

WINDOWX

TECHNICAL MAP

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DISCLAIMER

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Patent is pending on the WINDOX®-system.

Disclaimer ALULOG NV - WINDOX® Construction Details & Installation Instructions

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ALULOG NV reserves the right to change any information used in any documents without prior notice.

All references to and illustrations of NON-ALULOG components (window and door joinery, installation structure, insulation, structures by third parties, etc. ...) that appear in the construction details of ALULOG NV are purely indicative. Always verify with the specific producer or supplier.

Construction drawings using specific fasteners or NON-ALULOG NV accessories / tools may require specific tools and knowledge thereof. The construction supervisor/installer is required to gather the relevant correct information and apply the correct working method.

All bore holes, screw holes and other machining operations of any kind relating in one way or another to NON-ALULOG NV parts must always be verified with the producer/supplier in order to guarantee the permanent and proper functioning of those components.

Some constructions require specific stability calculations (NON-ALULOG) which have to be checked/calculated by the construction supervisor/installer.

All constructions are subject to local legislation, rules and standards.

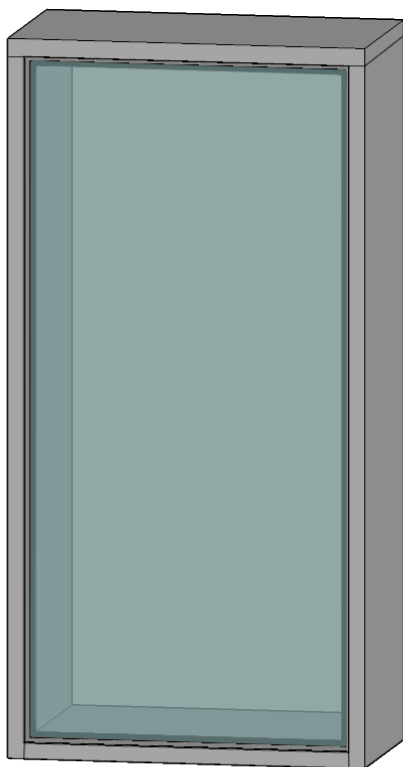


OVERVIEW

TYPES

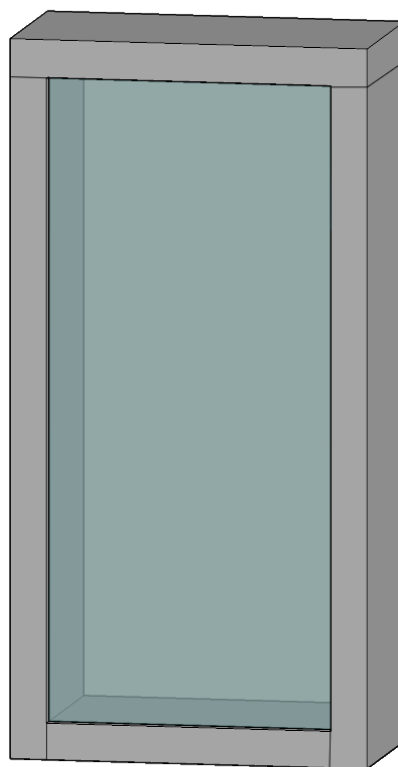
TYPE 1

FIXED WITH STRUCTURAL EXTERIOR GLAZING



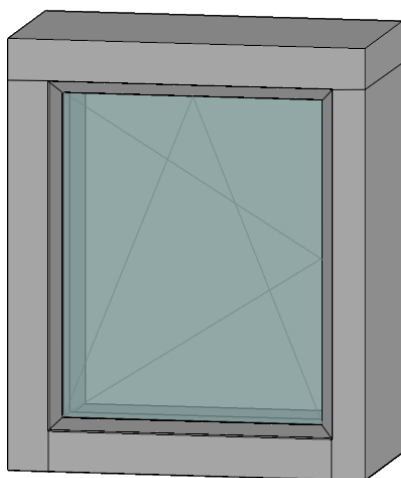
TYPE 2

FIXED WITH STANDARD INTERIOR GLAZING



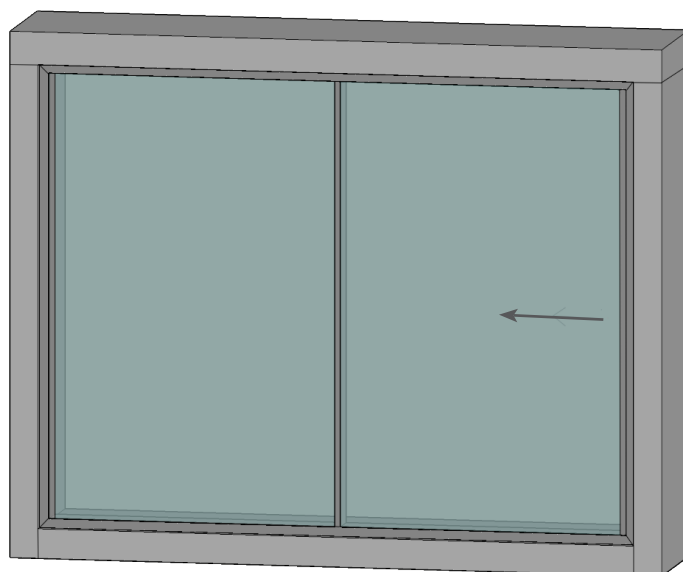
TYPE 3

TURN & TILT



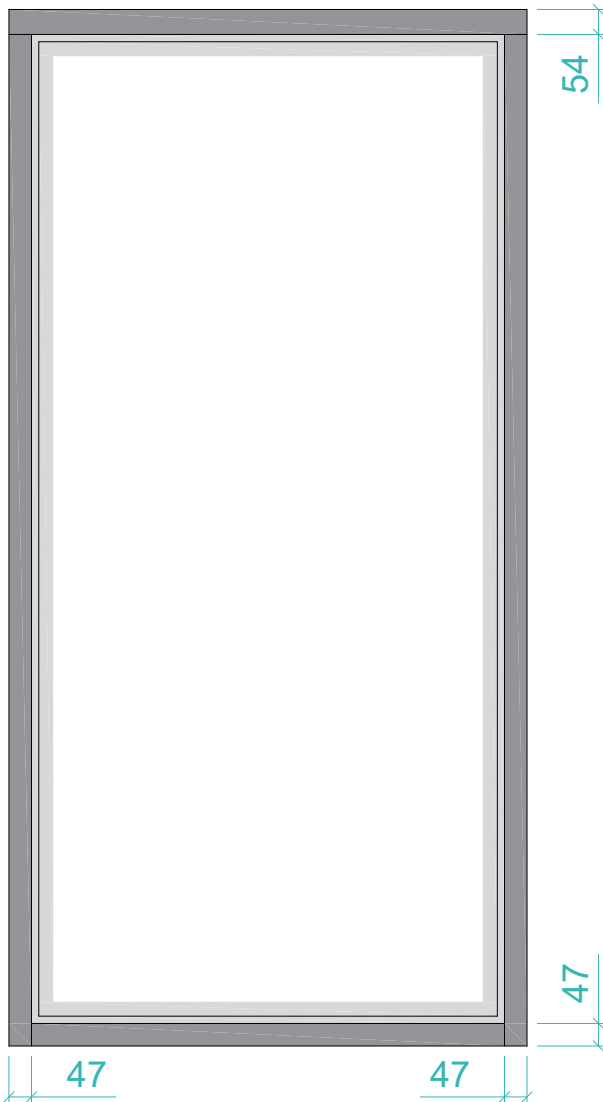
TYPE 4

MINIMALISTIC SLIDING WINDOW

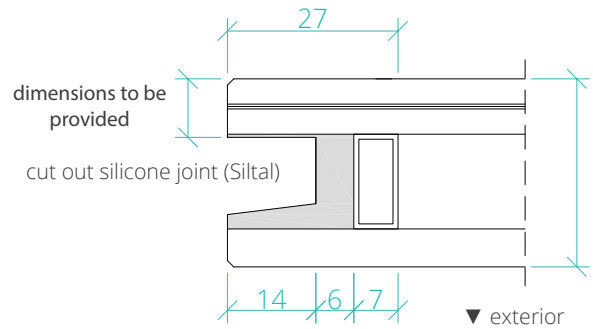


TYPE 1 - FIXED WITH STRUCTURAL EXTERIOR GLAZING

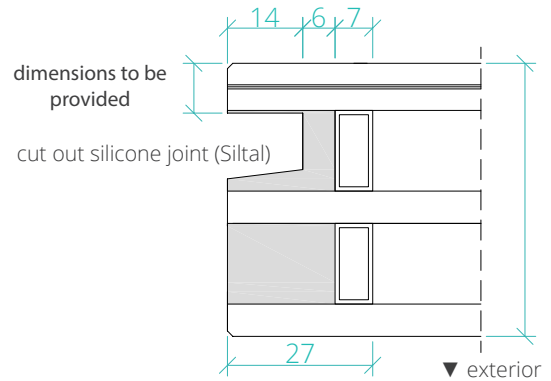
- To be glazed on the outside and fixed by means of stainless steel clamps (included) in the structural group around the glazing.
 See installation instruction on page 91
- Glass thickness min. 30 mm, max. 68 mm
- Glass composition
 - Structural groove on 4 sides with **UV resistant silicone**
 - **Inner pane minimum laminated 44.2** with smoothed edge
 - **Outer pane min. 6 mm** with smoothed edge
- Invisible dewatering and airing of the glass via the underside of the Windox



DOUBLE GLAZING



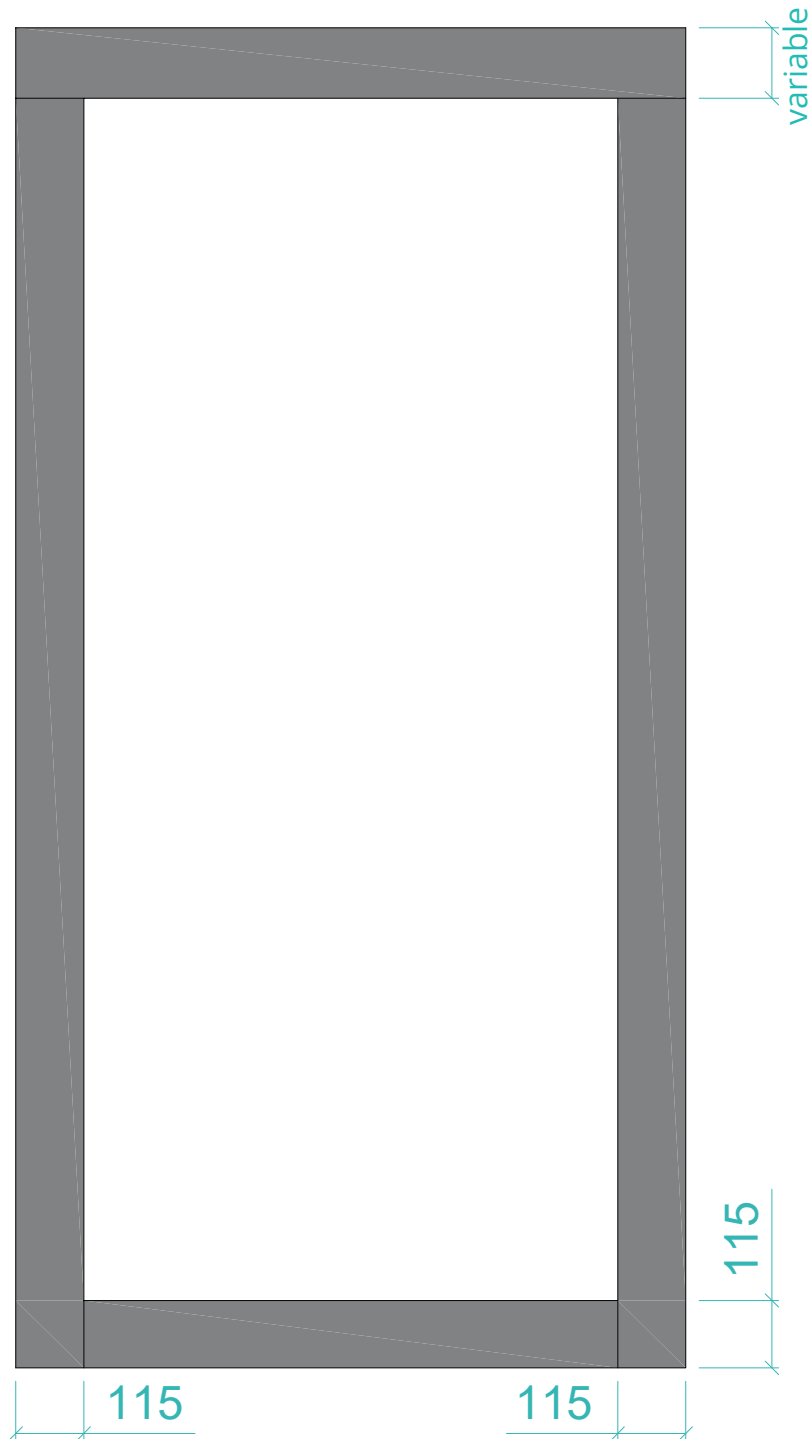
TRIPLE PANE



TYPE 2 - FIXED WITH INTERIOR GLAZING

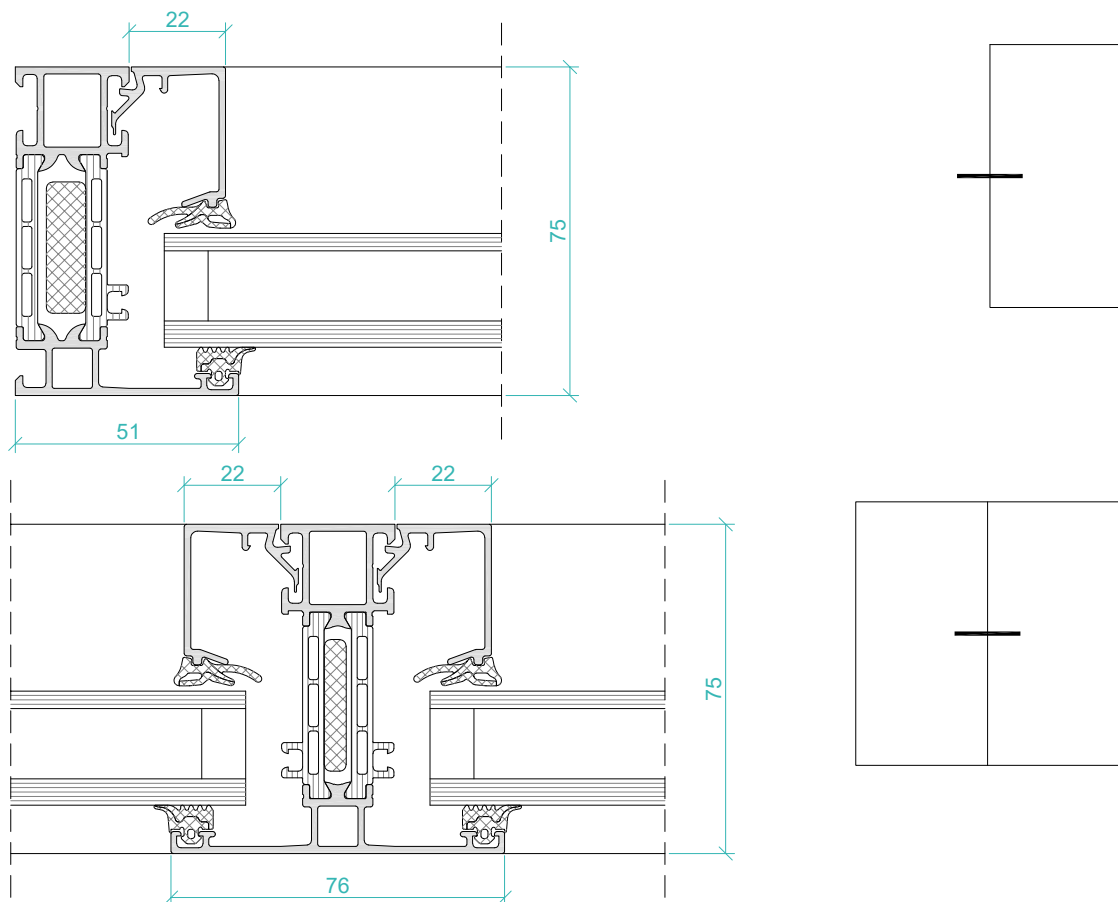
GENERAL

- To be glazed on the inside and fastened by means of clip-on glazing beads



WINDOW EXTRUSION PROFILES

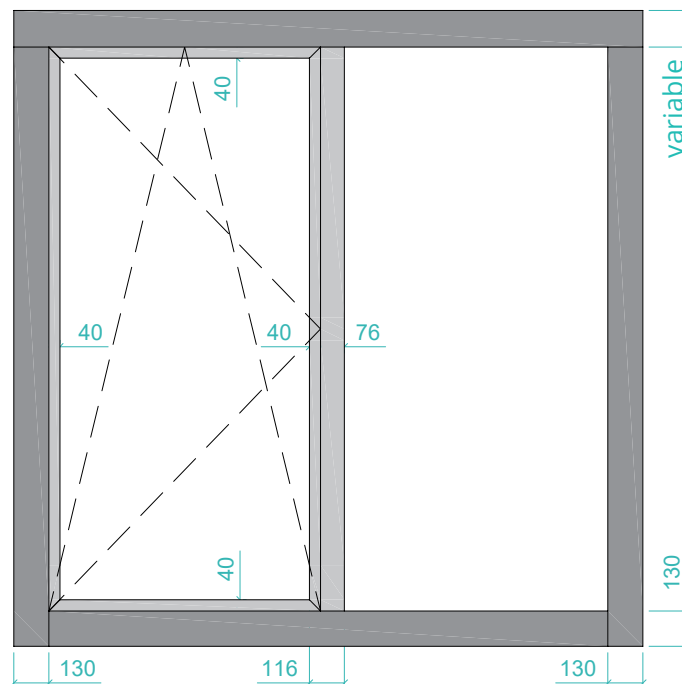
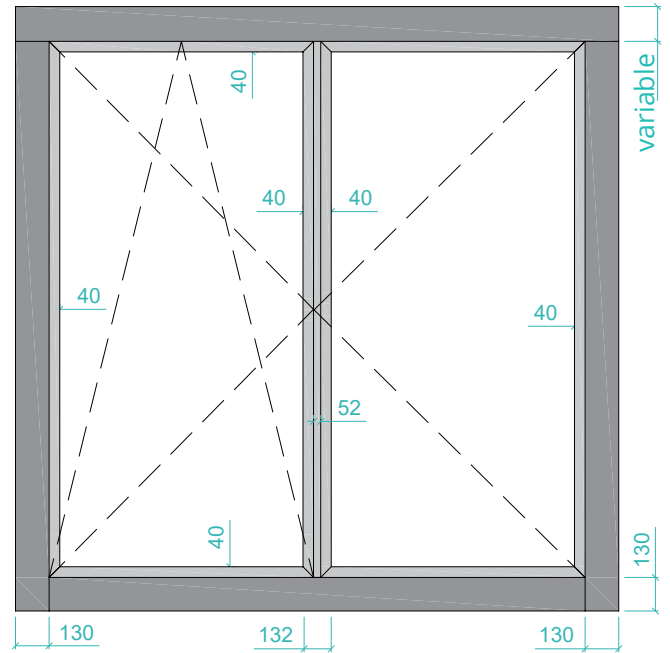
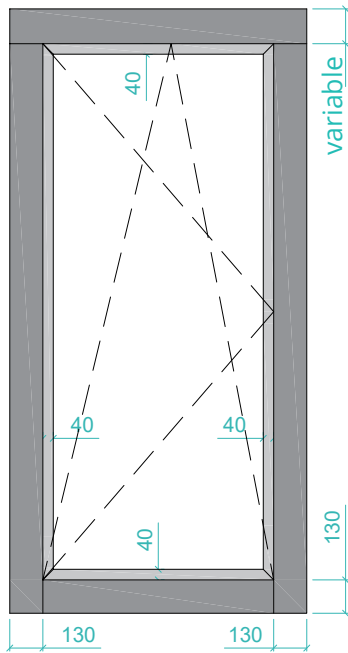
- Schüco type AWS 75
 - Elegant and ultra smooth
 - Maximum natural light
- Dimensions:
 - Frame: installation depth 75mm
 - Height glass rebate: 25mm
 - Glass thickness min. 23mm, max. 54mm
- The positions of T-sections are always viewed from the outside
- Invisible dewatering of the frame and airing of the glass via the underside of the Windox
- The position and number of drainage holes are according to the requirements of the extrusion profile supplier
- Performance:
 - $U_f = 1.3 \text{ W/(m}^2\cdot\text{K)}$ (NBN EN ISO 10077-2)
 - Air tightness: class 4 (NBN EN 12207)
 - Water tightness: Class 9a (NBN EN 12208)
 - Wind resistance: class C5/B5 (NBN EN 12210)
- Cross-sections:



TYPE 3 - TURN & TILT / TILT & TURN

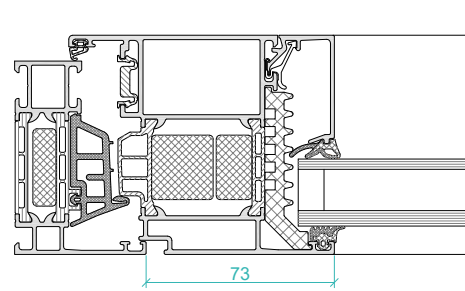
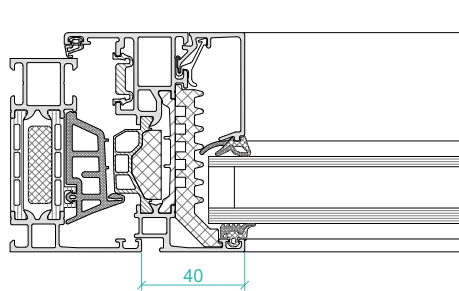
GENERAL

- To be glazed on the inside and fastened by means of clip-on glazing beads
- Not included: handle



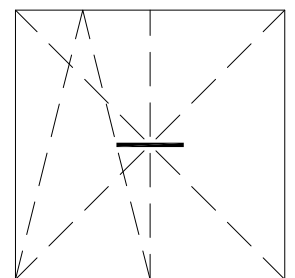
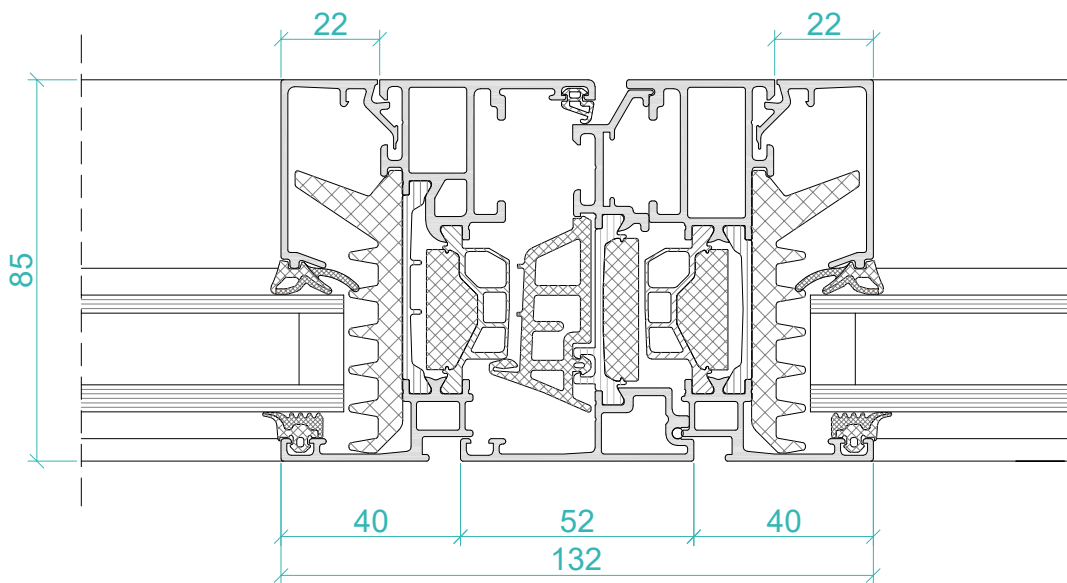
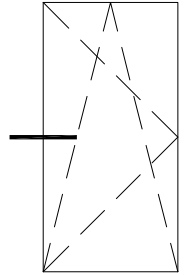
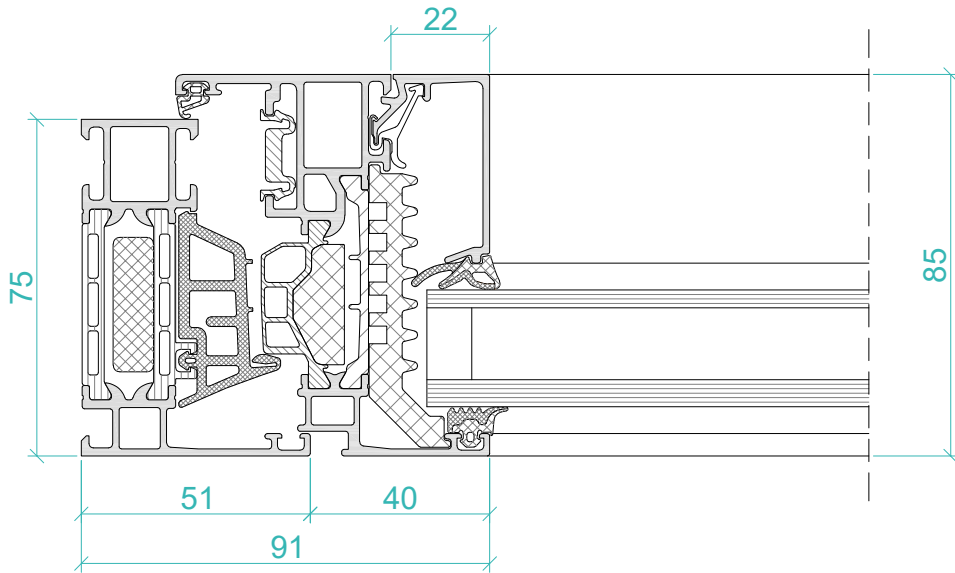
WINDOW EXTRUSION PROFILES

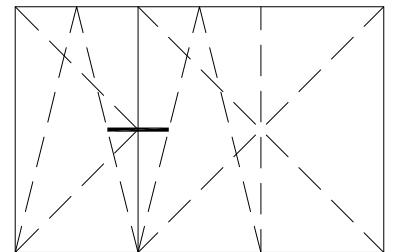
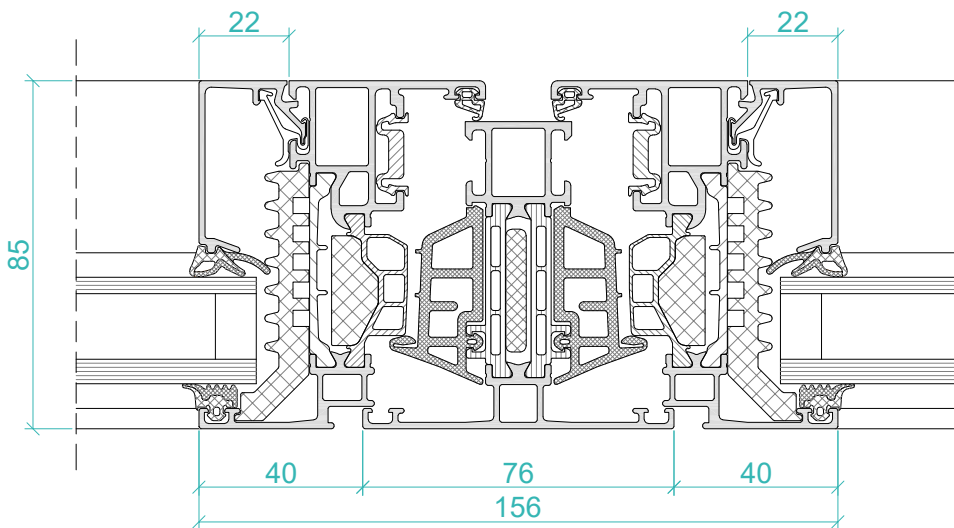
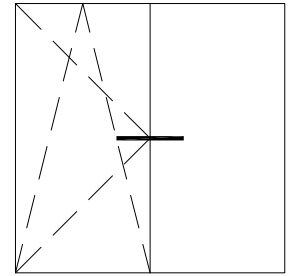
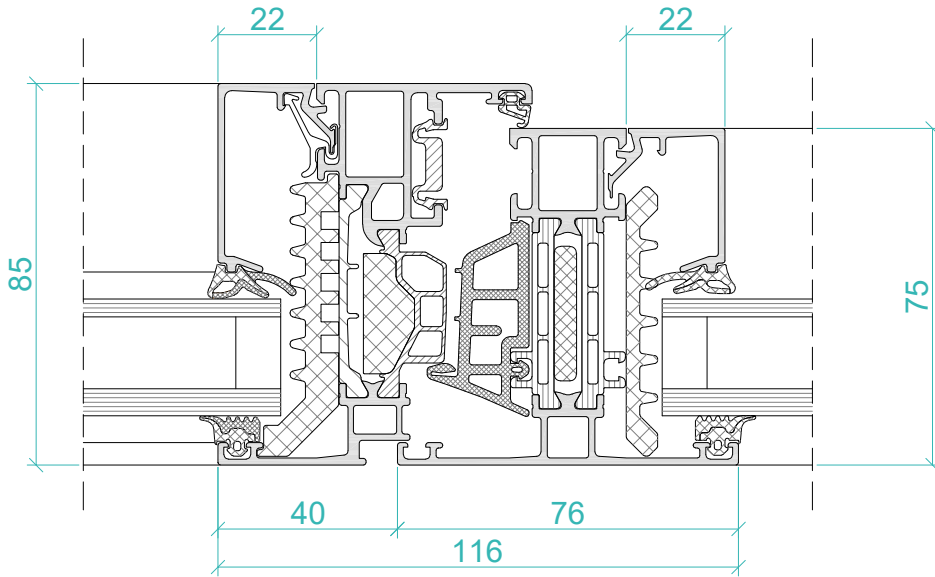
- Schüco type AWS 75: Elegant and ultra smooth, a maximum of natural light
- Dimensions:
 - Frame: installation depth 75mm
 - Sash: installation depth 85mm
 - Height glass rebate: 22mm
 - Glass thickness: sash: min. 21mm / max. 64mm
fixed part: minimum 23mm / maximum 54mm
- Min. sash width: 450mm
- Max sash dimensions: upon request



- Can be combined with fixed parts
- Width and positions of T-sections always viewed from the outside
- Invisible dewatering of the frame and airing of the glass via the underside of the Windox
- The position and number of drainage holes are according to the requirements of the extrusion profile supplier
- Performance:
 - Uf frame + sash = 1.3 W/(m²·K) (DIN EN ISO 10077-2)
 - Air tightness: class 4 (DIN EN 12207)
 - Water tightness: Class 9a (DIN EN 12208)
 - Wind resistance: class C5 / B5 (DIN EN 12210)
 - Burglary-resistant: RC3 (DIN EN 1627)
- Hardware:
 - Standard turn&tilt
 - Tilt & turn with lockable window handle optional if a fall-through protection is not applied (= outside Windox responsibility)
 - Hidden hinges
 - Max weight of glass in sash: **160kg**
 - Double opening: embedded bolt lock with central operation
 - Handles: not included (to be supplied by customer)
type to be determined by customer:
 - Square pin 7 / collars shaft size screw 43mm
 - Square pin 7 / no collar

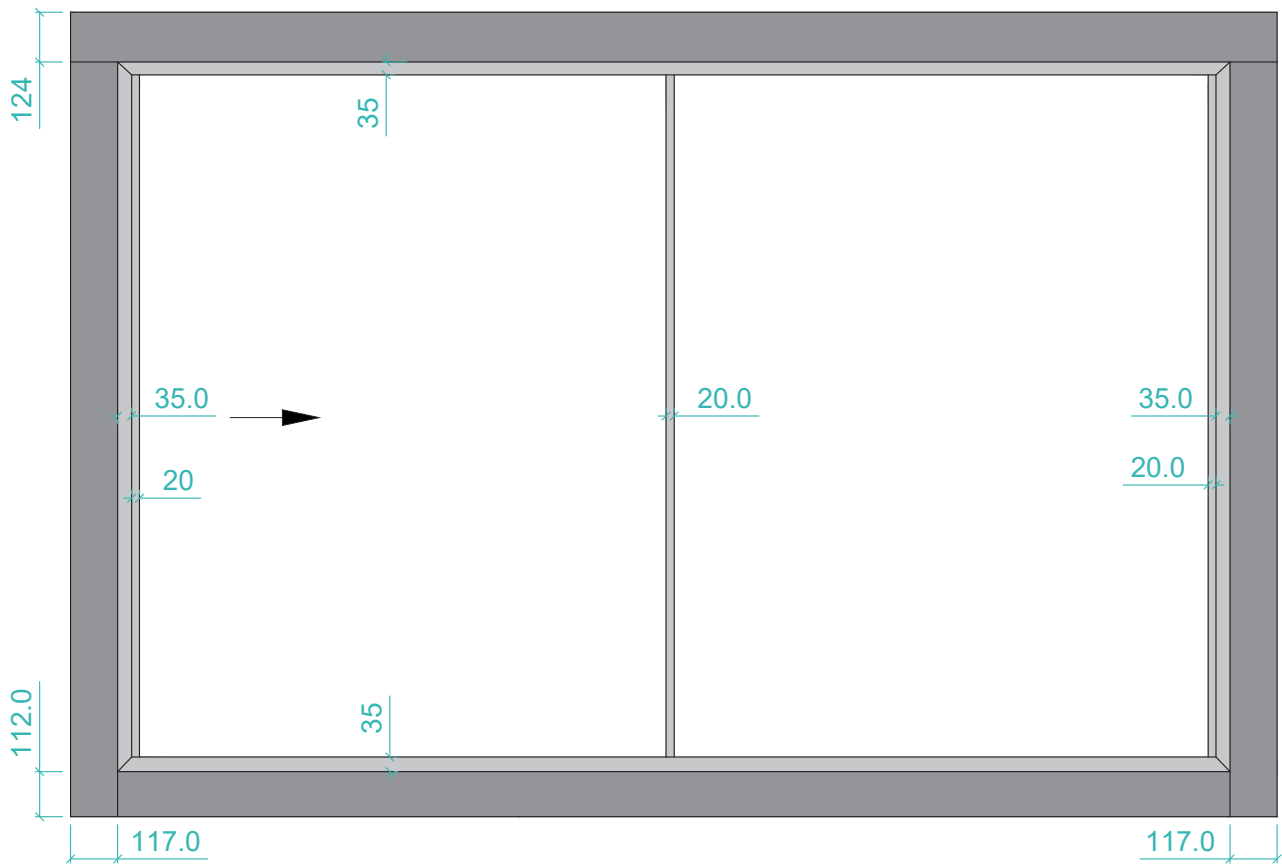
□ Cross-cuts





TYPE 4 - MINIMALISTIC SLIDING WINDOW

SUBJECT TO CHANGE

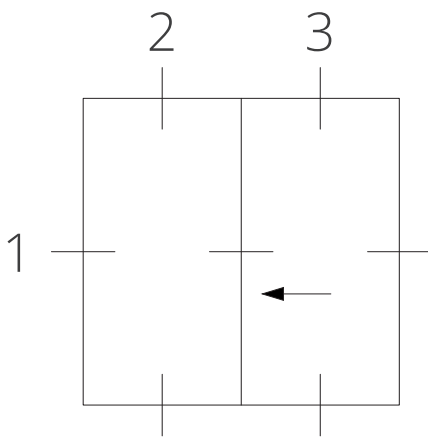


WINDOW EXTRUSION PROFILES

SUBJECT TO CHANGE

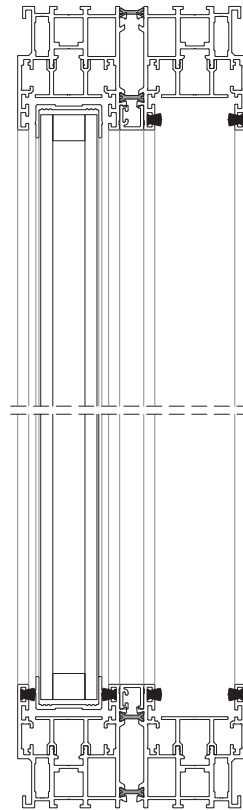
- Hyline 30 (<https://hyline.com.pt/>)
- Glass:
 - included in Windox
 - structurally bonded with surrounding "minimal" sash profile
 - all fixed and sliding glass elements are supplied separately and are to be placed in the sliding frame by the customer after installation of the window box on site
- Single sliding: sliding sash on in- or exterior
- Double sliding
- Hardware
 - Lock: 3 point hook lock: control box on reveal of interior cladding
Electromagnetic: embedded in the frame section
 - Operation: manual by means of integrated lever
Automation: integration
- Insect screen:
 - vertical roller blind integrated in frame section
 - max 1500 mm width x 4000 mm height
- Double glazing:
 - both panes toughened / black warmedge spacer
 - Max 9 m² per sash / max 500 kg per sash
 - Airtight 7A
 - U_w average = 1.3 W/(m²·K)
- Triple glazing:
 - all panes toughened / black warmedge spacer
 - Max 18 m² per sash / max 1000 kg per sash
 - Airtight 7A
 - U_w average = 1.05 W/(m²·K)

SUBJECT TO CHANGE



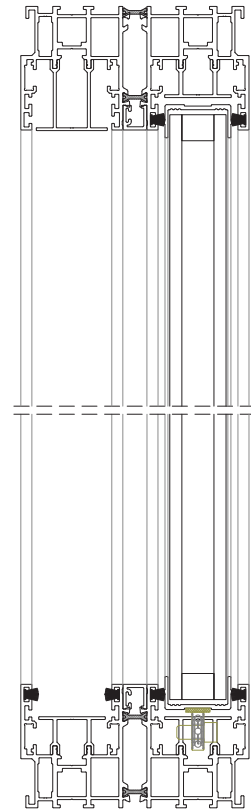
fixed element

2

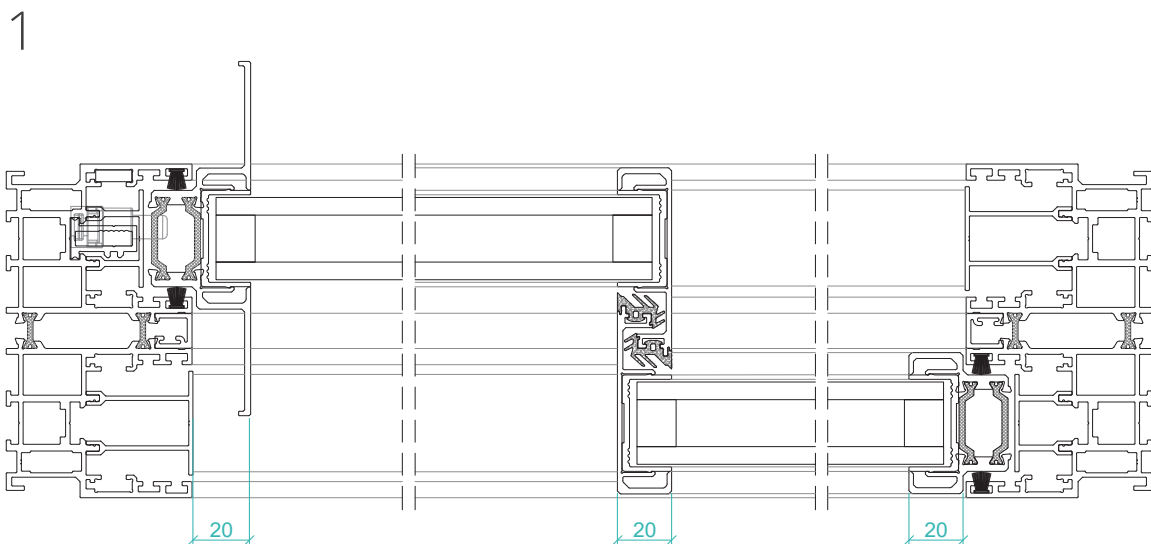


sliding element

3



Wheel bearings mounted in subrail of frame section



□ Remark: in order to obtain the technical drawings of type 4, please contact Windox.

OPTIONS

- RAILING (GLASS FALL PREVENTION): type 3 / 4
- VENTILATION GRID: type 2 / 3 / 4
- SUN PROTECTION: type 2 / 3 / 4
- INSECT SCREEN: type 3 / 4
- BURGLARY PROTECTION: type 3 / 4
- GLASS SIDE: type 1 / 2 / 3
- ALUMINIUM REVEAL: type 1 / 2 / 3 / 4

**Options cannot be integrated retroactively
These must be ordered with the total order**

OPTION B: BALUSTRADE

Available for: type 3 / 4

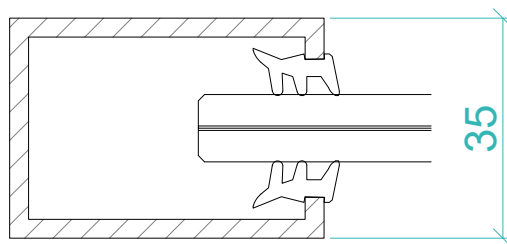
GENERAL - GLASS FALL PREVENTION

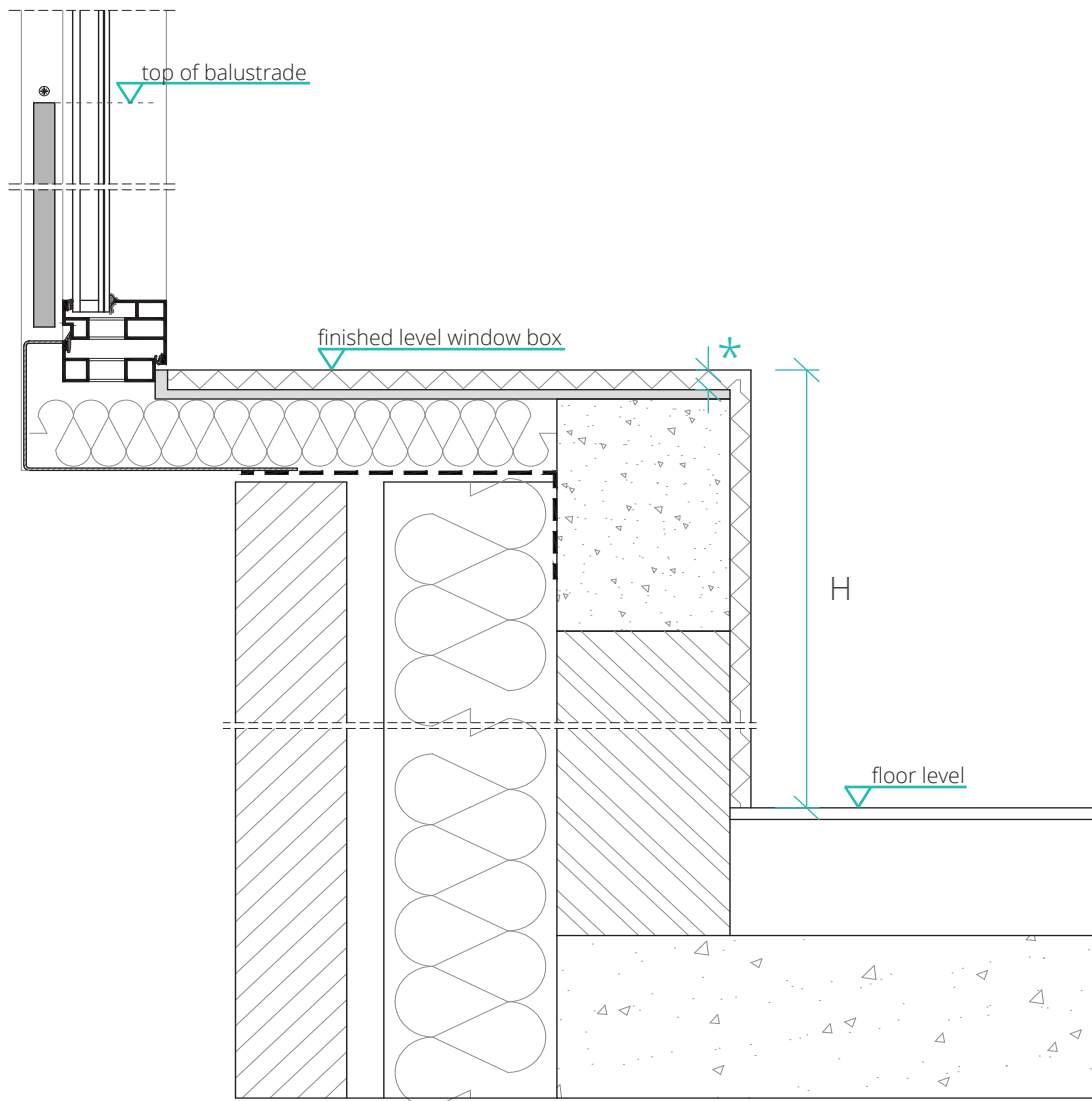
- Embedded in the sides of the Windox
Except on T-profile
- Glazing:
 - Clear laminated glass with smoothed edges
 - Thicknesses: 55.4 - 66.4 - 88.4 - 1010.4
 - Types of films:
 - * Standard: DG41 "Saflex inside"
 - * Coastal location or very humid spaces: "Sentry" (10-year warranty on delamination of the glass panes)
- Both films are moisture resistant:
 - No white haze or edge delamination possible
 - no cover strip on top edge required

GLASS COMPOSITION

WIDTH FALL-THROUGH											
	mm	700	800	900	1000	1200	1400	1600	1800	2000	2200
HEIGHT FALL-THROUGH (*)	200	88.4	88.4	1010.4	1010.4	/	/	/	/	/	/
	400	55.4	55.4	66.4	66.4	88.4	1010.4	1010.4	/	/	/
	450	55.4	55.4	55.4	66.4	88.4	88.4	1010.4	1010.4	/	/
	600	55.4	55.4	55.4	55.4	66.4	88.4	88.4	1010.4	1010.4	/
	800	55.4	55.4	55.4	55.4	66.4	66.4	88.4	88.4	88.4	1010.4
	1000	55.4	55.4	55.4	55.4	66.4	66.4	66.4	88.4	88.4	88.4
	1200	55.4	55.4	55.4	55.4	66.4	66.4	66.4	88.4	88.4	88.4

ALUMINIUM CLAMPING SECTION





* Thickness of finish depends on position of Windox (see page 31)

STANDARD: NBN B03-004 (2017)

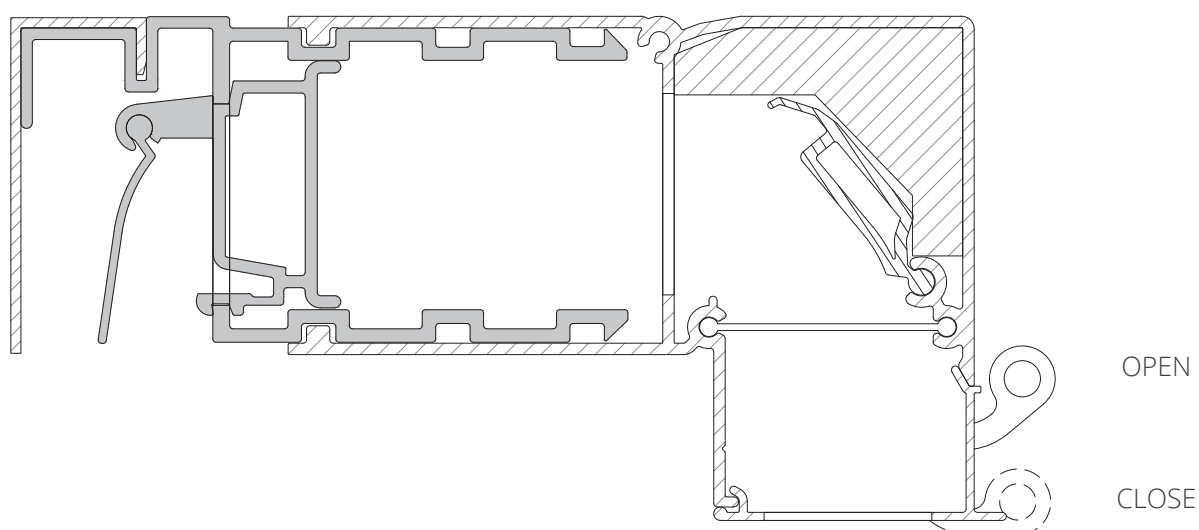
- If $H \leq 450$ mm:
Top balustrade at 1100 mm (or 1200 mm if height of drop > 12m) above finished level window box
- If 450 mm < $H \leq 600$ mm (bench):
Top balustrade at 600 mm above finished level window box (back rest)
- If $H > 600$ mm:
Top balustrade at 1100 mm (or 1200 mm if drop height > 12m) above finished floor level window box

* The glass fall-through protection can be omitted in case of a tilting window and lockable handle
Windox cannot be held responsible if this standard is not complied with.

OPTION V: VENTILATION GRID

Available for: TYPE 2 / 3 / 4

- ❑ Embedded in the Windox
- ❑ Self-regulating flap: class P3
- ❑ U-value: 2.63 - 2.59 W/m²/K
- ❑ Ventilation capacity at 1 Pa per m: 14.8 dm³/s
- ❑ Ventilation capacity at 1 Pa per m (with Duco filter): 12.6 dm³/s
- ❑ Dne, A open position: 27 dB(A)
- ❑ Dne, Atr open position: 26 dB(A)
- ❑ Watertightness (in closed position): 1000 Pa
- ❑ Windtightness (in closed position): 650 Pa
- ❑ Flap length: split into 2 equal parts if > 1500 mm
- ❑ Max. length of grid: 3050 mm
- ❑ Linkage possible
- ❑ PVC end piece: white/black
- ❑ Operation mode: lever
- ❑ Operating side: left / right

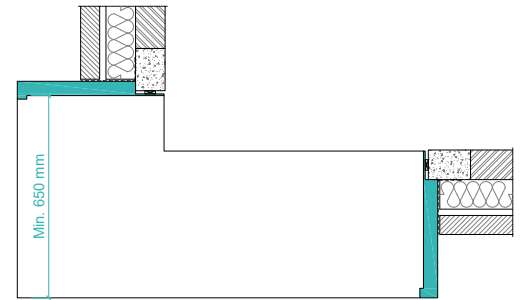


OPTION SP: SUN PROTECTION

Available for: type 2 / 3 / 4

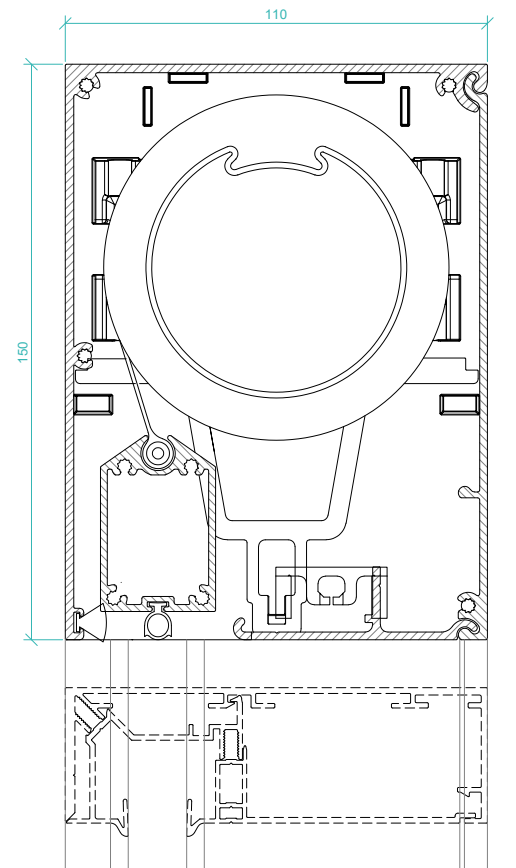
GENERAL:

- Renson Fixscreen® 100 Slim
- Embedded in the Windox
- Storm proof up to gale force 10
- 1 reinforced case for all dimensions: height 150 mm / width 110 mm
- Lower batten with integrated stopper hidden in the case
- At request: corner sun protection: (Renson Panovista®) on glazed side option G only possible if facade has a protruding corner (minimum width 650 mm)



MOTORS SOMFY:

- Each motor wired separately
- Preferably with blind wall box + preflex for cable passage
- With Hirschmann plug: robust plug for easy and safe connecting and disconnecting
- With Hipro head: standard factory-adjusted
- Connection and adjustment guidelines available on request
- Switch and home automation (WT):
 - Somfy® mechanical or Renson Detecto Motor
 - parallel switching possible of up to 3 motors
 - cable: 4 x 0.75 mm² (5m)
- Radio controlled and home automation by Somfy (IO):
 - cable: 3 x 0.75 mm² (5/10m)
 - Optional:
 - single-channel remote: SITUO 1 IO PURE II
 - 5-channel remote: SITUO 5 IO PURE II



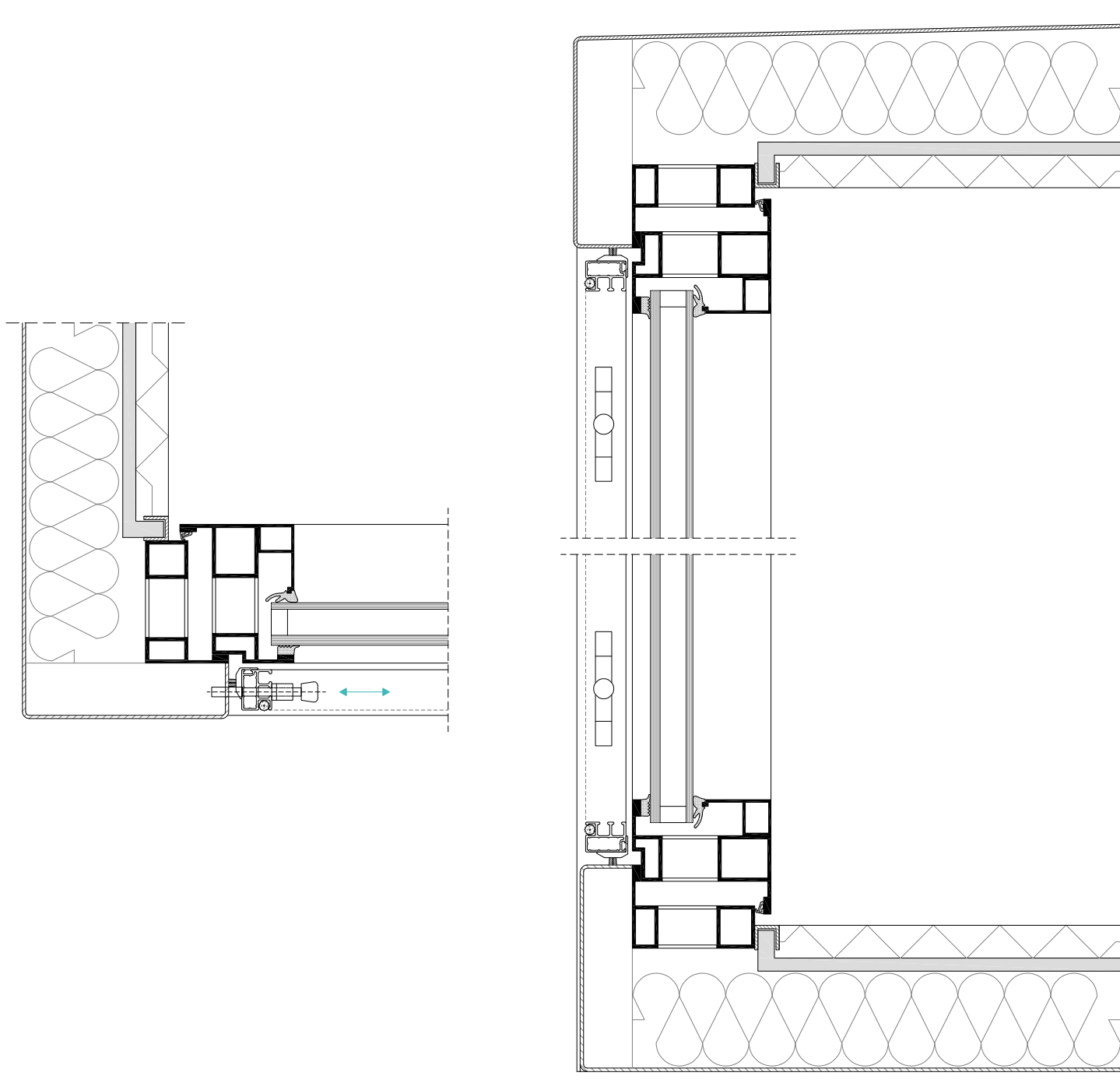
FABRICS:

- Up to 3200 mm height available without horizontal seam
- Glass fibre fabrics: Sergé, Natté or Privacy
- Blackout fabrics: Satiné

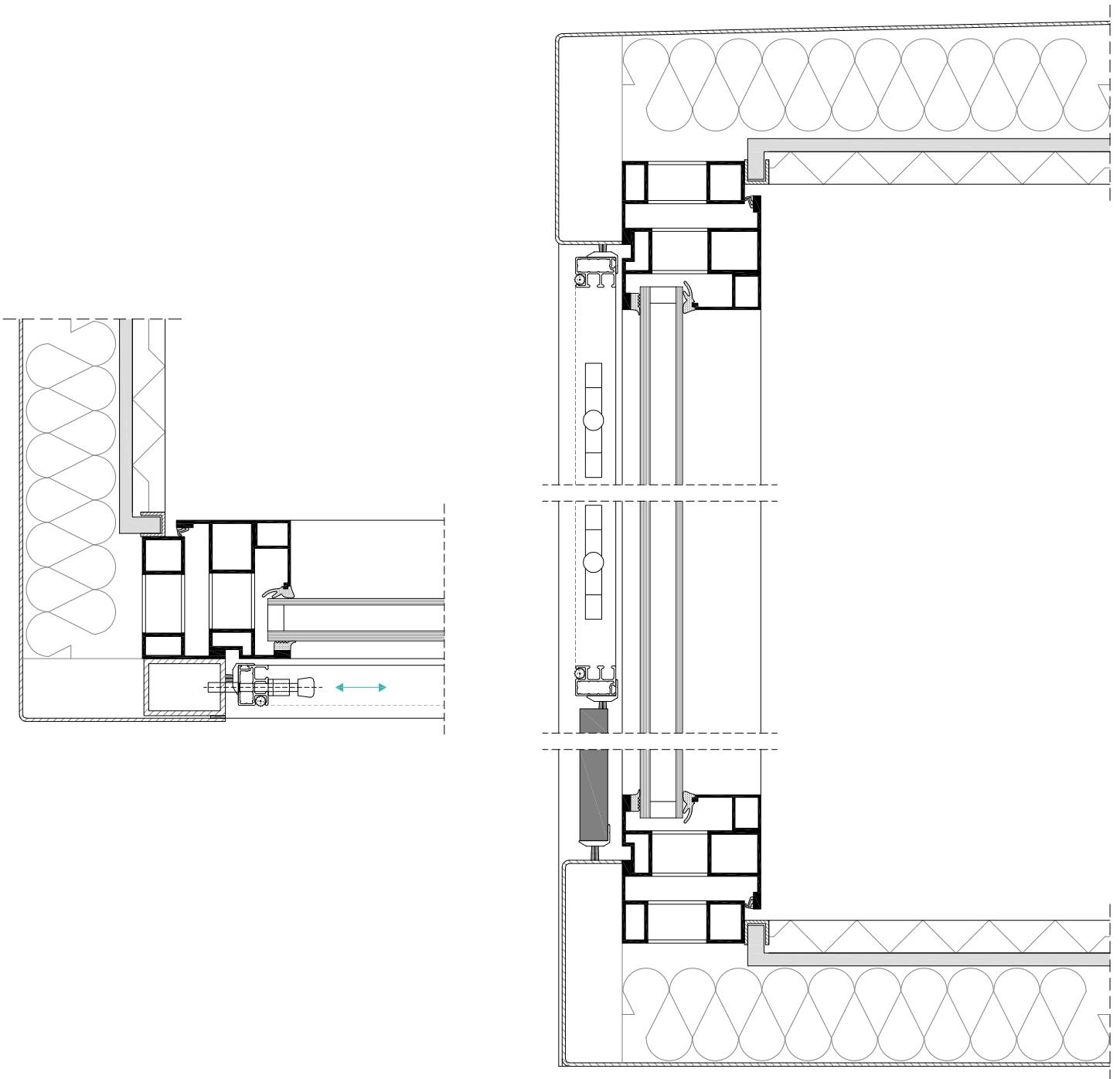
OPTION I: INSECT SCREEN

Available for: TYPE 3

- Standard with clearview mesh
- Easy to install and remove by means of an extendable sliding latch
- Insect screen must be ordered when ordering the window box!

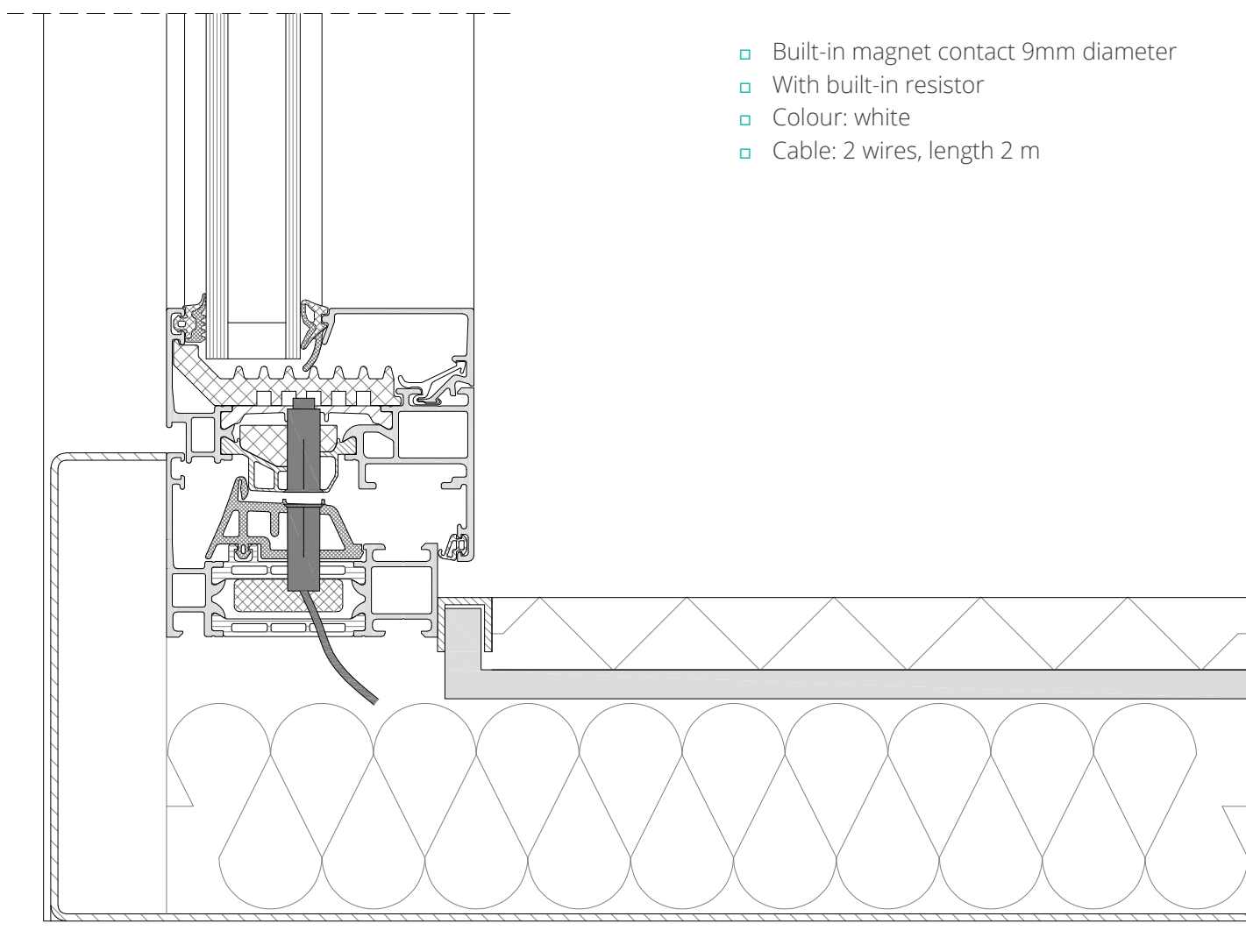
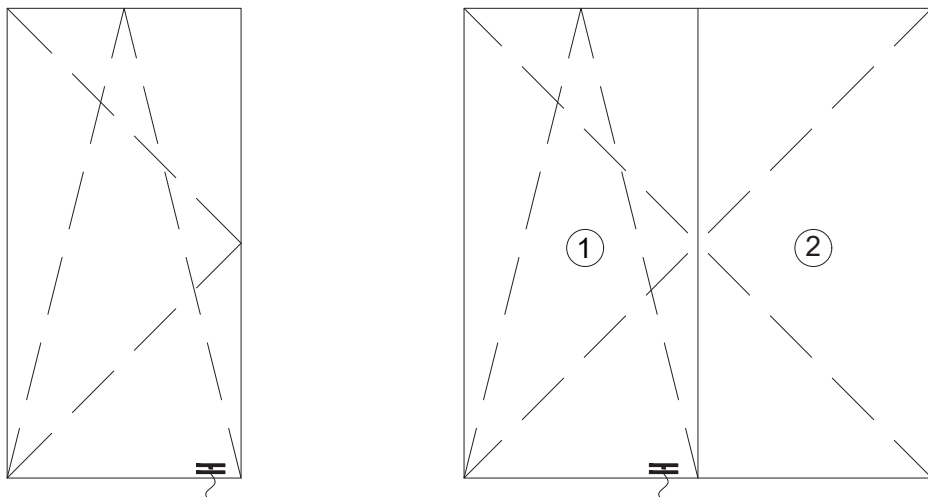


- Standard with clearview mesh
- Aluminium brush profile (included) to be cemented at the bottom of the balcony glass to the balustrade
- Easy to install and remove by means of an extendable sliding latch
- Insect screen must be ordered when ordering the window box!



OPTION BP: BURGLARY PROTECTION

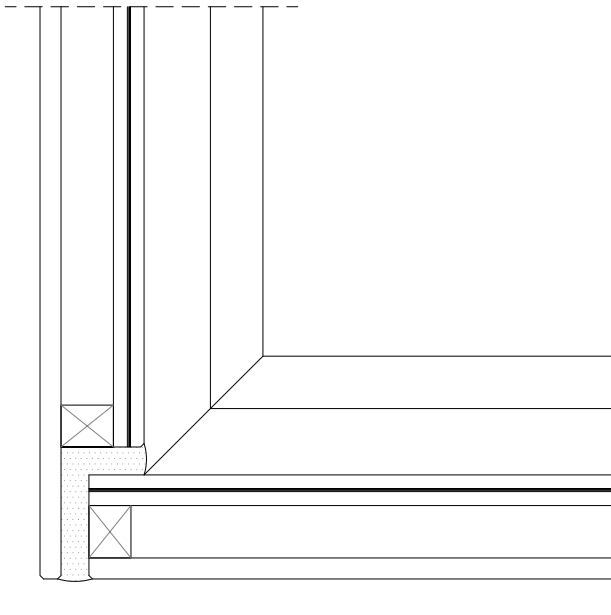
Available for: TYPE 3



OPTION G: GLAZED SIDE

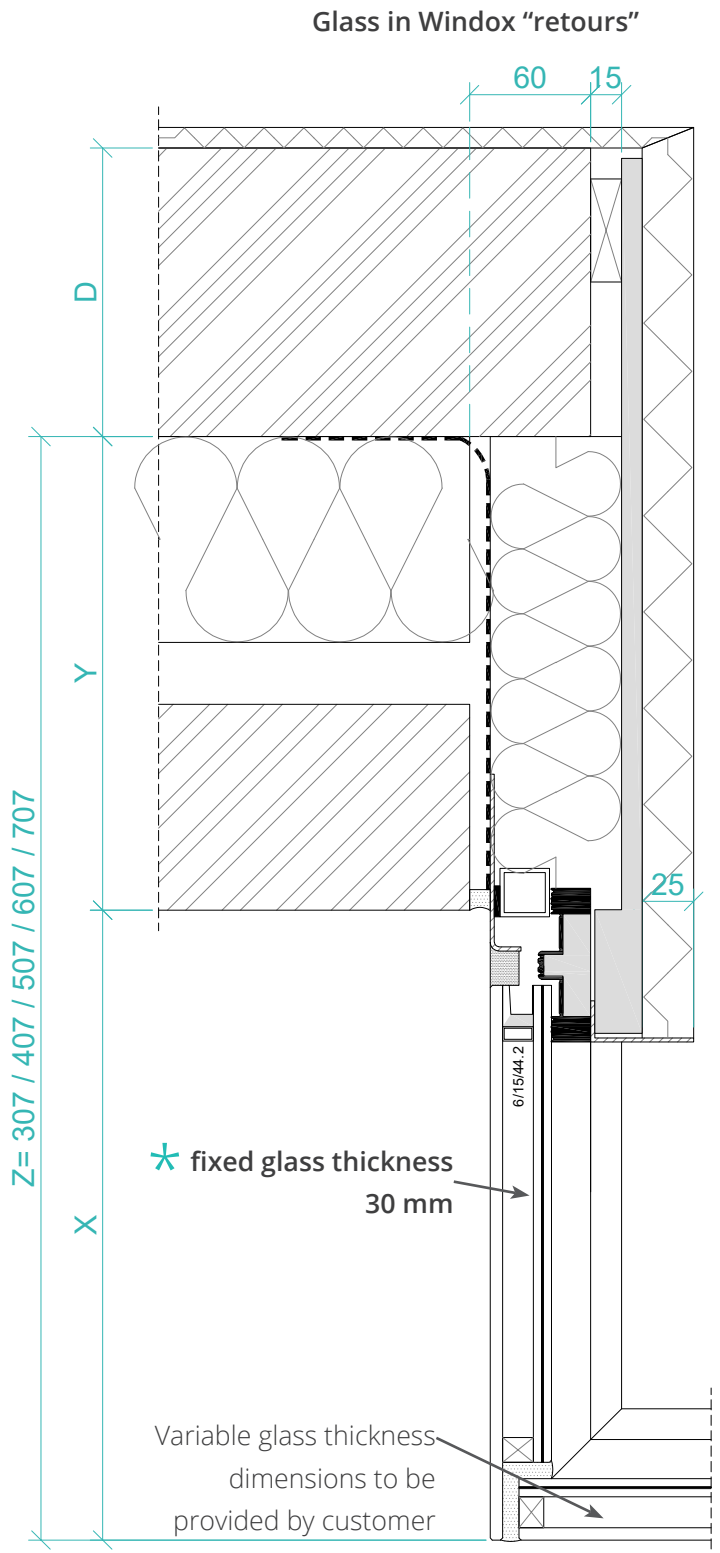
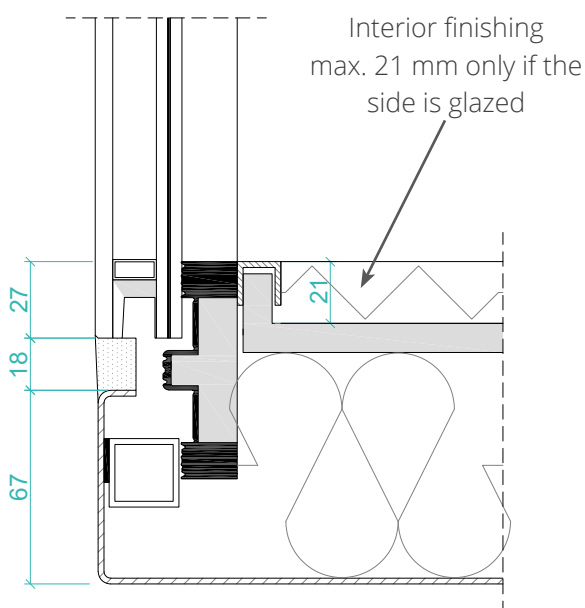
- Available for: type 1 / 2 / 3
- **Maximum depth (Z) glazed side: see on page 37**
- The same details apply for positioning on the outer corner of 2 facades
- There must not be a supporting column in the load-bearing structure to support the structure above!

- TYPE 1



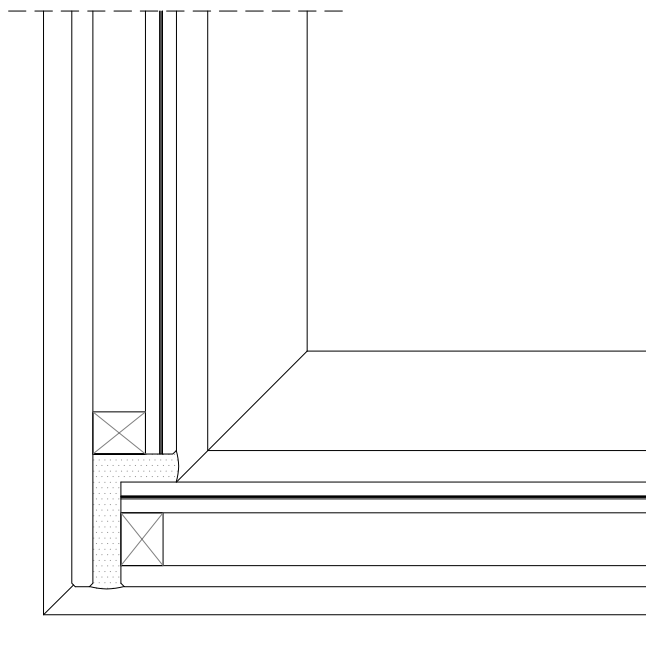
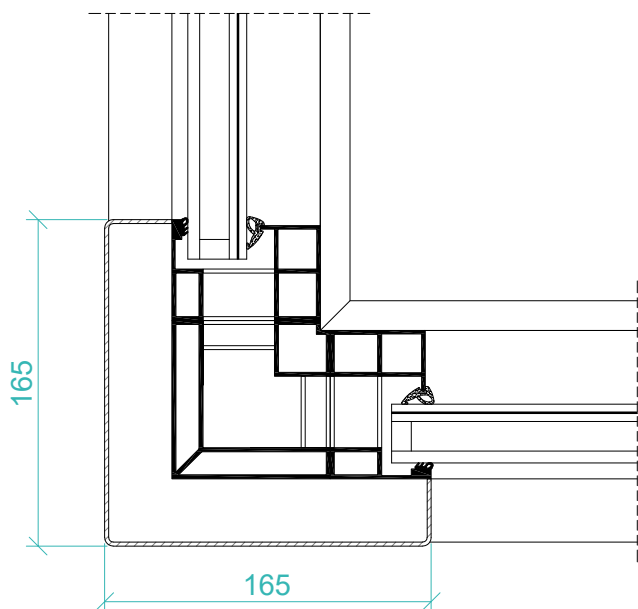
*** Note:**

- If there is to be glass in the Windox retour the glass thickness must be 30 mm.

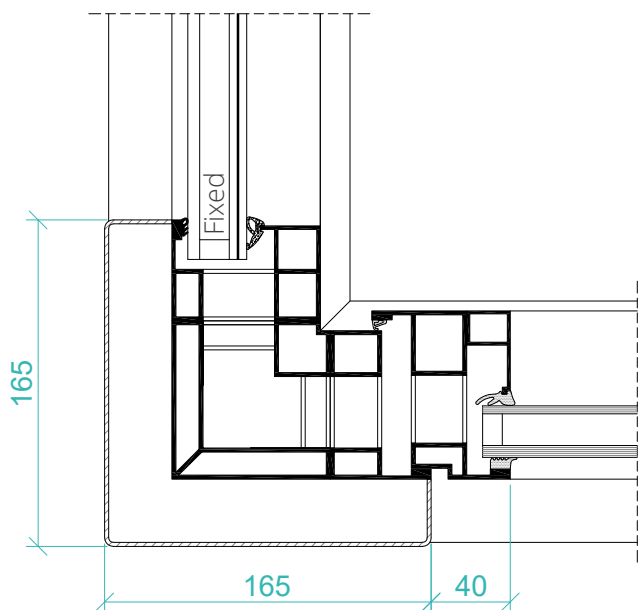


See page 36-37

□ TYPE 2



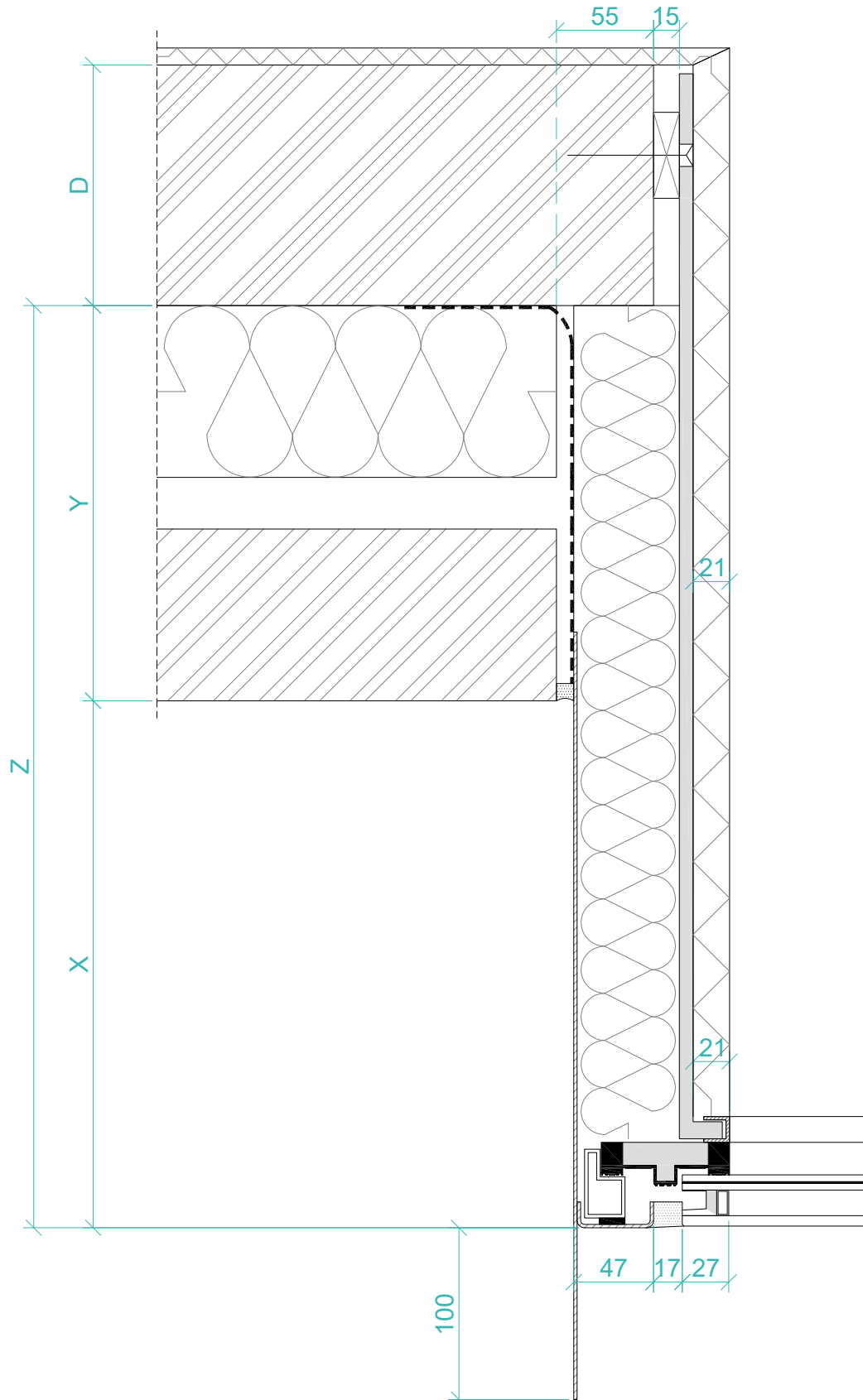
□ TYPE 3



OPTION R: REVEAL

Available for: type 1 / 2 / 3 / 4

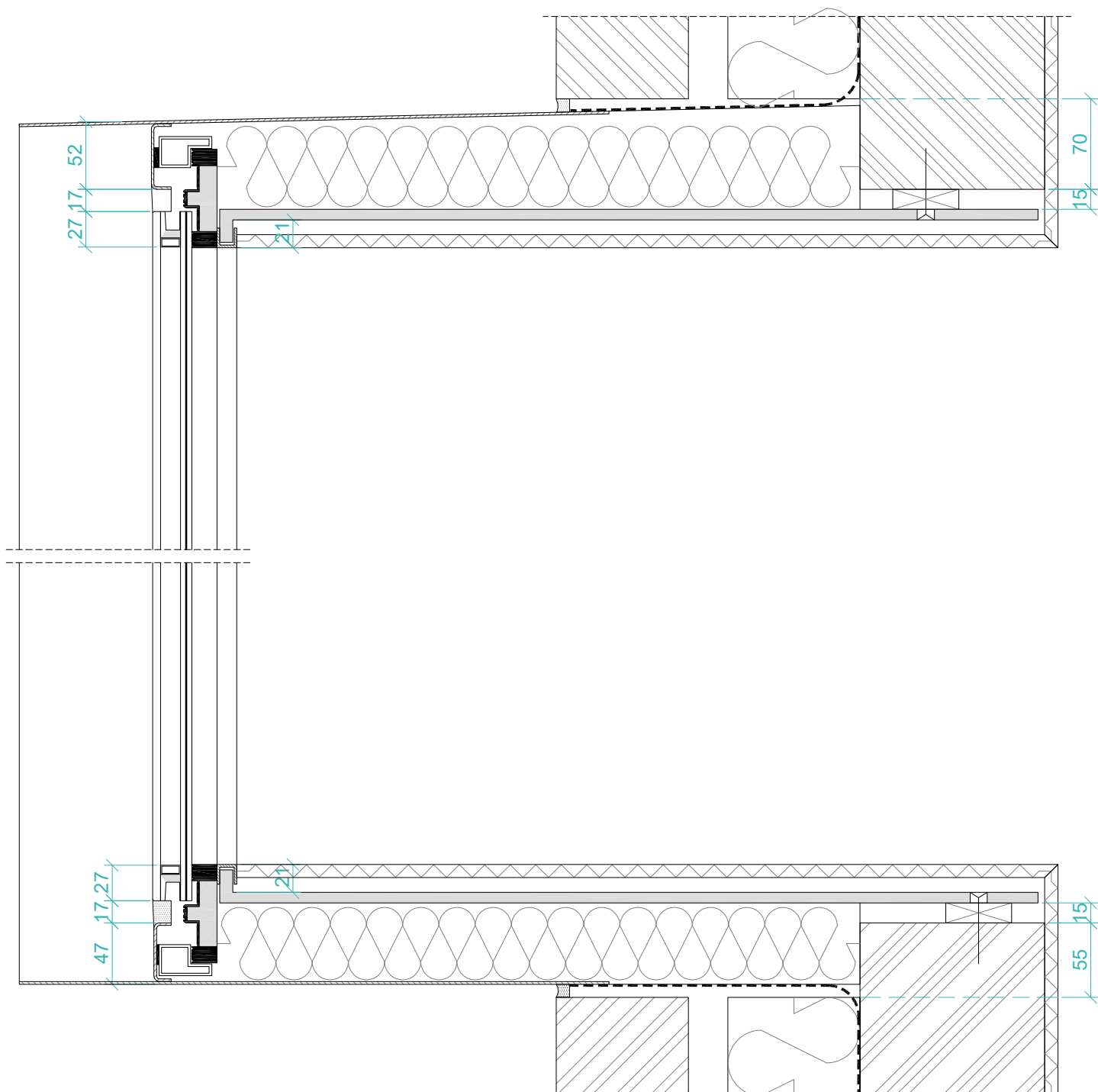
□ TYPE 1



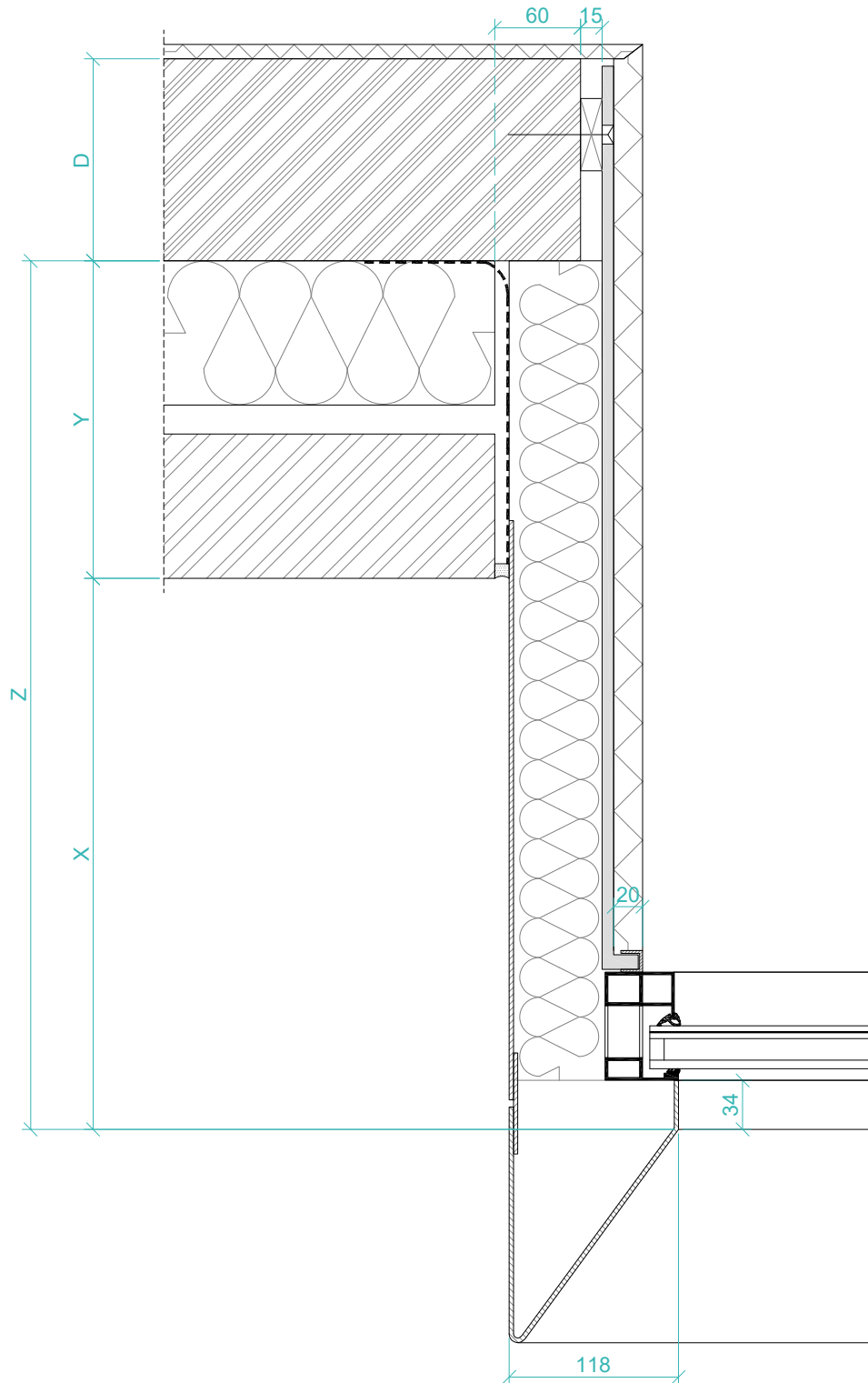
See page 36-37

2024/06

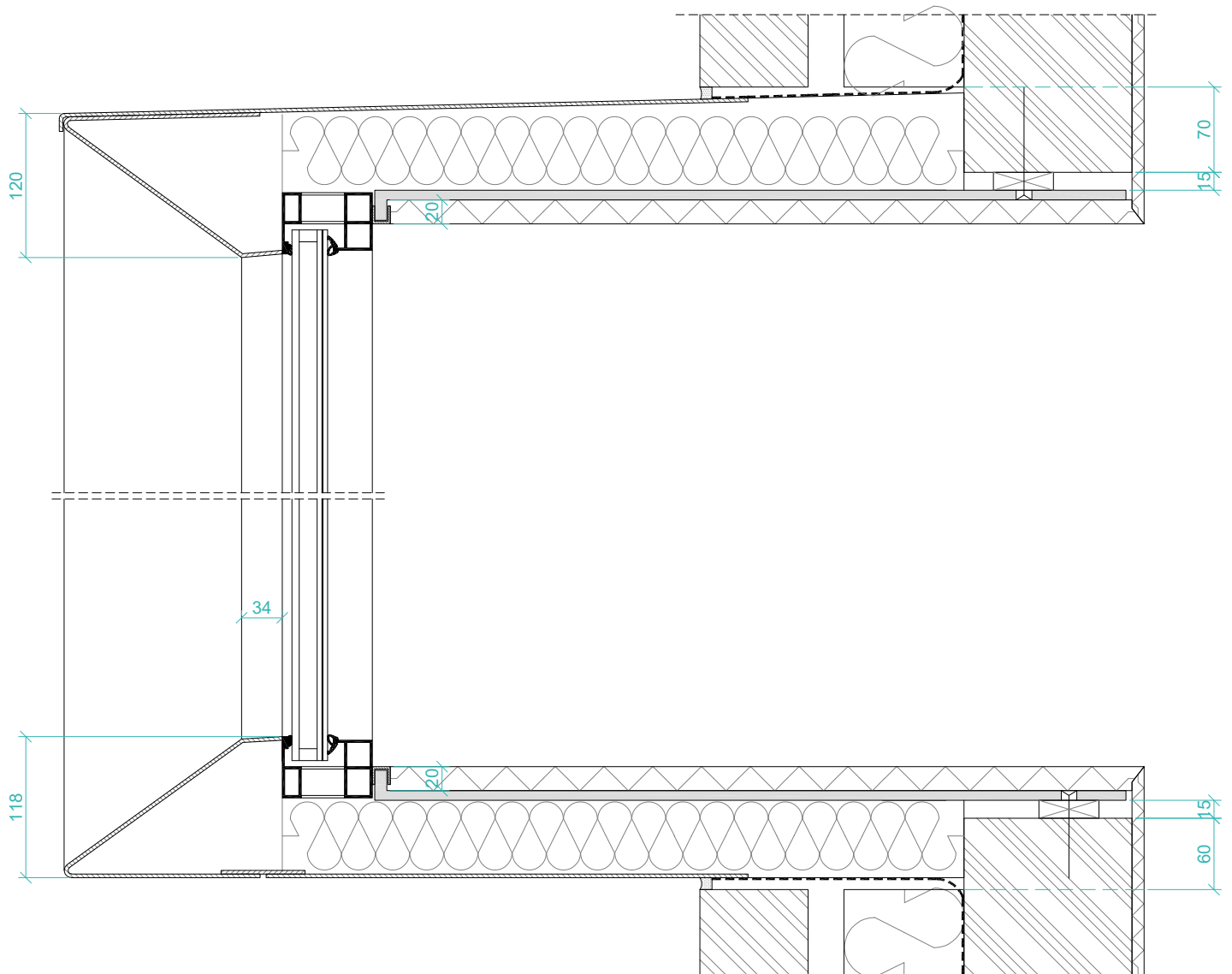
□ TYPE 1



□ TYPE 2/3/4

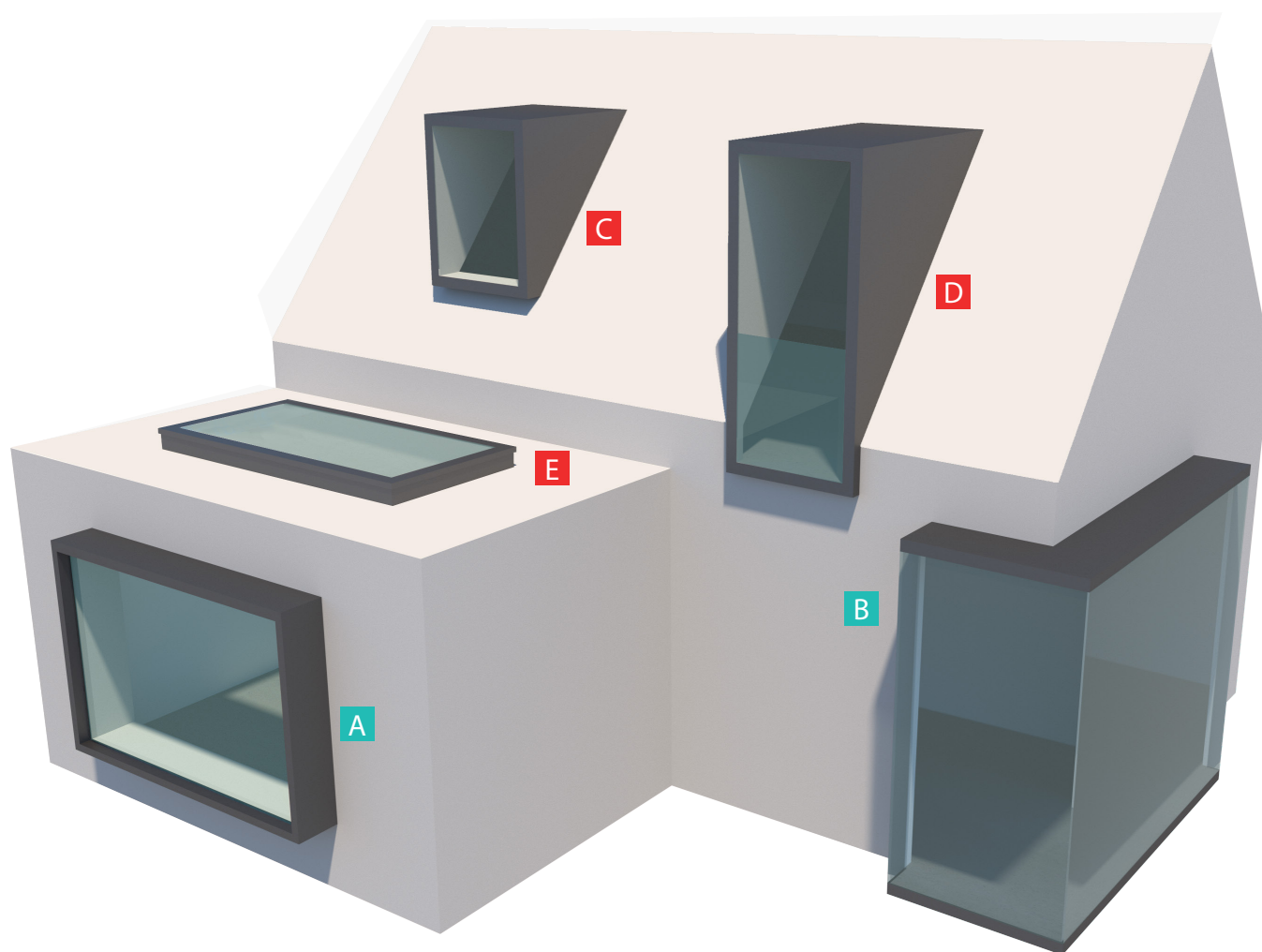


- TYPE 2 / 3 / 4



POSITIONS

- A** FACADE
- B** FACADE: PROTRUDING CORNER



- C** SLANTED ROOF
- D** SLANTED ROOF + FACADE
- E** FLAT ROOF

PROOFS
 PREFAB ROOF SOLUTIONS

WWW.PROOFS.BE



DESIGN GUIDELINES

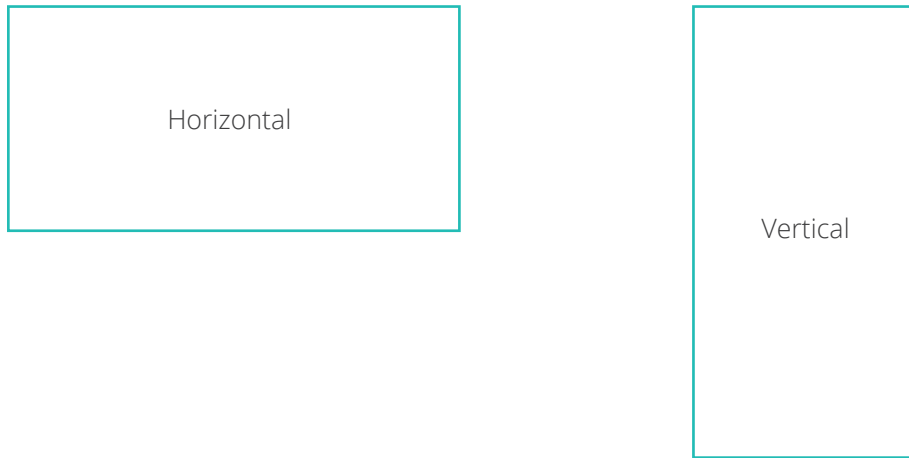
GENERAL

- Windox recommends to **install the facade cladding AFTER installation of the window box** so that the waterproof fleece and the wall insulation can be neatly fitted (see page 87). This will also substantially reduce installation time. If $Z > 600$ mm, an additional support bracket can be mounted. The top cladding must not rest on the Windox.
- If the facade cladding must be installed before the window box, an inverted recess of the building structure must be taken into account. (see page 41-42).
- For reasons of stability a contractor must always provide for a concrete, steel or wooden load-bearing beam **below and above**, mechanically anchored into the building structure (based on static calculation by an agency).
Upstands below in masonry are NOT acceptable!
If the location is an outward corner, there must not be a load-bearing column at that position.
- Windox recommends a clearance of 15mm between supporting structure and window box.
The floor level has priority over all clearances.
Normally an elastic joint of 10 mm between window box and facade cladding is to be taken into account.
- All construction seams of the Windox are sealed with a water and airtight fleece.
- On the interior side there is an aluminium, black-coated stop profile to connect with the interior finish (not part of Windox performance) which can be up to 20mm thick (see page 98).
- Steel bearing structure coated with 2 corrosion-resistant layers.
Attention: in order to avoid corrosion on the inside of the steel structure, we recommend making the Windox wind- and waterproof within a week!
- Fire resistance of a Windox construction "in its entirety" has not been tested.
However, the walls can optionally be fitted with Promatect H board (20mm) with a fire safety rating of A1 (non-combustible) against flashover.
- The composition of the glass panes must be specified when ordering (double or triple glazing). Windox provides the glass sizes once order confirmation is approved.
- **Not included:** transportation, installation, water-proof connection to the building structure, glass, interior finish, mounting anchors, adjusting blocks, window handle.

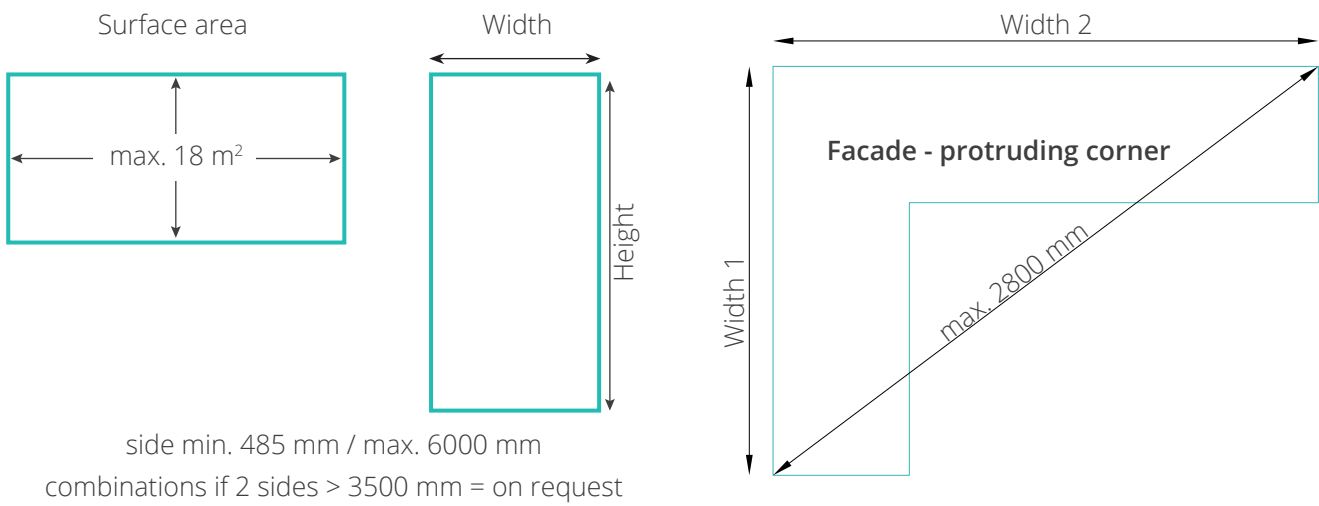
WHEN ORDERING

- If cladding not yet installed:
 - > Case 1:
Openings in load-bearing structure are provided. Windox will determine the exterior dimensions of the window box.
In the case of a facade with bricks, ideally the dimensions of the brick + joint width should be taken as the basis for determining the openings in the load-bearing structure
 - > Case 2:
Exterior dimensions of the window box are provided. Windox determines the openings in the supporting structure.
- If facade masonry is in place:
 - > Openings in facade masonry and load-bearing structure are to be provided.
Attention: inverted recess!

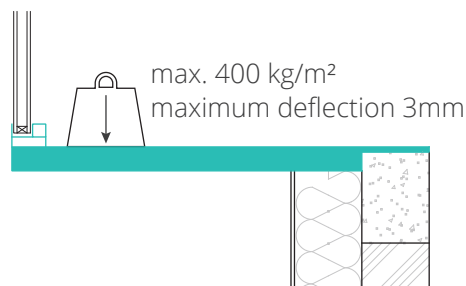
ORIENTATION

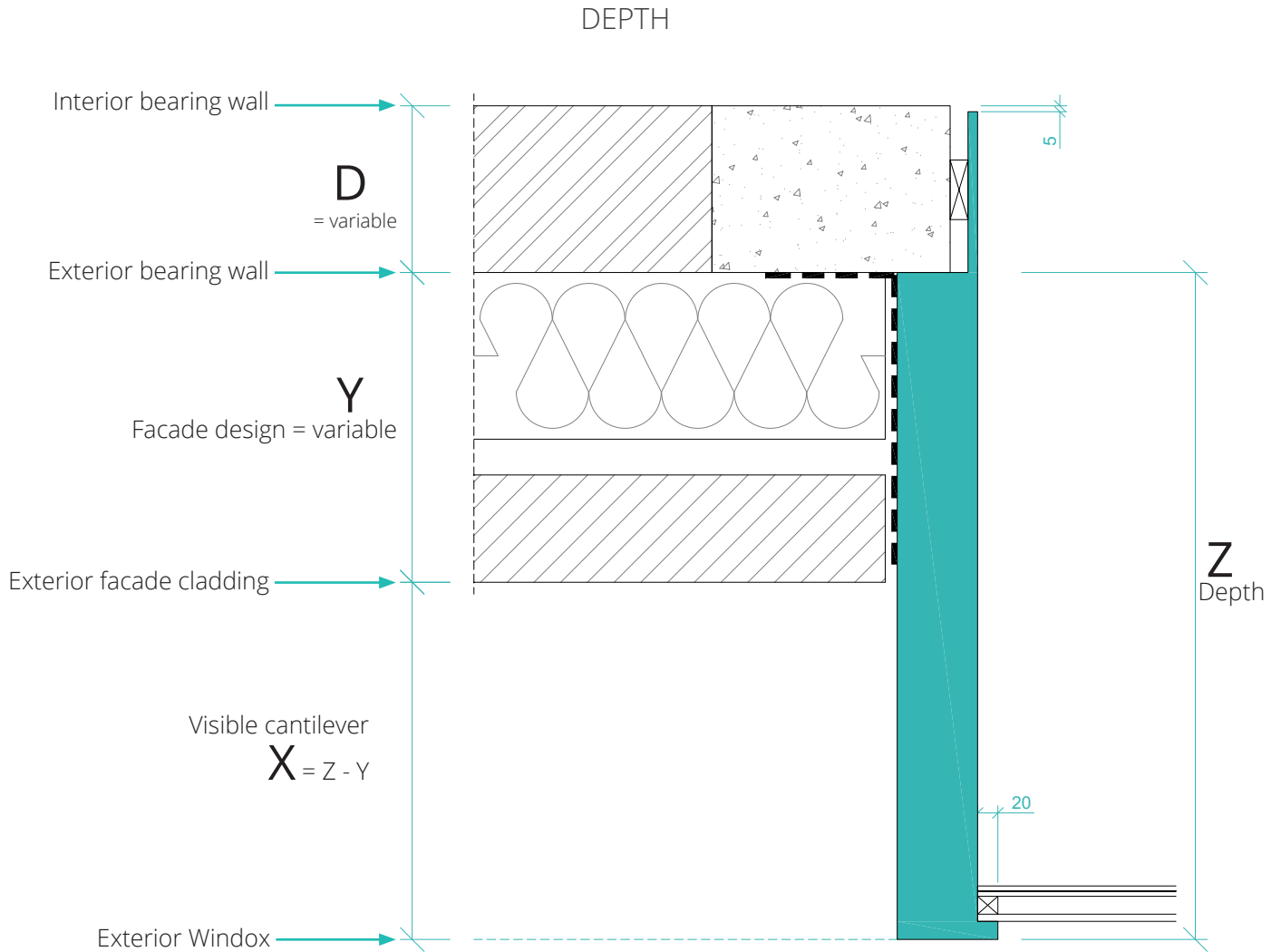


DIMENSIONS



LOAD

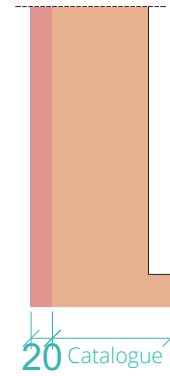




X is determined by the depth of the facade design (Y)
Z: to the outside of the Windox

S = STANDARD
 B = BALUSTRADE
 V = VENTILATION GRID
 SP = SUN PROTECTION

- Standard window box view according to catalogue
Maximum area of application if glass side and window box <18 m²
- Window box view + 20 mm adjacent space
Standard when window box:
 - Width >= 4000 mm
 - Surface area >18 m²
 - Type 2 with exterior glazing



DEPTH Z										
TYPE 1										
S	Z	307*	407*	507*	607*	707*	807*	907*	1007*	1107*
B	Z	/	/	/	/	/	/	/	/	/
V	Z	/	/	/	/	/	/	/	/	/
V + B	Z	/	/	/	/	/	/	/	/	/
SP	Z	/	/	/	/	/	/	/	/	/
SP + B	Z	/	/	/	/	/	/	/	/	/
SP + V	Z	/	/	/	/	/	/	/	/	/
SP + V + B	Z	/	/	/	/	/	/	/	/	/

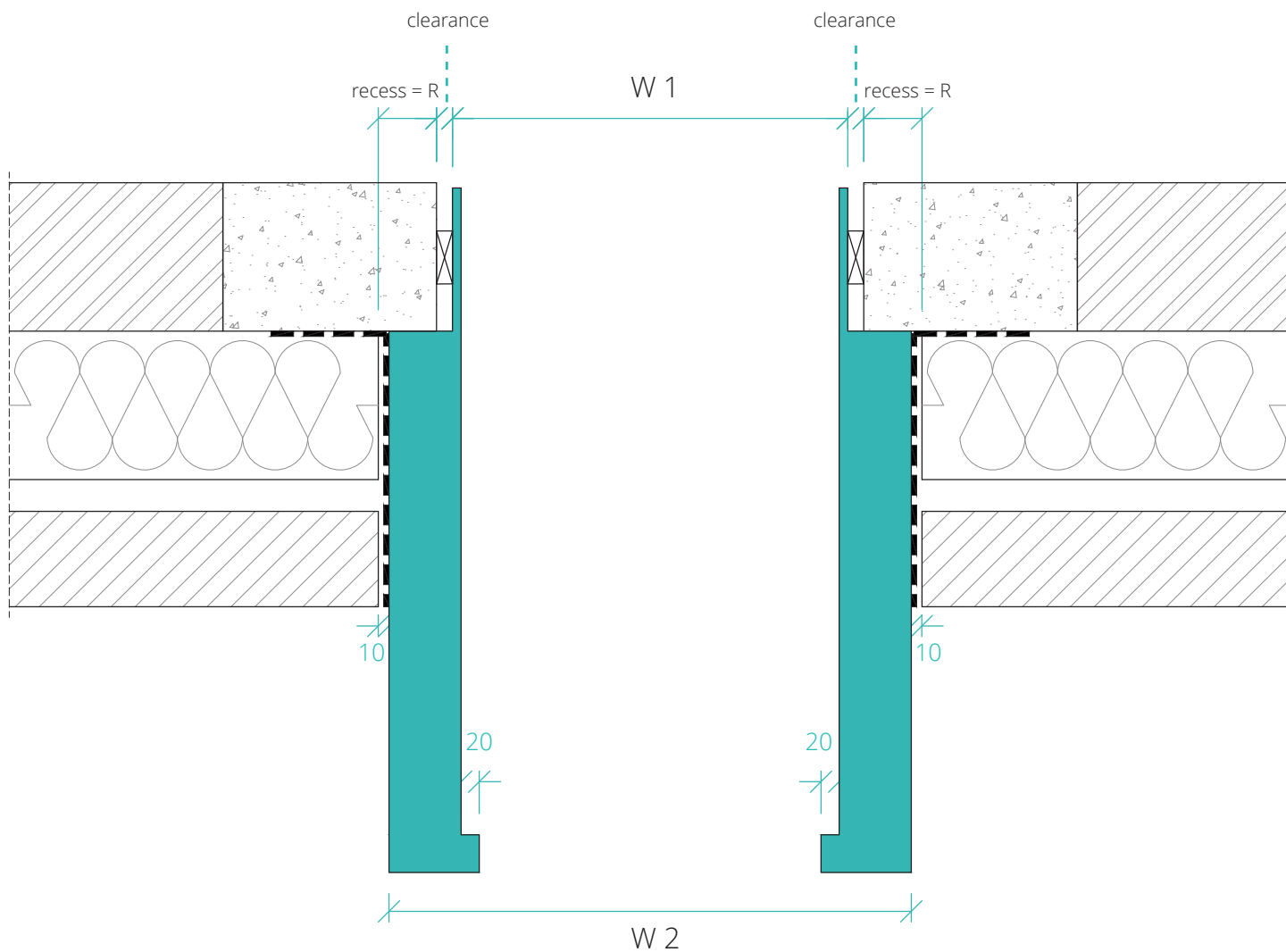
* + glass thickness

DEPTH Z										
TYPE 2										
S	Z	396	496	596	696	796	896	996	1096	1196
B	Z	/	/	/	/	/	/	/	/	/
V	Z	/	501	601	701	801	901	1001	1101	1201
V + B	Z	/	/	/	/	/	/	/	/	/
SP	Z	476	576	676	776	876	976	1076	1176	1276
SP + B	Z	/	/	/	/	/	/	/	/	/
SP + V	Z	/	611	711	811	911	1011	1111	1211	1311
SP + V + B	Z	/	/	/	/	/	/	/	/	/

DEPTH Z										
TYPE 3 / 4										
S	Z	396	496	596	696	796	896	996	1096	1196
B	Z	401	501	601	701	801	901	1001	1101	1201
V	Z	/	501	601	701	801	901	1001	1101	1201
V + B	Z	/	501	601	701	801	901	1001	1101	1201
SP	Z	476	576	676	776	876	976	1076	1176	1276
SP + B	Z	511	611	711	811	911	1011	1111	1211	1311
SP + V	Z	/	611	711	811	911	1011	1111	1211	1311
SP + V + B	Z	/	611	711	811	911	1011	1111	1211	1311

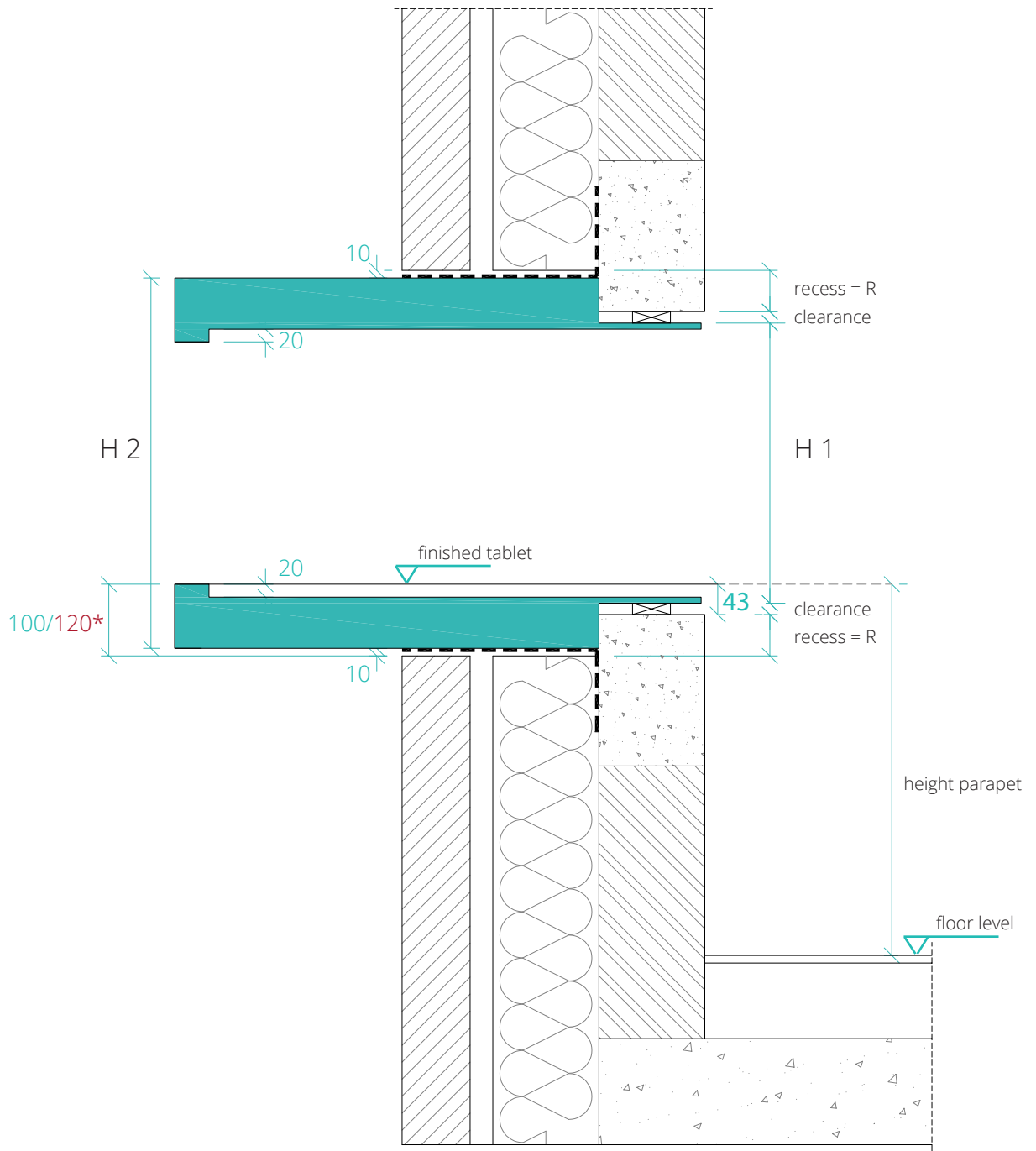
WIDTH

- STRUCTURAL CONSTRUCTION:
 - columns in concrete, steel or wood, or full masonry (based on static calculation by a design office)
- Inverted recess: see pages 41-42



HEIGHT AT PARAPET

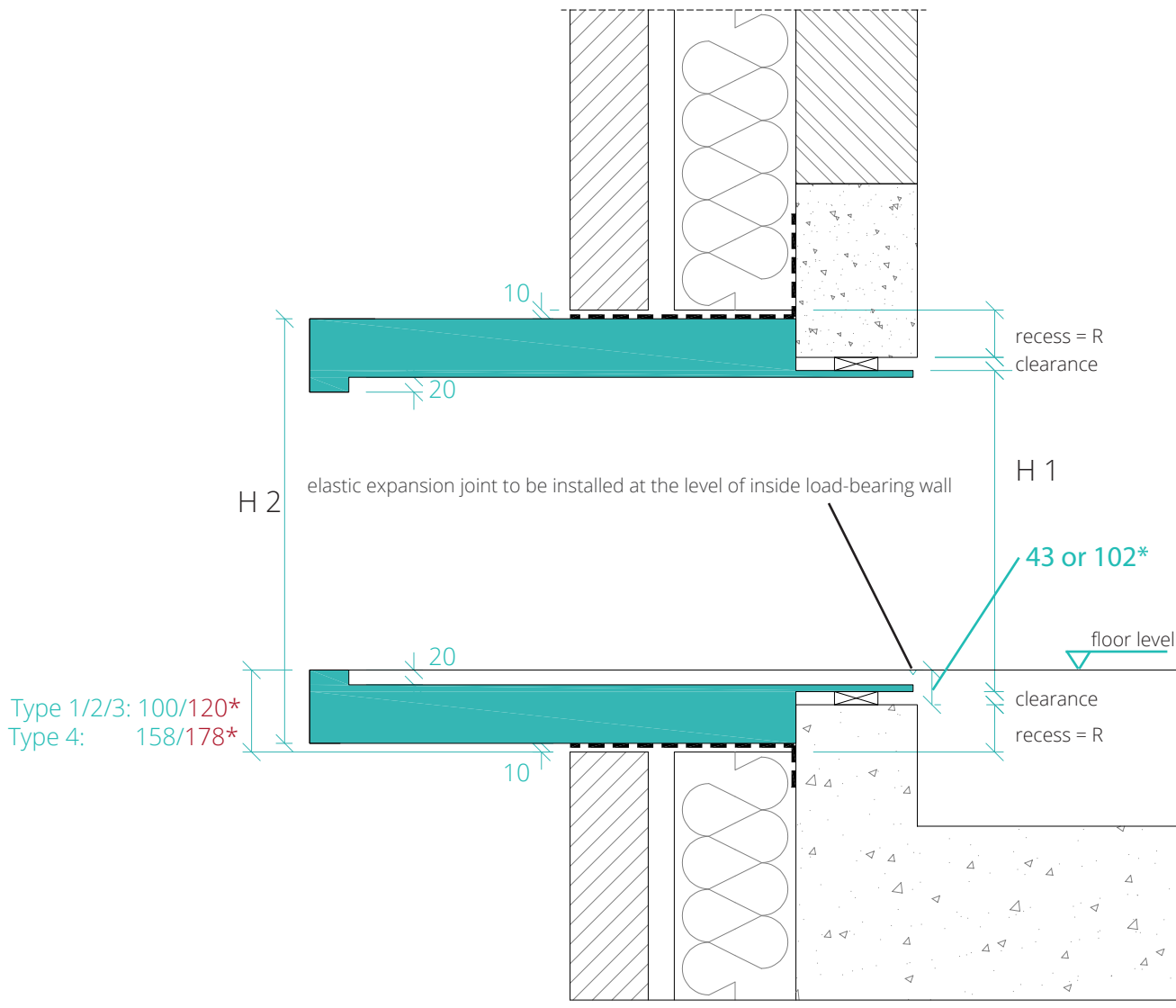
- Structural construction:
- beams in concrete, steel or wood (based on static calculation by an agency)
- Inverted recess: see pages 41-42



* see page 37

AT FLOOR LEVEL

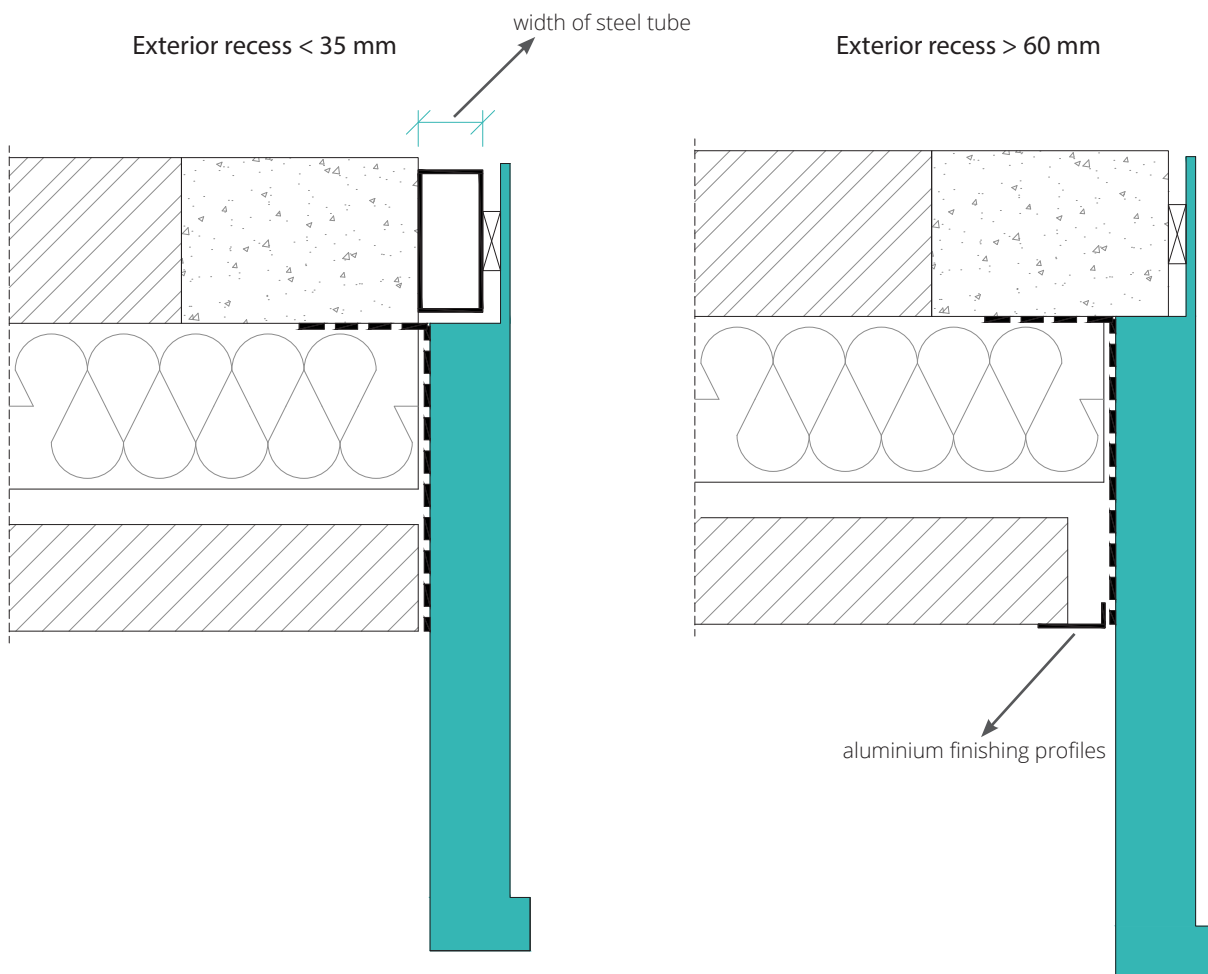
- Structural construction: beams in concrete, steel or wood (based on static calculation by an agency)
- * □ Windows at floor level:
 - type 1, 2 and 3: top of concrete beam at **-43mm** in relation to floor level
 - type 4: top of concrete beam at **-102mm** in relation to floor level
- Inverted recess: see pages 41-42
- Additional floors inside a Windox are an option: on request



* see page 37

REVERSED RECESS

- For an optimal installation, Windox recommends an **exterior recess of 55 mm or 75mm on all 3 sides.** (depends on depth, see table page 37).
The reversed recess at the top can vary depending on the chosen options (see cross-sections).
- In the case of smaller external or internal recess, the structural contractor must install additional steel tubes around the load-bearing structure.
Windox advises to cast a concrete upstand at the bottom, with anchors in the underlying structure.
- If the outer recess are too big, the elastic joint all around becomes too wide to use sealant, so additional coated aluminium finishing strips will have to be placed. This, however, will affect the visual slenderness of the unit. (Not part of Windox performance).



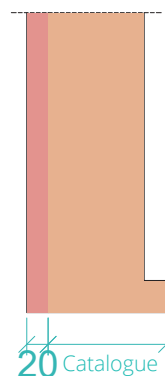
THE TABLE BELOW IS ONLY APPLICABLE FOR TYPE 1 / 2 / 3

The size of the inverted recess depends on depth (Z) (see page 37)

EXTERIOR RECESS						
EXTERIOR RECESS		SIDES / BELOW		ABOVE		
		WIDTH OF STEEL TUBE	CLEARANCE	WIDTH OF STEEL TUBE	CLEARANCE	
		ONLY FOR STANDARD & BALUSTRADE				
Optimal:	60	80	/	10	/	25
	55	75	/	15	/	30
	50	70	/	20	/	35
	45	65	/	25	/	40
	40	60	/	30	/	45
	35	55	/	35	/	50
	30	50	/	40	40	15
	25	45	/	45	40	20
	20	40	40	10	40	25
	15	35	40	15	40	30
	10	30	40	20	40 60	35 15
	5	25	40	25	60	20
	0	20	40 60	30 10	60	25
	-5	15	60	15	60	30
	-10	10	60	20	60 80	35 15
	-15	5	60	25	80	20
-20	0	80	10	80	25	
-25	-5	80	15	80	30	

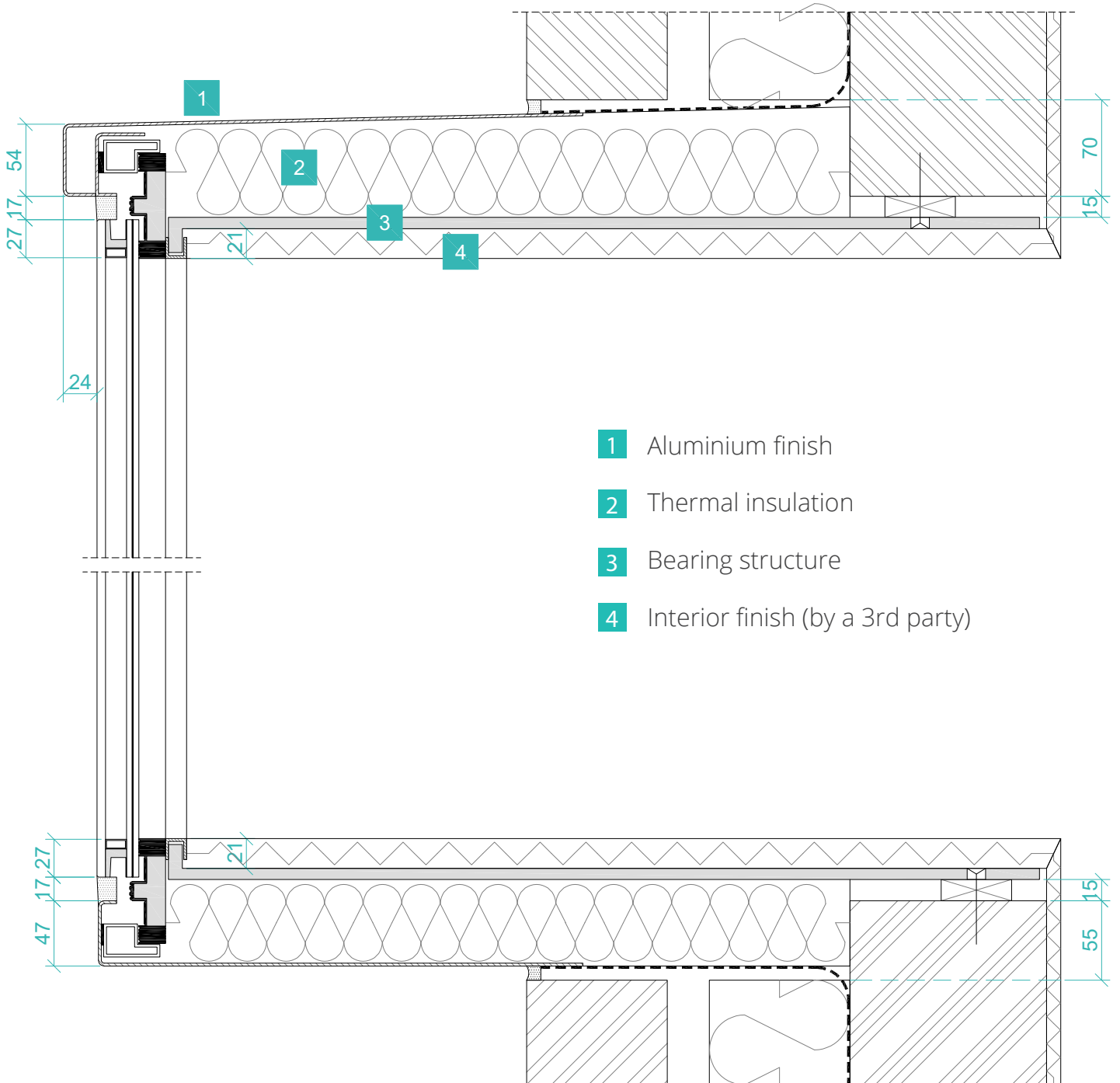
- Standard window box view according to catalogue
- Maximum area of application in case of glass side**
- Window box view + 20 mm

see page 37

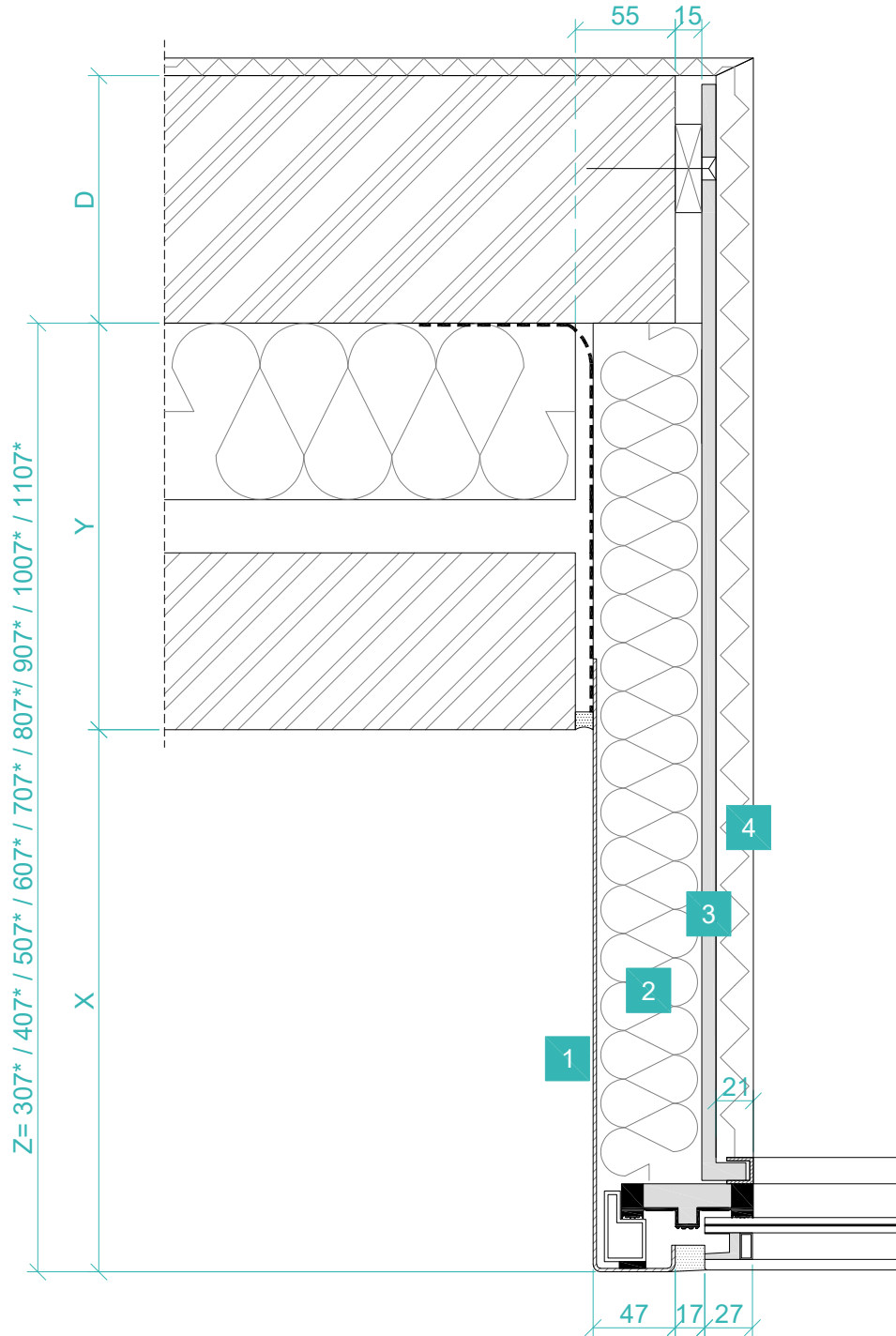


TYPES

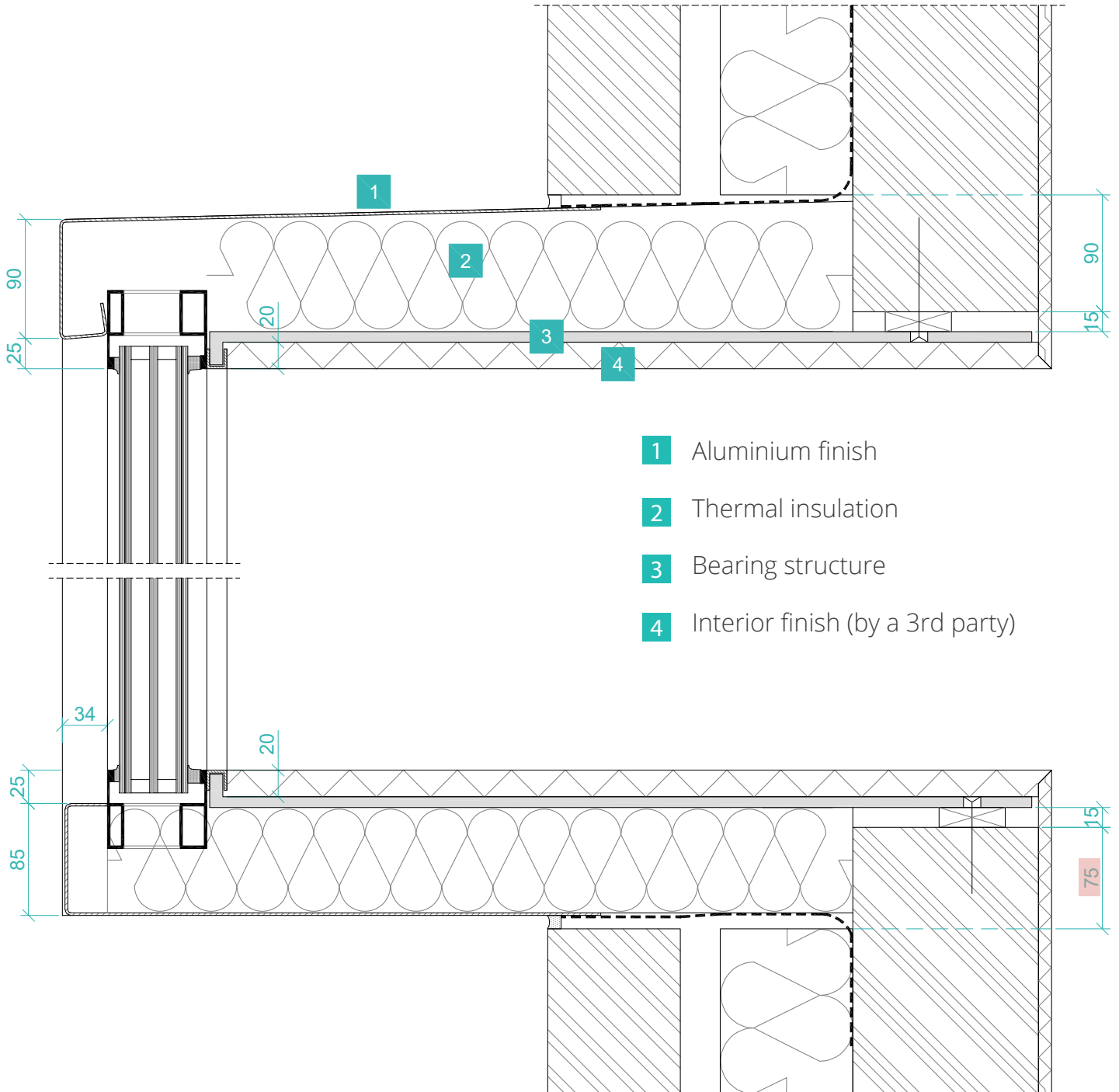
Vertical cross-cut



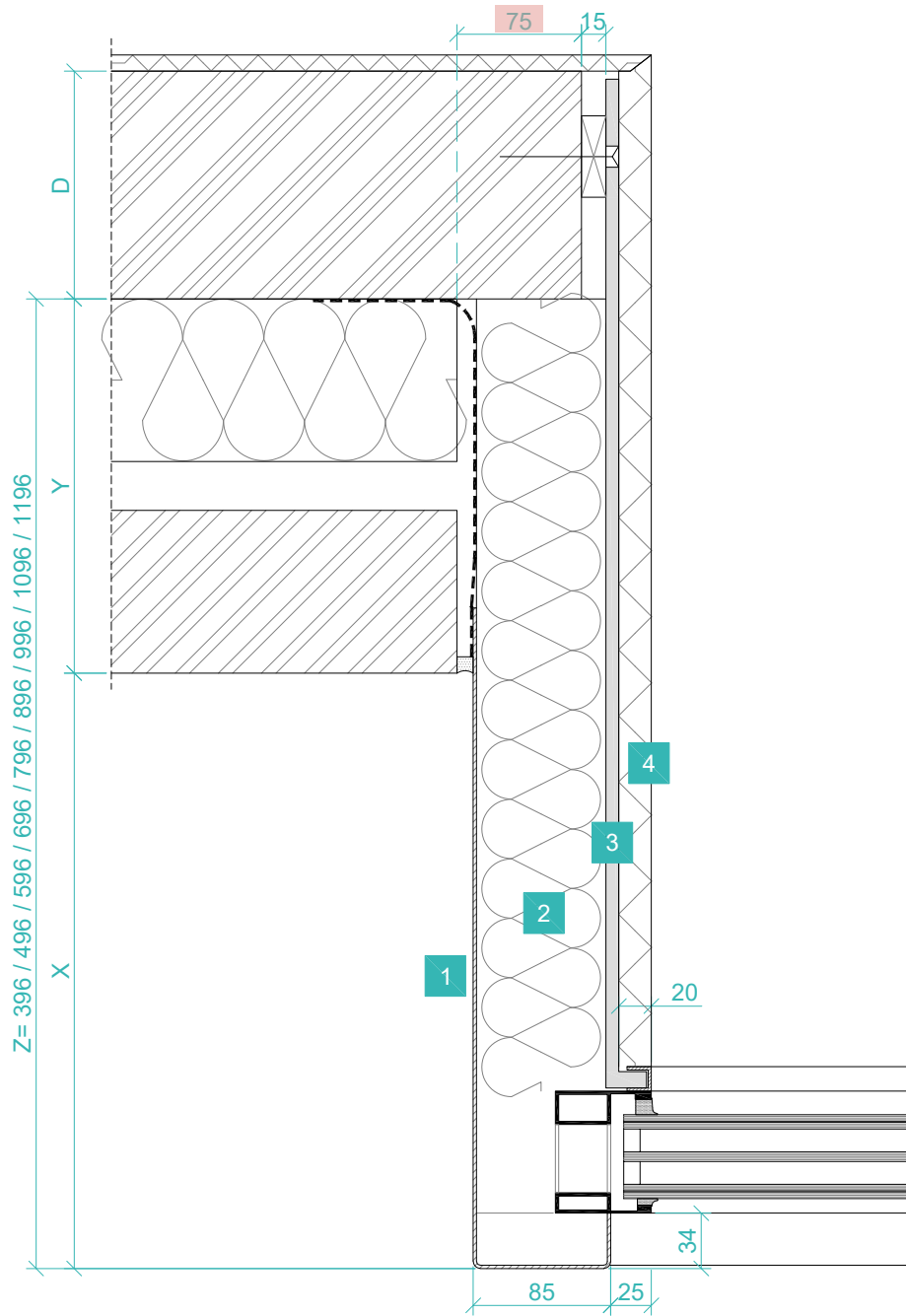
Horizontal cross-cut



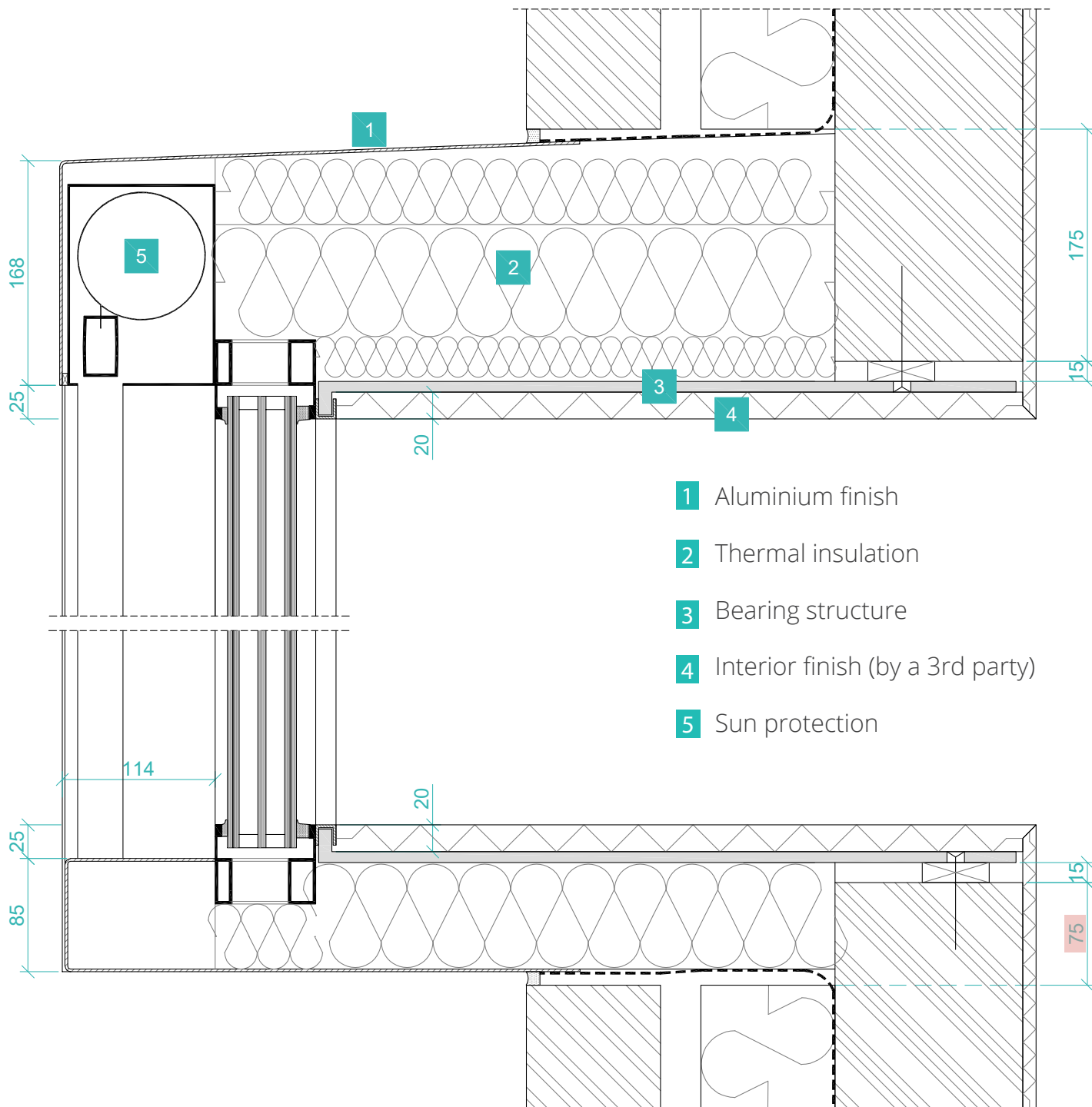
Vertical cross-cut



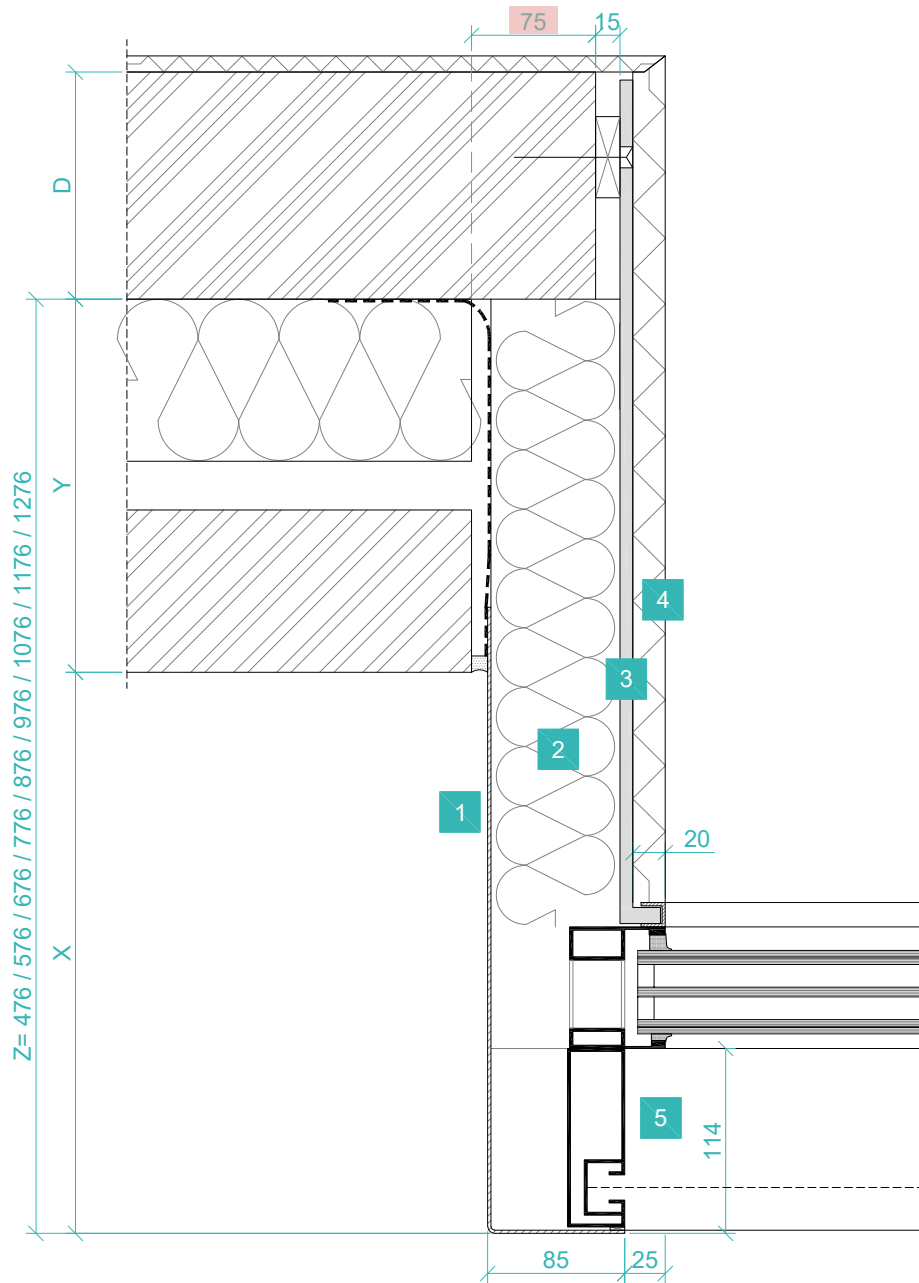
Horizontal cross-cut



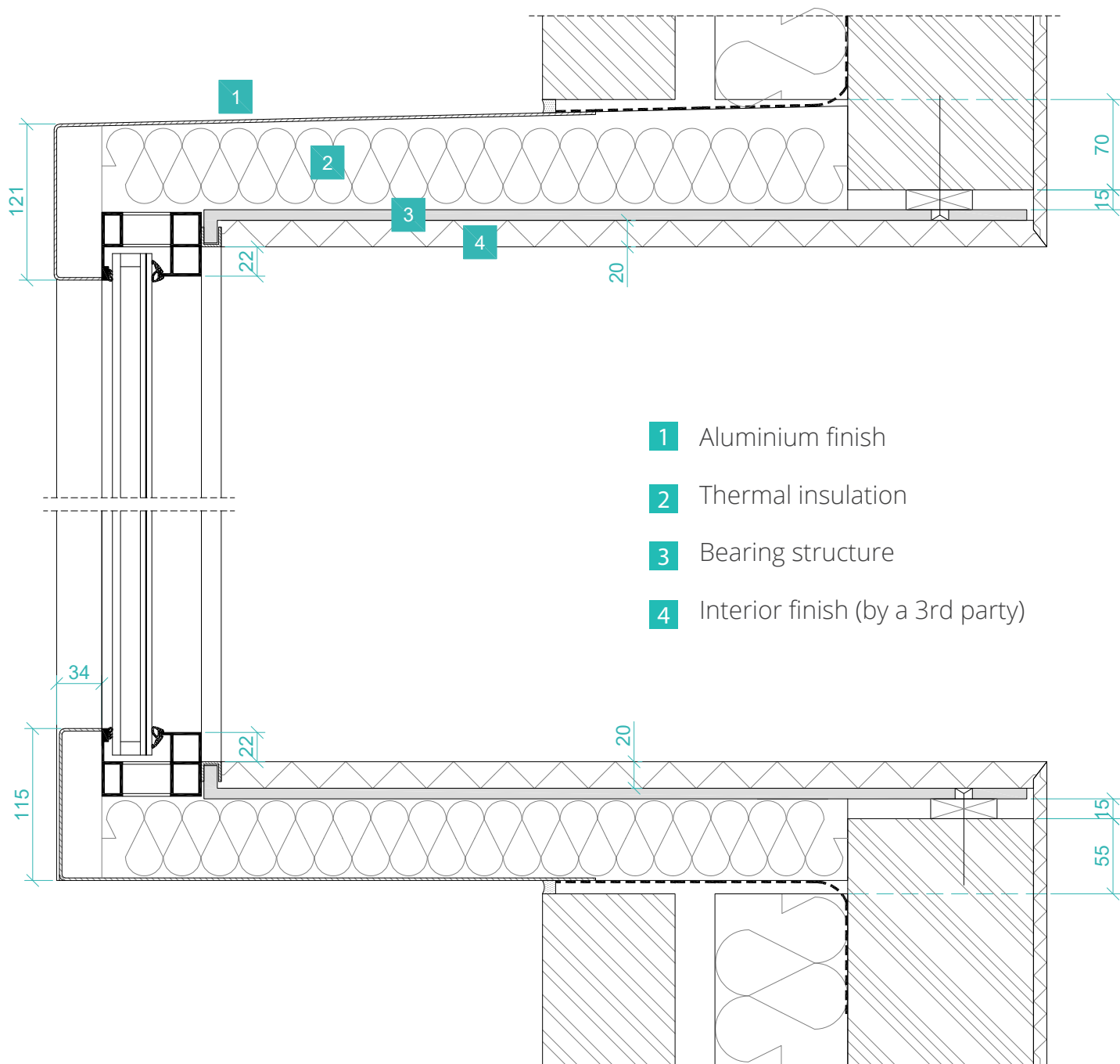
Vertical cross-cut



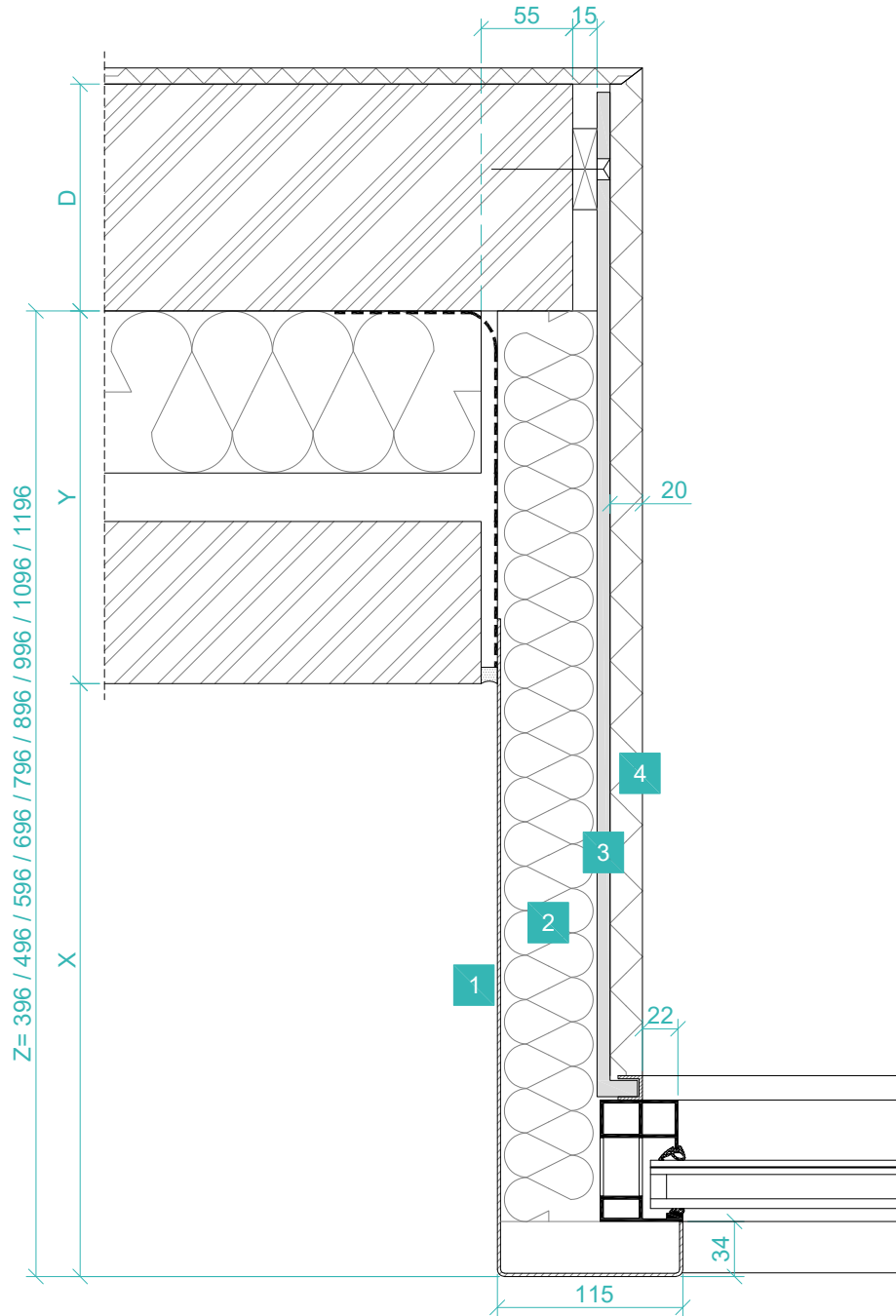
Horizontal cross-cut



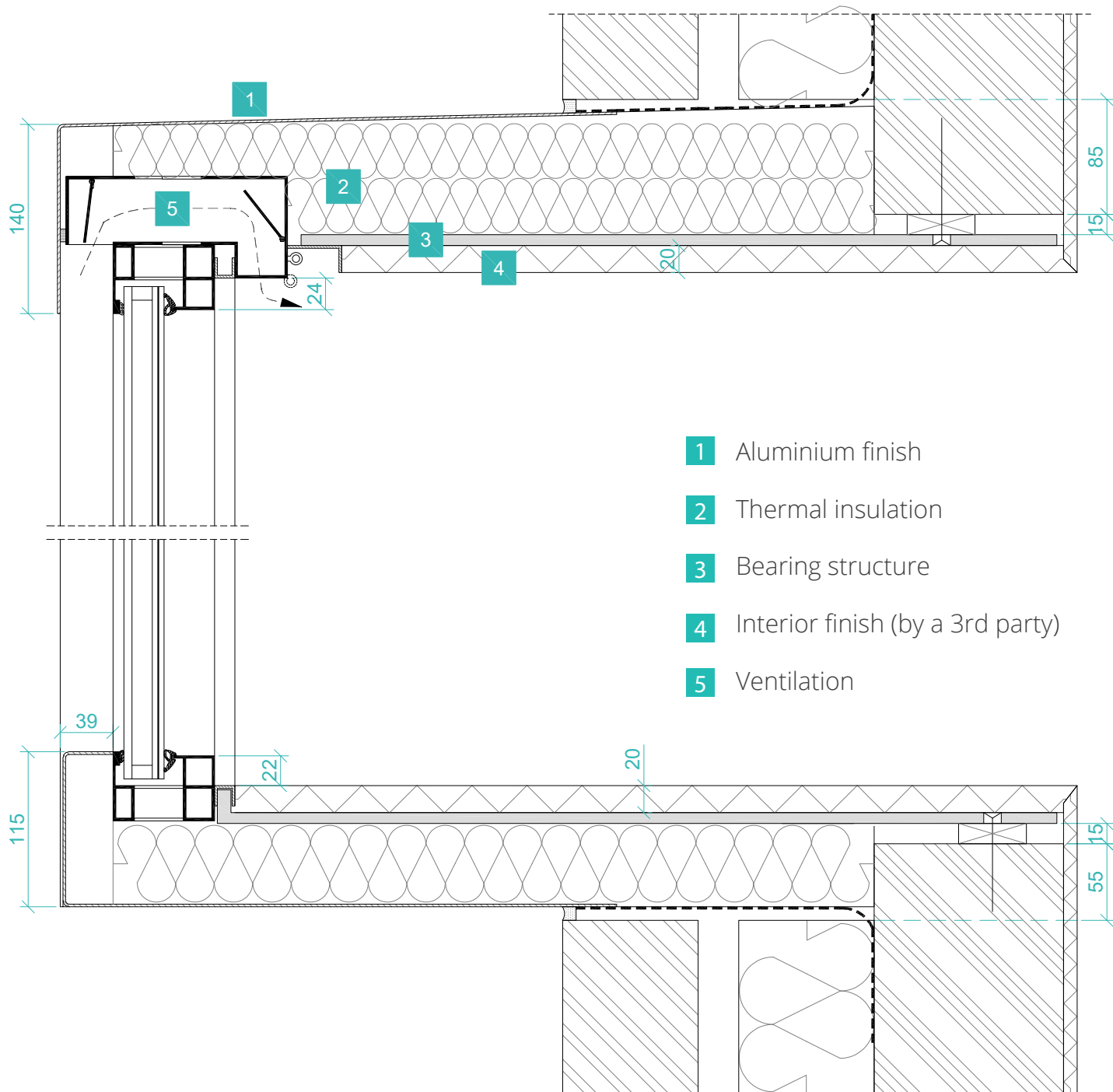
Vertical cross-cut



Horizontal cross-cut

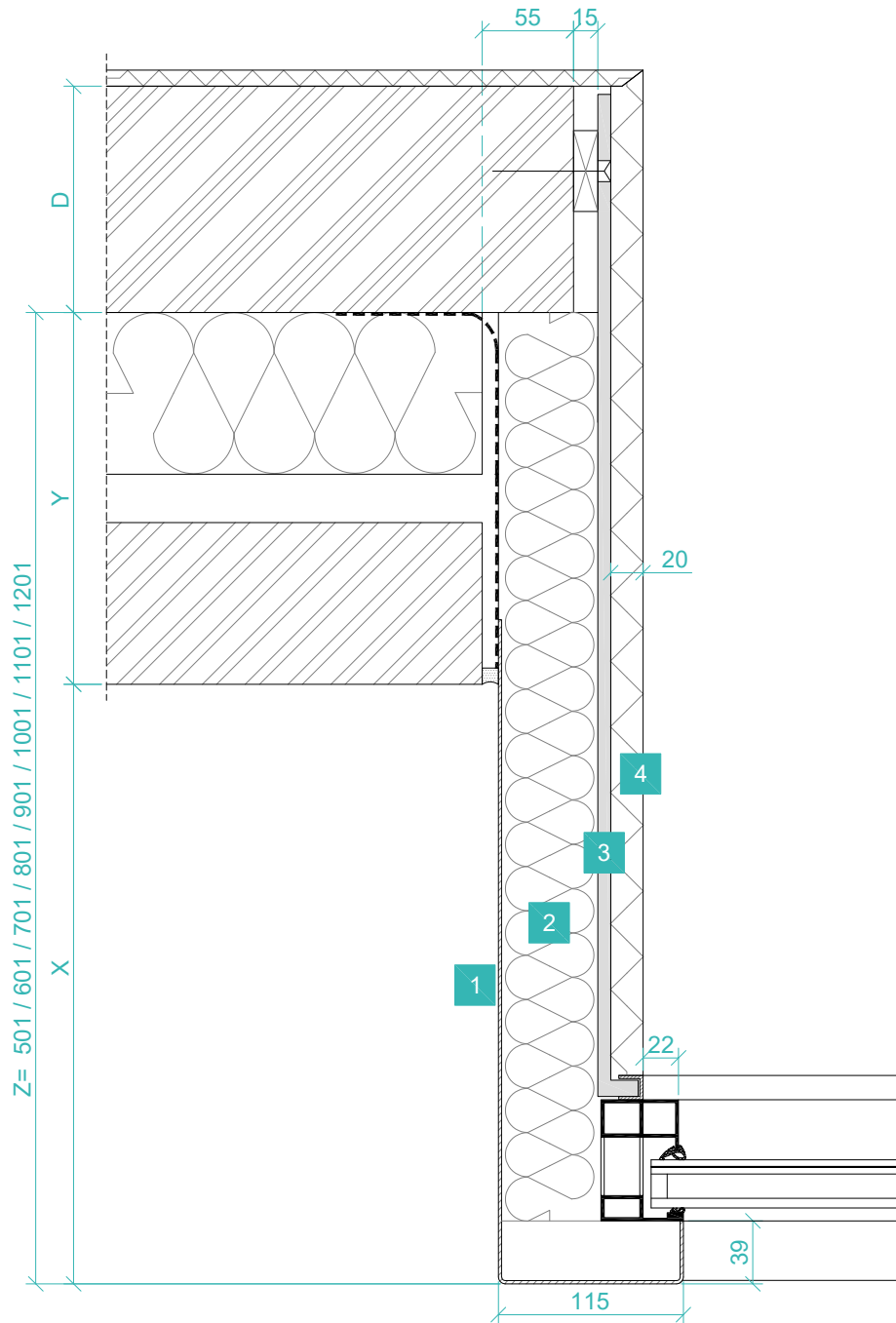


Vertical cross-cut

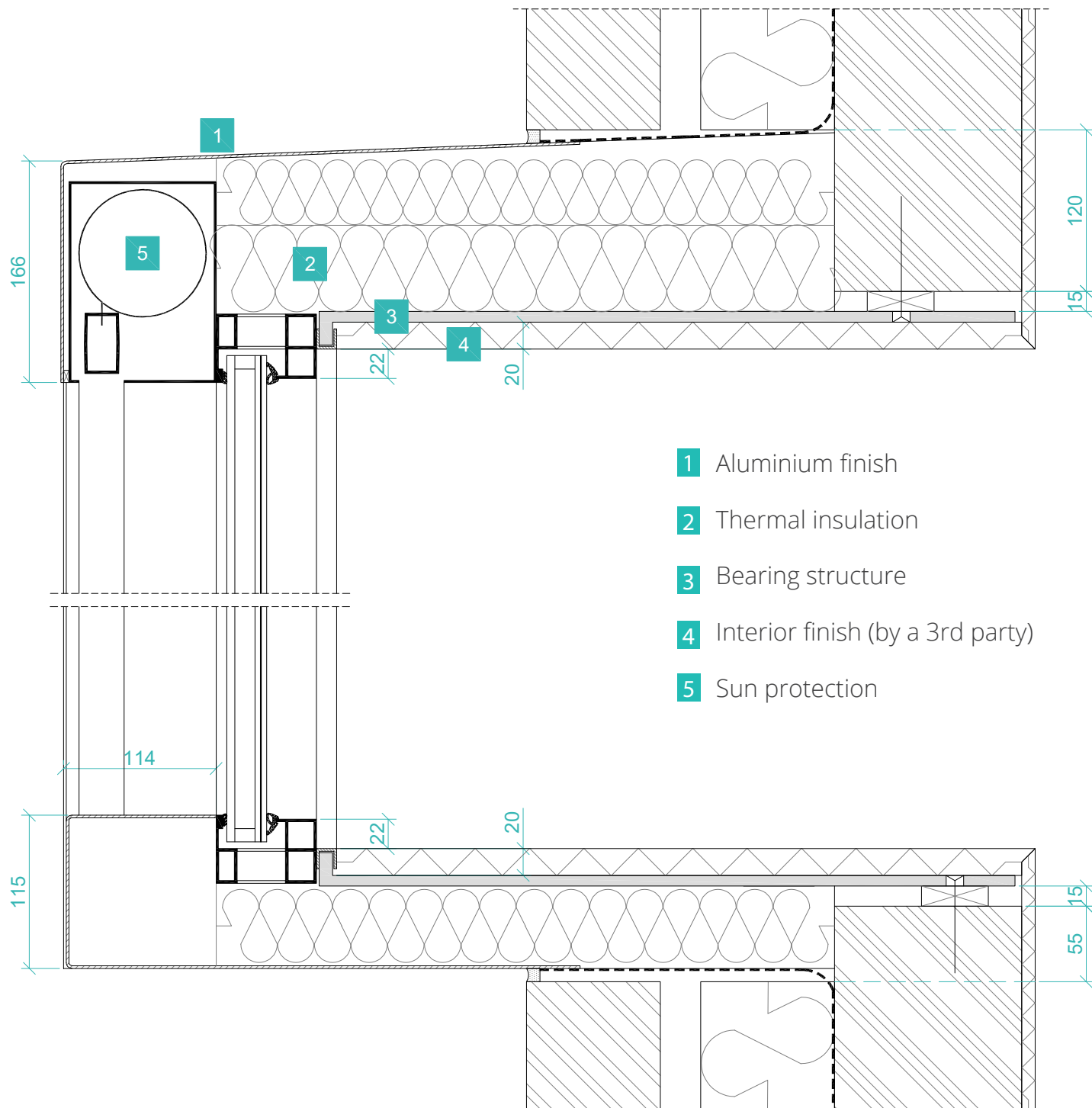


- 1 Aluminium finish
- 2 Thermal insulation
- 3 Bearing structure
- 4 Interior finish (by a 3rd party)
- 5 Ventilation

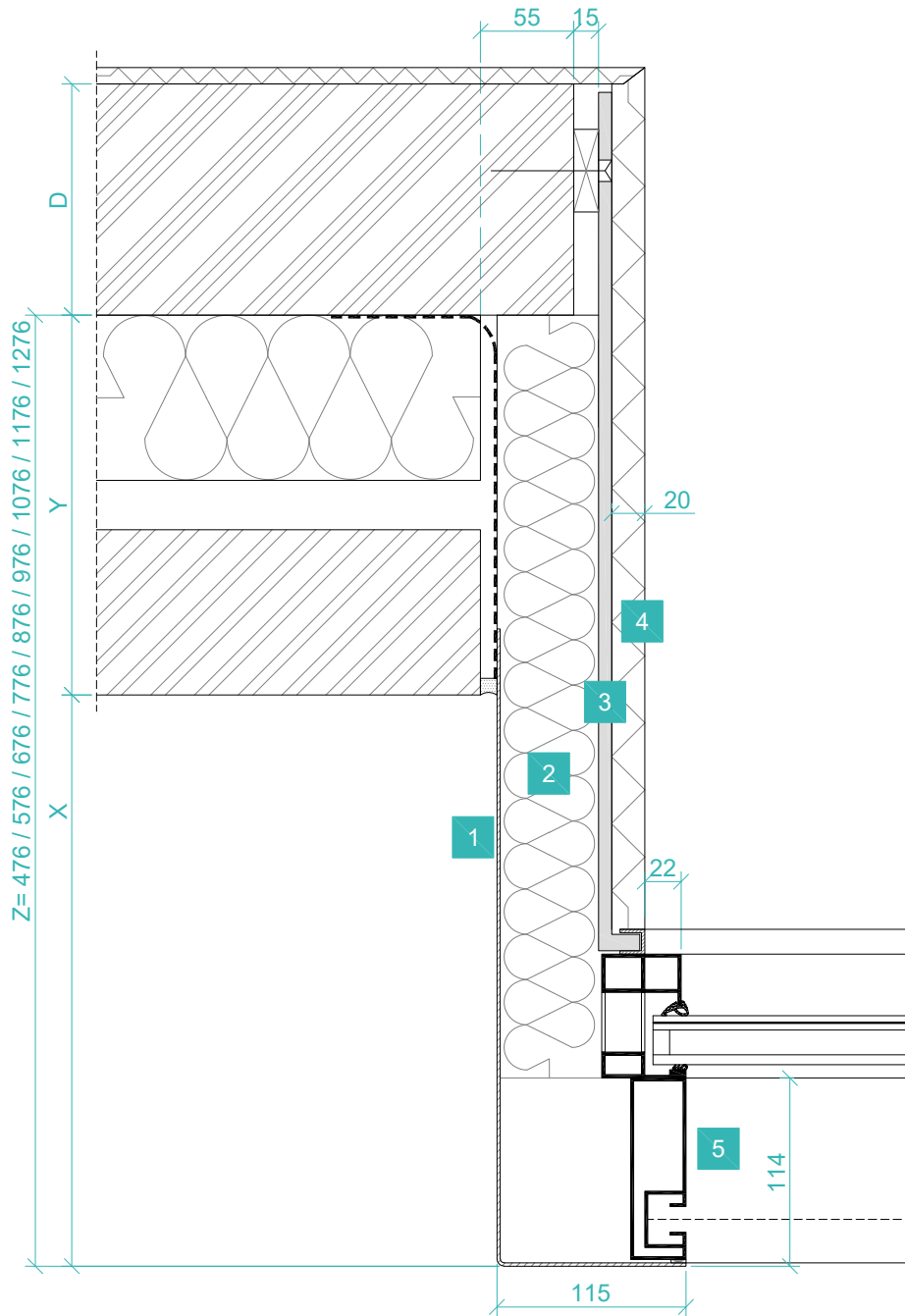
Horizontal cross-cut



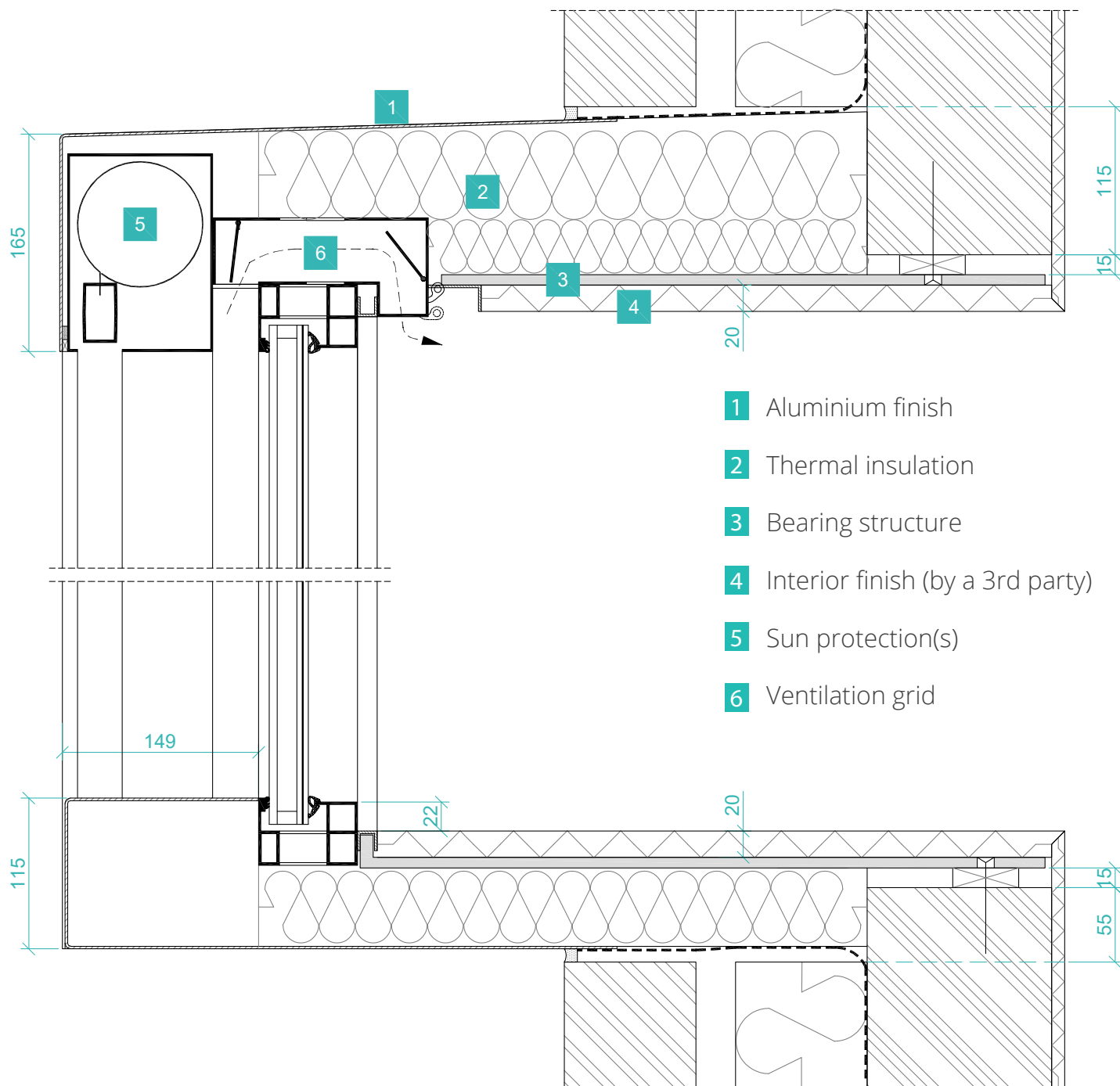
Vertical cross-cut



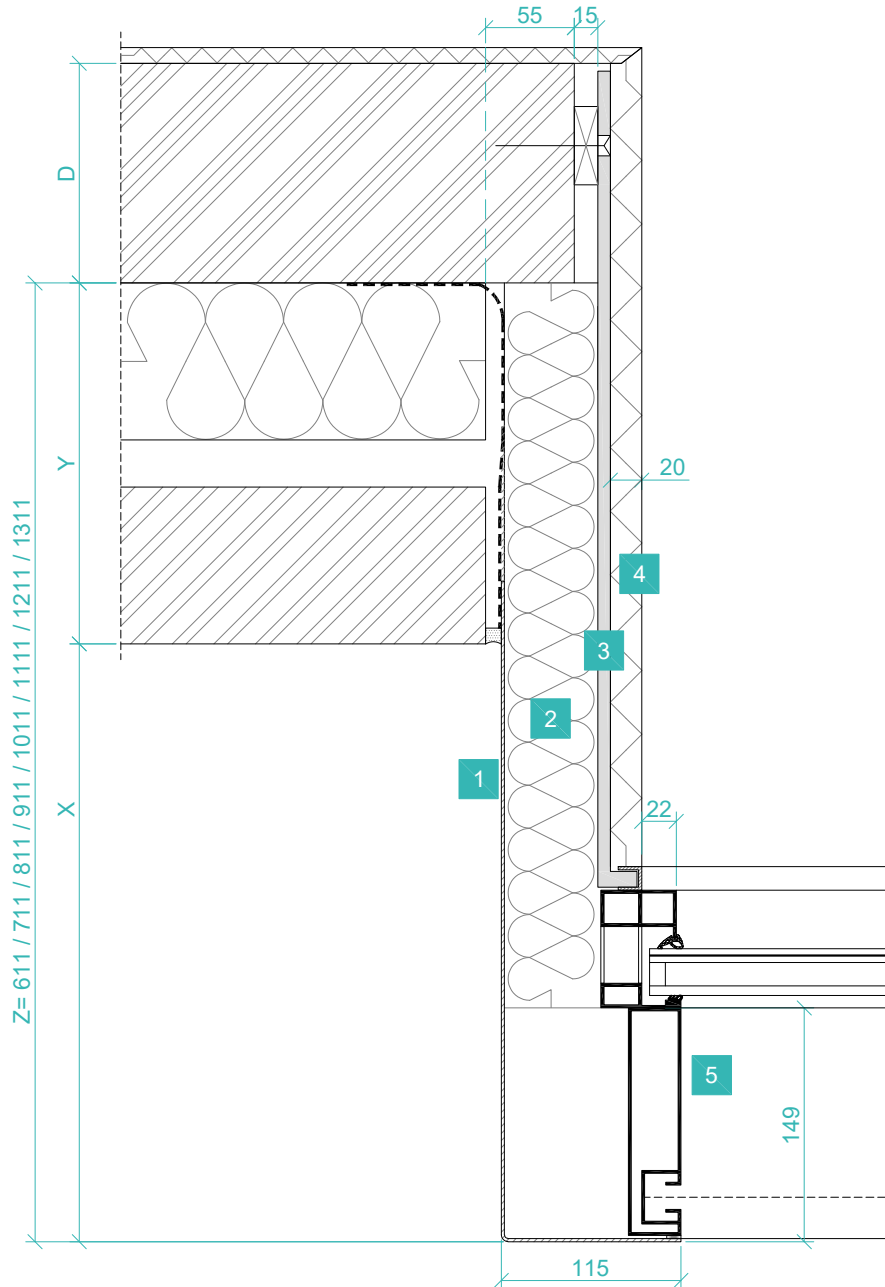
Horizontal cross-cut



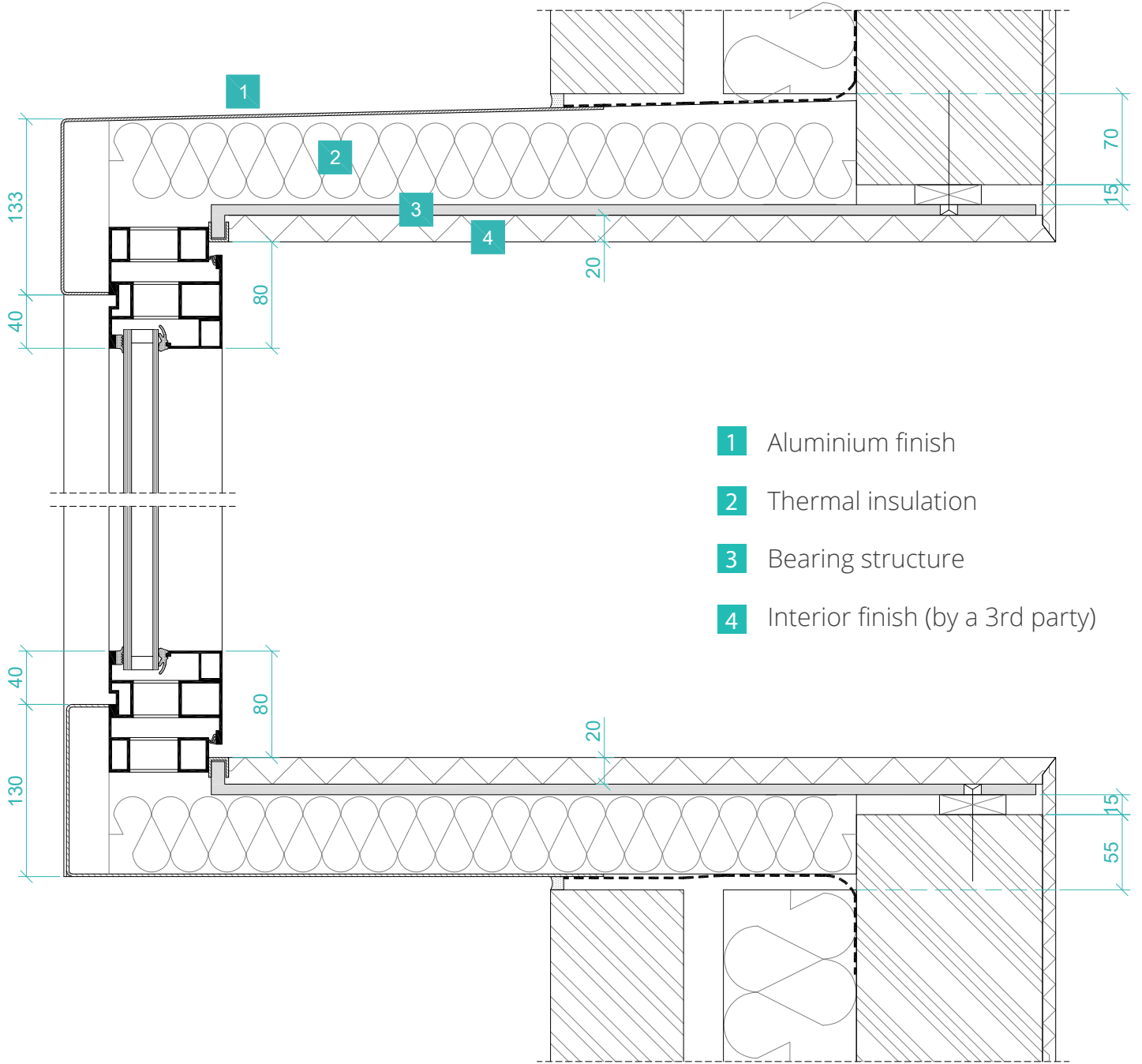
Vertical cross-cut



Horizontal cross-cut

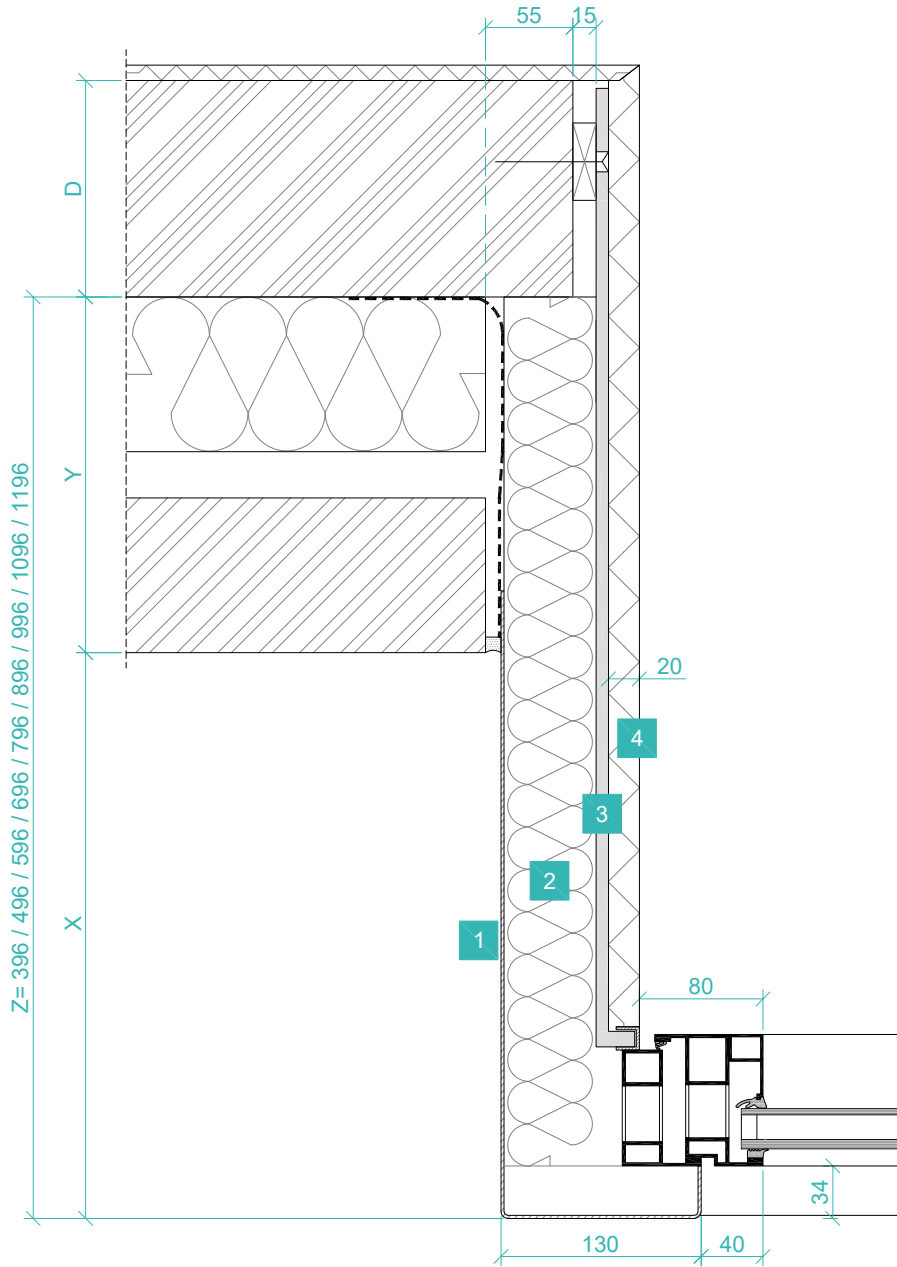


Vertical cross-cut

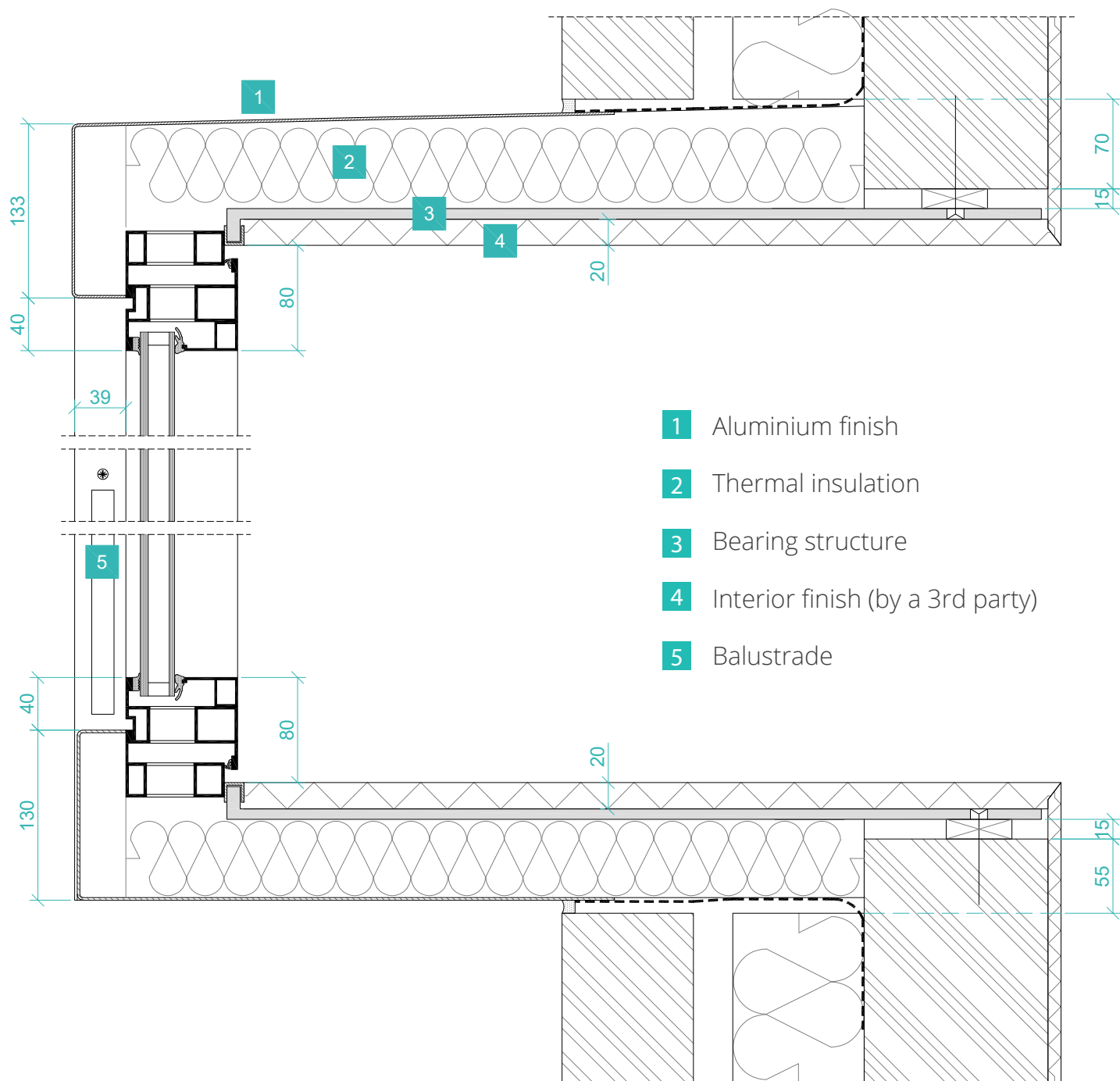


- 1 Aluminium finish
- 2 Thermal insulation
- 3 Bearing structure
- 4 Interior finish (by a 3rd party)

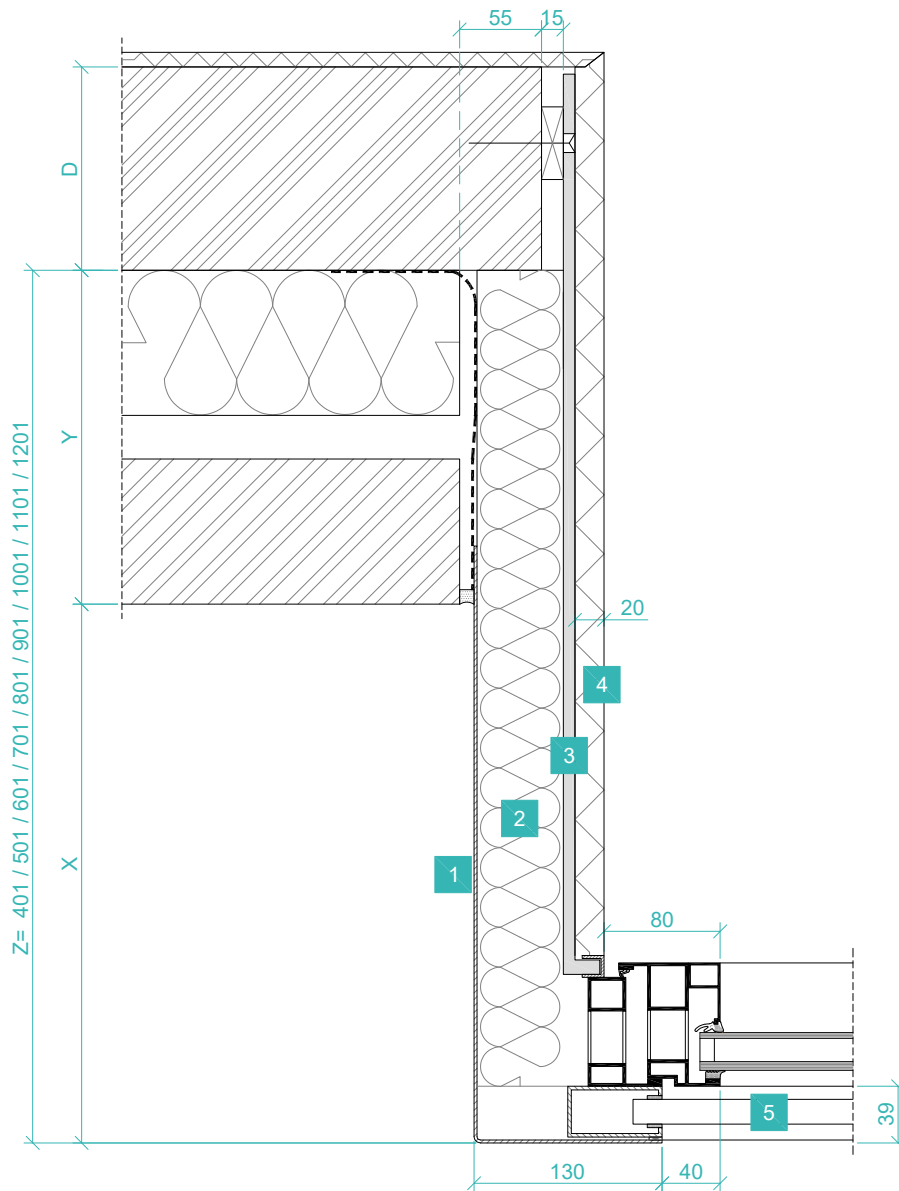
Horizontal cross-cut



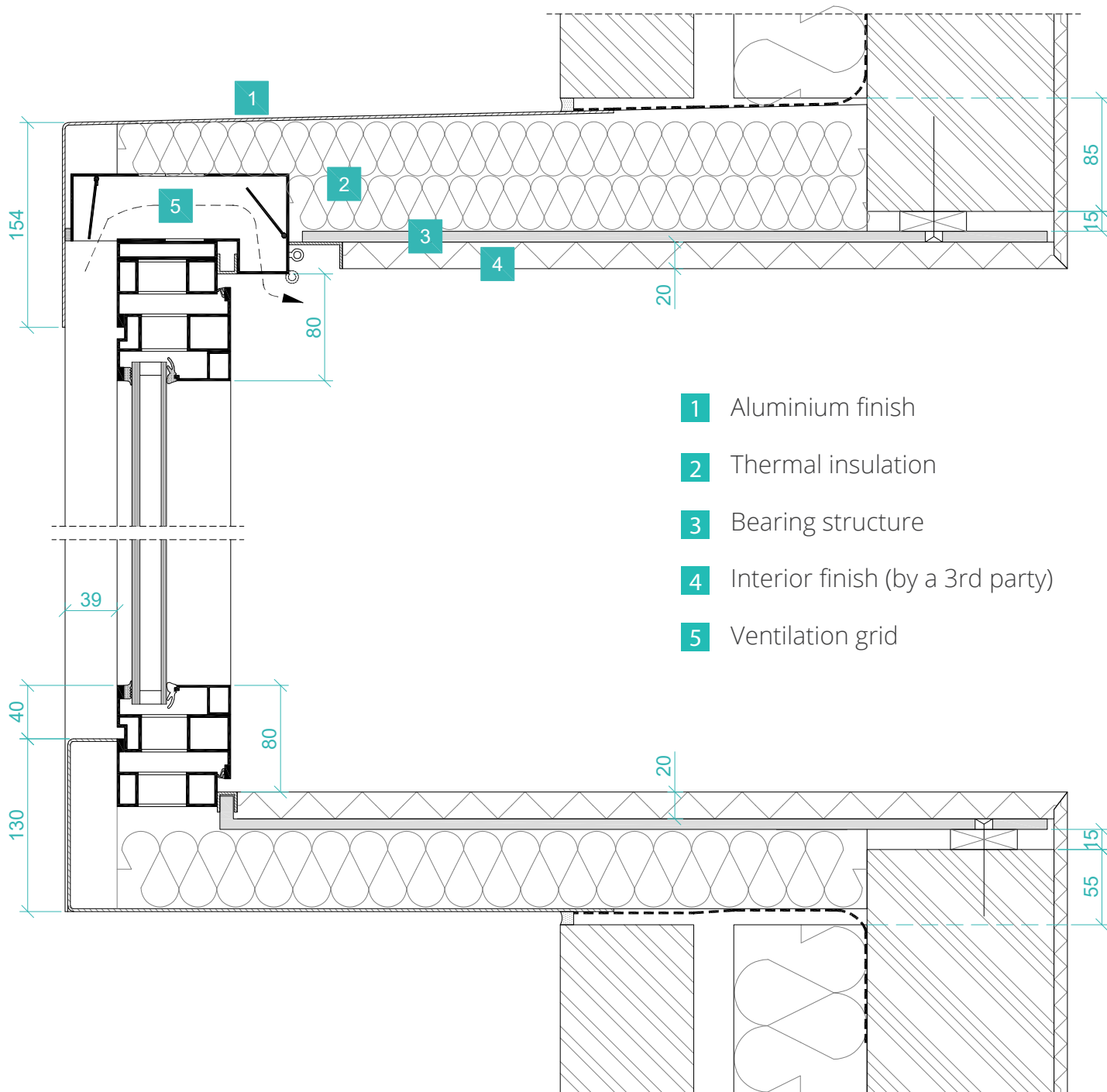
Vertical cross-cut



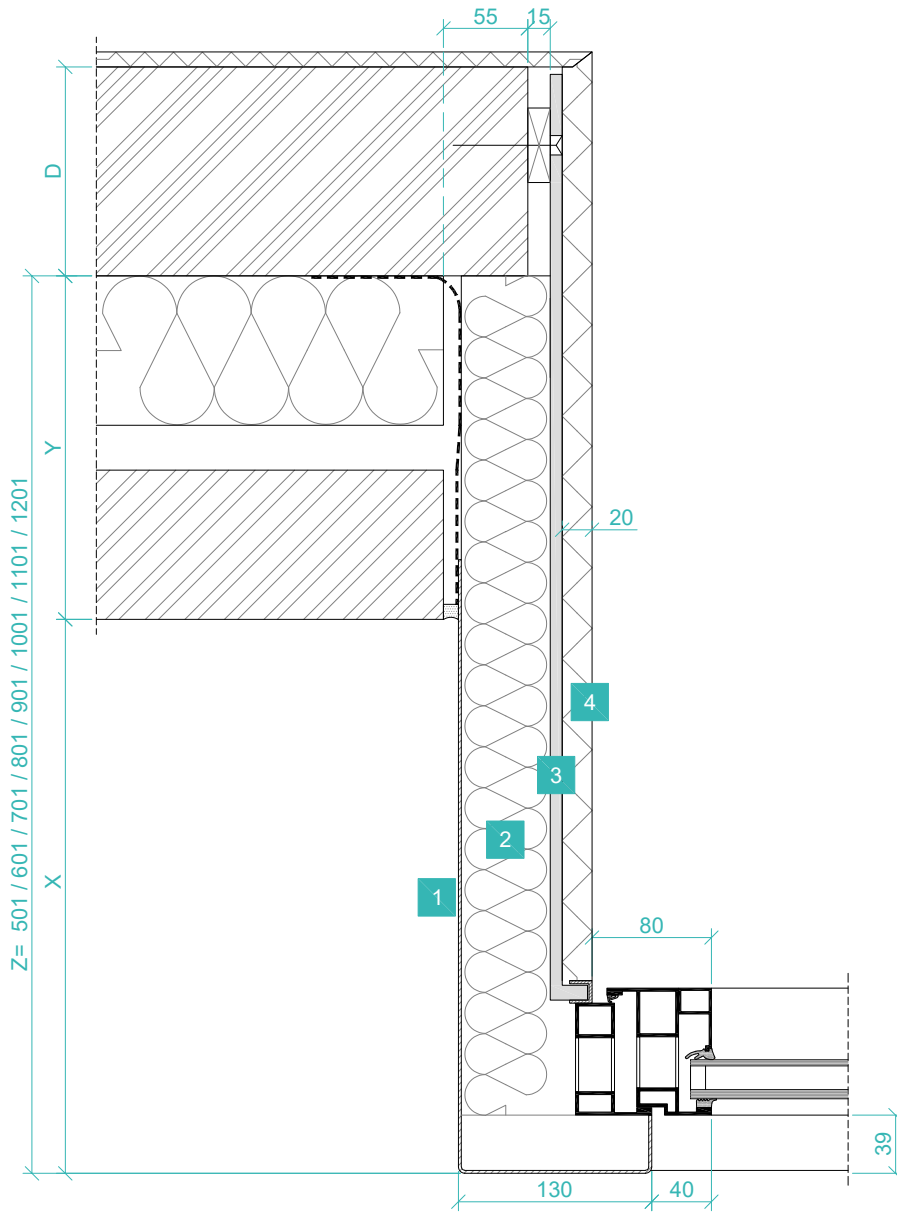
Horizontal cross-cut



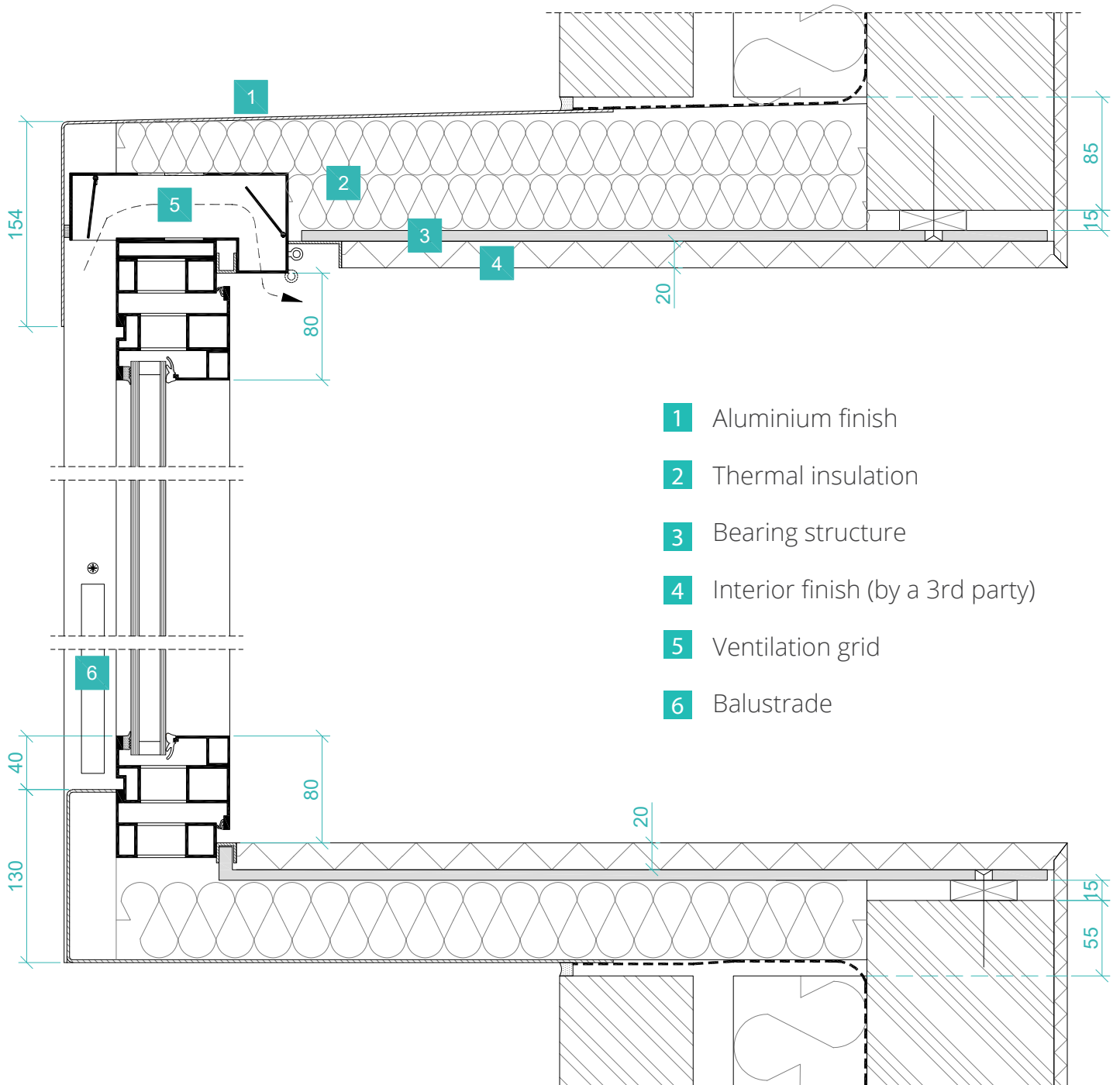
Vertical cross-cut



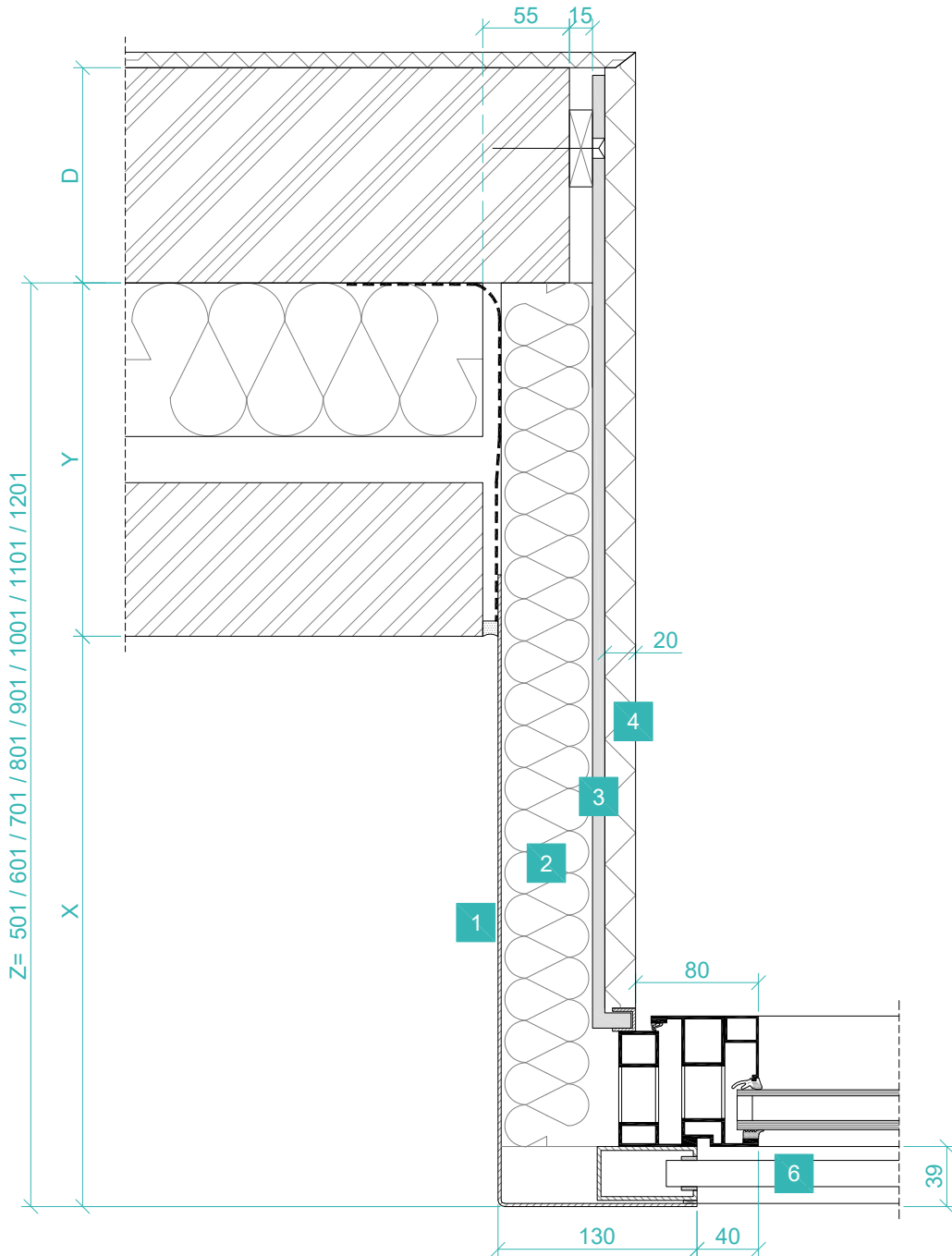
Horizontal cross-cut



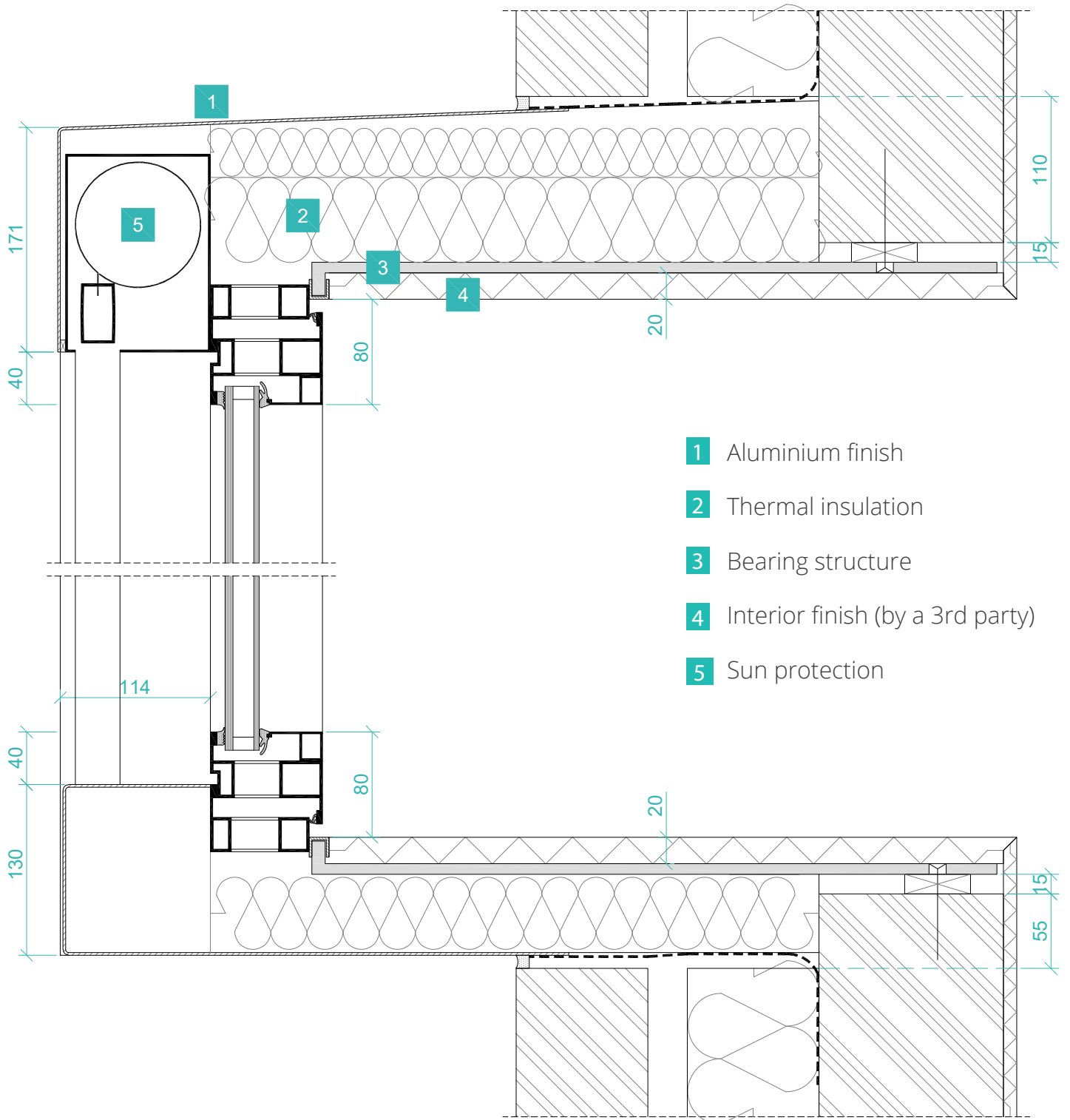
Vertical cross-cut



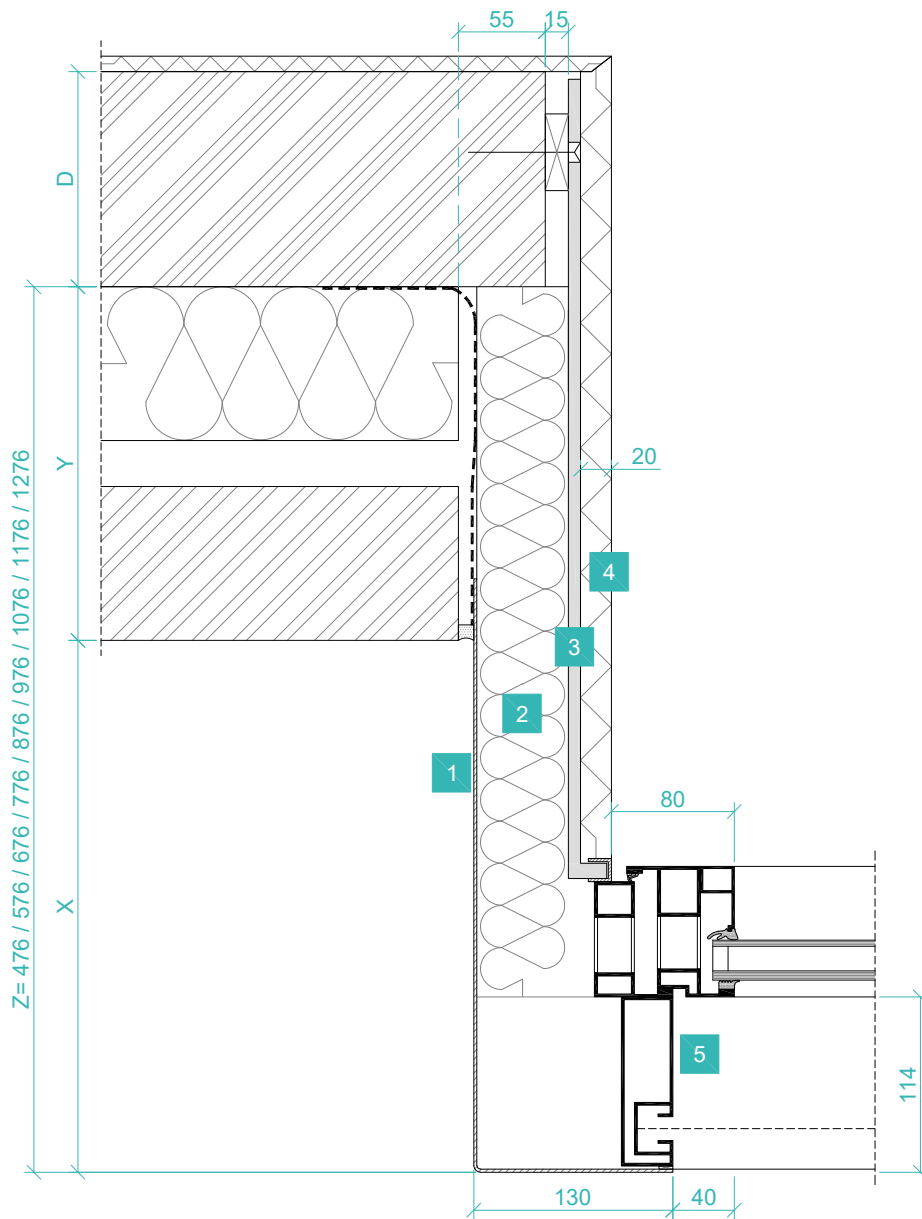
Horizontal cross-cut



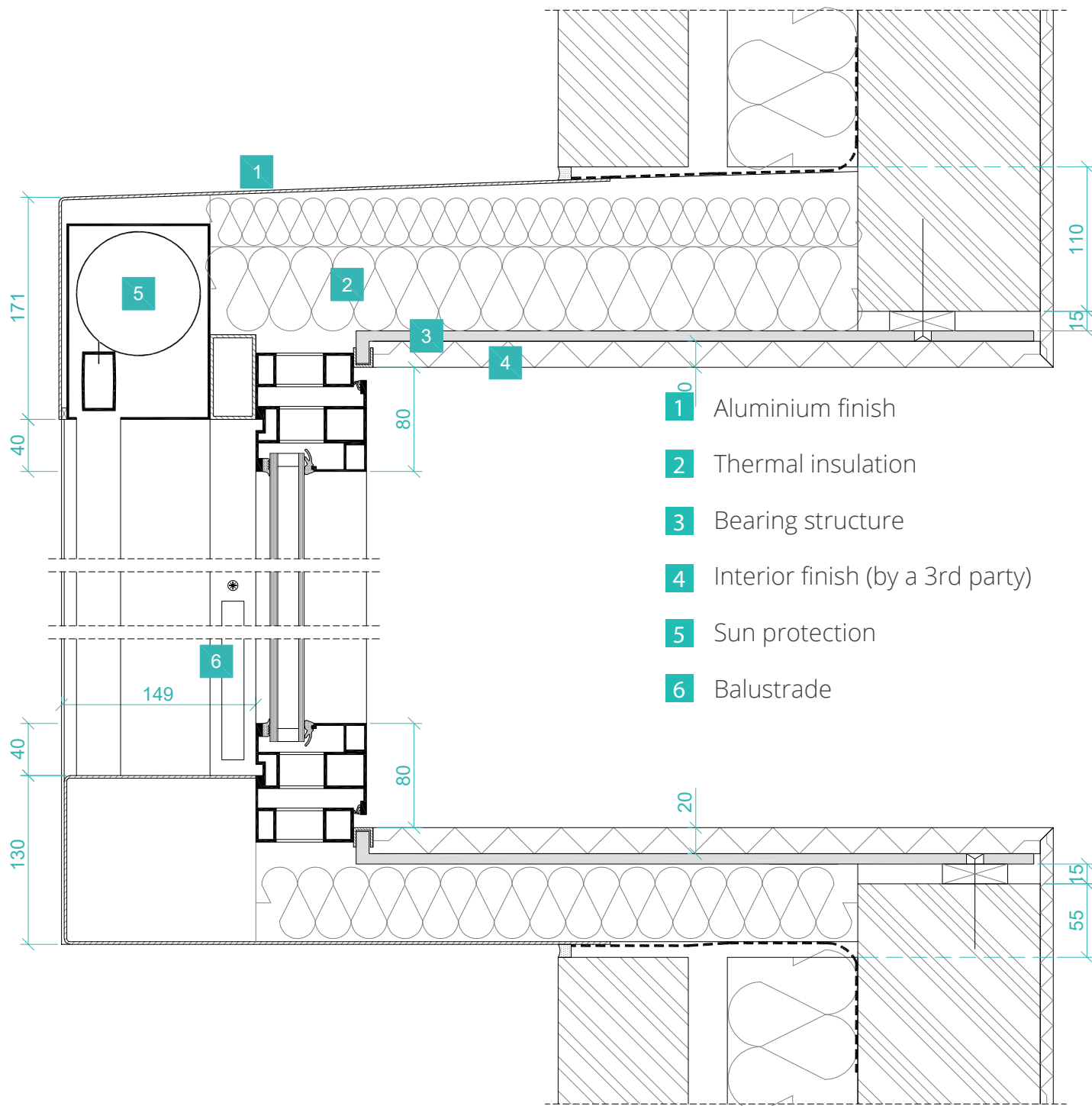
Vertical cross-cut



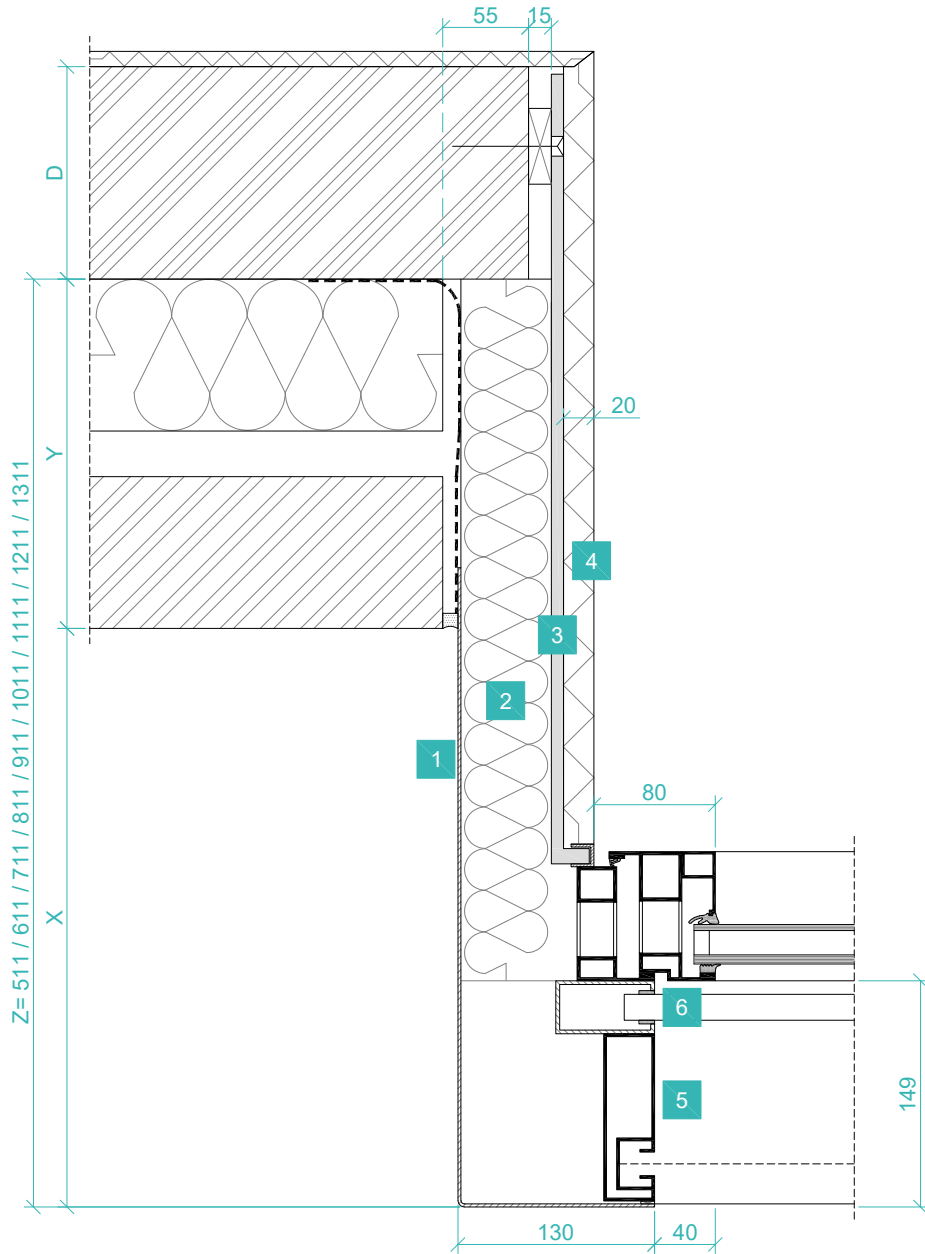
Horizontal cross-cut



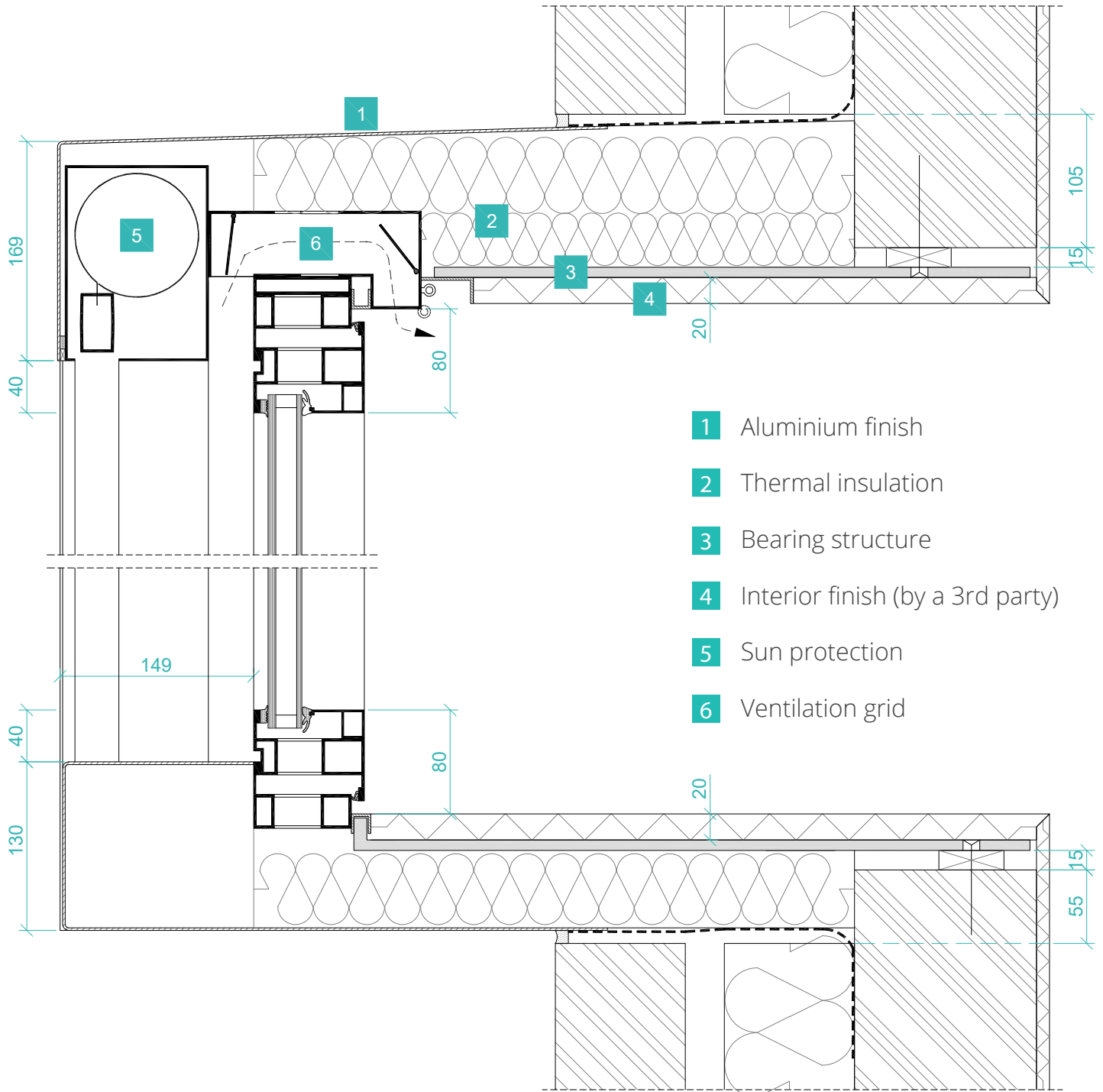
Vertical cross-cut



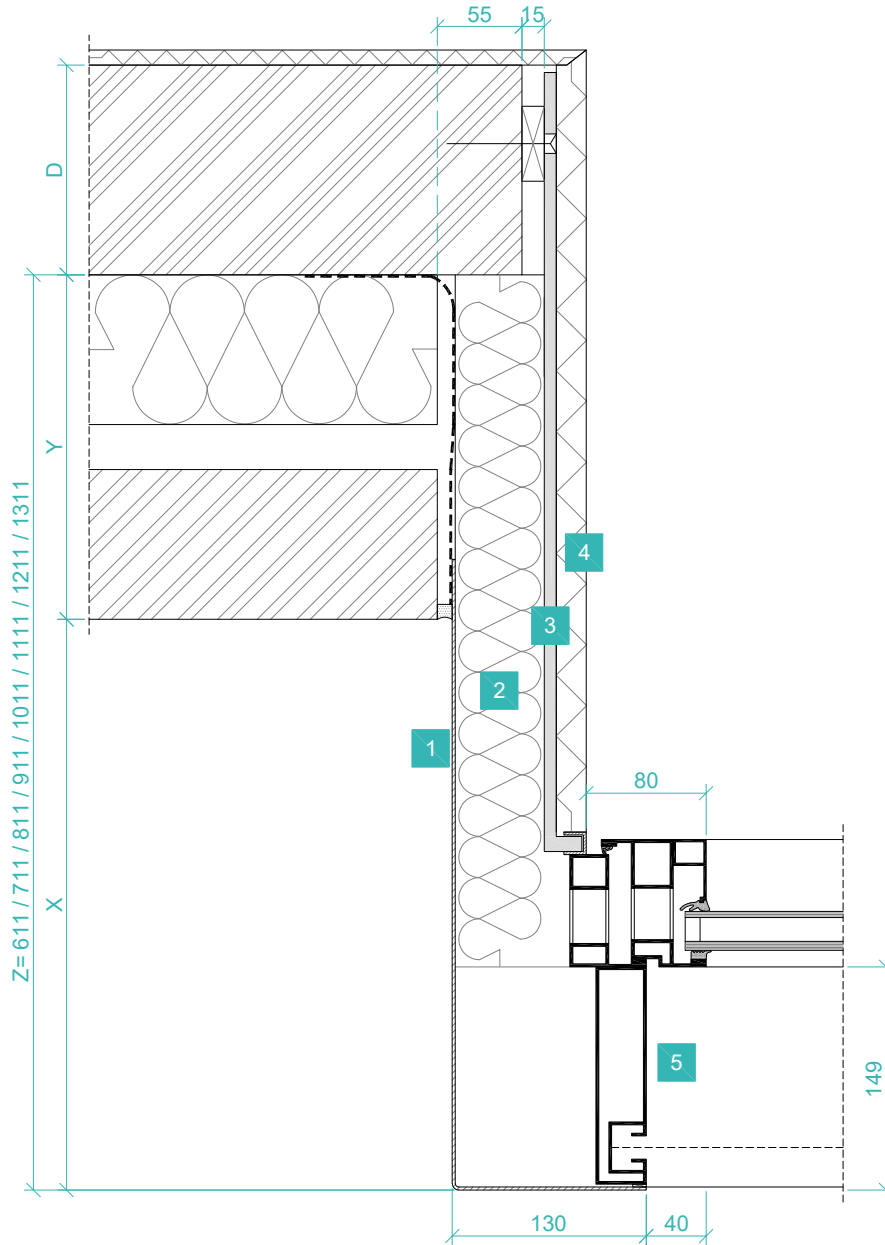
Horizontal cross-cut



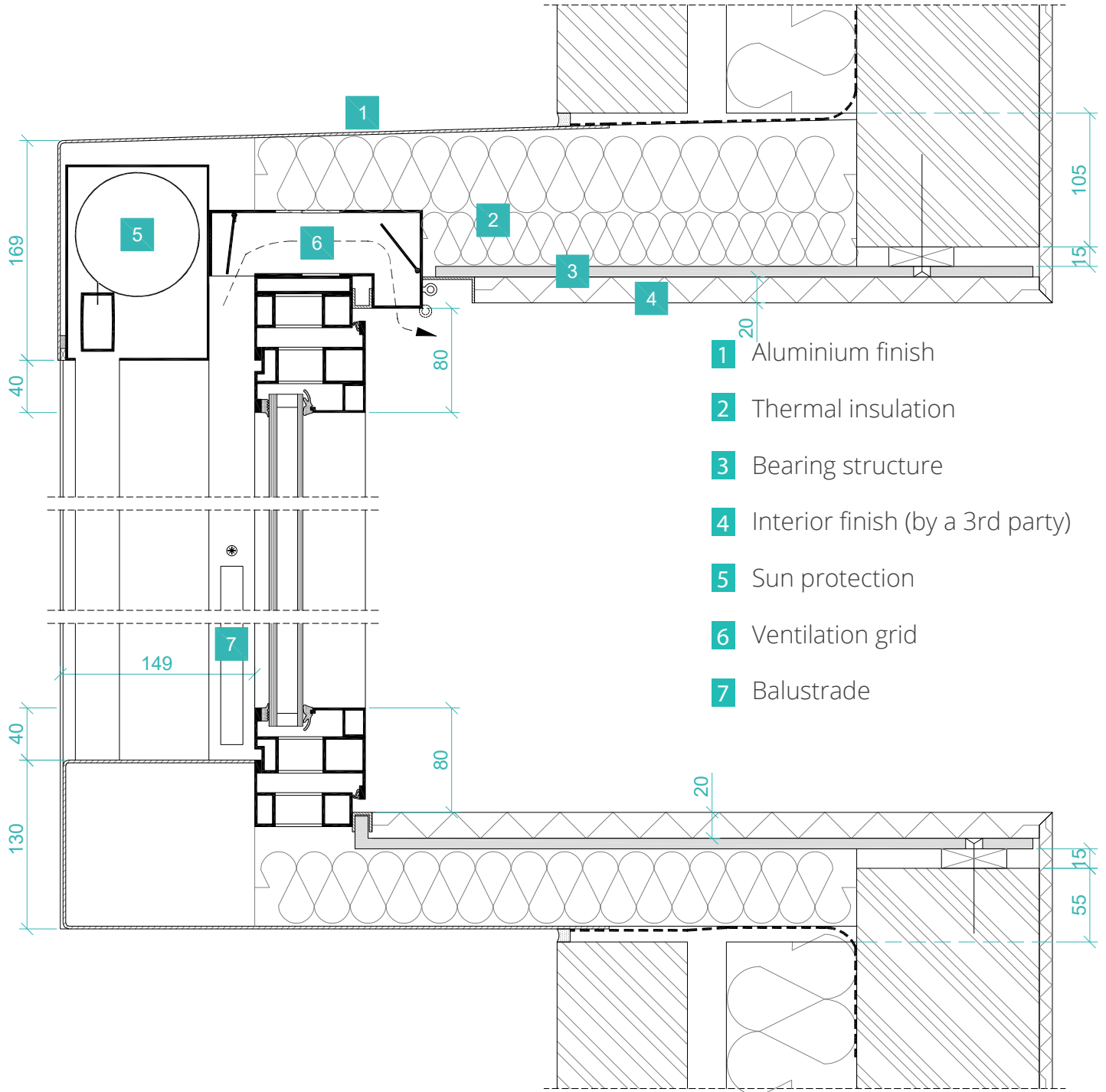
Vertical cross-cut



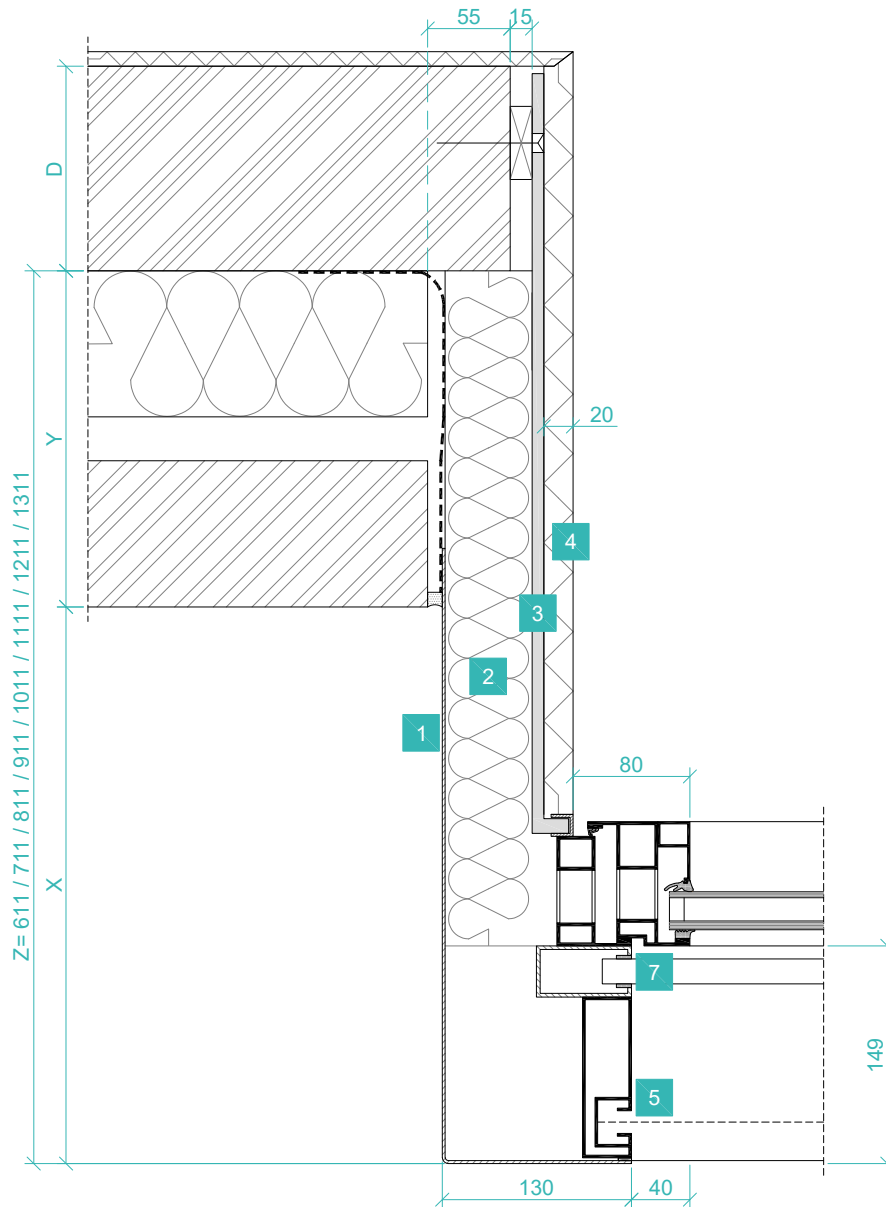
Horizontal cross-cut



Vertical cross-cut

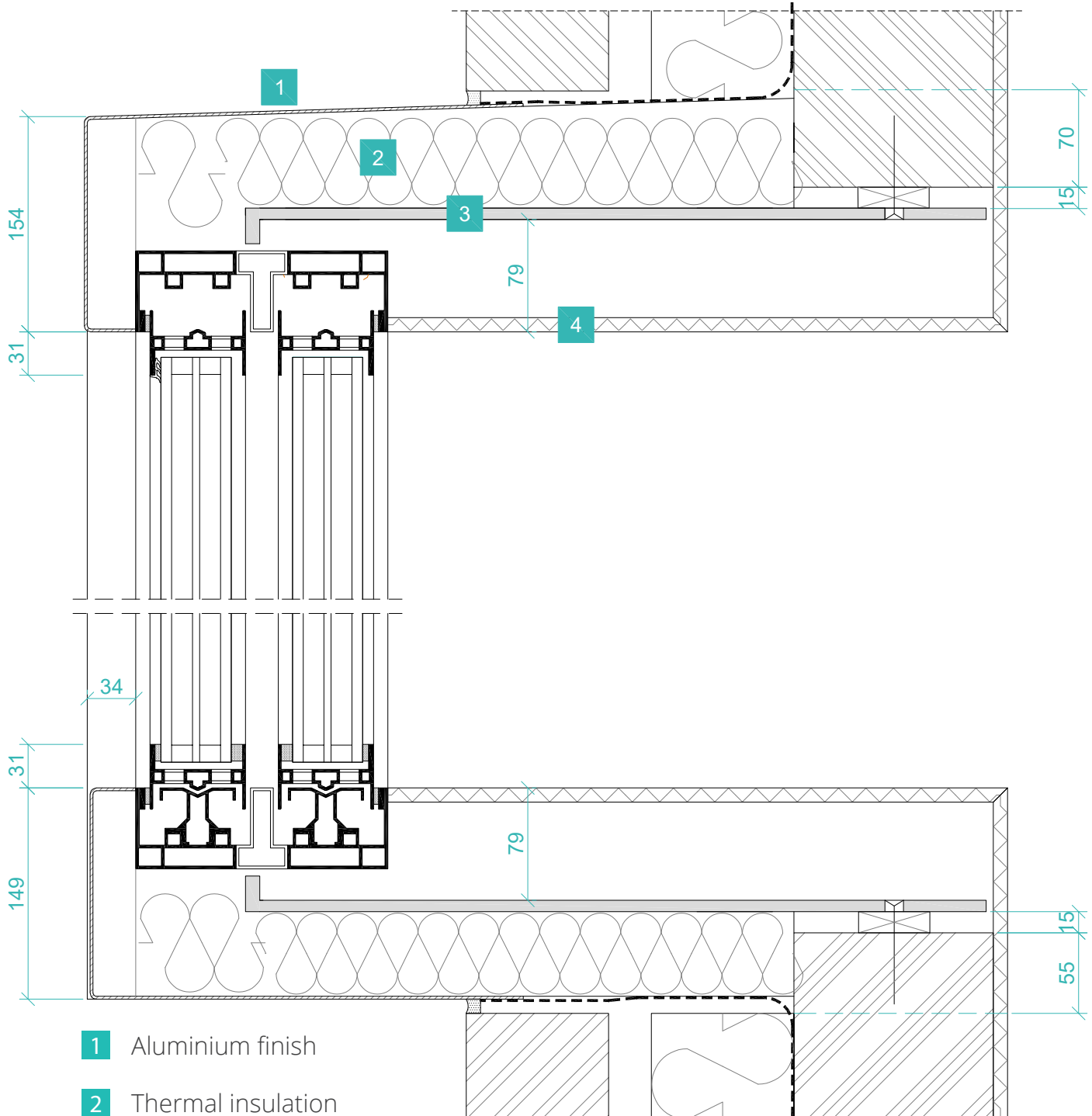


Horizontal cross-cut



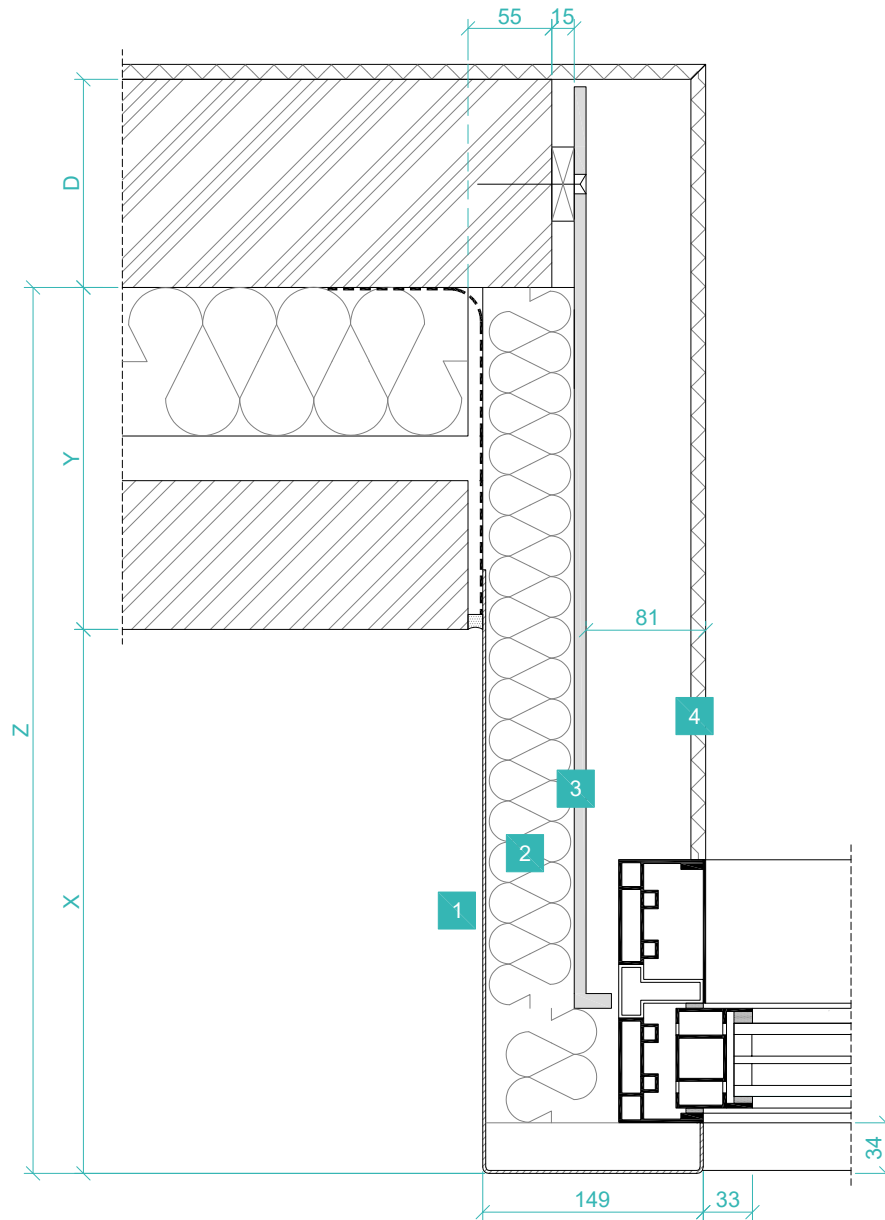
Vertical cross-cut

SUBJECT TO CHANGE



Horizontal cross-cut

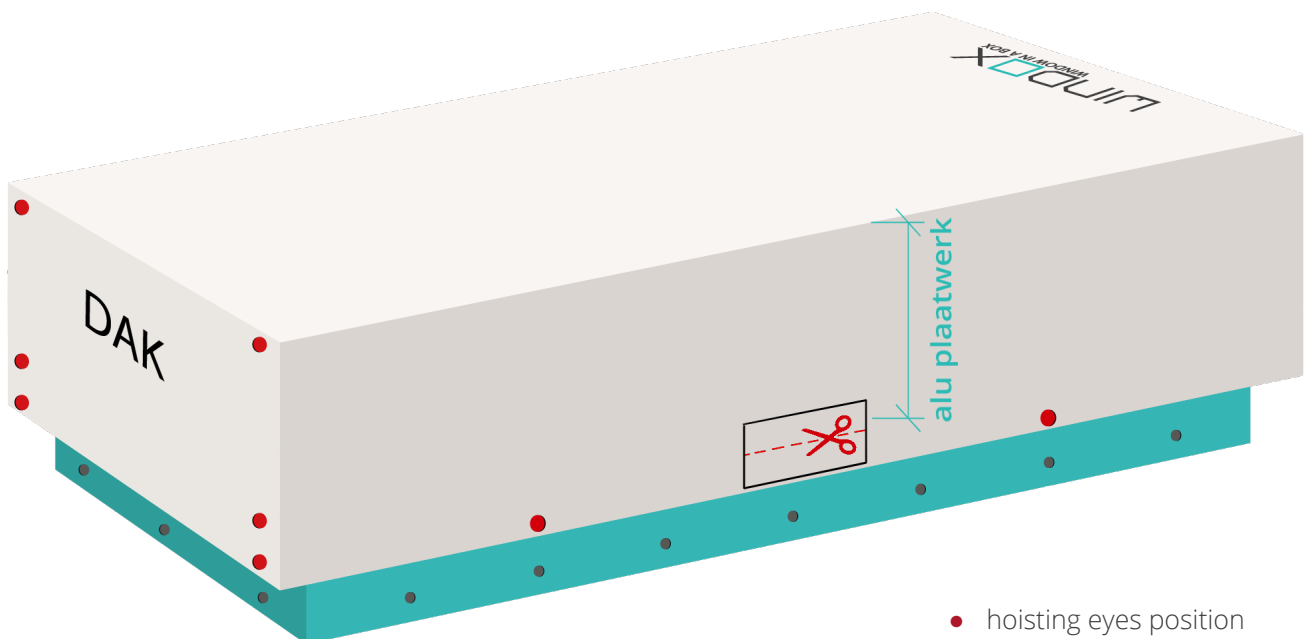
SUBJECT TO CHANGE



PACKAGING - TRANSPORT - HOISTING

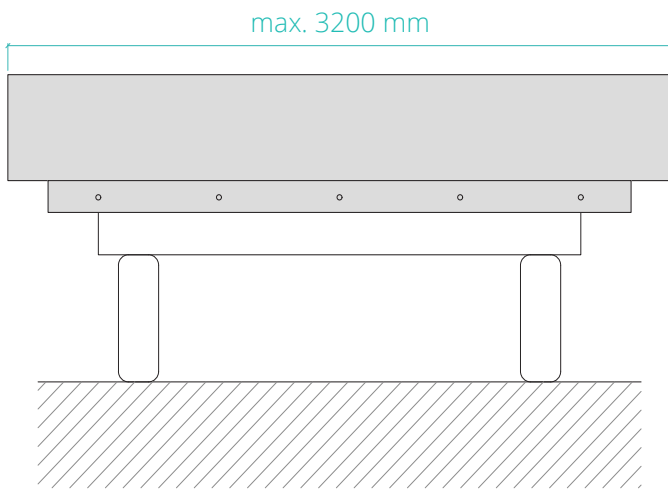
PACKAGING

- The Windox is wrapped in shrink wrap to protect against dust, rain, wind and damage during storage and transport before and after assembly.
- Cut the film at the level of the red line so the aluminium sheet metal above it is not damaged.
- Remove the lower part of the film before assembly of the Windox
- Remove the top part of the film before mounting the glass. The glass does not have to be mounted immediately after installation of the Windox.
- Steel bearing structure coated with 2 corrosion-resistant layers.
Attention: in order to avoid corrosion on the inside of the steel structure, we recommend making the Windox wind- and waterproof within a week!



TRANSPORTATION

Horizontal



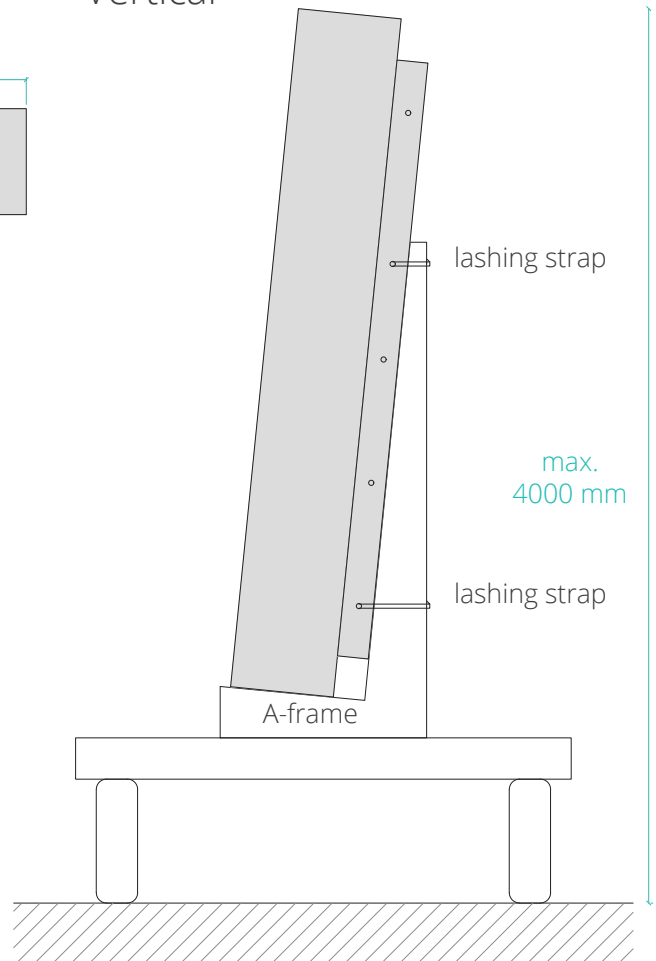
Smallest side of window box:

- < 2550 mm = standard
- > 2550 mm and < 3200 mm = supplement
- > 3200 mm = supplement on request

Please note:

May vary in other countries

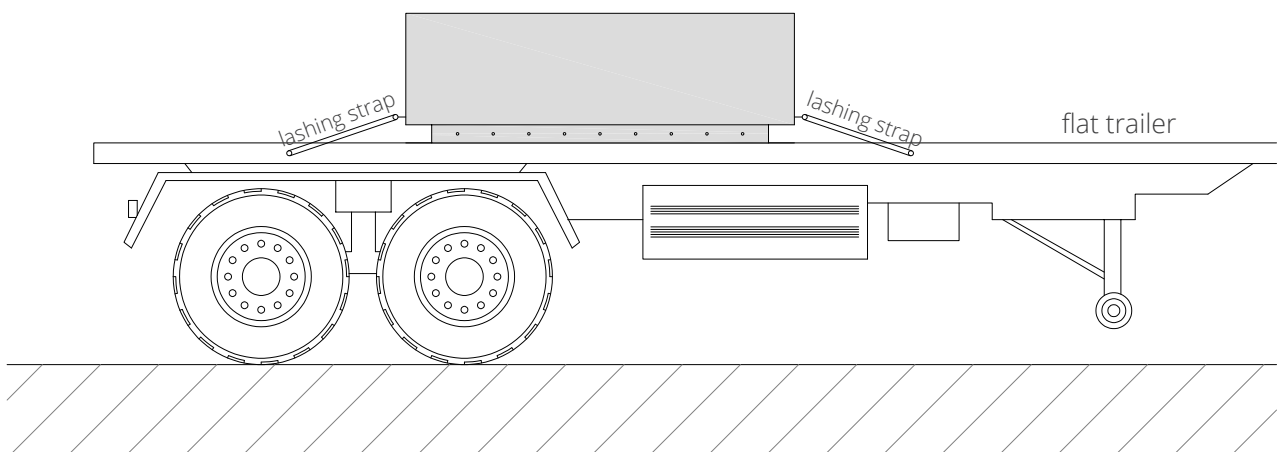
Vertical



- Vertical transportation not advised

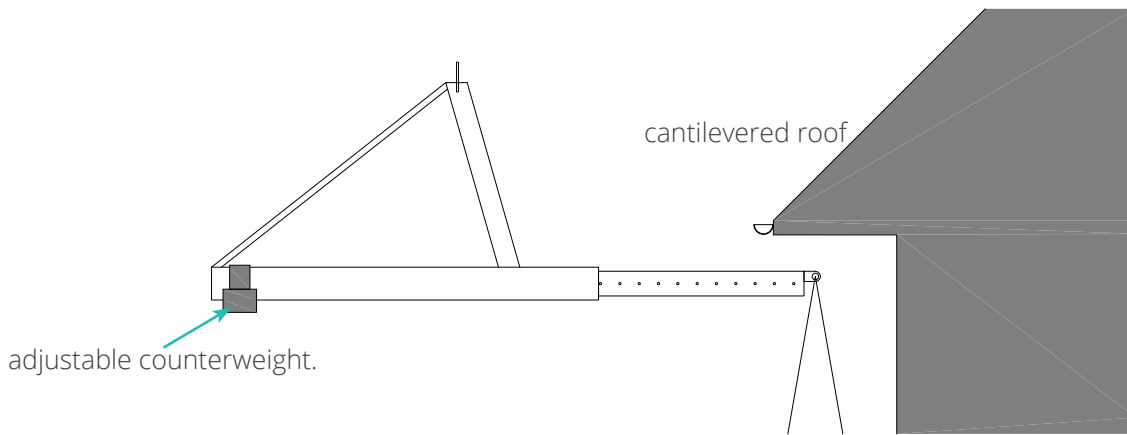
- Vertical transportation on an A-frame by customer
- A-frame, lashing straps and securing for transportation by customer

The lashing straps may only be attached to the lifting eyes, in order to avoid damage to the sheet metal!

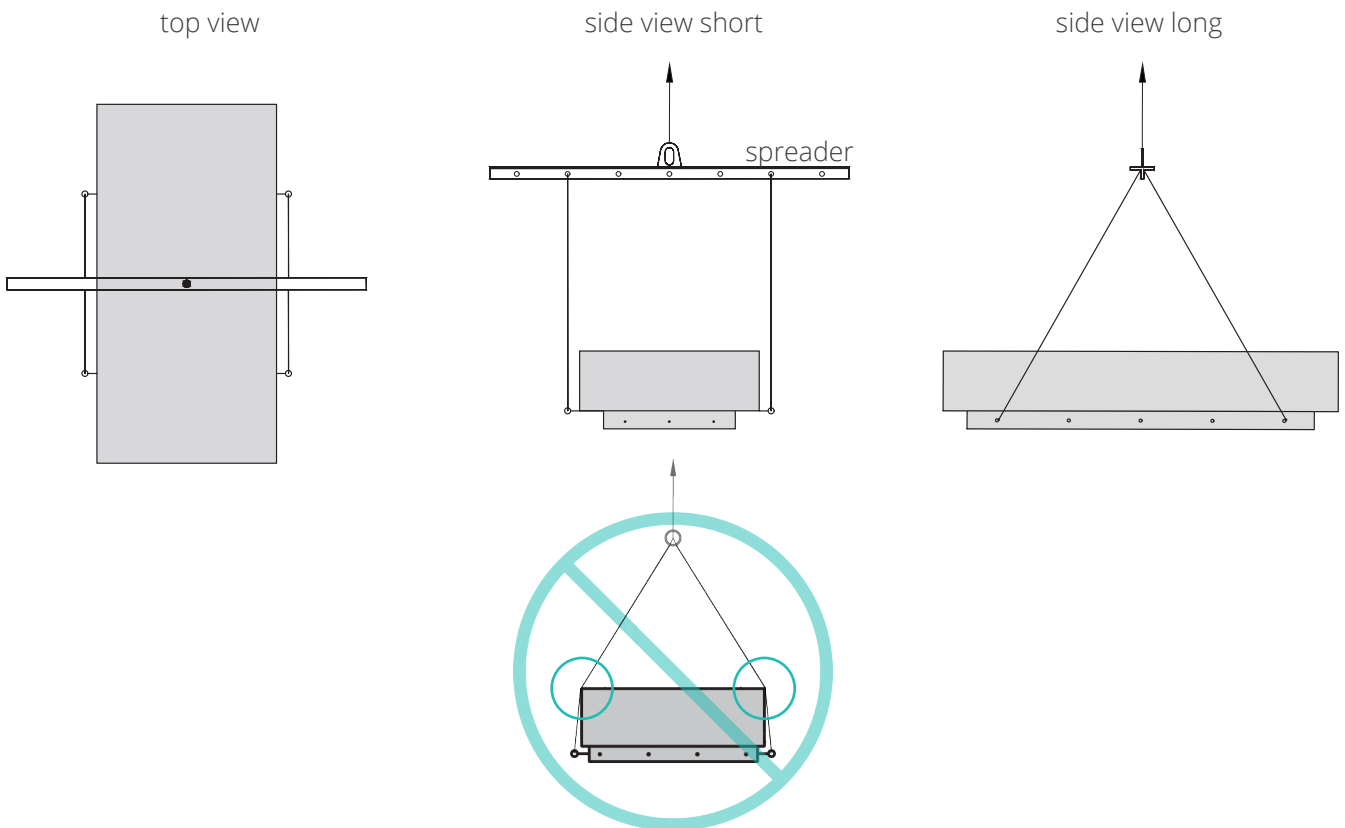


HOISTING

- ❑ **In order not to damage the Windox during hoisting, the use of a spreader is required.**
Spreader length depends on width of Windox. To be provided by the customer
- ❑ In the case of a cantilevered roof or balcony crossing, we recommend the use of a balancing beam with adjustable counterweight
- ❑ 4 ready-mounted M16 hoisting eyes are included with the Windox
- ❑ Note: lifting a Windox outside corner must be looked at in detail per situation
- ❑ Weight Windox (on request)

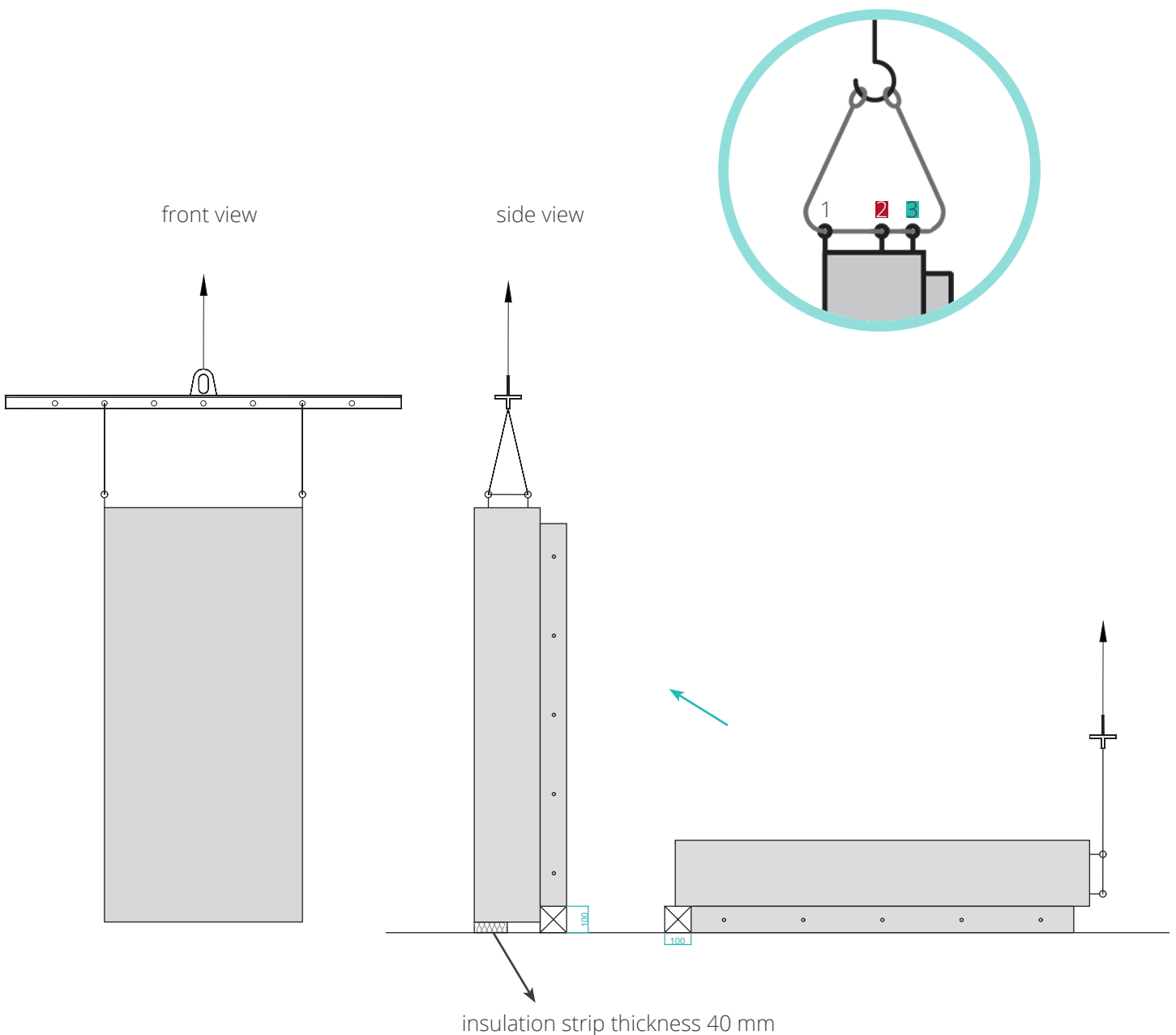


WHEN (OFF)LOADING



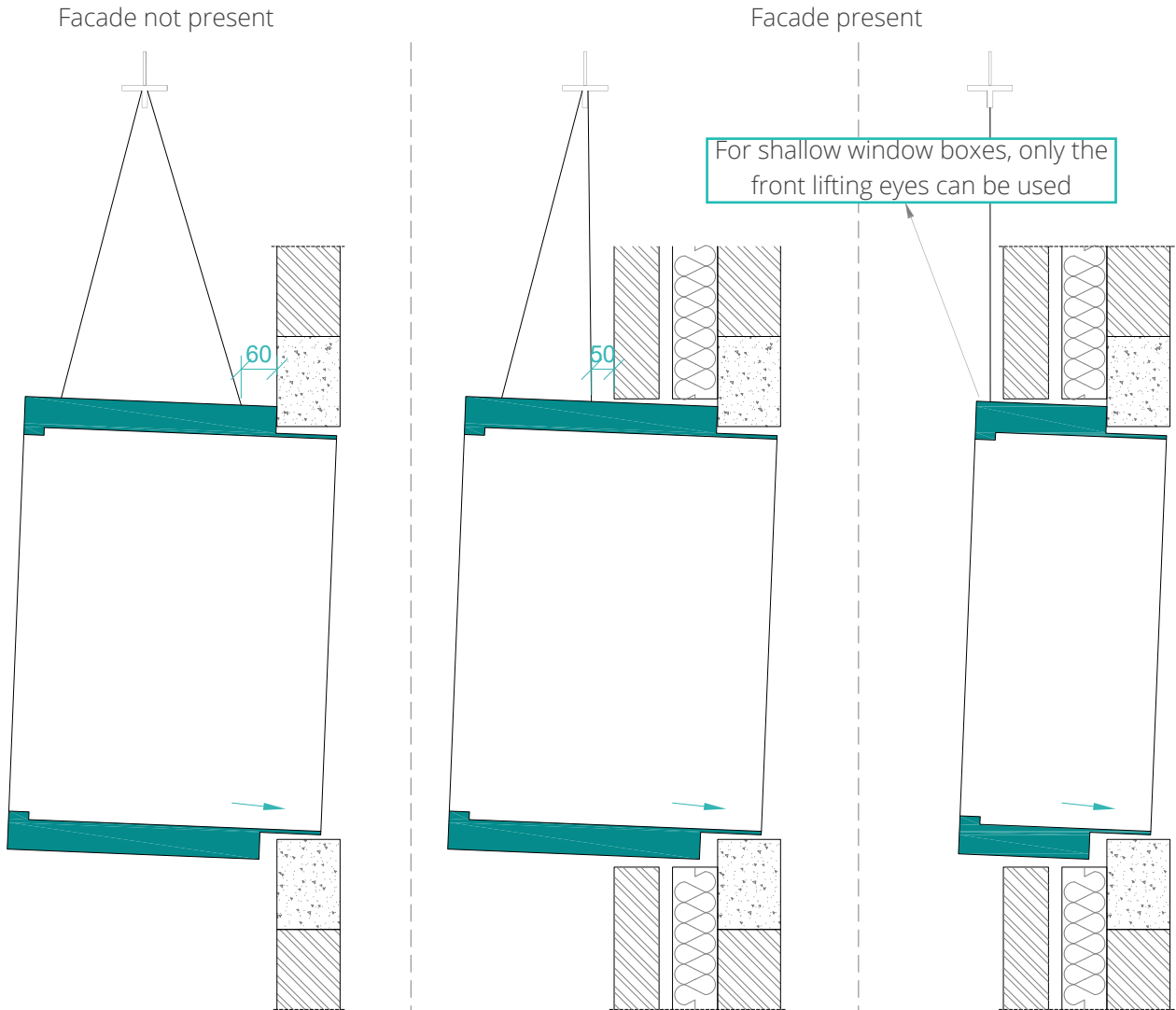
DURING INSTALLATION

- 1) Move the hoisting eyes (4 pcs) from the sides to the openings in the roof
 - If there is no facade cladding during installation: use hoisting eyes 1 + 3
 - If there is facade cladding during installation: use hoisting eyes 1 + 2
- 2) Using adhesive tape, place a 40 mm thick insulating strip on the aluminium base plate to support and protect the aluminium when in a vertical position
- 3) Hoist window box to vertical position using pre-assembled wooden corner pieces (100 x 100 mm)
- 4) Slide the hoisting belts (3000 mm long / 35 mm wide / 1 ton pull) into the hoisting eyes until the vertical lifting position is reached by sliding the hoisting belts through the hoisting eyes

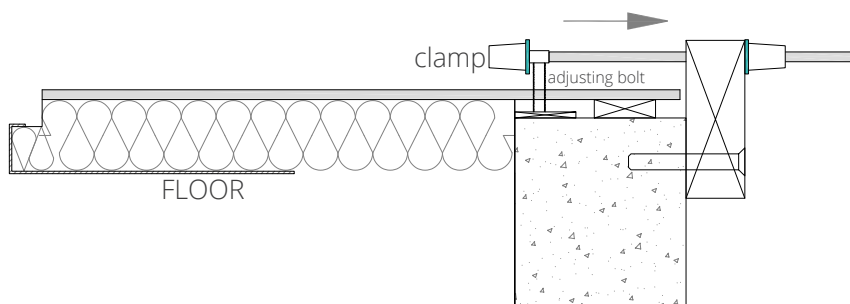


INSTALLATION WINDOW BOX

POSITION + ADJUST



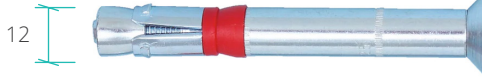
- Use clamps at the bottom or top to position the Windox correctly in the day opening (due to tension on the hoisting straps).



MOUNTING ANCHORS

- Not included (on request)
- Type of mounting anchor depends on the type of material of load-bearing wall
In the concrete beams below and above only metal heavy-duty anchors must be used

Ø 12 mm - sunk head



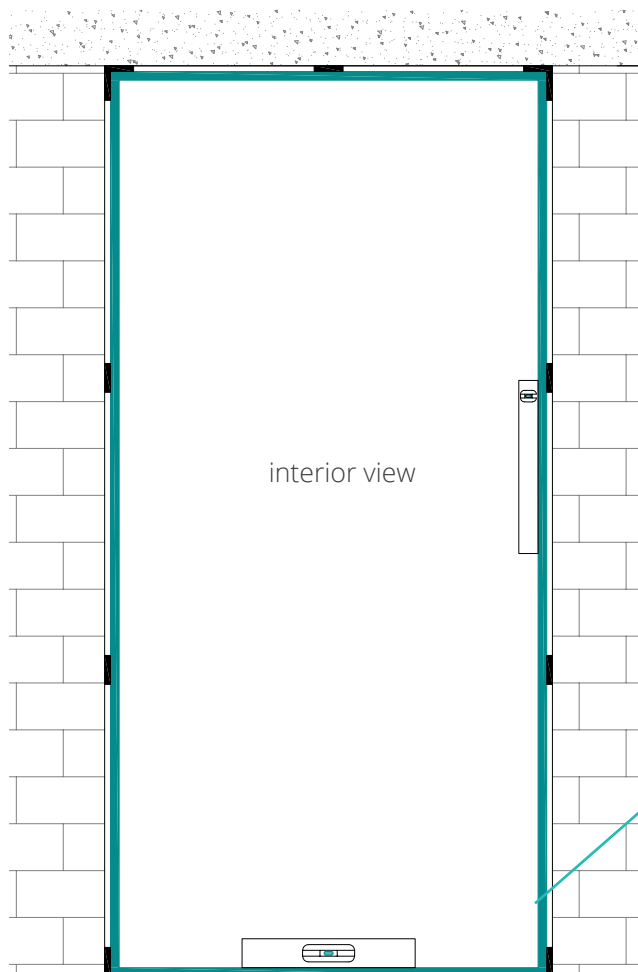
length 95 or 120 mm

- Mounting holes:
 - Provided by Windox: Ø 13 mm / every 300 mm / with a countersink
 - Note:
 - every mounting hole must be used
 - place adjustment blocks under each mounting bolt

Windox can only supply heavy-duty anchors (on request) for installation in concrete.
 For constructions in wood, steel, ... these must be provided by the customer.

INSTALLATION SEQUENCE

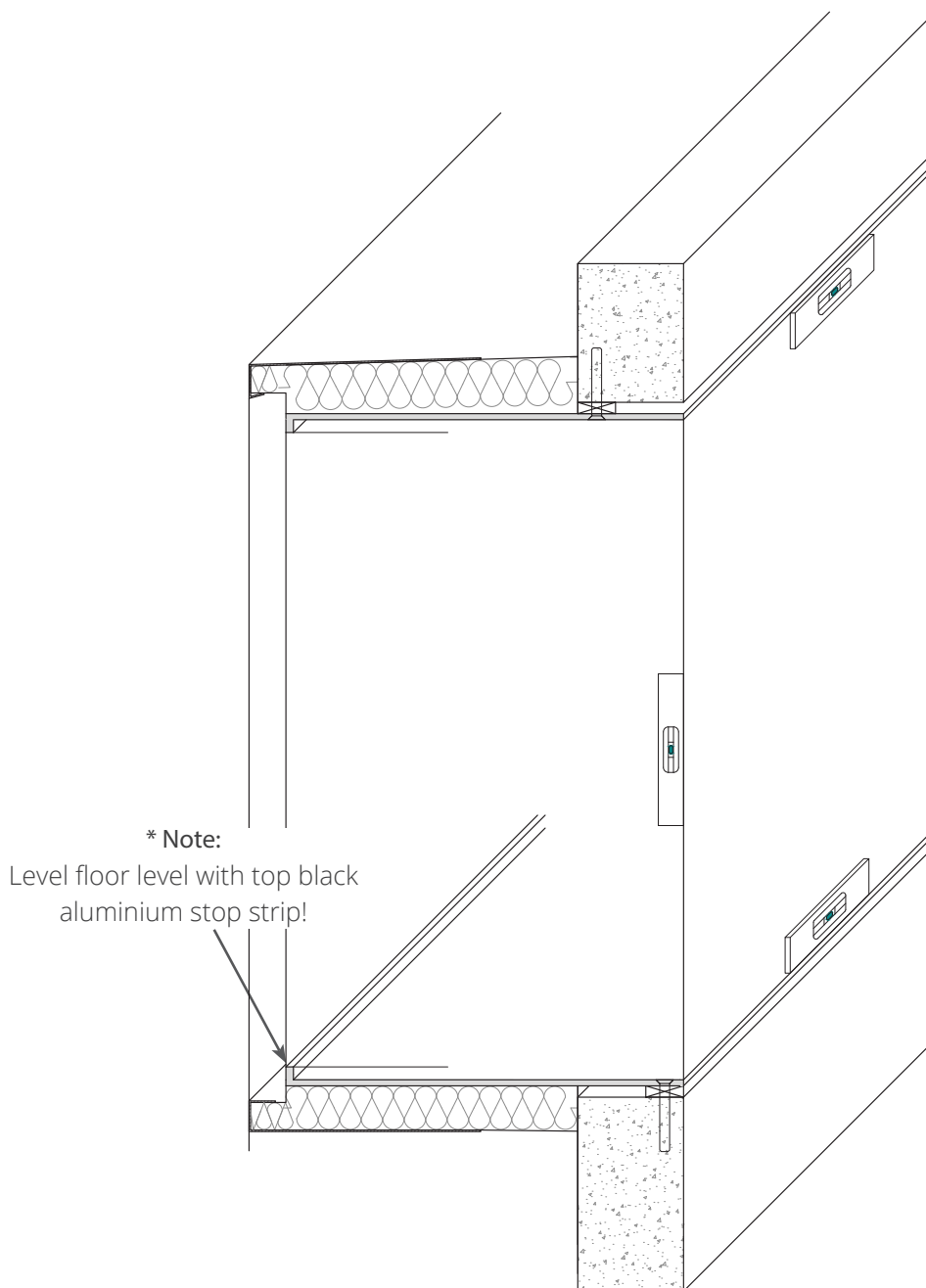
- Adjust Windox by means of adjusting blocks (not included) so it is evenly distanced on all sides to the opening



Important:
 Position the adjusting blocks as far as possible at the corners

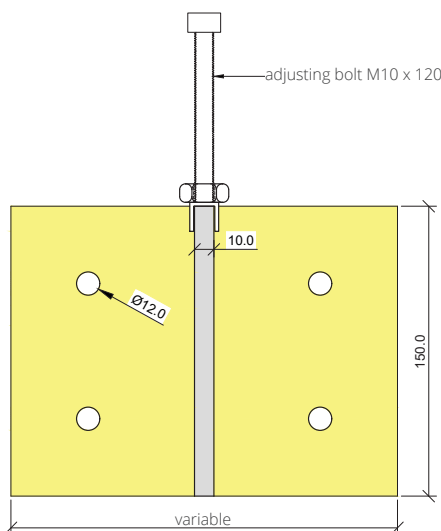
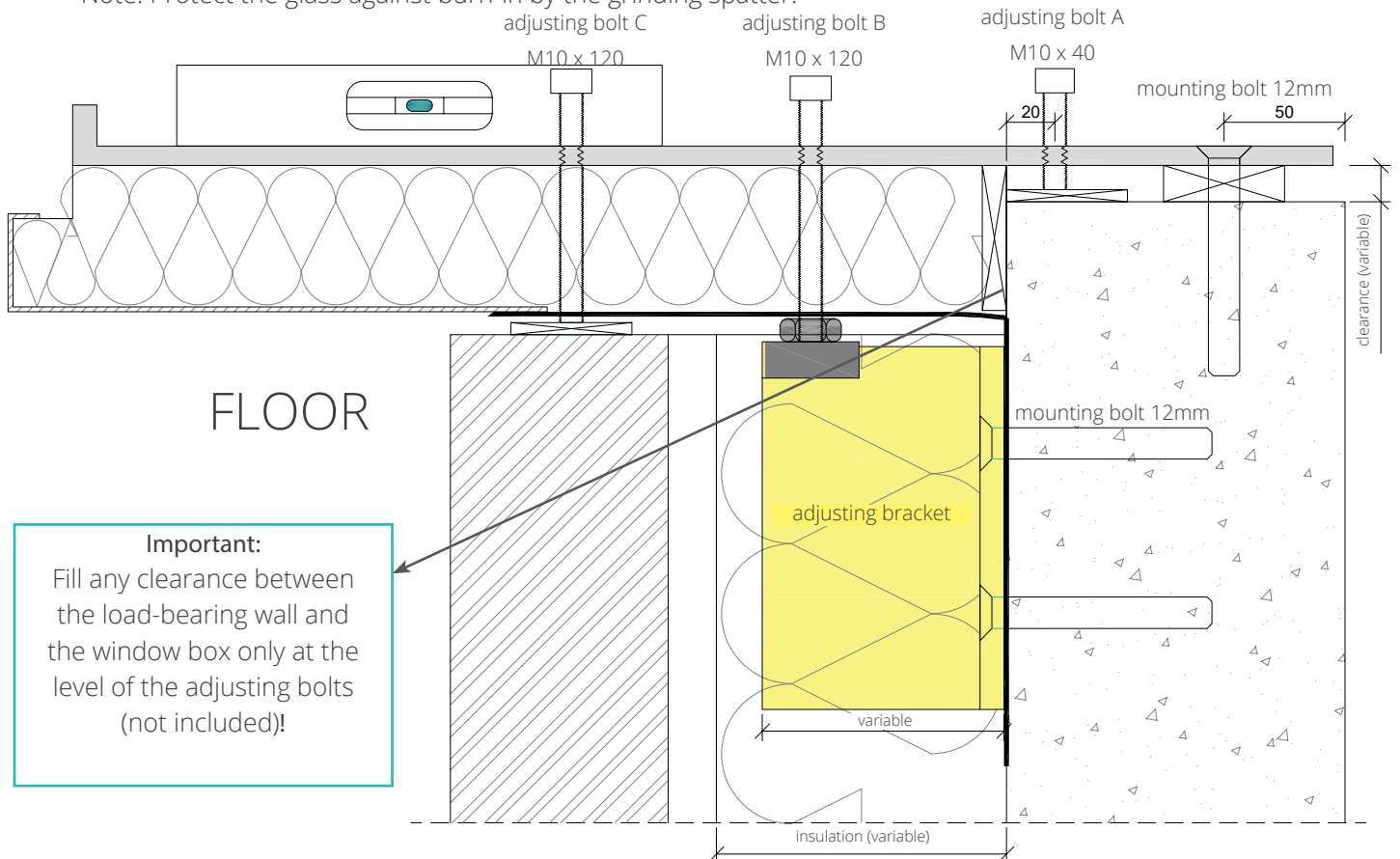
- 1) Top and bottom:
 - position the steel sheet horizontally on the inside with the help of a spirit level, chalk line or level gauge
 - *Note: level floor level with top of black aluminium stop profile!
 - anchor steel sheet with mounting bolts to the building structure

- 2) Sides:
 - position the steel sheet vertically on the inside with the help of a spirit level and chalk line
 - anchor steel sheet with mounting bolts to the building structure

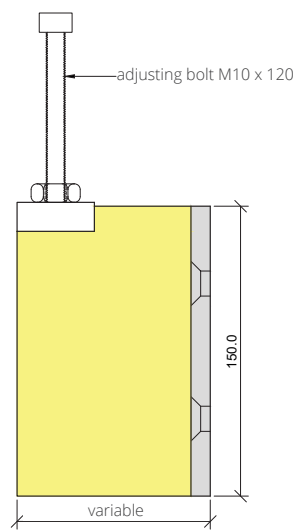


LEVELING DEPTH

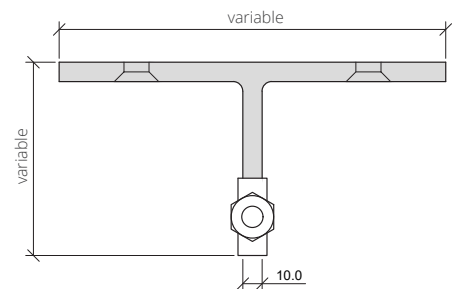
- Included: adjusting bolts A/B/C and adjusting brackets (if applicable)
- **Adjusting bolt A: standard (included):**
 - Screw in adjusting bolts A against the load-bearing wall with support of adjusting plate (not included)
- **Adjusting bolt B: (included) if Z > 600mm (pg 37) and W > 3000mm (pg 38) and facade follows after mounting box**
 - Placing of additional adjusting brackets in **steel** (included)
 - Screw adjusting bolts B against adjusting brackets
- **Adjusting bolt C (included): If facade masonry is installed before the installation of Windox:**
 - Screw in adjusting bolts C against the facade masonry with the support of an adjusting plate (not included)
- Grind the adjusting bolts after fitting the glazing
 - Note: Protect the glass against burn-in by the grinding spatter!



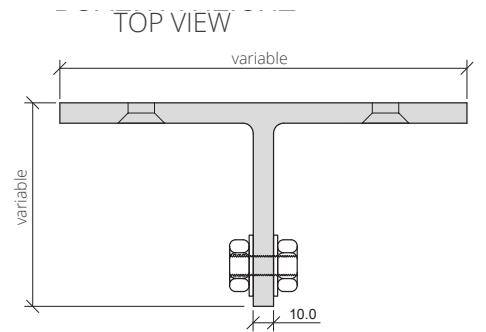
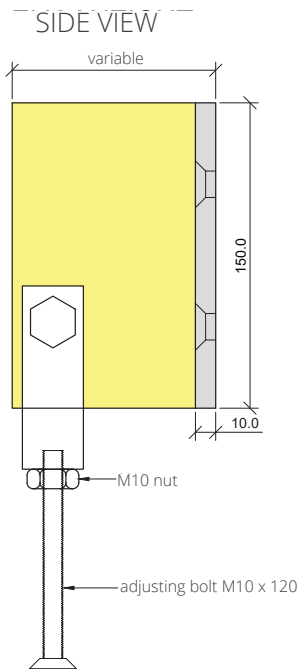
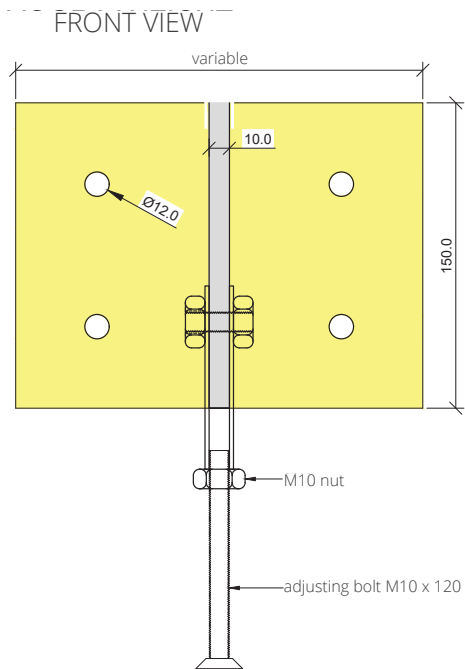
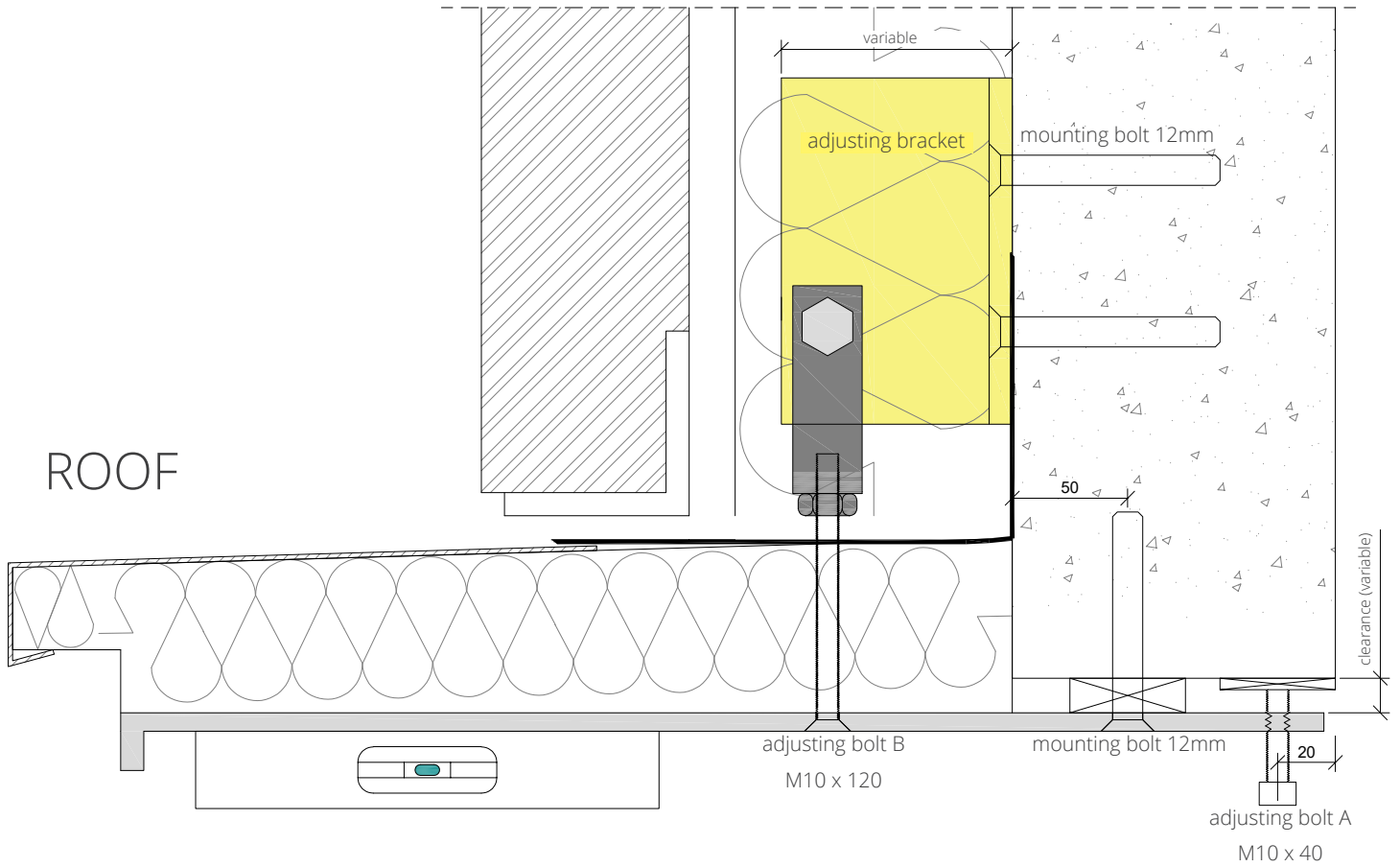
FRONT VIEW



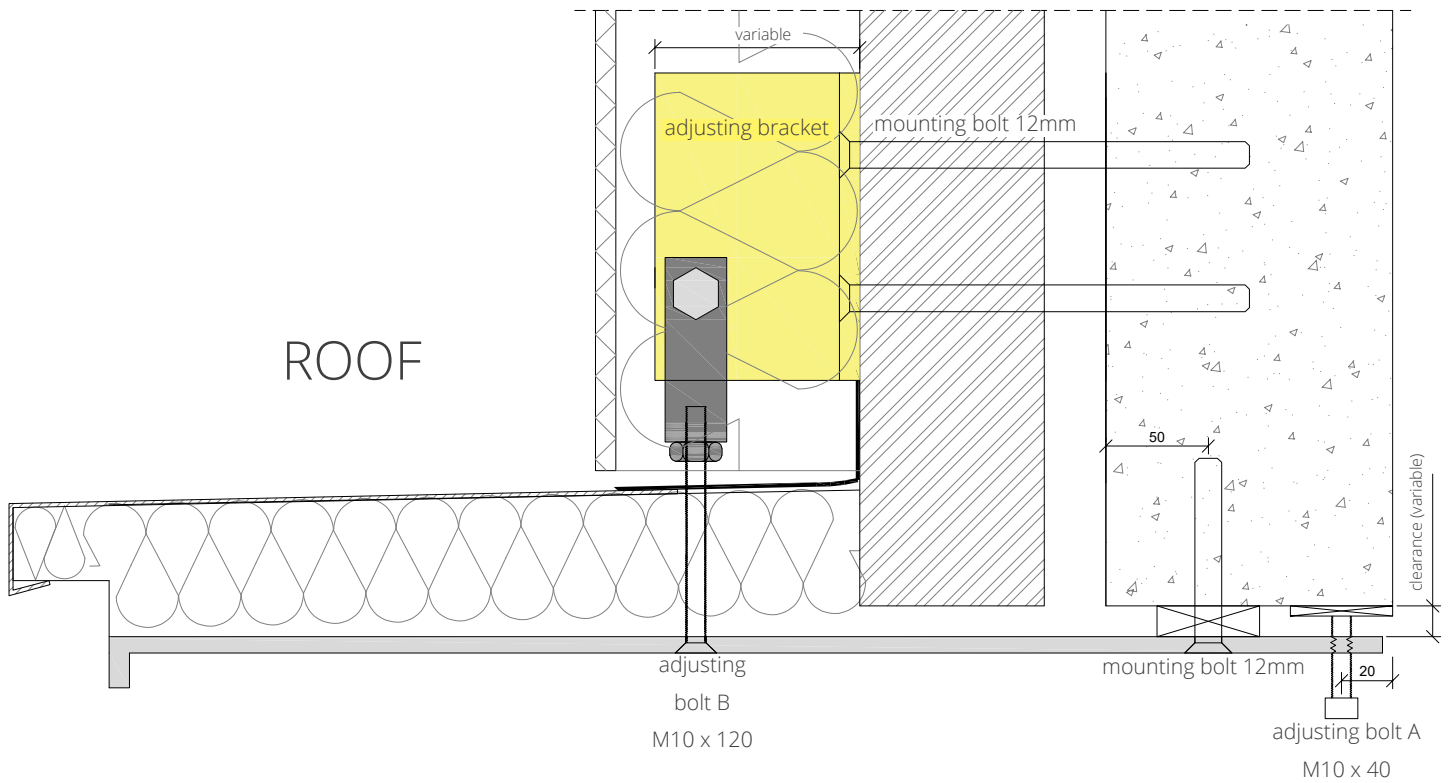
SIDE VIEW



TOP VIEW

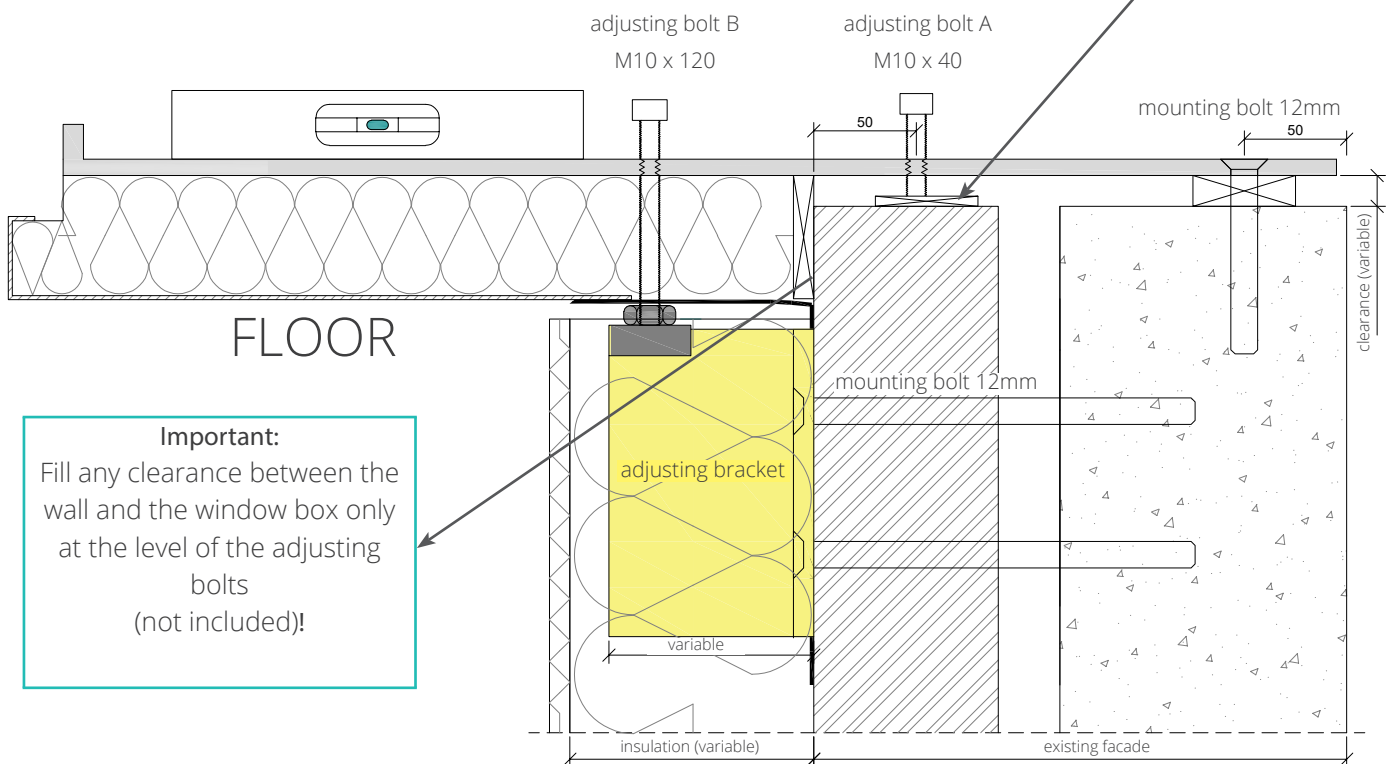


RENOVATION WITH ADDED INSULATION



Steel plate (not included)

provided in advance on existing facade stone



Important:

Fill any clearance between the wall and the window box only at the level of the adjusting bolts (not included)!

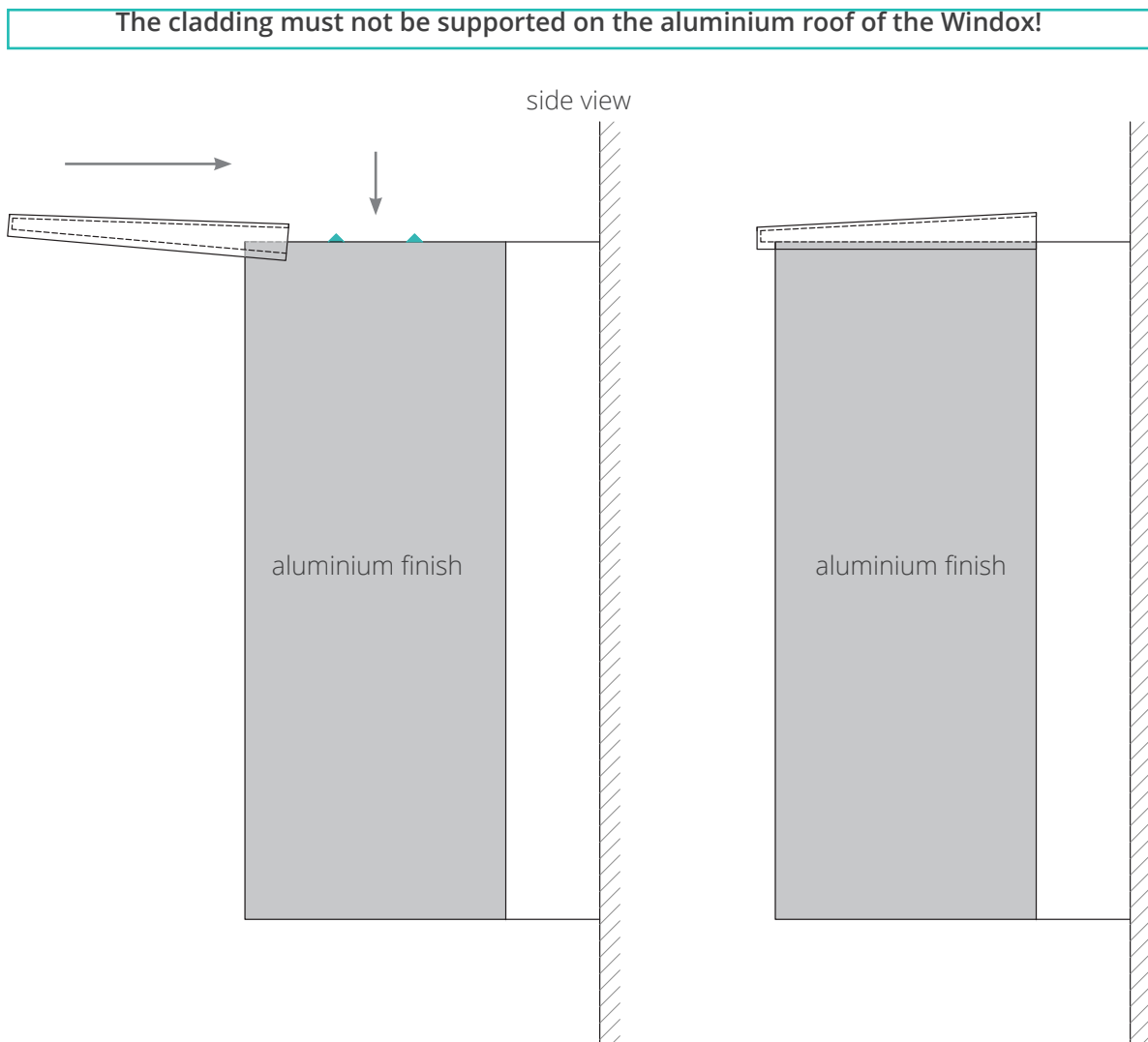
INSTALLATION ALUMINIUM ROOF

DESCRIPTION

- Aluminium sheet 2 mm
- Welded mitres
- Equipped with vibration damping to reduce noise during rainfall

INSTALLATION

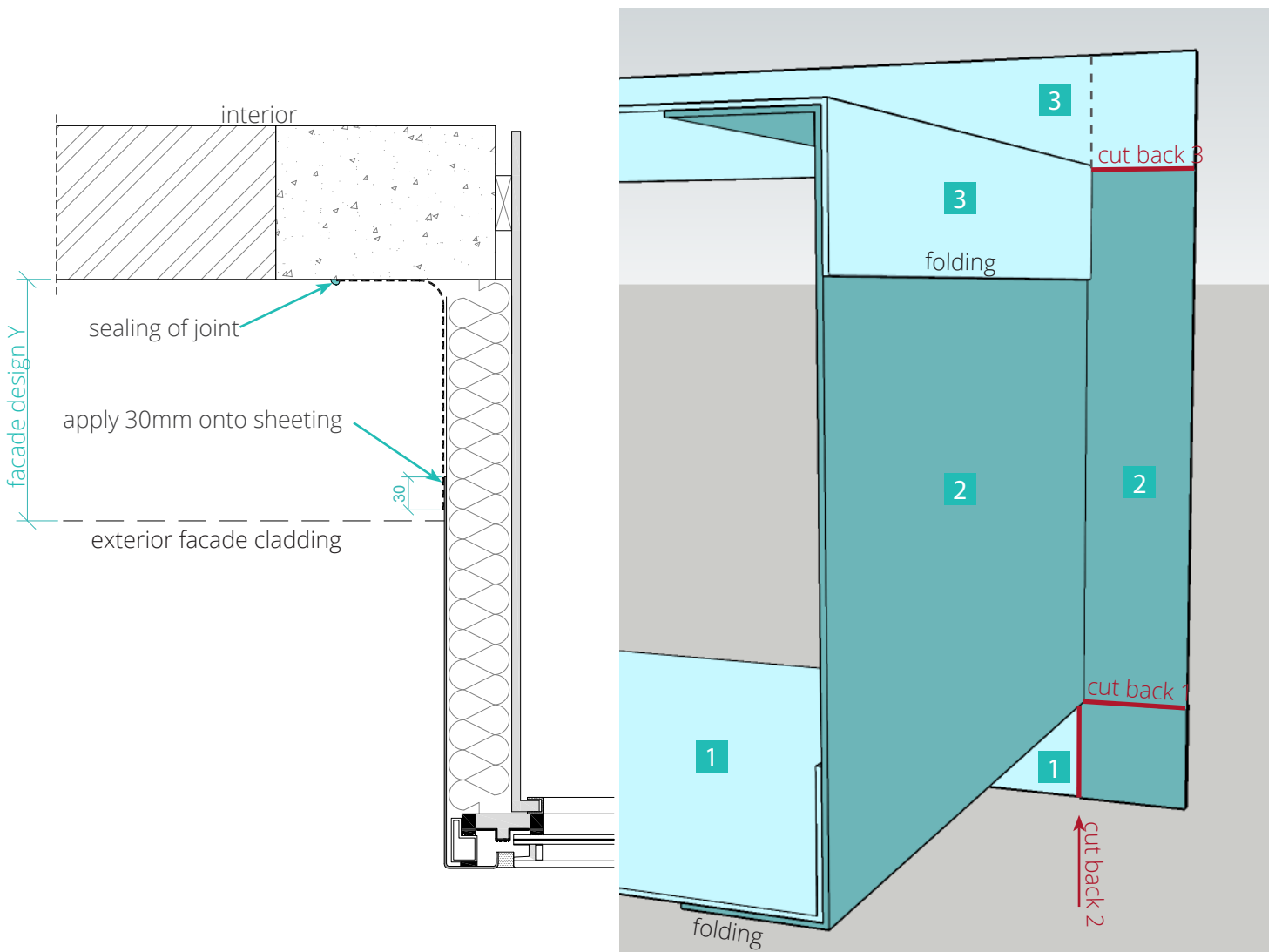
- Remove the hoisting eye of the roof after mounting the Windox
- Close the hoisting eyes with installation foam (not included) and make openings airtight with adhesive fabric (included)
- Cement the roof to the construction using polymer cement (not included)
Make sure seams (▲) are parallel to facade (ventilation behind aluminium sheeting)



WATERTIGHT CONNECTION WINDOX - BUILDING STRUCTURE

MOUNTING CLADDING AFTER INSTALLATION WINDOX

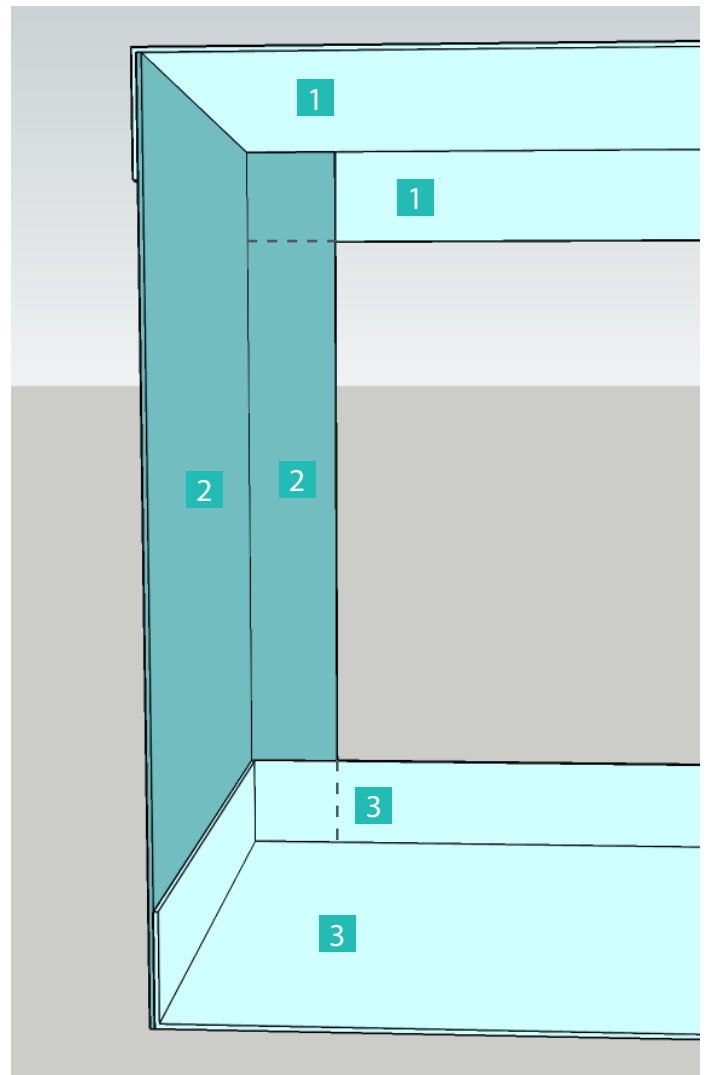
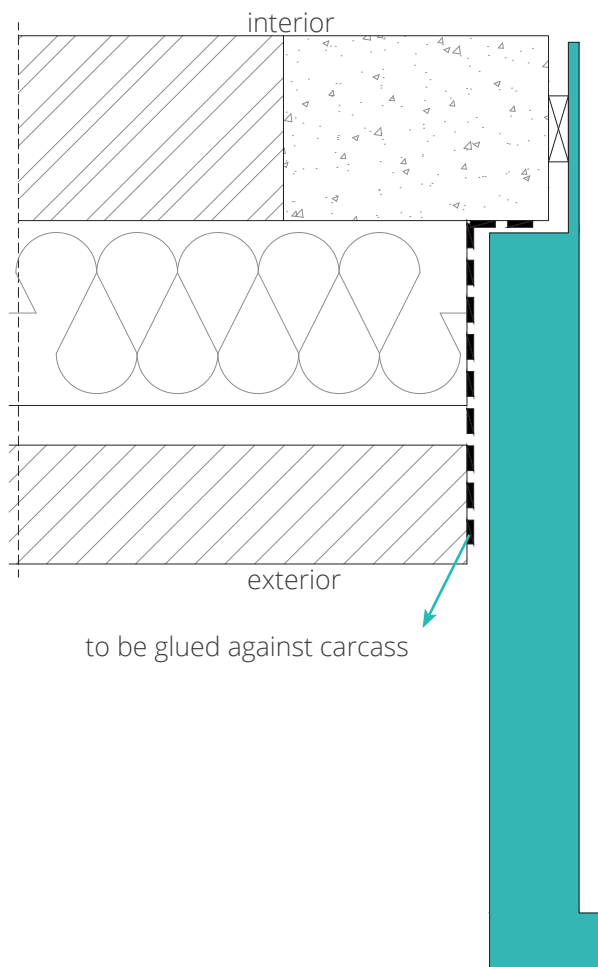
- 4 sides waterproof film (sequence see below) max. 30 mm to be glued on aluminium finish of the window boxes (not included)
- Seal the seam between the film and the building structure with an MS polymer jointing compound. (not included)



If façade cladding is already installed, ideally at least 20 cm should be left free all around for the watertight connection with the structural wall.

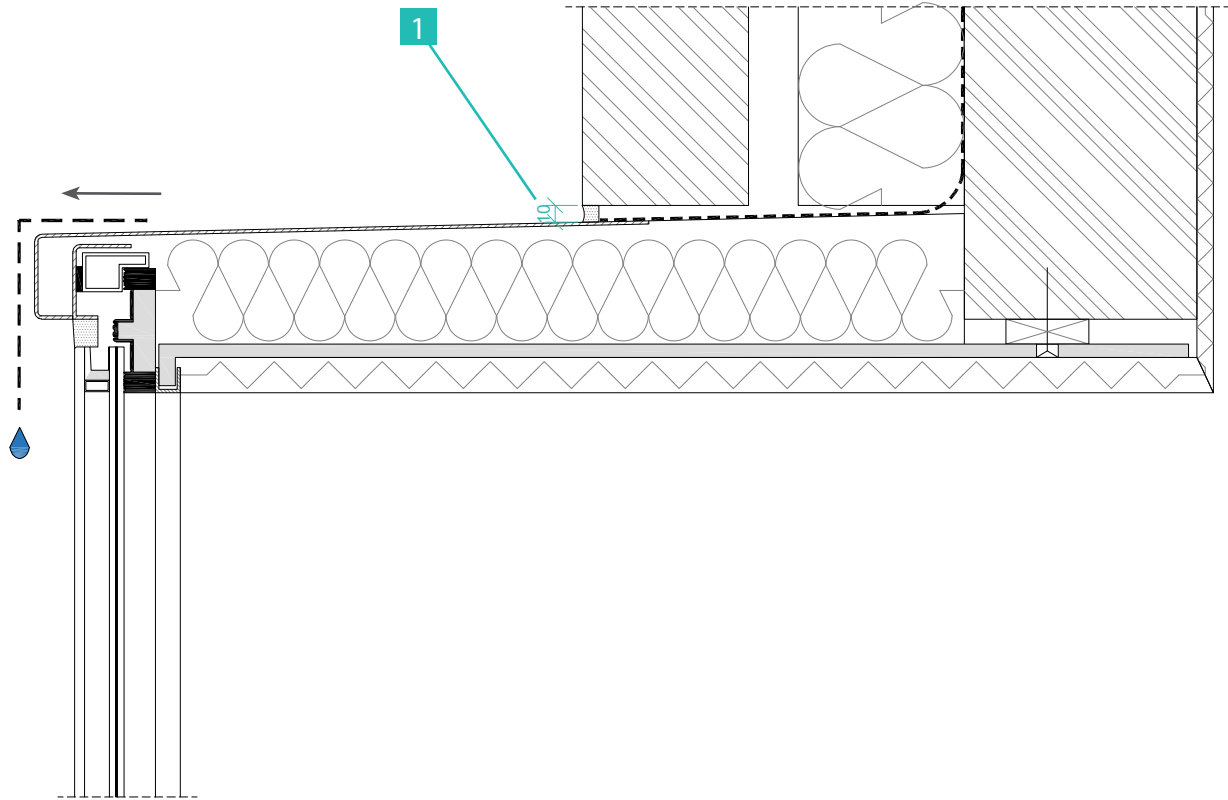
MOUNTING OF FACADE CLADDING BEFORE INSTALLATION OF WINDOX (ALSO RENOVATIONS)

- Cover inverted recess on 4 sides with waterproof film (not included) before installation of Windox
- Open elastic butt joints to be provided at the bottom!



ELASTIC JOINT



For type 1, it is recommended to first seal the glass and then glue on the roof

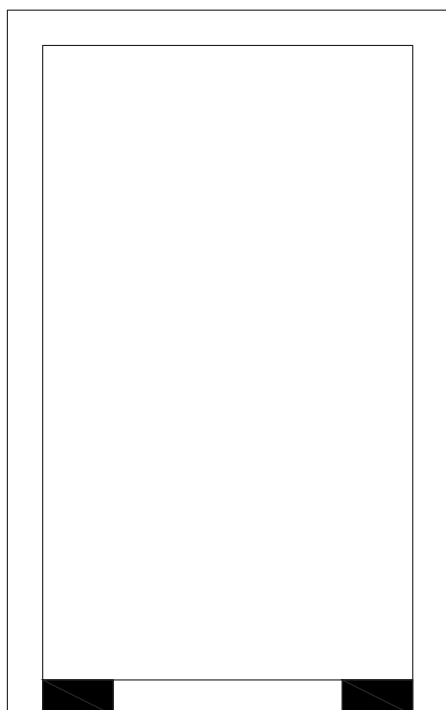


- 1 Elastic joint on the 4 sides of the WINDOX and at the top an open butt joint.

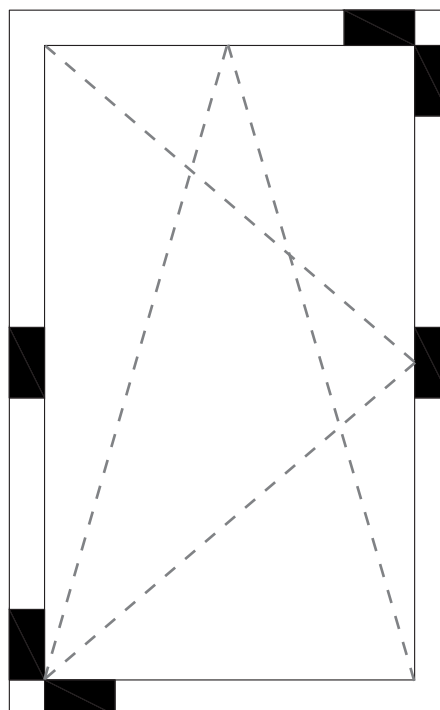
MOUNTING THE GLASS

GENERAL

- Glazing and placement of the glass blocks according to the EN standard.
- Support blocks  To transfer the glass weight to the sash or window frame, support blocks are placed. The position of these blocks is of great importance to ensure a well-functioning window.
- Adjusting blocks  To keep the glazing in the correct position in the glass rebate, adjusting blocks are placed. These cubes are placed as spacers to avoid any movement of the glass.



fixed window



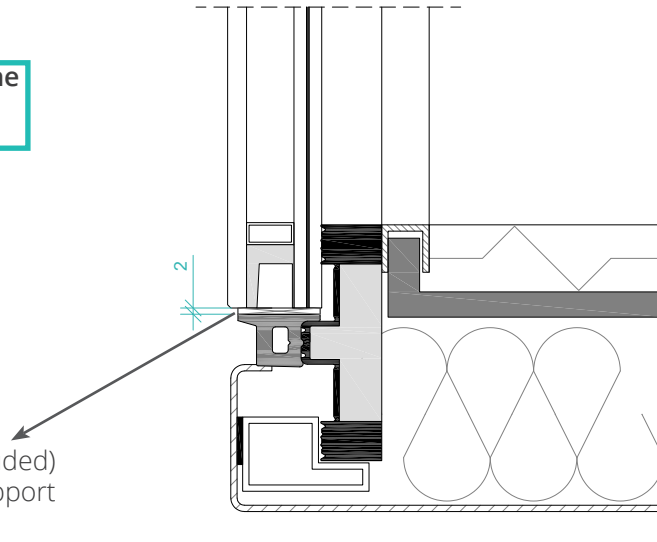
turn/tilt window

MOUNTING THE GLASS - TYPE 1

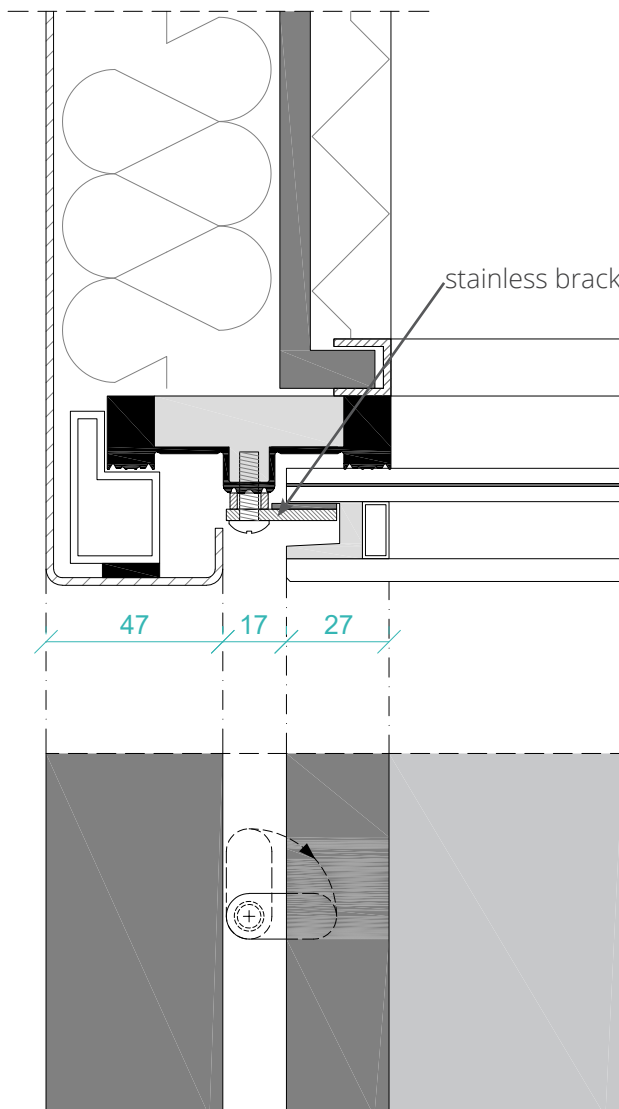
GLAZING POSITIONING

For type 1, it is recommended to first seal the glass and then glue on the roof

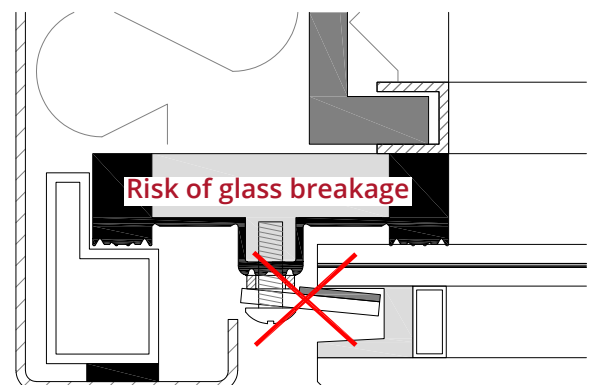
support block glass (included) must cover the entire width of the glass support



MECHANICAL CLAMPING OF GLAZING

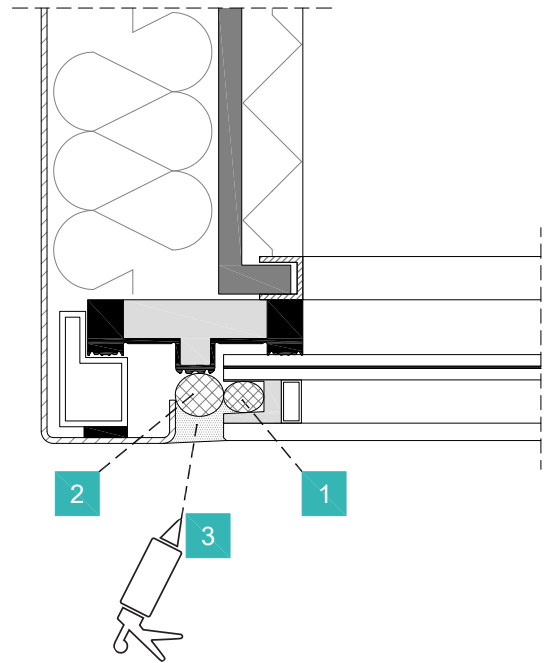


- ❑ Cut away protruding silicone residues from the edges of the glass
- ❑ To be fastened by means of stainless steel clamps that are pre-assembled on the structure by Windox.
- ❑ Procedure: loosen the clamp slightly so the pane can tilt horizontally in the groove of the glazing and tighten again manually (torx 25).

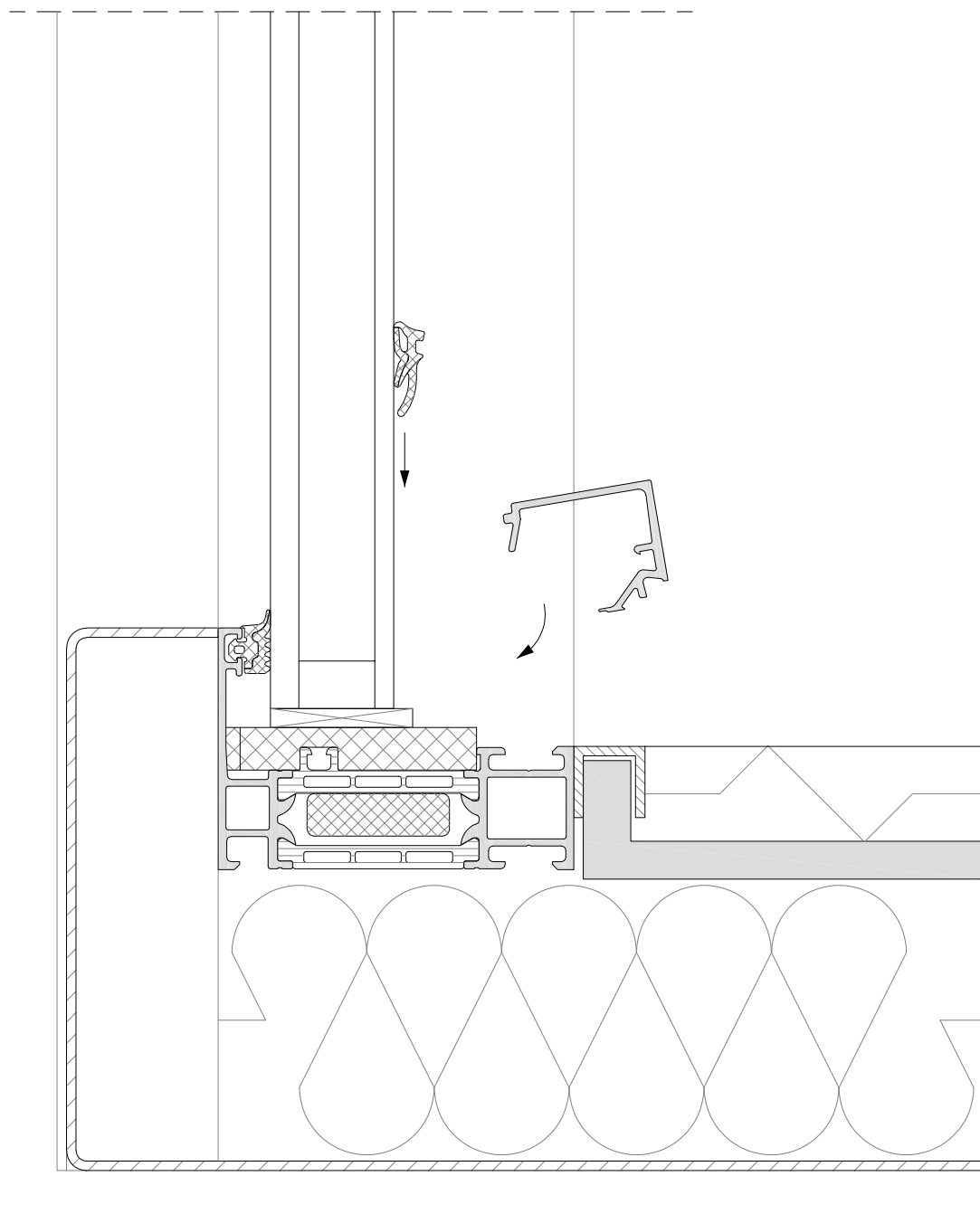


SEALING EXTERIOR JOINT

- 1** Round PE insulation profile \varnothing 13 mm (included)
To be placed all around in the open groove of the glass
- 2** Round PE insulation profile \varnothing 25 mm (included)
To be placed between the glass clamps
- 3** UV-resistant silicone joint (not included)
Seal immediately after installation of the window box to prevent dirt and dust accumulation in the glass rebate

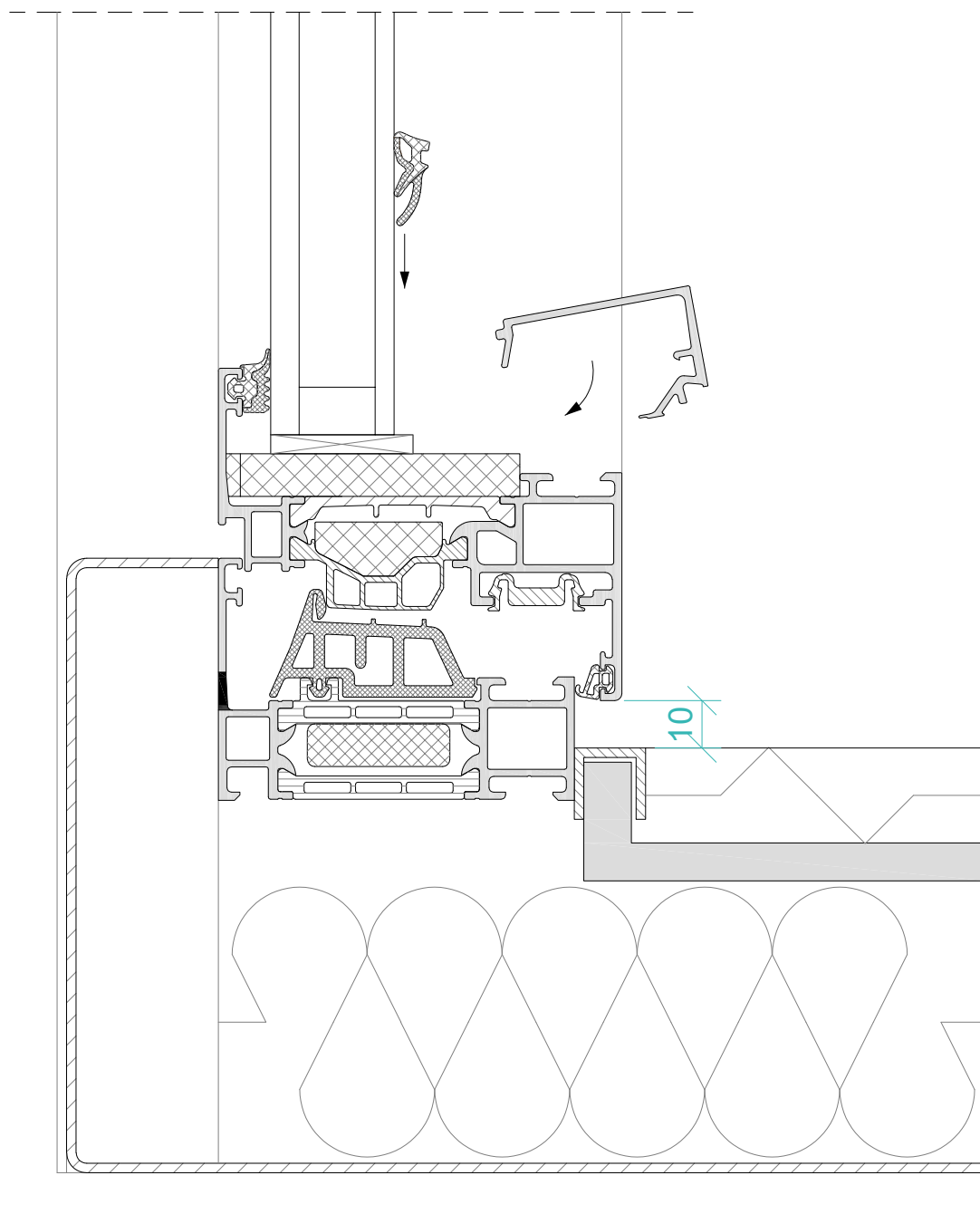


MOUNTING THE GLASS - TYPE 2



- Included: - rubber glazing strips
green 3-4 mm / blue 5-6 mm / brown 7-8 mm / red 9-10 mm
- PVC glass links

MOUNTING THE GLASS - TYPE 3

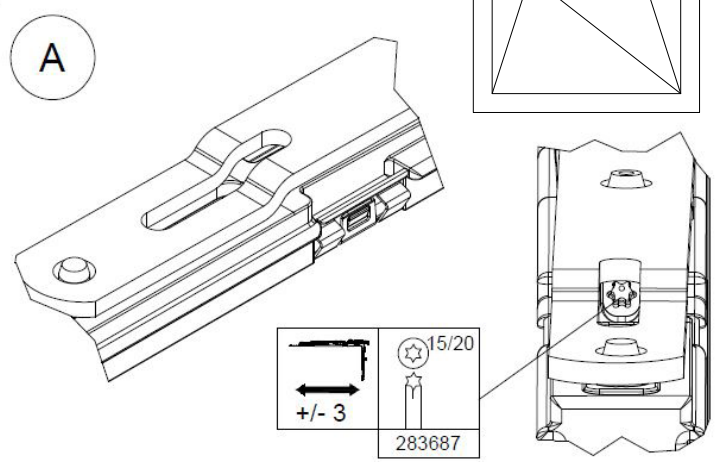
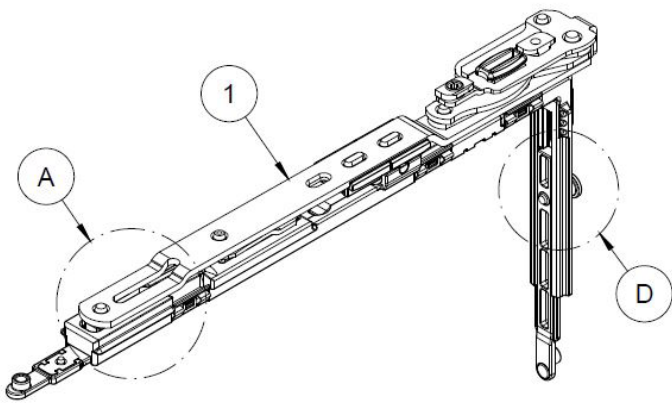


- ❑ OPTIONAL: gluing glass to aluminium window sashes for extra stability of large sashes
- ❑ Included:
 - rubber glazing strips
green 3-4 mm / blue 5-6 mm / brown 7-8 mm / red 9-10 mm
 - PVC glass links

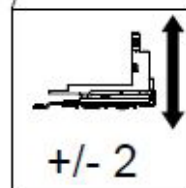
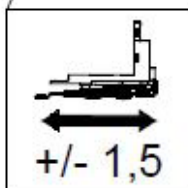
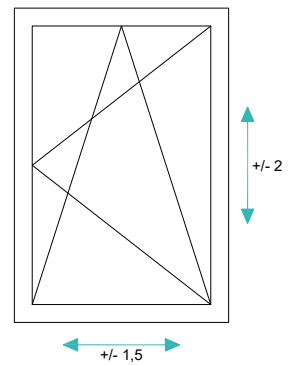
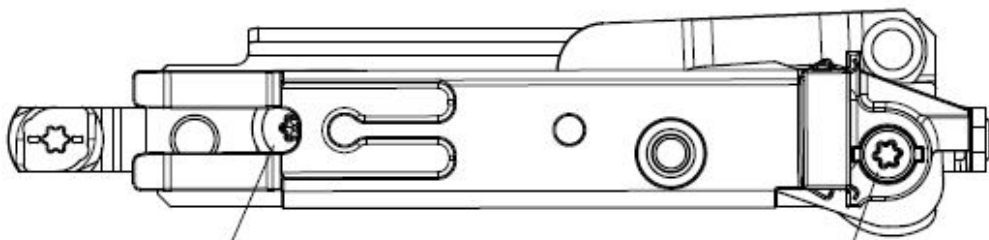
FINE ADJUSTMENT OF HINGES

TOP HINGE

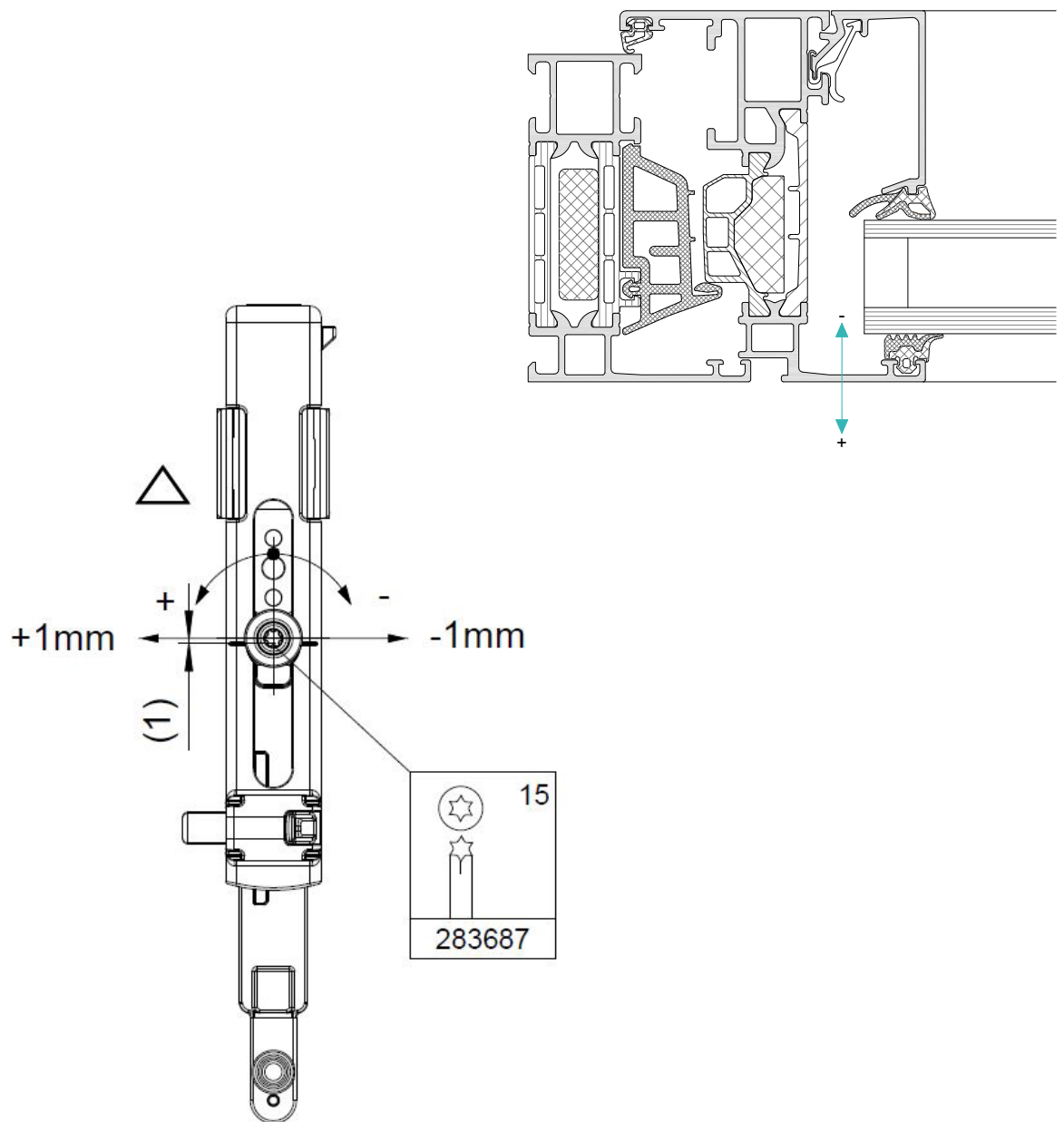
- Adjusting the hinges is best done with a screwdriver with a flexible neck (torx 15 - length 70 mm)



LOWER HINGE



ADJUSTING THE OVER-REBATE



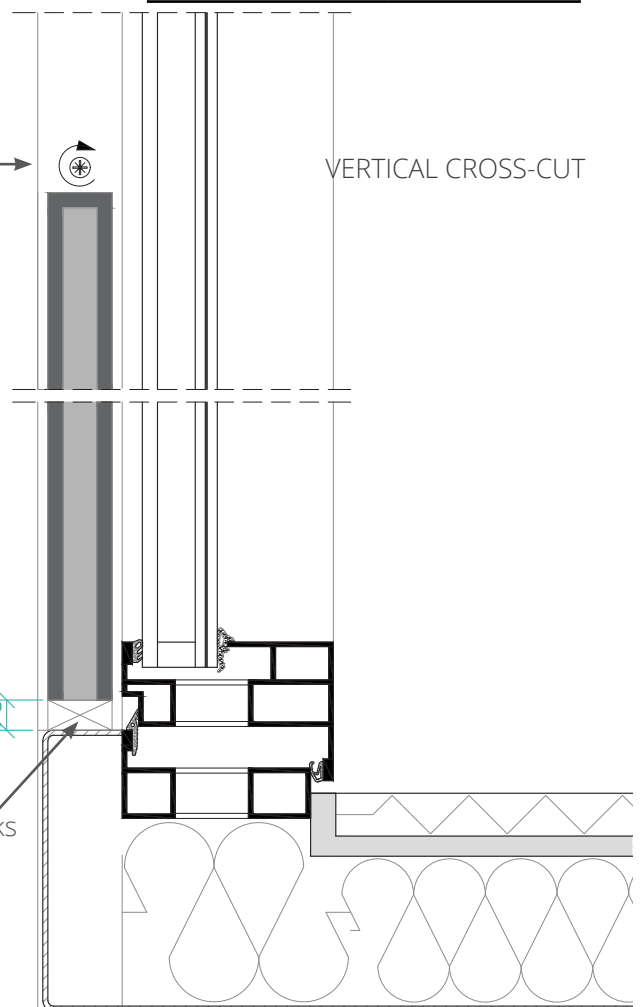
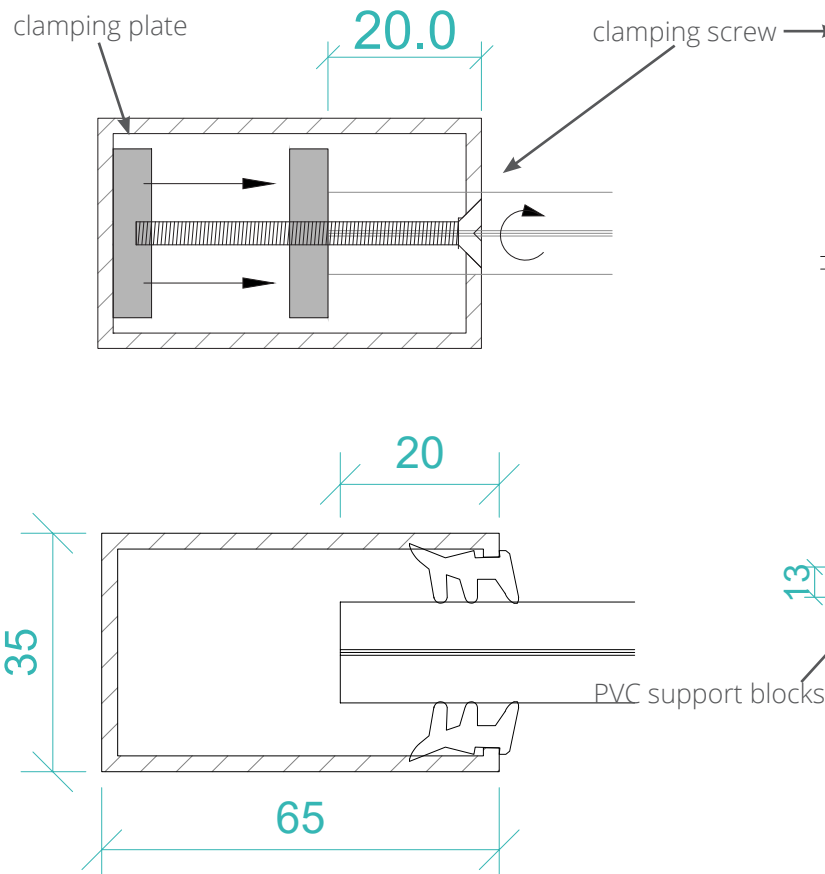
MOUNTING OF GLASS - BALUSTRADE

HORIZONTAL CROSS-CUT



- Tighten the clamping screws evenly on both sides until lateral movement is no longer possible and the glass is 20mm in the guide
- Included: - PVC-support blocks that sit in the guides
- Glass rubbers included separately

GLASS LIST	
Glass composition	Rubber glass strips
44.4	7 + 6 mm
55.4	6 + 5 mm
66.4	5 + 4 mm
88.4	3 + 3 mm
1010.4	2 x silicon sealant



INTERIOR FINISHING

THE STEEL MUST NOT BE PUNCTURED !

- Windox provides an aluminium black coated stop profile for connection of interior finish
- **Inside finishing not part of Windox contract**
- Maximum thickness 20 mm

□ **Option 1:**

- 1 component PU mounting adhesive
- Gyplat 9.5 mm
- plaster layer 5 mm

□ **Option 2:**

- 1 component PU mounting adhesive
- Gyproc 9 / 12.5 mm
- finishing of joints with filler

□ **Option 3:**

- adhesive layer of Metal Dec mixed with plaster
- plaster layer

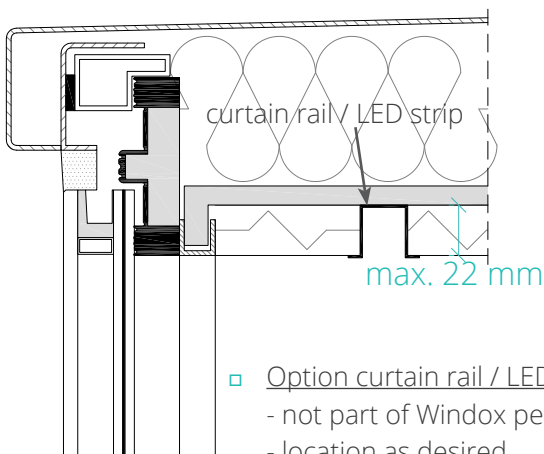
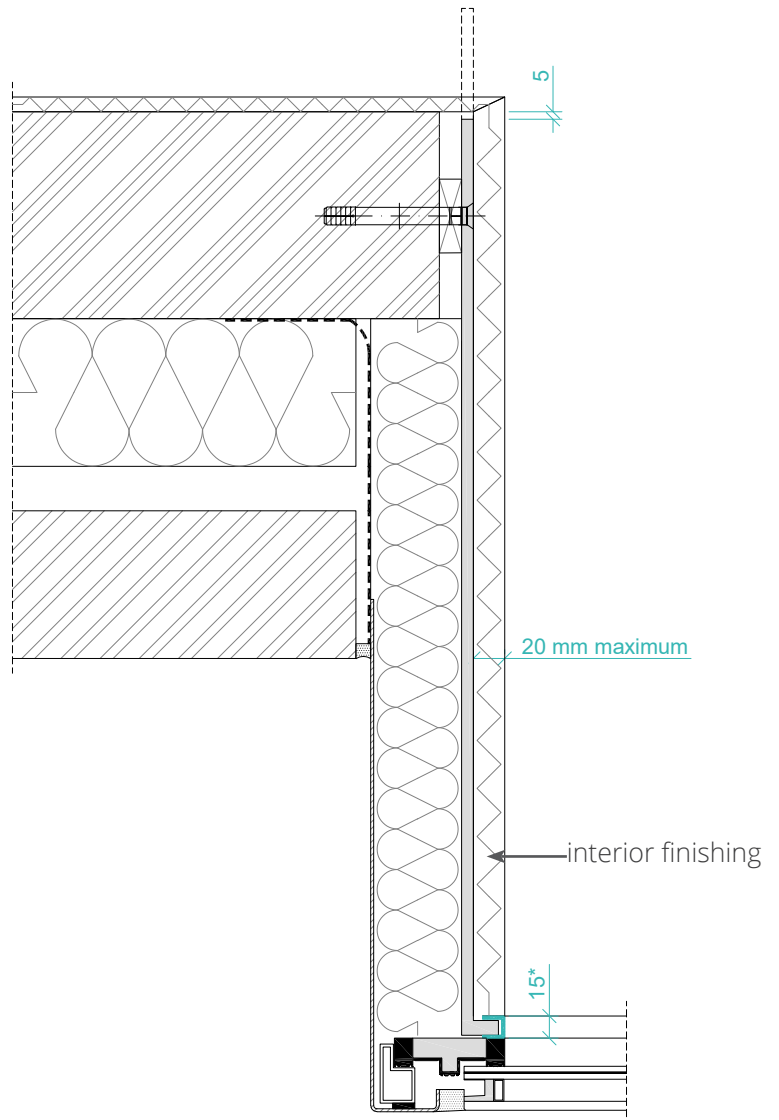
□ **Option 4:**

- 1 component PU mounting adhesive
- wall covering panel of your choice (max. 18 mm)

Note:

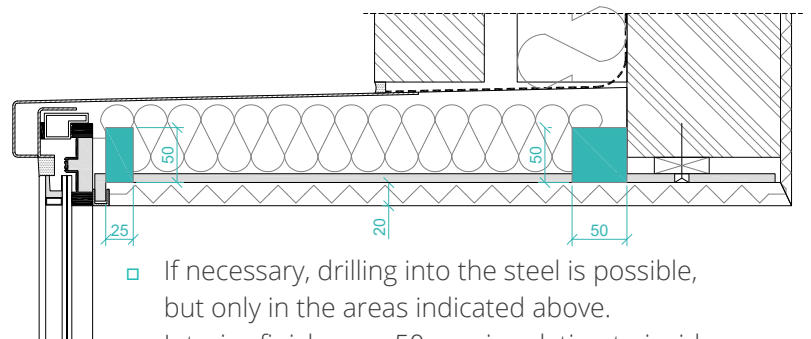
- * 15mm of black aluminium profile remain visible

Option: extension of interior steel



□ Option curtain rail / LED strip:

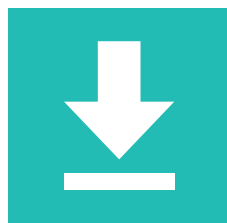
- not part of Windox performance
- location as desired
- **can only be fastened by cementing to a steel plate**



- If necessary, drilling into the steel is possible, but only in the areas indicated above. Interior finish max. 50 mm in relation to inside of steel

GENERAL
INFORMATION

TEXT OF SPECIFICATIONS



DOWNLOAD

[NL](#) | [FR](#)[NL https://www.cobosystems.be/alu-log/windox/product.html](https://www.cobosystems.be/alu-log/windox/product.html)[FR https://dbc.cobosystems.be/alu-log/windox/produit.html](https://dbc.cobosystems.be/alu-log/windox/produit.html)

STABILITY

- Calculated as a self-supporting construction from exterior load-bearing wall

CALCULATION METHODS, CODES AND STANDARDS

- Maximum deflection 3mm
- Calculated with software package "SCIA-Engineering" with the following standards:
 - EN1990 basis for structural design
 - EN1991 actions on structures
 - EN1992 design of concrete structures
 - EN1993 design of steel structures

LOAD ON STRUCTURE

- Permanente load
 - weight of the materials used
- Variable load
 - use comfort A = 400 kg/m^2
(accessibility of one person to the balcony)
 - snow acc. NBN EN1991-1-3
= 50 kg/m^2 (0.5 kN/m^2)
 - wind load acc. to NBN EN1991-1-4
= terrain **category 2** and wind speed **26 m/s**

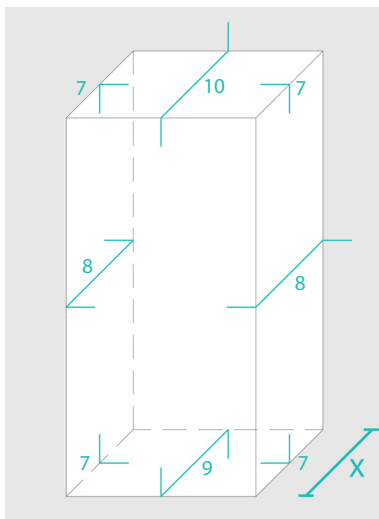
EPB - THERMAL BRIDGES

CALCULATED BY AN ACCREDITED DESIGN OFFICE

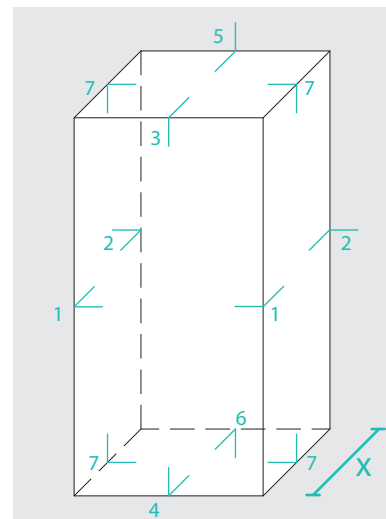
ALL THERMAL BRIDGES ARE EPB ACCEPTED

- Thermal performance is calculated with Trisco software version W13.0, according to NBN EN ISO 10211 and the current EPB regulations.
- Thermal bridges need **NOT** be entered (i.e. no penalty points at the S level) if Psi value (linear heat transmission coefficient) meets the minimum legally imposed requirements (section 4.2 condition 2).
- **If net visible depth < 400 mm**
 Interior corner and window connection are considered as one thermal bridge (8/9/10)
 - the U-value of the wall is not to be entered in the EPB software
 - Psi-value < 0.25 W/mk (value when absent 0.15 + 0.10)
- **If net visible depth X > 400 mm**
 - Interior corner and connection with window are regarded as separate thermal bridges
 - the U-value of the wall (0.24 W/(M².K)) s is to be entered in the EPB software
 - Psi value < 0.15 W/mK (2/5/6)
 - Psi value window connection < 0.10 W/mK (1/3/4)
- The longitudinal cross-cut 7 is not affected by the depth of the Windox.
- The report is available on request.

net visible depth X < 400 mm



if net visible depth X > 400 mm



WINDOX

www.windox.be - info@windox.be - Belgium,