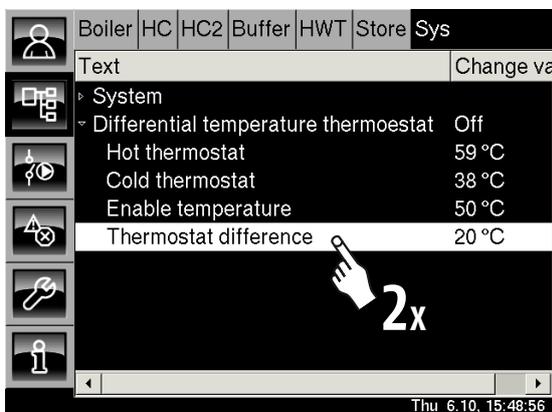
The output is not switched until the warmer side exceeds the "Enable" temperature and the **"Thermostat difference" (+hysteresis)** compared to the **colder side** has also been reached.

 The factory setting for this is 20°C.

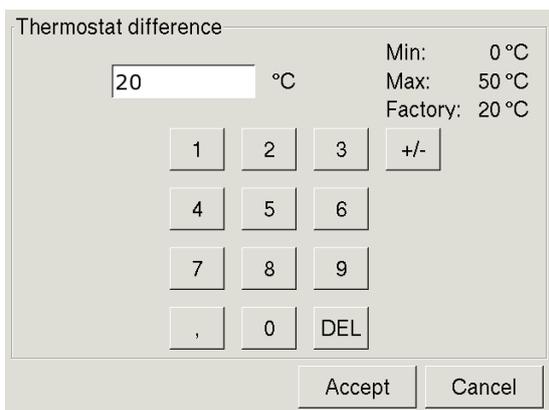
## Setting the "Thermostat difference"

Press **Sys** and  to open the text menu.

Tap the [Differential temperature thermoestat] line.  
Double-tap the [Thermostat difference] line.



A settings screen opens.



Enter the desired temperature difference and press **Accept**.

Press  to return to the overview screen.

## The "Hysteresis" parameter

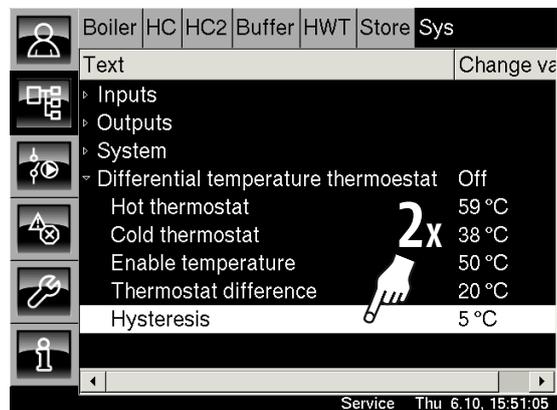
 The hysteresis is used to define an additional temperature that is used as the tolerance range. **In addition to the "Thermostat difference", the temperature sensor hot must also exceed the hysteresis** in order to switch the output. This prevents the output from clocking.

**The factory setting for the hysteresis is 5°C.** The access level **"Service"** is required to change this.

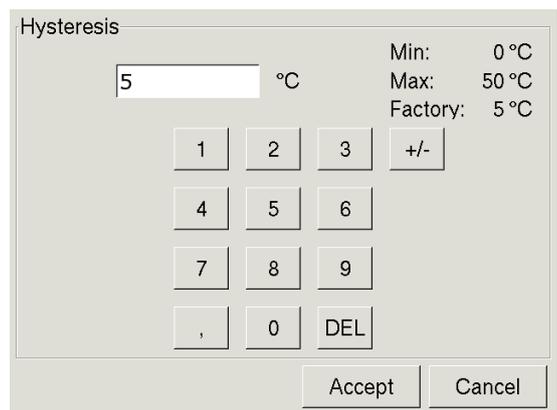
## Setting the "hysteresis"

Press **Sys** and  to open the text menu.

Tap the [Differential temperature thermoestat] line.  
Double-tap the [Hysteresis] line.



A settings screen opens.



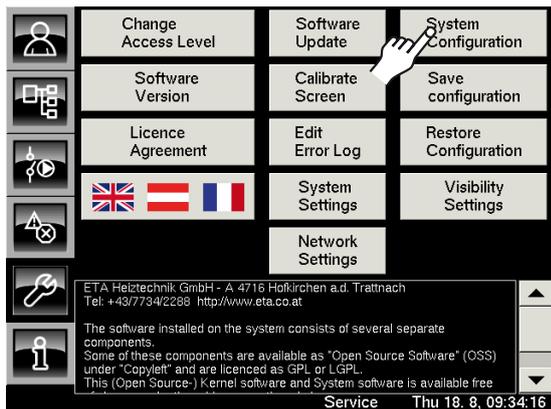
Enter the desired hysteresis and press **Accept**.

Press  to return to the overview screen.

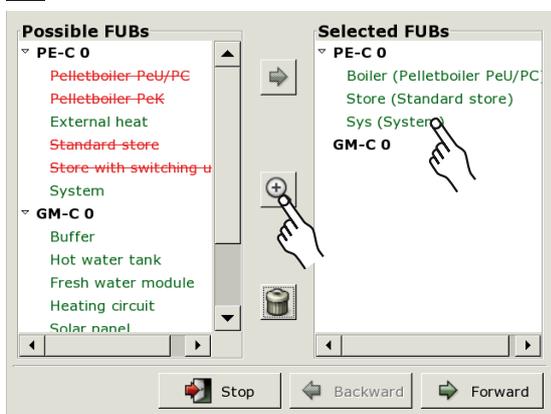
## Adding the special function "Differential temperature thermostat"

 This section describes how to add the function using **the assistant**.

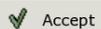
Using the access level "Service", open the toolbox and press [System Configuration]. Confirm the notice.

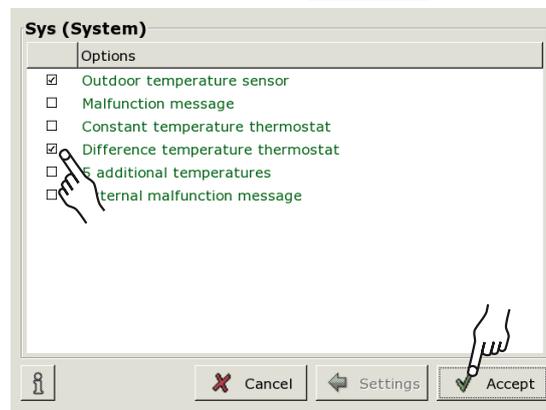


In the overview, select the [System] FUB, then press  to select the options for this FUB.



 The appearance of the overview for the selected FUBs differs depending on the system configuration.

Tap the "Differential temperature thermostat" option to add it, then press  to save.

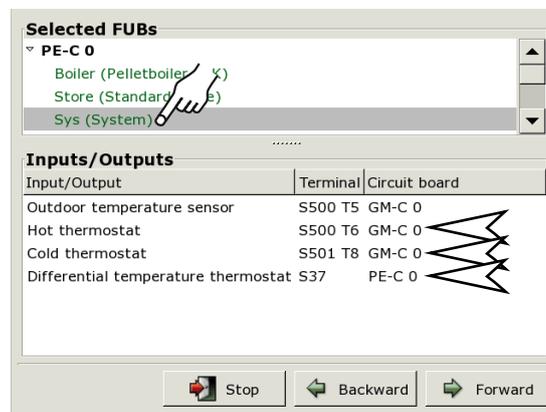


 Continue the configuration, but do not make any further changes!

## Viewing the assigned terminals

 During configuration, the Inputs/Outputs screen already displays the assigned terminals.

Tap the [System] FUB to view the assigned terminals.



Connect the temperature sensors and the device requiring switching to the assigned terminals. Then continue the configuration and install the device.

 Once this is complete, a **backup** can be created for the new configuration. For more information on this, see the separate "Commissioning assistant" instructions.



## "5 additional temperatures"

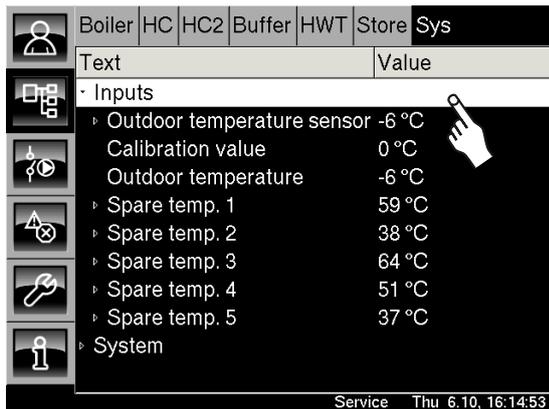
Up to 5 additional temperature sensors can be connected to the control system. These are for display purposes only, and cannot be used to control a PCB output.

 These additional temperatures are only displayed in the text menu **Sys**.

### Viewing additional temperatures in the text menu

Using the access level "Service", press the buttons **Sys** and  to open the text menu.

Tap the [Inputs] line. The submenu shows the temperature sensors [Spare temp. ...].



Text	Value
Boiler   HC   HC2   Buffer   HWT   Store   <b>Sys</b>	
▾ Inputs	
▸ Outdoor temperature sensor	-6 °C
Calibration value	0 °C
Outdoor temperature	-6 °C
▸ Spare temp. 1	59 °C
▸ Spare temp. 2	38 °C
▸ Spare temp. 3	64 °C
▸ Spare temp. 4	51 °C
▸ Spare temp. 5	37 °C
▸ System	

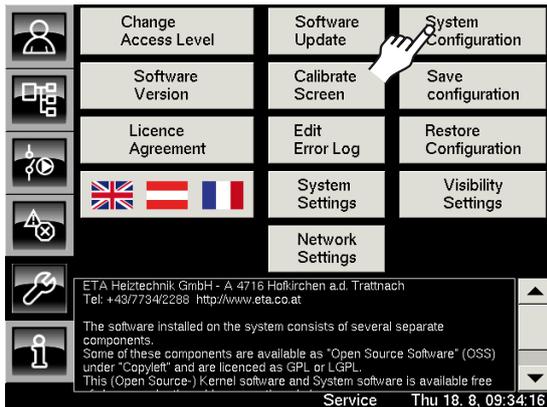
Service Thu 6.10, 16:14:53

Press  to return to the function block **Sys** overview.

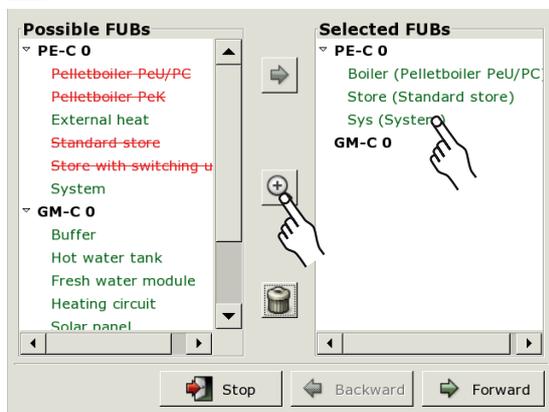
## Adding the special function "5 additional temperatures"

 This section describes how to add the function using the assistant.

Using the access level "Service", open the toolbox and press [System Configuration]. Confirm the notice.

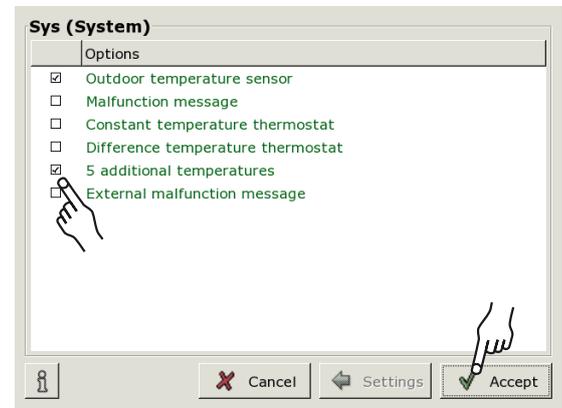


In the overview, select the [System] FUB, then press  to select the options for this FUB.



 The appearance of the overview for the selected FUBs differs depending on the system configuration.

Tap the "5 additional temperatures" option to add it, then press  to save.

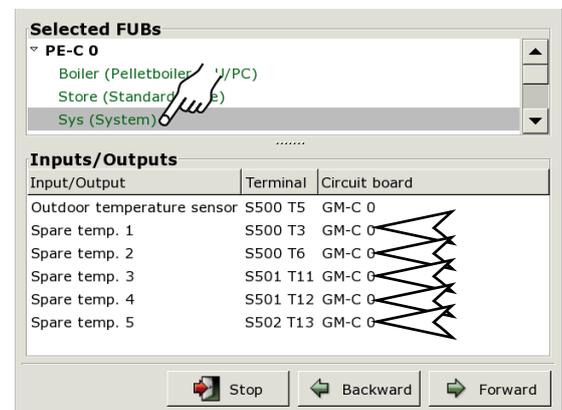


 Continue the configuration, but do not make any further changes!

## Viewing the assigned terminals

 During configuration, the Inputs/Outputs screen already displays the assigned terminals.

Tap the [System] FUB to view the assigned terminals.



Connect the temperature sensors to the assigned terminals. Then continue the configuration and install the device.

 Once this is complete, a **backup** can be created for the new configuration. For more information on this, see the separate "Commissioning assistant" instructions.

## "Oil/gas auxiliary boiler" overview

Press  and  to open the "Auxiliary boiler" overview screen.

This function block is used to control an additional auxiliary oil or gas boiler.

### When is the auxiliary boiler put into operation?

The **auxiliary boiler** is **only put into operation** by the control system if the **main boiler is unable to meet the current heating demand**.

#### For systems with buffer storage tank:

The auxiliary boiler is only switched on if the main boiler cannot attain the "Buffer target 1" temperature.

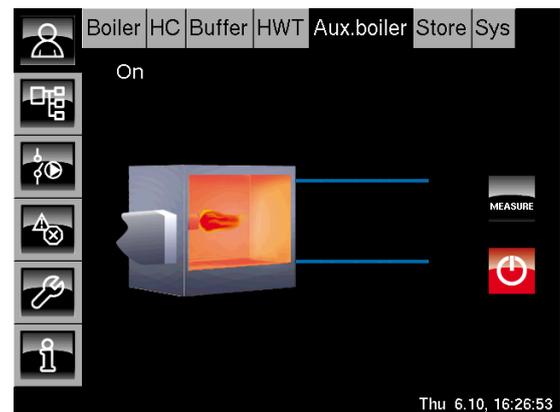
#### For systems without buffer storage tank:

The auxiliary boiler is only switched on if the current "Boiler" temperature cannot reach the required "Boiler target" temperature.

### Auxiliary boiler enabled and in operation

If the on/off button  lights up green, the auxiliary boiler is enabled. As long as there is no demand from the control system, the auxiliary boiler will have the status **Ready**.

If the auxiliary boiler is set into operation by the control system, its status will change to **On**, and a flame will be displayed in the auxiliary boiler.



### Enabling or locking the auxiliary boiler

The **on/off button**  can be used to **enable or lock the auxiliary boiler**.

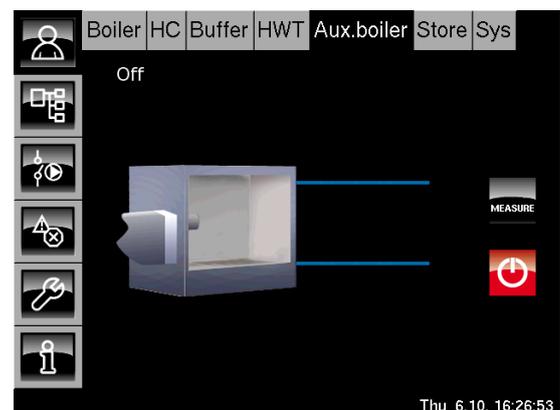
If the **on/off button**  lights up **green**, the auxiliary boiler is enabled and the control system can put **the auxiliary boiler into operation as needed**.

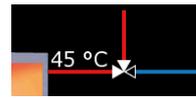
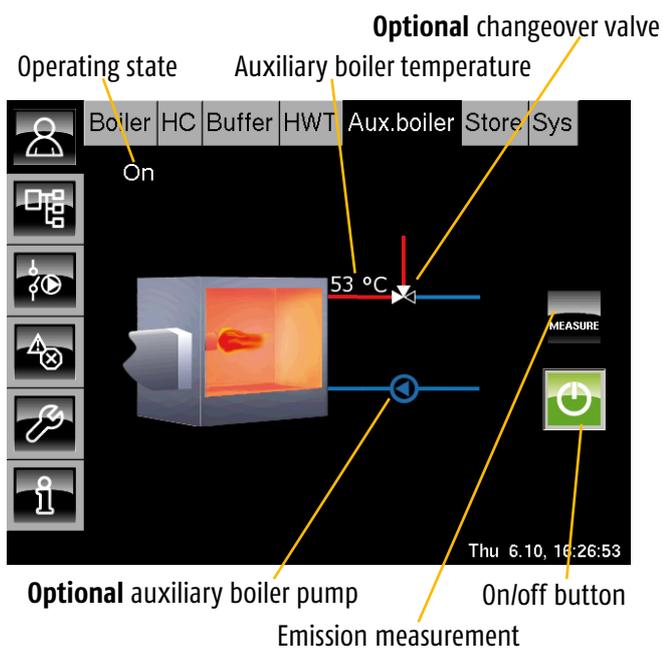
If the **on/off button**  lights up **red**, the auxiliary boiler is locked and the control system **cannot put the auxiliary boiler into operation**.

### Auxiliary boiler locked

The on/off button  is lit up red and the auxiliary boiler has the status **Off**.

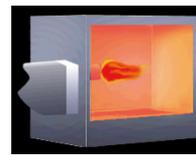
In the overview, only the auxiliary boiler is displayed.





## Changeover valve

Only displayed if a changeover valve is installed between the main and auxiliary boilers. The **red line** means that the consumers are being supplied by this heat producer.



## Auxiliary boiler

If a flame is displayed in the auxiliary boiler, it is running and supplying heat. If no flame is shown, the auxiliary boiler is either switched off or locked.



## On/off button for auxiliary boiler

This button can be used to enable or lock operation of the auxiliary boiler.

-  Green = Auxiliary boiler enabled
-  Red = Auxiliary boiler locked



## Emission measurement

The  button can be used to put the auxiliary boiler into operation for 30 minutes and switch on the consumers (buffer, hot water tank and heating circuits) in order to dissipate the heat. After 30 minutes, the auxiliary boiler and the consumers are switched back to automatic mode.



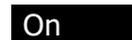
## Auxiliary boiler temperature

The current auxiliary boiler temperature is only displayed if an auxiliary boiler pump is configured and a temperature sensor is installed.



## Auxiliary boiler pump

Only shown if an auxiliary boiler is installed. If the icon for the pump appears, the auxiliary boiler pump is in operation.



## Current operating mode

This line shows the current operating mode of the oil/gas auxiliary boiler. Below is a list of the possible modes:

### On

The auxiliary boiler is enabled and in operation. In the overview, a flame is displayed.

### Ready

The auxiliary boiler is enabled, but there is currently no demand from the control system.

### Off

The boiler has been locked using the on/off button , and cannot be put into operation by the control system.

### Measurement

The auxiliary boiler has been put into operation for 30 minutes in order to perform emission measurement.

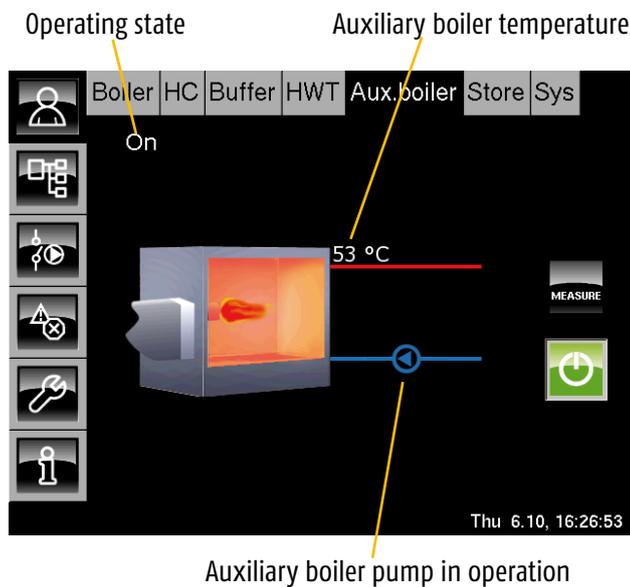
### Failure

There is a defect in the "Auxiliary boiler temperature" sensor. This status is only possible if an auxiliary boiler pump has been configured.

## Auxiliary boiler with "auxiliary boiler pump"

The operation of the auxiliary boiler pump will be only displayed if it is controlled by the ETAtouch control.

 The auxiliary boiler pump is put **into operation** as soon as the **"Auxiliary boiler temperature" has exceeded** the adjustable **"Enable – Aux.boiler pump"** temperature.  
If this is in operation, the icon for the auxiliary boiler pump is displayed in the overview.

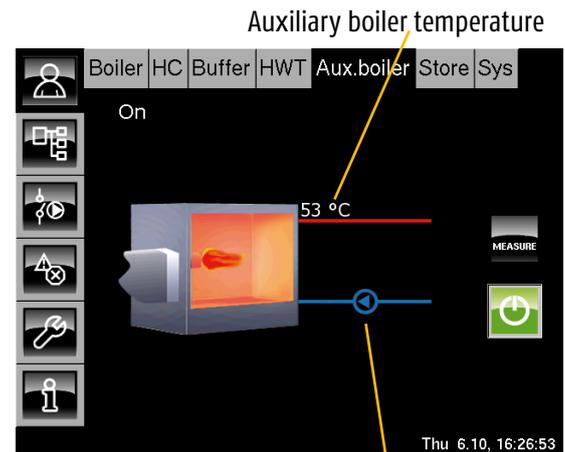


Auxiliary boiler pump in operation

## Auxiliary boiler with pump in operation

If the **auxiliary boiler is in operation**, a **flame is displayed** in the auxiliary boiler overview, together with the current temperature of the auxiliary boiler.

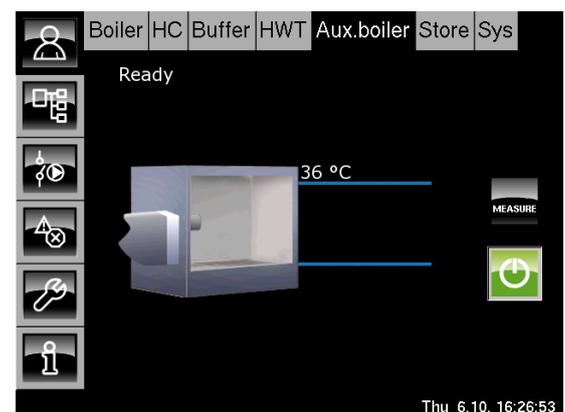
If the auxiliary boiler pump is in operation, the pump symbol is displayed.



Auxiliary boiler pump in operation

## Auxiliary boiler with pump not in operation

If the auxiliary boiler is not in operation, the auxiliary boiler is displayed in the overview, together with the auxiliary boiler temperature.



Thu 6.10, 16:26:53

## "Enable – Aux.boiler pump" temperature

The auxiliary boiler pump is controlled via the "Enable – Aux.boiler pump" temperature.

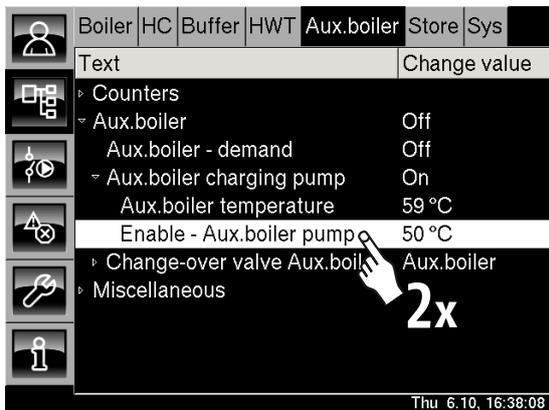
If the current "Aux. boiler temperature" exceeds the adjustable "Enable – Aux.boiler pump" temperature, the auxiliary boiler pump is put into operation.

## Setting the "Enable – Aux.boiler pump"

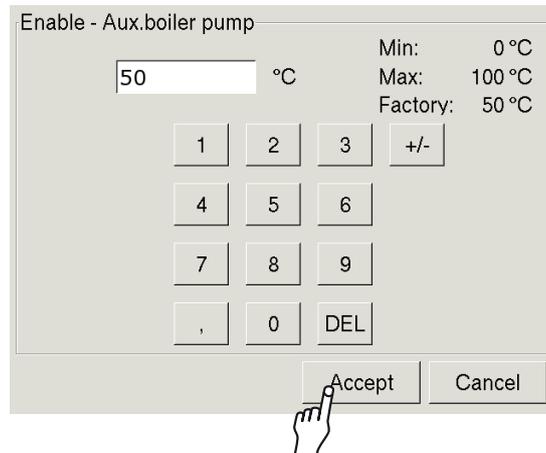
Press  and **Aux.boiler** to open the "Aux. boiler" text menu.

Tap the [Aux. boiler] line and, in the submenu, select the [Aux. boiler charging pump] line.

Double-tap on the [Enable – Aux.boiler pump] line.



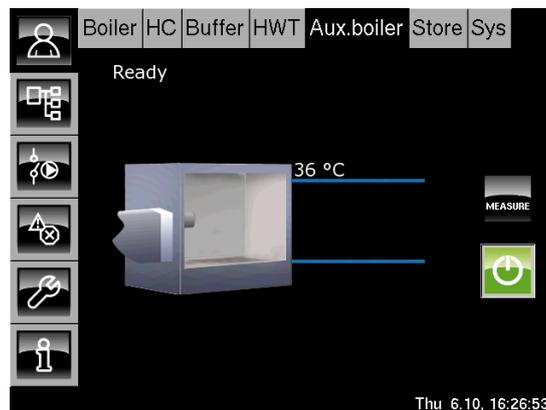
A settings screen opens:



Enter the new enable temperature for the auxiliary boiler pump and press **Accept**.

The "Auxiliary boiler" text menu display appears.

Press  to return to the "Auxiliary boiler" overview.



## Auxiliary boiler with "changeover valve"

 If a changeover valve has been configured and installed between the main and auxiliary boilers, **this changeover valve channels the heat from the producer with the highest temperature to the consumers.**

During this process, the control system continuously compares the temperature of the **heat producer (main boiler or buffer) with the highest priority** with the current auxiliary boiler temperature.

As soon as the temperature of the auxiliary boiler is higher than that of the main boiler or buffer, the changeover valve channels the heat from the auxiliary boiler to the consumers.

The overview displays the icon for the changeover valve and **red and blue lines to indicate how heat is currently being provided:**

### Red line

The red line means that the consumers are being supplied by this heat producer.

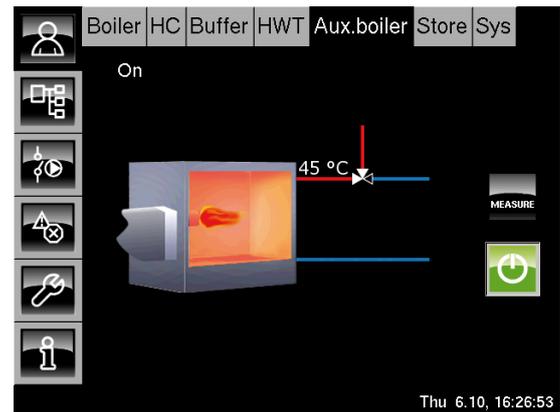
### Blue line

The blue line means that this heat producer is locked and not supplying any heat.

## Auxiliary boiler supplying consumers

If the auxiliary boiler is enabled ( button lights up green) and the **auxiliary boiler temperature is higher than the temperature of the boiler or buffer**, the changeover valve channels the heat from the auxiliary boiler to the consumers.

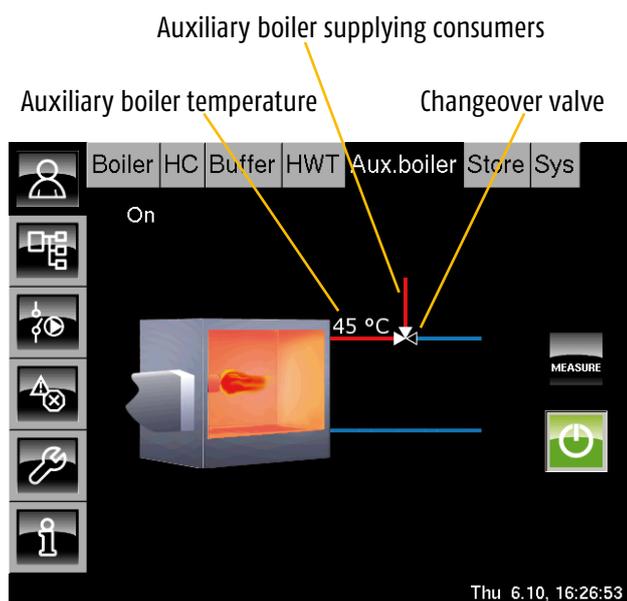
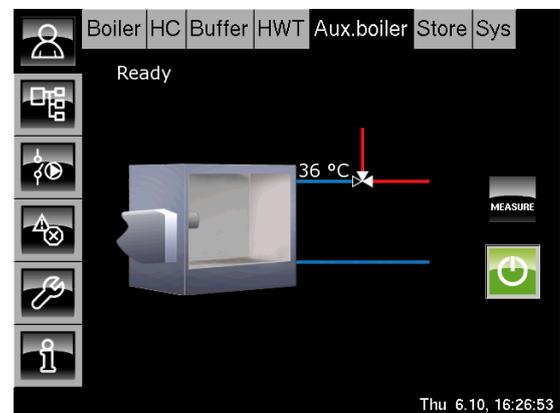
The **red line for supplying heat from the auxiliary boiler** is displayed in the overview.



## Main boiler or buffer supplying the consumers

If the **temperature of the auxiliary boiler is lower than that of the main boiler or buffer**, the changeover valve locks the auxiliary boiler. The consumers are then supplied with heat by the producer with the highest priority (boiler or buffer).

The overview displays the **blue line from the auxiliary boiler**.





## "External heat source" overview

Press  and **Ext.heat** to open the "External heat source" overview screen.

The term **"external heat source"** refers to an **additional heat producer connected to the system**. This can work in one of two ways, depending on the design of the heating system.

Either a changeover valve switches between the boiler and the additional heat producer, or the additional heat producer can supply heat in parallel with the boiler (using its own pump).

Two adjustable temperatures are used to control the function of the changeover valve: "Changeover valve Release" and "Switch off boiler at" temperatures. It is also possible to set a minimum time that must elapse between the two changeovers.

### Changeover valve – Overview

The overview displays the changeover valve and red and blue lines for heat supply:

#### Red line

The red line means that the consumers are being **supplied by this heat producer**.

#### Blue line

The blue line means that this **heat producer is locked** and not supplying **any heat**.

### Changeover valve control system

The changeover valve is controlled by the two temperatures "Changeover valve Release" and "Switch off boiler at".

For details on how to adjust these two temperatures, see page 143 and page 144.

### "Changeover valve Release" temperature

This temperature controls **the time from which the valve switches between the boiler and the external heat source**.

**Below** this temperature, the consumers are always supplied with heat **by the main boiler**. The external heat source is locked.

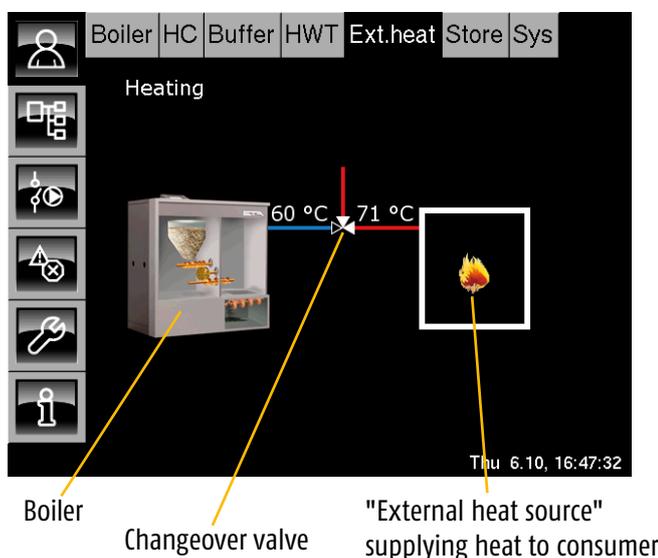
If the temperature of the "External heat source" **exceeds** the "Changeover valve Release" temperature, the changeover valve channels the heat from the **boiler with the highest temperature** to the consumers.

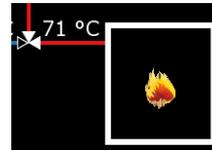
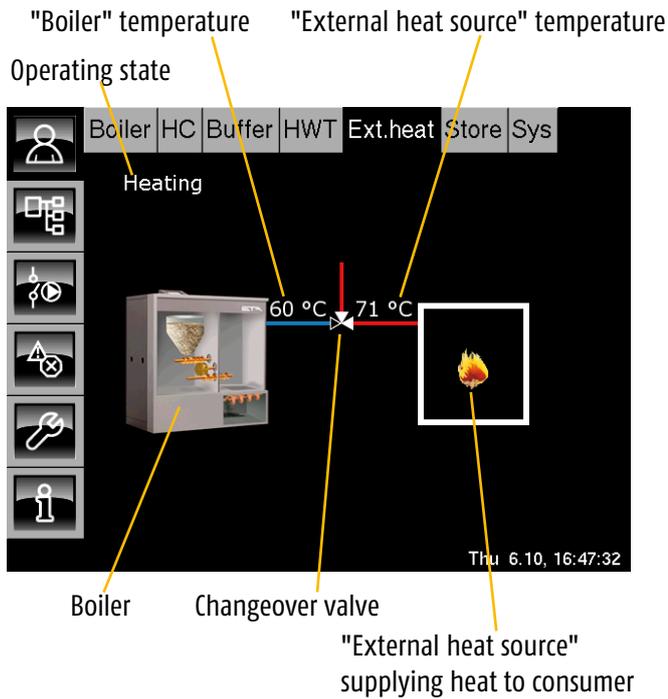
### "Switch off boiler at" temperature

This parameter controls **the temperature from which the boiler is switched off** and only the external heat source continues to supply the consumers.

If the temperature of the "External heat source" **exceeds** the "Switch off boiler at" temperature, the **main boiler is switched off** and changed to the **"locked" status**.

From this point on, the consumers are only supplied with heat by the external heat source.





**External heat source**

The flame is only displayed if the external heat source is providing the consumers with heat. The displayed temperature is the boiler temperature of the external heat source.

### Heating **Current operating mode**

This line shows the current operating mode of the external heat source. Below is a list of the possible modes:

#### Off

The additional heat producer is not active, because the temperature of the external heat source is lower than the "Switch off boiler at" temperature.

#### Heating

The additional heat producer is active. The temperature of the external heat source is higher than the "Switch off boiler at" temperature.

#### Overtemperature

The temperature of the external heat source has exceeded the "Pump safety run" temperature. The "Pump safety run" is switched on.

#### Failure

The temperature meter on the additional heat producer is damaged.



**Changeover valve**

The red and blue lines show the current position of the changeover valve:

Red line = The consumer is being supplied by the heat producer in question (boiler or external heat source).

Blue line = The heat producer in question is locked and not supplying any heat.



**Boiler**

If the blue line is shown at the boiler, the boiler is in the "locked" state. This means that the changeover valve has locked the boiler and no heat is currently being provided.

The temperature displayed next to the boiler is the boiler temperature.

If the red line is displayed, the boiler is supplying the consumer with heat.

## "External heat source" overview

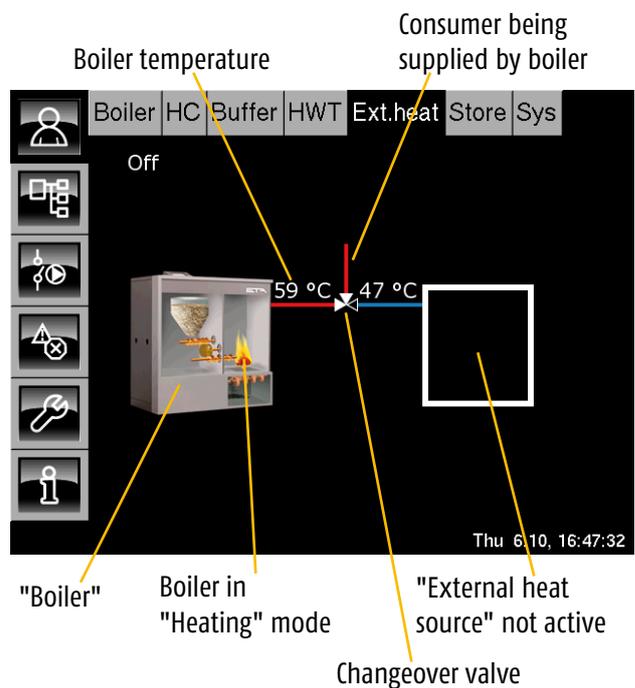
If a red line is displayed from the boiler to the consumer, the boiler is supplying heat to the consumer. The blue line means that heat producer in question is locked and not supplying any heat to the consumer.

## How the "External heat source" function works

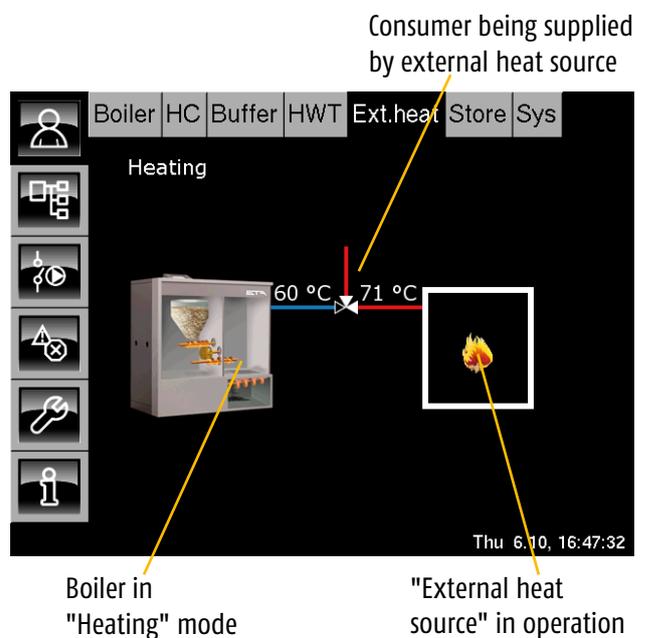
As soon as the temperature of the "External heat source" exceeds the "Changeover valve Release" temperature, the changeover valve channels the heat from the heat producer with the highest temperature to the consumers.

If the temperature of the "External heat source" exceeds the "Switch off boiler at" temperature, the main boiler is switched off and changed to the "locked" status. The consumer is then only supplied with heat by the external heat source.

## Boiler supplying the consumers



## External heat source supplying the consumer



External heat source

## "Changeover valve Release" temperature

This adjustable temperature controls the time from which the valve can switch between the boiler and the external heat source.

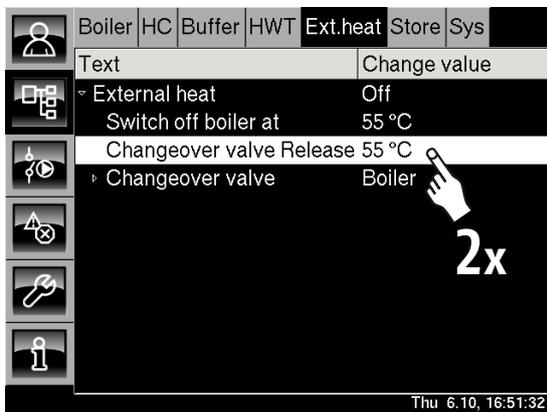
Below this adjustable temperature, the consumers are always supplied with heat by the main boiler. The external heat source is locked.

Only when the temperature of the **"External heat source" exceeds the "Changeover valve Release" temperature** does the changeover valve channel the heat from the **heat producer with the highest temperature** to the consumers.

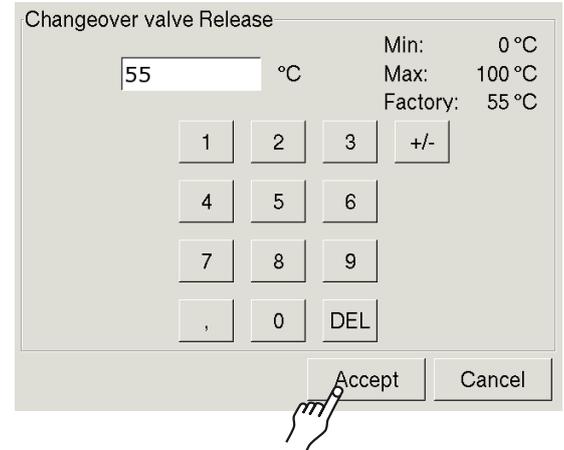
## Adjusting the "Changeover valve Release" temperature

Press  and **Ext.heat** to open the external heat source text menu.

Tap the [External heat] line and, in the submenu, double-tap the [Changeover valve Release] line.



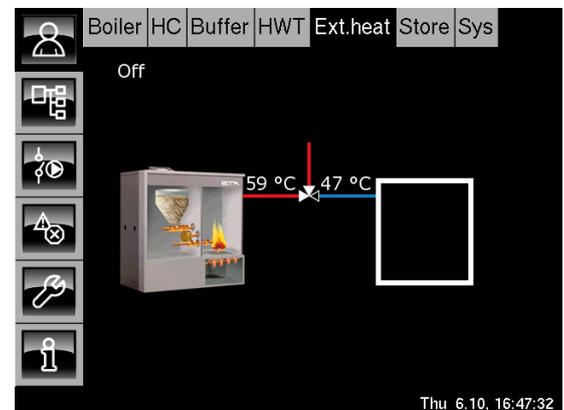
A settings screen opens:



Enter the desired enable temperature and press **Accept** to save.

The external heat source text menu display appears again.

Press  to return to the "External heat source" overview.



## "Switch off boiler at" temperature

This parameter controls the temperature from which the boiler is switched off and only the external heat source continues to supply the consumers.

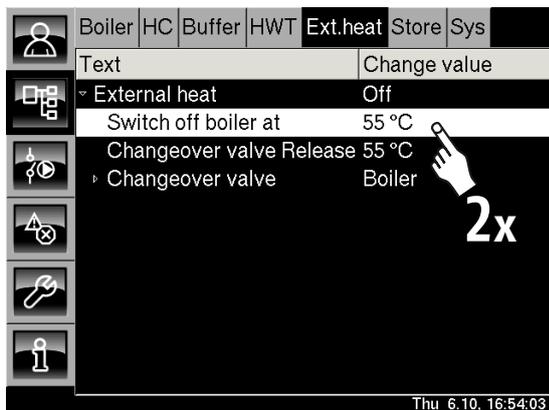
If the temperature of the "External heat source" exceeds the "Switch off boiler at" temperature, the main boiler is switched off and changed to the "locked" status.

From this point on, the consumers are only supplied with heat by the external heat source.

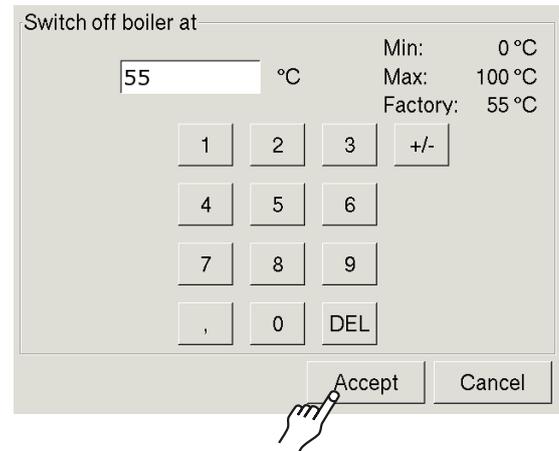
## Adjusting the "Switch off boiler at" temperature

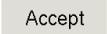
Press  and **Ext.heat** to open the external heat source text menu.

Tap the [External heat] line. In the submenu, double-tap the [Switch off boiler at] line.



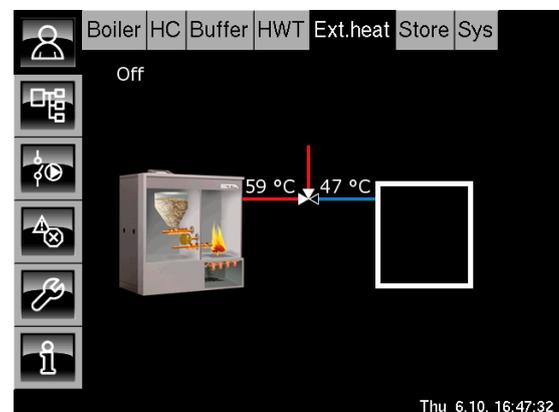
A settings screen opens:



Enter the desired temperature and press  to save.

The external heat source text menu display appears again.

Press  to return to the "External heat source" overview.



## Minimum time for changeover valve

The adjustable parameter "**Minimum time**" can be used to define the period of time during which the **changeover valve does not switch** between the "Boiler" and the "External heat source".

 The factory setting for the "minimum time" is 20 minutes.

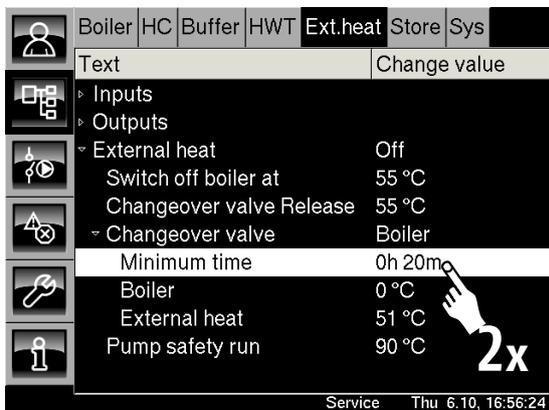
## Setting the minimum time

 The access level "Service" is required to adjust the settings.

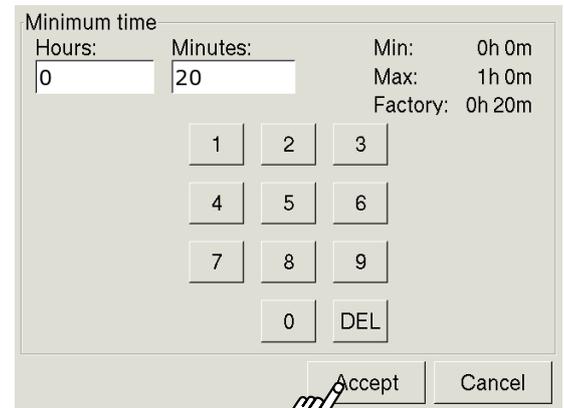
Press  and **Ext.heat** to open the external heat source text menu.

Tap the [External heat] line and, in the submenu, tap the [Changeover valve] line.

Double-tap on the [Minimum time] line.



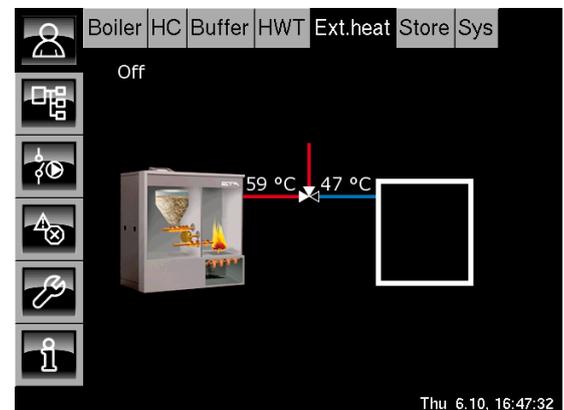
A settings screen opens:



Enter the desired minimum time and press **Accept** to save.

The external heat source text menu display appears again.

Press  to return to the "External heat source" overview.



## "External heat demand" overview

Press  and **Ext.dem** to open the "External heat demand" overview screen. An external control system can demand heat from the heating system via this FUB.

3 time slots with different temperatures can be set for the external consumer for each day of the week. Within the time slots, the external consumer can demand heat from the heating system.

It is only possible to predefine the temperature or output using an analogue signal (0-10 V or 4-20 mA) on wood chip boilers. No timer is required to set the external temperature or output.

## The "External heat demand" with timer function

The temperature required by the consumer is adjusted in the timer's time slot. The consumer can only demand heat from the boiler within the set time slots. The heat is supplied to the consumer using an external pump.

If the buffer and/or the main boiler is colder than the required temperature, it is put into operation. The external pump is not switched on to supply heat until the temperature of the heating system is higher than the set "Enable temperature".

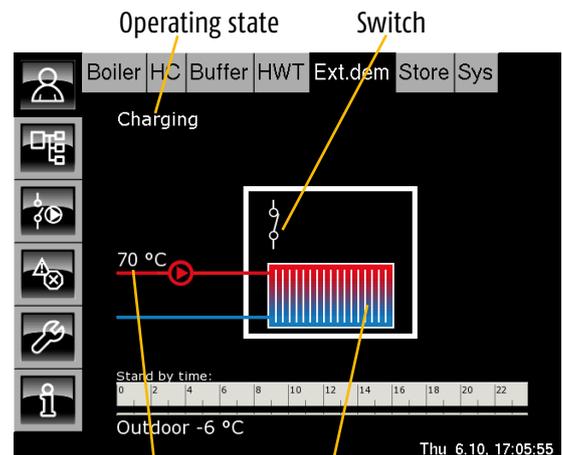
## "External heat demand" function with preset external temperature or output

 **only possible on a wood chip boiler.** The demand is made using an **analogue signal** (0-10 V or 4-20 mA). There is normally no timer in the control system for this mode.

If the buffer and/or the main boiler is colder than the required temperature, it is put into operation. The external pump is not switched on to supply heat until the temperature of the heating system is higher than the set "Enable temperature".

## External consumer being supplied with heat

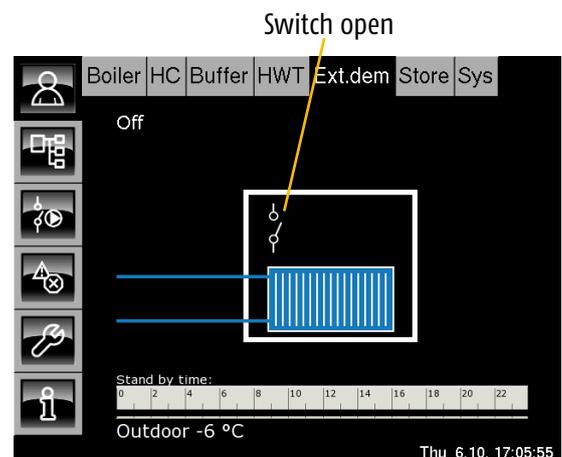
The switch in the overview is closed. The temperature set for the time slot and the pump symbol are displayed.



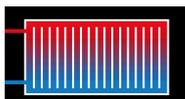
Operating state      Switch  
available "buffer top" temperature  
External consumer

## External consumer not demanding heat

The switch in the overview is open. The external consumer is displayed in blue.

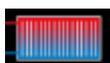


Switch open



## External consumer

This icon represents the external consumer. If the top section is shown in red, the consumer is currently being supplied with heat. If the consumer is entirely blue, no heat is being supplied to the consumer.

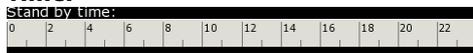


**Red** = consumer being supplied



**Blue** = consumer not being supplied

## Timer



The timer can be used to set 3 time slots with different temperatures for the external consumer for each day of the week.

Within these time slots, the external consumer can demand heat from the heating system.



## Supplying heat

If heat is being supplied to the external consumer, a red pump appears with the set temperature.



## Switch

This shows whether the external consumer is currently demanding heat from the heating system.

If the contact is closed, the external consumer is demanding heat.

If the switch is open, there is currently no demand, and no heat is being supplied.



Switch open



Switch closed

## Charging

### Current operating mode

This line shows the current operating mode of the external heat demand. Below is a list of the possible modes:

### Off

There is currently no demand from the external consumer.

### Demanding

The external consumer is demanding heat from the heating system.

### Charging

The external consumer is being supplied with heat by the heating system.

### Delay

The external consumer has switched off. The pump will keep running for the adjustable "Delay time".

### Off Timer

There is a demand, but the current time is outside the set time slots.

### Heat dissipation

The pump has been put into operation because the boiler is overheating and requires cooling.

### Freezing protection

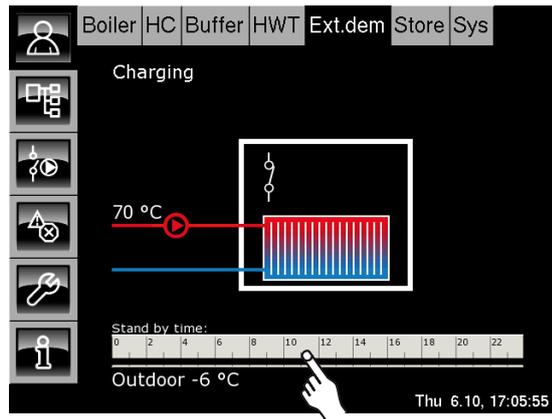
The current outside temperature is below the set "Freezing protection" temperature. There is no demand from the external consumer.

## Setting a time slot for the heat demand

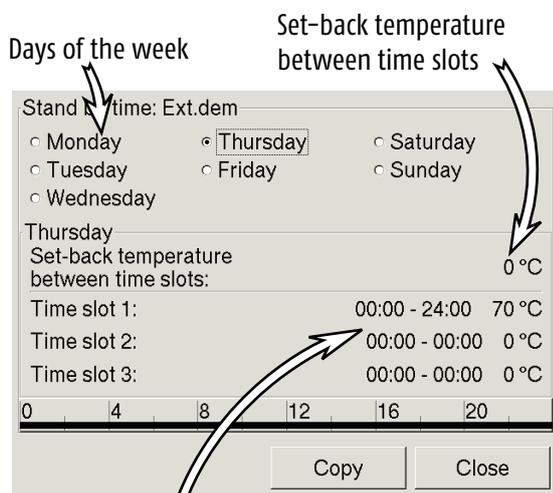
The timer can be used to set 3 time slots with different temperatures for the external consumer for each day of the week.

Within these time slots, the external consumer can demand heat from the heating system.

In the overview screen, tap the timer.



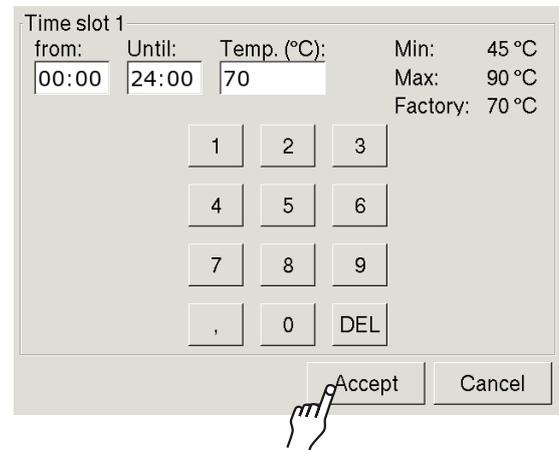
The settings screen opens:



3 adjustable time slots for each day of the week with different temperatures for supplying heat to the external consumer

## Selecting a time slot

In the time slot overview, tap the [Time slot 1] line.



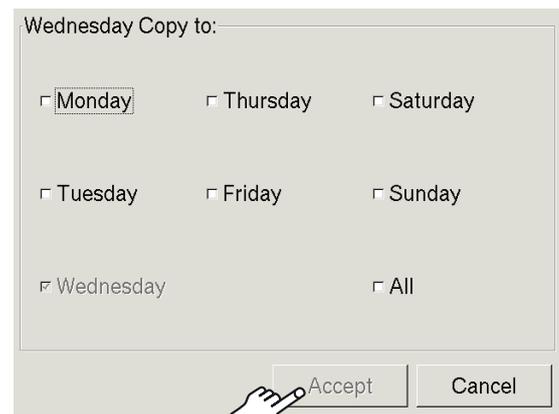
The times and the temperature for the demand from the external consumer can now be adjusted.

Press **Accept** to save the new settings. Use the same method to adjust the other time slots.

## Copying time slots to other days of the week

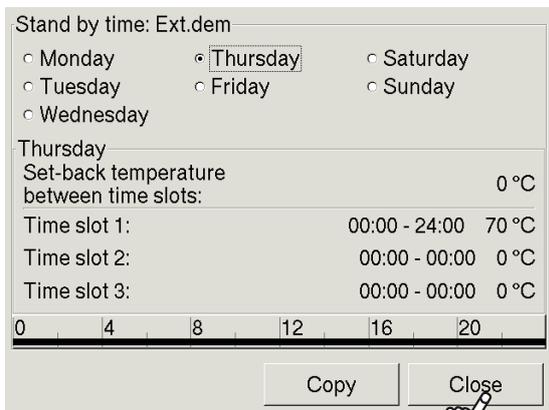
Once the time slots have been adjusted, they can also be adopted for other days of the week.

To do this, press **Copy**. A screen appears for selecting a day of the week:



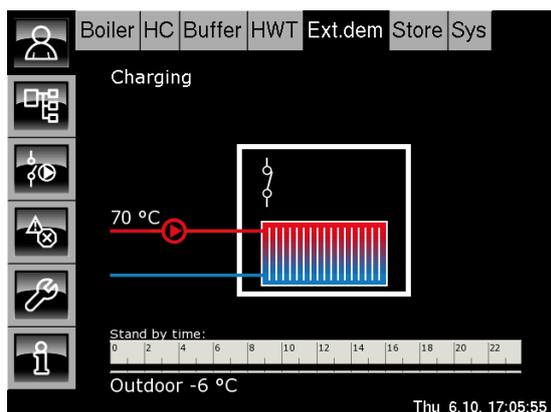
Tap to select the desired day of the week or [All] and then press **Accept**. The time slots are adopted for the selected days.

The time slot overview is displayed:



Finally, press **Close**.

The display returns to the overview.



## The "Enable temperature" parameter

The "Enable temperature" parameter can be used to control the pump that feeds the external consumer. The pump only starts to supply heat to the consumer once the temperature of the heating system is higher than the "Enable temperature".

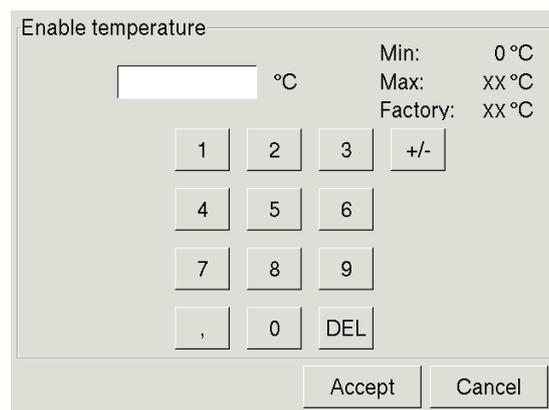
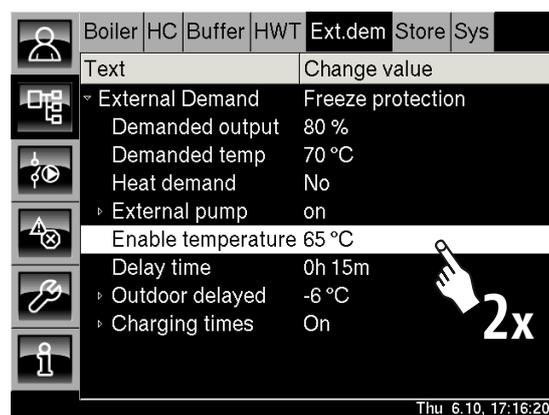
The factory setting for this is 65°C.

## Changing the "enable temperature"

Press and **Ext.dem** to open the external demand text menu.

Tap the [External Demand] line. The submenu opens.

Double-tap the [Enable temperature] line. A settings screen opens.



Enter the desired enable temperature and press **Accept** to save.

Press to return to the overview.

## "Transmission line" overview

Press  and **Trans.line** to open the "Transmission line" overview screen.

If the heating system is in a different room to the consumers, the **connection from the buffer or boiler to the consumers** is also classed as a "transmission line".

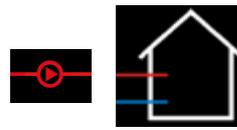
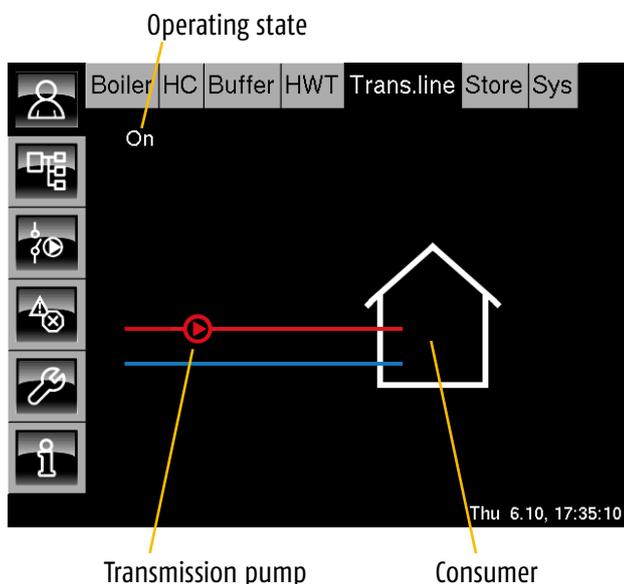
The "Transmission pump" and, optionally, a "Transmission line mixing valve" are installed in this transmission line.

## How the "Transmission line" works

The transmission pump supplies heat via the transmission line to the consumers in another building or a micro network.

## Transfer station

The transmission line function can also be used in a transfer station to channel off heat from a micro network or similar (see page 152).



### Supplying heat

Heat is being supplied to the consumers via the transmission line (red line). The transmission pump icon is also displayed.



### No heat supply

Both lines are blue. No heat is currently being supplied to the consumers.

## On Current operating mode

This line shows the current operating mode of the transmission line. Below is a list of the possible modes:

### On

The transmission line is in operation. Heat is being supplied to the consumers from the boiler or buffer.

### Off

No heat is currently being supplied to the consumers.

## Freezing protection

The current outside temperature is below the set "Freezing protection" temperature. The transmission pump is switched on for at least 30 minutes to bring the flow temperature to 2°C warmer than the freezing protection temperature. The factory setting for "Freezing protection" is 5°C.

## Heat dissipation

The transmission pump is switched on in order to dissipate excess heat from the boiler.

## Failure

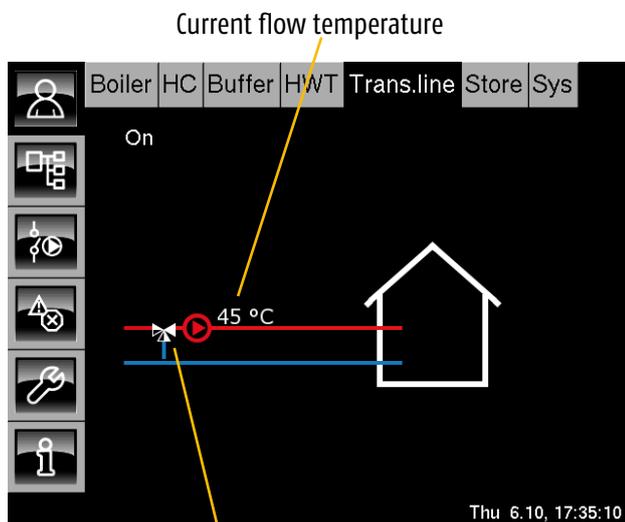
A temperature meter in the flow is damaged.

## Transmission line with "Transmission line mixing valve"

If a transmission line mixing valve is also installed, the flow temperature is also adjusted.

In this case, only the necessary temperature is taken from the buffer. This significantly reduces heat loss from the transmission line and also maintains a low thermal load on plastic transmission lines.

The overview displays the transmission line mixing valve and the current measured flow temperature.



Transmission line mixing valve



### Transmission line mixing valve with current flow temperature measurement

If a transmission line mixing valve is installed and the transmission line is in operation (red line), the current flow temperature measurement is displayed.



### Transmission line not in operation

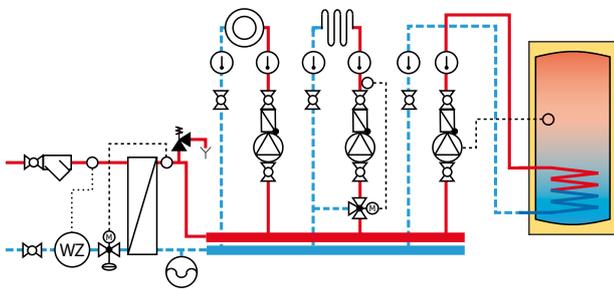
If the transmission line is not in operation, only the transmission line mixing valve is displayed.

## “Transmission line” for transfer stations

The **Trans.line** function block can also be used to control transfer stations in district heating networks. The individual control systems for the transfer stations can be linked together using a CAN-Bus cable, but can also be run as “islands” without any connection to the central hub.

On the primary side, a transfer station essentially comprises a heat exchanger with a primary valve on the network side.

The secondary side consumers, such as the heating circuits, hot water tank, buffer and fresh water module, are connected in the house.



The flow temperature for the first heating circuit (with the higher temperature) is regulated by the network-side primary valve via the heat exchanger. This concept has become established as the standard solution in district heating networks. It removes the need for a control valve, thus reducing costs.

In the ETAtouch system, a separate „Heating circuit“ FUB is configured for each heating circuit to allow adjustment of functions such as the timer, heating curve etc.

In the warmer heating circuit, the mixing valve function is transmitted by means of a temperature demand to the transmission line mixing valve upstream of the heat exchanger.

The **Trans.line** FUB is used to control the primary valve.

The heating circuits demand a temperature from the **Trans.line** FUB. The primary valve (transmission line mixing valve) of the transfer station opens. When the in-house heat exchanger output has reached the enable temperature of the heating circuit pump or the hot water charging pump, the heat exchanger will start up.

## Setting the "Freezing protection" parameter

The "Freezing protection" parameter can be used to set a temperature in order to protect the transfer station consumers from freezing damage.

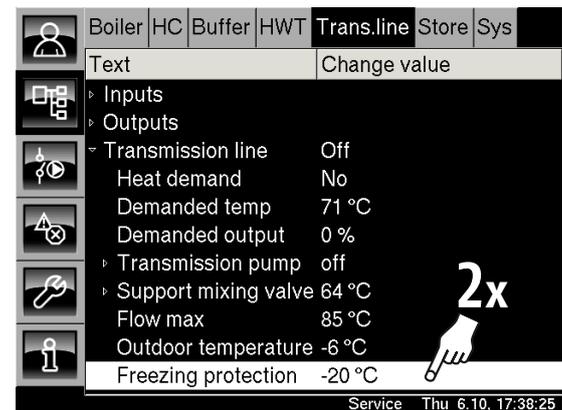
If the outside temperature falls below the set "Freezing protection" temperature, the transmission pump is put into operation for **at least 30 minutes** in order to **increase the flow temperature by 2°C**.

The factory setting for "Freezing protection" is -20°C. The access level "Service" is required to adjust this setting.

## Opening the transmission line text menu

Using the access level "Service", press the buttons **Trans.line** and to open the text menu.

Tap the line [Transmission line] and, in the submenu, double-tap the line [Freezing protection].



Enter the new value and press **Accept**.

Press to return to the "Transmission line" overview.



## HACK "Special conveyor" – Overview

 This FUB is only available on **wood chip boilers** with the **HE-C extension circuit board**.

Press  and  to open the "Special conveyor" overview screen.

This screen is used to control the special fuel conveyor variants for wood chip boilers. The overview differs depending on the special variant:

- **Intermediate conveyor screw** (also for silo conveying systems), see example on page 156.
- **Double agitator** (2 agitators supplying one boiler), see example on page 162.
- **Double discharge conveyor** (one agitator supplying 2 boilers), see example on page 166.

If multiple special conveyor systems are installed, each one is displayed in a separate FUB.

Example: Double agitator:

Agitator 1 is displayed in the  FUB, and agitator 2 is displayed in the  FUB.

### Optional light barrier

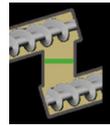
An optional light barrier is offered for ETA fuel conveying systems to control the fuel conveyance and the respective conveying system.

If the drop chute contains sufficient fuel, the light barrier is interrupted, and the conveying system stops to be continued at a later point. If a **light barrier is installed**, it will be **displayed in the overview**.



### Light barrier red

There is sufficient fuel in the drop chute. The light barrier has been interrupted and is displayed in red, with fuel. The special conveyor screw is switched off.



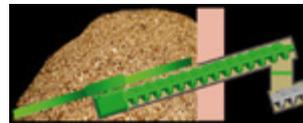
### Light barrier green

If the light barrier is displayed in green, there is no fuel or insufficient fuel in the drop chute.



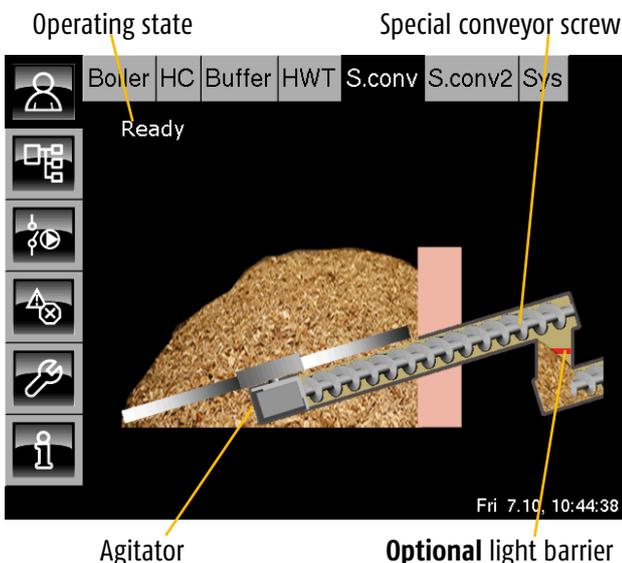
### Agitator on standby

The agitator and screw are displayed in grey when not in operation or if the screw is turning against the discharge direction, e.g. in order to remove a blockage.



### Agitator conveying fuel

The agitator and screw are displayed in green when the screw is turning in the discharge direction.



### Ready **Current operating mode**

This line shows the current operating mode of the special conveyor. Below is a list of the possible modes:

#### Ready

The special conveyor is not currently in operation. There is no demand for fuel.

#### Full

There is sufficient fuel in the drop chute. The light barrier has been interrupted.

## Conveying

The agitator and screw of the special conveyor are in operation. Fuel is being conveyed.

## Error Self-check

A malfunction has occurred during the self-check.

## Error conveyor

The special conveyor motor has caused a malfunction.

## Drop chute open

The sensor on the drop chute has been triggered. This may be due to a blockage.

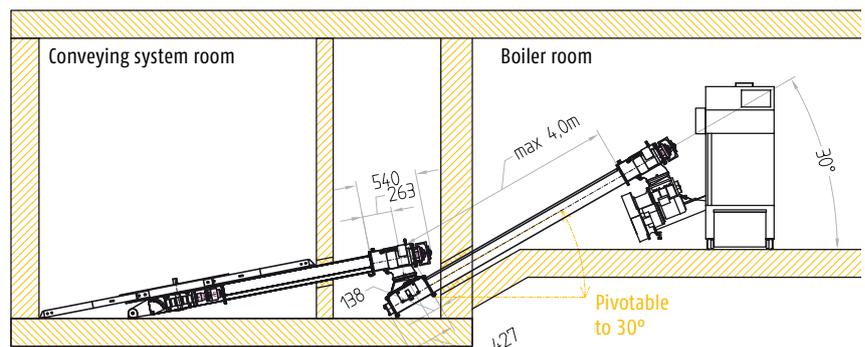
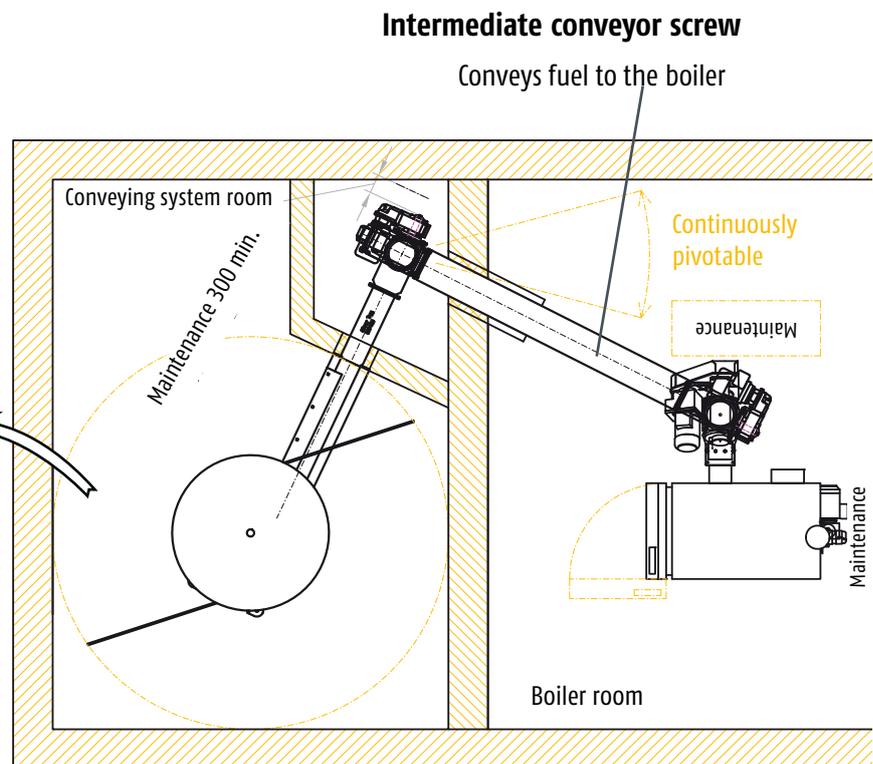
## Safety chain interrupted

The safety chain, e.g. water shortage, emergency stop, safety temperature limited, ash box, rotary valve maintenance cover... has been broken. Heating is locked and cannot be resumed.

## Special conveyor S.conv



Conveys fuel to the intermediate conveyor screw



## "Intermediate conveyor screw" overview

 The "Intermediate conveyor screw" overview in the special conveyor FUB is only displayed if **several conveying systems one after another** carry the fuel to the boiler. (See example on next page.)

These additional conveying systems are also known as "**Intermediate conveyor screws**", and they carry the fuel to a subsequent conveying system or the wood chip boiler.

Each individual conveying system or intermediate conveyor screw is displayed in a separate FUB, e.g.: `S.conv`, `S.conv2`, `S.conv3` ...

### Operating modes

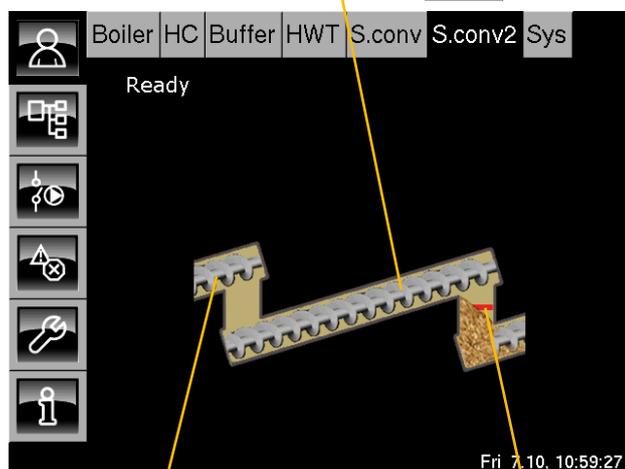
The different operating modes are listed on the previous page.

### Optional light barrier

In order to control the fuel conveying system, a light barrier can also be installed in the drop chute of the intermediate conveyor screw. If the drop chute contains sufficient fuel, the light barrier is interrupted, the intermediate conveyor screw stops, and then next conveying system begins to operate.

 If a **light barrier is installed**, it will be **displayed in the overview**.

Intermediate conveyor screw for Special conveyor 2 FUB `S.conv2`



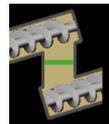
Intermediate conveyor screw receives fuel from `S.conv` FUB, e.g.: Agitator

**Optional light barrier**



### Light barrier red

There is sufficient fuel in the drop chute. The light barrier has been interrupted and is displayed in red, with fuel. The intermediate conveyor screw is always switched off.



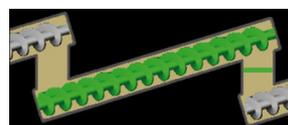
### Light barrier green

If the light barrier is displayed in green, there is no fuel or insufficient fuel in the drop chute.



### Intermediate conveyor screw on standby

The intermediate conveyor screw is displayed in grey when not in operation or if it is turning against the discharge direction, e.g. in order to remove a blockage.



### Intermediate conveyor screw conveying fuel

The intermediate conveyor screw is displayed in green when it is turning in the discharge direction.

## Conveying system with intermediate conveyor screws

The existing silo conveying system is displayed in the Special conveyor 1 `S.conv` FUB. This carries the fuel to intermediate conveyor screw 1.

From there, it is conveyed further to intermediate conveyor screw 2 `S.conv2`, and eventually reaches the boiler.

 **Intermediate conveyor screw 1 `S.conv2` is the consumer and producer of the fuel.** As such, the "Producer demand" option must be selected in the `S.conv2` FUB system configuration.

## No light barriers installed?

In this example, there are light barriers installed on the discharge connection to intermediate conveyor screw 1 and in the drop chute to intermediate conveyor screw 2.

If **no light barriers** have been installed, the **fuel conveying system is controlled** using the **runtime scale factor** (see page 158).

This factor reduces the demand placed on the previous conveying system in order to prevent blockages.

### Existing silo conveying system `S.conv`



Light barrier in discharge connection

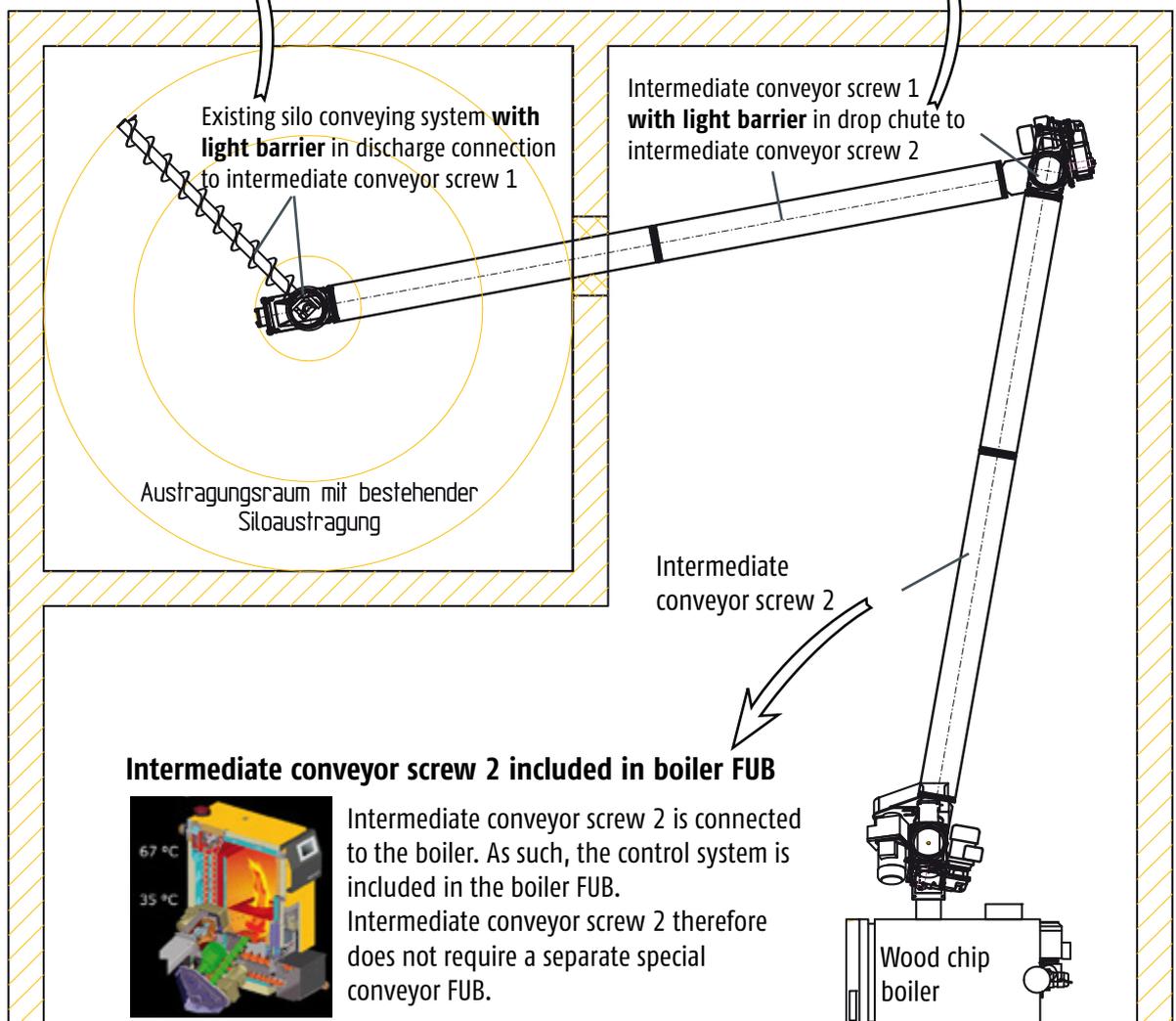
Conveys fuel to intermediate conveyor screw 1

### Intermediate conveyor screw 1 `S.conv2`



Light barrier in drop chute to intermediate conveyor screw 2

Supplies fuel to intermediate conveyor screw 2



## How the runtime scale factor works

 If several conveying systems are operating one after another, the **fuel discharge rate must be adjusted** in order to **prevent blockages** of the individual discharge screws.

As a rule, **light barriers** are usually installed in **the discharged connections or drop chutes** in order to **determine when** a sufficient **filling level has been reached**, stop the previous conveying system and put the following conveying system into operation.

If **no light barriers are installed**, the **runtime scale factor** must be used to **reduce the conveying system's clock rate** in order to prevent blockages.

On ETA fuel conveying systems with no light barriers, this factor is changed to the maximum of 80%. This means that **the conveying system only demands 80% of the clock rate of the previous conveying system** and only 80% of the original fuel volume is supplied.

 Having been reduced by the runtime scale factor, this clock rate is also transmitted to the previous conveying systems.

 For **fuel conveying systems with no volume control**, please consult ETA Customer Services. The **runtime scale factor** may only **be altered** after **consulting ETA Customer Services**.

 If **light barriers are installed**, the **runtime scale factor is not required**, and the **factory setting of 0% remains unchanged**.

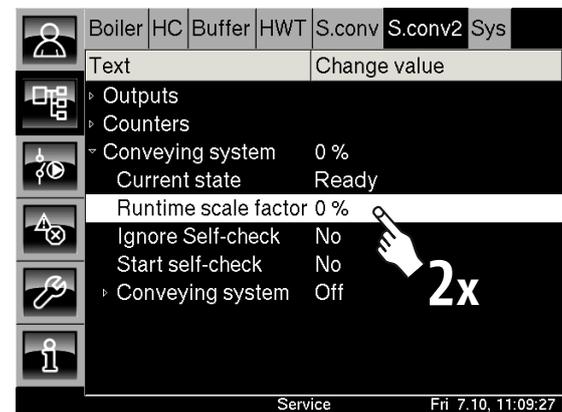
## Changing the runtime scale factor

The **runtime scale factor** is **changed in the conveying system FUB** in which the **supply of fuel to the discharge screw is uncontrolled**. In the example opposite, this is the intermediate conveyor screw 1 FUB `S.conv2`.

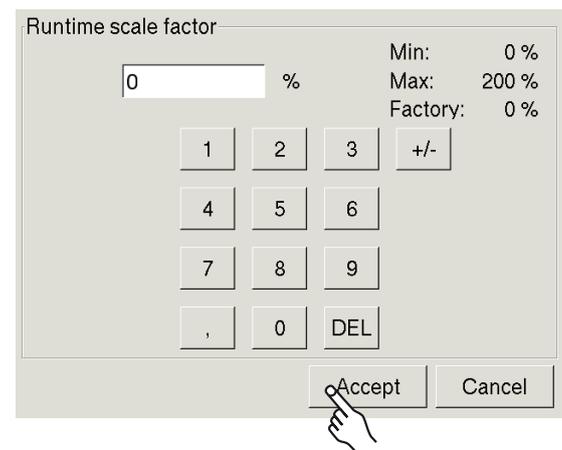
 The access level "Service" is required to change the setting.

Select the **relevant conveying system FUB** and press  to open the text menu.

Tap the [Conveying system] line and, in the submenu, double-tap the [Runtime scale factor] line.



A settings screen opens:



Enter the new value and press  to save. The text menu display appears again.

 The **maximum value is 80%**.

## Example of how to use the runtime scale factor

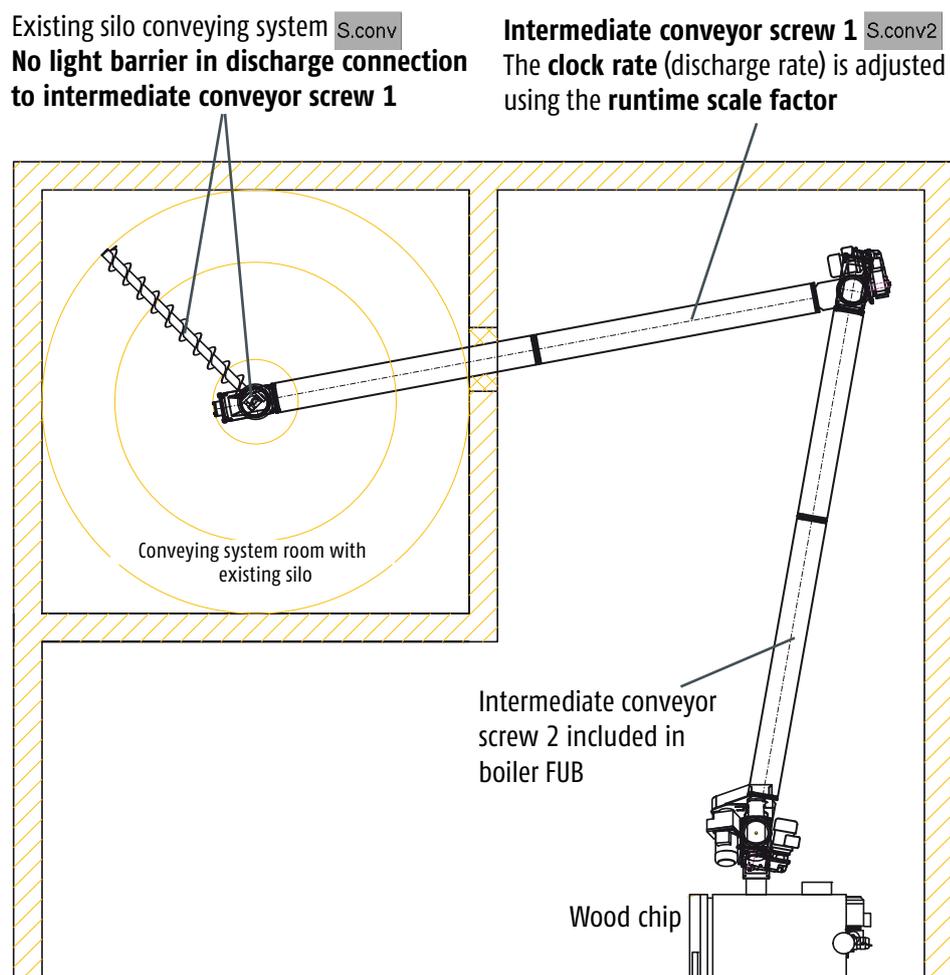
An existing silo conveying system carries the fuel to the boiler via two intermediate conveyor screws.

**No light barriers are installed in the discharge connection to intermediate conveyor screw 1** for monitoring the volume of fuel. As such, there is no means of monitoring the fuel volume, and intermediate conveyor screw 1 may become overfilled.

In order to prevent this, the **runtime scale factor in intermediate conveyor screw 1** is changed to the **maximum value of 80%**.

This means that **intermediate conveyor screw 1** only demands **80% of the clock rate of the existing silo conveying system** and only 80% of the original fuel volume is supplied to intermediate conveyor screw 1.

 The **runtime scale factor** may only be altered after **consulting ETA Customer Services**.



## Multiple intermediate conveyor screws

The two conveying systems Agitator 1 `S.conv1` and Agitator 2 `S.conv2` take turns in conveying the fuel to **Intermediate conveyor screw 1** `S.conv3`. From there, it is conveyed further to **Intermediate conveyor screw 2** and to the boiler.

 **Intermediate conveyor screw 2** is connected to the boiler. This means that the **control system is already contained in the Boiler FUB**, and this intermediate conveyor screw **does not require a separate Special conveyor FUB**.

 **Intermediate conveyor screw 1** `S.conv3` is the **consumer and producer** of the fuel. As such, the **"Producer demand"** option must be selected in the `S.conv3` FUB system configuration.

### Switching between conveying systems

The two conveying systems take it in turns to supply Intermediate conveyor screw 1 with fuel. In order to ensure that the fuel deposit is emptied at a steady rate, the system **switches** between the two agitators **automatically**.

This **switch can also be actuated manually**, for example if you only want one agitator to convey the fuel. **How to change** switching is described on page 164.

The discharge time for each conveyor is set in the Boiler FUB, and can be **changed** at any time. The factory setting for the **shifting time is 5 hours**. For more information, see page 164.

### Modes for multiple conveying systems

The following modes are **only displayed** if a conveying system FUB controls two additional conveying systems. (See example opposite.)

#### Conveyor 1

The conveying system 1 FUB is currently conveying the fuel to the intermediate conveyor screw or to another conveyor.

#### Waiting Conveyor 1

Fuel conveying is being switched to the Conveyor 1 FUB. This FUB will continue the conveying.

#### Self-check 1

The self-check for the conveying system 1 motors is currently being carried out.

#### Conveyor 2

The conveying system 2 FUB is currently conveying the fuel to the intermediate conveyor screw or to another conveyor.

#### Waiting Conveyor 2

Fuel conveying is being switched to the conveying system 2 FUB. This FUB will continue the conveying.

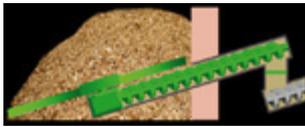
#### Self-check 2

The self-check for the conveying system 2 motors is currently being carried out.

#### Error

There are errors in the conveying system FUBs. Fuel conveying cannot continue.

**Conveying system 1** S.conv1

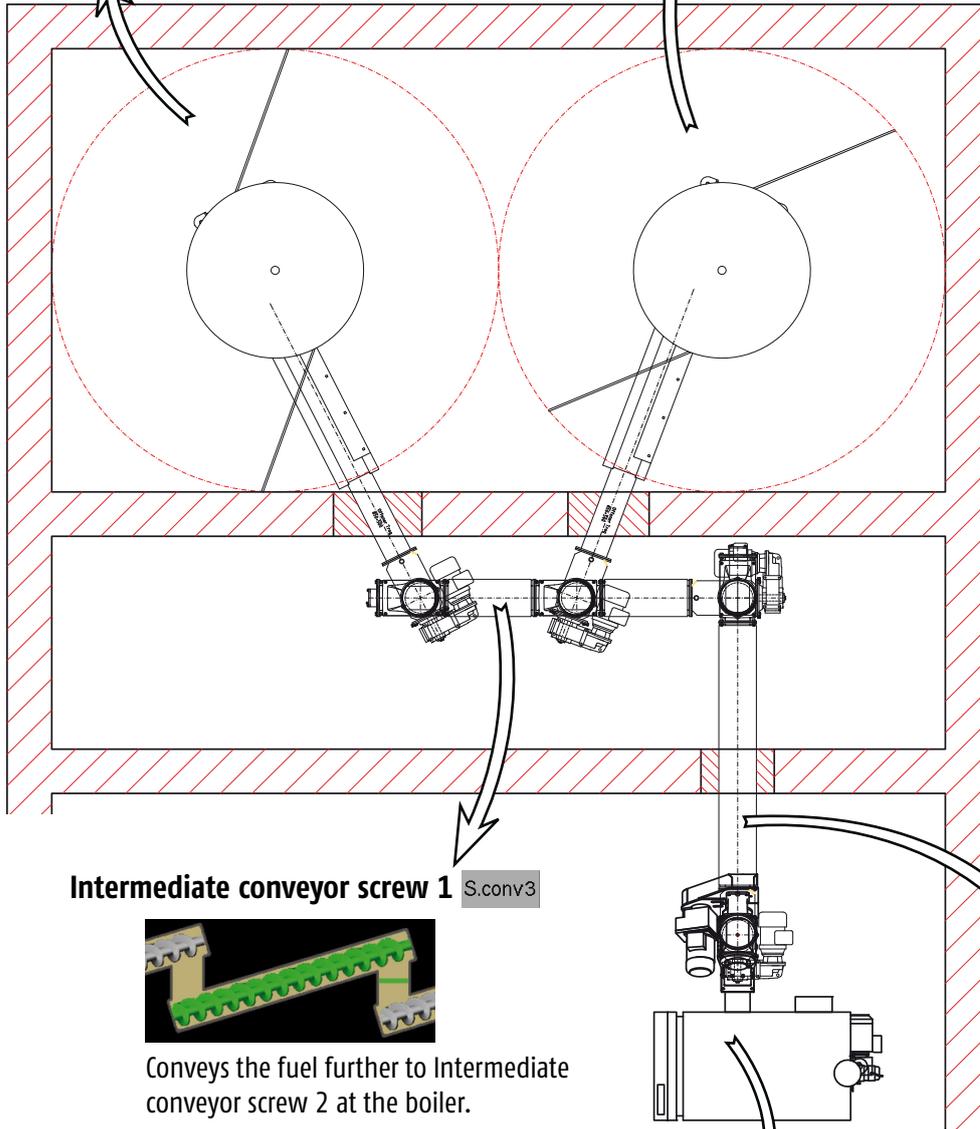


Alternately conveys fuel to the intermediate conveyor screw S.conv3.

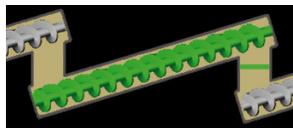
**Conveying system 2** S.conv2



Alternately conveys fuel to the intermediate conveyor screw S.conv3.



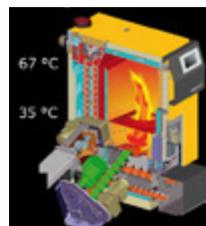
**Intermediate conveyor screw 1** S.conv3



Conveys the fuel further to Intermediate conveyor screw 2 at the boiler.

Intermediate conveyor screw 2 is included in boiler FUB

**Intermediate conveyor screw 2 included in boiler FUB**



Intermediate conveyor screw 2 is connected to the boiler, and its control system is contained in the Boiler FUB. Intermediate conveyor screw 2 therefore does not require a separate special conveyor FUB.

## Double agitator 2 agitators on one boiler

The two conveying systems **Agitator 1** S.conv1 and **Agitator 2** S.conv2 take turns in conveying the fuel to the intermediate conveyor screw on the boiler.



This **intermediate conveyor screw** is **connected to the boiler**, and the **control system** is thus **contained in the Boiler FUB**.

As such, the intermediate conveyor screw **does not require a separate Special conveyor FUB**.

### Automatic switching

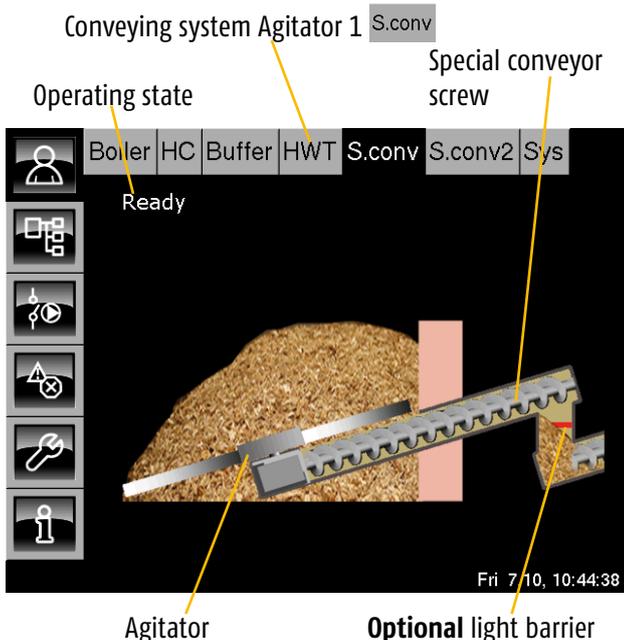
The two conveying systems take it in turns to supply the intermediate conveyor screw with fuel. In order to ensure that the fuel deposit is emptied at a steady rate, the system **switches** between the two agitators **automatically**.

This **switching process** and the **discharge times of the conveyors** can be **changed** (for more information, see page 164).

### Overview of the conveying system

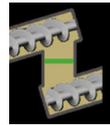
#### Agitator 1 S.conv1

The overview of the conveying system **Agitator 2** is displayed in the S.conv2 FUB.



#### Light barrier red

There is sufficient fuel in the drop chute. The light barrier has been interrupted and is displayed in red, with fuel. The special conveyor screw is switched off.



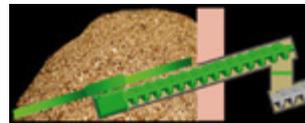
#### Light barrier green

If the light barrier is displayed in green, there is no fuel or insufficient fuel in the drop chute.



#### Agitator on standby

The agitator and screw are displayed in grey when not in operation or if the screw is turning against the discharge direction, e.g. in order to remove a blockage.



#### Agitator conveying fuel

The agitator and screw are displayed in green when the screw is turning in the discharge direction.

#### Ready **Current operating mode**

This line shows the current operating mode of the respective conveying system. Below is a list of the possible modes:

#### Ready

The conveying system is not currently in operation. There is no demand for fuel.

#### Full

There is sufficient fuel in the drop chute. The light barrier is interrupted.

### Conveying

The conveying system is in operation and is conveying the fuel to the intermediate conveyor screw.

### Error Self-check

A malfunction has occurred during the self-check.

### Error conveyor

The conveying system motor has caused a malfunction.

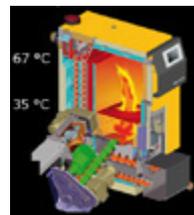
### Drop chute open

The sensor on the drop chute has been triggered. This may be due to a blockage.

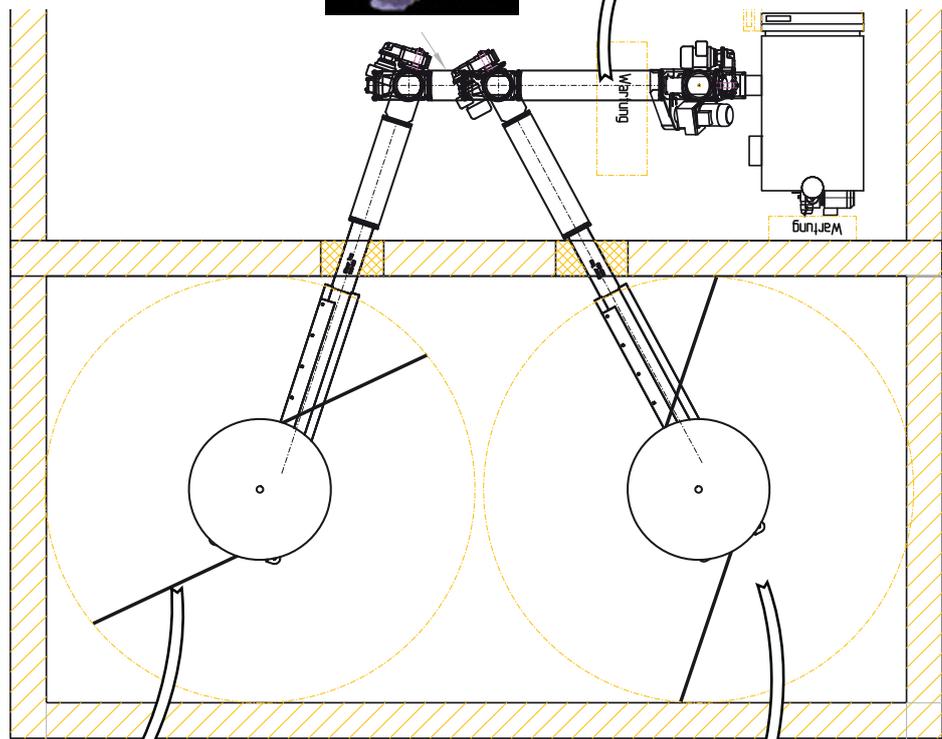
### Safety chain interrupted

The safety chain, e.g. water shortage, emergency stop, safety temperature limited, ash box, rotary valve maintenance cover... has been broken. Heating is locked and cannot be resumed.

### Intermediate conveyor screw included in boiler FUB



The intermediate conveyor screw is connected to the boiler. The control system is included in the boiler FUB.



**Conveying system 1** S.conv



Alternately conveys fuel to the intermediate conveyor screw or the boiler.

**Conveying system 2** S.conv2



Alternately conveys fuel to the intermediate conveyor screw or the boiler.

## Switching between conveying systems, "Shifting time" parameter in the Boiler FUB

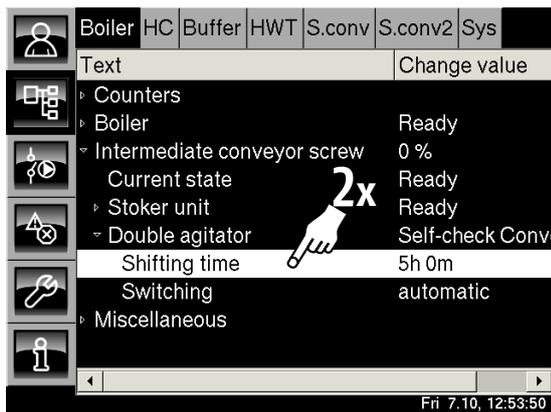
The discharge time for a conveyor can be set using the **"Shifting time" parameter** in the **Boiler FUB**. This sets the length of time for which a conveying system is in operation and supplying fuel. **Once this "Shifting time" has expired** (factory setting: 5 hours), the **system switches to the second conveying system to continue the process**.

## Changing the shifting time between conveying systems

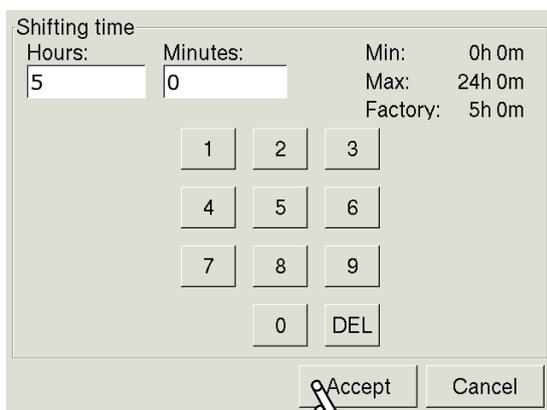
Press the buttons **Boiler** and **[Boiler]** to go to the boiler text menu.

Tap the **[Intermediate conveyor screw]** line and, in the submenu, select **[Double agitator]**.

Double-tap the **[Shifting time]** line.



A settings screen opens:



Enter the new time and press **Accept** to save.

## Manually switching between conveying systems

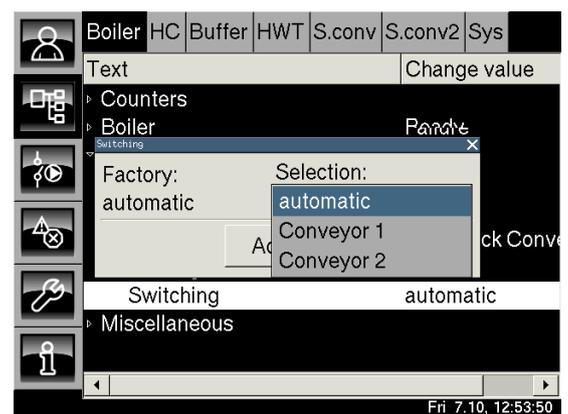
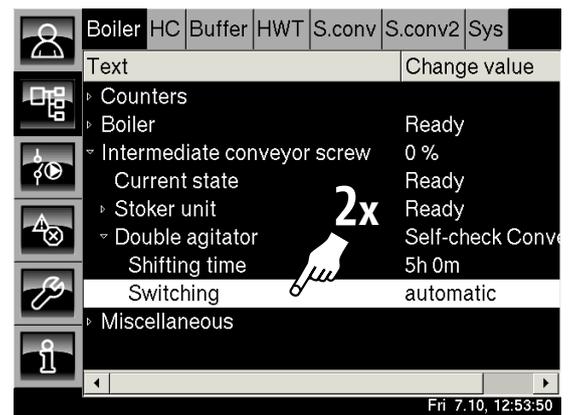
When using the factory settings, the system switches automatically between the conveying systems once the "Shifting time" has expired. However, this **switch can also be actuated manually**, for example if you only ever want one agitator to convey the fuel. You can switch manually between the conveying systems using the **"Switching" parameter in the Boiler FUB**.

## Manually changing conveying system

Press the buttons **Boiler** and **[Boiler]** to go to the boiler text menu.

Tap the **[Intermediate conveyor screw]** line and, in the submenu, select **[Double agitator]**.

Double-tap the **[Switching]** line. A settings screen opens:



Select the desired conveying system and press **Accept**.

**Only the selected conveying system will now be used to convey the fuel.**

To re-activate automatic switching, repeat the above procedure and select "automatic".



## Double discharge conveyor one agitator supplies 2 boilers

If one agitator is supplying two boilers, the **separate drive** is only used to drive the **agitator with the flat springs**.

The **conveyor screws are driven** by the corresponding **control system in the boiler**.

The agitator is put into operation as soon as one of the boilers demands fuel. At the same time, this boiler sets its discharge screw into operation in order to convey the fuel to the boiler.

## Alternating boiler operation, boiler order

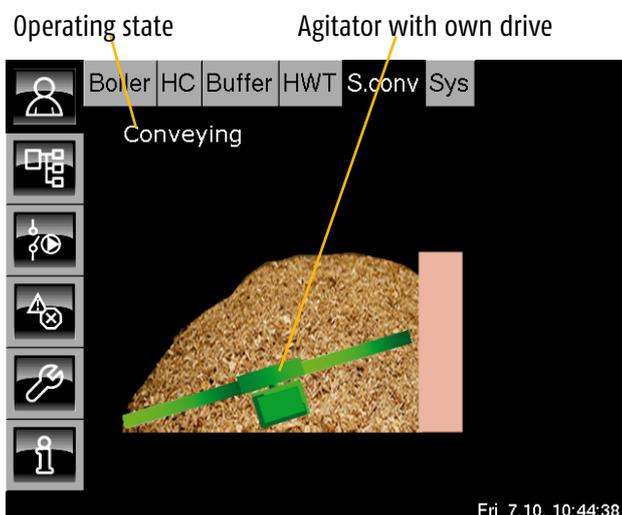
In order to ensure that both boilers are used equally, in the **factory settings**, only **one boiler** is in operation and the **heating switches** to the other boiler every **50 operating hours**.

If **one boiler can no longer meet the demand** from the consumers, the **second boiler is automatically put into operation**.

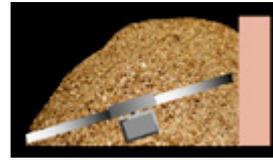
However, if only one boiler is ever in operation, e.g. in summer, when heating demand is low, the priority of the boilers must be changed using the **"Boiler Order" parameter** (for more information, see page 168).

The "Boiler Order" defines a **"Main boiler" which is always in operation**. The other boilers are then only switched on when demand is high.

 In the **factory settings**, **all the boilers** have the **same boiler order**, so they automatically alternate operation after every 50 operating hours.

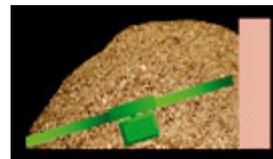


## Agitator on standby



The agitator is displayed in grey when not in operation.

## Agitator in operation



The agitator is displayed in green when it is in operation and conveying fuel.

## Conveying Current operating mode

This line shows the current operating mode of the agitator. Below is a list of the possible modes:

### Ready

The agitator is not in operation. There is no demand for fuel.

### Conveying

The agitator is in operation and is conveying fuel to one of the boilers.

### Error Self-check

A malfunction has occurred during the agitator motor self-check.

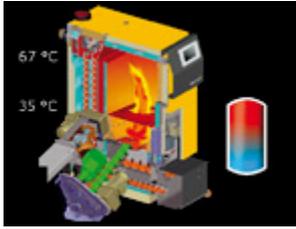
### Error conveyor

The agitator motor has caused a malfunction.

### Safety chain interrupted

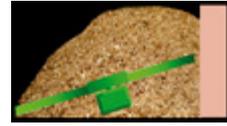
The safety chain, e.g. water shortage, emergency stop, safety temperature limited, ash box, rotary valve maintenance cover... has been broken. Heating is locked and cannot be resumed.

**Boiler 1** Boiler

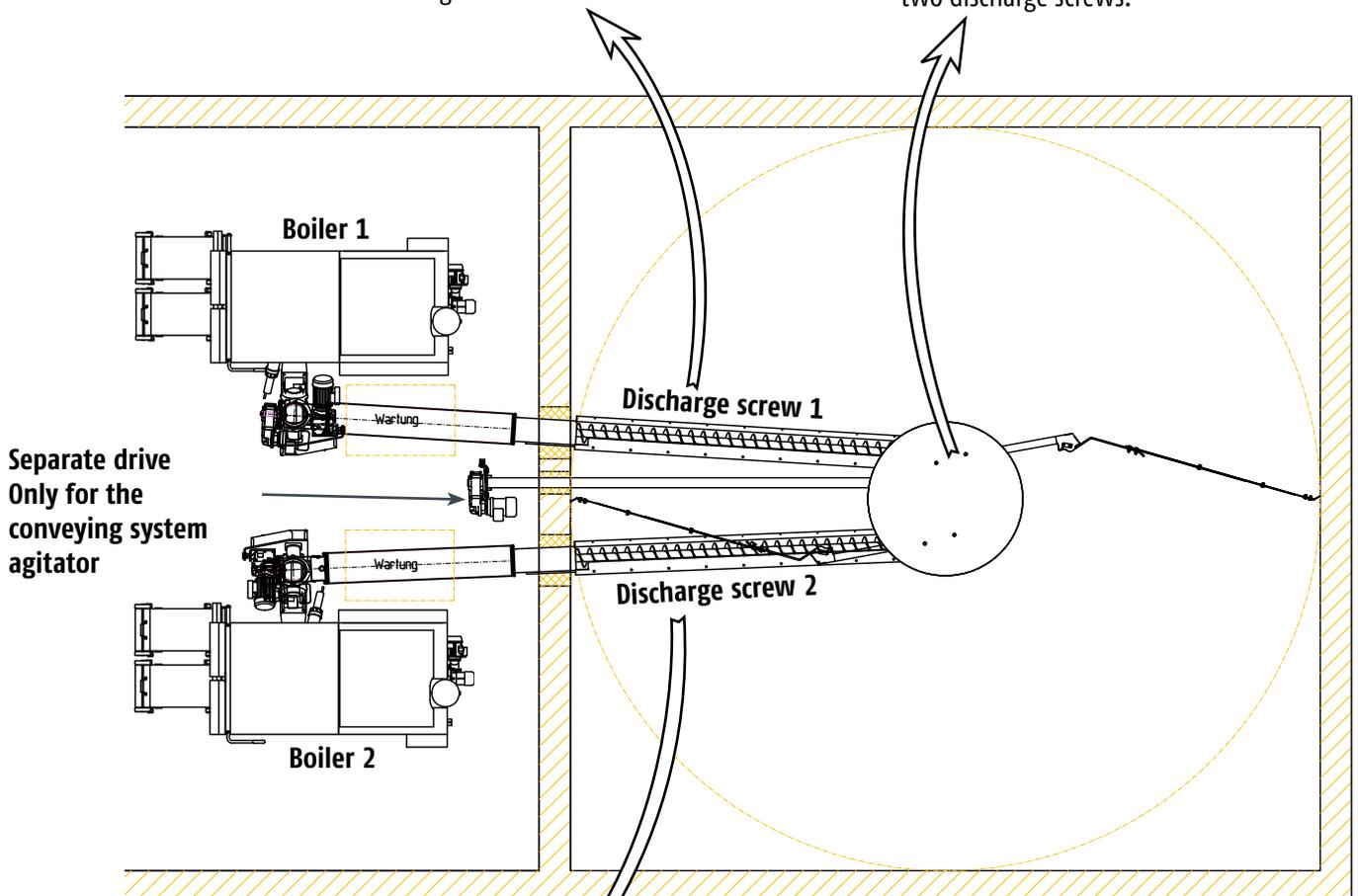


Boiler 1 controls discharge screw 1

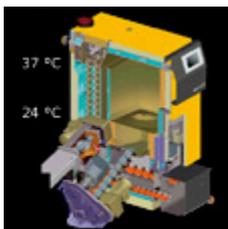
**Agitator** S.conv



The agitator only conveys the fuel to the two discharge screws.



**Boiler 2** Boiler 2



Boiler 2 controls discharge screw 2

## Adjusting the boiler order

The parameter "**Boiler Order**" is used to adjust the **priority of each boiler**. This can be given a setting from 1 (highest) to 4 (lowest).

The boiler with the **highest priority (1)** is defined as the "**Main boiler**" and is **always in operation**. Boilers with the priorities 2, 3 and 4 are automatically put **into operation in this order** if the "Main boiler" can no longer meet the demands of the consumers.

 If **2 boilers have the same priority**, they will be put into **alternating** operation, and the system will switch between them after every 50 operating hours. **In the factory settings**, every boiler has a priority of **1**.

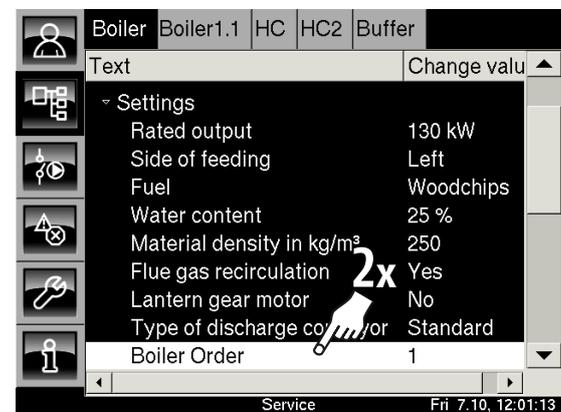
## Changing the boiler order

 The access level "Service" is required to change the "Boiler Order". For safety purposes, the **boiler order should be checked for all boilers**.

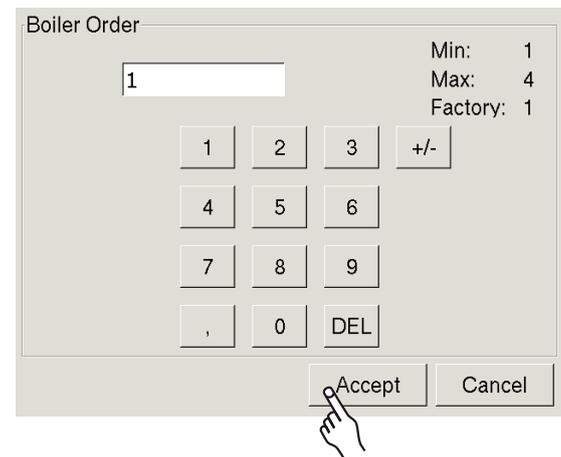
Select the corresponding **Boiler** FUB and press  to open the text menu.

Tap the [Boiler] line and, in the submenu, tap [Settings].

Double-tap the [Boiler Order] line.



A settings screen opens:



Change the boiler order (priority) for this boiler and press **Accept** to save.

## Connecting multiple boilers

If the control systems of multiple boilers are interconnected (e.g. double discharge conveyor), there are a few points that must be observed in order to **guarantee safe boiler operation**.

### Independent boiler power supplies



Each boiler must have an independent power supply.

It is forbidden to connect the power supply of one boiler to the next one.

### Removing the power supply from the CAN-Bus cable for extension circuit boards with no mains adapter

The extension circuit boards, such as HE-C and GM-C, are connected to the boiler's PCB via the CAN-Bus cable. This CAN-Bus cable is also used to supply power to the individual PCBs.



However, if an extension circuit board is fitted with a **separate mains adapter as a power supply, the power supply wires must be removed from both sides of this CAN-Bus cable. Only the CAN-Bus wires CH (CAN HIGH) and CL (CAN LOW) are permitted to be looped in.**

In situations where multiple boilers are interconnected, the power supply would otherwise be channelled from the boiler with the CAN-Bus cable via the extension circuit board to the next PCB.

Extension circuit boards often require their own power supply so that the devices connected to them also function when the boiler is disconnected from the mains. For example, with a double discharge conveyor:

The HE-C PCB is connected separately so that the agitator continues to function when one of the boilers is disconnected from the mains.



If an additional touchscreen is connected via a CAN-Bus cable, the power supply in this CAN-Bus cable must be maintained.

### Setting node switches correctly

If several extension circuit boards of the same design, e.g. GM-C, HE-C etc. or additional touchscreens are installed in the system, these must be given different node numbers so that the control system can differentiate between these extension circuit boards.

The **node number** can be changed using the **node switch** on the **extension circuit board** in question.

Example: Wood chip boiler with extension circuit board GM-C for 2 extra mixing circuits:

A GM-C PCB with the node number 0 is already connected to the boiler. The node number on the extension circuit board GM-C (for the 2 extra mixing circuits) must therefore be changed, e.g. to 1.

If 2 boilers are installed in the system, it follows that all PCBs on the 2nd boiler should have the node number 1. Only after this should the extension circuit boards be assigned the node numbers 2, 3, 4 etc.



**The node numbers 0 to 7 are available**, even if the node switch has 16 positions. If the switch is moved to position 8, this corresponds to node 0. Any **changes made to node numbers** are not adopted until **after the system is restarted**.

### System configuration on just one touchscreen



Once the boiler and extension circuit boards are connected, the power supply isolated from the CAN-Bus and the node switches set correctly, system configuration can begin.

The entire **system configuration is carried out on just one touchscreen** with the help of the "Configuration assistant". During this process, all the system components are installed on their respective PCBs.

Once configuration is complete, all the function blocks can be seen on each of the connected touchscreens. Function blocks can be **shown or hidden** so that each touchscreen only shows those that are relevant to the customer (for more information, see page 10).

## "Ash removal" overview

Press  and  to open the "External ash removal" overview screen.

Ash removal

 This FUB is only available on **wood chip boilers** with the **HE-C extension circuit board**.

With external ash removal, an additional ash screw is installed in place of the ash box. This conveys the ash from the boiler to a separate waste bin.

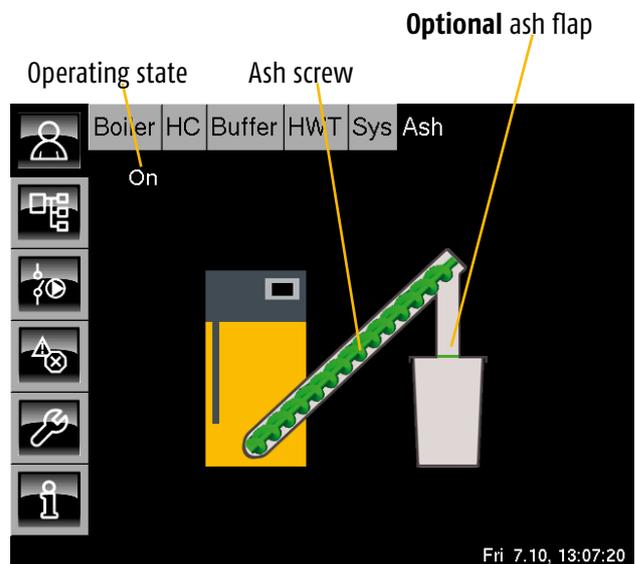
### Optional "Ash flap"

The ash flap is located in the drop chute of the external ash removal unit to prevent the leak air from reaching the boiler via the ash screw. The ash flap is always closed, and only opens when the grate in the boiler tips up during ash removal.

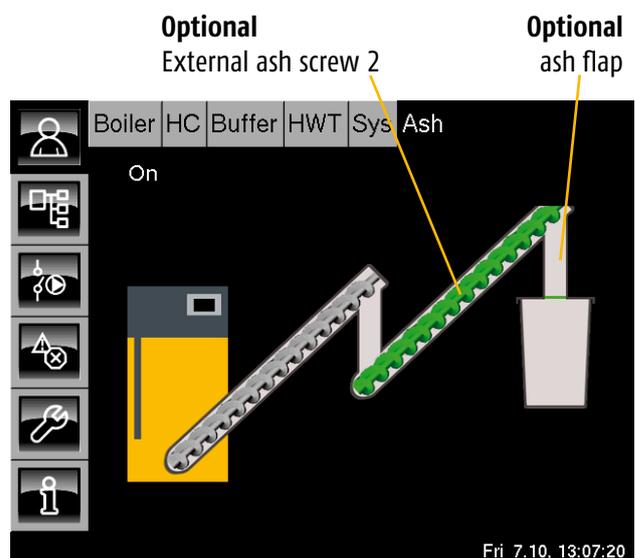
### Optional "External ash screw 2"

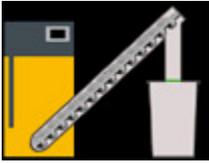
If a second ash screw (the optional "External ash screw 2") is configured, this is also shown in the overview.

### External ash removal with one ash screw



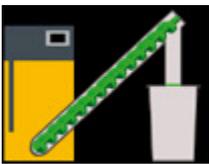
### External ash removal with 2 ash screws





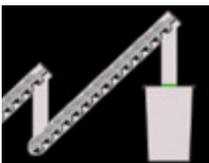
**Ash screw on standby**

The ash screw is displayed in grey when not in operation.



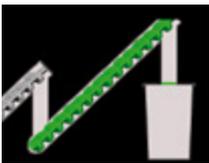
**Ash screw in operation**

The ash screw is displayed in green when it is turning in the discharge direction.



**Ash screw 2 on standby**

Ash screw 2 is displayed in grey when not in operation.

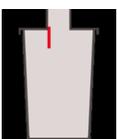


**Ash screw 2 in operation**

Ash screw 2 is displayed in green when it is turning in the discharge direction.



**Ash flap closed**



**Ash flap open**

## On **Current operating mode**

This line shows the current operating mode of the ash screw. Below is a list of the possible modes:

### Self-check screw 1

Ash screw 1 is performing a self-check on the drive.

### Self-check screw 2 (external ash screw 2 only)

Ash screw 2 is performing a self-check on the drive.

### Ready

The ash screw is not currently in operation. There is no demand from the control system.

### On

The ash screw is conveying the ash to the waste bin.

### Error

There is an error. There was an error either in the ash screw self-check or in the power supply, or the ash flap is not opening or closing.

## The "Ash flap open" parameter

This parameter is used to define the length of time the ash flap needs to open fully.

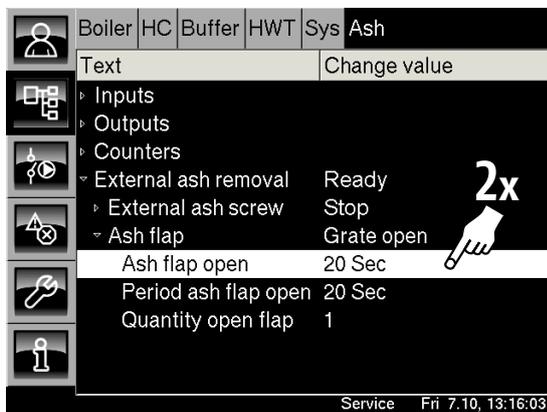
 The factory setting for this period is 20 seconds. The access level "Service" is required to adjust this setting.

## Changing "Ash flap open"

Using the access level "Service", press the buttons  and **Ash** to open the text menu.

Tap the [External ash removal] line and, in the submenu, select the [Ash flap] line.

Double-tap on the [Ash flap open] line.



A settings screen opens:



Enter the new time and press  to save.

## The "Period ash flap open" parameter

This parameter is used to define the length of time for which the ash flap remains open before it closes again.

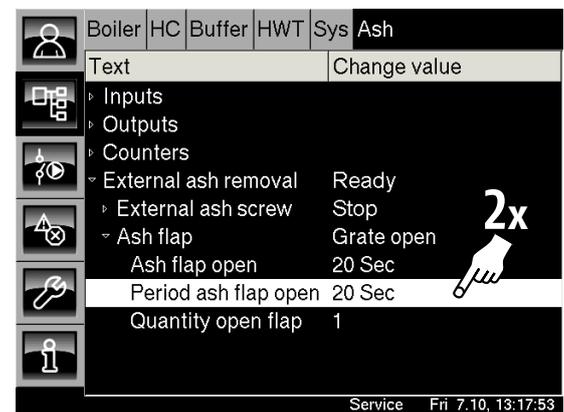
 The factory setting for this period is 20 seconds. The access level "Service" is required to adjust this setting.

## Changing "Period ash flap open"

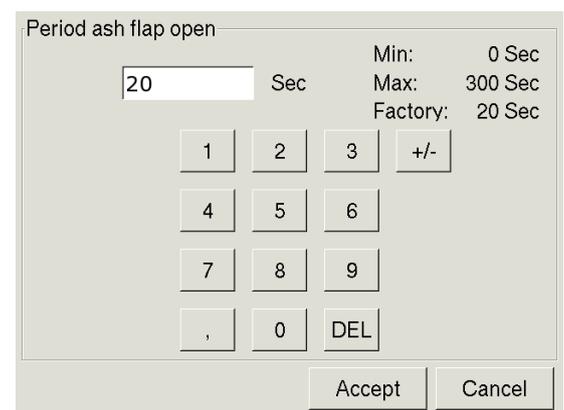
Using the access level "Service", press the buttons  and **Ash** to open the text menu.

Tap the [External ash removal] line and, in the submenu, select the [Ash flap] line.

Double-tap on the [Period ash flap open] line.



A settings screen opens:



Enter the new time and press  to save.



### Using remote control

With remote control, you can control your ETA boiler over long distances via the Internet with a PC, smartphone or tablet (pad), just as if you were standing in front of the boiler's touch screen.

For example, if you are away from home for a long time, you can verify that the heating is switched off. You can also switch it back on before you return.

The ETA boiler's touch screen is connected to the Internet. Once you have registered your touch screen, you can log in to the ETA homepage <[www.meinETA.at](http://www.meinETA.at)> using your access details.

You can access this homepage via a PC with an Internet connection or a smartphone or tablet with Internet capabilities. You can view the touch screen at <[www.meinETA.at](http://www.meinETA.at)> and control your boiler remotely.

### Creating a partner network

The "Partner Network" function allows you to assign access rights to other users via the homepage <[www.meinETA.at](http://www.meinETA.at)>. This gives multiple users access to your boiler touch screen.

Example:

An installer can access customer touch screen controls via <[www.meinETA.at](http://www.meinETA.at)>. In order to allow this, the customers simply need to authorise the installer's access (see page 186 onwards).



### Boiler with touch screen and software version 1.18.0 or higher

In order to use the remote control function, your boiler must be equipped with an ETAtouch control system (touch screen). The software installed on the boiler must be version 1.18.0 or higher. If this is not the case, the software must be updated.

### Internet connection

In order to establish an Internet connection to your boiler, the touch screen must be connected to the Internet. To do this, the house must have a broadband Internet connection. The connection can be established via:

- a network cable from your modem to the touch screen
- or
- the ETA FreeLine wireless connection

### Browser for remote control

You can connect your PC, smartphone or tablet to the boiler via <[www.meinETA.at](http://www.meinETA.at)>.

In order to do this, you must have a browser that supports HTML 5, e.g.:

- Mozilla Firefox
- Apple Safari
- Google Chrome
- Microsoft Internet Explorer version 9 or higher
- some default Android browsers 2.2 or higher

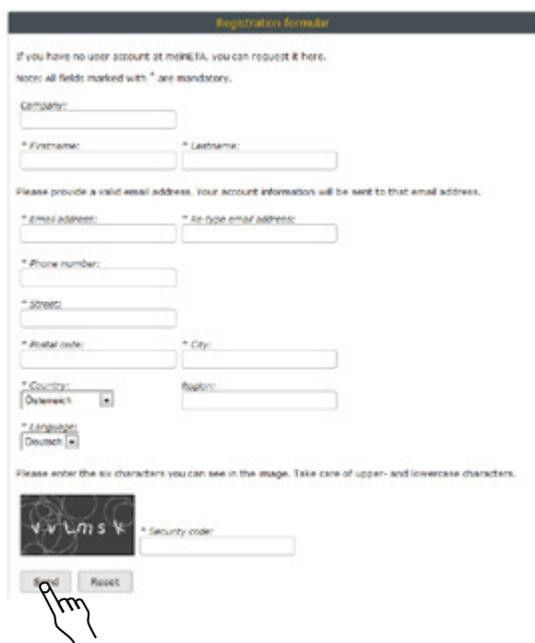
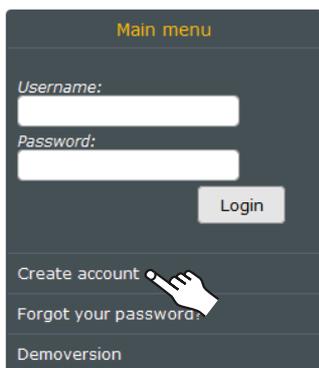
### Internet connection via smartphone or tablet

In order to use the remote control function from your smartphone or tablet (pad), your device must use either Android or iOS (Apple) as its operating system. Your network operator's Internet service must provide at least "EDGE"-level service ("3G" recommended).

## Requesting login data

You can request login data for using remote control at <www.meinETA.at>. Each account is registered to a person, not to the boiler.

Press the [Create account] button and enter the required information in the corresponding fields.



Once you have entered all the data, press [Send]. Your details will be sent to ETA, and your personal login data (username and password) will be sent to the specified e-mail address.

 You can still change your personal data after you have registered. It is recommended that you change your password to a personal combination that you will be able to remember.

## Checking your Internet connection

In order to allow remote control of your boiler via <www.meinETA.at>, the touch screen of your boiler must be connected to the Internet. This connection can be made via a network cable or a wireless connection, e.g. ETA Freeline.

 Before connecting the touch screen to the network, it is a good idea to use a laptop to check that the Internet connection is working. To do this, plug the cable into your laptop and test whether you can access the Internet using this LAN connection.

## Connecting the network cable to the touch screen

On **PU** and **PC** boilers, remove the upper casing. You do not need to remove the front of the boiler unless you are inserting the cable via the tube running from the base of the boiler.

Plug the network cable into the port at the bottom left-hand corner of the touch screen (under the casing).



Port for network cable

On **PE-K** and **HACK 20 to 130** boilers, remove the upper boiler casing. The cable duct in the electronics board houses the end of a patch cable that protrudes from the door. A patch extension cable (male/female) is required to extend this connection.

On the **HACK 200**, the end of the patch cable is located in the control box on the side of the boiler.

## Controlling the touch screen in a control extension (wall housing) by remote control?

 If the control extension is connected to the boiler via a CAN bus, a separate Internet connection is not required.

A separate Internet connection is required if you have an "island" control system that is not connected to the boiler.

## Checking the network settings

The network settings must be checked in order to ensure that the touch screen can be controlled remotely via <www.meinETA.at>. "Service" level access is required to do this.

 The network settings must be checked on every touch screen that is intended for use by remote control.

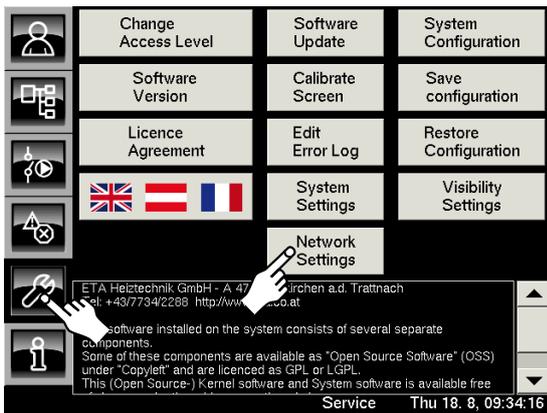
 Make sure that the Internet connection network cable is connected to the touch screen and that the Internet connection is active.

Remote control

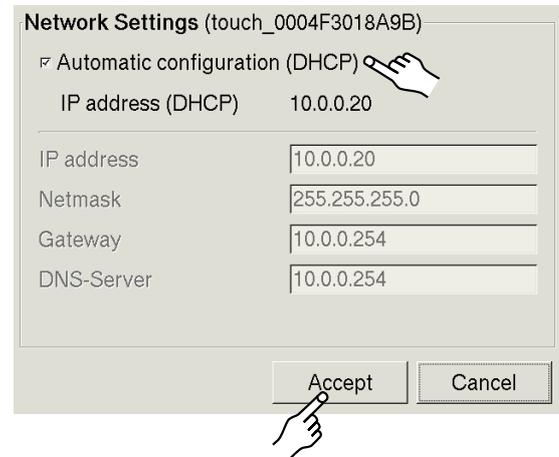
## Checking the network settings

Using "Service" level access, go to the toolbox by pressing .

Press the [Network Settings] button.



A screen opens:

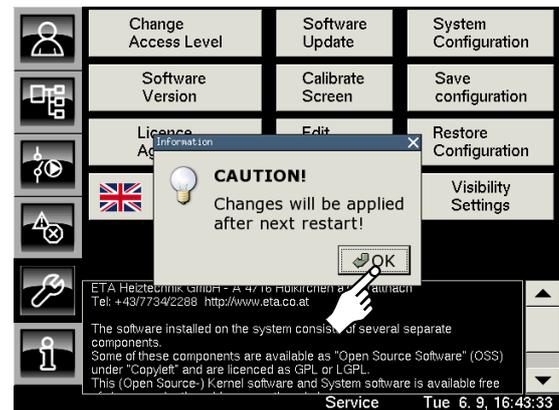


Select [Automatic configuration (DHCP)], then press [Accept].

Once this option has been activated, the system will check the network settings after it has restarted and configure them automatically.

## Restarting the boiler using the main switch

A message appears indicating that the changes will not be applied until the next time the unit is restarted.



Press [OK] and switch off the boiler at the main switch. Wait for about 10 seconds, then switch it back on again.

## After restarting change to "Service" level access

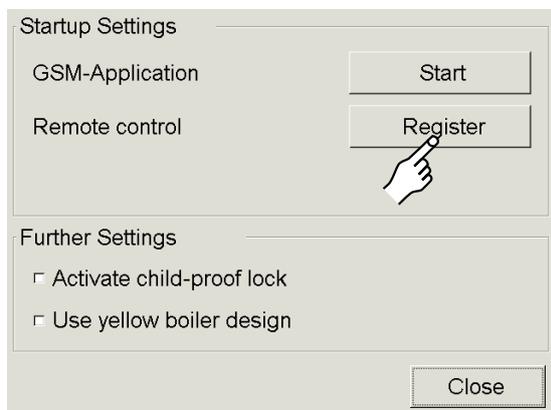
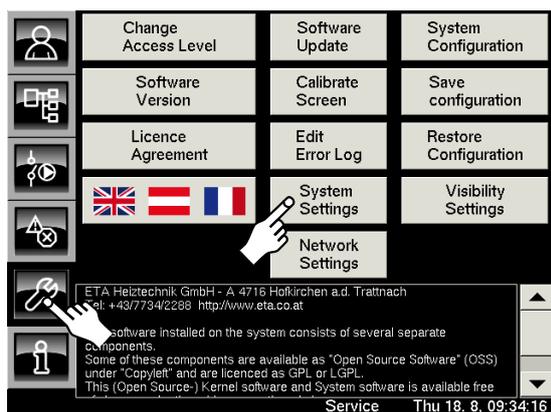
Once the boiler has been restarted, switch to "Service" level access to register the touch screen.

## Registering the touch screen

Once the network settings have been configured, the touch screen must be registered in order for it to become accessible via <www.meinETA.at>. Each user registered at <www.meinETA.at> can be granted access to any number of boilers. Access can be granted by entering the user's personal login data on the boiler.

 Each touch screen for which remote control access is required must first be registered.

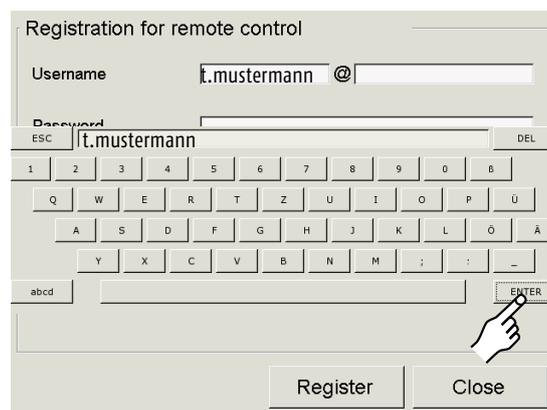
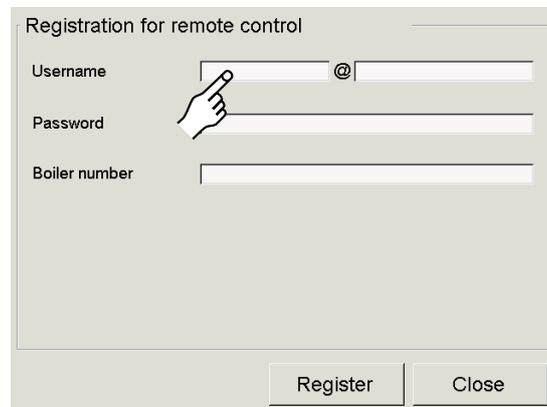
Using "Service" level access, press the  button and select [System Settings].



Press .

## Entering your personal login details

Enter your personal login details in the empty fields. A keyboard appears when you tap each field.



Enter your username and press .

Use the same method to enter the remaining login data.

## Entering the boiler manufacturer number

Enter the manufacturer number of the boiler in the field marked "Boiler number". This is given on the boiler's type plate.

Once you have entered all your login data, press **Register** to save the data.

Registration for remote control

Username

Password

Boiler number

**Register** **Close**

Remote control

## Registering the touch screen

Once you have pressed the **Register** button, the touch screen is registered at <www.meinETA.at>.

The  symbol appears at the bottom of the screen while the system is establishing an Internet connection.

	Change Access Level	Software Update	System Configuration
	Software Version	Calibrate Screen	Save configuration
	Licence Agreement	Edit Error Log	Restore Configuration
		System Settings	Visibility Settings
	Network Settings		
	ETA Heiztechnik GmbH - A 4716 Hofkirchen a.d. Trattnach Tel. +43/7734/2268 http://www.eta.co.at		
	The software installed on the system consists of several separate components. Some of these components are available as "Open Source Software" (OSS) under "Copyleft" and are licensed as GPL or LGPL. This (Open Source-) Kernel software and System software is available free		

Service Thu 18. 8, 09:34:16

 If the system is unable to establish an Internet connection, check that the login data you have provided is correct.

## Internet connection status

After a delay of about 15 seconds, the screen displays the current status of the Internet connection.



### Connecting

This symbol is displayed while the touch screen is establishing an Internet connection, during registration or after remote control has been switched on.



### Connected

The touch screen has an active Internet connection to the homepage <www.meinETA.at>. The boiler can be controlled remotely.



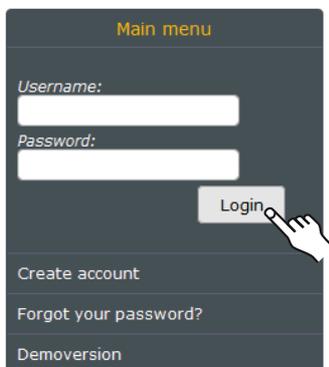
### No connection possible

The touch screen is not currently connected to the Internet. If this symbol is still being displayed after one minute, there is a fault in the access cable, with your Internet service provider or with the meinETA server.

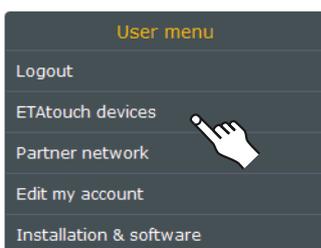
In order to locate the fault, it may help to test the network connection by connecting a laptop to the network instead of the boiler.

## Logging on at <www.meinETA.at>

Open the homepage <www.meinETA.at> and enter your login data. Press the [Login] button to log in.



Once you have logged in successfully, the user menu will appear. Tap the [ETAtouch devices] button.



## Opening the touch screen

The [Currently connected ETAtouch devices] window shows the currently available touch screens.



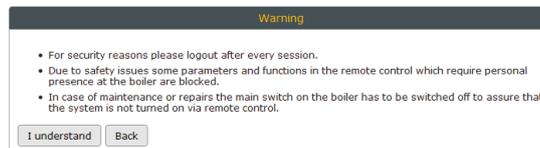
Press the **button** to view the corresponding touch screen.

In the [Registered ETAtouch devices] window, you can use the **button** to **change the data** for each registered touch screen.



## Safety notice

Before the touch screen is displayed, a safety notice appears. This notice must be observed in order to ensure safe operation of the heating system.



Confirm that you have read and understood the safety notice by pressing [I understand]. The touch screen will then appear. The display is the same as the current display on the boiler.



You can now control the boiler remotely, exactly as if you were standing in front of it.

For safety reasons, some functions and parameters **cannot be changed via remote control** (see page 182.)

## Errors and warnings may NOT be rectified via <www.meinETA.at>

**Any errors or warnings that are displayed can and may only be rectified on site, i.e. directly via the boiler.**

Rectifying an error using the remote control is not permitted. This is because doing so could injure anyone who is working on the boiler to rectify the error.

**In particular, you should avoid switching the boiler on via remote control if an error message is present.**

## Example: Switching on the boiler

Press the On/Off button  to switch on the boiler.



Remote control

## Closing the touch screen display

Press [Back] to close the touch screen display.



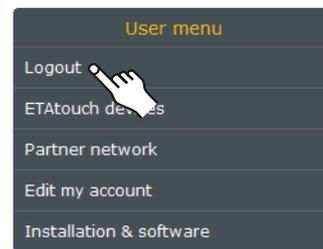
The menu display appears again.



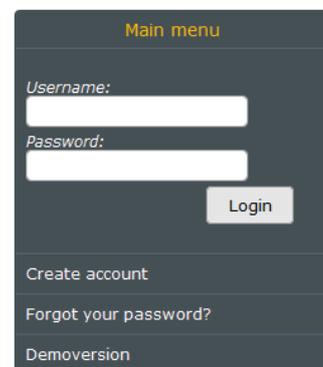
Press the  button to view the corresponding touch screen.

## Logging out of remote control

Once you have finished using remote control, press the [Logout] button on the homepage.



The display returns to the start page.



 Logging out minimises the data flow from the touch screen to the homepage, thus significantly reducing the download volume. This is especially important for reducing the download volume for Internet connections **without** a flatrate tariff. The touch screen remains connected to the meinETA server via the Internet.

## Automatic logout after 10 minutes of inactivity

If the remote control remains unused for longer than 10 minutes, you will be logged out automatically.

## Remote control operating modes

In the boiler overview, the current remote control mode is shown at the bottom of the screen. The remote control system has 3 different operating modes.

 A different operating mode can be selected for each touch screen.

 **Remote control must** always be set to **"Off"** or **"Only View"** before rectifying errors or performing maintenance work.

 **"On"**

Remote control is on and the unit is connected to the Internet. The heating system can be controlled remotely.

 **"Off"**

Remote control is switched off. The remote control can only be switched on again directly via the touch screen of the boiler or the control system.

 **"Only View"**

In "Only View" mode, the touch screen is displayed via the homepage <[www.meinETA.at](http://www.meinETA.at)>. The boiler can be **monitored**, but it is **not possible** to send **commands via remote control**.

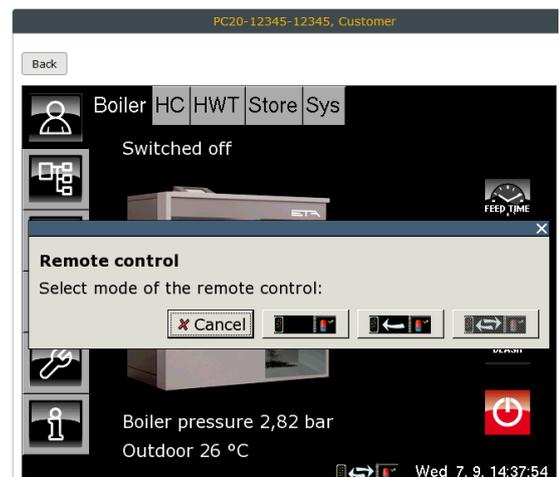
 **Remote control must** always be set to **"Off"** or **"Only View"** before **rectifying errors or performing maintenance work**. This prevents others from switching the boiler on via remote control while an error is being fixed or maintenance is being carried out.

## Changing the operating mode of the remote control system

In the "Boiler" overview, tap the remote control icon at the bottom of the screen.



A selection window appears:



Tap the operating mode you require to select it.

## Switch remote control back on

 If remote control has been switched off, it can only be switched on again via the touch screen of the boiler or the control system.

To re-activate remote control, tap the  icon on the touch screen and select "On"  in the window that appears.

The  symbol appears while the connection is being established.

## For safety reasons, some commands can only be executed at the boiler itself

With remote control, you can control the boiler as if you were standing right in front of it.

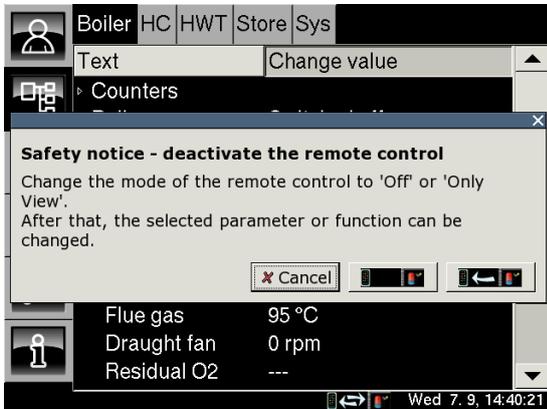
However, for safety reasons, some **parameters and functions are unavailable remotely**. These can only be executed when somebody is by the boiler itself. This also prevents somebody else from activating a drive remotely while an error is being fixed or maintenance work is being carried out.

For example, none of the drives (stoker, ash screw etc.) can be set to manual operation using remote control.

**Remote control must** always be set to **"Off"** or **"Only View"** before **rectifying errors or performing maintenance work** (see page 181).

## Note on blocked parameters/functions

If a blocked command is selected while remote control is active, a notice window will appear.



If no buttons are pressed, this notice window automatically disappears after 4 seconds.

If the **"Only View"** mode is selected, using remote control, the ETA customer service is able to monitor and provide assistance, for example, but is unable to make changes.

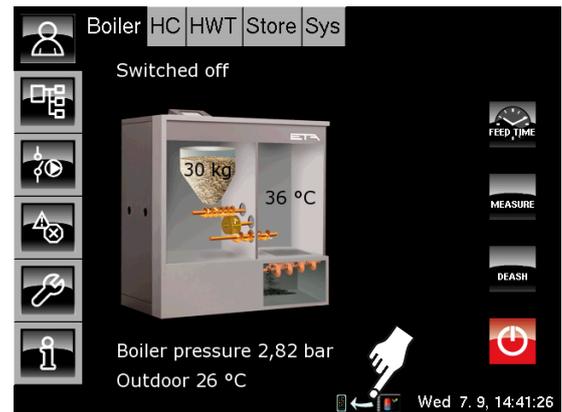
In **"Off"** mode, remote control is switched off. Remote display of the touch screen is therefore not possible.

## Modifying parameters

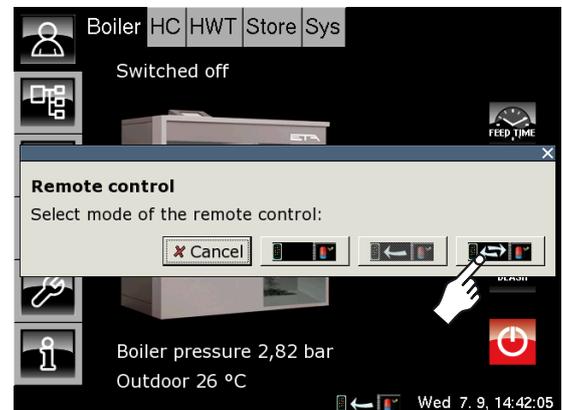
**Do not modify parameters unless you know what their function is.** Read the corresponding section of the operating instructions before making any modifications. If the explanation of the relevant function given in the instructions is not sufficient for your purposes, **contact a technician**.

## Switching remote control back on

Tap the remote control icon on the touch screen.



A window appears:



**"On"** is the only available option.

**"Only View"** mode can only be selected when remote control is **"On"**.

## Personal login data

Once you have registered, you will be sent your personal login data (username and password).

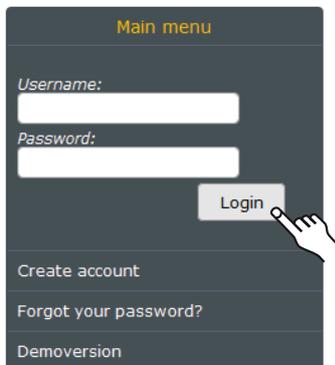
 For the login at <www.meinETA.at>, it is only possible to change the password. Your username will always stay the same, even if you change the e-mail address in your personal details.

 If you change your password for logging in at <www.meinETA.at>, your new password will also be the password required to register another touch screen.

If a touch screen is added at a later date, the current login data (username and current password) are always required.

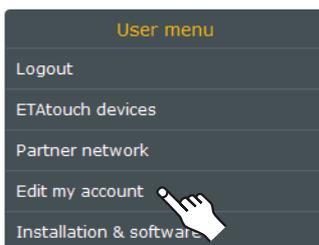
## Changing your password or personal details

Log in to the homepage <www.meinETA.at> using your current login data.

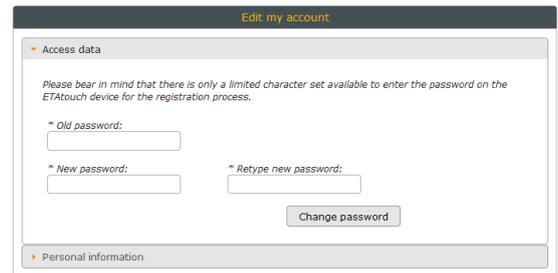


The screenshot shows a dark-themed 'Main menu' with the following elements: 'Username:' and 'Password:' labels above their respective input fields; a 'Login' button with a hand icon pointing to it; and a list of menu items: 'Create account', 'Forgot your password?', and 'Demoversion'.

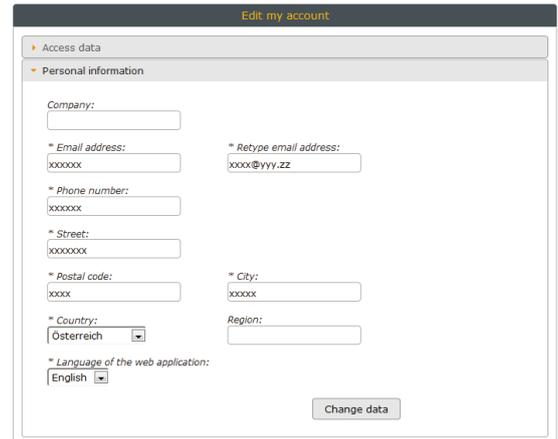
In the user menu, tap [Edit my account]. The screen will display your current details.



The screenshot shows a dark-themed 'User menu' with the following elements: 'Logout', 'ETAtouch devices', 'Partner network', 'Edit my account' (with a hand icon pointing to it), and 'Installation & software'.



The screenshot shows the 'Edit my account' screen with the 'Access data' section expanded. It contains a warning: 'Please bear in mind that there is only a limited character set available to enter the password on the ETAtouch device for the registration process.' Below this are three input fields: '\* Old password:', '\* New password:', and '\* Retype new password:'. A 'Change password' button is located at the bottom right of this section. The 'Personal information' section is collapsed.



The screenshot shows the 'Edit my account' screen with the 'Personal information' section expanded. It contains several input fields: 'Company:', '\* Email address:', '\* Retype email address:', '\* Phone number:', '\* Street:', '\* Postal code:', '\* City:', '\* Country:' (with a dropdown menu showing 'Osterreich'), '\* Language of the web application:' (with a dropdown menu showing 'English'), and 'Region:'. A 'Change data' button is located at the bottom right.

You can now change your password and core details.

Press the [Change password] or [Change data] button to save your changes.

 If a touch screen is added at a later date, the current login data (username and current password) are always required.

## Quantity of data transmitted, download volume

As soon as remote control is switched on, the touch screen automatically connects to the homepage <www.meinETA.at>, and data is transmitted.



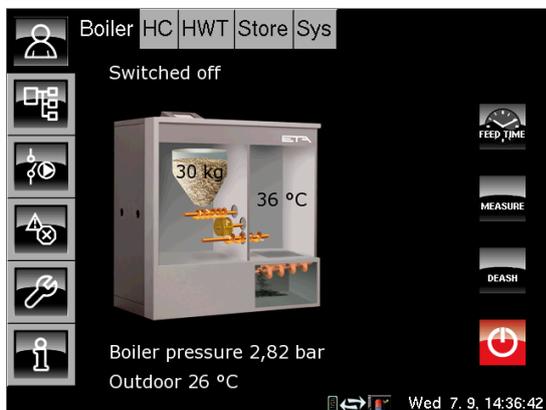
In order to avoid excessive costs, we recommend that you have an Internet connection with a flatrate tariff or a contract with no data download limit. At the very least, we recommend that you regularly check your download volume.

## Has the Internet connection been interrupted?

The Internet connection between the touch screen and the homepage <www.meinETA.at> is checked every 10 seconds.

If the connection is active, the symbol  is displayed at the bottom of the screen.

If the Internet connection has been interrupted due to an error in the access cable, with your Internet service provider or with the meinETA server, the boiler's touch screen displays the  symbol.



## Checking your Internet connection

In order to locate the error, it may help to test the network connection by connecting the boiler's network cable to a laptop.

## Cancelling touch screen registration

If you wish to completely cancel the registration for remote control of a touch screen, you must cancel the registration for the touch screen.

This can be done directly via the touch screen in question. It is not possible to cancel registration via remote control.

 "Service" level access is required to cancel registration.

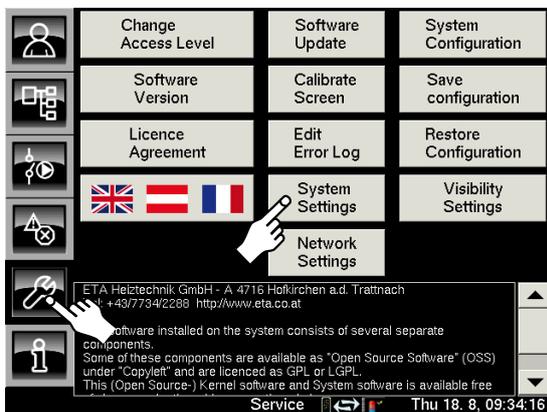
If you wish to cancel multiple registrations, follow the steps below separately for each of the touch screens in question.

## Cancelling your registration

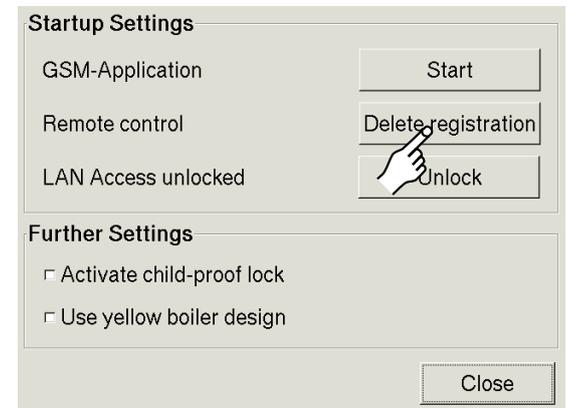
Switch to the "Service" access level on the touch screen for which you wish to cancel the registration.

Press the  button to go to the toolbox.

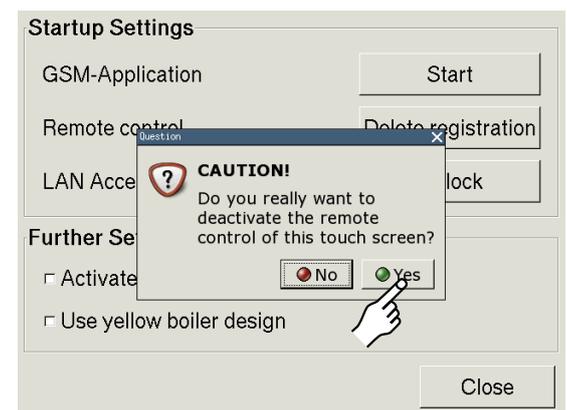
Press the [System Settings] button.



You can cancel the touch screen registration by pressing [Cancel registration].



The system will ask you to confirm whether you really wish to cancel the registration.



Press  to cancel the registration for the touch screen.

It will now no longer be possible to access this touch screen via remote control.

## Re-registering the touch screen

 If you wish to return to operating the touch screen by remote control, you will need to re-register (see page 177 onward).

Use your current login data for re-registration.

## Setting up a partner network Granting access to the touch screen

The "Partner network" function can be used to grant one or more people remote access to your touch screen.

The people in question must be registered at <www.meinETA.at> prior to setting up the network (see page 175).

The boiler owner generates an "activation code" and passes this on to the partner requiring access. The new partner enters this code in the "Partner network" menu at <www.meinETA.at>. The new partner will then be granted access to the boiler. The partner receives full access as soon as the boiler owner grants them access to the touch screen.

 The boiler owner can revoke or cancel this access at any time (see page 189).

### Example: Installer and boiler owner

The boiler owner wishes to grant the installer access to the touch screen so that he can provide the required assistance.

The boiler owner requests an **activation code** for his registered touch screen via <www.meinETA.at> and passes this code on to the installer.

The installer then registers at <www.meinETA.at> and enters the **activation code** in the **"Partner network"** menu. This gives the installer authorisation. However, he still does not have access. **Finally, the boiler owner enables access for the installer.** The installer can now access the touch screen.

### The advantage of the partner network

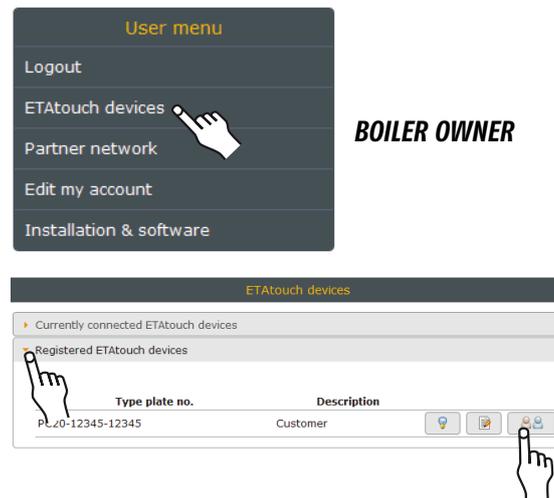
The installer can make minor adjustments to the heating via remote control, and can prepare better for service operations such as repairing errors or performing maintenance.

District heating network operators have access to a quick overview of their individual customers, allowing them to provide rapid assistance when needed.

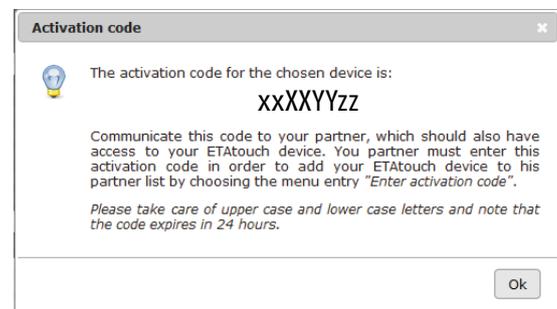
## Requesting an activation code for touch screens

The **boiler owner** (owner of the control system) must log in to <www.meinETA.at> using his login data.

Open the [ETAtouch devices] menu and select [Registered ETAtouch devices].



Tap the  symbol to generate and display an activation code for a newly authorised user.



Pass this activation code on to the partner or installer in question.

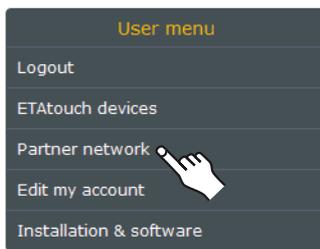
 The activation code is only valid for 24 hours.

## Entering the activation code

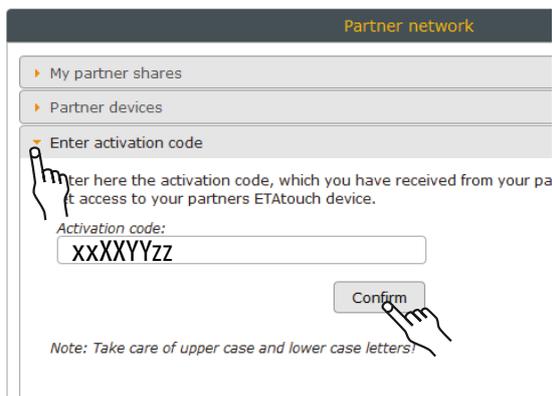
 The activation code must be entered by the person who requires the additional access to the touch screen.

This person must be registered at <www.meinETA.at>.

Log in to <www.meinETA.at> using the login data. Open the [Partner network] menu and select the [Enter activation code] sub-menu.

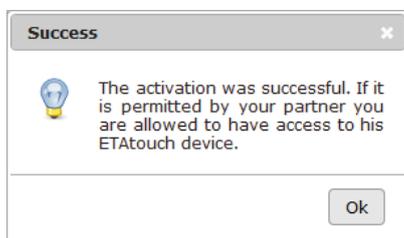


**AUTHORISED PARTNER**  
e.g. installer



Enter the case-sensitive activation code you received from the owner. Press [Confirm] to save the code.

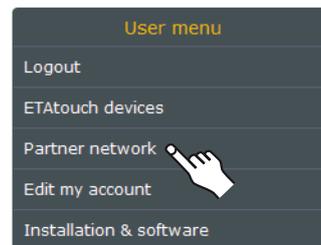
If the activation is successful, the following notice will appear:



## Enabling access for authorised partners

 Once a partner has been granted authorisation, the owner must also enable them to access the control system.

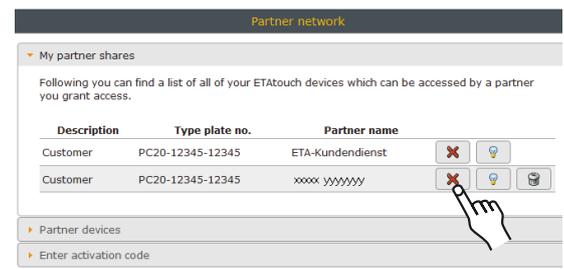
The boiler owner must open the [Partner network] menu.



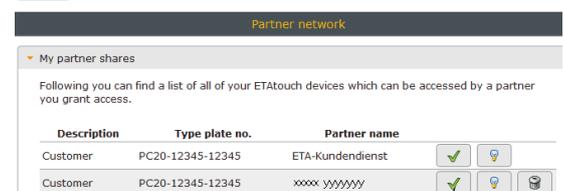
**BOILER OWNER**

Open the [My partner shares] menu. This shows all authorised partners, who are allowed to access the owner's touch screen.

Press the button  to see more information on the authorised partners.



Tap  to enable remote access for the authorised partner. The symbol changes to  as confirmation of this action.



Authorisation enabled, access allowed

 The automatically preinstalled authorisation for ETA customer service can also be enabled. This allows ETA customer service to provide help, should you need it.

## Overview of owners' control systems for the authorised partner (e.g.: installer)

If the boiler owner has granted a partner, e.g. an installer, authorisation to access his control system using the  button, the installer will then be able to access the control system in question.

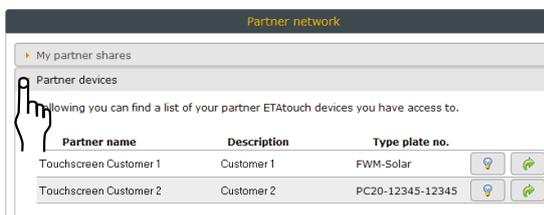
The authorised partner (e.g. installer) logs in to <www.meinETA.at> using his login data.

Open the [Partner network] menu and select the [Partner devices] window.



**AUTHORISED PARTNER**  
e.g. installer

The [Partner devices] window shows all the owners' control systems to which the authorised partner has been granted access.



If the symbol  is displayed next to a control system, access to this system is available.

If the symbol  is displayed, it is not currently possible to access this control system. This may be because the owner's boiler is switched off.

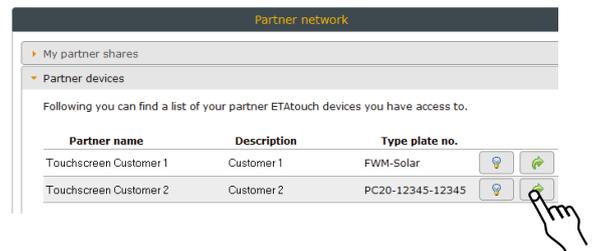
Press the button  to see more information about the owner of the touch screen.



 If the owner has blocked or cancelled access to his control system (see page 189), it will no longer be shown in the [Partner devices] overview.

## Viewing the owner's touch screen

Tap the button  to view the owner's touch screen.



Before showing the touch screen, the display brings up a notice with the safety regulations that must be observed.



Press [I understand] to view the owner's touch screen.

The display is the same as the current display on the boiler.



The boiler can now be controlled by an installer or another partner. Press [Back] to close the touch screen display and return to the [Partner devices] overview.

 For safety reasons, some functions and parameters **cannot be changed via remote control** (see page 182).

**Errors and warnings may NOT be rectified via <www.meinETA.at>.**

 **If any errors or warnings are displayed, they can and may only be rectified on site, i.e. at the boiler itself.**

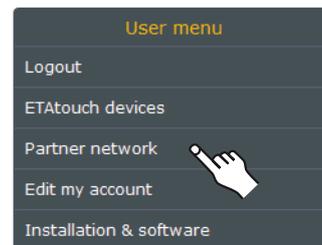
Rectifying an error using remote control is not permitted. This is because doing so could injure anyone who is working on the boiler to rectify the error.

 **In particular, you should avoid switching the boiler on via remote control if an error message is present.**

## Blocking an authorised partner's access

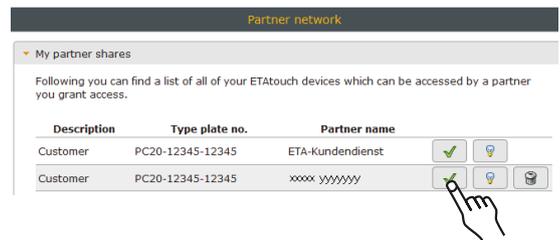
 An authorised partner's **access can only be blocked or cancelled by the owner of the boiler.**

In the [Partner network] menu, open the [My partner shares] sub-menu.

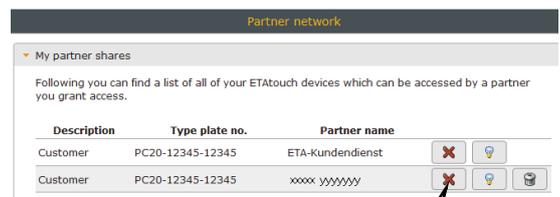


**BOILER OWNER**

The [My partner shares] window lists **all the authorised partners** who have **access** to this control system.



In the row for the authorised partner whom you wish to block, press the  icon. The  icon appears. This shows that access has now been blocked for this authorised partner.



Access blocked

 If you wish to cancel this person's authorisation, tap the  icon. If you wish to grant this person authorisation again at a later date, you will need to generate a new activation code (see page 186 onward).

## Information regarding access

 The boiler owner can find out at any time when his control system was last viewed by an authorised partner, and whether anyone is currently viewing his touch screen.

Remote control

## Checking current access

The boiler owner logs in to <www.meinETA.at> using his login data and selects the [ETAtouch devices] menu.



**BOILER OWNER**

Open the [Currently connected ETAtouch devices] window.



The symbol  means that there are currently no authorised partners viewing the **touch screen**.

If the icon  is displayed, an authorised partner is currently viewing the touch screen. If you tap the icon, a window appears displaying the relevant information:

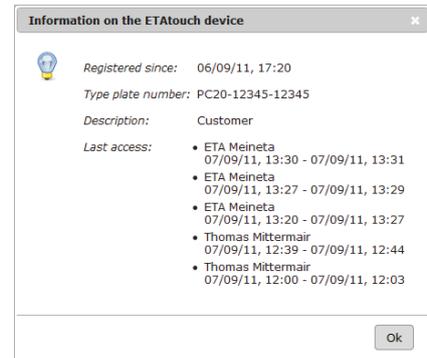


## Showing previous access

The last 5 occurrences of the touch screen being accessed by an authorised partner are saved on the system. To view these, open the [Registered ETAtouch devices] window.



Press  to open a window displaying the last 5 times the touch screen was accessed:





## Setting up the messaging system

With the "ETAtouch messaging system" you can save up to **5 recipients** to **receive an e-mail** as soon as a message, warning or alarm appears on the touch screen.

Even if the Internet connection to the touch screen has been interrupted, the system will attempt to send the e-mail again every 5 minutes for a maximum of 3 hours.

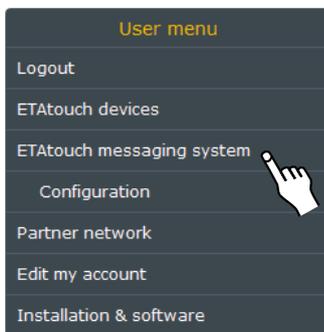
 **The e-mail notification is a quick information service, and is not a substitute for the regular checks required on the boiler.**

The e-mails can only be sent if the touch screen is online and the Internet connection is active.

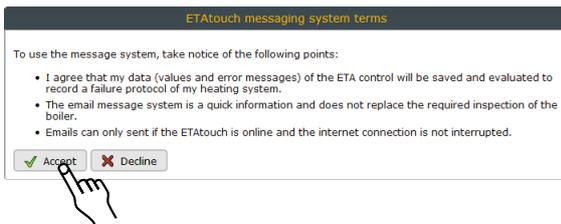
 **The messaging system saves the last 10 messages, regardless of whether they have already been acknowledged on the touch screen.**

## Setting up e-mail messaging

Log in to <www.meinETA.at> using your personal login data. Tap [ETAtouch messaging system] in the main menu.

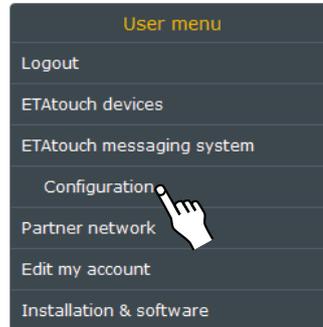


If you are opening this for the first time, you will be asked to agree to ETA recording the data.



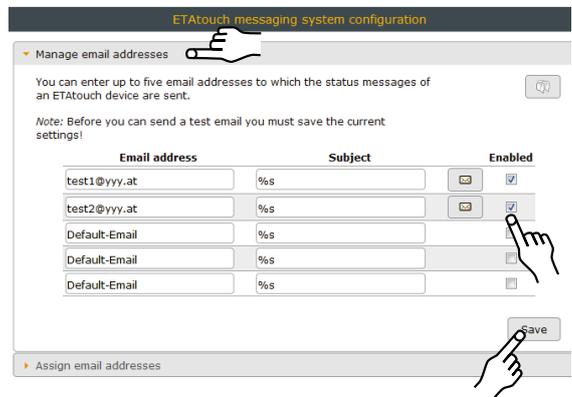
## Adding an e-mail recipient for messaging

In the main menu, go to [ETAtouch messaging system] and tap the [Configure] sub-menu.



 In the [Manage e-mail addresses] window, you can now save up to **5 e-mail recipients**. Tick the **checkbox** in the "Enabled" column to assign this e-mail address to a touch screen.

You can also choose to **edit the topic**. To do this, enter your **own text** or **choose an abbreviation** from the list. Press the  button to see the available abbreviations.



Press  to save the e-mail addresses. A notification appears to inform you that you still need to assign the e-mail addresses to a touch screen in the next step.

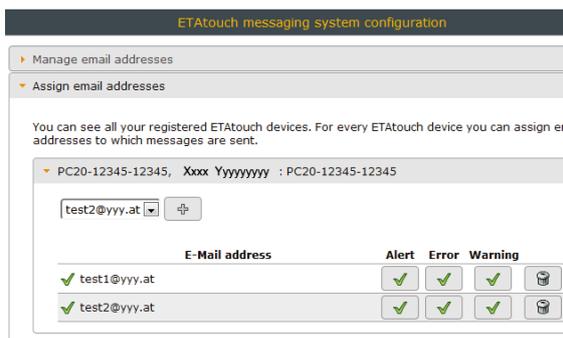
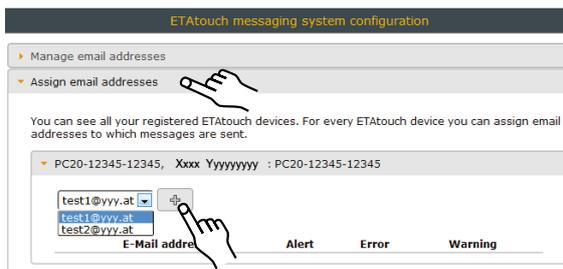


Press  to send a test e-mail and verify that the e-mail addresses are working.

## Assigning e-mail addresses to the touch screen

The [assign e-mail addresses] window is used to assign the e-mail addresses that have been entered to the registered touch screen for messaging.

To do this, select the touch screen and the e-mail address(es) by pressing .

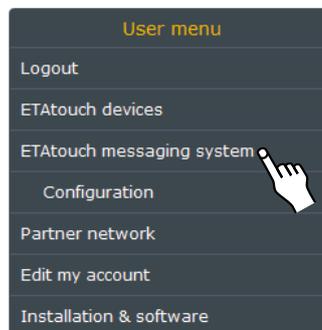


 If you wish, you can choose which messages will result in an e-mail being sent. Tap  to deselect a message. The  symbol appears.

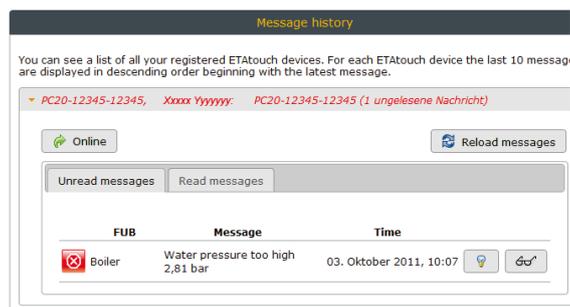
Press  to unassign the e-mail address.

## Viewing messages in the messaging system

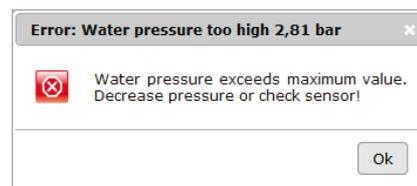
Log in to <www.meinETA.at> using your personal login data and tap [ETAtouch messaging system] in the main menu.



 The overview saves the **last 10 messages**, regardless of whether they have already been acknowledged on the touch screen. Any **unread error or alarm messages** are marked in red on the touch screen.



Press  to view additional information, for example:



Press  to mark a message as "read". The message will then be moved to the "Read messages" folder.

Press  Reload messages to update the messages from the touch screen.

Press the button  Online to open directly the touch screen.

The symbol  Offline informs, that the touch screen is currently not connected. Maybe the remote control is switched off  or the power or internet connection to the boiler is interrupted.





