HEATPEX

ARIA VITALE COMPACT

INSTALLATION MANUAL

IKONA'25 DOBRY WZÓR

heatpex.pl

Contents

Chapter 1

Introduction and safety information

This manual applies to the ARIA VITALE Compact ventilation unit, designed for mechanical ventilation in single-family houses and residential buildings.

In this document, the ARIA VITALE Compact ventilation unit manufactured by HEATPEX will be referred to as the **unit.**

1.1 General

Before commencing operation of the unit , this documentation must be read carefully and in full.

The following symbols are used in this manual to highlight key information relating to:

- potential hazards affecting the correct operation of the unit ,
- possible dangers to the health and safety of the user.

	Unit hazard
	Health hazard
	Guidelines

The device may only be used if it has been correctly installed in the building in accordance with this instruction manual.
The device can be used by children aged 8 and over, as well as by people with limited physical, sensory, or mental abilities, or by people without sufficient experience or knowledge, provided they are supervised or have been instructed on how to use the device safely and understand the possible risks. Children must not play with the device. Cleaning and maintenance must not be carried out by children without supervision.

1.2 Safety

- The unit must not be used against its intended purpose.
- Before unit installation or opening the housing at any time (e.g. for maintenance purposes), the unit must be disconnected from the power supply.
- The air supplied to the rooms must not contain harmful substances such as : flammables, substances hazardous to health, corrosive agents.
- The unit must not be installed on unstable surfaces.
- Do not use any liquids to clean electrical components.
- Do not use aggressive chemical cleaning agents that may damage the surface or internal components to clean the unit.
- Do not open the unit during its operating time.
- Do not touch moving parts located inside the unit.
- Do not leave any objects or tools inside the unit.

Chapter 2

Unit overview

2.1 Unit purpose and ventilation system principles

The ARIA VITALE Compact heat recovery ventilation unit is designed for installation in buildings as a component of a system providing balanced mechanical ventilation with heat recovery.
The unit operates continuously, supplying fresh outdoor air to the interior of the building while simultaneously extracting stale air.
Within the heat exchanger located inside the unit, thermal energy from the extracted air is transferred to the incoming fresh supply air.
The supply air is delivered to rooms such as living rooms, studies, and bedrooms via a system of ventilation ducts. At the same time, an equal volume of stale air is extracted from kitchens, bathrooms, and utility rooms.
The supply and extract air duct systems are completely separated, which prevents any mixing of the air streams.

In order for the unit to operate correctly and maintain high efficiency, careful installation of the ventilation duct system is essential and must be carried out in accordance with recognised building and installation best practice.

Errors made during installation may result in heat and pressure losses, reduced unit efficiency, and may prevent the achievement of the airflow parameters specified in the ventilation system design.

It is recommended that the ventilation system be installed using HEATPEX ARIA CONNECT and HEATPEX ARIA ADURO systems.

HEATPEX shall not be held liable for improper operation of the unit resulting directly from incorrect installation of the ventilation duct system and associated accessories.

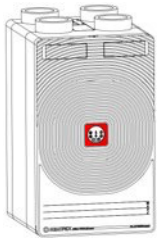
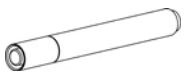
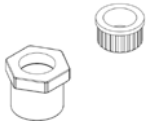
2.2 Storage and transport

- The unit is factory-packed and protected against damage during transport. It must not be removed from the packaging prior to installation, unless the packaging has been damaged to an extent that may compromise the safety of the unit during transport.
- The unit must be transported using appropriate handling equipment and with particular care in order to avoid damage.
- Upon delivery, the condition of the packaging must be inspected. If any damage is observed, the carrier must be notified. If the damage to the packaging may indicate damage to the unit, acceptance must be refused and the distributor must be informed.
- The unit must be stored indoors at a temperature between +5°C and +35°C, with a relative humidity not exceeding 65% and a low level of dust. Storage of the unit outdoors or in locations exposed to weather conditions is prohibited.
- The packaging must be protected against shocks and impacts.

No heavy objects may be placed on the packaging, as this could cause damage to the unit inside..

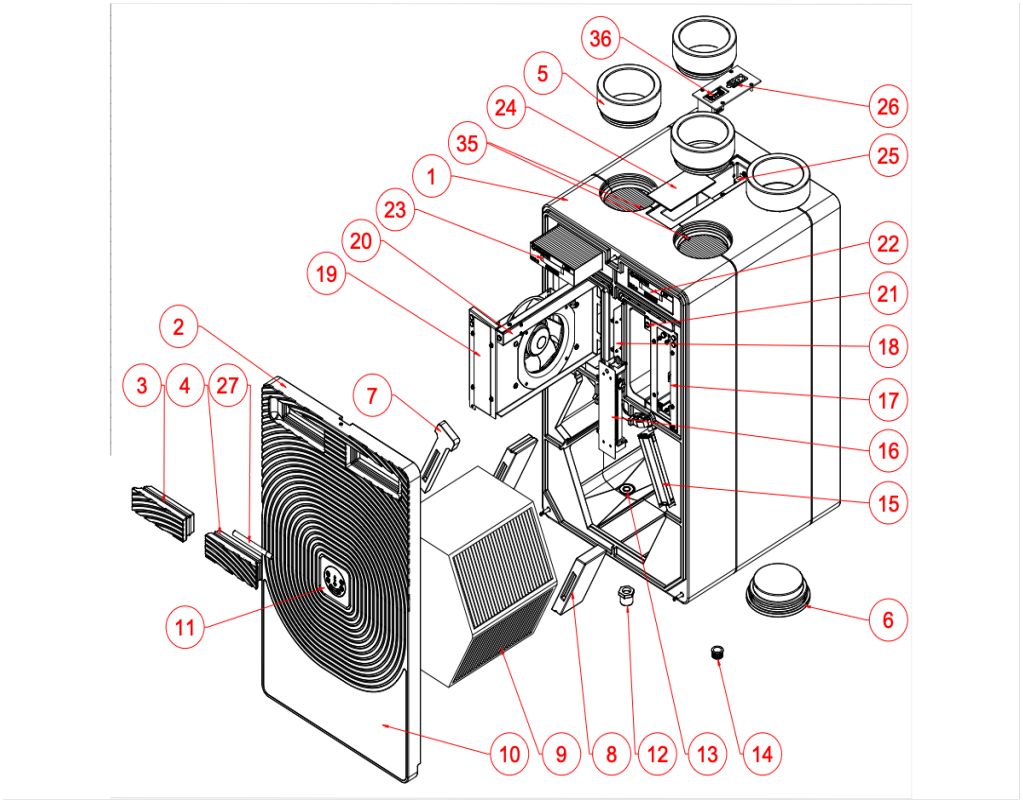
2.3 Packaging contents

The package contains the following items::

	ARIA VITALE Compact heat recovery ventilation unit
	Control Panel
	Power supply cable
	Set of wall/ceiling mounting brackets
	Whiteboard marker (located under the extract air filter cover)
	Condensate drain adapter
	Quick installation guide and product data sheet

2.4 Unit overview

The basic Silver / Platinum version of the unit includes the following components:



1. Unit housing
2. Unit cover
3. Left filter cover
4. Right filter cover
5. Connection spigots Φ 125 mm
6. Lower connection blanking plug Φ 125 mm
7. Bypass blanking plug
8. Heat exchanger baffles(interchangeable left/right)
9. Heat exchanger
10. Washable note board
11. Control panel
12. U32mm x 1/2" reducer, M6 screw 2 pcs
13. Condensate drain spigot ½"
14. Condensate drain plug ½"
15. Bypass damper with actuator (left/right)
16. Preheater
17. Right fan
18. Main control board (automation)
19. Left fan
20. Left CF sensor
21. Right CF sensor
22. Air filter F7/ePM1 70%
23. Air filter M5/ ePM10 50%
24. Cover with serial number
25. Wago connector block, M6 washer 2 pcs
26. Power socket with switch, blanking cover
27. Whiteboard marker
28. Mounting brackets 2 pcs
29. M6 washer 2 pcs
30. M6 screw 2 pcs
31. Blanking plug
32. Levelling feet 2 pcs
33. CO2 sensor
34. Temperature sensor
35. Wago socket for CO2 sensor
36. Wago plug for CO2 sensor

2.5 Configurations

The **ARIA VITALE Compact** unit is available in the basic **Silver** version and the extended **Platinum** version, which is equipped with additional sensors and enthalpy heat exchanger.

	SILVER	PLATINUM CF Enthalpy
Airflow rate	250/350 m^3/h	250/350 m^3/h
Sensors	Temperature	Temperature, CO2 concentration, constant flow (CF), relative humidity (RH)
Exchanger	Counterflow heat exchanger	Counterflow enthalpy heat exchanger

2.6 Automatic heat exchanger bypass

The unit is equipped with an internal heat exchanger bypass.
When heat recovery would be unfavourable, the bypass duct opens and the outdoor air stream bypasses the heat exchanger, flowing directly into the rooms.

This function is particularly useful during summer nights, when the outdoor temperature is lower than the indoor temperature. Based on the set indoor and outdoor temperature thresholds, the unit control system determines whether the bypass duct should be opened. As a result, cool night air is supplied to the interior, gradually reducing the indoor temperature to a comfortable level.

When the outdoor air temperature exceeds the indoor temperature, the bypass closes automatically, preventing unwanted overheating of the building.

2.7 Anti-freeze system

The ARIA VITALE Compact unit is equipped with a system that protects the heat exchanger against freezing. This solution protects the heat exchanger from damage and enables effective heat recovery even at sub-zero outdoor temperatures.
When the outdoor temperature falls below a defined threshold, the preheater is automatically activated to increase the temperature of the fresh air before it enters the heat exchanger. This prevents moisture contained in the extracted air from condensing, thereby protecting the heat exchanger against icing.

The second stage of protection consists of airflow control according to a defined algorithm: the supply fan speed is reduced while the extract airflow is simultaneously increased.

2.8 Air filters

ARIA VITALE Compact units are equipped with high-quality air filters:

ISO ePM1 70% (equivalent to F7 according to the former PN-EN 779 classification) – on the intake side.

ISO ePM10 50% (M5) – on the extract side.

The ePM1 70% filters retain 70% of particulate matter (PM) with a diameter below 1 µm in the supply air delivered to the rooms. This allows a high level of indoor air quality to be maintained even when outdoor air contains high concentrations of particulate matter, in accordance with Eurovent recommendations from 2022. PM1 particles are particularly hazardous to human health due to their very small size, as they can enter the bloodstream and increase the risk of cancer, cardiovascular diseases, and dementia.

The secondary class M5 / ePM10 50% filter protects the unit fans from contamination originating from the extract air. This ensures long-term, reliable operation. Filters of this class retain on average 40–60% of particles with a diameter of 0.4 µm, effectively capturing pollen and partially also smog particles and bacteria.

2.9 Air quality sensor control

The air quality sensor control system enables automatic adjustment of fan operation based on indoor air parameters.

If the set threshold for carbon dioxide (CO_2) concentration or relative humidity is exceeded, the unit automatically increases fan performance by 20%. The increased operating mode is maintained until CO_2 concentration and humidity levels fall below the defined thresholds.

2.10 Constant flow control mode (CF)

Constant Flow (CF) mode allows the preset airflow rate to be maintained regardless of the execution of the ventilation duct system. This simplifies unit configuration and eliminates the need for manual adjustment of fan output percentages based on pressure losses and fan performance curves.

The system is based on differential pressure sensors installed separately for each fan. If airflow resistance increases (e.g. due to gradual clogging of filters, intake or exhaust terminals), CF mode automatically increases fan speed in order to maintain the set airflow rate.

2.11 Boost mode

The unit is equipped with a Boost mode function, which enables a temporary increase in fan speed and, consequently, ventilation intensity via an external switch. This may include, for example:

- A bathroom light switch,
- a separate bathroom fan switch,
- a kitchen cooker hood switch.

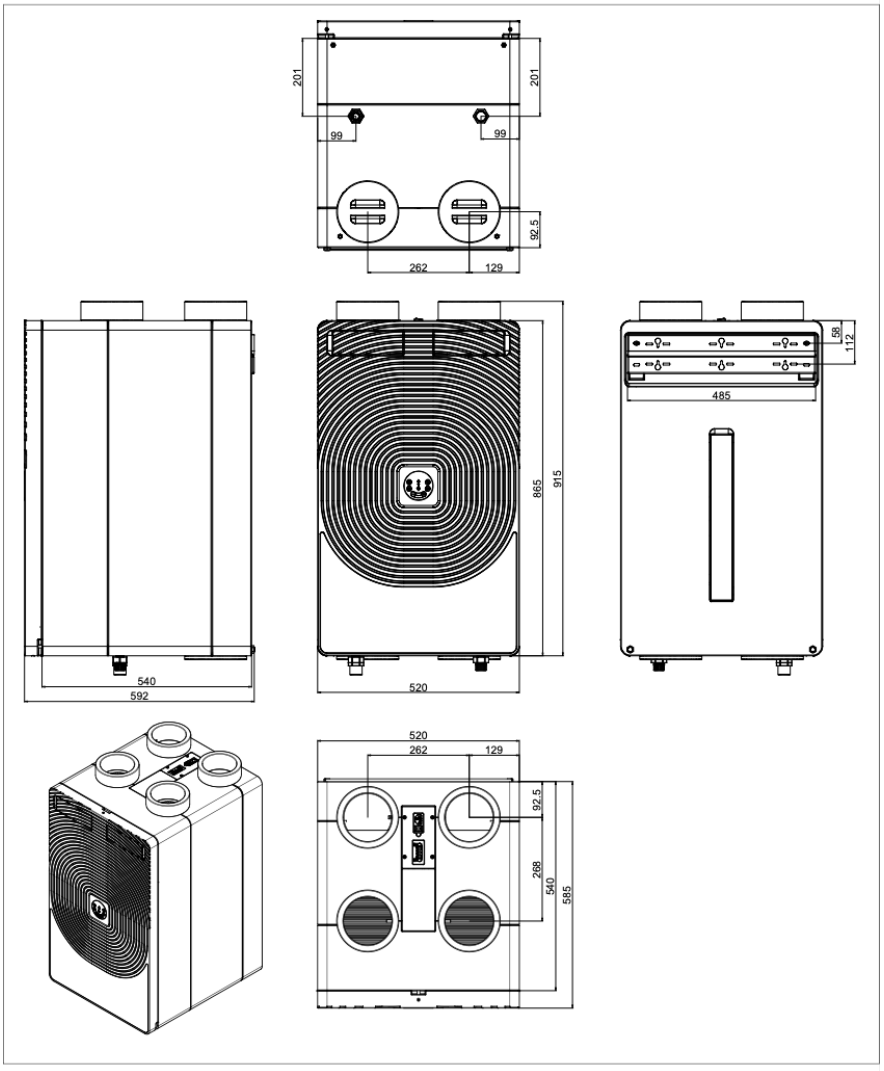
Fan speeds can be adjusted independently for supply and extract air. Boost mode allows the operation of the unit to be adapted to various situations, such as:

- increasing extract fan speed after bathing to remove excess humidity,
- increasing supply fan speed during cooker hood operation to prevent negative pressure within the rooms.

Up to two scenarios can be programmed: Boost 1 and Boost 2.

The main control board of the unit is equipped with two ports (DIN 2 and DIN 3) intended for connecting Boost mode control switches.

2.12 Unit dimensions

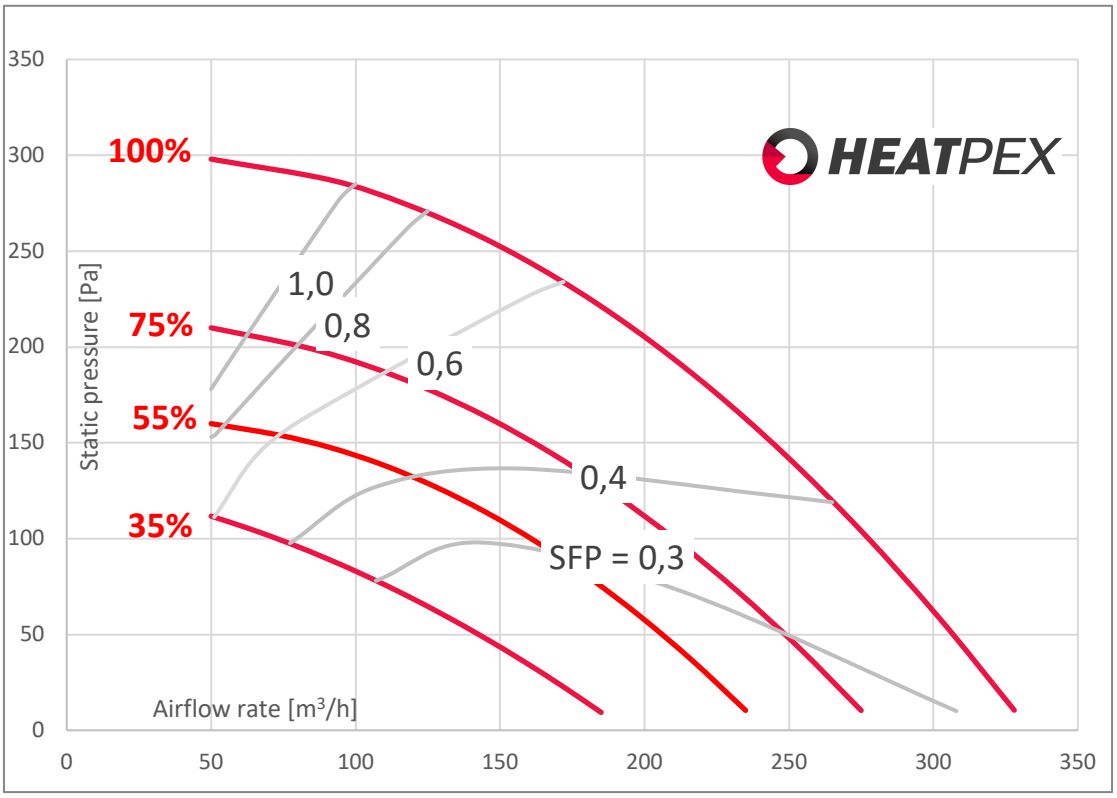


2.13 Technical data

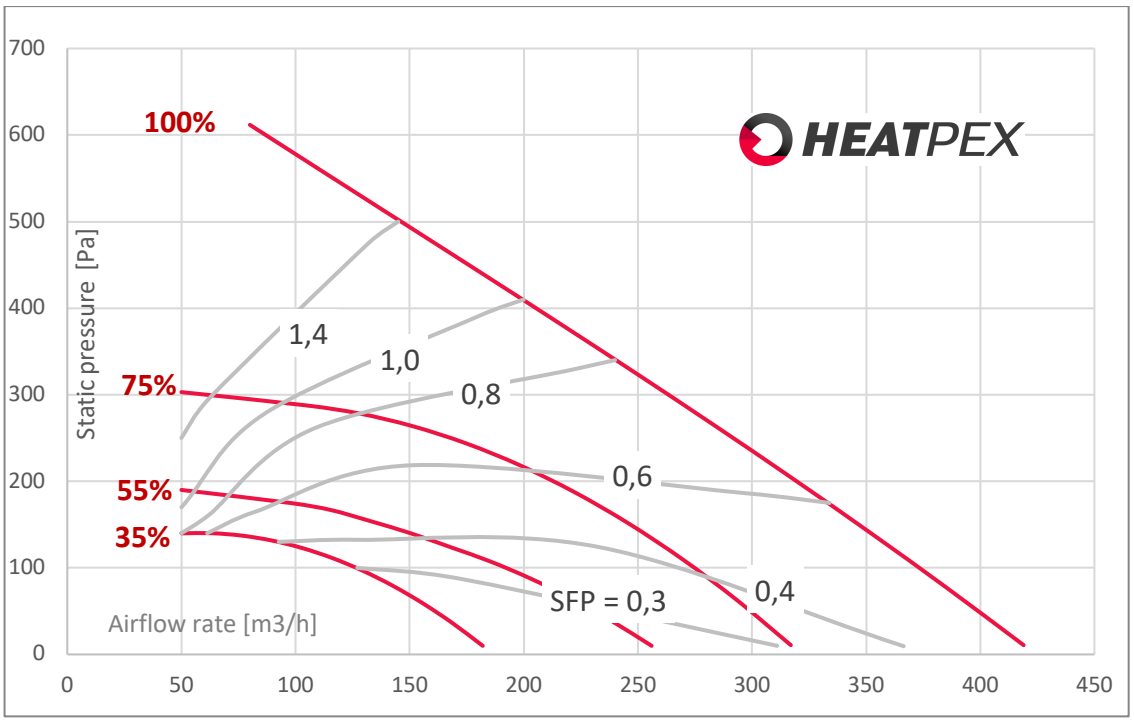
		ARIA VITALE compact 250	ARIA VITALE compact 350
Rated airflow		250 m3/h	350 m3/h
Static pressure at rated airflow		150 Pa	140 Pa
Sound power level emitted through casing		42,1 dB	49,3 dB
Heat Recovery Efficiency	Silver	88,8%	85%
	Platinum CF	88,3%	85%
Energy Efficiency Class	Silver	A+	A
	Platinum CF	A+	A
Fan type		EC centrifugal fans with stepless capacity control	
Maximum fan power		2x90W	2x90W
Preheater power		500W	500W
Power supply		230V/50Hz	
IP rating		IP 40	
Casing material		EPP	
Air connection port diameter		φ 125	
Condensate drain port diameter		Φ32mm	
Filter class		ePM1 70/% (F7) – supply air ePM10 50% (M5) – extract air	
Heat exchanger type		Counterflow heat exchanger (Silver) Counterflow enthalpy heat exchanger (Platinum CF)	
Bypass		rotary, 100% bypass, controlled by outdoor and indoor air temperature	
Dimensions (H. x W. x D.)		865mm x 520mm x 585mm	
Weight		20/21 kg	

2.14 Fan performance

ARIA VITALE Compact Silver/Platinum CF 250



ARIA VITALE Compact Silver/Platinum CF 350



Chapter 3

Unit Installation

3.1 Air requirements at the installation site of the unit

- The unit must be installed in rooms where the operating temperature is within the range of +5°C to +45°C.
- The relative humidity of the air in the room must not cause condensation of water vapour on the unit casing.
- Continuous relative humidity should not exceed 60%.
- The unit is not intended for ventilating rooms where humidity remains at a high level for prolonged periods or periodically exceeds permissible values, such as swimming pools, saunas, SPA and wellness areas, as well as rooms located in their immediate vicinity.
- The unit must not be used for drying construction sites. In newly constructed buildings, the use of additional dehumidifiers is recommended to remove excess moisture.
- The unit is not intended for extracting gases or dusts that could damage internal components, including air containing large amounts of grease, explosive gases or adhesive aerosols.
- Connection of a kitchen cooker hood to the ventilation system is prohibited due to the risk of grease accumulation in the extract ducts.
- Due to the materials used and the design of the unit , it must be installed exclusively in enclosed rooms, without direct exposure to sunlight or weather conditions.
- Connection of warm air distribution systems to the ventilation system is prohibited. The materials used in the unit are not designed to operate at temperatures exceeding 50°C.

Failure to comply with the above requirements may result in improper operation of the ventilation system, damage to the unit or, in extreme cases, a risk to the health and safety of users.

If the unit is installed or used during renovation works, it must be protected against mechanical damage and dust contamination. All unit connection spigots must be sealed, and if the unit has already been connected to the ventilation system, the duct outlets at the air terminals must also be sealed. The unit must not be started up before all construction works have been completed.

3.2 Simultaneous operation of ARIA VITALE unit with open flue combustion equipment

Simultaneous operation of the mechanical ventilation system with appliances that draw combustion air from the room (e.g. a fireplace without a separate air supply duct or a solid fuel boiler) is prohibited.
Such operation may lead to the creation of negative pressure in rooms where the boiler or fireplace is installed and, consequently, to the backflow of flue gases into the interior.
In boiler rooms where combustion air is drawn directly from the room, the following measures must be applied:

- a separate gravity (natural) ventilation system must be provided,
- the room must be separated from the rest of the building by airtight doors.

Only fireplaces with a closed combustion chamber, supplied with air from outside and with flue gases discharged outside the building, are permitted for use.

3.3 Water drainage and electrical power connections

At the installation location, access to a **230 V / 50 Hz** electrical socket with a protective earth (ground) pin must be provided. Access to the drainage system is also required in order to connect the condensate drain from the unit. It must be ensured that the condensate discharge pipe leading to the drainage system is protected against freezing along its entire length.

If the condensate drain passes through unheated spaces, appropriate thermal insulation must be applied.

3.4 Recommended installation locations

It is recommended to install the unit in the following locations:

- a separate technical or utility room,
- a basement,
- an insulated attic with access to the drainage system,
- a technical recess suitable for enclosure,
- a garage.

Due to the noise generated by the unit , installation in open-plan living spaces or in the immediate vicinity of bedrooms is not recommended.

3.5 Unit unboxing and preparing for installation

After unpacking the unit, check that it has not been damaged during transport. Next, place it on a solid, level surface in order to prevent damage.

The unit must not be placed on the connection spigots, as this may result in their damage.

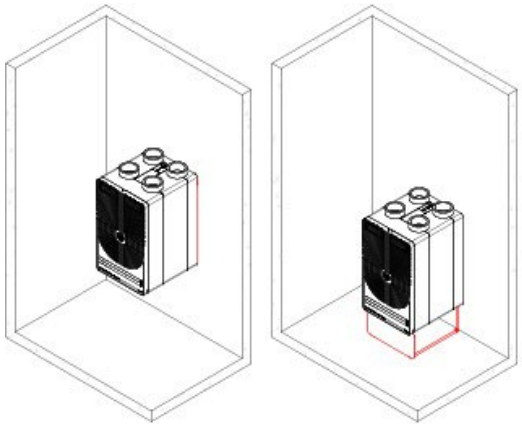
During installation, the unit must not be connected to the electrical power supply.

Do not dispose of the cardboard packaging!
A mounting template is printed on the side of the packaging, which facilitates preparation of the mounting holes for the unit suspension brackets.

3.6 Installation variants

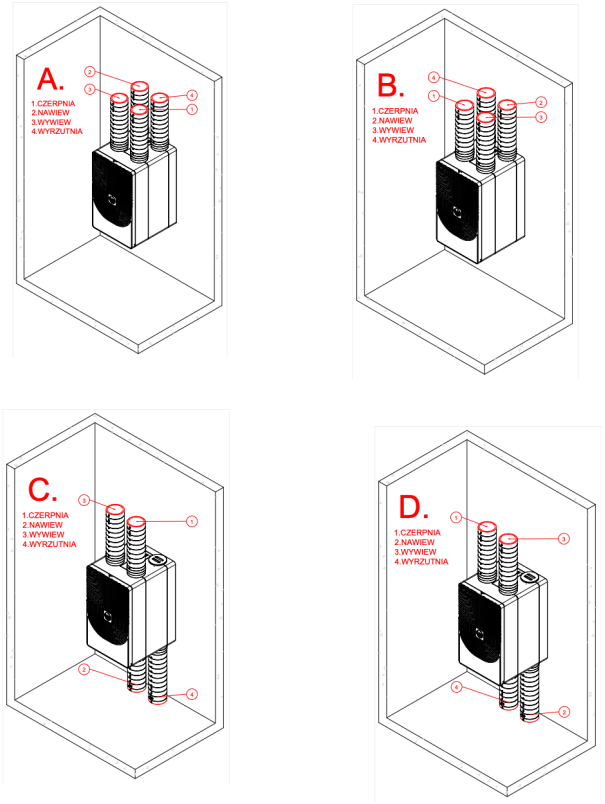
The ARIA VITALE Compact unit is designed for operation in two installation configurations:

- Wall-mounted,
- Floor-mounted.



Each of the above configurations allows connection of the outdoor air intake on the left or right side, the extract air connection on the left or right side at the front of the unit, as well as the exhaust air outlet on the left or right side and the supply air connection on the left or right side at the rear of the casing.

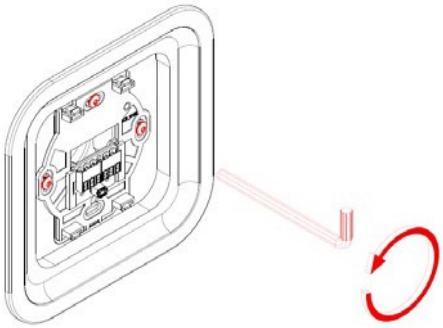
The arrangement of the unit connection spigots, depending on the position of the air intake, is shown in the diagrams below:



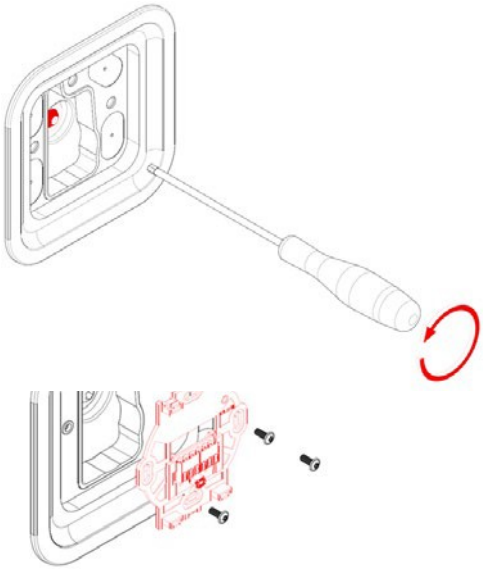
1-Intake 2-Supply 3-Exhaust 4-Outlet

In the event of changing the air intake side from right to left, the following additional steps must be carried out:

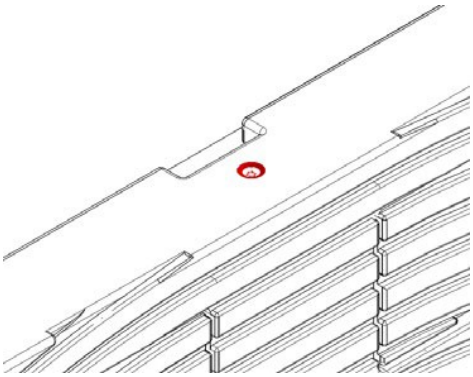
1. Open the unit
   a. Unscrew the three screws securing the panel base and remove the panel.



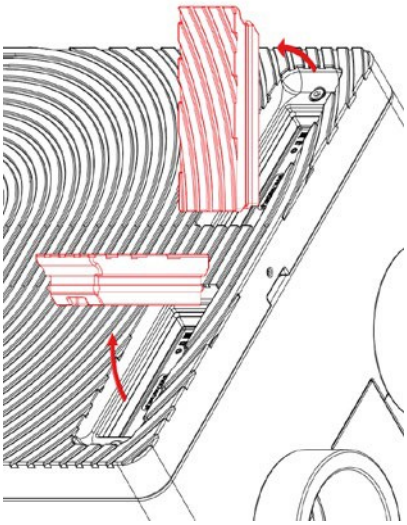
   b. Unscrew the screw securing the plate.



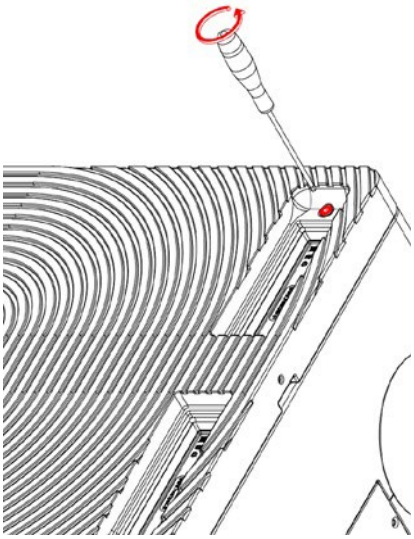
   c. Release the side latches of the flap.



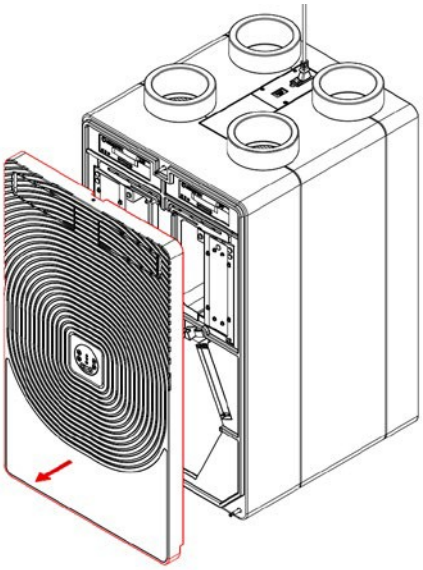
   d. Remove the filter blanking covers.



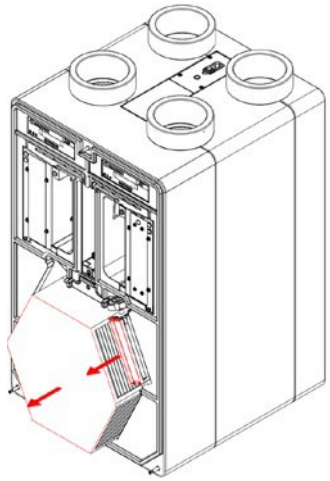
   e. Unscrew the screws on both sides of the filter.



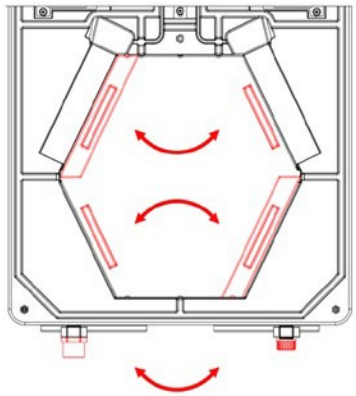
   f. Remove the flap.



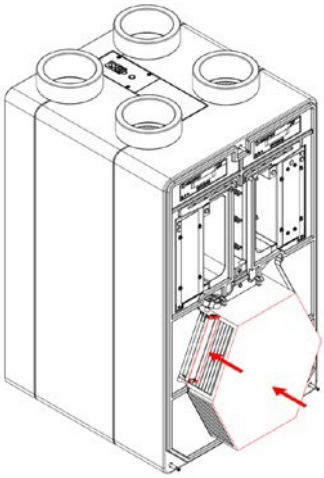
g. Slide out the heat exchanger and the damper without disconnecting the cables.



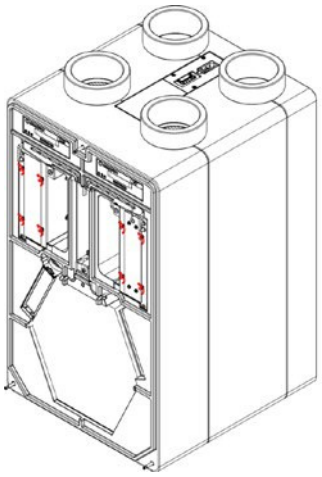
h. As standard, the unit is supplied in a right-hand configuration (air intake on the right-hand side). To change the configuration to left-hand, after removing the heat exchanger, relocate the two baffles located behind the heat exchanger to the opposite side and swap the condensate tray connection components by repositioning the spigot together with the blanking plug.



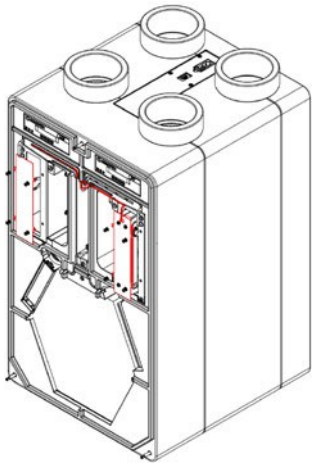
i. After repositioning the baffles, slide the heat exchanger back in and install the damper on the left-hand side, routing its cables through the designated channels.



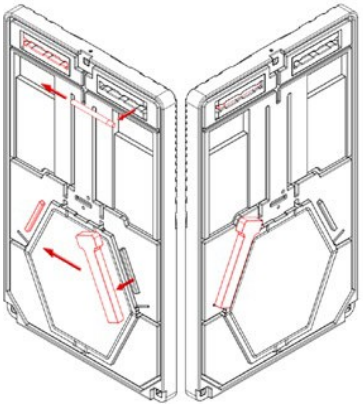
j. Repositioning the heater from the right-hand to the left-hand configuration In the right fan, unscrew the four screws securing the heater. Then, in the left fan, unscrew the four screws securing the heater blanking cover.



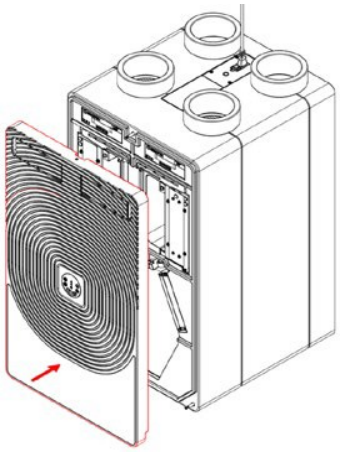
j. Then reposition the heater from the right-hand side to the left-hand side without disconnecting the cables from the main control board – the cables should only be routed through the designated channels. Secure the heater to the fan housing using four screws. In the same manner, reposition the blanking cover by installing it on the right fan and securing it to the fan housing with four screws.



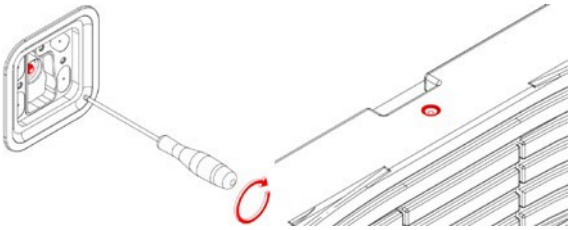
k. On the unit flap, relocate the bypass blanking cover from the right-hand side to the left-hand side and move the marker to the opposite cover.



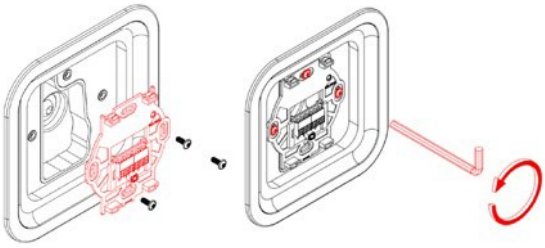
l. Close the flap by pressing it into the locking catches.



m. Tighten the main screw and the screws on both sides of the flap.



n. Install the control panel base.

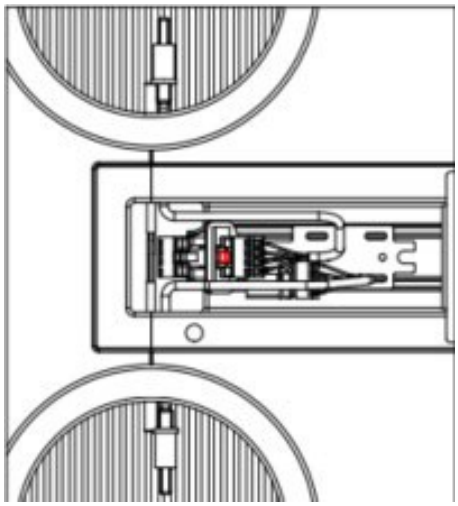


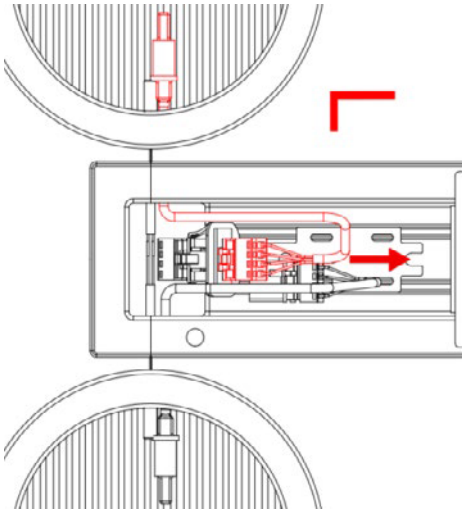
o. Attach the control panel to the base.

In the Platinum CF model, the CO_2 concentration sensor and the humidity sensor must also be repositioned.

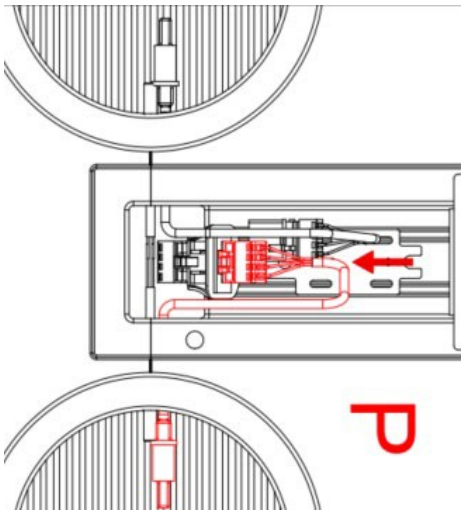
a. To relocate the sensors, unscrew the four screws securing the upper cover on which the rating plate is located.

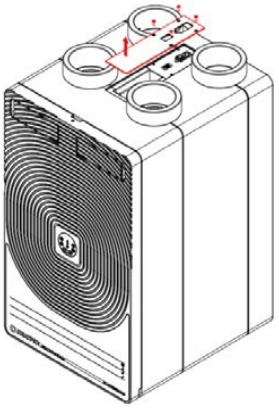
b. After removing the cover, the connection block for the CO_2 and humidity sensors will be visible. As standard, the unit is configured for the right-hand version, which means that the sensor connected to the terminal block is the one located on the left-hand side.



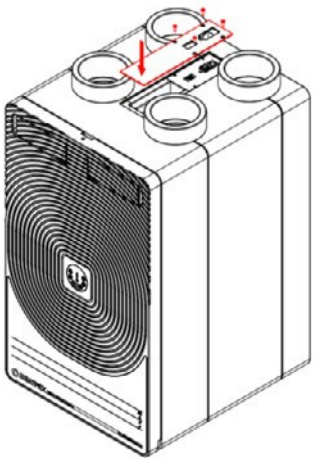


c. If the unit is to be configured with the air intake on the left-hand side, disconnect the CO_2 and humidity sensor from the left-hand side and connect it to the right-hand socket, in accordance with the diagram below.





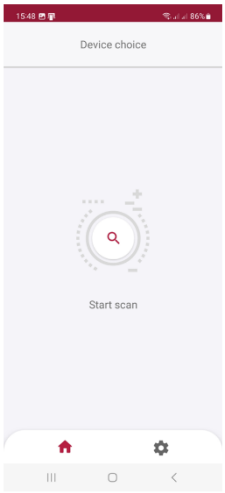
d. After switching the sensor connection, close the cover and secure it to the casing.



After completing the above steps, the supply and extract fans as well as the temperature sensors must be defined in the control system.

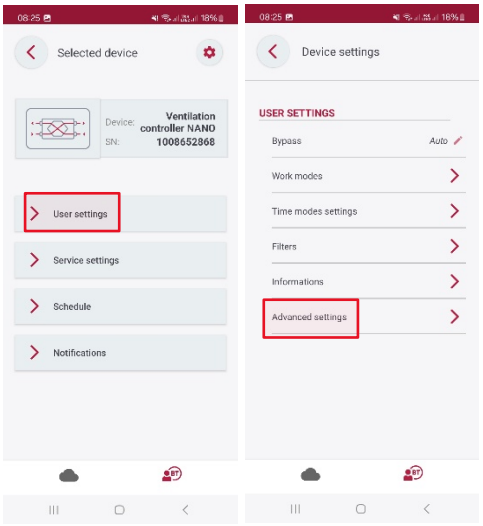
To do this, launch the **ARIA myHOME** application and follow the steps below:

1. In the application, open BT settings.

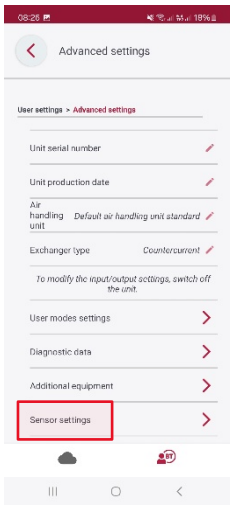


2. Go to the Internet Module, then select Controller.

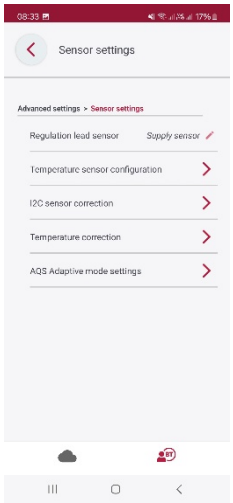
3. Open the User Settings, then Advanced settings.

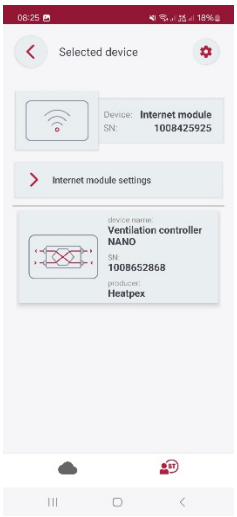


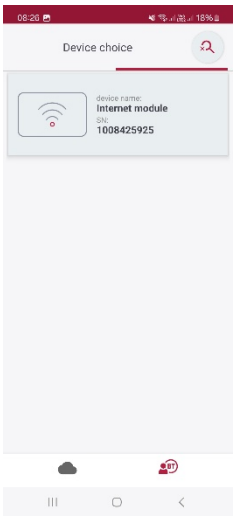
4. Select Sensor settings.



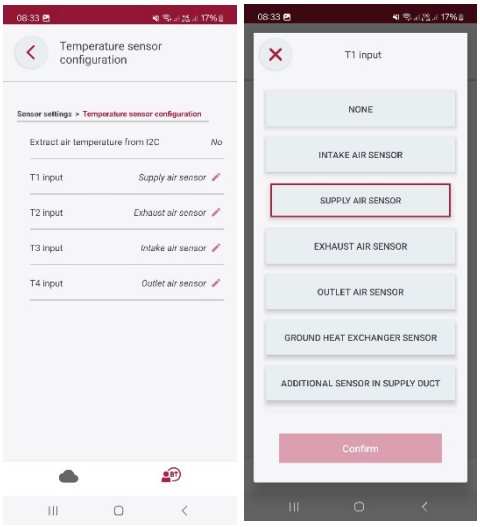
5. Select Temperature sensor configuration.



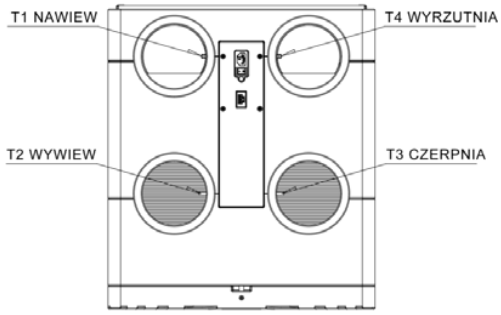



08:28
18%
Device choice
device name:
Internet module
SN:
1008425925

6. All temperature sensors T1, T2, T3 and T4 will be displayed. Each sensor can be defined individually by selecting it.

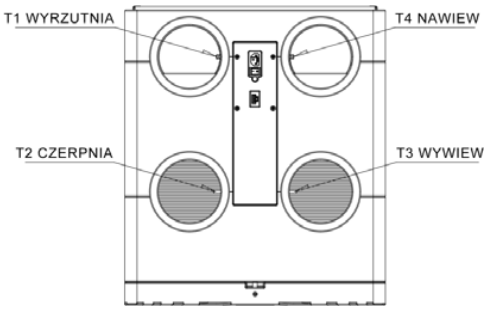


7. Sensor configuration for right-hand version.



T1 Sensor – Supply Air
T2 Sensor – Extract Air
T3 Sensor – Outdoor Air Intake
T4 Sensor – Exhaust Air Outlet

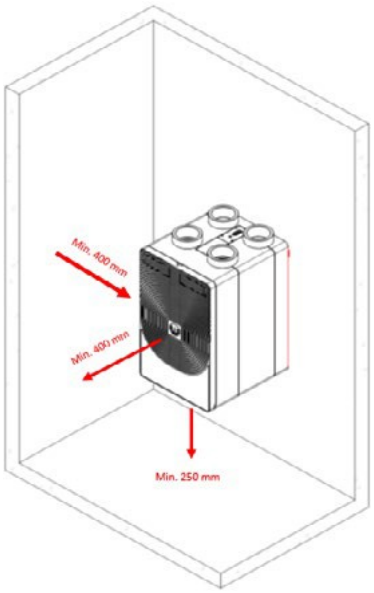
8. Sensor configuration for left-hand version.



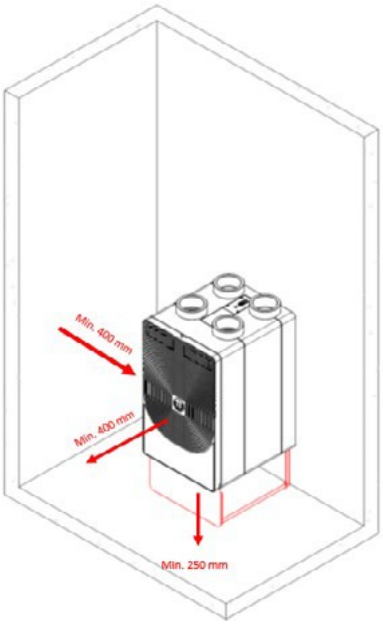
T1 Sensor – Exhaust Air Outlet
T2 Sensor – Outdoor Air Intake
T3 Sensor – Extract Air
T4 Sensor – Supply Air

3.7 Minimum clearances

Before installation, ensure that the minimum clearances from walls are maintained in accordance with the drawings provided. This will ensure unrestricted connection of ductwork and the condensate drain, as well as convenient access for maintenance.



Minimum clearances – wall-mounted installation

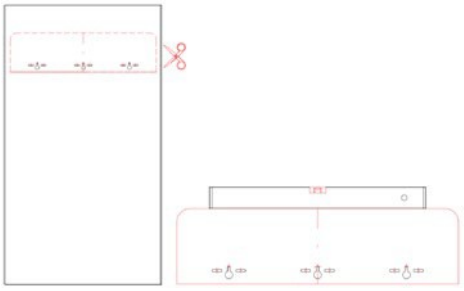


Minimum clearances – floor-mounted installation

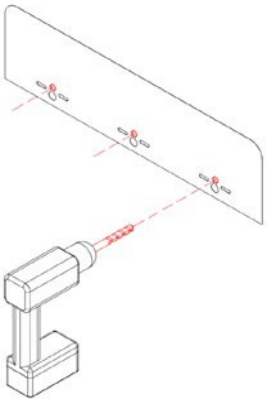
Ensure that the surface and load-bearing capacity of the wall or ceiling on which the unit is to be installed are sufficient.
Fixings suitable for the type of substrate and the weight of the unit must be used for installation.
The above recommendations do not apply to floor-mounted installation.

3.8 Wall/Ceiling installation

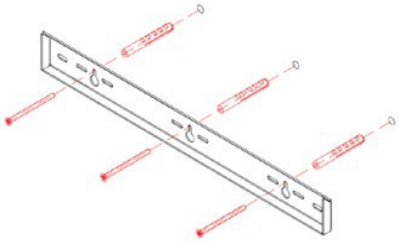
1. Cut out the mounting template printed on the back of the cardboard packaging along the marked line. Place the template against the wall and level it.



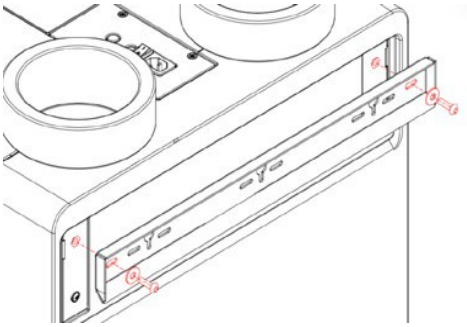
2. Drill holes at the marked locations.



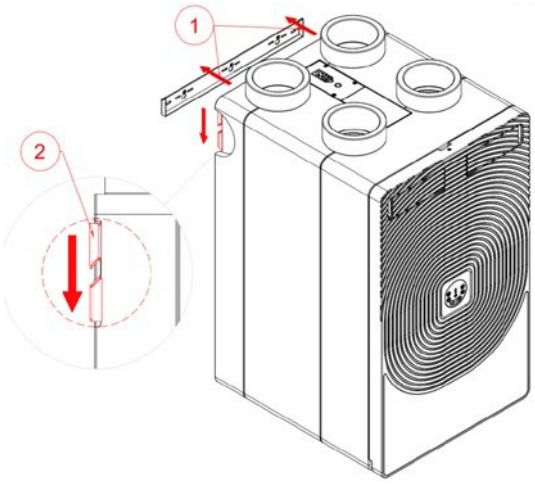
3. Fix the suspension brackets to the wall using wall plugs suitable for the load-bearing capacity of the substrate on which the unit is to be mounted. Use a spirit level to ensure that the brackets are correctly levelled.



4. Attach the second part of the suspension system to the rear panel of the unit at the designated points, using two M6 screws and two M6 washers.



5. Hang the unit on the wall by sliding the suspension elements mounted on the rear panel of the unit (1) into the suspension elements fixed to the wall (2).



6. The design of the mounting brackets itself prevents the unit from moving; therefore, no additional securing measures are required.

The design of the suspension system itself prevents the unit from shifting; therefore, no additional securing measures are required.

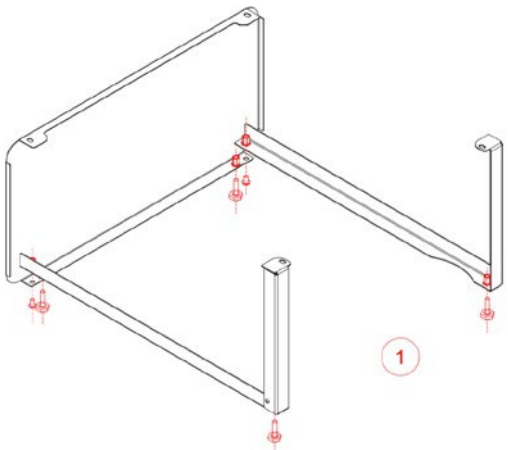
3.9 Floor installation

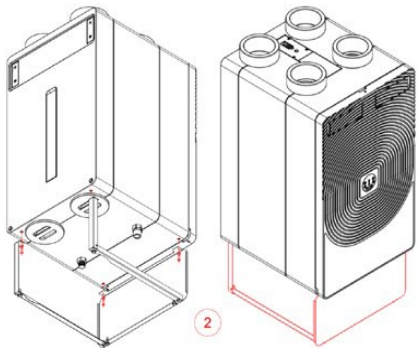
For floor-mounted installation of the unit , a floor mounting frame set must be ordered as an optional accessory. The frame is universal and suitable for both 250 and 350 units. Installation is shown in the diagrams below.

1 Connect the left and right support elements to the front plate using screws.

2 Screw the adjustable levelling feet (1) into the prepared rivet nuts.

3 Fix the assembled frame to the bottom of the unit at the designated points (2), using four screws.

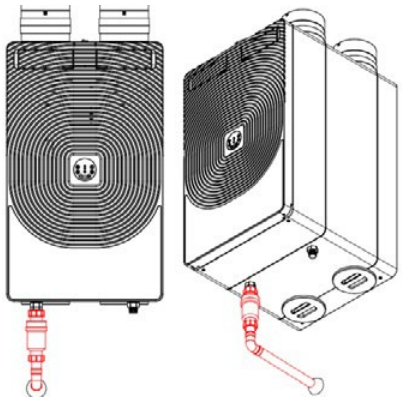




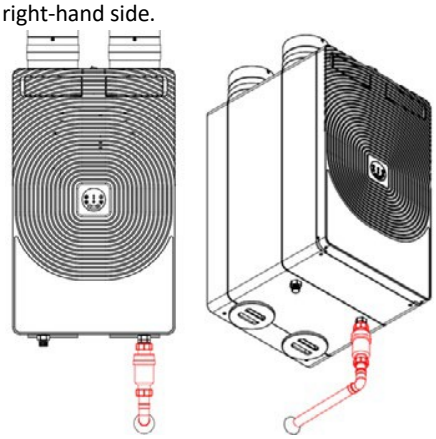
3.10 Condensate drain installation

The condensate drain outlets are located at the bottom of the unit at two positions. The correct outlet depends on the air intake side configuration.

Wall-mounted – left drain: installation with air intake on the left-hand side.

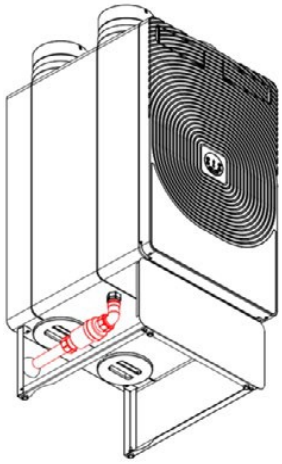


Wall-mounted – right drain: installation with air intake on the right-hand side.

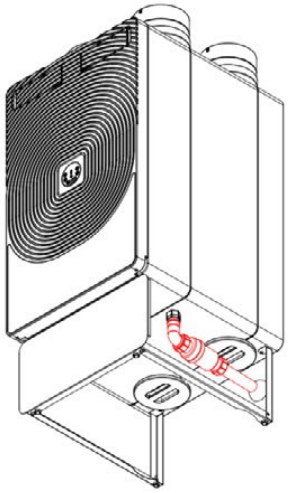


The condensate drain adapter must be screwed in by hand only, without the use of tools. Excessive tightening may damage the unit casing and result in loss of tightness.

Floor-mounted – left drain: installation with air intake on the left-hand side.



Floor-mounted – right drain: installation with air intake on the right-hand side.



The condensate drain outlets are positioned as shown in the diagram above:

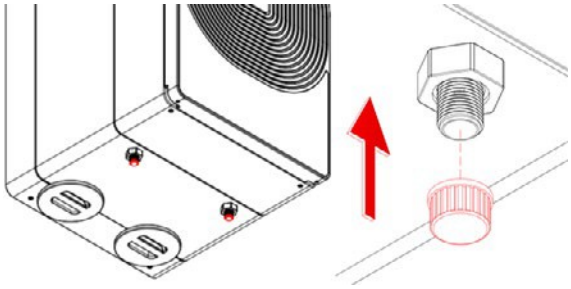
- **Wall-mounted installation** - at the bottom of the unit ,
- **Floor-mounted installation** - on the mounting frame.

The method of installing the condensate drain is identical for all installation variants.

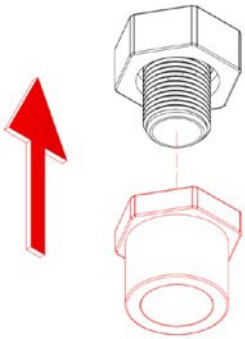
The unit is equipped with a drip tray with appropriate slopes that facilitate condensate drainage. During installation, the unit must be carefully levelled to ensure proper water drainage.

Any inclination in any direction may cause condensate to accumulate inside the unit , which may consequently lead to damage to its components.

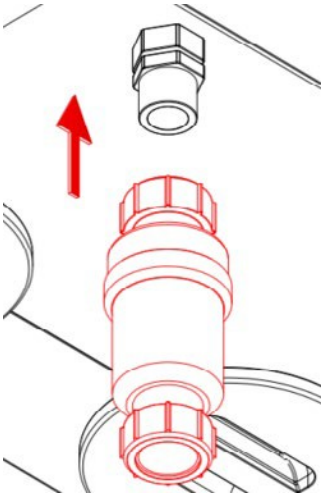
1. Screw the blanking plug securing the condensate drain onto the left-hand or right-hand spigot, depending on the siphon installation, in accordance with the indications shown in the diagrams above.



2. Fit the adapter for connection to a Ø32 mm system onto the second condensate drain spigot.



3. The condensate drain adapter allows the unit to be connected to a 32 mm drainage system. The use of a dry siphon (available as an optional accessory) is recommended.
   If a water-filled siphon is used, there is a risk of it drying out due to the small amount of condensate, which may result in unpleasant odours from the drainage system entering the supply air delivered to the rooms.



Optional accessories

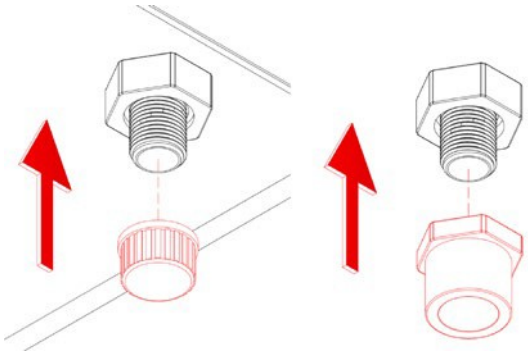
Two optional accessories are available to enable connection of different types of siphons, depending on the unit configuration.

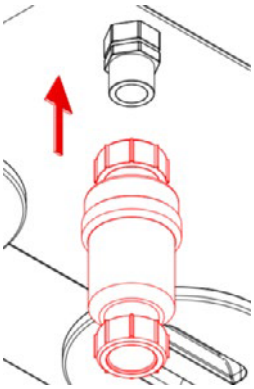
1. Dry membrane siphon (52600800100W)
2. Dry ball siphon 32 mm (52600700100T)

Dry membrane siphon

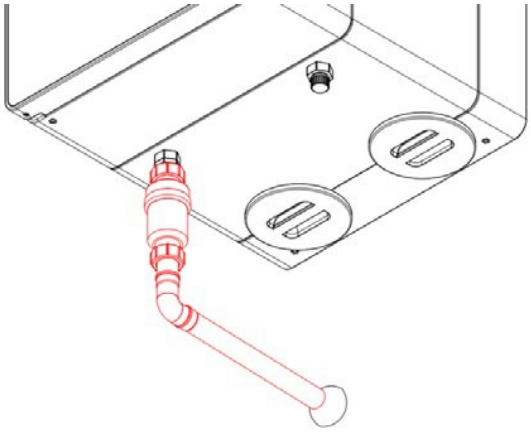
1. How to connect the **dry siphon with the adapter?**

To connect the dry siphon with the adapter:
- unscrew the nut from the selected spigot,
- attach the end piece with the Ø32 mm connection,
- connect the membrane siphon to the spigot.





2. Connect the siphon to the drainage system with a slope of 2%.



3.11 Connecting the unit to the ductwork

The **ARIA VITALE Compact** unit is equipped with connection spigots with an internal diameter of 125 mm. They are designed for connection to the **ARIA ADURO** system, the use of which is recommended due to its high level of airtightness and ease of installation.
To connect the unit to the **ARIA ADURO** system or another commercially available ventilation system, four connection spigots must be installed in the selected locations by pressing them into the locking points in the casing.

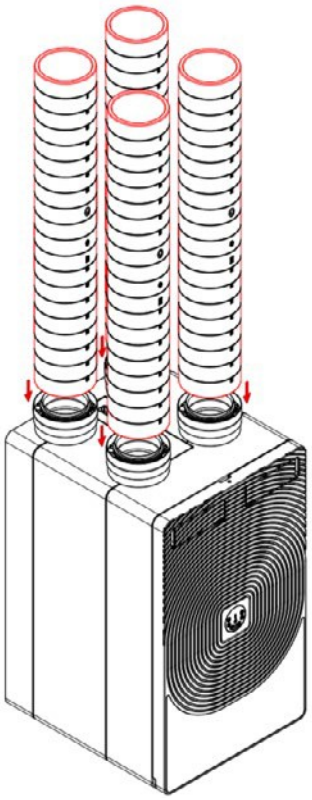
It is possible to install:.

- four spigots at the top,
- or two spigots at the top and two at the bottom.

Ensure that the ducts connected to the unit spigots do not exert any force that could cause them to detach, lead to loss of airtightness, or—in extreme cases—damage the spigots themselves.

3.11.1 ARIA ADURO System

1. Slide the **125 mm** connector onto the unit spigot until it reaches the stop.
2. Insert the Ø125 mm duct into the connector to a depth of 2 mm, then push it fully home.

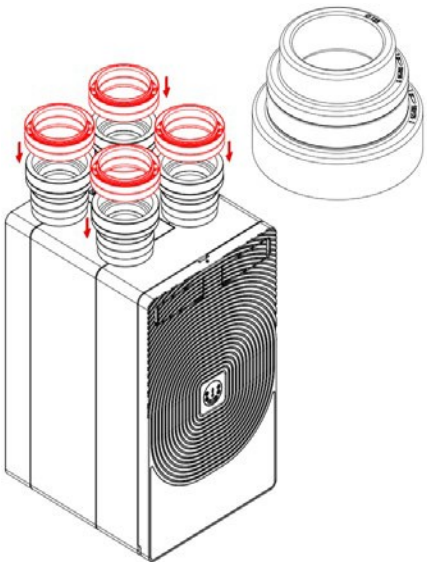


3. Further expansion of the installation should be carried out in accordance with the system instructions.

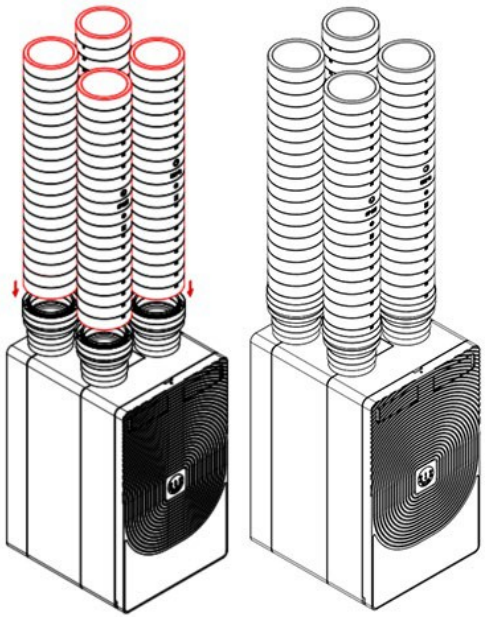
Increasing the cross-section of the connection ducts is recommended for units with an airflow rate of 350 m³/h

1. Insert a **125/160/200 mm** reducer into the connector.

If **Ø160** mm ducts are to be used for air distribution, cut off the **Ø200** mm section of the reducer.



2. Insert the **Ø160 mm** or **Ø200 mm** ARIA ADURO duct fully into the connector.



3.11.2 Round metal ducts

The unit can also be connected to round metal spiral ducts (spiro type). The internal dimensions of the spigots comply with **PN-EN 1506:2007**.

ARIA ADURO system connectors with a diameter of **125 mm** may be used to connect spiro ducts.
The connection must be additionally sealed and secured to minimise the risk of the duct slipping out of the connector.

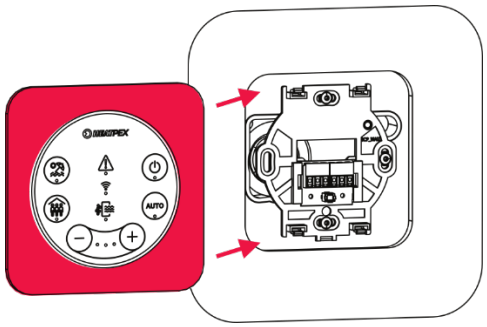
The use of pre-insulated aluminium ducts for connecting the unit to the rest of the installation should be avoided. Such ducts cause high pressure losses and are susceptible to damage, which may lead to air leakage in the system and deterioration of unit performance.

To reduce noise, it is recommended to install acoustic silencers on the supply and extract air spigots of the unit.

3.12 Control panel installation

The control panel is supplied in a separate package. Before starting installation, remove it from the box.

Insert the control panel into the control panel base until it clicks into place.



3.12.1 Control panel wall installation

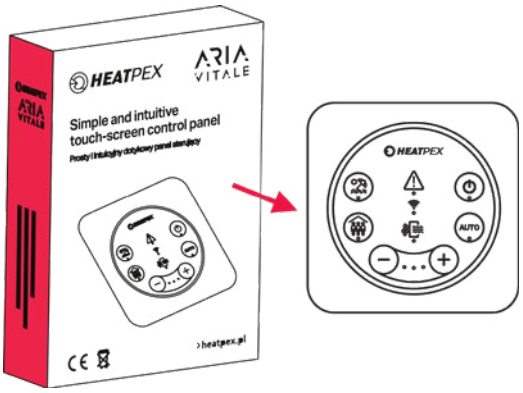
As standard, the unit is prepared for installation of the control panel on the unit casing. It is also possible to install the control panel on a wall at any selected location in the building and cover the control panel socket with a blanking cover (available as an optional accessory, together with a 10 m power and control cable).

The control panel is intended for wall mounting in dry rooms only. It must be protected against condensation and direct contact with water. Contact with water may damage the panel and poses a risk of electric shock.

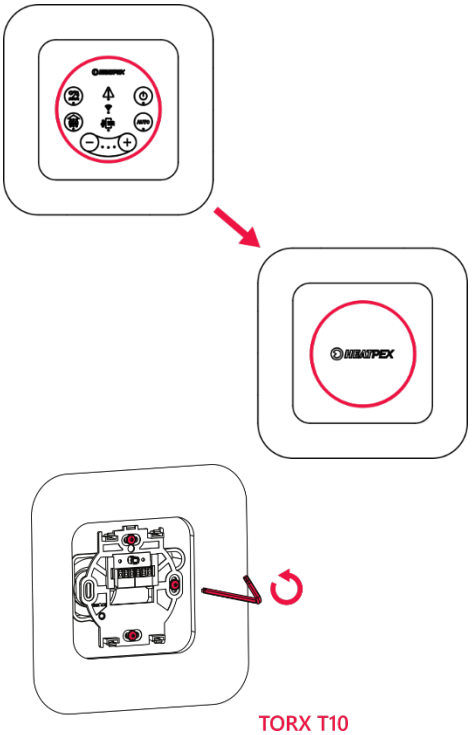
When selecting the cable connecting the control panel to the controller, ensure that the resistance of a single conductor does not exceed **8 Ω** and that the total cable length is **less than 100 m**.
As the cable length increases, its cross-sectional area must be increased accordingly.

For cable lengths below **10 m**, a **LiYY 4 × 0.14 mm²** cable is recommended.

Basic steps for relocating the control panel to the wall

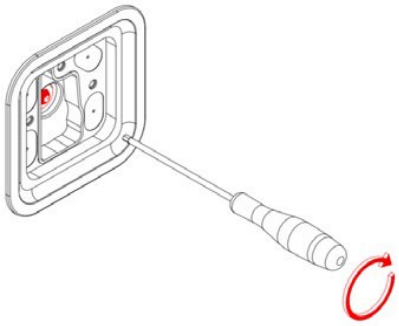

HEATPEX
ARIA VITALE
Simple and intuitive touch-screen control panel
heatpex.pl
HEATPEX
AUTO

1. Using a Torx T10 key, unscrew the three screws securing the control panel base and carefully remove the base, taking care not to damage the cable connecting it to the main control board of the unit.
2. Disconnect the cable ends from the control panel base.

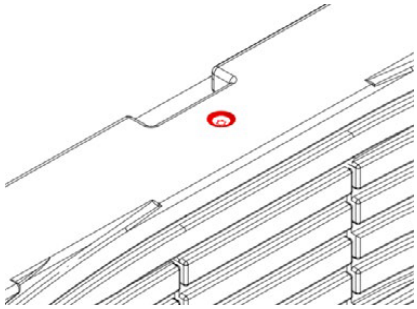


TORX T10

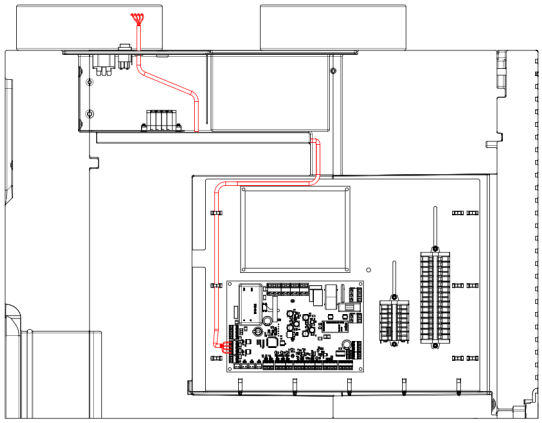
3. Using a Torx T10 key, unscrew the screw securing the unit flap.



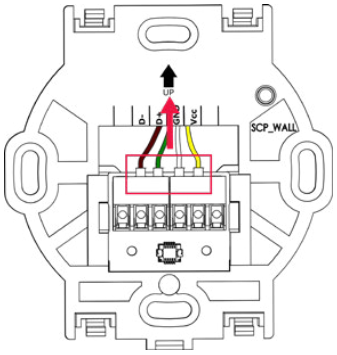
4. Release the three locking points on the sides of the flap and then remove the flap.

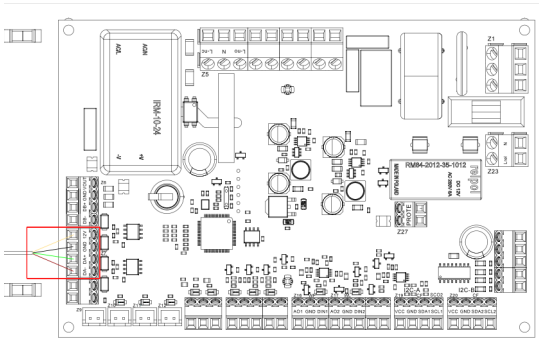


5. After removing the flap, slide out the main control board located inside the unit.

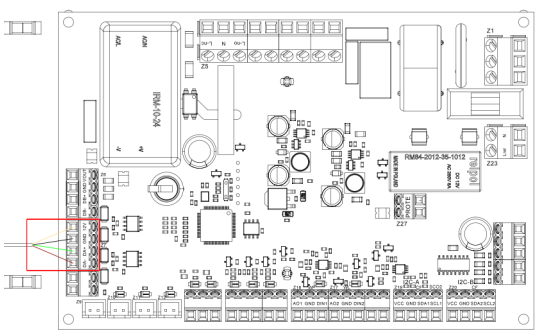


Once the mai6. When control board has been slid out, disconnect the power cable supplying the control panel from the board.



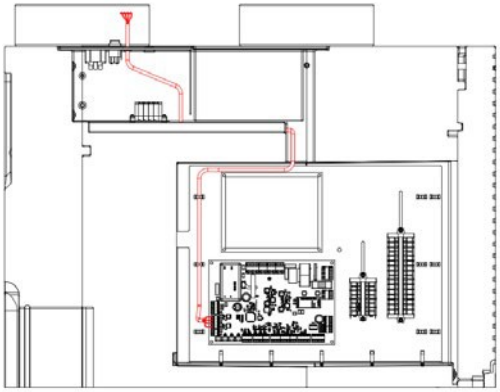


6. Connect the cable intended for relocating the control panel to the same socket, in accordance with the colour coding.

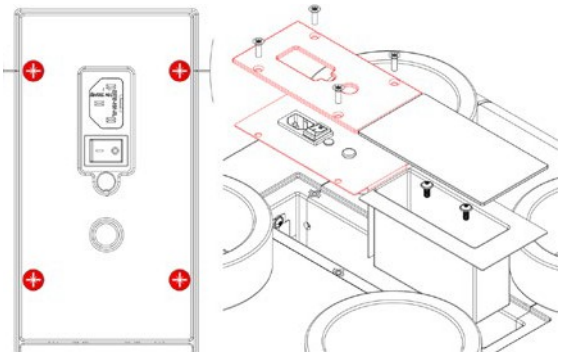


7. Route the cable inside the unit to the power socket as shown in the diagram.

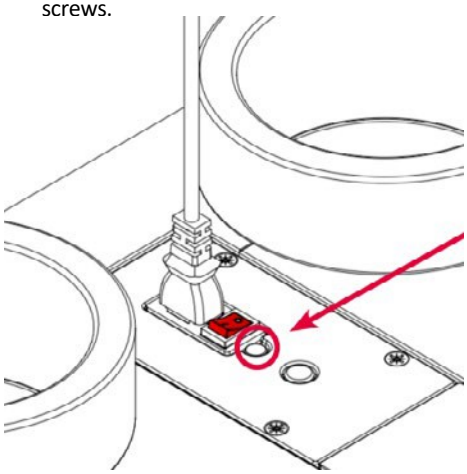
The cable connecting the control panel to the unit controller must be recessed into the wall and routed away from mains power cables as well as from unit s emitting strong electromagnetic fields.



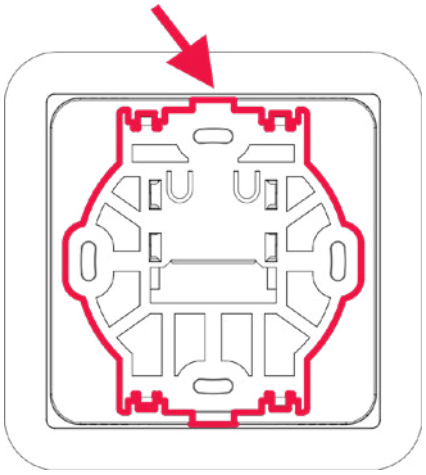
8. Using a Torx T10 key, unscrew the four screws securing the rating plate and lift the plate to allow the cable to be routed underneath.

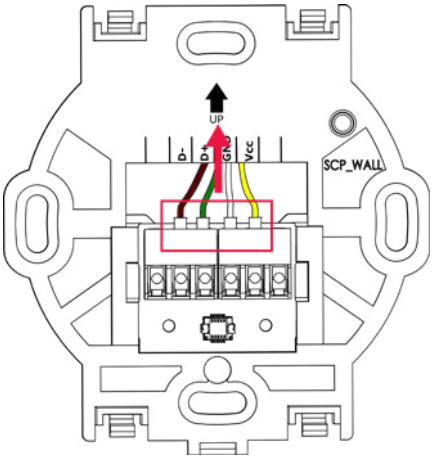


9. Route the cable through the prepared opening secured with a blanking plug, which must be removed first. After routing the cable, reinstall the rating plate and secure it by tightening the four screws.

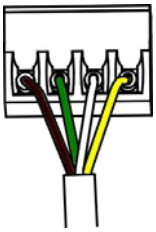


10. After routing the cable, lead it to the desired location within the building according to its intended use. Then install the control panel base in an electrical wall box.

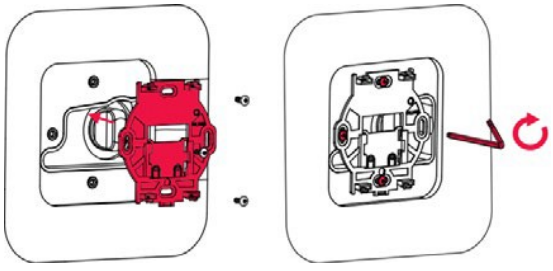




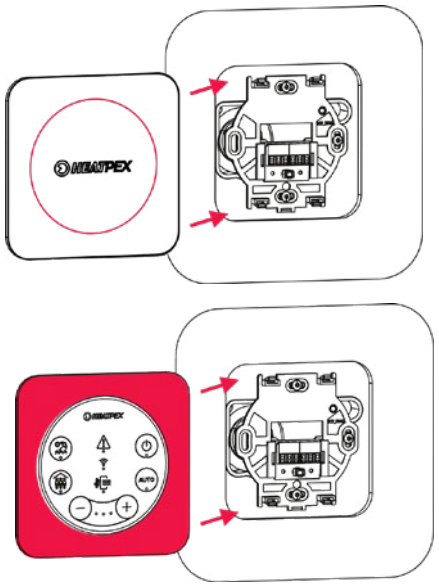
11. Connect the wires to the terminal board in the base according to the markings:



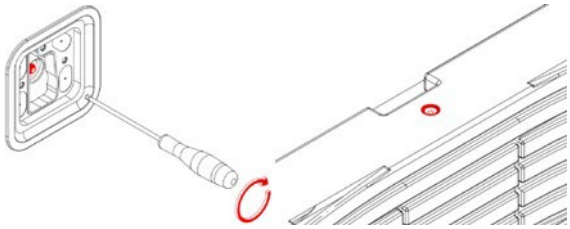
- Vcc – yellow
- GND – white
- D+ – green
- D- – brown



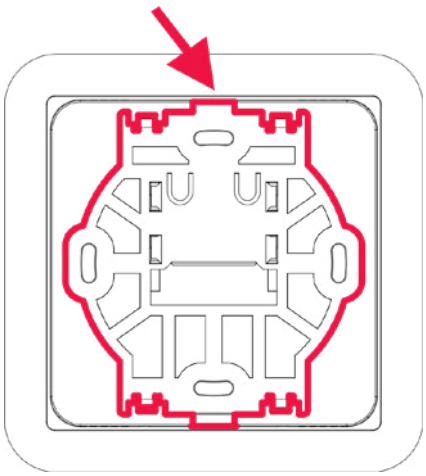
12. After correct wiring, insert the control panel into the base.



13. Then slide the control system back into place and close the flap, securing it with the central screw and the three side screws.



14. Detach the base from the control panel cover by releasing the latch at the indicated location.



15. Screw the cover base to the unit casing.

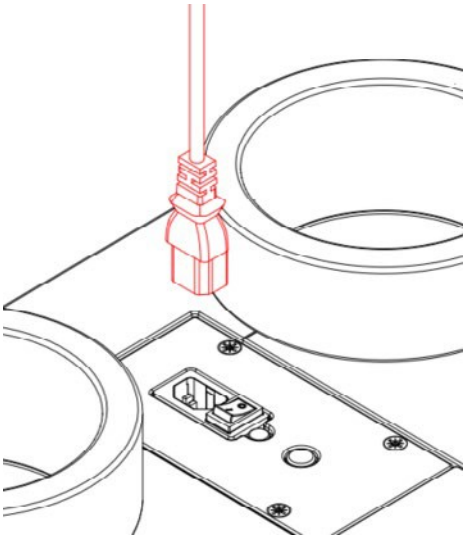
16. Clip the cover onto the cover base mounted on the unit.

3.13 Connecting the unit to the power supply

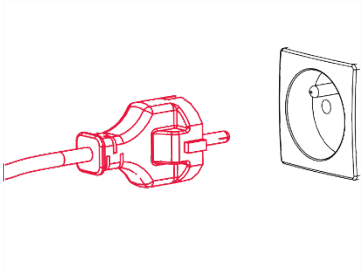
The unit is equipped with factory-installed internal wiring. All components inside the unit are factory-connected to the main control board.

A Schuko–IEC C13 power cable, 3 m in length, is supplied with the unit. The power socket is located on the side of the unit , on the filter side.

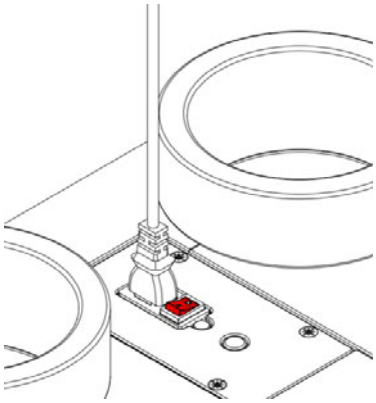
1. Insert the IEC C13 plug into the socket on the side of the unit.



2. Insert the Schuko plug into an earthed electrical socket.



3. Set the main power switch on the unit to position 1.

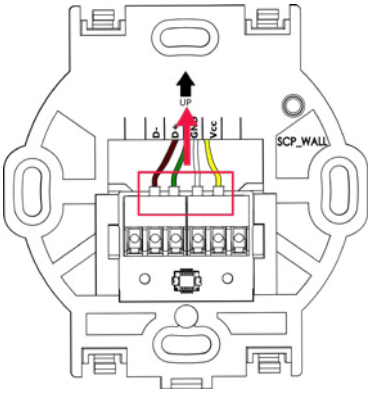


The unit will start up, and the ring on the control panel will begin flashing. When it illuminates red, communication

will be possible.

The electrical installation supplying the unit must be carried out in accordance with applicable regulations and building standards. Electrical connection may only be performed by a person holding the appropriate electrical qualifications.

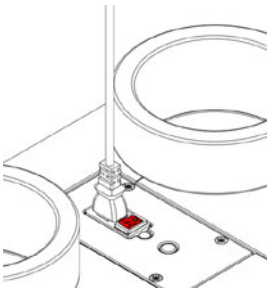
The unit must only be connected to sockets with a protective earth (ground) pin.



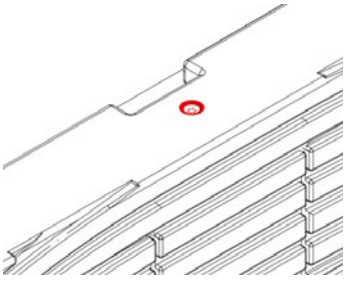
3.14 Maintenance access

In order to gain access to the interior of the unit for maintenance or service work, or to connect the control panel on the wall, the unit cover must be removed.

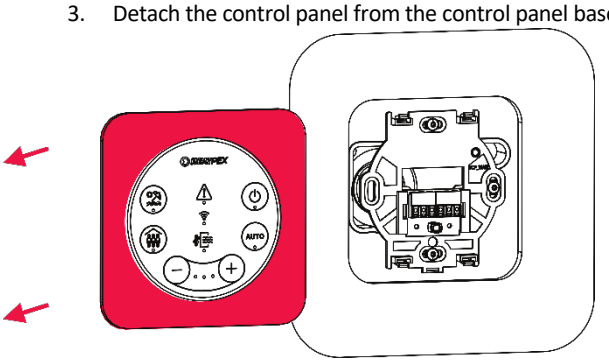
1. Switch off the unit using the main power switch located on the side of the unit.



2. Using a Torx T10 key, loosen the three screws securing the cover. Two screws are located in the corners of the unit , and the third is located in the centre of the shorter edge of the cover. The screws do not need to be fully removed and may remain in the cover.



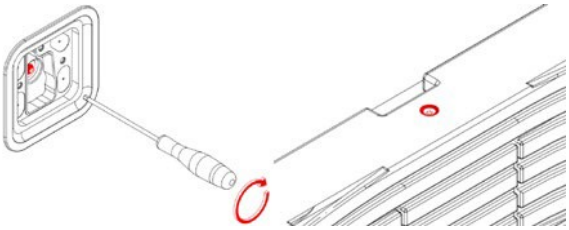
3. Detach the control panel from the control panel base.



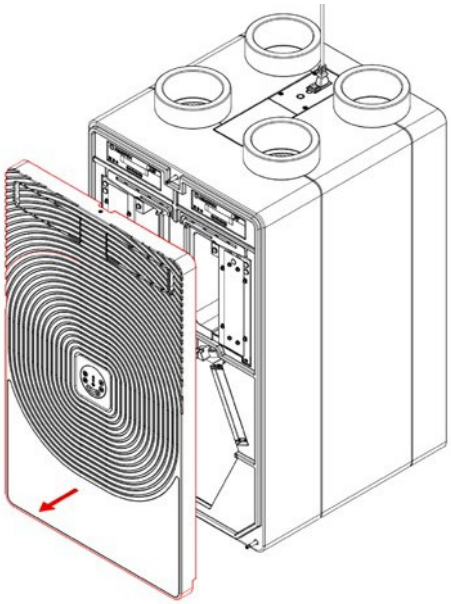
4. Using a Torx T10 key, unscrew the three screws securing the control panel base and remove the base carefully, paying attention to the cable connecting it to the main control board.

5. Disconnect the cable from the control panel base. This will facilitate removal of the unit cover and prevent accidental damage to the cable.

6. Unscrew the screw securing the unit cover and the side screws on the flap.



7. Remove the unit cover by gripping it at the corners and gently pulling until it disengages from the locking points on the unit casing. Avoid sudden movements, as this may damage the cover.



To reinstall the cover, perform the above steps in reverse order.

3.15 Steps before commissioning the unit

Before starting the unit for the first time, the following must be checked:

- ensure that all unit spigots are connected to the corresponding ventilation ducts,
- verify that all electrical connections have been made correctly and safely,
- check that no foreign objects remain inside the unit (e.g. tools, packaging fragments, construction dust or debris),
- ensure that the filters are clean and correctly installed in their holders,
- ensure that the unit is properly levelled both vertically and horizontally,
- check that the condensate drain has been connected in accordance with the instructions for the selected installation method and that the siphon has been filled with water (does not apply to dry siphons),
- check that all air terminals are open and partially throttled (approximately halfway).

3.16 Ventilation system balancing

1. Close all external doors and windows of the building.
2. Start the unit and check if it works correctly (the ring on the control panel should be continuously illuminated red) in each of the predefined performance modes.
3. Set the airflow corresponding to the nominal value in the **ARIA myHOME** application (maximum 75% of the unit capacity).
4. Measure the airflow values at each supply and extract air terminal using an anemometer. During measurement, follow the instructions provided by the manufacturer of the measuring unit. The use of a conical measuring hood is recommended to ensure maximum measurement accuracy.
5. Starting with the air terminal furthest from the unit , adjust the airflow in accordance with the design by throttling the HEATPEX ARIA throttle/damper.
6. After adjusting all supply and extract points, measure the airflow values again. If the results differ from the design values, repeat the procedure described in step 4.
7. If it is not possible to achieve the required airflow at the furthest supply or extract point, increase the unit airflow rate and repeat the adjustment procedure.
8. Fill out the commissioning report.

3.17 User commissioning

- Explain the operation and use of the unit , paying particular attention to safety measures.
- Explain the operation of the control panel, describing each available option.
- Explain the **ARIA myHome** service functions and their capabilities.
- Emphasise that air diffuser valves must always remain open and must not be adjusted by the user, as this affects the overall ventilation balance. Ventilation intensity should be adjusted only using the control panel or the **ARIA myHome** application.
- Draw attention to the need to keep door undercuts and ventilation openings unobstructed (e.g. not covered by carpets or other objects), as this affects ventilation efficiency.
- Explain the filter replacement procedure and how to reset the filter alarm and set the next replacement interval. Emphasise that regular filter replacement ensures reliable operation at nominal efficiency.
- Advise periodic inspection of the outdoor air intake and exhaust outlet and removal of any contamination that could block airflow.
- Emphasise that any work on the ventilation system, maintenance and servicing of the unit other than filter replacement, as well as any repairs, may only be carried out by authorised service personnel. Unauthorised interference may result in improper operation of the ventilation system and damage to the unit.
- Hand over the complete documentation to the user.
- Hand over the unit to the user with clean, unused filters installed.

Chapter 4

Unit operation

Unit operation guidelines

- The unit should operate continuously to ensure constant air exchange in the building. Prolonged shutdown of the unit is not recommended, as it may lead to increased pollution and humidity indoors and, in extreme cases, to the formation of mould and fungi. In the event of a long absence of occupants, the minimum airflow mode (Holiday mode) should be selected. The unit should only be switched off for maintenance or service work.
- To ensure correct operation of the ventilation system, ventilation openings, door undercuts and grilles must not be covered, closed or reduced. Supply and extract air diffuser valves must not be independently closed or adjusted.
- Filters for supply and extract air must be replaced regularly in accordance with the unit indications. Filter replacement may be carried out by the user. This ensures energy-efficient operation and prevents

damage to components, particularly the fans. If accelerated filter clogging is observed, it is recommended to adjust the time schedule settings and increase the frequency of filter replacement.

- Any service work or modifications to the unit other than filter replacement may only be carried out by qualified installers or service technicians.

4.1 Operating modes

Automatic Mode (AUTO)

Operation according to the time schedule set in the **ARIA myHOME** application. The unit operates at one of three predefined fan speeds during the time periods defined in the application. By default, the speeds correspond to the following airflow rates:

- Speed 1 – 35%
- Speed 2 – 55%
- Speed 3 – 75%

The airflow rates for individual speeds can be adjusted by the installer in the **ARIA myHOME** application.

Holiday Mode – minimum airflow

The unit operates at minimum airflow (default 25% for 7 days) for a specified period. This mode ensures minimal air exchange, preventing moisture accumulation and mould formation during occupant absence. Holiday mode is recommended for planned long-term absences. Minimum airflow and duration can be changed in the application.

The airflow rates for individual speeds can be adjusted by the installer in the **ARIA myHOME** application.

Party Mode – Intensive Ventilation

The unit operates at maximum airflow for 3 hours. This mode is recommended when increased humidity or CO_2 levels occur, e.g. when more occupants are present than assumed in the ventilation design or during activities generating increased pollutants and odours. After 3 hours, the unit automatically returns to the previously used mode. Party mode can also be manually cancelled by selecting another operating mode. The duration of Party mode can be adjusted in the **ARIA myHOME** application**.**

Manual Mode

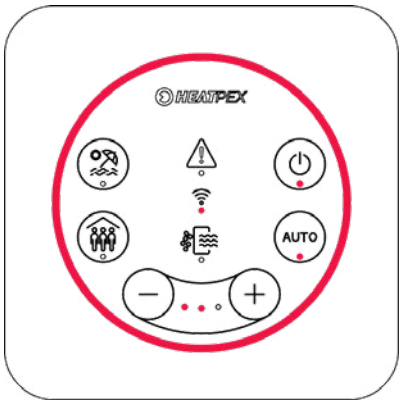
Operation at a constant airflow according to the settings in the **ARIA myHOME** application. The unit will operate at the selected speed until another mode or speed is selected. By default, the speeds correspond to:

- Speed 1 – 35%
- Speed 2 – 55%
- Speed 3 – 75%

The airflow rates for individual speeds can be adjusted by the installer in the **ARIA myHOME** application.

4.2 Control panel operation

The control panel supplied with the unit enables quick and intuitive operation. It allows adjustment of key operating parameters, covering most typical usage scenarios.



ON/OFF

Used to start or stop the unit. Pressing the field while the unit is operating will stop the fans and the LED under the icon will turn off. Pressing again will restart the unit in the last operating mode.

This function does not completely disconnect the unit from power; for full shutdown, use the power switch located on the side of the unit.

AUTO Mode

Pressing activates AUTO mode. Operation in AUTO mode is indicated by a red LED under the icon. LEDs between the +/- icons indicate the current speed. To exit AUTO mode, switch to Manual mode.

Manual Mode

Operation at one of three predefined speeds. LEDs between the +/- icons indicate the current speed. Pressing "+" increases the speed, pressing "–" decreases it.

Holiday Mode

Minimum airflow mode. The unit operates in Holiday mode until it is switched off or until the time set in the application expires. To exit Holiday mode earlier, press the Holiday mode icon again. The unit will return to the previous operating mode.

Party Mode

Maximum airflow mode. The unit operates in Party mode until

it is switched off or until the time set in the application expires. To exit Party mode earlier, press the Party mode icon again. The unit will return to the previous operating mode.

Wireless Connection
LED indicating wireless communication status:

- fast flashing – wireless connection with a mobile phone,
- slow flashing – searching for Wi-Fi connection,
- steady light – connected via Wi-Fi.

To switch between Wi-Fi mode and phone connection mode, press and hold the start button for 5 seconds.

Alarm
LED indicating an alarm condition. To check the unit status and a detailed description of the alarm, log in to the **ARIA myHOME** service

Filter Contamination
Red LED indicating filter contamination. Perform the filter replacement procedure described in section 5.1.

4.3 Connecting the ARIA VITALE to a mobile phone

For initial configuration, the mobile phone must be paired with the unit. The **ARIA myHOME** mobile application is required.

1. Download the **ARIA myHOME** application from Google Play Store (Android 8.0 or later) or Apple App Store (iOS 11 or later).

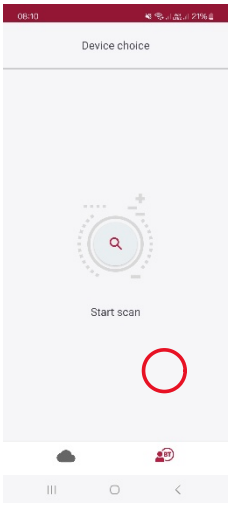
2. Enable wireless connectivity on the mobile phone.

3. Switch on the ARIA VITALE unit. The ring on the control panel should be illuminated red.

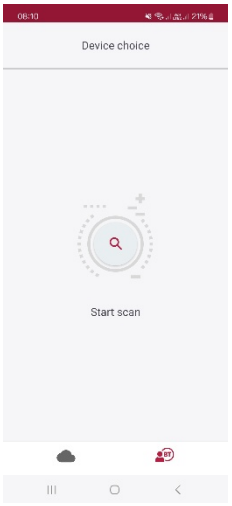
4. Ensure that the unit is in wireless phone connection mode (indicated by a fast flashing LED under the wireless icon). If not, switch to phone connection mode by pressing and holding the unit start button for 5 seconds. The LEDs will turn off and then illuminate again after a few seconds.

5. Launch the **ARIA myHOME** application on the phone.

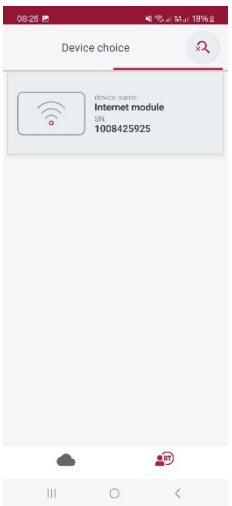
6. Select the communication channel using the icon at the bottom of the screen (Cloud / BT).



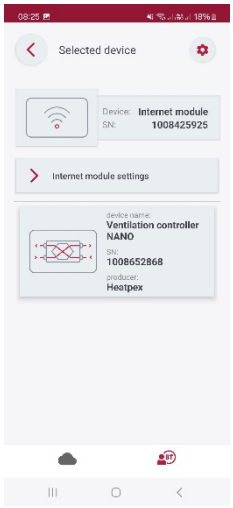
7. Press ***Start scan.***



8. The application will search for the available control panel, which will appear as ***Internet Module***. Select this unit.



9. If the confirmation screen appears, the wireless connection has been successfully established. From this screen, you can proceed with further configuration or add the unit to the web application.

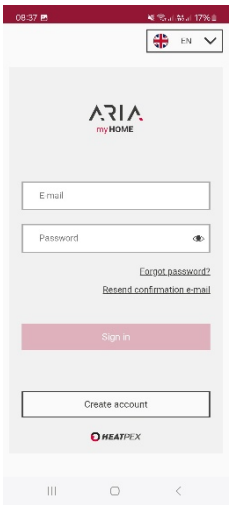


4.4 Registering the unit in the web app

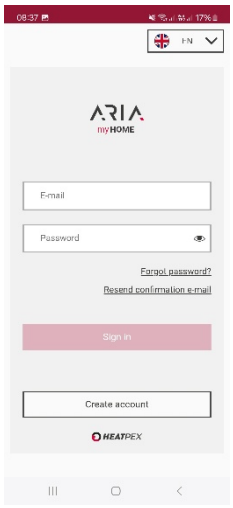
To add the unit to the **ARIA myHOME** web application, select Add **ARIA myHOME** installation on the screen shown. A setup wizard will start and guide you step by step through connecting the unit to the internet. An existing Wi-Fi network with internet access is required.

The **ARIA myHOME** mobile application is used for the initial configuration of the unit during first start-up, especially when internet access is not yet available in the building. For everyday use, it is recommended to connect the unit to the internet via a Wi-Fi network, as described in section 4.5.

1. Create a new account at www.ariamyhome.com.

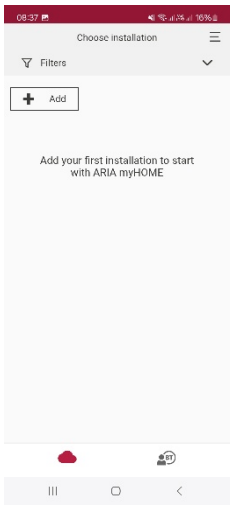


Log in to the service using the newly created account.

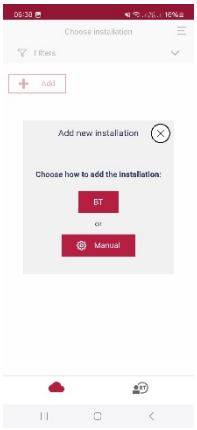


The control panel connects exclusively to a 2.4 GHz Wi-Fi network. Ensure that the 2.4 GHz network is enabled or that the router operates in dual-band mode. Otherwise, the control panel will not be able to connect to the internet.

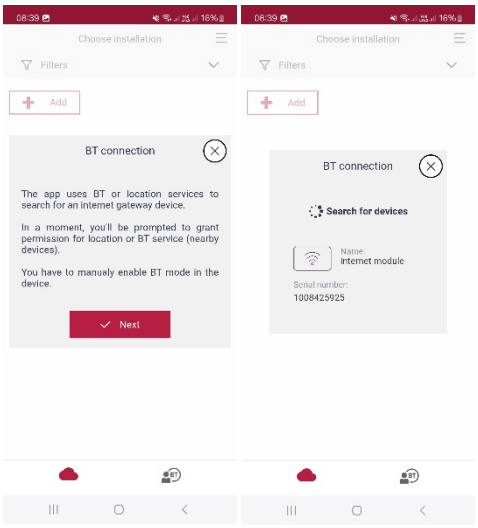
2. In the list of installations, select ***Add.***



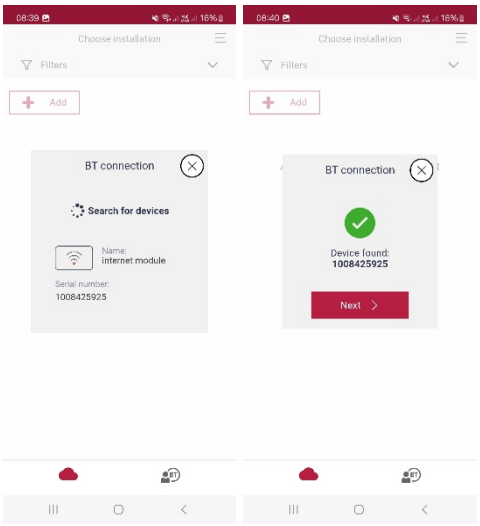
3. Select BT communication, ensuring that the icon on the controller is flashing red rapidly.



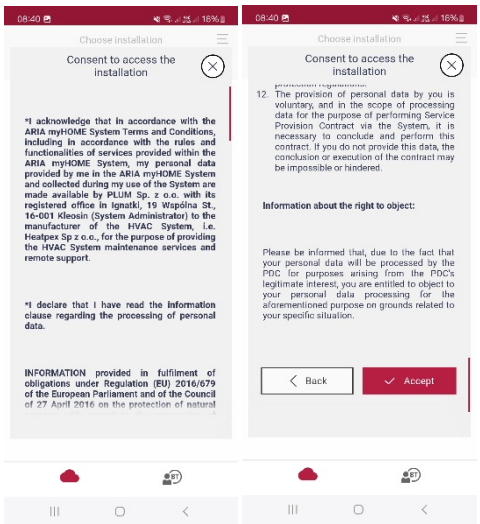
4. When the message appears, click Next and the application will search for the control panel.



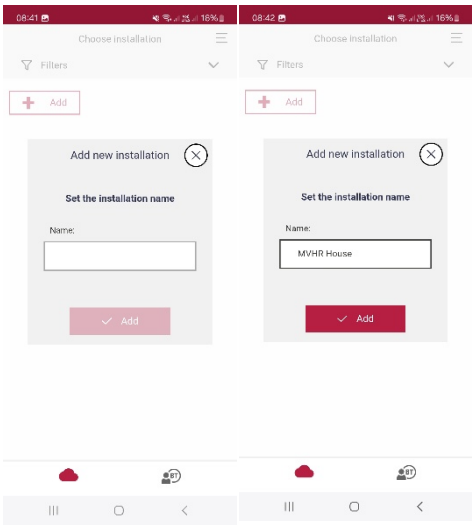
5. The application should detect the panel and automatically connect to it.



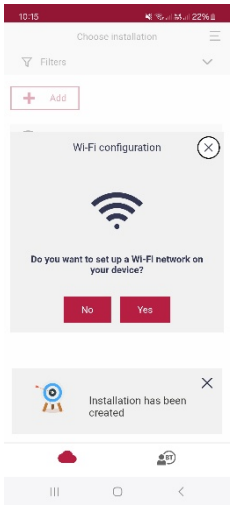
6. Accept the displayed consent forms.



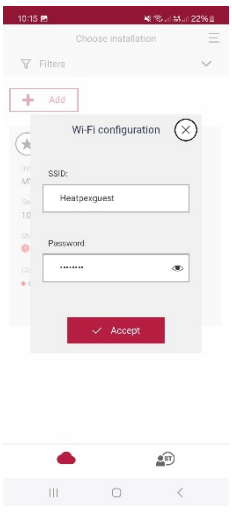
Enter a name for your installation, which will allow the unit to be identified within the network.



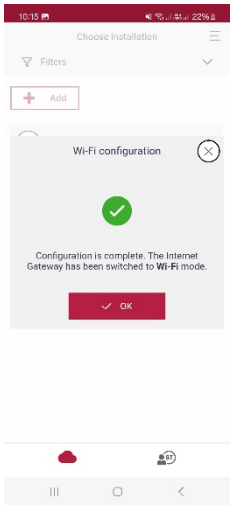
7. Press Yes to start the Wi-Fi connection proces.



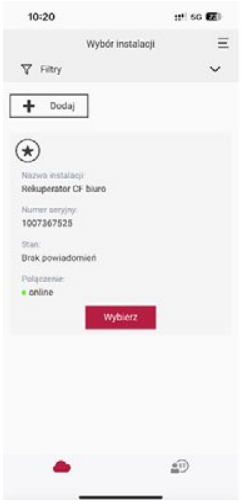
8. Enter the selected Wi-Fi network name (SSID) and the network password.



9. Once the Wi-Fi connection is established successfully, a confirmation notification will appear and the unit will automatically switch communication from BT to Wi-Fi. A steady red LED will illuminate on the control panel.



10. After correct configuration, the unit will be added to your account. When the icon at the bottom indicates online connectivity, the unit can be controlled via the application or the website from any location.



4.5 Operation via web service

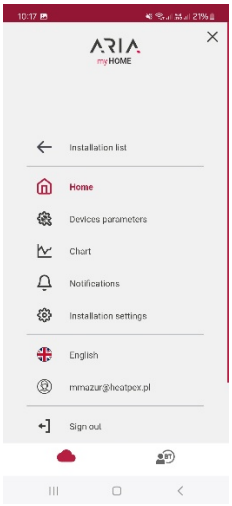
The ARIA **myHOME** web application allows operation of the unit connected to the internet via Wi-Fi.

Main Menu

After logging in and selecting the installation, the main menu is displayed.

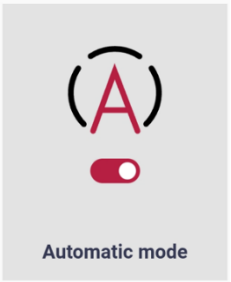
The top bar shows icons indicating the current unit status and sensor readings. Below are tiles for operating modes, enabling unit control.

On the left side of the screen, or after clicking the ☰ icon on mobile unit s, a list of additional screens is displayed, allowing configuration of unit and installation parameters, as well as viewing operating status over time and current notifications.



ON/OFF Used to start or stop the unit.

Warning: This button does not completely disconnect the unit from power; it only stops operation. Settings changes and remote start are still possible. To fully switch off the unit , use the power switch on the side of the casing.

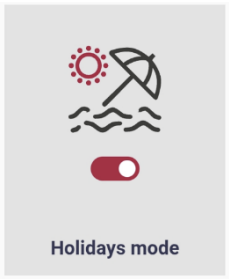


Automatic Mode

Enables or disables automatic operation according to the time schedule . Disabling automatic mode switches the unit to Manual mode.

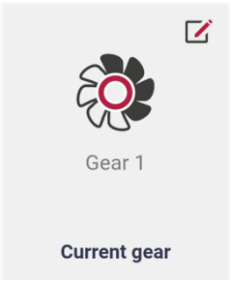
Party Mode

A timed mode enabling increased performance for a defined duration. By default, the unit operates at 100% capacity for 3 hours. Fan speed and duration can be configured in installer settings. After the defined time, the unit returns to the previous mode (Automatic or Manual). To exit Party mode earlier, press the Party mode icon.



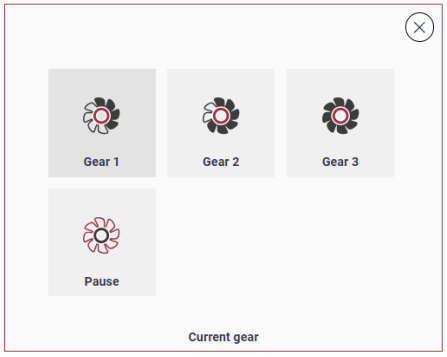
Holiday Mode

Activates minimum airflow operation for a defined number of days. By default, airflow is set to 25% of nominal capacity. Parameters can be modified in installer settings. After the defined time, the unit returns to the previous mode. To exit Holiday mode earlier, press the Holiday mode icon.

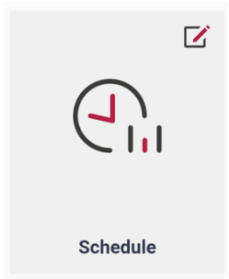


Manual Mode

If Automatic mode is disabled, the unit switches to Manual mode. The ***Current speed*** icon allows selection of one of three fan speeds or stopping the unit.

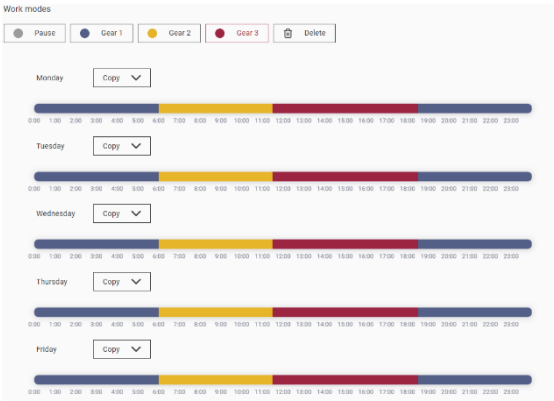


(Option visible only when AUTO mode is active).



Time schedule Allows definition of the time schedule according to which the unit operates in Automatic mode.

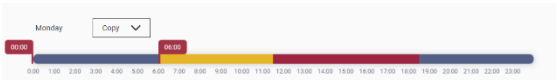
Schedule



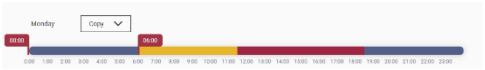
In the Time schedule view, the operating mode of the unit can be defined separately for each day of the week. For easy identification, each speed is represented by a different colour:

- Blue – Speed 1 (default 35%)
- Orange – Speed 2 (default 55%)
- Red – Speed 3 (default 75%)
- Grey – Stop.

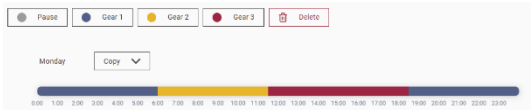
To change the operating duration at a specific speed, first select the bar in the corresponding colour. Time markers indicating the start and end times for that speed will appear at the edges of the bar.



Next, drag the time marker to extend or shorten the operating period at the selected speed.



To delete a time interval, select the Delete button located on the bar above the timeline, then choose the interval to be removed.



To add a new interval, select the desired speed on the top bar, then click an empty area on the timeline and drag the interval to the required length.

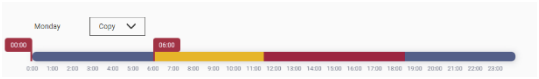
To add a new interval, there must be free space on the timeline. A maximum of five intervals per day can be set.

It is possible to copy the time schedule from one day to other days of the week. To do this, select the Copy button next to the day whose time schedule you wish to transfer. Then, from the drop-down list, select the days to which the time schedule should be copied and confirm.

To reset the changes made, select the Reset button at the bottom of the screen. To confirm the changes to the time

schedule , select the Confirm button located at the bottom of the screen. If the changes are not confirmed, they will be discarded when exiting the time schedule view.

Warning: Once the changes are confirmed, it will not be possible to revert to the previous time schedule settings..



Unit Parameters

Menu used to change the unit configuration by the user and the installer/service technician.

User Menu

Bypass Allows setting the bypass operating state.

Auto – The bypass opens and closes automatically depending on the comfort temperature setting (the comfort temperature is the temperature defined by the user as the desired indoor temperature).

Open – The bypass remains permanently open; the comfort temperature is ignored and fresh air bypasses the heat exchanger.

Closed – The bypass remains permanently closed; the comfort temperature is ignored and fresh air flows through the heat exchanger.

It is recommended that the bypass state is set to Auto.

Operating Mode
Allows control of the unit operating mode. These settings correspond to the options available in the main menu of the application.

Unit operating status – Indicates whether the unit is running or stopped.

Automatic mode – Enables or disables automatic operation.

Current speed – Sets the speed at which the unit operates in Manual mode.

Timed mode – Activates one of the timed modes: Party or Holiday.

It is recommended to operate the unit in Auto mode.

Summer/Winter Mode
Defines the unit operating control logic. **Winter mode** disables connected cooling units and automatic bypass opening, **Summer mode** disables heaters, and **Ventilation mode** disables both heaters and cooling units.

Winter mode activation – the temperature at which Winter mode will be enabled when the operating mode is set to Auto.

Summer mode activation hysteresis – the hysteresis value for switching operating modes when Auto mode is active. If the temperature rises above the sum of the values defined for Winter mode activation and Summer mode activation hysteresis, Summer mode will be activated.

Operating mode – selection of the unit operating control mode. Auto mode is recommended.

Comfort temperature

Allows definition of the comfort temperature (the temperature set by the user as the desired indoor temperature) for each unit speed. This parameter affects bypass operation as well as heaters and cooling units, if installed.

Timed mode settings

Allows configuration of operating parameters for the timed modes.

Party – 100 % airflow – Party duration – defines the time in hours after which Party mode is automatically deactivated.
Holiday – fan control – defines the percentage airflow at which the fans operate in Holiday mode.
Holiday – Holiday mode duration – defines the number of days after which Holiday mode is automatically deactivated.

Information

Menu allowing detailed inspection of the unit status.

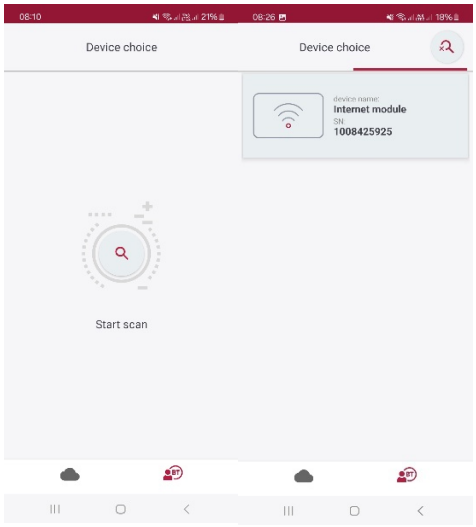
Filters

Reset filter operating time – allows the filter runtime counter to be reset after replacing the filters with new ones.

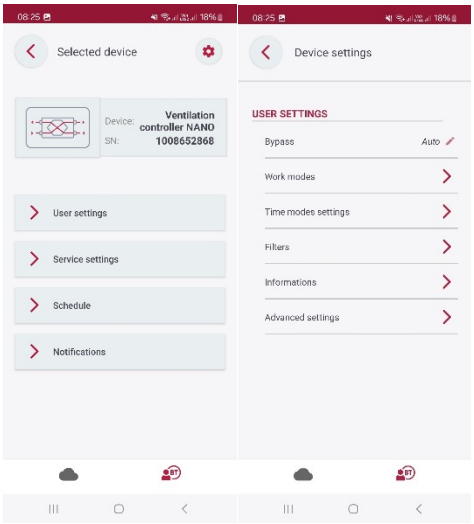
Installer menu

To display installer options, install the **ARIA myHOME** application and register as an installer. This provides access to the extended Installer Menu.

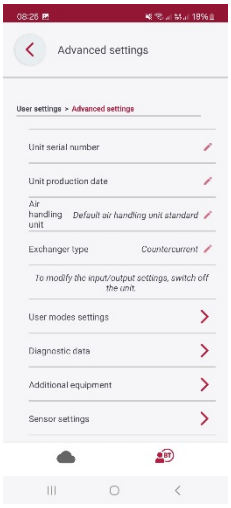
1 After opening the **ARIA myHOME** application and selecting BT Search at the bottom of the screen, an Internet Module icon will appear. Select it, then enter the controller by tapping the Controller icon.



2. The selected unit together with its menu will be displayed. Select User settings; if registered as an installer, **Advanced settings** will appear at the bottom of the menu (end users do not have access to advanced settings).



3. After entering Advanced settings, the installer or service technician gains access to full unit configuration.



Service configuration confirmation - determines whether confirmation of configuration changes is required.

Master control sensor - selection of the main sensor used to control the heater and the bypass.

User mode settings - allows setting the fan airflow for each of the three speeds and for Party mode, separately for the supply and extract fans, as a percentage of the nominal airflow

Supply and extract fan control

Control Type – Defines the fan control method.
Standard – Default fan control mode, based on predefined percentage values of the nominal airflow for the supply and extract fans.
Constant Pressure – control based on a set pressure value; the fans attempt to maintain the specified pressure. A constant pressure sensor is required.
Constant Flow – control based on a set airflow value; the fans attempt to maintain the specified airflow. A constant flow sensor is required.

Supply / Extract control
Flow coefficient K – an individual value for each fan, used for fan calibration in Constant Flow (CF) mode. The default value is set according to laboratory measurements performed by the ventilation unit manufacturer. Increasing the K value reduces fan speed; decreasing it increases fan speed.

Start level – the minimum fan speed at which CF control is active.

Fan settings – Allows configuration of fan operating limits.

Minimum supply/extract fan output – defines the minimum permissible fan output as a percentage of nominal airflow.

Maximum supply/extract fan output – defines the maximum permissible fan output as a percentage of nominal airflow.

Supply/extract fan stop delay – defines the time after which the fans stop following pressing the ON/OFF button on the control panel or in the **ARIA myHOME** application while the unit is operating.

Supply/extract fan start delay – defines the time after which the fans start following pressing the ON/OFF button on the control panel or in the **ARIA myHOME** application while the unit is stopped.

Filter settings – Menu allowing configuration of the filter replacement procedure.

Detection mechanism -> Time-based mechanism

Days to alarm – defines the number of days after the last filter replacement after which a reminder alarm is triggered.

Days to emergency mode – defines the number of days after the last filter replacement after which the unit switches to emergency mode.

Filter support

Force filter replacement procedure – stops the ventilation unit when the filter operating time limit is exceeded.

User-permitted filter replacement – defines whether filter replacement can be performed by the end user.

Reset supply/extract filter operating time – resets the filter runtime counters (separately for supply and extract filters).

Emergency mode – stop unit – defines whether the unit should be completely stopped when emergency mode is activated.

Supply/extract fan output in emergency mode – defines fan airflow in emergency mode as a percentage of nominal airflow.

Pre-warning filter replacement alarm – advance alarm notifying the user (x days in advance) that the filter service interval is approaching.

Boost Mode settings

Boost 1/2 logic state – defines the logical state triggering Boost mode (normally open or normally closed contact).

Boost 1/2 activation method – defines how Boost mode is activated and deactivated. Setting the parameter to SIGNAL requires defining an additional parameter: Boost duration.

Boost 1/2 duration – parameter active when Boost activation is set to SIGNAL; defines the time after which Boost mode is deactivated following a change in the DIN input state.

Supply/extract fan control in Boost 1/2 – percentage value by which the current fan speed is increased during Boost mode.

Inspection/Lockout settings

Inspection function handling – enables periodic inspection reminders (disabled by default). When enabled, the activating person sets the inspection interval after which an inspection alarm is generated. If the inspection is not carried out within 14 days, the unit will stop for safety reasons.

Operation lockout handling – stops the unit after a defined number of operating days (disabled by default).

Reset inspection counter – resets the inspection cycle counter.

Days until inspection – defines the number of days after the last inspection when the next inspection is required.

Days until lockout – defines the number of days after enabling lockout when the unit will be stopped.

Modbus settings – Allows configuration of Modbus communication options. More information is provided in section 4.7.

Modbus adress – controller address on the Modbus network.

Baud rate – required Modbus transmission speed; available values: 9600, 19200 or 115200.

Stop bits – number of stop bits ending the Modbus frame; available values: 1 or 2 stop bits.

Parity – must be set to None.

Enable Modbus – enables communication via the Modbus protocol; setting this parameter to No disables Modbus communication.

Parameter editing – allows parameter editing via Modbus; setting this parameter to No blocks modification commands 0x06 and 0x10.

Unit control – allows control of the unit via Modbus; setting this parameter to No disables Modbus-based control.

Air quality sensor settings – Allows configuration of additional air quality sensors.

Enable air quality sensors – enables or disables air quality sensor support.

CO_2 / humidity sensor signal source – defines the type of CO_2 / humidity sensor used (Gold, Platinum versions – default: CO_2/SCO_2).

Sensor input – defines the physical input port on the controller board to which the sensor is connected.

Normal CO_2 concentration / humidity level – defines the target CO_2 concentration or humidity level.

CO_2 concentration / humidity hysteresis – defines the threshold at which fan speed is increased or returned to normal.

Fan output change – defines how much the fan speed increases in air quality control mode.

Clear alarms – clears all active alarms.

Communication is carried out using the RS-485 standard. To ensure reliable data transmission, the D+ and D− signal wires must be connected correctly to the corresponding ports of the master unit and the controller (slave).

The parameters: Transmission and Number of stop bits must be configured in the exact same way across all unit s on the line. Otherwise, communication will not be established.

4.5 Modbus communication

Modbus RTU protocol

The controller is equipped with a built-in software module enabling communication using the Modbus RTU protocol. This protocol allows reading a single register or a group of registers containing current parameter values, as well as writing values to selected parameters. The controller supports three Modbus commands: Read command **0x03**, Single register write command **0x06** Multiple register write command **0x10.** Communication is carried out via the controller's isolated communication port (COM3), which operates as a slave port.

A complete list of Modbus parameters of the controller is provided in Table 7.3.

Read command 0x03

The Modbus communication protocol allows reading a register (or a group of registers) containing current parameter values.
The read command frame consists of the following fields (from the beginning of the frame):

- unit address (1 byte)
- command code (1 byte; for read command – 0x03)
- number of the first register to be read (2 bytes)
- number of registers to be read (2 bytes)
- CRC (2 bytes).

Example request:

01 03 00 04 00 02 85 CA
According to the protocol specification, the above command defines the reading of 2 registers (00 02), starting from register 4 (00 04), from the unit with address 1 (01), using the read command 0x03 (03).

Example response:

01 03 04 00 03 00 01 CB F3
According to the protocol specification, this frame indicates that two consecutive registers (a total of 4 bytes – 04) of the unit with address 1 (01) contain the values 3 (00 03) and 1 (00 01), and that the read command 0x03 (03) was used.

Modification command 0x06

The Modbus protocol allows modification of the value of a single register containing a current parameter value.
The command frame consists of the following fields (from the beginning of the frame):

- unit address (1 byte)
- command code (1 byte; for write command – 0x06)
- number of the register to be modified (2 bytes)
- value to be written (2 bytes)
- CRC (2 bytes).

Example request:

01 06 00 04 00 03 88 0A
00 04 00 03 88 0A
According to the protocol specification, this command defines modification of register number 4 (00 04) in the unit with address 1 (01), setting its value to 3 (00 03) using the write command 0x06 (06).

The response to the write command depends on whether the modification is successful:

- if successful, a confirmation frame is returned,
- if unsuccessful, an error frame is returned.

The confirmation frame is identical to the original write command frame. The error frame consists of the following fields (from the beginning of the frame):

- unit address (1 byte)
- command echo + error flag (1 byte; for write command – 0x86)
- error code (1 byte)
- CRC (2 bytes).

Example error response:

01 86 03 02 61

According to the protocol specification, this frame indicates that in the unit with address 1 (01), the modification of a single parameter failed (0x86) due to an illegal data value (03).

Modification command 0x10

The Modbus protocol allows modification of multiple registers containing current parameter values.
The command frame consists of the following fields (from the beginning of the frame):

- unit address (1 byte)
  command code (1 byte; for write command – 0x10)
- number of the first register to be modified (2 bytes)
- number of registers to be modified (2 bytes)
- number of data bytes (2 × number of registers)
- values to be written (2 bytes per register)
- CRC (2 bytes).

Example request:

01 10 00 27 00 02 04 00 15 00 16 20 5B
According to the protocol specification, this command defines modification of data registers starting from register number 39 (00 27) in the unit with address 1, using the 0x10 command.

A total of 2 registers (00 02), corresponding to 4 bytes (04), are to be modified and set to the values 21 (15) and 22 (16), respectively.

The response to the write command depends on whether the operation is successful).

- if successful, a confirmation frame is returned,
- if unsuccessful, an error frame is returned.

The confirmation frame is an echo of the write command frame, differing only by the absence of the data value field.

The error frame consists of the following fields:

- unit address (1 byte)

- command echo + error flag (1 byte; for write command – 0x90)
- error code (1 byte
- CRC.

Example error response:

0 1 90 03 0C 01

According to the protocol specification, this frame indicates that in the unit with address 1 (01), the modification of multiple parameters failed (0x90) due to an illegal data value (03).

Chapter 5

Inspection and maintenance

Filter replacement

The need to replace the filters is indicated by the filter contamination icon on the control panel as well as in the **ARIA myHOME** application.
By default, the unit signals the need for filter replacement every 3 months, which is the recommended interval under normal air pollution conditions. If the building is located in an area with a high level of airborne pollutants (e.g. chimney exhaust fumes, heavy road traffic, plant pollen), more frequent filter replacement is recommended. The filter replacement interval can be adjusted in the **ARIA myHOME** service.

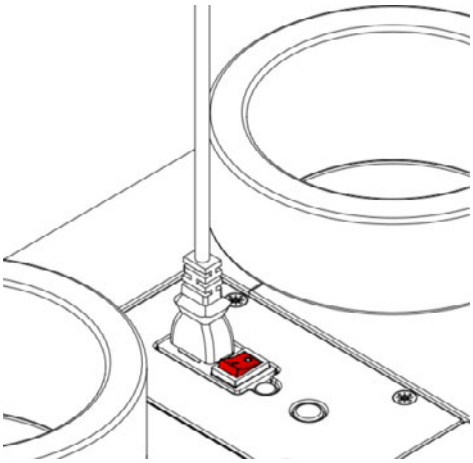
It is recommended to use original filters from Heatpex, which guarantee a perfect fit to the unit and a high level of filtration performance.

Dirty filters must not be shaken out or cleaned using a vacuum cleaner, detergents, or any other chemical agents. A filter cleaned in this way has a significantly lower efficiency than a new, clean filter. Operating the unit with cleaned or reused filters will result in: reduced ventilation performance, increased noise levels, deterioration of overall system efficiency. For correct and safe operation, contaminated filters must always be replaced with new ones, not cleaned.

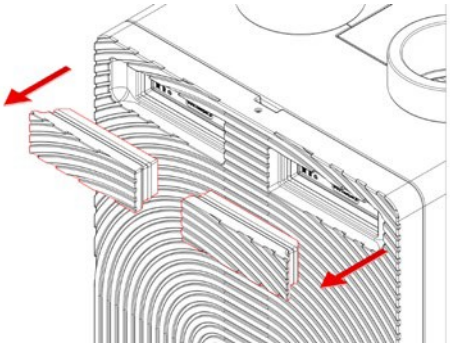
The unit must never be operated without the filters installed.

5.1 Filter replacement procedure

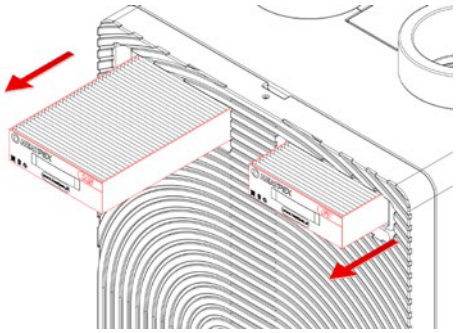
1. Switch off the unit using the main power switch located on the side of the unit, on the filter side.



2. Remove the filter covers by gently prying them open at the marked location.

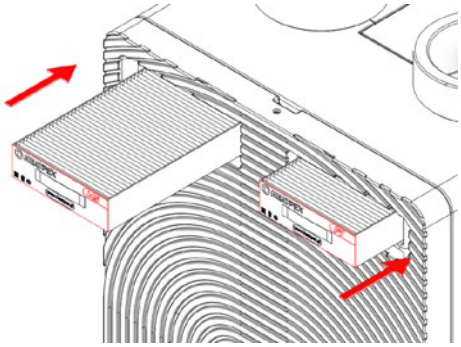


3. Remove the dirty filters from their slots.

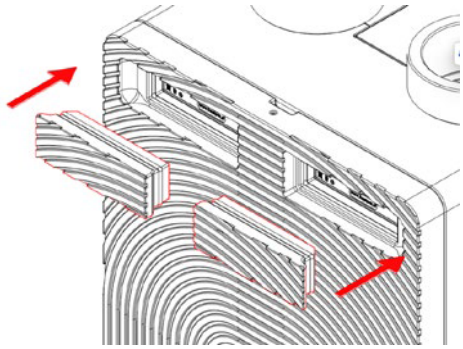


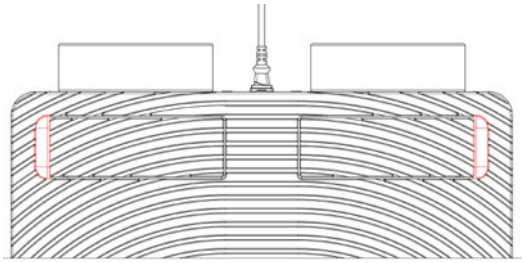
4. Dispose of the used filters in a mixed waste container.

5. Insert new filters into the correct slots: Supply air side – F7 filter, Extract air side – M5 filter. The slots are marked with symbols on the unit. Insert the filters according to the airflow direction arrow printed on the side of each filter.

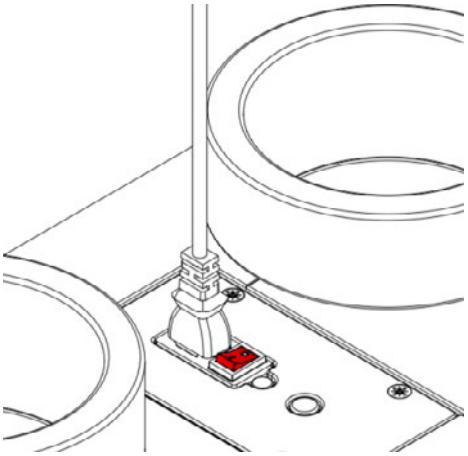


6. Reinstall the filter covers and make sure they are fully pressed into place.





7. Switch the unit back on using the main power switch on the unit.



8. In the **ARIA myHOME** application, go to Unit Parameters, expand the ***Filters*** menu, and set ***Filter operating time reset*** to ***Yes*** from the dropdown list. Confirm by pressing ***Confirm*** at the bottom of the screen.

Regular replacement of the filters ensures energy-efficient and trouble-free operation of the unit. Heavily contaminated filters cause an increase in pressure drop and, as a result, a reduction in airflow performance, a higher noise level, and, in extreme cases, may lead to damage to the unit's fans.

Chapter 6
Disposal of the unit

The unit is subject to the provisions of Directive 2012/19/EU of the European Parliament and of the Council on waste electrical and electronic equipment (WEEE). This means that the unit must not be disposed of together with household waste, but should be handed over to an appropriate collection point for recycling, processing, or proper disposal.

Electronic equipment is a complex mixture of materials, some of which may be hazardous. In addition, electronic components contain rare and valuable resources that can be recovered and reused. Responsible recycling contributes to efficient resource use and the recovery of secondary raw materials, while also minimizing potential risks to the environment and human health.

Packaging

The materials used for the packaging of the unit components are recyclable and should be disposed of in appropriate waste containers, according to the type of material from which they are made.

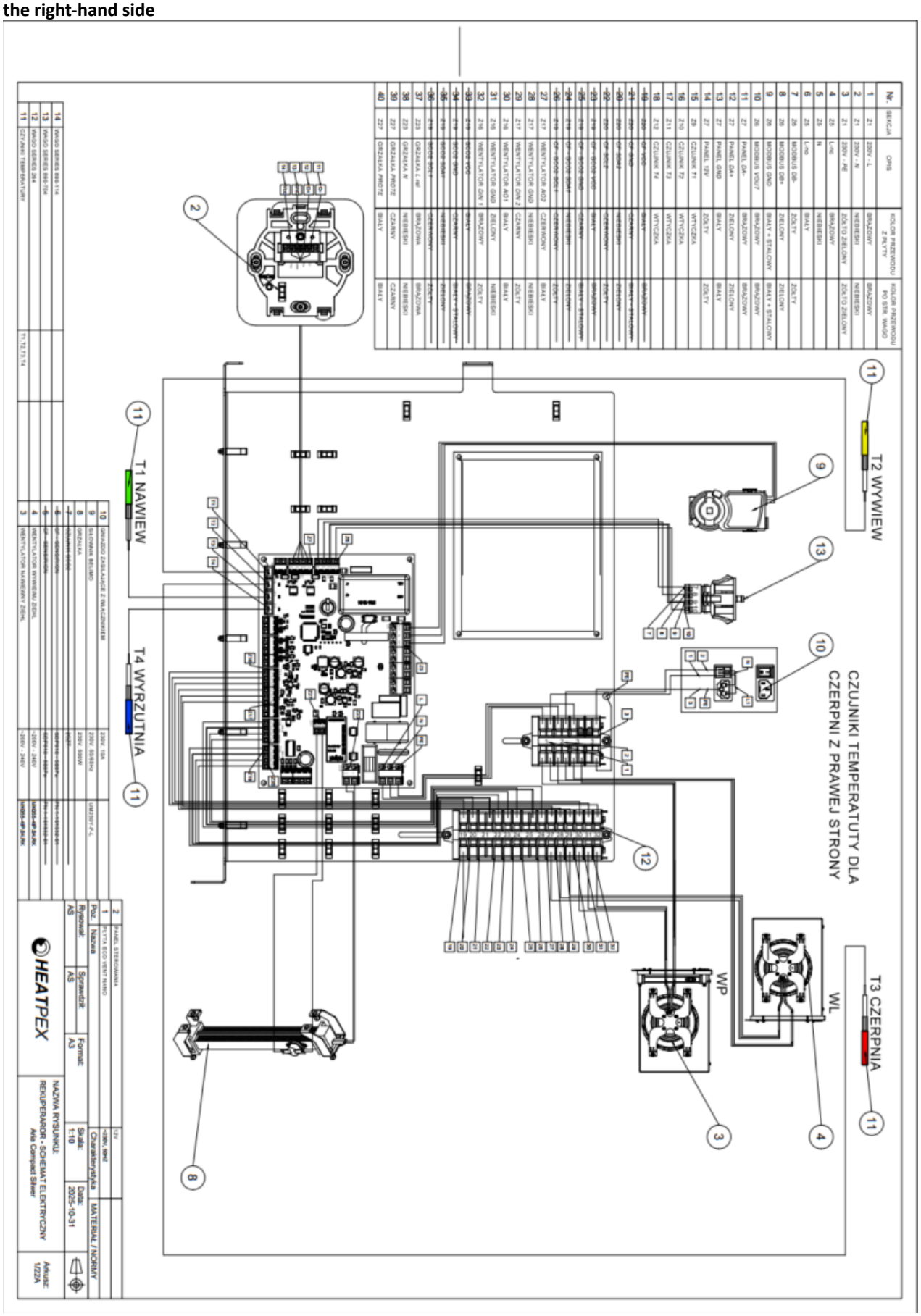
Unit's disassembly

To disassemble the unit, the following tools are required:

Motors: Torx keys T20, T25, T30
Heaters: Torx key T20
Main control board: Torx keys T10, T20, flat-head screwdriver, pliers / knife
Control panel: Torx key T10
Heat exchanger: Torx key T25
The Torx keys are supplied with the unit and are hidden under the cover located near the power switch (rating plate).

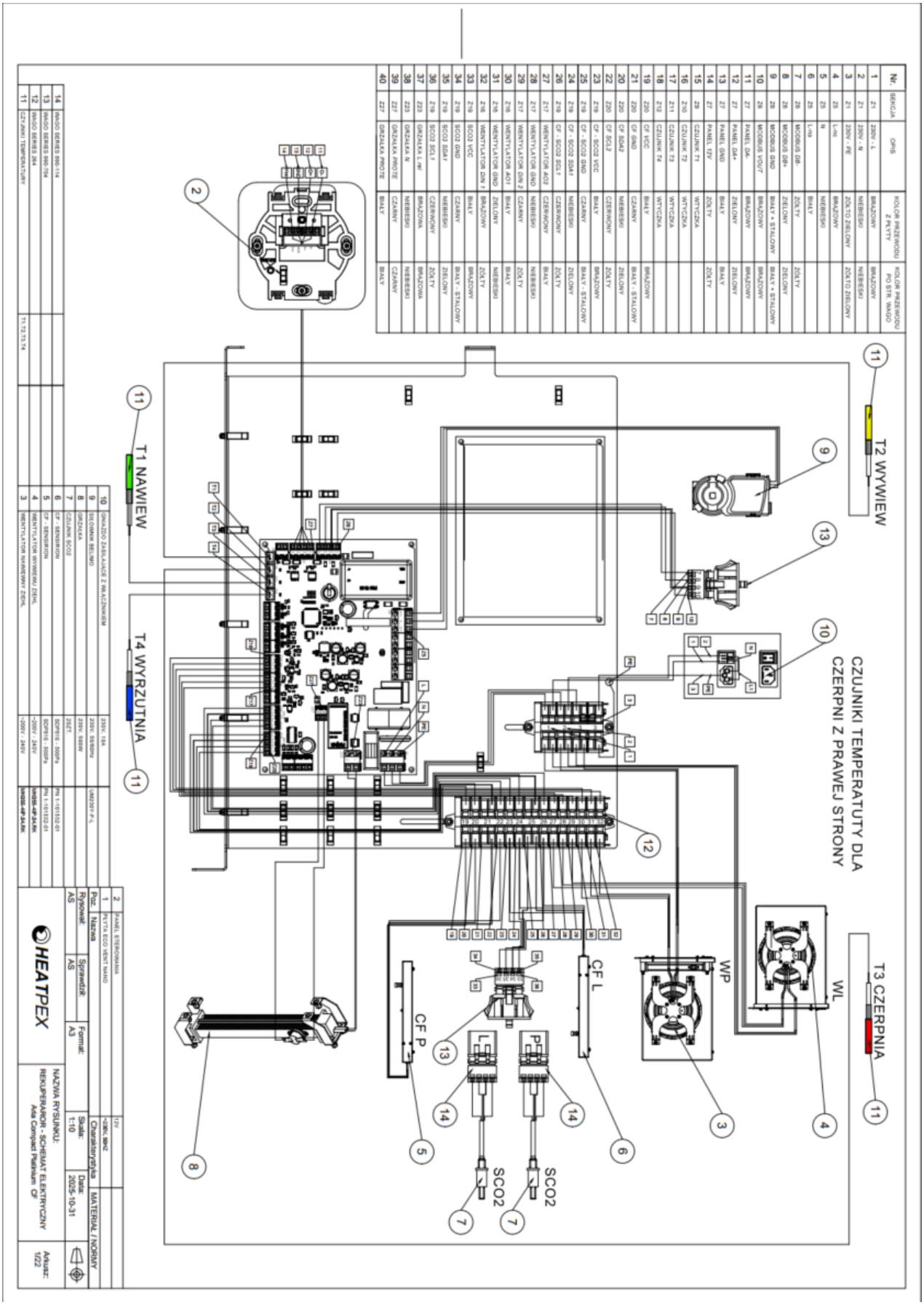
Chapter 7

Electrical diagrams
ARIA VITALE Compact Silver – Outdoor air intake on the right-hand side



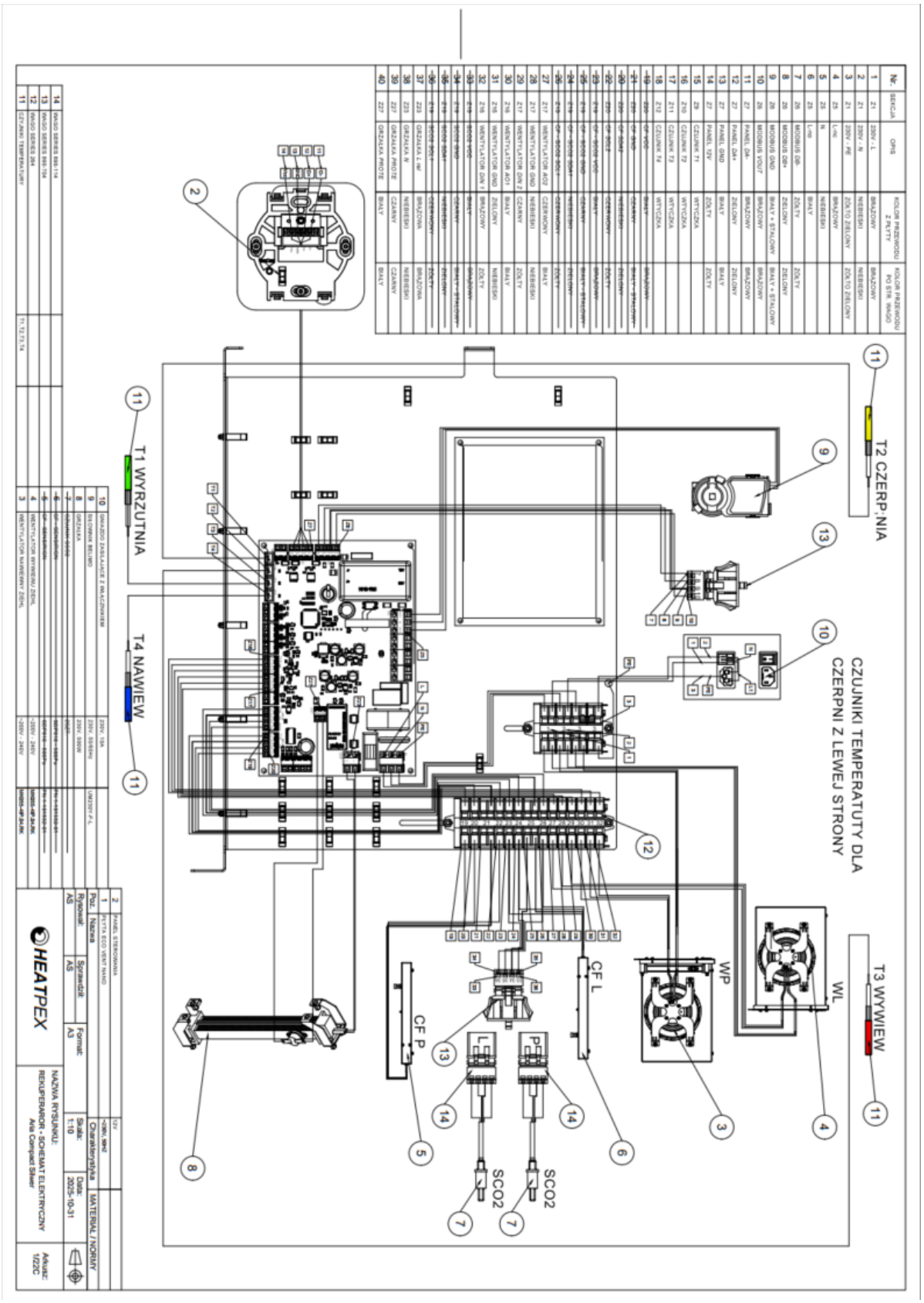
Electrical diagrams

ARIA VITALE Compact Platinum CF – Outdoor air intake on the right-hand side



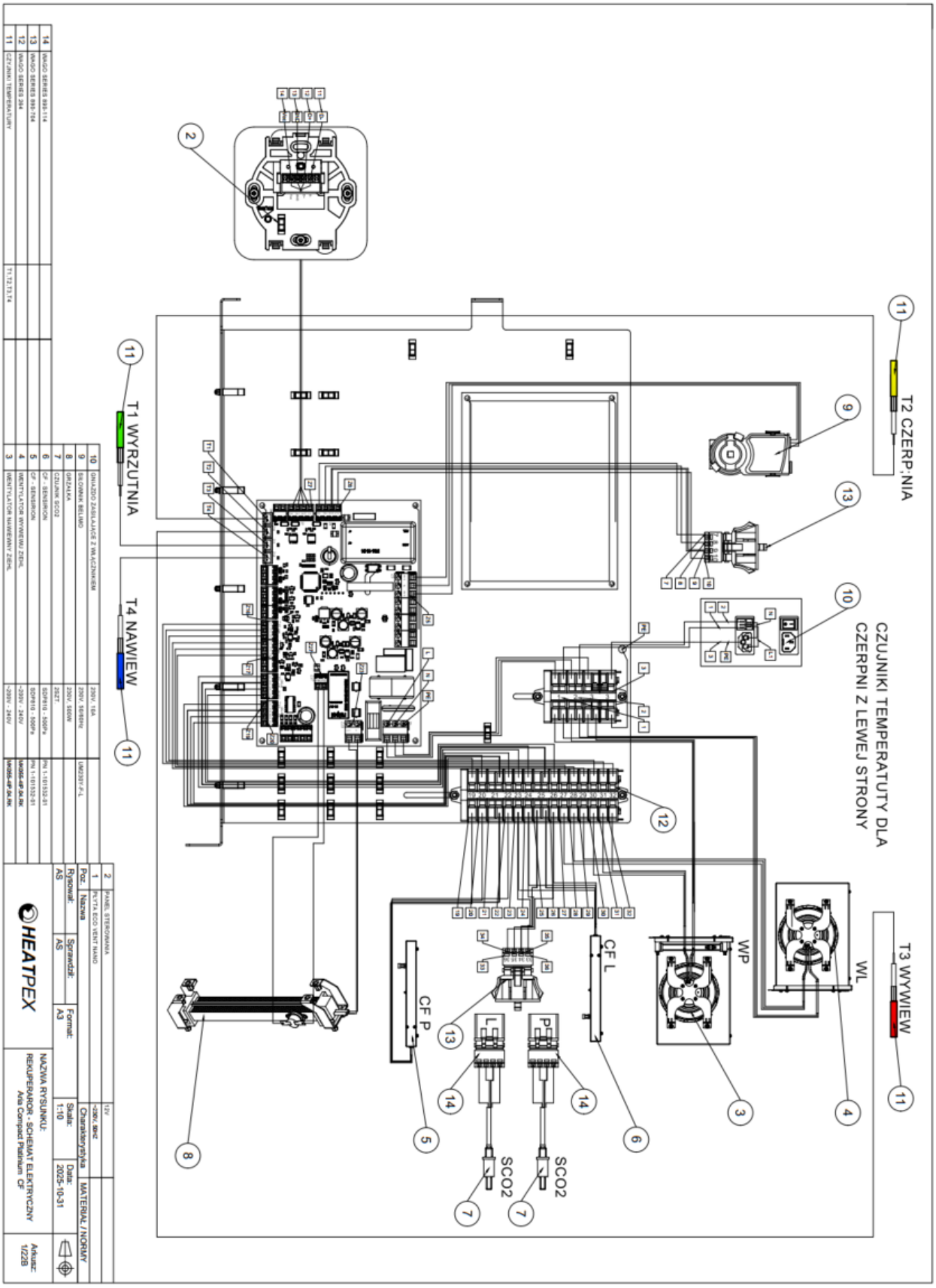
Electrical diagrams

ARIA VITALE Compact Silver – Outdoor air intake on the left-hand side



Electrical diagrams

ARIA VITALE Compact Platinum CF– Outdoor air intake on the left-hand side



Energy Data

The data comply with the requirements of Commission Regulations (EU) No 1253/2014 and (EU) No 1254/2014.

Supplier name	–	**Heatpex sp. z o.o**			
MODEL IDENTIFIER	–	**Aria Vitale Silver 250**	**Aria Vitale Silver 350**	**Aria Vitale Platinum Enthalpy 250**	**Aria Vitale Platinum Enthalpy 350**
SPECIFIC ENERGY CONSUMPTION (SEC) FOR CLIMATE:					
COLD	kWh/ m2/ rok	-82,5	-79,2	-75,0	-81,4
AVERAGE		-43,2	-40,7	-37,2	-42,2
WARM		-18,1	-16,0	-12,9	-17,2
SEC ENERGY CLASS FOR CLIMATE:					
COLD	–	A+	A+	A+	A+
AVERAGE		A+	A	A+	A
WARM		E	E	E	E
TYPE OF UNIT	–	Bidirectional ventilation system (BVS)			
TYPE OF FAN DRIVE	–	Infinitely variable fan speed control system			
TYPE OF HEAT RECOVERY SYSTEM	–	Plate heat exchanger			
THERMAL EFFICIENCY OF HEAT RECOVERY	%	88,8	85,0	88,3	85,0
MAXIMUM AIRFLOW RATE	m3/h	250	350	250	350
FAN MOTOR POWER CONSUMPTION	W	98	176	98	176
SOUND POWER LEVEL (LWA)	dB(A)	51,5	58,9	51,5	58,9
REFERENCE AIRFLOW RATE	m3/s	0,05	0,07	0,05	0,07
REFERENCE PRESSURE DIFFERENCE	Pa	50			
SPECIFIC POWER INPUT (SPI)	W/(m3 /h)	0,23	0,36	0,29	0,45
SYSTEM TYPE	–	Ducted ventilation system, MISC = 1,1			
CONTROL FACTOR	–	Local demand-controlled ventilation, CRS = 0,65			
MAXIMUM EXTERNAL AIR LEAKAGE RATE	%	2,4	1,63	2,4	1,63
MAXIMUM INTERNAL AIR LEAKAGE RATE	%	1,44	1,03	1,44	1,03
LOCATION AND DESCRIPTION OF VISUAL FILTER REPLACEMENT WARNING MECHANISM	–	LED indicator on the control panel lights up when filter replacement is required. Regular filter replacement has a significant impact on maintaining high performance and energy efficiency of the unit..			
WEBSITE ADDRESS CONTAINING PRE-INSTALLATION / DISMANTLING INSTRUCTIONS	–	www.heatpex.pl/do-pobrania			
ANNUAL ELECTRICAL ENERGY CONSUMPTION (AEC) FOR CLIMATE:					
COLD	kWh/rok	702	772	737	822
AVERAGE		165	235	200	285
WARM		120	190	155	240
ANNUAL HEATING ENERGY SAVINGS (AHS) FOR CLIMATE:					
COLD	kWh/rok	9133	8979	9113	8979
AVERAGE		4669	4590	4658	4590
WARM		2111	2075	2106	2075

Modbus Table

The table below contains the complete list of Modbus parameters of the controller. The table is valid for software versions S001.00 and later.

1	0	Program version	3	O	0	0xFFFF	1	hex	Format: SXXX.YYY XXX – older byte, YYY – younger byte,
2	1	-	-	-	-	-	-	-	
3	2	STATUS_OK	Operating status	O	0	1	0	integer	
4	3	AWARIA	Fault status	O	0	1	0	integer	
5	4	WORK_MODE	Controller operating mode	I/O	0	6	0	integer	2 – manual control, 3 – speed 1, 4 – speed 2 .5 – speed 3
6	5	Tmain	Master control sensor	O	0	2	2	integer	1 – extract air sensor, 2 – supply air sensor, 100 – control panel sensor
7	6	Tsup	Supply air temperature(T 1)	O	-40.0	60.0	0.0	integer	999 – sensor fault
8	7	Texh	Extract air temperature (T2)	O	-40.0	60.0	0.0	integer	999 - sensor fault
9	8	Tinl	Outdoor / intake air temperature (T3)	O	-40.0	60.0	0.0	integer	999 - sensor fault
10	9	Tout	Exhaust air temperature (T4)	O	-40.0	60.0	0.0	integer	999 - sensor fault
11	10	Trec	Ground heat exchanger temperature (T15)	O	-40.0	60.0	0.0	integer	999 - sensor fault
12	11	Theat	Post-heater outlet temperature (T16)	O	-40.0	60.0	0.0	integer	999 - sensor fault
13	12	Tpanel	Main control panel temperature	O	-40.0	60.0	0.0	integer	999 - sensor fault
14	13	Q1-limit	Air quality sensor (Q1 – 0/1)	O	0	1	0	integer	0 – contact open 1 – contact closed
15	14	DEV_factorySettin gs	Restore factory settings	I/O	-	-	-	-	0-no, 1-yes
16	15	TR1	Pre-heater thermostat (N1)	O	0	1	0	integer	0 – contact open 1 – contact closed
17	16	TR2	Secondary heater thermostat (N2)	O	0	1	0	integer	0 – contact open 1 – contact closed
18	17	BYPASS	Bypass actuator status	O	0	1	0	integer	0 – flow OFF 1 - flow On,
19	18	SAP	External SAP signal	O	0	1	0	integer	0 - SAP, 1 - no SAP
20	19	IN1	External signal IN1	O	0	1	0	integer	0 – inactive 1 – active
21	20	IN2	External signal IN2	O	0	1	0	integer	0 – inactive 1 – active
22	21	ECO	External ECO signal (alarm system)	O	0	1	0	integer	0 – inactive 1 – active
23	22	N1	Pre-heater (N1)	O	0	1	0	integer	0 – inactive 1 – active
24	23	N2	Secondary heater (N2)	O	0	1	1	integer	0 – inactive 1 – active
25	24	N2 control	Secondary heater control signal (N2)	O	0	100	0	integer	Control value in %
26	25	Y1 control	Cooling coil control signal (CH1)	O	0	100	0	integer	Control value in %
27	26	GWC	Ground heat exchanger actuator	O	0	1	0	integer	0 – inactive 1 – active
28	27	SBP1	Heat exchanger bypass actuator – supply air (SBP1)	O	0	100	0	integer	Control value in %
29	28	SM1	Mixing chamber actuator (SM1)	O	0	100	0	integer	Control value in %
30	29	Clean	HEAT EXCHANGER CLEANING mode	O	0	1	0	integer	0 – inactive 1 – active
35	34	Mode_PARTY	Party Mode	I/O	0	1	0	integer	0 – inactive 1 – active
-	-	-	-	-	-	-	-	-	-
39	38	-	-	-	-	-	-	integer	
40	39	Temp_USER1	Setpoint temperature – speed1	I/O	8	30	20	integer	Unit:: °C
41	40	Temp_USER2	Setpoint temperature – speed2	I/O	8	30	20	integer	Unit: °C
42	41	Temp_USER3	Setpoint temperature – speed3	I/O	8	30	20	integer	Unit: °C
44	43	W1	Supply fan – current control output	O	0	100	0	integer	Control value in %

45	44	W2	Extract fan – current control output	O	0	100	0	integer	Control value in %
46	45	W1_EN	Supply fan enable (W1))	O	0	1	0	integer	0 – inactive, 1 - active
47	46	W2_EN	Extract fan enable (W2)	O	0	1	0	integer	0 – inactive, 1 - active
49	48	Speed_W1_USER 1	W1 speed – level 1	I/O	dyn. (15)	dyn. (100)	30	integer	Control value in %
50	49	Speed_W1_USER 2	W1 speed – level 2	I/O	dyn. (15)	dyn. (100)	50	integer	Control value in %
51	50	Speed_W1_USER 3	W1 speed – level 3	I/O	dyn. (15)	dyn. (100)	75	integer	Control value in %
55	54	Speed_W2_USER 1	W2 speed – level 1	I/O	dyn. (15)	dyn. (100)	30	integer	Control value in %
56	55	Speed_W2_USER 2	W2 speed – level2	I/O	dyn. (15)	dyn. (100)	50	integer	Control value in %
57	56	Speed_W2_USER 3	W2 speed – level3	I/O	dyn. (15)	dyn. (100)	750	integer	Control value in %
68	67	-	-	-	-	-	-	-	-
69	68	Service_time_remaining	Time remaining until general service	O	0	999	-	integer	Unit: day
70	69	GWC_Enable	Ground heat exchanger enable (GHE)	I/O	0	2	2	integer	0 - close, 1 - open, 2 - auto
71	70	GWC_Winter	Upper GHE activation threshold – winter	I/O	5	20	8	integer	Unit: °C
72	71	GWC_Summer	Lower GHE activation threshold – summer	I/O	10	30	18	integer	Unit: °C
73	72	SM1_Enable	Mixing chamber activation (SM1)	I/O	0	1	0	integer	0 - inactive, 1 - active
74	73	SM1_Limit	Mixing chamber actuator opening limit (SM1)	I/O	0	100	100	integer	Unit: %
75	74	BMS_adress	Unit address for BMS communication	O	0	247	1	integer	
76	75	-	-	-	-	-	-	-	
77	76	BMS_change_en	Parameter change via BMS	O	0	1	1	integer	0 – turn off 1 – turn on
78	77	BMS_STOP_en	START/STOP via BMS	O	0	1	1	integer	0 – turn off 1 – turn on
79	78	-	-	-	-	-	-	-	
80	79	UID1	UID - characters 1 i 2	O	12336	23130	-	ASCII	
81	80	UID2	UID - characters 3 i 4	O	12336	23130	-	ASCII	
82	81	UID3	UID - characters 5 i 6	O	12336	23130	-	ASCII	
83	82	UID4	UID - characters 7 i 8	O	12336	23130	-	ASCII	
84	83	UID5	UID - characters 9 i 10	O	12336	23130	-	ASCII	
85	84	UID6	UID - characters 11 i 12	O	12336	23130	-	ASCII	
86	85	UID7	UID - characters 13 i 14	O	12336	23130	-	ASCII	
87	86	UID8	UID - characters 15 i 16	O	12336	23130	-	ASCII	
88	87	UID9	UID - characters 17 i 18	O	12336	23130	-	ASCII	
89	88	UID10	UID - characters 19 i 20	O	12336	23130	-	ASCII	
90	89	UID11	UID - characters 21 i 22	O	12336	23130	-	ASCII	
91	90	UID12	UID – character 23	O	48	90	-	ASCII	Lower byte contains the character; upper byte to be ignored
92	91	P1_value	Measured supply air pressure	O	0	4000	0	integer	Unit: Pa
93	92	P2_value	Measured extract air pressure	O	0	4000	0	integer	Unit: Pa
94	93	Flow1_value	Measured supply air flow rate	O	0	4000	0	integer	Unit: m3/h
95	94	Flow2_value	Measured extract air flow rate	O	0	4000	0	integer	Unit: m3/h
96	95	-	-	-	-	-	-	-	-
97	96	-	-	-	-	-	-	-	-
98	97	Flow1_setPoint	Set supply air flow rate	O	0	4000	0	integer	Unit: m3/h
99	98	Flow2_setPoint	Set extract air flow rate	O	0	4000	0	integer	Unit: m3/h
108	107	-	-	-	-	-	-	-	-
109	108	Flow_W1_USER1	Set supply air flow rate – level 1	I/O	0	4000	100	integer	Unit: m3/h
110	109	Flow_W1_USER2	Set supply air flow rate – level 2	I/O	0	4000	200	integer	Unit: m3/h
112	110	Flow_W1_USER3	Set supply air flow rate – level 3	I/O	0	4000	300	integer	Unit: m3/h
113	112	Flow_W2_USER1	Set extract air flow rate – level 1	I/O	0	4000	100	integer	Unit: m3/h

114	113	Flow_W2_USER2	Set extract air flow rate – level 2	I/O	0	4000	200	integer	Unit : m3/h
116	114	Flow_W2_USER3	Set extract air flow rate – level 3	I/O	0	4000	300	integer	Unit : m3/h
117	116	k_fac_W1	Supply fan K coefficient	I/O	0	1000	0	float	
118	117	k_fac_W2	Extract fan K coefficient	I/O	0	1000	0	float	
119	118	PSA_W1	Supply fan start level	I/O	dyn. (15)	dyn. (100)	25	integer	Control value in %
120	119	PSA_W2	Extract fan start level	I/O	dyn. (15)	dyn. (100)	25	integer	Control value in %
121	120	-	-	-	-	-	-	-	-
122	121	-	-	-	-	-	-	-	-
	127	OUT_manControl	Relay control in manual mode	I/O	0			integer	0x01 – OUT1 0x02 – OUT 2 0x04 – OUT 3
	128	ECOX_set Value_AOUT0	AOUT1 control – manual mode	I/O	0				Unit: V
	129	ECOX_set Value_AOUT1	AOUT2 control – manual mode	I/O	0				Unit : V
	130	ECOX_set Value_AOUT2	AOUT3 control – manual mode	I/O	0				Unit: V
	131	ADC_A4	AIN1 reading – manual mode	O	-			integer	Unit: V
	132	IN_DINstate	DIN reading – manual mode	O	-			integer	0x01 – DIN 1 0x02 – DIN 2 0x04 – DIN 3 0x08 – DIN 4 0x10 – DIN5
	133	ADC_A2	T1 reading	O	-			integer	Unit : °C
	134	ADC_A1	T2 reading	O	-			integer	Unit : °C
	135	ADC_A3	T3 reading	O	-			integer	Unit : °C
	136	ADC_A0	T4 reading	O	-			integer	Unit : °C
	137	REK_WS2	Summer/Winter mode	I/O					1-Auto, 2-winter, 3-summer, 4-windy
	138	REK_summerHyst	Summer mode activation hysteresis	I/O	0	20	14		Unit : °C
	139	REK_winterActive Temp	Winter mode activation hysteresis	I/O	-20	20	6		Unit : °C
	140	P_HEAT_modSett	Pre-heater operation outside frost protection	I/O					0-no, 1-yes
	141	DEV_servConfirm	Service configuration confirmation	I/O					0-no, 1-yes
	42	DEV_prodConfirm	Manufacturer configuration confirmation	I/O					0-no, 1-yes
	143	P_HEAT_turnOnT emp	Heater activation temperature	I/O	-20	20	5		Unit: °C
	144	P_HEAT_turnOffH yst	Heater switch-off hysteresis	I/O	1	10	2		Unit: °C

Parameter type: O – Output only – read-only parameter, I/O – Input/Output – reading and modification permitted.