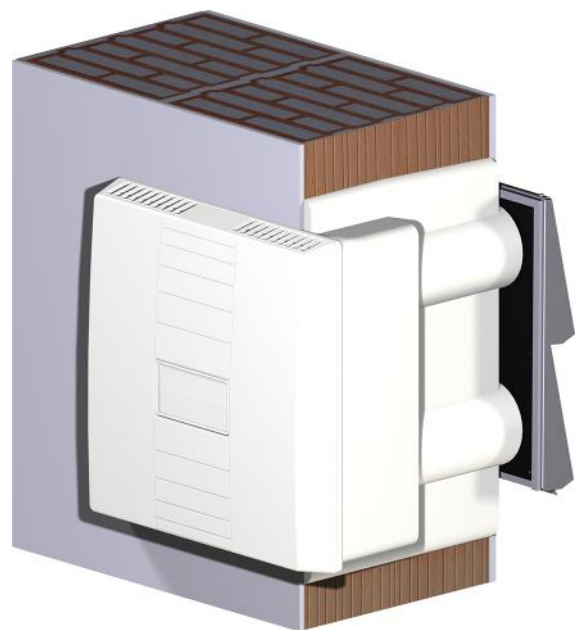


HOME VENTILATION WITH HEAT RECOVERY

M-WRG-S...

for surface-mount and flush-mount installation
of M-WRG ventilation units



INSTALLATION MANUAL

Part no. 5300-10-01 Week 01/2018 EN



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1 Introduction

1.1 Notes on this installation manual



This installation manual contains important information that should be followed when installing the ventilation units from the M-WRG series.

- ▶ Read all the instructions carefully before installing the ventilation unit to avoid possible risks and mistakes.
- ▶ When installation is complete, give these instructions to the home owner, caretaker or property manager.
- ▶ These instructions are part of the product. Keep the instructions in a safe place for future reference.

WARNING

- ▶ Follow ALL danger and warning instructions and notes on precautionary measures.
- ▶ Read section „2 Safety instructions“ on page 8 carefully.

1.2 Description

This manual describes the surface-mount installation (see Fig. 1) and flush-mount installation (see Fig. 2) of decentralised ventilation units from the M-WRG series in solid constructions.



Fig. 1: Ventilation unit – surface-mount installation



Fig. 2: Ventilation unit – flush-mount installation

1.3 Target group

The activities described in this manual must only be carried out by technicians with the following qualifications:

- Training in the installation and commissioning of electrical devices
- Training in electrical hazards and the local safety requirements
- Knowledge of the relevant standards and directives
- Knowledge and observance of this document and all the safety instructions

1.4 EU declaration of conformity

The ventilation units

Type:	M-WRG-S...
Part number:	5010
	5013
	5014-...
	5016-...

manufactured by

Meltem Wärmerückgewinnung GmbH & Co. KG
Am Hartholz 4
82239 Alling

conform to the regulations and standards listed in the EU Declaration of Conformity provided.

1.5 National technical approval (for Germany)

A valid national technical approval from the Deutsches Institut für Bautechnik (DIBt) must be obtained for the ventilation unit before it is installed in Germany. This approval can be provided upon request or can be downloaded from our website at www.meltem.com/waermerueckgewinnung/downloads/ (see also the QR code on the back page of these instructions).

The approval number is Z-51.3-138 (see item 1 in Fig. 3).

- ▶ For installation outside Germany, the national regulations applicable in your country should be followed.

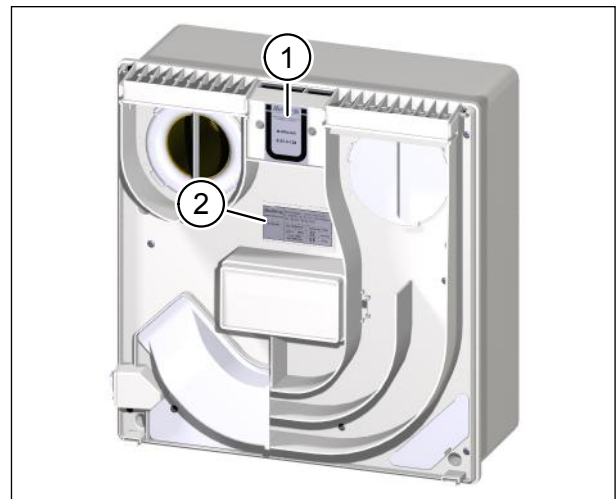


Fig. 3: Approval number and nameplate

1.6 Nameplate

You will find the nameplate on the intermediate plate on the inside of the housing (see item 2 in Fig. 3).

1.7 Storage

- ▶ Store the ventilation unit in its original packaging in a dry place where the temperature ranges between 0 °C and +40 °C.

1.8 Environmentally-friendly disposal

The ventilation units must not be disposed of in the residual waste bin.



- ▶ Dispose of the ventilation unit in accordance with the electronic waste disposal regulations that apply on site.

1.9 Revision index

Edition	Manual	Date
3 rd edition	M-WRG-S... installation manual	Week 01/2018 EN

1.10 Explanation of the symbols used

- ▶ This symbol indicates an action to be taken.
- This symbol indicates a list.

1.11 Supplementary documents

Manual	Part no.
Installation manual for flush-mount installation kit (frame construction) M-WRG-M	5300-00-01
Installation manual for flush-mount installation kit with plastering trim (solid construction) M-WRG-M/MB	5300-01-01
Installation manual for flush-mount installation kit, solid construction, with one / two flat ductwork connection(s) M-WRG-M/MB-FK1 / FK2	5300-03-01
Installation manual for flush-mount installation kit, solid construction, with one / two flexible pipe connection(s) M-WRG-M/MB-FR75/1 / FR75/2 / FR63/1 / FR63/2	5300-05-01
Installation manual for flush-mount installation kit, solid construction, with flat ductwork connections / flexible pipe connections M-WRG-M/MB-U ²	5300-06-01
Installation manual for outer wall terminals M-WRG-EFL/AP...	5300-22-01

Table 1: Supplementary documents

2 Safety instructions

This manual contains notes that you must follow for your own personal safety and to avoid injury and damage to property. They are highlighted by warning triangles and are shown as follows according to the level of danger.

2.1 Hazard classification

DANGER

The signal word designates a hazard with a **high** degree of risk which, if it is not avoided, will result in death or severe injury.

WARNING

The signal word designates a hazard with a **medium** degree of risk which, if it is not avoided, will result in death or severe injury.

CAUTION

The signal word designates a hazard with a **low** degree of risk which, if it is not avoided, could result in minor or moderate injury.

NOTE

A note as used in this manual contains important information about the product or about a part of the manual to which particular attention should be paid.

2.2 Notes on using the ventilation units safely

WARNING

— **Fire protection**

- ▶ Follow the requirements of the national technical approval from the Deutsches Institut für Bautechnik (DIBt), approval number Z-51.3-138, when planning and installing the unit.

— **Operation with fireplaces**

- ▶ An additional safety device (underpressure or differential pressure monitor) is needed to monitor operation when M-WRG ventilation units are used in conjunction with fireplaces.
- ▶ Follow the requirements of the German Fire Code (FeuVo) when planning and installing the unit.
- ▶ Contact the local chimney sweep before the end of the planning phase.
- ▶ Have the chimney sweep approve the operation of the ventilation unit.

⚠ WARNING

— **Installation in wet areas**

The following rules from DIN VDE 0100-701/702 (IEC 60364-7-701) apply to installation in wet areas:

- Protection zone 0 and 1: The unit must NOT be installed in these areas.
- Protection zone 2: The unit may be installed in this area if the mains switch is covered with a protective cap. The protective cap must be installed at the factory.
 - ▶ You will need to include the mains switch protective cap (M-WRG-SN, part no. 5430) when you order the ventilation unit.
- Other zone: The unit may be installed in this area.

— **Build-up of icicles and ice patches at low temperatures**

The heat recovery process in our ventilation units causes condensation. This condensation is dissipated to the outside via the exhaust air pipe. When external temperatures drop below 0 °C this can cause a build-up of icicles at the outer wall terminals and ice patches on the ground.

- ▶ You should therefore position the outer wall terminals so as to exclude any possibility of accidents.

⚠ CAUTION

— **Starting and using the ventilation unit**

- ▶ Do not start up the ventilation unit until it is fully installed.
- ▶ Always make sure that the cover is closed and locked in place before using the ventilation unit.

2.3 Intended use

- The ventilation unit is intended for supplying air to and extracting air from living and recreation rooms (bedrooms, playrooms, living rooms, bathrooms, basement workshops, offices, consulting rooms, etc.). The ventilation unit is installed in a perpendicular position in the external wall. Any different or more extensive usage will be regarded as contrary to the intended use.
- The intended use also includes compliance with all the notes in the installation manual.
- The ventilation unit must not be operated without air filters.
- The ventilation unit's functions may be impaired or the unit may be damaged in rooms with a lot of dust (e.g. model-making) or corrosive gas emissions (e.g. blueprint shop, cleaning).
- For any use contrary to the intended use, Meltem Wärmerückgewinnung GmbH & Co. KG shall accept no liability for any damage that may occur and offers no warranty that the components will work perfectly and correctly.

3 Planning notes

3.1 Surface-mount installation

3.1.1 Requirements for the installation wall

⚠ WARNING

Danger from emerging gas or electric shock

- ▶ Make sure that the holes for the external and exhaust air pipes in the wall are not in the vicinity of supply lines (e.g. gas, water or power).

- The ventilation unit must be installed indoors in a perpendicular position on an external wall. The surface to which the ventilation unit will be fixed must be flat. Any unevenness will distort the housing when it is fixed in place, and may impair the unit's functioning.

- The minimum wall thickness depends on the outer wall terminal used:

Outer wall terminal	Minimum wall thickness
M-WRG-ES	50 mm
M-WRG-ESR	30 mm
M-WRG-ESG/AP...	50 mm

Table 2: Minimum wall thicknesses for outer wall terminals

- ▶ For walls that are 47 cm thick or more, you will need 100 cm long outdoor and exhaust air pipes (M-WRG-LR 100, part no. 5580).

3.1.2 Positioning the ventilation unit indoors

- The ventilation unit must be installed so that the openings for extract air and supply air (pos. 1 and pos. 7 in Fig. 7 on page 15) point up.

- For a standard room height of 2.50 m, the best effect for air exchange is achieved if the supply and extract air openings are roughly 30 cm (top edge of the unit) below the ceiling.
 - ▶ Maintain the following minimum distances:
 - the distance between the top edge of the ventilation unit and the ceiling must be at least 15 cm. Otherwise air turbulence or an air short circuit may occur.
 - The distance between the side edge of the ventilation unit and adjacent surfaces should be at least 5 cm. The ventilation unit will be easier to operate if this minimum distance is maintained. It also allows the air filter to be replaced without obstruction.

 - ▶ In taller rooms, position the ventilation unit so that the unit can be operated unaided (without steps, ladders, etc.). Alternatively order a ventilation unit that can be operated externally.

3.1.3 Unrestricted access to the ventilation unit

The ventilation unit must always be freely accessible for operation and maintenance.

- ▶ Make sure that the ventilation unit is not blocked, obstructed or covered when the room is subsequently decorated and furnished, otherwise it cannot be operated and it will not be possible to replace the air filter. You should therefore maintain a clearance of at least 150 mm in front of the ventilation unit cover.
- ▶ Make sure that the supply and extract air openings are not blocked, obstructed or covered when the room is subsequently decorated and furnished.

3.1.4 Electrical connection

The ventilation unit is supplied with 230 V AC (working voltage range: 85 to 265 V AC / 50 to 60 Hz).

NOTE

If the ventilation unit is not equipped with a mains connection cable and plug or other means of disconnecting from the mains supply that has, at each pole, a contact opening width that conforms to the conditions of overvoltage category III for complete separation, then such an isolating unit (e.g. circuit breaker) must be integrated into the permanently installed electrical system in accordance with the installation regulations. The isolating unit must be identified as such and easy to access.

3.2 Flush-mount installation

An M-WRG flush-mount installation kit is needed to flush-mount the ventilation unit.

- ▶ Also read and follow the “Planning notes” section of the installation manual that is supplied with the flush-mount installation kit.

4 Warranty and liability

4.1 Warranty

The following cases shall invalidate the warranty:

- The installation kit was not installed as described in the installation manual.
- The ventilation unit was not installed as described in the installation manual.
- The ventilation unit was flush-mounted without using the M-WRG flush-mount installation kit.
- Genuine parts/genuine air filters were not replaced with genuine parts.
- Unapproved changes were made to the installation kit or ventilation unit.
- Repairs were not carried out by Meltem or by an authorised specialist company.
- The ventilation unit was operated without air filters.
- The warranty does not cover wearing parts such as air filters.

4.2 Liability

The manufacturer's liability shall not apply in the following cases:

- The installation kit was not installed as described in the installation manual.
- The ventilation unit was not installed as described in the installation manual.
- The ventilation unit was flush-mounted without using the M-WRG flush-mount installation kit.
- Genuine parts/genuine air filters were not replaced with genuine parts.
- Unapproved changes were made to the installation kit or ventilation unit.
- Repairs were not carried out by Meltem or by an authorised specialist company.
- The ventilation unit was operated without air filters.

5 Dimensions

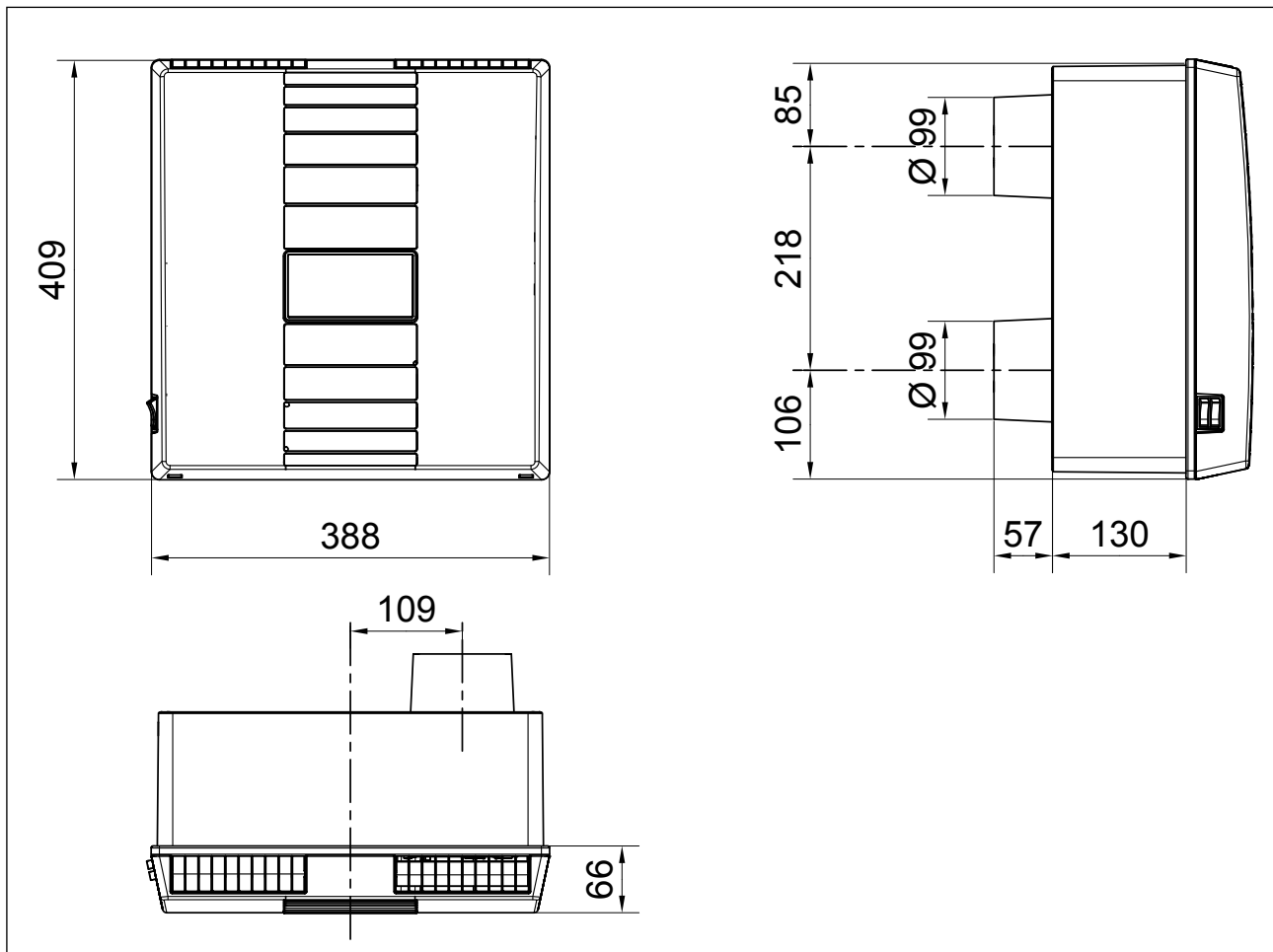


Fig. 4: Dimensions of the M-WRG-S... ventilation unit, in millimetres

6 Items supplied

6.1 M-WRG-S... ventilation unit

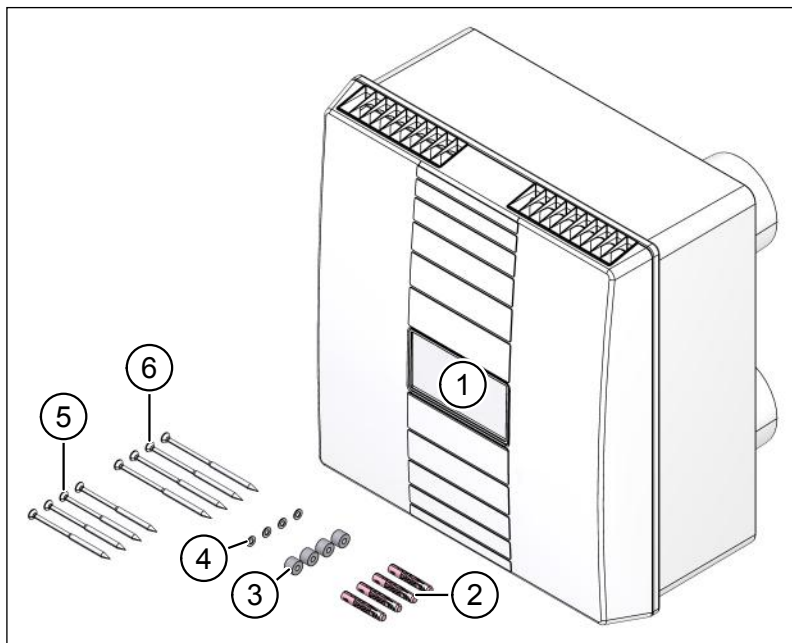


Fig. 5: Items supplied with the M-WRG-S... ventilation unit

Item	Description	Quantity
1	Ventilation unit	1x
2	Dowel S8	4x
3	Centring guide	4x
4	Washer 5.3 x 10 mm	4x
5	Cross-head screw 5 x 100 mm for flush-mount installation	4x
6	Cross-head screw 5 x 120 mm for surface-mount installation	4x
-	Operating instructions	1x
-	Installation manual	1x
-	Installation manual for connecting the control cable, depending on the type of ventilation unit	1x

6.2 Installation materials required

Additional installation materials are needed for surface-mount and flush-mount installation. These must be ordered separately.

Type	Part no.	Description
M-WRG-M/AP	5062	Surface-mount installation kit consisting of drilling templates for ventilation unit and outer wall terminal stainless steel pod, including outdoor air and exhaust air pipe DN 100, 0.5 m long
M-WRG-LR 50	5574	Outdoor air and exhaust air pipe 2 x 0.5 m - DN 100 for flush-mount installation

7 Overview of the modules

7.1 Ventilation unit – cover attached

Item	Designation
1	Housing
2	Cover
3	Stepping switch for three power levels + intensive ventilation level
4	Mains switch

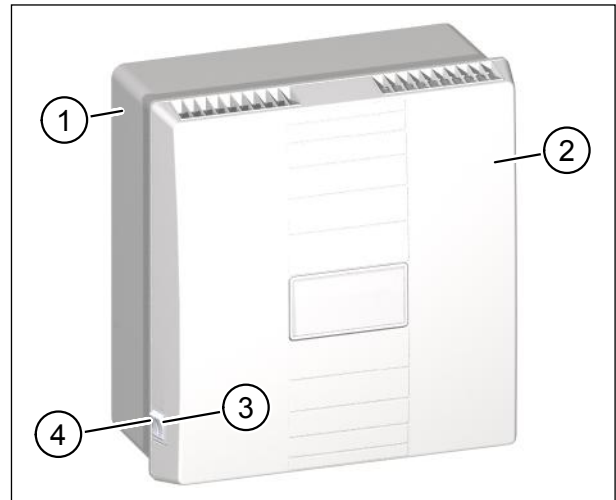


Fig. 6: Ventilation unit – cover attached

7.2 Ventilation unit – cover removed

Item	Designation
1	Supply air opening with air flap
2	Supply air filter with filter cover
3	Intermediate plate
4	Network connection cover
5	Supply air hood
6	Extract air filter with filter ring
7	Extract air opening with air flap

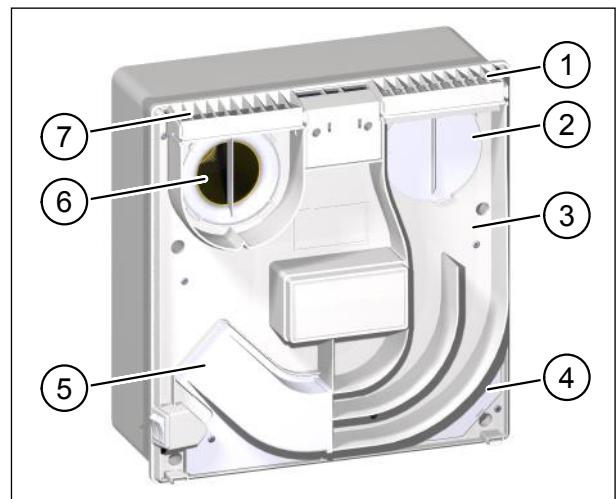


Fig. 7: Ventilation unit – cover removed

7.3 Outer wall terminal

Fig. 8 shows the outer wall terminal M-WRG-ES by way of example.

Item	Designation
1	Opening for drawing in outdoor air
2	Opening for blowing out exhaust air

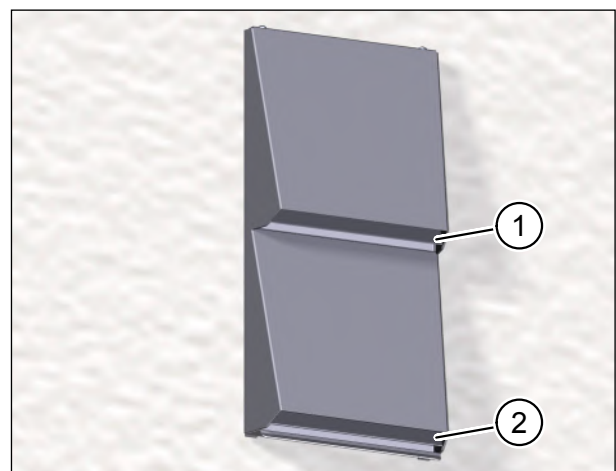


Fig. 8: Outer wall terminal

8 Tools and equipment required

8.1 Surface-mount installation

- Adhesive tape for fixing the drilling template
- Core drill Ø 120 mm
- Expanding foam with abP (national technical test certificate of the DIBt) approval (“exact gap” foam is recommended)
- Hammer drill with 8 mm masonry bit
- Material for closing off the ventilation pipes for plastering (e.g. paper)
- Saw for cutting the ventilation pipes to length
- Set of cross-head screwdrivers
- Set of slotted screwdrivers
- Spirit level
- Torx screwdriver TX20
- Wall chaser

8.2 Flush-mount installation

- Set of cross-head screwdrivers
- Set of slotted screwdrivers
- Torx screwdriver TX20

9 General installation instructions

NOTE

- The unit must be installed in accordance with the generally acknowledged rules of technology.
- Connections with adjacent components must be formed to absorb movements between the contact surfaces.
- Seal any connections that are exposed to driving rain with tapes, profiles or sealants such that they offer sufficient protection against the expected conditions.

9.1 Surface-mount installation/flush-mount installation

This manual describes the surface-mount and flush-mount installation of the ventilation unit.

- For **surface-mount installation**, follow the steps in sections „10 Surface-mount installation“ from page 18 and „11 Installing the ventilation unit“ from page 26.
- For **flush-mount installation**, follow the steps in section „11 Installing the ventilation unit“ from page 26.

The ventilation unit is installed once the work described in the following installation manuals is complete:

Installation manual	Part no.
Flush-mount installation kit M-WRG-M (frame construction)	5300-00-01
Flush-mount installation kit with plastering trim (solid construction) M-WRG-M/MB	5300-01-01
Flush-mount installation kit M-WRG-M/MB-FK...	5300-03-01
Flush-mount installation kit M-WRG-M/MB-FR...	5300-05-01

WARNING

Follow the relevant accident prevention regulations

- ▶ Follow the accident prevention regulations when setting up the installation location.
- ▶ Protect the outside area against falling parts.

9.2 Electrically disconnecting mains cables

During installation, the ventilation unit is connected to the power supply with a mains cable.

DANGER

Potentially fatal voltages.

- The electrical installation work must only be carried out by a qualified electrician.
- The VDE regulations or any special safety regulations applicable in your country apply to the electrical installation work.
- ▶ Disconnect the mains cable for connecting to the ventilation unit on all poles from the mains supply.
- ▶ Make sure that the mains supply cannot be switched on again.

10 Surface-mount installation

10.1 Marking positions of core drill holes with drilling template

- ▶ Press the pre-punched cut-outs (item 2 in Fig. 9) for the core drill holes out of the drilling template.
- ▶ Position the drilling template (item 3 in Fig. 9) at the installation location on the internal wall.

NOTE

- ▶ Observe the required distances of 300 mm from the ceiling and 50 mm from the side wall.
- ▶ Use the spirit level to align the drilling template (item 1 in Fig. 9).
- ▶ Fix the drilling template in place with adhesive tape (item 4 in Fig. 9).
- ▶ Using the spirit level, check again that the drilling template is aligned.
- ▶ Mark the outlines (item 1 in Fig. 10) of the pre-punched contours in the drilling template for the core drill holes on the internal wall.
- ▶ Mark the six notches (item 2 in Fig. 10) in the drilling template on the internal wall.
- ▶ Remove the drilling template.
- ▶ Draw the cross-hairs (item 3 in Fig. 10) for the core drill holes using the six marked notches.
- ▶ Check the marks for the core drill holes against Fig. 10.

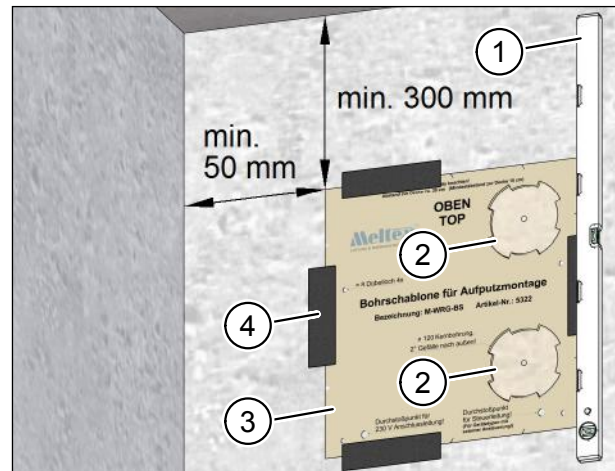


Fig. 9: Marking positions of the core drill holes

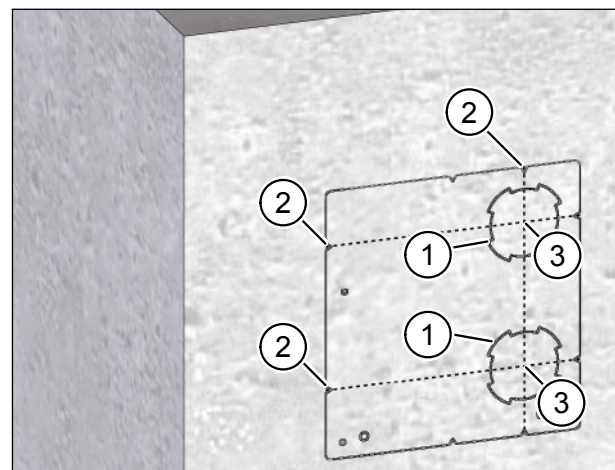


Fig. 10: Marks on the internal wall

10.2 Drilling core drill holes

- ▶ Drill the two Ø 120 mm core drill holes as described in Fig. 11.

NOTE

- ▶ Be sure to align the core drill holes with a 2° drop from the internal wall to the external wall. This will allow condensate in the ventilation pipes to drain to the outside.

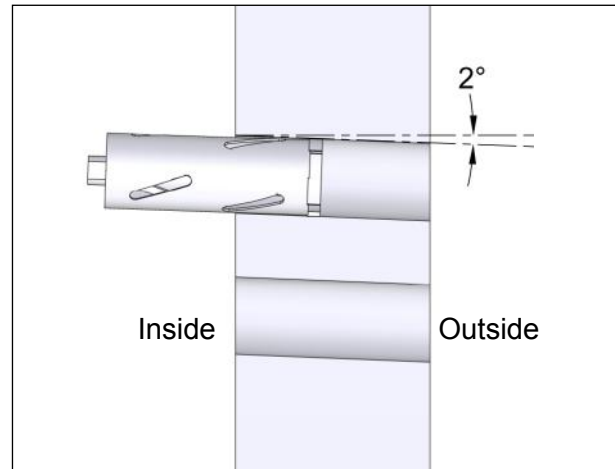


Fig. 11: Drilling core drill holes

10.3 Drilling holes for dowels and making marks for connecting cables

- ▶ Position the drilling template (item 1 in Fig. 12) precisely over the two core drill holes.
- ▶ Mark the four holes (item 2 in Fig. 12) for the dowels for fixing the ventilation unit to the internal wall.
- ▶ Mark the position of the passage for the mains cable (item 4 in Fig. 12) in the ventilation unit on the internal wall. This mark identifies the end of the wall channel that needs to be chased out for the mains cable.
- ▶ Mark the position of the passage for the control cable (if used) (item 3 in Fig. 12) on the internal wall (only for ventilation units with a control cable connection, see Table 4 in section 10.8 on page 22). This mark identifies the end of the wall channel that needs to be chased out for the control cable.
- ▶ Remove the drilling template.
- ▶ Drill four holes for the dowels Ø 8 mm and 60 mm deep.

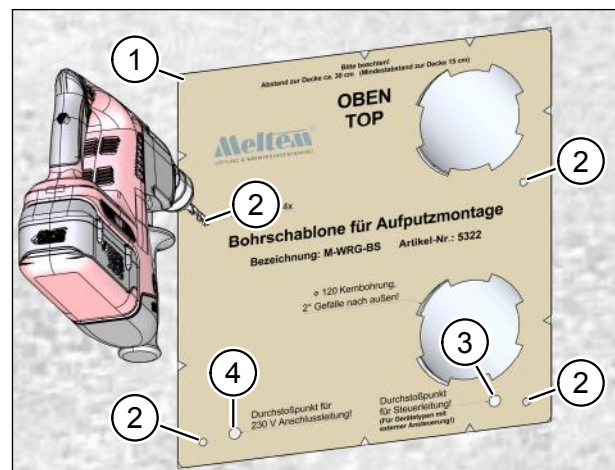


Fig. 12: Holes for dowels and marks for connecting cables

10.4 Chasing out channels for connecting cables

- ▶ Chase out a wall channel for the mains cable starting from the cable passage (item 1 in Fig. 13).
- ▶ Chase out a wall channel for the control cable (if used) starting from the cable passage (item 2 in Fig. 13) (only for ventilation units with a control cable connection, see Table 4 in section 10.8 on page 22).
- ▶ Position the drilling template (item 2 in Fig. 14) on the internal wall.
- ▶ Fix the drilling template in place with the four S8 dowels (item 3 in Fig. 14).
- ▶ Use the spirit level to align the drilling template and fix the drilling template in place with adhesive tape.

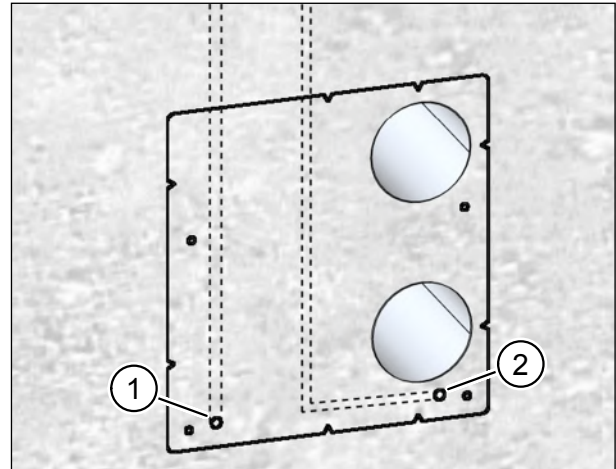


Fig. 13: Chasing wall channels for the mains cable and control cable (if used)

10.5 Inserting the ventilation pipes

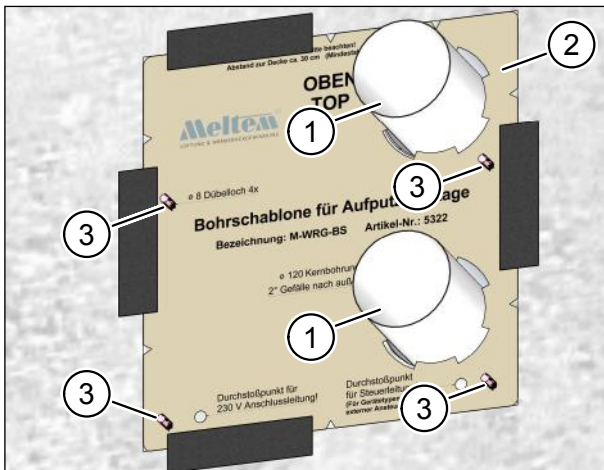


Fig. 14: Ventilation pipes on the internal wall

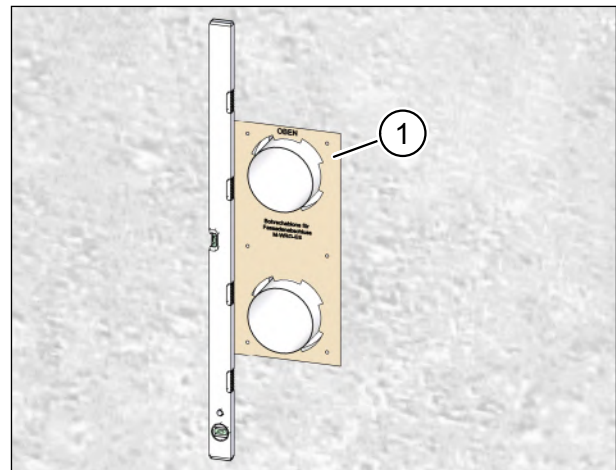


Fig. 15: Ventilation pipes on the external wall

NOTE

- ▶ Prepare the breakthrough surfaces suitably for the ventilation pipes.
- ▶ Push the two ventilation pipes (item 1 in Fig. 14) through the core drill holes so that they protrude from both the internal and external wall. The ventilation pipes are fixed in place on the internal wall by the drilling template for the ventilation unit (item 2 in Fig. 14).
- ▶ Push the drilling template for the outer wall terminal (item 1 in Fig. 15) over the ventilation pipes on the external wall.
- ▶ Align the drilling template for the outer wall terminal so that the ventilation pipes have a 2° drop from the internal wall to the external wall.

NOTE

- ▶ Be sure to align the ventilation pipes with a 2° drop from the internal wall to the external wall. This will allow condensate in the ventilation pipes to drain to the outside.
- ▶ Use the spirit level to align the drilling template for the outer wall terminal.

10.6 Fixing the drilling template for the outer wall terminal

- Fixing the drilling template for outer wall terminal M-WRG-ESR:
 - ▶ Fix the drilling template to the external wall with adhesive tape.
- Fixing the drilling template for outer wall terminal M-WRG-ES and M-WRG-ESG/AP:
 - ▶ Drill the holes for the outer wall terminal (depending on the outer wall terminal, see also the “Outer wall terminals M-WRG-ES...” installation manual, part no. 5300-20-01).
 - ▶ Fix the drilling template in place with the dowels and screws provided.
- ▶ Check the excess length between the ventilation pipes and the external wall with reference to the following table (depending on the outer wall terminal, see also the “Outer wall terminals M-WRG-ES...” installation manual, part no. 5300-20-01):

Outer wall terminal	Excess
Stainless steel pod, M-WRG-ES	5 - 10 mm from the plastered external wall
Stainless steel pipe set, M-WRG-ESR	25 - 30 mm from the plastered external wall
Stainless steel louvred design (surface-mount) M-WRG-ESG/AP	5 - 10 mm from the plastered external wall

Table 3: Excess length of the ventilation pipes from the external wall

- ▶ Correct the excess, if necessary, by moving the ventilation pipe.

10.7 Fixing ventilation pipes and filling gaps with foam

- ▶ Spray expanding foam through the recesses (item 1 in Fig. 16) in the drilling templates on the internal and external walls in order to provisionally fix the ventilation pipes.
- ▶ Check the position of the ventilation pipes again.

NOTE

- ▶ Be sure to align the ventilation pipes with a 2° drop from the internal wall to the external wall. This will allow condensate in the ventilation pipes to drain to the outside.
- ▶ Wait until the expanding foam has cured.
- ▶ Remove the drilling templates from the internal and external walls.

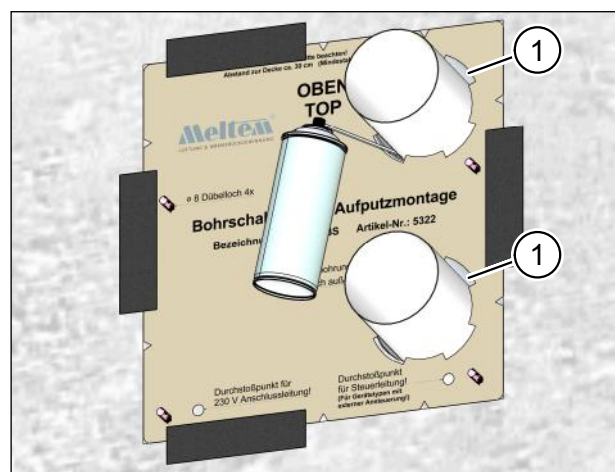


Fig. 16: Fixing the ventilation pipes

- ▶ Completely fill the cavities between the core drill holes and ventilation pipes with expanding foam.
- ▶ Wait until the expanding foam has cured.

10.8 Running the connecting cables

DANGER

Potentially fatal voltages.

- The electrical installation work must only be carried out by a qualified electrician.
- The VDE regulations or any special safety regulations applicable in your country apply to the electrical installation work.
- ▶ Disconnect the mains cable for connecting to the ventilation unit on all poles from the mains supply.
- ▶ Make sure that the mains supply cannot be switched on again.

NOTE

- Table 4 on page 22 and Table 5 on page 23 contain overviews of the recommended mains cable and control cable types.
- A control cable is only needed for certain types of ventilation unit.
- The ventilation unit (constructed 2018 or later) is equipped with an external control input as standard. The mains cable **NYM-J 4 x 1.5 mm²** is needed if this control input is used.

Part no.	Type of ventilation unit	Type of mains cable	Type of control cable
5010	M-WRG-S	NYM-J 3 x 1.5 mm ² or NYM-J 4 x 1.5 mm ² (*)	-
5016-1-0	M-WRG-S/Z-S	NYM-J 3 x 1.5 mm ² or NYM-J 4 x 1.5 mm ² (*)	J-Y (St) Y 4 x 2 x 0.6 mm or J-Y (St) Y 4 x 2 x 0.8 mm
5016-1-1	M-WRG-S/Z-T	NYM-J 3 x 1.5 mm ² or NYM-J 4 x 1.5 mm ² (*)	J-Y (St) Y 10 x 2 x 0.6 mm or
5016-1-1-1	M-WRG-S/Z-T-F		J-Y (St) Y 10 x 2 x 0.8 mm
5016-1-1-2	M-WRG-S/Z-T-FC		
5016-1-2	M-WRG-S/Z-KNX	NYM-J 3 x 1.5 mm ² or NYM-J 4 x 1.5 mm ² (*)	J-Y (St) Y 2 x 2 x 0.8 mm or
5016-1-2-1	M-WRG-S/Z-KNX-F		EIB-Y (St) Y 2 x 2 x 0.8 mm
5016-1-2-2	M-WRG-S/Z-KNX-FC		
5016-2-2	M-WRG-S/Z-EIB		
5016-2-1	M-WRG-S/Z-24	NYM-J 3 x 1.5 mm ² or NYM-J 4 x 1.5 mm ² (*)	J-Y (St) Y 4 x 2 x 0.6 mm or J-Y (St) Y 4 x 2 x 0.8 mm
5013	M-WRG-S 485	NYM-J 3 x 1.5 mm ² or NYM-J 4 x 1.5 mm ² (*)	J-Y (St) Y 3 x 2 x 0.6 mm or
5014-1	M-WRG-S 485-TF		J-Y (St) Y 3 x 2 x 0.8 mm
5014-2	M-WRG-S 485-TFC		

Table 4: Types of mains cable and control cable for each ventilation unit type

(*) If the external control input is used

In addition, there are further options available for the control input supplied as standard:

Part no.	Options for external control input	Type of mains cable	Type of control cable
5046-31	M-WRG-O/EST-1 (without switch-on delay)	NYM-J 4 x 1.5 mm ²	-
5046-32	M-WRG-O/EST-2 (without follow-up time)		

Table 5: Mains cable types for external control input options

- ▶ Run the mains cable (item 1 in Fig. 17) and the control cable, if required (item 2 in Fig. 17). The cables should extend roughly 250 mm beyond the wall.
- ▶ Fix the mains cable and the control cable (if required) in position.

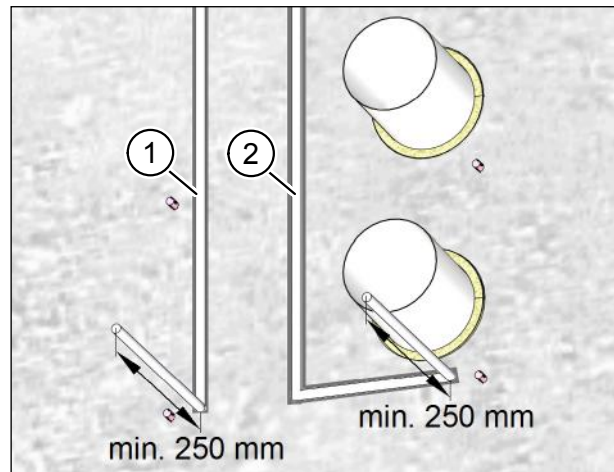


Fig. 17: Running the connecting cables

10.9 Plastering the internal wall

NOTE

- ▶ Prepare the substrate suitably before plastering.
- ▶ Before plastering, close off both ends of the ventilation pipes with adhesive tape (item 1 in Fig. 18) or another suitable material.
- ▶ Trim the expanding foam (item 2 in Fig. 18) flush with the unplastered wall.
- ▶ Plaster the cable ducts.
- ▶ Plaster the internal wall as far as the ventilation pipes. The plaster forms the airtight layer on the internal wall. The expanding foam does not act as an airtight layer.

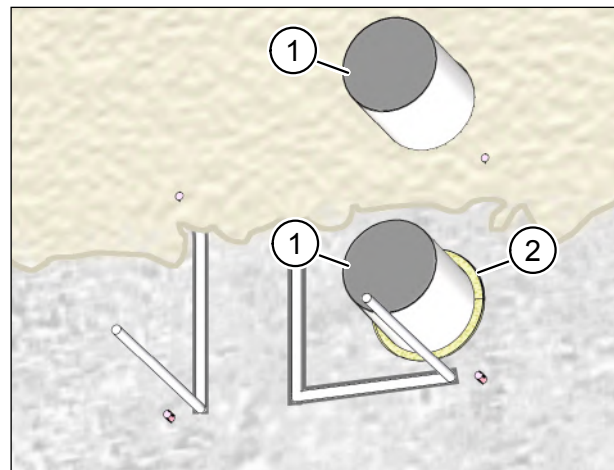


Fig. 18: Plastering the internal wall

NOTE

When the ventilation unit is subsequently surface-mounted, the internal wall is already plastered.

- ▶ In this case, remove the expanding foam as far as the unplastered wall and then plaster the gap around the ventilation pipe. The plaster forms the airtight layer on the internal wall. The expanding foam does not act as an airtight layer.

10.10 Cutting ventilation pipes on internal wall to length

- ▶ Cut the ventilation pipes (item 1 in Fig. 19) to length on the internal wall so that they end flush with the internal plaster.
- ▶ Deburr the ventilation pipes on the internal wall.

NOTE

If you do not deburr the ventilation pipes there is a risk of damaging the seals at the ventilation unit.

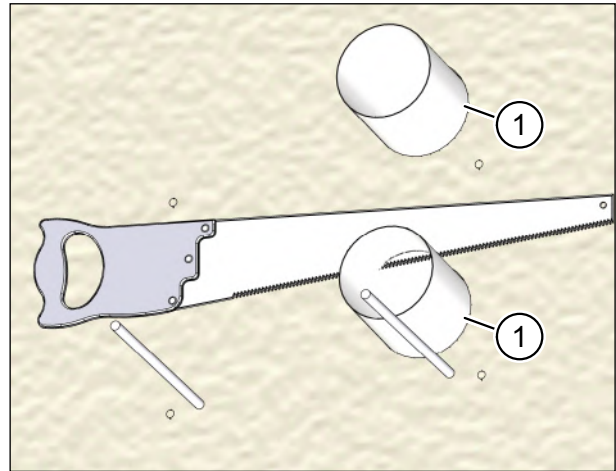


Fig. 19: Cutting ventilation pipes on internal wall to length

10.11 Sealing ventilation pipes on external wall

NOTE

If the external plaster encloses the ventilation pipes all round and without gaps, you can skip the steps described in this section.

- ▶ Chamfer both pipe breakthrough edges (item 1 in Fig. 20) to roughly 5x45° to create enough space for the sealing joints with permanently elastic sealant.
- ▶ Fill the chamfers of the pipe breakthrough edges all-round with permanently elastic sealant on the outside.

NOTE

- ▶ Only use a solvent-free sealant if the sealant is applied to polystyrene.

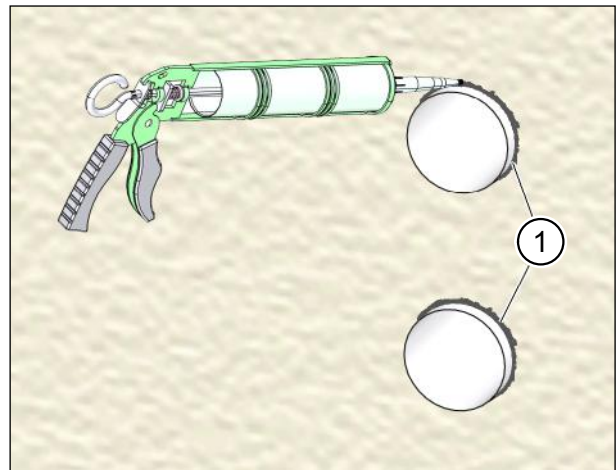


Fig. 20: Sealing ventilation pipes on external wall

10.12 Attaching the outer wall terminal

WARNING

Do not run without the outer wall terminal.

- ▶ Please note that the ventilation unit must not be used without the outer wall terminal for safety reasons.

- ▶ Attach the outer wall terminal to the outer wall.

NOTE

Installation of the outer wall terminal is described in the separate installation manual "Outer wall terminals M-WRG-ES...", part no. 5300-20-01.

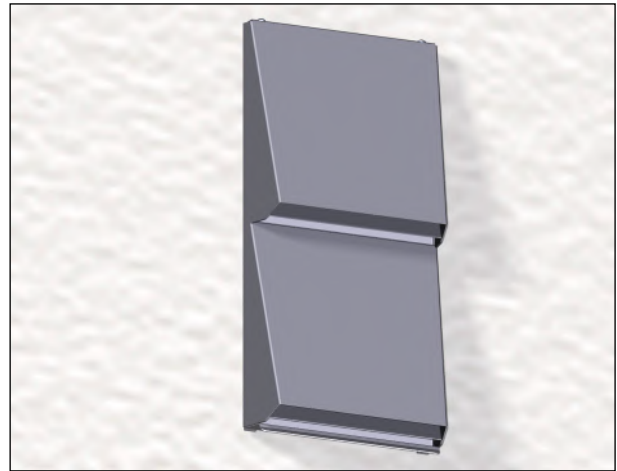


Fig. 21: Attaching the outer wall terminal

11 Installing the ventilation unit

11.1 Removing the cover from the ventilation unit

- ▶ Using both thumbs, press the two latches (item 1 in Fig. 22) on the bottom of the ventilation unit. The cover will come away.
- ▶ At the same time, push your index fingers into the gap between the cover and housing, and lift the cover away from the housing.

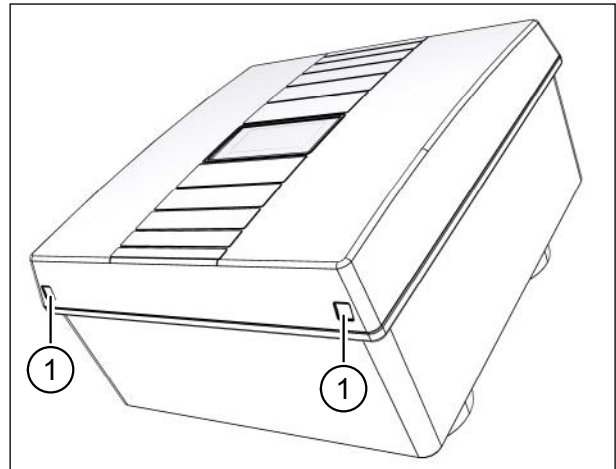


Fig. 22: Removing the cover from the ventilation unit

11.2 Inserting fixing screws with centring guides into the ventilation unit

- ▶ Take the four 5 x 100 mm (flush-mount) or 5 x 120 mm (surface-mount) cross-head screws, four washers and four centring guides (see Fig. 5 on page 14) from the ventilation unit set.
- ▶ Place the washers (item 1 in Fig. 23) on the cross-head screws (item 2 in Fig. 23) and introduce them into the holes in the housing (item 3 in Fig. 23).
- ▶ Screw the four centring guides (item 4 in Fig. 23) onto the four cross-head screws at the back until the tip of each cross-head screw protrudes roughly 10 mm over the centring guide.

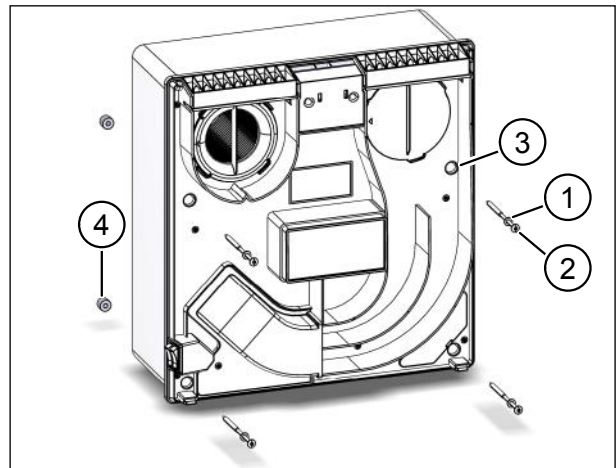


Fig. 23: Inserting the fixing screws

11.3 Removing the supply air hood

- ▶ Use the screwdriver to loosen the screw (item 1 in Fig. 24) on the supply air hood (item 2 in Fig. 24).
- ▶ Hold the supply air hood by the curved walls and press against the pressure point (item 3 in Fig. 24). This will release the latch connection and you can now remove the supply air hood.

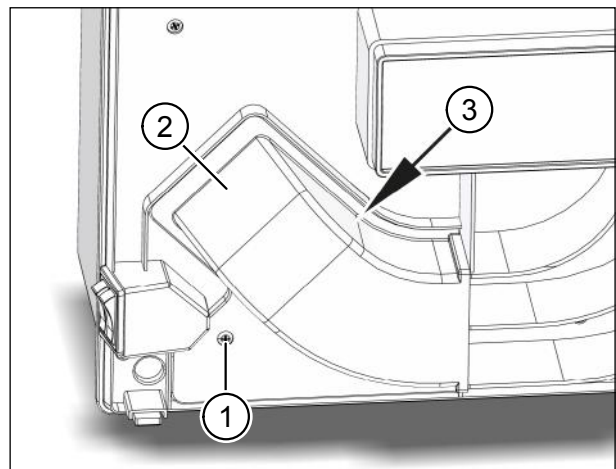


Fig. 24: Removing the supply air hood

11.4 Removing the network connection cover (on certain ventilation unit types only)

NOTE

The network connection cover only has to be removed when connecting a control cable to the ventilation unit. You will find the affected ventilation units in Table 4 in section 10.8 on page 22.

- ▶ Press the latch (item 1 in Fig. 25) of the network connection cover (item 2 in Fig. 25) gently towards the middle of the unit, and lift up the network connection cover.

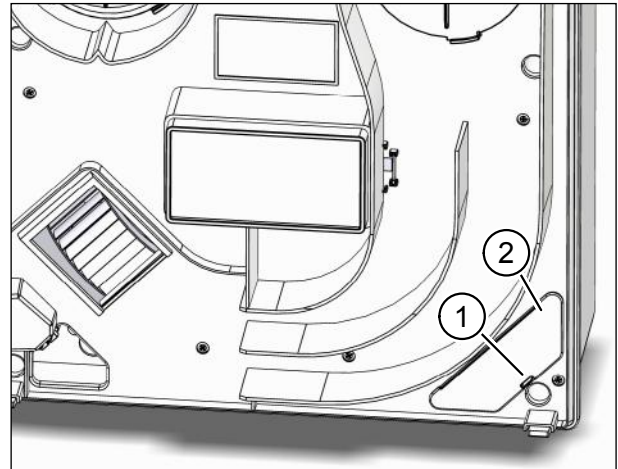


Fig. 25: Removing the network connection cover

11.5 Threading in the mains cable and control cable (if used)

- ▶ Hold the ventilation unit in front of the installation location.
- ▶ Thread the mains cable into the hole (item 1 in Fig. 26) on the ventilation unit and pull the cable through the hole.
- ▶ Thread the control cable (if used) into the hole (item 2 in Fig. 26) on the ventilation unit, and pull the cable through the hole.

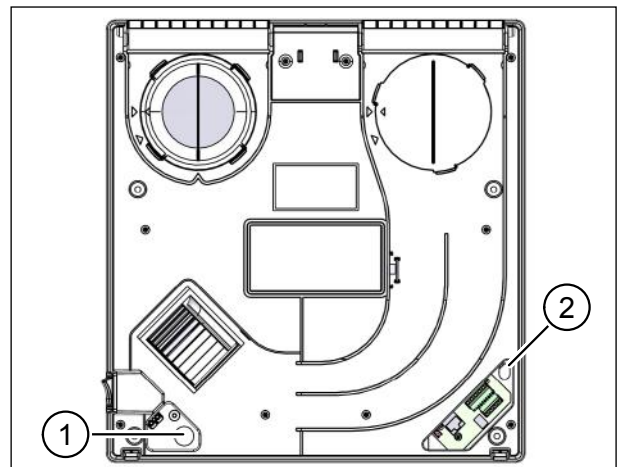


Fig. 26: Threading in the mains cable and control cable (if used)

11.6 Fixing the ventilation unit

- ▶ Check that the sealing tapes around the ventilation connecting pieces on the back of the ventilation unit are undamaged. Damaged sealing tapes should be replaced immediately.
- ▶ Attach the ventilation unit so that the ventilation connecting pieces are lined up with the outdoor air pipe (item 1 in Fig. 27 and Fig. 28) and exhaust air pipe (item 2 in Fig. 27 and Fig. 28).
- ▶ Carefully push the ventilation unit onto the outdoor air and exhaust air pipes as far as it will go.
- ▶ Use the four cross-head screws (item 3 in Fig. 27 and Fig. 28) to fix the ventilation unit. **Lightly** tighten the screws using a diagonal sequence.
- ▶ Use a spirit level to align the ventilation unit for surface-mount installation.
- ▶ Tighten the cross-head screws using a diagonal sequence.

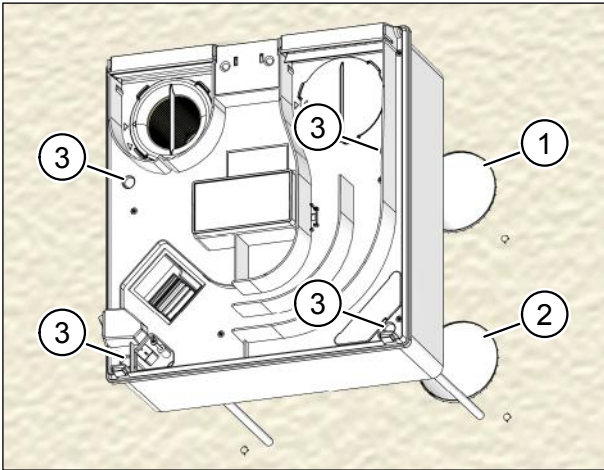


Fig. 27: Fixing the ventilation unit – surface-mount installation

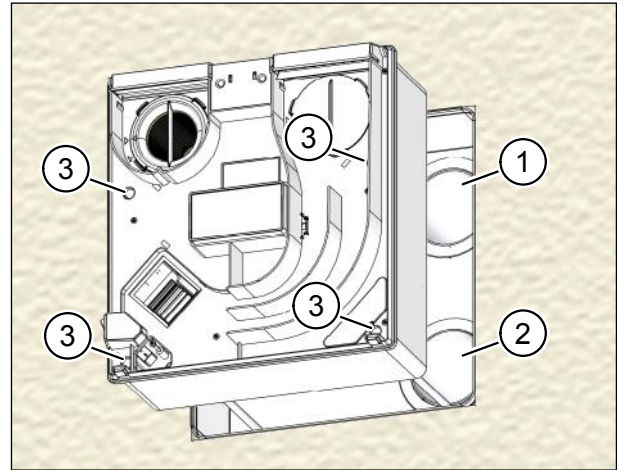


Fig. 28: Fixing the ventilation unit – flush-mount installation

11.7 Connecting the mains cable and control cable (if used)

⚠ DANGER

Potentially fatal voltages.

- The electrical installation work must only be carried out by a qualified electrician.
- The VDE regulations or any special safety regulations applicable in your country apply to the electrical installation work.
- ▶ Disconnect the mains cable for connecting to the ventilation unit on all poles from the mains supply.
- ▶ Make sure that the mains supply cannot be switched on again.

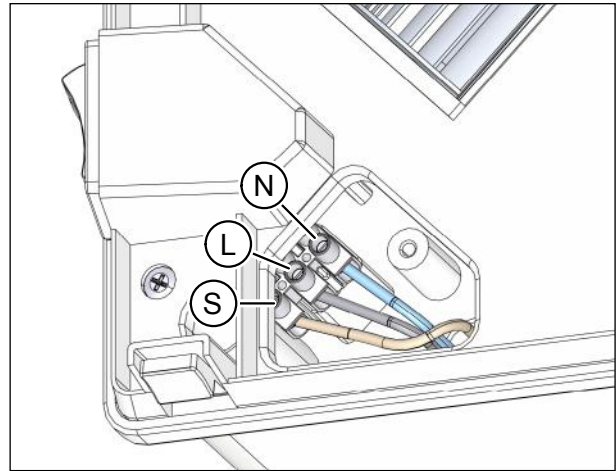


Fig. 29: Connecting the ventilation unit to the mains power supply

NOTE

The ventilation unit may be damaged if the mains or control cable is connected incorrectly. This will also invalidate the warranty.

- ▶ Connect the neutral conductor N (item N in Fig. 29) and the outer conductor L (item L in Fig. 29) to the screw terminal of the ventilation unit.
- ▶ Connect the wire for the external control input (if used) (item S in Fig. 29) to the screw terminal (only for ventilation units with external control input, see Table 5 in section 10.8 on page 23).

NOTE

No protective earth (PE) conductor is required.

- ▶ Connect the control cable (if used) to the ventilation unit.

NOTE

Connection of the control cable is described in separate installation instructions (only for certain ventilation units, see Table 4 in section 10.8 on page 22).

11.8 Fixing the supply air hood

⚠ WARNING

Do not run without the supply air hood.

- ▶ Please note that the ventilation unit must not be used without the supply air hood. The supply air hood is designed to prevent contact with live and rotating parts.
- ▶ Push the supply air hood (item 1 in Fig. 30) into the slotted guide (item 2 in Fig. 30). Push until you hear the latches snap into place.
- ▶ Use the screw (item 3 in Fig. 30) to fix the supply air hood.

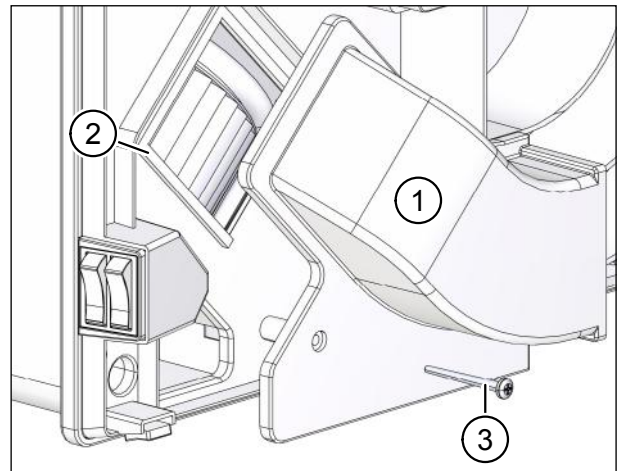


Fig. 30: Fixing the supply air hood

11.9 Inserting the network connection cover (on certain ventilation unit types only)

NOTE

If a control cable was connected to the ventilation unit, the network connection cover must be inserted again. You will find the affected ventilation units in Table 4 in section 10.8 on page 22.

- ▶ Place the network connection cover (item 1 in Fig. 31) over the opening (item 2 in Fig. 31) and lock it in place.

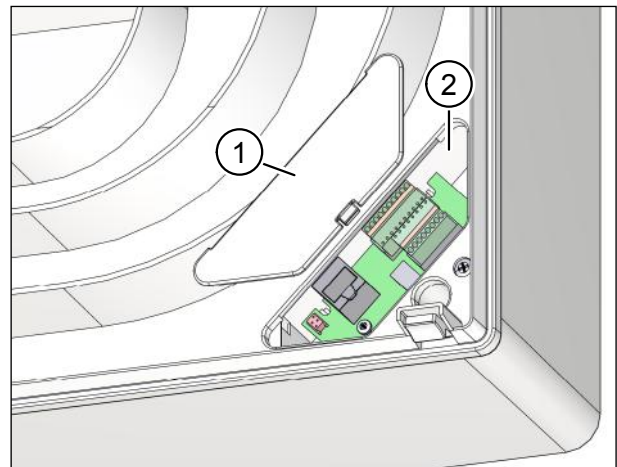


Fig. 31: Inserting the network connection cover

11.10 Attaching the cover to the ventilation unit

- ▶ Hold the cover of the ventilation unit with both hands and tilt the top edge of the cover towards the ventilation unit.
- ▶ Insert the tabs of the cover into the openings (item 1 in Fig. 32) on the top of the ventilation unit.
- ▶ Lightly press the bottom edge of the cover against the ventilation unit until you hear the cover snap in place.

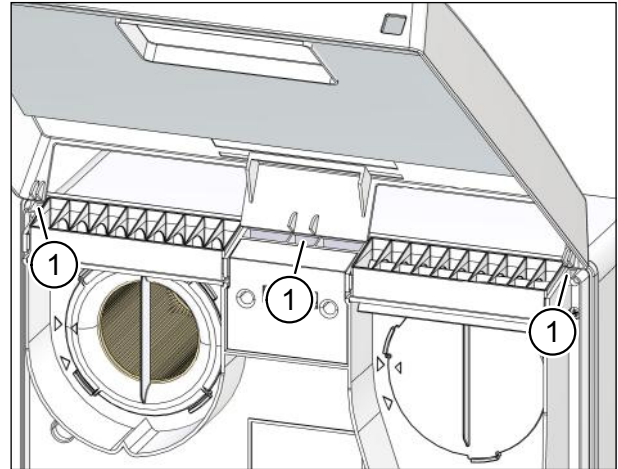


Fig. 32: Cover pivot points

11.11 Attaching the blind frame (optional for flush-mount installation)

The blind frame hides unattractive gaps between the ventilation unit and the wall.

- ▶ Push the blind frame (item 1 in Fig. 33) over the installed ventilation unit until it lies against the internal wall.

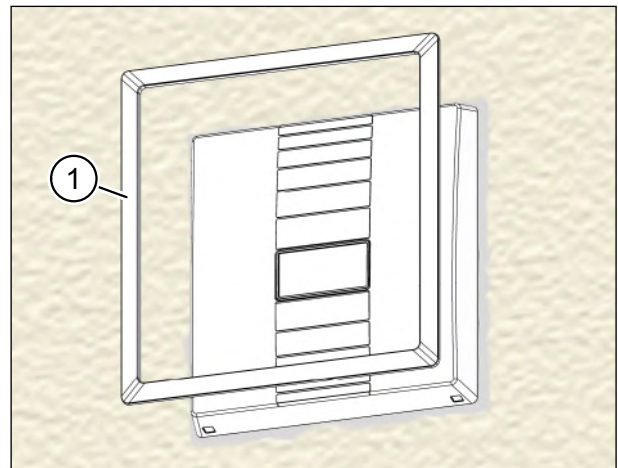


Fig. 33: Attaching the blind frame

11.12 Starting up the ventilation unit

- ▶ Start up the ventilation unit as described in the instructions provided with the unit.



We have checked the content of this publication for conformity with the unit described in it. There may nevertheless still be differences, so we cannot guarantee complete accuracy.

The information in this publication is regularly checked and any necessary corrections are made in the subsequent editions.

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