

AERO

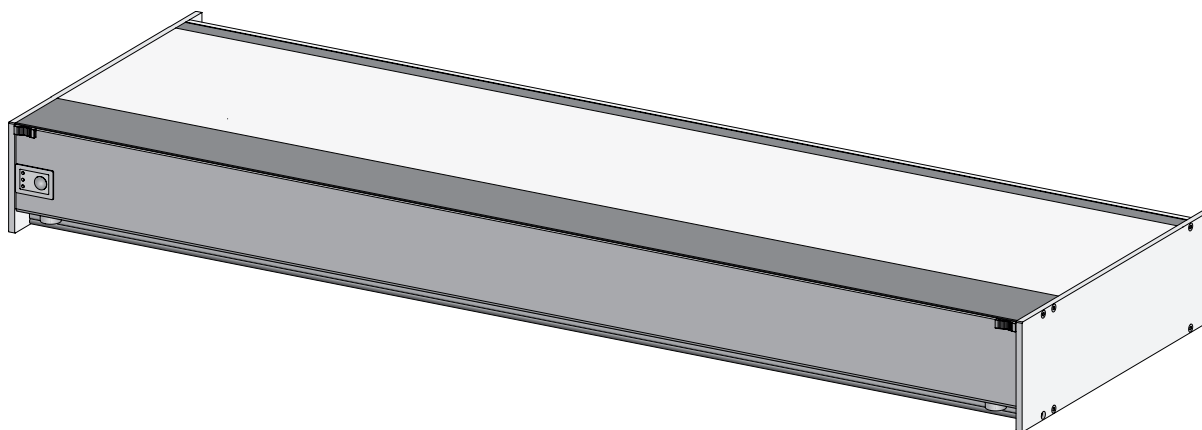
AEROMAT VT

Sound absorbing ventilator.

Window systems

Door systems

Comfort systems



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1. Target group of this documentation

- This documentation is intended for use by specialists and end users.
- All instructions concerning assembly, installation and repairs described in this document are to be performed exclusively by experienced professionals with training and practice in the installation, commissioning, servicing and maintenance of decentralised ventilation units.
- All instructions on operation, care and maintenance as well as the rectification of malfunctions described here are intended for specialists end users.
- After the successful assembly and installation, the installation company is committed to handing over the operating instructions to the end user.

2. Intended use

- The AEROMAT VT is intended for installation in the exterior windows/walls of permanent structures in accordance with our installation and design documents and the specifications of our operating instructions and is only suitable for the ventilation of enclosed rooms.
- The AEROMAT VT must be installed in the intended installation position (horizontal or vertical). The intended installation position results from the weather grille preassembled in the factory.

		<p>Weather grille: 911 HW Installation position: Horizontal</p>
		<p>Weather grille: 911 HW-g (concealed installation in the wall) Installation position: Horizontal</p>
		<p>Weather grille: 911 CW Installation position: Horizontal</p>
		<p>Weather grille: 911 HS Installation position: Vertical</p>
		<p>Weather grille: 911 CS Installation position: Vertical</p>

- Do not use the AEROMAT VT in environments with corrosive or explosive atmospheres (dust, vapour or gas).
- Do not install the unit in contaminated rooms and ensure that no hazardous substances can be drawn in.

- The AEROMAT VT may be installed in damp locations in protection class 2; however, the socket used must be in at least protection class 3.
- If the AEROMAT VT is to be used in a room with a heating unit that draws air from the room, prior authorisation must be obtained from the proper authorities, such as the officially appointed district chimney sweep. Intended use requires that any combustion air lines and exhaust gas systems of solid fuel heating units must be able to be shut off.
- Only operate and/or store the AEROMAT VT at temperatures between -15 °C and $+40\text{ °C}$.
- Use the AEROMAT VT only with genuine accessories from SIEGENIA.
- Comply with the safety regulations for operating electrical equipment and, if necessary, for ladders, steps and work overhead or at certain heights.
- Use the AEROMAT VT only when it is in a technically sound condition.
- Do not modify the unit's components in any way.
- Ensure that the device's ventilation openings are kept free and are not blocked by other equipment, furniture or objects.
- Please do not put any objects on top of the unit.
- If the AEROMAT VT is fitted with filters, you must make sure that these cannot become the source of elements that are odorous and harmful to health; this also includes regular inspection and replacement of filters.
- In the event of a fault, the AEROMAT VT is only to be repaired by experienced specialists with training and practice in the repair of ventilation units.
- Any use or application of this product that is not in accordance with its proper use, or any adaptation of or modifications made to the product and its associated components, for which the express consent of SIEGENIA has not been obtained, are strictly prohibited. SIEGENIA accepts no liability whatsoever for any material losses or injury to people caused by failure to comply with this stipulation.

3. Dimensions

- All the dimensions in this documentation are specified in millimeter (mm).

4. Safety notes

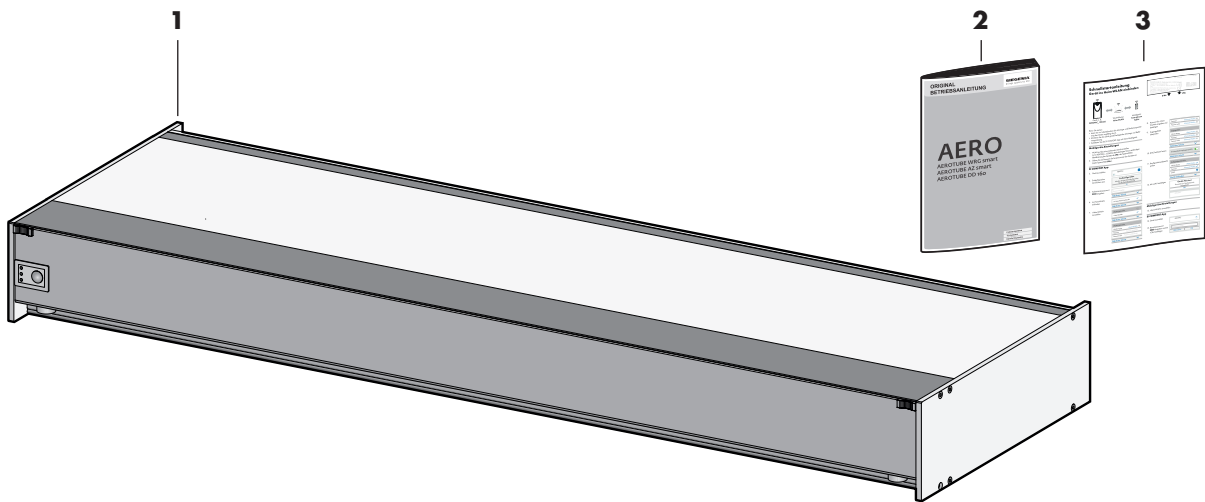
Type RS1

- This unit can be used by children aged 8 and above as well as by people with physical, sensory or mental difficulties or with a lack of experience and knowledge as long as they are supervised or have been instructed in how to use the unit safely and understand the resulting risks. Children must not play with the unit. Cleaning and user maintenance may not be carried out by unsupervised children.
- Electrically operated unit. Risk of fatal injury from electric shock or fire.
To prevent personal injury or damage to property, always comply with the following instructions:
 - Work on a 230 V AC mains power supply may only be performed by a qualified electrician.
 - If the mains connection cable for the unit is damaged, it must be replaced by SIEGENIA, the company's customer service department, or similarly qualified personnel in order to prevent personal injury or damage to property.
 - All-pole safety isolation is required if the customer is routing the network connection cable.
 - All work on the 230 V AC mains power supply must be carried out in compliance with the current German VDE regulations (e.g., VDE 0100) and any relevant country-specific requirements.
 - Relevant country-specific regulations must be strictly followed for all work carried out on the voltage supply system or house wiring system.
 - Should a solid object or any liquid get inside the unit, stop operation immediately and disconnect the AEROMAT VT from the mains power supply:
Check whether the AEROMAT VT is damaged
If necessary, repair work can be performed by experienced professionals
- Hazard due to third party attacks on SIEGENIA WLAN devices! Please observe the following notes to protect your system against attacks by third parties:
 - Every SIEGENIA WLAN device is protected by two passwords (user and administrator). It is essential that you change these passwords after the initial setup. Do not leave in the default setting.
 - If the SIEGENIA WLAN devices are integrated in your home WLAN, this must be encrypted for operation.
 - Please choose secure passwords consisting of lower case and capital letters, numbers and special symbols.

5. Scope of delivery / equipment

	Item	Designation	AEROMAT VT				
			DSg	DS1	DS2	RS1	RS smart
Scope of delivery	1	Unit	✓	✓	✓	✓	✓
	2	Original operating instructions	✓	✓	✓	✓	✓
	3	Quick start instructions SIEGENIA Comfort App*	-	-	-	-	✓
Function		Operation via SIEGENIA Comfort app	-	-	-	-	✓
		Optional electrical locking slider	(✓)	(✓)	(✓)	(✓)	(✓)

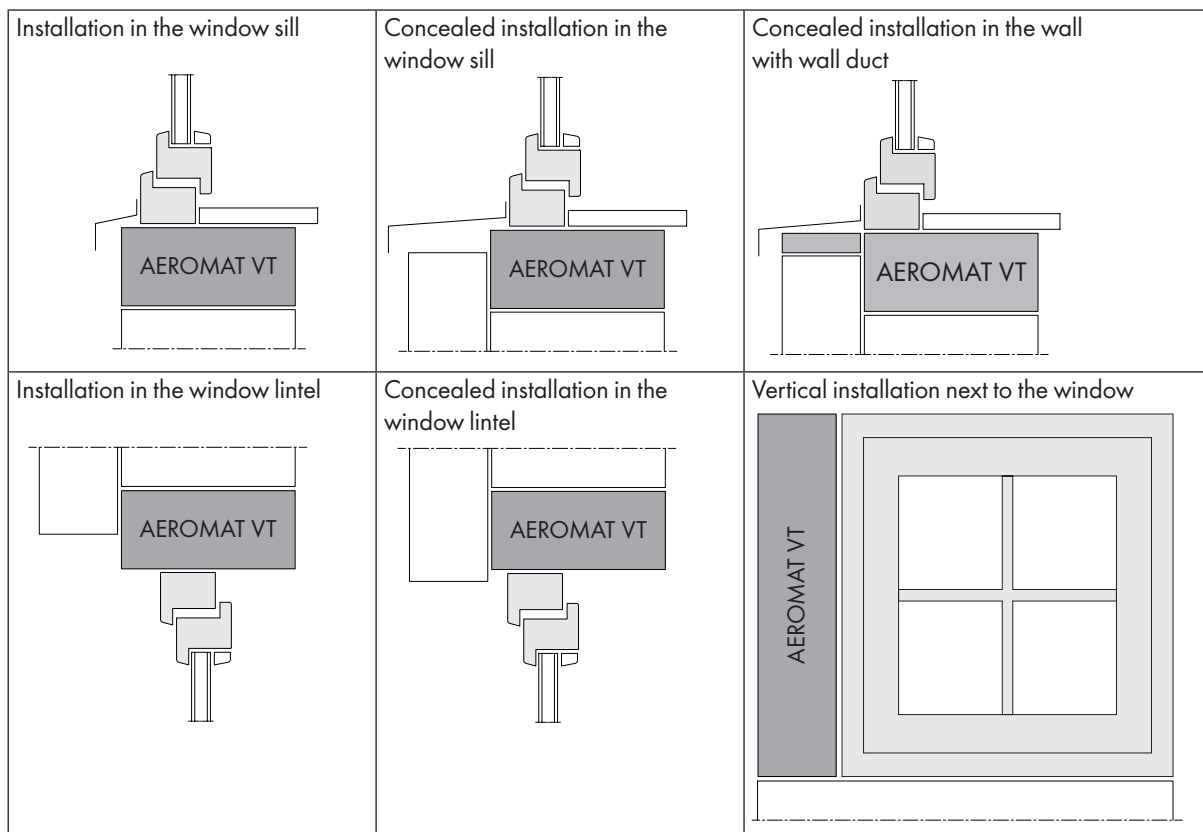
* The quick start instructions for the SIEGENIA Comfort app are located behind the front panel (To open the front panel, see page 18).



6. Installation

6.1 Prerequisites for installation

- The position from which the outdoor air is drawn in must be selected so that any nearby emission sources have as little impact as possible on the quality of the air being drawn in.
- The maximum permissible area load is 1,000 kg per running metre of ventilator length.
- Installation options:



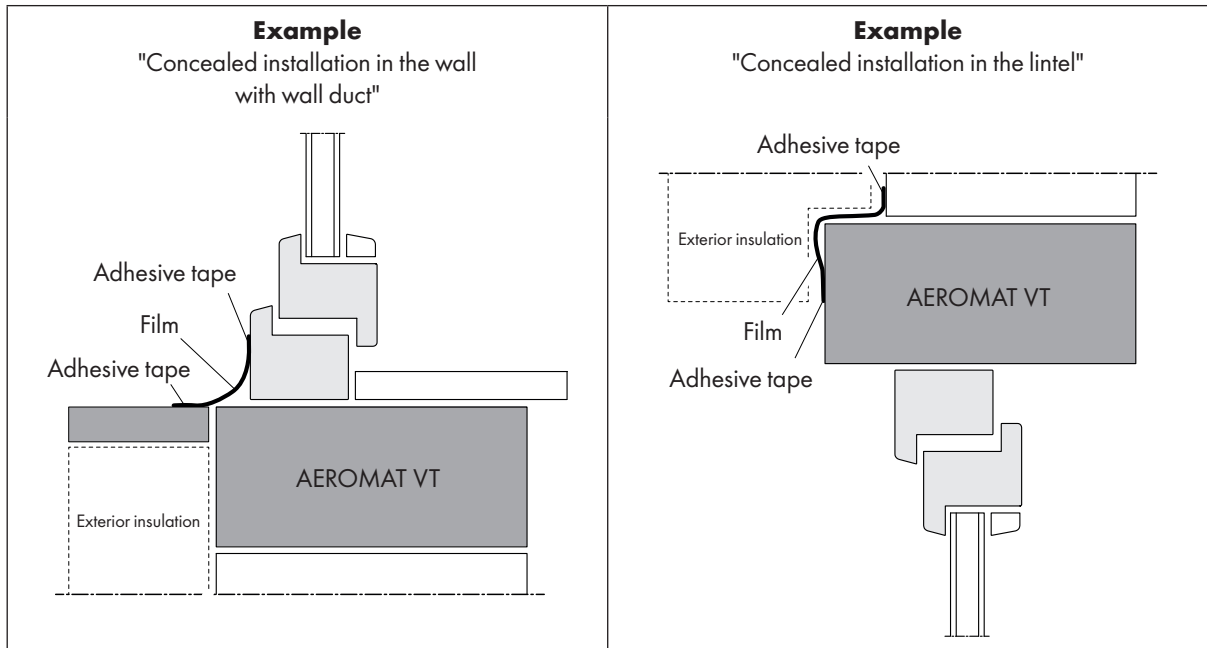
6.2 Additional requirements for AEROMAT VT RS smart

- The AEROMAT VT RS smart should be installed to be as free from interference as possible. The following interferences can have a negative influence on the WLAN signal:
 - Water pipes
 - Stone and concrete walls
 - Metal objects
 - Air conditioning units
 - Wireless devices (e. g. radio telephones, baby monitors, Bluetooth loudspeakers, etc.)
 - WLAN networks on the same wireless channels (e. g. the neighbour's WLAN router)
- If energy-carrying cables are routed in parallel to data cables (ISDN, DSL, etc.), this could lead to interference e.g. in the speed of the data transmission.

6.3 Installation sequence

1. Remove the AEROMAT VT carefully from the packaging and do not place it on the weather grille or front panel. We recommend storing the unit on a soft surface (e.g. cardboard or sheet) during installation.
2. Close the sliders on the front to prevent dirt (e.g. dust) from entering the unit during installation. If the AEROMAT VT does not have sliders, tape up the recesses in the front panel with film.
3. Make sure that no dirt and liquids can get inside the AEROMAT VT including the weather grille prior to the installation of the exterior insulation or cladding.

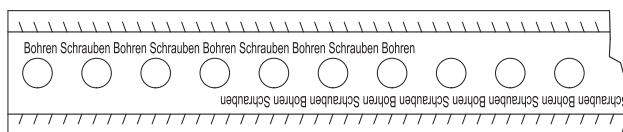
Attention! According to the installation location, it is therefore necessary to adhere the AEROMAT VT at points where rain could permeate.



4. Install the AEROMAT VT in its intended installation position and seal it in accordance with the installation directives applicable on site.
5. Check AEROMAT VT for cleanliness prior to starting it up. Clean if necessary (see "maintenance and care" on page 17).

Attention! Only drill in through-holes for wall plugs and screws in the area indicated (see marker tape).

Important! Remove any marker tape that is visible after installation.



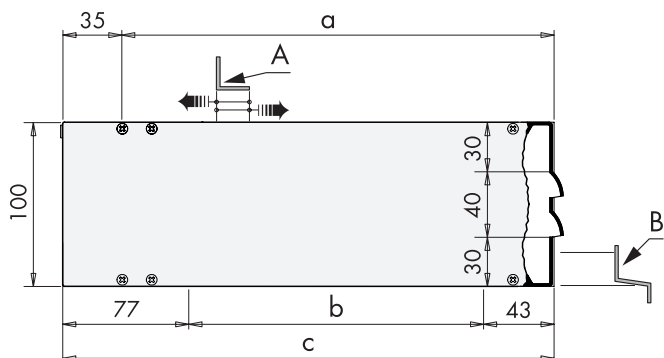
6.4 Interruption of installation work

- > Prior to stopping work or while work is interrupted, protect open ends or areas so that no dust or moisture can enter.

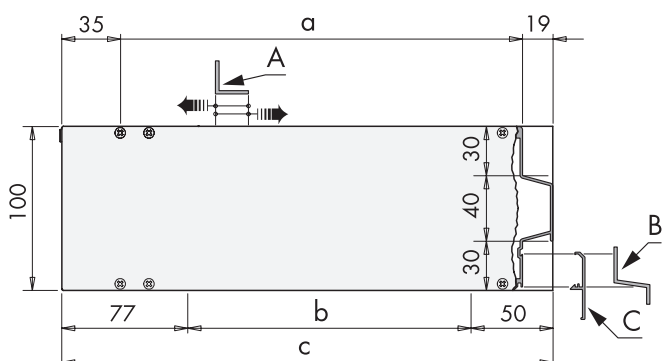
6.5 Mounting angle

- › Screw on the mounting bracket in the area indicated (marker tape) or fasten it to the casing profiles with a rivet. We recommend that you use SIEGENIA aluminium mounting angles.

AEROMAT VT with 911 CW weather grille



AEROMAT VT with 911 HW weather grille



Dimension	Meaning
a	Mounting area for bracket
b	Screw and drilling area (e.g. for wall plugs or mounting screws)
c	Overall depth
A	Bracket 20 x 20 x 2 (optional)
B	Z profile (optional)
C	Stop profile (optional)

6.6 Z profile

- › First, fix the Z profile (optional) to the weather grille using double-sided tape, then drill and rivet it.

7. Mains supply

Depending on the design, the AEROMAT VT is connected to a suitable socket of the 230-V AC mains power supply using the Euro plug or directly to the 230-V AC mains power supply using an external switch.

7.1 Socket connection

Important: When installed in damp locations, the socket for the AEROMAT VT must be installed in at least protection class 3.

- › Insert the Euro plug into a suitable 230-V AC mains power supply.

7.2 External switch connection



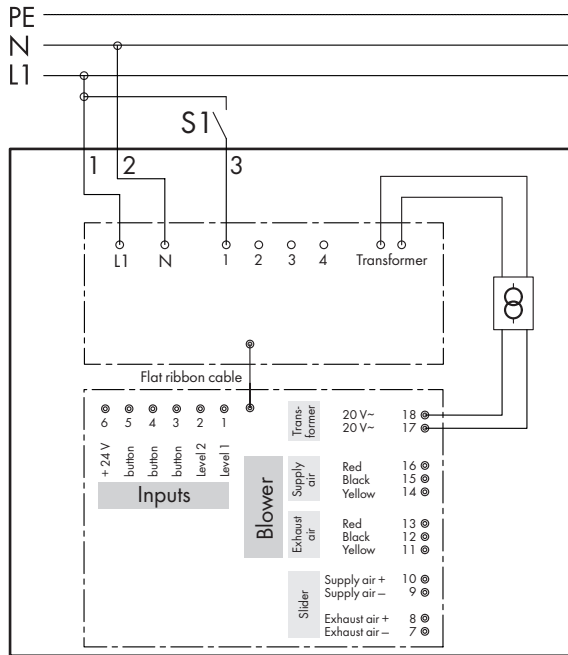
WARNING

**Exposed electrical components.
Risk of fatal injury from electric shock or fire.**

- › Work on a 230 V AC mains power supply may only be performed by a qualified electrician.
- › All work on the 230 V AC mains power supply must be carried out in compliance with the current German VDE regulations (e.g. VDE 0100) and any relevant country-specific requirements.
- › Switch off or unscrew the security devices.

Important: If the AEROMAT VT is connected directly to the 230-V AC mains power supply, the customer must install a mains isolator.

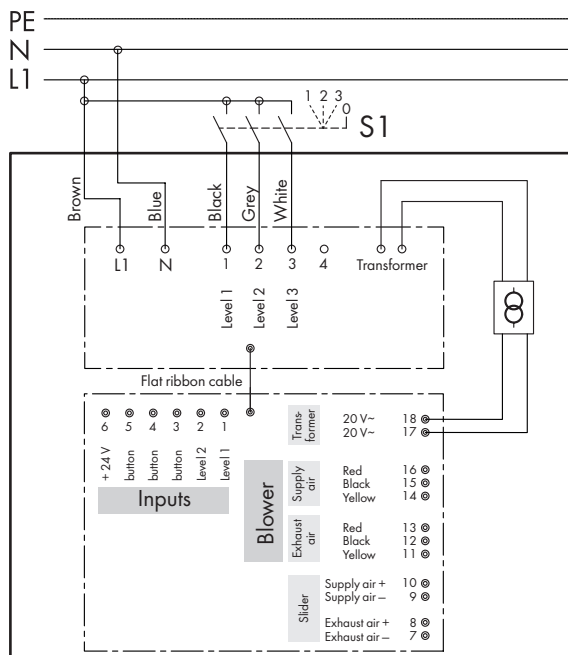
7.3 Type DS wiring scheme with external switch and internal electrical closer



Cable no.	Colour
1	Black
2	Blue
3	Brown

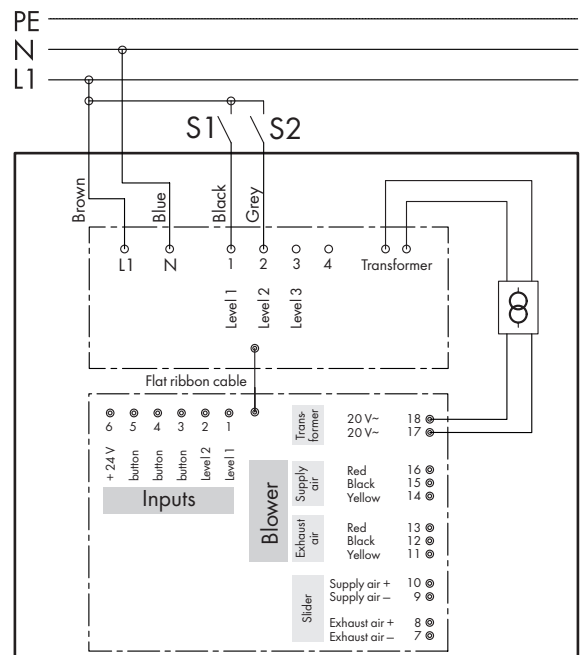
7.4 Wiring diagrams type RS1

3-stage rotary switch



Switch	Value	Colour
S1	Blower level 1	Black
	Blower level 2	Grey
	Blower level 3 (Power level)	White

Series switch



Switch	Value	Colour
S1	Blower level 1	Black
S2	Blower level 2	Grey

8. Unit function

8.1 Operation by pressure differential: (DS/DSg type)





- The room is ventilated through compensation of the indoor and outdoor air pressures (pressure differential). As this happens, the air normally flows into the room from outside.
- The air flow into the room varies as the wind pressure changes with the weather.
- With the optional internal electrical closer, the unit is opened and closed using e.g. an external switch.

8.2 Ventilator operation (type RS1)

- The AEROMAT VT RS1 is either equipped with 1 or 2 supply air fans and/or with 1 or 2 exhaust air fans.
- Supply air blower (depending on the the equipment): The outside air is drawn in through the supply air blower and enters the room as supply air.
- Exhaust air blower (depending on the equipment): The exhaust air is drawn in through the exhaust air blower and makes its way outside as outgoing air.
- When the blower is switched off, the Type RS1 AEROMAT VT functions as a pressure differential ventilator.

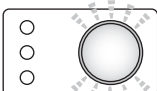
9. Membrane key and LED display

9.1 Operating status

Membrane key/LED	Operating status
	Blower level 0 (device is switched off)
 1 LED lights up red	Blower level 1
 2 LEDs light up red	Blower level 2
 2 LEDs flash red	Blower level 3 (power level)

9.2 Filter change display

Depending on the equipment, the filter change is displayed in addition to the current operating mode.

Membrane key/LED	Malfunction	Solution
 Membrane key flashes blue	Filter soiled	Replace the filter (see page 18) Please note: M5 filters must be replaced not cleaned.

10. Operation

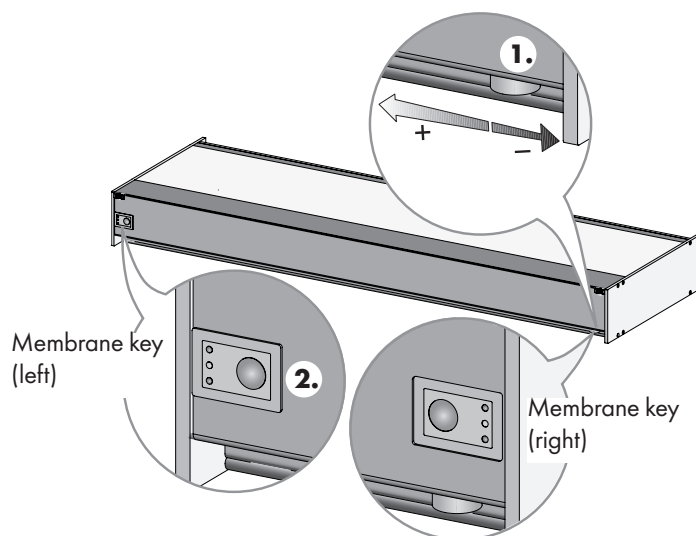
10.1 Ventilation without fans (type DS/DSg and RS1)

1. Open sliders*

10.2 Ventilation with fans (type RS1)

Note: Depending on the design, the membrane key is positioned on either the left or right in the AEROMAT VT. If it is on the right, the membrane key is turned 180° (see figure). If it is located on the right-hand side, the membrane key is turned 180° (see figure).

1. Open sliders*
2. Set the required blower level using either the membrane key or the external switch

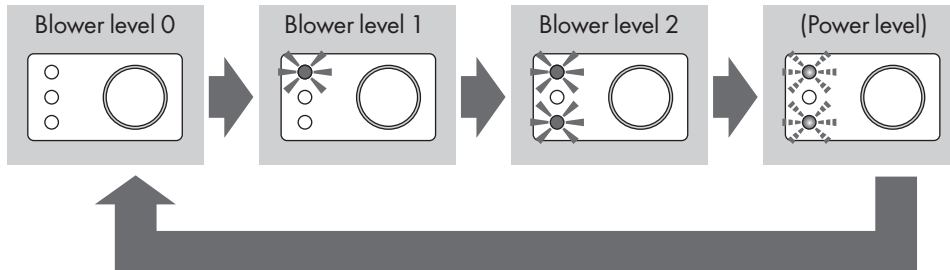


*Control cord operation (optional): When the slider is operated using control cords, you move the slider into the position you require by alternately pulling on the two control cords.

10.2.1 Setting the blower level (using the membrane key)

- You can activate the required blower levels by pressing the membrane key several times (relaying).
- After a power failure, the AEROMAT VT RS1 switches to the last level to be used.

Switching sequence

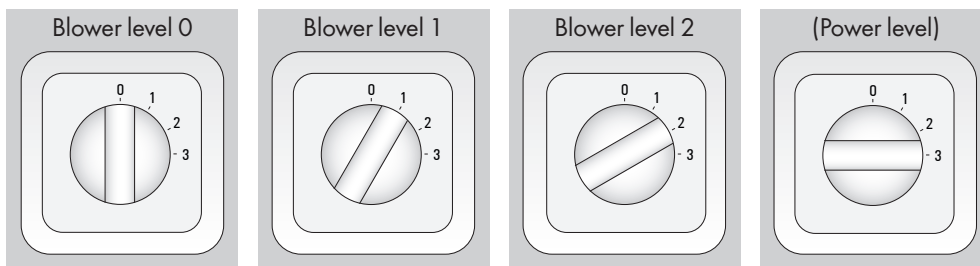


10.2.2 Setting the blower level (using the external switch)

- You can activate the required blower levels directly by pressing the external switch (without relaying).
- **Attention!** If the membrane key is pressed when an external switch is installed, the next blower level will be activated (for switching sequence see page 15). Pressing the external switch again takes you back to the required blower level.
- After a power failure, the AEROMAT VT RS1 switches to the last level to be used.

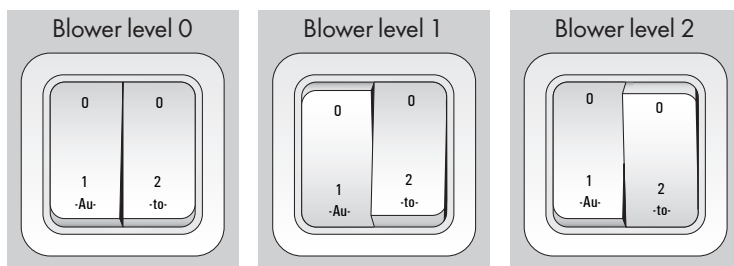
3-stage rotary switch

Recommendation: use a 3-stage rotary switch provided onsite.



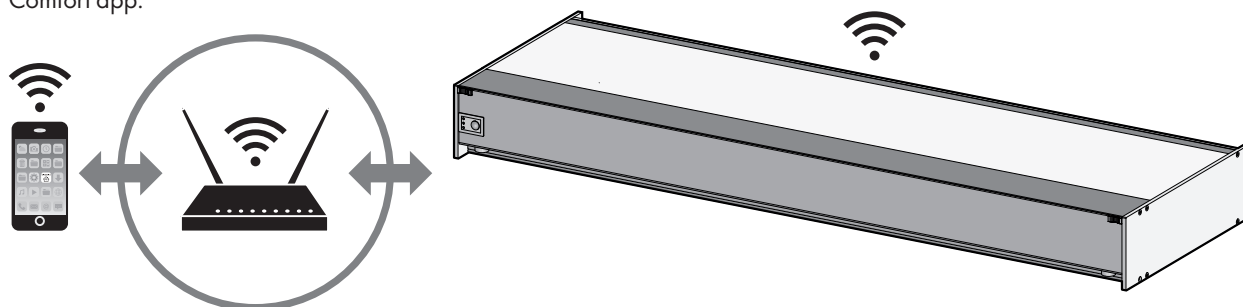
Series switch

Recommendation: use the SIEGENIA type VT series switch (material number: 131322)



10.3 Operation via smartphone or tablet (AEROMAT VT smart only)

AEROMAT VT smart can be controlled via tablet or smartphone and offers additional device functions via the SIEGENIA Comfort app.



11.3.1 Teaching in the device

Please follow the enclosed quick start instructions ([H47.MOTS005EN](#)) to integrate the device in your home WIFI.

11.3.2 Device functions in the app

Blower performance

- The blower performance can be set manually.

Warning (replace filter)

- As soon as a filter replacement is required, this will be indicated as a warning.

11. Care and maintenance

⚠ WARNING Electrically operated unit.
Risk of fatal injury from electric shock or fire.

To prevent personal injury or damage to property, always comply with the following instructions:

- › Pull the mains plug out of the socket prior to every cleaning process or maintenance work. Never pull at the cable to disconnect the device from the electricity grid.
- › For all devices with a fixed connection to the 230 V AC mains power supply, switch off all poles of the feeder. The fuses may need to be removed.

11.1 Cleaning

Important: When cleaning the AEROMAT VT, do not allow liquids to get inside the unit.

- Never use cleaning agents that are aggressive or contain solvents, or sharp-edged objects, as these may damage the surfaces of the casing.
- Never clean the unit with a high-pressure cleaner or steam-jet cleaner.
- Clean the AEROMAT VT with a cloth moistened with a mild soap solution or cleaning agent.
- Always clean the G3 dust filter manually (e.g. with a vacuum cleaner, wash out using a grease-dissolving cleaning agent). Do not wash the filter in a washing machine!

11.2 Maintenance intervals

Component	Check and clean	Replace
Insect screen	Every 6 months	–
Air ducts (foam elements) ¹⁾	Every 12 months	Depending on the level of soiling
M5 filter ¹⁾	–	Every 12 months or when the filter change notification illuminates
G3 Filter	Every 12 months or when the filter change notification illuminates	Depending on the level of soiling

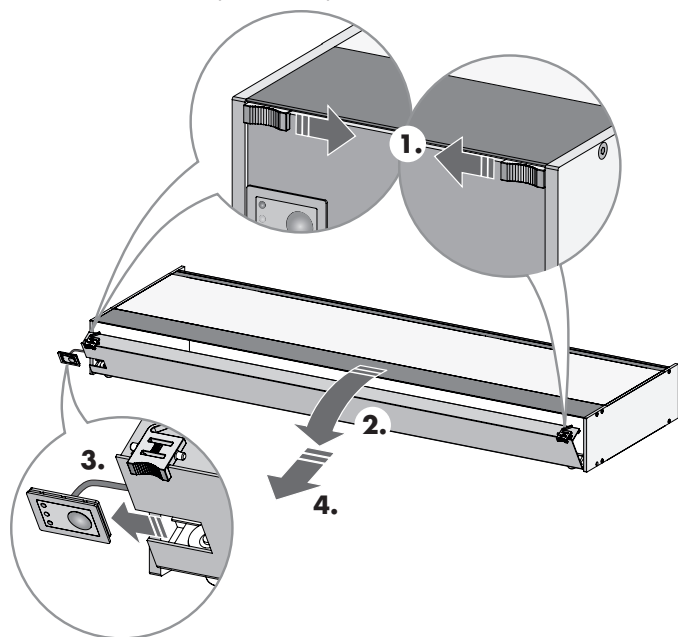
1) M5 filters must be replaced, not cleaned. Only use genuine filters from SIEGENIA. You can purchase replacement filters from SIEGENIA or from specialist retailers.

11.3 Replacing the air canal and the filter (optional)

11.3.1 Removing the front panel

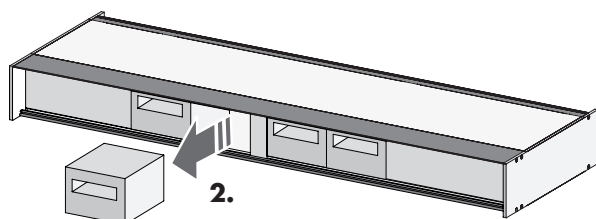
The figure below shows the opening direction for a AEROMAT VT that has been installed horizontally. Note: The number and position of the components can deviate from the figure. Be sure to note the arrangement of the internal parts for special models that do not correspond to the illustration.

1. Open the sliders on the right and left (or in the middle according to design)
2. Pull out the front panel
3. Slide the membrane key out sideways (if present)
4. Remove the front panel and place it on a soft surface (cardboard, sheet)



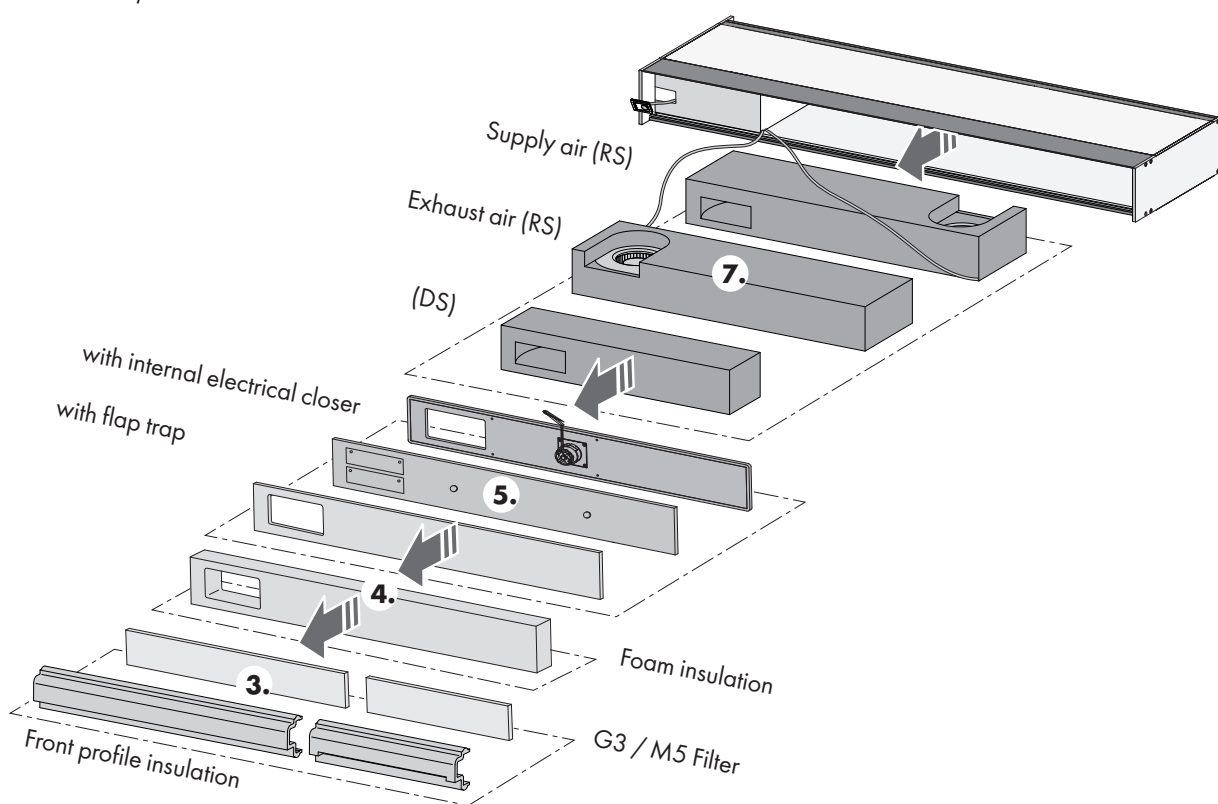
11.3.2 AEROMAT VT (Type DSg)

1. Remove the front panel (see also "Removing the front panel" page 18)
2. Remove air canal/foam elements and clean or replace
3. Reassemble the AEROMAT VT in the reverse order



11.3.3 AEROMAT VT (Type DS and RS1)

1. Pull out the mains plug or switch off the safety device for the power supply cable
2. Remove the front panel (see also "Removing the front panel" page 18)
3. Remove front profile insulation and filter
4. Remove the foam
5. Remove the supporting plate, to do this, press the top toward the interior of the unit and pull out of the bottom
6. Open the transformer compartment and release the blower cable from the circuit board
7. Carefully take out the air canal/foam element and remove the blower
8. If necessary, clean the blower using compressed air only
9. Insert blower in the new air canal
10. Reassemble the AEROMAT VT in the reverse order
11. After replacing the filter, hold down the membrane key for 5 seconds to reset the LED indicator (filter replacement indicator)



12. Rectification of malfunctions

In case of a malfunction, do not open the device or try to repair it under any circumstances.

If the problem is not listed in the table below, please contact your installation firm or SIEGENIA directly: Tel. +49 271 3931-0

Problem	Possible cause	Solution
AEROMAT VT shows no reaction when button is pressed	No power supply	Check power supply
	Wiring wrong/defective or cable defective	Have the wiring checked by a qualified electrician
	Power supply defective	Have the supply voltage checked by a qualified electrician
AEROMAT VT smart does not respond to smartphones/tablets	No WLAN connection to the router of the home network	Restart WLAN router of the home network
	No WLAN connection to the smartphone/tablet	Restart smartphone/tablet
	No WLAN connection to the AEROMAT VT smart	Reset on the AEROMAT VT smart: 1. Press membrane key 3 times briefly in succession 2. Then immediately press and hold the membrane key once (for approx. 4 seconds) 3. The AEROMAT VT smart has been reset to the factory settings.

12.1 SIEGENIA Comfort App

You will find detailed operating information as well as information on how to rectify disturbances on the SIEGENIA Smarthome Internet page.

<https://smarthome.siegenia.com>



13. Technical specifications

The values can vary according to the specific equipment configuration.

	AEROMAT VT			
	DSg	DS1	DS2	RS1 / RS smart
Sound absorption (at 300 mm installation depth) ^{1) 5)}	$R_{w-1.9} = 33-49$ dB $D_{n,e,w} = 40-56$ dB	$R_{w-1.9} = 49$ dB $D_{n,e,w} = 56$ dB	$R_{w-1.9} = 49$ dB $D_{n,e,w} = 56$ dB	$R_{w-1.9} = 50$ dB $D_{n,e,w} = 57$ dB
Max. permissible area load per linear metre of ventilator length	1,000 kg	1,000 kg	1,000 kg	1,000 kg
Heat transition coefficient ²⁾	$U = 0.25$ W/m ² K	$U = 0.25$ W/m ² K	$U = 0.25$ W/m ² K	$U = 0.25$ W/m ² K
Permissible operating temperature	—	—	—	- 15 °C to +40 °C
Air throughput (at 10 Pa) ⁵⁾	c. 16-66 m ³ /h	18 m ³ /h	24 m ³ /h	—
Air throughput (with filter)				
With blower level 1	—	—	—	approx. 30 m ³ /h
With blower level 2	—	—	—	approx. 43 m ³ /h
With blower level 3 (power level)	—	—	—	approx. 56 m ³ /h
Inherent noise ^{4) 6)}				
at blower level 1	—	—	—	$L_{pA} =$ approx. 16 dB(A)
With blower level 2	—	—	—	$L_{pA} =$ approx. 26 dB(A)
With blower level 3 (power level)	—	—	—	$L_{pA} =$ approx. 33 dB(A)
Supply voltage	—	—	—	230 V~
Unit operating voltage	—	—	—	24 V===
Power consumption				
With blower level 1	—	—	—	4 W
With blower level 2	—	—	—	7 W
With blower level 3 (power level)	—	—	—	18 W
Mains supply	—	—	—	230 V~ / 50 Hz
Protection class II	—	—	—	✓
Thermal protection in transformer	—	—	—	✓
Length of connecting cable	—	—	—	1.50 m or 5 m

¹⁾ Measured in accordance with DIN EN 10140-2 at an overall depth of 320 mm

²⁾ Calculated in accordance with DIN EN ISO 6946

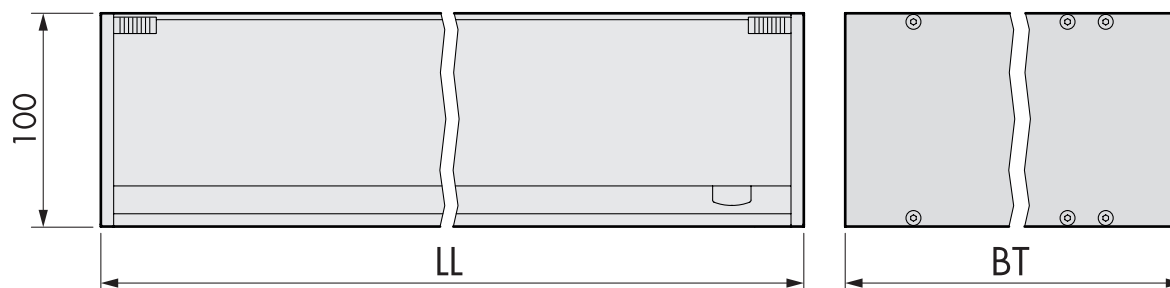
³⁾ Based on EN 308

⁴⁾ Measured in accordance with DIN EN ISO 3745 (with room insulation 8 db)

⁵⁾ depending on the number of air canals

⁶⁾ with exhaust air units internal sound increases by approx. 3 dB (A)

13.1 Dimensions



	AEROMAT VT			
	DSg	DS1	DS2	RS1 & RS smart
Ventilator length (LL)	600 - 3,000 mm	520 - 3,000 mm	1,000 - 3,000 mm	725 - 3,000 mm
Installation depth (BT)	250 - 500 mm	200 - 500 mm	200 - 500 mm	300 - 500 mm

13.2 Information requirements (in accordance with EU Regulation 1253/2014)

a	Manufacturer	SIEGENIA
b	Model identification	AEROMAT VT RS1
c	Energy consumption (SEV); Energy efficiency class (SEV class) (according to climatic zone warm / average / cold)	1.1 kWh/(m ² · a); F -8.7 kWh/(m ² · a); F -22.1 kWh/(m ² · a); D
d	Type	WLA / ELA
e	Type of drive	Multi-stage drive
f	Heat recovery system	—
g	Degree of temperature change	—
h	Highest air flow rate	56 m ³ /h
i	Electrical input power	19 W
j	Noise level	34 dB (A)
k	Relative air flow rate	43 m ³ /h
l	Relative pressure differential	—
m	Specific input power	0.15 W/(m ³ /h)
n	Control factor / control typology	1.21 / 1
o	Highest degree of inner and outer leakage rate (inner / outer leakage)	—
p	Mix rate (inner area / outer area)	—
q	Instructions for replacing filter	Replace filter see page 18
r	Instructions for the mounting of outside air / exhaust air grilles (for one-directional ventilation units)	Installation see page 8
s	Instructions for dismantling	—
t	Pressure fluctuation sensitivity of the air flow (at +20 Pa and -20 Pa)	< 11 %
u	Air tightness between inside and outside	4.6 m ³ /h

14. Feedback on documentation

We welcome your comments and suggestions on how to improve our documentation. Please email your comments to documentation@siegenia.com

15. EU Declaration of Conformity with regard to CE marking

For our product **AEROMAT VT**, we confirm that the general safety of the defined product, in accordance with Directive **2001/95/EC**, is compliant with the relevant protection requirements which are laid down in the Council Directives about electrical and electronic products.

The following listed test standards, which are harmonised in the relevant directives, have been employed for the evaluation:

- a) 2014/30/EC EMC Directive**
 - EN 55014-1:2006+A1:2009+A2:2011
 - EN 55014-2:1997+A1:2001+A2:2008
 - EN 61000-3-2:2014
 - EN 61000-3-3:2013

- b) 2014/35/EC Low voltage directive**
 - EN 60335-1:2012+A11:2014
 - EN 62233:2008

- c) 2014/53/EC RED Directive**
 - c1) Electromagnetic compatibility
 - EN 301489-1, V.1.9.2
 - EN 301 489-17, V.2.2.1
 - EN 61000-3-2:2014
 - EN 61000-3-3:2013
 - c2) Electrical safety - Establishment of information technology
 - EN 60950-1:2006+A11:2009+A12:2011+A1:2010+A2:2013
 - c3) Safety of persons in electromagnetic fields (10 MHz to 300 GHz)
 - EN 62479:2010
 - c4) Funkspektrumangelegenheiten - Datenübertragungsgeräte im 2,4- GHz-ISM-Band
 - EN 300 328 V1.9.1

- d) 2006/42/EC Machinery Directive**
 - EN 12100:2010 Risk assessment

- e) 2011/65/EU RoHs**
 - EN 50581:2012 Technical documentation on the evaluation of electrical and electronic devices with reference to the restriction of hazardous substances

This declaration is responsible for the manufacturers / importers based in the European Union submitted by:

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