

SYNEGO[®]
TECHNICAL INFORMATION
INSTALLATION GUIDELINES

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INSTALLATION GUIDELINES

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These installation guidelines specify the planning and detailing of wall connections to ensure the suitability of use of a fitted window even for extended periods of time.

The performance of a high-quality window depends on the profession-

al design and workmanship of the wall connection. The correct design and detailing of the wall joint is therefore of utmost importance. All physical construction forces acting on the window must be taken into account (fig. 1).

1. Fixing the units

1.1 Sources of load application

To ensure suitability of use of windows, doors and facades for an extended period of time, all design forces acting on the window must be reliably transmitted to the building. The following forces occur :

- Wind load,
- Dead load,
- Horizontal live loads. This is based on DIN 1055.

In addition to the above loads, the forces exerted are also influenced by the following:

- the flexural rigidity of the frame profiles,
- the position and number of fixing points,
- the internal/external temperature difference,
- the thermal expansion of the materials used and
- the flexibility (spring stiffness) of the fasteners.

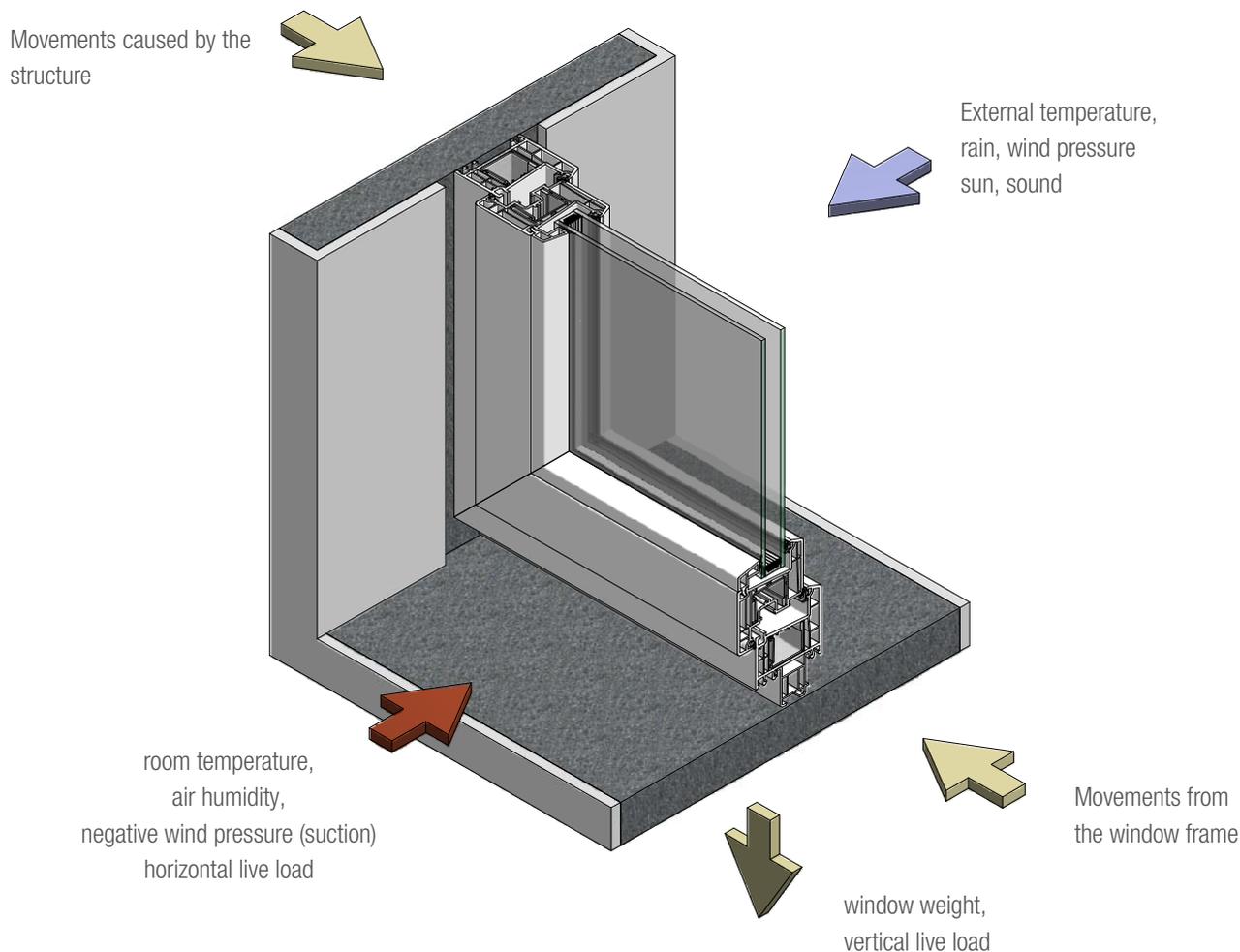
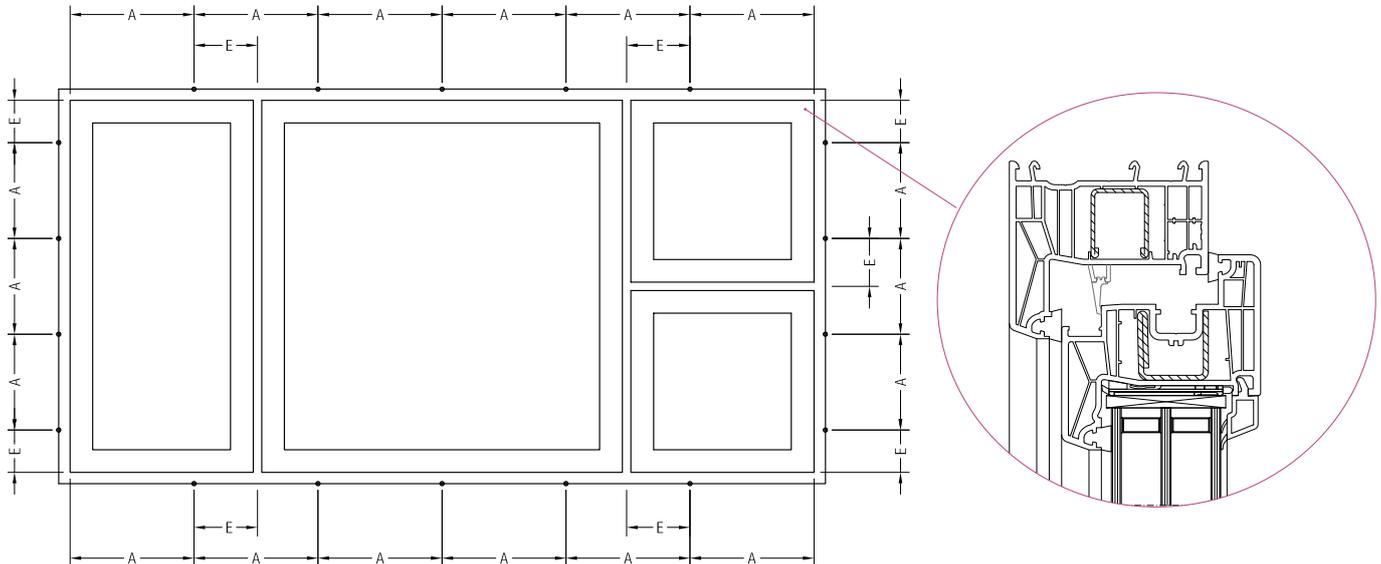


Fig. 1: Effects on the installation connecting joint



- - Fastening points
- A - Fastening distance approx. 700 mm
- E - Distance from the profile internal corner approx. 150 mm

Fig. 2: Fastening distances for PVC windows

1.2 Load distribution

Wind loads and horizontal live loads:

The correct selection of the fasteners depends primarily on the load, the construction situation and the wall connection system.

The fasteners inserted are used primarily to distribute the wind load and the horizontal live load. In line with the latest technology, PUR foams, gunnable sealants or other insulation or sealing materials are not defined as fixing materials/fasteners.



The fixing must be mechanical!

The layout of the fasteners for PVC windows is specified in fig. 2.

Dead loads:

These are forces generated by the self-weight of the window or door element.

The frames must be secured for load distribution to the masonry and fixed to the masonry using commercially available fasteners (see fig. 3).

The latter are not sufficient for load distribution of the self-weight!

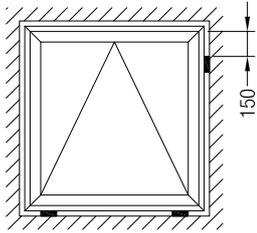


The following should be noted:

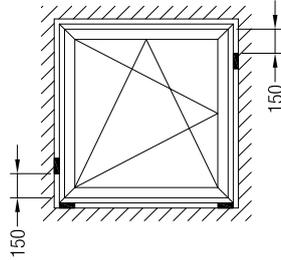
- The support blocks must be made of a suitable material.
- The arrangement of the support blocks must not unduly affect the expansion of the unit.
- The support blocks must remain in the construction joint for continuous load distribution.
- For units positioned in front of the masonry, correspondingly stable steel angles or brackets must be used.
- Adequate flexural rigidity of the frame profile must always be ensured.
- The support blocks must not affect subsequent work, such as sealing the connecting joint.

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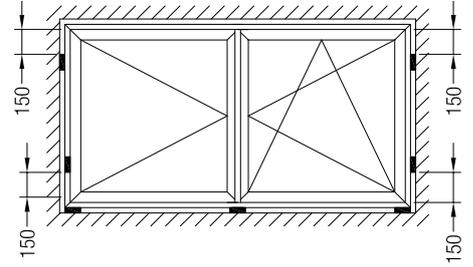
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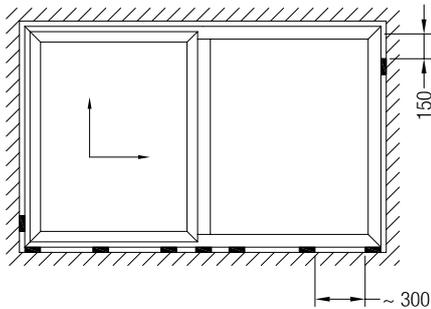
Bottom-hung window
(Support blocks underneath the hinges)



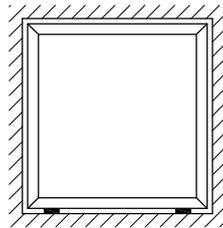
Tilt and turn window



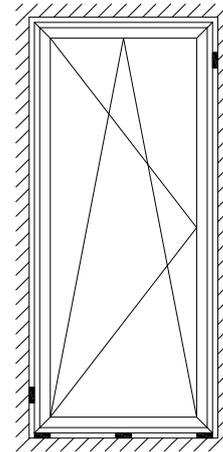
French window
(The support block in the area of the meeting stiles shall not affect the function of the window)



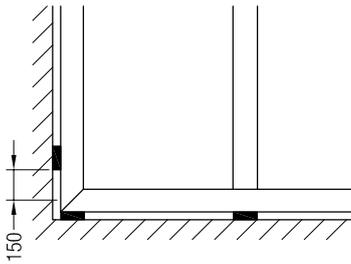
Lift and slide door



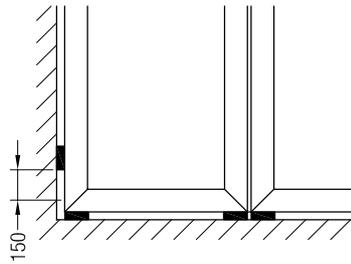
Fixed light
(Support blocks underneath the glazing blocks)



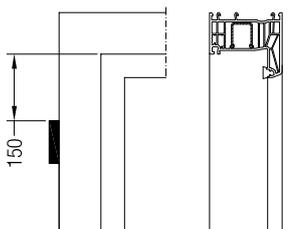
Entry and balcony doors



Mullion



Joint



■ – Support blocks

Fig. 3: Blocking of the window units

1.3 Fasteners

The relevant conditions on site determine the selection of the correct fasteners. Masonry and fasteners must match. This means that it is essential to follow the manufacturer's instructions (fig. 4), such as

- specified shear loads,
- maximum distance between frame and masonry: maximum useful length d_a ,
- minimum anchoring depth h_v ,
- Distance of anchor from edge,
- Drilling diameter d and drilled hole depth t_d .

Some important fasteners are shown in figs. 5 to 7.



Observe the specifications from the relevant manufacturer!

When fastening the frame horizontally at the bottom, choose a fastener that does not necessarily open the reinforcement chamber from the rebate platform.

If this is not possible, the reinforcement chamber must be permanently sealed.

The choice of fastener is based on the construction of the masonry. In perforated brick masonry, the masonry must be filled in the anchor area (e.g. use injection mortar Fischer FIS VS 150 C).

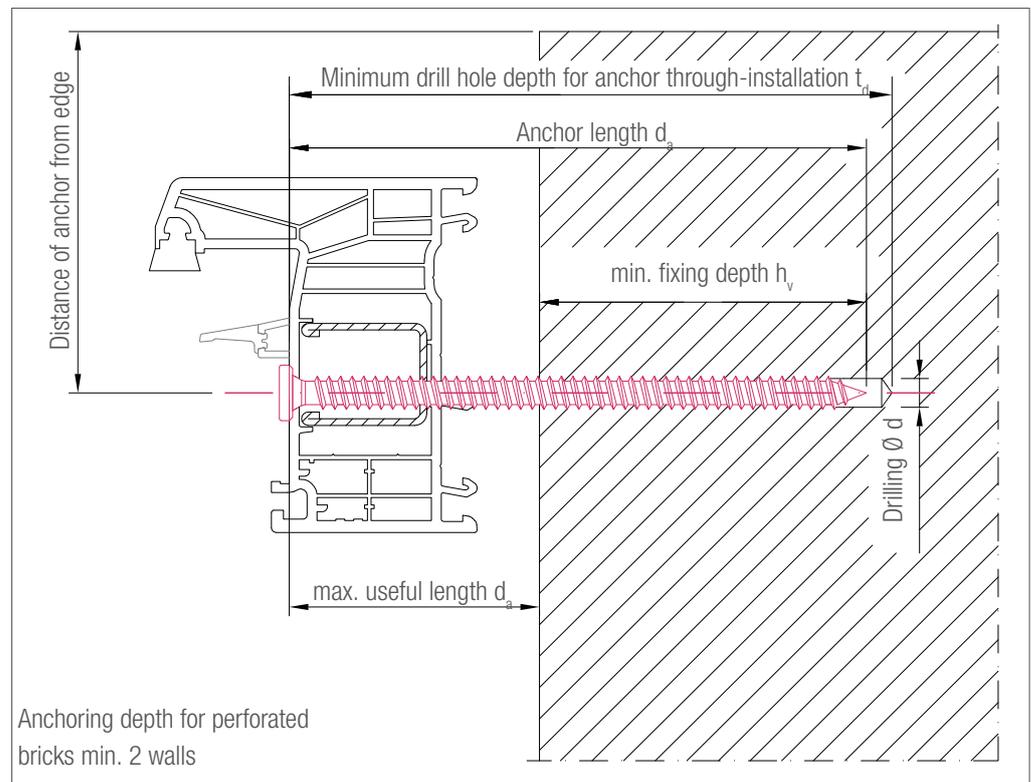


Fig. 4: Important dimensions for fastening

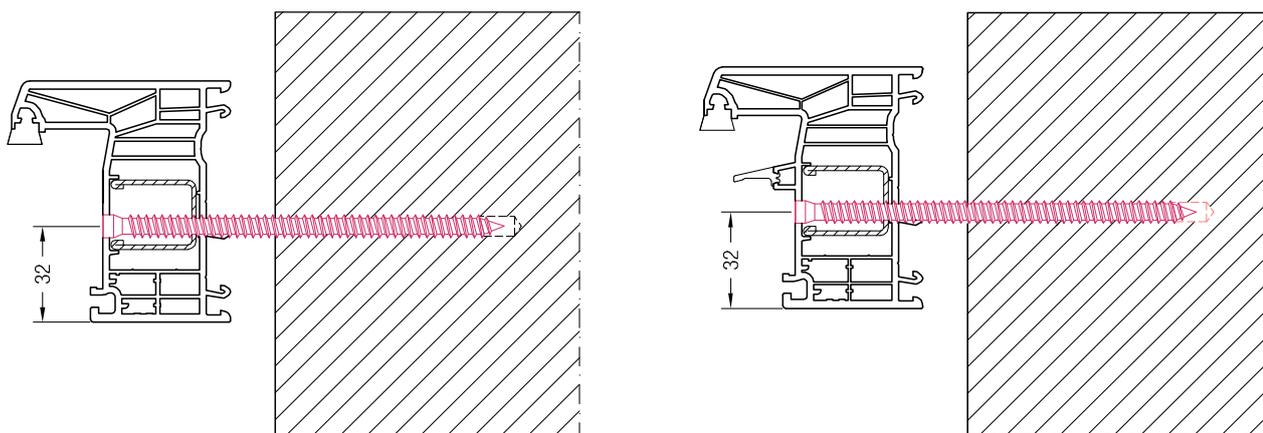
1.4 General instructions on fixing windows

- Drill correctly; do not use drills on hammer mode (except for concrete)!
- Drill into the mortar joints of masonry if possible!
- Observe the loadbearing capacity and length of the anchor taking account of the wall structure!
- Use screws/bolts, anchors, straps, brackets, mounting systems, etc. that are appropriate for the anchor system!
- Blow out the drill holes!
- Observe the center-to centre and edge distances specified by the anchor manufacturer, based on the building material!
- Tighten screws evenly without tension in relation to the frame! (Use a screwdriver with torque limiter!)
- A combination of support block and fastener is preferable!
- Hammering in nails, even special versions, is not permitted!

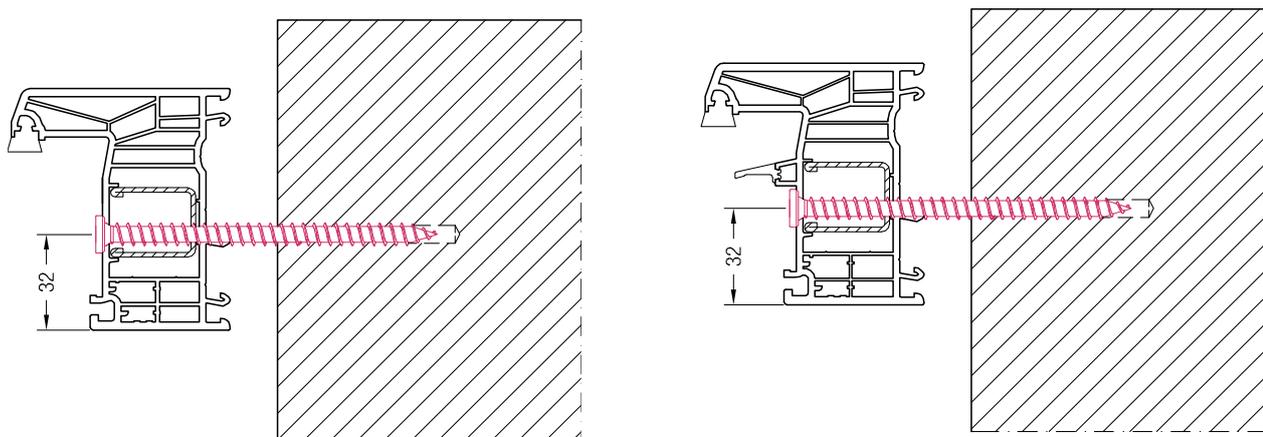
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Fasteners



Amo® III screw \varnothing 7.5 with AW 25 Würth



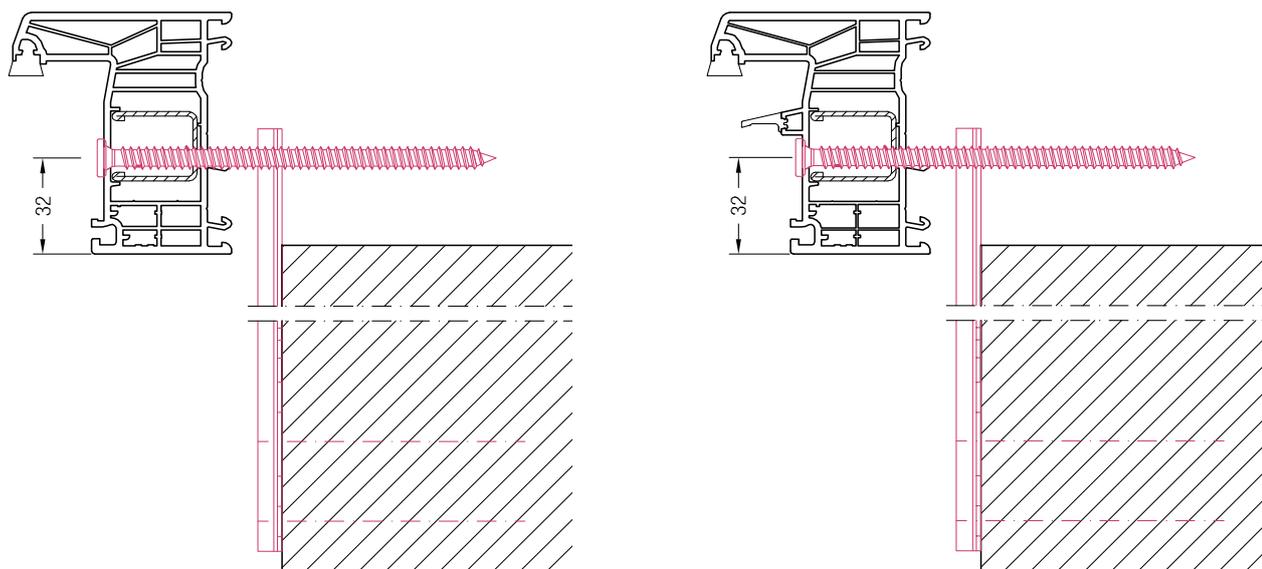
Amo® III type 3 screw \varnothing 7.5 with flat head Würth

Fig. 5: Fasteners

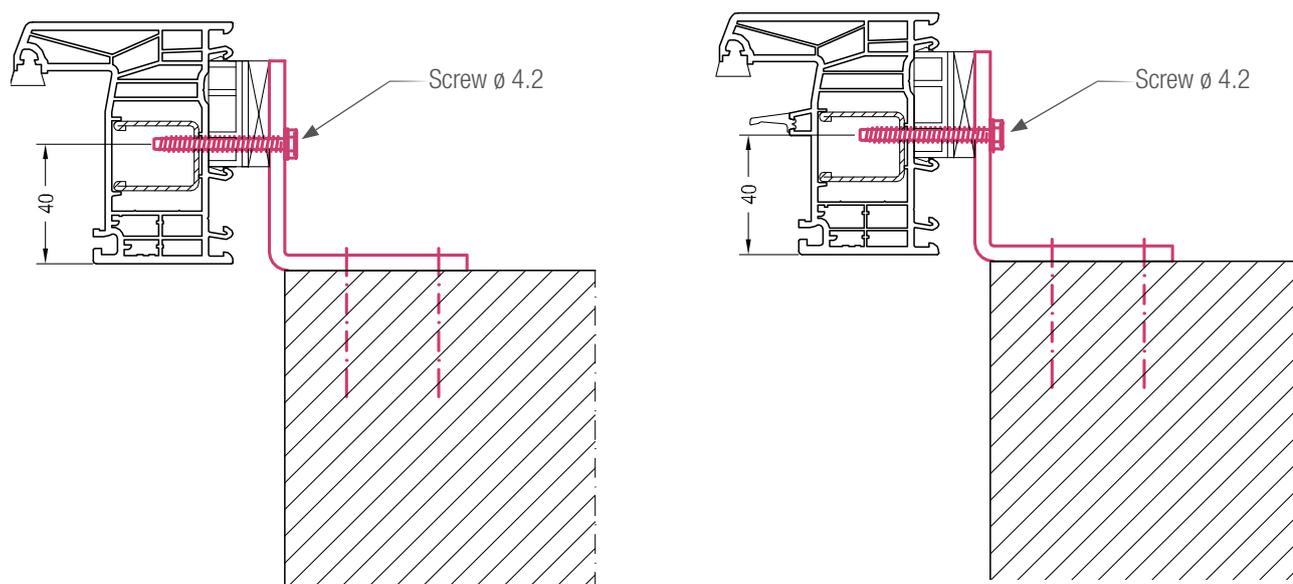
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Fasteners



EL anchor 200/1.5 Knelsen GmbH, art. no. 405102



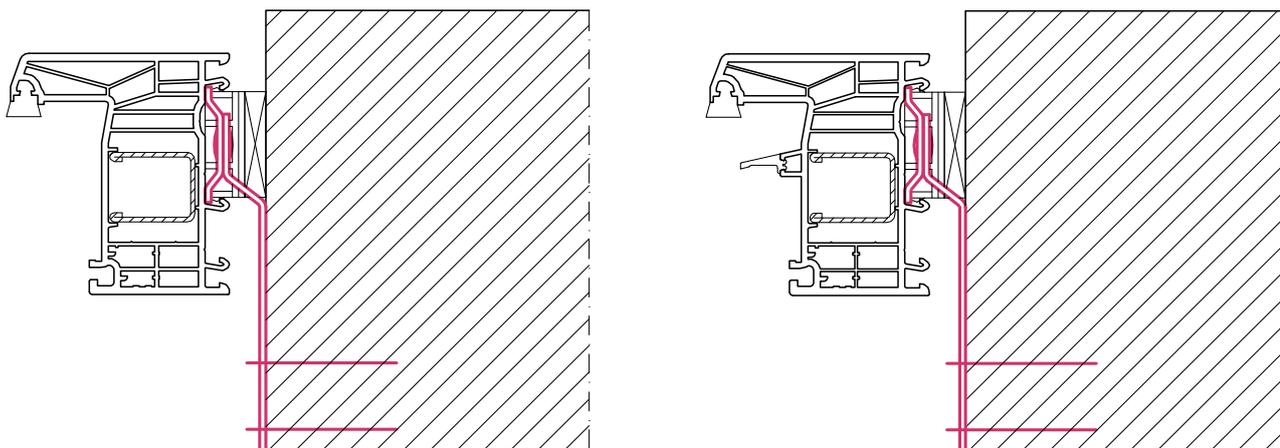
Angle

Fig. 6: Fasteners

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Fasteners



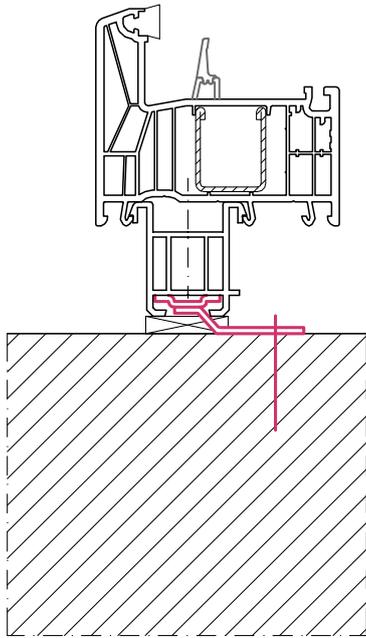
Claw / tie bolt (not permitted for entry door).
The frame should always be reinforced.

Fig. 7: Fasteners

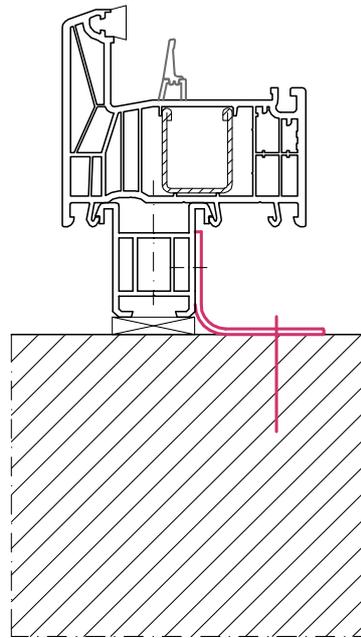
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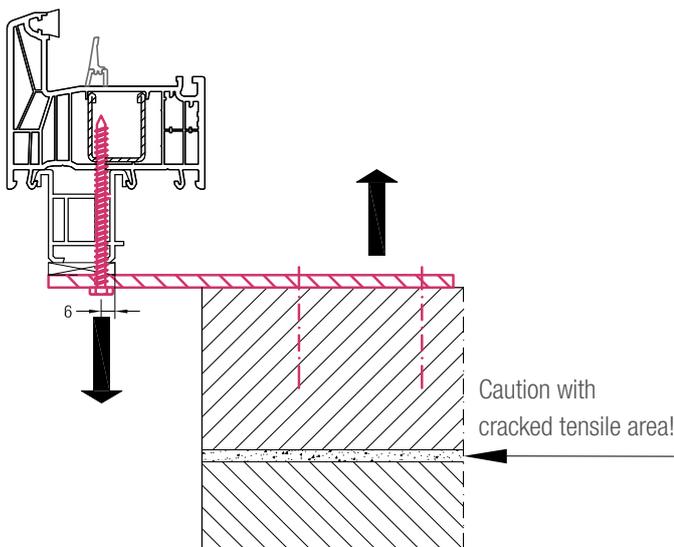
Fasteners for fixing of unit at the bottom



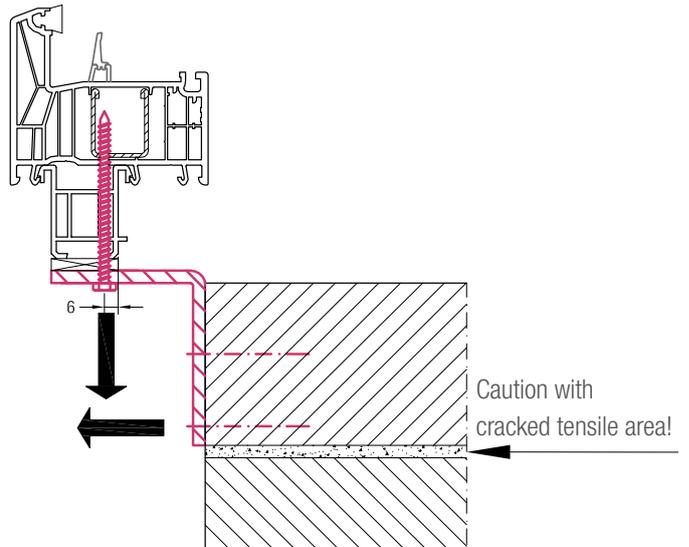
Claw / tie bolt
The frame should always be reinforced



Angle



Strap



Angle

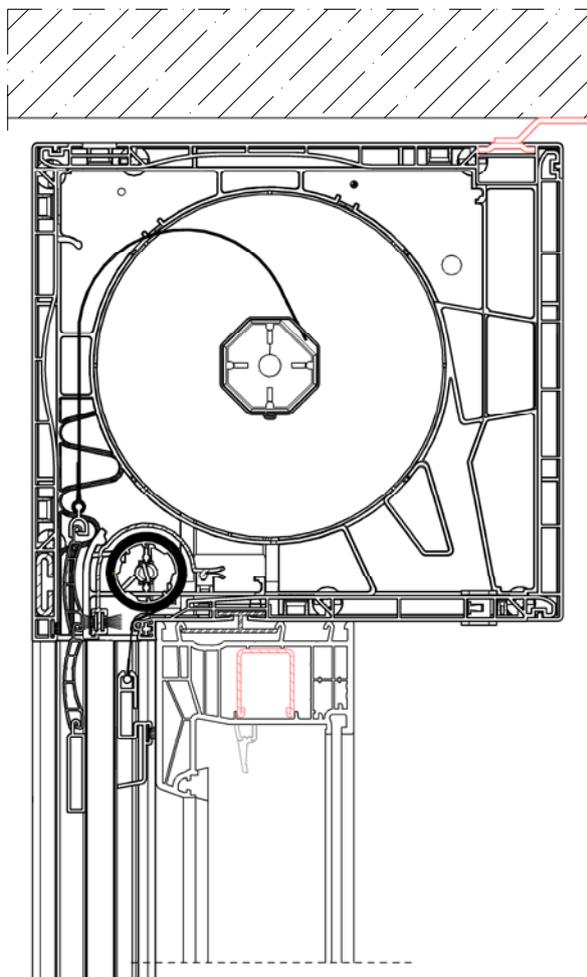
i Loadbearing components must be sized acc. to the load stresses.

Fig. 8 Fasteners for fixing of bottom unit

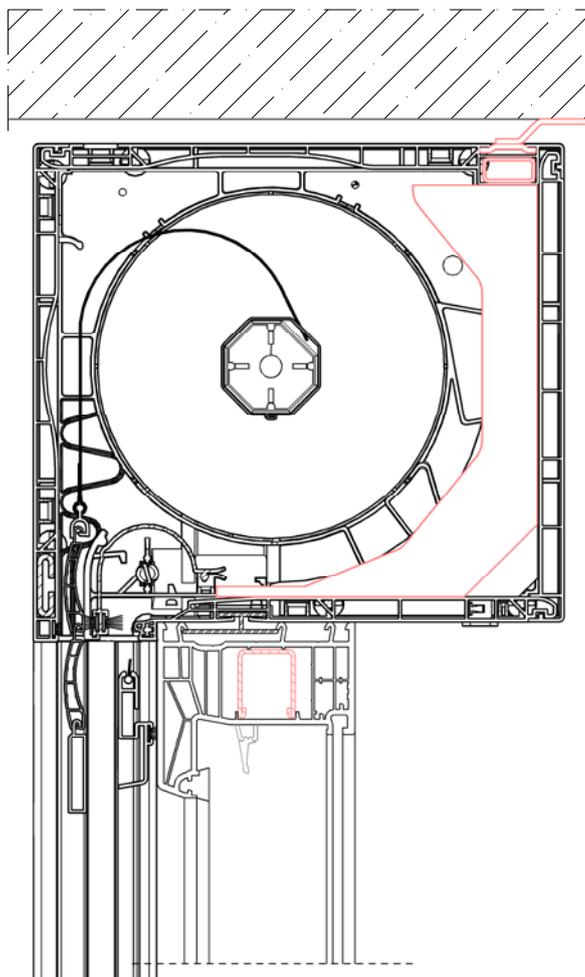
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Static reinforcement of roller shutter boxes/fastening with straps



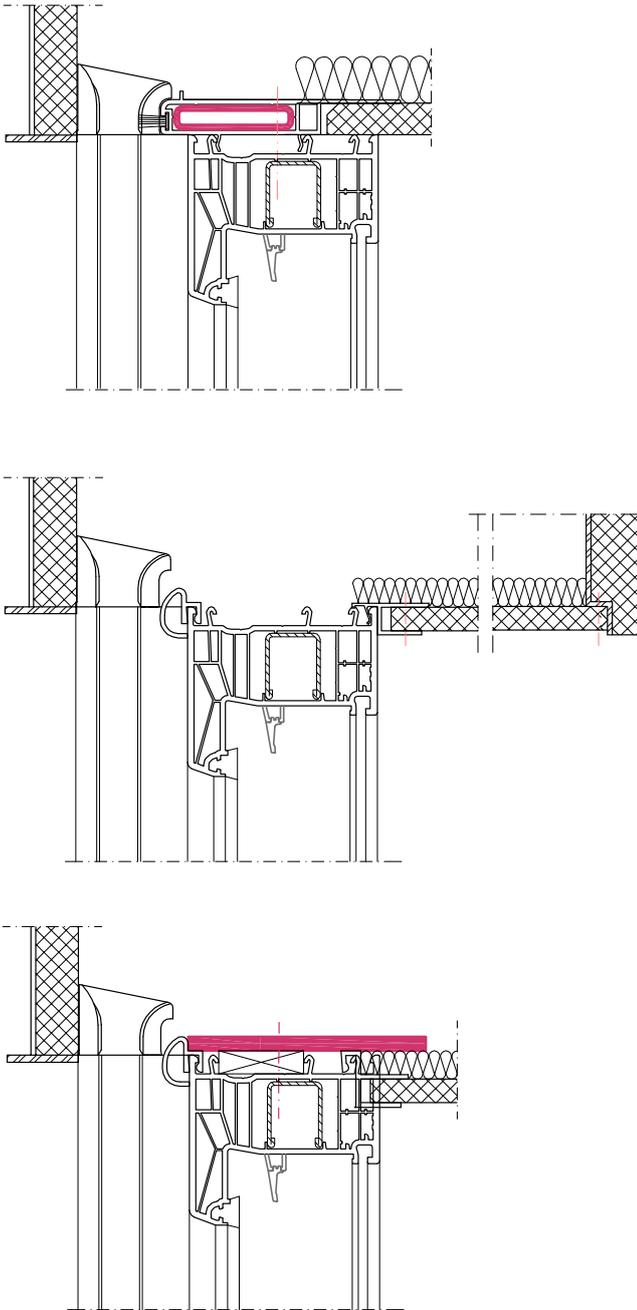
Roller shutter head box only with frame reinforcement



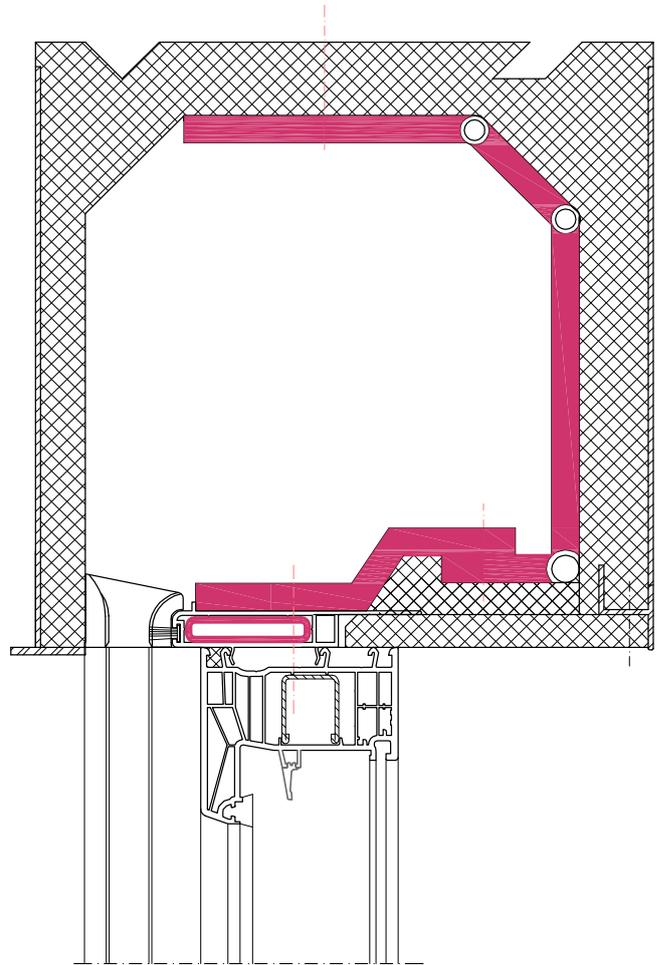
Roller shutter head box with wind load bracket

Fig. 9: Reinforcing and fixing of roller shutter head boxes

Static reinforcement of lintel boxes



Fastening of lintel boxes using window stabilisers



Window stabiliser, such as HALESTA or in-house construction

i Additional reinforcement of the frame profile is provided by screw-fastening the roller shutter cover to the main profile. The number of remaining fasteners depends on the requirements to be taken into account from paragraph 1.1.

Fig. 10: Reinforcing and fixing of lintel boxes

1.5 Special connections

Extension profiles

Extension profiles such as window sill connection profiles, extensions, etc. should be screw-fitted to the main profiles.

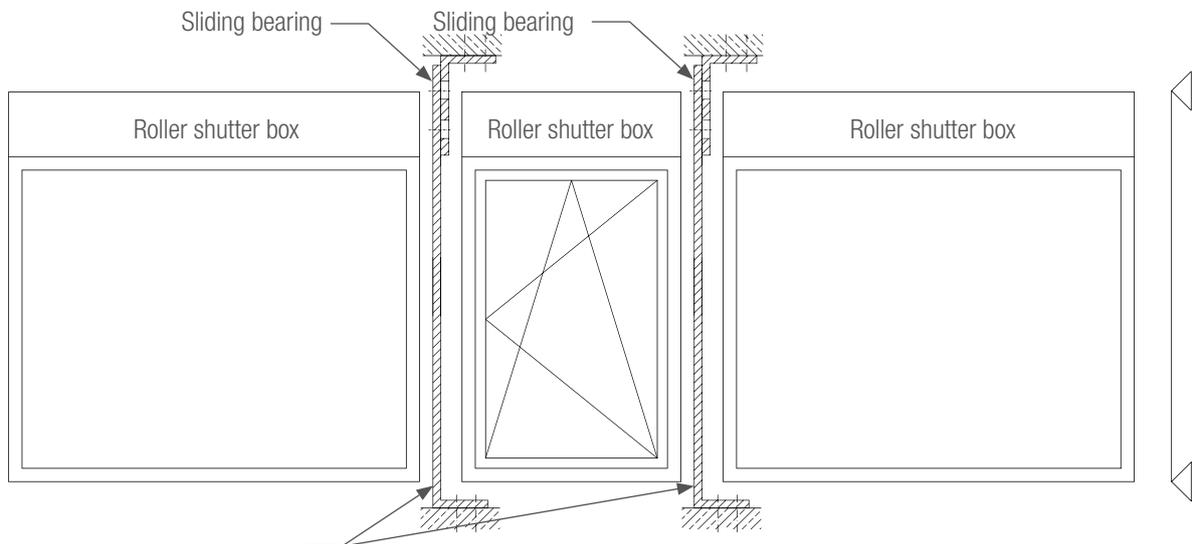
Roller shutter box

If windows are installed in combination with a roller shutter box, upwards fastening is problematic independent of the box construction (head box or lintel box).

In this case, structural calculations referring to the top frame must be provided (see section on Static design).

Reinforcement or fixing is possible as shown in the illustrations in figs. 9 and 10.

For larger element widths, the subdivision of the element is essential for sufficient structural design and fastening. The details of the joint are shown in fig. 11.



Continuous steel reinforcement with connection to the building top and bottom

Fig. 11: Element joints with roller shutter box

Entry doors

Entry doors are exposed to more dynamic loads (e.g. forcible slamming of the door) than to static loads. In addition, an entry door has less locking points than a window. For this reason, additional fixtures should be fitted in addition to the standard fixing points described above (see fig. 12).

For multi-section entry doors with mullions or as coupled individual elements, additional reinforcement profiles should also be fitted (fig. 13).

Fixing in the lower area should be carried out as shown in the illustrations in fig. 14.

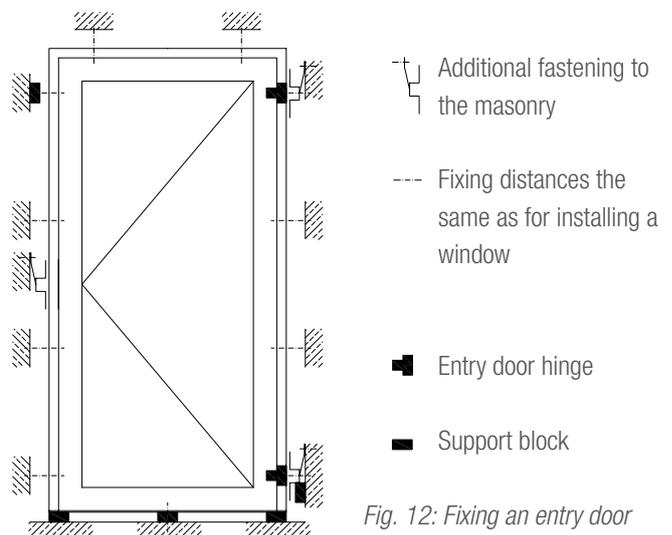


Fig. 12: Fixing an entry door

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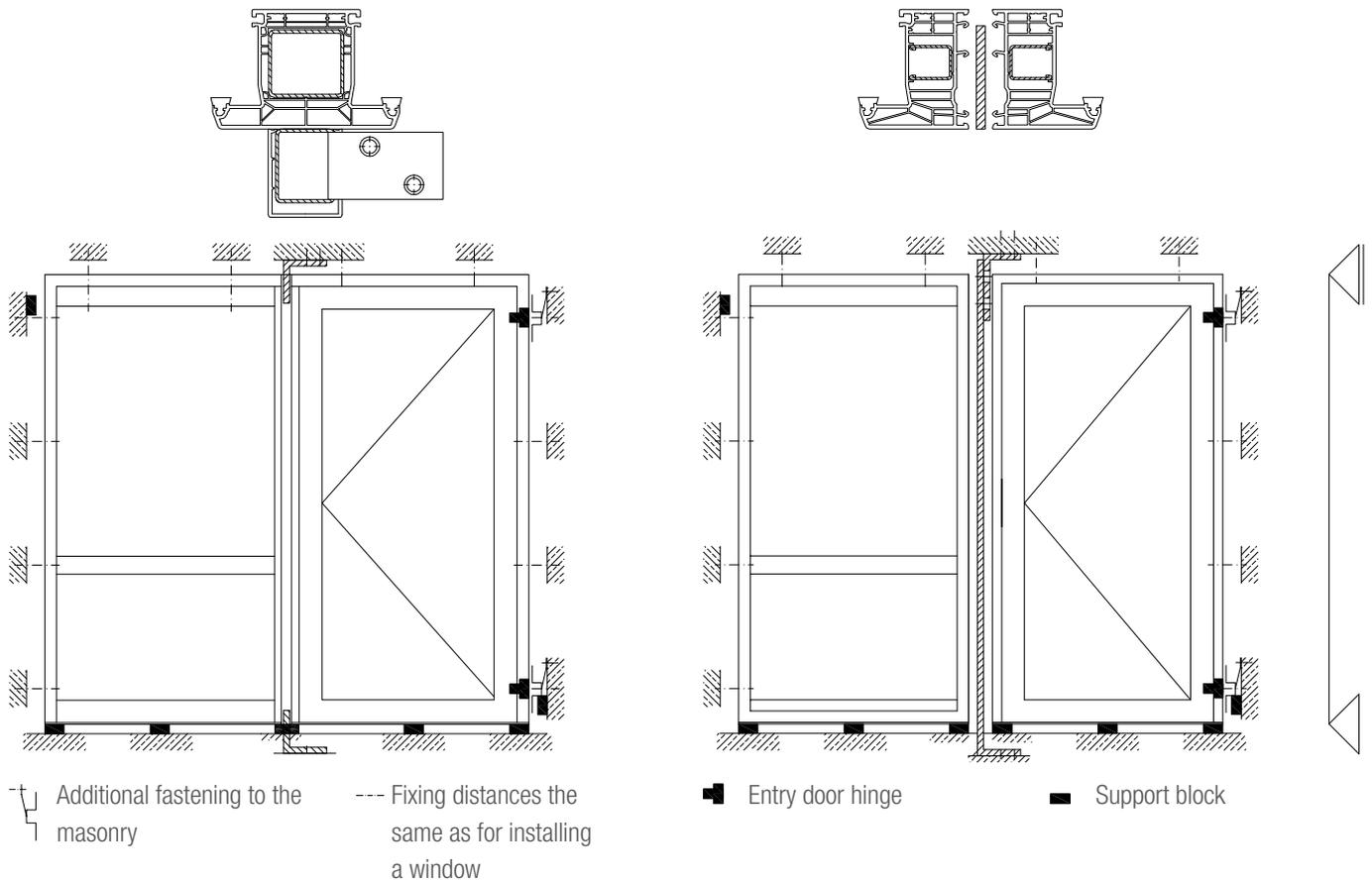


Fig. 13: Fixing of multi-part entry doors

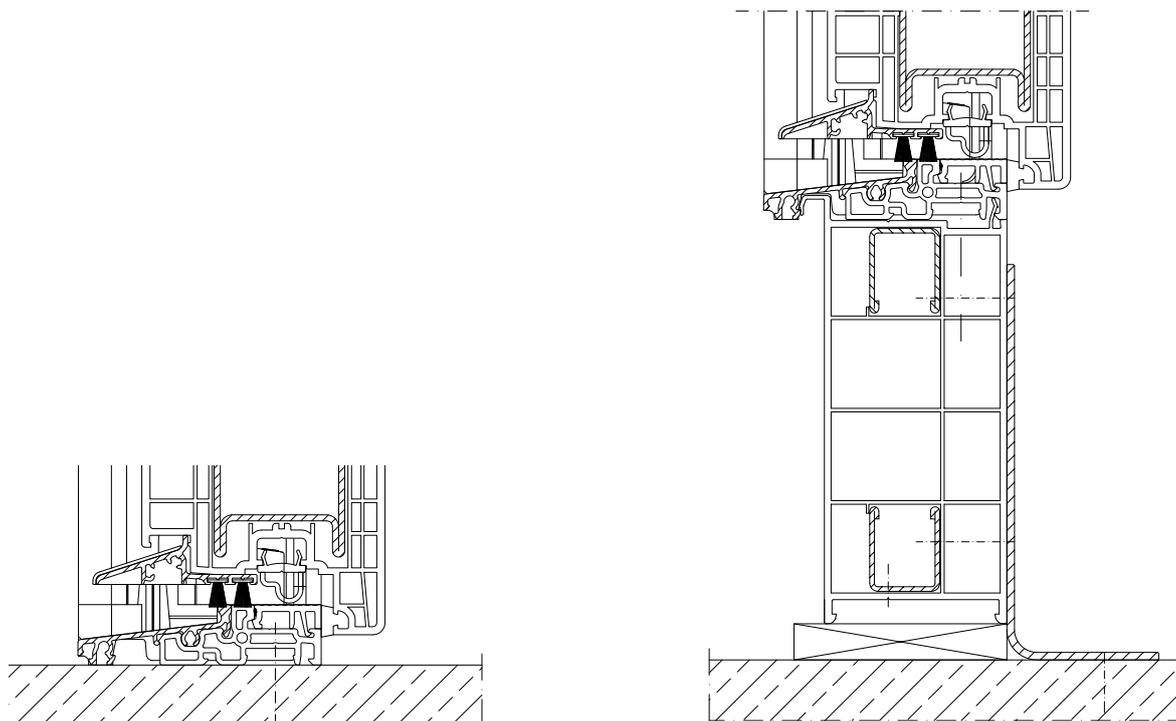


Fig. 14: Fixing the threshold

Joints

For the safe distribution of the acting forces to the building, for element joints the reinforcements used for bracing must be fastened to the building. Make sure that the reinforcements are never rigidly clamped; use a fixed and sliding bearing as shown in fig. 15 to compensate for the building-related movements.

Window width	Change in length Δl [mm] at ± 30 °C for $\alpha_{\text{window}} = 0.42 \cdot 10^{-4} / \text{K}$
1500	± 1.9
2500	± 3.2
3500	± 4.4
4500	± 5.7

Table 1: Change in length of white PVC windows due to thermal loads.

For large element widths or heights both the horizontal and the vertical expansion of the profiles must be compensated by an expansion joint. The expansion of white profiles is shown in table 1. In simple terms, when dimensioning the joint width of white windows, a change in length of ± 1.25 mm per m of profile length should be taken into account; this figure should be doubled for non-white windows.



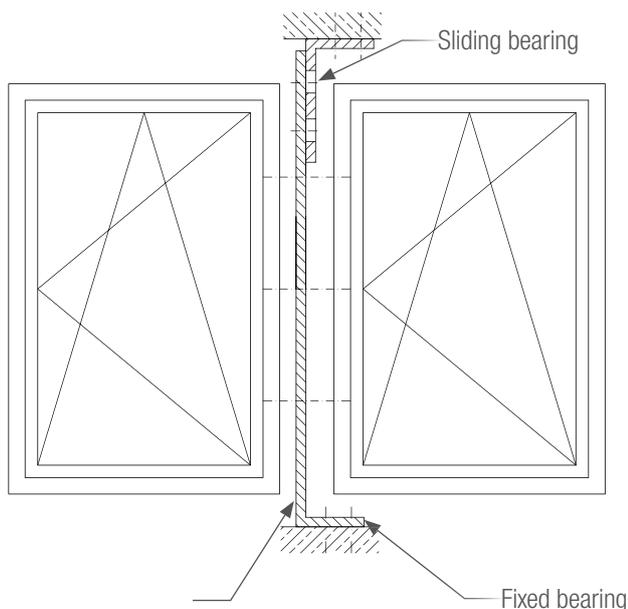
Maximum profile length of elements:

- White profile colour: 4.0 m,
- Non-white profile colour: 3.0 m.

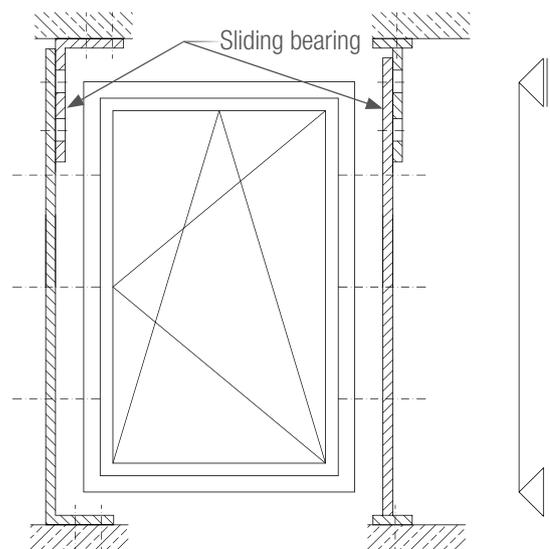
From these profile lengths and over, the frame joints must be designed as expansion joints (fig. 16). These expansion joints must not be bridged using frames, support profiles, etc. In addition, the movement of the profiles must not be restrained.

Recommendation for non-white elements with a profile length of 2.5 m to 3.0 m:

- Do not fill the installation joint in the corner area of the frame with foam (distance from the frame corner, approx. 300 mm).
- Use of expansion accommodating insulating material
- The fasteners must permit changes in length of the frame due to temperature.



Continuous steel reinforcement with connection to the building top and bottom



Fixing of angle plates in the element direction

Fixing of angle plates at a 90° angle to the element direction

Fig. 15: Element joints

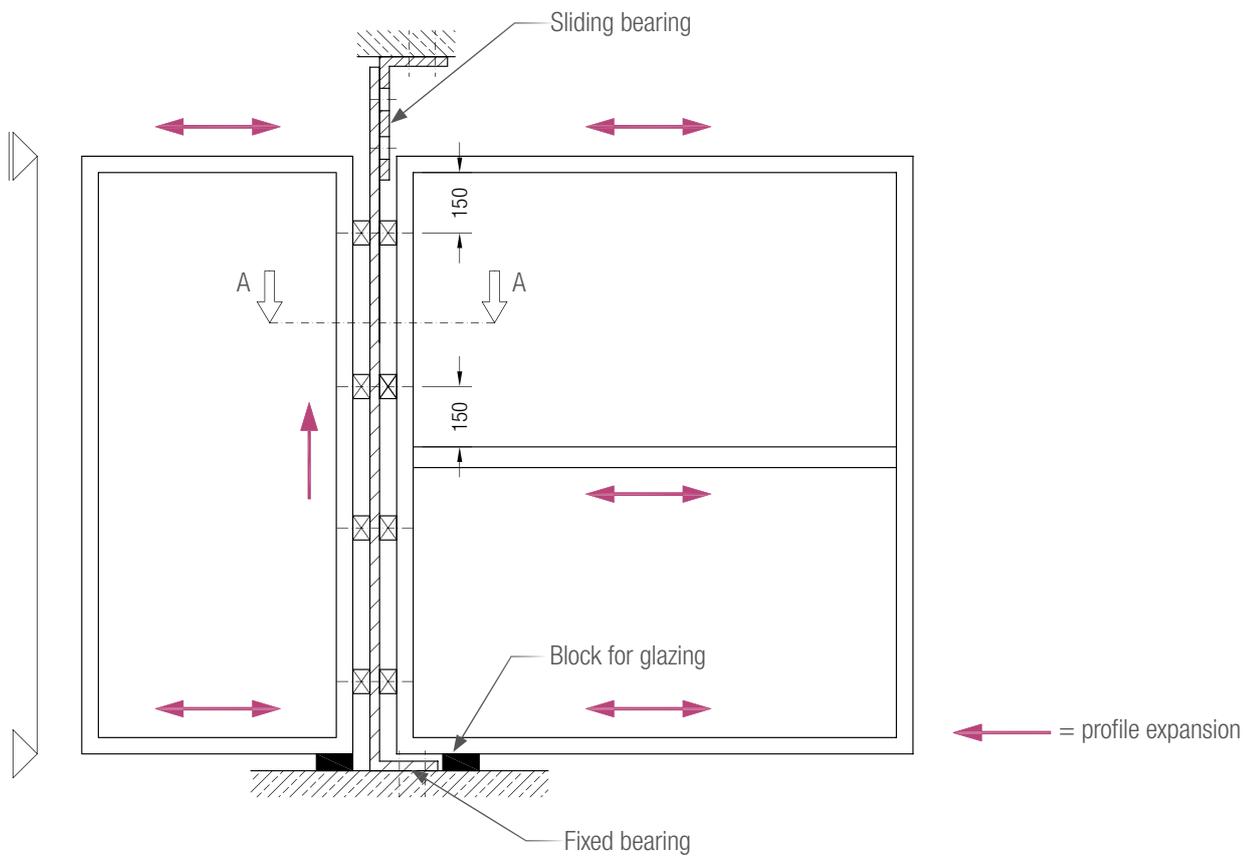
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Maximum profile length of one fixed light:

- White profile colour: 3.0 m,
- Non-white profile colour: 2.5 m.



A - A

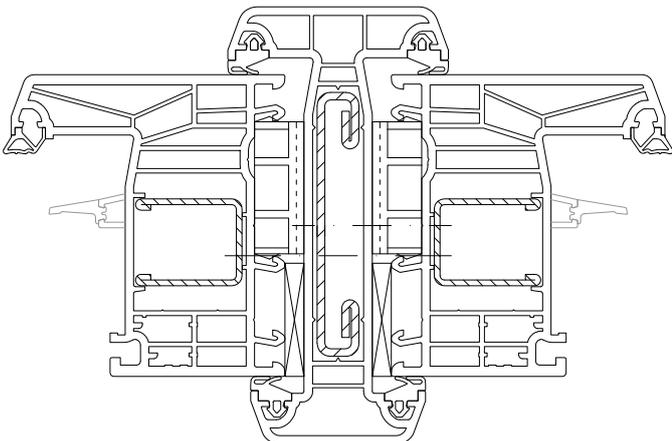


Fig. 16: Element expansion joint

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Load distribution via extensions

When using extensions with a face height exceeding 60 mm, fixing to the masonry using claws / tie bolts or screws/ bolts is not sufficient. In this case, fasten the extension profiles using brackets (fig. 17).

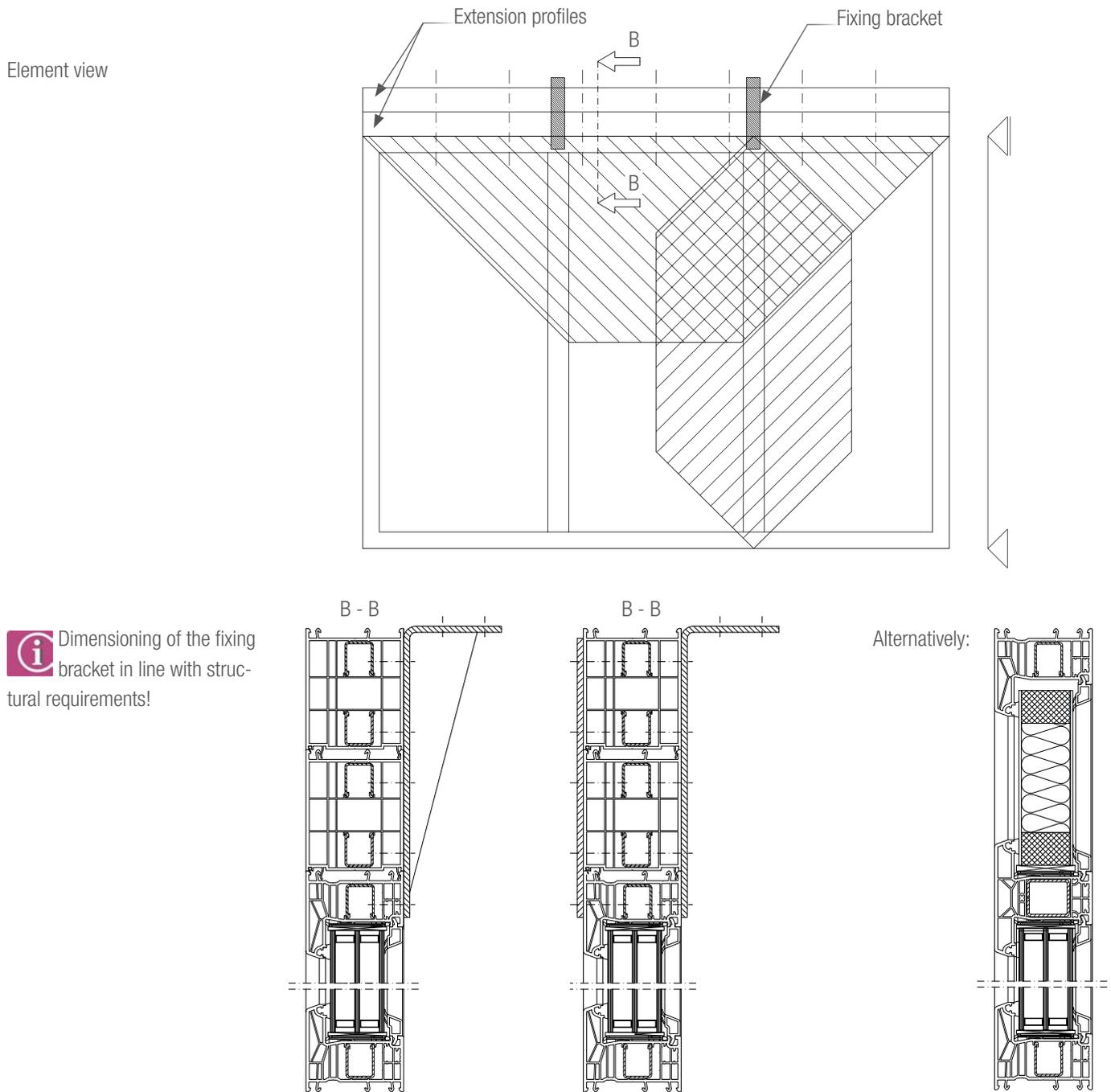


Fig. 17: Fixing frame extensions

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2. Sealing and insulation

2.1 Joint sealing

Windows and doors including connecting joints must be able to permanently withstand the effects given in fig. 1 during use. To meet this requirement, the correct design and detailing of the construction joint is of the utmost importance in terms of joint geometry, insulation and waterproofing.

Water is everywhere and in its different aggregate states (gaseous, liquid and solid) it is the general cause of many building defects, whether through direct infiltration from the outside (e.g. rainwater) or via condensation of diffused water vapour (from the inside).

Windows and their connecting joints are therefore affected by driving rain from the outside and by the high relative air humidity of the inte-

rior and the resulting condensation. Therefore, the following principles apply to the correct sealing of the connecting joint:

- Protection against rainwater must be on the outside of the building. It is not permitted for any rainwater to penetrate the connecting joint, and at the same time it may be necessary for any humidity that has penetrated the joint to be able to escape to the outside.
- Correct sealing on the inside must prevent penetration of damp room air.

These basic requirements require a joint structure in line with fig. 18:

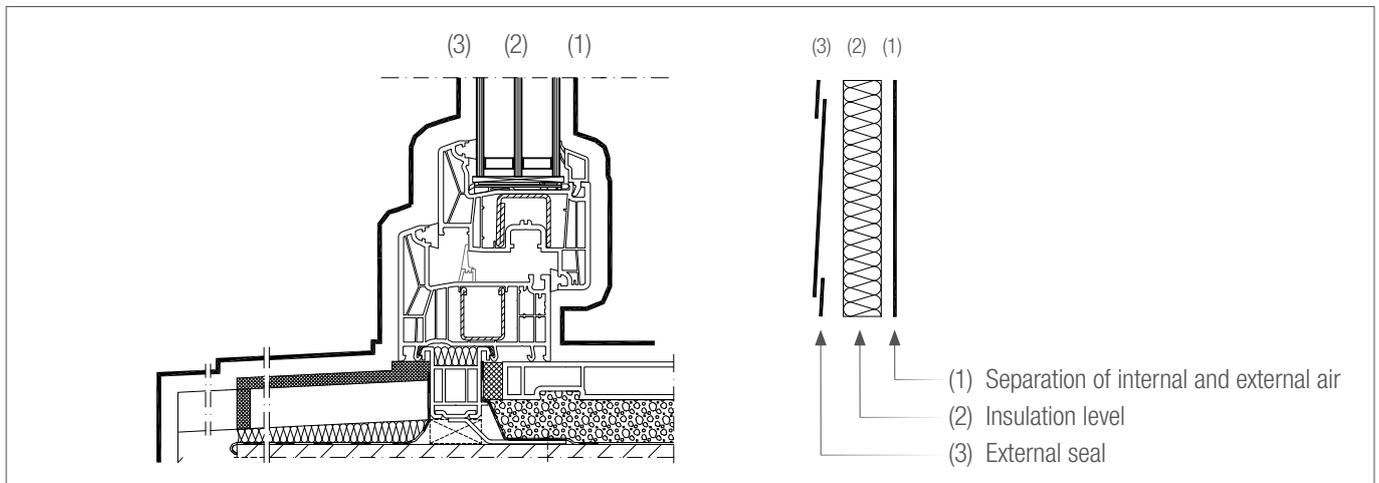


Fig. 18: The level model

Functional level 1

Separation of internal and external climate: airtight, more vapour-diffusion tight than the external seal. The separating level of the internal and external air must be visible across the entire surface on the inside of the external wall and must not be interrupted. Its temperature must be above the dewpoint temperature of the room.

Functional level 2

Insulation level: thermal and sound insulating material. In this area, in particular the performance of thermal and sound insulation must be ensured over a reasonable period of time. To ensure these functions, this area must "stay dry" and be fully separated from the internal air.

Functional level 3

External seal - weather protection: Continuously watertight, vapour diffusion permeable, UV-resistant material. The level of weather protection from the outside must prevent virtually all ingress of driving rain and carry off penetrated rainwater to the outside in a controlled manner. At the same time any penetrated moisture must be able to escape from the functional area to the outside.

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From these findings, the following principle is derived:

"Inside sealed tighter than outside".

The position of the window in the masonry also influences the formation of condensation on the surface profile and reveal area caused by the temperature of the internal component surfaces. DIN 4108 (here especially Part 7 and Addendum 2) and DIN EN ISO 10211-2, regulate the relevant conditions on site.

Installation should be carefully planned in advance applying the standards given.

i According to the principle "inside sealed tighter than outside", functional levels 1 and 3 are combined (see figs. 19 and 20). Observe the information provided by the manufacturers. Detailed illustrations can be found in IVD Data Sheet No. 9 "Sealants in the connecting joint for windows and external doors - Principles for design and construction."

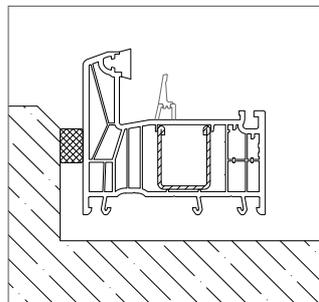
The design of functional level 3 must ensure watertightness, functional level 1 is used to separate internal and external air. In functional level 1, the sealing materials must therefore be installed in such a way that they are enclosed allround.

With non-smooth surfaces, use pasty adhesives. Do not use bituminous membranes.

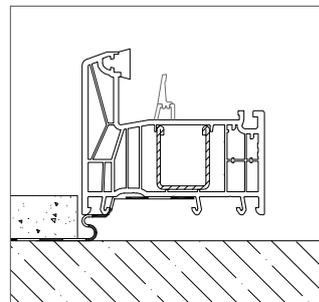
The seal level should also be continued in the area of the window sill side connection (fig. 21).

The choice of sealing material used is determined by the external wall system, i.e. the wall connection. The selection criteria are the joint geometry and the material of the wall connection (masonry). Observe the information provided by the manufacturer on sealing materials to be used, for example, the processing instructions for the correct application of gunnable sealants. This applies primarily to the surface humidity, pressure resistance, temperature, material compatibility and surface adhesion. Pretreatment may be required depending on the condition.

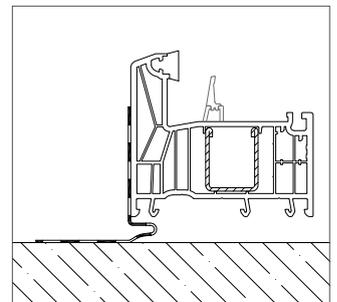
Fig. 19: Examples of external joint seal



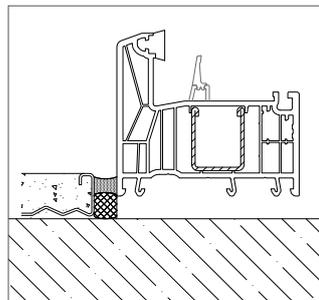
Impregnated foam plastic tape according to DIN 18542



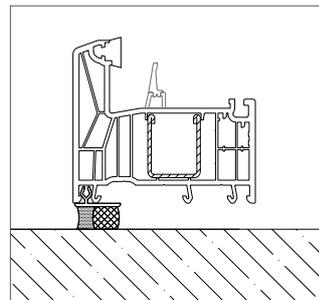
Construction membrane



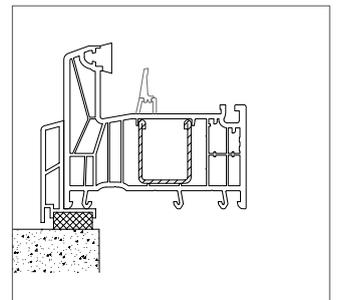
Butyl tape, can be rendered



gunnable joint sealant between frame/insulation and render



gunnable joint sealant between frame and masonry



Cover strips with sealing tape

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Fig. 20: Examples of internal joint seal

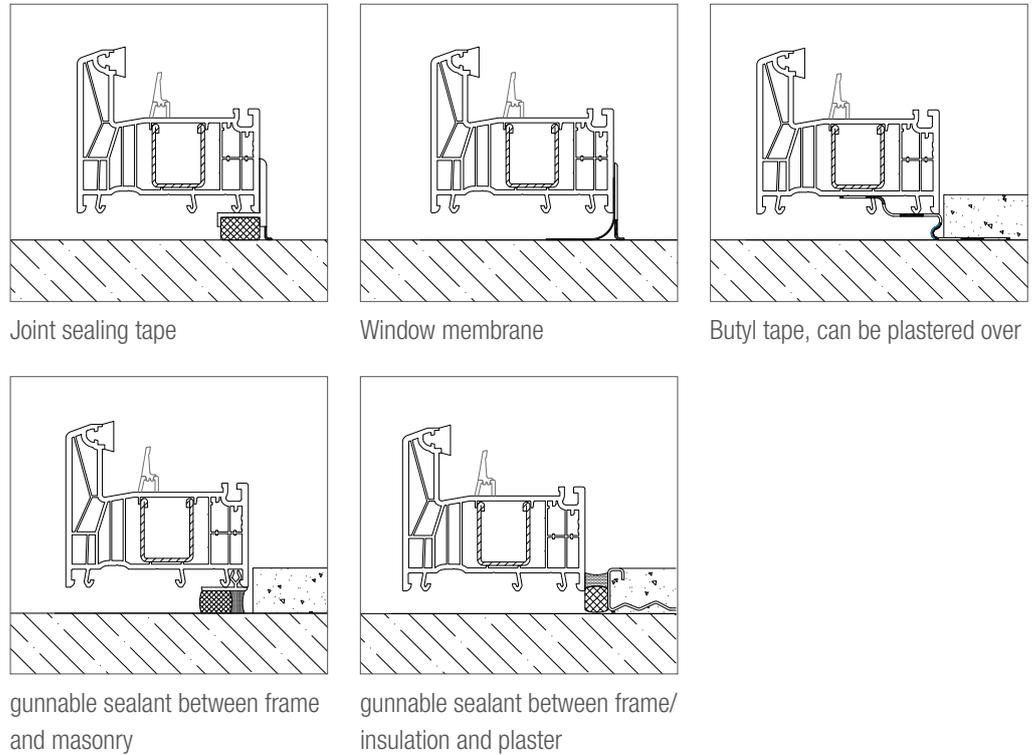
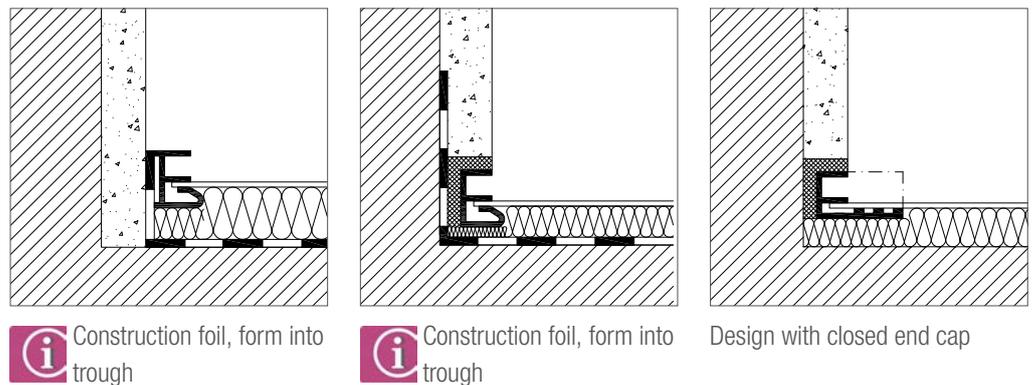
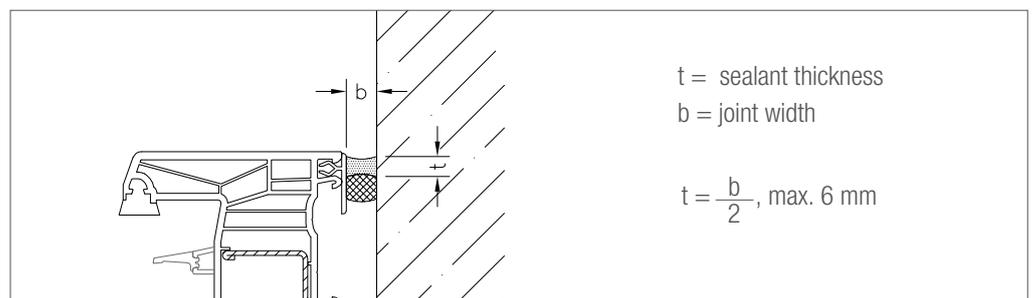


Fig. 21: Seal in the area of the window sill side connection



i **Building renovation:**
Note the quality of the existing render!

Fig. 22: Dimensioning a joint when using gunnable sealants



When using gunnable sealants, precise sizing of the joint is a prerequisite for a permanent seal (fig. 22).

As rigid PVC is affected by the thermal load causing expansion or shrinkage (see table 1), construction joints must be planned and designed in such a way that the sealing materials can absorb the frame movements without breaking away from their sealing level.

In addition, no stress cracks in the welded frame corners are permitted.

The minimum joint widths based on the sealing system used are given in tables 2 and 3. Compliance with the minimum joint widths does not exempt from compliance with the manufacturer's specifications for sealants and sealing tapes.

	Joint details with sealing tape for element lengths							
	< 1.5 m	< 2.5 m	< 3.5 m	< 4 m	< 2.5 m	< 3.5 m	< 4 m	
white	8 mm	8 mm	10 mm	10 mm	8 mm	8 mm	8 mm	
non white	10 mm	10 mm	10 mm	-	8 mm	8 mm	-	

Table 2: Minimum width of sealing tapes

	Joint details with seal for element length							
	< 1.5 m	< 2.5 m	< 3.5 m	< 4 m	< 2.5 m	< 3.5 m	< 4 m	
white	10 mm	15 mm	20 mm	25 mm	10 mm	10 mm	15 mm	
not white	15 mm	20 mm	25 mm	-	10 mm	15 mm	-	

Table 3: Minimum width of seals

2.2 Joint insulation

The following materials can be used for joint insulation:

- 1-component PUR foam,
- 2-component PUR foam,
- glass wool,
- rock wool,
- gunned cork,
- insulation tapes.

i During installation, ensure that the insulation materials used stay dry to maintain their insulating function.

PUR foams generate more or less pressure during curing, this must be accommodated by the window construction.

i For roller shutter head boxes:
In the area of the head pieces and the external cover profile, no deformations shall occur as a result of the cured PUR foam (see fig. 23). Here either different insulating materials should be used or the PUR foam should be carefully applied as appropriate.

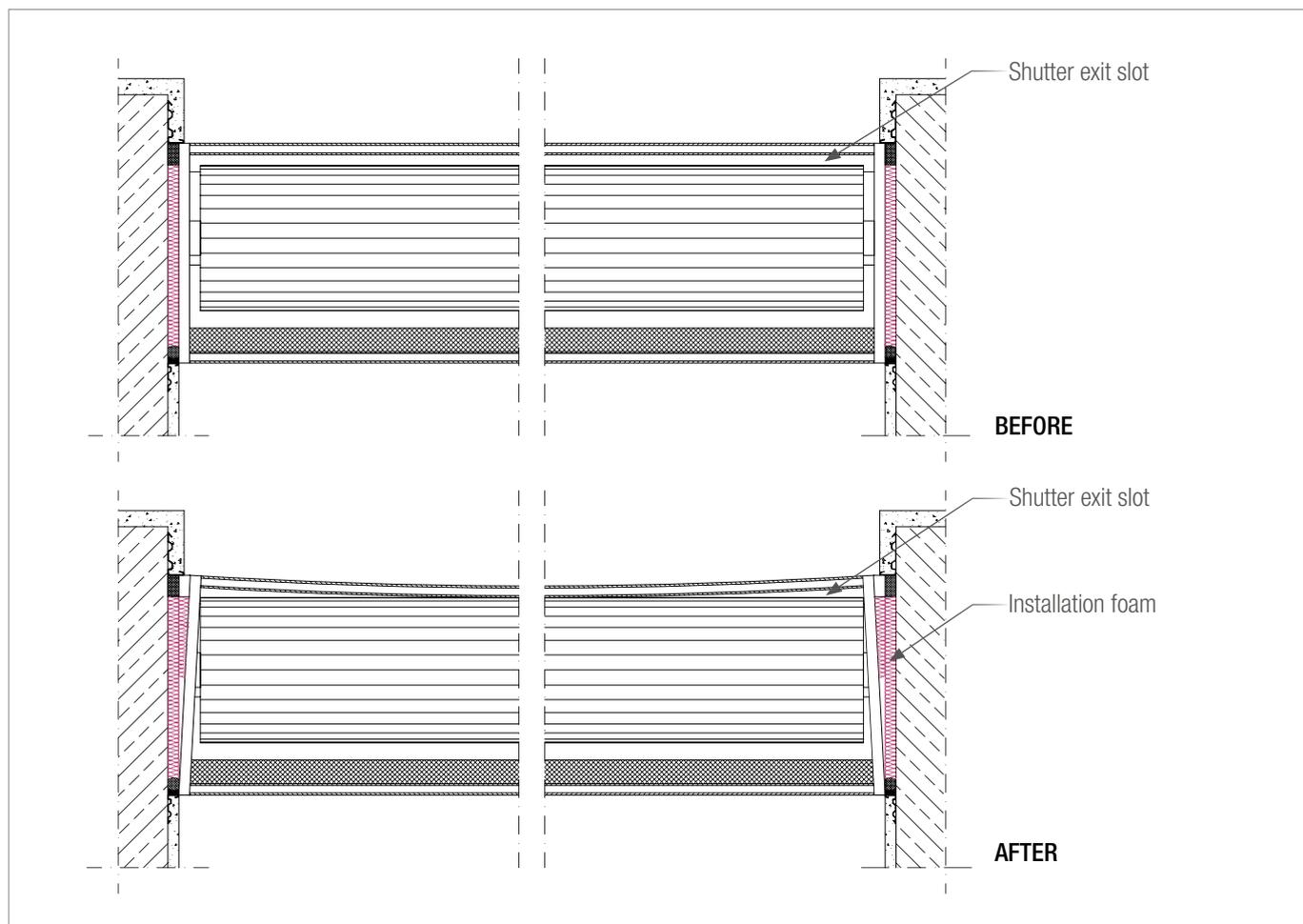


Fig. 23 Insulation in the area of the roller shutter head box

3. Site measurements

To avoid errors, record the actual site conditions directly at the building. This includes the actual conditions on site and the precise measurements of all window reveals. The German construction contract procedures VOB/B § 4 specify the inspection of the work carried out by the preceding trades, by the contractor with the option of raising concerns in writing. To check the existing conditions and for any required information on defects to the planner or contractor, the following procedure is recommended:

- The construction and details of the external walls and the building materials used form the basis for selecting the necessary fasteners.
- The condition of the wall covering (render, plaster, brick, etc.) determines the choice of the internal and external sealing systems.
- The wall structure determines the type of connection and the installation level.
- Potential movements from windows and the building are decisive for the selection of connecting profiles and the details of expansion joints.
- Are datums (meter marks) available?
- Are there any detectable thermal bridges and moisture penetration?
- Do the wall openings conform to DIN 18202 "Tolerances in building construction"?
- Are all joints or vertically perforated bricks covered by smooth rendering?

The dimensions of the window reveals shall be determined directly at the building. To do this, measure three times the height (left, centre, right) and the width (top, middle, bottom) of the window openings. The smallest dimension determines the production!

The meter mark must be provided on each floor and should be positioned not more than 10 m from the point of installation.

If changes or additional measures become necessary due to exceeding the dimensional tolerances set out in DIN 18202, or deviations from the specified conditions on site, they must be agreed before beginning installation.

Any concerns should always be raised in writing.

The thresholds of entry doors and casement doors shall be detailed in advance.

4. Transport and storage

When transporting the units and for subsequent storage at the construction site, observe the following :

- secure and stable position of the units,
- vertical transport and storage of the units,
- protection against damage due to slipping, twisting, jamming and deflection of the units,
- protection against mechanical damage and dirt,
- prevention of direct, mutual support,
- stress relief of the hardware of larger units using the transport support profile, 1561780.

5. General installation guidelines

The windows must be installed plumb and level. Deviations from this requirement should be agreed in writing.

When installing windows at temperatures below 5°C, observe the specific properties of the materials used during the installation. Avoid direct impacts on the frame and sash parts.

For all profiles, remove the protective film immediately after installation. Remove any residue of installation foam adhering to the windows immediately prior to curing.

According to the German construction contract procedures VOB/B § 4 no. 5, the contractor is responsible for protecting the installed windows against damage until acceptance. It is advisable to agree to individual measures with the client, e.g. for protection during subsequent foaming. When rendering/plastering, protect the surfaces of the profiles by applying a cover.

After completing the installation work, check the function of all opening parts for smooth operation and record.

6. Quality assurance

In summary, observe the following criteria during installation:

Planning:

- masonry type,
- dimensional specifications,
- anticipated movement,
- joint geometry,
- seal (suitability and compatibility),
- installation level,
- weather protection,
- forces occurring,
- fastening,
- insulation,
- additional equipment.

Production control:

- Requirements of supply agreement met?
- Correct units?
- Appropriate accessories?
- Detail drawings?

Site inspection before starting the installation:

- Tolerances of the structure?
- Walls straight?
- Smooth render/plaster?
- Wall rebate/connection?
- Reveals in the area of the sealing levels smooth?
- Connecting elements without defects?
- Installation required for a model room?

Instructions for fitters:

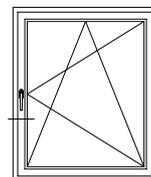
- based on detailed drawings,
- take special care with critical details,
- discussion of the installation instructions and deployment of a responsible site manager,
- only install windows in perfect condition
- check dimensional accuracy before installation!
- Setting the window - check!
- Is the required joint width of 10-20 mm available?
- Are the fixings adequate?
- How do the seal levels run?

Building acceptance process:

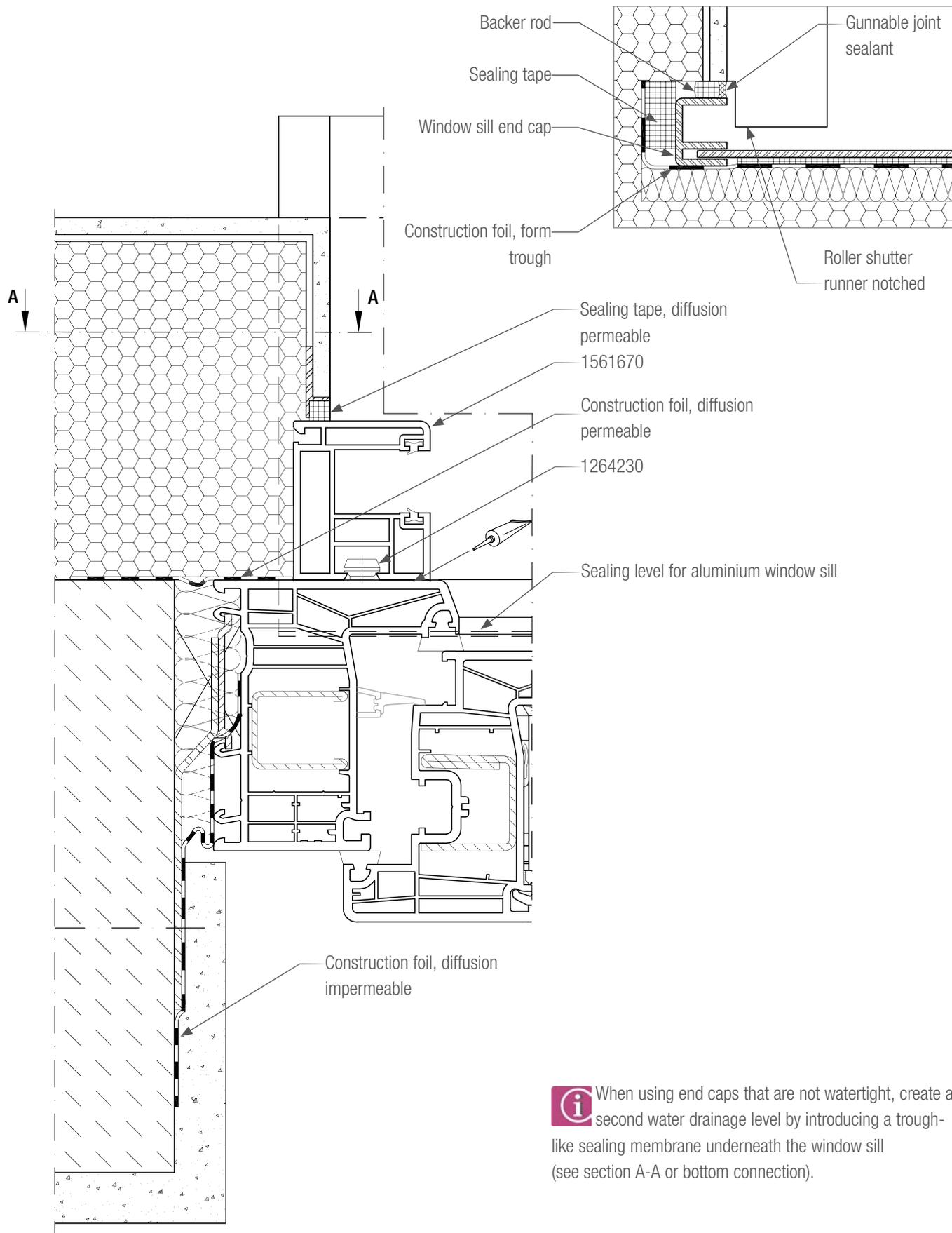
- A building acceptance process should be carried out in any case.
- Are sound insulation measurements required? If so, then only with the jobsite manager.

7. Installation guidelines - installation drawings

Masonry with ETICS, window unit with on-site roller shutter box

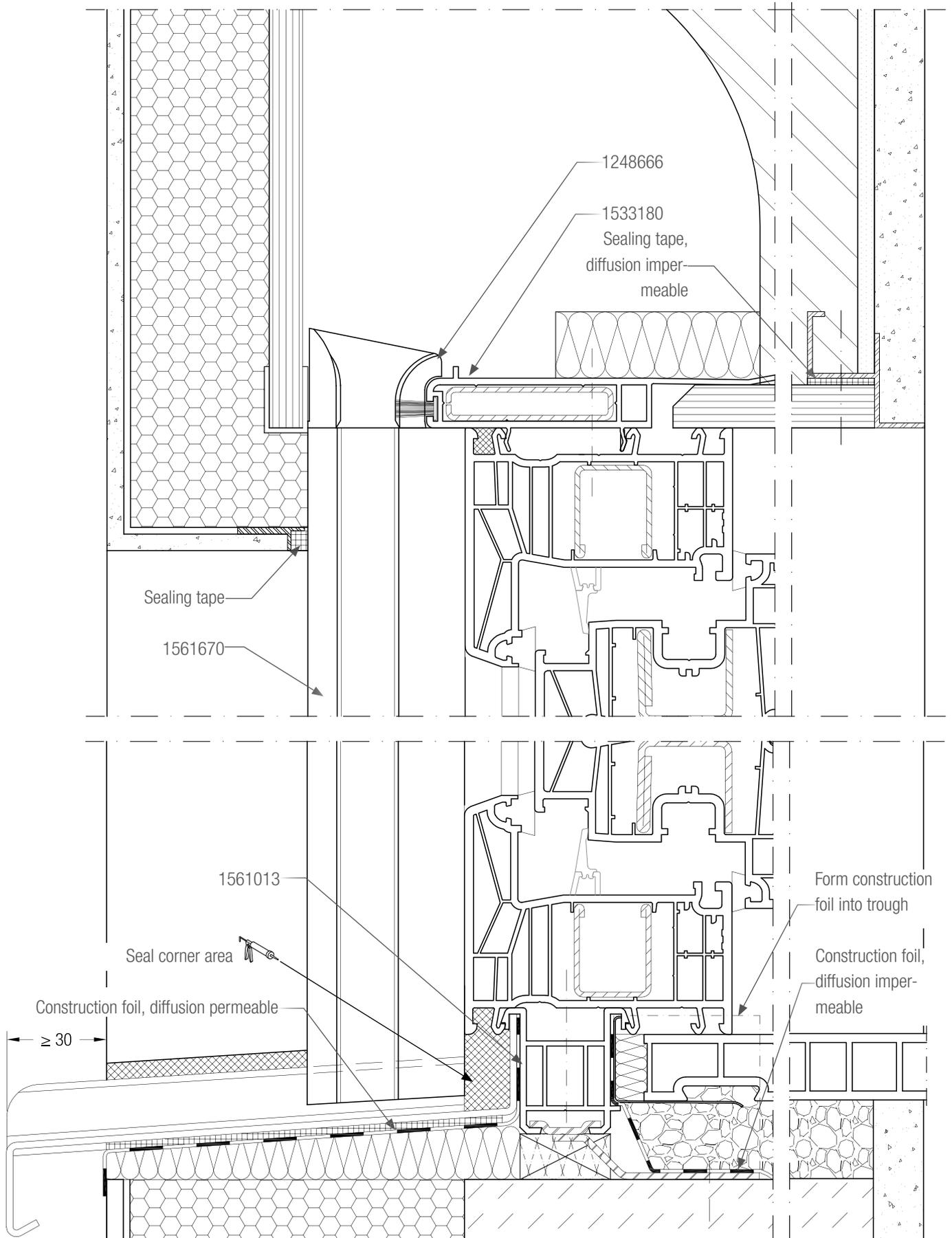
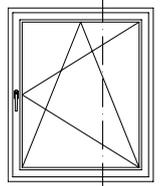


Section A - A:

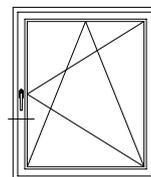


i When using end caps that are not watertight, create a second water drainage level by introducing a trough-like sealing membrane underneath the window sill (see section A-A or bottom connection).

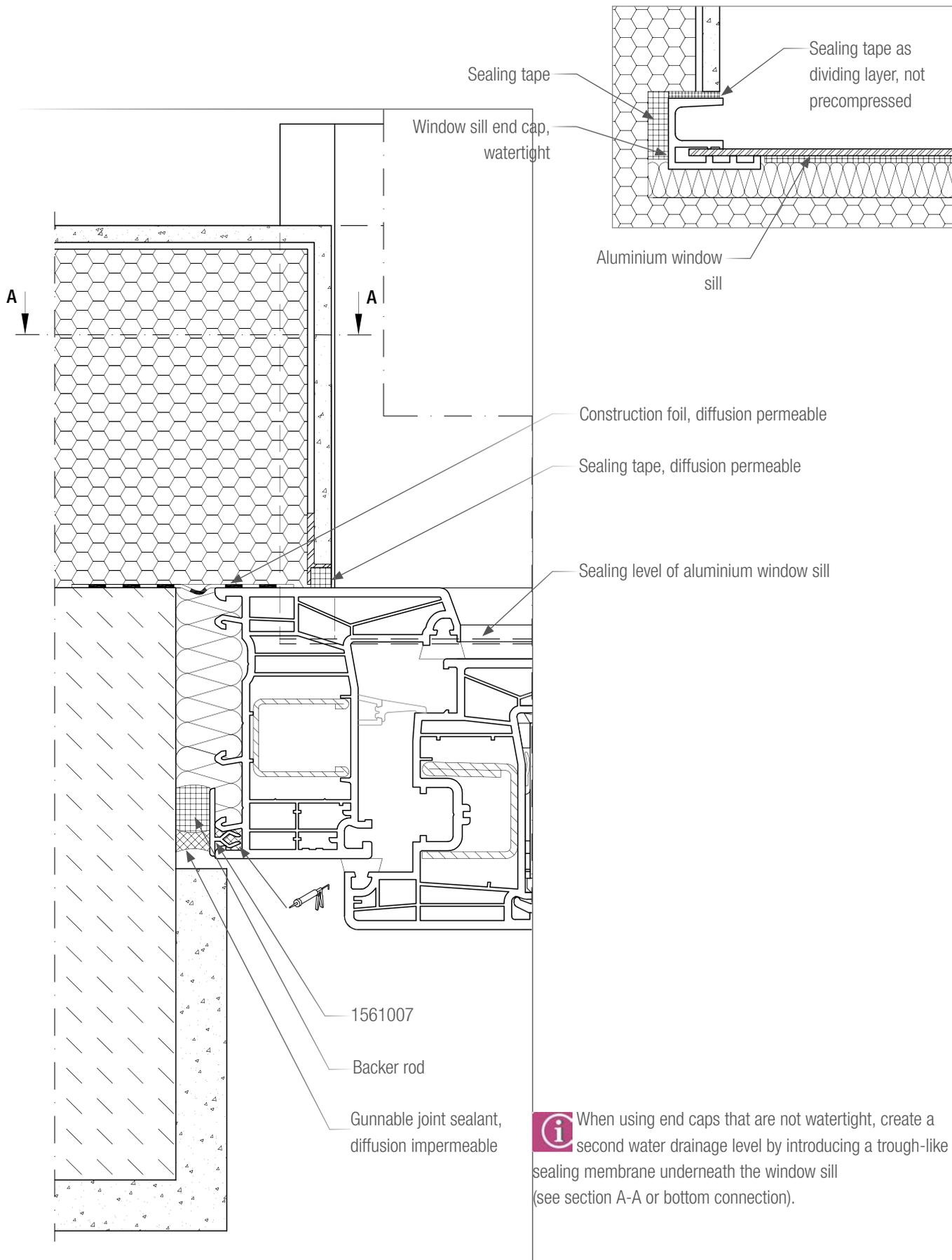
7. Installation guidelines - installation drawings
 Masonry with ETICS, window unit with on-site roller shutter box



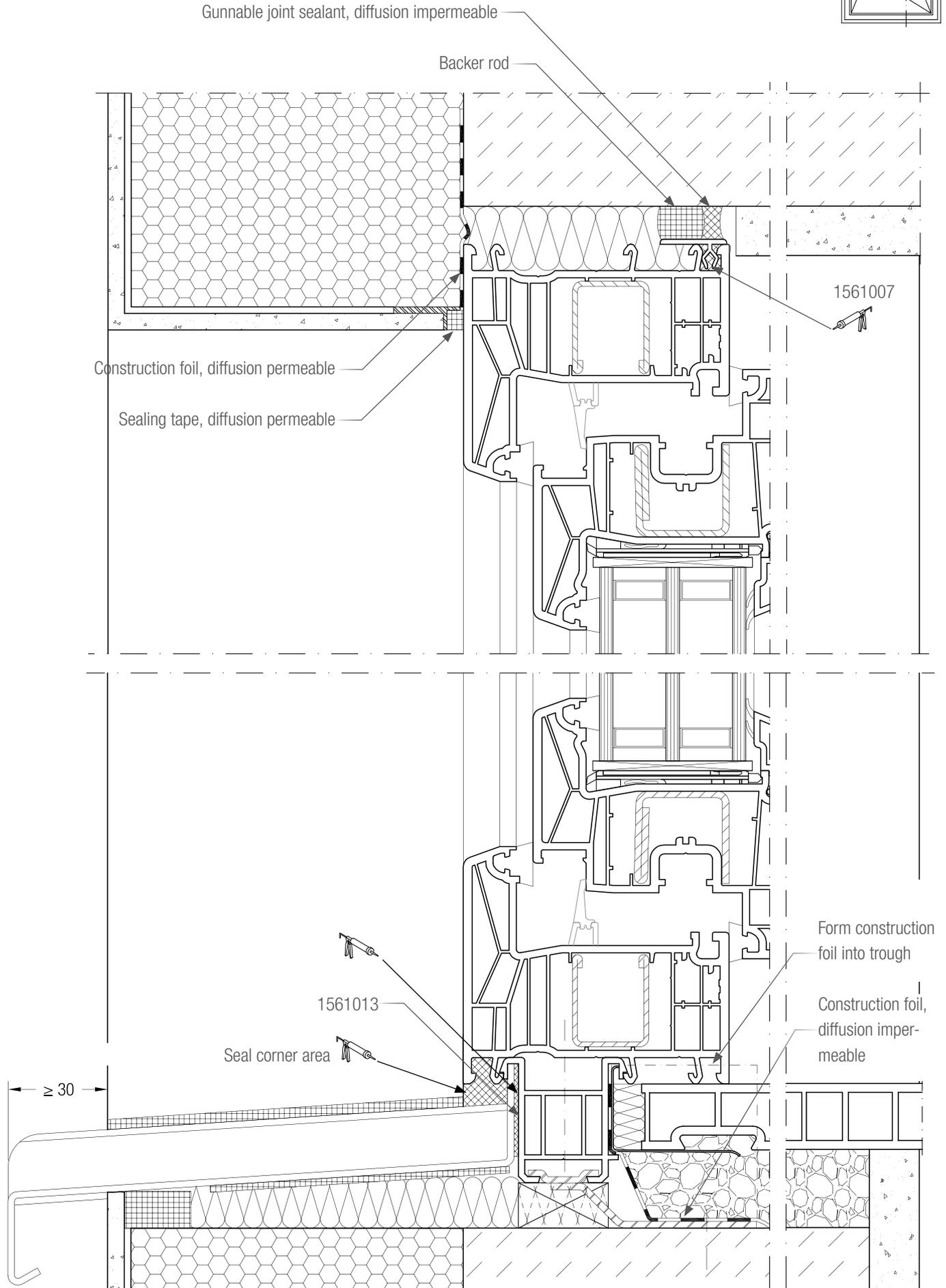
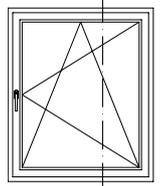
7. Installation guidelines - installation drawings
Masonry with ETICS



Section A - A:

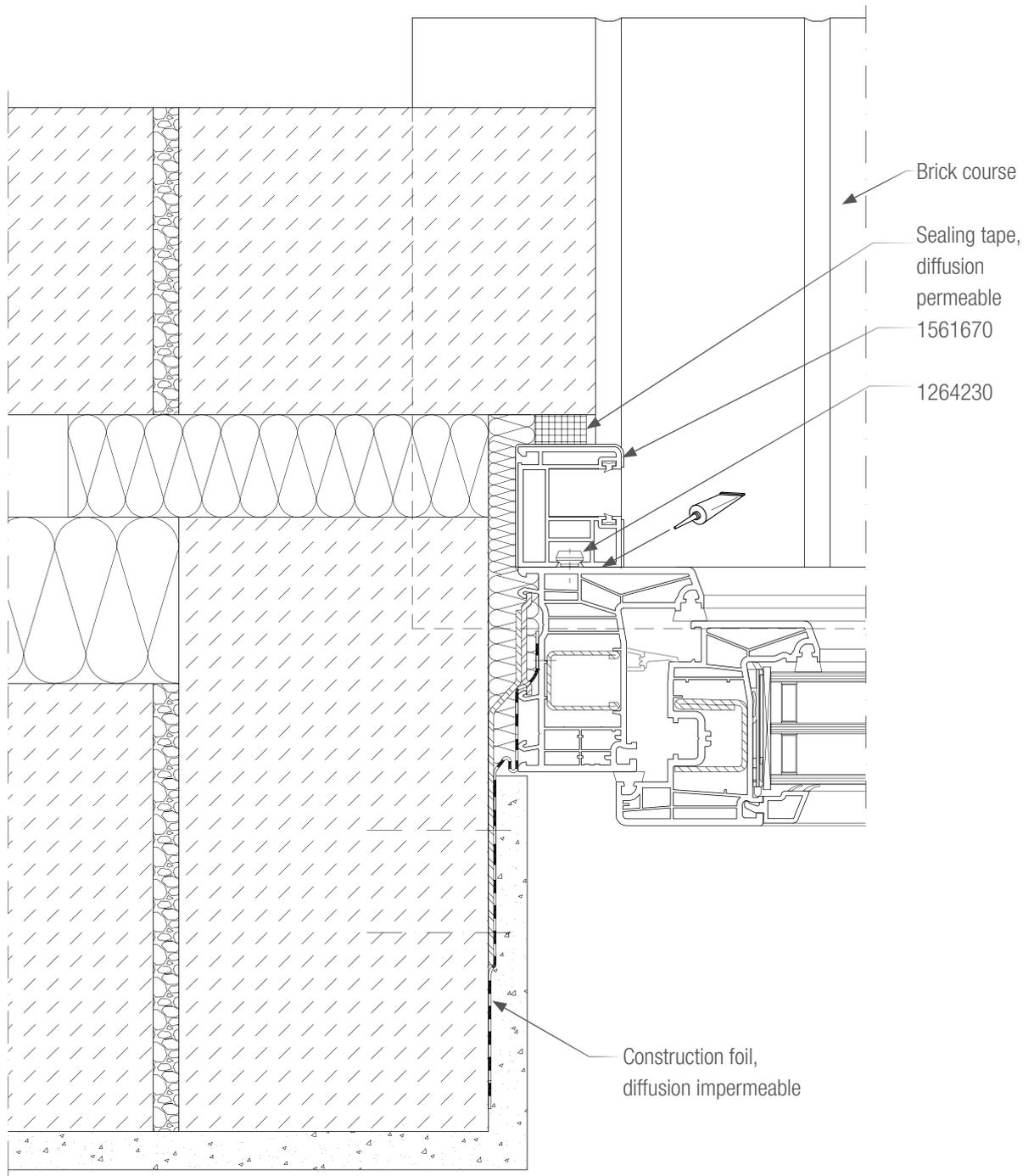
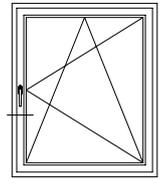


7. Installation guidelines - installation drawings
 Masonry with ETICS



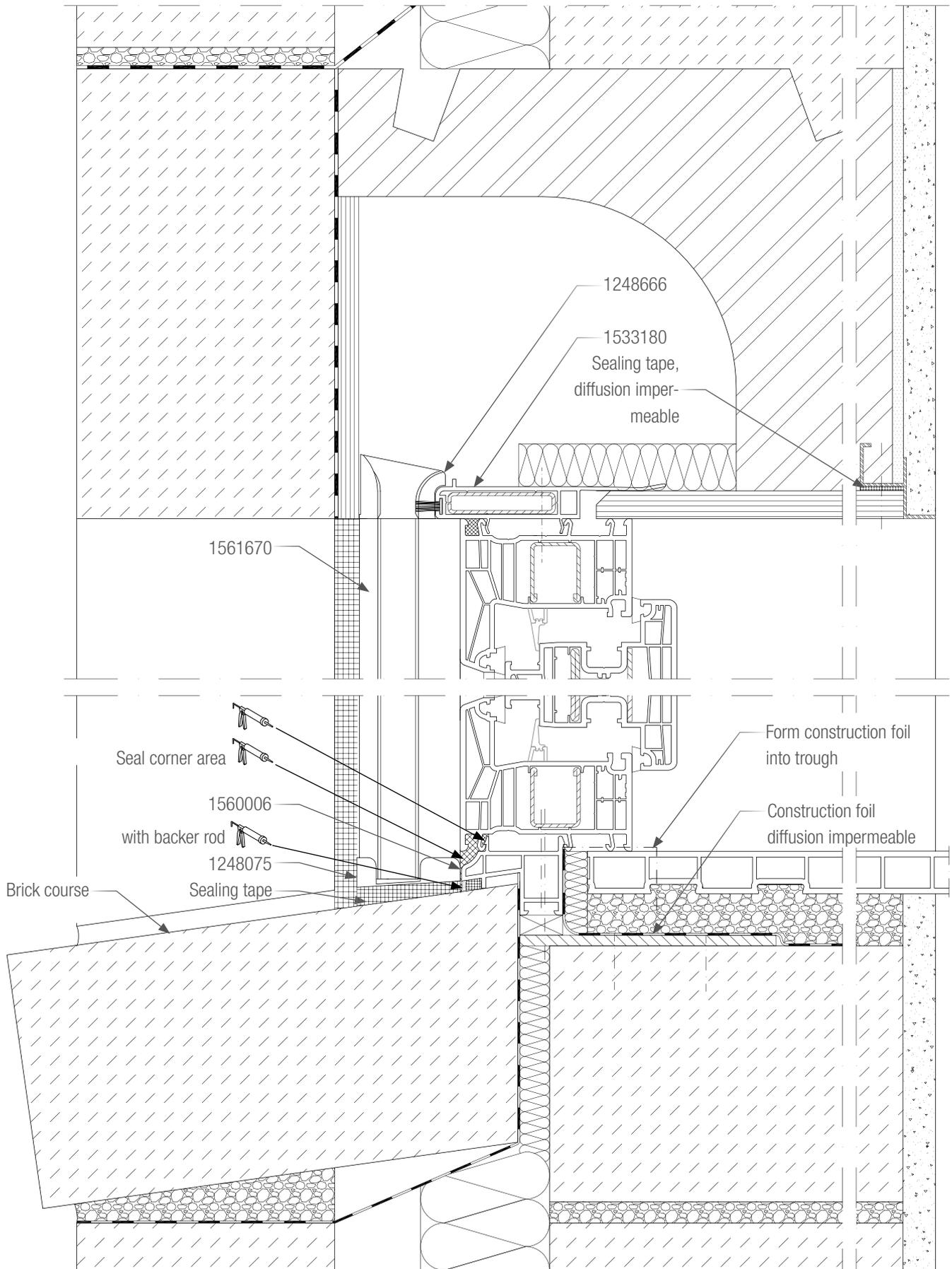
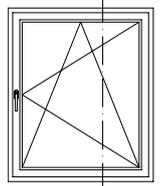
7. Installation guidelines - installation drawings

Double skin brick masonry, window unit with on-site roller shutter box

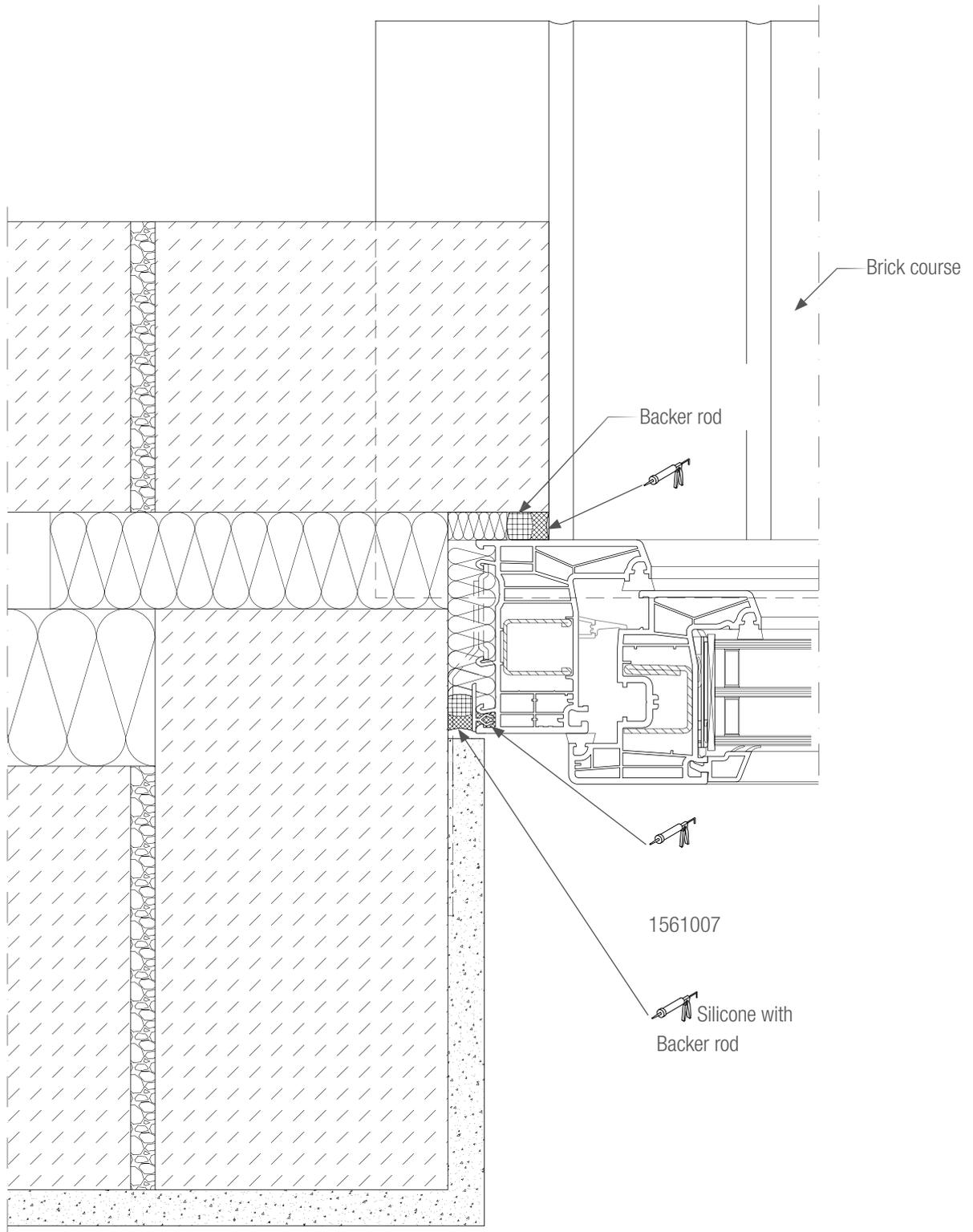
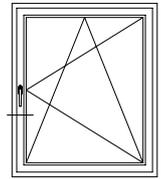


7. Installation guidelines - installation drawings

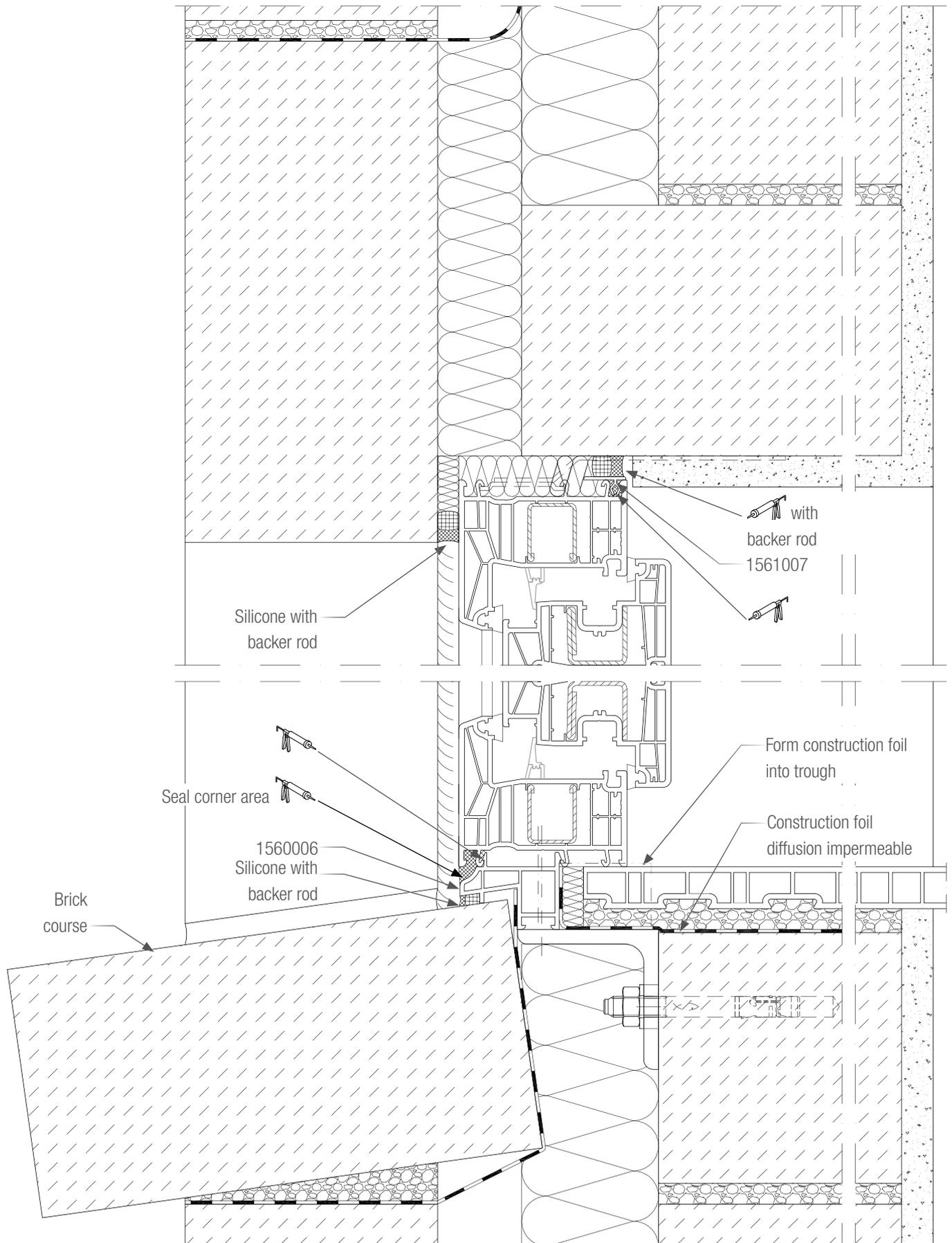
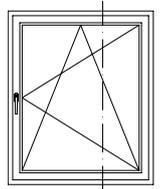
Double skin brick masonry, window unit with on-site roller shutter box



7. Installation guidelines - installation drawings
Double skin brick masonry

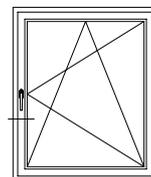


7. Installation guidelines - installation drawings
 Double skin brick masonry

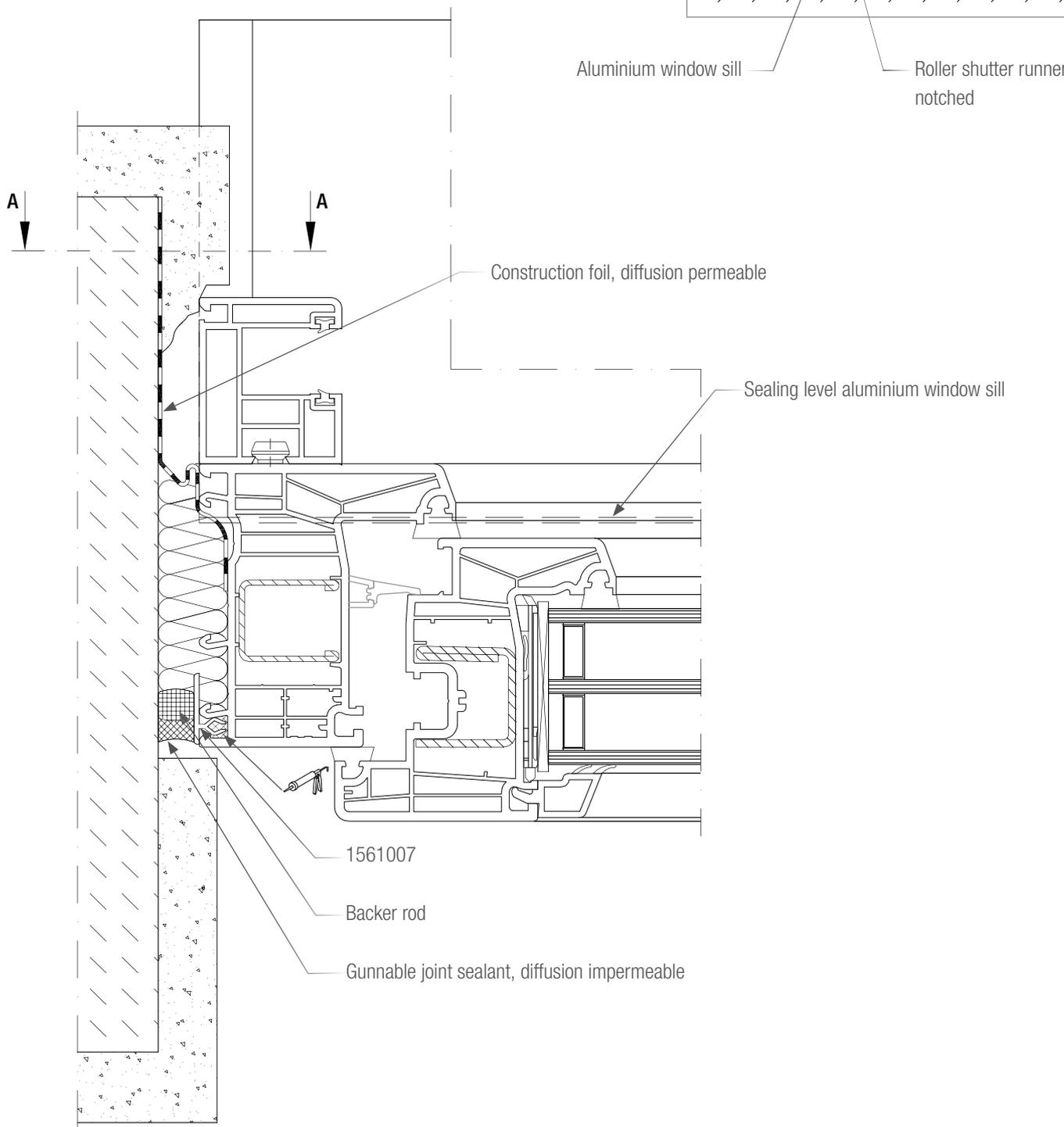
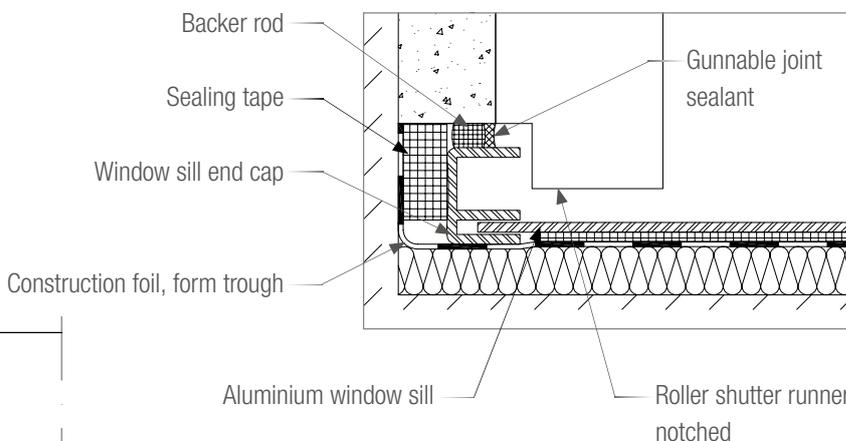


7. Installation guidelines - installation drawings

Single skin rendered masonry (no wall rebate), window unit with on-site roller shutter box

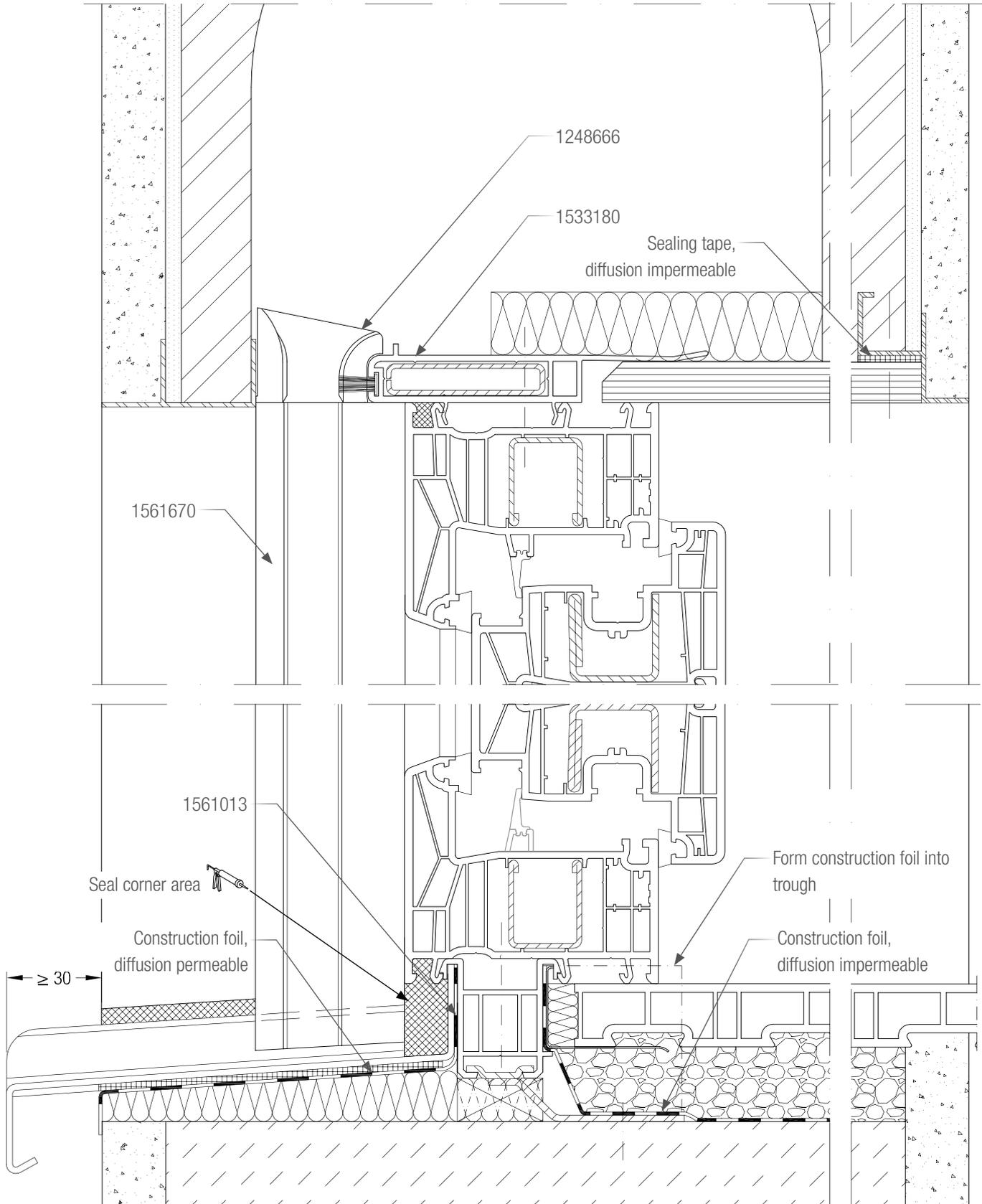
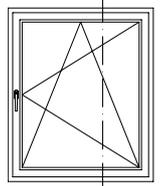


Section A - A:

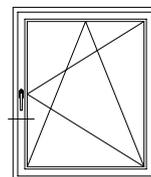


7. Installation guidelines - installation drawings

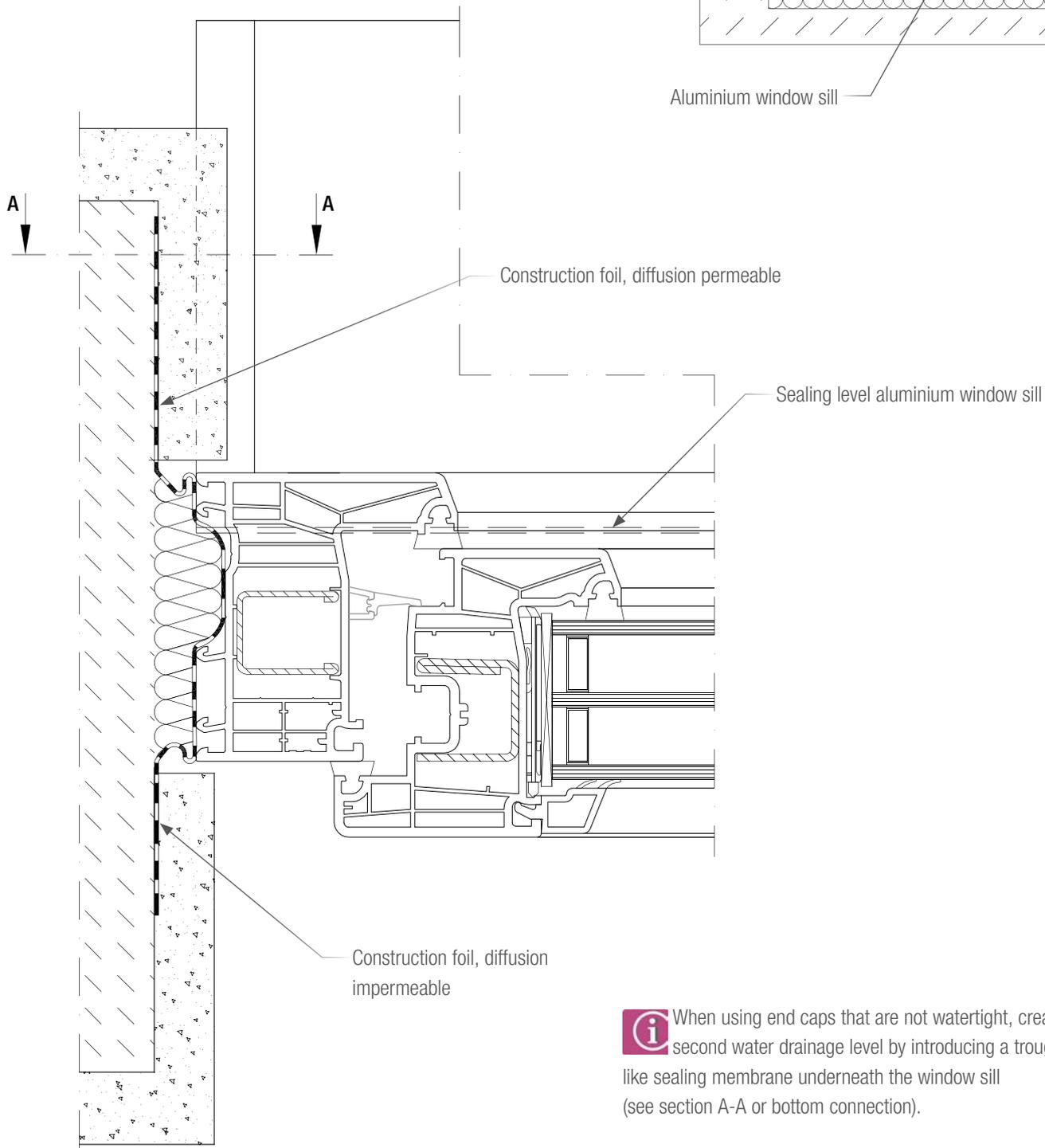
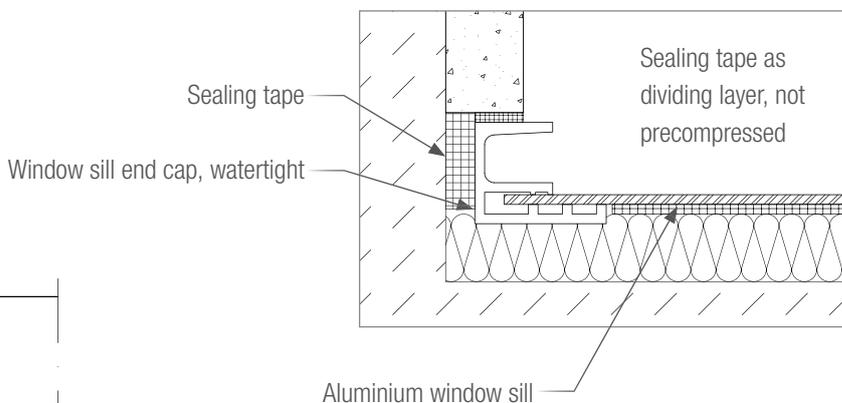
Single skin rendered masonry (no wall rebate), window unit with on-site roller shutter box



7. Installation guidelines - installation drawings
 Single skin rendered masonry (no wall rebate)

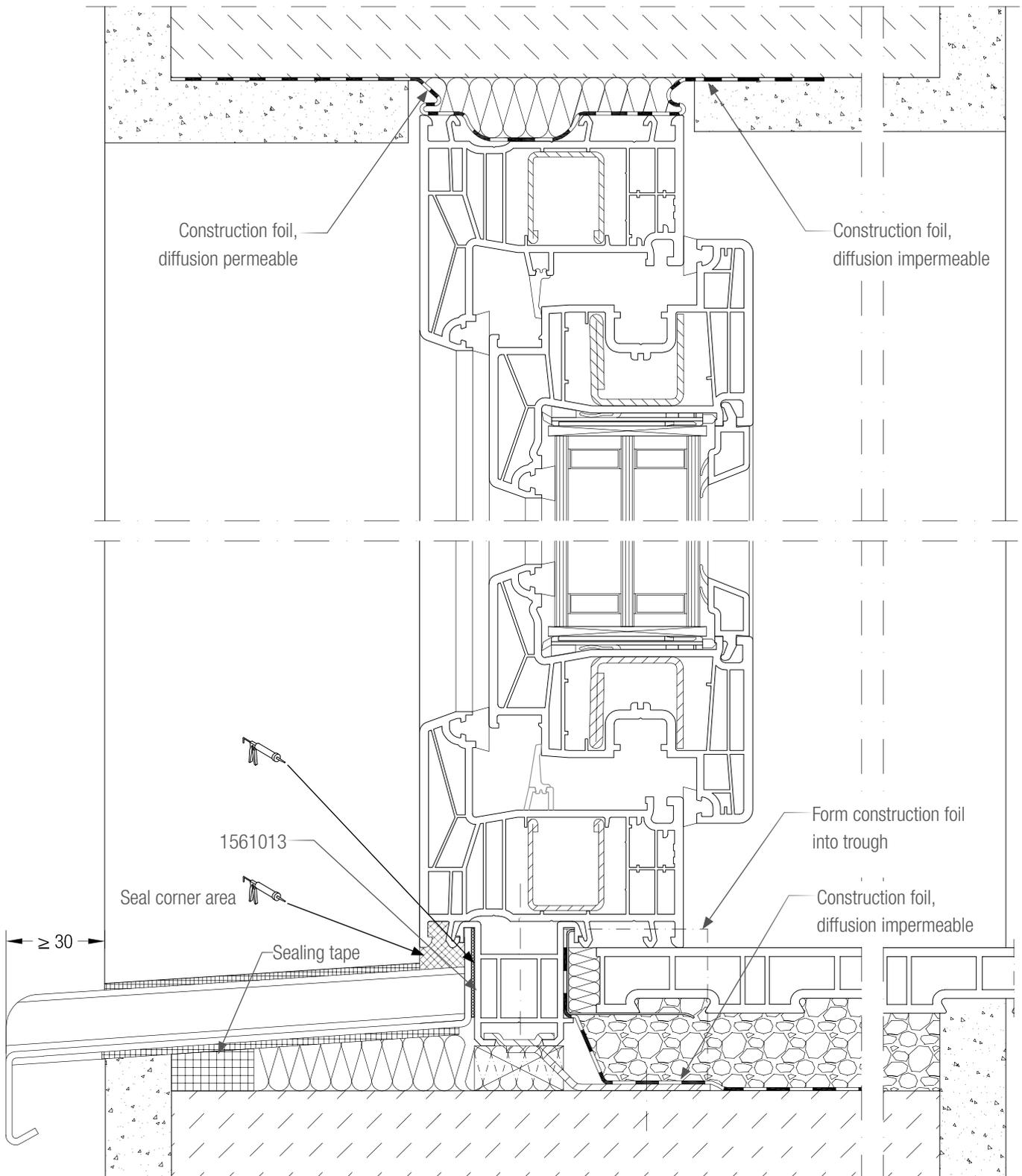
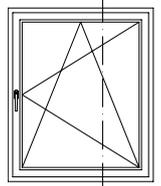


Section A - A:

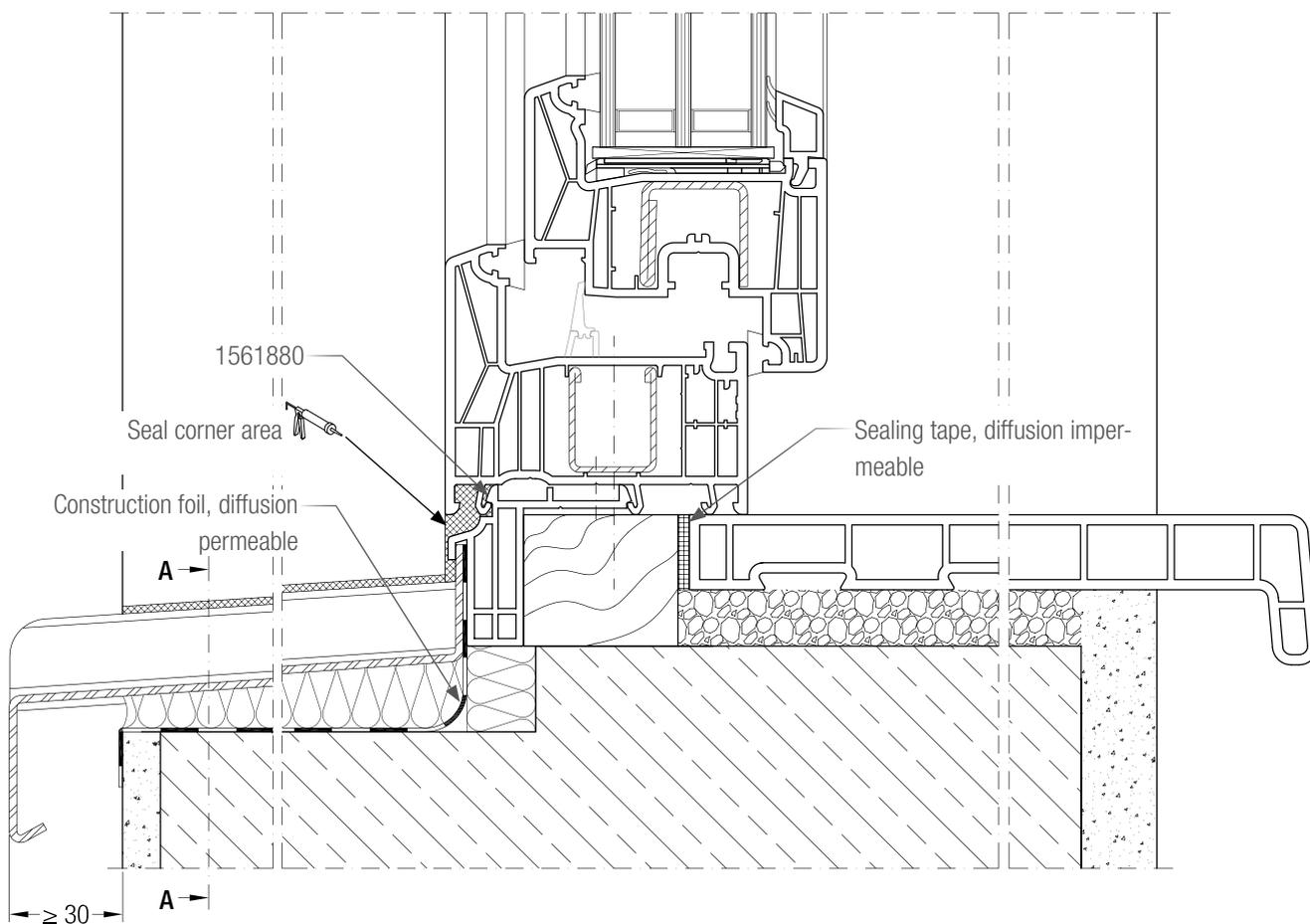
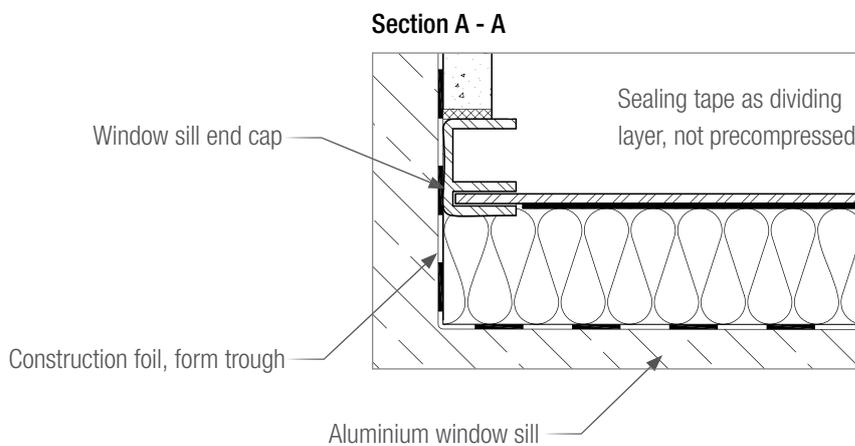
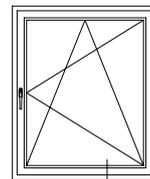


i When using end caps that are not watertight, create a second water drainage level by introducing a trough-like sealing membrane underneath the window sill (see section A-A or bottom connection).

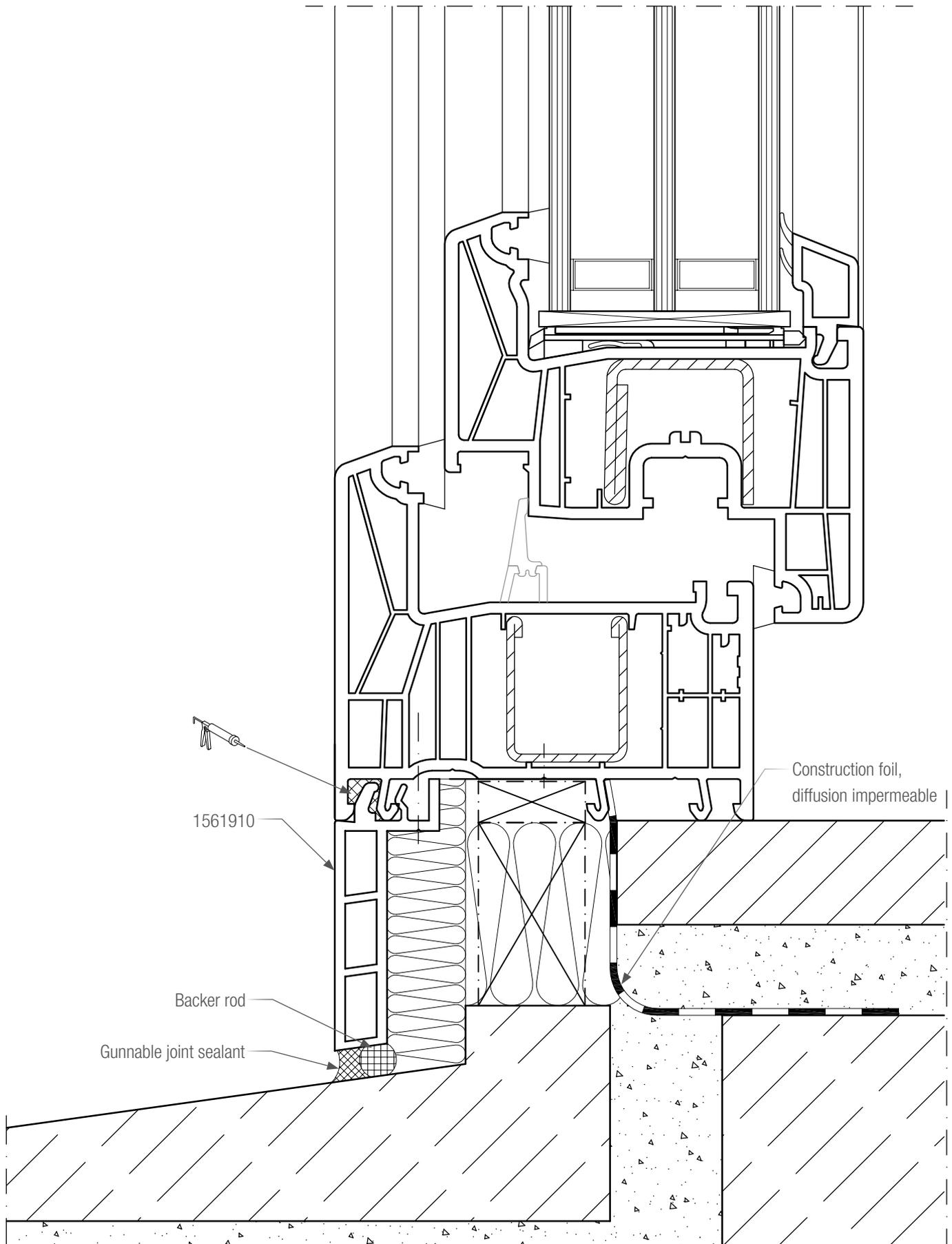
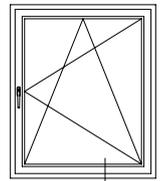
7. Installation guidelines - installation drawings
 Single skin rendered masonry (no wall rebate)



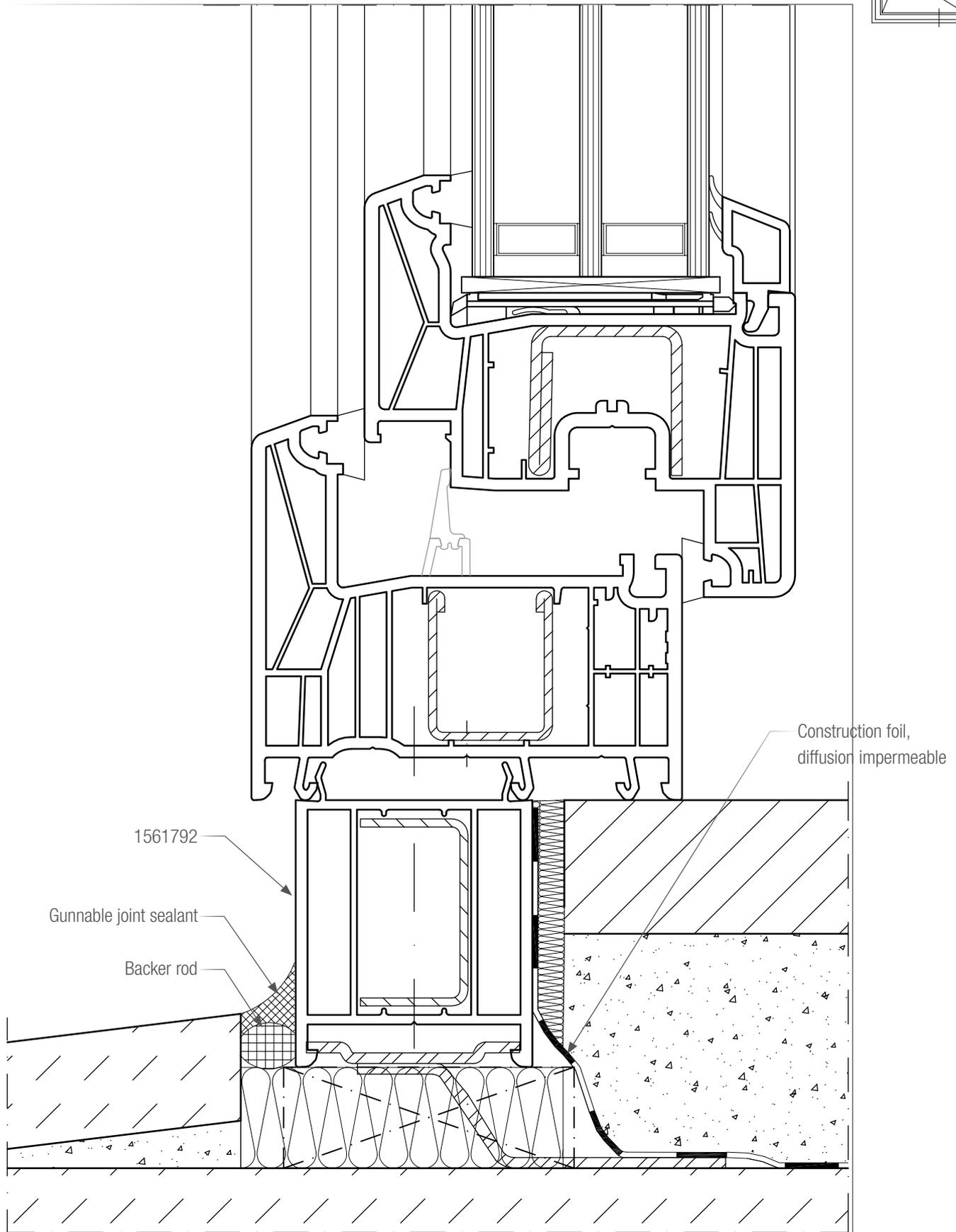
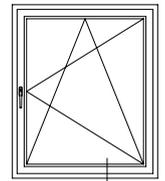
7. Installation guidelines - installation drawings
 Connection at bottom, window sill no. 37



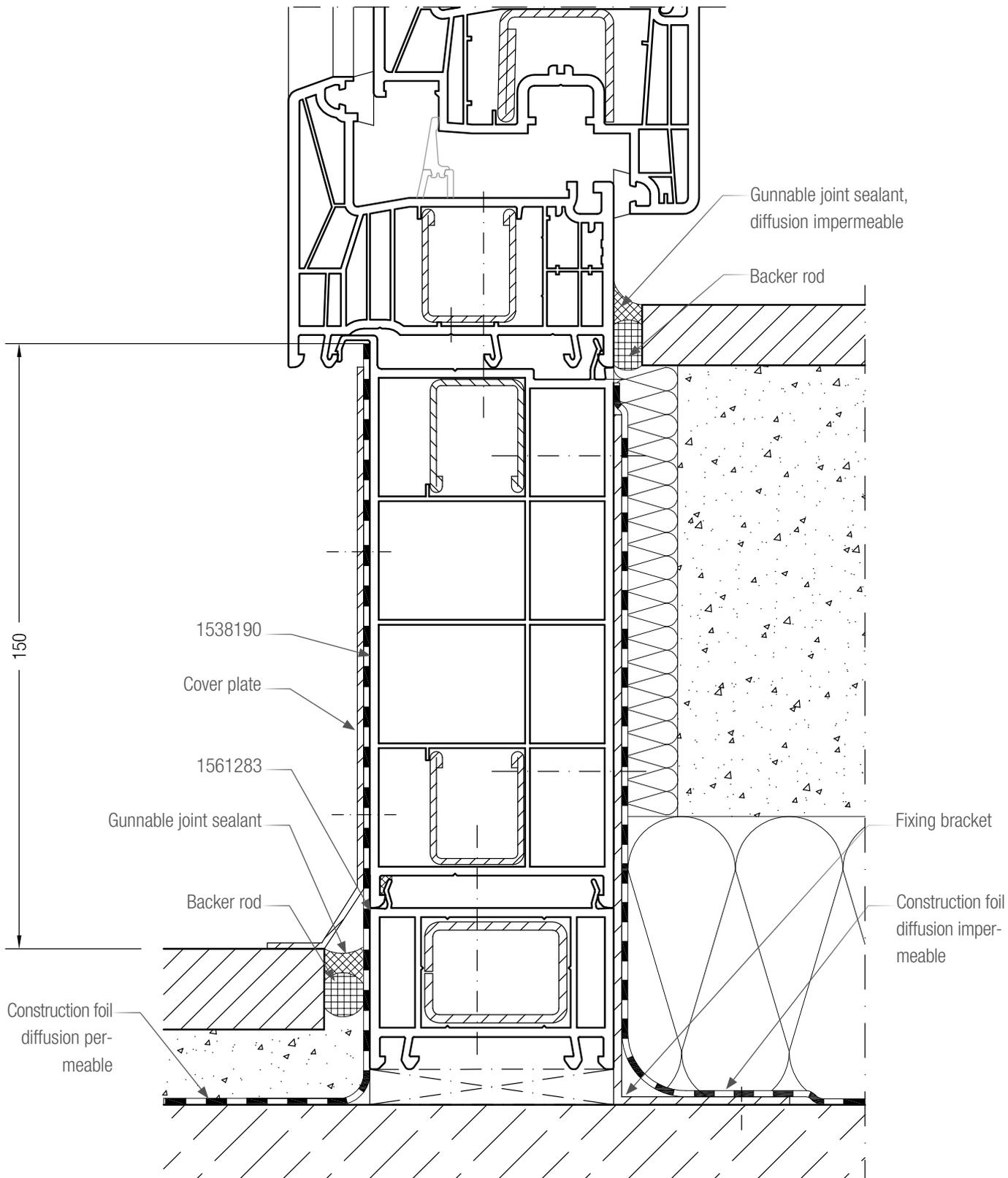
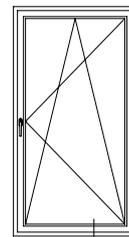
7. Installation guidelines - installation drawings
Connection at bottom, window sill no. 31/60



7. Installation guidelines - installation drawings
Connection at bottom, window sill no. 34

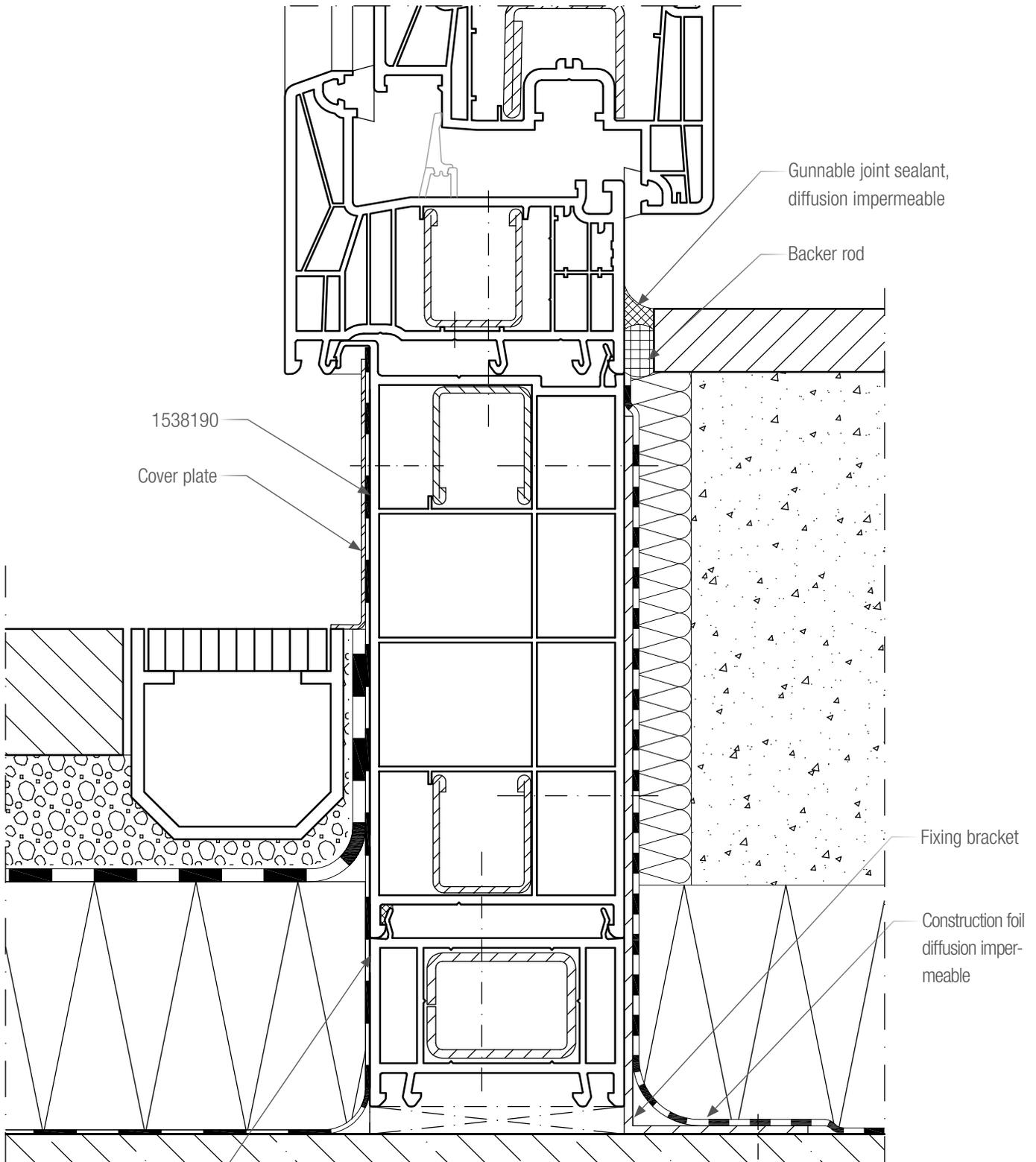
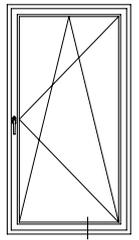


7. Installation guidelines - installation drawings
 Connection at bottom, installation height 150 mm
 (DIN 18195), window sill 100/54 and window sill extension 30/54



7. Installation guidelines - installation drawings

Connection at bottom with gutter, installation height < 150 mm (DIN 18195-9)

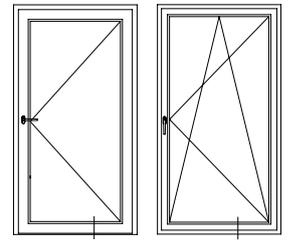


1561283

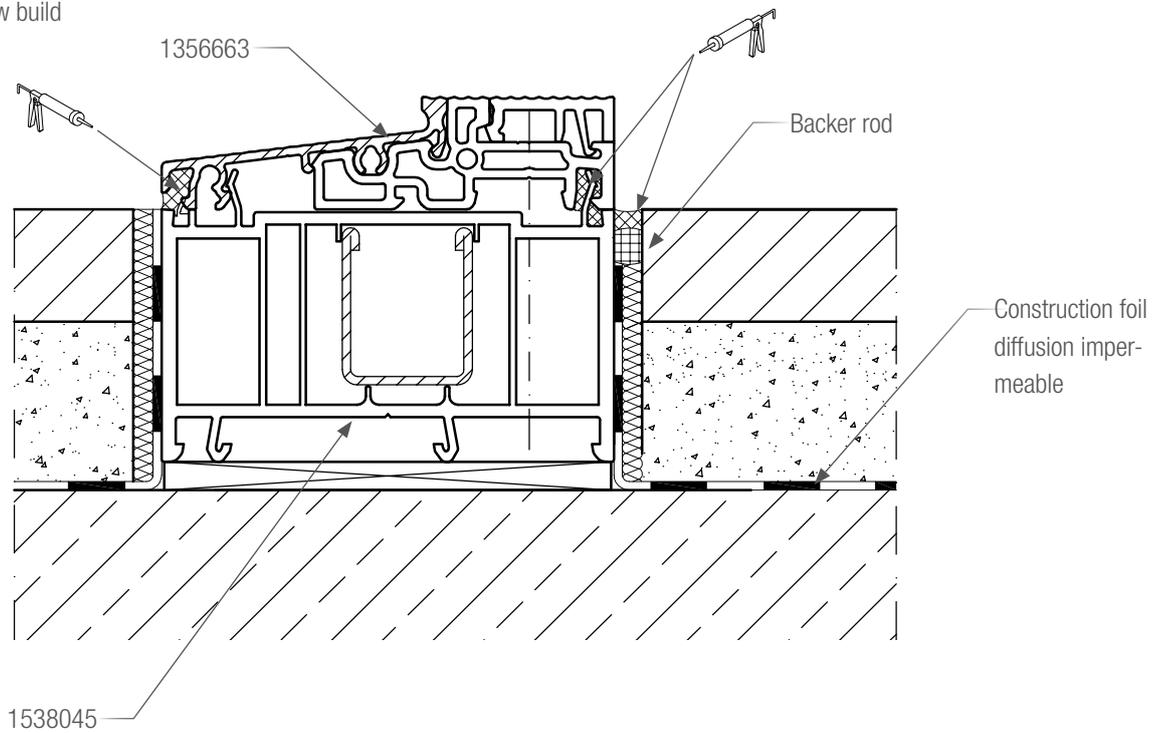
 Sill connections with little or no upstand should have additional protection against heavy water load, e.g. via adequately large canopies, facade recesses and/or directly draining gutters with grates.

7. Installation guidelines - installation drawings

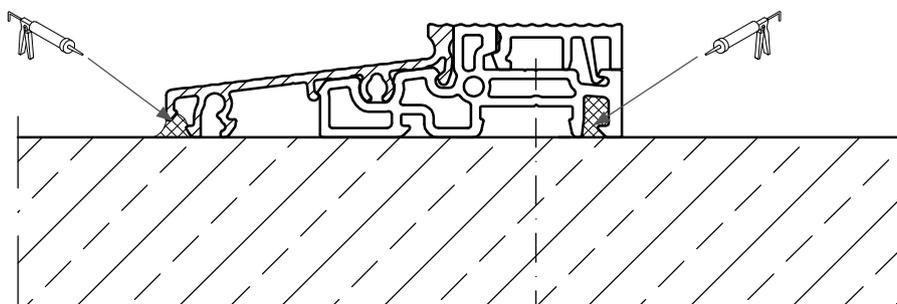
Connection at universal threshold, construction < 150 mm, protected position (DIN 18195-9)



Connection variant: New build



Connection variant: Building renovation



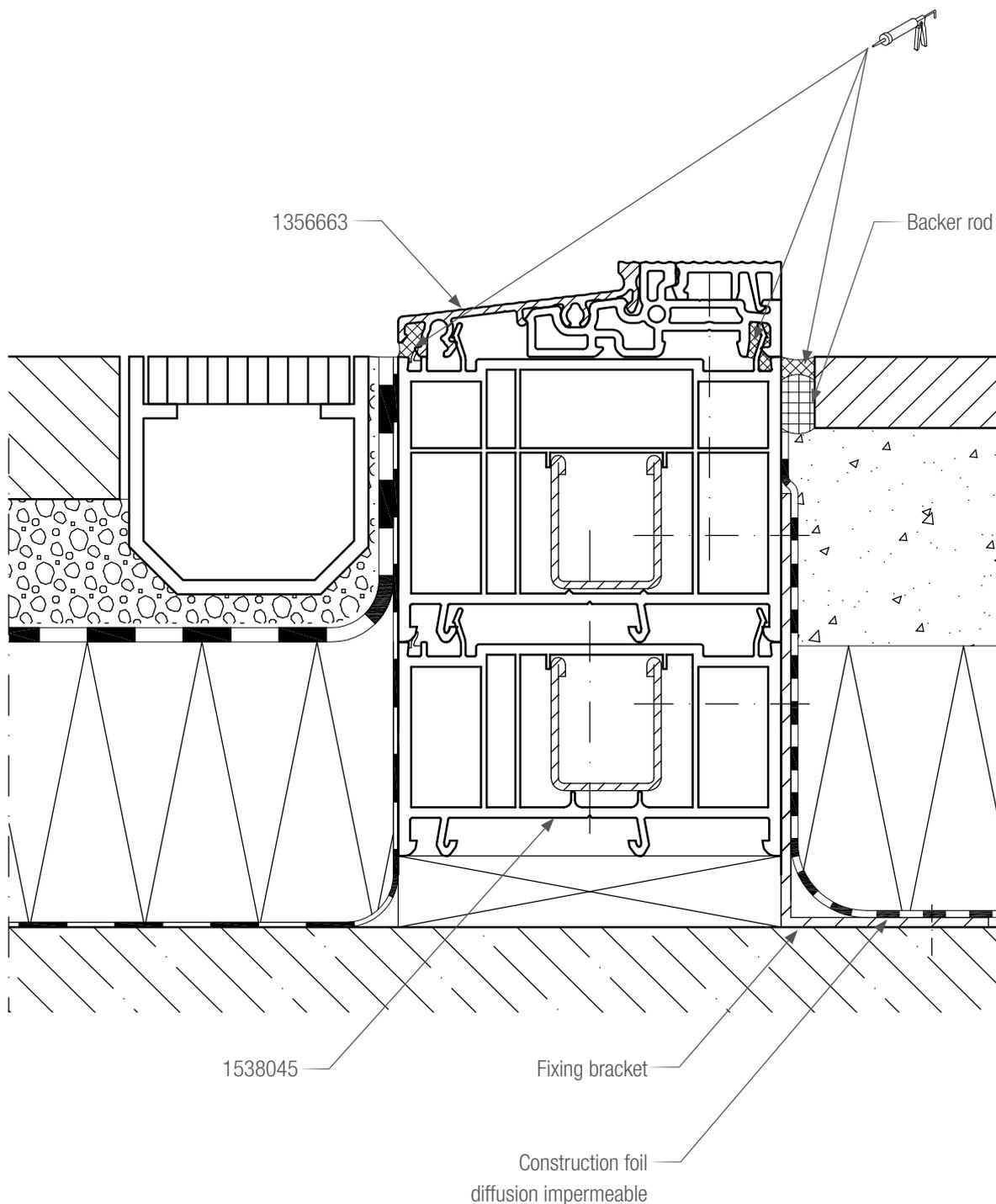
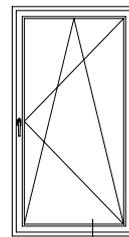
Attention: note thermal bridge



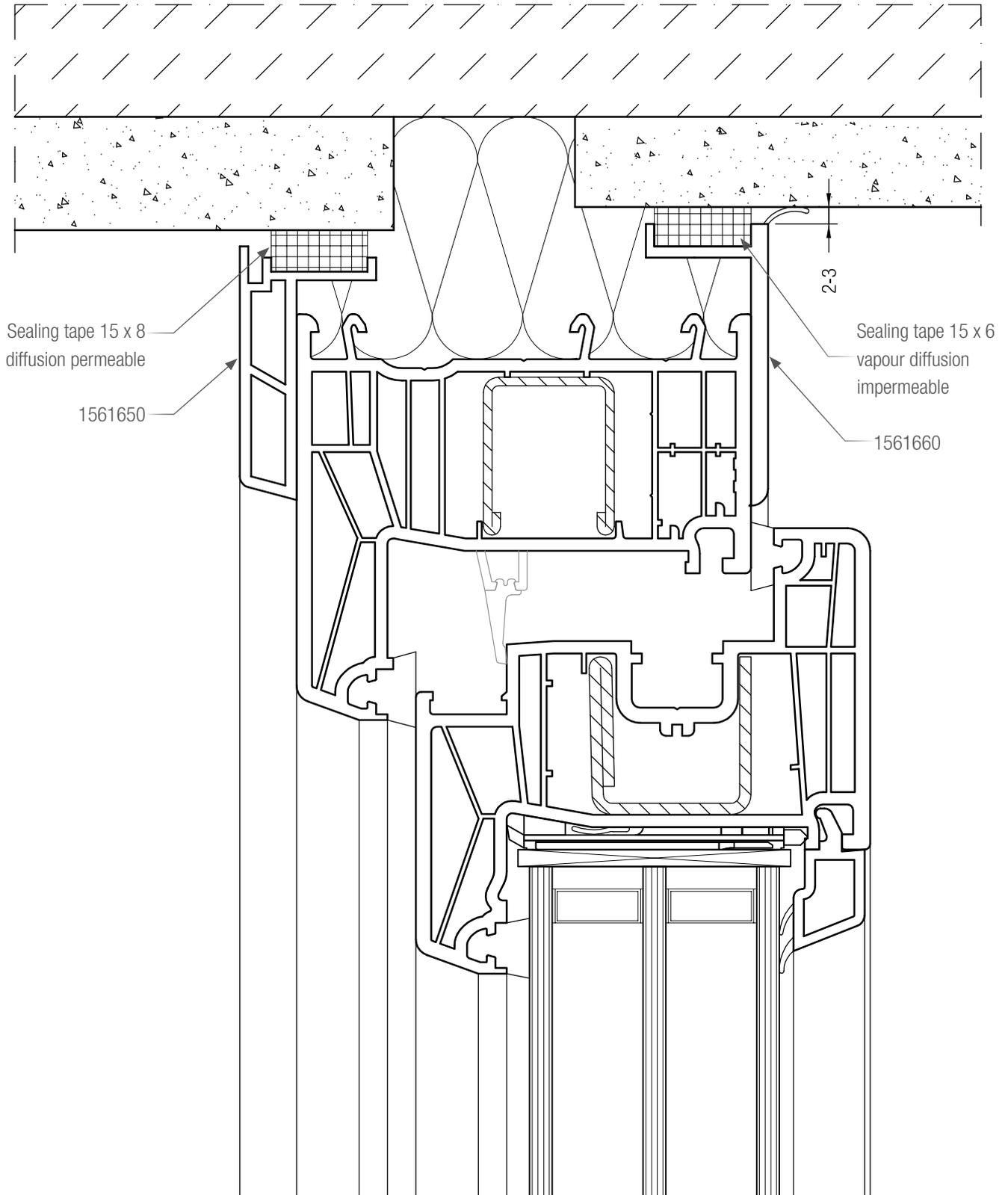
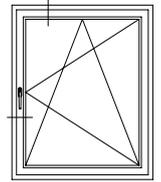
All joints

7. Installation guidelines - installation drawings

Threshold connection, universal, with gutter, installation height < 150 mm (DIN 18195-9)

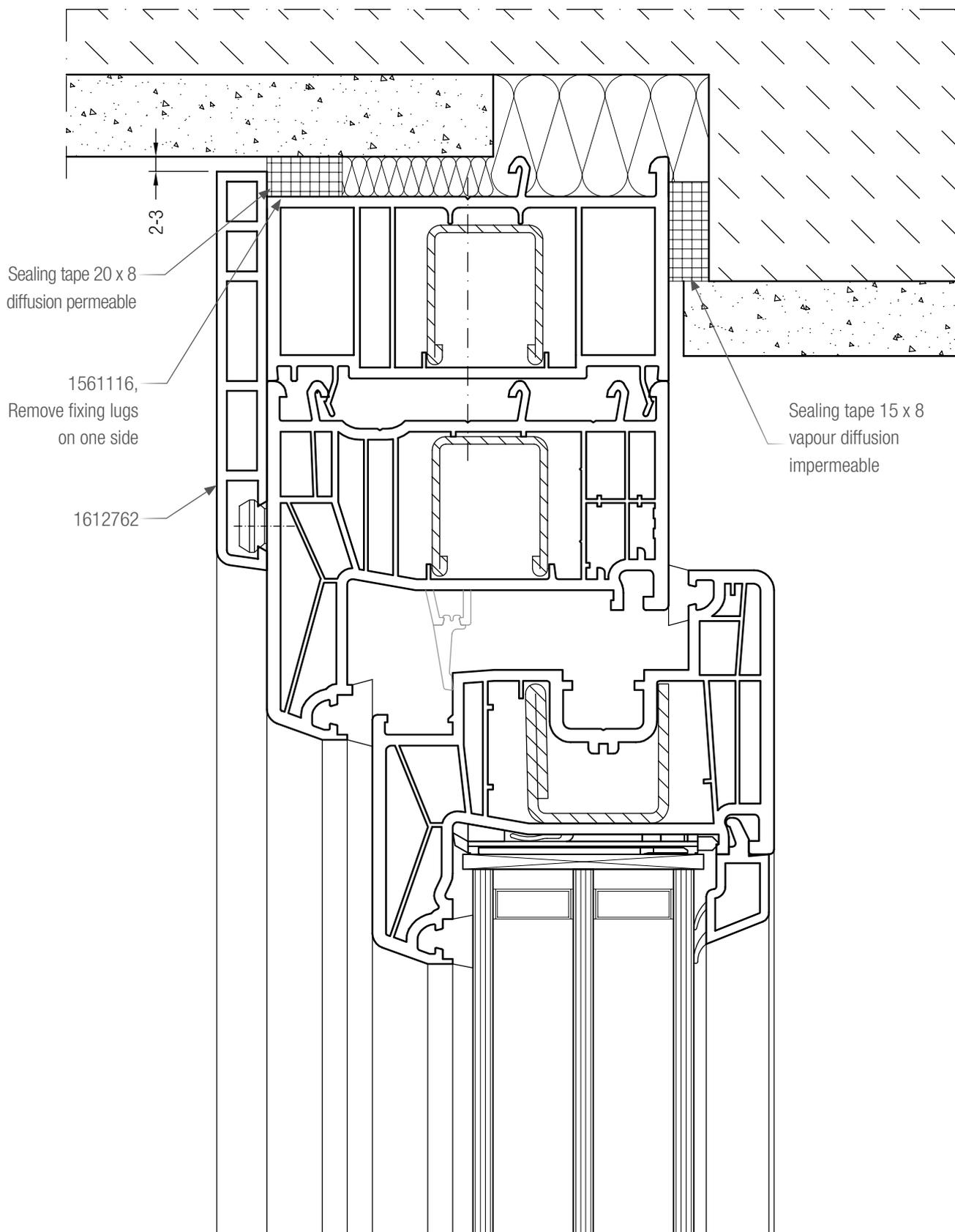
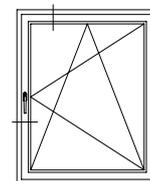


7. Installation guidelines - installation drawings
No wall rebate, top or side connection



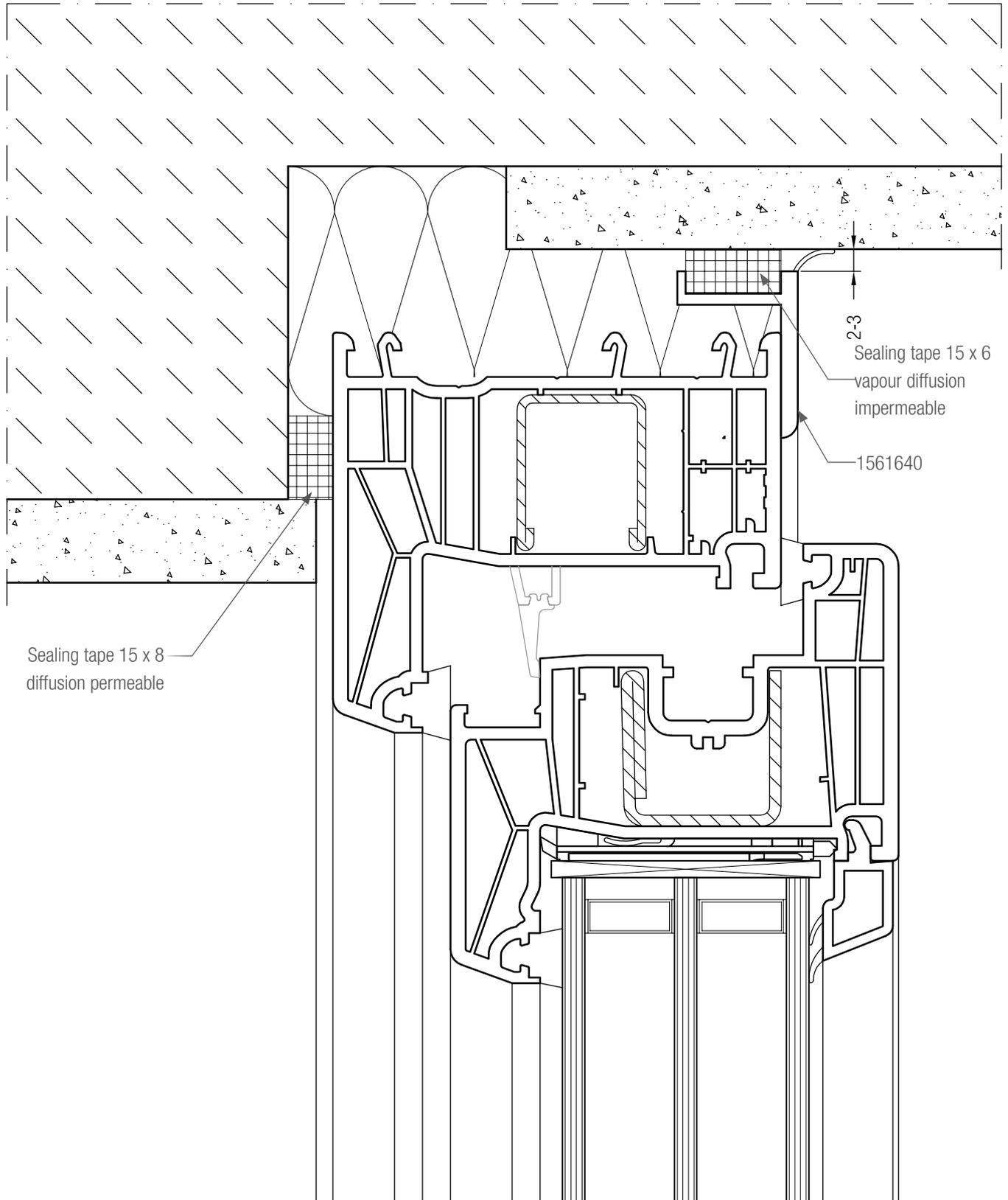
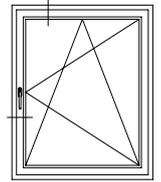
7. Installation guidelines - installation drawings

External wall rebate, top or side connection



 For frame extensions without IDS, seal the external snap-on base area with silicone.

7. Installation guidelines - installation drawings
Internal wall rebate, top or side connection



Explanation of symbols

	Colour: black
	Colour: grey
	Colour: white
	Colour: creamy white
	Colour: brown
	Colour: caramel
	Colour: green
	Colour: red
	Colour: silver
	Colour: any
	Aluminium, natural anodisation
	Aluminium, mill finish
	Laminated version
	Painted version
	Packing unit (for details, see item directory)
	Wall thickness in mm
	With weldable seal
	Seal to be inserted manually
	Right-hand version
	Left-hand version
@	Non-standard, delivery time on request
Ix	Moment of inertia in X direction in cm ⁴
Iy	Moment of inertia in Y direction in cm ⁴
	Affix with PVC adhesive, white profiles with adhesive 1251660/1251670, laminated profiles with solvent-free adhesive (e.g. Cosmofen 515, Weiss).
	Seal with silicone
	Seal with EPDM sealant
	Affix with EPDM adhesive
	Panhead tapping screw ISO 7049
	Countersunk tapping screw ISO 7050
	Countersunk drilling screw ISO 15482
	Profile perimeter in mm
	Drilling jig

Our technical advice relating to applications is provided to the best of our knowledge, but is to be regarded as nonbinding. We therefore recommend checking that the details given in this document are suitable for your intended technical solution.

Application, usage and processing of our products takes place outside of our control and therefore lie within your area of responsibility. Our warranty in any case relates to the consistent quality

of our products in accordance with our specifications. Should the issue of liability arise, this shall be based on our general terms and conditions of delivery and payment already provided. These terms and conditions can also be found under <http://rehau.com> or can be forwarded on request. Damage arising from the use of original system accessories other than those listed in our documentation is excluded from all warranties and REHAU liability.