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## Brands

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## Disclaimer

This documentation is an English translation of the original German installation and operating instructions. After completion of the installation it must be given to user (tenant, owner, property management, etc.).

The contents of this documentation have been checked for compliance with the described hardware and software. Nevertheless deviations may still occur, therefore no guarantee of compliance can be provided. This documentation is updated regularly. Necessary corrections and appropriate supplements are always included in subsequent editions.

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# 1 User and safety instructions

The section entitled "User and safety instructions" contains basic instructions on how to install operate the aV100 extract air system.

## 1.1 Safety instructions

Read all instructions contained in this section for installation, operation and maintenance of the aV100 extract air system and the Avio N 100 extractor fan. Also note the safety instructions that precede the described handling instructions.

Carefully read the safety instructions before performing any work on the equipment/system. Non-observance of safety warnings could result in injury and/or property damage.

The safety instructions in these installation and operating instructions have a uniform structure and are marked with a symbol on the left side of the instruction. A signal word above the text indicates the hazard level. If several danger levels exist, the highest level safety instruction is always used.



### DANGER

**Type and origin of the hazard. Imminent danger of serious personal injury.**

Possible consequences of the hazard!

► Measures to avoid the hazard.



### WARNING

**Type and origin of the hazard. Possible danger of serious personal injury.**

Possible consequences of the hazard!

► Measures to avoid the hazard.



### CAUTION

**Type and origin of the hazard. Direct or possible danger of minor/significant personal injury.**

Possible consequences of the hazard!

► Measures to avoid the hazard.



### NOTE

**Nature and origin of an adverse event or condition. Imminent or possible damage to property.**

Possible consequences of the event or condition!

► Measures to avoid the event or condition.

In addition to the safety instructions, a note symbol provides practical and useful tips for handling the aV100 extract air system.



### TIP

Useful information that you should be aware of for installation and operation.

## 1.2 Intended use

When installing the equipment/system, ensure compliance with the current building regulations, fire protection regulations and accident prevention regulations of the relevant professional association.

Use the equipment/system only for the applications that are described in this documentation and only in conjunction with components which have been recommended, authorised and described by inVENTer GmbH in this documentation. Changes or modifications to the equipment/system are not permitted.

Trouble-free and safe operation of the equipment/system depends upon proper transportation, proper storage and installation as well as careful operation and maintenance. These instructions are part of the equipment/system and must be permanently available. Observe all safety instructions that are contained in this document.

The aV100 extract air system is connected directly to 230 V mains.

Observe the VDE 0100 installation regulations when connecting the equipment in rooms with a bath and/or shower. The Avio N 100 extractor fan must only be installed outside protection area 0. When laying the power cable, observe the requirements of protection class II. Do not lay the power cable while it is live.

Before installation, if necessary perform a biocidal pretreatment/water repellent treatment of the plaster surface around the weather protection hood/reveal grille, in order to prevent algae accumulation on the weather protection hood and a discolouration of the façade. Consult your building planner about this!

Install a pressure monitor in rooms with open flues. Consult your chimney sweeper and/or building planner about this.

During the construction work, the aV100 extract air system must remain sealed against dust. It must not be put into operation and the dust cover must not be removed until after completion of the construction work.

## 1.3 Improper use

The equipment/system is not suitable for:

- Rooms with aggressive and corrosive gases
- Rooms with extreme dust load
- Structural drying

Reliable operation of the fan cannot be ensured in rooms containing polluted air.

## 1.4 Qualified personnel

The equipment/system may only be set up and operated in conjunction with this documentation. Installation, electrical connection and commissioning of the equipment/system may only be performed by qualified personnel.

Qualified personnel within the meaning of the safety notices in this documentation are persons who are authorised to install, put it into operation and identify equipment, systems and circuits in accordance with established safety procedures.

## 2 System overview

The aV100 extract air system was developed for the ventilation of rooms with exterior windows in single and multi-family homes, hotels and boarding houses.

The aV100 extract air system consists of a wall sleeve with non-return valve, an exterior outlet and the Avio N 100 extractor fan with inner panel, which is mounted in the wall sleeve.

Installation of the wall sleeve with integrated non-return valve is generally carried out in the exterior wall. The extractor fan can be mounted in the wall sleeve or a subceiling. When installing the extractor fan to the subceiling the connection between wall sleeve and extractor fan must be carried out on site.

Outside, the extract air system can be optionally finished with a weather protection hood (standard model) or a flat duct and reveal grille (corner model). The corner model is particularly suitable when subsequently fitting insulation or if a weather protection hood cannot be fitted to the outside wall for structural or other reasons (e.g. listed buildings).

The connection of a hygrostat is available as an option.

The aV100 extract air system can be used in the following rooms:

- Bathrooms/toilets
- Utility rooms
- Kitchens
- Hallways

### Features

- Avio N 100 extractor fan with run-on function
- Can be installed in protection area 1 bath and shower rooms to VDE 0100
- Fan with low power consumption
- Very quiet operation through flow-optimised and attractive inner cover design
- Available as a standard model or corner model
- Borehole for wall sleeve  $\varnothing$  115 mm
- Suitable for wall thickness from 150 mm to 530 mm
- Can be used with wall sleeve extension for wall thickness up to 1000 mm
- Suitable for distances between wall opening and window reveal of 250mm to 950 mm (corner model)
- Can be combined with a light switch connection or switch/pushbutton
- Potentiometer for setting the run-on time

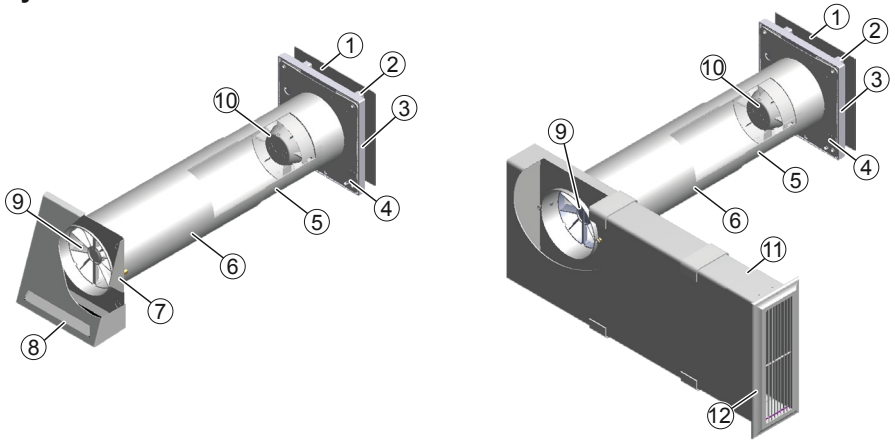
### Components

- Inner cover
- Extractor fan
- Wall sleeve with pre-installed non-return valve
- Weather protection hood or flat duct and reveal grille
- Hygrostat (optional)

### Models

- aV100 and Avio N 100 extract air system with weather protection hood (white/grey/iron grey)
- aV100 and Avio N 100 extract air system with flat duct and reveal grille (white)

2.1 Layout



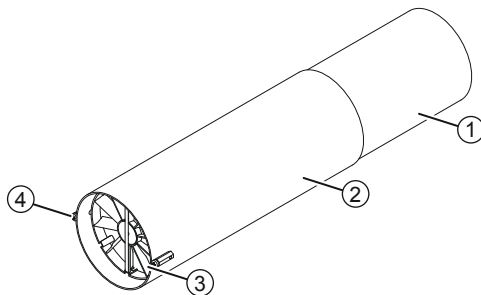
*Extract air system with Avio N 100 standard model*

*Extract air system with Avio N 100 corner model*

Figure 1: Overview of aV100 extract air system with Avio N 100 extractor fan

- |   |  |
|---|--|
| 1 Panel inner cover                                   | 8 Weather protection hood cover (standard model) |
| 2 Spacer  | 9 Non-return valve                               |
| 3 Inner cover base plate                              | 10 Fan   |
| 4 Extractor fan casing                                | 11 Flat duct (corner model)                      |
| 5 Tube of wall sleeve                                 | 12 Reveal grille (corner model)                  |
| 6 Sleeve of wall sleeve                               |  |
| 7 Weather protection hood base plate (standard model) |  |

**Wall sleeve**



- |                         |                    |
|-------------------------|--------------------|
| 1 Tube of wall sleeve   | 3 Non-return valve |
| 2 Sleeve of wall sleeve | 4 Fixing elements  |

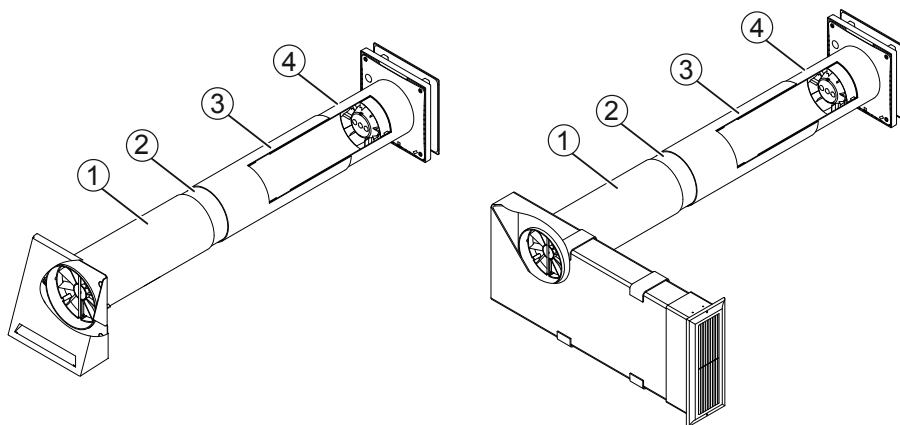
Figure 2: Wall sleeve for aV100 extract air system

The total length of the wall sleeve is 530 mm. It can be used for wall thickness up to 530 mm. The wall sleeve is freely adjustable for wall thickness from 320 mm up to 530 mm. For wall thickness less than 320 mm the tube and sleeve can be shortened by max. 185 mm

### Wall sleeve extension

An optional extension is available for wall thickness 531 mm – 1000 mm.

The extension is a second wall sleeve without pre-installed non-return valve and fixing elements. The wall sleeve extension is inserted into the wall sleeve and stuck together at the seam with durable, waterproof fabric tape.



*aV100 extract air system standard model*

*aV100 extract air system corner model*

Figure 3: aV100 extract air system with wall sleeve extension

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>1 Sleeve of wall sleeve with non-return valve and fixing elements</li> <li>2 Tube of wall sleeve</li> </ul> | <ul style="list-style-type: none"> <li>3 Sleeve of wall sleeve extension</li> <li>4 Tube of wall sleeve extension</li> </ul> |
|--|--|

### Inner cover

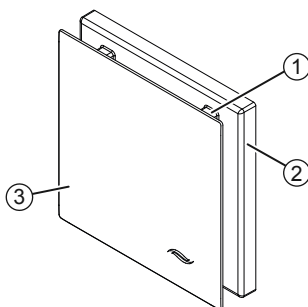


Figure 4: Inner cover

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>1 Spacer</li> <li>2 Inner cover base plate</li> </ul> | <ul style="list-style-type: none"> <li>3 Panel inner cover</li> </ul> |
|--|---|



## Fan casing Avio N 100

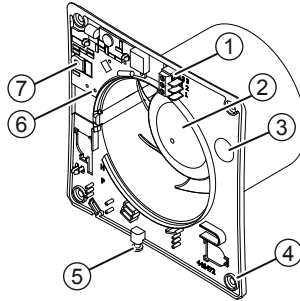
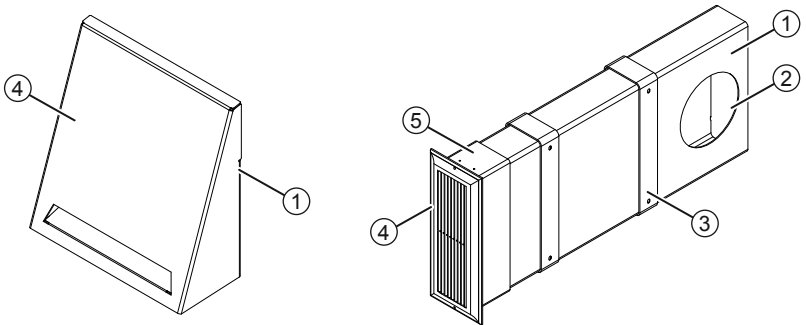


Figure 5: Fan casing for Avio N 100 extractor unit

- |  |                                |
|--|--------------------------------|
| 1 Power cable terminal<br>(230 V, 50 Hz) | 4 Inner wall attachment points |
| 2 Fan                                    | 5 Inner cover retaining screw  |
| 3 Power cable entry                      | 6 PCB                          |
|  | 7 Potentiometer                |

## Weather protection hood



*Standard model end plate:  
Weather protection hood aV100*

*Corner model end plate:  
Flat duct with reveal grille*

Figure 6: Weather protection hood for aV100 extract air system

- |   |  |
|---|--|
| 1 Weather protection hood base plate<br>(standard model)/<br>flat duct (corner model) | 4 Weather protection hood cover<br>(standard model)/<br>reveal grille (corner model) |
| 2 Opening for wall sleeve   | 5 Flat duct sliding sleeve   |
| 3 Wall mount  |  |

## Hygrostat (optional)

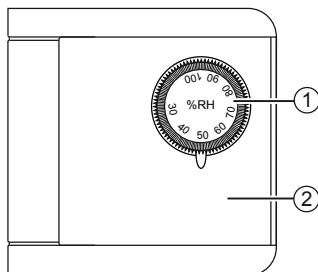


Figure 7: Front view of hygrostat

- 1 Rotary control
- 2 Casing

The hygrostat is a two-position controller for detecting and controlling the relative humidity indoors. The measuring element is a hygroscopic fabric tape which undergoes a measurable change in length via absorption of water. A micro-switch converts the changes into ON/OFF signals.

The range of relative humidity (RH) can be continuously adjusted between 35% and 95% via a set-point rotary control on the hygrostat's casing.

## 2.2 Functions

The aV100 extract air system is used for removing spent air from a room.

The Avio N 100 (N = run-on function) extractor fan is used in the aV100 extract air system. The aV100 extract air system operates without heat recovery and runs on alternating current.

The Avio N 100 has a run-on function. Optionally, a hygrostat can be connected to control the fan depending on the relative air humidity.

The run-on time determines how long the fan continues to run after switch-off. With activation of the run-on time (switch-off is via a control element), the Avio N 100 continues to run until the end of the set run-on time and then turns off automatically. This ensures an optimal air exchange.

The run-on time is factory set at 15 minutes. It can be altered via the integrated potentiometer within a range of 5 – 30 minutes.

The Avio N 100 extractor fan can be combined with an existing light switch or operated separately via a switch/pushbutton.

- Combination with a light switch:  
The Avio N 100 is switched on simultaneously with the activation of the room lighting. When the room lighting is switched off, the run-on time is activated; the extractor fan runs until the end of the run-on time and then switches itself off.

- **Switch connection:**  
When the switch is pressed, the Avio N 100 is switched on. When the switch is switched off, the run-on time is activated; the extractor fan runs until the end of the run-on time and then switches itself off.
- **Pushbutton connection:**  
When the pushbutton is pressed, the Avio N 100 is switched on and the run-on time is activated. The extractor fan will run until the end of the run-on time.

The optional hygrostat controls the fan depending on the interior humidity. If the set relative interior humidity limit is exceeded, the extract air system is switched on. If the relative interior humidity falls below the set limit, the run-on is activated. The extractor fan will run until the end of the run-on time and then switch itself off automatically.

## 2.3 Control elements

### Potentiometer

The potentiometer is located on the PCB of the Avio N 100 extractor fan.

It is used to set the run-on time within a range of 5 – 30 minutes. The run-on time is factory set at 15 minutes.

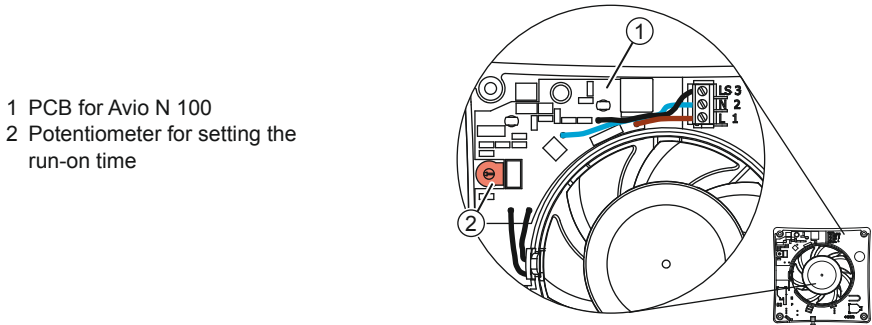


Figure 8: Integrated potentiometer control element on the PCB of the Avio N 100

### Light switch/switch/pushbutton

The Avio N 100 extractor fan can be connected to an existing light switch or a standard switch/pushbutton. These are not included and must be provided by the customer.

Control element	Switch on	Switch off
Light switch/switch	Avio N 100 is switched on.	Run-on time is activated.
Pushbutton	Avio N 100 is switched on. Run-on time is activated.	–

### 3 Preparations prior to installation



#### DANGER

**Ingress of water into aV100 extract air system or its components/power source.**

Electric shock and/or overheating due to short circuit (230V, 50Hz)!

- ▶ Install aV100 extract air system outside protection area 0.
- ▶ Install hygrostat outside protection areas 0 to 2.
- ▶ Install light switch/switch/pushbutton outside protection areas 0 to 2.



#### NOTE

**Short distance between the wall opening and objects/walls.**

Inner cover and weather protection hood cannot be installed!

- ▶ Keep a minimum distance of 250 mm to components, walls and furnishings in the interior space.

### 3.1 Dimensions

Designation	Depth/ length (mm)	Width (mm)	Height (mm)	Dia. (mm)	
Wall openings:					
Borehole for wall sleeve	Wall thickness <sup>1)</sup>	–	–	115	
Borehole in subceiling <sup>2)</sup>	Thickness of subceiling	–	–	105	
Installation elements:					
Wall sleeve R-D103/107x330x550 RV	Tube	280	–	–	103
	Sleeve	300	–	–	107
Wall sleeve extension	Tube	280	–	–	103
	Sleeve	300	–	–	107
Weather protection hood aV100 (standard model)	46	154	157	–	
Flat duct (corner model)	500 (1000)	60	204	–	
Reveal grille (corner model)	76	93	232	–	
Hygrostat (optional)	28	81	81	–	
Inner cover aV100	36	159	159	–	

<sup>1)</sup> Render, insulation, masonry and interior plaster (standard model) or masonry and interior plaster (corner model)

<sup>2)</sup> Only necessary when installation is carried out subceiling

### 3.2 Dimensioned drawings

#### Wall openings

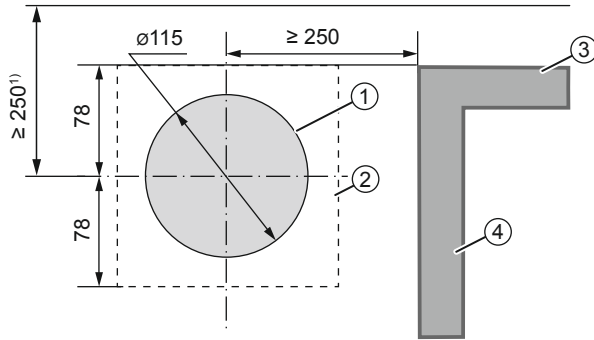


Figure 9: Dimensioned drawing of wall opening with weather protection hood aV100 (standard model)

- |   |   |
|---|---|
| 1 Wall opening                              | 3 Bottom edge of reveal grille (lintel) <sup>2)</sup> |
| 2 Position of weather protection hood aV100 | 4 Door/window frame                                   |

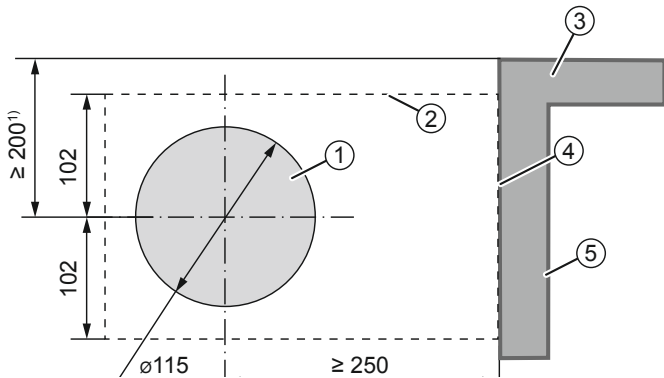


Figure 10: Dimensioned drawing of wall opening with flat duct (corner model)

- |  |                                  |
|--|----------------------------------|
| 1 Wall opening                                 | 4 Outer edge of reveal (masonry) |
| 2 Flat duct position                           | 5 Door/window frame              |
| 3 Bottom edge of reveal (lintel) <sup>2)</sup> |                                  |

<sup>1)</sup> Minimum distance from adjacent components

<sup>2)</sup> Note insulation thickness and possibly shutters

### Wall sleeve

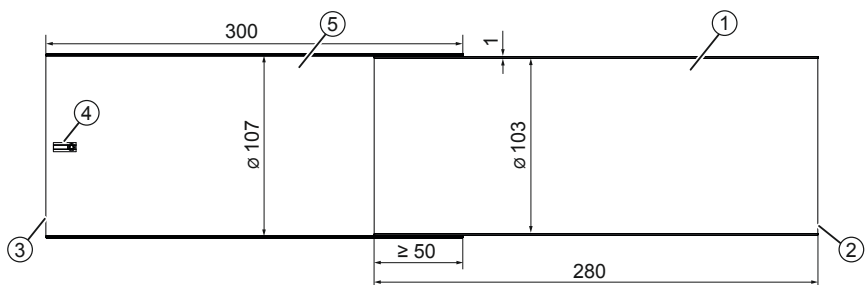


Figure 11: Dimensioned drawing of wall sleeve aV100

- 1 Tube of wall sleeve
- 2 Interior wall side
- 3 Exterior wall side
- 4 Fixing element
- 5 Sleeve of wall sleeve

### Flat duct corner

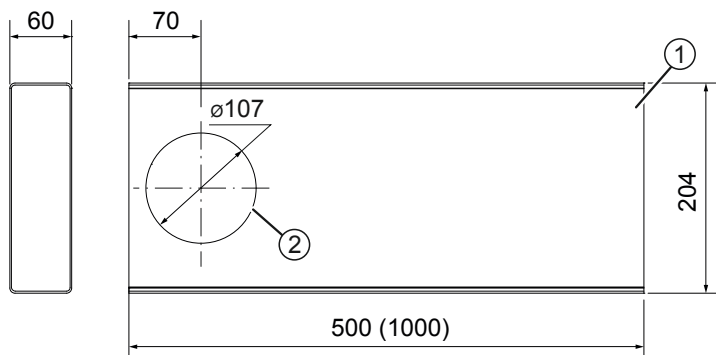


Figure 12: Dimensioned drawing of flat duct corner

- 1 Flat duct corner
- 2 Opening for wall sleeve

### Weather protection hood aV100

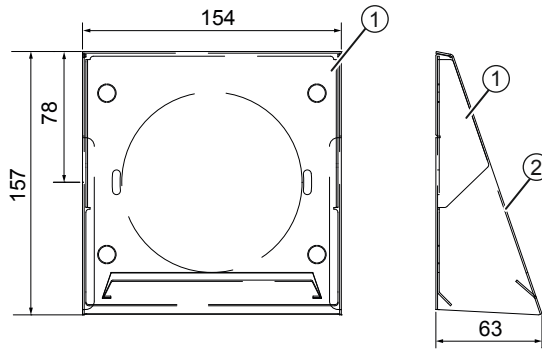


Figure 13: Dimensioned drawing of weather protection hood aV100

- 1 Weather protection hood base plate
- 2 Weather protection hood cover

### Reveal grille

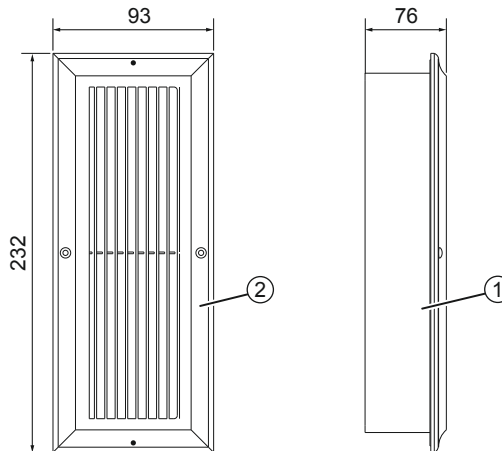


Figure 14: Dimensioned drawing of reveal grille

- 1 Reveal grille
- 2 Flat duct sliding sleeve

### Inner cover

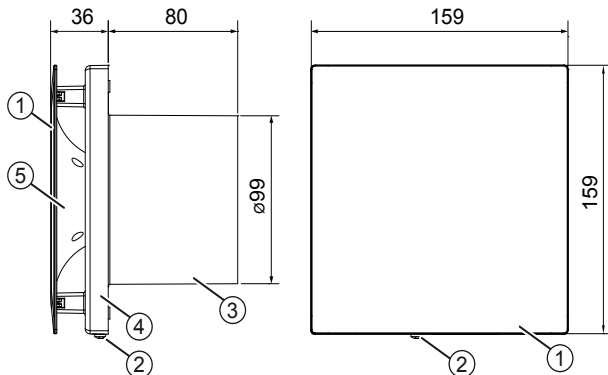


Figure 15: Dimensioned drawing of inner cover Avio N 100

- |  |                          |
|--|--------------------------|
| 1 Panel inner cover                      | 4 Inner cover base plate |
| 2 Inner cover base plate retaining screw | 5 Airflow cone           |
| 3 Fan casing                             |                          |

## 3.3 Installation conditions

During installation, ensure the following conditions are met in order to ensure safe and fault-free operation of the aV100 extract air system:

### Electrical protection areas in bathrooms in accordance with VDE 0100



#### DANGER

**Ingress of water into aV100 extract air system or its components/power source.**

Electric shock and overheating due to short circuit (230V, 50Hz)!

- ▶ Install aV100 extract air system outside electrical protection area 0.
- ▶ Install hygrostat outside electrical protection areas 0 to 2.
- ▶ Install light switch/switch/pushbutton outside electrical protection areas 0 to 2.

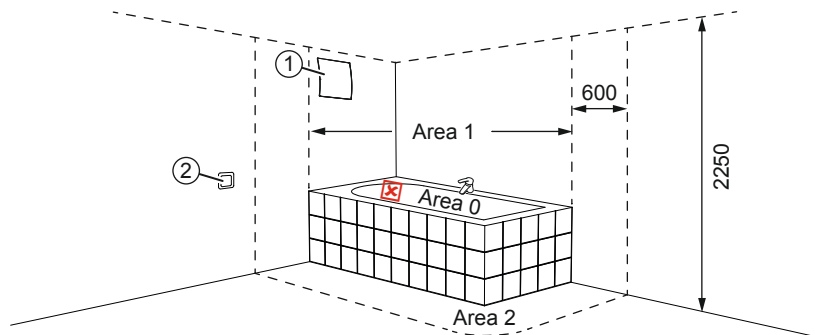


Figure 16: Overview of electrical protection areas in bathrooms in accordance with VDE 0100

1 aV100 extract air system

2 Light switch/switch/pushbutton



## Airflow

Install the aV100 extract air system in the air flow of the room to ensure optimal humidity removal and reliable detection of the humidity level by the humidity sensor.

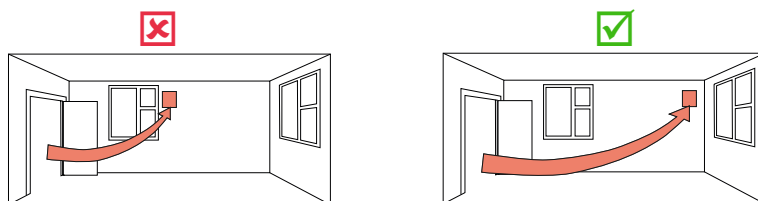


Figure 17: Positioning in the air flow of the room

## Hygrostat (optional)

When installing the hygrostat, make sure that the ventilation slots are at the top and bottom to ensure optimum airflow to the hygrostat.

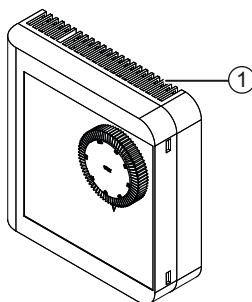


Figure 18: Installation direction for hygrostat/vent position

### 1 Ventilation slots

Install the hygrostat at a point within the air flow of the room (see Figure 17) in which moisture readings correspond to those of the room. This will ensure accurate humidity measurements.

## 4 Electrical connections



### DANGER

#### Exposed electrical components.

Electric shock and injury due to live components (230V, 50Hz)!

- ▶ Before working on electrical installations, disconnect all affected equipment from the power supply.



### DANGER

#### Ingress of water into aV100 extract air system or its components/power source.

Electric shock and overheating due to short circuit (230V, 50Hz)!

- ▶ Install aV100 extract air system outside protection area 0.
- ▶ Install the power source for the aV100 extract air system outside protection areas 0 to 2.



### NOTE

#### Insufficient wire cross-section.

Excessive voltage drop and/or contact cannot be guaranteed!

- ▶ For the power cable use a wire cross-section of 1.5 mm<sup>2</sup>.
- ▶ To connect the optional hygrostat use a 2-wire installation cable with a wire cross-section of at least 0.75 mm<sup>2</sup>.



### TIP

The aV100 extract air system can be combined with a light switch (2-pole) or connected to a standard switch/pushbutton. This is not supplied with the aV100 extract air system and must be provided by the customer.

### Terminal assignment for power cable terminal

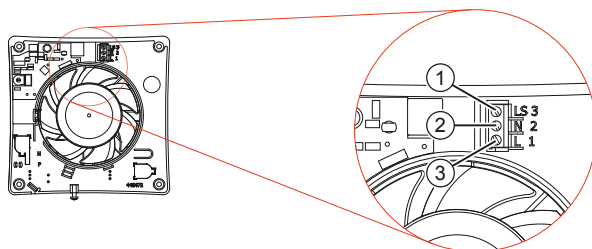


Figure 19: PCB for Avio N 100 extractor fan: terminal assignment for power cable terminal

- 1 Terminal LS (phase conductor, switched)
- 2 Terminal N (neutral conductor)
- 3 Terminal L (phase conductor)

## 4.1 Wiring diagrams

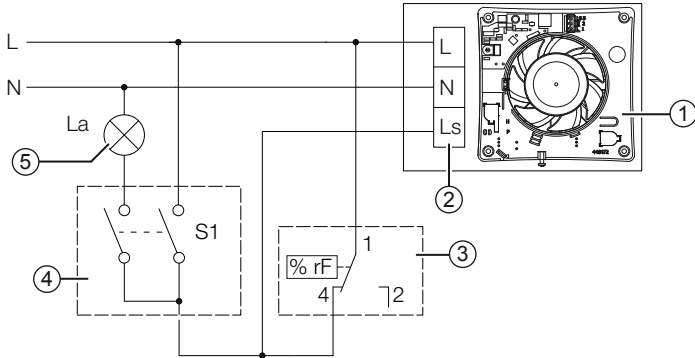


Figure 20: Wiring diagram: Avio N 100 extractor fan with connection to light switch

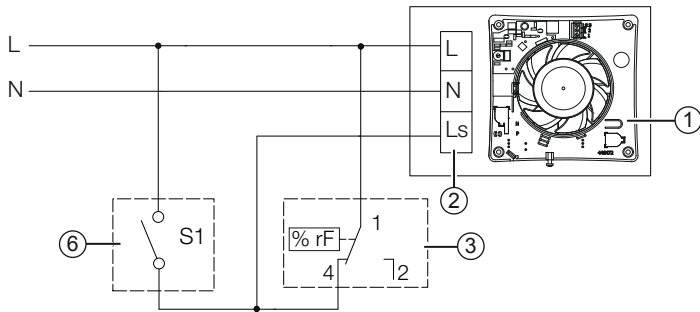


Figure 21: Wiring diagram: Avio N 100 extractor fan with connection to switch

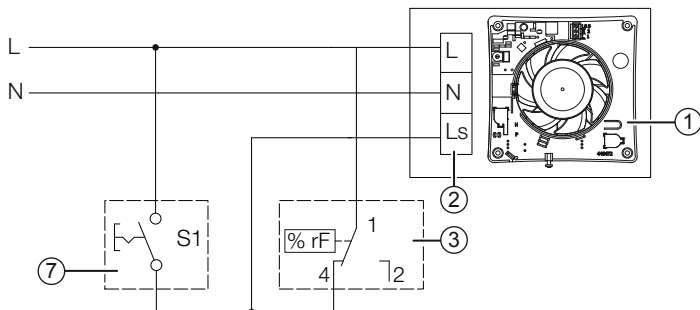


Figure 22: Wiring diagram: Avio N 100 extractor fan with connection to pushbutton

- |                                     |                            |
|-------------------------------------|----------------------------|
| 1 PCB for Avio N 100                | 5 Lamp                     |
| 2 Terminal for power cable terminal | 6 Switch (closing contact) |
| 3 Hygrostat (optional)              | 7 Pushbutton               |
| 4 Light switch, 2-pole              |                            |

## 5 Installation and assembly

### 5.1 Instructions for proper RAL installation



#### NOTE

**Interruption of the thermal insulation composite system.**

Damage to the building structure.

► Observe the regulations in the RAL installation guidelines!

Wall sleeves must be inserted in wall openings, aligned with a gap and finished flush to the interior wall. Modern walls consist of multiple vertical layers which are penetrated during the creation of the wall opening. Replace this construction as far as the wall sleeve. A similar situation exists during the installation of windows and doors; their installation must be carried out according to RAL<sup>1)</sup> and is regulated normatively. Apply this procedure also for inVENTer® ventilation devices. In addition to the supporting and insulating properties of the walls, there are also defined barrier layers:

#### Water vapour barrier

The water vapour barrier is usually in the interior wall and prevents the penetration of water vapour from the living space into the wall. This water vapour can condense to water at cold spots in the wall and thus lead to thermal bridges.

#### Rain barrier

The rain barrier is waterproof and resists rainwater up to a certain pressure. This barrier is located on the outside and is permeable to water vapour in order to bring the moisture out of the wall and keep the wall sufficiently dry for a long time.

#### Wind barrier

Multilayered walls often have special windproof layers that are created using film systems. Frequently, water vapour barriers also perform this function.

#### Expanding waterstops

Expanding waterstops complement the barrier system by flexibly filling gaps and joints between components and masonry. They often also serve locally as rain barriers and water vapour barriers.

#### Adhesives

Adhesives create a long-term bond between various foils.

If present, rebuild these wall layers as far as the wall sleeve. Various materials, systems and additives are available for this purpose. Only use tested and approved materials and read the manufacturer's working instructions thoroughly prior to use.

<sup>1)</sup> RAL-Gütegemeinschaft Fenster und Haustüren e.V. (RAL quality assurance association for windows and front doors) Frankfurt am Main

## 5.2 Creating a plaster slot/wall opening for the wall sleeve



### **DANGER**

#### **Ingress of water into aV100 extract air system**

Electric shock and/or overheating due to short circuit (230V, 50Hz)!

- ▶ Create wall opening for aV100 extract air system outside protection area 0.



### **CAUTION**

#### **Falling masonry when creating the wall opening.**

Injury to persons and/or damage to property!

- ▶ Install protection against falling masonry on building exterior.
- ▶ Remove objects from the immediate vicinity of the building's exterior.



### **TIP**

Creating the wall opening for the wall sleeve is shown below when mounting the extractor fan into the wall sleeve on the exterior wall.

When mounting the extractor fan subceiling the wall opening for the wall sleeve must be created on the exterior wall between ceiling and subceiling.

Additionally on the subceiling a 105 mm diameter hole for the fan must be cut. The power cable must be laid (only when mounting subceiling!) between ceiling and subceiling to the hole for the fan instead of the wall sleeve. The connection between wall sleeve and extractor fan must be carried out on site.

### Requirements:

The masonry must be dry and in a load-bearing condition.

There must be no load-bearing elements at the location of the planned borehole/plaster or wall slot.



### NOTE

#### Accumulation of condensation in the wall sleeve.

Damage to the exterior wall and masonry!

- Create the wall opening with a slope of  $1^\circ$  to  $2^\circ$  to the exterior wall.



### TIP

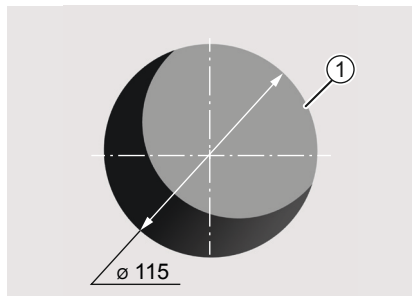
Ensure that you position the wall opening properly (see section 3.2).

Standard model: create the wall opening with at least 250 mm distance from adjacent components in order to install the inner cover and weather protection hood correctly.

Corner model: create the wall opening with at least 200 mm distance from bottom edge of the reveal (lintel) and interior adjacent components in order to install the inner cover and the reveal grille correctly. (Note the insulation thickness and possibly shutters)

With both models, take care not to create the wall opening in the vicinity of radiators/heaters and keep a minimum frontal clearance of 300 mm, otherwise maintenance work cannot be carried out.

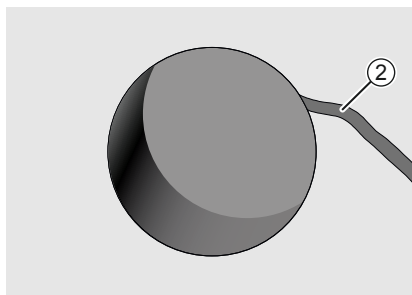
- Drill a wall opening,  $\varnothing$  115 mm (1) with a slope of  $1^\circ - 2^\circ$  to the exterior wall.



### TIP

Ensure that the plaster/masonry slot is  $45^\circ$  above and to the right of the wall opening to ensure correct installation of the power cable.

- Mill the plaster/masonry slot (2) between the light switch/switch/pushbutton and the wall opening.  
**Ensure that** the plaster/masonry slot (2) for the power cable is located at the top right at an angle of  $45^\circ$ .



⇒ The wall opening for the wall sleeve and the plaster/masonry slot have been created.



**TIP**

Seal off the wall opening from the inside and outside until you are ready to install the wall sleeve.

**5.3 Lay power cable**



**DANGER**

**Exposed electrical components.**

Electric shock and injury due to live components (230V, 50Hz)!

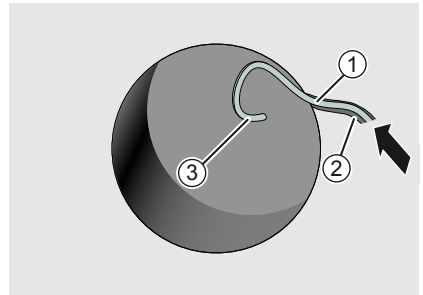
- ▶ Before working on electrical installations, disconnect all affected equipment from the power supply.
- ▶ Observe the requirements for protection class II when laying the power cable.

Requirements:

The wall opening is ready.

The plaster or wall slot has been milled.

- ▶ Connect the power cable to the switch/push-button (see section 4.1: Electrical connections – wiring diagrams).
- ▶ Lay the power cable, 3-wire, (1) between the switch/pushbutton and the wall opening for the wall sleeve.  
**Ensure that** the cable end (3) protrudes approximately 500 mm into the interior space.
- ▶ Re-plaster the plaster/masonry slot (2).



⇒ The power cable has been laid.

## 5.4 Install hygrostat (optional)



### DANGER

#### Exposed electrical components.

Electric shock and injury due to live components (230V, 50Hz)!

- ▶ Before working on electrical installations, disconnect all affected equipment from the power supply.



### NOTE

#### Penetration of water spray into the hygrostat.

Damage to the hygrostat!

- ▶ Install hygrostat outside protection areas 0 to 2.



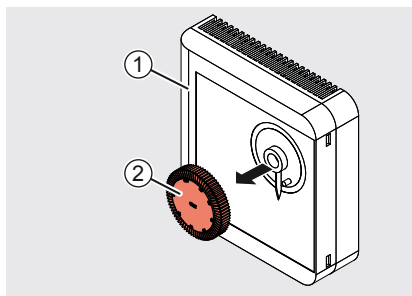
### TIP

Position the hygrostat in the air flow of the room, making sure that the humidity readings at the place of installation correspond to those of the room in order to obtain representative humidity measurements.

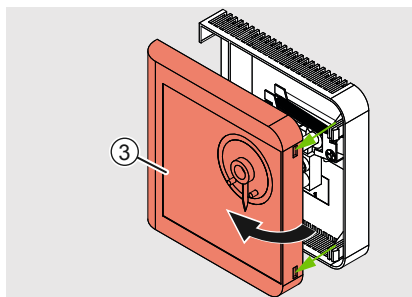
Requirements:

The installation location has been chosen.

- ▶ Lay the 2-wire hygrostat cable between the control element and hygrostat installation location (see section 4.1: Electrical connections – wiring diagrams).
- ▶ Pull the rotary control (2) off the hygrostat's casing (1).



- ▶ Release the hygrostat's cover (3) at the notches (green arrow) on the right side with a screwdriver.
- ▶ Fold the hygrostat's cover (3) away to the left side.







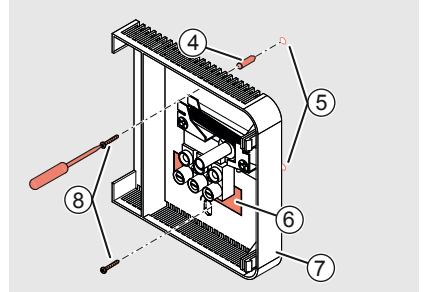
**NOTE**

**Insufficient wire cross-section.**

Excessive voltage drop and/or contact cannot be guaranteed!

- ▶ To connect the optional hygrostat use only a 2-wire installation cable with a wire cross-section of at least 0.75 mm<sup>2</sup>.

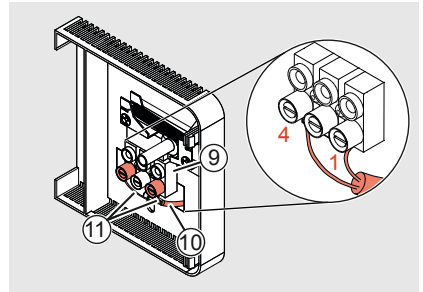
- ▶ Mark the drill holes (5) for the hygrostat base-plate (7) on the interior wall.
- ▶ Drill two boreholes at the marks and insert the rawl plugs (4).
- ▶ Screw the hygrostat base plate (7) to the interior wall with mounting screws (8).
- ▶ Break out the cable entry (6) on the back of the hygrostat base plate (7).
- ▶ Run the 2-wire hygrostat cable through the cable entry.



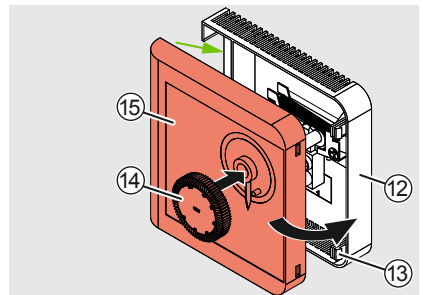
**TIP**

Ensure that the vents of the hygrostat show upward and downward.

- ▶ Connect the wires (11) of the hygrostat cable (10) with terminal 1 and terminal 4 on the terminal block (9).  
(see section 4: Electrical connections – terminal assignment).



- ▶ Mount the hygrostat cover (15) on the left side of the hygrostat base plate (12) (green arrow).
- ▶ Flip the right side of the hygrostat cover onto the hygrostat baseplate (12).
- ▶ Snap the hygrostat cover (15) on the right side into the locking hook (13).
- ▶ Press the rotary control (14) onto the hygrostat cover (15) in accordance with the guidance of the axis.



⇒ The hygrostat is installed.

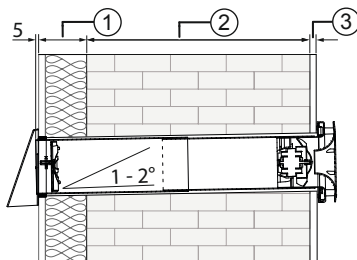
## 5.5 Adjust length of wall sleeve

### aV100 extract air system with weather protection hood (standard model)

Requirements:

The interior and exterior walls are completed.

- ▶ Determine the exact wall thickness + 5 mm.  
**Ensure to** add the thickness of the render and insulation (1), masonry (2) and interior plaster (3).
- ▶ **Ensure that** the sleeve of the wall sleeve has an overhang of 5mm on the exterior wall.
- ▶ Slide the sleeve of the wall sleeve and the tube of the wall sleeve inside each other until the calculated wall thickness +5 mm is reached  
(see table on page 26).



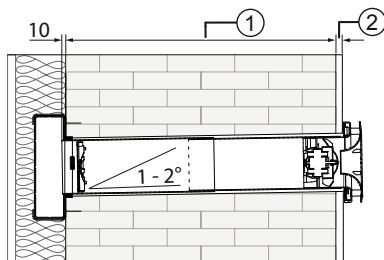
⇒ The length of the wall sleeve has been adjusted.

### aV100 extract air system with flat duct and reveal grille (corner model)

Requirements:

The interior and exterior walls are completed.

- ▶ Determine the exact wall thickness + 10 mm.  
**Be sure to** add the thickness of the masonry (1) and interior plaster (2).
- ▶ **Ensure that** the sleeve of the wall sleeve has an overhang of 10 mm on the exterior wall.
- ▶ Slide the sleeve of the wall sleeve and the tube of the wall sleeve inside each other until the calculated wall thickness +10 mm is reached  
(see table on page 26).



⇒ The length of the wall sleeve has been adjusted.

**Procedure for adjusting the length of the wall sleeve**



**NOTE**

**The length of the wall sleeve is dependent on the exterior outlet.**

Correct installation of the weather protection hood/flat duct corner is not possible!

- ▶ Weather protection hood: add 5 mm to the determined wall thickness.
- ▶ Flat duct and reveal grille: add 10 mm to the determined wall thickness.

Wall sleeve		Extension wall sleeve
Wall thickness		Wall thickness
150 mm – 319 mm	320 mm – 525 mm	526 mm – 1000 mm
<b>Step 1:</b>		
Shorten the sleeve of the wall sleeve with an angle grinder or jigsaw, on the side without non-return valve, to the determined wall thickness -40 mm.	Insert the wall sleeve into the wall opening from the outside. <b>Ensure that</b> the wall sleeve has an overhang on the exterior wall.	Insert the tube of the wall sleeve into the sleeve of the wall sleeve extension with at least a 50 mm overlap. Shorten the tube and sleeve as necessary.
<b>Step 2:</b>		
Shorten the tube of the wall sleeve with an angle grinder or a jigsaw to the determined wall thickness -40 mm.	From the interior, pull the tube from the sleeve until the wall thickness is reached. <b>Ensure that</b> the wall sleeve still has an overhang on the exterior wall.	Set the combination of wall sleeve and wall sleeve extension to the determined wall thickness + overhang. <b>Ensure that</b> the wall sleeve has an overhang on the exterior wall.
<b>Step 3:</b>		
Insert tube and sleeve of the wall sleeve inside each other with approx. 50 mm overlap.	Remove the wall sleeve from the wall opening and seal the interface between the tube and sleeve airtight with durable waterproof fabric tape <sup>1)</sup> .	Seal the interface between the tube and sleeve airtight with durable waterproof fabric tape <sup>1)</sup> .
<b>Step 4:</b>		
Seal the interface between the tube and sleeve airtight with durable waterproof fabric tape <sup>1)</sup> .		

<sup>1)</sup> Not included. Available as an option.

## 5.6 Install the aV100 extract air system with aV100 weather protection hood (standard model)

### Install wall sleeve for aV100 weather protection hood

Requirements:

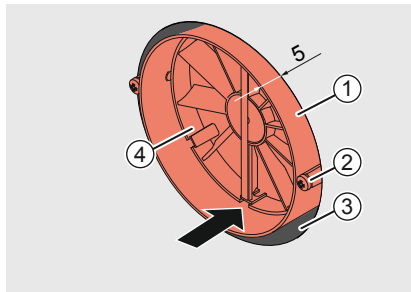
The power cable has been laid.

- ▶ Insert the wall sleeve (1) into the wall opening (3) from the outside.

**Ensure that** the fixing elements (2) and the non-return valve (4) point towards the outside.

**Ensure that** the notch in the non-return valve (4) is facing downwards.

**Ensure that** the wall sleeve has an overhang of 5mm on the exterior wall.

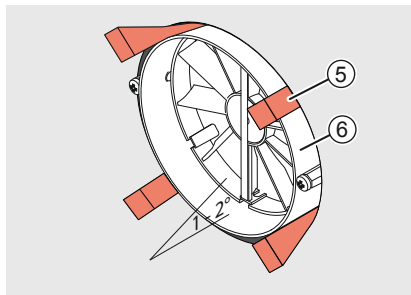


### TIP

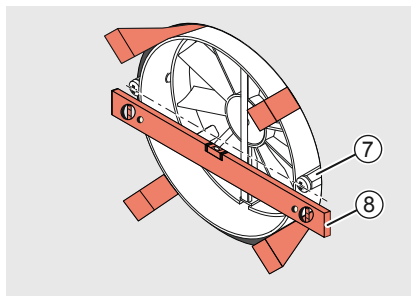
Do not insert the wall sleeve too deeply into the wall opening.

When inserting the wall sleeve, pay attention to the thickness of the plaster. Also ensure that the fixing elements and non-return valve point towards the exterior wall.

- ▶ Attach the wall sleeve (6) inside and outside with the mounting wedges (5) so that there is a slope of  $1^\circ - 2^\circ$  to the exterior wall.
- ▶ Check the angle of the wall sleeve (6) from the interior using a spirit level.



- ▶ Ensure the fixing elements (7) are horizontal using a spirit level (8).



### TIP

Do not remove the thread locks on the fixing elements until after completion of the wall work to prevent contamination of the threads.



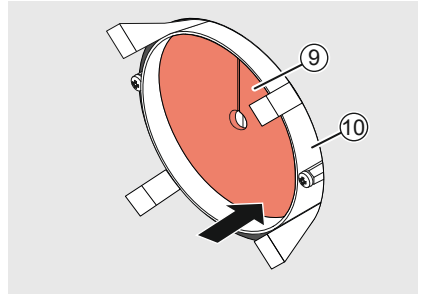
**NOTE**

**Contamination of the non-return valve.**

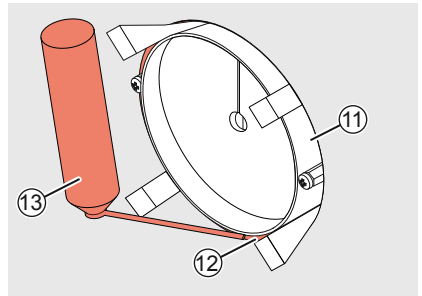
Incorrect functioning of the aV100 extract air system!

- ▶ Insert styrofoam discs before foam-sealing the wall sleeve.

- ▶ Insert the styrofoam protective discs (9) into the wall sleeve (10) from the outside and inside.



- ▶ Foam-seal the gap (12) between the wall sleeve (11) and masonry peripherally with non-compressing 2K fitting foam (13).



**DANGER**

**Exposed electrical components.**

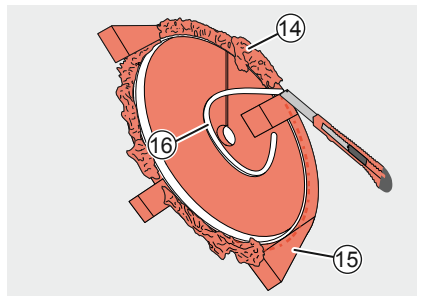
Electric shock and injury due to live components (230V, 50Hz)!

- ▶ Before working on electrical installations, disconnect all affected equipment from the power supply.

- ▶ Cut the 2K fitting foam (14) and protruding mounting wedges (15) flush with the exterior and interior wall.

**Take care not to damage the power cable (16) in the interior wall.**

- ▶ Remove the styrofoam protective disc from the wall sleeve on the exterior wall side.



⇒ The standard model wall sleeve is installed.

## Install aV100 weather protection hood



### NOTE

#### Install on unfinished exterior wall.

Damage to the exterior wall!

- ▶ Do not install the weather protection hood until the exterior wall is completed and fully cured.

Requirements:

The exterior wall is completed and even.

The wall sleeve is installed.

The styrofoam protective disc is removed from the exterior wall.



### NOTE

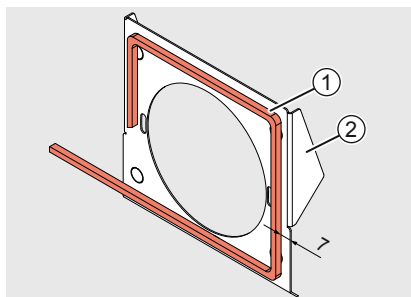
#### Algae accumulation around the weather protection hood.

Discolouration of the facade!

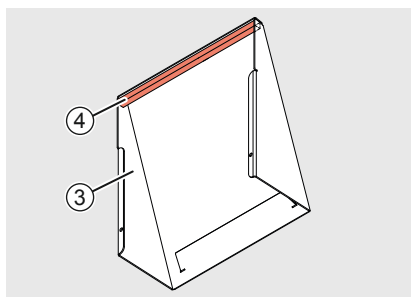
- ▶ Secure all sealing tapes circumferentially before installing the weather protection hood.
- ▶ In vulnerable areas, apply a biocidal/water repellent treatment to the plaster surface around the weather protection hood before installing. (Consult your planner!)

- ▶ From the exterior wall side, secure the sealing tape, 9 mm, (1) circumferentially along the weather protection hood base plate (2).

**Ensure that** the sealing tape (1) has a clearance of about 7 mm to the outer edge of the base plate on both the left and right.



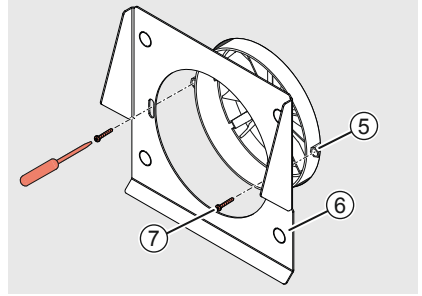
- ▶ Secure the sealing tape, 9 mm, (4) to the top edge inside the weather protection hood base plate (3).



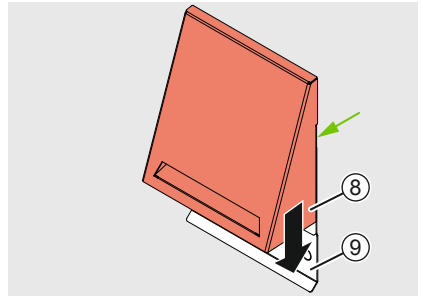
### TIP

Before installing the weather protection hood base plate, remove the styrofoam disc from the wall sleeve (from the exterior wall side) to ensure adequate air flow.

- ▶ Remove the protective disc on the exterior wall side.
- ▶ Turn the 2 screws (7) from the fixing elements (5) of the wall sleeve.
- ▶ Screw the weather protection hood base plate (6) to the wall sleeve's fixing elements (5) with 2 screws (7).



- ▶ Place the weather protection hood cover (8) onto the weather protection hood base plate (9) from the top.
- ▶ Pull the weather protection hood cover (8) downwards as far as it will go.  
**Ensure that the** hook guides (green arrow) on the weather protection hood cover (8) hook into the weather protection hood base plate (9).

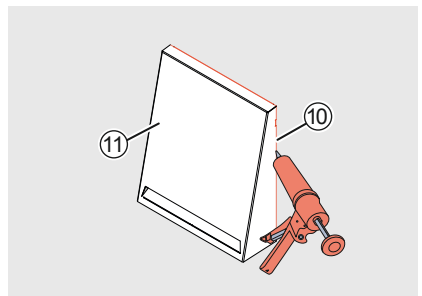


**WARNING**

**Incorrect sealing of the joint between the weather protection hood base plate and facade.** Weather protection hood cover cannot be installed.

- ▶ After fitting the weather protection hood cover, seal the joints between weather protection hood cover and facade using permanently elastic exterior sealant on both sides and at the top.

- ▶ Seal the joint (10) between the weather protection hood cover (11) and the exterior wall with permanently elastic exterior sealant on the sides and top.



⇒ The aV100 weather protection hood is installed.



**TIP**

Continue installation of the extract air system by referring to section 5.8: Installation and Assembly – insert Avio N 100 extractor fan and connect power cable.

## 5.7 Install the aV100 extract air system with flat duct and reveal grille (corner model)

### Installing the wall sleeve for flat duct and reveal grille

Requirements:

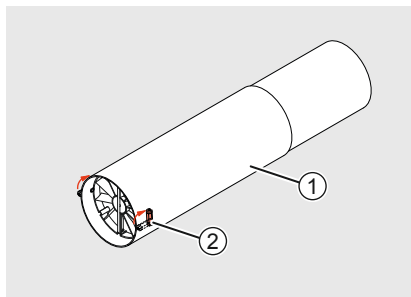
The power cable has been laid.



#### TIP

Before inserting the wall sleeve, rotate the fixing elements upwards.

- ▶ Turn the fixing elements (2) on the wall sleeve (1) upwards 90°.



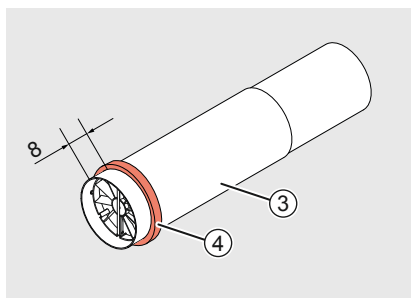
#### NOTE

##### Algae accumulation around the flat duct.

Discolouration of the facade!

- ▶ Secure all sealing tapes circumferentially before installing the flat duct.
- ▶ In vulnerable areas, apply a biocidal/water repellent treatment to the masonry around the flat duct before installing. (Consult your planner about this!)

- ▶ Attach the sealing tape, 9 mm (4) circumferentially to the sleeve (3) of the wall sleeve.  
**Be sure to** leave a distance of 8 mm between the outer edge of the wall sleeve and the sealing tape.





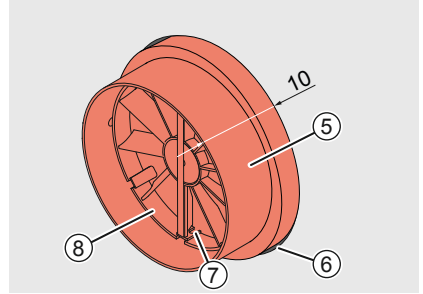


**TIP**

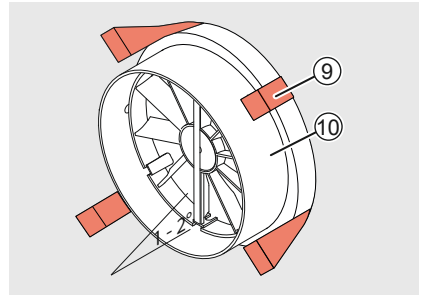
Do not insert the wall sleeve too deeply into the wall opening

When inserting the wall sleeve, pay attention to the thickness of the plaster. Also ensure that the fixing elements and non-return valve point towards the exterior wall.

- ▶ Insert the wall sleeve (5) into the wall opening (6) from the outside wall.  
**Ensure that** the non-return valve (8) faces outward and the notch (7) in the non-return valve is directed downwards.  
**Ensure that** the wall sleeve (5) has an overhang of 10 mm on the exterior wall.



- ▶ Attach the wall sleeve (10) inside and outside with the mounting wedges (9) so that there is a slope of 1° – 2° to the exterior wall.
- ▶ Check the angle of the wall sleeve from the interior using a spirit level.



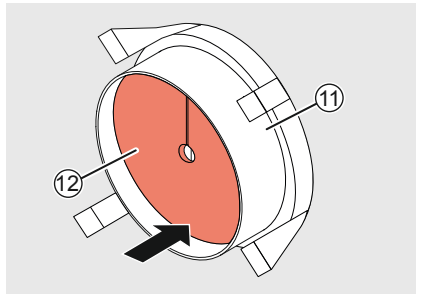
**NOTE**

**Contamination of the non-return valve.**

Incorrect functioning of the extract air system!

- ▶ Insert styrofoam protective discs before foam-sealing the wall sleeve.

- ▶ Insert the styrofoam protective discs (12) into the wall sleeve (11) from the outside and inside.





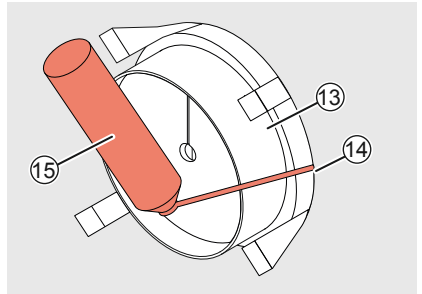
### DANGER

#### Exposed electrical components.

Electric shock and injury due to live components (230V, 50Hz)!

- ▶ Before working on electrical installations, disconnect all affected equipment from the power supply.

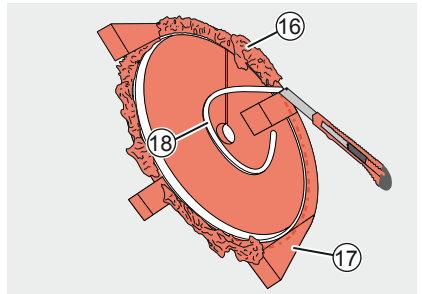
- ▶ Foam-seal the gap (14) between the wall sleeve (13) and masonry peripherally with non-pressing 2K fitting foam (15).



- ▶ Cut the 2K fitting foam (16) and protruding mounting wedges (17) flush with the exterior and interior wall.

**Take care not to damage the power cable (18) in the interior wall.**

- ▶ Remove the styrofoam protective disc from the wall sleeve on the exterior wall side.



⇒ The corner model wall sleeve is installed.

Calculate installation length of flat duct

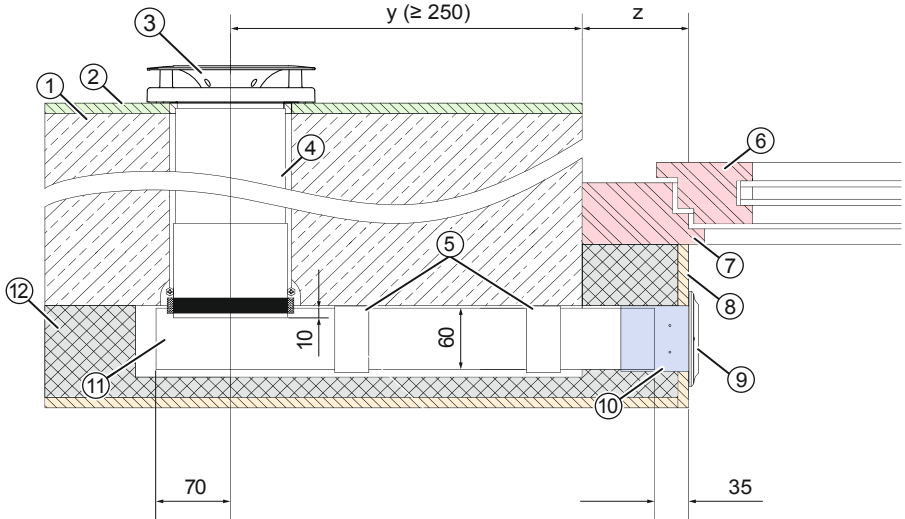


Figure 23: Overview of dimensions for installing flat duct corner

- |               |                       |                                       |
|---------------|-----------------------|---------------------------------------|
| 1 Masonry     | 6 Window casement     | 10 Flat duct sliding sleeve           |
| 2 Plaster     | 7 Window frame        | 11 Flat duct corner <sup>1), 2)</sup> |
| 3 Inner cover | 8 Reveal edge plaster | 12 Insulation <sup>3)</sup>           |
| 4 Wall sleeve | 9 Reveal grille       |                                       |
| 5 Wall mount  |                       |                                       |

<sup>1)</sup> Use Corner 500 flat duct if (y + z) is max. 450 mm.

<sup>2)</sup> Use Corner 1000 flat duct if (y + z) is between 450 mm and 950 mm.

<sup>3)</sup> Insulation thickness on the flat duct must be at least 20 mm.

Requirements:

None

- ▶ Add the dimensions y and z. (y+z)
- ▶ Add 35 mm to the calculated sum. (y+z) + 35 mm

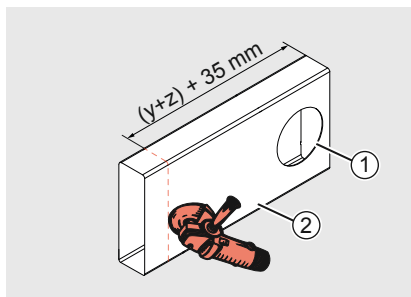
⇒ The installation length of the flat duct is calculated ( $L_{\text{installation}} = (y+z) + 35 \text{ mm}$ )

## Shortening the flat duct

Requirements:

The installation length of the flat duct has been calculated.

- ▶ Shorten the flat duct (2) to the determined installation length  $L_{\text{insertion}}$  (see Figure 23, page 35).  
**Be sure to shorten the flat duct (2) on the opposite side of the round opening (1) for the wall sleeve.**
- ▶ Deburr the edges.



⇒ The flat duct has been cut to the required length.

## Install the flat duct corner

Requirements:

The exterior wall is even.

The wall sleeve is installed.

The styrofoam disc on the exterior wall side has been removed.

### TIP

Before installing the flat duct corner, remove the styrofoam protective disc from the wall sleeve on the exterior wall side to ensure proper functioning of the extract air system.

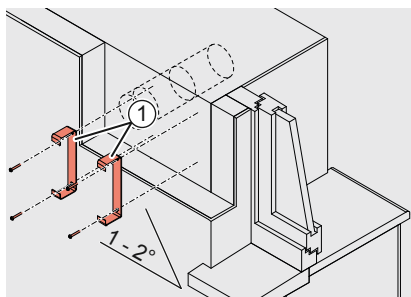
### NOTE

#### Formation of condensation.

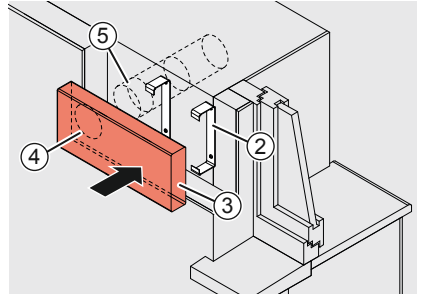
Damage to the exterior wall!

- ▶ Install the flat duct corner with a slope of  $1^\circ - 2^\circ$  to the window reveal.

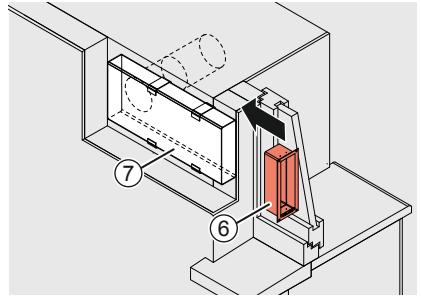
- ▶ Screw the wall bracket (1) to the exterior wall with a slope of  $1^\circ - 2^\circ$ .



- ▶ Slide the round opening (4) on the flat duct (3) onto the wall sleeve (5).
- ▶ Snap the flat duct (3) into the wall bracket (2).



- ▶ Insert the sliding sleeve (6) onto the flat duct (7) as far as it will go.



### TIP

At least 20 mm of insulation must be attached to the flat duct so that the reveal grille does not protrude over the window reveal.

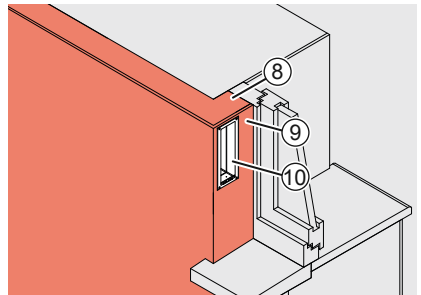
For better mounting of the reveal grille, we recommend an insulation thickness of  $\geq 20$  mm on the flat duct.



### TIP

Mask the outlet opening of the flat duct corner before applying the render. This will prevent contamination of the flat duct.

- ▶ Fit insulation (8) with a thickness of at least 20 mm to the flat duct.
- ▶ Apply render (9) to the insulation and window reveal.
- ▶ Plaster the sliding sleeve (10) to the window reveal.



⇒ The flat duct corner is installed.

## Install the reveal grille

Requirements:

The exterior wall is completed and even.

The adhesive tape on the flat duct's opening has been removed.



### NOTE

**Install on unfinished exterior wall.**

Damage to the exterior wall!

- ▶ Do not install the reveal grille until the exterior wall is completed and fully cured.



### NOTE

**Algae accumulation around the reveal grille.**

Discolouration of the facade!

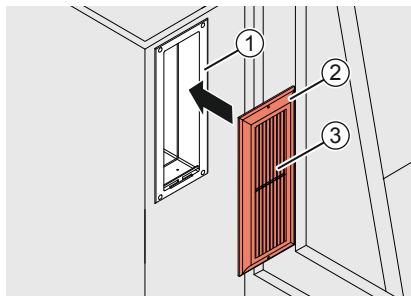
- ▶ In vulnerable areas, apply a biocidal/water repellent treatment to the plaster surface around the reveal grille before installing. (Consult your planner about this!)

- ▶ Place the reveal grille (2) on the sliding sleeve (1).

**Ensure that** the blades (3) of the reveal grille (2) direct the air flow away from the window.

- ▶ Push the reveal grille (2) onto the sliding sleeve (1).

**Ensure that** the reveal grille clicks into place.



⇒ The reveal grille is installed.

## 5.8 Insert Avio N 100 extractor fan and connect power cable



### DANGER

**Exposed electrical components.**

Electric shock and injury due to live components (230V, 50Hz)!

- ▶ Before working on electrical installations, disconnect all affected equipment from the power supply.



### TIP

Mounting the extractor fan is shown below when mounting the extractor fan directly into the wall sleeve.

When mounting the extractor fan subceiling.

Additionally on the subceiling a 105 mm diameter hole for the fan must be cut. The power cable must be laid (only when mounting subceiling!) between ceiling and subceiling to the hole for the fan instead of the wall sleeve. The connection between wall sleeve and extractor fan must be carried out on site.

**Requirements:**

The wall sleeve is installed.

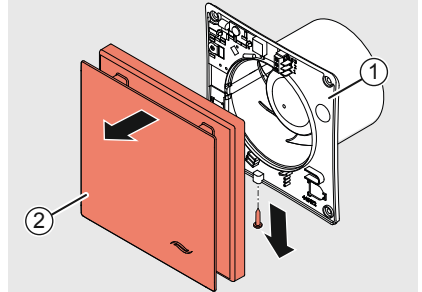
The power cable has been laid.



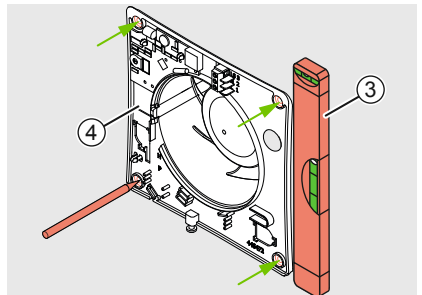
**TIP**

Before using the extractor fan, remove the styrofoam protective disc from the wall sleeve on the interior wall side.

- ▶ Unscrew the inner cover (2) from the fan casing (1).
- ▶ Remove the inner cover (2) from the front of the fan casing (1).
- ▶ Remove the styrofoam protective disc from the wall sleeve on the interior wall side.



- ▶ Place the fan casing (4) into the wall sleeve from the interior.
- ▶ Level the fan casing (4) using a spirit level (3).
- ▶ Mark the 4 corner boreholes (green arrows).
- ▶ Remove the fan casing (4) from the wall sleeve.
- ▶ Drill the boreholes, Ø 6 mm, min. 30mm deep.
- ▶ Insert four S6 rawl plugs, 30mm.



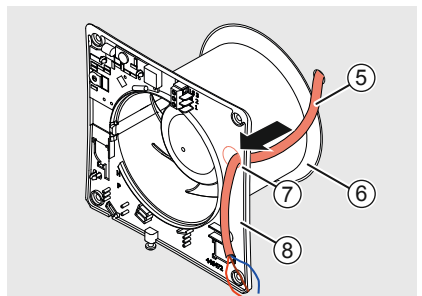
**DANGER**

**Exposed electrical components.**

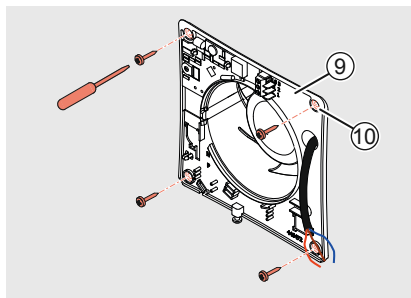
Electric shock and injury due to live components (230V, 50Hz)!

- ▶ Before working on electrical installations, disconnect all affected equipment from the power supply.

- ▶ Insert the power cable (5) through the borehole in the (7) fan casing (8).
- ▶ From the interior, slide the fan casing (8) into the wall sleeve (6) as far as the interior wall.



- ▶ Screw the fan casing (9) to the four corner boreholes (10) on the interior wall.



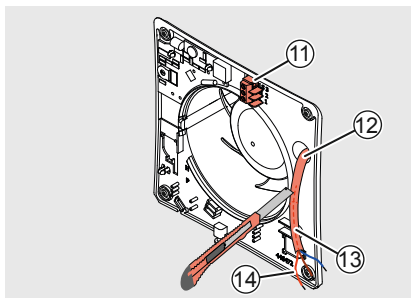
### NOTE

#### Over-shortened cable.

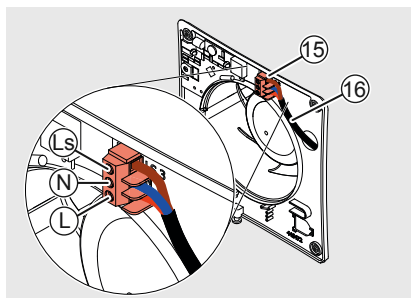
Cable cannot be reconnected after disassembly for maintenance work!

- ▶ Do not excessively shorten the cable.

- ▶ Remove the cable sheath (13) of the power cable (12).
  - ▶ Shorten the wires (14) of the power cable, ensuring that they can reach the power supply terminal (11) on the PCB of the fan casing.
- Take care not to over-shorten the power cable (12).**
- ▶ Strip the insulation (14) of the power cable (12).



- ▶ Connect the shortened power cable (16), according to the wiring diagram, to the terminal block (15), see section 4: Electrical connections – terminal assignment, wiring diagrams.



⇒ The Avio N 100 extractor fan is inserted and the power cable is connected.



### TIP

Check functioning of the aV100 extract air system immediately after connecting the Avio N 100 extractor fan. To do this, connect the Avio N 100 to the power supply and activate the operating element (light switch, switch or pushbutton). Subsequently disconnect the extract air system from the power supply again.



## 5.9 Install inner cover



### DANGER

#### Exposed electrical components.

Electric shock and injury due to live components (230V, 50Hz)!

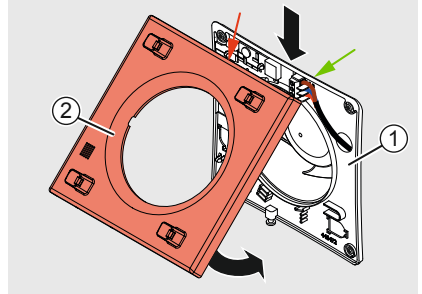
- ▶ Before working on electrical installations, disconnect all affected equipment from the power supply.

Requirements:

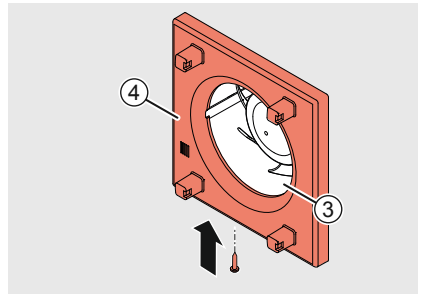
The fan casing is inserted.

The extract air system is connected to the power circuit.

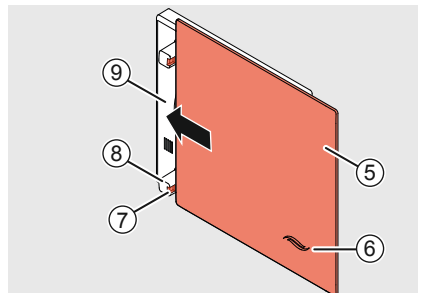
- ▶ Hang the top edge of the inner cover base plate (red arrow) (2) in the upper strip (green arrow) of the fan casing (1).
- ▶ Press the inner cover base plate (2) onto the fan casing (1) at all four corners.  
**Ensure that** the inner cover base plate (2) clicks into place.



- ▶ Screw the inner cover base plate (4) to the bottom edge of the fan casing (3).



- ▶ Place the panel inner cover (5) on the right side of the spacer (8) of the inner panel base plate (9).  
**Ensure** the inVENTer logo (6) is visible on the bottom-right of the panel inner cover (5).
- ▶ Slide the panel inner cover (5) to the left in the detent lugs (7) of the inner panel base plate (9).  
**Ensure that** the detent lugs (7) click into place.



⇒ The inner cover is installed.

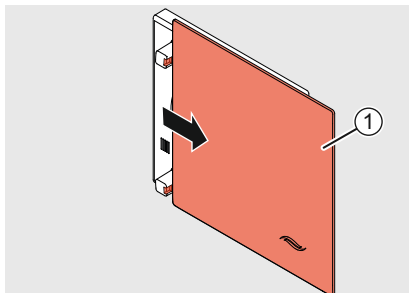
## 5.10 Disassemble inner cover

Requirements:

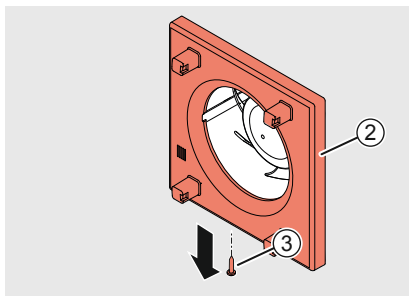
The extract air system is disconnected from the power circuit.

The inner cover is installed.

- ▶ Slide the inner panel cover (1) to the right until it audibly disengages.
- ▶ Remove the inner panel cover (1) from the front.



- ▶ Undo the screw (3) on the bottom edge of the inner cover base plate (2).



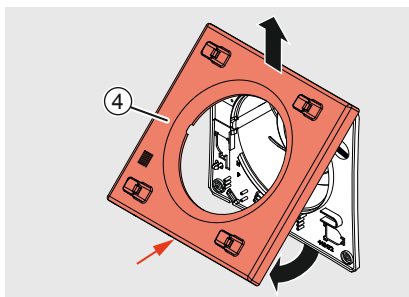
### DANGER

**Exposed electrical components.**

Electric shock and injury due to live components (230V, 50Hz)!

- ▶ Before working on electrical installations, disconnect all affected equipment from the power supply.

- ▶ Gently pull on the bottom edge (red arrow) of the inner cover base plate (4) until the four corners audibly disengage.



⇒ The inner cover has been disassembled.

## 6 Operation

### 6.1 Operate light switch/switch/pushbutton

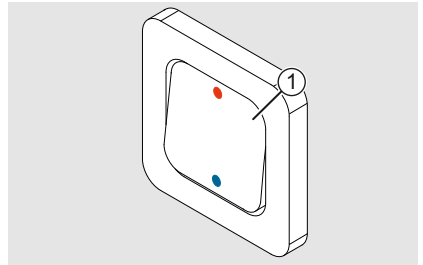
Operation of the aV100 extract air system is carried out in combination with a light switch or a standard switch or pushbutton.

#### Light switch operation

Requirements:

The aV100 extract air system is connected to mains voltage.

- ▶ Turn the room lighting on via the light switch (1) (blue dot).
  - ⇒ The aV100 extract air system is switched on.
- ▶ Turn the room lighting off via the light switch (1) (red dot).
  - ⇒ The run-on time is activated.
  - ⇒ The extract air system will run until the end of the run-on time and then switch itself off.



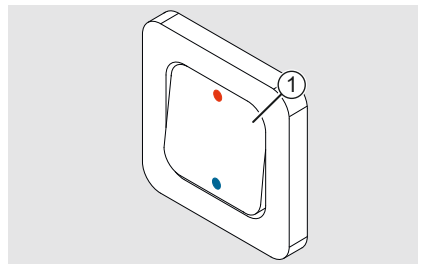
⇒ The aV100 extract air system was operated via a light switch.

#### Switch operation

Requirements:

The aV100 extract air system is connected to mains voltage.

- ▶ Turn the switch (1) on (blue dot).
  - ⇒ The aV100 extract air system is switched on.
- ▶ Turn the switch (1) off (red dot).
  - ⇒ The run-on time is activated.
  - ⇒ The extract air system will run until the end of the run-on time and then switch itself off.



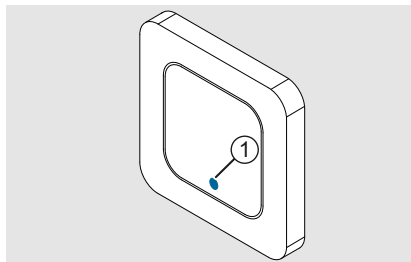
⇒ The aV100 extract air system was operated via a switch.

## Pushbutton operation

Requirements:

The aV100 extract air system is connected to mains voltage.

- ▶ Briefly press the pushbutton (1) (blue dot).
  - ⇒ The aV100 extract air system is switched on.
  - ⇒ The run-on time is activated.
  - ⇒ The extract air system will run until the end of the run-on time and then switch itself off.



⇒ The aV100 extract air system was operated via a pushbutton.

## 6.2 Set the run-on time



### DANGER

**Exposed electrical components.**

Electric shock and injury due to live components (230V, 50Hz)!

- ▶ Before working on electrical installations, disconnect all affected equipment from the power supply.

If desired, the run-on time (time between interrupting the power supply via switch/pushbutton and the fan switching off) can be freely set within a range of 5 minutes to 30 minutes. The potentiometer for setting the run-on time is located on the PCB of the Avio N 100 extractor fan. The run-on time is factory set at 15 minutes.

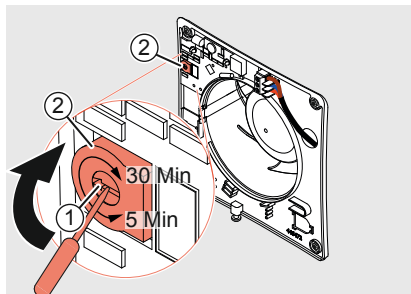
### Increase the run-on time

Requirements:

The ventilation system is disconnected from the power circuit.

The inner cover is removed (see section 5.10).

- ▶ Turn the adjuster (1) on the potentiometer (2) clockwise with a screwdriver.



⇒ The run-on time is increased.

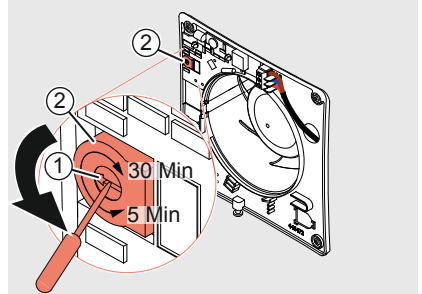
## Decrease the run-on time

Requirements:

The ventilation system is disconnected from the power circuit.

The inner cover is removed (see section 5.10).

- ▶ Turn the adjuster (1) on the potentiometer (2) anti-clockwise with a screwdriver.



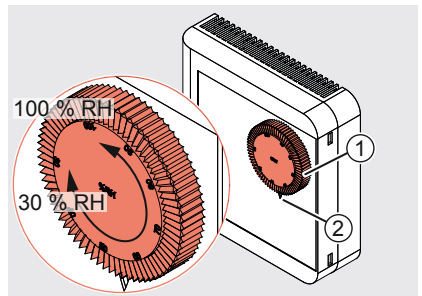
⇒ The run-on time is decreased.

## 6.3 Set hygrostat (optional)

Requirements:

The extract air system is switched on.

- ▶ Turn the rotary control (1) clockwise until the desired value is above the marking arrow (2).
  - ⇒ The relative humidity limit at which the extractor fan is activated has been raised.
- ▶ Turn the rotary control (1) anti-clockwise until the desired value is above the marking arrow (2).
  - ⇒ The relative humidity limit at which the extractor fan is activated has been lowered.



⇒ The hygrostat is set.

## 7 Specifications

### Extract air system operating conditions

Feature	Value
Ambient temperature	5°C – 40°C
Supply air	Free from aggressive gases, dust and oils

### Air flow characteristic of Avio N 100 extractor fan

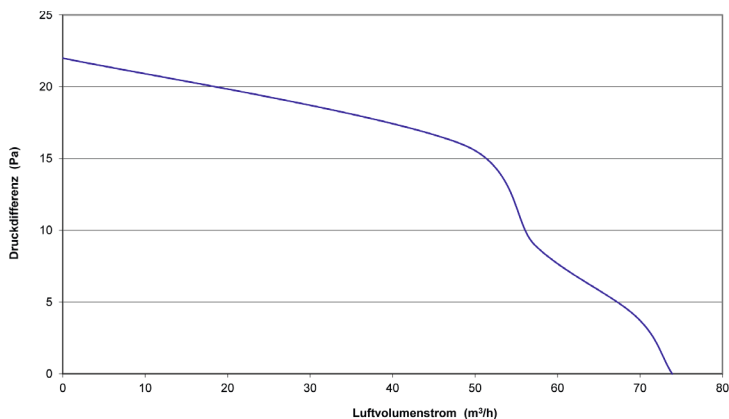


Figure 24: Air flow performance of Avio N 100 extractor fan:

### Extractor fan with run-on function (Avio N 100)

Feature	Value
Protection class	II
Type of protection	IP44
Input voltage	AC 230 V, 50 Hz
Power consumption	6.4 W
Width x Height x Depth	159 x 159 x 115
Weight	590 g
Noise emission (rated)	28 dB(A)
Run-on time	5 minutes – 30 minutes

**Hygrostat (optional)**

Feature	Value
Type of protection	IP 30D
Measuring range/adjustment range	35 % – 95 % RH / 30% – 100 % RH
Compensation time	20 minutes – 40 minutes (depending on airflow)
Switching differential	Approx. 4% RF at 50% RF
Switching capacity	AC 250 V, 0.1 A – 5 A (with resistive load)
Contact	Changer, 1 pole (NO or NC)
Ambient temperature	-40°C – 60°C
Working temperature	0°C – 60°C
Width x Height x Depth	81 mm x 81 mm x 28 mm
Weight	Approx. 60 g

**Wall sleeve**

Components	Length/ depth (mm)	Dimensions (mm)	Weight (g)
Sleeve of wall sleeve	300	Ø 107	270
	with pre-installed non-return valve		
Tube of wall sleeve	280	Ø 103	180
Wall sleeve extension	Identical to the wall sleeve, without non-return valve and fixing elements		

**Flat duct**

Designation	Length/ depth (mm)	dimensions (W x H in mm)	Weight (g)
Flat duct 60x204x500 (D100) Corner	500	204 x 60	668
Flat duct 60x204x1000 (D100) Corner	1000	204 x 60	1296

**Weather protection hood**

<b>Designation</b>	<b>Length/ depth (mm)</b>	<b>Dimensions (W x H in mm)</b>	<b>Weight (g)</b>
Weather protection hood aV100 <sup>1)</sup>	46	154 x 157	424

<sup>1)</sup> available in white (RAL 9016)/ grey (RAL 9006) and iron grey (RAL 7011)

**Inner cover**

<b>Designation</b>	<b>Length/ depth (mm)</b>	<b>Dimensions (W x H in mm)</b>	<b>Weight (g)</b>
Inner cover Avio N 100, white RAL 9010	115	159 x 159	135

**Reveal grille with sliding sleeve**

<b>Designation</b>	<b>Length/ depth (mm)</b>	<b>Dimensions (W x H in mm)</b>	<b>Weight (g)</b>
Reveal grille	76	93 x 232	153



## 8 Scope of supply

### aV100 extract air system

- Wall sleeve R-D103/107x300x550 RV with styrofoam discs and mounting wedges
- Weather protection hood aV100 (white/grey/Nord (iron grey))
- Flat duct 60x204x500 (D100) corner or flat duct 60x204x1000 (D100) corner
- Avio N 100 extractor fan with run-on function and inner cover
- Installation and operating instructions

Components	Order number
aV100 extract air system	1001-0140
Installation and operating instructions	7002-0064

### Avio N 100 extractor fan with run-on function and inner cover

Components	Order number
Avio N 100	3002-0265

### Wall sleeve

Components	Order number
Wall sleeve R-D103/107x330x550 RV	1506-0079

### Weather protection hood aV100

Components	Order number
Weather protection hood aV100, white RAL9016	1508-0043
Weather protection hood aV100, Nord RAL7011	1508-0044
Weather protection hood aV100, grey RAL9006	1508-0066

### Flat duct corner with reveal grille

Components	Order number
Flat duct 60x204x500 (D100) Corner	1506-0060
Flat duct 60x204x1000 (D100) Corner	1506-0061

## 9 Accessories and spare parts

### Accessories

Components	Order number
Wall sleeve extension aV, 2-piece	1002-0021
Self-adhesive fabric tape 50 m x 48 mm	1004-0051
Hygrostat	1002-0015
2K fitting foam (for companies only)	1004-0050

### Spare parts

Components	Order number
Grille for duct 60x204	2001-0070
Cover IB Avio V-159x159, RAL9003	3006-0240

## 10 Servicing and maintenance

The aV100 extract air system is virtually maintenance free. In the "Servicing and Maintenance" section you will find a table with a list of all recommended maintenance activities.



### DANGER

#### Exposed electrical components and rotating fan components.

Electric shock and injury due to live components (230V, 50Hz) an rotating fan!

- ▶ Before working on electrical installations, disconnect all affected equipment from the power supply.



### NOTE

#### Scratch-sensitive plastic surfaces.

Risk of damage to the surface coating!

- ▶ Do not use detergents containing sand, soda, acids or chlorine.

### Detergents

A commercially available detergent in warm water can be used for cleaning. The following tools may be used for cleaning:

- lint-free, soft cloth
- soft brush

### Recommended maintenance schedule

The listed maintenance activities and intervals are recommendations of the inVENTer GmbH. As required your personal maintenance schedule may deviate.

Interval	Assembly	Maintenance activity
Monthly	Inner cover	Clean the surface of the cover with a damp cloth.
Monthly	Reveal grille	Clean reveal grille with a brush.
Half-yearly	Wall sleeve	Clean wall sleeve with a damp cloth.
Half-yearly	Fan	Clean fan blades with brush.
Yearly	Flat duct	Remove reveal grille and clean the inside of the flat duct.
Yearly	Weather protection hood	Clean the surface of the cover with a damp cloth.
As required	Hygrostat	Clean the surface of the hygrostat with a damp cloth.

## 11 Troubleshooting and disposal

### Troubleshooting

Fault	Possible cause	Remedy
Fan failure	No electrical power.	Check fuse.
	Installation error.	Check wiring for correct polarity. Check connected control element for proper functioning.
	Fan defective.	Replace fan.
Fan does not switch off.	Run-on function is defective. Switch/pushbutton is defective.	Wait until the end of the run-on time, if the fan does not switch off contact your factory representative or our service staff.
Noises	Foreign body in the fan.	Remove foreign body from the fan. Clean the extract air system.
	Fan blades contaminated.	Clean fan blades.

### Disposal

Dispose of the product in compliance with the applicable national regulations.

The products described in these installation and operating instructions are largely recyclable due to their low-pollutant processing. Contact an electronic appliance disposal company to arrange environmentally friendly recycling and disposal of your old system.

The table below contains disposal recommendations.

Product	Material	Disposal
Weather protection hood	Powder-coated stainless steel	Scrap metal collection
Reveal grille	ABS	Domestic waste
Wall sleeve	PVC	Recyclable material
Flat duct	PVC	Recyclable material
Inner cover	ABS	Domestic waste
Fan casing	ABS	Domestic waste
PCB for Avio N 100	Plastic/copper	Collection point for electrical appliances

## 12 Warranty and service

### Warranty

Outside Germany, the national warranty provisions of the country in which the system is sold apply. Please contact the distributor for your country.

### Ventilation system

The manufacturer provides a two-year warranty for the aV100 extract air system. The warranty does not apply if:

- damage results from improper handling/use or failure to observe the installation and operating instructions
- supplementary or accessory parts are used that are not approved by the system's manufacturer
- conversions and/or modifications are made to the aV100 extract air system
- spare parts are used that are not original manufacturer spare parts for the aV100 extract air system
- damage is caused by force majeure or environmental influences
- damage occurs due to the chemical and/or electrochemical action of liquids or gases

### Claims

Check the delivery for completeness and transport damages upon receipt using the delivery note. Report missing items within four weeks.

### Documentation

This documentation describes the functionality of the standard scope. The documentation does not purport to cover all details on all types of the product and cannot cover every conceivable scenario for installation, assembly, operation, maintenance and servicing. The illustrations in this document may differ slightly from the design of the product that you have purchased. The same functionality is ensured despite any design deviations.

### Service

For technical support contact your supplier, factory representative or our service staff.

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**Notes**

Notes

**Notes**



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