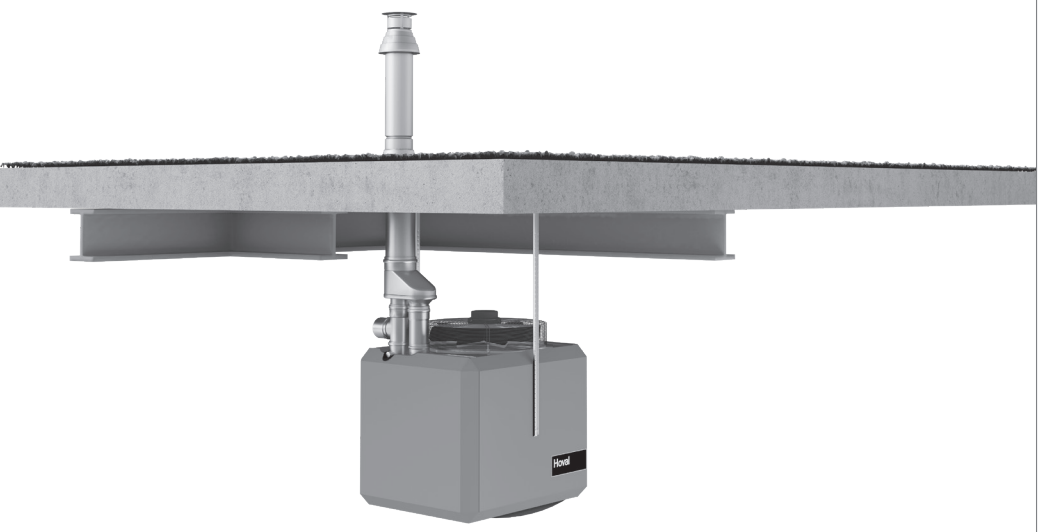
TempTronic MTC

Operating Instructions



TempTronic MTC

Room temperature controller
for TopVent® GV units

4 220 655-en-00

Hoval

1 Use

1.1 Intended use

The TempTronic MTC is a programmable room temperature controller for up to 8 TopVent® GV units. It fulfils the following functions:

- Regulation of the room temperature with setting option for 3 temperature setpoints (0…30 °C)
- Clock programme with 10 programmable time blocks
- Summer ventilation (in 3 speeds)
- Destratification mode
- Recording the room temperature with the integrated temperature sensor
- Connection option for external temperature sensor (instead of the integrated sensor or for averaging)
- Alarm display and reset
- External switching (off/clock program)
- Keypad lock
- Password protection

Communication is via a 2-wire low-voltage bus system. The TempTronic MTC cannot be used for 24 V, 230 V or other signals. It may only be used in dry, dust-free rooms (protection rating IP 30).

Intended use also includes compliance with the operating instructions. Any usage over and above this use is considered to be not as intended. The manufacturer can accept no liability for damage resulting from improper use.

1.2 User group

There are 2 user levels:

User level	User group	Access rights	Access
USER	Trained users	■ Setting of temperature setpoints ■ Setting of operating modes ■ Programming ■ Alarm processing	free
INSTALLER	Experts	In addition: ■ Setting of control parameters	Protected by a password Factory setting password: **0543**

2 Basic principles

2.1 Operating elements

The device is operated via a 4-line display and 4 keys:

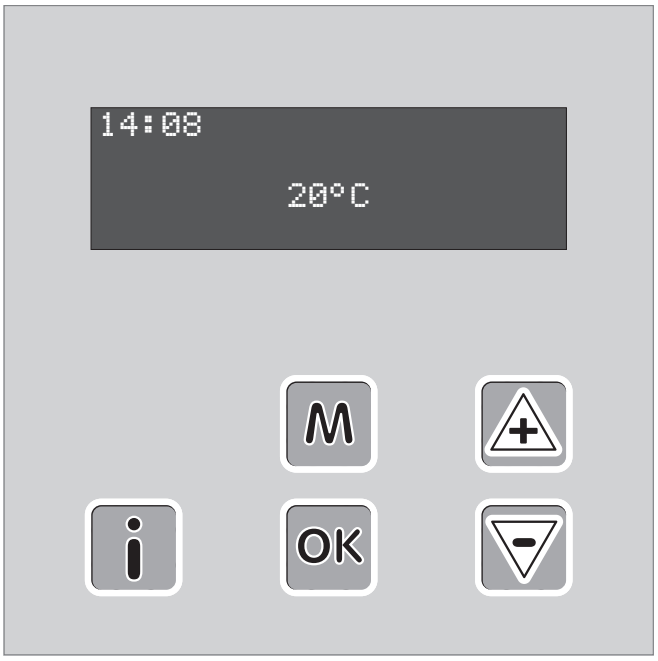


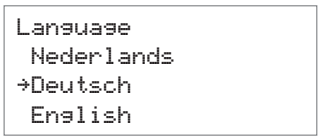
Fig. 1: TempTronic MTC

Key	Function
i	■ View information
M	■ Access and exit menu
OK	■ Confirm values and settings
+	■ Increase values ■ Navigation upwards
-	■ Decrease values ■ Navigation downwards

Table 1: Key assignment

2.2 Language

Menu → Settings → Language



Select the desired language:

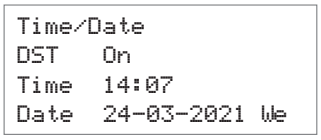
- Nederlands
- Deutsch
- English
- Francais
- Italiano
- Polski
- Lietuviu
- Cesky
- Dansk
- Russkij

Operating example – How to navigate through the menu:

- To access the menu, press M.
- Select the menu item 'Settings' with ▲ ▼ and press OK.
- Select the menu item 'Language' with ▲ ▼ and press OK.
- Select the desired language with ▲ ▼ and press OK.
- To exit the menu, press 2 × M.

2.3 Time and date

Menu → Settings → Time/Date



- Activate or deactivate automatic changeover between summer and winter time (Daylight Saving Time 'DST').
- Set the time and date.

2.4 Display

Menu → Settings → Display

During operation, the time, the room temperature, the valid temperature setpoint (optional) and, if applicable, alarms are displayed. You can choose between 3 variants for the arrangement on the display:

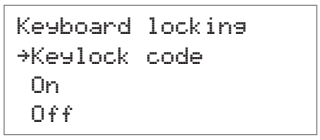
- Select the desired display variant:

2.5 Keyboard locking

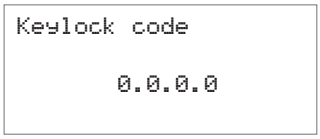
Keyboard locking is used to protect the controller against unauthorised changing of the settings. The following security levels can be selected:

- On (keyboard locked)
- Off (keyboard unlocked)
- On excl. overtime (access to the overtime program only, see section 4.1)

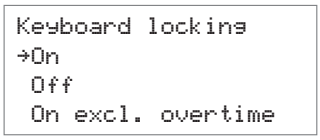
Menu → Keyboard locking



- To modify the unlocking code, select 'Keylock code' and press OK.



- Enter the desired unlocking code.



- Select the security level.

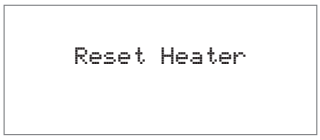
Unlocking the keyboard

- Press and hold the M key for 10 seconds.
- Enter the unlocking code.

Notice
The factory setting for the unlocking code is: **0000**

2.6 Reset

You can reset the controller to the factory settings with a reset:



- Press and hold the OK key for 10 seconds.
- Confirm with OK.
- All settings are deleted.

3 Programming

3.1 Temperature setpoints

In automatic mode, the controller works with 3 different setpoints for the room temperature, each of which can be set from 0...30 °C: 'Day', 'Night' and 'Frost'. The period for their validity can be freely defined in the clock program.

Menu → Settings → Temperatures

```
Temperatures
  Day          21 °C
  Night        15 °C
  Frost         6 °C
```

- Set the desired setpoints for automatic operation according to the clock program.

3.2 Clock program

The clock program is used to define regular weekly switching times. You can program up to 10 time blocks. A block looks like this, for example:

```
Program  Block 1
Mo Tu We Th Fr
07:00 Day
17:00 Night
```

- Days on which the block is valid
- Switching time 1 and temperature setpoint
- Switching time 2 and temperature setpoint

The following options are available for the days of validity:

- Off
- Mo Tu We Th Fr Sa Su
- Mo Tu We Th Fr
- Sa Su
- Mo
- Tu

(... and so on until Sunday)

Menu → Settings → Clock program

```
Program  Block 1
Off
```

- Scroll through the programmed blocks with ▲ ▼.
- To edit the selected block, press OK.

```
Program  Block 1
Mo Tu We Th Fr
07:00 Day
17:00 Night
```

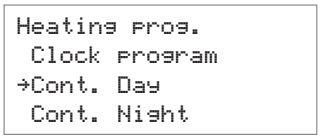
- Select the validity days with ▲ ▼ and press OK.
- Set '07', '00', 'Day' with ▲ ▼ and confirm each time with OK.
- Set '17', '00', 'Night' with ▲ ▼ and confirm each time with OK.
- Go on to the next block: Press ▲.
- Delete block: Select 'Off' and press OK.
- To exit the menu, press 2 × M.

3.3 Heating program

In the heating program, you can choose between automatic operation according to the clock program or continuous operation with a specific temperature setpoint:

- Clock program:
  - The controller switches the setpoints as defined in the clock program.
  - You can change the temperature manually. The manually changed value remains valid until the next automatic switching time.
- Continuous day:
  - The controller operates continuously with the 'Day' setpoint.
  - You can change the temperature manually.
- Continuous night:
  - The controller operates continuously with the 'Night' setpoint.
  - You can change the temperature manually.
- Continuous frost:
  - The controller operates continuously with the 'Frost' setpoint.
  - You can change the temperature manually.

Menu → Settings → Heating prog.

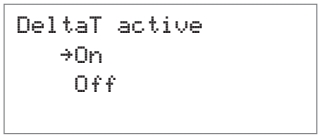


- Select the desired heating program.

3.4 Destratification

Destratification mode is used to avoid heat accumulation under the hall ceiling. When this function is activated, the controller continuously compares the air temperatures in the ceiling area and in the occupied area. If the temperature difference becomes too great (factory setting 12 K), it switches on the fans of the connected units and switches off the heating until a balanced temperature level is reached again.

Menu → Settings → DeltaT active



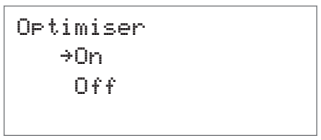
- Activate the destratification mode, if requested.

3.5 Optimisation

You can set the controller so that it starts heating up in automatic mode before the entered switching time. Heat-up is optimised so that the desired temperature is reached at the actual switching time.

Notice
- After activating this function, it will take a few days for the controller to gather the information needed for optimisation.
- The function is programmed so that individual colder or warmer nights are not immediately included in the calculations.
- Heat-up starts at the earliest 3 hours before the programmed switching time and not before midnight.

Menu → Settings → Optimiser



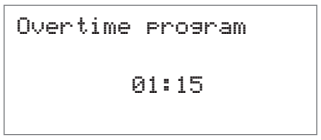
- Activate optimisation, if requested.

4 Manual operation

4.1 Overtime program

Use the overtime program if the controller is working in automatic mode and the current temperature setpoint is to be maintained for a longer period of time (beyond the programmed switching time).
The overtime timer can be set in 15-minute increments.

Menu → Overtime program

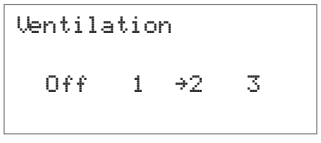


- Enter the time period. The countdown starts immediately when you press the OK key.

4.2 Summer ventilation

The fan can be switched manually to 3 speeds without the heating being in operation. This can have a cooling effect in summer.

Menu → Ventilation

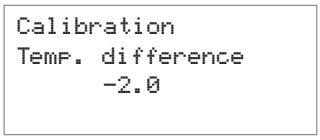


- Select the desired speed.

5 Calibration

The measured value of the integrated temperature sensor may deviate from the actual temperature under unfavourable circumstances (e.g. due to sunlight or installation on an outside wall). You can compensate for this temperature difference using the calibration function.

Menu → Settings → Calibration

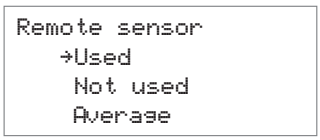


- Enter the correction value.
  Example:
  – The displayed value is 2 °C too high.
  – Enter: **-2.0**

6 External sensor

Optionally, an external room temperature sensor can be connected to the controller (for connection, see wiring diagram). You can use the measured value of the external sensor either instead of the integrated sensor or for averaging. Possible faults of the external sensor are shown on the display (error 3 = no sensor found).

Menu → Installer → Password → Remote sensor



- If requested, activate the external sensor and select the desired use.

Notice
The factory setting for the password is: **0543**

7 External switching

Optionally, an external signal can be connected to the controller (for connection, see wiring diagram). This way, the units can be controlled via a door contact or an external time switch, for example. Define the desired operating principle in the installer menu:

- Contact closed = Off
  - The controller works according to the active heating program.
  - When the contact is closed, the units are switched off, regardless of the current heat demand.
- Contact closed = Burn
  - The controller works according to the active heating program.
  - When the contact is closed, the units are switched on, regardless of the current heat demand.
- Remote clock:
  - The external signal switches between the setpoint day (contact closed) and setpoint night (contact open) set in the controller.

Menu → Installer → Password → External contact

```
External contact
  →Closed = OFF
   Closed = Burn
   Remote clock
```

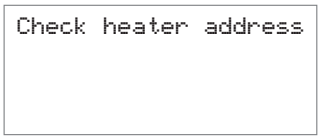
- Select the desired operating principle.

Notice
The factory setting for the password is: **0543**

8 Alarms

The system monitors itself. All alarms are entered in the alarm list and displayed on the screen.

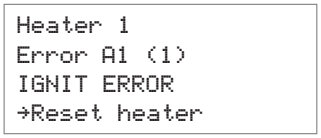
Communication error
If the controller cannot communicate with the connected units, a communication error is displayed.



- Check the unit addressing (setting of the micro switches on the burner control).

Burner malfunctions
If an error has occurred in one or more of the connected units, an alarm is displayed.

- To view more details, press i.
- Switch between several connected units with ▲ ▽.



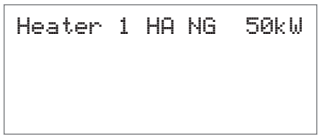
- If a reset is possible for the error in question, this is indicated accordingly: Press OK.

Caution
Do not carry out a reset again and again if faults occur frequently with a unit. Have the system checked by Hoval customer service.

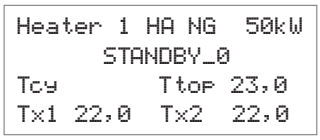
9 Information menu

The information menu displays additional information about the connected units.

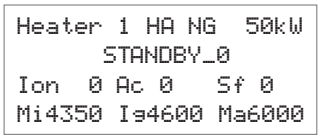
- Press and hold the i key for 5 seconds, to access the information menu.
- Switch between several connected units with ▲ ▼.
- Press i again, to view more information about the selected unit.
- Press the i key, to scroll through the pages.
- To exit the menu, press 2 × M.
- If no unit is found, the display shows 'Heater 1 N.C.'.



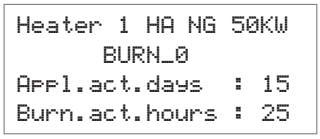
Info page 1
Description of the unit



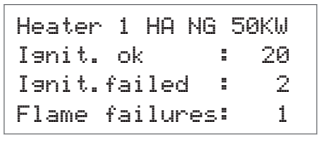
Info page 2
Line 1: description of the unit
Line 2: current status
Line 3 +4: measured values of the temperature sensors
Tcy .....not used
Ttop .....stratification sensor
Tx1 / Tx2...temperature sensor on the heat exchanger



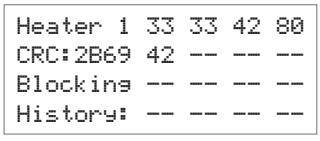
Info page 3
Line 1: Description of the unit
Line 2: current status
Line 3 +4:
Ion.....ionisation level 0-90
Ac .....current speed of the gas blower
Sf .....current modulation level of the fan 0-255
Mi.....minimum speed of the gas blower
Ig.....ignition speed of the gas blower
Ma.....maximum speed of the gas blower



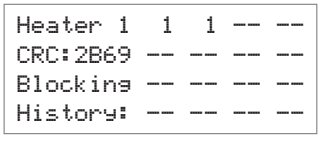
Info page 4
Line 1: Description of the unit
Line 2: current status
Line 3: Number of days the unit is supplied with power
Line 4: Number of burning hours



Info page 5
Line 1: Description of the unit
Line 2: Number of successful ignitions
Line 3: Number of failed ignitions
Line 4: Number of flame failures



Info page 6
- Shows the last 16 E errors (temporary burner malfunctions).
- The flashing number is the last error.
- The CRC code is the software version of the unit.



Info page 7
- Shows the last 16 L errors (locking burner malfunctions).
- The flashing number is the last error.
- The CRC code is the software version of the unit.

10 Installer menu

Menu → Installer → Password

Notice
The factory setting for the password is: **0543**

The following parameters can be set in the installer menu:

- Heater modes (modulation of the heater)
  - Full modulation ..... full modulation of the heater (standard)
  - Heater high ..... only high power level
  - Heater mid ..... only middle power level
  - Heater low ..... only low power level
  - Heater low & mid ..... only low and middle power level
  - Heater mid & high..... only middle and high power level

- DeltaT hysteresis
  - Hyst up ..... 12°C (switching on destratification mode)
  - Hyst down..... 8°C (switching off destratification mode)

- DeltaT2 hysteresis (not used)

- Hysteresis (has an influence on the temperature control)
  - 0.3 °C

- I Factor (has an influence on the temperature control)
  - I 5 min.
  - Only change this value after consulting Hoval customer service.

- DeltaT2 control (not used)

- Remote sensor
  - see section 6

- View mode only
  - Yes/No

  In view mode, the temperature control is deactivated. Only the key i can be used to display information about the units.
  To exit view mode:
  - Press and hold the M key for 10 seconds.
  - Call up the installer menu to change the setting.

- External contact
  - see section 7

11 Internal battery

The internal battery ensures that the controller's clock continues to run even in the event of a power failure. To replace the battery:

- Using a flat screwdriver, press into the opening at the bottom of the controller and carefully detach the front part of the controller from the wall plate.
- Carefully prise the print plate out of the holder.
- Replace the battery.
- Reassemble the controller.
- Dispose of the battery in accordance with local regulations.

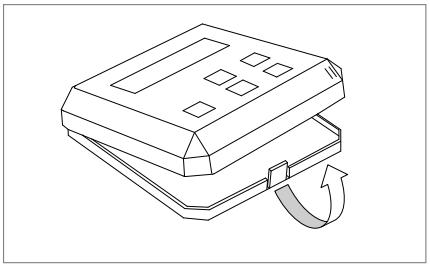


Fig. 2: Opening TempTronic MTC

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