



- I DE **Einbauanleitung**
Silvento ec Unterputz-Klemmlüfter

- Bitte an den Nutzer weiterleiten -

- II EN **Installation Manual**
Silvento ec Flush-mounted Clamp-in Fan

- Please pass on to user -

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About this manual

- Read this manual carefully and completely before assembly! Always observe the general safety instructions and the safety symbols with information in the text.
- Hand out this manual to the user (tenants, proprietors, property management etc.) after completing assembly.
- **Symbols in this manual:**



This sign warns you against risks of injury



This sign warns you against risks of injury from electricity

Safety instructions



Caution! Any assembly work to the ventilation device may only be carried out after disconnecting the supply voltage! The ventilation device is fitted with protective insulation according to Protection Class II; a protective conductor connection is not required!



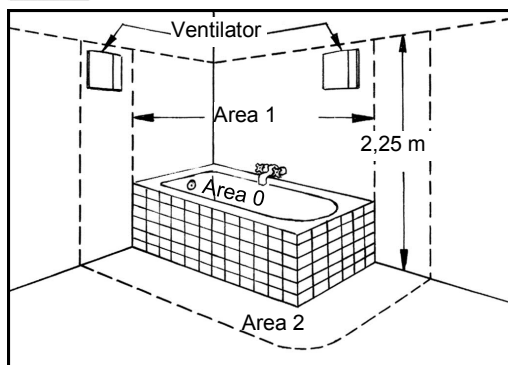
Attention! The electric connection may only be made by authorised qualified personnel and according to the applicable version of VDE 0100!



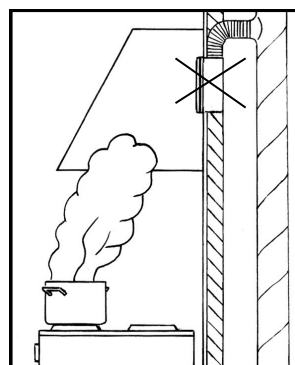
Attention! This device must not be operated by children and persons (filter replacement/cleaning) who are not able to operate the device safely due to their physical, sensory or mental abilities or their inexperience or lack of knowledge.



Fans for exhaust air operation must at any time be provided with a continued flow of outside air.



The German VDE 100 regulation permits installation in bath and shower room area 1.



Fans must not be installed for usage as extractor hood.

Operating range

Temperature range: -15°C to +40°C

Usable with relative humidity levels of up to 75% in the interior area (not condensing, short-term exceeding allowed while the fan is running). When usage limits are exceeded, switch off the device. Ensure fresh air supply by window ventilation.

Disposal



The packaging must be sorted before disposal. If you wish to dispose of the ventilation device, observe the currently applicable regulations. Pursuant to the German Electrical and Electronic Equipment Act (ElektroG) this device can be returned to your municipal collection point free of charge.

Power supply:	200 - 240 V AC 50 Hz	Airflow volume:	OFF, 15 - 60 m³/h
Remote control input:	0 - 10V DC	(with active humidity control „quasi“-stageless between 15 and 60 m³/h)	
Protection class:	II	Electrical power consumption:	1,8 - 6,2 W
Protection type:	IPX5	Sound pressure level:	22 - 35 dB(A)

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

This allows the following configuration options:

- Silvento ec with basic control board without humidity sensor, with integrated delay time
- Silvento ec with basic control board without humidity sensor, with integrated delay time and motion sensor module
- Silvento ec with basic control board without humidity sensor, with integrated delay time and radio sensor module
- Silvento ec with basic control board with humidity sensor, with integrated delay time
- Silvento ec with basic control board with humidity sensor, with integrated delay time and motion sensor module
- Silvento ec with basic control board with humidity sensor, with integrated delay time and radio sensor module

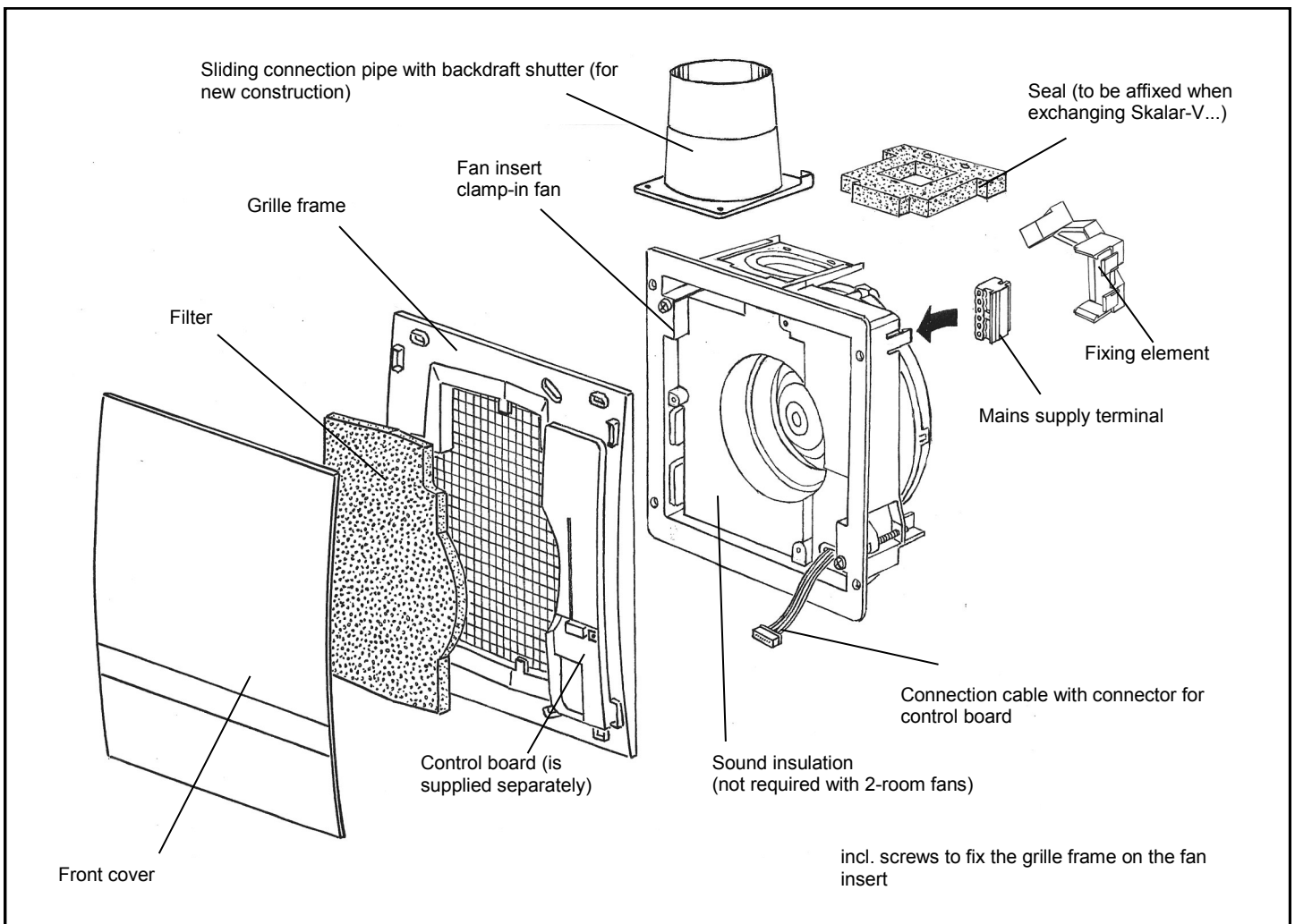
All devices are equipped with filters of the class G2 and a filter replacement indicator.

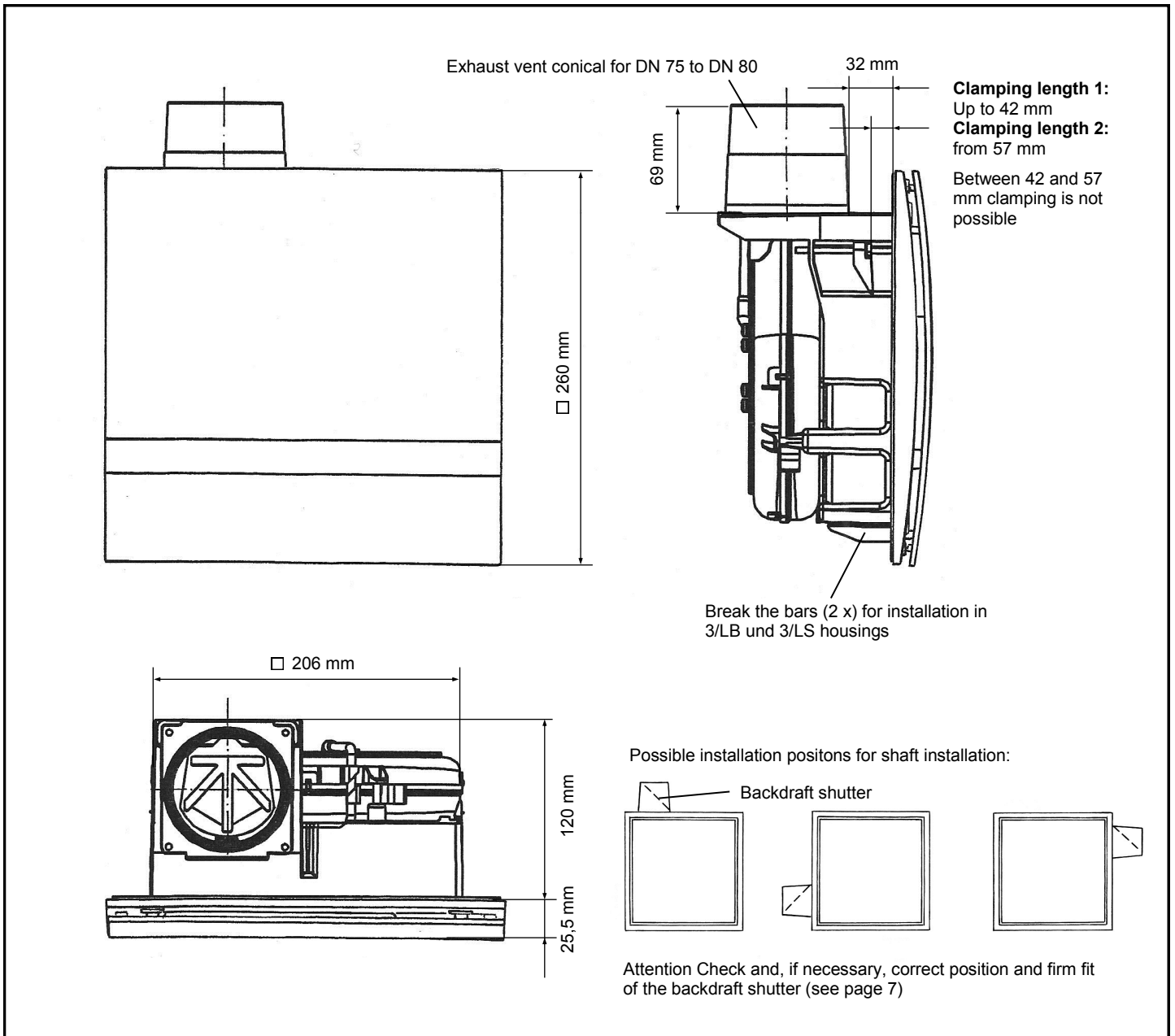
Ventilation devices of the series „Silvento“ meet all requirements of:

- DIN 18017-3
- for low voltage (CE) according to EC Directives (2006/95/EG; 2014/35/EU)
- for electromagnetic compatibility (CE) according to EC Directives (2004/108/EG; 2014/30/EU)

Shipping unit

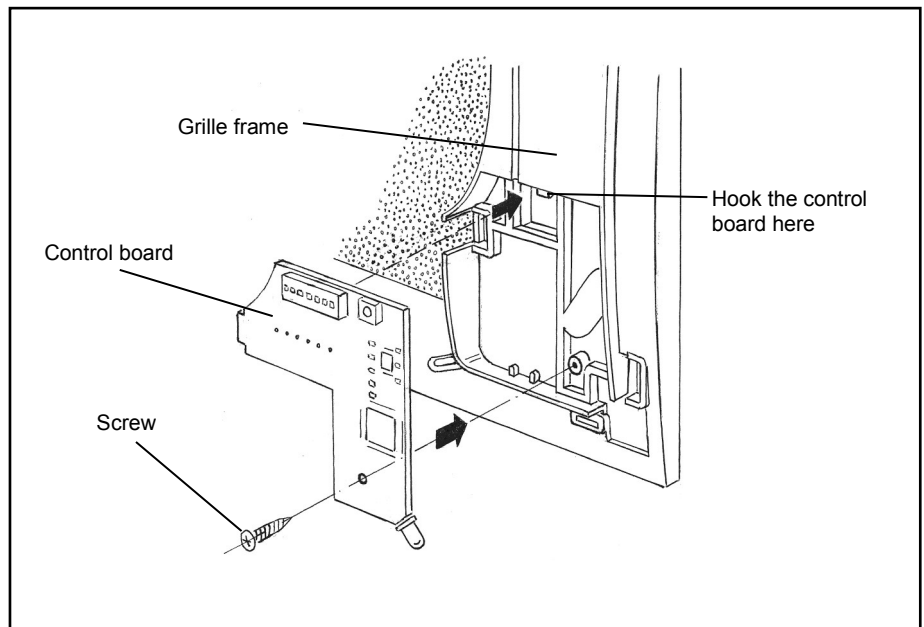
Check the delivery for completeness and mint condition





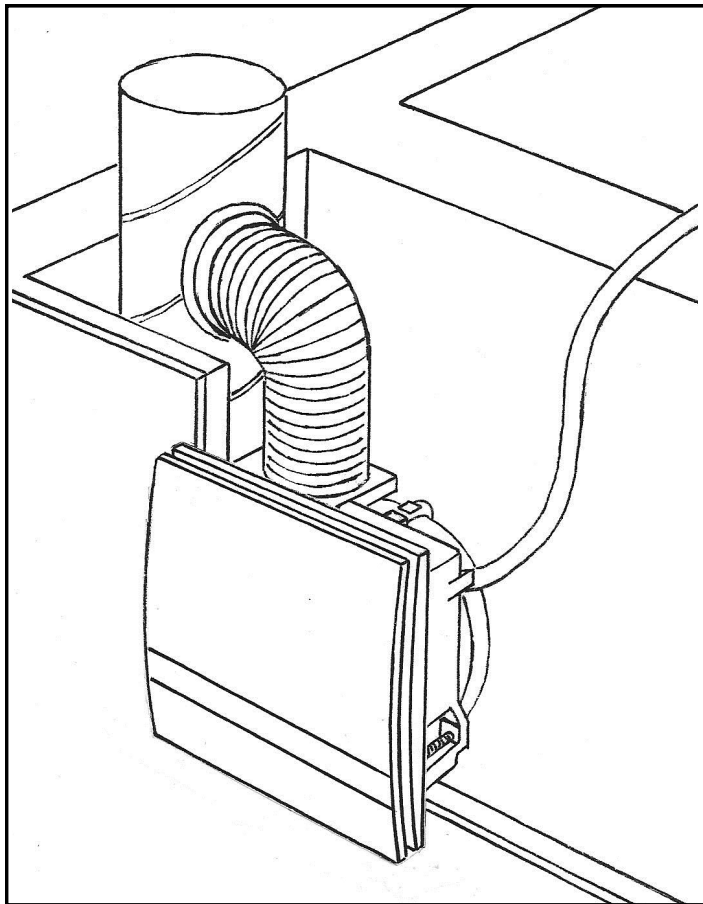
Assembly: Control board in the grille frame

Fasten the control board in the intended assembly area of the grille frame using the screw provided.

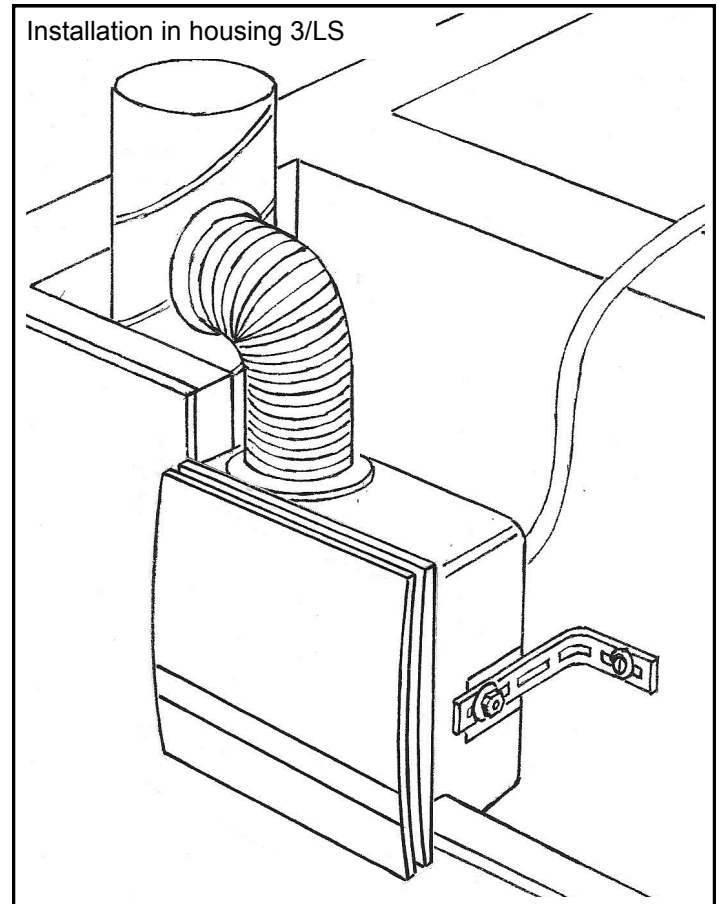


Note: The installation examples only represent a small part of the options available

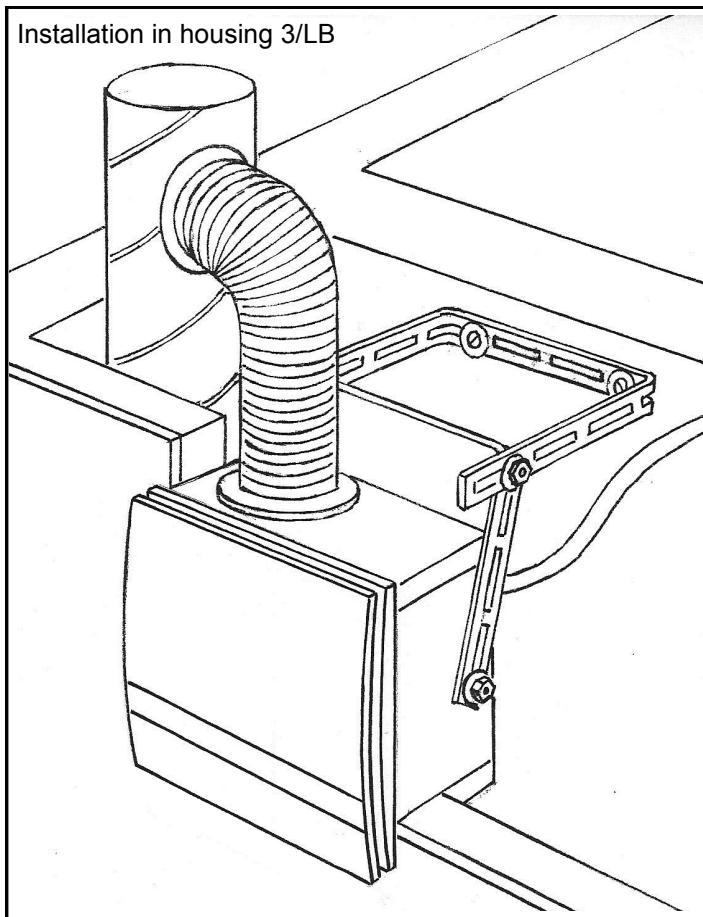
Only clamp-in fans



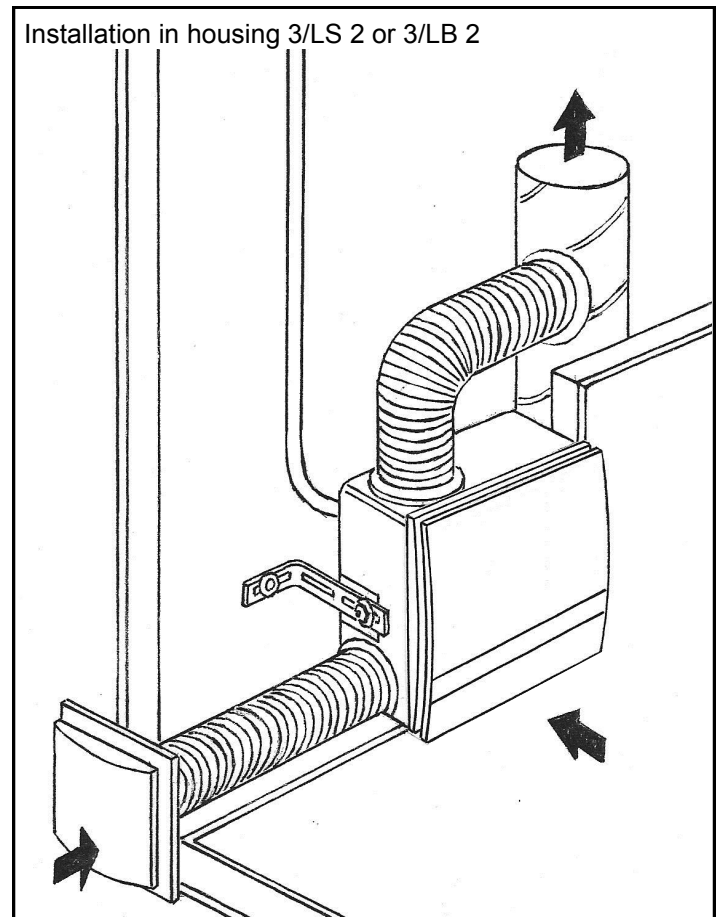
With styrofoam housing



With fire protection housing

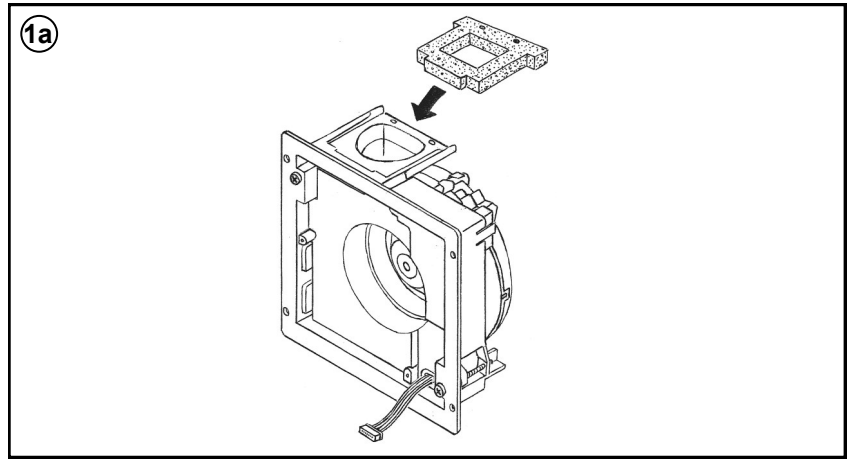


2-room fan



Assembly for installation in wall installation housing 3/LS, 3/LB, 3/LS 2, 3/LB 2

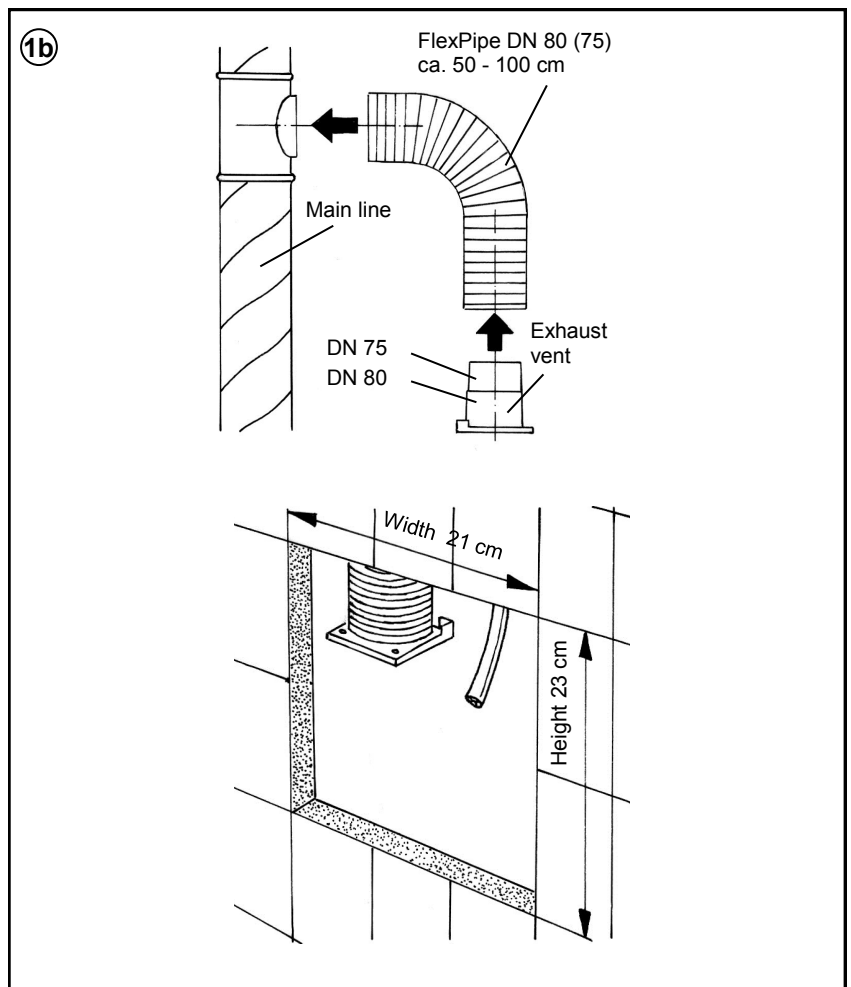
Attach the enclosed seal to the exhaust opening of the fan insert (remove protective film and stick on)



Assembly for installation in wall cutout

Connection to main line

- Connect FlexPipe to the main line
- Fasten sliding connection pipe to FlexPipe
- Seal the connections with sealing tape or clamps



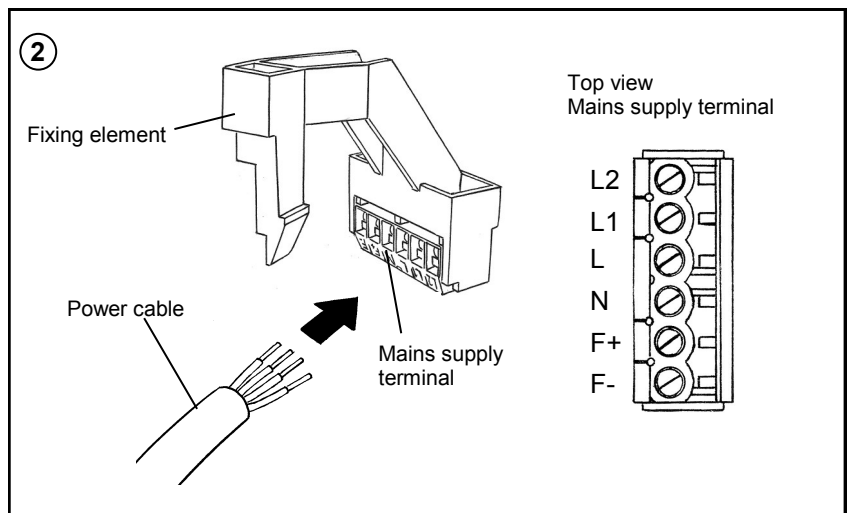
Making a wall cutout

- Install pre-wall covering
- Affix FlexPipe and power cable readily to hand in the wall opening

Power connection

Take off the fixing element with the mains supply terminal from the fan and affix the mains supply terminal according to the selected connection diagram (see connection diagrams) to the power cable.

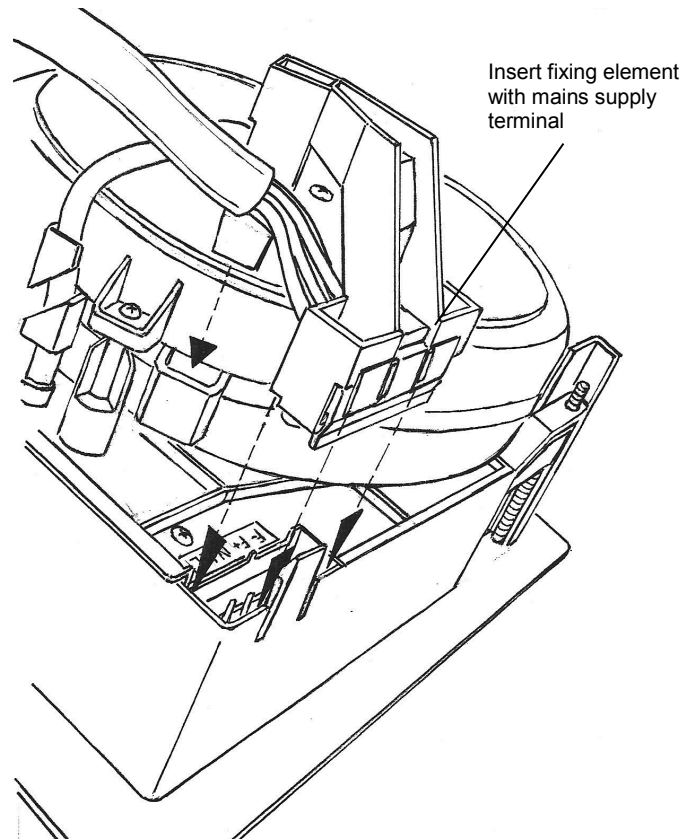
Attention! Make sure the power cable is voltage-free



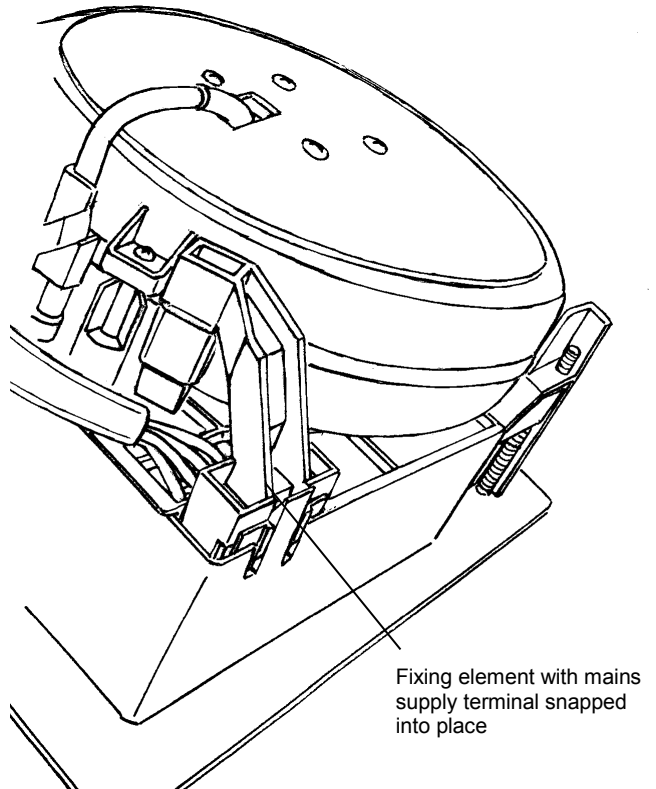
Insert fixing element with mains supply terminal and connected power cable and snap it into place.

Attention! The power cable must be free from mechanical stress after assembly. Use flexible cables if necessary.

3a



3b

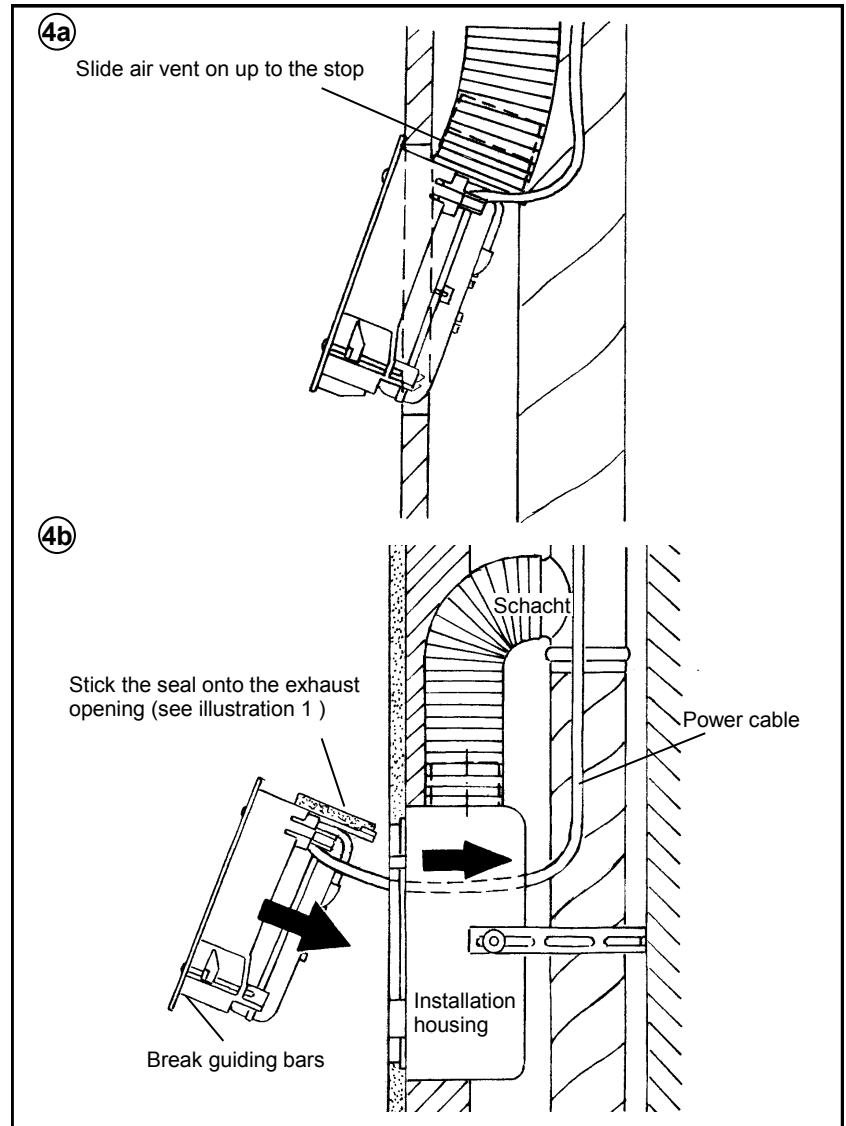


Insert Clamp-in fan in wall cutout

- Insert the fan unit into the wall cutout (check and, if necessary, correct position and firm fit of the backdraft shutter (see illustration below)).

Insert in wall installation housing 3/LS, 3/LB, 3/LS 2, 3/LB 2

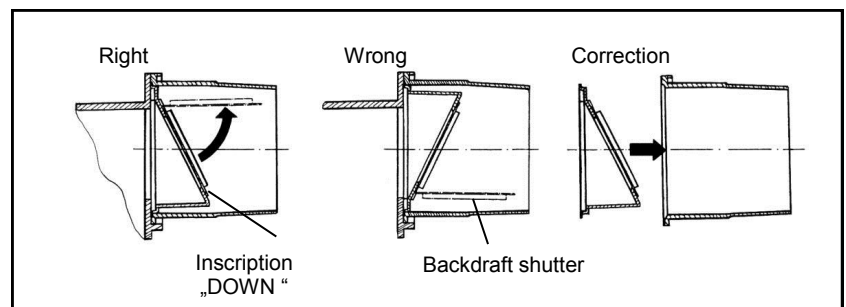
- Insert the fan unit into the wall installation housing. When doing so, push the power cable back into the shaft.



Position and correction of the backdraft shutter

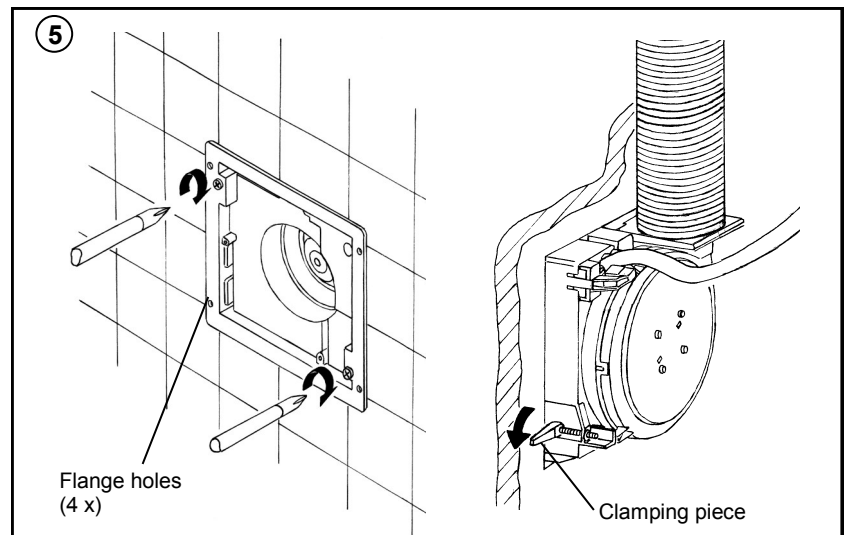
(important for ceiling installation)

- In installation position the backdraft shutter in the exhaust vent must close by its own weight. The backdraft shutter can be pulled out to the inside for correction purposes .



Fastening of the fan unit

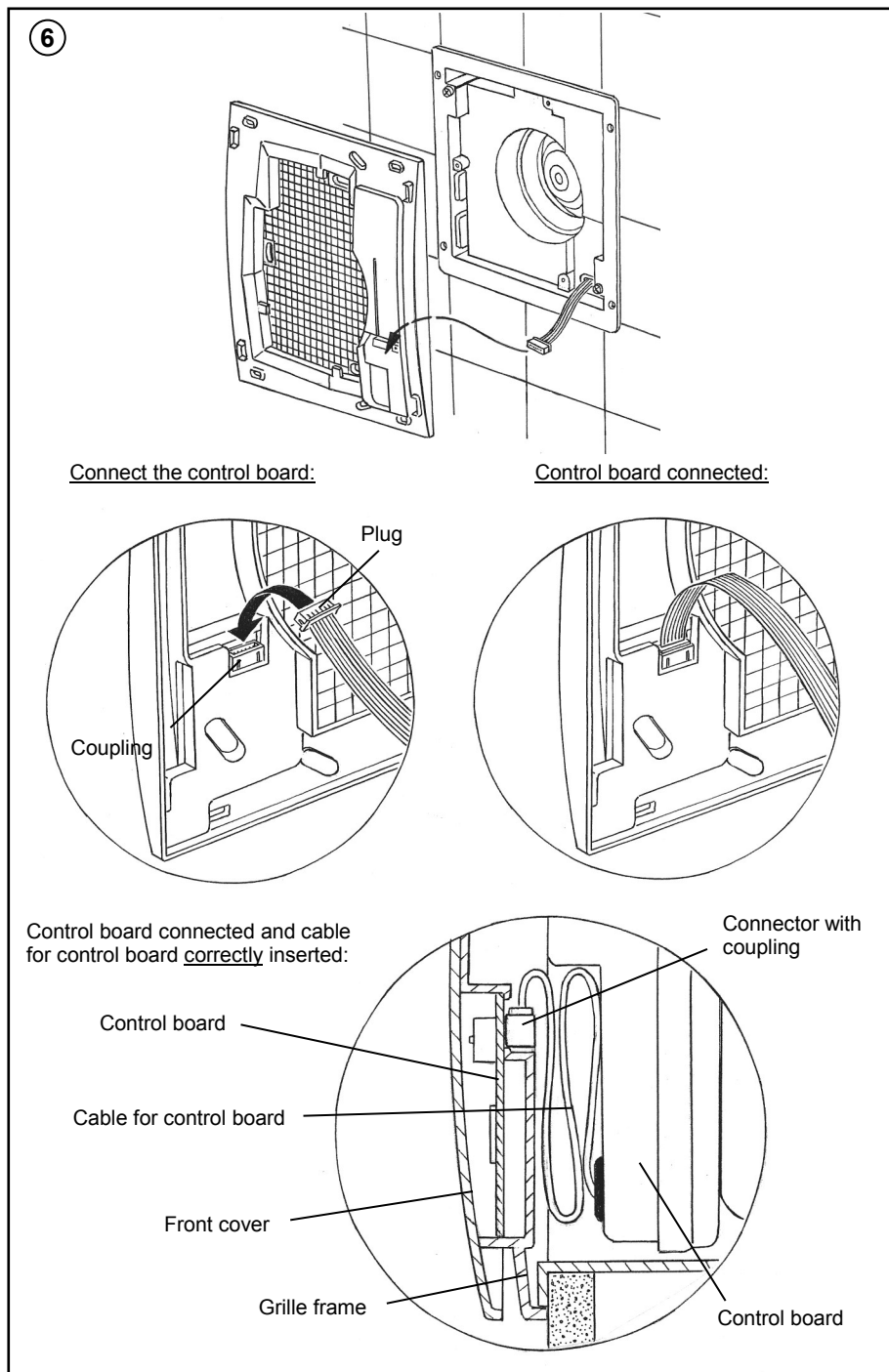
- Tighten the clamp screws moderately with a screwdriver
- The clamping pieces extend automatically and position themselves from behind at the pre-wall covering or in the recesses of the plaster frame of the housings 3/LB, 3/LS, 3/LS 2 and 3/LB 2
- Screw fixing can be done via flange holes in the plaster frame of the wall installation housing. Screws and accessories not supplied



Connecting the control board to the control

- Assemble fan insert, insert sound insulation
- Clear snap-on or screw openings in the grille frame
- Plug in the cable for the control board, the coupling for the cable plug is located in a recess on the reverse side of the grille frame
- Snap grille frame into place or screw it on and position the cable beneath the control board (do not jam the cable)
- Fit the front cover and snap it into place

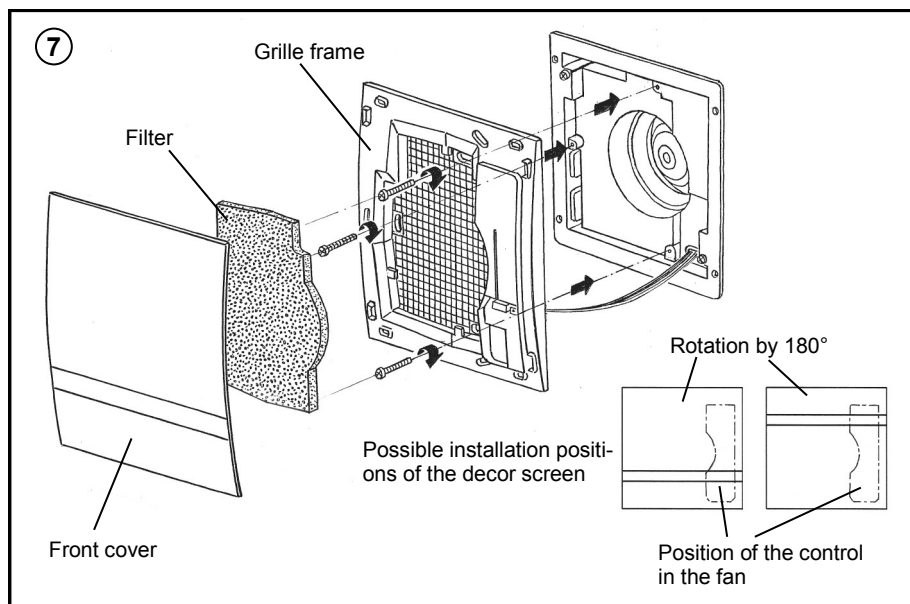
Note: The LED at the control board flashes once after the mains supply has been connected to the completed ventilation device.



Assembly: Decor screen

- Connect control board to control (see below)
- Fasten and align the grille frame at the fan insert using the screws provided
- Insert filter
- Fit front cover and snap it into place

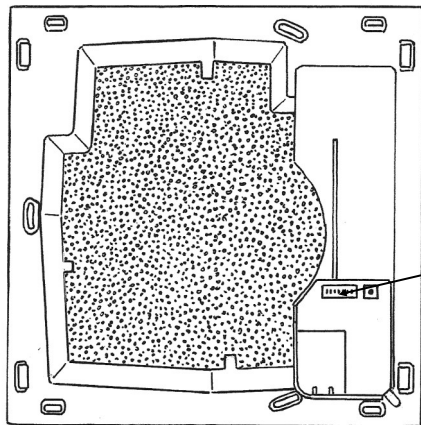
Attention: The grille frame should always be assembled according to the installation position of the fan! The front cover can then be assembled on the grille frame in any one of two positions rotated by 180°.



Via the DIP switches on the control board you have the possibility to create various settings of fan functions. Each of the white switches provides **three** setting options.



Attention! Set switches only when the ventilation device is in voltage-free condition.



Factory settings:

Basic ventilation: OFF
 Nominal load level: 60 m³/h
 Interval: OFF
 Delay time: OFF
 Switch-on delay: OFF



Changing the settings:

1. Remove the front cover
2. Make the settings of your choice
3. Reassemble in reverse order

The following DIP switch settings with the following functions are possible:

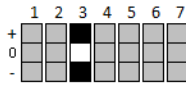
Via the DIP switches 1, 2, 6 and 7 you can set the airflow volumes for basic ventilation and regulated ventilation; via the DIP switches 3, 4 and 5 you can configure the delay time functions.

DIP switch settings basic ventilation

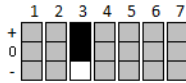
DIP switch settings regulated ventilation

0 m ³ /h	
15 m ³ /h	
20 m ³ /h	
30 m ³ /h	
40 m ³ /h	
45 m ³ /h	
50 m ³ /h	
60 m ³ /h	

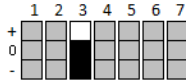
0 m ³ /h	
15 m ³ /h	
20 m ³ /h	
30 m ³ /h	
40 m ³ /h	
45 m ³ /h	
50 m ³ /h	
60 m ³ /h	



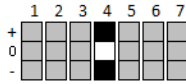
Interval OFF



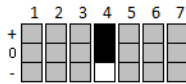
Interval ON,
Fan runs every 4 hours for 30 min in regulated ventilation



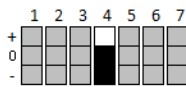
Interval ON,
Fan runs every 2 hours for 15 min in regulated ventilation



Delay time OFF



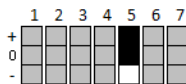
Delay time ON,
Fan continues to run ?? for 15 min in regulated ventilation



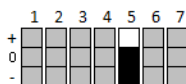
Delay time ON,
Fan continues to run for 30 min in regulated ventilation



Switch-on delay OFF



Switch-on delay 120 s



Switch-on delay 45 s

Attaching modules to the control board

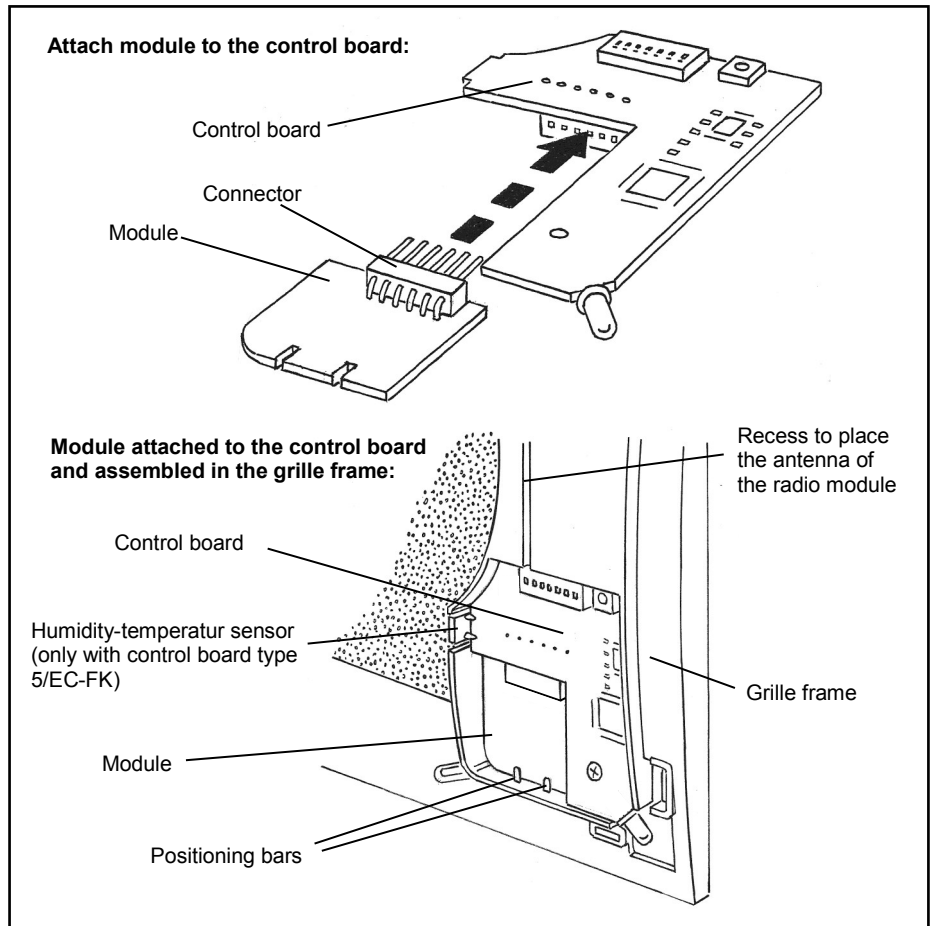
Remove the control board from the grille frame by loosening the fixing screw. Attach the module with the connector to the control board.

Insert the control board with the attached module in the Grille frame. Snap the module into the positioning bars.





Affix the control board using the fixing screw.

Push the antenna of the radio module into the opening provided for this purpose on the grille frame.

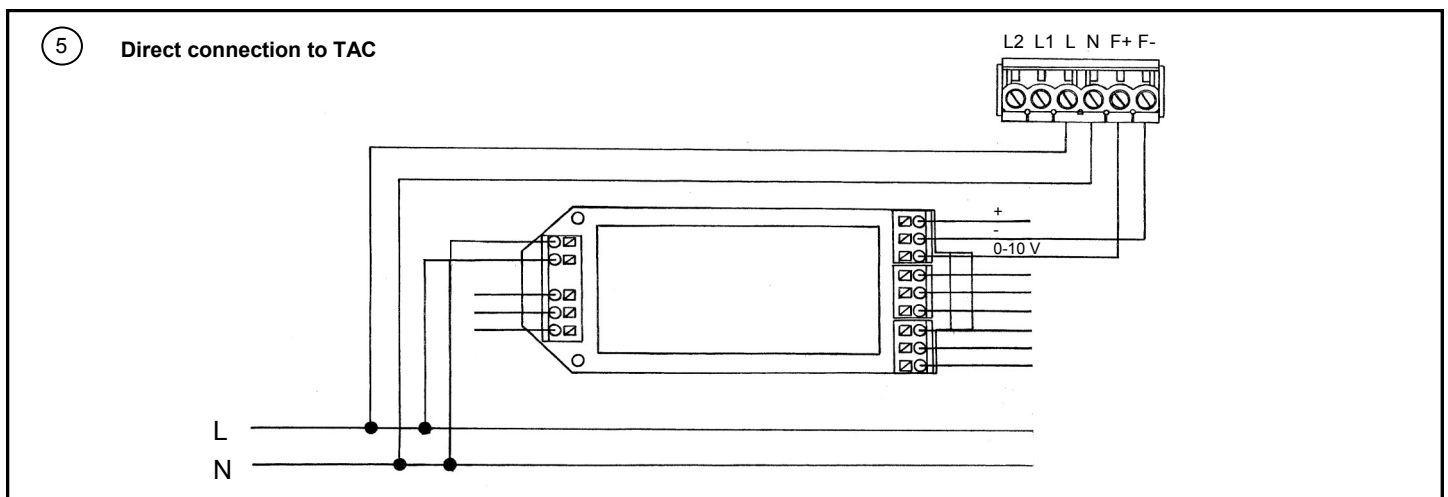
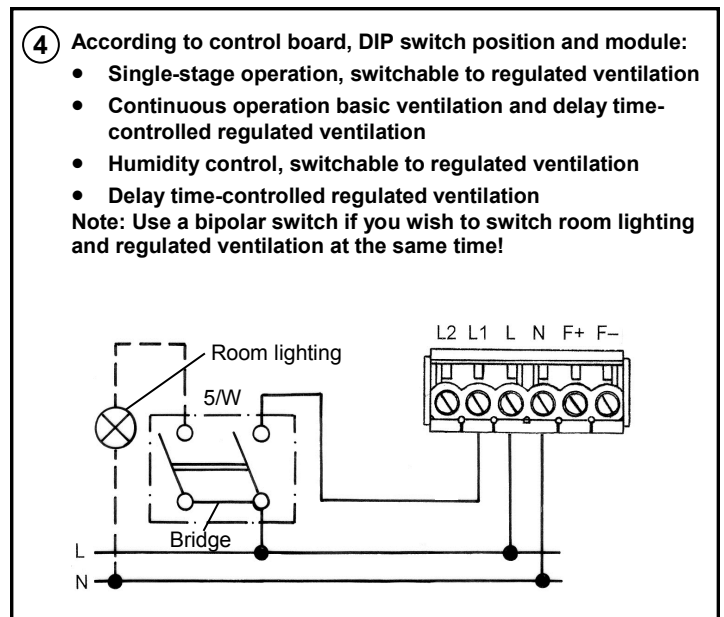
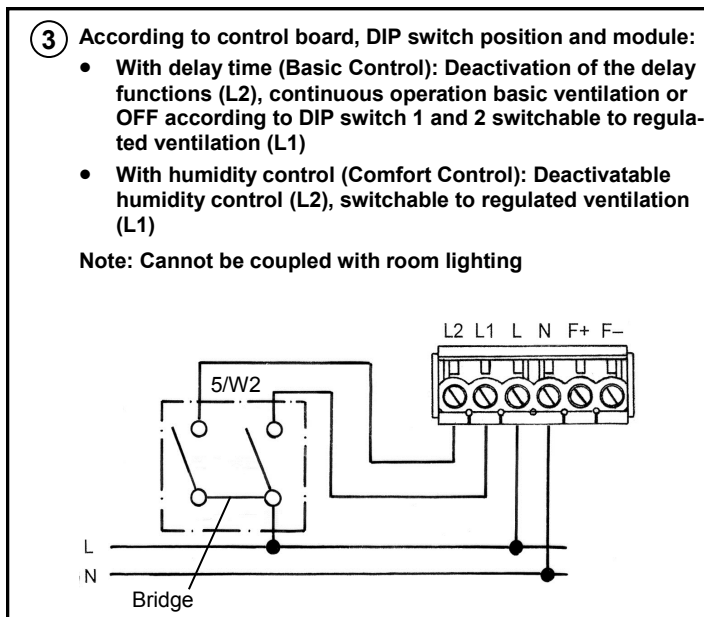
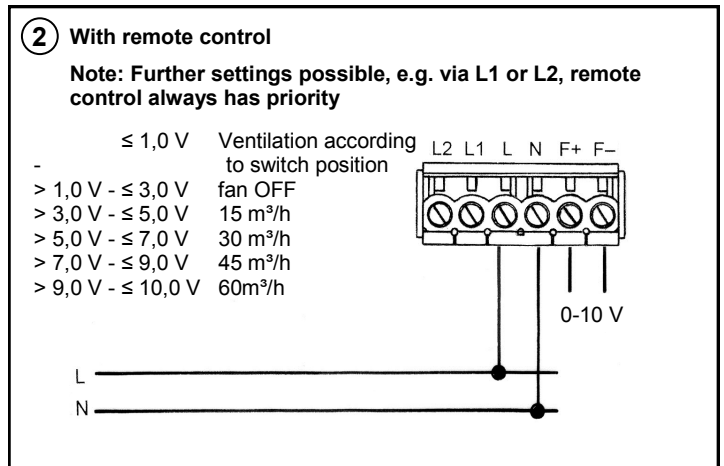
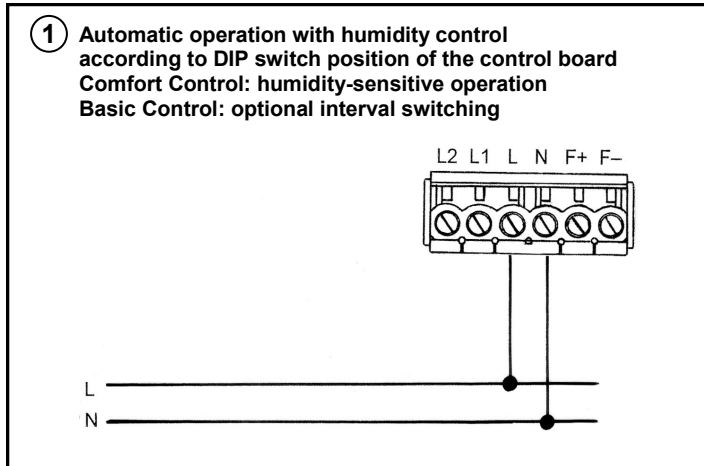
See also "Installation of the control board in the grille frame" p.2



Safety instructions:

-  Caution! Any assembly work to the ventilation device may only be carried out after disconnecting the supply voltage. The ventilation device is fitted with protective insulation according to Protection Class II, a protective conductor connection is not required.
-  Make sure that the supply voltage of all connection lines is voltage-free (dead)! (Separation from the power supply with a minimum contact opening of 3 mm, e.g. electric fuse).
-  Each electric circuit of this ventilation system must be fitted with a residual current protection (e.g. FI switch/RCCB).
-  Electric connection only by a specialist.

Additional installations and electrical components in the ventilation unit are not allowed.
 Connection diagrams for further fan functions upon request.



Fans equipped with the comfort board/EC-FK have an independent humidity control system with a standard control range between 50 - 70% rh; the control is performed between the selected basic ventilation stage (DIP switches 1, 2) and the regulated ventilation stage (DIP switches 6, 7). This ensures a constant adaptation of the exhaust airflow volume to room air humidity and room temperature so that an optimum of comfort is achieved. Ventilation is carried out only as much as necessary, but only as little as possible, which saves energy and prevents excessive humidification of the apartment as well as building damage and mould.

The control takes place in a quasi-stageless and "intelligent" way, in which a distinction is made between permanently high relative humidity or a rapid rise (e.g. by taking showers).

If the relative humidity cannot be significantly reduced within a period of two hours (e.g. in summer), the fan will be switched to the basic ventilation stage.

If the relative humidity increases during the decrease mode by more than 5% within one hour, the decrease mode will be terminated. If the lower switching threshold is undercut and OFF is set as the basic ventilation stage, the fan will be switched off.

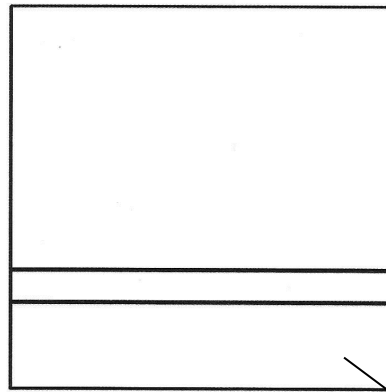
If the fan is in the basic ventilation stage OFF, it will run at the stage 15 m³/h (sniff mode) once per hour for 3 minutes. If a relative humidity above the set switching threshold is measured during this time, e.g. 50% rh, the humidity control will be activated. If the measured relative humidity is lower than the switching threshold, the fan will be switched off again after these three minutes.

Note:

- If voltage is applied to L2, all special functions, switch-on delay, run-on time, interval mode as well as humidity control (only 5/EC-FK) will be deactivated.
- Normally, a smaller airflow volume should be set for the basic ventilation stage than for the regulated ventilation stage. If the airflow volume of the basic ventilation stage is higher than the airflow volume of the regulated ventilation stage, the control will operate in the opposite direction, which means that less ventilation is carried out in case of increasing relative humidity.
- Within the first two hours after mains connection, the fan will run at the stage corresponding to the currently measured value of relative humidity.

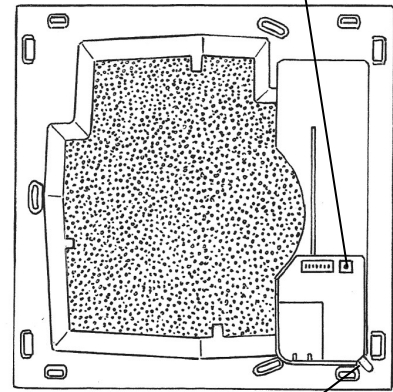
- Indicator light illuminates continuously when filter is contaminated
- Remove front cover, take the filter out. Insert new or cleaned filter. Filter can be cleaned e.g. in a dish washer.
- Press key with a tool e.g. a pen for 3 seconds; indicator light goes out
- Put front cover on

Never operate the device without filter.



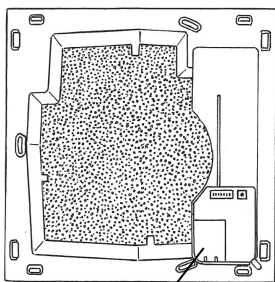
Indicator light illuminates beneath the corner

Key to reset the filter control



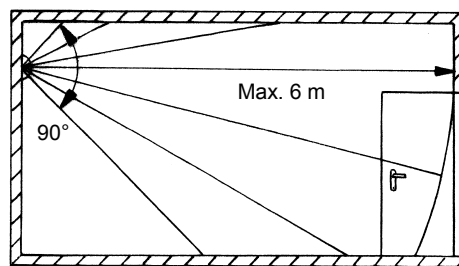
Positioning of the motion detector

Positioning of the motion detector at the grille frame



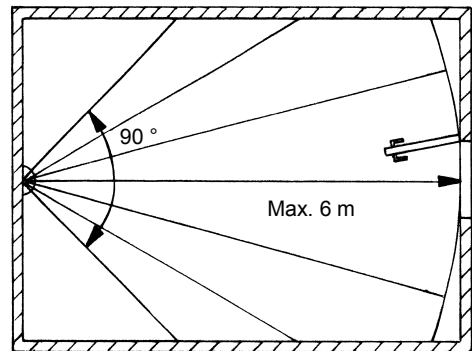
Motion detector integrated into the module

Range of the motion detector vertical



Note:
If the connection L2 is set or permanently connected, basic ventilation takes place at 30 m³/h.

Range of the motion detector horizontal



Cleaning

If necessary wipe the the front cover and grille frame with a soft, dry cloth.



Filter replacement and cleaning may neither be carried out by children nor by persons who are not able to operate the device safely due to their physical, sensory or mental abilities or their inexperience or lack of knowledge.

Additional parts / Replacement parts

Filters, three-pack	2/FSI-R	Order No.: 039 721
Control board, basic version	5/EC-ZI	Order No.: 040 080
Control board, comfort version with FT-Sensor	5/EC-FK	Order No.: 040 081
Motion detector module	5/BM	Order No.: 040 082
Radio module	5/FM	Order No.: 040 083