

# VMZ Overlapping panel

Cladding system made up of horizontal overlapping panels fixed on a wooden or metal wall-mounted framework.

Specification and installation guide





## Presentation of the system

VMZ Overlapping panel is a wall-mounted cladding system made up of horizontal overlapping panels fixed to the substructure using brackets. The system is designed to be compatible with external insulation. The panels fit easily into each other, making them quick and easy to install.

### A durable natural material

VMZ Overlapping panel is manufactured using rolled copper titanium zinc that complies with European standard EN 988. Zinc is a natural material that is recognised for being robust and exceptionally durable.

### A low maintenance material

Zinc does not require any particular maintenance. It remains aesthetically harmonious throughout its lifespan and is also rot-proof and non-flammable.

### Surface aspects

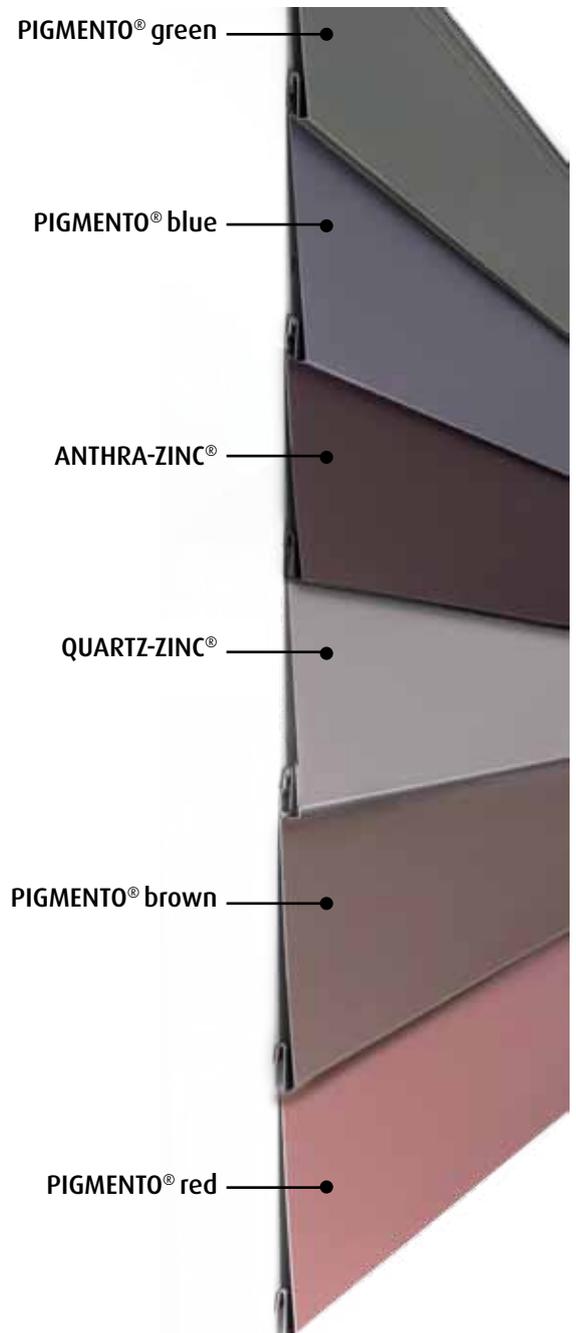
The system is available in the 6 VMZINC preweathered surface aspects: a range of grey and subtle shades. This range of colours provides creative possibilities including elegant blending in combination with other materials.

### Easy to install

VMZ Overlapping panel is lightweight and easy to install: the panels fit easily into each other. The panels can be cut easily on site, without creating dust.

### Universal flashings

The system is available with the VMZINC universal flashings range, making it possible to manage an entire project with a single elegant solution.

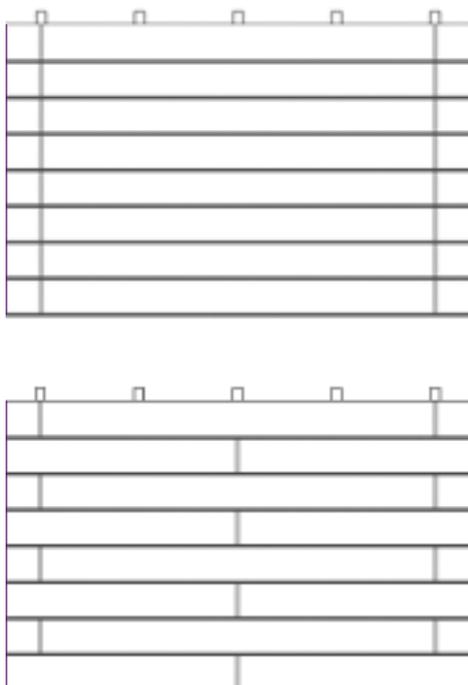


# Presentation of the system

**Technical characteristics**

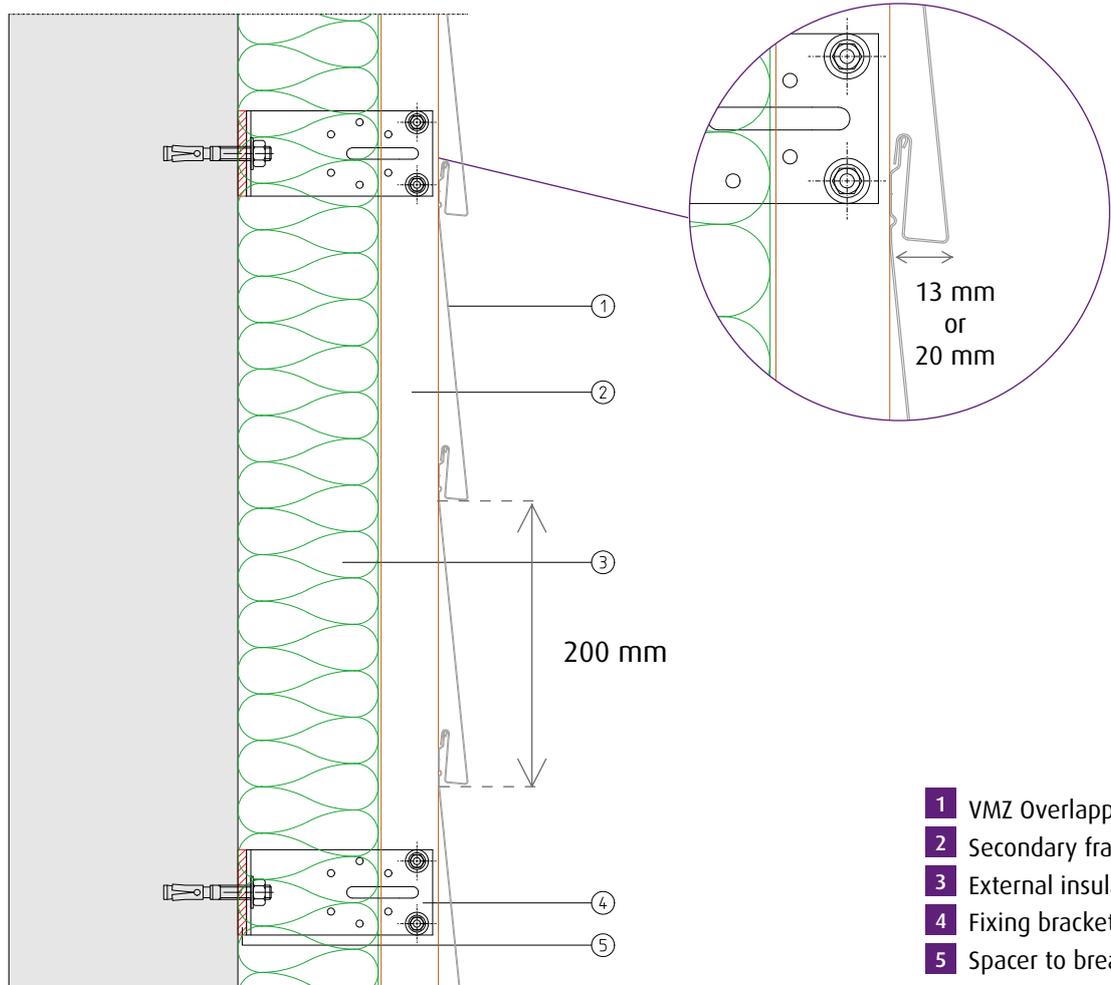
Surface aspects	QUARTZ-ZINC®, ANTHRA-ZINC® and PIGMENTO®	
Zinc thickness	0.7 mm	
Dimension of the panels (L x H)	3,000 x 200 mm	
Depths	13 mm	20 mm
Weight per unit	4.56 Kg	4.67 kg
Weight per m <sup>2</sup>	7.6	7.78
Number of panels per m <sup>2</sup>	1.66 (i.e. 5 for 3 m <sup>2</sup> )	
Number of splice plates per m <sup>2</sup>	1.67	
Number of screws per m <sup>2</sup>	10	

**Joints** VMZ Overlapping panel can be installed with aligned or staggered joints.



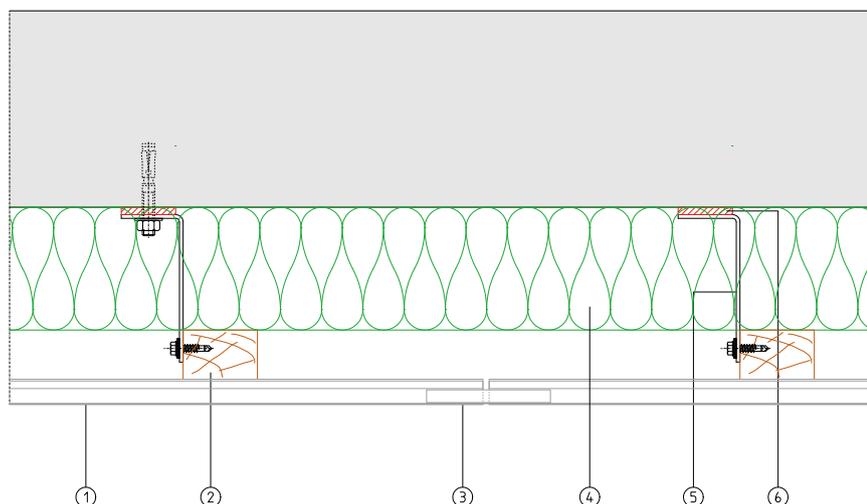
# Presentation of the system

Vertical section



- 1 VMZ Overlapping panel
- 2 Secondary framework
- 3 Splice plate
- 4 Fixing bracket
- 5 Spacer to break thermal continuity

Horizontal section



- 1 VMZ Overlapping panel
- 2 Secondary framework
- 3 Splice plate
- 4 External insulation
- 5 Fixing bracket
- 6 Spacer to break thermal continuity

# Projects



VMZ Overlapping panel

# Projects



## Area of use

**Designed for** Flat, vertical supports in rendered brickwork or concrete, or on wooden or metal substructures, on new or renovated buildings.  
Maximum building height is 40 m (maximum altitude 900 m).  
For buildings higher than 40 m, please contact us.

**Wall-mounted framework** The wall-mounted framework (not supplied) can be wooden or metal (galvanized steel, aluminium). The frameworks are fixed to the main structure with galvanized steel or aluminium adjustable brackets, using screws and rawlplugs suited to the support.

**Reaction to fire** The zinc cladding is classified Euroclasse A1 and A2s1d0, making it suitable for general use on condition that the specific design and installation rules pertaining to various buildings are respected.

**Ultimate load** Based on the following 2 criteria: safety factor for ruin  $> 2.5$  and horizontal deformation under load (deformation at centre less deformation at fixed point  $< 1/100^{\text{th}}$  of the distance between fixed points). For all other criteria, contact us (especially permanent deformation).

N.B. in coastal areas, highly visible white marks may appear on parts not exposed to rain. This is an aesthetic drawback. It does not alter the quality of the zinc.

## Preparing buildings

The installation company must possess facade know-how. It must ensure that the system is used in compliance with the conditions and area of use described in this document.

**Ventilated cladding** VMZ Overlapping panel is installed on a wall-mounted framework as part of a ventilated facade that provides a sound and durable solution for the building.

**Ventilation** Ventilation of the facade must be ensured by an air gap of 2 cm minimum, situated between the insulation and the back of the overlapping panel, or between the brickwork and the back of the overlapping panel.  
A perforated panel on the base trim is used to allow air flow.

**Layout plan** Prior to installation, the contractor must draw up a precise layout plan to determine the positioning of the secondary framework elements and the precise quantity of panels required. The design and installation of the framework will take into account constraints arising from expansion and local installation rules.

**Storage recommendations** The overlapping panels must be stored on their original pallet on a dry floor, in a ventilated sheltered area.

## Installation

### STEP 1: Installing the framework

VMZ Overlapping panel can be installed on wooden and metal frameworks. Installation of the framework is prepared by marking out (laser or tracing line) and must correspond to the layout plan provided by the architect. The framework is fixed to the main building by adjustable aluminium or Galva Z 275 steel brackets.

#### Installation of brackets

Once the vertical tracing is done, the brackets are fixed in a staggered arrangement that positions them on either side of the beam. The centre distance between beams must not exceed 600 mm on the main building.

The length of the fixing brackets is determined according to the thickness of the insulation.

The distance between brackets along each rafter must not exceed 1,350 mm.

Special care must be taken when aligning the framework to ensure perfect flatness of the facade.

#### Installation of insulation

Mineral wool insulation is installed directly onto the substructure.

A galvanised steel corner piece is fixed on the base trim and acts as a stop for the insulation.

Insulation is fixed mechanically with star-shaped fixing to avoid any settlement, in accordance with the manufacturer's specifications.

In certain countries, we recommend installing a rain screen membrane.

In this case, the membrane manufacturer's installation recommendations must be followed.



## Installation

### STEP 1: Installing the framework

#### Wooden framework

The beams must be timber (pine, spruce, scots pine with compatible fungicide and insect treatment) :

- water resistant according to risk category 2 or 3 of French standard NF EN 335-2, according to the risk of dump of the beams.
- load resistant according to category C18 of the French standard NF EN 338.

The section of the beams must be minimum 40 x 60 mm.

Each panel must be fixed to at least 3 beams. If panels can only be fixed on two beams, the centre distance between beams is reduced to 400 mm.



#### Metal framework

VMZ Overlapping panel can also be installed on a 40 x 40 cm "L" profile type metal framework in 1.5 mm Z 275 galvanised steel that is fixed to the substructure with adjustable brackets. The "L" profiles are fixed onto the brackets using rivets or screws.

Use a spirit level to check that the beams or metal profiles are perfectly aligned on the base trim, vertically and perpendicular to the substructure.



## Installation

### STEP 2: Installation on the main part of the facade

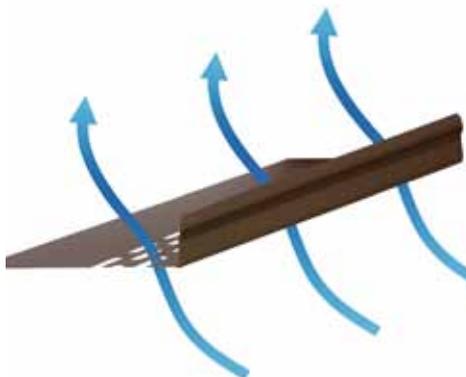
No specific tools are necessary to install VMZ Overlapping panel. We recommend fixing the panels using screws, but nails may also be used. Three parts are used for installation on the main section of the facade: the overlapping panel, the base trim and the splice plate.



**Base** Base: Start installing VMZ Overlapping panel by installing a perforated base trim to create the air inlet (100 cm<sup>2</sup> section per linear metre).

It is important to ensure the base trim is horizontally aligned because it determines the correct position of the first row of panels.

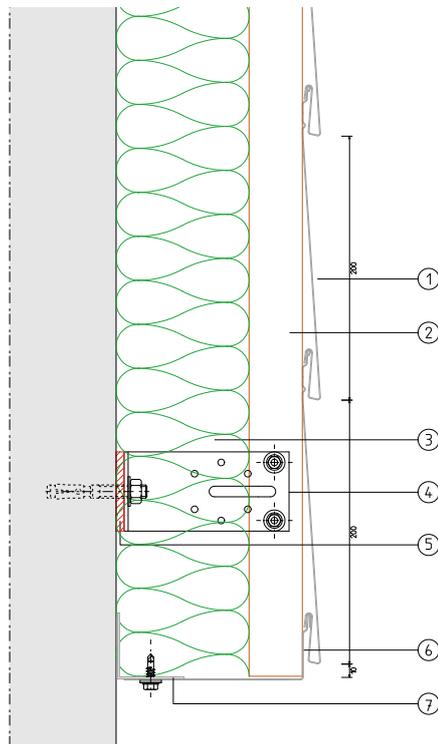
There must be a clearance of 150 mm between the base trim and the ground.



# Installation

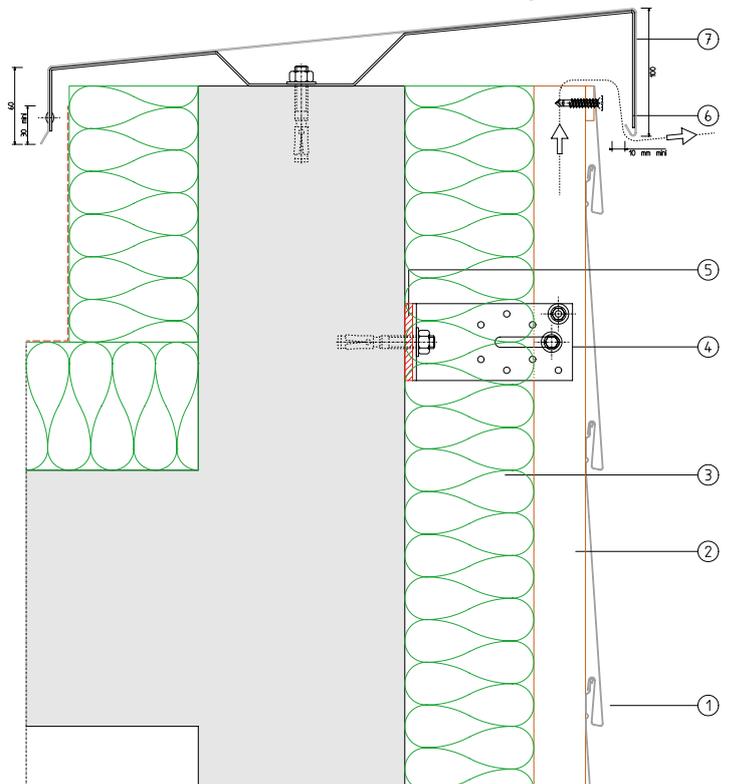
## STEP 2: Installation on the main part of the facade

### Base trim



- 1 VMZ Overlapping panel
- 2 Secondary framework
- 3 External insulation
- 4 Fixing bracket
- 5 Spacer to break thermal continuity
- 6 VMZ perforated base trim
- 7 Corner end-piece for insulation

### Top trim



- 1 VMZ Overlapping panel
- 2 Secondary framework
- 3 External insulation
- 4 Fixing bracket
- 5 Spacer to break thermal continuity
- 6 Bracket clip
- 7 Coping

## Installation

### STEP 2: Installation on the main part of the facade

#### Installing the panels

The panels must be handled with care and carried by one or two people by the edge in order to avoid deformation.



The panels are installed from bottom to top and slot into each other easily.

Make sure the panel is firmly slotted into place over the lower panel.

On delivery, the front side of the panels are covered with a film to protect the surface aspect during installation. All film must be removed at the same time to avoid any marks on the surface aspect, at the latest 3 days after completion of installation.



It is crucial to check that the first panel is perfectly horizontal to start installation correctly.



## Installation

### STEP 2: Installation on the main part of the facade

The panels are fixed onto each beam using screws or nails.

#### Fixing with screws:

Fixing with screws can be used for wooden or metal frameworks.

Screws are fixed onto the substructure through the VMZ Overlapping panel, under its upper fold.

Screw details:

minimum 4.8 x 25 mm screw with a flat round head of minimum 12 mm in diameter.



#### Fixing with nails:

Nails must be fixed with a pneumatic nail gun with grooved stainless steel nails.

Fixing with nails is only authorized for wooden frameworks. Manual nailing is strictly prohibited.

Nails are fixed onto the wooden framework through the VMZ Overlapping panel, under the upper fold.

Nail details:

Stainless steel grooved nail.

Minimum length: 32 mm

Diameter of flat head: 7 mm.



Using a level, regularly check that the profiles are perfectly horizontal throughout the installation process.



#### Expansion:

For optimum expansion, oblong holes (5x20 mm) should be pierced when installing screws. The holes are made with a punch.

## Installation

### STEP 3: Cutting and trim

**Cutting Elements** At the ends of the facade, for window surrounds or vertical junction, the overlapping panel is cut to the required dimensions, preferably using a circular saw or a grinder :

- circular saw: opposed tooth metal blade
- grinder: 2 mm thin disc for stainless steel
- jig saw: thin metal blade
- metal saw: 24 tooth bi-metal blade.

Be sure to follow the cutting equipment manufacturer's safety recommendations.

The saw bench must be perfectly stable to ensure the cleanest cut possible. The cut edges are not exposed. They are covered with flashings.



**Transverse trim** For transverse junctions, a trim splice plate is placed behind one end of the panel using screws or rivets, or by gluing. The next panel fits into the splice plate, making it possible both to ensure watertightness of the trim and harmonious appearance of the horizontal panels. Keep a free space of 3 to 5 mm to allow for expansion.

When the panel is cut on site on one side, cut the other side industrially (regular cut) and use for vertical junctions.



# Flashings

## Universal flashings

A range of universal zinc accessories that can be used with all VMZINC facade systems is available and makes working on flashings easy. This range features 8 articles in the 6 VMZINC preweathered surface aspects, ensuring perfect continuity with cladding panels and flawless flashings.

### Flashing articles



Universal clip \*



Adjustment clip

\* To make installation of clips easier, a template is also provided.



Universal ledge



Recessed corner



Protruding corner



Universal reveal



Universal lintel



Corner piece

# Flashings

## Corners

Protruding and recessed corners click easily onto the universal clips.

The universal clips are installed for each panel at 500 mm intervals (2 clips/metre).

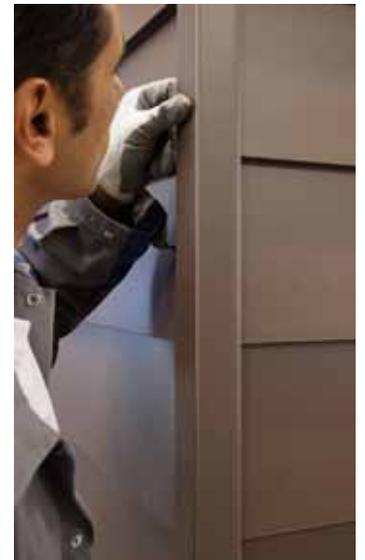
A 21 mm x 21 mm zinc corner piece is fixed flush with the clips to conceal them and create aesthetic continuity.



Make sure panels are installed flush with the corner piece.



Fit the corner pieces directly into the clips.  
Proceed identically for recessed corners.

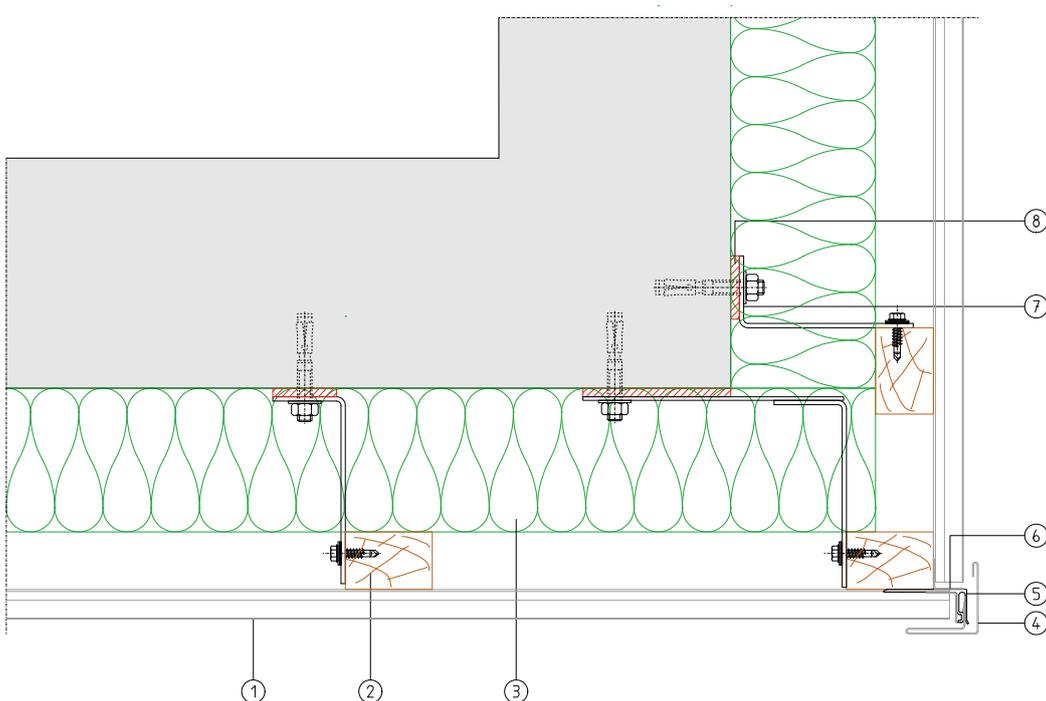
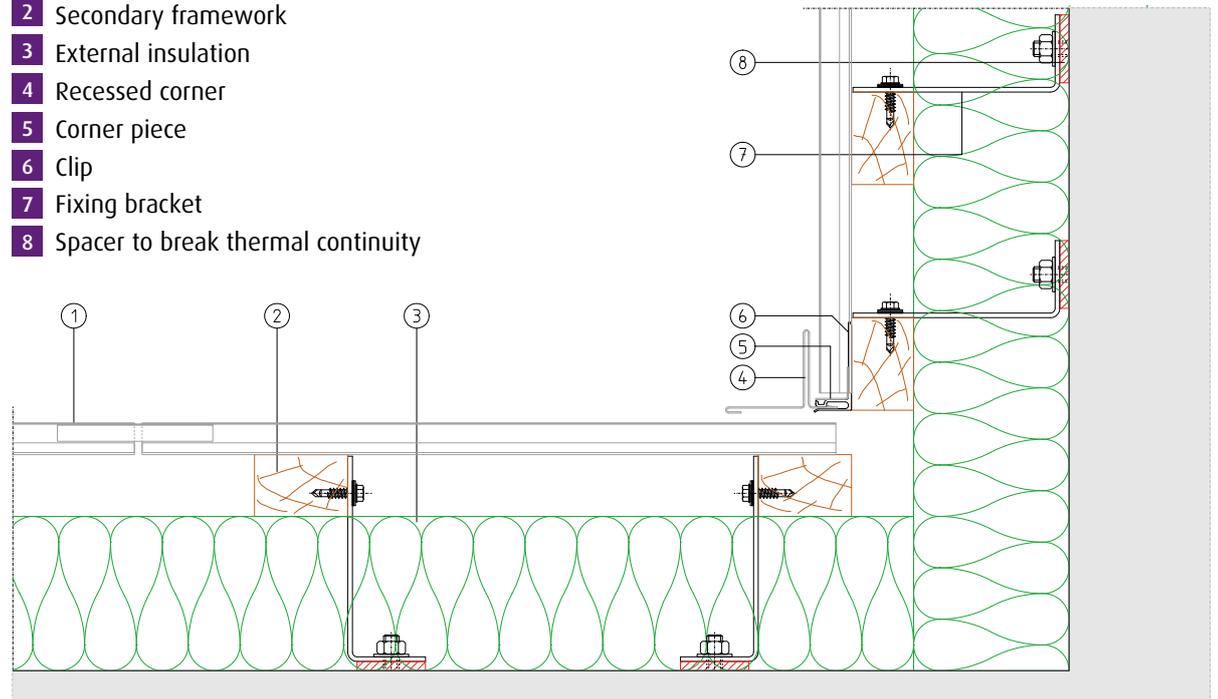


# Flashings

## Corners

### Recessed corner

- 1 VMZ Overlapping panel
- 2 Secondary framework
- 3 External insulation
- 4 Recessed corner
- 5 Corner piece
- 6 Clip
- 7 Fixing bracket
- 8 Spacer to break thermal continuity



### Protruding corner

- 1 VMZ Overlapping panel
- 2 Secondary framework
- 3 External insulation
- 4 Protruding corner
- 5 Clip
- 6 Corner piece
- 7 Fixing bracket
- 8 Spacer to break thermal continuity

# Flashings

## Window surrounds

### Installing Universal clips

Universal clips allow quick installation of flashings.

Start fixing the clips on the rafters under the ledge and on the sides of the window. A galvanised steel template is provided with the clips, making it easier to position them correctly and fit the flashings into each other.

Use a spirit level to check clips are aligned. For reveals, install the first clip at the edge of the lower panel, and then install clips at 500 mm intervals.



Use a template to make sure clips are correctly positioned and to make installation of flashings easier.



The last panel under the window ledge must be fixed with self-drilling screws (Ø 4.8, 12 mm head) through the clip.

# Flashings

## Window surrounds

**Installing corner pieces** 21 mm x 21 mm corner pieces are fixed on either side of the window, flush with the clips to conceal the latter and create aesthetic continuity.

Continue in parallel to install the VMZ Overlapping panels. The overlapping panels must be carefully cut in order to fit snugly against the corner piece.



# Flashings

## Window surrounds

**Installing adjusting clips and corner pieces** Cut the corner pieces to fit the depth of the frame and fix them in the corners. Install the adjusting clips all around the inside of the window.



# Flashings

## Window surrounds

**Ledge** Adjust the width and depth of the ledge to the window frame.  
Ensure watertightness by using PH neutral silicon to glue the edges of the ledge to the corner pieces.  
Seam the ledge part into the adjusting clip or slide it under the frame divider. Fit into the universal clips.



**Reveal** Adjust the reveals to the window frame and slide them into the adjusting clips.  
Fit them into the universal clips.



**Lintel** For the lintel, the flashing is perforated to allow ventilation and evacuation of any incoming rain water.

Make sure the lintel is cut so that the edges are perfectly aligned with the top of the reveals.



# Flashings

Window surrounds

5 steps to remember



1 Installation of universal clips



2 Installation of corner pieces flush with the clips



3 Installation of VMZ Overlapping panels



4 Installation of adjusting clips and corner pieces

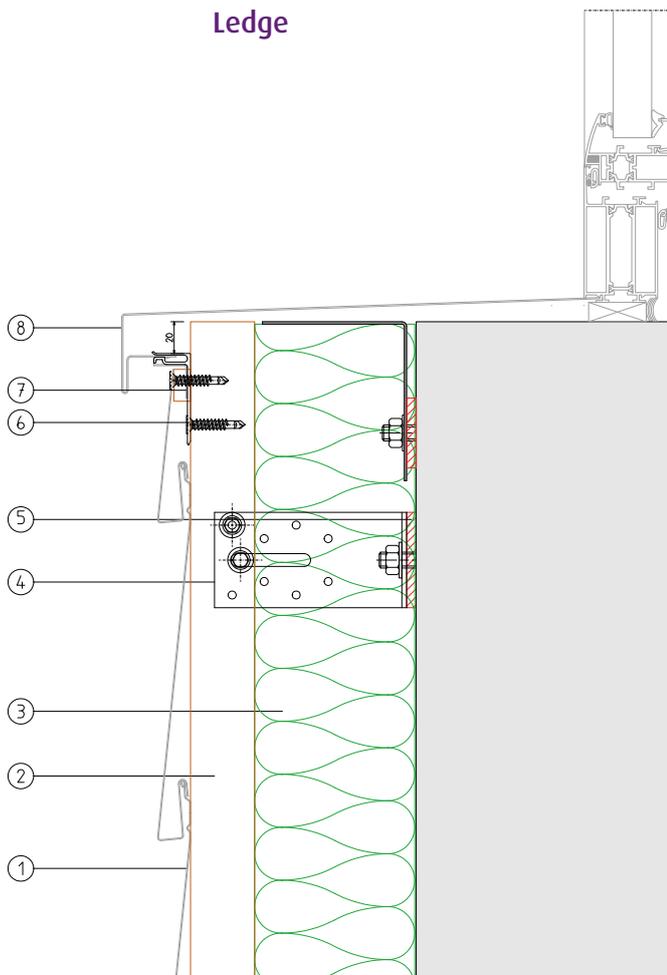


5 Installation and fixing of flashings

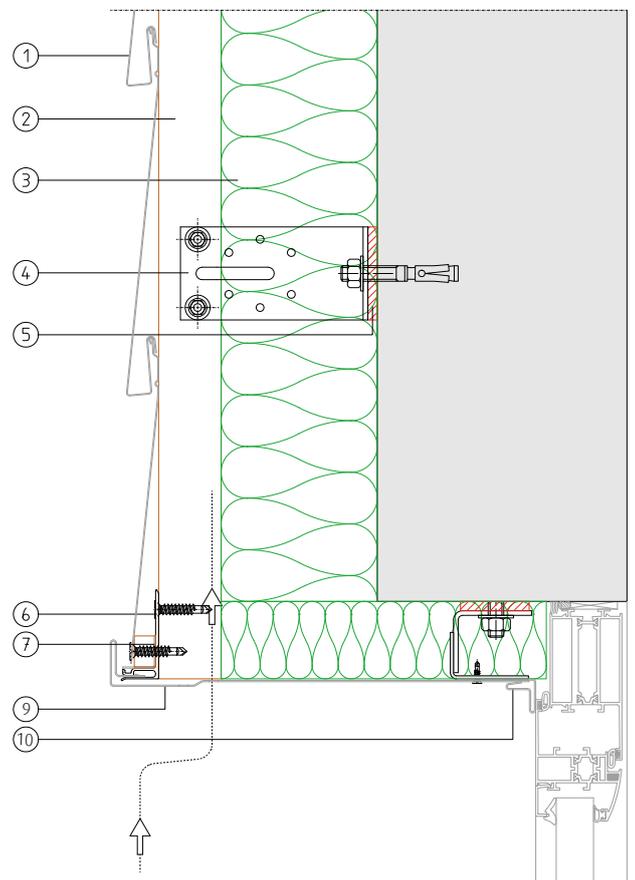
# Flashings

## Window surrounds

Ledge



Lintel

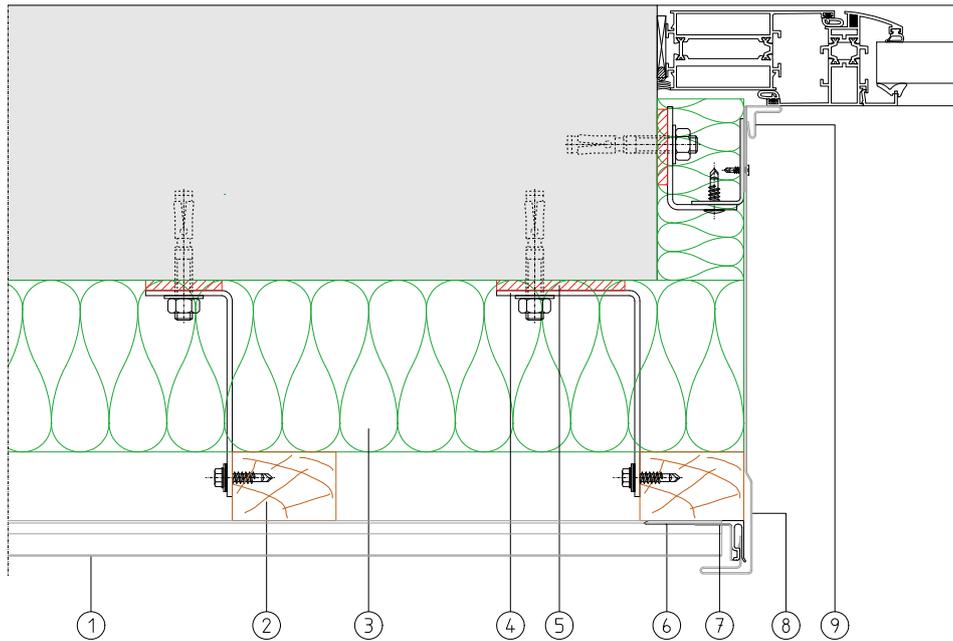


- 1 VMZ Overlapping panel
- 2 Secondary framework
- 3 External insulation
- 4 Fixing bracket
- 5 Spacer to break thermal continuity
- 6 Clip
- 7 Corner piece
- 8 Ledge
- 9 Perforated lintel
- 10 Adjusting clip

# Flashings

## Window surrounds

### Reveal



- 1 VMZ Overlapping panel
- 2 Secondary framework
- 3 External insulation
- 4 Fixing bracket
- 5 Spacer to break thermal continuity
- 6 Clip
- 7 Corner piece
- 8 Reveal
- 9 Adjusting clip

VMZINC

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