EN

TECHNICAL MANUAL

ENERGIE®

AQUAPURA SPLIT

160i | 250i | 250ix | 300i | 300ix | 500i | 500ix

Revision 15
Version 2
Date 03/05/2024

Directives
2006/95/CE

CE

Esteemed Client,

We would like to thank you for your choice when you acquired an equipment for sanitary water heating.

AquaPura Split aero-thermal system will surely meet all your expectations and provide many years of comfort with maximum power saving.

Our organization dedicates much time, energy and economic resources in order to develop innovations that will promote power saving in our products.

Your choice has demonstrated your good sense and concern with power consumption, a matter that affects the environment.

We have taken on a permanent commitment to conceive innovative and efficient products so that this rational use of energy can actively contribute to the preservation of the environment and natural resources of the planet.

Keep this manual whose objective is to inform, alert and advise about the use and maintenance of this equipment.

Our services are always at your disposal. Feel free to call upon us!

Index

1 Intro 6
1.1 Symbols 6
1.2 Safety Information 6
2 Information 7
3 Package 9
3.1 Contents 9
3.2 Transport 9
4 Specifications 10
4.1 Running Principle 10
4.2 Technical Data 11
4.3 Main Components 12
4.3.1 Internal Unit – Storage Water Heater 12
4.3.2 Exterior Unit (split) 13
4.4 Dimensions 14
4.5 Safety and Control Devices 17
4.5.1 High/Low Pressure Switch 17
4.5.2 Safety Thermostat 17
4.5.3 Temperature Probe 17
4.5.4 Protection against Corrosion (if applicable) 17
4.5.5 PT Safety Valve 17
4.5.6 Expansion Vessel (1) 18
4.5.7 Safety Group (1) 18
4.5.8 Pressure Reducing Valve (1) 18
5 Installation 19
5.1 Hydraulic 19
5.2 Set Up 20
5.2.1 Interior Unit – Storage Water Tank 20
5.2.2 Exterior Unit (split) 21
5.3 Refrigerant Couplings 22
5.3.1 Distance between indoor unit (storage water heater) and outdoor unit (split) 22
5.3.2 Refrigerant Connections 23
5.3.3 Load of Nitrogen 26
5.3.4 Vacuum 26

5.3.5 Checking good running condition 27
5.4 Hydraulic Connections 27
5.5 Electrical Connections 28
5.6 First Use 33
5.6.1 Filling the tank 33
5.6.2 System Start Up 33
6 System Operation 34
6.1 Control Panel 34
6.2 Operating principle in different modes 36
6.3 List of operating modes 38
6.4 Controller features 38
6.5 Run and adjust functions 41
6.6 Manual functions 41
6.7 Anti Legionella Function 42
6.8 Electrical heater manual activation 43
6.9 End of system life 44
7 Errors table 44
8 Troubleshooting 46
9 System Maintenance 47
9.1 General Inspection 47
9.2 Magnesium Anode (if applicable) 47
9.3 PT Safety Valve 48
9.4 Safety Thermostat 48
9.5 Empty the Storage Water Heater 48

1 Intro

1.1 Symbols

	Every process that the supplier believes to be conducive to harmful danger and/or material damage will be signalled with a danger sign. To better characterize the danger, the symbol will be followed by one of these words: • **DANGER**: when there is the possibility of harm to the operator and/or people in the vicinity of the equipment. • **WARNING**: when there is the possibility of material damage to the equipment and/or attached materials.
	All the information that the supplier believes to be an asset for better performance and preservation of the equipment, will be signalled together with the information sign .

1.2 Safety Information

WARNING/DANGER

- The electrical installation of the equipment must comply with the national regulations for electrical installations in effect.
- The equipment can only work if the water heater is filled with water and properly purged;
- The electrical supply is 230VAC/50Hz or 60Hz* (equipment version only designed on specific request);
- The equipment must be connected to an electrical outlet with earth contact;
- If the power supply cable is damaged, it must be replaced by the manufacturer, by its customer service, or by staff with similar training in order to avoid any danger.
- Children must not play with the device.
- Cleaning and maintenance must not be carried out by children without supervision.
- This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved.
- The operating principle of this equipment is directly linked to high temperatures and pressures, so all processes that involve contact with the equipment must be prepared with care to avoid risks of burns and material projection.
- The heating of other fluids than drinking water is not allowed.

2 Information

INFORMATION

Installation

- The installation of the equipment must be carried out by staff with suitable training and qualified for this purpose.
- The device must not be installed:
  - outdoors;
  - in places with corrosive environment;
  - in places with a risk of temperatures below 5ºC;
  - in places that present a risk of impact, shock or explosion.
- The equipment must be installed in a dry place, protected from the weather;
- Keeping the equipment packed until the place and time of installation.
- Ensure that all hydraulic connections are properly watertight before powering the equipment electrically.
- The discharge pipe connected to the pressure limiting device must be installed in a non-freezing environment and continuously directed downwards.
- The discharge tube of the pressure limiting device must be kept open to the atmosphere.

Maintenance

- The user is responsible for the safety and environmental compatibility of the installation and/or maintenance.
- Maintenance/repair should only be carried out by a brand assistance service, with the exception of general and continuous cleaning operations, which can/must be carried out by the user himself. Repairs carried out incorrectly can create risks for the user and cause the product to malfunction.
- The supplier recommends that at least an annual inspection of the equipment be carried out by a qualified technician.
- Always switch off the electrical supply to the device before carrying out any maintenance work.
- Cleaning and maintenance must not be done by children without supervision.
- Only use original replacement parts.
- The safety valve must be operated regularly to remove impurities and check that it is not blocked.
- To drain the water from the water heater, close the supply valve and open the drain valve.

*** Pressure Reducing Valves**

- Pressures admitted upstream of the pressure reducing valve:
  - Maximum pressure allowed 1.2 Mpa;
  - Minimum pressure allowed 0.1 MPa;
- Pressure downstream of the pressure reducing valve:
  - Factory set to 0.3 MPa;

*** Safety Group**
The safety group allows the system to be protected in the event of anomalies in the supply of cold water, hot water return, emptying of the water heater and high pressures. The valve is calibrated to operate at 0.7 MPa.

Refrigerant

- Handle and recycle refrigerant gas, if necessary, in compliance with environmental laws. It cannot be released into the environment!
- The refrigerant gas is R134a, free of CFCs, non-flammable and without harmful effects on the ozone layer.
- Before carrying out any intervention on the components of the refrigerant circuit, evacuate/recover the refrigerant gas in order to carry out the operations safely.
- In maintenance, it must be taken into account that fluorinated greenhouse gas HFC-134a is used, covered by the Kyoto protocol GWP=1300.
- All gas handling must be carried out by a qualified technician.

In operation

- Water pressure:
  - Minimum 0,1 MPa;
  - Maximum 0,7 MPa;
- Water temperature:
  - Minimum 5 °C;
  - Maximum 65 °C;

Information to give to the customer

- The installer must inform the customer about the operation of the appliance, instruct him on its handling, and the customer's rights and duties.
- Communicate to the customer the fact that the alteration or maintenance of the device must only be carried out by specialized and accredited personnel.

(*)
Components not supplied with the equipment.
We strongly recommend its installation.

To request additional information, contact us via the email address energie@energie.pt or via our website www.energie.pt.

3 Package

3.1 Contents

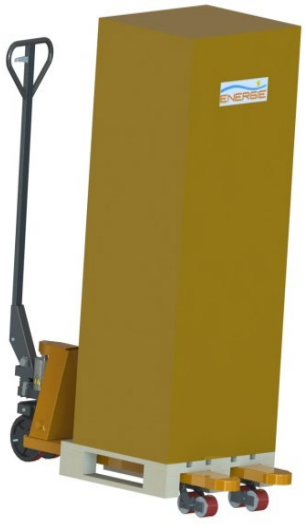
The equipment is supplied in two packages, each on a wooden pallet, with protective units and wrapped in cardboard.

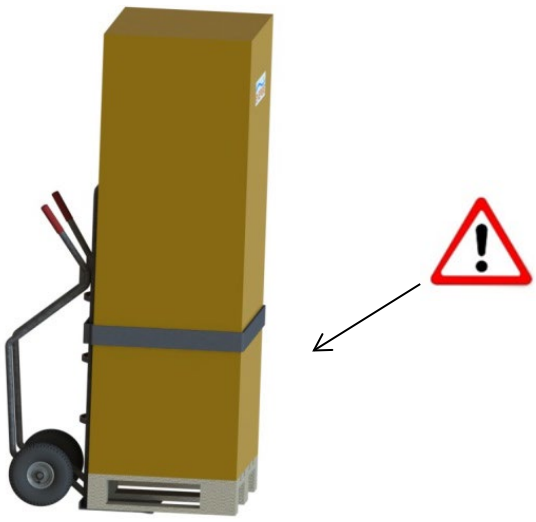
The packages contain:

1. An outdoor unit (Heat Pump) and its components:
2. Nozzle for condensate drainage
3. Tube for condensate drainage
4. One indoor unit
5. PT valve
6. Installation guide

3.2 Transport

WARNING	The equipment must be carried in an upright position. The equipment must be raised and lowered with extreme care, to avoid impact that could damage the material. Make sure the belts and/or transportation straps do not damage the material. Always use suitable means to transport the material (pallet lift, forklift, etc.). The transport of the equipment must be done with an inclination never exceeding 45º; Both the packaging containing the water heater and the thermodynamic block must be transported in an upright position and in the correct direction. Horizontal transport or with the equipment turned upside down can cause serious damage to the equipment





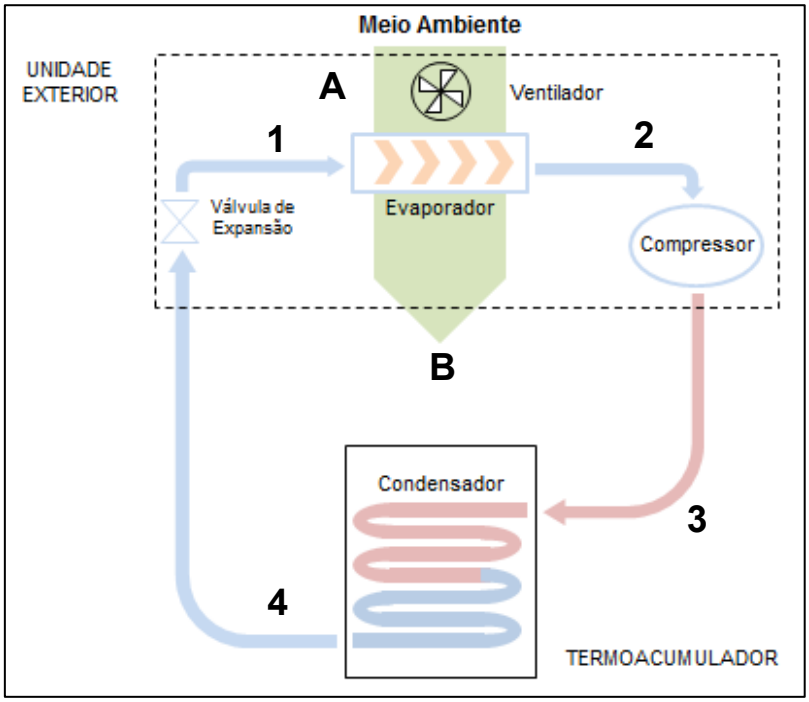
The equipment must always be transported in its original packaging, to the point of installation. Check, before starting the transport of the equipment, if the path you are going to take is unobstructed, in order to avoid collisions that could prove damage to the device.

The packaging contains the following information symbols:

	Fragile, handle with extreme caution		Keep the package dry
	Make sure the arrows are always up		Do not stack packages

4 Specifications

4.1 Running Principle



1. The cooling fluid (R134a) is compressed in the high efficient compressor, raising its pressure and temperature;
2. In the condenser (not in direct contact with the water), the heat energy in the cooling fluid is transmitted to the water in the water storage heater;
3. The condensate fluid (high pressure) runs from the expansion valve which is responsible for easing the its pressure;
4. The fluid absorbs heat energy from the environment by flowing through the evaporator with the help of a fan;

	The R134a is a HFC fluid, thus not harmful to the ozone layer. It has great chemical and thermal stability, low toxicity, non-inflammable, and is compatible with most materials.

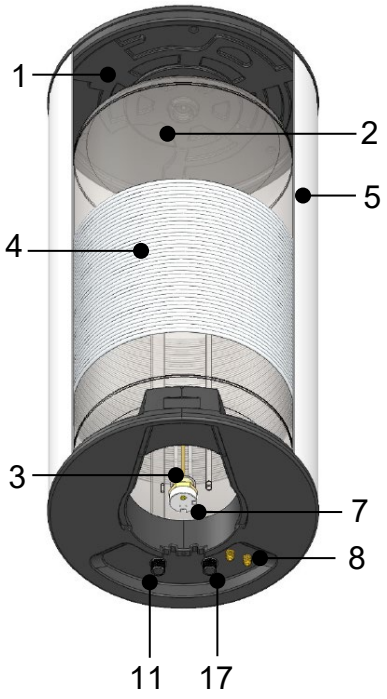
4.2 Technical Data

STORAGE HEATER	Unit	160 l	250 l/IX	300 l/IX	500 l/IX
DHW Capacity	L	160	250 / 245*	300 / 295*	455 / 445*
Dimensions (ø | height)	mm	530 / 1141	580 | 1540	650 | 1400	650 | 2020
Empty Weight	kg	32	46 / 51*	50 / 55*	73 / 95*
Material	-	Stainless Steel			
Insulation	-	High-density polyurethane 50mm			
Cathodic Protection	-	-	Mg Anode 1"1/4 (if applicable)		
Max Running Temperature	ºC	80			
Max Working Pressure	bar	7			
Heat Loss**	kWh/24h	0,94	1,01	1,17	1,81
Coil Heat Exchanger (ø / length)	m	---	0,025 | 10	0,025 | 10	0,025 | 24
Coil Thermal Power***	kW	---	20		54
Protection Index	-	IPX1			
Absorbed Power Electrical Support	W	1500			2200
Refrigeration connections	inches	1/4" | 3/8"			
* IX Models ** According to EN12897 ***Primary (Te = 90 ºC; Ts = 80oC); DHW (Te = 10 oC; Ts = 60 ºC)					
EXTERIOR UNIT	Unit	160 l	250 l/IX	300 l/IX	500 l/IX
Weight	kg	33			
Refrigerant connections	pol.	1/4" | 3/8"			
Outdoor sound power level	dB(A)	54			
Power supply	V / Hz	230 Monophase / 50			
Protection Index	-	IPX1			
Absorbed electrical power (HP) (med/max)	W	600 / 900			
Thermal power supplied (HP) (med/max)	W	1920 / 3200			
Maximum distance between refrigerant connections	m	20 (max height 10)			
Outdoor operating temperature range	ºC	-14 / 43			
Refrigerant	type/g	R134a / 1600			
Air flow	m^3/h	1300			
PERFORMANCE	Unit	160 l	250 l/IX	300 l/IX	500 l/IX
Load profile	-	L	XL	XL	XXL
****COP	-	3,26	3,4	3,4	3,5
Amount of Useful Water at 40 ºC	L	194	323	362	599
Energy Efficiency Class	-	A+	A+	A+	A+
Energy Efficiency	%	134	139	143	139
Annual Electricity Consumption	kWh/year	759	1203	1170	1549
****A14/W54 according with EN16147 and Delegated Regulation (EU) Nº812/2013					

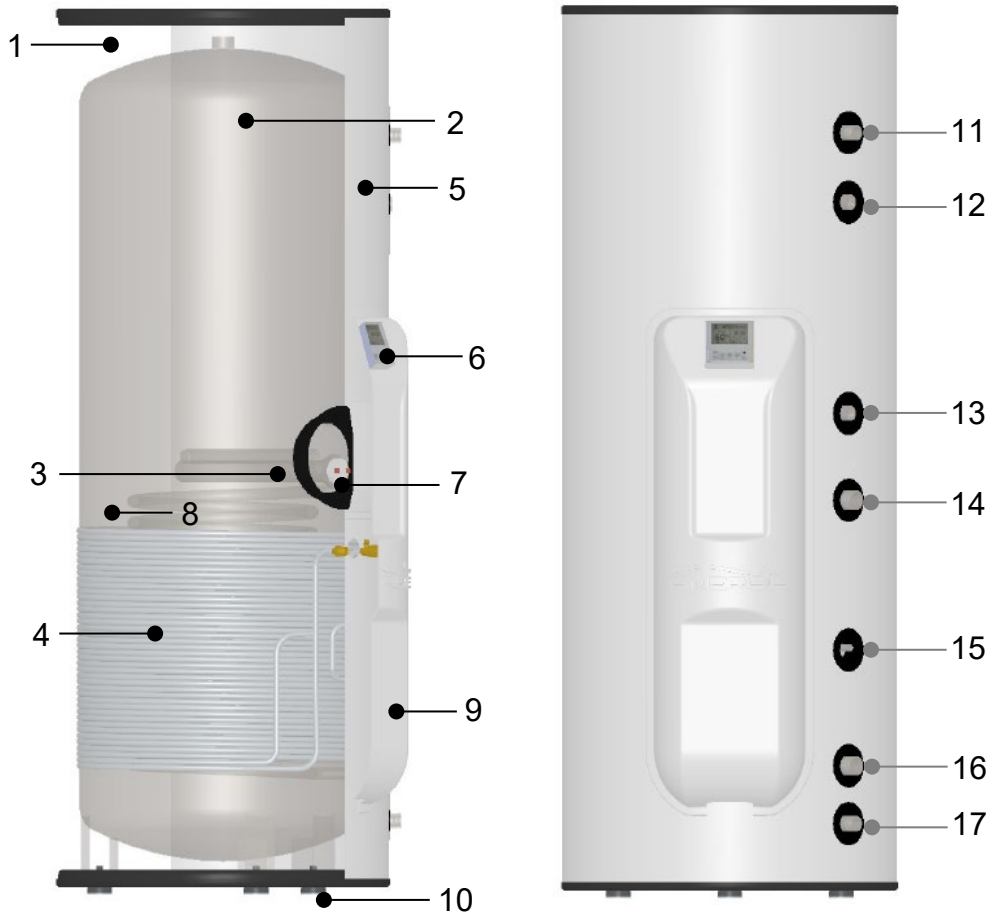
4.3 Main Components

4.3.1 Internal Unit – Storage Water Heater

160

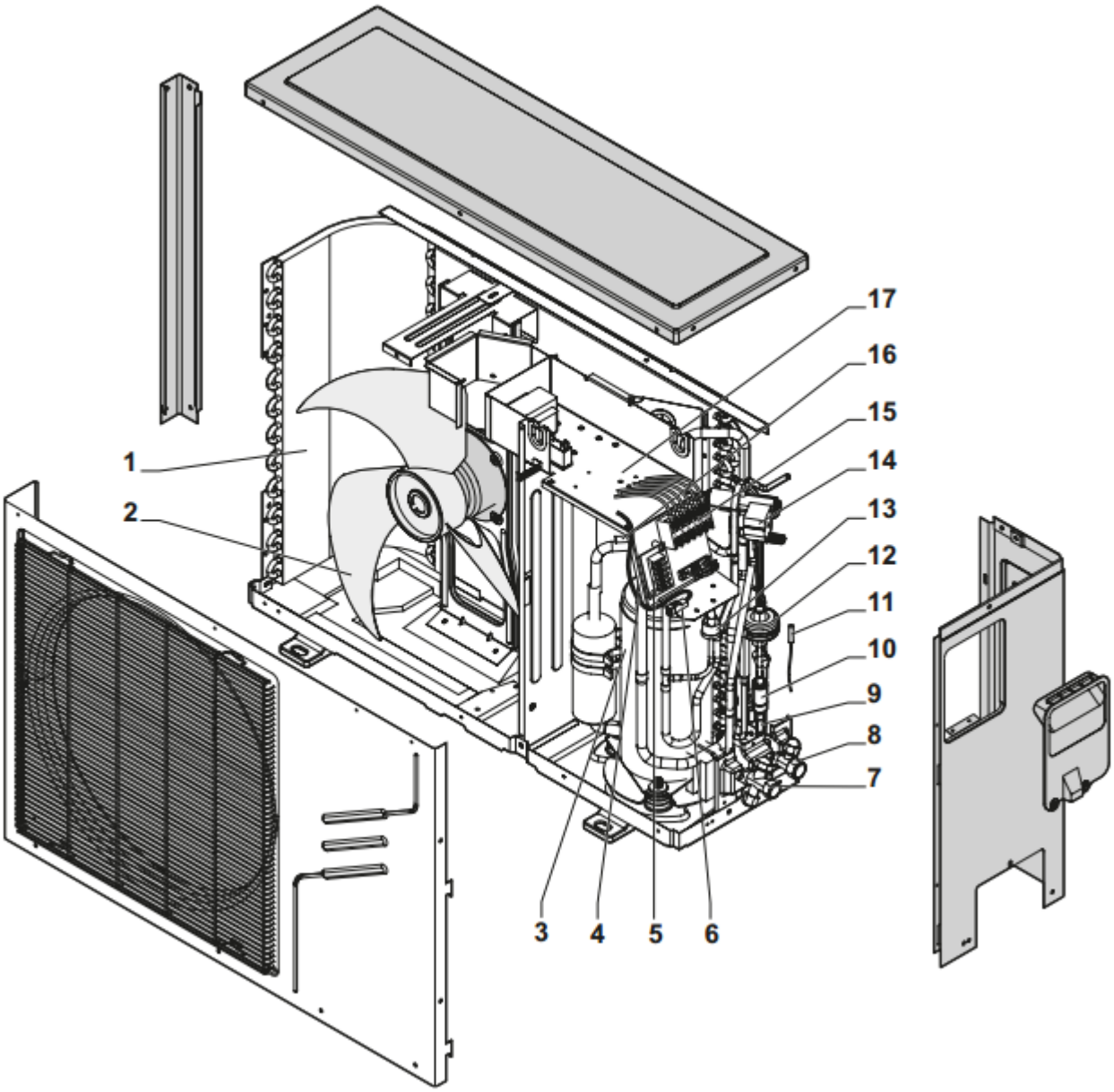


250/300/500



1 - Polyurethane insulation
2 - Tank
3 - Electrical heater
4 - Condenser
5 - Outer Coating
6 - Display
7 - Safety Thermostat
8 - Refrigeration Connections
9 - "Split" hood
10 - Adjustable Support Foot
11 - Hot Water Outlet
12 - P/T valve
13 - Recirculation
14 - Support Coil Inlet
15 - Instrumentation
16 - Support Coil Outlet
17 - Cold Water Inlet

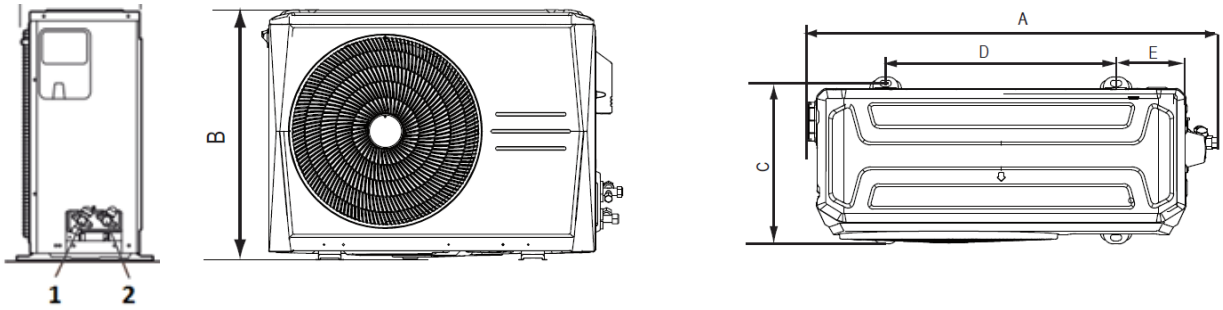
4.3.2 Exterior Unit (split)



1 - Evaporator
2 - Fan
3 - Compressor
4 - Compressor discharge temperature probe
5 - Display connection terminal
6 - Water temperature probe connector
7 - 3-way valve
8 - 2-way valve
9 - Evaporator temperature probe
10 - Filter
11 - Outside temperature probe
12 - Electronic expansion valve
13 - High pressure switch
14 - 4-way valve
15 - Terminal for electrical connections
16 - Suction temperature probe
17 - Power board
Filter

4.4 Dimensions

Exterior Unit

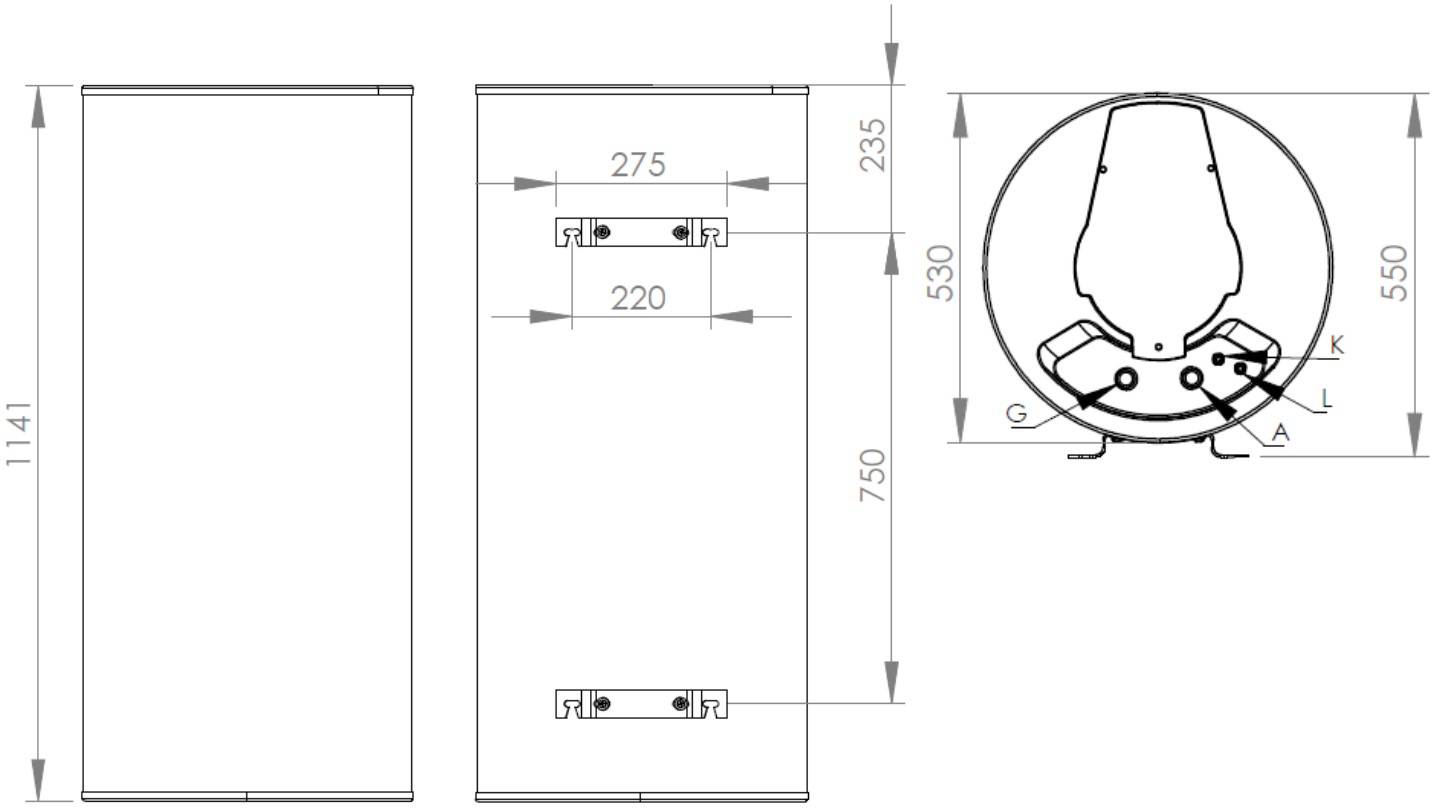


1 – 2 way valve (3/8") **2 – 2 way valve (1/4")**

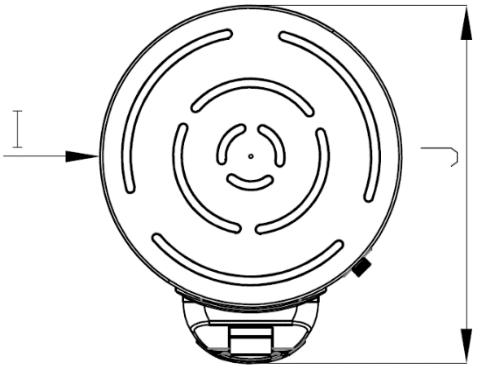
A	B	C	D	E
Unit. (mm)				
804	555	302	452	137

Interior Unit – Storage Water Heater

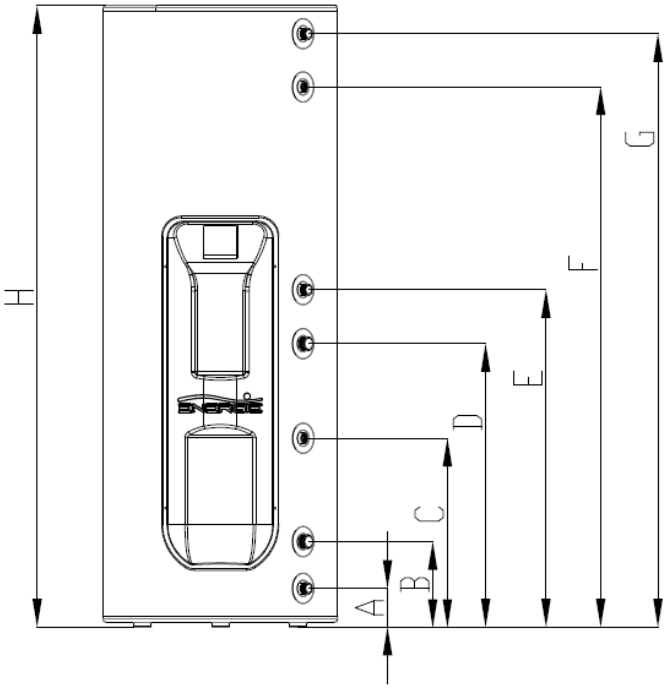
AQUAPURA SPLIT 160

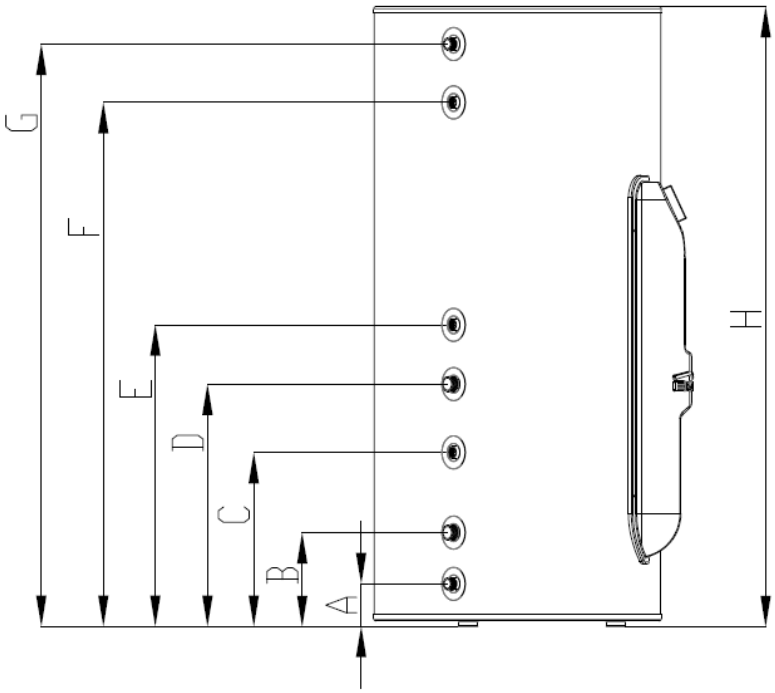


250 l/IX



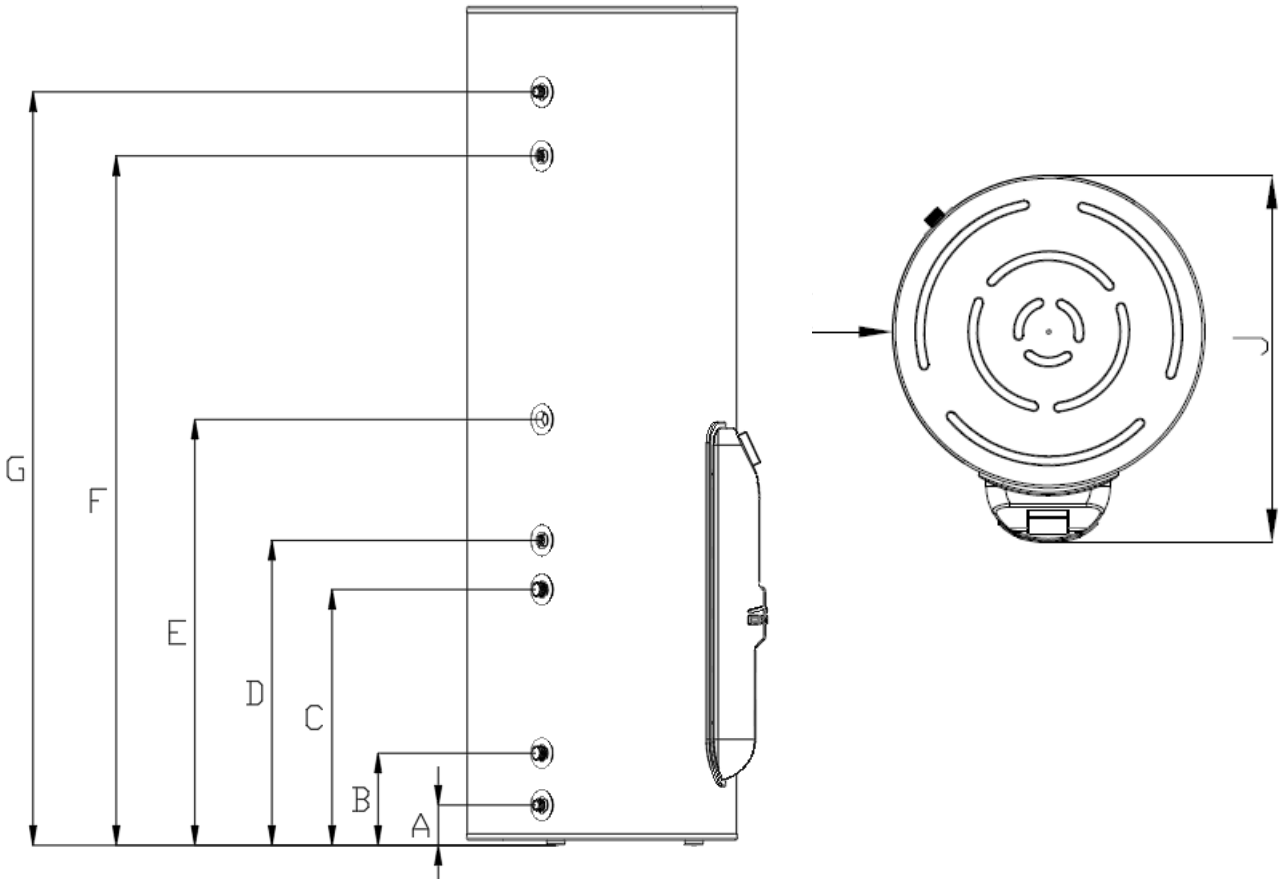
300 l/IX





		Connection	160 l/IX	250 l/IX	300 l/IX
A	**Cold water inlet**	3/4” (M)	-	131	107
B	**Coil outlet**	1’’ (M)	-	231	236
C	**Instrumentation**	-	-	435	436
D	**Coil inlet**	1” (M)	-	690	636
E	**Recirculation**	1/2" (F)	-	840	855
F	**Instrumentation (PT Valve)**	1/2” (F)	-	1205	1065
G	**Hot water outlet**	3/4” (M)	-	1325	1190
H	**Height**	-	1141	1540	1400
I	**Tank diameter**		Ø530	Ø580	Ø650
J	**Total depth**		550	688	758
K	**Refrigerant outlet**		1/4’’		
L	**Refrigerant inlet**		3/8’’		

AQUAPURA SPLIT 500I/IX



		Connection	500 I/IX
A	**Cold water inlet**	1” (M)	102
B	**Coil outlet**	1’’ (M)	237
C	**Coil inlet**	1’’ (M)	657
D	**Recirculation**	3/4” (M)	784
E	**Magnesium anode (if applicable)**	1’’ 1/4 (F)	1095
F	**Instrumentation (PT Valve)**	1/2” (F)	1772
G	**Hot water outlet**	1” (M)	1937
H	**Height**	-	2020
I	**Tank diameter**		Ø650
J	**Total depth**		758

4.5 Safety and Control Devices

4.5.1 High/Low Pressure Switch

In case of running outside the range of pressures recommended and defined by the supplier, the equipment will switch off and indicate error in the electronic panel.

4.5.2 Safety Thermostat

The safety thermostat is set by the supplier to ensure that the water temperature in the storage water heater does not exceed the standard value. If the temperature exceeds this value, the thermostat switches off the backup electrical heater. Switching on is done manually by qualified staff, after analysing the reasons for the switch off.

4.5.3 Temperature Probe

The purpose of the temperature probe is to measure the temperature values of water in the storage water heater in order to control the system.

4.5.4 Protection against Corrosion (if applicable)

Besides being resistant to corrosion (stainless steel), the storage water heater has in addition a magnesium anode that should be checked periodically according to information by the installer.

4.5.5 PT Safety Valve

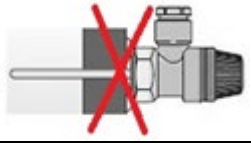
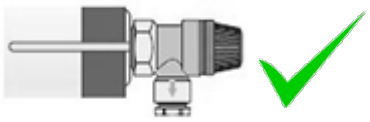
The PT valve (combined safety valve of temperature and pressure) is placed on top of the storage water heater and its purpose is to limit the pressure/temperature of the water inside the storage water heater. This valve has been previously calibrated to prevent the water temperature from exceeding 99º C and pressure from exceeding 10 bar. If any of these figures is reached, the valve will open and release water until the temperature and pressure inside the storage water heater are within the calibrated range.

	The PT valve (combined safety valve of temperature and pressure) is placed on top of the storage water heater and its purpose is to limit the pressure/temperature of the water inside the storage water heater. This valve has been previously calibrated to prevent the water temperature from exceeding 99ºC and pressure from exceeding 10 bar. If any of these figures is reached, the valve will open and release water until the temperature and pressure inside the storage water heater are within the calibrated range.

This safety device is already incorporated in your equipment. The installer must make sure that the draining of the PT valve is done according to the standards.

Remember that:

- In the horizontal installation, the water outlet nozzle must not be turned downside up to prevent the accumulation of waste in the device.

 **AVISO**		

- Discharge must be done so that the normal running of the valve is not stopped and without risk for people or to materials.
- Discharge must be visible and into a suitable collection pipe.

- Discharge must be done into a suitable container

4.5.6 Expansion Vessel (1)

The expansion vessel is a device whose purpose is to compensate for the increase in water volume due to temperature rise.

	The placement of this device is a recommended procedure for a correct installation of the equipment. Installation of this device is the responsibility of the installer. As a general rule, it is installed in the cold water pipe.

4.5.7 Safety Group (1)

The safety device allows the system to be protected against anomaly situations: cold water supply, hot water flowing back, emptying of the storage water heater and high pressure. The valve is calibrated to activate at 0.7 MPa).

To drain the water in the storage water heater, you should close the supply valve and open the discharge valve.

The safety valve discharge pipe must be open into the atmosphere, because the valve may drip water or even discharge water.

The safety valve must be opened regularly to remove impurities and check that it is not blocked. The discharge pipe must be installed in a vertical position. The discharge pipe must be installed upright away from a cold environment.

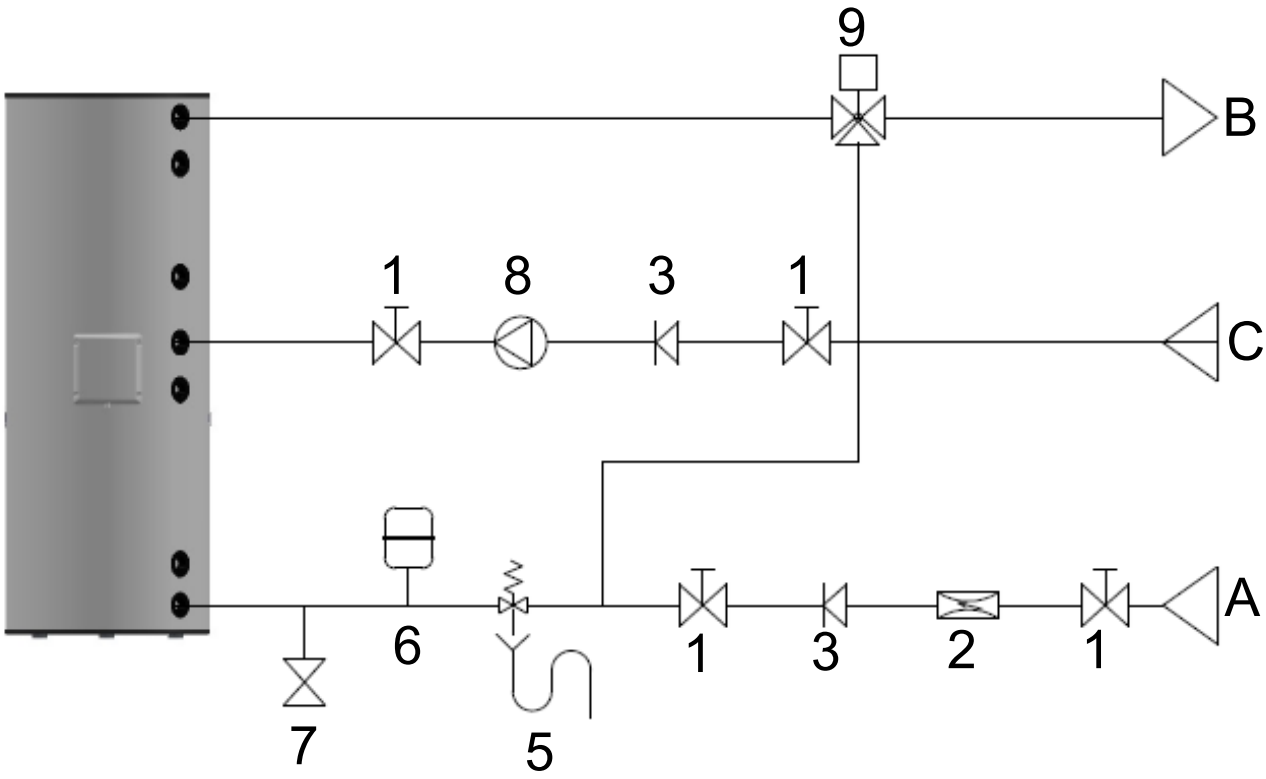
4.5.8 Pressure Reducing Valve (1)

The pressure reducing valve must always be installed upstream from the safety device, and ready to activate in situations when the pressure in the circuit exceeds 3 bar (0,3MPa). This valve comes with a pressure gauge.

(1) Parts not supplied by the manufacturer. They must be installed by the installer.

5 Installation

5.1 Hydraulic



1	Shut Off Valve	**7**	Drain Valve
2	Pressure Reducing Valve (3 bar / 0,3 MPa)	**8**	Circulating Pump
3	Non-return Valve	**9**	Thermostatic Mixing Valve
4	Safety group (7 bar / 0,7 MPa)	**A**	Cold Water Inlet
5	Drainage Siphon	**B**	Hot Water Outlet
6	Expansion Vessel	**C**	Recirculation

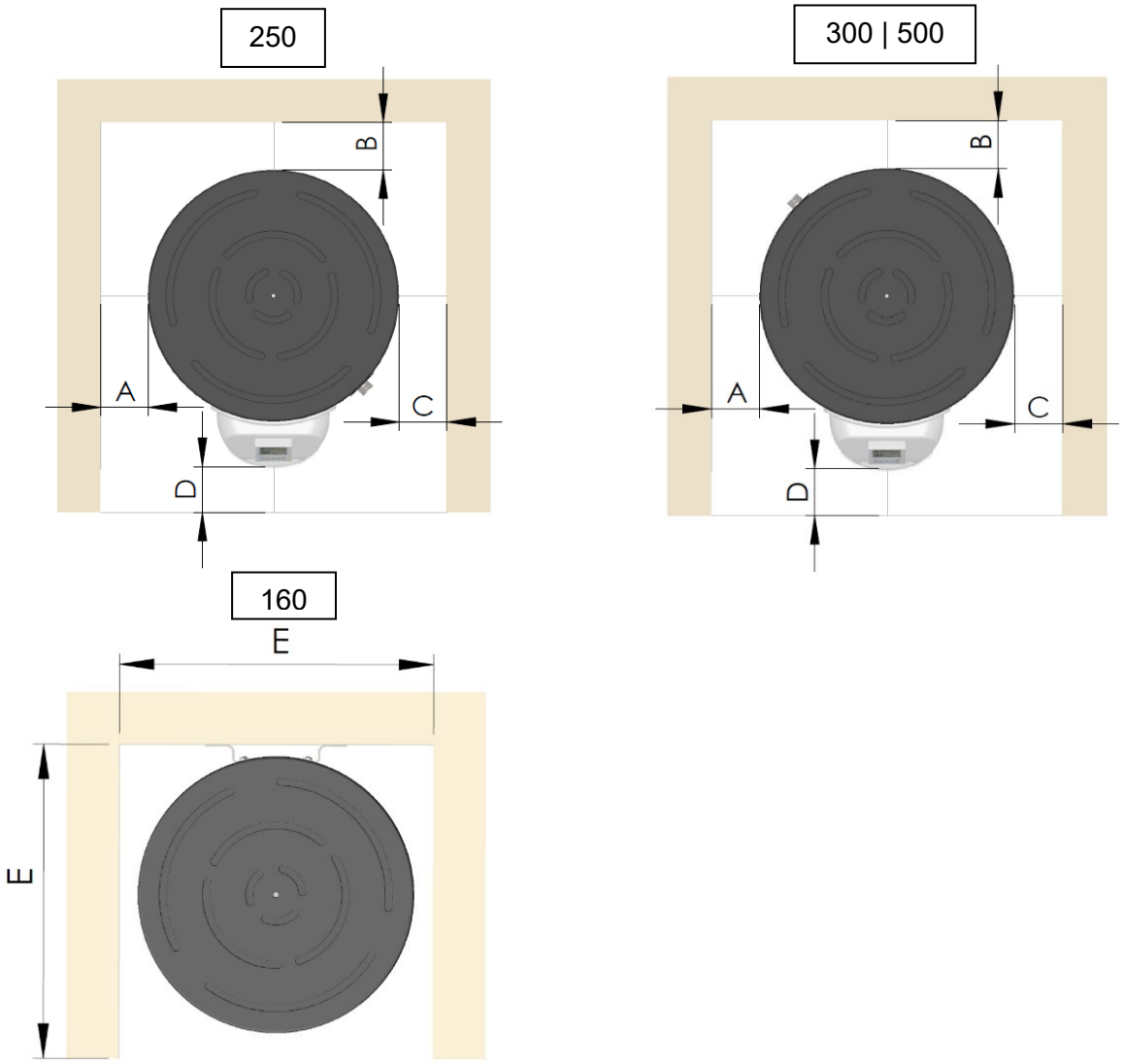
WARNING	It is necessary to install a safety device at the cold water inlet of the appliance. The safety device must be in compliance with the standard EN 1487:2002, maximum pressure 7 bar (0.7 MPa) Water must not be stopped from flowing from the safety device to the deposit by any sort of accessory. The safety device must be connected with piping whose diameter is not less than the cold water inlet coupling. The discharge must be connected to a sewage siphon or, if this is not possible, elevated to a distance of at least 20 mm from the pavement to allow visual inspection; To prevent high pressure from main water supply, install a pressure reduction valve set to 3 bar (0.3 MPa).

	The Manufacture is not responsible for damage related to not following these recommendations/ warnings.

5.2 Set Up

5.2.1 Interior Unit – Storage Water Tank

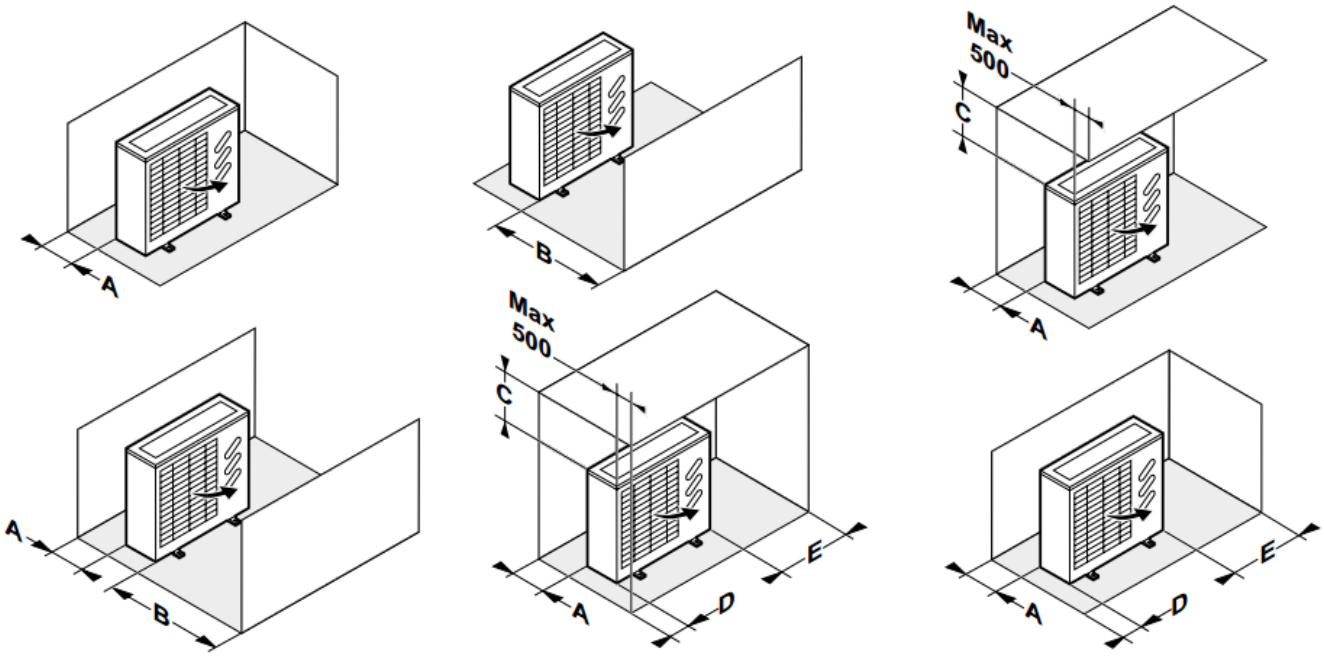
- Shelter the equipment in places susceptible to ice formation
- Choose the position closest to the main points of use;
- Always insulate the pipes;
- The temperature around the equipment must not exceed 40 °C;
- The water heater should never be placed outside, also avoiding exposure to sunlight.
- Make sure that the support surface is sufficient to accommodate the weight of the water-filled water heater.
- In order to guarantee accessibility to the equipment for maintenance or any other need, the schematic cluttering distances must be respected:



	A	B	C	D	E
	Unit. (mm)				
160	---	---	---	---	600
250	100	100	100	150	---
300 | 500	400	100	100	150	---

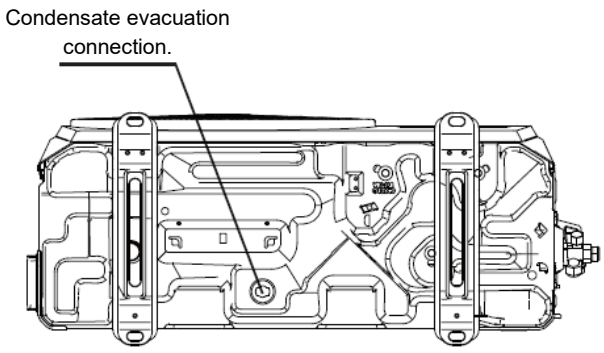
5.2.2 Exterior Unit (split)

- There must be no obstructions that prevent air from exiting the unit;
- The outdoor unit must be installed at a height of 100mm or higher from the ground and in order to facilitate the evacuation of condensate;
- For the correct evacuation of condensate, always use the accessories supplied with your equipment;
- Make sure the outdoor unit is kept in a horizontal position (use a level);
- Choose the location of the outdoor unit so as not to disturb your neighbours with noise;
- Make sure that the wall where the outdoor unit is installed is able to support its weight;
- Do not place anything on the outdoor unit.



	A	B	C	D	E
Unit. (mm)	300	1500	500	200	600

WARNING	The outdoor unit must be placed on level ground, in an open and well-ventilated place, also facilitating the evacuation of condensate.



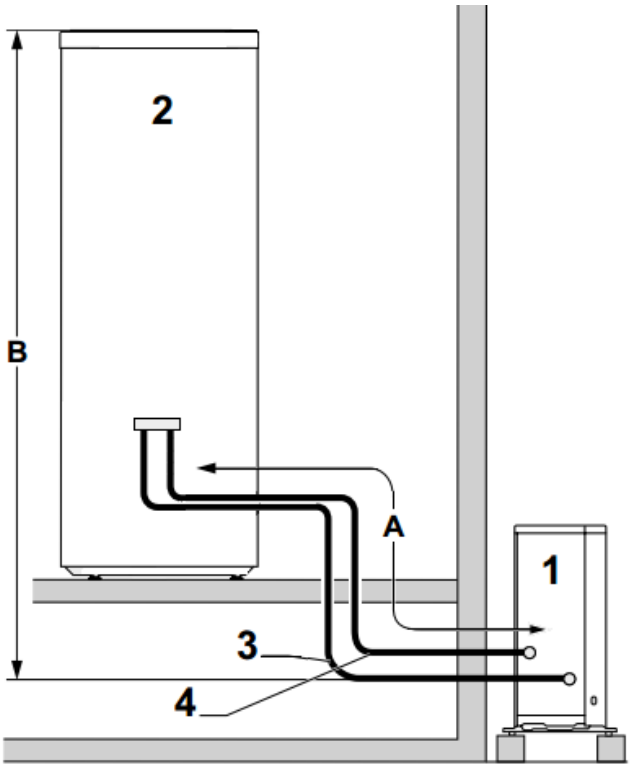
5.3 Refrigerant Couplings

	• Refrigerant connections must be carried out by a qualified technician, with a professional certificate of skills for this purpose. • Refrigerant connections must be thermally insulated to prevent burns and to ensure optimal system performance.
	The external unit holds a pre-load of fluid R134a.

While connecting the components bear in mind these details:

- Distance between the storage water heater and the external unit must be as short as possible. Performance and longevity of the equipment depends on these factors.
- The piping must not have elbows.
- The two refrigeration pipes that make up the joint must be insulated separately.
- Use only R134a, and avoid mixture with another fluid, air or substance.
- The piping must be of copper, without seams, refrigeration type (Cu DHP according to standard ISO1337).
- Use piping whose thickness is never less than 0.8 mm
- Do not use sanitary type copper under any circumstance.

5.3.1 Distance between indoor unit (storage water heater) and outdoor unit (split)



To ensure the proper functioning of the equipment, the minimum and maximum distances between the indoor unit and outdoor unit must be respected.

1 – Exterior Unit (split)

2 – Interior Unit (Storage Water Heater)

3 – Max bends allowed: 10

4 – Radius of curvature: 38mm

A – Minimum/maximum distance: 2/20m

B – Maximum height: 10m

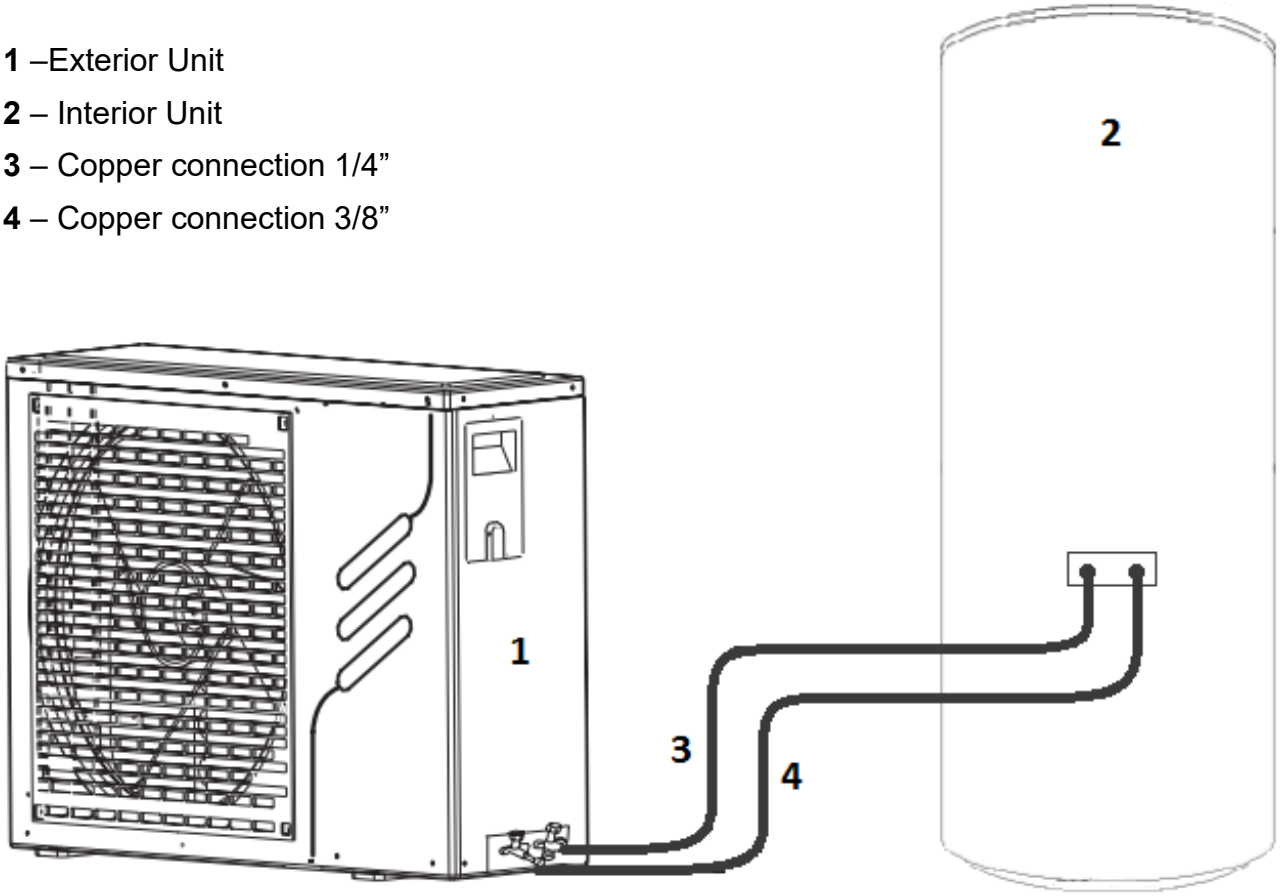
5.3.2 Refrigerant Connections

1 –Exterior Unit

2 – Interior Unit

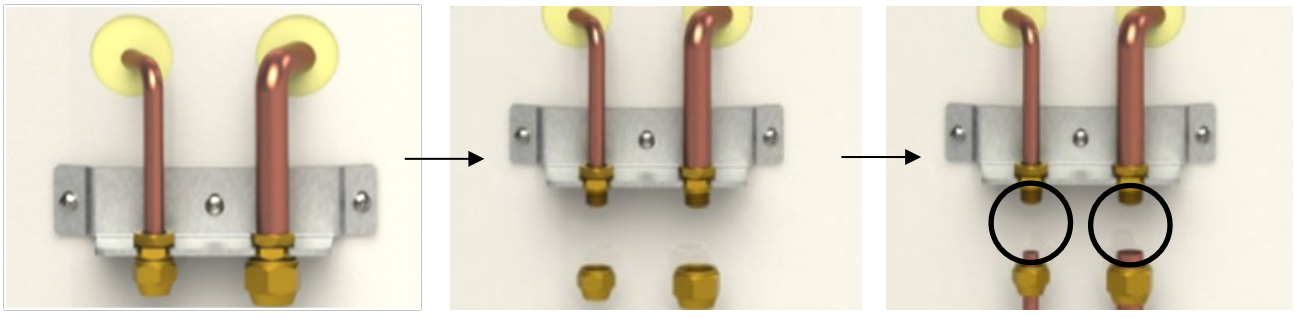
3 – Copper connection 1/4”

4 – Copper connection 3/8”

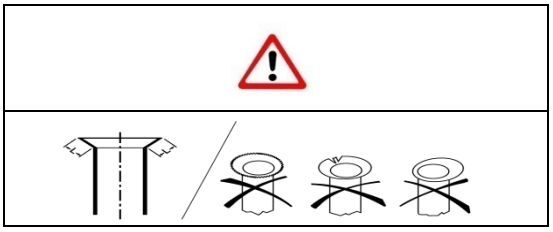


Procedure for connecting the refrigeration connections to the indoor unit:

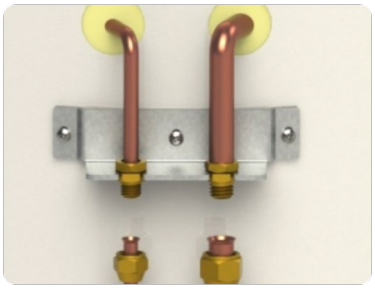
a) Prepare the copper pipe, removing the protective caps from the ends;
b) Place the extremity of the pipe upside down, cut the appropriate size of pipe and sand the rough edge;
c) Remove female couplings from the storage water heater condenser and insert them in the pipe.

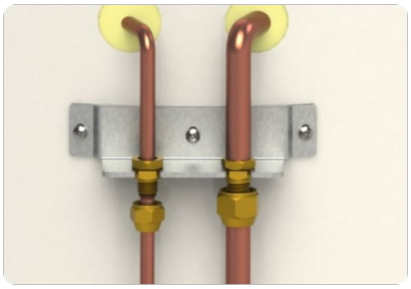


d) Flange the pipe with the appropriate tool shaping a conic edge, make sure that there are no rough edges or imperfections and that the vertical of the walls is uniform;

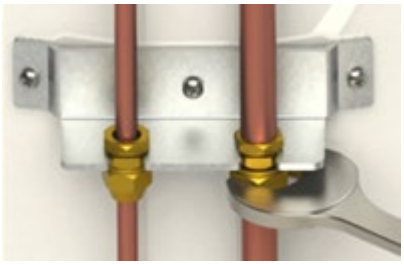


e) Tighten the female coupling with your hands, turning it a few times.



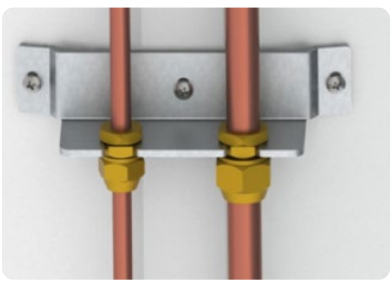


f) Tighten with a wrench, apply a torque in conformity with the diameter of the pipe used. Insufficient torque will cause leaks of cooling fluid. An excessive tightening of the coupling will damage the edge of the pipe and cause leaks.



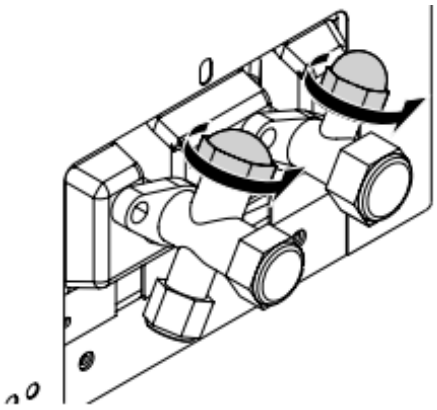
Pipe diameter (inches)	Applied Torque (Nm)	Wrench nº
1/4”	14 a 16	19
3/8”	33 a 42	21

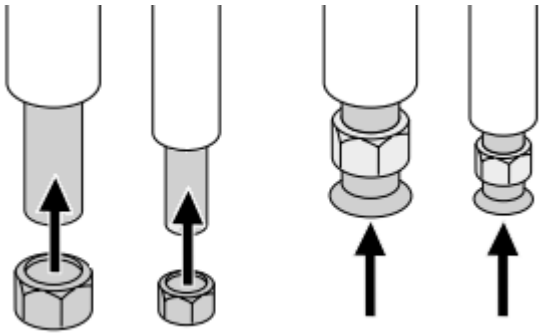
g) Insulate all connections.



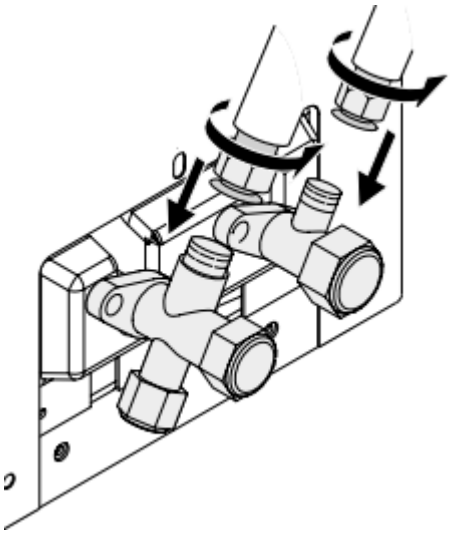
Procedure for connecting the refrigeration connections to the exterior unit:

a) Remove the protective caps from the ends of the 2 and 3-way valves. Place the end of the tubes facing downwards, cut the tube to the desired distance, clean the existing burrs, install the nuts and flange the tubes.





b) Fasten the tubes to the respective valves. It is recommended to use a thread sealant on all existing threaded connections.



Pipe diameter (inches)	Nut diameter (mm)	Applied Torque (N.m)
1/4	17	14 – 18
3/8	22	34 – 42

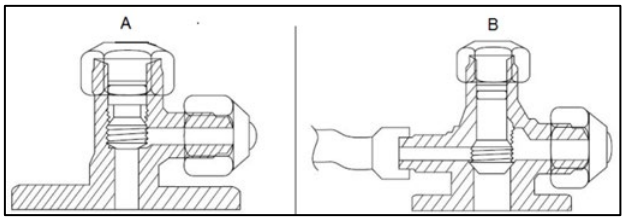
5.3.3 Load of Nitrogen

a) After finishing the joints, make sure there are no leaks. For this purpose, inject a load of nitrogen with a pressure of 10 bar through the pressure inlet (3-way valve);
b) Brush every coupling in soap foam and make sure the pressure in the pressure gauge is constant;
c) After checking for leaks, remove nitrogen from the circuit.

5.3.4 Vacuum

a) Use, throughout the operation, connections, vacuum pump and pressure gauges properly adapted for R134a;
b) Use a vacuum pump only to remove the air and humidity inside the piping;
c) Never use the system refrigerant to purge the connection pipes;
d) The valves must be completely closed during the vacuum process, in order to create vacuum only in the piping;

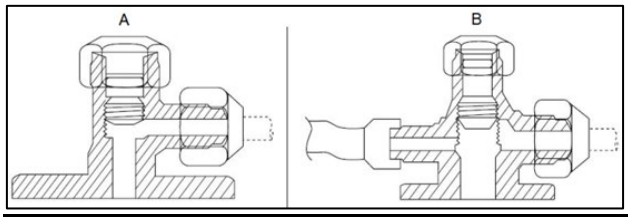
Closed Valves



A –2 Way Valve B – 3 Way Valve

e) Create a vacuum with the vacuum pump plugged to the inlet of the three-way pressure valve as depicted, keeping the valves completely shut until there is a vacuum of 50 Pa (0.5mbar);
f) Once the vacuum procedure is over, shut the vacuum pump valves. The vacuum pressure gauge should indicate the same reading after the pump has stopped, ensuring the installation is in a vacuum and ready for running the coolant;
g) After concluding the vacuum procedure, you must open the two valves so that the coolant may circulate throughout the whole system.

Open Valves



A – 2 Way Valve B – 3 Way Valve

	After concluding the vacuum, do not remove the hoses while the system is not completely pressurized by the refrigerant.

5.3.5 Checking good running condition

To check if your equipment is running correctly, start it and wait 20-30 minutes and the check these conditions:

- The air temperature at the exit of the evaporator should be 3ºC/4ºC below the air inflow temperature.
- The gradient between the gas temperature at the Split exit and the condensation temperature should be between 5ºC and 12ºC.

5.4 Hydraulic Connections

The water you use may contain impurities and/or substances damaging to the system and even harmful to your health. Make sure you use water with quality fitting for home consumption. The following table indicates some parameters that, when exceeded, must be chemically treated.

Hardness (ºdH)	pH	Treatment
3,0 - 20,0	6,5 - 8,5	No
3,0 - 20,0	<6,5 or >8,5	Yes
<3,0 or >20,0	----------	Yes

To assemble the couplings of the hydraulic circuit you must:

a) Connect the water inlet and outlet of the equipment with a pipe and fittings that can cope with constant temperature / pressure of 75 ºC / 7 bar. For this reason, we recommend the use of piping with resistance to high temperature and pressure. We recommend the use of pipe type PEX, PPR, MULTICAMADA, amongst others;

b) It is necessary to install a safety device at the cold-water inlet of the appliance. The safety device must be in compliance with the standard EN 1487:2002, maximum pressure 7 bar (0.7 MPa);

c) Besides this device, other components will be necessary to ensure the interruption of the hydraulic load, installed according to this sequence:
   - Retainer valve / gate valve
   - Pressure throttle valve (in case the cold-water inlet pressure exceeds 4.5 bar)
   - Safety valve / discharge valve
   - Expansion tank

The safety/discharge valve must be connected with piping whose diameter is not less than the cold-water inlet coupling. The discharge must be connected to a sewage siphon or, if this is not possible, elevated to a distance of at least 20 mm from the pavement to allow visual inspection.

We recommend the installation of a shut-off / section valve between the gate valve and the coupling to the storage water heater for the purpose of maintenance, safety or emergency.
The manufacturer is not responsible for damage related to not following these recommendations / warnings.

5.5 Electrical Connections

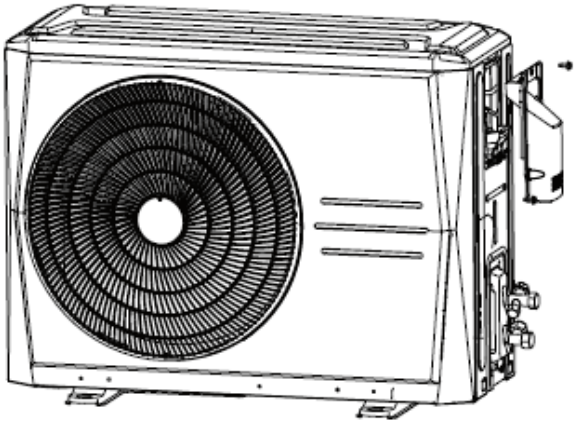
To establish the electric connection of the equipment, check these conditions:

a) The thermodynamic equipment must only be electrically powered after filling the water heater.
b) The thermodynamic equipment must be connected to a single-phase voltage (230 VAC/50Hz);
c) The thermodynamic equipment must be permanently powered to guarantee the availability of continuous hot water;
d) The connections must comply with the installation regulations in force in the national territory or country where the thermodynamic equipment is installed;
e) Earth wiring is mandatory;
f) It is imperative that the cable routing of the outdoor probe is carried out in the proximity of the sector(s) where the power lines of the outdoor unit pass.

It's recommended that the installation includes:

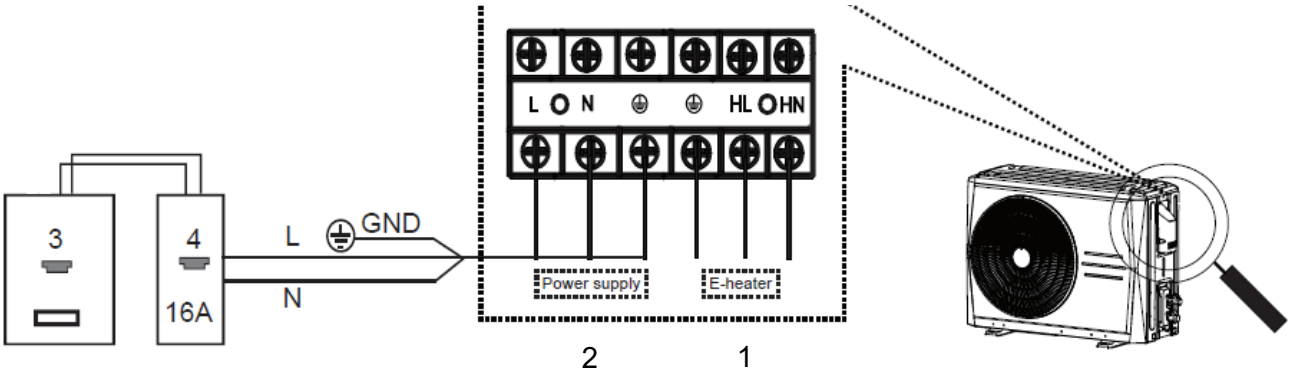
- Bipolar circuit-breaker with connection cable with section equal to or exceeding 2,5mm;
- Protection differential circuit breaker of 32A/30mA;

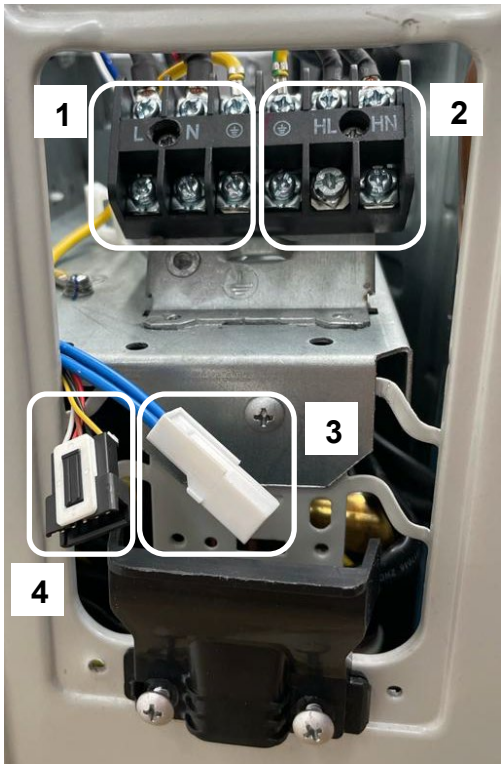
Connections in the exterior unit



With the help of a star wrench, remove the protective cover of the electrical connections.

1- Connection terminal for the electrical heater (indoor unit);
2- Connection terminal for the general power supply;
3- 20A/30mA differential (recommended installation);
4- 16A circuit breaker (recommended installation).





1 – Connection terminal for the general power supply;

2 – Connection terminal for the electrical heater (indoor unit);

3 – Connector terminal for the water temperature probe of the water heater;

4 – Connection terminal for the display (indoor unit).

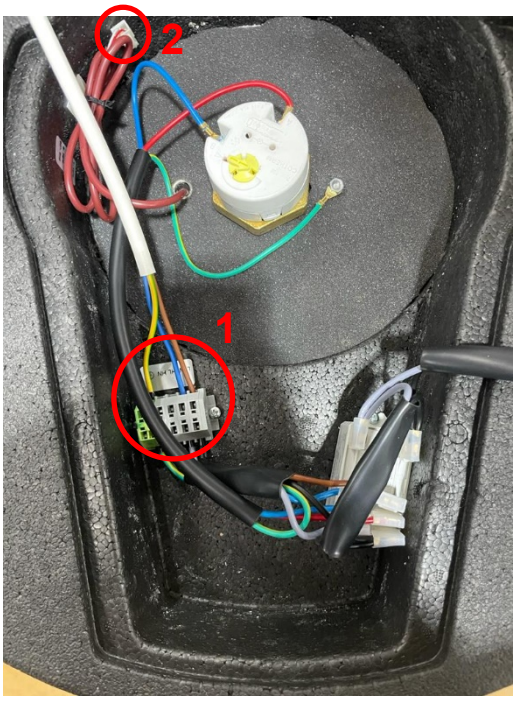
WARNING	**The main power cable, as well as the connection cable for the electrical heater in the indoor unit, is not supplied with the unit.** **The cable section (general power supply and electrical heater connection to the indoor unit) must be at least 2.5mm² for a distance of up to 20m.**

WARNING	**The cables for connecting the temperature probe (3) and for connecting the display (4) are supplied with the unit.** **The cables (3 and 4) have a distance of 20m.**

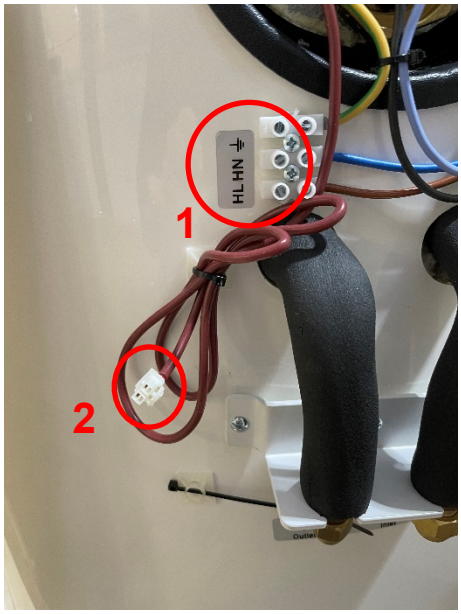
WARNING	**The safety thermostat of the thermodynamic equipment must not, under any circumstances, undergo any type of repair outside the manufacturer's premises.** **Failure to comply with this clause voids the equipment warranty.**

Connections in the interior unit

- Interior unit 160L



- Interior unit 250L, 300L e 500L



1 – Connection terminal for electrical heater;

2 – Connector terminal for the water temperature probe of the water heater;

3 – Connection terminal for display.

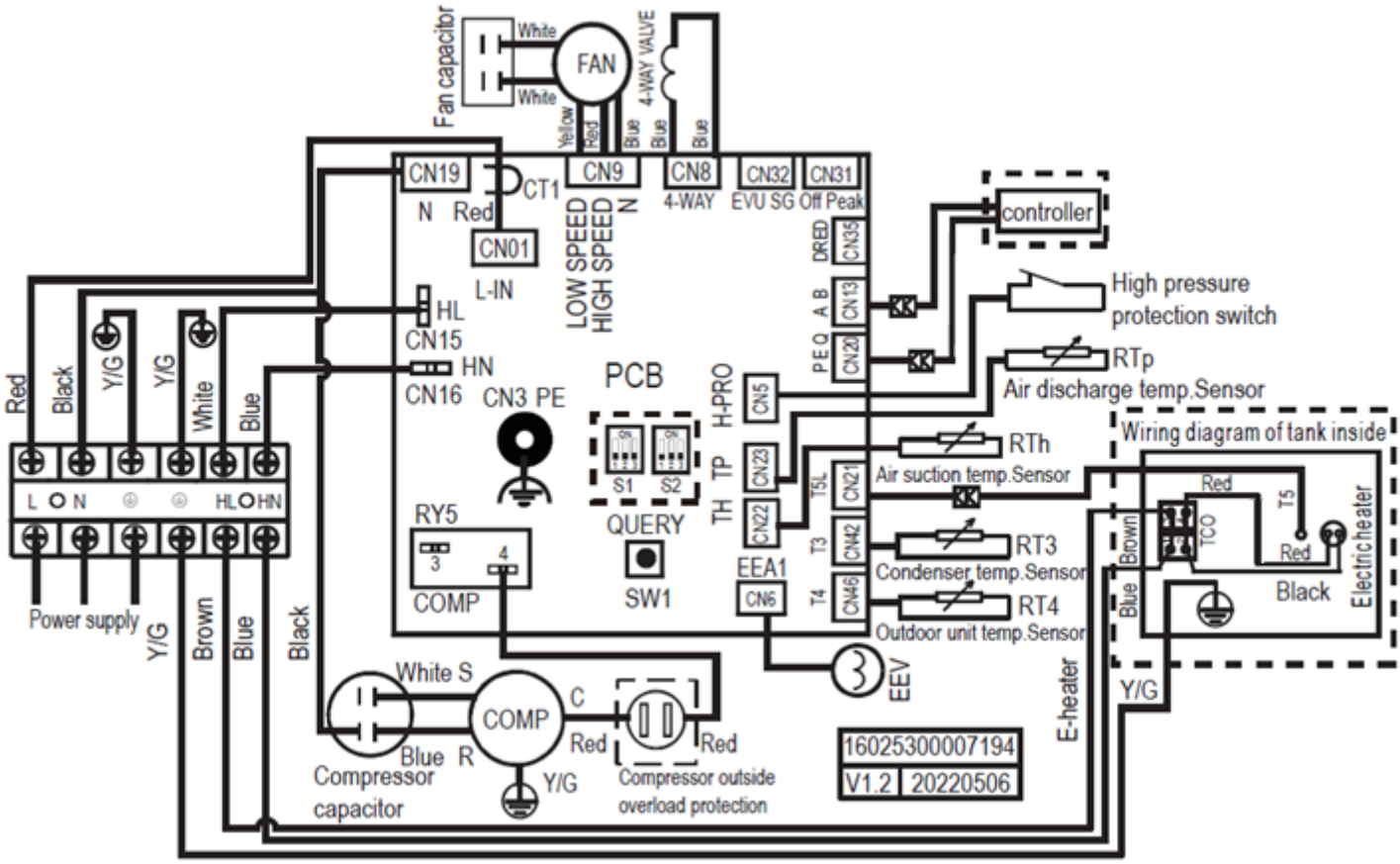
Use the SPLIT 160L as an electric water heater

In the event of an anomaly, the SPLIT 160L indoor unit can be used as an electric water heater, in order to obtain domestic hot water using only the 1500W electrical support resistor.

To do this, you must disconnect the outdoor unit from the mains and the power cable that comes with the indoor unit must be connected to the socket (230V~).

⚠	**In the event of an anomaly, disconnect the equipment (exterior unit) from the electricity supply and plug the interior unit to electricity to ensure domestic hot water.**
⚠	**The power cable that comes with the 160L indoor unit must only be connected in case of anomaly for use as an electric water heater.** **In normal operation, only the power cable of the outdoor unit must be connected to the electrical grid.**

Electrical Scheme (outdoor unit)



Probe	Type	Description
T3	NTC 10K @25°C	Evaporator temperature
T4	NTC 10K @25°C	Outside air temperature
Th	NTC 10K @25°C	Compressor suction temperature
T5L	NTC 17K @50°C	Water temperature
Tp	NTC 5K @90°C	Compressor discharge temperature

Symbol	Description
COMP	Compressor
FAN	Fan
E-heater	Electrical heater connection (backup)
Power supply	Power supply (230Vac/50Hz) • L – Phase • N – Neutral • T – Ground
Controller	Electronic controller
TCO	Safety thermostat
4WAY	4-way valve
S1; S2	Selectors
SW1	Button
EEV	Electronic expansion valve
CT1	Coil Measuring Consumption (Amp) Compressor/Electrical heater

5.6 First Use

5.6.1 Filling the tank

a) Open a cold-water tap / isolation valve next to the safety group (this procedure is also used to check if the drain valve is closed);
b) After obtaining flow in the hot water tap(s), shut it. Your water heater is full;
c) Check the tightening in the pipes;
d) Carry out successive discharges through the safety valve, in order to guarantee the proper functioning of all hydraulic components of the installation.

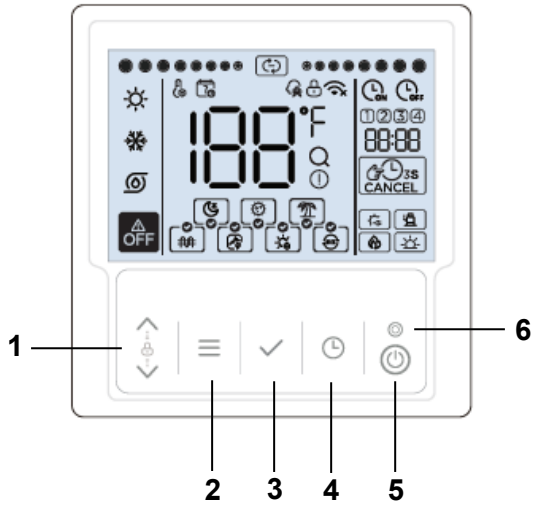
5.6.2 System Start Up

Before starting the SPLIT, check whether the installation is set up according to the recommendations and that everything is in conformity, then you may plug your equipment to the power supply. After switching on your equipment, you should wait a few seconds until the controller begins to work.

6 System Operation

6.1 Control Panel

Split control panel is simple and intuitive. It enables the configuration of several operating parameters according to operating mode selected by the user.



1 – Navigation keys, up and down;

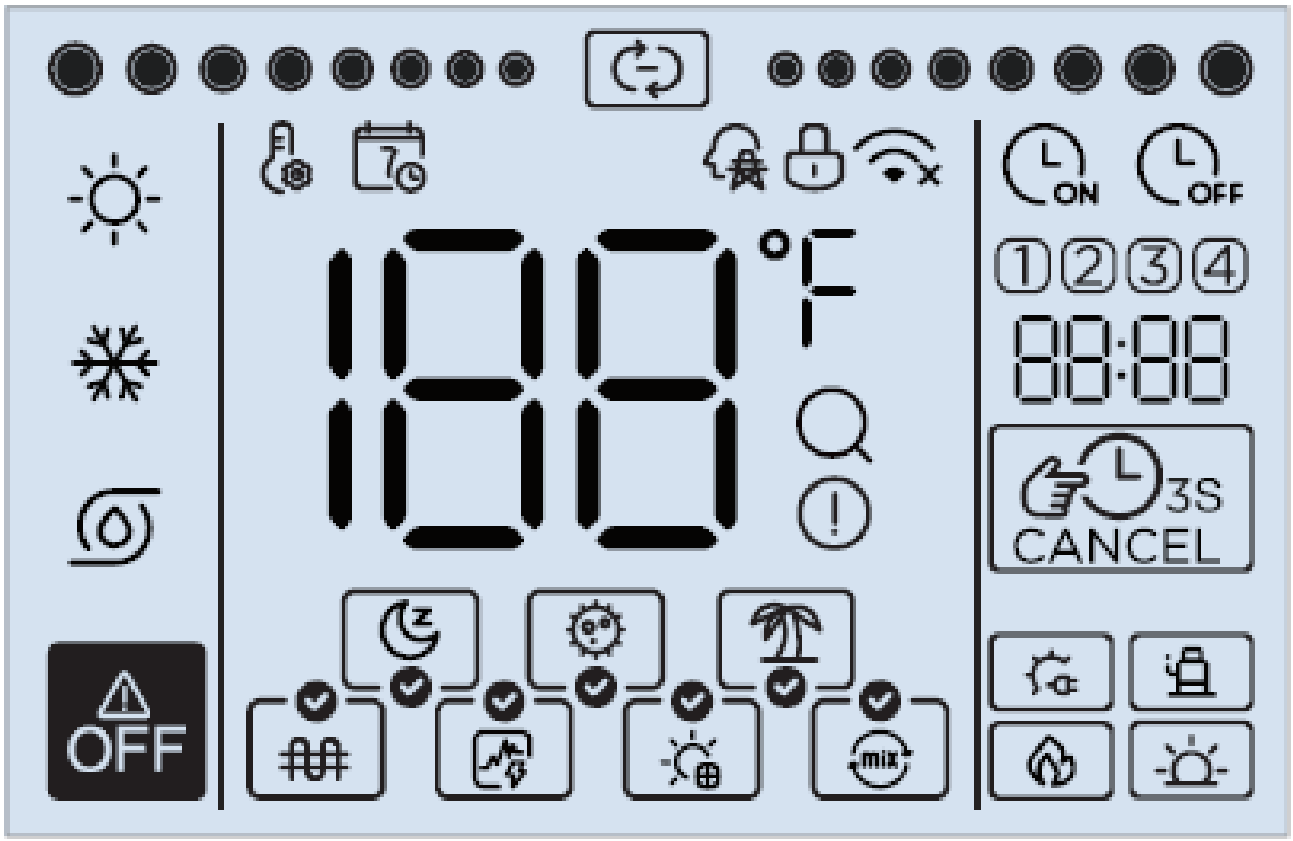
2 – Menu;

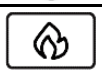
3 – OK;

4 – Time schedule;

5 – ON/OFF;

6 – Functional Led;



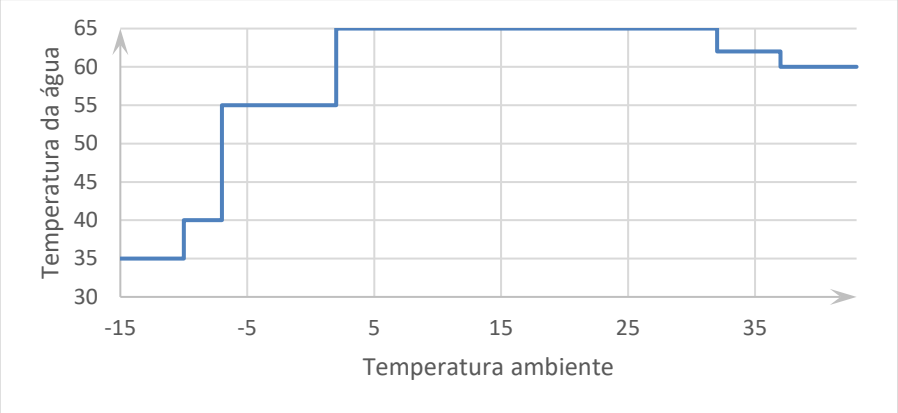
Icon	Function	Description
	DHW mode	Lightened when the DHW mode is operating
	Cooling mode	Not available
	Pump mode	Not available
	Silence function	Not available
	Disinfection function	Lightened when the function is activated. When it is selected (not activated) the icon will slowly flash. If it's manually activated it will flash in the main interface.
	Holiday function	Lightened when the function is activated. When it is selected (not activated) the icon will slowly flash.
	Manual e-heating function	Lightened and quickly flash when the function is manually activated. When it is selected (not activated) the icon will slowly flash.
	Backup OPT. function	Lightened when the function is activated. When it is selected (not activated) the icon will slowly flash.
	Solar-energy function	Lightened when the function is activated. When it is selected (not activated) the icon will slowly flash.
	Hybrid function	Lightened when the function is activated. When it is selected (not activated) the icon will slowly flash.
	OFF icon	Lightened when the unit is OFF or selects OFF in some timers.
	Operating icon	Dynamically lightened when is operating.
	Settings	Only lightning when setting or adjusting.
	Weekly-schedule	Lightened when the function is activated.
	Smart-grid	Lightened when the function is activated.
	Lock icon	Lightened when the keyboard is locked.
	Wi-Fi	will be lightened if Wi-Fi is normal and it's off. When searching signal, slowly flash.
	Temperature	Display the current tank temperature or parameters when setting.
	Temperature unit	Display ºF or ºC according to the desire unit.
	Parameters	Lightened when searching parameters.
	Alarm	Quickly flash when a fault occurs.
	Boiler	When lightened it is recommended to turn on the boiler.
	Solar	Lightened when the solar energy signal is on.
	E-heater	Lightened when the e-heater is operating.

	Heat pump	Lightened when the compressor is operating.
3S CANCEL	Cancel	Lightened when timer can be cancelled.
ON	Timer-on	Lightened when setting timer is on.
OFF	Timer-off	Lightened when setting timer is off.
88:88	Clock	Display clock at the main interface and display error code when fault occurs. Could also display paraments wen setting.
①②③④	Timer	Lightened when corresponding timer is activated.

6.2 Operating principle in different modes

The heat pump, by default, represents the main source of heat in the thermodynamic system intended for heating sanitary water.
If the ambient temperature (X axis of the graph below) is above or below the operating range defined for the heat pump, the equipment will stop and, by itself, will activate the support electrical heater. The mentioned operating mode fits this work within the following temperature spectrum from -15ºC to +43ºC
There are 2 rules that are inherent and common to the 3 operating modes shown below:

- in heat pump mode, the equipment is capable of heating water up to a limit of 65ºC,
- the range for setting the domestic hot water temperature is between 25ºC and 75ºC.



Outdoor Temperature (T_a)	Consumed energy sources
• $T_a < -15\ ºC$ • $T_{water} >$ **variable temperature selection position according to Ta** • $T_a > 43\ ºC$	Support electrical heater
$-15\ ºC < T_a < 43\ ºC$	If required, there may be parallel work between the heat pump and the electrical heater.
T_{water} - Water temperature	

Running principle – AUTO MODE

The energy sources used by the DHW system to heat the water are: the heat pump, the support electrical heater or the 2 elements mentioned simultaneously.

Outdoor temperature (T_a)	Consumed energy sources
At least one of the 3 requirements listed below must be met: • $T_a < -15\ ºC$ • $T_{water} >$ **variable temperature selection position according to T_a** • $T_a > 43\ ºC$	Support electrical heater
$-15\ ºC < T_a < T_d$	If required, there may be parallel work between the heat pump and the electrical heater.
Compliance with both requirements described below must be ensured: • $T_a > T_d$ • $T_{água} < 65\ ºC$	Heat pump
T_{water} – Water temperature T_d - Ambient temperature operating limit for electrical backup. It can be set between -5 and 18°C..	

Running principle – OPT.BACKUP

In this operation mode, the DHW system has the water heating action limited to two specific moments:

- During the time programmed;
- Each time the off-peak rate signal occurs;

The energy sources used by the AQS system to heat the water are:

- Heat pump (priority heating mechanism)
- Electrical heater (its work starts while the heat pump is running, aiming to reach the temperature setpoint, in parallel, before the end of the period)

6.3 List of operating modes

The heat pump has available the following items that can be active:

Activation Code	Operating mode	Activation Code	Operating mode
1	Net	11	Smart grid
2	Timer type	12	Tank volume
3	Temperature Unit	13	Standard capacity of heat pump
5	Disinfect	14	E-heater capacity
6	Holiday	15	Manually defrosting
7	OPT. Backup	18	Refrigerant recovery
8	Solar Energy	19	Power consumption estimation
9	Hybrid	20	Operating time statistics

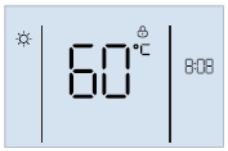
To activate each operating mode, press the ∧+∨+◷ keys for 3 seconds to enter the parameters, then navigate using the arrows and use the confirm key to select the required mode and, finally, activate “on” or adjust it.

Note: It is only possible to execute these functions and configure the respective settings (chap. 7.2.) or manually activate certain functions (chap. 7.3.) if the required mode is active according to the previous instruction.

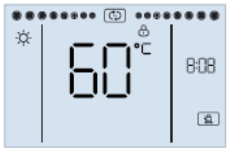
6.4 Controller features

1 – ON/OFF

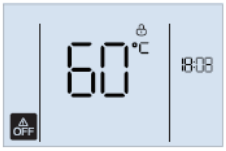
Press “⏻” to turn the unit on or off. If the equipment is turned on, but not in operation, the display will show the operating mode, temperature and time (1). If it is working, the operating symbol (2) will flash. To turn off, follow the same procedure and the icon OFF will be displayed (3).



(1)



(2)

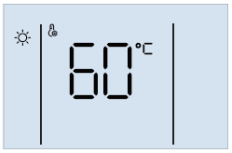


(3)

2 – Lock/Unlock keyboard

To lock or unlock, press the arrows simultaneously for 1 second ∧+∨.
When unlocked, the keypad will automatically lock after 120 seconds of no operation.

2 – Setting set-point temperature



Click on the cursor “∨” to decrease or “∧” to increase the operating set-point. Press the “✓ “key to confirm the changes.

3 – Set clock

Press the “◷“ button for 3 seconds to access the date and time setting. Use the arrows to set the year and confirm, then the month and the day. Then adjust the hours, starting by adjusting the desired hour using the arrows and confirming, then the minutes.

4 – Time schedule

It is possible to define 4 programmable time points: In each one it is possible to define the operating time, the operating mode and the set-point temperature.

Note: To carry out this setting, timer type "1" must be selected in the list of operating modes (chap. 6.3.)

Setting timer 1

To define each one of them, click on the "🕒 " button and use the cursors "^" or "v" to search for the desired timer, selecting and confirming Timer1 on the "✓ " button.

Set the desired hours and confirm. Then, using the arrows, define and confirm the desired operating mode and the set-point temperature. At the end, press the "✓" button to activate the programmed period and return to the four points of timer selection interface

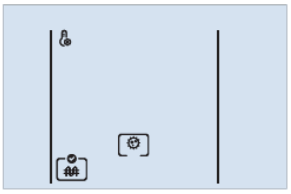
Setting timer 2, 3 e 4

Carry out the same procedures as for "Timer 1" to configure the remaining timers.

5 – Cancel time schedule

Press the "🕒"key for 3 seconds to cancel the time schedule.

6 – Enable/disable e-heater



Press "✓" for 3 seconds to enter in the manual functions interface.
Then using the arrows search the icon "⎓" to activate the e-heater.
Press "✓" to enable or disable this manual function.
If active the icon "⎓" will flash together with the icon "●"

7 – Change operating differential (tr dh)

Enter the menu through "☰" and press "✓" key for 3 seconds to enter temperature differential adjustment mode. Use the arrows to set the desired temperature and confirm with "✓". The differential is between 3 and 20°C, by default it is programmed with a differential of 5°C.

8 – Ambient temperature of auto e-heating (td)

td is a temperature value that determines whether the heat pump and electrical heater operate simultaneously or not. If the ambient temperature is equal or higher than td, the machine will start operating only in heat pump mode and the electrical heater will only activate if the set-point as heat pump is reached (T5stop), if the ambient temperature goes out of range work or if an error occurs with the heat pump.

If the ambient temperature is lower than td, the machine will only start in heat pump mode and after 1 hour, if the water temperature is 10ºC below the set-point, after reaching the T5stop, the electrical heater will start working until it reaches the setpoint.

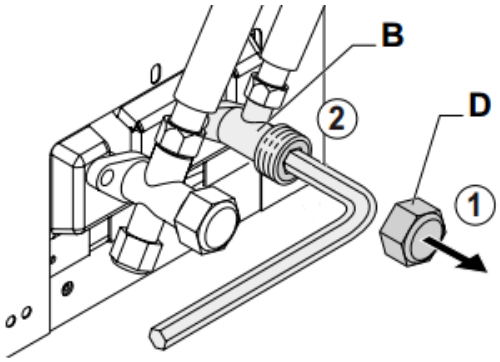
To set this value of td, in the manual functions interface and with the electrical heater icon selected, press the "✓" key for 3 seconds. Then use the arrows to set the desired value and confirm "✓".
The operating limit can be set between -5 and 18°C, by default it is programmed at 3°C.

9 – Refrigerant recovery

To access the refrigerant collection mode, simultaneously press the ⏲+⋀+⋁keys to enter the installation settings. Then scroll to “18” using the arrows. Press “✓”to enter refrigerant collection mode.

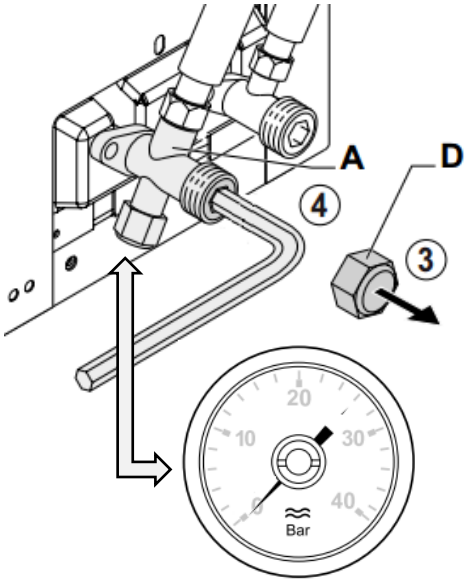
During the process, the display will show “ ”. This refrigerant collection function will be automatically disabled after 10 minutes after being activated.

This function forces the equipment to invert the cycle allowing the recovery of the refrigerant to the outdoor unit. To perform the recovery, perform the following procedures:



1 – Remove the two-way valve cover;

2 – With a hexagonal wrench, close the valve completely.



1 – Remove the three-way valve cover;

2 – Place a refrigeration gauge on the three-way valve;

3 – When the pressure on the manometer is equal to 0 bar, completely close the three-way valve.

10 – Parameters view

Simultaneously press the keys ◷+∧ for 1 second. Use "∧" or "∨" to check the parameter list.

Code	Displayed at 88:88	Description	Displayed at 188
1	Fan motor speed (0 means fan stopped)	Fan speed	FA
2	Pulse value	Pulse value of EXV1	E1
3	Current value (A)	Current consumption	Co
4	Temperature	Discharge temperature	tP
5	Temperature	Suction temperature	th
6	Temperature	Evaporator temperature	t3
7	Temperature	Ambient temperature	t4
8	Temperature	Water tank temperature	t5
9	Temperature	Ambient temperature limit of auto e-heating	td
10	tr dh	Differential temperature	Temperature value
11	SG SL	Smart grid class	Class value (0 means no signal)
12	Power value kWh	Cumulative estimated power consumption	AP
13	Power value kWh; (":" means the decimal point)	Current estimated power consumption of e-heater in 24 hours	EP
14	Power value kWh; (":" means the decimal point)	Current estimated power consumption of heat pump in 24 hours	HP
15	Total time value in hours	Cumulative operating time of unit	t1
16	Total time value in hours	Cumulative operating time of the compressor	t2
17	Total time value in hours	Cumulative operating time of the e-heater	t3
18	EF	Clock chip state	"EF" if fault, or "- -"
19	Er 1	Historical fault	Error code
20	Er2	Historical fault	
21	Er 3	Historical fault	
22	Ctrl	Software version of controller	Version number
23	Odu	Software version of unit	

6.5 Run and adjust functions

To select the functions and adjust the respective parameters, it is necessary that they are previously active in the list of operating modes(**check chapter 6.3**).

From here, you can select, run, and adjust these functions as follows:

On the main interface, press the "☰" key for 3 seconds, scroll to the desired operating mode symbol and press the "✓" key for 3 seconds to adjust the parameter. After choosing the desired setting by the arrows, confirm the setting "✓".

6.6 Manual functions

It is possible to perform some functions manually and immediately. As long as the functions are previously active in the list of operating modes (**check chapter 6.3**), start by pressing the "✓" key for 3 seconds on the main interface. Then select the function you want to activate and confirm with the "✓" button.

6.7 Anti Legionella Function

The Split electronic control is suitable for anti-Legionella function, which consists of a water heating cycle at 55°C to 75°C (factory default at 65°C), for a suitable period of time to prevent the formation of germs in the warehouse. The Anti Legionella function can be configured and activated on the controller as follows:

Enable this function on the menu previously on the menu (**check chapter 6.3**)

Click "☰" key for 3 seconds to enter manual functions interface. Then scroll through the arrows to the disinfect icon "  " and press the "✓" key for 3 seconds to enter the settings of the anti-legionella function. Start by defining the time you want to carry out the cycle, and confirm with the "✓" button, then define and confirm the desired temperature and, finally, define how often you want to repeat the cycle (factory default of 7 days).

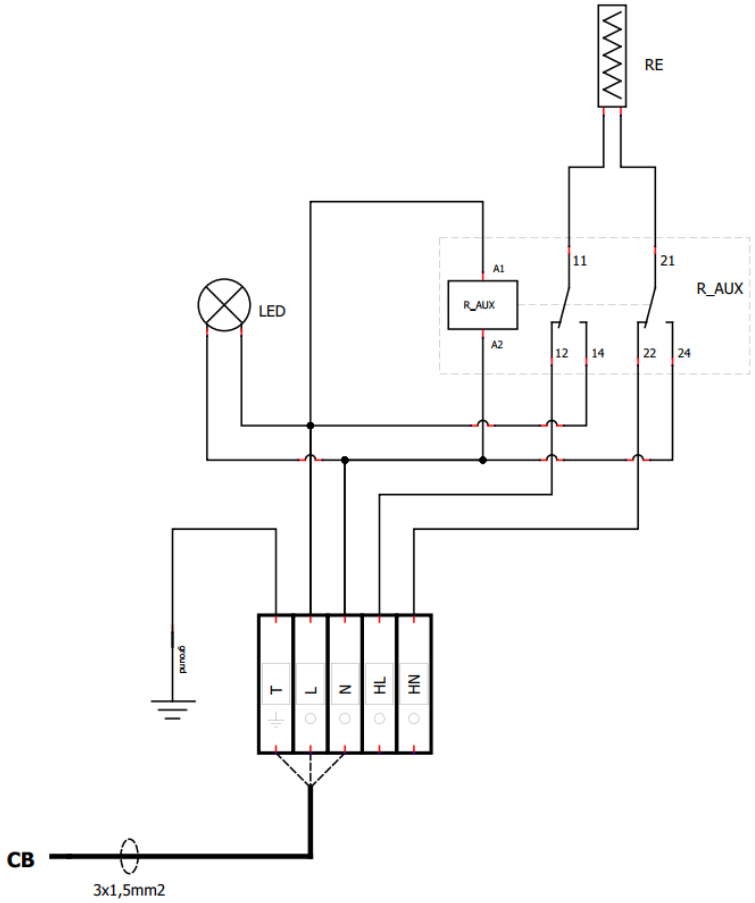
If the function is active, the "  " icon will flash together with a tick "  "

6.8 Electrical heater manual activation

The possibility of manually connecting the backup resistor is only available on the indoor unit (accumulator) of the AquaPura Split 160.

The electrical heater is on:

- Automatically, depending on the configuration adopted by the user on the equipment's control panel;
- Manually, in case of any non-compliance in the equipment. In these circumstances, the user must connect the power cable located on the back of the water heater to the socket (230V~). The electrical heater has an integrated thermostat that will control the temperature in the water heater. By default, the thermostat leaves the factory set to heat the water up to 70ºC.



Terminal	Description
CB	Power cable
R_AUX	Auxiliar relay
RE	Support electrical heater
LED	Indication of manual activation of the electrical heater
HL	Connection of the electrical heater with the outdoor unit
HN	

6.9 End of system life

At the end of the product's useful life, dismantling of the equipment must be carried out by a qualified installer or plumber and/or electrician (if necessary). All materials used in this equipment can be deposited at your nearest recycling center. Find out more about regulations at the recycling centers closest to you.

7 Errors table

In the event of an anomaly and a possible assistance request the error code is important to effectively trace the problem.

In case of an anomaly and before requesting assistance, please do the following:

1 – Turn off the power and turn it on again.

2 – The device restarts and stars up automatically;

3 – If the error code persists, request for assistance.

In case of anomaly, the control panel displays a message with a corresponding code, the alarm icon will flash quickly and the bell will ring 3 times every 180 seconds. To turn off the bell ring press for seconds "🕒":

Code	Description	Problem	Corrective action
E2	Communication error between the outside unit and the display;	Communication failure between outsider unit and the display.	Check the connection and the condition of the cable.
		Damaged display.	Trocar display
E4	Temperature probe error T5L – storage water heater probe;	Communication failure	Check the connection and the condition of the cable.
		Damaged sensor	Replace the probe
E5	Temperature probe error T3 – Evaporator probe;	Communication failure	Check the connection and the condition of the cable.
		Damaged probe	Replace the probe
E6	Temperature probe error T4 – outdoor probe;	Communication failure	Check the connection and the condition of the cable.
		Damaged probe	Replace the probe
E9	Temperature probe error Th – aspiration temperature probe;	Communication failure	Check the connection and the condition of the cable.
		Damaged probe	Replace the probe
EA	Temperature probe error Tp – Compressor discharge temperature probe.	Communication failure	Check the connection and the condition of the cable.
		Damaged probe	Replace the probe
EF	Clock chip error (most of the functions are OK except timer Schedule)	Damaged controller	Replace the controller
HP	Error in smart grid function	Communication failure	Check the connection and the condition of the cable.
P1	High pressure error – Active high-pressure switch	Storage water heater without water	Check if the heater cylinder is running without water or if there is a water leak
		Valves closed on the outsider unit	Check if valves are open.
		Refrigeration circuit tube bent	Check piping

		Excessive refrigerant	Check the amount of refrigerant
		Check if the temperature probe T5L is inside its case	Check the positioning of the probe T5L
P2	Compressor excessive consumption error	Storage water heater empty	Check if there is water in the cylinder or if there is a water leak
		Valves closed in the outsider unit	Check if the valves are open
		Refrigeration circuit tube bent	Check piping
		Excessive refrigerant	Check the amount of refrigerant
		Check if the temperature probe T5L is inside its case	Check the positioning of the probe T5L
		Lack of refrigerant	Check the amount of refrigerant
P4	Compressor discharge temperature is too high	Storage water heater empty	Check if there is water in the cylinder or if there is a water leak
		Valves closed in the outsider unit	Check if the valves are open
		Refrigeration circuit tube bent	Check piping
		Excessive refrigerant	Check the amount of refrigerant
		Check if the temperature probe T5L is inside its case	Check the positioning of the probe T5L
		Lack of refrigerant	Check the amount of refrigerant
PA	Tank temperature too low	Frozen water inside the tank	Check the condition of the water inside the tank
F2	Superheat too low	Wrong expansion valve parameter	Check the operation of the expansion valve
		Damaged valve	
F6	Electronic expansion valve error	Damaged valve	Check the operation of the expansion valve
bA	Outdoor air temperature outside the operating limits of the equipment	Outdoor air temperature outside the operating limits of the equipment	****
HC	Electrical heater consumption error	E-heater consumption too low	Verify the e-heater
		E-heater consumption too high	
db	Protection against frost in progress	Storage water heater installed in a place exposed to frost	Place the storage water heater in an appropriate location
		4 way-valve blocked or damaged	Check 4 way-valve

8 Troubleshooting

PROBLEM	POSSIBLE CAUSES	HOW TO PROCEED
Failure in electronic board	Power supply failure	Check the power supply
		Check the corresponding circuit breaker
	Cable damaged or disconnected	Check the integrity of the electronic board's electric circuit
Low Water Temperature	Equipment OFF	Press ON/OFF
	Cable damaged or disconnected	Check the power supply
		Check the corresponding circuit breaker
		Check the integrity of the cables
	Error in the operation of components	Check if there is an error in the electronic panel and consult the error table
	Use of large amount of hot water	Activate the electrical heater
	Low temperature programmed as the set-point	Adjust the set-point temperature
	Return of hot water into the cold-water circuit (safety device incorrectly installed or damaged)	Close the cold-water inlet valve to turn off the safety group. Open a hot water tap. Wait 10 minutes and if hot water is obtained, replace the defective plumbing and/or ensure the correct positioning of the safety group.
Water is too hot and/or there is steam	Problem with the probe (T5L)	Check error display on electronic board
	Problem with the safety thermostat	Check correct running of safety thermostat. Restart the controller (unplug the unit and switch it back on).
Reduced heat pump operating time and excessive electrical heater operating time	Outside air temperature is over the equipment's operating limits	The running of the equipment depends on weather conditions
Low hot water flow rate	Leaks or clogging on the hydraulic circuit	Verify the hydraulic circuit status
Water discharge on the safety group	Absence or incorrect sizing of expansion vessel (if the leak is not continuous)	Installation and/or correct dimensioning of expansion vessel
	High pressure in the supply (if leakage is continuous)	Check the reducing pressure valve (if installed) Install a reducing pressure valve (if not installed)
Loud noise in the outdoor unit	Obstruction of some component	Cleaning the components that make up the outdoor unit
	Vibration of some element	Make sure that all unit components are in good condition, properly accommodated and free from vibrations.
Fan do not work	Dirty fan	Clean the fan status
	Damaged fan	Check the fan status

Electrical heater doesn't work	Thermostat failure	Check the thermostat status
	Damaged electrical heater	Check the electrical heater status
Others	---	Contact technical assistance service.

9 System Maintenance

 **DANGER**	Before undertaking any maintenance operation on the equipment, make sure it is not plugged to the power supply. Wait until the fan comes to a complete stop!

9.1 General Inspection

During the equipment's useful life, the owner should carry out a general inspection of the equipment, according to the place where the equipment is set up:

- Exterior cleaning, with a damp cloth, of the equipment and surrounding areas;
- Carry out a visual inspection of all equipment, in order to check for possible leaks and damaged devices;
- Check the condition of the evaporator regularly for dirt and possible abnormal noises.

9.2 Magnesium Anode (if applicable)

This equipment has a magnesium anode that together with the building material of the tank will provide an effective protection against corrosion.

The internal shielding of the tank will ensure an effective protection against corrosion contributing to a water quality within the parameters considered normal. However, the characteristics of the water change according to the installation.

In your living area, the quality of the water can be aggressive to your equipment. So together with the equipment there is a magnesium anode that wears over time, thus protecting your equipment.

The wear of the anode always depends on the characteristics of the water you use. Thus, checking the condition of the anode is very important, particularly in the first years of the installation.

To check the condition of your anode, follow these steps.

- Unplug the appliance from the power supply
- Shut off water supply
- Remove pressure (for example, open a hot water tap)
- Unscrew the anode with a suitable tool
- Check the level of wear of the anode and replace it, if necessary
- If the diameter of the anode is less than 15mm, it will need to be replaced

9.3 PT Safety Valve

On a monthly basis, open the PT safety valve, in order to ensure that it is in good working order, in case it is necessary to act. To open the valve, simply lift the device lever.

DANGER	This device has the function of releasing water at high temperature and pressure, when necessary. So make sure that when carrying out this process, the water to be released will be conducted to the appropriate sewage outlet.

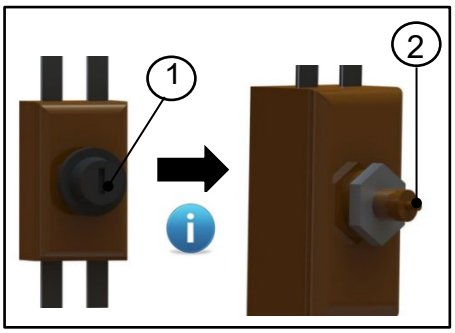
9.4 Safety Thermostat

The safety thermostat is deactivated whenever there is an anomaly in the system, so every time you plan to activate it, find out what happened that caused it to change its status mode.

If you were not able to determine what happened and it is still deactivated, contact customer service to have your problem solved.

If everything is ok and you want to reset the thermostat, proceed as follows:

- Remove the bonnet, unscrewing the four screws present;
- Unscrew the cap (1);
- Press the button (2) to reset the thermostat;
- Re-tighten the cover (1) and place the bonnet, tightening the four screws again;



9.5 Empty the Storage Water Heater

DANGER	Remember that the water in the storage water heater is at a high temperature, so there is an associated risk of burns. Before emptying the storage water heater, allow the water temperature to drop to a level that avoids burns.

After ensuring the water temperature is at a safe level that will avoid burns, follow this procedure:

- Unplug the system from the power supply
- Shut off the water supply valve and open a hot water tap
- Open the system discharge valve.

Warranty

This warranty covers all defects to the confirmed materials, excluding the payment of any type of personal damage indemnity caused directly or indirectly by the materials.
The periods indicated below start from the purchase date of the apparatus, 6 months at the latest from the leaving date from our storage warehouses.

Water Cylinder (Domestic and Industrial)	**Thermodynamic Solar Panel**	**Electrical components and moving parts:**
5 Years: Stainless Steel (2+3 Years)* 5 Years Enamelled (2+3 Years)* Manufacturer Warranty	10 years against corrosion	• Thermodynamic Block • □ Solar Block • Solarbox • □ Split • Monobloc (except cylinder) • Thermobox • Inverter 2 Years

*The warranty extension of 3 years, against corrosion of the internal tank (Enamelled / Stainless Steel), is conditioned to the submission of:

- Warranty and Check Sheet at maximum 15 days after the installation.
- Documental evidence of the magnesium anode annual replacement (if applicable).
- Pictures of the installation where it's shown safety group, expansion vessel, hydraulic and electrical connections.

In case of warranty, the parts replaced are property of the manufacturer. A repair under the warranty is not reason for an extension of its term.

Warranty Exclusions

The warranty ceases to be effective when the apparatus is no longer connected, used or assembled in accordance with manufacturer instructions, or if there has been any form of intervention by unauthorized technicians, has the appearance of modifications and/or if the series number appears to have been removed or erased. The equipment should be installed by qualified technicians according to the rules in effects and/or the rules of the trade, or the instructions of our technical services. Further exclusions from warranty:

- Hot water tanks have been operating in water with the following indexes:
  - Active chlorine > 0.2 ppm
  - Chlorides > 50 mg/l (Inox)
  - Hardness > 200 mg/l
  - Conductibility > 600µS/cm (20ºC)
  - PH < 5,5 or PH > 9 (Sorensen at 20ºC)
  - Magnesium > 10 mg/l
  - Calcium > 20 mg/l
  - Sodium > 150 mg/l
  - Iron > 1 mg/l
  - If one of the water parameters has a higher value than stipulated by directive 236/98 (Portugal) or equivalent standard in the costumer's country.
- Parts are subject to natural wear and tear – levers, switches, resistances, programmers, thermostats, etc.
- Breakdown due to incorrect handling, electrical discharges, flooding, humidity or by improper use of the apparatus;
- The warranty lapses if it is transferred to another owner, even if within the guarantee period.
- The warranty lapses if this certificate is incorrectly filled in, if it is violated or if it is returned after more than 15 days have passed since the installation or purchase date of the apparatus.

NOTE: This sheet must be properly filled, signed and stamped by the installer / reseller and returned to ENERGIE EST, Lda., otherwise the warranty will not be validated.
Send this installation sheet to **warranty@energie.pt**, writing the serial number of the equipment as subject.

Notes:

ENERGIE®

ErP READY

Informação mais detalhada em
energie.pt

Siga-nos em
ENERGIE PORTUGAL

Morada Zona Industrial de Laúndos, Lote 48
4570-311 Laúndos - Póvoa de Varzim PORTUGAL
Coordenadas GPS N 41 27.215' , W 8 43.669'
Telefone + 351 252 600 230

Fax + 351 252 600 239
E-mail energie@energie.pt
Web www.energie.pt

Projeto co-financiado por:
NORTE 2020 PORTUGAL 2020 UNIÃO EUROPEIA Fundos Europeus Estruturais e de Investimento