

EXCERPT FROM THE SUPPLY AND INSTALLATION SPECIFICATIONS MANUAL

zintek® zinc-titanium and application designs





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SUPPLY AND INSTALLATION SPECIFICATIONS MANUAL

ZINTEK® ZINC-TITANIUM

The zintek® Specifications Manual features many highly specific items. It is structured in two parts:

- 1) The first part concerns items most commonly and normally used by the designer as a general cost indication to define the works; these are often sufficient to define the specifications of completed works and their precise cost.
- 2) The second part concerns items which characterize single construction details within a single general section; these are generally not required by the designer, but are included in a manual for minor works or in cases requiring detailed design specifications and a numeration of single components within a complex structure. This list also allows the reader to extrapolate certain items and place them where they are needed in relation to their intended use. Items from the Specifications Manual always refer to the “*Development in Architecture*” Manual for the design and installation of zintek® covering and cladding solutions.

The item “use of the pre-existing scaffolding” must be interpreted as a permit to use the pre-existing scaffolding for construction works in progress; otherwise, it must be calculated separately.

The preliminary assessment is based on the surfaces indicated on the design drawings. The final balance will be based on the real measurements following the conclusion of the works, on the basis of unit costs.

ZINTEK®: GENERAL INCONSTRUCTION

The zintek® laminate, manufactured in Porto Marghera - Venice, is a zinc-titanium alloy compliant with European Standard EN 988. This Standard outlines requirements for zinc-titanium alloy flat laminates used in the construction industry. As stated in EN 1179, the alloy must be produced from Z1-quality zinc, i.e. containing at least 99,995% zinc, with the addition of alloying elements. The Standard EN 988 indicates the tolerated copper and titanium percentages: Cu 0,08 – 1%, Ti 0,06 – 0,2% plus primary EN 1779-certified Z1 zinc for the remaining part. Copper increases the material’s tensile strength; titanium increases its resistance to permanent deconstruction over the course of time; the combination of these two elements decreases the expansion coefficient of the alloy. The melting point of the alloy is equal to 420°C, its recrystallization limit is > 300°C and its specific weight is 7,2 Kg/cbdm. It is an anisotropic material with a longitudinal-direction expansion coefficient of 0,022 mm/m°C. Furthermore, the alloy is non-magnetic, non-combustible, easy to recycle and non-pollutant. The weight of the standard 7/10 mm laminate is 5 Kg/sq. m.

PROTECTION OF THE SUBSTRUCTURE

Before the installation of the zintek® laminate covering, the substructure and wooden planking must be protected from adverse weather conditions by using specific waterproof sheathing sheets, so that the zintek® can be installed on dry planking. These protection sheets, which will be removed before installing the zinc covering, must be joined together via overlaps and sealing tape junctions. The sheets must be cut-free, and no parts of the covering must remain unsheathed, with the exception of already protected elements such as finished chimneys or other projecting parts.

ITEMS OF THE MANUAL PART 1

ROOFING

01.0 Full surface metal seam roof cladding

Supply and installation of zintek® zinc-titanium roof cladding, compliant with Standard EN 988, rolling mill polished (natural) or pre-coated, includes substructure plus insulation package, vapour barrier and breathable waterproof sheathing. (01.1+01.2+01.3)

01.1 Metal seam roof cladding

Supply and installation of rolling mill polished (natural) or pre-coated zintek® zinc-titanium roof covering, compliant with Standard EN 988, 7/10 mm thickness, featuring a double seaming system, spacing of 475 mm with a 550 total surface extension, as per standard strip supply measurements. The price includes the fastening and connecting equipment, as well as the anchor tabs.

01.2 Ventilated metal seam roof substructure

Supply and installation of fir wood substructure featuring mm retaining tabs (same thickness as the insulation panel) and additional orthogonal mm tab for ventilation and supporting of the wooden planking. Planking made of raw fir wood boards, 24 mm of thickness, 80-120 mm of width, 5-10 mm spacing between the boards, secured with at least two screws in each point of the substructure designed for the installation of the metal seam zintek®.

01.3 Supply and installation of insulation panel

Supply and installation of insulation panel (stone wool, vegetable fibre, polystyrene, etc.), rigid/soft type and with a density of kg/cbm. Thickness of mm, includes a vapour barrier to be positioned under the panel, as well as breathable waterproof sheathing.

WALLS

02.0 Full surface metal seam wall cladding

Supply and installation of wall cladding in pre-coated zintek® zinc-titanium, compliant with Standard EN 988, the price includes the substructure and the insulation package (02.1 + 02.2 + 02.3).

02.1 Metal seam wall cladding

Supply and installation of pre-coated wall cladding in zintek® zinc-titanium, compliant with Standard EN 988, 8/10 mm thickness, with angular seaming system, 430 mm spacing with a 500 mm total surface extension, or available in standard supply measurements. Furthermore, the price includes the perforated metal sheet used for ventilation of the base of the wall, as well as use of the pre-existing scaffolding.

02.2a Wooden substructure for ventilated metal seam wall

Supply and installation of fir wood substructure featuring mm retaining strips (same thickness as the insulation panel) and installation of an additional orthogonal mm tab for ventilation purposes and as support of the zintek®; planking made of raw fir wood boards, 24 mm of thickness, 80-120 mm of width, 5-10 mm spacing between the boards, secured with at least two screws in each point of the substructure designed for the installation of the zintek®.

02.2b Metallic substructure for ventilated metal seam wall

Supply and installation of aluminium or galvanized steel substructure with mm spacing, secured to the wall via angular brackets, designed to contain the insulation panel. The wooden planks for the zintek® seaming are secured to an additional orthogonal profile for ventilation purposes. Features straight edges for detecting eventual misalignments.

02.3 Supply and installation of wall insulation panel:

Supply and installation of wall insulation panel (stone wool, vegetable fibre, polystyrene, etc.), rigid/soft type and with a density of kg/cbm. Thickness of mm, secured to the wall with specific wall-plugs.

03.0 Full wood slat wall

Supply and installation of cladding for horizontal/vertical-slat wooden walls, in pre-coated zintek® zinc-titanium, compliant with Standard EN 988. Includes substructure and insulation. (03.1 + 03.2 + 03.3).

03.1 Wood slat wall

Supply and installation of cladding for horizontal/vertical-slats wooden walls, in pre-coated zintek® zinc-titanium, compliant with Standard EN 988, 10/10 mm thickness, mm height with a mm total surface extension, or available in standard strip supply measurements. The price includes the expansion joints, wall connections, fastening equipment and anchor tabs.

03.2 Ventilated wood slat wall substructure

Supply and installation of aluminium substructure with mm spacing at the centre and mm spacing on the sides, secured to the wall with angular brackets, designed to contain the insulation panel. A further profile will be added to allow ventilation and for the fastening of the slats. Features straight edges for detecting eventual misalignments.

03.3 Supply and installation of wall insulation panel

(Stone wool, vegetable fibre, polystyrene, etc.), rigid/soft type and with a density of kg/cbm. Thickness of mm, secured to the wall with specific wall-plugs.

04.0 Cladding for particularly complex metal seam walls

Supply and installation of pre-coated zintek® wall covering, compliant with Standard EN 988, 8/10 mm thickness, angular seaming system, 430 mm spacing with a 500 mm total surface extension, or available in standard strip supply measurements. The price includes perimeter connections, connection and fastening equipment, anchor tabs, as well as use of the pre-existing scaffolding. Includes perforated sheet metal when necessary.

INTRADOSES

05.0 Door or window sheeting

Supply and installation of door or window (intrados) pre-coated zintek® zinc-titanium sheeting, compliant with Standard EN 988, 8/10 mm thickness. The price includes: pre-built raw wood 24 mm-thick planking, hooking strips, corrosion-resistant anchoring equipment, construction of the drip edge, the internal vertical fold and lateral folds, the construction of waterproof corner connections and the off-cut wastage:

- a) total surface extension between 200 mm and 330 mm
- b) total surface extension between 330 mm and 500 mm

05.1 Intrados covering

Supply and installation of intrados covering (internal part of door or window opening) in pre-coated zintek® zinc-titanium sheet metal, compliant with Standard EN 988, 8/10 mm thickness. Intrados coverings must be positioned in the insertion profiles and seamed to the façade cladding. The price includes hooking strips, corrosion-resistant anchoring equipment, the construction of waterproof corner connections and the off-cut wastage:

- a) total surface extension 150 mm
- b) total surface extension 200 mm
- c) total surface extension 250 mm
- d) total surface extension 330 mm

GUTTERS

06.0 Complete gutter

Complete gutter in natural or pre-coated zintek® zinc-titanium sheet metal, compliant with Standard EN 988, including supply and installation of eaves with brackets, hangers, expansion joints, accessories. Furthermore, the price includes the zintek® 7/10 mm eaves flashing for connecting the roof to the eaves, fasteners, brackets, accessories and perforated sheet metal for ventilation purposes. (06.1 + 06.2 + 06.3).

06.1 Eaves

Supply and installation - with slope - of semi-circular gutter with external curl and inner rib structure in natural or pre-coated zintek® zinc-titanium sheet metal, compliant with Standard EN 988, 7/10 mm thickness. The price includes the eaves hangers in galvanized steel sheathed in zinc or in stainless steel featuring a zinc strip, with a maximum spacing of 700 mm; the overlapping rivet-nailed and soldered joints, the connection and fastening equipment and the off-cut wastage:

» total surface extension of mm and thickness of mm.

06.2 Eaves flashing

Supply and installation of eaves flashing (hooking strip or “grondino” type) in natural or pre-coated zintek® zinc-titanium sheet metal, compliant with Standard EN 988, 7/10 mm thickness. The flashing, which connects the roof to the gutter, is assembled on the gutter bulge and its total surface extension will be ... mm.

06.3 Perforated sheet metal

Supply and installation of perforated sheet metal in natural or pre-coated zintek® zinc-titanium sheet metal, compliant with Standard EN 988, for ventilation purposes, total surface extension of ... mm. The sheet metal allows for ventilation of the roof (or wall), and the price includes necessary adjustments and accessories.

07.0 Supply and installation of internal gutters

Supply and installation —with slope— of recessed internal gutters in natural or pre-coated zintek® zinc-titanium sheet metal, compliant with Standard EN 988, 8/10 mm thickness and total surface extension of mm. The price includes the eaves hangers in galvanized steel sheathed in zinc or the eaves hangers in stainless steel with a maximum spacing of 600 mm, the overlapping rivet-nailed and soldered joints, the connection and fastening equipment and the off-cut wastage.

08.0 Downpipe

Supply and installation of downpipe with welded joint in natural or pre-coated zintek® zinc-titanium sheet metal, compliant with Standard EN 988. The price includes the joint overlaps, the collars with their respective hot-dip galvanized steel clamps, with a maximum spacing of 2,000 mm, the connection to the exit pipe and the off-cut wastage:

- a) diameter 80 mm;
- b) diameter 100 mm;
- c) diameter 120 mm.

ACCESSORIES

09.0 Flashing or coping

Supply and installation of flashing or coping in natural or pre-coated zintek® zinc-titanium sheet metal, compliant with Standard EN 988, thickness of mm, for cladding perimeter connections. The price includes the hooking strips, the corrosion-resistant anchoring equipment, the construction of the drip edges, the construction of waterproof corner connections, seaming operations and the off-cut wastage:

- a) total surface extension 150 mm;
- b) total surface extension 200 mm;
- c) total surface extension 250 mm;
- d) total surface extension 330 mm;
- e) total surface extension 400 mm;
- f) total surface extension 500 mm.

10.0 Cladding for miscellaneous surfaces

Supply and installation of natural or pre-coated zintek® zinc-titanium sheet metal, compliant with Standard EN 988, for various types of finishing surfaces for terraces, canopies, etc. The price includes the hooking strips, the corrosion-resistant anchoring equipment, the construction of the drip edges, the construction of waterproof corner connections, seaming operations and the off-cut wastage.

11.0 Full surface of ventilated ridges

Supply and installation of natural or pre-coated zintek® zinc-titanium sheet metal, compliant with Standard EN 988. The price includes the supply and installation of the wooden substructure, developed in compliance with Standard UNI 10372; the assembly is performed with fasteners and galvanized iron brackets (11.1 + 11.2).

11.1 Ventilated ridge

Supply and installation of natural or pre-coated zintek® zinc-titanium sheet metal, compliant with Standard EN 988, thickness of 7/10 mm with a total surface extension of mm (as per standard strip supply measurements), including galvanized iron hooking strips and perforated sheet metal assembled on a pre-assembled substructure. The ridge is built in compliance with Standard UNI 10372.

ITEMS OF THE MANUAL PART 2

11.2 Ventilated ridge substructure

Ventilated ridge substructure in raw fir wood, connected to the roof and built in compliance with Standard UNI 10372 or according to the specific design requirements. Includes the profiles and fastening devices needed for perfect laying of the zintek®.

12.0 Building wall corner edge

Building wall corner edge with corner cap in pre-coated zintek® zinc-titanium sheet metal, compliant with Standard EN 988, 7/10 mm thickness. The single corner caps must be seamed to the custom-profiled strips and must overlap by 50 mm. The parts applied at the top and base of the wall must be installed as described above and in the same position. The seam shape (height, width) on the corner edge must correspond to the seaming of the façade. The price includes connection and fastening equipment, as well as the anchor tabs:

- a) total extension surface 150 mm;
- b) total extension surface 200 mm;
- c) total extension surface 250 mm;
- d) total extension surface 330 mm.

13.0 Nozzle

Supply and installation of funnel nozzle in natural or pre-coated zintek® zinc-titanium sheet metal, compliant with Standard EN 988, for the previously described semi-circular gutter. The price includes the overlapping rivet-nailed and soldered joints:

- a) nominal size: 80 mm;
- b) nominal size: 100 mm;
- c) nominal size: 120 mm.

14.0 Gutter tray

Gutter tray in natural or pre-coated zintek® zinc-titanium sheet metal, compliant with Standard EN 988, thickness of 7/10 mm, with external barrel-domed external part; the tray is installed as a connection between the gutter and the downpipe. The price includes the overlapping rivet-nailed and soldered joints, as well as the connection and fastening equipment:

- a) size: approximately 350x300x400 mm (special construction);
- b) size: approximately 200x300x250 mm.

15.0 Eaves corners

Eaves corners, for internal and external corners, in natural or pre-coated zintek® zinc-titanium sheet metal, compliant with Standard EN 988, supplied as a supplementary component of the previously described eaves.

16.0 Gutter head

Gutter head in natural or pre-coated zintek® zinc-titanium sheet metal, compliant with Standard EN 988, supplied as a supplementary component of the previously described gutter.

17.0 Expansion joint

Neoprene expansion joint combined with a double natural or pre-coated zintek® zinc-titanium sheet metal strip, compliant with Standard EN 988, supplied as a supplementary component of the previously described gutter.

18.0 Downpipe curve

Downpipe curve in natural or pre-coated zintek® zinc-titanium sheet metal, compliant with Standard EN 988, supplied as a supplementary component of the previously described downpipe.

- a) diameter 80 mm;
- b) diameter 100 mm;
- c) diameter 120 mm.

19.0 Cantilevered flashing

Supply and installation of cantilevered flashing in natural or pre-coated zintek® zinc-titanium sheet metal, compliant with Standard EN 988, 7/10 mm thickness, for connection to the wall, fastened with dowels and screws with an approximate spacing of 250 mm; sealing of the upper channel between the cantilevered flashing and the wall with elastic sealant. The price includes the dowels, the corrosion-resistant anchoring equipment, the hooking clips, the construction of corners, of connections, of the drip tray, the sealing with permanently resilient elastic sealant and the off-cut wastage:

- a) total extension surface 100 mm;
- b) total extension surface 150 mm;
- c) total extension surface 200 mm.

20.0 Flashing:

Supply and installation of flashing in natural or pre-coated zintek® zinc-titanium sheet metal, compliant with Standard EN 988, 7/10 mm thickness, with folded edge channel border on both sides. The price includes the hooking brackets, the corrosion-resistant anchoring equipment, the overlaps and the off-cut wastage.

21.0 Wall cladding

Supply and installation of wall cladding in zintek® zinc-titanium sheet metal, compliant with Standard EN 988, with a thickness of mm. The price includes a separation layer, the hooking brackets, the corrosion-resistant anchoring equipment, the construction of the drip edges, the construction of waterproof corner connections, seaming operations and the off-cut wastage:

- a) total extension surface 330 mm;
- b) total extension surface 500 mm;
- c) total extension surface 670 mm.

22.0 Framing of protruding structures

Zinc-titanium sheet metal framing of protruding structures (chimneys, skylights, etc.) on pitch roofs. Supply and installation of: apron and ridge in natural or pre-coated zintek® zinc-titanium sheet metal, compliant with Standard EN 988, 7/10 mm thickness, height of the vertical folds 150 mm. The price includes the connection and fastening equipment, as well as the anchor tabs:

- a) protruding surface up to 1 sq. m.;
- b) protruding surface between 1 sq. m. and 2,5 sq. m.

23.0 Cladding of vents

Supply and installation of vent cladding in natural or pre-coated zintek® zinc-titanium sheet metal, compliant with Standard EN 988, 7/10 mm thickness, with a joint flange for welding or a connection layer to the cladding and a cone-shaped coping with brackets. The price includes the fastening equipment:

- a) for pipes with a diameter up to 120 mm;
- b) for pipes with a diameter up to 250 mm.

24.0 Cladding of aerial masts

Supply and installation of aerial mast cladding in natural or pre-coated zintek® zinc-titanium sheet metal, compliant with Standard EN 988, 7/10 mm thickness, with a joint flange for welding or a connection layer to the cladding and sealing of the upper border with elastic sealant. The price includes the truncated cone featuring the border to be welded, the elastic sealing of the upper border, the fastening equipment.

25.0 Perforated sheet metal strip or edge-banding

Supply and installation of strip or edge-banding in natural or pre-coated zintek® zinc-titanium sheet metal, compliant with Standard EN 988, 7/10 mm thickness, for ventilated cladding solutions. The price includes corrosion-resistant anchoring equipment, the construction of folds and the off-cut wastage:

- a) total extension surface between 100 mm and 200 mm;
- b) total extension surface from over 200 mm to 300 mm.

26.0 Two-gable dormer sheeting

Two-gable dormer sheeting with strips in natural or pre-coated zintek® zinc-titanium sheet metal, compliant with Standard EN 988, 7/10 mm thickness. The sheeting will be supplied and installed with double metal seam vertical joints and/or simple corner fold-fastened metal seaming on a pre-built wooden planking support. This planking, with a thickness of 24 mm, will be 80 to 120 mm in width, with a spacing between the boards of 5 to 10 mm, and will be fastened to the substructure by at least two screws in every point. The price includes perimeter connections, the construction of the lateral flashings, the edge-banding of the window opening, the connection and fastening equipment, the anchoring tabs and strips and the off-cut wastage.

27.0 Semi-circular dormer sheeting

Semi-circular dormer sheeting with strips in natural or pre-coated zintek® zinc-titanium sheet metal, compliant with Standard EN 988, 7/10 mm thickness. The sheeting will be supplied and installed with double metal seam vertical joints and/or simple corner fold-fastened metal seaming on a pre-built wooden planking support. This planking, with a thickness of 24 mm, will be 80 to 120 mm in width, with a spacing between the boards of 5 to 10 mm, and will be fastened to the substructure by at least two screws in every point. The price includes perimeter connections, the construction of the lateral flashings, the edge-banding of the window opening, the connection and fastening equipment, the anchoring tabs and strips and the off-cut wastage.

28.0 Pipe-style snow guard

Supply and installation of snow guard pipe with aluminium clamps. Anchoring spacing of approximately 500 mm. The price includes the clamps, the fastening screws, the snow guard pipe with a diameter of 1”, the off-cut wastage and the ice barrier.

29.0 Separation layer with sheathing

Filament mat and breathable waterproof sheathing, to be positioned under the zintek® zinc-titanium sheet laminate seam cladding, in order to provide protection from water during the installation of the zintek® laminate, and for the purpose of increasing sound isolation and of separating the laminate from its support during the installation of the cladding.

29.1 Separation layer

Filament mat to be positioned under the zintek® zinc-titanium sheet laminate seam cladding, for the purpose of increasing sound isolation and of separating the laminate from its support during the installation of the cladding.

30.0 Vapour barrier

Supply and installation of vapour barrier with suitable SD equipment for insulation (SD value must always be higher than that of the insulation). The joints will be overlapped with specific connection strips. mm sheet, mm thickness.

31.0 Breathable waterproof sheathing sheet

Supply and installation of breathable waterproof sheathing placed between the insulation package and the ventilation strip. Its SD value must be lower than the SD value of the insulation panel.

Thickness of the metal

The thickness of the metal should ideally be 0,7 mm, closely in relation to the building height.
For support flashings and eaves flashings, the thickness of the metal is 0,8 mm. For greater static loads, it will be necessary to use galvanized flashings as support.

Division of the strip

Due to shape-related reasons, it is important to divide the wall surfaces as symmetrically as possible. In cases with unfavourably positioned openings (skylights, etc.), the remaining surface must be balanced out by using the thinner strips on the inside of the wall surface or on the corner of the building.

Length of sheets in zintek®

The maximum length of panels in standard structures with fasteners using fixed and sliding tabs is limited to 10 m. For larger distances between the eaves and the ridge, the designer has two options to ensure the expansion of the sheets:

- Installation of expansion joints (sliding welds, projecting in slopes and protrusions).
- Sheets of greater length, by installing sliding holding tabs.

The implementation of these expansion joints depends on design requirements, development of the substructure, and local factors.

Roof Slope

Substructures for metal roofs must be designed, as far as possible, with a $>7^{\circ}$ (13%) roof slope. This is the initial value to guarantee relative security regarding gradients and inflections of the substructure.

The minimum tolerated slope is 3° (5,2 %).

Only in exceptional cases are zintek® roof coverings recommended for slopes from 3° to 7° , and observing the following additional precautionary measures:

- Seam raising
- Attics
- Sealing tapes for seaming
- Structured separator layers with drainage function

Whatever necessary measures are taken, these must be assessed on an objective basis.

Wooden planking as a substructure

The substructure consists of non-planed, air-dried coniferous timber boards ($< 20\%$), laid in parallel position.
The laying direction of the planking must be at a right angle or in diagonal in relation to the pattern of the sheets, in order to allow the brackets to be fastened to the respective planks. Exceptions are, for example, wall claddings and chimney framings.
Solid wooden planking must have a nominal thickness of 24 mm and total surface extensions between 60 and 100 mm. In the case of a wooden board planking, sufficient nailing space will be present when a net distance of 0,60 m between the boards is not exceeded. In the event of greater distances, thicker planking will need to be used.

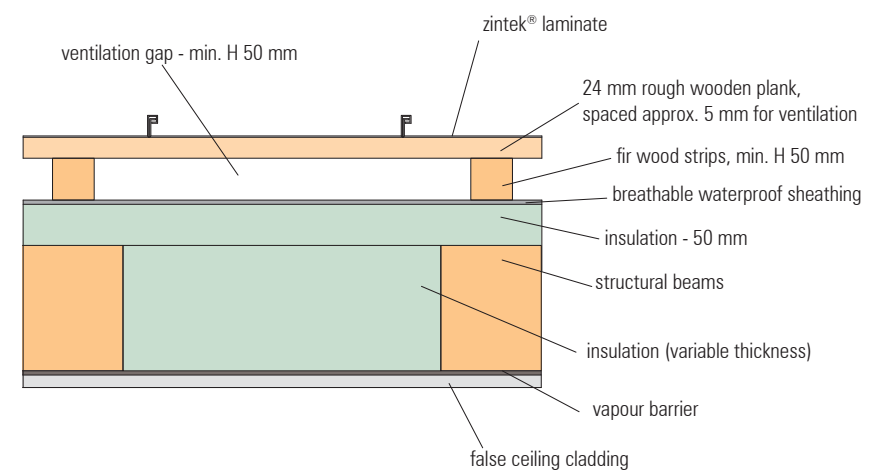
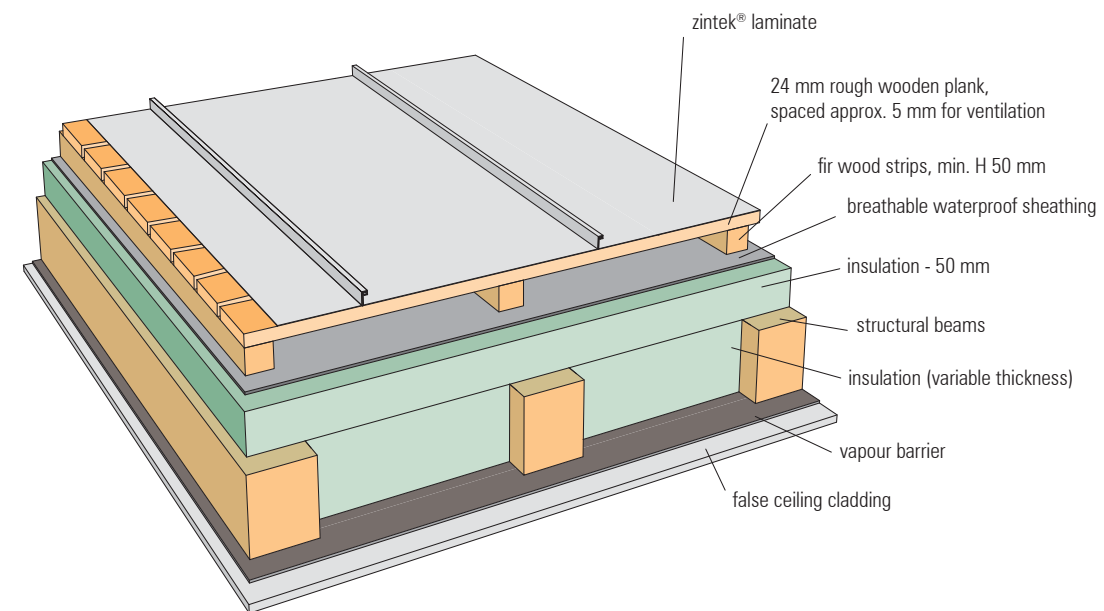
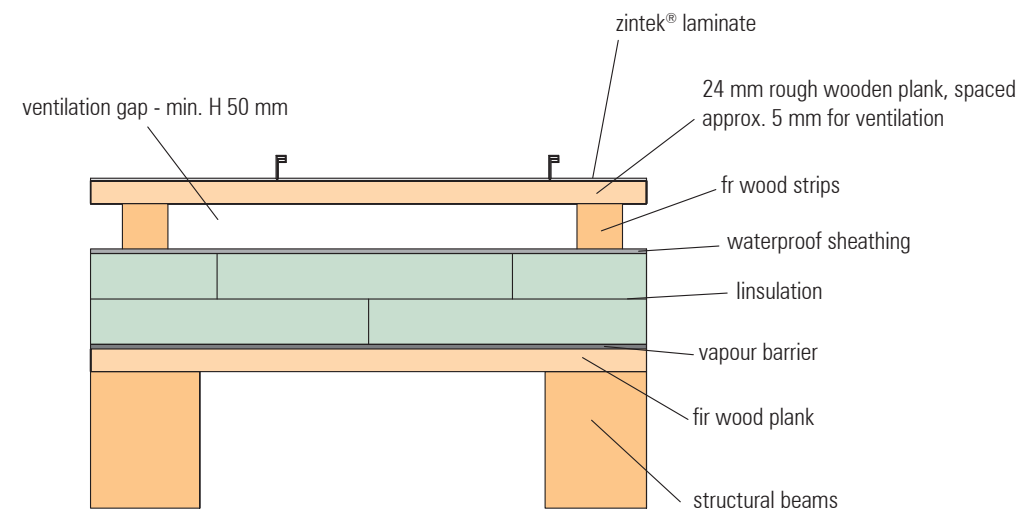
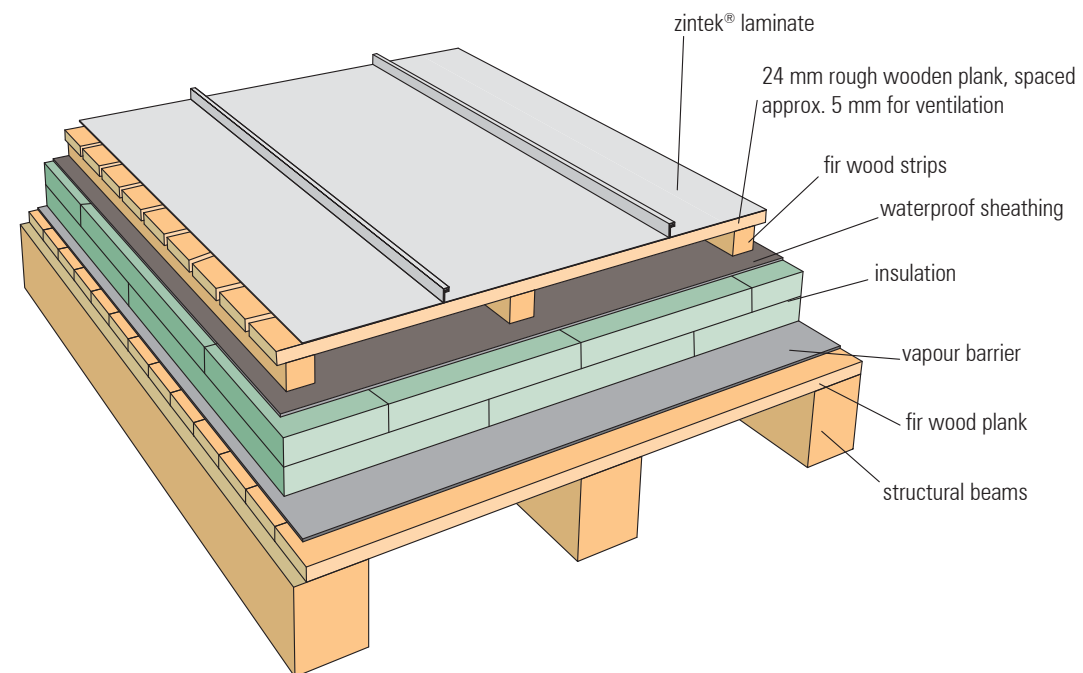
- Wooden planking substructures for zintek® coverings are secured to each board with two specific nails.
- In the case of structures with zintek®, the 5-10 mm fissures between the planks need to remain open to allow sufficient ventilation of the lower part of the sheets.

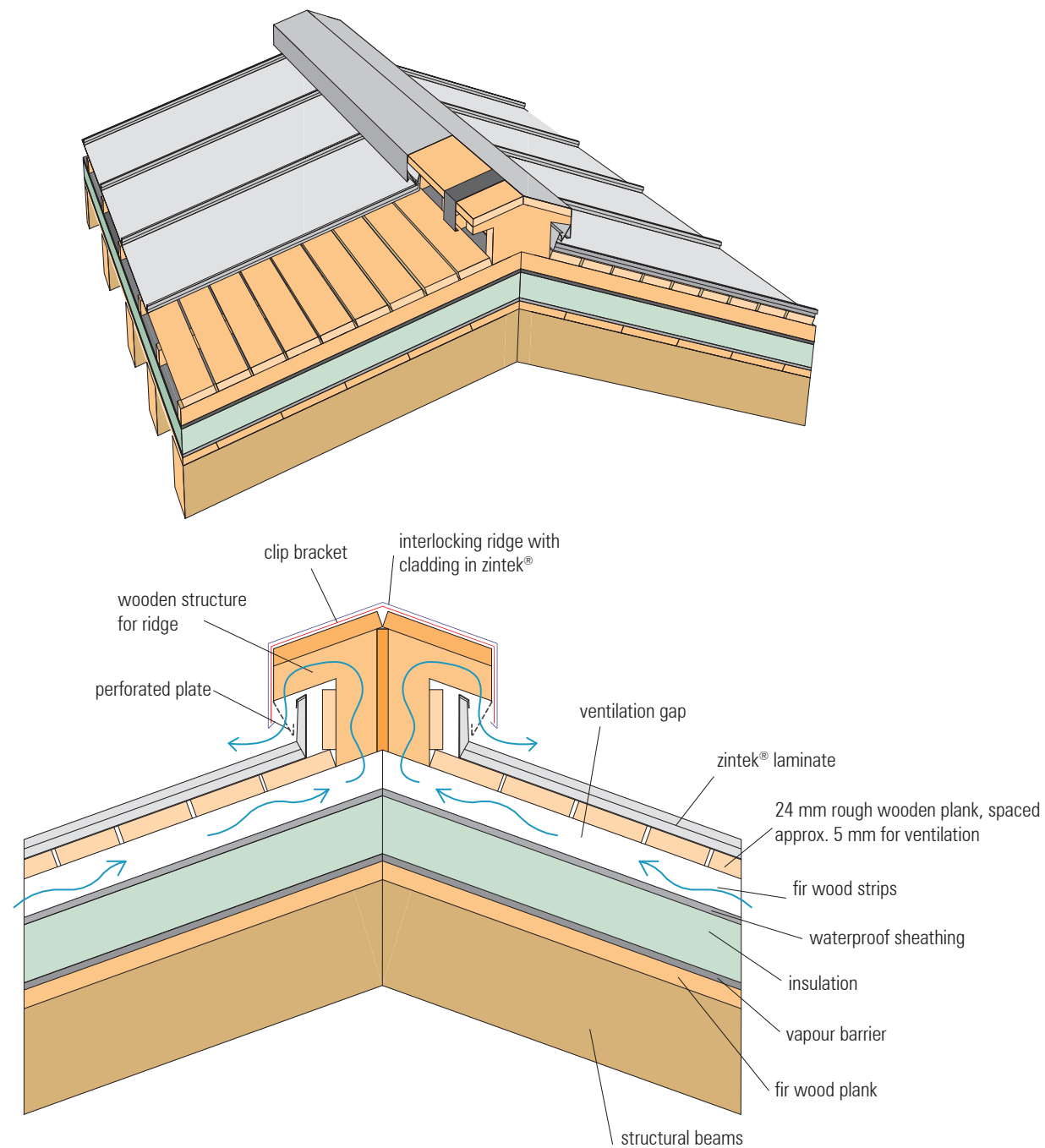
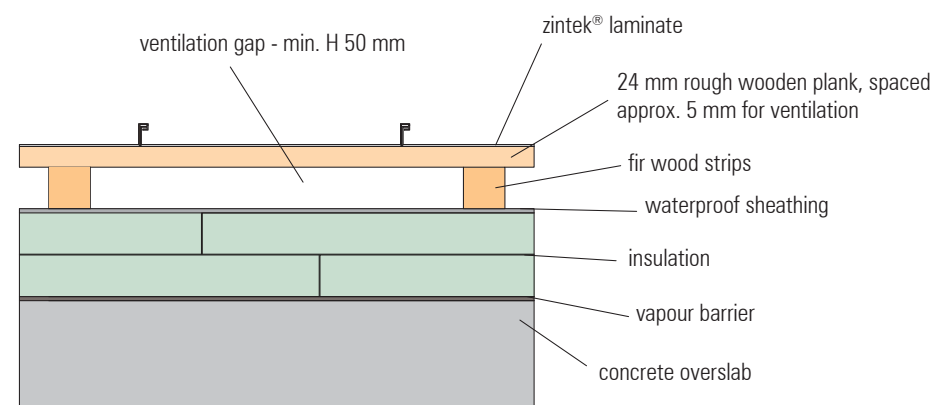
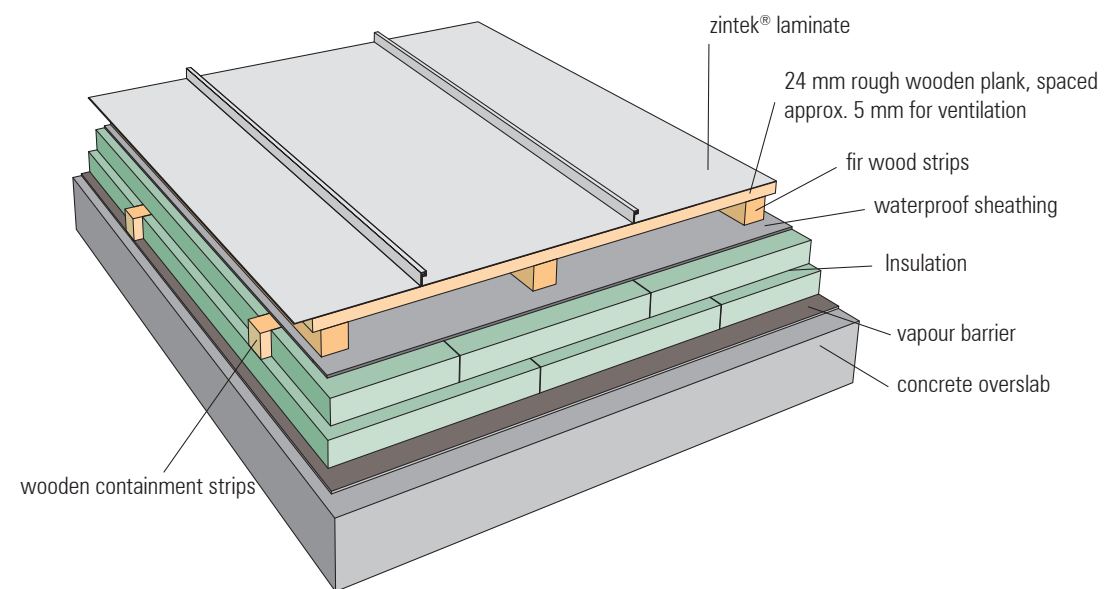
Wooden panels

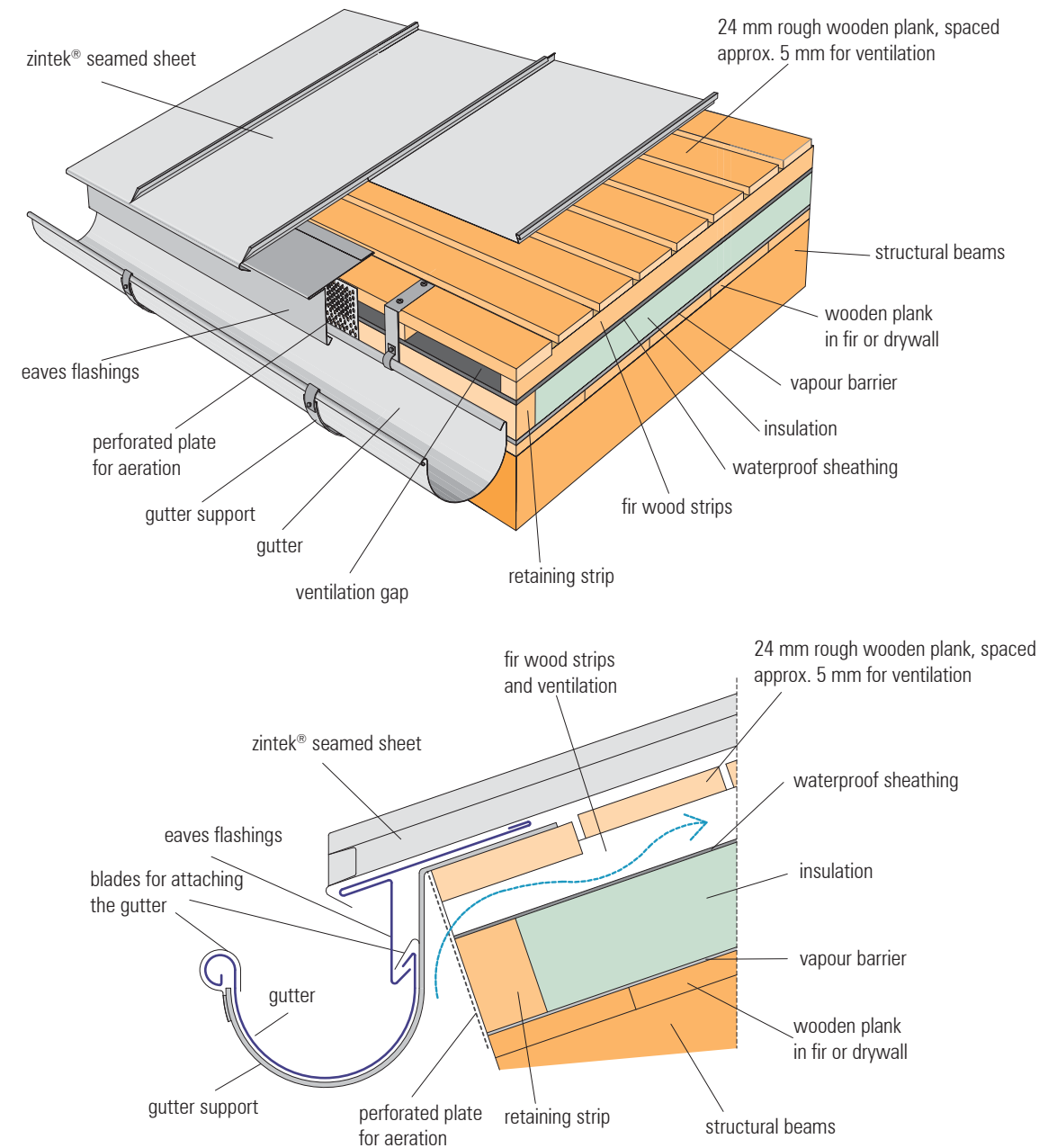
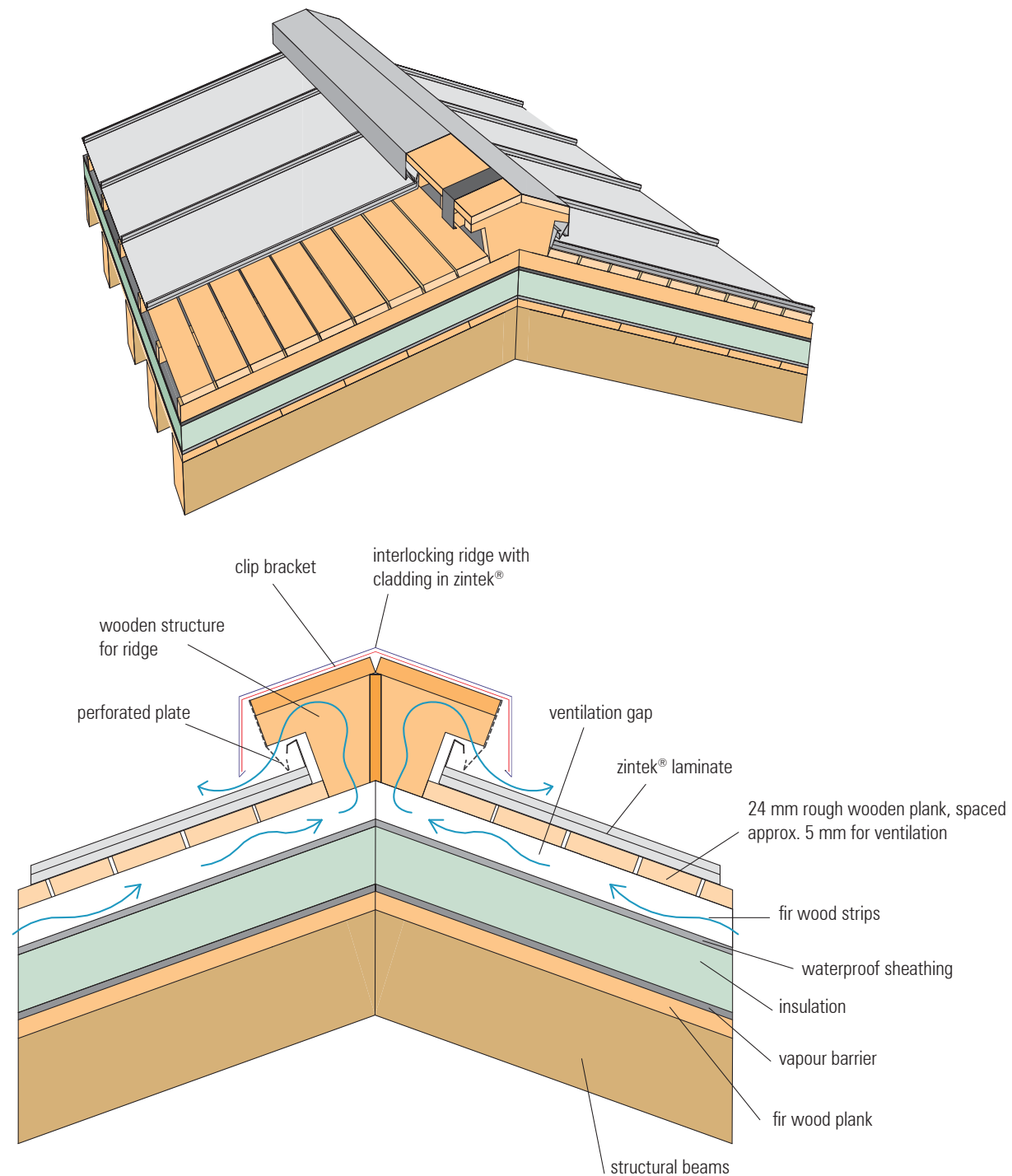
Wooden panels used as a base for zintek® must have a minimum nominal thickness of 22 mm.
A spacing and drainage structure must be inserted between the wooden panel and the zintek®.

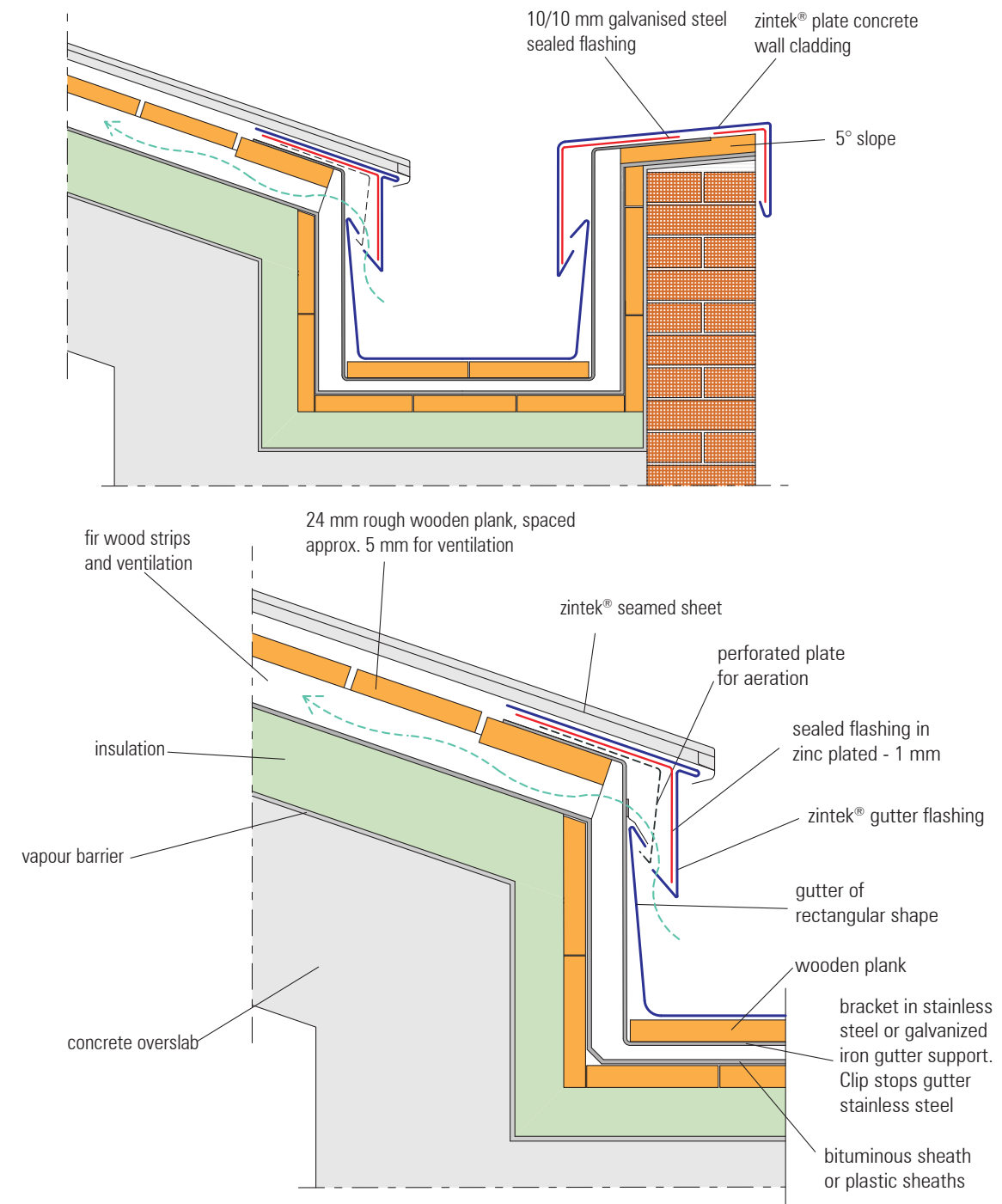
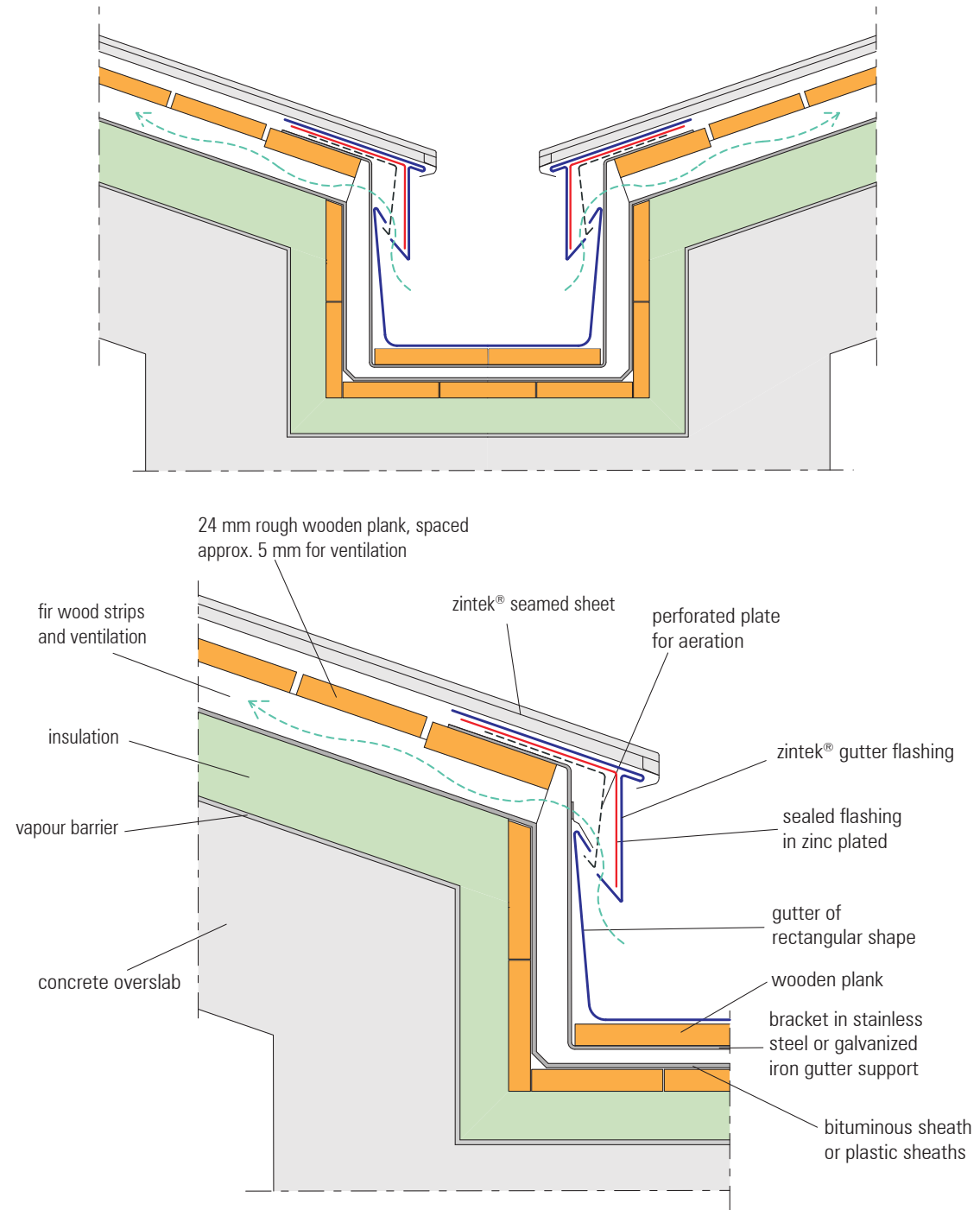
Welding

The junctions of areas requiring high-durability waterproof joints (e.g. gutters) can be welded with the soldering technique.









TECHNICAL INFORMATION ON ZINTEK® FAÇADE CLADDINGS



Thickness of the metal

The thickness of the metal should ideally be 0,8 mm, as this guarantees a superior level of rigidity of the sheet metal strips.

Materials

When the cladding is exposed, it is preferable to use pre-coated zintek®. This allows to achieve a homogeneous surface look from the very start of the cladding operations.

Division of the strip

Due to shape-related reasons, it is important to divide the single wall surfaces as symmetrically as possible.

In cases with unfavourably positioned openings (windows, etc.), the remaining surface must be balanced out by using the thinner strips on the inside of the wall surface or on the corner of the building.

Height-above-ground distance

To avoid the accumulation of dirt due to unfavourable weather conditions, which can cause major splashing onto walkways, roads or courtyard areas, the zintek® cladding must be positioned at a distance of at least 15 cm (from the ground).

Precautions against external factors

If the façade features openings, e.g. windows, it is important to avoid substructures consisting of galvanized parts, and to use aluminium or stainless steel substructures instead.

Fastening equipment for interlocking-strips systems

The ideal tools for fastening zintek® strips on aluminium substructures are rivets, Ø 4,00 mm times the necessary length, or stainless steel sheet metal screws, Ø 2,9x9,5 mm.

For wooden substructures, the ideal tools are pan head wood screws in stainless steel, Ø 3,0x25 mm. The quantity of fastening tools to be used and the distance between each rivet/screw must be based on static calculations.

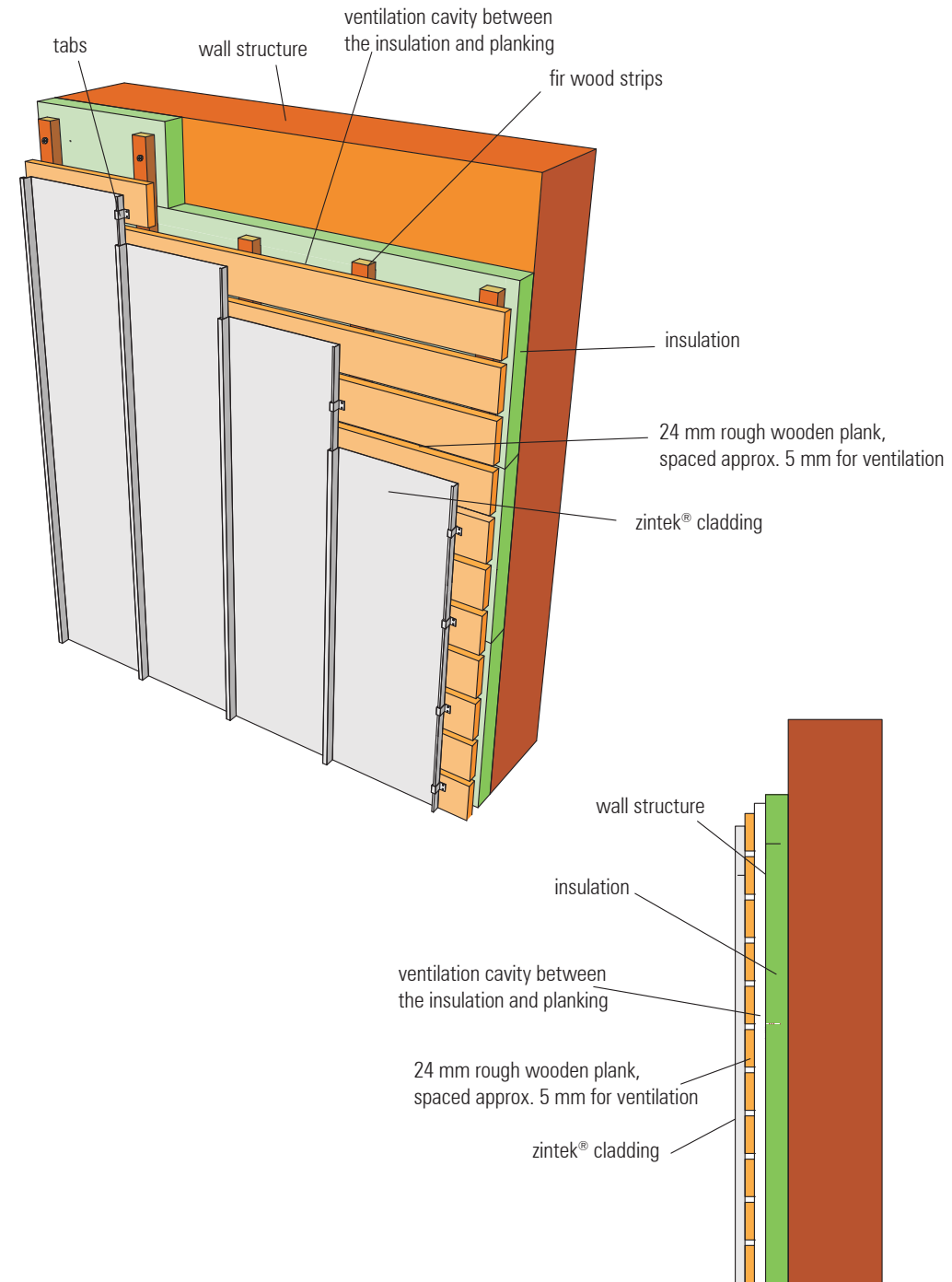
Exposed fastening systems can be used in cases involving high wind load pressure levels.

Supplementary stability for interlocking-strips systems

The lower strips feature a three-layer wooden panel that is subsequently glued to the strip as protection against dents in walkway areas or sporting facilities; this panel is positioned at a height-above-ground of approximately 1 meter.

Folding of interlocking strips

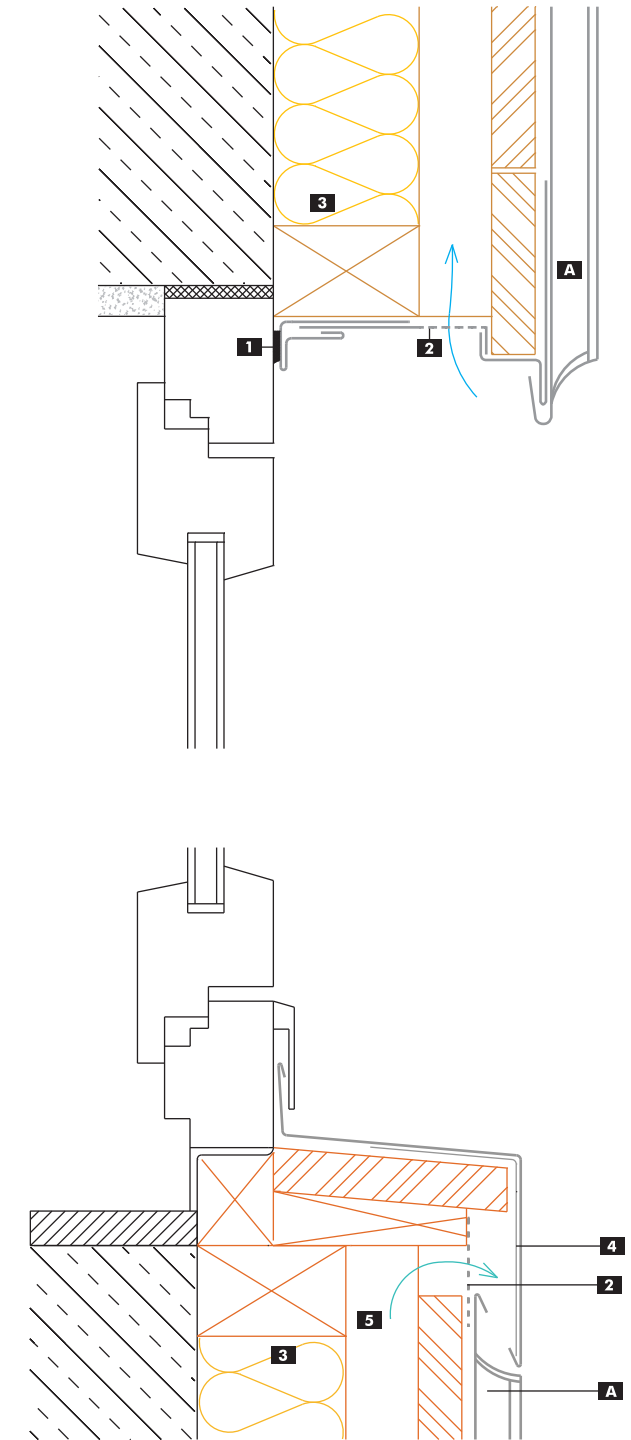
To guarantee the stabilization of the strips, their terminal areas require > 240 mm folds along the width of the panels.

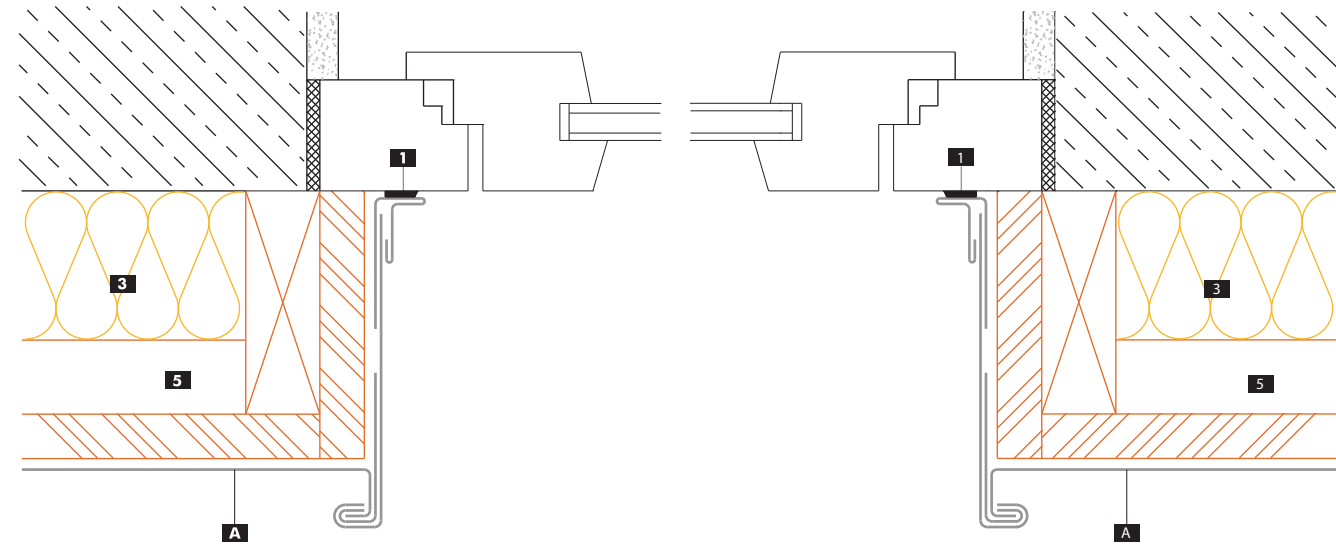


Vertical section
Window upper frame detail

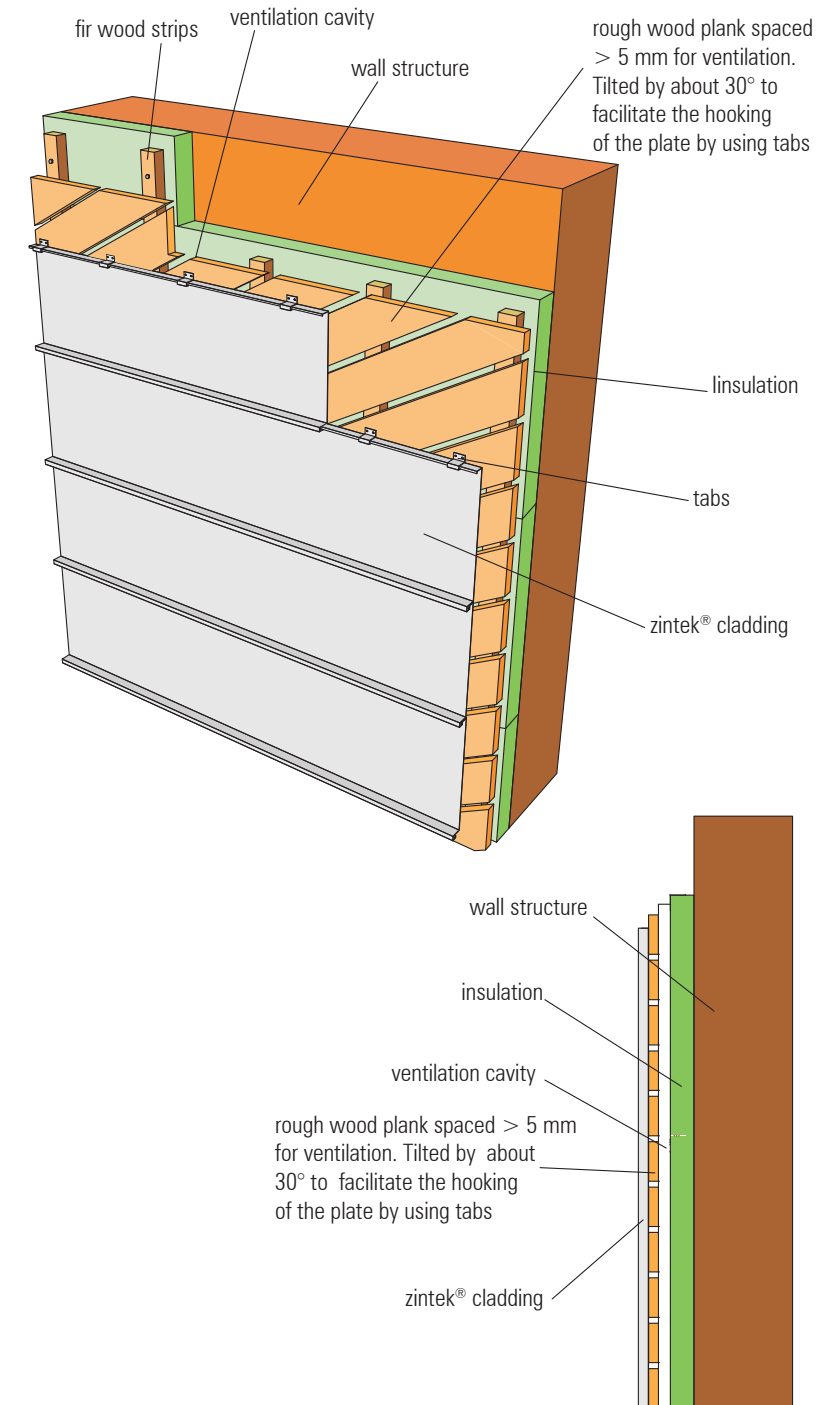
- A. Seaming in zintek®
- 1. Compressed tape seal
- 2. Perforated sheet metal in zintek®
- 3. Insulation
- 4. Sealed flashing
- 5. Ventilation space

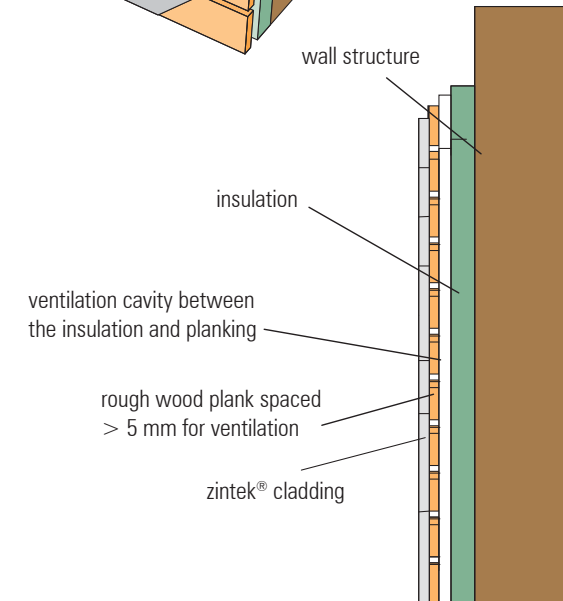
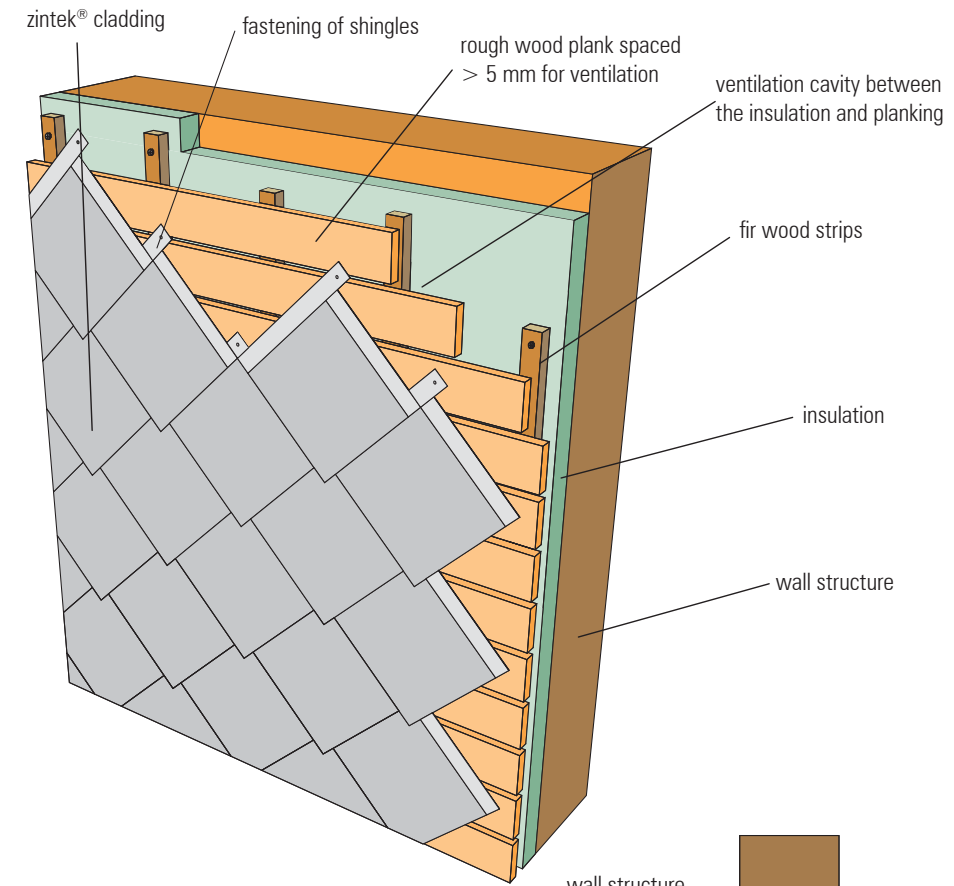
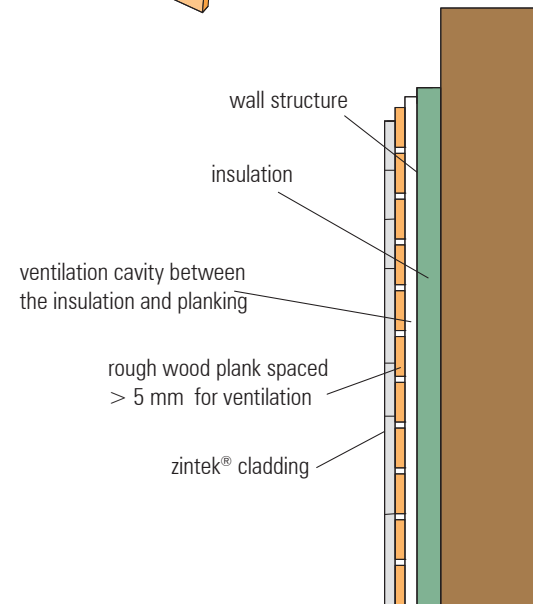
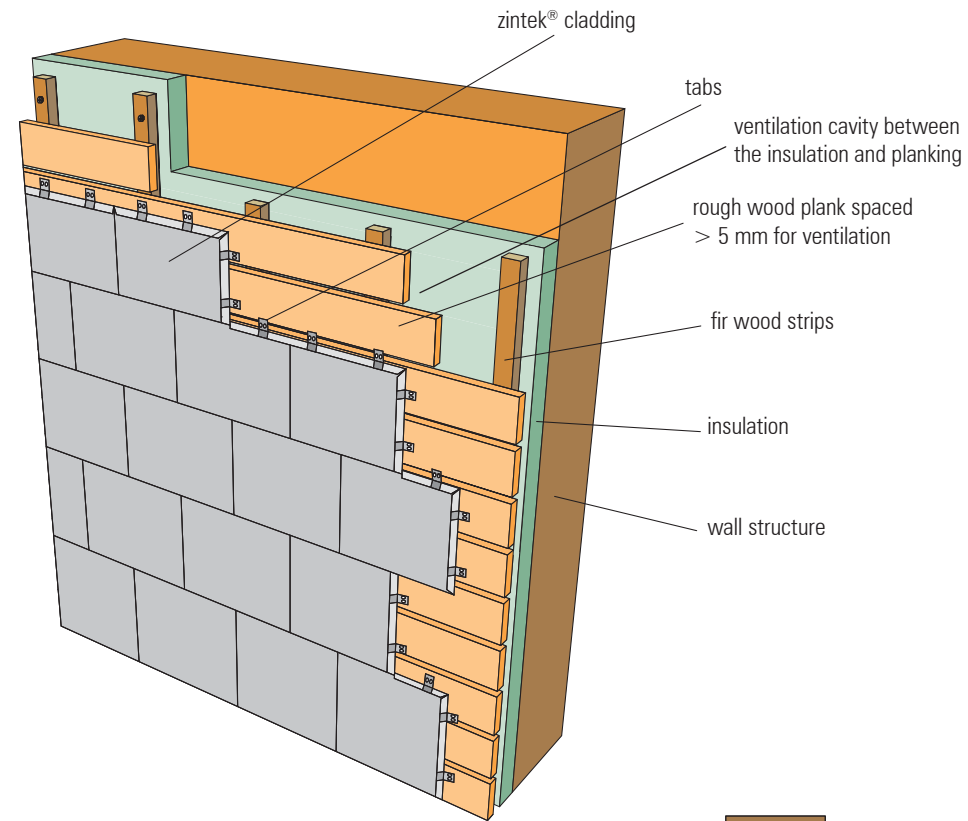
Vertical section
Window sill detail

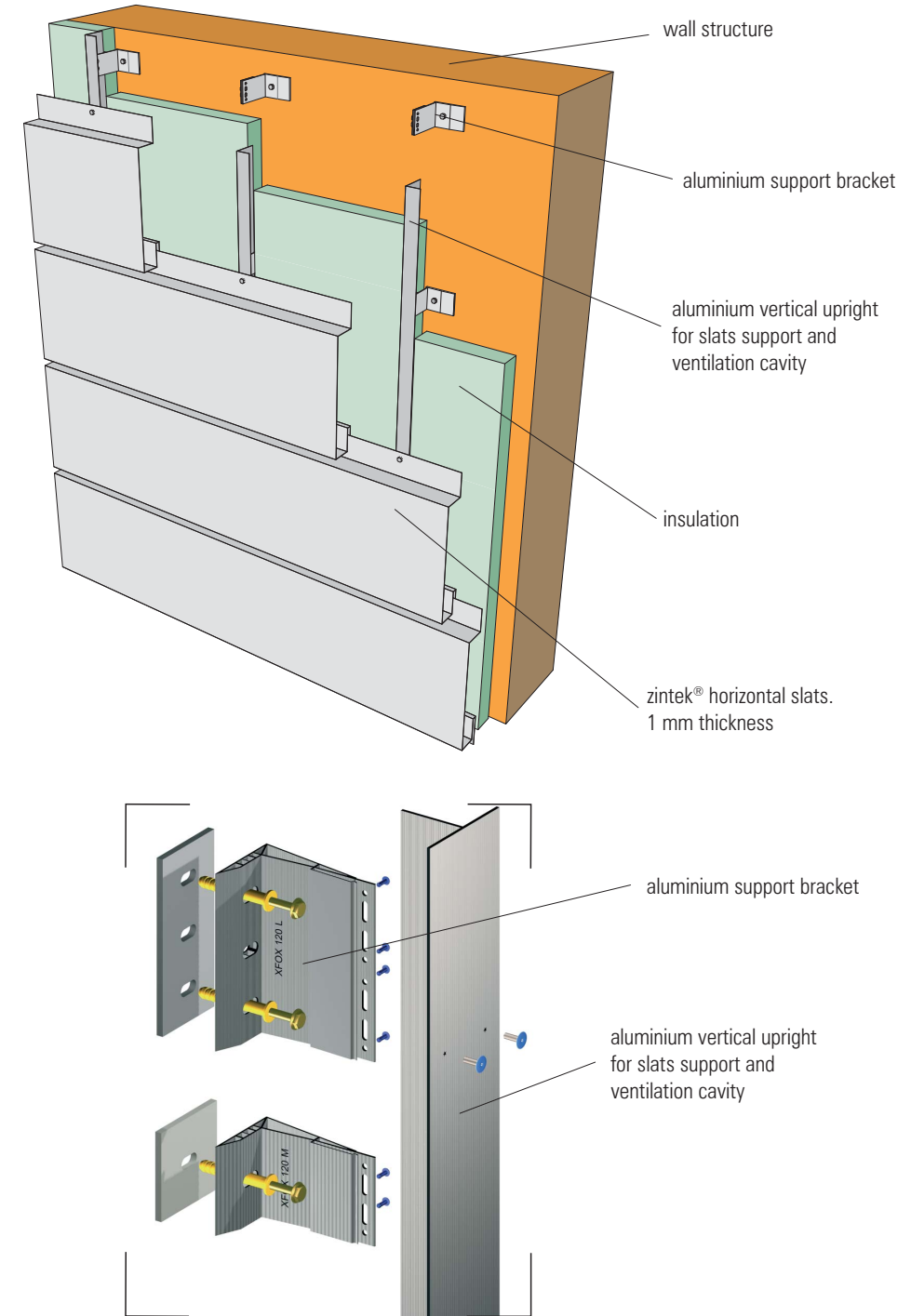
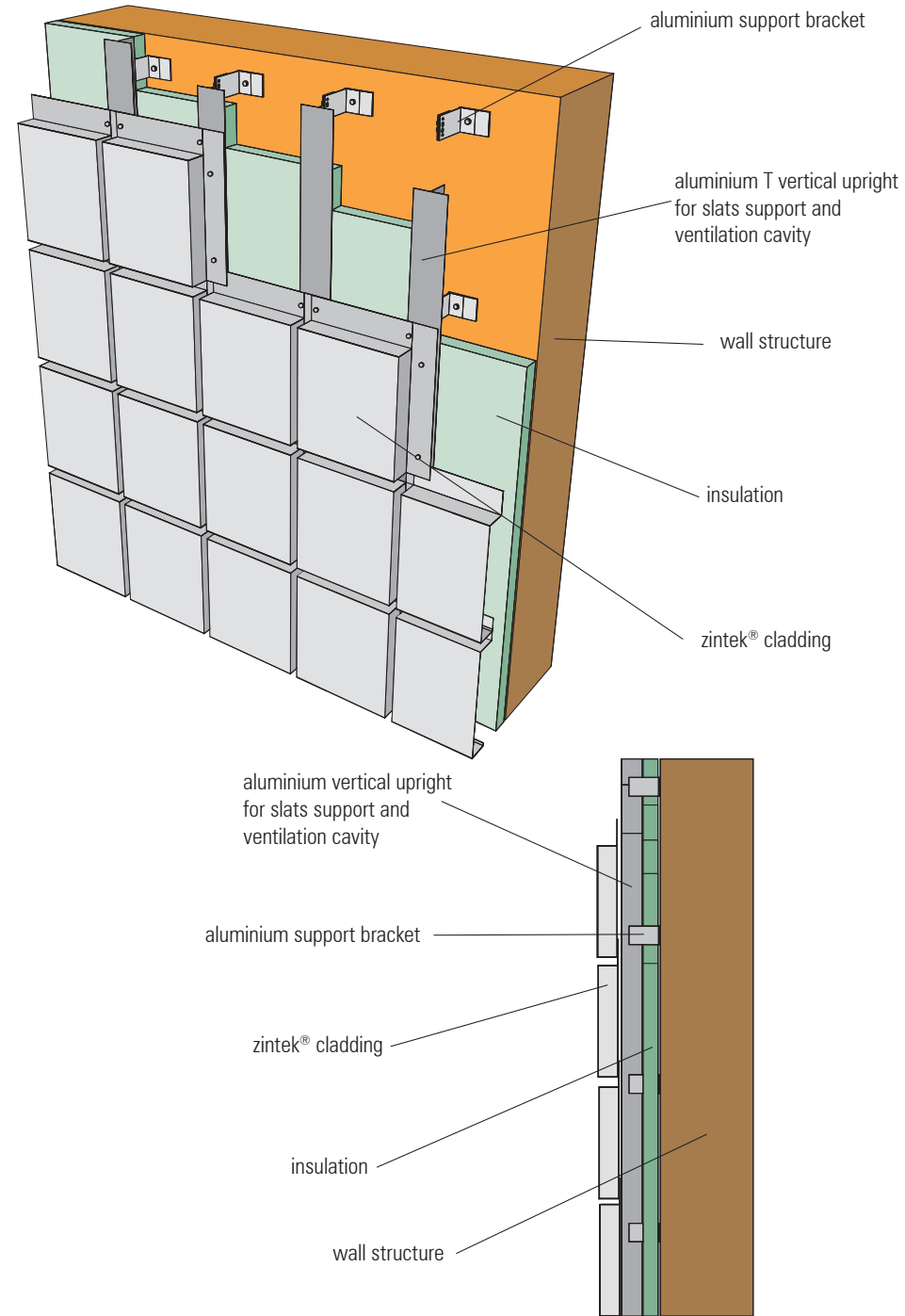


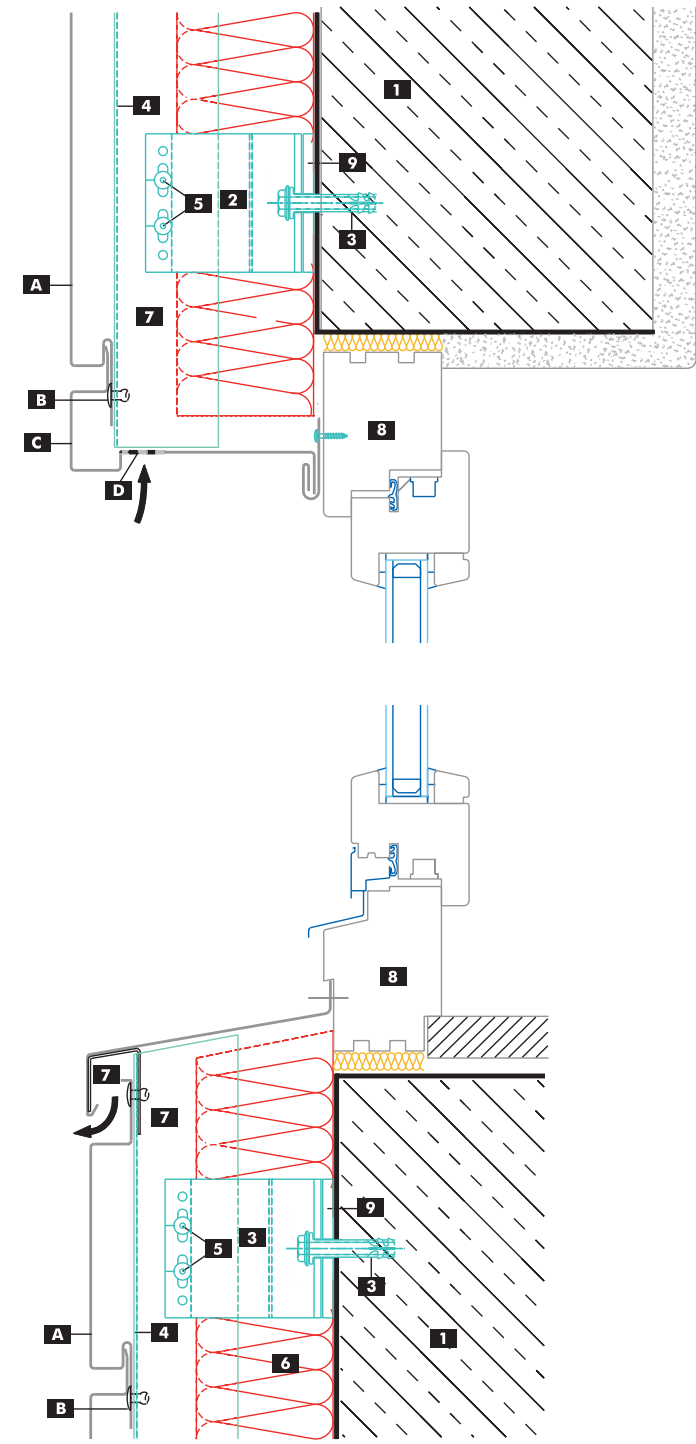


- A. Seaming in zintek®
1. Compressed tape seal
3. Insulation
5. Ventilation space





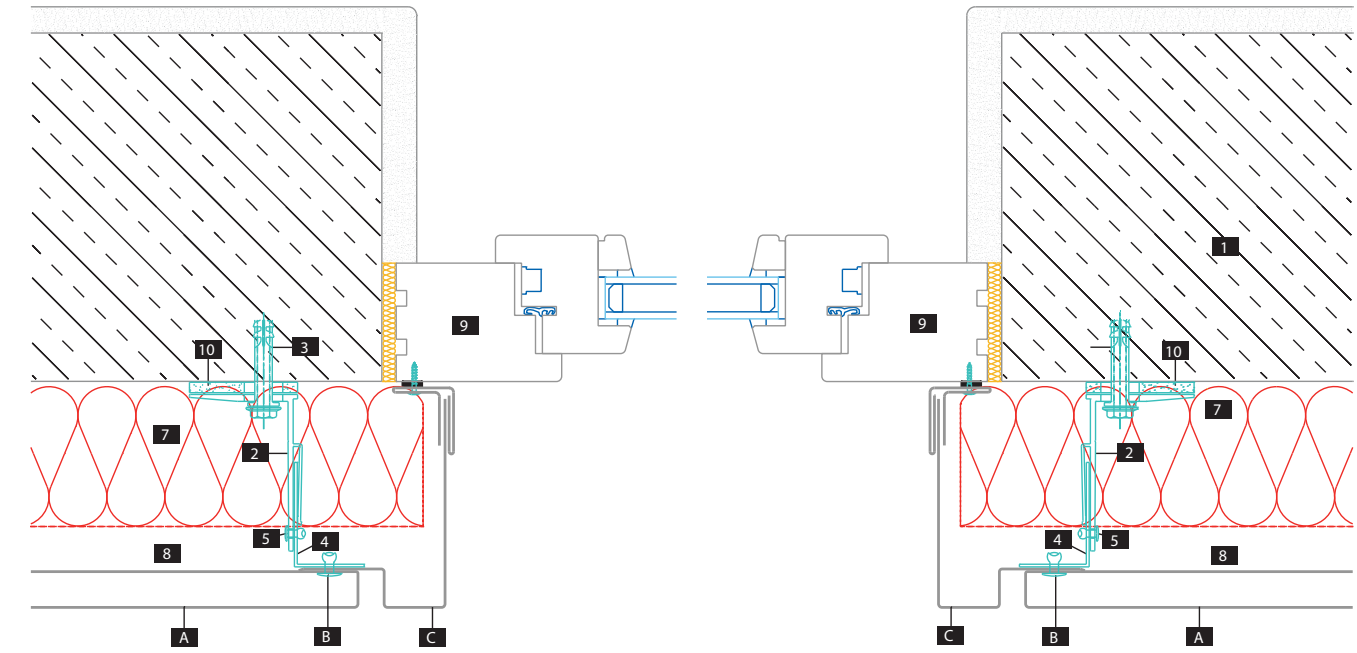




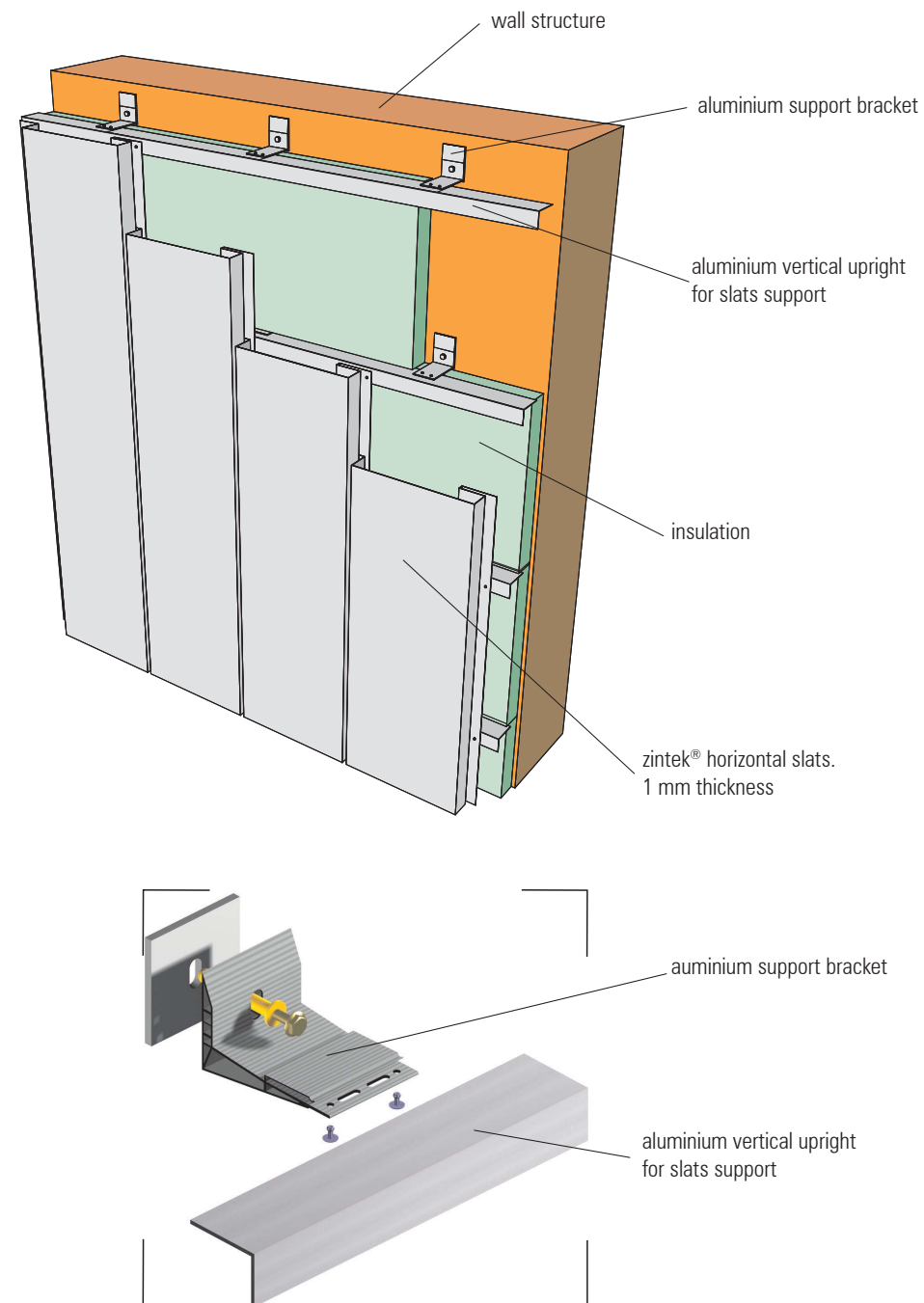
Vertical section
Window upper frame detail

- A. Horizontal slats in zintek®
- B. Rivet
- C. Flashing in zintek®
- D. Perforated sheet metal in zintek®
- 1. Wall structure
- 2. Support bracket
- 3. Dowel
- 4. "L"-shaped profile
- 5. Stainless steel screw
- 6. Insulation
- 7. Ventilation space
- 8. Frame
- 9. ThermoStop

Vertical section
Window sill detail



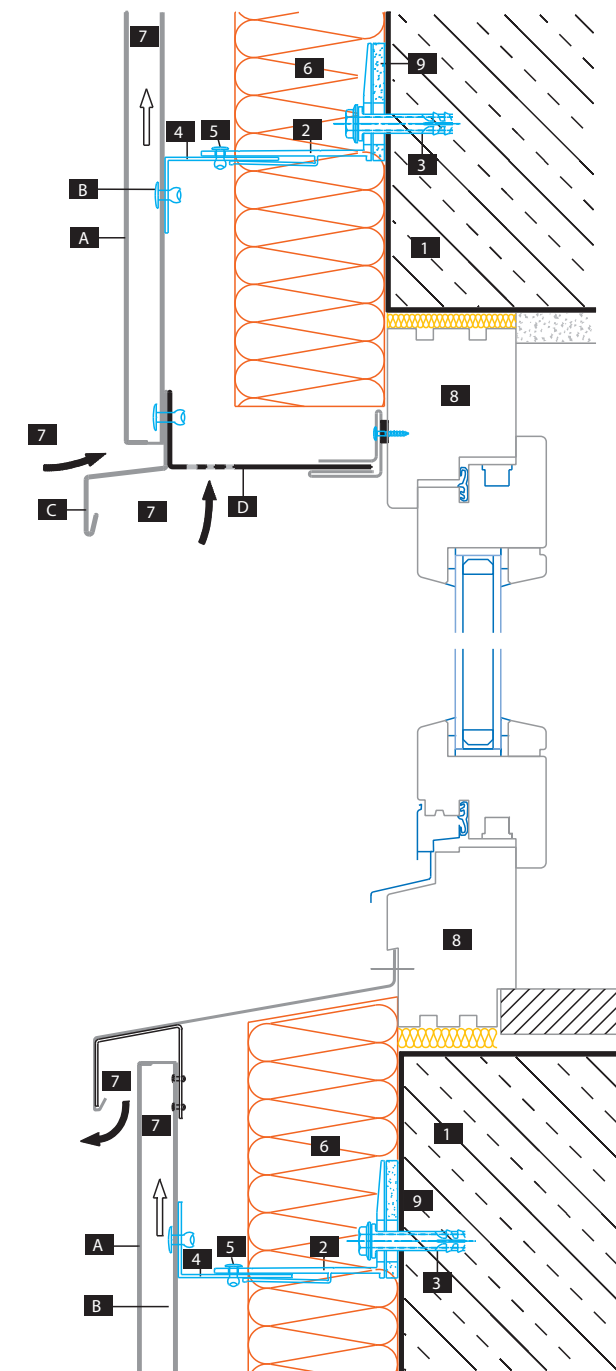
- A. Horizontal slats in zintek®
- B. Rivet
- C. Flashing in zintek®
- 1. Wall structure
- 2. Support bracket
- 3. Dowel
- 4. "L"-shaped profile
- 5. Stainless steel screw
- 6. Insulation
- 7. Ventilation space
- 8. Frame
- 9. ThermoStop

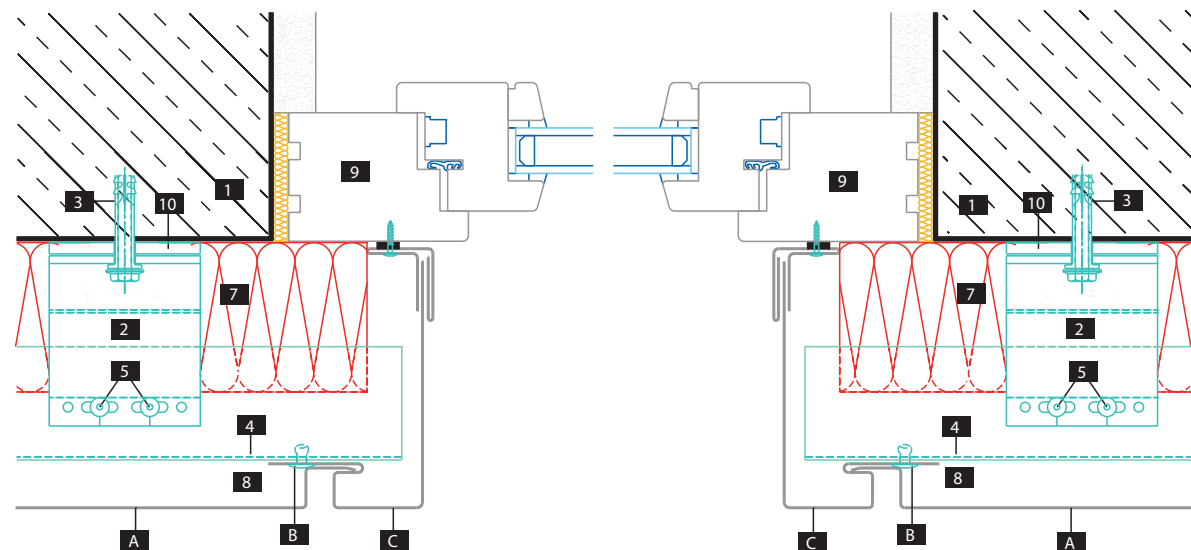


Vertical section
Window upper frame detail

- A. Vertical slats in zintek®
- B. Rivet
- C. Flashing in zintek®
- D. Perforated sheet metal in zintek®
- 1. Wall structure
- 2. Support bracket
- 3. Dowel
- 4. "L"-shaped profile
- 5. Stainless steel screw
- 6. Insulation
- 7. Ventilation space
- 8. Frame
- 9. ThermoStop

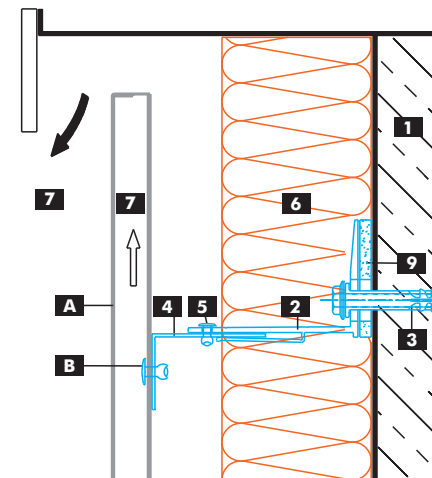
Vertical section
Window sill detail





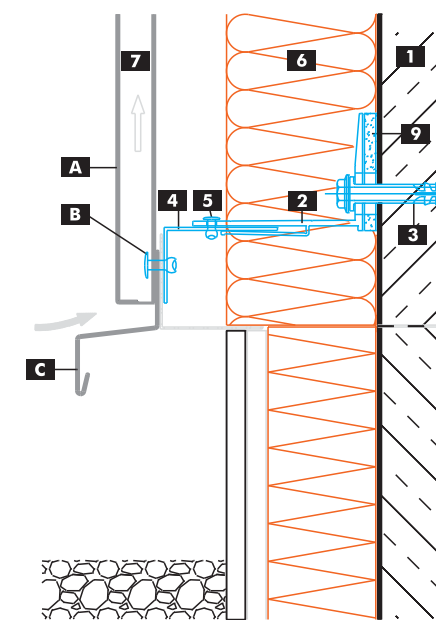
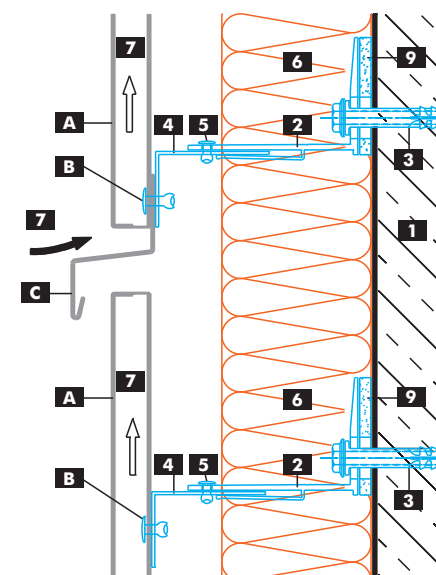
- A. Vertical slats in zintek®
- B. Rivet
- C. Flashing in zintek®
- 1. Wall structure
- 2. Support bracket
- 3. Dowel
- 4. "L"-shaped profile
- 5. Stainless steel screw
- 6. Insulation
- 7. Ventilation space
- 8. Window frame
- 9. ThermoStop

Vertical section
Gable detail

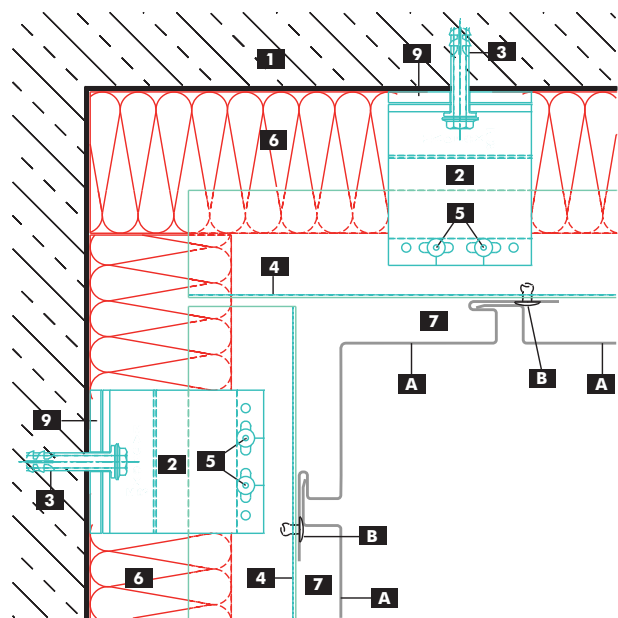
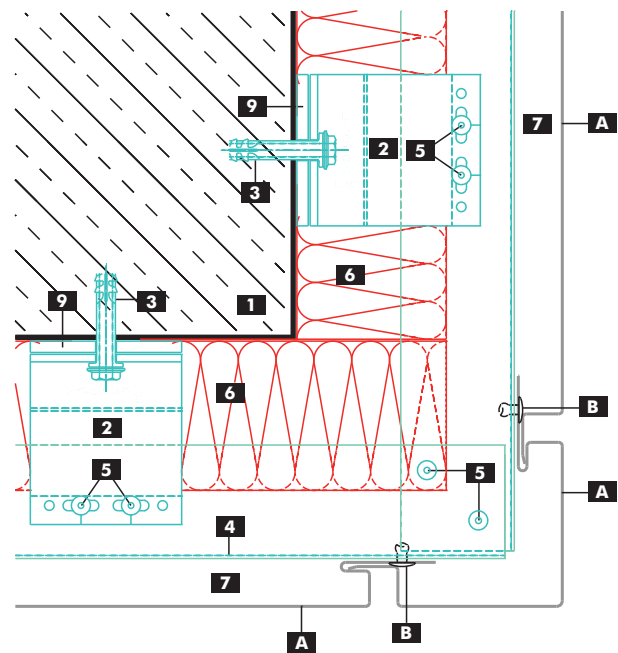


- A. Vertical slats in zintek®
- B. Rivet
- C. Flashing in zintek®
- 1. Wall structure
- 2. Support bracket
- 3. Dowel
- 4. "L"-shaped profile
- 5. Stainless steel screw
- 6. Insulation
- 7. Ventilation space
- 9. ThermoStop

Vertical section
Façade frame detail



Vertical section
Ground anchor detail



- A. Slats in zintek®
- B. Rivet
- 1. Wall structure
- 2. Support bracket
- 3. Dowel
- 4. "L"-shaped profile
- 5. Stainless steel screw
- 6. Insulation
- 7. Ventilation space
- 9. ThermoStop

Concept

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