

Condensing Hydronic Heating Systems



BOSCH

Invented for life



Bosch **Hydronic Heating**



Making a difference to your life, your gas bills, and the environment.

Bosch is a global market leader in high efficiency, condensing hydronic heating and water heating technology. All of our products are designed to deliver heating and hot water comfort.

Our environmentally friendly Hydronic Heating range of gas condensing boilers can help lower your gas bills, save you money, and reduce your carbon footprint.

This brochure will provide information about the Bosch Hydronic Heating options available and how we can help make it easy for you and a trained Bosch installer to find the right heating system for your home and lifestyle.

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Why choose **Bosch Hydronic Heating?**



Bosch, the name you know & trust

Bosch, the inventors of condensing technology, have been producing a variety of hot water systems and hydronic heating boilers since 1895 and have since then been driven by Robert Bosch's promise of quality.

In line with this promise, every boiler is designed for quality and reliability and is rigorously tested before it leaves the factory to ensure it is fit for everyday use and meets our customers' requirements.

Choose the most popular way of heating around the world

Hydronic heating is the predominant heating technology used around the world. Bosch are a global market leader in hydronic heating and have sold 1.2 million boilers in 2011.

Besides the unparalleled comfort they provide and other benefits such as quiet operation, hydronic heating can also help to reduce the effects of allergies and asthma as airborne particles such as pollen and dust are not circulated as is the case with gas ducted heating systems.

Environmental responsibility

The new Bosch Condens 5000W condensing hydronic heating boiler range is engineered to offer the ideal solution for those who want to meet their domestic heating and hot water needs whilst looking after the environment. They use a combustion process, which reduces NOx emissions, providing energy savings while contributing to cleaner air and quality of life.

Peace-of-mind after sales service

You can feel safe in the knowledge that Bosch have a local team in Australia and New Zealand. The Bosch customer contact centre can help with queries and get you in touch with one of our trained installers in your area. Refer to page 11 for more information.

How does **hydronic heating work?**



Hydronic heating brings warmth into your home in a comfortable, healthy and energy efficient way.

Experience Bosch Hydronic Heating comfort

Hydronic heating is based on the simple principle of heating water with a boiler and circulating the hot water through a loop of pipes and heating outlets, which deliver the heat into the rooms.

The most commonly used heating outlets are radiators or underfloor heating pipes:

Underfloor pipes are best installed when the house is being built or during major renovations. Radiators can also be used for new homes, and provide a great solution for retro-fit installations. There are many modern radiator designs available that offer an additional architectural or decorative impact.

Hydronic heating systems provide a natural way of heat distribution as they produce radiated as well as convected heat, which heats the space naturally, is very quiet and avoids the airborne distribution of particles experienced with gas ducted heating systems.

With a **Bosch Condens 5000W** you are making sure that your hydronic heating system maintains a long-lasting, highly energy efficient heat.



Radiator heating

Underfloor heating pipes

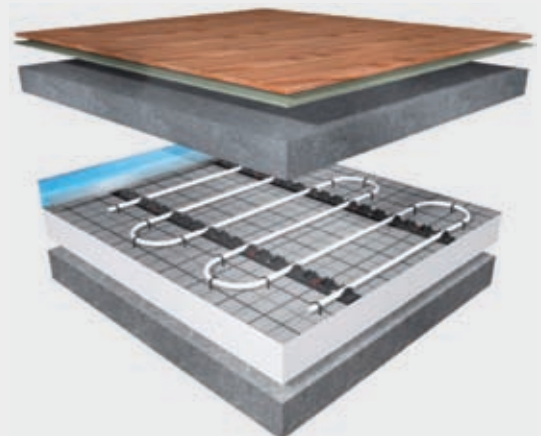


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Hydronic Heating **Condensing Technology**



Condensing technology unlocks energy that would otherwise be wasted. With the Bosch Condens 5000W you can utilise 91% of the energy invested.

Condensing technology makes best use of energy, so that heat is produced economically and with lower CO₂ emissions. With Bosch Condens 5000W hydronic heating boilers you gain from our experience and innovation.

Condensing Technology explained

Condensing technology uses “hidden” energy that is usually expelled as hot air through the flue terminal of a non-condensing appliance. This energy gets released in the condensation process when flue gases undergo a phase change from gas to liquid.

The result is a greatly reduced temperature of the flue gases leaving the appliance and an over 90% use of the energy used in the heating process* when flue gases undergo a phase change from gas to liquid.

Save 9% or more on your gas bills. Combined with our intelligent controller range, these savings can be even bigger as they help to optimise the required heat input to achieve even greater energy efficiency. Please refer to page 8 for more information on Bosch hydronic heating controllers.

+ Energy efficiency tested at 80°C

* Approx. energy efficiency rating of a non-condensing boiler @ 80°C.

Non-condensing boiler*

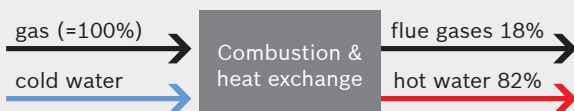


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Condensing boiler

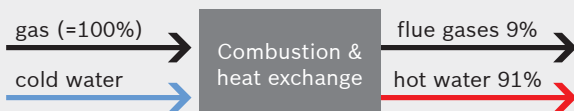


Diagram is for illustration purposes only

Bosch Condens 5000W

Features & Benefits:

- ▶ Condensing technology – saving you money
- ▶ Over 90% energy efficiency+
- ▶ 18 kW and 30 kW system boilers for central heating
- ▶ 37 kW ‘combi’ boiler for central heating and domestic hot water
- ▶ Easy installation and servicing
- ▶ Self-cleaning aluminium/silicon heat cell – prolonged system life
- ▶ Fully electronic safety management and fault diagnostics
- ▶ Optional room thermostats and controls available
- ▶ Quiet operation (42 – 45 dB)

Condens 5000W **Hydronic Heating Boiler Range**



At the heart of a hydronic heating system is a high-efficiency gas fired heating boiler.

There are two different kinds of Condens 5000W boilers available: **System** and **'Combi'**.

Bosch System Boiler

Condens 5000W – 18kW and 30kW

The Bosch Condens 5000W System Boilers, 18 kW and 30 kW, take care of heating your home. They are an easy to install hydronic heating solution. Many of the components of the system, such as an expansion vessel, are built into the Bosch hydronic heating boiler itself, making it quick and easy to install.

Bosch Combination Boiler

Condens 5000W – 37 kW

The Bosch Condens 5000W 37 kW Combination Boiler is a gas condensing boiler that is capable of providing both central heating and domestic hot water.

Combining two appliances, a Bosch 'Combi' boiler uses high-efficiency condensing technology for both heating and domestic hot water, which saves you money in two ways. Another Bosch 'Combi' benefit is that it can generally save you money on installation time and costs, as well as installation materials as no additional hot water system or hot water storage cylinder will be required.

All Bosch Condens 5000W boilers can be combined with easy-to-use, sophisticated controllers and thermostats, which make them even more energy efficient. Please refer to page 8.

Bosch System Boiler

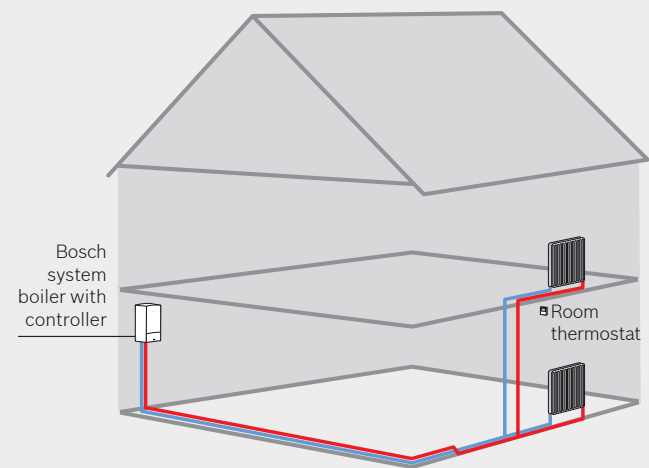


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Bosch Combination Boiler

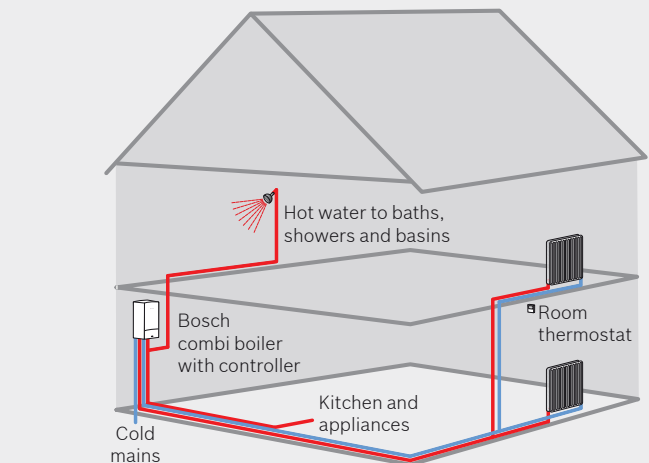


Diagram is for illustration purposes only

Bosch Condens **5000W Product Range**



Bosch Condens 5000W 18kW System Boiler

- ▶ Central heating output:
up to 18 kW or 75 MJ
- ▶ 91% energy efficient
– saving you money
- ▶ Wall-mounted
- ▶ Compact, space-saving
dimensions
- ▶ Internal* and external+
installation possible
- ▶ Quiet operation (42 dB)
- ▶ Frost protection standard

Bosch Condens 5000W 30 kW System Boiler

- ▶ Central heating output:
up to 30kW or 130 MJ
- ▶ 91% energy efficient
– saving you money
- ▶ Wall-mounted
- ▶ Internal* and external+
installation possible
- ▶ Quiet operation (45 dB)
- ▶ Modern design
- ▶ Modulating pump – reduces
electricity used by the pump
by up to 30%
- ▶ Frost protection standard

Bosch Condens 5000W 37 kW 'Combi' Boiler

- ▶ Central heating output:
up to 30 kW or 130 MJ
- ▶ Domestic hot water output:
up to 37 kW or 160 MJ
- ▶ 91% energy efficient
– saving you money
- ▶ Internal* and external+
installation possible
- ▶ Combines heating and domestic
hot water modes for fuel savings
in two ways
- ▶ 21 l/min domestic hot water flow
rate @ 25°C temperature rise
suitable for up to 2 bathrooms
- ▶ Modulating pump – reduces
electricity used by the pump
by up to 30%
- ▶ Quiet operation (45 dB)
- ▶ Frost protection standard

* Internal installations require Bosch hydronic heating flue components. Refer page 9.

+ External installations require an outdoor casing and horizontal telescopic flue terminal. Page 9.

Controllers

If no controller is used, the boiler will supply a consistent central heating and hot water* temperature set on the front of the boiler. But the use of a controller gives you a lot more options, flexibility and increases the efficiency of the system.

Bosch can offer you three different types of controllers for use with 'combi' and system boilers. These range from simple-to-operate programmers and more sophisticated digital, wireless programmers and room thermostats, right up to a new generation of intelligent controls.




*37 kW model only

DT Programmers and wireless room thermostats

 <p>Bosch DT10RF digistat</p> <ul style="list-style-type: none"> – Wireless controller ▶ Radio Frequency control <ul style="list-style-type: none"> – no wiring required ▶ 24-hour programmable room thermostat ▶ Set different temperatures for up to 6 different time periods ▶ No separate room thermostat is required 	 <p>Bosch DT20RF</p> <ul style="list-style-type: none"> – Wireless controller ▶ Radio-frequency control <ul style="list-style-type: none"> – no wiring required ▶ Twin channel for central heating and hot water ▶ Set up to 3 different time periods a day ▶ Room thermostat provides the temperature control 	 <p>DT20</p> <ul style="list-style-type: none"> – Digital Twin Channel Programmer ▶ Plugs into the boiler fascia ▶ 3 separate time periods for both heating and hot water ▶ Use either the built in pre-set programs, or choose your own settings
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FX intelligent programmers and room thermostats

FX programmers are intelligent and learn about heating patterns and thereby adjust heating system performance to optimise comfort

 <p>Bosch FR10</p> <ul style="list-style-type: none"> – Intelligent Room Thermostat ▶ Enables load compensation (adjustment of flow temperature in line with set temperature) ▶ Offers approx. 11% energy savings compared to standard on/off controls 	 <p>Bosch FR110</p> <ul style="list-style-type: none"> – Programmable Room Thermostat ▶ Load compensation for heating and time control of hot water systems ▶ Built-in programming – no need for additional controller ▶ Six weekly heating programs with 6 switching points ▶ Optimum Start - calculates the time needed to activate the boiler to precisely achieve the required temperature at the required time each day 	 <p>Bosch FW100</p> <ul style="list-style-type: none"> – Weather Compensation Controller ▶ Enables the boiler to anticipate changes in heating demand in relation to external temperatures ▶ Comprises programmable indoor unit and external sensor
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Accessories

Flueing components

Bosch offer a selection of flueing components, which are easy to assemble and made from light weight, durable PP (plastic) material.

The flueing components are available as a 60/100 mm or 80/125 mm size depending on the total flue length:

- ▶ Vertical flue terminal (BF kit)
- ▶ Horizontal flue terminal
- ▶ Flue extension components
- ▶ 45° and 90° Elbows

Please call **1300 30 70 37** (Australia) or **0800 54 33 52** (New Zealand) for more information.



Plume management

A clever solution in order to ensure that the plume of moist vapor that is created by condensing heating boilers at times, will not disturb your neighbours or anyone in the proximity of the boiler.

Please call **1300 30 70 37** (Australia) or **0800 54 33 52** (New Zealand) for more information.



Controller Specifications

Part Number	Model					
	DT20	DT20RF	DT10RF digistat	FR10	FR110	FW100
Type						
Digital	•	•	•			
Intelligent				•	•	•
Mount						
Fascia mounted	•	•	•			•
Wall mounted		•	•	•	•	•
Features						
Time Control						
Central Heating	•	•	•		•	•
Hot water	•	•	•		•	•
24 hour			•			
7 day	•	•			•	•
Temperature Control						
Room thermostat		•		•		
Programmable room thermostat			•		•	•
Optimum start					•	
Boiler flow temp compensation				•	•	•
Electrical						
Connection Type						
Plug in	•	•	•			•
Wireless		•	•			
Hard wired				•	•	•

Outdoor installation

Flexible installation options

If there is no space for an internal installation e.g. in the laundry, kitchen or garage, the BOC5000W outdoor casing, together with the 60/100mm horizontal telescopic flue kit (part number: 7716191082), makes it possible to install the hydronic heating boiler on an external wall.



Product Specifications



Bosch hydronic heating boilers are more than 90% energy efficient, extremely quiet and designed for quality and reliability.



Bosch Condens 5000W range

Features & benefits

- ▶ Condensing technology – saving you money
- ▶ Over 90% energy efficiency*
- ▶ 18 kW and 30 kW system boiler for central heating
- ▶ 37 kW ‘combi’ boiler for heating and domestic hot water
- ▶ Wall mounted – space saving
- ▶ Easy installation and servicing
- ▶ Self-cleaning aluminium/silicon heat cell – prolonged system life
- ▶ Fully electronic safety management and fault diagnostics
- ▶ Optional controllers available
- ▶ Quiet operation (42 – 45 dB)

Specifications

	Model		
	18 kW	30 kW	37 kW
Part Number	ZSB182A	ZSB302A	ZWB372A
Ignition	Electronic	Electronic	Electronic
Installation	Internal (requires optional flueing components) or External (requires optional outdoor casing)		
Gas type	NG/LPG	NG/LPG	NG/LPG
Efficiency at 80°C	91%	91%	91%
Nominal Gas Consumption (Mj/H) – Central Heating (CH)	75	130	130
Nominal Gas Consumption (Mj/H) – Domestic Hot Water (DHW)	n/a	n/a	160
Gas supply pressure (kPa)	1.13 (NG) 2.75 (LPG)	1.13 (NG) 2.75 (LPG)	1.13 (NG) 2.75 (LPG)
Expansion tank (ltr)	8	10	10
Minimum Working Water Pressure (kPa)	CH: 100 DHW: n/a	CH: 100 DHW: n/a	CH: 100 DHW: 20
Maximum Working Water Pressure (kPa)	CH: 265 DHW: n/a	CH: 265 DHW: n/a	CH: 265 DHW: 1000
Net weight (kg)	27.1	46.5	48.5
Dimensions			
Height (mm)	700	750	750
Width (mm)	400	440	440
Depth (mm)	330	360	360

Hydronic Heating Product Selection & After Sales Service



Product selection

In order to determine the most energy efficient boiler for your hydronic heating system, we recommend that you contact a Bosch trained hydronic heating installer. They will design the complete heating system and select the boiler based on several factors such as the insulation level of your home, building materials used, the size of the space you would like to heat, the number of people living in your home, whether you want to integrate the domestic hot water supply into your boiler, the typical air temperatures in your area, etc.

Servicing

To ensure your appliance's quality and performance is optimised, Bosch recommends having your boiler serviced no less than once every second year by a Bosch trained hydronic heating technician. Having your product inspected and cleaned periodically by a Bosch trained technician not only ensures peak operation but also extends the life of the appliance.

Warranty

Your Bosch hydronic heating boiler comes with a 1 year manufacturer's parts and labour warranty. You are invited to register for a free warranty extension from 1 year to 2 years*. The registration must occur within 30 days of the date of installation.

Your Bosch hydronic heating boiler's heat exchanger comes with a 5 year part only warranty.

Important note for Australian Consumers

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

*Terms and conditions apply. Please refer to our websites: www.bosch-climate.com.au (Australia), www.bosch.co.nz/hotwater (New Zealand), or the warranty card included in your boiler's packaging.



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