

Operating Instructions

Oil boilers

Uno-3 / Mega-3 / Max-3 / Cosmo / ST-plus / Titan-3 E

Gas boilers

CompactGas (1000-2800) / Cosmo aluFer® / ST-plus aluFer®



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1. For an optimal use of the heating system, read the operating instructions

These instructions will provide you with all the information, you need for an optimal use of your heating system.

An optimally adjusted heating system can not only save you a lot of grief, but also a lot of money.

1.1 Important addresses and telephone numbers

Heating installer:

.....

Plumbing installer:

.....

Electrical installer:

.....

Fuel supplier:

.....

Chimney sweep:







.....

Oil-/ Gas burner service:

.....

Tank cleaning:

1.2 Key to symbols used

	Instruction:	Prompts you to carry out an action
	Result:	Shows the expected reaction to your action
	Note:	Provides important information
	Safety information:	Indicates an immediate hazard to persons
	Warning information:	Indicates danger to machines and installations
	Energy saving tip:	Provides energy saving information

1.3 System data

To be completed by the heating installer!!

Order no.:

Year of manufacture:

Heating boiler type:

Boiler nominal output

Heating pump type:

Heating controller type:

Mixer type:

Calorifier type:

DHW sensor: Yes No

Thermostat: Yes No

Type of gas: Natural Gas H Natural Gas L Liquid Gas

Outside temperature sensor: Yes No

Room temperature sensor: Yes No

Number of heating circuits: 1 2
3 4

Heating circuit HC =

Heating circuit MC1 =

Heating circuit MC2 =

Heating curve value HC =

Heating curve value MC1 =

Heating curve value MC2 =

1.4 Calculation basis

To be completed by the heating installer!!

Lowest outdoor temperature: °C

Heat demand: kW

Max. flow temperature: °C

Max. return flow temperature:..... °C

1.5 Burner setting

To be completed by the firing operative!!

Firing output setting

Burner: min. kW

max. kW

Exhaust gases: °C

For the arrangement of the exhaust gas regulators, refer to
Technical Information / Installation Instructions

Important information:



Permissible minimum limit temperatures

The limit values quoted in the Technical Information / Installation Instructions (Pt. 3.2) must not be fallen below in continuous operation. Please have your boiler regularly checked by a specialist.

The operational reliability and service life of the boiler will be endangered if it is continually run below these limits, and the supplier's guarantee will become invalid.

Trial run

A trial run should be carried out before the heating system is handed over to the owner of the house.

This trial run (to be carried out by your heating installation company - or by the Hoval Service on their behalf) guarantees that the Hoval appliances are working in accordance with the boundary conditions (e.g. compliance with the minimum permissible limit temperatures).

2. Safety information



In the event of danger!

Cut off the fuel (oil/gas) and electricity supplies



If you smell gas!

(Operation with gas blower burner)

- ⇒ Do not smoke
- ⇒ No open fire
- ⇒ Avoid the occurrence of sparks
- ⇒ Do not switch on the light or other electrical appliances
- ⇒ Open windows and doors
- ⇒ Close the gas stop cock
- ⇒ Notify the heating company / installing contractor
- ⇒ Follow the safety regulations on the gas meter
- ⇒ Follow the safety regulations of the heating company



If you smell flue gas!

- ⇒ Turn the system off
- ⇒ Open windows and doors
- ⇒ Notify the heating company



Venting openings

Air inlets and outlets may not be closed. Closed venting openings can lead to incomplete combustion and possible poisoning.

Exception: Your system operates room sealed - see page 4



Commissioning of a newly installed system may only be carried out by a qualified installer. The installation control must be completed prior to commissioning - see chapter 5.

2.1 Safety precautions



Checking the water level - see page 48



Maintain the room in which the boiler is held always clean and turn off the burner before starting the cleaning to avoid any faults due to dusty combustion air.



Corrosion prevention:

Don't use sprays, solvents, purifying agents, colours, glues etc. close to the boiler. These substances may cause corrosion in the boiler and the flue gas pipe.

2.2 Intended use



Intended use:

The boiler may only be operated with the fuels indicated in the Information/Installation instructions.

The heat produced must be carried away by the heating water. All boiler openings must be closed during operation..

3. Customer service



The following information should be read before starting up the boiler!

Dear Customer,

With the Hoval boiler you have acquired a product manufactured according to the state-of-the-art and highest quality standards.

Please ensure that the delivery is consistent with your order and check it is complete. Also check for possible damage in transit and inform the nearest Customer Service centre if there is any. For insurance reasons it will not be possible to accept any subsequent claims.

For the correct installation and operation of your Hoval boiler, all applicable laws, regulations and standards must be complied with; in particular the regulations of the respective energy supply company. In case of queries, please contact your specialist installer or the nearest Hoval Customer Service centre.

Assembly or installation of the heating boiler may only be carried out by trained personnel of an approved installation company. Before starting the boiler for the first time, an installation inspection and approval of the overall installation by the installer are required.

To guarantee safe and trouble-free operation, operate your Hoval boiler only according to these operating instructions.

The boiler may only be used for its intended purpose and fuels for which it is suitable on the basis of its design and for which it has been approved by Hoval.

Do not carry out any changes to the system, otherwise all claims under the guarantee will be invalidated. Conversion kits are to be installed and the installation approved by authorised installers or by the Hoval Customer Service.

The reliable and safe functioning of a oil boiler, as well as the achievement of an optimal effectiveness and clean combustion are only possible and guaranteed if the system is maintained and cleaned at least once every year.

In the event of a fault or in case of damage, please contact the Hoval Customer Service to inquire about the necessary repairs. In the meantime, shut down the unit to avoid any damage.

With the acquisition of a Hoval unit you also obtain a comprehensive guarantee protection, as indicated in the guarantee conditions of the guarantee pass for your unit.

This guarantee is, however, dependent on the observance of the operating and installation instructions and on compliance with the applicable legal regulations. Non-compliance with the above will invalidate all liability and warranty claims against Hoval.

Provided it is used correctly, your Hoval boiler will ensure you enjoy a well heated home for many years.

The Hoval Customer Service











If you have any doubts in regard to the operation of your Hoval boiler, or minor faults affect its correct functioning, please contact the nearest Hoval Customer Service centre. A telephone call is often enough when it comes to solving small problems. Our trained Customer Service staff will do everything in their hands to help you.

If a fault can not be solved in this way, a service technician will visit you in order to solve the problem. We hope you understand that, except in urgent cases, this is not always immediately possible.

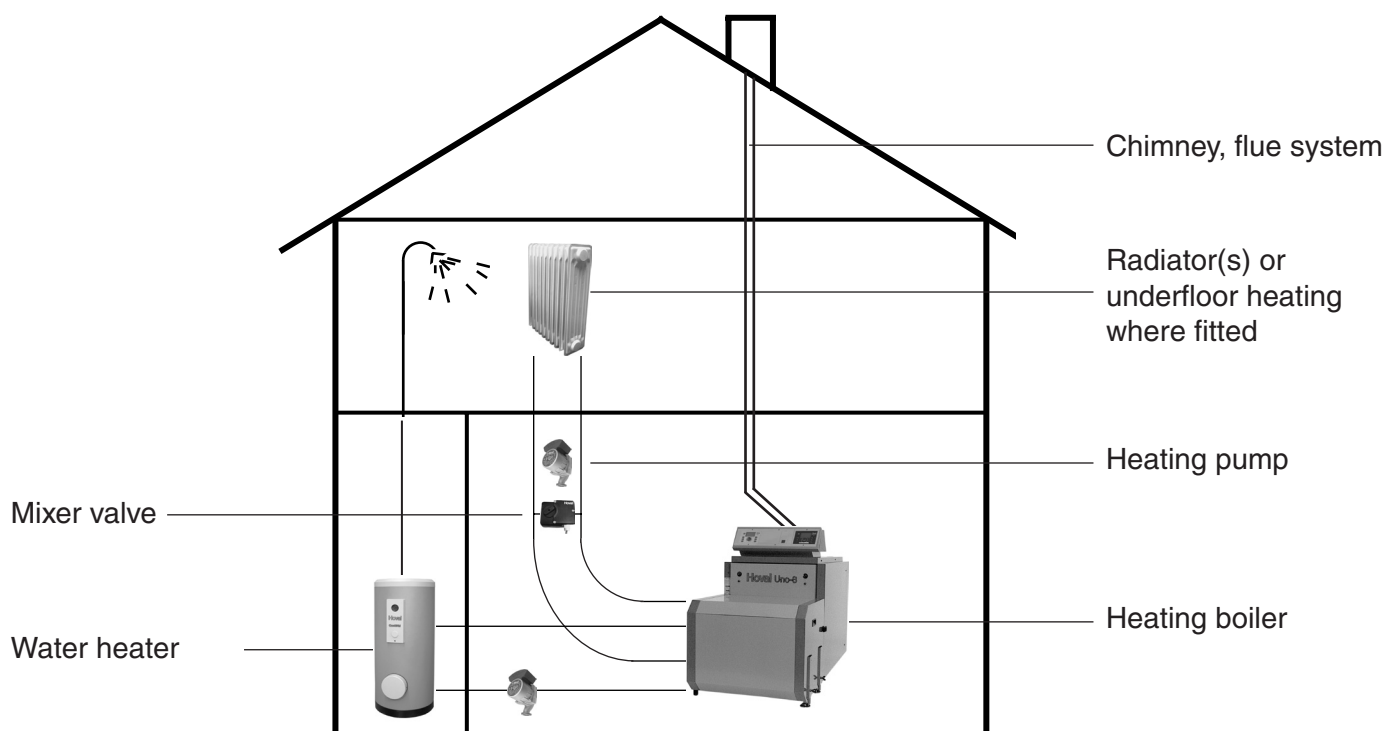
Take advantage of the offer of the Hoval Customer Services for extending the service life of your Hoval boiler, and ask for a service agreement. Your Customer Services advisor will be pleased to give you information.

You will find the addresses on the last page.

4. Functional principle of the heating system

	Components	Function
	Oil/Gas heating boiler	Burns fuel oil or natural gas safely and environmentally friendly. Extracts the heat from the generated combustion gases and transfers it to the heating water.
	Calorifier	It holds a reserve of domestic hot water for consumption (e.g. for showering).
	Boiler control unit	Controls and monitors the operation of the heating boiler. Maintains the desired room temperature optimally and fuel efficiently, independently of the outside temperature.
	Radiator, floor heating	Releases the heat of the heating water into the room.
	Heating pump	Transports the heating water from the heating boiler to the radiators and back to the heating boiler, where it is reheated.
	Mixing valve	Adjusts the heating flow temperature by admixing colder return water (water flowing to the radiator) to maintain the desired room temperature, independently of the outside temperature.
	Pressure gauge	Displays the hydraulic pressure in the heating system.
	Air bleeder	Eliminates any air to make sure that the system contains only heating water.
	Safety valve	Prevents an overpressure in the system.
	Diaphragm expansion tank	Maintains the pressure in the system constant.
	Hot water and hot water pipes	Convey the heat generated from the heating boiler to the radiators.

Depending on the working principle of the heating system selected, there may be extra components or some may not be provided. Have your system explained in detail by the specialist.



The hot water heated by the heating boiler is conveyed to the radiators, or is used to heat the domestic hot water in the water heater.

5. Commissioning

i Commissioning of a newly installed system may only be carried out by a qualified installer. A full installation check must be completed prior to start-up.

- Set the main SYSTEM switch to „0”
- Open the shut-off valves in the flow and return lines.
- Open the shut-off valve in the gas line to the boiler
- Switch on the main switch outside the heating room (if present).

The heating installation often has an additional danger switch that only sets the gas burner out of operation.

5.1 Checks prior to start-up

⇒ Check the water level in the heating system.

i The heating system must be filled with water and all the air removed. Observe the regulations regarding antifreeze and water treatment.

- ⇒ Open the shut-off valves in the flow and return lines.
- ⇒ Check the fresh air supply to the heating system.
- ⇒ Check the settings for the operating modes.

5.2 Switching on the system

- ⇒ Gas tap open.
- ⇒ Switch on the main switch.
- ⇒ Set the boiler control unit to the desired operating mode and temperature.

6. Boiler system control U 3.1 and U 3.2

6.1 What is the function of the heating controller TopTronic® T?

i The boiler controller is, in conjunction with the temperature sensor connected to it, so to speak, the brain of the heating system.

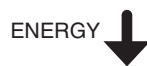
Its main functions are:

- maintaining the desired room temperature independently of the outdoor temperature
- heating the living space when required
- produce warm water (e.g. for showering) only when required
- displaying information

Further functions:

- Input of desired temperatures and operating modes
- Turn the burner ON/OFF
- Temperature monitor

The correct settings for the heating system have already been applied by Hoval, or the installer, during commissioning. Any changes to those settings should only be carried out if you go away on a trip or if your home is too cold or too warm. An overview of the most frequent questions/answers can be found on page 13, 18 of these instructions.



6.2 How you can save energy

i **For your benefit and for the environment**

Using energy more efficiently by avoiding unnecessary losses:

With little effort you can optimize the operation of your system and make it worthwhile.

- You can save money. Enough money to pay your oil or gas bill every sixth year
- Every year, you can save the energy equivalent of a bathtub full of heating oil

i **In autumn, it is worth while turning the heating off again on warm days**

This prevents the heating system from producing unnecessary heat in the morning, due to low outdoor temperatures, and overheating the house. Turning the heating on or off depending on the weather conditions is one of the most effective energy saving measures. If you want to save yourself going down the basement, you may want to consider acquiring a „remote control“ from Hoval, which will allow you to operate and control the heating comfortably from your living room.

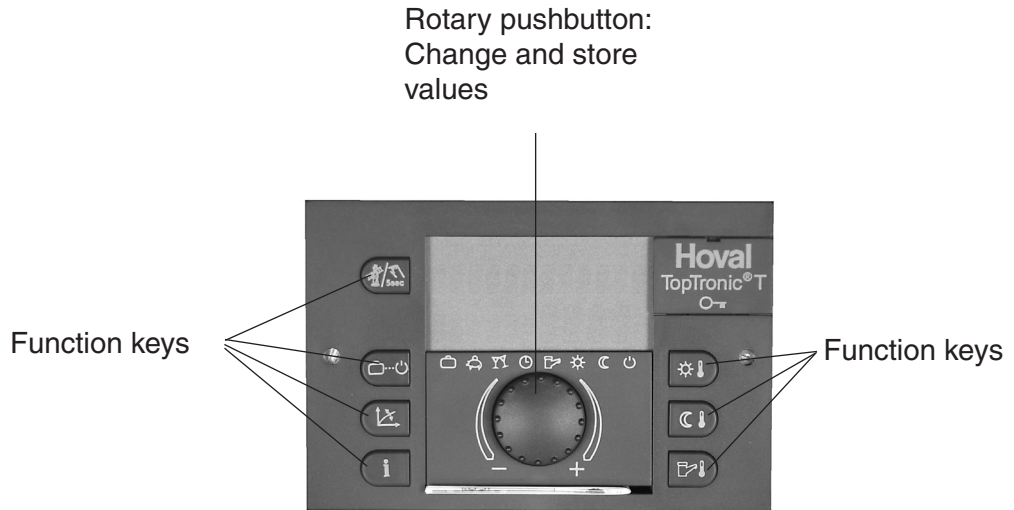
6.3 Basic display

The basic display shows the day of the week, date and time of the day, as well as the current boiler temperature and room temperature (room station).

6.4 Operating and display elements

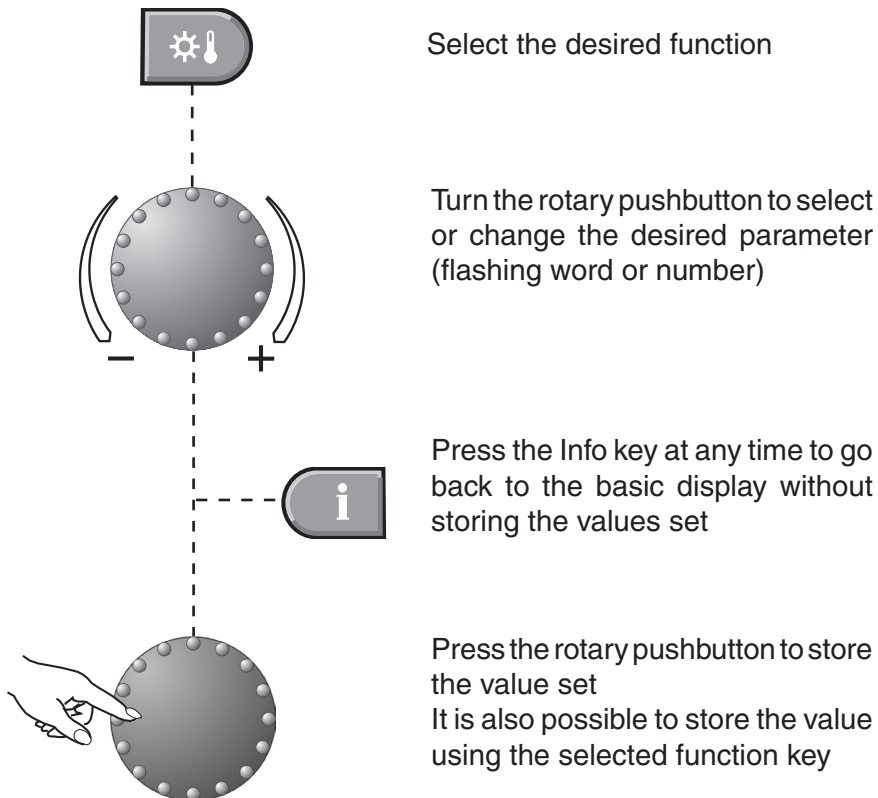
6.4.1 Function of the operating elements

The central rotary pushbutton and the labelled keys are designed for easy and straightforward operation.
























6.4.2 Basic procedure for changing settings

An example

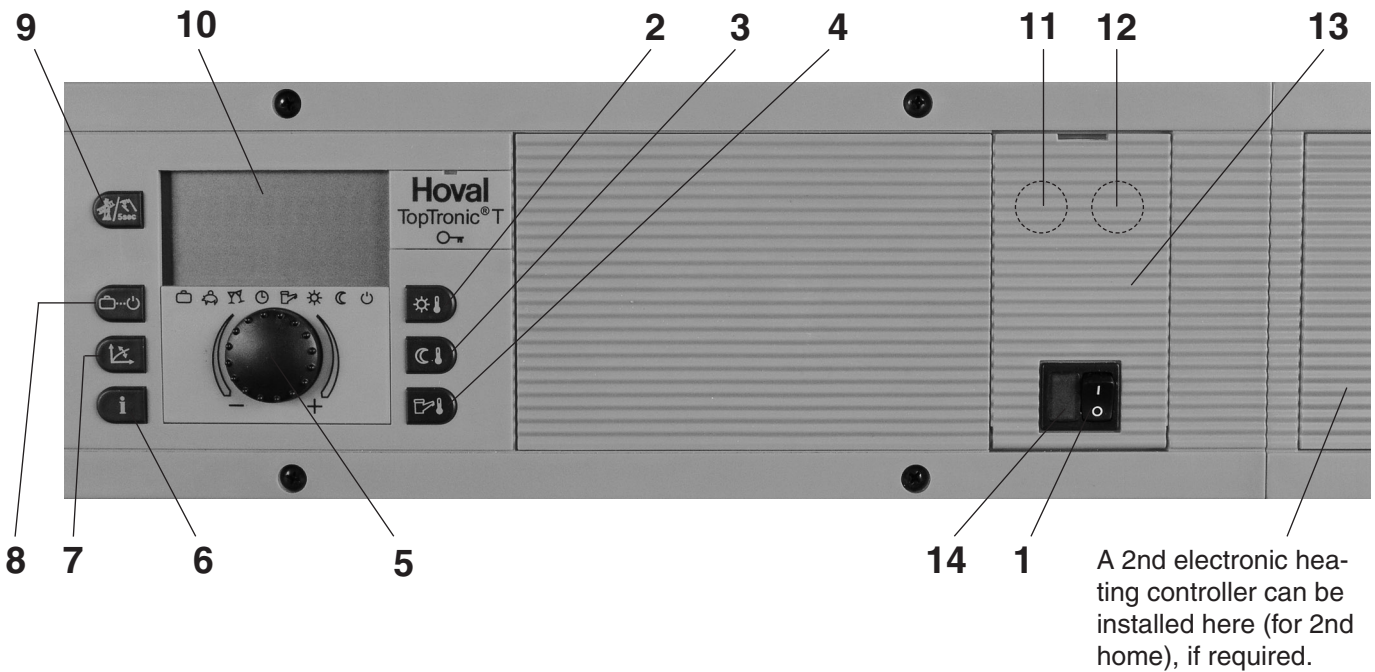






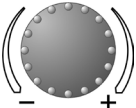


6.4.3 What to do if...











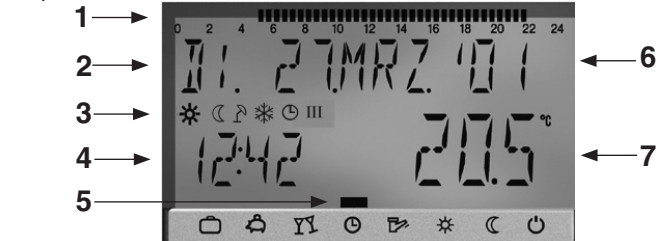
The following information can be used as a first level support in frequently occurring situations.

Observation	Remedy
It is too cold	Set a higher value for the room temperature with  and the rotary pushbutton (page 16).
It is too warm	Set a lower value for the room temperature with  and the rotary pushbutton  (page 16,20).
From now on, equal day and night temperatures should be maintained continuously.	Set the operating mode to  "HEATING" with  (page 21).
This evening, the heating should remain on for longer.	Set the operating mode to  "PARTY" with  and set the desired time (page 20).
A larger amount of hot water is required.	Press  for 3 seconds and set the additional loading time (page 31).
From now on, hot water but no heating is required.	Set operating mode to  "SUMMER" with  (heating off, only hot water) (page 21).
Suddenly, there is no heating or hot water; it is cold.	Check the boiler controller for alarms and consult a heating engineer, if necessary. Check main switch (see page 14) and gas supply.
The room temperature setpoint requires frequent adjustments because it is too cold or too hot.	Change the set heating curve (page 28,29). Changing the heating curve is not sensible if your system is fitted with a room sensor (or room station) and an outdoor sensor. The correct settings for the heating curve are then provided automatically. Consult a specialist, if necessary.
Today, I will be absent for several hours during the day.	Set the operating mode to  "ABSENT TIL" with  and set the return time (page 20).
I am travelling for a short period of time (e.g. 3 days).	Set the operating mode to  "HOLIDAY TIL" with  and set the return date (page 20).
I will be travelling for an indefinite period of time.	Set the operating mode to  "RED. HEATING" with  . When returning, set the operating mode  to  "AUTOMATIC" (page 21).
In summer, it is too cold or too warm.	 indicates that the summer disconnection is active. If it is too cold, set the operating mode to  "HEATING" with  (page 21).

6.4.4 Control elements on the boiler control panel



Key	Designation	Function	Page
1	 Main switch	I = ON - Boiler is in operation 0 = OFF - Boiler and burner are shut down ! Attention: No frost protection	
2	 Daytime room temperature	Set the daytime room temperature.	16
3	 Reduced room temperature	Set the night time room temperature (reduced heating).	17
4	 DHW temperature	Set the domestic hot water temperature. Manual DHW reloading.	30,31
5	 Rotary pushbutton	Change the values by turning. Confirm the values by pressing. Function selection by pressing and turning.	
6	 Information key	<ul style="list-style-type: none"> Show the operating data on the display. Return to the basic display without saving the values. 	41
7	 Heating curve set-up	Set the heating characteristics	28,29

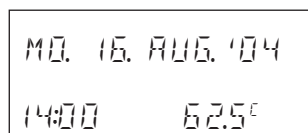
Key	Designation	Function	Page
8 	Selection key	Select the operating modes	
	 Holiday	Turn off the heating system during the holidays (frost protection)	20,21
	 Absence	Temporarily switch off heating Page	20,21
	 Party	Extended heating	20,21
	 Automatic	Automatic heating according to the preset heating times = normal heating	20,21
	 Summer	only DHW; heating off	20,21
	 Constant heating	Constant heating mode	20,21
	 Reduced heating	Constant reduced heating mode	20,21
 Standby	System switched off - Frost protection activated	20,21	
9 	Manual mode / emission measurement	For heating technician only or for preliminary acknowledgement of a maintenance prompt“ see „Special symbols”.	42
10 	Display	<p>The basic screen shows the day of the week, date and time of the day, as well as the current heat production temperature or another temperature (system dependent).</p>  <p>Possible readouts:</p> <ol style="list-style-type: none"> Active heating time 24h Weekday display Display of the active operating mode and the clock programme Time of the day Selected operating mode Date / Day / Month / Year Heat production temperature or another temperature (system dependent). 	
11	Control panel fuse under the hinged cover	Check the 6.3 A fuse if the display 11 stays dark. This should only be done by the heating technician!	
12	Safety limiter under the hinged cover	It is secured against automatic starting, if the burner switches off because the boiler temperature is too high. It can be unlocked under the hinged cover. Notify your Customer Service Centre.	
13	Brief operating instructions on the hinged cover	Special brief operating instructions are provided with the heating control.	
14	Burner error lamp	Press the Reset button (see no. 12)	

6.5 Main settings

6.5.1 Changing the room temperature

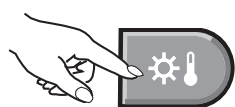
i These adjustments can also be carried out on a room station.

Setting the daytime room temperature



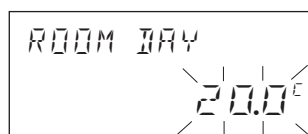
Start - Basic display

1



⇒ Tap the “Daytime room temperature” key.

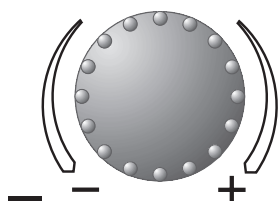
2



i The daytime room temperature setpoint flashes.

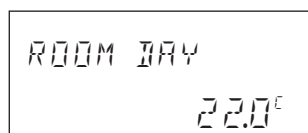
3

i If “MC1” is shown on the display, you need to select the heating circuit. (Information on which heating circuit to select for your home can be found on page 5 of these instructions).



⇒ Set the desired room temperature by turning the “rotary pushbutton”. **i** Setting range 5 - 30°C (Factory setting 20°C)

4



i The new “Daytime room temperature” setpoint appears on the display.

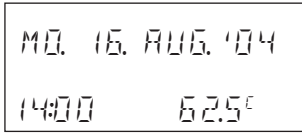
5



⇒ Tap the “Daytime room temperature” key to confirm the temperature setpoint.

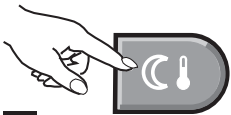
6

6.5.2 Setting the reduced (night time) temperature



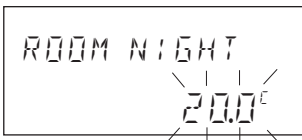
Start - Basic display

1



⇒ Tap the “Reduced room temperature” key.

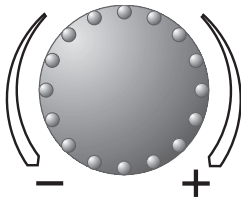
2



🔊 The night time room temperature setpoint flashes.

i If “MC1” is shown on the display, you need to select the heating circuit. (Information on which heating circuit to select for your home can be found on page 5 of these instructions).

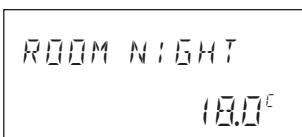
3



⇒ Set the desired room temperature by turning the “rotary pushbutton”.

i Setting range 5 - 30°C (Factory setting 16°C)

4



🔊 The new “Reduced room temperature” setpoint appears on the display.

5
















⇒ Tap the “Reduced room temperature” key to confirm the temperature setpoint.

6

6.6 Operating modes






6.6.1 Operating mode functions

Operating mode	Function	Application						
HOLIDAY 	<ul style="list-style-type: none"> - Heating system off during holidays. - Room temperature set to minimum (10°C). - Calorifier frost protected (5°C). <p>i End of holiday = Return date Normal heating is resumed on the day of return! Setting range: current date + 250 days. To switch over to automatic mode prematurely  press the “operating mode” key for 3 sec.</p>	<p>You go on holiday for e.g. 1 week and you know the return date.</p> <p>Page 20, 21</p>						
ABSENT 	<ul style="list-style-type: none"> - Heating system OFF (heating temporarily switched off until set time). - Room temperature set to minimum (10°C). - Calorifier frost protected (5°C). <p>i Setting range: 0.5 - 24 h. To switch over to automatic mode prematurely - press the “operating mode” key  for 3 sec.</p>	<p>You leave home in the morning and come back in the evening.</p> <p>Page 20, 21</p>						
PARTY 	<ul style="list-style-type: none"> - Extend heating (daytime room temperature) up to set day/night time (you do not want to reduce the room temperature at the preset time). <p>i Setting range: 0.5 - 24 h. To switch over to automatic mode prematurely - press the “operating mode” key  for 3 sec.</p>	<p>You have guests in the evening.</p> <p>Page 20, 21</p>						
AUTOMATIC 	<ul style="list-style-type: none"> - Automatic heating mode according to the heating times set in the 1. switching time program = normal heating mode. <p>i Factory setting:</p> <table> <tr> <td>Heating:</td> <td>06.00 - 22.00</td> </tr> <tr> <td>Reduced heating:</td> <td>22.00 - 06.00</td> </tr> <tr> <td>Domestic hot water:</td> <td>05.00 - 22.00</td> </tr> </table>	Heating:	06.00 - 22.00	Reduced heating:	22.00 - 06.00	Domestic hot water:	05.00 - 22.00	<p>You want to heat as cost effectively and efficiently as possible.</p> <p>Page 20, 21</p>
Heating:	06.00 - 22.00							
Reduced heating:	22.00 - 06.00							
Domestic hot water:	05.00 - 22.00							
SUMMER 	<ul style="list-style-type: none"> - Heating system OFF - DHW is produced at the times set in the switching time program (for showering, etc.) - Frost protection active. <p>i Factory setting for domestic hot water: 05:00 - 22:00 Operating mode “Summer” can not be selected if each heating circuit is adjusted separately.</p>	<p>Heating the rooms is unnecessary due to the high outdoor temperatures.</p> <p>Page 20, 21</p>						
HEATING 	<ul style="list-style-type: none"> - The room temperature is not reduced during the night. - The rooms are continuously heated at the set “daytime room temperature” . - DHW mode according to switching program. 	<p>You prefer to heat the rooms also during the night.</p> <p>Page 20, 21</p>						
RED. HEATING 	<ul style="list-style-type: none"> - The rooms are continuously heated at the set “reduced room temperature” . - Continuous reduced heating mode. 	<p>You are travelling for an indefinite period of time.</p> <p>Page 20, 21</p>						
STANDBY 	<ul style="list-style-type: none"> - Heating system OFF. - Frost protection active. - No DHW mode. 	<p>You are travelling for an indefinite period of time in spring or in autumn. It does not matter if the rooms are cold on return. You need warm water on return.</p> <p>Page 20, 21</p>						


6.6.2 Operating modes for holiday and absence?

Depending on the duration of your absence and what your requirements are in regard to comfort, there are different operating modes available for interrupting or reducing the heating. In any case you will be able to save a lot of energy and money if the rooms are not heated or less heated during your absence.

The following table is intended as a guide for finding the best operating mode for each particular case:

Application	Operating mode	Function
You go on holiday for e.g. 1 week and you know the return date.	"HOLIDAY TIL"  Heating system and DHW off during holidays.	- Heating system OFF / Calorifier frost protected (5°C) - Room temperature set to minimum (10°C) Setting range: current date + 250 days ! End of holiday = Return date Normal heating is resumed on the day of return! Early return:  "Press" for 3 sec. to return to "AUTOMATIC" mode (see page 20, 21).
You leave home in the morning and come back late in the evening.	"ABSENT TIL"  Heating interrupted temporarily	Heating temporarily interrupted until set time. Setting range: 0.5 - 24h
You are travelling for an indefinite period of time and want the living area to be at the set reduced temperature on return.	"RED. HEATING"  Continuous reduced heating mode	Continuous reduced heating and DHW mode (reduced see page 20, 21) around the clock.
You are away for an indefinite period of time during spring or autumn and you don't mind if your home is cool on return.	"STANDBY"  System switched off - Frost protection activated	The entire heating system is switched off and frost protected. Calorifier frost protected!

See following pages for a detailed description on how to set the operating modes.

You can return to the "AUTOMATIC" function (normal heating mode) at any time by "pressing"  for 3 sec.

6.6.3 Changing the operating mode - for "HOLIDAY TIL", "ABSENT TIL" and "PARTY TIL"

Procedure for activating the operating modes "HOLIDAY TIL", "ABSENT TIL" or "PARTY TIL".



⇒ Tap the "Operating mode" key.

1



👁️ The note "OP. MODE" is displayed for a short time.

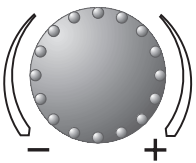
2



👁️ The currently active operating mode is then shown flashing on the display.

ⓘ A black rectangle at the lower part of the display points to the corresponding symbol!

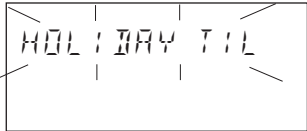
3



⇒ Set the desired operating mode by turning the "rotary pushbutton":

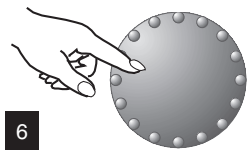
ⓘ "HOLIDAY TIL", "ABSENT TIL" or "PARTY TIL".

4



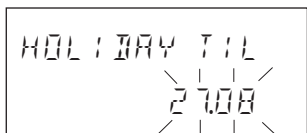
👁️ The selected operating mode (e.g. "HOLIDAY TIL") is shown flashing on the display.

5



⇒ Tap the "rotary pushbutton" to confirm the selected operating mode.

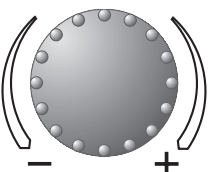
6



👁️ Today's date ("HOLIDAY TIL") or the current time ("ABSENT TIL", "PARTY TIL") is shown flashing on the display.

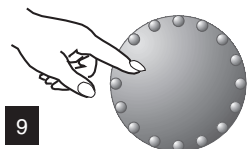
ⓘ - for "HOLIDAY TIL", the date of return from holiday.
 - for "ABSENT TIL", the expected return time (within max. 24h).
 - for "PARTY TIL", the time the party is expected to end.

7



⇒ Turn the "rotary pushbutton" and select:

8



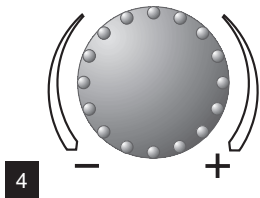
⇒ Tap the "rotary pushbutton" to confirm the setting.

9

6.6.4 Changing operating mode - for "AUTOMATIC", "SUMMER", "HEATING", "RED. HEATING" and "STANDBY"

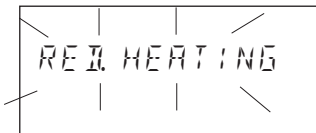
Procedure for activating the operating modes "AUTOMATIC", "SUMMER", "HEATING", "RED. HEATING" and "STANDBY"

⇒ Follow the steps 1 to 3 described in chapter 6.6.3 "Changing the operating mode" on page 20!

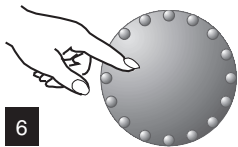


⇒ Set the desired operating mode by turning the "rotary pushbutton":

ⓘ "AUTOMATIC", "SUMMER", "HEATING", "RED. HEATING" or "STANDBY".



👁 The selected operating mode (e.g. "RED. HEATING" is shown flashing on the display.



⇒ Tap the "rotary pushbutton" to confirm the setting.

6.7 Switching times (heating times)

- ① In this menu the switching time programs can be set individually for the heating and DHW modes.
- ① The standard heating times preset by the manufacturer are overwritten.
- ① It is possible to program up to 3 heating times per day.
- ① The switching times are only active when the “AUTOMATIC” mode is selected.

6.7.1 Standard heating times

Circuit	Day	Heating from
All heating circuits (HC,MC-1,MC-2)	Mo-So	06.00 - 22.00
Hot water circuit (DHW)	Mo-So	05.00 - 22.00

6.7.2 Table for recording individual switching times

Switching times program for living area..... (MC1)

Day	Cycle 1		Cycle 2		Cycle 3	
	from	to	from	to	from	to
Mo						
Di						
Mi						
Do						
Fr						
Sa						
So						

Switching times program for living area..... (MC2)

Day	Cycle 1		Cycle 2		Cycle 3	
	from	to	from	to	from	to
Mo						
Di						
Mi						
Do						
Fr						
Sa						
So						

Switching times program for living area..... (HC)

Day	Cycle 1		Cycle 2		Cycle 3	
	from	to	from	to	from	to
Mo						
Di						
Mi						
Do						
Fr						
Sa						
So						

Switching times program for calorifier..... (DHW)

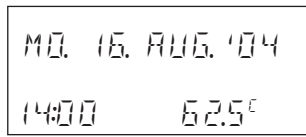
Day	Cycle 1		Cycle 2		Cycle 3	
	from	to	from	to	from	to
Mo						
Di						
Mi						
Do						
Fr						
Sa						
So						

Further standard programs can be - or could have been - set-up or enabled for programming by the installer (P1-P3) see page 25.

A maximum of 3 heating times per day are possible, e.g.:

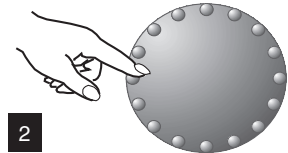


6.7.3 Changing the switching times (heating times)



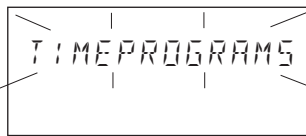
Start - Basic display

1



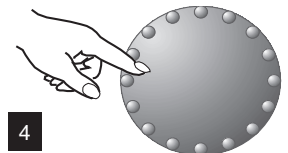
2

⇒ Press the “rotary pushbutton” for at least 3 sec.



3

🔗 The note “TIMEPROGRAMS” is shown flashing on the display.



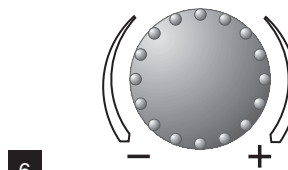
4

⇒ Tap the “rotary pushbutton” to confirm the selected operating mode.



5

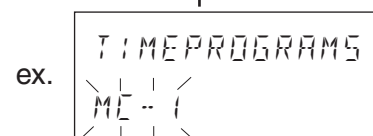
🔗 The note “HC” is shown flashing on the display



6

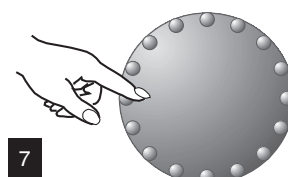
⇒ Select the heating circuit by turning the “rotary pushbutton”.

ⓘ Information on which heating circuit to select for your home can be found on page 5.



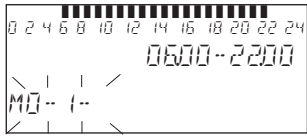
ex.

ⓘ select switching times program P1, P2 or P3, if required - see page 25.



7

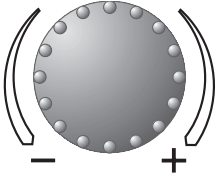
⇒ Tap the “rotary pushbutton” to confirm the selected heating circuit.



The first day of the week is shown flashing on the display.

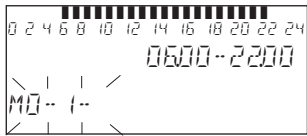
Change the flashing value by turning the “rotary pushbutton”. Confirm by tapping the “rotary pushbutton”. Go back one step with . Return to the starting point with or, automatically, after approx. 60 sec.

8



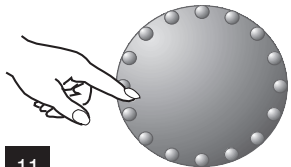
Turn the “rotary pushbutton” until the desired day is displayed.

9



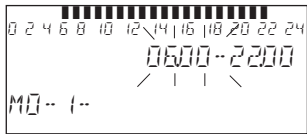
The selected day of the week is shown flashing on the display.

10



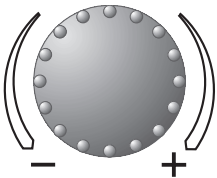
Tap the “rotary pushbutton” to confirm the day.

11



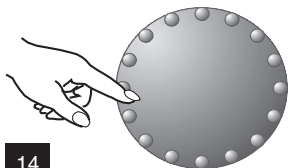
The heating start time is shown flashing on the display.

12



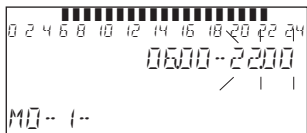
Set the desired heating start time by turning the “rotary pushbutton”.

13



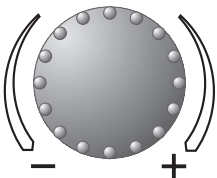
Tap the “rotary pushbutton” to confirm the set start time.

14



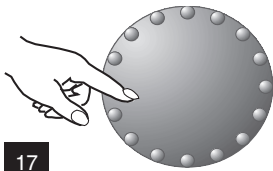
The heating end time is shown flashing on the display.

15



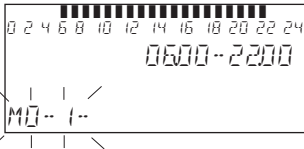
Set the desired heating end time by turning the “rotary pushbutton”.

16



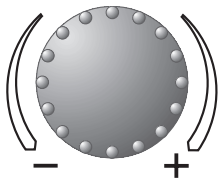
⇒ Tap the “rotary pushbutton” to confirm the set end time.

17



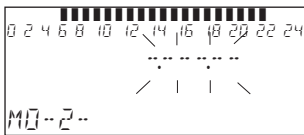
ⓘ After confirmation of the end time, the day of the week flashes again.

18



⇒ Set a second heating time (Mo-2-) by turning the “rotary pushbutton”.

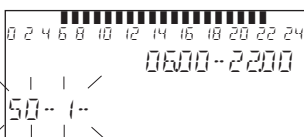
19



Set the switching times as described for the previous heating circuits.

⇒ Keep turning to reach the following day.

20



Set the switching times as described for the previous days.

ⓘ You can also copy the switching times from other days (see pages 26, 27).

21



⇒ Tap the “Operating mode” key to confirm the settings.

22

If P1 is displayed, it means that further standard heating times programs are already enabled. If not, P2 and P3 can be enabled by the heating technician.

Factory setting:
Switching times program P2

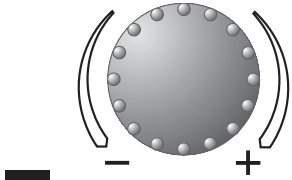
Circuit	Day	Heating from
All heating circuits (HC,MC-1,MC-2)	Mo-Th	06.00-08.00 16.00-22.00
	Fr	06.00-08.00 13.00-22.00
	Sa-Su	07.00-23.00
Hot water circuit (DHW)	Mo-Th	05.00-08.00 15.30-22.00
	Fr	05.00-08.00 12.30-22.00
	Sa-Su	06.00-23.00

Factory setting:
Switching times program P3

Circuit	Day	Heating from
All heating circuits (HC,MC-1,MC-2)	Mo-Fr	07.00-18.00
	Sa-Su	reduced
Hot water circuit (DHW)	Mo-Fr	06.00-18.00
	Sa-Su	reduced

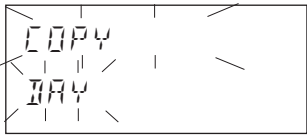
6.7.4 Copying switching times

➔ Follow the steps 1 to 8 described in chapter 6.7.3 “Changing the switching times” on pages 23, 24!



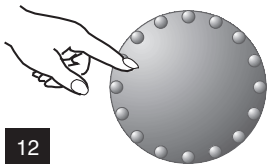
10

➔ Select the “COPY”, “DAY” by turning the “rotary pushbutton”.



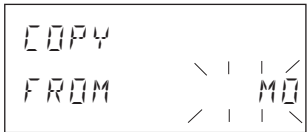
11

🔗 The settings flash on the display.



12

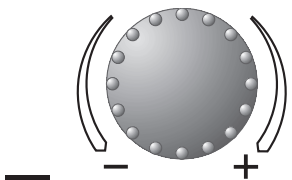
➔ Tap the “rotary pushbutton” to confirm the settings.



13

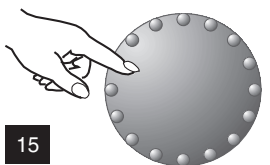
🔗 The selected setting value is shown flashing on the display.

ⓘ Change the flashing value by turning the “rotary pushbutton”. Confirm by tapping the “rotary pushbutton”.
Go back one step with ⓘ.
Go to the starting point with ⏪ or, automatically, after approx. 60 sec.



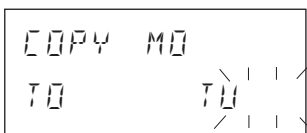
14

➔ Select the day you want to copy by turning the “rotary pushbutton”.



15

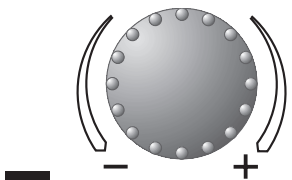
➔ Tap the “rotary pushbutton” to confirm the day.



16

🔗 The target day(s) is (are) shown flashing on the display.

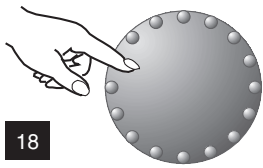
ⓘ Top line = value to copy
Bottom line = target



17

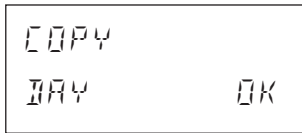
➔ Select the desired value by turning the “rotary pushbutton”.

ⓘ Days of the week: MO, TU...
Whole week: 1 - 7
Working days: 1 - 5
Weekend: 6 - 7



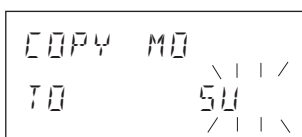
18

⇒ Tap the “rotary pushbutton” to confirm the setting.



19

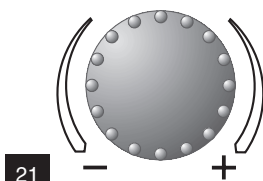
👁️ Confirmation for correct copying of day(s).



20

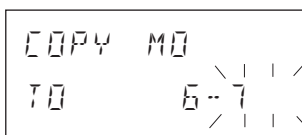
👁️ Target range for the next copy process is shown flashing on the display.

ⓘ The same value as in the preceding action is copied to the target range!



21

⇒ Select the next copy range by turning the “rotary pushbutton”.



22

👁️ Target range for the copy process is shown again flashing on the display.

ⓘ Use the same scheme to create any additional copies.



23

⇒ Tap the “Operating mode” key to confirm the settings.

ⓘ The start display is shown (basic display).

6.8 Heating curve

6.8.1 Heating curve (heating characteristic) information

i The heating curve describes the flow temperature of a heating system as a function of the outdoor temperature.

i The heating curve is preset by the installer *.

i Conduct temporary changes to the room temperature settings via the “Daytime room temperature” or “Reduced temperature”.

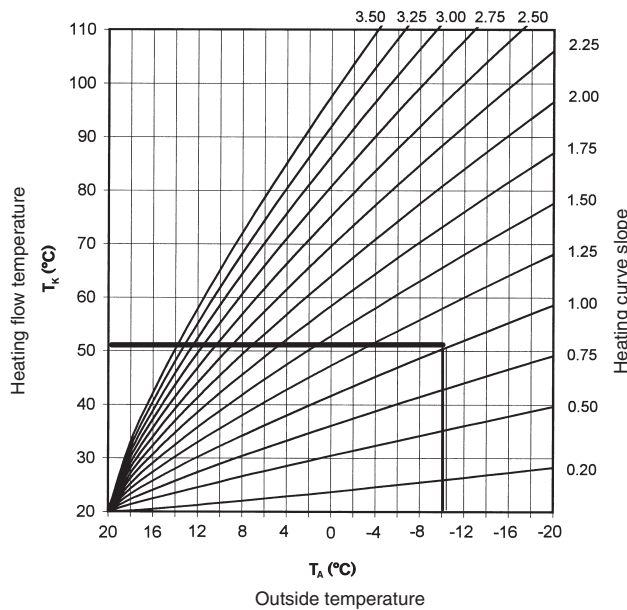
i The heating characteristic curve settings should only be changed if the room temperature is not reached over a longer period of time during the heating period.

Recommended settings:

Floor heating: 0,3 bis 1,0

Radiator heating: 1,2 bis 2,0

Convactor heating: 1,5 bis 2,0



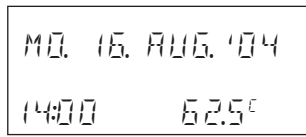
Example:

You have set the system to radiator heating and a heating curve slope of 1,0. At an outdoor temperature of -10°C this results in a flow temperature of approx. 52°C, if a temperature of 20°C is required.

* Info :

The heating curve for the direct circuit is set to OFF by default. The direct heating circuit is activated automatically by setting a value.

6.8.2 Changing the heating curve (heating characteristic)



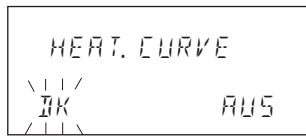
Start - Basic display

1



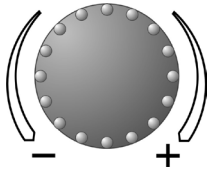
⇒ Tap the “Heating characteristics” key.

2



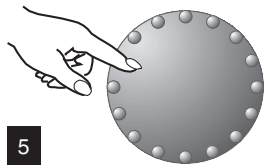
👁️ “Heating curves” appears and “HC” is shown flashing on the display.

3



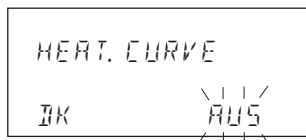
⇒ Select the heating circuit by turning the “rotary pushbutton”. ⓘ See page 5, chapter 1.3 system data

4



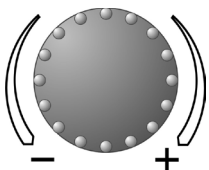
⇒ Tap the “rotary pushbutton” to confirm.

5



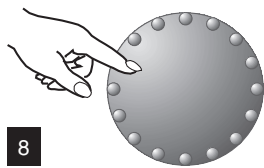
👁️ The slope of the heating characteristic curve is shown flashing on the display, or OFF if the selected heating circuit is not connected

6



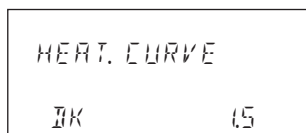
⇒ Select the desired value for the slope of the heating characteristic curve by turning the “rotary pushbutton”.

7



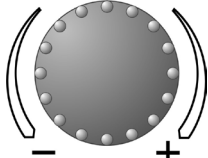





⇒ Tap the “rotary pushbutton” to confirm the selected value.

8



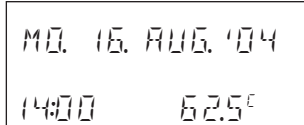

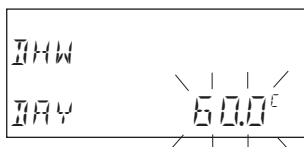

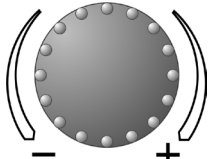

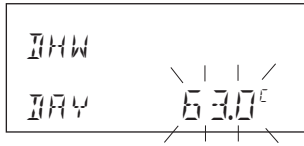


👁️ The selected slope of the heating characteristic curve is shown.

9

- 1**  Turn the rotary pushbutton to set further heating circuits...
- 2**   "Heating curves" appears again on the display.  For example "MC" (flashing).
- 3**  Tap the "Operating mode" key to confirm the settings.  The start display is shown (basic display).

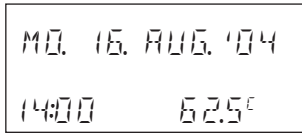
6.9 Domestic hot water

6.9.1 Adjusting the domestic hot water temperature

- 1**  Start - Basic display
- 2**  Tap the "Hot water temperature" key.
- 3**   The currently set hot water temperature is shown flashing on the display.
- 4**  Set the desired hot water temperature by turning the "rotary pushbutton".  Setting range 10 - 65°C
Factory setting 60°C
- 5**   The selected hot water temperature flashes.
- 6**  Tap the "Room temperature" key to confirm the temperature setpoint.

6.9.2 Manual hot water loading

In case of increased hot water demand it is possible to conduct a temporary additional heat up of the calorifier. The calorifier is then loaded once according to the set daytime hot water temperature.



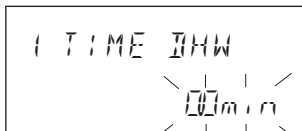
Start - Basic display

1



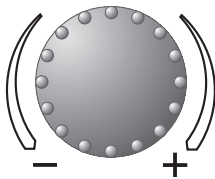
⇒ Press and hold the “Hot water temperature” key for 3 sec.

2



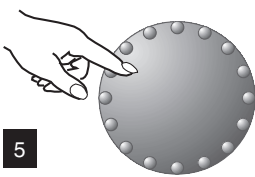
The additional DHW loading time is displayed; the minutes display flashes.

3



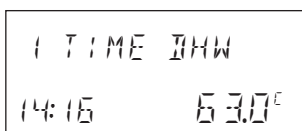
⇒ Set the desired additional loading time Setting range 0 - 240 min.

4



⇒ Tap the “rotary pushbutton” to confirm the setting.

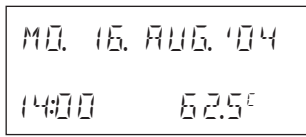
5



The selected additional loading time is shown. The information on the display disappears when the additional loading is completed.

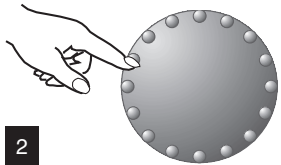
6

6.9.3 Domestic hot water economy temperature (reduced temperature)



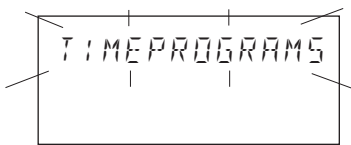
Start - Basic display

1



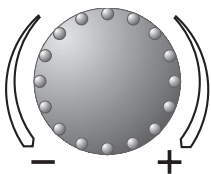
⇒ Press and hold the “rotary pushbutton” for 3 sec.

2



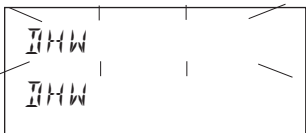
🔗 “Switching times” is shown flashing on the display.

3



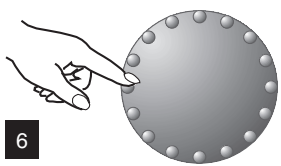
⇒ Change the DHW setting by turning the “rotary pushbutton”. ⓘ Setting range 0 - 240 min.

4



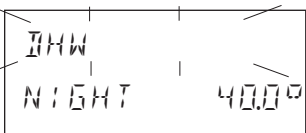
🔗 “DHW” is shown flashing on the display.

5



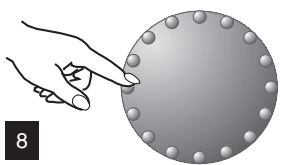
⇒ Tap the “rotary pushbutton” to confirm the selected value

6



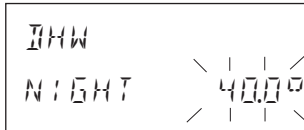
🔗 “DHW” is shown flashing on the display again. ⓘ The temperature shown corresponds to the set reduced DHW temperature.


7



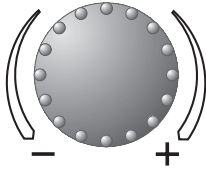
⇒ Tap the “rotary pushbutton” to confirm the selected value


8



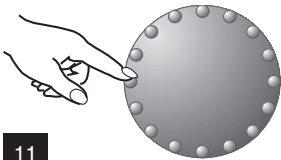
 The reduced night-time DHW temperature flashes.


9



 Select the desired temperature value by turning the “rotary pushbutton”.


10




 Tap the “rotary pushbutton” to confirm the setting.

11



 Tap the “Operating mode” key.

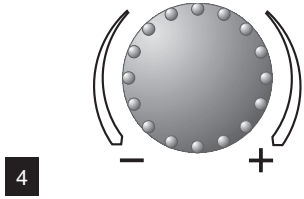
 The start display is shown (basic display).

12

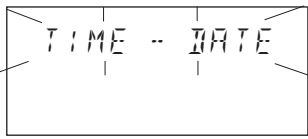
6.10 Further settings

6.10.1 Setting the clock

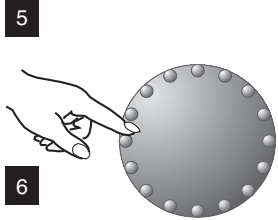
⇒ Follow the steps 1 to 3 described in chapter 6.9.3 “Domestic hot water economy temperature” on page 32!



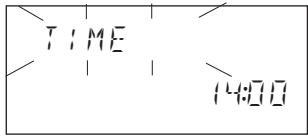
⇒ Select “Time-date” by turning the “rotary pushbutton”.



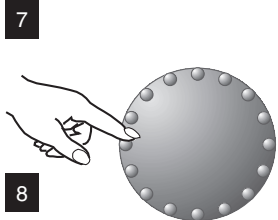
☞ “Time-date” is shown flashing on the display.



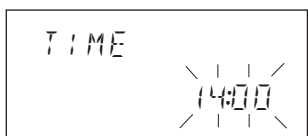
⇒ Tap the “rotary pushbutton” to confirm the selected value



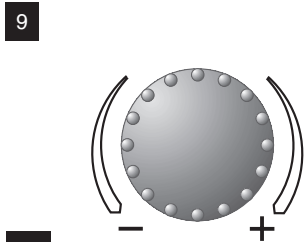
☞ “Time” is shown flashing on the display.



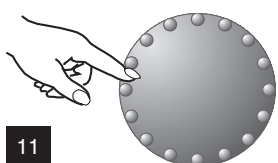
⇒ Tap the “rotary pushbutton” to confirm the selected value




☞ The “time” is shown flashing on the display.



⇒ Set the desired time by turning the “rotary pushbutton”.

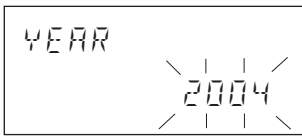


⇒ Tap the “rotary pushbutton” to confirm the selected value

ⓘ Return to the starting page and save the set values with .

ⓘ For further settings turn the “rotary pushbutton”.

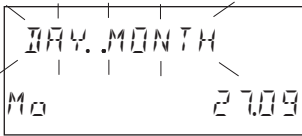
6.10.2 Setting the date



12


🔗 “Year” is shown flashing on the display - confirm. Change the year setting by turning the “rotary pushbutton” - confirm.

ⓘ Continuation of ”Setting the clock” 6.10.1 on page 34.



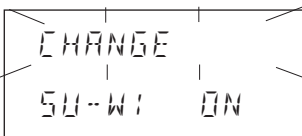
13

🔗 “Day...Month” is shown flashing on the display - confirm. Change the Day...Month setting by turning the “rotary pushbutton” - confirm.

ⓘ Return to the starting page and save the set values with  .

ⓘ For further settings turn the “rotary pushbutton”.

6.10.3 Changing between summer and winter time



14

🔗 “Change” is shown flashing on the display - confirm. Change SU-WI ON or OFF by turning the “rotary pushbutton” - confirm.

ⓘ Continuation of ”Setting the date” 6.10.2 on page 35.

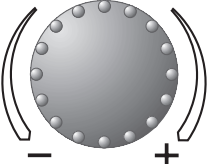



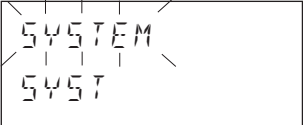

15

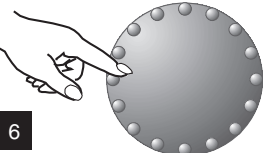

➡ Tap the key “Operating mode” to confirm the selected summer /winter time and to open the basic display.

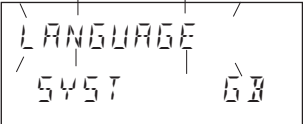

6.10.4 Setting the language

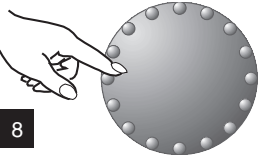

Follow the steps 1 to 3 described in chapter 6.9.3 “Domestic hot water economy temperature” on page 32! **i** You will be prompted for the desired language when switching on the control system for the first time. Changing the language is also possible during normal operation.

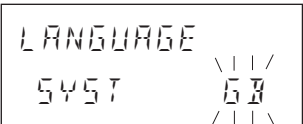

4   Select “System” on the display by turning the “rotary pushbutton”.

5   “System” is shown flashing on the display.

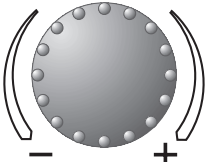

6   Tap the “rotary pushbutton” to confirm the selected value



7   “Language” is shown flashing on the display

8   Tap the “rotary pushbutton” to confirm the selected value

10   Language is displayed - abbreviations for the language are shown flashing.

i DE = German
 GB = English
 FR = French
 IT = Italian

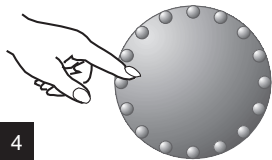
11   Turn the “rotary pushbutton” to select the desired language and tap to confirm.

12   Tap the “Operating mode” key..

6.10.5 Reloading the standard switching times program - Deleting the own time program

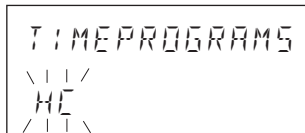
i With this function you can reload all the factory settings!

Follow the steps 1 to 3 described in chapter 6.9.3 “Domestic hot water economy temperature” on page 32!



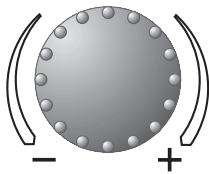
4

⇒ Tap the “rotary pushbutton” to confirm the selected value



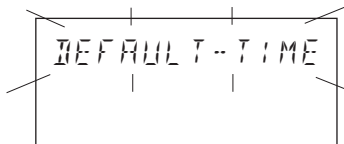
5

i The letters “HC” are shown flashing on the display.



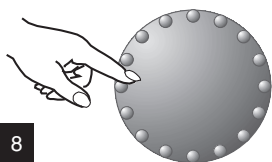
6

⇒ Select “Default-time” by turning the “rotary pushbutton”.



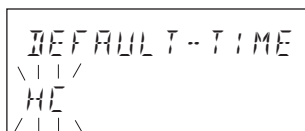
7

i “Default-time” is shown flashing on the display.



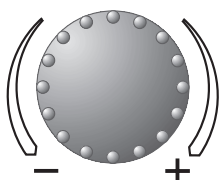
8

⇒ Tap the “rotary pushbutton” to confirm the selected value.



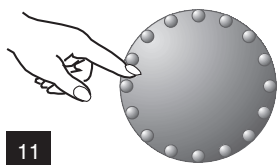
9

i The letters “HC” are shown flashing on the display.



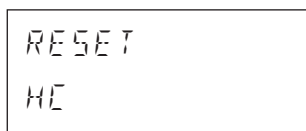
10

⇒ Select the heating circuit by turning the “rotary pushbutton”.



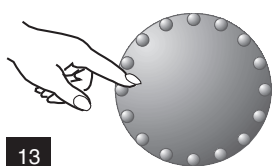
11

⇒ Tap the “rotary pushbutton” to confirm the selected value.



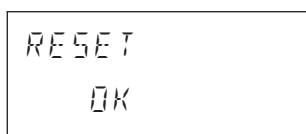
12

👁️ “Reset / HC” is displayed.



13

⇒ Press and hold the “rotary pushbutton” for 3 sec.



14

👁️ “Reset / HC” is displayed to confirm.



15

⇒ Tap the “Operating mode” key to confirm the new settings and to open the basic display.

6.10.6 Manual operating mode

i The following information is intended for the heating technician only

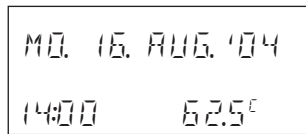


This function key is also used for emission measurement when it is only pressed briefly.
- see installation instructions; combustion control

All pumps are operating without restrictions. Available mixers are disconnected and can be operated manually, if necessary, depending on the heat demand.

CAUTION:

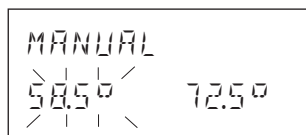
- i** - The DHW temperature reaches the level of the boiler temperature setpoint. Scalding hazard if temperature setting too high!
- To protect underfloor heating systems against invalid overheating during manual operation, it is necessary to implement appropriate safety measures (e.g. safety temperature limiter with pump switch-off).



Start - Basic display



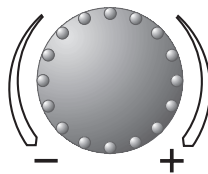
⇒ Press and hold for 5 seconds




60

Current boiler temperature

Boiler temperature setpoint

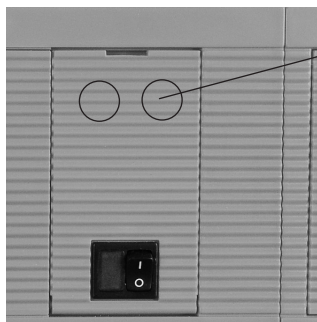


⇒ Set the desired boiler temperature by turning the “rotary pushbutton”.

- i Note:** You can leave the manual operating mode and the emission monitoring mode at any time by tapping of the operating mode key  (Return to basic display).

6.10.7 Alarms

- i** The controller comprises a comprehensive alarm logic which displays the fault type by means of the corresponding error code.



If "Error" is shown on the display, press the Reset button under the hinged cover. If this happens frequently, notify your Customer Service centre.

```
FLOW
ERROR 12-0
```

Example for sensor alarm messages (short circuit or interruption) Error code 10-20 and index 0 or 1

```
HEAT GENER.
ERROR 30-2
```

Example for heat generator alarm messages (switching status) Error code 30-40 and index 2-5

```
IHW
ERROR 50-2
```

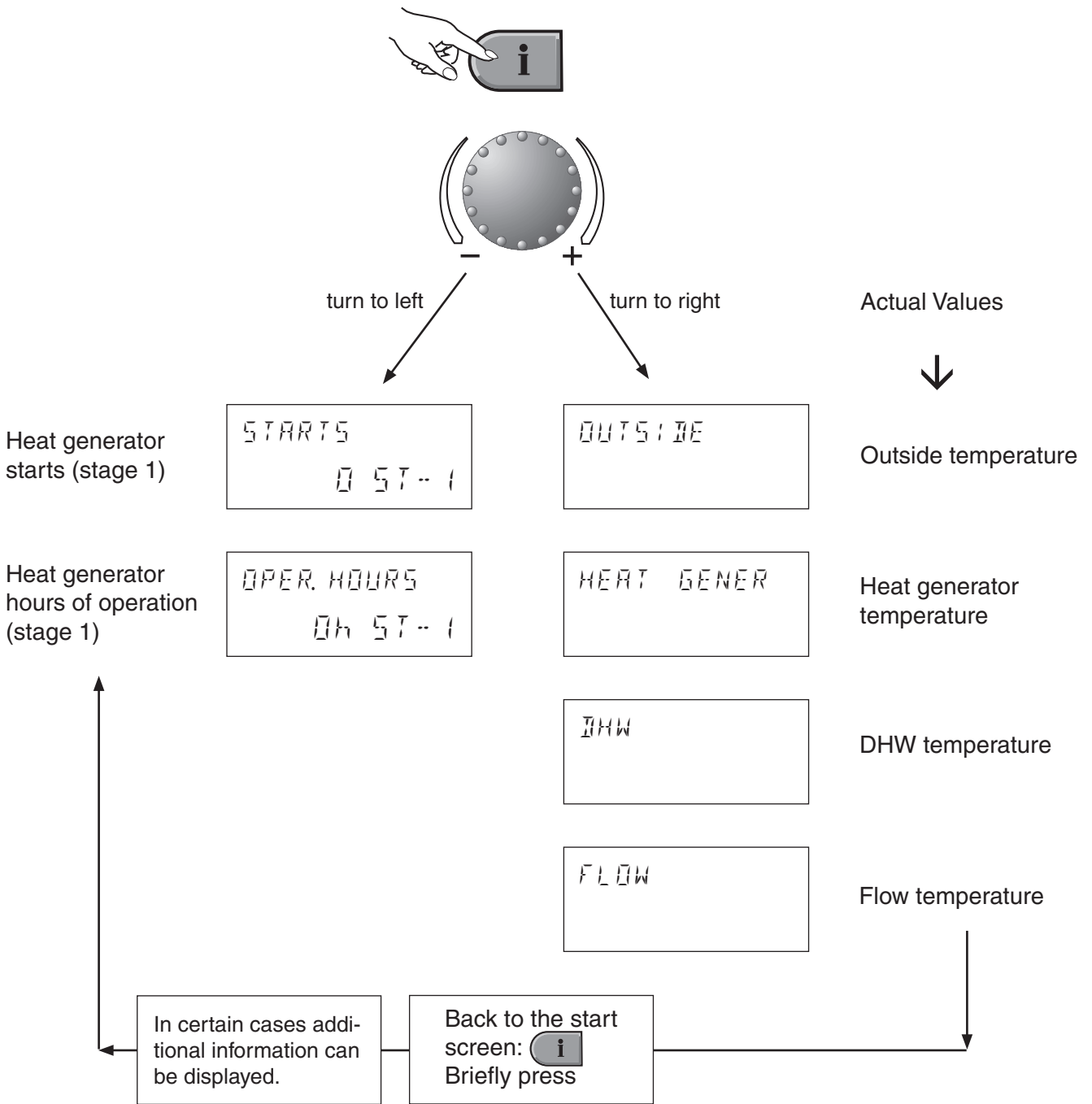
Example for logical alarm messages (control functions) Error code 50-60 and index 2-

```
BUS
ERROR 70-1
```

Example for data bus alarm messages (address errors on data bus) Error code 70 and index 0 or 1

6.11 System information

6.11.1 Information key for system temperatures and heating circuit information



only for 2-stage gefahren wird:
 - Heat generation hours of operation (stage 2)

- Heat generation starts (stage 2)

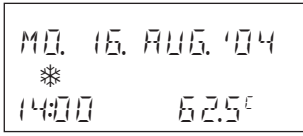
only in conjunction with room sensor:
 - Room temperature direct HC

- Room temperature MC 1

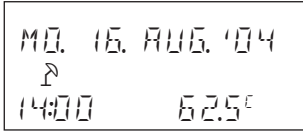
- Room temperature MC 2

All temperature values shown represent the current values. Press and hold the “rotary push-button” to display the individual setpoint.

6.11.2 Special symbols



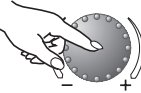
Ice crystal symbol:
Frost protection activated



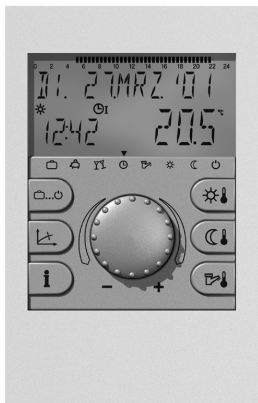
Umbrella symbol:
Summer disconnection active (heating switched off, DHW according to program).



Maintenance message (optional):
If the display shows the basic display alternating with the maintenance prompt, call customer service. To temporarily suppress this message, press the Manual mode/Emission key and acknowledge according to the display by pressing the PUSH & TURN button for 3 seconds.



6.11.3 Optional accessories



Room station RS-T

The Room station RS-T offers additional operating convenience through decentralised monitoring and intervention options, since every heating circuit can be assigned with its own individual room station. Moreover, the central unit contains various control and regulating functions which can only be activated in conjunction with a room station. The following are some of those functions:

- Optimization functions
- Automatic heating curve adaption

System specific temperatures and switching times can be checked and modified via five control keys, also allowing the definition of individual system programs.

The operation of the room station and the boiler control unit is identical.



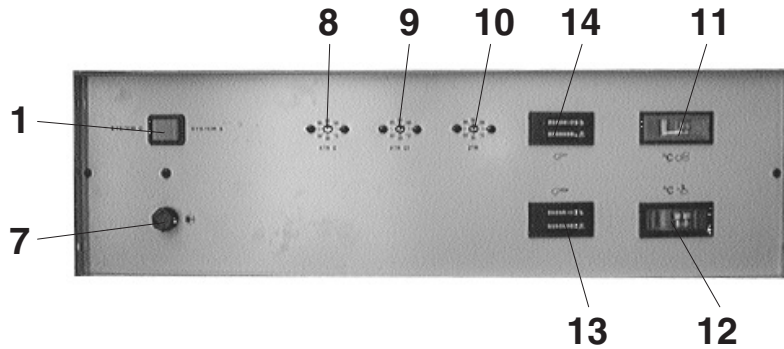
Remote setting device with room sensor RFF-T

This auxiliary device monitors the current room temperature and allows the desired room temperature to be corrected.

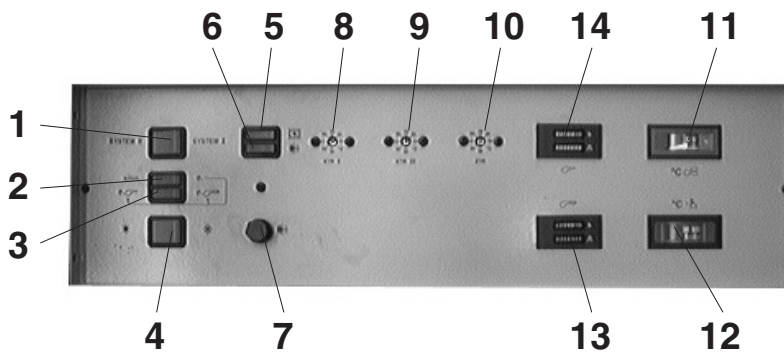
With the integrated operating mode key you can select between continuous heating, reduced heating or automatic mode according to a preset automatic program stored in the central unit.














7. Boiler system control T0.2 und T2.2


















7.1 Operating elements of the boiler controller T0.2




7.2 Operating elements of the boiler controller T2.2



Key	Designation	Function
1	 Main switch EIN / AUS	SYSTEM I = ON - Heating boiler operative SYSTEM 0 = OFF - Heating boiler and burner are inoperative Attention: No frost protection
2	 Operating mode selection switch: Burner	autom.  Base load full load change over automatic Base load full load change over manual
3	 Base load / full load	  Base load applied   Full load applied
4	 Operating mode selection switch: Summer / winter	 Summer: Hot water only  Winter: Heating and hot water
5	 Fault display "Burner"	 Lamp not lit = normal operation

Key	Designation	Function
6	 Fault display Safety temperature high limit	 Lamp not lit = normal operation Lamp lights = over-temperature (for resetting, see above)
7	 Boiler temperature high limit reset	 Safety device: The boiler is rendered inoperative if the boiler water exceeds the temperature limit. (for resetting, see above)
8	 Boiler temperature controller: KTR I	Temperature controller for basic load heating
9	 Boiler temperature controller: KTR II	Temperature controller for heating the water
10	 Boiler temperature controller: ZTR	Temperature controller for full load heating
11	 Boiler temperature display	  Display of instantaneous boiler temperature
12	 Flue gas temperature display	  Display of instantaneous flue gas temperature
13,14	 Running hours counter Basic load (13) Full load (14)	Number of running hours is displayed
	 Pulse counter (on request)	Number of burner starts is displayed
13,14	(Alternative)  Running hours counter Basic load (13) Full load (14)	Number of running hours is displayed
	 Pulse counter (on request)	The number of burner starts is displayed for 10 sec. after supply voltage has been switched on

Version with mounted-on water heater

15		Water heater corrosion protection	<p>Attention! Water heater corrosion protection is only active when the green pilot lamp is illuminated.</p> <ul style="list-style-type: none"> • Flashing red -> Notify After-Sales Service • Lamp not illuminated -> Supply open-circuit
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Instructions for setting the temperature controller and resetting the safety temperature high limit

Resetting in the case of over-temperature **6** lights, the burner has been prevented from firing due to an If fault display excessively high boiler temperature. To reset, unscrew the protective cap and press the exposed button when the boiler temperature has fallen to below 80C.

Notify Hoval after-sales service if the high limit is continuously being activated!

8. Oil tank and burner (Uno-3 / Mega-3 / Max-3 / Cosmo / ST-plus / Titan-3 E)

8.1 Filling the oil tank

Always switch off the operating mode selection switch at the heating boiler when filling the oil tank. It is only to be switched back on after a waiting time of approx. 2 hours. The oil supplier is to supervise the filling of the heating oil tank.

8.2 Fuel

Oil burners generally operate with 35 sec fuel oil. The heating boiler is also suitable for gas firing if fitted with the appropriate burner.

8.3 Burner setting

Your burner was checked at the factory. Setting is carried out by the heating installer or Hoval after-sales service at the time of commissioning (for output settings, see "Data of your heating installation". pages 5/6).

8.4 Heating space and fresh air supply

For correct combustion of the heating oil the burner requires a supply of fresh air. Provision is therefore always to be made for an adequate supply of fresh air to the boiler house for both combustion and ventilation. Contaminated intake air, e.g. with dust or textile fibres leads to a rapid deterioration of the combustion and possible reduction in the life of the boiler. So the boilerhouse is to be kept as clean and as free of dust as possible. No chemicals are to be stored in the boilerhouse or the in the zone of the fresh air supply to the boilerhouse.

8.5 Placing in operation

- When first placing in operation, take note of the Technical information / installation instructions for the burner.
- Check the water content of the heating system. Check the oil level in the oil tank with the dipstick.
- Check the settings of the boiler automatic system, and thermostats.
- Check the oil supply to the burner (open the oil pipeline gate valve).
- Check the fuses on the switch panel.
- Place the emergency switch to the position "On".

The burner can now be placed in operation by switching on the main switch and the operating mode selection switch at the heating boiler.

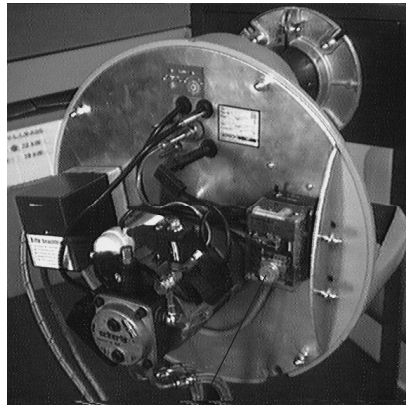
8.6 Placing out of operation

To place the oil burner out of operation for a short time it is sufficient to simply switch off at the operating mode selection switch. For longer periods it is recommended to close the oil shutoff valves.

8.7 Operating faults

All burner functions are monitored by the integrated oil firing automatic devices. Any operating faults are signalled by the lighting of a fault clearing button 1 at the oil firing automatic device and the fault display lamp on the boiler.

The burner can be restarted by pressing the fault clearing button on the oil burner (max. 2-3 times). If burner operation is not possible in spite of this, notify the specialist.



1



8.8 Burner maintenance

An important precondition for cost-effective operation and for maintaining good air quality is the sound condition of your burner system. The burner must be inspected resp. cleaned by a specialist once a year. We recommend you to conclude a maintenance contract.

9. Heating system maintenance

9.1 Cleaning

Insufficient cleaning not only leads to increased fuel consumption, but also shortens the life of the boiler.

In accordance with national regulations, the heating boiler of oil-fired systems is to be cleaned by the boiler inspector.

Recommendations for an oil fired boiler are:

- With boiler operating throughout the year: Clean the boiler twice per year
- For winter operation only: Clean the boiler once per year

Instructions for the cleaning specialist are contained in the Technical information / installation instructions.

9.2 Placing out of service

The following measures are to be taken when the boiler is to be out of service for several weeks:

- Clean all boiler heating surfaces thoroughly with the tools provided.
- Where there is a risk of frost, drain the system down.
- If your system is fitted with an electronic heating controller, a minimum room temperature of 5°C is guaranteed providing your system is on standby.

9.3 Check the water level

When the water pressure is too low (readable from the manometer), notify your installation engineer.

9.4 Recommendations

9.4.1 Water heater inspection

The water heater should be inspected every three years. You can take out a corresponding service contract with the supplier.

9.4.2 Oil tank inspection

It is legally required that the oil tank must be inspected and cleaned. You should approach a specialist oil tank inspection company to carry this out.

Recommendation:

Check whether your third party liability insurance covers all damage which might arise in the event of an escape of oil.

9.4.3 Boiler inspection

After 8 to 10 years in operation, a general inspection by the Hoval Service is recommended.

10. Checklist in the case of faults

Fault	Check/cause	Rectification	Page
Oil burner not functioning	- Is electrical supply present?	- Check fuses - Switch on main switch	43
	- Is the fault lamp lit?	- Press the clear fault button - Notify the oil burner service agent	44
	- OIL LEVEL CHECK	- Oil fill up	46
	- Is the burner plug connector plugged in?	- Insert plug	
	- Has the high limit stat been activated?	- Remove cover and press the knob to reset	44
Gas burner not functioning	- Is electrical supply present?	- Check fuses - Switch on main switch	
	- Is the gas cock open?	- Open	
	- Is the fault lamp lit?	- Press the clear fault button - Notify the burner service agent	44
	- Is gas present?	- Make enquiries with your gas supplier	
	- Is the burner plug connector plugged in?	- Insert plug	
	- Has the high limit stat	- Remove cover and press the knob to reset	44
Heating system nor warm	- Are the feed and return heating	- Open	
	- Is the main switch incorrectly set?	- Main switch ON	43
	- Is the operating mode selection switch incorrectly set?	- Set	
	Is the time switch of the TopTronic®T set up correctly?	- Check according to the separate operating instructions for the heating controller	23
	- Check the setting of the temperature adjuster	Select a higher setting	
	- Check the system water content and pressure	- Too low - inform the installation company	48
	- Are the radiator valves open?	- Open	
	- The heating circulation pump is not running	- Open the sealing screw Turn the shaft end vigorously with a screwdriver until the resistance reduces	

Fault	Check/cause	Rectification	Page
No hot water	- The mixing valve is not opening automatically	- Open by hand and contact your heating installer	
	The calorifier primary pump is not running	- Remove sealing screw - Turn shaft end vigorously with a screwdriver to overcome the resistance	
	- Is air present in the calorifier primary	- Where necessary, bleed manually - Actuate automatic bleeding by hand	
	-Has the high limit stat been activated?	- Remove cover and press the knob to reset	44

Please note!



In the event of a fault, please proceed according to the above checklist.

If you are unable to rectify the fault, please call your heating installer or Hoval after-sales service.



11. This is how you can save energy

Room temperatures and operating times of the heating system have a decisive influence on the fuel consumption.

1°C reduction in the room temperature setting leads to an economy in fuel consumption of up to 6%. Therefore, please take note of the following tips:

- Avoid setting room temperatures above 20°C and adjust your heating system accordingly.
- It is worth turning off the radiators in unused rooms, provided there is no risk of frost and no damage caused by moisture either to the building fabric or its furnishings is to be expected.
- In the main living rooms, there is frequently heat gain due to body warmth, televisions, fireplaces and also sunshine. These cannot be compensated by a weather-dependent regulatory system. It may be worth installing a remote control (RS 30) or a room sensor or fitting thermostats to the radiators in these rooms.

When it is draughty in the house, it is not merely unpleasant; it indicates at the same time that heating energy is being wasted.

You therefore save fuel if you...

- keep windows and doors closed in winter.
- close chimney dampers when the fire is out.
- only operate kitchen and bathroom fans when it is necessary to remove moisture and odours.
- only ventilate briefly, but frequently.
- seal doors and windows, to prevent continuous leakage loss.

Insulation helps to keep in valuable warmth.

Take advantage of all these possibilities and...

- close window and door shutters at night.
- make sure that heating pipes and hot water pipes in unheated rooms are properly insulated.

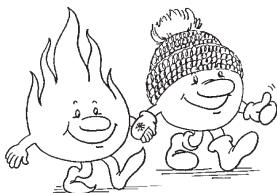
As low a radiator temperature as possible will prevent unnecessary heat losses.

For this reason, the radiator must always be enabled to give its heat up to the room without hindrance. You should therefore avoid:

- radiator coverings
- window-sills which obstruct heat flow because the outlets are covered.

Heating the hot water too offers opportunities for saving.

- The hot water temperature should be set as low as possible. Experiment to find out the lowest temperature at which there is still enough hot water available.
- If your system includes a hot water circulating pump, it is worth shutting this down at night by means of a time-switch.



12. Hoval Service / sales program

There are many advantages in favour of having a service agreement

- Your heating system will always be optimally adjusted – this saves heating costs and helps preserve the environment.
- A high level of operational reliability, as in the course of servicing early warning of possible faults may be recognized and corrected.
- Optimum settings of your system and the regular maintenance will together guarantee a longer service life for your system.
- The advantageous all-in price.

The Hoval specialists are well-equipped and will give you good and reliable service.

When you give us an order, please call the regional Service Controller, who works in close co-operation with the service engineers in the area. The service call can then be made without delay.

You will find we have product ranges which offer you possibilities in all sizes of new builds and renovated buildings.

Modern Hoval system engineering with a guaranteed future includes:

Heat generation systems

Compact heating centres for oil firing, heating boilers for oil- and wood-firing, burners, solar energy production systems (collectors) and heat-pumps for making use of geothermal heat or heat generated by wind and water.

Heat distribution systems and buildings services

Water heaters (boilers), radiators, heating walls, convectors, low-temperature radiators, heating and ventilation regulators, circulation pumps and heating oil tanks of both plastic and concrete.

Heat recovery and industrial ventilation systems

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