

The user to keep this manual

WARNINGS

This appliance is not designed for use by people (including children) of reduced physical, sensory or mental capacity, or those inexperienced or not understanding this manual unless they have received prior instruction or supervision from someone responsible for their safety, about the use of the appliance.

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

INSTALLATION

WARNING: Product heavy, handle with care:

1/Install the appliance in a frost-free room. The warranty does not cover damage of the appliance through excessive water pressure caused by faulty pressure limiting or control valves.

2/Ensure that the floor on which it is mounted can support the weight of the appliance filled with water.

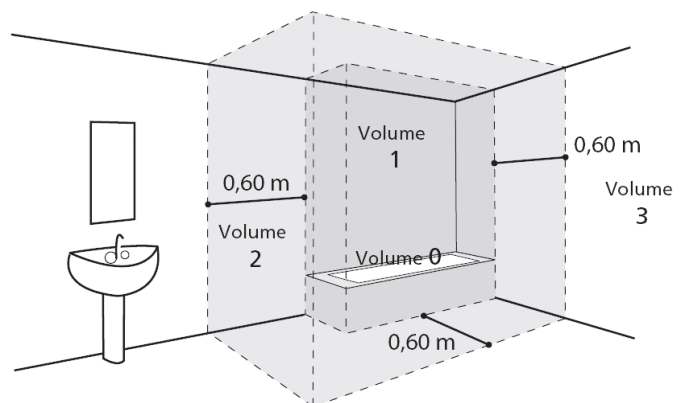
3/If the appliance has to be installed in a room or location with an ambient temperature always above 35°C, this room must be ventilated.

4/Place the appliance in an accessible place.

5/Refer to the installation diagrams.

The size of space needed for the appliance to be correctly installed is specified in the chapter installation.

It is mandatory for the water heater to be fixed to the floor using the fixing attachment provided.



WARNINGS

HYDRAULIC CONNECTION

Cold Water Inlet

Before making the hydraulic connection, it is essential to clean the feed pipes thoroughly to avoid the risk of metal or other particles entering the tank or the water heater.

Cold water piping should be provided with a 350 – 500 kPa Pressure Limiting Valve at the point of cold water connection to the water heater. In addition to the Pressure Limiting Valve, It is a requirement of AS 3500.4 & NZBC G12 that both a Stop Valve and a Non Return Valve are installed upstream of the Product.

No parts (stop valve, pressure reducer, etc.) must be placed between the pressure limiting valve and the cold water inlet of the water heater, apart from a copper pipe.

Note: since limited water discharge from pressure limiting valve is normal in the heating operation, the discharge pipe needs be connected to external drain.

Hot Water Outlet

Where a maximum hot water delivery temperature is specified by Local, State or Federal Regulations, a Tempering Valve shall be installed at the Hot Water Outlet, as required. The included specified Pressure & Temperature Relief Valve must be installed as shown in the schematic. The PTR valve should be connected to a drain point to accommodate discharge as a result of both water expansion during heating, and also pressure fluctuations.

A discharge pipe connected to the pressure relief valve is to be installed in a continuously downward direction and in a frost- free environment.

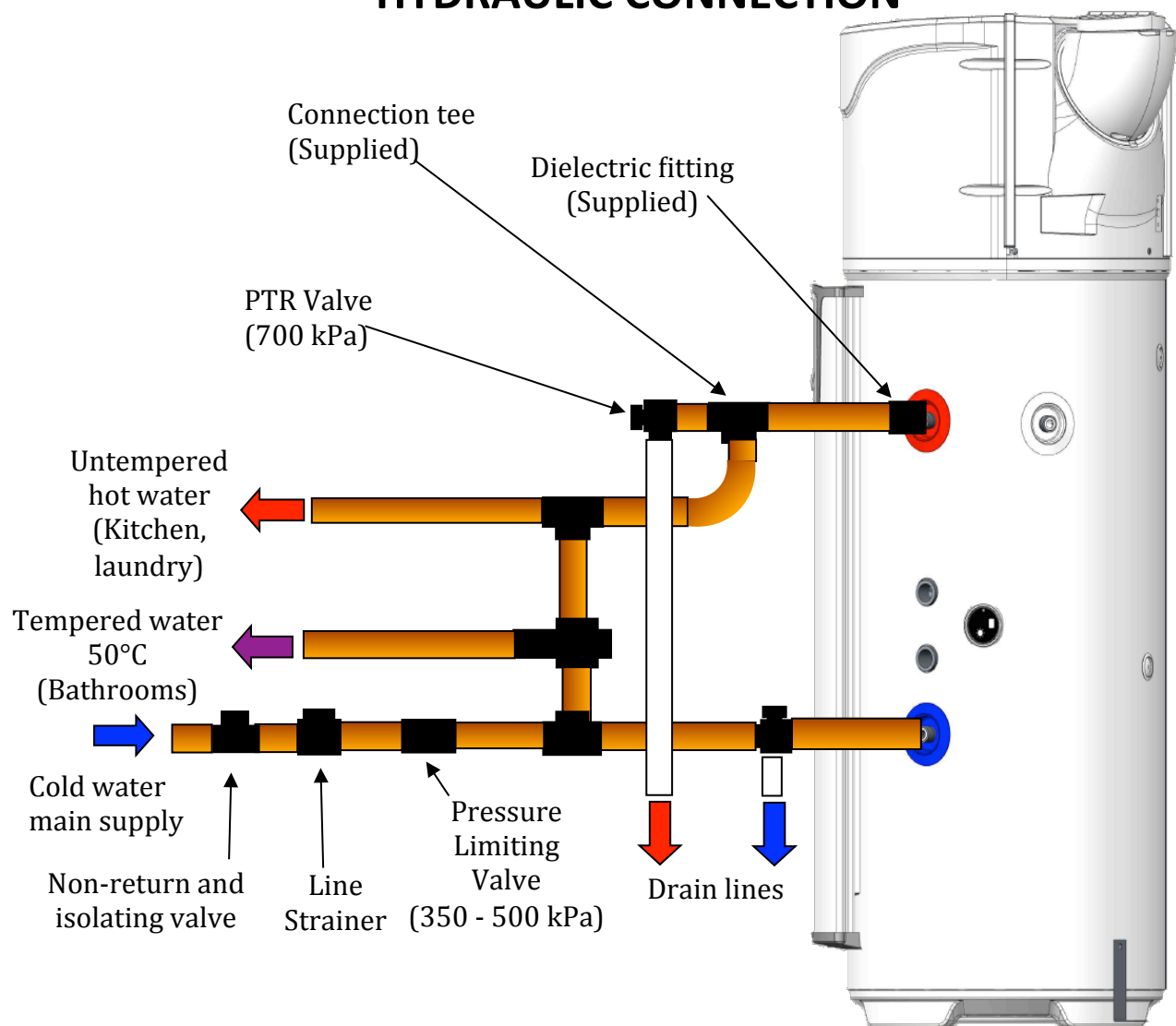
WARNING: The Pressure Temperature Relief valve and drain line must not be sealed or blocked.

Evacuation of condensate

Air passing through the Evaporator may result in some condensation. If the humidity of the location Warrants, it may be preferable to connect a simple polymer hose from the Condensate Drain to the convenient PTR drain point.

Depending on the humidity of the air, up to 0.25l/h of condensate may form.

HYDRAULIC CONNECTION



ELECTRIC CONNECTIONS



Caution: The water heater must be filled with water first, before making the electric connections.

Electrical work must be carried out by a licensed tradesperson and in accordance with Electrical Wiring Rules of Aus/NZ. Circuit Isolation and fixed appliance regulations of the Wiring rules shall be complied in regard to connection to supply, circuit isolation, and protection.

MAINTENANCE - REPAIR

Flushing of sediment and draining :

To flush or to drain the water heater, power must be turned off and then turn off the cold water supply to the water heater. The lever on the pressure and temperature relief valve should be opened but care should be taken so the lever does not snap back as it could damage the valve seat. The pressure in the water heater will be released when the lever is opened. The union at the cold water inlet to the water heater should be undone and a hose should be attached to the water heater side of the union. The other end of the hose should go to a drain.

Opening the pressure and temperature relief valve allows air into the water heater and for the water to drain. Following complete draining of the water heater, the closest hot water taps may be opened fully and the pressure and temperature relief valve closed with care. Following reconnection at the cold water inlet, the cold water stop valve is now opened fully and the water heater may be filled with cold water and flushed through to ensure the cylinder contains no sediment and is clean. Finally the closest hot taps are closed and power may be turned on again to the completely filled water heater..

In the event of an anomaly - the heater does not heat or steam is released from the Pressure Temperature Relief valve - switch off the electric power supply and contact your reseller.

Domestic maintenance

Water heaters do not require much domestic maintenance by the user. Operate the Pressure Temperature Relief valve once or twice a month to eliminate any residue of scaling and check that it is not blocked.

Regularly check the display for alarms. If an alarm appears, refer to the *Trouble shooting* section, page 31 - 33.

DANGER: Failure to operate the Pressure Temperature Relief valve easing gear at least once every six months may mask a problem with the water heater. Continuous leakage of water from the Pressure Temperature Relief valve may indicate a problem with the water heater.

It is not unusual for the Pressure Temperature Relief valve to allow a small quantity of water to escape during the heating cycle and this must be left open to the atmosphere.

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Description

1. Important recommendations

1.1. Safety directives

Installation and commissioning work on the heat pump water-heaters may pose hazards because of high-pressure and live electrical parts.

Heat pump water heaters must be installed, serviced and maintained by trained and qualified personnel only.

1.2. Transport and storage

The product may be turned through 90° on one side. The side permitted is shown clearly on an information label placed on the product packaging. The product must not be turned on the other sides. An inclination indicator is used to check that the product has been transported and handled in accordance with our recommendations. We recommend you should be careful to respect these instructions. Our warranty will not apply if the inclination indicator is red. We will not be responsible for any fault in the product resulting from transport or handling of the product in a way that does not comply with our recommendations.



2. Content of package



Water heater



1 Manual



1 bag with insulation sleeve with 2 seals to be fitted to the hot water outlet

Coil model only: an other additional insulation sleeve is provided to be fitted to the recirculation fitting.

1 x 700 kPa PT safety valve & tee piece to be installed on the hot water outlet



1 connection for evacuation of the condensates



1 tube for condensates (2m)

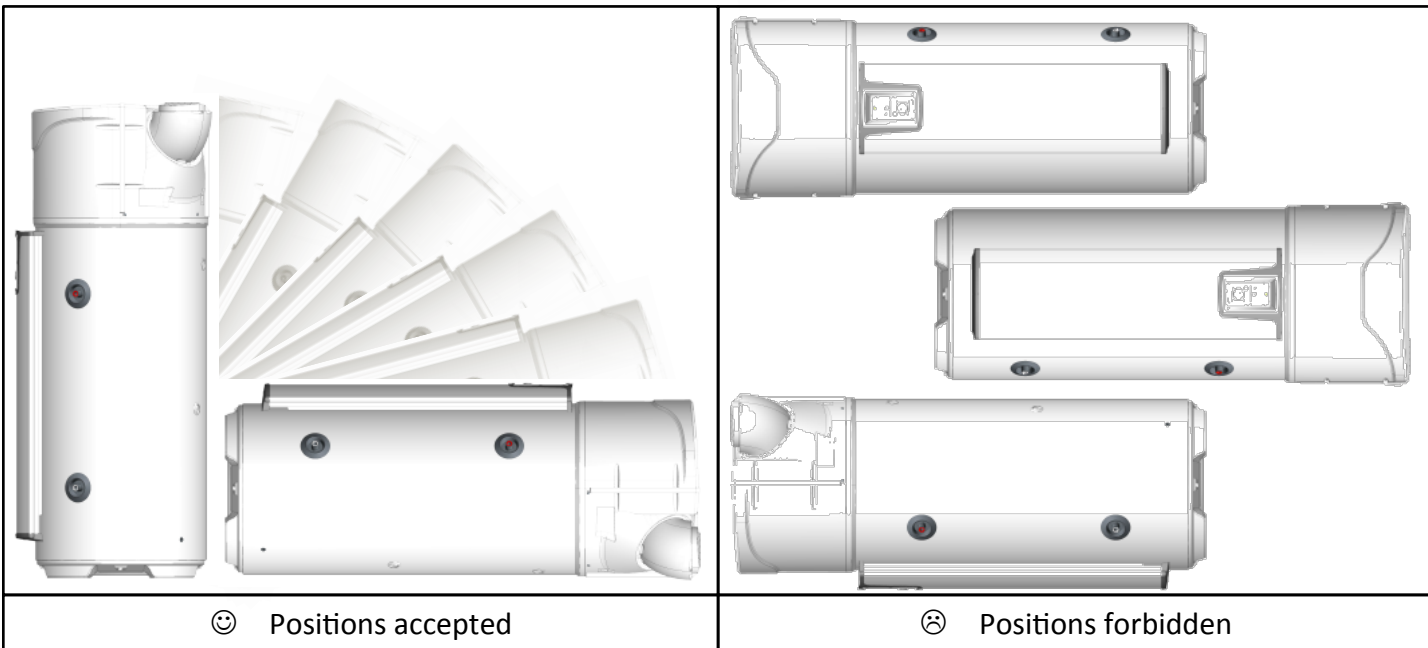


1 metal strap and screw to fix the device on the ground

3. Transport

The product integrates several handles to facilitate handling to the installation site.

To transport the boiler to the installation site, always use the lower grips and top handles as shown.



☺ Positions accepted

☹ Positions forbidden



Observe the recommendations and handling on the packaging of the water heater.

4. Working principles

The heat pump water heater uses unheated air to heat domestic hot water.

The coolant in the heat pump sets up a thermodynamic cycle which allows the energy from the unheated ambient air or the outside air to be transferred to the water in the cylinder.

The air is passed through the device by a fan, ventilating the various components including the evaporator.

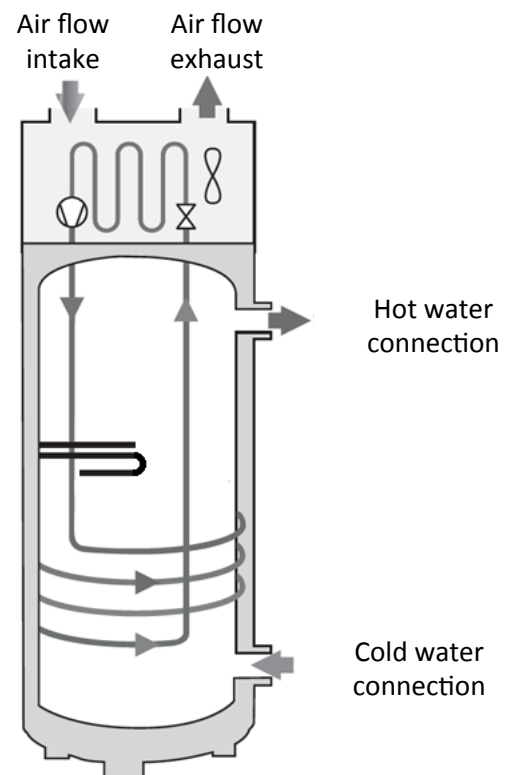
As it passes through the evaporator, the coolant evaporates and conveys calories to the intake air.

The compressor compresses the coolant causing its temperature to rise.

This heat is transmitted by the condenser to the domestic water stored in the cylinder.

The coolant expands in the thermostatic expansion valve and cools down. It is then once again ready to receive heat in the evaporator.

The colder the air, the harder it is to withdraw calories from it. Similarly, the higher the hot water setting, the harder it is for the heat pump to return the calories withdrawn



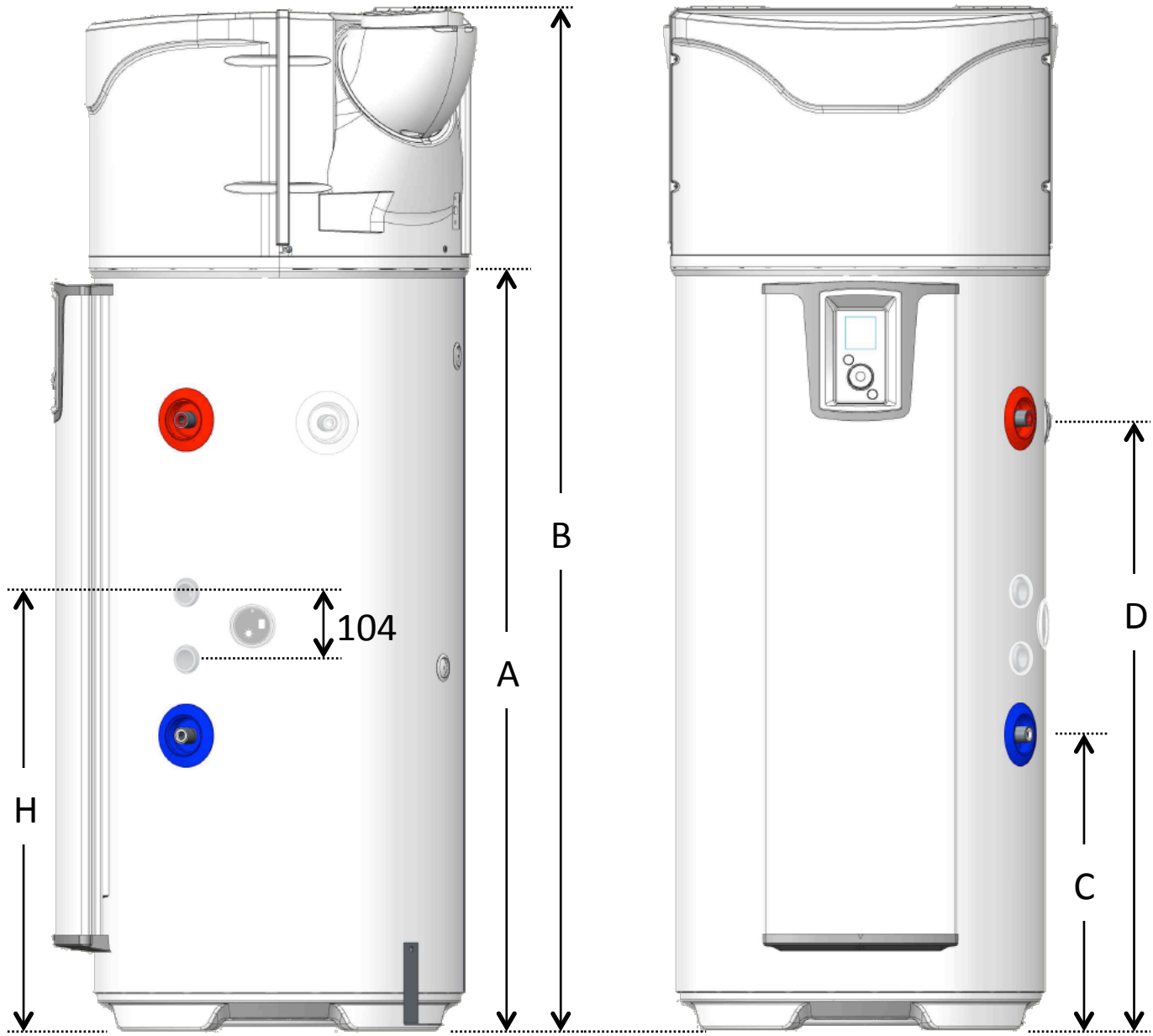
5. Technical data

Model		200 liters	270 liters
Dimensions (Height x Width x Depth)	mm	1609 x 620 x 665	1949 x 620 x 665
Empty weight (model without coil)	kg	85	93
Empty weight (model with coil)	kg	100	108
Nominal capacity	L	200	270
Hot and cold water connection			¾ " M
Coil's connection			1" M
Coil's heating surface	m ²		1,2
Coil's power at T _{Primary} 60°C and flow 1,5m ³ /h	kW		16
Anticorrosion system			ACI Hybrid
Rated water pressure	Bar		8
Electrical connection (voltage/frequency)	-	230V single phase 50 Hz	
Maximal total power absorbed by the device	W		2465
Maximal power absorbed by the heat pump	W		665
Power absorbed by the auxiliary electrical unit	W		1800
Heat pump water temperature setting range	°C		50 to 62
Heat pump user temperature setting range (air temperature)	°C		-5 to +43
Duct diameter	mm		160
Air flow (without duct) at low speed	m ³ /h		300
Air flow (without duct) at high speed	m ³ /h		390
Load losses acceptable on ventilation circuit, without affecting performance	Pa		25
Sound power level	dB(A)		50,3
Sound pressure level at 2m	dB(A)		33,5
R134a refrigerant capacity	kg	1,25	1,35
Hot water quantity at 40° : V40td in 8h(Off-peak)	L	312	347
Hot water quantity at 40° : V40td in 14h (Off-peak+6h)	L	579	607

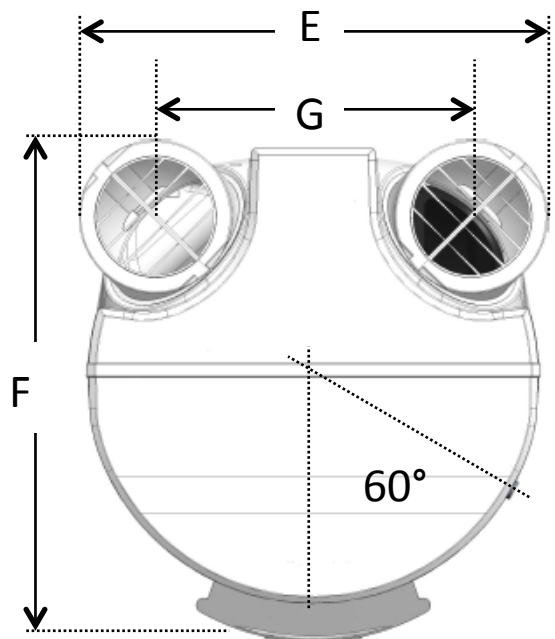
Performance at 7°C air temperature (EN 16147)

Coefficient of performance (COP)	-	2,8	2,9
Tapping cycle	-	L	XL
Standby power input (P _{es})	W	27	30
Heating up time (t _n)	h.min	7h54	10h41
Reference hot water temperature (T _{ref})	°C	54	52,9
Flowrate (air)	m ³ /h	305,7	287,6

6. Dimensions

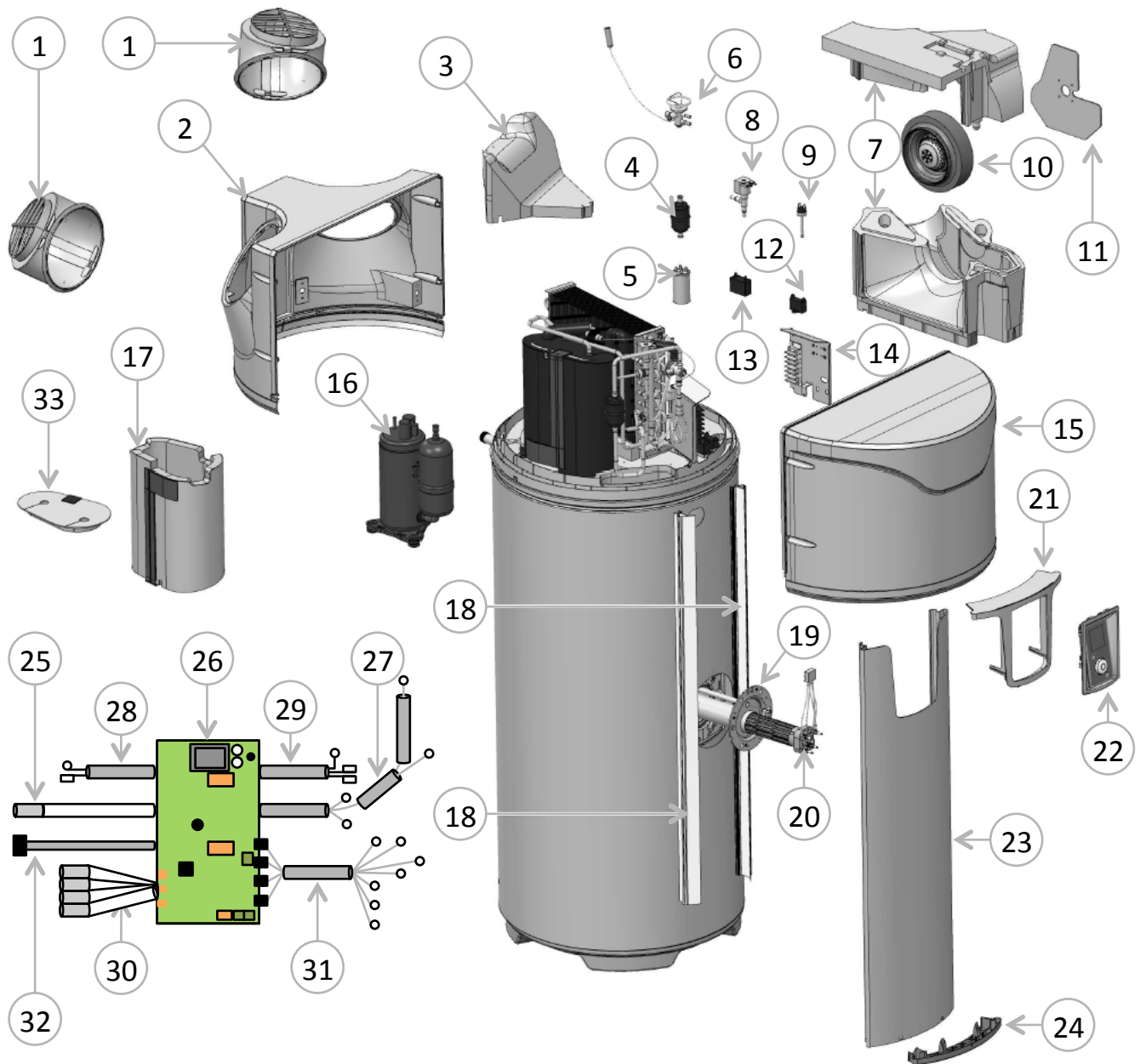


Ind	MODEL	200 STD	200 ECH	270 STD	270 ECH
A	Condensate outlet	1221	1221	1562	1562
B	Total height	1609	1609	1949	1949
C	Cold water inlet	304	462	304	462
D	Hot water outlet	961	961	1300	1300
E	Total width	620	620	620	620
F	Total depth	665	665	665	665
G	Distance between air inlet and outlet	418	418	418	418
H	Coil inlet	-	581	-	581



Dimensions in mm

7. Parts list



1 Adjustable inlet and outlet

2 Rear cover

3 Spoiler

4 Filter

5 Capacitor 15 μ F

6 TX valve

7 Fan scroll casing

8 Hot gas valve assembly

9 Pressure switch

10 Fan

11 Fan plate support

12 Capacitor 1,5 μ F

13 Capacitor 4 μ F

14 Terminal connection block

15 Front cover

16 Compressor

17 Compressor jacket

18 Guide support rail

19 Hybrid heating sleeve

20 Electrical heating element

21 Controller desk

22 Controller

23 Front column

24 Lower column plug

25 ACI wire

26 Regulation controller PCB

27 Compressor wire

28 Water sensor wire

29 Electrical backup wire

30 Heat pump sensors wire

31 Fan wire

32 Controller wire 10

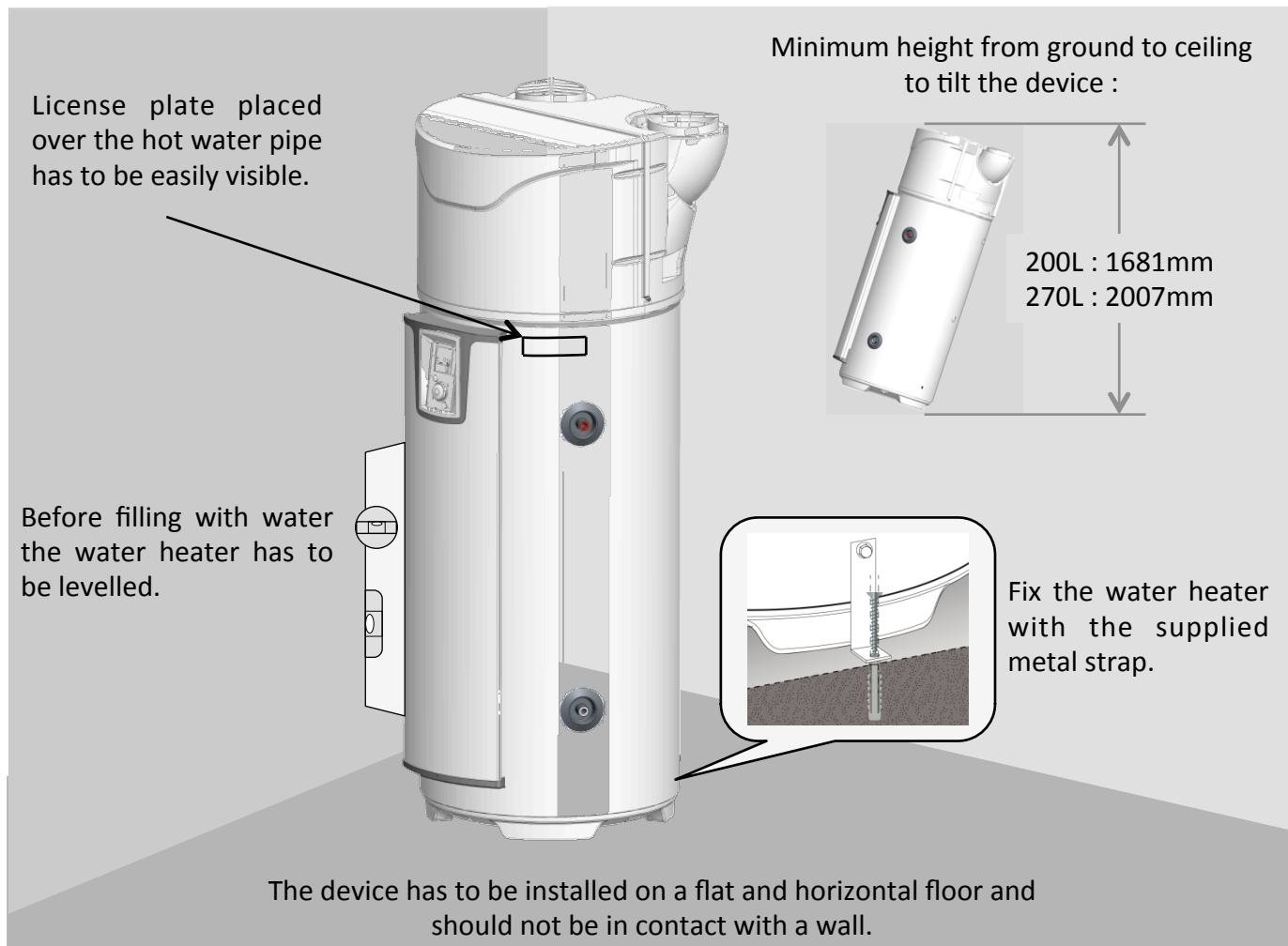
33 Compressor jacket cover

Installation

1. Product installation



For internal (inside home) installations, a safe tray is recommended in accordance with AS/NZS 3500.4



In accordance with AS/NZS 60335.2.21 the water heaters must be fixed to the ground using the attachment provided and in compliance with the New Zealand Building Code Clause G12, Seismic restraint of storage water heaters.

The clearance required needs to be adequate for service/replacement of cold water inlet piping devices, PTR valve and tempering valves (where fitted), elements and thermostats. This may be facilitated by correct orientation of the cover positions when installing. There are no operational clearance limitations to surrounding structure. PTR valve removal requires approximately 150 mm for withdrawal.

AS/NZS 3500.4.2 – National plumbing & drainage. Hot Water Supply Systems – Acceptable solutions.

The floor has to support a load of 400 kg minimum (surface below the water

The selected place of installation has to conform to the protection level IP X1B,

Combustible Material :

It is recommended to not place combustible material on or adjacent to the water heater.

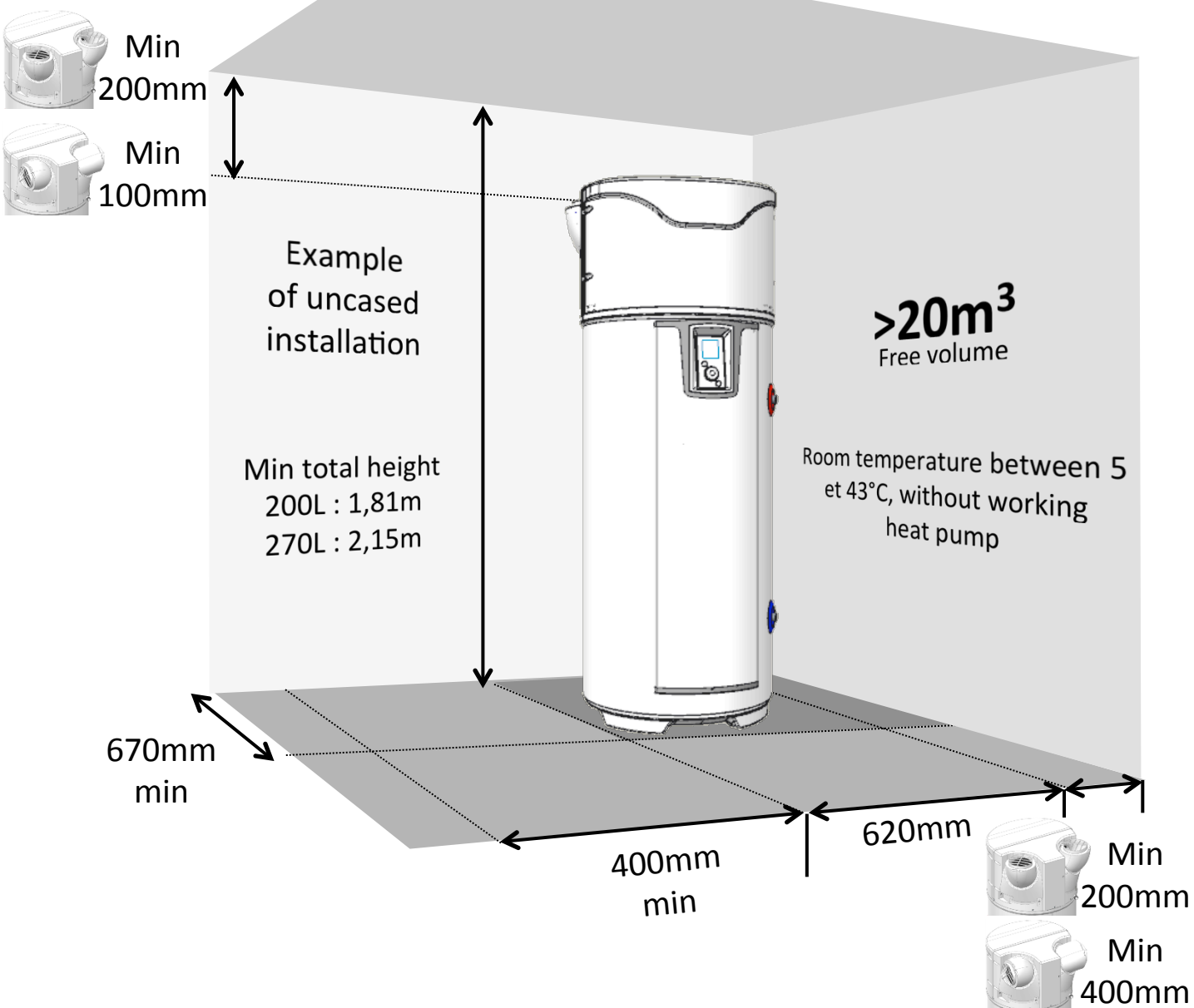
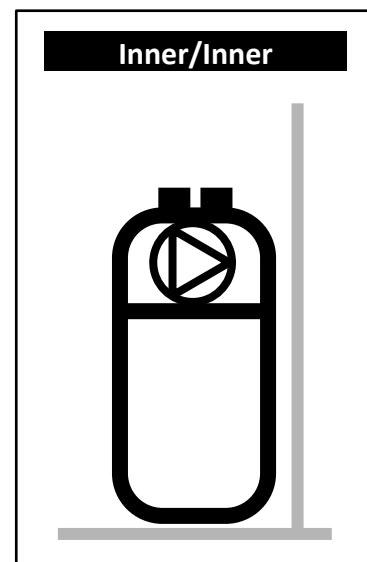


2. Installation uncased (Ambient air).

- ✓ Unheated room with ambient temperature $> 5^{\circ}\text{C}$ and insulate the heated rooms of the dwelling.
- ✓ Parameter « Air pipes » to be set on « Inner/Inner »
- ✓ Recommended room = underground or partially underground, room where average yearly temperature is $> 10^{\circ}\text{C}$.

Examples :

- Garage : recovery of free energy from combustion engine or of domestic devices.
- Washing room : reduce humidity of the room and recover lost energy of washing machine and dryer.



It is mandatory to respect indicated distances to prevent air looping .

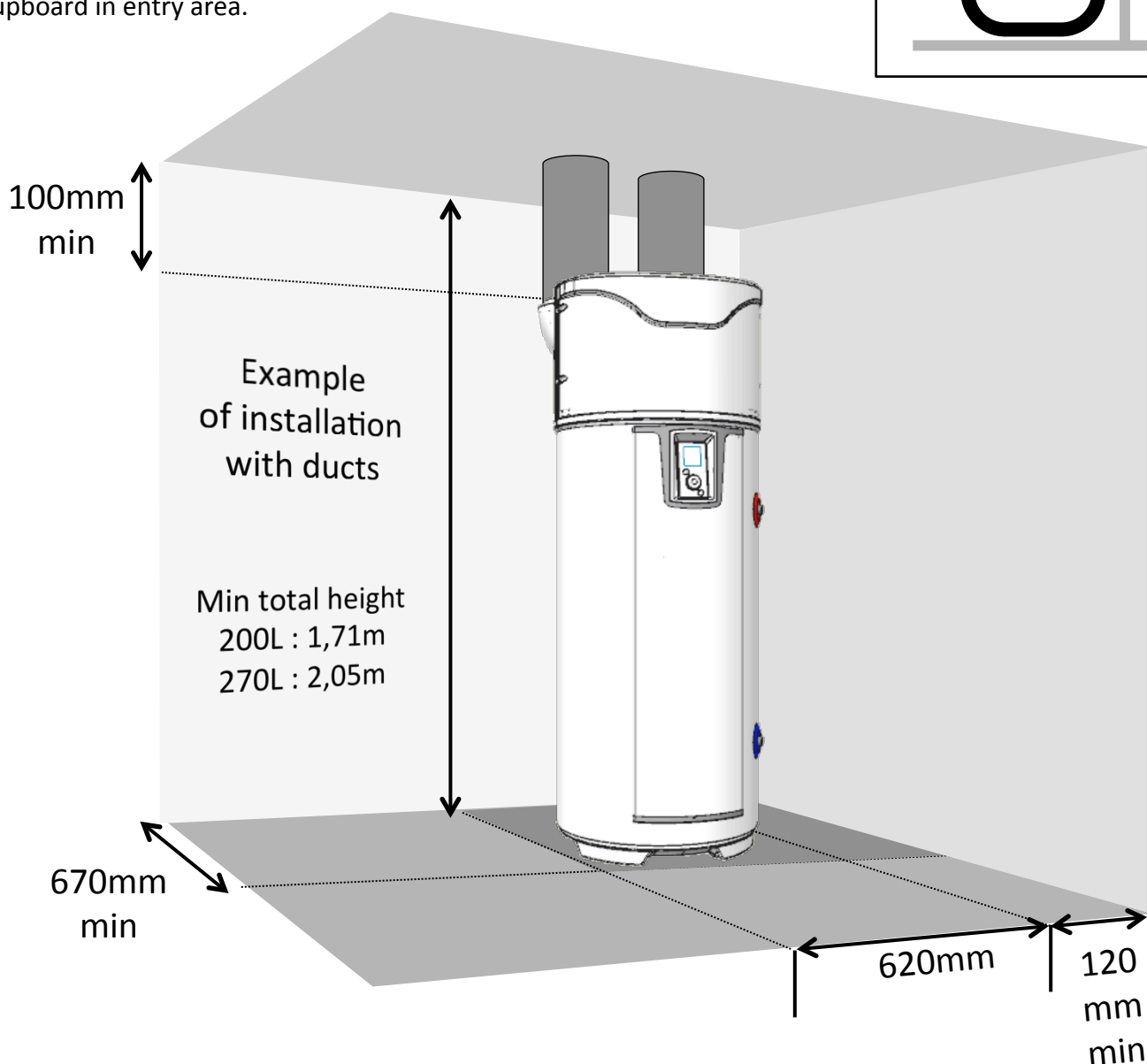
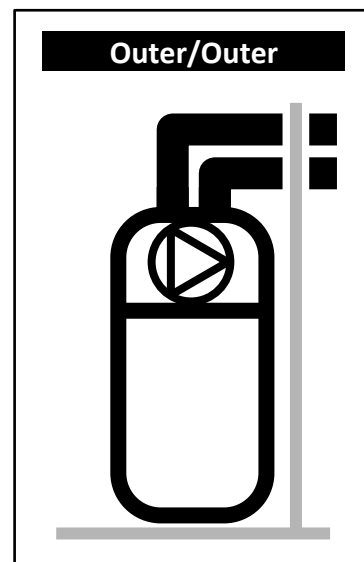
Keep a free space of 500 mm in front of electric compartment and 300 mm around hydraulic connections to allow easy access for maintenance.

3. Installation cased (2 ducts).

- ✓ Room at minimum frost free ($T > 1^{\circ}\text{C}$).
- ✓ Parameter « Air pipes» to be set « Outer/Outer »
- ✓ Recommended room : living area (the heat loss of the water heater remains in heated area), close to external walls. Avoid installation of water heater and/or ducts near to sleeping rooms.

Examples :

- Washing room,
- Storage room,
- Cupboard in entry area.



Respect the maximum length of ducts. Use insulated ducts.
Install mesh vents for air in/out to avoid intrusion of objects or animals.



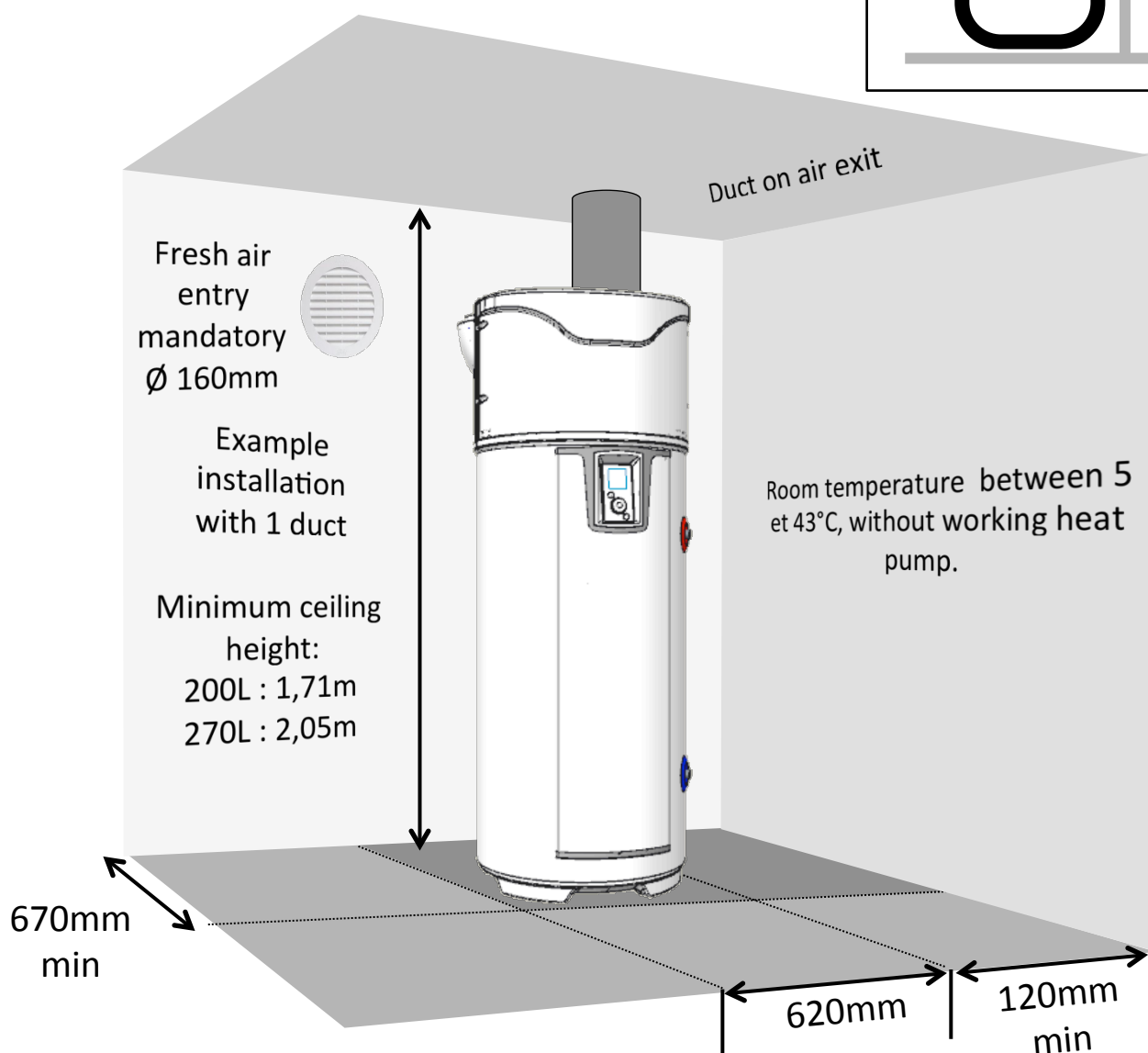
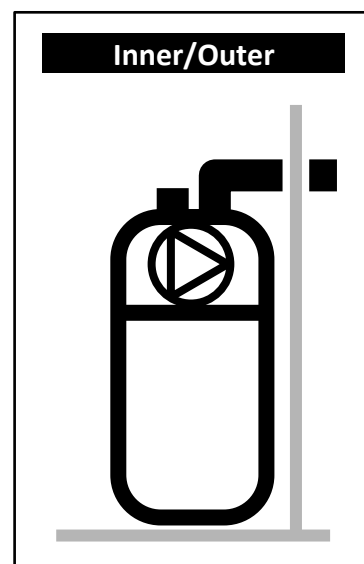
Keep a free space of 500 mm in front of electric compartment and 300 mm around hydraulic connections to allow easy access for maintenance.

4. Installation semi – cased (1 duct for air exit).

- ✓ non heated room with ambient temperature > 5° C and insulated to the heated rooms of the dwelling.
- ✓ Parameter « Air pipes » to be set on « Inner/Outer ».
- ✓ Recommended room = underground or partially underground, room where average yearly temperature is > 10° C°.

Examples :

- Garage : recovery of free energy from combustion engine or of domestic devices
- Washing room : reduce humidity of the room and recover lost energy of washing machine and dryer.



The pressure reduction in the room generated by the air extraction causes fresh air entry through doors and windows. Plan an air entry (Ø 160mm) from outside to avoid air sucking from heated living area.

In winter time the renewed air can cool the room.



Keep a free space of 500 mm in front of electric compartment and 300 mm around hydraulic connections to allow easy access for maintenance.

5. Prohibited configurations

- Water heater extracting air from heated room.
- Connection to a heat recovery ventilation unit.
- Connection of the ducts to the attic.
- Duct on outside air and air exit indoor.
- Connection to an underground air duct.
- Water heater installed in a room together with a boiler connected to a chimney with natural draft and 1 duct to outside.
- Direct air connection to a cloth drying machine.
- Installation in dusty rooms.
- Intake of air with solvents or explosive materials.
- Direct air connection to cooking hoods with polluted and fatty air.
- Installation in a room where freezing temperature can occur.
- Objects stacked on the top of the device.

6. Hydraulic connection



The use of a circulation loop should be restrained. Such an installation may disturb the stratification inside the tank. This triggers more working cycles for the heat pump and the potential use of the electric backup heater.

Before making the hydraulic connection, it is essential to clean the feed pipes thoroughly to avoid the risk of metal or other particles entering the tank or the water heater.

Cold water piping should be provided with a 350 – 500 kPa Pressure Limiting Valve at the point of cold water connection to the water heater. In addition to the Pressure Limiting Valve, It is a requirement of AS 3500.4 & NZBC G12 that both a Stop Valve and a Non Return Valve are installed upstream of the Product.

No parts (stop valve, pressure reducer, etc.) must be placed between the pressure limiting valve and the cold water inlet of the water heater, apart from a copper pipe.

Note: since limited water discharge from pressure limiting valve is normal in the heating operation, the discharge pipe needs be connected to external drain.

6.2. Hot water connection



Do not connect copper tubes directly on the tank connection. You have to fit the supplied insulation union (included in the supply).

In case that the tank connection is corroded without this protection the warranty will not apply.

6.3. Connection of circulation loop



Do not connect copper tubes directly on the tank connection. You have to fit the supplied insulation union (included in the supply).

In case that the tank connection is corroded without this protection the warranty will not apply.



If the circulation connection is not used install the plug and seal on this connection (included in the supply).

6.4. Connection of primary circuit (for water heater with coil)

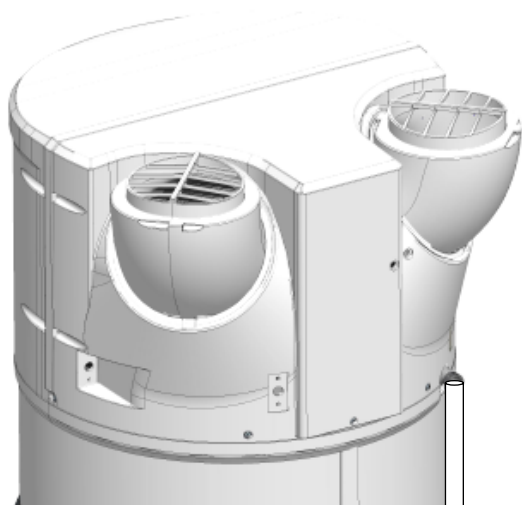


Protect the circuit against over pressure due to water expansion during heating with a safety valve 3 bar – 0,3MPa, or an expansion vessel open type (atmospheric pressure) or a closed expansion vessel. The nominal circuit pressure should not exceed 3 bar – 0,3MPa, the temperature not higher than 85°C. If the coil is connected to solar panels use an adapted water glycol mix to protect against frost and corrosion : e.g. « TYFOCOR L ». If the circuit is equipped with stop valves on the coil entry and exit do never close both valves simultaneously to avoid the risk of over-pressure in the coil.

6.5. Condensate evacuation



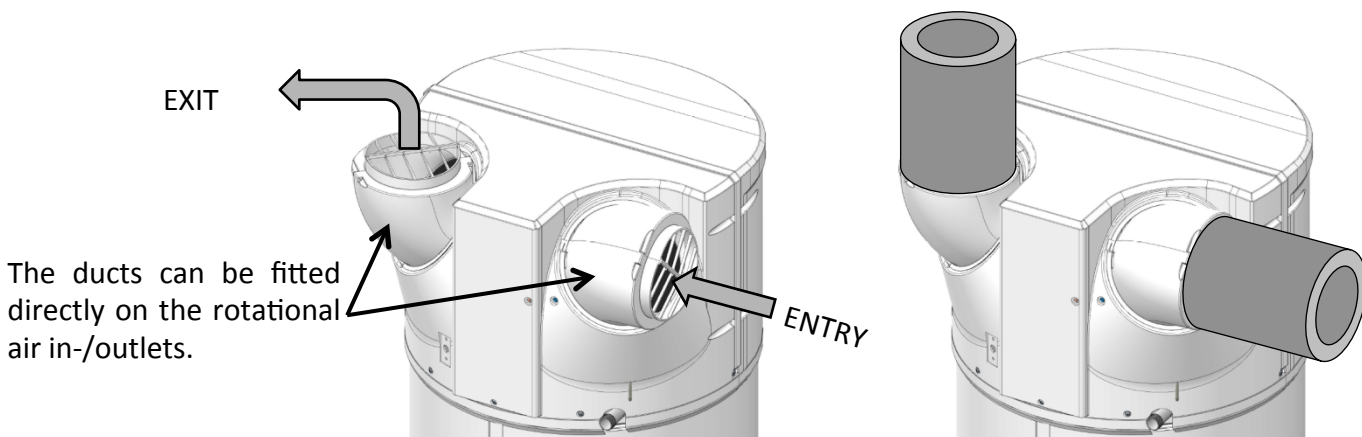
The temperature drop of the air passing through the exchanger forms condensation from humidity in the air. The condensed water is evacuated on the rear of the tank using the supplied plastic tube.



Depending on the degree of humidity in the air you can get up to 0,25l/h of condensation. The evacuation of condensate should be made directly to the PTR drain point.

7. Air connection

If the volume of the installation room is not sufficient the water heater can be connected to ducts with a diameter 160 mm. If the ducts are not insulated this could generate condensation in the ducts during operation. **The use of insulated ducts is mandatory.**



If the water heater is ducted the **parameter setting** has to be adapted.

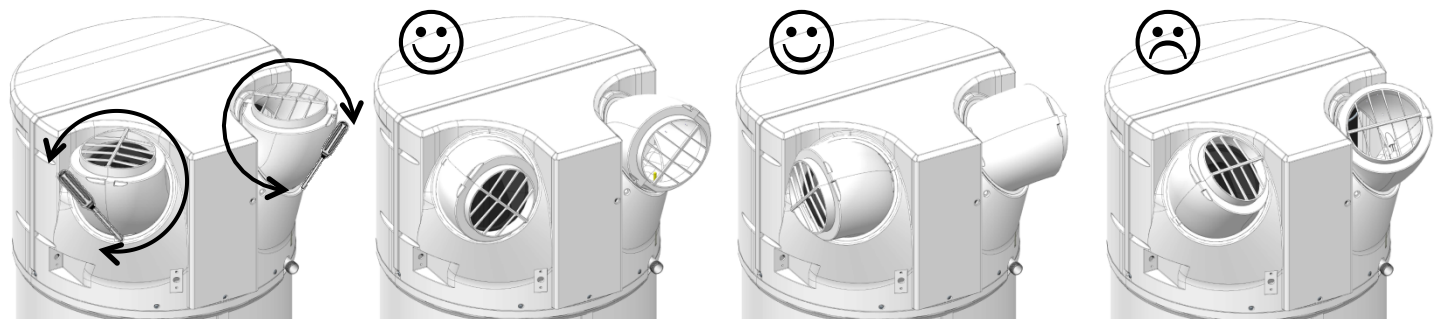
The total pressure drop of ducts and accessories for air intake and exit has to be less than 150 Pa. The recommended length of ducts has to be respected.

A poor duct installation (duct compressed, length or number of bends too high...) can reduce the performance.

Number of bends 90°	Total duct length with air intake and exit (ATL catalogue)	
	ALUMINIUM SEMI RIGID	PEHD
0	8m	19m
1	7m	16m
2	5m	12m

Note : The rotational air connections allow to reduce or avoid the duct bends. For further information on the rotational air connections, see the § « Positioning of the water heater ».

Position of the air intake and exit.



1 Unscrew the fixing screws of the air connection, then turn in the required direction.

2 Rotate by 120°, position to the rear.

3 Rotate again by 120°, position to the opposite sides.

4 Do not position the air connection partially face to face. Position not allowed as cold air will be recycled !

8. Electric connection

Refer to the electric connections diagram below and on [page 34](#).



**The water heater must not be switched on before complete filling with water.
The water heater must be connected to electricity supply permanently.**

The water heater has to be connected on single phase 230/240 V alternative current. Connect the water heater with a cable min size 1.5 mm².

If the power cable is damaged, the manufacturer, the after-sales service or similarly qualified people must replace it, to avoid danger.

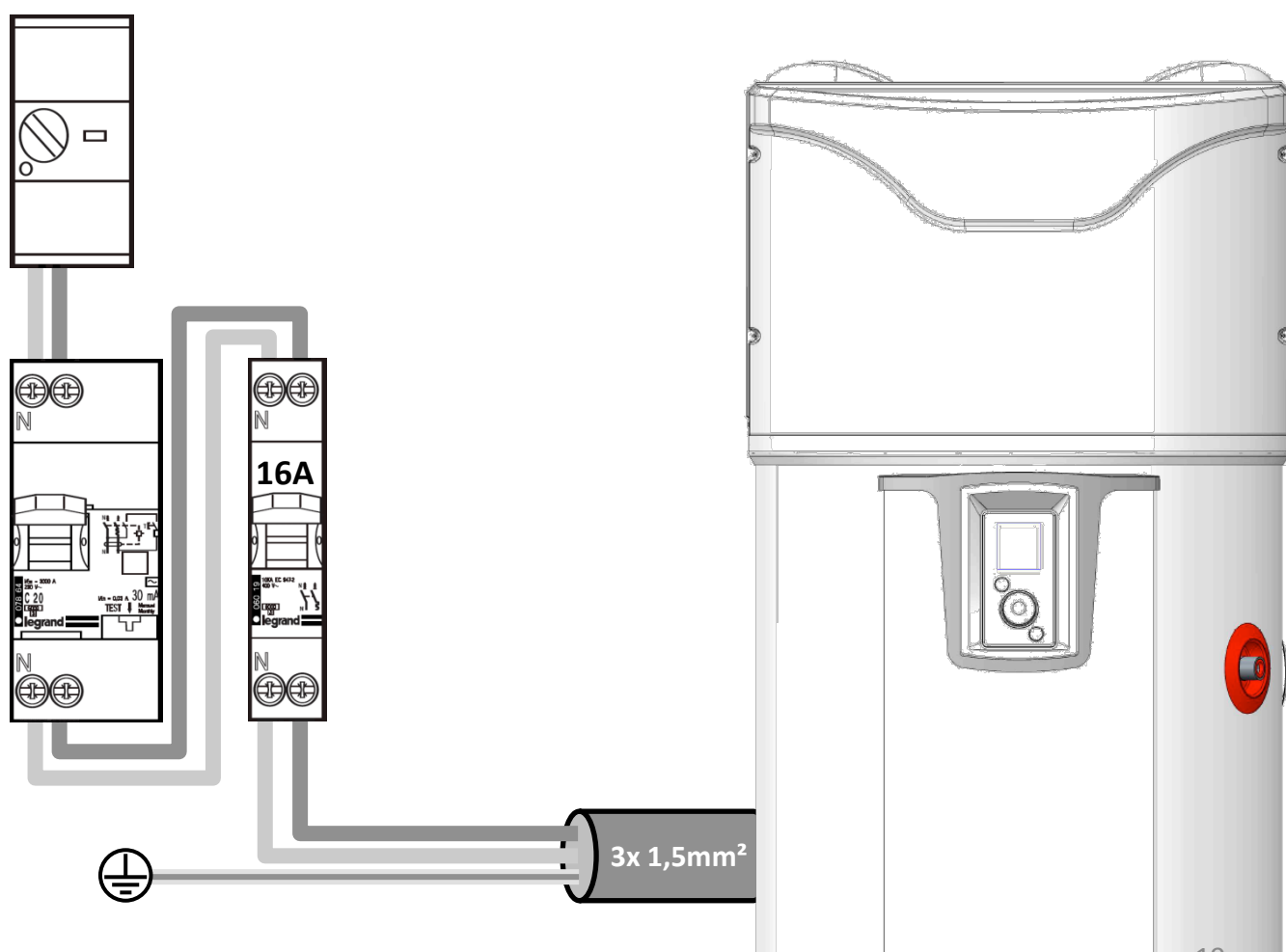


Never supply power directly to the heating element.

The security thermostat fitted to the auxiliary electric heating element must be replaced by an authorised agent. **Failure to respect this clause invalidates the warranty.**

Electrical work must be carried out by a licensed tradesperson and in accordance with Electrical Wiring Rules of Aus/NZ. Circuit Isolation and fixed appliance regulations of the Wiring rules shall be complied in regard to connection to supply, circuit isolation, and protection.

Electric connection diagram



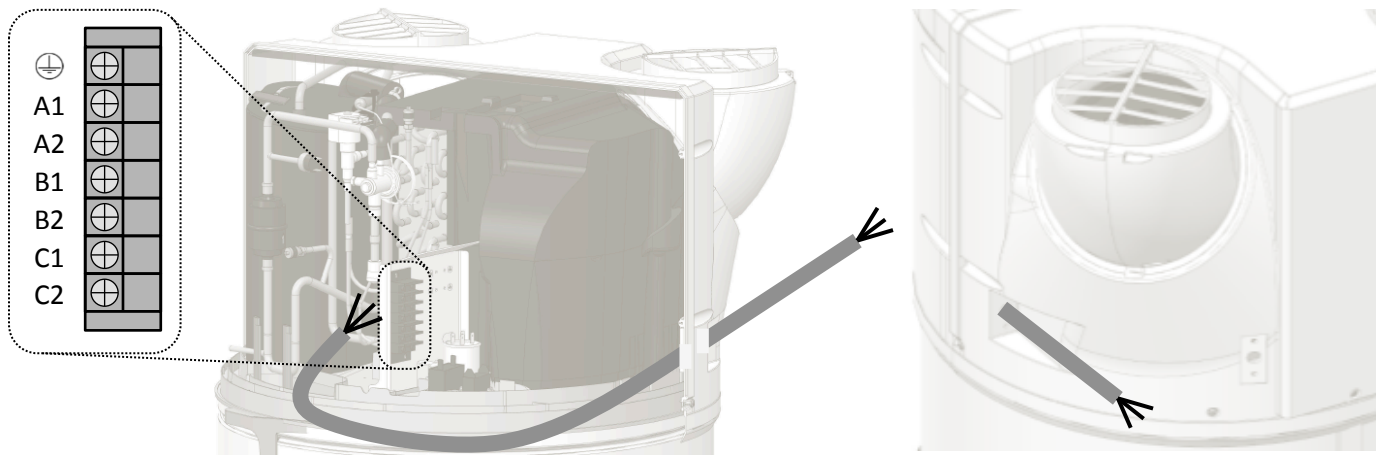
Connection to earth is mandatory.

9. Connection of optional equipment

 Always switch-off power before any operation.

To access the wiring board read the instructions to remove the front cover.

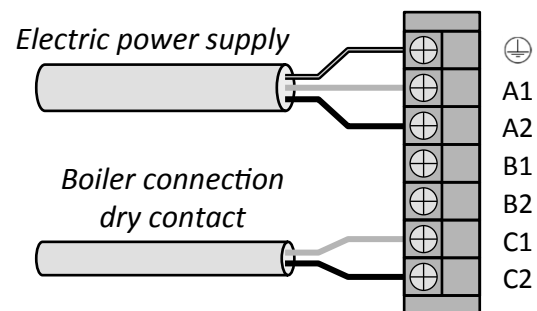
 A dedicated cable channel exists for the connections. Please use it.



9.1. Connection to a boiler.

Water heaters with a coil can be connected to a gas / fuel oil boiler. In this configuration, the water heater commands the heat generation to the boiler.

The connection of the boiler has to be made on the contacts **C1** and **C2** of the wiring board.

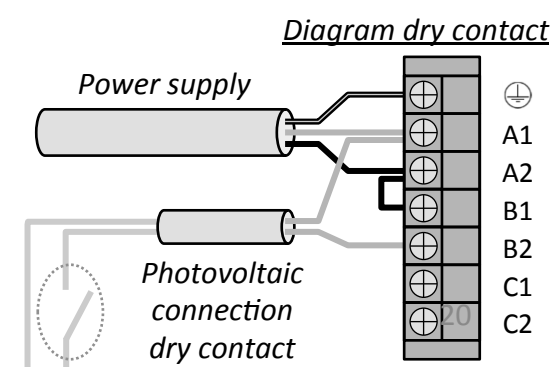
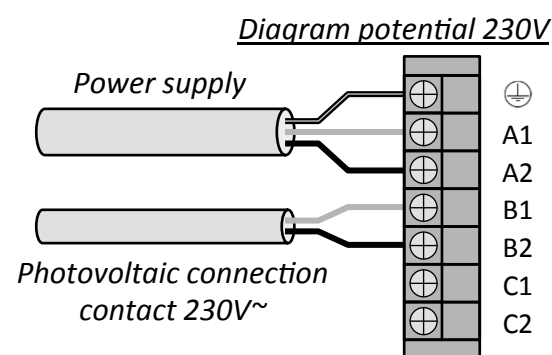


9.2. Connection of a photovoltaic station.

When associated with a photovoltaic system you can store the excess energy produced in the water heater as hot water. Once the photovoltaic panels produce enough energy, the inverter sends a signal to the water heater which switches into a special mode (PV) activating the heat pump. If the inverter signal stops, the water heater switches automatically back to the previous operating mode. In this PV mode the set temperature is changed to 62 ° C (no modification possible) and on the display appears «PV».

The water heaters linked to a photovoltaic installations has to be connected to the inverter module.

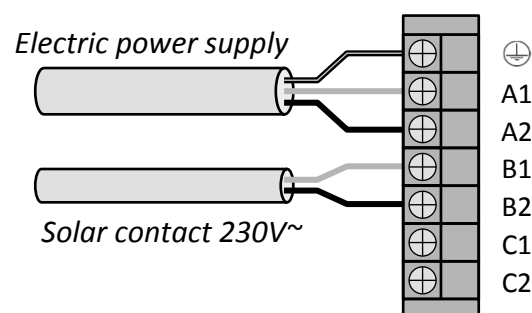
The connection to the inverter is done with **B1** and **B2** of the wiring board.



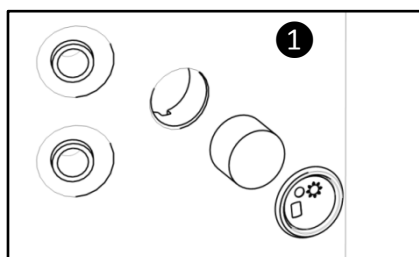
9.3. Connection to a solar station.

For thermal solar operation the water heater (models with « solar» exchanger) has to be connected to the solar station. In this configuration, the water heater receives the signal to operate the electric backup from the solar station. All other functions are not active. This connection should not be used for an automatic multi-energy operation.

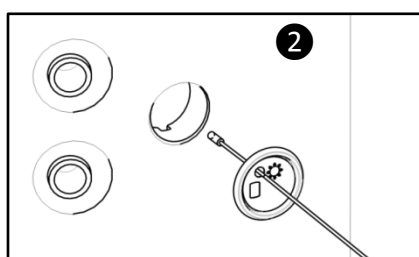
The connection to the solar station should be done on the contacts **B1** and **B2** of the connection board.



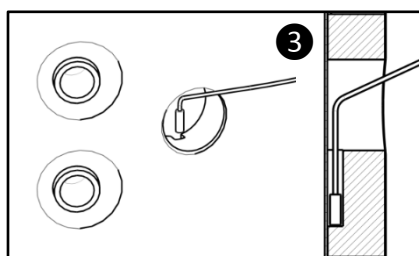
9.4. Installation of the solar sensor



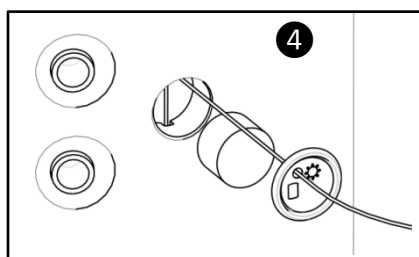
Take off the plastic cap and the foam plug located near the exchanger connections.



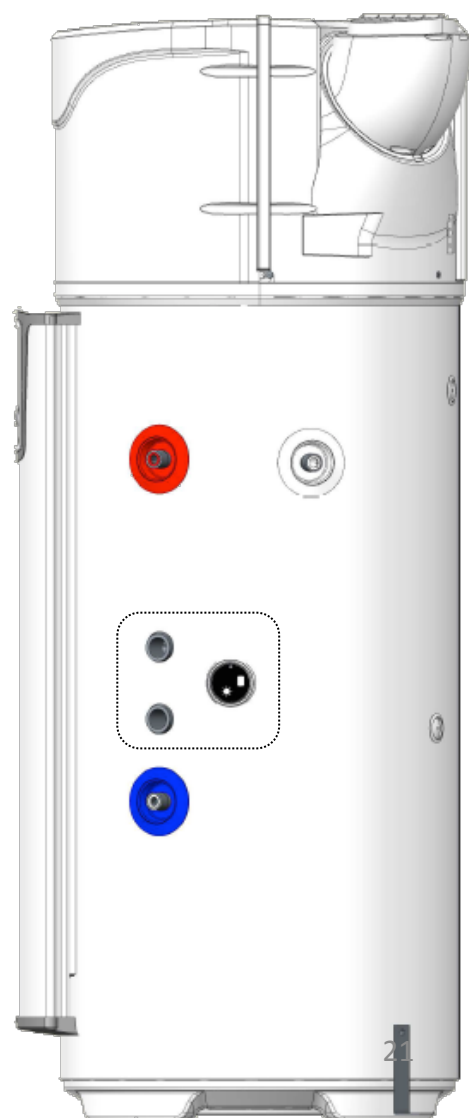
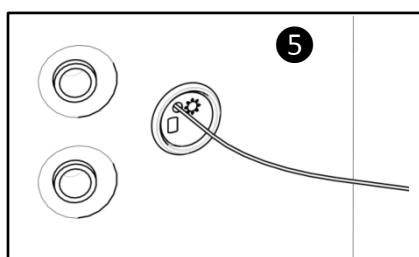
Push the sensor through the plastic cap (the cap has dedicated perforations).



Insert the sensor in the sensor slot and make sure that it is in correct position in the bottom of the sensor slot.



Replace the foam plug and clip the plastic cap.



10. Commissioning

10.1. Filling of the tank

Fill the water heater by opening all hot water taps and opening the cold water inlet to allow the water heater to fill and air in the system to be expelled.

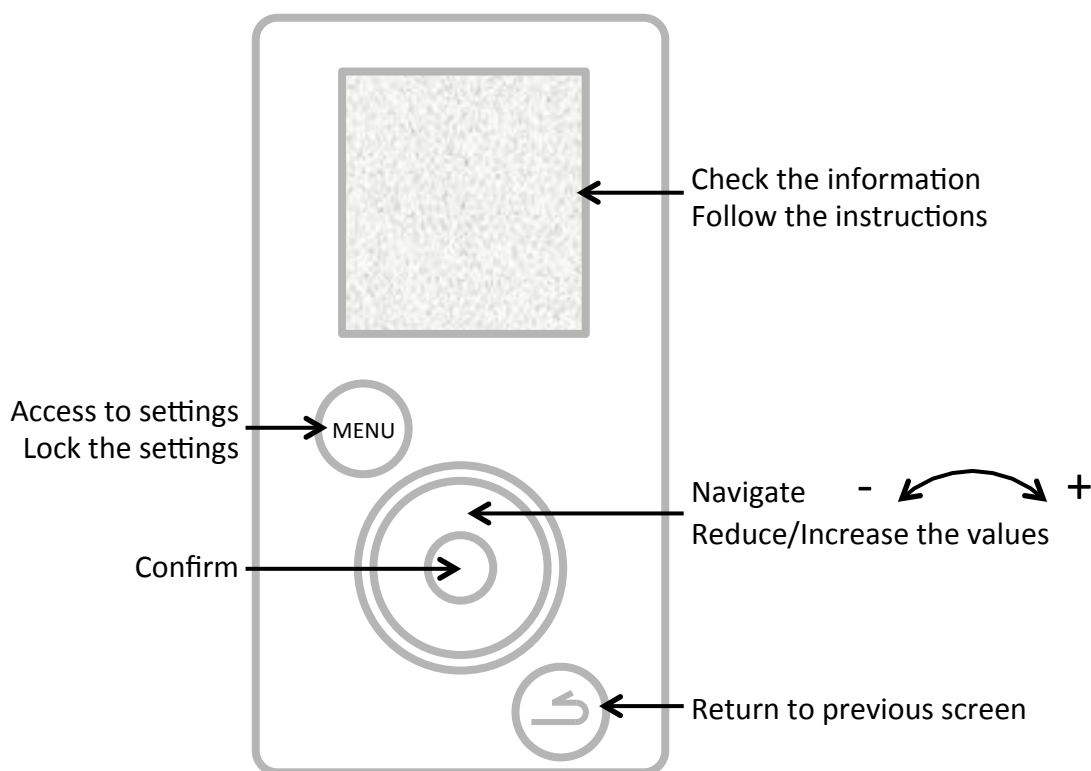
Close each hot water tap, as the flow becomes free of air. Check all piping for leaks. Check that water flows freely by gently operating the lever on the Pressure Temperature Relief valve.

Power should not be turned on until the water heater is completely filled with water.

10.2. First operation



If the water heater has been tilted wait for minimum 1h before operation.



- 1 Switch on the power supply.
- 2 Check that no error message appears on the screen.
- 3 At the first switching on the setting instructions are shown on the display. Follow thoroughly the instructions on the display to set the parameters (Date and time, Air ducts, Installation, circulation loop, Photovoltaic system, operation range, Anti-legionella system).
- 4 When the parameters are set check the functions of the water heater (see § « Checking of operation »).

To return later to the settings, check the paragraphs « Setting of the installation » or « Parameters of installation ».

10.3. Settings of the installation.

Access again to the various settings of the installation :



Settings

• Date and time

Set the day and confirm. Proceed in the same way for the month, the year, the hour and the minutes.

• Operation time

This parameter defines the allowed working hours for the operation of the heat pump, the electric backup and, if existing, the hydraulic backup depending on the need of DHW :

Permanent 24h/24h

Start of the machine any time of the day,

Programming

Start of the machine during the programmed period only.

• Language

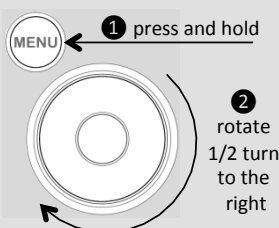
Setting possible in French, English, Flemish, Spanish, Portuguese, German, Italian et Polish.

• Additional electric backup

Allows to activate or not the use of the electric backup. If not activated, the water heater will never use the electric backup; in case of low air temperature a lack of hot water is possible.

10.4. The parameters to set on installation.

(If not set during the first commissioning)



The parameters can be used in MODE INSTALLER



Press and hold the button MENU and rotate the knob a half turn to the right.

To exit the installer mode, proceed in the same way or wait for 3 minutes.

Access to parameters →



Settings

• Air pipes (aeraulics operation) :

This parameter defines the type of aeraulics connection:

Inner/Inner

Air intake and exit are not connected to air ducts (ambient air)

Outer/Outer

Air intake and exit are connected to air ducts (fully ducted)

Inner/Outer

Air exit is connected to an air duct (semi ducted)

• Installation (for models with coil) :

Thermodynamics only

The internal coil is not used

Connected to boiler

The internal coil is connected to a boiler managed by the water heater

Connected to solar sys.

The internal coil is connected to a solar system

In « Connected to boiler» mode , you have to define the degree of priority in the operation of the boiler and the heat pump in 4 levels :

HP prioritized

The backup operates at the end of heating up in case of low air temperature (<7°C)

HP optimized

The backup operates at the end of heating up and ± early depending on air °C

Boiler optimized

The heat pump works on the start of heating up and stops ± early depending on air °C

Boiler prioritized

The heat pump works on the start of heating up and for air temperature > 10°C.

- **PV system (Photovoltaic)/Smart-grid :**

This parameter activates the pairing of the water heater with a photovoltaic installation. This operating mode allows the forced start of the heat pump when the photovoltaic inverter sends a signal to the water heater. The regulation switches automatically to the previous operating mode 30mn after the loss of the photovoltaic signal.

During the signal reception the set temperature is automatically raised to 62°C (can not be changed).

- **Exhaust air :**

Allows to activate the air extraction function (2 speed : 300 or 390m³/h). When the water heater does not heat the tank, the ventilator turns to evacuate the ambient air to the outside (only possible to activate if the aeraulics connection is set to Indoor/Outdoor).

- **Anti-Legionella function :**

Allows to activate the function of water disinfection several times per month.

The water temperature reaches 62°C one to four times per month depending on the setting.

- **EMERGENCY-mode :**

When activated the water heater operates only on the electric backup heater.

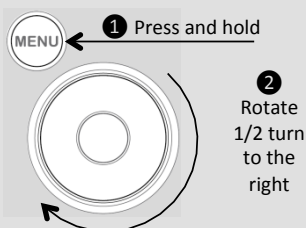
- **Circulation cycle:**

This mode is mandatory when a circulation loop is installed.

The set temperature changes to 65°C and the operation of the heat pump is adapted to this use.

The heat pump is allowed to work permanently (programming is not available).

10.5. Functional check



Functional check is available in MODE INSTALLER



Press and hold the button MENU and turn the knob half a turn to the right.

To exit the mode installer, proceed the same way or wait for 10 minutes.

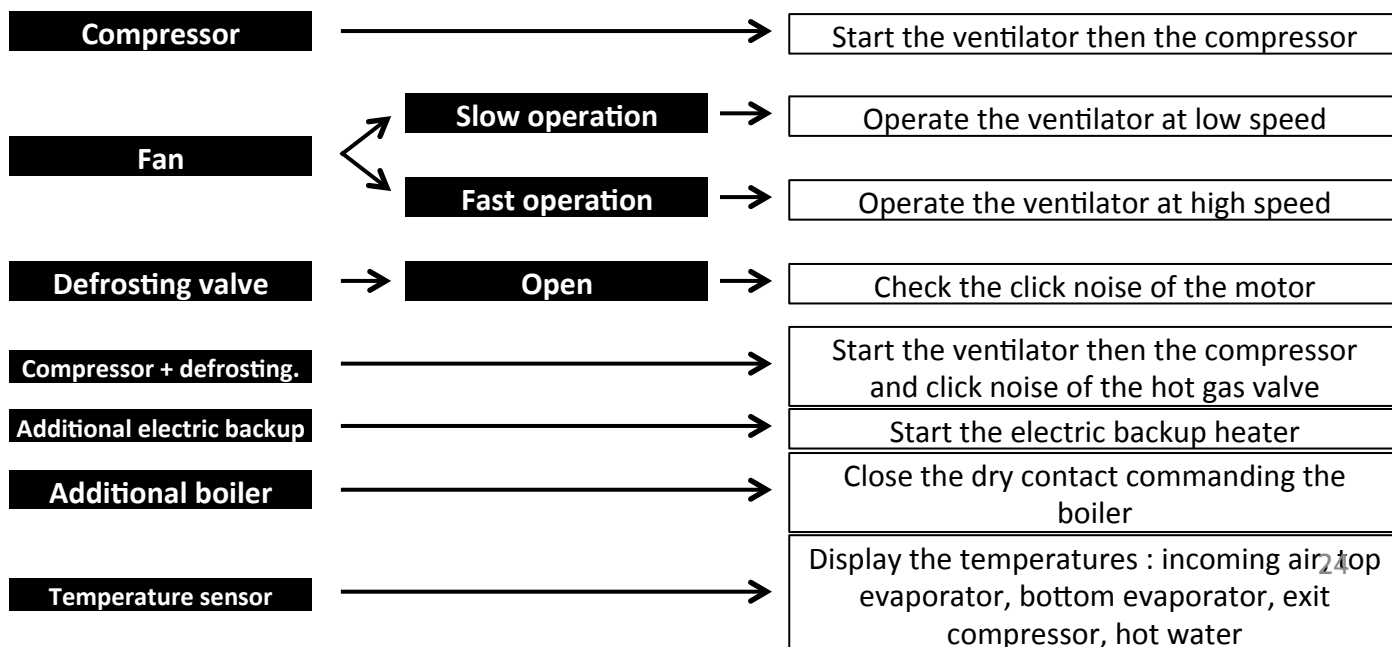
Access to parameters →



Test →

Actuator

The TEST menu allows to operate all components of the product.



10.6. Choice of operating mode

Press the button



to access the menu

Mode

Mode AUTO (only available on installations «heat pump only ») :


This operating mode manages automatically the choice of energy allowing to maximize economies while supplying a sufficient hot water comfort level.

The water heater analyses the water consumption of the previous days to adapt the hot water production as required. It reacts to unplanned events by launching working cycles during the day to assure enough hot water. The set temperature varies automatically between 50 and 62°C according to the consumption profile. The water heater chooses preferably the heat pump. The electric backup can automatically be added to provide the correct hot water volume.



This mode is not available on installations « boiler backup » and « solar backup »

Mode MANUAL :

This mode allows to define the desired hot water quantity by selecting the set temperature. The set temperature is also displayed as equivalence of showers  : about 50 L of hot water).

When the mode ECO is not activated, the water heater favors the operation of the heat pump. However if the air temperature is low or the water consumption high, the electric (or boiler) backup can be used at the end of the heating cycle to reach the set temperature.

When the mode ECO is activated, the water heater works exclusively with the heat pump in the air temperature range of -5 to +43°C. The electric backup heater is not used. This function maximizes the energy savings but can cause a lack of hot water.

Whatever setting of ECO, the electric backup heater is used automatically if the air temperature is outside the working range to assure a sufficient hot water volume.



The mode ECO activated/not activated can't be changed on installations « Boiler backup »



Mode MANUAL on installation « Solar backup »


This mode allows the work of the heat pump in combination with a solar backup. However the simultaneous working of the heat pump and the solar backup can damage the product. The heat pump must be used in periods when solar energy is not available (to do this use the programming mode of the water heater)

The mode BOOST : this mode activates the heat pump and all other available energy sources (boiler backup if set, electric backup) at the same time to reach the maximum set point of 62°C.

The mode ABSENCE : this mode maintains the hot water temperature above 15°C by using the heat pump. The boiler and electric backup can be used if the heat pump is not available.

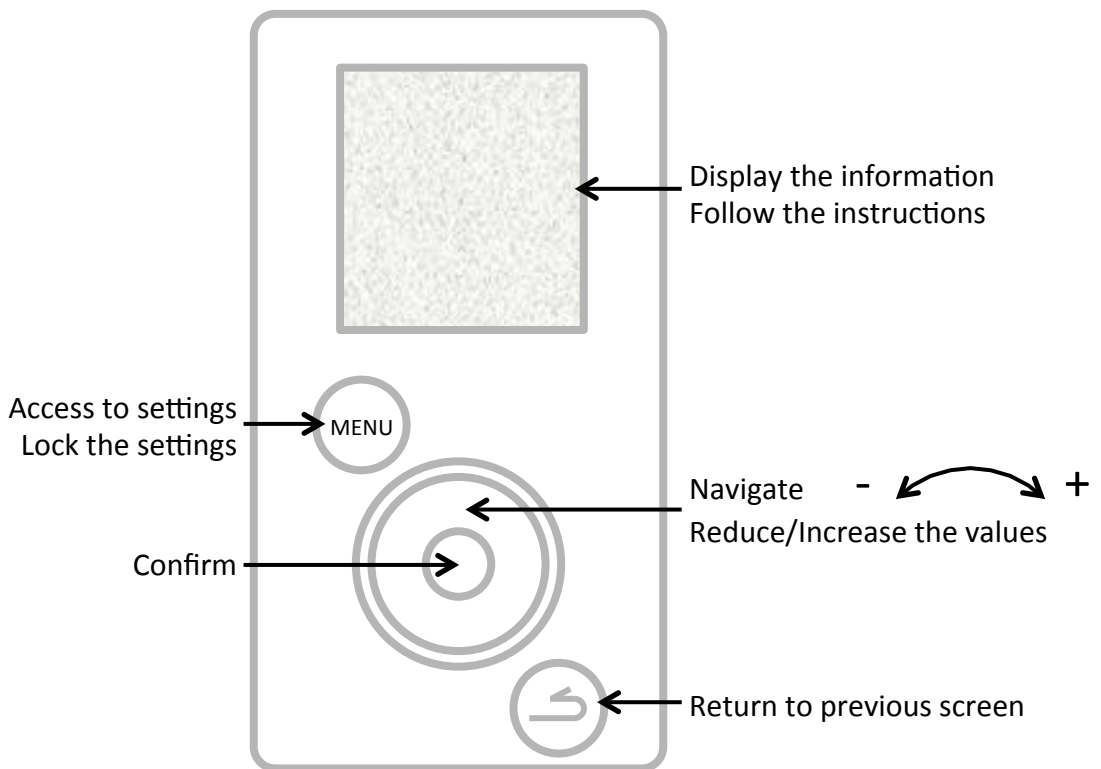
The mode LOOP : this mode allows the heat pump to work permanently to reach the set point of 62°C. The backups (boiler if set and electric) may be used after 7h of operation of the heat pump.

10.7. Locking of interface

Press  for some seconds to lock/unlock the interface.

Operation

1. Interface.



2. Description of pictograms.

BOOST

Fast heating confirmed



Electric backup working



Absence registered / in operation



Heat pump working



Present hot water temperature



Boiler backup working



Waiting



Reception of signal on solar system
contact

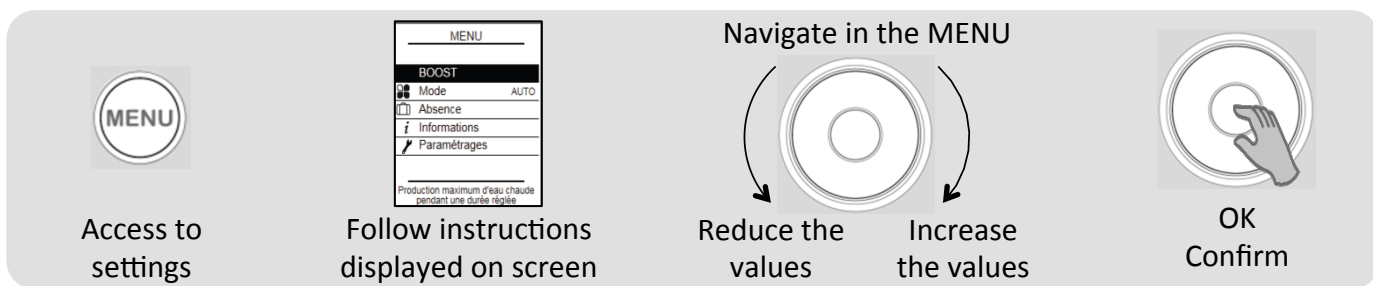


Warning



Reception of signal on
photovoltaic / Smart-grid contact

3. Main menu.



BOOST

Increase the hot water production during the period :

Set the number of days BOOST should work (from 1 to 7).

At the end of the set period, the water heater resumes the initial operating mode.

BOOST can be stopped at any moment :

Stop BOOST



Choose the operating mode:

Select AUTO or MANUAL (see § « The operating modes »)



Program absence period:

Allows to indicate the water heater

- a permanent absence starting from the present day.
- a programmed absence (*set the starting date and the return date*). The day before return a anti-legionella heating cycle starts.

During the absence period, the water temperature remains above 15°C.

This function can be interrupted at any moment:

Stop absence



Display the energy savings :

Allows to display the working level of the heat pump and of the electric backup during the last 7 days, the last 12 months, since commissioning.

Display the electric consumption :

Allows to display the energy consumption in kw/h, of the last days, the last months, the last years.

Display the parameters :

Allows to display the registered settings.



Set the date and time :

Set the day and confirm. Set the month, the year, the hour and the minutes.

Set the periods of operation :

Allows to define periods when the water heater may start.

Connectivity :

The Water Heater can be paired with devices using



and remotely controlled.

Set the language :

French, English, Dutch, Spanish, Portuguese, German, Italian and Polish.

Additional Electric backup heater :

Allows to deactivate the use of the electric backup heater.

4. The operating modes.

4.1 The installation mode « Heat pump only » :

AUTO: The set temperature varies automatically between 50 and 62°C according to the consumption profile. The water heater chooses preferably the heat pump. The electric backup can automatically be added to provide the correct hot water volume.

MANUAL – ECO Not activated: The set temperature is fixed by the user between 50 and 62°C. The water heater chooses preferably the heat pump. The electric backup can automatically be added to provide the correct hot water volume.

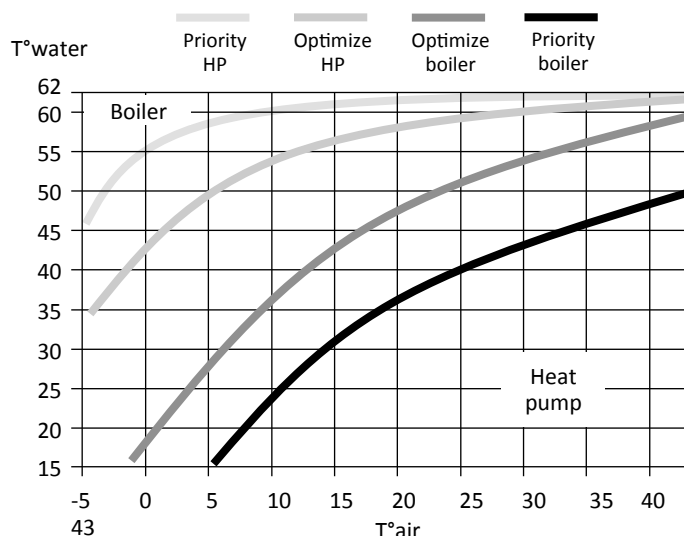
MANUAL – ECO Activated: The set temperature is fixed by the user between 50 and 62°C. The water heater chooses preferably the heat pump to maximize the energy savings. The electric backup is allowed to work if the air temperature is out of the operating range.

4.2 The installation mode « Boiler backup » :

MANUAL : The set temperature is fixed by the user between 50 and 62°C. The water heater chooses preferably the heat pump. The boiler backup can be activated automatically to provide the correct hot water volume. If the backup through the boiler is not available (e.g. boiler switched off), the electric backup will be activated.

SMART Energy Function :

A heat pump uses the available energy in the air and transfers this energy through an exchanger around the tank to the water. The heat pump performance is higher when the exchange parameters are more favorable; i.e. air temperature higher or tank temperature lower. Our regulation evaluates permanently the air and water temperature and what energy source is more economical. The function **SMART Energy** can decide to start heating with the heat pump and to finish heating up with the boiler backup.



The Smart Energy function can be set on 4 different management levels:

HP prioritized The backup operates at the end of heating up in case of low air temperature (<7°C)

HP optimized The backup operates at the end of heating up and ± early depending on air °C

Boiler optimized The heat pump works on the start of heating up and stops ± early depending on air °C

Boiler prioritized The heat pump works on the start of heating up and for air temperature > 10°C.

4.3 The installation mode « Solar backup » :

The water heater works only during the period when the solar system does not supply energy (when the solar system signal is off). During the periods of solar production, the hot water production is operated with the internal coil, the heat pump and the electric backup are not working.

MANUAL – ECO Not activated : The set temperature is fixed by the user between 50 and 62°C. The water heater chooses preferably the heat pump. The electric backup can automatically be added to provide the correct hot water volume.

MANUAL – ECO Activated : The set temperature is fixed by the user between 50 and 62°C. The water heater chooses preferably the heat pump to maximize the energy savings. The electric backup is allowed to work if the air temperature is out of the operating range.

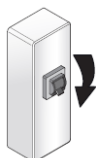


Service, Maintenance and Repair

1. Advice to the user.

If the absence mode cannot be used it could be necessary to drain the water heater if the device is switched off. Proceed as follows:

❶ Switch off power supply.



❷ Close the cold water inlet.

❸ Open a hot water tap.

❹ Open the drain cock or tee

2. Service.

In order to maintain the performances of your water heater, we advice to service it regularly.

By the USER :

What	When	How
PTR valve	1 to 2 times per month	Operate the safety valve. Check that water evacuation is ok.
General	1 time per month	Check external shape of your device : no Error code displayed, no leakage on the connections...



The device has to be disconnected from mains before opening the cover.

By the INSTALLER :

What	When	How
Ducts	1 per year	Check if the device is ducted. Check if the ducts are well positioned and not deformed.
Condensates evacuation	1 per year	Check the cleanness of the condensates evacuation tube.
Electric connections	1 per year	Check that any internal and external cable connections are not loose and that all connectors are plugged in.
Electric backup	1 per year	Check the correct function of the electric backup by measuring the power.
Scaling	Every 2 years	If the supply water is hard clean the deposited scale.



Only a refrigeration engineer is permitted to have access to the expansion valve adjustment screw. If the expansion valve is adjusted without approval from the constructor, the product warranty may be invalidated.

it is not recommended to touch the expansion valve setting until all other repair solutions have been exhausted.

By the REFRIGERATION ENGINEER :

What	When	How
Thermal exchange of the heat pump	Every 2 years*	Check the correct working of the heat pump.
Components of the heat pump	Every 2 years*	Check the ventilator operation on it's 2 speeds and the hot gas valve.
Evaporator	Every 2 years*	Clean the evaporator with a nylon brush and products neither scratching nor corrosive.
Refrigerant	Every 5 years*	Check the refrigerant quantity.

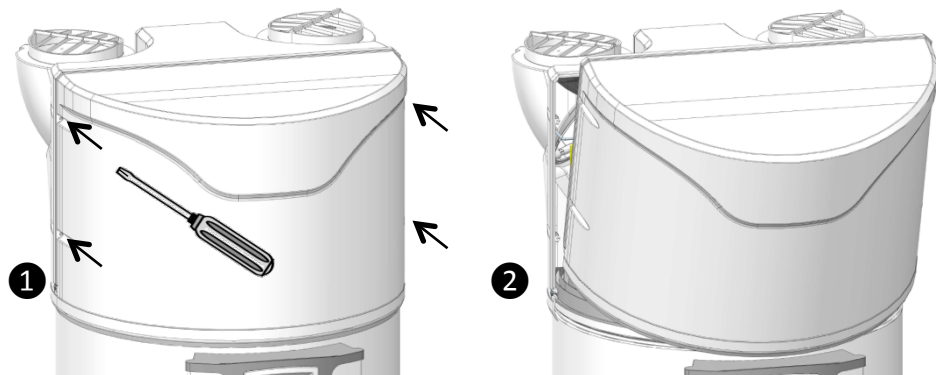
* In case of dusty environment increase the maintenance frequency.

3. Open the water heater for maintenance.

To access to the heat pump compartment :

- 1 Remove 4 screws on the front, Tilt the hood to the front.

2



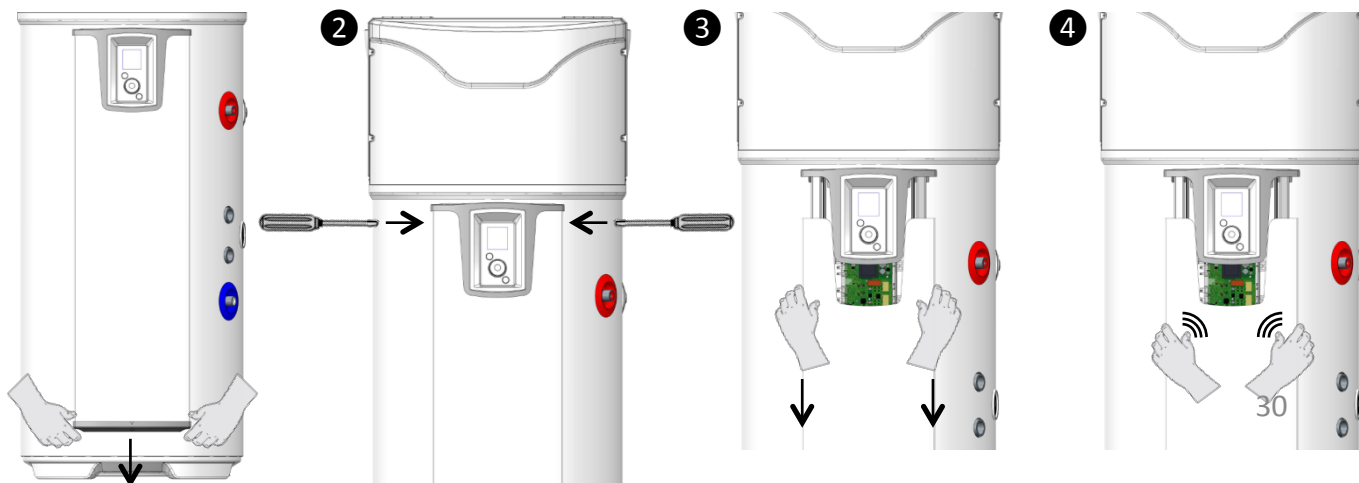
To access the regulation:

- 1 Remove the clipped bottom plug of the front column, Unscrew the 2 screws on each side of the column,
- 2 Slide the column down for 10 centimeters to liberate the interface support, Press the center of the column to open and remove from the guiding rails.

3

1

4



4. Trouble shooting.

If there is a problem, lack of heating or release of fumes from the water outlet, cut the power supply and notify your installer.



Repairs have to be done exclusively by a qualified installer.

4.1. Error codes.

The alarm can be paused or reset by pressing OK.

Displayed Code	Reason	Result	Service action
Error 03	Water temperature probe defect or out of measuring range	Reading of water temperature impossible : no heating up.	Check the connection (A1) of the probe (immersion sleeve). If required replace the probe.
Error 07	No water in the tank or ACI connection open	No heating up	Fill the tank with water. Check the connection (AC) of the cables, the water conductivity.
Error 09	Water temperature too hot (T>80°C)	Risk to trigger the mechanical security thermostat : no heating up	Check the real temperature at a tap (T>80°C). Check the connection (A1) and the position of the temperature probe (immersion sleeve). Check that the electrical backup is not working permanently. Reset the mechanical security device if necessary.
Water too cold	Cold water temperature too cold(T<5°C)	HP stopped. Heating with electric backup.	Resetting automatically at T>10°C. Control the situation of the installation room (frost-free).
Error 21	Air intake probe defect or out of measuring range	HP stopped. Heating with electric backup.	Check the connections (A4) and the position of the air intake probe. If necessary replace the probe cable harness.
Error 22	Evaporator top probe defect or out of measurement range (-20 to 110)	HP stopped. Heating with electric backup.	Check the connections (A4) and the correct contact of the probe to the tube. Check the operation of the ventilator and that it turns easily without any stop.
Error 23	Evaporator bottom probe defect or out of measurement range (-20 à 110)	HP stopped. Heating with electric backup.	Check the connections (A4) and the correct contact of the probe to the tube. Check the operation of the ventilator and that it turns easily without any stop.
Error 25	Pressure switch open or compressor thermal safety	HP stopped. Heating with electric backup.	Check the compressor connections (R1), pressure switch, starting capacitor (15mF) and the hot gas valve (T2). Control the resistance of compressor windings.

Displayed Code	Reason	Result	Service action
Error 27	Compressor probe defect or short circuit	HP stopped. Heating with electric backup.	Check the connections (A4) and the position of the compressor probe. If necessary replace the probe harness.
Error 28	Default on defrosting	HP stopped. Heating with electric backup.	Check the cleanness of the evaporator. Check the refrigerant R134a charge (defrosted). Check the operation of the ventilator. Check the correct evacuation of condensates. Check the hot gas valve connections (T2) and its function (TEST menu).
Error 29	Flow temperature of the compressor too high	HP stopped. Heating with electric backup.	Control the resistance of compressor windings. Check the cleanness of the evaporator. Check the refrigerant R134a charge. Check that the air circulates without any obstacles.
Error 30	HP operates without stop more than 24h or lack of power.	HP stopped. Heating with electric backup.	Check the cleanness of the evaporator. High consumption or circulation loop or leak on hot water circuit. Check the connections (A4) and the correct contact of the probes to the tubes. Check the charge, the overheat value (5 minimum), the defrost operation... Control the resistance of compressor windings.

4.2. Other failures without error code display.

Default	Possible reason	Diagnosis and service
Water not hot enough.	Power supply is not permanent.	Check that the device receives permanently electric current. Check that no cold water flows into the hot water circuit (mixing tap defect).
	Set temperature too low.	Select a higher set temperature.
	Mode ECO selected & air temperature out of range.	Select the mode AUTO. Check the periods of programming.
	Electric backup or supply cables (partially) defect.	Check the resistance of the heating element on the plug, and the good shape of the cables. Check the security thermostat.

Default	Possible reason	Diagnosis and service
No heating No hot water	No power supply to the water heater : fuse, cabling...	Check the voltage on the power supply cable
		Check the parameters of the installation (see periods of operating)
Hot water volume not sufficient	Water heater layout too small	Check the programmed periods and reception of Night / Low Tariff signal.
	Operation in ECO mode	Select AUTO mode
Low pressure on the tap.	Filter of security group clogged.	Clean the filter (see § maintenance).
	Tank full of scale.	Remove the scale from the tank.
Water dripping out of the security group when the water heater is not heating	Security group damaged or clogged.	Replace the security group
	Supply pressure too high	Check that the supply pressure after the water counter does not exceed 5 bar (0,5 MPa), if it does install a pressure reducer set to 3 bar (0,3 MPa) at the start of the water network.
The electric backup heater does not work.	Mechanical security thermostat was triggered.	Reset the security thermostat on the heating element.
	Thermostat defect	Replacer the thermostat
	Backup heater defect.	Replace the element
Condensate overflow.	Condensates evacuation clogged	Clean the evacuation
Bad smell	No siphon installed on the security group or on condensates evacuation	Install a siphon
		Fill the siphon
	No water in the siphon of the security group	
Vapor on the hot water tap	Electric backup works permanently	Shut off the electricity supply and call the installer.
Interface does not work or display problems	No power supply	Control the power supply.
	Interface defect	Replace interface.

Warranty

1. Warranty Conditions

The following faults are excluded from this warranty: :

1/ The heat pump water heater (hpwh) must be installed to plumbing and electrical services that meet all relevant statutory and local requirements of the region in which the system is installed. Relevant clauses of AS/NZS 3500 Plumbing & Drainage Code; and NZ G12 New Zealand Building Code – must be complied with by the Installer.

2/ The hpwh requires a single phase 16 amp supply requiring a licensed electrician for connecting. A licensed plumber must connect cold water and hot water supplies in accordance with this manual. The installers must comply with good practice, applicable installation standards and Atlantic Australasia's technical instructions included in this Manual.

3/ The hpwh must be regularly operated and maintained in accordance with the service & maintenance page 29 & 30 of this manual. Supporting evidence by a service agents report or receipt invoice detailing maintenance history would be required with any claims under this warranty. Should this hpwh be installed in a regional location where regular flushing is required due to sediment build-up, then a drain cock or tee for flushing must be fitted at the time of installation. If in doubt consult your Installation Contractor.

5/ The cylinder is warranted to be defect free for a period of 10 years in domestic installations, and 3 years in commercial installations. Electric elements and component parts are warranted for a period of 2 years in domestic installations and 1 year in commercial installations. The compressor is warranted for a period of 5 years in domestic and 2 years in commercial installation.

5/ / Our warranty takes effect from the date of purchase (according to invoice), and where there is no documentary evidence, the date used will be that of manufacture as shown on the water heater information plate, plus six months. The warranty on the replacement part or water heater (under warranty) ends at the same time as the part or water heater replaced. Internet registration must be completed for warranty protection

6/ This warranty takes the form of repair or determined by Atlantic Australasia Pty Ltd in the form of exchange or supply, free of charge, excluding all labour and transport replacement charges.

7/ These Warranty Conditions do not exclude any of the benefits due to the purchaser that may be conferred by Trade Practices and Consumer Law and associated articles in the country of installation.

For Australia: 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 failure does not amount to a major failure. The benefits provided by this Warranty are in addition to all other rights and remedies in respect of the product which the consumer has under the Competition and Consumer Act 2010.

PLEASE NOTE : If a Service call is requested and it is found that the defect is not a Warranted fault, the purchaser may be charged for associated Warranty/Service call out costs even during the Warranty period.

Warranty

1. Warranty Conditions

- **Faulty maintenance:**
 - Abnormal scaling of heating elements or safety units.
 - No maintenance of safety unit, leading to excess pressure.
 - No cleaning of evaporator or condensate evacuation.
 - Modification of original equipment, without notifying constructor, or use of spare parts not recommended by manufacturer.

2. Warranty Exclusions

The following warranty exclusions may cause the Atlantic Heat Pump Water Heater warranty to become void. This may also incur a service charge and cost for parts should they be necessary.

1/ Any physical damage caused by impacts or falls when the hpwh is handled after leaving the factory.

2/ Where service is required to reconnect the hpwh operation due to problems related with abnormal water supply (i.e. high water pressure above 1,000 kPa before, at system pressure relief), faulty plumbing supply or downstream connection and/or electrical wiring or major variations in electrical energy supply.

3/ Failing to ensure the (ACI) anti-corrosion protection system to the tank.

Where a 350 – 500 kPa pressure limiting valve as shown in the water circuit diagrams, has not been fitted during installation

4/ Where the hpwh fails due to misuse, accidental damage, acts of God, incorrect installation including being located in premises affected by frost or bad weather (humid, harsh or badly ventilated atmospheres) or unlicensed service repair work attempts.

2. Warranty exclusions.

5/ Any damage resulting from power surge from supply such as accidental high voltage injection or lightning strike.

6/ Damage resulting from non-detectable problems due to the inaccessible location of the device, and that could have been avoided by immediately repairing the device if properly located.

7/ Claims for damage to walls, foundations (outside), floor coverings & furnishings (inside), roofs or other losses, directly or indirectly due to leakage from the Atlantic Heat Pump Water Heater.

8/ No spacer insulation sleeves on the cold and hot water connection pipes, resulting in loss of function of impressed current protection, that has lead to consequential corrosion

9/ Where the hpwh has been powered up before it has been filled (heating when dry).

10/ Where the hpwh has suffered external corrosion due to non-watertight piping connections.

11/ If the system is either sold and/or repaired or altered by any third party without the consent of Atlantic Australasia Pty Ltd.

12/ Exclusions due to Water Composition

Please take note :

Water composition varies widely in Australia and New Zealand. In order to ensure a long and trouble free life the Atlantic Heat Pump Water Heater incorporates an impressed current protection system, normally only found in major installations in contact with water such as gas transmission pipelines. It is important that the composition of water is not excessively high in salt which may result is aggressive attack, or calcium carbonate (also known as water hardness) which will coat and isolate the effectiveness of the impressed current anode. Warranty is therefore excluded where water composition in the hpwh exceeds the following :

Total dissolved solids	1000 mg/litre or p.p.m.
Electrical Conductivity	1400 uS/cm.
Total hardness	200 mg/litre or p.p.m.
Chloride	250 mg/litre or p.p.m.
Sulphate	250 mg/litre or p.p.m.
Magnesium	10 mg/litre or p.p.m.
Sodium	150 mg/litre or p.p.m.
pH	Min 6.5 and Max 8.5

Water from springs, bores and dams is also excluded from meeting Warranty conditions because of the rapidly variable composition of these waters due to groundwater salinity and aggressive mineralisation. Water MUST be from a supplied, reticulated source or from rainwater to ensure Warranty compliance.

WARRANTY :

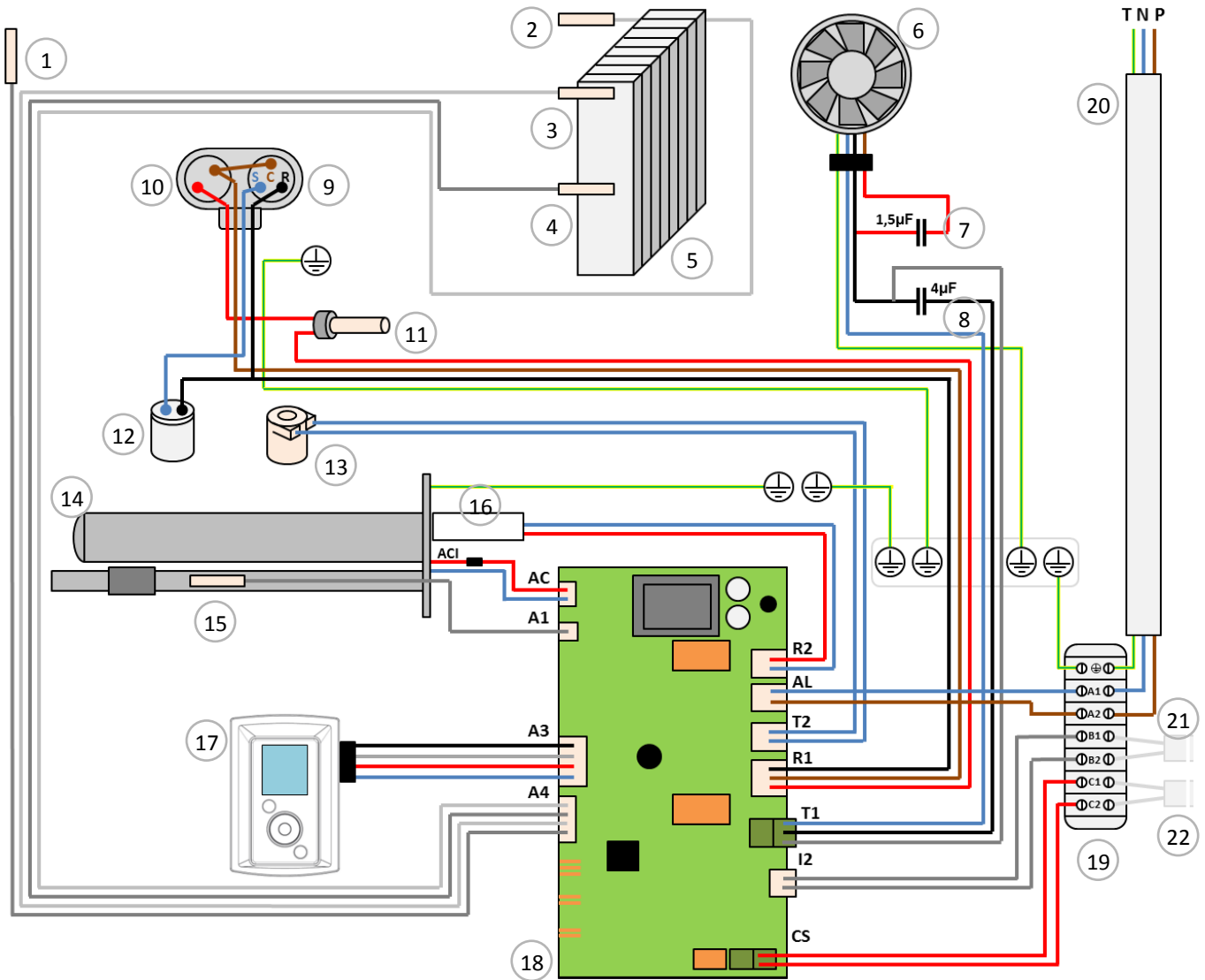
*Water heater tank: Domestic 10 years & 3 years commercial

*Heat pump : Domestic 5 years & 2 years commercial

*Labour & Electrics: Domestic 2 years & 1 year commercial

*Warranty Conditions apply:

SCHEMA ELECTRIQUE – ELEKTRISCH SCHEMA – ESQUEMA ELECTRICO – ELECTRIC DIAGRAM



FR
NL
SP
EN

1	Sonde de refolement compresseur Temperatuursonde bij uitgang van compressor Sonda descarga del compresor Probe oulet pipe of compressor
2	Sonde air entrant Sonde bij luchtinlaat Sonda entrada aire Probe supply air
3	Sonde évaporateur haut Sonde verdamper top Sonda evaporador alto Probe evaporator top
4	Sonde évaporateur bas Sonde verdamper laag Sonda evaporador bajo Probe evaporator bottom
5	Évaporateur Verdamper Evaporador Evaporator
6	Ventilateur Ventilator Ventilador Ventilator
7	Condensateur démarrage ventilateur Condensator bij gebruik van ventilator Condensador de funcionamiento del ventilador Capacitor ventilator start
8	Condensateur petite vitesse ventilateur Condensator van ventilator lage snelheid Condensador del ventilador pequeño velocidad Capacitor small speed ventilator

9	Connexions compresseur Verbindingen compresor Conexión compresor Compressor connections
10	Protection thermique compresseur Compressor thermische beveiliging Protección térmico del compresor Compressor overheat protection
11	Pressostat Pressostaat Presostato alta presión Pressostat
12	Condensateur démarrage compresseur Condensator bij gebruik van compresor Condensador de funcionamiento del compresor Capacitor compressor start
13	Bobine vanne gaz chauds Geheel klep hete gassen Bobina valvula gas caliente Hot gas valve motor
14	Corps de chauffe Warmteweerstand Calentador de inmersión Electric backup heater
15	Sonde eau doigt de gant Sonde bij water Sonda del agua Immersion sleeve water probe
16	Thermostat de sécurité Veiligheidsthermostaat Termostato de seguridad Security thermostat

17	Contrôleur Afstandsbediening Unidad de control Controller
18	Carte de régulation Regelkaart Regulación Regulation PCB
19	Bornier de connexion client Geheel klemmenbord Regleta de conexión cliente Customer wiring board
20	Câble d'alimentation permanente Permanente voedingskabel Cable de alimentación permanente Permanent power supply cable
21	Câble de connexion PV / Smart Grid / Solaire Kabel communicatie PV / Smart Grid / Zonn Cable de conexión PV / Smart Grid / Solare Connection cable PV / Smart Grid / Solar
22	Câble de connexion chaudière Kabel ketel Cable de conexión caldera Connection cable boiler

Non fournis :
Niet geleverd :
No suministrada :
Not supplied :

FOR INFORMATION, REPAIRS AND SERVICE

CALL: AUSTRALIA: 1800 677 857

NEW ZEALAND: 0800 422 000

FOR WARRANTY REGISTRATION:

REGISTER AT: AUSTRALIA – www.atlantics.com.au

NEW ZEALAND – www.atlantic.nz

WARRANTY :

*Water heater tank: Domestic 10 years & 3 years commercial

*Heat pump : Domestic 5 years & 2 years commercial

*Labour & Electrics: Domestic 2 years & 1 year commercial

*Warranty Conditions/Exclusions apply: