









**DE Einbauanleitung
Silvento Aufputz-Gehäuse**

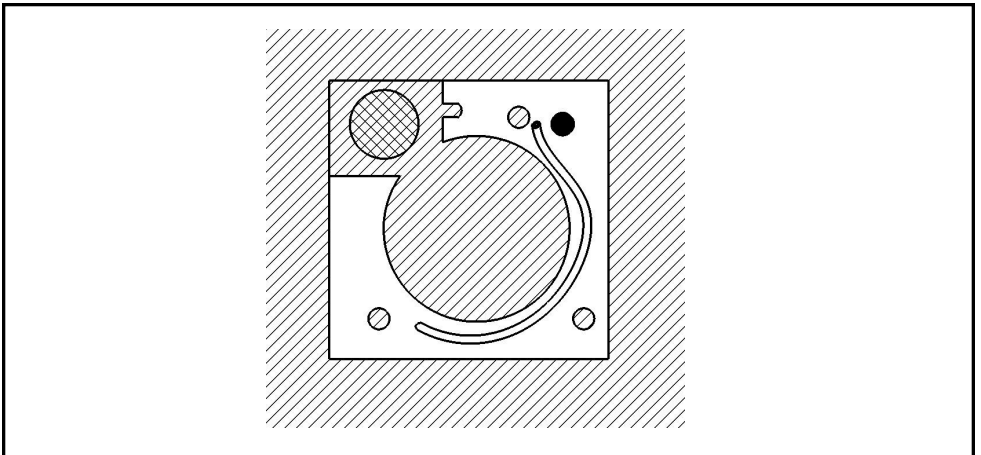
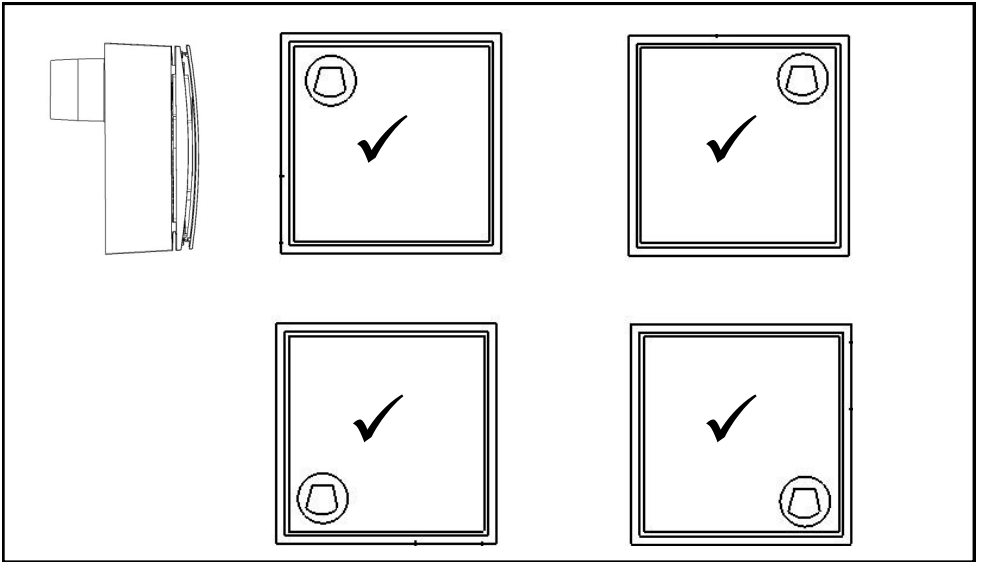
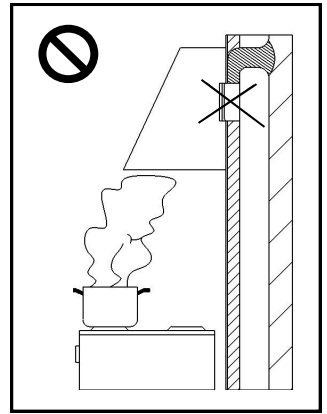
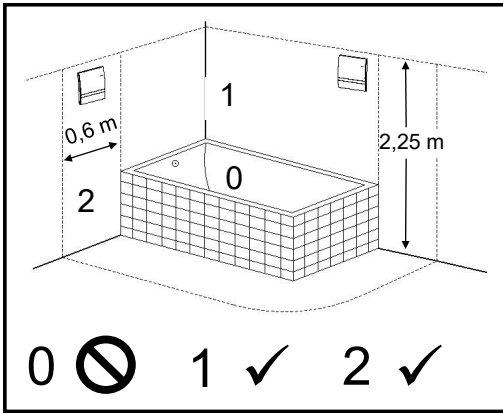
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**EN Installation Manual
Silvento Surface-Mounted
Housing**

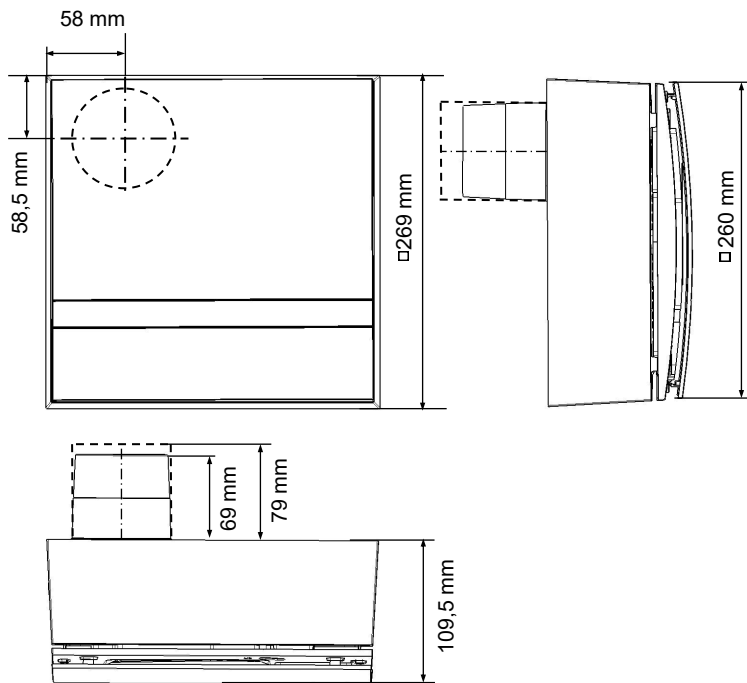
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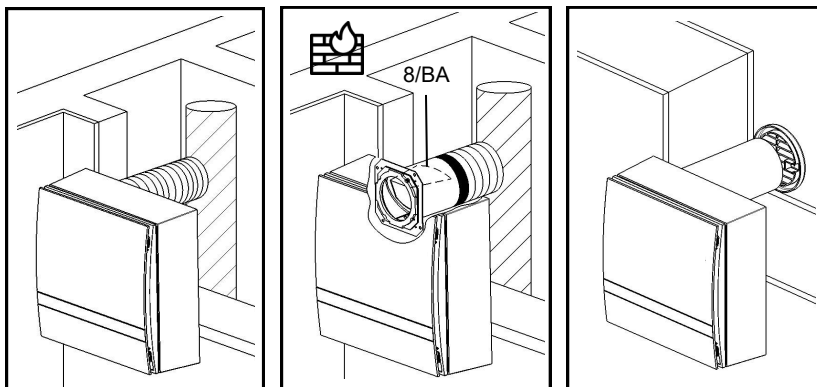
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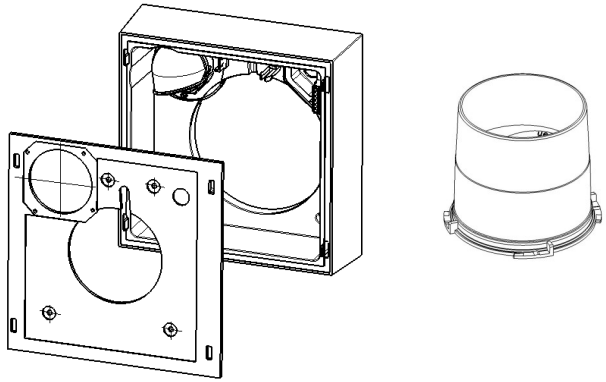
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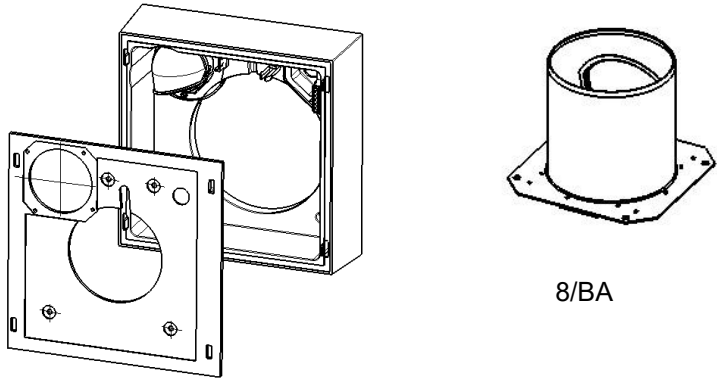
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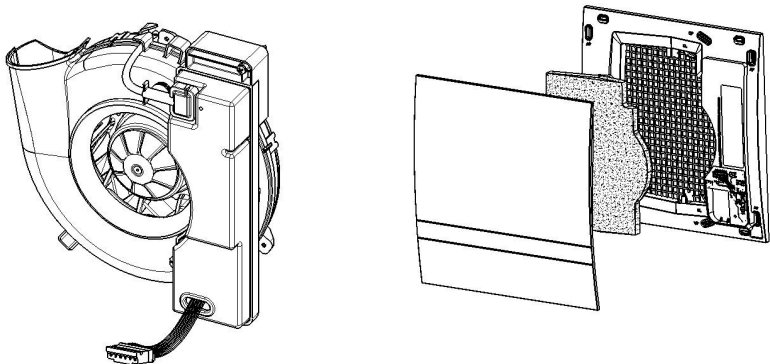


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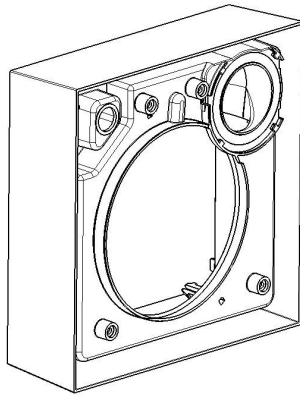
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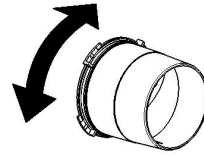
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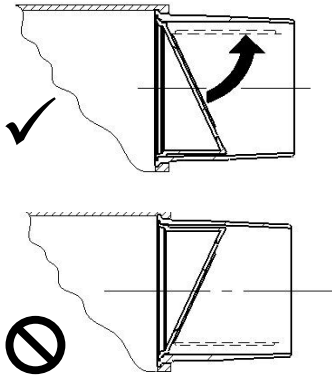
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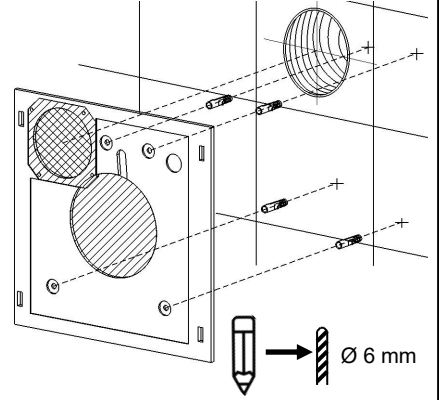
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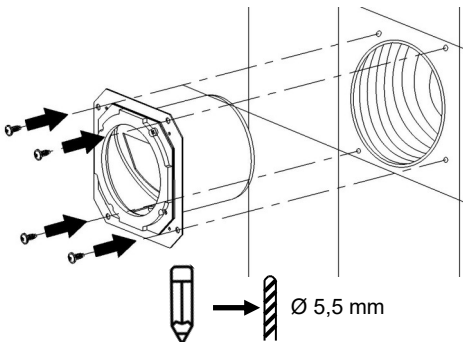


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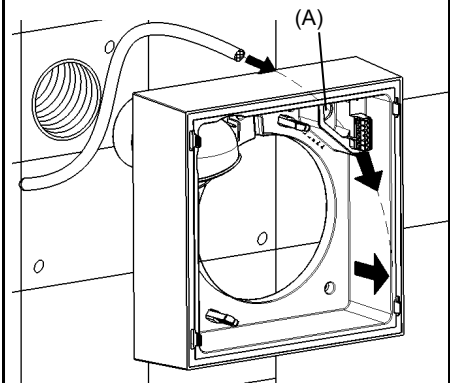


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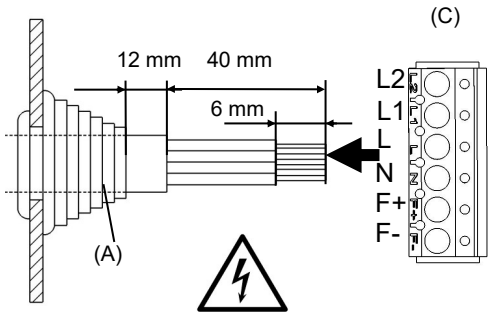
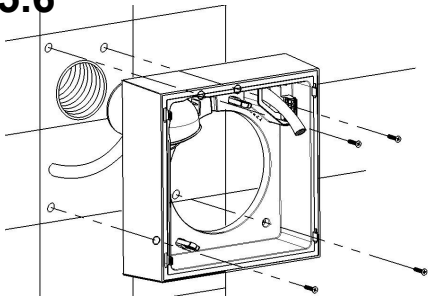
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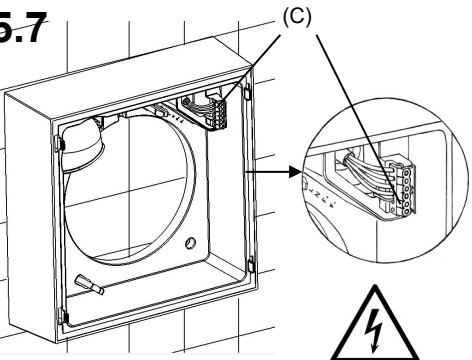
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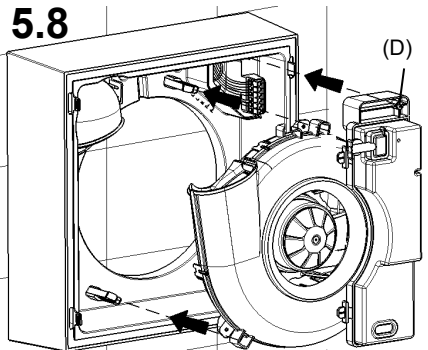
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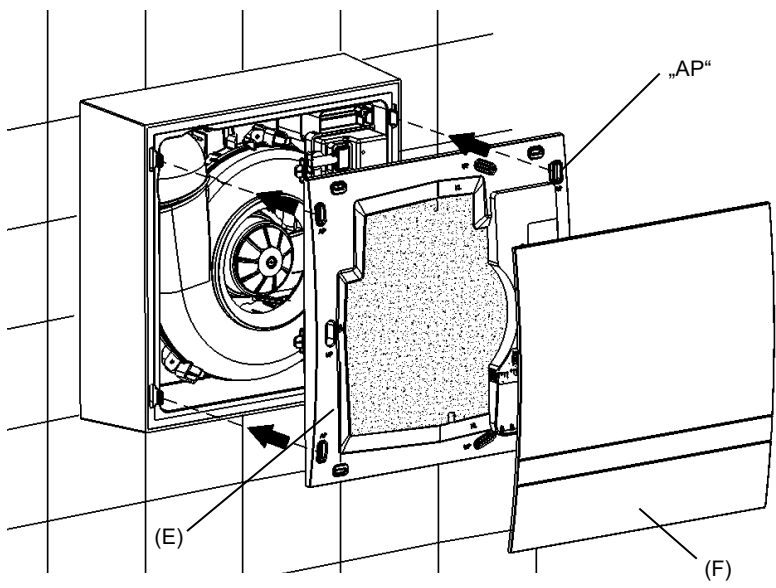
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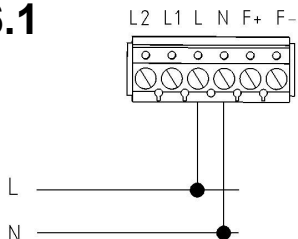
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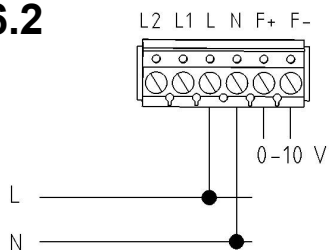
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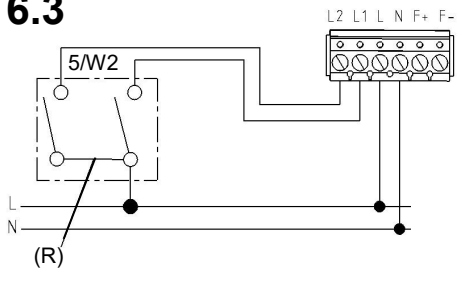
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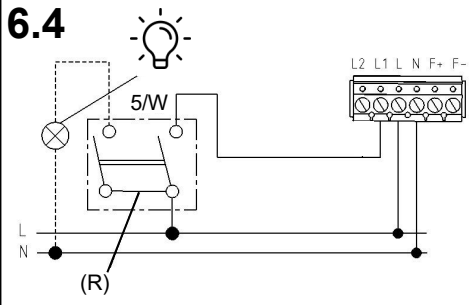
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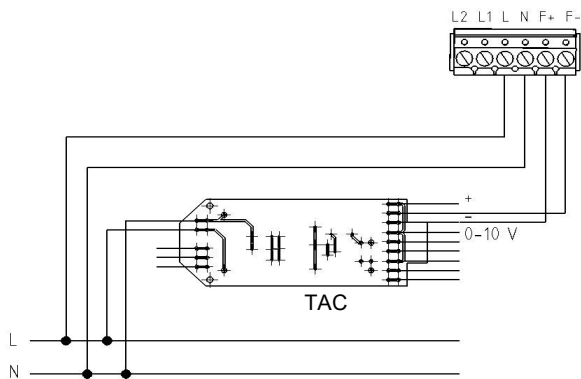
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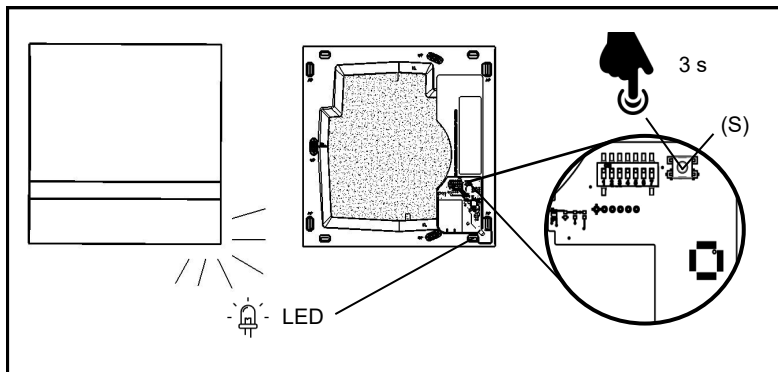
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About These Instructions

- Read these instructions carefully and completely before executing assembly work! General safety instructions and the safety symbols with respective notes in the text must be observed.
- These instructions are to be passed on to the user after completing assembly work (tenant, owner, building administration etc.).

Symbols in these instructions



This symbol warns of a risk of injury



This symbol warns of a risk of injury from electricity

Safety Instructions



Caution! Any installation work on the ventilation unit may only be carried out with the mains voltage disconnected!



Attention! Electrical connections must be carried out by authorized qualified staff in accordance with applicable VDE 0100!



Attention! This device must not be operated by children or persons (filter change/cleaning) who are not able to operate it safely on account of their physical, sensory or mental capacity or due to their inexperience or lack of skills.



When using fans for exhaust air operation, a properly working fresh air flow must always be ensured.

Range of Application

Temperature application range: - 15°C to + 40°C

Can be used at a relative air humidity of up to 75% indoors (non-condensing; temporary exceedance with the fan running is permissible). The user is requested to switch off the unit if the application limits are exceeded. Ensure fresh air supply by window ventilation.

Disposal



Dispose of packaging correctly sorted. If you wish to dispose of the device, observe applicable conditions. Within the framework of the German Electrical and Electronic Equipment Act (ElektroG), the free return of this device to your municipal collection point is guaranteed.

Technical Data

Power supply:	200-240 V AC 50/60 Hz
Remote control input:	0-10 V DC
Protection class:	II
Protection type:	IPX5
Air volume flow:	OFF, 15-60/90* m³/h
Electrical power consumption:	1.8-6.2/14.5* W
Sound pressure level:	22-35/44* dB(A)

* depending on the control board

Function/Control Board	5/EC-ZI (90)	5/EC-FK (90)	5/EC-FK+ (90)
Volume flow base load (DIP 1,2)	15/20/30/40/45/45/50/60 m³/h		
Volume flow demand (DIP 6,7)	15/20/30/40/45/45/50/60 (90) m³/h		
Switch-on delay (-/45/120s)	(✓/✓/✓)	(✓/✓/✓)	(-/-/-)
Follow-up time (-/15/30 min)	(✓/✓/✓)	(✓/✓/✓)	(-/-/-)
Interval operation (-/4h30min/2h15min)	(✓/✓/✓)	(✓/✓/✓)	(-/-/-)
Humidity / temperature sensor	(-/-/-)	(✓/✓)	(✓/✓)
VOC Sensor (smells)	-	-	✓
CO2 equivalent operation	-	-	✓
LED filter change indicator	✓	✓	✓
0-10 V control input	✓	✓	✓
Data logging	✓	✓	✓
Optional Radio Module FM-EO or Motion Detector 5/BM	(✓/✓)	(✓/✓)	(✓/✓)
Diagnostic tool PC based	✓	✓	✓

Every Silvento ec can be combined with a control board without a humidity sensor or with a humidity sensor, each control board can be combined with one extension module.

This results in the following configuration options:

The Control board for the basement ventilation 5/EC-KE is optionally available and not listed here. We will be pleased to inform you.

All units are equipped with class G2 filters and a filter change indicator.

Ventilation units of the "Silvento" series meet all requirements:

- for low voltage (CE) according to EG guidelines (2006/95/EG; 2014/35/EU)
- for electromagnetic compatibility (CE) according to EC directives (2004/108/EC; 2014/30/EU)

The characteristic curve of the level 60 m³/h is part of the DIBt approval Z-51.1-215 and can be taken from it. The characteristic curve is also summarized with all other characteristic curves in a separate document that can be downloaded from www.lunos.de.

The fans of the Silvento ec series can be configured in combination with the circuit boards listed above and the volume flow can be calibrated. Instructions can also be found at www.lunos.de.

The volume flows specified in the accompanying documents refer to the installed condition, taking into account correct design/planning and corresponding installation.

1 Notes

- Installation in area 1 in bath and shower rooms in accordance with VDE 100 is permissible
- Fan installation for use as extractor hood not permitted
- Correct position and tight fit of the non-return valve if necessary (see Figure 5.7).
- Do not place a power cable within the hatched areas.

3 Installation Examples

For fire protection, the shaft wall must have the required fire resistance duration!

4 Shipping Units

All wall installation housings including:

- Nozzle with non-return valve
- Mains connection terminal
- Drilling template
- Installation Manual
- Screws and dowels

Fan insert Silvento V-EC including:

- Filter frame with filter
- Decor Screen
- Screw accessories
- Installation Manual
- Product data sheet and energy label

5 Installation - Housing and Electrical Connection

3/AP without fire protection shut-off device

- 5.1** Check the position of the non-return valve according to the selected installation position and correct it if necessary. Loosen the nozzle with the non-return valve by turning it for correction. (see figure 5.2)

3/AP-B with fire protection shut-off device 8/BA

- 5.3** Drill fixing holes and insert dowels (using the drilling template, align upper edge horizontally)
- 5.4** Installing the kitchen fire protection
The position of the non-return valve must be according to the selected installation position. (see figure 5.2)

Housing installation

- 5.5** Cut off cable grommet (A) (observe water tightness, see also figure 5.6) and insert power cable.
Place the power cable as a loop behind the housing, fasten the housing to the shaft wall using the screws provided.



Attention! Disconnect the mains cable from the power supply!

Power connection

- 5.6** Strip the power cable as shown.
Mount the mains connection terminal (C) according to the selected connection diagram (see **6**). To facilitate the installation, the mains connection terminal can be removed by pressing it in the direction of the housing wall.
- 5.7** Snap the mains connection terminal into place.

5 Installation - Fan Insert and Decor Screen

Mounting the fan insert

- 5.8** Snap the fan insert firmly into place and screw on the mains connection area (D). Make sure that the motor connection cable is properly seated within the guide provided for it.

Attention: Do not operate the one-room fan without sound insulation

Mounting the decor screen

- 5.9** Clear the snap openings (AP) in the grille frame (P) (they are marked "AP")
Snap the grill framewith filter onto the housing. Put on the front cover and snap it into place.

6 Electrical Connection



Caution! Any installation work on the ventilation unit may only be carried out with the mains voltage disconnected! The ventilation unit is insulated in accordance with protection class II, a protective conductor connection is not required.



Make sure all connection lines are de-energized before connecting the ventilation unit to the power supply! (Disconnection from power supply with at least 3 mm contact opening, e.g. fuse)



Each circuit connected to the ventilation system must be fitted with residual current protection (e.g. RCD switch)!



Electrical connections must be carried out by qualified staff only!

Additional installations and electrical components in the ventilation unit are not permitted!
Connection diagrams for further fan functions available on request!

Note: A variety of Silvento ec ventilation functions can be created using the DIP switches integrated in the control board of this type and via optional add-on modules. For this information, please refer to the "Fan Insert Silvento ec Installation Manual".

6.1 Automatic operation with humidity control according to DIP switch position of the control board.

Comfort control: Humidity controlled operation

Basic control: Interval switching possible

6.2 With remote control (0 - 10 V)

The remote control input is divided into two ranges. In the range of 0-5 V the level is set absolutely, i.e. with highest priority (corresponds to DIP 6,7 with switched L1). In the range of 6-10 V only the base load is set (corresponds to DIP 1,2). In the range of 0-0.4 V the fan operates autonomously.

Area absolute level	Step 0: 0,6 V - 0,9 V	Base load level area	Step 1: 6,1 V - 6,4 V
	Step 1: 1,1 V - 1,4 V		Step 2: 6,6 V - 6,9 V
	Step 2: 1,6 V - 1,9 V		Step 3: 7,1 V - 7,4 V
	Step 3: 2,1 V - 2,4 V		Step 4: 7,6 V - 7,9 V
	Step 4: 2,6 V - 2,9 V		Step 5: 8,1 V - 8,4 V
	Step 5: 3,1 V - 3,4 V		Step 6: 8,6 V - 8,9 V
	Step 6: 3,6 V - 3,9 V		Step 7: 9,1 V - 9,4 V
	Step 7: 4,1 V - 4,4 V		Step 8: 9,6 V - 9,9 V
	Step 8: 4,6 V - 4,9 V		

6.3 Depending on the control board, DIP switch position and module:

With run-on time (basic control): Deactivation of the run-on functions (L2), continuous operation basic ventilation or OFF according to DIP switches 1 and 2 switchable to regulated ventilation (L1) according to DIP switches 6 and 7

With humidity control (comfort control): Humidity control can be deactivated (L2), switchable to regulated ventilation (L1)

Note: No light coupling possible with VDE-compliant installation
(R) Bridge)

- 6.4** Depending on control board, DIP switch position and module:
 Single-stage operation, switchable to regulated ventilation
 Continuous operation basic ventilation and run-on time-controlled regulated ventilation
 Humidity control, switchable to regulated ventilation
 Run-on time-controlled regulated ventilation
Note: Use a two-pole switch to switch the room lighting simultaneously with the regulated ventilation!
- 6.5** Direct connection to TAC via F+ and F-.


7 Filter Change

- 7.1** The LED lights up continuously when the filter is dirty.
 Remove the front cover, remove the filter. Insert a new or cleaned filter. The filter can be cleaned e.g. using a dishwasher.
 Press the button (S) with a tool, e.g. a pen, for 3 seconds; the LED goes out.
 Put the front cover back in place.

Never operate the unit without a filter!

Cleaning

When necessary, wipe the front cover and grille frame using a dry soft cloth.

 Filter change and cleaning must not be carried out by children or persons who are not able to operate the unit safely on account of their physical, sensory or mental capacity or due to their inexperience or lack of skills.

Additional Parts and Replacement Parts

Pack of 3 filters	2/FSI-R	Order no.: 39721
Control board basic variant	5/EC-ZI	Order no.: 40080
Control board comfort variant	5/EC-FK	Order no.: 40081
Control board comfort plus	5/EC-FK+	Order no.: 40217
Control board basic variant up to 90 m ³ /h	5/EC-ZI90	Order no.: 40126
Control board comfort variant up to 90 m ³ /h	5/EC-FK90	Order no.: 40127
Control board comfort plus up to 90 m ³ /h	5/EC-FK 90+	Order no.: 40221
Control board for basement ventilation	5/EC-KE	Order no.: 40133
Motion detector module	5/BM	Order no.: 40082
Radio module	5/FM –EO	Order no.: 40083



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