

AZURE

COUNTER FLOW
HEAT RECOVERY
VENTILATION

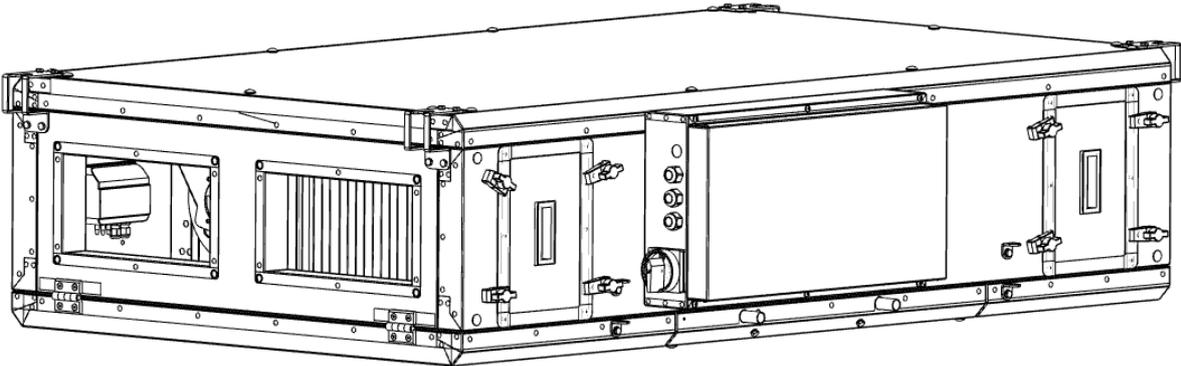


Table of Contents

CHAPTER 1 GENERAL INFORMATION

1.1	Important information.....	4
1.2	Warning and safety instructions	4
1.3	Warranty claims – Exclusion of liability.....	4
1.4	Regulations – Guidelines.....	4
1.5	Area of application – Intended use.....	5

CHAPTER 2 INSTALLATION AND COMMISSIONING

2.1	General installation instructions.....	6
2.1.1	Receipt.....	6
2.1.2	Storage.....	6
2.1.3	Shipping.....	6
2.1.4	Heat systems.....	7
2.1.6	Disassembly and re-assembly.....	8
2.1.6	Standstill and disposal.....	8
2.2	Mechanical assembly.....	8
2.2.1	General mechanical assembly.....	8
2.2.2	Condensation outlet.....	10
2.2.3	Flange connection / adapters.....	11
2.2.4	Air ducting, ventilation circuit.....	11
2.3	Electrical connection.....	11
2.3.1	Power supply connection.....	12
2.3.2	Controller connection.....	12
2.3.3	Modbus/Bacnet.....	14
2.3.4	Connection of optional air quality sensors.....	14
2.3.5	Wiring diagrams.....	15
2.4	Commissioning assistant.....	21
2.4.1	Calling up the Commissioning assistant.....	21
2.4.2	Language selection	22
2.4.3	Device selection.....	22
2.4.4	External 0-10V control of the fans	23
2.4.5	Temperature Control Mode	23
a.	Constant Supply Air Temperature Control	23
b.	Outdoor Compensated Supply Air Temperature Control.....	24
c.	Cascade Room Temperature Control.....	24
d.	Cascade Extract Air Temperature Control.....	25
e.	Outdoor Dependent Supply or Room Temperature Control.....	25
f.	Outdoor Dependent Supply or Extract Air Temperature Control.....	26
g.	Outdoor Compensated Room Temperature Control.....	26
h.	Outdoor Compensated Extract Air Temperature Control.....	27
2.4.6	Ventilation Mode.....	28
a.	Constant Air Flow.....	28
b.	Constant RPM.....	29
c.	Constant Pressure.....	29
d.	External Fan Control.....	29
2.4.7	Electrical Preheating.....	30
2.4.8	Supply Air Filter Type.....	30
2.4.9	Extract Air Filter Type.....	30
2.4.10	After Heater Type.....	31
2.4.11	Cooler	31
2.4.12	Recirculation damper.....	31
2.4.13	By pass / Free cooling (night cooling).....	31
2.4.14	Ventilation on demand (VOD).....	32
2.4.15	Leaving the commissioning assistant.....	34
2.5	Emergency operation/Fire mode.....	34

CHAPTER 3 TECHNICAL DATA

3.1	Performance data and technical data.....	35
3.2	Unit overview.....	35
3.3	Dimensions.....	36
3.4	Performance curves.....	37

CHAPTER 4 FUNCTIONS AND SETTINGS

4.1	Operating modes.....	38
4.1.1	Manual operation.....	38
4.1.2	Timers.....	39
a.	Time/Date Set.....	39
b.	Day/Week Program.....	39
c.	Holiday.....	40
4.1.3	Ventilation on demand (VOD).....	41
4.1.4	Recirculation Damper.....	42
4.1.5	Bypass / Free Cooling (Night Cooling).....	42
4.1.6	Overrun.....	43
4.2	Functions.....	43
4.2.1	Exchanger Deicing.....	43
4.2.2	Frost Protection WW Heating Coil.....	44
4.2.3	Filter monitoring.....	44
4.3	Priorities.....	45
4.4	User Level/access rights.....	45

CHAPTER 5 SERVICE AND MAINTENANCE

5.1	Service and maintenance.....	47
5.2	Maintenance plan.....	47
5.3	Service and maintenance of cross counter flow heat exchanger.....	48
5.4	Filter change.....	50
5.5	Service and maintenance of fans.....	52
5.6	Service and maintenance of electrical pre-heater.....	54
5.7	Reset function of electrical pre-heater.....	56
5.8	Cleaning the condensate tray.....	57
5.9	Cleaning of housing.....	58
5.10	Function tests (manual/auto).....	58
5.11	Alarms.....	60

CHAPTER 1

GENERAL INFORMATION

1.1 Important information

To ensure safety and correct operation please read and observe the following instructions carefully before proceeding. Important information is specified in the maintenance section on filter changes and necessary cleaning and maintenance activities. The user usually carries out maintenance work. The chapter "Installation" with important installation tips and basic unit adjustments is intended for the specialised installer.

DANGER

The electrical connection must be fully isolated from the supply up to the final assembly!

This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

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

The planning office provides the planning documents necessary for system calculations. Additional information can be requested ex works. Keep the installation and operating instructions as a reference at the device. After the final assembly, the document must be handed out to the operator (tenant/owner).

1.2 Warning and safety instructions

The following designations/symbols are used in this manual to specify safety-relevant information.

DANGER

- DANGER - Death/serious irreversible injury

Indicates an extremely hazardous situation which will result in death or serious irreversible injury, if the safety instruction is not followed.

WARNING

- WARNING - Death/serious injury

Indicates a hazardous situation which can result in death or serious irreversible injury, if the safety instruction is not followed.

CAUTION

- CAUTION - Minor or moderate injury

Indicates a hazardous situation which can result in minor or moderate injury, if the safety instruction is not followed.

ATTENTION

- ATTENTION - Environmental or material damage

Indicates actions that can result in damage to equipment or property.

1.3 Warranty claims – Exclusion of liability

If the preceding instructions are not observed, all warranty claims and accommodation treatment are excluded. This also applies to any liability claims extended to the manufacturer.

The use of accessories not offered or recommended by AERA is not permitted. Potential damages are not covered by warranty.

1.4 Regulations – Guidelines

If the product is installed correctly and used to its intended purpose, it conforms to all applicable CE standards at its date of manufacture. The AZURE ventilation units in this series are compliant with Eco-Design 2018.

1.5 Area of application – Intended use

AZURE units are highly energy efficient, fully automated, quiet and plug-and-play heat recovery air handling units. AZURE devices are designed in 6 different models to correspond the need of up to 3200 m³/ h air flow. There is an ePM1 55% class filter on the outdoor air side and an ePM10 50% class filter on the exhaust side as standard.

AZURE devices are designed with energy efficient, low sound pressure radiating and low power consumption plug fans. Plug fans with EC motors can be driven with 3 fixed air volume/pressure/RPM or steplessly with the help of any sensor thanks to build in smart control system.

The AZURE units are equipped with cross counter flow heat exchangers, in which the heat of the extracted air is recovered and transferred through the plates to the outdoor air, so both air flows remain separated. Through this procedure more than 80 % of the extract air heat is transferred to the outdoor air depending on working conditions. The supply air is led by the duct system to the primary (supply air needing) areas. The used air is extracted from the secondary areas. It flows back through the ducting to the ventilation unit, transfers the heat and is discharged by the exhaust air duct to the atmosphere.

The AZURE units are only intended for handling of air and performing the following jobs:

- filtering normally polluted air
- air heating and/or cooling
- heat recovery
- or combination of the above-mentioned functions.

Proper use also includes observance of the operation manual and instructions from the manufacturer of the individual components, as well as the inspection and maintenance intervals stipulated by AERA.

AZURE devices application limits can be seen below.

	AZURE 500	AZURE 700	AZURE 1000	AZURE 1400	AZURE 2200	AZURE 3200
Ambient Temperature (°C)	0 / 50	0 / 50	0 / 50	0 / 50	0 / 50	0 / 50
ODA/ETA Air Temperature (°C)	-20 / 50	-20 / 50	-20 / 50	-20 / 50	-20 / 50	-20 / 50
Humidity (Max.) (ODA/ETA)	95% RH	95% RH	95% RH	95% RH	95% RH	95% RH

- ATTENTION** ⚠ Electrical pre heater must be used if the ODA/ETA temperatures are below 0°C
- ATTENTION** ⚠ Corrosion level of the sheet metal is C4 according to ISO 12944.

CHAPTER 2

INSTALLATION AND COMMISSIONING

2.1 General installation instructions

2.1.1 Receipt

The delivery contains one of the following unit types:

Unit
AZURE 500
AZURE 700
AZURE 1000
AZURE 1400
AZURE 2200
AZURE 3200

The scope of delivery also includes:

- 4 or 6 x Vibration pads
- 2 x Door keys
- 8 x fixing clamp (AZURE 3200)

Vibration pads and door handles are placed supply fan side. (Fig. 1)

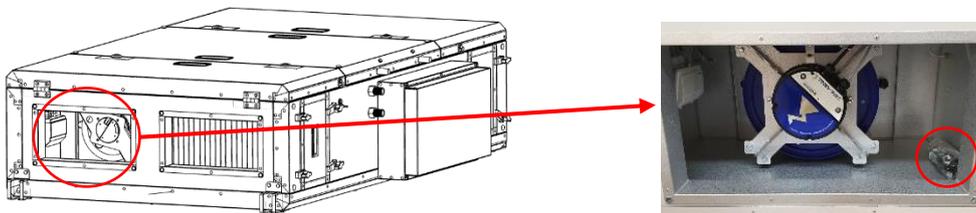


Fig. 1

Please check delivery immediately on receipt for accuracy and damage. If damaged, please notify carrier immediately.

In case of delayed notification, any possible claim may be void.

2.1.2 Storage

When storing for a prolonged time the following steps are to be taken to avoid damaging influences:

Protection by dry, air-dustproof packing. The storage place must be water protected, vibration-free and free of temperature variations. (Ambient temperature limit, min/max, 0°C/ +40°C) Damages due to improper transportation, storage or putting into operation are not covered by warranty.

The maximum permissible stack quantity of the devices can be seen below.

Model	Stack Quantity
AZURE 500	4
AZURE 700	4
AZURE 1000	4

Model	Stack Quantity
AZURE 1400	3
AZURE 2200	3
AZURE 3200	3

2.1.3 Shipping

The transport of the devices must be done with care. All manufactured devices are shipped from the factory after all tests and checks have been made before shipment.

The transport must be carried out by trained and experienced personnel and the necessary safety precautions should be taken to prevent overturning and slipping of the device. During transport of the devices it should be ensured that the weight is evenly distributed over the four corners.

DANGER ⚠ **Danger due to overhead loads – risk of grave injuries or death!**

- Never stand beneath suspended loads, since there is always a risk that the lifting gear, tackle, ropes or slings are faulty or damaged.

- Make sure that equipment is firmly seated before lifting it.

WARNING  **Risk of personal injury and equipment damage!**

Due to a high center of gravity, some equipment can tend to tip over and cause damage to persons and property.

- When transporting the unit, carefully observe its behavior and do not get near any possible hazardous areas.

Delivery dimensions and weights

The dimension and weight of each package can be seen below.

MODEL	Package Dimensions (LxWxH) (mm)	Package Weight (kg)
AZURE 500	1778x1188x558	170
AZURE 700	1794x1363x561	200
AZURE 1000	1794x1613x561	215
AZURE 1400	1919x1663x601	270
AZURE 2200	2144x2081x684	360
AZURE 3200	2290x2331x771	440

ATTENTION  Before off-loading products, please ensure that the means of transport/ lifting is suitable to accommodate to the required weight and size capacity.

- AZURE devices are shipped in wooden case. (Fig. 2)



Fig. 2

- The package can be transported by forklift, pallet truck or crane (Fig. 3)

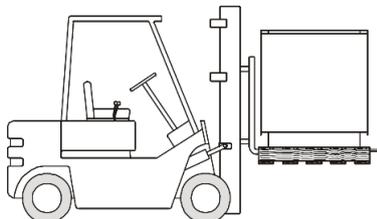


Fig. 3

ATTENTION  **Before transporting the device make sure that the forks of forklift truck are sufficient length that will come out from the opposite side of the device!**

- Lift the device from the mounting brackets on the corners of the device.
- Provide a symmetrical load distribution before lifting the device
- Lift the device slowly

2.1.4 Heat systems

The relevant applicable regulations on the combined use of heat systems, domestic ventilation and extractor hoods (Federal Association of Chimney Sweeps (ZIV) information) must be observed!

General construction-law requirements

The AZURE units with heat recovery must only be installed and operated in rooms with heat systems which depend on room air, if their flue gas venting is monitored by specific (on-site) safety devices, which shut down the AZURE unit when activated.

We recommend speaking with the competent chimney sweep to take account of possible wishes before procuring a negative pressure monitoring system for heat systems.

2.1.5 Disassembly and re-assembly

DANGER ⚠ Before starting any disassembly or re-assembly operation, please ensure that the product is isolated from its mains electrical supply, in order to ensure that fans cannot be run. As disassembly and re-assembly are not part of routine maintenance, these should be carried out by qualified personnel.

Ensure that the hydraulic circuit is switched off. (If the heater-cooler coil added to the unit)

- Close all hydraulic shut-off valves. (If the heater-cooler coil added to the unit)
- Isolate all connections and ensure leak-free condition regarding oil, refrigerant (If the heater-cooler coil added to the unit)
- As the coil piping diameter is small, waste water can remain in the unit following normal evacuation. For safety reasons, use compressed air to blow through the system in order to remove all remaining water.

WARNING ⚠ **Risk of personal injury and equipment damage!**

Due to a high centre of gravity, some equipment can tend to tip over and cause damage to persons and property.

When transporting the unit, carefully observe its behaviour and do not get near any possible hazardous areas.

2.1.6 Standstill and disposal

DANGER ⚠ Before starting any operation, please ensure that the product is isolated from its mains electrical supply, in order to ensure that fans cannot be run.

Dispose of all components and filters and disused operating materials (e.g. oil, refrigerants) in an environmentally-friendly manner in accordance with the local codes, practices and environmental regulations.

An authorized appointed contractor specializing in waste processing must dispose of the unit or its individual components. This appointed contractor must ensure that:

- the components are separated according to material types
- the used operating materials are sorted and separated according to their respective properties.

2.2 Mechanical assembly

WARNING ⚠ Unit installation and connections shall only be performed by qualified licensed staff. The electrical connections must be carried out by a person who has proper professional training and experience in the relevant accident prevention regulations, as well as other generally recognized safety and occupational health codes, perform unit jobs.

2.2.1 General mechanical assembly

AZURE compact devices are suitable for ceiling mounting thanks to the hanging apparatuses found on. Due to noise level which change according to working conditions, it is recommended to install the AZURE units apart from each other. Ensure that there is a waste water connection in the installation area. Please consider the information on the "condensation outlet"! Assembly should take place in such a way to enable preferably short ventilation ducts and their trouble-free connection to the unit. Tight bends in the channel will cause high pressure drops.

ATTENTION ⚠ Flip over the unit before installation. Service covers should be opened downwards.

ATTENTION ⚠ In order not to harm the electrical box cover, turn the unit from the side panel where there is no e-box.

(Fig. 4)

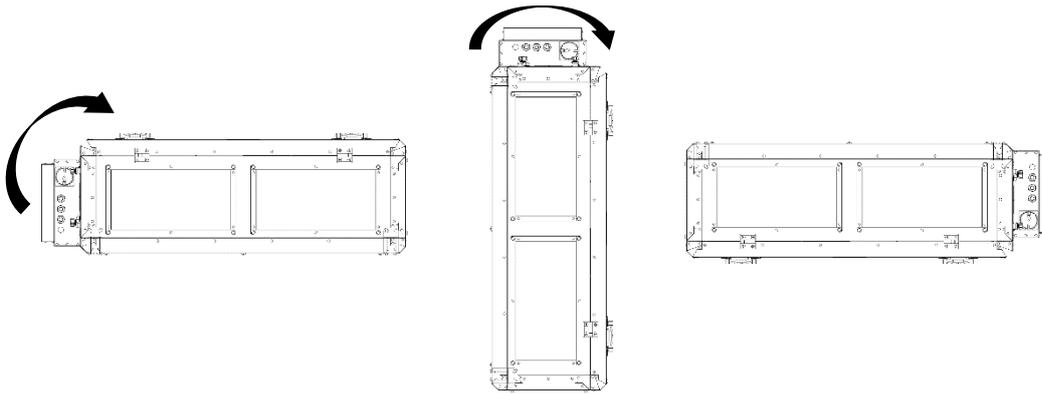


Fig. 4

ATTENTION ⚠ It is recommended to put a soft pad on the ground or on the transport tool to avoid damage while turning the unit upside down.

Important notes:

1. The ventilation ducts must not become kinked.
2. The connections to the connection valves must be firm and tight.
3. Flange connections must be leakproof and firm
4. It is recommended that the devices have a grid structure that prevents the entry of small animals or pollutants in the air inlet-outlet.
5. The exhaust air discharges from the exhaust outlet must not enter the device again from the outdoor air inlet. These two connections should be different lengths.
6. The assembly of the AZURE compact unit must only take place in rooms that are free of frost, as there is a danger of freezing. The room temperature must not fall below 0 °C

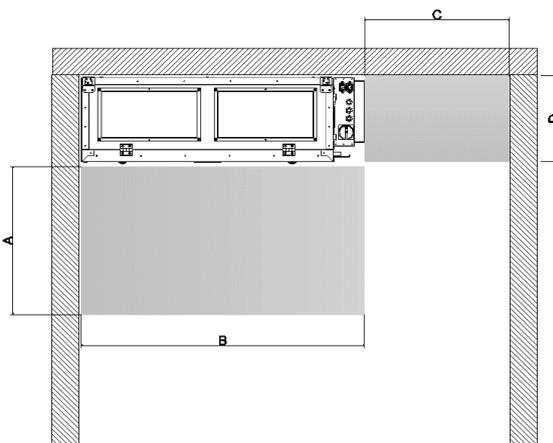
Assembly area

Observe the following criteria during installation to ensure that the device service is comfortable. (Fig. 5)

A is the minimum distance for opening service cover.

C is the minimum distance for servicing the terminal box and filter.

ATTENTION ⚠ In assemblies where the minimum distance A is not available, the service doors can be removed from the hinges.



MODEL	A	B	C	D
	Dimensions (mm)			
AZURE 500	665	1050	600	383
AZURE 700	666	1225	600	385
AZURE 1000	666	1475	600	385
AZURE 1400	703	1525	600	425
AZURE 2200	757	1895	600	508
AZURE 3200	797	2145	600	594

Fig. 5

Make sure that there is enough space for the device servicing. Therefore, the device must be assembled after the dimensions have been identified.

WARNING ⚠ Before installing the unit, it must be ensured that the ceiling and/or the fixing components used can withstand the heavy weight and vibration of the AZURE unit. Unsuitable mounting material can lead to the unit falling uncontrollably from the ceiling. There is danger to life due to the heavy weight! Furthermore, it can also lead to a large amount of property damage! Depending on the mounting, a further safeguard must be implemented to safeguard the AZURE compact unit from falling uncontrollably!

Four mounting brackets (with vibration pads (included in scope of delivery)) (Fig.6) are mounted to the unit for ceiling installation. Installation to the ceiling takes place e.g. with hanger bolts or suitable mounting accessories.



Fig. 6

- For detailed information on transport of AZURE unit, please refer to chapter 2.1.3

2.2.2 Condensation outlet

Condensation water can occur during the heating and cooling period. The condensate water collected in the condensate tube made of stainless steel.

Condensate water can be easily removed from the condensate tube optionally with ball siphon. If the water is to be raised to a certain height, a suitable pump should be used.

ATTENTION ⚠ Condensation outlet pipes should be insulated against freezing.

ATTENTION ⚠ The unit has two condensation pipes for summer (2 – Fig. 7) and winter (1 - Fig. 7) conditions. Make sure that the condensation outlets are connected separately.

- The drainage pipe route must not rise above the siphon!
- Existing drainage systems shall not be connected directly to the sewage system.

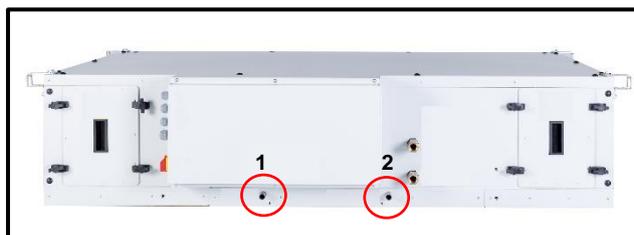


Fig. 7

2.2.3 Flange connection / adapter pieces

AZURE flange connection diameters are shown below (Fig. 8)

Fixing sheet metal must be used for flange connection in AZURE 3200 (included in scope of flange delivery)

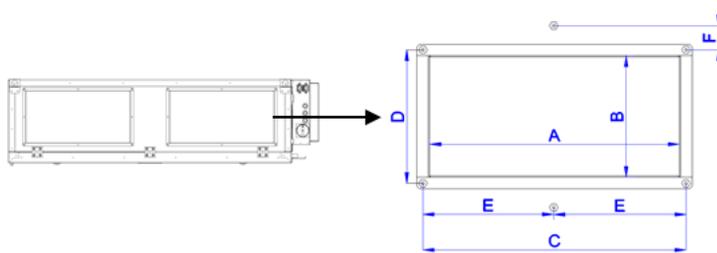


Fig. 8

Unit type	Dimensions (mm)						
	A	B	C	D	n	E	F
AZURE 500	300	150	320	170	4	-	-
AZURE 700	400	200	420	220	4	-	-
AZURE 1000	500	200	520	220	4	-	-
AZURE 1400	500	250	520	270	4	-	-
AZURE 2200	500	300	520	320	4	-	-
AZURE 3200	700	400	720	420	6	360	30
n : number of drill hole (horizontal) (Except corner holes)							
Hole/Bolt dimension: M8X16							

2.2.4 Air ducting

When designing the ductwork, use the shortest possible runs. Airtight connections and changeovers must be ensured for the best possible heat recovery. To avoid pressure losses, dirt build-up and noise, use smooth ducts (plastic or rigid ducting). If supply and extract air ductworks run through unheated rooms, insulation must be provided to reduce heat losses and condensation.

CAUTION  **All fire and building regulations must be observed!**

Check two or three representative locations on inner air duct surface for contamination, corrosion and, condensation every 12 months.

Check accessible air duct sections for damage every 12 months.

2.3 Electrical connection

DANGER  **The unit must be fully isolated from the mains power supply before any maintenance and installation work or before opening the enclosure! The electrical connection must only be carried out by an authorised qualified electrician in accordance with the following wiring diagrams. The electrical connection must be fully isolated from the mains power supply until the assembly is complete!**

The unit is equipped with a main switch which can be secured against unauthorized switching with a U-lock. The relevant standards, safety regulations and the technical connection conditions of the local electricity supply companies must be observed. An all-pole mains switch / isolator, with a contact opening of at least 3 mm must be provided on site.

EVO-ECO and EVO-TOUCH display (not scope of delivery – optional) is connected to the unit by means of HMI cable (HMI cable has two different optional lengths 10m - 20m)

- These circuit breakers recommended from the manufacturer for the AZURE units below.

AZURE	500	700	1000	1400	2200	3200
Phase	1+1	3+1	3+1	3+1	3+1	3+1
Type	C	C	C	C	C	C
Circuit Breaker (A)	20	10	16	20	25	40

- AZURE models RCD type can be seen below.

Model	RCD type	RCD current	Leakage current
AZURE 500	B or B+	30mA	5,2mA
AZURE 700	B or B+	30mA	7,13mA
AZURE 1000	B or B+	30mA	10,9mA
AZURE 1400	B or B+	300mA	14,5mA
AZURE 2200	B or B+	300mA	22,34mA
AZURE 3200	B or B+	300mA	25mA

2.3.1 Power supply connection

1. Open the terminal box cover.
2. Check the thickness of the cable that you will use for power connection. Refer to the electrical diagrams for cable thickness and connections.
3. Loosen the marked grommet and enter the cables here. (Fig. 9)

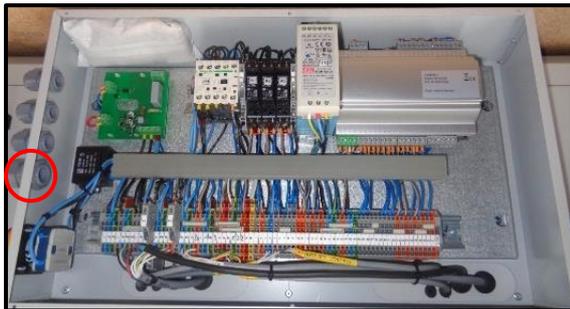


Fig. 9

4. Connect the cables to the marked terminals. Refer to the electrical diagrams for cable connections (Fig. 10)



Fig. 10

2.3.2 Controller connection

DANGER  **RISK OF INJURY!** Make sure that the power connection is disconnected, and fan is not moving before doing any work on the device

The display menu system is handled via seven buttons. Buttons can be seen below. (Fig. 11)

Designation	Function	Colour
	There are one or more unacknowledged alarm(s)	Flashing red
	There are one or more remaining, acknowledged alarm(s)	Fixed red
	You are in a dialogue box where it is possible to switch to change mode	Flashing yellow
	Change mode	Fixed yellow

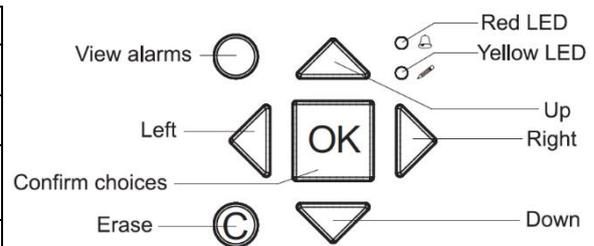


Fig. 11

When using magnetic tape mounting, the cable should be led through the alternate outlet at the bottom of the wiring compartment (Fig. 12). Prize the lid off and move the cable. Rotate the lid 180°, blocking the side outlet. Then mount the lid back on.



Fig. 12

1. Open the terminal box cover
2. Loosen the marked grommet and enter the cables here. (Fig. 13)



Fig. 13

3. Connect the HMI cable to the marked terminals in the terminal box. (Fig. 14)



Fig. 14

4. Connect the other end of the HMI cable with the display (Fig. 15) (refer to chapter 2.3.5 for connections)



Fig. 15

2.3.3 Modbus/Bacnet

AZURE units have a rs485 connection and Ethernet connection. The rs485 connection is used for the internal communication of the pressure sensors. The Ethernet connection can be used for the communication with building control systems as ModBus TCP and Bacnet IP.

2.3.4 Connection of optional air quality sensors

The following sensors can be used:

- VOD-CO2
- VOD-CO2 K
- VOD-VOC
- VOD-VOC K
- VOD-RH
- VOD-RH K

Connection of air quality sensors:

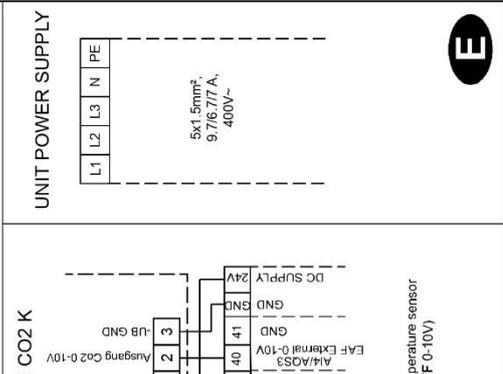
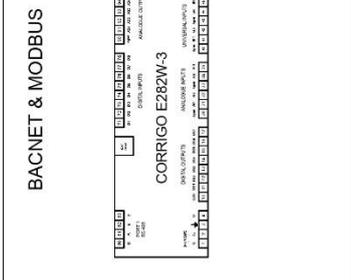
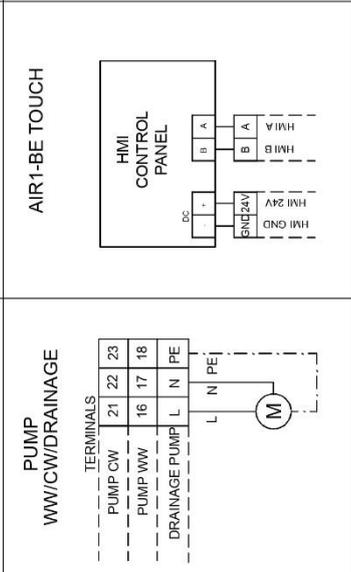
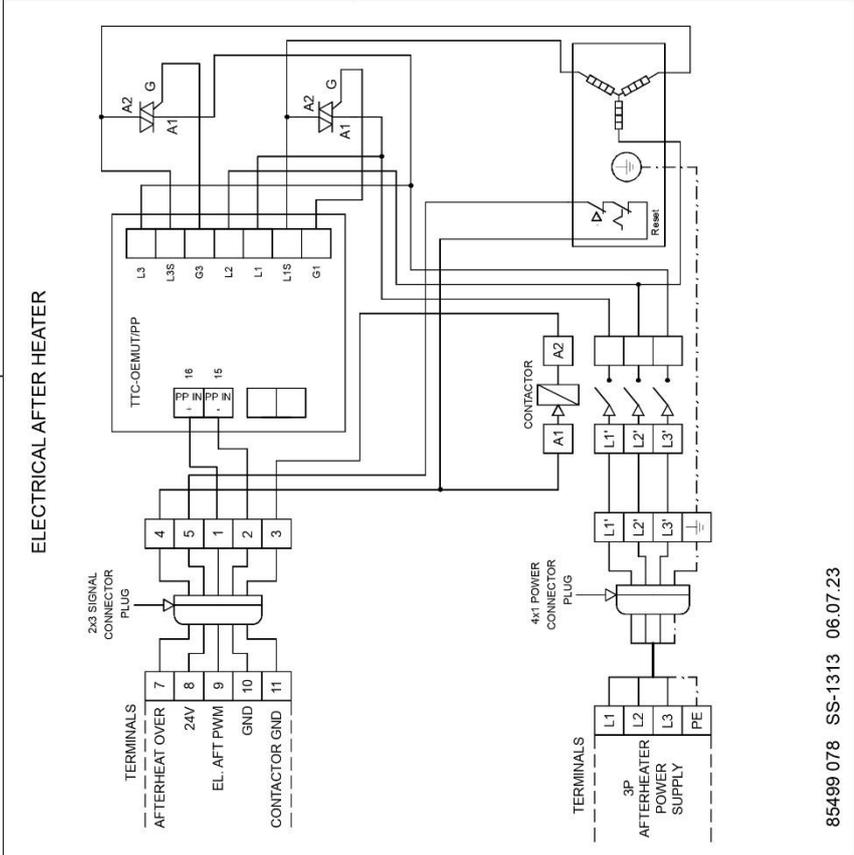
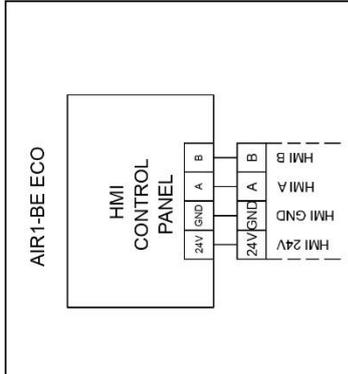
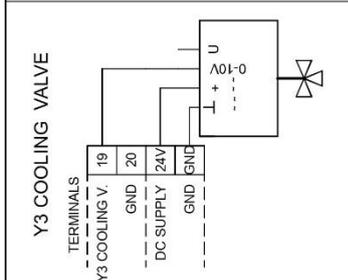
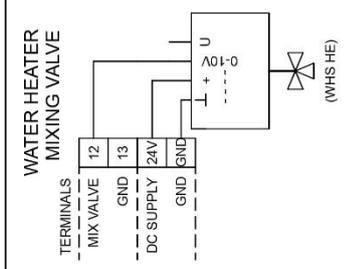
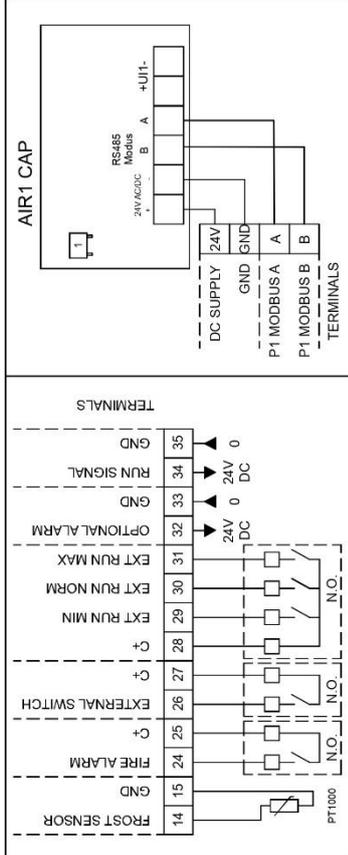
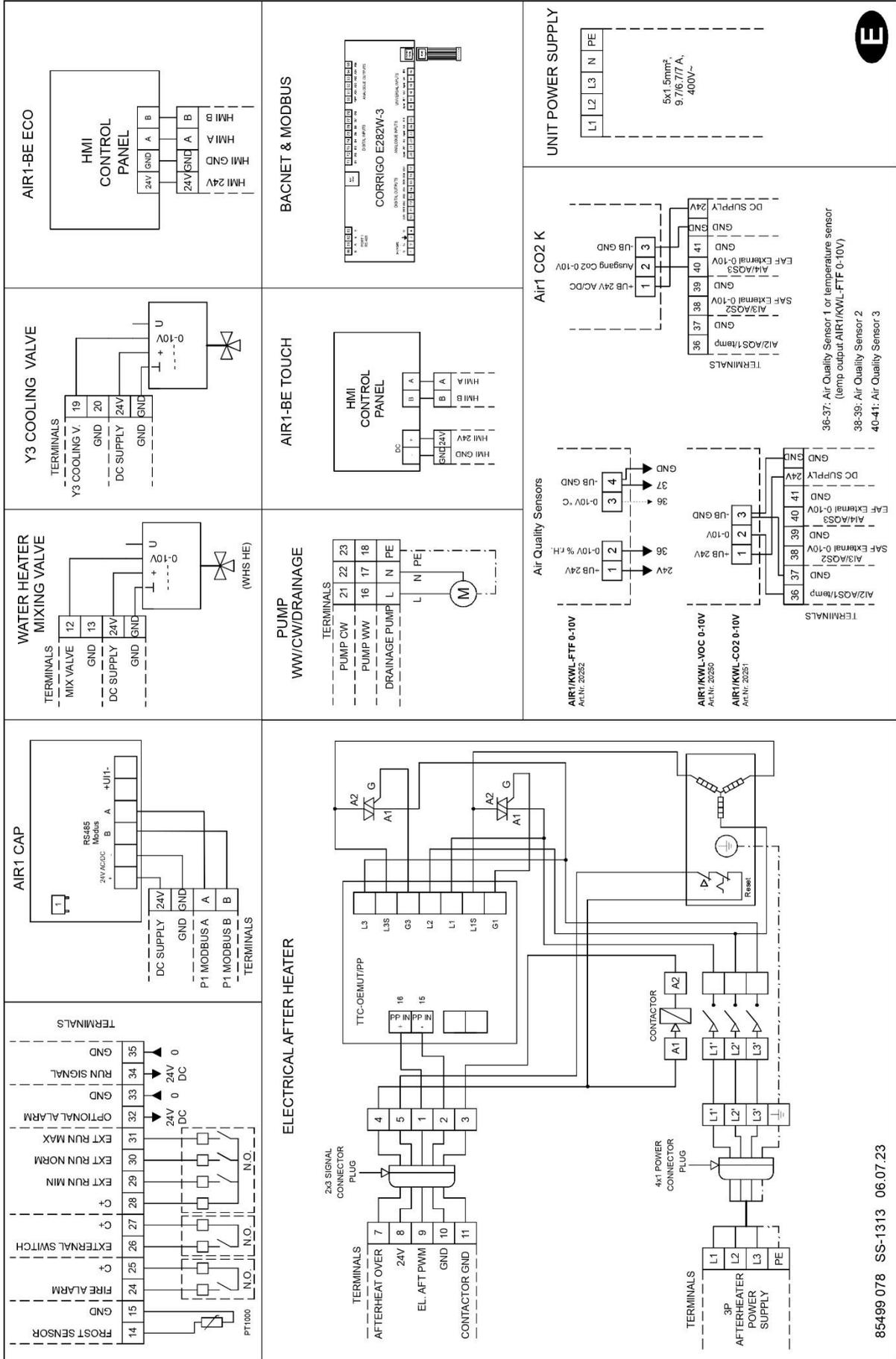
The power supply (24 VDC) is connected according to the wiring diagram (Refer to chapter 2.3.5)

The signal cables are connected according to the wiring diagram (Refer to chapter 2.3.5) via the analog inputs AI2, AI3 and AI4

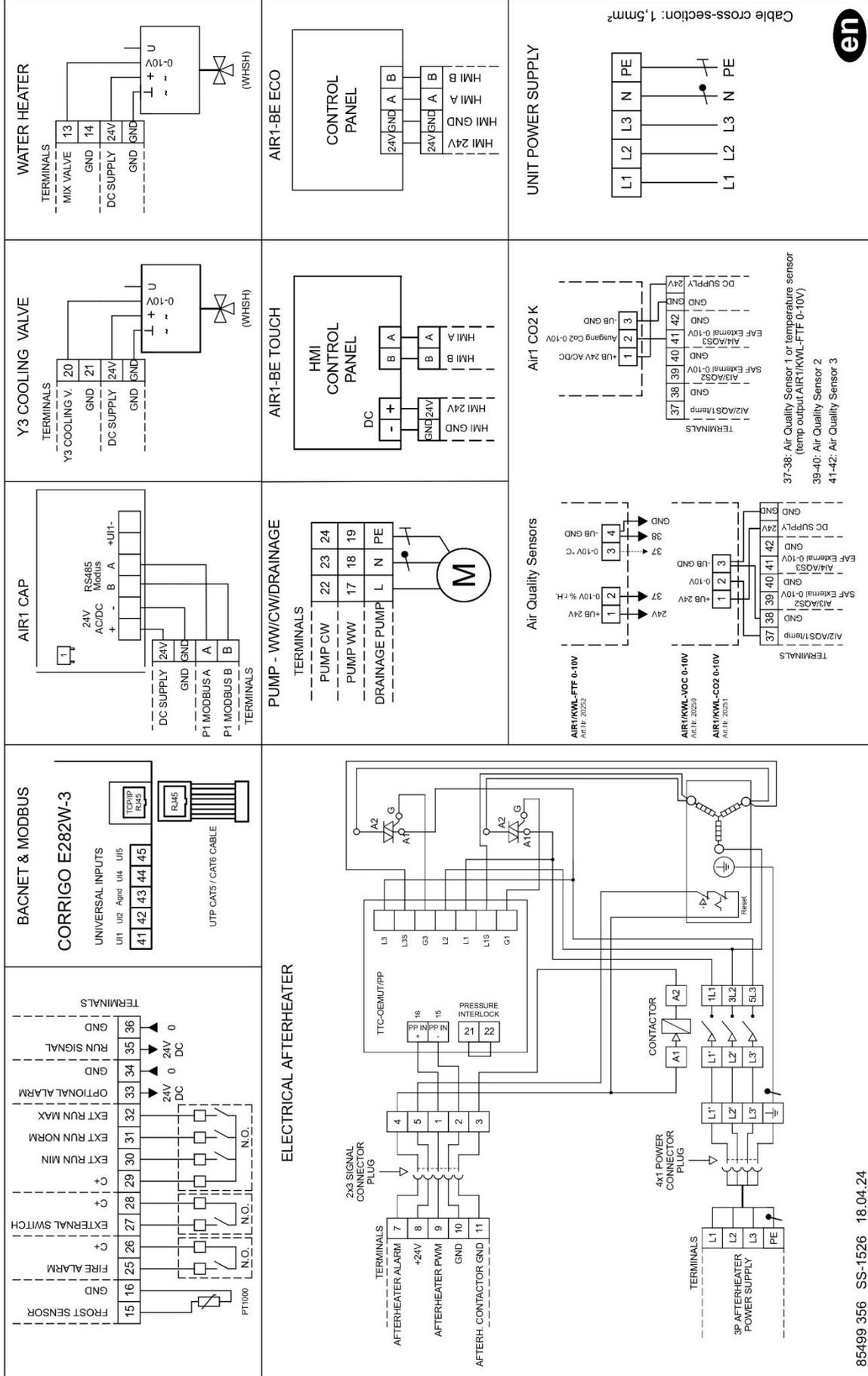
When connecting to note:

- If a room temperature sensor is used on analog input AI2, only the analog inputs AI3 and AI4 for air quality sensors are available.
- Up to 3 different type of sensors can be connected to a ventilation unit with 3 free analogue inputs. The highest ventilation requirement is always leading.
- If more than 3 sensors are to be connected, the SENSO⁺ SK is available as an accessory. The module has 6 analog inputs and one analog output. At the inputs of a SENSO⁺ SK, only sensors of the same type may be connected.
- If several sensors are connected, the current-carrying capacity of the internal power supply unit must be considered.

- AZURE 700 wiring diagram

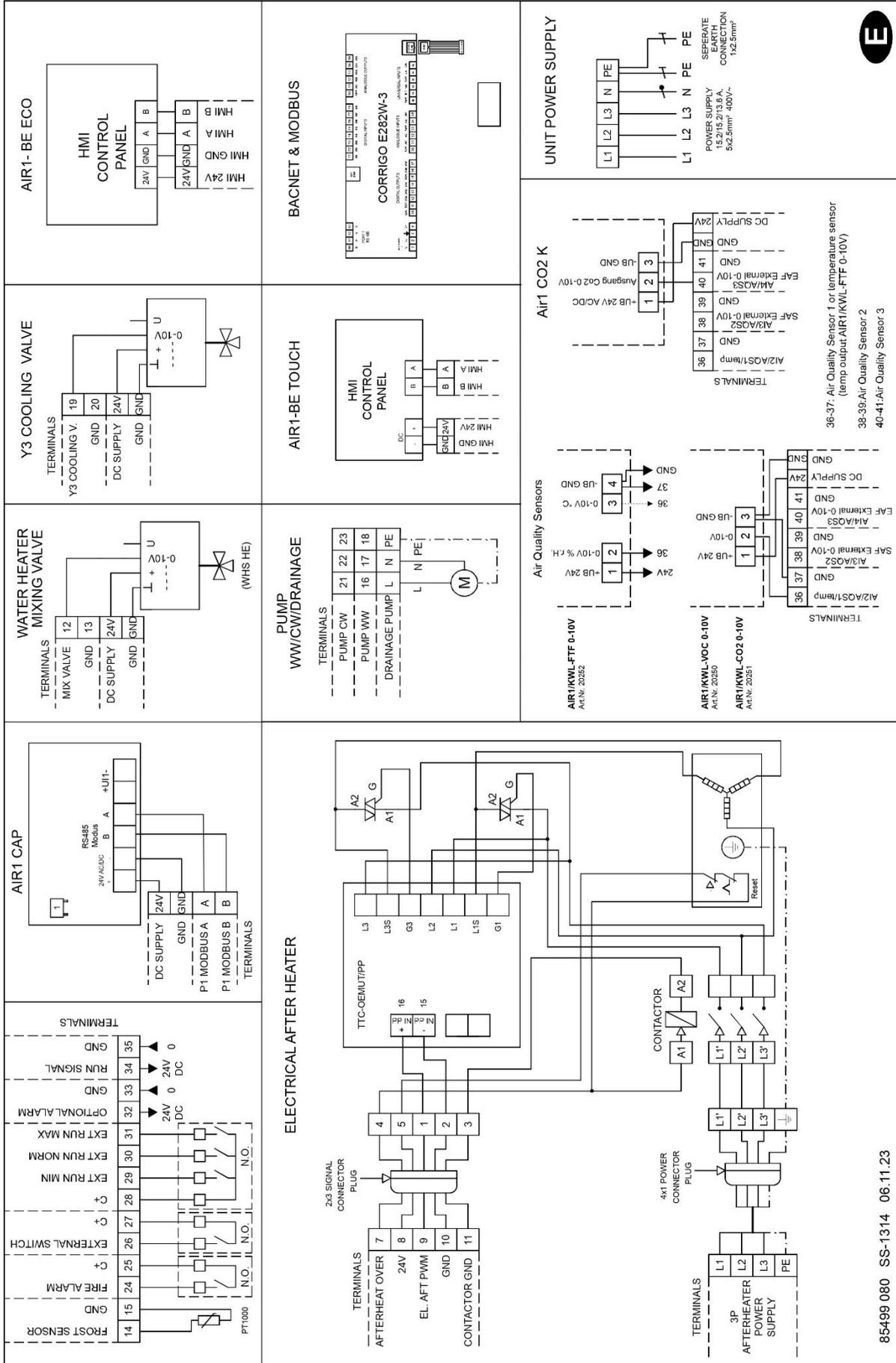


- AZURE 1000 wiring diagram



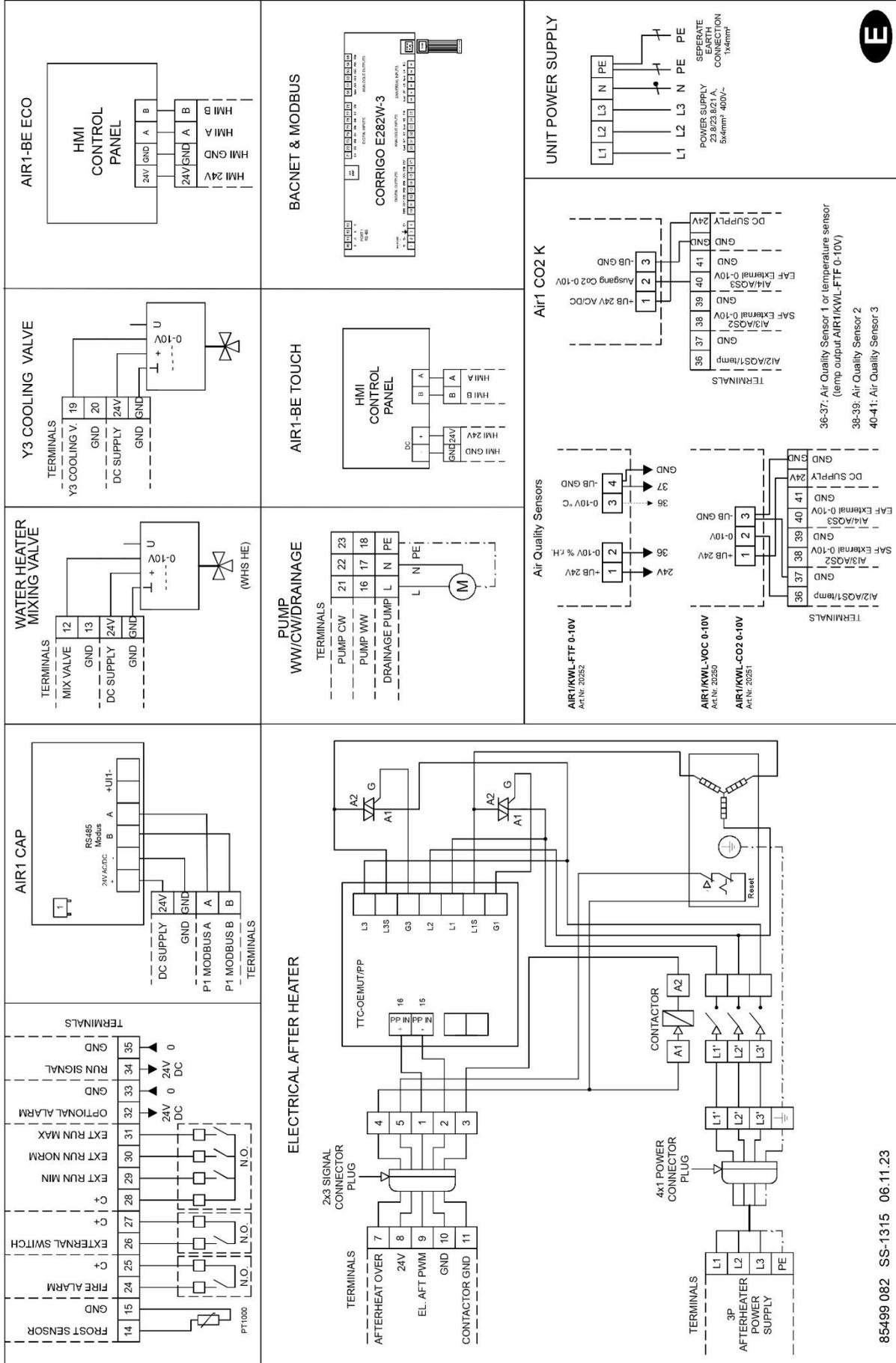
85499 356 SS-1526 18.04.24

- AZURE 1400 wiring diagram



85499 080 SS-1314 06.11.23

- AZURE 2200 wiring diagram



2.4 Commissioning assistant

With the help of the commissioning assistant (wizard), the most important settings of the ventilation unit can be made (except for time / date, Timer).

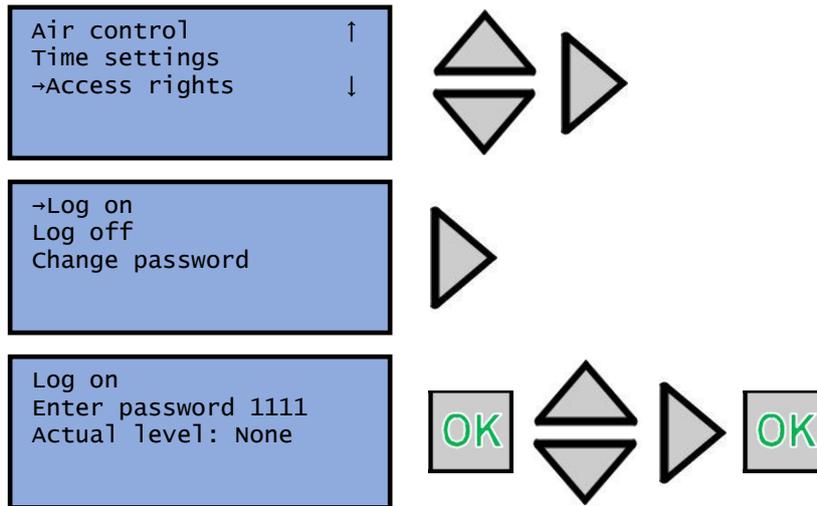
At the first start-up, the controller starts with the start-up wizard and the language selection.

If settings are to be made later (with the exception of language, Timer, temperature and ventilation setpoints), the commissioning wizard must be called up again.

2.4.1 Calling the commissioning assistant (Wizard)

Step1: Log in as an Admin

- Access rights



- Activate wizard

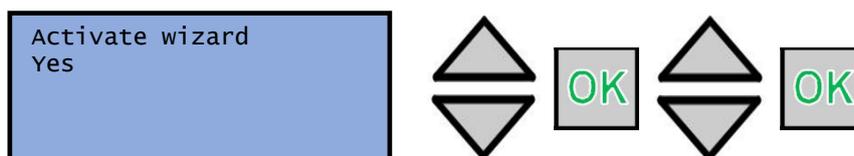
Press the "LEFT" direction button to return to the Main Menu. By selecting "Configuration", input is entered with "RIGHT" direction button.



Press the "UP-DOWN" direction button to select "System" Menu. By pressing "RIGHT" direction button to enter System Menu.



Press the "UP-DOWN" direction button to select "Activate Wizard" Menu. By pressing "OK" button to select "YES" to activate wizard.



Corrigo will start again for the startup wizard to start. While the unit is in the commissioning assistant (wizard) it can not run.



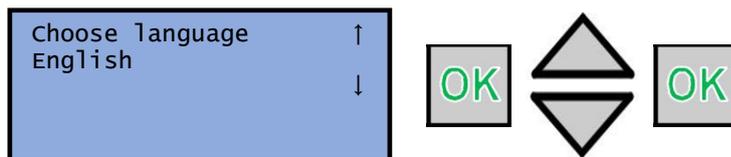
ATTENTION Do not enter the commissioning wizard while the device is operating.

2.4.2 Language Selection

Select language for the main menu. The following languages are available:

For the commissioning assistant (wizard) only German, French, English and Turkish are available.

- German
- French
- Finnish
- Russian
- Polish
- Hungarian
- Czech
- Lithuanian
- Estonian
- Latvian
- Slovenian
- Spanish
- Portuguese
- Italian
- Slovak
- Dutch
- Turkish
- Dutch
- Romanian
- English
- Swedish
- Norwegian
- Danish

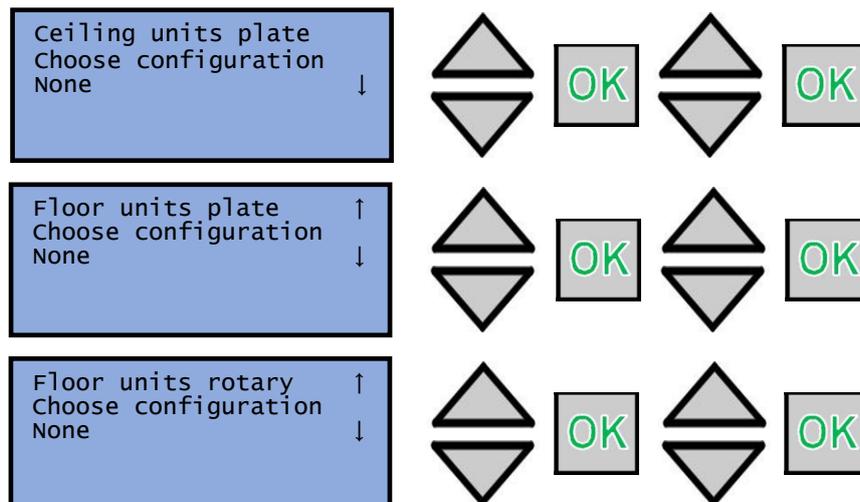


2.4.3 Device Selection

Selection of the applicable ventilation unit in 3 groups

- Ceiling unit with counter-flow exchanger for the device series AZURE
- Stand units with counter-flow exchanger for the device series EVO-C
- Stand units with rotary exchanger for the device series EVO-R

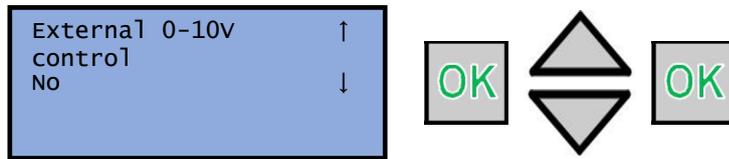
Only a single ventilation unit can be selected. In the other two groups, "None" appears automatically. The last setting is valid.



2.4.4 External 0-10V control of the fans

Selection of external 0-10 V control. This mode should be selected for VAV applications where there is another controller that regulates the airflow in the system.

Select Yes/No.



2.4.5 Temperature Control Mode

The temperature control has an influence on the existing heating and cooling registers:

- Electrical heating
- WW heating
- DX Cooling
- CW Cooling

The control function mode is defined only by the commissioning assistant (wizard).

The following temperature control modes are available:

- a. Constant Supply Air
- b. Outdoor Compensated Supply Air
- c. Cascade Room Temp Control
- d. Cascade Extract Air Control
- e. Outdoor Dependent Supply or Room Temp
- f. Outdoor Dependent Supply or Extract Temp
- g. Outdoor Compensated Room Temp Control
- h. Outdoor Compensated Extract Air Control

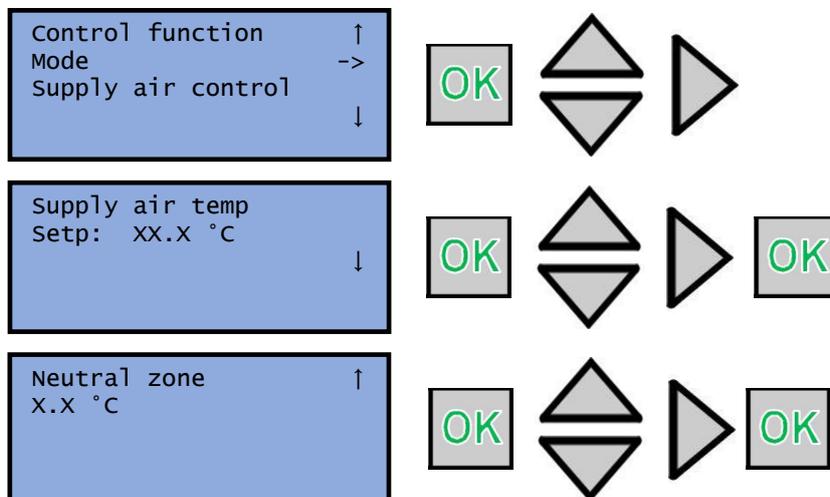
a. Constant Supply Air Temperature Control

In the Constant Supply Air control mode, the heating, heat exchanger and cooling outputs are only adjusted to the supply air sensor.

A neutral zone can be defined for the supply air setpoint.

Example: If the set point is 18 °c and the neutral zone is 2 K, the value is: heating = 17 °c (we = OK) and set point cooling = 19 °c. If the supply air temperature is in the neutral zone, "heating" and "cooling" are blocked. If the supply air temperature falls below the SetPoint-NZ/2, "heating" is active until the set point is reached. If the supply air temperature rises above the SetPoint + NZ/2, "cooling" is active until the set point is reached.

The set point is in the menu **Temperature**. (log in as User or admin).



Alarms triggered by too high or low supply air temperature are activated.
 The alarm for the control deviation of the supply air temperature is active.

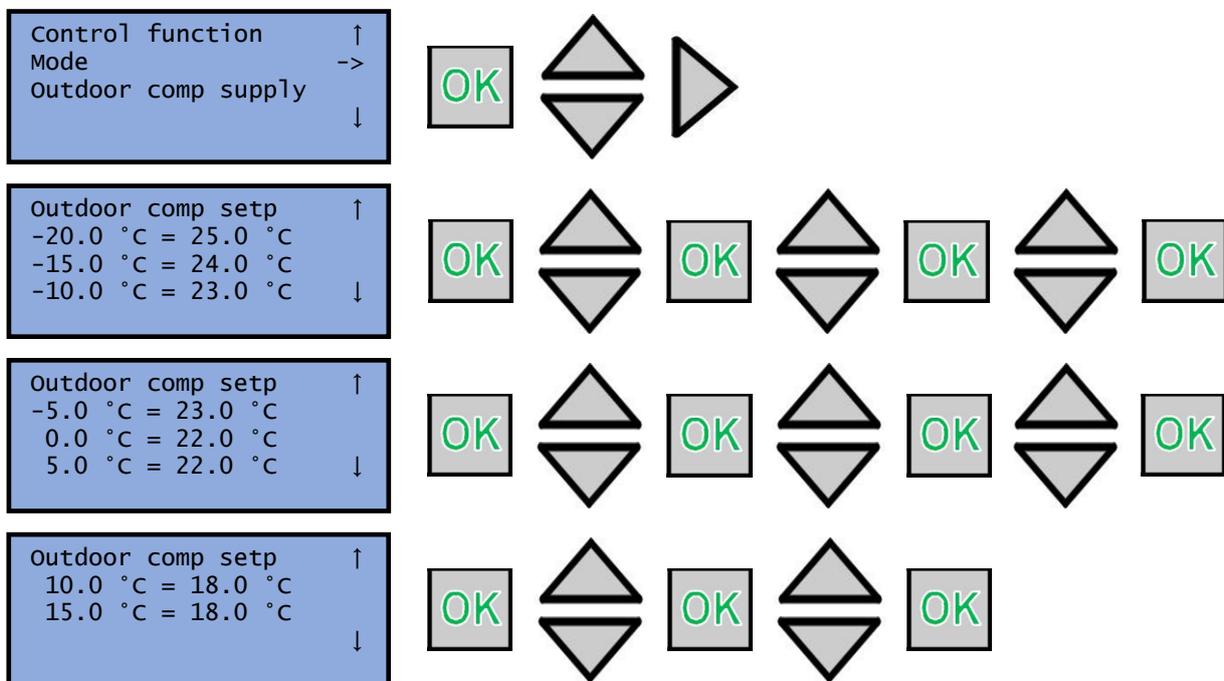
b. Outdoor Compensated Supply Air Temperature Control

The set point of the supply air temperature can be guided to improve the adjustment to room heat losses from the outside temperature. This ensures that the cooling of room walls is compensated during the cold season.

The setpoint of the supply air temperature is determined outside temperature-dependent by means of a control curve with 8 points.

Example:

Outdoor temperature [°C]	Supply Temperature [°C]
-20	25
-15	24
-10	23
-5	23
0	22
5	20
10	18
15	18



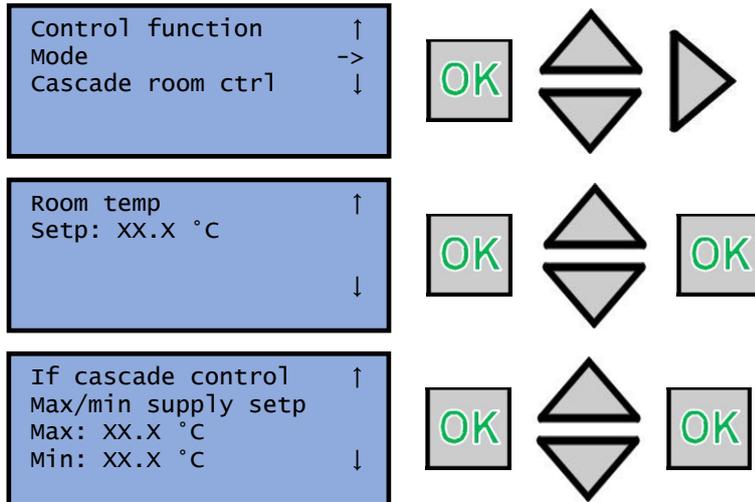
Alarms triggered by too high or low supply air temperature are activated.
 The alarm for the control deviation of the supply air temperature is active.

c. Cascade Room Temperature Control

Note: Only available with VOD-RH accessory. Connection of the analog output A2 (temperature signal) of the VOD-RH to the analogue input AI2 at the controller.

The cascade control of the room and supply air temperature is used to maintain a constant, adjustable room temperature. The room temperature controller sets the setpoint of the supply air temperature according to the deviation of the ambient temperature from the room temperature setpoint.

The room temperature SetPoint is in the menu **Temperature** (log in as User or admin).

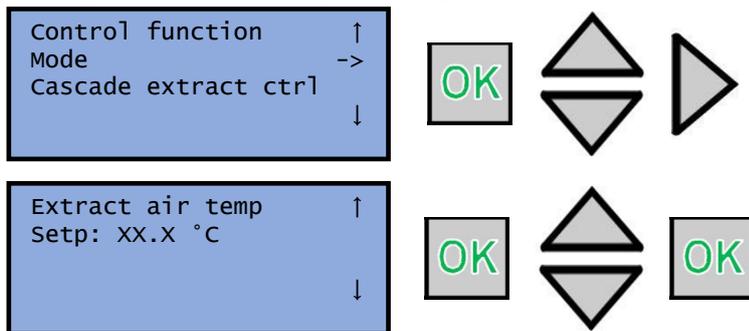


d. Cascade Extract Air Temperature Control

The cascade control of the extract air and supply air temperature is used to maintain a constant, adjustable room temperature.

The output signal of the extract air temperature control mechanism indicates the setpoint of the supply air.

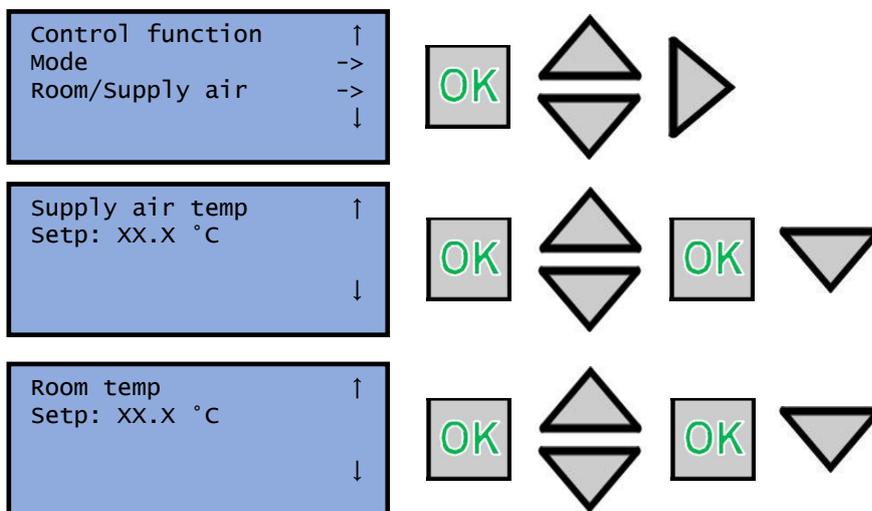
The set point is in the menu **Temperature** (log in as User or admin).

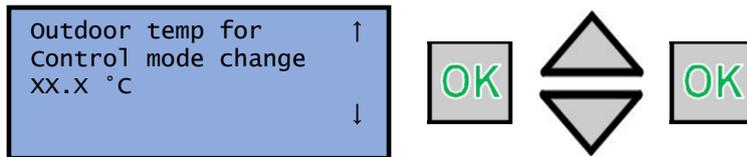


e. Outdoor Dependent Supply or Room Temperature Control

Note: Only available with VOD-RH accessory Connection of the analog output A2 (temperature signal) of the VOD-RH to the analogue input AI2 at the controller.

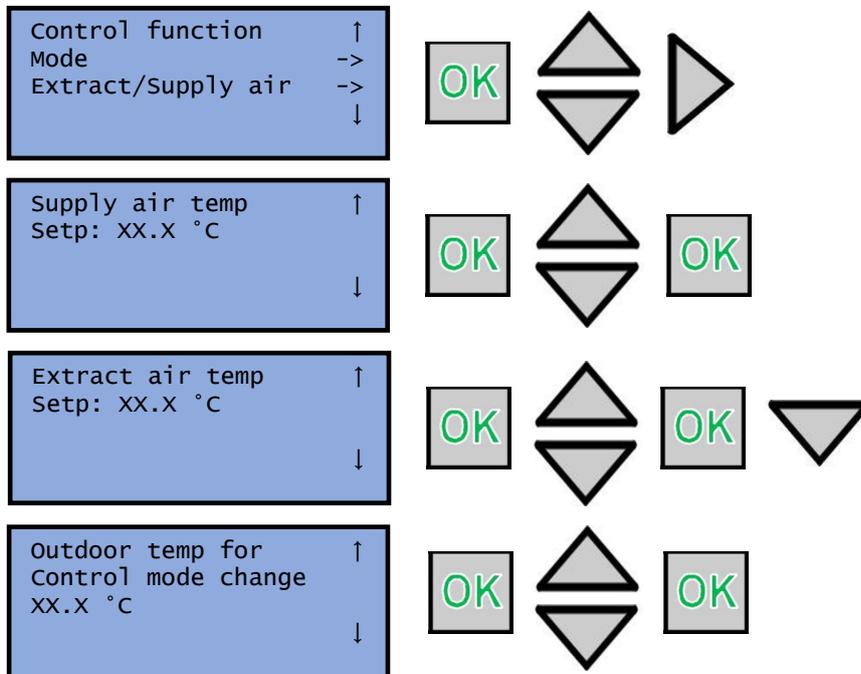
If the outside temperature is below the adjustable limit (winter), outdoor compensated supply air temperature control will be active (see b). Otherwise (summer) the Cascade Room Temp Control (see c) is active.





f. Outdoor Dependent Supply or Extract Air Temperature Control

If the outside temperature is below the adjustable limit (winter), outdoor compensated supply air temperature control will be active (see b). Otherwise (summer) the Cascade Extract Air Control (see d) is active.



g. Outdoor Compensated Room Temperature Control

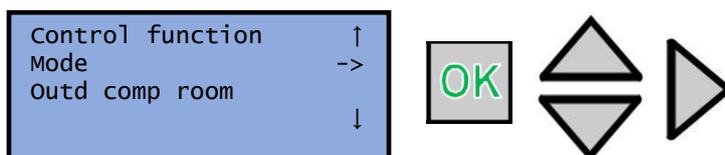
Note: Only available with VOD-RH accessory. Connection of the analog output A2 (temperature signal) of the VOD-RH to the analogue input AI2 at the controller.

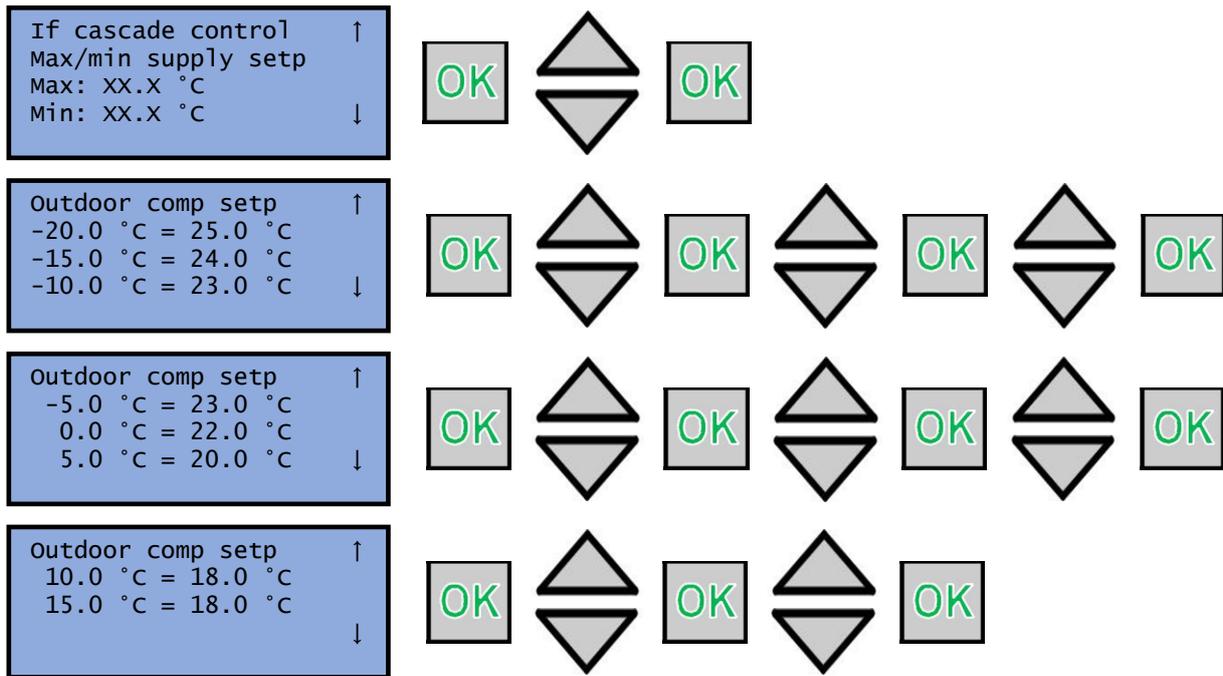
The room temperature can be adapted when the outside temperature rises. For example, at higher outside temperatures a slightly higher room temperature may be acceptable or a slightly lower in cooler weather conditions. This temperature control mode is used to conserve energy.

The setpoint of the room temperature is determined outside temperature-dependent by means of a control curve with 8 points.

Example:

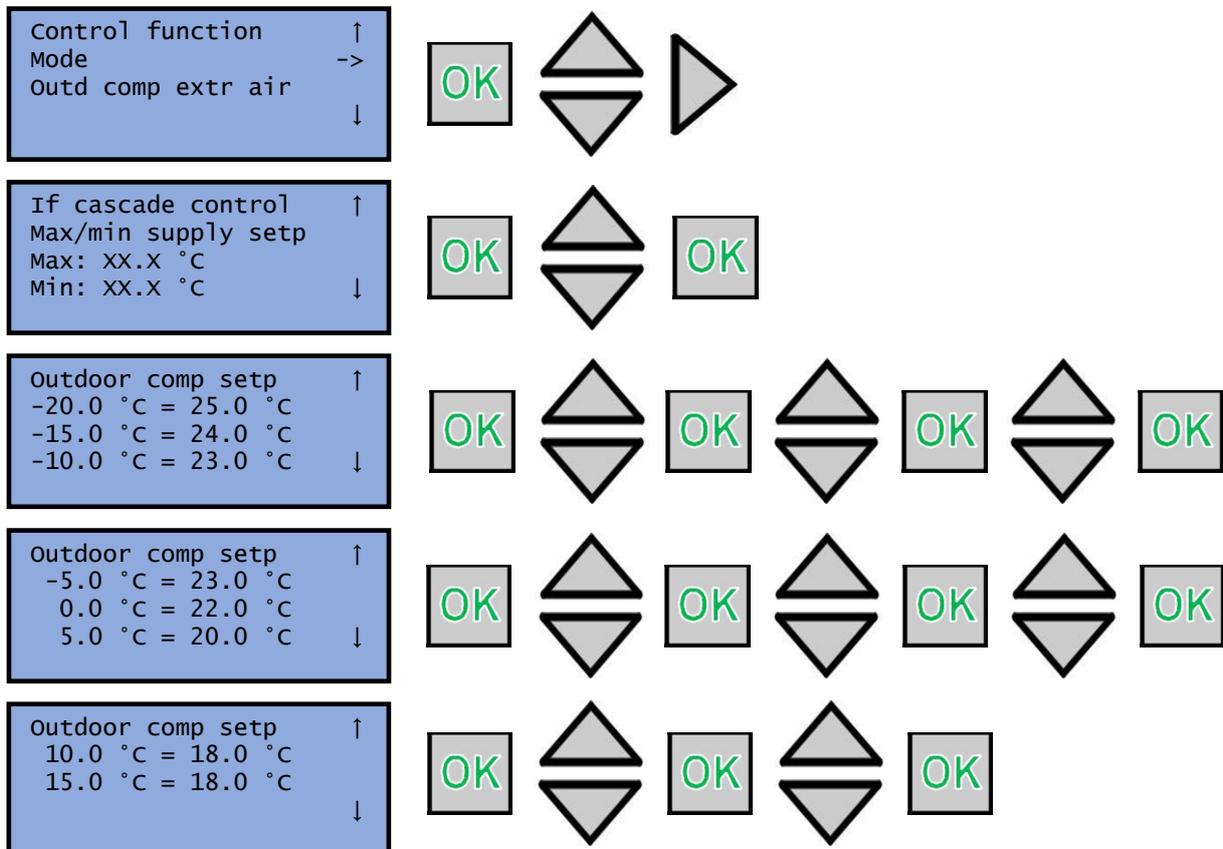
Outdoor temperature [°C]	Room Temperature [°C]
-20	18
-15	18
-10	20
-5	22
0	23
5	23
10	24
15	25





h. Outdoor Compensated Extract Air Temperature Control

The extract air temperature can be adapted when the outside temperature rises. For example, at higher outside temperatures a slightly higher extract air temperature may be acceptable or a slightly lower in cooler weather conditions. This temperature control mode is used to conserve energy.



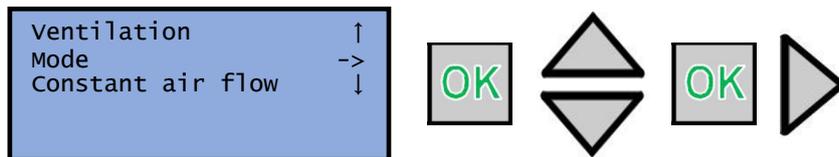
2.4.6 Ventilation Mode

The ventilation mode is defined during commissioning. This can only be changed later using the Admin Access to commissioning wizard.

The following ventilation modes are available:

- a. Constant air flow
- b. Constant speed
- c. Constant pressure
- d. External fan Control

Note: If external fan control 0-10V is selecting in the commissioning wizard setting other modes are not available.



The ventilation mode is a mode used to determine how the device fans work. In the ventilation mode menu, press the "OK" button to select the ventilation mode selection field. Press the "RIGHT" direction button to adjust the ventilation mode control. Reduced and normal and boost air flow rates of Supply and Extract fans are set in m3 / h in constant air flow mode, % in constant RPM mode, Pa in constant pressure mode by the "Up-Down" direction buttons by pressing "OK" key. Then press to "OK" button again to confirm.

The functions that can be selected for the ventilation mode are listed below.

- Constant air flow (m3 / h)
- Constant RPM (%)
- Constant pressure (Pa)

a. Constant air flow

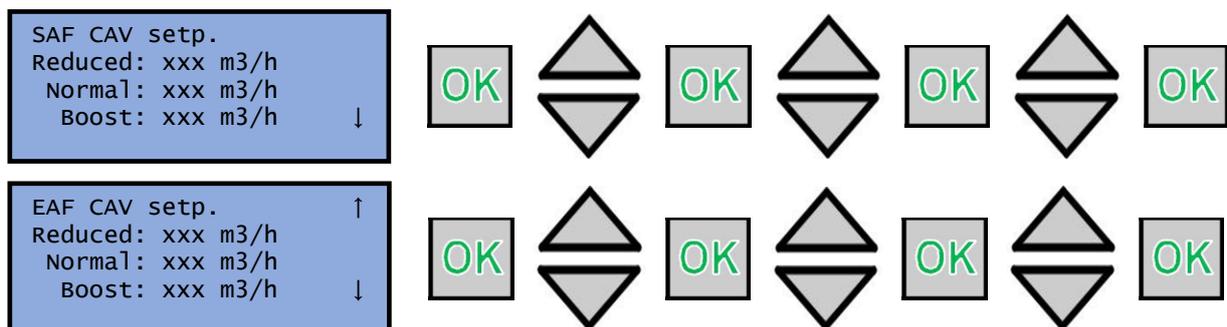
3 Ventilation levels are available:

- Reduced
- Normal
- Boost

Each ventilation stage has two independent set levels: one for the Supply fan and one for the exhaust fan.

The ventilation levels are predefined during commissioning using the Commissioning wizard. Operation of the ventilation unit is not possible while the assistant is active.

When you select constant volume flow, the volume flows can be set via the menu **Air control** be set separately for SAF and EAF.



b. Constant RPM

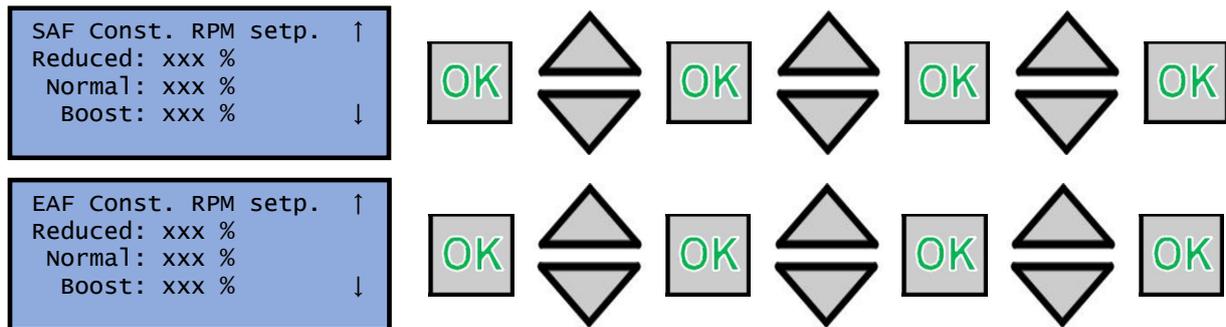
3 ventilation levels are available:

- Reduced
- Normal
- Boost

Each ventilation stage has two independent set-up levels: one for the SAF(Supply Air Fan) and one for the EAF (Exhaust Air Fan).

The ventilation levels are predefined during commissioning using the Commissioning wizard. Operation of the ventilation unit is not possible while the assistant is active.

When the constant speed is selected, the speeds can be set via the menu **Air control** be set separately for SAF and EAF.



c. Constant Pressure

Note: Additional SENSO⁺-CAP required. The installation is possible in the supply air and the extract air duct.

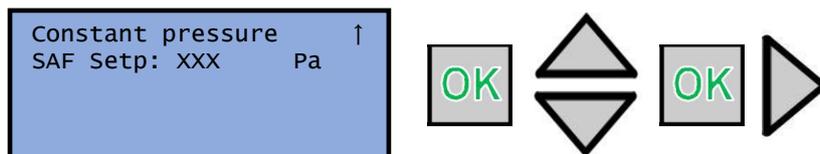
1 ventilation level is available:

- Normal

If you select a different level of ventilation (minimal, intensive) from the ventilation mode menu, The ventilation unit always runs at the set pressure setpoint.

The set point is predefined during commissioning via the commissioning assistant. Operation of the ventilation unit is not possible while the assistant is active.

If constant pressure is selected, the pressure can be set via the menu **Air control**. The channel pressure setpoint can be defined for the SAF. EAF follows the SAF with the same volume flow.



d. External Fan Control

The ventilation unit is operated according to two separate analog voltage signals (0-10 V):

- SAF: Analog input AI3
- EAF: Analog input AI4

Hints:

In this mode, there is only one (variable) ventilation level. With manual selection of any ventilation level via the ventilation mode menu, the ventilation unit always runs with the external 0-10V control signal. If "Off" is selected, the ventilation unit will not run.

In this ventilation mode, the function sensor-guided operation (ventilation on demand = VOD) is not available.

The recirculation mode via the timer and the external switching contact is still available.

Free cooling (night cooling) is still available.

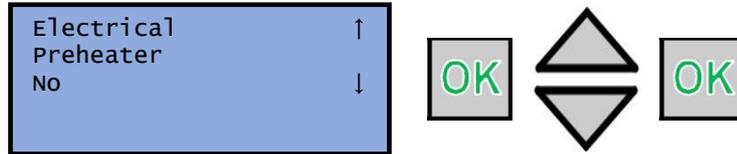
2.4.7 Electrical Preheating

Note: Standard in AZURE and EVO-C series, available as accessories for EVO-R series.

Activate/deactivate electrical preheating. By default electrical preheater is deactivated.

The electric preheating is used exclusively to prevent the freezing of the heat exchanger.

Press the "OK" button in electrical preheater menu to activate or deactivate electrical preheater By pressing "UP-DOWN" direction button to select "YES-NO".

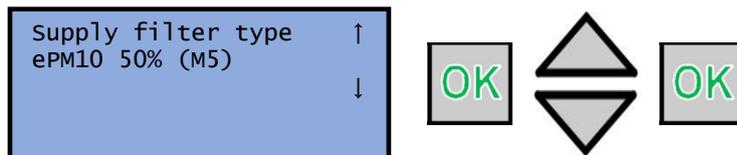


2.4.8 Supply Air filter Type

The following filter types are available:

- ePM1 55% (F7)
- ePM1 80% (F9)
- ePM10 50% (M5) + ePM1 55% (F7)
- ePM10 50% (M5) + ePM1 80% (F9)

A corresponding filter loss curve is stored for each type of filter. Regardless of the selected operating point, the control gives a filter / Maintenance alarm when the filter pressure loss becomes bigger than allowed. After changing the filter, the alarm automatically goes out.



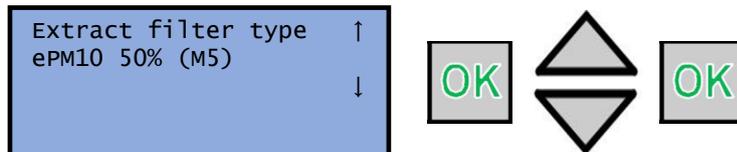
In the supply filter type menu, with the "OK" button, the supply filter type is selected with the "UP-DOWN" direction buttons and the "OK" button is pressed to confirm.

2.4.9 Extract Air Filter Type

The following filter types are available:

- ePM10 50% (M5)
- ePM1 55% (F7)

A corresponding filter loss curve is stored for each type of filter. Regardless of the selected operating point, the control gives a filter / Maintenance alarm when the filter pressure loss becomes bigger than allowed. After changing the filter, the alarm automatically goes out.



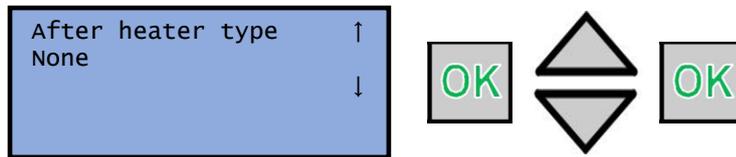
In the extract filter type menu, with the "OK" button, the extract filter type is selected with the "UP-DOWN" direction buttons and the "OK" button is pressed to confirm.

2.4.10 After Heater Type

Selection of the optionally available heater types. The following selection is available:

- No
- Water (WW heating register)
- Electrical (electrical heating register)

In the after heater type menu, with the “OK” button, the after heater type is selected with the “UP-DOWN” direction buttons and the “OK” button is pressed to confirm.

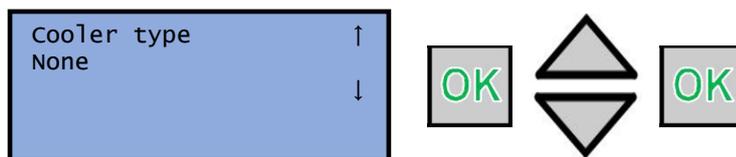


2.4.11 Cooler

Selection of the available cooler types. The following selection is available:

- None
- Water (CW cooling register)
- DX (DX cooling register)

In the cooler type menu, with the “OK” button, the cooler type is selected with the “UP-DOWN” direction buttons and the “OK” button is pressed to confirm.

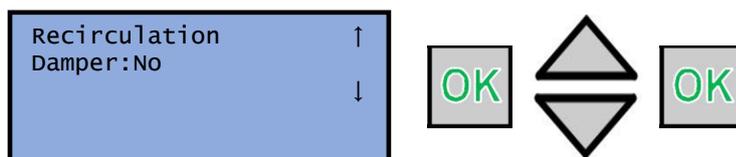


2.4.12 Recirculation damper

Note: Not available for AZURE series units and not available for EVO-R series units up to EVO 50-R.

Select Yes/No.

In the recirculation damper menu, with the “OK” button, the recirculation damper is selected with the “UP-DOWN” direction buttons and the “OK” button is pressed to confirm.

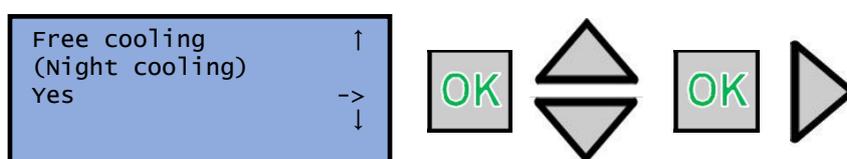


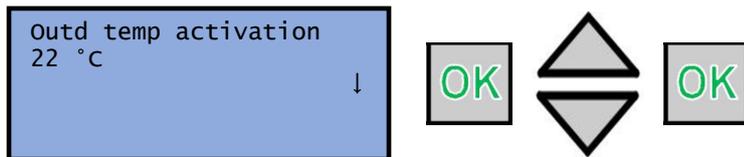
2.4.13 Bypass / Free cooling (night cooling)

Select Yes/No.

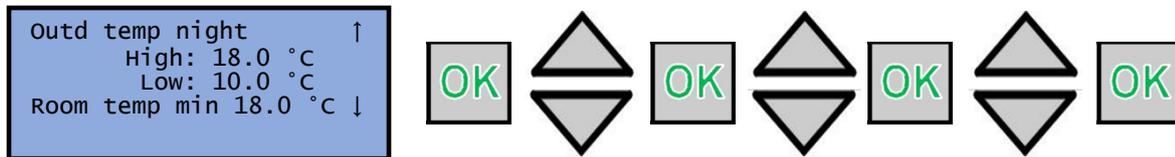
Settings:

- Outside temperature activation
- Outside temperature night High
- Outside temperature night Low
- Room temperature Minimum
- Hour for Start and stop free cooling
- Time to block heat output after free cooling
- The ODA sensor is always placed in the intake channel. So the setting must be always “yes”.





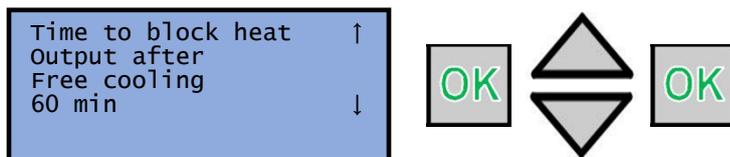
In the outdoor temperature activation menu, press OK key to set the outdoor temperature activation set value for free cooling and press OK button to select the temperature.



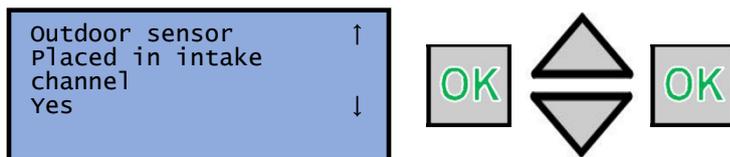
The Outdoor temperature night menu is entered with the “OK” button. The high and low limits of the free cooling outdoor air temperature are set by the “UP-DOWN” direction buttons. Press the “OK” button. If the outside temperature is higher than the set High value or the outside air temperature is below the set Low value or if the Room temperature falls below the set value and below, the free cooling function stops.



Free cooling is used to set the start and end time. Start and end times, OK key is pressed, “UP-DOWN” buttons are set, and then press “OK” button. Free cooling is started if all operating conditions have occurred within the set times.

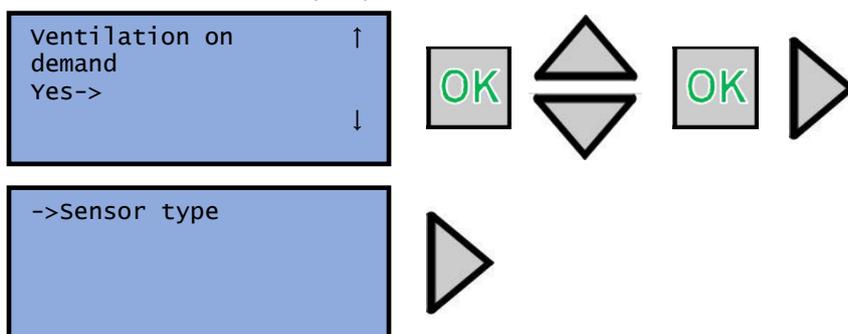


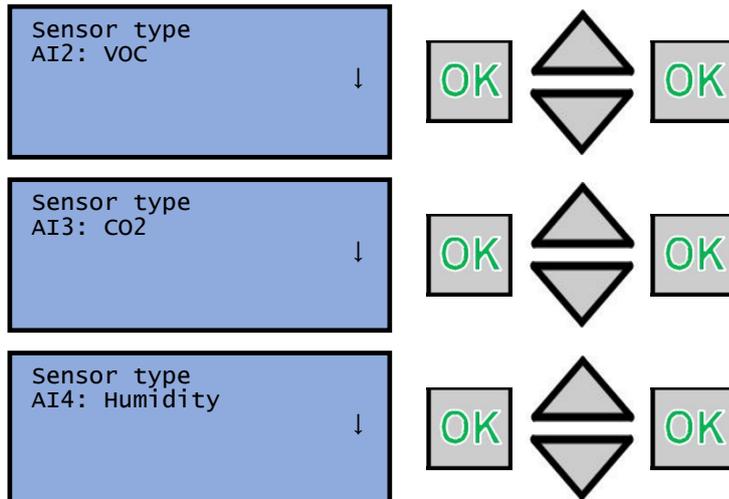
It is used to prevent heating outputs after free cooling. It is a function used for energy efficiency. After the free cooling, press OK button in the time to block heat output after freecooling menu, press the “UP-DOWN” buttons to set the heating outputs to be blocked for a few minutes and press the OK button to confirm.



All units have an ODA temperature sensor as a standard. In the outdoor sensor placed in intake channel menu is entered with “OK” button. With the “UP-DOWN” direction buttons, it is selected as YES and “OK” button is pressed to confirm.

2.4.14 Ventilation on demand (VOD)





In the ventilation on demand menu is selected by “YES” button. With the “UP-DOWN” direction buttons, it is selected as YES and then press “RIGHT” direction button to select the type of sensor that connected to inputs AI2, AI3, AI4. After the selection of sensor types, press the “LEFT” direction button to go back Sensor type settings.



In the sensor type menu is entered by “RIGHT” direction button. With the “OK” button Reduced and boost and difference and stop time can set by the “UP-DOWN” direction buttons and press “OK” to confirm.

- To perform sensor settings:
 - Reduced: Activation of the ventilation level minimal from this sensor value.
 - Boost: Activation of the ventilation level intensive from this sensor value.
 - Diff: hysteresis
 - Stop time: As soon as the ventilation unit is on the ventilation level for more than time set, sensor-controlled ventilation is terminated. 0 hours means that the sensor-guided operation is never terminated due to a high sensor requirement.



Press “OK “ button to enter the selected air quality sensor, reduced ventilation requirement, boost ventilation requirement, difference and stop time set values. Then press the “UP-DOWN” keys to set the desired values and press “OK” to confirm.

Notes:

To use this function, you must have at least one air quality sensor selected.

The sensor-controlled operation is only activated via Timer.

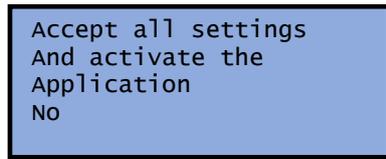
Up to 3 different or identical sensors can be connected to a ventilation unit with 3 free analog inputs. The highest ventilation requirement is the leader.

If a room temperature sensor is use at analogue input AI2. (VOD-RH Temperature 0-10V Sensor) Only the analogue inputs AI3 and AI4 for air quality sensors are available.

If more than 3 sensors are to be connected The signal converter SENSO+ SK with 6 analogue inputs and an analogue output available. Only the same type of sensors can be connected to one SENSO+ SK.

2.4.15 Leaving the commissioning assistant

By selecting “Yes” at “accept all settings menu” the controller will restart to start the desired application.



The device can now be put into operation. Necessary settings after traversing the commissioning wizard:
Time/Date/ Timer See chapter 4.1.2.a

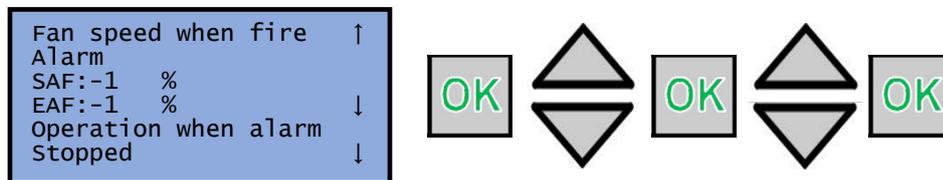
2.5 Emergency operation/Fire mode

When the potential-free switching contact DI2 is closed, the device goes into emergency mode/fire modes.

To access the settings: Log in as admin.

The Emergency/Fire mode settings are located in the Configuration menu: Fire function

- Operation when alarm (stopped, only EAF, only SAF, normal run, continuous run)
- Fan speed when fire alarm SAF, EAF



- Pressure SAF/EAF when fire alarm (-1 means no change compared to previous operation)



Note:

A pre-set fan speed for use during fires can be set. “-1” will deactivate this function. The fire mode is activated by closing the switching contact DI2.

CHAPTER 3

TECHNICAL DATA

3.1 Performance Data and Technical Data

Mechanical connections must be made correctly in order to obtain maximum efficiency from the device. The device's thermal efficiency, sound level and electrical performance may vary depending on the ambient and operating conditions. These conditions may affect the measurement result on site and vary from the catalogue data.

Unit type	AZURE 500	AZURE 700	AZURE 1000	AZURE 1400	AZURE 2200	AZURE 3200
Air flow (m ³ /h)	500	700	1000	1400	2200	3200
Nominal current – ventilation (A)	10,3	6,4/3,4/3,7	7/7/5,5	8,7/8,7/6,8	13,6/13,6/10,5	20,9/20,9/15,5
Nominal current – electrical afterheater (A)	7	3,3/3,3/3,3	5,2/5,2/5,2	6,5/6,5/6,5	10,2/10,2/10,2	15,2/15,1/15,1
Max. total current (A)	17,3	9,7/6,7/7	12,2/12,2/10,7	15,2/15,2/13,3	23,8/23,8/20,7	36,1/36/30,6
Power consumption – ventilation (kW)	0,34	0,34	0,44	1	1,56	2,6
Power consumption – pre-heating (kW)	1,6	2,3	3,6	4,5	7,05	10,5
Voltage/Frequency	1~230V 50Hz	3~400V 50Hz				
Filter class (extract / outdoor air)	ePM10 50% ePM1 55%					
Weight (kg)	130	155	178	200	285	370
IP Class	IP31	IP31	IP31	IP31	IP31	IP31

3.2 Unit overview

- Sectional view of standard unit including internal accessory. (Fig. 16)

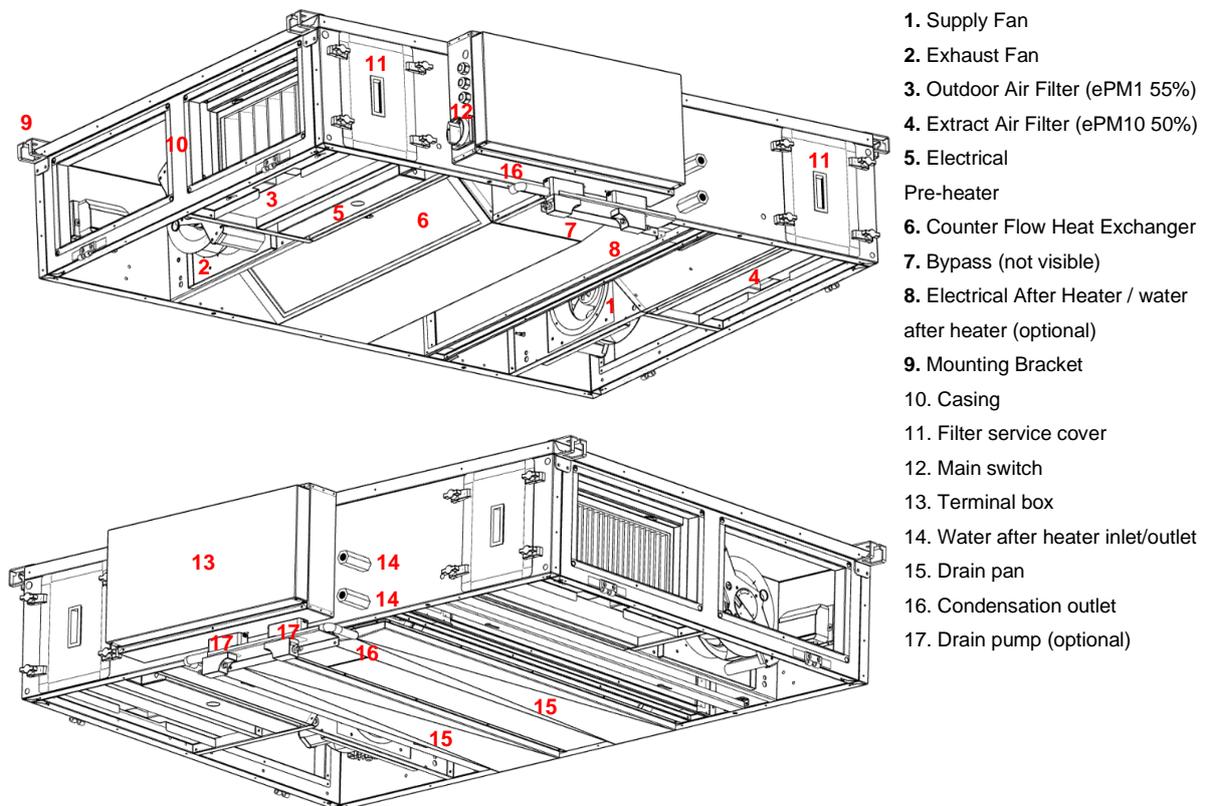


Fig. 16

3.3 Dimensions

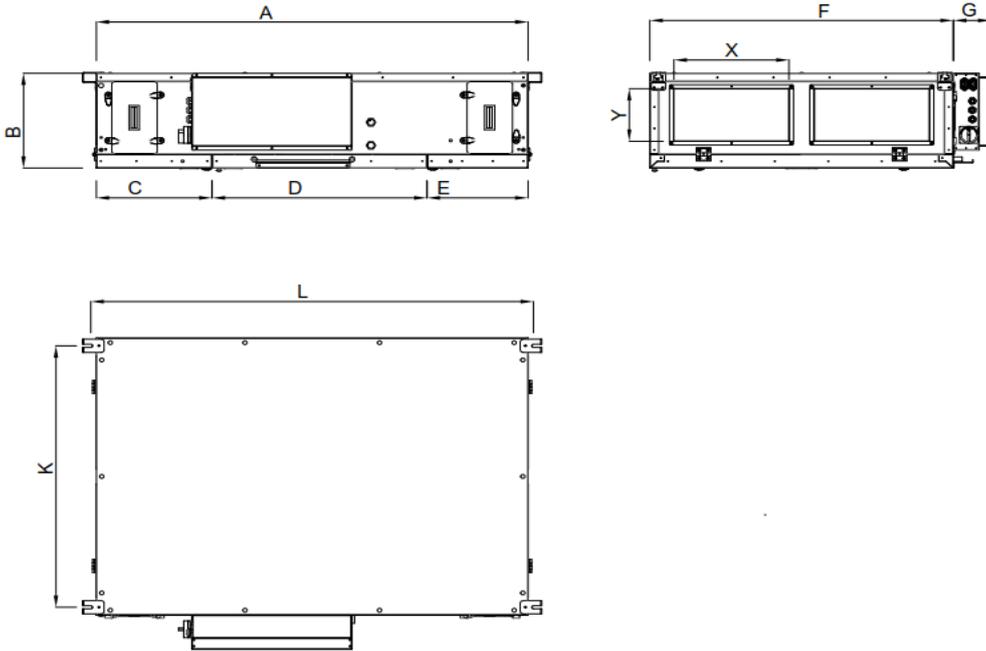


Fig. 17

MODEL	A	B	C	D	E	F	G	K	L	X	Y
AZURE 500	1540	383	465	674	401	920	130	820	1578	300	150
AZURE 700	1590	385	466	749	375	1095	130	995	1628	400	200
AZURE 1000	1590	382	466	749	372	1345	130	1245	1628	500	200
AZURE 1400	1715	425	503	799	413	1395	130	1295	1753	500	250
AZURE 2200	1940	508	557	932	451	1765	130	1665	1978	500	300
AZURE 3200	2090	594	597	967	526	2015	130	1915	2128	700	400

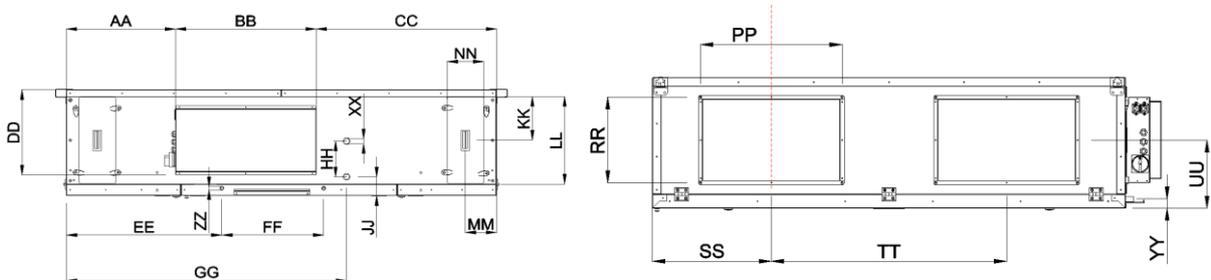
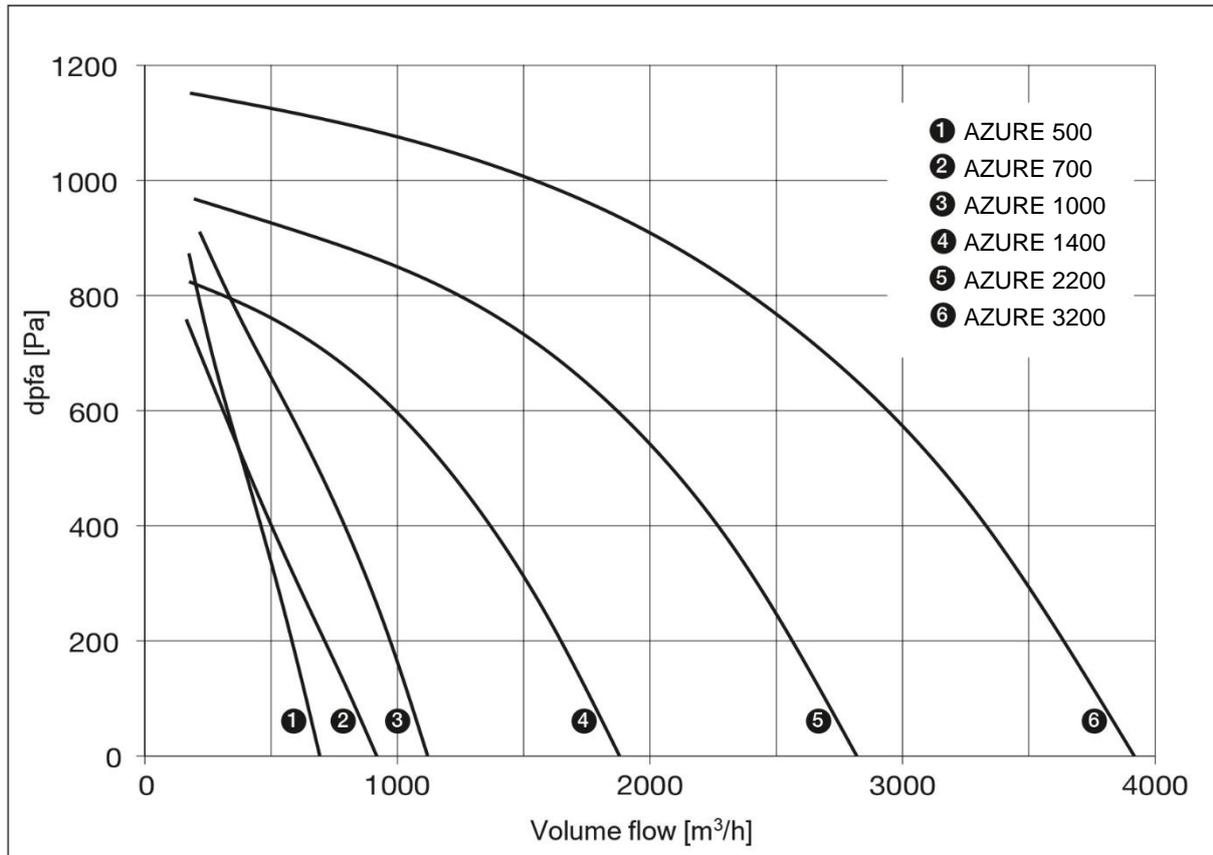


Fig. 18

MODEL	AA	BB	CC	DD	EE	FF	GG	HH	JJ	KK	LL
AZURE 500	394	521	625	313	613	296	964	65	88	133	283
AZURE 700	399	556	635	315	615	338	1024	88	86	135	285
AZURE 1000	399	556	635	315	615	338	1024	88	86	133	282
AZURE 1400	414	606	695	337	653	373	1118	116	85	155	325
AZURE 2200	539	606	795	430	737	436	1275	163	89	200	408
AZURE 3200	614	606	870	502	776	436	1379	197	87	243	494

MODEL	MM	NN	PP	RR	SS	TT	UU	YY	ZZ	XX
AZURE 500	177	206	320	170	254	412	192	36,5	17,5	1/2 inch
AZURE 700	177	206	420	220	300	487	182	36,5	17,5	1/2 inch
AZURE 1000	177	206	520	220	354	637	203	36,5	17,5	1/2 inch
AZURE 1400	177	206	520	270	395	605	202	36,5	17,5	1/2 inch
AZURE 2200	177	206	520	320	454	854	254	36,5	17,5	1/2 inch
AZURE 3200	177	206	720	420	530	955	279	36,5	17,5	3/4 inch

3.4 Performance curves



CHAPTER 4

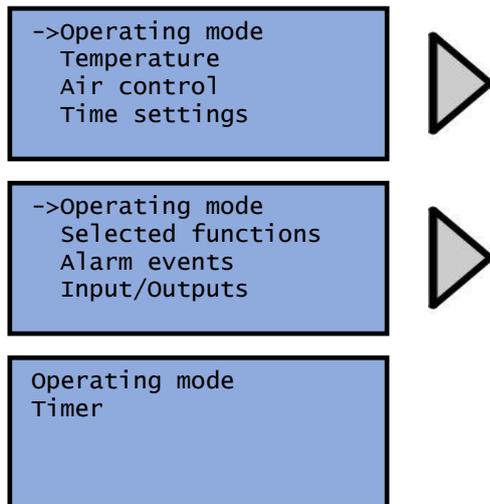
FUNCTIONS AND SETTINGS

4.1 Operating modes

The following operating modes are available:

- Manual operation
- Timer (incl. optional sensor operated operation)
- Sensor-controlled operation (via timer)
- Recirculating air (via temperature and timer)
- Bypass (via commissioning assistant and timer)

In addition, manual operation via switching contacts is possible.



4.1.1 Manual operation

Selection of

- Manual Reduced
- Manual Normal
- Manual Boost
- Off

When selected, the ventilation unit will run with the set target values for the respective level.

The device is in standby mode immediately after switching on the main switch.

Hint:

Constant pressure ventilation mode: In this mode, there is only one ventilation level. If you select any ventilation level manually using the menu **Ventilation Mode** the ventilation unit always runs at the set pressure setpoint.

Hint:

EVO-TOUCH: The ventilation unit returns to automatic mode after an adjustable time "return to timer after" has elapsed. This also applies to the manual selection of "Off".

If a permanent manual operation is desired, the adjustable time "return to timer after" must be set to zero.

4.1.2 Timers

The device runs only after the set time intervals of the Timers.

For the use of the Timers must be in the menu mode **Timers** be set.

If Timers is selected and no switching contacts are active, the device runs only according to the Timer settings.

If there are several timers active at the same time, the function with the highest priority is active. No active Timers means that the device is not running.

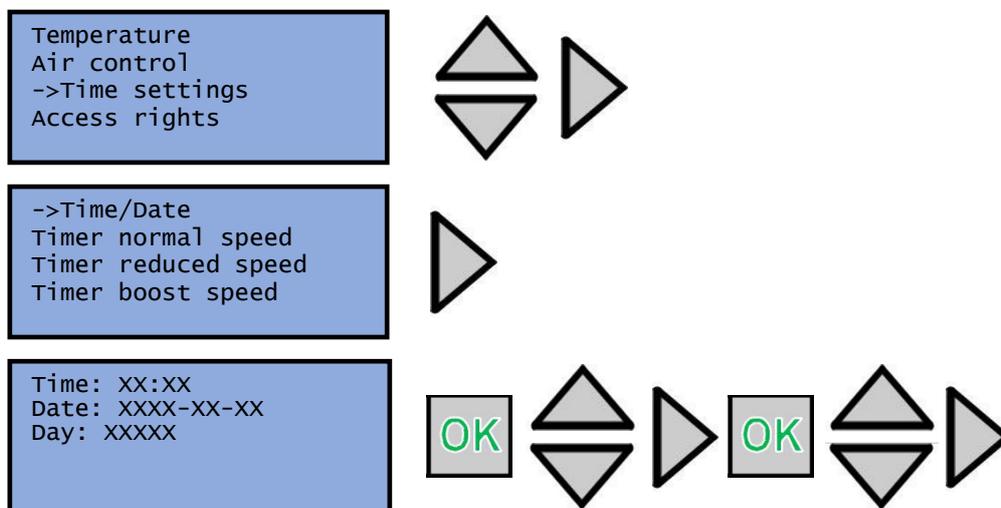
Manual operation and switching contacts blocks the Timers operation.

The switching contacts over control the Timers permanently.

When using an EVO-TOUCH, the unit will change after manual operation (non-switching contacts) back after an adjustable time to Timers operation.

a. Time/Date Set

To set Time and Date, you must first log in as User or Administrator. Then click Time Settings with the "RIGHT" direction button. After that you will enter the "Time/Date" menu with the "RIGHT" direction button. In the "Time/Date menu using "UP-DOWN" direction buttons to set the time and date then click "OK" button to confirm.



b. Day/Week Program

The Timers has an adjustable weekly program with two operating intervals for each ventilation level on each weekday.

Special feature of EVO-TOUCH: Four operating intervals for each level on each weekday.

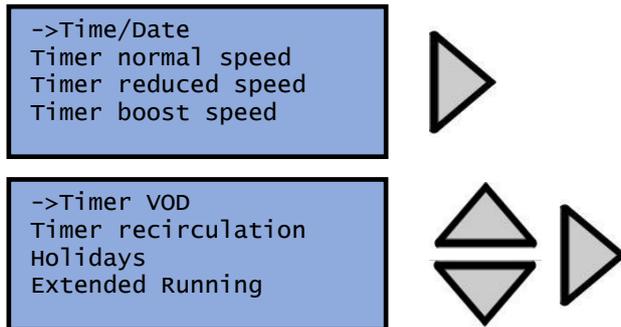
The following ventilation levels/functions are available:

- Timer reduced speed
- Timer normal speed
- Timer Boost speed
- Timer VOD (Accessories required, sensor operated operation)
- Timer Recirculation (accessories required, not available on AZURE equipment)

At times when no ventilation levels/function is selected, the device does not run (standby).

Setting the weekly program:

- Login as user or admin
- Call Up the Timer settings menu
- Call up the desired Timer
- Set Timer for all days



Priorities Hours (Highest Up):

- Timer boost speed
- Timer normal speed
- Timer VOD
- Timer reduced speed
- Timer recirculation

If the timers overlap, for example, a boost speed time and normal speed timer programmed at the same time, the timer operation with the higher priority will run and the ventilation unit will run in the boost speed ventilation level.

Special feature with simultaneous programming of timer recirculation and timer VOD: Sensor based recirculation activation:

If the timer VOD and timer recirculation are active at the same time and no air quality sensor reaches the upper sensor limit (boost speed ventilation), the unit is in recirculation mode.

When a connected sensor reaches the upper sensor limit, the recirculation mode stops and the unit runs on Ventilation on demand mode (VOD).

If the sensor signal drops to the lower sensor limit, the ventilation unit switches back to recirculation mode.

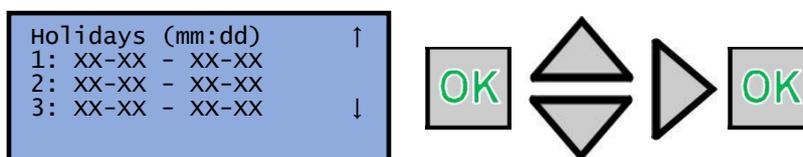
Recirculation mode does not work if timer reduced speed , timer normal speed or timer boost speed are in operation at the same time because it has a lower priority.

c. Holiday

The Timer settings has a programmable holiday calendar with up to 24 holiday periods per year.

Setting the holiday calendar:

- Login as user or admin
- Calling the Timer settings menu
- Holiday Day according to “setting of the Days/Week programs” program. The ventilation unit always runs during all holiday periods (max. 24) with the settings of the holiday day.
- Visit Holiday Calendar
- Define vacation periods



4.1.3 Ventilation on demand (VOD)

Operation of the ventilation unit according to one or more air quality sensors. The sensor with the highest ventilation requirement determines the ventilation.

The sensor-guided operation can only be operated via the Timer VOD can be started.

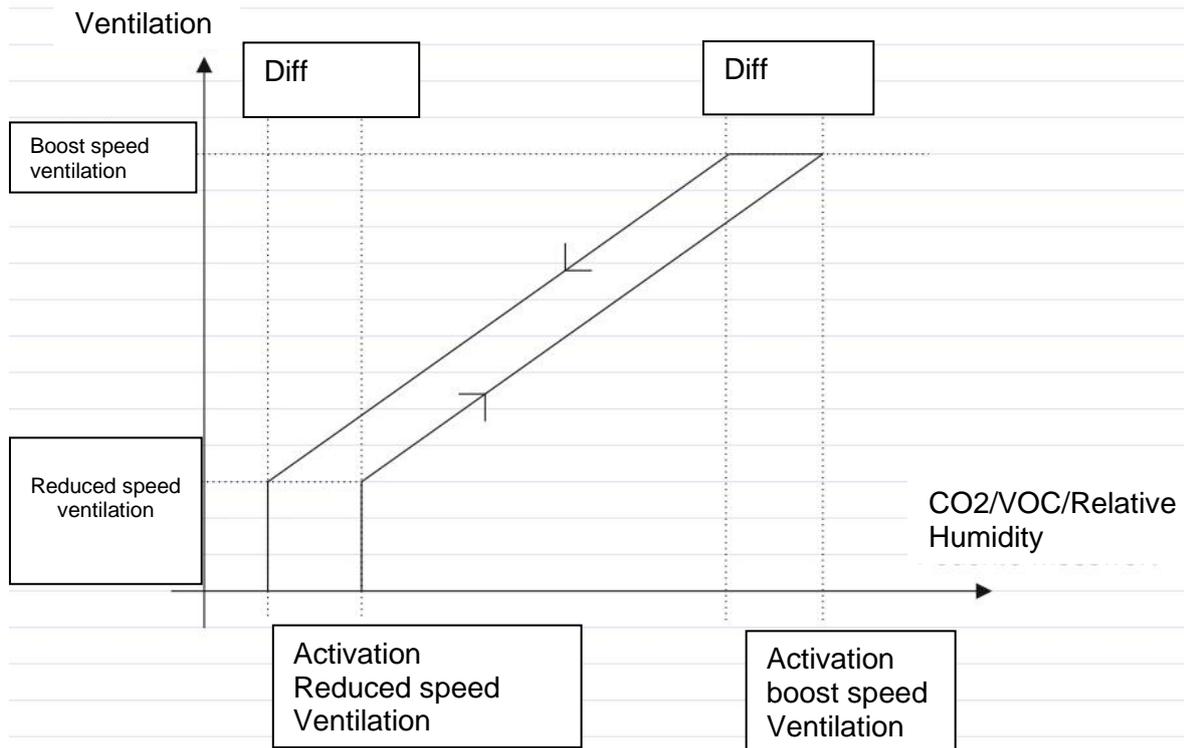
In order to use the sensor-controlled operation (VOD = Ventilation On Demand), it must first have been activated in the commissioning wizard.

An air quality sensor (external accessory) must also be connected.

Calculation basis: VOD-CO₂ = 200 mA, VOD-RH = 30 mA, VOD-VOC = 40 mA. VOD-CO₂ K=200mA

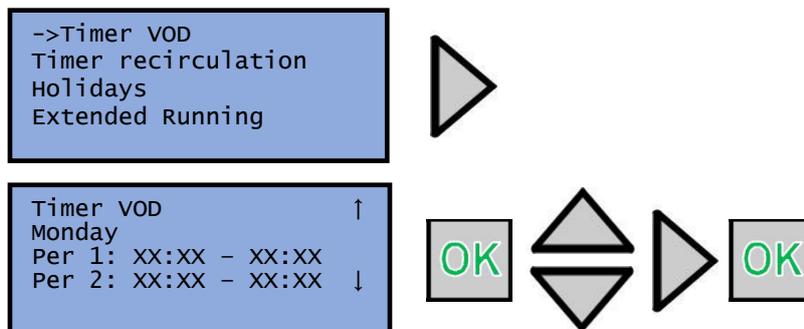
Settings for the sensor-controlled operation:

The settings are made in the commissioning wizard.



- Reduced: Activation of the ventilation level -reduced- from this sensor value.
- Boost: Activation of the ventilation level -boost- from this sensor value.
- diff: hysteresis

VOD Stop time: As soon as the ventilation unit has been operated in boost speed for more than 2 hours on the ventilation stage, the sensor-controlled ventilation for the set stop time is terminated. 0 hours means that the VOD mode is never terminated due to a high sensor requirement.



4.1.4 Recirculation damper

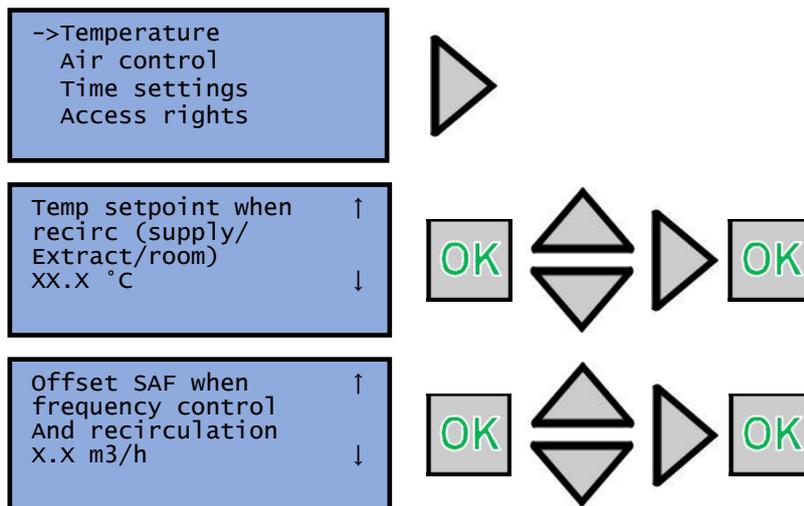
In recirculation mode, the extract air is 100% returned to the supply air.

During recirculation mode, a separate temperature setpoint and a fan offset are available.

To use the recirculation mode, it must first have been activated in the commissioning wizard (see chapter 1 commissioning).

Settings for the recirculation mode:

- Log in as admin
- Call up the Temperature menu
- Set setpoint (temperature) for recirculating air
- Set supply air fan offset



The recirculating air can be started as follows:

- via the recirculation timer
- via the external switching contact D18

Recirculation stop function:

If the timer VOD and the circulating air timer are active at the same time and no air quality sensor reaches the upper sensor limit (boost speed ventilation), the unit is in recirculation mode.

When a connected sensor reaches the upper sensor limit, the recirculation mode stops and the unit enters sensor-guided mode (VOD).

If the sensor signal drops to the lower sensor limit, the ventilation unit switches back to recirculation mode.

Note:

Recirculation mode does not work if timer reduced, timer normal or timer boost speed are in operation at the same time because it has a lower priority.

4.1.5 By-Pass Ventilation

In transition periods (spring and autumn) if the outside temperature is desirable the bypass ventilation can be used to eliminate the heat recovery (natural bypass cooling). In this case the air is routed through the bypass facilities and not through the heat exchanger. The bypass can also be used in the summer months for so-called “night cooling “. With this function the effect of cool outside temperatures at night is used to cool down the room during the night.

The night cooling effect and “natural bypass cooling” is strongly influenced by the temperature differences between outside air/supply air and room air, the flow rate, the shade and the required cooling loads.

Bypass cooling will never replace air conditioning!

In order to use the free cooling system, it must be activated in the commissioning assistant (wizard).

In order for the free night cooling to be active, the following conditions must be met:

- The unit has been in operation within the last 4 days.
- The outside temperature was above the set limit (XX°C) during operation.
- It is between XX:XX and XX:XX am (adjustable).
- The following Timer are turned off: Timer VOD, Timer Normal Speed, Timer Boost Speed, Timer recirculation.
- A Timer will be turned on over the next 24 hours.

Stop conditions for the free cooling:

- The outside temperature is above the set maximum value (e.g. 18 °C) or below the set minimum value (e.g. 10 °C).
- The room temperature/exhaust air temperature is below the set stop (e.g. 18 °c).
- One of the following Timer is switched on: Timer VOD, Timer normal speed, Timer boost speed, Timer recirculation.
- It's after e.g. 07:00 am.

4.1.6 Overrun

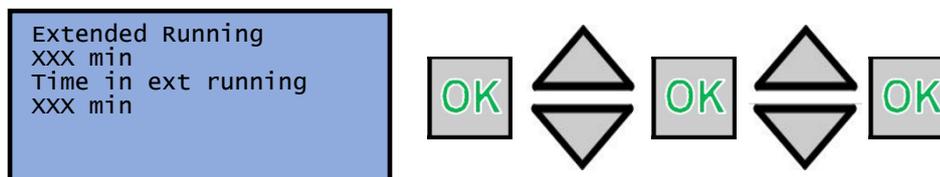
The switching contacts for the levels Minimal, Normal, Intensive, Recirculation have a follow-up function.

The ventilation unit runs for the set time after the last closing of a switch contact. Thus, a button function is also possible, so that the device is always operated for the set overrun time with a single push of a button (closing a switch contact).

If the extended run time is set to 0, the ventilation unit only runs as long as the corresponding switch contact is closed.

Setting the extended running time:

- Login as user or admin
- Call up the Time settings menu
- Call up the Extended running
- Set the desired extended running time.



4.2 Functions

4.2.1 Electrical pre-heater and frost protection

A pre-heater is mandatory to prevent the cross-counter flow heat exchanger from freezing! The AZURE units are equipped with an electrical pre-heater as standard. Pre-heaters are controlled by steplessly in order to decrease the energy consumptions.

The pre-heater is equipped with two safety temperature limiters, the STL (auto reset = trigger temp. +70 °C) and (manual reset = trigger temp. +90 °C) are connected in series. Once a safety temperature limiter is triggered, the preheater will be disconnected from the power supply and an error will be displayed on the controller.

- Preheater enabling/disabling

Enabling/disabling of the preheater by the user/installer is possible (Refer to chapter 2.4 for commissioning)

The preheater only works if the supply air fan is operating and there are no errors. If the unit is switched to standby or unit-off mode, the preheater will switch off immediately. The supply air fan stops 90 seconds after the pre-heater is stopped. If the main switch is turned off, the fan and the heater both stop immediately.

Step I: Activation of the preheater

The preheater will start if the following conditions are met:

Condition I: T-ODA is lower than -4 °C

Condition II: T-EHA is lower than +0 °C

Condition III: Preheater is not disabled

If all conditions are met, the preheater will be switched on and controlled according to T-EHA.

Step II: Reducing the flow rate / EHA and SUP air fan

Condition I: Preheater has been switched on for longer than 3 minutes (100% power).

Condition II: T-EHA is lower than 0 °C.

If both conditions are met, the EHA and SUP air volume will be reduced 50 % but not more than 50 % of the total flow rate. The preheater will not be deactivated in this period.

Step III: Emergency shutdown

Condition I: The flow rate of the exhaust and supply air fan is reduced for longer than 5 min.

OR

Condition II: T-EHA is lower than 0 °C.

If the conditions are met, the preheater will be deactivated, and the supply air fan will be shut down with a delay time of 90 sec.

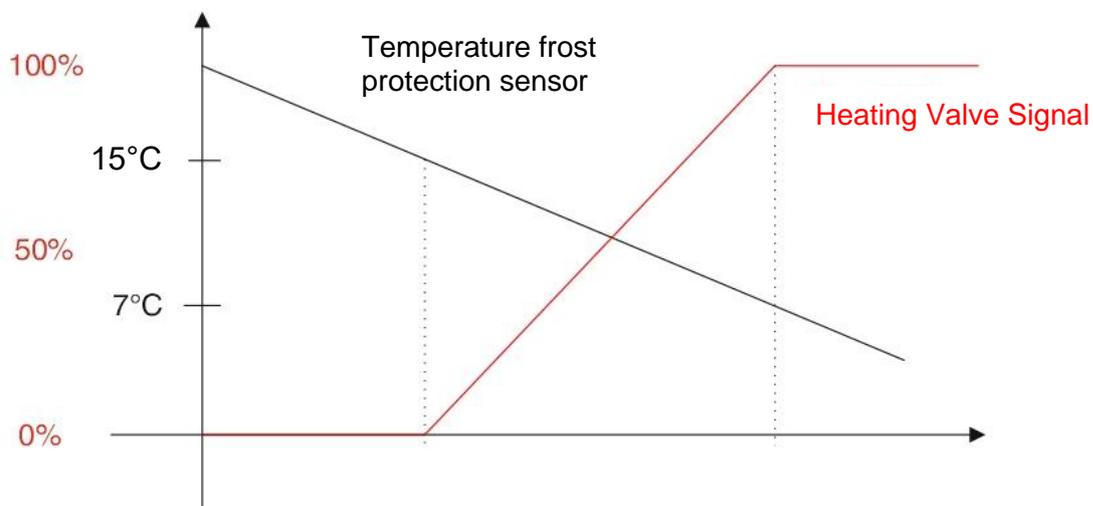
The heat exchanger frost-protection will be deactivated, and the unit resumes with normal operation if the following conditions are met:

Condition I: T-ODA is higher than -3 °C.

OR

Condition II: T-EHA is higher than +4 °C.

4.2.2 Frost Protection WW Heating Coil



Start Frost Protection:

- Under 15 °C: Valve is opened linearly with T-Frost protection probe, pump on
- Under 7 °C: switch off ventilation, close the outside air flaps, open valve 100%

End Frost Protection:

- Temperature frost protection sensor above + 15 ° C

4.2.3 Filter monitoring

Dynamic filter monitoring is used for checking the filter status. Based on the chosen filter type and the working point, maximum allowed filter pressure drop is calculated. If the pressure drop over the filter is greater than the allowed pressure drop at that working point, a filter alarm is triggered.

4.3 Priorities

If several ventilation requirements are active at the same time, the ventilation unit runs with the respective ventilation level, which has the highest priority. This means, for example, that the external switching contact overrides all other ventilation requirements.

Priority list (highest up):

- External switching contact
- Fire/Emergency Contact
- Manual operation with HMI or via building control systems (Bacnet, Modbus)
- External switching Contact Boost Speed
- External switching Contact Normal Speed
- External switching Contact Reduced Speed
- External switching Contact Circulation Air
- Timer Boost Speed
- Timer Normal Speed
- Timer VOD Speed
- Timer Reduced Speed
- Timer Recirculation
- Free Cooling (Night Cooling)

4.4 User Level/access rights

Depending on the current operating level, different menus are activated.

The following operating levels are available:

- No rights
- User Password 3333
- Service, Password 2222
- Admin, Password 1111

The operating level can be located in the main **Access** be changed. After a preset time of 5 minutes after the last key press, all operating levels are automatically logged out to "no rights".

All passwords can be changed in the access rights menu under the change password.

If the passwords are lost, a current master password can be requested (Aera customer service).

View the following menus only with operating level at least

- Operating mode- No rights
- Temperature-No rights
- Fan control– No rights
- Timer – No rights
- Selected Functions (Pure display menu)-No rights
- Alarms (Pure display menu)-No rights
- Manual / Auto -- Service
- Configuration-Service
- Settings-Service
- Commissioning assistant (Wizard) Log in as Admin.

Active intervention in the following menus only with operator level at least:

- Operating mode- No rights
- Temperature-User
- Fan control-User
- Timer– User
- Alarms-User to acknowledge, Admin to block
- Manual / Auto -- Service
- Configuration-Service
- Settings-Service

Commissioning assistant (Wizard) – Log in as Admin

CHAPTER 5

SERVICE AND MAINTENANCE

5.1 Service and maintenance

The filter change is usually carried out by the operator. Additional cleaning and maintenance work must only be carried out by qualified personnel.

DANGER ⚠ The AZURE unit must be fully isolated from the power supply and secured against reactivation with the main isolator switch located on the controller box of the unit before any cleaning and maintenance work. Danger of electric shock, moving parts (fan) and hot surfaces.

5.2 Maintenance plan

The device must be regularly inspected for the following areas from the list below.

DANGER ⚠ Make sure that the power connection is disconnected before doing any work on the device.

Row	Item	Activity	Action if required	3 months	6 months	12 months
1	Outdoor-air inlets and exhaust-air outlets					
	1.1	Check for contamination, damage and corrosion.	Clean and repair			X
2	Air filters					
	2.1	Check for unacceptable contamination and damage (leaks) and odors.	Change affected air filters.	X		
3	Air ducts					
	3.1	Check accessible air duct sections for damage.	Repair			X
	3.2	Check two or three representative locations on inner air duct surface for contamination, corrosion and condensation.	Inspect duct system at further locations, decide on the necessity to clean all (visible and non-visible) sections.			X
4	Fan					
	4.1	Check for contamination, damage, and corrosion.	Clean and repair, check water drain.		X	
5	Heat exchangers (including HRS)					
	5.1	visual inspection of air-to-air plate heat exchangers for contamination, damage, corrosion	Clean, repair		X	
	5.2	visual inspection of directly heated heat exchangers for tightness	Ensure tightness.			X
	5.3	Heaters: Check for contamination, damage, corrosion, and tightness.	Clean and repair, replace.	X		
	5.4	Coolers: Check tube bundle and condensate tray for contamination, corrosion, damage, and tightness.	Clean and repair.	X		
	5.5	Function-check drain and drain trap.	Clean and repair.	X		
6	Housing					
	6.1	Check for unacceptable contamination and damage (leaks) and odours.	Clean and repair.	X		

5.3 Service and maintenance of cross counter flow heat exchanger

DANGER ⚠️ Make sure that the power connection is disconnected before doing any work on the device.
 Danger of electric shock; moving parts (fan) and hot surfaces.

WARNING ⚠️ **DANGER OF INJURY!** From falling or down-folding covers/inspection openings!

CAUTION ⚠️ Heat exchanger is very heavy and can contain condensation water!

High weight! Two people are required for dismantling the heat exchanger.

Unit	Cross-counter flow heat exchanger weight (kg)	Middle service door weight (kg)
AZURE 500	10,1	13
AZURE 700	14,6	15,5
AZURE 1000	15	19
AZURE 1400	23,6	20,5
AZURE 2200	39,2	28,5
AZURE 3200	62,2	33

WARNING ⚠️ The heat exchangers of AZURE 1400, AZURE 2200, AZURE 3200 devices are in two parts.
 - If a drain pump is installed, disconnect the drain pump connections before servicing the heat exchanger.

1. Unlock and open the service covers. Support the panel with your hand while opening (Fig. 19)

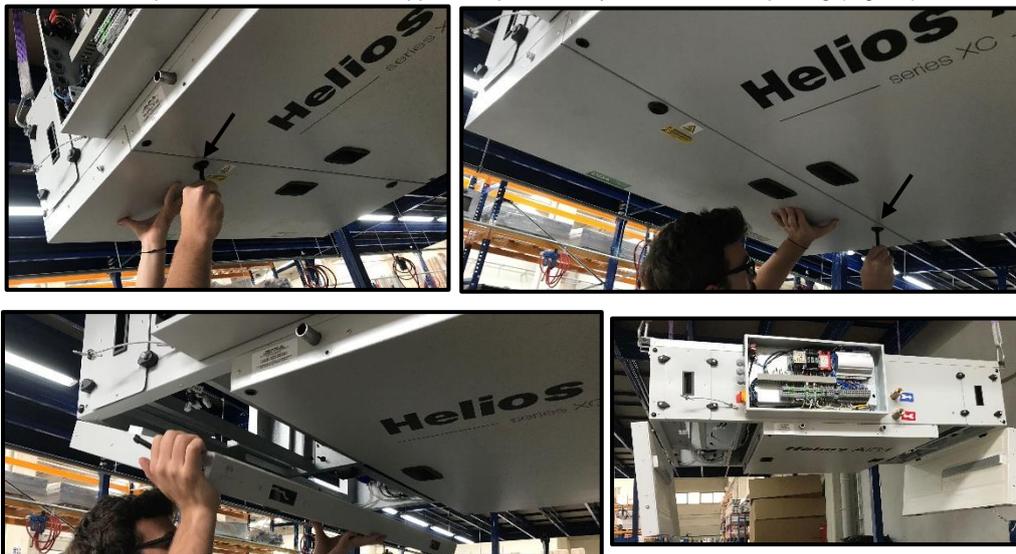


Fig. 19

2. Unscrew the screws of the middle service cover. (Fig. 20)



Fig. 20

3. Remove the service panel by pulling towards the electrical box. (The panel will remove after exiting the slots.) (Fig. 21)



Fig. 21

4. Unscrew all screws from the heat exchanger sheet metal cover. (Fig. 22)



Fig. 22

5. Loosen the heat exchanger star knob from the heat exchanger fixing sheet metal. **Support heat exchanger with your hand!** (Fig. 23)



Fig. 23

6. Carefully pull heat exchanger from the unit. (Fig. 24)

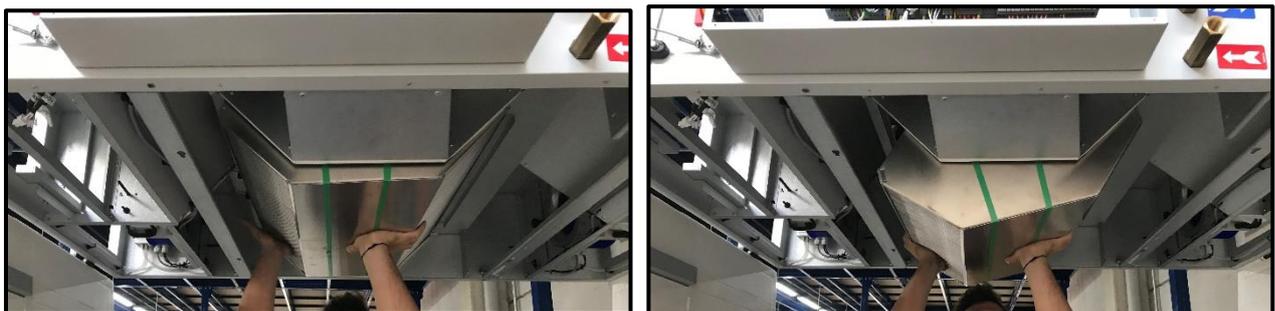


Fig. 24

The heat exchanger must be regularly checked for contamination and damage every 6 months.

The counter-flow heat exchanger must be inspected regularly for dirt and dust deposits. If there are dirt and dust deposits on the heat exchanger, these can be easily removed, using the water or pressure air.

Cleaning pressure: up to 5 bar

Temperature: 70°C

- Aluminum counter-flow heat exchanger can be wet cleaned and up to a pressure of 5 bar working pressure.
- The cleaning can be made with cold or warm (up to max. 70°C) water. Household cleaners are allowed.
- Clean heat exchanger on both sides!
- Do not bend the fins!
- Heat exchanger material is corrosion and weather resistant.
- When cleaning take care that the exchanger is not damaged, neither mechanically nor chemically.

Allow heat exchanger to dry before installation!

5.4 Filter change

DANGER  **Make sure that the power connection is disconnected before doing any work on the device.**

Danger of electric shock; moving parts (fan) and hot surfaces.

The filters must be regularly checked for contamination, damage and odours every 3 months. If the filters are damp or mouldy, they must be exchanged immediately.

- Filters can be removed from the side of the device or from service doors under the device.
- The filters of AZURE 1400, AZURE 2200, AZURE 3200 devices are divided in two parts.
- Filter information for all AZURE models can be seen below.

	Nominal air flow rate (m3/h)	Number of filters	Filter class	Dimensions (LxHxW) (mm)	Recommended final pressure drop (Pa)
AZURE 500 Extract air filter	500	1	ePM10 50%/96	410x231x96	100
AZURE 500 Outdoor air filter		1	ePM1 55%/96	410x231x96	125
AZURE 700 Extract air filter	700	1	ePM10 50%/96	500x235x96	124
AZURE 700 Outdoor air filter		1	ePM1 55%/96	500x235x96	150
AZURE 1000 Extract air filter	1000	1	ePM10 50%/96	625x235x96	160
AZURE 1000 Outdoor air filter		1	ePM1 55%/96	625x235x96	170
AZURE 1400 Extract air filter	1400	1	ePM10 50%/96	642x275x96	166
AZURE 1400 Outdoor air filter		1	ePM1 55%/96	642x275x96	180
AZURE 2200 Extract air filter	2200	2	ePM10 50%/96	399x358x96	163
AZURE 2200 Outdoor air filter		2	ePM1 55%/96	399x358x96	176
AZURE 3200 Extract air filter	3200	2	ePM10 50%/96	462x442x96	168
AZURE 3200 Outdoor air filter		2	ePM1 55%/96	462x442x96	178

WARNING  **RISK OF INJURY!** From down-folding covers /inspection openings!

Filter change from the service doors

1. Unlock and open the service covers. Support the panel with your hand while opening (Fig. 25)

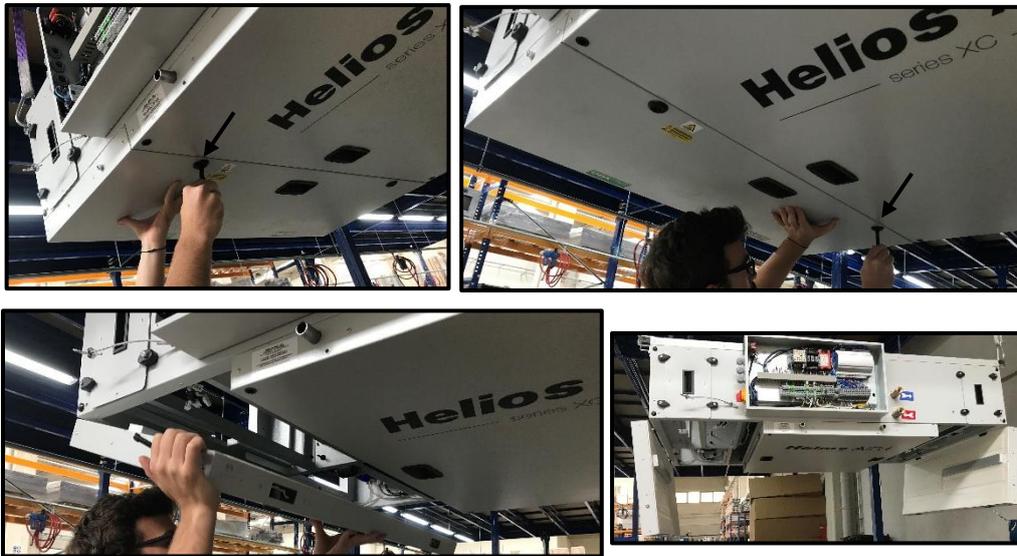


Fig. 25

2. Slide the filter lock to loosen (Fig. 26)



Fig. 26

3. Carefully remove filter (Fig. 27)



Fig. 27

- The filter's direction of air flow must be taken into account!

Filter change from the side of the device

1. Filter service doors are on the side of the device
2. Loosen the screws of the filter service cover (Fig. 28)
3. Remove the service cover completely (Fig. 29)
4. Pull filter lock (Fig. 30)
5. Remove filter from slides (Fig. 31)

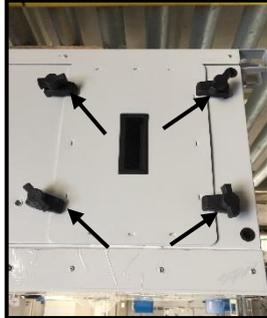


Fig. 28



Fig. 29



Fig. 30

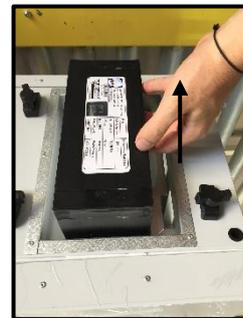


Fig. 31

The filter's direction of air flow must be taken into account!

The AZURE compact unit is equipped with ePM1 55% class filter on the outdoor air side and ePM10 50% class filter on the extract air side as standard. If another filter type is used in the unit, the settings in the startup wizard have to be changed.

- The filter's direction of air flow must be taken into account!

5.5 Service and maintenance of fans

DANGER  **RISK OF INJURY!** Make sure that the power connection is disconnected, and fan is not moving before doing any work on the device.

Danger of electric shock; moving parts (fan) and hot surface.

Be careful during service and maintenance as the fans are heavy.

The fan must be regularly checked for contamination, damage and corrosion every 6 months.

- Regular inspection with cleaning, is necessary to prevent imbalance due to ingress of dirt.
- Clean the fans housing.
- Watch out for vibration free motion.
- Maintenance interval in accordance with the degree of contamination of the impeller!
- Fan can be cleaned with a moist cloth. Do not use any aggressive, paint solvent cleaning agents when cleaning. Never use a high-pressure cleaner or water-spray for cleaning - particularly when the ventilator is running.
- If water enters the motor; dry off the motor winding before using it again.

WARNING  **RISK OF INJURY!** Wet cleaning under voltage may lead to an electric shock.

1. Unlock and open the service covers. Support the panel with your hand while opening (Fig. 32)

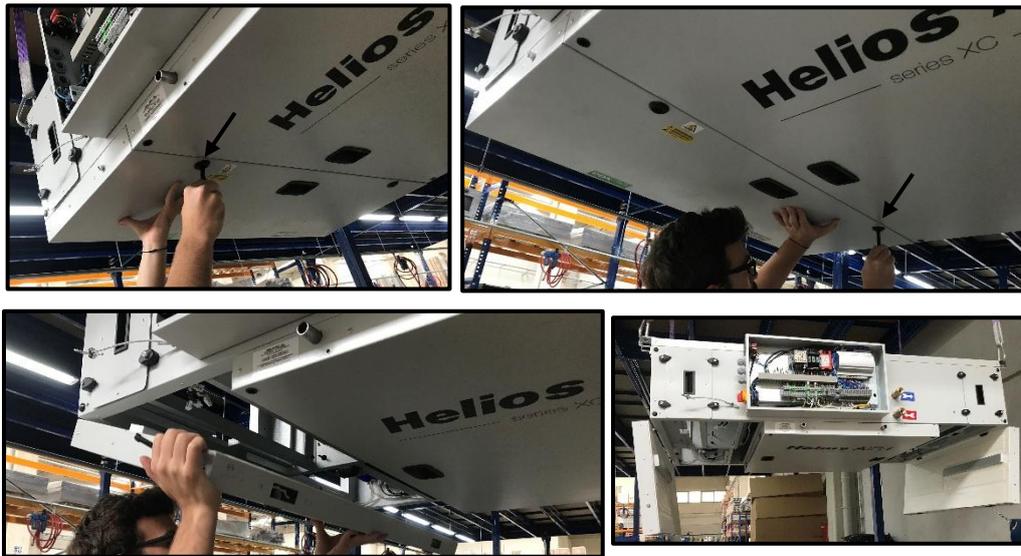


Fig. 32

2. Unplug the power connector of the fan (Fig. 33)



Fig. 33

3. Remove the fan pressure hoses (Fig. 34)

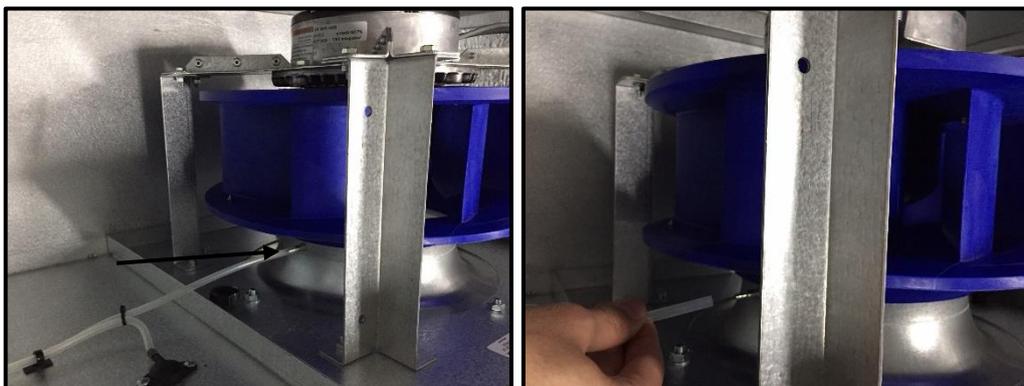


Fig. 34

4. Remove the fan star knob. Support the fan with your hand while removing the star knob. (Fig. 35)



Fig. 35

5. Remove the fan slowly and carefully (Fig. 36)



Fig. 36

- Be careful to electrical connections when installing the fans back into.

5.6 Service and maintenance of electrical pre-heater

DANGER ⚠️ **RISK OF INJURY!** Make sure that the power connection is disconnected, and fan is not moving before doing any work on the device.

WARNING ⚠️ Service and maintenance of electrical heater must be carried out by trained and experienced personnel and the necessary safety precautions should be taken.

WARNING ⚠️ Danger of electric shock; moving parts (fan) and hot surface. Wait for 3 minutes before doing maintenance.

It is recommended to check the electrical heater for contamination and damage every 6 months. If there are dirt and dust on the electrical heater, these can be removed, using air.

1. Unlock and open the service covers. Support the panel with your hand while opening (Fig. 37)



Fig. 37

2. Unplug the electrical connections on the electrical heater (Fig. 38)



Fig. 38

3. Remove the pre-electrical heater star knobs. Support the electrical heater with your hand while removing star knobs (Fig. 39)

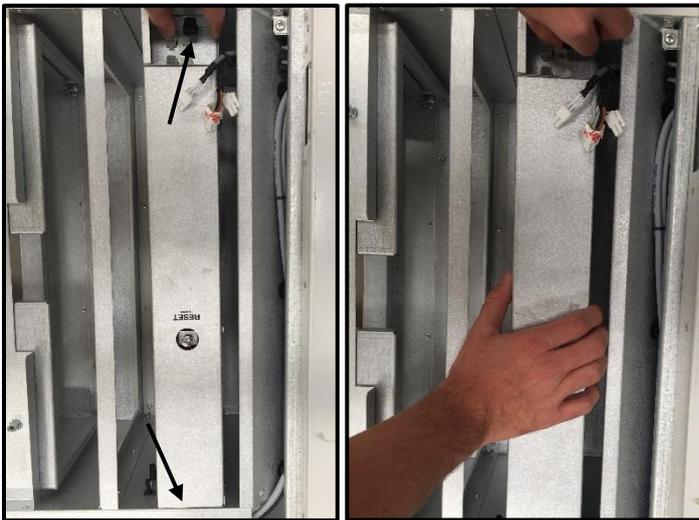


Fig. 39

4. Remove the pre-electrical heater slowly and carefully (Fig. 40)



Fig. 40

5. Be careful to electrical connections when installing the pre-electrical heater back into

5.7 Reset function of electrical pre-heater

DANGER ⚠️ **RISK OF INJURY!** Make sure that the power connection is disconnected, and fan is not moving before doing any work on the device

WARNING ⚠️ Danger of electric shock; moving parts (fan) and hot surface. Wait for 3 minutes before doing maintenance

- Manual reset button is located directly on the electrical pre-heater.

1. Unlock and open the service covers. Support the panel with your hand while opening (Fig. 41)



Fig. 41

2. Press the reset button to reset pre-electrical heater (Fig. 42)



Fig. 42

Manual reset: Manual reset temperature is 90 °C. When the safety temperature limiters reach the 90 °C, safety temperature limiter is triggered, and preheater will be disconnected from the power supply.

ATTENTION ⚠️ **If the manual reset is active, there is most likely a problem with the heater. Manual reset is only to be pushed if problem is identified and solved.**

Automatically reset: Automatically reset temperature is 70 °C. When the safety temperature limiters reach the 70 °C, safety temperature limiter is triggered, and preheater will be disconnected from the power supply. When the temperature falls below 70°C, the electrical heater will automatically switch on.

5.8 Cleaning the condensate tray

DANGER ⚠️ **RISK OF INJURY!** Make sure that the power connection is disconnected, and fan is not moving before doing any work on the device

WARNING ⚠️ Danger of electric shock; moving parts (fan) and hot surface

- If a drain pump is installed, disconnect the drain pump connections before removing the service panel.
- The condensate tray must be regularly checked for contamination and damage every 6 months

1. Unlock and open the service covers. Support the panel with your hand while opening (Fig. 43)

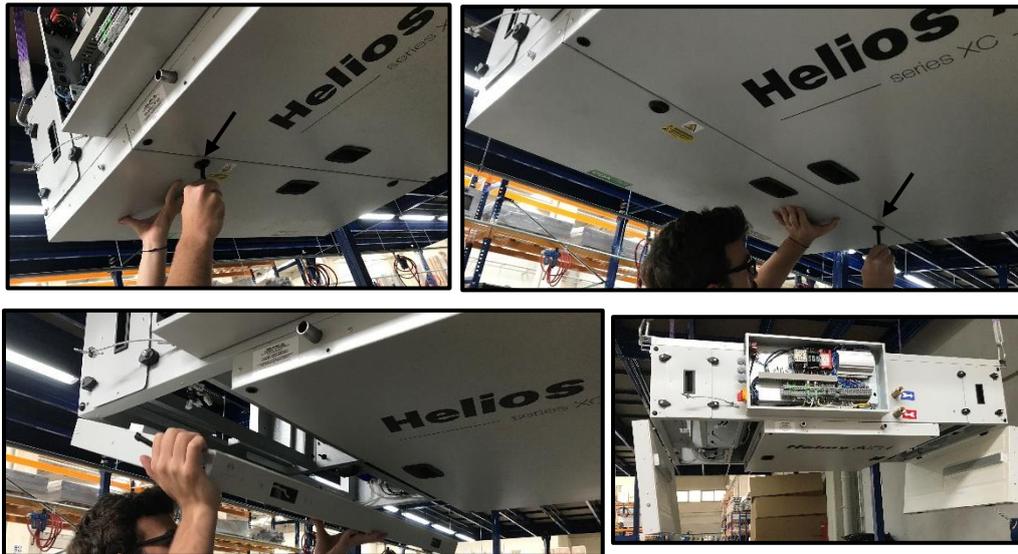


Fig. 43

2. Unscrew the screws of the middle service cover. (Fig. 44)



Fig. 44

3. Remove the service panel by pulling towards the electrical box. (The panel will remove after exiting the slots.) (Fig. 45)

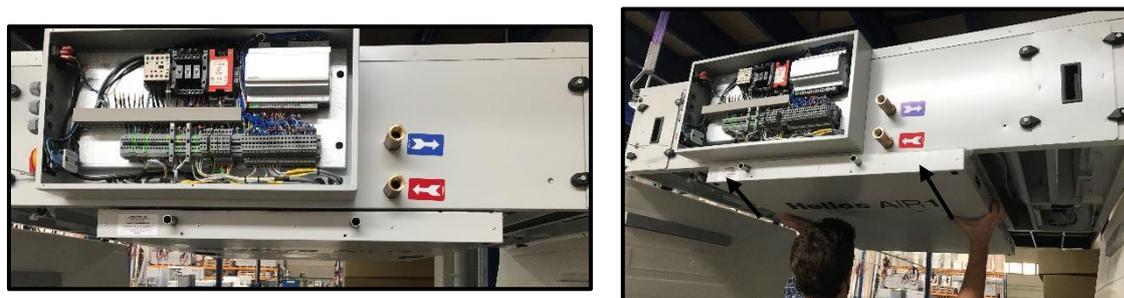


Fig. 45

4. Clean condensate tray with a cloth (Fig. 46)



Fig. 46

5.9 Cleaning of housing

DANGER  **RISK OF INJURY! Make sure that the power connection is disconnected, and fan is not moving before doing any work on the device.**

WARNING  Danger of electric shock; moving parts (fan) and hot surface

- The unit housing must be regularly checked for contamination, damage and corrosion every 12 months.
- Use a wet cloth to clean the housing.

5.10 Function tests (manual/auto)

The components connected to the controller can be manually operated and tested individually in this component test menu. All functions must be reset to “Auto” after testing. Otherwise, the normal control function will be interrupted and an alarm will sound.

Access to this menu requires the Service or Administrator operating level. If necessary, log on under “Access rights”.

a. Functions Supply air control

- Off = The controller for temperature control is deactivated.
 - Auto = The supply air temperature control is automatic, like during normal operation.
 - Manual = The supply air temperature control output can be manually set to a value between 0 and 100 %.
- Manual: xxx.x – The value for the control output is set between 0 and 100 % here.

b. Functions Supply air fan (SAF)

- Off = The supply air fan is deactivated.
 - Auto = The supply air fan is controlled automatically, like during normal ventilation unit operation.
 - Manual Minimal = The supply air fan is operated according to the settings for fan stage “Minimal”.
 - Manual Normal = The supply air fan is operated according to the settings for fan stage “Normal”.
 - Manual Intensive = The supply air fan is operated according to the settings for fan stage “Intensive”.
 - Manual = The supply air fan can be manually set for testing between 0 to 100 % speed.
- Manual: xxx.x – The value for the control output is set between 0 and 100 % here.

c. Functions Extract air fan (EAF)

- Off = The extract air fan is deactivated.
- Auto = The extract air fan is controlled automatically, like during normal ventilation unit operation.
- Manual Minimal = The extract air fan is operated according to the settings for fan stage “Minimal”.
- Manual Normal = The extract air fan is operated according to the settings for fan stage “Normal”.
- Manual Intensive = The extract air fan is operated according to the settings for fan stage “Intensive”.
- Manual = The extract air fan can be manually set for testing between 0 to 100 % speed.

Manual: xxx.x – The value for the control output is set between 0 and 100 % here.

d. Functions Heat recovery

- Off = The control output is deactivated.
- Auto = The heat recovery is controlled automatically, like during normal ventilation unit operation.
- Manual = The heat recovery control output can be manually set for testing between 0 to 100 %.

Manual: xxx.x – The value for the control output is set between 0 and 100 % here.

e. Functions P1 heater (pump warm water auxiliary heater)

- Off = Pump is deactivated.
- Auto = Pump is automatically activated and deactivated by the controller, like during normal ventilation unit operation.
- On = Pump is activated.

f. Functions P1 cooler (pump cold water unit)

- Off = Pump is deactivated.
- Auto = Pump is automatically activated and deactivated by the controller, like during normal ventilation unit operation.
- On = Pump is activated.

g. Functions Outside air damper

- Auto = The outside air damper is automatically opened and closed by the controller, like during normal ventilation unit operation.
- Close = The outside air damper is not activated and closes via a spring return.
- Open = The outside air damper is activated and opened.

h. Functions Exhaust air damper

- Auto = The exhaust air damper is automatically opened and closed by the controller, like during normal ventilation unit operation.
- Close = The exhaust air damper is not activated and closes via a spring return.
- Open = The exhaust air damper is activated and opened.

i. Functions Extra sequence Y5 (recirculation damper)

- Auto = The recirculation damper is automatically opened and closed by the controller, like during normal ventilation unit operation.
- Off = The recirculation damper is not activated and closes via a spring return.
- Manual = The recirculation damper can be activated and opened.

Manual: xxx.x – The value for the control output is set between 0 and 10 V. The recirculation damper can only be completely opened or completely closed, since it is connected via a relay. Therefore, the control output should only be set to 0 or 10V for testing.

5.11 Alarm

Subdivision A, B, C alarms

- A alarms has no delay time and stops unit immediately. Must be acknowledged to go out. (a receipt is required (login as user)).
- B alarms has delay time and unit runs. Must be acknowledged to go out. a receipt is required (login as user).
- C alarms has no delay and stops fans immediately. Goes out automatically as soon as the reason for the alarm has disappeared.

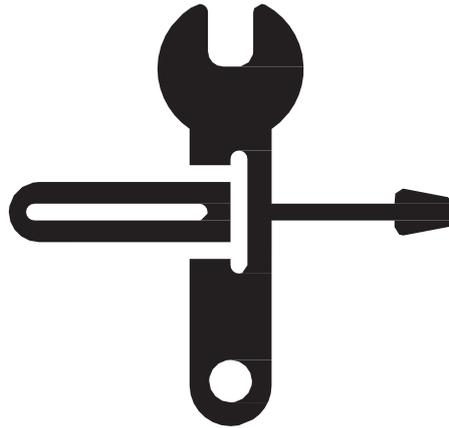
Alarm List:

No	Alarm	Priority	Fan stop	Solution
1	Supply air fan (SAF) out of operation	B	No	Check SAF cable connection. Check pressure hoses
2	Exhaust air fan (EAF) out of operation	B	No	Check EAF cable connection. Check pressure hoses
3	Extract air filter	B	No	Change extract air filter with a new one
4	Fire alarm	A	Yes	Check fire alarm cable connection.
5	External power switch	C	Yes	N/A
6	Supply air control error (max. difference between setpoint and supply air 10k)	B	No	Check heaters and coolers running or not.
7	High supply air temperature (35 °c)	B	No	Check supply air set temperature and heaters.
8	Low supply air temperature (10 °c)	B	No	Check supply air set temperature and heaters.
9	High room temperature (35 °c)	B	No	Check set point.
10	Low room temperature (10 °c)	B	No	Check setpoint.
11	High extract air temperature (35 °c)	B	No	Check setpoint.
12	Low extract air temperature (10 °c)	B	No	Check setpoint.
13	Electrical heater overtemperature	A	Yes	Check electrical heaters limit thermostats and cable connection.
14	Low frost protection sensor temperature	A	Yes	Check hot water coil fluid temperature.
15	Outdoor air sensor fault	B	Yes	Check outdoor sensor cable connection.
16	Heat exchanger rotation sentinel fault	B	No	Check rotation sentinel distance with the magnet. Check if the belt is ok.
17	Supply fan external operation	C	No	Check running mode.
18	Exhaust fan External operation	C	No	Check running mode.
19	Manual operation supply air control	C	No	Check running mode.
20	Manual operation supply air fan mode	C	No	Check running mode.
21	Manual operation frequency control supply air	C	No	Check running mode.
22	Manual operation exhaust fan mode	C	No	Check running mode.
23	Manual operation frequency control exhaust Air	C	No	Check running mode.
24	Manual operation Heating valve	C	No	Check running mode.
25	Manual Operation Heat exchanger	C	No	Check running mode.
26	Manual Operation cooler valve	C	No	Check running mode.
27	Manual Operation P1-exchanger	C	No	Check running mode.
28	Internal Battery failure	A	No	Contact Aera Support for new battery.
29	Supply air temperature sensor alarm	B	Yes	Check outdoor sensor cable connection.
30	Exhaust air temperature sensor alarm	B	Yes	Check outdoor sensor cable connection.
31	Analogue deicing	B	Yes	Defrost conditions is on, check manual 4.3.4 chapter
32	Frost protection temperature sensor alarm	B	Yes	Check outdoor sensor cable connection.
33	Alarm Frequency Converter SAF	A	No	Check mains cable connection of SAF.
34	Alarm Frequency Converter EAF	A	No	Check mains cable connection of EAF.
35	Communication error frequency converter SAF	C	No	Check communication cable connection of SAF.
36	Communication error frequency converter EAF	C	No	Check communication cable connection of EAF.
37	Communication error expansion unit 1	C	No	Check communication cable connection of DX Panel
38	Alarm Frequency Inverter SAF	C	No	SAF Modbus internal alarm.
39	Alarm Frequency Inverter EAF	C	No	EAF Modbus internal alarm.
40	Manual-operated output	C	No	Check running mode.
41	Restart blocked after power-on	B	Yes	N/A.
42	Supply air filter	B	No	Change supply air filter with a new one
43	Communication error expansion unit 3	C	No	Check communication cable connection of Supply Pressure Transmitter
44	Communication error expansion unit 4	C	No	Check communication cable connection of Extract Pressure Transmitter
45	Communication error expansion unit 5	C	No	Check communication cable connection of SENSO+ Cap Pressure Transmitter
46	Time for service	C	No	Contact Aera Support
47	Extra alarm 5	B	No	Contact DX supplier support
48	Dx Defrosting Mode Active	C	Yes	Wait for the defrost mode alarm to turn off

AZURE

COUNTER FLOW HEAT RECOVERY VENTILATION

INSTALLATION AND OPERATING INSTRUCTIONS



AERA AIR CONDITIONING AND VENTILATION TECHNOLOGIES CORP.

SALES OFFICE

Sahrayıcedit Mah. Mümindere Cad. Özdemir Sok. Kurtuluş Apt. No:5/1-2,
Kadıköy – İstanbul
TEL +90 216 504 76 86 FAKS +90 216 504 76 90

FACTORY

3. Cadde No:13 Pancar OSB, Torbalı – İzmir
TEL +90 232 799 0 111 FAKS +90 232 799 01 14

FACTORY II

14. Cadde No: 13 Pancar OSB, Torbalı – İzmir – Türkiye

R&D CENTER

10032 sokak No:2/1 B:210 Bilimpark ITOB, Menderes – İzmir

