

**GLASSLINE**

PLANNING MANUAL

**FIX'N SLIDE** *outside*

SYSTEM WITH THERMAL BREAK FOR  
SECURE ATTACHMENT OF ADD-ON ELEMENTS  
ON BUILDING ENVELOPES

## FIX'N SLIDE

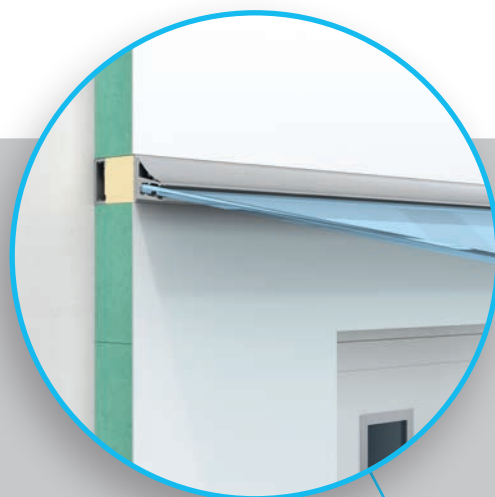
### THE ADVANTAGES

- Reduction of thermal bridges
- Secure attachment of add-on elements
- Thermal characteristics /  
Energy planning pursuant EnEV 2016
- Safe load input
- Variable attachment methods
- Modular and flexible
- Application-independent  
bridging of the insulation system
- Safety in case of fire
- Flexible application – for new buildings  
or retrofitting



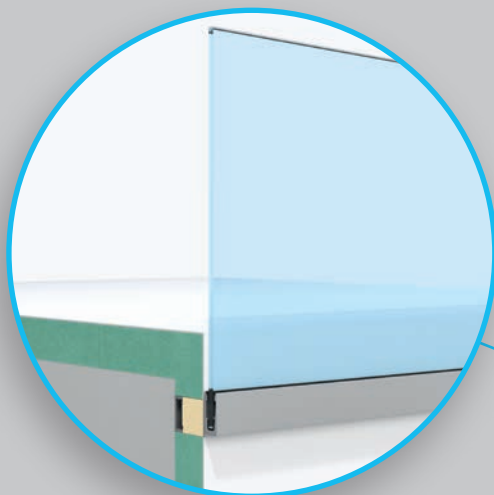
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## RAILINGS

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**FIX'N**



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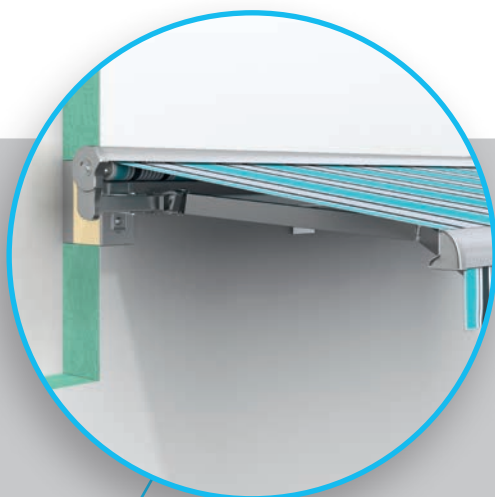


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## AWNINGS

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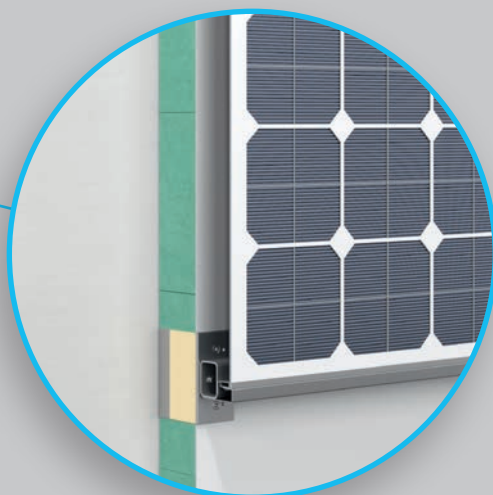


## VENETIAN BLINDS

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SLIDE



## PHOTOVOLTAICS

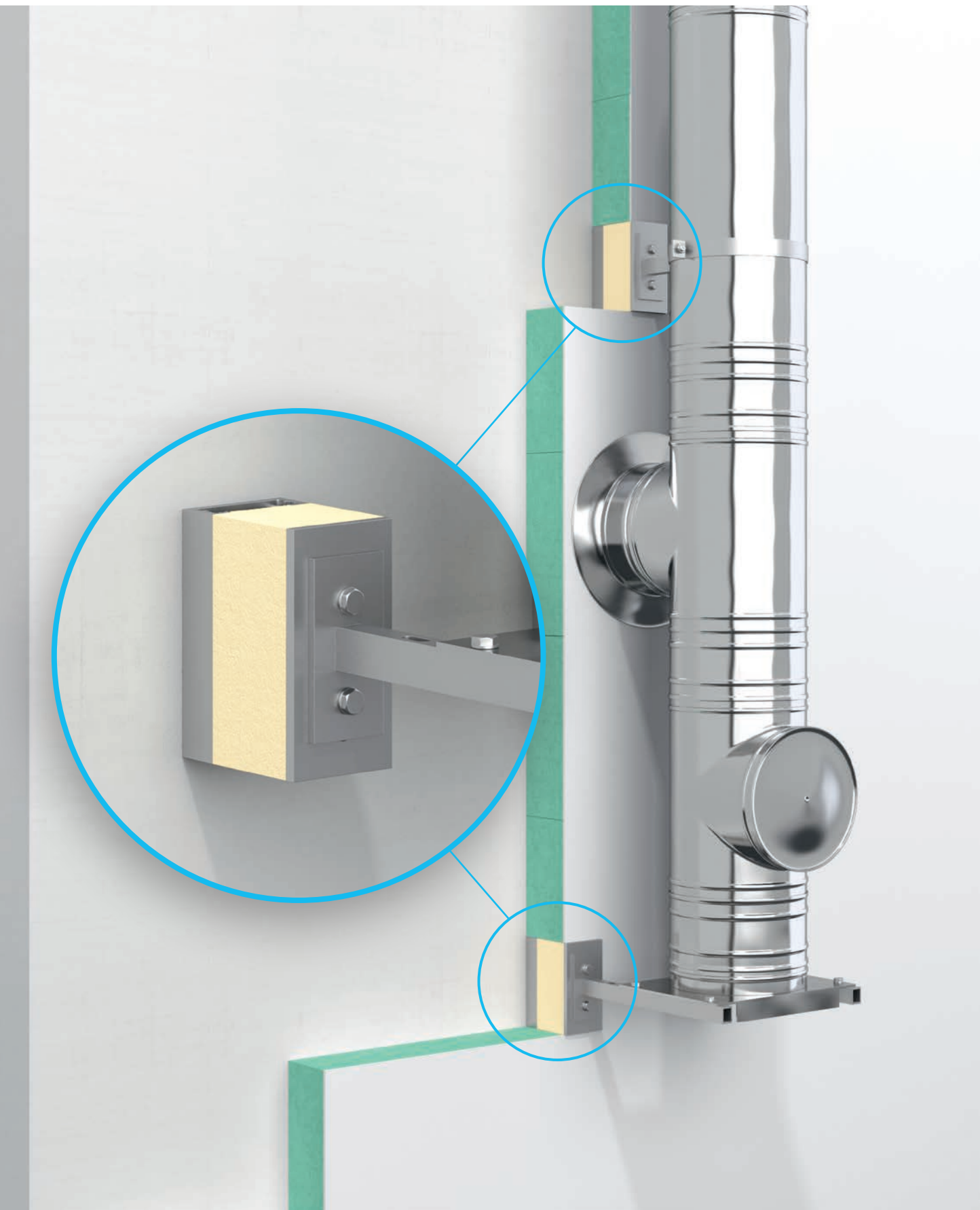
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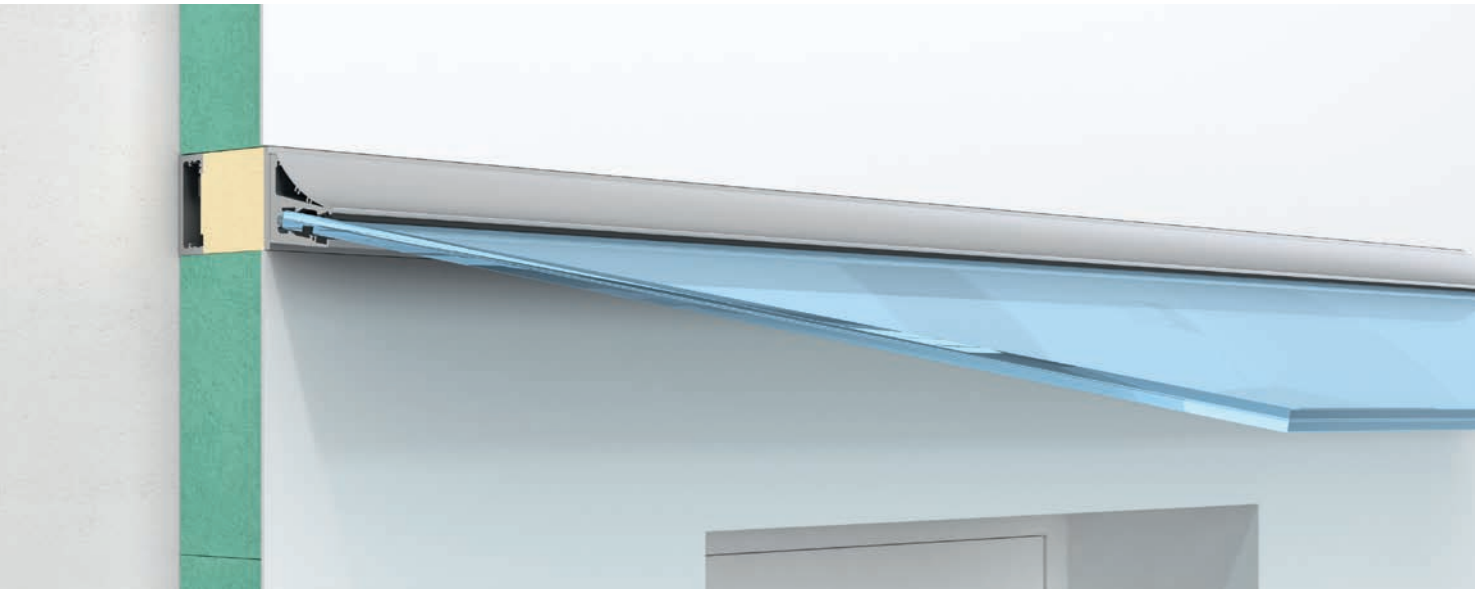
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## FIX\*N SLIDE

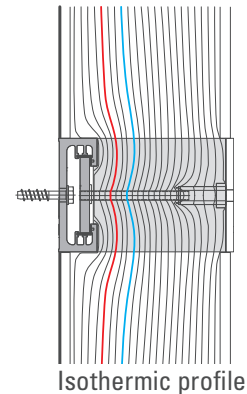
### SYSTEMATIC COMPONENT ANCHORING THROUGH THE REDUCTION OF THERMAL BRIDGES

Flexible, easy to assemble and absolutely safe - the new FIX\*N SLIDE revolutionises component mounting in the ETICS sector. FIX\*N SLIDE ensures secure attachment of add-on elements and simultaneously reduces thermal bridges in new buildings and retrofitting.

With only a few components and different insulating thicknesses almost any insulation thickness can be thermally and statically bridged without problem. FIX\*N SLIDE used as a rail for linear installation and as a system component for point-to-point attachment is suitable for every on-site situation. Furthermore, both versions can be combined.

# THE ADVANTAGES

- REDUCTION OF THERMAL BRIDGES
- SECURE ATTACHMENT OF ADD-ON ELEMENTS



## **Thermal properties / energy planning in accordance with EnEV 2016**

The existing isotherm calculations / thermal proofs prove that the use of FIX\*<sup>N</sup> SLIDE reduces thermal bridges to a minimum. The system is optimally suited for energy planning in new or existing buildings.

## **Safe load transfer**

The tension, shearing and torque transfer allows the system to cover a wide range of applications.

## **Variable mounting design**

The variable arrangement of the fasteners allows the load transfer to be optimally adapted to the substructure and adapted and optimised to the local conditions.

## **Modular and flexibel**

The system is modular and as flexible as the application requires. Thanks to the different insulating thicknesses, any insulation thickness up to 315 mm can be easily bridged.

## **Application-independent bridging of the insulation system**

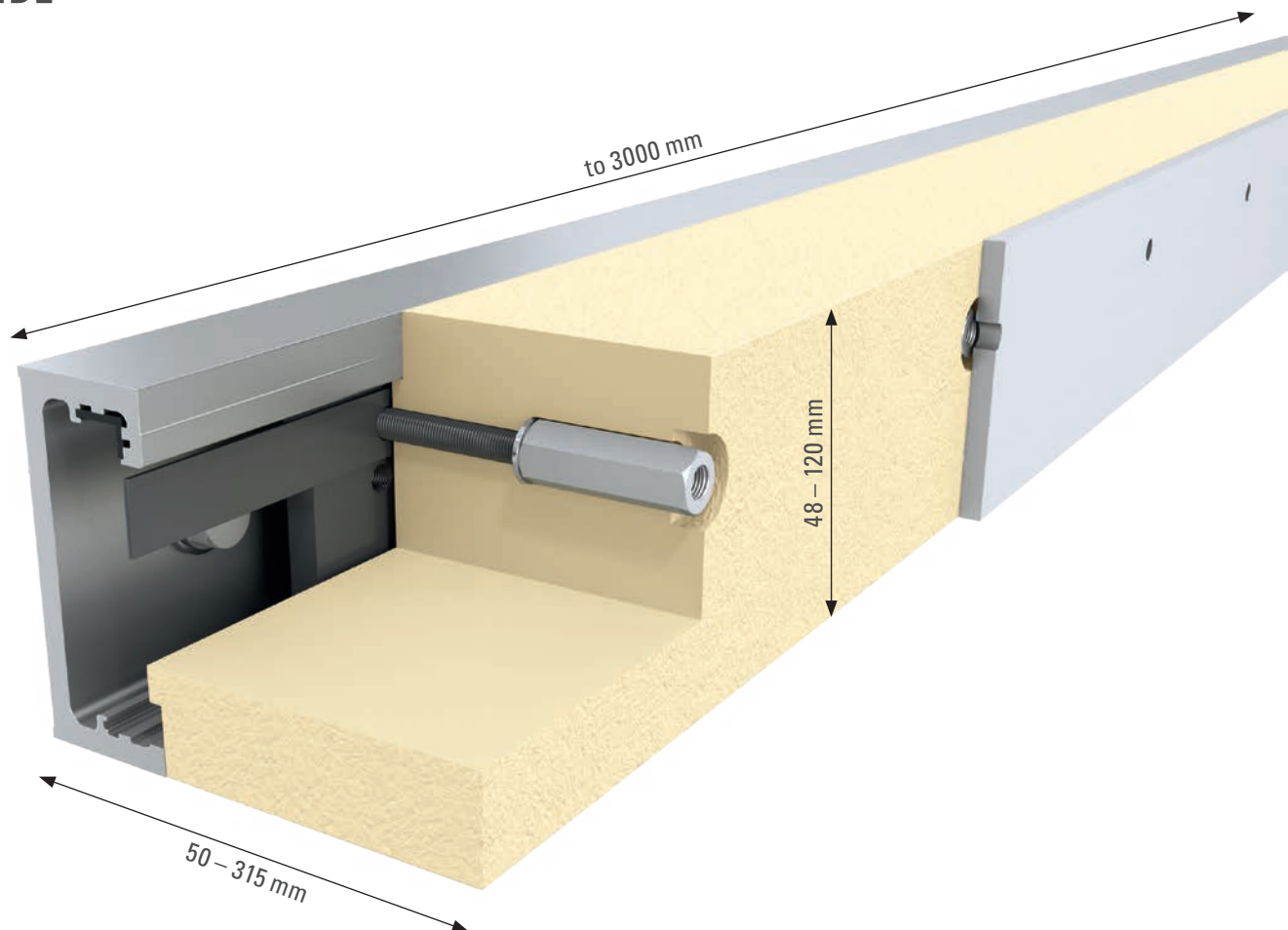
The insert support elements with their high-tensile threaded rods can be flexibly adjusted by locating in the support profile. As a result, the attachment of the aluminium rail to the substructure is independent of the mounting of the attachment elements.

## **Safety in case of fire**

In case of failure, e. g. due to fire, a residual support capacity is ensured via the metallic supporting components.

## **Flexible deployment - for new construction or retrofitting**

Canopies, conservatories, front facades, sunscreens and awnings, wind and visual protection, decoration and lighting, add-on elements on facades, such as fire escape ladders or stainless steel Chimneys, all types of parapet elements in attic, balcony and roof areas.

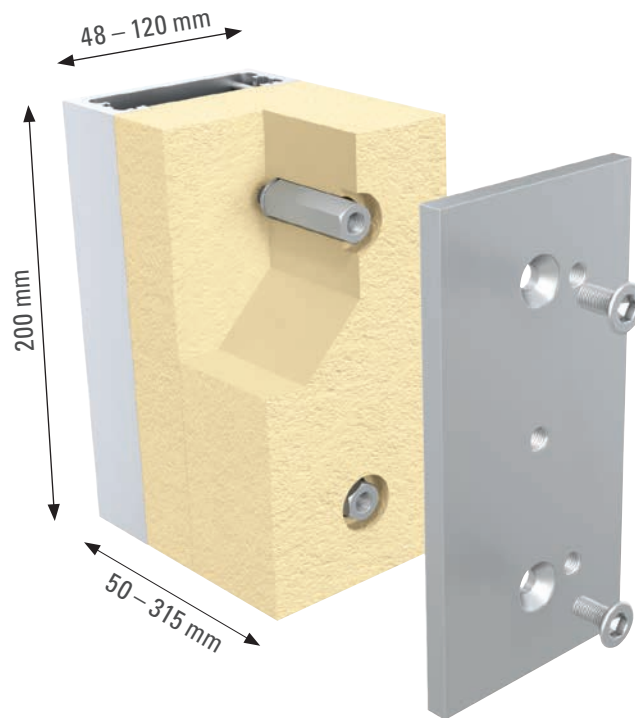


## THE SYSTEM FOR LINEAR CONNECTION

The system is modular and as flexible as the application requires. The main components are the application-independent aluminium mounting rail for pre-assembly and connection to the substructure, stainless steel insert plates with high-tensile threaded rods and threaded sleeves, pressure-resistant insulating elements and an optional aluminium connection plate.

- Rails in fixed stock lengths and custom lengths up to 3000 mm
- 5 system widths from 48 to 120 mm
- For fixing the rail, the holes can also be drilled variably
- Insulation thicknesses from 50 to 315 mm
- The insert support elements with their high-tensile threaded rods can be flexibly adjusted by locating in the support profile
- Optional aluminium surface-mount / connection plate (8 mm thickness) with self-adhesive EPDM membrane for outside areas
- Pre-drilled insulating elements for holding the threaded rods and threaded sleeves, additional holes can be drilled variably





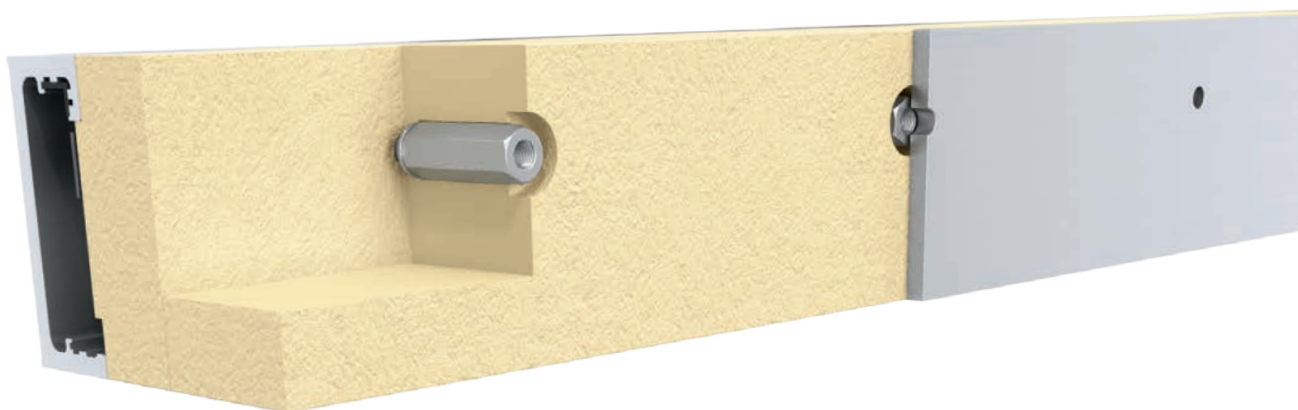
## SYSTEM COMPONENT WITH ADAPTER PLATES FOR POINT-TO-POINT CONNECTION

Firmly defined complete system. The main components are the C-profile for pre-assembly and connection to the substructure, two stainless steel insert plates with high-tensile threaded rods and threaded sleeves, pressure-resistant insulating elements and optional stainless steel adapter plates.

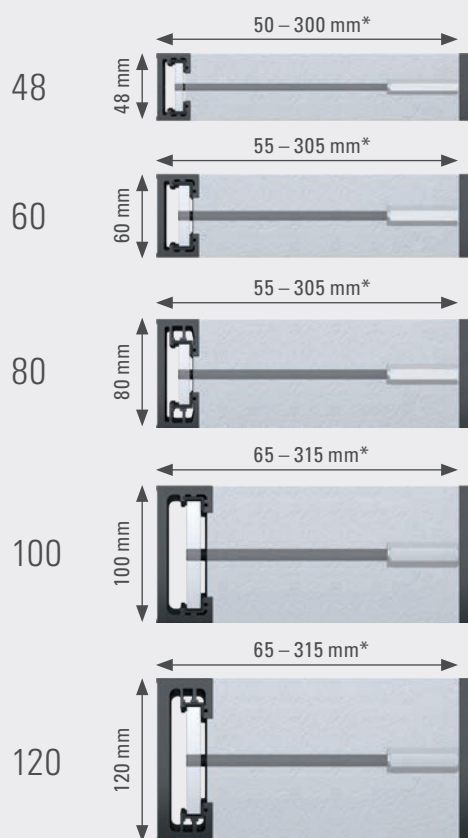
- Length 200 mm
- 5 system widths from 48 to 120 mm
- Fixed holes for fixing the profile
- Insulation thickness from 50 to 315 mm
- Pre-drilled insulating element for holding the threaded rods and threaded sleeves
- Optional stainless steel adapter plates
- The attachment can also be used without or with on-site adapter plates

# THE SYSTEM

## FOR LINEAR CONNECTION



### FIX'N SLIDE – LINEAR CONNECTION



Available depths without optional connection plate

|    |    |    |     |     |     |     |     |     |     |     |     |     |     |
|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 50 | 70 | 80 | 100 | 120 | 140 | 160 | 180 | 200 | 220 | 240 | 260 | 280 | 300 |
|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

|    |    |    |     |     |     |     |     |     |     |     |     |     |     |
|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 55 | 75 | 85 | 105 | 125 | 145 | 165 | 185 | 205 | 225 | 245 | 265 | 285 | 305 |
|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

|    |    |    |     |     |     |     |     |     |     |     |     |     |     |
|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 55 | 75 | 85 | 105 | 125 | 145 | 165 | 185 | 205 | 225 | 245 | 265 | 285 | 305 |
|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

|    |    |    |     |     |     |     |     |     |     |     |     |     |     |
|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 65 | 85 | 95 | 115 | 135 | 155 | 175 | 195 | 215 | 235 | 255 | 275 | 295 | 315 |
|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

|    |    |    |     |     |     |     |     |     |     |     |     |     |     |
|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 65 | 85 | 95 | 115 | 135 | 155 | 175 | 195 | 215 | 235 | 255 | 275 | 295 | 315 |
|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

Available lengths

|     |     |      |      |      |      |      |      |      |
|-----|-----|------|------|------|------|------|------|------|
| 600 | 800 | 1200 | 1400 | 1600 | 2000 | 2400 | 2800 | 3000 |
|-----|-----|------|------|------|------|------|------|------|

Other sizes on request

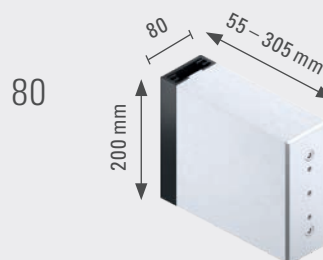
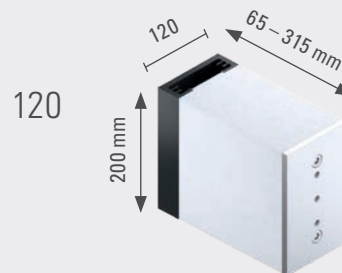
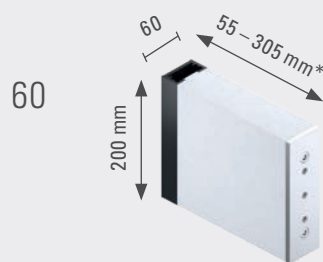
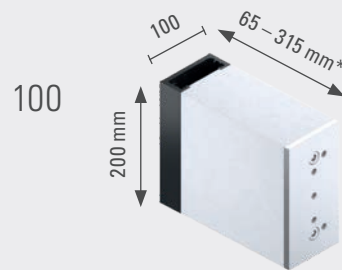
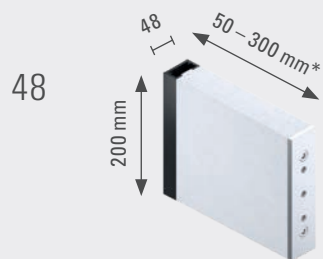
\*Depths without optional connection plate t = 8 mm (aluminium, E6/EV1 surface)

## FOR POINT-TO-POINT CONNECTION

The system component can also be used without or with on-site adapter plates for flexible mounting of add-on components.



## FIX™N SLIDE – POINT-TO-POINT CONNECTION



\*Depths without optional stainless steel adapter plate: 48, 60, 80 = 8 mm / 100, 120 = 10 mm

## POINT-TO-POINT CONNECTION

A number line from 0 to 1000 with a break between 500 and 600. The line is divided into segments of 50, 100, and 100 units. There are 12 dots on the line, with 6 dots in the first 500-unit segment and 6 dots in the second 500-unit segment.

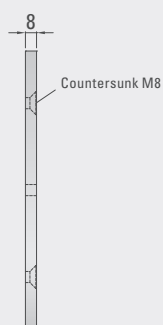
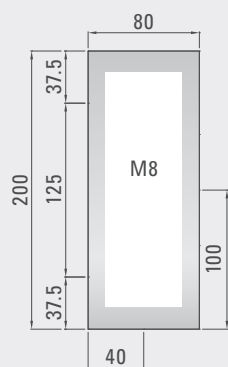
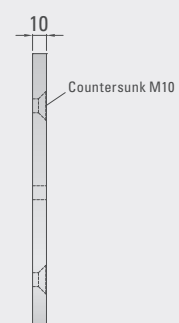
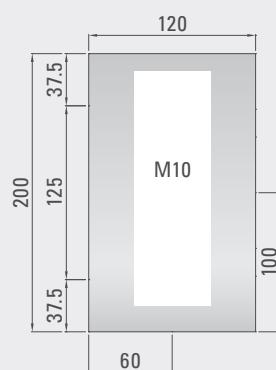
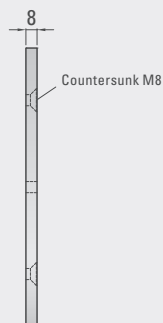
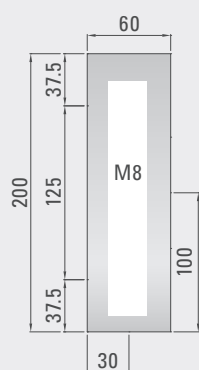
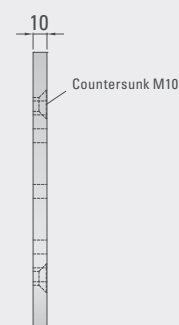
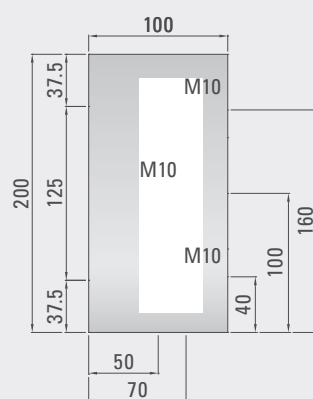
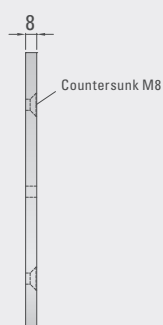
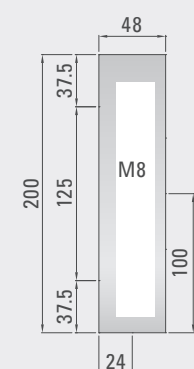
## HOLE PATTERN, INSULATION BLOCK AND CONNECTING PLATES (ALU)

A horizontal number line is shown with a break between 400 and 600. The line is divided into segments of 100, 200, 200, 200, 200, 200, and 100. A shaded gray region covers the segment from 400 to 600.

A number line starting at 0 and ending at 1000. The line has a break between 400 and 600. The segments are labeled 100, 200, 200, 200, 200, 200, and 100. A point is marked at 450.

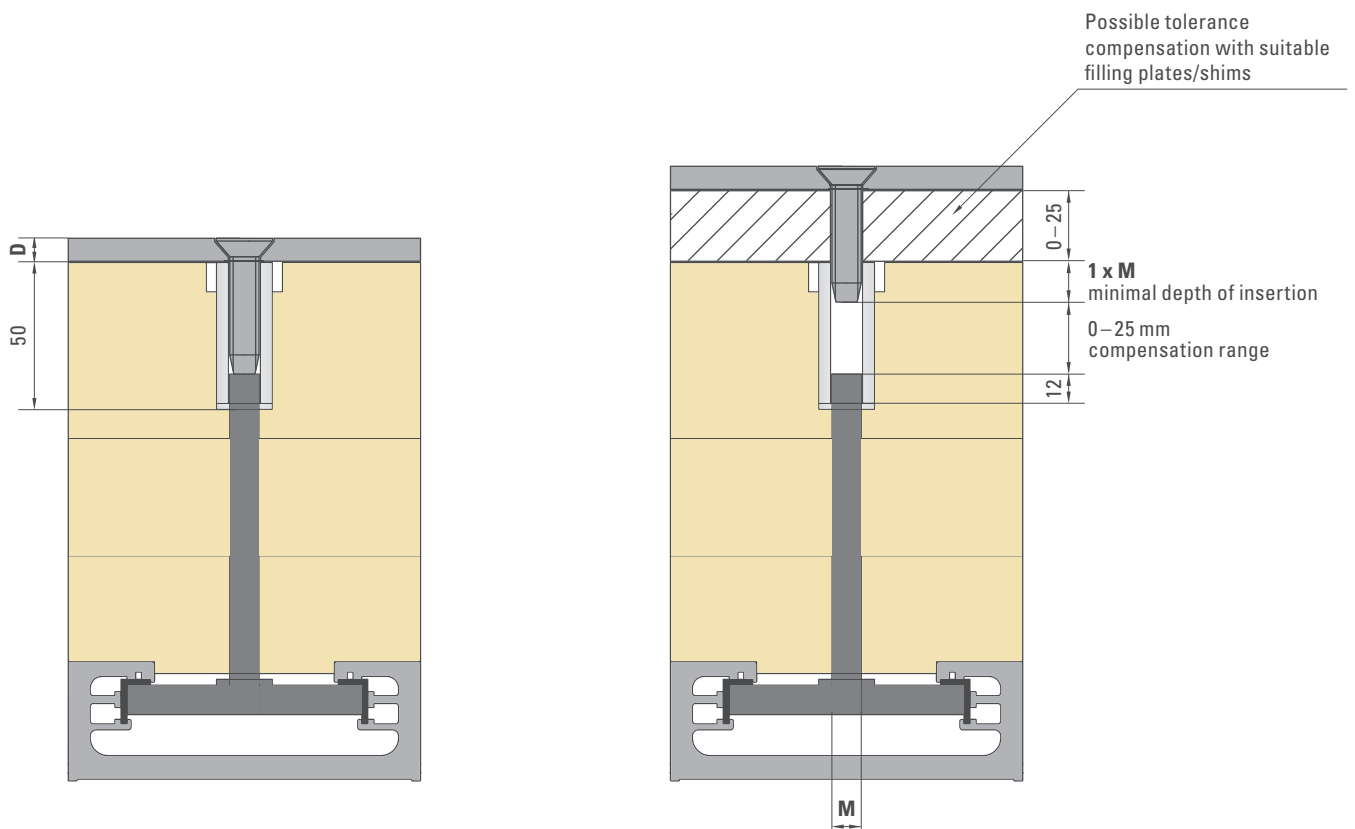
HOLE PATTERN, INSULATION  
BLOCK WITH ADAPTER PLATE

# STAINLESS STEEL ADAPTER PLATES



# LEVEL COMPENSATION

## WITH ON-SITE UNDERLINING

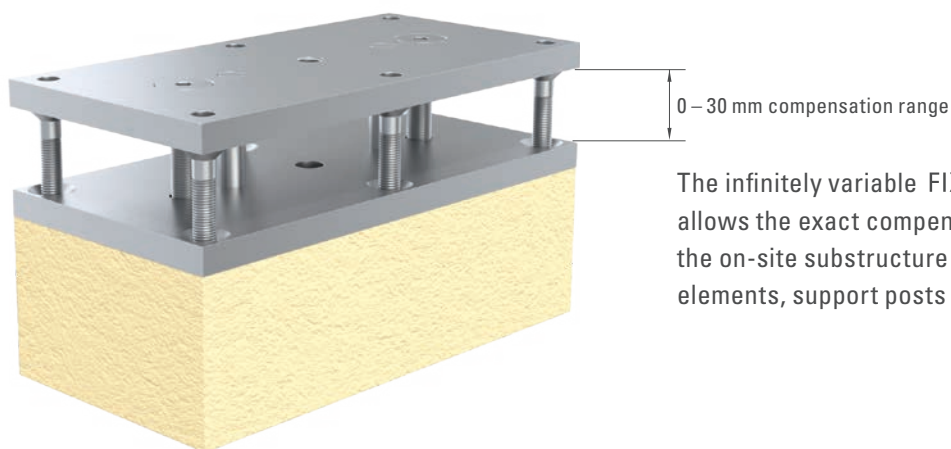


| Size | M  | D  |
|------|----|----|
| 48   | 8  | 8  |
| 60   | 8  | 8  |
| 80   | 8  | 8  |
| 100  | 10 | 10 |
| 120  | 10 | 10 |

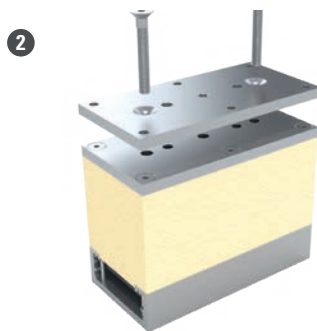


# VARIO SYSTEM MODULE

CONTINUOUSLY ADJUSTABLE  
FOR INTERIOR FITTING



Screw 6 pressure pins in the base plate



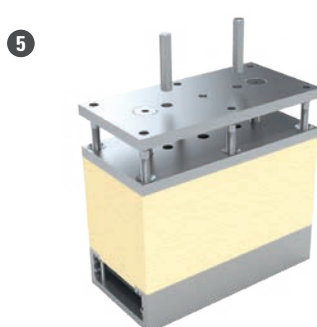
Place compensation plate with 2 screw connections on the base plate



Screw in the two screwed connections to the desired height



Use the pressure elements to move the compensation plate upwards against the screw connection



Insert the 2 locking pins

# EXTERIOR FACADES – EXTERIOR INSULATION

Due to the legal requirements such as the German Energy Saving Act [EnEG], Energy Saving Ordinances [EnEV] resp. the planned Building Energy Law (summary of EnEG, EnEV and others) and economic aspects, the casings of heated buildings are provided with thicker insulating layers.

Under structural physics aspects, the placement of insulation on the outside of building shell components (exterior walls, roofs) is preferable. It is therefore most commonly deployed.

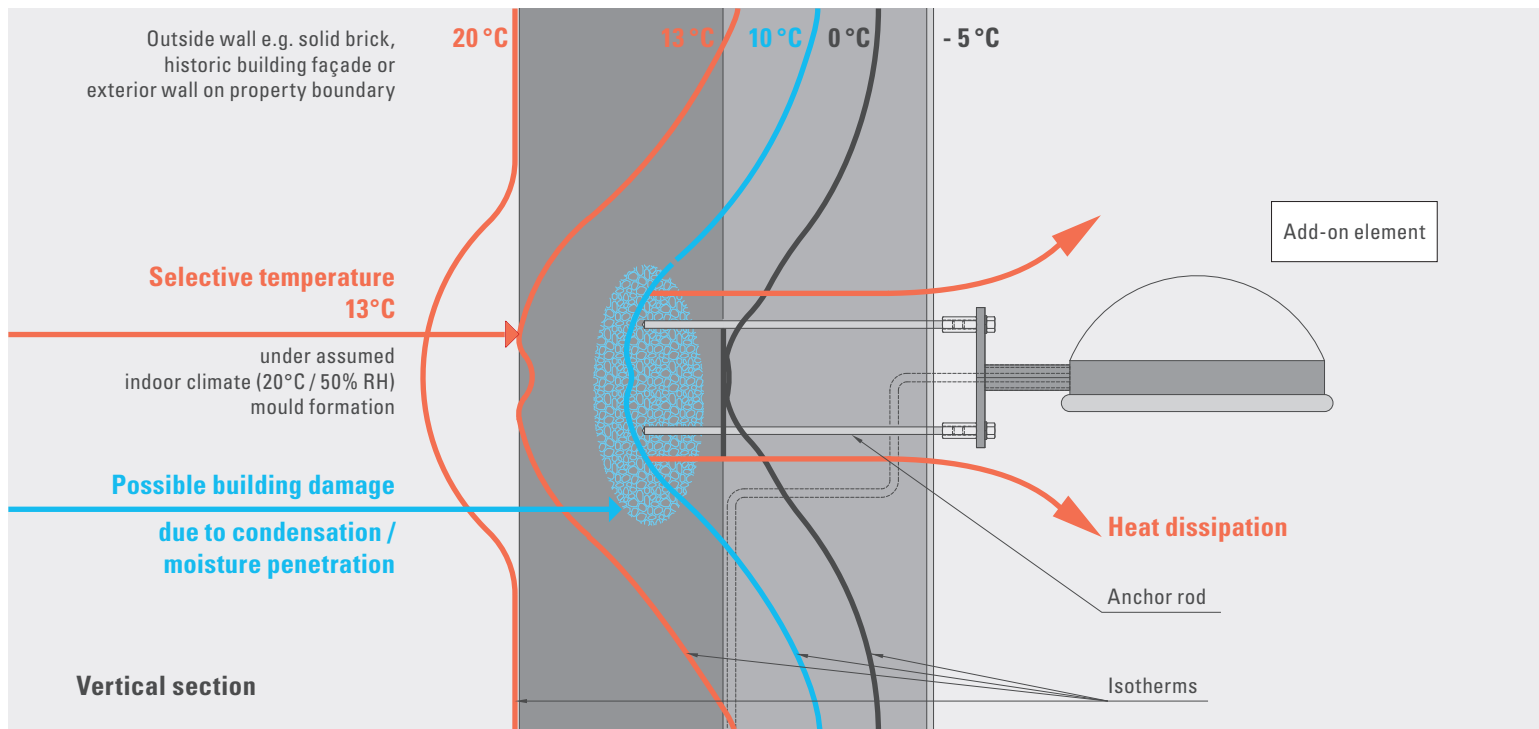
Elements such as canopies, sun protection systems, advertising systems and railings must or should be placed on the outside of buildings. The insulating materials used are inherently unsuitable to support anchoring loads from the above-mentioned elements. Their anchorages must therefore be led through the insulation layers to a load-bearing component (solid wall, concrete ceiling, columns).

In order to avoid the formation of thermal bridges and resulting heat losses / avoid structural damage, the element anchoring must be consistently thermally separated in the insulation layer.

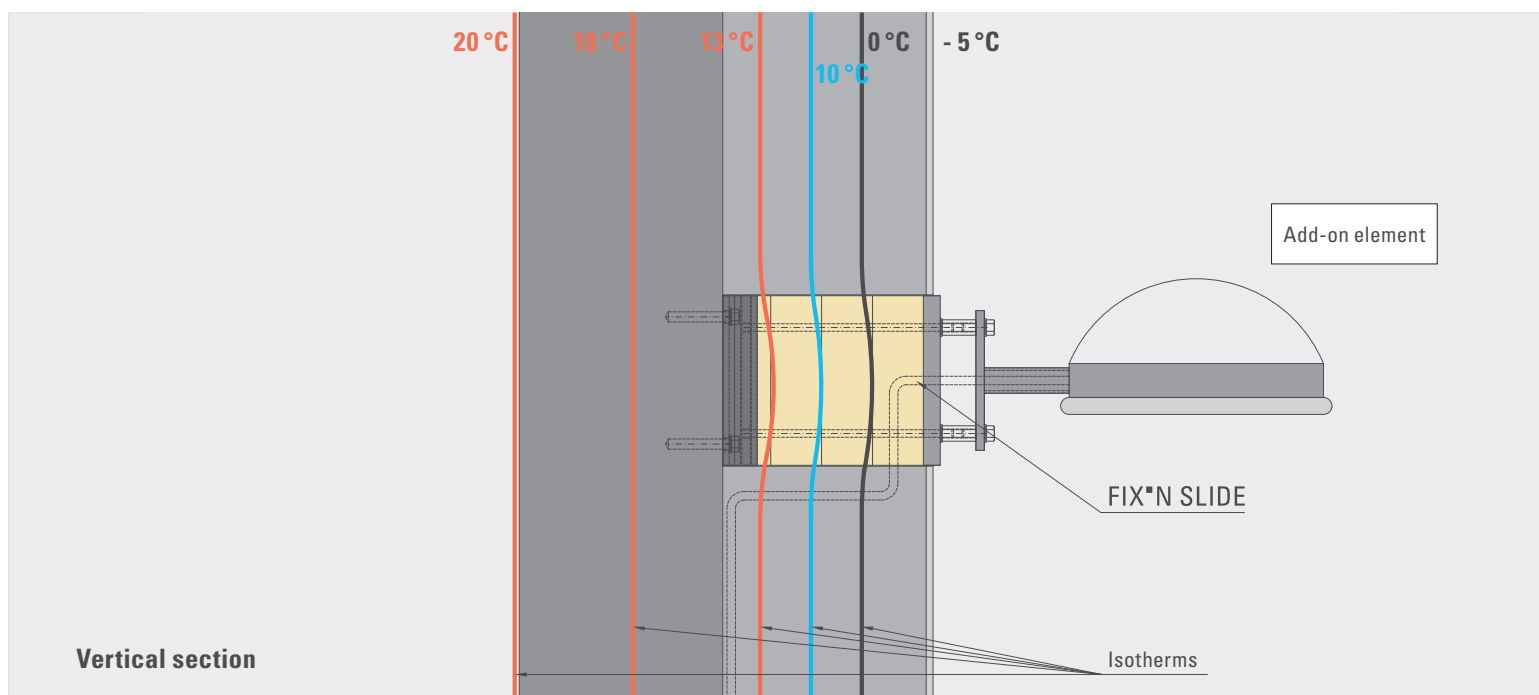
The consistent thermal insulation of component connections is essential to avoid thermal bridges and thus structural damage. This applies in particular to highly insulated building envelopes.

Thermal bridges primarily lead to heat losses. From an energetic point of view, locally limited thermal bridges might be negligible, but in fact even isolated thermal bridges can lead to considerable (construction) damage. The following building physics relationships are responsible for this.

## External component **without** thermal insulation

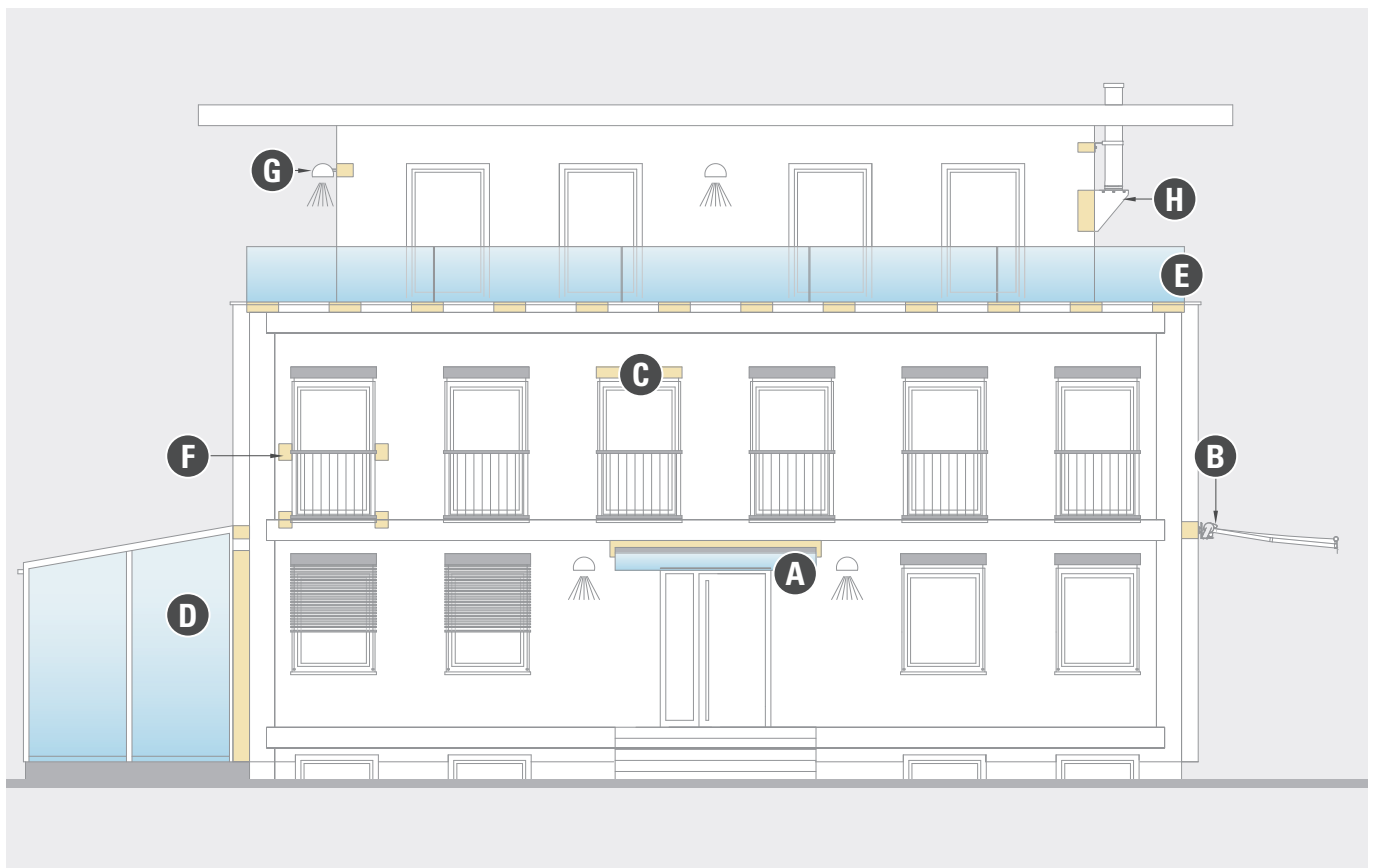


## External component **with** thermal insulation FIX<sup>®</sup>N SLIDE



# COMPONENTS ON THE OUTSIDE OF BUILDINGS

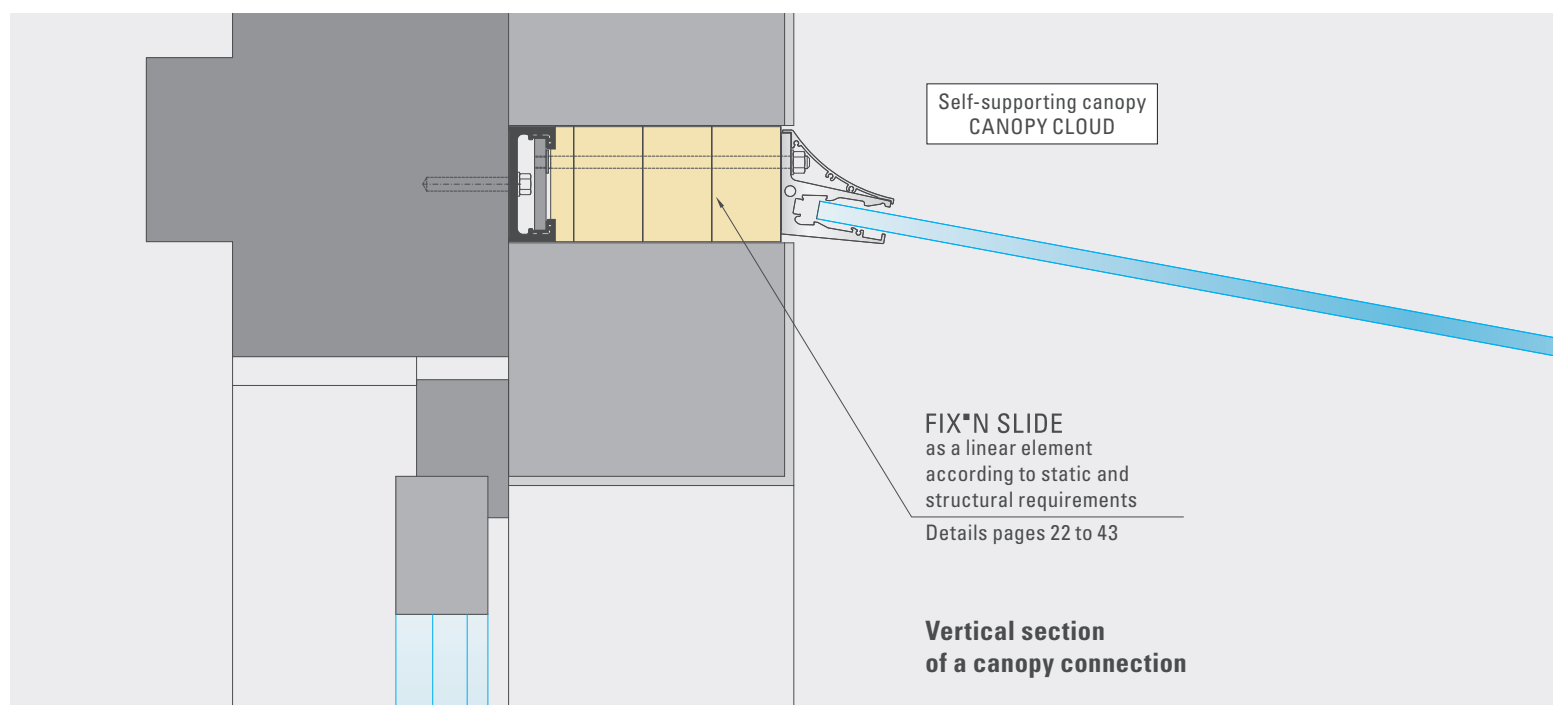
Situations with outdoor applications



- A** Canopy e.g. CANOPY CLOUD
- B** Articulated arm awning
- C** External venetian blind systems
- D** Conservatory unheated
- E** Railings on roof terrace
- F** Railings in front of French doors (French balconies)
- G** Outdoor wall lights
- H** Chimney flue

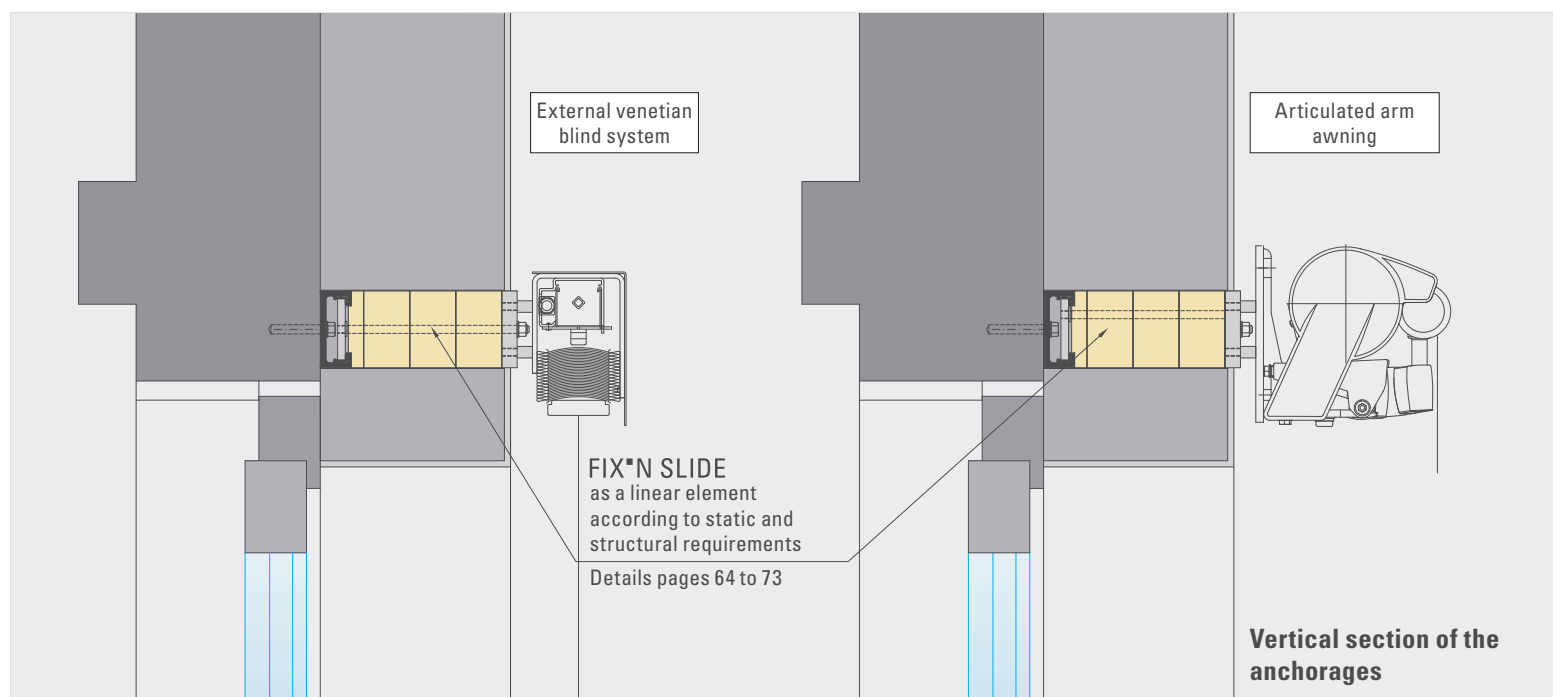
## Situation **A** – glass canopy

e.g. CANOPY CLOUD



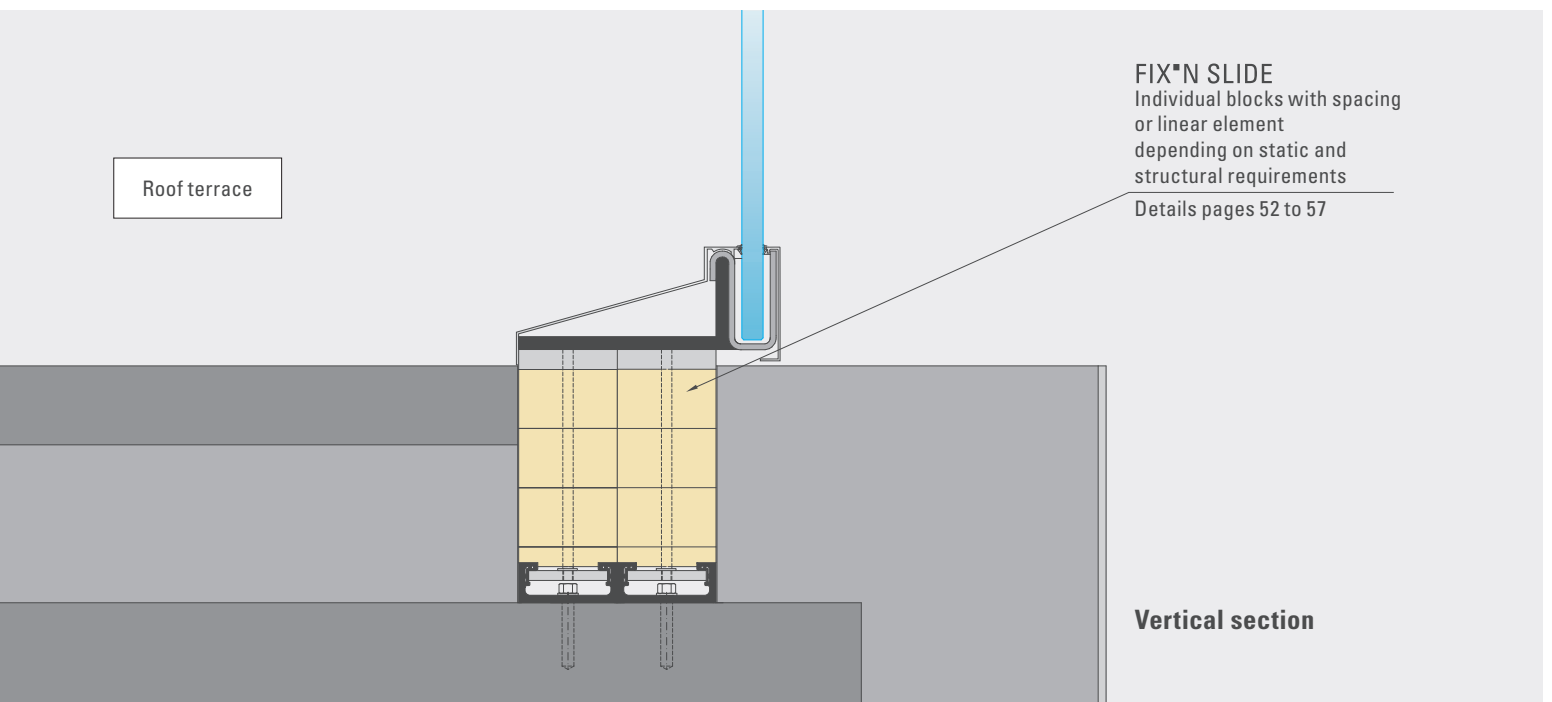
## Situation **B** and **C** – sun protection systems

e.g. external venetian blinds or articulated awnings



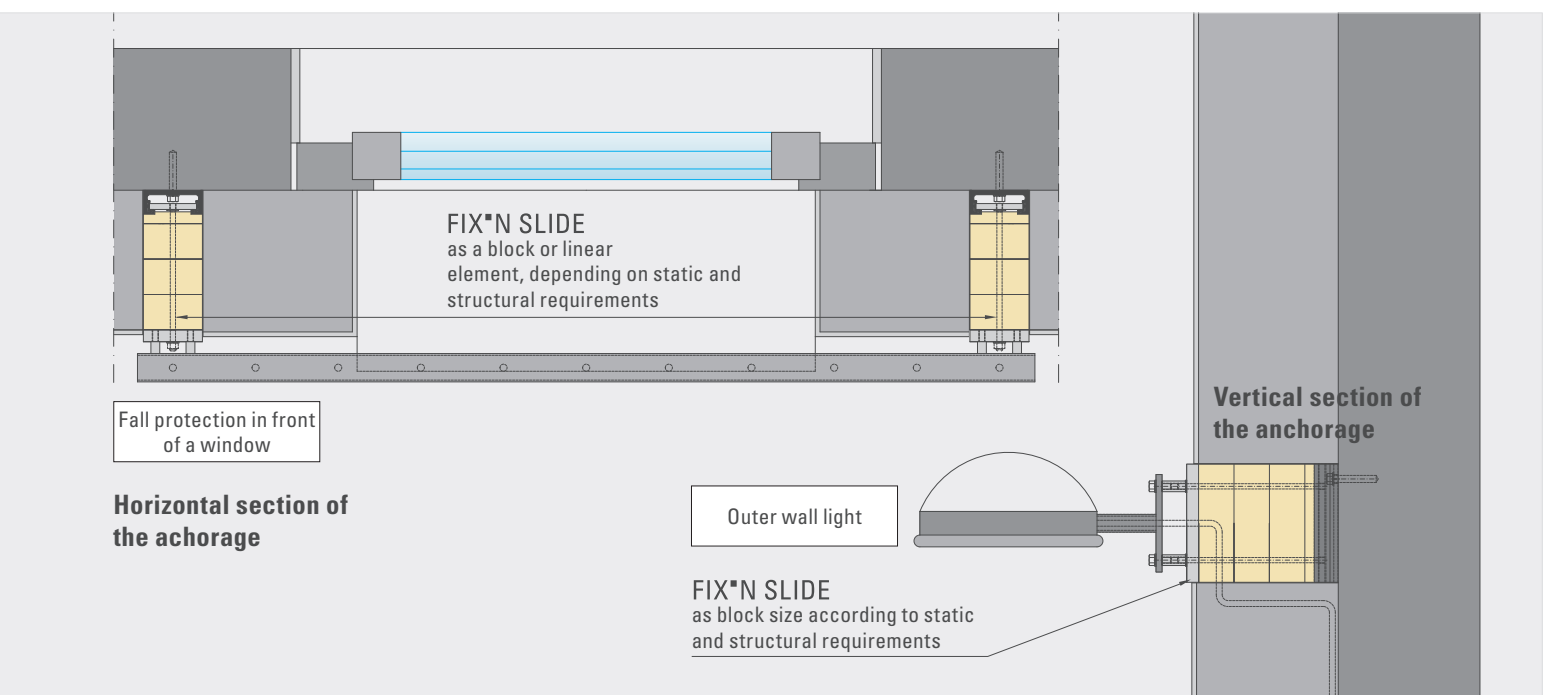
### Situation **E** – railings

e.g. All-glass railing BALARDO STEEL on a roof terrace



### Situation **F** and **G** – Outer wall

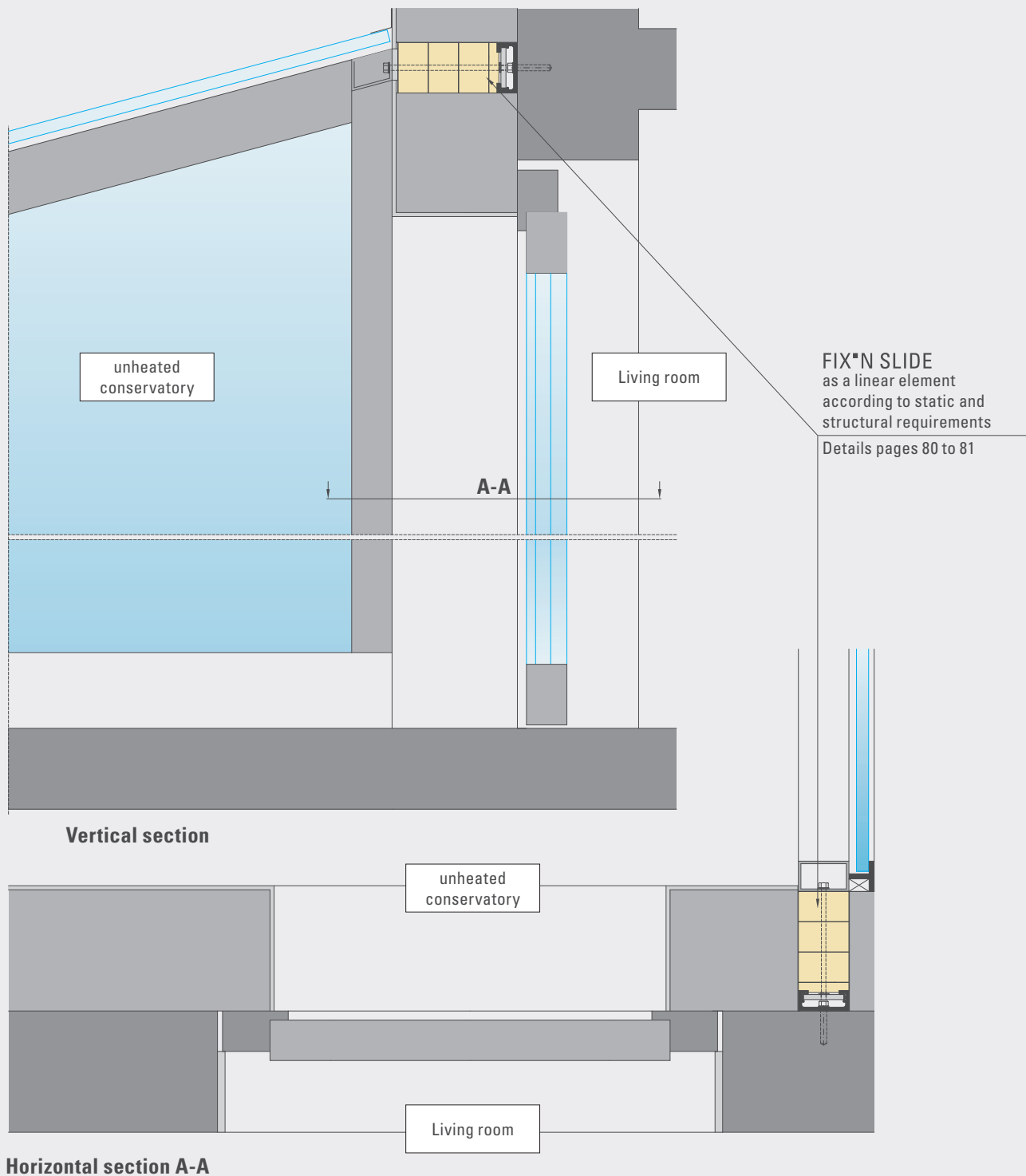
e.g. fall protection in front of a window or exterior wall light





## Situation **D** – Conservatory

on an exterior wall



**GLASSLINE**

FIX'N SLIDE



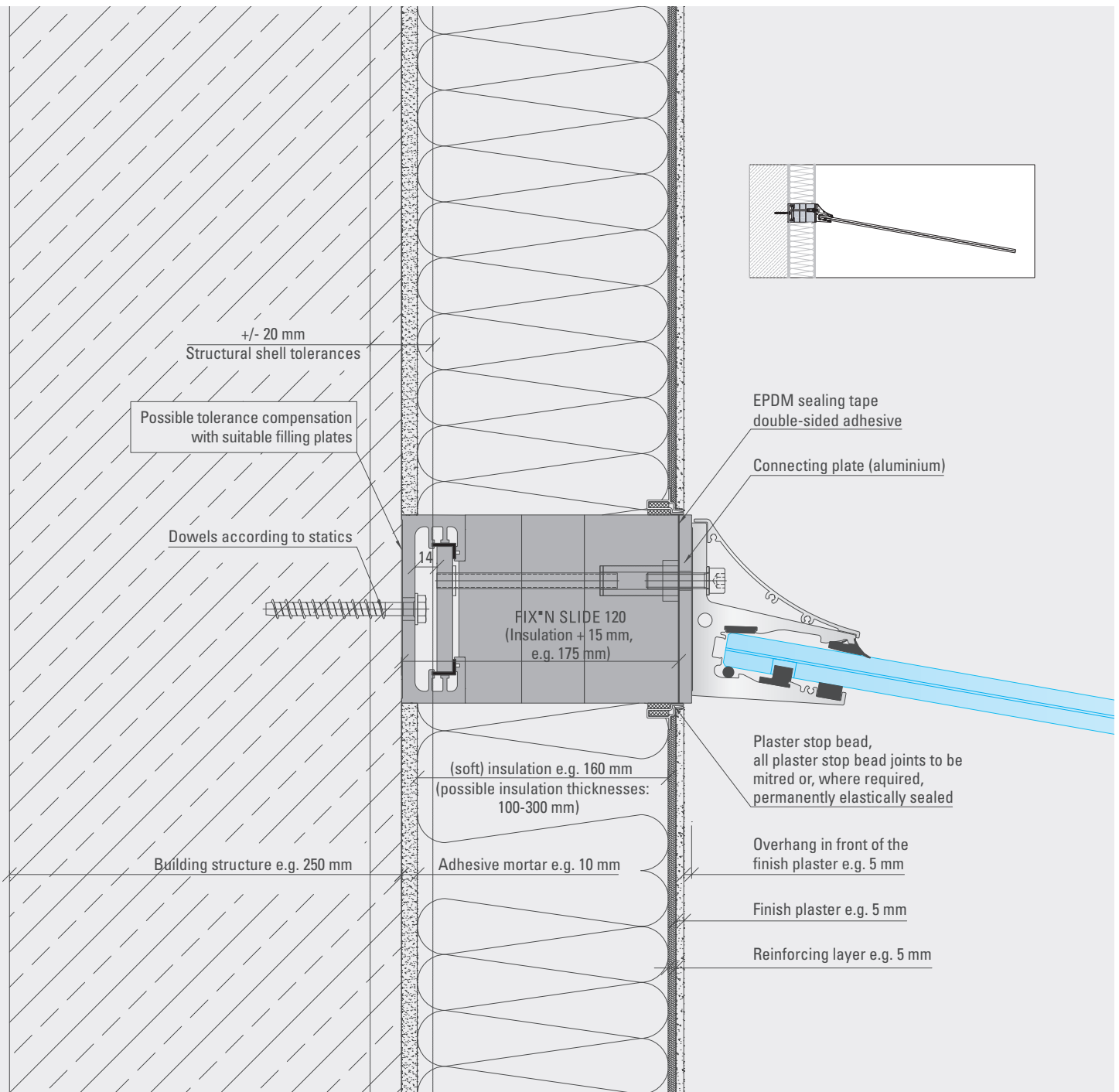
# CANOPIES

## APPLICATION EXAMPLES

### Self-supporting glass canopy, e.g. CANOPY CLOUD

Finish plaster and soft insulation

Vertical section

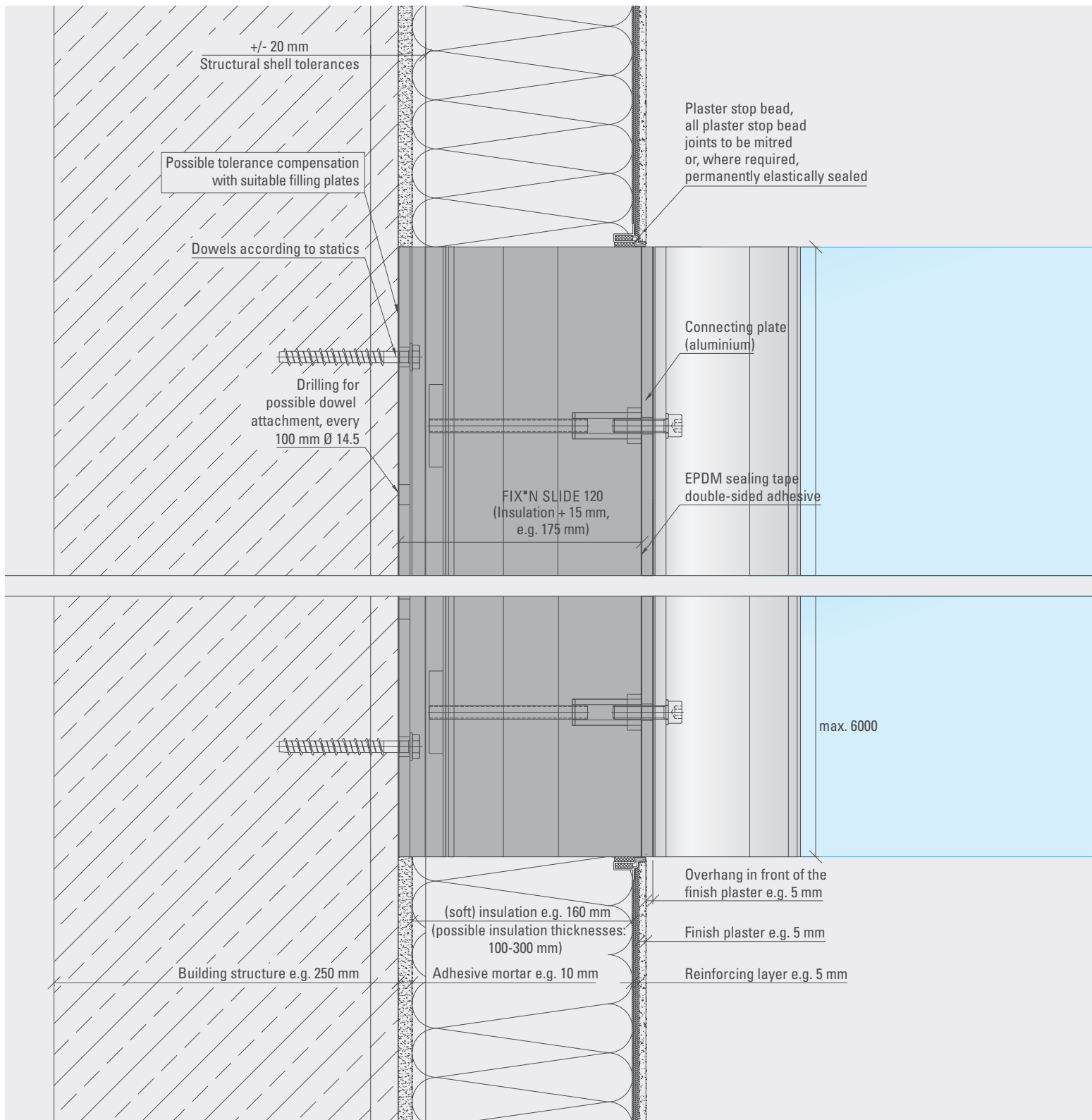


#### INSTALLATION RECOMMENDATION

- String out building (determine insulation outer edge)
- Installation FIX\*N SLIDE (possible tolerance compensation with suitable filler plates/shims)
- Ensure exterior impermeability with double-sided

- adhesive EPDM sealing membrane
- Fix connection plate
- Create ETICS with finish plaster
- Install canopy

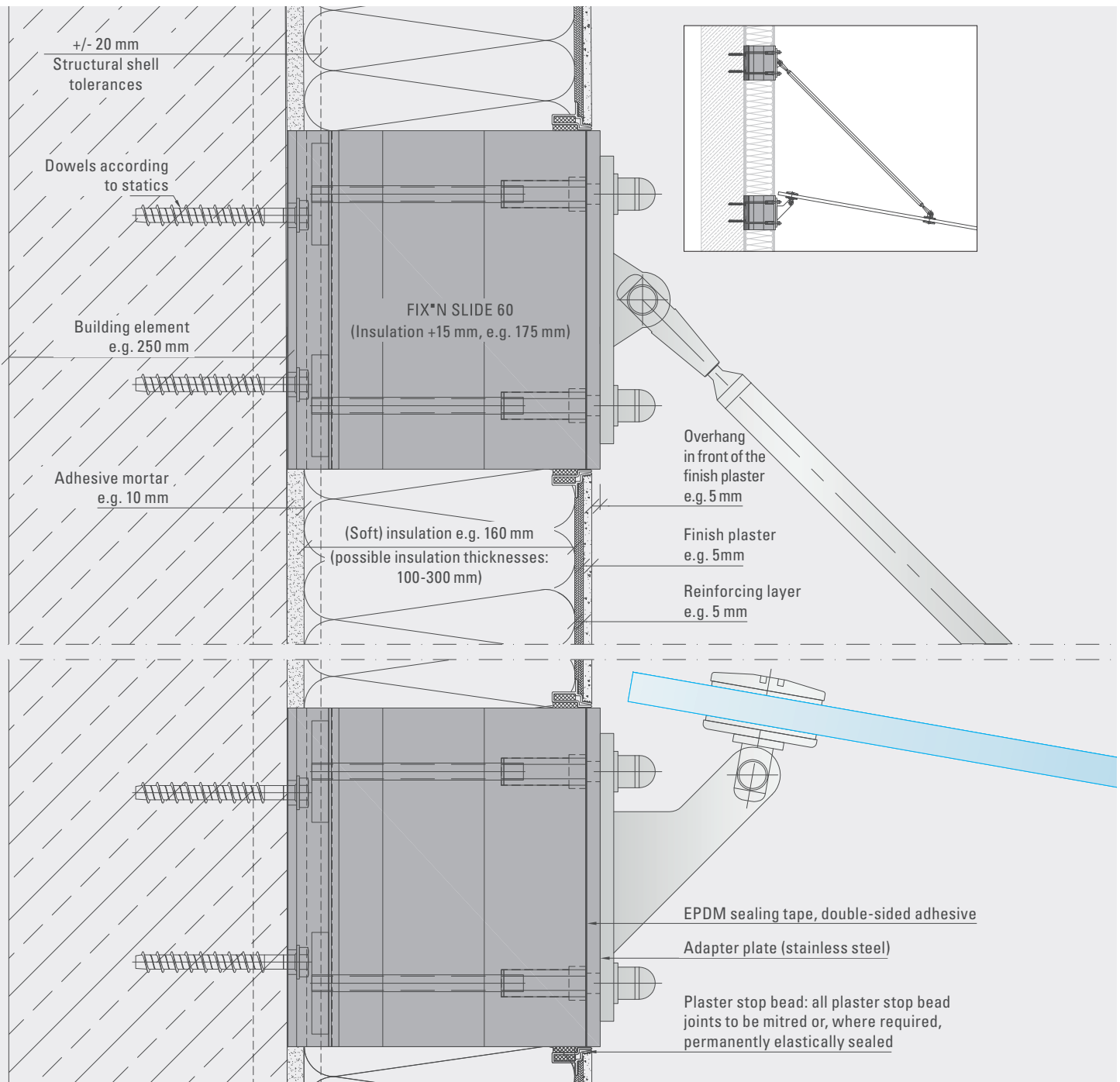
Horizontal section



### Point-retained glass canopy, e.g. CANOPY CLASSIC

Finish plaster and soft insulation

Vertical section

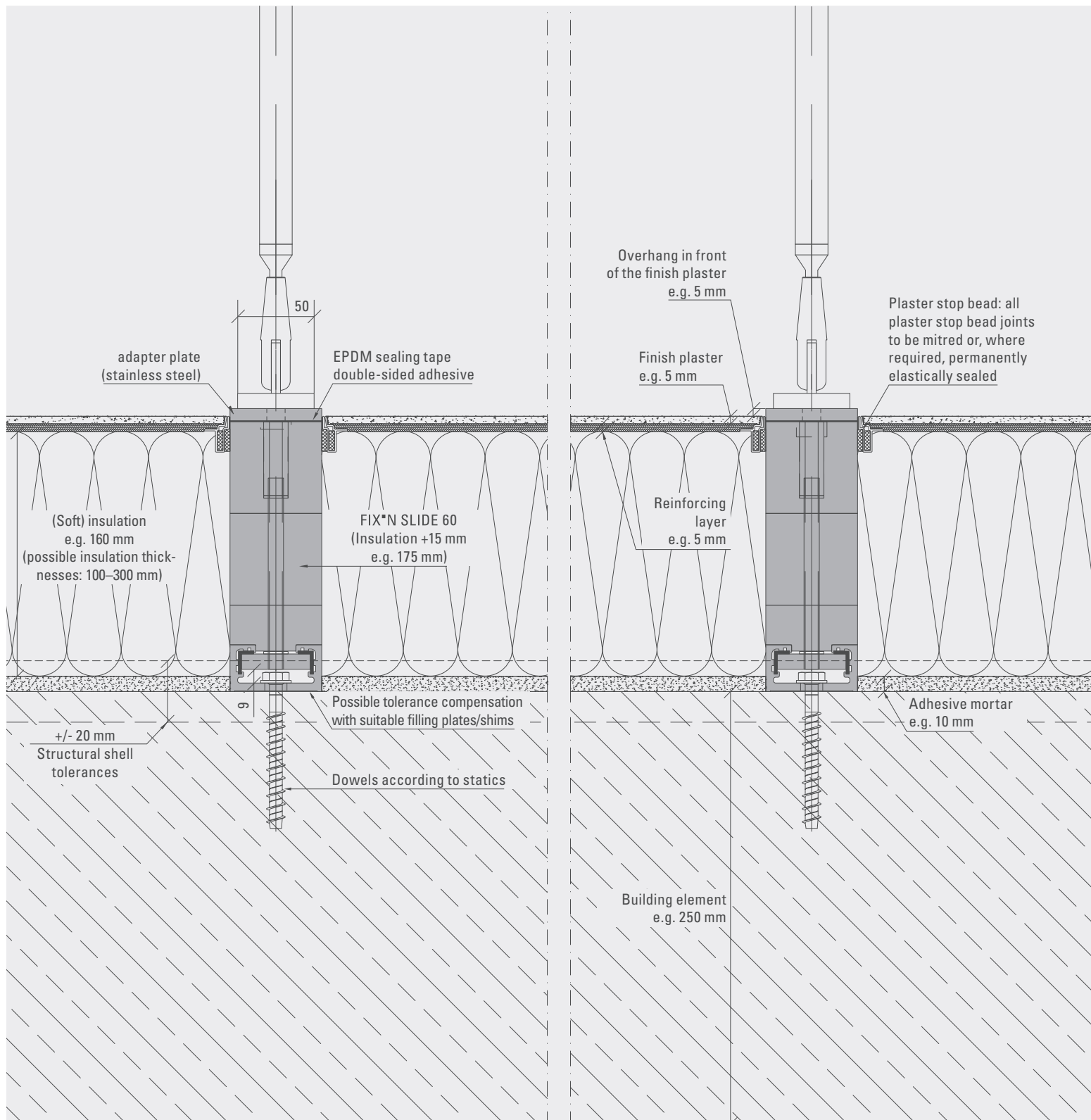


#### INSTALLATION RECOMMENDATION

- String out building (determine insulation outer edge)
- Installation FIX\*N SLIDE (possible tolerance compensation with suitable filler plates/shims)
- Ensure exterior impermeability with double-sided adhesive EPDM sealing tape
- Fix adapter plate
- Create ETICS with finish plaster
- Install canopy



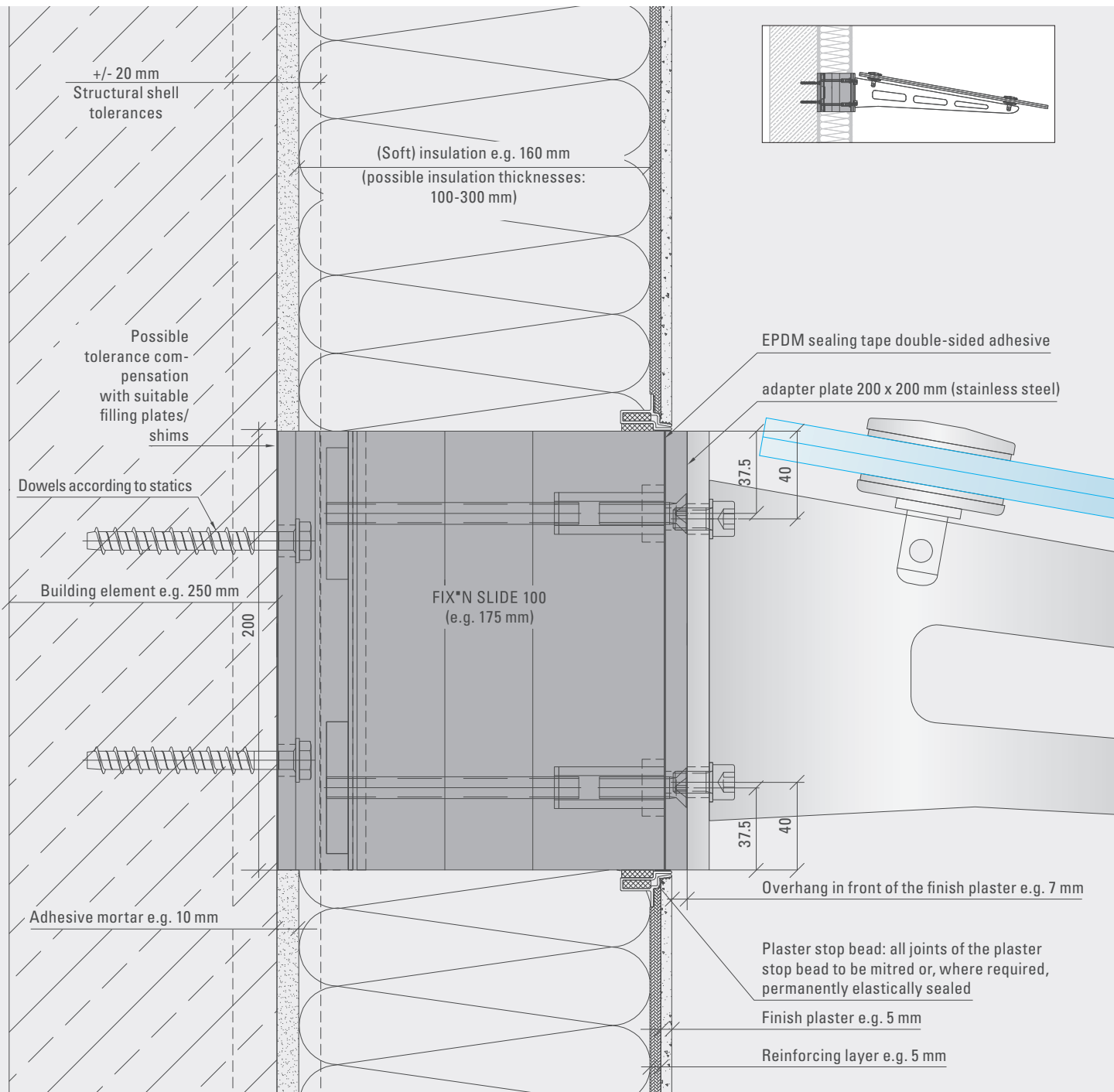
Horizontal section



### Glass canopy with brackets, e.g. CANOPY BLADE

Finish plaster and soft insulation

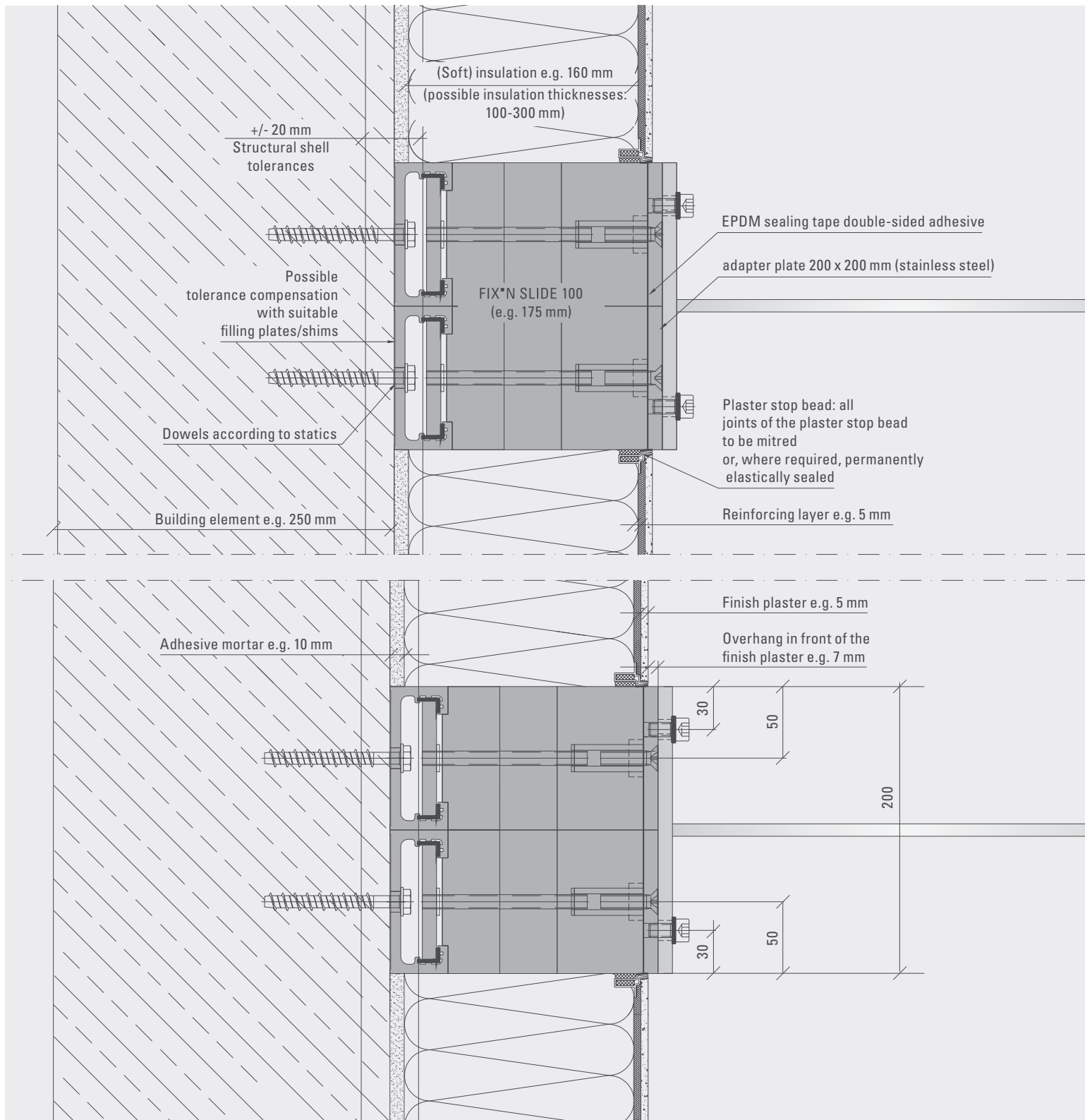
Vertical section



#### INSTALLATION RECOMMENDATION

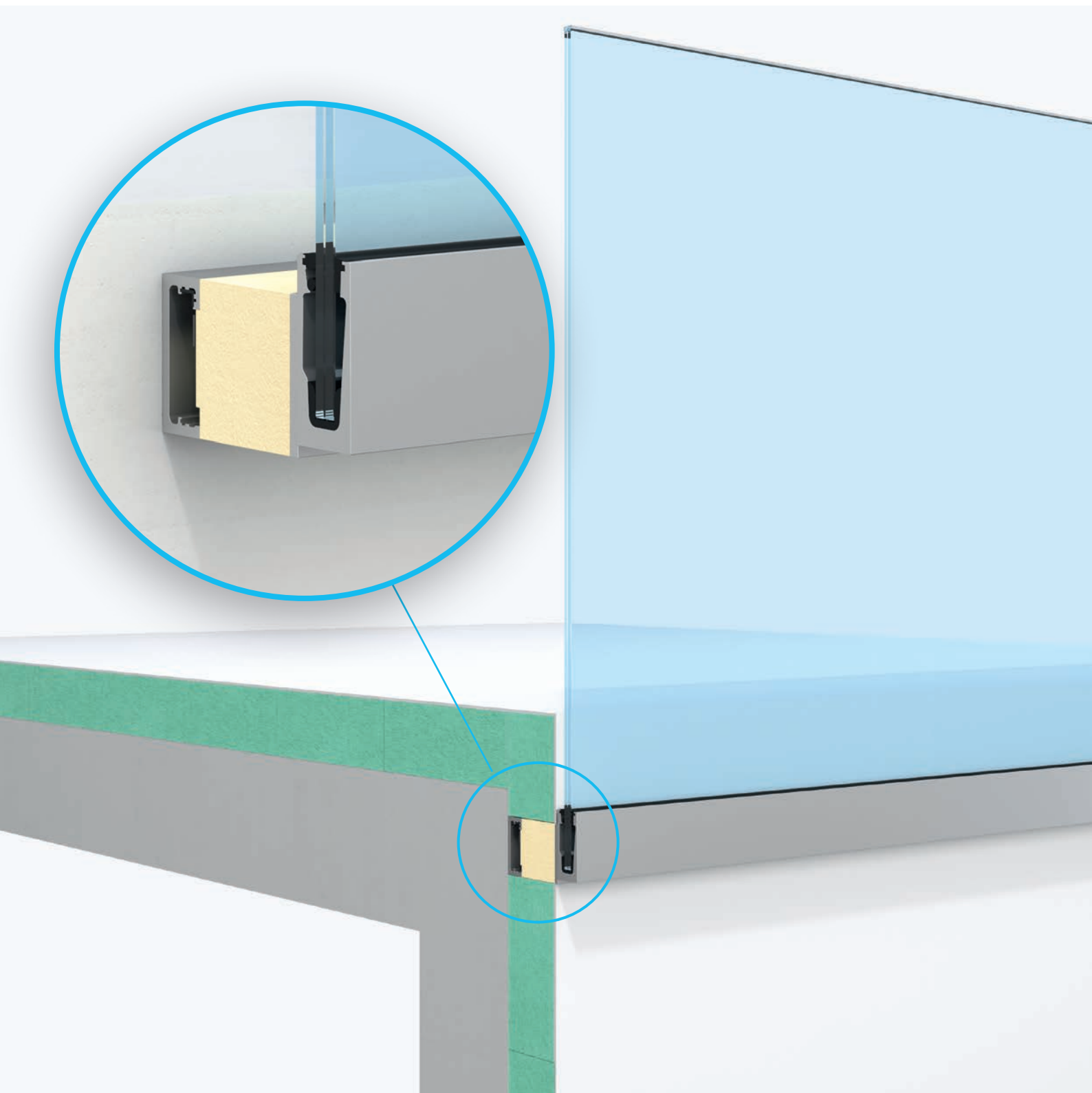
- String out building (determine insulation outer edge)
- Installation FIX\*N SLIDE  
(possible tolerance compensation with suitable filler plates/shims)
- Ensure exterior impermeability with double-sided adhesive EPDM sealing tape
- Fix adapter plate
- Create ETICS with finish plaster
- Install canopy

Horizontal section



**GLASSLINE**

FIX\***N** SLIDE



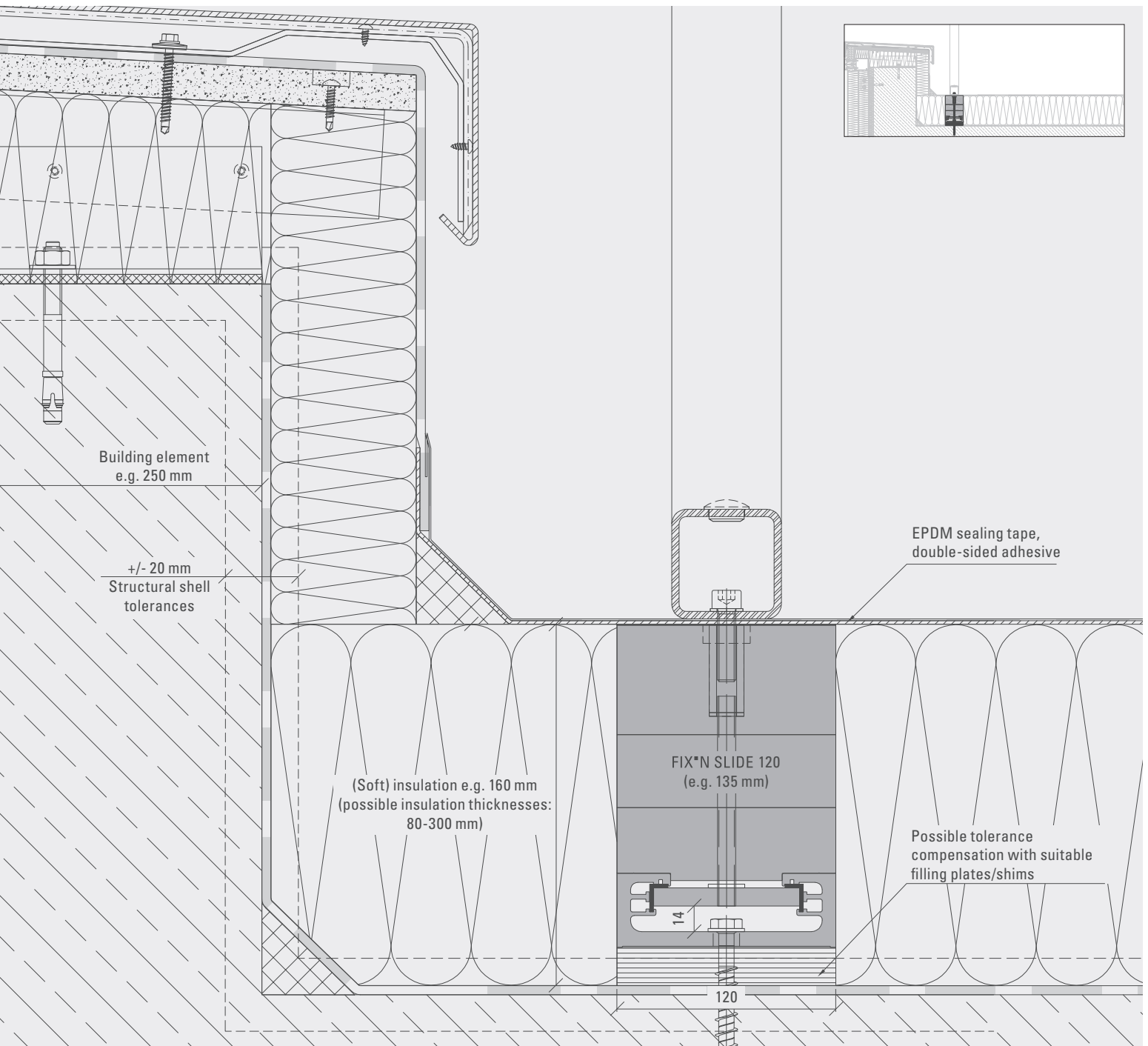
# RAILINGS

## APPLICATION EXAMPLES

### Steel railing

Terrace

Vertical section

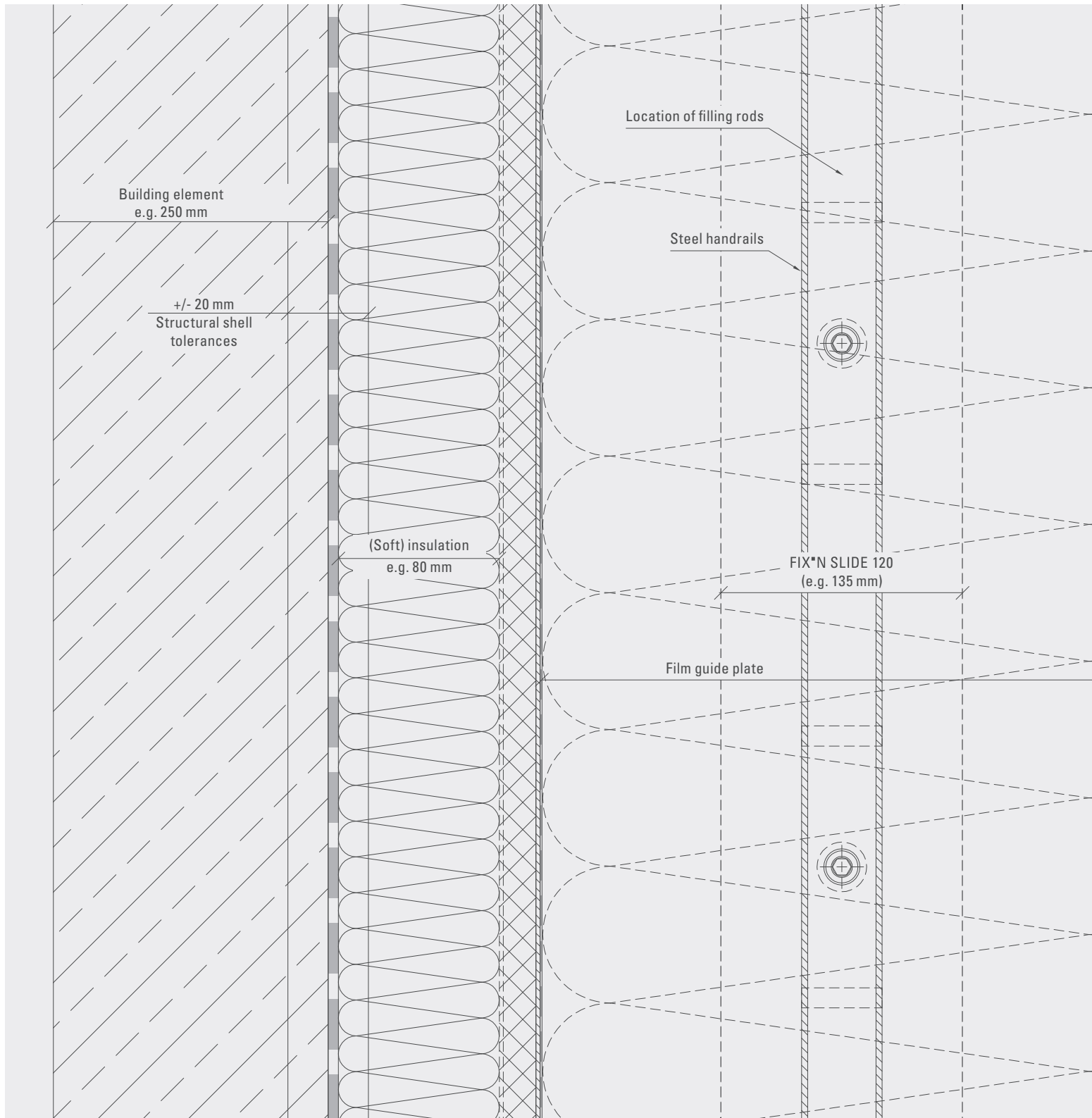


#### INSTALLATION RECOMMENDATION

- String out building (determine insulation outer edge)
- Installation FIX\*N SLIDE (possible tolerance compensation with suitable filler plates/shims)
- Ensure exterior impermeability with double-sided adhesive EPDM sealing tape

- Fix film guide plate
- Execute building sealing e.g. with liquid plastic
- Install steel railing

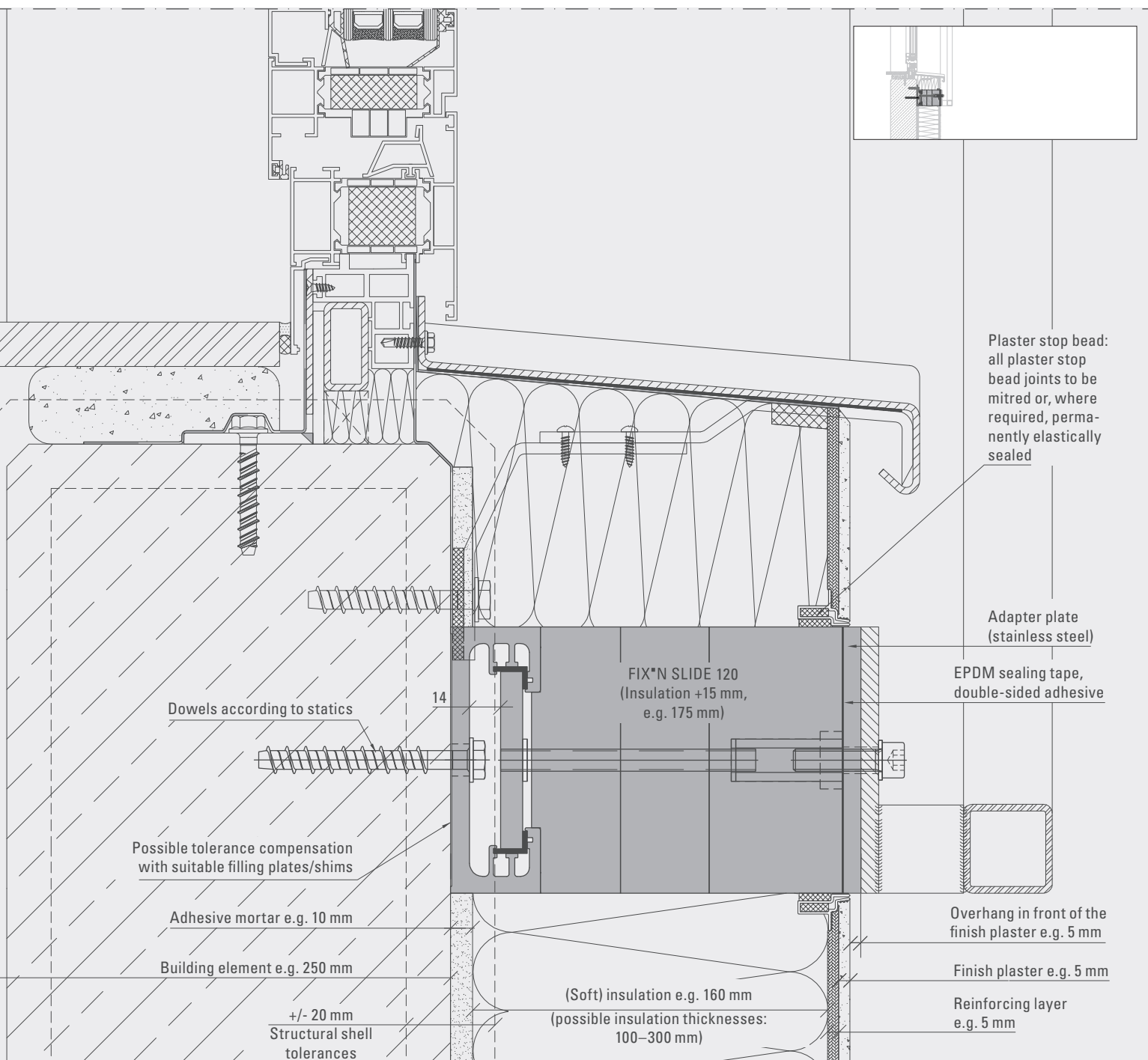
Horizontal section



### Parapet railing (window fall protection)

Finish plaster and soft insulation

Vertical section



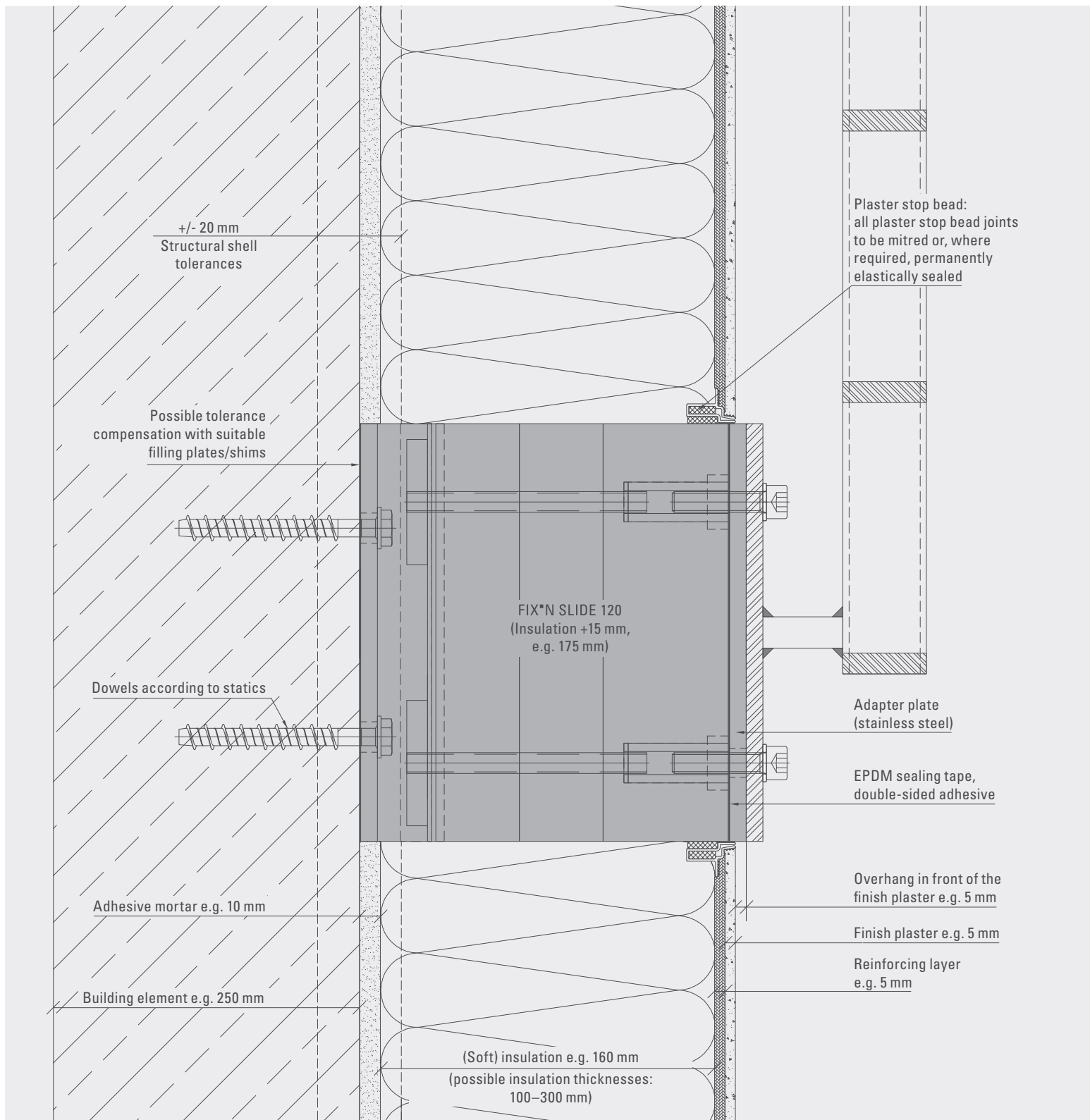
#### INSTALLATION RECOMMENDATION

- String out building (determine insulation outer edge)
- Installation FIX\*N SLIDE (possible tolerance compensation with suitable filler plates/shims)
- Ensure exterior impermeability with double-sided adhesive EPDM sealing tape

- Fix the adapter plate
- Execute building sealing e.g. with liquid plastic
- Create ETICS with finish plaster
- Install steel railing

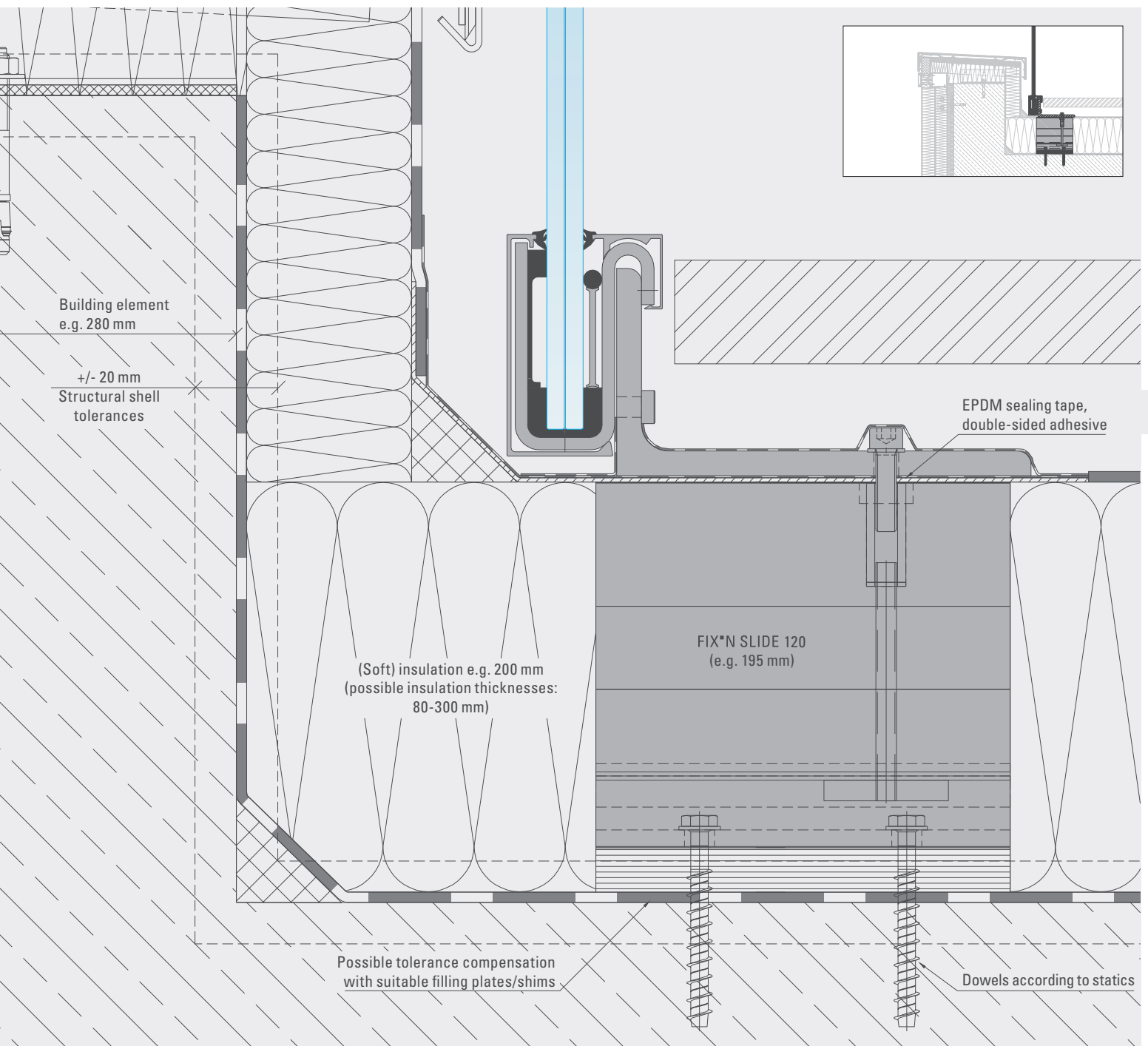


Horizontal section



### Attic cover all-glass railing, e.g. BALARDO STEEL with soft insulation

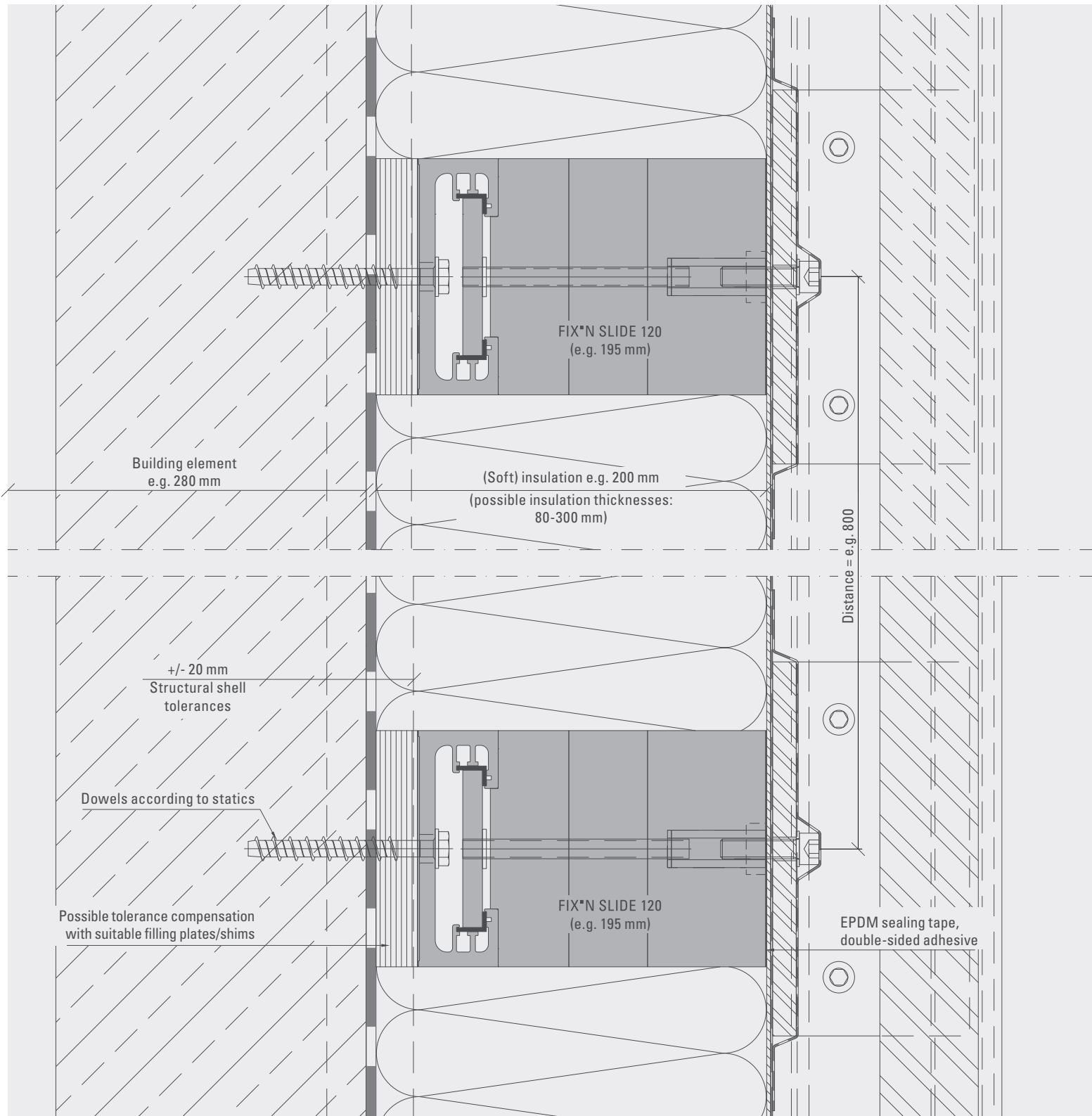
Vertical section



#### INSTALLATION RECOMMENDATION

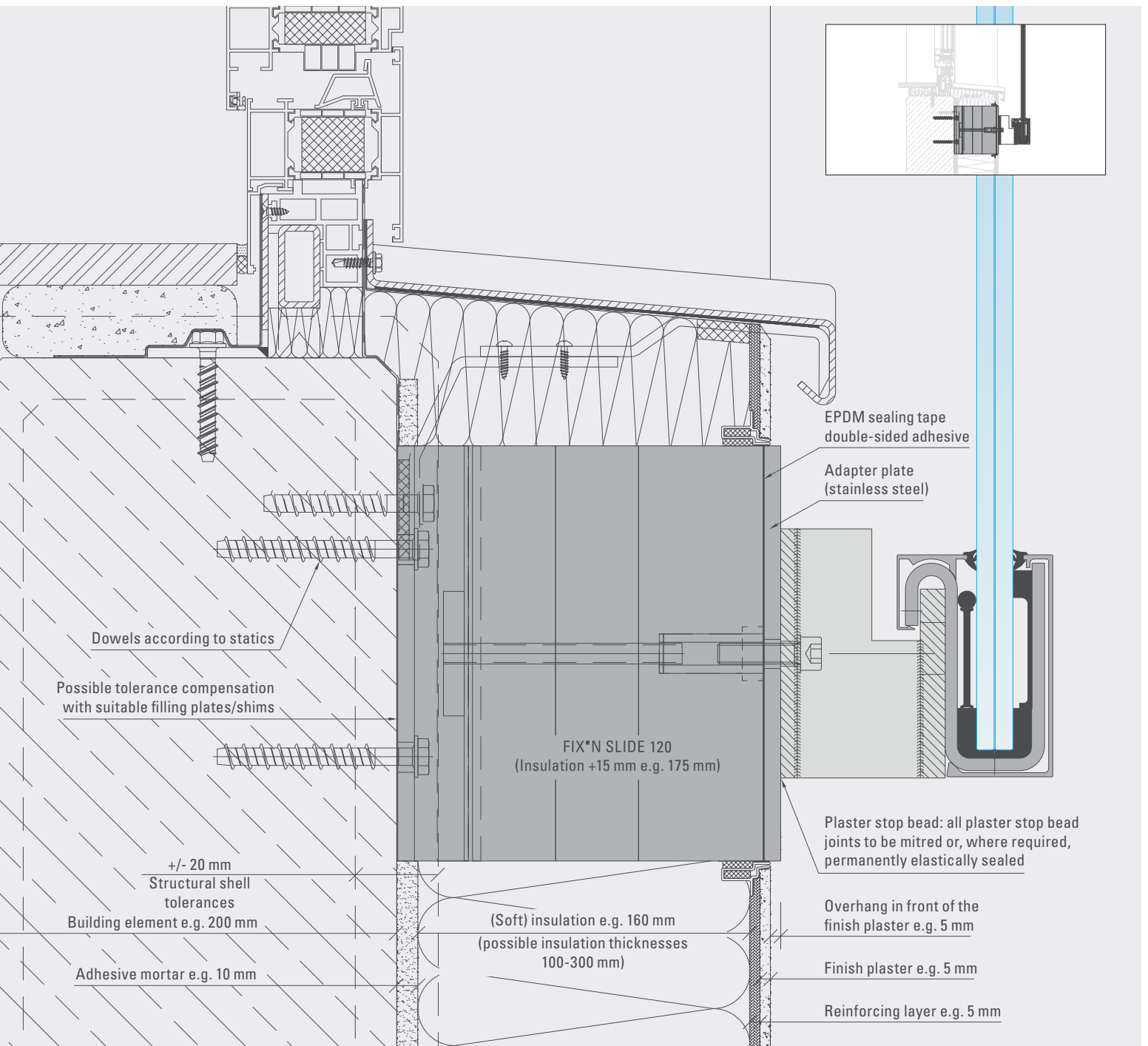
- String out building (determine insulation outer edge)
- Installation FIX\*N SLIDE  
(possible tolerance compensation with suitable filler plates/shims)
- Ensure exterior impermeability with double-sided adhesive  
EPDM sealing tape
- Fix film guide plate
- Execute building sealing
- Install BALARDO STEEL

Horizontal section



### Parapet glazing all-glass railing, e.g. BALARDO STEEL with soft insulation

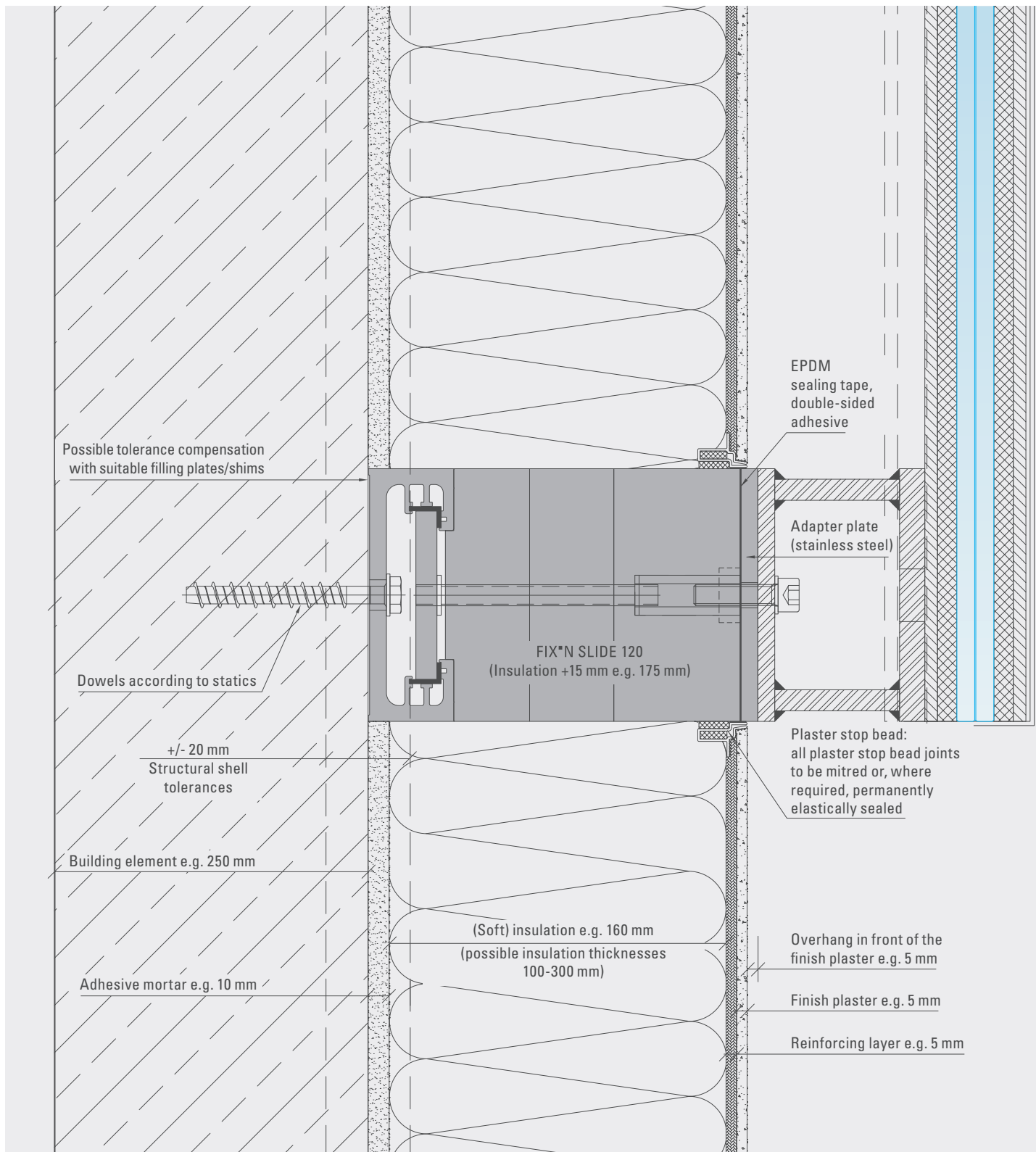
Vertical section



#### INSTALLATION RECOMMENDATION

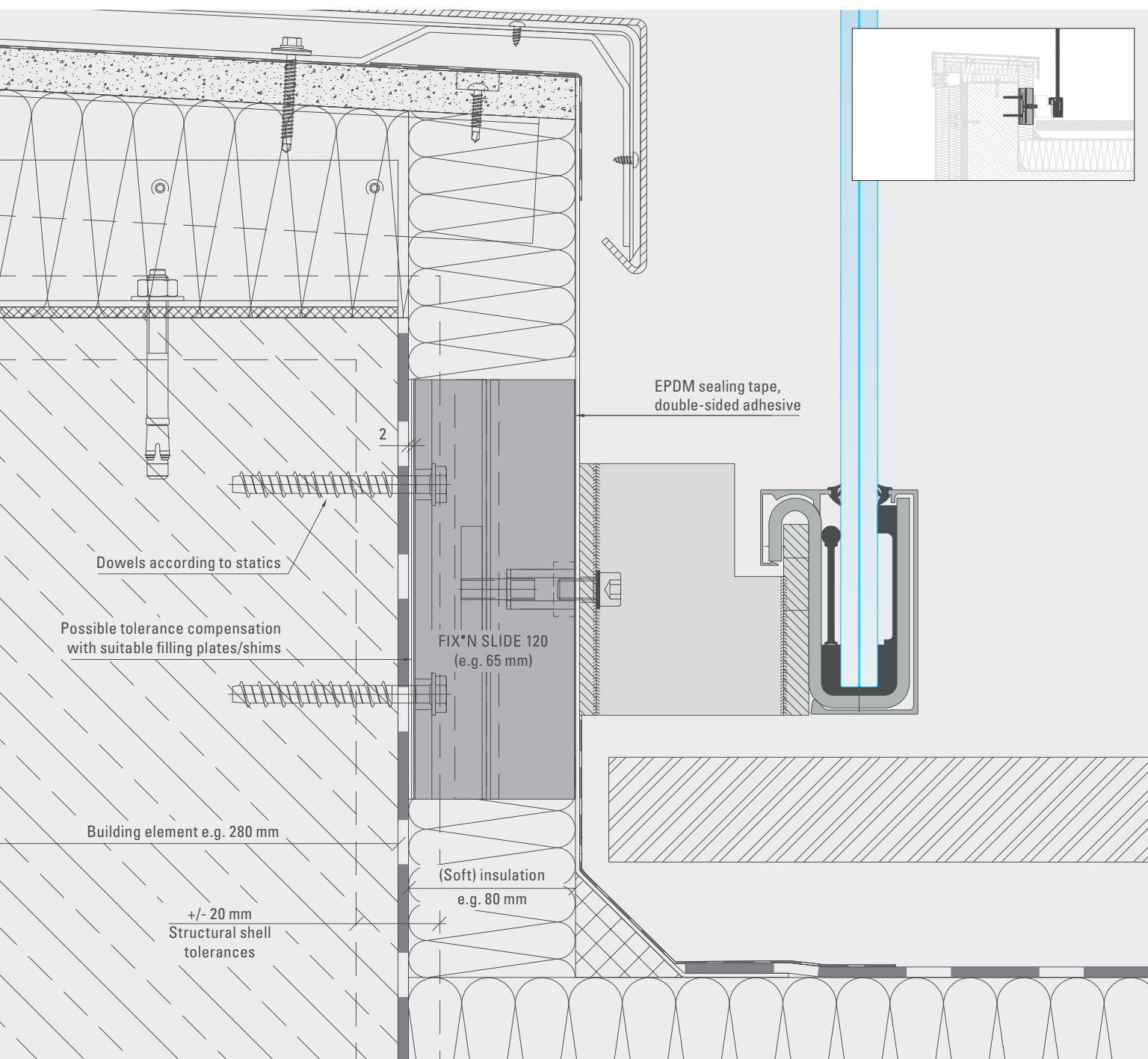
- String out building (determine insulation outer edge)
- Installation FIX\*N SLIDE  
(possible tolerance compensation with suitable filler plates/shims)
- Ensure exterior impermeability with double-sided adhesive EPDM sealing tape
- Fix connecting plate
- Install BALARDO STEEL

Horizontal section



### Attic cover all-glass railing, e.g. BALARDO STEEL with soft insulation

Vertical section

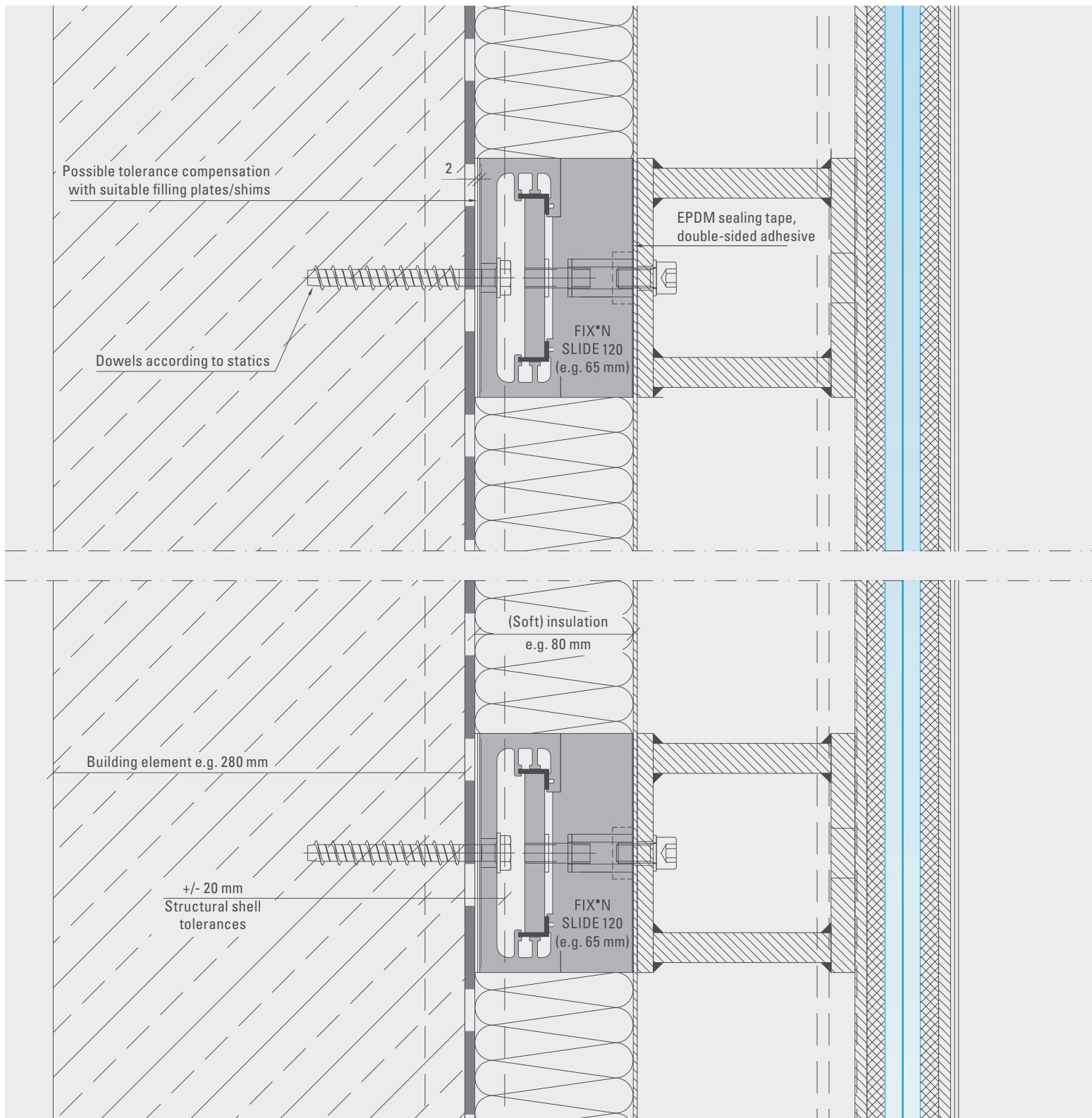


#### INSTALLATION RECOMMENDATION

- String out building (determine insulation outer edge)
- Installation FIX\*N SLIDE (possible tolerance compensation with suitable filler plates/shims)
- Ensure exterior impermeability with double-sided adhesive EPDM sealing tape

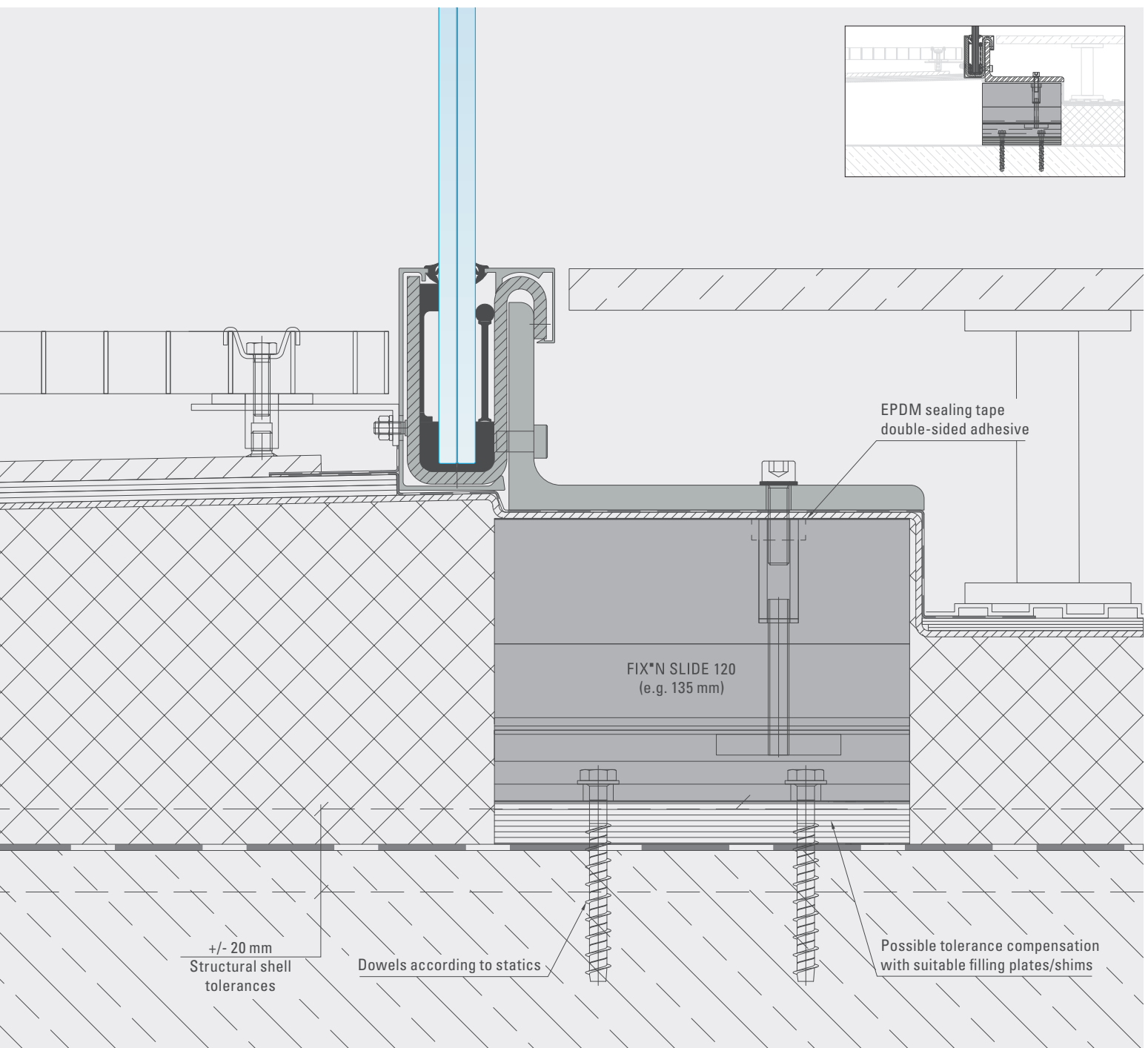
- Fix film guide plate
- Install BALARDO STEEL

Horizontal section



### Maintenance passage all-glass railing, e.g. BALARDO STEEL with hard insulation

Vertical section

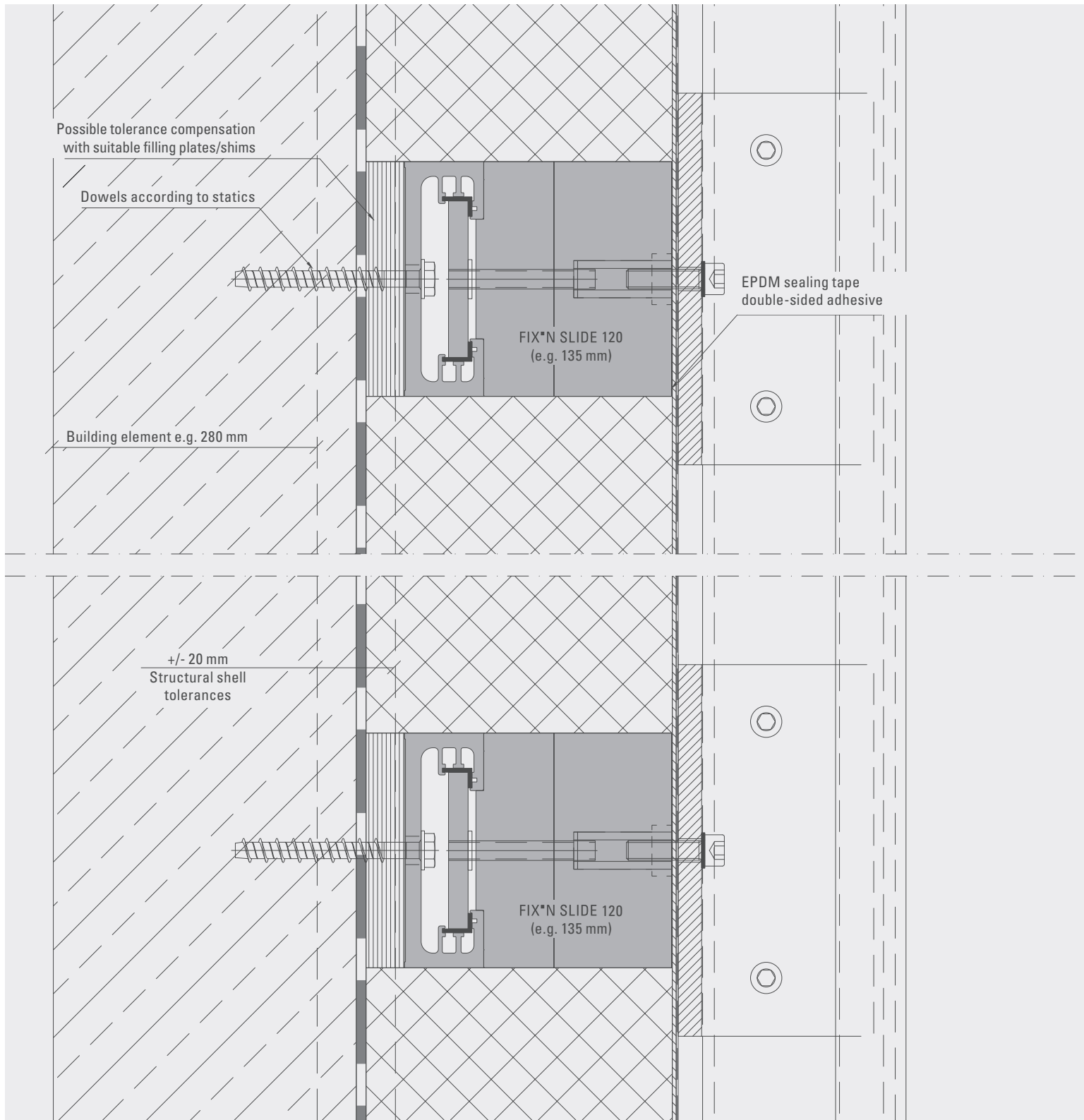


#### INSTALLATION RECOMMENDATION

- String out building (determine insulation outer edge)
- Installation FIX\*N SLIDE  
(possible tolerance compensation with suitable filler plates/shims)
- Ensure exterior impermeability with double-sided adhesive  
EPDM sealing tape
- Fix film guide plate
- Execute building sealing
- Install BALARDO STEEL

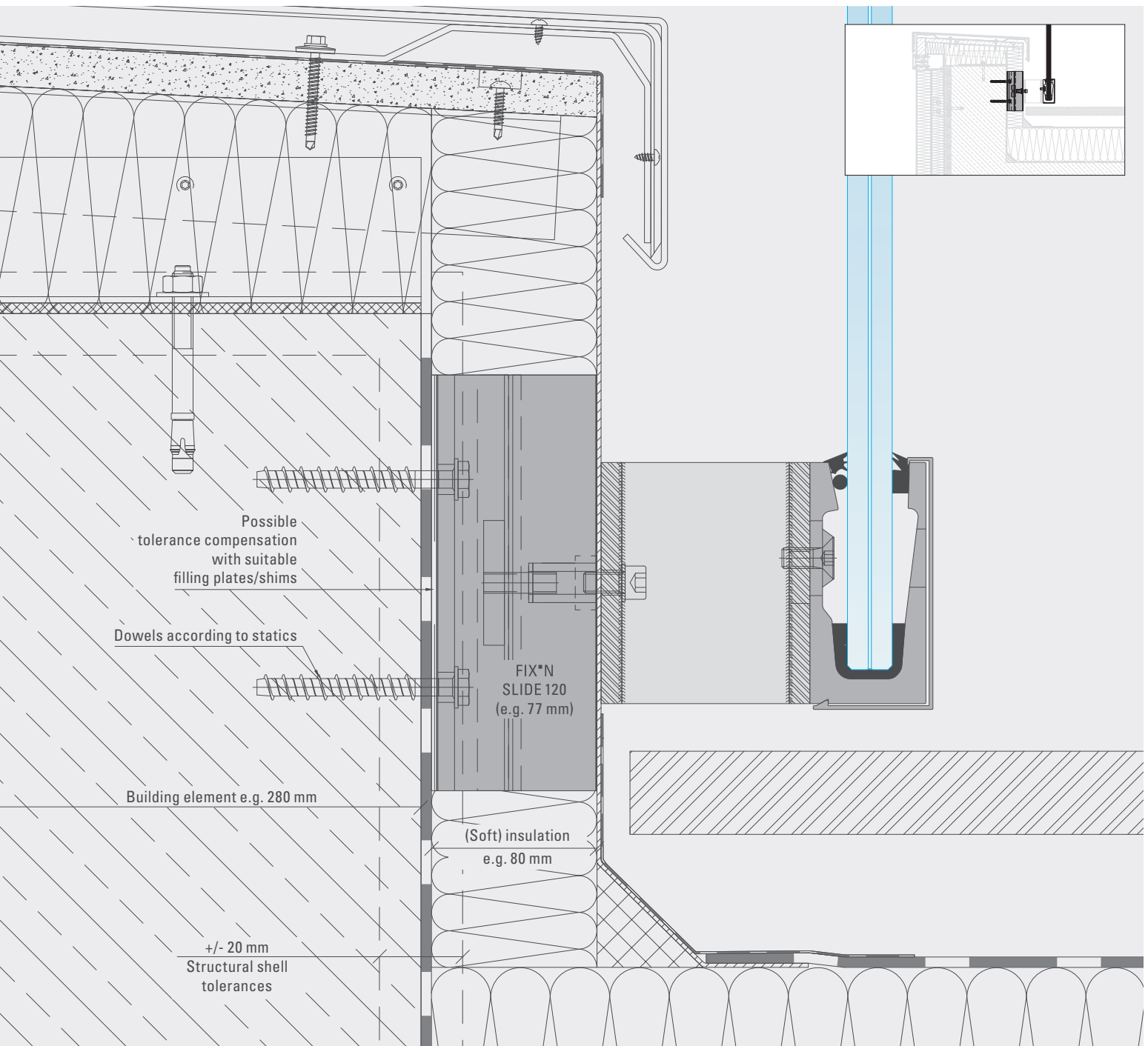


Horizontal section



### Attic cover all-glass railing, e.g. BALARDO ALU SIDE 1 with soft insulation

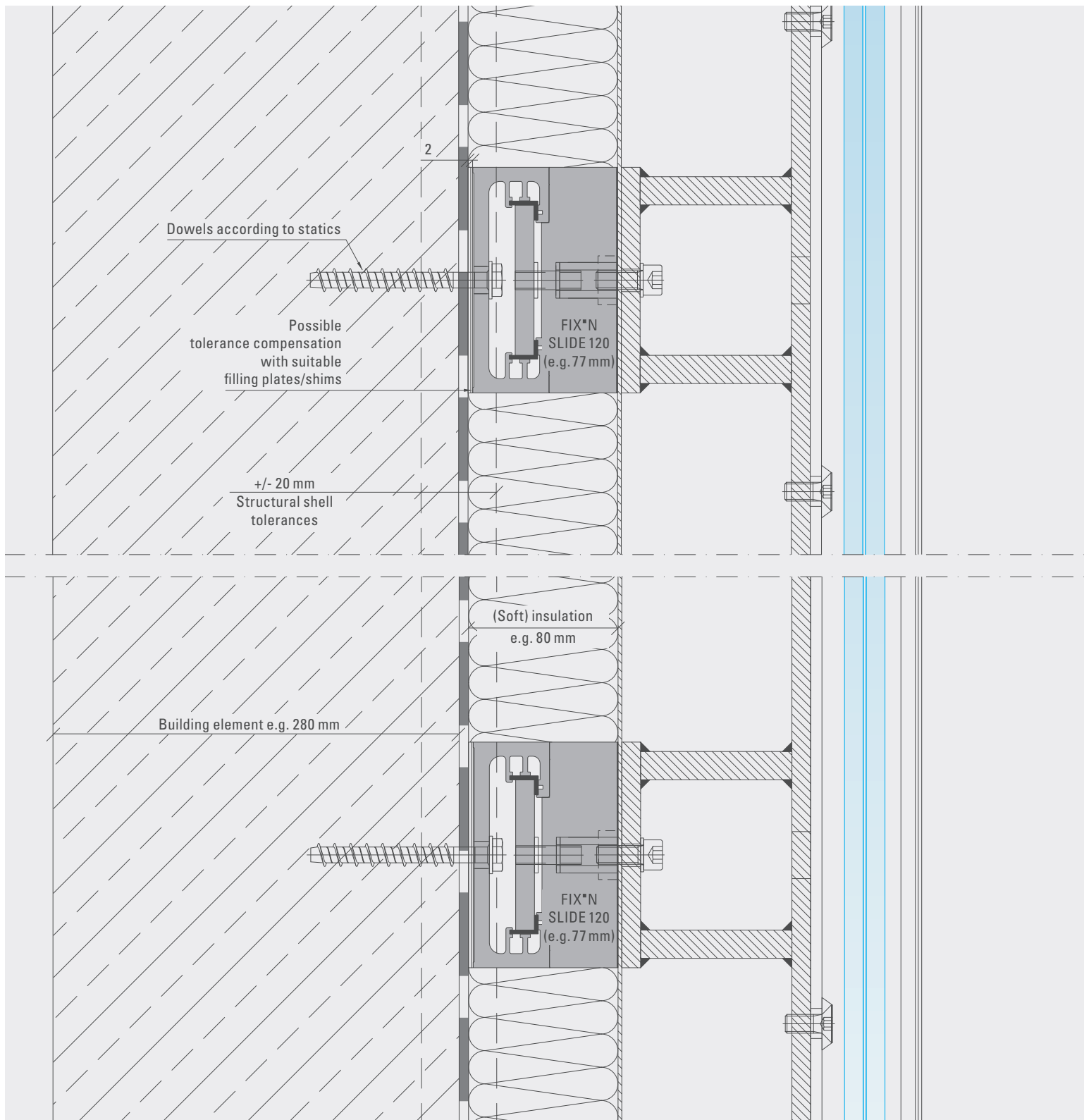
Vertical section



#### INSTALLATION RECOMMENDATION

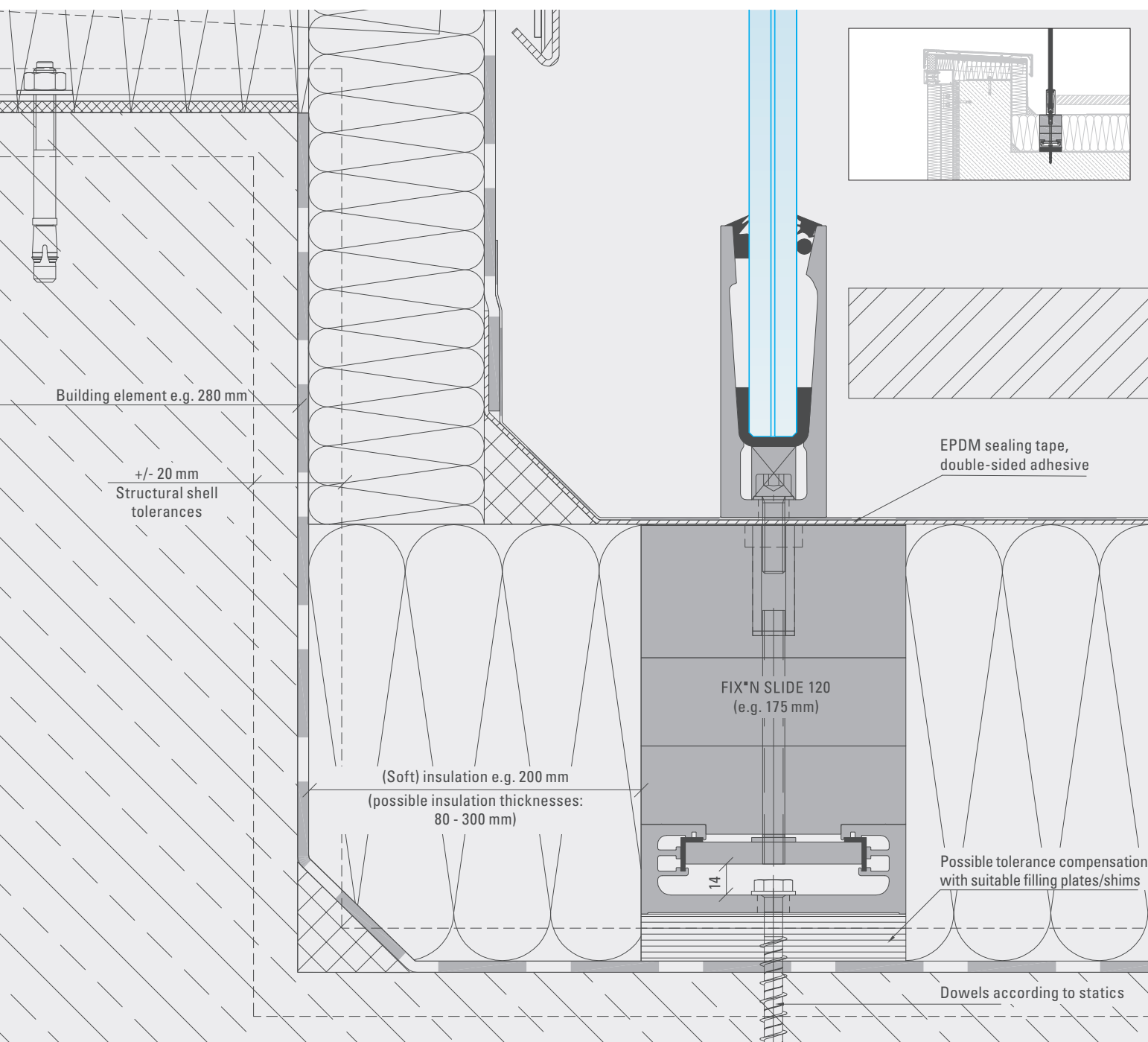
- String out building (determine insulation outer edge)
- Installation FIX\*N SLIDE (possible tolerance compensation with suitable filler plates/shims)
- Ensure exterior impermeability with double-sided adhesive EPDM sealing tape
- Fix film guide plate
- Execute building sealing
- Install BALARDO ALU SIDE 1

Horizontal section



### Attic cover all-glass railing, e.g. BALARDO ALU TOP 3 with soft insulation

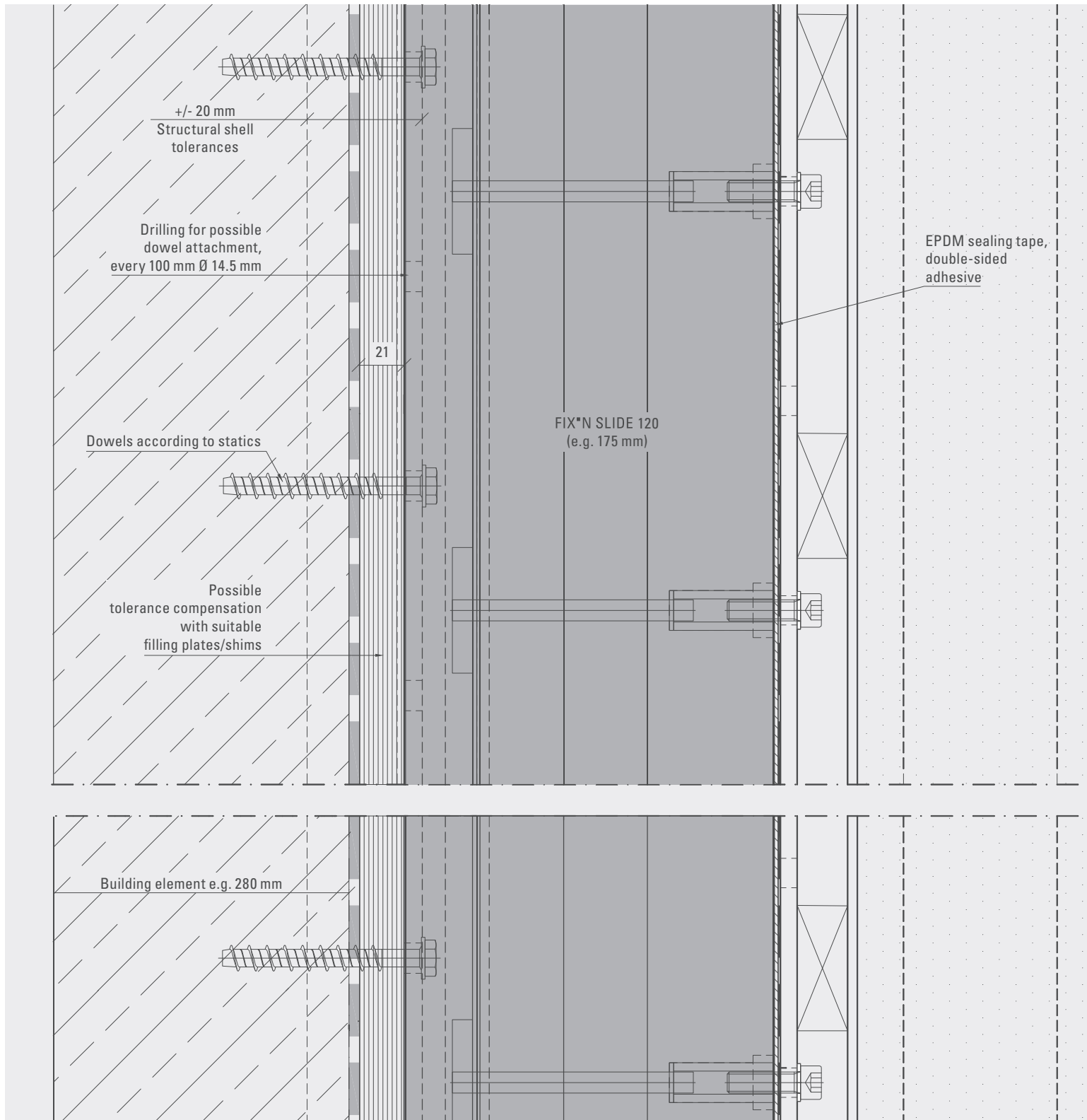
Vertical section



#### INSTALLATION RECOMMENDATION

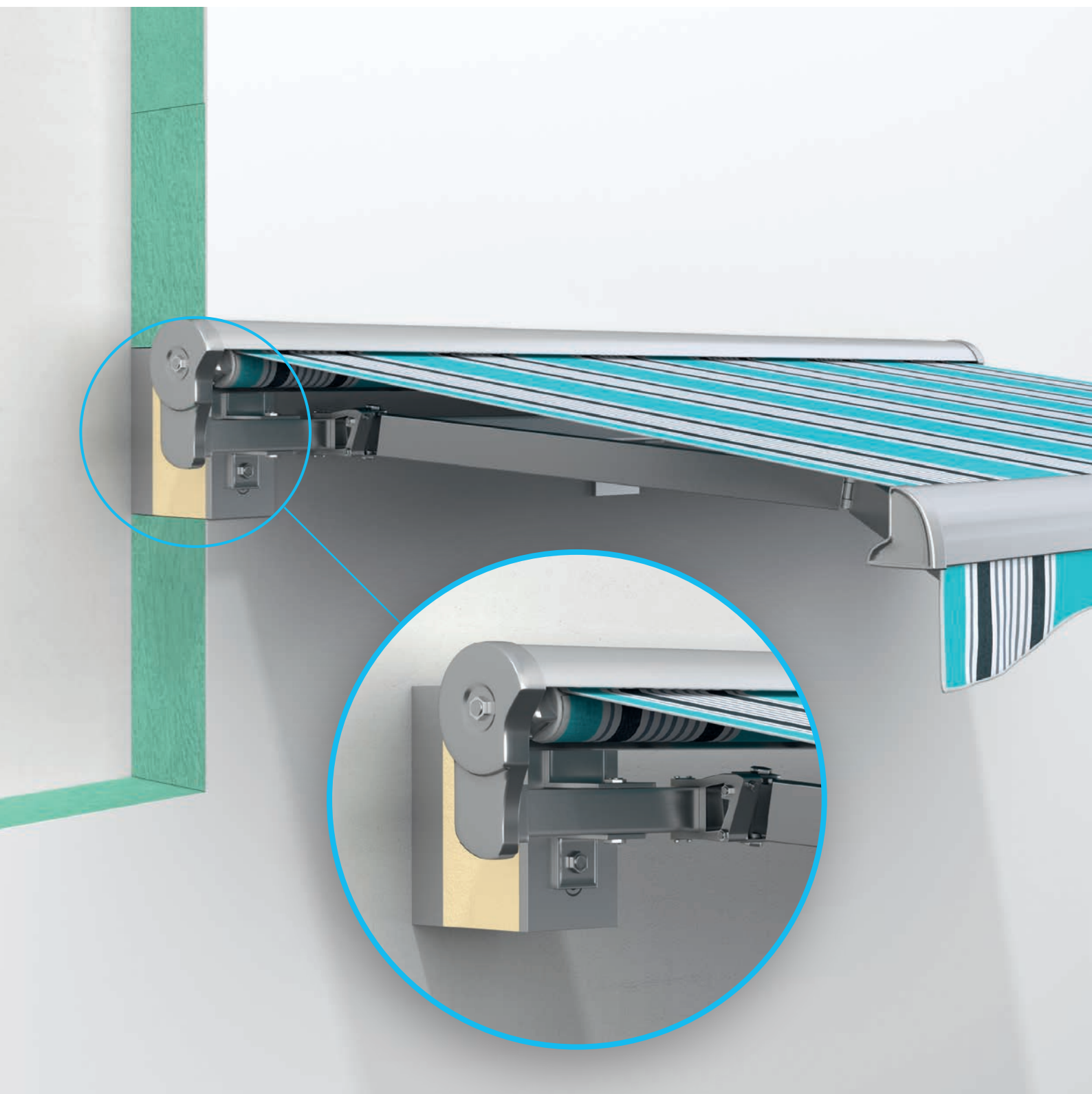
- String out building (determine insulation outer edge)
- Installation FIX\*N SLIDE  
(possible tolerance compensation with suitable filling plates/shims)
- Ensure exterior impermeability with double-sided  
adhesive EPDM sealing tape
- Fix film guide plate
- Execute building sealing
- Install BALARDO ALU
- Profile spacing for drainage: max. 40 mm

Horizontal section



**GLASSLINE**

FIX'N SLIDE



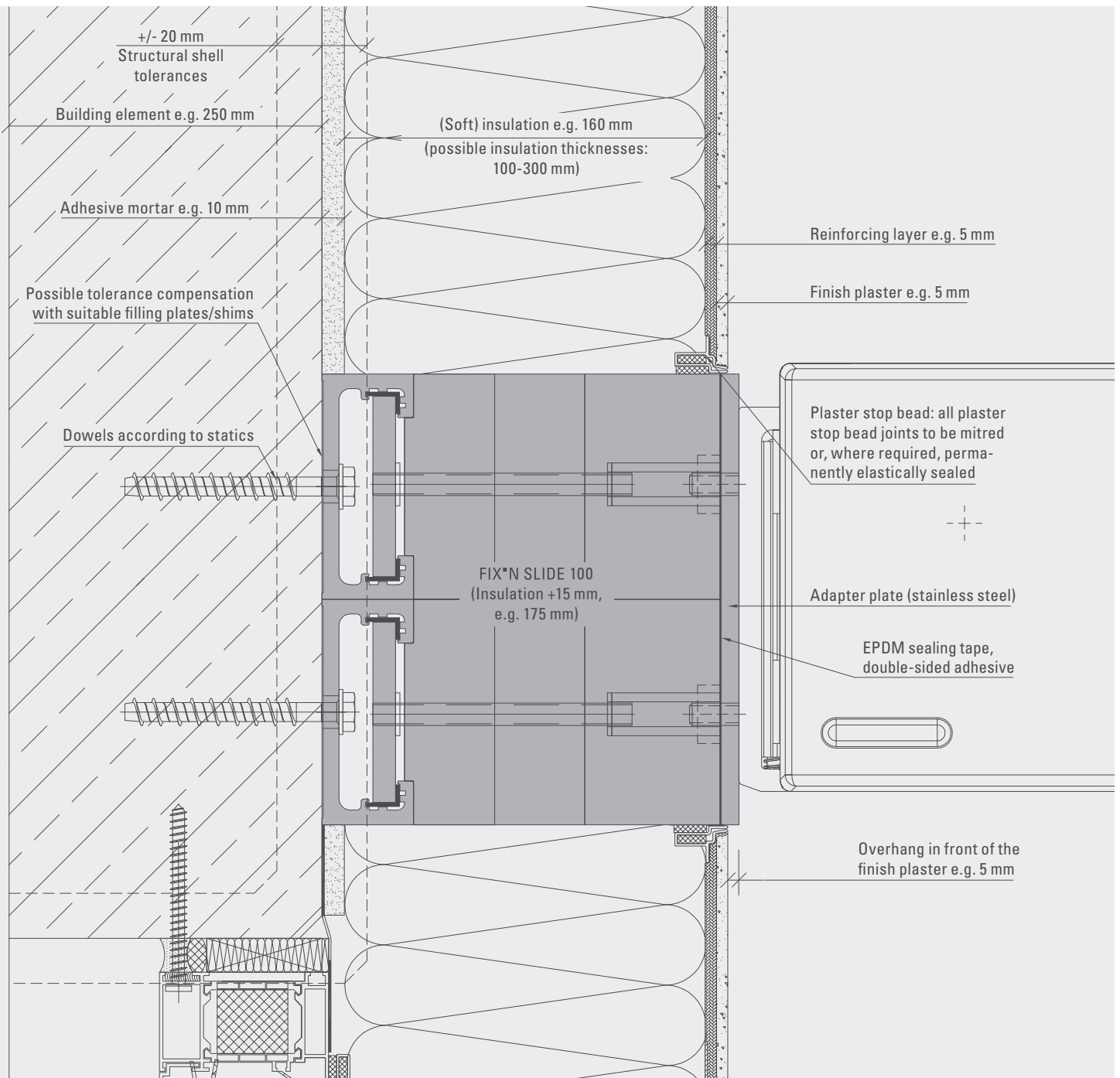
# AWNINGS

## APPLICATION EXAMPLES

### Articulated arm awning

Finish plaster and soft insulation

Vertical section

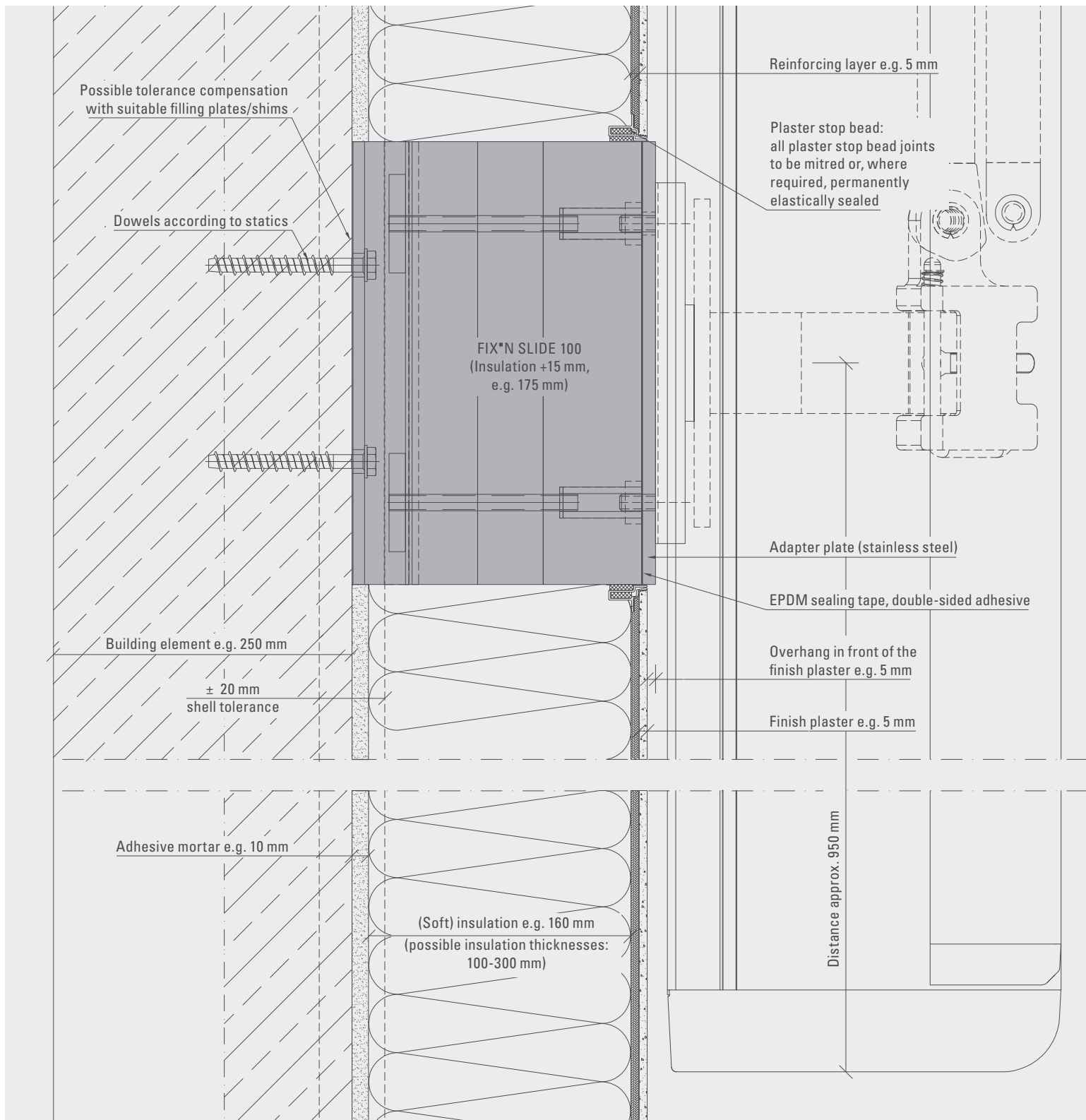


#### INSTALLATION RECOMMENDATION

- String out building (determine insulation outer edge)
- Installation FIX\*N SLIDE  
(possible tolerance compensation with suitable filling plates/shims)
- Ensure exterior impermeability with double-sided  
adhesive EPDM sealing tape
- Fix adapter plate
- Ensure ETICS with finish plaster
- Install sun protection system



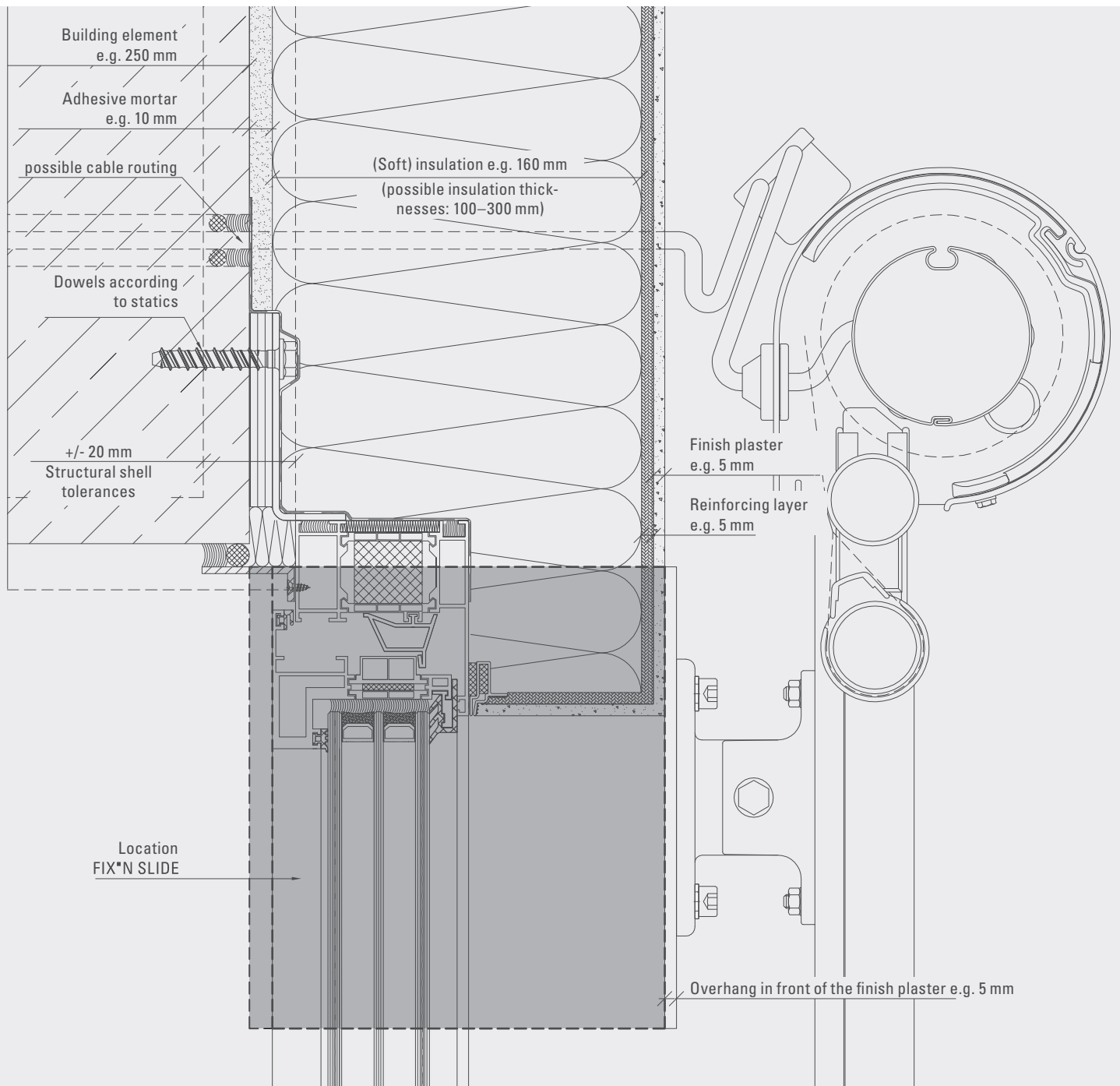
Horizontal section



### Drop arm awning

Finish plaster and soft insulation

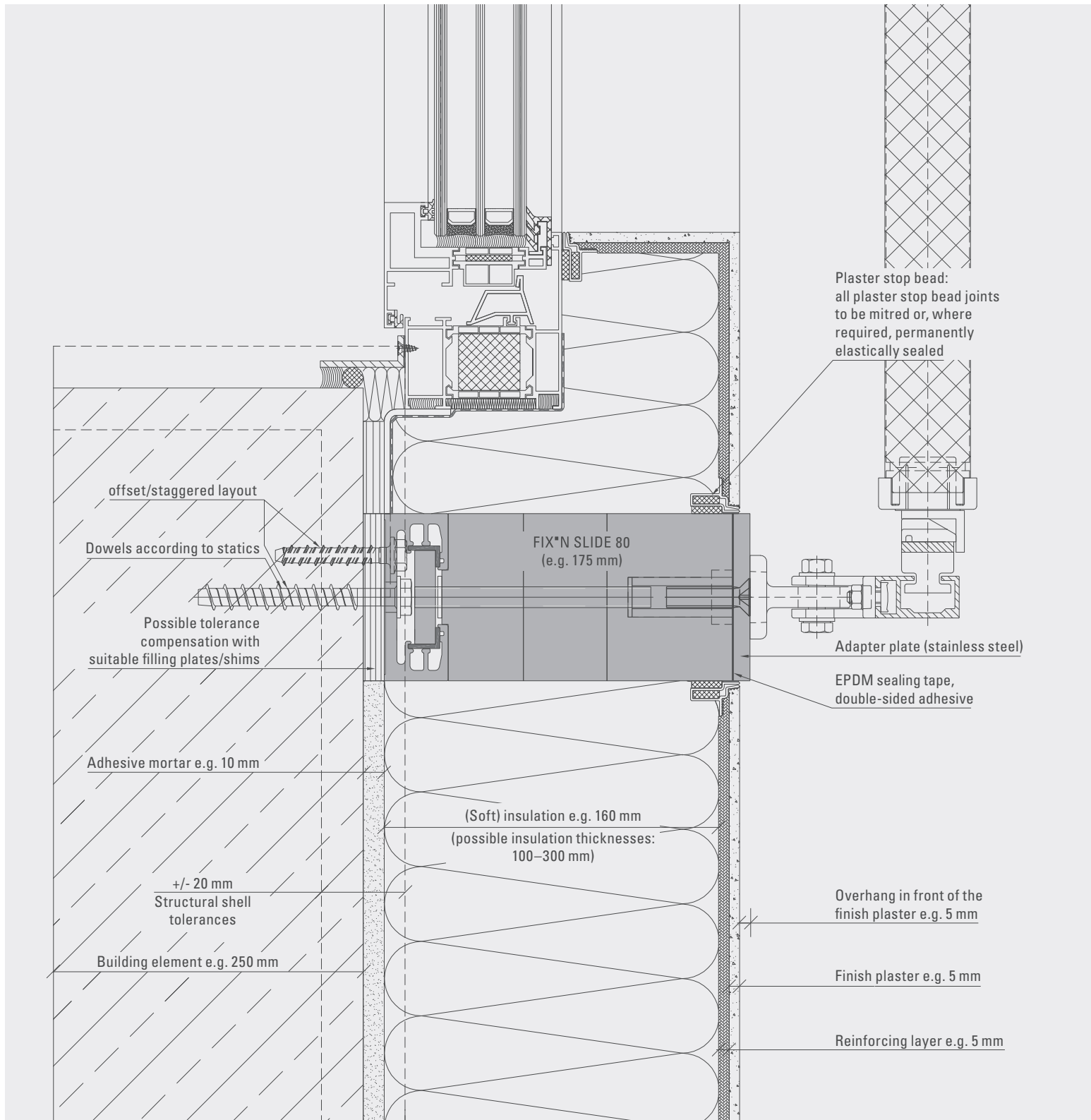
Vertical section



#### INSTALLATION RECOMMENDATION

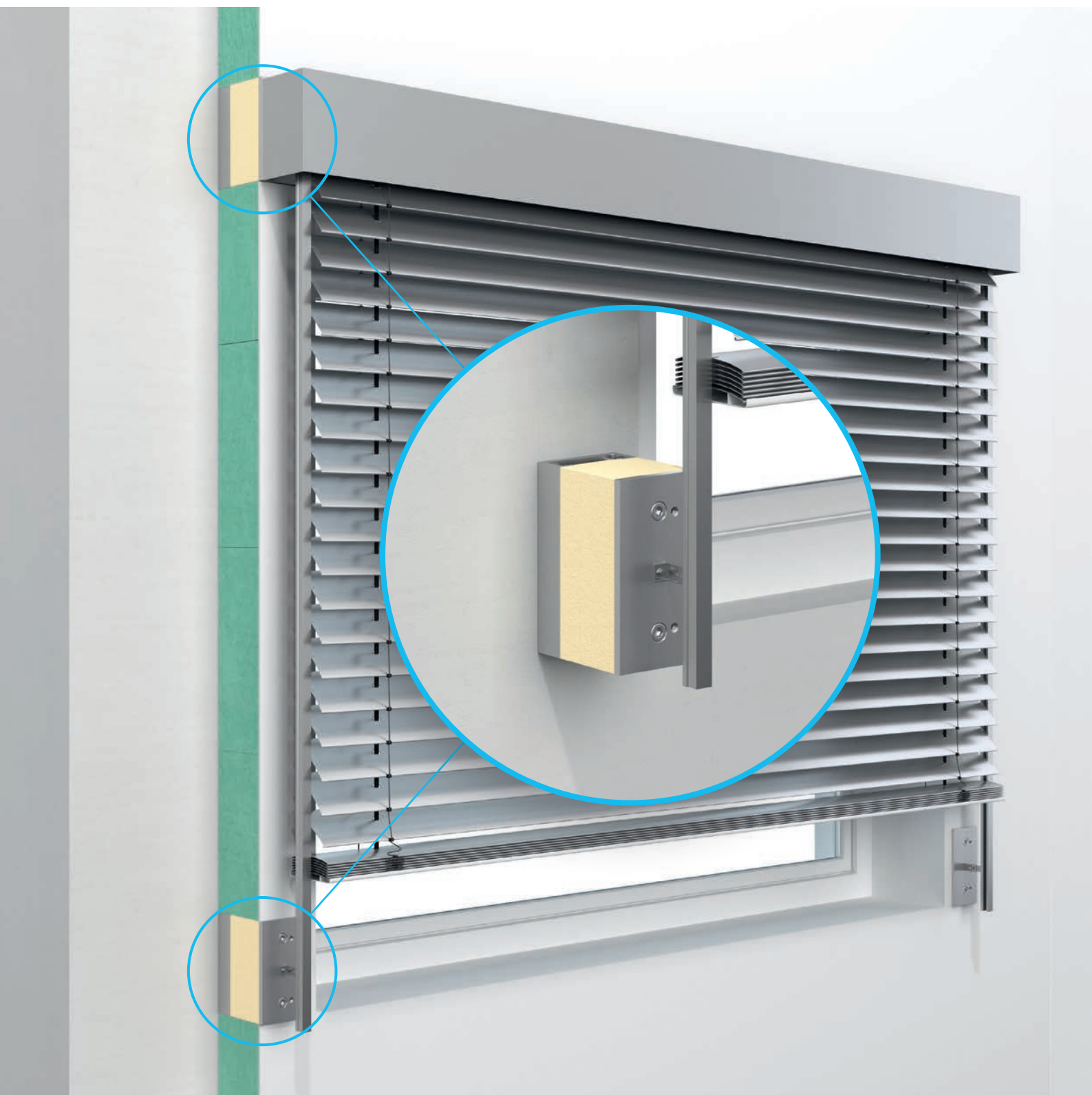
- String out building (determine insulation outer edge)
- Installation FIX\*N SLIDE  
(possible tolerance compensation with suitable filling plates/shims)
- Ensure exterior impermeability with double-sided adhesive EPDM sealing tape
- Fix adapter plate
- Ensure ETICS with finish plaster
- Install sun protection system

Horizontal section



**GLASSLINE**

FIX'N SLIDE



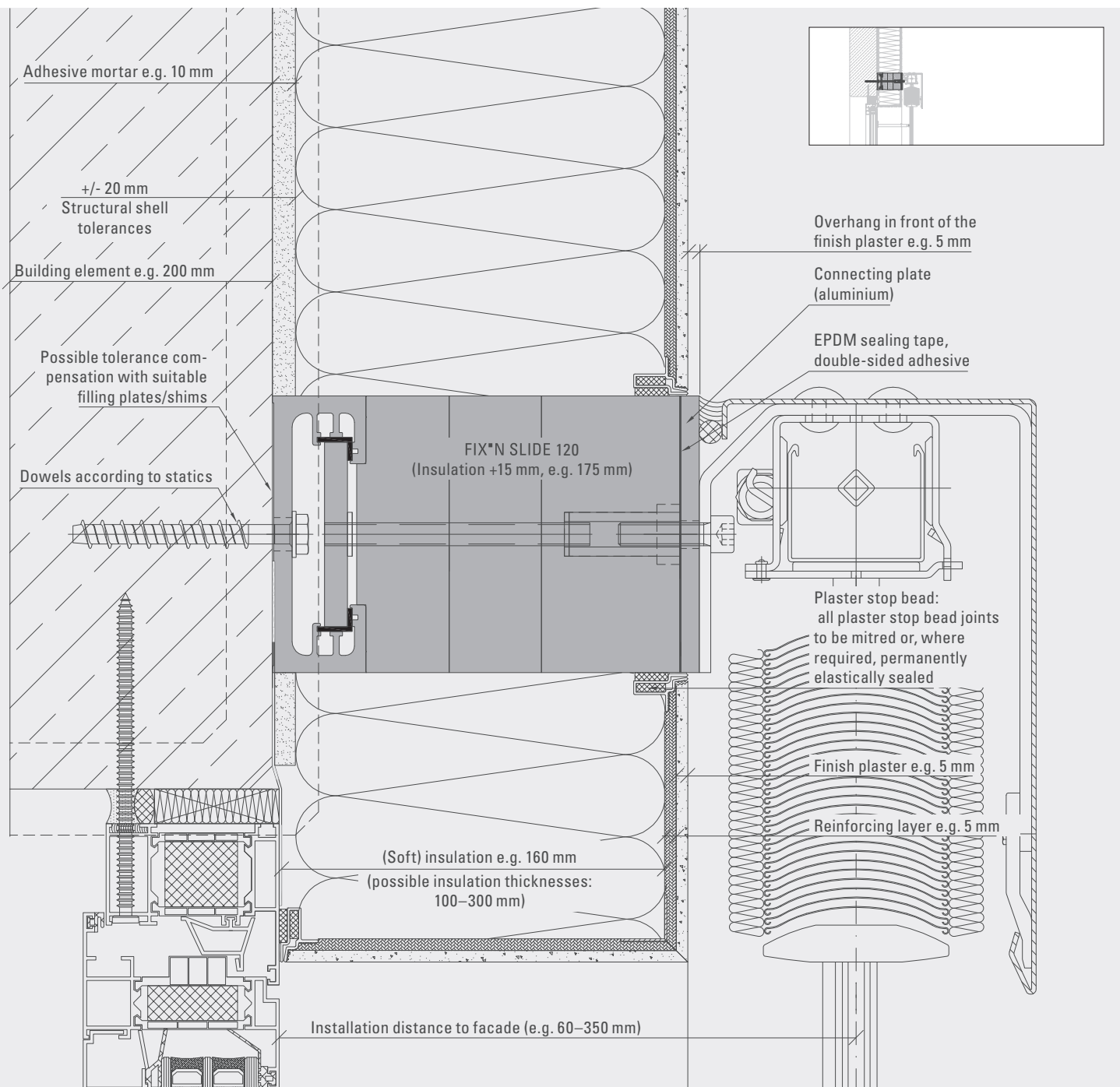
# **EXTERNAL VENETIAN BLINDS**

## APPLICATION EXAMPLES

### External venetian blind

with guide rail

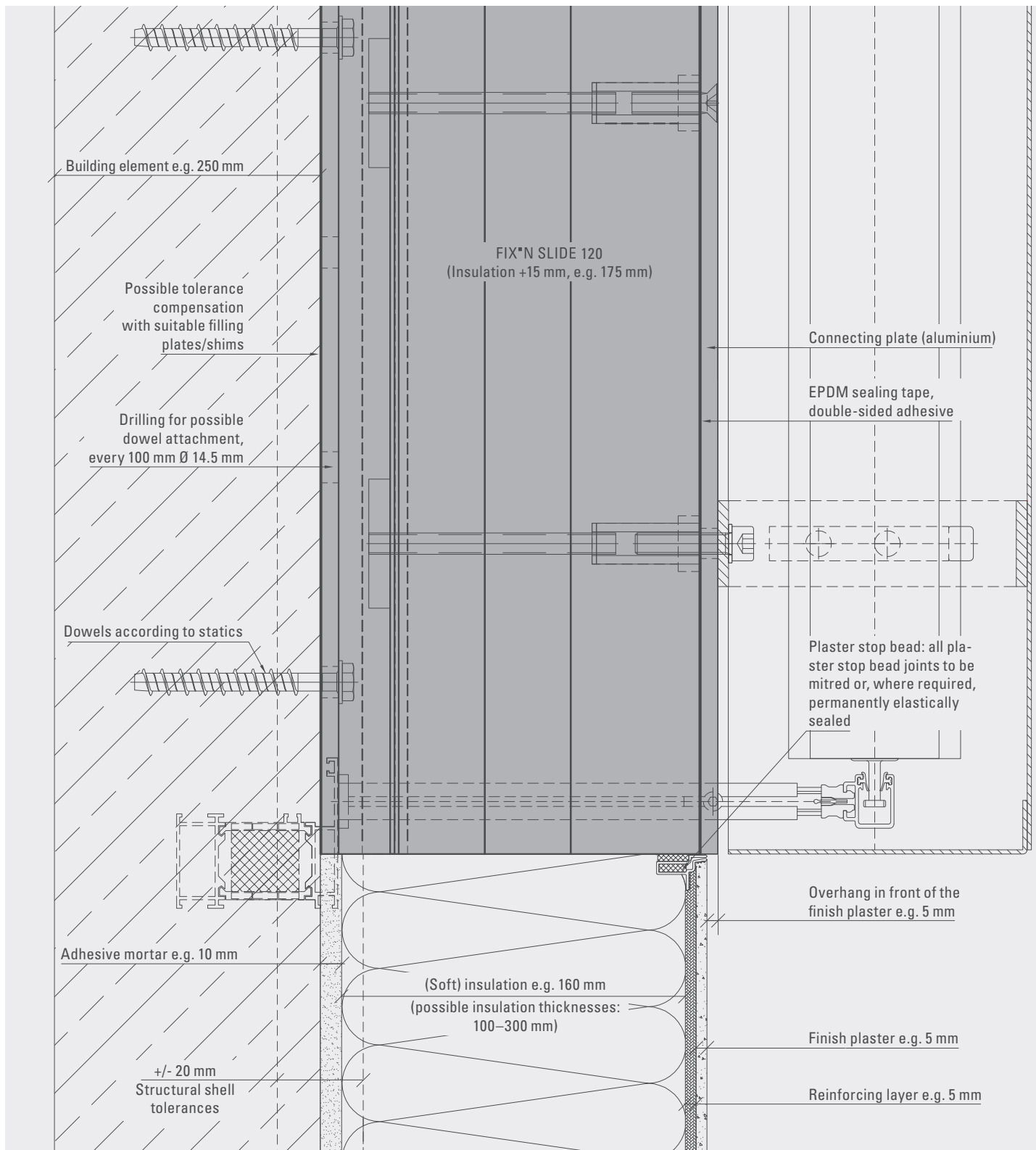
Vertical section



#### INSTALLATION RECOMMENDATION

- String out building (determine insulation outer edge)
- Installation FIX\*N SLIDE (possible tolerance compensation with suitable filling plates/shims)
- Ensure exterior impermeability with double-sided adhesive EPDM sealing tape
- Fix connecting plate
- Ensure building sealing e.g. with liquid plastic
- Create ETICS with finish plaster
- Install sun protection system

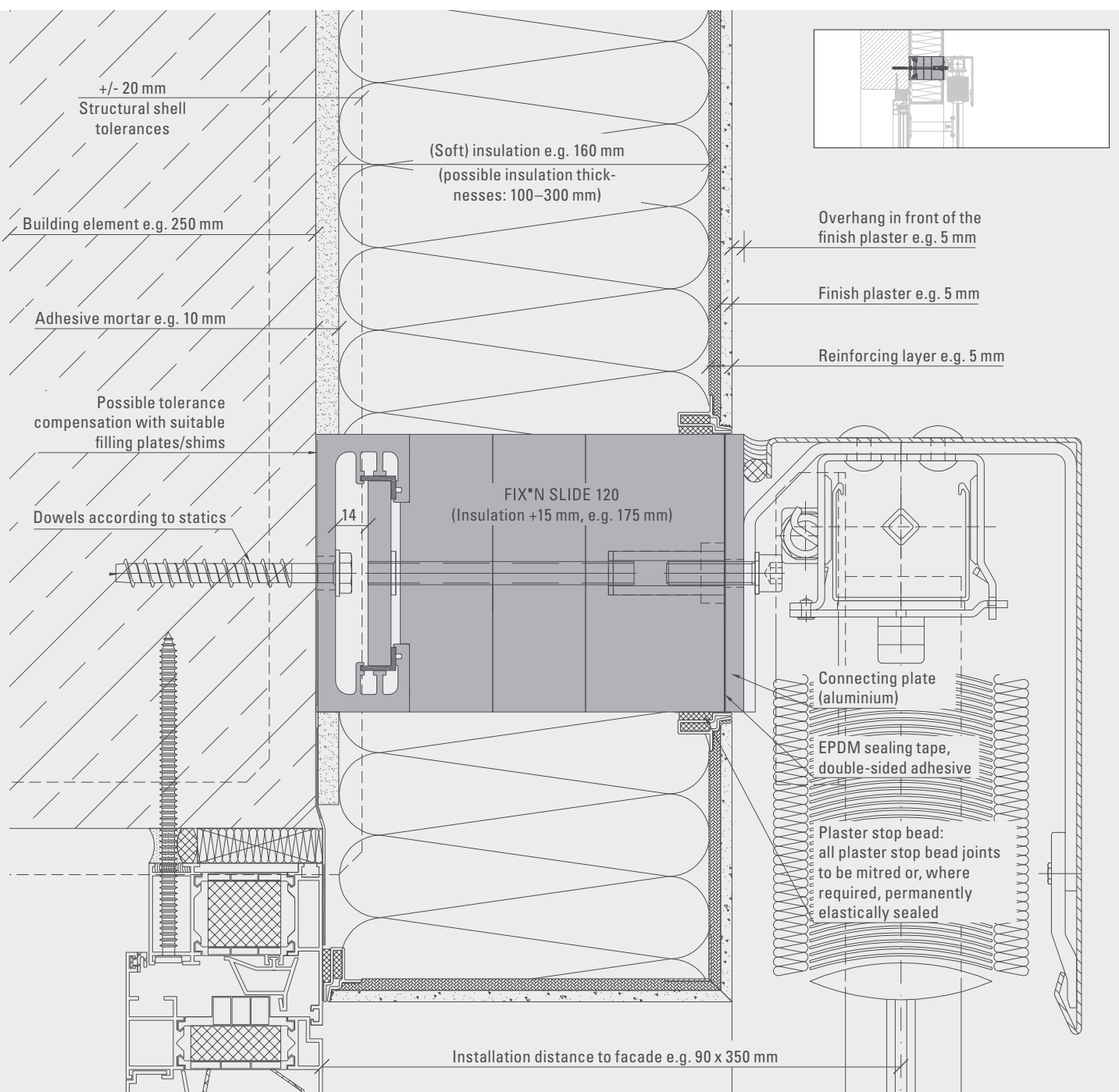
Horizontal section



### Wind-resistant external venetian blinds

Finish plaster and soft insulation

Vertical section

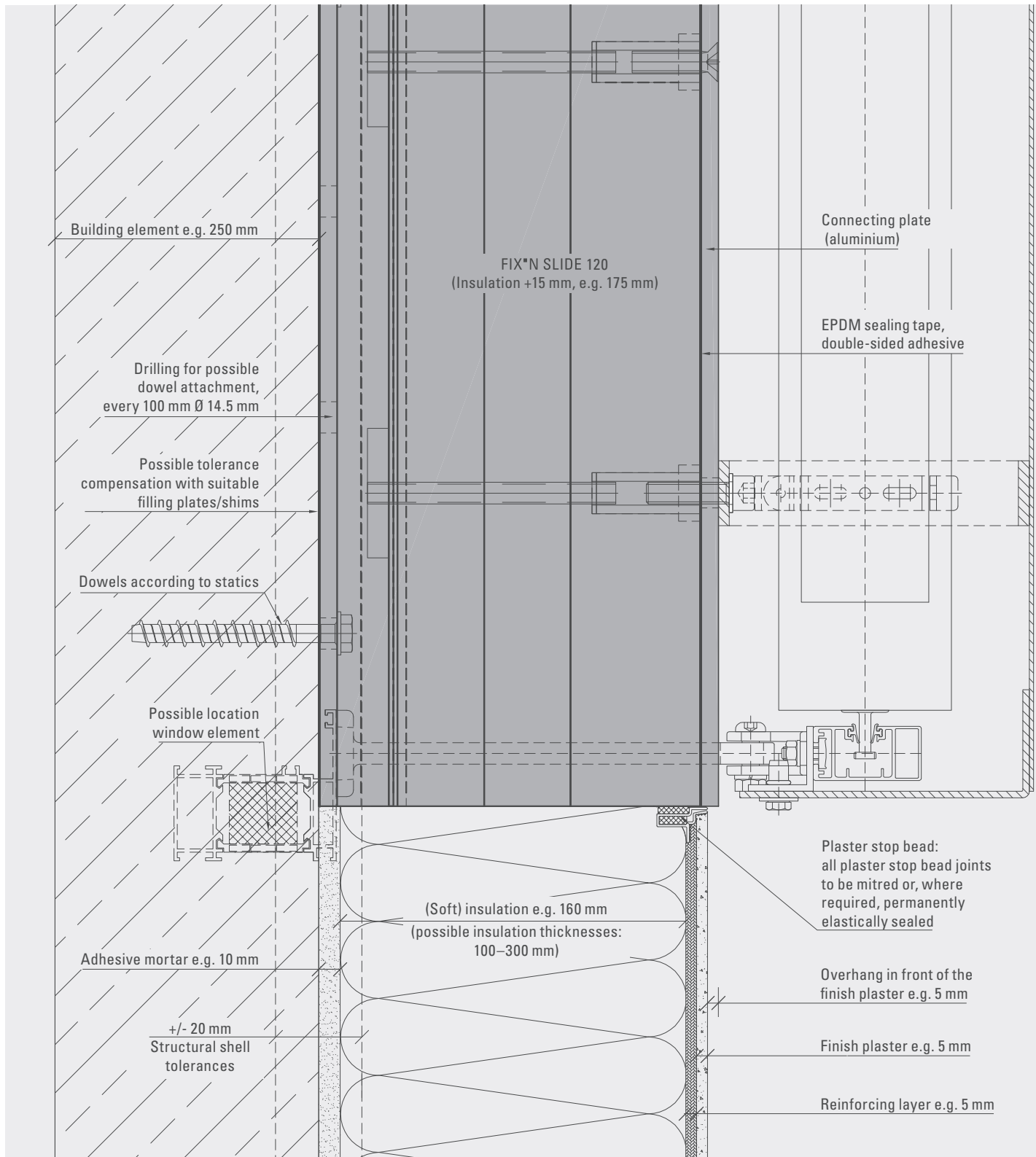


#### INSTALLATION RECOMMENDATION

- String out building (determine insulation outer edge)
- Installation FIX\*N SLIDE (possible tolerance compensation with suitable filling plates/shims)
- Ensure exterior impermeability with double-sided adhesive EPDM sealing tape
- Fix adapter plate
- Ensure ETICS with finish plaster
- Install sun protection system



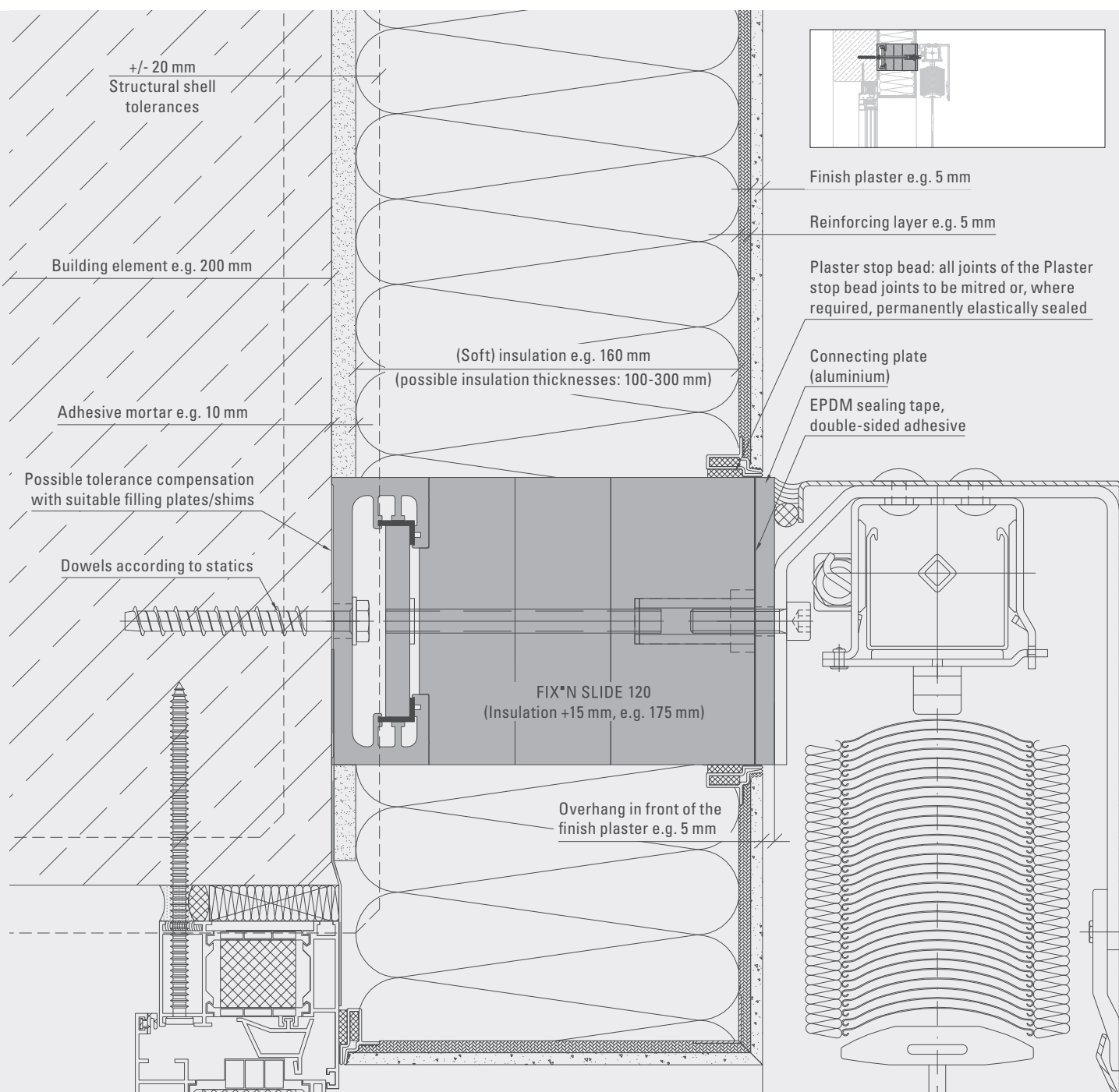
Horizontal section



### External venetian blind

Finish plaster and soft insulation

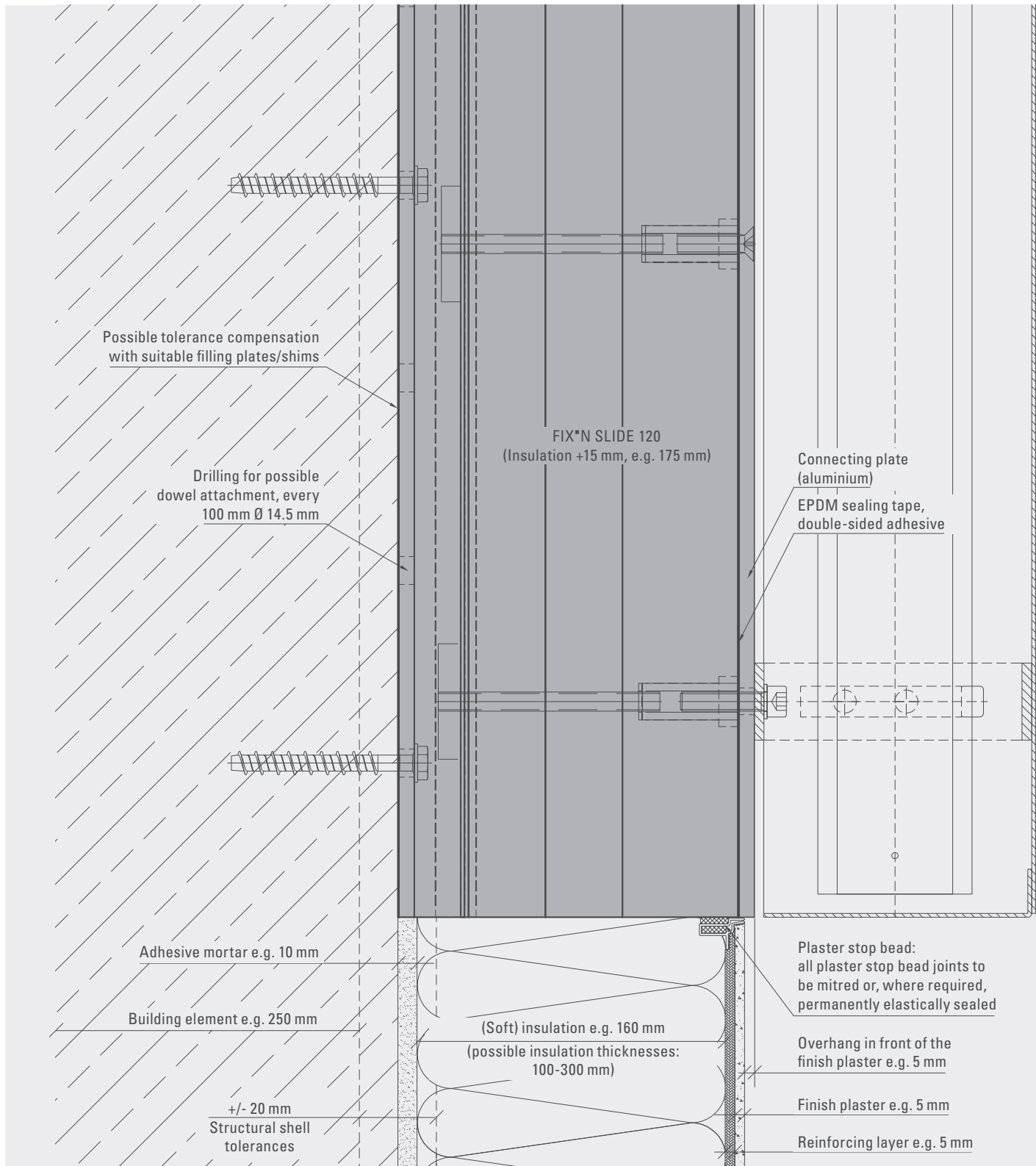
Vertical section



#### INSTALLATION RECOMMENDATION

- String out building (determine insulation outer edge)
- Installation FIX\*N SLIDE (possible tolerance compensation with suitable filling plates/shims)
- Ensure exterior impermeability with double-sided adhesive EPDM sealing tape
- Fix connecting plate
- Ensure ETICS with finish plaster
- Install sun protection system

Horizontal section



**GLASSLINE**

FIX\***N** SLIDE



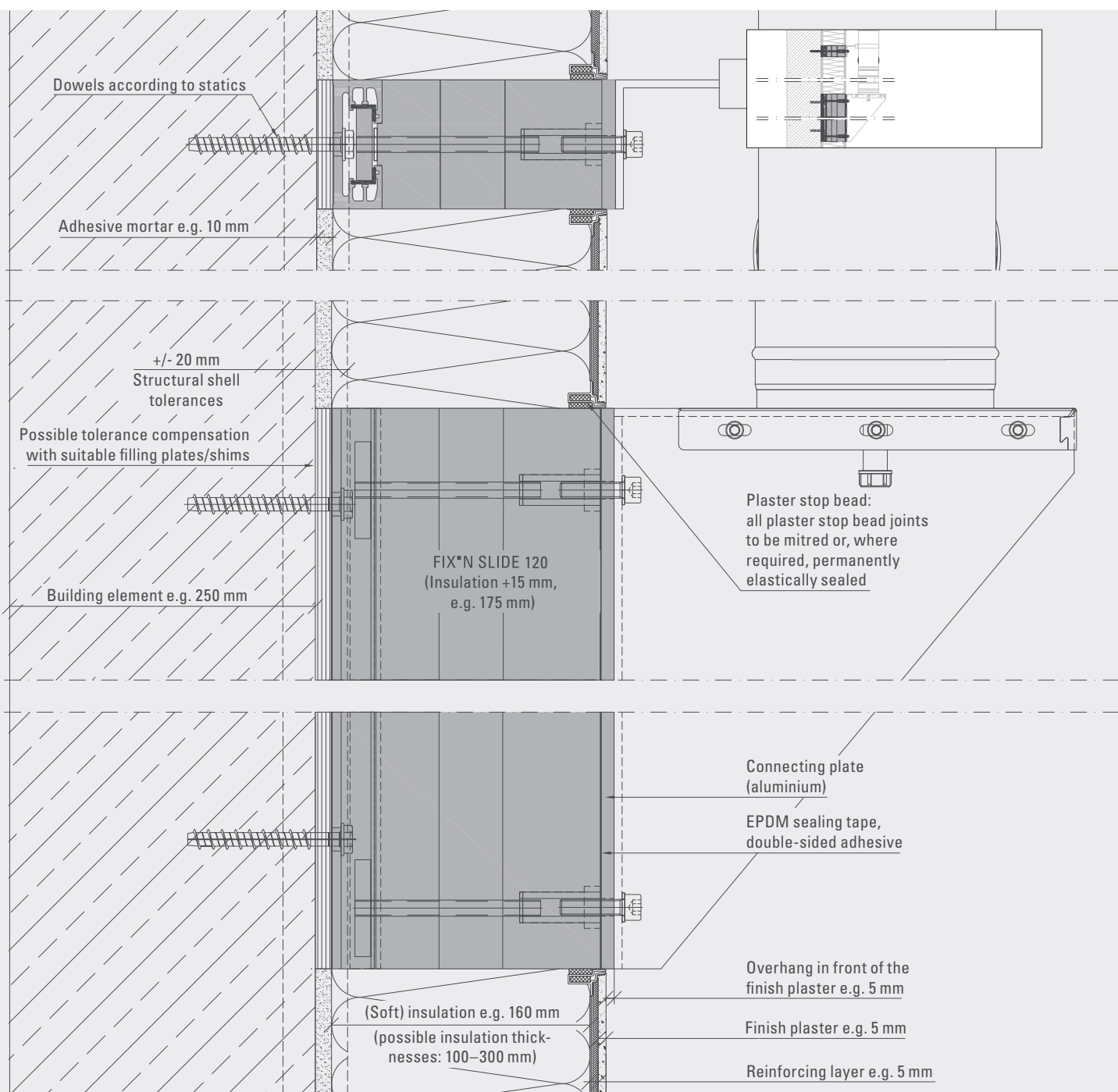
# **CHIMNEYS, RESCUE LADDERS**

APPLICATION EXAMPLES

### Chimney flue

Finish plaster and soft insulation

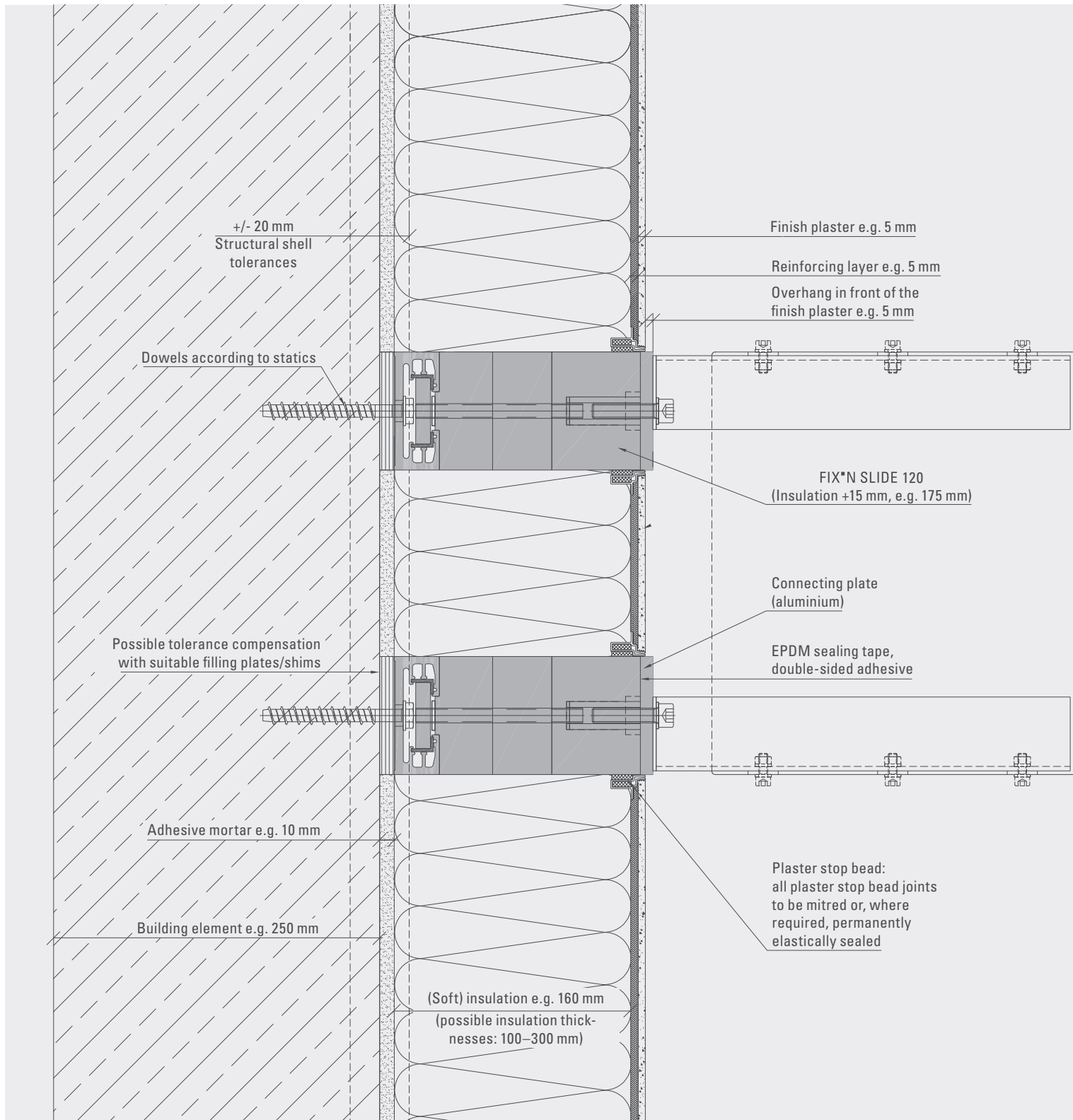
Vertical section



#### INSTALLATION RECOMMENDATION

- String out building (determine insulation outer edge)
- Installation FIX\*N SLIDE (possible tolerance compensation with suitable filling plates/shims)
- Ensure exterior impermeability with double-sided adhesive EPDM sealing tape
- Fix connecting plate
- Install adapter console, chimney flue and bracket
- Create ETICS with finish plaster
- Install chimney flue

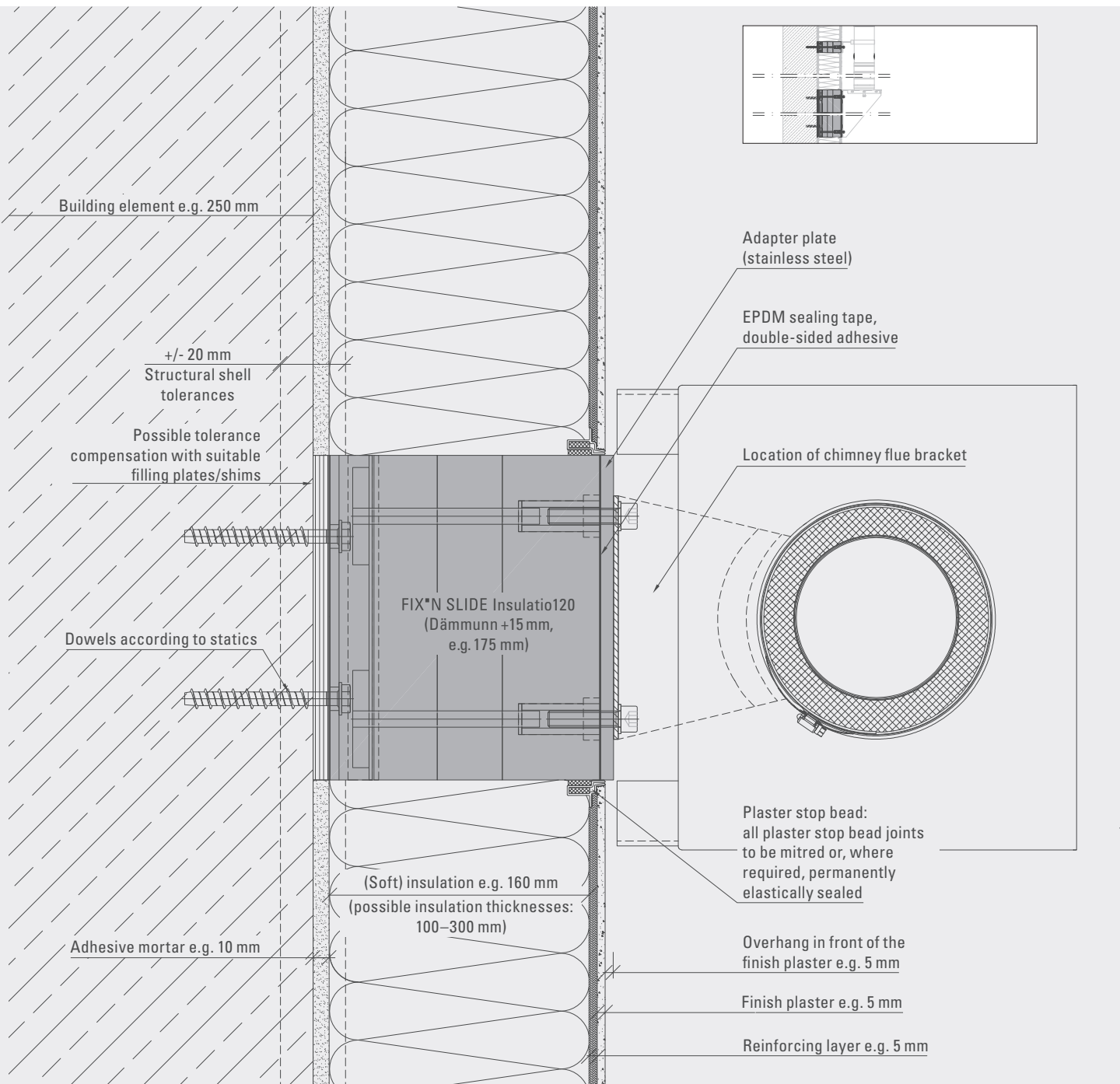
Horizontal section



### Chimney flue

Finish plaster and soft insulation

Vertical section



#### INSTALLATION RECOMMENDATION

- String out building (determine insulation outer edge)
- Installation FIX\*N SLIDE (possible tolerance compensation with suitable filling plates/shims)
- Ensure exterior impermeability with double-sided adhesive EPDM sealing tape
- Fix adapter plate
- Install adapter console, chimney flue and bracket
- Create ETICS with finish plaster
- Install chimney flue

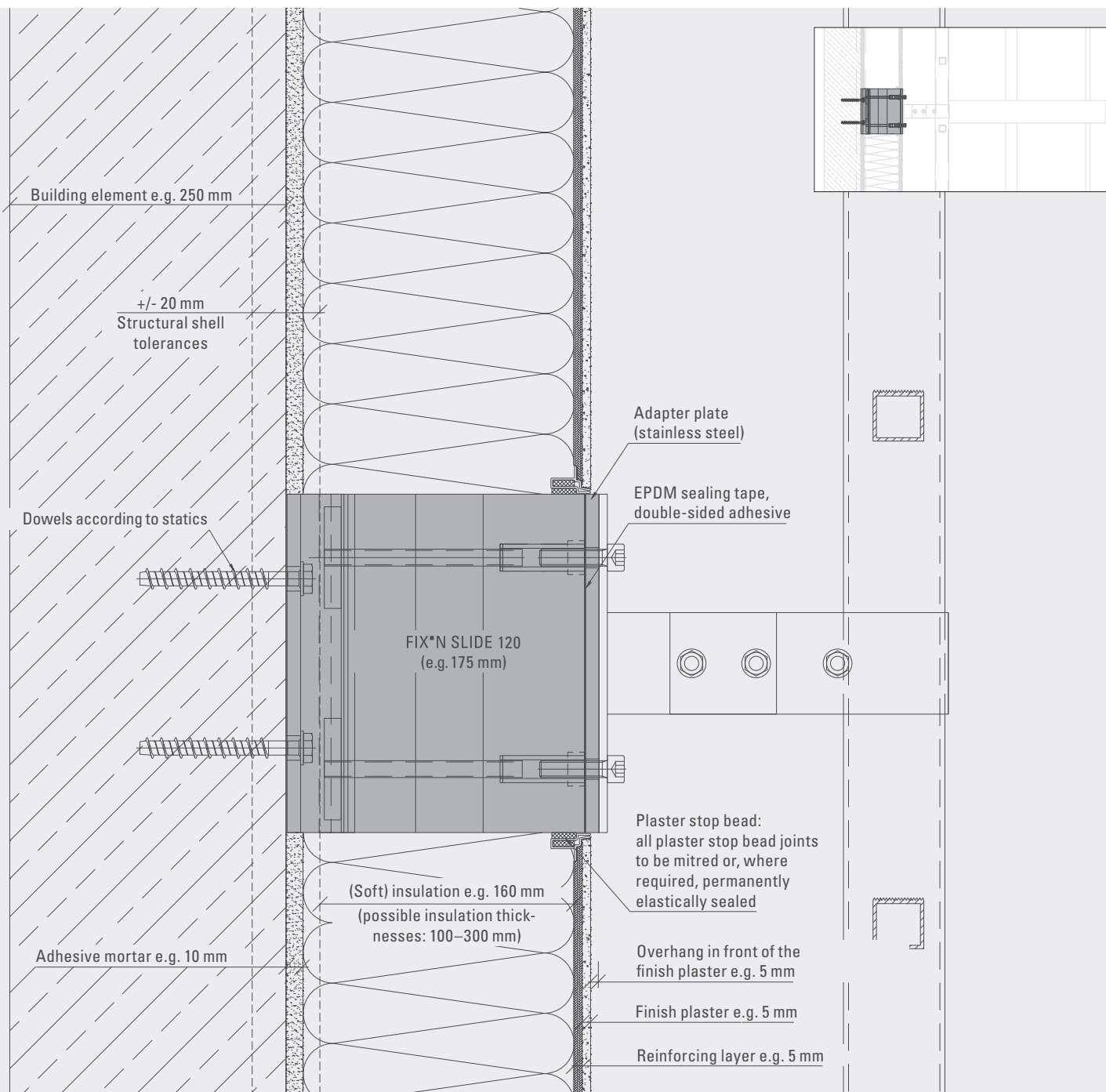


## Notes

### Rescue ladders

Finish plaster and soft insulation

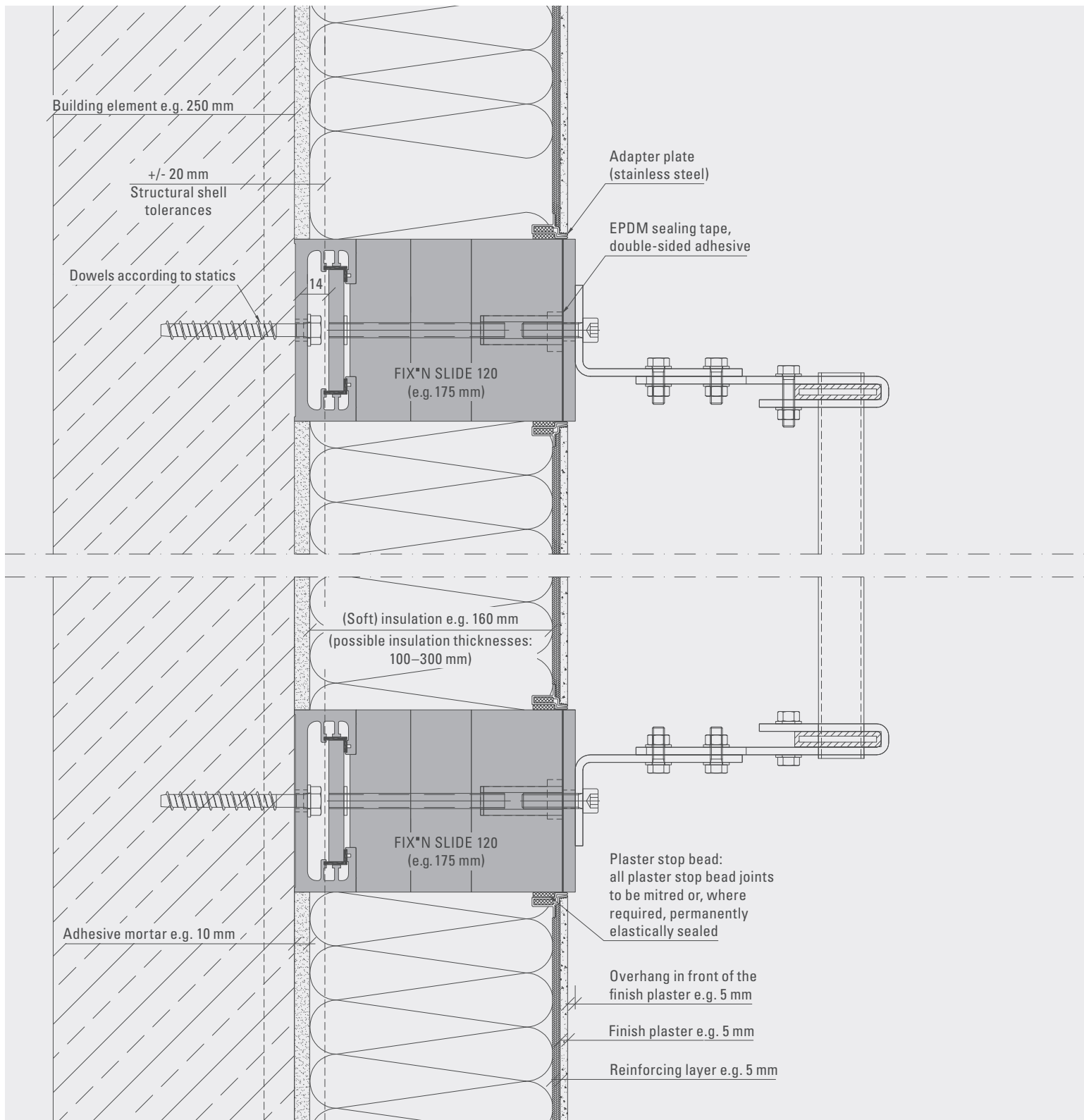
Vertical section



#### INSTALLATION RECOMMENDATION

- String out building (determine insulation outer edge)
- Installation FIX\*N SLIDE  
(possible tolerance compensation with suitable filling plates/shims)
- Ensure exterior impermeability with double-sided adhesive EPDM sealing tape
- Fix adapter plate
- Create ETICS with finish plaster
- Install fixed ladder

Horizontal section



**GLASSLINE**

FIX'N SLIDE



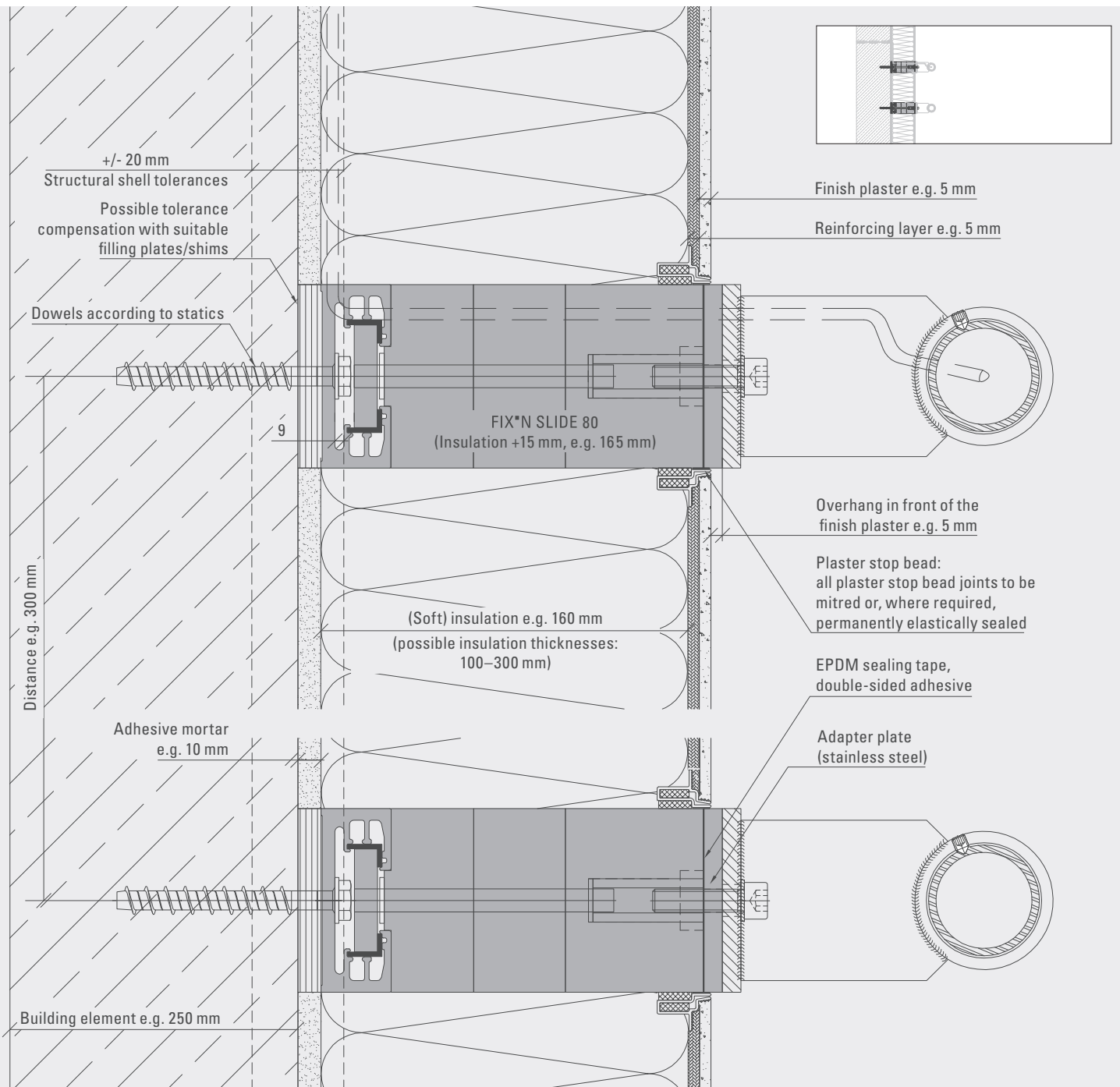
# **ADVERTISING MEDIA AND ADVERTISING SYSTEMS**

APPLICATION EXAMPLES

### Advertising media

Finish plaster and soft insulation

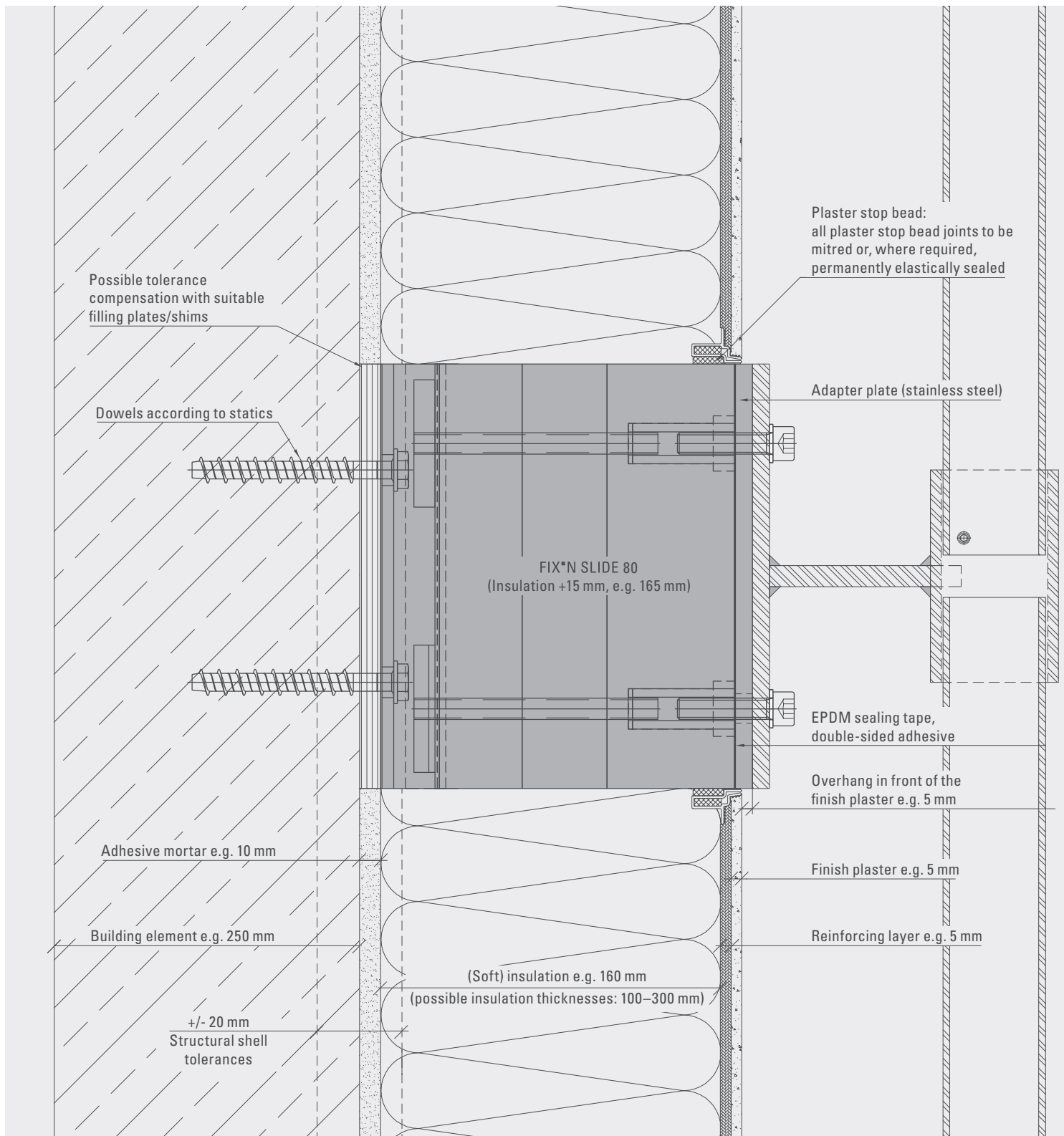
Vertical section



### INSTALLATION RECOMMENDATION

- String out building (determine insulation outer edge)
- Installation FIX\*N SLIDE (possible tolerance compensation with suitable filling plates/shims)
- Ensure exterior impermeability with double-sided adhesive EPDM sealing tape
- Fix adapter plate
- Create ETICS with finish plaster
- Install advertising media

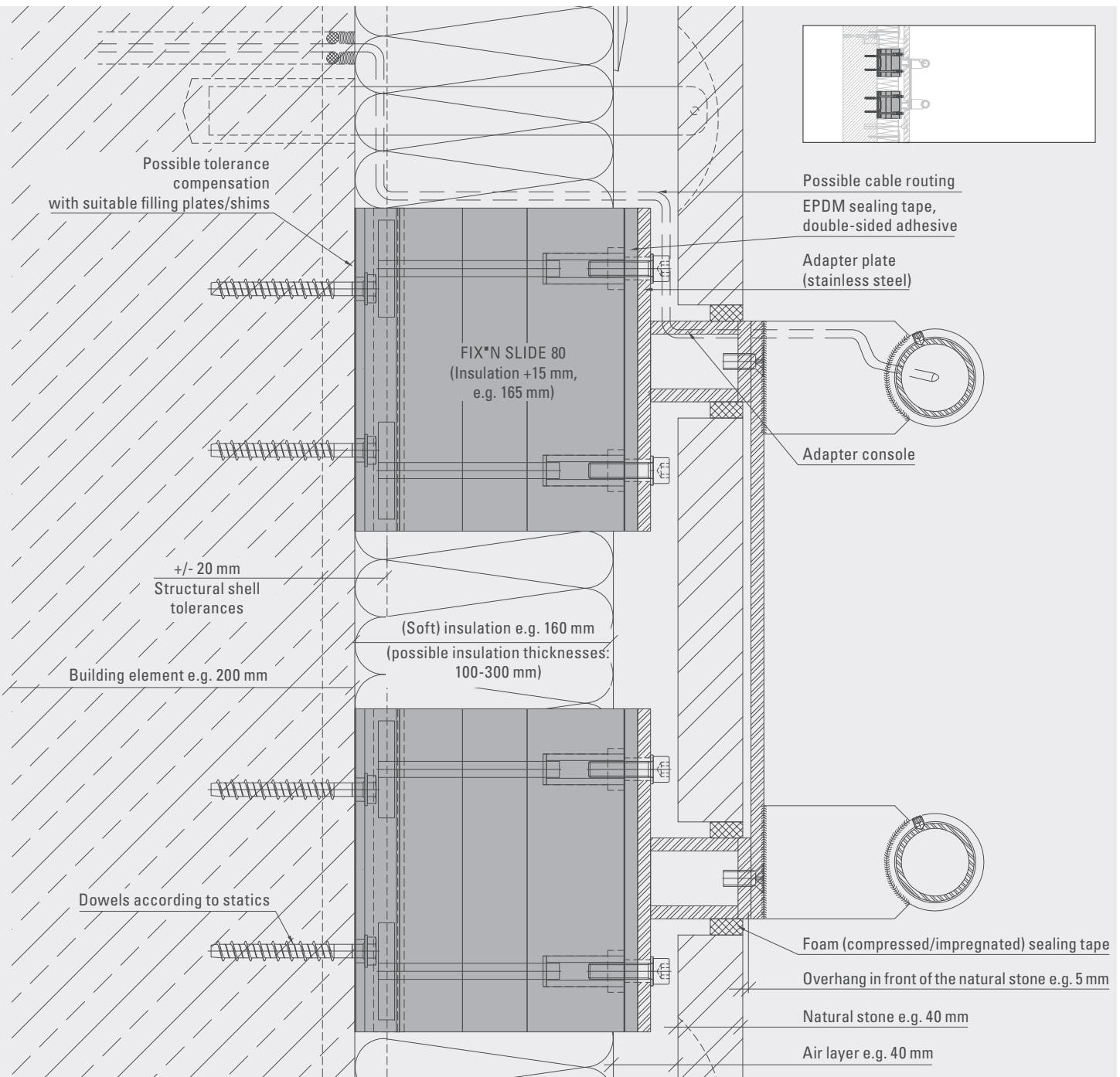
Horizontal section



### Advertising media

Natural stone

Vertical section

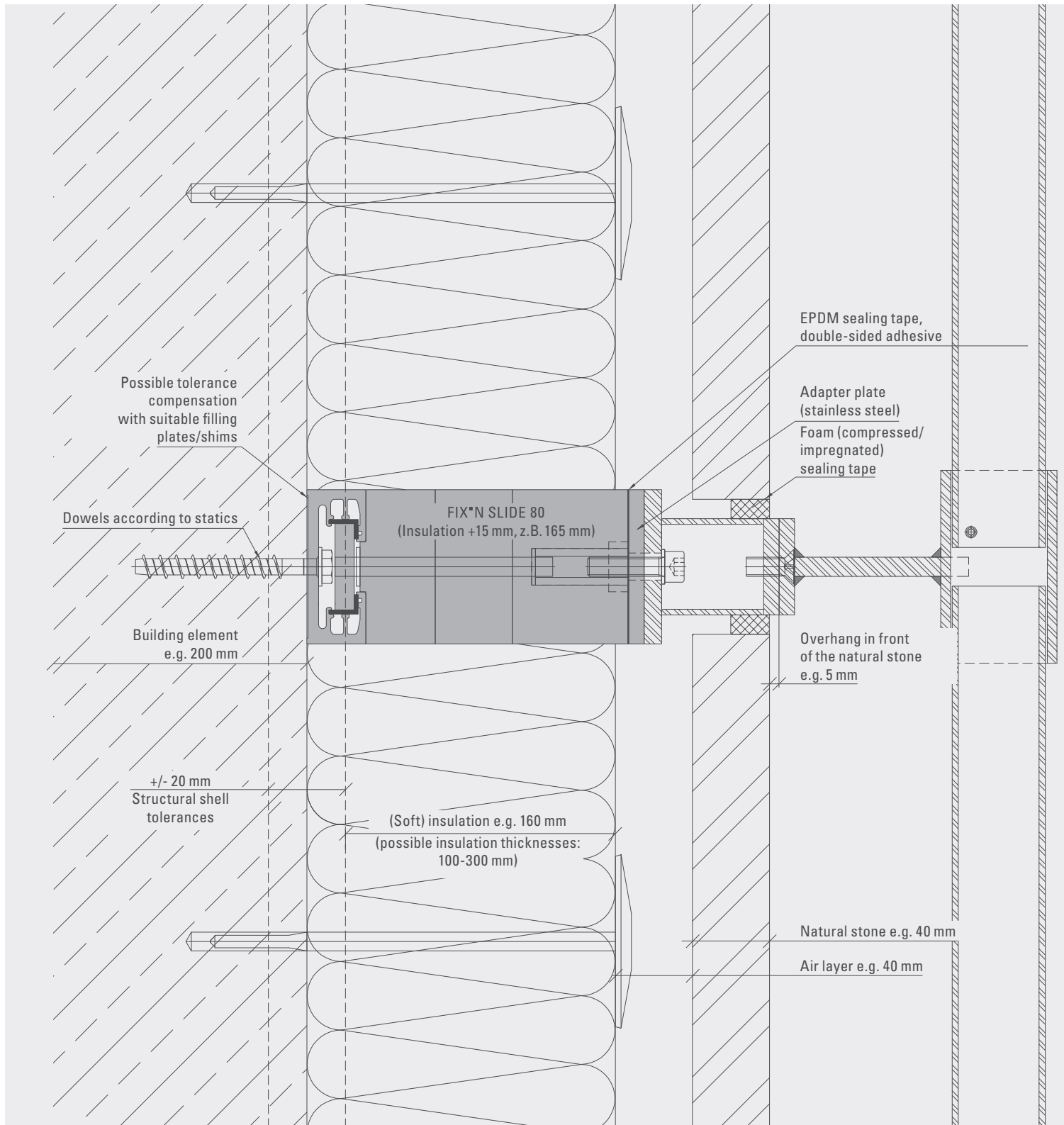


#### INSTALLATION RECOMMENDATION

- String out building (determine insulation outer edge)
- Installation FIX\*N SLIDE (possible tolerance compensation with suitable filling plates/shims)
- Ensure exterior impermeability with double-sided adhesive EPDM sealing tape
- Fix adapter plate
- Install adapter console
- Install natural stone
- Install advertising media



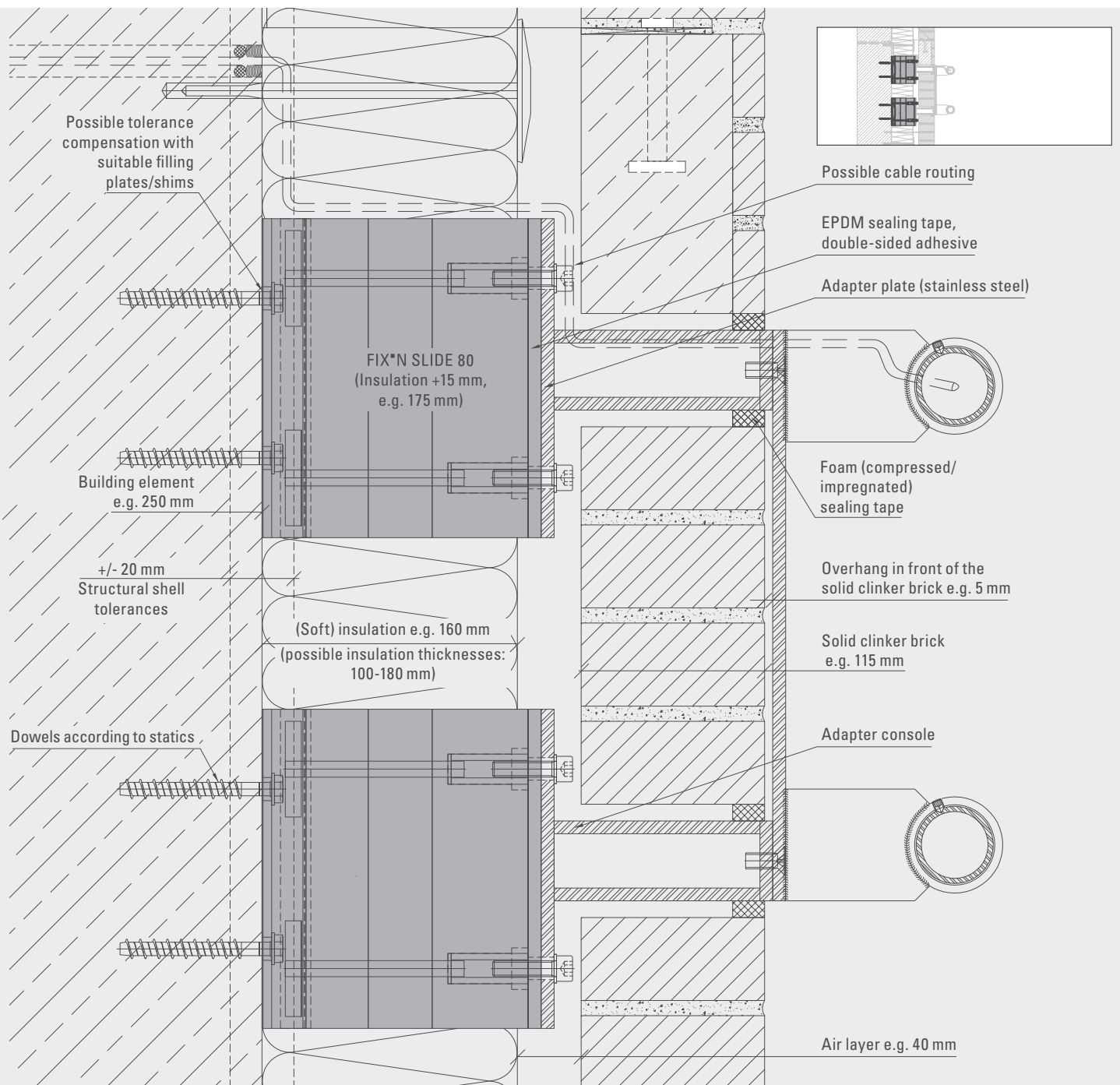
Horizontal section



### Advertising media

Clinker

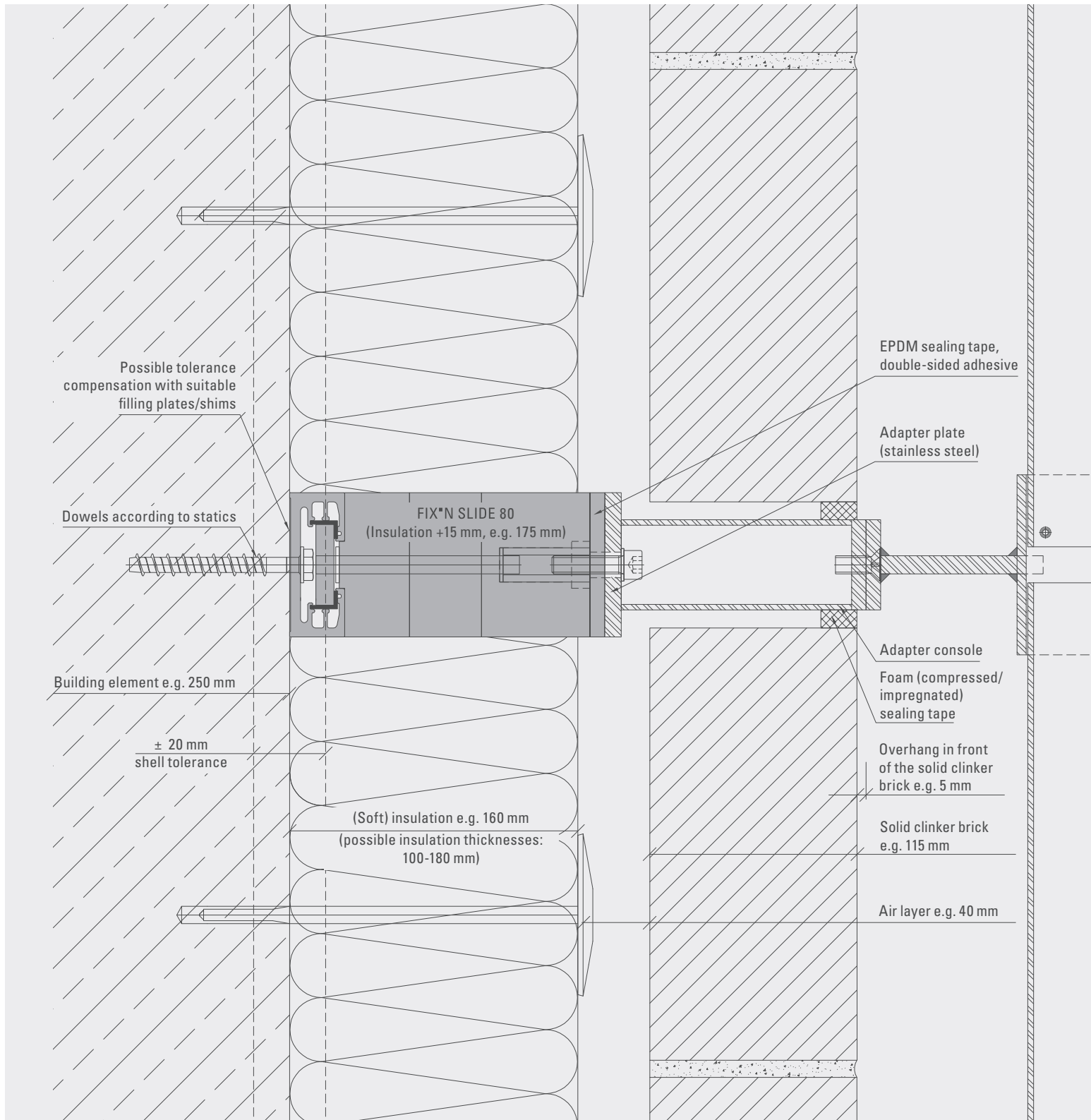
Vertical section



#### INSTALLATION RECOMMENDATION

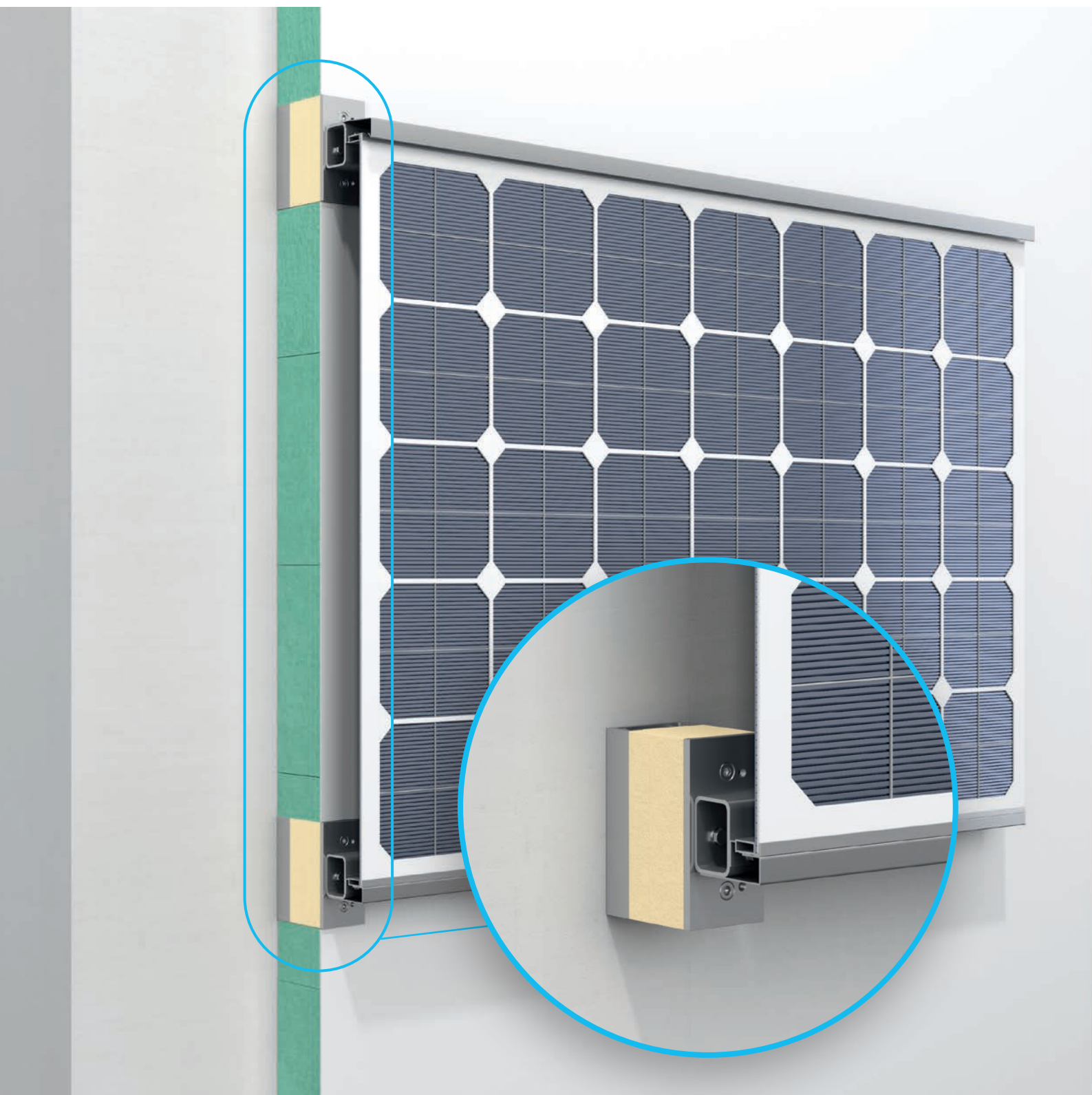
- String out building (determine insulation outer edge)
- Installation FIX\*N SLIDE (possible tolerance compensation with suitable filling plates/shims)
- Ensure exterior impermeability with double-sided adhesive EPDM sealing tape
- Fix adapter plate
- Install adapter console
- Install solid clinker brick
- Install advertising media
- Apply foam (compressed/impregnated) sealing tape

Horizontal section



**GLASSLINE**

FIX'N SLIDE

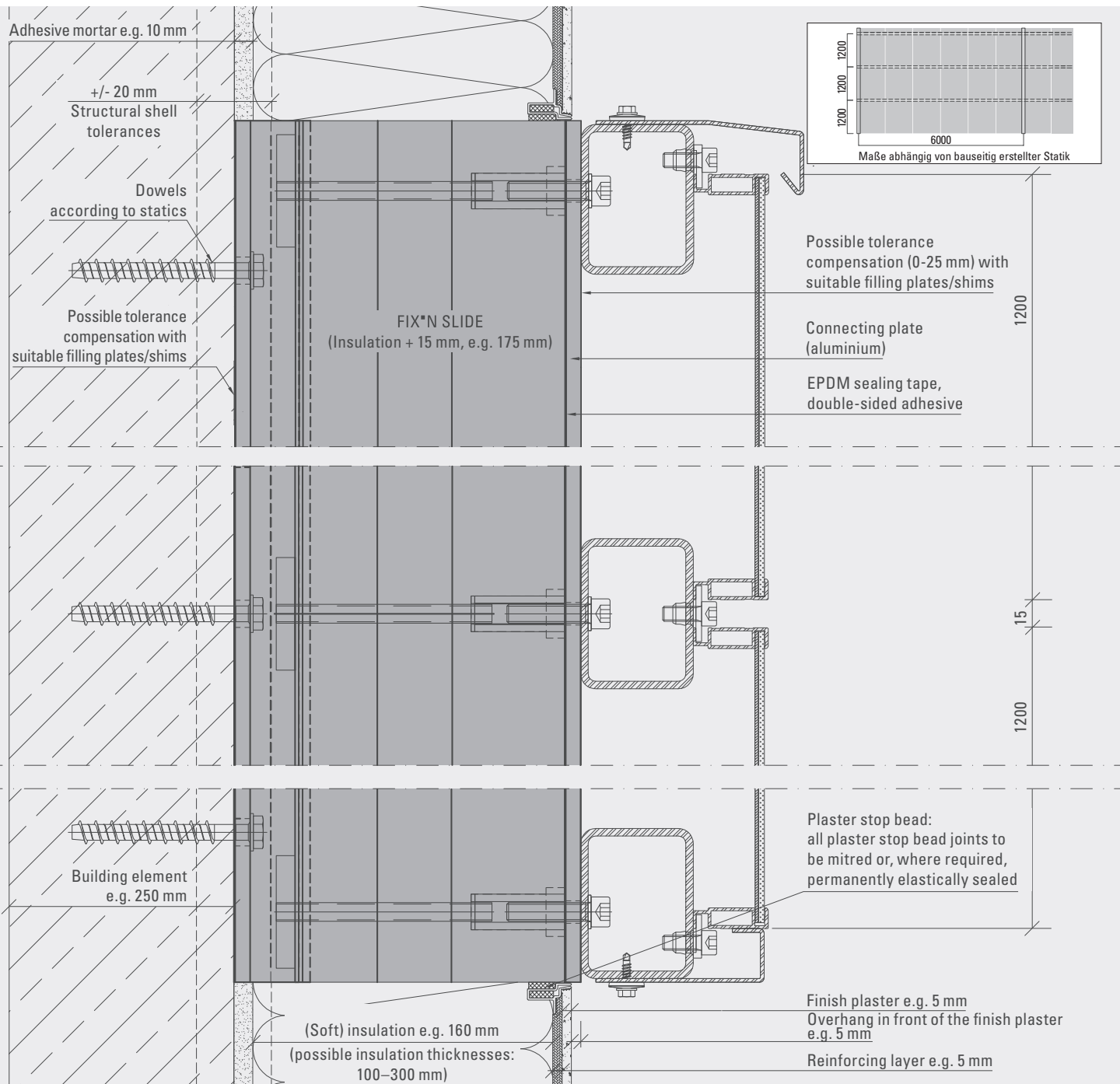


# PHOTOVOLTAIC MODULES

## APPLICATION EXAMPLES

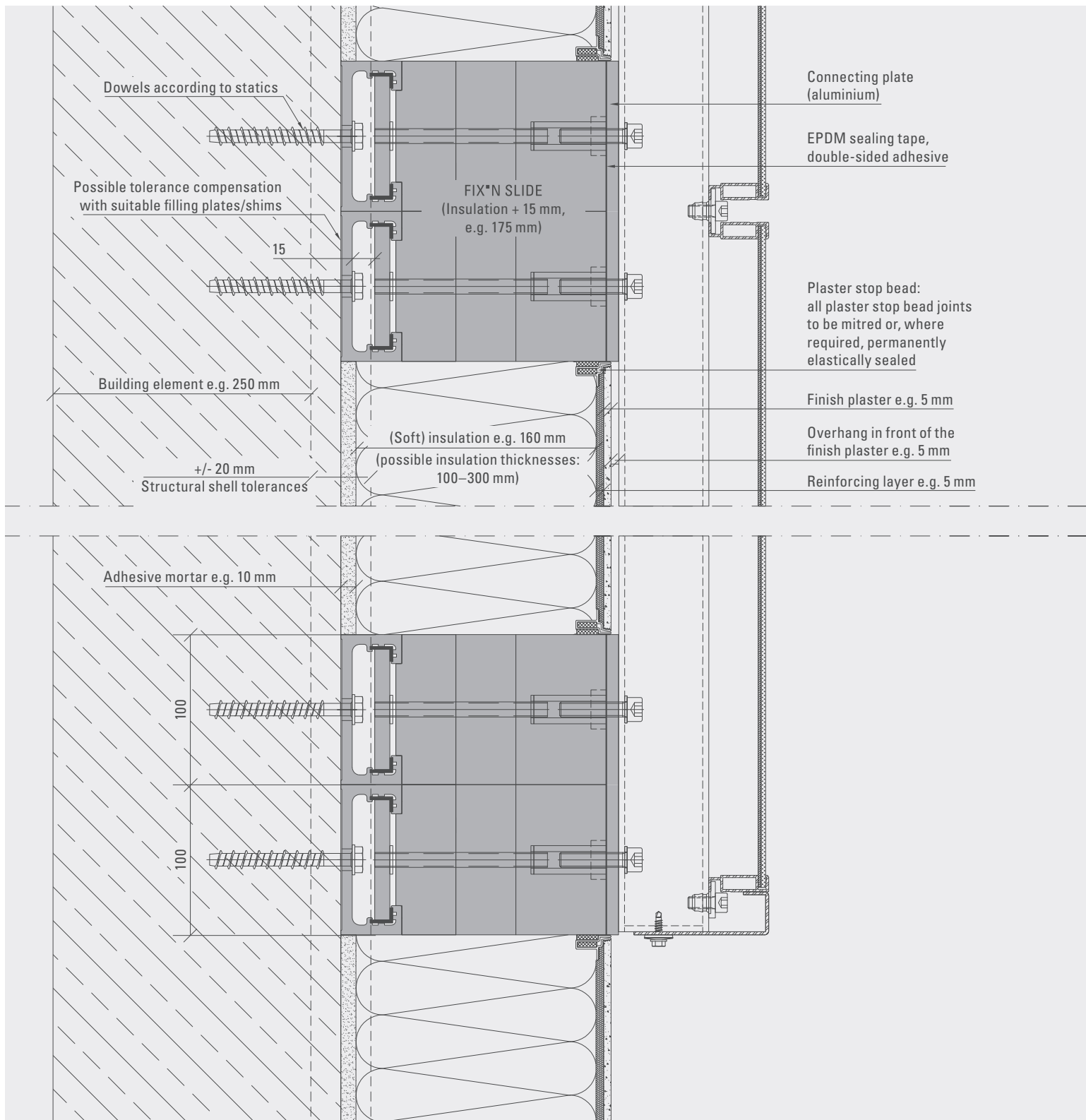
### Photovoltaic modules on substructure

Finish plaster and soft insulation



#### INSTALLATION RECOMMENDATION

- String out building (determine insulation outer edge)
- Installation FIX\*N SLIDE (possible tolerance compensation with suitable filling plates/shims)
- Ensure exterior impermeability with double-sided adhesive EPDM sealing tape
- Fix connecting plate
- Execute building sealing e.g. with liquid plastic
- Create ETICS with finish plaster
- Install photovoltaic modules

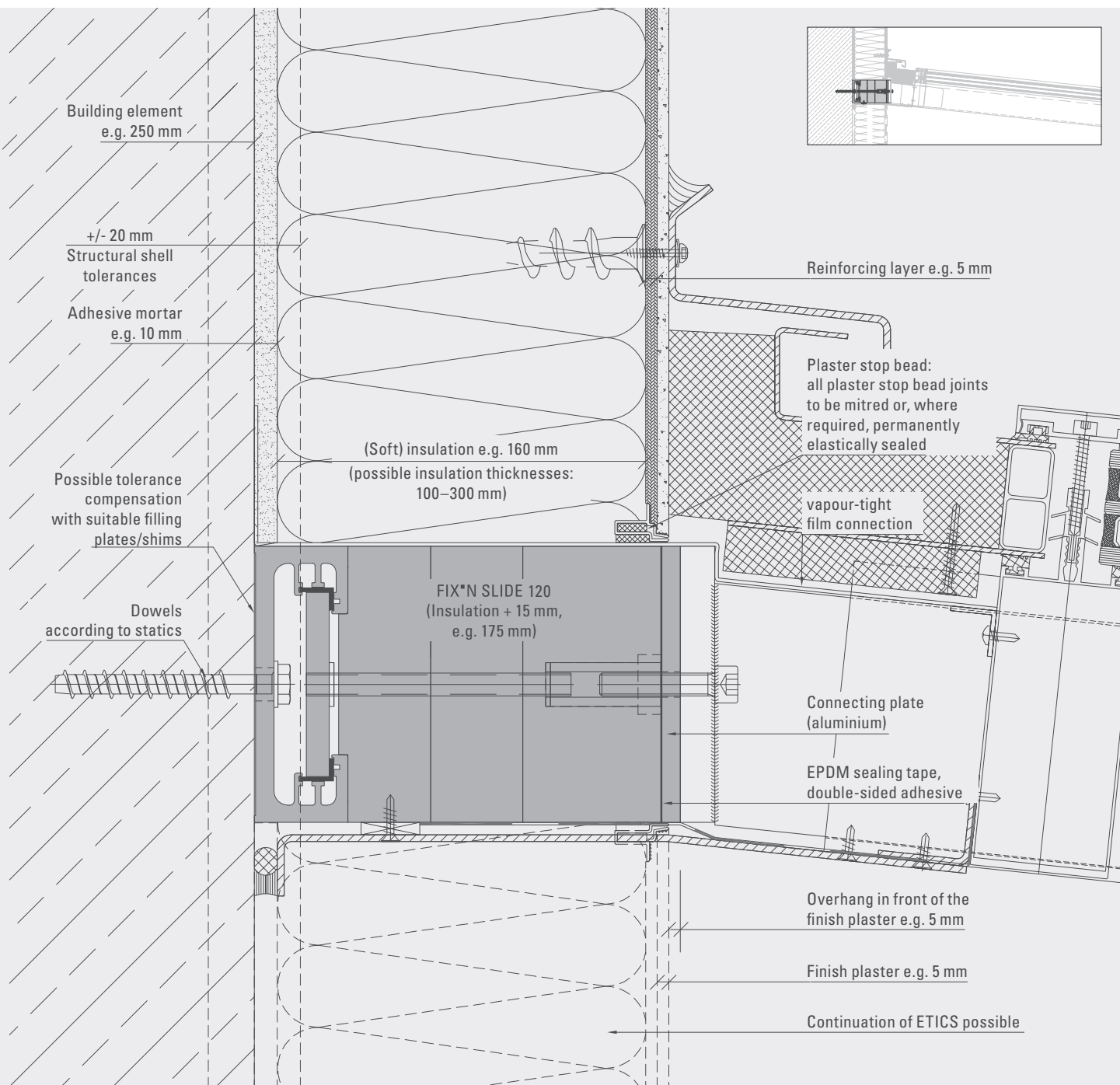




### Conservatory roof ridge connection

Finish plaster and soft insulation

Vertical section

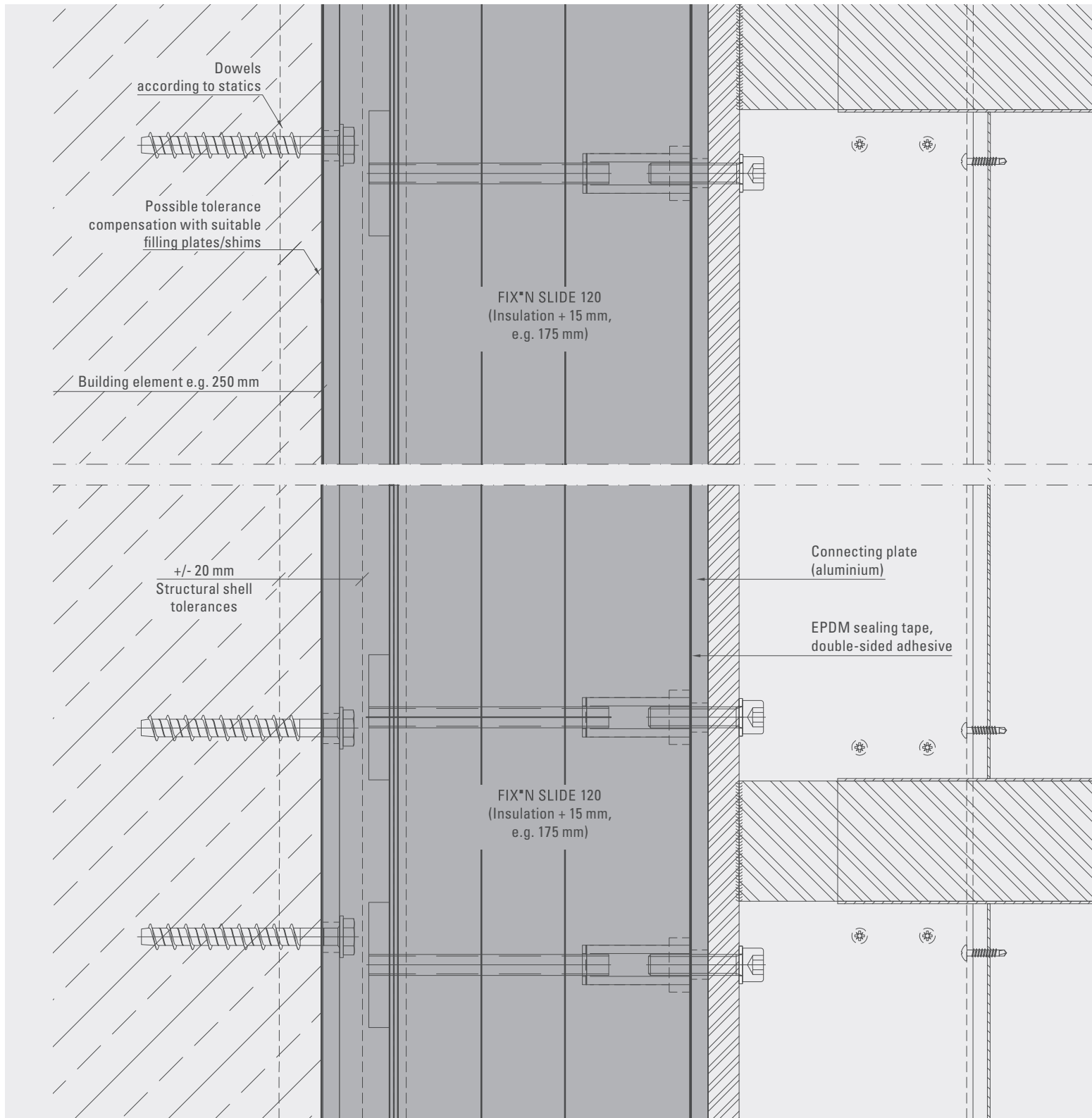


#### INSTALLATION RECOMMENDATION

- String out building (determine insulation outer edge)
- Installation FIX\*N SLIDE  
(possible tolerance compensation with suitable filling plates/shims)
- Ensure exterior impermeability with double-sided adhesive EPDM sealing tape
- Fix end plate
- Create ETICS with finish plaster
- Install conservatory

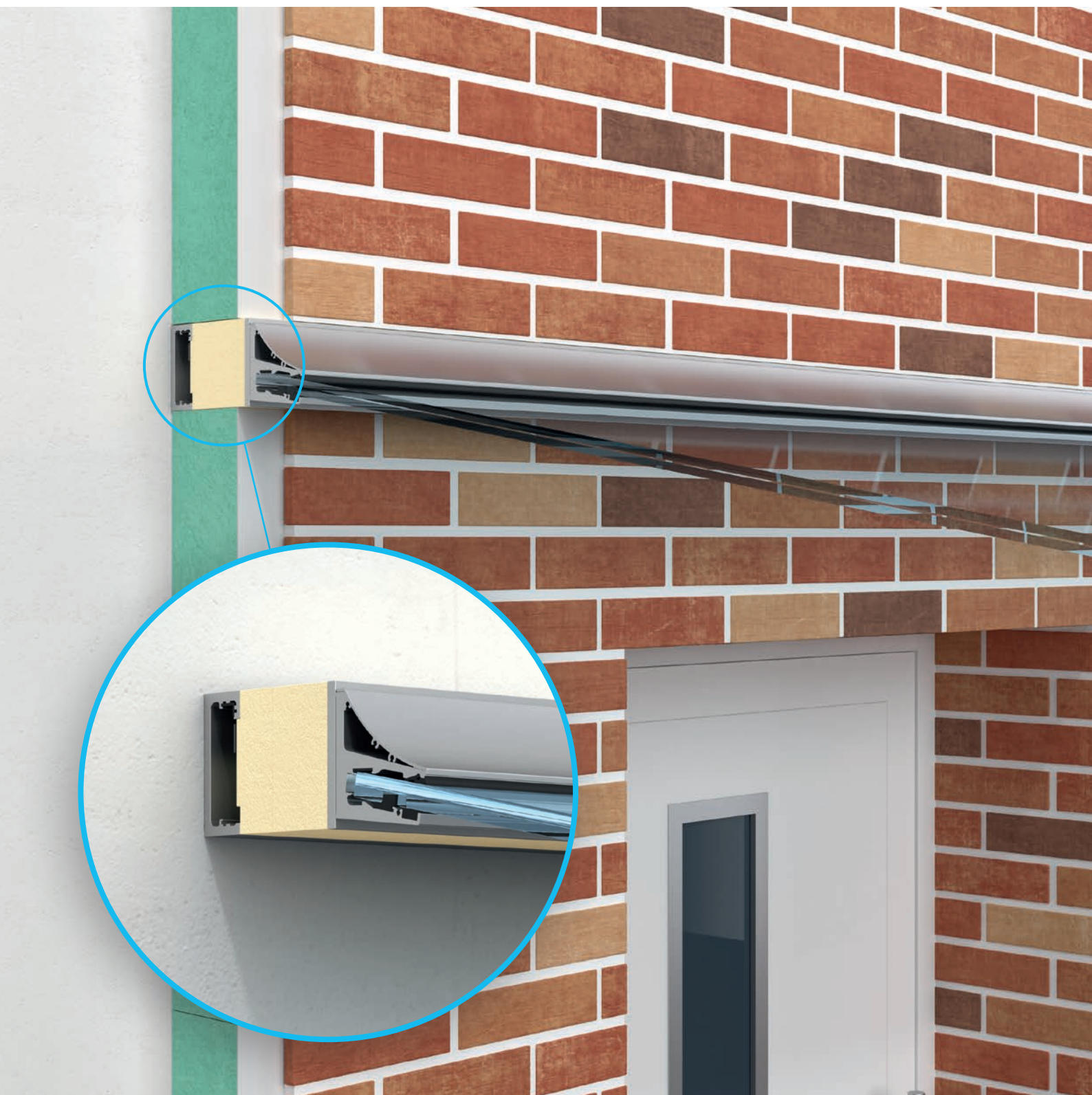


Horizontal section



**GLASSLINE**

FIX'N SLIDE



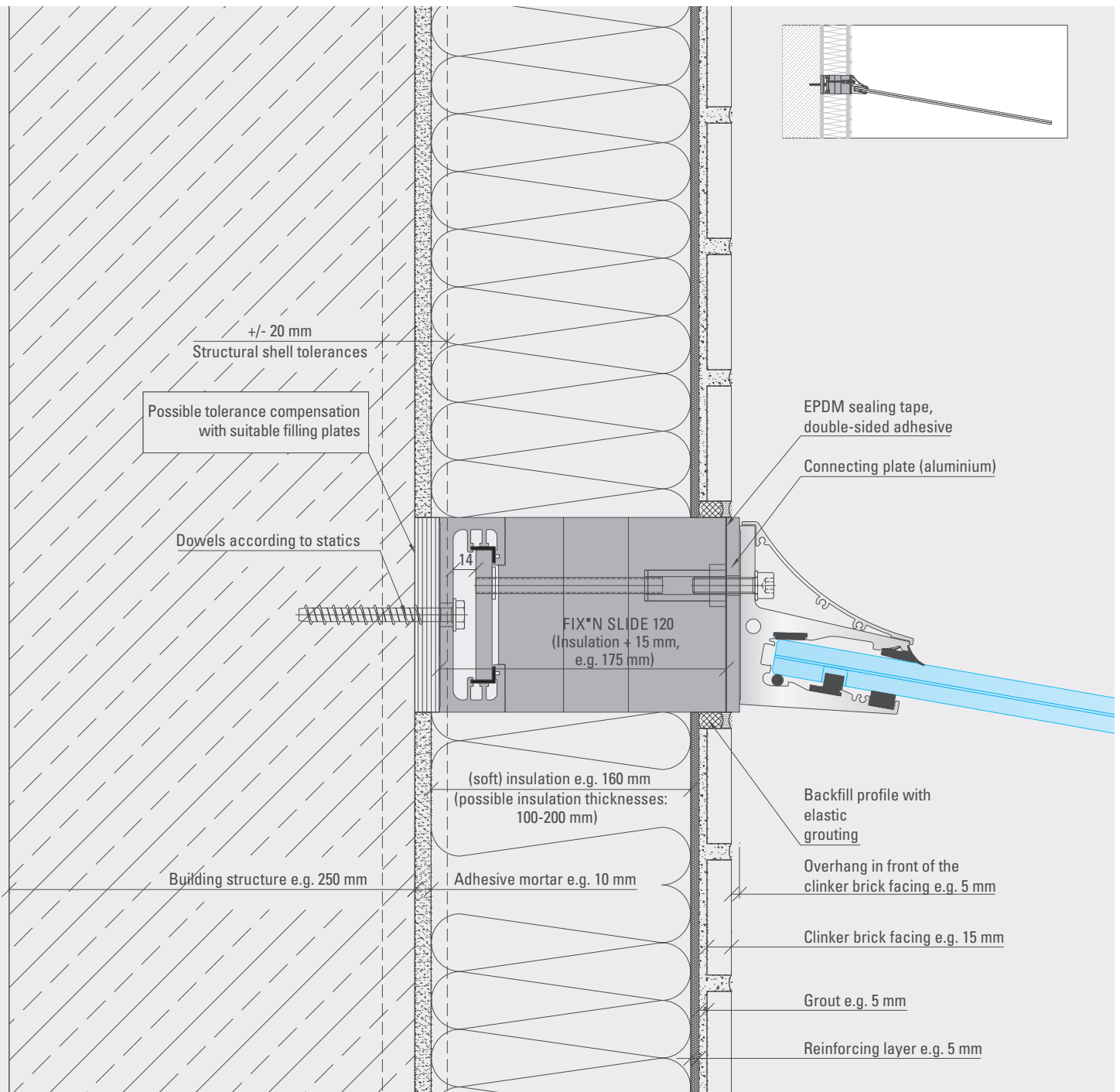
# **DIFFERENT FACADES WITH GLASS CANOPY CLOUD**

APPLICATION EXAMPLES

### Glass canopy CANOPY CLOUD

Clinker brick facing and soft insulation

Vertical section



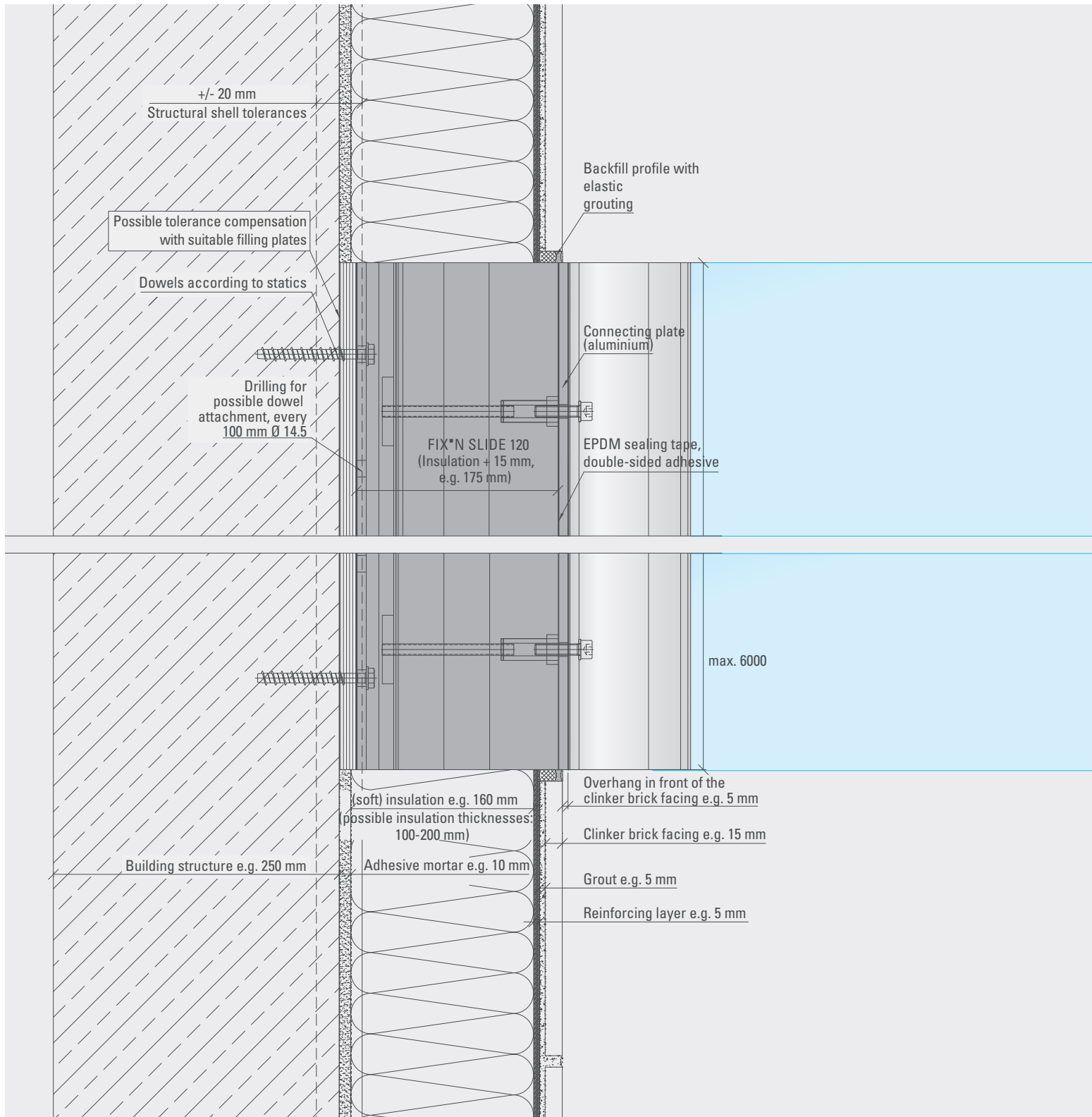
#### INSTALLATION RECOMMENDATION

- String out building (determine insulation outer edge)
- Installation FIX\*N SLIDE (possible tolerance compensation with suitable filling plates/shims)
- Ensure exterior impermeability with double-sided

- adhesive EPDM sealing tape
- Fix connecting plate
- Create ETICS with clinker brick facing
- Install the canopy

## FIX\*<sup>N</sup> SLIDE WITH CANOPY CLOUD

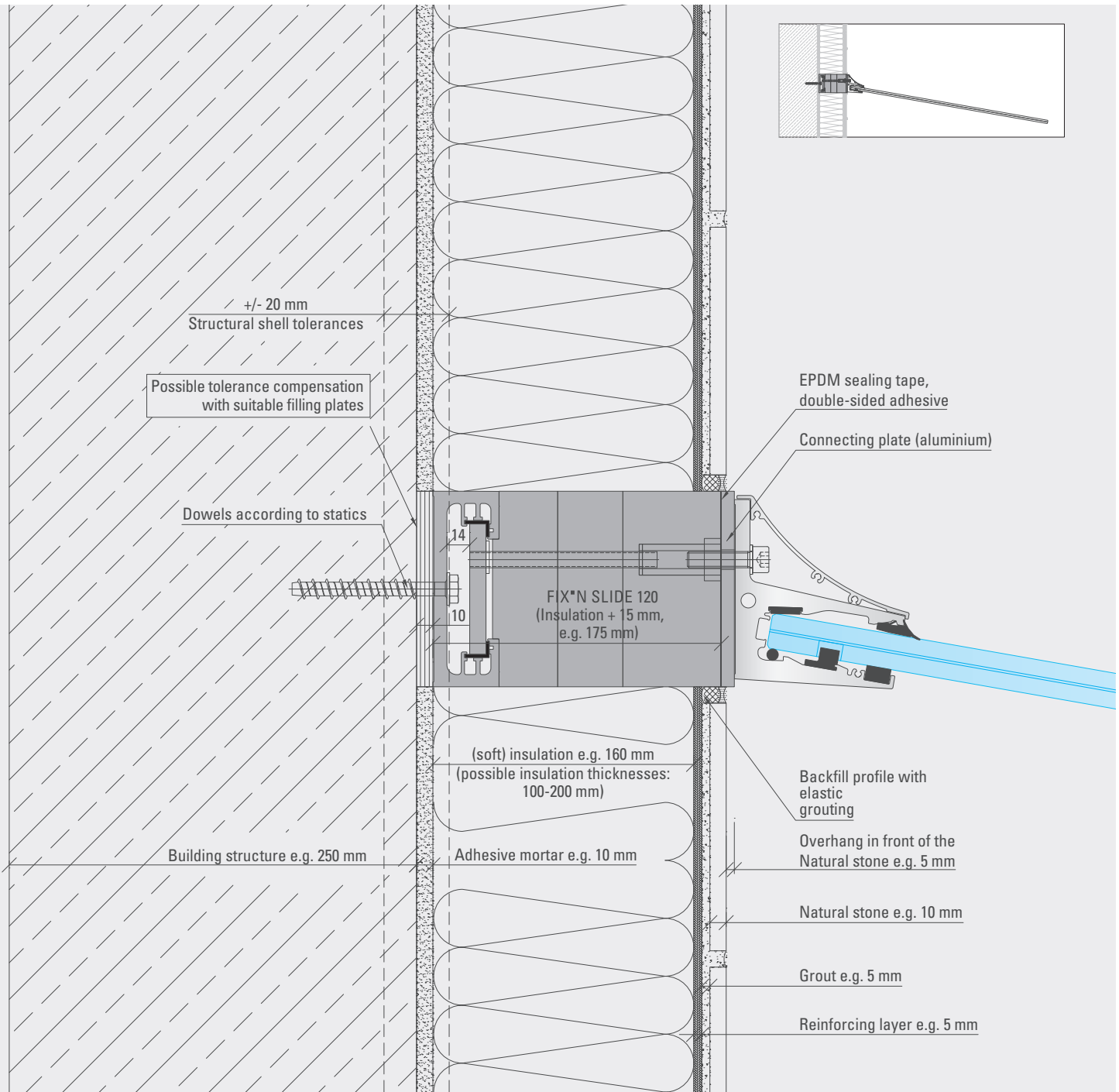
Horizontal section



### Glass canopy CANOPY CLOUD

Natural stone and soft insulation

Vertical section



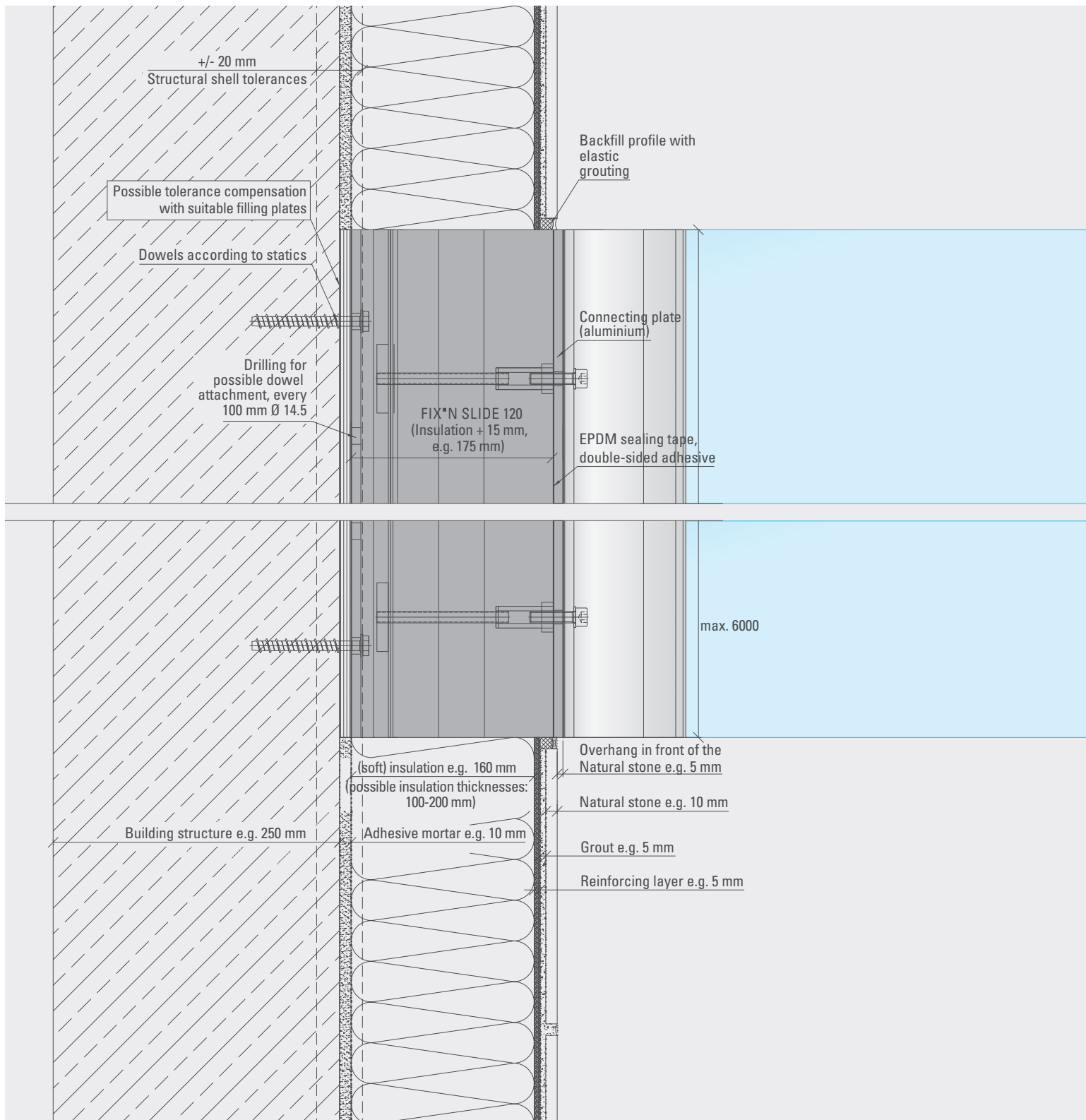
#### INSTALLATION RECOMMENDATION

- String out building (determine insulation outer edge)
- Installation FIX\*N SLIDE (possible tolerance compensation with suitable filling plates/shims)
- Ensure exterior impermeability with double-sided adhesive EPDM sealing tape
- Fix connecting plate
- Create ETICS with natural stone
- Install the canopy



## FIX\*<sup>N</sup> SLIDE WITH CANOPY CLOUD

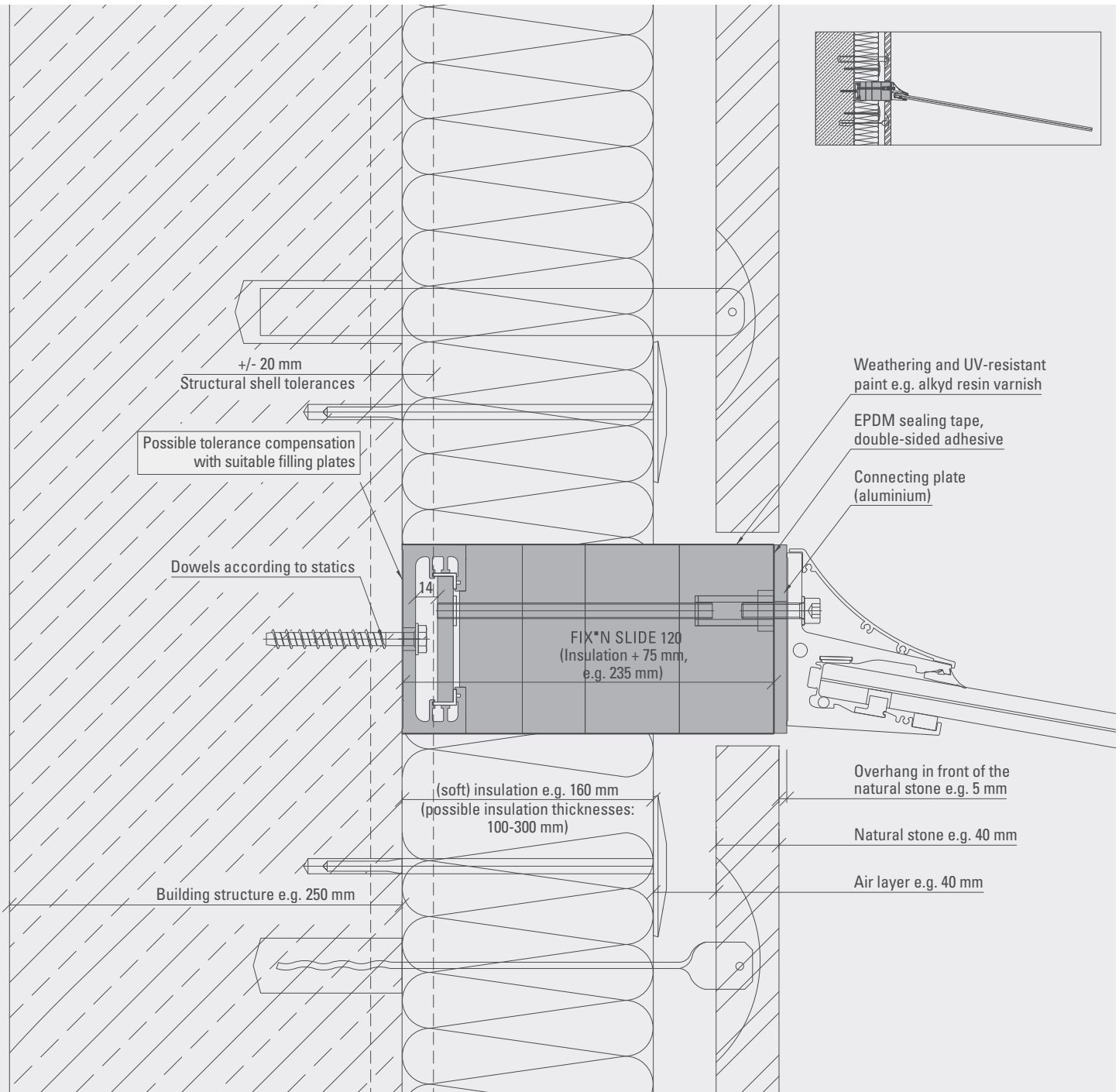
Horizontal section



### Glass canopy CANOPY CLOUD

Natural stone and soft insulation

Vertical section



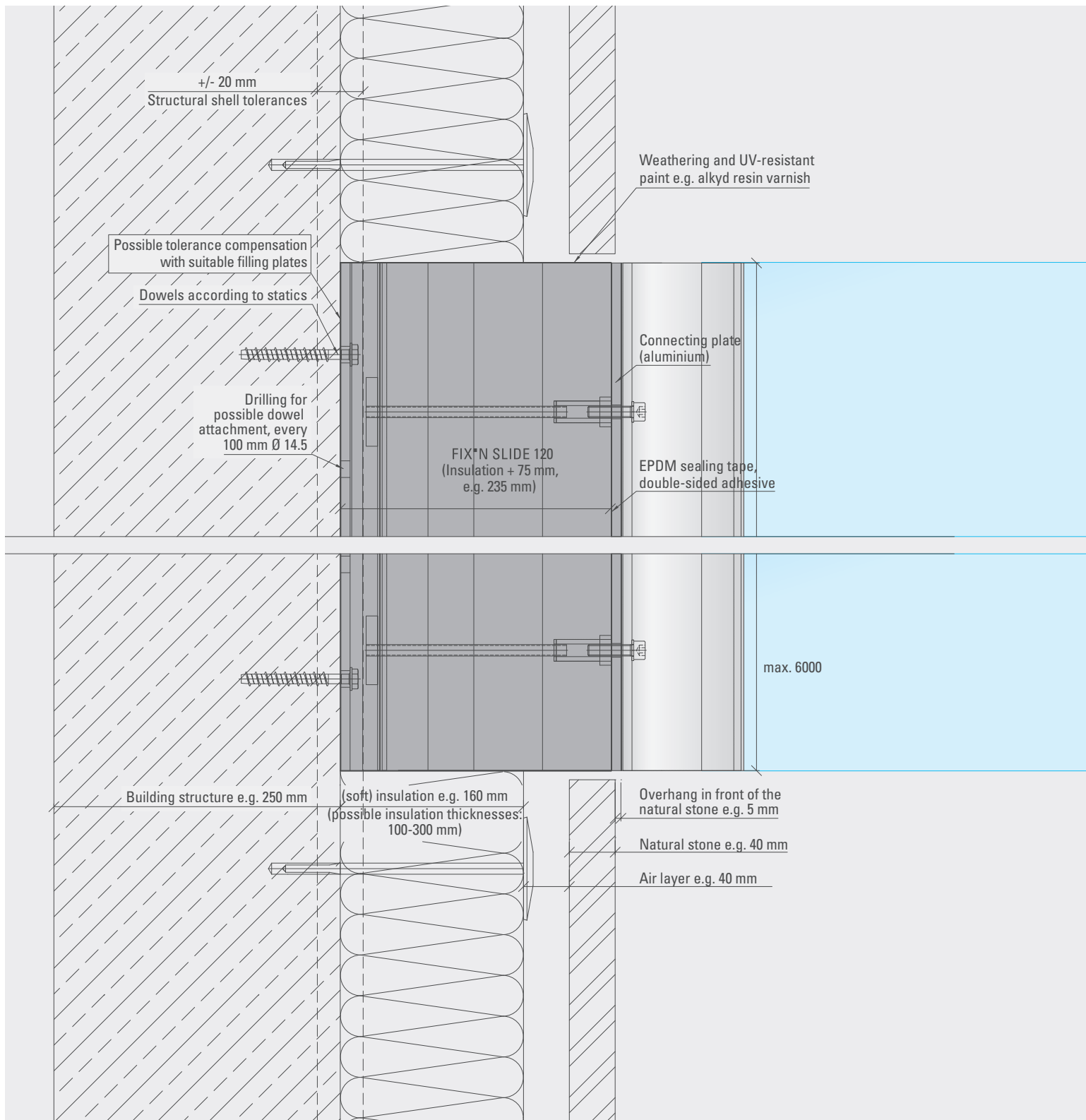
#### INSTALLATION RECOMMENDATION

- String out building (determine outer edge of natural stone)
- Installation FIX\*N SLIDE  
(possible tolerance compensation with suitable filling plates/shims)
- Ensure exterior impermeability with double-sided adhesive EPDM sealing tape
- Weathering and UV resistant paint e.g. alkyd resin paint
- Install natural stone
- Install the canopy



## FIX\*<sup>N</sup> SLIDE WITH CANOPY CLOUD

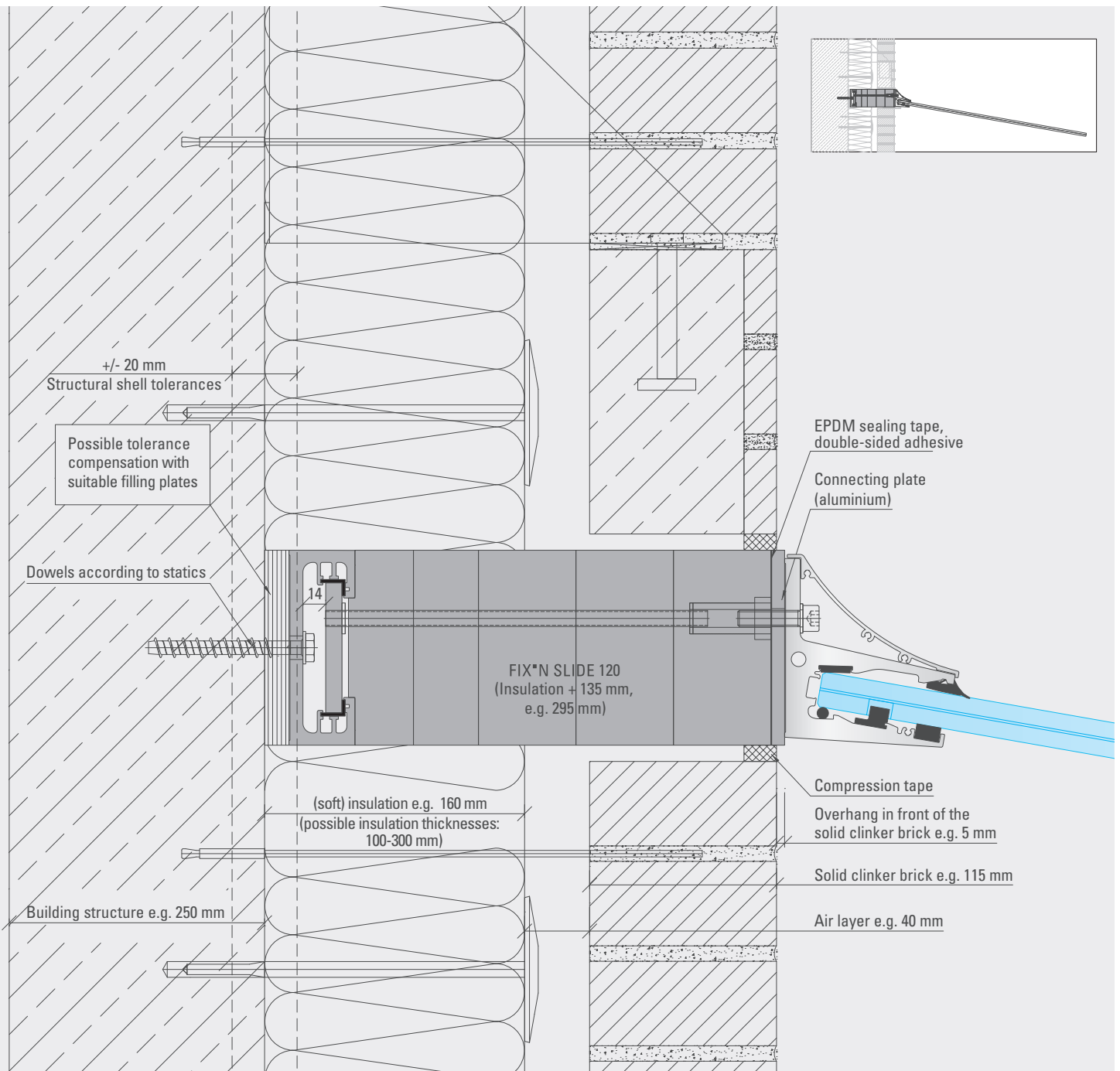
Horizontal section



### Glass canopy CANOPY CLOUD

Solid clinker brick and soft insulation (160 mm)

Vertical section

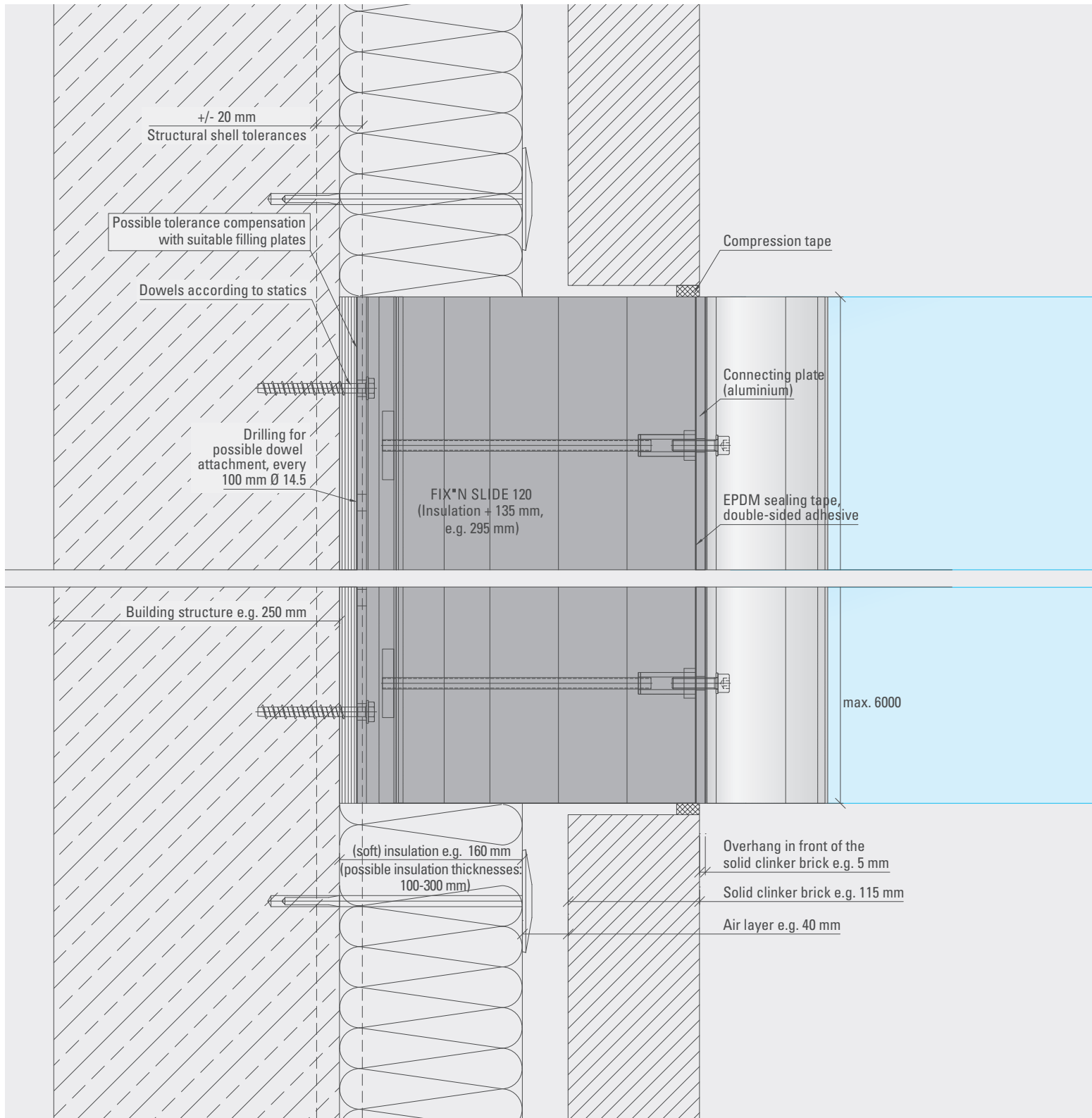


#### INSTALLATION RECOMMENDATION

- String out building (determine outer edge of solid clinker brick)
- Installation FIX\*N SLIDE (possible tolerance compensation with suitable filling plates/shims)
- Ensure exterior impermeability with double-sided adhesive EPDM sealing tape
- Fix connecting plate
- Install solid clinker brick
- Install the canopy
- Install foam (compressed/impregnated) sealing tape

# FIX\*<sup>N</sup> SLIDE WITH CANOPY CLOUD

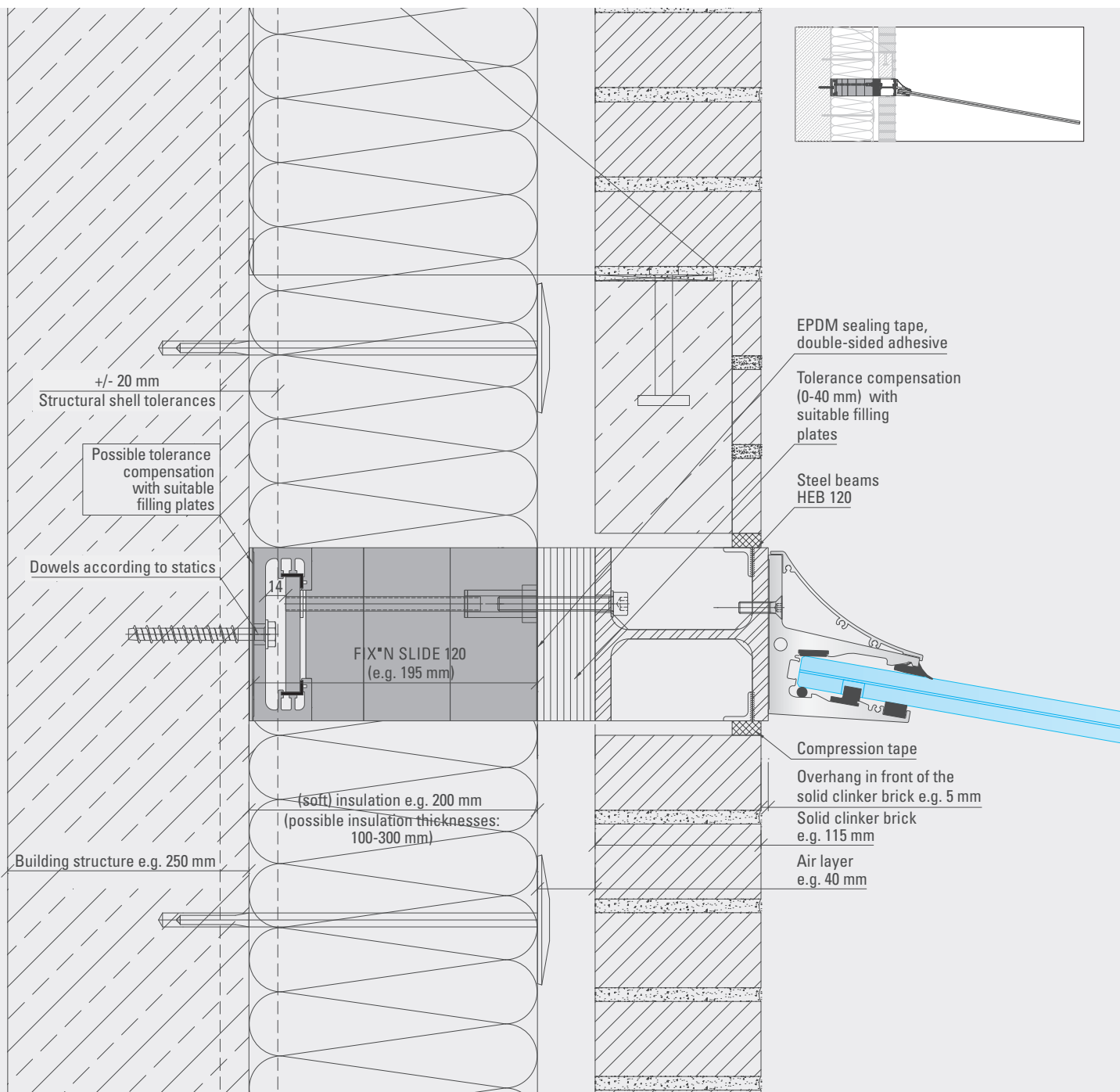
Horizontal section



### Glass canopy CANOPY CLOUD

Solid clinker brick and soft insulation (200 mm)

Vertical section

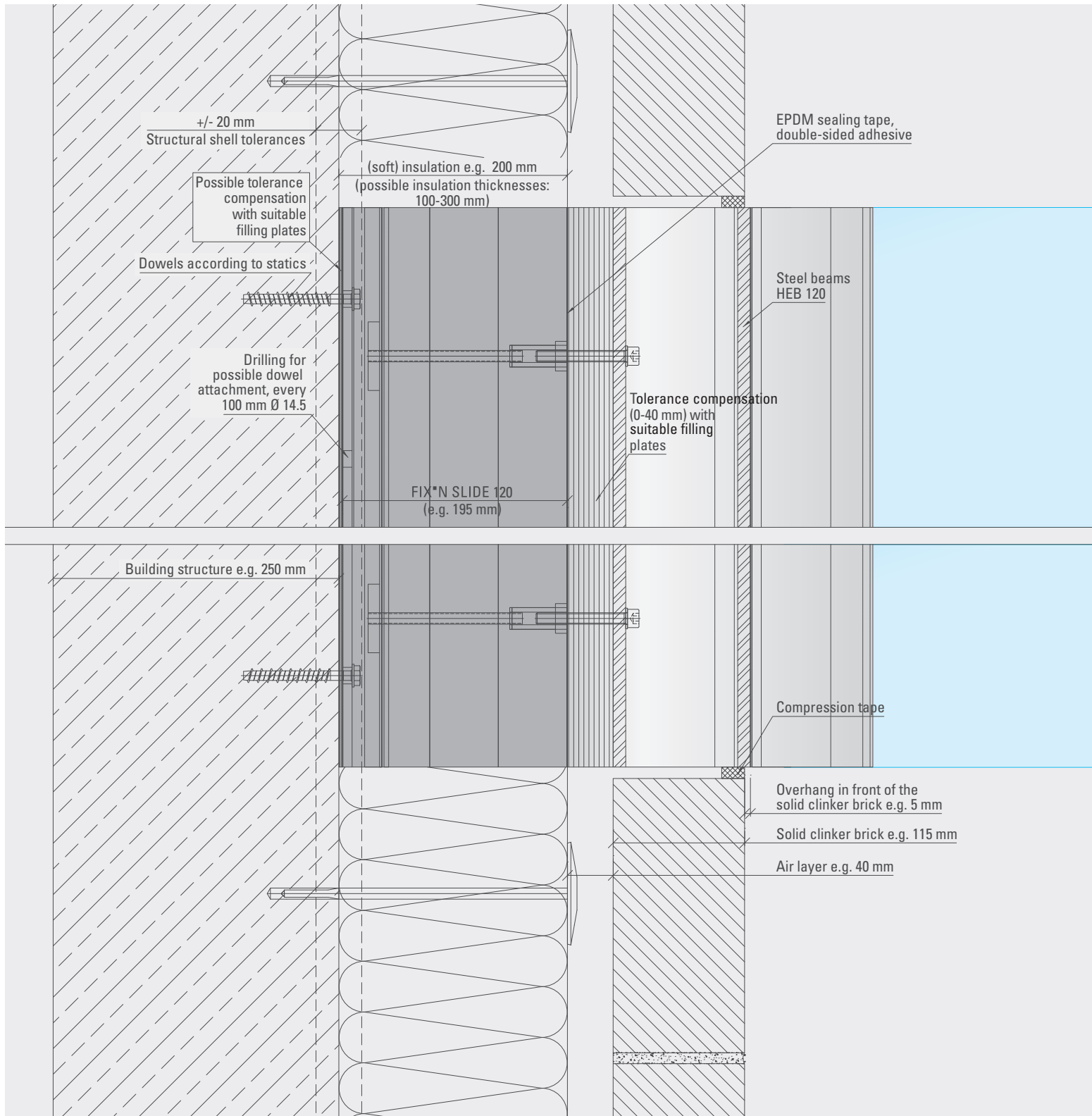


#### INSTALLATION RECOMMENDATION

- String out building (determine outer edge of solid clinker brick)
- Installation FIX\*N SLIDE (possible tolerance compensation with suitable filling plates/shims)
- Ensure exterior impermeability with double-sided adhesive EPDM sealing tape
- Install further filling plates/shims
- Fix steel beam
- Install solid clinker brick
- Install the canopy
- Install foam (compressed/impregnated) sealing tape

## FIX\*<sup>N</sup> SLIDE WITH CANOPY CLOUD

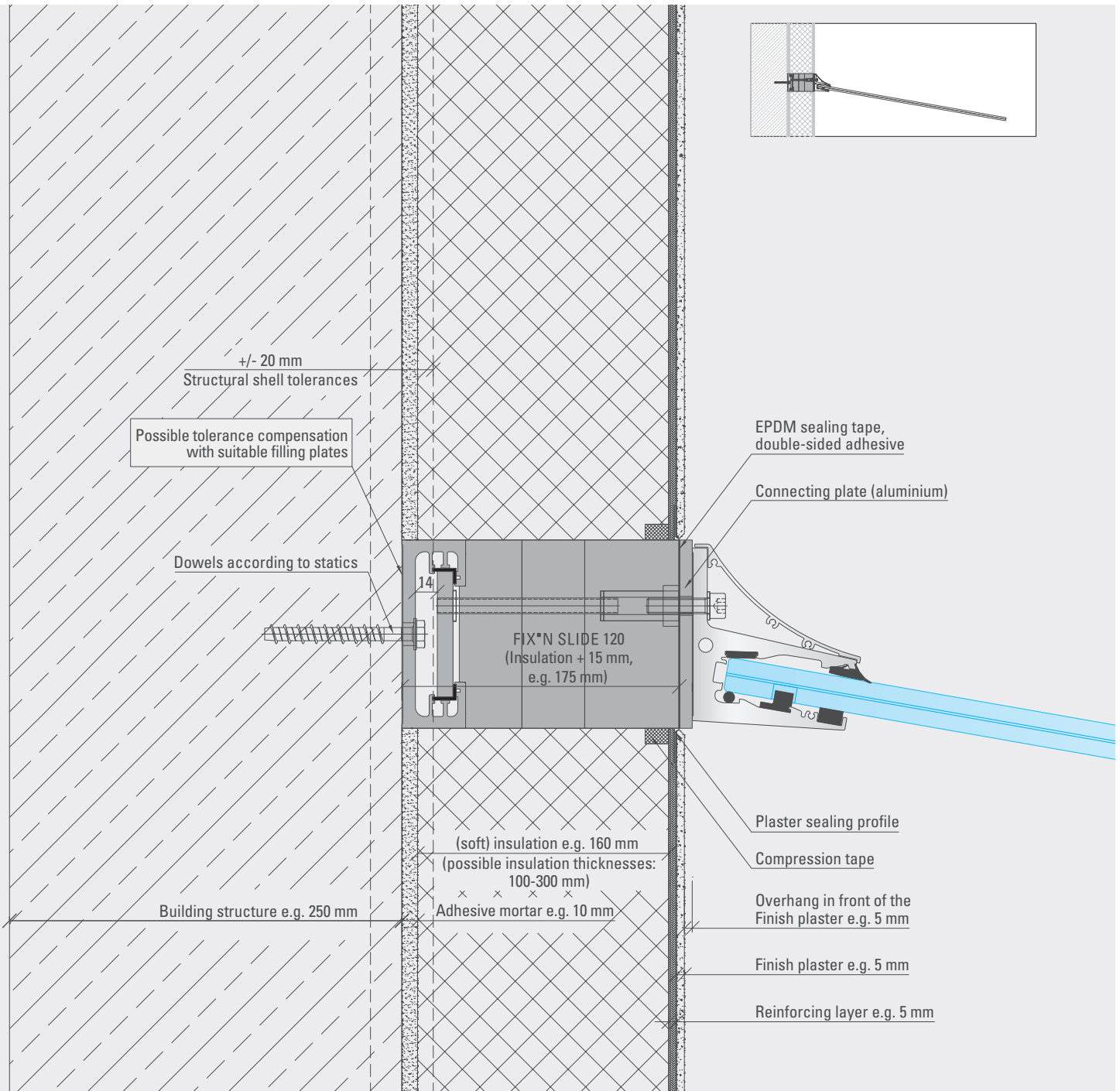
Horizontal section



### Glass canopy CANOPY CLOUD

Finish plaster and hard insulation

Vertical section

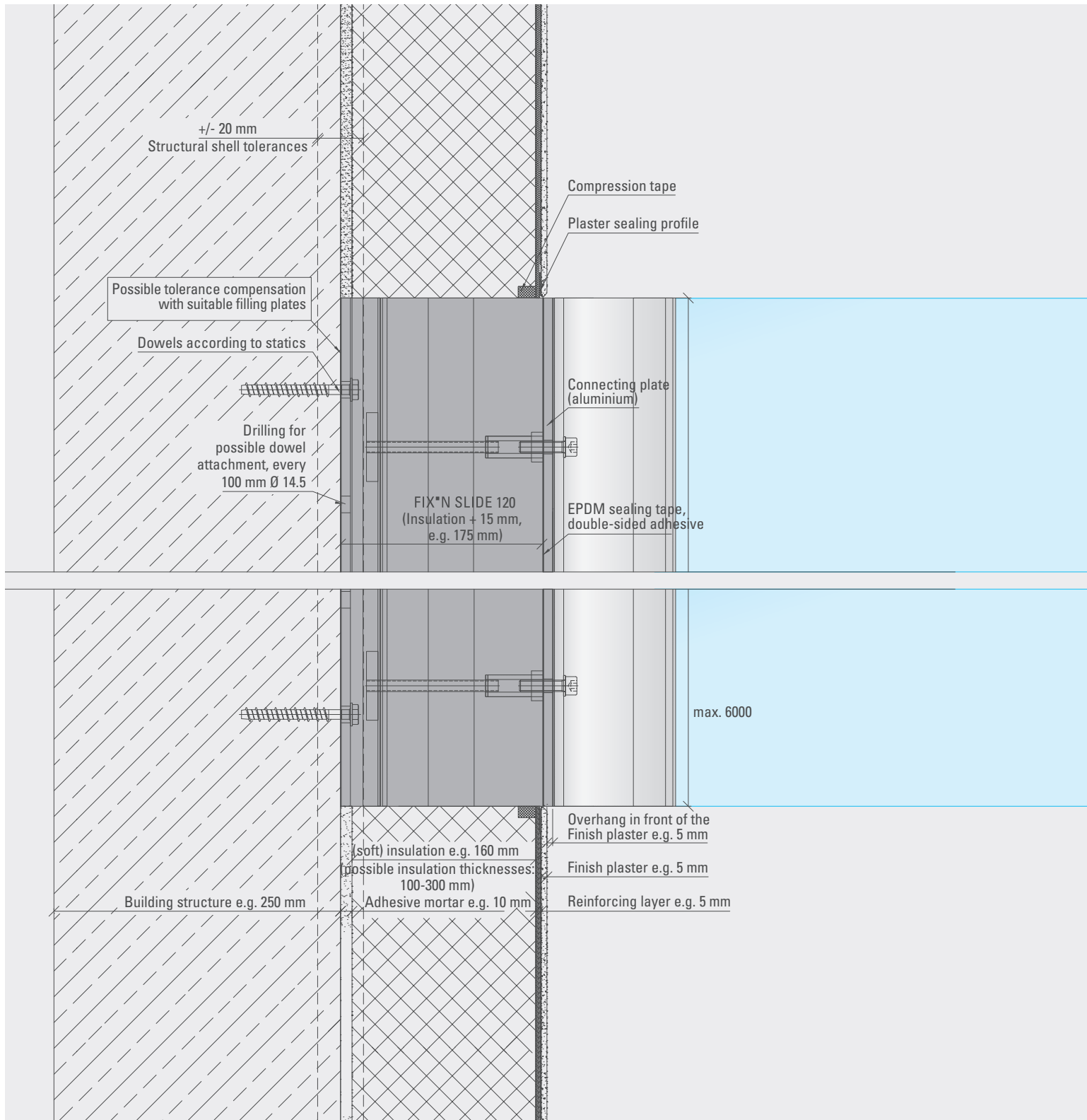


#### INSTALLATION RECOMMENDATION

- String out building (determine insulation outer edge)
- Installation FIX\*N SLIDE (possible tolerance compensation with suitable filling plates/shims)
- Fix connecting plate
- Ensure exterior impermeability durch double-sided adhesive EPDM sealing tape
- Create ETICS with finish plaster
- Install the canopy

## FIX\*<sup>N</sup> SLIDE WITH CANOPY CLOUD

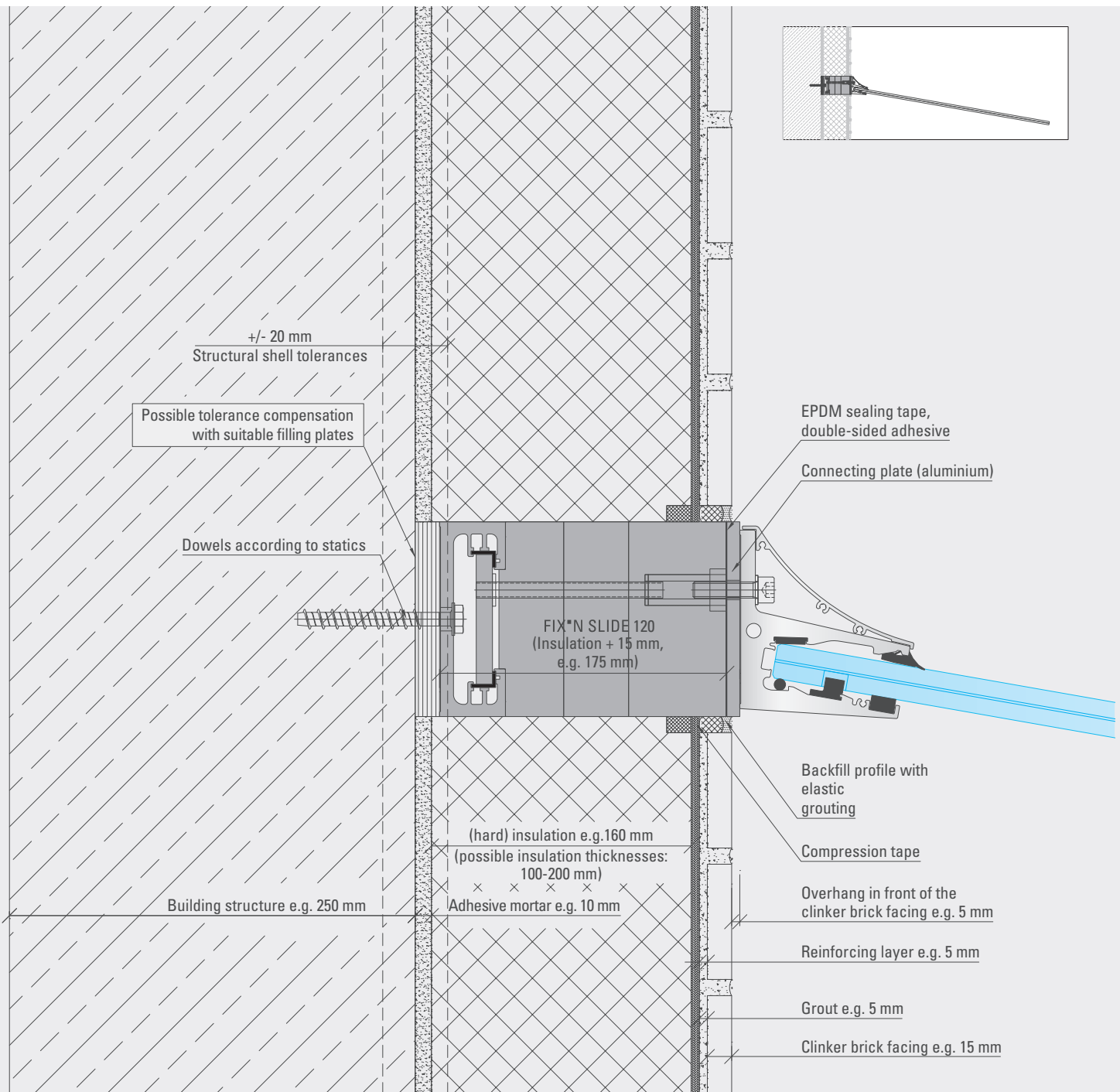
Horizontal section



### Glass canopy CANOPY CLOUD

Clinker brick facing and hard insulation

Vertical section



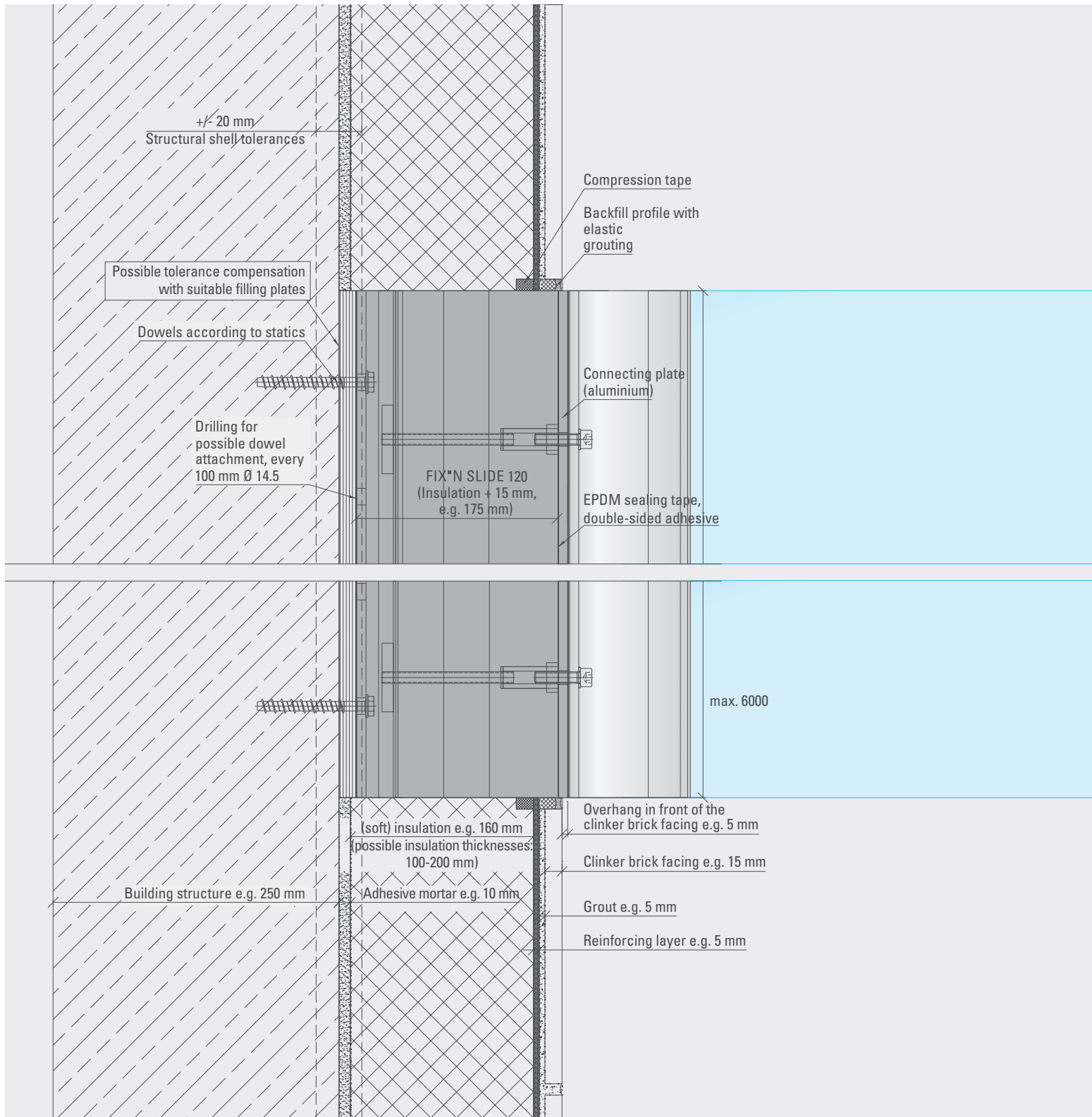
#### INSTALLATION RECOMMENDATION

- String out building (determine insulation outer edge)
- Installation FIX\*N SLIDE (possible tolerance compensation with suitable filling plates/shims)
- Fix connecting plate
- Ensure exterior impermeability durch double-sided adhesive EPDM sealing tape
- Create ETICS with clinker brick facing
- Install the canopy



## FIX\*<sup>N</sup> SLIDE WITH CANOPY CLOUD

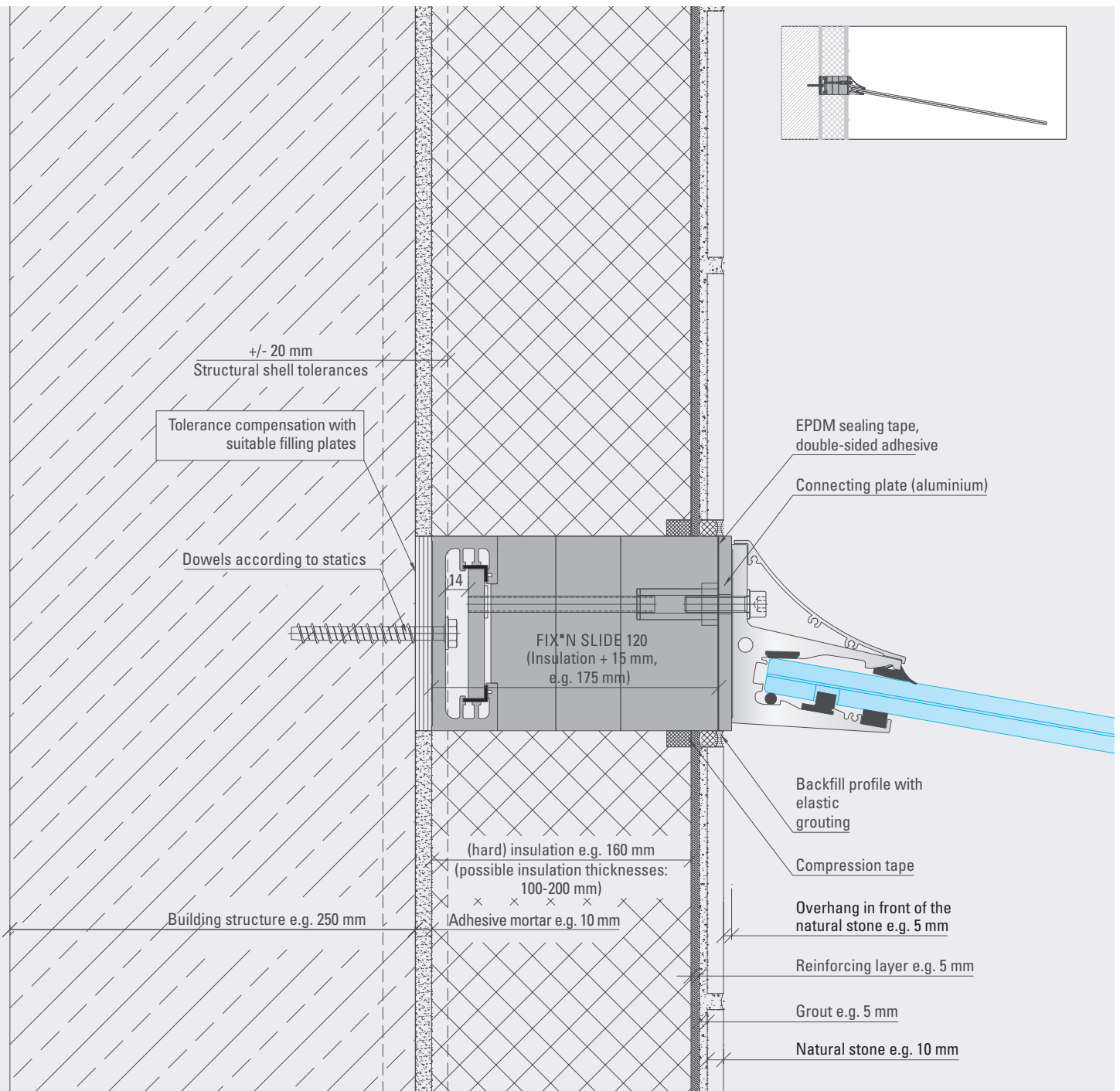
Horizontal section



### Glass canopy CANOPY CLOUD

Natural stone and hard insulation

Vertical section

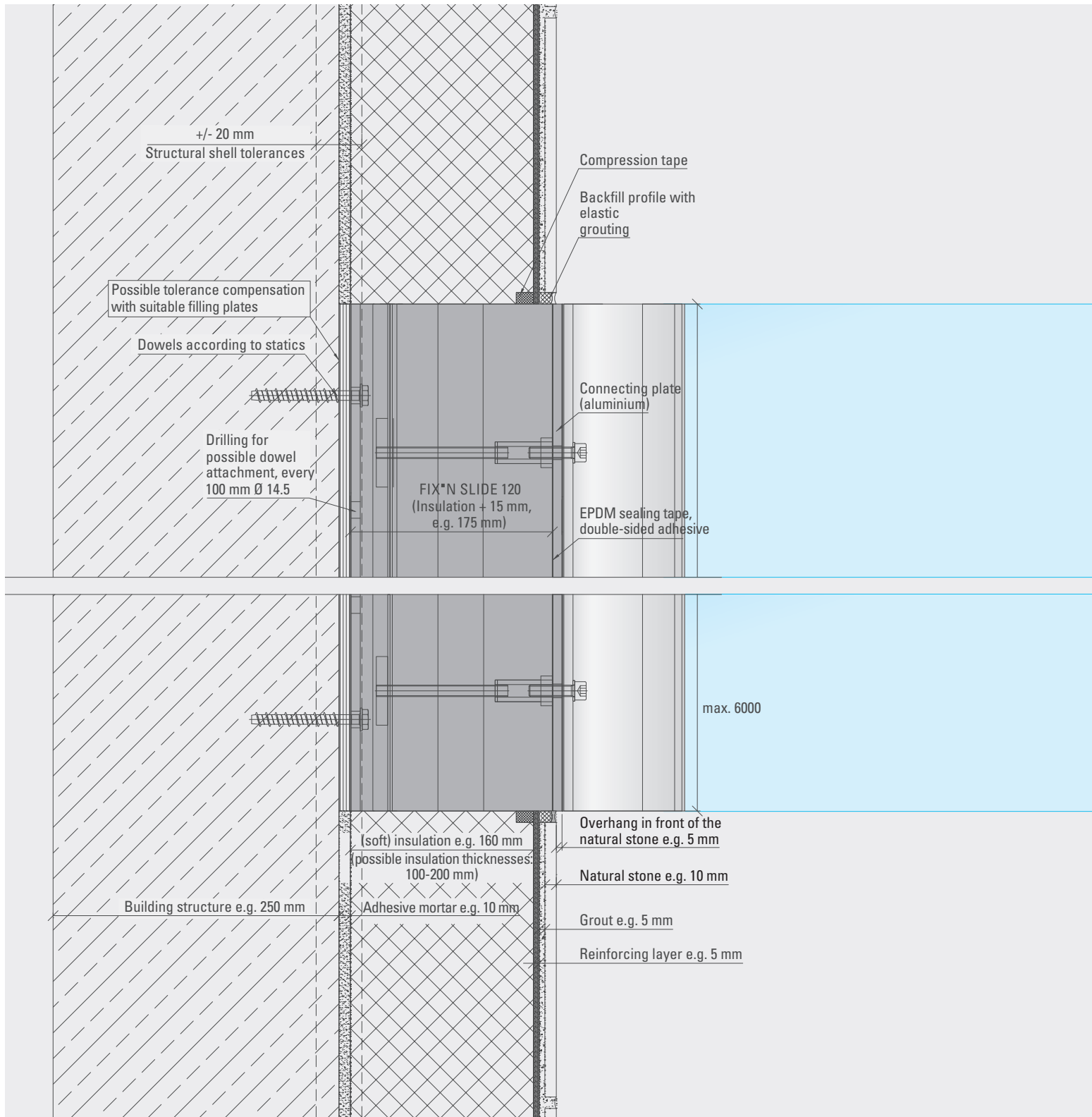


#### INSTALLATION RECOMMENDATION

- String out building (determine insulation outer edge)
- Installation FIX\*N SLIDE (possible tolerance compensation with suitable filling plates/shims)
- Fix connecting plate
- Ensure exterior impermeability durch double-sided adhesive EPDM sealing tape
- Create ETICS with natural stone
- Install the canopy

## FIX\*N SLIDE WITH CANOPY CLOUD

Horizontal section

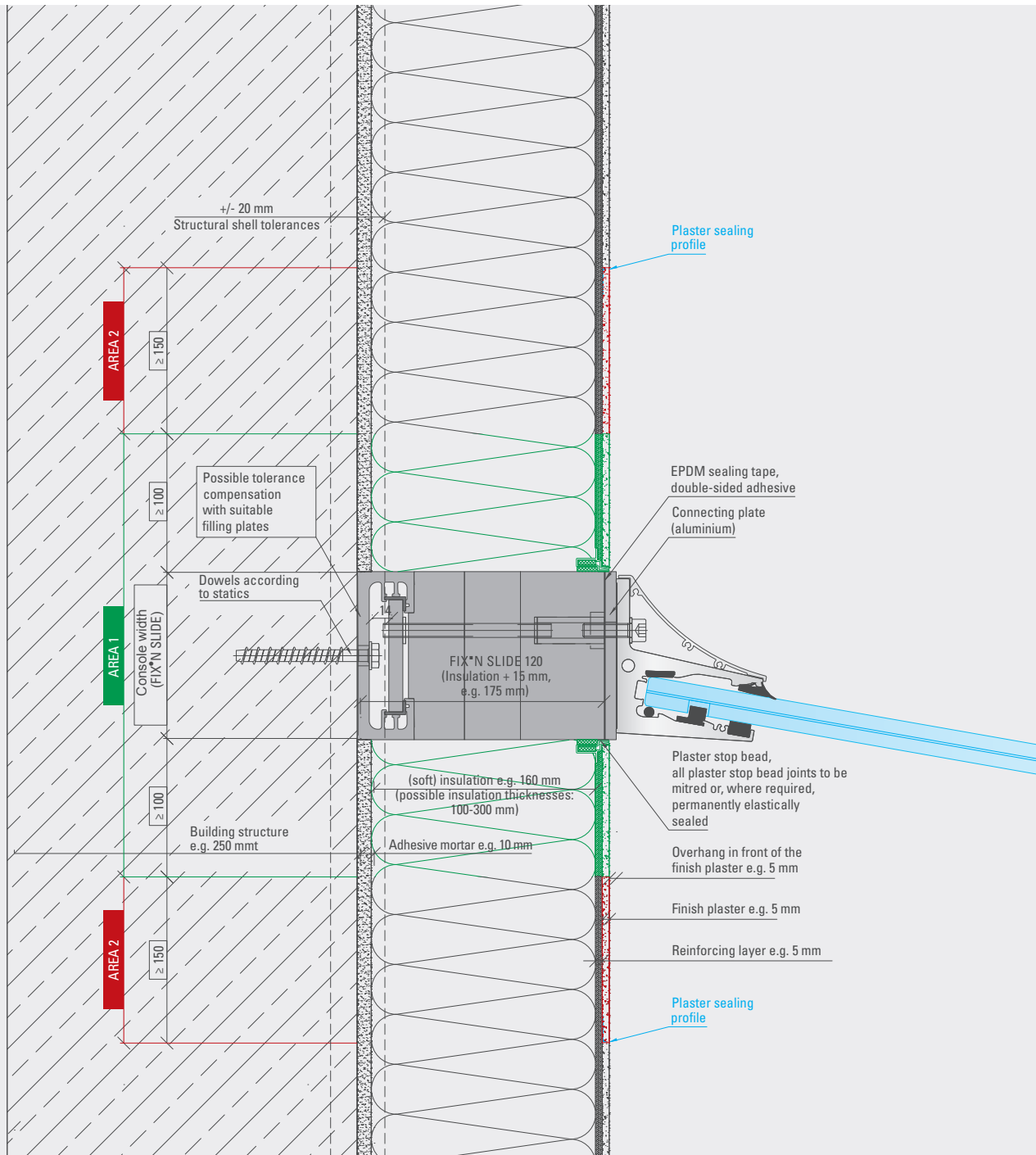


# APPLICATION EXAMPLES EXISTING BUILDING

## Glass canopy CANOPY CLOUD

Finish plaster and soft insulation

Vertical section

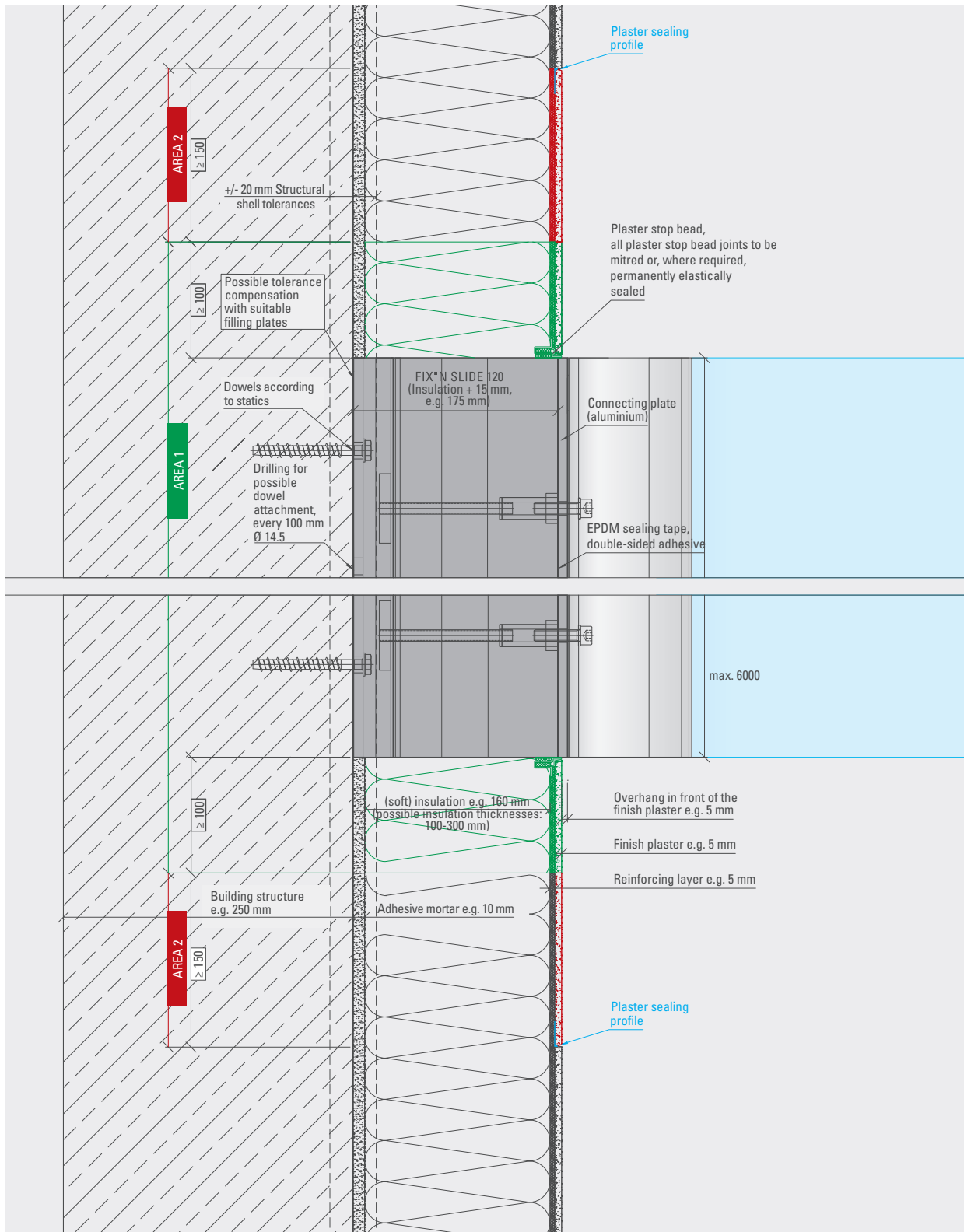


### INSTALLATION RECOMMENDATION

- Cut ETICS back: **AREA 1** (console width FIX\*N SLIDE + 200 mm)
- Mill off finish plaster to reinforcing layer: **AREA 2**
- FIX\*N SLIDE install
- Execute insulation and reinforcing layer (reinforcing layer must overlap existing reinforcing layer by approx. 150 mm).
- It is recommended to plaster the **finish plaster with the plaster finish profile**
- Restore ETICS with finish plaster

## FIX\*<sup>N</sup> SLIDE WITH CANOPY CLOUD

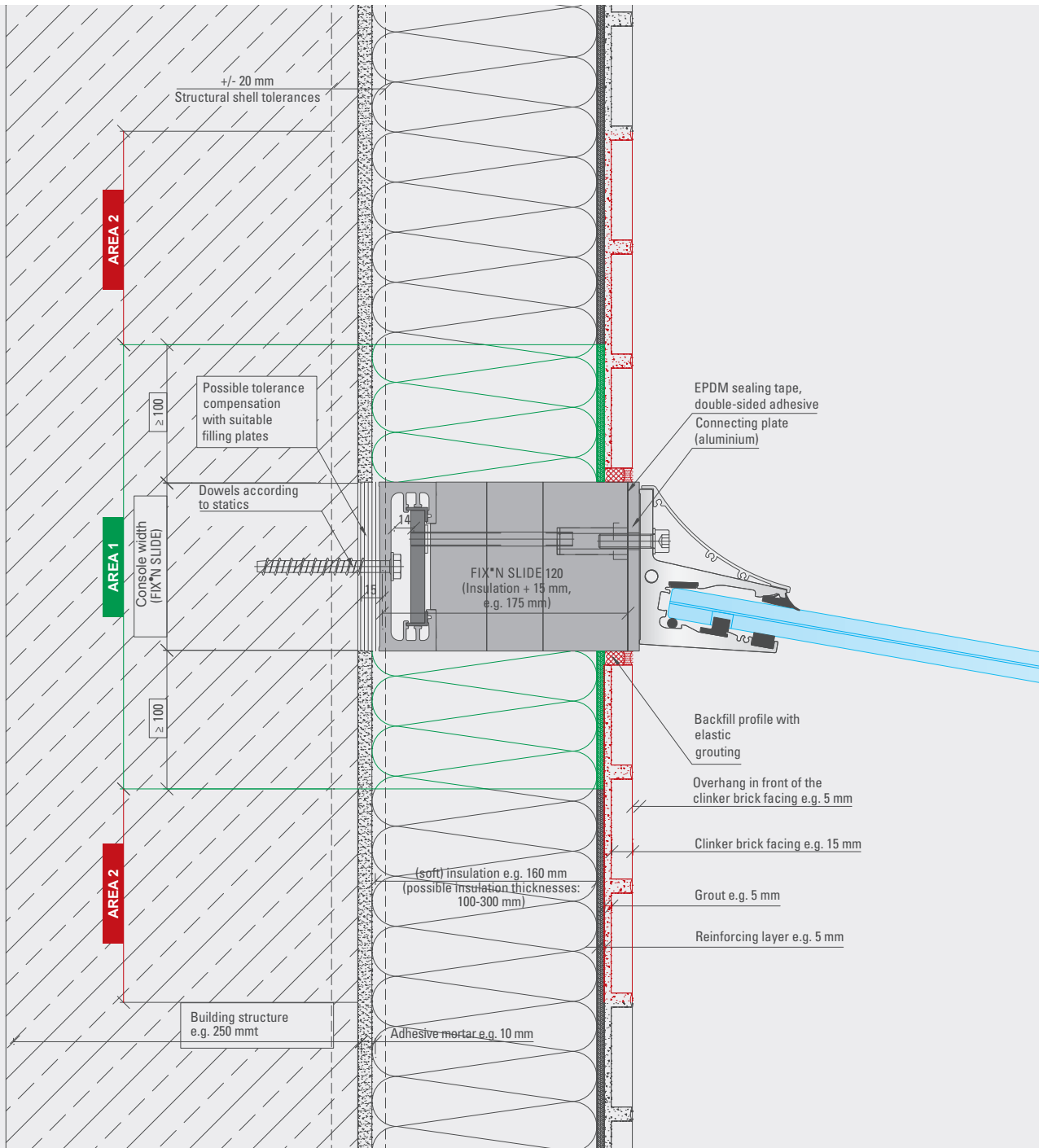
Horizontal section



### Glass canopy CANOPY CLOUD

Clinker brick facing and soft insulation

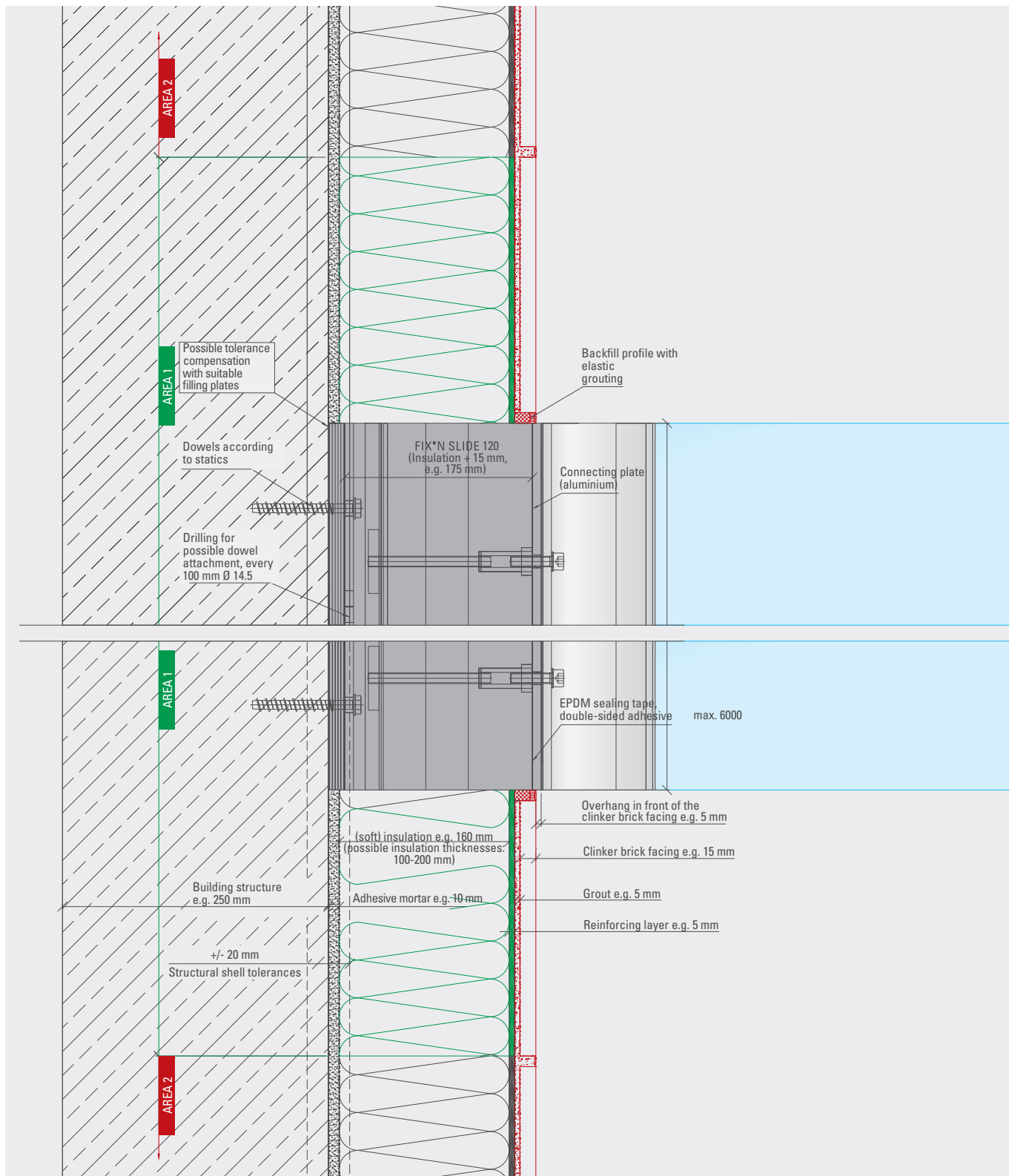
Vertical section



#### INSTALLATION RECOMMENDATION

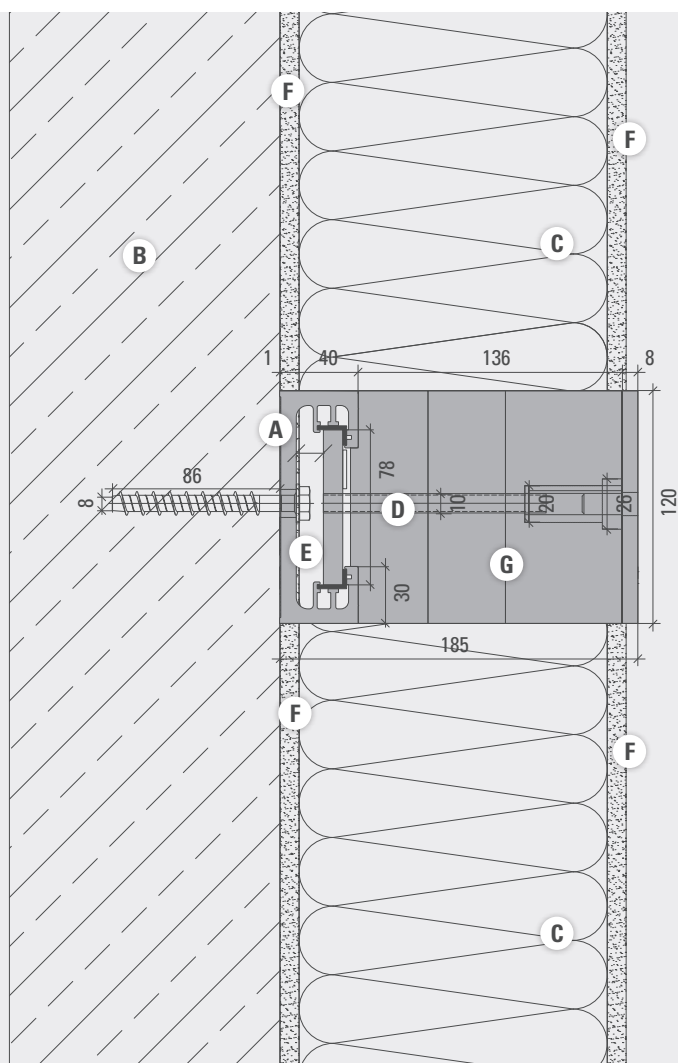
- Cut ETICS back: **AREA 1** (console width FIX\*N SLIDE + 200 mm)
- Mill off clinker brick facing to reinforcing layer: **AREA 2**
- FIX\*N SLIDE install
- Execute insulation and reinforcing layer (reinforcing layer must overlap existing reinforcing layer by approx. 150 mm).
- Observe the specifications of the ETICS system provider
- Restore ETICS with clinker brick facing

Horizontal section



# THERMAL INSULATION CALCULATIONS

Linear connection purs. DIN 4108-2 and  $\chi$  value calculation (example)

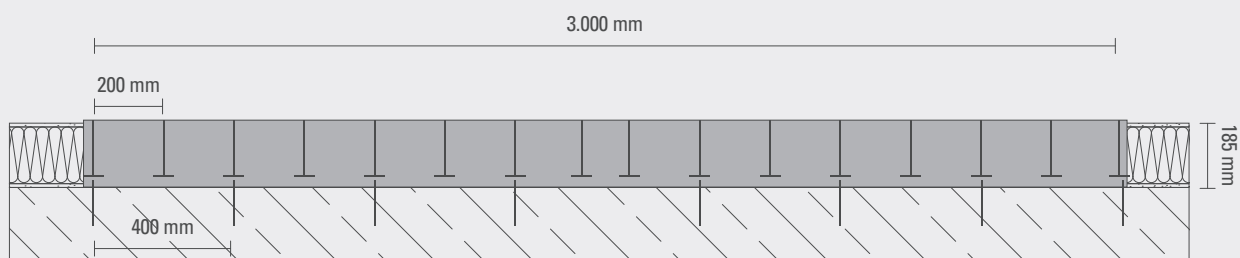


## Characteristics

- Construction component (W x H x L)  
120 mm x 185 mm x 3000 mm
- 400 mm dowel spacing
- 200 mm tension rod/sleeve spacing

## Materials

|  | $\lambda$ [W/(m·K)] | $\epsilon$ |
|--|---------------------|------------|
| A Aluminium profile                    | 160.000             | 0.900      |
| B Concrete reinforced (with 2% steel)  | 2,500               | 0.900      |
| C Insulation WLG 035                   | 0.035               | 0.900      |
| D Stainless steel                      | 17.00               | 0.900      |
| E Air                                  |                     |            |
| F plaster                              | 0.870               | 0.900      |
| G Pressure-resistant system insulation | 0.083               | 0.900      |





### Constraints

- Exterior temperatures

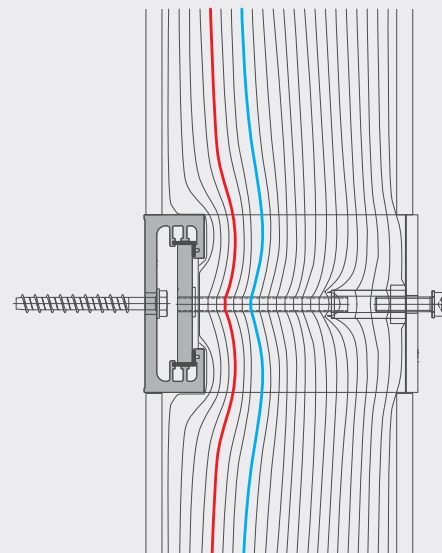
:  $T_a = -5^\circ \text{C}$   
inside:  $T_i = 20^\circ \text{C}$

- External thermal transfer

:  $R_a = 0.04 \text{ m}^2 \text{K/W}$   
inside:  $R_i = 0.13 \text{ m}^2 \text{K/W}$  (heat flow)  
 $R_i = 0.25 \text{ m}^2 \text{K/W}$  (temperature)

### Isotherm calculation

12.6° C isotherm ————  
10.0° C isotherm ————



### Results

- Minimum heat insulation

$f_{RSI} = 0.930 (>0.70)$   
 $T = 18.13^\circ \text{C}$

#### Minimum heat insulation complied with

- Wall structure  $U = 0.20 \text{ W/m}^2 \text{K}$   
250 mm reinforced concrete  
10 mm plaster  
160 mm insulation WLG 035  
10 mm reinforcing, plaster

- Extracts from relevant standards/norms

DIN 4108-2  
DIN EN ISO 13788  
DIN EN ISO 10211  
DIN EN ISO 10077  
DIN EN ISO 12631  
DIN EN ISO 6946

- Thermal bridge surcharge for energy planning according to EnEV 2016

$\chi$  value of the punctiform thermal bridge  
 $\chi = 0.277 \text{ W/K}$

- Audit/test report of the thermal simulation

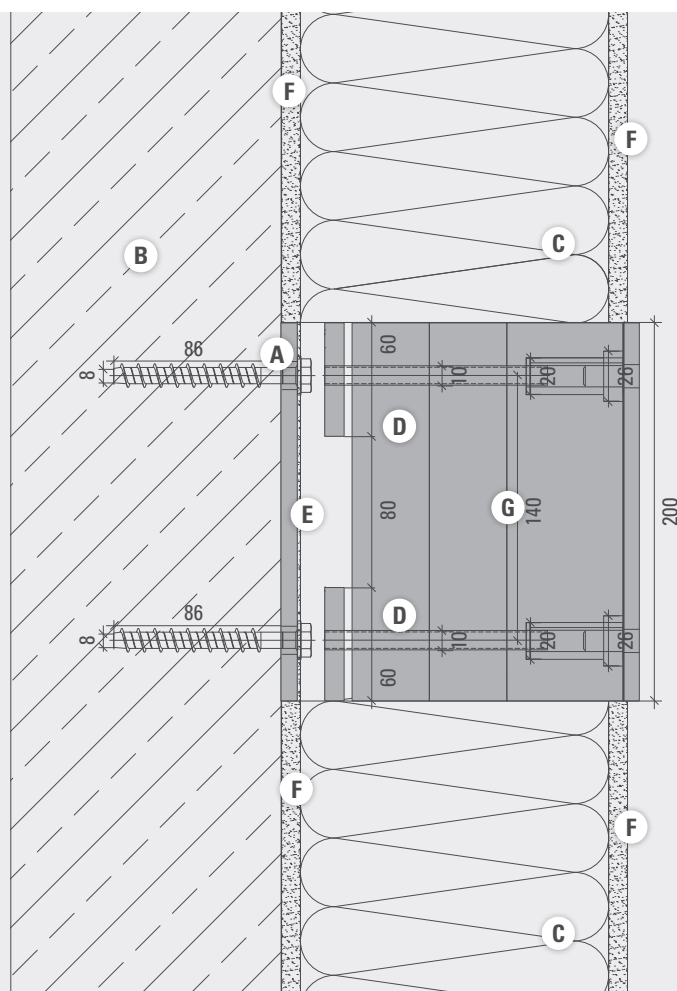
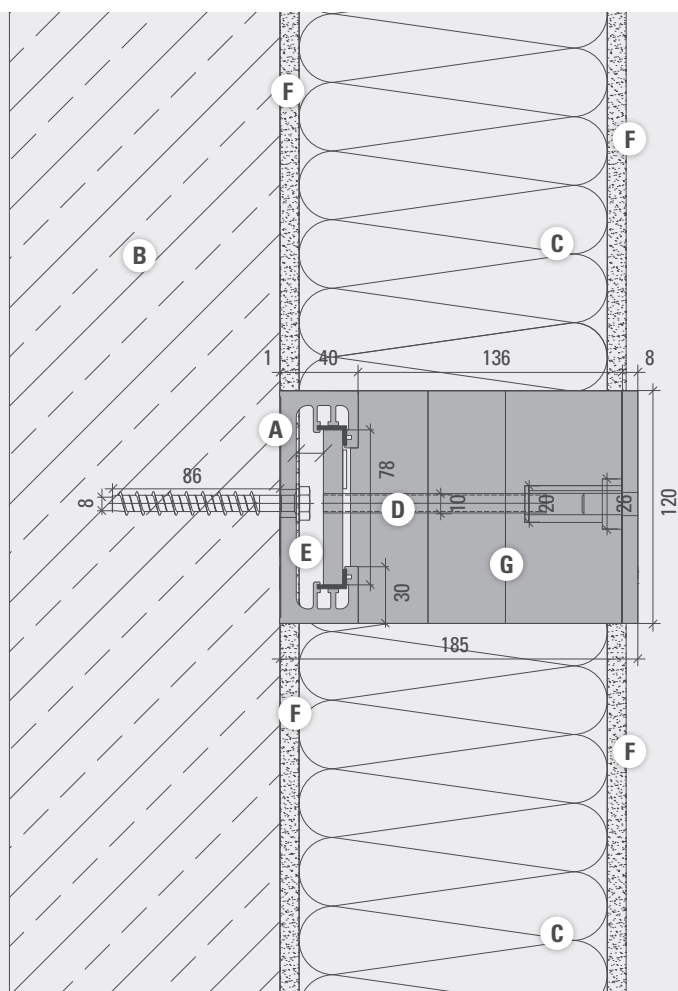
Audit/test report No.  
FS\_120\_3000\_WDVS\_160\_P

### Linear connection

| FIX'N SLIDE | Insulation thickness<br>mm | $\chi$ value<br>W/K | $f_{RSI}$<br>>0.70 | T<br>°C |
|-------------|----------------------------|---------------------|--------------------|---------|
| 100         | 80                         | 0.507               | 0.870              | 16.63   |
|             | 160                        | 0.250               | 0.930              | 18.20   |
|             | 300                        | 0.130               | 0.960              | 19.02   |
| 120         | 80                         | 0.546               | 0.860              | 16.52   |
|             | 160                        | 0.277               | 0.930              | 18.13   |
|             | 300                        | 0.140               | 0.960              | 18.99   |

# THERMAL INSULATION CALCULATIONS

Point-to-point connection purs. DIN 4108-2 and  $\chi$ -value calculation (example)



## Materials

|  | $\lambda$ [W/(m·K)] | $\varepsilon$ |
|--|---------------------|---------------|
| A Aluminium profile                    | 160.000             | 0.900         |
| B Concrete reinforced (with 2% steel)  | 2,500               | 0,900         |
| C Insulation WLG 035                   | 0.035               | 0.900         |
| D Stainless steel                      | 17.00               | 0.900         |
| E Air                                  |                     |               |
| F Plaster                              | 0.870               | 0.900         |
| G Pressure-resistant system insulation | 0.083               | 0.900         |

## Characteristics

- Construction component (W x H x L)  
120 x 185 x 200 mm
- 140 mm dowel spacing
- 140 mm tension rod/sleeve spacing

### Constraints

- Exterior temperatures

:  $T_a = -5^\circ \text{C}$   
inside:  $T_i = 20^\circ \text{C}$

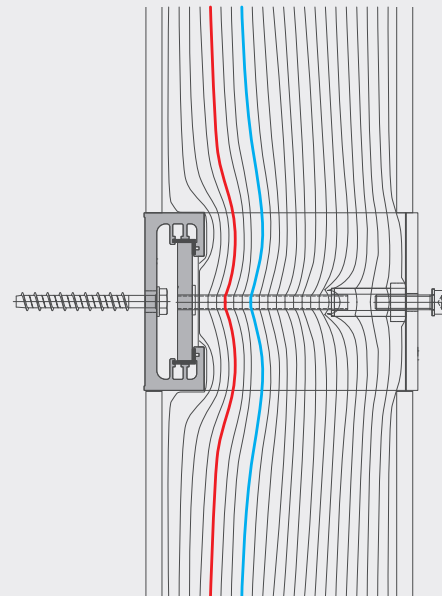
- External thermal transfer

:  $R_a = 0.04 \text{ m}^2 \text{K/W}$   
inside:  $R_i = 0.13 \text{ m}^2 \text{K/W}$  (heat flow)  
 $R_i = 0.25 \text{ m}^2 \text{K/W}$  (temperature)

- Thermal bridge surcharge for  
Energy planning according to EnEV 2016  
Xi value of the punctiform  
thermal bridge  
 $= 0.028 \text{ W/K}$

### Isotherm calculation

12.6° C isotherm ————  
10.0° C isotherm ————



### Results

- Minimum heat insulation

$f_{RSI} = 0.94 (>0.70)$   
 $T = 18.51^\circ \text{C}$

#### Minimum heat insulation complied with

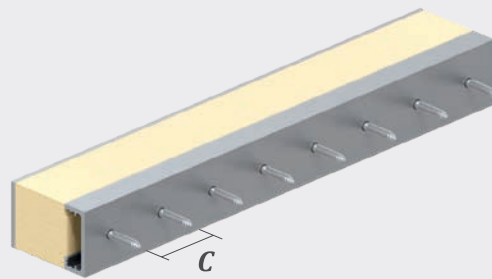
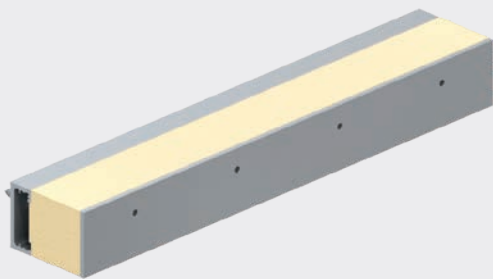
- Wall structure  $U = 0.20 \text{ W/m}^2 \text{K}$   
250 mm reinforced concrete  
10 mm plaster  
160 mm Insulation WLG 035  
10 mm reinforcing, plaster
- Audit/test report of the thermal simulation  
Audit/test report No.  
FS\_120\_0200\_WDVS\_160\_D
- Extracts from relevant standards/norms  
DIN 4108-2, DIN EN ISO 13788, DIN EN ISO 10211, DIN EN ISO 10077, DIN EN ISO 12631  
DIN EN ISO 6946

### Point-to-point connection

| FIX'N SLIDE | Insulation thickness<br>mm | Xi value<br>W/K | $f_{RSI}$<br>>0.70 | T<br>°C |
|-------------|----------------------------|-----------------|--------------------|---------|
| 48          | 80                         | 0.030           | 0.900              | 17.43   |
|             | 160                        | 0.012           | 0.950              | 18.64   |
|             | 300                        | 0.006           | 0.970              | 19.25   |
| 60          | 80                         | 0.049           | 0.890              | 17.27   |
|             | 160                        | 0.019           | 0.940              | 18.59   |
|             | 300                        | 0.009           | 0.970              | 19.23   |
| 80          | 80                         | 0.053           | 0.890              | 17.24   |
|             | 160                        | 0.020           | 0.940              | 18.57   |
|             | 300                        | 0.010           | 0.970              | 19.22   |
| 100         | 80                         | 0.060           | 0.890              | 17.19   |
|             | 160                        | 0.026           | 0.940              | 18.53   |
|             | 300                        | 0.014           | 0.970              | 19.19   |
| 120         | 80                         | 0.065           | 0.890              | 17.16   |
|             | 160                        | 0.028           | 0.940              | 18.51   |
|             | 300                        | 0.014           | 0.970              | 19.19   |

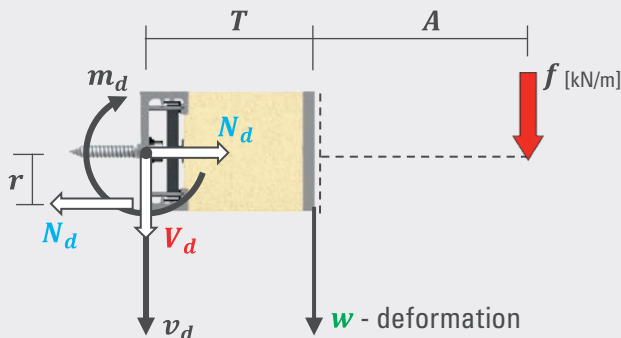
# DIMENSIONING

linear connection (action perpendicular to element axis)

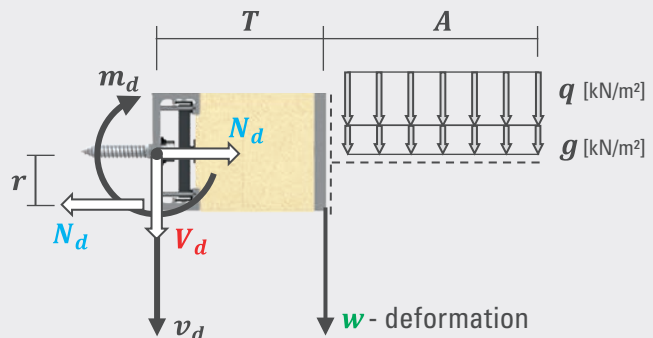


Actions / effects

Example 1 – linear action:



Example 2 – area load (q) and dead weight (g):



Limit state of carrying capacity  $m_d \leq m_{R,d}$  and  $v_d \leq v_{R,d}$

Calculated values of the linear bearing moments  $m_d$  and the linear bearing forces  $v_d$ :

Example 1

$$v_d \text{ [kN/m]} = \gamma_Q \cdot f \text{ [kN/m]}$$

$$m_d \text{ [kNm/m]} = v_d \text{ [kN/m]} \cdot (T_{[m]} + A_{[m]})$$

Example 2

$$v_d \text{ [kN/m]} = (\gamma_Q \cdot q_{[kN/m^2]} + \gamma_G \cdot g_{[kN/m^2]}) \cdot A_{[m]}$$

$$m_d \text{ [kNm/m]} = v_d \text{ [kN/m]} \cdot (T_{[m]} + A_{[m]}/2)$$

|        | $T$ [mm]          | to 90 | 90-100 | 100-120 | 120-140 | 140-160 | 160-180 | 180-200 | 200-220 | 220-240 | 240-260 | 260-280 | 280-300 | 300-320 |
|--------|-------------------|-------|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| FS 48  | $m_{R,d}$ [kNm/m] | 0.76  | 0.72   | 0.66    | 0.6     | 0.56    | 0.53    | 0.50    | 0.48    | 0.46    | 0.44    | 0.42    | 0.41    | 0.39    |
|        | $v_{R,d}$ [kN/m]  | 8.5   | 7.2    | 5.5     | 4.3     | 3.5     | 3.0     | 2.5     | 2.2     | 1.9     | 1.7     | 1.5     | 1.4     | 1.3     |
| FS 60  | $m_{R,d}$ [kNm/m] | 1.00  | 1.32   | 1.20    | 1.11    | 1.04    | 0.98    | 0.93    | 0.88    | 0.85    | 0.81    | 0.78    | 0.75    | 0.73    |
|        | $v_{R,d}$ [kN/m]  | 15.5  | 13.2   | 10.0    | 8.0     | 6.5     | 5.5     | 4.7     | 4.0     | 3.6     | 3.2     | 2.8     | 2.5     | 2.3     |
| FS 80  | $m_{R,d}$ [kNm/m] | 2.77  | 2.55   | 2.20    | 1.95    | 1.75    | 1.59    | 1.46    | 1.35    | 1.26    | 1.18    | 1.12    | 1.06    | 1.00    |
|        | $v_{R,d}$ [kN/m]  | 30.8  | 25.5   | 18.4    | 13.9    | 10.9    | 8.9     | 7.3     | 6.2     | 5.3     | 4.6     | 4.0     | 3.6     | 3.2     |
| FS 100 | $m_{R,d}$ [kNm/m] | 4.24  | 3.98   | 3.56    | 3.25    | 2.99    | 2.79    | 2.62    | 2.47    | 2.34    | 2.23    | 2.14    | 2.05    | 1.97    |
|        | $v_{R,d}$ [kN/m]  | 47.1  | 39.8   | 29.7    | 23.2    | 18.7    | 15.5    | 13.1    | 11.3    | 9.8     | 8.6     | 7.7     | 6.9     | 6.2     |
| FS 120 | $m_{R,d}$ [kNm/m] | 7.76  | 7.19   | 6.31    | 5.65    | 5.14    | 4.72    | 4.38    | 4.09    | 3.84    | 3.63    | 3.44    | 3.28    | 3.13    |
|        | $v_{R,d}$ [kN/m]  | 52.4  | 52.4   | 52.4    | 40.4    | 32.1    | 26.3    | 21.9    | 18.6    | 16.0    | 14.0    | 12.3    | 11.0    | 9.8     |

The values  $m_{R,d}$  and  $v_{R,d}$  in the table above apply to continuous and temporary measurement situations with short and/or long load duration (e.g. exposure to wind, snow or traffic loads and their combinations with the construction component weight). In load situations with predominantly permanent effects (e.g. only impact from the construction component weight), the values  $m_{R,d}$  and  $v_{R,d}$  from the table above should be multiplied by a reduction factor of 0.75. If dynamic, multi-axial or other special impact or effects which can result from adverse external influences (e.g. in exposed installation situations) must be taken into account, a separate consideration/calculation must take place.

## Limit state of serviceability (deformation)

Characteristic values of the linear bearing moments  $m$ :

**Example 1** – linear action:

$$m_{[kNm/m]} = f_{[kN/m]} \cdot (T_{[m]} + A_{[m]})$$

**Example 2** – area load and dead weight:

$$m_{[kNm/m]} = (q_{[kN/m^2]} + g_{[kN/m^2]}) \cdot A_{[m]} \cdot (T_{[m]} + A_{[m]}/2)$$

Existing deformation  $w$  at the front edge of the FS element as a function of the element depth  $T$  and the characteristic linear moment  $m$ :

|        | $T$ [mm]    | to 90                          | 90-100 | 100-120 | 120-140 | 140-160 | 160-180 | 180-200 | 200-220 | 220-240 | 240-260 | 260-280 | 280-300 | 300-320 |
|--------|-------------|--------------------------------|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
|        | $m$ [kNm/m] | existing deformation $w$ [mm]* |        |         |         |         |         |         |         |         |         |         |         |         |
| FS 48  | to 0.20     | < 1                            | < 1    | 2       | 3       | 3       | 3       | 4       | 4       | 5       | 5       | 5       | 5       | 5       |
|        | 0.20 - 0.25 | < 1                            | < 1    | 2       | 3       | 3       |         |         |         |         |         |         |         |         |
|        | 0.25 - 0.30 | < 1                            | < 1    | 2       | 3       | 3       |         |         |         |         |         |         |         |         |
| FS 60  | to 0.20     | < 1                            | < 1    | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | 2       | 2       |
|        | 0.20 - 0.30 | < 1                            | < 1    | < 1     | < 1     | < 1     | 2       | 2       | 2       | 2       | 3       | 3       | 3       | 4       |
|        | 0.30 - 0.40 | < 1                            | < 1    | < 1     | 2       | 2       | 2       | 3       | 3       | 4       | 4       |         |         |         |
|        | 0.40 - 0.50 | < 1                            | < 1    | < 1     | 2       | 3       | 3       | 4       |         |         |         |         |         |         |
|        | 0.50 - 0.60 | < 1                            | < 1    | 2       | 3       | 3       | 4       |         |         |         |         |         |         |         |
| FS 80  | to 0.20     | < 1                            | < 1    | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | 2       | 2       |
|        | 0.20 - 0.40 | < 1                            | < 1    | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | 2       | 2       | 3       | 4       |
|        | 0.40 - 0.60 | < 1                            | < 1    | < 1     | < 1     | < 1     | < 1     | < 1     | 2       | 3       | 3       | 4       |         |         |
|        | 0.60 - 0.80 | < 1                            | < 1    | < 1     | < 1     | < 1     | 2       | 2       | 3       | 4       | 5       |         |         |         |
|        | 0.80 - 1.00 | < 1                            | < 1    | < 1     | < 1     | 2       | 3       | 3       | 4       |         |         |         |         |         |
|        | 1.00 - 1.20 | < 1                            | < 1    | < 1     | 2       | 3       | 3       |         |         |         |         |         |         |         |
| FS 100 | to 0.25     | < 1                            | < 1    | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | 2       | 2       |
|        | 0.25 - 0.50 | < 1                            | < 1    | < 1     | < 1     | < 1     | < 1     | < 1     | 2       | 2       | 2       | 2       | 2       | 3       |
|        | 0.50 - 0.75 | < 1                            | < 1    | < 1     | < 1     | < 1     | < 1     | 2       | 2       | 2       | 3       | 3       | 4       | 4       |
|        | 0.75 - 1.00 | < 1                            | < 1    | < 1     | < 1     | < 1     | < 1     | 2       | 2       | 3       | 3       | 4       | 5       | 5       |
|        | 1.00 - 1.25 | < 1                            | < 1    | < 1     | < 1     | 2       | 2       | 2       | 3       | 3       | 4       |         |         |         |
|        | 1.25 - 1.50 | < 1                            | < 1    | < 1     | < 1     | 2       | 2       | 2       | 3       | 4       |         |         |         |         |
|        | 1.50 - 1.75 | < 1                            | < 1    | < 1     | < 1     | 2       | 2       | 3       | 4       |         |         |         |         |         |
| FS 120 | to 1.00     | < 1                            | < 1    | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | 2       | 2       | 2       | 2       | 3       |
|        | 1.00 - 1.25 | < 1                            | < 1    | < 1     | < 1     | < 1     | < 1     | 2       | 2       | 2       | 2       | 3       | 3       | 4       |
|        | 1.25 - 1.75 | < 1                            | < 1    | < 1     | < 1     | < 1     | < 1     | 2       | 2       | 3       | 3       | 4       | 4       | 5       |
|        | 1.75 - 2.00 | < 1                            | < 1    | < 1     | < 1     | < 1     | 2       | 2       | 3       | 3       | 4       | 4       | 5       | 6       |
|        | 2.00 - 2.25 | < 1                            | < 1    | < 1     | < 1     | 2       | 2       | 2       | 3       | 4       | 4       | 5       | 6       |         |
|        | 2.25 - 2.75 | < 1                            | < 1    | < 1     | < 1     | 2       | 2       | 3       | 3       | 4       |         |         |         |         |
|        | 2.75 - 3.25 | < 1                            | < 1    | < 1     | < 1     | 2       | 2       | 3       | 4       |         |         |         |         |         |

\* For particularly deformation-sensitive installation situations and under high continuous loads, it is advisable to use a larger Fix 'n Slide (FS) element. The values are to be understood as expected deformation. The influence of the rigidity of the substructure has not been taken into account.

Bearing forces:

$$N_{d[kN]} = m_{d[kNm/m]} \cdot C_{[m]} / r_{[m]}$$

$$V_{d[kN]} = v_{d[kNm/m]} \cdot C_{[m]}$$

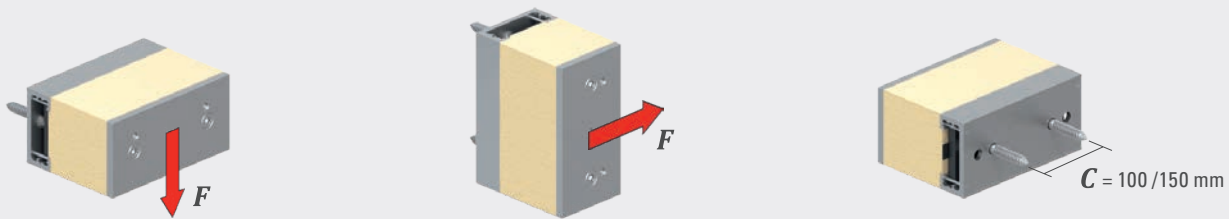
$C = \text{e.g. } 0.1 \text{ m}$

|           | FS 48 | FS 60 | FS 80 | FS 100 | FS 120 |
|-----------|-------|-------|-------|--------|--------|
| $r_{[m]}$ | 0.023 | 0.028 | 0.038 | 0.047  | 0.057  |

The proofs of the load input and forwarding and those for the substructure are not included/provided with the proofs for the FS elements.

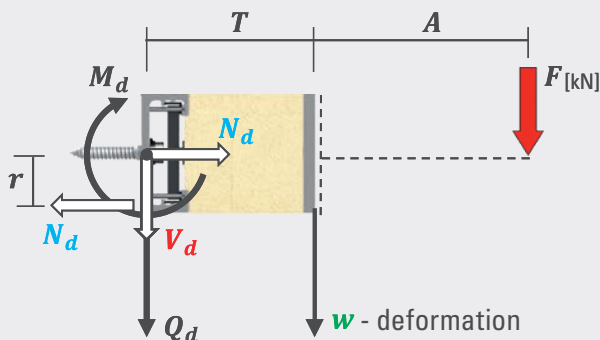
# DIMENSIONING

Point-to-point connection (action perpendicular to element axis)



Actions / effects

Example – single load:



limit state of carrying capacity  $M_d \leq M_{R,d}$  and  $Q_d \leq Q_{R,d}$

Calculated values of the linear bearing moments  $M_d$  and the bearing forces  $Q_d$  per element 200 mm:

$$Q_{d \text{ [kN]}} = \gamma_Q \cdot F_{\text{[kN]}}$$

$$M_{d \text{ [kNm]}} = Q_{d \text{ [kN]}} \cdot (T_{\text{[m]}} + A_{\text{[m]}})$$

|        | $T$ [mm]        | to 90 | 90-100 | 100-120 | 120-140 | 140-160 | 160-180 | 180-200 | 200-220 | 220-240 | 240-260 | 260-280 | 280-300 | 300-320 |
|--------|-----------------|-------|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| FS 48  | $M_{R,d}$ [kNm] | 0.26  | 0.25   | 0.23    | 0.22    | 0.20    | 0.19    | 0.18    | 0.18    | 0.17    | 0.16    | 0.16    | 0.16    | 0.15    |
|        | $Q_{R,d}$ [kN]  | 1.9   | 1.9    | 1.9     | 1.6     | 1.3     | 1.1     | 0.9     | 0.8     | 0.7     | 0.7     | 0.6     | 0.6     | 0.5     |
| FS 60  | $M_{R,d}$ [kNm] | 0.35  | 0.34   | 0.32    | 0.3     | 0.29    | 0.28    | 0.27    | 0.26    | 0.26    | 0.25    | 0.24    | 0.24    | 0.23    |
|        | $Q_{R,d}$ [kN]  | 3.9   | 3.4    | 2.7     | 2.2     | 1.8     | 1.6     | 1.4     | 1.2     | 1.1     | 1.0     | 0.9     | 0.8     | 0.8     |
| FS 80  | $M_{R,d}$ [kNm] | 0.74  | 0.70   | 0.65    | 0.60    | 0.57    | 0.54    | 0.51    | 0.49    | 0.47    | 0.45    | 0.44    | 0.43    | 0.41    |
|        | $Q_{R,d}$ [kN]  | 7.6   | 7.0    | 5.4     | 4.3     | 3.6     | 3.0     | 2.6     | 2.3     | 2.0     | 1.8     | 1.6     | 1.5     | 1.3     |
| FS 100 | $M_{R,d}$ [kNm] | 1.32  | 1.26   | 1.16    | 1.08    | 1.01    | 0.96    | 0.91    | 0.87    | 0.84    | 0.81    | 0.78    | 0.76    | 0.74    |
|        | $Q_{R,d}$ [kN]  | 10.5  | 10.5   | 8.5     | 6.9     | 5.8     | 5.0     | 4.3     | 3.8     | 3.4     | 3.1     | 2.8     | 2.6     | 2.4     |
| FS 120 | $M_{R,d}$ [kNm] | 1.88  | 1.81   | 1.70    | 1.61    | 1.54    | 1.48    | 1.42    | 1.38    | 1.34    | 1.30    | 1.27    | 1.24    | 1.21    |
|        | $Q_{R,d}$ [kN]  | 10.5  | 10.5   | 10.5    | 10.5    | 9.1     | 7.8     | 6.9     | 6.1     | 5.5     | 4.9     | 4.5     | 4.1     | 3.8     |

The values  $M_{R,d}$  and  $Q_{R,d}$  in the table above apply to continuous and temporary measurement situations with short and/or long load duration (e.g. exposure to wind, snow or traffic loads and their combinations with the construction component weight). In load situations with predominantly permanent effects (e.g. only impact from the construction component weight), the values  $M_{R,d}$  and  $Q_{R,d}$  from the table above should be multiplied by a reduction factor of 0.75. If dynamic, multi-axial or other special impact or effects which can result from adverse external influences (e.g. in exposed installation situations) must be taken into account, a separate consideration/calculation must take place.

## Limit state of serviceability (deformation)

Characteristic values of the linear bearing moments  $M$ :

$$M_{[kNm]} = F_{[kN]} \cdot (T_{[m]} + A_{[m]})$$

Existing deformation  $w$  at the front edge of the FS element as a function of the element depth  $T$  and the characteristic linear moment  $M$ :

|        | $T$ [mm]    | to 90                          | 90-100 | 100-120 | 120-140 | 140-160 | 160-180 | 180-200 | 200-220 | 220-240 | 240-260 | 260-280 | 280-300 | 300-320 |
|--------|-------------|--------------------------------|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
|        | $M$ [kNm]   | existing deformation $w$ [mm]* |        |         |         |         |         |         |         |         |         |         |         |         |
| FS 48  | to 0.05     | < 1                            | < 1    | < 1     | < 1     | < 1     | 2       | 2       | 3       | 3       | 3       | 3       | 3       | 4       |
|        | 0.05 - 0.10 | < 1                            | < 1    | < 1     | 2       | 2       |         |         |         |         |         |         |         |         |
|        | 0.10 - 0.15 | < 1                            | 2      | 2       |         |         |         |         |         |         |         |         |         |         |
| FS 60  | to 0.05     | < 1                            | < 1    | < 1     | < 1     | < 1     | < 1     | < 1     | 2       | 2       | 2       | 2       | 2       | 2       |
|        | 0.05 - 0.10 | < 1                            | < 1    | < 1     | 2       | 2       | 2       | 3       | 3       | 3       | 4       | 4       | 5       | 5       |
|        | 0.10 - 0.15 | < 1                            | < 1    | 2       | 2       | 3       | 4       | 4       |         |         |         |         |         |         |
|        | 0.15 - 0.20 | < 1                            | 2      |         |         |         |         |         |         |         |         |         |         |         |
| FS 80  | to 0.05     | < 1                            | < 1    | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | 2       | 2       |
|        | 0.05 - 0.10 | < 1                            | < 1    | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | 2       | 2       | 2       | 3       |
|        | 0.10 - 0.20 | < 1                            | < 1    | < 1     | < 1     | < 1     | < 1     | 2       | 2       | 3       | 3       | 4       | 5       | 5       |
|        | 0.20 - 0.30 | < 1                            | < 1    | < 1     | 2       | 2       | 3       | 3       | 4       |         |         |         |         |         |
|        | 0.30 - 0.40 | < 1                            | < 1    | 2       | 3       | 3       |         |         |         |         |         |         |         |         |
| FS 100 | to 0.10     | < 1                            | < 1    | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     |
|        | 0.10 - 0.20 | < 1                            | < 1    | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | 2       | 2       | 2       | 2       | 3       |
|        | 0.20 - 0.30 | < 1                            | < 1    | < 1     | < 1     | 2       | 2       | 2       | 3       | 3       | 3       | 4       | 4       | 5       |
|        | 0.30 - 0.40 | < 1                            | < 1    | < 1     | 2       | 3       | 3       | 4       |         |         |         |         |         |         |
|        | 0.40 - 0.50 | < 1                            | < 1    | 2       |         |         |         |         |         |         |         |         |         |         |
|        | 0.50 - 0.60 | < 1                            | < 1    |         |         |         |         |         |         |         |         |         |         |         |
| FS 120 | to 0.40     | < 1                            | < 1    | < 1     | < 1     | < 1     | < 1     | 2       | 2       | 2       | 2       | 3       | 3       | 3       |
|        | 0.40 - 0.50 | < 1                            | < 1    | < 1     | < 1     | 2       | 2       | 2       | 2       | 3       | 3       | 4       | 4       | 4       |
|        | 0.50 - 0.60 | < 1                            | < 1    | < 1     | < 1     | 2       | 2       | 3       | 3       | 4       | 4       | 5       | 5       | 6       |
|        | 0.60 - 0.70 | < 1                            | < 1    | < 1     | 2       | 2       | 3       | 3       | 4       | 5       | 5       |         |         |         |
|        | 0.70 - 0.80 | < 1                            | < 1    | < 1     | 2       | 3       | 3       | 4       |         |         |         |         |         |         |
|        | 0.80 - 0.90 | < 1                            | < 1    | 2       | 2       |         |         |         |         |         |         |         |         |         |
|        | 0.90 - 1.00 | < 1                            | < 1    | 2       |         |         |         |         |         |         |         |         |         |         |

\* For particularly deformation-sensitive installation situations and under high continuous loads, it is advisable to use a larger Fix'n Slide (FS) element. The values are to be understood as expected deformation. The influence of the rigidity of the substructure has not been taken into account.

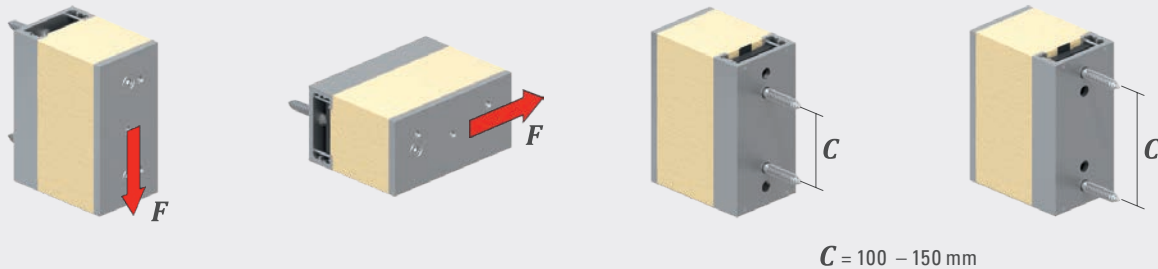
Bearing forces per connection (dowel / screw):  $N_d [kN] = M_d [kNm] / (r_{[m]} \cdot 2)$   $V_d [kN] = Q_d [kN] / 2$

|           | FS 48 | FS 60 | FS 80 | FS 100 | FS 120 |
|-----------|-------|-------|-------|--------|--------|
| $r_{[m]}$ | 0.023 | 0.028 | 0.038 | 0.047  | 0.057  |

The proofs of the load input and forwarding and those for the substructure are not included/provided with the proofs for the FS elements.

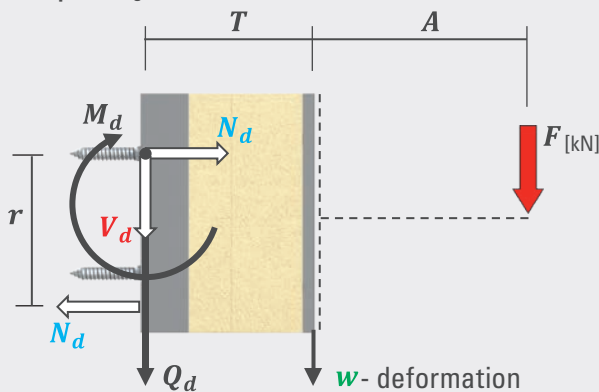
# DIMENSIONING

Point-to-point connection (action parallel to element axis)



Actions / effects

Example – single load:



limit state of carrying capacity  $M_d \leq M_{R,d}$  and  $Q_d \leq Q_{R,d}$

Calculated values of the linear bearing moments  $M_d$  and the bearing forces  $Q_d$  per element 200 mm:

$$Q_d \text{ [kN]} = \gamma_Q \cdot F \text{ [kN]}$$

$$M_d \text{ [kNm]} = Q_d \text{ [kN]} \cdot (T \text{ [m]} + A \text{ [m]})$$

|        | $T$ [mm]        | to 90 | 90-100 | 100-120 | 120-140 | 140-160 | 160-180 | 180-200 | 200-220 | 220-240 | 240-260 | 260-280 | 280-300 | 300-320 |
|--------|-----------------|-------|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| FS 48  | $M_{R,d}$ [kNm] | 1.10  | 1.07   | 1.01    | 0.96    | 0.92    | 0.89    | 0.86    | 0.83    | 0.81    | 0.79    | 0.77    | 0.75    | 0.74    |
|        | $Q_{R,d}$ [kN]  | 1.2   | 1.2    | 1.2     | 1.2     | 1.2     | 1.2     | 1.2     | 1.2     | 1.2     | 1.2     | 1.2     | 1.2     | 1.2     |
| FS 60  | $M_{R,d}$ [kNm] | 1.78  | 1.72   | 1.63    | 1.55    | 1.49    | 1.44    | 1.39    | 1.35    | 1.31    | 1.28    | 1.25    | 1.23    | 1.20    |
|        | $Q_{R,d}$ [kN]  | 3.3   | 3.3    | 3.3     | 3.3     | 3.3     | 3.3     | 3.3     | 3.3     | 3.3     | 3.3     | 3.3     | 3.3     | 3.3     |
| FS 80  | $M_{R,d}$ [kNm] | 1.48  | 1.44   | 1.37    | 1.31    | 1.26    | 1.22    | 1.19    | 1.16    | 1.13    | 1.10    | 1.08    | 1.06    | 1.04    |
|        | $Q_{R,d}$ [kN]  | 3.4   | 3.4    | 3.4     | 3.4     | 3.4     | 3.4     | 3.4     | 3.4     | 3.4     | 3.4     | 3.4     | 3.4     | 3.3     |
| FS 100 | $M_{R,d}$ [kNm] | 3.61  | 3.36   | 2.97    | 2.67    | 2.44    | 2.25    | 2.10    | 1.96    | 1.85    | 1.75    | 1.67    | 1.59    | 1.52    |
|        | $Q_{R,d}$ [kN]  | 4.5   | 4.5    | 4.5     | 4.5     | 4.5     | 4.5     | 4.5     | 4.5     | 4.5     | 4.5     | 4.5     | 4.5     | 4.5     |
| FS 120 | $M_{R,d}$ [kNm] | 2.85  | 2.66   | 2.35    | 2.12    | 1.94    | 1.8     | 1.67    | 1.57    | 1.48    | 1.41    | 1.34    | 1.28    | 1.22    |
|        | $Q_{R,d}$ [kN]  | 4.5   | 4.5    | 4.5     | 4.5     | 4.5     | 4.5     | 4.5     | 4.5     | 4.5     | 4.5     | 4.5     | 4.3     | 3.9     |

The values  $M_{R,d}$  and  $Q_{R,d}$  in the table above apply to continuous and temporary measurement situations with short and/or long load duration (e.g. exposure to wind, snow or traffic loads and their combinations with the construction component weight). In load situations with predominantly permanent effects (e.g. only impact from the construction component weight), the values  $M_{R,d}$  and  $Q_{R,d}$  from the table above should be multiplied by a reduction factor of 0.75. If dynamic, multi-axial or other special impact or effects which can result from adverse external influences (e.g. in exposed installation situations) must be taken into account, a separate consideration/calculation must take place.



## Limit state of serviceability (deformation)

Characteristic values of the linear bearing moments  $M$ :

$$M_{[kNm]} = F_{[kN]} \cdot (T_{[m]} + A_{[m]})$$

Existing deformation  $w$  at the front edge of the FS element as a function of the element depth  $T$  and the characteristic linear moment  $M$ :

|        | $T$ [mm]    | to 90                          | 90-100 | 100-120 | 120-140 | 140-160 | 160-180 | 180-200 | 200-220 | 220-240 | 240-260 | 260-280 | 280-300 | 300-320 |
|--------|-------------|--------------------------------|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
|        | $M$ [kNm]   | existing deformation $w$ [mm]* |        |         |         |         |         |         |         |         |         |         |         |         |
| FS 48  | to 0.20     | < 1                            | < 1    | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     |
|        | 0.20 - 0.30 | < 1                            | < 1    | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     |
|        | 0.30 - 0.40 | < 1                            | < 1    | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | 2       | 2       |
|        | 0.40 - 0.50 | < 1                            | < 1    | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | 2       | 2       | 2       | 2       | 2       |
|        | 0.50 - 0.60 | < 1                            | < 1    | < 1     | < 1     | < 1     | < 1     | 2       | 2       | 2       | 2       | 3       | 3       | 3       |
| FS 60  | to 0.30     | < 1                            | < 1    | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     |
|        | 0.30 - 0.40 | < 1                            | < 1    | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     |
|        | 0.40 - 0.50 | < 1                            | < 1    | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     |
|        | 0.50 - 0.60 | < 1                            | < 1    | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     |
|        | 0.60 - 0.70 | < 1                            | < 1    | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     |
|        | 0.70 - 0.80 | < 1                            | < 1    | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | 2       | 2       | 2       |
|        | 0.80 - 0.90 | < 1                            | < 1    | < 1     | < 1     | < 1     | < 1     | < 1     | 2       | 2       | 2       | 2       | 2       | 3       |
| FS 80  | to 0.30     | < 1                            | < 1    | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     |
|        | 0.30 - 0.40 | < 1                            | < 1    | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     |
|        | 0.40 - 0.50 | < 1                            | < 1    | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | 2       |
|        | 0.50 - 0.60 | < 1                            | < 1    | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | 2       | 2       | 2       |
|        | 0.60 - 0.70 | < 1                            | < 1    | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | 2       | 2       | 2       | 2       | 2       |
|        | 0.70 - 0.80 | < 1                            | < 1    | < 1     | < 1     | < 1     | < 1     | 2       | 2       | 2       | 2       | 2       | 3       | 3       |
|        | 0.80 - 0.90 | < 1                            | < 1    | < 1     | < 1     | < 1     | 2       | 2       | 2       | 2       | 3       | 3       | 3       | 4       |
| FS 100 | to 0.50     | < 1                            | < 1    | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     |
|        | 0.50 - 0.75 | < 1                            | < 1    | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | 2       | 2       | 2       |
|        | 0.75 - 1.00 | < 1                            | < 1    | < 1     | < 1     | < 1     | < 1     | < 1     | 2       | 2       | 2       | 2       | 2       | 2       |
|        | 1.00 - 1.25 | < 1                            | < 1    | < 1     | < 1     | 2       | 2       | 2       | 2       | 2       | 3       | 3       | 3       | 3       |
|        | 1.25 - 1.50 | < 1                            | < 1    | < 1     | 2       | 2       | 2       | 2       | 3       | 3       | 3       | 4       | 4       | 4       |
| FS 120 | to 0.50     | < 1                            | < 1    | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     |
|        | 0.50 - 0.75 | < 1                            | < 1    | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | < 1     | 2       | 2       | 2       |
|        | 0.75 - 1.00 | < 1                            | < 1    | < 1     | < 1     | < 1     | < 1     | < 1     | 2       | 2       | 2       | 2       | 2       | 3       |
|        | 1.00 - 1.25 | < 1                            | < 1    | < 1     | < 1     | < 1     | 2       | 2       | 2       | 2       | 3       | 3       | 3       | 4       |
|        | 1.25 - 1.50 | < 1                            | < 1    | < 1     | 2       | 2       | 2       | 2       | 3       | 3       | 4       | 4       | 5       | 5       |

\* For particularly deformation-sensitive installation situations and under high continuous loads, it is advisable to use a larger Fix'n Slide (FS) element. The values are to be understood as expected deformation. The influence of the rigidity of the substructure has not been taken into account.

Bearing forces per connection (dowel / screw):  $N_d = M_d / r$   $V_d = Q_d / 2$

|         | when $C = 100$ mm |       |       |        |        | when $C = 150$ mm |       |       |        |        |
|---------|-------------------|-------|-------|--------|--------|-------------------|-------|-------|--------|--------|
|         | FS 48             | FS 60 | FS 80 | FS 100 | FS 120 | FS 48             | FS 60 | FS 80 | FS 100 | FS 120 |
| $r$ [m] | 0.135             | 0.137 | 0.140 | 0.143  | 0.144  | 0.158             | 0.159 | 0.161 | 0.162  | 0.163  |

The proofs of the load input and forwarding and those for the substructure are not included/provided with the proofs for the FS elements.

# INSTALLATION MANUAL

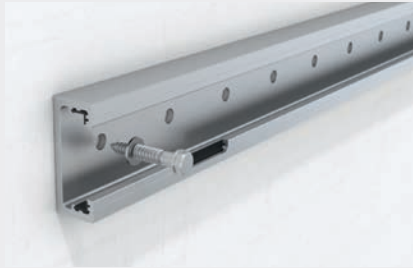
## LINEAR CONNECTION

1



Slide the plastic elements for thermal bridging reduction into the areas of the aluminium mounting rail provided for this purpose.

2



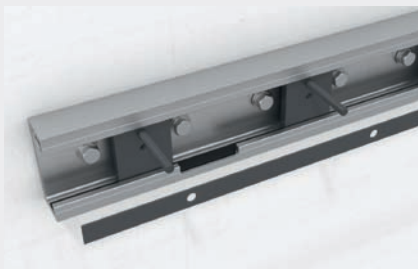
Determine the attachment points using the aluminium mounting rail. Attach the aluminium mounting rail to the substructure or building element with regulated/approved means of connection.

3



Screw the tension-resistant threaded rods into the insert plates and guide the insert plates into the aluminium mounting rail.

4



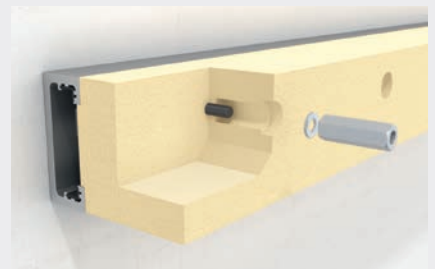
Align the insert plates according to the attachment points of the add-on element by sliding. Secure the insert plates with the pre-drilled installation aid.

5



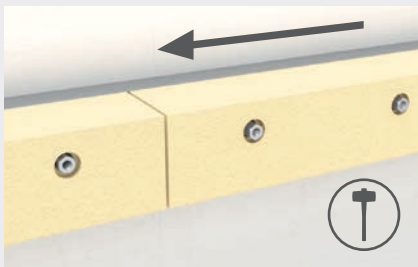
Slide the pre-drilled insulating elements over the threaded rods.

6



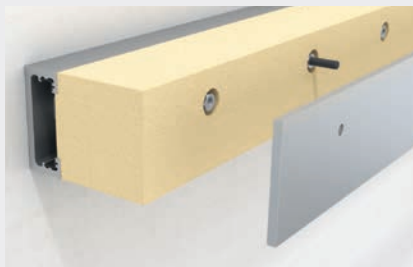
Insert the washers and threaded sleeves on the threaded rods and fasten them with a tightening torque of 10 Nm.

7



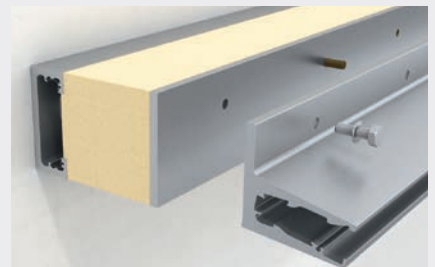
After attaching the first insulating elements, slide the other elements end-to-end together (if the case may be, knock with a hammer).

8



To help with installing, insert a bolt into a threaded sleeve and attach the optional aluminium connection plate with self-adhesive EPDM tape to the insulating element.

9



Align the attachment (here CANOPY CLOUD from GLASSLINE) with a bolt. Fasten the attachment to the substructure with regulated/approved means of connecting with a tightening torque of 24 Nm for M10 or M12 Nm for M8.

All screw connections must be secured against loosening with appropriate measures.

# INSTALLATION MANUAL POINT-TO-POINT CONNECTION

1



Determine the attachment points using the U-profile. Attach the U-profile to the sub-structure or building element with regulated/approved means of connection.

2



Screw the tension-resistant threaded rods into the insert plates.

3



Guide the insert plates into the aluminium mounting rail.

4



Align the insert plates by sliding them on the pre-drilled installation aid and fix them.

5



Slide the pre-drilled insulating elements over the threaded rods.

6



Insert the washers and threaded sleeves on the threaded rods and fasten them with a tightening torque of 10 Nm.

7



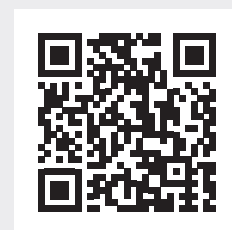
Mount an adapter plate with regulated/approved means of connecting with a tightening torque of 24 Nm for M10 or 12 Nm for M8.

Installation video  
**Linear** connection



[www.glassline.de/fs-linear](http://www.glassline.de/fs-linear)

Installation video  
**Point-to-point** connection



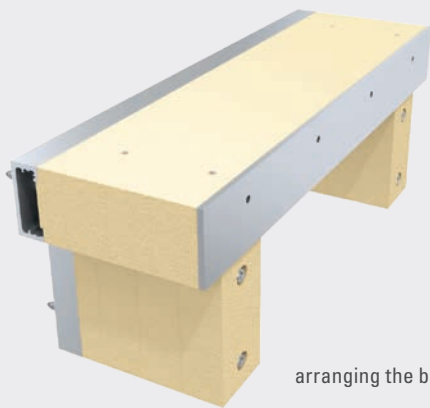
[www.glassline.de/fs-punktuell](http://www.glassline.de/fs-punktuell)

All screw connections must be secured against loosening with appropriate measures.

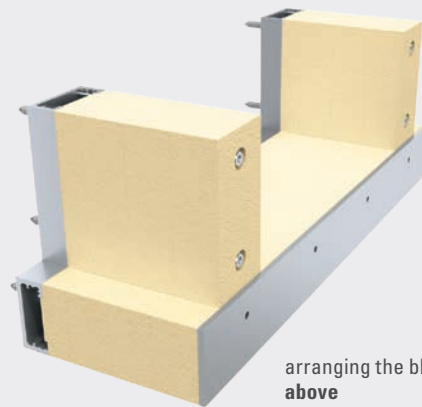
# REINFORCEMENT SOLUTIONS

by FIX<sup>■</sup>N SLIDE

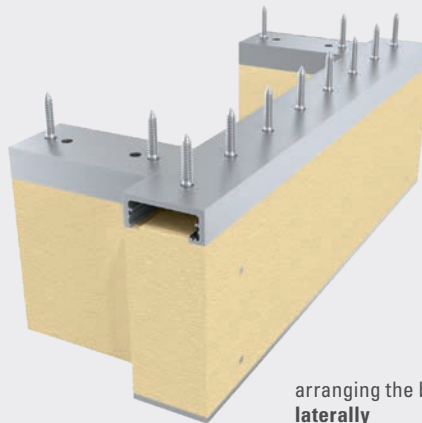
Arrangement of the stiffening elements



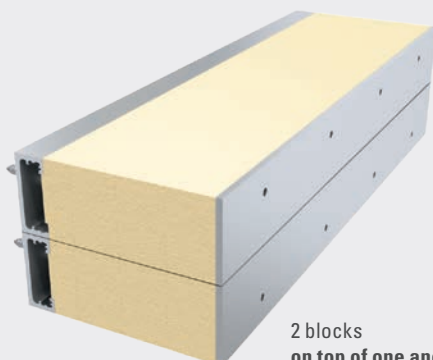
arranging the blocks **below**



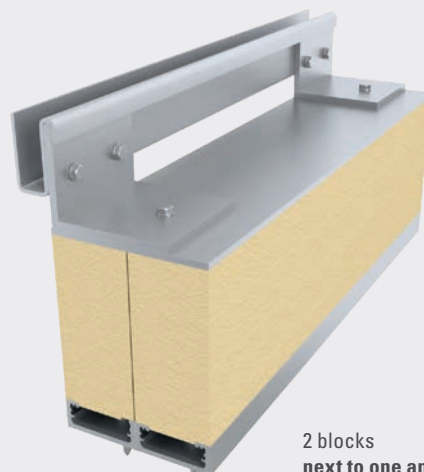
arranging the blocks **above**



arranging the blocks **laterally**



2 blocks  
on top of one another



2 blocks  
next to one another

# PRODUCT INQUIRY FIX<sup>N</sup> SLIDE

Name

Company

Street address

Postcode/ City

Telephone

Telefax

Email

(Please fill in all fields)

## The speedy inquiry:

- Print/save inquiry
- Fill in
- Fax to **+49 (0) 6291/6259-11** or  
by email to **info@glassline.de**  
Your inquiry will be processed  
as soon as possible.

Construction project

## FIX<sup>N</sup> SLIDE

### ☐ POINT-TO-POINT CONNECTION

\_\_\_\_\_ piece(s)



- ☐ Optional  
adapter plate  
(stainless steel)

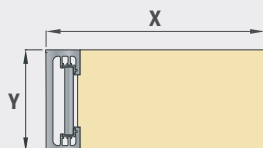
### ☐ LINEAR CONNECTION

\_\_\_\_\_ piece(s)



- ☐ Optional  
connecting plate  
(aluminium, surface  
E6/EV1)

## BLOCK HEIGHTS



### Sizes Y:

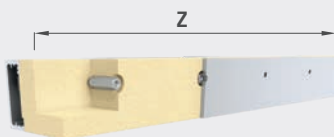
- ☐ 48  
☐ 60  
☐ 80  
☐ 100  
☐ 120

Special heights on request

### Block heights X:

| 48                           | 60 + 80                      | 100 + 120                    |
|------------------------------|------------------------------|------------------------------|
| <input type="checkbox"/> 50  | <input type="checkbox"/> 55  | <input type="checkbox"/> 65  |
| <input type="checkbox"/> 70  | <input type="checkbox"/> 75  | <input type="checkbox"/> 85  |
| <input type="checkbox"/> 80  | <input type="checkbox"/> 85  | <input type="checkbox"/> 95  |
| <input type="checkbox"/> 100 | <input type="checkbox"/> 105 | <input type="checkbox"/> 115 |
| <input type="checkbox"/> 120 | <input type="checkbox"/> 125 | <input type="checkbox"/> 135 |
| <input type="checkbox"/> 140 | <input type="checkbox"/> 145 | <input type="checkbox"/> 155 |
| <input type="checkbox"/> 160 | <input type="checkbox"/> 165 | <input type="checkbox"/> 175 |
| <input type="checkbox"/> 180 | <input type="checkbox"/> 185 | <input type="checkbox"/> 195 |
| <input type="checkbox"/> 200 | <input type="checkbox"/> 205 | <input type="checkbox"/> 215 |
| <input type="checkbox"/> 220 | <input type="checkbox"/> 225 | <input type="checkbox"/> 235 |
| <input type="checkbox"/> 240 | <input type="checkbox"/> 245 | <input type="checkbox"/> 255 |
| <input type="checkbox"/> 260 | <input type="checkbox"/> 265 | <input type="checkbox"/> 275 |
| <input type="checkbox"/> 280 | <input type="checkbox"/> 285 | <input type="checkbox"/> 295 |
| <input type="checkbox"/> 300 | <input type="checkbox"/> 305 | <input type="checkbox"/> 315 |

## LINEAR CONNECTION



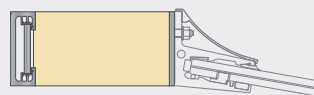
### Lengths Z:

- ☐ 600 mm      ☐ 2000 mm  
☐ 800 mm      ☐ 2400 mm  
☐ 1400 mm      ☐ 2.800 mm  
☐ 1600 mm      ☐ 3.000 mm

Special lengths on request

## FIX<sup>N</sup> SLIDE FOR CANOPY CLOUD STOCK PROGRAM

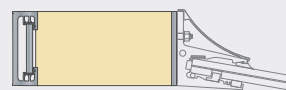
### CANOPY CLOUD PROFILE TYPE 1



### Lengths:

- 1400 mm \_\_\_\_\_ piece(s)  
 1600 mm \_\_\_\_\_ piece(s)  
 2000 mm \_\_\_\_\_ piece(s)  
 2400 mm \_\_\_\_\_ piece(s)

### CANOPY CLOUD PROFILE TYPE 3



### Lengths:

- 2400 mm \_\_\_\_\_ piece(s)  
 2800 mm \_\_\_\_\_ piece(s)

## ACCESSORIES

FIX<sup>N</sup> SLIDE VARIO system module: \_\_\_\_\_ piece(s)



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info@glassline.de  
**www.glassline.de**

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ARCHITECTURE AND SECURE ATTACHMENT OF  
ADD-ON COMPONENTS TO ETICS**

As a leading supplier, GLASSLINE develops, manufactures and sells high-quality system solutions in the areas of point fixing systems, all-glass railing systems, frameless canopy constructions and systems with thermal insulation for the secure attachment of add-on elements to building envelopes.

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- All screw connections are permanent, e.g. to be secured against loosening with an adhesive bond.
- The pressure-resistant insulating elements must be protected against UV radiation and weathering.
- The object-specific application and the proofs for load input and forwarding are to be tested and provided on site.

