

HOME VENTILATION WITH HEAT RECOVERY

# Outer wall terminals M-WRG-II ES (-P, -PK) M-WRG-II KSR (-1, -2)

for fitting on external walls



INSTALLATION MANUAL

Part no. 744005EN Week 13/2020 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 outer wall terminals.

- ▶ Read all the instructions carefully before installing the outer wall terminals to avoid possible risks and mistakes.
- ▶ When assembly 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 6 carefully.

## 1.2 Description

These instructions describe how to install the outer wall terminals M-WRG-II ES (-P, -PK) and M-WRG-II KSR (-1, -2) on an external wall.

### 1.2.1 Outer wall terminal stainless steel pod M-WRG-II ES (-P, -PK)

- **M-WRG-II ES**,  
outer wall terminal stainless steel pod, material: stainless steel 1.4301, part no. 730000
- **M-WRG-II ES-P (\*)**,  
outer wall terminal stainless steel pod, material: stainless steel 1.4301, colour: white powder-coated (similar to RAL 9016), part no. 730001
- **M-WRG-II ES-PK (\*)**,  
outer wall terminal stainless steel pod, material: stainless steel 1.4301, colour: colourless matt powder-coated (R533-0092), part no. 730002



Fig. 1: Outer wall terminal stainless steel pod M-WRG-II ES

(\*) We recommend this version for use where the outdoor air is polluted or saline (e.g. industrial regions or near the coast).

### 1.2.2 Outer wall terminal plastic pipe set M-WRG-II KSR (-1, -2)

- **M-WRG-II KSR-1**,  
 outer wall terminal plastic pipe set,  
 material: ASA, colour: white, similar  
 to RAL 9016,  
 part no. 730100
- **M-WRG-II KSR-2**,  
 outer wall terminal plastic pipe set,  
 material: ASA, colour: grey, similar to  
 RAL 7012,  
 part no. 730101



Fig. 2: Outer wall terminal plastic pipe set  
 M-WRG-II KSR-1

### 1.3 Target group

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

- Training in local safety requirements
- Knowledge of the relevant standards and directives
- Knowledge and observance of this document and all the safety instructions

### 1.4 Storage

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

### 1.5 Environmentally-friendly disposal

The outer wall terminals must not be disposed of in the residual waste bin.



- ▶ Dispose of the outer wall terminal in accordance with the waste disposal regulations that apply on site.

### 1.6 Revision index

Edition	Manual	Date
3 <sup>rd</sup> edition	Installation manual for outer wall terminals M-WRG-II ES (-P, -PK), M-WRG-II KSR (-1, -2)	Week 13/2020 EN

### 1.7 Explanation of the symbols used

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

## 1.8 Supplementary documents

Manual	Part no.
Installation manual for flush-mount installation kit with plastering trim (solid construction) M-WRG-II M/MB	744001EN
Installation manual for flush-mount installation kit M-WRG-II M (frame construction)	744002EN
Installation manual for flush-mount installation kit M-WRG-II M-U <sup>2</sup>	744003EN
Installation manual for M-WRG-II ventilation units	744004EN
Operating instructions for M-WRG-II P (-F, -FC), M-WRG-II E (-F, -FC) ventilation units	744007EN

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.

#### **NOTICE**

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

#### 2.2.1 Fire protection

Follow the generally applicable fire safety requirements when planning and installing the unit.

#### 2.2.2 Operation with fireplaces

- An additional safety device (underpressure or differential pressure monitor) is needed to monitor operation when M-WRG-II 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.
- Correct use of a ventilation system set up with the decentralised ventilation unit requires the possibility of shutting off combustion air pipes and flue systems for solid fuel fireplaces during periods in which the fireplaces are not in use.

### 2.2.3 Installation in wet areas

The following rules from DIN VDE 0100-701/702 (IEC 60364-7-701) apply to installation of M-WRG-II ventilation units in wet areas:

- Protection zone 0: The unit must NOT be installed in this area.
- Protection zone 1: The unit must only be installed with the “integrated into wall” U<sup>2</sup> variant. The extract and supply air valves must be installed in the top part of the wall or in the ceiling.
- Protection zone 2 and other zone: The unit may be installed in this area.

Country-specific standards/regulations on observing the protection zones for installation in rooms with bathtub or shower must also be followed.

### 2.2.4 Condensate drain

The heat recovery process in our ventilation units causes condensation. This condensation is dissipated via the exhaust air pipe.

- If M-WRG-II P ventilation units are used, a condensate drain should be provided.
- With M-WRG-II E ventilation units (with enthalpy heat exchanger) there is no condensation if the following requirements are fulfilled:
  - The ventilation unit is operated as described in “Intended use” (see section 2.5 on page 8) and the “Rules for correct usage” chapter of the operating instructions.
  - There is no exceptional loading due to very high atmospheric humidity.

### 2.2.5 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.
- Please note that the ventilation unit must not be used without the outer wall terminal for safety reasons.

## 2.3 Notes on using the ventilation units

- This unit may be used by children from 8 years old and by persons of restricted physical, sensory or mental abilities or persons lacking experience and knowledge if they are supervised or have been instructed in how to use the unit safely and understand the associated hazards. Do not allow children to play with the unit. Cleaning and user maintenance must not be carried out by children unless they are supervised.
  - ▶ Follow the regulations applicable in your country concerning the age from which people may be permitted to operate the ventilation unit.

- The ventilation unit must always be freely accessible for operation and maintenance.
  - ▶ Make sure that the ventilation unit is not covered or obstructed when the room is subsequently decorated and furnished, otherwise it cannot be operated and it will not be possible to replace the air filters. You should therefore maintain a clearance of at least 15 cm in front of the ventilation unit cover.
  - ▶ Make sure that the supply and extract air openings are not covered when the room is subsequently decorated and furnished, otherwise the ventilation unit's functions may be impaired.

## 2.4 Note on use in conjunction with room air conditioners

Condensation may form in the ventilation unit if the outdoor air temperature and humidity are high, but the room temperature is cool.

For these conditions, we recommend using the M-WRG-II E ventilation unit with enthalpy heat exchanger. This has the advantage of removing both sensible and latent heat from the supply air. As a result, the air is dehumidified as well as being pre-cooled. The room air conditioner needs to do less work, so the user saves money on the reduced power consumption.

## 2.5 Intended use

- The outer wall terminal should only be used together with ventilation units from the Meltem M-WRG-II series.
- The outer wall terminal is attached to the outdoor air pipe and exhaust air pipe on the external wall.
- The ventilation unit is designed to ventilate living spaces and rooms used for quasi-residential purposes. 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 operating instructions.
- The ventilation unit must not be operated without air filters or outer wall terminal.
- The ventilation unit is intended for use in rooms with normal room air humidity levels of approx. 40 % to 70 % RH. It must not be installed in rooms in which the relative humidity during operation constantly exceeds 80 %.
- 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 ventilation unit will work perfectly and correctly.

### 3 Items supplied

#### 3.1 Outer wall terminal stainless steel pod M-WRG-II ES (-P, -PK)

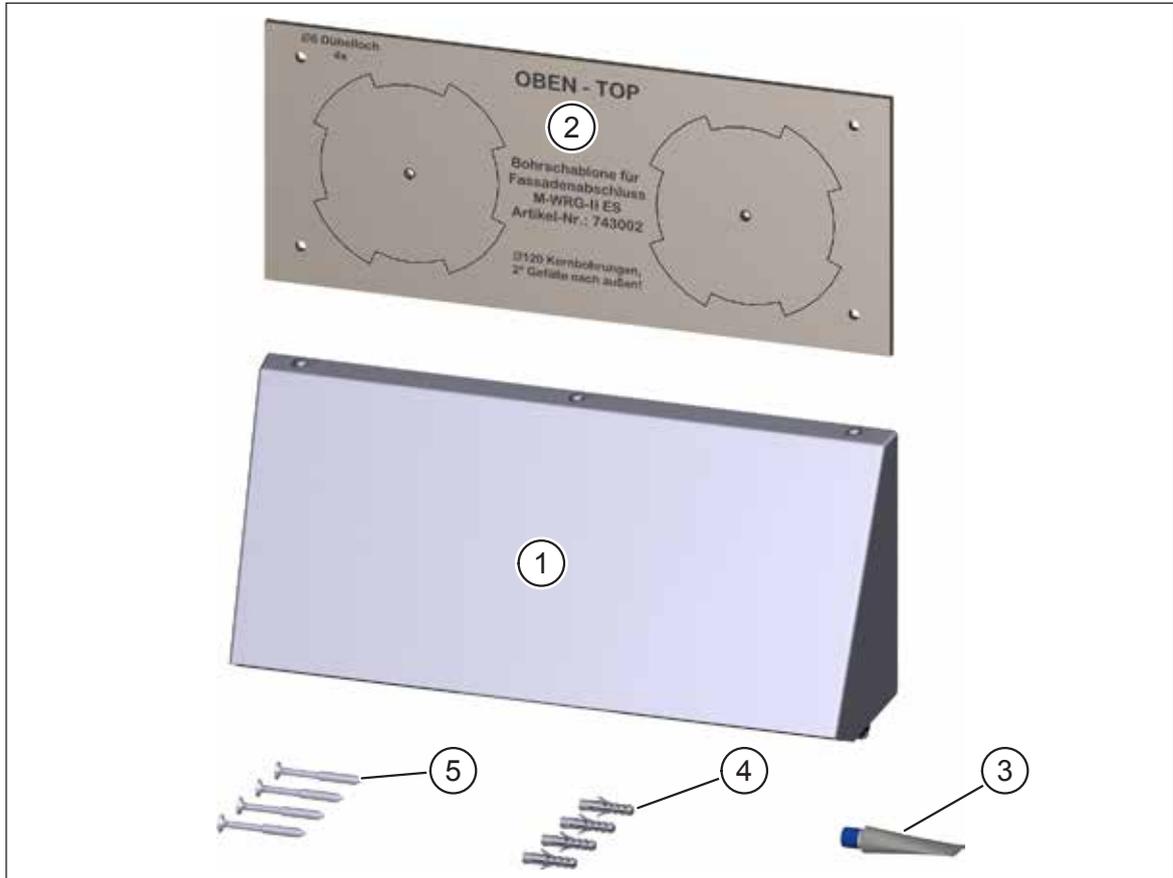


Fig. 3: Items supplied with the outer wall terminal stainless steel pod M-WRG-II ES (-P, -PK)

Item	Description	Quantity
1	Outer wall terminal stainless steel pod M-WRG-II ES (-P, -PK)	1x
2	Drilling template	1x
3	Vaseline, tube	1x
4	Dowel 6 x 30 mm for fitting to brick wall	4x
5	Screws 4.0 x 40 mm, stainless steel	4x
-	Installation manual	1x

#### NOTICE

- The fixing materials supplied are intended for fixing the outer wall terminal to brick walls.
  - ▶ For other wall structures, contact your facade constructor to ensure that the outer wall terminal is fitted correctly.
- Würth insulation anchors with setting tool, part no. 090350050, for example, are suitable for fixing the outer wall terminal to rigid foam boards.

### 3.2 Outer wall terminal plastic pipe set M-WRG-II KSR (-1, -2)



Fig. 4: Items supplied with the outer wall terminal plastic pipe set M-WRG-II KSR (-1, -2)

Item	Description	Quantity
1	Outer wall terminal plastic pipe set M-WRG-II KSR (-1, -2)	1x (2 per pack)
2	Self-tapping Torx screws TX10, 2.9 x 6.5 mm	4x
3	Vaseline, tube	1x
-	Installation manual	1x

## 4 Dimensions

### 4.1 Outer wall terminal stainless steel pod M-WRG-II ES (-P, -PK)

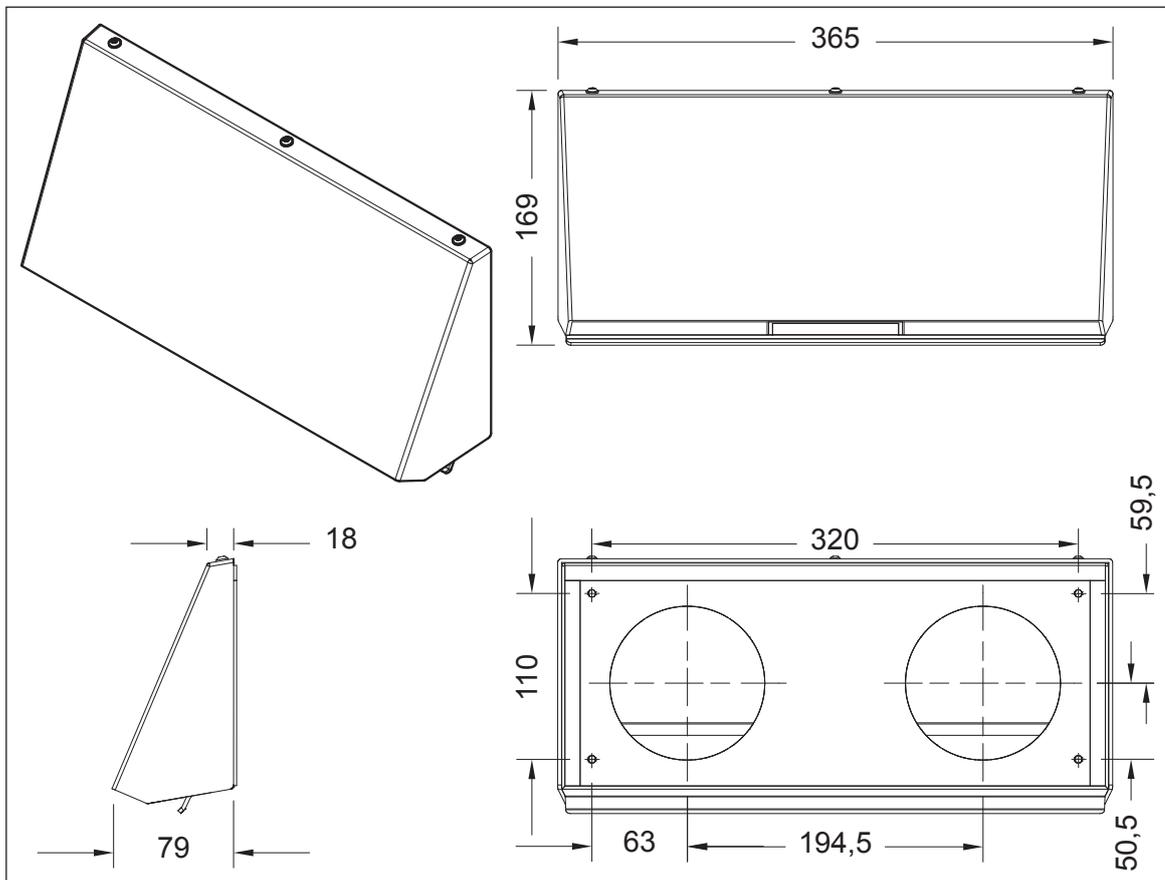


Fig. 5: Dimensions of the outer wall terminal stainless steel pod M-WRG-II ES (-P, -PK), dimensions in millimetres

## 4.2 Outer wall terminal plastic pipe set M-WRG-II KSR (-1, -2)

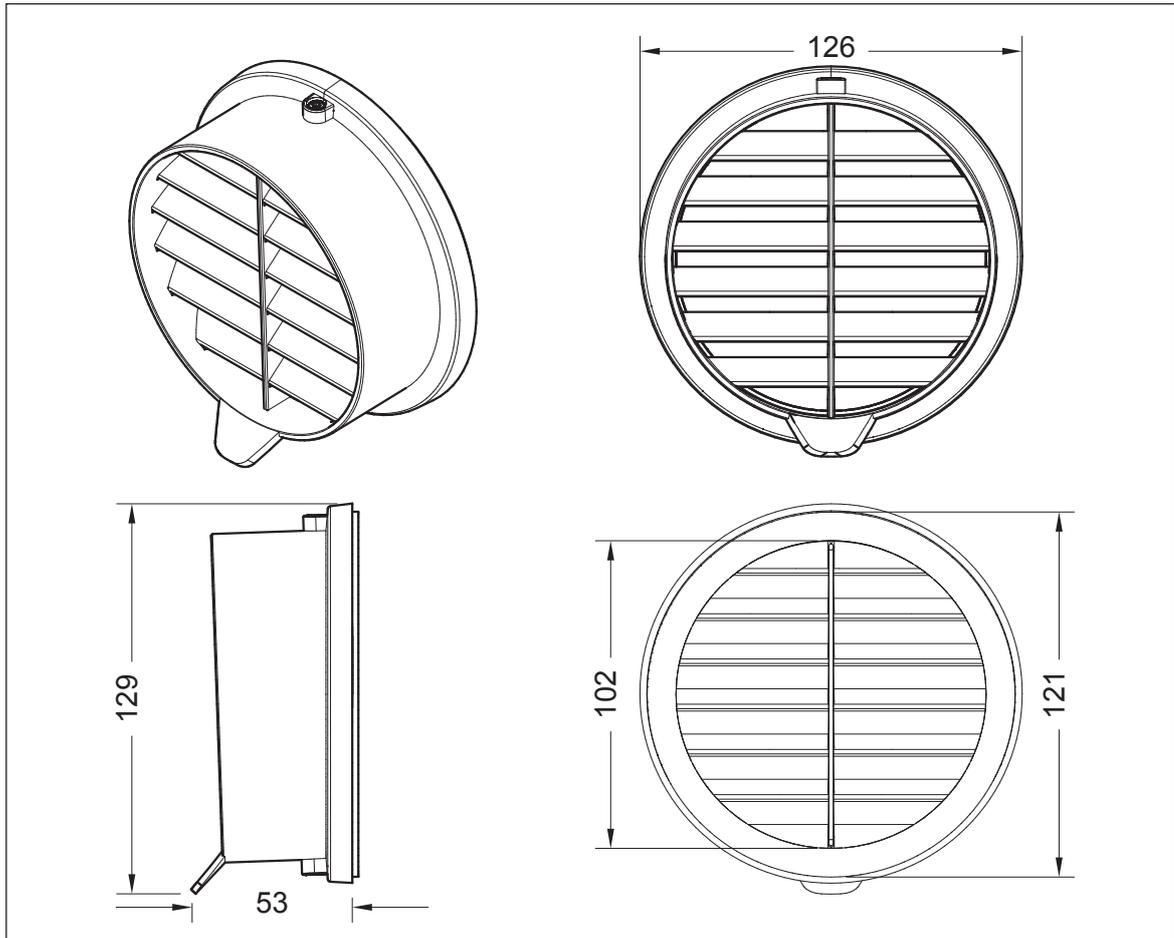


Fig. 6: Dimensions of the outer wall terminal plastic pipe set M-WRG-II KSR (-1, -2), dimensions in millimetres

## 5 Tools and equipment required

### 5.1 Outer wall terminal stainless steel pod M-WRG-II ES (-P, -PK)

- Cross-head screwdriver
- Hammer drill with 6 mm masonry bit for fitting the outer wall terminal on brick walls. Make sure you use suitable tools for other wall structures.
- Spirit level

### 5.2 Outer wall terminal plastic pipe set M-WRG-II KSR (-1, -2)

- Torx screwdriver TX10

## 6 Installing the outer wall terminal

### NOTICE

- 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.

### 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.

### NOTICE

- We recommend that you wear gloves when installing the stainless steel outer wall terminal. In this way you will avoid transferring grease from your skin to the outer wall terminal. Dust and other soiling can then collect on the grease deposits, which will encourage flash rusting (see also section “7 Cleaning and care instructions” on page 18).
- Do not remove the protective film from the outer wall terminal until the installation is complete.

### NOTICE

The following requirements must be fulfilled before the outer wall terminal is fitted:

- The external wall has been plastered. The plaster forms the windtight layer on the external wall.
- The ventilation pipes have been shortened to the correct length.
- The ventilation pipes have been pushed into the openings in the installation kit so that they end flush with the inside of the installation kit.
- The ventilation pipes project to the required length over the external plaster.
- The ventilation pipes have been glued into the facade using permanently elastic sealant.
- The chamfered edges of the pipe openings have been filled all-round with permanently elastic sealant. This will prevent moisture penetrating into the masonry.
- The cut surfaces of the ventilation pipes must be deburred. If this is not the case, there is a risk that the seals on the outer wall terminal will be damaged.

## 6.1 Installing the outer wall terminal stainless steel pod M-WRG-II ES (-P, -PK)

### 6.1.1 Checking the ventilation pipes

- ▶ Check that the ventilation pipes protrude 5 - 10 mm beyond the external plaster (see item 1 in Fig. 7).
- ▶ Check that the cut surfaces of the ventilation pipes have been deburred (see item 2 in Fig. 7).

#### NOTICE

The cut surfaces of the ventilation pipes must be deburred. If this is not the case, there is a risk that the seals on the outer wall terminal base plate will be damaged.

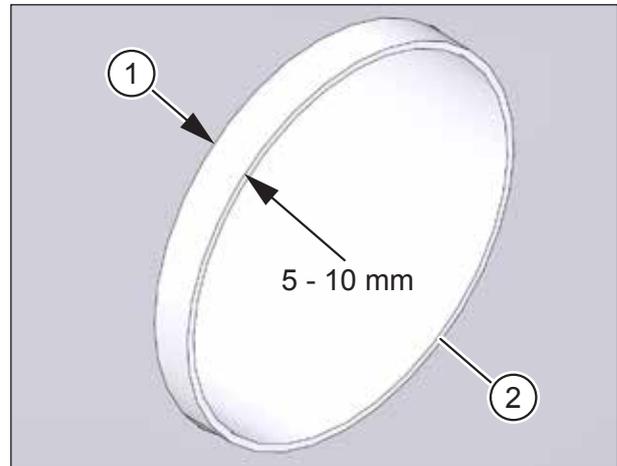


Fig. 7: Checking the ventilation pipes

### 6.1.2 Drilling the holes for the outer wall terminal

- ▶ Press the pre-punched cut-outs (item 1 in Fig. 8) for the ventilation pipes out of the drilling template (item 2 in Fig. 8).
- ▶ Position the drilling template correctly on the ventilation pipes and flush with the facade.

#### NOTICE

- Note the “OBEN (TOP)” (item 3 in Fig. 8) printed on the drilling template.
- The fixing materials supplied are intended for fixing the outer wall terminal to brick walls.
  - ▶ Note the information on page 9 concerning other facade structures.

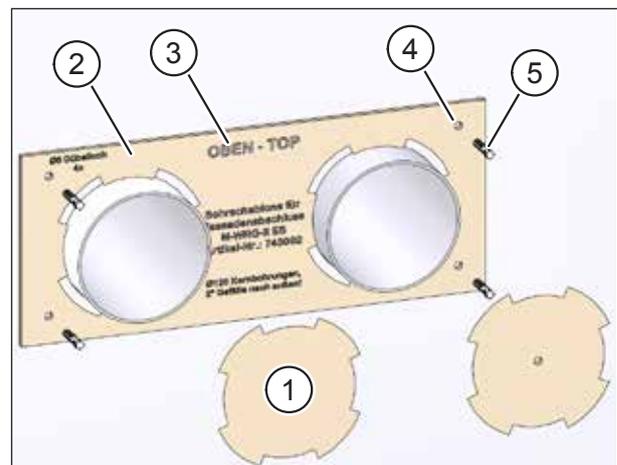


Fig. 8: Drilling the holes

- ▶ Use the 6 mm masonry bit to drill four holes, roughly 40 mm deep, in the external wall at the points indicated on the drilling template (item 4 in Fig. 8).
- ▶ Remove the drilling template.
- ▶ Insert the four dowels provided (item 5 in Fig. 8) into the holes.

### 6.1.3 Attaching the outer wall terminal

- ▶ Remove the three cross-head screws 3.5 x 16 (item 1 in Fig. 9) at the top of the outer wall terminal.
- ▶ Slide the cover (item 2 in Fig. 9) up roughly 10 mm. Lift the cover forward and away from the base plate (item 3 in Fig. 9).
- ▶ Fully coat both 4 mm wide sealing surfaces (item 4 in Fig. 9) on the inside with Vaseline.
- ▶ Carefully position the base plate (item 1 in Fig. 10) correctly on the ventilation pipes. Be careful not to damage the seals.
- ▶ Use a spirit level to align the base plate vertically (see item 2 in Fig. 10).
- ▶ Use the four screws provided to fix the base plate (item 3 in Fig. 10).
- ▶ Position the cover (item 1 in Fig. 11) on the base plate so that the tabs of the cover (item 2 in Fig. 11) slide into the guides on the base plate (item 3 in Fig. 11).
- ▶ Use the three cross-head screws 3.5 x 16 (item 4 in Fig. 11) to fix the cover.
- ▶ Remove the protective films from the cover (this does not apply to powder-coated outer wall terminals).
- ▶ Clean the outer wall terminal (see chapter 7 on page 18).

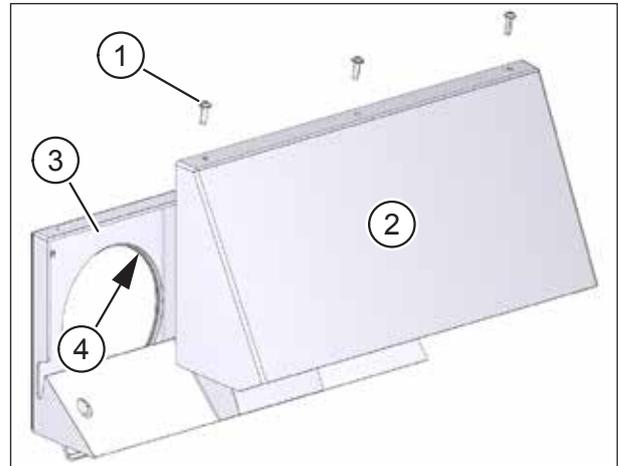


Fig. 9: Removing the cover

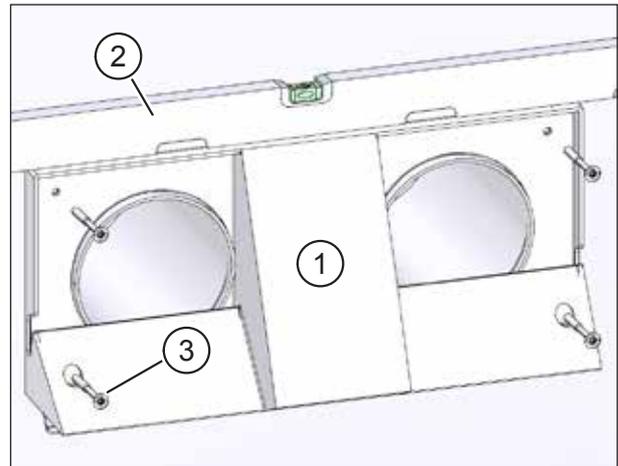


Fig. 10: Fixing the base plate

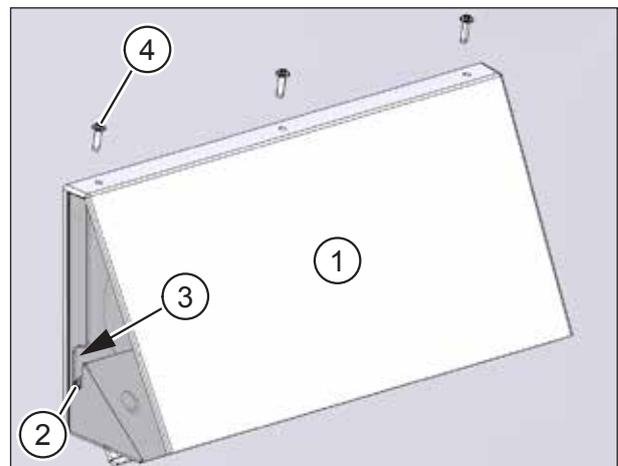


Fig. 11: Outer wall terminal installed

## 6.2 Installing the outer wall terminal plastic pipe set M-WRG-II KSR (-1, -2)

### NOTICE

Multiple plastic pipe sets may only be installed one above the other if the ventilation units have a condensate connection or if units with enthalpy heat exchangers are used (M-WRG-II series only).

### 6.2.1 Checking the ventilation pipes

- ▶ Check that the ventilation pipes protrude 20 - 27 mm beyond the external plaster (see item 1 in Fig. 12).
- ▶ Check that the cut surfaces of the ventilation pipes have been deburred (see item 2 in Fig. 12).

### NOTICE

The cut surfaces of the ventilation pipes must be deburred. If this is not the case, there is a risk that the seals on the outer wall terminal will be damaged.

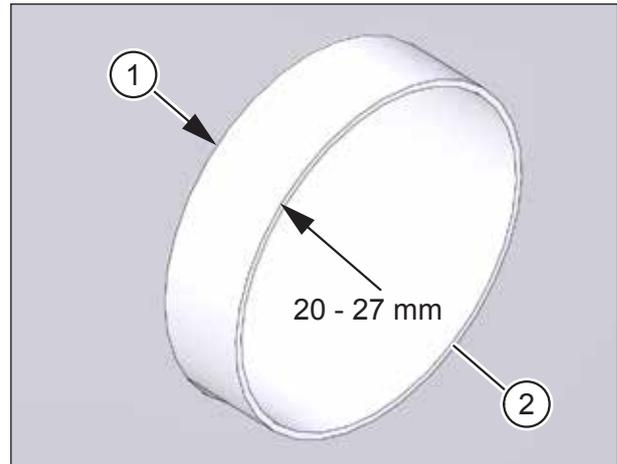


Fig. 12: Checking the ventilation pipes

### 6.2.2 Applying Vaseline

- ▶ Unscrew the two Torx screws (item 1 in Fig. 13) from the outer wall terminals until you can no longer see the tips of the screws in the holes (item 2 in Fig. 13).

### NOTICE

Do not unscrew the screws completely from the holes otherwise there is a risk that you may lose them.

- ▶ Apply the Vaseline provided to the inside of the black sealing ring (item 3 in Fig. 13) on each of the outer wall terminals.

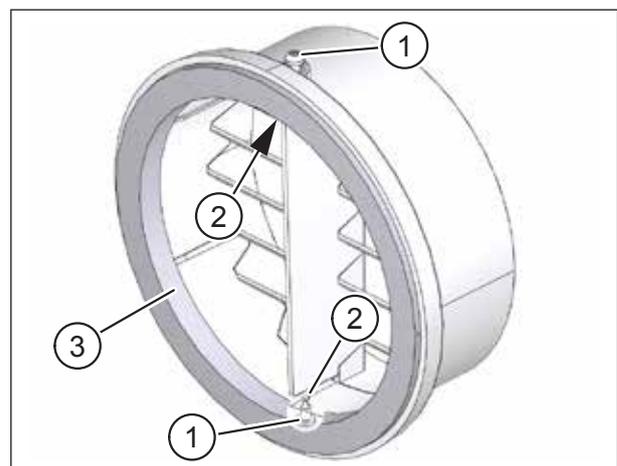


Fig. 13: Applying Vaseline

### 6.2.3 Attaching the outer wall terminals

- ▶ Carefully push the outer wall terminals (item 1 in Fig. 14) onto the ventilation pipes (item 2 in Fig. 14). Be careful not to damage the seals.
- ▶ Direct the drip edges (item 3 in Fig. 14) downwards.
- ▶ Press each outer wall terminal against the outer wall so that the plastic ring (item 4 in Fig. 14) lies flat against the outer wall. Hold the outer wall terminal in this position.
- ▶ Carefully screw the upper and lower Torx screws (item 5 in Fig. 14) in as far as they will go. They will self-tap into the ventilation pipes, thus fixing the outer wall terminal in position.

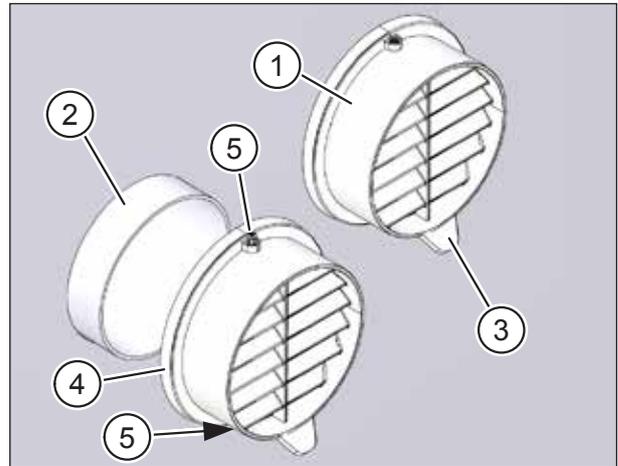


Fig. 14: Attaching the outer wall terminals

#### NOTICE

If the outer wall terminal does not lie flush against the external wall, seal the gap between the outer wall terminal and the external wall with a bead of permanently elastic sealant. There is a risk that the plaster will be damaged if this is not done.

- ▶ Clean the outer wall terminal if necessary (see section 7.3 on page 18).

## 7 Cleaning and care instructions

### 7.1 Stainless steel outer wall terminals (M-WRG-II ES)

#### NOTICE

The thin and transparent passive coating on the surface protects the stainless steel against corrosion. However, dust and other soiling from the atmosphere can still be deposited on the surface, causing flash rusting.

- ▶ Do not remove the protective film from the outer wall terminals until the installation is complete.
- ▶ Remove all adhesive residues that remain on the outer wall terminals when you remove the protective film.
- ▶ Clean the outer wall terminals after installation using a soft, lint-free cloth and stainless steel cleaner.
- ▶ Remove any flash rust that is already present using a soft, lint-free cloth and stainless steel cleaner.

#### NOTICE

Corrosion caused by flash rust is not covered by the warranty.

- ▶ Immediately remove particles of iron, metal filings, plaster and swarf from the surface of the outer wall terminals.
- ▶ Remove lime and cement spatter as quickly as possible and before it hardens from the surface of the outer wall terminals.
- ▶ Do not use abrasive cleaning utensils (pan scourers, steel wool, etc.) and do not use cleaning agents containing chlorine or hydrochloric acid.

### 7.2 Powder-coated outer wall terminals (M-WRG-II ES-P, M-WRG-II ES-PK)

- ▶ Clean the outer wall terminals after installation using a soft, lint-free cloth and mild soapy water.
- ▶ Immediately remove particles of iron, metal filings, plaster and swarf from the surface of the outer wall terminals.
- ▶ Remove lime and cement spatter as quickly as possible and before it hardens from the surface of the outer wall terminals.
- ▶ Do not use abrasive cleaning utensils (pan scourers, steel wool, etc.).

### 7.3 Outer wall terminal plastic pipe set (M-WRG-II KSR)

- ▶ Clean the outer wall terminals using a soft, lint-free cloth and mild soapy water.





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 subsequent editions.

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