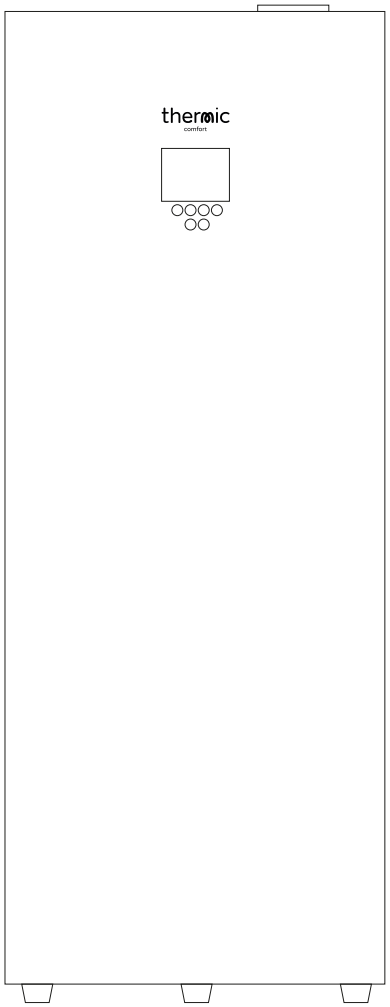
thermic
comfort

User Manual & Installation

THERMIC COMFORT ECOPRIME LINE 300L



Installation and Operating Instructions
THERMIC COMFORT ECOPRIME LINE 300L
(ALL IN ONE HEAT PUMP WATER HEATER)

English

THERMIC COMFORT ECOPRIME LINE 300L

thermic
comfort

ENGLISH

REMARKS

Dear customers.

Thank you for choosing our products.

The purpose of this manual is to inform you about the installation, operation, and maintenance of the heat pump and to provide you with important safety information. It is strongly recommended that you read the entire contents of this manual carefully before installing and operating the heat pump, and that you retain it for future reference.

CONTENT

1. General warnings

⚠ WARNING

- **Please read the instructions and warnings in this manual carefully as they provide important information on safe installation, use and maintenance. This manual is an integral and essential part of the product. You must always accompany the appliance even if the latter is sold to another owner or user and/or transferred to another installation.**
- The manufacturer is not responsible for damage to people, animals and property arising from inappropriate, erroneous and irrational use or from a failure to comply with the instructions contained in this manual.
- It is forbidden to carry out repairs to the cooling circuit and the components that are part of it at the installation site. These interventions may be carried out exclusively in a workshop expressly equipped for the maintenance of units with flammable refrigerants and by qualified personnel. Annex HH IEC 60335-2-40.
- The installation and maintenance of the appliance must be carried out by professionally qualified personnel, following the corresponding instructions. Use only original spare parts. Failure to comply with the above indications may compromise safety and void all liability of the manufacturer.
- Packaging items (staples, plastic bags, expanded polystyrene, etc.) should not be left within the reach of children, as they are sources of danger.
- The appliance may be used by children over 8 years of age and by persons with reduced physical, sensory or mental capacities, who are inexperienced or without the necessary knowledge, provided that they are under supervision or after having received instructions on the safe use of the equipment and an understanding of the related hazards. Children should not play with the appliance. Cleaning and maintenance that must be carried out by the user must not be carried out by unsupervised children.
- It is forbidden to touch the equipment while barefoot or with wet parts of the body.
- Before using the appliance and after routine or extraordinary maintenance work, it is advisable to fill the appliance tank with water and then empty it completely in order to remove any residual impurities.
- If the appliance has an electrical power cord, if you need to replace the cord, you should contact an authorized service center or professionally qualified personnel.
- It is mandatory to screw a safety valve to the water inlet pipe of the appliance in accordance with national regulations. For countries that have adopted the EN 1487 standard, the safety group must be at a maximum pressure of 0.8 MPa, must have at least one blocking tap, a check valve, a safety valve and a hydraulic load interrupting device.
- The overpressure device (safety valve) must not be altered and must be operated periodically to check that it is not blocked and to remove any limescale deposits.
- Possible dripping of the overpressure device is normal during the water heating phase. For this reason, it is necessary to connect the discharge (always left open to the atmosphere) with a drainage pipe installed on a continuous downward slope and in a place where there is no ice. It is recommended to also connect the condensed steam drainage system to the same tube using the corresponding connector, located at the bottom of the heater.
- It is essential to empty the appliance and disconnect it from the mains if it is left unworked in a room subject to ice.
- Hot water supplied through household taps at 50°C can immediately cause serious burns. Children, disabled people and the elderly are more exposed to this risk. It is therefore advisable to use a thermostatic mixing valve that will be screwed into the water outlet pipe of the appliance.
- There must be no flammable element in contact with and/or near the appliance.
- Avoid standing under the appliance and placing any object that could, for example, be damaged due to a water leak.
- **The heater is supplied with sufficient amount of R290 (propane) refrigerant for operation. This type of refrigerant, despite being highly flammable, is an efficient refrigerant with a low global warming potential (GWP).**

	Use an R290 (propane) refrigerant CAUTION: Fire Hazard

- The heater should not be placed near appliances that generate heat or near hazardous and/or flammable materials.
- It is prohibited to install the device in a public space accessible to the general public.
- It is forbidden to install the appliance outdoors or in a place partially covered or exposed to the weather.

2. Safety Standards

⚠ PRECAUTION

Legend of the symbols:

⚠ Failure to comply with the warning involves risks of personal injury, which in certain circumstances can be fatal.

The unit contains R290 flammable gas. Failure to comply with the warning implies fire and/or explosion risks.

△ Failure to comply with the warning entails a risk of damage, in certain serious circumstances, to property, plants and animals. The manufacturer is not responsible in the event of damage resulting from improper use of the product or non-conformity of the installation with the instructions contained in this manual.

The appliance must be stored in an environment without ignition sources (free flames, gas appliances, electric heaters) in continuous operation.

Risk of fire and/or explosion.

Do not use means not recommended by the manufacturer to speed up the defrosting process or for cleaning.

Risk of fire and/or explosion.

Do not drill and do not burn the appliance.

Risk of fire and/or explosion.

R290 (propane) refrigerant is a flammable and odorless refrigerant.

Risk of fire and/or explosion.

It is forbidden to carry out repairs to the cooling circuit and the components that are part of it at the installation site. These interventions may be carried out exclusively in a workshop expressly equipped for the maintenance of units with flammable refrigerants and by qualified personnel. Annex HH IEC 60335-2-40.

Risk of fire and/or explosion.

Refrigerant recharging operations can only be carried out by qualified personnel and with the appropriate equipment. Annex HH IEC 60335-2-40.

Risk of fire and/or explosion.

The heater is supplied with 0.15 kg of R290 refrigerant. Do not exceed the permitted amount of load.

Risk of fire and/or explosion.

Maintenance operations and repairs can be carried out exclusively by qualified personnel, with a "Refrigeration License" that attests to the knowledge and management capacity of circuits with HC type gas content such as R290 (Propane), and provided with the appropriate equipment.

Risk of fire and/or explosion.

Do not damage electrical cables or pipes already installed.

Electrocution by contact with live conductors.

Damage to existing facilities.

Flooding due to water leaks in damaged pipes.

Make electrical connections with conductors of an appropriate cross-section. The electrical connection of the product must be made as indicated in the corresponding section.

Fire due to overheating due to the passage of electrical current through cables of insufficient section.

Protect the connecting tubes and cables from being damaged.

Fulguration by contact with live conductors.

 Flooding due to water leaks in damaged pipes.

Check that the environment in which the installation is to be carried out and the installations to which the appliance must be connected are in accordance with current standards.

 Fulguration due to contact with incorrectly installed live conductors.

 Damage to the appliance due to improper operating conditions.

Use suitable hand tools (especially check that the tool is not damaged and that the handle is intact and correctly fastened), use them correctly, avoid possible falls from the top and reposition them in place after use.

 Personal injury due to bursting with release of splinters or fragments, inhalation of dust, blows, cuts, punctures, or abrasions.

 Damage to the appliance or nearby objects due to bursting with splinter release, bumps, or cuts.

Use the appropriate electrical appliances for use, use them correctly, do not obstruct the passage of the power cord, secure it from possible falls, disconnect and store them after use.

 Personal injury due to bursting with release of splinters or fragments, inhalation of dust, blows, cuts, punctures, or abrasions.

 Damage to the appliance or nearby objects due to bursting with splinter release, bumps, or cuts

Check that portable ladders are stably supported, sturdy, that steps are in good condition and that they are not slippery, that they do not move when someone is upstairs, and that someone is watching.

 Personal injury from falling from a great height or from cuts (double ladders).

Protect the appliance and the areas near the workplace with appropriate material.

 Damage to the appliance or nearby objects due to bursting with splinter release, bumps, or cuts.

Move the appliance with the corresponding protections and with due caution.

 Damage to the appliance or nearby objects due to bursting with splinter shots, blows or cuts.

Organise the movement of material and equipment in such a way that it is easy and safe, avoiding piles that may give way or collapse.

 Damage to the appliance or nearby objects due to shocks, blows, incisions or crushing.

Restore all safety and control functions related to an intervention on the appliance and check its functionality before putting it back into service.

 Damage or blockage of the appliance due to out-of-control operation.

Before handling components that may contain hot water, empty them by activating the traps.

 Personal injuries such as burns.

Carry out the descaling of limescale in the components respecting what is specified in the safety plate of the product used, aerating the environment, wearing protective clothing, avoiding mixing different products, protecting the appliance and nearby objects.

 Personal injury due to skin or eye contact with acidic substances and inhalation or ingestion of harmful chemical agents.

 Damage to the appliance or nearby objects due to corrosion with acidic substances.

In the event that you notice a burning smell or smoke coming out of the appliance, disconnect the power supply, open the windows and notify the technician.

 Personal injuries caused by burns, smoke inhalation, or intoxication.

Do not get on the unit.

 Probability of accidents and damage to the appliance.

Do not leave the unit open uncoated for longer than strictly necessary for installation.

 Possible damage to the appliance.

3. Product Description

The floor equipment consists of an upper block containing the heat pump unit and a lower block consisting of the accumulator. On the front is the control panel, equipped with a screen.

3.1. Water heater

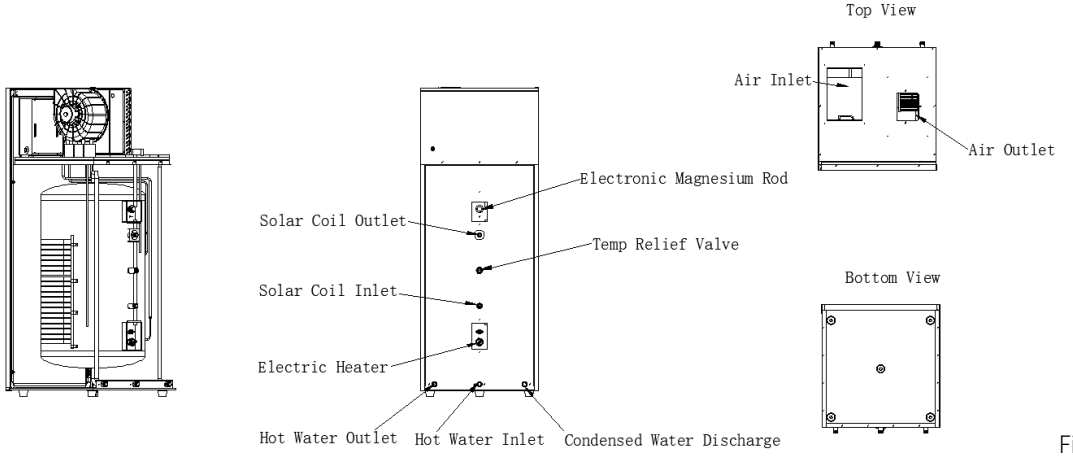


Figure 1

3.2. Dimensions

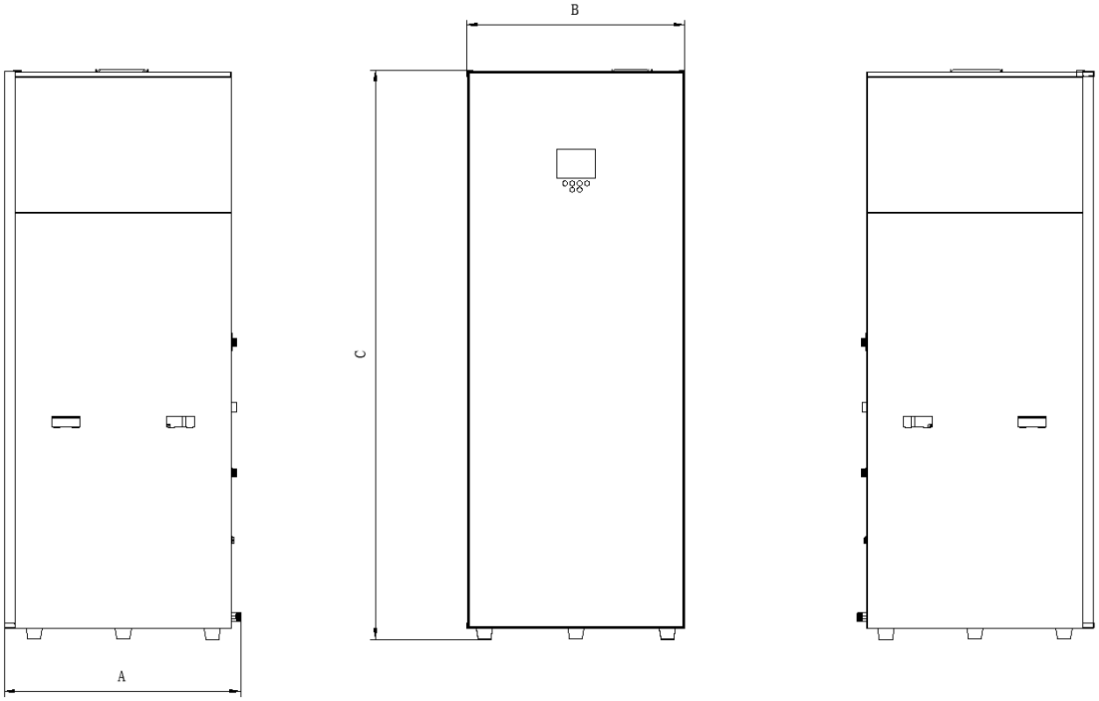


Figure 2
* The dimensional deviation range ±10mm.

Model/Size (mm)	One	B	C
NE-F15HWR5-300HTOS6-GA	740	685	1785

4. Installation

Do not install the water heater outdoors or in unprotected areas.

- Be sure to install it in a well-ventilated place, free of toxic gases, mineral oils, or flammable substances.
- Do not install in areas where flammable gases or ignition sources are present. The ECOPRIME LINE 300L series uses a flammable refrigerant.
- Follow these safety guidelines:

- Do not store or transport the appliance near ignition sources.
- Do not puncture or burn the appliance.
- Please note that refrigerant may be odorless.
- Follow all national and local regulations related to the storage, transportation, and handling of flammable gases and dangerous goods.

4.3. Space requirements

To ensure proper operation, ventilation, and ease of maintenance, observe the following minimal gaps around the unit:

- Front and sides: • 300 mm
- Back (air outlet): • Space required for installation
- Top (for service access): • 500 mm

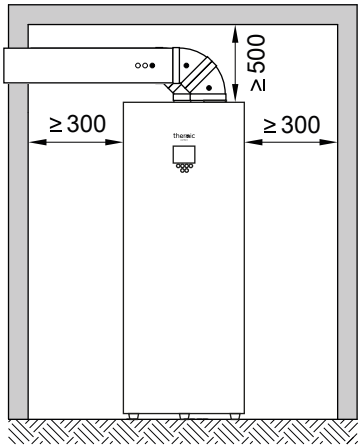


Figure 3

NOTE

- Installation in an enclosed space without adequate ventilation will lead to higher energy consumption.
- The auxiliary drain pan must be installed in accordance with local codes. Drain pan kits are available at the store where you purchased the water heater or through any other water heater distributor. The drain pan should not obstruct the cold water inlet or drain valve.
- Choose a location that has enough space for periodic maintenance. The air filter, covers and front panels can be removed to allow for inspection and maintenance.
- Consider the weight of the water heater and choose a location where the ground is strong enough to support the weight of the full water heater.
- The water heater and water lines must be protected against freezing and highly corrosive elements. Do not install the water heater outdoors or in unprotected areas.
- Install the water heater near the area of highest water demand of the heater and the center of the piping system. Long-length, uninsulated hot water pipes can waste energy.
- Insufficient air exchange will result in a higher level of energy consumption.
- The installation site must be above 3ºC.

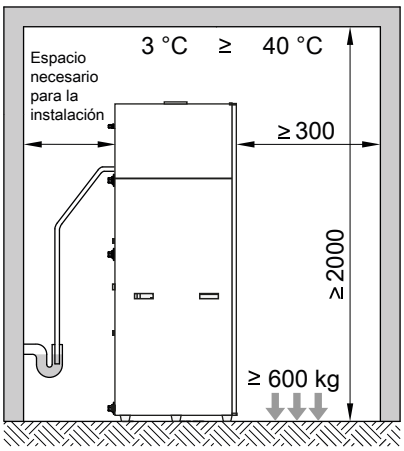


Figure 4

Make sure the water heater is level by using a spirit level.

Keep the level parallel when installing the product. Otherwise, it could lead to vibrations or water leaks. It could lead to injury or an accident.

4.4. Soil Conditions

- The unit must be installed on a flat, stable and level surface with a slope of no more than 2º.
- The support surface must be able to support the entire weight of the unit when filled with water.
- Please refer to the product's technical data sheet for exact weight specifications.
- Do not install the unit on loose or unstable floors, as this may cause vibration noise during operation.

4.5. Accessibility and Pipelines

- Ensure easy access to the front panel for maintenance purposes.
- Reserve additional space at the back for water pipes and electrical cable connections.
- The air exhaust duct should be directed to the outside and should be properly insulated to prevent condensation during operation.

4.6. Startup and Safety Notes

- Before turning on the unit for the first time, make sure the water tank is completely full:
    - Open the cold water inlet valve.
    - Then open a hot water outlet valve to allow air to escape until the water flows steadily.
    - Close the outlet valve and check for leaks.
- In cold regions, do not turn off the power during the winter months. If the system will be idle for a long time, drain all water from the tank to prevent it from freezing or cracking.
- The unit is pre-filled with coolant at the factory, no vacuuming or refilling required.
- The temperature sensor is pre-installed and sealed by the manufacturer, no installation is necessary.

4.7. Condensate Drain Pipe Fittings

The condensation formed during normal operation of the heat pump passes through a suitable discharge tube (G 3/4") extending from the side of the appliance. It must be connected to the drain by means of a siphon so that the condensate can flow freely and not freeze, causing a clog.

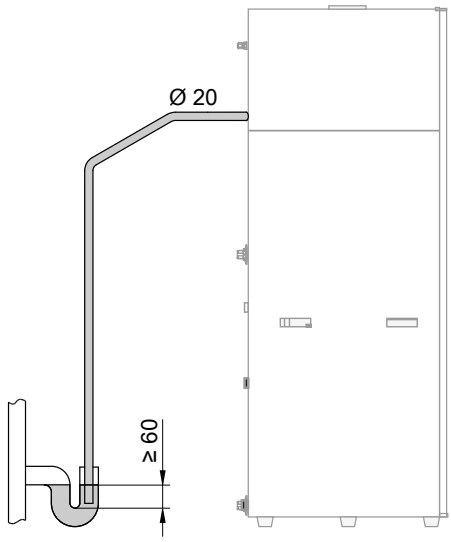


Figure 6

4.8. Electrical connection

The device is supplied with a wiring system and ready for connection to the mains. It is powered by a flexible cord with a plug (Figure 7 and Figure 8). A Shuko type plug connected with a separate protection earth connection is required for connection to the mains.

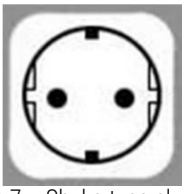


Figure 7 – Shuko type plug

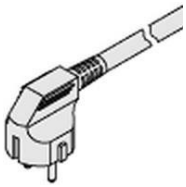


Figure 8–Appliance plug

⚠ATTENTION! The power supply to which the appliance will be connected must be protected by a suitable fuse with characteristics: 16A / 240V

NOTE

- All wiring must comply with European and national standards, and must be protected by a 30 mA RCD (Residual Current Device).
- A means of disconnection must be incorporated into the fixed wiring according to the rules related to wiring.
- ECOPRIME LINE 300L must be permanently powered by electricity to guarantee the printed current (ICCP).
- Do not turn on the power until the water heater is completely full.
- This device can only be connected and put into operation on a 230V single-phase network.

4.9. Connecting the water supply

I. DO NOT weld with brass or tin directly to hot or cold water connections. If welded connections are used, solder the tubes to the adapter before installing the adapter to the hot or cold water connections on the heater. Any heat applied to the water supply fittings will permanently damage the internal plastic coatings on these intakes.

II. The minimum and maximum pressures in the cold water supply line are between 0.4 MPa and 0.8 MPa. If the water supply is greater than 0.8 MPa, install a pressure-reducing valve.

III. Connect the water to fill or refill the heating system as specified by EN1717/EN 61770 to prevent contamination of drinking water by the backflow.

Maximum and minimum operating temperatures of water (°C)	35/62
Maximum and minimum water operating pressure (MPa)	0,4/0,8

IV. See the "Installation Instructions" for information on suggested typical installation.

V. Connect the hot and cold water supply using a 3/4" G-tube.

VI. Install a shut-off valve on the cold water line near the water heater.

VII. Install insulation in hot and cold water pipes.

VIII. Insulation of the hot water pipe can increase energy performance.

4.10. To fill the water heater

I. Check the type of water pipes in your home. Use fittings that are suitable for the type of pipe.

II. If copper pipes are used, the water heater should always be connected with dielectric junctions to prevent corrosion caused by the electrical currents common in copper water pipes.

III. For easy disconnection of the equipment in case of maintenance or replacement, the installation of joints in the water connections is recommended.

IV. Place Teflon tape on the end of the G-tube to prevent leakage.

V. Make sure the water heater drain valve is fully closed.

VI. Turn on the cold water supply.

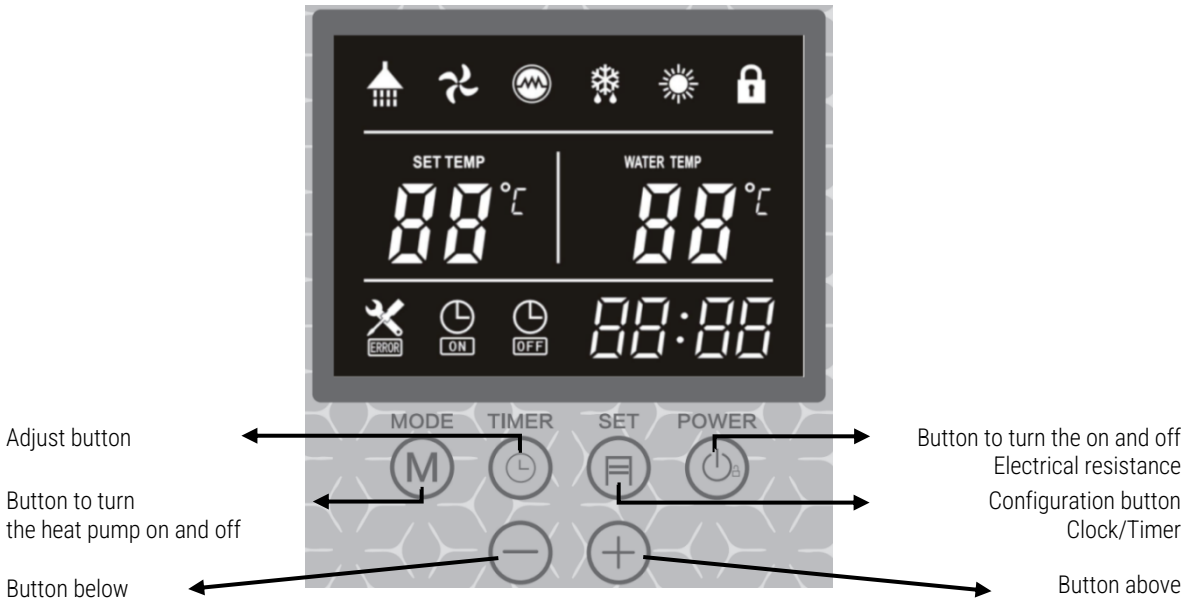
VII. Turn on each hot water faucet.

VIII. slowly and let the water run until it flows with a full stream.

IX. Let the water flow in full stream for a few minutes.

5. Screen

5.1. Description of the symbols



Button	Name
POWER	**Power "ON/OFF"** When you turn on the unit on the button POWER, all icons appear on the screen for 3 seconds. After checking that everything is fine, the unit goes into "standby" mode.
TIMER	**Watch calibration:** With the unit activated, press the button TIMER to access the watch calibration; By pressing the button again TIMER you can change the hours/minutes. Tap the TIME key, the time flashes, tap the key ⊕ and key ⊖ to change the time, tap the TIME key again, the minutes flash, tap the key ⊕ and the key ⊖ to change the minute. Press the TIME key again to save the change and exit the watch setting.
MODE M	**MODE Key** Tap the SET key and the STANDBY TIMING key for 5 seconds to enter the forced manual defrost mode.
SET	**Verification of equipment temperatures and opening of the electronic expansion valve:** Press this button to access the temperature reading of the equipment and open the electronic expansion valve; Press ⊕ and ⊖ to scroll through the equipment temperatures and open the electronic expansion valve (parameters A-F). Press the SET key 5 seconds to enter the system parameter query and query each parameter by combining the key ⊕ and the key ⊖. In the system query parameter state, press the SET key to set the parameter, and set each parameter by combining the key ⊕ and the key ⊖. The serial number parameter 0 is the default setting temperature of the water tank and the serial number parameter 1 is the setting temperature of the heating return difference.
⊕ ⊖	They are used to adjust temperature, general parameters, clock, and timer; If the unit is activated, they are used to adjust the temperature of the set points. If the unit is in calibration, they are used to adjust hours and minutes. If the unit is in the timer calibration, they are used to adjust the ON/OFF hours and minutes. Press ⊕ and ⊖ at the same time for 5 seconds, the screen is locked. Pressing again for 5 seconds unlocks the screen.
	Hot water available This icon indicates that domestic hot water is now available for consumption. The device is in "Stand-by" mode.
	Fan Function This icon indicates that the fan function is active. When the unit is powered on, press the button for 5 seconds MODE to turn the fan function on/off. If the function is active, the fan will continue to run to ventilate the desired space even if the water reaches its set point. If this function is disabled, the fan ends its operation when the desired set point is reached.
	Electrical resistance This icon indicates that the electrical resistance is active according to the programmed temperatures or the Legionella protection cycle has been activated.

	**Heating:** This icon indicates that the heat pump (compressor) is running.
	**Error** This icon indicates that there is a malfunction of the drive.
	**Timer "On"** This icon indicates that the timer is on.
	**Thawing** This icon indicates that the product is defrosting the evaporator.
	**Lock keyboard** This icon indicates that the screen is locked. The buttons have no effect if you try to activate them.

⚠ Each time the product is turned off on the ON/OFF button or the mains power is turned off, the legionella protection cycle clock is reset.

6. Error Code

Error Code	Protection/Error
P1	Water tank bottom temperature. Sensor failure
Q2	Water tank top temperature sensor failure
Q3	Coil temperature sensor failure
Q4	Suction temperature sensor failure
Q5	Ambient temperature sensor failure
Q6	Exhaust temperature failure
P7	Remote shutdown
P8	Water temperature protection too high
P9	Backwater/solar temperature
E2	Low pressure protection
E4	High Exhaust Temperature Protection
Defrost	DEFROST signal
E8	Communication failure
EC	Electronic anode state output failure
Eb	Electronic Anode Voltage Output Failure
Ea	DC Fan Motor Failure

7. Parameter Table

Parameter Check: While the appliance is powered on, press SET and hold the button for 5 seconds to access the System Parameter Review interface.

Parameter Settings: When the unit is in standby mode, press MODE + SET for a period of 5 seconds simultaneously to access the system parameter configuration interface. A password must be entered to access the settings.

Parameter Number	Access: U = User I = installer	Description		Scope	The default	Note
Set parameters:						
0	I/U	Adjusted water temperature	TS1	10~65°C	Adjust	Adjustable
1	I	Temperature difference to start the compressor.	TS6	2~15°C	5°C	Adjustable
2	I	The temperature of the water that will turn off the electrical resistance when it reaches it.	TS2	10~90°C	65°C	Adjustable
3	I	Delayed onset of electrical resistance.	t1	0~90min	6	t * 5 min
4	I	Disinfection temperature	TS3	50~70°C	70°C	Adjustable
5	I	Disinfection time	Tier 2	0~90 min	30 min	Adjustable
13	I	Time to start disinfecting		0 ~ 23	23:00	Adjustable (time)
14	I	External Circulation Pump Type		0/1/2	0	0: without water pump 1:(circulation pump) 2:(solar water pump)

15	I	Water temperature in the device in which the external circulation pump will start		15~50°C	35°C	Adjustable
16	I	Temperature difference to start the external circulation pump.		1-15°C	2°C	Adjustable
17	I	Temperature difference to start the solar circulation pump.		5-20°C	5°C	Adjustable
18	I	Temperature difference to exclude solar circulation pump		1-4°C	2°C	Adjustable
19	I	Activation of the electrical resistance at low outside temperature. Ice mode.		0/1	1	Adjustable 0= off, 1= on
20	I	Activation of the electrical resistance during defrosting.		0/1	1	Adjustable 0=off, 1=on
21	I	Disinfection period		1~30 days	7 days	Adjustable

8. Operation Parameter Table

NO.	State Name	Name	Display Range	Reserves
One	Water tank bottom temperature. Sensor failure	°C	0~99°C	Error Code P1
B	Water tank top temperature sensor failure	°C	0~99°C	Error Code P2
C	Coil temperature sensor failure	°C	-15~99°C	Error Code P3
D	Suction temperature sensor failure	°C	-15~99°C	Error Code P4
And	Ambient temperature sensor failure	°C	-15~99°C	Error Code P5
F	EEV Opening	°C	6~47	N*10
H	Exhaust temperature failure	°C	0~125(C7)°C	Error Code P6

9. Maintenance standards (for authorized personnel)

ATTENTION!

Strictly follow the general warnings and safety regulations of the previous sections, unfailingly respecting what is indicated.

ATTENTION!

Maintenance operations and repairs can only be carried out by qualified personnel with the appropriate equipment.

ATTENTION!

To avoid the risk of fire and/or explosion, do not use means not recommended by the manufacturer in order to speed up the defrosting process or for cleaning.

ATTENTION!

THE HEATER IS SUPPLIED WITH 0.15 KG OF R290 REFRIGERANT. DO NOT EXCEED THE PERMITTED AMOUNT OF LOAD. R290 (PROPANE) REFRIGERANT IS A FLAMMABLE AND ODORLESS REFRIGERANT. REFRIGERANT RECHARGING OPERATIONS CAN BE CARRIED OUT EXCLUSIVELY BY AUTHORISED PERSONNEL, PROVIDED WITH THE APPROPRIATE EQUIPMENT AND EQUIPPED WITH A "REFRIGERATION LICENCE" THAT ATTESTS TO THE KNOWLEDGE AND MANAGEMENT CAPACITY OF CIRCUITS WITH HC TYPE GAS CONTENT SUCH AS R290 (PROPANE). Annex HH IEC 60335-2-40.

ATTENTION!

It is forbidden to carry out repairs to the cooling circuit and the components that are part of it at the installation site. These interventions may be carried out exclusively in a workshop expressly equipped for the maintenance of units with flammable refrigerants and by qualified personnel. Annex HH IEC 60335-2-40.

In the case of ordinary or extraordinary maintenance, safety checks are necessary to ensure that the risk of ignition in a potentially explosive atmosphere is minimised during the execution of the work.
All maintenance personnel and others working in the area should be instructed on the nature of the work in progress. Avoid working in confined spaces. It is recommended to carry out the operations avoiding the use of ignition sources that may cause fire or explosion risks.
In the case of interventions in a refrigeration system that involve the exposure of pipes, ignition sources must not be used in such a way that fire or explosion risks may arise.
All possible sources of ignition, including cigarette smoke, should be avoided at the site of installation, repair, disassembly and disposal work, during which dispersions of flammable refrigerant into the surrounding space could occur.
Before starting work, the area around the appliance should be examined for any hazards of ignition or ignition.

Put up "No smoking" signs.
Make sure that the work area is well ventilated before accessing the system or performing maintenance operations; It is necessary to guarantee a certain degree of continuous ventilation throughout the intervention. Ventilation should disperse loose coolant safely, expelling it to the outside as much as possible.
The area should be checked with a suitable coolant detector before and during work, so that the technician is aware of the presence of potentially toxic or flammable atmospheres.
Ensure that the detector used is suitable for use with all applicable refrigerants.
Suitable fire-fighting equipment is required for hot work on the refrigeration unit or associated parts. Have a dry powder or CO2 extinguisher on hand.

9.1. Electrical Device Controls and Maintenance

Repair and maintenance of electrical components should include initial safety checks and component inspection procedures.

Initial security checks should include the following checks:

- The capacitors must be discharged.
- The operation must be carried out safely to prevent sparks from occurring.
- There should be no active electrical components or exposed wires.
- The continuity of the grounding must be guaranteed.
- Check that the wiring is not subject to wear, corrosion, excessive pressure, vibration, sharp edges or other adverse environmental effects. The control shall take into account the effects of ageing or continuous vibrations caused by the compressor or fan.

If a fault is observed that could compromise safety, the power supply should not be connected to the circuit until the problem has been resolved.

If the fault cannot be resolved immediately and it is necessary to continue using the appliance, apply a suitable temporary solution. This circumstance must be reported to the owner of the appliance so that all affected persons are informed.

In the event of the need to replace electrical components, the components used for the replacement must be suitable for the respective function and conform to the manufacturer's specifications. Only genuine spare parts supplied by the manufacturer are tested and certified to operate with flammable gases in safe conditions. Adhere to maintenance and support guidelines at all times.

It is necessary to adhere to the maintenance and support guidelines established by the manufacturer at all times. If in doubt, consult the manufacturer's technical office for assistance.

REPAIRING SEALED COMPONENTS

During repairs to sealed components, all electrical power supplies must be disconnected from the appliance being worked on before removing sealed covers, etc. If it is absolutely necessary to maintain the electrical supply to the appliance during maintenance, a permanently operating leak detection system should be placed at the most critical point to flag potentially dangerous situations. Pay particular attention to the following indications to ensure that during work on electrical components the covers are not altered and the level of protection is not compromised. This includes damage to the cables, excessive number of connections, terminals not made to the original specifications, damage to the joints, incorrect assembly of the cable glands, etc. Ensure that seals or retaining materials have not degraded to the point of no longer serving to prevent the entry of flammable atmospheres. Spare parts must conform to the manufacturer's specifications.

REPAIR OF INTRINSICALLY SAFE COMPONENTS

Do not apply permanent inductive or capacitive loads to the circuit without ensuring that they do not exceed the voltage and amperage allowed for the appliance in use. Intrinsically safe components are the only ones that can be worked on in the presence of stress and even if a flammable atmosphere has formed in the environment. Replace components only with parts specified by the manufacturer. The test equipment must be of the correct rating. Different parts could cause the refrigerant to ignite, which would disperse into the atmosphere as a result of a leak.

REFRIGERANT GAS LEAK DETECTION

Under no circumstances should possible ignition sources be used for the search or detection of refrigerant leaks. Do not use halide torches or any other detector that uses free flames.
Electronic detectors can be used to detect refrigerant leaks, but in the case of flammable refrigerants the sensitivity may not be adequate or may require recalibration.
The following leak detection methods are considered acceptable for installations containing flammable refrigerants:

- Electronic detectors can be used only if they are suitable for potentially explosive environments and if they can detect R290 (propane) gas.
- Make sure the detector has been calibrated correctly.
- The detector must be configured to identify an R290 gas leak equal to a maximum of 25% of the lower flammability limit.
- Leak detection fluids are adequate; However, it is advisable to avoid the use of detergents with chlorine content, as this substance could react with the refrigerant and corrode copper pipes.

If a leak is suspected, remove/extinguish all free flames. No soldering operation is permitted in the refrigerant circuit, at the installation site.

NOTE

After ordinary or extraordinary maintenance, it is advisable to fill the device's tank with water and carry out a complete emptying to remove any residual impurities. Use only original spare parts supplied by service centers authorized by the manufacturer, otherwise compliance with D.M. 174 is lost.

EMPTYING THE APPLIANCE

If the appliance must remain inactive for a long time, or in an environment where frost may occur, it is essential to empty it.
When necessary, empty the appliance as follows:

- Disconnect the appliance permanently from the mains;
- Turn off the shut-off valve, if installed; if not, the central key of the domestic installation;
- Turn on the hot water faucet (sink or bathtub);
- Open the tap of the safety group (for countries that have adopted the EN 1487 standard) or the tap installed in the "T" fitting, as described in the section "Hydraulic connection".

PERIODIC MAINTENANCE

It is recommended to clean the evaporator annually to remove dust and obstructions. To access the evaporator, placed in the external unit, it is necessary to remove the fixing screws from the protection grille.
Clean with a flexible brush, taking care not to damage it. If the fins are found folded, straighten them by means of a special comb (1.6mm pitch).
Check that the condensate discharge tube (in the external unit) is free of obstructions. Use only original spare parts.
After ordinary or extraordinary maintenance, it is advisable to fill the device's tank with water and carry out a complete emptying to remove any residual impurities. Regulation on water intended for human consumption:
D.M. 174 (and successive updates) is a regulation on the materials and objects that can be used in fixed installations for the collection, treatment, supply and distribution of water for human consumption. The provisions of this regulation establish the conditions that must be met by the materials and objects used in fixed installations for the collection, treatment, supply and distribution of water for human consumption. This product complies with D.M. 174 (and successive updates) on the application of Directive 98/83/EC on the quality of water intended for human consumption.

ORDINARY MAINTENANCE RESERVED FOR THE USER

It is recommended to rinse the appliance after each ordinary and extraordinary maintenance intervention.
The overpressure device should be operated periodically to check that it is not blocked and to remove any limescale deposits.

9.2. Recycling (for authorized personnel)

 ATTENTION!

THE HEATER IS SUPPLIED WITH 0.15 KG OF R290 REFRIGERANT. R290 (PROPANE) REFRIGERANT IS A FLAMMABLE AND ODORLESS REFRIGERANT. REFRIGERANT RECOVERY OPERATIONS CAN BE CARRIED OUT EXCLUSIVELY BY QUALIFIED PERSONNEL WITH A "REFRIGERATION LICENSE" THAT ATTESTS TO THE KNOWLEDGE AND ABILITY TO MANAGE CIRCUITS WITH HC GAS CONTENT SUCH AS R290 (PROPANE) AND PROVIDED WITH THE APPROPRIATE EQUIPMENT.

The disposal operation must be carried out exclusively by qualified personnel and in accordance with the local regulations in force.
It is recommended to adopt the good practice of recovering all refrigerants safely. Before carrying out the operation, it is necessary to take a sample of oil and coolant in the event that analysis is necessary before reuse of the recovered coolant. It is essential that power is available before the operation begins. It is recommended to follow the procedure described below:

- Become familiar with the equipment and how it works.
- Insulate the system electrically.
- Before starting the procedure, make sure that mechanical travel equipment is available if necessary to move the refrigerant cylinders.
- Ensure that all personal protective equipment is available and used correctly.
- Ensure that the recovery process is always supervised by a competent person.
- Ensure that recovery equipment and cylinders conform to relevant standards.
- If possible, vacuum the refrigerant circuit.
- If it is not possible to vacuum it, create a manifold to remove the refrigerant from all parts of the system.
- Make sure that the cylinder is on the scale before retrieving it.
- Start the recovery machine and follow the instructions.
- Do not exceed the maximum operating pressure, even momentarily.
- Once the cylinders have been properly filled and the process has been completed, ensure that the cylinders and equipment have been removed from the site and all equipment isolation valves are closed.
- The recovered refrigerant should not be charged into another refrigeration system unless it has been cleaned and controlled.

DISPOSAL LABEL

The equipment must have a label indicating that the system has been taken out of use and drained of coolant. The label must be signed and dated. Make sure the equipment has labels indicating that it contains flammable refrigerant.

REFRIGERANT GAS RECOVERY

When removing refrigerant from a system, good practice is recommended to remove all refrigerant safely.
When transferring refrigerant to cylinders, ensure that only suitable refrigerant recovery cylinders are used. Ensure that the correct number of cylinders are available to contain the entire load on the system. All cylinders must be expressly designed for the type of refrigerant recovered and labeled for that refrigerant.
The cylinders must have a pressure outlet valve and shut-off valves in perfect working order.

Recovery cylinders should be emptied and, if possible, cooled before recovery. Recovery equipment must be in perfect working condition, with a series of instructions regarding tools within easy reach, and must be suitable for the recovery of flammable refrigerants. In addition, there must be a series of calibrated balances in perfect working condition. Flexible hoses must have watertight connection fittings and must be in perfect condition.
Before using the recovery machine, check that it is in perfect working condition and properly maintained, and that all electrical components are insulated to prevent ignition in the event of refrigerant dispersion. If in doubt, consult the manufacturer.
The recovered refrigerant must be delivered to the supplier in the correct recovery cylinder, with the corresponding waste transport document. Do not mix refrigerants in recovery units and even less in cylinders.
In the event of removal of compressors or compressor oils, ensure that they have been evacuated to an acceptable extent to exclude the presence of flammable refrigerant residues in contact with the lubricant. The evacuation process must be carried out before returning the compressor to the supplier. To speed up this process, use only an electrical resistor connected to the compressor body.
Drain the oil from the circuit in maximum safety conditions.

STAFF INFORMATION AND TRAINING

Training should essentially cover the following:

- Information on the explosion potential of flammable refrigerants to demonstrate that flammables can be hazardous if handled unattended.
- Information on possible sources of ignition, especially those that are not obvious, such as lighters, light switches, vacuum cleaners, electric heaters.

Information on the various security concepts:

- The safety of the appliance does not depend on the ventilation of the cover. Switching off the appliance or opening the cover has no significant effect on safety. However, it is possible for the leaky refrigerant to accumulate inside the cover and create a flammable atmosphere when the cover is opened.

Coolant detector information:

- Principle of operation and factors influencing operation.
- Procedures for repairing, checking or replacing a refrigerant detector or parts thereof in safe conditions.
- Procedures for deactivating a refrigerant detector in the event of repair of the parts carrying refrigerant.

Information on the concept of sealed components and covers according to IEC 60079-15:2010.

Information on the correct working procedures related to the following activities:

a) Commissioning
- Ensure that the pavement surface has sufficient capacity for refrigerant charging and that the vent duct is properly mounted.
- Connect the tubes and perform a leak test before charging the refrigerant.
- Check safety devices before commissioning.

b) Maintenance
- Portable appliances should be serviced outdoors or in a workshop specially equipped for the maintenance of units with flammable refrigerants.
- Ensure sufficient ventilation at the repair site.
- Be aware that equipment malfunction may be due to a loss of refrigerant and that there may be a loss of refrigerant.
- Discharge the capacitors so that no sparks originate. The standard procedure of short-circuiting capacitor terminals often results in sparks.
- Properly assemble the sealed covers. If the gaskets are worn, replace them.
- Check safety devices before putting them into operation.

c) Reparation
- Portable appliances should be serviced outdoors or in a workshop specially equipped for the maintenance of units with flammable refrigerants.
- Ensure sufficient ventilation at the repair site.
- Be aware that equipment malfunction may be due to a loss of refrigerant and that there may be a loss of refrigerant.
- Discharge the capacitors so that no sparks originate.
- When welding is necessary, perform the following procedures in the correct order:
- Remove the coolant. If recovery is not required by national standards, discharge the refrigerant to the outside. Make sure that the drained coolant does not cause any danger. Ensure that the drained refrigerant does not refloat in the building.
- Evacuate the refrigerant circuit.
- Purge the coolant circuit with nitrogen for 5 minutes.
- Evacuate again.
- Remove the parts to be replaced by cutting, not with the flame.
- Purge the weld spot with nitrogen during the welding procedure.
- Perform a leak test before charging the refrigerant.
- Properly assemble the sealed covers. If the gaskets are worn, replace them.
- Check safety devices before commissioning.

d) Taken out of service
- If safety is compromised, the refrigerant charge must be removed before the appliance is taken out of service.
- Ensure sufficient ventilation in the place where the appliance is located.
- Be aware that equipment malfunction may be due to a loss of refrigerant and that there may be a loss of refrigerant.
- Discharge the capacitors so that no sparks originate.

- Remove the coolant. If recovery is not required by national standards, discharge the refrigerant to the outside. Make sure that the drained coolant does not cause any danger. When in doubt, a person should monitor the discharge. Ensure that the drained refrigerant does not flow into the building.

In case of use of flammable refrigerants:

- Evacuate the refrigerant circuit.
- Purge the coolant circuit with nitrogen for 5 minutes.
- Evacuate again.
- Fill with nitrogen until atmospheric pressure is reached.
- Apply a label to the appliance to indicate that the refrigerant has been evacuated.

e) Elimination

- Ensure sufficient ventilation in the workplace.
- Remove the coolant. If recovery is not required by national standards, discharge the refrigerant to the outside.

Make sure that the drained coolant does not cause any danger. In case of doubt, a person should watch the exit.
Ensure that the drained refrigerant does not fluctuate within the building.

- In case of use of flammable refrigerants, with the exception of A2L refrigerants:
  - Evacuate the refrigerant circuit.
  - Purge the coolant circuit with nitrogen for 5 minutes.
  - Evacuate again.
  - Interrupt the compressor and discharge the oil.
- Evacuate the refrigerant circuit.
- Purge the coolant circuit with nitrogen for 5 minutes.
- Evacuate again.
- Disconnect the compressor and discharge the oil.

A This product complies with the WEEE Directive 2012/19/EU

The crossed-out container symbol on the appliance or its packaging indicates that the product, at the end of its useful life, must be collected separately and without mixing with other waste. Therefore, the user must hand over the appliance that has reached the end of its useful life to the municipal centres responsible for the separate collection of electrical and electronic waste. As an alternative to autonomous management, it is possible to hand over the equipment to be disposed of to the distributor when new equipment of equivalent type is purchased. In addition, electronic products to be disposed of with a dimension of less than 25 cm can be delivered free of charge and without obligation to purchase to distributors of electronic products with a sales area of at least 400 m². An adequate separate collection for a subsequent shipment of the appliance for recycling, treatment and disposal compatible with the environment helps to avoid possible negative effects on health and the environment and favors the reuse and/or recycling of the materials that make up the appliance. For more detailed information on the collection systems available, please contact your local waste disposal service or the shop where you purchased the product.

10. Technical Specifications

Model No.: NE-F	NE-F15HWR5-300HTOS6-GA
Power Supply	220-240 V~/50 Hz
Maximum outlet water temperature (°C)	75
Nominal heat capacity (W)	400
COP	4.00
Maximum Power Input (W)	2600
Max. Operating Current (A)	11.3
Water Tank Volume (L)	300
Hot water volume (L/h)	35L/h
Water Connection (inches)	G3/4"
Noise dB(A)	≤42 dB(A)
Operating Temperature Range (°C)	-7 ~ 43
Refrigerant	R290/0.15kg
Net Weight (kg)	136
Net Dimensions (L*W*H) (mm)	685×740×1785

The parameters in the table are nominal values according to the nominal working conditions specified in EN 16147, which will change with the working conditions. The above parameters are subject to the product nameplate, if they are changed due to product upgrade, please understand that we will not notify you in advance.

11. Warranty conditions.

If the device needs to be repaired according to the warranty, we recommend that you contact the manufacturer's official service service. The relevant contact details are specified in our product catalogues/guides as well as on our website. To avoid any inconvenience, we suggest that you read this carefully before requesting a warranty repair.

Guarantee

This warranty applies with respect to the product that was purchased at the time of purchase.
The warranty on this product covers all defects in material or workmanship for a period of two years from the date of purchase.
Warranty: 5 years for the water tank when replacing the anode every two years and two years with respect to the appliance.
In the event that defects in materials or workmanship (on the date of original purchase) are detected during the warranty period, we will provide repair and/or replacement of the defective product or its components, in accordance with the terms and conditions set forth below, at no additional cost in terms of labor and spare parts.
The technical assistance service has the right to replace defective products or their components with new or repaired products. All replaced products and components are the property of the MANUFACTURER.

Conditions

• Repairs carried out in accordance with the warranty will only be completed if the defective product is delivered within the warranty period, together with a bill of sale or purchase receipt (indicating the date of purchase, the type of product and the name of the merchant). The MANUFACTURER has the right to refuse repairs performed under the warranty in the absence of the above documents or in cases where the information contained therein is incomplete or illegible. This warranty will terminate if the product model or identification number has been modified, removed, or becomes illegible.
• This warranty does not cover the costs and risks associated with shipping your product to our COMPANY.
• This warranty does not cover the following:

a) Periodic maintenance actions, as well as repair or replacement of parts due to wear and tear.
b) Consumables (components that will require periodic changes during the useful life of a product, such as tools, etc.).
(c) Damage or malfunction due to improper use and/or handling of the product for purposes other than normal and customary use.
(d) Damage or changes to the product as a result of:

Misuse, including:

- Procedures that cause physical, aesthetic, or superficial damage or alterations.
- Improper installation or use of the product for purposes other than those for which it was designed.
- Improper installation or use of the product for purposes other than those for which it was designed or failure to follow the installation and use instructions;
- Improper maintenance of the product that does not comply with proper maintenance instructions;
- Installation and use of the product that does not comply with the applicable technical and safety requirements or regulations of the country in which the product is installed or used;
- Condition or malfunction of the systems to which the product is connected or within which it is connected;
- Repairs or attempted repairs made by unauthorized personnel.
- Adaptations or modifications of the product without the prior written consent of the manufacturer, updating the product in excess of the specifications and functions described in the instructions for use, or modifications of the product for the purpose of complying with national and local safety standards with respect to countries other than those for which it was specifically designed and manufactured.
- Accidental events, fire, liquids, chemicals or other substances, floods, vibrations, excessive heat, insufficient ventilation, current spikes, excessive or inadequate supply voltage, radiation, electric discharges, even lightning, other external forces and impacts.

Exceptions and limitations

Except for the events specifically mentioned in the previous section, the MANUFACTURER does not make any warranties (express, absolute, binding or otherwise) in relation to the product in terms of quality, performance, accuracy, reliability, suitability for use, or for any other reason. If this exemption is not fully or partially permitted by applicable law, the MANUFACTURER shall limit the warranty to the maximum legal limit. Any warranty that cannot be completely excluded will be limited (subject to conditions permitted by applicable law) to the end of that warranty.
MANUFACTURER's sole obligation under this warranty is to repair or replace the products in accordance with the terms and conditions of this warranty. The MANUFACTURER is not liable for any loss or damage related to the products, services, or anything else, including economic or intangible loss, the price paid for the product, loss of revenue, revenue, data, property or use of the products or other related products: indirect, accidental or consequential loss or damage. This applies to loss or damage arising from:

- Risk or malfunction of the product or related products as a result of damage or lack of access while the device is at the MANUFACTURER's premises or other authorized technical assistance center, resulting in involuntary inactivity, loss of time, or interruption of work activities.
- Product provided with insufficient qualities at the operational level or performance of a related product.

This applies to loss and damage within the legal framework, including negligence and any other unlawful acts, breach of contract, express or implied warranty and strict liability (in the event that the MANUFACTURER or authorized technical assistance has been informed of the possibility of such damage).

In cases where applicable law prohibits or limits these discharges, the MANUFACTURER excludes or limits its own liability to the maximum legal limits. Other countries, for example, prohibit the exclusion or limitation of damages caused by negligence, gross negligence, willful misconduct,

fraud, and other similar activities. The MANUFACTURER'S LIABILITY under this warranty may not exceed the price paid for the product in any event, notwithstanding the fact that the individual jurisdiction of applicable laws may impose higher limits of liability, in which case it will apply.

Applicable national laws give the buyer (legally) rights related to the purchase and sale of consumer goods. This warranty does not affect the rights of the buyer under applicable law, rights that cannot be excluded or limited, or the rights of the customer with respect to the seller. At its sole discretion, the customer may assert its rights.

Subject to technical modifications without prior notice.

Thermic Comfort Europe S.L.
C/Francisca Cabello Hoyos, 9D
P.I. Los Polvillares
14900 Lucena - Cordoba (Spain)
Phone: +34 950 68 95 18