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HYDRONIC GAS SYSTEM BOILER 18kW

CONDENS 5000 W

ZSB18 - 2A.



BOSCH

USER MANUAL

6 720646 196 (2013/08)

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Preface

Please read these instructions carefully

These instructions are applicable to the Bosch boiler model stated on the front cover only.

These instructions apply in AU/NZ only and must be followed except for any statutory obligation.

After installation please leave this user manual, the installation instructions and completed installation checklist with the customer.

Dedicated to heating comfort

Thank you for purchasing a Condens 5000 hydronic system boiler manufactured by Bosch. The company prides itself on manufacturing boilers to the strictest quality control standards throughout every stage of production.

Bosch has led the field in innovative boiler design and performance for almost 50 years. This heritage means all our products are of exceptional quality and proven reliability.


The Condens 5000 in particular is extremely energy efficient, offering you economical running costs and value for money.

Register the warranty within 30 days of installation for the reassurance of a two years parts and labour guarantee.


1 Symbols and safety precautions

1.1 Explanation of symbols

Warning symbols



Safety instructions in this document are framed and identified by a warning triangle which is printed on a grey background.




Electrical hazards are identified by a lightning symbol surrounded by a warning triangle.

Signal words indicate the seriousness of the hazard in terms of the consequences of not following the safety instructions.

- **NOTICE** indicates possible damage to property or equipment, but where there is no risk of personal injury.
- **CAUTION** indicates possible personal injury.
- **WARNING** indicates possible severe personal injury.
- **DANGER** indicates possible risk to life.

Important information



Notes contain important information in cases where there is no risk of personal injury or material losses and are identified by the symbol shown on the left. They are bordered by horizontal lines above and below the text.

Additional symbols

Symbol	Meaning
▶	a step in an action sequence
→	a reference to a related part in the document or to other related documents
•	a list entry
–	a list entry (second level)

Table 1 Symbols

1.2 Safety precautions

If you smell gas:

- ▶ **LPG boilers** call the suppliers number on the side of the LPG tank/cylinder
- ▶ **Turn off** the ECV (emergency control valve) at the meter
- ▶ **Do not turn any electrical switches on or off**
- ▶ **Do not** strike matches or smoke
- ▶ Put out naked flames
- ▶ Open doors and windows
- ▶ Keep people away from the affected area

Boiler operation:

This boiler must only be operated by a responsible adult who has been instructed in, understands and is aware of the boiler's operating conditions and effects.

Combustible and corrosive materials:

Chemically aggressive substances can corrode the boiler and invalidate any warranty.

- ▶ Do not store or use any combustible materials (paper, thinners, paints etc.) inside or within the vicinity of the boiler.

Fittings and modifications:

Only an authorised person can remove the outer case and carry out any work.

- ▶ Do not remove the outer casing.

Any misuse or unauthorised modifications to the boiler, flue or associated components and system will invalidate the warranty.

- ▶ Do not modify the boiler or flue system in any way.

Bosch accepts no liability arising from any such actions. This does not affect your statutory rights.

2 General information

Servicing



Ensure that the service engineer completes the service checklist after each service. The service checklist and service interval record can be found at the rear of the installation instructions.

- ▶ The boiler must be serviced annually by an authorised person.
- ▶ Always use original spares, to help maintain the economy, safety and reliability of the boiler and have the service record completed in the service checklist.

The completed service checklist will be required in the event of any warranty work.

3 Controls

- ▶ To gain access to the boiler controls open the flap and release.

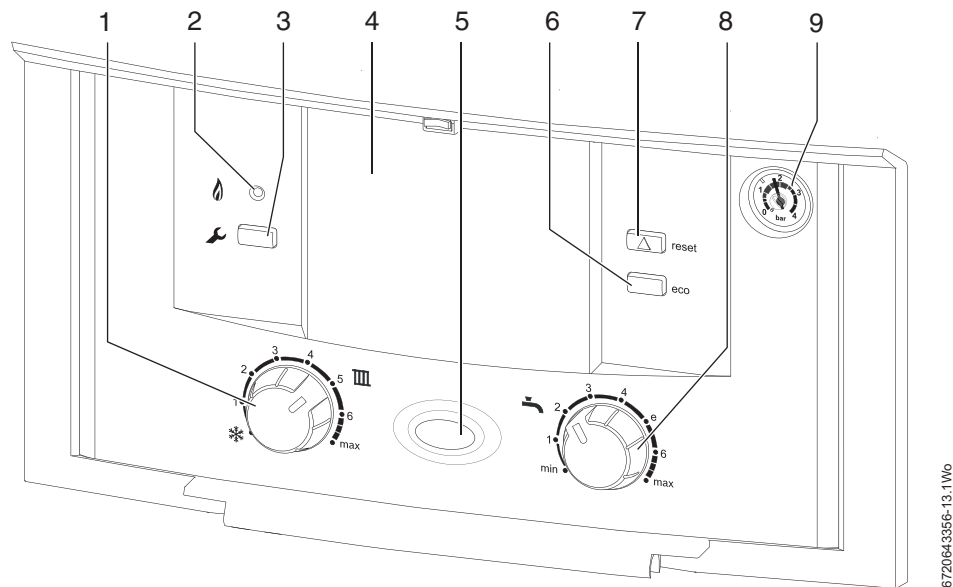


Fig. 1 Control panel fascia

Boiler Controls	1	Central heating temperature control	6	ECO button (non functional)
	2	Burner indicator (green)	7	Reset button
	3	Service button	8	Hot water temperature control*
	4	Cover or optional programmer	9	System pressure gauge
	5	Power ON and fault indicator (blue)	*	Requires optional integral diverter kit to be functional

Table 2

3.1 Operating the boiler

Setting the central heating temperature

- 1. Turn the central heating temperature control knob to the desired level.

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The temperatures quoted in the figure below are only approximate.

- 1. The Burner indicator (green) will illuminate to show that the boiler is running.

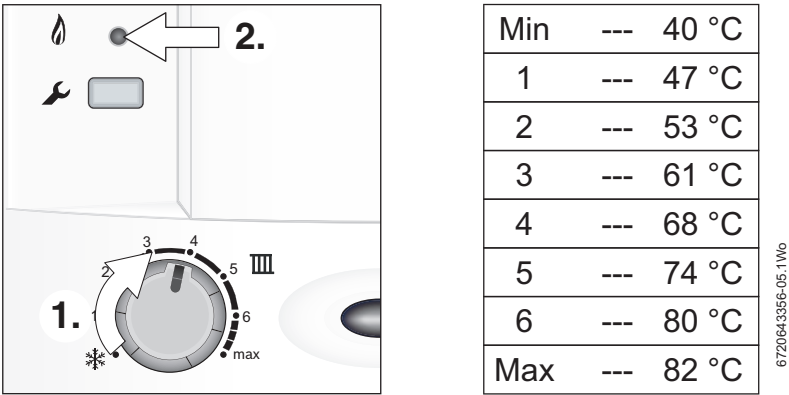


Fig. 2 Central heating temperature control

3.1.1 Switching off the central heating

- 1. Turn the temperature control knob to the snowflake symbol to switch off the central heating.

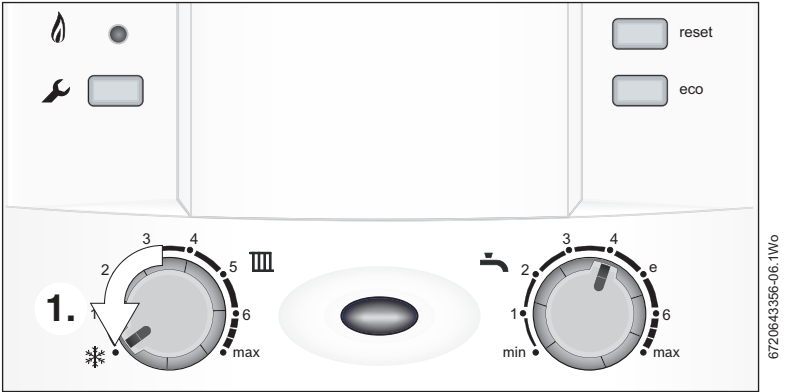


Fig. 3 Switch off central heating

3.1.2 Boiler frost protection

If the temperature within the boiler falls below 8°C the pump will run to circulate water and prevent the system freezing. If the temperature within the boiler falls below 5°C the boiler will fire periodically, bringing the boiler temperature up to 12°C to avoid the possibility of the system freezing. This process will be repeated until such time that the boiler temperature does not drop below 5°C.

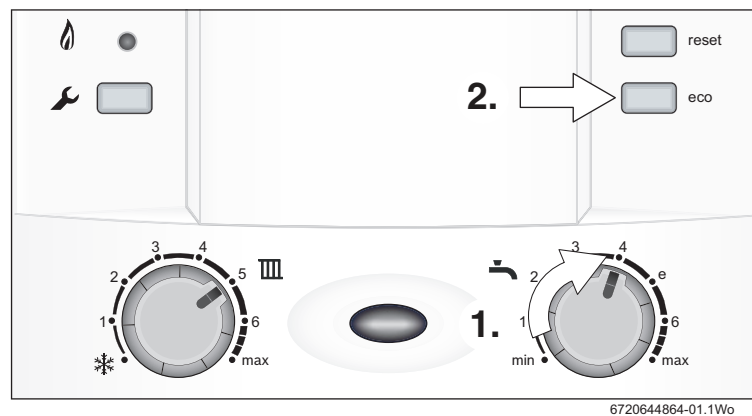
3.1.3 Setting the hot water temperature



Optional integral diverter valve kit with cylinder temperature sensor is required to be able to set the hot water temperature.

Otherwise the temperature is factory set to approximately 55°C.

1. Turn the hot water temperature control knob to the desired level.
2. The ECO button is non operational with this type of boiler.



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Fig. 4 Hot water temperature

3.1.4 Boiler reset

In the event of a fault, the reset button will flash once per second and the blue mains indicator light will flash.

1. To reset the boiler press the reset button for approximately five seconds.
When the boiler resets the reset button will no longer be illuminated.
2. The mains indicator will no longer be flashing.

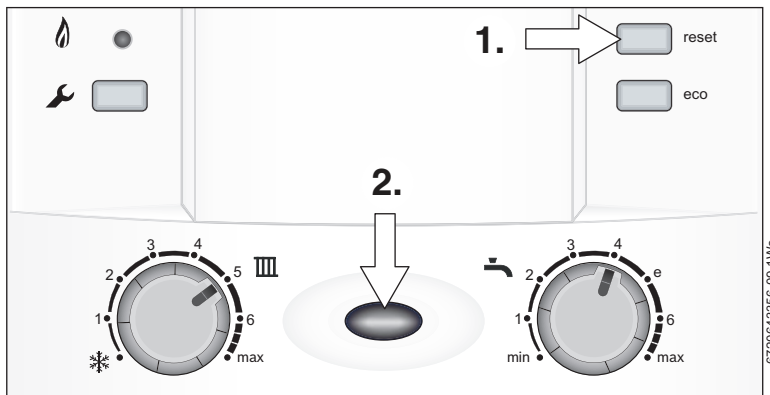


Fig. 5 Reset button and mains light



If the fault remains and cannot be cleared by pressing the reset button, contact Robert Bosch for assistance on: 1300 30 70 37

4 System pressure

4.1 Sealed heating systems

This boiler is fitted to a sealed heating system which is pre-pressurised. The optimum pressure is indicated on the pressure gauge shown in figure 6.

- Check regularly that the pressure is maintained.

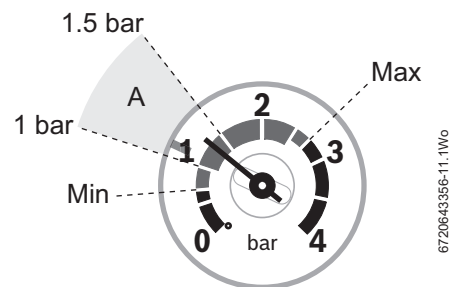


Fig. 6 Optimum pressure when cold (area A)

- Contact your installer or authorised person if a permanent significant decrease in pressure is indicated on the pressure gauge. The filling method on this boiler will be an external filling loop, with fitted valves and a flexible hose. The filling loop should ideally be located close enough to the boiler so that the pressure gauge can be monitored during filling.

4.2 External filling loop



External filling loop valve must be installed according to local authorities regulations to protect the potable water supply.

Once the external filling loop has been located, follow the instructions for re-pressurising the system.

1. Unscrew blanking cap.
2. Attach the hose to the valves, screw on hand-tight.
3. Turn the handle/screwdriver slot through 90° to open the valves.
4. The handle/screwdriver slot will be in-line with the valves

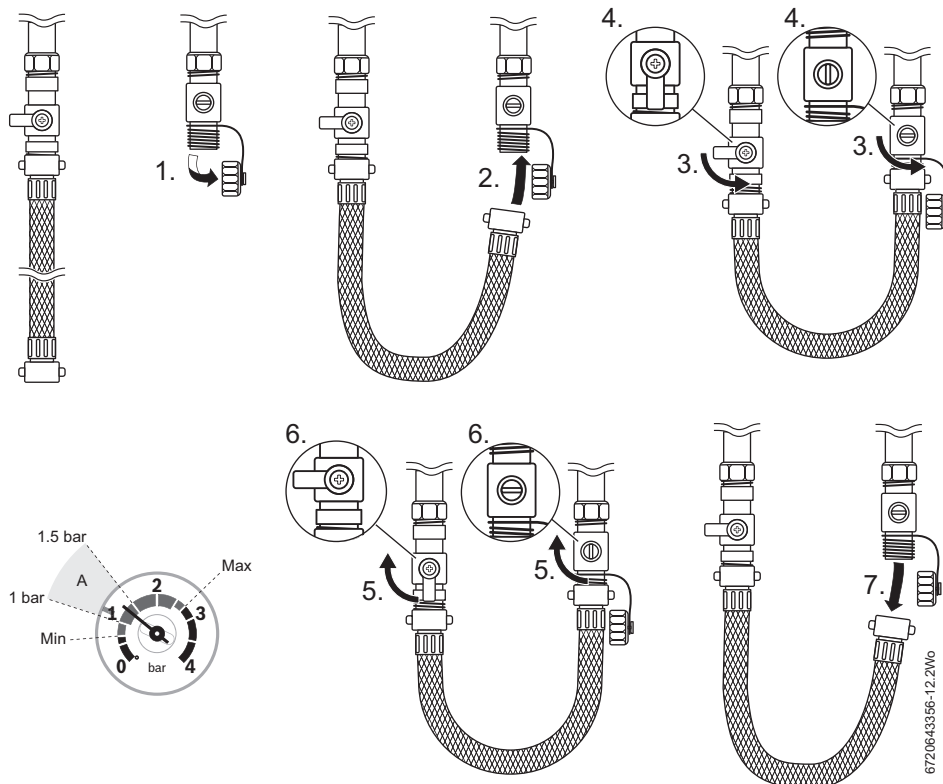


Fig. 7 External filling loop

5. When the pressure reaches between the 1 and 1.5 bar marks (zone A), turn the handle/screwdriver slot back, through 90°, to close the valve.
6. The handle/screwdriver slot will be at 90° to the valves
7. Remove the hose and replace the blanking caps.

5 Service clearances

Your installer will have provided adequate space around the boiler for safety and servicing access.



CAUTION: Restricted space.

The boiler may overheat.

► Do not restrict this space with the addition of cupboards, shelves etc. next to the boiler.

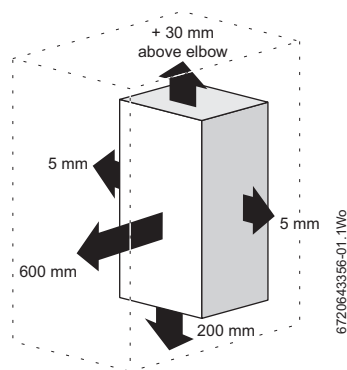


Fig. 8 Service clearances

6 Maintaining the boiler

Your new Condens 5000 hydronic boiler represents a long term investment in a reliable, high quality product.

In order to realise its maximum working life, and to ensure it continues to operate at peak efficiency and performance, ensure that your boiler receives annual servicing from an authorised person beyond the 2 year guarantee period.

If your Condens 5000 should fail to operate correctly or requires servicing please contact Robert Bosch on: 1300 30 70 37.

Details of the boiler can be found under the controls covers flap on the boiler.

7 Fault finding

If a boiler fault occurs, please read the following page thoroughly before contacting Robert Bosch.

Problem	Cause	Remedy
Desired room temperature is not reached	Thermostatic radiator valve(s) set too low	► Increase thermostatic radiator valve setting(s)
	Temperature control for central heating flow on boiler set too low	► Increase central heating flow temperature control setting
	Air trapped in heating system	► Bleed radiators and recharge heating system
Desired room temperature exceeded by large amount	Radiators are too hot	► Turn down thermostatic radiator valves/room thermostat ► Reduce central heating temperature by turning down the Central Heating control on boiler
Heating stays on for too long	Clock is incorrectly set	► Check setting and adjust
No ON/OFF mains indicator	Momentary power failure	► Switch off boiler at master switch, wait a few seconds then switch on again
Hot water cylinder temperature too low	Temperature set too low	► Check setting and adjust
Hot water cylinder temperature too high	Temperature set too high	► Check setting and adjust

Table 3

8 Fault or breakdown

This boiler is supported in AU and NZ by Robert Bosch.

Service Engineers are available to attend a breakdown occurring on this boiler.



Invoices for attendance and repair work carried out on this boiler by any third party will not be accepted.

- No charge will be made for parts and/or labour providing:
A boiler fault is found and the appliance has been installed within the past 24 months. Reasonable evidence of this must be supplied on request. i.e. the service checklist.
- A call-out charge will be made where:
 - The boiler has been installed for over 24 months.
 - Evidence cannot be provided that the first year service inspection has been carried out (i.e. an entry in the service checklist).
 - Our Service Engineer finds no fault with the boiler.
 - The cause of breakdown is misuse or with other parts of your plumbing/heating system, or with equipment not supplied by Robert Bosch.

Technical Support



No boiler fault is found on over 30% of all service calls.

In the case of a suspected fault, refer to the fault finding section of this guide.

In the event of a boiler fault or breakdown please contact Robert Bosch on: 1300 30 70 37.

Your advisor will arrange for an engineer to call with the minimum of delay, for priority breakdown situations (no hot water and /or heating).

9 Tips on energy saving

Heating economically

The Condens 5000 provides a high level of comfort whilst keeping gas consumption and the environment effects as low as possible.

The gas supply to the burner is controlled according to the level of demand for heat. The boiler operates with a low flame if the demand for heat reduces. The technical term for this process is modulating control.

Modulating control reduces temperature fluctuations and provides an even distribution of heat throughout the home. This means that the boiler may stay on for relatively long periods of time but will use less gas than a boiler that continually switches on and off.

Central heating systems with room thermostats and radiator valves

With modern heating systems set around a 20 °C heat loss, the optimum setting for a condensing boiler will be approximately between one and two on the central heating temperature control. The system must be balanced correctly and the radiators may need upgrading. This allows the boiler to condense as much as possible for the central heating system.

The temperature of each room can be set individually (except primary room with the room thermostat) using the thermostatic radiator valves.

Room thermostats

Reducing the setting of the room thermostat by 1 °C can reduce fuel consumption by up to 10%.

New control systems

Upgrade your heating control system if necessary with the latest equipment available. The minimum level of control is a programmer, interlocking room thermostat and thermostatic radiator valves.



WARNING: Air vents

- Do not block or seal any air vents that are installed to ensure that the central heating boiler operates safely.

Curtains

Lined curtains, or heavier full length curtains can provide excellent insulation. However, always ensure that the curtains do not drape over radiators.

10 Environment / disposal

Environmental protection is a fundamental corporate strategy of the Bosch Group.

The quality of our products, their economy and environmental safety are all of equal importance to us and all environmental protection legislation and regulations are strictly observed.

We use the best possible technology and materials for protecting the environment taking account of economic considerations.

Packaging

We participate in the recycling programmes of the countries in which our products are sold to ensure optimum recycling.

All of our packaging materials are environmentally compatible and can be recycled.



USED APPLIANCES

- All Condens 5000 gas boilers are 100% recycleable.

The various assemblies can be easily dismantled and synthetic materials are marked accordingly. Assemblies can therefore be sorted by composition and passed on for recycling.

11 Your guarantee

This boiler is guaranteed against faulty materials or workmanship for a period of 2 years from the date of installation provided the warranty card is returned within 30 days, subject to the following terms and conditions:

- During the period of this guarantee any components of the boiler which are proven to be faulty or defective in manufacture will be exchanged or repaired free of charge by Robert Bosch (Australia) Pty Ltd - Thermotechnology Division.
- The householder may be asked to prove the date of installation, that the boiler was correctly commissioned and, where appropriate, the first year's service has been carried out to the satisfaction of Robert Bosch (Australia) Pty Ltd - Thermotechnology Division, when requested. These should be part of the service checklist.
- The boiler has been used only for the normal domestic purposes for which it was designed.

This guarantee does not affect your statutory rights.

Registering your boiler

Returning the card will register you as the owner of your new Condens 5000 hydronic boiler and will assist us in maintaining an effective and efficient customer service by establishing a reference and permanent record for your boiler.

For your own record:

Please ensure that the service checklist has been completed by your installer or service engineer.

Model	
Serial No. ¹⁾	
Type/size	
Date of installation	
Name of Installer	
Telephone number of Installer	

Table 4

1) See identity label on control panel/flap or service checklist.

12 Glossary

Central heating systems

All radiators must be heated at an even rate. If the top of a radiator is at a lower temperature than the bottom then it should be vented by releasing air through the venting screw at the top of the radiator. Ask your installer to show you how this is done.

This boiler is fitted to a sealed system. Should water leaks be found or if excessive venting is required, then a service engineer must be contacted to inspect the installation and rectify any fault.

Only additives that are compatible with aluminium may be used in the system. Any incompatible additive used will invalidate the guarantee.

Plumbing and condensate drain

This is a condensing boiler and the flue terminal will, at times give out a plume of water vapour. This is quite normal.

The boiler produces condensate which is discharged regularly by a syphon within the boiler via a plastic pipe to a drain. This pipe must not be blocked or altered in any way.

Room thermostat / programmer

A room thermostat / programmer must be fitted to control the central heating. This controls the times and temperatures of the central heating, preventing the boiler from firing unnecessarily. Refer to the instructions supplied with the thermostat and programmer for further information.

Thermostatic radiator valves

Bosch recommend, as a minimum, that thermostatic radiator valves are fitted in sleeping accommodation. It is recommended that this type of valve is fitted to all but one of the radiators. The remaining radiator, where the room thermostat is located, must be uncontrolled and left open.

Pump over run function

After the boiler has finished a demand for central heating or hot water, the pump continues to run for three minutes to dissipate the heat from within the boiler.

Pump anti-seizure

If there has been no heating demand for 24 hours the boiler will run the system pump for a few seconds to reduce the possibility of pump seizure during long periods of inactivity.

Notes

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