

# World smallest Gas Boiler User Manual

(Gasboiler with printcard Type 585 )



15B, 15C, 37K, 37B, 37C

Gas boiler with 3-way valve for storage cylinder .....	E15B
Gas boiler for heating .....	E15C
Combi-boiler for heating with Hot Water .....	E37K
Gas boiler with 3-way valve for storage cylinder .....	E37B
Gas boiler for heating .....	E37C

Sale - Installation - Service, please contact Gazelco



*Generates Heat Technology*

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## General

The appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instructing concerning use of the appliance by a person responsible for their safety.

Children should be supervised to ensure that they do not play with the appliance.

## Display

Open the door of the casing for display operation.

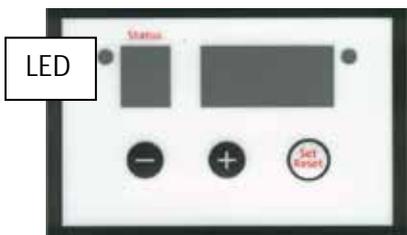
On the Status display is the status indication shown.

On the 3 right segments, the Reading display, values of the temperature °C, pressure, etc are shown.



(-) button (+) button Set/Reset

Push buttons from the left to right:  
MINUS, PLUS and Set / Reset



Left of the Status display is a LED informing the situation of the boiler.

LED is ON = burner is ON

LED is OFF = burner is OFF

LED is Flashing = boiler is in LOCK-OUT

Right of the Reading display is a LED, active for TWIN boilers only.

### Normal state

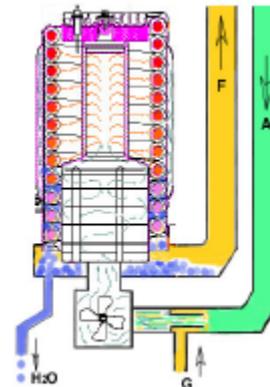
The boiler is stand-by or heating. During heating the burner may be switched off temporarily when the regulated water temperature is above setpoint.

### Lock-out

Lock-out protection is used when a certain condition must lock the system until the user resets the system. These conditions are often more safety related than blocking conditions. A lockout state is indicated by a blinking letter or number on the left display characters

position. Depending on the lockout state, the right characters of the display are empty or have extra information regarding the Lockout state.

See list.



## Operation

A fan sucks the air required for the combustion through the air feed canal (A). Because the combustion air in the venturi sucks an under pressure, the correct amount of gas (G) is automatically added to the combustion air. The flammable gas/air mixture thus obtained is fed to the burner, via a mixing chamber, to be ignited at the surface of the burner by a ceramic glow plug. The hot combustion gases are efficiently fed through the heat exchanger, where they give their heat to the water. The flue gases are fed outside, through the flue tube (F), into a flue tube exhaust canal. The condensation water (H<sub>2</sub>O) thus obtained is discharged into the sewer.

### Gas service

After the first year, have a recognised installer or maintenance man to inspect the boiler. He should be ascertaining the maintenance deadline on the basis of the inspection and circumstances. The condensation water drain must be cleaned each second year.

### Clean the condensation water drain



Always clean the trap (Siphon)

Clean the drain each second year. There is an opening for this purpose on the top of the vapour tray. First remove the rubber sealing plug; rinse the vapour tray and drain with clean tap water. When no more impurities are removed, the vapour tray is clean.

### Holiday

Planned several weeks of holiday, it is recommended to let the boiler running unchanged. This means that the boiler every 24 hours monitor management function. If it is not frost set room thermostat lower. If frost may occur set the room thermostat to 12 C. The boiler has a built-in antifreeze but the heating system pipes and radiators are not protected against frost damage.

### DISPLAY

The view mode is to enter directly.  
 Press the (+) button for at least 10 seconds. First upcoming is the water pressure P / u; in the Reading display on the right hand segments is the actual water pressure in bar.  
 Press the Set/Reset button to next parameter.

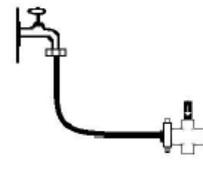
To switch out of the view mode press the (-) button shortly or after timeout.  
 When the keys are untouched for 3 minutes, the system will switch out of the view mode automatically.

### Reading water pressure

To read the actual water pressure press the (+) button for at least 10 seconds. Press the (-) button briefly to return to normal mode. Time out: Automatic return to normal operation after 3 minutes.

### Water pressure

Check the water pressure; top up and de-aerate as necessary. If the water pressure in the installation falls below 0,5 bar the Status display shows a continuous P and the right hand display shows the actual water pressure in bar. Solution: Fill the system with domestic water. The working range of the boiler is between 0,5 and 3,5 bar. With lower and higher water pressures the burner is off. The boiler is blocked and gives no heat.



### Venting

Follow instructions of your installer of how to vent the system elements of the installation. Take care all pumps are off. Running water can move the air through the system constantly. During the venting process you also may put the appliance mains switch in the supply cable off. Open the air bleed cocks of the radiators one at a time. Use an air bleed key for this. As soon as water comes out of the air bleed cock, shut the cock off again. Air in the boiler can cause a malfunction of the boiler. Vent the boiler, the HWS hot water cylinder or internal tank of Combi-boiler. After venting of the system, the appliance and pumps must be connected to the mains and be switched on.



View mode Single boiler	Status	Description
	P / u	Actual water pressure left hand unit (in bar)
	∞ / u	Setpoint temperature on flow sensor (in °C) (parameter C/r = 0)
		Setpoint temperature on return or system sensor (in °C) (parameter C/r = 1)
	1 / u	Actual flow sensor temperature (in °C)
	2 / u	Actual return sensor temperature (in °C)
	3 / u	0÷10V control (in Volt)
	4 / u	Outdoor sensor temperature (in °C)
	5 / u	Combi-boiler internal tank or external storage cylinder temperature (in °C)
	6 / u	Flue gas sensor temperature (in °C)
	7 / u	Flame signal (in µA DC)
	9 / u	Last lock-out
	A / u	Last blocking
	d / u	Actual system sensor temperature (in °C) (parameter C/r=1)

Status	Reading	1.3.1. Normal state (continuous code)
P		With initialisation and after restoration of supply power de-aeration programme runs for 2 minutes. The boiler pump and 3-way valve (if applicable) switch several times, with the purpose to move eventual air out of the boiler; burner off
0		Stand-by (no heat demand)
C		Heating heat demand, temperature above setpoint, burner off
C.		Heating heat demand, temperature below setpoint, burner on
J		Heating heat demand, 3 minutes anti-cycling time, burner off
c		Pump after run heating mode, burner off
d		DHW heat demand, temperature return sensor of Combi-boiler above setpoint, burner off
d.		DHW heat demand, temperature return sensor of Combi-boiler below setpoint, burner on
b		HWS heat demand, temperature external cylinder above setpoint, burner off
b.		HWS heat demand, temperature external cylinder below setpoint, burner on
o		Frost protection 8 °C; burner off, pump on
o.		Frost protection 3 °C; burner on, pump on
C flashing		Chimney sweeper function (ionisation current on the right hand segments)
Status	Reading	1.3.2. Blocking state (continuous code)
2		Return sensor temperature 5 °C above flow sensor temperature, pump on, burner off
6		Combi boiler internal tank sensor not connected or open (parameter H=01)
6.		Combi boiler internal tank sensor shortcut fault (parameter H=01)
9		Flow or return sensor temperature > 95 °C
A		Flue gas sensor temperature > 100 °C
b/r		Hot water on right unit of TWIN boiler
E		No SLAVE connected / PCB is set as MASTER, (parameter A=0)
	SLA/01	No MASTER connected / PCB is set as SLAVE, (parameter A=1)
P		Water pressure low or high, display shows 'P'+ pressure
t		Outdoor sensor summer switch on, burner off, (parameter O/t)
Status	Reading	1.3.3. Lock-out state (flashing code)
1		Max delta temperature, differential temperature between flow and return sensor limits 50 °C
1		Boiler does not pass temperature test. After burner start the flow sensor must rise 3 °C more in temperature than return sensor within 20 seconds (after 3 start attempts follows lock-out)
2		Flame signal lost 3 times during operation
5		Fan speed error (fan speed deviates > 30% from the speed setpoint)
8		Flame signal detected with closed gas valve
9		Eeprom programmed (to reset press the Set/Reset button)
A		Flue gas temperature > 100 °C for more then 3 times within 30 minutes
E		Internal regulation fault / A/D conversion fault (depending type of error display shows 'E' or "EEE")
E	t1	Flow sensor open or shortcut fault
E	t2	Return sensor open or shortcut fault
E	t3	Flue gas sensor open or shortcut fault
F		Too many (4 times) consecutive start attempts
H		Flow or return sensor temperature > 105 °C
O		Safety limiter contact is open (no limiter on this boiler, contacts bridged)