

OPERATION AND MAINTENANCE MANUAL

SERENITY 08, 10

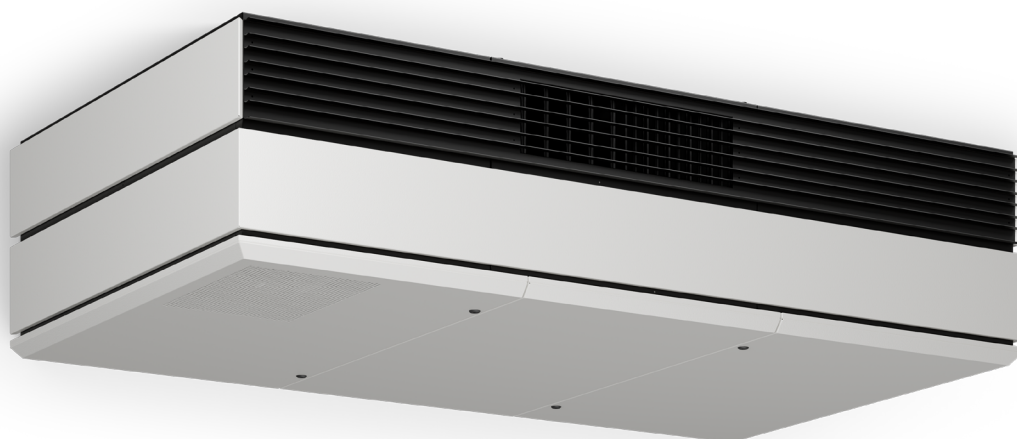


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1. General

1.1 Symbols



WARNING !



Must be connected by a qualified electrician.

Warning! Hazardous voltage.



OUTDOOR AIR (1)



EXTRACT AIR (3)



SUPPLY AIR (2)

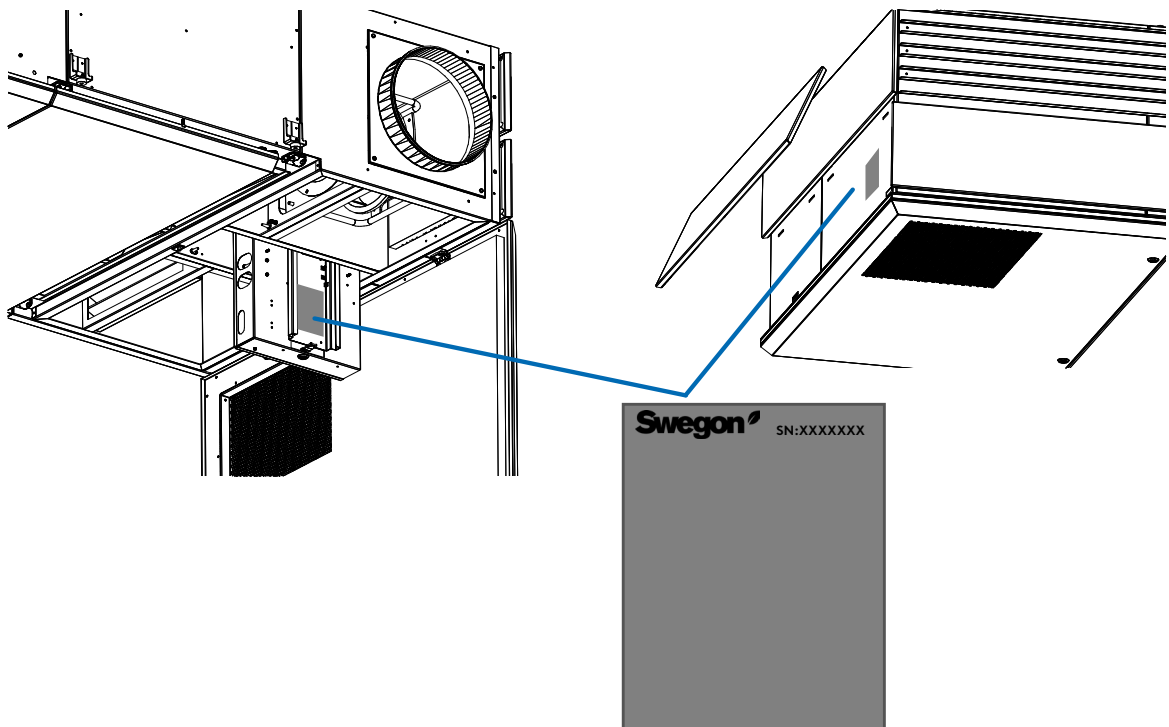


EXHAUST AIR (4)

1.2 General information

All staff must consult the instructions before starting any work on the unit. Any damages to the unit (or parts of it) due to a misuse cannot be considered subject to guarantee.

The product identification can be found on the silver labels. One can be found on the unit and the other is stuck on the back the regulation box. Refer to this label and the serial number (SN) when you contact the supplier.





All electrical connections must be carried out by an authorized installer and in accordance with local rules and controls. Adequate security measures should be applied throughout the maintenance of the unit.

Before switching off the unit, it is recommended to first turn off the fan function via the control system. This allows the post-ventilation process to cool the electrical coils and helps prevent overheating of internal components.

The unit must always be operated with all doors and panels closed. Ensure that no foreign objects are present inside the unit, the ducting system, or any functional sections.

The interface should be installed in a physically secure location, typically within a restricted-access or maintenance area.

Before performing any maintenance or electrical work, make sure the unit is completely disconnected from the power supply. Even if the unit is open and the fans have stopped, some internal components may remain energized if the equipment has not been fully isolated from the electrical mains using an appropriate external isolating device (to be provided and installed by the installer). There is therefore a risk of electric shock during any intervention.



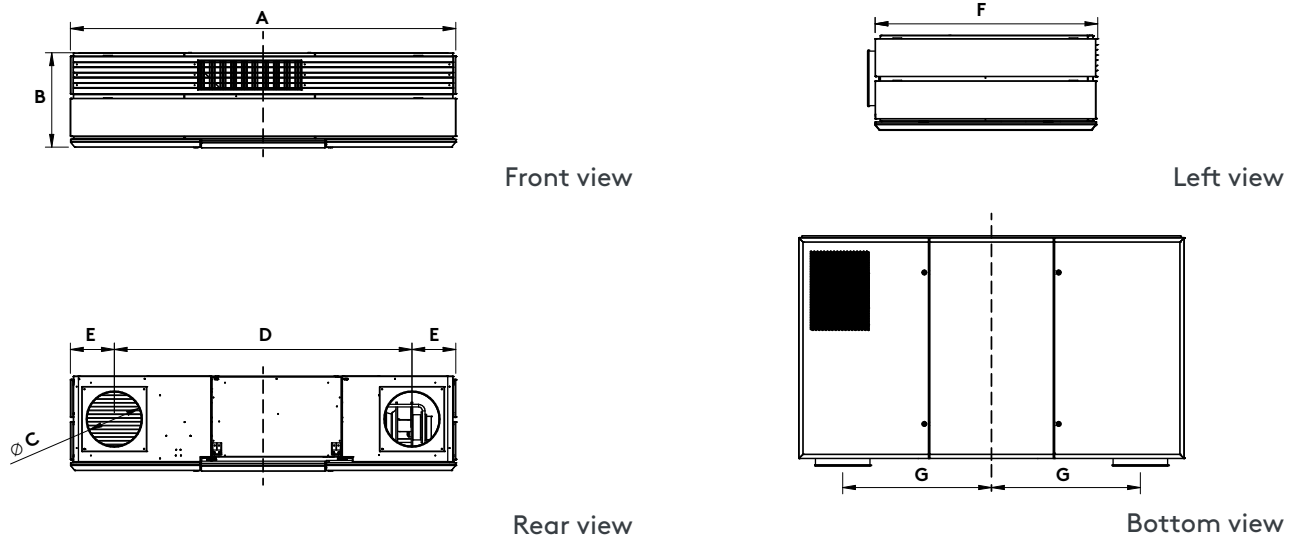
Disclaimer:

For security reasons, floor standing units are equipped with door contactors.

It is strictly forbidden to bypass, disable, or interfere with the mechanical safety interlock systems that automatically stop the fans when the doors are opened, as tampering with these devices may result in serious injury or damage to the equipment.

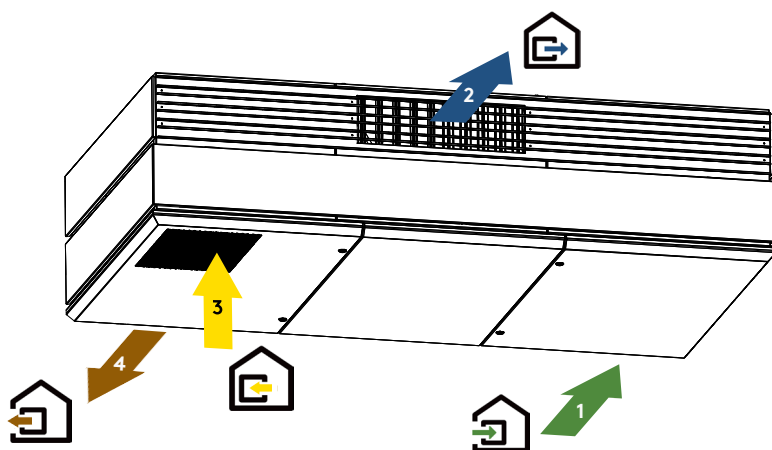
2. Product overview

2.1 General

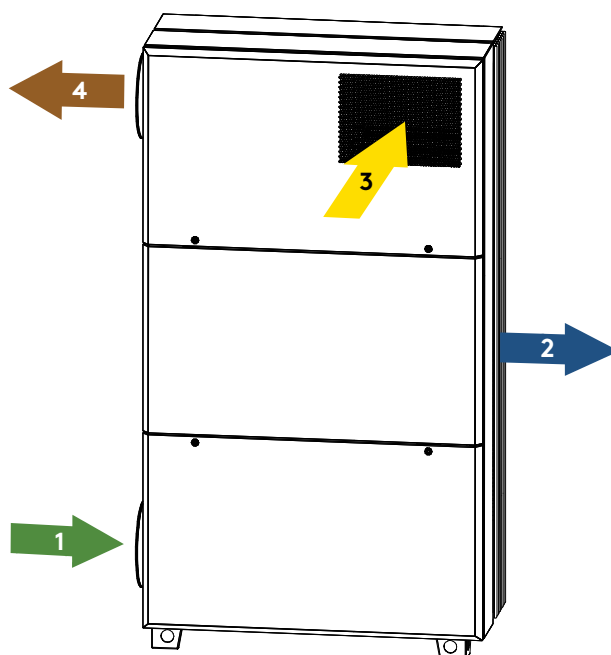
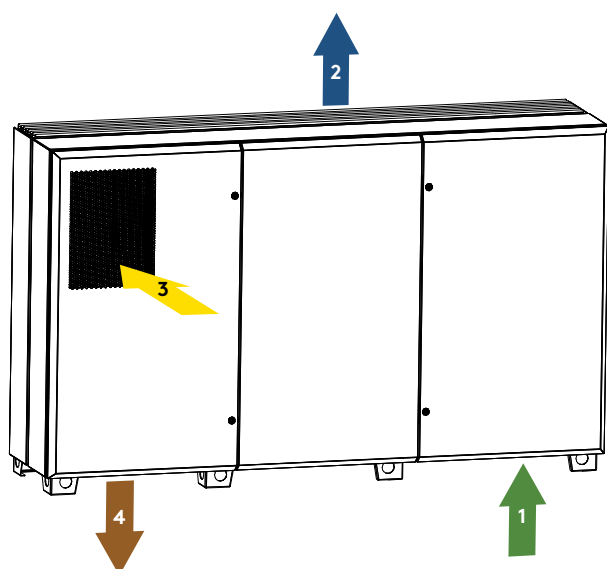


	Weight	Airflow		Dimensions (mm)						
	kg	m ³ /h	l/s	A	B	C	D	E	F	G
SERENITY 10	285	200-800	59-222	2230	545	315	1720	255	1285	860
SERENITY 10	300	200-1200	59-333	2230	545	315	1720	255	1285	860

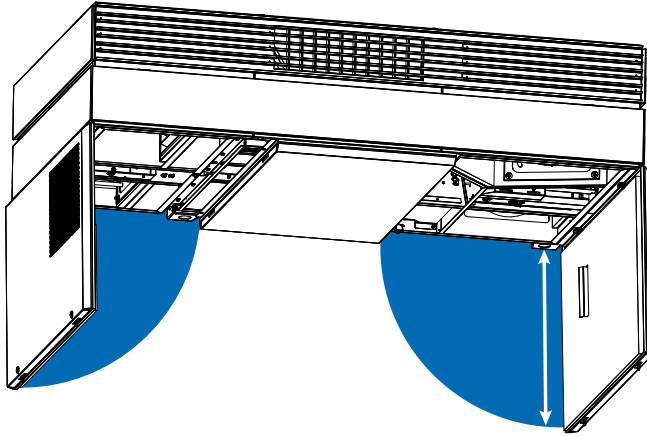
2.2 Airflows



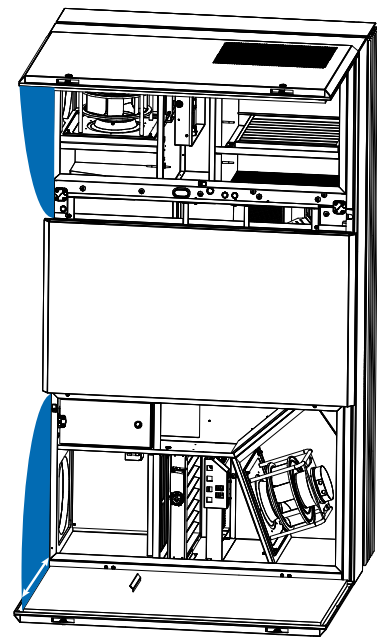
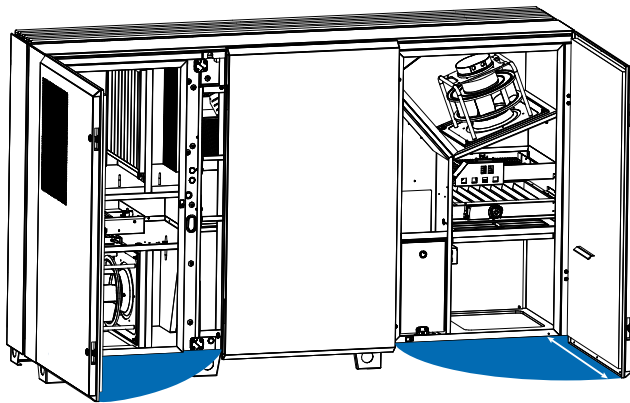
- 1. Outdoor air
- 2. Supply air
- 3. Exhaust air
- 4. Extract air



2.3 Maintenance area



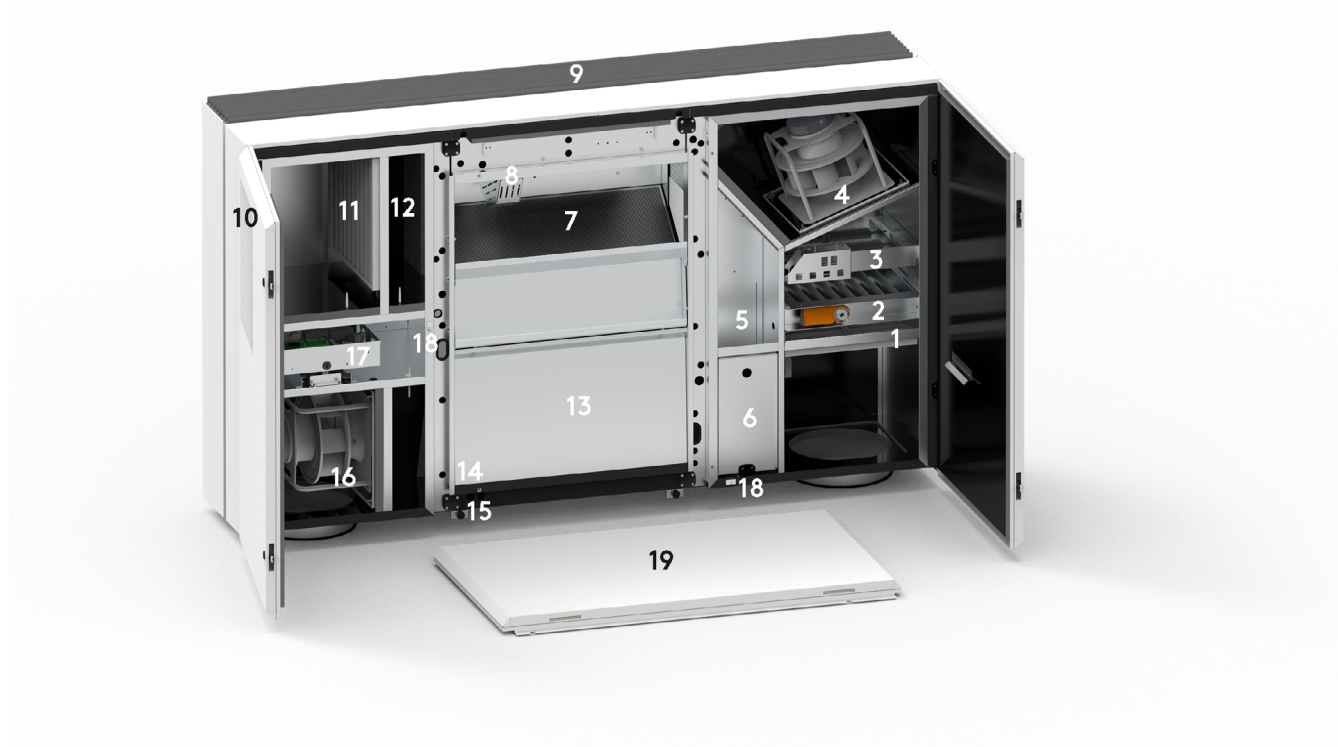
SERENITY 08	700mm
SERENITY 10	700mm



2.4 Footprint

	Vertical	Horizontal
SERENITY 08	0.71	1.22
SERENITY 10	0.71	1.22

2.5 Components



- | | |
|--|---|
| 1. Outdoor air filter | 11. Extract air filter |
| 2. Outdoor air damper | 12. Sensors: CO2*/humidity* |
|  3. Electric preheating* | 13. Condensate pan |
| 4. Supply fan | 14. Condensate pump |
| 5. Bypass | 15. Condensate evacuation |
|  6. Electrical cabinet (power) | 16. Extract fan |
| 7. Plate heat exchanger |  17. Electrical cabinet (PCB) - Regulation box |
|  8. Electrical postheating* or reversible*/heating*/cooling* waterborne coil | 18. Door contacts (only on floor standing units) |
| 9. Double deflection air diffuser grille | 19. Central door |
| 10. Extract grille | |

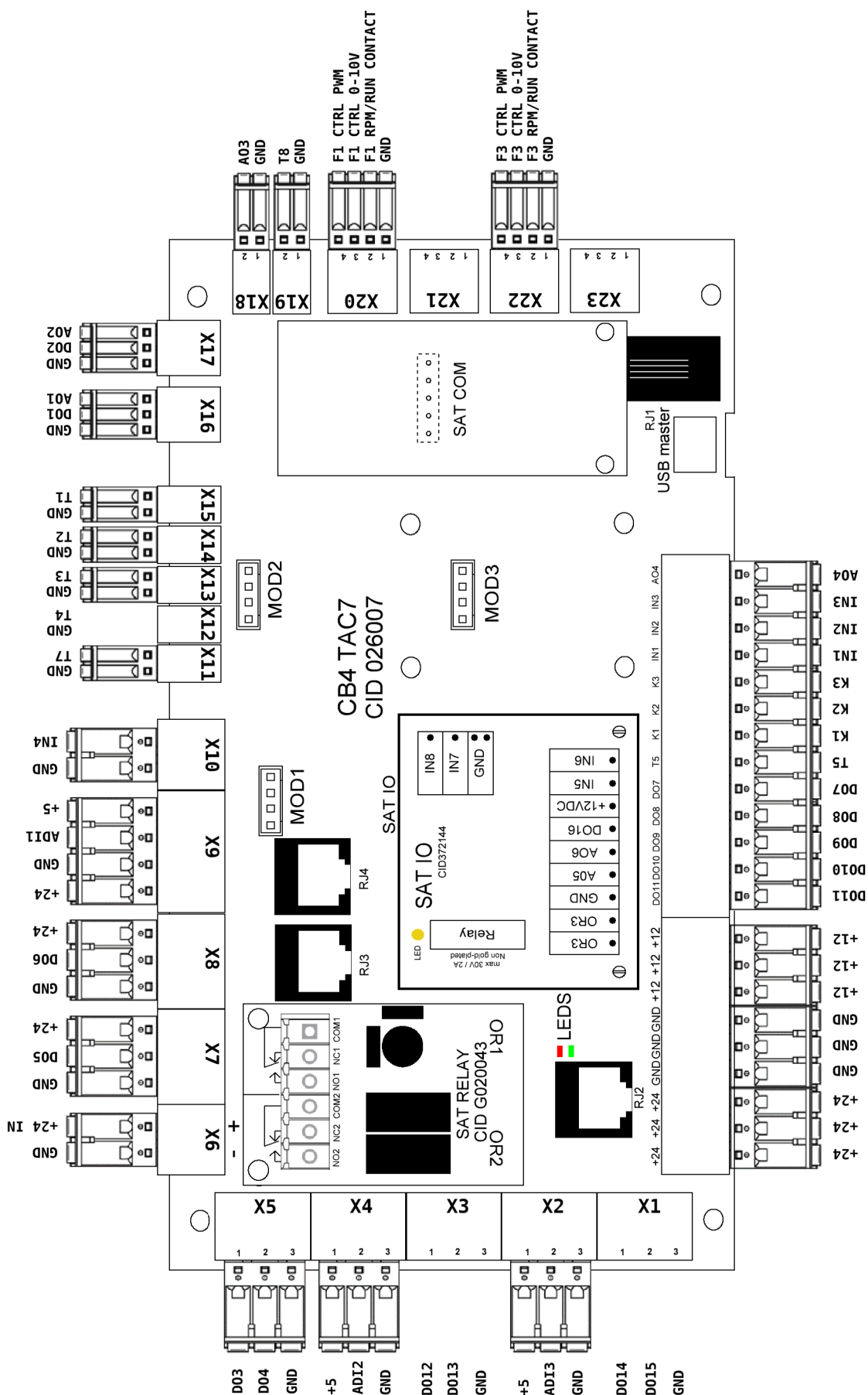
* available as an option

3. Declaration of conformity

Swegon UK DECLARATION OF CONFORMITY	Swegon EC DECLARATION OF CONFORMITY
Manufacturer (and where appropriate his authorized representative): Company: Swegon Operations Belgium Address: Parc-industriel de Sauvenière 102 Chaussée de Tirlemont B5030 Gembloux	Manufacturer (and where appropriate his authorized representative): Company: Swegon Operations Belgium Address: Parc-industriel de Sauvenière 102 Chaussée de Tirlemont B5030 Gembloux
Hereby declares that: Following product range(s): SERENITY PX	Hereby declares that: Following product range: SERENITY PX
Conform with Supply of Machinery (Safety) Regulations 2008 including Electrical Equipment (Safety) Regulations 2016	Complies with the requirements of Machinery Directive 2006/42/EC.
Also conform to the following directives: Electromagnetic Compatibility Regulations 2016 The Ecodesign for Energy-Related Products Regulations 2010 (Commission regulation (EU) No. 1253/2014) The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012	Complies also with applicable requirements of the following EC directives: 2014/30/EU EMC 2009/125/EC Ecodesign (Regulation nr 1253/2014 – LOT 6) 2011/65/EU RoHS 2 (including amendment 2015/863/EU – RoHS 3)
Authorized to compile the technical file: Name: Nicolas Pary Address: Parc-industriel de Sauvenière 102 Chaussée de Tirlemont B5030 Gembloux	Authorized to compile the technical file: Name: Nicolas Pary Address: Parc-industriel de Sauvenière 102 Chaussée de Tirlemont B5030 Gembloux
Signature: Place and date: Gembloux 2026-03-25 Signature: Name: Jean-Yves Renard Position: R&D Director	Signature: Place and date: Gembloux 2026-03-25 Signature: Name: Jean-Yves Renard Position: R&D Director
	

4. Main board

AO1 = output 0-10V for external waterborne reheater (Option)	T1 = from outdoor T° sensor (prewired)	
DO1 = KWout = output PWM for electric reheater power control (Prewired option)	T2 = from indoor T° sensor (prewired)	
DO2 = KWIn- PX: output PWM for electric pre-heater power control (Prewired option)	T3 = to outdoor T° sensor (prewired)	
	T4 = Waterborne pre-heater (EBAin) T° sensor (option)	
AO3 = 0-10V output to control cooling capacity or reversible heat/cool	T5 = supply T° sensor (prewired)	
AO4 = output 0-10V for internal waterborne reheater or reversible heat/cool (option)	T7 = Waterborne reheater (IBA)/waterborne pre-heater (EBA) anti freeze protection T° sensor (option) /internal reversible (IBA+-)	
DO3 = BYPASS OPEN- PX (with rotary actuator) (prewired)	T8 = Cooling coil frost protection sensor	
DO4 = BYPASS CLOSE - PX (with rotary actuator) (prewired)	IN1 + 12/24V = FIRE ALARM	
DO5 = DAMPER 1 (Prewired)	IN2 + 12/24V = BOOST	
DO6 = DAMPER 2 (with or without spring return, I _{max} = 0.5A DC) (Option)	IN3 + 12/24V = BYPASS ACTIVATION OVERRIDE	
DO7 = HEAT OUTPUT (open collector; V _{max} =24 VDC; I _{max} =0,1 A)	IN4 + GND = Drain pan full contact (prewired)	
DO8 = COOL OUTPUT (open collector; V _{max} =24 VDC; I _{max} =0,1 A)	K1 + 12/24V: Airflow MODE	= m³/h or l/s K1
DO9 = ALARM OUTPUT (open collector; V _{max} =24 VDC; I _{max} =0,1 A)	Demand/Pressure control	= START/STOP
DO10 = AL dPA OUTPUT (open collector; V _{max} =24 VDC; I _{max} =0,1 A)	K2 + 12/24V: Airflow control	= m³/h or l/s K2
DO11 = FAN ON OUTPUT (open collector; V _{max} =24 VDC; I _{max} =0,1 A)	Demand/Pressure control	= 0-10V INPUT
ADI1 = BYPASS POS - PX	K3 + 12/24V: Airflow control	= m³/h or l/s K3
ADI2 = SUPPLY FILTER dPa (not used)	Demand/Pressure control	= % ON K3 or 0-10V INPUT
ADI3 = EXTRACT FILTER dPa (not used)	RJ1 = RJ12 connector for TACtouch (option)	
F1 = FAN 1 (SUPPLY)	RJ2 = RJ12 connector for Modbus Pressure CP mode (option); Modbus Air quality sensors for demand control mode (option); Modbus Air quality sensors for BOOST in all modes (option)	
F3 = FAN 3 (EXHAUST)	RJ3 = RJ12 connector for Modbus Pressure sensor kit CA on supply (prewired) and outdoor filters monitoring (prewired)	
SAT COM = SAT MODBUS or SAT WIFI-ETHERNET - (option)	RJ4 = RJ12 connector for Modbus Pressure sensors kit CA on extract (prewired) and extract air filters monitoring (prewired) and defrost detecting (option - prewired)	
GREEN LED ON = POWERED ON RED LED ON = ALARM		



5. Preventive maintenance

5.1 General



Caution: Before handling and/or opening the access panels it is compulsory to shut down the unit.

Do not isolate the power supply whilst the unit is running. If pre and/or post-heater are installed, then isolate the corresponding power supplies.

Regular maintenance is essential to guarantee good operation of the air handling unit and a long service life. The maintenance frequency will depend on the application and on the actual environment conditions but the following are general guidelines.

5.2 Every 3 months

Check for any alarms indicated on the control device. In case of an alarm refer to the alarm manual to identify the issue.

Check the state of filter clogging. To locate the filter, refer to schemas on page 8. The control device allows a pre-defined 'filter alarm' threshold to be set. Replace filters if necessary.

Filters that are too clogged can generate the following problems:

- Insufficient ventilation
- Excessive increase of fan rotation speed
- Excessive sound levels
- Excessive power consumption (for a constant airflow, power consumption increases significantly with pressure drop)
- Unfiltered air passing through the heat exchanger (risk of clogging) and into ventilated rooms

Inspection and cleaning of the inside of the unit:

- Vacuum clean any accumulations of dust in the unit
- Inspect and gently vacuum clean the heat exchanger if necessary. Use a brush to protect the fins
- Clean any condensation stains
- Clean any accumulations in the drain pan

5.3 Every 12 months

Check the condition of all power-circuit terminal blocks and tighten them if needed.

Maintenance of the plate heat exchanger:

- Clean the drain pan
- Clean the inside of the bypass. To access the interior of the bypass it is necessary to force it open, it is possible to de-clutch the servo-motor of the bypass to allow for its opening.
- Always clean the heat exchanger against the direction of the airflow
- Cleaning must only be done by blowing with compressed air, vacuum cleaning with a soft nozzle or through wet cleaning with water and/or solvent. Before you begin cleaning, cover adjacent functional sections to protect them. If cleaning solvent is used, do not use solvent that will corrode aluminium or copper.

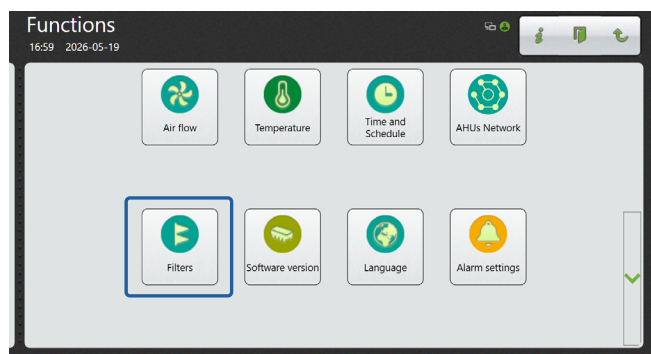
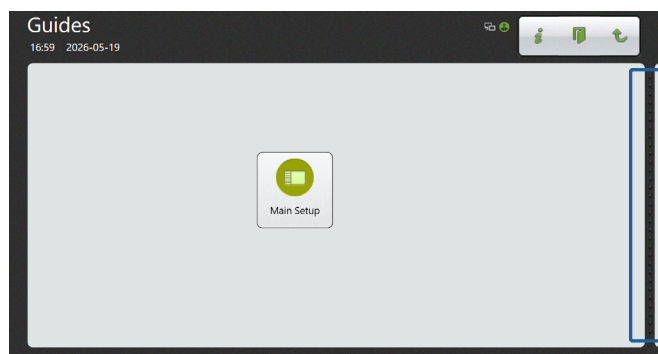
Maintenance of the fan:

- Check again whether the power supply is shut down and fans are not running.
- Check and, if necessary, clean the fan blades to remove any deposits, taking care not to unbalance the blades (do not remove the balancing clips).

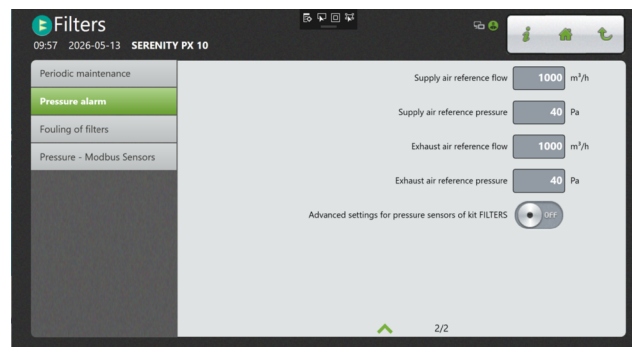
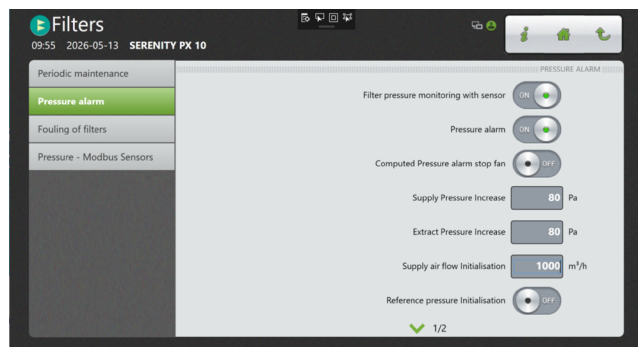
6. Filter monitoring setup

In the event that a filter type different from the originally installed filter is used, the filter monitoring parameters must be adjusted accordingly:

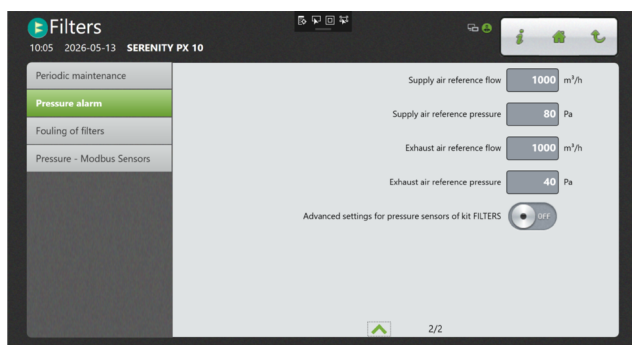
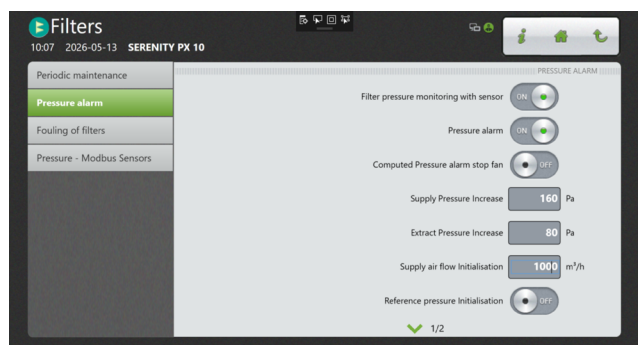
	Pa ref	Pa increase (default value: 2* Pa Ref)
1000 m ³ /h ePM10 50%	40 Pa	80 Pa
1000 m ³ /h ePM1 60%	80 Pa	160 Pa
800 m ³ /h ePM10 50%	25 Pa	50 Pa
800 m ³ /h ePM1 60%	65 Pa	130 Pa

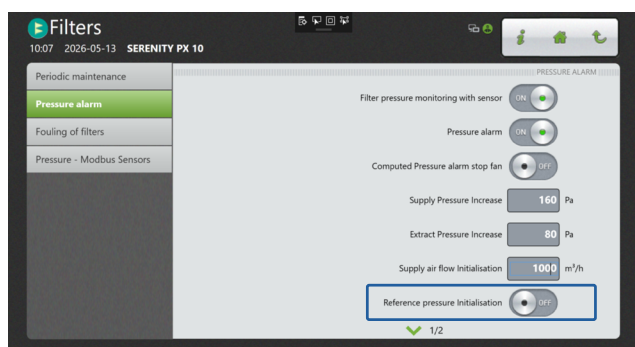


Setup with filter ePM1 60% on supply and filter ePM10 50% on extraction:



Setup with filter ePM1 60% on supply and filter ePM10 50% on extraction:





If a different filter type is used, press the reference pressure initialisation button to measure the reference pressure of clean filters. Then, define the desired pressure increase values. It is recommended to set the pressure increase to twice the reference pressure.

7. Other resources



Check out the SERENITY [webpage](#) on the website.

Installation manual	 LINK
Function manual	 LINK
Alarm manual	 LINK
Commissioning manual	 LINK