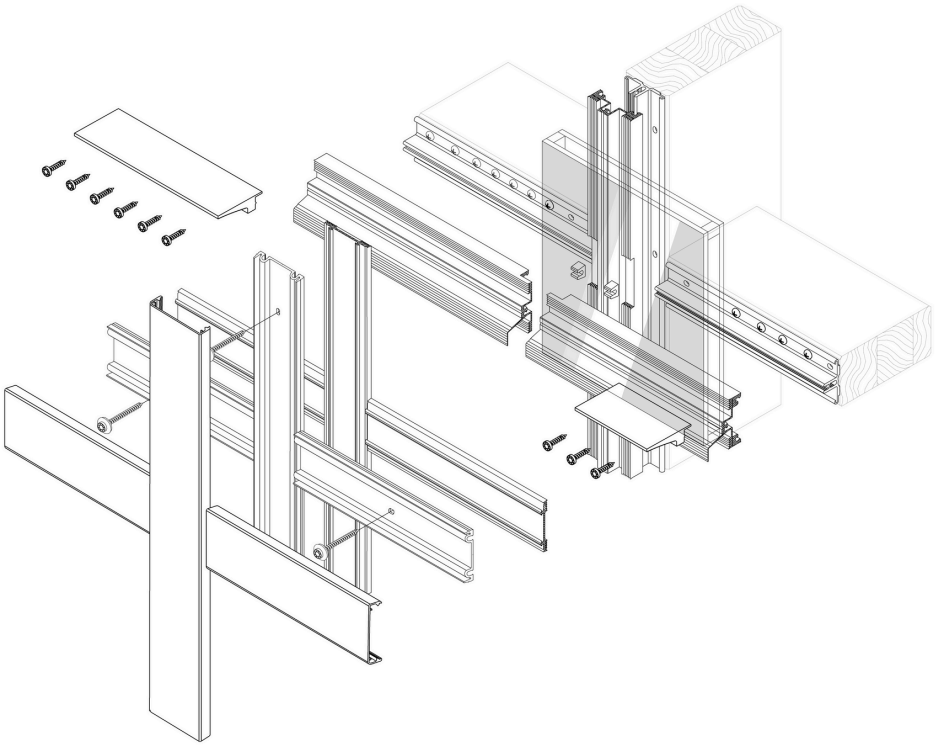
AVA C - Table of Contents

1.1 System specifications



System widths		50, 60, 80 mm
Air permeability EN 12152		AE
Driving rain resistance EN12154 / EN 13050	static dynamic	RE 1500 Pa 250 Pa / 750 Pa
Resistance to wind EN 13116	permitted increased	2000 Pa 3000 Pa
Shock resistance		I5 / E5
Glass weight		≤ 1030 kg
Burglar resistance DIN EN 1627		RC 2
Thermal insulation Uf value		0.67 W/(m2K) glass thickness 46 mm, slab insulation

Thermal insulation

The AVA C System offers excellent thermal insulation, with frame Uf values as low as 0.69 W/(m^{2}K) using 44 mm glass thickness.

1.2 Wood selection and requirements

The wooden substructure supports the glazing and must meet all structural and suitability requirements. The wood choice is on the client, architect, or processor.

All wood materials comply with the current Eurocode 5 standard (DIN EN 1995-1).

Minimum requirements for all wood materials:

- Softwood, strength class C24
- Laminated timber, strength class GL24h

Comparable hardwoods can also be used.

Wood Type	Strength Class & Modulus of Elasticity (E_0,mean [kN/cm²])
Spruce, Fir	C16 - 800
Pine, Larch	C24 - 1100
Douglas Fir, Southern Pine	C30 - 1200
Western Hemlock	C35 - 1300
Yellow Cedar	C40 - 1400
Oak, Teak, Keruing	D30 - 1100
Beech	D35 - 1200
Beech, Azalea, Intsia	D40 - 1300
Angelique (Basralocus)	D40 - 1300
Azobé (Bongossi)	D60 - 1700
Glued Laminated Timber (GLT)	C24 - GL24h - 1160
	C30 - GL28h - 1260
	C35 - GL32h - 1370
	C40 - GL36h - 1470
Laminated Veneer Lumber (LVL)	Kerto Q - 1000 - 1050
	Kerto S - 1380
	Kerto T - 1000
Multiplex Sheets (Plywood)	900 - 1600

Confirm exact values with the supplier and applicable standards.

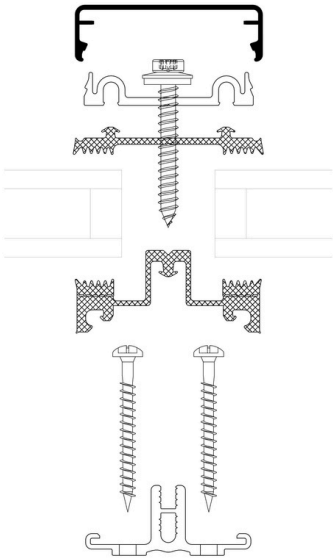
1.3 Profile design

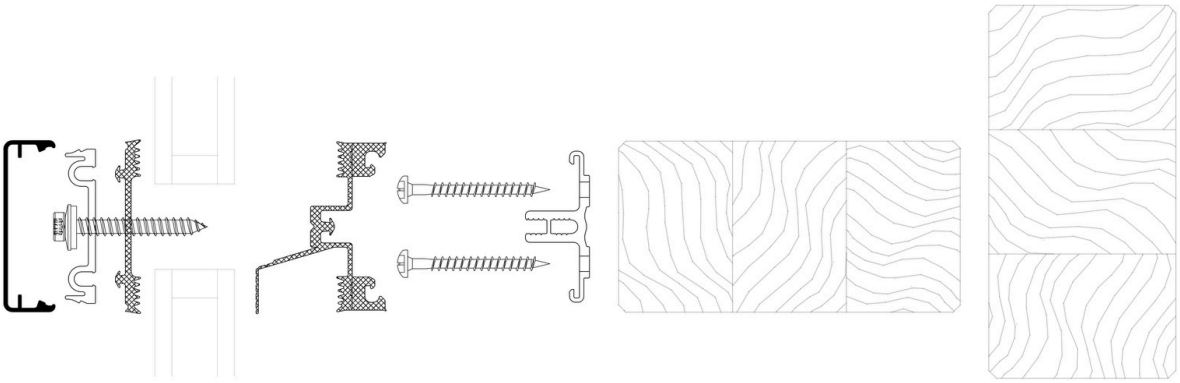
The add-on channel is used the same way for facades and roofs. It is mounted directly on timber structures.

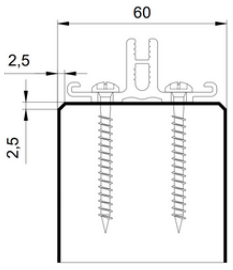
AVAVERA add-on channel is suitable for single, double, triple glazing.

Pre-assembled in workshop or mounted on-site — ideal for restorations.

The timber structure can be coated independently of the add-on channel and screws.







The system can be found in 50, 60, 80 mm system widths.

Aluminium profiles

The aluminium profiles are made from EN AW 6060 and EN AW 6063 according to DIN EN573-3, T66 according to DIN EN 755-2.

Coating the aluminium

In addition to anodic oxidation, with pre-treatment, traditional coating techniques can be used - airdrying multi-layer coatings or thermosetting coatings. Discuss required actions with the coater.

Linear expansion of aluminium

Take into account the temperature-related linear expansion of the aluminium pressure and cover plates. Theoretical bar length ℓ to be reduced by:
$\Delta\ell = \alpha T \cdot \Delta T \cdot \ell$

Shorten the pressure plate by ≈ 2.5 mm per bar ℓ = 1000 mm. Ensure the correct length of the outer gaskets.

Use a diameter of d = 9 mm for the holes to screw the cover plates in the roof area.

Thermal expansion parameters

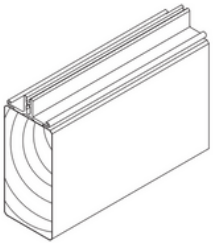
$\alpha T \approx 24 \cdot 10\text{-}6$ 1/K
coefficient of thermal expansion for aluminium
T = 40 K
assumed temperature difference of aluminium depending on colour and solar radiation
ℓ = 1000 mm rod length
$\Delta\ell \approx 1$ mm longitudinal expansion

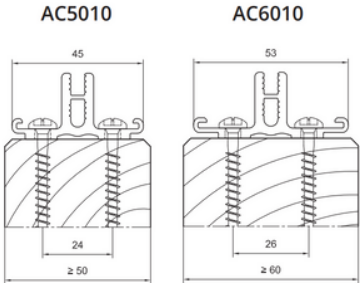
Expansion references

Rod length ℓ (mm)	Temperature difference ΔT	Linear expansion Δℓ (mm)
1000	40°C	1
3000	40°C	3
1000	60°C	1.5
3000	60°C	4.5
1000	100°C	2.5
3000	100°C	7.5

1.4 Add-on channel components

System properties





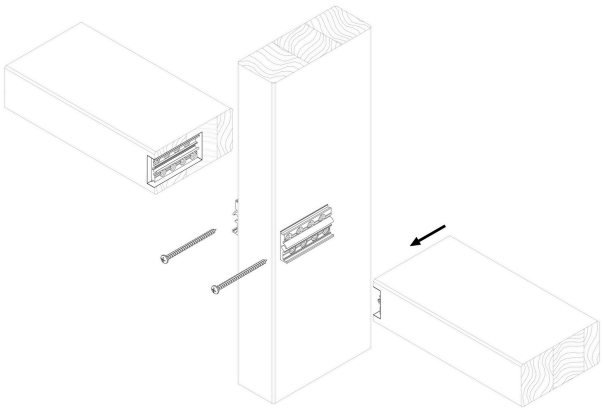
Material	AC5010/AC6010 Wood types	Aluminium EN 6063 T66 min. softwood C24 (density ≥ 350 kg/m3) min. laminated timber GL24h (density ≥ 380 kg/m3)
Pre-cut	AC length on mullion AC length on transom AC length on intermediate mullion	ℓAC = ℓmullion ℓAC = ℓtransom - (2 x 15 mm) ℓAC = ℓintermediate mullion - (2 x 15 mm)
Attachments	to steel profile	S0171 / S0172 / S0173 / S0174
Glass supports	G6100 glass thickness 20-60 mm	3 x SN025 screw for glass supports 6 x S0171/S0172/S0173/S0174 strengthening for AC
	G6200 glass thickness 20-60 mm	6 x SN025 screw for glass supports 11 x S0171/S0172/S0173/S0174 strengthening for AC
	G6300 glass thickness 8-18 mm	3 x S0193 screw for glass supports 6 x S0171/S0172/S0173/S0174 strengthening for AC
Inner gasket AVA C 50	facade + roof mullion	D5071
	facade transoms	D5072
	roof transoms	D5073 also for facade single-glazing
	sealing piece	D0062 |1 x per transom end
Inner gasket AVA C 60	facade + roof mullion	D6071
	facade transoms	D6072
	roof transoms	D6073 also for facade single-glazing
	sealing piece	D0062 |1 x per transom end
Inner gasket AVA C 80	facade + roof mullion	D8071
	facade transoms	D8072
	roof transoms	D8073 also for facade single-glazing
	sealing piece	D0062 |1 x per transom end

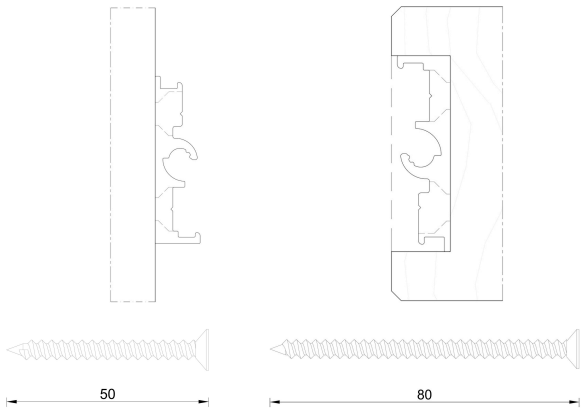
2 Structure Assembly

2.1 Mullion-transom connection

- Attach the connector parts to the mullion and transom, insert the transom to connect them. Secure the joint in all directions with a connecting screw.
- Install the transom connector screws, avoid collision with pressure plate screws and glass support screws.
- Ensure the centre groove in the transom begins approximately 80 mm from the transom end.
- Insert the transom from the inside to the outside.
- Place the front edge of the connector 6 mm behind the front edge of the mullion and transom. For hardwood or when placed close to the edge of the wood, pre-drill with Ø 3 mm.
- Mill a 12 - 12,5 mm deep recess on the front edge of the transom.

Milling dimensions: width x length x depth
40 x (connector length + 6) x 12-12.5 (mm)





mullion assembly transom assembly

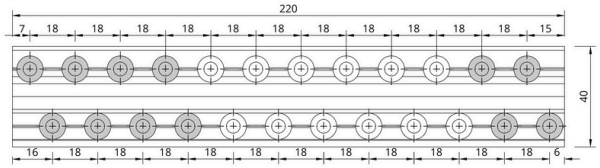
Place the mullion transom connectors as described.

The load-bearing capacity and suitability must be statically verified on site.

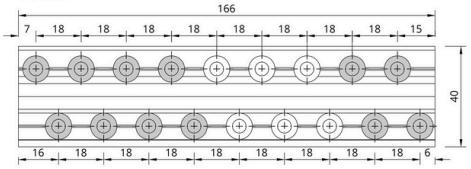
2.2 Mullion-transom connection types

Transom connector types differ from each other in terms of their length and load-bearing capacity. The number of screws varies depending on the connector type and screw connection variant.

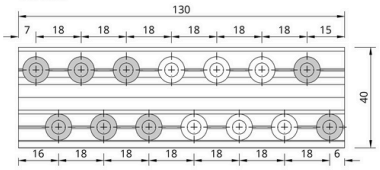
T8220



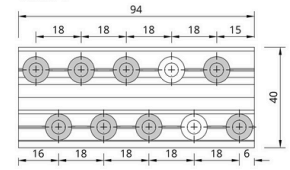
T8166



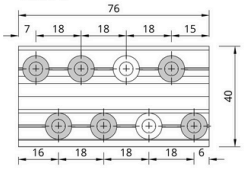
T8130



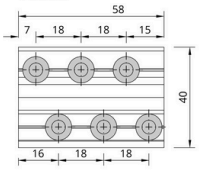
T8094



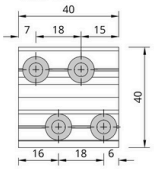
T8076



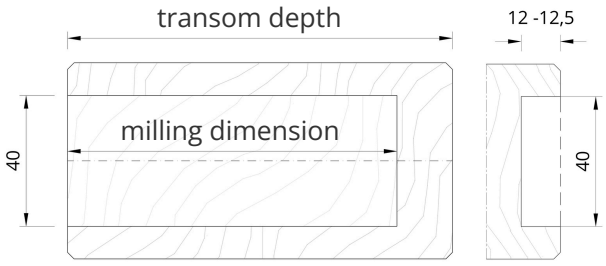
T8058



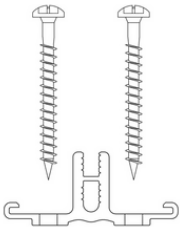
T8040

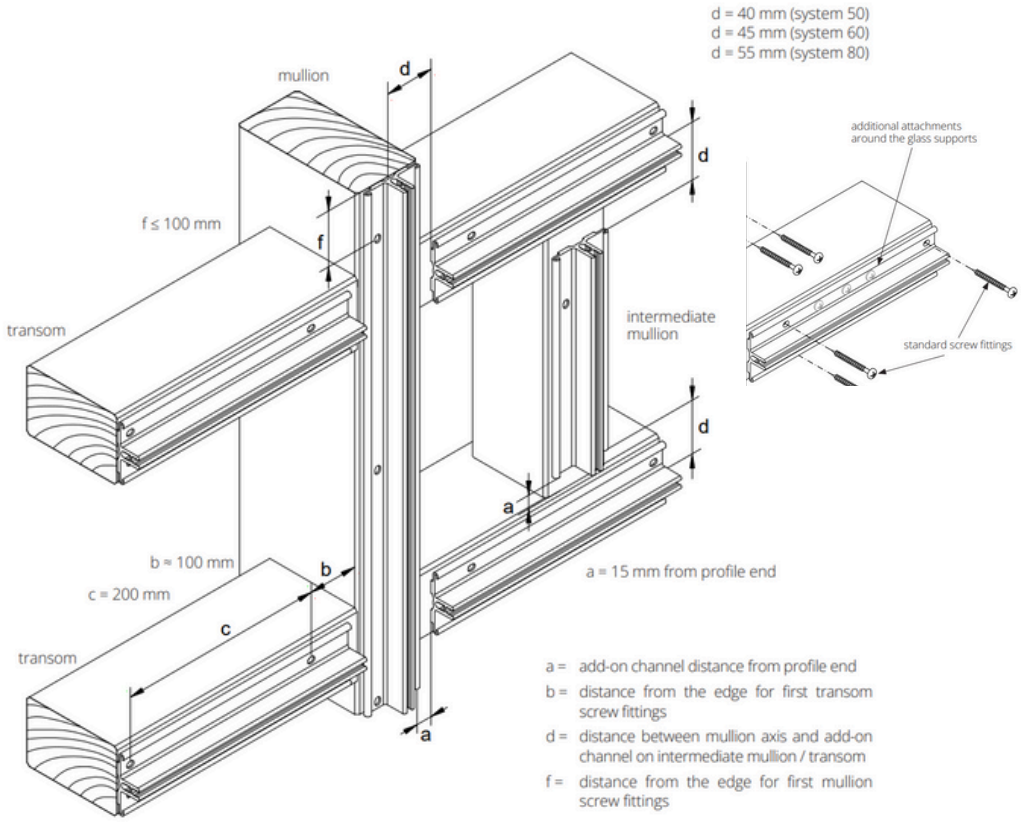


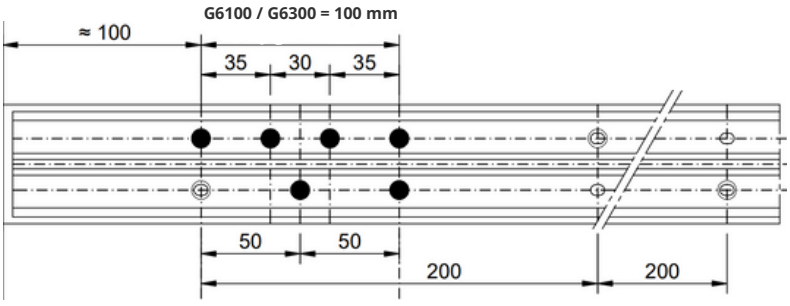
	Transom depth R (mm)	Milling dimension L (mm)
T8040	55-73	46
T8058	74-91	64
T8076	92-109	82
T8094	110-145	100
T8130	146-181	136
T8166	182-235	172
T8220	236-300	226

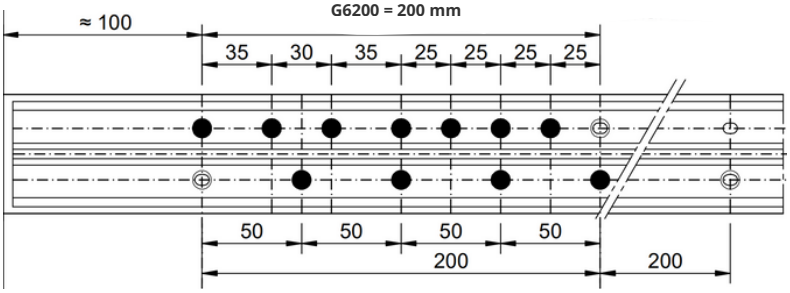


Add-on channel AC5010/AC6010









Installing AC5010/AC6010

- Pre-drill the add-on channel with 5.4 x 7.2 mm slots at 200 mm intervals, starting 50 mm from the edge.
- Fasten the add-on channel to the substructure through these slots. Use AVAVERA system screws.
- Place screws alternately every 200 mm. In pairs if needed.
- Always place a pair of screws at each end of the add-on channel.
- Screw directly into the timber; pre-drilling is usually not required.

Installing AC5010/AC6010 on mullion

- Position the add-on channel centrally on each mullion.
- Start with screw pairs, then offset every 200 mm.
- Run add-on channel continuously along the mullion.
- Match the add-on channel length to the mullion length.
- For intermediate mullions, cut the add-on channel length 15 mm from both sides and place it centrally on the intermediate mullion.
- Ensure that the edge distance of screw fittings is max. 100 mm ($f \leq 100$ mm).

Installing AC5010/AC6010 on transom

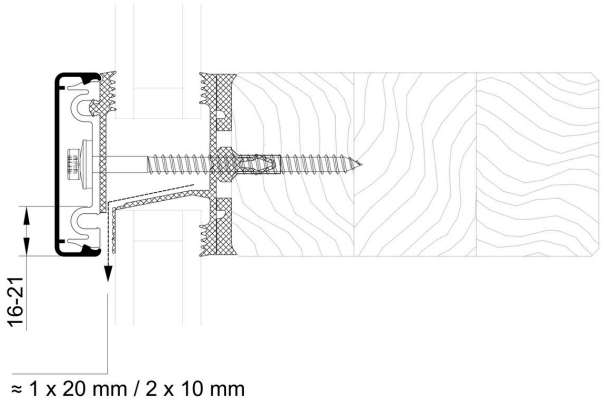
- Position the add-on channel centrally on each transom with a distance of 15 mm from both sides.
- The add-on channel on transoms is interrupted by the mullions.
- Place the first screws approx. 100 mm from the transom end. Avoid collision with T-connectors and glass supports.
- Reinforce the add-on channel around glass supports using additional fixings, depending on the glass support type.

Vapour pressure equalisation in a mullion-transom facade is usually achieved through openings at the base, head and ridge.

The vapour pressure equalisation openings also help remove moisture. The inner gasket allows moisture to drain downwards.

In sloped glazing with 2 drainage levels, the higher transom gasket overlaps the lower mullion/rafter gaskets. The moisture drains outside through the water-bearing level of the structure. Foils are placed under gaskets and kept in place permanently.

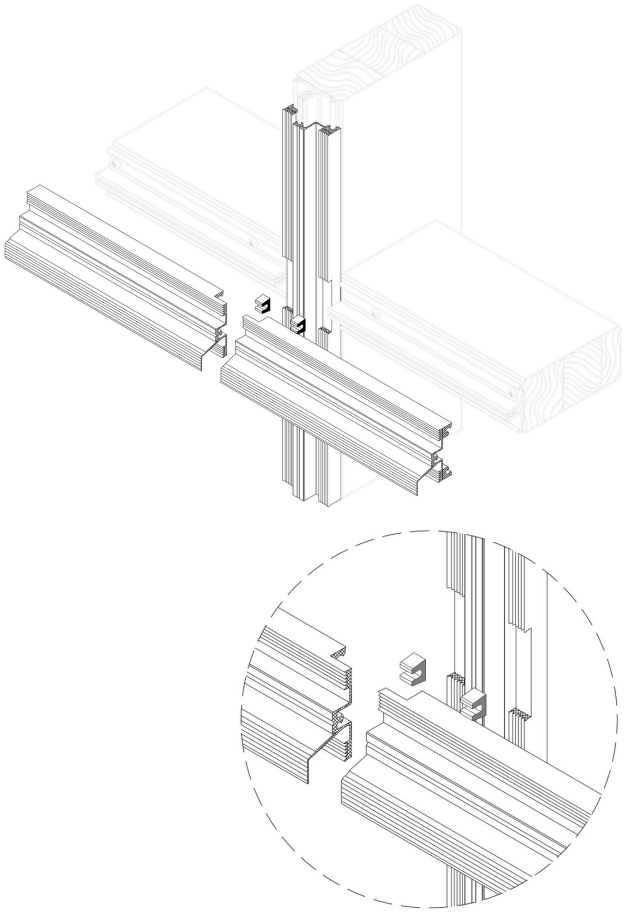
In the AVA C system, higher gasket sections overlap lower ones. Follow the principle down to the bottom of the glazing so that the moisture is effectively guided to the outside. Film is placed beneath the add-on channels and gaskets.



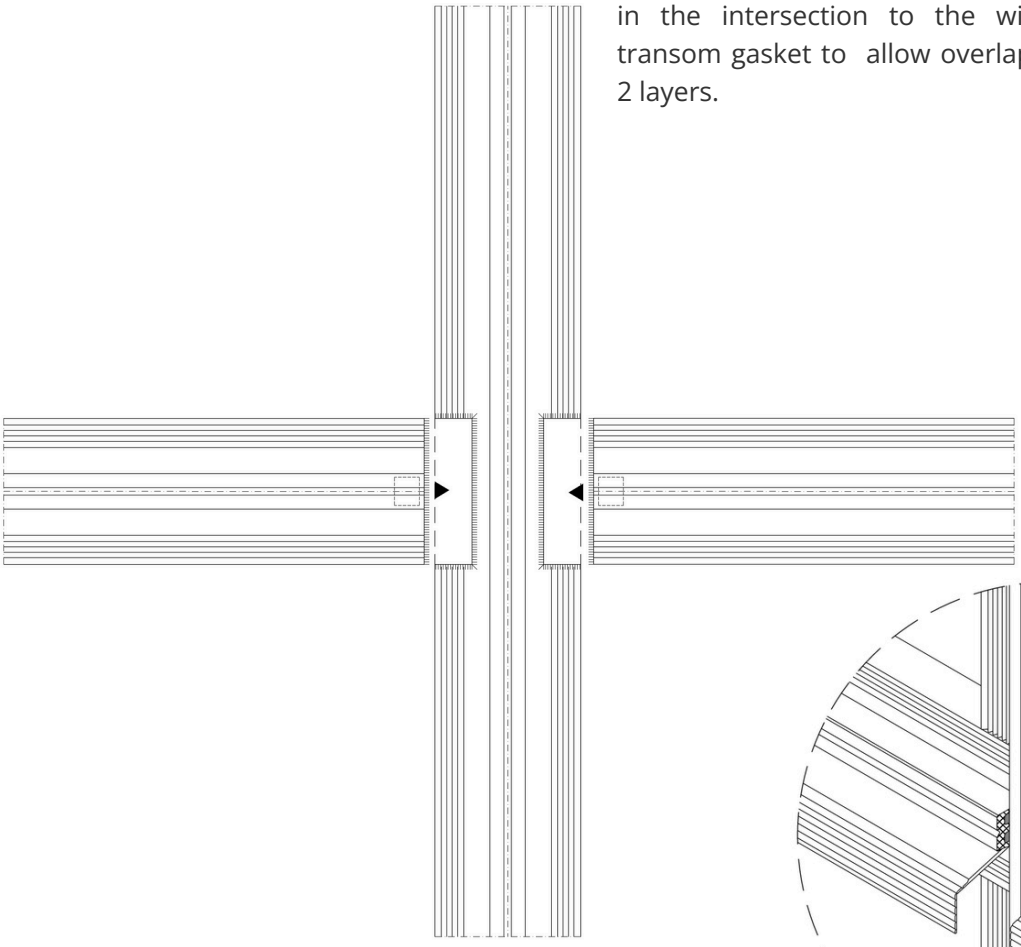
When the transom length is ≥ 2,00 m, notch the lower sealing lips of the outer gasket (opening approx. 20 mm) for additional ventilation.

3.1 Inner gasket installation

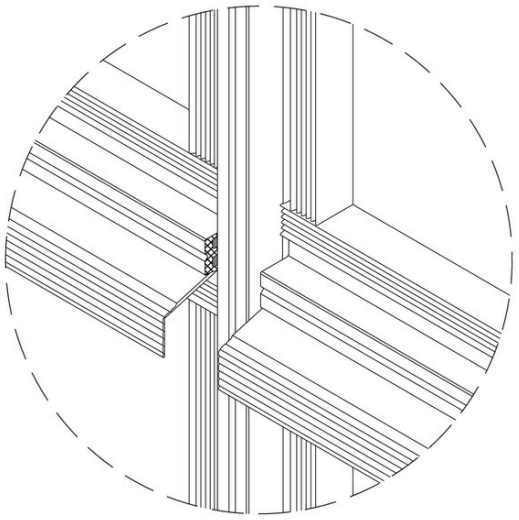
- Mullion gasket length = Mullion length
- Transom gasket length = Transom length + Glass inset
- Lay the vertical mullion gaskets (2nd drainage level) continuously.
- Notch mullion gaskets at transom height to interlock with transom gaskets. For 16.5 mm gaskets, divide across their height if needed.
- Lay the horizontal transom gaskets continuously.
- Overlap transom gaskets into mullion gaskets. Cut off the lower part of the 16.5 mm separable transom gasket in the overlap area.
- Insert sealing pieces D0062 at both ends of the transom gasket before gluing with AVAVERA paste Z0094.
- Remove the protruding transom flap at the perforation after glazing.
- For single glazing up to 18 mm, use transom gaskets without a seal flap.

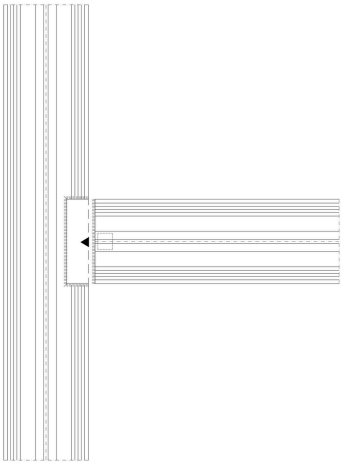


3.1 Inner gasket installation



Cut off the upper level of the mullion gasket in the intersection to the width of the transom gasket to allow overlapping of the 2 layers.

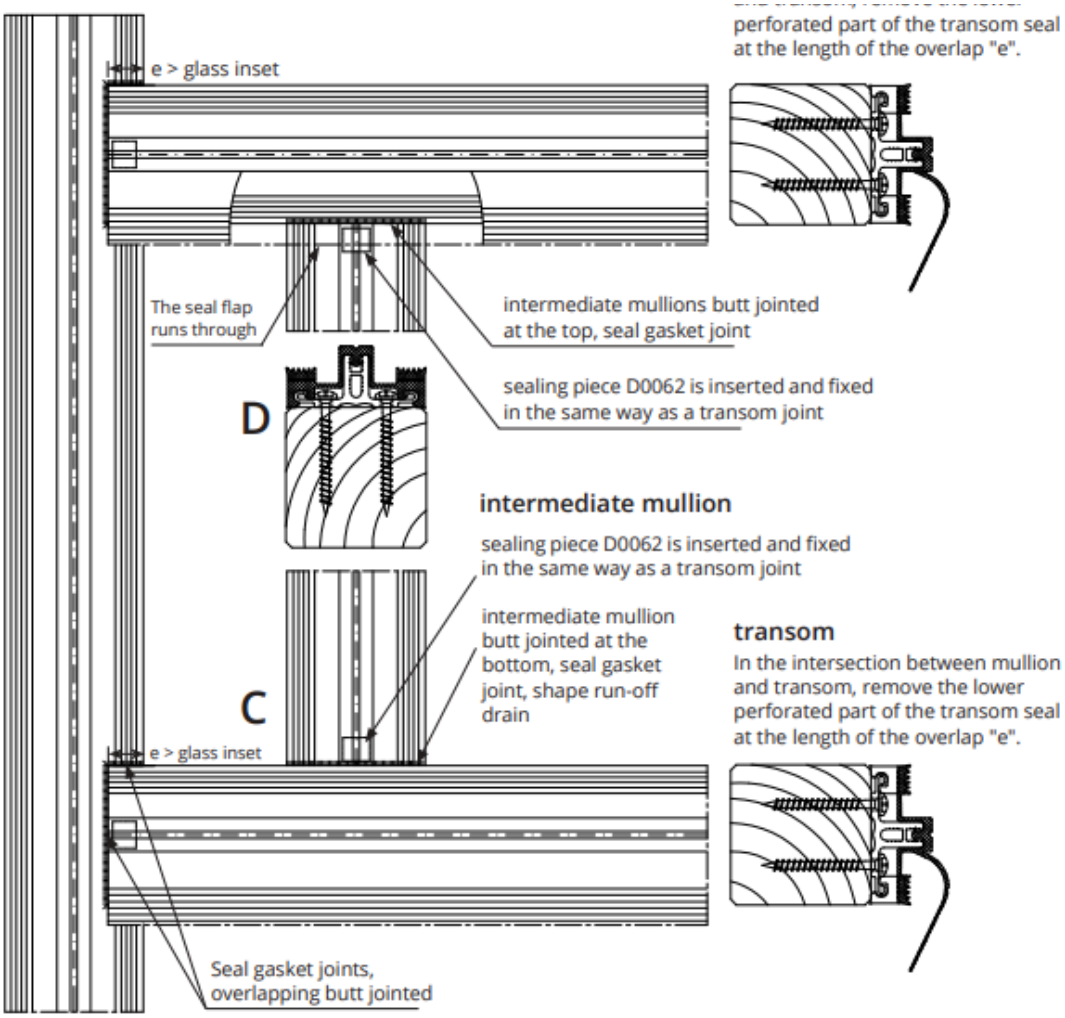




Make sure that the transom flap always covers the inset of the infill elements. Consider the transom width and the glass inset when cutting the transom gasket.

3.2 Inner gasket installation intermediate mullion

- At intermediate mullions, install transom gaskets first.
- Push intermediate mullion gaskets against transom gaskets. Do not cut the upper transom gasket flap, it runs continuously.
- Insert sealing pieces D0062 at both ends of the intermediate mullion gasket. Fix with AVAVERA paste Z0094.
- Form a drain at the lower intermediate mullion rebate´s connection to the transom gasket.
- Use inner gasket D5073/D6073/D8073 for intermediate mullions.



Commonly used:
AVA C50 - 12 mm glass inset
AVA C60 - 15-20 mm glass inset
AVA C80 - 15-20 mm glass inset

Glass supports are chosen based on wood and glass specifications.

Install the glass supports following industry guidelines and the Institute for Window Technology standards.

Glazing blocks must align with the edge bond of insulating glass, be durable and allow vapor pressure equalization and condensate drainage. They must also tolerate minor adjustments.

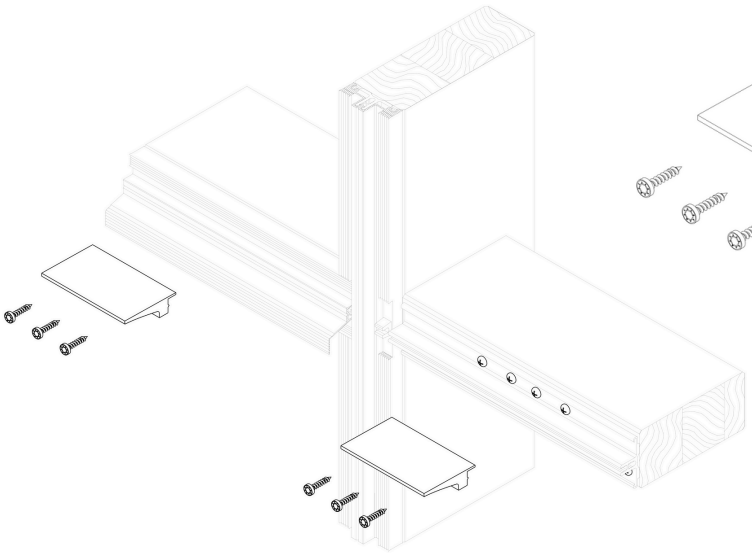
- AVAVERA recommends 100 mm distance from the transom end. Consider the position of mullion-transom connectors.

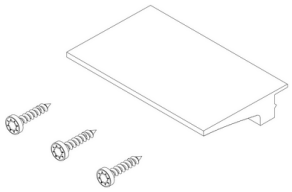
- Fix the glass support to the add-on channel using hole patterns. Cut the add-on channel in half and join the two sides in the middle of the transom. Fasten the add-on channel to the timber structure on both ends.

As mentioned in section 1.4 Add-on channel components

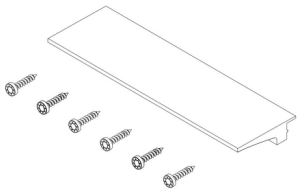
Glass support	Add-on channel attachments around glass supports per glass support
G6100 (101 mm long)	6
G6200 (206 mm long)	11
G6300 (101 mm long)	6

4.1 Installation of glass supports G6100 and G6200

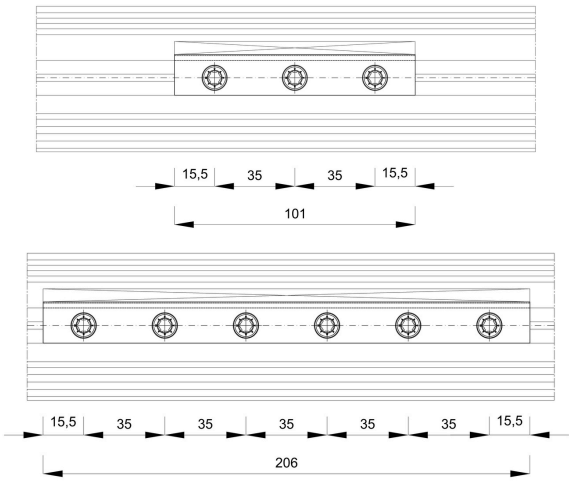


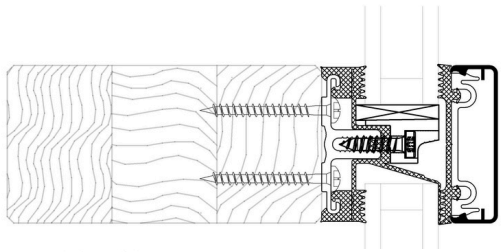


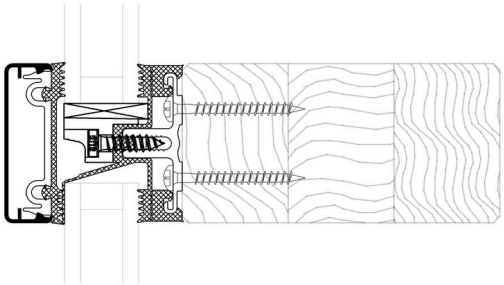
G6100



G6200



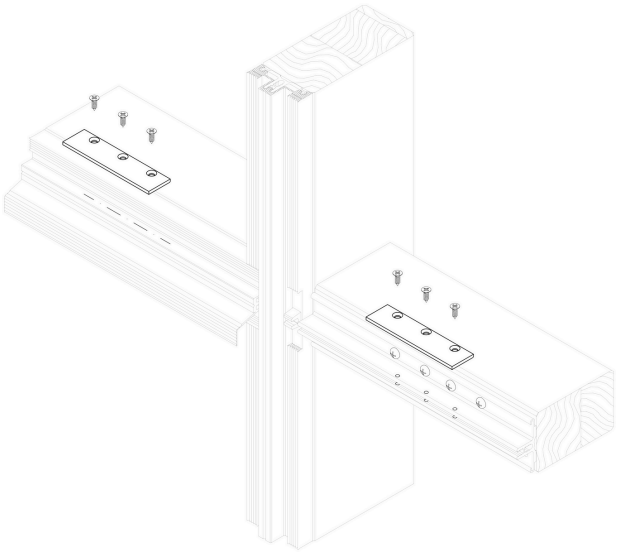


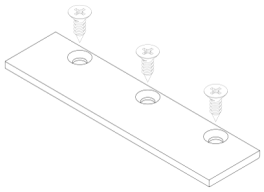


Additional attachments for AC5010/AC6010

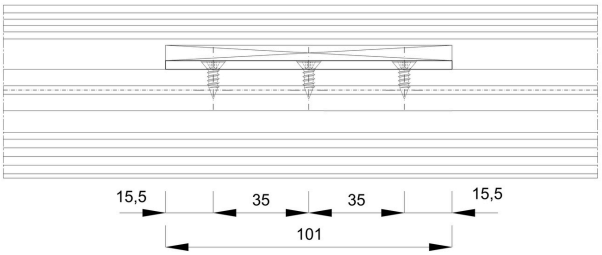
- Fix the add-on channel to the timber structure using AVAVERA system screws S0171/S0172/S0173/S0174.
- Around glass support G6100, install 6 additional S0171/S0172/S0173/S0174 screw fittings.
- Around glass support G6200, install 11 additional S0171/S0172/S0173/S0174 screw fittings.
- Drill additional holes in the add-on channel with a 5.5 mm diameter.

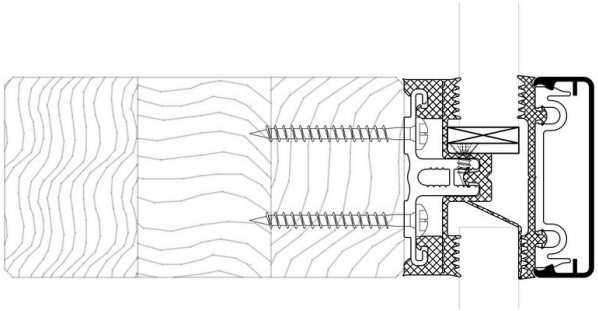
4.2 Installation of glass support G6300

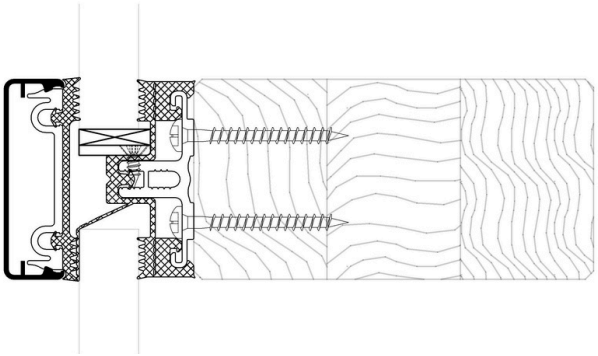




G6300







Additional attachments for AC5010/AC6010

- Fix the add-on channel to the timber structure using AVAVERA system screws S0171/S0172/S0173/S0174.
- Around glass support G6300, install 6 additional S0171/S0172/S0173/S0174 screw fittings.
- Drill additional holes in the add-on channel with a 5.5 mm diameter.

Additional holes in the add-on channel bars

- Pre-drill the add-on channel at a distance of 4.5 mm from the edge and with a diameter of d = 3.5 mm.
- Fix the glass support G6300 onto the add-on channel using 3 AVAVERA system screws S0193. Before installation, apply AVAVERA paste Z0094 around each screw fitting.

4.3 Installation of outer gaskets

Outer sealing
- holds the glass in place
- protects the rebate from moisture

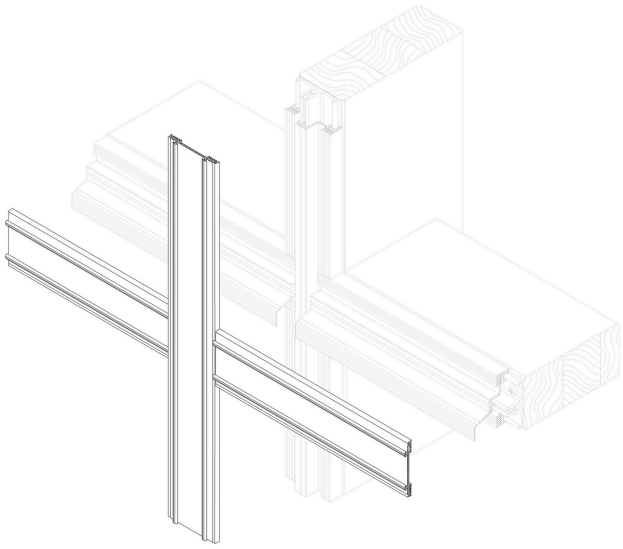
Ensure that the outer gasket level is tight, apart from the openings for vapor pressure equalization and condensate drainage.

Sealing lips of different heights on the outer gasket compensate for the height difference caused by the transom flap.

Split gaskets of different heights balance filling elements up to 6 mm.

- Install the gaskets flush with a slight oversize, considering the system situation.

- Cut the transom flap at the tear-off grooves to match the glass thickness so that it is concealed under the outer gasket.



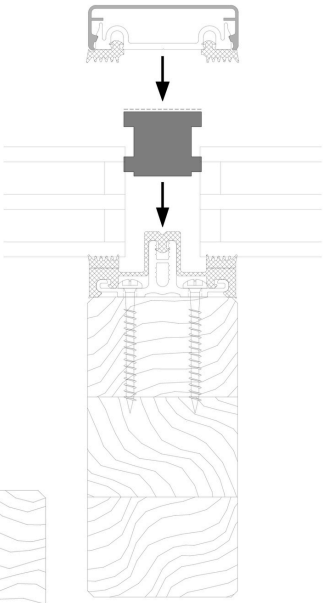
mullion outer gasket continuous
transom outer gasket butted

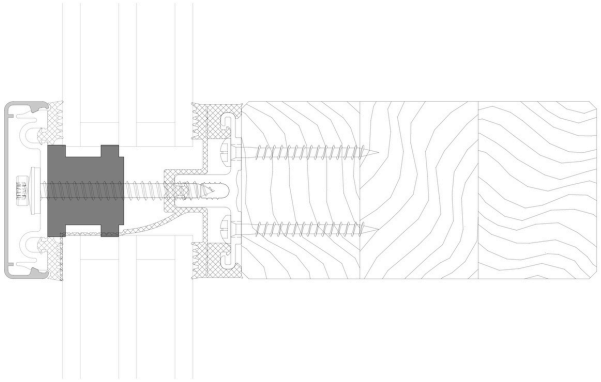
Using slab insulation

Insulation blocks come with a permanent HOTMELT adhesive.

Glue the block directly to the pressure plate or place it in the rebate space and press into position.

Always use 2-piece outer gaskets with slab insulation blocks.





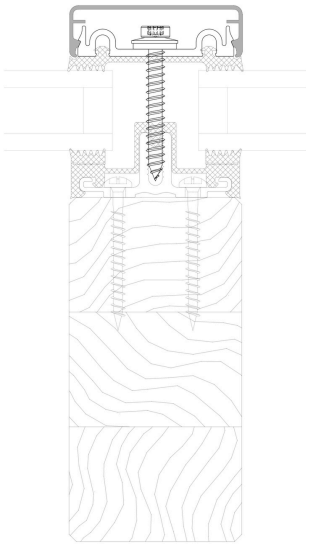
Insulation block	Width (rebate)	Height (insulation block)	Glass thickness
AVA C 50 mm			
Z2026	26 mm	26 mm	≥ 32 mm
Z2042	26 mm	42 mm	≥ 48 mm
AVA C 60 mm			
Z3026	30 mm	26 mm	≥ 32 mm
Z3042	30 mm	42 mm	≥ 48 mm
AVA C 80 mm			
2 x Z2026	40 mm	26 mm	≥ 32 mm
2 x Z2042	40 mm	42 mm	≥ 48 mm

4.4 Installation of pressure plates and cover plates

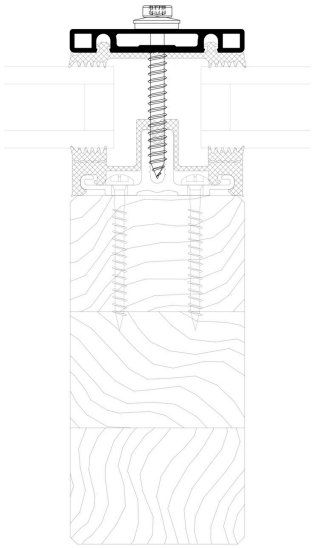
- Fix the pressure plates to the add-on channel using AVAVERA stainless steel system screws, meeting DIN EN 10088 standards. The screw connection type determines the use of 4 mm high vulcanized EPDM sealing washers. Also available - individual washers with 2 or 4 mm EPDM / plastic (PA) washer: Ø10 mm, 1.5 mm thick.
- Distance the screws max. a = 250 mm
- Mullions first screw ≤ 100 mm from end
- Transoms first screw 50–130 mm from end
- Minimum screw-in depth = 12.5 mm
- Maximum screw-in depth = 17 mm

The clamp connection only experiences tensile stress. The allowed tensile force is determined by the general building approval Z-14.XXXX. Crash-proof glazing is allowed to be demonstrated according to DIN 18008.

- Use a standard electric screwdriver with a depth stop for the screw connection. Set the depth to compress the gasket by 1,5 - 1,8 mm.



concealed screw connection

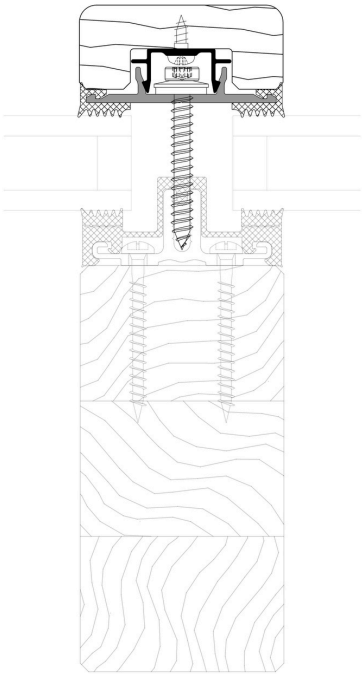


visible screw connection

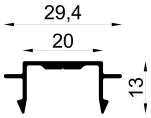
4.4 Installation of pressure plates and cover plates

Wooden cover plates

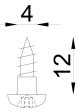
- Screw the pressure plate with two-piece outer gasket D1908 to the system.
- Attach the cover plate C1908 (80 mm long) app. every 300 mm along the centre of the wooden cover plate using 3 screws. Timber and screws are provided by the customer.
- Clip it onto the pressure plate.
- Make sure the fixing screws are offset. So that they do not collide with the pressure plate system screws.
- Additional fastening may be needed over time due to the natural properties of wood.



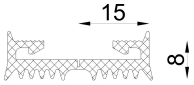
C1908



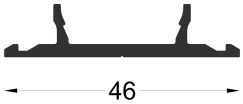
provided by the customer



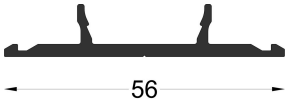
D1908



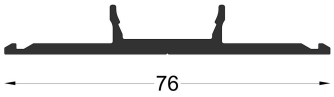
U5003

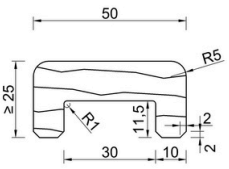


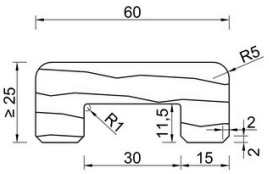
U6003

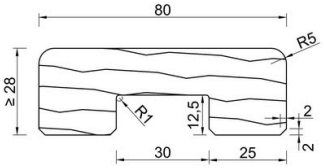


U8003

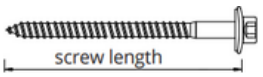








4.5 Calculation of screw length



	System width 50 / 60 mm		System width 80 mm		
	S0014	3 mm	S0014	3 mm	
	S0011 (*)	1,5 mm	S0011 (*)	1,5 mm	
	P6059 (*)	(2,5) 8 mm			〉 mm
	P6067 (*)	(1,5) 6 mm			
	U5009 / U6009	2,5 mm	U8009	3,5 mm	
	U5003 / U6003	2,5 mm	U8003	3,5 mm	
					+
	D5050		D8050	5 mm	
	D6050	5 mm			
	D6054				
	D1925	5 mm	D1925	5 mm	〉 mm
	D1928		D1928		
	D1934	4 mm	D1936	6 mm	
	D1938	8 mm	D1940	10 mm	+
	D1908	4 mm	D1908	4 mm	
	Glass thickness				〉 mm
					+
	Inner gasket | height 16,5 mm				〉 11 mm
					=

screw length in mm

(round down the result to the next five-part division)

(*) Use PA washers for visibly countersunk screw connections.
The mm specifications in () are decisive for calculating the screw length.

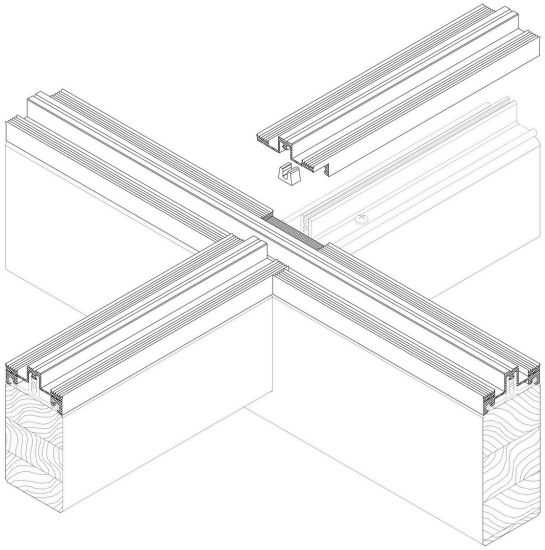
5.1 Installation of inner gaskets

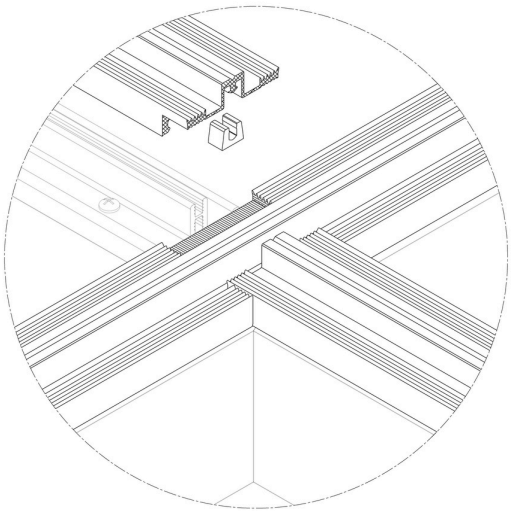
For roof glazing, a special gasket design allows drainage in 2 levels, with 16.5 mm high gaskets laid overlapping.

Transom gaskets are designed to create a condensate channel that drains into the rafters at the overlap.

Avoid using intermediate mullions in glazed roofs.

- Divide the height of 16.5 mm high gaskets to allow easy overlap at critical transom joints.
- Lay the mullion gaskets the same way as vertical glazing.
- Clip transom gaskets into the add-on channel.
- Cut and attach the same way as vertical glazing.

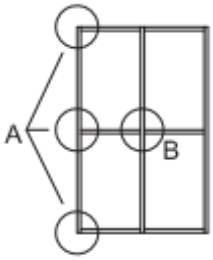


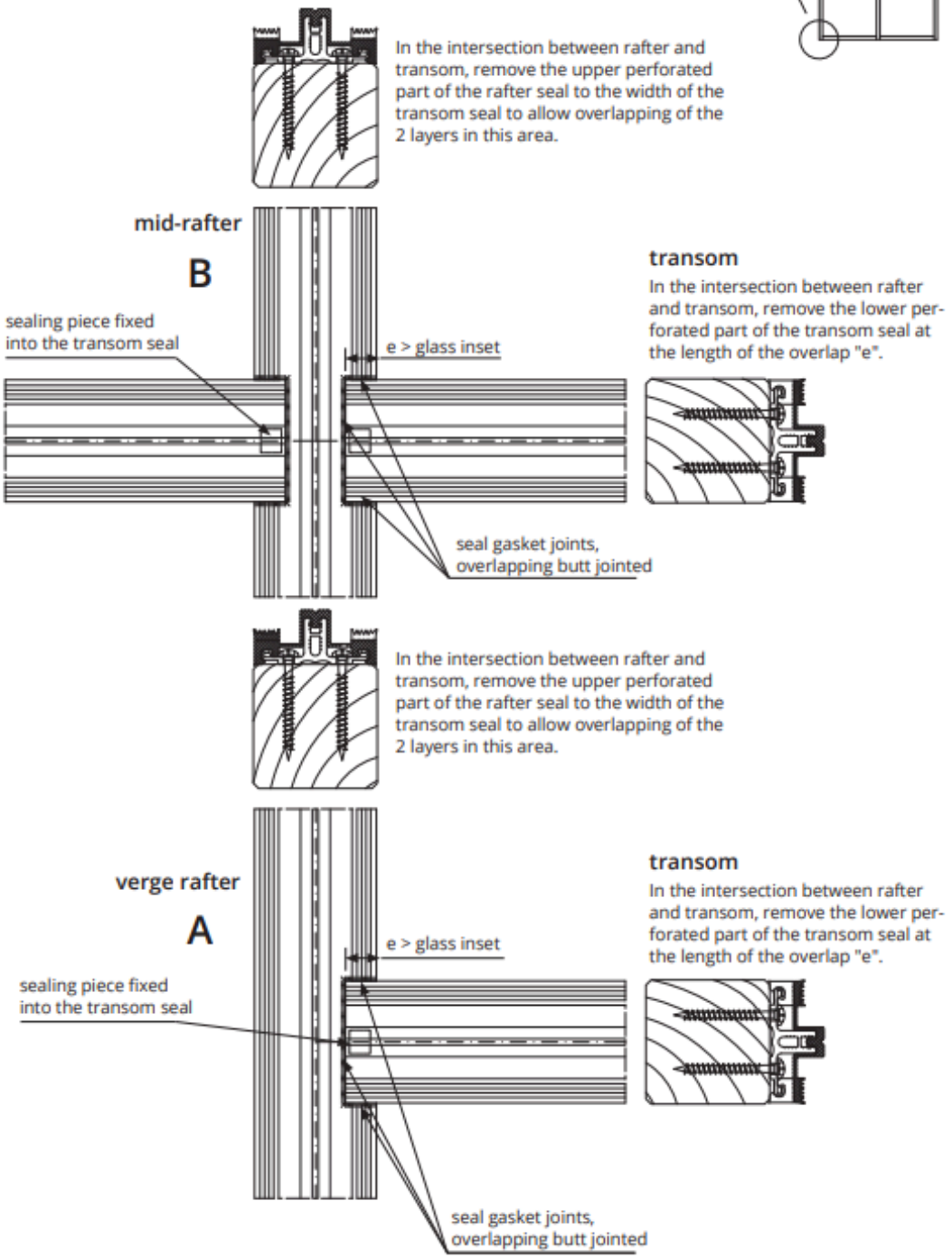


5.1 Installation of inner gaskets

Assembly of the inner seal in roof glazing - rafters/transoms

Completed glued joints, intermediate mullion and edge mullion





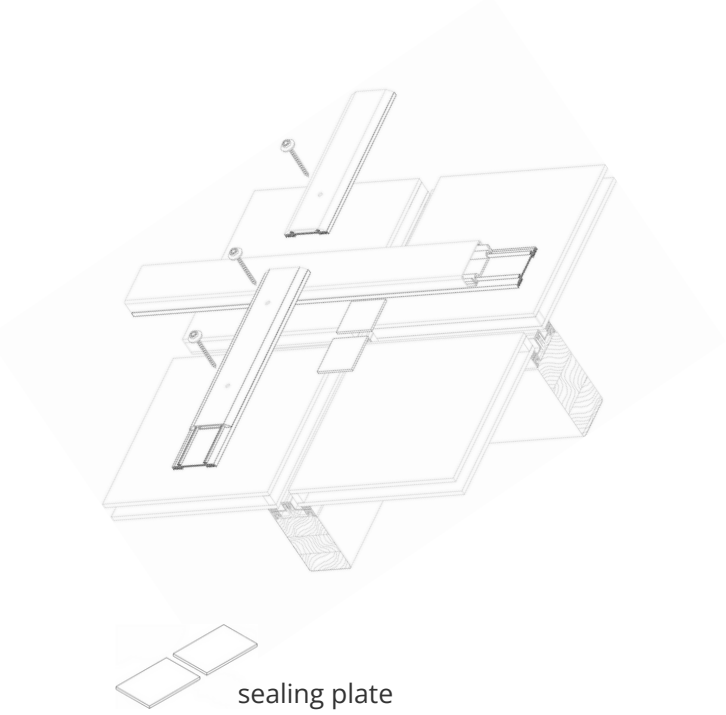
5.2 Installation of outer gaskets EPDM

Vertical glazing installation principle applies.

- Do not use split gaskets for transom sealing in the roof. Use split gaskets in rafters only with an insulation block. Check for tightness.
- Install self-adhesive sealing plates for the cross joints. Glue these plates to the glass edge parallel to the mullion axis.
- Do not use butyl tape between glass and outer gaskets.
- Lay rafter gaskets continuously and join transom gaskets at connections.
- Install gasket joints flat, with slight oversize.

Note

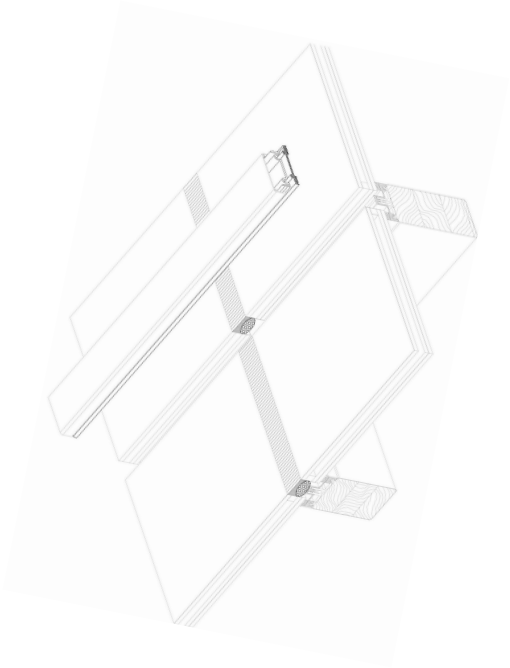
- Horizontal pressure plates block rainwater and dirt flow.
- Use cover plates and pressure plates with sloping edges to reduce water build-up in front of the aluminium profile.
- Shorten the cover plates and pressure plates of the transoms by 5 mm in the joint area for better drainage.
- Fit gasket joints flat with a slight oversize.
- Seal the open ends of the transom aluminium profiles.



sealing plate

- Glue the sealing plates in the centre of the transom axis.
- For 15 mm glass insets, start the first transom pressure plate screw 50 mm from the profile end.

5.3 Installation of outer gaskets silicone



Vertical glazing installation principle applies.

The outer gasket in the rafter area is designed like a standard roof with a slope up to 15°.

- Use split gaskets in rafters only with an insulation block. Check for tightness.
- In roofs with a ≥ 2° slope, avoid pressure plates in the transoms for proper drainage. Seal the rebate spaces with weatherproof silicone.
- Use only tested sealants for transom rebates.
- Install an outer sealing level with pressure profiles at the high point or ridge area of the sloped glazing.

Note

Consider the expansion factor of aluminium profiles in the roof area due to high heat absorption.

Use single-piece pressure plates with caution. If used, drill Ø 9 mm holes for screws.

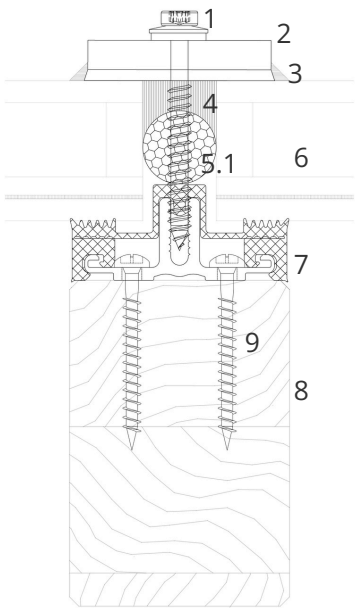
For larger spans and rafters, use concealed screw connections for pressure plates. Seal unused holes.

In roof areas where materials with different expansion coefficients meet, like eaves, install aluminium sheets with expansion joints to prevent cracking.

5.3 Installation of outer gaskets silicone

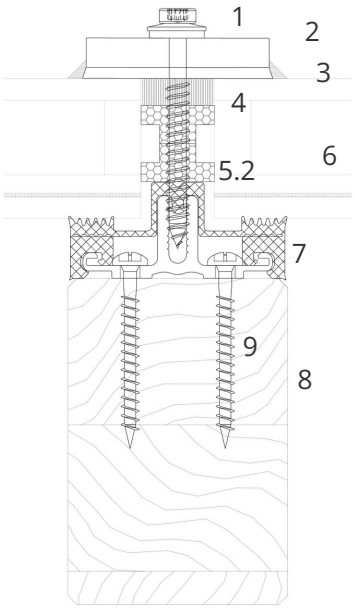
- Use highly elastic, weatherproof, UV-resistant sealants for a reliable joint. See UV resistance details with the manufacturer. Silicone sealants are the best for UV resistance, polysulphide are ideal for volatile argon fillings.
- If silicone joint has no additional mechanical fastening, support the glass at certain points with hold-down clamps.
- The hold-down clamps are stainless steel with silicone washers, screwed like pressure plates. Seal them with silicone sealant. Design depends on glass dimensions.

Transom sloped glazing ≥ 2° inclination with weatherproof silicone and round section rope seal



1 hold-down clamp
2 silicone washer
3 silicone sealant / seal around the clamp
4 weatherproof silicone seal
5.1 round section rope seal

Transom sloped glazing ≥ 2° inclination with weatherproof silicone and slab insulation

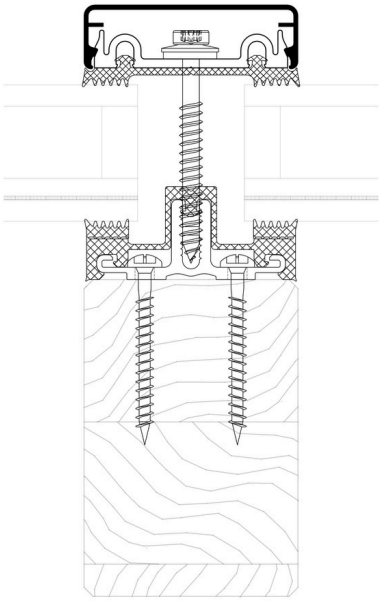


5.2 slab insulation
6 glass / filling element
7 inner gasket 10 mm transom
8 timber profile
9 system screw fittings

5.3 Installation of outer gaskets silicone

- Use PE round cords or AVAVERA slab insulation blocks as backfill material.
- Apply silicone sealant before placing rafter gaskets and pressure plates/cover plates.
- Once the silicone cures, seal and screw in the rafters.
- Seal the mullion-transom joints.
- Ensure that the transom area joint is fully cured before applying the second layer.

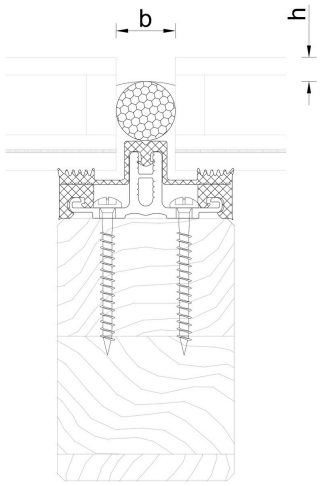
Rafter with pressure plate



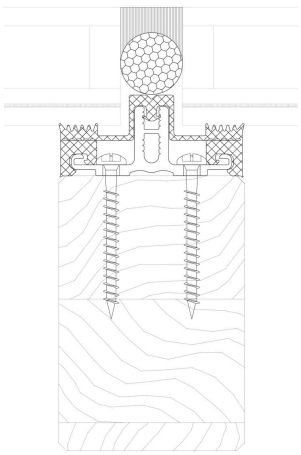
5.3 Installation of outer gaskets silicone

Joint design width x height = 20 mm x 10 mm

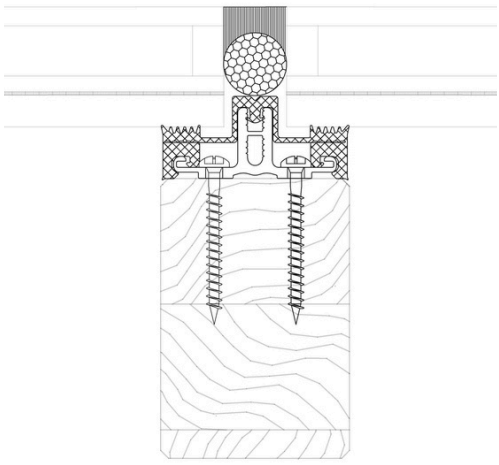
b : h = 2 : 1- 3.5 : 1
Check and adjust if needed.



Transom with weatherproof silicone seal + round section rope seal

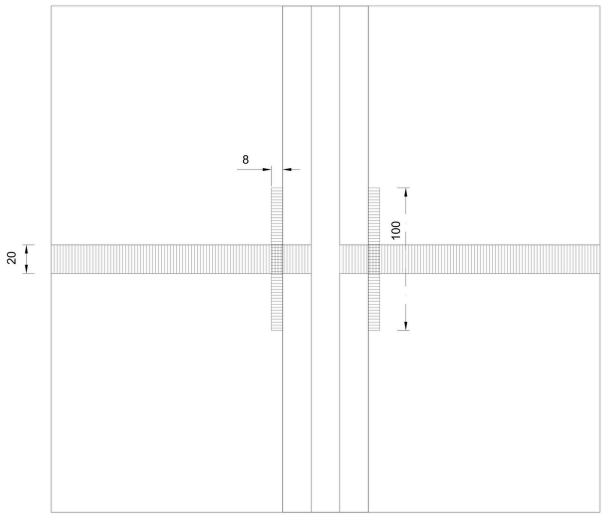


Transom with weatherproof silicone and round section rope seal



5.3 Installation of outer gaskets silicone

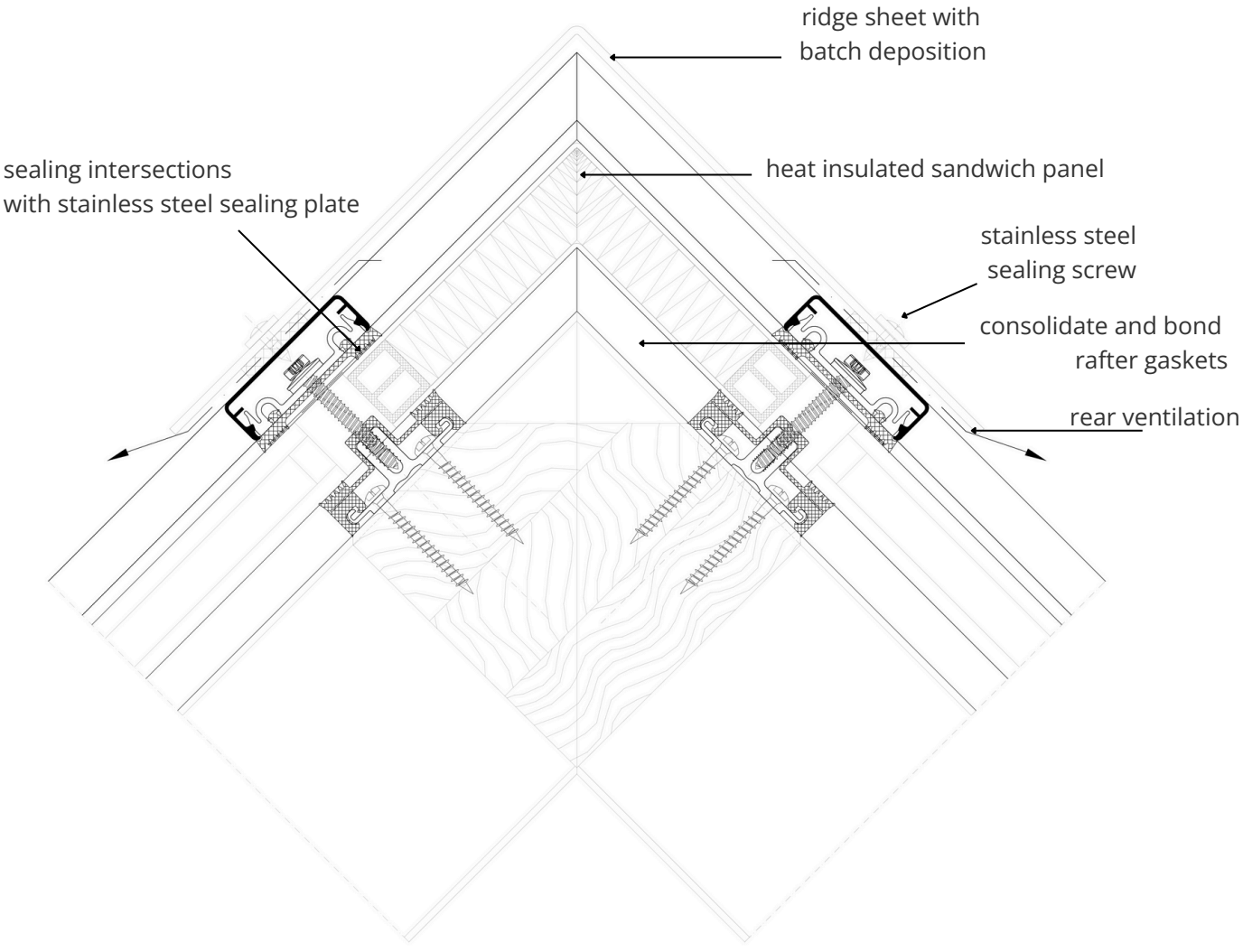
- Check silicone sealant and contact surfaces for compatibility.
- Clean the surfaces according to manufacturer instructions.
- Fill the joints only with non-water absorbent, closed-cell PE profiles to avoid damage to the edge seal.
- Ensure that the glazing rebate allows for vapour pressure equalisation and drainage.
- Prime metal components according to manufacturer instructions.
- Seal joints without leaving cavities. Mask nearby components if needed.
- Smooth the joints using conventional tools. Remove adhesive tape.
- When using multiple reactive sealants, allow the first to fully cure before applying the next.



Ridge design

Ensure that the rafter clamping and strips are pulled under the ridge cap.

Glazing at an angle of 10° from vertical position must conform to a glass structure for overhead glazing.



Eaves with glass roof connection
Design with stepped glazing

The construction design varies based on transom, rain gutter option, and choice of stepped glass or pressure plate. Guarantee proper drainage of condensation and moisture at the eaves.

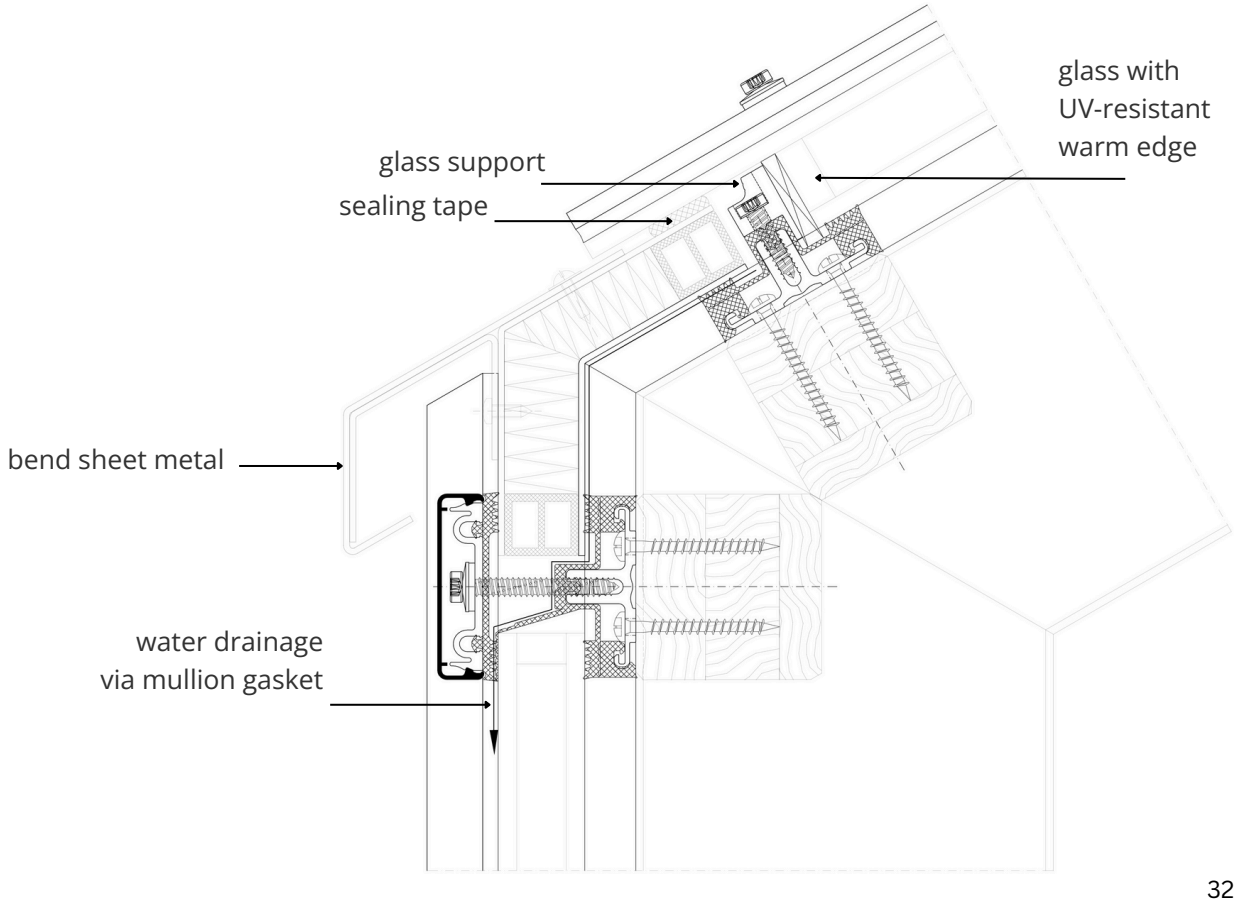
Use UV-resistant edge seal for stepped glazing. Silicone-based seals may need extra sealing around the edges.

Thermal calculations indicate a slight shift in the isotherms on stepped glass panes compared to covered glass edges.

Stepped glass panes must be statically designed based on their reduced wind suction resistance.

Use toughened glass (TVG, ESG) for the outer stepped glass pane to handle extra thermal loads.

For shallow roof pitches, use stepped glass panes to ensure free water flow at the eaves.

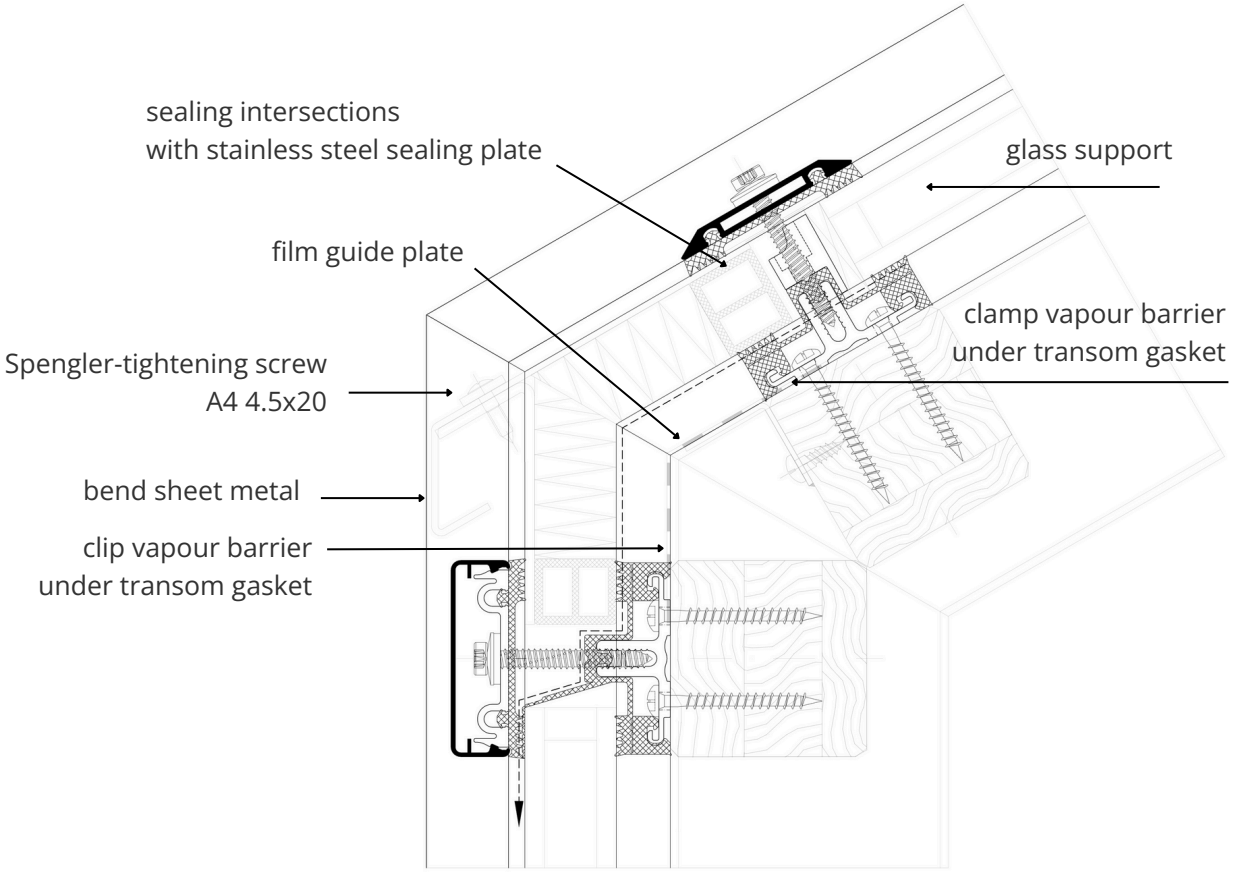


Eaves with glass roof connection
Design with cover plates

- Ensure precise outer sealing on the glass roof.
- Combine stainless steel sealing plates with a four-sided pressure plate cover for high safety.
- Ensure inner sealing allows reliable condensate drainage.
- Shorten transom pressure plates by 5 mm at transom ends for water drainage and heat expansion.
- Fit gasket joints flat with a slight oversize.
- Seal the open ends of the transom cover plates.

Note:

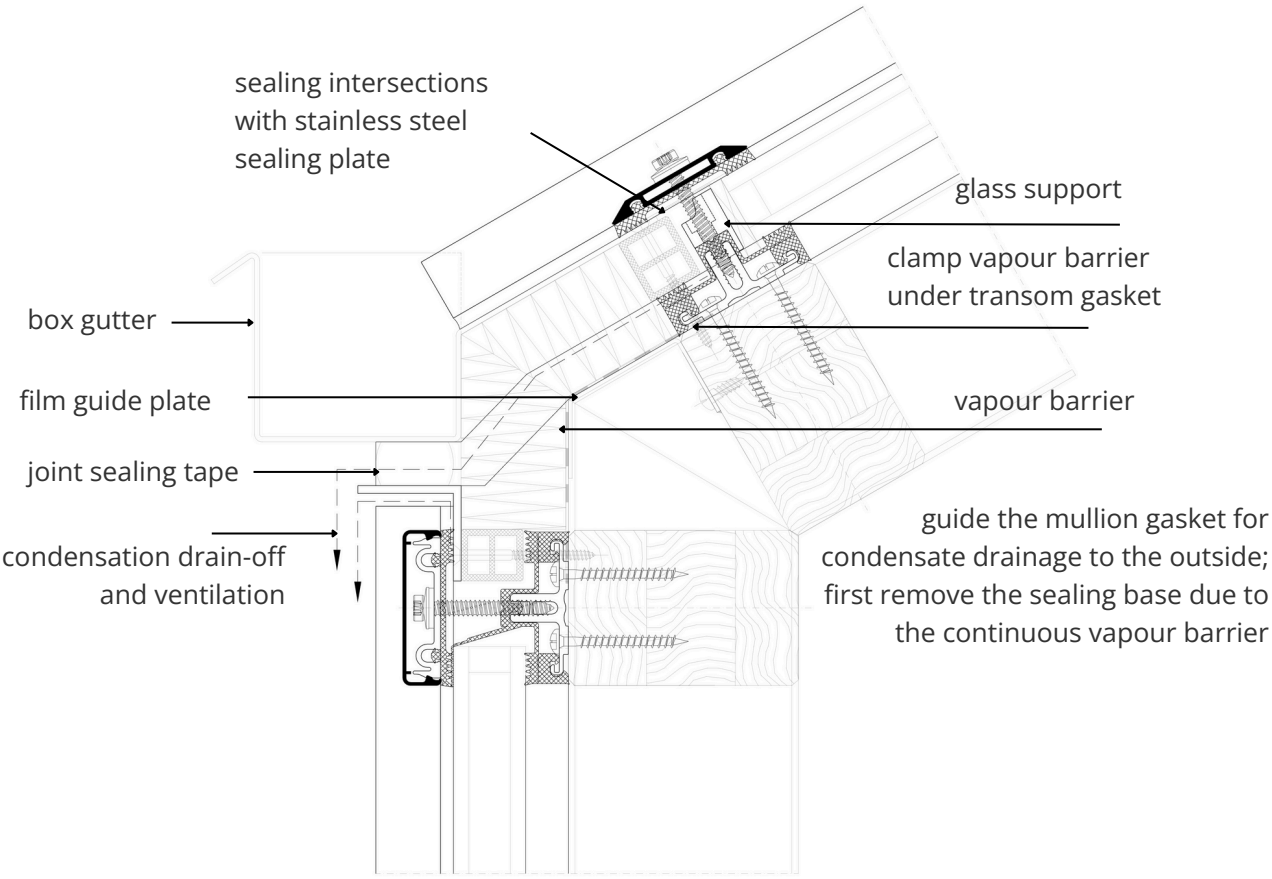
For longer system lengths and rafters, use pressure plates with concealed screw connections to reduce thermal stress. Seal any unused holes.



Eaves with glass roof connection
Design with gutter

The rain gutter must be load-bearing and capable to prevent deformation from its weight, water or ice which could apply direct load on the glazing.

The vapor barrier over the foil baffle plate drains condensation, in addition to the gutter-shaped rafter gasket which directs water outside.



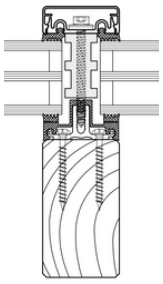
According to Building Energy Act (GEG) and DIN 4108, facades must meet minimum thermal insulation standards to ensure:

- a healthy indoor climate for residents
- protection of the building from climate-related moisture damage
- reduced energy use for heating and cooling
- lower costs and improved climate protection

Better insulation reduces the energy consumption and lowers environmental impact of pollutants and CO2.

AVAVERA timber facades offer excellent Uf values.

Uf values according to DIN EN 10077-2



AVA C 50
glass inset 15 mm

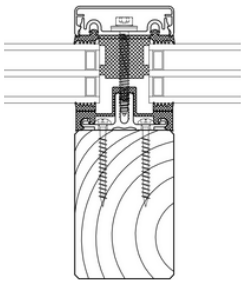
values without screw influence*

16,5 mm inner gasket

Glass thickness (mm)	Uf (W/m2 ·K) with insulator D1934		Uf (W/m2 ·K) without insulator D5050	Uf (W/m2 ·K) without insulator D1934
24	(Z2010)	1,381	2,230	1,805
26	(Z2010)	1,386	2,181	1,758
28	(Z2010)	1,362	2,129	1,705
30	(Z2026)	1,342	2,082	1,658
32	(Z2026)	1,010	2,045	1,626
34	(Z2026)	1,008	2,012	1,590
36	(Z2026)	0,991	1,979	1,559
38	(Z2042)	0,976	1,951	1,534
40	(Z2042)	0,957	1,918	1,503
44	(Z2042)	0,935	1,870	1,458
48	(Z2042)	0,690	1,836	1,421
52	(Z2042)	0,690	1,803	1,391
56	(Z2042)	0,675	1,774	1,363

* screw influence per piece 0.0023 W/K, for system 50 mm and screw spacing 250 mm
= + 0.15 W/(m2-K) screw influence according to Ebök (12.2008)

Uf values according to DIN EN 10077-2



AVA C 60
glass inset 15 mm

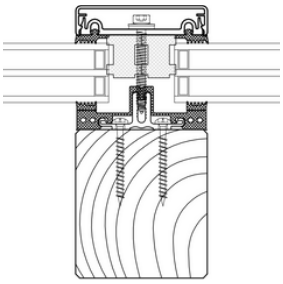
values without screw influence*

16,5 mm inner gasket

Glass thickness (mm)	Uf (W/m2 ·K) with insulator D1934		Uf (W/m2 ·K) without insulator D6050	Uf (W/m2 ·K) without insulator D1934
24	(Z3026)	1,314	2,151	1,712
26	(Z3026)	1,287	2,103	1,665
28	(Z3026)	1,257	2,051	1,617
30	(Z3026)	1,003	2,007	1,573
32	(Z3026)	0,962	1,973	1,542
34	(Z3026)	0,958	1,938	1,582
36	(Z3026)	0,941	1,908	1,548
38	(Z3042)	0,926	1,880	1,516
40	(Z3042)	0,909	1,850	1,483
44	(Z3042)	0,886	1,803	1,432
48	(Z3042)	0,674	1,765	1,390
52	(Z3042)	0,663	1,734	1,356
56	(Z3042)	0,648	1,705	1,324

* screw influence per piece 0.0023 W/K, for system 60 mm and screw spacing 250 mm
= + 0.15 W/(m2-K) screw influence according to Ebök (12.2008)

Uf values according to DIN EN 10077-2



AVA C 80
glass inset 20 mm

values without screw influence*

16,5 mm inner gasket

Glass thickness (mm)	Uf (W/m2 ·K) with insulator D1934		Uf (W/m2 ·K) without insulator D8050	Uf (W/m2 ·K) without insulator D1934
24	(Z2026)	1,188	1,886	1,537
26	(Z2026)	1,161	1,849	1,503
28	(Z2026)	1,128	1,810	1,464
30	(Z2026)	0,916	1,774	1,429
32	(Z2026)	0,886	1,749	1,405
34	(Z2026)	0,883	1,722	1,374
36	(Z2026)	0,871	1,698	1,354
38	(Z2042)	0,857	1,673	1,331
40	(Z2042)	0,842	1,651	1,306
44	(Z2042)	0,817	1,611	1,272
48	(Z2042)	0,632	1,582	1,234
52	(Z2042)	0,626	1,547	1,214
56	(Z2042)	0,612	1,529	1,185

* screw influence per piece 0.0023 W/K, for system 80 mm and screw spacing 250 mm
= + 0.11 W/(m2-K) screw influence according to Ebök (12.2008)