VALLOX

Model
Vallox Pureo SX 1000
Vallox Pureo SX 1500
Vallox Pureo SX 2000
Vallox Pureo SX 3000

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MANUAL

VALLOX
Pureo
SX

Manual

Air handling units

CONTENTS

SAFETY

Safe and appropriate handling of the unit requires an understanding of the applicable basic safety regulations and the intended purpose of the ventilation system. Read this manual before using the air handling unit and keep it safe for later use. If you lose the manual, you can find and download it on our website.

This manual contains all the information needed for the safe use of the system. All persons using and maintaining the ventilation system shall follow the instructions in this manual. They must also comply with any local safety regulations to prevent accidents.

Installation

The installation and setup of the unit shall be carried out by qualified professionals only. Electrical installations and electrical connections shall be done by an electrician in compliance with the local legislation.

NOTE
Visit www.vallox.com for more information

DANGER
Electrical connections must be fully isolated from the main power source until the final assembly!

WARNING
Children under the age of eight or persons with a sensory, physical or mental disability or with insufficient understanding and experience of the safe use of the unit shall not be allowed to use the unit unsupervised.

Such persons may use the unit under supervision or by following instructions given by a person responsible for their safety.

Keep an eye on children and do not let them play with the unit.

WARRANTY

The warranty and the manufacturer's responsibility do not cover damage caused by:

- Inappropriate use of the ventilation system or control unit
- Incorrect or inappropriate installation, setup or use of the unit
- Failure to comply with the instructions for transport, installation, use or maintenance
- Structural or electronic modifications, or changes made to the software

INTENDED PURPOSE

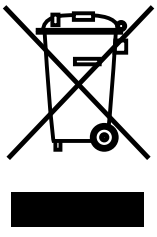
All Vallox air handling units have been designed to provide continuous ventilation appropriate for the intended use without any health risks or risks of damage to the building structures.

DISPOSAL OF THE AIR HANDLING UNIT

Do not dispose of electrical appliances with domestic waste. Follow the local laws and regulations on safe and ecological disposal.

Make sure that

- the components are separated and sorted according to the material type.



SAFETY SYMBOLS

DANGER
A hazard that will result in death or serious injury, if not avoided.

WARNING
A hazard that could result in death or serious injury, if not avoided.

CAUTION
A hazard that could result in minor or moderate injury, if not avoided.

IMPORTANT
A hazard that could result in damage to property or loss of data, if not avoided.

NOTE
Important information about the product.

TIP
Additional information about the use of the product and its benefits.

REGULATIONS – INSTRUCTIONS

If the product has been installed correctly and it is used according to the intended purpose, it is in compliance with all the applicable regulations and requirements for CE markings valid at the time of manufacture. Vallox Pureo SX air handling units are compliant with the Energy-related Products Directive (2018).

SCOPE OF APPLICATION – INTENDED PURPOSE

Vallox Pureo SX air handling units are energy-efficient, fully automated, quiet and operational ventilation units equipped with heat recovery. Vallox Pureo SX is available in four models with a maximum volume flow demand of 3000 dm^3/s. The units are equipped with an ePM_1 60% filter for outdoor air and ePM_{10} 60% for extract air.

Vallox Pureo SX units have energy-efficient and quiet fans that save energy. Running with an EC motor, these fans operate at three speeds and they can be controlled with an integrated smart controller based on data provided by air quality sensors. Vallox Pureo SX units are equipped with cross counterflow heat exchangers that recover heat from the extract air before it is blown out through the plates. The process keeps the air flows separate. Depending on the operating conditions, over 80% of the heat in extract air can be recovered before it is blown out.

Supply air is circulated into the priority areas (areas in need of supply air) through the duct system. Air is extracted from secondary areas (such as social premises, bathrooms and showers). The air circulates back to the ventilation unit through the ducts, where heat is recovered before the air is blown out through the extract air duct.

Vallox Pureo SX units have been designed for air handling and the following purposes only:
- Filtration of regular impure air
- Heating and/or cooling of air (with accessories)
- Heat recovery
- Combination of any of the above

The intended purpose includes compliance with the manual and any component-specific instructions provided by the manufacturer as well as inspection and maintenance according to Vallox's instructions.

Standard Vallox Pureo SX units have been designed for installation and use in non-freezing facilities (room temperature +5–45°C). Non-freezing draining of condensate must be ensured on site. The casing's corrosion class is C4 pursuant to ISO 12944. The unit may be used in the conditions specified below.

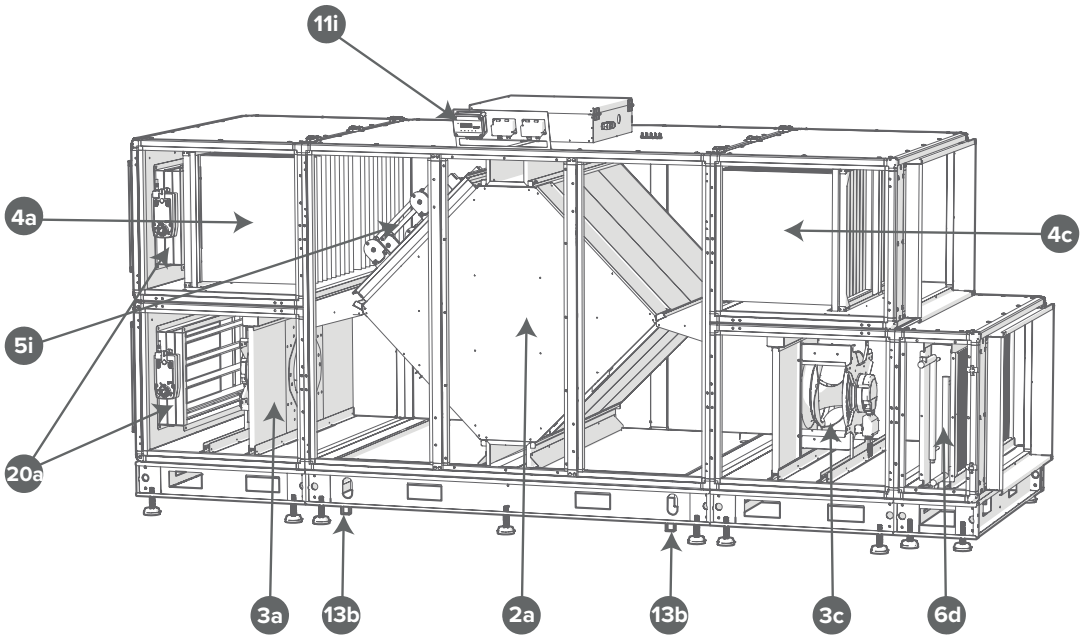
Operating conditions:
- Ambient temperature +5–45°C
- Humidity (max.) 90% RH

IMPORTANT
Freezing could cause physical damage to the unit!

NOTE
Any use other than the intended purpose of use is prohibited!

MAIN PARTS

Vallox Pureo SX



- Counterflow heat exchanger 2a
- Extract air fan 3a
- Supply air fan 3c
- Supply air filter 4a
- Extract air filter 4c
- Bypass/sectional defrosting dampers 5i
- Post-heater (liquid) 6d
- Pressure transmitter 11i
- Condensation outlet pipe 13b
- Outdoor air dampers 20a

DELIVERY CONTENTS

The delivery includes one of the following units:

- Vallox Pureo SX 1000
- Vallox Pureo SX 1500
- Vallox Pureo SX 2000
- Vallox Pureo SX 3000

The delivery also includes:

NOTE
Inspect the delivery contents upon receipt and make sure everything is in order. If you detect any damage, file a complaint with the transport company immediately. If no complaint is filed within a reasonable time, any future claims for compensation may be invalid.

SCOPE OF DELIVERY

	M6x20 screw DPT mounting	M8x30 screw Module assembly	M10x25 screw Base frame connection	DPT mounting sheet metal	Condensate drain pipe (set)	Main switch	Door handle	Panel handle
Vallox Pureo SX 1000	2	18	12	1	2	1	24	4
Vallox Pureo SX 1500	2	18	12	1	2	1	28	4
Vallox Pureo SX 2000	2	26	12	1	2	1	28	4
Vallox Pureo SX 3000	2	28	12	1	2	1	28	4

The condensation outlet pipes, door handles and holders included in the delivery are inside the unit.

PACKAGE DIMENSIONS AND WEIGHT

The dimensions and weight of each unit type are given in the table below. Vallox Pureo SX units are delivered in four modules.

IMPORTANT
Before unloading the unit, make sure that the transport devices and hoists meet the weight capacity requirements.

PACKAGE DIMENSIONS AND WEIGHTS

		Package 1		Package 2		Package 3		Package 4	
	No. of packages	Dimensions (mm) (w x h x d)	Weight (kg)	Dimensions (mm) (w x h x d)	Weight (kg)	Dimensions (mm) (w x h x d)	Weight (kg)	Dimensions (mm) (w x h x d)	Weight (kg)
Vallox Pureo SX 1000	4	1360 x 845 x 1760	207	1360 x 1864 x 1910	395	1360 x 845 x 1760	207	1505 x 405 x 1050	130
Vallox Pureo SX 1500	4	1665 x 995 x 2370	349	1665 x 2011 x 2520	542	1665 x 995 x 2370	349	1810 x 405 x 1355	178
Vallox Pureo SX 2000	4	1970 x 1140 x 2370	424	1970 x 2011 x 2520	619	1970 x 1140 x 2370	424	2115 x 405 x 1355	207
Vallox Pureo SX 3000	4	2275 x 1140 x 2370	482	2275 x 2305 x 2520	802	2275 x 1140 x 2370	482	2420 x 405 x 1355	229

STORAGE

When the unit is stored for a long period of time, the following measures must be taken to avoid damage: The unit must be packed in a dry, airtight and dust-proof packaging (a plastic bag with drying agent and moisture detectors). The unit must be stored in a watertight and vibrationless place of constant temperature (ambient environment: min. 0°C/max. +40°C). Evidence of damage due to incorrect transport, storage or setup must be provided and such damage shall not be covered by the warranty.

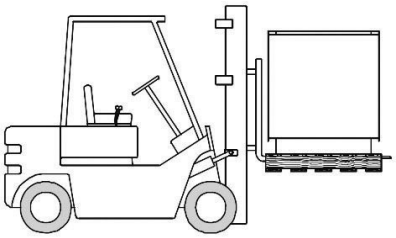
TRANSPORT AND MOVING

The unit must be transported with utmost care. We recommend the unit be kept in the original packaging until installation to avoid damage or contamination. The unit shall be transported and moved by qualified and experienced personnel and necessary safety measures shall be taken to prevent the unit from falling over or slipping.

Due to its high centre of gravity, the unit could fall over and cause personal injury or damage to property. When transporting the unit, its movements must be followed closely and potentially dangerous areas must be avoided.

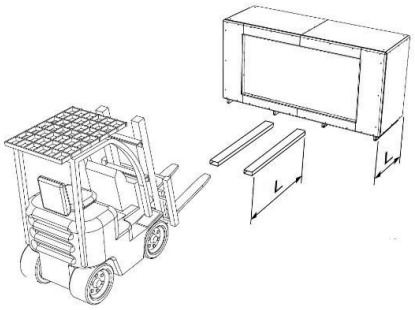
The unit can be moved with a forklift truck, pallet truck or crane. The unit must be kept stable when moving it around.

DANGER
A falling unit could cause personal injury and/or damage to property!



Before moving the unit with a forklift truck, check that the fork is longer than the width of the unit base. Lift the unit slowly.

DANGER
A falling unit could cause personal injury and/or damage to property!



DANGER
Incorrect transport or moving practices could cause personal injury and/or damage to property!

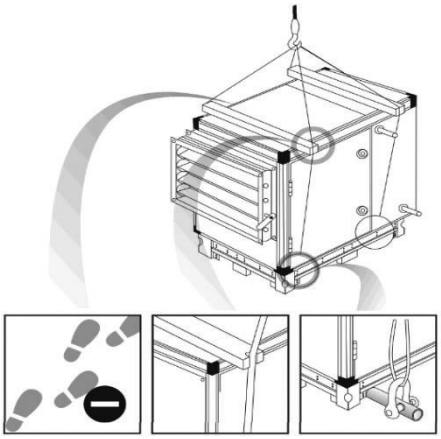
Make sure the bearing capacity of the transport devices and hoists is sufficient. Make sure the unit is secured properly before lifting.

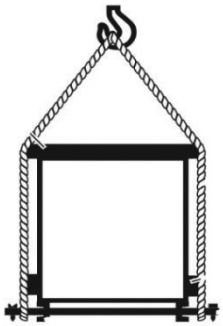
DANGER
Danger due to lifting!

The hoists, machines or cables could be defective or damaged. Never stand directly below a lifted load.

If the unit is moved by lifting with a crane, the unit must be secured by the holes in the unit base intended for this purpose.

1. Slip the bars of the transport rack through the holes in the unit base.
2. Secure the transport rack in place with screws.
3. Slip a chain or rope around the ends of the bars.
4. Use spacers to prevent the chains or ropes from damaging the unit.





DANGER
Danger due to lifting!

The hoists, machines or cables could be defective or damaged. Never stand directly below a lifted load.

DISASSEMBLY AND REASSEMBLY

Disassembly and reassembly are not considered to be normal maintenance measures. The unit shall be disassembled and reassembled by qualified professionals only. Make sure the unit is dead and disconnected from power before disassembly or reassembly. Earth and short-circuit the unit. Protect any adjacent live components.

WARNING
Risk of personal injury or damage to property! An electric shock could result in death or serious injury.

Take the following steps when installing heating and cooling coils:

- Close all hydraulic stop valves.
- Insulate the connections and make sure no oil or refrigerant is leaking from the unit.
- The diameter of the heating and cooling pipes is small and water may remain in the coil even after draining. For safety reasons, blow compressed air into the system to remove any water remaining inside.

IMPORTANT
Risk of damage to property in the installation of heating and cooling coils!

MECHANICAL ASSEMBLY

The unit shall be installed and connected by experienced professionals only. The person carrying out electrical connection work must have an appropriate qualification and sufficient experience of the applicable safety regulations and other generally recognised safety and occupational health regulations. They must also be authorised to carry out work on the unit.

DANGER
Mortal danger caused by an electric shock!

The Vallox Pureo SX unit must be installed in an upright position. The system's noise level depends on the level of pressure. This should be considered when choosing the installation location. The room in which the unit is installed must have a wastewater connection. See Draining of condensate (pp. 12–13).

The ducts used must be as short as possible, and connecting the unit to the duct system should be effortless. Sharp angles worsen pressure losses and make flow induced noise louder. The maintenance side (handedness) of the unit can be switched.

Make sure that the unit is standing on an even surface before installation.

IMPORTANT
The ventilation ducts must not get twisted.

The connections must be strong and secure.

The flange connections must be leak-proof and strong.

If necessary, vibrodamping supports may be placed between the unit base and the floor.

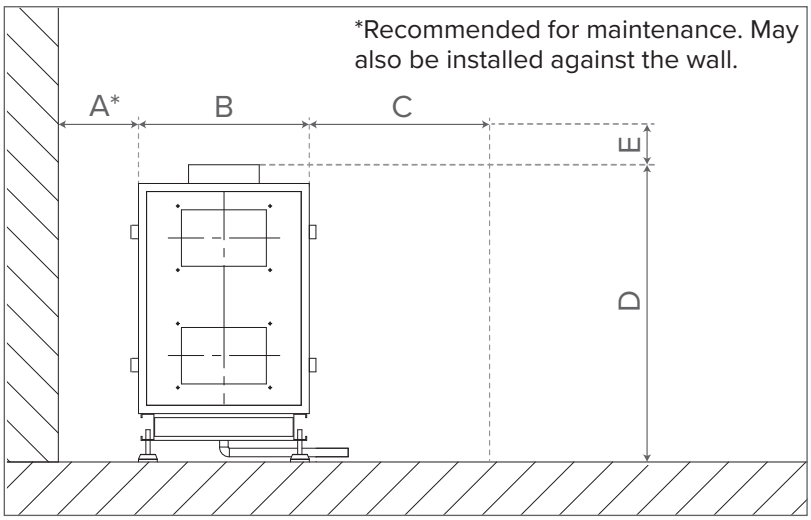
Assembly area

Make sure to leave enough room around the unit for carrying out maintenance.

A Minimum distance from walls
B Unit width
C Minimum distance for opening the service door
D Unit height

ASSEMBLY DIMENSIONS

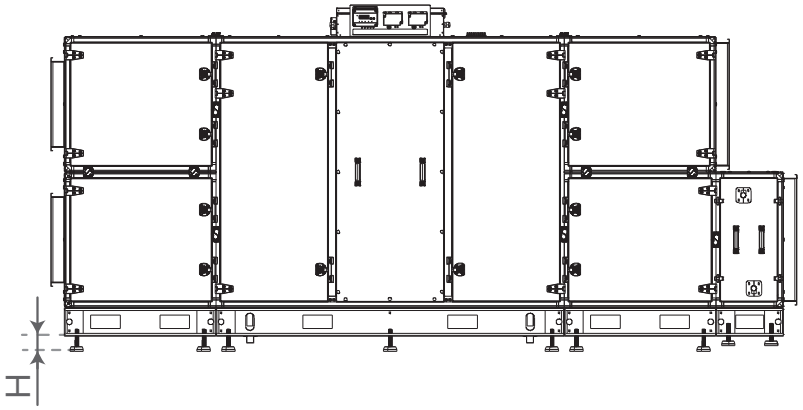
	Dimensions (mm)				
	A*	B	C	D	E
Vallox Pureo SX 1000	719	1320	1320	1797	570
Vallox Pureo SX 1500	964	1625	1625	2409	570
Vallox Pureo SX 2000	964	1930	1930	2409	570
Vallox Pureo SX 3000	964	2235	2235	2409	570



NOTE
It may be easier to install the accessories before moving the unit to the final location and completing the installation, since there is more room around the unit.

STABILISATION

Vallox Pureo SX units have adjustable feet. Make sure that the unit is standing on an even floor before installation. The unit is stabilised by adjusting the height of the feet. The maximum permitted height “H” is 125 mm.

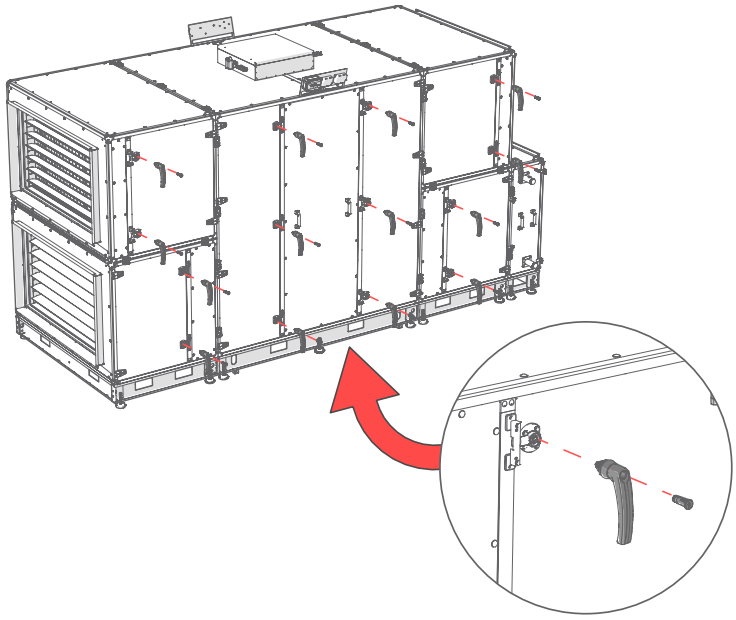


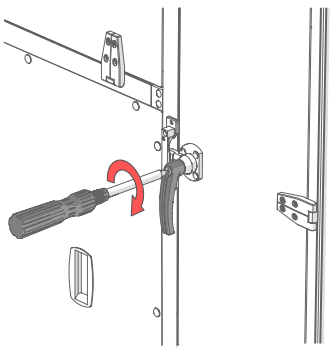
INSTALLATION OF DOOR HANDLES

The door handles have been packed separately to avoid damage during transport. The door handles are installed once the unit has been installed and stabilised.

Place the handles on the desired maintenance side and secure in place with screws.

IMPORTANT
Do not open the doors before the unit is standing on solid ground and it has been stabilised.





CHANGING THE HANDEDNESS OF MAINTENANCE

Switching the maintenance side of the post-heating radiator

Open the maintenance hatch of the fan and disconnect the anti-freezing sensor's connector, remove the hatch on the backside of the post-heating module and release the retainers of the cover on the outlet side of the post-heating radiator. Pull the post-heating radiator and its hatch out of the module and push them back in from the other side of the module. Move the anti-freezing sensor to the fan-side through hole. Rewire the sensor wiring from the supply air fan towards the anti-freezing sensor and reconnect the connector. Attach the backside maintenance hatch and close the retainers of the hatch on the outlet side of the post-heating radiator.

Changing the handedness of the outdoor air dampers

Open the maintenance hatches of the outdoor air and exhaust air modules on both sides. Disconnect the connectors of the damper actuators and move the module wires to the other side. Remove the dampers from the module whole and turn them around so that the actuators are situated on the new maintenance side. Connect the connectors and close the maintenance hatches.

DRAINING OF CONDENSATE

Moisture in extract air condenses into water during the heating season. In new buildings with many people present, large amounts of condensate can form in the system. Condensate collected in a stainless steel condensate tray is drained through a drain hole designed for this purpose.

IMPORTANT
The unit must be installed in a room with a floor drain.

The outlet pipe must not run above the siphon. Condensate must be able to drain out effortlessly. If condensate is not properly drained automatically, a condensate pump must be used.

The condensation outlet pipe must be frost-proof!

- Vallox Pureo SX units have two condensation drain holes on the supply side and the extract side (4 pcs in total). Connect the condensation outlet pipes to the maintenance-side drain holes on the supply and extract side.

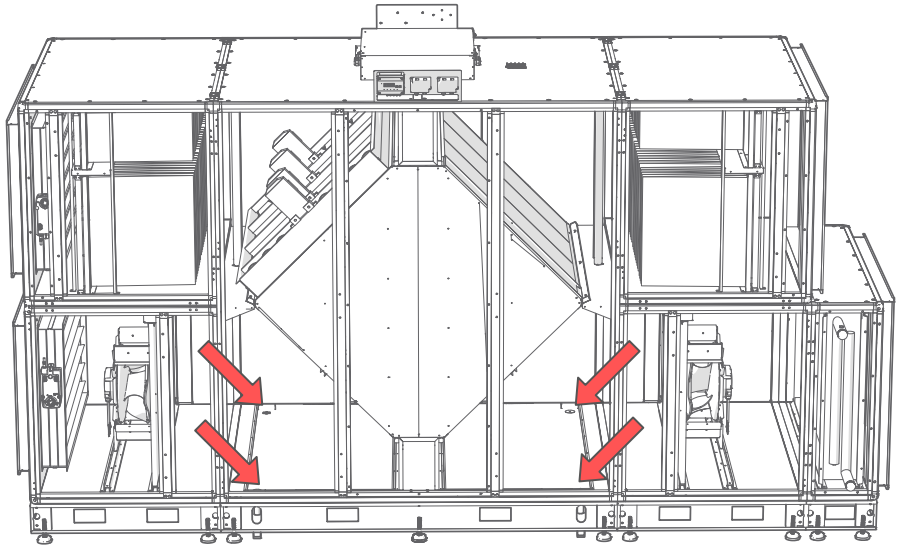
NOTE
Ball siphon available as an accessory.

Make sure that the condensation outlet pipes have been connected separately.

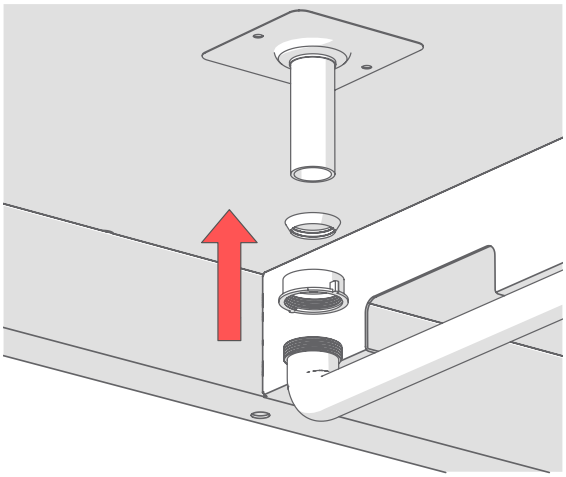
The condensation outlet pipes must be connected to the wastewater system through a siphon.

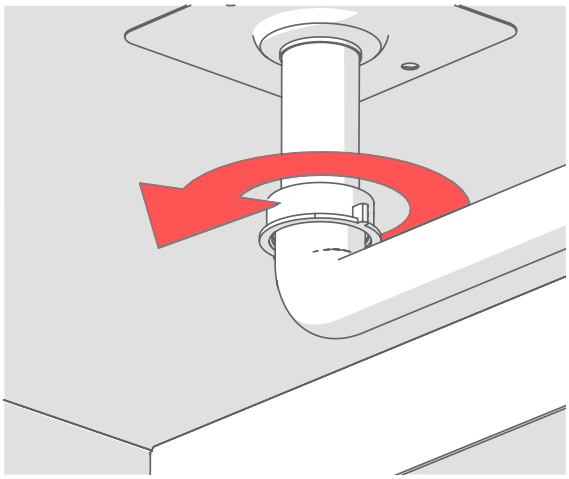
Condensate should drain freely into the wastewater system beyond the siphon. Existing draining systems must not be connected directly to the wastewater system.

Make sure that the unused condensate drain holes have been plugged.



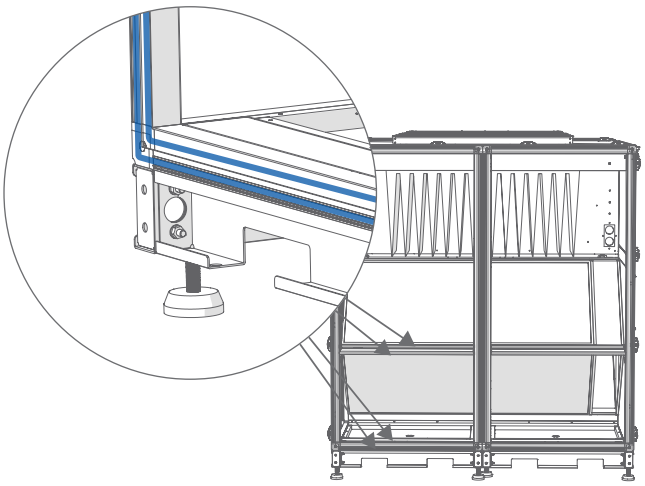
Install an elbow fitting to the condensate tray. Twist the fitting to check that the structure is watertight.





ASSEMBLY OF UNIT PARTS

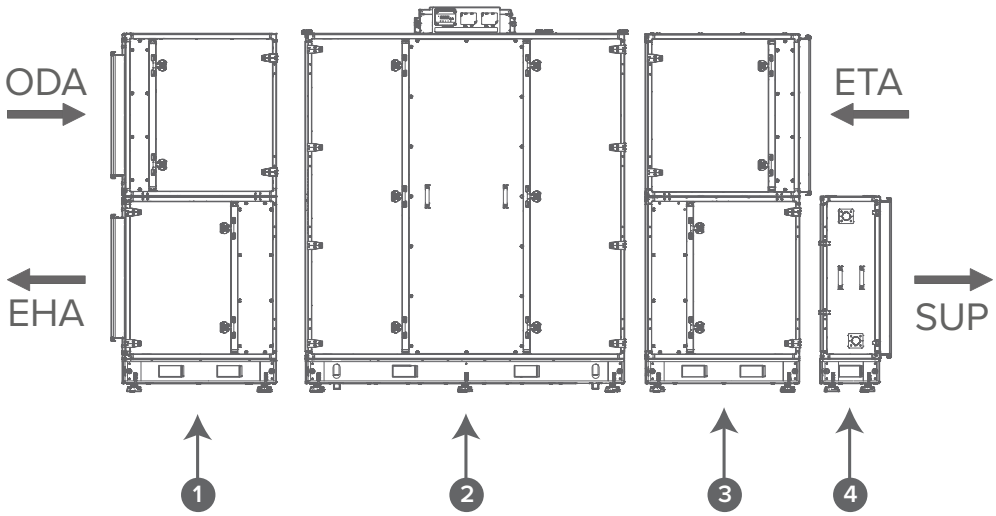
Start the assembly by sealing both heat exchanger module surfaces.



DANGER
Mortal danger caused by an electric shock!

An electric shock could result in death or serious injury. Make sure the unit is dead and disconnected from power. Earth and short-circuit the unit. Protect any adjacent live components.

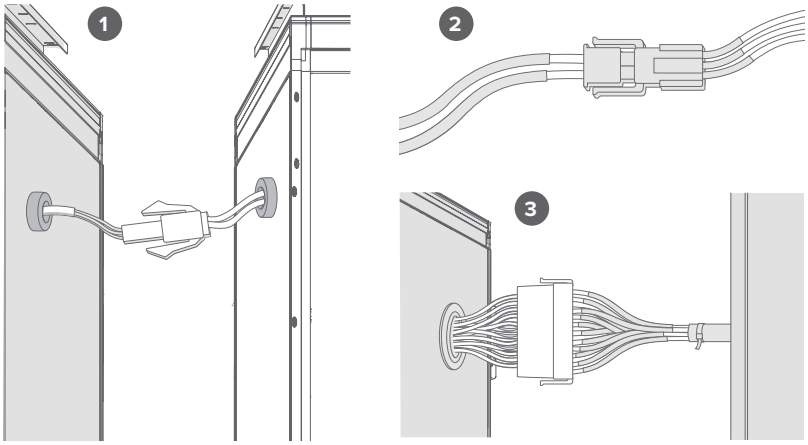
Vallox Pureo SX units consist of four modules, delivered separately.



MODULE DIMENSIONS

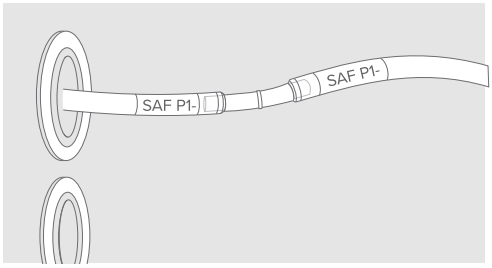
	Dimensions (mm) (w x h x d)			
	1	2	3	4
Vallox Pureo SX 1000	795 x 1719 x 1412	1971 x 2149 x 1715	795 x 1719 x 1412	354 x 723 x 1412
Vallox Pureo SX 1500	942 x 2149 x 1715	1971 x 2149 x 1715	942 x 2149 x 1715	354 x 1041 x 1715
Vallox Pureo SX 2000	1089 x 2180 x 2021	1971 x 2180 x 2021	1089 x 2180 x 2021	354 x 1041 x 2021
Vallox Pureo SX 3000	1089 x 2180 x 2326	2265 x 2180 x 2326	1089 x 2180 x 2326	354 x 1044 x 2326

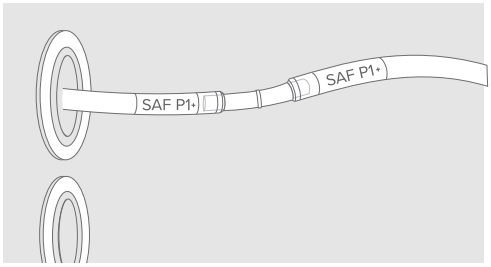
Before assembling the modules together at the final place of installation, place them as close to each other as possible. Use the base of each module to pull them together.

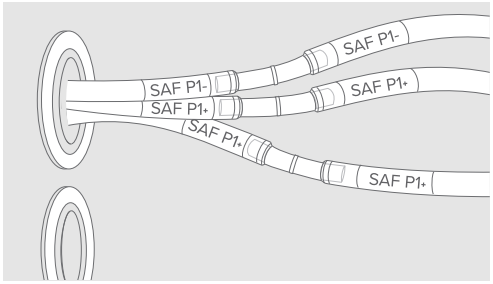


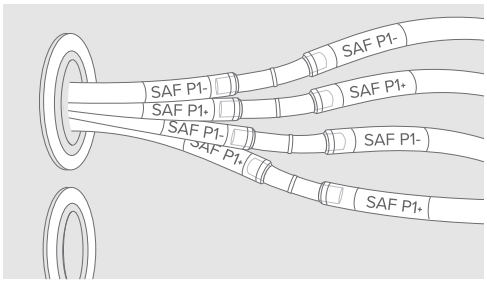
Make sure all the electrical connections have been done carefully.

Make sure the pressure hoses have been connected correctly according to their markings.



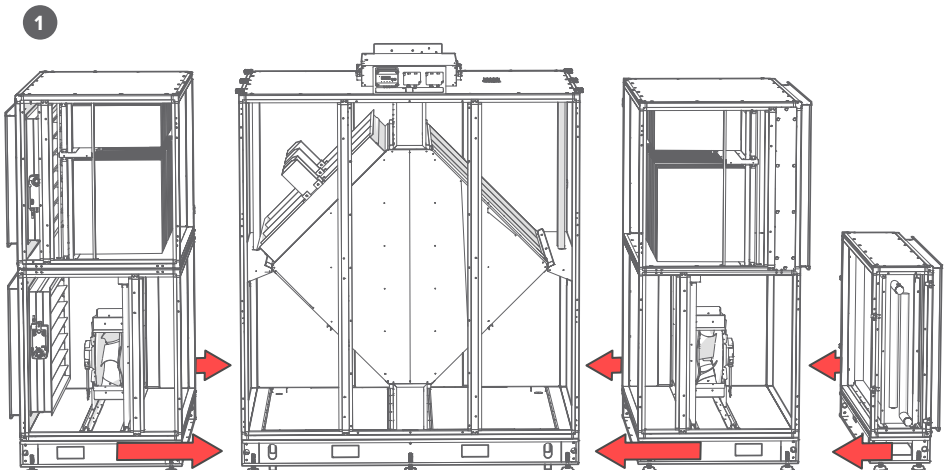


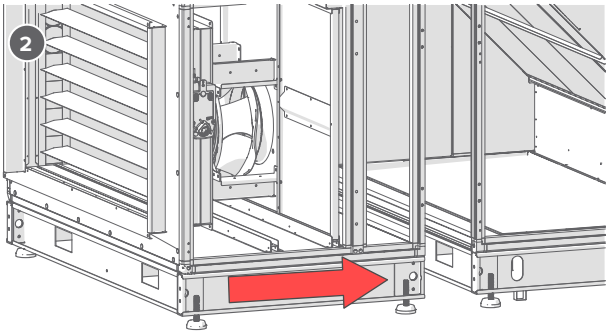


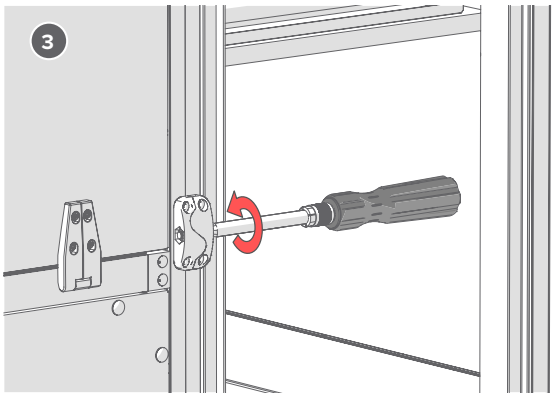


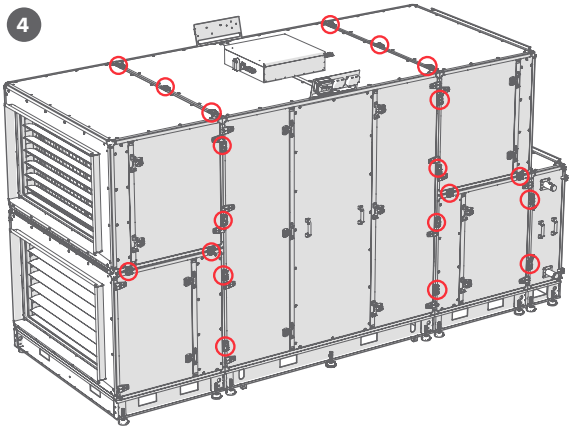
Before assembling the unit, place all the modules as close to each other as possible. Use the base of each module to pull them together. Pull the modules close to each other and tighten with screws.

1. Move the modules as close to each other as possible.
2. Push them from the base only.
3. Press the modules together and tighten with screws.
4. To finish, make sure all the modules have been securely connected.







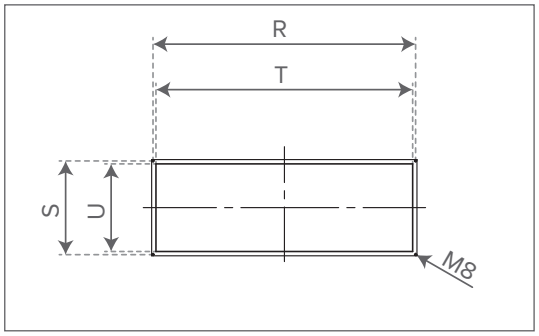


Flange connections and adapters

The dimensions of the unit's flange connections have been listed in the table below.

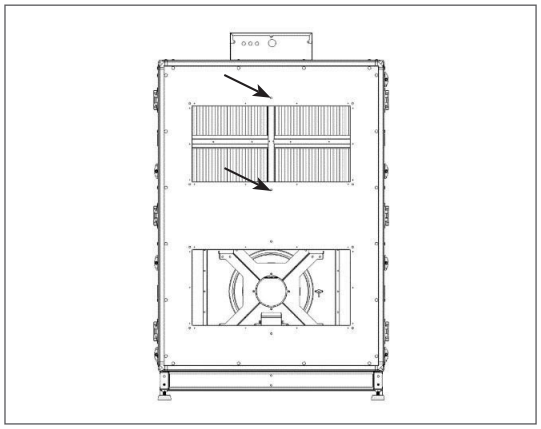
DIMENSIONS FOR THE UNIT FLANGE CONNECTIONS

	Outdoor air/exhaust air duct (mm)					Supply air/extract air duct (mm)				
	R	S	T	U	n	R	S	T	U	n
Vallox Pureo SX 1000	1013,6	467,6	1003,6	447,6	4	973,2	667,2	963,2	647,2	4
Vallox Pureo SX 1500	1318,6	767,6	1308,6	747,6	4	1278,2	972,2	1268,2	952,2	4
Vallox Pureo SX 2000	1623,6	767,6	1613,6	747,6	4	1583,2	972,2	1573,2	952,2	4
Vallox Pureo SX 3000	1928,6	767,6	1918,6	747,6	4	1888,2	972,2	1878,2	952,2	4



NOTE
The ducts must be secured tightly to the connection valves.

Connect the ducts, connector and flexible duct to the unit corners with M8x16 screws.



NOTE
After tightening the screws, the accessory must be secured with supports.

DUCT SYSTEM

Follow the local regulations on fireproofing and air ducts.

ELECTRICAL CONNECTIONS

DANGER
Mortal danger caused by an electric shock!

The unit must be fully isolated from the mains before carrying out maintenance and installation work and before opening the connection box! Electrical connections shall be made by a qualified electrician only according to the wiring diagram used. Electrical connections must be fully isolated from the main power source until the final assembly!

The unit has a main switch and an insulator, which has been protected against unauthorised use with a D-lock. Applicable standards, safety regulations, and technical requirements set for the connection by the local electricity company shall be complied with. The unit is connected to the mains through the connection box or the main switch. The unit controller (not included in the standard delivery) is connected to the unit with a cable provided with the controller. The Vallox Pureo control panel is connected to the unit with a cable. The control cable should not be longer than 10 metres. The unit shall be classified as "professional equipment" according to the applicable standard. A low-voltage connection is allowed if discussed in advance with the electrical contractor.

NOTE!
The following circuit breakers are recommended:

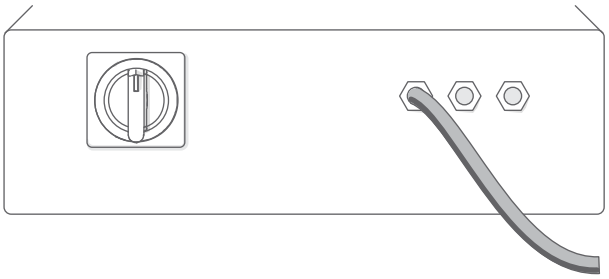
CIRCUIT BREAKERS

	Phase	Type	Circuit breakers (A)
Vallox Pureo SX 1000	~1	C	10
Vallox Pureo SX 1500	~3	C	10
Vallox Pureo SX 2000	~3	C	10
Vallox Pureo SX 3000	~3	C	10

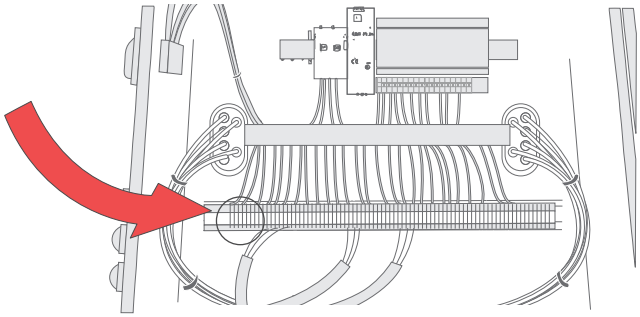
For more information about the connection of optional components to the mains, please see the instructions for installation and use of said component.

MAINS CONNECTION

1. Open the connection box cover.
2. Check the diameter of the cable used for the mains connection.
3. Loosen the cable gland and slip the cables through it.



4. Connect the cables to the correct connectors.



CONTROLLER CONNECTION

DANGER
Mortal danger caused by an electric shock!

An electric shock could result in death or serious injury. Make sure the unit is dead and disconnected from power. Earth and short-circuit the unit. Protect any adjacent live components.

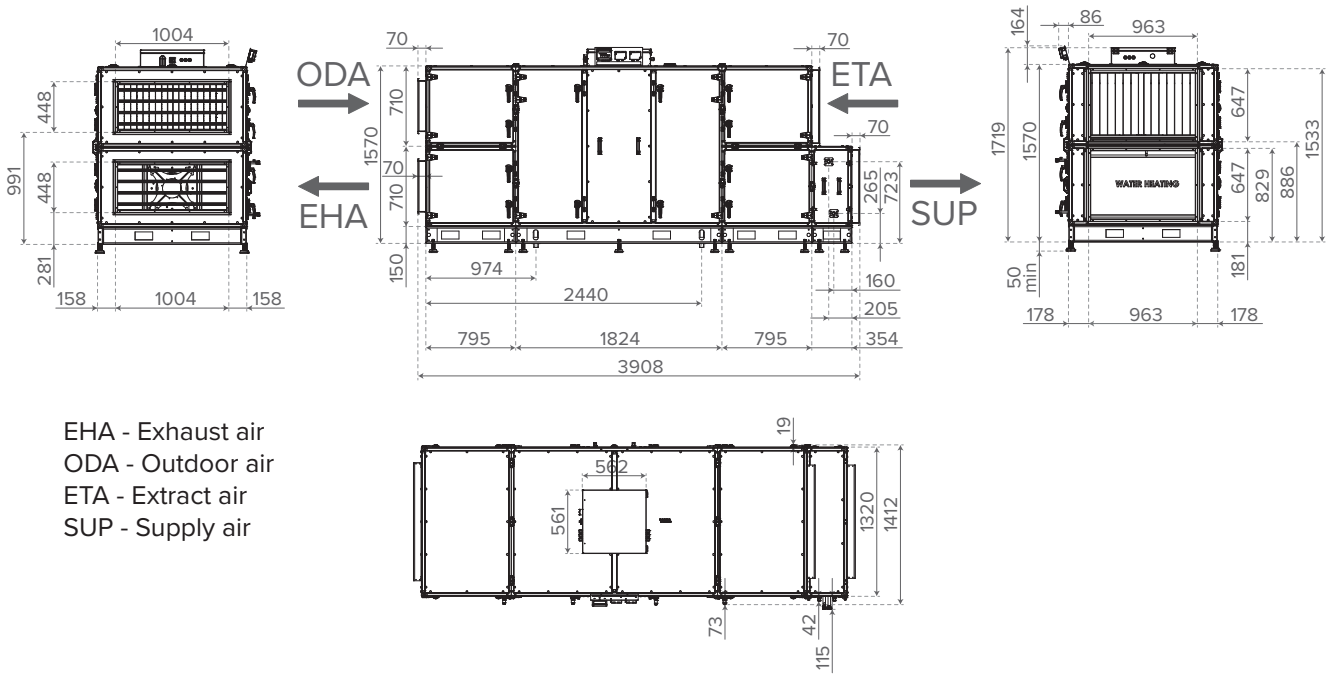
WARNING
Danger due to an electric shock, moving parts (fan) and hot surfaces!

1. Open the connection box cover.

2. Loosen the cable gland and slip the cables through it.
3. Connect the control cable to the correct connectors on the connection box (see. Electrical connections).
4. Connect the other end of the HMI cable to the display(see. Electrical connections).

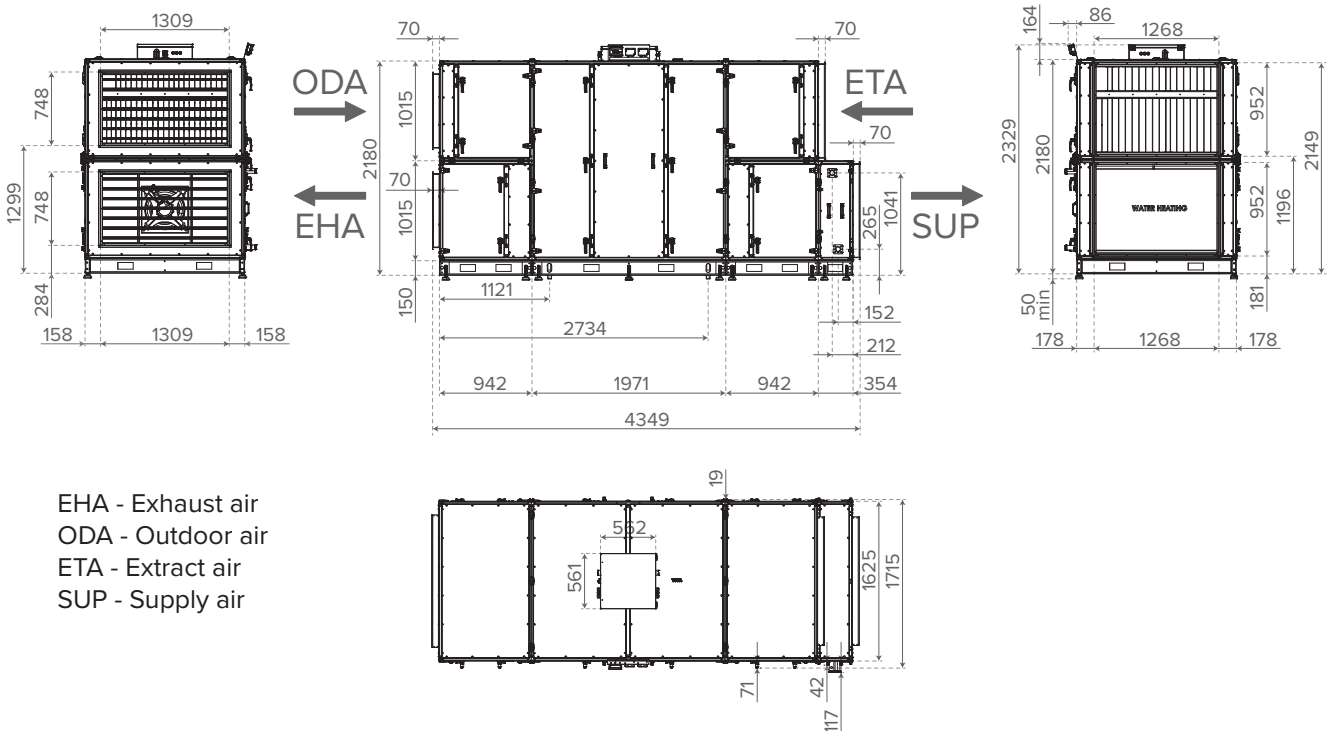
DIMENSIONS AND DUCT OUTLETS

Vallox Pureo SX 1000



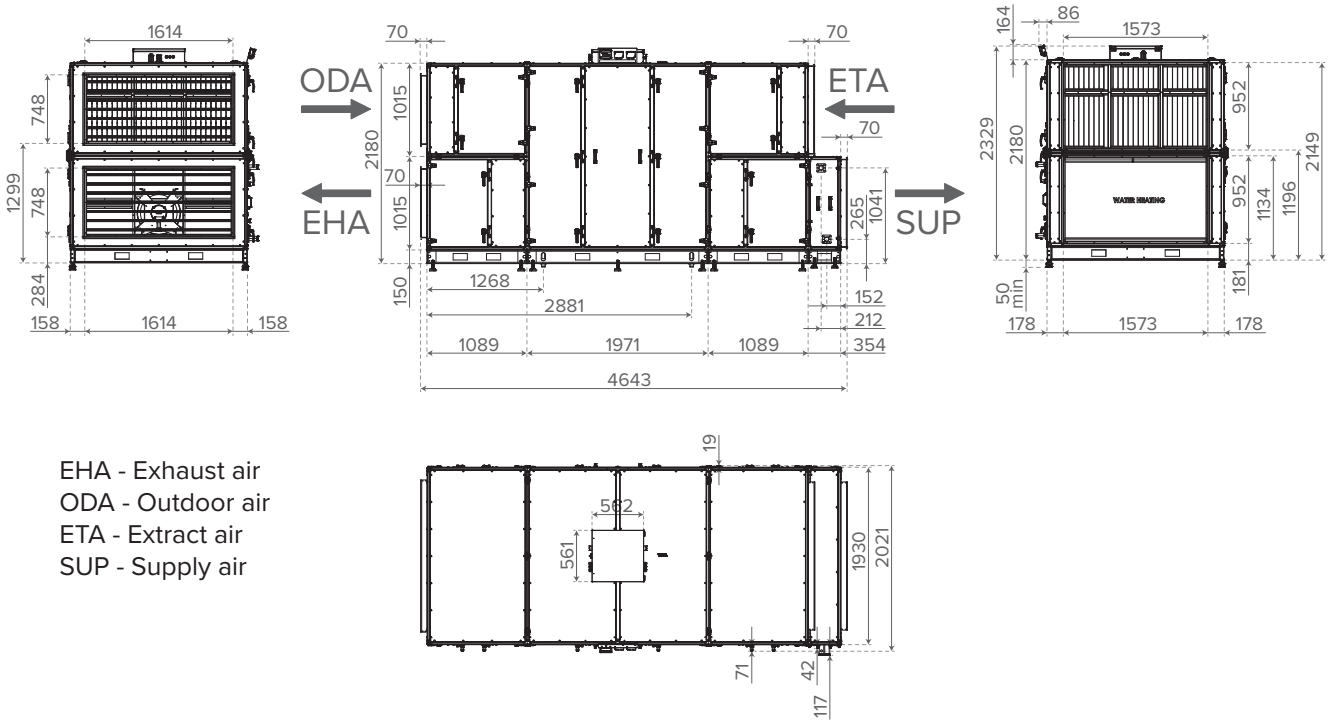
EHA - Exhaust air
ODA - Outdoor air
ETA - Extract air
SUP - Supply air

Vallox Pureo SX 1500



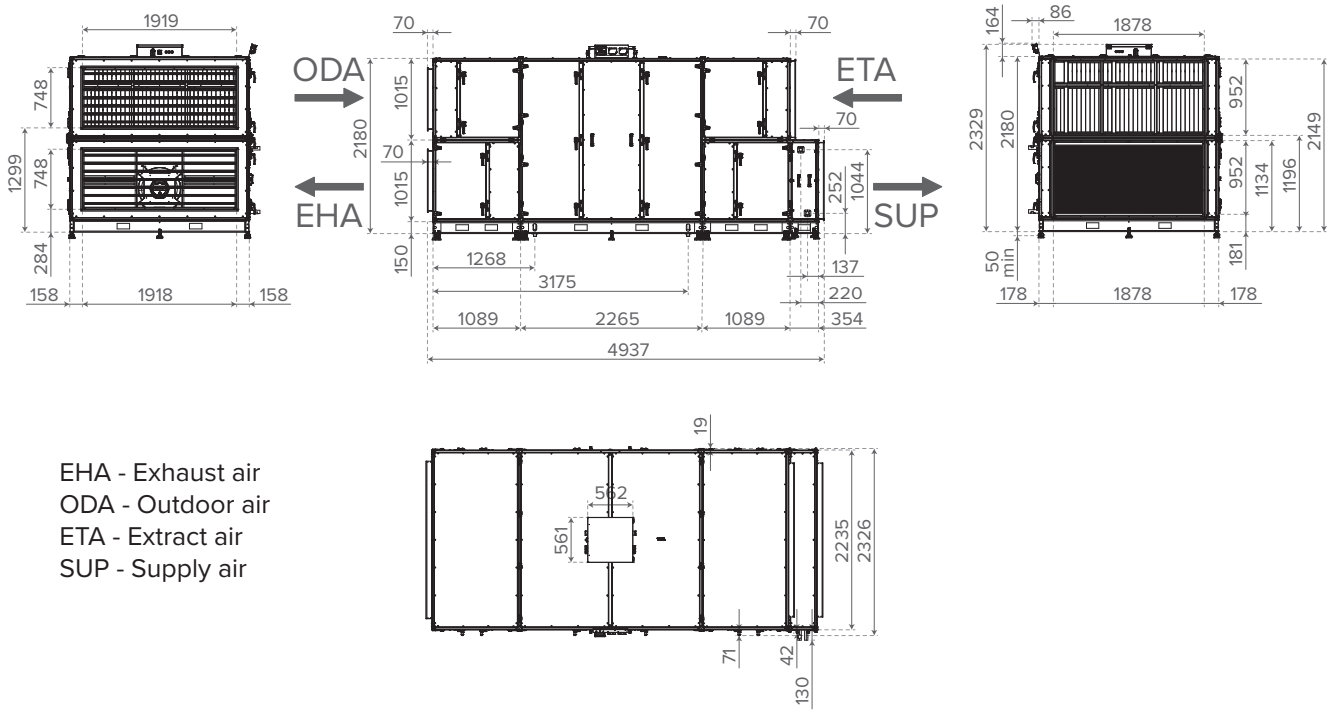
EHA - Exhaust air
ODA - Outdoor air
ETA - Extract air
SUP - Supply air

Vallox Pureo SX 2000



EHA - Exhaust air
ODA - Outdoor air
ETA - Extract air
SUP - Supply air

Vallox Pureo SX 3000



EHA - Exhaust air
ODA - Outdoor air
ETA - Extract air
SUP - Supply air

SERVICE AND MAINTENANCE

The unit shall be cleaned and maintained by professionals only.

The unit must be fully isolated from the mains before carrying out maintenance and installation work and before opening the service door.

DANGER
Mortal danger caused by an electric shock!

CAUTION
After cutting off the power, wait for five (5) minutes before starting maintenance work!

MAINTENANCE PLAN

The unit must be fully isolated from the mains before carrying out maintenance and installation work and before opening the connection box! Electrical connections shall be made by a qualified electrician only according to the wiring diagram used. Electrical connections must be fully isolated from the main power source until the final assembly!

DANGER
Danger due to an electric shock, moving parts (fan) and hot surfaces!

The unit must be inspected regularly according to the maintenance plan:

MAINTENANCE PLAN

Part	Measure (if necessary)	3 months	6 months	12 months	24 months
1. Outdoor air and exhaust air duct outlets					
Check for contamination, damage and corrosion	Clean and repair				X
2. Filters					
Check for harmful contamination and damage (leaks) and odours	Replace defective filters	X			
3. Air ducts					
Check the accessible areas for damage	Repair			X	
Check 2–3 typical locations for contamination, corrosion and condensation on the duct surface	Check the other duct areas for a need of cleaning (not only visible areas!)			X	
4. Fan					
Check for contamination, damage and corrosion	Clean and repair		X		
5. Heat exchanger					
Check the counterflow heat exchanger visually for contamination, damage and corrosion	Clean and repair		X		
Heating coil: Check for contamination, damage and corrosion and make sure the seals are tight	Clean and repair, replace	X			
Cooling coil (optional): Check the coil, droplet separator and condensate tray for contamination, damage and corrosion and make sure the seals are tight	Clean and repair	X			
Check the operation of the condensation outlet pipe and siphon	Clean and repair	X			
6. Casing					
Check for harmful contamination and damage (leaks) and odours	Clean and repair	X			

SERVICE AND MAINTENANCE OF THE CROSS COUNTERFLOW HEAT EXCHANGER

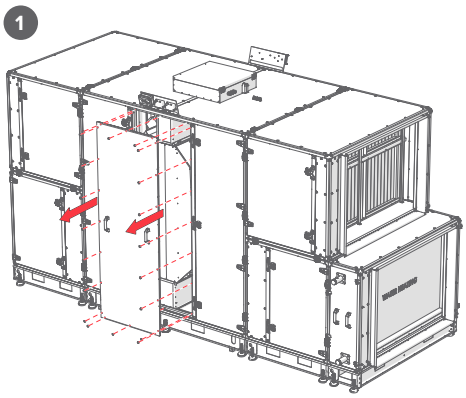
The unit must be fully isolated from the mains before carrying out maintenance and installation work and before opening the connection box! Danger due to an electric shock, moving parts (fan) and hot surfaces!

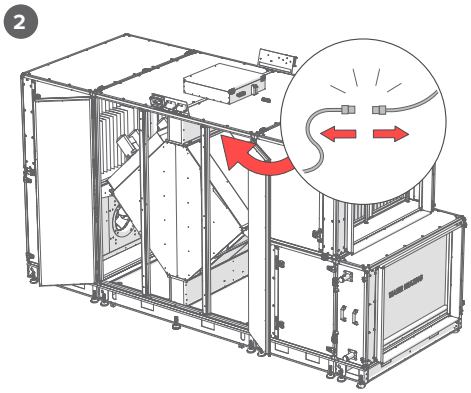
DANGER
Mortal danger caused by an electric shock!

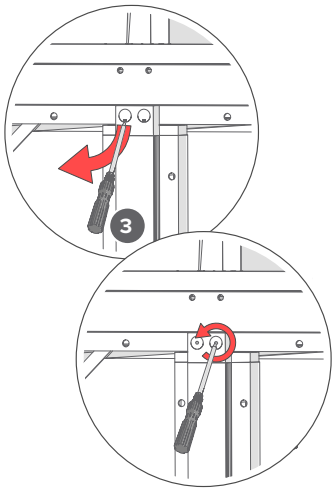
WARNING
The heat exchanger is very heavy and may contain condensate! Maintenance work shall always be carried out by at least two people!

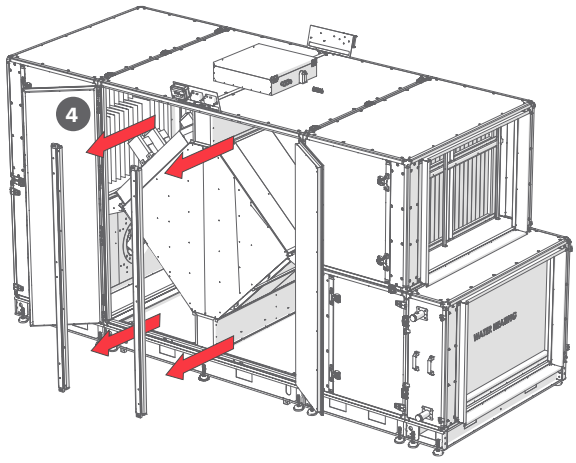
DISASSEMBLY

1. Loosen the screws and remove the maintenance panels.
2. Remove the connectors of the sectional defrosting damper and bypass actuator.
3. The profile must always be removed for heat exchanger maintenance. Remove the cover plates and loosen the screws.

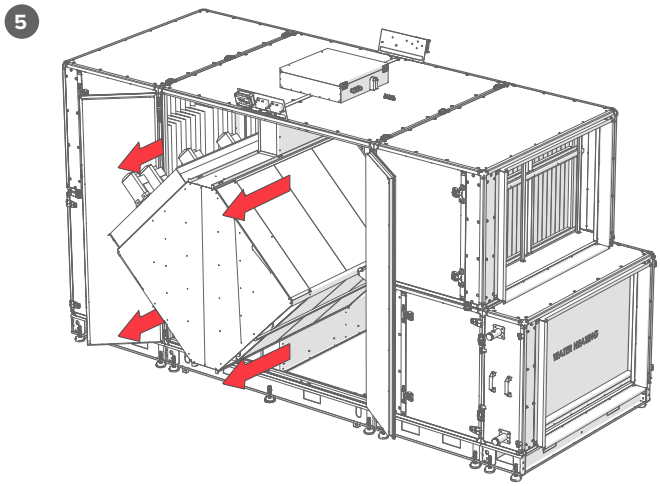




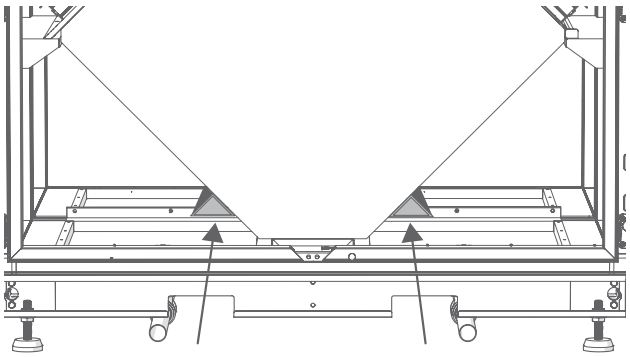




4. Remove the profile carefully.
5. Remove the cross counterflow heat exchanger carefully and put it down safely.



A forklift truck may be used to remove the cross counterflow heat exchanger. Make sure to leave enough room for the forklift truck to maintain the heat exchanger.



CLEANING

The cross counterflow heat exchanger must be inspected regularly for any dirt and dust. The cross counterflow heat exchanger must also be inspected for damage every six months. If the cross counterflow heat exchanger is dirty or dusty, follow these instructions to clean it:

- Aluminium cross counterflow heat exchangers may be cleaned with water (maximum permitted cleaning pressure 5 bar).
- You can use either cold or warm water (max. 70°C). A regular household cleaning agent may be used.
- Make sure to clean both sides of the heat exchanger!
- Do not bend the plates!
- When cleaning the heat exchanger, make sure to not damage it mechanically or chemically.

IMPORTANT
Allow the heat exchanger to dry before installation!

FILTER REPLACEMENT

The unit must be fully isolated from the mains before maintenance and cleaning.

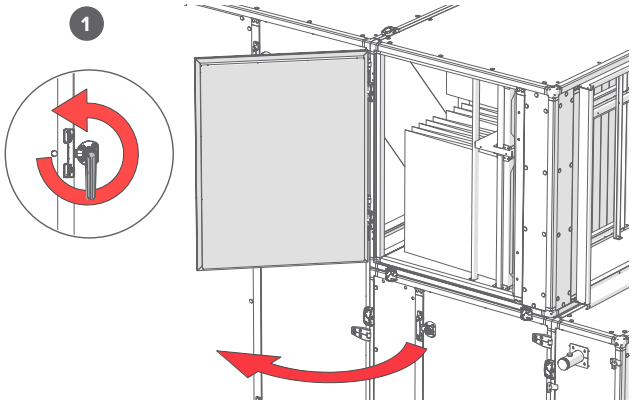
The filters must be inspected for dirt, damage and odours every three months. If the filters are damp or mouldy, replace them immediately.

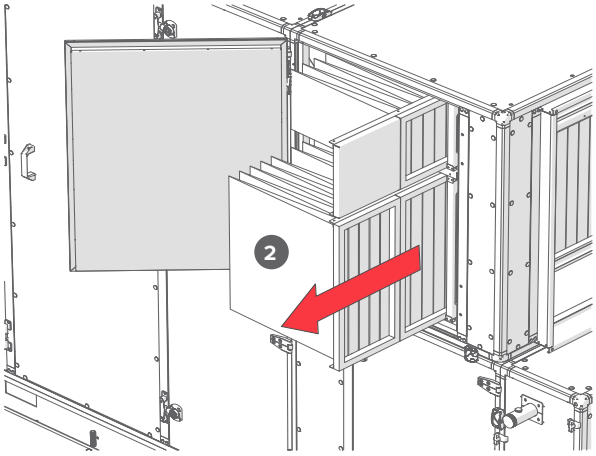
Vallox Pureo SX units are equipped with an ePM_1 60% filter for outdoor air and ePM_{10} 60% for extract air. If other types of filters are used, the settings of the unit controller must be changed.

DANGER
Mortal danger caused by an electric shock!

The technical specifications of a standard filter are listed in the table below:

1. Open the doors by releasing the retainer and turning the handles anticlockwise.
2. Open the filter's retainer rail by pulling at it and remove the filter.





IMPORTANT
Check the air flow direction when installing the filter.

NOTE
Replacement filters are also available online at filters.vallox.com

TECHNICAL DATA FOR STANDARD FILTERS						
	Filters	Nominal air volume flow (dm^3/s)	Number of filters	Filter class	Dimensions (mm) (l x h x w)	Recommended final pressure differential (Pa)
Vallox Pureo SX 1000	Extract air	1000	2	ePM_{10} 60 %	592 x 592 x 535	151
Vallox Pureo SX 1000	Outdoor air	1000	2	ePM_1 60 %	592 x 592 x 535	151
Vallox Pureo SX 1500	Extract air	1500	2	ePM_{10} 60 %	592 x 592 x 535	132
Vallox Pureo SX 1500	Extract air	1500	2	ePM_{10} 60 %	592 x 287 x 535	132
Vallox Pureo SX 1500	Extract air	1500	1	ePM_{10} 60 %	287 x 592 x 535	132
Vallox Pureo SX 1500	Outdoor air	1500	2	ePM_1 60 %	592 x 592 x 535	132
Vallox Pureo SX 1500	Outdoor air	1500	2	ePM_1 60 %	592 x 287 x 535	132
Vallox Pureo SX 1500	Outdoor air	1500	1	ePM_1 60 %	287 x 592 x 535	132
Vallox Pureo SX 2000	Extract air	2000	3	ePM_{10} 60 %	592 x 592 x 535	138
Vallox Pureo SX 2000	Extract air	2000	3	ePM_{10} 60 %	592 x 287 x 535	138
Vallox Pureo SX 2000	Outdoor air	2000	3	ePM_1 60 %	592 x 592 x 535	138
Vallox Pureo SX 2000	Outdoor air	2000	3	ePM_1 60 %	592 x 287 x 535	138
Vallox Pureo SX 3000	Extract air	3000	3	ePM_{10} 60 %	592 x 592 x 535	164
Vallox Pureo SX 3000	Extract air	3000	4	ePM_{10} 60 %	592 x 287 x 535	164
Vallox Pureo SX 3000	Extract air	3000	1	ePM_{10} 60 %	287 x 592 x 535	164
Vallox Pureo SX 3000	Outdoor air	3000	3	ePM_1 60 %	592 x 592 x 535	164
Vallox Pureo SX 3000	Outdoor air	3000	4	ePM_1 60 %	592 x 287 x 535	164
Vallox Pureo SX 3000	Outdoor air	3000	1	ePM_1 60 %	287 x 592 x 535	164

SERVICE AND MAINTENANCE OF FANS

The unit must be fully isolated from the mains before maintenance and cleaning. Risk of injury due to an electric shock, moving parts (fan) and hot surfaces!

WARNING
Mortal danger caused by an electric shock!

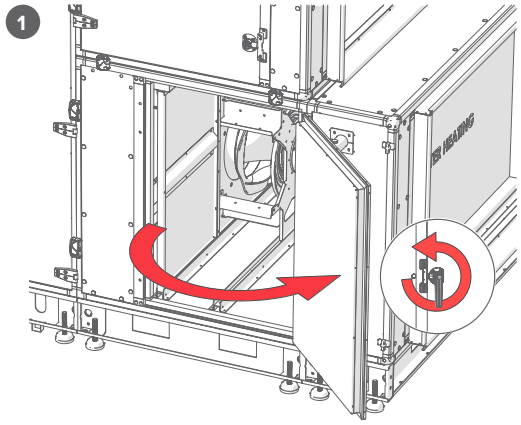
Be careful when carrying out maintenance work – the fans are very heavy. The fans must be inspected for dirt, damage and corrosion every six months or more frequently, depending on the dirtiness of the blades:

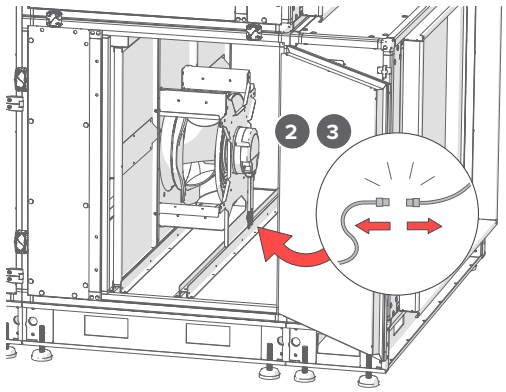
- Regular inspections and cleaning carried out whenever necessary help prevent imbalance caused by dirt.
- Clean the fan casing.
- Make sure the unit does not vibrate or move.
- Wipe the fan clean with a damp cloth. Do not use corrosive agents that could damage the paint. It is prohibited to use a pressure washer and a water jet to clean the fan.
- If water enters the motor: dry the fan carefully before restarting the unit.

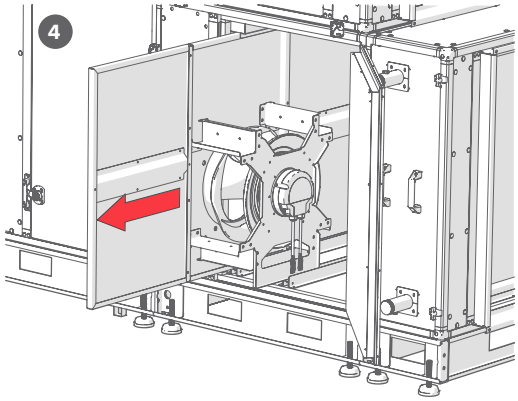
WARNING
Risk of injury due to the weight of the unit!

K FACTORS	
Vallox Pureo SX 1000	145
Vallox Pureo SX 1500	190
Vallox Pureo SX 2000	250
Vallox Pureo SX 3000	375

1. Open the doors by releasing the retainer and turning the handles anticlockwise.
2. Disconnect the fan connector.
3. Disconnect the pressure hoses from the fan.
4. Remove the fan carefully.







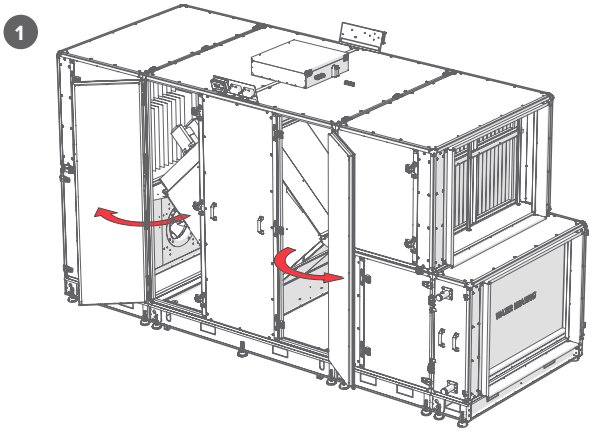
NOTE
When installing the fan, pay attention to the electrical connections and the correct connection of the pressure hoses.

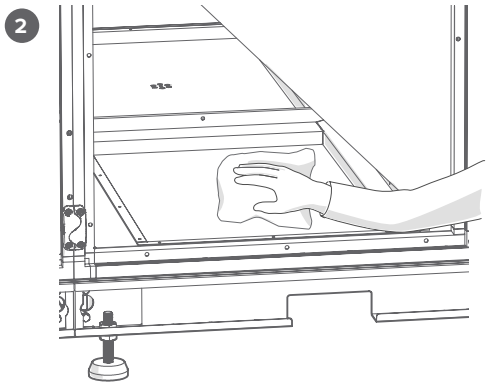
CLEANING THE CONDENSATE TRAY

The unit must be fully isolated from the mains before maintenance and cleaning. Risk of injury due to an electric shock, moving parts (fan) and hot surfaces! If a condensate pump is installed, remove the pump connections before removing the service door. The condensate tray must be inspected for dirt and damage every six months.

DANGER
Mortal danger caused by an electric shock!

1. Loosen the screws and remove the maintenance panels.
2. Wipe the condensate tray clean with a cloth.





CLEANING THE UNIT

The unit must be fully isolated from the mains before maintenance and cleaning. Risk of injury due to an electric shock, moving parts (fan) and hot surfaces!

- The unit must be inspected for dirt, damage and corrosion once a year.
- Wipe the unit clean with a damp cloth.

DANGER
Mortal danger caused by an electric shock!

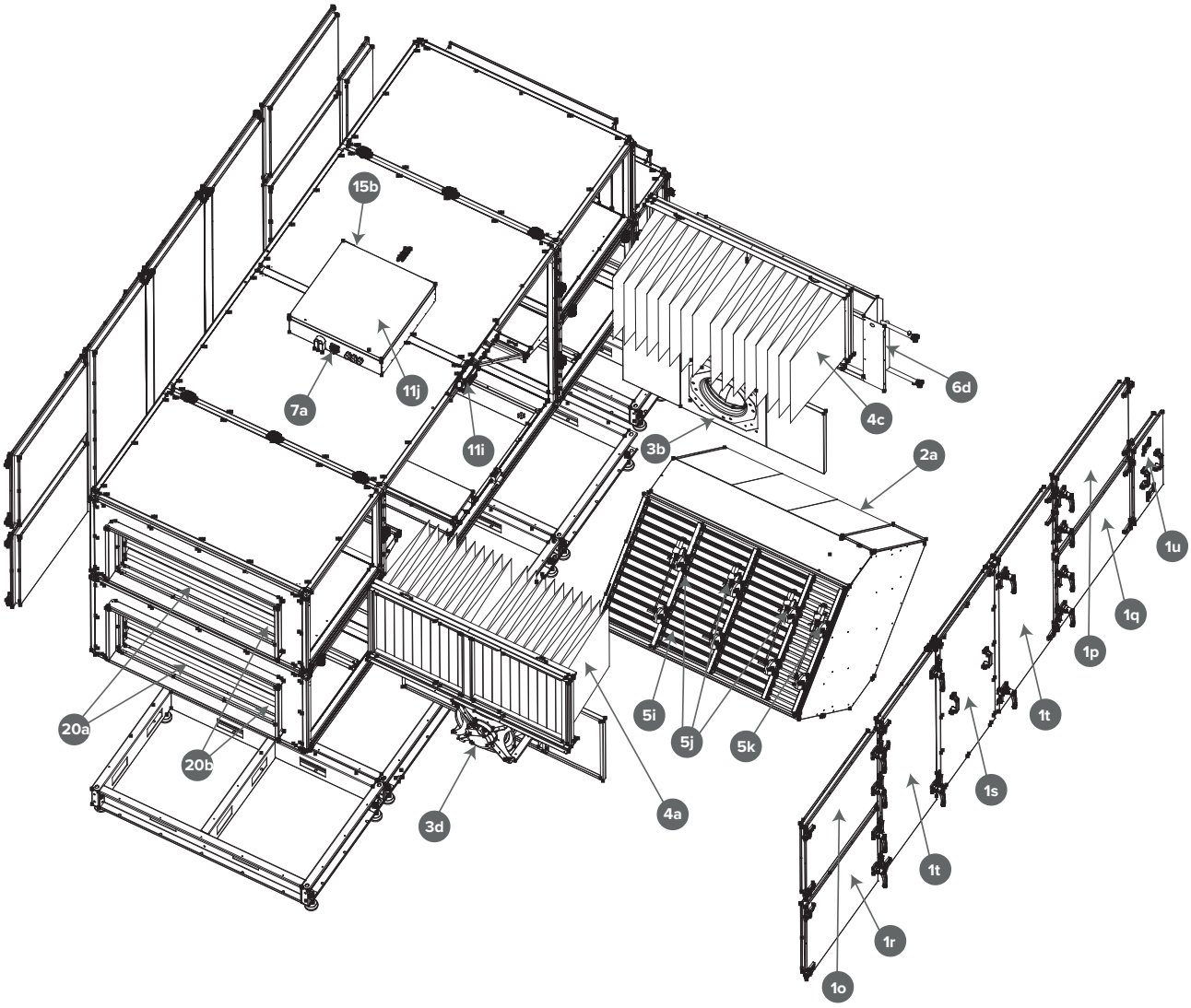
PERFORMANCE AND TECHNICAL SPECIFICATIONS

Rating details and technical specifications are available in the selection software. Available online at valloxselect.com.

The mechanical connections must be made correctly to achieve the best possible performance results. The unit's thermal efficiency, noise level and electrical performance could vary depending on the operating conditions. The operating conditions could impact the on-site values, which could differ from the values specified in the selection software.

EXPLODED VIEW AND PARTS LISTS

Vallox Pureo SX



NO	PART	NO	PART	NO	PART
1o	Maintenance hatch of the supply air filter	3b	Supply air fan	7a	Main switch
1p	Maintenance hatch of the extract air filter	3d	Extract air fan	11i	Pressure transmitter
1q	Maintenance hatch of the supply air fan	4a	Supply air filter	11j	Controller
1r	Maintenance hatch of the extract air fan	4c	Extract air filter	15b	Electrical box
1s	Maintenance hatch of the counterflow heat exchanger	5i	Bypass/sectional defrosting dampers	20a	Outdoor air dampers
1t	Maintenance hatch of the counterflow heat exchanger with handle	5j	Actuator of the sectional defrosting dampers	20b	Actuator for outdoor air dampers
1u	Maintenance hatch of the post-heating radiator	5k	Bypass actuator		
2a	Counterflow heat exchanger with bypass	6d	Post-heater (liquid)		

DEVICE CONNECTIONS

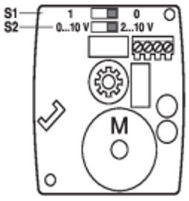
Terminal block	Pureo 5ch differential pressure transmitter		Device
1	24V -	Blue	⊦
2	24V +	Red	~
A	A	White	A
B	B	Yellow	B

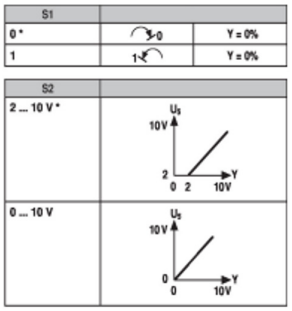
Ouman 5-CDPT

Terminal block	Pureo controller		Device
1	24V -	Blue	1
2	24V +	Yellow	2
A	A	Red	A
B	B	White	B

Ouman RU-23

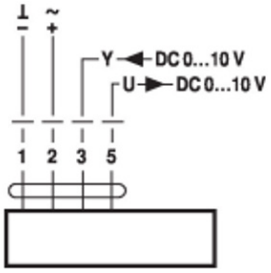
Terminal block	Cooling coil actuator	Device
7	24V -	1
8	24V +	2
9	0–10V	3
10		





Belimo NRYD24-SR-HW

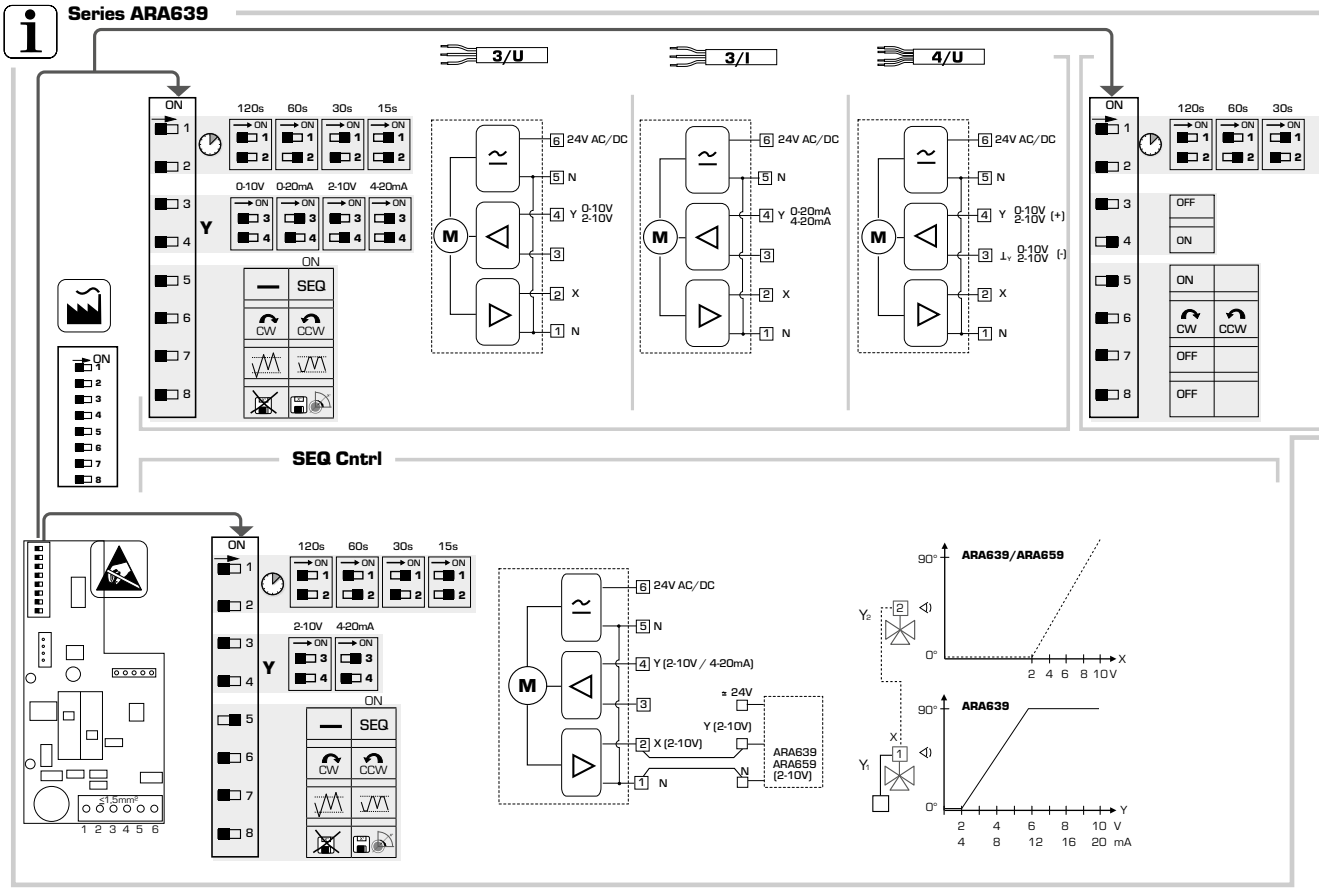
Wiring diagrams
AC/DC 24V, voltage-controlled



Cable colours:
1 = black
2 = red
3 = white
5 = orange

Terminal block	Heating coil actuator	Device
7	24V -	5
8	24V +	6
11	0–10V	4
12		

ESBE Series ARA639



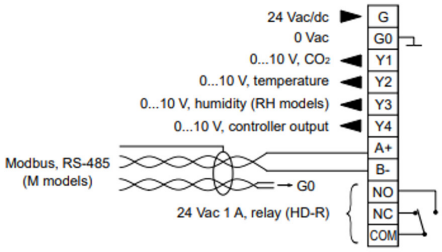
On-site cabling SU.

NOTE
Supply voltage for the circulation pump directly from the electrical cabinet. Separate safety switch.

Terminal block	CO2 transmitter	Device
7	24V -	G0
8	24V +	G0
13	0–10V	Y1

Produal HDK-N

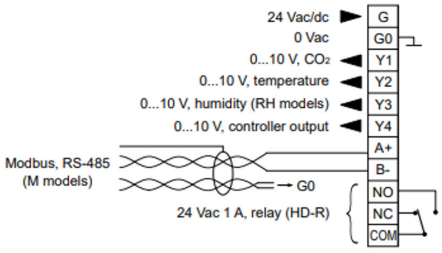
CAUTION: Device wiring and commissioning can only be carried out by qualified professionals. Always make the wirings while the power is switched off.



Terminal block	VOC transmitter	Device
7	24V -	G0
8	24V +	G0
15	0–10V	Y1

Produal ILK-N

CAUTION: Device wiring and commissioning can only be carried out by qualified professionals. Always make the wirings while the power is switched off.



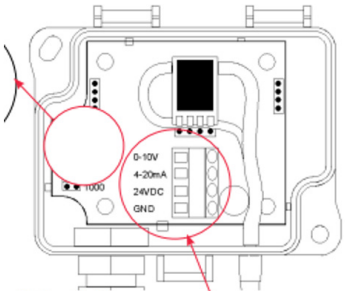
Terminal block	Outdoor air temperature in the duct	Device
19	NTC	1
20	GND	2

Ouman TMD

Terminal block	Supply air temperature in the duct	Device
21	NTC	1
22	GND	2

Ouman TMD

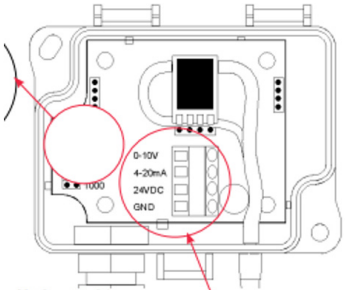
Terminal block	Pressure transmitter for the supply air duct	Device
7	24V -	GND
8	24V +	24VDC
23	0–10V	0–10V



Pressure area selected 0–500 Pa

Ouman DPT-T

Terminal block	Pressure transmitter for the extract air duct	Device
7	24V -	GND
8	24V +	24VDC
25	0–10V	0–10V

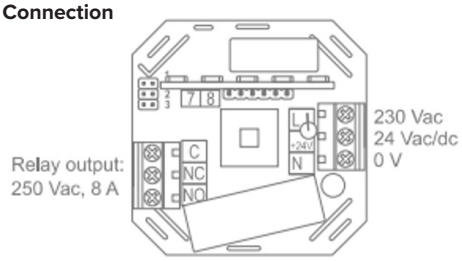


Pressure area selected 0–500 Pa

Ouman DPT-T

Terminal block	Additional timer
27	COM
28	NO

Connection



E.g. Produal LxE

The LAP xE electronic timer is suitable for e.g. controlling boosted ventilation. Press the button to set the time. The indicators show the time set.

Terminal block	Emergency stop
29	COM
30	NC

Short circuit as a factory setting

EC DECLARATION OF CONFORMITY

Manufacturer	Vallox Oy Myllykyläntie 9-11, FIN-32200 LOIMAA, FINLAND Tel. +358 10 7732 200, Fax +358 10 7732 201
Declares that:	
Description of unit	Air handling unit
Model	Vallox Pureo SX 1000, Vallox Pureo SX 1500, Vallox Pureo SX 2000, Vallox Pureo SX 3000 and accessories for each respective size that fall within the scope of these directives.

If the product is installed correctly and used to its intended purpose, it conforms to below standards and directives at its date of manufacture.

Directives

1. Machinery Directive 2006/42/EC
2. Low Voltage Directive 2014/35/EU
3. EMC Directive 2014/30/EU
4. Restriction of Hazardous Substances (RoHS) Directive 2011/65/EU
5. Eco-design (Commission regulation (EU) No. 1253/2014) 2009/125/EC

Standards

1. SFS-EN JSO 12100:2010 Safety of machinery. General principles for design. Risk assessment and risk reduction
2. EN60204-1 Safety of machinery. Electrical equipment of machines. General requirements
3. EN 61000-6-3 Electromagnetic compatibility (EMC). Generic standards. Emission standard for residential, commercial and light-industrial environments
4. EN13053:2019 Air handling units - Rating and performance for units, components and sections
5. EN1886:2007 Ventilation for buildings - Air handling units - Mechanical performance

The person who compiles the technical file

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This declaration relates exclusively to the machinery in the state in which it was placed on the market and installed according to Vallox Oy's instructions. This declaration does not include components which are added or changes done subsequently to the unit.

This is the original Declaration of Conformity

Loimaa, 16th December 2025

Jukka-Pekka Korja
Managing Director

VALLOX

www.vallox.com

Vallox Oy | Myllykyläntie 9-11 | FI-32200 LOIMAA | FINLAND

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