

BOSCH

Installation & Owner's Guide

HydroPower

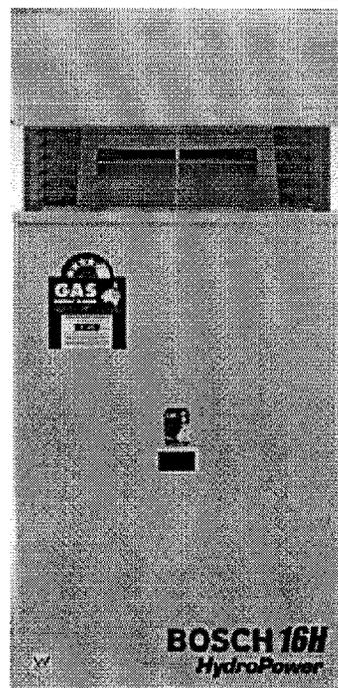
External Models
10H, 13H & 16H

**To be installed and serviced only
by an authorised person**

**This appliance is not suitable for
use as a pool heater**

The "authorised installing person"
is responsible for:

1. Correct commissioning of this
appliance.
2. Ensure unit performs to the
specifications stated on the rating
label.
3. Demonstrate operation of unit to
customer before leaving.
4. Hand these instructions to
customer.



This appliance must be installed in accordance with the manufacturer's installation instructions, AS 5601 (AG 601), NZ 5261, AS3500.4.2 and all Local Water, Building and Gas fitting regulations

Failure to install this appliance in accordance with these installation instructions may void warranty

In the interest of continued product improvement, Bosch reserves the right to alter these specifications without notice

Service Department: 1300 30 70 42

www.bosch.com.au

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<p style="text-align: center;">HOUSEHOLDER: WE RECOMMEND THAT YOU READ PAGES 2-7 The other pages are intended for the installer but may be of interest</p>
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Congratulations

Congratulations for choosing a Bosch HydroPower water heater. This appliance should give many years of trouble free use, when installed to the specifications contained in this document.

The Bosch Story

Bosch Thermotechnology has been delivering hot water to Australia and New Zealand families for nearly 50 years, and forms part of the worldwide Thermotechnology division of Robert Bosch. With global sales of 1.4 million water heaters every

year, Bosch provide hot water solutions for every water heating need.

Bosch pioneered continuous flow water heating in the late 1800's and this tradition of innovation and invention still drives our company today.

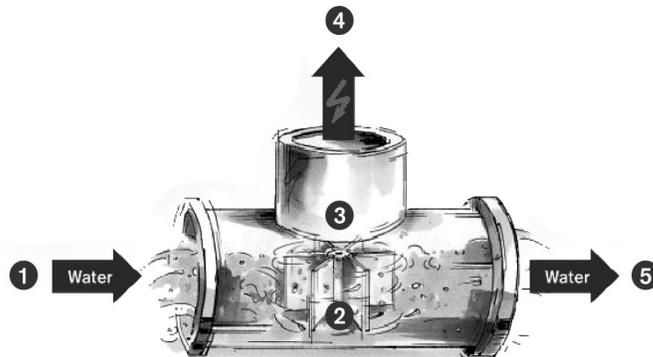
Extensive research and development ensures that Bosch remains at the forefront of water heating technology. With an extensive product range, Bosch strives to deliver products designed to fit the lifestyle of today's modern families.

Product Overview

HydroPower Ignition is exclusive to Bosch.

HydroPower used the energy created by water flow to ignite the burner and begin the heating process. The unit only starts when a hot water tap is opened. Once hot water is no longer needed, the unit turns itself off.

1. Water enters the Hydro Dynamic Generator
2. The turbine spins with water pressure
3. A spark is generated by the turbine
4. The spark ignites the main burner
5. The water continues to the heat exchanger and is heated



External HydroPower

External HydroPower models are perfect for a constant, reliable service of hot water. The HydroPower ignition provides endless hot water at the flick of a tap, without the need of power point.

Versatile

- LPG models are particularly popular in country areas, where reticulated gas is not installed and there is no external power point.
- Are able to operate in relatively low water pressure areas and in low temperature regions of Australia and New Zealand using Bosch accessories.

Economical

- Only heating water when required by the user, the Bosch range is extremely economical to run.

Internal HydroPower

Limited space need not mean limited hot water. The Bosch range of internal hot water heaters are created specifically to go places where storage units will not, and will provide endless hot water.

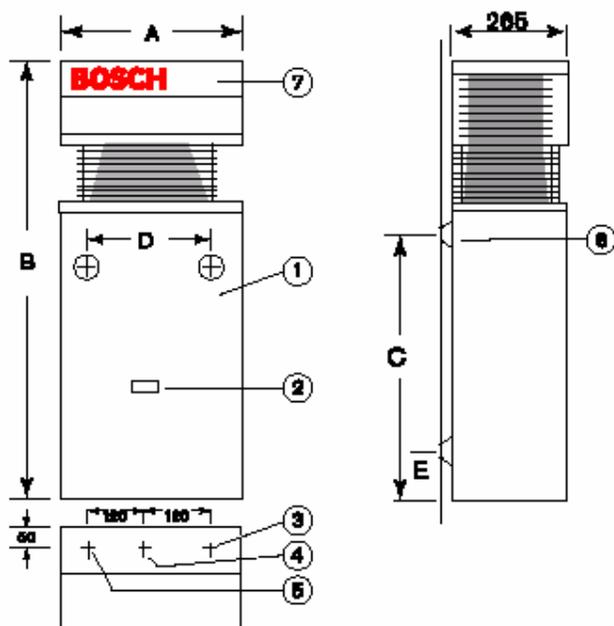
Versatile

- Operable without a power point
- Compact design
- Flexible connections
- Caters for a wide range of applications and needs

Economical

- Only heating water when required by the user.
- HydroPower ignition means no standing pilot light, no batteries and no mains electricity is required.

Product Diagram



1. Main Cover
2. Inspection Window
3. Cold Water Inlet
4. Gas Inlet
5. Hot Water Outlet
6. Mounting Point
7. Horizontal Flue

Dimensions

A	B	C	D	E
10H				
405mm	845mm	533mm	240mm	68mm
13H				
405mm	845mm	533mm	240mm	68mm
16H				
450mm	936mm	533mm	240mm	82mm

Product Characteristics

Model	BOSCH 10H	BOSCH 13H	BOSCH 16H
Inlet Gas Pressure NG	1.13 kPa	1.13 kPa	1.13 kPa
Inlet Gas Pressure LPG	2.75 kPa	2.75 kPa	2.75 kPa
Burner Gas Pressure NG	0.89 kPa	0.84 kPa	0.78 kPa
Burner Gas Pressure LPG	2.60 kPa	2.60 kPa	2.60 kPa
NHGC	79 MJ/hr	104 MJ/hr	130 MJ/hr
Maximum Water flow at 50°C rise	5 l/min	6.5 l/min	8 l/min
Maximum Water flow at 25°C rise	10 l/min	13 l/min	16 l/min
Minimum water flow rate	3.2 l/min	3.2 l/min	3.2 l/min

Note:

Your water heating appliance requires a hot water flow rate of 3.2 litres per minute and above to operate.

Water fixtures with a flow rate of 7.5 litres per minute or higher are recommended.

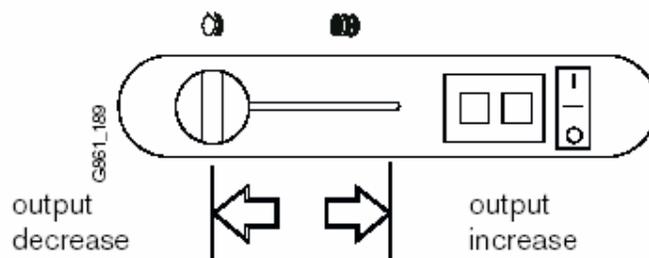
Your water heating appliance is not recommended for use on Solar, Spa or recirculation systems.

Operating Instructions

Purge all water and gas pipes before operating.
Adjust appliance with only one tap operating.

Green light on = Main burner on
Green light off = Main burner off
Red light flashing: Fault Indication

Output control



Water Flow Adjustment



Turn anti-clockwise Water flow increases, temperature diminishes
Turn clockwise Water flow decreases, temperature increases.

Warning

If the appliance does not operate, burns with yellow flame, leaks water or a gas smell is evident, turn off and contact the local gas authority, the manufacturer or an authorised service person.

Freezing Weather

In areas where the atmospheric temperature may drop below 0°C the heater must be drained to prevent damage by expansion of freezing water. For appliances installed in locations where the temperature falls below 0°C and not less than -2°C for brief periods, the installation of an EXOGEL expansion valve, part number H707 060 151, will minimise the possibility of damage to the appliance.

This water heater **MUST NOT** be installed in areas where the temperature remains below 0°C for extended periods.

CAUTION: It is recommended that for sanitary fixtures used primarily for the purpose of personal hygiene that a temperature control device be fitted (such as a tempering valve) as per AS.3498

Trouble Shooting

Symptom	Possible Cause	Solution
Appliance does not light	Switch turned off Hydrogenerator Jammed Low Water Flow	Turn switch on Clean hydrogenerator Increase water flow >3.2 litres per minute
Smell of gas	Gas Leak	Locate leak with soap solution
Low burner flame, water does not heat up.	Low inlet gas pressure Low burner pressure Low water flow Low flame	Check supply regulator & pipe size. Check appliance regulator Check water flow rate Move slide control to high
Low water temperature	Water flow selector in warm position Low Gas pressure Cross connection	Set flow rate to individual need. Check gas pressure Disconnect hot outlet with cold off. Correct connection
Low water flow	Low water pressure Blocked water valve Blocked shower rose or tap aerator	Check and adjust Clean filter Clean

Care & Servicing of the Unit

We recommend that the appliance be inspected and cleaned by an authorised person periodically, depending on the frequency and duration of its operation, but never less than once in a two year period.

10 Basic Steps for Installation

1. Check cold water supply pressures, min & max as per table below.

Model	BOSCH 10H	BOSCH 13H	BOSCH 16H
Minimum Inlet Pressure for maximum water flow	60 kPa	100 kPa	130 kPa
Minimum Inlet Pressure for minimum water flow	30 kPa	40 kPa	50 kPa
Maximum Inlet water pressure*	800 kPa	800 kPa	800 kPa

* If Inlet water pressure exceeds 800 kPa then a pressure reduction valve **MUST** be fitted. In the cases where the pressure reduction valve is less than 3 metres from the hot water unit then it must be fitted in conjunction with a cold water expansion valve. Failure to comply with this requirement may void the warranty. The preferable location for the pressure reduction valve is at the water meter.

2. Connection sizing as per table below.

Hot & Cold Water	1/2" BSP Male
Natural Gas	3/4" BSP Female
L.P. Gas	1/2" BSP Male

3. Determine most suitable location for appliance. Install only on an external wall, as close as possible to the most frequently used hot tap. If the unit is to be installed on a combustible surface use a heat shield (Contact Bosch for part number). Allow a minimum air gap of 10mm between the flue and the heat shield.
4. Secure Heater to wall using two 10G X 5/16 hex head wood screws (Ramset 610041 or similar).
5. Locate & connect cold and hot water piping to hot water appliance. Install gate valve or full flow ball valve (fixed mechanism type) in cold water. If the water supply pressure exceeds 800 kPa, install a pressure limiting valve. If installing a pressure limiting valve fit a cold expansion valve between the limiting valve and the appliance. PLV=500 kPa Cold Expansion=700 kPa. Refer to AS 5601(AG 601) and AS3500.1 for the relevant pipe size.

NOTE: Service calls for incorrect pipe sizing will **NOT** be covered under warranty.

6. Test Inlet Gas Pressure while unit is running, adjust regulator to give values in table below.

Model	BOSCH 10H	BOSCH 13H	BOSCH 16H
Inlet Gas Pressure NG	1.13 kPa	1.13 kPa	1.13 kPa
Inlet Gas Pressure LPG	2.75 kPa	2.75 kPa	2.75 kPa

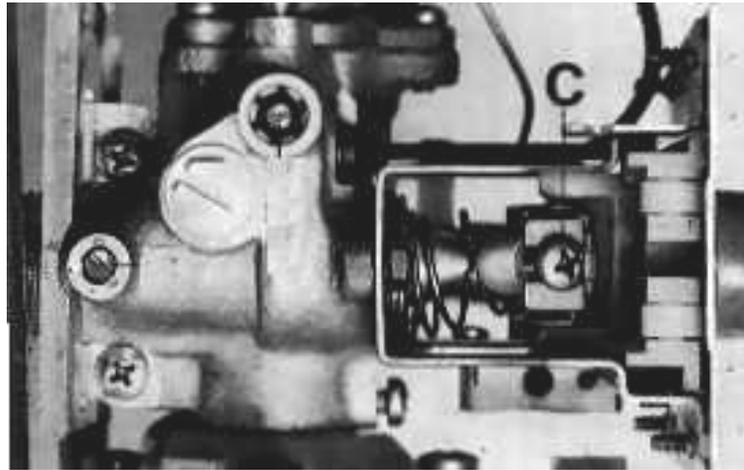
Natural Gas: With the gas supply turned off, remove sealing screw from inlet pressure test point located on the left hand side of the gas section, attach manometer. Turn on gas, open hot water tap fully and adjust gas pressure regulator to 1.13 kPa. Turn off gas and water, remove manometer, replace sealing screw and test for soundness.

LP Gas: No adjustment is provided at the appliance for inlet pressure, check cylinder regulator and pipe sizing.
For LPG we recommend the installation of two or more supply cylinders and an auto change over pressure regulator

7. Adjust Burner pressure. Turn of gas supply, loosen captive screw in burner pressure test point, left hand side of burner manifold. Attach manometer, turn on gas and open hot water tap fully, check pressure.



8. Minimum Gas Pressure Adjustment. Attach manometer to burner test point (see picture above) Set water flow selector fully clockwise (hot position). Move gas slide to left side, single flame symbol, open hot tap fully. Turn adjustment screw (Position C in picture below) located on left hand side of gas valve at a 45° angle to correct pressure. Anti clockwise to decrease minimum burner pressure.



Model	BOSCH 10H	BOSCH 13H	BOSCH 16H
Burner Pressure LPG	0.64 kPa	0.64 kPa	0.64 kPa
Burner Pressure NG	0.30 kPa	0.30 kPa	0.30 kPa

9. Familiarise yourself with appliance operation and advise customer of operation.
10. Supply customer with these operating instructions and any other relevant paperwork

Regs Chart

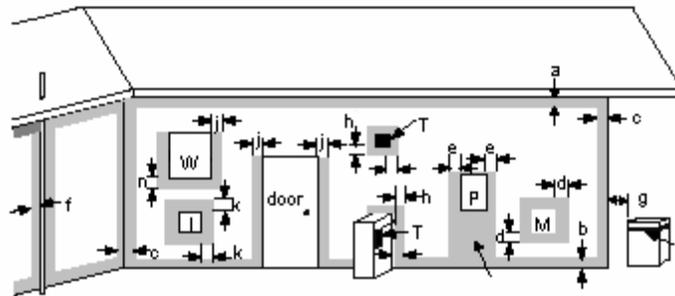
APPLIANCE LOCATION

- (1) This water heater is approved for outdoor installation only.
- (2) Do not install this water heater with any modification or alteration.
- (3) Do not install this water heater indoors or in an enclosed space .

WARNING: FLUE OUTLET MUST BE FREE FROM ANY COMBUSTIBLE MATERIAL.

CLEARANCES FOR FLUE TERMINAL (front of heater)

The location of the flue terminal must comply with the clearances shown on this page. If you are unsure about clearances not indicated here, in general refer to AG601, or your local authority. In Western Australia refer to the SECWA rules and regulations.



Use as a guide only. Refer to AS5601 or local gas fitting rules for specific locations

T = Flue Terminal
 M = Gas Meter
 Shaded area indicates prohibited area
 W = Window
 I = Mechanical air inlet
 P = Electrical meter or fuse box

Ref	Item	Clearance mm	
		Natural draft	Fan assisted
a	Below eaves, balconies and other projections		
	Appliances up to 50MJ/h input	300	200
	Appliances over 50 MJ/h input	500	300
b	From the ground, above a balcony or other surface	300	300
c	From a return wall or external corner	500	300
d	From a gas meter	1000	1000
e	From an electricity meter or fuse box (P)	500	500
f	From a drain pipe or soil pipe	150	75
g	Horizontally from any building structure or obstruction facing a flue terminal	500	500
h	From any other flue terminal, cowl, or combustion air intake	500	300
j	Horizontally from an opening window, door, non-mechanical air inlet. Or other opening into a building with the exception of sub floor ventilation		
	Appliances up to 150 MJ/h	500	300
	Appliances over 150MJ/h input up to 200 MJ/h input	1500	500
	Appliances over 200 MJ/h input	1500	1500
	All fan assisted flue appliances in the direction of discharge		1500
k	From a mechanical air inlet, including spa blower	1500	1000
n	Vertically below an openable window, non-mechanical air inlet, or any other opening into a building with the exception of sub-floor ventilation:		
	Space heaters up to 50 MJ/h	150	150
	Other appliances up to 50 MJ/h	500	500
	Appliances over 50 MJ/h and up to 150 MJ/h input	1000	1000
	Appliances over 150 MJ/h input	1500	1500

Water quality

All Bosch water heating appliances are constructed from high quality materials and components and all are certified for compliance with relevant parts of Australian and New Zealand gas, electrical and water standards.

Whilst Bosch water heaters are warranted against defects, the warranty is conditional upon correct installation and use, in accordance with detailed instructions provided with the heater, in the case of the water supplied to the heater, it is important that the water quality be of acceptable standard.

The water quality limits/parameters listed in water quality table are considered acceptable and generally, Australian and New Zealand suburban water supplies fall within these limits/parameters.

In areas of Australia and New Zealand where water may be supplied, either fully or partly, from bores, artesian wells or similar, one or more of the important limits may well be exceeded and the heater could, therefore, be at risk of failure.

Where uncertainty exists concerning water quality, intending appliance users should seek a water analysis from the water supplying authority and in cases where it is established that the water supply does not meet the quality requirements of the water quality table, the Bosch warranty would not apply.

Water quality table

Maximum levels

pH	Saturation Index(LSI) (langelier)	Total Hardness	Chlorides	Sodium	Iron
6.5-9.0	+0.4 to -1.0 at 65 °C	200 mg/l	250 mg/l	180 mg/l	1 mg/l

Table 8

Overview of Warranty Conditions

What to do before contacting Bosch for Servicing assistance.

Check that the water is available to the unit (ie. No work being done on the mains)

Check that Gas is available to the unit (ie. No work being done on the mains, LPG bottle not empty)

Authorised Service Dealers

Please call 1300 307 037 to find your nearest service dealer.

Warranty details

**Robert Bosch (Australia) Pty Ltd
(Bosch) Manufacturer's Warranty
(Applicable for purchases from 1 January 2012)**

All Bosch hot water units are carefully checked, tested and subject to stringent quality controls.

1. Warranty

Bosch offers, at its option, to repair or exchange this Bosch hot water unit or the relevant part listed in clause 2 below at no charge, if it becomes faulty or defective in manufacture or materials during the warranty period also stated in clause 2. This warranty is offered in addition to any other rights or remedies held by a consumer at law.

2. Warranty periods & coverage

- (a) Domestic applications: 2 years (parts and labour)
- (b) Heat exchangers used in domestic applications: 10 years (parts only)
- (c) Commercial applications: 12 months (parts and labour)
- (d) Heat exchangers used in Commercial applications 12 months (parts only)

All warranty periods commence on the date of purchase of the hot water unit by the end-user. However, where the date of purchase by the end-user is more than 24 months after the date of manufacture, all warranty periods will automatically commence 24 months after the date of manufacture.

3. Warranty exclusions

This warranty is VOID if any damage to or failure of the hot water unit is caused wholly or partly by:

- (a) Faulty installation
- (b) Neglect, misuse, accidental or non-accidental damage, failure to follow instructions
- (c) Use of the unit for purposes other than which it was designed or approved
- (d) Unauthorised repairs or alterations to the unit without Bosch's consent
- (e) Use of unauthorised parts and accessories without Bosch's consent
- (f) Use of non-potable water or bore water in the hot water unit (see product instructions for further details)
- (g) Continued use after a fault becomes known or apparent.

This warranty DOES NOT include:

- (a) Costs of consumables or accessories
- (b) Wear and tear, normal or scheduled maintenance
- (c) To the extent permitted by law, any damage to property, personal injury, direct or indirect loss, consequential losses or other expenses
- (d) Changes in the condition or operational qualities of the hot water unit due to incorrect storage or mounting or due to climatic, environmental or other influences.

NOTE: Any service call costs incurred by the owner or user of the hot water unit for any matter not covered by the terms of this warranty will not be reimbursed by Bosch, even if those costs are incurred during the warranty period. If the hot water unit is located outside the usual operating area of a Bosch service agent, the agent's travel, freight or similar costs are not covered by this warranty and must be paid by the owner or user of the hot water unit.

4. Warranty conditions

- (a) Proof of purchase may be required.
- (b) The hot water unit must be installed by an authorised and licensed installer.
- (c) Proof may be required of the date of installation and correct commissioning of the hot water unit has

been carried out to Bosch's satisfaction (such as a certificate of compliance).

(d) Repair or replacement of the hot water unit or any parts under this warranty does not lengthen or renew the warranty period.

(e) This warranty is not transferable and is only offered to the original purchaser of the hot water unit.

(f) No employee or agent of Bosch is authorised to amend the terms of this warranty.

(g) This warranty only applies to Bosch hot water units purchased from an authorised reseller and installed in Australia or New Zealand.

(h) To the extent that any condition or warranty implied by law is excludable, such condition or warranty is excluded.

5. How to lodge a warranty claim and warranty procedure

(a) Warranty claims must be made with the Bosch Customer Contact Centre (Australia: ph 1300 307 037; New Zealand: ph 0800 543 352). Please be ready to provide the model and serial numbers, date of installation, purchase details and a full description of the problem. Warranty claims must be made before the end of the warranty period.

(b) All warranty service calls must be conducted by an authorised Bosch service agent.

(c) Invoices for attendance and repair of a hot water unit by third parties not authorised by Bosch will not be accepted for payment by Bosch.

6. Privacy Act 1988 (Cth)

A customer's personal information collected during warranty claims may be used for the provision of customer support, for the provision of information about products and services and for other marketing activities undertaken by Bosch and its Bosch Service Agents who are authorised to carry out warranty repairs on behalf of Bosch (Purpose). Bosch is committed to protecting the privacy of its customers' personal information. It will act in compliance with the National Privacy Principles and Privacy Act 1988 (Cth). Bosch will not forward customers' personal information to third parties other than for the Purpose. A customer can object at any time to the use of their personal information for the purpose. Bosch will cease to use a customer's personal information accordingly if an objection is made.

7. Bosch contact details

If you have any questions about this warranty or to lodge a warranty claim, please contact:

Robert Bosch (Australia) Pty Ltd
1555 Centre Road, Clayton, Victoria 3168
Tel: Australia: 1300 307 037
Tel: New Zealand: 0800 543 352

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.

Bosch & the Environment

Environmental sustainability is of prime importance to Bosch. This focus is essential from design and production, through to recommending the correct sized appliance for the consumer's daily hot water requirements.