

Electric Storage Water Heater
CascadeTherm Plus
CT132-1315SS



Installation and maintenance instructions



Please read the installation instructions before installing the appliance!
Please read the operating instructions before commissioning the appliance!



Please observe the safety instructions in the operating instructions!
The installation location must meet the manufacturer's requirements!



Installation must only be carried out by an authorised person!

Contents

1	Key to symbols and safety instructions.....	3
1.1	Key to symbols.....	3
1.2	Safety information.....	3

2	Standard delivery	5
2.1	Standard delivery.....	5
2.2	Product description.....	6
2.2.1	System Components.....	6
2.2.2	Description of Operation	6
2.3	Correct use	6
2.4	Dimensions	7
2.5	Specifications.....	7

3	Shipping	8
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4	Installation.....	8
4.1	Location	8
4.1.1	Requirements for installation location	9
4.1.2	Positioning the CascadeTherm Plus	9
4.2	Water connections.....	9
4.2.1	PTR valves (supplied with appliance)	9
4.2.2	Temperature mixing device	10
4.2.3	Pressure limiting valve	10
4.2.4	Expansion control valve.....	10
4.3	Gas connections	11
4.4	Electrical connections.....	11
4.4.1	Electrical Wiring.....	11
4.5	Fluing Requirements.....	11

5	Commissioning	14
5.1	Before commissioning.....	14
5.2	Commissioning process	14
5.2.1	Commissioning Process - Alphastat.....	14
5.2.2	Commissioning - Gas	15

6	Water quality.....	15
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7	Environmental protection/Recycling.....	16
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8	Warranty details.....	16
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1 Key to symbols and safety instructions

1.1 Explanation of symbols

Warnings



Warnings in this document are identified by a warning triangle printed against a grey background.



If there is danger due to electricity, the exclamation mark in the warning triangle is replaced by a lightning symbol

Signal words at the start of a warning indicate the type and seriousness of the ensuing risk if measures to prevent the risk are not taken.

- **NOTICE** indicates that material losses may occur.
- **CAUTION** indicates that minor to medium injury may occur.
- **WARNING** indicates possible severe personal injury.
- **DANGER** indicates a risk to life.

Important information



Important information where there is no risk to people or property is indicated with the adjacent symbol. It is bordered by lines above and below the text.

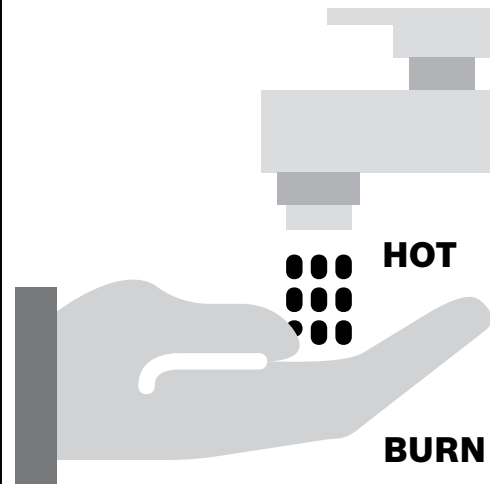
Additional symbols

Symbol	Meaning
►	Action step
→	Cross-reference to other parts of this document or to other documents
•	List/list entry

1.2 Safety Instructions



DANGER



Water temperatures over 50°C can cause severe burns instantly or death from scalds.

Children, disabled and elderly are at highest risk of being scalded.

Feel water temperature before bathing or showering.

To prevent serious injury, unit damage, or damage to other property, please use the unit properly. Read this manual and understand the following information correctly.



WARNING:

This water heater is not suitable for pool heating.

**WARNING:**

Do not operate this system before reading the operating manuals.

**WARNING:**

This appliance must be installed, commissioned, and serviced by an authorised person in accordance with all applicable local rules and regulations.

**WARNING:**

Keep appliance area clear and free from combustible materials, gasoline, and other flammable vapors and liquids.

**WARNING:**

This 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 instruction concerning use of the appliance by a person responsible for their safety.

**WARNING:**

Water temperatures over 50°C can cause severe scalds. Local regulations and/or the requirements of AS/NZ 3500.4 must be considered regarding the temperature limitations of hot water used primarily for personal hygiene.

Notice to Victorian Customers from the Victorian Plumbing Industry Commission

This water heater must be installed by a licensed person as required by the Victorian Building Act 1993. Only a licensed professional will give you a Compliance Certificate, showing that the work complies with all the relevant standards. Only a licensed person will have insurance protecting their workmanship.

Make sure you use a licensed person to install this water heater and ask for your Compliance Certificate.

Every care has been taken to ensure accuracy in preparing this document.

No liability can be accepted for any consequences, which may arise as a result of its application.

2 Product Information

2.1 Standard delivery

The CascadeTherm Plus is delivered fully assembled with the primary circuit and AlphastatPlus controller attached.

The following parts of the standard delivery are packed separately:

- Pressure-temperature relief (PTR) valve x 2
- Technical documentation

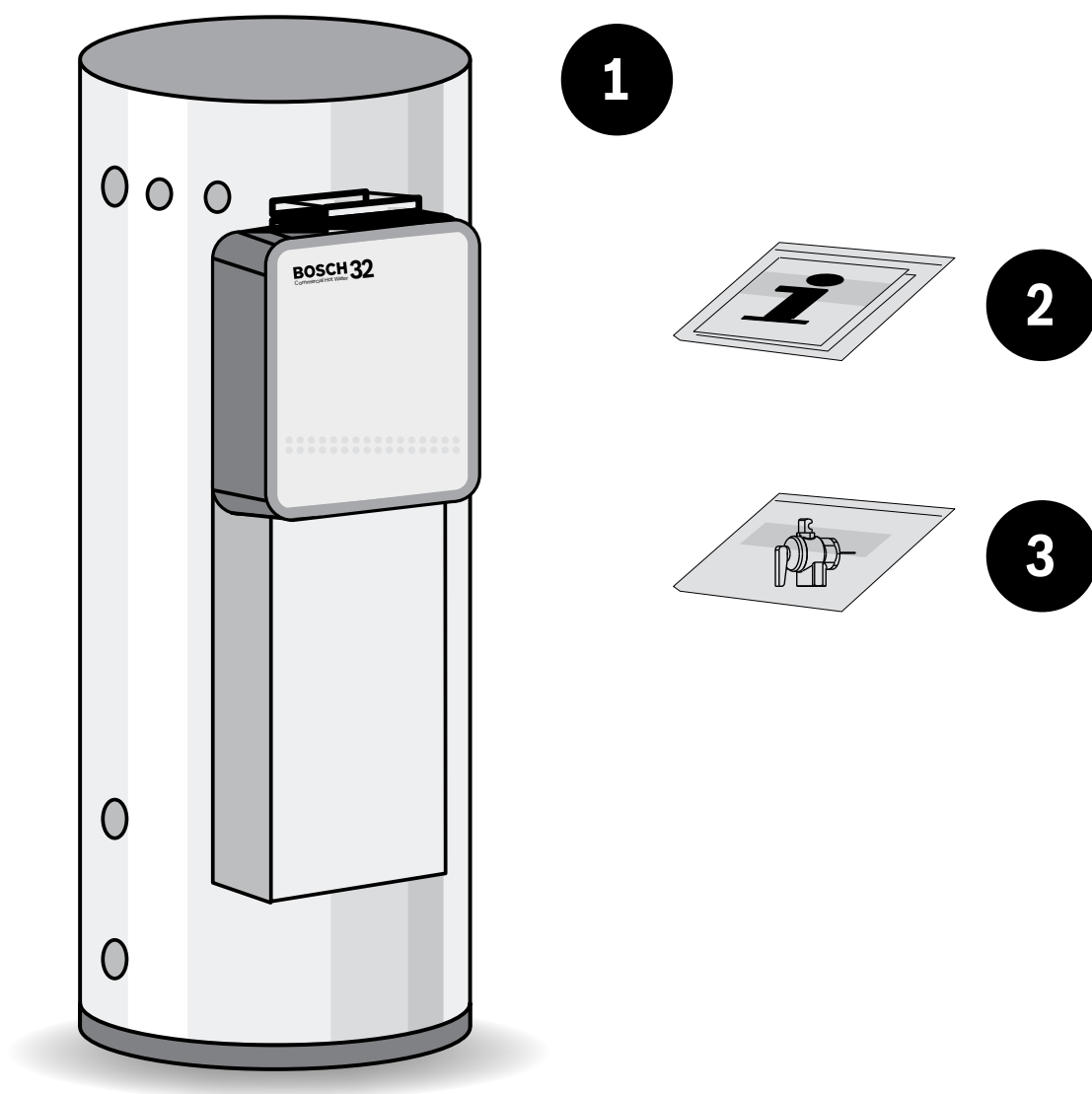


Fig. 1

[1] Bosch CascadeTherm Plus

[2] Installation instructions (including operating instructions for the pump, gas burner and thermostat)

[3] PTR valve x2

2.2 Product description

The Bosch CascadeTherm Plus is a domestic hot water, stainless steel 315L cylinder, equipped with a Bosch KM3211WHNG water heater as the heating source. Included is a primary heating circuit pump which is operated by an AlphastatPlus temperature controller, with a temperature sensor located in the sensor pocket of the tank.

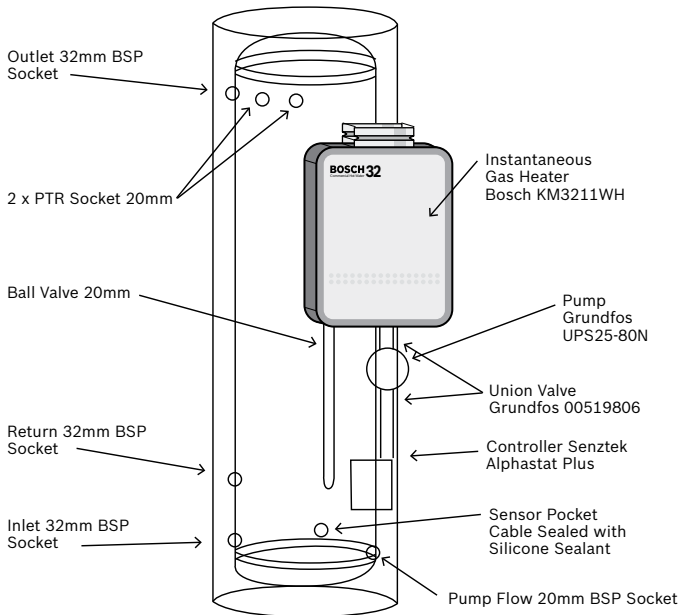


Fig. 2

2.2.1 System Components

The main components of the Bosch CascadeTherm Plus are:

- 315L stainless steel storage cylinder
- Bosch KM3211WHNG/LP water heater
- Thermal insulation, polyurethane foam insulation
- Sensor well with the domestic hot water (DHW) temperature sensor. The DHW temperature sensor supplies temperature information to the AlphastatPlus controller.
- AlphastatPlus controller. The AlphastatPlus controller has a microprocessor at its core that intelligently and automatically controls your hot water system at greater efficiency.
- Primary circuit pump. The Grundfos UPS 25-80N pump is included as the primary circuit pump.

2.2.2 Description of Operation

The Grundfos UPS 25-80N pump is used to circulate water from the tank through the water heater. When the Senztek thermostat activates the pump, the movement of water through the flow sensor of the water heater sends a signal to the electronic control unit. This signal triggers the following actions:

The fan starts to purge exhaust gases.

The ignition sequence begins and the gas valve opens to deliver gas to the burner.

The burner ignites. Initially only one section of the burner is lit, with the remaining sections igniting depending on the heat required.

The flame sensor rod detects the presence of the flame.

The temperature of the water is automatically adjusted by the fan speed, gas, and water valves.

The Alphastat will control the pump until the tank reaches the set point off temperature selected (normally 65°C). When the set point is reached the water heater stops heating the water.

When the Alphastat measures the tank temperature at below the set point on temperature, (normally 60°C), the pump will reactivate.

2.3 Correct use

The Bosch CascadeTherm Plus is designed for heating and storing domestic hot water. Please observe all DHW regulations, guidelines and standards for your country.

Any other application will be considered incorrect use. No liability for any losses resulting from such use is accepted.

2.4 Dimensions

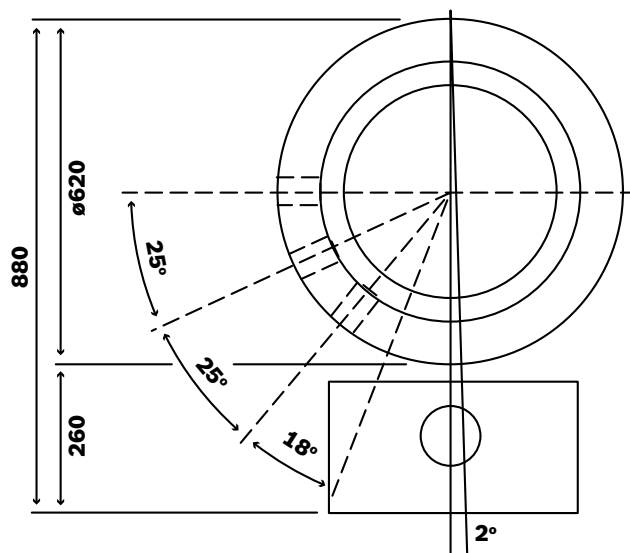
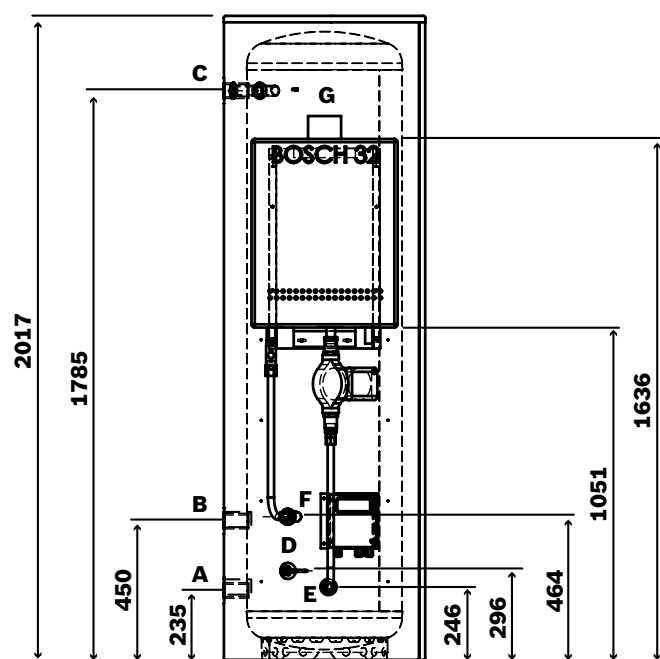


Fig. 3

2.5 Specifications

CascadeTherm	CT132-1315SS
Weight (empty)	135kg
Primary pump	Grundfos UPS 25-80 N
Digital thermostat	ALPHASTATPLUS WR
Cylinder	
Material	Stainless steel
Hot water storage	315L
Relief valve setting	850 kPa
Maximum supply pressure	950 kPa
Maximum power input	92 kW
Approximate mass full	420 kg
Approximate mass empty	100 kg
Maximum temperature	75°C
Water Heater	KM3211WHNG
Minimum water pressure for maximum flow	200kPa
Minimum flow rate	3.5L/min
Gas consumption	NG: 250MJ/h, LP: 250MJ/h
Power supply	240V, 50Hz
Pump	GRUNDFOS UPS 25-80N
Connections Water	25mm
Electrical Connection	240V / 50Hz
Thermostat	AlphastatPlus

Position	Description	Measurement
A	Cold inlet	32mm
B	Return Inlet	32mm
C	Hot Outlet	32mm
D	Sensor Pocket	6mm
E	Heater Flow	20mm
F	Heater Return	20mm
G	PTRV	20mm

Thermostat	AlphastatPlus
Relay	16A
Sensor Tank Cable	10 metres
Set On	21-75°C
Set Off	20-74°C

3 Shipping


WARNING:

Risk of injury from carrying heavy loads and inadequately securing loads for transport.

- Use suitable means of transportation e.g. a hand trolley with strap.
- Secure the DHW cylinder against slipping



Where possible, transport the DHW cylinder fully packed to the installation location. This ensures protection during handling. If you are transporting the DHW cylinder unpacked, use a transport net. Protect the connections against damage.

- Position the hand trolley at the back of the packed CascadeTherm Plus.
- Secure the CascadeTherm Plus to the means of transportation with a strap as the unit is top heavy.

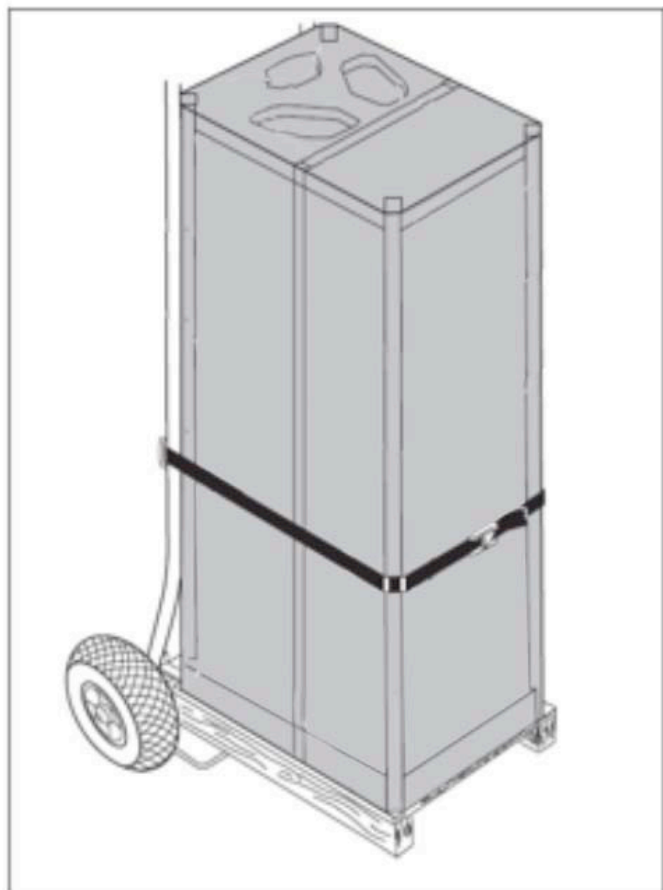


Fig. 4

4 Installation


WARNING:

The manufacturer's warranty does not cover any damage or defect caused by improper installation, attachment, or use of any type of accessories (other than those mentioned in this user manual) with this water heater. The use of unauthorised energy-saving devices may shorten the life of the water heater, and may endanger life and / or cause property damage.

The manufacturer disclaims any responsibility for such loss and / or injury resulting from the use of such unauthorised devices.


CAUTION:

The Bosch KM3211WHNG/LP is an internal (with fluing) or external appliance, electronically controlled gas boosted water heater. It comes supplied and preset to deliver water at a temperature at 83°C.



Before installing this appliance, carefully check that all packing materials have been removed and that the appliance is correct for the gas supply to which it is to be connected.

4.1 Location


NOTICE:

System damage through inadequate load-bearing capacity of the supporting surface or unsuitable substrate.

- Ensure that the installation area offers sufficient load-bearing capacity.


CAUTION:

The water heater should not be located in an area where leakage of the tank or connection will result in damage to the area adjacent to it or to lower floors of the structure. In places where installation in such areas cannot be avoided, it is recommended that a suitable catch pan, adequately drained, be installed under the water heater (Fig. 5).



At least 1m clearance in front of the CascadeTherm Plus is required for the maintenance of the hot water heater and auxillary components located behind the shroud.

- Maintain the minimum height and minimum wall clearances in the installation room.



If the CascadeTherm Plus is connected on the left hand side, maintain a minimum wall clearance of 500mm.

4.1.1 Requirements for installation location

The CascadeTherm Plus is designed for both outdoor and indoor installations. Proper clearances must be observed.

Local installation regulations

The installation must comply with the requirements of AS/NZS 3500.4, AS5601 and AS/NZS 3000 standards, and all additional local codes and regulatory authority requirements.

In New Zealand, the installation must comply with Clause G12 of the New Zealand Building Code.

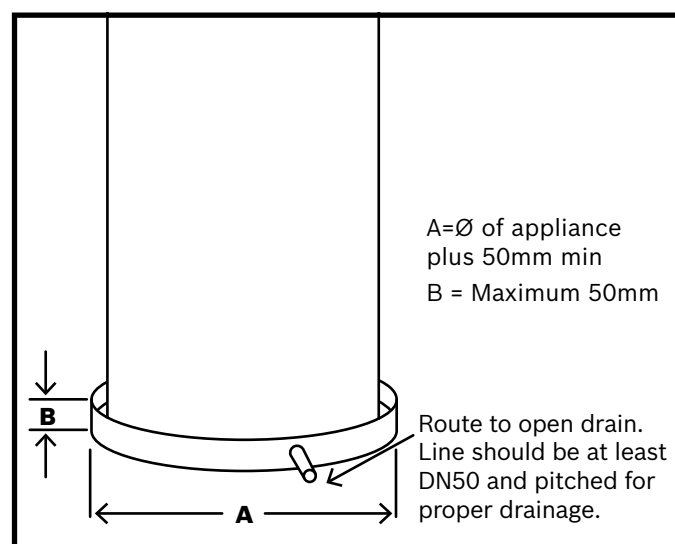


Fig. 5

Water heater support needs to be as specified in AS3500.4

NOTE: Auxiliary catch pan MUST confirm to local codes. Catch pan kits are available from the store where the water heater was purchased, a builder store, or any water heater distributor.

4.1.2 Positioning the CascadeTherm Plus

The Bosch CascadeTherm Plus is delivered as a fully assembled unit.

- Check that the delivered package is complete and in perfect condition.
- Dispose of packaging in an environmentally responsible manner.
- Lift the CascadeTherm Plus from the pallet and position it on a level floor that has adequate load bearing capacity.
-

4.2 Water connections



WARNING:

All plumbing work must be carried out by a qualified professional and in accordance with the Plumbing Standard AS/NZS 3500.4 and local authority requirements.

Installation of the water inlet or outlet pipes: The water inlet and outlet thread are 32mm BSP (internal thread). All other fittings must be in accordance of the provisions of AS/NZS3500 and local regulatory requirements.

A heat trap must be installed in the hot water line as per AS/NZS3500 and the hot water lines after the heat trap must be insulated.

A non return valve and isolation valve should be installed on the cold water line of the water heater. Refer to Fig. 6

It is recommended that a union be fitted to the cold and hot water connections to allow easy disconnection of the appliance.

All pipe work should be insulated with proper insulating material (weatherproof and UV resistant if exposed) to optimise energy efficiency. Water piping sizing should be performed in accordance with AS/NZS 3500.4.

4.2.1 PTR valves (supplied with appliance)



WARNING:

To reduce the risk of excessive pressures and temperatures in this water heater, install temperature and pressure protective equipment required by local codes, and no less than a combination temperature and pressure relief valve certified by a nationally recognised resting laboratory that maintains periodic inspection of production of listed equipment or materials, as meeting the requirements of AS/NZS 3500.4, AS/NZS 3000 and all locally codes and regulatory authority requirements.

Two temperature and pressure relief valves are supplied and must be installed in the tank ports marked for this purpose. No valve or accessory of any type should be installed between the relief valve and the tank. Please observe local codes for the correct installation of relief valves.

**WARNING:**

The pressure rating of the relief valve must not exceed 850 kPa, the maximum working pressure of the water heater as marked on the rating plate.

**WARNING:**

Relief valve easing gear should be operated **AT LEAST ONCE EVERY SIX MONTHS**. If water does not discharge freely when the lever is operated, the valve should be checked by an authorised agent.

**WARNING:**

The relief valve and relief drain pipe must not be sealed or blocked. Small amounts of water may leak from relief valve during heating cycles.

**WARNING:**

Relief valves should be checked every six months, or replaced at intervals not exceeding 3 years or more frequently in areas where there is a high incidence of water deposits.

**WARNING:**

The function of the temperature and pressure relief valve installed on this water heater is to discharge high temperature water under certain conditions. Therefore it is strongly recommended that the pipe work connected to the relief valve is able to withstand water temperatures exceeding 99°C. Failure to follow this recommendation may result in a dangerous situation.

The combined kW rating of the relief valves must be 92 kW to ensure that they are always above the maximum output power of the water heater when operating. The supplied PTR valves comply with this.

**WARNING:**

Never block or seal the outlet of the PTR valve or its drain for any reason. The warranty will be void if the relief valves or other safety devices are tampered with, or if the installation is not in accordance with this manual.

Connect the outlet of the relief valve to a suitable open drain so that the discharge water cannot contact any electrical parts, persons, or animals, and to eliminate any other possible risks.

A drain line from a relief valve must comply with the requirements of AS/NZS 3500.4.

Always use a valve of the same rated pressure and temperature as the PTR valves supplied with the unit.

4.2.2 Temperature mixing device (not supplied with the appliance)

**WARNING:**

This water heater can heat water to temperatures which can cause scalding.

Bosch recommends the installation of a temperature limiting device between the water heater and the hot water outlets in a bathroom or similar usage point, in order to reduce the risk of scalding.

Additionally, a certified plumber may have the legal obligation to ensure the water heater installation meets the hot water delivery requirements listed in AS/NZS 3500.4.

4.2.3 Pressure limiting valve (not supplied with the appliance)

In installations where the mains water supply pressure exceeds that specified for this product, an approved pressure limiting valve is required and must be fitted.

4.2.4 Expansion control valve (not supplied with the appliance)

For local regulations, a saturation index greater than +0.4, or in corrosive water areas where there are sufficient quantities of silica dissolved in the water the installation of an expansion control valve (ECV) in the cold water line may be required, being the last valve installed prior to the water heater.

4.3 Gas connections



DANGER:

Non-compliance with applicable legal standards may cause material damage, personal injury, or even death.

The gas connection to the water heater must comply with AS/NZS5601.

- First ensure that the water heater corresponds to the gas type available.
- Fit a gas isolation valve on the gas supply line as close as possible to the appliance.
- After installation of the gas supply line, thorough purging and a tightness test must be carried out.



Size gas supply as per AS/NZS5601. Incorrect gas pipe sizing will not be covered by the warranty.

Gas Pressure

- Size the gas line according to total MJ/h demand of the building and distance from the gas meter or regulator, so that the following supply pressures are available at the heater even at maximum demand (Refer AS5601).

Natural Gas Pressure Inlet	1.13kPa
LP Gas Pressure Inlet	2.75kPa

Gas Meter

- Select a gas meter capable of supplying the entire MJ/h demand of all gas appliances in the building

Gas Connection

- Do not use piping with a diameter smaller than the inlet diameter of the water heater.
- Gas flex lines are not recommended unless they are rated for 250MJ/h.
- Install a gas shut-off valve on the supply line.
- Use only approved gas piping materials

4.4 Electrical connections

This appliance requires two 240V general purpose power outlets, one for the water heater and one for the thermostat.

4.4.1 Electrical Wiring

Employ a qualified electrician for the electrical work.

- The electrical supply required by both the water heater and the thermostat is 240V AC at 50 Hz. the power consumption may be up to 135W. Use an appropriate circuit.
- Do not disconnect the power supply when not in use. When the power is off, the freeze prevention in the water heater will not activate, resulting in possible freezing damage.
- Do not let the power cord contact the gas piping.
- Tie the redundant power cord outside the water heater. Putting the redundant length of cord inside the water heater may cause electrical interference and faulty operation.

Ground

- To prevent an electric shock, always plug power lead into an earthed powerpoint.
- Power source to be within 500mm of the bottom of the water heater and thermostat.

4.5 Fluing Requirements

When installing the unit internally, the water heater needs to have appropriate fluing using the Bosch flue kits which are available.

Vertical Flue Kit

The vertical flue kit contains the following components

- 100mm gas cowl
- 1.5m x 100mm diameter gas flex (3 piece)
- Flue pipe adaptor (3 pieces)
- Support struts (2 pieces)
- 3m x 6mm condensation hose

Horizontal Flue Kit


The horizontal flue kit contains the following components

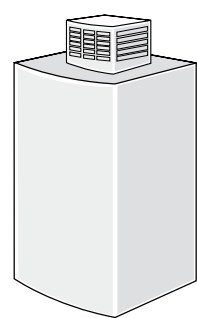
- 100mm diameter flexible flue, 5m long
- Flue sleeve
- Adjustable wall penetration sleeve (2 pieces)
- Clamp

The following considerations should be made when planning the installation


- Vertical sections of flue must be as short as possible
- Ensure the joints are gas tight and will not leak. Use heat resistant silicon sealant wherever necessary.
- Use a maximum of 1m straight pipe before the first elbow

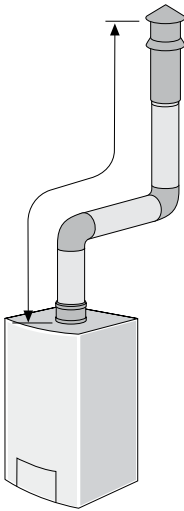
Available flue components

Components	Part No.	Description
	KMVC-100	Vent Cap
	FKV32LTR	Vertical Flue Kit
	FKH32LTR	SS flue elbow, 90°, 100m diameter



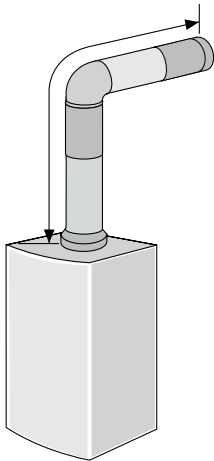
Outdoor installation

Components	
Part Numbers	KMVC-100
Maximum length (mm) & no. of components required	
N/A	1



Standard vertical flue kit

Part No 100mm	FKV32LTR
Maximum length (mm) & no. of components required	
9m	1 kit



Standard horizontal flue kit

Part No 100mm	FKH32LTR
Maximum length (mm) & no. of components required	
11m	1 kit

Typical layout for single CascadeTherm Plus

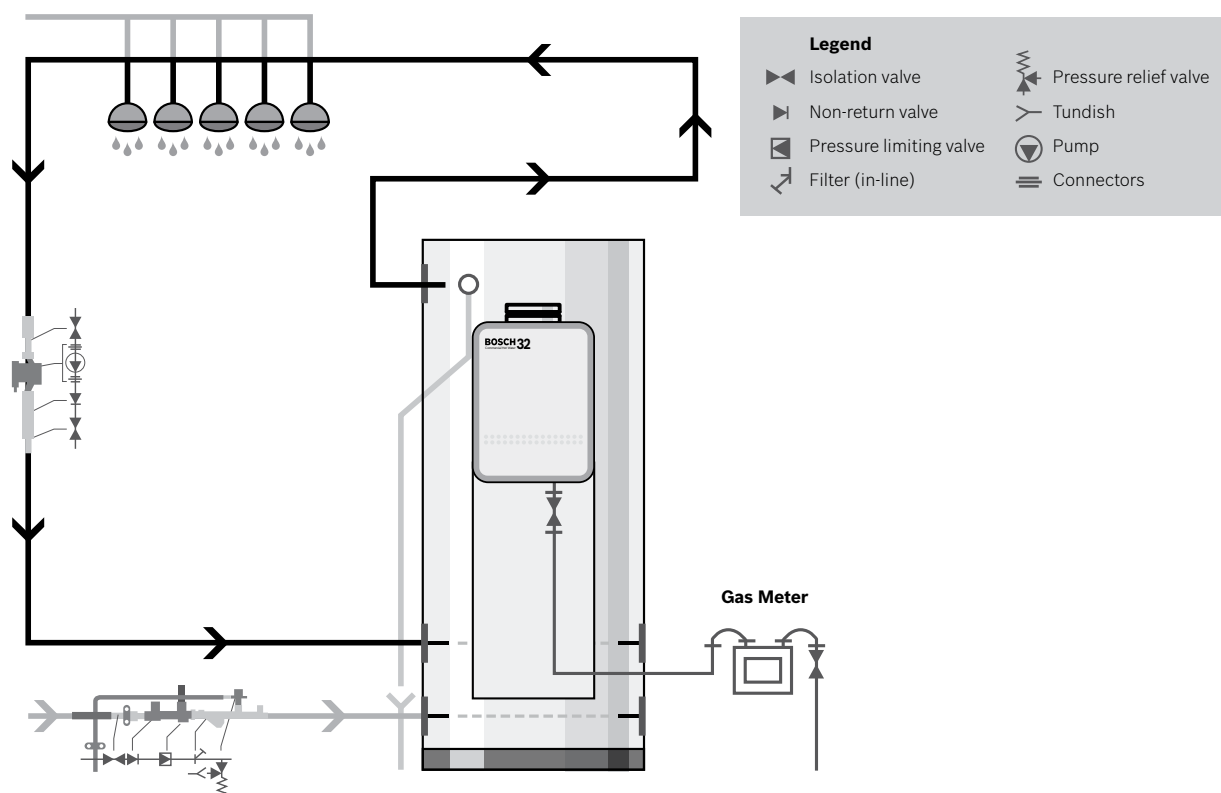


Fig 6

Typical layout for manifolded CascadeTherm Plus

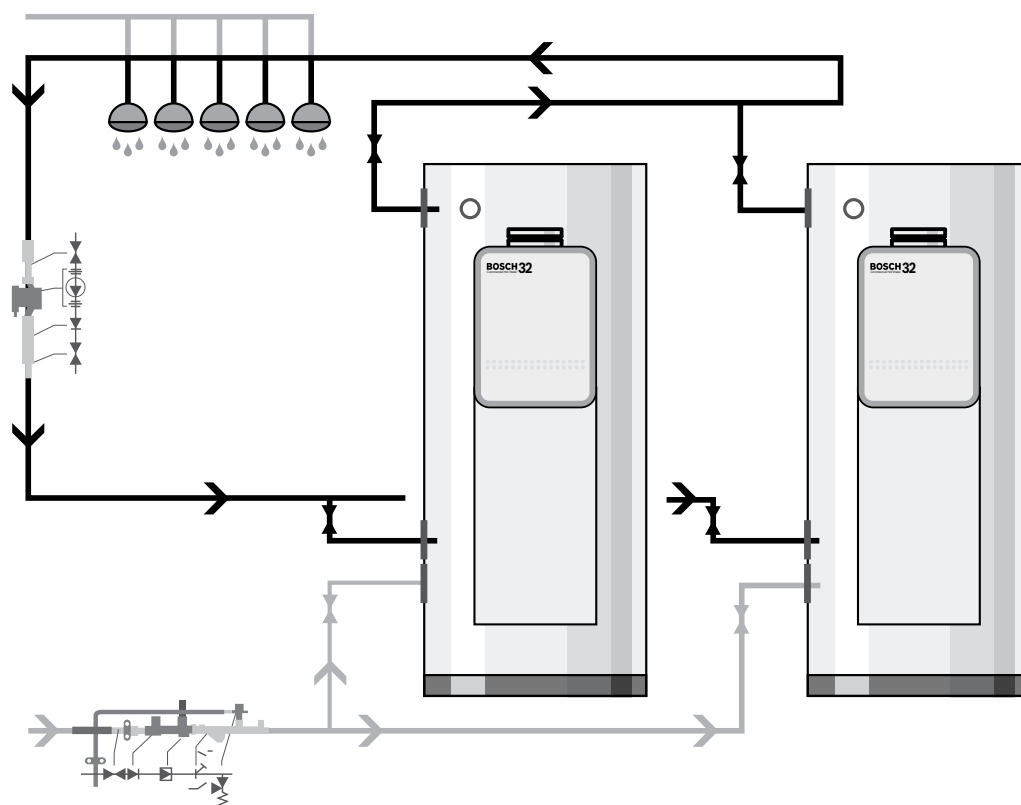


Fig 7

5 Commissioning

5.1 Before commissioning



NOTICE:

Do not start the appliance without water!

- Only operate the appliance once it has been filled with potable water.

- Ensure the cylinder is filled with water.
- Check all connections for water tightness.
- Check the electrical connections.

5.2 Commissioning process

- Bleed pump according to the process in the pump manual.
- Ensure all isolation valves are open.
- Open the hot tap at the furthest point and allow air to bleed out until a consistent flow of water is achieved.
- If a thermostatic mixing valve or a tempering valve is attached, set it to the correct temperature.

5.2.1 Commissioning Process - Alphastat Plus

Your AlphaStatPlus has a microprocessor at its core that intelligently and automatically controls your hot water system at greater efficiency. The AlphaStatPlus measures the cylinder water temperature and turns on the pump at the optimum time. Principle of operation.

The hot water tank sensor is called: 'TANK'

The upper temperature threshold is called: 'SET OFF' (typically 65°C)

The lower temperature threshold is called: 'SET ON' (typically 60°C)

AlphaStatPlus Display Panel Description.



- The 'PWR' light on indicates that power is being applied to the AlphastatPlus.
- 'TANK', 'SET OFF' and 'SET ON' lights will be on to indicate which temperature is being displayed. Only 1 of the 3 can be on at a time.

- The 'HWC' light will be on when the hot water circuit (HWC) pump is on.
- The 'AWAY' light flashes to indicate that the user has placed the controller in a suspended state. No power will be applied to the HWC until the 'AWAY' button is pressed again to cancel it. The AlphaStat will remember the 'AWAY' mode even if the power goes off and comes on again.
- The 'NEXT' button will step from Tank to Set Off to Set On and the display will show the relevant temperature in °C. If the Tank sensor is below -20°C the display reads 'Lo'. If the Tank sensor is above 140°C the display reads 'Hi'. If the sensor is outside the specified temperature range of -40°C to 150°C then the Display will read 'SSd' and the 'NEXT' button is disabled.
- 'SET OFF' and 'SET ON' temperatures may be changed while they are displayed, by pressing the buttons marked with '+' and '-' in yellow ('HWC' and 'AWAY'). The limits are 20°C and 75°C, but note that the 'SET OFF' temperature will always be higher than the 'SET ON' temperature. If sixty seconds pass and no buttons have been pressed, the display reverts to 'TANK'.

AlphaStatPlus System Adjustable Values.

Installer to fill in at installation time or after any change in program Adjustable Values.

System Adjustable Values		
Function	AlphaStat-Plus-1 Factory Value	Installation Values
Set Off	50°C	°C
Set On	35°C	°C
Demand	60°C	°C
Biosafe	60°C	°C

AlphaStatPlus Programming

If the adjustable values from the factory are inappropriate for the installation (see included document stating programmed values) then the unit needs to be reprogrammed.

Once new values are 'stored' they are permanently written into memory and will be retained even when power is removed.



Note: Immediately after reprogramming please fill out the 'System Adjustable Values' in the 'System Adjustable Values' table above.

AlphaStatPlus Programming Table for Adjustable Values.

Programming Table for Adjustable Values				
Adjustable Values	Light indication	Typical	Range	Disable / Function
Demand	HWC steady	60°C	60°C - 100°C	n/a

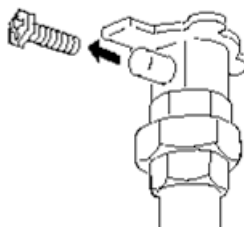
Notes on AlphaStat-Plus Programming. Also refer principle of operation.

1. SET OFF must always be higher than SET ON.
2. Demand should generally be higher than SET OFF.
3. A disabled value is indicated by 'OFF'
4. Fill out programming record in User Guide.

5.2.2 Commissioning - Gas

Measuring Gas Pressure

In order to check the gas supply pressure to the unit, a tap is provided on the gas inlet. Remove the hex head philips screw from the tap, and connect a manometer using a silicon tube. Operate the unit and check gas pressure, in order to check the gas valve inside the unit. The pressure can be checked either by removing the hex head philips screw and connecting a manometer with a silicon tube, or by removing the 3mm NPT screw with an allen wrench and connecting the appropriate pressure gauge.



Once the appliance is ready to use, test the inlet gas pressure:

- Isolate gas supply
- Attach manometer to inlet gas test point.
- Open gas supply
- Operate appliance at full power by creating a demand on the AlphaStat and forcing the burner to high by pressing Max Pressure Set Button. (Refer to Fig 8.)

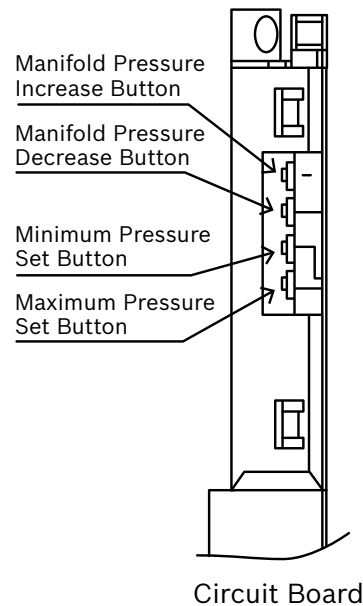


Figure 8

- Check table for correct inlet gas pressure

	NG	LP
KM3211WH	1.13	2.75

- The appliance must be disconnected from the gas supply piping during any pressure testing of that piping at test pressures in excess of 3.5kPa.
- The appliance and its gas connections must be leak tested before operation
- The inlet gas pressure must be as specified. This is for the purpose of input adjustment.
- In order to choose the proper size for the gas line, consult local codes and / or the AS5601.

6 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.

This water heater has been designed and constructed to be suitable for connection to most water supplies in Australia and New Zealand. However, in areas where Total Dissolved Solids (TDS) exceeds 2500mg/L, detrimental effects on water heater performance and longevity will result.

While Bosch water heaters are warranted against manufacturing 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 the water quality table (table 7, page 16) are considered acceptable, and generally Australian and New Zealand suburban water supplies fall within these limits/parameters.

Where uncertainty exists concerning water quality, intending appliance users should seek a water analysis from the water supplying authority. 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.



NOTICE:

- ▶ When fitted, gently operate the easing lever on the ECV every six months and replace at intervals not exceeding 5 years or more frequently where there is poor quality water.

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 7

7 Environmental protection/Recycling

Environmental protection is one of the fundamental company policies of the Bosch Group.

Product quality, efficiency, and environmental protection are equally important objectives for us. We comply with all environmental protection laws and regulations. In order to protect the environment, we use the latest technologies and the best materials whilst bearing in mind the economic implications.

Packaging

Where packaging is concerned, we participate in the relevant local recycling systems in order to ensure optimum recycling. All of our packaging materials are environmentally friendly and can be reused.

8 Warranty details

Robert Bosch (Australia) Pty Ltd Thermotechnology Division

Voluntary Repair or Replacement Warranty

All Bosch products are carefully checked, tested and certified to Australian and New Zealand standards.

Important Note: Mandatory Australian Consumer Law statement

If you have purchased your product in Australia, you should be aware that:

This warranty is provided in addition to other rights and remedies held by a consumer at law. 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.

Important Note: New Zealand law

If you have purchased your product in New Zealand, you should be aware that:

This warranty is supplemental to any other rights and remedies you have under the Consumer Guarantees Act 1993 NZ, unless your purchase is made for commercial purposes, in which case Bosch excludes all consumer guarantees implied in the Consumer Guarantees Act 1993 NZ in respect of your product.

Warranty

Bosch warrants, at its option, to repair or replace your water heater or relevant part thereof (Product) if such Products are faulty or defective in manufacture or materials during the warranty period specified below.

The warranty period commences on the date of purchase. If the date of original purchase cannot be determined, then the warranty period will commence six (6) months after the date of manufacture stamped on the Product.

Bosch may require evidence to verify the date of purchase.

This warranty only covers repair or replacement of defective Product (including labour costs where indicated). It does not cover:

- any costs incurred by the end user in normal or scheduled maintenance of the Product; or
- subject to any law to the contrary, any damage to property, personal injury, direct or indirect loss, consequential losses or other expenses arising from breach of this warranty. Any end user concerned with this exclusion should consider the "Important Note: Mandatory Australian Consumer Law statement" above.

Warranty Period and Coverage

Bosch will provide warranty service for Product purchased and installed in Australia and New Zealand as follows.

Components	The period after purchase within which the fault must appear	What Bosch will do (see below for definitions)
Domestic Use (see below for definition)		
All components	Year [1 to 2]	Parts & Labour
Tank	Year [2 to 5]	Parts only
Commercial Use (see below for definition)		
All components	Year [1 to 1]	Parts & Labour

Table 8

“Parts & Labour” means free of charge repair and/or replacement, including labour.

“Parts only” means a replacement tank, free of charge. All installation and repair labour costs are the responsibility of the owner.

“Domestic use” warranty period applies to Product installed to supply hot water for use by individuals in domestic dwellings. For Product used for all other uses, the commercial use warranty period will apply. This includes, without limitation, installations such as centralised or bulk hot systems, hotels, sporting complexes, caravan parks, laundry facilities, restaurants and cafes.

For “Parts only” warranty, the end user will be charged for service call costs and service technician fees in effecting the replacement.

For valid claims within “Parts & Labour” warranty periods, the end user will not be charged for costs associated with making a warranty claim, including service call costs, any service technician fees or the cost of replacement parts and freight, provided that:

- the Product is located within the usual operating area of an authorised service technician;
- the Product has been installed according to the installation instructions so as to provide adequate service access.

If the Product is not located within the usual operating area of an authorised service technician, the end user will be required to pay the service call costs associated with a service call under this voluntary warranty.

Notwithstanding the above, if the Product has not been installed in accordance with the installation instructions in regards to access, or has been otherwise installed in location where service access is difficult, the end user will be required to pay charges associated with the difficult access. This includes, but is not limited to, the removal of walls or doors to gain access and the use of specialised equipment to move the Product or components to safe working levels. Where the Product cannot be safely accessed, Bosch may refuse to service the Product under this voluntary warranty.

For invalid claims under this voluntary warranty, the end user will be liable for the costs of making the warranty claim including any service call costs.

Warranty Conditions

This voluntary warranty is subject to the following conditions:

- The Product must have been installed and correctly commissioned by an authorised and licensed installer in compliance with applicable Australian Plumbing and Gas Standards. Proof may be required of correct commissioning of the Product (such as certificate of compliance). Claims for failures due to incorrect installation or commissioning are not covered under this voluntary warranty and may be rejected by Bosch.
- Where a Product or part thereof is replaced or repaired under this voluntary warranty, the balance of the original voluntary warranty will apply. The replacement Product or part does not carry a new voluntary warranty.
- The Product must have its original serial numbers and rating labels intact.
- The warranty does not extend to any Product that has been completely or partially disassembled.
- These warranty terms cannot be amended except in writing by an authorised officer of Bosch.
- The warranty only applies to Product installed for an end user in Australia or New Zealand and purchased from Bosch or from a reseller where the Product has been originally sold by Bosch.
- Any claim made under this voluntary warranty meets the requirements set out below in the “How to Make a Warranty Claim” section.

Warranty Exclusions

This warranty will not apply to a defect or fault to the extent to which it arises:

- due to storage, handling or installation of the Product otherwise than in accordance with instructions provided for the Product by Bosch or without reasonable care, including installation of a Product which is of inappropriate size or type for the intended purpose;
- due to operation, use or maintenance of the Product otherwise than in accordance with instructions provided for the Product by Bosch or without reasonable care, including use of the Product with faulty or unsuitable plumbing, water pressure, power or gas supply;
- due to accidental damage or use of the Product for a purpose or in environmental conditions for which the Product were not designed or sold, or use of the products outside the specified or normal operating ranges for such Product.
- as a result of changes which occur in the condition or operational qualities of the Product due to climate or other environmental influence, foreign material contamination or water entry or as a result of exposure to excessive heat or solvents or because of use of non-potable water or bore water in the Product or damage as result of an Act of Nature including but not limited to storms, fires, floods and lightning strikes;
- from normal wear and tear or when replacement or repair of parts would be part of normal maintenance or service of the Product or where the damage is only to surface coating, varnish or enamel;
- as a result of repairs, alterations or modifications to the Product which have been performed by a person who is not suitably qualified and experienced to perform works on the Product; or
- from the use of any spare parts not manufactured, sold or approved by Bosch in connection with the repair or replacement of Product. This voluntary warranty does not apply to damage that has been caused by continued use of a Product after it is known, or would have been known with regular servicing, it is defective.

This voluntary warranty does not apply to damage that has been caused by continued use of a Product after it is known, or would have been known with regular servicing, it is defective.

Failure to service Product in accordance with recommendations in instruction manuals for Product may result in a warranty claim under this voluntary warranty being rejected by Bosch. Bosch alerts end users that instruction manuals for Product contain specific recommendations for servicing and safety checks to be carried out on Product.

Wrong Deliveries and Transit Damage

Wrong deliveries, incorrect or damaged packing and transit damage claims are not warranty claims. Such cases should be directed to Bosch's Customer Service line in Australia on ph: 1300 307 037 or in New Zealand on ph: 0800 543 352.

How to Make a Warranty Claim

If a Product fails within the warranty period, the end user must stop using the Product and make a claim as soon as possible, in any event before the end of the Warranty Period (see Deadlines for Submitting Warranty Claims below).

To make a warranty claim under this voluntary warranty, call the Bosch Customer Contact Centre (in Australia on ph: 1300 307 037 or in New Zealand on ph: 0800 543 352). Please be ready to provide the model and serial number, date of installation, purchase details and a full description of the problem. Alternatively, for claims in Australia, you can post details of your claim to Robert Bosch (Aust) Pty Ltd, Attn TT Warranty Department, Locked Bag 66, Clayton Sth, Victoria, 3169. Claims received by post will take longer to process and we encourage you to call. Bosch may refer you to one of its Bosch Warranty Authorised Service Dealers.

Proof of purchase and purchase date, as well as proof of installation and proper commissioning by a licensed installer, may be required by Bosch or an authorised service technician.

All warranty service calls will be conducted by an authorised service technician during normal business hours. Bosch will not accept claims under this voluntary warranty for attendance and repair of the Product by third parties not authorised by Bosch.

Deadlines for Submitting Warranty Claims

Bosch aims to rectify genuine quality problems as a priority. This is generally achieved by investigating why defective products have failed and by introducing immediate corrective action measures to prevent re-occurring warranty failures. It is therefore critical that all warranty claims are promptly submitted to Bosch as soon as the product fails, and in any event before the end of the warranty period.

Product Liability and Product Safety

Bosch should be informed immediately about any potential product safety concerns within and outside the warranty period. Bosch is well aware of its product liability and product safety obligations and responsibilities. It is our aim to ensure appropriate product safety standards are met in order to avoid injury, loss and damage caused by defects in any Product.

Privacy

Bosch is required to seek personal information from an end user who seeks to make a claim under this warranty. Such personal information may be used by Bosch and/or any authorised service technician (who is authorised to process warranty claims and/or carry out warranty repairs on behalf of Bosch) for the purpose of processing such warranty claim and also for the provision of customer support and further information about Bosch's products and services (Purpose).

If an end user does not wish to provide Bosch and/or its authorised service technician with personal information, Bosch may be unable to process the end user's warranty claim or to provide the end user with additional customer support, services and information.

Bosch is committed to protecting the privacy of personal information and will act in compliance with applicable privacy laws, including the National Privacy Principles under the Australian Privacy Act 1988 (Cth) (as amended) and New Zealand's Information Privacy Principles described in the Privacy Act 1993 (NZ).

Bosch takes security measures in order to protect any personal information collected in the warranty claim process against manipulation, loss, destruction, access by unauthorised persons or unauthorised disclosure.

Bosch will not disclose any personal information to third parties other than for the Purpose or except as required by law.

An end user has the right to access the personal information Bosch or its authorised service technician hold about them. The end user can request to see, change or modify the personal information held about them, or withdraw consent for its usage, by contacting Bosch at the Bosch Contact Details below.

Bosch Contact Details

This warranty is offered by Robert Bosch (Australia) Pty Ltd (ACN 004 315 628) of 1555 Centre Road, Clayton, Victoria 3168. Please call the Customer Contact Centre on 1300 30 70 37 in Australia or 0800 543 352 in New Zealand if you have any queries in relation to this warranty or contact us using the online form at www.bosch-climate.com.au or www.boschclimate.co.nz

Robert Bosch Australia Pty. Ltd.

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