Programmable roomthermostat
Instruction manual

*i*RT 30

CE

A

3 16:39 20.5

20
15   25
10

NEFIT

①   ②   ③

B

3 16:39 20.5

20
15   25
10

1..7

④

1..7
⑤   ⑥   ⑦

⑧   ⑨   ⑩

⑪   ⑫   ⑬
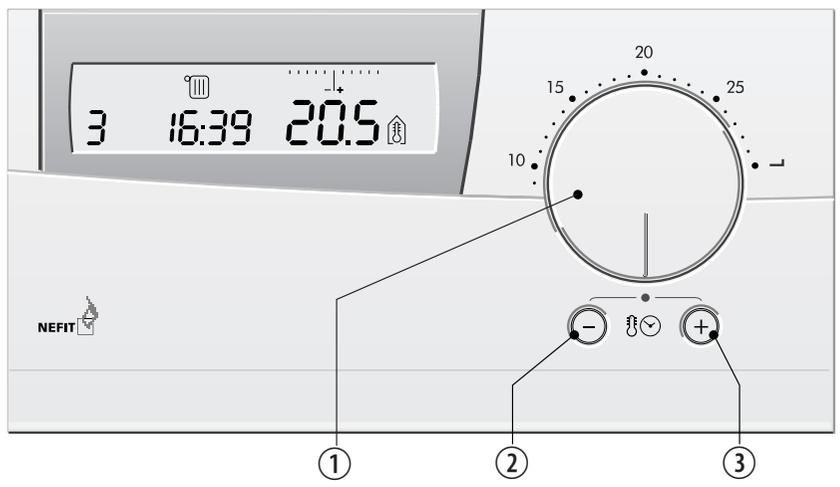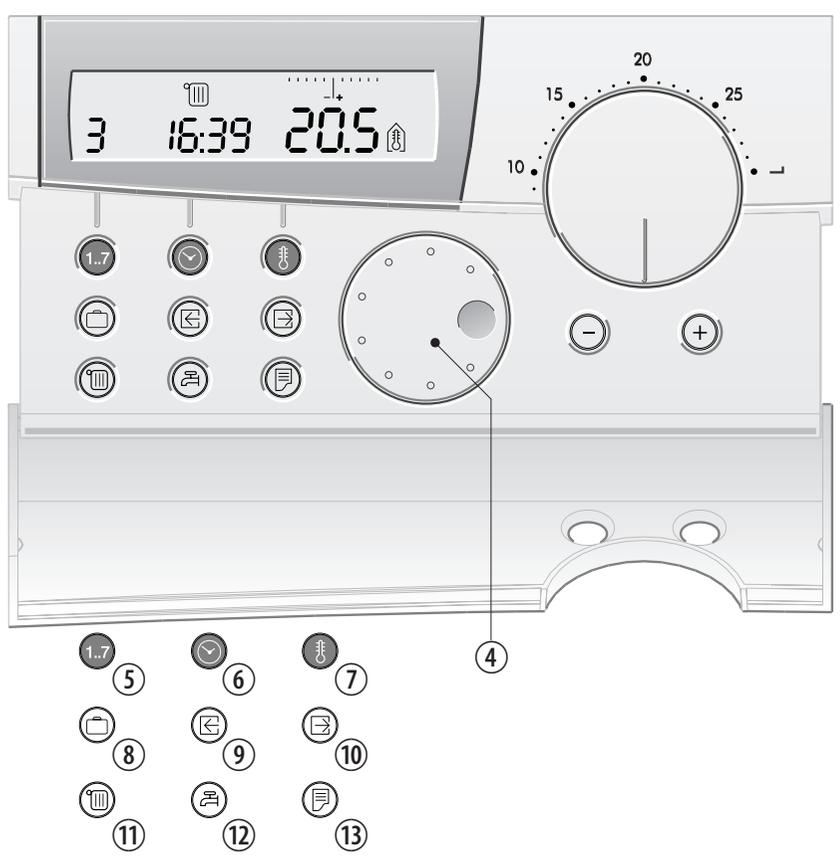
① temperature adjustment knob • Temperaturwahlschalter • bouton de réglage de la température • manopola di regolazione della temperatura • Temperatur indstillingsknap

② temporarily reduce the program-temperature • Programmtemperatur vorübergehend erniedrigen • abaisser temporairement la température du programme • riduzione temporanea della temperatura programmata • Midlertidig sænkning af programtemperatur

③ temporarily raise the program-temperature • Programmtemperatur vorübergehend erhöhen • augmenter temporairement la température du programme • aumento temporaneo della temperatura programmata • Midlertidig forøgelse af programtemperatur

④ adjustable program knob • Programmwahlschalter • bouton de réglage du programme • tasto di programmazione • Programdrejeknap

⑤ day • Tag • jour • giorno • Dag

⑥ time • Zeit • Heure • ora • Tid

⑦ temperature • Temperatur • température • temperatura • Temperatur

⑧ vacation • Urlaub • vacances • vacanze • Ferie

⑨ insert • Einfügen • insérer • inserire • Indføring

⑩ remove • Löschen • effacer • Slet

⑪ heating • Heizung • chauffage • riscaldamento • Opvarmning

⑫ hot water • Brauchwasser • eau chaude • acqua calda • Varmt vand

⑬ menu • Menü • menu • menu • Menu

Technical specifications

EV-number	18127
EV-number optional outside sensor	18140
Power supply	2-core polarity-free low voltage connection with UBA-4000
Maximum wire thickness	1.5 mm^2

Permissible ambient temperature:
- in operation   0 °C - 50 °C
- during storage   - 20 °C - 60 °C

Permissible relative humidity	0 - 90 %, non-condensing
Electrical protection level	IP 00
Dimensions (W x H x D)	175 x 90 x 35 mm

Clock program:
- total day programs   7
- total switching points per week   70
- adjustable by   10 minutes
- option for clock switching hot water provision

Temperature regulation:
- adjustment principle   modulates on the basis of:
  - room temperature
  - outside temperature
  - combination of both

- adjustment range   10 °C - 30 °C
- smallest adjustable value   0.5 °C
- setting via clock program   digital
- setting via manual control   analogue

Contents

Technical specifications

Settings of the IRT 30

1. Preface

This manual is split up into two parts:
- Manual for the user (chapters 1 up to and including 4)
- Manual for the installer

This manual contains a glossary (chapter 10). The glossary gives a description of the words which are not used in common parlance. Also, an index is included. This enables you to easily find a specific subject in the manual.

After reading the User Manual, you are able to use the IRT 30 clock thermostat. You can enter the desired program, so that you have the desired temperature at every moment of the day. This manual gives an answer to the following question:
"What do you have to know to control the IRT 30".
The more technical issues can be found in the manual for the installer. In this section you can also find the mounting and installation instructions. The installer should also set the IRT 30. In the event of malfunctions, you can find information about this in chapter 9. You can also contact your installer.

2. Safety regulations

- Never disassemble the thermostat, and do not drop it on the floor; the thermostat contains vulnerable electronic parts and sensitive sensors.
- Avoid high temperatures, moist and dusty surroundings.
- Do not use liquids or cleaning agents to clean the thermostat.
- Switch off the power supply of the CH before you install the thermostat. Make sure the power supply of the CH is actually switched off.

3. Brief description of the IRT 30

3.1 Introduction

The IRT 30 clock thermostat has been specially developed for the use with boilers fitted with the universal burner auto unit UBA-4000. The IRT 30 is designed for wall-mounting and is powered via a connection to the boiler. Thus, the thermostat does not use any batteries. By making use of a computer program, the thermostat continuously receives data from the boiler and the other way around. With this information, the thermostat is able to give instructions to:
- comfortably heat your home,
- supply the boiler with hot water at the right time,
- save as much energy as possible.

You can program the IRT 30 with a maximum of 70 switching points for one week. Furthermore, you can change the switching points, and remove or insert them.

Switching point
A switching point is a setting in your clock thermostat. It is a moment in time at which you desire a different temperature. To set this, you have to enter the desired time and the desired temperature.
(In paragraph 4.4 this will be explained in detail).

In doing so, you can refine the temperature regulation of your home.

The IRT 30 is suitable for three kinds of temperature regulation:
- room temperature controlled regulation
- weather dependent regulation
- weather dependent regulation with room temperature compensation.

The kind of temperature control which is applicable to you, is the starting point for setting the IRT 30. Therefore, the following paragraphs will describe the three kinds of temperature regulations.

3.2 Selecting the correct kind of temperature regulation

In paragraph 3.1 the three kinds of temperature regulation for which the IRT 30 is suitable, are mentioned:
- room temperature controlled regulation
- weather dependent regulation
- weather dependent regulation with room temperature compensation.

For the last two mentioned, it is necessary to place an outside temperature sensor (which determines the outside temperature and sends this information to the boiler) on the outside wall of your house. This must be a wall where the sun does not shine on directly and where the outside air can freely circulate around the sensor.

Room temperature controlled regulation
This is the simplest principle of regulation. It gives a high comfort level and has a high performance. To ensure the installation will operate according these principles, a number of conditions should be satisfied. There should be a room in your house in which the temperature is representative for the temperature in the rest of your house. This must be a room where, for example, the fireplace does not burn all day long, or the outside door or windows are not open very often. Such a room is called a reference room.

Reference room
A reference room is a room (for example the living room) where a temperature can be measured which is representative for the entire house.
We assume that the temperature in other rooms (for example kitchen or bathroom) is equal to the temperature in the reference room.
An other reason to appoint a specific room as reference room is that most of the time will be spent in this room. Therefore, it is important that the temperature regulation of this room is correct. The other rooms in the house can have a lower (or higher) temperature.

What does room temperature controlled regulation mean?
- The IRT 30 continuously measures the temperature in the room where it is fitted.
- The measured temperature will be compared with the desired (set) temperature.
- The IRT 30 determines how intensely the boiler has to burn to heat the CH-water, in order to achieve and maintain the desired temperature.
- The IRT 30 calculates the lowest possible water temperature, so that the boiler has to burn no more than necessary.
- In general, the boiler will therefore burn for a longer period at a lower capacity.
- By means of this principle of control, hot CH-water is available nearly all the time. If, in another room, a closed radiator valve is opened, the room will quickly be brought up to temperature as a result.

When to apply the room temperature controlled regulation?
- When the house is heated only by means of radiators.

When not to apply the room temperature controlled regulation?
- When there is no appropriate reference room in the house to install the IRT 30.
- When your house is heated (also) by means of floor heating, air heating or convectors.

In practice, the room temperature controlled regulation is the principle which will be selected in most cases.

Weather dependent regulation
This is a principle of regulation in which the determination of the CH water temperature is achieved by the outside temperature and a number of preset values in the IRT 30. This can be necessary when no reference room is available. Furthermore, this principle is used in buildings where it must be possible to heat the rooms independently from each other (for example old people's homes or office blocks). For this principle, the separate rooms should be equipped with radiators with thermostatic radiator valves, in order to regulate the temperature in each room.

In a house which is heated by floor heating, the temperature fluctuations should not become too large. Furthermore, this kind of heating heats up and cools down very slowly. In this situation, weather dependent regulation is a good choice, because with this regulation the heating intensity of the boiler will only be affected by the outside temperature. Because of this, changes will take place relatively gradually.

What does the weather dependent regulation mean?
- The heating intensity of the boiler is determined by the outside temperature and specific preset values on the IRT 30 clock thermostat.
- When the outside temperature drops, the boiler will burn more intensely and heat the CH water to a higher temperature (up to a preset maximum temperature).
- When the outside temperature rises, the boiler will burn less intensely and heat the CH water to a lower temperature (up to a preset minimum temperature).
- The rooms will be heated by the continuously circulating CH water.
- The temperature in the rooms to be heated can be regulated by means of thermostatic radiator valves.

When to apply weather dependent regulation?
- When your house does not have a suitable reference room.
- When you want to precisely regulate the temperature in more than one room.

When not to apply weather dependent regulation?
- When your house does not comply with the above mentioned criteria. This is a relatively less economical regulation principle, so you should apply this kind of regulation only if strictly necessary.

Weather dependent regulation with room temperature compensation
This kind of regulation is a derivative of the weather dependent regulation. With this principle, the CH water temperature is determined, in first instance, by the outside temperature and the preset values on the IRT 30. However, the thermostat also measures the temperature in the room where it is fitted.

This information is used to make minor corrections to the signal to the boiler, so that the desired temperature can be reached. The temperature in the room where the thermostat is fitted, is determined by the thermostat itself. The temperature in all other rooms can be regulated by means of the thermostatic radiator valves. Basically, you can choose this kind of regulation in the same cases as you would choose the weather dependent regulation without room temperature compensation. A suitable reference room should be available in the house.

What does weather dependent regulation with room temperature compensation mean?
- The CH water temperature will be determined, in first instance, by the outside temperature and the preset values in the IRT 30.
- The IRT 30 also measures the temperature in the room where it is fitted.
- On the basis of the measured room temperature, the IRT 30 adapts the water temperature of the CH automatically.
- The rooms will be heated by the continuously circulating water.
- The temperature in the room where the thermostat is fitted will be determined by the thermostat itself.
- The temperature in all other rooms which must be heated can be regulated with the thermostatic radiator valves.

When to apply weather dependent regulation with room temperature compensation?
- When you want to precisely regulate the temperature in more than one room and there is a reference room available.

When not to apply weather dependent regulation with room temperature compensation?
- When your house does not comply with the above mentioned criteria. This is a relatively less economical regulation principle, so you should apply this kind of regulation only if strictly necessary.

3.3 Operating controls

The IRT 30 can be controlled on two levels (refer to the fold-out page, figure A and B):

1. With the flap closed (figure A); you now have access to:
    -   The temperature adjustment knob, for manual adjustment of the temperature,
    -   the + and – push buttons, for temporary adjustment of the temperature within the clock program.

2. With the flap open (figure B); you now have access to 10 operating controls:
    -   One adjustable program knob, by means of which you can scroll through a program and raise or lower the values,
    -   Nine push buttons for several functions like time setting, day setting, program setting etc.

    The principle of this operation is '**push and turn**':
    -   Select the key of the function you want to change and hold it.
    -   Simultaneously turn the program knob clockwise to raise the value, or:
    -   Simultaneously turn the program knob counter-clockwise to lower the value.

In chapter 4, operation will be explained in detail.

3.4 Information on the display

The screen (also referred to as display) shows information about the operation of the boiler and the thermostat by means of digits and symbols. The display in figure 3-1 shows all possible symbols. Beside this, the meaning of each symbol is described.

figure 3-1

☒ (tap with cross)	boiler does not heat the CH water (hot water supply OFF)
⊙ (clock)	clock program is shown
⊐ (tap)	boiler heats the CH water (hot water supply ON)
⊙ ⊐	Boiler heats CH water according to clock program (hot water supply AUTO)
°▦	CH boiler ON
🌡	room temperature controlled regulation is active
⌂🌡	weather dependent regulation is active
🌡🌡	weather dependent regulation with room temperature compensation is active
°▦ (crossed)	CH boiler OFF
°▦ ⌂🌡	automatic summer/winter mode (only when outside temperature sensor is connected)
▪▪▪▪▪|▪▪▪▪▪ −+	each block 0.5 °C lower/higher
☾	night setting (ECO-mode)
☐	vacation setting
👷	boiler display code, may indicate malfunction
8	day number (Monday = 1, Tuesday = 2 ... Sunday = 7)
88:88	time indication
88.8	temperature indication

During programming, the display shows information about the switching points of the program.
In rest (normal mode), the following is shown on the display:

figure 3-2   Display in rest

4.   Operation

4.1   General

Read this manual carefully, so you can operate the IRT 30 correctly. Your installer can inform you in detail about the use of the clock thermostat.

Efficient heating and ventilation
- Avoid extreme temperature settings and quick changes of temperature in the program (difference between day and night temperature may not exceed 5 °C).
- Do not let the temperature of the rooms drop too low during night setting. (Your CH must burn longer and more intensely to heat up walls which are cooled down).
- Make sure your house has a good atmospheric humidity, especially during the cold months. You can achieve this by placing indoor plants or humidifiers. A good atmospheric humidity contributes to a pleasant climate in your house.
- Ventilate well (briefly more ventilation takes less energy than ventilating a little for a long period).

Clock
- Set the clock of the IRT 30 to the correct time (if necessary), to ensure correct functioning of the clock thermostat (refer to paragraph 4.3: Setting the clock).

Power supply
- The IRT 30 does not use batteries but uses electric power.
- The necessary electric power is supplied via a connection on the boiler.
- During power failure or when switching off the power supply, the clock will continue for at least one hour.
- Your clock program will always be maintained.

Maintenance
- Clean the IRT 30 using a dry cloth.
- Do not use any liquid or cleaning agents. This may cause short-circuiting or damage to the thermostat.

Outside temperature
- If you select the weather dependent regulation (with or without room temperature compensation), you need an outside temperature sensor, which is connected to the boiler.
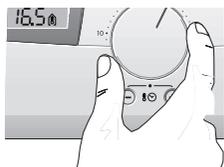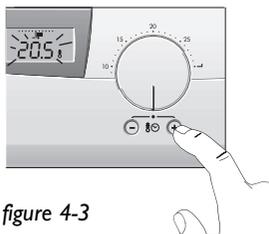- Without the outside temperature sensor, only the room temperature controlled regulation can be used.

4.2 Setting the temperature

You can set the temperature in two ways:
1. manually:
   - Turn the temperature adjustment knob to the desired temperature (refer to figure 4-1)

   The clock program will be switched off.
2. automatically:
   - Turn the temperature adjustment knob counter-clockwise until the dash points downwards (Auto mode, refer to figure 4-3)
   - Raise the temperature by pressing the + key, 0.5 °C per step, refer to figure 4-3).
   - Lower the temperature by pressing the - key.

   The clock program will not be switched off, but adjusted temporarily to your desire. At the next switching point, the clock program will be activated again.

manually

figure 4-1

automatically

figure 4-2

figure 4-3

The display usually shows the measured temperature in the room and therefore not the set temperature. You can see the set temperature by pressing the + or − key briefly. The set temperature will blink for 5 seconds. After that, the measured room temperature is shown.

If the thermostat is set to weather dependent regulation and you turn the temperature adjustment knob <u>out</u> of the AUTO-mode, the thermostat will function as for weather dependent regulation with room temperature compensation. On the screen, the symbol of weather dependent regulation will be replaced by the symbol for weather dependent regulation with room temperature compensation (also refer to page 9).

4.3 Setting the clock

For a correct functioning of the clock program, it is important that the set time is equal to the actual time. Setting the clock is only possible when the display is in normal mode.

1. Make sure the display is in normal mode (refer to figure 3-2). Wait 7 seconds until the display returns to the normal mode, if the display is not in normal mode, for example because you are programming.
2. Set the correct day:
   - Press and hold the DAY key
   - Change the day number using the program knob (Monday = 1, Tuesday = 2 etc.).
   - Release the DAY key.

3. Set the correct time:
   - Press and hold the TIME key.
   - Change the time using the program knob.
   - Release the TIME key.

4.4 Clock programs

With the clock programs the IRT 30 can regulate the temperature automatically throughout the week. The clock program uses switching points. The program will switch over to your temperature settings on these points in time.

Switching point
A switching point is a setting in your clock thermostat. It is a point in time at which you desire another temperature. To set the switching point, you have to enter the desired time and the desired temperature.

You can check the switching points by slowly turning the program knob. You will see the day number, time and temperature for each switching point. Looking to the clock program, you can see a clock in the left upper corner of the display. As soon as you change a setting in the clock program, the clock symbol starts blinking.

The IRT 30 is supplied with a standard clock program.
This program looks like this:

For room temperature controlled regulation and weather dependent regulation with room temperature compensation	For weather dependent regulation
Monday to Friday (day number 1 t/m 5)	Monday to Friday (day numbers 1 t/m 5)
7:00 u 21 °C	7:00 u + 1.0
9:00 u 19 °C	9:00 u - 1.0
17:00 u 21 °C	17:00 u + 1.0
23:00 u ECO	23:00 u - 4.0
Saturday and Sunday (day number 6 en 7)	Saturday and Sunday (dagnummers 6 en 7)
8:00 u 21 °C	8:00 u + 1.0
23:00 u ECO	23:00 u - 4.0

• = switching point
— = Mo to Fri
- - - = Sat + Sun

• = Switching point
— = Mo to Fri
- - - = Sa + Sun

This program is activated, when the temperature adjust knob is in AUTO (refer to figure 4.2).

ECO means the setting of the night temperature (standard set to 16 °C)

In the standard clock program for the **weather dependent regulation** you do not find temperatures, but scale points. One point of the scale corresponds with a temperature range of 0.5 °C to 2 °C. The calculation starts at 0, which corresponds with a standard room temperature (20 °C).

Consequently:

– 1 means   18 - 19.5°C and
+ 1 means   20.5 - 22°C.

1 point does <u>not</u> correspond with 1 °C.

Where setting or changing of the temperature is mentioned in the text, you must change the scale points for the **weather dependent regulation**. *This is possible with steps of 0.5 points.*

4.5 Your own clock program

Instead of using the standard clock program, it is also possible to create your own clock program. In doing so, you can create a clock program appropriate for your daily schedule. For each switching point you can adapt the time and the temperature. Furthermore, you can insert or remove switching points.

Changing a switching point
1. Make sure the display is in normal mode (refer to figure 3-2)
2. Select the switching point you want to change, using the program knob.

$$S \quad 21{:}30 \quad 20.0$$

3. Change the time as follows:
   - Press and hold the TIME key.
   - Change the time using the program knob.
   - Release the TIME key.

$$S \quad 21{:}30 \quad 20.0$$

4. Change the temperature as follows:
   - Press and hold the TEMPERATURE key.
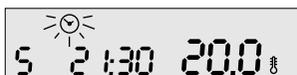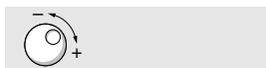   - Change the time using the program knob.
   - Release the TEMPERATURE key.

You have now changed a switching point. After a few seconds, the display shows the actual time and the measured room temperature (normal mode).
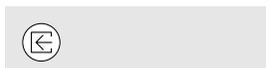
Inserting an arbitrary switching point
If you want to have more switching points in your clock program, do the following:
1. Make sure the display is in normal mode (refer to figure 3-2).
2. Select a switching point using the program knob.

3. Briefly press the INSERT key.

4. Press and hold the DAY key and select a day using the program knob.

5. Release the DAY key.
6. Press and hold the TIME key and select a time using the program knob.

7. Release the TIME key.

8. Press and hold the TEMPERATURE key and select a time using the program knob.

9. Release the TEMPERATURE key.

You have inserted a switching point.

Inserting a switching point at the current time
You can also insert a switching point at the current time:
1. Make sure the display is in normal mode (refer to figure 3-2).
2. Press and hold the INSERT key and change the temperature using the program knob. The temperature indication is blinking.


3. Release the INSERT key when the desired temperature is set. The switching time is set to the current time, rounded off at 10 minutes.

Removing a switching point
1. Make sure the display is in normal mode (refer to figure 3-2).
2. Select the switching point you want to remove with the program knob.
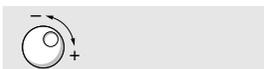
3. Press and hold the REMOVE key. All digits change into an 8 and disappear from the right to the left.
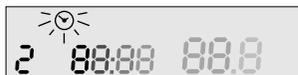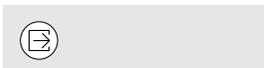

4. Wait until all digits are removed.
5. Release the REMOVE key.

When you release the REMOVE key before all digits have been removed, the switching point has <u>not</u> been removed.

Copy the switching points of the previous day

You can copy the switching points, set for a day, to the next day. For example, you can copy the switching points from Monday to Tuesday or from Sunday to Monday. Note: it is only possible to copy the switching points to the next day (for example, copying switching points from Friday to Monday is not possible).

1. Press and hold the DAY an the INSERT key simultaneously.
2. Turn the program knob until the display shows the day number you want to copy <u>to</u>.
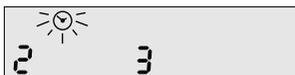
Copying is shown by a dash which moves from left to right in the display (2 steps). As soon as the settings have been copied, the display shows two dashes left of the day number.
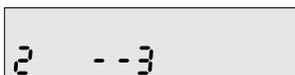
3. Release the DAY and the INSERT key.

Return to the standard clock program

It is always possible to return to the standard clock program. This will erase all other switching points.

1. Make sure the display is in normal mode (refer to figure 3-2).
2. Press and hold the TIME, REMOVE and INSERT key. All digits change into an 8 and disappear from the right to the left.

3. Wait until all digits have been removed.
4. Release the TIME, REMOVE and INSERT key.

When you release the keys before all digits have been removed, the standard clock program has not been activated, your own switching points will be maintained.

4.6 Special functions

Look at the current display codes of the boiler
- Briefly press the HEATING key. The display codes of the boiler
  will be shown for 3 seconds on the temperature position.
  Also refer to paragraph 9.2 and the installation instructions of
  your boiler.

°▥
🧍 - H

Look at the outside temperature
When the thermostat is set to weather dependent regulation,
you are able to look at the outside temperature.
- Briefly press the MENU key. The outside temperature will be
  shown for 3 seconds.

°▥
15:80 -2.5

Vacation setting
With this function you can set a lower temperature for a longer
period. without changing the clock program. This is called the
'vacation setting'.
1. Make sure the display is in normal mode (refer to figure 3-2).
2. Press and hold the VACATION key.
3. Use the program knob to set the amount of days you will be
    absent. Include the current day as a vacation day. For weather
    dependent regulation -4.0 appears in the display instead of
    ECO.

2 00 ECO

4. Release the VACATION key.
5. Press and hold the TEMPERATURE key.
6. Use the program knob to set the temperature.

3 01 16.0

7. Release the TEMPERATURE knob.

On the display a suitcase symbol is shown to indicate the vacation setting is activated.

Removing the vacation setting

You can remove the vacation setting in two ways:

1.
- Press and hold the VACATION key.
- Use the program knob to set the days to 0.

$$2_{\Box} \; 00 \quad EC0_{\mathchar'26\mkern-9mu l}$$

2.
- press and hold the REMOVE key. All digits change into an 8 and disappear from the right to the left.

$$88{:}88 \quad 88.8$$

- Wait until all digits have been removed.
- Release the REMOVE key.

When you release the REMOVE key before all digits have been removed, the vacation setting has not been removed.

Heating

You can switch on or off your CH installation with the HEATING key. When you have selected the weather dependent regulation (with or without room temperature compensation), you also can automatically switch off the heating at a certain outside temperature. Set the thermostat as follows:

- *If your thermostat is set to room temperature controlled regulation.*
1. Make sure the display is in normal mode (refer to figure 3-2).
2. Press and hold the HEATING key. The display shows the current boiler mode.
   (⌑ = on, ⌑ = off). Standard setting is 'on'.
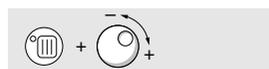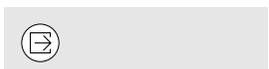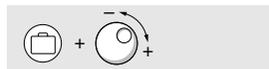
3. Turn the program knob to change the setting. The boiler mode will change from 'on' to 'off' or the other way round.

```
                    ℃▨
```

4. Release the HEATING key. The display will show the current display code of the boiler for 3 seconds.

• *If your thermostat is set to weather dependent regulation (with or without room temperature compensation).*
1. Make sure the display is in normal mode (refer to figure 3-2).
2. Press and hold the HEATING key. The display shows the current boiler mode. (℃▥ = on, ℃▨ = off). Standard setting is 'on'.

```
        ℃▥
```

3. Turn the program knob to change the setting. On the display, the symbol of your control appears next to the radiator. On the right side in the display, a number appears which may vary from 10 to 25. With this number you can set the outside temperature at which the CH installation has to switch off automatically. When you turn the program knob to 25, the next setting is 'off'. (℃▨).
4. Release the HEATING key. The display will show the current display code of the boiler for 3 seconds.

```
        ℃▥ 🎛
              10
```

Hot water

If your boiler is also equipped with a hot water supply, or controls one, this hot water supply can be set to the ON, OFF or AUTO mode as desired:

1. Make sure the display is in normal mode (refer to figure 3-2).
2. Press and hold the HOT WATER key. The display shows the current hot water mode.
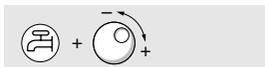
3. Turn the program knob to change the mode of the hot water supply. Successively, the modes ON, OFF and AUTO will be shown. Set the desired mode using the program knob.

ON	OFF	AUTO

4. Release the HOT WATER key.

In the AUTO mode, the hot water supply will be switched off when the ECO mode in the clock program is set.

5. Installation of the IRT 30

This chapter is important for installers and may also be of interest to some users.

5.1 Mounting

### 1. Check the contents of the package
The package should contain the following:
- 1 clock thermostat IRT 30 with mounting plate
- 1 bag with 2 screws, 2 washers and 2 plugs
- this manual.

2. Find a suitable mounting position
The thermostat should be mounted to an inside wall at a distance of approximately 150 cm above the floor. Consider the following when searching for a suitable mounting position:
- There should be enough air circulation around the thermostat, but no draught!
- The air temperature should be representative for the whole room.
- Do not mount the thermostat too near heat sources like radiators, hot water pipes, tv sets, radios, fire places, lamps or incoming sunlight.
- Do not mount the thermostat too near cold sources like walls of unheated rooms, cold water pipes and draught.
- Do not mount the thermostat in a blind corner of the room.
- Mount the thermostat on a flat surface.
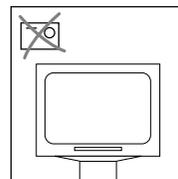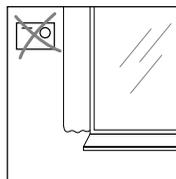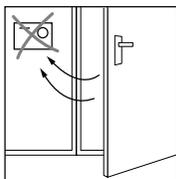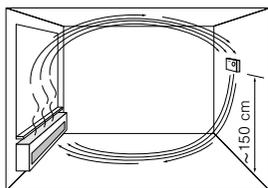
3. Install the wiring

Switch off the power supply of the boiler before you install the wiring!

Install the cable between the boiler and the thermostat. Do not connect the cable yet!

To obtain a correct functioning system, the wiring should comply with the following specifications:

- the cable must consist of 2 connection wires
- the thickness of the wire should preferably be 0.75 mm^2 and may not exceed 1.5 mm^2
- maximum cable resistance: 2 x 5 Ohm
- maximum cable length: 30 m
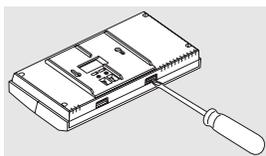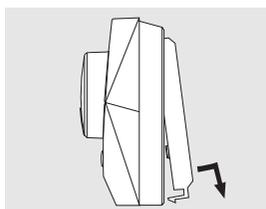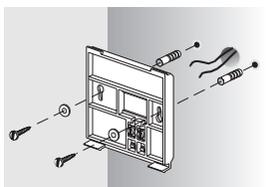- maximum cable length, running parallel to a high current cable: 2.5 m.

4.   *Mount the mounting plate onto the wall*

Make sure the power supply of the boiler is switched off!

figure 5-1

figure 5-2

figure 5-3

figure 5-4

1. Remove the old thermostat if you want to replace it by the IRT 30.
2. The mounting plate can be fitted to a standard terminal box or directly to the wall.
3. Remove the mounting plate from the thermostat. At the bottom side of the thermostat are 2 right-angled slots. Here, the click-on latches are located. Press the click-on latches out of the slots using a flat screwdriver (refer to figure 5-1). Remove the mounting plate from the thermostat (refer to figure 5-2).
4. Make sure the connection wires stick out of the wall for at least 5 cm on the mounting location.
5. Hold the mounting plate against the wall and mark the mounting holes on the wall (only applicable for mounting directly onto the wall).
6. Remove the mounting plate.
7. Drill holes ø 5 mm on the marked positions.
8. Place the plugs in the holes.
9. Mount the mounting plates with the screws and washer against the wall. Do not fasten the screws too tightly. The mounting plate may not deform! (refer to figure 5-3).

If you fix the mounting plate onto a standard terminal box, you only need to use the screws and the washers (refer to figure 5-4).
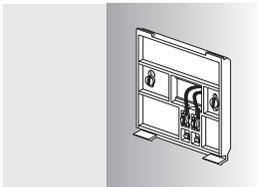
figure 5-5
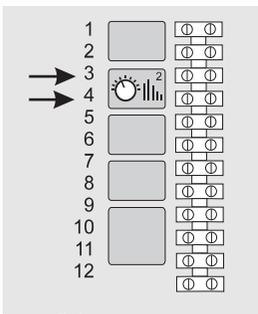
figure 5-6
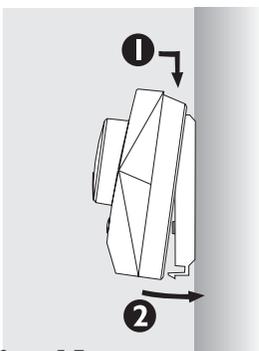
figure 5-7

5.   Connect the wiring

⚠️ *Make sure the power supply of the boiler is switched off!*

1. Connect the wires onto the mounting plate by fitting them behind the clamps (refer to figure 5-5). **It is not important which wire is connected to which clamp.**
2. Push the wires back into the hole in the wall if the wires are too long. Fill the hole in the wall with filler to prevent draught affecting the operation of the thermostat.
3. Make sure the wires are fitted into the slots of the mounting plate and that they do not cross each other.
4. Connect the wires to the boiler. Connect the wires to connection point 3 and 4 of the connector (refer to figure 5-6). **It is not important which wire is connected to point 3 or 4.**

⚠️ *Do not connect the wires to connection points in the boiler other than points 3 and 4. This can cause damage to the boiler or the thermostat.*

6.   Fix the thermostat onto the mounting plate

Place the thermostat onto the mounting plate (refer to figure 5-7):
1. Hook the thermostat from the top onto the mounting plate.
2. Push the bottom side of the thermostat towards the wall until the thermostat clicks onto the mounting plate.

5.2 Testing the thermostat

Switch on the power supply of the boiler.
The thermostat automatically completes a start-up and test
program:
- First, the display is empty.
- During 3 seconds all symbols will be shown on the display (also
  refer to figure 3-1).
- Subsequently, the version number of the software will be shown
  on the display.
- After this, a few tests will be executed. During the first tests,
  EE will be shown on the display. If this test is successful, a 1 will
  be shown left in the display, changing into a **2**.
- After this, the communication with the boiler will be tested.
  If this test is succesful, a **1** is shown in the display.
- At the end, the thermostat itself will be tested. If this test is
  successful, a **1** is shown in the display.

After the test the day number and the time indication are blinking
in the display.

```
  1   23:59
```

Set the day number and the time to the correct value (refer to
chapter 4).

5.3 Setting the thermostat

Before you start using the IRT 30 thermostat, a few settings
should be checked and, if necessary, changed:

1. Set the correct kind of temperature control; refer to chapter 6.
2. Check the settings of the hot water supply and change them
   when necessary; refer to chapter 7.
3. Change the installation parameters of the thermostat, if
   necessary; refer to chapter 8.

6. Setting the temperature control

6.1 Selecting a temperature control

The IRT 30 thermostat is suitable for 3 kinds of temperature control:
- Room temperature controlled regulation (RR)
- Weather dependent regulation (WD)
- Weather dependent regulation with room temperature compensation (WD + RTC)

⚠️ *Select one of these control before you continue. Chapter 3 describes the points of attention for making your choice.*

You have selected room temperature controlled regulation (RR)
Set the thermostat as follows:
1. Go the CH menu; refer to paragraph 6.2.
2. Set **room temperature controlled regulation**.
3. Leave the CH menu.
4. Continue with setting the hot water supply; refer to chapter 7.

You have selected weather dependent regulation (WD or WD + RTC)
Set the thermostat as follows:
1. Go the CH menu; refer to paragraph 6.2.

⚠️ *Only change the settings mentioned below!*

2. Set **weather dependent regulation**.
3. Select the correct **installation type**.
4. Leave the CH menu.
5. Wait for 3 or 4 hours.
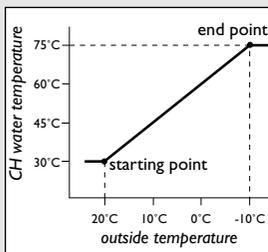
Firing characteristic
The firing characteristic is a line which shows the temperature of the CH water at a certain outside temperature. You can set the firing characteristic with the help of 2 points:
- the desired water temperature at +20 °C outside temperature; starting point
- the desired water temperature at -10 °C outside temperature; end point

6. Check the temperature in the coldest room.
7. Set the firing characteristic using the CH menu when the temperature in the coldest room is too cold or too warm (refer to paragraph 6.2). For example, if it is too cold or too warm in a room during winter, the firing characteristic can be adjusted according to the following diagram.

Outside temperature is less then 0 °C:
Warmer: raise the end point of the firing characteristic
Colder: lower the end point of the firing characteristic
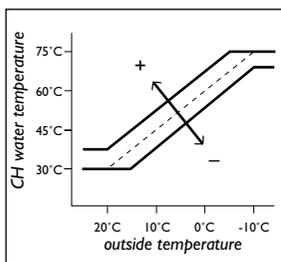
Outside temperature is between 0 °C and 10 °C:
Warmer: raise the starting point as well as the end point of the firing characteristic
Colder: lower the starting point as well as the end point of the firing characteristic
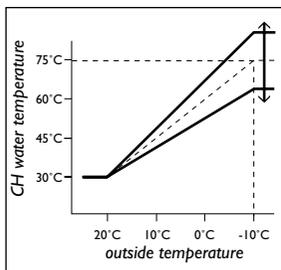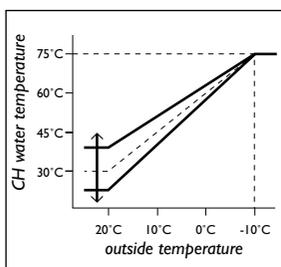

Outside temperature is above 10 °C:
Warmer: raise the starting point of the firing characteristic
Colder: lower the starting point of the firing characteristic

8. Continue setting the hot water supply; refer to chapter 7.

> ⚠ *If floor heating is used, we recommend to reduce the maximum temperature of the CH water. This can be obtained with the UBA of the boiler. Reducing the maximum temperature of the CH water prevents too hot water in the floor heating.*

6.2 CH menu

The CH menu appears on the display when you simultaneously press the keys MENU and CH. With the CH menu you can select the kind of temperature regulation and set all accompanying features.

	key	display	
1. First press:		`75:80  -2.5`	75 desired CH water temperature

1. First press:

75   desired CH water temperature
80   measured CH water temperature
-2.5   measured outside temperature
(these figures are examples)
For RR, only the measured CH water temperature will be shown.

2. Press and hold the ▤ key and subsequently press the ▥ key

ECO temperature
The lowest temperature which can be used in a clock program. Standard, the ECO temperature is set to 16 °C.

(release the key ▤)

`ECO  16.0`

Advanced heat-up (yes = 1, no = 0)
(only for RR and WD + RTC)
If the advanced heat-up is set to off, the boiler starts heating at the moment when the clock program switches over from a low temperature setting to a higher temperature setting.
If the advanced heat-up is set to on, the thermostat takes care that the boiler starts heating earlier, so that the desired temperature is reached at the switching point of the thermostat. The thermostat learns in the long term how much earlier the boiler must start heating. Standard, the advanced heat-up is set to on (yes = 1).

Kind of temperature regulation
The kind of temperature regulation which is selected.
The set regulation can be recognised by the symbol on the display:

room temperature controlled regulation (RR)

weather dependent regulation without
room temperature compensation (WD)

weather dependent regulation with room
temperature compensation (WD + RTC)
for WD and WD + RTC, the outside
temperature will be displayed in the right
bottom corner of the display as well.

*The settings described below are only applicable for weather dependent regulation
(with or without room temperature compensation).*

Installation type
The type of installation:
1. Radiators
2. Convectors
3. Thermostatic radiator valves in the living room
4. Only floor heating (no radiators or convectors)
To each type of installation, a special firing
characteristic is attached (starting point, end
point, room influence); refer to table 6-1.
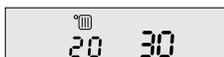
Starting point
The desired CH water temperature at +20 °C.
This is called the starting point of the firing
characteristic.

End point
The desired CH water temperature at -10 °C.
This is called the end point of the firing
characteristic.

Room influence
A factor which indicates the influence of the
room temperature to the WD + RTC control.

Setting the temperature control

Minimum CH water temperature

The thermostat takes care that the CH water temperature can never drop below this value. Standard, the minimum CH water temperature is set to 10 °C.

If you release the CH key and wait for 5 seconds, the display returns to normal mode.

Table 6-1   Standard firing characteristics for different types of installation

Installation type	Starting point	End point	Room influence
1. Radiators	20 °C	75 °C	6
2. Convectors	40 °C	90 °C	8
3. Thermostatic radiator valves in living room	30 °C	80 °C	0
4. Only floor heating (no radiators or convectors)	20 °C	50 °C	4

7. Setting the hot water supply

This chapter is only necessary if the boiler also supplies hot water.

If the hot water supply is set to automatic (refer to chapter 4), the thermostat takes care that the water in the boiler will only be heated during the day. With the 'advanced hot water heat-up' and the 'hot water stop delay', the start and stop points for heating the water can be set:
- The advanced hot water heat-up determines how long before the switching point from ECO to another temperature in the clock program the boiler starts heating the boiler water.
- The hot water stop delay determines how long after the switching point to ECO in the clock program, the boiler stops heating the boiler water.

> ⚠️ *If advanced heat-up is set to on (refer to chapter 6), the advanced hot water heat-up starts heating the hot water, calculated from the moment, the CH installation starts advanced heating up the house.*

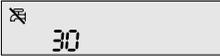## 7.1 Checking and/ or changing the settings

- Check with the hot water menu (refer to paragraph 7.2) whether the advanced hot water heat-up is set correctly. Change the advanced hot water heat-up if necessary.
- Check with the hot water menu whether the hot water stop delay is set correctly. Change the hot water stop delay if necessary.
- Leave the hot water menu.

The IRT 30 thermostat is now ready for use.

7.2 Hot water menu

The hot water menu appears on the display when you simultaneously press the MENU and HOT WATER keys. With the hot water menu you can set during which period of the day, hot water is available.

	key	display	
1. first press:		`75:80 -2.5`	75 desired CH water temperature 80 measured CH water temperature -2.5 measured outside temperature (these figures are examples) For RR, only the measured CH water temperature will be shown.
2. hold the key and press on:		`30`	**Advanced hot water heat-up** The time during which the water in the boiler is already heated-up, before the CH installation starts heating up the house. This time can be set from 0 to 120 minutes. Standard, the value is set to 30 minutes.
(release the key)		`30`	**Hot water stop delay** The time during which the water in the boiler is still heated, after the CH has been switched over to the ECO temperature. This time can be set from 0 to 120 minutes. Standard, the value is set to 30 minutes.

When you release the HOT WATER key and wait for 5 seconds, the display returns to the normal mode.

8. Configuration and calibration of the IRT 30 thermostat

This chapter is intended for the installer.

⚠️ *Configuration and calibration of the IRT 30 thermostat are only necessary in exceptional situations.*

8.1 Adapting the configuration

The IRT 30 thermostat can be adapted, with a few settings, to the speed and the capacity of the CH installation. These settings are included in the configuration menu. In this menu you can:
1. Change the heat-up speed setting (PID).
2. Adjust the clock speed.
3. Switching the slow temperature rise on or off.
4. Reset the thermostat.
The configuration menu appears in the display when you first press and hold the MENU key and the INSERT key and after that, press and hold the REMOVE key. You now press and hold 3 keys at the same time.
You can scroll through the configuration menu by pressing only the INSERT key.

1. Change the heat-up speed (PID) setting
If the thermostat is set to room temperature controlled regulation, you can adapt the heat-up speed of the CH installation. This is necessary if the temperature in the room where the thermostat is fitted, during heat-up, rises to a higher temperature then the set temperature and then drops to the set temperature.
There are 3 possible settings:
- **PID 1:** This is the standard and also the fastest setting. This setting satisfies almost all of the cases.
- **PID 2:** This is a slower setting. This setting is intended for a 'fast' house, that means a CH installation with a large boiler and radiators with a large surface.
- **PID 3:** This is the slowest setting. This setting is meant for very fast houses.

You can adapt the heat-up speed as follows:

1. Simultaneously press the MENU, INSERT and REMOVE key. PID appears on the display.

2. Hold the INSERT key and release the other keys.
3. Turn the program knob, while holding the INSERT key, until the desired PID number appears in the display.
4. Release the INSERT key.

2.   Adjust the clock speed.

The IRT 30 thermostat has a internal clock. This clock can lose or gain some time in the long term. You can adjust the speed of the clock. When you enter a correction of '+1', the clock will run 1 minute per year faster.

You can adjust the clock as follows:

1. Simultaneously press the MENU, INSERT and REMOVE key, and release them.
2. Press an hold the INSERT key again. On the display, ëcorrí appears.

3. Turn the program knob, while holding the INSERT key, until the desired clock correction appears.
4. Release the INSERT key.

3.   Switching the slow temperature rise on or off.

If you have a boiler with a high capacity, this can cause the CH water to heat up too fast. This can result in a ticking sound in the tubes. To prevent this, you can set the slow temperature rise to on.

You can switch the slow temperature rise on or off as follows:

1. Simultaneously press the INSERT, REMOVE and MENU key, and release them.
2. Press the INSERT key twice again an hold it. On the display, SLO or FASt appears.

```
3 >SLO<          |          FASt
```

3. Turn the program knob, while holding the INSERT key, until the desired PID number appears in the display.
4. Release the INSERT key.

4.   Reset the thermostat.

You can switch off the thermostat and switch it on again (reset). This causes the thermostat to run the start and test program again (refer to paragraph 5.2).

You can reset the thermostat as follows:

1. Simultaneously press the MENU, INSERT and REMOVE key, and release them.
2. Again press the INSERT key three times and hold it. On the display, tESt appears.

```
4  tESt      0
```
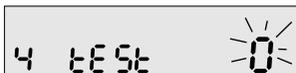
3. Release the INSERT key.

8.2 Calibration

Although the sensors of the IRT 30 thermostat are of high-quality, some irregularities can not be avoided in the long term. You can recalibrate the sensors then. Only recalibrate the sensors when the measurement deviation becomes clearly evident and irritating.

⚠️ *Incorrect calibration may have serious consequences to the operation of the thermostat. Preferably, let the installer recalibrate the thermostat during a service visit.*

Calibration of the temperature sensor of the thermostat
The temperature sensor in the IRT 30 thermostat should be calibrated when the measured temperature, shown on the display, deviates from the actual temperature.

⚠️ *It is no simple task to determine the actual temperature in the room. The position you are measuring and the accuracy of the thermometer you are using may influence the result. It is also important to measure the temperature when the temperature is stable, (i.e. not during the heat-up periods etc.).*

You can recalibrate the temperature sensor as follows:
1. Make sure the display is in normal mode (refer to figure 3-2).
2. Press and hold the MENU and then REMOVE key. Hold both keys. In the middle of the display, the temperature which is measured by the sensor in the thermostat is shown. On the right side, a blinking temperature, which you can alter, is shown.

3. Turn the program knob, while holding the MENU and REMOVE keys, until the blinking temperature indicates the actual temperature.
4. Release all keys when you are finished.

Calibration of the temperature adjustment knob
Calibration of the temperature adjustment knob of the thermostat may be necessary when the actual temperature deviates from the temperature which is set manually with the temperature adjustment knob. For example, the temperature adjustment knob is set to 20 °C but in the long term the actual temperature never rises above 19 °C.

You can calibrate the temperature adjustment knob as follows:
1. Make sure the display is in normal mode (refer to figure 3-2).
2. Simultaneously press the MENU and REMOVE keys twice and hold them. To the right on the display, the TEMP symbol appears.

3. In the middle of the display, the temperature to which the temperature adjustment knob is set, is shown. On the right side, a blinking temperature, which you can alter, is shown.

$$20.0 \quad 20.0_{\ast}$$

4. Turn the program knob, while holding the MENU and REMOVE keys, until the blinking temperature reflects the temperature onto which the temperature adjustment knob is set.
5. Release all keys when you are finished.

Calibration of the outside temperature sensor
The outside temperature sensor should be calibrated when the measured temperature shown on the display, deviates from the actual outside temperature at the outside temperature sensor.

Note: The outside temperature sensor can only be calibrated when it is connected to the boiler, and the weather dependent regulation (WD or WD + RTC) has been set.

You can calibrate the outside temperature sensor as follows:
1. Make sure the display is in normal mode (refer to figure 3-2).
2. Simultaneously press the MENU and REMOVE keys three times and hold them. To the right on the display, the TEMP-BUITEN symbol appears.
   In the middle of the display, the temperature to which the temperature adjustment knob is set, is shown. On the right side, a blinking temperature, which you can alter, is shown.
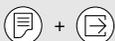
$$12 \quad 12_{\ast}$$

3. Turn the program knob, while holding the MENU and REMOVE keys, until the blinking temperature reflects the actual outside temperature.
4. Release all keys when you are finished.

9. Malfunctions and the display codes of the boiler

In this chapter, some possible problems/malfunctions will be described. Furthermore, the possible solutions will be given. You can always contact your installer if the problems persist.
For some items, the solution depends on the set kind of regulation. This will be reflected by the following abbreviations:
- RR   = room temperature controlled regulation
- WD   = weather dependent regulation
- WD + RTC = weather dependent regulation with room
                        temperature compensation

9.1 Malfunctions

During heat-up, an annoying ticking sound is heard in the pipes.
At the beginning of the day, the water will be heated-up as quickly as possible, to enable the radiators to warm up the rooms as quickly as possible. The metal tubes will expand because of the sudden temperature rise, which may result in a ticking sound.
1. Increase the PID setting to reduce the heat-up speed of the installation
2. Set 'slow temperature rise' to ON.
3. If the capacity of the boiler is much higher then necessary, the water will be heated-up too fast. By means of the partial load potentiometer on the UBA, the maximum capacity for heating up the water can be reduced, so that the water will be heated up more slowly.
4. If the rooms have been equipped with too many or too large radiators, the house can also be heated with water of a lower temperature. The maximum temperature setting of the water can be reduced on the UBA.

In the morning, heating up takes too long
1. Set the 'advanced heat-up' to on
   (only for RR and WD + RTC).
2. Advance the switching point to give the installation more time to heat up the house.
3. We advise not to let the difference between the day and night temperature exceed 5 °C (for floor heating we advise a maximum difference of 2 °C).

At the beginning of the day, the installation is heated up too far, too long. The rooms become too warm.
1. Lower the temperature in the clock program, for the switching point of the beginning of the day.
2. Raise the PID setting, so that the installation will burn less intensely.
3. If the capacity of the boiler is much higher then necessary, the water will be heated up too fast. By means of the partial load potentiometer on the UBA, the maximum capacity for heating up the water can be reduced, so that the water will be heated up more slowly.
4. If the rooms have been equipped with too many or too large radiators, the house can also be heated with water of a lower temperature. The maximum temperature setting of the water can be reduced on the UBA.

The room becomes too warm (warmer then the set temperature).
1. Is the IRT 30 thermostat able to measure the correct temperature (only for RR and WD + RTC)? Is the IRT 30 thermostat installed on a cold outside wall or in stream of draught?
2. If the rooms have been equipped with too many or too large radiators, the house can also be heated with water of a lower temperature. The maximum temperature setting of the water can be reduced on the UBA.
3. Are the thermostatic radiator valves installed correctly? (Is cold air streaming around the thermostatic radiator valves)?

It is too cold (colder then the set temperature) in the room.
1. Is the IRT 30 thermostat able to measure the correct temperature (only for RR and WD + RTC)? Is the IRT 30 thermostat installed between cupboards (no natural airflow) or in the vicinity of heat sources (tv, refrigerator, radiator, etc.)?
2. Are the thermostatic radiator valves completely open in the room where the thermostat has been installed?
3. Check the setting of the maximum CH water temperature on the UBA (90 °C maximum).
4. Has the pump switch on the UBA been set to position 2 (only for WD and WD + RTC)?

Energy consumption is too high (higher then old boiler) / the boiler burns too often or too long.
1. Is the room heated while it is not in use?
   Insert more switching points with a lower temperature to the clock thermostat.
2. Is the capacity of the new boiler higher then the capacity of the old boiler?
3. Have you replaced an old geyser by a combi boiler? A combi boiler can produce more hot water (more comfort) but also uses more energy.
4. Is the ECO setting too high, as a result of which the room temperature is too high during the night?
5. (Only WD and WD + RTC) Are the values for the starting point and end point set in the CV menu not set too high?

The display shows an incorrect temperature
1. Is the IRT 30 thermostat able to determine the correct temperature? Is the thermostat installed on a cold or warm wall? Is it installed in direct sunlight or in draught? Is the IRT 30 thermostat installed near an open window or near heat sources (tv, refrigerator or lamps)?
2. If you are convinced that the indication of the temperature is incorrect (most of the times it is correct!), the temperature measurement can be calibrated (refer to chapter 8).

Outside temperature indication is incorrect (only for WD and WD + RTC) /display shows --- on the position of the temperature indication
1. Is the outside temperature sensor able to determine the correct outside temperature? Installed on a warm or cold spot on the outside wall, (influenced by sun, wind, snow, ice or rain)?
2. Has the correct wiring (preferably 0.75 mm^2) been used. Does the wiring run along a 230 V power supply cable?
3. Is the wiring connected to terminal 7 and 8 of the terminal block in the boiler?
4. If necessary, the outside temperature sensor can be calibrated (refer to chapter 8).

Clock loses / gains time. Time indication is blinking
1. The time indication blinks after a power failure or as a result of an interruption of the connection to the boiler. Check the time setting and press the TIME key to let the clock run normally again.
2. Contact your installer when the clock loses or gains time.

Malfunction of the communication
1. Is the wiring of the IRT 30 thermostat connected to terminal 3 and 4 of the terminal block in the boiler?
2. (only for WD and WD + RTC) Has the correct wiring (preferably 0.75 mm^2), for connection of the outside temperature sensor, been used. Does the wiring run along a 230 V power supply cable?
3. Is the cable defective? You can check this by connecting the IRT 30 thermostat directly to terminal 3 and 4 of the boiler, using a short cable.

9.2 Boiler display codes

When you press the HEATING key, a boiler display code appears in the display for 3 seconds. This code is shown on the position of the temperature indication. A boiler display code consists of two symbols:
- The first symbol indicates the current function of the boiler,
- the second symbol indicates which part of the function is active, or in some cases, is not active.

In case of a malfunction, the display shows the symbol of a mechanic (refer to figure 9-1). Press the reset button on the boiler when an error code appears on the display of the thermostat. If the malfunction keeps repeating, you should contact your installer.

figure 9-1

Other codes:

- Malfunction of the sensors.

   On the display appears:
   - the symbol of the mechanic
   - three blinking dashes (on the position of the temperature indication).
   - the symbol of the room temperature, or the symbol of the outside temperature, indicating which sensor is malfunctioning (refer to figure 9-2 and 9-3).

figure 9-2   Room temperature sensor

figure 9-3   Outside temperature sensor

- Malfunction of the communication with the UBA

   On the display appears:
   - the symbol of the mechanic
   - blinking text: UbA (refer to figure 9-4).

figure 9-4

In both cases you should contact your installer.

10. Glossary

Switching point
A switching point is a setting in your clock thermostat. It is a moment in time at which you desire a different temperature. To set this, you have to enter the desired time and the desired temperature.

Reference room
A reference room is a room (for example the living room) where a temperature can be measured which is representative for the entire house.
We assume, that the temperature in other rooms (for example kitchen or bedroom) is equal to the temperature in the reference room.
A room where the temperature is not representative for the house, due to open windows or the use of a fire place, is not suitable as a reference room.
An other reason to appoint a specific room as reference room is that most of the time will be spent in this room. Therefore, it is important that the temperature regulation of this room is correct. The other rooms in the house can have a lower (or higher) temperature.

Room temperature controlled regulation
This is one of the principles of regulating the temperature in your house. According to this regulation, the thermostat measures the temperature in the room where it is fitted. This measured temperature will be compared with the set (desired) temperature. The thermostat now determines how intensely the boiler must burn to reach or maintain the desired temperature.

Weather dependent (temperature) regulation
This is a principle of regulation in which the determination of the CH water temperature (and the intensity of burning of the boiler) is achieved by the outside temperature and a number of preset values in the IRT 30. With this, the desired temperature will be reached as close as possible. You can influence the temperature in the rooms by using radiators with thermostatic radiator valves.

Weather dependent (temperature) regulation with room temperature compensation

This is one of the ways to regulate the temperature in your house. With this principle, the CH water temperature (and the intensity of burning of the boiler) is determined, in the first instance, by the outside temperature and the preset values on the IRT 30. However, the thermostat also measures the temperature in the room where it is fitted. The temperature in the room where the thermostat is fitted is determined by the thermostat itself. This measured temperature is compared with the set (desired) temperature. The thermostat can now correct the preset values to ensure the desired temperature can actually be reached or maintained.

Firing characteristic

The firing characteristic is a line which shows the temperature of the CH water at a certain outside temperature. You can set the firing characteristic with the help of 2 points:
- the desired water temperature at +20 °C outside temperature; starting point.
- the desired water temperature at -10 °C outside temperature; end point.

11. Index

Settings of the IRT 30

	Min./Max. settings	Standard setting	Your settings (by installer)

CV menu *(refer to paragraph 6.2)*

	Min./Max. settings	Standard setting	Your settings
ECO-temperature	10 / 25	16 °C	
Advanced heat-up	YES / NO	YES	
Kind of temperatur regelation	RR / WD / WD+RTC	RR	
Installation type	1 / 2 / 3 / 4 / N / A	N/A	
Starting point of the firing characteristic	10 / 90		
Endpoint of the firing characteristic	10 / 90	Refer to Table A	
Room influence	0 / 10		
Minimum CH water temperature		10 °C	

Hot water menu *(refer to paragraph 7.2)*

	Min./Max. settings	Standard setting	Your settings
Advanced heat water heat-up	0 / 120	30 min.	
Hot water stop delay	0 / 120	30 min.	

Configuration settings *(refer to paragraph 8.1)*

	Min./Max. settings	Standard setting	Your settings
PID number	1 / 2 / 3	1	
Correction of the clock speed	-99 / 99	0	
Slow temperature rise	SLO / FAST	FAST	

Other settings *(refer to paragraph 4.6)*

	Min./Max. settings	Standard setting	Your settings
Hot water	ON / OFF / AUTO	ON	
Heating	ON / OFF / AUTO	ON	

Standard clock *(refer to paragraph 4.5)*

		RR / WD+RTC	WD	
Monday to Friday	7.00	21 °C	+1	
	9.00	19 °C	-1	
	17.00	21 °C	+1	
	23.00	ECO	-4	
Saturday and Sunday	8.00	21 °C	+1	
	23.00	ECO	-4	

Table A   Standard settings for different types of installation

Installation Type	Starting point	End point	Room influence
1. Radiators	20 °C	75 °C	6
2. Convectors	40 °C	90 °C	8
3. Thermostatic radiator valves in the living room	30 °C	80 °C	0
4. Only floor heating (no radiators or convectors)	20 °C	50 °C	4