

# **AARIA ONE INVERTER**

EN USER INSTRUCTIONS



Dear Technician,

We would like to congratulate you on having recommended a **RIELO** unit: a modern product that is capable of ensuring maximum comfort at length, with a high degree of reliability, efficiency, quality and safety.

While your technical skills and knowledge will certainly be more than sufficient, this booklet contains all the information that we have deemed necessary for the device's correct and easy installation.

Thank you again, and keep up the good work.

RIELLO

### COMPLIANCE

RIELLO AARIA ONE INVERTER heat pumps are compliant with the following European Directives:

- Low Voltage Directive 2014/35/EU
- Electromagnetic Compatibility Directive 2014/30/EU
- RoHS Directive 2011/65/EU
- Directive 2010/30/EU Indication of the energy consumption on the labels of products related to energy consumption
- WEEE Directive 2012/19/EU
- ErP Directive 2009/125/EC and Regulation 2012/206/EC

## TABLE OF CONTENTS

1	GENERAL INFORMATION
1.1	General Notices
1.2	Safety precautions
1.3	Energy saving tips p. 4
1.4	Unit description
1.5	Safety and adjustment devices
1.6	Identification
1.7	Layout
1.8	Controls
	Control panel on board the unit
	Remote control <i>p.</i> 7
2	USE
2.1	Initial settings
	Inserting the battery
	Positioning
2.2	Start-up
2.3	Use
	Cooling mode
	Heating Mode <i>p. 9</i>
	Dehumidification mode
	Smart mode
	Ventilation mode
	Adjusting ventilation speed
	Maximum power function
	Motorised deflector
	Sleep function
	Timer function
	Hotel function
	Button locking
	Auto restart function
2.4	Temporary shutdown
2.5	Stop for an extended period of time
2.6	Maintenance
27	Ueaning
2.(	Iroubleshooungp. 14
3	<b>DISPOSAL</b>

The following symbols are used in this publication:

WARNING = actions requiring special care and appropriate training.

DO NOT = actions that MUST ON NO ACCOUNT be carried out.

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es.

## 1 GENERAL INFORMATION

## 1.1 General Notices

When you get the product, check immediately that the contents are all present and undamaged. Contact the dealer **RIELLO** if you notice any problems.

The product's installation must be carried out by an authorised company that will issue a declaration of the installation's conformity to the product's owner once the work has been completed, indicating that the work has been carried out in accordance with the standards of good practice, current National and Local regulations, and the indications provided by **RIELLO** in the instruction booklet accompanying the device.

The product must be used for its intended purpose, as stated by **RIELO** for which it has been expressly manufactured. **RIELO** shall bear no responsibility, whether of a contractual or non-contractual nature, for any damage caused to people, animals, or property due to incorrect installation, adjustments, or maintenance, or improper use.

Suitable clothing, instrumentation, and accident-prevention devices must be utilized during the installation and/ or maintenance operations. **RIELO** shall bear no responsibility for any failure to comply with current safety and accident-prevention regulations.

During installation and/or service operations, keep the area around the unit tidy and clean.

Comply with the legislation in force on the country of deployment with regard to the use and disposal of packaging, of cleaning and maintenance products and for the management of the unit's decommissioning.

Any repair and maintenance interventions must be carried out by **RIELIO** Technical Support Service, in accordance with the provisions contained in this publication. Do not modify or tamper with the unit as dangerous situations may arise and the unit manufacturer will not be liable for any damage caused.

In the event of any functional anomalies or fluid leaks, set the system's main switch to its "off" position. Promptly contact your local **RIELO** Technical Support Service, and do not perform any interventions upon the device on your own.

Any gas leaks indoors can generate toxic gases if they come into contact with naked flames or high temperature bodies, in case of leaks, please air the rooms thoroughly.

According to EU Regulation no. 517/2014 regarding certain fluorinated greenhouse gases, the total amount of refrigerant contained within the installed system must be indicated. This information can be found on the unit technical data plate.

This unit contains fluorinated greenhouse gases covered by the Kyoto protocol. Maintenance and disposal activities must be carried out exclusively by skilled personnel. This booklet is an integral part of the device, and must therefore be carefully preserved, and must ALWAYS accompany it, even in the event that it is sold to another Owner or User, or is transferred to another system. If it is damaged or lost, another copy can be requested to **RIELO** Technical Support Service in your Area.

## **1.2** Safety precautions

It should be noted that the use of products that utilize electric energy requires certain essential safety regulations to be respected, including the following:

- Do not allow children or unassisted disabled people to use the unit.
- It is forbidden to touch the device while barefoot or with wet body parts.
- Do not spray or throw water directly on the unit.



It is strictly forbidden to touch the coil fins, the moving parts, to place any body parts between them, or to insert pointy objects into the grilles.

➡ It is forbidden to perform any technical interventions or cleaning operations before having disconnected the device from its electrical power supply, by setting the system's main switch to its "OFF" position.

It is forbidden to modify the safety or adjustment devices without the manufacturer's authorisation.

Do not pull, detach or twist the electrical wires coming out of the unit, even when the unit is disconnected from the power grid.

- The packing material must not be disposed of in the surrounding environment and must be kept out of children reach, as it can be dangerous. It must be disposed of according to the regulations in force.
- **1.3** Energy saving tips
- Cover windows with shutters or curtains to stop sunlight coming through and hence increase the cooling effect.
- A Maintaining moderate temperature settings will help save energy.

Recommended temperature settings:

- for cooling: 26-28 °C
- for heating: 20-24 °C
- Keep air filter cleaned. Clogged air filters result in inefficient operation and waste of energy.

## 1.4 Unit description

**RIELIO** AARIA ONE INVERTER is a climate control system without external unit suitable for wall installation on any perimeter wall. The aesthetic impact is reduced significantly both on the outside where only two 162 mm holes will be visible, and inside the house thanks to a depth of only 170 mm, smaller than conventional indoor climate control units.

The rotary-type compressor is regulated by the DC-inverter control with continuous modulation, ensuring high energy standards. The DC fan motor improves performance and reduces the noise level. The expansion valve electronically optimises the flow of refrigerant in the circuit.

Control, adjustment and programming are carried out using the on-board control or the infrared remote control.

## 1.5 Safety and adjustment devices

The device safety and setting are achieved thanks to:

- temperature sensor of the upper heat exchanger, transmits the detected value to the main electronic board which activates:
  - heating mode if the detected temperature is greater than 52°C, turning off the lower fan which then restarts when the temperature is lower than or equal to 47°C
  - heating mode if the detected temperature is greater than 62°C for 10 seconds, turning off the compressor which then restarts when the temperature is lower than or equal to 47°C
  - cooling and dehumidification if the detected temperature is lower than 0°C for 20 seconds, turning off the compressor and the lower fan that restart when the temperature is greater than 7°C
- temperature probe of the lower heat exchanger, transmits the detected value to the main electronic board which activates:
  - cooling mode if the detected temperature is greater than 58°C, increasing the speed of the lower fan until the temperature is lower than 55°C
  - cooling mode if the detected temperature is greater than 62°C, turning off the unit which then restarts after 60 seconds when the temperature is lower than 62°C
  - cooling and dehumidification mode if the detected temperature is lower than 25°C, forcing the lower fan to operate at minimum speed
- temperature sensor of compressor outlet, transmits the value to the electronic board which acts when the temperature is greater than 110°C, turning off the unit
- external air temperature sensor, which transmits the detected value to the electronic board to act on the unit's operation and adapt it to variations in external conditions
- room air temperature sensor, which transmits the detected value to the electronic board to act on the unit's operation and to adjust the room temperature
- safety float in the condensation pan that turns off the unit if the level of condensation is too high
- A Safety device replacement must be carried out by **RIELLO** Technical Support Service, using only original components. Please refer to the spare parts catalogue.
- IT IS FORBIDDEN to operate the device with faulty safety systems.

## 1.6 Identification

The unit can be identified through the technical data plate:



#### Technical data plate

Contains the device's technical and performance data.

The tampering, removal, or absence of the identification plates will not allow the product to be properly identified by its serial number.

## 1.7 Layout



## 1.8 Controls

Control, adjustment and programming are carried out using the on-board control panel or the infrared remote control. Based on the temperatures detected by the probes present in

the unit, the electronics modulates the operation of the device.

### Control panel on board the unit

The control panel on board the unit is equipped with a touch screen. Pressing the symbols activates their associated functions, and the screen also displays the active mode of operation, the temperature and any alarms.





#### Keys and symbols



- Select required ventilation speed: minimum, medium, maximum or automatic
  - 2. Enables Maximum power function
- L 1. Enables Timer function
  - 2.Locks or unlocks key operation
- It activates the Sleep function
- (I) It switches the device on and off

It activates and deactivates the automatic
movement of the horizontal deflector or stops it
in a specific position

### **Remote control**



## **Function keys**

(44)

(1

- (U) It switches the device on and off
- A Enables Automatic mode
- 🗱 🛛 It activates the Cooling mode
- 🗱 🛛 It activates the Heating mode
- $(\Delta)$  It activates the Dehumidification mode
- Increases the value of the selected parameter
- Decreases the value of the selected parameter
- It activates the Sleep function
- 😵 🛛 Enables Fan mode

It activates and deactivates the automatic movement of the horizontal deflector or stops it in a specific position

- 1. Enables Timer function
- 2.Locks or unlocks key operation
  - 1. Select required ventilation speed: minimum,
  - medium, maximum or automatic 2. Enables Maximum power function

USE

## **2** USE

## 2.1 Initial settings

## Inserting the battery

The remote control is powered with a dry lithium battery (CR2025 3.0 V) housed on a support inserted into a slot on the underside. Should you notice poor reception, the battery must be changed. To replace the battery:



- press the side tab
- extract the battery holder
- remove the used battery



#### place the new battery



— insert the battery holder into the remote control

**M** Do not use batteries of different types.

Do not dispose of old batteries in the environment. Always take them to the suitable containers at points of sale.

For the first installation, a CR2025 3.0 V battery is supplied already housed in the remote control with the contact being protected by a plastic film.

To remove the protective film:



— remove the protective film

## Positioning

The underside of the remote control has a magnet so it can be attached to the device or on any metal surface.

## 2.2 Start-up

To switch on:



8

#### 2.3 Use

## **Cooling mode**

The Cooling mode allows starting and using the system to deliver cold and dehumidified air. To activate this function, recommended outdoor temperature should be ranging from +10 °C to 43 °C.

Required ambient temperature available range is between 16 °C and 31 °C.



- Activation
- press 🗱

On the unit's control panel appears.

The temperature indicator 💩 appears in blue. Set required temperature as follows:

- act using  $\odot$  or  $\odot$ 

Value is stored with no need to press other buttons.

Switch-off

select another operating mode

Alternatively:

- press 🕑 to turn unit off

## **Heating Mode**

The Heating mode allows starting and using the system to deliver hot air. To activate this function, recommended outdoor temperature should be ranging from -10 °C to 16 °C.

Required ambient temperature available range is between 16 °C and 31 °C.



 Activation — press 送 On the unit's control panel R appears. The temperature indicator • appears in red. Set required temperature as follows: - act using  $\bigcirc$  or  $\bigcirc$ 

Value is stored with no need to press other buttons.

Switch-off

select another operating mode

Alternatively:

– press 🕑 to turn unit off



🛕 In this mode the fan starts with a delay with respect to the compressor to prevent a jet of cold air in the environment.

In this mode defrost cycles are periodically performed during which the emission of hot air is stopped.

## **Dehumidification mode**

Dehumidification mode allows starting and using the system to reduce ambient humidity.

The device will only work at minimum fan speed while the temperature setting will be handled automatically by the control electronics.

1 The control panel displays the change in temperature and speed but the electronics ignores the settings.



- Activation
- press ( $\delta$ )

On the unit's control panel  $\delta$  appears.

The temperature indicator • appears in white.

Switch-off

select another operating mode

Alternatively:

- press 🕑 to turn unit off

🛕 In this mode the operation of the device may be intermittent.

## Smart mode

In Automatic mode, the device automatically changes the operating mode between Cooling and Heating and adjusts the fan speed between the minimum and the maximum value in order to maintain the temperature at the value set according to the detected ambient temperature.



Activation

 $-\operatorname{press} A$ On the unit's control panel A appears.

The temperature indicator  $\bullet$  appears in white. Set required temperature as follows:

 $-\operatorname{act}\operatorname{using}^{\bigstar}\operatorname{or}^{\bigstar}$ 

Value is stored with no need to press other buttons.

Switch-off

 select another operating mode Alternatively:

- press to turn unit off

## Ventilation mode

The Fan mode allows the user to turn on only the fan, so as to recirculate and filter ambient air.



- Activation
- press 🕉

On the unit's control panel \* appears.

The temperature indicator  $\bullet$  appears in white.

A The equipment will operate at selected ventilation speed.

A During operation in Ventilation mode, automatic sped cannot be selected.

- Switch-off select another operating mode Alternatively:
- press 🕑 to turn unit off

## Adjusting ventilation speed

Ventilation speed can be adjusted in the following modes:

- Cooling
- Heating

 Ventilation Set required ventilation speed as follows:





Each press will select a different speed. If selected, the speed changes automatically according to preset strategies.

 $oldsymbol{\Lambda}$  In Dehumidification mode the fan operates only at minimum speed.

## Maximum power function

Equipment operation is forced to maximum so as to quickly achieve ambient required conditions.

The Maximum power function can be turned on in the following modes:

- Heating
- Cooling
- 1 The Maximum power function remains active for 30 minutes and then is disabled and the unit switches to Automatic mode.







- The speed indicator bars flash.
- The red or blue temperature bars 💩 move.

## Motorised deflector

The motorised deflector controls the vertical air flow by setting a preferred outlet tilt or activating automatic operation.



To activate automatic operation:

— press 📣

On the unit's control panel  $\bigstar$  appears. The deflector starts automatic movement.

• To stop the deflector in the desired position: — press (4.)

On the unit's control panel  $\checkmark$  disappears. The deflector stops in its current position.

- During Cooling and Dehumidification mode the deflector closes and reopens in a horizontal position every 30 minutes to avoid the formation of condensation on the flap.
- 🛕 Do not set under the equipment any objects susceptible to get damaged in contact with water.
- Multiple When climate control system is turned off, the horizontal deflector will close automatically.
- 🔁 Do not manually move the deflector.

## **Sleep function**

The Sleep function allows user to select a time period throughout which the equipment will change reference ambient temperature:



- Sleep function on Α
- В Sleep function end and unit switch-off
- Set temperature С
- h Hours passed since function activation

increasing it in Cooling mode



- decreasing it in Heating mode

M With the Night function activated the fan operates only at minimum speed.



Activation

— press 🥮

On the unit's control panel 🗳 appears.

Switch-off

— press 🥮

On the unit's control panel 💐 disappears.

A The Auto Off Timer function has priority over the Night function.

## **Timer function**

The Timer function allows to start or stop the device automati-

cally.



## Automatic switch-on

The function allows to set the number of hours after which the unit will start automatically.

The range of hours that can be selected is from 1 to 24. Switch-on occurs in the current operating mode.

With the device off:

press 🕒

On the unit's control panel L appears.

- act using  $\odot$  or  $\odot$ 

— set the number of hours desired  $egin{array}{c} egin{array}{c} egin{arra$ 

— confirm using 🕒

## Automatic switch-off

The function makes it possible to set the number of hours after which the unit will stop automatically.

The range of hours that can be selected is from 1 to 24. With the device on:

press 🕒

On the unit's control panel appears.

- act using  $\bigcirc$  or  $\bigcirc$
- set the number of hours desired BB
- confirm using

## **Hotel function**

The Hotel function reduces available modes of operation and limits the range of temperatures selectable to make the device easier to use. Specifically:

- Dehumidification and Automatic modes are deactivated
- in cooling mode the temperature can be selected from 22 to 28°C
- in heating mode the temperature can be selected from 16 to 24°C

• To activate:

set the system main switch to "ON"



— use the control panel

– hold down 🗘 for 10 seconds

The symbol **d5** flashes.



## press 🗘

The symbol **En** flashes.

The Hotel function is activated.

Not performing other operations for 3 seconds, the setting is saved.

• To deactivate:

— hold down 🗘 for 10 seconds

The symbol **En** flashes.

## press 🗘

The symbol **d5** flashes.

The Hotel function is deactivated.

Not performing other operations for 3 seconds, the setting is saved.

## **Button locking**

To prevent any accidental activations and deactivations it is possible to lock the keys.



- Button locking
- On the control panel: hold down b for 6 seconds The symbol b flashes. The keys are locked.

Button unlocking

On the control panel: hold down b for 6 seconds The symbol stops flashing. The keys are unlocked.

1 The lock remains active even in the event of a power failure.

M With the lock activated the remote control does not work.

## Auto restart function

In the event of a power outage during operation, when power

is restored the unit will resume operation with the previously active settings.

If the Timer function was active, the time of interruption is not counted.

If the compressor was in operation, restart is delayed by 3 minutes.

If the compressor was off, restart is immediate.

## 2.4 Temporary shutdown

In order to shut down the unit for periods of brief absences:

 deactivate the unit using only the on-board control panel or remote control

## 2.5 Stop for an extended period of time

If the device has not been used for an extended period of time, carry out the following operations:

- start the device in ventilation mode
- select the maximum speed
- let the device run for 6 hours
- deactivate the device with the control panel or the remote control



- set the system main switch to "OFF"

## 2.6 Maintenance

Routine maintenance is fundamental for keeping the equipment efficient, safe and reliable. It can be performed periodically by **RIELLO** Technical Support Service, whose staff is technically qualified and can use genuine spare parts, if necessary.

## Cleaning

The only cleaning operations required of the user concern the remote control, the device cover, the front panel and the mesh filter.

All described operations MUST be carried out under the following conditions:

- cold device
- device NOT supplied with electric power
- suitable personal protection equipment



➡ It is forbidden to open the access doors and carry out any cleaning operation before disconnecting the device from the power supply positioning the system main switch to "OFF".

#### Cleaning the remote control

— clean with a soft and dry cloth

- Cleaning the housing and front panel
  - wet a sponge or soft cloth with water and soap to wash
  - once cleaning is over dry surfaces with care
- Do not use water at a temperature that is higher than 40°C, powder or abrasive detergents, solvents and brushes.

## Mesh filter cleaning



To remove the intake grille:

- push it downwards
- slide it forward
- remove it by lifting
- After having removed the intake grille:
  - extract the mesh filter



- remove dust with an vacuum cleaner
- If there is a considerable amount of dust, wash it with lukewarm water (max 40°C) and a neutral detergent, carefully rinse it off and let it dry in the shadow.
- Exposing the filters to the sun or washing them with water at a temperature that is higher than 40°C can cause the filters to shrink.

🔁 It is forbidden to use the device without mesh filter.

## 2.7 Troubleshooting

## **Power failure**

If unit display does not turn on after you press () on remote control, and equipment does not turn on, ensure that:

- equipment power plug, if any, is properly plugged
- system main switch is set to "ON"
- remote control batteries are well charged

If necessary, contact **RIELLO** Technical Support Service.

# The climate control system does not sufficiently cool down or warm up the air

Check that:

- the mesh filter is clean
- doors or windows leading outdoors are closed
- Unit air flow is free from obstructions
- set temperature is the one actually required

If necessary, contact **RIELLO** Technical Support Service.

### Faults displayed on the control panel

Faults are communicated through a code on the unit's control panel.





To restore operating conditions:

- set the main switch to "Off"
- allow 10 minutes
- set main switch back to "ON"
- press 🕑 on remote control

If the climate control system resumes normal operation, it means that shutdown was due to an erratic condition.

If the fault occurs again, an accurate check of the device components is required. Contact **RIELLO** Technical Support Service.

#### Fault codes

Code	Description	Remarks
E1	Room probe fault	Cooling, Dehumidifying and Heating modes remain active The adjustment only monitors the internal battery antifreeze
E2	Upper exchanger probe fault	The unit resets after problem resolution
E3	Outdoor air temperature probe fault	
E4	Lower exchanger probe fault	Cooling, Dehumidifying and Heating modes remain active Defrosting operates at fixed time cycles
E5	Upper fan motor fault	The unit resets after problem resolution
E6	Lower fan motor fault	
E7	Communication error between unit and control panel Communication error between electronic boards	
E8	Compressor outlet probe fault	
СР	Presence contact open	The unit resets upon contact closure
OF	Maximum level float triggering	The unit resets after problem resolution

In case of simultaneous failure of two probes, the unit turns off and resets after the resolution of the problem.

#### Faults requiring intervention of the Technical Support Service If any of these faults occurs:

- the power cable is too hot or damaged
- a strange noise is heard during operation
- either the cut-out, a fuse or grounding switch is tripping all the time
- a switch or a button is not operating properly
- user smells burnt
- water leakage from the unit

An accurate inspection of equipment components is required. — set the main switch to "Off"

— immediately contact **RIELLO** Technical Support Service.

## Normal noise during operation

During normal operation, the equipment may make particular noise linked to settling, expansion of the materials or refrigerant flow. This type of noise should not be considered a fault:

- ticking due to expansion or shrinking of materials upon temperature changes
- hiss due to refrigerant cycle inversion when changing operating mode and toggling between Cooling and Heating or during defrost
- swish similar to water flowing due to the refrigerant gas flowing in the unit

## 3 DISPOSAL

Packing materials must be disposed of separately, in order to be recovered and recycled. Equipment at end of life and flat batteries must be disposed of as required by prevailing law and regulations.





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As the manufacturer is constantly improving its products, the aesthetic or dimensional features, the technical data, the equipment and accessories indicated could be subject to variations.