RHEINZINK®

# SP-LINE

## The Complete System for the Facade

DESIGN AND APPLICATION

For up-to-date information, technical reports, advanced technical information,
parts lists, standard details or specifications please visit our website.

Exclusion of Liability

RHEINZINK GmbH & Co. KG takes account of state-of-the-art technology, product development and research at all times in its technical opinions. Such comments or recommendations are based on installation as is possible in standard cases in a European climate, specifically the indoor climate prevailing in Europe. We are of course unable to cater for all conceivable circumstances, which may call for restrictions and/or further measures in individual cases. This means that on no account are such comments provided by RHEINZINK GmbH & Co. KG any substitute for the advice or planning offered by an architect/consultant or contractor in charge of a specific building project under consideration of the specific circumstances prevailing on site.

Usage of documentation made available by RHEINZINK GmbH & Co. KG constitutes a service for which no liability can be assumed for losses or further claims of whatever nature. This does not affect liability arising in the case of intent, gross negligence or injury to life, limb or human health. Claims to compensation governed by the German Product Liability Act shall be likewise by unaffected thereby.

11th edition

## Foreword

This document describes the use of SP-Line – The Complete System for the Facade. Although it forms the basis for proper planning and classical application solutions, it is no more than a guide for users. The detailed drawings included here describe solutions which are feasible at a practical level.

We should like to explicitly point out that in actual practice it may not be possible to create the type of cladding illustrated in this document – or not to their full extent. In this context every situation should be examined in detail by the planner in charge. It is necessary here to take account of the system-specific effects on the property and local/climatic conditions as well as the requirements in terms of building physics. Compliance with the application techniques and specifications described here does not release users from any responsibility in this regard.

This document is based on our practical experience and represents the latest findings from research and development, recognised standards and state-of-the-art technology. We reserve the right to make changes at any time in the course of further development.

Please also note our information on the material and its processing on our websites.

IIf you have any queries or suggestions, please contact your customer advisor or get in touch with your local RHEINZINK sales office. All contact data can be found on our homepage **www.rheinzink.com/contact**

Datteln, May 2020

CONTENTS

RHEINZINK®

bright rolled

blue-grey

graphite-grey

## RHEINZINK-CLASSIC

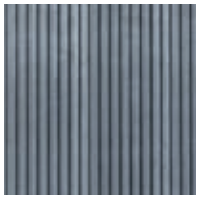
*ORIGINAL.*
*EXPRESSIVE.*
*PATINATES OVER TIME.*

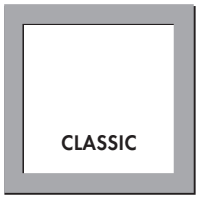
## RHEINZINK-prePATINA

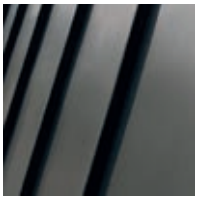
*PRE-WEATHERED.*
*SELF-HEALING.*
*NATURAL.*

# ONE BRAND – 5 PRODUCT LINES

***THE PERFECT SOLUTION FOR EVERY REQUIREMENT***






TITANIUM ZINC BRIGHT ROLLED: PATINATES OVER THE YEARS. NATURAL, VARIABLE SURFACE CHARACTER.

THE ONLY NATURALLY PRE-WEATHERED SURFACE IN THE WORLD. ZINC TYPICAL PATINA EX WORKS. 100% NATURAL, 100% RECYCLABLE.

- skygrey
- basalte

## RHEINZINK-GRANUM

*NOBLE.*
*MATTE FINISH.*
*MULTIFACETED.*


SKYGREY AND BASALTE. PURE, GREY ELEGANCE. URBAN DESIGN. PHOSPHATED SURFACE WITH COUNTLESS DESIGN OPPORTUNITIES.

- gold
- brown
- blue
- red
- green
- black

## RHEINZINK-PRISMO

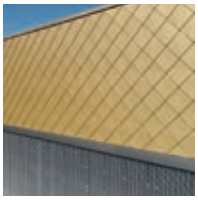
*GLAZED.*
*DYNAMIC.*
*ADAPTABLE.*

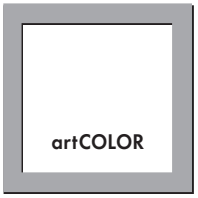

AESTHETIC, HARMONIOUS MATCH WITH ITS SURROUNDINGS. SUBTLE COLOUR VARIETY FOR A UNIQUE LOOK. SEMI-TRANSPARENT.

- pure-white
- pearl-gold
- moss-green
- nut-brown
- blue
- tile-red
- black-grey

## RHEINZINK-artCOLOR

*COLOURFUL.*
*LIVELY.*
*CREATIVE.*






CREATIVE DESIGN POSSIBILITIES. INDIVIDUAL, EXPRESSIVE COLOUR COMPOSITIONS. COATED COLOUR VARIETY.

## 1. Function of rear-ventilated Facades

- **Windproof Building Envelope**
- **Weather Protection**
- **Moisture**
- **Thermal Economy**
- **Fire Protection**
- **Rear-Ventilation**
- **Air Intake and Exhaust Openings**
- **Soundproofing**

The rear-ventilated facade is a multi-layered system, which, when designed properly, guarantees permanent functional capability. By functional capability, we mean that all requirements pertaining to structural physics are met. This is described in detail below.

By separating the rainscreen facade from the thermal insulation and supporting structure, the building is protected from the weather.

he supporting outer walls and the insulation remain dry and thus fully functional. Even when driving rain penetrates open joints, it is quickly dried out as a result of the air circulation in the ventilation space. The bracket-mounted rear-ventilated facade protects the components from severe temperature influence. Heat loss in the winter and too much heat gain in the summer are prevented.

Thermal bridges can be reduced considerably.

In the case of rounded parapets and dormer girders, the substructure and thermal insulation should be protected from penetrating moisture with a suitable layer.

### 1.1 Windproof Building Envelope

This does not apply to the rear-ventilated facade, as this component itself cannot be windproof.
The building must be windproof before the rear-ventilated facade is installed. A solid brick or concrete wall will ensure that the building is windproof. Penetrations (e.g. windows, ventilation pipes, etc.) must be sealed from the building component to the supporting structure. In the case of a skeleton construction, the wall surface must also be sealed.
If the building envelope is improperly sealed (wind suction, wind pressure), there is a high degree of ventilation/energy loss, which, along with drafts, creates unpleasant room temperature. Dew or condensation can be expected on the leeward side of the building.
Air circulation in the room should be provided through air conditioning or by opening the windows.

### 1.2 Weather Protection

Rear-ventilated facade cladding protects the supporting structure, the water-proofed thermal facade insulation, and the substructure, from the weather.
Bracket-mounted rear-ventilated facades provide a high degree of protection from driving rain.
Because of the physical structure, it is impossible for the rain or capillary water transfer to reach the insulating layers. Furthermore, moisture can always be drawn out through the ventilation space. This allows the insulating layers to dry out quickly, without impeding thermal insulation.

### 1.3 Moisture

Rear-ventilated facade cladding provides protection from driving rain and moisture. Moisture penetration as a result of diffusion does not occur in the rear-ventilated facade.
When the supporting structure is windproof, the diffusion current density is too small to cause the dew point temperature to drop.

### 1.4 Thermal Economy

In order to understand the thermal economy of the rear-ventilated facade, we must first consider the various heat flow rates, as well as the air exchange between the rear-ventilation space and the outside air, separately, in terms of structural physics.

#### 1.4.1 Thermal Insulation

In the winter, heat flow from the inside to the outside is referred to as a heat transfer co-efficient (U-value).
The smaller the value, the smaller the quantity of heat escaping to the outside. The U-value is determined by the heat conductivity of the thermal insulation and insulation thickness.

The high-grade thermal insulation is a contribution to environmental protection and pays for itself in a relatively short period of time through low heating costs.

#### 1.4.2 Summer thermal Insulation

Summer thermal insulation should provide comfort: The amount of heat flowing from the outside to the inside sh ould remain as small as possible. Proper thermal insulation, as well as a certain mass in the construction itself, will help to achieve this objective.
The advantage of a bracket-mounted, rear-ventilated facade, is that a large portion of the heat which streams onto the cladding is diverted through convective air exchange.

#### 1.4.3 Thermal Bridges

Thermal bridges are elements of the building envelope, that have high thermal conductivity (have high U-values) and are continuous from the warm side to the cold side of the thermal insulation. Apart from general design-dependent thermal bridges of a building, e.g. protruding balconies, the installation of the substructure must be taken into account in the case of a rear-ventilated facade. Thermal bridges can be reduced significantly by installing an insulating strip between the supporting structure and the substructure (thermal break).
Proper installation of the insulation reduces the formation of thermal bridges.

### 1.5 Fire Protection

Metal facades with a metal substructure and appropriate fasteners meet the highest requirements for non-combustibility (Building Material Class A1, DIN 4102). In the case of bracket-mounted, rear-ventilated facades, it may be necessary to install firestops.

### 1.6 Rear-Ventilation

The free ventilation cavity between the facade cladding and the layer behind it must be at least 20 mm. Tolerances and plumbness of the building must be taken into account. In some places, this rear-ventilation space may be reduced locally up to 5 mm – e.g. by means of the substructure or the unevenness of the walls.

#### 1.6.1 Air Intake and Exhaust Openings

The rear-ventilation space requires intake and exhaust vent openings. These openings must be designed so that their functionality is guaranteed for the lifetime of the building. It cannot be hindered through dirt or other external influences. The openings are located at the lowest and highest point of the facade cladding, as well as in windowsill and window lintel areas, and penetrations. In the case of higher, multi-storey buildings, additional intake and exhaust vent openings should be provided (e.g. at each floor).

### 1.7 Soundproofing

To prove that a facade design is soundproof, the entire wall structure, as well as each building component (windows, etc.) must be defined. The use of proper static fasteners will prevent any potential noise development as a result of the cladding.

## 2. RHEINZINK-SP-Line

### 2.1 Profile Geometry

Material thickness
s = 0.70 mm

| Cover width of SP-Line s = 0.70 mm | Weight |
|---|---|
| 350 mm | 7.20 kg/m² |

**Application for outside Areas**

- Facades
- Gable wall claddings
- Soffits
- Rounded parapets
- Dormers
- Fascias

**Fasteners**

The basic panels are fastened with self-drilling screws that are fastened along a line marked with centre punches sitting above the reinforcing corrugation. Additional brackets or clips are not required.

**Technical Data**

| | |
|---|---|
| Surface | RHEINZINK-prePATINA blue-grey |
| Coverage area with basic panel | 1.05 m² |
| Profile length | 3000 mm |
| Profile width | 400 mm |
| Cover width | 350 mm |
| Profile height | 15 mm |
| Scope of delivery | 3 panels per carton, incl. fasteners |

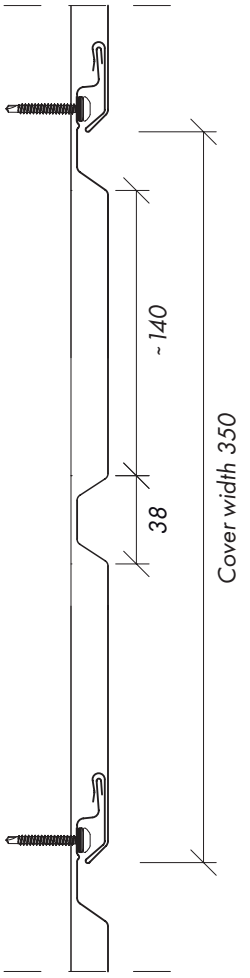
**Tolerances**

According to Works Standard WN 21

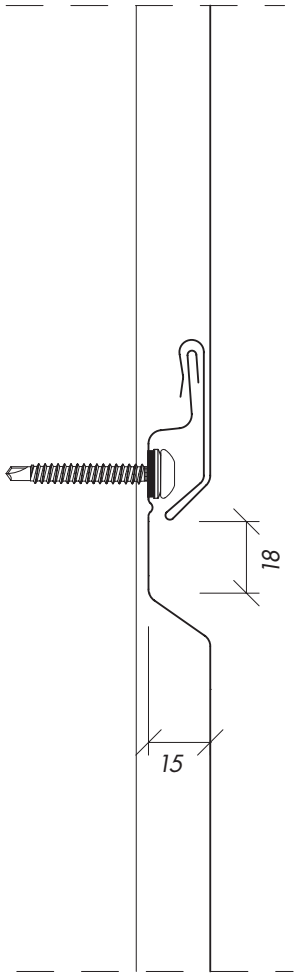
**Installation**

By "inserting" the next row of panels, the fasteners of the row beneath are concealed. Panel geometry ensures that the panels are inserted completely so that they cannot be leveraged out. Panel length is strictly limited to 3000 mm maximum due to thermal expansion and contraction.

The connection profiles, e.g. lintel profiles and jamb profiles on windows and doors, corner profiles, joint profile spans, etc. are installed first.




*System profile, grid*




*System profile, illustration of panel connection*

Then the basic panels are cut and the reference surface is clad quickly and simply. Using suitable tools, the tradesman machines the individual lateral, longitudinal or diagonal profiles and notches on the construction site. We recommend using a circular saw with a hack saw blade and stop bar to cut to length. A cordless screwdriver is required to fix the basic panels directly.The RPM is set so that the sealing washer of the screws, which are included in the delivery, are slightly compressed after installation. A suitable Torx-bit is included in the scope of delivery.

Perforated connection profiles are fastened with self-drilling screws; all other connection profiles are fastened conventionally, using roofing nails.

## 2.2 Static Design

With the RHEINZINK-SP-Line System, the designer has the option of realizing grid dimensions up to 3000 mm in length. The width of the basic panel is 350 mm.

The span tables for profiles are based on DIN 18807-2 for cross-section properties.

### Technical Approval

The RHEINZINK-SP-Line System is subject to EN 14782 and is approved for use with substructure spacing ≤ 1.00 m (other support spacing possible on request). In Germany the facade system is additionally governed by the Construction Products List B, Part 1 (edition 2015/2), section 1.0 relating to construction products subject to harmonised standards according to the Construction Products Directive, section 1.4.10.1 Self-supporting roof covering and wall cladding elements for interior and exterior application made of sheet metal.

### Units for Loads and Strength

Permissible loads and force are given in kN/m² in the calculation tables. Deflection values in relation to span width are given for single-, double- or multiple-span conditions.

The following symbol is used in the illustration:

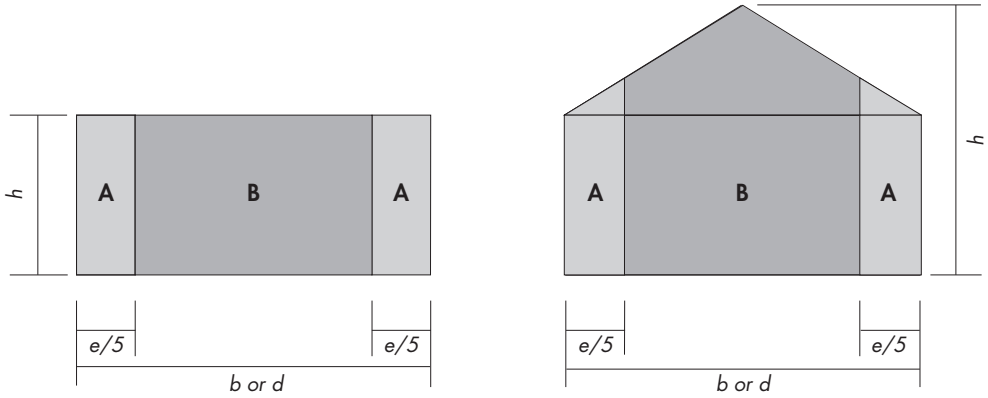
Single-span ■
Double-span ■■
Multiple-span ■■■

| Span width in m | 0.50 | 0.60 | 0.70 | 0.80 | 0.90 | 1.00 | 1.10 | 1.20 |
|---|---|---|---|---|---|---|---|---|
| permissible wind load in kN/m² | | | | | | | | |
| ■ | 3.15 | 2.62 | 2.25 | 1.91 | 1.51 | 1.22 | 1.01 | 0.85 |
| ■■ | 2.20 | 1.83 | 1.57 | 1.37 | 1.22 | 1.10 | 1.00 | 0.92 |
| ■■■ | 2.50 | 2.08 | 1.78 | 1.56 | 1.39 | 1.25 | 1.14 | 1.04 |

SP-Line basic profile. s = 0.70 mm

*Basis for calculation: Uniformly distributed load, including profile dead load*
*Safety factor: 1.50*
*Yield limit: 100 N/mm²*
*Width of support profile: ≥ 60 mm*
*DIN 18807-2/experimental testing at the University of Karlsruhe, taking into account the DIN 18800-1 safety concept.*

## STATICS




*e = b or 2h, the smaller value is decisive*

*Simplified area segmentation for vertical walls with a building height of h ≤ 10.0 m*

| | Wind zone 1 | | Wind zone 2 | | Wind | zone 3 |
|---|---|---|---|---|---|---|
| Area segmentation | **A** | **B** | **A** | **B** | **A** | **B** |
| Wind load in kN/m² | 1.10 | 0.80 | 1.43 | 1.04 | 1.76 | 1.28 |
| max. support span in m | 1.10 | 1.20 | 0.70 | 1.00 | 0.60 | 0.80 |

*Space between fasteners, resp. span of support for aluminium or wood substructures, support width ≥ 60 mm, Fastening with EJOT® stainless steel screws SAPHIR* **Self-drilling screw JT4-FR-2-4,9*35-E11**

Wind zone 1

Wind zone 2

Wind zone 3

Wind zone 4

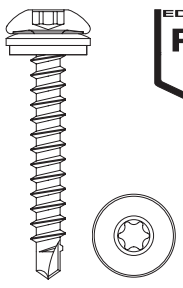

**Note:**
In order to calculate the space between fasteners/support in wind zone 4, static proof of stability pertaining to the project in question is required.

If the building project is on the border of two wind zones, please contact your RHEINZINK representative for the correct calculation.

*Multi-part timber substructure*

*Two-part metal substructure*

| Marking | Ø x<br>mm | Length<br>mm | Drill capacity<br>$t_I + t_{II}$<br>mm | Clamping thickness<br>mm | Drive |
|---|---|---|---|---|---|
| * **JT3-FR-2-4,9** | 4.8 | 35 | 2.0 | 30 | TORX® T25 |



## 2.3 Substructures

The design of the facade determines the layout of the substructure. In order to determine the position of the substructure with certainty, the facade must be designed prior to installation.

For applications such as facades, dormers, fascias and gable walls, a dry timber substructure with a support of ≥ 60 mm is suitable when installing the RHEINZINK-SP-Line. For cladding large surfaces and multi-storey facades, substructures made up of two-part or multi-part aluminium metal systems (2 mm thick) are best. These systems allow for problem-free equalization of building tolerances.
If the basic panel protrudes more than 300 mm, additional support is required.

## 2.4 Fasteners

The basic panels are fastened with self-drilling screws that are fastened along a line marked with centre punches sitting above the reinforcing corrugation.
By "inserting" the next row of panels, the fasteners of the row beneath are concealed. They guarantee long-term function capability of the system and are included in the scope of delivery, along with the suitable Torx-bit.
Fasteners in the substructure must be at least 10 mm from the edge.

**EJOT® SAPHIR stainless Steel self-drilling Screw JT3-FR-2-4,9***

**Area of application**

Use self-drilling screws to fasten

- Aluminium profile sheets
- Facade sheets

to

- Timber substructures
- Aluminium substructures 2,0 mm
- Steel substructures 1.5 mm

**Properties**

- A2 stainless steel
- Stainless steel sealing washer
- Sealing washer, securely connected
- Thread according to DIN 7998

## 2.5 Connection Principles

### 2.5.1 Horizontal longitudinal Connection – vertical Joint

Facade cladding is designed as a multi-span system using overlapping vertical joint profiles. The ends of the panel are inserted laterally into the joint profile and thus concealed. The use of vertical joints reinforces the vertical segmentation of the facade, facilitates efficient area installation and functions as a design component.

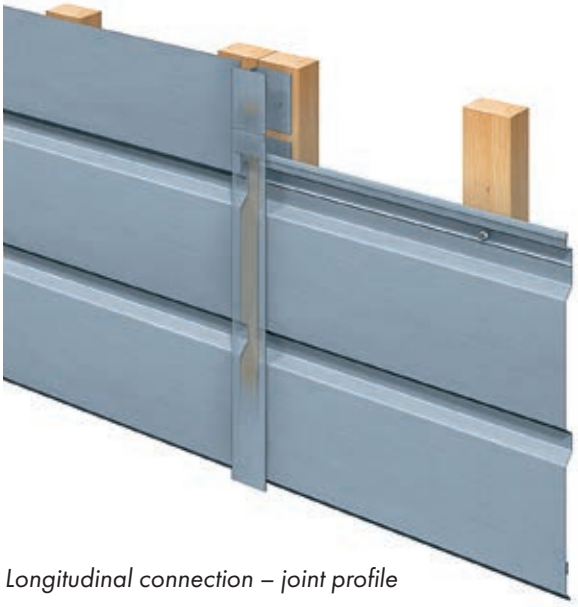
**Note:**
**Functioning Principle of Connection Profiles**
Vertical joints and outside/inside corner profiles are equipped with butt joints at the plant so that each individual profile can be connected with a 10 mm joint without any difficulty.

### 2.5.2 Longitudinal Connection – Slave Profile

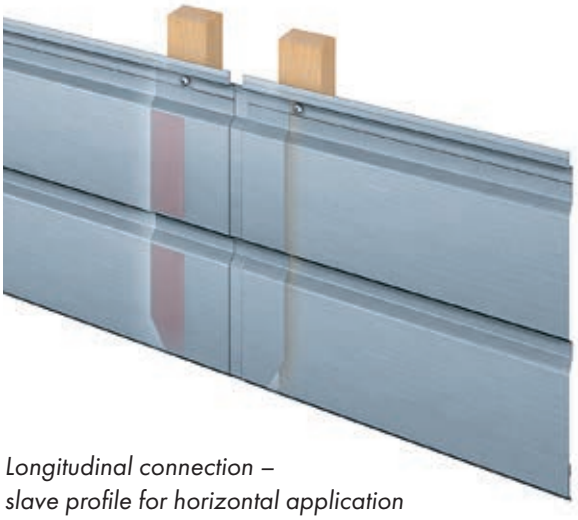
Alternatively, a longitudinal connection of the basic panels is created using a slave profile. The result: an aesthetically pleasing reserved joint design, which underscores the horizontal or vertical orientation of the panels. The slave profile is always fastened on one side of the panel with an adhesive strip, which has been mounted at the plant. It is underlapping when used with horizontal cladding and overlapping when used with vertical cladding.
The butt joints are 15 - 20 mm wide.

### 2.5.3 Vertical longitudinal Connection – Cornice Profile

Using a cornice profile for vertical cladding produces a horizontally structured facade image. The vertically installed basic profiles are restricted by horizontally running cornice profiles – a design element that underscores horizontal segmentation.



*Longitudinal connection – joint profile*

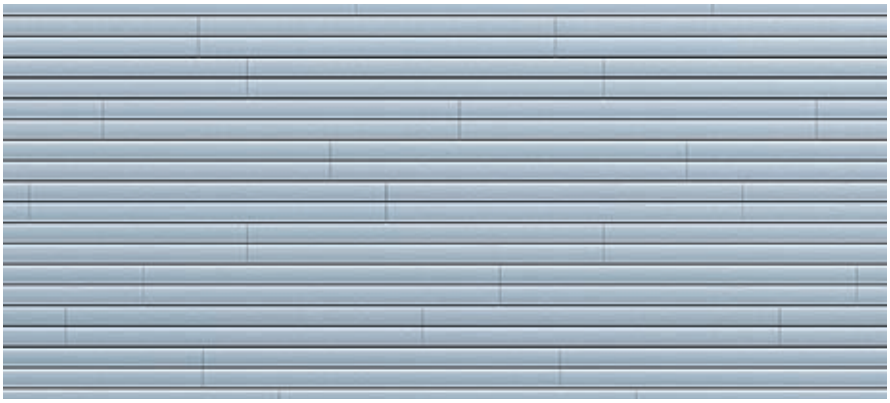


*Longitudinal connection – slave profile for horizontal application*

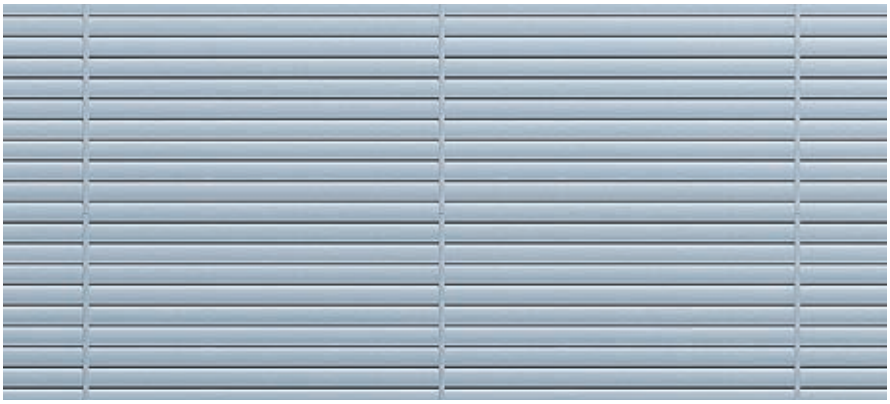
*Longitudinal connection – slave profile for vertical application*

*Longitudinal connection – cornice profile*

*1/2 staggered joints*



*Random structure*



*Installation using vertical profiles*

## 2.6 Design Options

The RHEINZINK-SP-Line is a complete system made of RHEINZINK-prePATINA blue-grey. It opens up diverse design options within the framework of facade structuring and can be installed both horizontally and vertically. In so doing, panels are inserted one into the other, then fastened with self-drilling screws.
Versatile connection profiles allow the tradesperson to realize detail solutions efficiently and economically.
It is the details that characterize and sustain facade design. Special profiles are used for corners, reveals, as well as connections and terminations. The RHEINZINK-SP-Line consists of pre-fabricated, coordinated connection profiles that facilitate and secure detail design. This is realized using the "insert and cover" principle.

### 2.6.1 Design Options for horizontal Application

**Staggered Joint Design, even Segmentation of Butt Joints**

The seam will be implemented with a slave profile that corresponds to the geometry of the panel. Aesthetically speaking, it is a very conservative joint design. The horizontal orientation of the panels is strongly emphasized.

**"Random Structure"**

Staggered vertical joints make the facades come to life. The 3 m long basic panels are installed without ends and cut where the cladding surface ends. The end of the panel is used in the next row of panels as the starter panel. The result is scrap-free installation.

**Installation with vertical Joints**

A clear vertical segmentation of the horizontal design emerges. The combination of window reveal – and vertical joints allows for unique design options.

### 2.6.2 Design Options for vertical Application

**"Random Structure"**
The staggered butt joints make the facades come to life. The "random structure" provides for scrap-free installation without end.

**Installation with Cornice Profiles**
Horizontal segmentation of vertical facade cladding is achieved by using the cornice profile. The combination of a lintel profile for windows and doors with the cornice profile, allows for unique design possibilities.

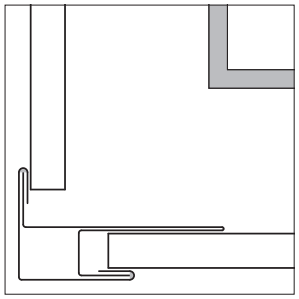
*Random structure*

*Installation with cornice profiles*

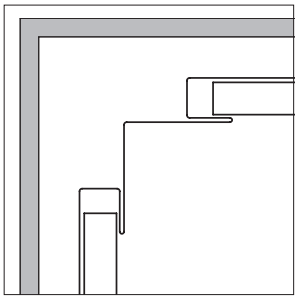
## 2.7 Design, horizontal Application

### Horizontal Sections

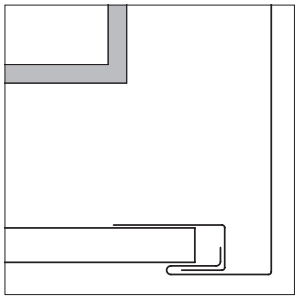
Detail H1: Outside corner profile



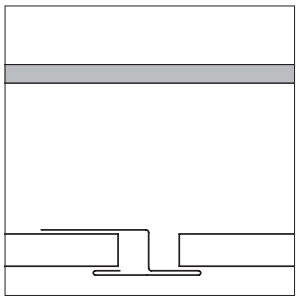
Detail H2: Inside corner profile



Detail H3: Jamb profile

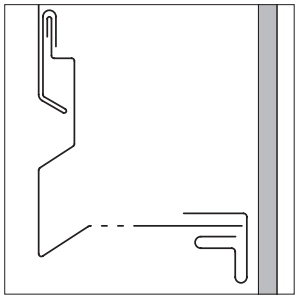


Detail H4: Vertical joint profile

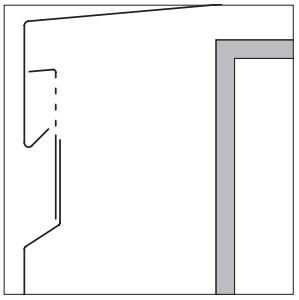


### Vertical Sections

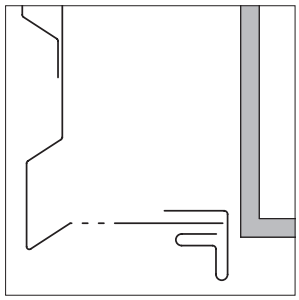
Detail V1: Base profile



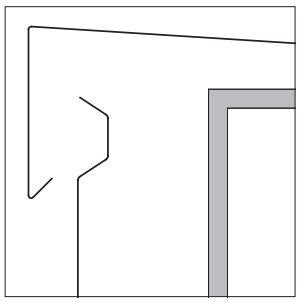
Detail V2: Termination profile



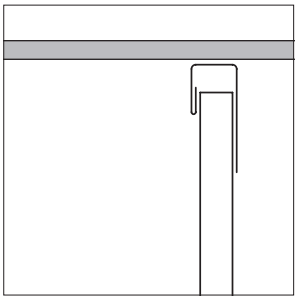
Detail V3: Lintel profile



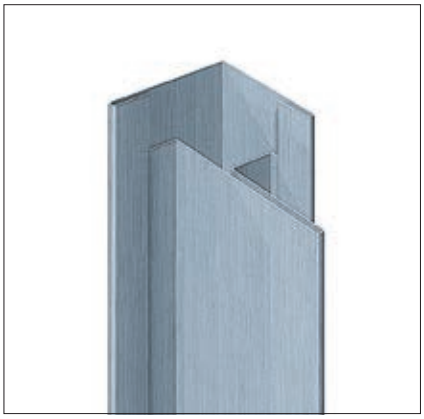
Detail V4: Wall coping



Detail V5: Plug-in profile



DESIGN
DETAIL H1, OUTSIDE CORNER PROFILE

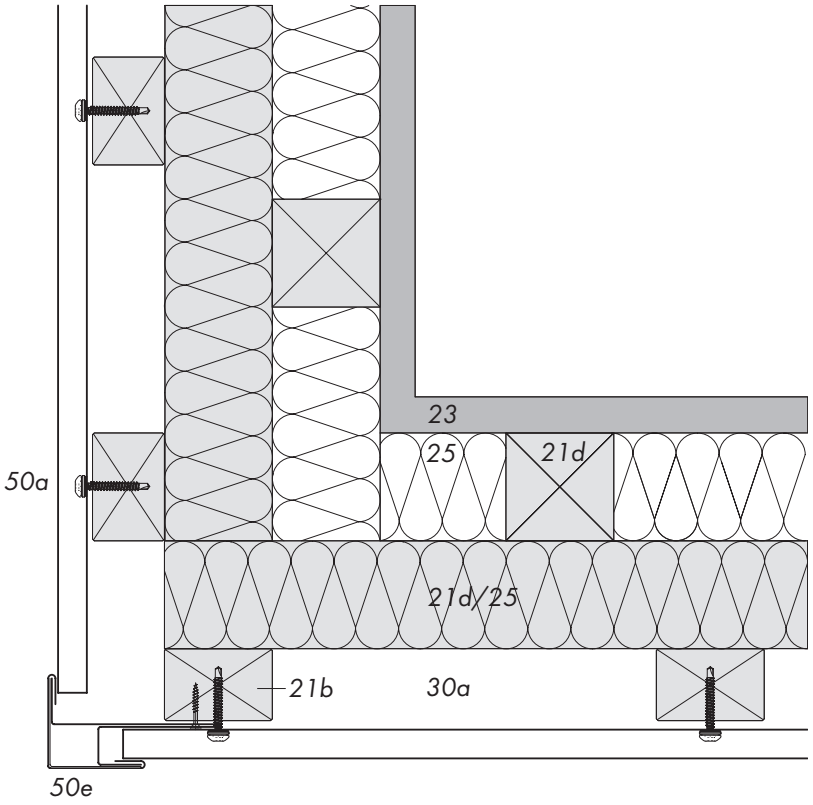


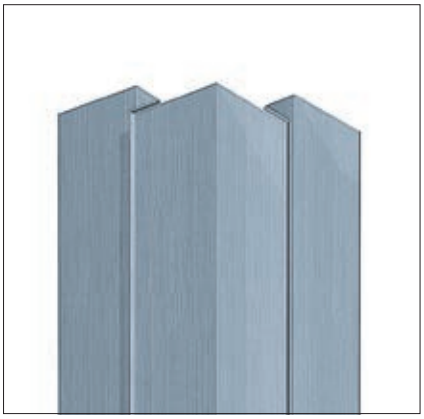
**Detail H1: Outside Corner Profile**

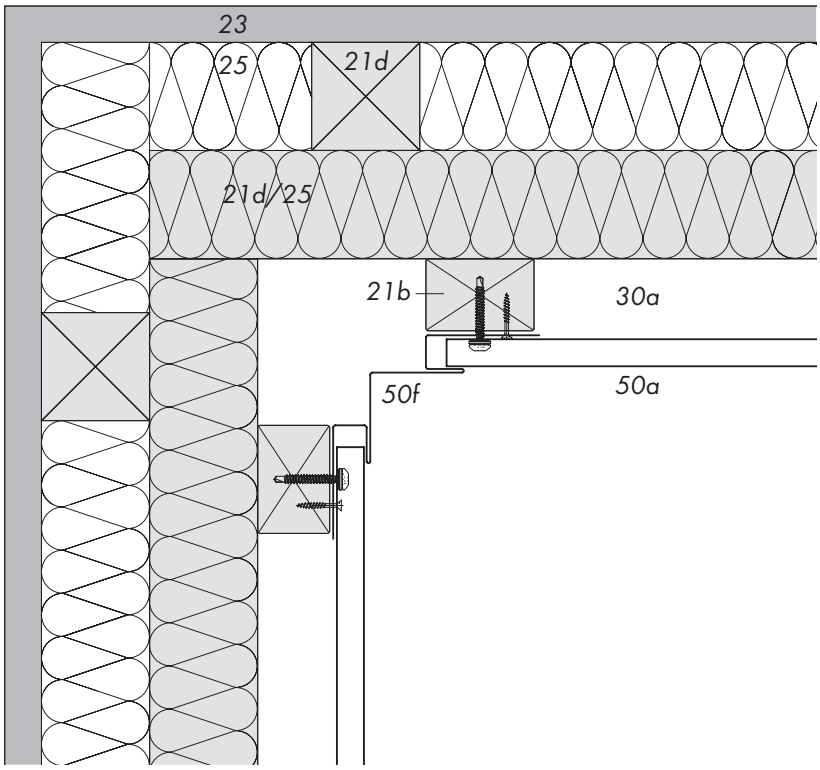
50 RHEINZINK-SP-Line
- a Basic panel
- e Outside corner profile

21 Batten/Squared Timber
- b 40/60 mm
- d 60/60 mm

23 Supporting Structure
25 Thermal Insulation
30 Ventilated Air Space
- a Depth of air space ≥ 20 mm








**Detail H2: Inside Corner Profile**

50 RHEINZINK-SP-Line
- a Basic panel
- f Inside corner profile

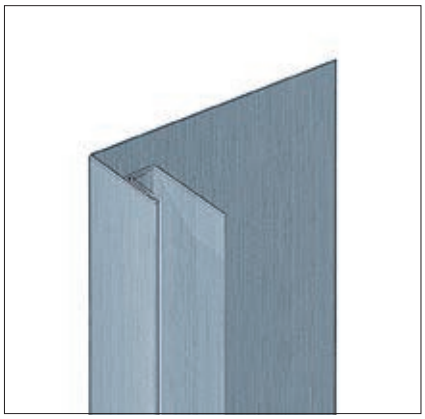
21 Batten/Squared Timber
- b 40/60 mm
- d 60/60 mm

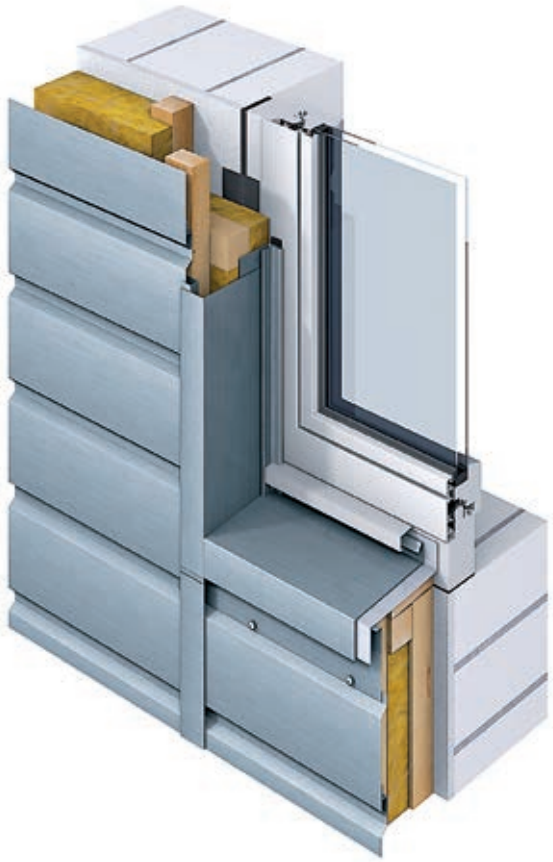
23 Supporting Structure

25 Thermal Insulation

30 Ventilated Air Space
- a Depth of air space ≥ 20 mm

DESIGN
DETAIL H3, JAMB PROFILE





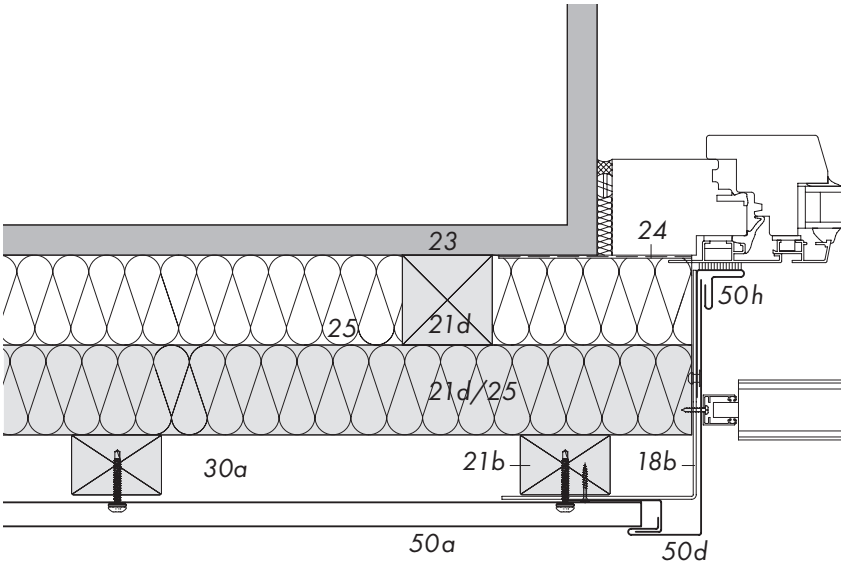
**Detail H3:Jamb Profile**

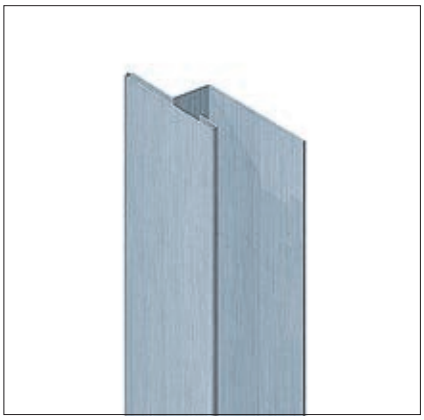
50 RHEINZINK-SP-Line
- a Basic panel
- d Jamb profile
- h Receiver strip, with sealant tape

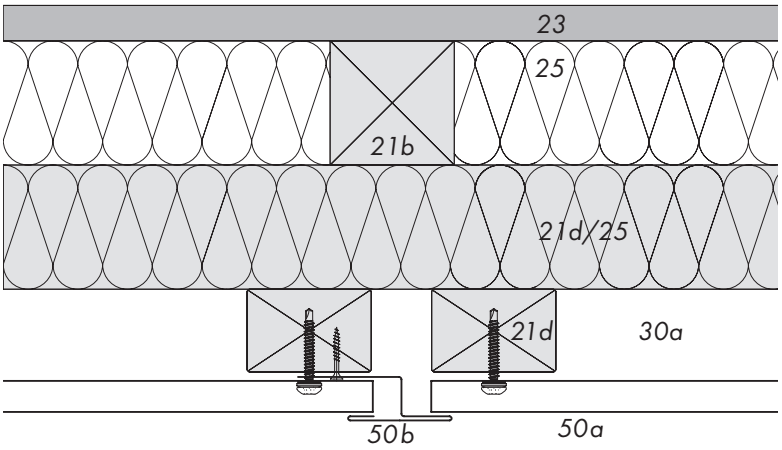
18 Support Profile
- b Aluminium

21 Batten/Squared Timber
- b 40/60 mm
- d 60/60 mm

23 Supporting Structure
24 Window Foil
25 Thermal Insulation
30 Ventilated Air Space
- a Depth of air space ≥ 20 mm








**Detail H4: Vertical Joint Profile**

50 RHEINZINK-SP-Line
- a Basic panel
- b Slave profile

21 Batten/Squared Timber
- b 40/60 mm
- d 60/60 mm

23 Supporting Structure

25 Thermal Insulation

30 Ventilated Air Space
- a Depth of air space ≥ 20 mm

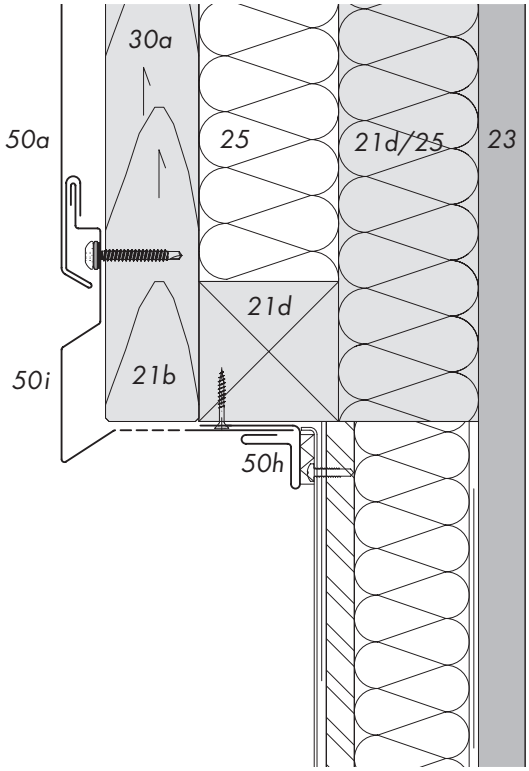
DESIGN
DETAIL V1, BASE PROFILE

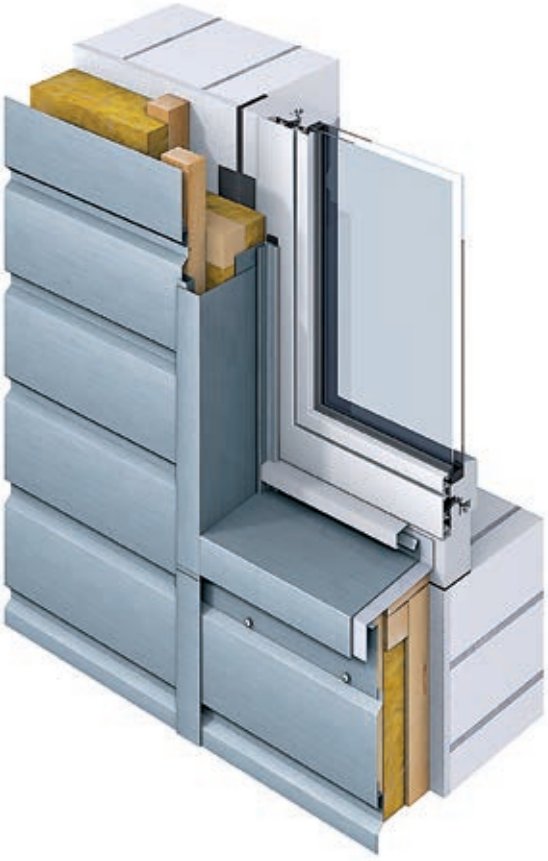
**Detail V1: Base Profile**

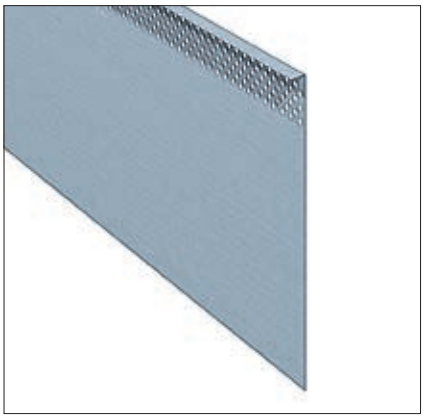
50 RHEINZINK-SP-Line
- a Basic panel
- h Receiver strip, with sealant tape
- i Base profile horizontal, partly perforated

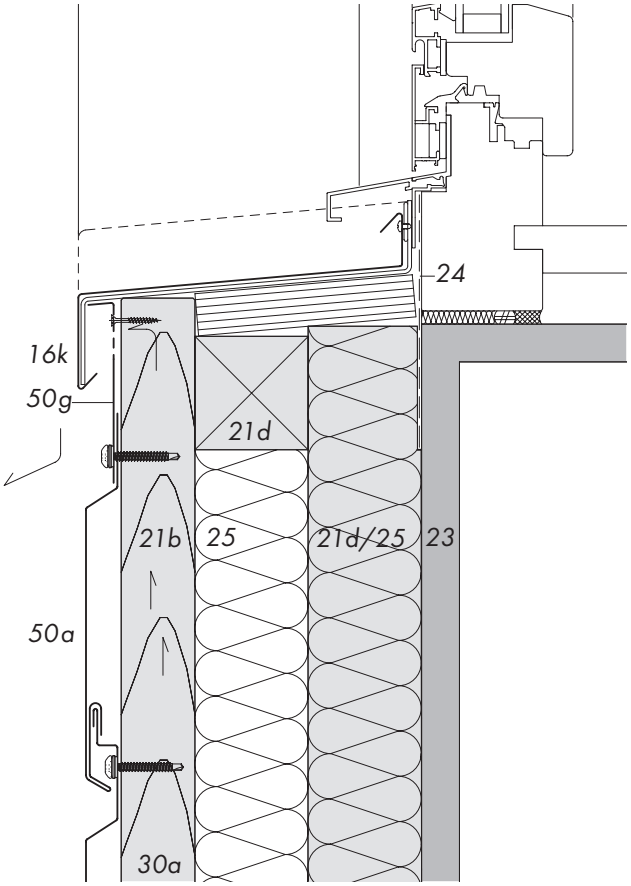
21 Batten/Squared Timber
- b 40/60 mm
- d 60/60 mm

23 Supporting Structure
25 Thermal Insulation
30 Ventilated Air Space
- a Depth of air space ≥ 20 mm










**Detail V2: Termination Profile**

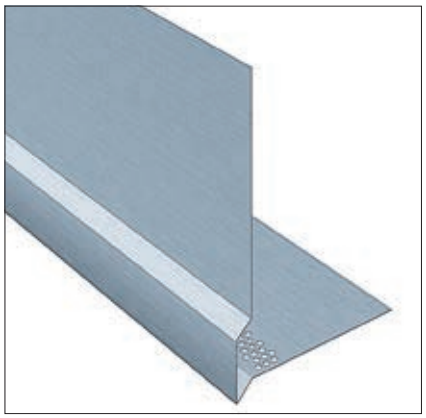
50 RHEINZINK-SP-Line
- a Basic panel
- b Termination profile, partly perforated

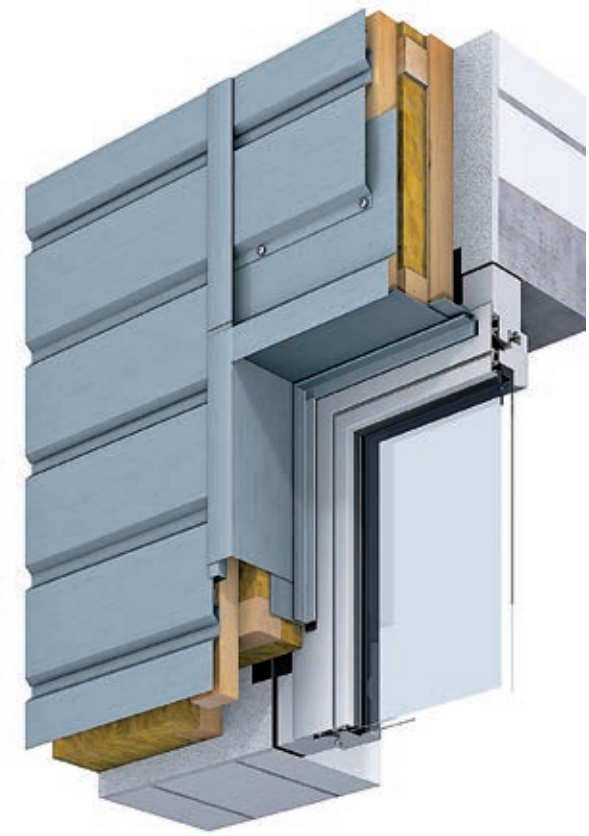
16 RHEINZINK-Building profile
- k Window sill coping

21 Batten/Squared Timber
- b 40/60 mm
- d 60/60 mm

23 Supporting Structure
24 Window Foil
25 Thermal Insulation
30 Ventilated Air Space
- a Depth of air space ≥ 20 mm

DESIGN
DETAIL V3, LINTEL PROFILE





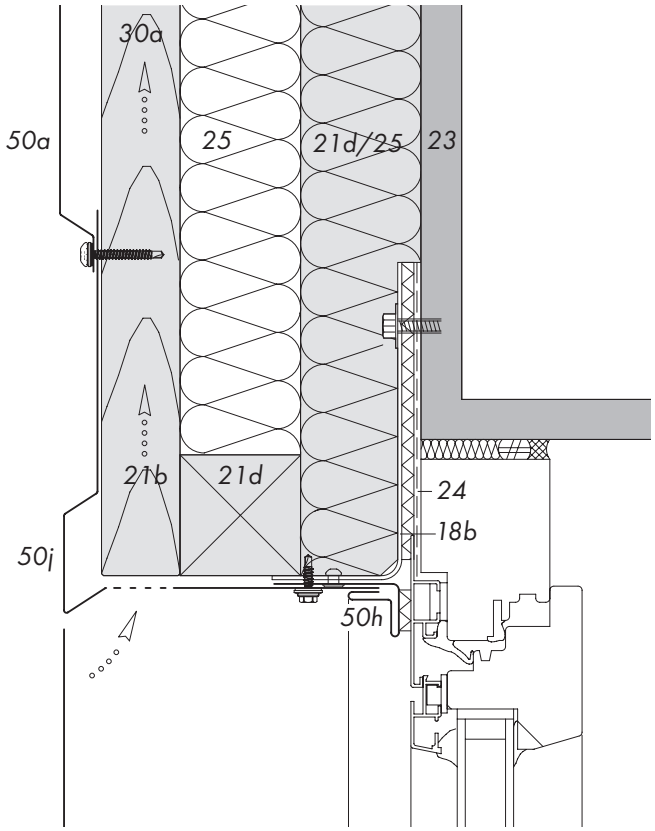
**Detail V3: Lintel Profile**

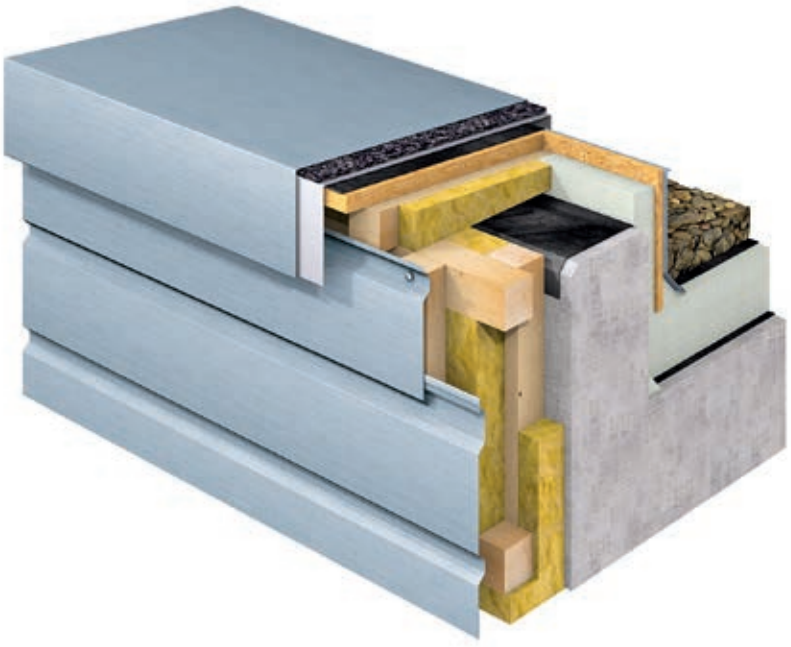
50 RHEINZINK-SP-Line
- a Basic panel
- h Receiver strip, with sealant tape
- i Base profile horizontal, partly perforated

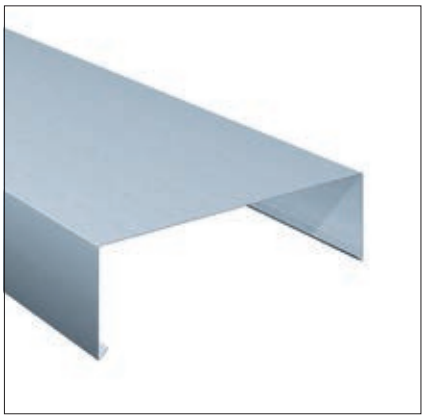
18 Support Profile
- b Aluminium

21 Batten/Squared Timber
- b 40/60 mm
- d 60/60 mm

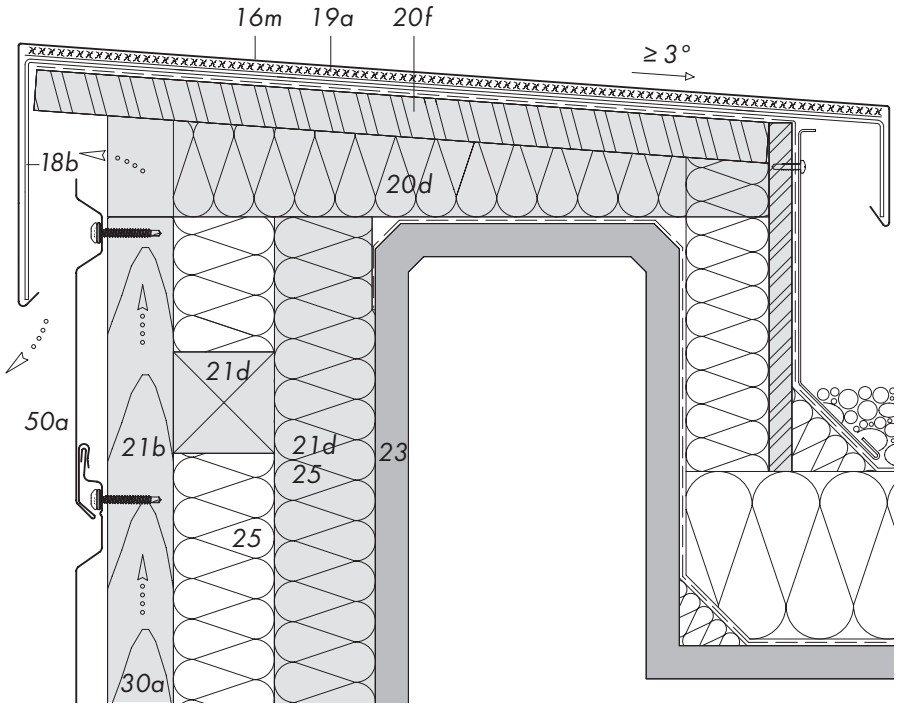
23 Supporting Structure
24 Window Foil
25 Thermal Insulation
30 Ventilated Air Space
- a Depth of air space ≥ 20 mm







*Edging according to specified measurements*




**Detail V4: Wall Coping**

50 RHEINZINK-SP-Line
a Basic panel
16 RHEINZINK-Building profile
m Wall coping
18 Support Profile
b Aluminium
19 Underlay
a Structured Underlay VAPOZINC
20 Substructure
d Wood, wedge board
f OSB/veneer plywood sheathing, thickness min. 22 mm
21 Batten/Squared Timber
b 40/60 mm
d 60/60 mm
23 Supporting Structure
30 Ventilated Air Space
a Depth of air space ≥ 20 mm

DESIGN
DETAIL V5, PLUG-IN PROFILE

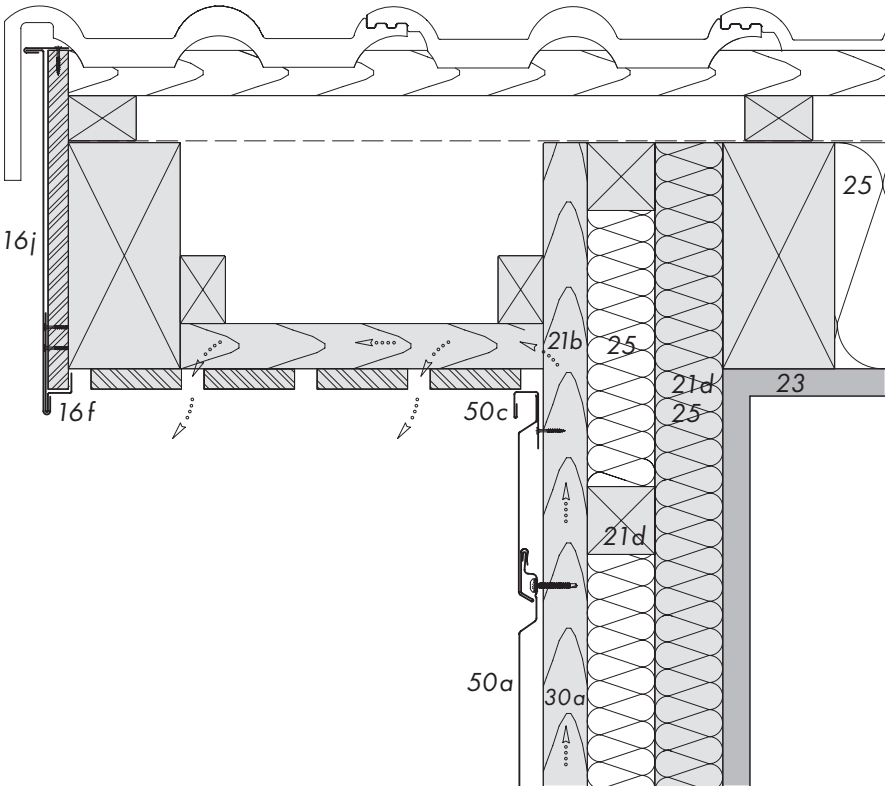
**Detail V5: Plug-in Profile**

50 RHEINZINK-SP-Line
- a Basic panel
- c Plug-in profile

16 RHEINZINK-Building profile
- f Base trim
- j Fascia profile

21 Batten/Squared Timber
- b 40/60 mm
- d 60/60 mm

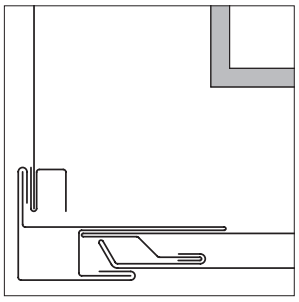
23 Supporting Structure
25 Thermal Insulation
30 Ventilated Air Space
- a Depth of air space ≥ 20 mm



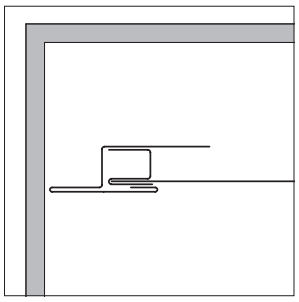
## 2.8 Design, vertikale Application

### Horizontal Sections

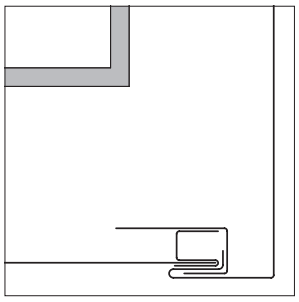
Detail H1: Outside corner profile



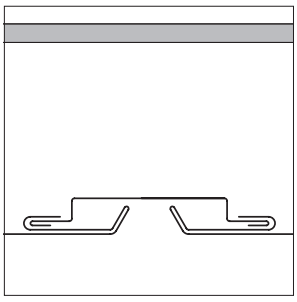
Detail H2: End profile



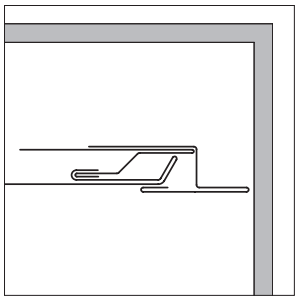
Detail H3: Jamb profile



Detail H4: Gable starter profile

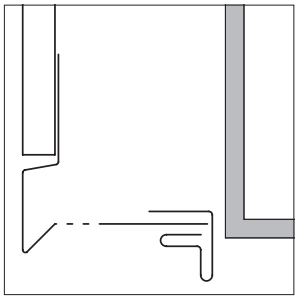


Detail H5: Starter profile

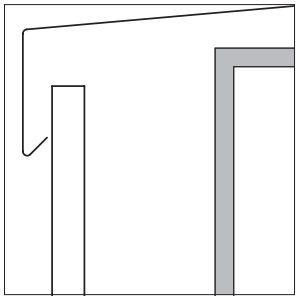


### Vertical Sections

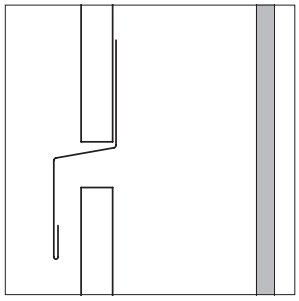
Detail V1: Base-/lintel profilel



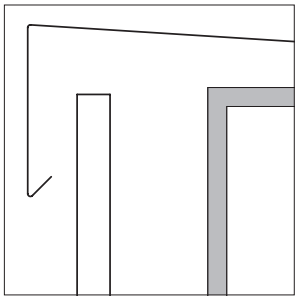
Detail V2: Window sill coping



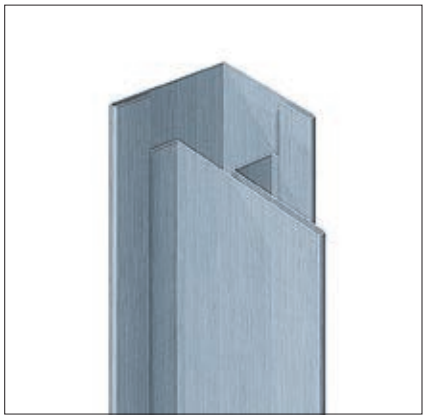
Detail V3: Cornice profile

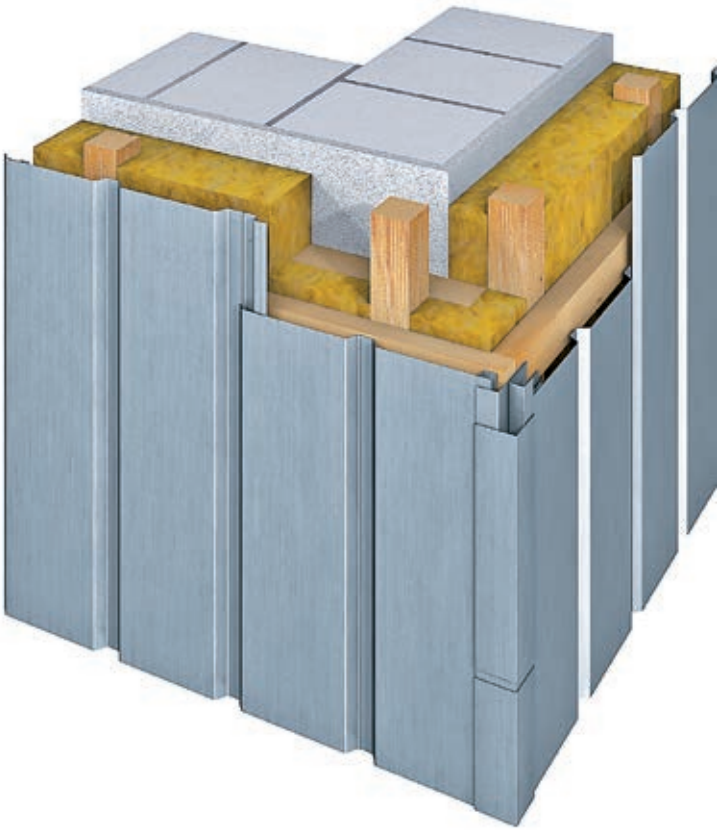


Detail V4: Wall coping



DESIGN
DETAIL H1, OUTSIDE CORNER PROFILE



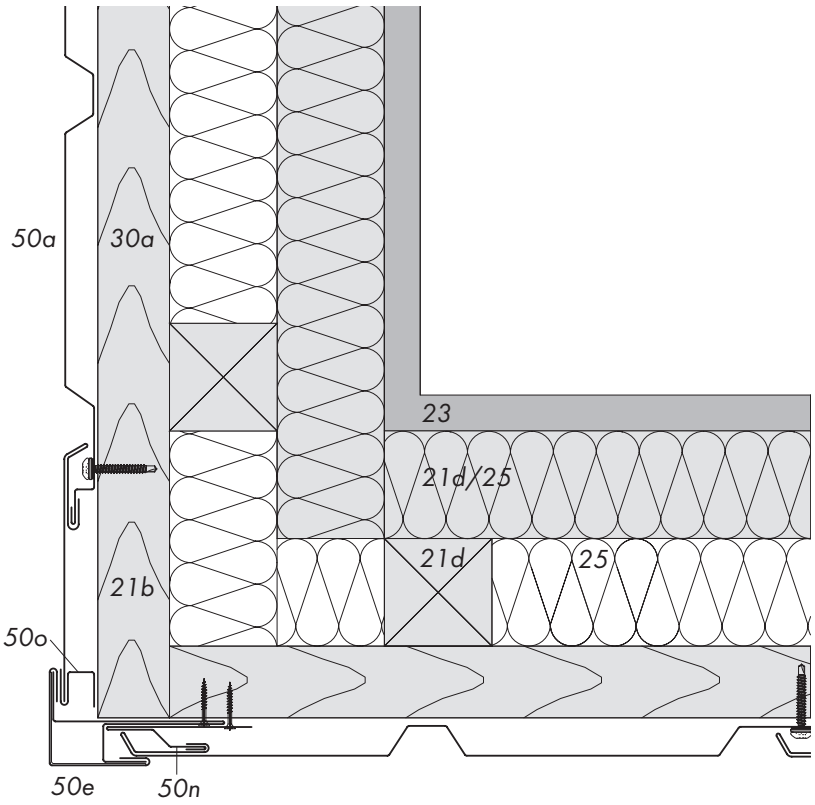


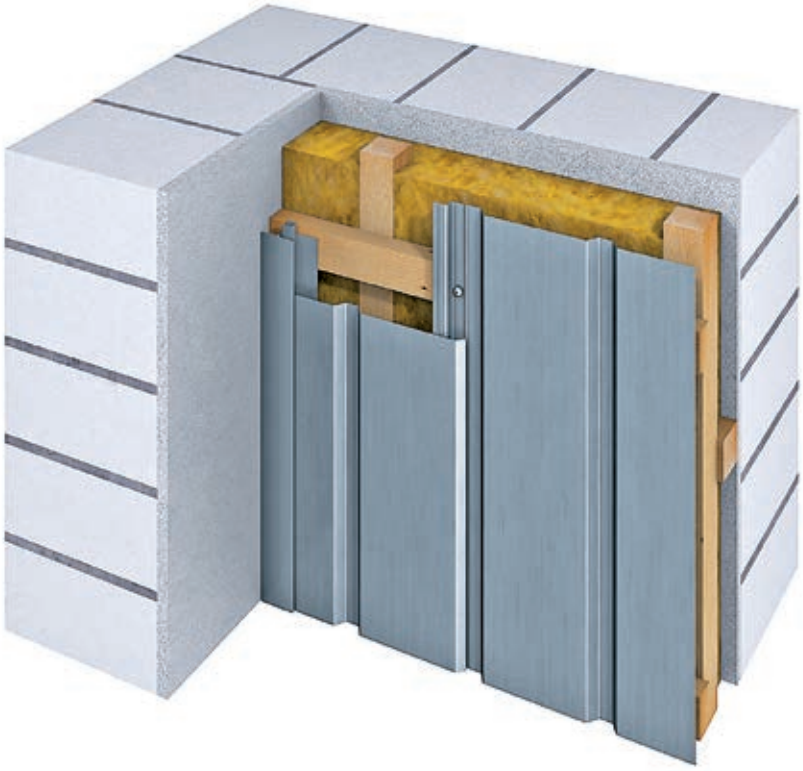
**Detail H1: Outside Corner Profile**

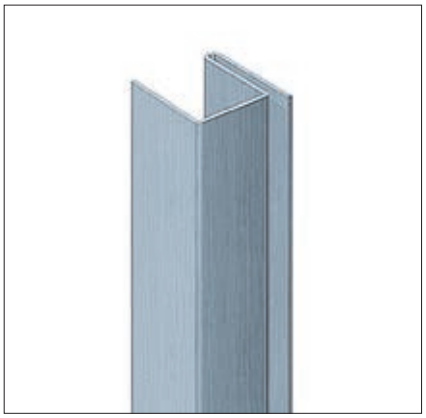
50 RHEINZINK-SP-Line
- a Basic panel
- e Outside corner profile
- n Starter profile, vertical
- o End profile, vertical

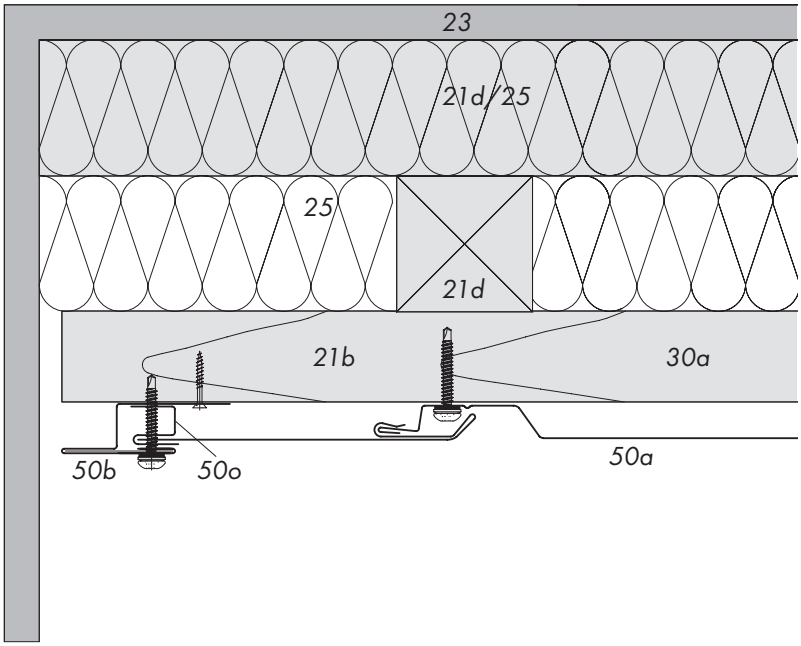
21 Batten/Squared Timber
- b 40/60 mm
- d 60/60 mm

23 Supporting Structure
25 Thermal Insulation
30 Ventilated Air Space
- a Depth of air space ≥ 20 mm










**Detail H2: End Profile**

50 RHEINZINK-SP-Line
- a Basic panel
- b Slave profile
- o End profile vertical

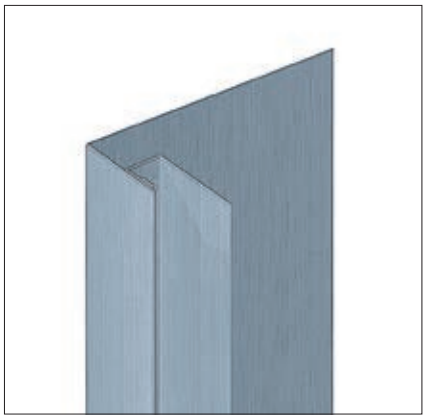
21 Batten/Squared Timber
- b 40/60 mm
- d 60/60 mm

23 Supporting Structure

25 Thermal Insulation

30 Ventilated Air Space
- a Depth of air space ≥ 20 mm

DESIGN
DETAIL H3, JAMB PROFILE



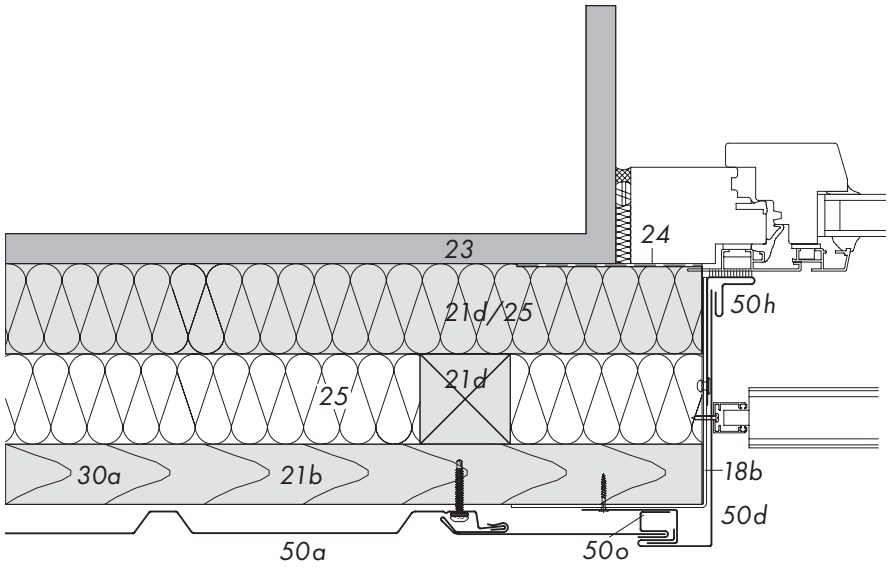
**Detail H3: Jamb Profile**

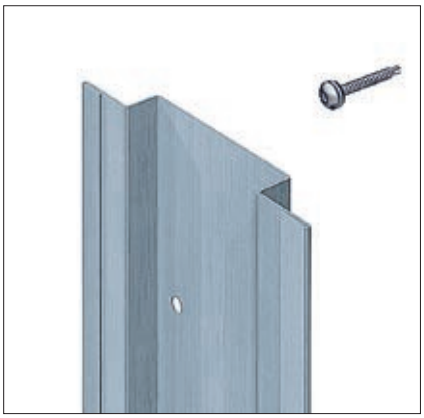
50 RHEINZINK-SP-Line
- a Basic panel
- d Jamb profile
- h Receiver strip, with sealant tape
- o End profile vertical

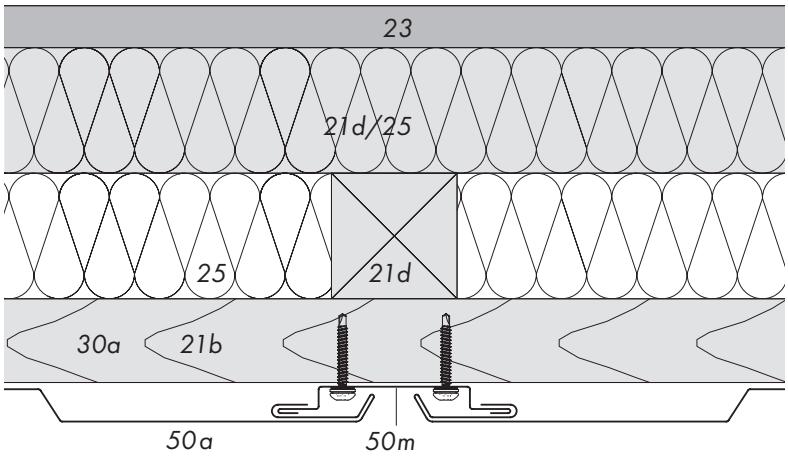
18 Support Profile
- b Aluminium

21 Batten/Squared Timber
- b 40/60 mm
- d 60/60 mm

23 Supporting Structure
24 Window Foil
25 Thermal Insulation
30 Ventilated Air Space
- a Depth of air space ≥ 20 mm








**Detail H4: Gable Starter Profile**

50 RHEINZINK-SP-Line
- a Basic panel
- m Gable starter profile vertical

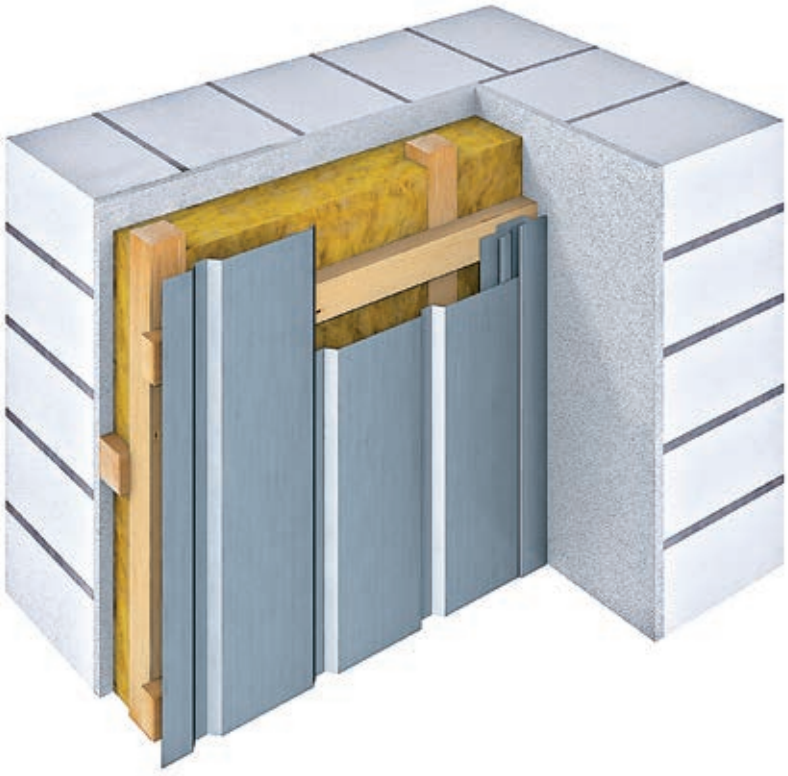
21 Batten/Squared Timber
- b 40/60 mm
- d 60/60 mm

23 Supporting Structure

25 Thermal Insulation

30 Ventilated Air Space
- a Depth of air space ≥ 20 mm

DESIGN
DETAIL H5, STARTER PROFILE

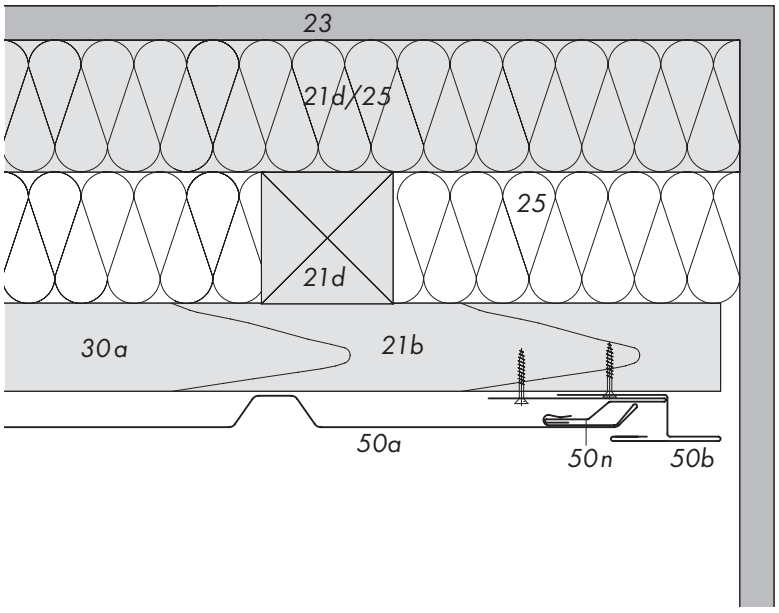


**Detail H5: tarter Profile**

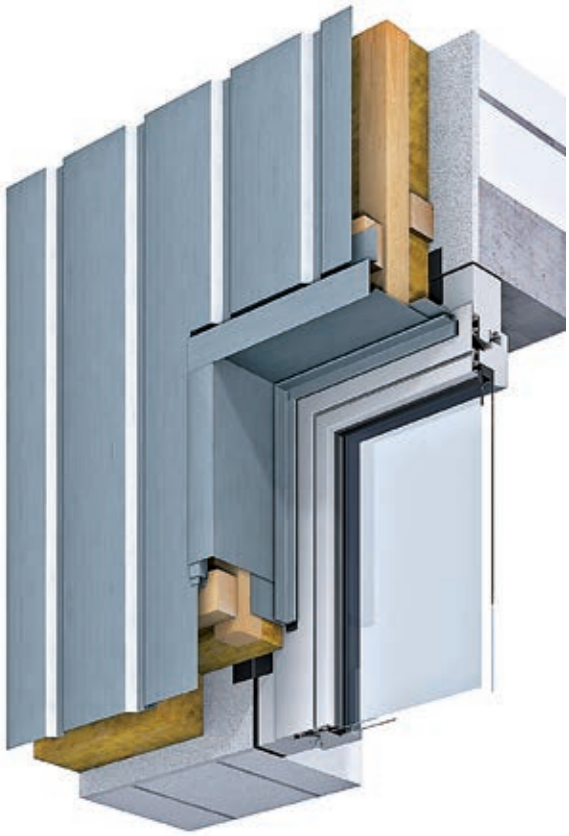
50 RHEINZINK-SP-Line
- a Basic panel
- b Slave profile
- n Starter profile vertical

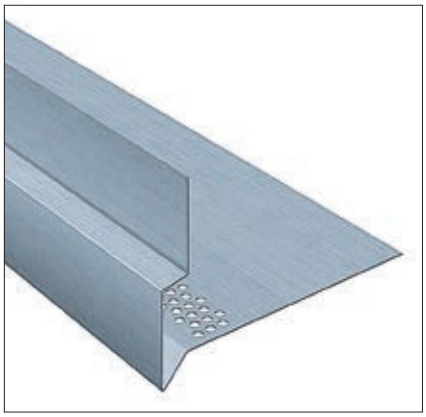
21 Batten/Squared Timber
- b 40/60 mm
- d 60/60 mm

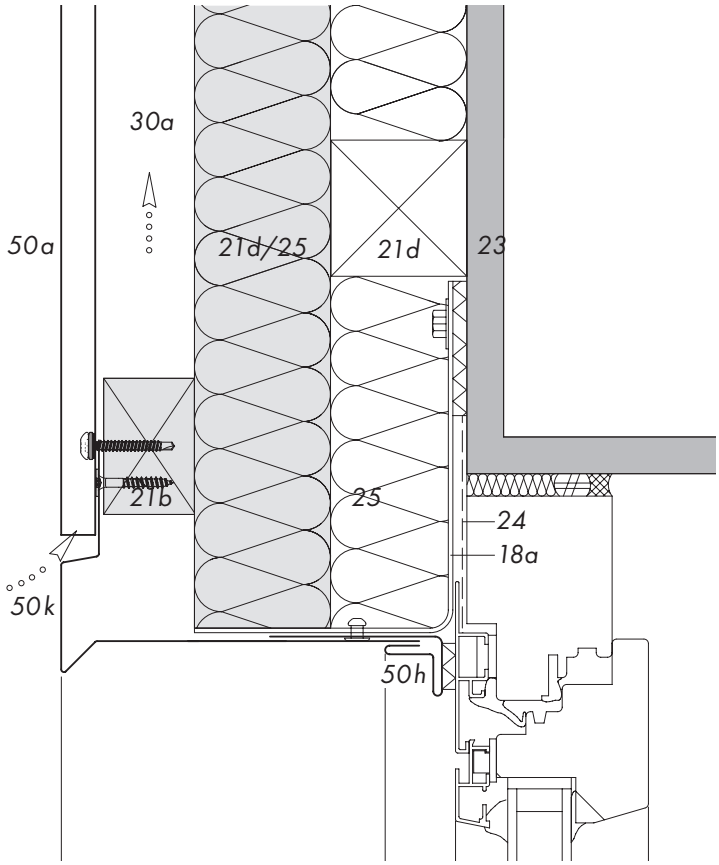
23 Supporting Structure
25 Thermal Insulation



DESIGN
DETAIL V1, BASE-/LINTEL PROFILE








**Detail V1: Base-/Lintel Profile**

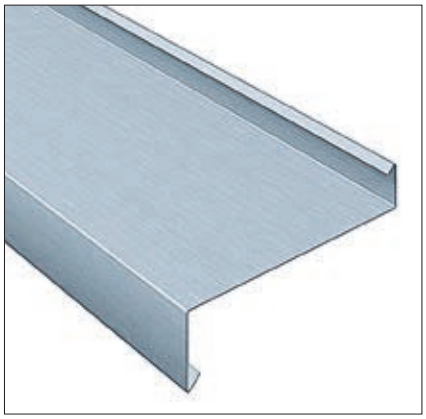
50 RHEINZINK-SP-Line
- a Basic panel
- h Receiver strip, with sealant tape
- k Base/lintel profile vertical, partly perforated

18 Support Profile
- b Galvanised steel

21 Batten/Squared Timber
- b 40/60 mm
- d 60/60 mm

23 Supporting Structure
24 Window Foi l
25 Thermal Insulation
30 Ventilated Air Space
- a Depth of air space ≥ 20 mm

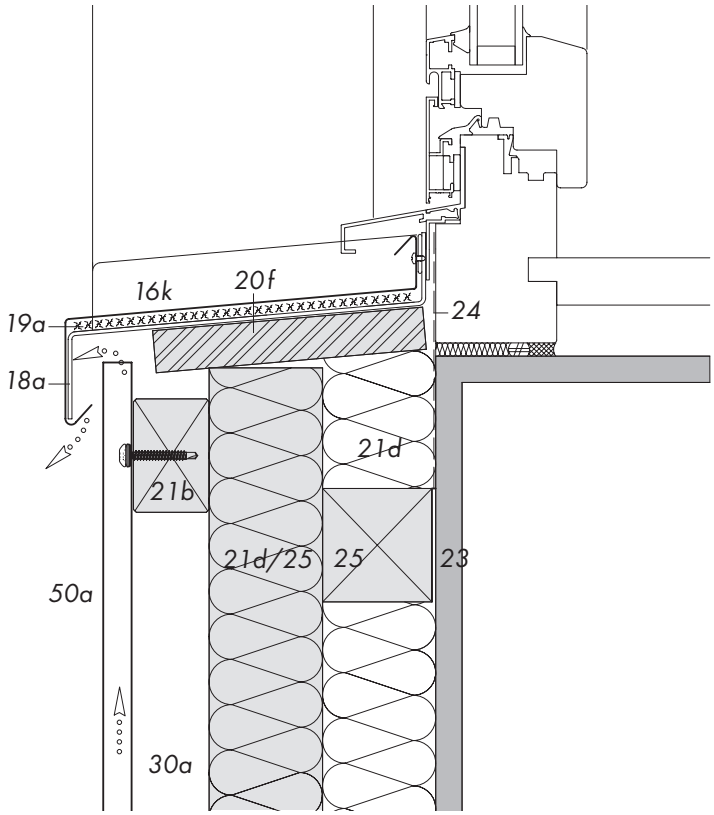
DESIGN
DETAIL V2, WINDOW SILL COPING

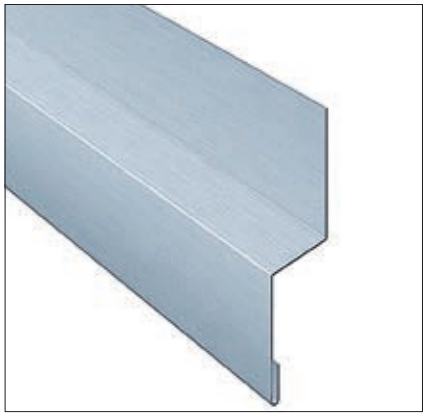


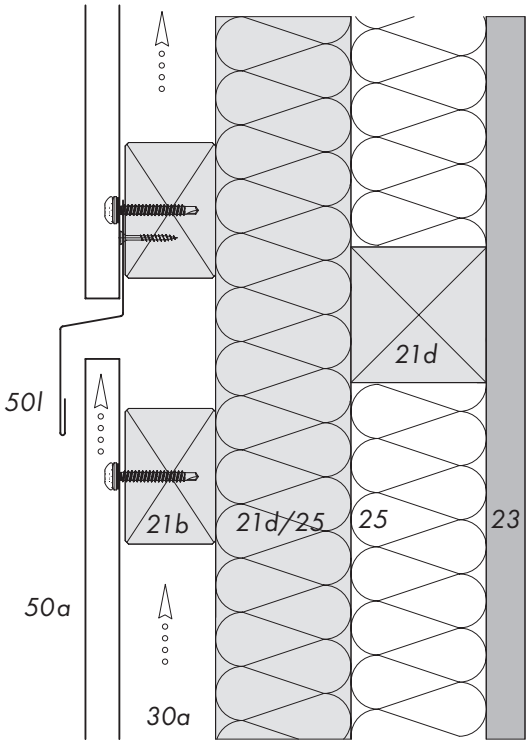
*Edging according to specified measurements*

**Detail V2: Window Sill Coping**

50 RHEINZINK-SP-Line
a Basic panel
16 RHEINZINK-Building profile
k Window sill coping
18 Support Profile
a Galvanised steel
19 Separating Layer
a Structured underlay VAPOZINC
20 Substructure
f OSB/veneer plywood sheathing, thickness min. 22 mm
21 Batten/Squared Timber
b 40/60 mm
d 60/60 mm
23 Supporting Structure
24 Window Foil
25 Thermal Insulation
30 Ventilated Air Space
a Depth of air space ≥ 20 mm








**Detail V3: Cornice Profile**

50 RHEINZINK-SP-Line
- a Basic panel
- l Cornice profile

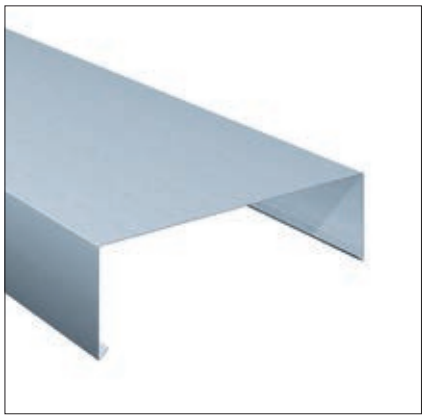
21 Batten/Squared Timber
- b 40/60 mm
- d 60/60 mm

23 Supporting Structure

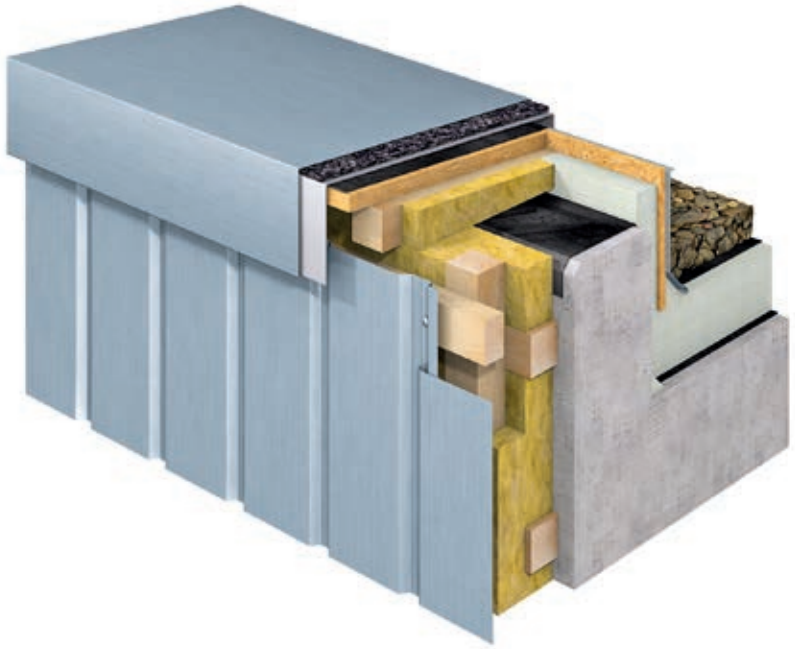
25 Thermal Insulation

30 Ventilated Air Space
- a Depth of air space ≥ 20 mm

DESIGN
DETAIL V4, WALL COPING

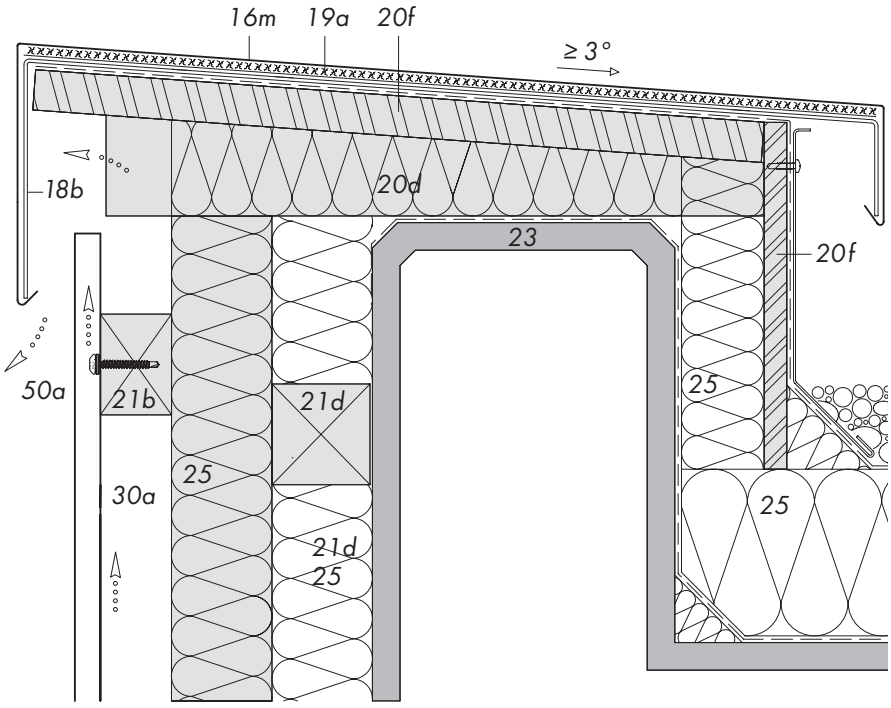


*Edging according to specified measurements*



**Detail V4: Wall Coping**

50 RHEINZINK-SP-Line
a Basic panel
16 RHEINZINK-Building profile
m Wall coping
18 Support Profile
b Aluminium
19 Separating Layer
a Structured underlay VAPOZINC
20 Substructure
d Wood, wedge board
f OSB/ veneer plywood sheathing, thickness min. 22 mm
21 Batten/Squared Timber
b 40/60 mm
d 60/60 mm
23 Supporting Structure
25 Thermal Insulation
30 Ventilated air space
a Depth of air space ≥ 20 mm



1

2

3

SP-LINE, DESIGN AND APPLICATION

REFERENCE PROJECTS

4

5

6

7

8

**Title: Private Residence, Schmerlitz, Germany**
RHEINZINK-work done by: Komplett-Dach Wittichenau GmbH, Wittichenau, Germany

**1./7. Private Residence, Unterschneidheim, Germany**
RHEINZINK-work done by: Flaschnerei Stelzer, Ellwangen-Neunheim, Germany

**2. Apartment Building, Hannover, Germany**
RHEINZINK-work done by: Dachdeckerei Peter Bonse, Schellerten, Germany

**3. Private Residence, Hüttlingen/Seitzberg, Germany**
RHEINZINK-work done by: Flaschnerei Stelzer, Ellwangen-Neunheim, Germany

**4. Private Residence, Essenrode, Germany**
RHEINZINK-work done by: Siegfried Waldmann Dach und Fassade GmbH, Meinersen, Germany

**5. Office Building, Hamburg, Germany**
RHEINZINK-work done by: Peter Bendig & Söhne GmbH, Hamburg, Germany

**6. Residential and Commercial Building, Lehrte, Germany**
RHEINZINK-work done by: Laue Bedachungen GmbH, Burgwedel, Germany

**8. Gable Cladding at Private Residence**

RHEINZINK®

RHEINZINK GmbH & Co. KG
Postfach 1452
45705 Datteln
Germany

Tel.: +49 2363 605-0
Fax: +49 2363 605-209

info@rheinzink.de
www.rheinzink.com

105209-RZ-GB_STAMM-011-04-20