

# eK!

## USER'S OPERATING INSTRUCTION

## SAFETY WARNINGS



### CAUTION!

The appliance may only be used by adults after reading the installation and servicing manual thoroughly. Children must be supervised to prevent them from playing or tampering with the appliance



### CAUTION!

The appliance must be installed, adjusted and maintained by professionally qualified personnel, in compliance with the standards and provisions in force. Incorrect installation can cause damage to persons, animals and objects for which the manufacturer cannot be held responsible.



### DANGER!

NEVER attempt performing maintenance or repairs on the appliance on your own initiative.

Any work must be done by professionally qualified personnel. We recommend stipulating a maintenance contract.

Insufficient or irregular maintenance can jeopardise the operating safety of the appliance and cause damage to persons, animals and objects for which the manufacturer cannot be held responsible.



### ATTENTION!

Changes to the parts connected to the boiler (once the boiler installation is complete) Do not modify the following parts:

- the boiler
- the gas, air, water and electricity supply lines
- the flue gas pipe, the safety valve and the exhaust pipe
- the construction parts which affect the operating safety of the appliance.



### ATTENTION!

To tighten or loosen the screwed fittings, use only appropriate fixed spanners. Non-compliant use and/or inappropriate tools can cause damage (e.g. water or gas leakage).



### ATTENTION!

Indications for propane gas-fired appliances

Make sure that the gas tank has been deaerated before installing the appliance. For state-of-the-art tank venting, contact the LPG supplier or person qualified in compliance with the law requirement.

If the tank has not been professionally deaerated, ignition problems could arise. In that case, contact the supplier of the LPG tank.



### DANGER! Smell of gas

Should a smell of gas be perceived, follow these safety guidelines:

- do not turn electric switches on or off
- do not smoke
- do not use the telephone
- close the gas shut-off valve
- air out the area where the gas leakage has occurred
- inform the gas supplier or a company specialised in installation and maintenance of heating systems.



### DANGER! Explosive and easily flammable substances

Do not use or store explosive or easily flammable materials (e.g. petrol, paints, paper) in the room where the appliance is installed.



### DANGER!

Do not use the appliance as a supporting base for objects.

In particular, do not place receptacles containing liquids (Bottles, Glasses, Jars or Detergents) on top of the appliance.

If the appliance is installed inside a housing, do not insert or rest other objects inside this housing.

# 1 - SYMBOLS USED IN THE MANUAL

Pay special attention when reading this manual to the parts marked by the symbols:



**DANGER!**  
Serious danger for  
personal safety and life



**ATTENTION!**  
Possible dangerous  
situation for the product and the environment



**NOTE!**  
Tips  
for the user

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## 2 - APPROPRIATE USE OF APPLIANCE



The boiler has been built according to the current level of engineering and acknowledged technical safety rules.

Nonetheless, if improperly used, dangers could arise for the safety and life of the user and other persons or damage to the equipment or other objects.

The appliance is designed to work in heating systems, with hot water circulation, for the production of domestic hot water.

Any other use is considered improper.

The manufacturer will not be held liable for any damage resulting from improper use.

Use according to the intended purposes also includes strict compliance with the instructions in this manual.

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## 3 - WATER TREATMENT



- The hardness of the feed water conditions the frequency at which the domestic hot water exchanger must be cleaned.
- If the water has a hardness greater than 15°f, we recommend using water softeners, chosen according to the characteristics of the water.
- In order to improve scaling resistance, it is recommended to adjust the domestic hot water at a temperature very close to that actually used.
- It is recommended to verify the cleanliness of the domestic hot water exchanger at the end of the first year, and then according to the level of scaling found; the period can be extended to two years.

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## 4 - INFORMATION PROVIDED TO THE USER BY THE INSTALLATION/MAINTENANCE TECHNICIAN



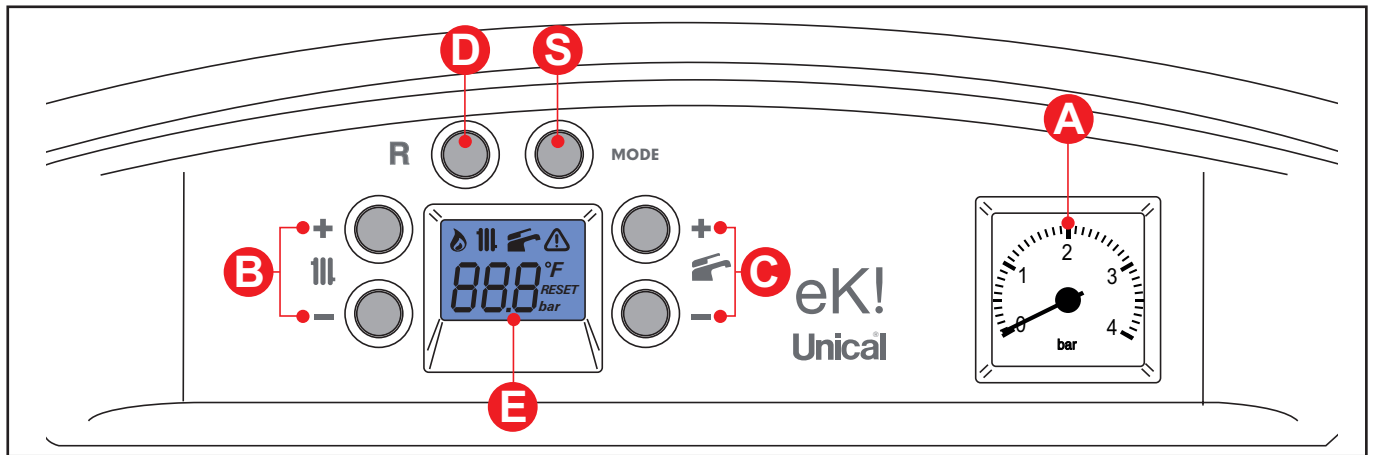
The user must be instructed concerning the use and operation of the heating system, in particular:

- Deliver these instructions to the user, as well as other documents concerning the appliance inserted in the envelope inside the packaging. The user must keep this documentation safe for future consultation.
- Inform the user about the importance of the air vents and the flue gas exhaust system, highlighting their essential features and the absolute prohibition of modifying them.
- Inform the user concerning controlling the system's water pressure as well as operations to restore it.
- Inform the user concerning correct temperature control, control units/thermostats and radiators for saving energy.
- Remember that the system must receive regular maintenance at least once a year and combustion analysis must be performed every two years (as per national law).
- Should the appliance be sold or transferred to a new owner or if you move and leave the appliance, always make sure that the instruction booklet accompanies it in order to be consulted by the new owner and/or installer.

The manufacturer will not be held liable in the event of damage to persons, animals or objects resulting from failure to comply with the instructions contained in this manual.

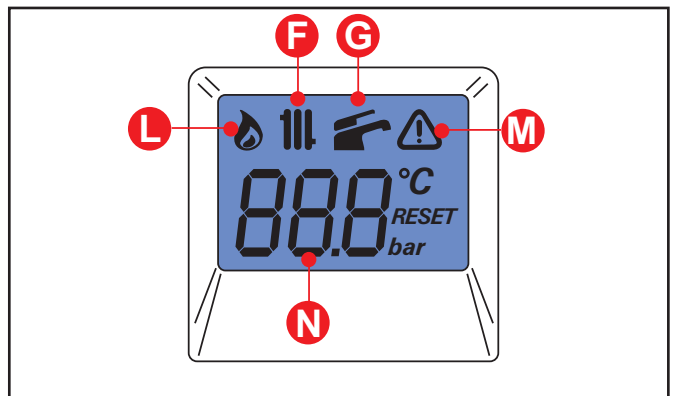
# 6 - OPERATING INSTRUCTIONS

## 6.1 - CONTROL PANEL



KEY	
A	Pressure gauge
B	Room heating temperature regulators (request from ON-OFF thermostat)
C	Domestic hot water temperature regulators
D	Reset button
E	Information display
F	Heating function active
G	Domestic hot water function active
L	Burner in operation symbol
M	Fault symbol
N	Temperature of fault code indication

S	Menu access key: Info / Errors log / Parameters
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S - MODE	
<b>OFF</b>	(only antifreeze function active)
	<b>Summer</b> (domestic hot water production only)
	<b>Winter</b> (domestic hot water production and heating temperature adjustment).

stand-by symbol appears on display when there is no CH and DHW request.

### C - Temperature regulator domestic hot water








By pressing key **C +** or **C -**, the symbol flashes on the display **E** indicating the domestic hot water temperature setting. Press key **C -** to decrease **C +** to increase, the new temperature value will be stored when the symbol is fixed on the display. Domestic hot water set-point min. 30°C max 60°C (factory setting 45 °C).


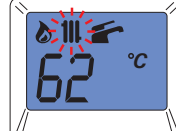

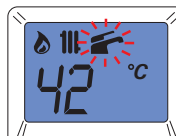

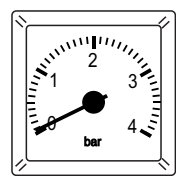
### B - Heating temperature regulator

By pressing key **B +** or **B -**, the symbol flashes on the display **E** indicating the heating temperature setting. Press key **B -** to decrease **B +** to increase, the new temperature value will be stored when the symbol is fixed on the display. Heating set-point min. 25°C max 85°C (factory setting 70 °C).

### L - Burner in operation signal

This symbol indicates that the burner is in operation / burner modulation. The symbol lights up when the boiler receives a request for heating or domestic hot water production.

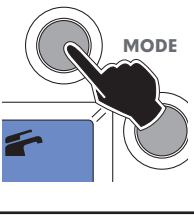

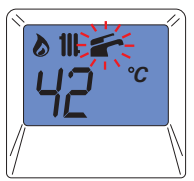

F - Operation in heating mode	
	The symbol flashes when the boiler receives a request in heating mode (*). If a request for domestic hot water production is received at the same time, the symbol stays fixed on and the symbol  flashes
G - Operation in hot water production mode	
	This symbol lights up when there is a request for domestic hot water (*).
(*) all the functions requested must be activated via <b>B/C</b>	
I - Block signal	
	The symbol lights up when the burner safety device has intervened, due to: - No gas - Failed ignition In the first case, in which the burner will not light, one must check if the gas valve is open.
M - Fault signal	
	The symbol lights up on the display monitor when the boiler detects an operation anomaly or it is blocked due to a permanent fault. The code that identifies the cause is displayed in place of the degrees centigrade:
	in a volatile way (disappears) (the boiler starts working again)
	in a fixed way (by pressing the reset button D) (the burner tries to ignite).


D - Unblock button	
	y acting on this button one can:
	- restart the boiler after the burner safety device has intervened, activating the symbol on the display
Thermometer	
	If, on the display, the symbol (  ) is lit up, the temperature indicated is that relating to the water for the heating circuit
	If, on the display, the symbol (  ) is lit up, the temperature indicated is that relating to the water for the domestic hot water circuit.
A - Pressure gauge	
	Displays the water pressure inside the heating circuit; this pressure value must not be below 0.8/1 bar (when cold). If the pressure drops below 0.8/1 bar, one must restore the correct value by acting on the system filling valve. This operation must be carried out when the boiler is cold.

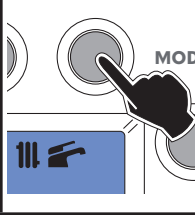

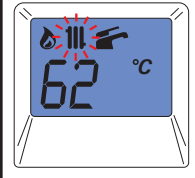

## 6.2 - CHECKS BEFORE COMMISSIONING



1	Make sure the gas shut-off valve upstream of the boiler is open.	5	Check that the boiler is powered electrically; the display <b>(E)</b> on the control panel must be lit up.
2	Check that any shut-off valves for maintenance, on the flow and return are open.	6	Check the water pressure on the boiler pressure gauge <b>(A)</b> ; for optimum operation, the pressure should be between 0.8 and 1 bar (with pump stopped). Should the pressure be lower than 0.7 bar with the system cold, restore pressure by opening the system filling tap (see par. 6.4).
3	Check that the shut-off valve, for maintenance, on the domestic cold water inlet is open.		
4	Check that the safety valves outlet /condensation drain has been connected to the drains.		

## 6.3 - OPERATION

Domestic hot water production	
	<p>Make sure that on the display <b>E</b> (  ) is lit up, select the mode via <b>MODE</b>.</p>
<p>By adjusting the temperature of the domestic hot water at a temperature very close to that actually used, you will avoid mixing hot water with cold water, with management savings and significantly reducing the formation of limescale.</p>	
	<p>By opening a hot water tap, the appliance is automatically activated and delivers water at the set temperature.</p> <p>During the sampling stage, the display shows the temperature of the domestic hot water and the symbol (  ) flashes.</p>

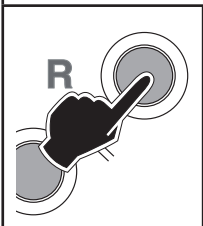

Complete decommissioning	
	<p>To decommission the system, disconnect the boiler from the power supply by acting on the main switch.</p>
<p>In the event of complete decommissioning, the heating and hot water production modes as well as the antifreeze protection are completely disabled.</p> <p>If idle for long periods, close the gas shut-off valve and cold water cock, if present.</p>	

Heating discharge	
	<p>Make sure that on the display <b>E</b> is lit up (  ), select the mode via <b>MODE</b>.</p>
	<p>During operation in heating mode, the display shows the water temperature and the symbol (  ) flashes.</p>




Antifreeze protection only	
	<p>Make sure that <b>E</b> is lit up on the display (<b>OFF</b>), select by pressing <b>MODE (OFF)</b>.</p>
	<p>The antifreeze protection intervenes <u>only if the boiler is powered electrically and if the gas valve is open</u>.</p> <p>If for some reason there is a power or gas failure, the antifreeze protection described above is not active</p>

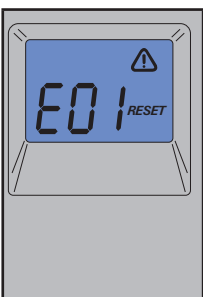
## 6.4 - ELIMINATING FAULTS


When the boiler detects an operation anomaly or it is blocked due to a permanent fault, the control panel display lights up, and the symbol (⚠) starts to flash.


	<p>by pressing the unblock button “D” the code that identifies the cause is displayed,</p>
	<p>((for the “error codes” list see par. 4.6 installation and maintenance instruction manual).</p>

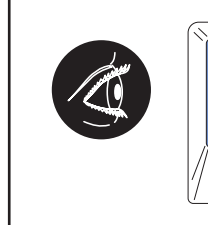
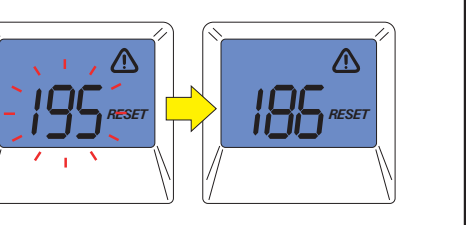

The user can intervene to restore proper operation only in the following cases:

	<p><b>System pressure too low</b></p>
<p><b>How to eliminate the fault:</b></p> 	<p>Restore the correct pressure value by acting on the boiler filling valve (for optimum operation, the pressure value should be within 0.8 and 1 bar). When the minimum pressure value is reached (0.6 bar), boiler operation is resumed.</p>
	<p><b>In case of frequent interventions to restore the water pressure, contact an Authorized Unical AG S.p.A. Assistance Center.</b></p>

	<p><b>Burner ignition block</b> Burner blocking device triggered due to:</p> <ul style="list-style-type: none"> <li>- no gas</li> <li>- air in pipe (when system is new or after long idle period).</li> </ul>
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<p><b>How to eliminate the fault:</b></p> 	<p>Check that the gas valve is open and press the unblock button to resume the proper operation of the boiler.</p> <p><b>After 5 interventions of the boiler blocking device, do not try to resume operation of the boiler by yourself. Contact an Authorized Unical AG S.p.A. Assistance Centre.</b></p>
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	<p><b>Safety thermostat intervention (due to air)</b></p>
<p><b>How to eliminate the fault:</b></p>	<p>Bleed the air from the radiators and restore system pressure.</p>
<p><b>For all the other error codes, the user is NOT authorised to resume boiler operation by himself. Contact an Authorized Unical AG S.p.A. Assistance Centre.</b></p>	

<p><b>Troublesome flue gas exhaust</b></p>	
	
<p>It can occur after a particularly strong wind conditions. It can also occur in the event of partial or total obstruction of the exhaust / intake pipes or in the event of condensation drainage difficulties. In these case contact an Authorized Unical Assistance Centre.</p>	
	<p><b>UNICAL AG S.P.A.</b> disclaims any liability for damage caused as a result of improper installation, use, appliance conversion or for non-compliance with the instructions supplied by the manufacturer or installation regulations in force concerning the material in question.</p>

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