

ASSEMBLY INSTRUCTIONS

AEROMAT VT system

AEROMAT VT WRG
AEROMAT VT WRG plus



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Assembly instructions

AEROMAT VT WRG / AEROMAT VT WRG plus

1 About this documentation

1.1 Original operating instructions

These instructions are part of the original operating instructions. The operating instructions consist of the following sections:

- assembly instructions
- operating and service instructions

1.2 Read the instructions

These instructions are an important document and part of the product. Only the defined procedures are safe. Persons can be injured or material damage could occur if these instructions are not observed.

Read and observe the instructions completely prior to the installation of the product.

1.3 Producer

SIEGENIA-AUBI KG
Industriestraße 1 – 3
57234 Wilnsdorf
Germany

You can find the addresses of our worldwide locations here:

<https://www.siegenia.com/en/company/locations>

1.4 Target group

This information is intended for producers of construction elements, fitters and retrofitters.

Producers of construction elements comprise all persons who carry out the following activities:

- Fabricate SIEGENIA products in window elements or door elements

The target group "fitters and retrofitters" comprises all persons who carry out the following activities:

- SIEGENIA install and repair products in a building project
- install and repair window elements or door elements that are equipped with SIEGENIA products in a building project
- retrofit window elements or door elements with SIEGENIA products

1.5 Applicable information

Note the following applicable information prior to installation.

- Installation suggestions for AEROMAT VT system <link.si/td/fens006/1122>



- Operating and service instructions for AEROMAT VT WRG / WRG plus

<link.si/td/fens014/1023>



2 Safety

2.1 Intended use

- The AEROMAT VT system is a ventilation system for ventilating and extracting air from closed rooms.
- The AEROMAT VT system consists of different device types. These different device types can be combined with each other.
- The AEROMAT VT system is suitable for installation in external windows or walls of fixed buildings.
- Depending on the environmental conditions, the AEROMAT VT system can support dehumidification in the home.
- The AEROMAT VT system is not suitable for targeted dehumidification (e. g. drying out new buildings or concealing defects or deficiencies in the construction).

2.2 Requirements for the target groups

We assume and require that manufacturers of building elements possess the following knowledge and skills:

- knowledge of the regulations concerning occupational safety and accident prevention
- comprehension of technical correlations according to state-of-the-art science and technology
- knowledge of professional work steps
- knowledge of the applicable standards and directives
- knowledge of applicable testing regulations
- knowledge and skills with regard to the professional fixing of technical elements
- knowledge of the requirements of profile system providers

SIEGENIA offers training courses for the acquisition of some of the required knowledge and skills. Contact your SIEGENIA sales consultant in case of requirement.

We assume and require that fitters and retrofitters possess the following knowledge and skills:

- knowledge of the regulations concerning occupational safety and accident prevention
- comprehension of technical correlations according to state-of-the-art science and technology

- knowledge of professional work steps
- knowledge of the applicable standards and directives
- knowledge and skills with regard to the professional use of electrical and mechanical tooling
- knowledge and skills with regard to the professional fixing of technical elements
- knowledge and skills with regard to the professional fabrication of electrical components
- knowledge and skills with regard to the work steps:
 - connecting electrical components
 - commissioning electrical components
 - checking the function of electrical components
- knowledge of the 5 safety rules:
 - enable
 - secure against reactivation
 - ensure that system is voltage-free
 - earthing and short-circuiting
 - cover or isolate proximate live parts

SIEGENIA offers training courses for the acquisition of some of the required knowledge and skills. Contact your SIEGENIA sales consultant in case of requirement.

2.3 Safety notes

Risk of poisoning from combustion fumes

A vacuum can be created when this ventilation unit is operated simultaneously with a heat-producing appliance (such as a stove or gas heater). The vacuum could cause exhaust fumes to enter the room, resulting in poisoning.

- Have the ventilation compound in your home checked by an accredited chimney sweep.
- For ventilation units that permanently run in exhaust air operation, install a safety device in consultation with the accredited chimney sweep.

Risk of poisoning from contaminated air

When the ventilation unit is in operation, hazardous substances can enter the room, resulting in poisoning.

- If the air drawn in contains hazardous substances, switch off the ventilation unit.

Explosion hazard due to electrical sparks

When operating the ventilation unit in environments with an explosive atmosphere, electrical sparks may cause an explosion. Explosive atmospheres are created, for example, by flammable liquids, steam, gas or dust.

- Do not use the ventilation unit in environments with an explosive atmosphere.

Risk of injury from using unsuitable components

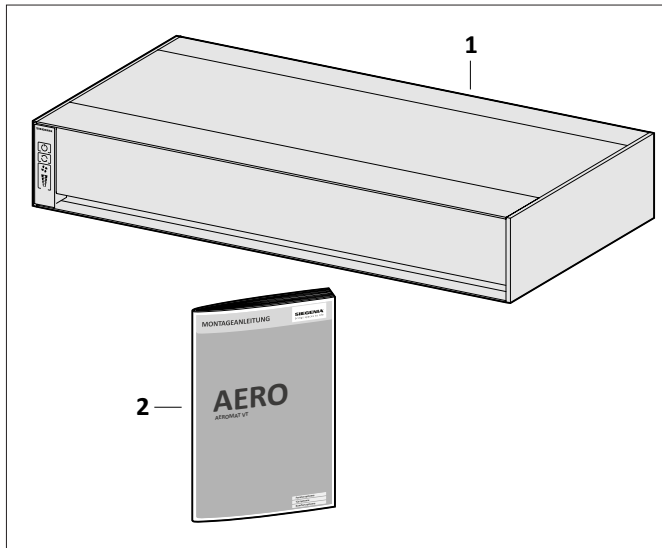
Components, accessories and spare parts which do not comply with SIEGENIA requirements can impair the safety of the product and lead to accidents.

- Use original parts or components that comply with the SIEGENIA requirements. If in doubt, contact SIEGENIA for confirmation.

3 Product specifications

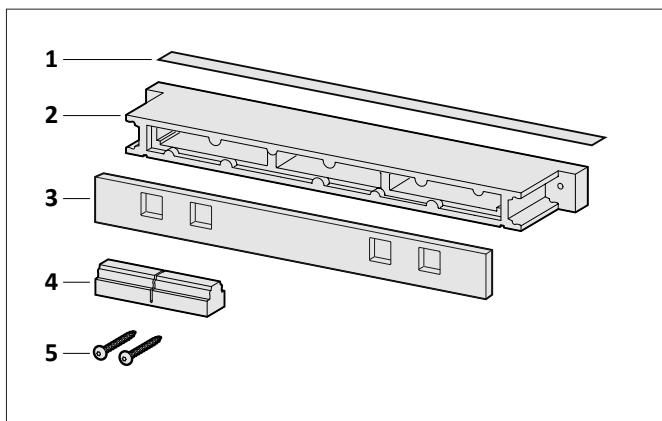
3.1 Scope of delivery

3.1.1 AEROMAT VT system



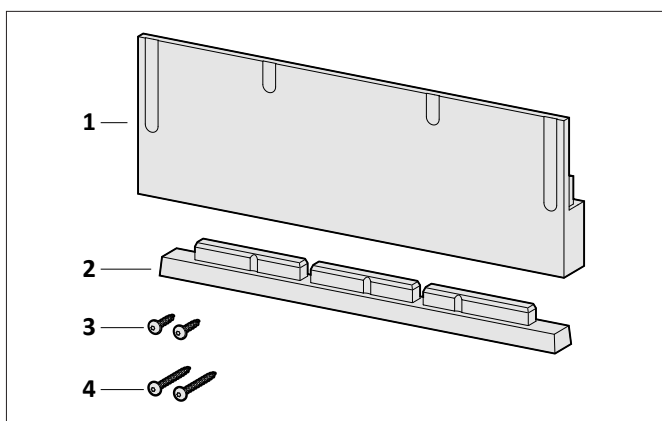
Item	name	Quantity
1	AEROMAT VT system	1
2	assembly instructions	1

3.1.2 Wall duct EPP



Item	name	Quantity
1	Adhesive tape	1
2	Wall duct EPP	1
3	Plaster cover	1
4	Filling piece	1
5	Countersunk screw 4.8 x 35	2

3.1.3 Vent duct and lintel duct EPP

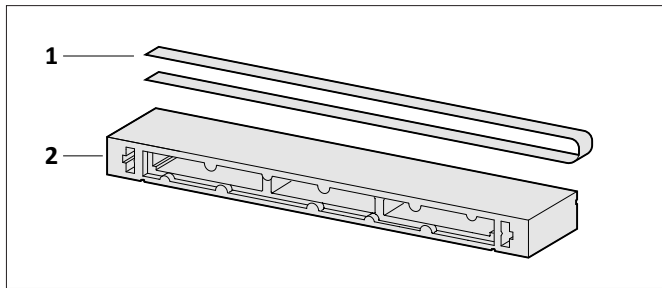


Item	name	Quantity
1	Vent duct and lintel duct EPP	1
2	Plaster cover	1
3	Countersunk screw 4.8 x 16	2
4	Countersunk screw 4.8 x 35	2

Assembly instructions

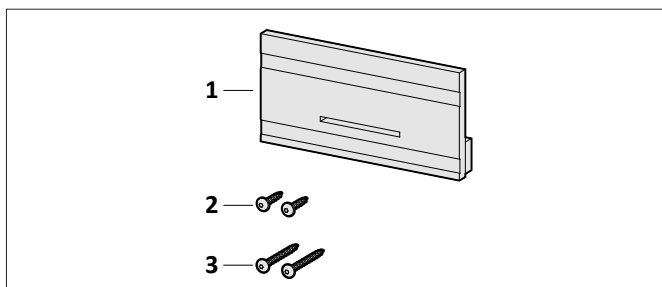
AEROMAT VT WRG / AEROMAT VT WRG plus

3.1.4 Extension canal



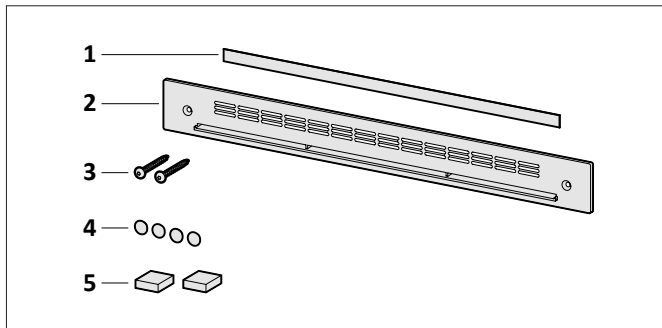
Item	name	Quantity
1	Adhesive tape	1
2	Extension canal	1

3.1.5 Compensation piece



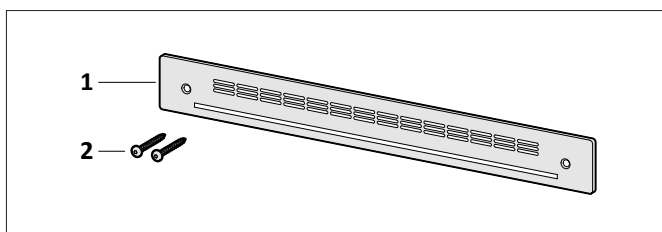
Item	name	Quantity
1	Compensation piece	1
2	Drill screw 4.8 x 16	2
3	Drill screw 4.8 x 35	2

3.1.6 PVC outer panel for wall duct EPP



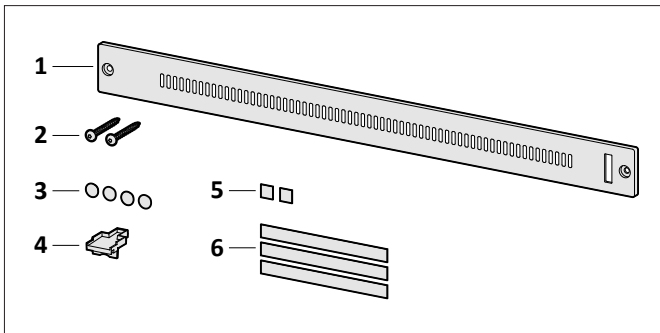
Item	name	Quantity
1	Insect grille	1
2	PVC outer panel	1
3	Clamping screw 3.5 x 35	2
4	Protective cap	4
5	Blank	2

3.1.7 Aluminium outer panel for wall duct EPP



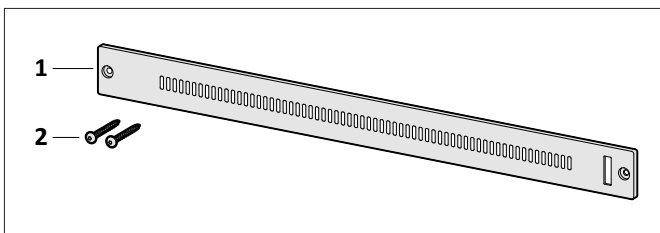
Item	name	Quantity
1	Aluminium outer panel	1
2	Clamping screw 4.5 x 40	2

3.1.8 PVC outer panel for vent duct and lintel duct EPP



Item	name	Quantity
1	PVC outer panel	1
2	Clamping screw 3.5 x 35	2
3	Protective cap	4
4	Condensate discharge duct	1
5	Small insect grille	2
6	Large insect grille	3

3.1.9 Aluminium outer panel for vent duct and lintel duct EPP



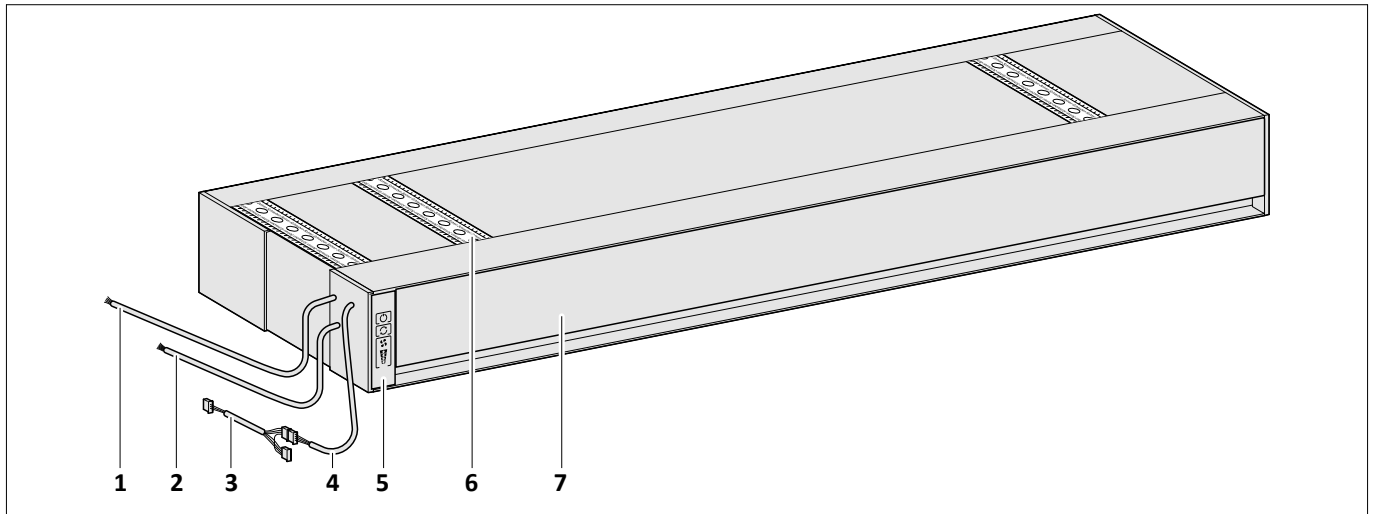
Item	name	Quantity
1	Aluminium outer panel	1
2	Clamping screw 4.5 x 40	2

Assembly instructions

AEROMAT VT WRG / AEROMAT VT WRG plus

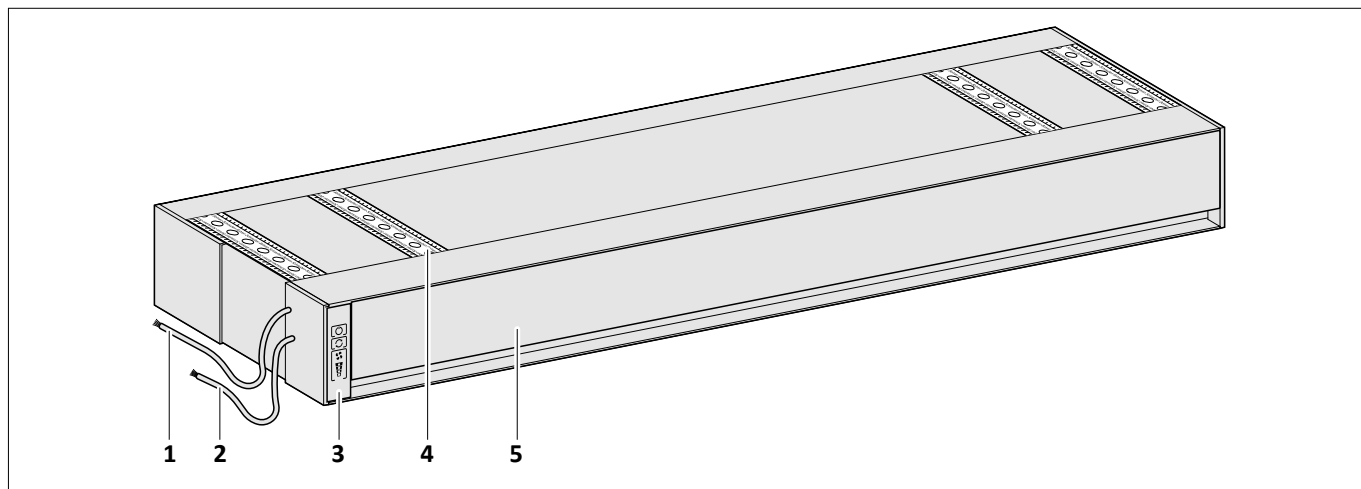
3.2 Structure

3.2.1 Units with standard cables



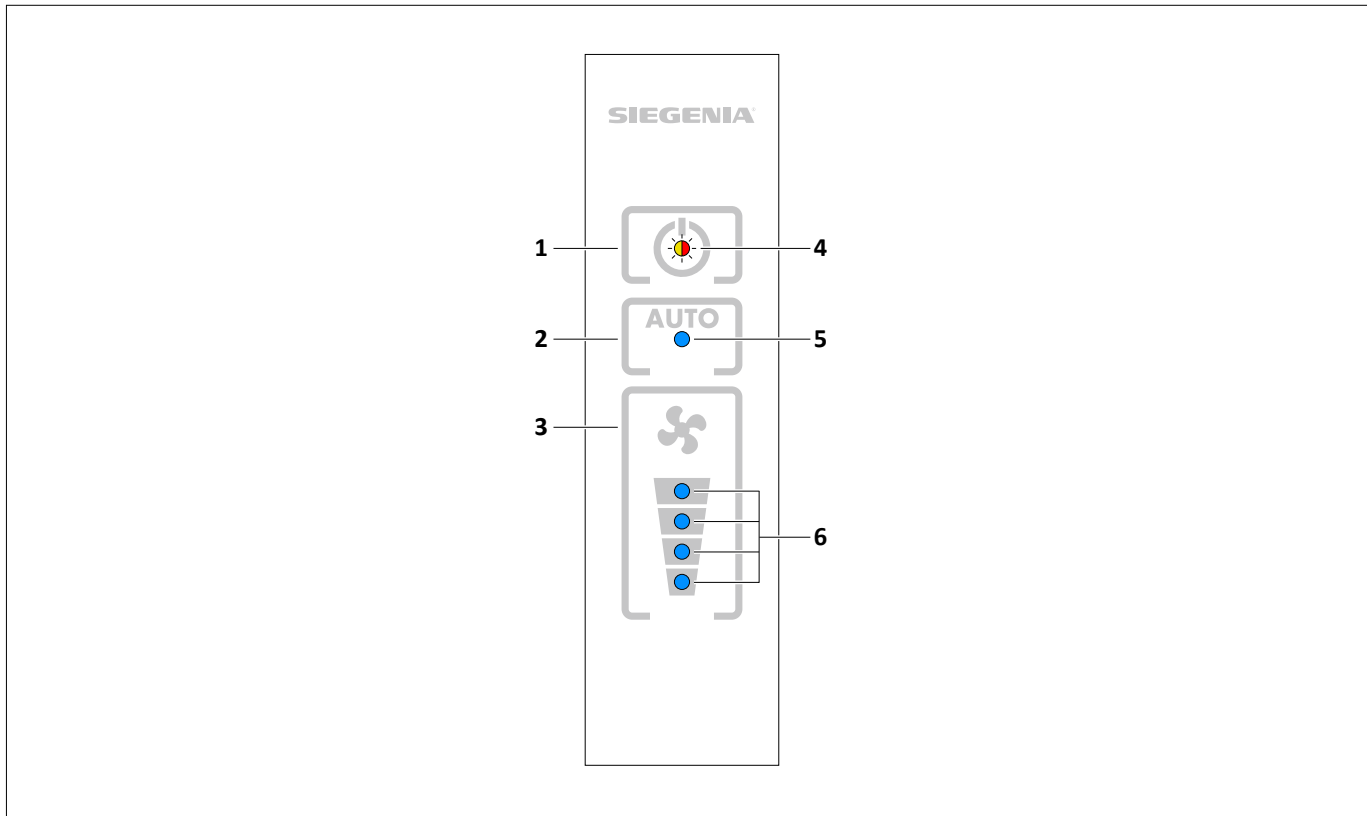
Item	name
1	Control cable 5 x 0.75 mm ² for digital outputs (optional)
2	Control cable 7 x 0.75 mm ² for supply voltage and for external inputs
3	SI-BUS Y cable (optional)
4	SI-BUS cable (optional)
5	Touch control
6	Marking tape
7	Inner panel

3.2.2 Units with halogen-free cables



Item	name
1	Control cable 2 x 1.5 mm ² for supply voltage
2	Control cable 7 x 0.75 mm ² for external outputs
3	Touch control
4	Marking tape
5	Inner panel

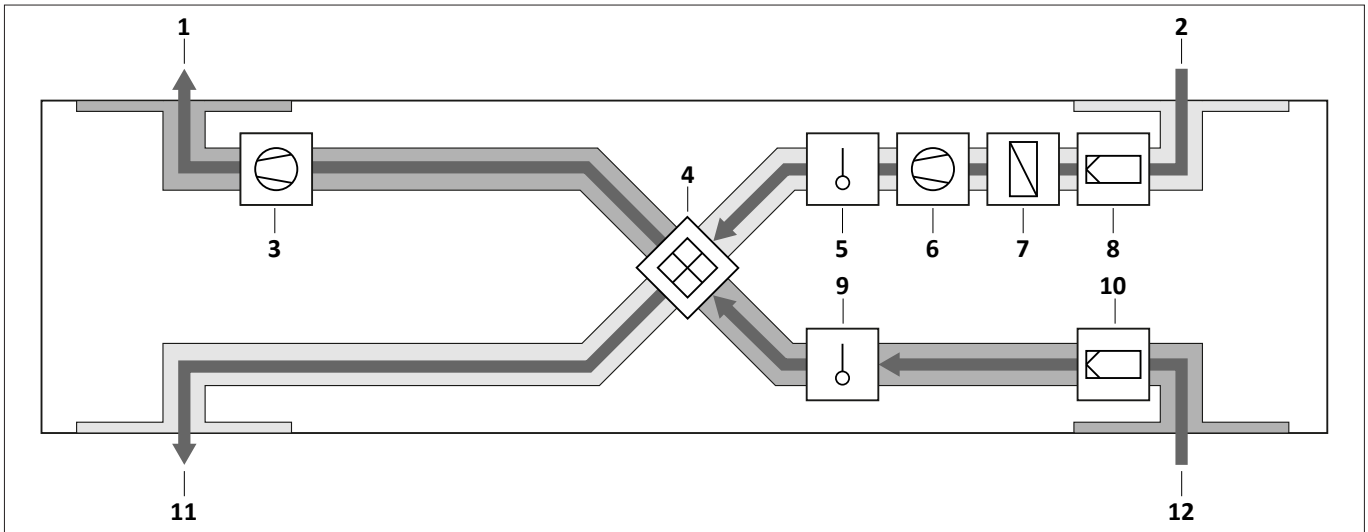
3.3 Touch control



Item	Name	Purpose
1	ON/OFF button	<ul style="list-style-type: none"> Switches the device on and off.
2	AUTO button	<ul style="list-style-type: none"> Switches automatic mode on and off. Opens the menu navigation when pressed and held.
3	Blower level button	<ul style="list-style-type: none"> Toggles through the blower levels. Confirms change filter function when held down.
4	Status LED	<ul style="list-style-type: none"> Lights up blue when the device is switched on. Flashes green while an external switch input is active (e.g. bathroom control). Lights up or flashes in different colours while the menu navigation is displayed. Lights up or flashes orange or red when there is an error.
5	AUTO LED	<ul style="list-style-type: none"> Lights up blue when automatic mode is switched on. Flashes blue when the filter needs replacing.
6	Blower level LEDs	<ul style="list-style-type: none"> Light up blue depending on which blower level is activated. The bottom LED flashes blue during the warm-up phase of the calibration. The top LED flashes blue when the condensate and frost protection control is active.
-	Buzzer	<ul style="list-style-type: none"> Produces a beeping sound during operation and when there is an error message.

3.4 Operation

3.4.1 AEROMAT VT WRG / AEROMAT VT WRG plus



Item	name
1	Exhaust air
2	Outside air
3	blower
4	Heat exchanger
5	Sensor
6	blower
7	Preheating register (optional)
8	Filters
9	Sensor
10	Filters
11	Supply air
12	air extraction only

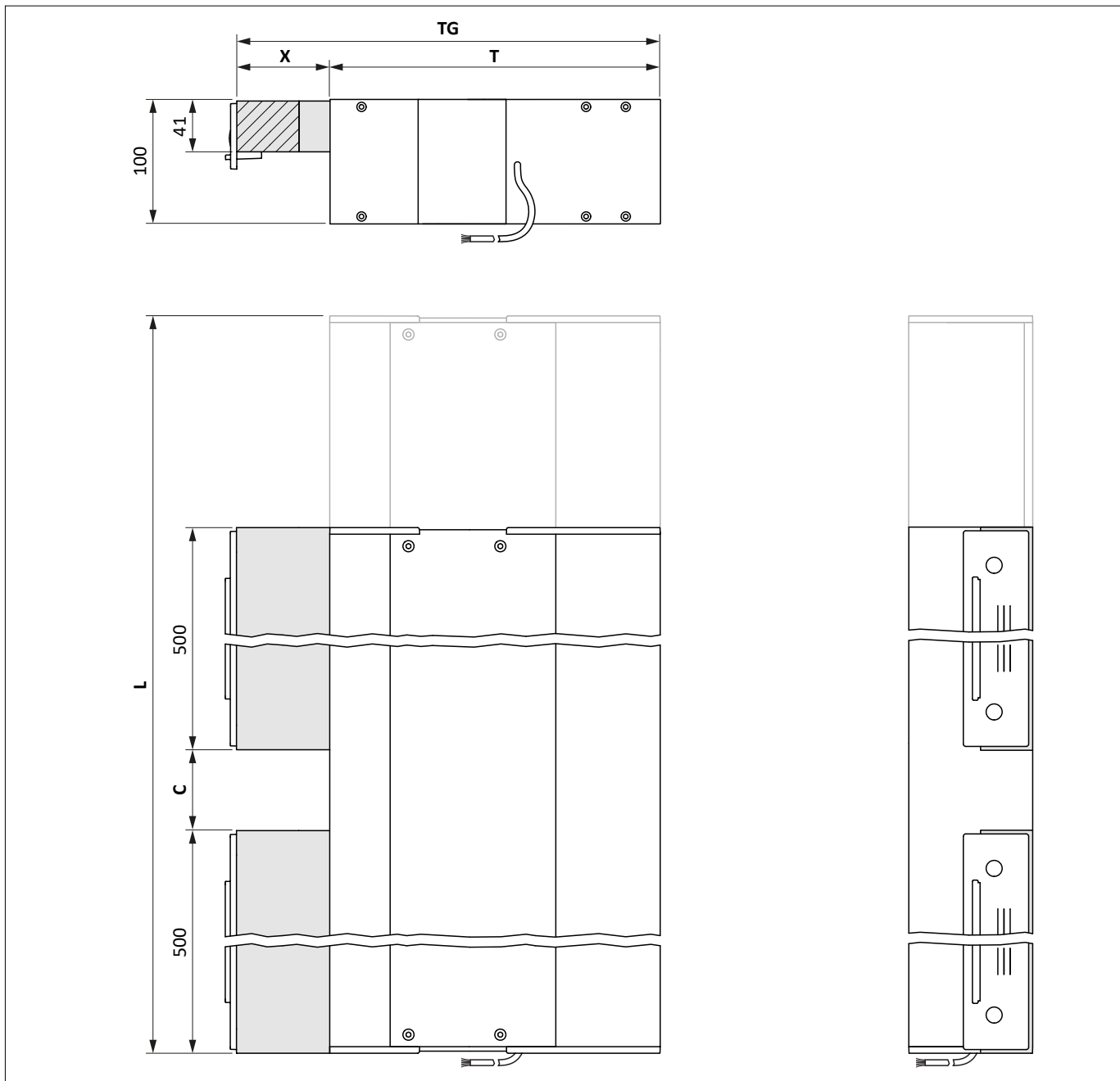
- AEROMAT VT WRG and AEROMAT VT WRG plus are bidirectional ventilation units (including heat recovery) for the ventilation of closed rooms. The exchange of air is accomplished using supply air fans and exhaust air blowers with heat recovery.


Assembly instructions

AEROMAT VT WRG / AEROMAT VT WRG plus

3.5 AEROMAT VT system dimensions

3.5.1 AEROMAT VT WRG / VT WRG plus with wall duct EPP



L	Ventilator length	
D	Ventilator depth	
X	Depth of ducts	The depth of the ducts can be increased in increments of 100 mm using duct extensions (see accessories). The ducts can be cropped on site to the final dimension (min. 25 mm).
TD	Total depth	Ventilator depth D + depth of ducts X
C	Spacing between ducts	
	Cropping area	

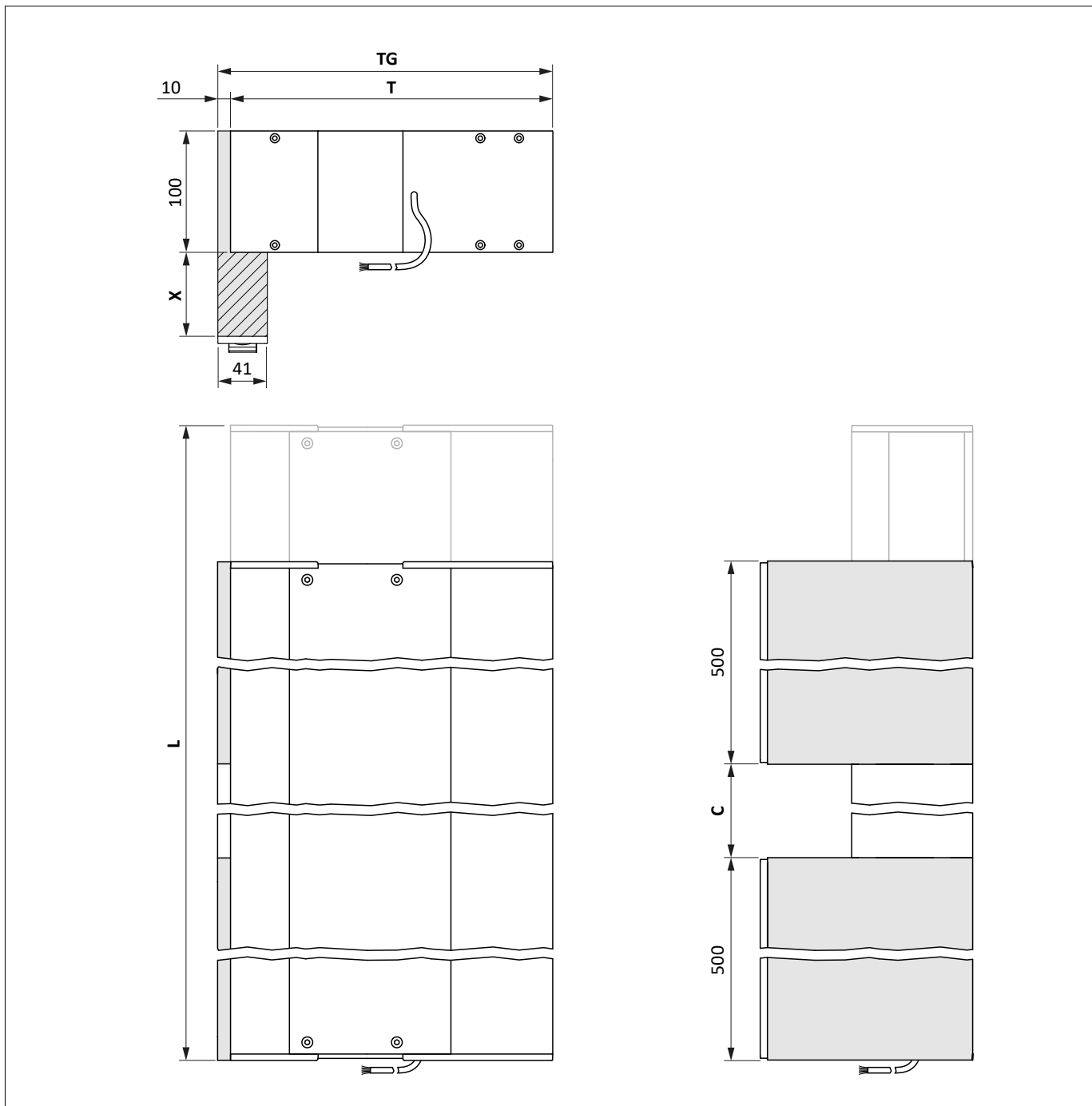
Measurements in mm


Device type	Dimension L (mm)	Dimension D (mm)	Dimension X (mm)	Dimension C (mm)
WRG without preheating register	1000 – 1190	320 – 500	25 – 500	0
	1200 – 6000	320 – 500	25 – 500	200
WRG with preheating register	1200 – 1390	320 – 500	25 – 500	200
	1400 – 6000	320 – 500	25 – 500	400
WRG plus without preheating register	1200 – 6000	320 – 500	25 – 500	200
WRG plus with preheating register	1400 – 6000	320 – 500	25 – 500	400

Assembly instructions

AEROMAT VT WRG / AEROMAT VT WRG plus

3.5.2 AEROMAT VT WRG / VT WRG plus with vent and lintel duct EPP



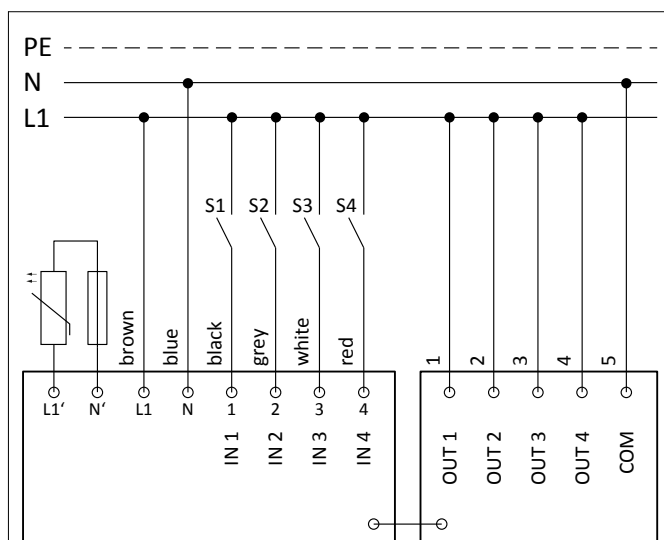
L	Ventilator length	
D	Ventilator depth	
TD	Total depth	Ventilator depth D + 10 mm
X	Height of ducts	The height of the ducts can be increased in increments of 100 mm using duct extensions (see accessories). The ducts can be cropped on site to the final dimension (min. 25 mm).
	Cropping area	

Measurements in mm

Device type	Dimension L (mm)	Dimension D (mm)	Dimension X (mm)	Dimension C (mm)
WRG without preheating register	1000 – 1190	320 – 500	0 – 570	0
	1200 – 6000	320 – 500	0 – 570	200
WRG with preheating register	1200 – 1390	320 – 500	0 – 570	200
	1400 – 6000	320 – 500	0 – 570	400
WRG plus without preheating register	1200 – 6000	320 – 500	0 – 570	200
WRG plus with preheating register	1400 – 6000	320 – 500	0 – 570	400

3.6 Electrical connection

3.6.1 Units with standard cables



L1'	PTC (preheating register)
N'	
L1	Phase
N	Neutral conductor

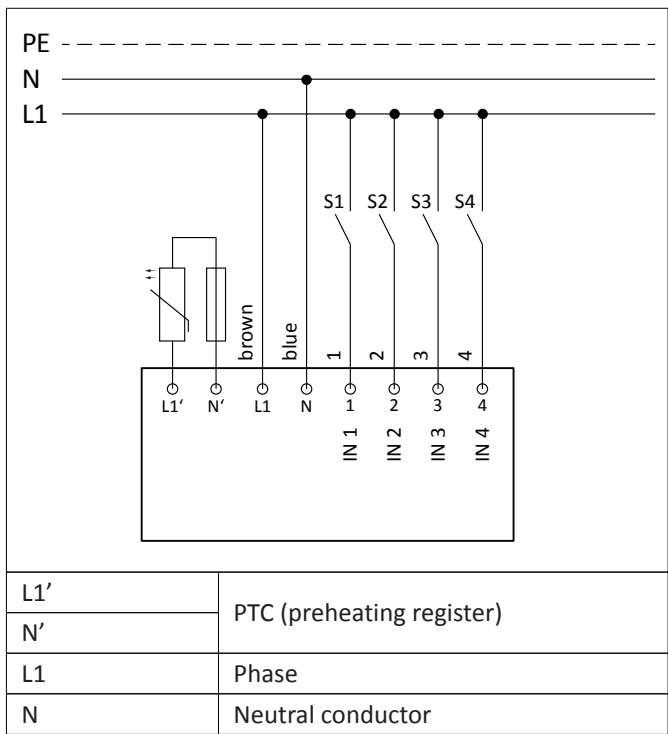
Function	IN 1	IN 2	IN 3	IN 4
Blower level 1	•			
Blower level 2		•		
Blower level 3			•	
Blower level 4	•	•		
Blower level 5	•		•	
Auto		•	•	
Special function (dependent on configuration): – Blower level as required – Bathroom control – Cross ventilation / night ventilation				•

Digital outputs		
Conne- ction for	Adern marking	Description
OUT 1	1	When the device is switched on, voltage is present.
OUT 2	2	When there is an error on the device, voltage is present.
OUT 3	3	When the filter replacement indicator is active, voltage is present.
OUT 4	4	When the frost protection control is active, voltage is present.
COM	5	Common potential which is fed through.

Assembly instructions

AEROMAT VT WRG / AEROMAT VT WRG plus

3.6.2 Units with halogen-free cables



Function	IN 1	IN 2	IN 3	IN 4
Blower level 1	•			
Blower level 2		•		
Blower level 3			•	
Blower level 4	•	•		
Blower level 5	•		•	
Auto		•	•	
Special function (dependent on configuration): – Blower level as required – Bathroom control – Cross ventilation / night ventilation				•

3.7 Technical specifications

Device type	WRG	WRG plus
Supply voltage	230 V AC	230 V AC
Supply frequency	50 Hz	50 Hz
Operating voltage	24 V DC	24 V DC
Maximum power consumption	27 W	20 W
Maximum power consumption (preheating register)	350 W	350 W
Protection class	II	II
Max. permissible area load	1000 kg/m	1000 kg/m
Permissible operating temperature	–15 – +40°C	–15 – +40°C
Permissible operating temperature (device with preheating register)	–30 – +40°C	–30 – +40°C
Length of connecting cable	5 – 20 m	5 – 20 m

3.8 Accessories

name	Description	Material number
Wall duct EPP	Wall duct EPP (incl. assembly material)	vL3490200-097010
Vent duct and lintel duct EPP	Vent duct and lintel duct EPP (incl. assembly material)	vL3490180-097010
Extension canal	Extension duct for extension of wall duct or vent duct and lintel duct	vL3490240-097010
Compensation piece vent duct and lintel duct	Compensation piece for vent duct and lintel duct EPP (incl. assembly material)	vL3490190-097010
PVC outer panel for wall duct EPP	PVC outer panel for wall duct EPP (incl. assembly material) in white (similar to RAL 9016)	vL3490210-004010
PVC outer panel for wall duct EPP	PVC outer panel for wall duct EPP (incl. assembly material) in black (similar to RAL 9005)	vL3490220-023010
Aluminium outer panel for wall duct EPP	Aluminium outer panel for wall duct EPP to cover the PVC outer panel	vL3490230-500010
PVC outer panel for vent duct and lintel duct EPP	PVC outer panel for vent duct and lintel duct EPP (incl. assembly material) in white (similar to RAL 9016)	vL3490160-004010
PVC outer panel for vent duct and lintel duct EPP	PVC outer panel for vent duct and lintel duct EPP (incl. assembly material) in black (similar to RAL 9005)	vL3490150-023010
Aluminium outer panel for vent duct and lintel duct EPP	Aluminium outer panel for vent duct and lintel duct EPP to cover the PVC outer panel	vL3490170-500010
Ventilation control unit	Ventilation control unit for external operation	vL7360010-004010
Ventilation control unit sensors	Ventilation control unit with integrated sensors for external operation	vL7360020-004010

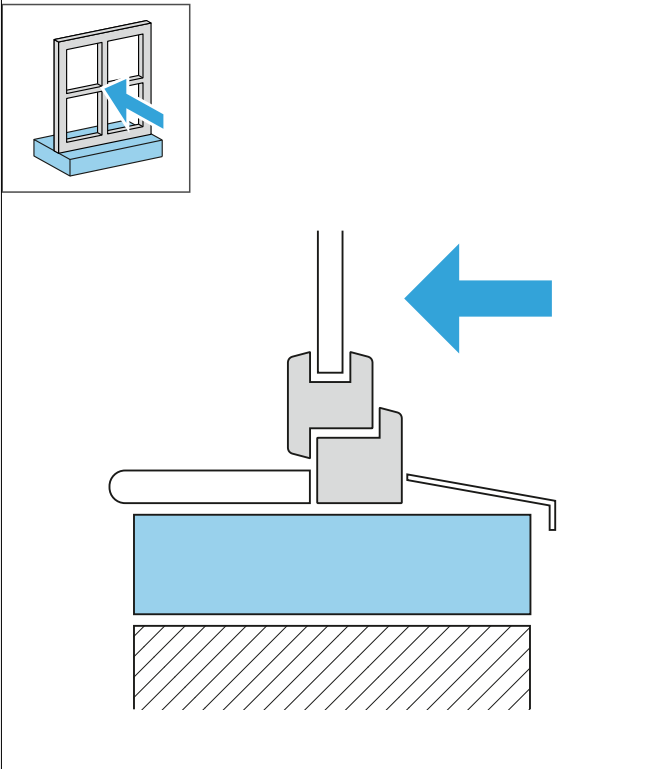
Assembly instructions

AEROMAT VT WRG / AEROMAT VT WRG plus

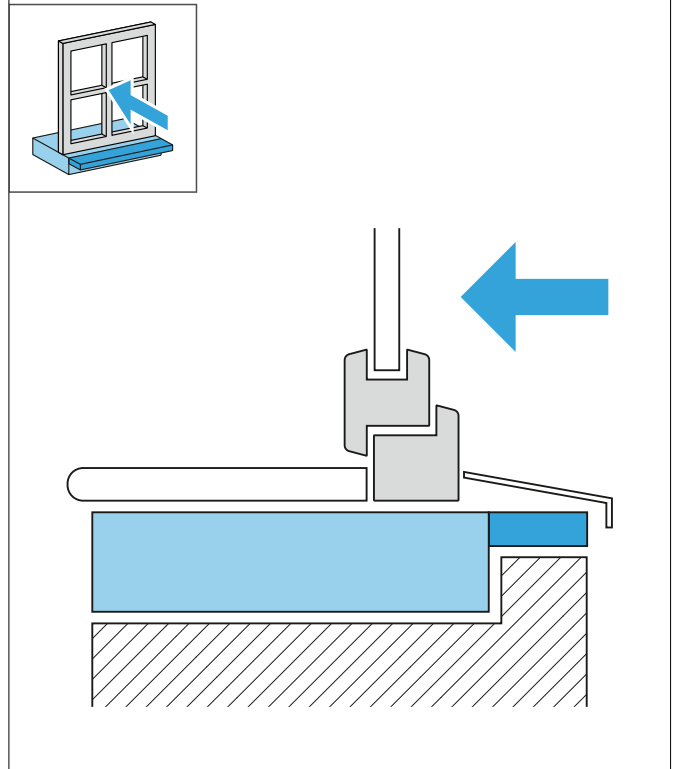
4 Assembly

4.1 Preparation for installation

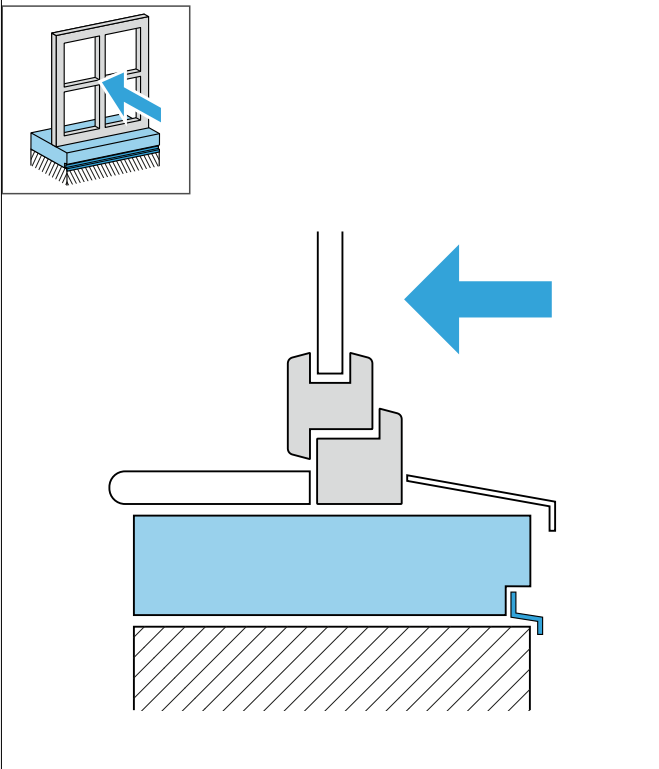
Installation in the window sill



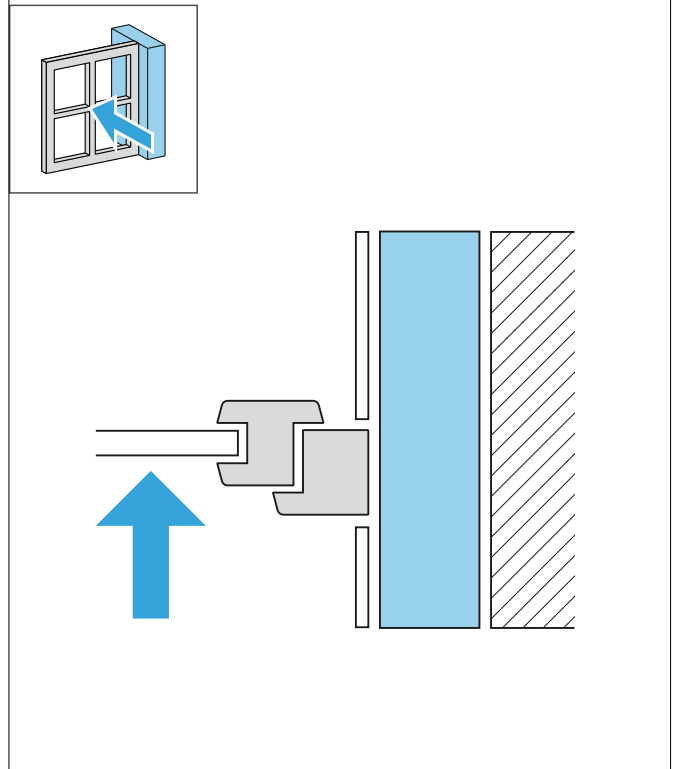
Concealed installation in the wall



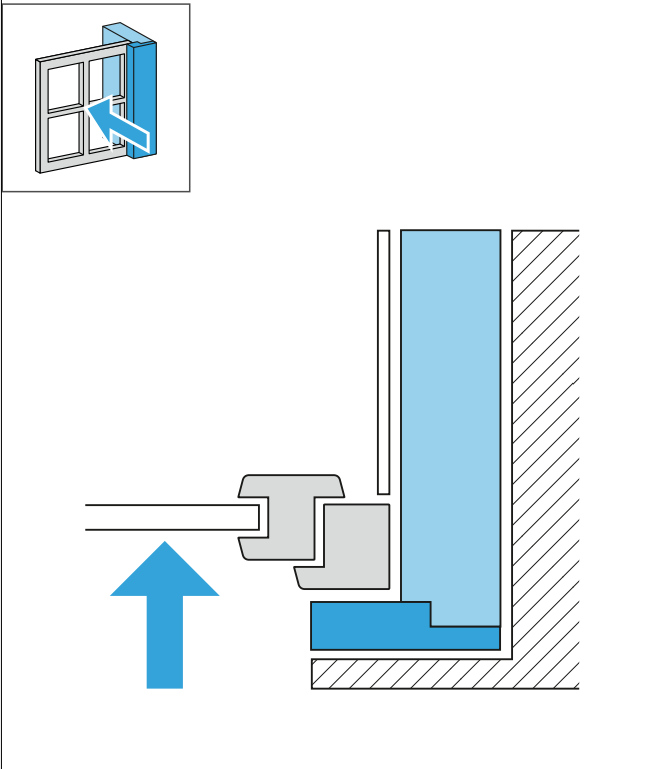
Installation in the wall with shadow gap



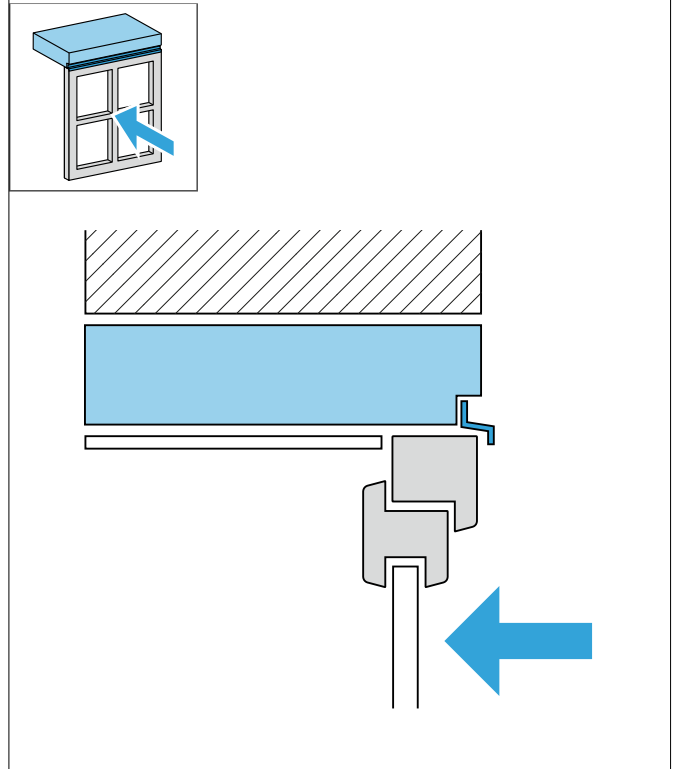
Installation in the reveal



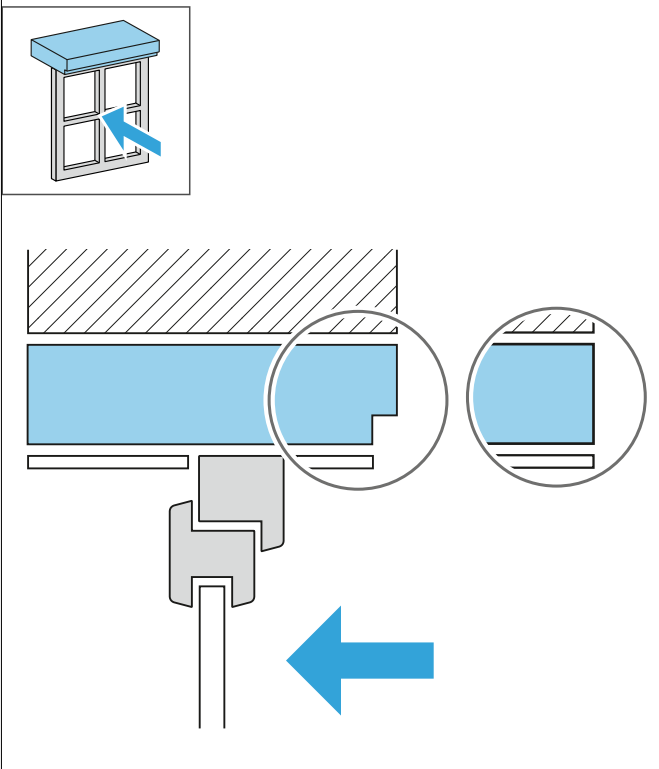
Installation concealed in the reveal



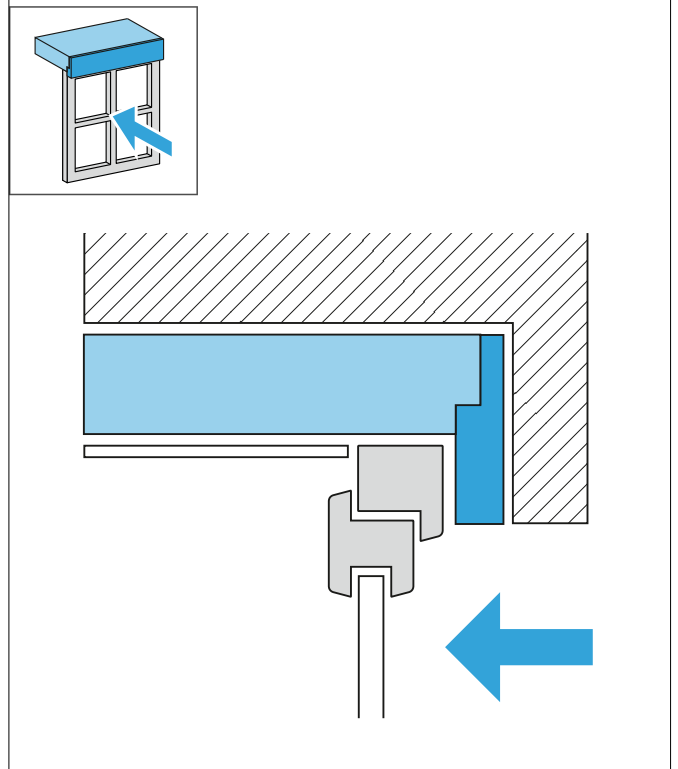
Installation in the lintel with shadow gap



Installation in the lintel



Concealed installation in the lintel



Assembly instructions

AEROMAT VT WRG / AEROMAT VT WRG plus

4.2 Installing the AEROMAT VT system

! NOTE

Material damage due to water or dirt in the device

Water and dirt inside the device can lead to damage to the device.

- Protect open areas on the device from ingress of water and dirt until installation is complete.

! NOTE

Material damage due to incorrect screwing of the ventilation unit

Internal component may be damaged if the ventilation unit is screwed incorrectly.

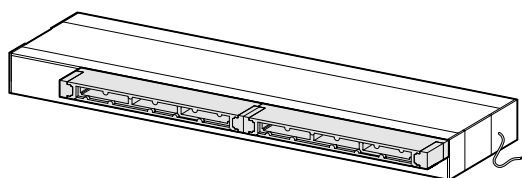
- Only fix screws in the region of the marking tape.

1. Remove the AEROMAT VT system from its packaging and place it on a soft surface (e.g. cardboard or a blanket).
2. Install and seal the AEROMAT VT system in accordance with the latest technological standards. Observe installation suggestions for the AEROMAT VT system (see [H43.FENS025](#)).
3. Use the control cable to connect the AEROMAT VT system to the mains electricity grid (see page 17).
4. If the unit is connected to external switches, then relay the switch assignment information to the end user.

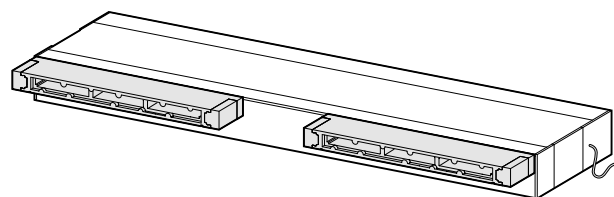
4.3 Installing ducts

4.3.1 Installing wall duct EPP

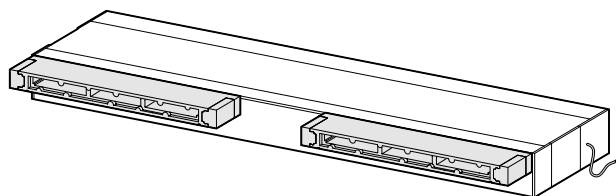
The installation position of the ducts (see page 14) varies according to the device type.



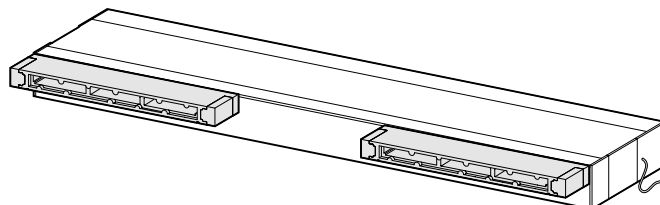
AEROMAT VT WRG



AEROMAT VT WRG plus

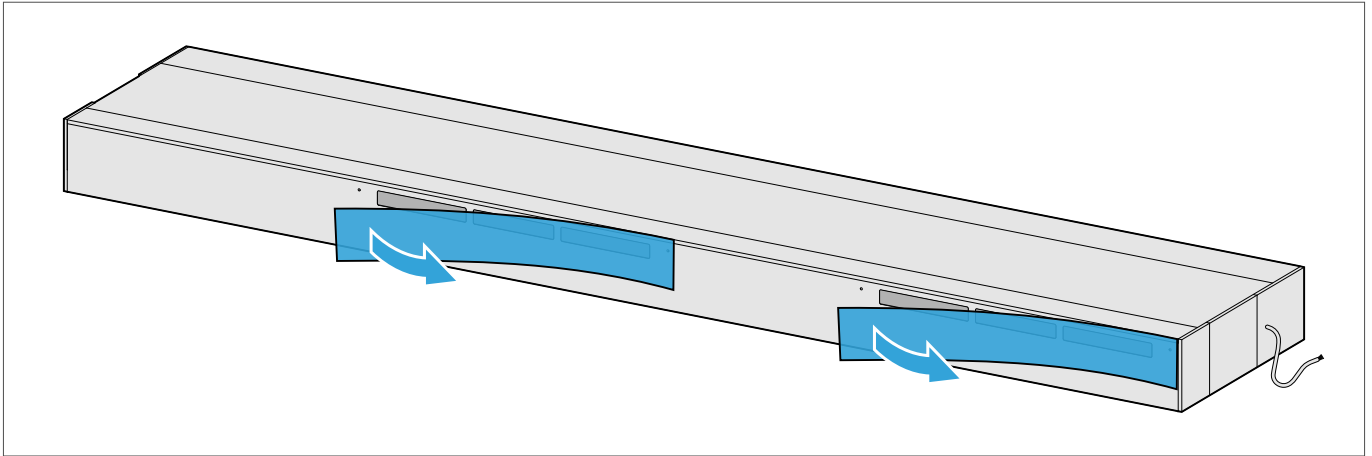


AEROMAT VT WRG with preheating register

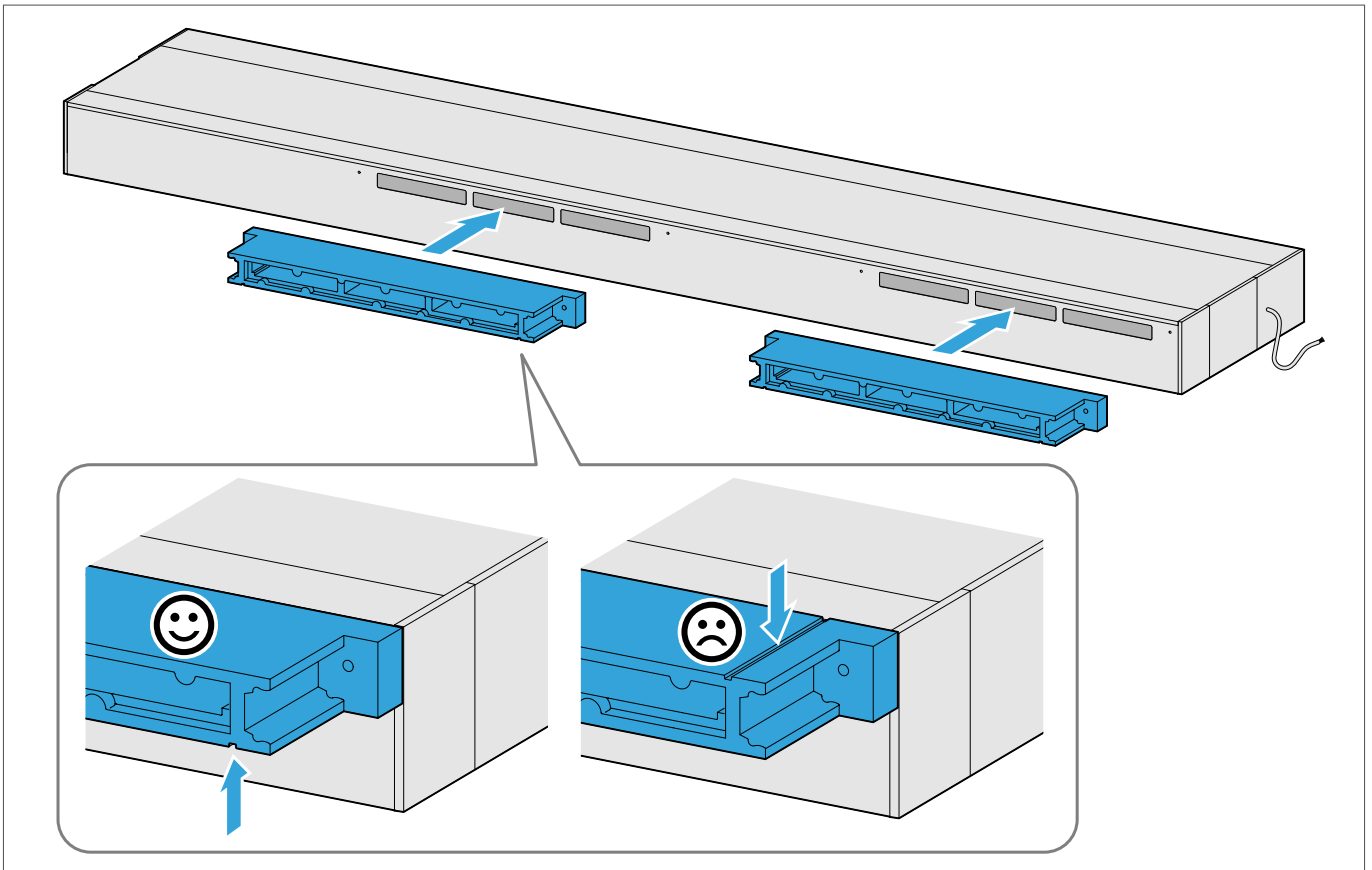


AEROMAT VT WRG plus with preheating register

1. Remove the protection foil.



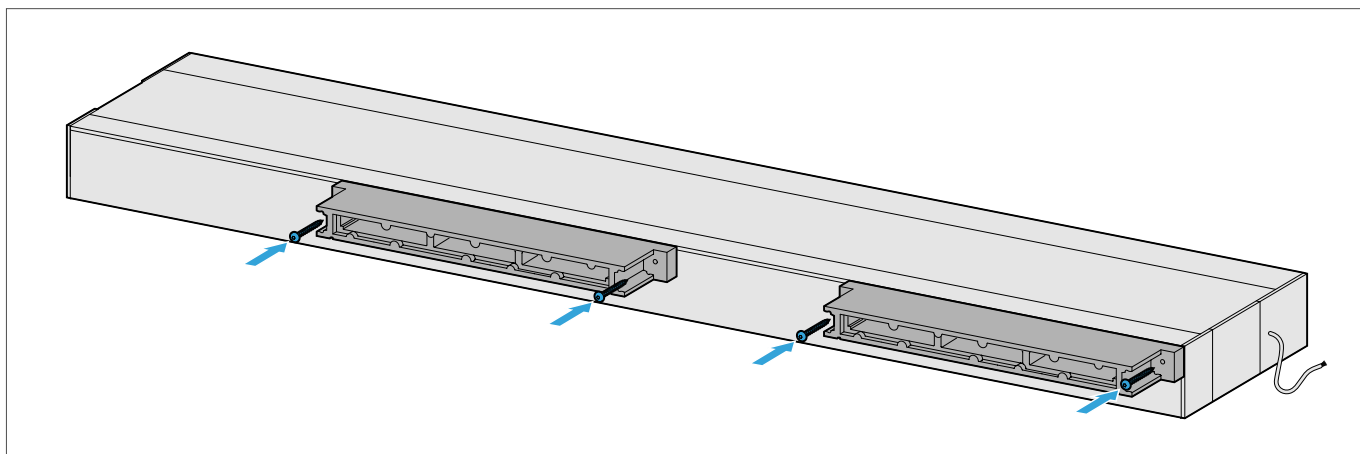
2. Position each wall duct on the ventilation unit.



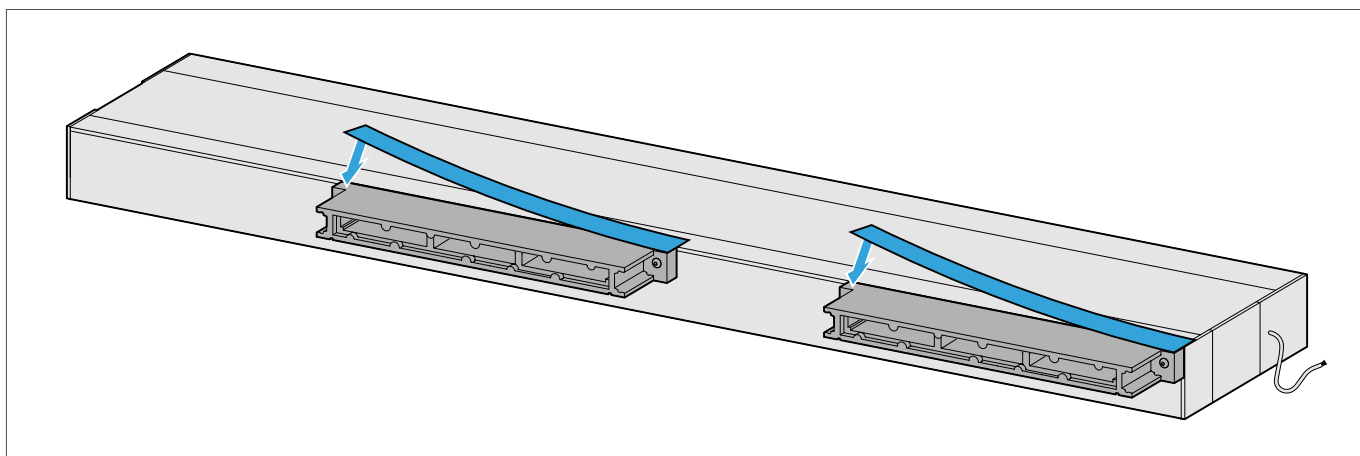
Assembly instructions

AEROMAT VT WRG / AEROMAT VT WRG plus

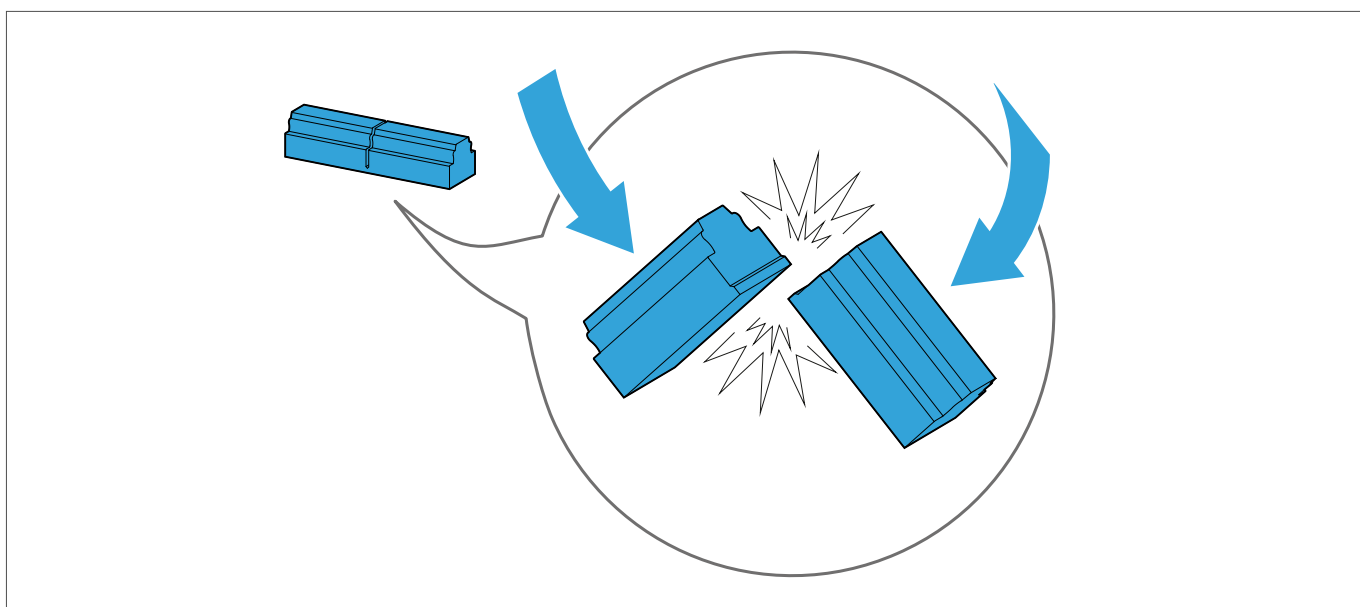
3. Screw each wall duct in place using 2 screws.



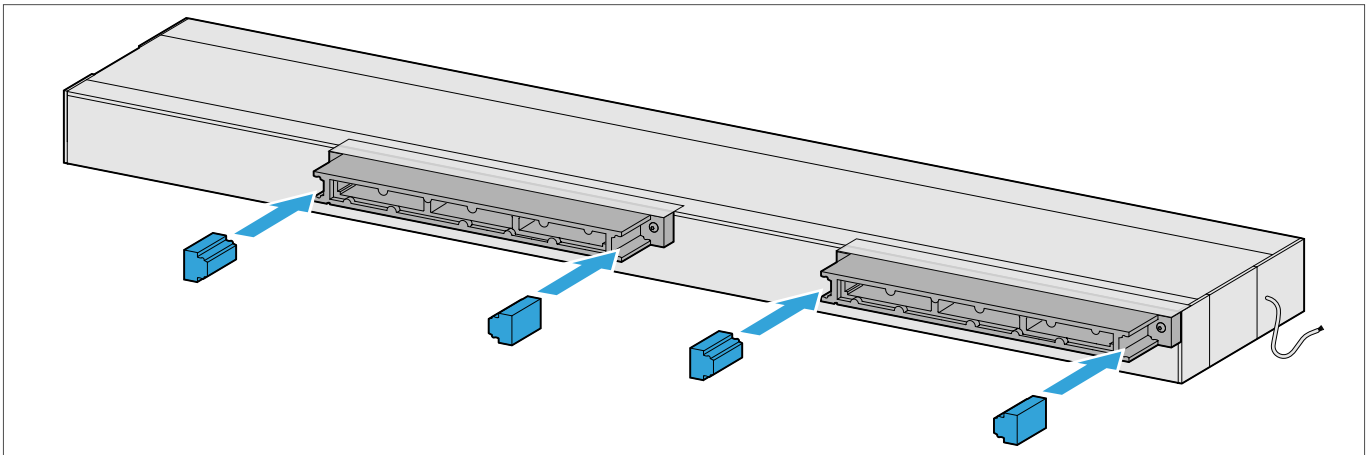
4. Additionally fix each wall duct to the ventilation unit using adhesive tape.



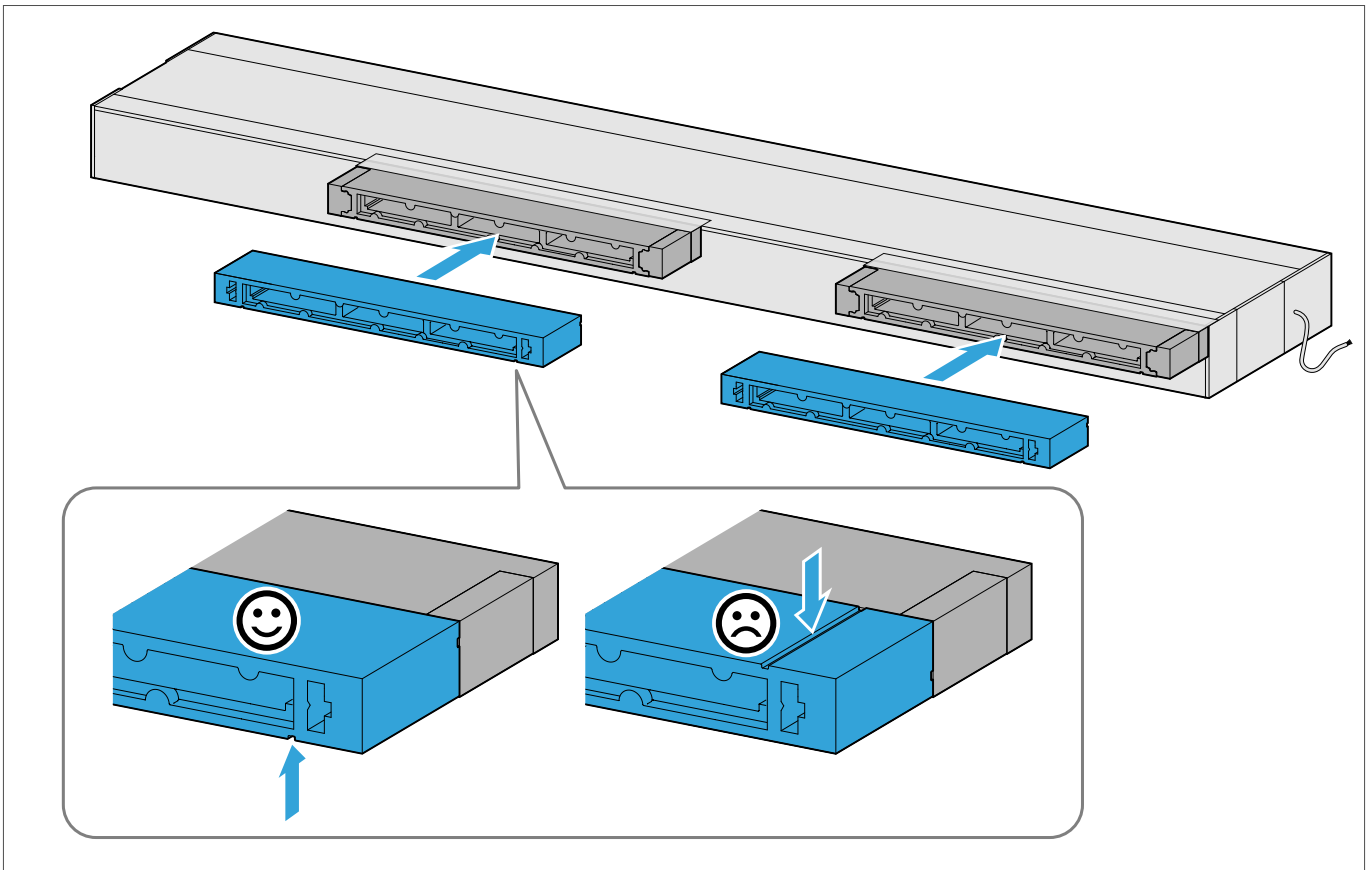
5. Separate the filling pieces from each other at the predetermined breaking point.



6. Insert the filling pieces into the outer ends of each wall duct.



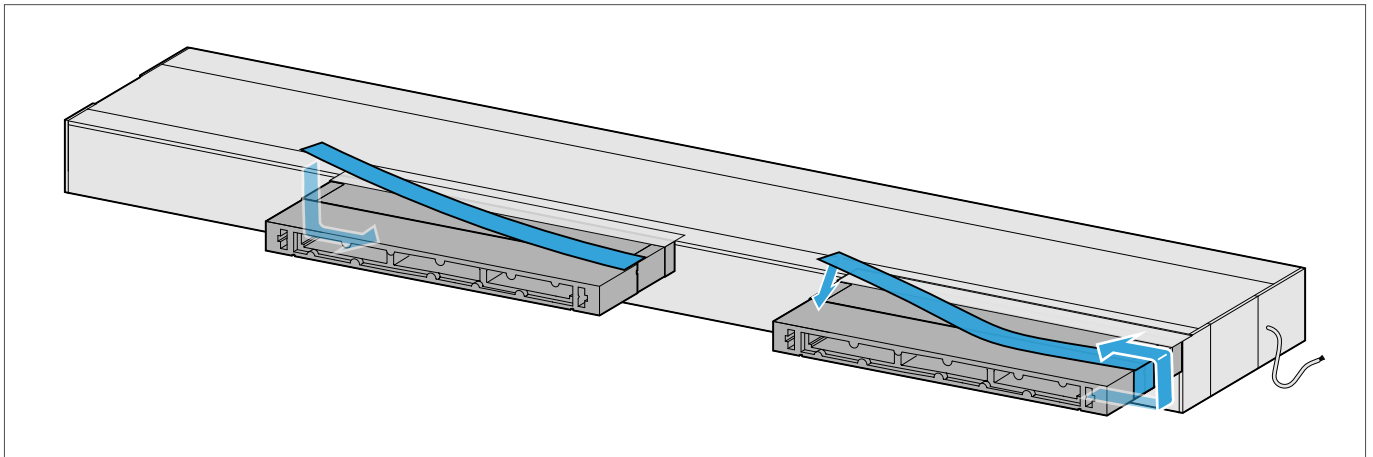
7. Optionally, attach one or more extension ducts to each wall duct.



Assembly instructions

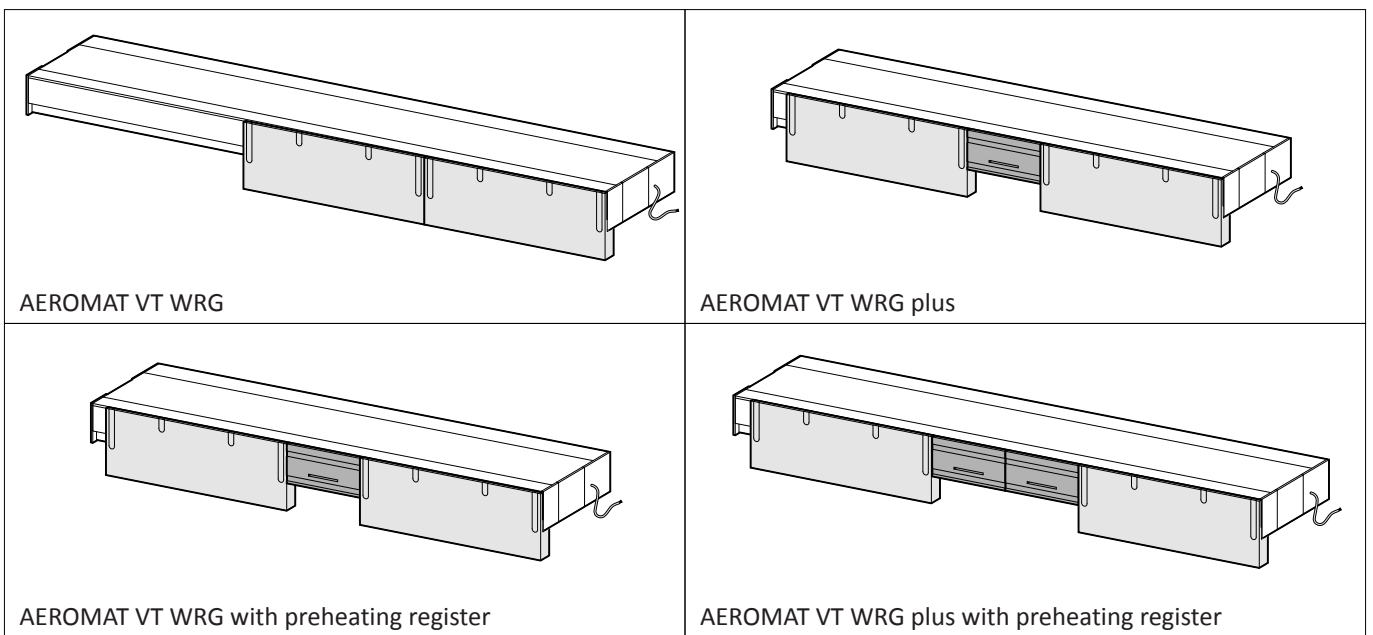
AEROMAT VT WRG / AEROMAT VT WRG plus

8. Fix the extension ducts to each wall duct from all sides using adhesive tape.

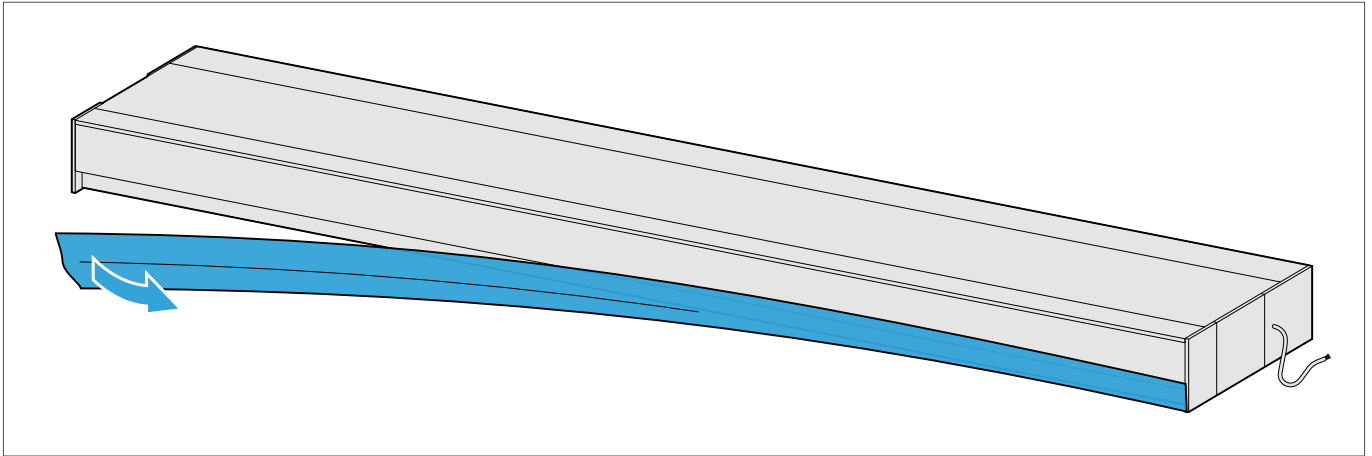


4.3.2 Installing the vent and lintel duct EPP

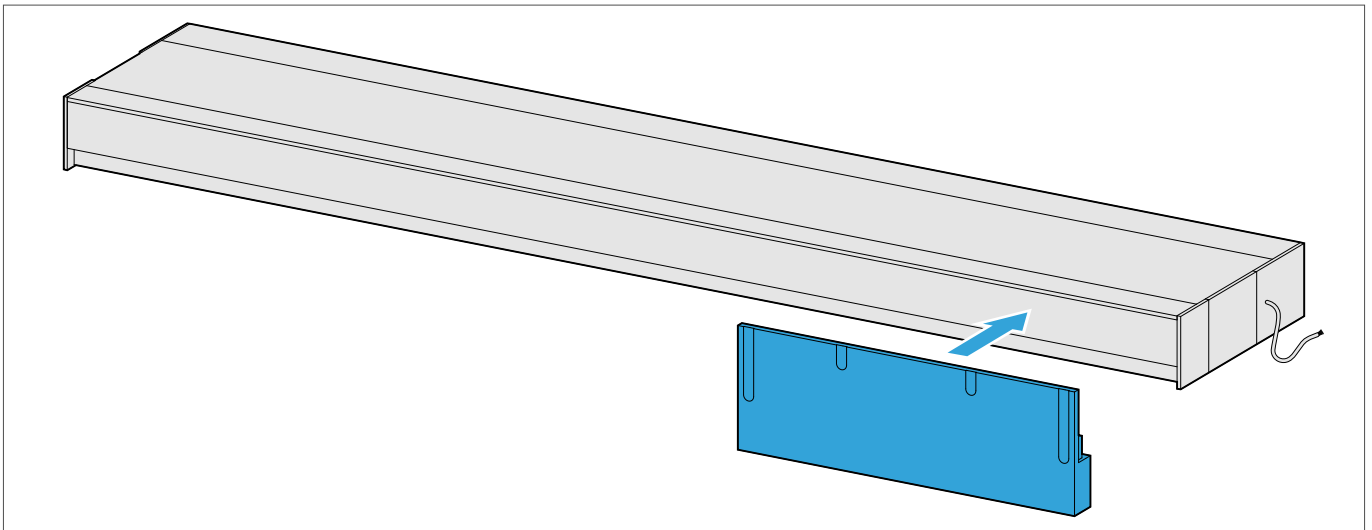
The installation position of the ducts (see page 14) varies according to the device type.



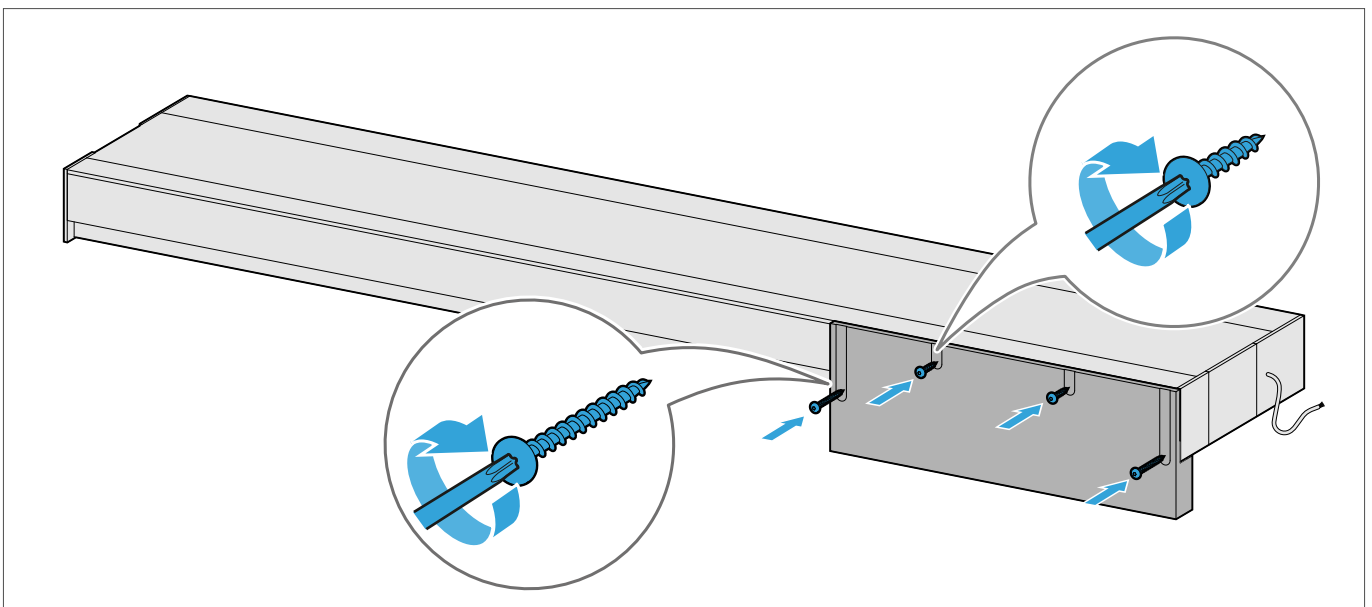
1. Remove the protection foil.



2. Position the vent and lintel duct on the ventilation unit.



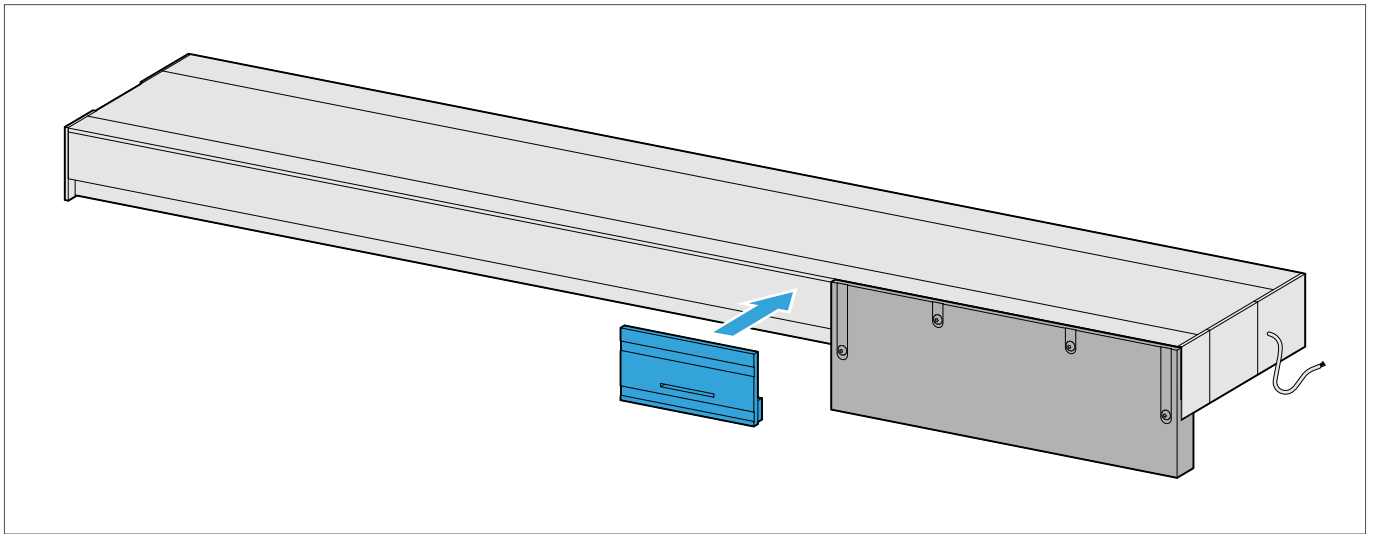
3. Screw the vent and lintel duct in place using 4 screws.



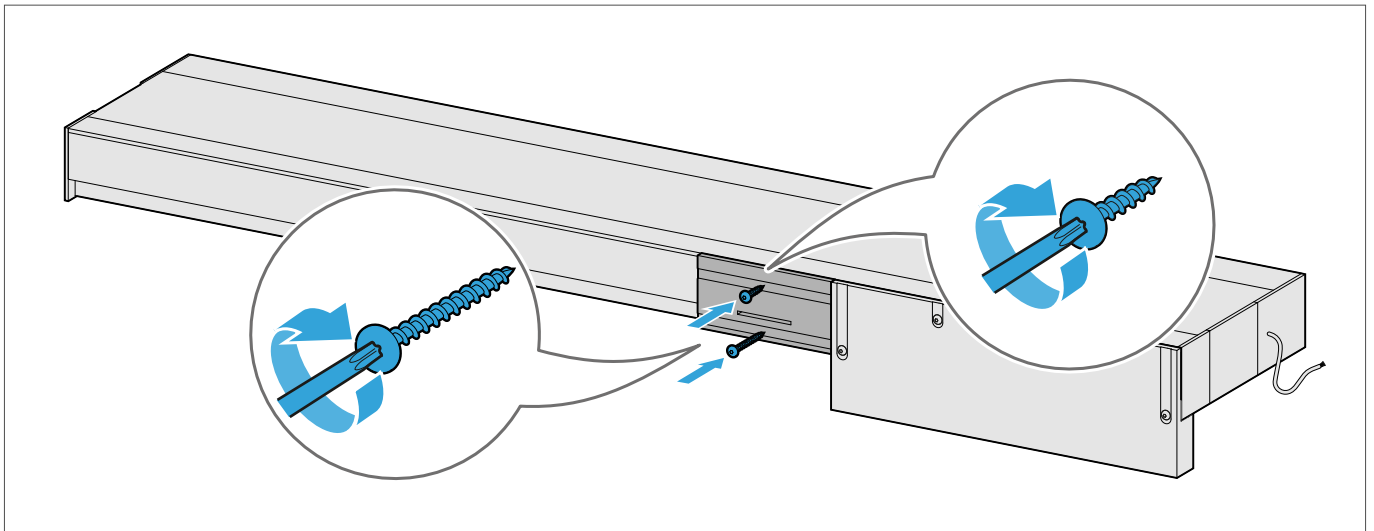
Assembly instructions

AEROMAT VT WRG / AEROMAT VT WRG plus

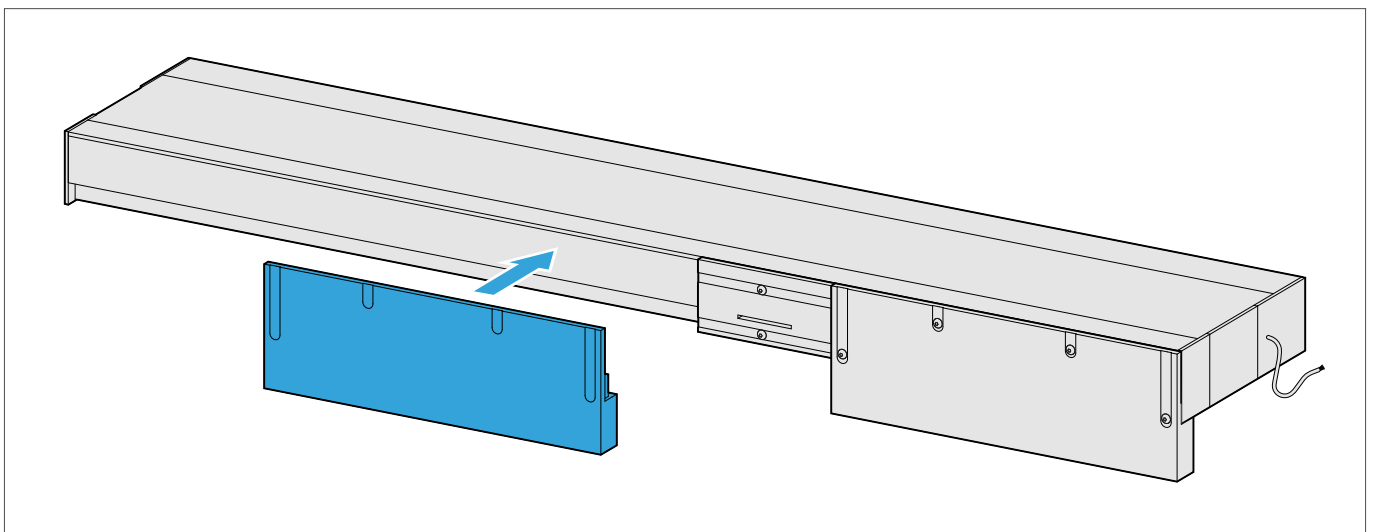
4. Position the compensation piece on the ventilation unit.



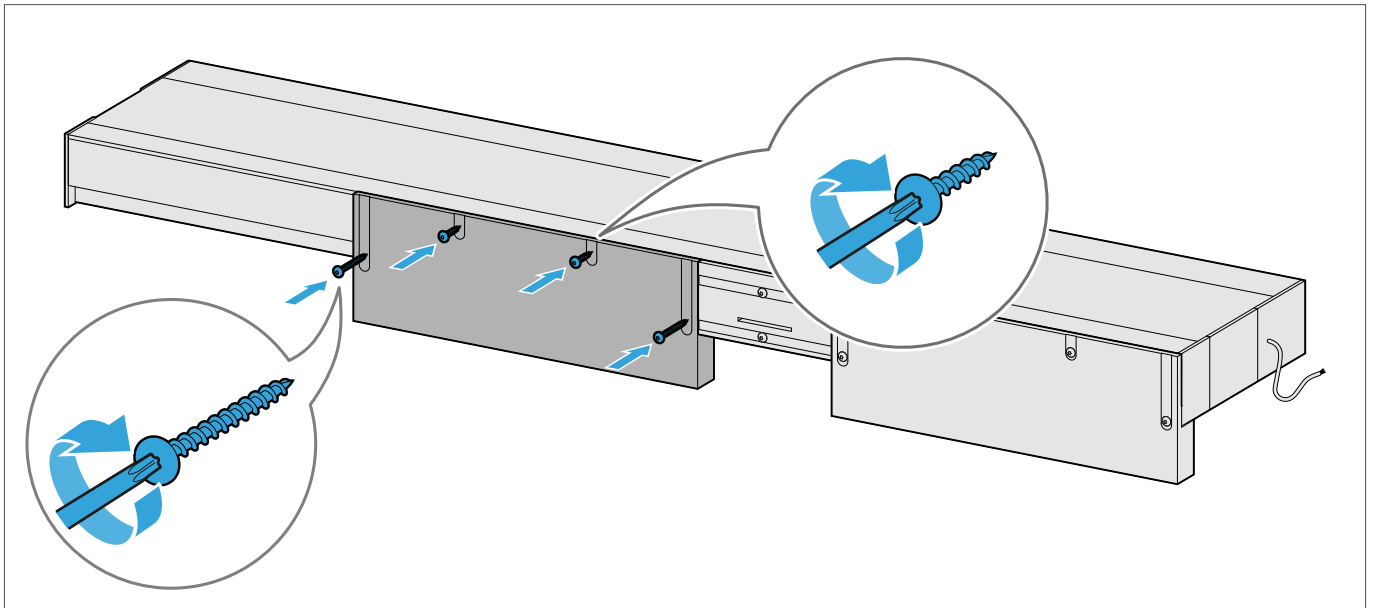
5. Screw the compensation piece in place using 2 screws.



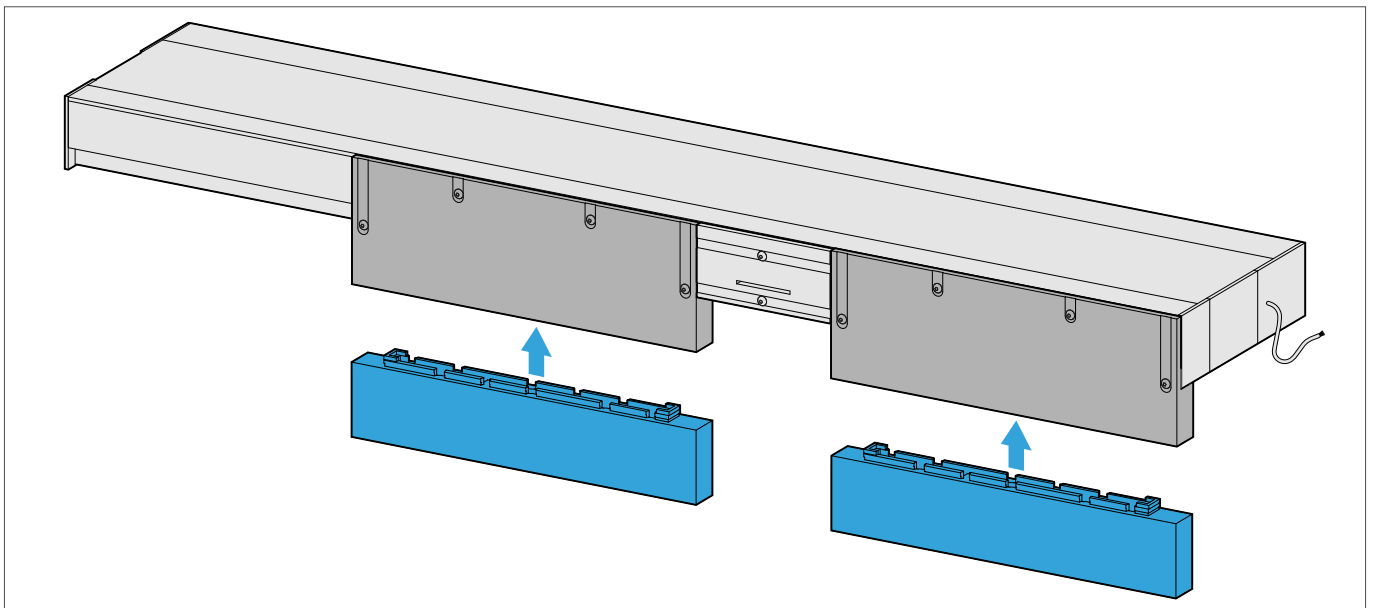
6. Position the second vent and lintel duct on the ventilation unit.



7. Screw the vent and lintel duct in place using 4 screws.



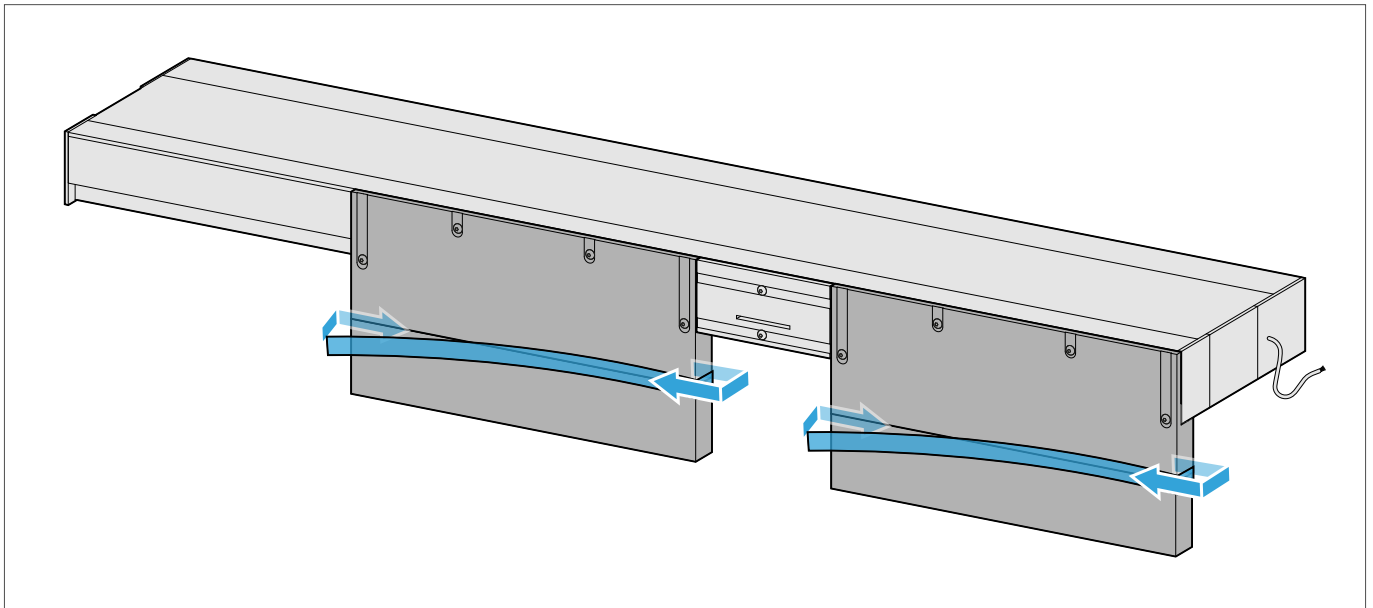
8. Optionally, attach one or more extension ducts to the vent and lintel duct.



Assembly instructions

AEROMAT VT WRG / AEROMAT VT WRG plus

9. Fix the extension ducts to the vent and lintel duct from all sides using adhesive tape.



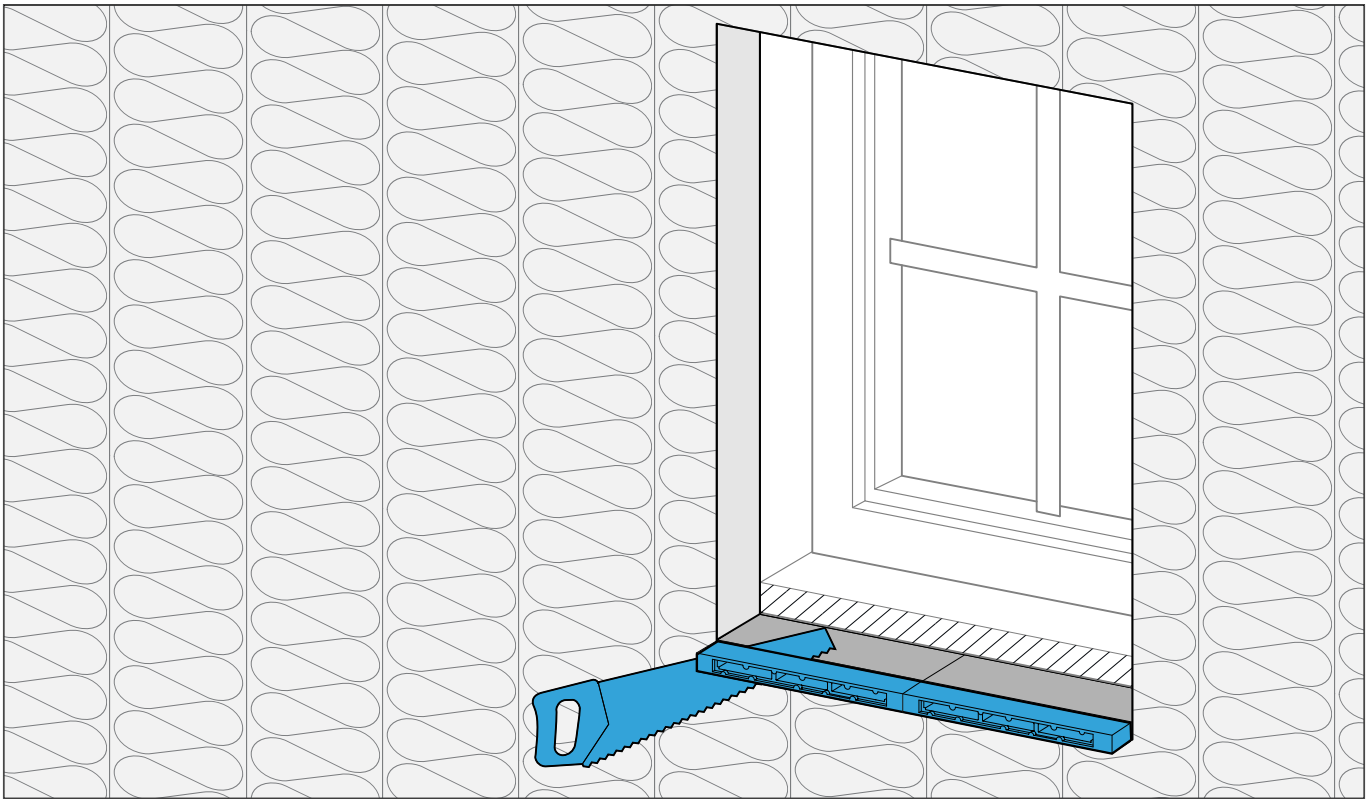
4.4 Installing the outer panels

4.4.1 Installing the outer panel for wall duct EPP

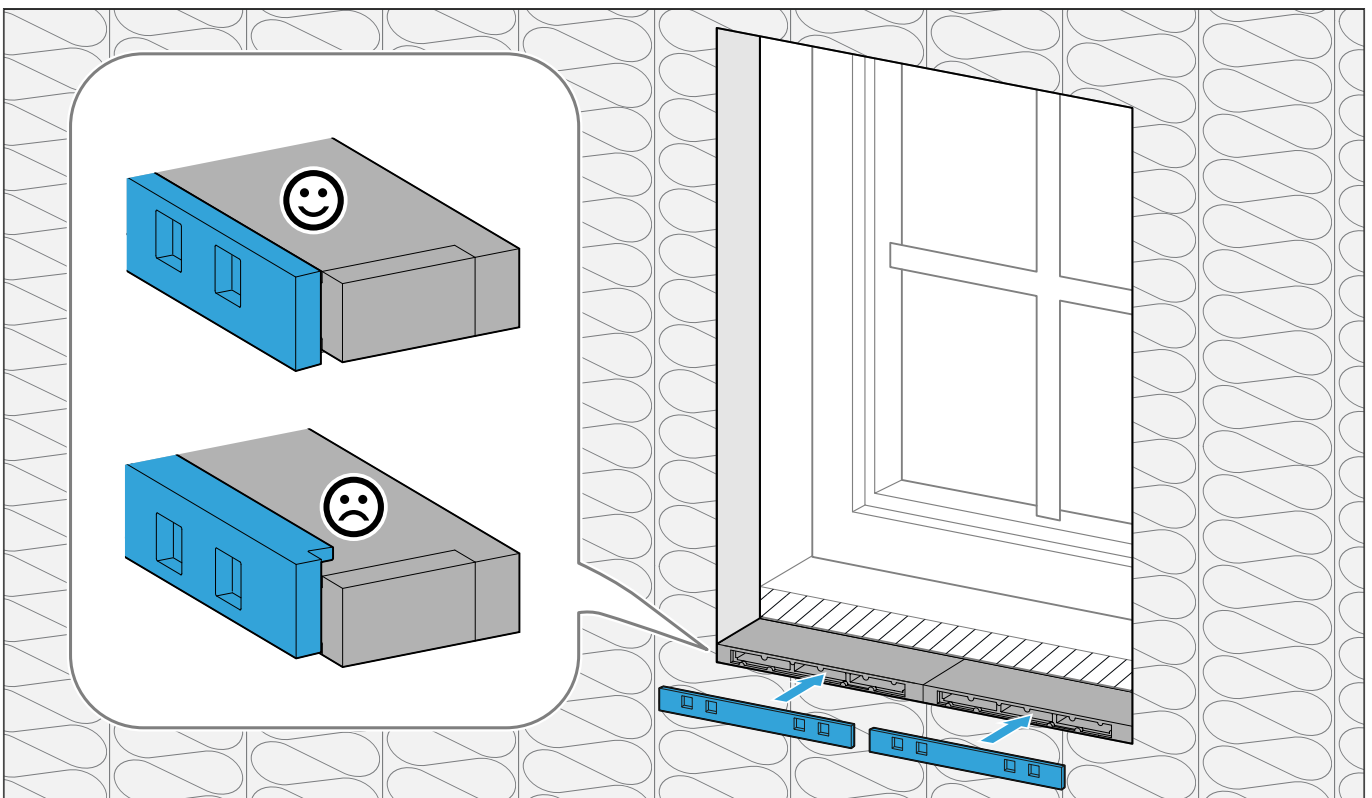
Prerequisites

- AEROMAT VT system with wall duct is installed in the wall.
- The thermal insulation of the outer façade has been applied.

1. Crop each duct if necessary.



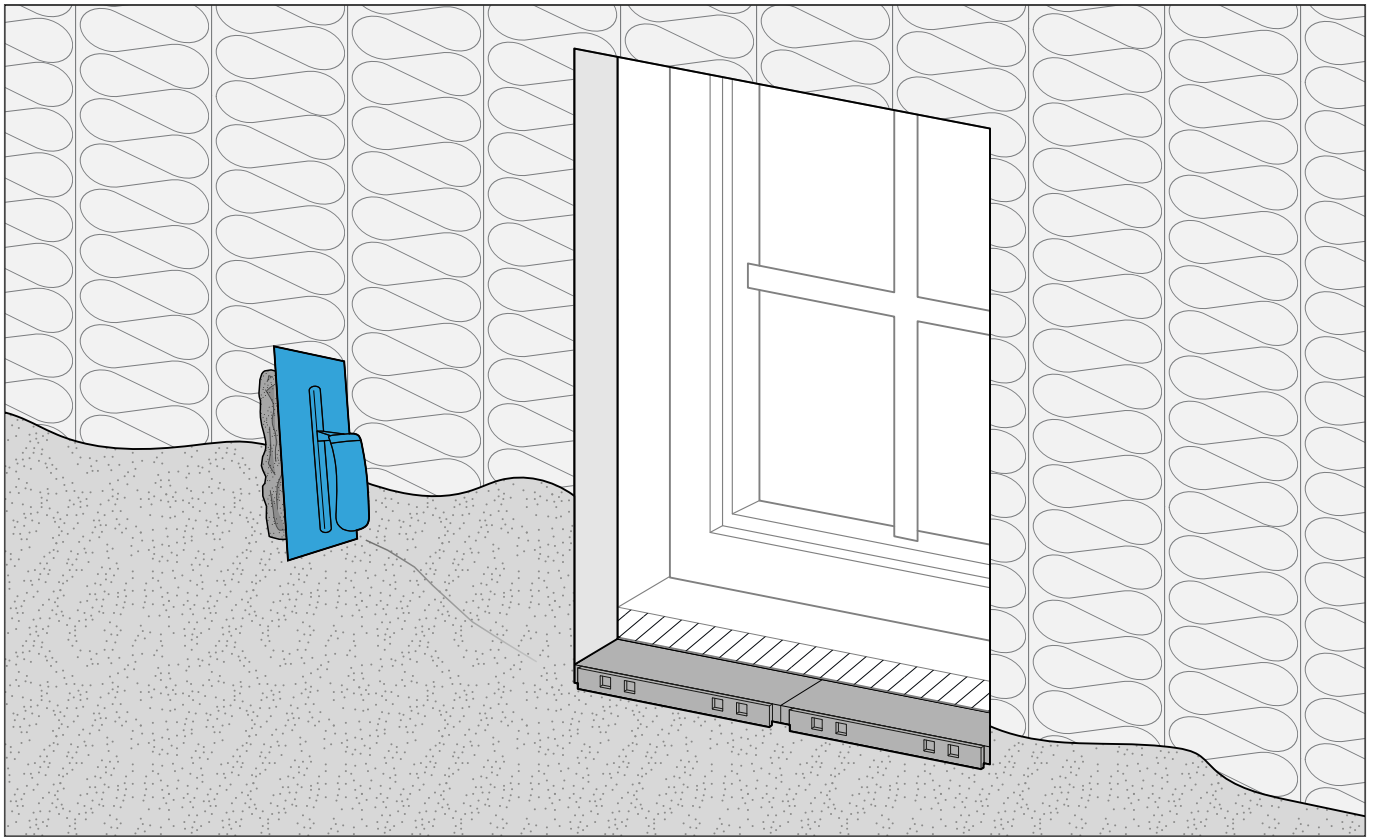
2. Slide a plaster cover onto each wall duct.



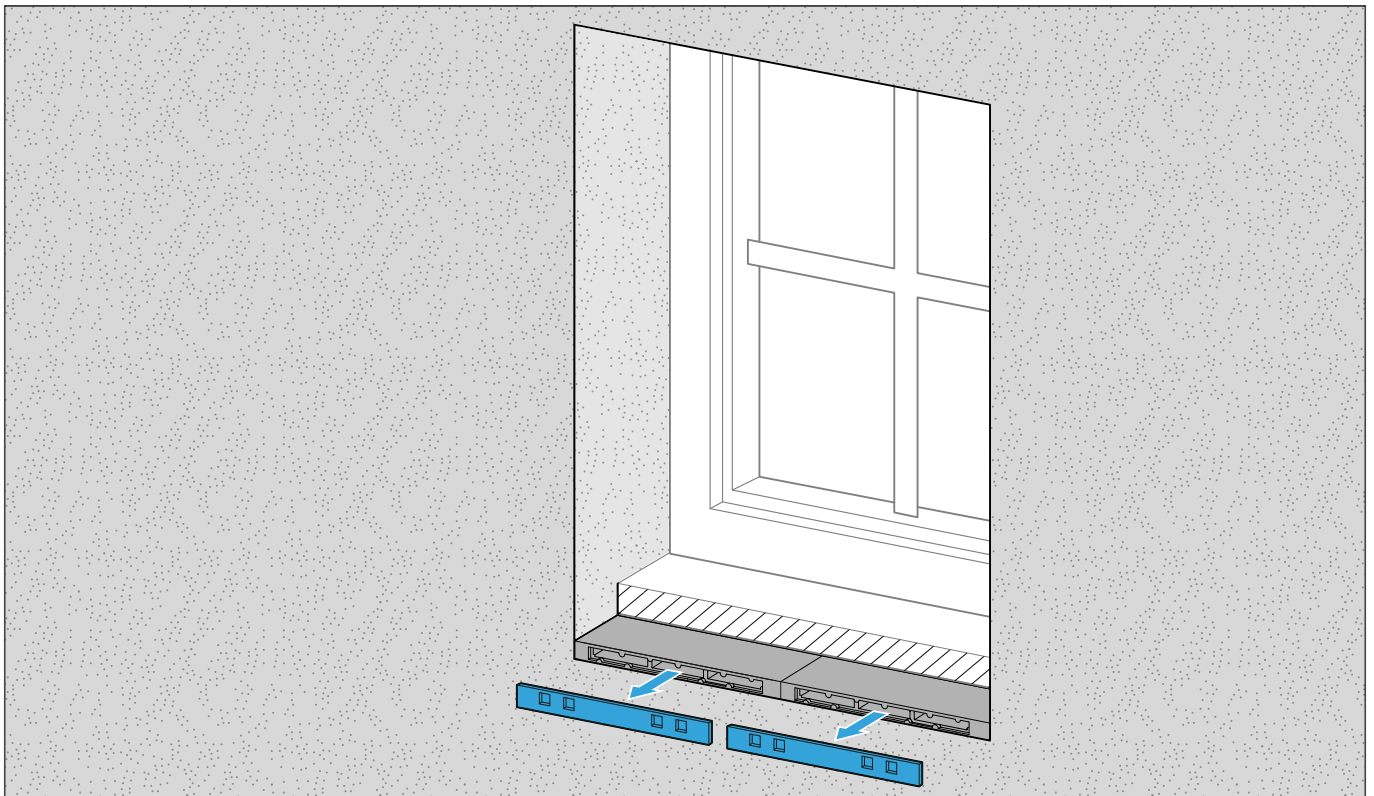
Assembly instructions

AEROMAT VT WRG / AEROMAT VT WRG plus

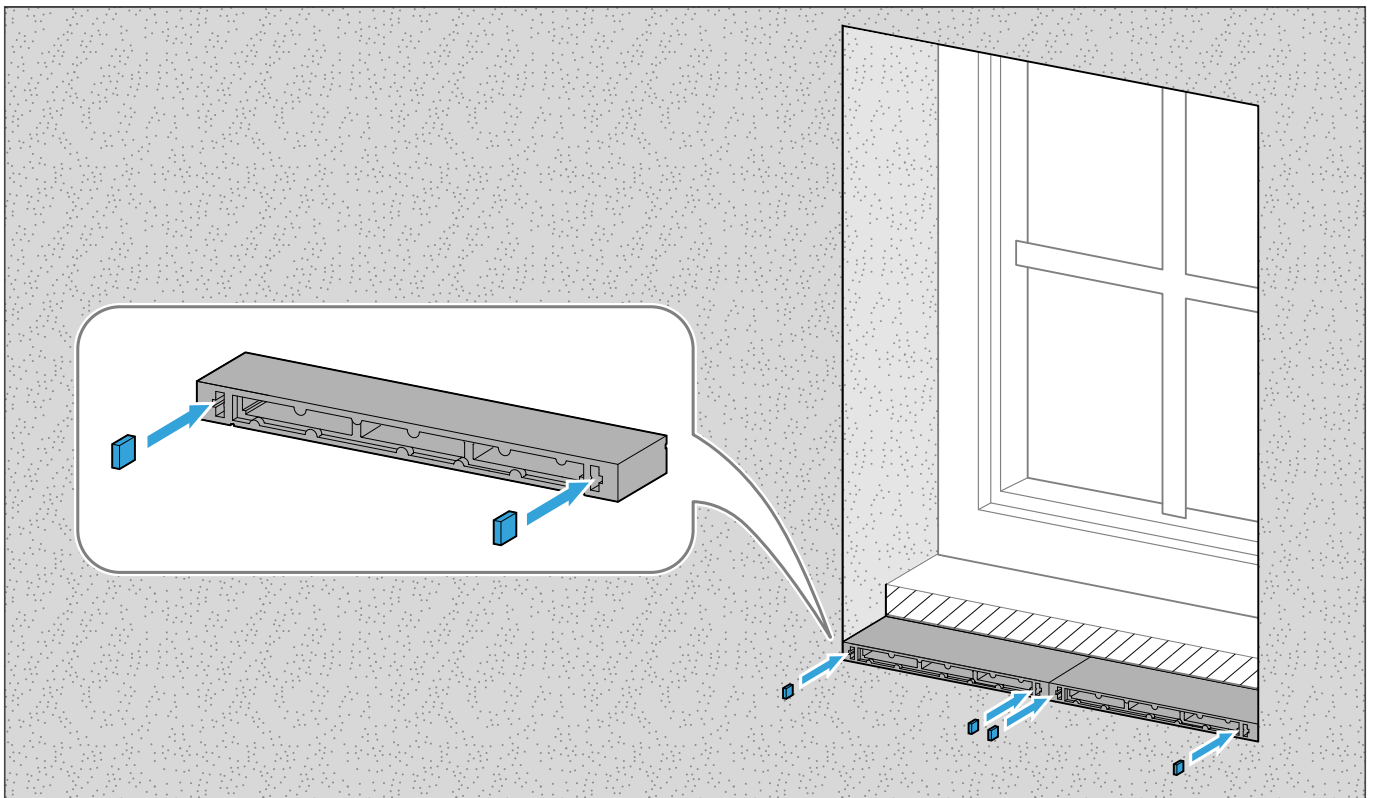
3. Plaster the wall.



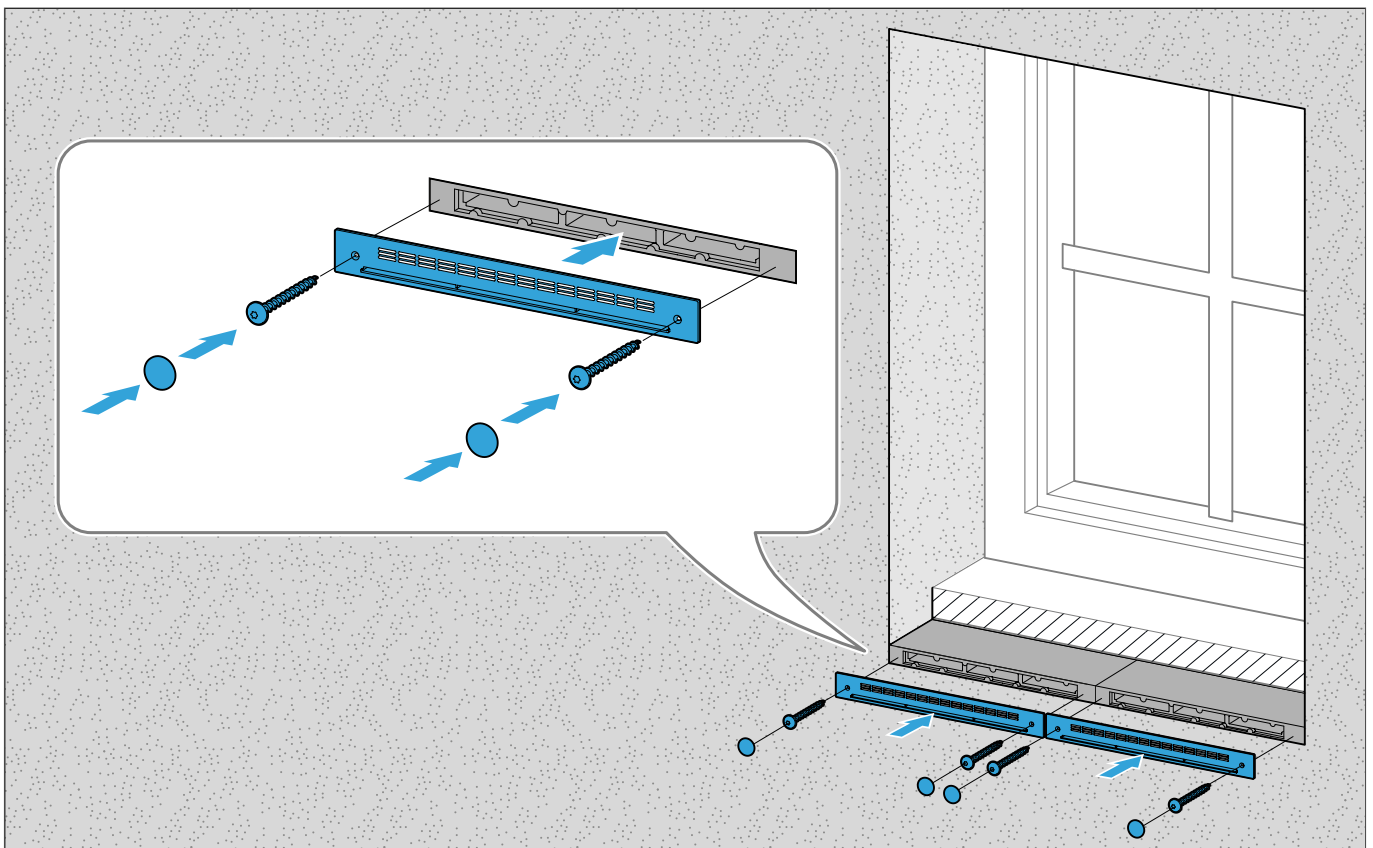
4. Remove plaster covers.



5. If extension ducts are used, slide the blanks into the outer slots of the extension ducts.



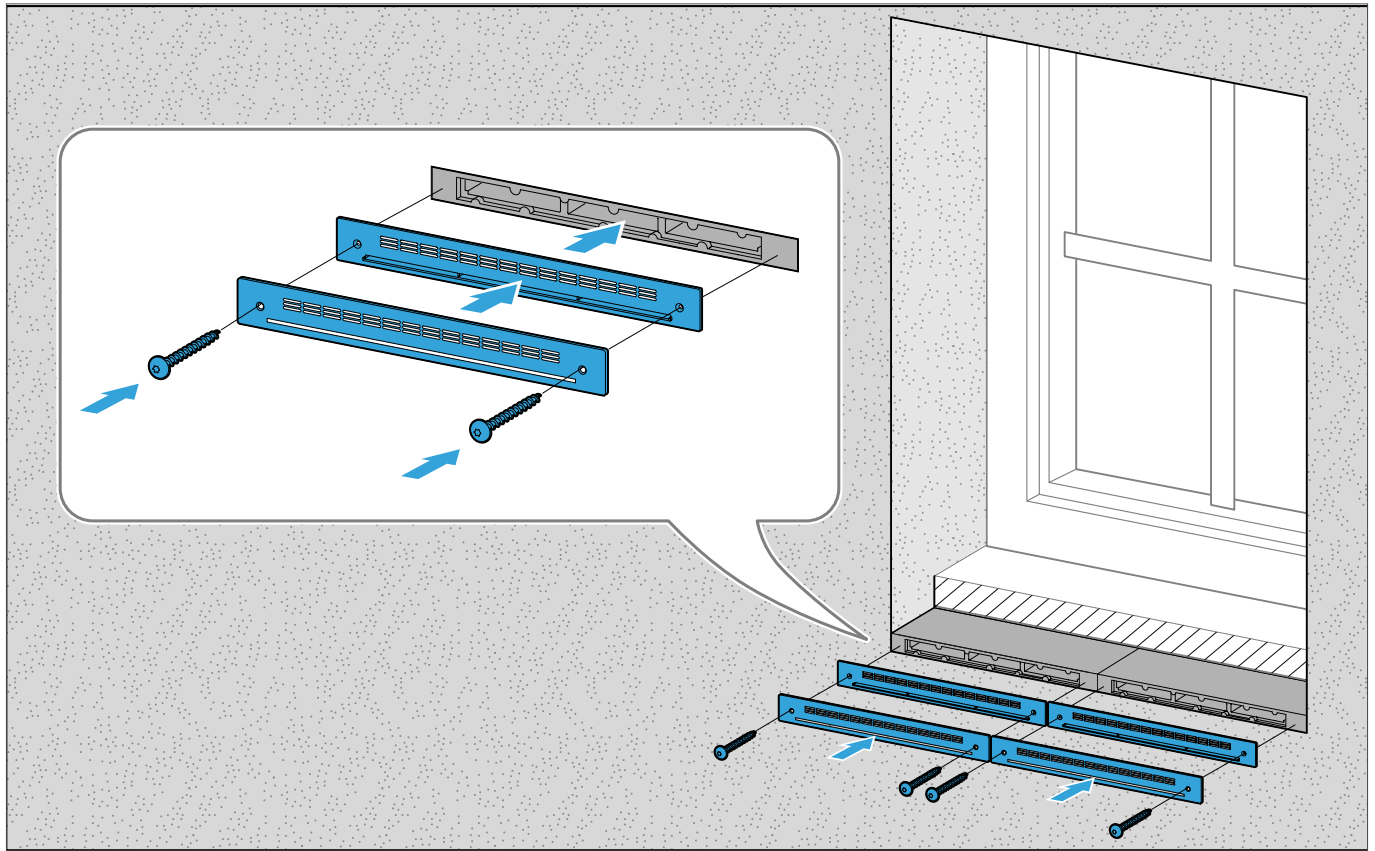
6. Position the PVC outer panel on each wall duct and screw into place with the 3.5 x 35 screws. Cover the screw heads with the protection caps.



Assembly instructions

AEROMAT VT WRG / AEROMAT VT WRG plus

7. If the aluminium outer panel is used, first place the PVC outer panel on each wall duct and then place the aluminium outer panel on each wall duct. Screw both outer panels into place with 4.5 x 40 screws.

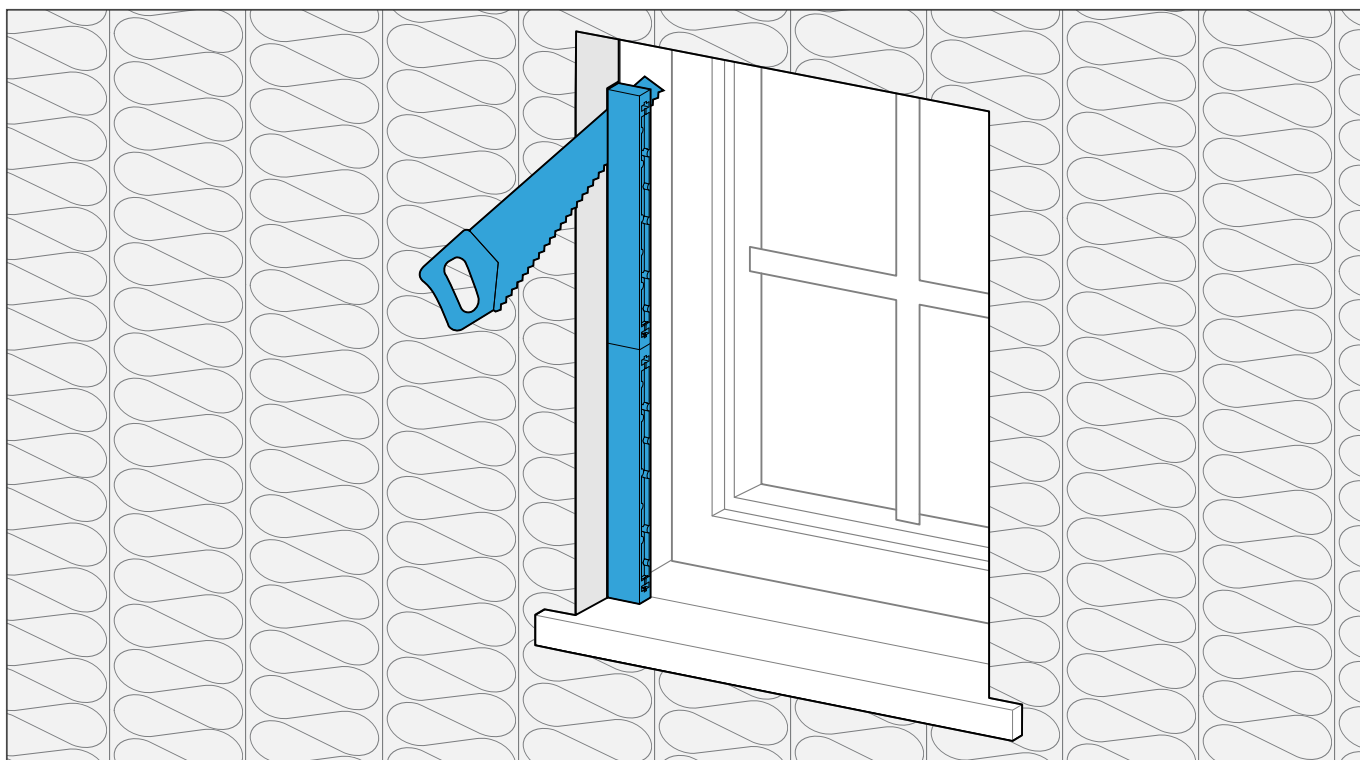


4.4.2 Installing the outer panel for vent and lintel duct EPP

Prerequisites

- AEROMAT VT system with vent and lintel duct EPP is installed in the window reveal.
- The thermal insulation of the outer façade has been applied.

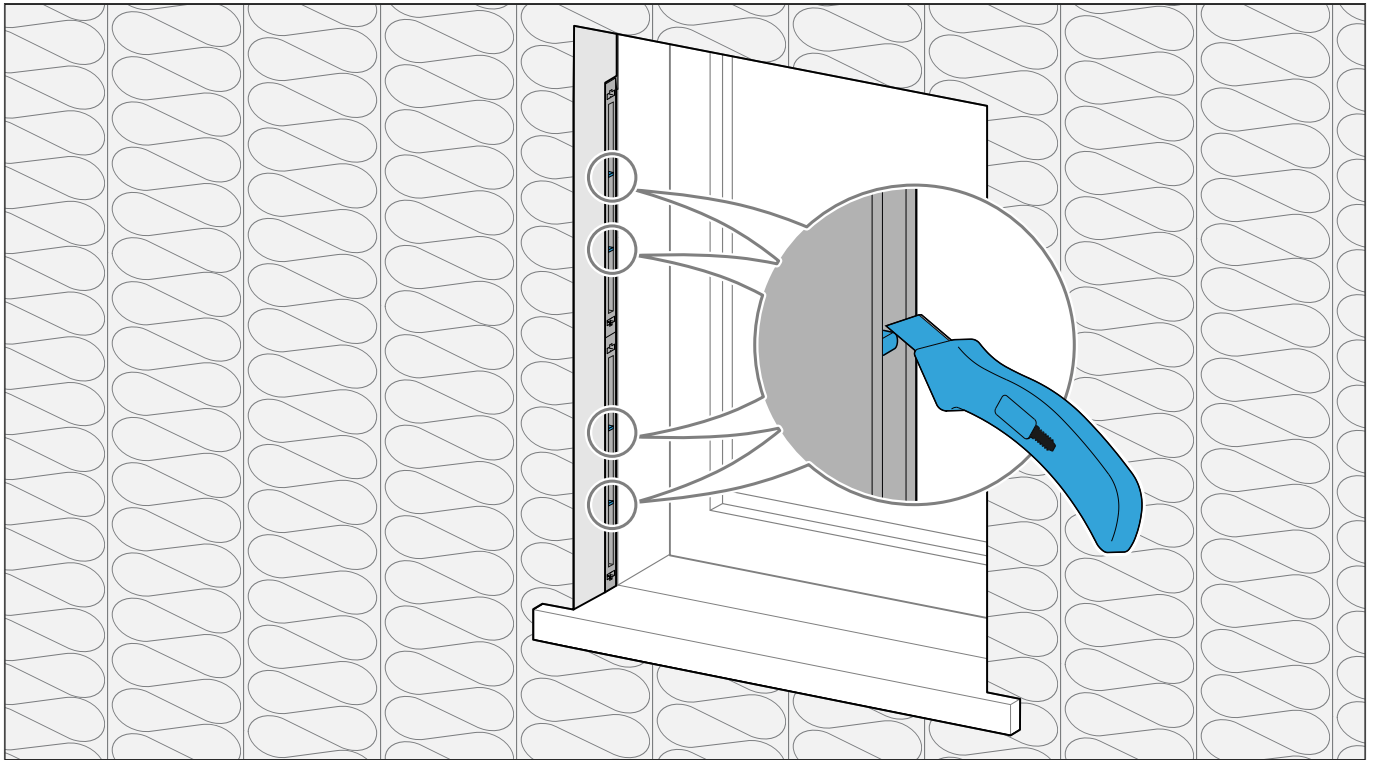
1. Crop each duct if necessary.



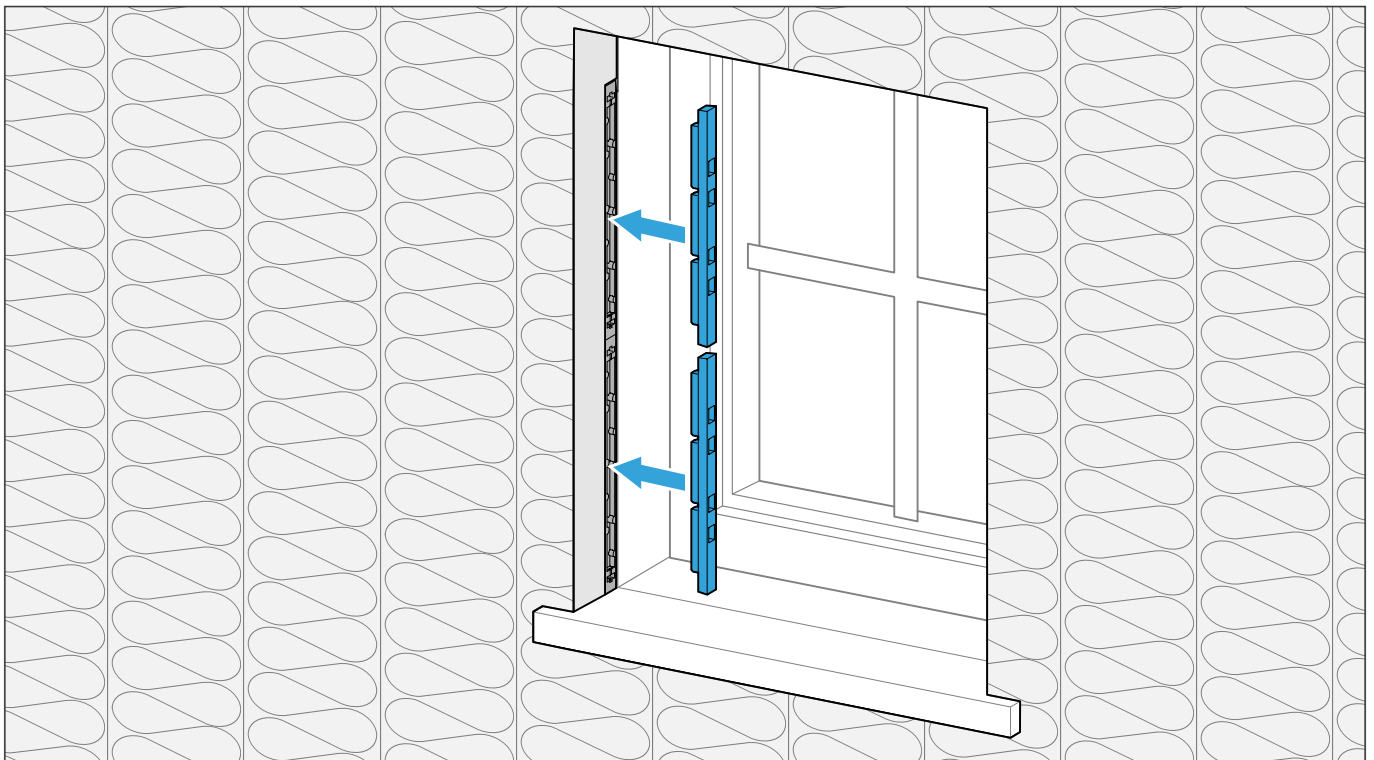
Assembly instructions

AEROMAT VT WRG / AEROMAT VT WRG plus

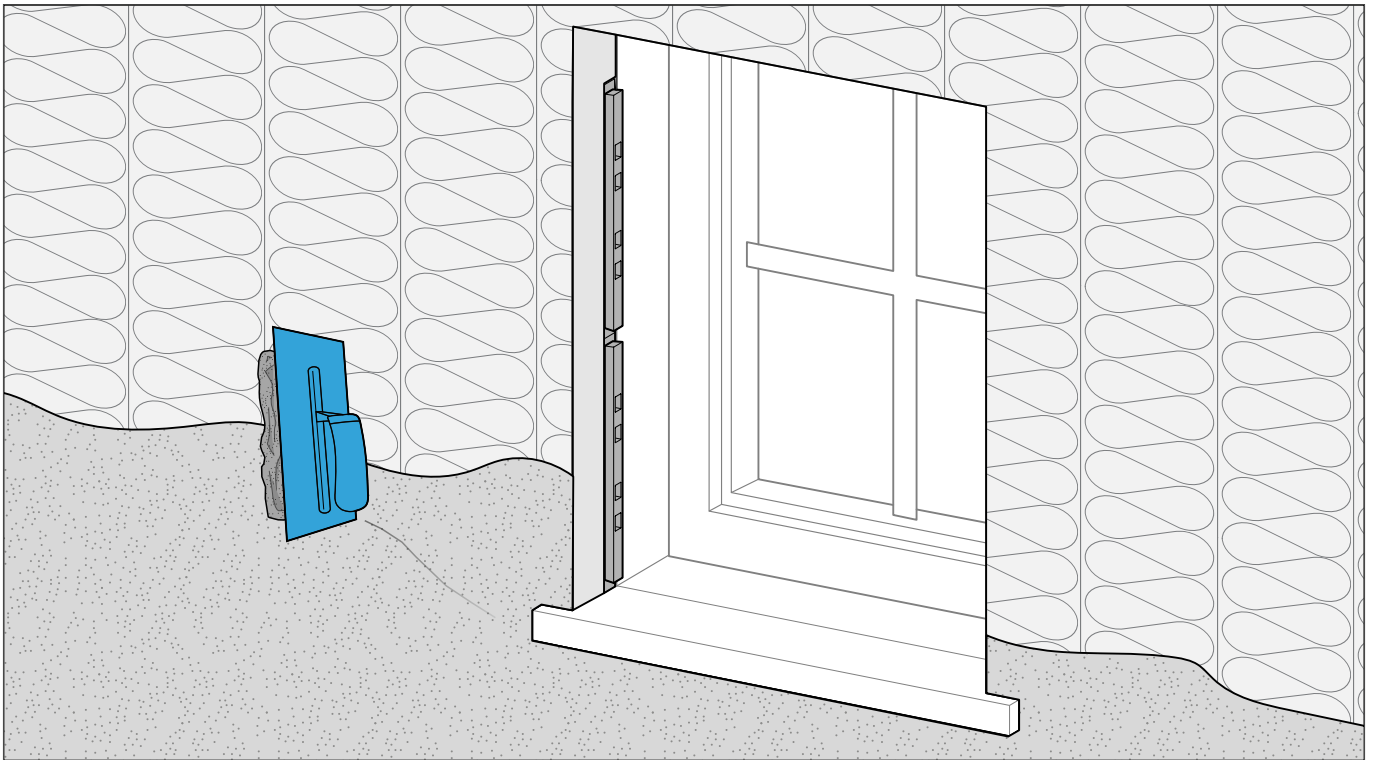
2. Separating bars are located inside the duct. If the duct is trimmed by more than 10 mm, the separating bars may need to be cut using a cutter knife.



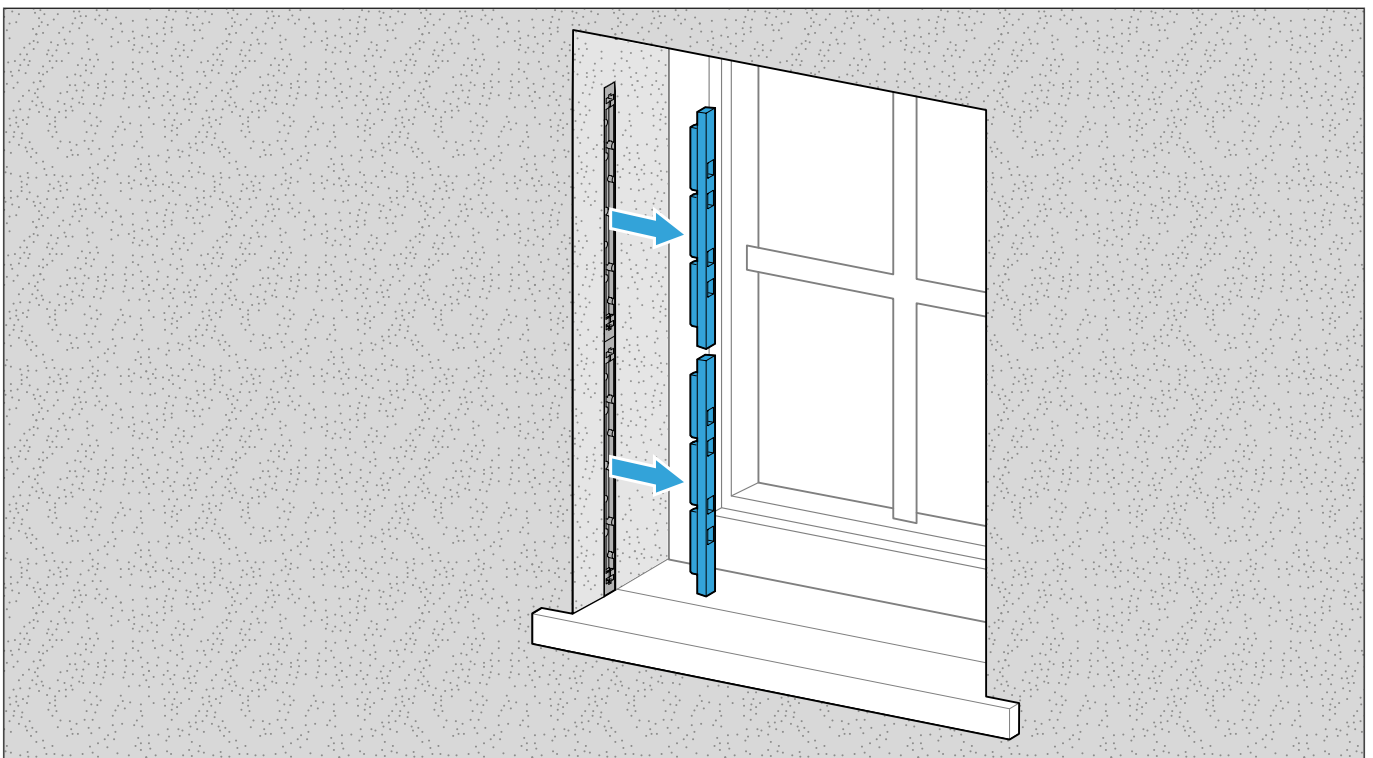
3. Insert a plaster cover on each vent and lintel duct.



4. Plaster the wall.



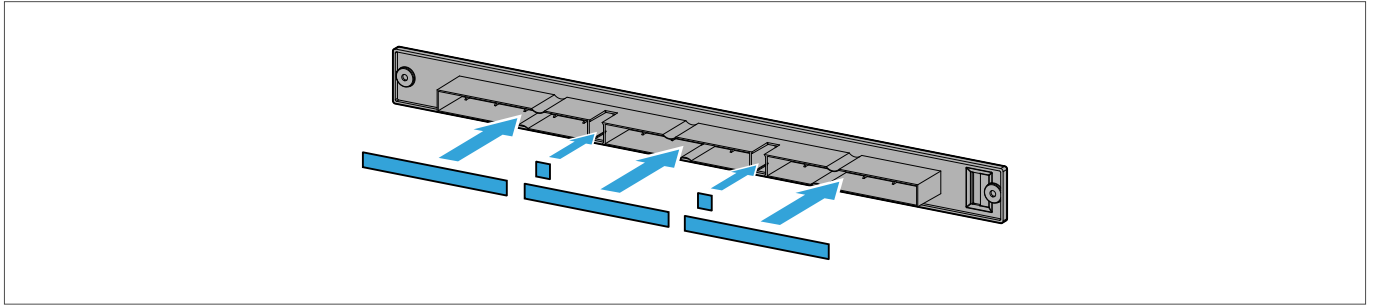
5. Remove plaster covers.



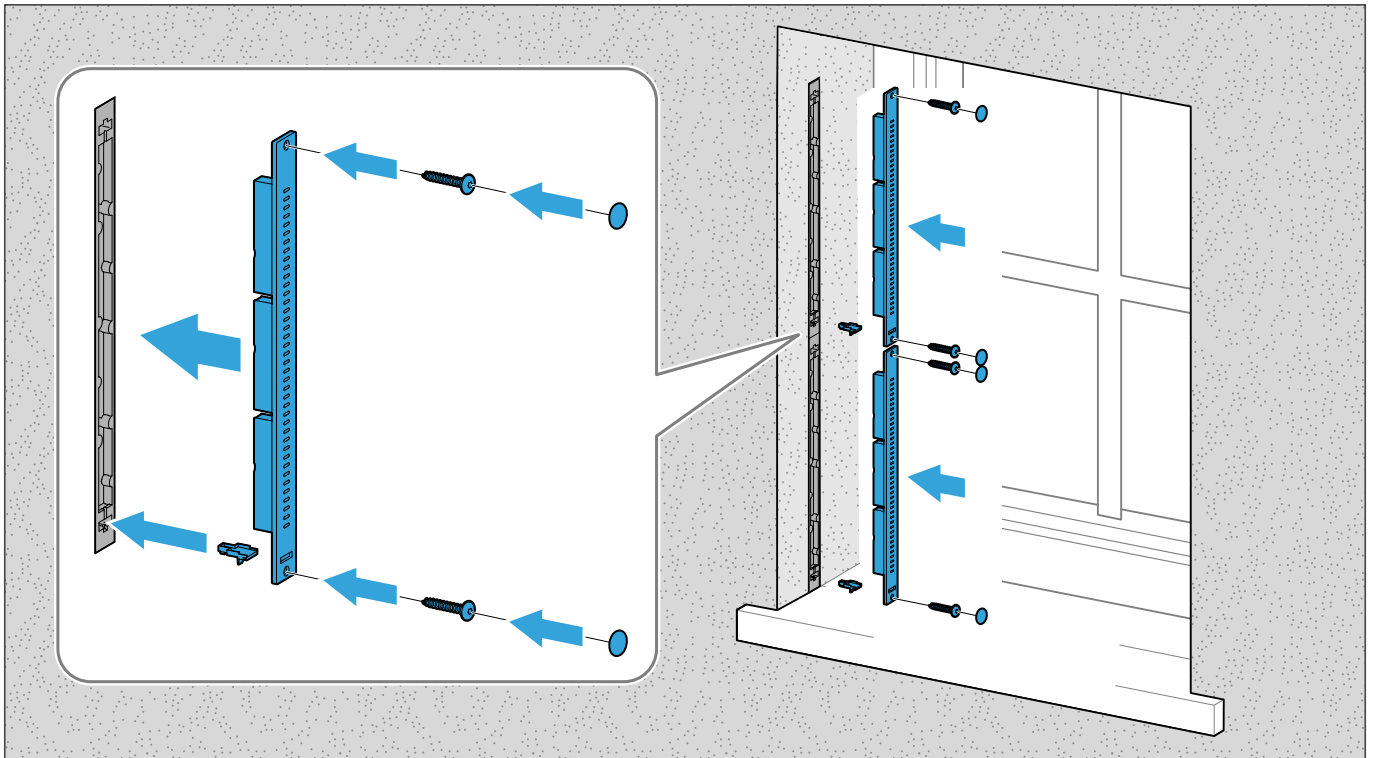
Assembly instructions

AEROMAT VT WRG / AEROMAT VT WRG plus

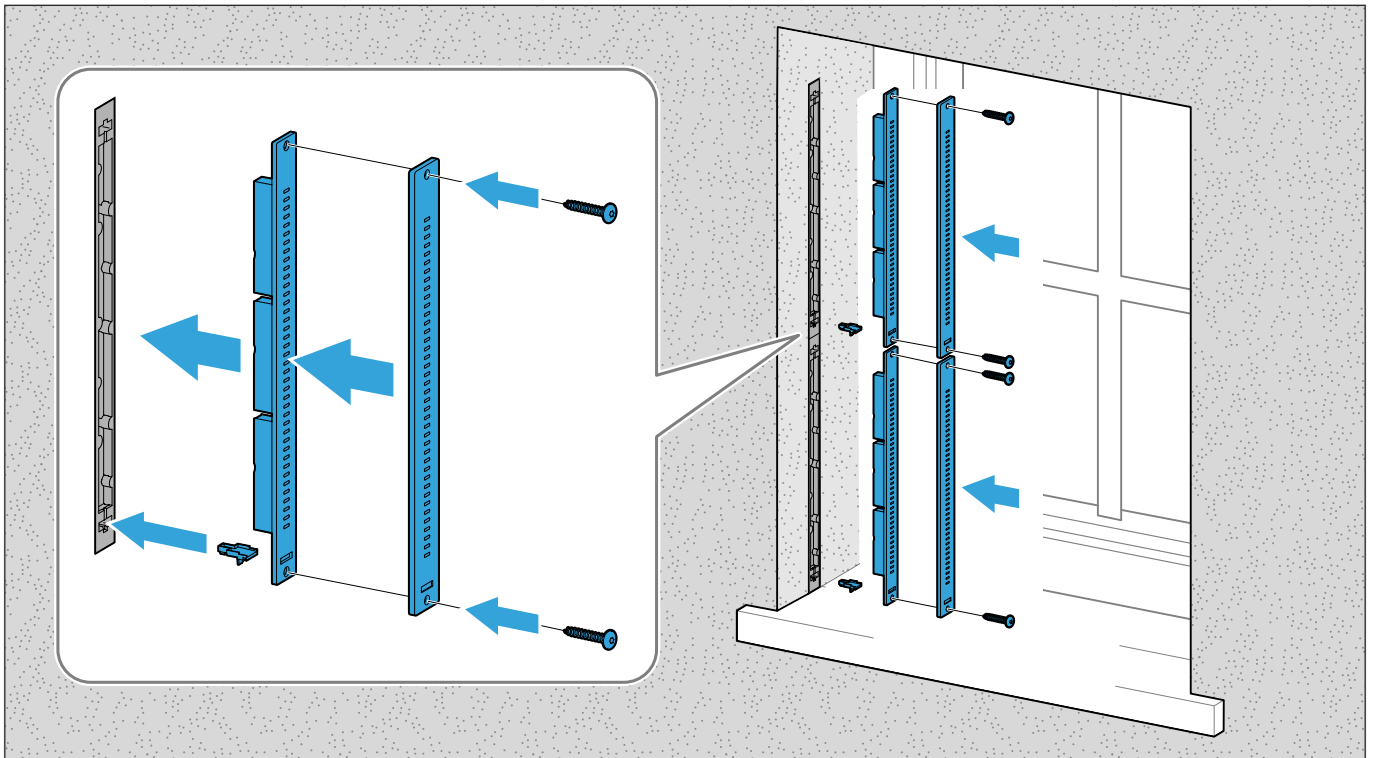
6. Optionally, insert the insect grille into the outer panels.



7. Insert the condensate discharge duct into each vent duct and place the PVC outer panels on top. Screw the outer panels into place with 3.5 x 35 screws and cover the screw heads with the protection caps.



8. If the aluminium outer panel is used, insert the condensate discharge duct into each vent duct and position first the PVC outer panel and then the aluminium outer panel. Screw both outer panels into place with 4.5 x 40 screws.



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