EN

Operating instructions

TopGas® (30, 35, 45, 50, 60, 80)

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Hoval

4 205 253 / 01 - 06/08

1. For optimum 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 und telephone numbers

Heating engineer: .....
.....

Sanitary installer: .....
.....

Electrical installer: .....
.....

Chimney-sweep: .....
.....

Fuel supplier: .....
.....

1.2 Key to used symbols

⇨	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	Energy saving tip:	Provides energy saving information

1.3 System data

To be filled in by the heating expert!

Order No.: .....

Boiler type: .....

Heating pump type: .....

Heating regulation type: .....

Mixing organ type: .....

Water heater type: .....

Water heater sensor: Yes ☐ No ☐

Thermostat: Yes ☐ No ☐

Gas type: Natural gas H ☐ Natural gas L ☐ Liquid gas ☐

Neutralitation unit: Yes ☐ No ☐

Condensate pump: Yes ☐ No ☐

Outdoor temperature sensor: Yes ☐ No ☐

Room temperature sensor: Yes ☐ No ☐

Outside temperature sensor: Yes ☐ No ☐

Room temperature sensor: Yes ☐ No ☐

Number of heating circuits: 1 ☐ 2 ☐

3 ☐ 4 ☐

Heating circuit DK = ...

Heating circuit Mk1 = ...

Heating circuit Mk2 = ...

Heating curve value DK = ...

Heating curve value Mk1 = ...

Heating curve value Mk2 = ...

1.4 Design parameters

Lowest outdoor temperature: ..... °C

Heat demand: ..... kW

Max. flow temperature: ..... °C

2. Safety instructions

In event of danger!
⇨ Switch off fuel (gas) and electricity supply!

In event of gas smell!
⇨ Do not smoke
⇨ No open fire
⇨ Avoid sparks
⇨ Do not turn on the light or other electrical equipment
⇨ Open doors and windows
⇨ Close the gas cock
⇨ Inform the heating specialist/installing contractor
⇨ Follow the safety regulations on the gas meters
⇨ Follow the safety regulations of the heating specialist

In event of exhaust smell!
⇨ Turn off the plant
⇨ Open doors and windows
⇨ Inform the heating specialist

Ventilation apertures
Ventilation apertures should not be closed, if no direct combustion air flow takes place. Closed flow apertures can lead to incomplete combustion. this can lead to poisoning.
Exception: Your system operates room sealed

With a newly installed system the first start-up may only be carried out by a specialist. Installation checks must be carried out in full - see chapter 5.

2.1 Precautionary instructions

Control water level - see page 16

Always keep the room, in which your boiler is installed, clean and turn off the burner before cleaning, since dusty combustion air can lead to faults.

Corrosion protection:
Do not use sprays, sovents, chloric cleaning agents, dyes, adhesives etc. in the environment of the equipment. Sometimes these materials can lead to corrosion in the boiler and in teh exhaust system!

2.2 Intended purpose

Intended purpose:
The TopGas®-boiler may only be operated with the fuels indicated in the technical information/installation guidelines. The heat produced must be removed by means of heating water. All openings of the boiler must be during operation!.

3. Customer service

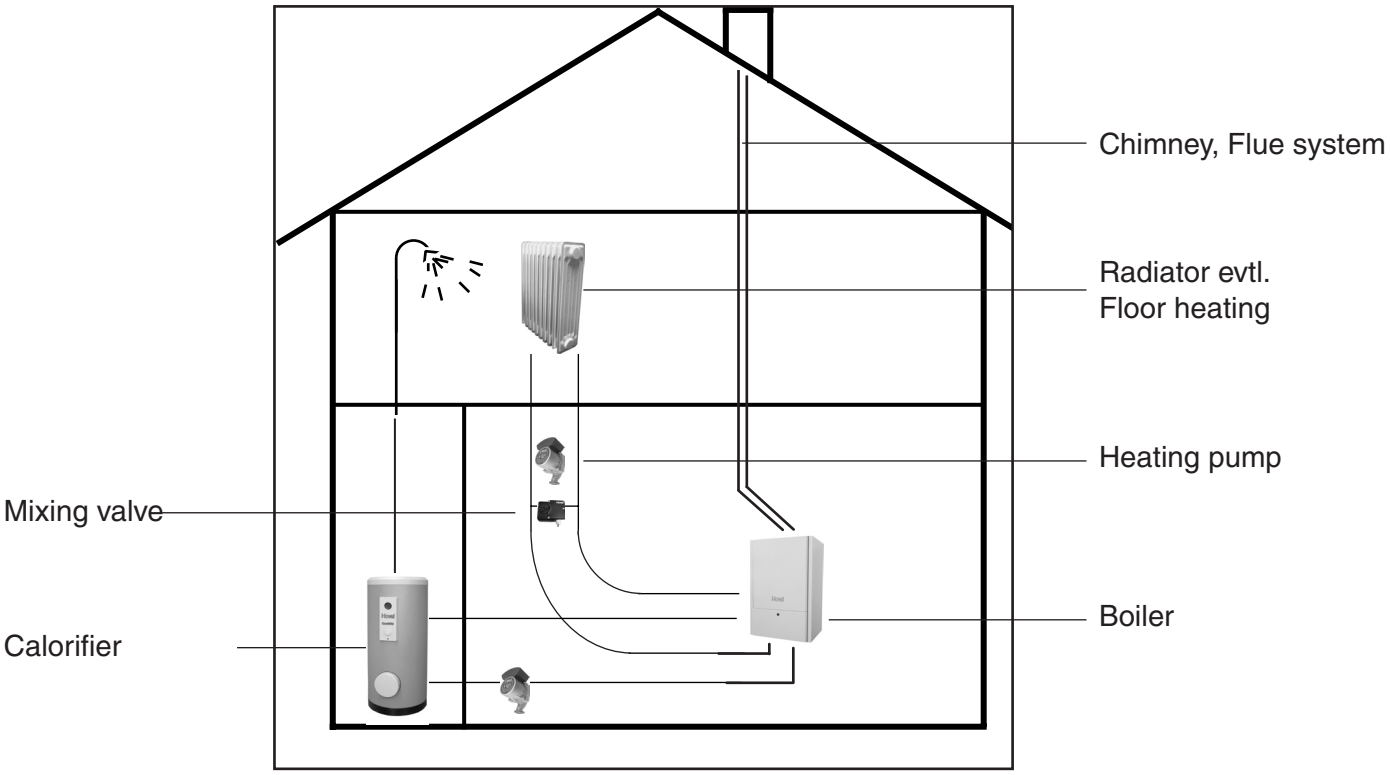
ⓘ These notices you should read in any case before start-up!

Dear Hoval customer,
You have acquired in the Hoval TopGas® a product, which has been manufactured to the latest state of the art and the highest quality.
Please ensure that the delivery is consistent with your order and check it for completeness. Also check for possible damages during transport and inform the nearest Customer Service centre about them. For insurance reasons it will not be possible to accept any subsequent claims.
For regular installation and operation of your Hoval TopGas®, you must comply with all applicable laws, regulations of the responsible power supply companies. For any further inquiries please contact your specialist or your nearest Hoval costumer services unit.
Assembly and installation of the boiler may only be carried out by trained personnel of a licensed installation company. Before start-up an installation check must be carried out and the system must be cleared by the specialist.
Please operate your Hoval-boiler only on the basis of these operating instructions, in order to ensure safe and troublefree operation.The boiler may only be used for its intended ppurposes and fuels, for which it is suitable through its mode of construction and has been approved by Hoval.
Do not carry out any changes to the system, otherwise all claims under the guarantee will be waived. Conversion kits are to be supplied and installed by a licensed installer or the Hoval after-sales service.
The reliable and safe functioning of a gas 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 damages.
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.
Make use of the Hoval Customer Service offerings to lengthen the life of your boiler. Those addresses you can find on the last page.

4. Functional principle of the heating system

	Components	Function
	Gas heating boiler	Burns 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.



5. Start-up

ⓘ With a newly installed system the first start-up may only be carried out by a specialist. Installation checks must be carried out in full..

- Set main switch SYSTEM to "0"
- Open the block valve in the heater flow and return pipe.
- Open the shut-off valve in the gas pipe to the boiler.
- Switch on the main switches outdoor the heating system room (if available). Often the heating system also has another danger switch, which only takes the gas burner out of operation.
- With the TopGas® the trap (Siphon) in the condensate exhaust pipe should be filled with water before start-up.

5.1 Checks prior to start-up

⇨ Check the water level in your system.

ⓘ 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

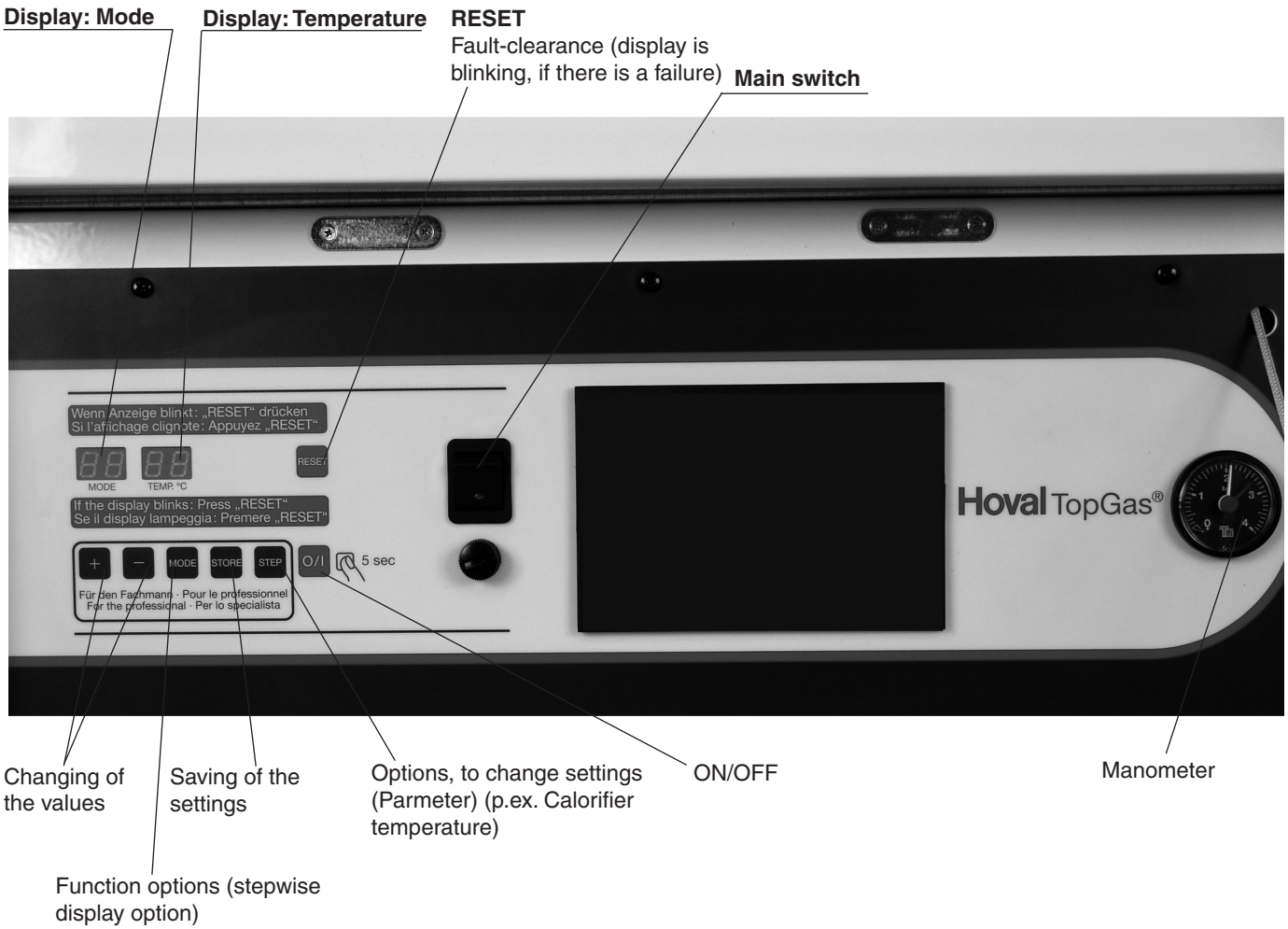
5.2 Switching on the system

⇨ Open the gas cock.
⇨ Switch on the main switch on the boiler.
⇨ Set the boiler control unit to the desired operating mode and temperatur

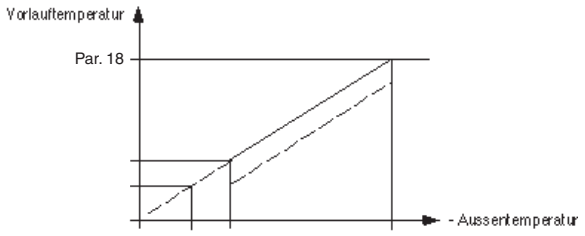
6. Control of the boiler

6.1 Control elements on the boiler control panel / Basic control N4.1

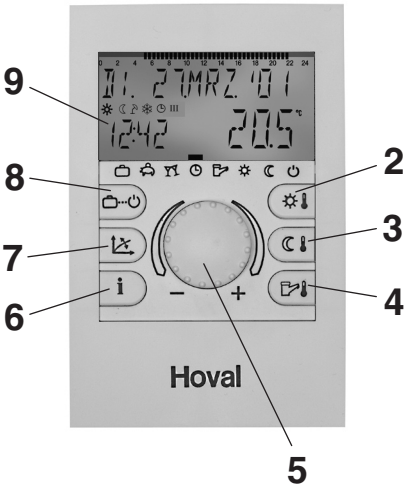
Normally no settings are required by the user to the basic control. All settings will have been made by the installer or by the manufacturer.

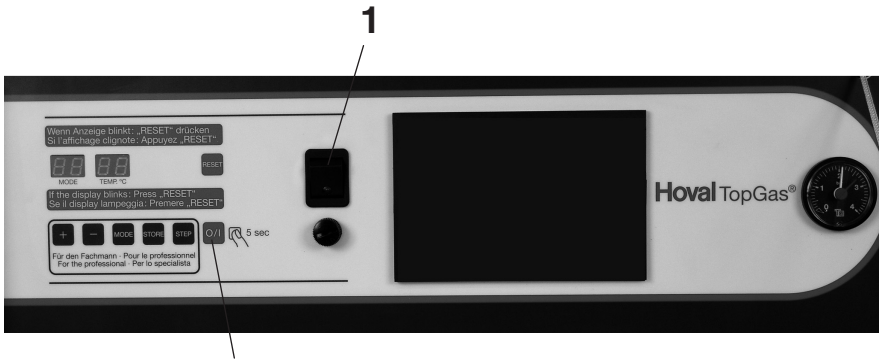


Function			Mode indication	Parameter-Indication	Value indication	Meaning, Description
Standby-Mode ↓	Normal position, Starting position	Current flow temperature	No indicaton	0		= Standby, no heat demand, Wartezeit Hauptgasventil
				1		= Rinsing
				2		= Ignition
				3		= Burner „on" in heating operation
				4		= Burner „on" in hot water operation
				5		= Air pressure switch defectiv (no air pressure switch in use)
				6		= Burner „off" in heating operation (flow-Temp > flow-temp set point + blockage Offset ZH)
				7		= Pump after-run time in heating operation
				8		= Pump after-run time in hot water operation
				9		= Burner „off" on hot water operation (flow-Temp > flow-temp. set point + Par.1 (2AB))
				Fr		= Frost protection is activated
				Su		= Summer short operation is activated

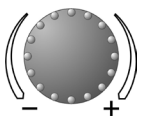
	Function	Mode Indication	Parameter inidication	Value indication	Meaning, Description
Information-Mode ↓	It is possible to read monetary values from here	Point is blinking	0	z.B. 45°	Current flow temperature (Heating water temperature)
			1	z.B. 40°	Current return temperature
			2	z.B. 60°	Current temperature in water heater
			3	z.B. 3°	Current outdoor temerature
			4	z.B. 55°	Current flue gas temperature
			5	z.B. 50°	Flow set value in the heating system
			6	z.B. 70°	Flow set value in hot water operation
			7	z.B.23 RPM	Fan speed in hundreds
			8	z.B. 4 µ A	Ionisation flow
↓ **Parameter-Mode**	Settings can be changed in this mode. Procedure: 1. Select parameter Mode (press Mode key 2 x) Parameter (P.7) and setting appear alternate 2. Select parameter to be changed (Step key) 3. Change setting using + - keys 4. Save (press Store key 1 x) Automatic return to standby mode in 20 minutes or with Mode key.	Point appears	P.7	60	= Hot water set value if there is no TopTronic® attached
			P.18	80	= Max. flow temperature during heating operation 

6.2 Control elements on the heating control panel RS-OT



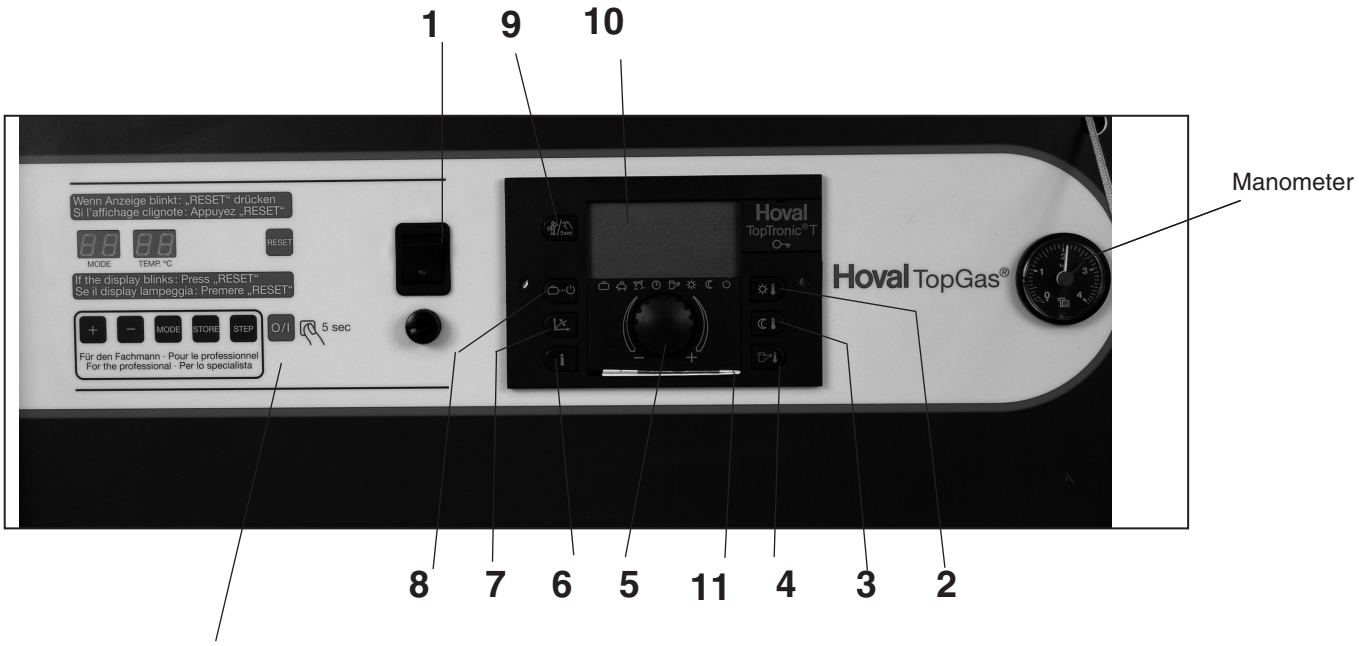


Settings and changes will be made only by the heating specialist.

Key	Designation	Function
1 	Main switch	I = ON - The boiler is in operation 0 = OFF - Boiler and burner are out of operation **! Note:** No freeze protection
2 	Daytime room temperature	Set the daytime room temperature
3 	Reduced room temperature	Set the nighttime room temperature (reduced heating).
4 	DHW temperature	Set hot water temperature. Manuel DHW reloading.
5 	Rotary pushbutton	Change the values by turning. Confirm the values by pressing. Function selection by pressing and turning.
6 	Information key	• Show the operating data on the display. • Return to the basic display without saving the values.
7 	Heating curve set-up	Set the heating characteristics

Key	Designation	Function
8 	Operating mode selection key	Select the operating modes
	Holiday	Turn off the heating system during the holidays (frost
	Absence	Temporarily switch off heating
	Party	Extended heating
	Automatic	Automatic heating according to the preset heating
	Summer	only DHW; heating off
	Constant heating	Constant heating mode
	Reduced heating	Constant reduced heating mode
	Standby	System switched off - Frost protection activated
9 	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)  Possible readouts: 1 Active heating time 24h 2 Weekday display 3 Display of the active operating mode and the clock programme 4 Time of the day 5 Selected operating mode 6 Date / Day / Month / Year 7 Boiler temperature and room temperature

6.3 Control elements on the heating control panel TopTronic® T/N



Settings and changes will be made only by the heating specialist.

Key	Designation	Function
1 	Main switch	I = ON - The boiler is in operation 0 = OFF - Boiler and burner are out of operation **! Note:** No freeze protection
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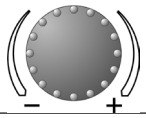
5 	Rotary pushbutton	Change the values by turning. Confirm the values by pressing. Function selection by pressing and turning.
6 	Information key	• Show the operating data on the display. • Return to the basic display without saving the values.
7 	Heating curve set-up	Set the heating characteristics

Key	Designation	Function
8 	Operating mode selection key	Select the operating modes
	Holiday	Turn off the heating system during the holidays (frost protection)
	Absence	Temporarily switch off heating
	Party	Extended heating
	Automatic	Automatic heating according to the preset heating times = normal heating
	Summer	only DHW; heating off
	constant heating	Constant heating mode
	Reduced heating	Constant reduced heating mode
	Standby	System switched off - Frost protection activated
9 	Manual mode / emission measurement	For heating technician only.
10 	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)  Possible readouts: 1 Active heating time 24h 2 Weekday display 3 Display of the active operating mode and the clock programme 4 Time of the day 5 Selected operating mode 6 Date / Day / Month / Year 7 Boiler temperature and room temperature
11	Brief operating instructions	Special brief operating instructions are provided with the heating control.

7. Check list in the event of faults

Fault	Check/cause	Solution	See page
Gas boiler does not start	- Is there a current	- Check fuses. Switch on the main switch	
	- Is the gas shut off cock open	- Open it	
	- Mode display "E" is blinking	- Press Reset-button - inform customer service	
	- If there is not enough gas "P26" appears on display	- Ask the gas works	
	- If the water pressure is too low "P27" appears on Display	- Check water level	16
Radiators do not heat up	- Are the blocking valves in the heating flow and return pipes open	- Open them	
	- Is the main swicth on position "OFF"	- Switch over	11 Nr. 1
	- Is the time switch of the TopTronic®T set correctly	- Check in accordance with separate operating guidilines of the heating regulation	
	- Check the water level and/or pressure	- Refill and drain air from the heating	16
	- Are the air radiator valves open	- Open	
	- The heating circulation pump is not working	- Open the plug Turn the shaft end with a screwdriver firmly until the resistance reduces	
	- Mixing organ does not open automatically	- Open by hand; contact customer services	
No hot water	- The loading pump is not working	- Open the plug Turn the shaft end with a screwdriver firmly until the resistance reduces	
	- Air is in the loading pipe	- Drain the air by hand - Operate the automatic air drainer annually	

Please note the following!

In the event of operating faults please carry out the checks in accordance with the above checklist.

If you cannot remove the fault, please call the heating engineer or Hoval customer service.

8. Check water level

With excessively low water pressure in the system (readable at the manometer), you should inform your installer and/or refill the water.

Refilling the heating

The heating system can normally be filled and topped up with mains water. In exceptional cases the water quality may vary strongly and it might not always be suitable for filling the heating system (highly corrosive or hard water). Please contact a certified specialist company in those cases.

Follow the procedure below

- Set the main system switch to “0”.
- Open the shut-off valves in the flow and return lines.
- The boiler filling and drain cock is accessible after removing the front panel on the front of the boiler.
- Connect a hose between the filling cock and the water tap:
  - Fill the hose with water before establishing the connection to prevent any air from entering the heating system
  - Unscrew the hose again after filling to brake the connection.
- Fill the water slowly while you control the water level on the hydrometer or manometer.
- Leave the bleed valves on the radiators open until you can see only water flowing out.

ENERGY

9. This saves you energy!

The room temperature and periods of operation of the heating system have a crucial influence on the fuel consumption.

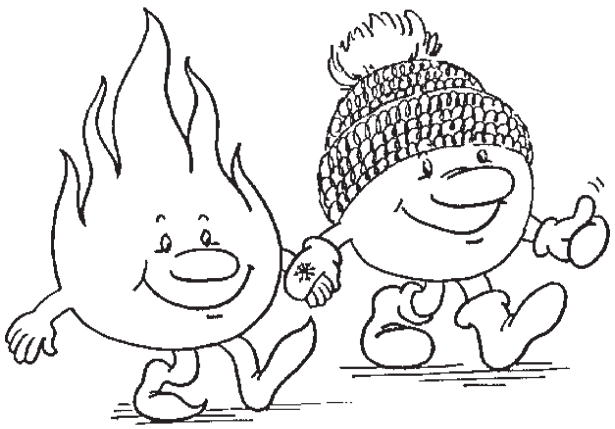
1°C lower room temperature produces 6% fuel saving. So bear in mind the following tips:

- Avoid room temperatures above 20°C and ajust your heating system accordingly.
- It is worthwhile to turn the radiators off of unused rooms as long as there is a danger of frost and no dampness damage to the building construction and the furniture is to be expected.
- In main living rooms, body heat, television sets, fire-places and solar radiation often produces heat gains. These cannot be balanced with a weather-dependent regulation. It may be worthwhile to install a remote control (RS-OT/RS-T) and/or a room sensor or attach thermostatic radiator valves in these rooms..

If there is a draft in the house, this is not only unpleasant, but at the same time means a loss of heating power.

So you can save fuel, if you...

- Keep doors and windows closed in the winter.
- Close chimney flaps, if the fire is out.
- Only operate kitchen and bathroom fans if steam and smells must be extracted.
- Only ventilate briefly, but repeatedly.
- Seal doors and windows, so that constant leakage losses are avoided.



Through installation you can retain precious heat.

Exploit these possibilities and...

- Close windows and doors at night.
- Make sure that heating and hot water pipes are insulated in unheated areas.

The lowest possible heating element temperature prevents unnecessary heat losses. So the heating element must always be able to deliver its heat to the room without impediment. So avoid:

- Covered heating elements
- Window sills, which do not let air through, because they are cluttered with objects.

Even for water heating there are possible economies.

- The hot-water temperature should be set as low as possible. Test at which temperature there is still sufficient hot water.
- If you have included a hot water circulating pump in your installation, then it is worthwhile to turn if off at night with a time switch..

10. Hoval-Services / Sales program

There are several advantages of a maintenance contract

- Your heating system is always optimally adjusted - this saves heating costs and preserves the environment.
- High working reliability, because in the course of maintenance possible causes of malfunction can be promptly recognised and repaired.
- The optimal setting and regular maintenance increase the life span of your heating still further.
- The attractive lump-sum price.

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

When you give us an order, please call an 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, burning, solar energy production systems (collectors) and heat pumps for making use of geothermal heat or heat generated heat by wind and water.

Heat distribution systems and buildings services

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

Heat recovery and industrial ventilation system

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Hoval

Responsibility for energy and the environment