

AERO

AEROPLUS WRG

Wall-mounted ventilator with sound absorption

Window systems

Door systems

Comfort systems

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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 Notice on gender

The linguistic form used serves for easier readability and always means all genders as long as nothing else is explicitly mentioned.

1.5 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

1.6 Applicable information

Note the following applicable information prior to installation.

- Product data sheet in accordance with EU Regulation 1254/2014
<link.si/td/wans011/1223>



- Operating and service instructions AEROPLUS WRG
<link.si/td/wans010/1123>



1.7 Symbols used

1.7.1 Installation situation



Installation from inside



Installation from outside

2 Security

2.1 Intended use

- The product is a ventilation system for ventilating and extracting air from closed rooms.
- The product is suitable for installation in outside walls of fixed buildings.
- The product 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

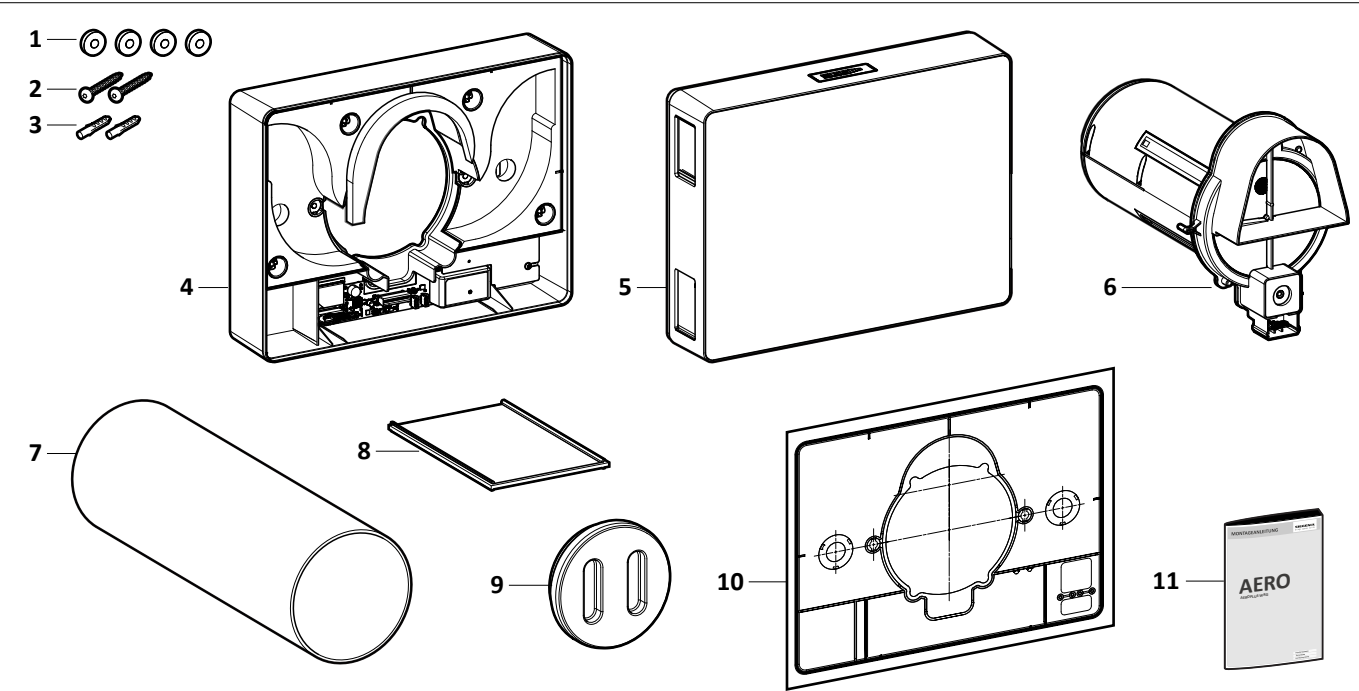
Components, accessories and spare parts which do not comply with SIEGENIA requirements can impair the safety of the product and lead to accidents.

- 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 AEROPLUS WRG / AEROPLUS WRG smart



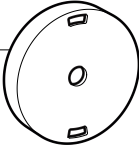
Item	name	Quantity
1	Use of foam	4 (2x reserve)
2	Screw Ø 5x50	2
3	Dowel Ø 8	2
4	Wall module	1
5	Housing module	1
6	Pipe module	1
7	Ventilation pipe	1
8	Divider	1
9	Mounting cover	1
10	Drilling template	1
11	Assembly instructions	1

3.1.2 Required components

Required components - external components

The listed components are required to establish the function.

Electively, the following variants are appropriate for the external components:

variant 1: PVC weather grille		
1  2 		
Item	name	Quantity
1	PVC weather grille	1
2	Plaster cover for weather grille	1

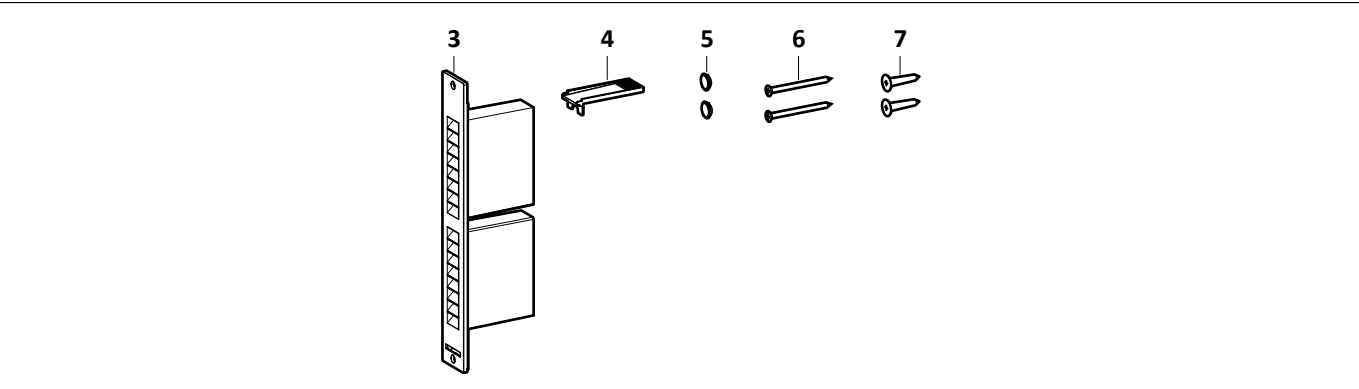
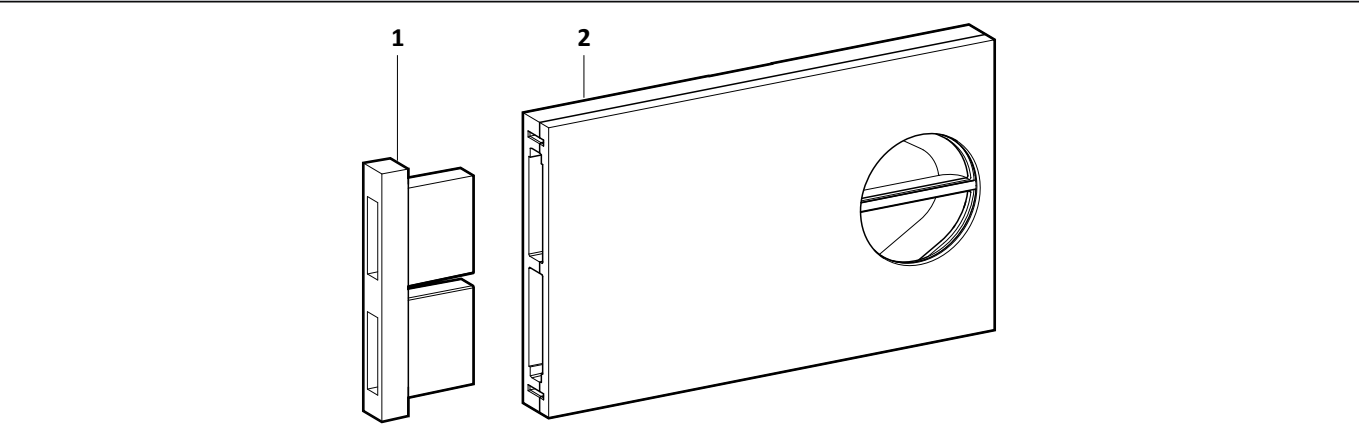
variant 2: stainless steel weather grille hood

The diagram illustrates the assembly of a stainless steel weather grille hood. It includes the following components:

- 1**: Four screws (Ø 4x50) for mounting the wall fixing.
- 2**: Four dowels (Ø 6) for securing the plaster cover.
- 3**: Two screws (M3x4) for attaching the stainless steel hood to the wall fixing.
- 4**: The wall fixing bracket, which features a central circular cutout and mounting tabs.
- 5**: The plaster cover, a circular disc with a central hole and a notched edge.
- 6**: The stainless steel weather grille hood, a rectangular plate with a mounting tab on one side.

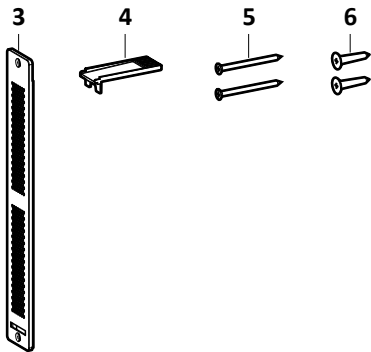
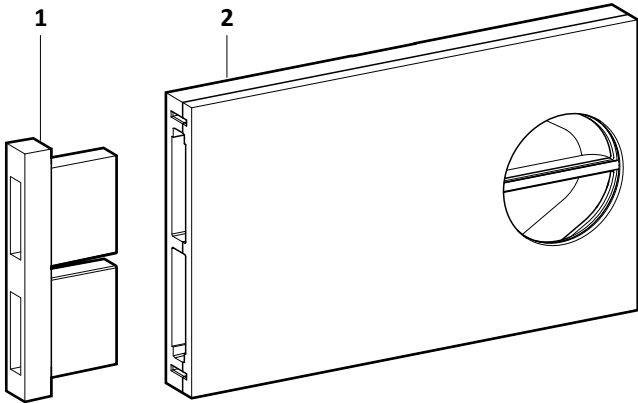
Item	name	Quantity
1	Screw Ø 4x50	4
2	Dowel Ø 6	4
3	Screw M3x4	2
4	Wall fixing for weather grille hood	1
5	Plaster cover for weather grille hood	1
6	Stainless steel weather grille hood	1

variant 3: vent duct EPP with PVC outer panel



Item	name	Quantity
1	Vent duct EPP type FL for AEROPLUS WRG	1
2	Plaster cover for vent duct	1
3	PVC outer panel	1
4	Drainage duct	1
5	Cover cap	2
6	Screw Ø 4.5x60	2
7	Dowel Ø 6.5	2

variant 4: vent duct EPP with aluminium outer panel



Item	name	Quantity
1	Vent duct EPP type FL for AEROPLUS WRG	1
2	Plaster cover for vent duct	1
3	Aluminium outer panel	1
4	Drainage duct	1
5	Screw Ø 4.5x60	2
6	Dowel Ø 6.5	2

Required components - supply air filter

The listed components are required to establish the function.

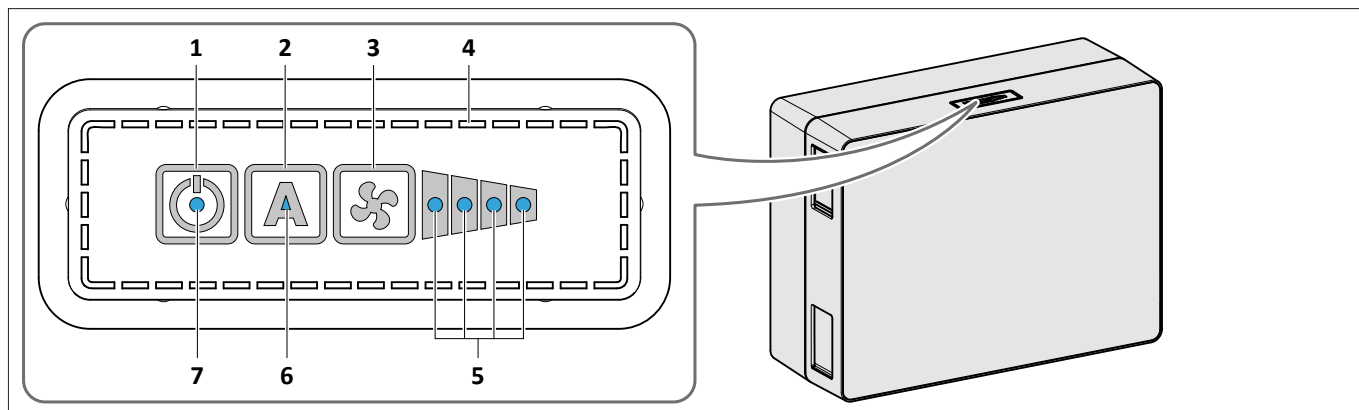
Electively, the following variants are available for the supply air filter:

variant 1: supply air filter ISO Coarse 45%

variant 2: supply air filter ISO ePM1 50%

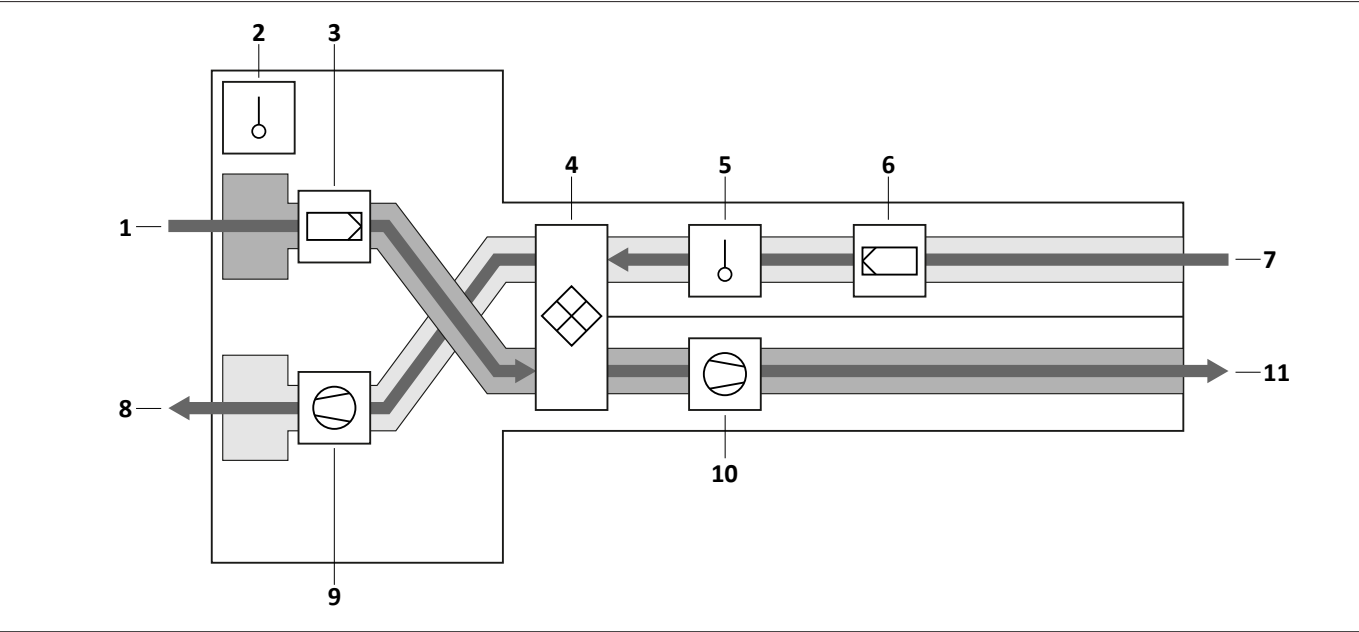
variant 3: supply air filter NOx


3.2 Touch control



Item	name	Purpose
1	ON/OFF button	- Switches the device on and off. - Prolonged pressings switches the heat recovery on or off. - Generates a beep tone when the heat recovery is switched on or off.
2	AUTO button	- Switches automatic mode on and off. - Prolonged pressing opens the menu navigation.
3	Blower level button	Toggles through the blower levels.
4	Opening slot	Enable a permanente circulation of the sensors with indoor air so that the indoor air conditions can be correctly recorded.
5	Blower level LEDs	- Light up blue depending on which blower level is activated. - The outside LH LED flashes blue when the condensate and frost protection control is active.
6	AUTO LED	- Lights up blue when automatic mode is switched on. - Flashes blue when the filter needs replacing.
7	Status LED	- Lights up blue briefly when the device is switched on. - Lights up permanently when the heat recovery is activated. - Light up white when the heat recovery is deactivated. - 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.
-	Buzzer	Produces a beeping sound during operation and when there is an error message.

3.3 Operation

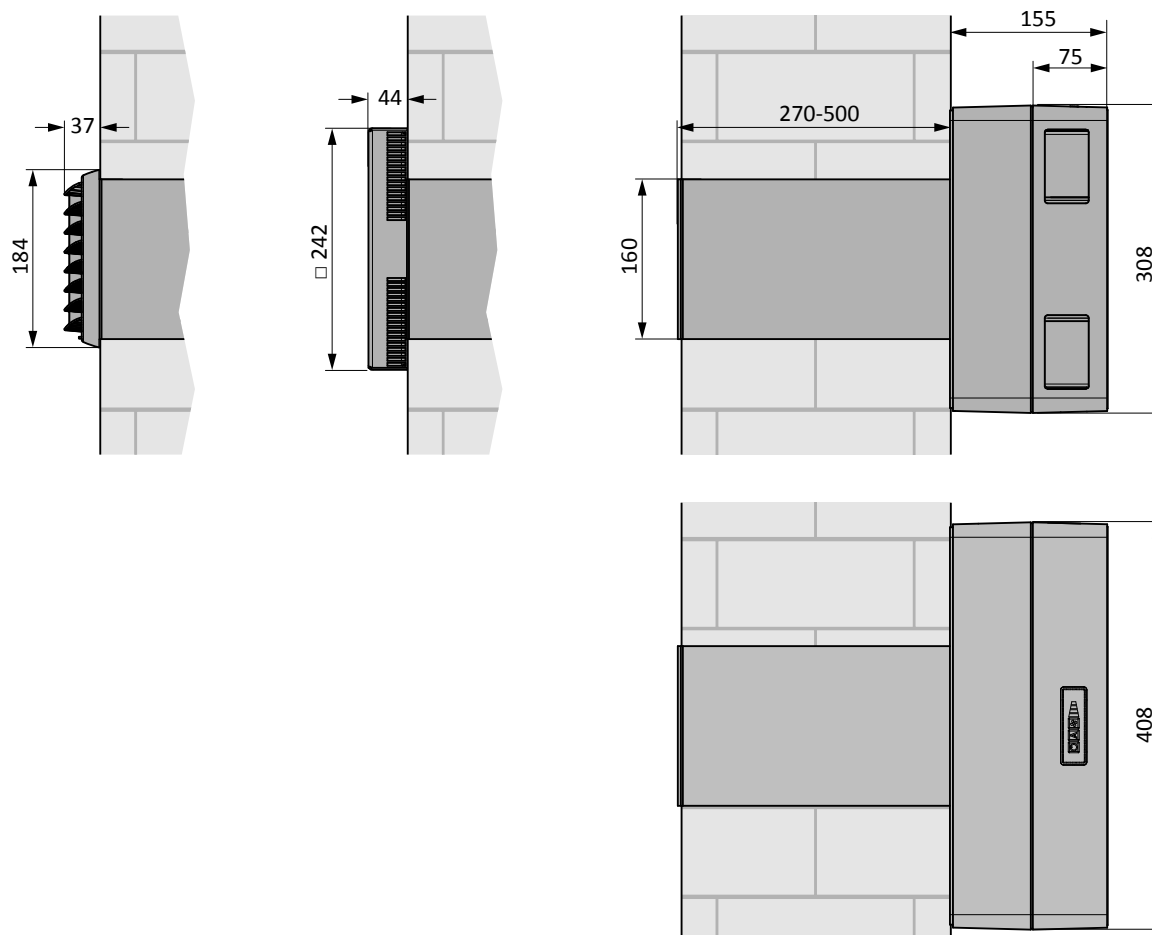


Item	name
1	Exhaust air
2	Sensor
3	Filters
4	Rotation heat exchanger
5	Sensor
6	Filters
7	Outside air
8	Supply air
9	blower
10	blower
11	Exhaust air

AEROPLUS WRG is a bidirectional ventilation unit (including heat recovery) for ventilation of closed rooms. The exchange of air is accomplished using supply air fans and exhaust air blowers with heat recovery.

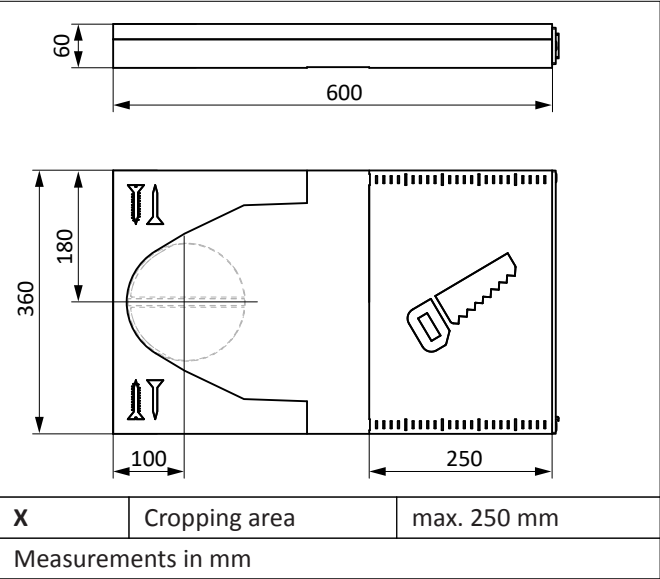
3.4 Dimensions

3.4.1 Dimensions of AEROPLUS WRG and weather grippe variants

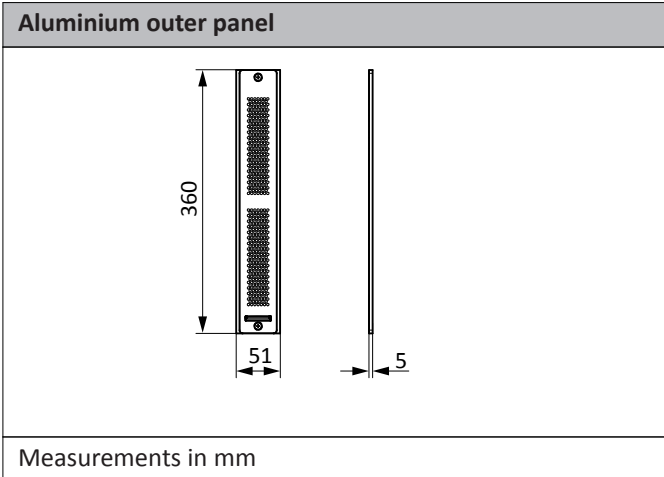
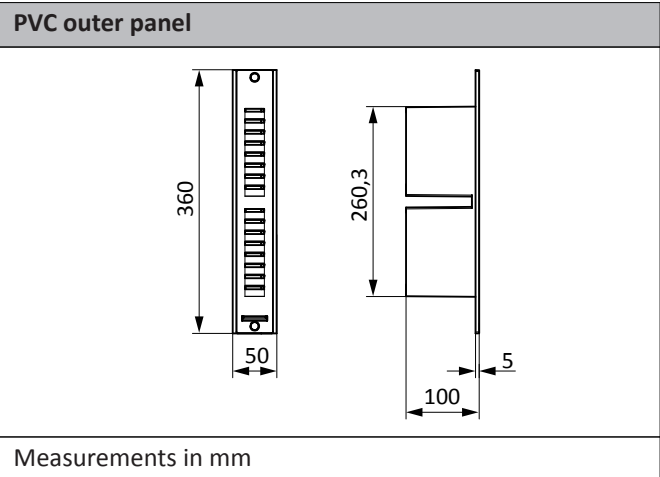


Measurements in mm

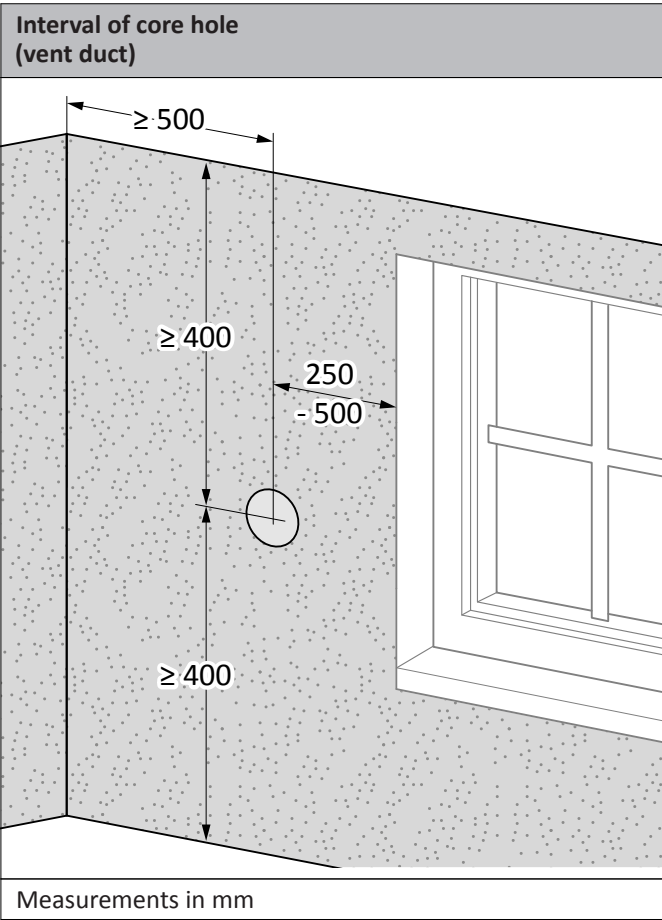
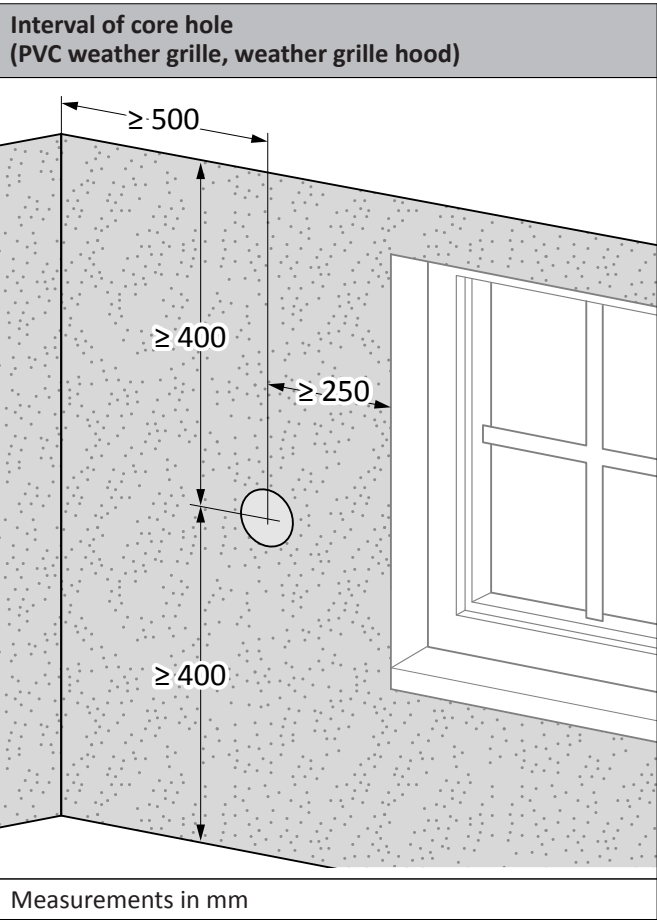
3.4.2 Dimensions of vent duct

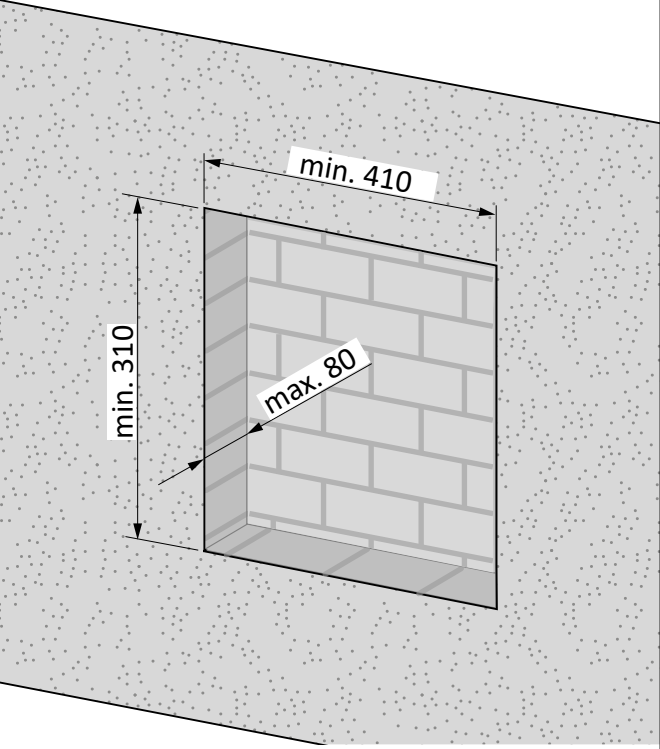


3.4.3 Dimensions of outer panels for vent duct



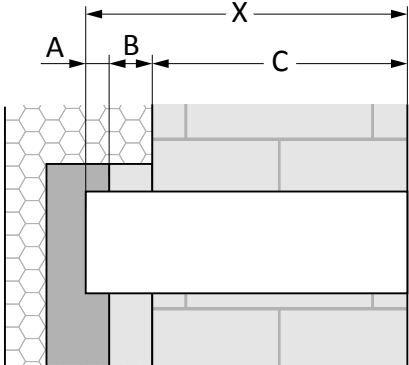
3.5 Processing dimensions



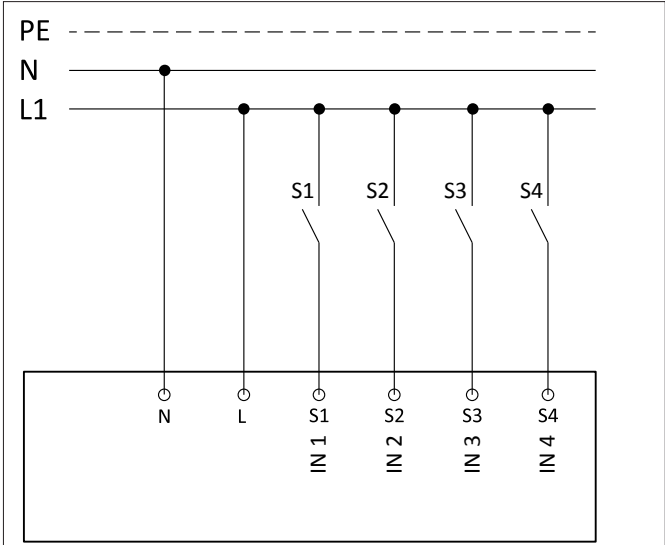
Wall recess for partially recessed installation

Measurements in mm

Wall thickness for weather grille and weather grille hood

Measurements in mm

Insertion dimensions of ventilation pipe for vent duct		
		
A	insertion depth of ventilation pipe in vent duct	15 mm
B	Back-up insulation of vent duct (combine insulation plates according to required thermal insulation)	
C	wall thickness incl. plaster	
X	Length of ventilation pipe	Insertion depth A + back-up insulation B + wall thickness C
Measurements in mm		

3.6 Electrical connection



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		•	•	
Bathroom control				•
Night ventilation			•	•

3.7 Technical specifications

		AEROPLUS WRG	AEROPLUS WRG smart
Power consumption	Blower level 1	5 W	6 W
	Blower level 2	6 W	7 W
	Blower level 3	7 W	8 W
	Blower level 4	10 W	11 W
	Blower level 5	15 W	17 W
Supply voltage		230 V AC	230 V AC
Supply frequency		50 Hz	50 Hz
Operating voltage		24 V DC	24 V DC
Protection class		II	II
Weight		5.6 kg	5.6 kg
Permissible operating temperature		−15 – +40°C	−15 – +40°C
Length of connecting cable		5 m	5 m

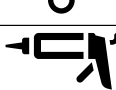
4 Assembly

4.1 Preparing for installation

1. Remove the product carefully from its packaging and place it on a soft surface (e.g. cardboard or a blanket).
2. Check the product for cleanliness prior to installation. Clean it thoroughly if necessary.

4.2 Tooling and work equipment

Tooling		Intended use
	Drill	
	Core hole drill Ø 178 -182 mm	for PVC weather grille
	Core hole drill Ø 164 - 182 mm	for weather grille hood and vent duct
	Hacksaw	
	Cutter	
	Drill Ø 6 mm	
	Drill Ø 8 mm	
	Spirit level	
	Folding rule	
	Screwdriver	
	Pointed pliers	

Work equipment		Intended use
	Installation foam	Install and seal the product RAL conformant and in accordance with state-of-the-art technology.
	Permanently elastic sealing material	• inside: diffusion-proof, outside: open to diffusion • Install and seal the product RAL conformant and in accordance with state-of-the-art technology.
	Dowels	According to wall structure, replace enclosed dowels with suitable fixing material on site.

4.3 Installation of ventilation pipe and PVC weather grille

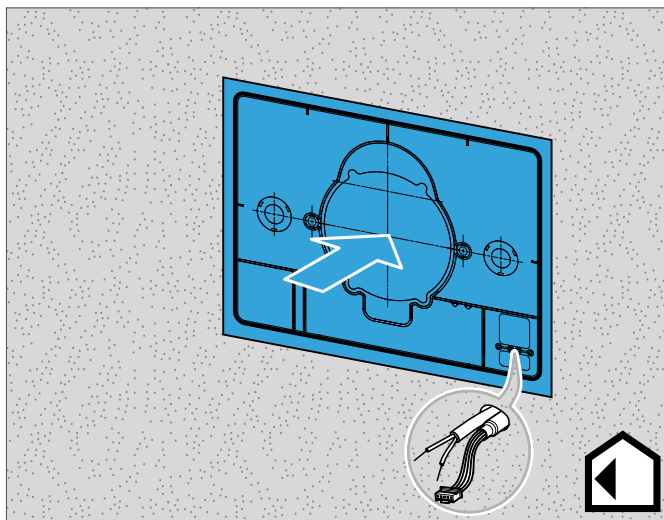
! NOTICE

Material damage due to holes in the wall

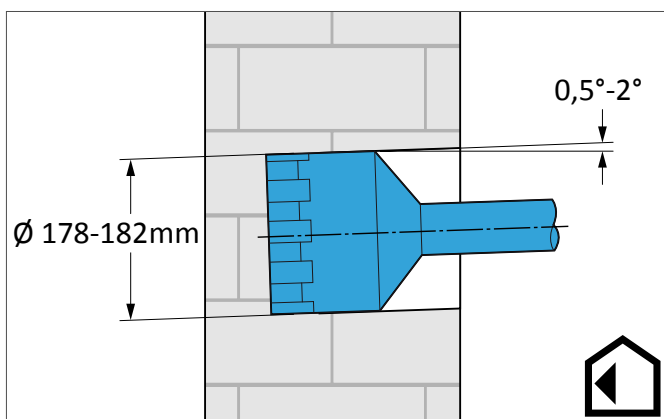
Concealed cables or pipes can be damaged while drilling the core hole.

- Ensure that there are no cables or pipes in the installation area of the wall.
- Use a suitable detection device to check for cables and pipes.

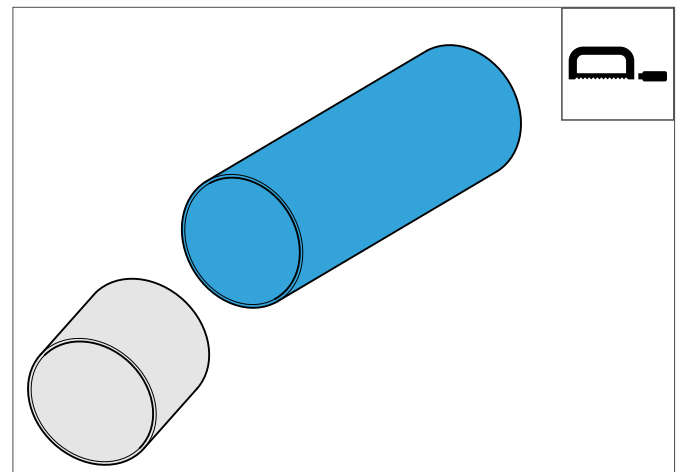
1. Fix the drilling template to the wall. Observe the intervals to the core hole while doing so Processing dimensions (see page 17).



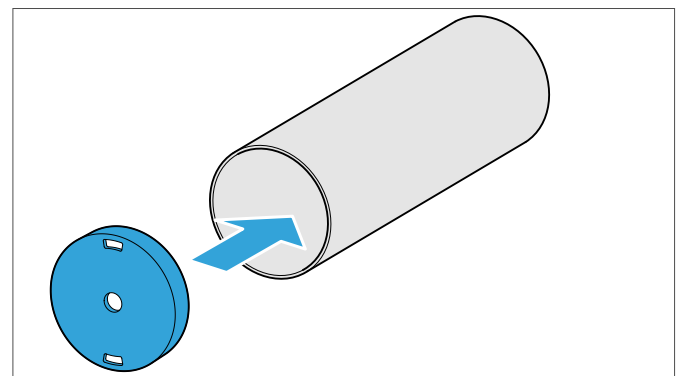
2. Drill the core hole. Ensure that the hole has an incline of $0.5^\circ - 2^\circ$.



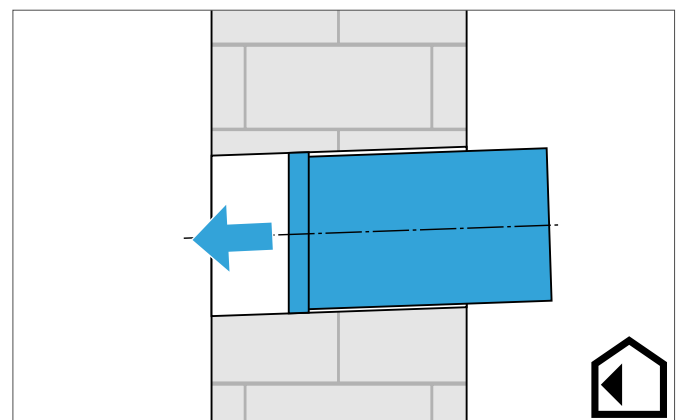
3. Trim the pipe to the wall thickness, Processing dimensions (see page 17).



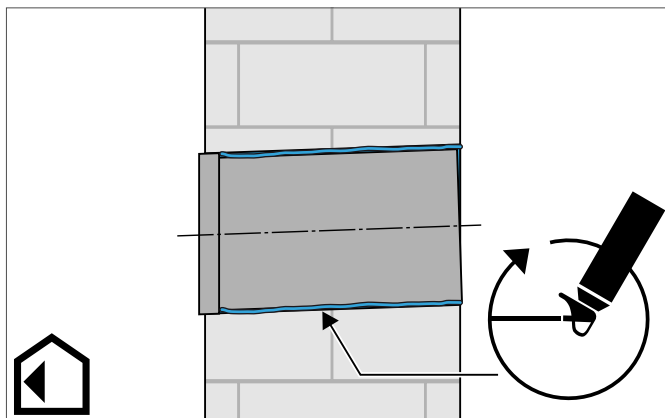
4. Push the plaster cover for the weather grille onto the pipe.



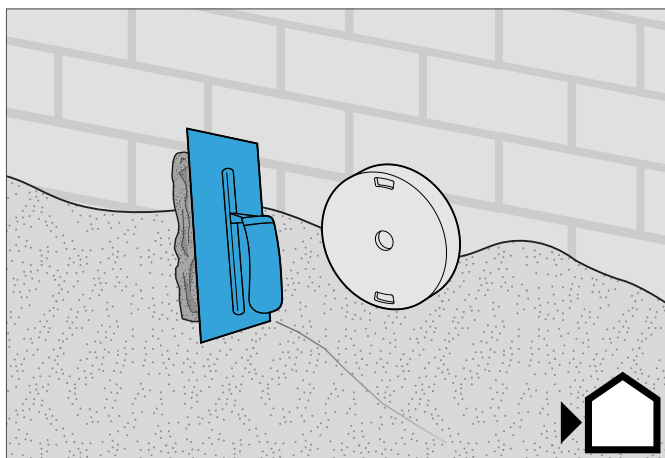
5. Insert the pipe with the plaster cover into the wall.



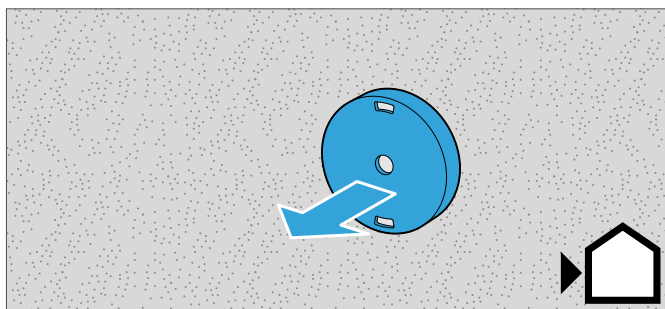
6. Insulate the pipe up to the plaster cover (according to requirement).



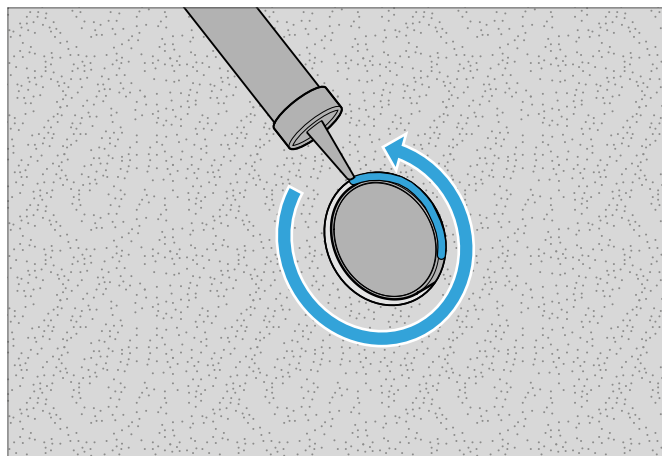
7. Plaster the outside wall.



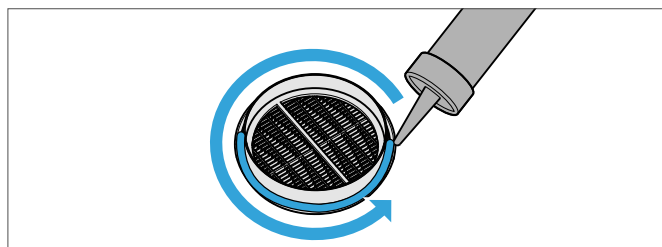
8. Remove the plaster cover.



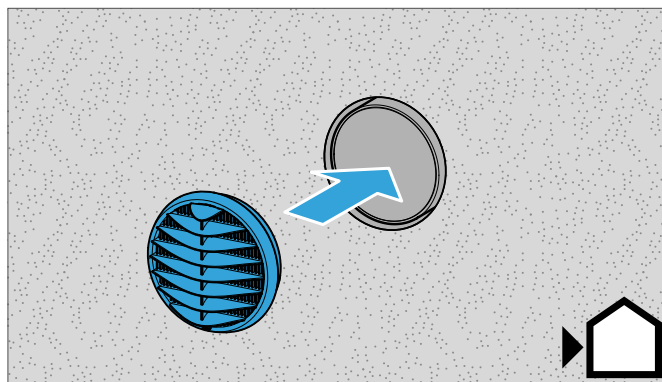
9. Seal the pipe to be diffusion-proof inside and open to diffusion outside.



10. Apply the sealant to the weather grille.



11. Position the weather grille and press firmly against the wall. Ensure that the lamellae are pointing downwards.



4.4 Installation of ventilation pipe and weather grille hood

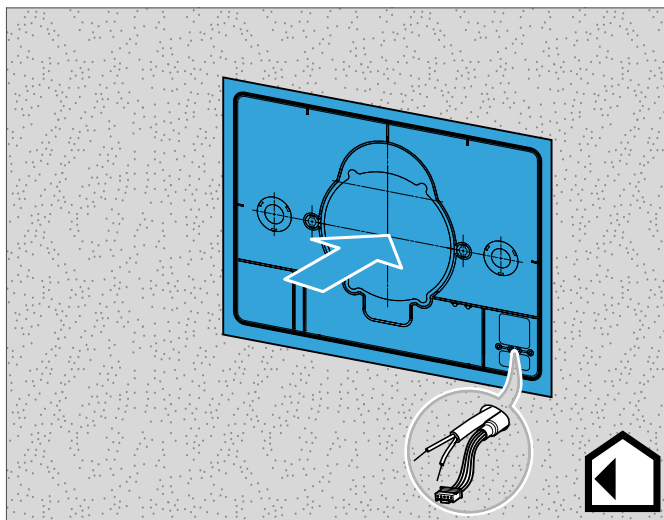
! NOTICE

Material damage due to holes in the wall

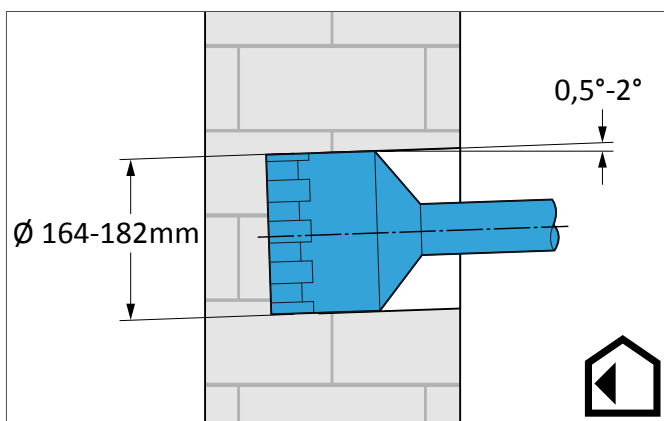
Concealed cables or pipes can be damaged while drilling the core hole.

- Ensure that there are no cables or pipes in the installation area of the wall.
- Use a suitable detection device to check for cables and pipes.

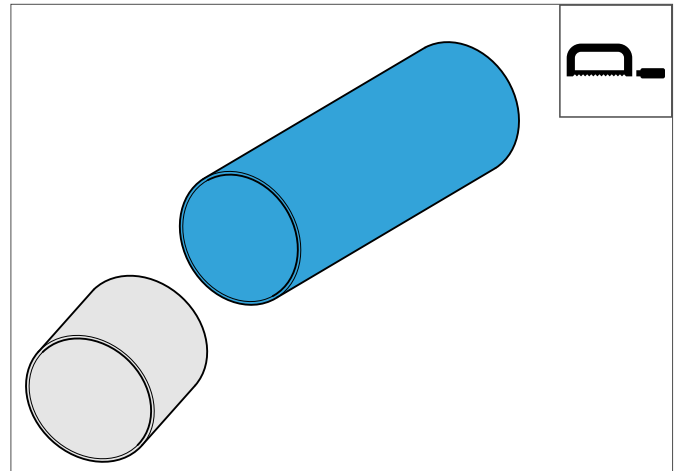
1. Fix the drilling template to the wall. Observe the intervals to the core hole while doing so Processing dimensions (see page 17).



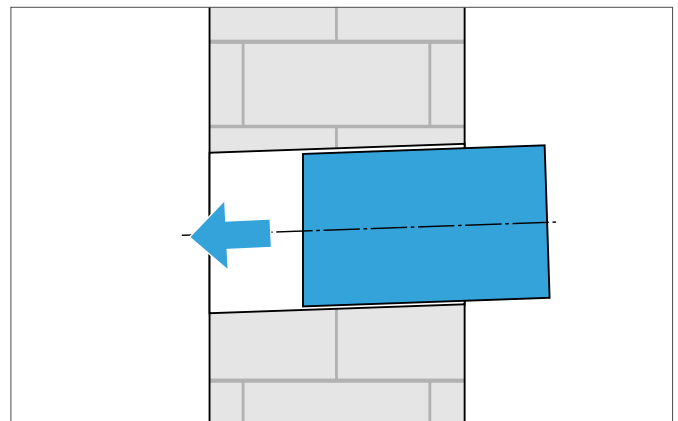
2. Drill the core hole. Ensure that the hole has an incline of 0.5° - 2°.



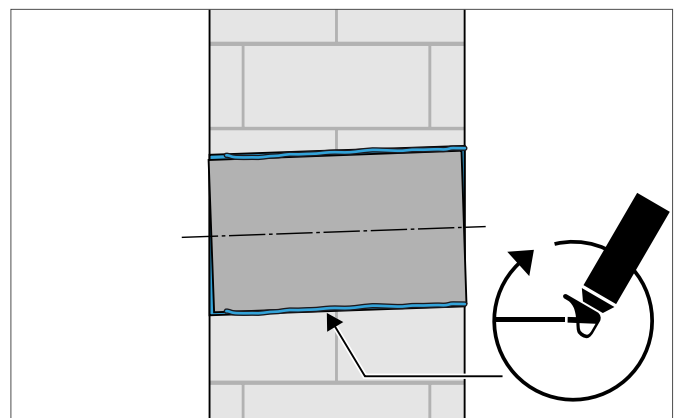
3. Trim the pipe to the wall thickness, Processing dimensions (see page 17).



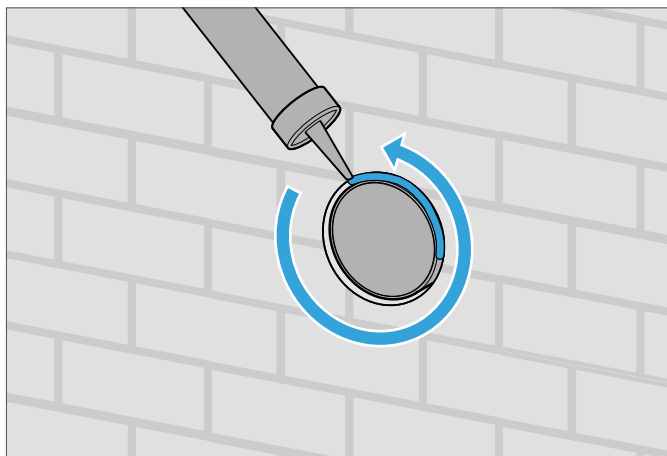
4. Insert the pipe into the wall.



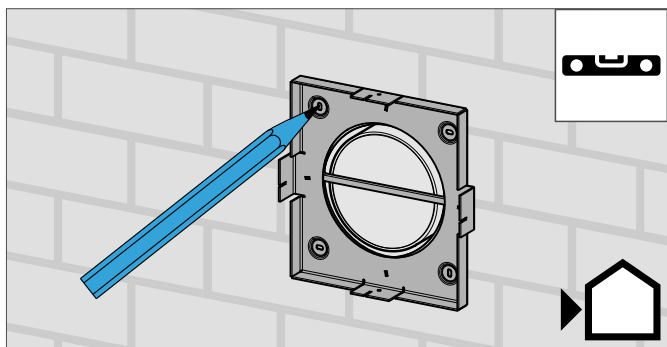
5. Insulate pipe (according to requirement).



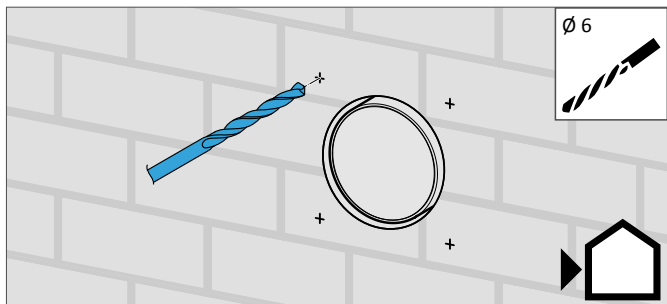
6. Seal the pipe to be diffusion-proof inside and open to diffusion outside.



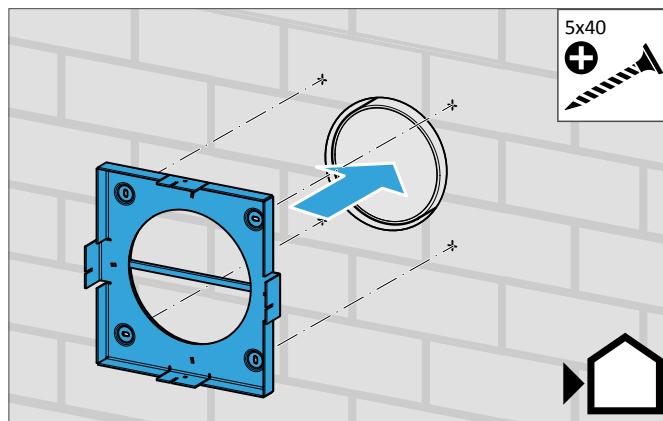
7. Adjust the wall fixing and mark the fixing holes.



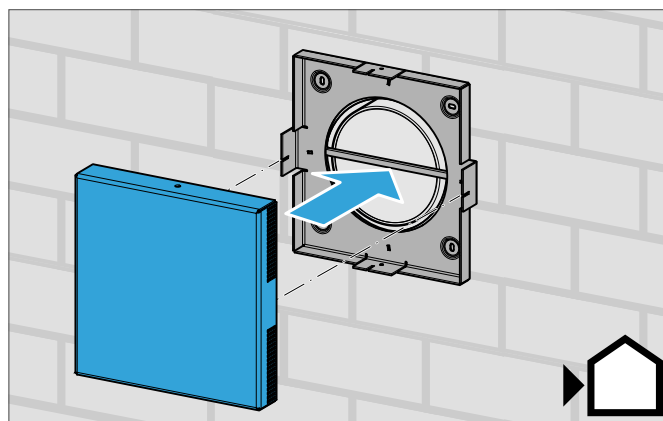
8. Drill the fixing holes and insert dowels.



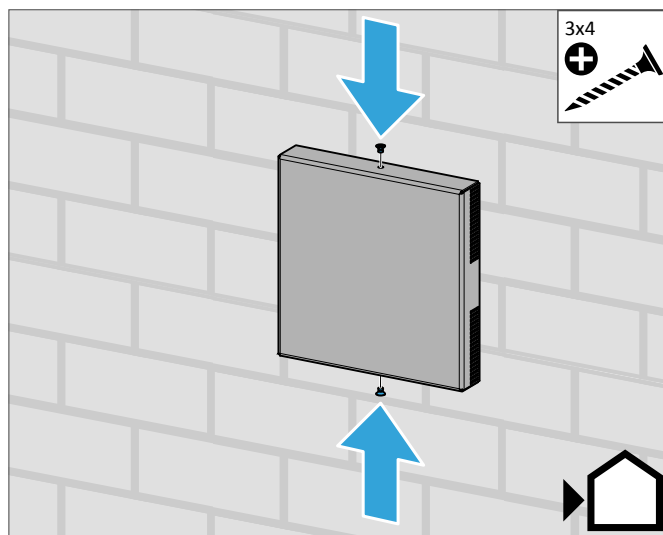
9. Screw the wall fixing into place.



10. Position the weather grille hood on the wall fixing.



11. Screw the weather grille hood into place.



4.5 Installation of ventilation pipe and vent duct

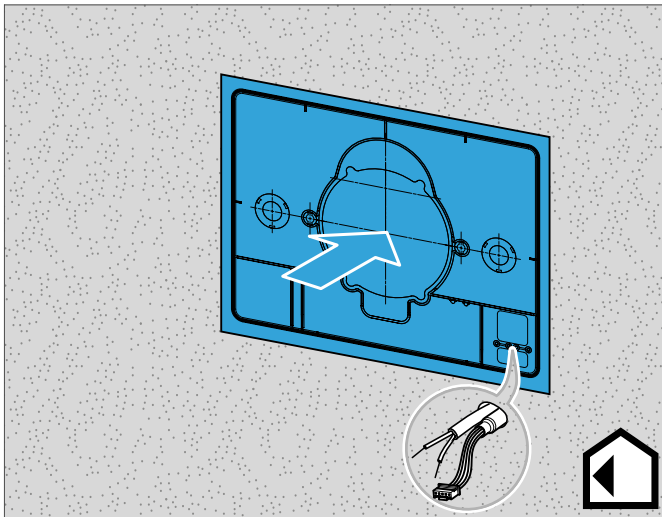
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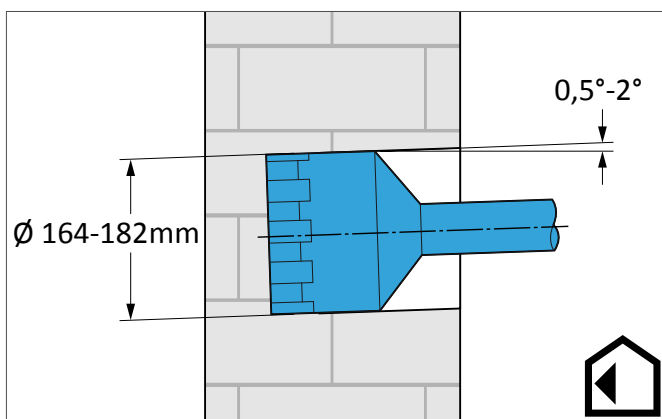
Concealed cables or pipes can be damaged while drilling the core hole.

- Ensure that there are no cables or pipes in the installation area of the wall.
- Use a suitable detection device to check for cables and pipes.

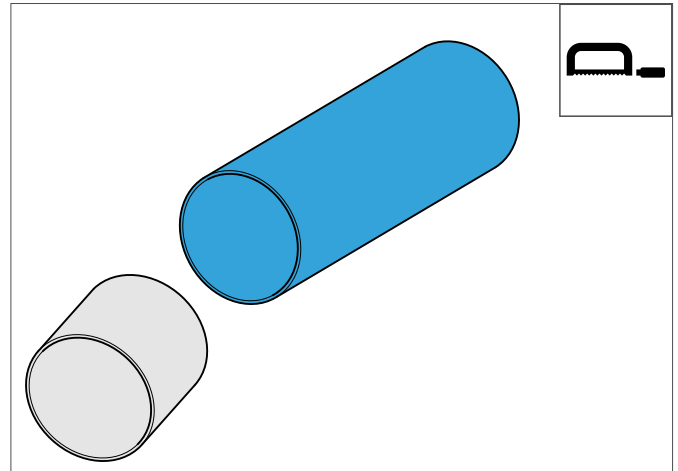
1. Fix the drilling template to the wall. Observe the intervals to the core hole while doing so Processing dimensions (see page 17).



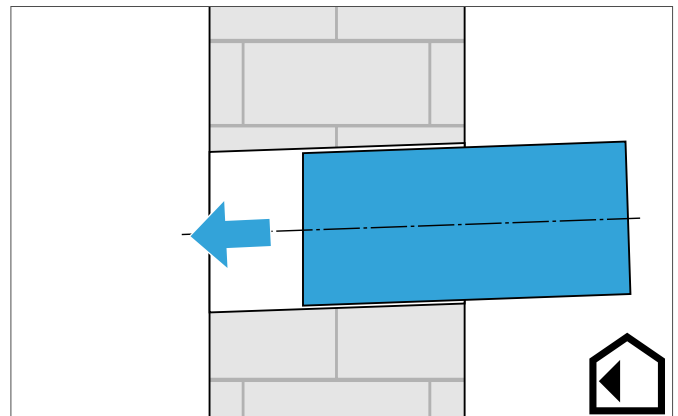
2. Drill the core hole (room side). Ensure that the hole has an incline of $0.5^\circ - 2^\circ$.



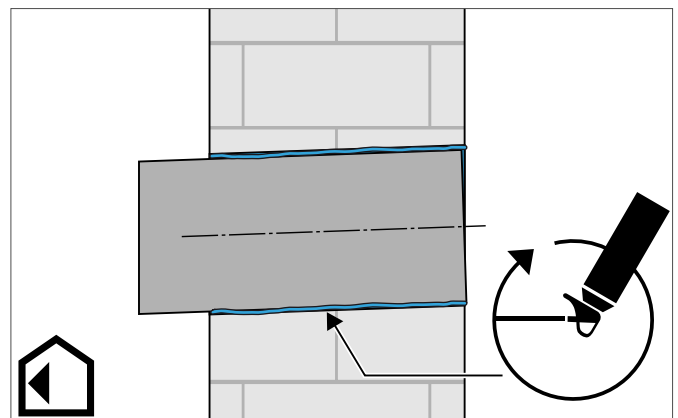
3. Shorten the pipe. Observe the insertion dimensions of the pipe into the vent duct Processing dimensions (see page 17).



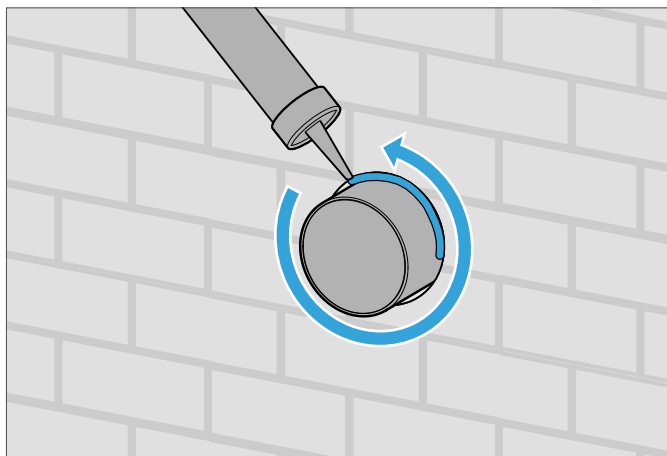
4. Insert the pipe into the wall.



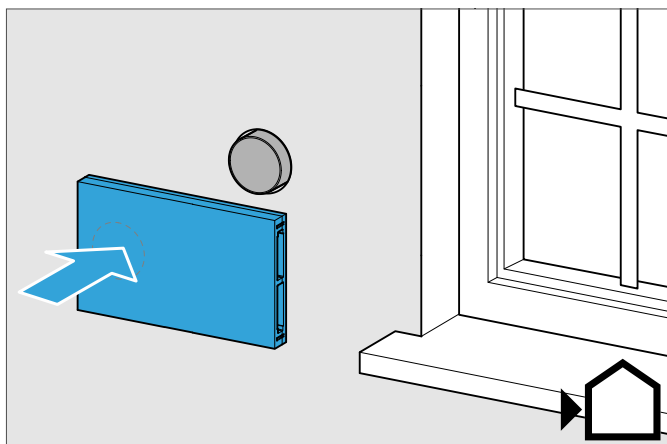
5. Insulate pipe (according to requirement).



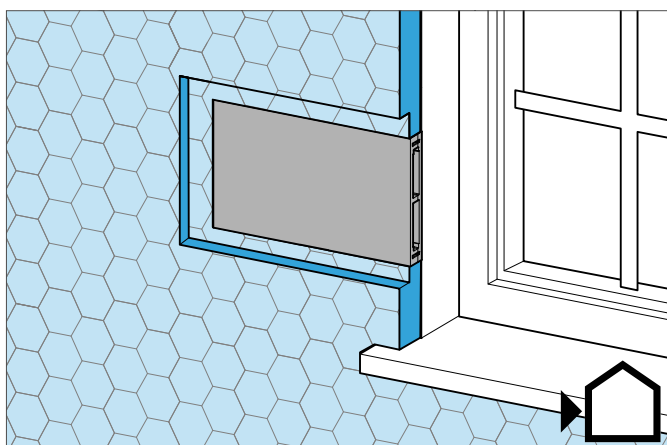
6. Seal the pipe to be diffusion-proof inside and open to diffusion outside.



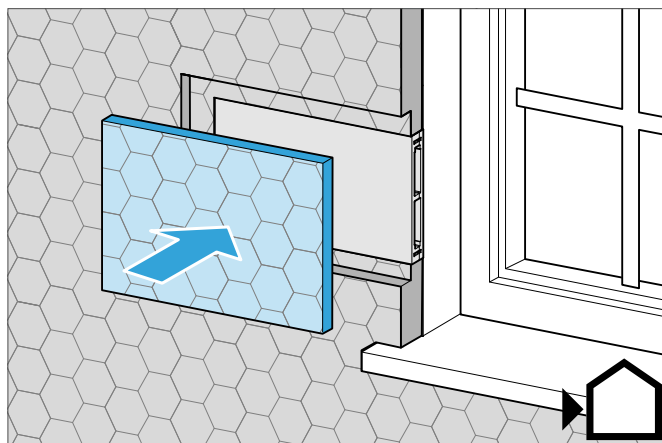
7. Place the vent duct onto the ventilation pipe and screw or glue to the outside wall.



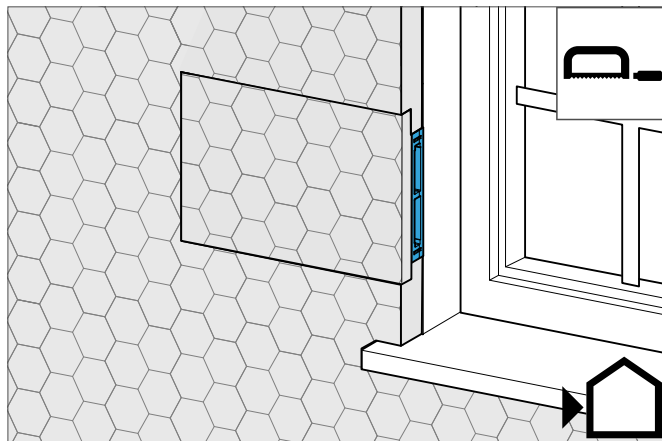
8. Attach thermal insulation.



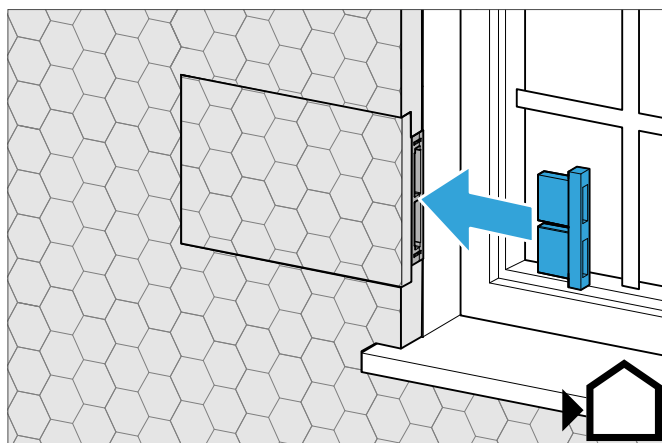
9. Apply the thermal insulation to the vent duct.



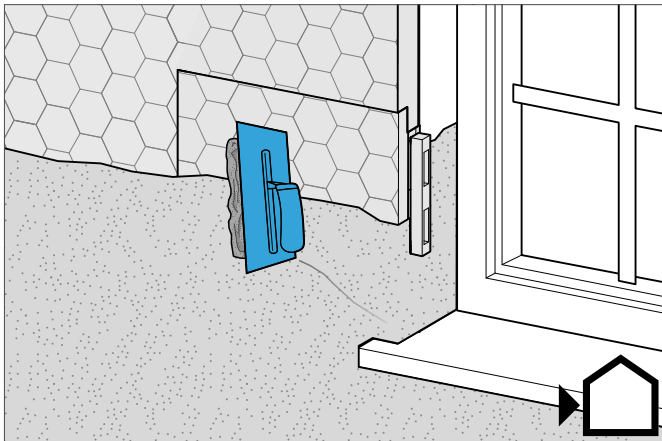
10. Shorten the vent duct if it is not flush with the wall. Observe the area that can be shortened while doing so Dimensions of vent duct (see page 16).



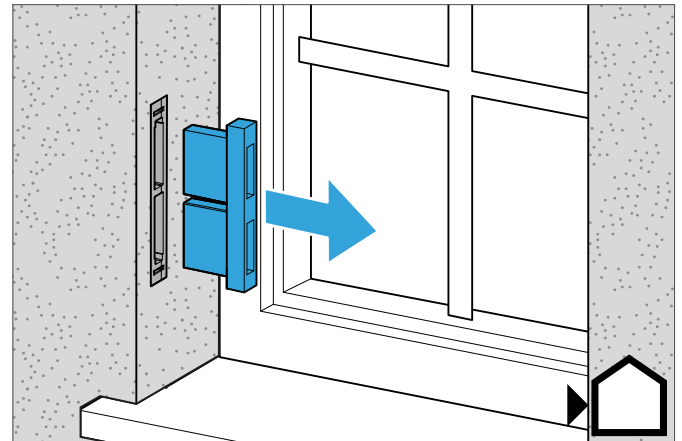
11. Insert the plaster cover.



12. Plaster the wall and the vent duct.



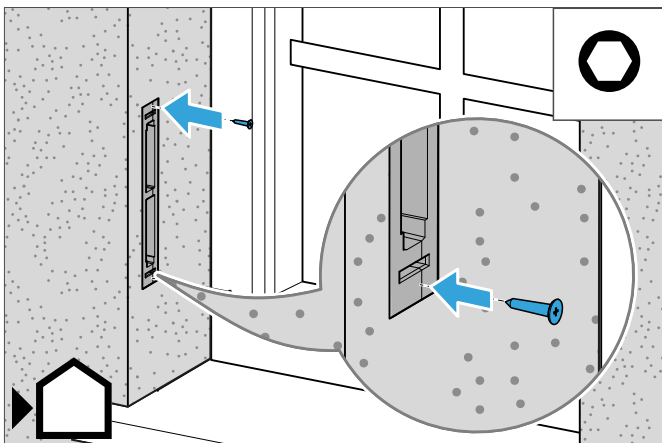
13. Remove the plaster cover.



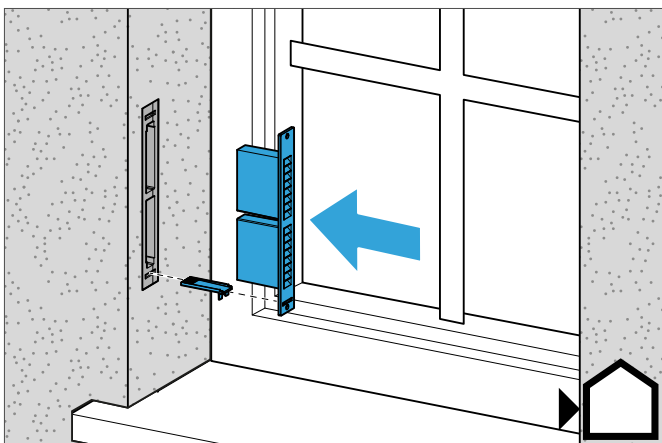
4.6 Installation of outer panels for vent duct

4.6.1 Installation of PVC outer panel

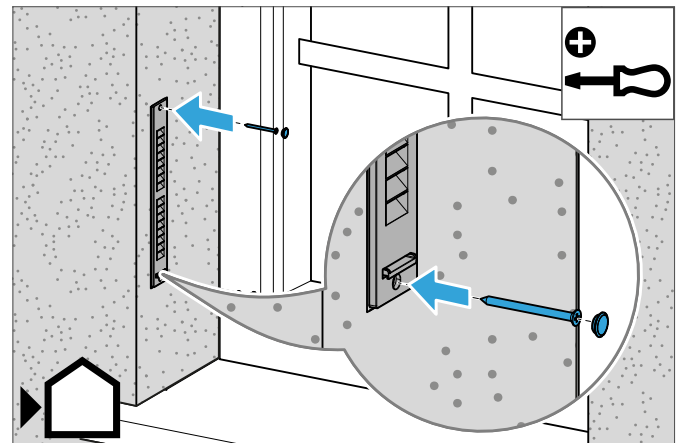
1. Screw the dowels into the vent duct.



2. Insert the drainage duct and the PVC outer panel into the vent duct.

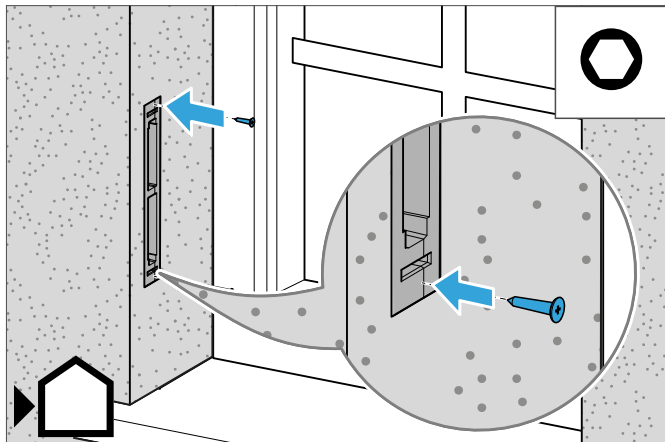


3. Screw the PVC outer panel into place and put the cover caps onto the screw heads.

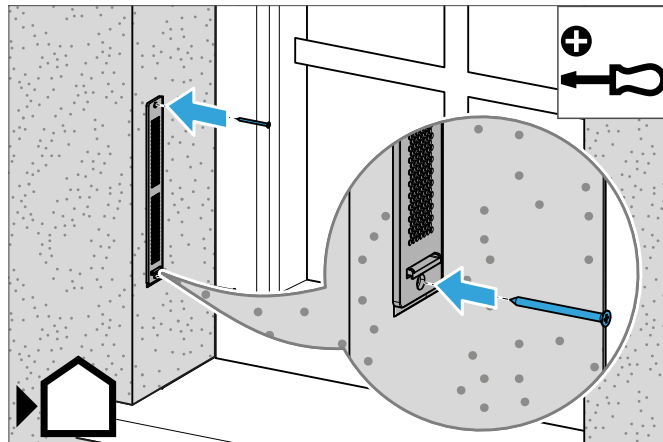


4.6.2 Installation of aluminium outer panel

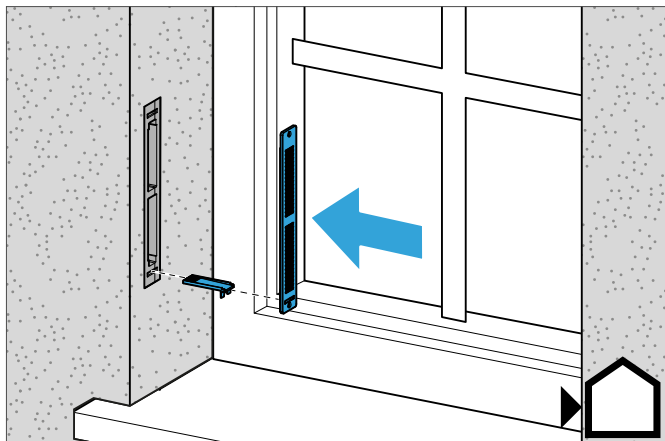
1. Screw the dowels into the vent duct.



3. Screw the aluminium outer panel into place.



2. Insert the drainage duct and the aluminium outer panel into the vent duct.



4.7 Installation of room-side components

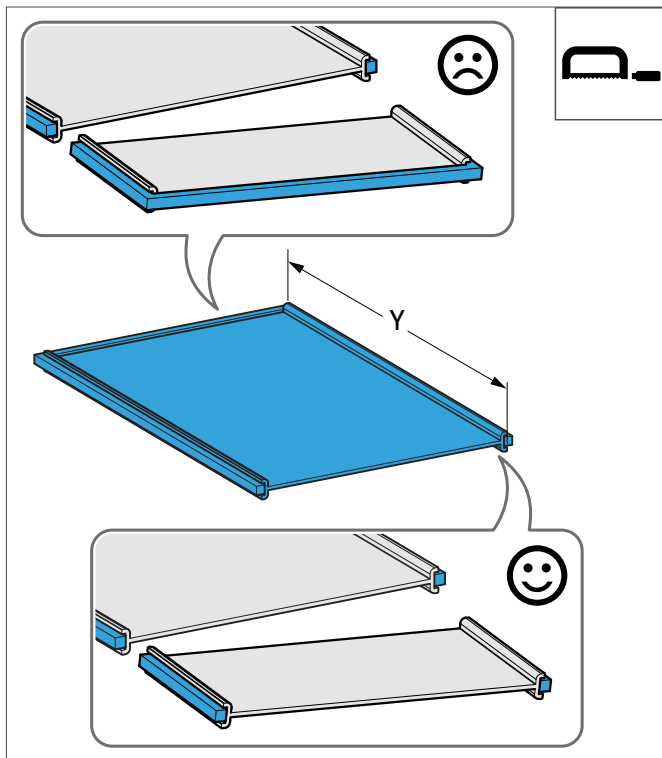
! NOTICE

Material damage due to water or dirt in the device

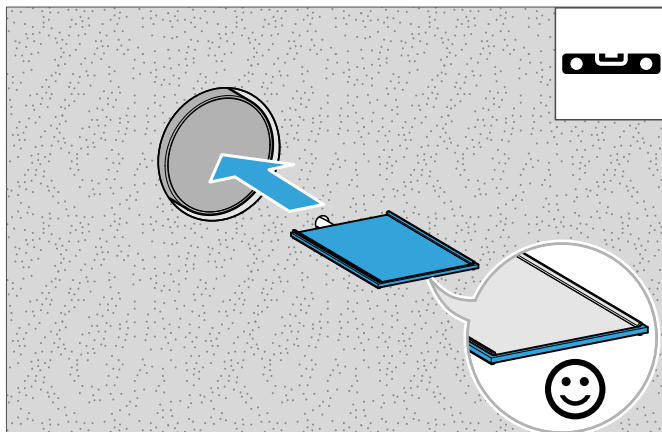
Water and dirt inside the device can lead to damage to the device.

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

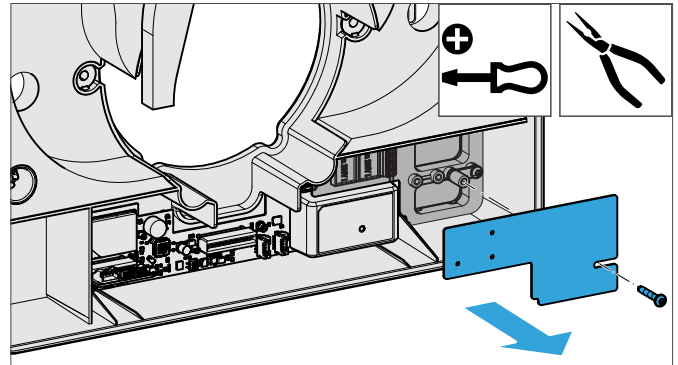
1. Shorten the divider: pipe length - 270 mm.



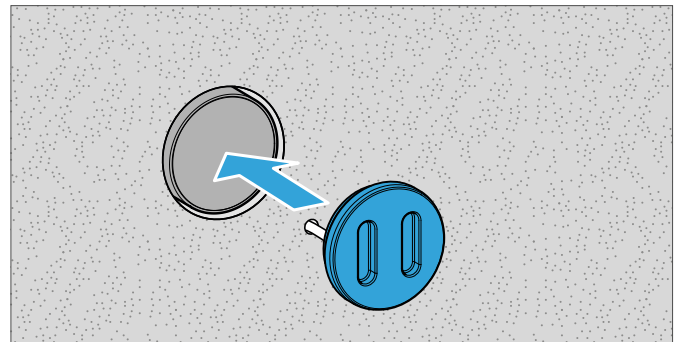
2. Push the divider into the ventilation pipe as far as the stop. Ensure that the divider is horizontally aligned and the seal is pointing in the direction of the room.



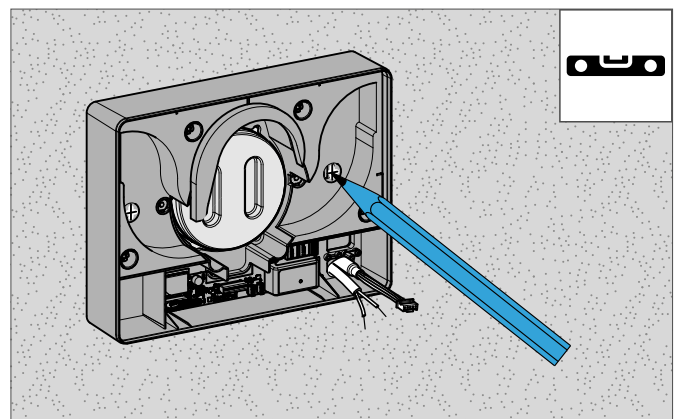
3. Remove the electronics cover from the wall module. To do this, clip on the 3 pins using the pointed pliers and then loosen the screws.



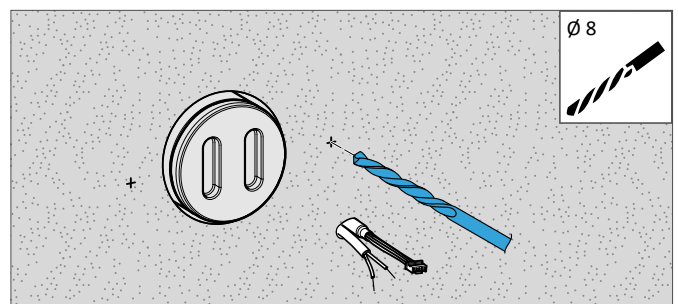
4. Insert the mounting cover into the ventilation pipe.



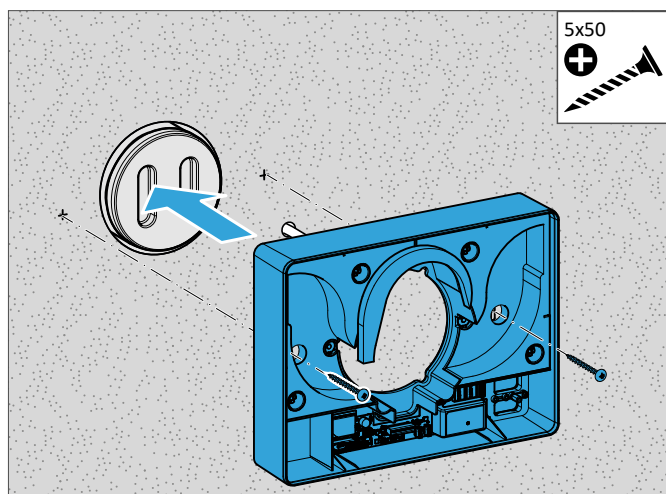
5. Adjust the wall module and mark the fixing holes.



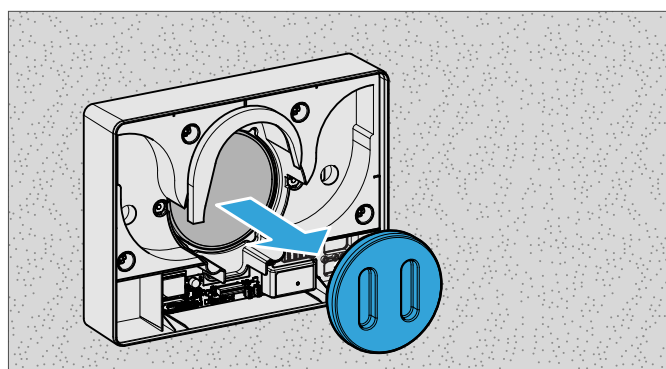
6. Drill the fixing holes for the wall module and insert the dowels.



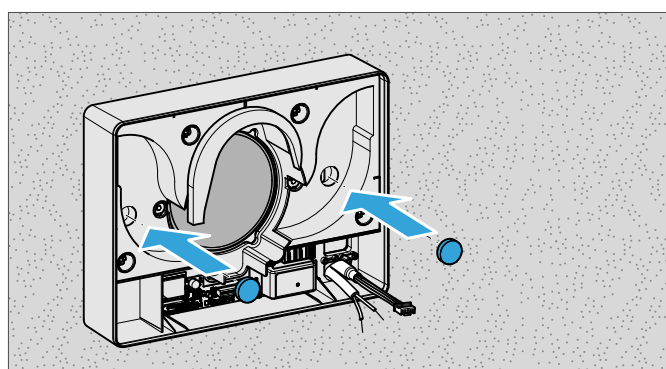
7. Screw the wall module into place.



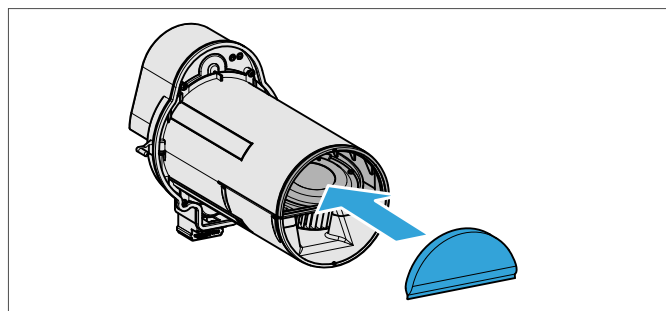
8. Remove the mounting cover.



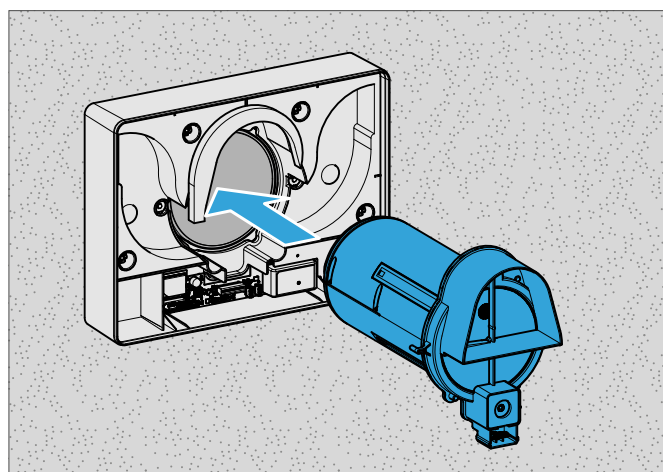
9. Mount the foam inserts.



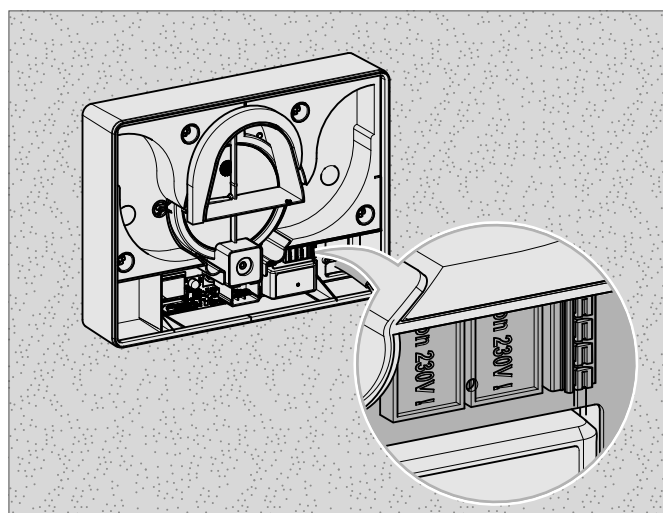
10. Insert the supply air filter into the pipe module.



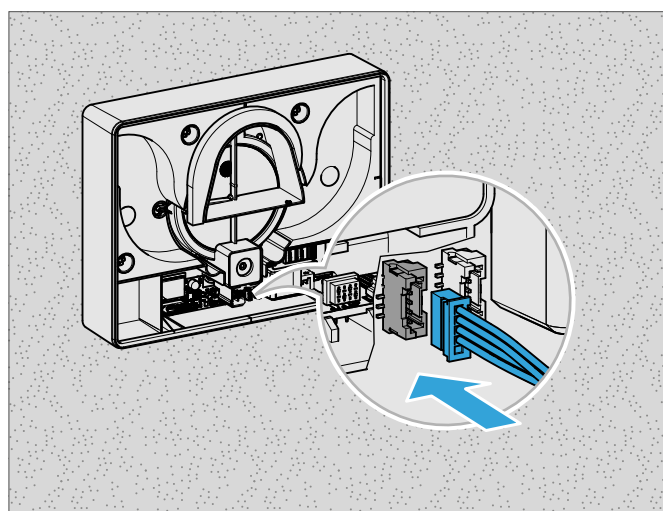
11. Push the pipe module into the ventilation pipe.



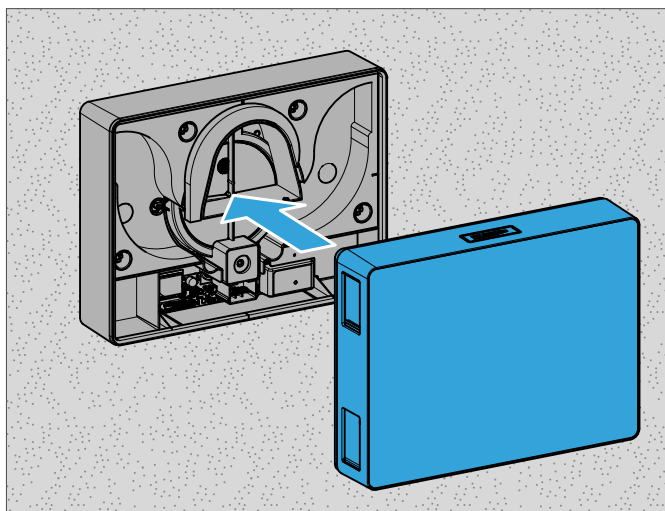
12. Connect the cable for fixed connection or external inputs Electrical connection (see page 19).



13. Connect the cable for the SI-BUS.



14. Place the housing module onto the wall module.



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