



EN

Climalux / Climalux Horizon

Mounting instructions

Art.N° 36179


Hello daylight!

1 CONTENT

1	CONTENT	P. 2 - 3
2	SAFETY	P. 4 - 5
3	GUIDELINES	P. 6
4	LOAD CAPACITY GRAPHS	P. 7
4.1	GENERAL CONSIDERATIONS	P. 7
4.2	LOAD CAPACITY OF RAFTERS IN FUNCTION OF PLASTIC SHEETS OR GLASS	P. 8
4.3	LOAD CAPACITY OF GUTTER BEAMS	P. 9
4.3.1	FOR ROOFS WITH PLASTIC SHEETS	P. 9
4.3.2	FOR ROOFS WITH GLASS	P. 10
5	OVERVIEW INSTALLATION VARIABLES	P. 11
5.1	APPROACH MOUNTING INSTRUCTIONS	P. 11
5.2	CODES FOR THE POSITIONING OF THE ELEMENTS	P. 11
5.3	SLOPE	P. 11
5.4	FRAME CONNECTIONS	P. 11
5.5	HORIZONTAL BEAMS	P. 12
5.6	ROOF PACKAGE	P. 12
5.7	POST COVERS	P. 13
5.8	GLAZING EDGE PROFILE	P. 13
6	MEASURING A WALL-SUPPORTED CLIMALUX ROOF	P. 14
6.1	OVERVIEW ELEMENT POSITION CODE	P. 14
6.2	MEASURING	P. 15
7	MEASURING A FREESTANDING CLIMALUX ROOF	P. 17
7.1	OVERVIEW ELEMENT POSITION CODE	P. 17
7.2	DETAIL FOUNDATION & HEIGHT	P. 17
7.2.1	RIDGE BEAM H1 IN LATERAL VIEW	P. 17
7.2.2	GUTTER BEAM G1 IN LATERAL VIEW	P. 18
7.3	OPTIONAL GROUND FOUNDATION	P. 18
8	OVERVIEW PROFILES AND PARTS	P. 19
9	PREPARATION	P. 24
9.1	WALLS	P. 24
9.2	FLOOR	P. 24
10	ASSEMBLING THE POSTS	P. 25
10.1	POST TYPE: PX	P. 25
10.1.1	PX + PU + (PV): INSTALLATION ON GROUND / GUTTER WITH BRACKET	P. 25
10.2	POST TYPE: PXLX	P. 25
10.2.1	PXLX + LB150: INSTALLATION ON GROUND WITH BRACKET	P. 25
10.2.2	PXLX + PS01 140X30: INSTALLATION WITH ANCHOR; FOUNDED IN CONCRETE / ON THE GROUND	P. 26
10.2.3	PXLX: FOUNDATION WITHOUT ANCHOR	P. 26
10.2.4	XLX + LB150 (+ C72): INSTALLATION ON GUTTER WITH BRACKET (+ BEAM P72 IN CASE OF BRACKET C72)	P. 27
10.2.5	PXLX + PCLX / PCLXLX: POST COVER OPTIONS	P. 27
10.3	POST TYPE: PGDX	P. 28
10.3.1	PGDX + PUX + (PV): INSTALLATION GROUND & GDY	P. 28
10.3.2	PGDX + PS: INSTALLATION WITH ANCHOR; FOUNDED IN CONCRETE / ON THE GROUND	P. 28
10.3.3	PGDX: FOUNDATION WITHOUT ANCHOR	P. 29
10.3.4	PGDX + C110: INSTALLATION CROSSBEAM GDY	P. 29
10.3.5	PGDX + C110 + C72: INSTALLATION HORIZONTAL BEAM GDY & BEAM P72 AND WITH BRACKET C72	P. 29
11	ASSEMBLING THE HORIZONTAL BEAMS	P. 30
11.1	WALL-SUPPORTED BACK PROFILE	P. 30
11.1.1	PREPARATION	P. 30
11.1.2	INSTALLATION	P. 30
11.2	SIDE BEAMS W1 & WN: TYPE P72	P. 31
11.2.1	P72 + PU: SIDE BEAM STANDARD VERSION	P. 31
11.2.2	P72 + C110: SIDE BEAM REINFORCED VERSION	P. 31

11.3	GUTTER BEAM G1: TYPE GX	P. 31
11.3.1	GX + VS: GUTTER WITH REINFORCEMENT PROFILE	P. 31
11.3.2	GX + PU: INSTALLATION ON POST PX	P. 32
11.3.3	GX + LT150: INSTALLATION ON POST PXLX	P. 32
11.3.4	GX + LT150 (+ VTVS): INSTALLATION ON POST PXLX	P. 33
11.3.5	GX: COUPLED GUTTER	P. 34
11.3.6	GX + GLX / GR: GUTTER WITH COVER	P. 34
11.4	GUTTER BEAM G1: TYPE GXLX	P. 35
11.4.1	GXLX + V1243: GUTTER WITH REINFORCEMENT PROFILE	P. 35
11.4.2	GXLX + LT150 + PT150: INSTALLATION ON POST PXLX	P. 35
11.4.3	GXLX: COUPLED GUTTERS	P. 36
11.5	RIDGE BEAM H1 & ROOF OVERHANG BEAM O1	P. 38
11.5.1	GDX + IP140 / V14105: BEAM WITH REINFORCEMENT PROFILE	P. 38
11.5.2	RIDGE BEAM H1: GDX + MX / MX32	P. 38
11.5.3	OVERHANG BEAM O1: GDX	P. 39
11.5.4	GDX + PUX: INSTALLATION ON PGDX	P. 39
11.5.5	GDX: INSTALLATION ON PGDX + C110	P. 39
11.5.6	THE CONNECTION OF 2 SUPPORTS IS SUPPORTED BY THE POST	P. 40
11.5.6	GDX: COVER PROFILE	P. 42
12	PREPARATION OF THE FRAME	P. 43
12.1	OVERVIEW	P. 43
12.2	INSTALLATION W1 & WN	P. 43
12.2.1	W1 / WN WITH C72 BRACKETS	P. 43
12.3	INSTALLATION R1 + R2 + RN	P. 44
12.3.1	OUTLINING THE STRUCTURE	P. 44
12.3.2	FINISH	P. 44
13	ASSEMBLING THE ROOF PACKAGE	P. 45
13.1	PARTS	P. 45
13.2	PREPARATION	P. 45
13.3	RAFTER SPACING	P. 45
13.4	INSTALLATION OF THE RAFTERS	P. 46
13.4.1	VERSION 1: GUTTER GX	P. 46
13.4.2	VERSION 2: GUTTER GXLX	P. 47
13.4.3	VERSION 3: ROOF WITH OVERHANG	P. 47
13.4.4	SPACERS	P. 48
13.5	FINISH	P. 48
13.5.1	WALL PROFILE	P. 48
14	OPTIONS	P. 49
14.1	LIGHTING	P. 49
14.1.1	LIGHTING COMPONENTS IN WALL PROFILE OR GUTTER	P. 49
15	GLAZING	P. 50
15.1	PLASTIC SHEETS	P. 50
15.1.1	MULTI-WALLED PLASTIC SHEETS	P. 50
15.1.2	FINISH	P. 52
15.2	PERGOTOP	P. 52
15.3	GLASS	P. 52
15.3.1	FINISH	P. 52
16	SEALS & WATER DRAINAGE	P. 53
16.1	EXTRA SEALS FOR GLASS ROOF WITH SLOPE 2° TO 5°	P. 53
16.1.1	GREY FOAM ADHESIVE TAPE	P. 53
16.1.2	BLACK RUBBER ADHESIVE TAPE	P. 53
16.1.2.1	STRIPS ON THE BACK PROFILE	P. 53
16.1.2.2	STRIPS ON THE GLASS-BEARING PROFILES	P. 53
16.1.3	GLASS SHEET PREPARATION	P. 54
16.1.4	GLASS SHEET ON THE ROOF	P. 54
16.1.5	SILICONE SEALANT	P. 54
16.1.6	MOUNTING THE SEAL C1CX	P. 54
16.2	SCREW-ON GLASS COVERS	P. 55
16.3	CLIP-ON GLASS COVERS	P. 56
16.3.1	MIDDLE RAFTERS (R2)	P. 56
16.3.2	SIDE RAFTERS (R1 & RN)	P. 56
16.3.3	SIDE RAFTERS (R1 & RN): FINISH	P. 57

2 SAFETY

Take the necessary and required safety precautions, such as safety nets and lifelines when installing from the outside, safety goggles, gloves, hard hat, etc.
Do not step on the glass.



Falling from height

- When using ladders to go on the roof:
 - Ladder in good condition?
 - Set up correctly at an angle of 75°?
 - Secured below and on top against moving?
 - Don't take heavy material with you on the ladder (3-point contact rule)! If possible, use a crane to lift the material.
- If you are going on the roof, make sure there is a walking surface that is wide enough and that supports on the beams of the lower structure.
- When using an aerial work platform: always wear and secure your harness (mandatory)! Leaving the cage is forbidden.
- Never walk backwards on a roof, always walk forwards.
- Make sure there's enough light in the working zone.



Low-hanging obstacles and falling loads

- Forbidden to walk under or within a radius of 1 m of a hanging or lifted load.
- Demarcate the danger zone below the zone where there is a risk of material falling down during the installation of the veranda.
- It is prohibited to enter these danger zones during construction.



Crushing hazard

- All working tools are in good condition, provided with a valid CE label and all necessary safety regulations. These cannot be removed.
- People who use these working tools are educated for this purpose. Protections are always present on all working tools. They are in good condition and need to be set correctly.



Tripping/falling

- Safety is key and it begins with order and tidiness. Clean everything immediately, leave nothing lying around.
- Trash needs to be sorted.
- Be cautious with electric cables (danger of tripping/falling). Never walk backwards!
- Make sure there's enough light in the working zone.



Sharp objects

- Make sure your fingers/hands are not pinched and watch out for cuts while handling veranda parts.
- Be careful where you put your hands during the installation.
- Wearing cut-resistant gloves is mandatory.



Ergonomics

- Always lift loads correctly: bend your knees, move your feet instead of forcing your spine, lift as close to your body as possible.
- Parts of more than 25 kg must be lifted with at least 2 persons.



Personal protective equipment



- Work clothes, safety shoes and helmet are mandatory for everyone.



- Lifeline and harness are mandatory if the edge is not secured enough or if there are no safety nets below the veranda roof. They are also necessary when using an aerial working platform.



- Use gloves when handling veranda parts.



- Safety glasses and hearing protection are mandatory when using saws / grinders.

Always perform a Last Minute Risk Analysis!

If in doubt: STOP! Do not take unnecessary risks. Ask your supervisor if needed.

3 GUIDELINES

Safety during construction

Please read this manual carefully.

The installation must be carried out by people with sufficient technical knowledge and experience in the area of conservatory installations (mechanical and electric). The installer must take the required safety measures into account during the installation such as the use of scaffolding and personal protection equipment - safety shoes, helmet (i.e. hard hat), gloves, safety goggles, etc. - to ensure the work is carried out in a safe environment. During installation, please make sure that the necessary precautions have been taken to ensure the stability of the unfinished construction.

Stability

1) Statik

For roofs (attached or freestanding) that need a Statik, separate mounting instructions & corresponding parts are provided.

2) Construction situation in general

The installer is responsible for the assessment of the appropriate fixing materials for the load and foundation on which the structure is to be fixed. Please contact your fixing material supplier or specialised engineering consultants in case of doubts. Skylux cannot be held responsible for the installation or the fixing materials used.

Seal installation

A distinction is made between push-in seals and slide seals.

The seal of a push-in seal is pushed into the profiles. The C2CX, C12, C8, CY10 and C31 seals are push-in seals.

The slide seals C1CX and C5 are slid into the profiles.

The seals C1CX and C2CX are equipped with an anti-stretch wire that prevents the seal from being stretched during installation. This technology ensures that the seal cannot shrink after installation.

Avoid the use of silicone and detergent when installing the seals. Plastic sheets can be damaged by these products. Plastic sheets can result in settlement noise due to temperature fluctuations. This will not affect the guarantee and will not be accepted as a claim.

Terms, conditions and guarantee

The guarantee is void when the installation instructions provided below are not followed. Not following the instructions and/or using other parts may have an adverse effect on the safety and life cycle of the product. Variations are not permitted without written permission of the manufacturer. Our installation instructions manual and film are based on the latest level of our knowledge and technics. We cannot be held responsible for possible incomplete information. Always check if our product is suited for your application.

As the handling and installation of the product are done beyond our control, can Skylux not be held responsible for possible damages.

The installer must take the specified span values in relation to the glazing and load (snow and wind) according to the applicable standards into account.

The load graphs that you will find in this manual on page 7 are only indicative. Contact the manufacturer, architect or engineering consultant for conservatory roofs outside the normal range.

Technical changes are reserved by the manufacturer without prior oral or written notification.

Skylux reserves the right to change this manual without prior notification. Changing the installation requirements or the product will not mean a right to any compensation or exchange of parts.

The latest version of this manual can be consulted by visiting www.skylux.eu.

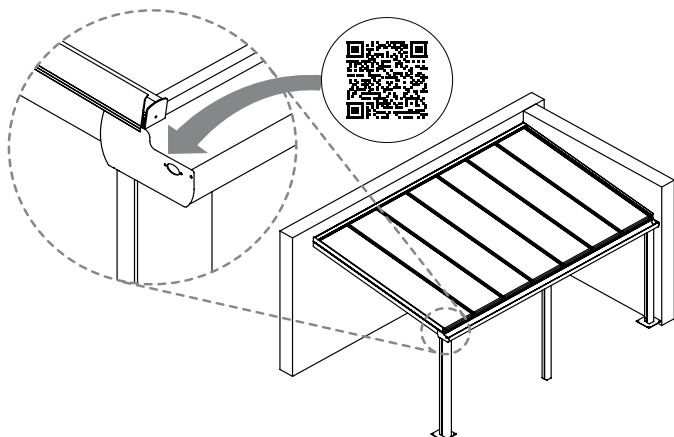
Climafast

The Climafast calculation application is offered by Skylux for free. You will receive information on how to log on and download the Excel version of the application upon request. With Climafast, you can determine the price of your Climalux roof. An overview of profiles, lengths, parts, allowed loads, etc, is provided for each project. The aim of this application is to inform the user.

Skylux reserves the right to change the Climafast application without prior notification. The results of the application are indicative and do not give right to any compensation. The latest version of the calculation application can always be downloaded from www.skylux.eu.

Questions or information about your canopy? Scan your NFC code.

You will find this on the inside of the left gutter end plate (see drawing). With this code, unique to your order, our customer service can help you further.



4 LOAD CAPACITY GRAPHS

4.1 General considerations

The following pages contain the load graphs for the Climalux profile system. You can use these to determine the free span of the gutter profiles and the supports in relation to the prescribed load.

A distinction is made between Climalux roofs with plastic sheets and Climalux roofs with single glazing.

The maximum allowable bending is 1/200 (= 1 cm per 200 cm free span) with plastic sheets.

This includes the weight of the structure and the plastic sheets. Select the graph in relation to **the prescribed snow and wind load**. This depends on the region and the orientation.

The maximum allowable bending is 1/300 (= 1 cm per 300 cm free span) with single glazing.

This is including the weight of the structure. In order to determine the total load, add **the weight of the glazing to the prescribed snow and wind load**. To determine the weight of the glazing, calculate 2.5 kg per m² and per mm thickness. Example: single glazing with a thickness of 8 mm weighs 8 x 2.5 = 20 kg/m². After converting into N/m² x factor 9.81, this results in 20 x 9.81 = 196.20 N/m². Suppose the prescribed snow and wind load is 500 N/m² and the glazing is 200 N/m², the total load would be approximately 700 N/m². In order to limit the weight of the glazing, the axis distance between the support profiles (AX) is limited to a maximum of 750 mm. The total width of the roof is divided into equal parts.

The bending of 1/200 or 1/300 is achieved with a maximum load. For example, a gutter support of 5000 mm with a maximum bending of 1/300 will bend 16.6 mm when loaded. Less if unloaded.

These graphs do not apply with regard to a continuous support or a structure under the gutter profiles installed by the customer.

The gutter profiles may put pressure on supporting window profiles when installed on top of each other.

A possible bending of the gutter profile above the sliding doors should therefore be taken into account.

When the selected gutter (support) cannot be installed where a certain span or load is concerned, select a gutter support that can handle a larger span. You could also install an extra post to decrease the free span.

“Span” refers to the distance between the posts. The total width of the roof = the free span + the width of the posts.

The roof's supporting posts should always be located at the corners of the roof. We do not recommend moving the post supports inwards.

Any sunblind installed on the profiles are at your own risk and should be included in the calculation as an additional load.

In case of large spans or loads, the use of reinforcement profiles is recommended. These are slid into the aluminium profiles. The reinforced profile V14105 is not supplied. They can be bought at any local hardware store. We recommend treating the reinforcement profiles with an anti-corrosion product.

The selection of required fixing material is dependent on the foundation or the walls. Check whether the foundation and the walls on which the structure is to be anchored have a sufficient load-bearing capacity. The installer is responsible for the assessment of the appropriate fixing materials for the load and basis on which the structure is to be fixed. Please contact your fixing material supplier or specialised engineering consultants in case of doubts. Skylux cannot be held liable for the installation or the fixing material used.

We recommend removing any snow from the roof to prevent accumulation against the wall by the wind. When snow on a higher roof can slide on to the Climalux roof, measures must be taken to prevent this, for example, by using snow hooks and snow beams.

You can use the Climafast calculation application to select the correct profiles and support in relation to the dimensions of the Climalux roof, the prescribed load and the glazing.

The latest version of this calculation application can always be downloaded from www.skylux.eu.

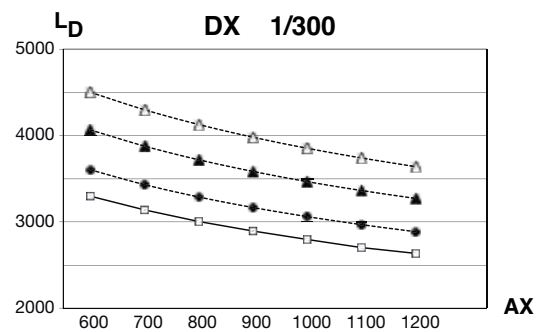
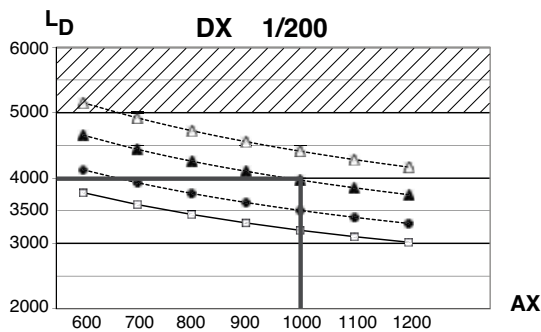
4.2 Load capacity of rafters in function of plastic sheets or glass

The graphs below can be used to determine the free span for the rafter DX. This is the maximum length of the rafter in function of the load and the depth (D) of your roof. The maximum bending is 1/200 (plastic sheets) or 1/300 (glass). E.g.: a bending of 1 cm for a free span of 200 cm or 300 cm. **The load is related to the snow and wind load.**

Practical example:

The axis distance (AX) between the rafters is 1000 mm (= for plastic sheets with a width of 980 mm). The depth (D) of the roof is 3500 mm. Determine the point on the graph “500 N/m² & 1/200”. The maximum rafter length is 4000 mm.

The maximum bending (1/200) with load is 20 mm. Less if unloaded.
The maximum deliverable length of the rafters is 5 metres.



- △--- 350 N/m²
- ▲--- 500 N/m²
- ◆--- 750 N/m²
- 1000 N/m²

4.3 Load capacity of gutter beams

4.3.1 For roofs with plastic sheets

The graphs below can be used to determine the free span for each type of gutter (support). This is the distance between your supports (posts) in function of the load and the depth (D) of your roof. The maximum bending is 1/200. **The load is related to the snow and wind load.**

Practical example:

The roof has a width (B) of 4000 mm and a depth (D) of 3500 mm. The prescribed load is 500 N/m² (~ 50 kg/m²). The roof is provided with multi-walled plastic sheets. Determine the point in the “500 N/m² & 1/200” graph and select a gutter (beam) above this point.

There are 3 possibilities according to the graph:

You can choose the gutter GXLX which allows for a free span length (P) of 6200 mm.

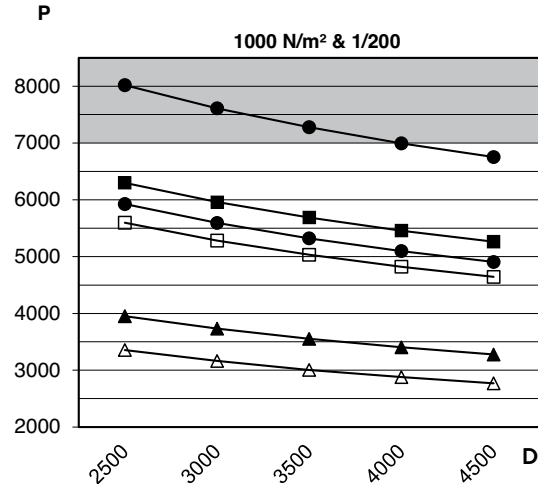
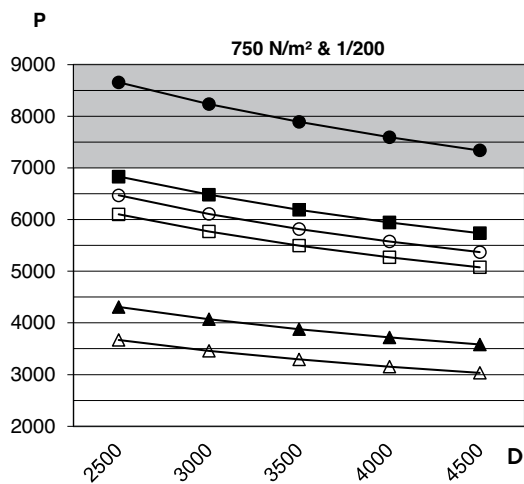
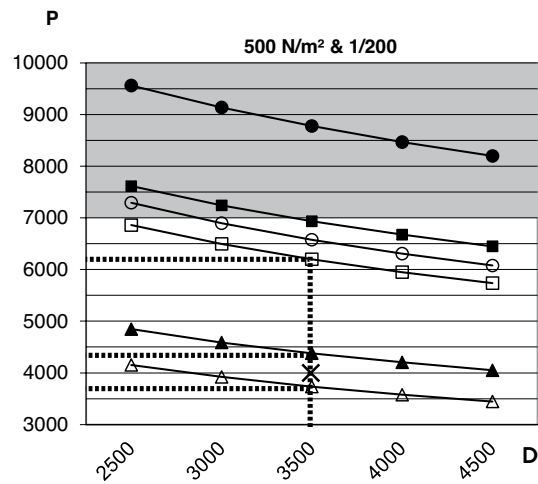
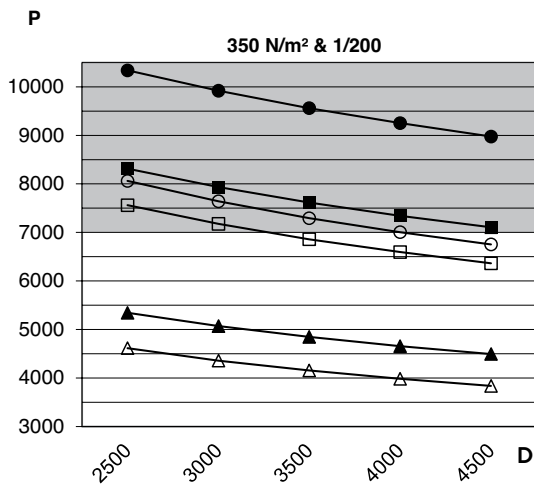
Or you can choose the gutter GX with reinforcement VS which allows for a free span length (P) of 4380 mm.

Or you can choose the gutter GX with a maximum span length of 3730 mm. An additional post for support in the middle is needed in this case.

The span is the distance (P) between the posts. In this example, the width can be 4500 mm where the free span (P) between the posts = 4500 – (2 x 110) = 4380 mm.

The bending in the middle with a load of 500 N/m² is 1/200 or 400/200 = 20 mm. Less if unloaded.

The maximum deliverable length of the gutter profiles is 7 metres.



- △— GX
- ▲— GX + VS
- GXLX
- GXLX + V1243
- GDX
- GDX + V14105

4.3.2 For roofs with glass

The graphs below can be used to determine the free span for each type of gutter (beam). This is the distance (P) between your supports (posts) in function of the load and the depth (D) of your roof. The maximum bending for a construction with glass is 1/300. **The load is the sum of the weight of the glazing and the snow and wind load applied to the roof.**

Practical example :

Your roof has a width (B) of 4000 mm and a depth (D) of 4000 mm. The prescribed load is 500 N/m² (~50 kg/m²). The glazing weighs 25 kg/m² (ca. 250 N/m²). The total load in this case is 750 N/m².

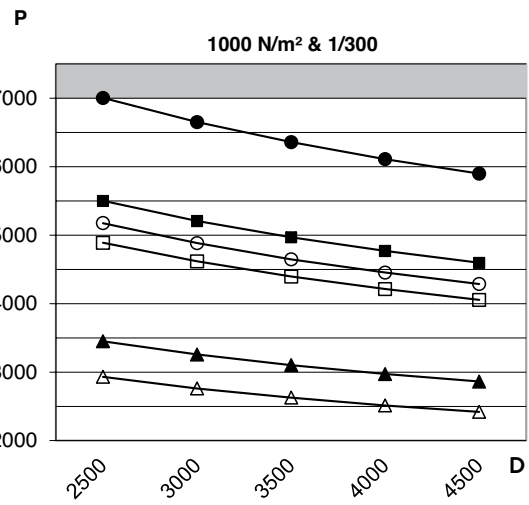
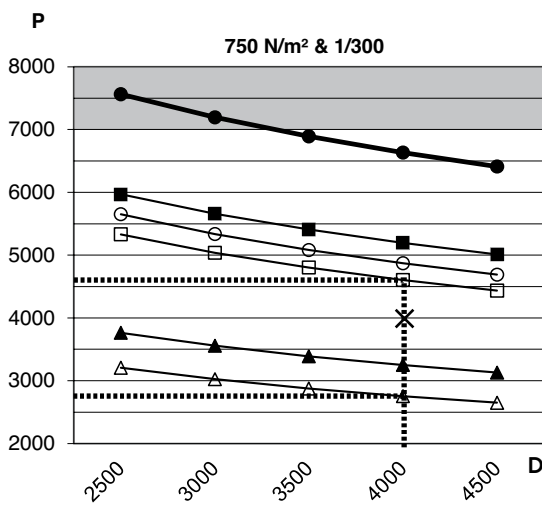
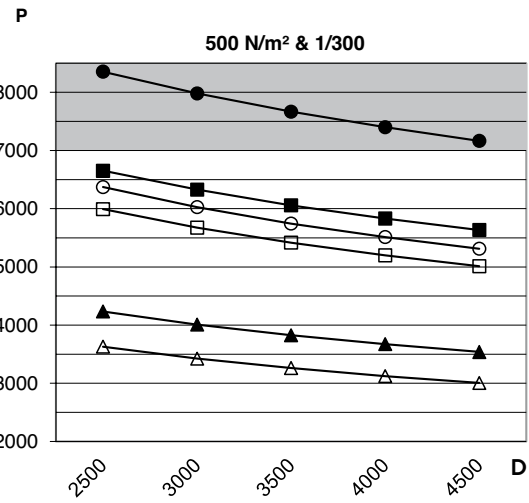
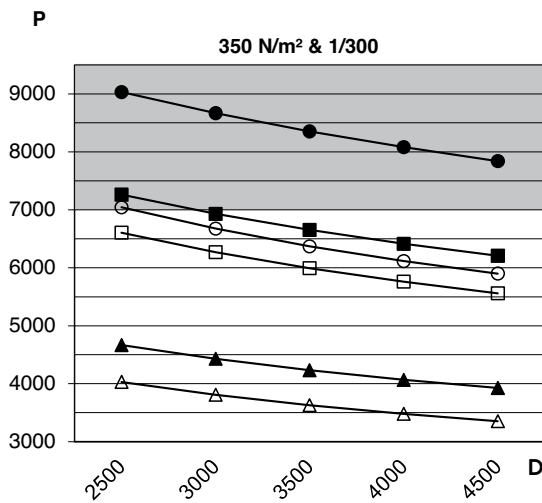
Determine the point on your graph “750 N/m² & 1/300” and choose a gutter (rafer) above this point.

There are 2 possibilities according to the graph:

You can choose the gutter GXLX which allows for a free span length (P) of 4600 mm.

Or you can choose the gutter GX without reinforcement VS for a max. span length of 2750 mm. An additional post for support is needed in this case.

The maximum bending (1/300) in the middle with load is 4000/300 = 13.3 mm. Less if unloaded. The maximum deliverable length of the gutter profiles is 7 metres.



- ▲ GX
- ▲ GX + VS
- GXLX
- GXLX + V1243
- GDX
- GDX + V14105

5 OVERVIEW INSTALLATION VARIABLES

5.1 Approach of mounting instructions

- 1) The tables below identify the relevant part combinations in function of your roof configuration.
- 2) Afterwards, use the index at the beginning of this document to find the installation points with relevant instructions.
- 3) The parts list can help you with this.

5.2 Codes for the positioning of the elements

Codes for the positioning of the profiles			Position			
			Side 1	Intermediate elements		Side n
Element & type	Posts	Gutter posts	P1.1	P1.2	...	P1.n
		Roof overhang posts	P1.1	P1.2	...	P1.n
		Ridge posts	P2.1	P2.2	...	P2.n
	Horizontal beam	Gutter beam	G1	G2	...	Gn
		Roof overhang beam	O1	O2	...	On
		Ridge beam	H1	H2	...	Hn
		Side beam	W1	W2	...	Wn
Roof rafters		R1	R2	...	Rn	

5.3 Slope

Slope	Degrees
Standard	5°
Max.	10°
Min. glass	2°
Min. plastic	5°

slope < 5°: risk of water infiltration on top & limited self-cleaning
 slope < 10°: risk of condensate in the hollow sheet channels

5.4 Frame connections

Wall-supported roof: with/without Statik			Post type & position					
			PX		PXLX		PGDX	
			P1.1 = P1.n	P1.2	P1.1 = P1.n	P1.2	P1.1 = P1.n	P1.2
Element & type	Ground	Bracket	PU		LB150		PUX	
		Ground sheet	(PV)		-		PV	(PV)
	Gutter beam	Stan	PU		LT150			
		Stan						
	Overhang beam	Stan					PUX	
Side beam	Stan	PU72		PU72		PU72		
Optional: (*)								

Freestanding roof: attached on foundation without Statik			Post type & position					
			PX		PXLX		PGDX	
			P1.1 = P1.n	P1.2	P1.1 = P1.n	P1.2	P1.1 = P1.n	P1.2
Element & type	Ground	Steel anchor			VTPS02 140x030 fixed on concrete		VTPS fixed on concrete	
	Gutter beam	GX			LT150+VTVS	LT150		
		GXLX			LT150+PT150			
	Ridge beam	GDX					C110	PUX
Side beam	P72			C72		C72		

Freestanding roof: founded with Statik			Post type & position					
			PX		PXLX		PGDX	
			P1.1 = P1.n	P1.2	P1.1 = P1.n	P1.2	P2.1 = P2.n	P2.2
Element & type	Foundation	No steel anchor	PX founded in concrete		PXLX founded in concrete		PGDX founded in concrete	
		With steell anchor			VTPS02 140X030 founded in concrete		VTPS founded in concrete	
	Gutter beam	GX	PU		LT150+VTVS	LT150		
		GXLX			LT150+PT150			
	Ridge beam	GDX					C110	PUX
	Side beam	P72	PU72		PU72		PU72	

5.5 Horizontal beams

Extra elements			Extra elements				
			Steel reinforcement	Beam connector	Cover profile		
Element & type	Gutter beam	GX	VS	GIX	Without	GLX	GR
		GXLX	V1243	VGXLX + GIXL			
	Overhang beam & ridge beam	GDX	IPE 140		Without	GDCX	
		V14105					

5.6 Roof package

Installation elements			Variables			
Rafter profile			DX			
Sheet/glass thickness			7 - 16 mm		32 mm	
Back profile			MX		MX32	
Stop sheet			S16X		S32.3	
Fixation method			Clips		Screws	
Rafter position			R1/Rn	R2	R2	R1/Rn
Fixation profile			CLLX	CL16	CLSB + CLST	CLSB + CLSL
Seals & fixation according to sheet thickness	Plastic	7 mm	+ / C3+C8 / F1		++ / CY10+C8 / °ZSB	
		Glass 44.2 / plastic	8 mm	++ / C3+C8 / F1		++ / CY10+C8 / °ZSB
	9 mm		++ / C3+C8 / F1		++ / CY10+C8 / °ZSB	
	Glass 55.2 / plastic		10 mm	++ / C3+C8 / F2		/ C3+C8 / °ZSB
		11 mm	++ / C3+C8 / F2		/ C3+C8 / °ZSB	
	Plastic	15 mm			++ / C3+C8 / °ZSB	
		16 mm	++ / C3+C8 / F3		++ / C3+C8 / °ZSB	
Plastic / Pergotop	32 mm			++ / C3 + C8		

Legend

Quality solution	++	Ideal solution
	+	Good solution
Seals	C3	Seal below glazing
	C8	Seal below glazing
	CY10	Seal below / above glazing
Clips fix position	F1	CL16 fix position on tooth 1
	F2	CL16 fix position on tooth 2
	F3	CL16 fix position on tooth 3
Screws	°	Screw tightly
	ZSB	Self-drilling stainless steel screw 5.5x32 TX25
	ZSG	Laquered self-drilling stainless steel screw 5.5x32 TX25

* Roof profile DX is treated before delivery: on inclination angle and gutter type.

5.7 Post covers

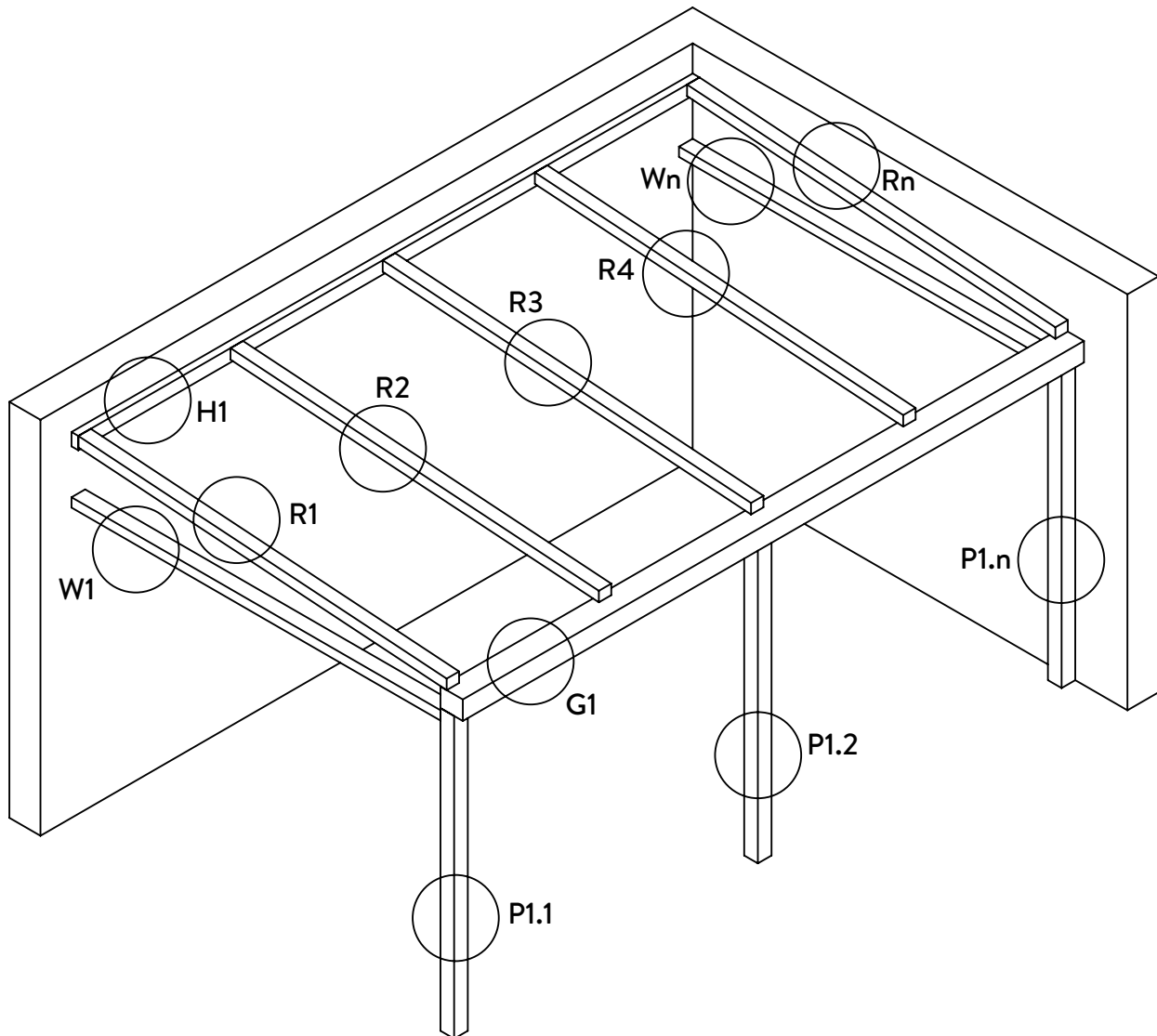
Gutter & post cover			Post type & position					
			PX		PXLX		PGDX	
			P1.1 = P1.n	P1.2	P1.1 = P1.n	P1.2	P2.1 = P2.n	P2.2
Element & type	Gutter	GX			PCLX			
		GXLX			PCLXLX			

5.8 Glazing edge profile

Glazing	Edge profile	Description
Glass (16 mm max)	L432	L finishing profile aluminium
16 mm sheet	U16P	Reinforced PVC end profile white
	U16A	Aluminium end profile
	U16	Pre-drilled alu end profile 16 mm
32 mm sheet	U32	Pre-drilled alu end profile 32 mm

6 MEASURING A WALL-SUPPORTED CLIMALUX ROOF

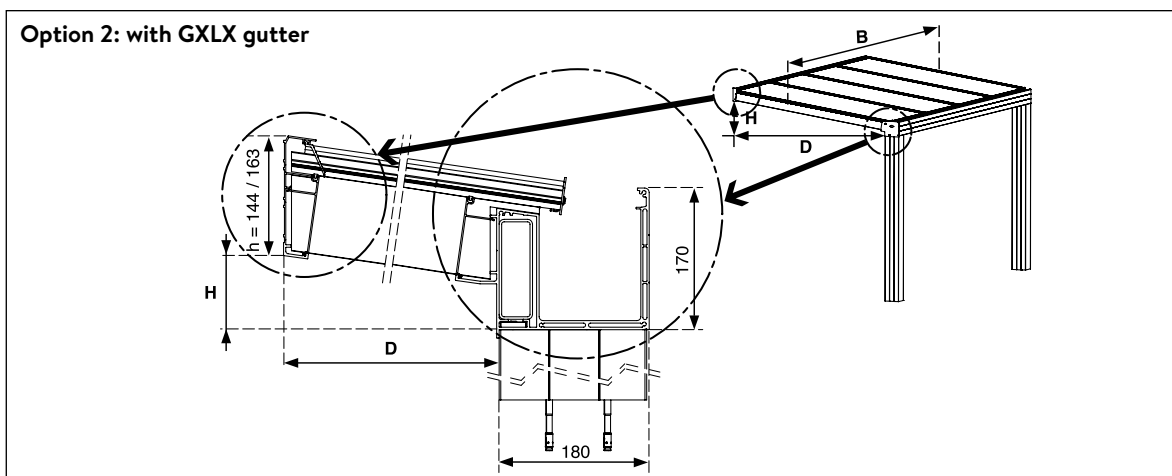
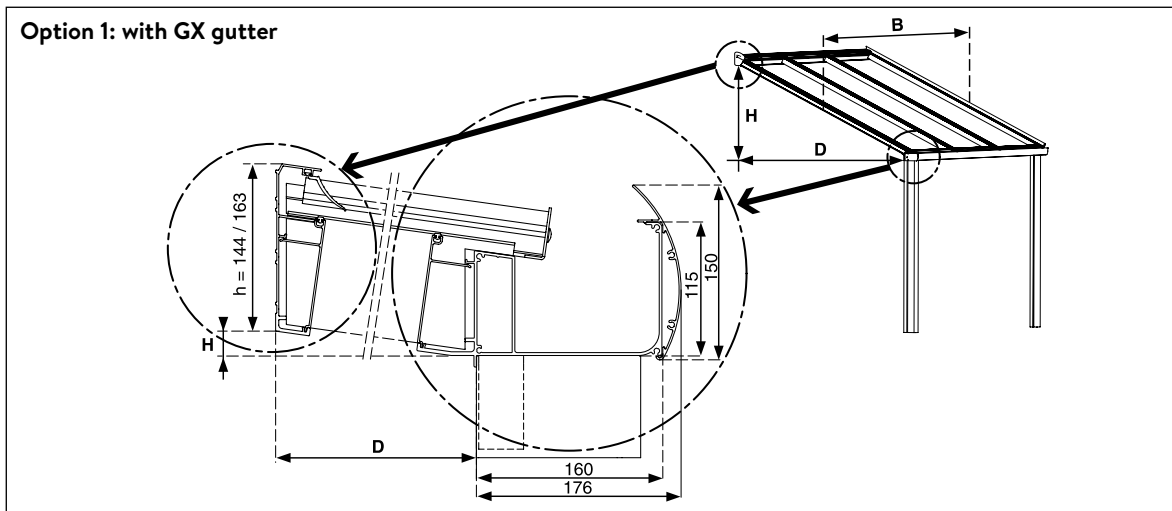
6.1 Overview element position code



6.2 Measuring

Determine the height difference H.

The height difference H is the difference between the bottom side of the wall profile MX and the bottom surface of the gutter combination. The stop lip for the post is not included in the calculation.



Height h is 144 mm for glazing up to 16 mm / Height h is 163 mm for plastic sheets of 32 mm.

Determine the depth

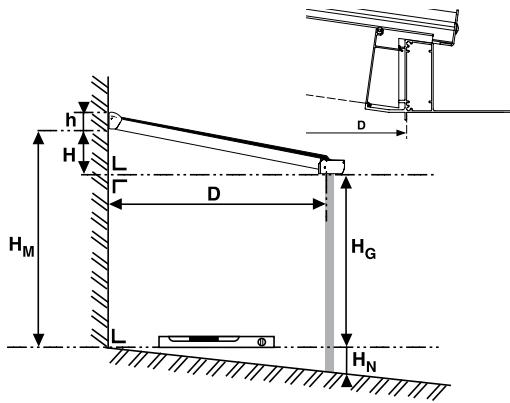
Measure horizontally from the wall to the inner side of the support post to determine the roof depth D. The additional depth of gutter GX is 160 mm, or of the gutter with ornamental frame GLX is 176 mm for a Climalux. The extra depth of the GXLX measures 180 mm. For a construction with roof overhang; see chapter 13.4.3 “Version 3: Roof with overhang”.

Determine the width B

The width B of the Climalux is the distance between the outer side of the side rafters. If the Climalux is installed between two walls and a gutter with screwed-on gutter end-pieces is used, you can deduct 5 mm per side from width B, as the screws for the gutter end piece require additional width and additional clearance is recommended.

These measurements can be used to calculate all other measurements using the Climafast calculation application, which is available free of charge from Skylux. We strongly recommend the use of the calculation application. All possible exceptions are taken into account. The correct cutting lengths are provided and only correct combinations are suggested. The list of measurements for sizing is always provided with the materials.

1



The difference in height H and depth D for the veranda.

H_M = The height from the floor and the bottom side of the profile measured at the back of the veranda.

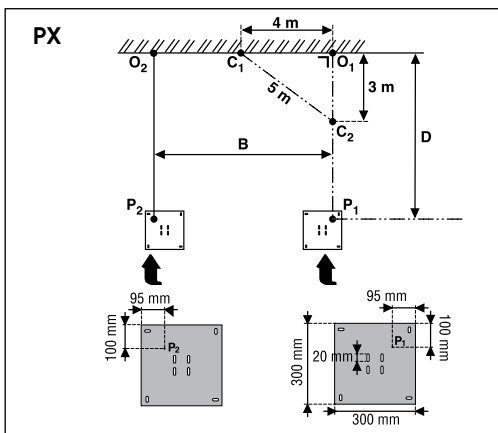
H_N = The slope difference of the veranda floor.

$H_G + H_N$ = Installation height for the bottom side of gutter GX
This is also the height for the windows or the length of the posts.

$$H = H_M - H_G$$

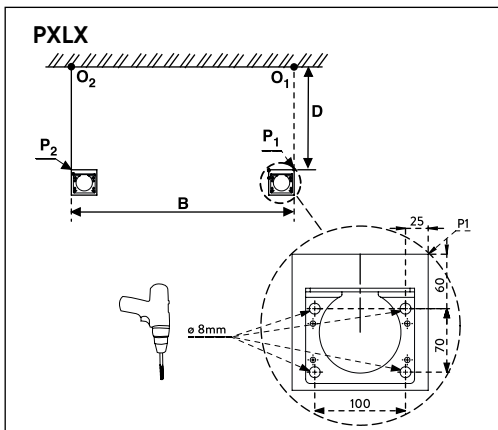
$h = 144 \text{ mm}$ or 163 mm (wall profile height)

2



Installing the Climalux post PX and PV base plate.

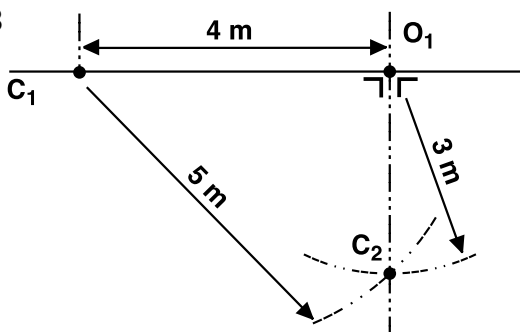
- Determine point O_1 .
- Determine O_2 . The distance $O_1 - O_2 =$ patio roof width "B".
- Draw a line with chalk using the 3/4/5 rule and determine point P_1 . The distance $O_1 - P_1$ is the depth = D (see item 3 below).
- Repeat the same actions for P_2 .
- Measure the distance ($P_1 - P_2$), which must be equal to ($O_1 - O_2$) as an additional check.
- The base plate can be slid through the slotted holes in order to position the base plate properly.
- The U for the base plate can be moved 20 mm either way to allow proper adjustment.



Installing the Climalux post PXLX.

- Determine point O_1 .
- Determine O_2 . The distance $O_1 - O_2 =$ patio roof width "B".
- Draw a line with chalk using the 3/4/5 rule and determine point P_1 . The distance $O_1 - P_1$ is the depth = D (see point 3 below).
- Do the same for P_2 .
- Measure the distance ($P_1 - P_2$) as additional check, it must be equal to ($O_1 - O_2$).

3

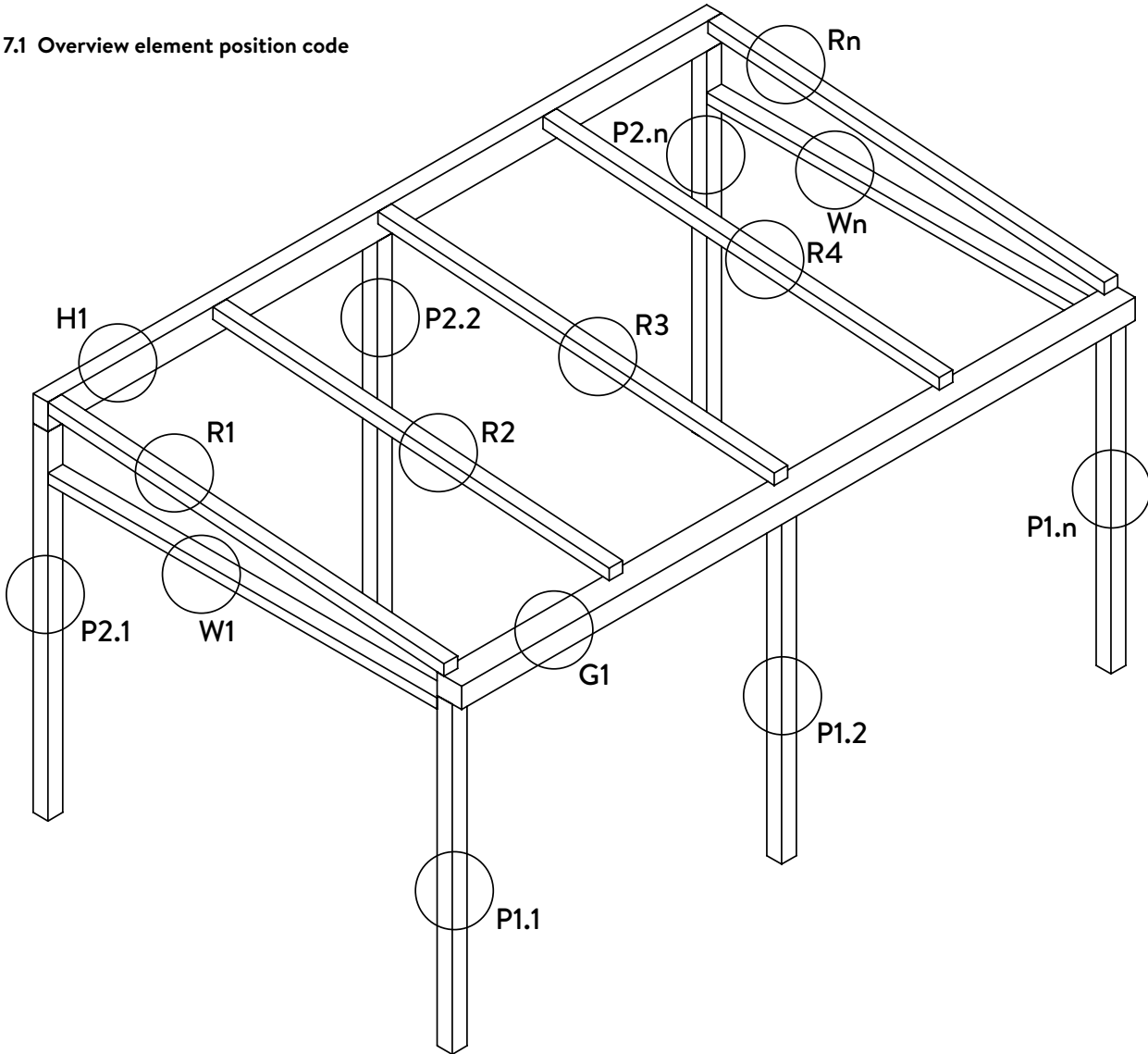


The 3/4/5 rule.

- Determine the auxiliary point C_1 based on O_1 at a distance of 4 metres
- Use a 3 metre string and a piece of chalk to draw a circle from point O_1 .
- Use a 5 metre string to draw a circle from point C_1 .
- The 2 circles intersect at C_2 .
- Line $O_1 - C_2$ should be at a perfect right angle to your wall (line $C_1 - O_1$).

7 MEASURING A FREESTANDING CLIMALUX ROOF

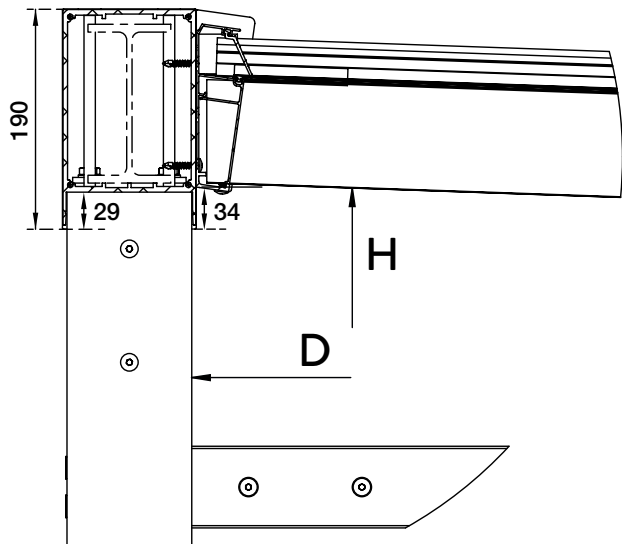
7.1 Overview element position code



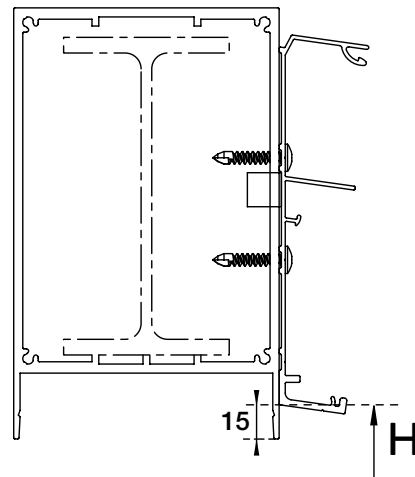
7.2 Detail foundation & height

7.2.1 Ridge beam H1 in lateral view

Wall profile type
Glass/sheet thickness 8-16 mm
Wall profile MX

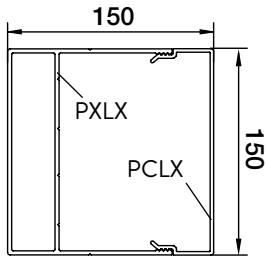
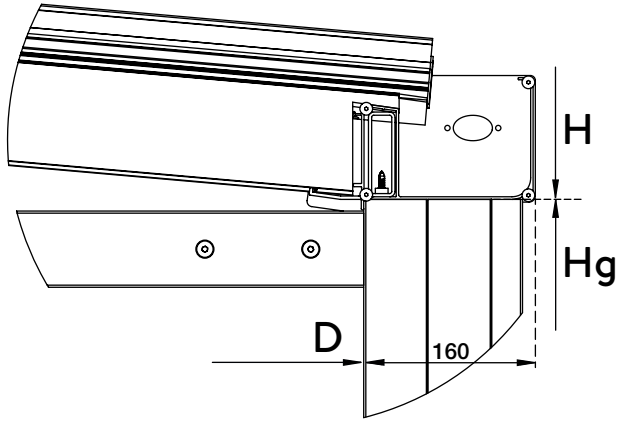


Sheet thickness 32 m
Wall profile MX32

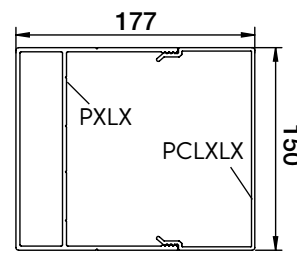
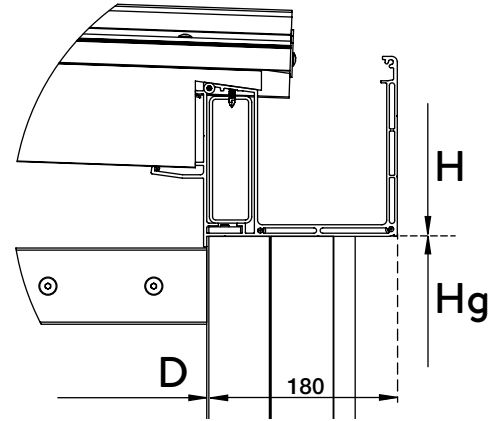


7.2.2 Gutter beam G1 in lateral view

Gutter type
GX

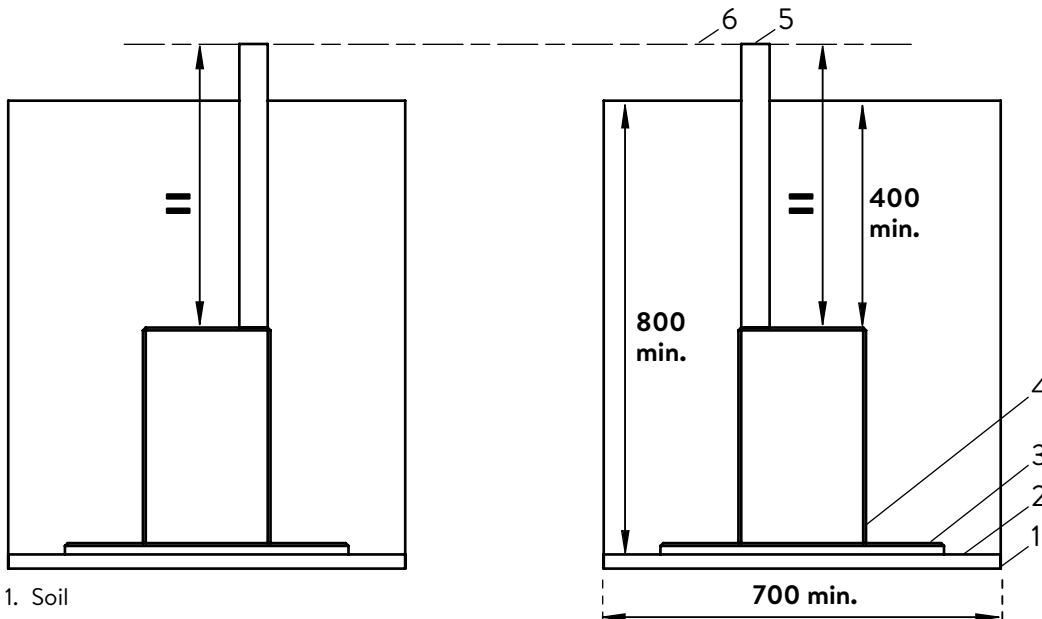


GXLX






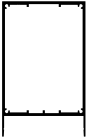
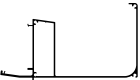


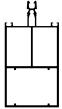




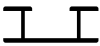


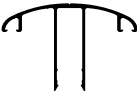
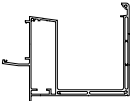


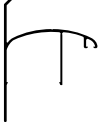
7.3 Optional ground foundation





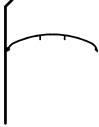

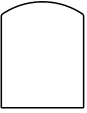










Determine the foundation dimensions. Make sure the posts will be in the middle of the foundation.



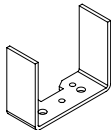

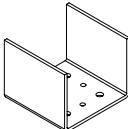

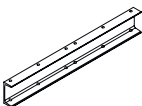

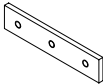
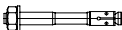
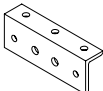

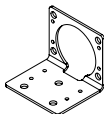




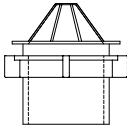

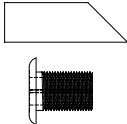
1. Soil
2. Sandbed
3. Tile
4. Concrete base
5. Level equal measuring posts
6. Level mason twine





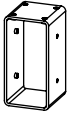
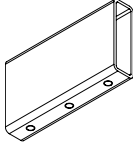

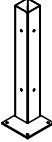

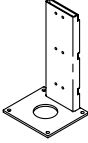
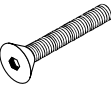

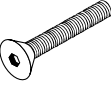






8 OVERVIEW PROFILES AND PARTS

WALL					
	MX	WALL PROFILE		GIXL	CONNECTING PIECE FOR GXLX
	MX32	WALL PROFILE FOR 32 MM SHEETS		GDX	CROSSBEAM FOR OVERHANG
GUTTER					
	GX	GUTTER PROFILE		GDCX	COVER FOR CROSSBEAM GDX
	VS	STEEL SHAFT 80 X 25 X 3		DX	RAFTER
	GLX	ORNAMENTAL PROFILE SOFTLINE FOR GUTTER GX		DX2	RAFTER TYPE 2
	GIX	CONNECTING PIECE FOR GX		V853	STEEL TUBE 80 X 50 X 3 GALVA FOR DX2
	GDGL	LED PROFILE FOR GDG		CL16	ALU CLIP 16 MM
	GR	RAISED PROFILE FOR GUTTER GX		C32	ALU CLIP 32 MM
	GXLX	GUTTER PROFILE XL		CLLX	SIDE CLIP 16 MM
	V1243	STEEL SHAFT 120 X 40 X 3		CLL	SIDE CLIP 32 MM

	CLSB	BASE SCREWABLE CLIP		C3	GREY SEAL FOR SPACER OR SIDE RAFTER
	CLST	TOP SCREWABLE CLIP FOR 8 TO 16 MM		CY10	GREY SEAL FOR SPACER OR SIDE RAFTER
	CLSL	TOP SCREWABLE CLIP		C8	GREY SEAL FOR CL16 AND CLSB
POSTS			ACCESSORIES		
	PX	POST 110/141 FOR GUTTER GX		AX	SPACER
	PGDX	POST 110/110 FOR CROSSBEAM GDY		U16P	REINFORCED PVC END PROFILE 16 MM WHITE
	PXLX	POST BASE 150 x 120 FOR GUTTER GX/GXLX		U16A	ALU END PROFILE 16 MM
	PCLXLX	POST CLIP 150 x 60 TO COMBINE WITH GUTTER GXLX		U16	PRE-DRILLED ALU END PROFILE 16 MM
	PCLX	POST CLIP 150 x 30 TO COMBINE WITH GUTTER GX		U32	PRE-DRILLED ALU END PROFILE 32 MM
SEALS					
	C1CX	COEX SEAL WHITE/BLACK COEX SEAL GREY/BLACK FOR WALL PROFILE MX			

	L432	L-OBTURATOR PROFILE FOR GLASS		GASXL	GUTTER END PIECE RIGHT "SKYLUX" FOR GXLX
	BT16	SYNTHETIC TAPE 10 AND 16 MM WITH GUARANTEE		GASXL	GUTTER END PIECE UNIVERSAL FOR GXLX
	BB16	PERFORATED SYNTHETIC TAPE 16 MM WITH GUARANTEE		LOGO	LOGO FOR GUTTER END PIECE
	S16X	STOP S16X		GDSX	END PIECE FOR CROSSBEAM GDx
	S32.3	STOP 32/3		MASX	WALL END PIECE FOR MX
	G SX	GUTTER END PIECE FOR GX		MASX32	WALL END PIECE FOR MX32
	GLSX	GUTTER END PIECE FOR GX + GLX		909	CONNECTING PIN
	GRSX	GUTTER END PIECE FOR GX+GR		LGDX	FIXING PROFILE FOR CROSSBEAM GDx
	GASXL	GUTTER END PIECE LEFT "SKYLUX" FOR GXLX		PV	BASE PLATE FOR POST

	PU	U TOP-BOTTOM FOR POST PX		ZSB ZSG ZSC	5,5 x 32 mm (TX 25) SELF-DRILLING SCREW SST SELF-DRILLING SCREW PAINTED SST SELF-DRILLING SCREW SST WITH SEAL
	PUX	U TOP-BOTTOM FOR POST PGDX		SCR.002 ZSB 82416	5,5 x 25 mm (TX 25) GALVANISED FOR FIXATIONS THROUGH STEEL PROFILES
	UPN140	CONNECTION PROFILE		6,3 x 25 3/8 (10)	SELF-DRILLING SCREW 6.3 x 25 mm
	PT150	TOP PLATE FOR GXLX		ZSR	ANCHOR PLUG HSA 8175
	LT150	L-BRACKET TOP FOR POST PXLX		49641	DIN 933 M10 X 20
	LB150	L-BRACKET BOTTOM FOR POST PXLX		72911	DIN 6798 A M10 TOOTHED WASHER
	VGXLX	CONNECTING PROFILE 2 GXLX		72910	DIN 912 M8 X 16
	BMR	STAINLESS STEEL BOLT, NUT AND WASHER M8		72912	DIN 6798 A M8 TOOTHED WASHER
	GC	WATER OUTLET + SWIVEL Ø 80 mm		71906	SST STEEL SCREW 5,5 X 25 - TX25 FOR END PIECE GASXL
	UGS WUGS	UNIVERSAL OUTLET + SWIVEL FOR OUTLET			

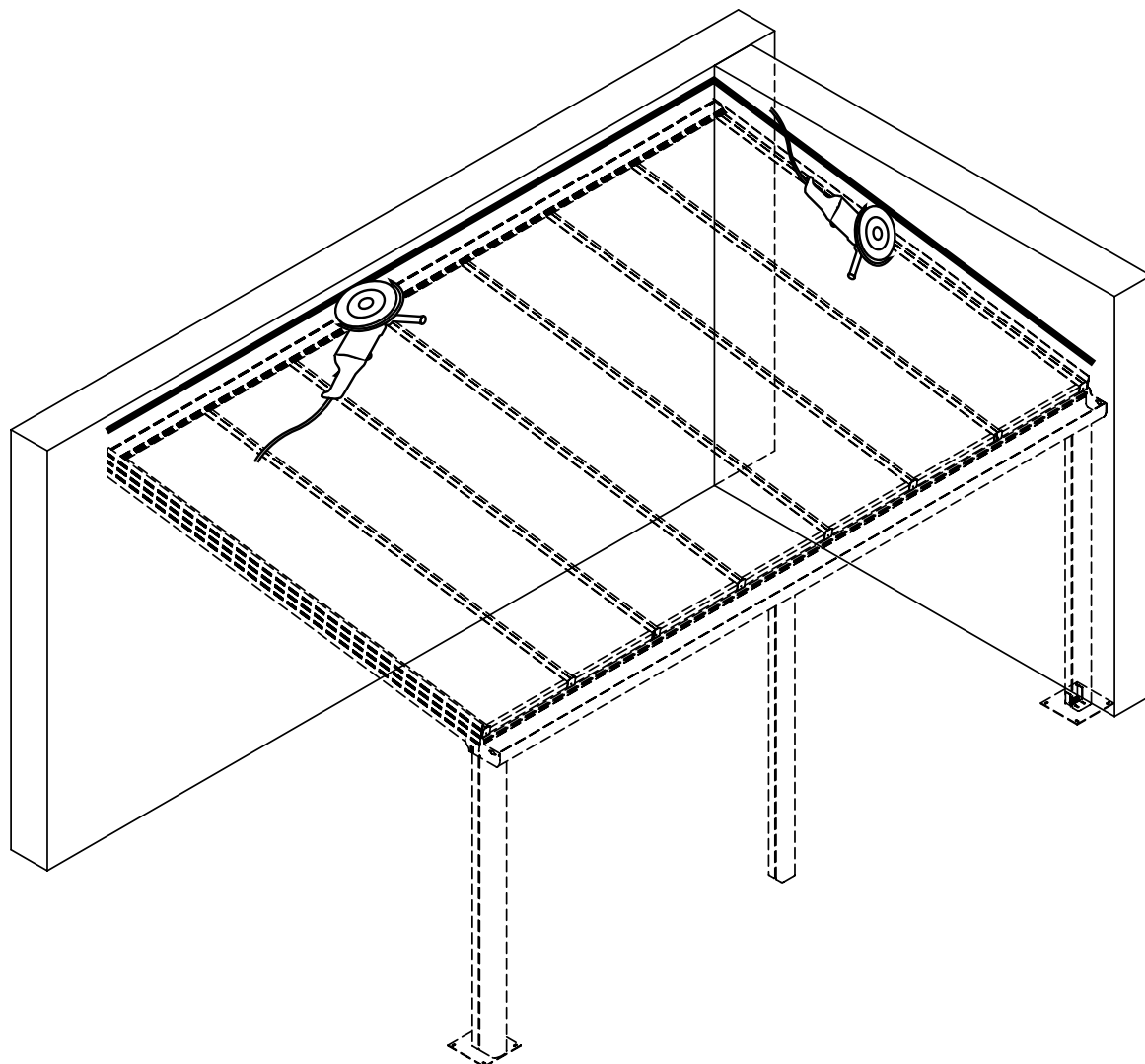
	PGDX	POST 110/110		46673	DIN 125-1A WASHER M10 GALVANISED
	GDX	CROSSBEAM		51197 51819	COUNTERSINK Ø 16.5 MM COUNTERSINK Ø 20.5 MM
	C110 48111	CONNECTING PIECE FOR PGDX		VTVS 93874	REINFORCEMENT PROFILE
	PT110 51817	REINFORCEMENT PLATE		VTPS 47792	POST SUPPORT 100 x 100
	GDSX	END PLATE FOR CROSSBEAM GDX		VTPS02 94527	POST SUPPORT 140 x 30
	51810	DIN 7991 SOCKET BOLT M10 X 180 SST		94567	PVC SEALING PROFILE WITH LIP FOR 8-10 MM GLASS
	82574	DIN 7991 SOCKET BOLT M10 X 120 SST		94665	ONE-SIDED ADHESIVE FOAM TAPE 15 X 6 MM (10M)
	21604	DIN 7991 SOCKET BOLT M8 X 20 SST		94664	ONE-SIDED ADHESIVE FOAM TAPE 20 X 30 MM (5 M)
	51701	DIN 933 HEXAGON BOLT M10x30		94637	SEALING TAPE
	82573	DIN 931 HEXAGON BOLT M10x60			

9 PREPARATION

9.1 Walls

Check that the walls, against which the structure is to be installed, are:

- sufficiently load-bearing to anchor the roof;
- free of obstacles such as water drains, window sills,



Cut a slot in the walls against which the patio roof will be mounted.

Place a lead slab or zinc flashing profile in this slot. The highest position in the facade = first joint above $H_m + h$ and max. 60 mm above the wall profile. We refer to the chapters below for the dimension details.

- Measuring a wall-supported roof (chapter 6)
- Measuring a freestanding roof (chapter 7)

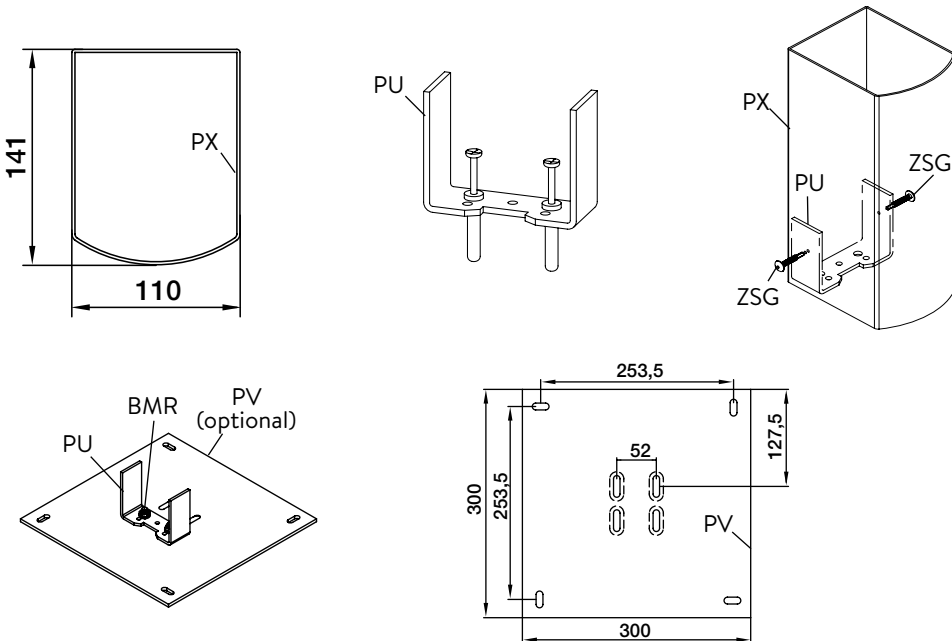
9.2 Floor

Ensure that the foundation can carry the load. Have an architect determine the required foundation. Implement measures to remove rainwater from the roof.

10 ASSEMBLING THE POSTS

10.1 Post type: PX

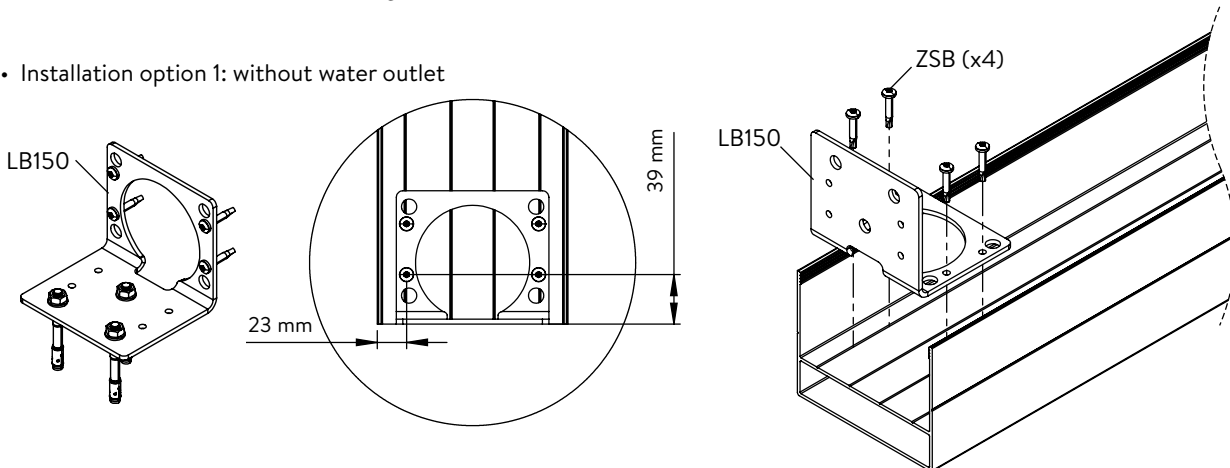
10.1.1 PX + PU + (PV): Installation on ground/gutter with bracket



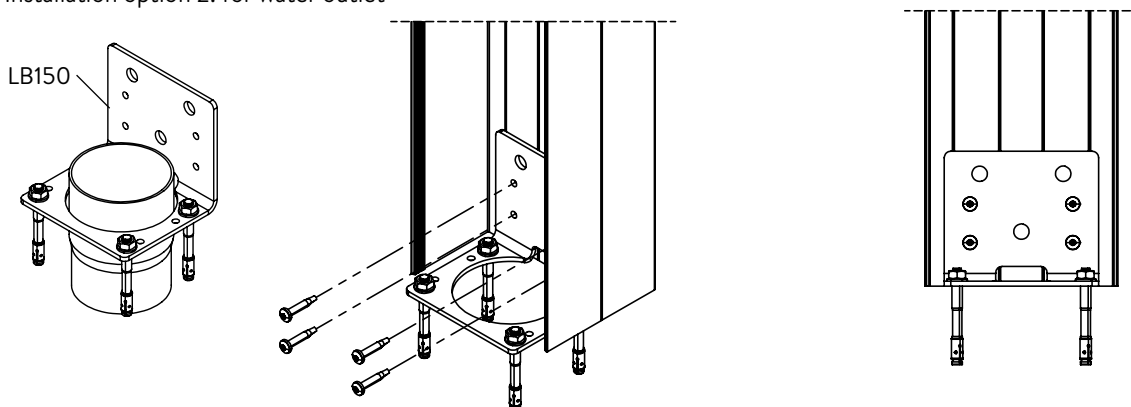
10.2 Post type: PXLX

10.2.1 PXLX + LB150: Installation on ground with bracket

- Installation option 1: without water outlet



- Installation option 2: for water outlet



10.2.2 PXLX + PS02 140x30: Installation; founded on the ground

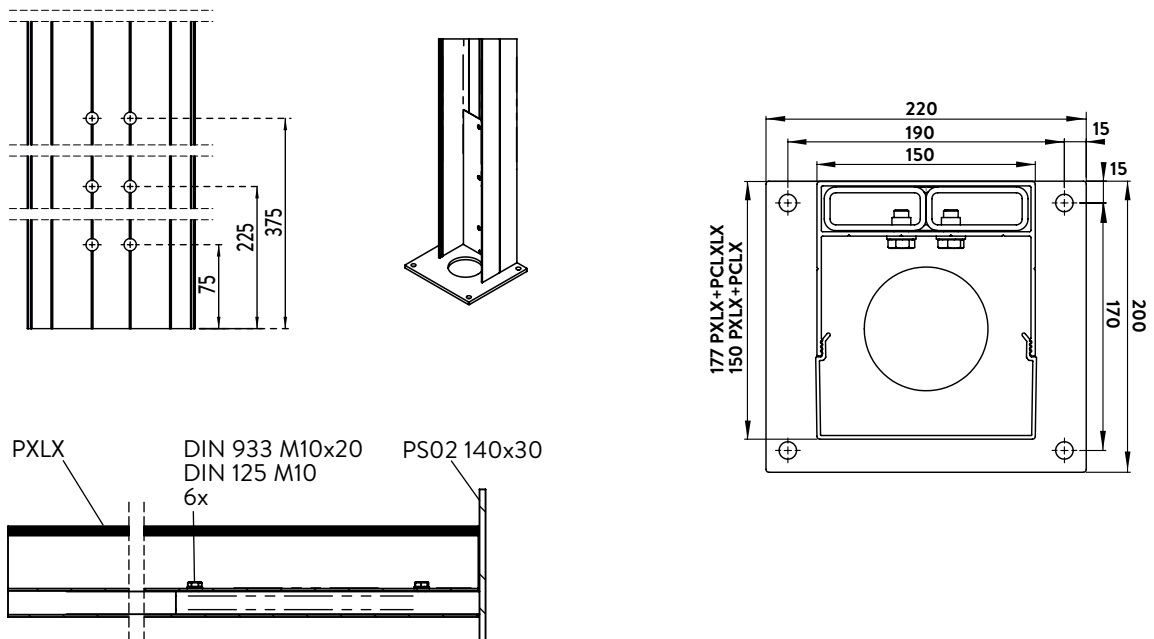
PXLX + PS02 140x30

Fixed on the ground

Positioning sticker art. 94600:

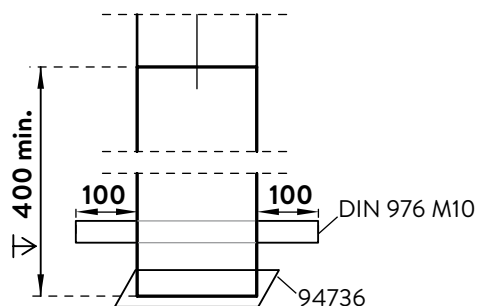
Bottom edge of sticker & post together =
the ground anchor is fully retracted.

Fix the base plate on the foundation with the appropriate fixing material.



10.2.3 PXLX: Foundation without anchor

- Install the post at least 400 mm deep into a concrete foundation.
- Slide 2 threaded rods M10 through the founded part of the post. Perpendicular to each other. Drill 4 holes & let the rods protrude 10 cm in each direction.
- Close the openings in the post below the foundation level with tape art. 94736, so the concrete and aluminium cannot affect each other.



10.2.4 PXLX + LB150 (+ C72): Installation on gutter with bracket (+ side beam P72 in case of bracket C72)

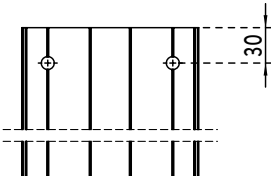
PXLX

Installation gutter (GX / GXLX)

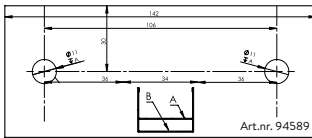
P1.1 = P1.2 = P1.n

PXLX + LB150

Sticker 94589



Place the sticker and level the top edge of the sticker with the top edge of the post.



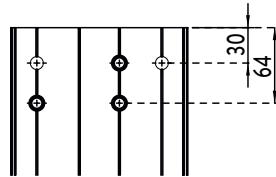
Installation gutter (GX / GXLX) & fixation post (P72+C72)

P1.1

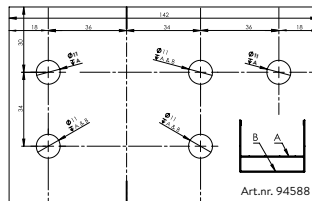
P1.1

PXLX + LB150 + C72

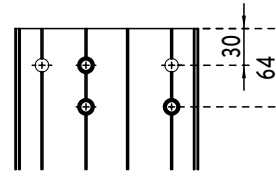
Sticker 94588



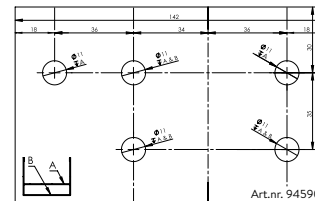
Place the sticker and level the top edge of the sticker with the top edge of the post.
The 3 extra holes to fix C72 can also be drilled on a lower position if necessary, but make sure that those on the PGDX are also on the same height (art. 94592 & 94591).



Sticker 94590



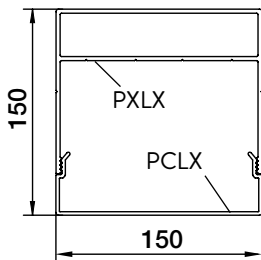
Place the sticker and level the top edge of the sticker with the top edge of the post.
The 3 extra holes to fix C72 can also be drilled on a lower position if necessary, but make sure that those on the PGDX are also on the same height (art. 94592 & 94591).



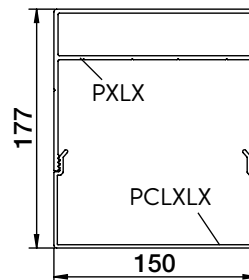
10.2.5 PXLX + PCLX / PCLXLX: Post cover options

PXLX Post covers

Gutter GX: PXLX + PCLX



Gutter GXLX: PXLX + PCLXLX



10.3 Post type: PGDX

10.3.1 PGDX + PUX + (PV): Installation ground & GDZ

PGDX

Wall-supported roof with overhang

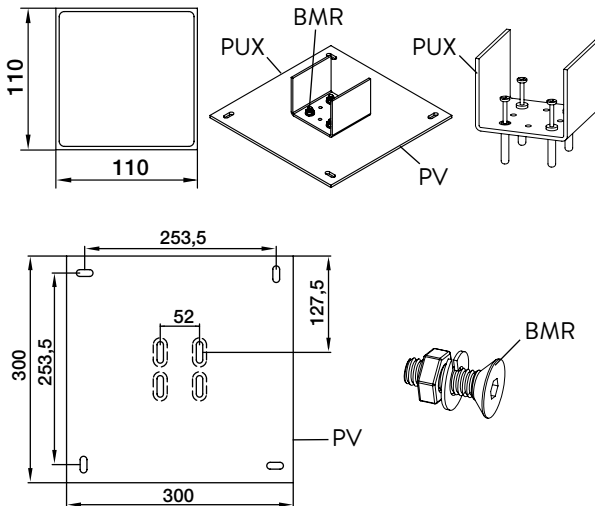
Ground fixation

P1.1 = P1.n

PGDX + PUX + PV

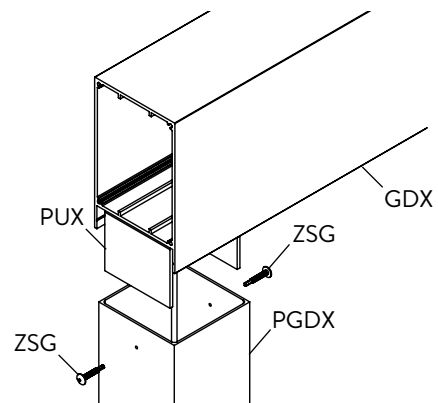
P1.2

PGDX + PUX (+PV)



- Anchor on a firm concrete surface.
- The base plate PV of the post P1.2 is optional.
- The appropriate fixation material is not included in the delivery.

Freestanding roof
GDZ fixation
P1.1 = P1.2 = P1.n
PGDX + PUX + GDZ



10.3.2 PGDX + PS: Installation with anchor; founded in concrete / on the ground

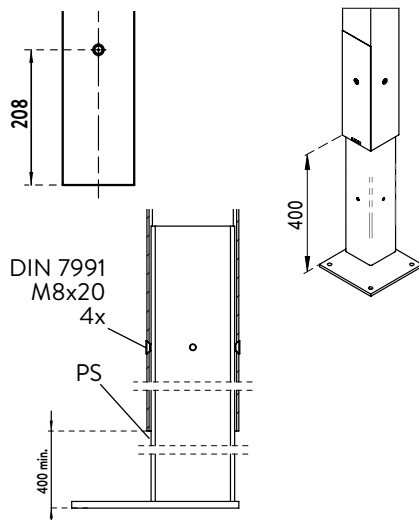
PGDX

Overhang beam O1: P1.1 = P1.2 = P1.n

Ridge beam H1: P2.1 = P2.2 = P2.n

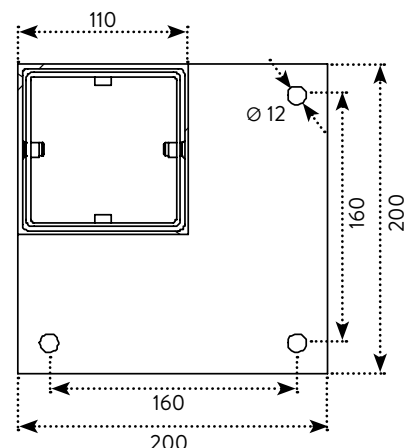
PGDX founded in concrete with PS

- Positioning sticker art. 94601: Bottom edge of sticker & post together = ground anchor protrudes 400 mm to pour in the foundation.



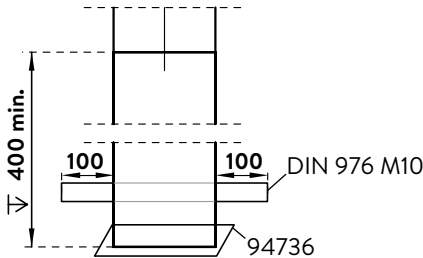
PGDX fixed on the concrete with PS

- Positioning sticker art. 94601: Bottom edge of the sticker 392 above the bottom edge of the post = the ground anchor is fully retracted.
- Fix the base plate on the foundation with the appropriate fixing material.



10.3.3 PGDX: Foundation without anchor

- Install the post at least 400 mm deep into a concrete foundation.
- Slide 2 threaded rods M10 through the founded part of the post. Perpendicular to each other. Drill 4 holes & let the rods protrude 10 cm in each direction.
- Close the openings in the post below the foundation level with tape art. 94736, so the concrete and aluminium cannot affect each other.

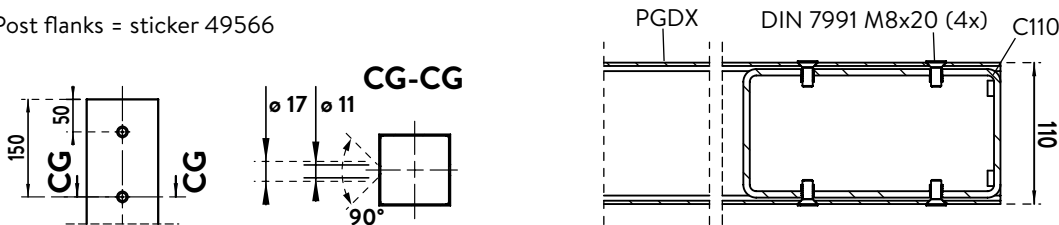


10.3.4 PGDX + C110: Installation crossbeam GDx

PGDX + C110

P1.1 = P1.2 = P1.n

Post flanks = sticker 49566

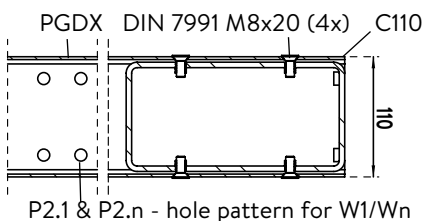
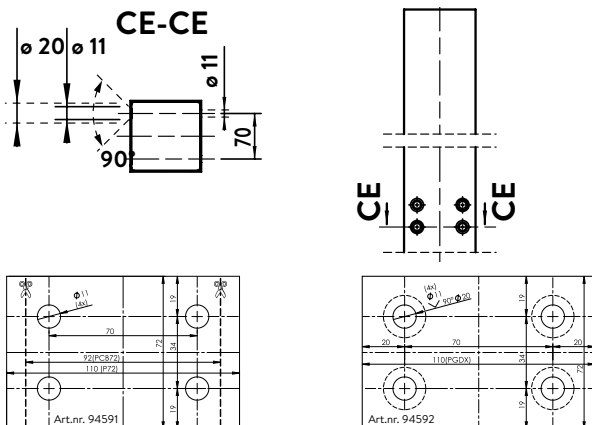


10.3.5 PGDX + C72: Installation horizontal beam GDx & side beam P72 and with bracket C72

Post outside = stickers 94592 (with countersink)

Post inside = stickers 94591 (without countersink)

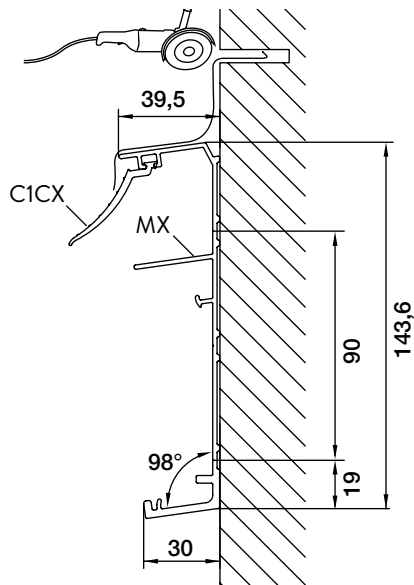
The height position of the drill holes needs to be the same as those of the posts in front.



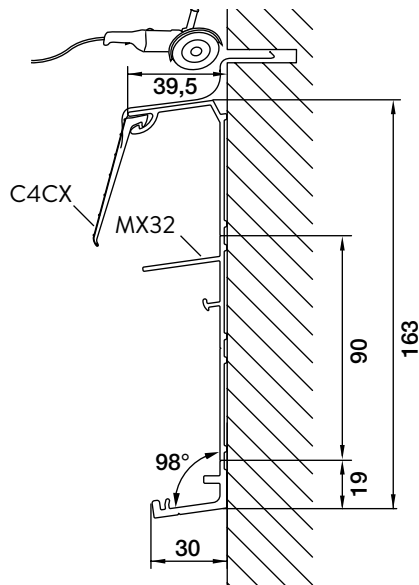
11 ASSEMBLING THE HORIZONTAL BEAMS

11.1 Wall-supported back profile

for glazing up to 16 mm



for sheets 32 mm



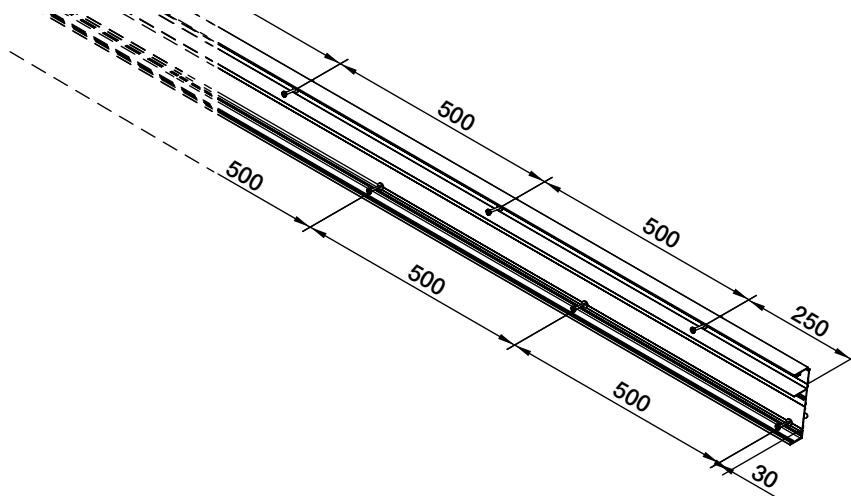
11.1.1 Preparation

A lead flashing is recommended for a waterproof junction to the wall.

Cut a slot in the wall against which the patio roof will be mounted. Place a lead slab or zinc flashing profile in this slot. Drill a hole in the wall profile MX at 250 mm from the ends and subsequently every 500 mm at the top indication line with a diameter in function of the chosen fixing material. Also drill a hole every 500 mm in the bottom indication line and start at 30 mm from the edge.

Important: slide the seal C1CX in the wall profile MX before the installation.

In case of the wall profile MX32, the seal C4CX can be pushed in afterwards.



11.1.2 Installation

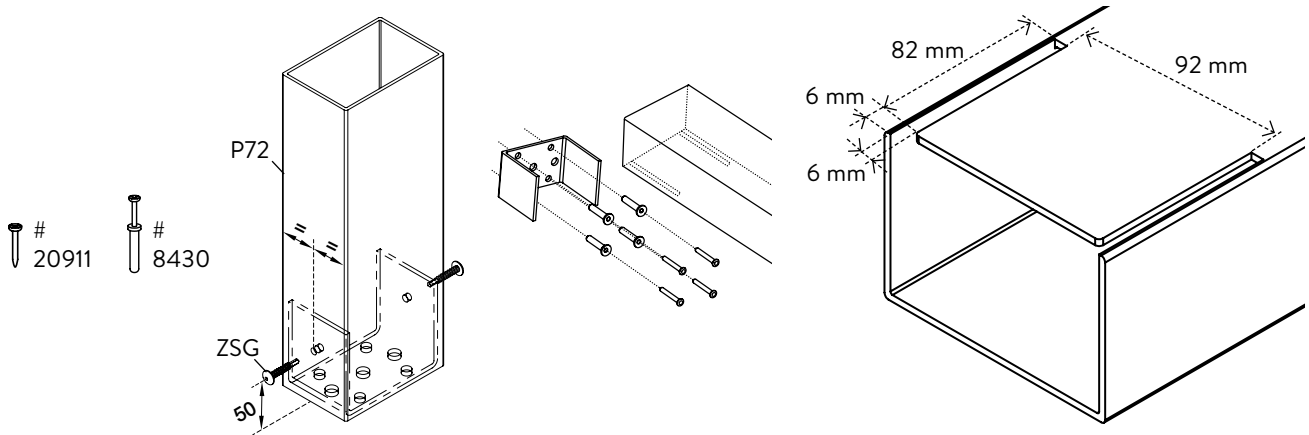
Fix the wall profile using the adapted anchoring. The holes in the bottom wall profile correspond to the height HM + 19 mm and HM + 109 mm on the wall.

Finish the top side of the wall profile with silicone and with a lead or zinc flashing built-in in the wall.

11.2 Side beams W1 & Wn: Type P72

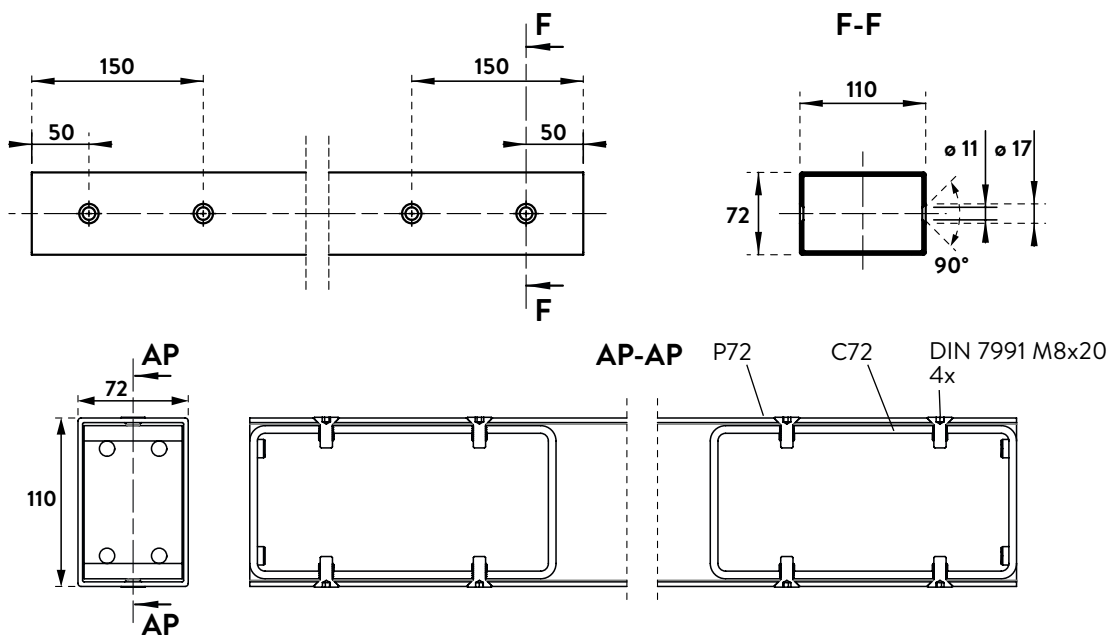
11.2.1 P72 + PU: Side beam standard version

Slots can be provided in the top side of P72 if it is not visible, to slide the P72 over the PU brackets that are already fixed on an already existing structure.



11.2.2 P72 + C110: Side beam reinforced version

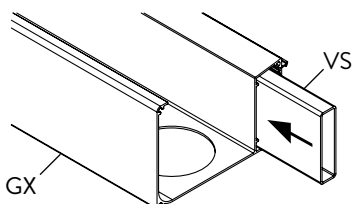
Side beam flank adaptations = sticker art. 49565



11.3 Gutter beam G1: Type GX

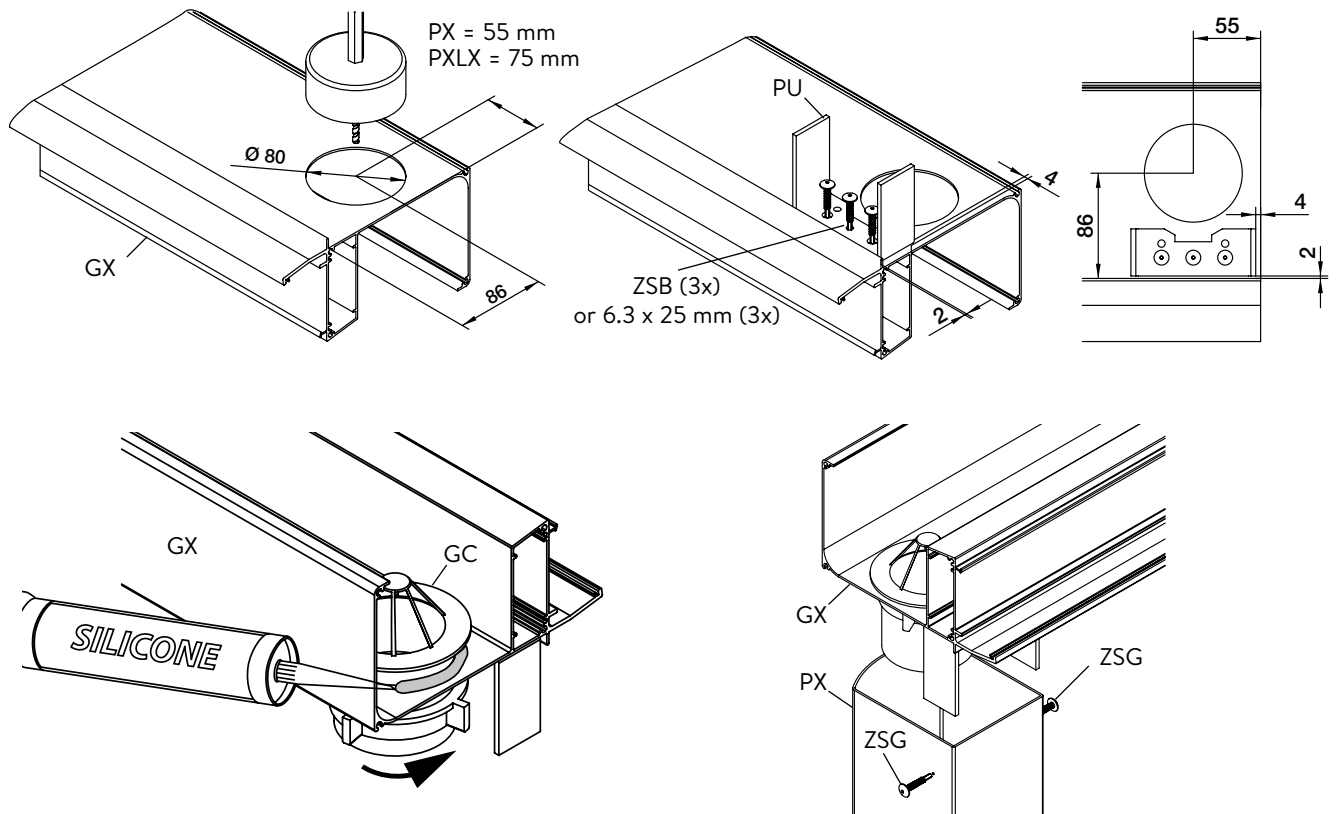
11.3.1 GX + VS: Gutter with reinforcement profile

- We recommend to treat the reinforcement profile against corrosion.
- It is necessary to pre-drill screw fixations that are applied in the gutter afterwards.



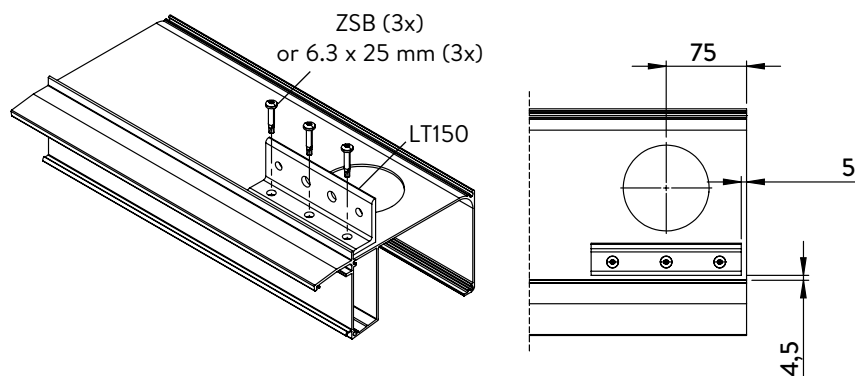
11.3.2 GX + PU: Installation on post PX

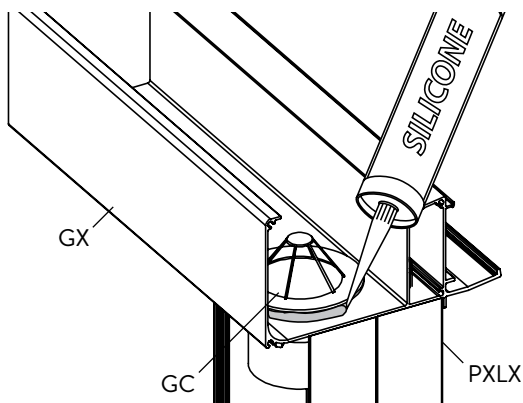
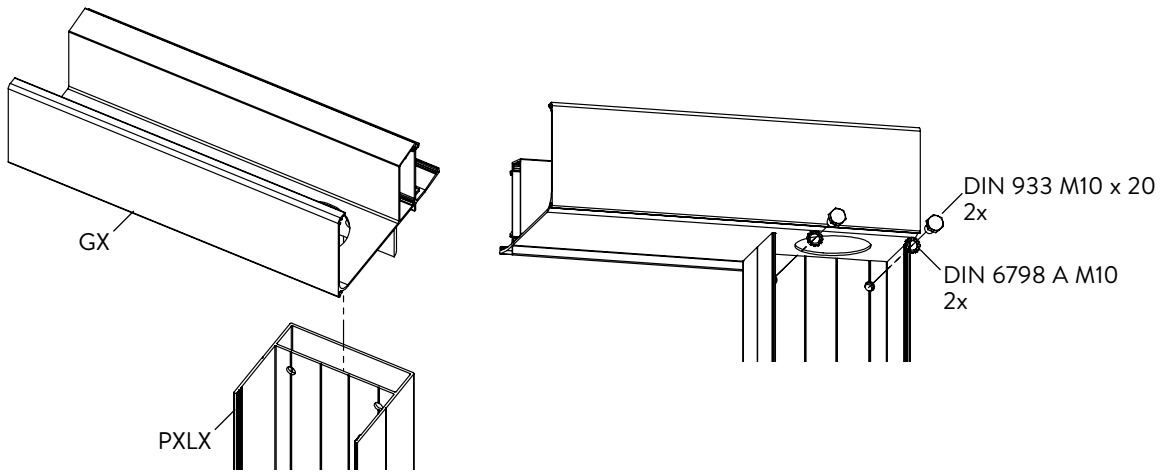
- Cut out the opening for the water outlet. Use a hole saw $\varnothing 80$ mm (not included in delivery).
- Use the delivered post gauge for a perfect position of the post bracket.
- If the reinforcement profile is used, you need to use the self-drilling screws 6.3 x 25 mm.
- Install the outlet with swivel in the gutter opening and seal off with silicone
- Put the pre-mounted gutter on the posts and secure the construction with the painted screws ZSG.
- If the post is installed against a wall, the end pieces must now be installed.



11.3.3 GX + LT150: Installation on post PXLX

- Use the delivered post gauge for a perfect position of the post bracket.
- If the reinforced profile is used, you need to use the self-drilling screws 6.3 x 25 mm.

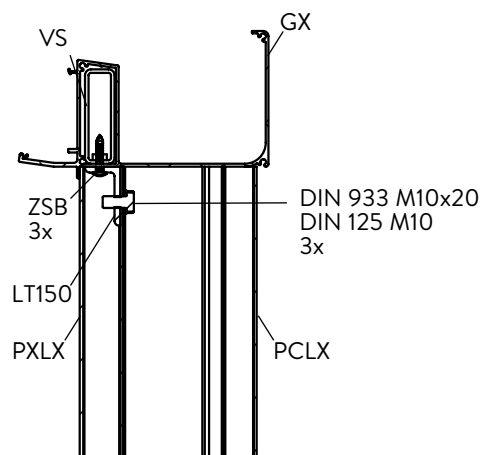
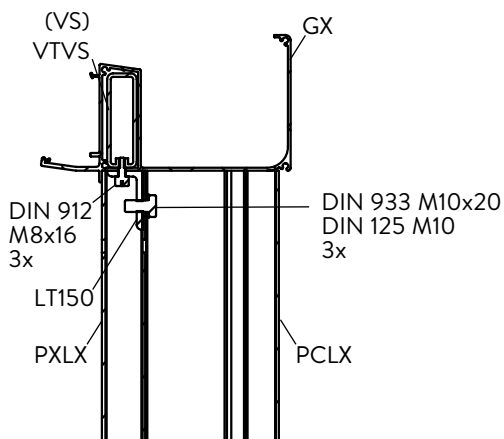




11.3.4 GX + LT150 (+ VTVS): Installation on post PXLX

P1.1 & P1.n

P1.2

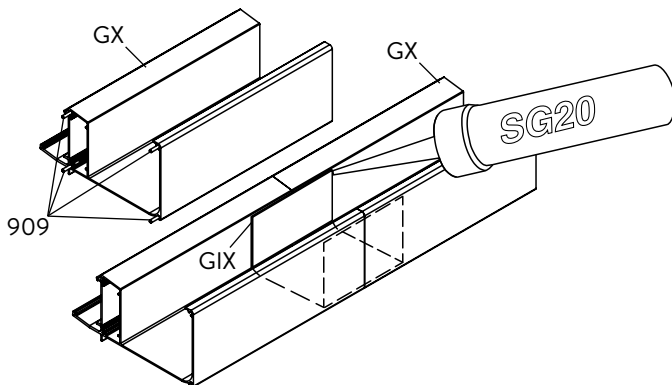


11.3.5 GX + GX: Coupled gutter

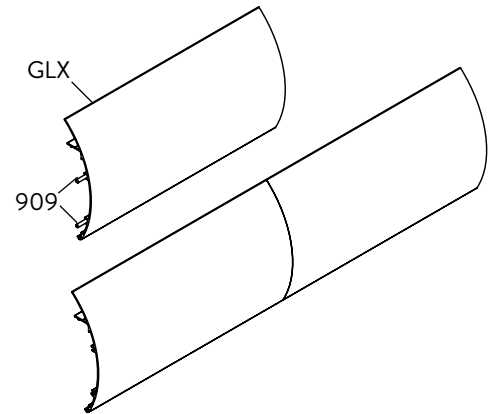
Multiple gutter elements can be connected to each other for gutter lengths > 7 m. A gutter support must be installed at every gutter connection point.

The gutter profiles can be linked using connection pins 909 and the connector profile GIX. Use silicone SG20 as sealant.

GX + GIX + 909 (4x)

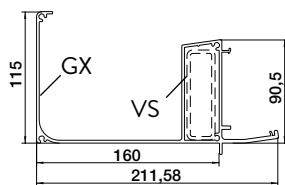


GLX + 909 (2x)

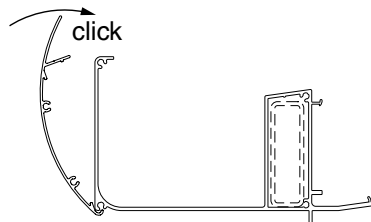
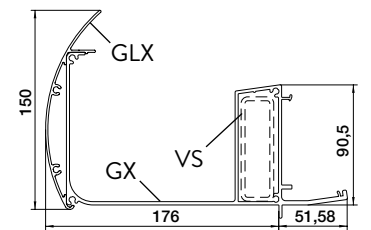


11.3.6 GX + GLX / GR: Gutter with cover

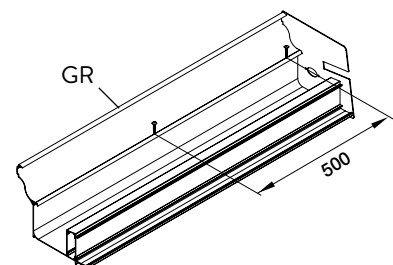
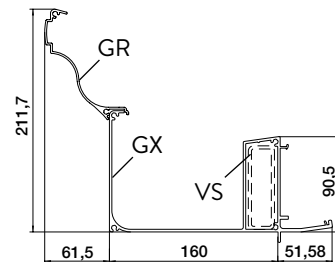
GX + (VS)



GX + GLX + (VS)



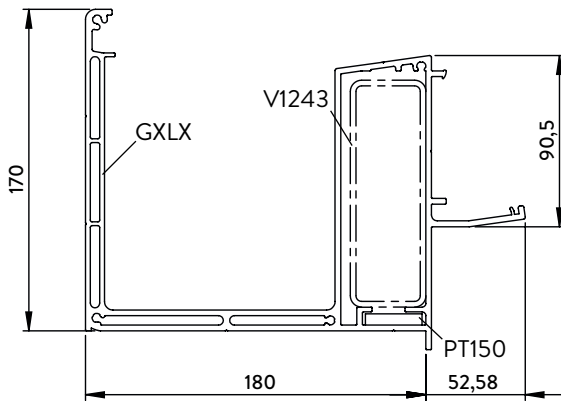
GX + GR + (VS)



First, install the lateral gutter ends and then fasten the GR profile on the gutter every 500 mm.

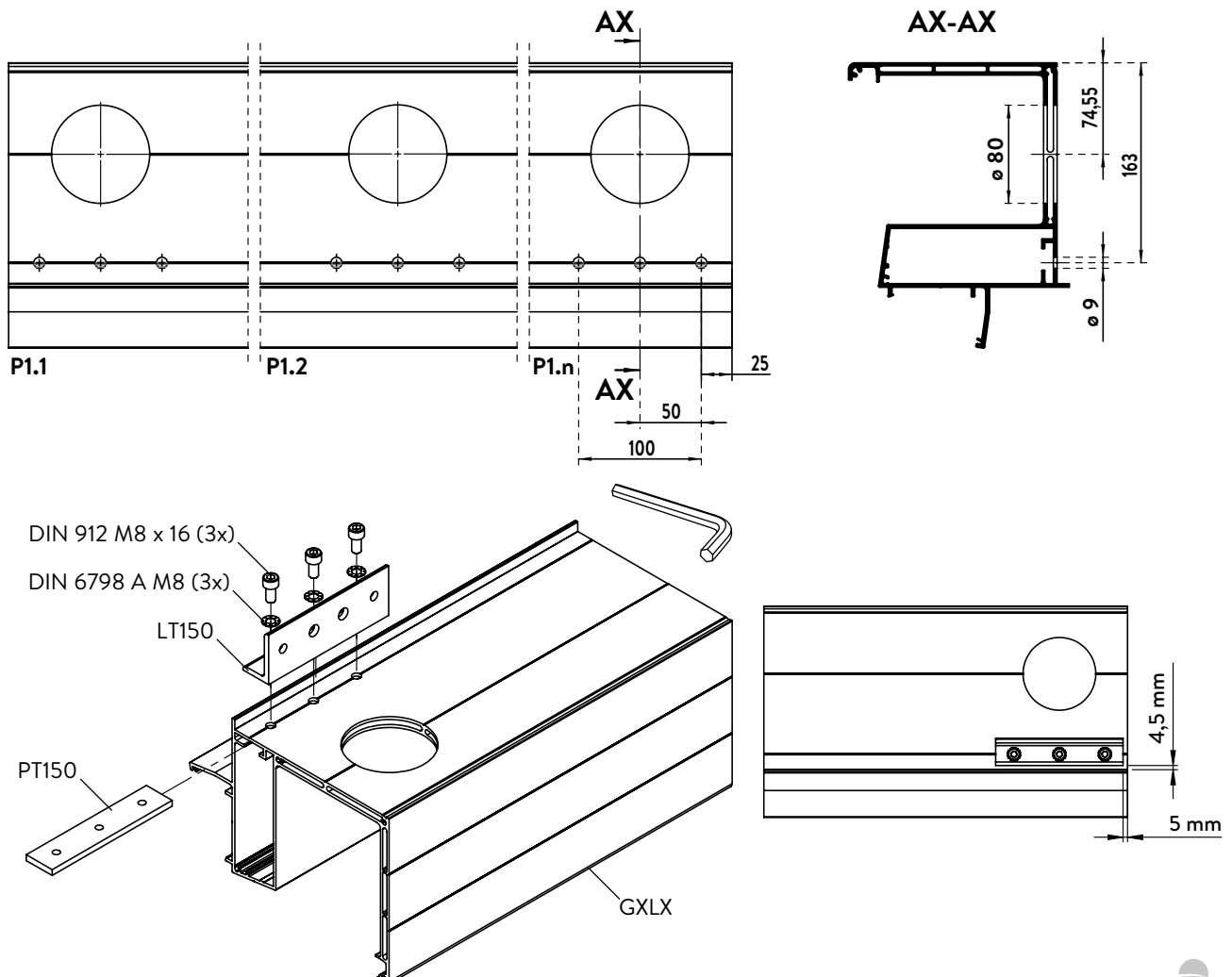
11.4 Gutter beam G1: Type GXLX

11.4.1 GXLX + V1243: Gutter with reinforcement profile



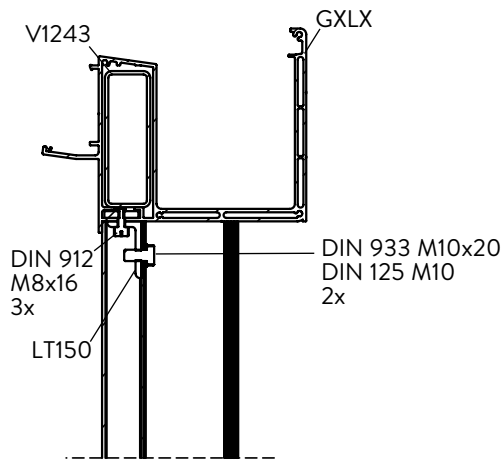
11.4.2 GXLX + LT150 + PT150: Installation on post PXLX

- Cut out the opening for the water outlet. Use a hole saw $\varnothing 80$ mm (not included in delivery). Place the drill head in the groove.
- Use the delivered post gauge for a perfect position of the post bracket.
- Drill three holes of 9 mm for the L-bracket. Place the drill head in the groove.
- Slide PT150 in the slot. Then fasten LT150 with screws.
- Mount the gutter on the post.



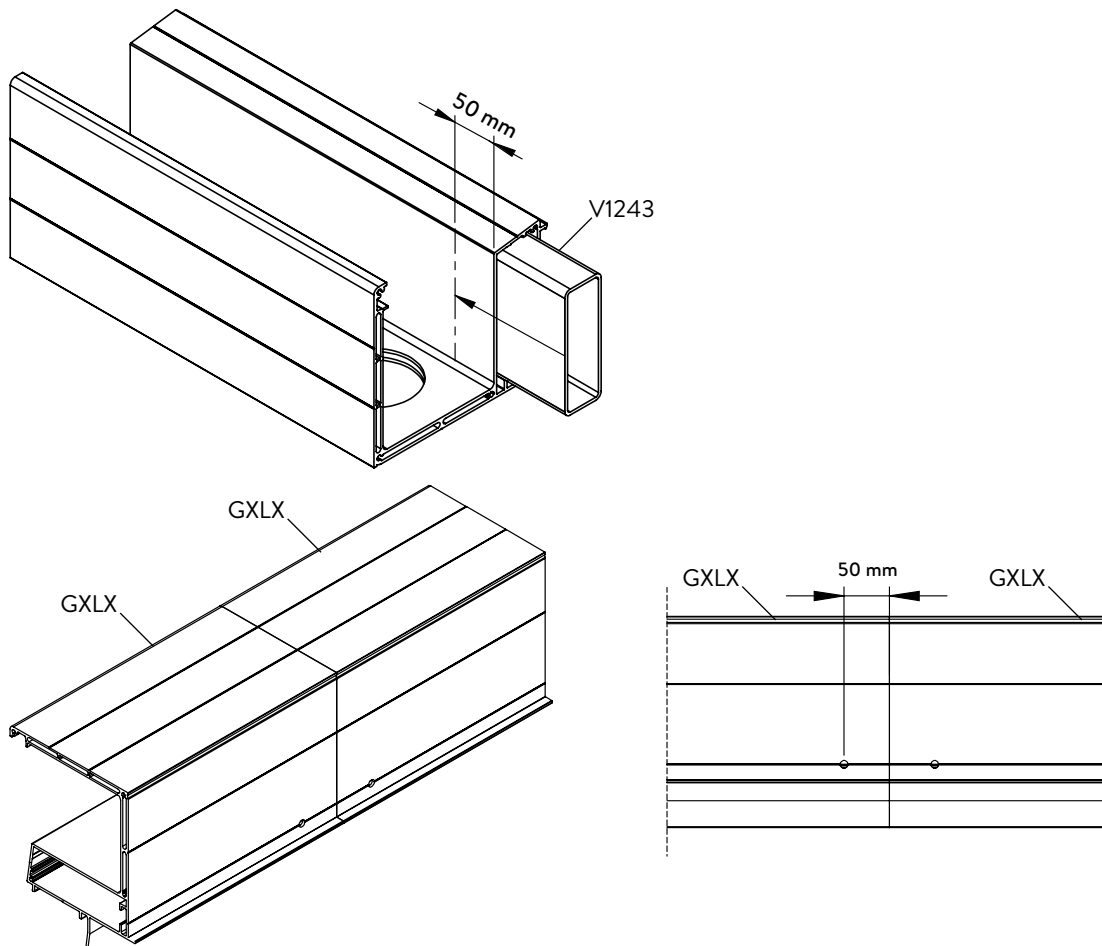
Installation gutter type GXLX

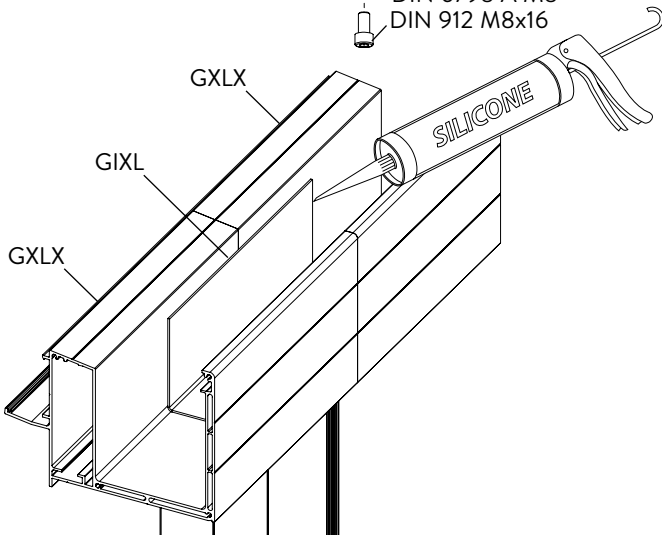
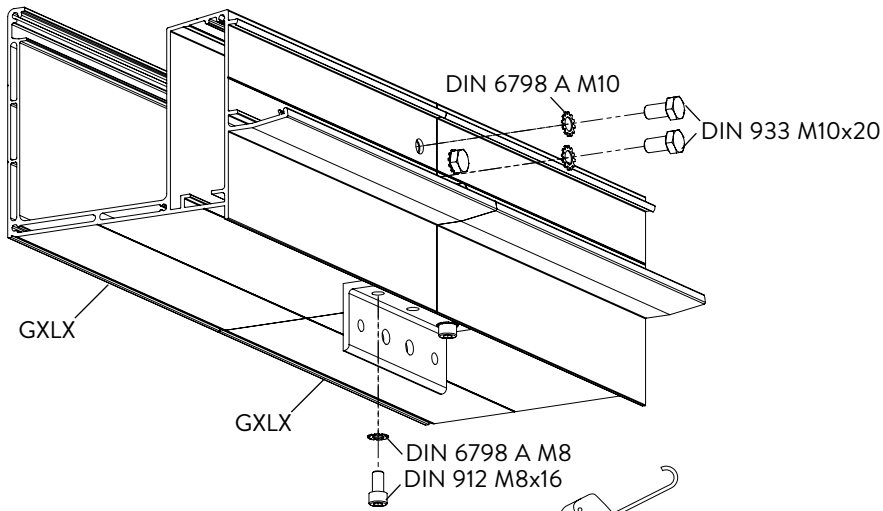
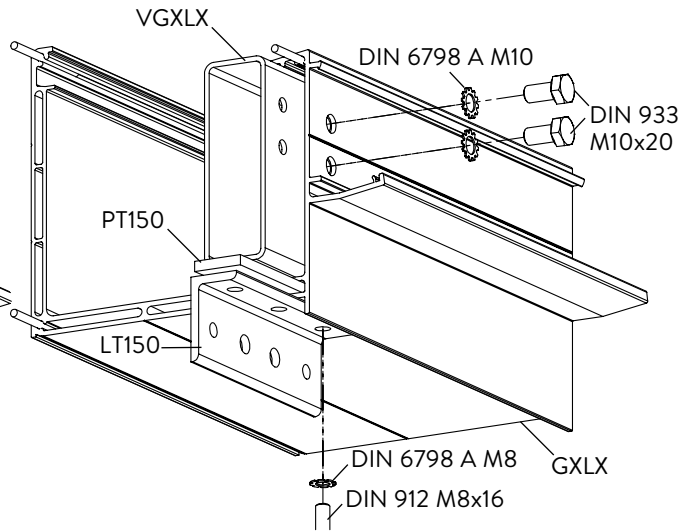
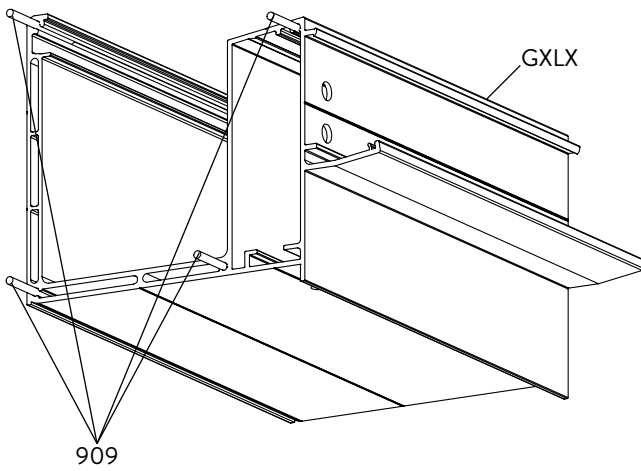
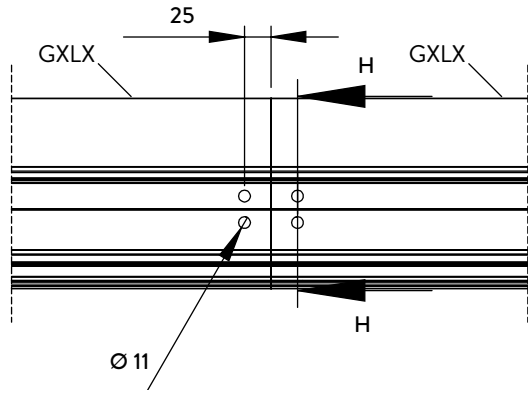
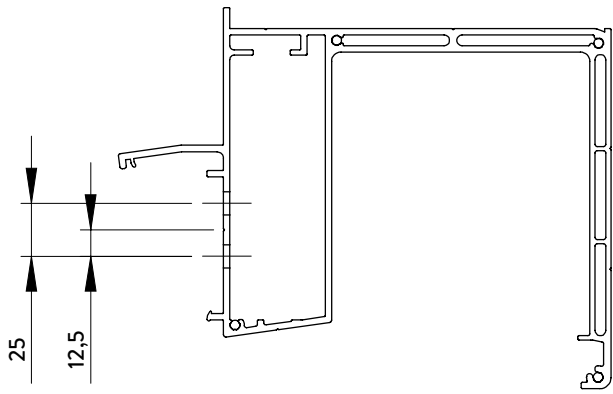
P1.1/ P1.2 / P1.n



11.4.3 GXLX + GXLX: Coupled gutters

- Multiple gutter elements can be connected to each other for gutter lengths > 7 m. A gutter support must be installed at every gutter connection point
- Slide the reinforcement profile into the gutter.
- The gutter profiles can be linked using connection pins 909.
- Drill a 9 mm hole in each gutter for the L-bracket. Place the drill head in the groove.
- Use the silicone SG20 to seal the connection profile GIXL.

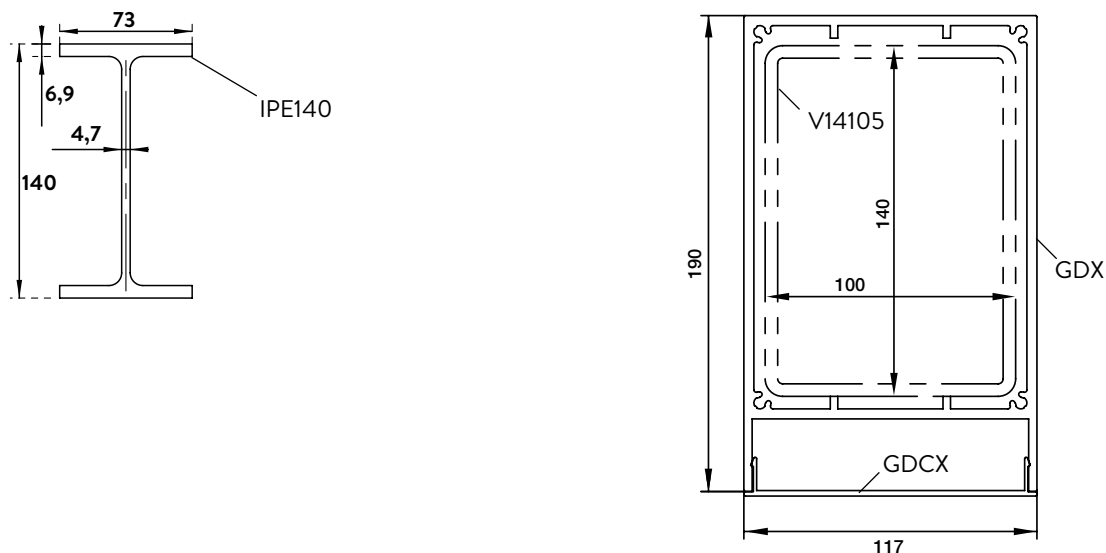




11.5 Ridge beam H1 & roof overhang beam O1

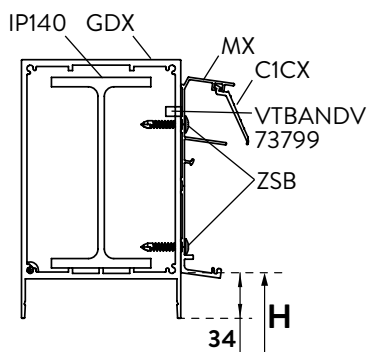
11.5.1 GDX + IP140 / V14105: Beam with reinforcement profile

- Fastening a reinforcement profile in the GDX (below and above) has a positive influence on the overall strength.
- These profiles can be purchased at a local steel merchant.
- We recommend to treat the steel reinforcement profile against corrosion.

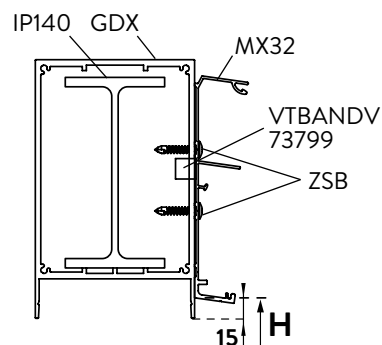


11.5.2 Ridge beam H1: GDX + MX / MX32

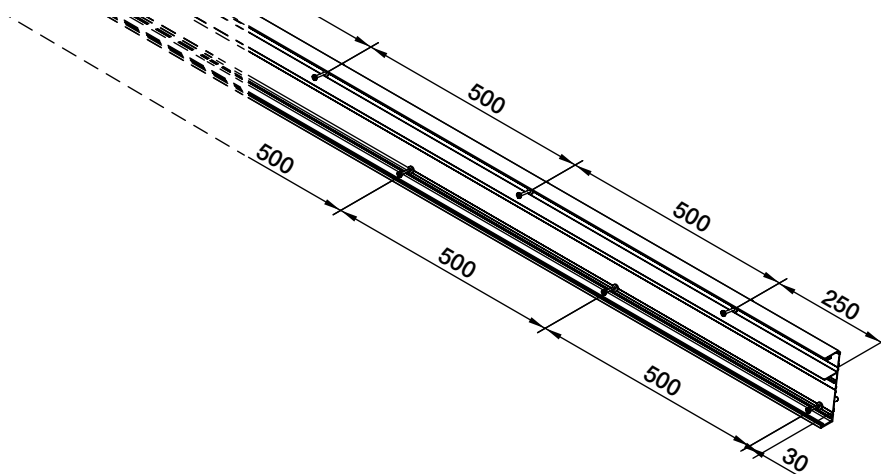
MX
Glass/sheet thickness 8-16mm



MX32
Sheet thickness 32m

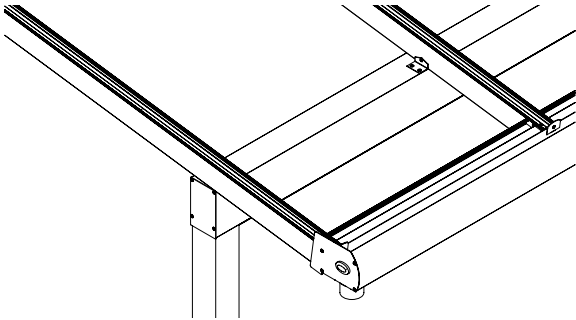


Screw the back profile on the prescribed distance of the bottom edge.

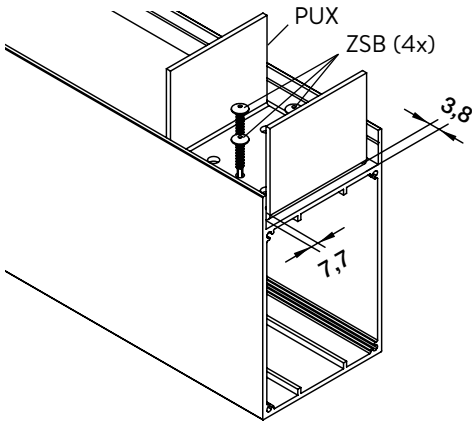


11.5.3 Overhang beam O1: GDX

- See chapter 11 roof package: roof with overhang

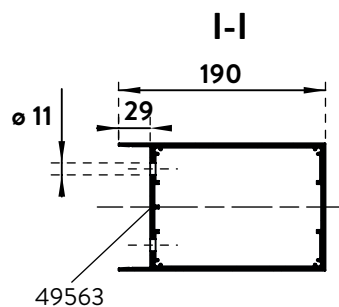
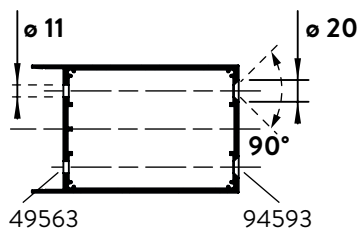
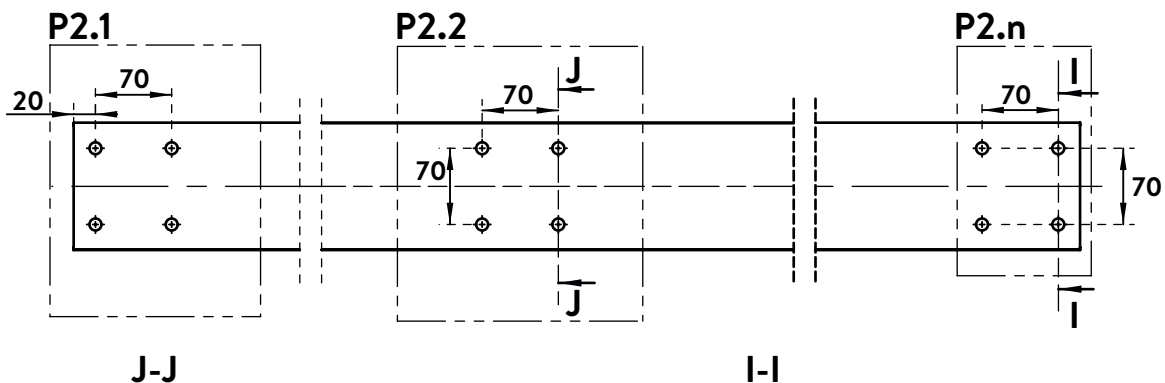


11.5.4 GDX + PUX: Installation on PGDX

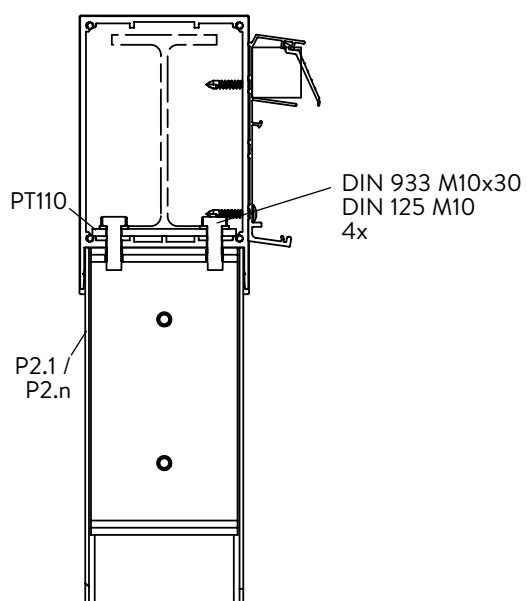


11.5.5 GDX: Installation on PGDX + C110

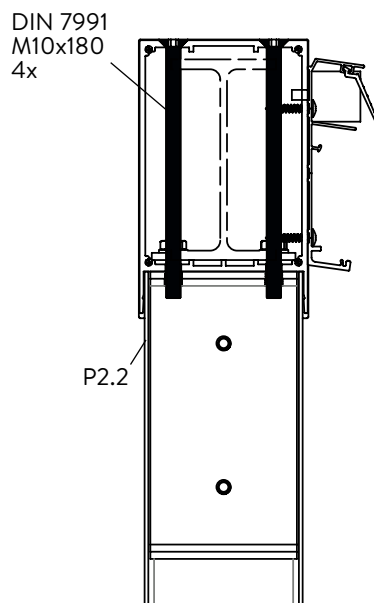
GDX	P2.1 & P2.n	P2.2
Bottom side	Drill pattern = sticker 49563	
Top side		Drill pattern = sticker 94593



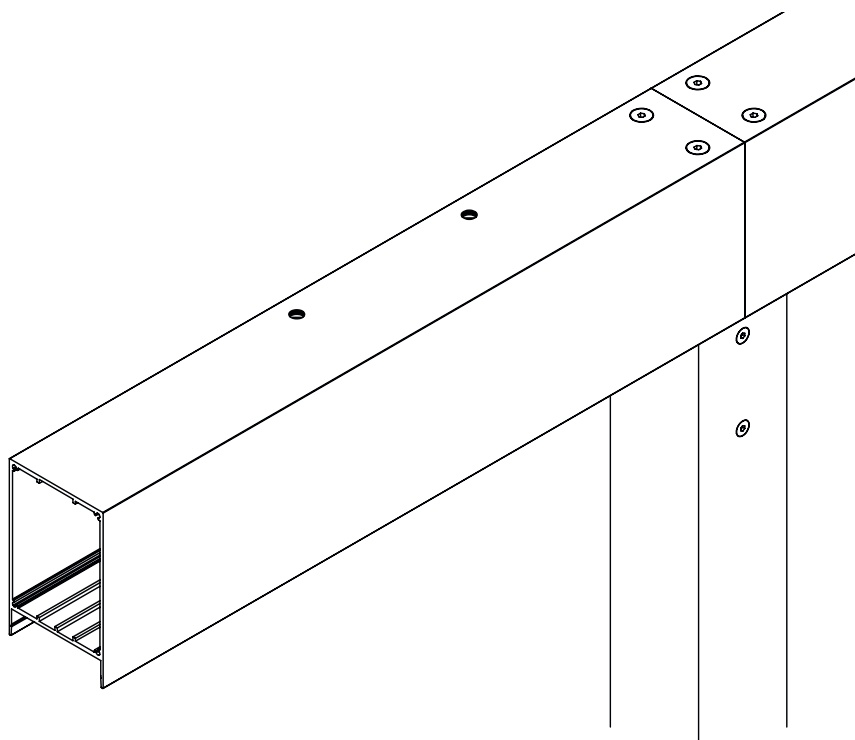
P2.1 & P2.n



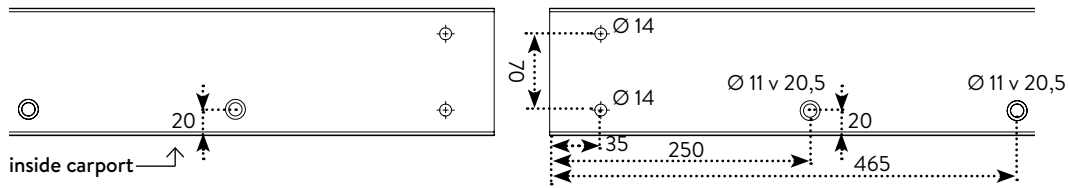
P2.2



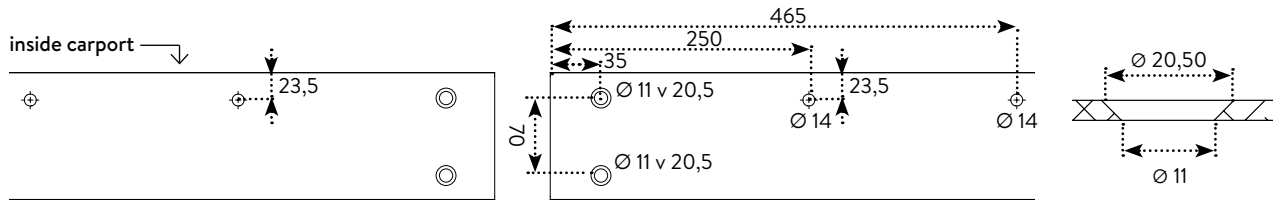
11.5.6 The connection of 2 supports is supported by the post



Drill 2 x 2 holes $\varnothing 14$ mm in the bottom side at 35 mm from the edge.
 Also drill 2 x 2 holes $\varnothing 11$ mm at 250 and 465 mm from the edge.
 Use a countersink $90^\circ \varnothing 20.5$ mm to make the hole conical.



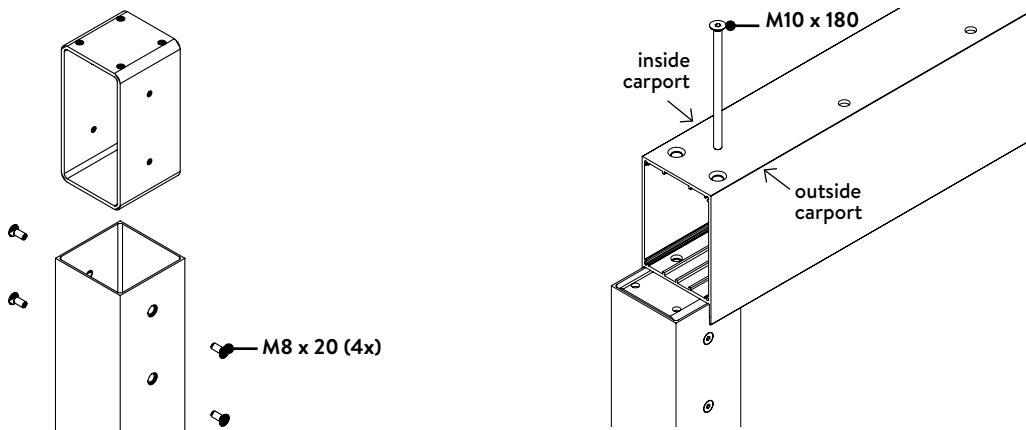
Afterwards, drill 2 x 2 holes $\varnothing 11$ mm in the top side of the support.
 Use a countersink $90^\circ \varnothing 20.5$ mm (art. 51819) to make the hole conical.
 Drill 2 x 2 holes $\varnothing 14$ mm at 250 and 465 mm from the edge.



Post supports connection

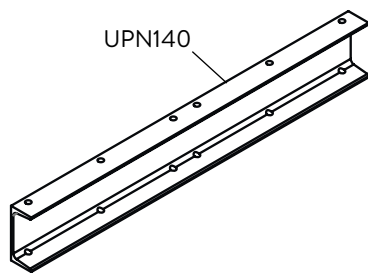
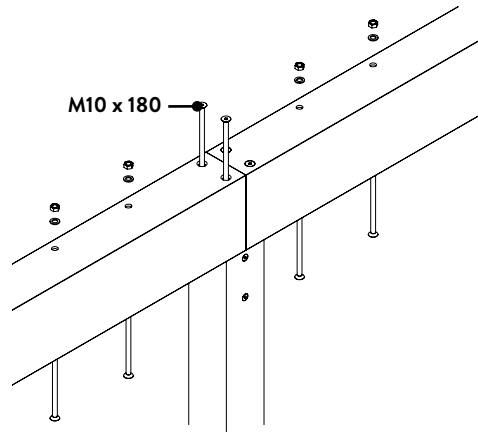
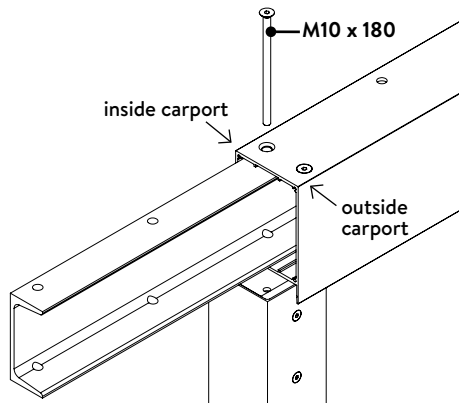
Slide the brackets C110 into the supporting post and make sure the holes in the bracket are faced sideways. Use the bolts M8 x 20 to secure the brackets. Do not tighten the bolts yet.

Place the support on the half of the post. Turn a bolt M10 x 180 into the outermost hole of the support and secure it in the bracket C110.



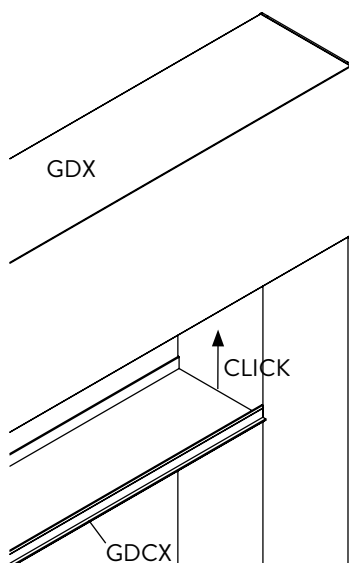
Slide the connection profile UPN140 in the support until the drill hole matches the opening in the support. Secure the connection profile with M10 x 180.

Slide the second support over the connection profile until it reaches the first support. Put 2 bolts M10 x 180 in the holes and tighten them in the bracket C110. Now, enter the 4 remaining bolts on the bottom in the support through the connection profile UPN140. Provide a washer and nut M10 and tighten them.



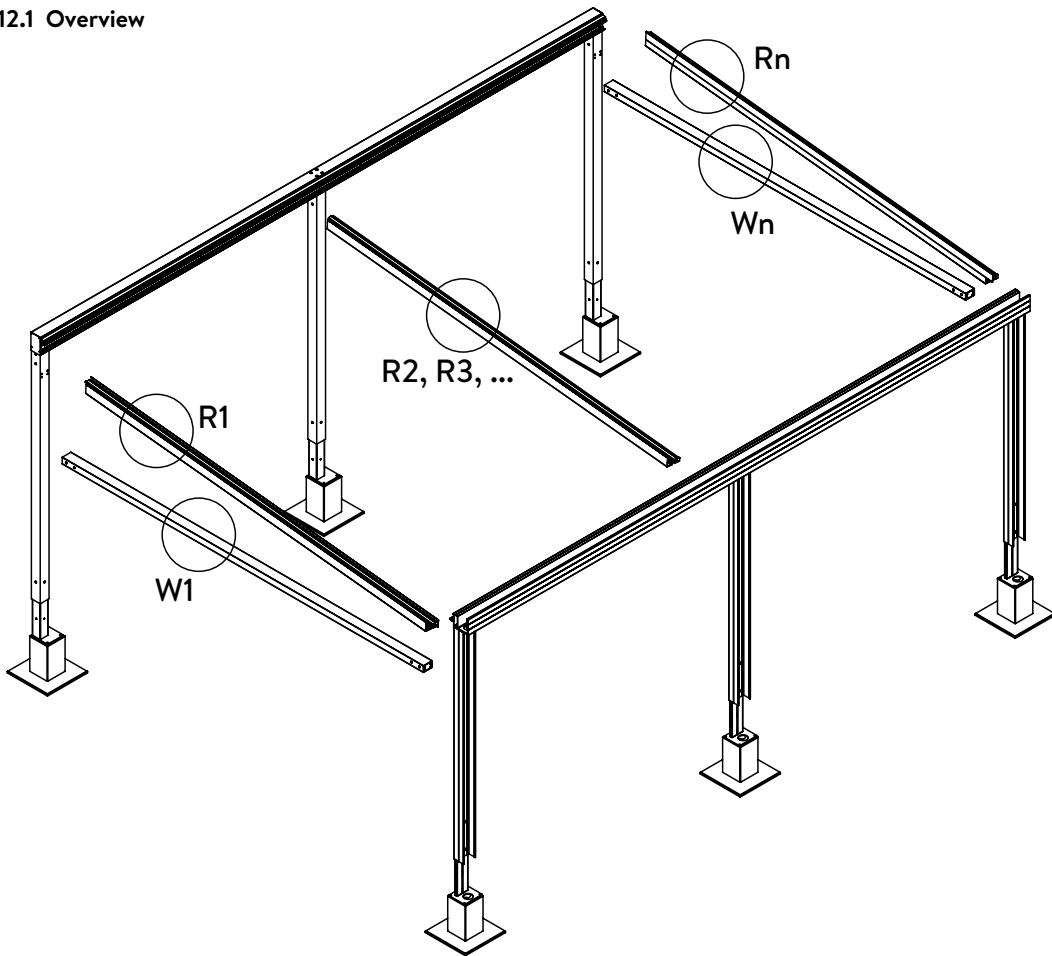
11.5.7 GDx + GDCX: Cover profile

- Cut the finishing clip to length and click it on the underside of the GDx



12 PREPARATION OF THE FRAME

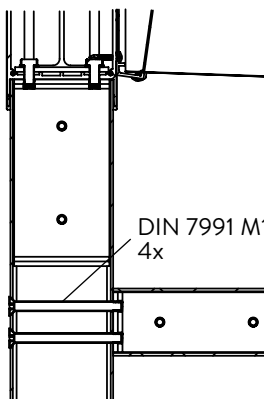
12.1 Overview



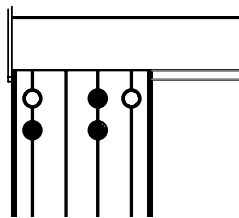
12.2 Installation W1 & Wn

12.2.1 W1 / Wn with C72 brackets

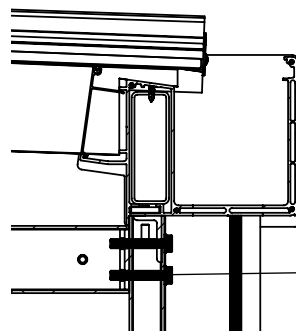
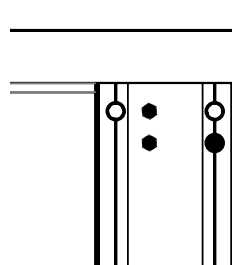
W1 / Wn with C72 brackets
P2.1 & P2.n



P1.1
P1.1 + W1



P1.n



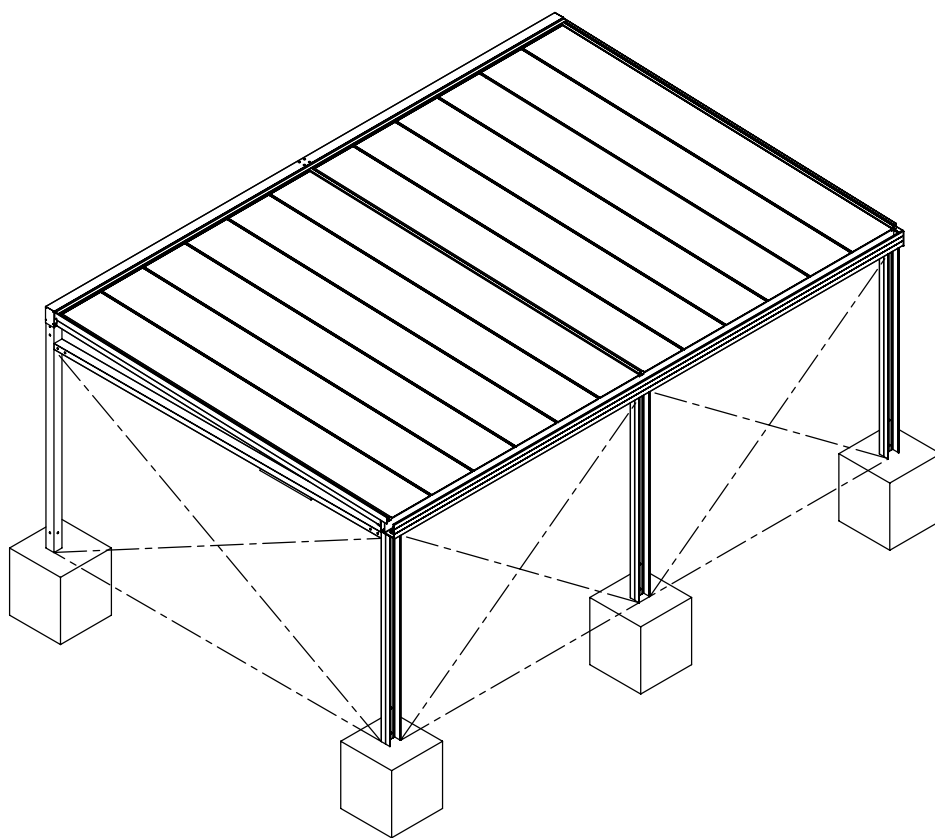
DIN 933 M10x60
DIN 125 M10
3x

12.3 Installation R1 + R2 + Rn

- See chapter 13: "Assembling the roof package"

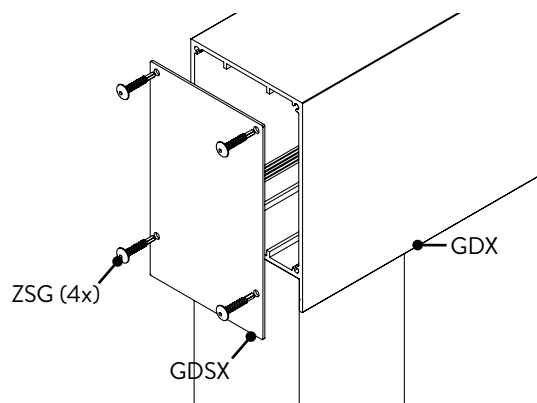
12.3.1 Outlining the structure

1. Check the perpendicularity (squareness) of the structure with the spirit level.
2. Also check if the diagonals are equal.
3. Fix the entire structure firmly in its current position.
4. Protect the painted posts against concrete stains.
5. Pour bags of C25/30 cement into the foundation pit & add water until the ground anchors are at least 400 mm deep in the concrete as previously marked.
6. Allow the concrete to harden before placing the glass on the structure.



12.3.2 Finish

Close the ends of the crossbeams with the end plates GDSX (4x). Use the delivered self-drilling painted screws ZSG.

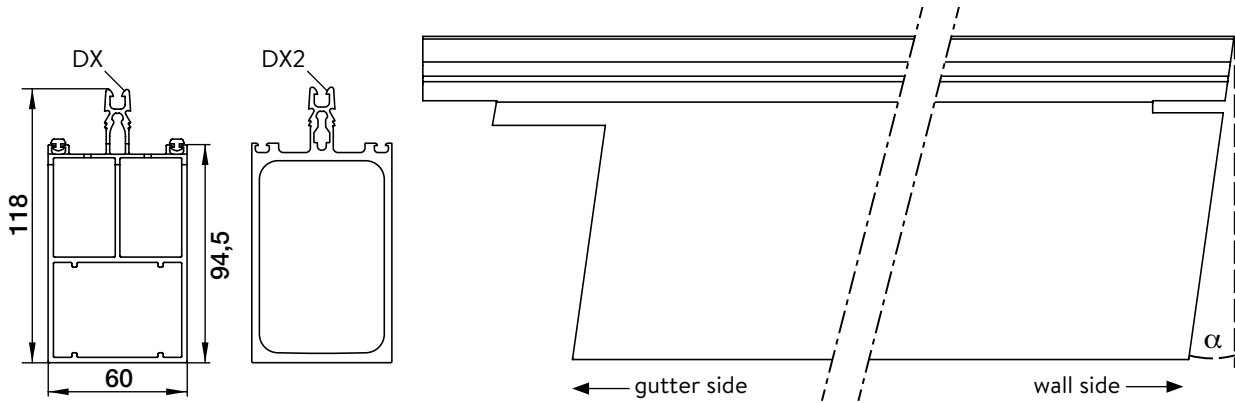


13 ASSEMBLING THE ROOF PACKAGE

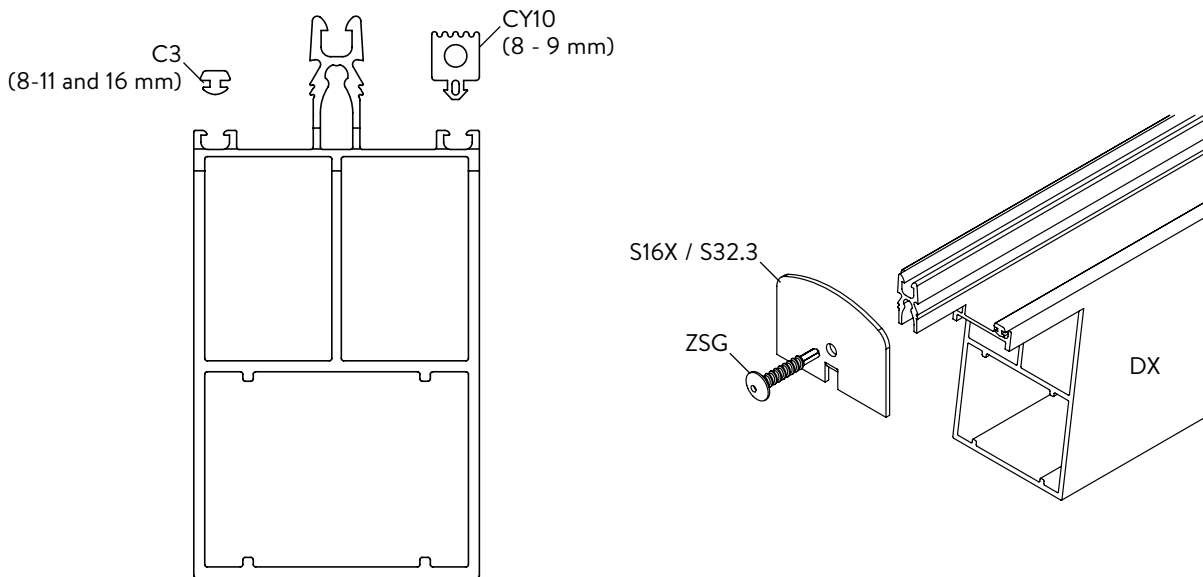
13.1 Parts

The rafters are pre-cut on the wall and gutter side. Check the rafter length in function of the glazing + snow & wind load (see graphs chapter 4). Or by using Climafast, the free calculation programme for professionals.

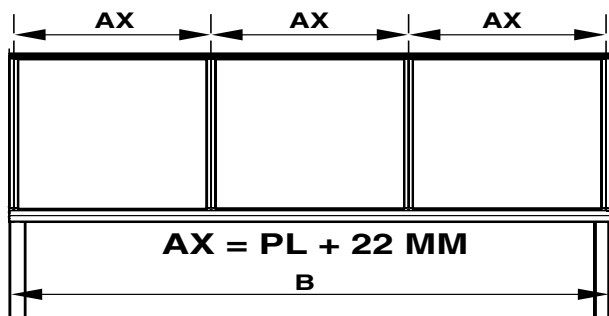
Rafter
DX + C3 (or CY10)



13.2 Preparation



13.3 Rafter spacing



General:

The number of rafters and their position must be determined in function of the glazing and the load. Check the axis distance in relation to the depth of the patio roof (D) and the load (glazing + snow and wind). Check the graphs (chapter 4). Or by using Climafast, the free calculation programme for professionals.

Plastic sheets:

The total width of polycarbonate or acrylic plastic sheets is used except for the left and/or right sheet which can be cut to size. The axis distance between the spacers AX = sheet width + 22 mm. Take into account a lateral clearance of 5 mm on each side. All useful information for the processing and installation of plastic glazing can be found in chapter 15.

Glass:

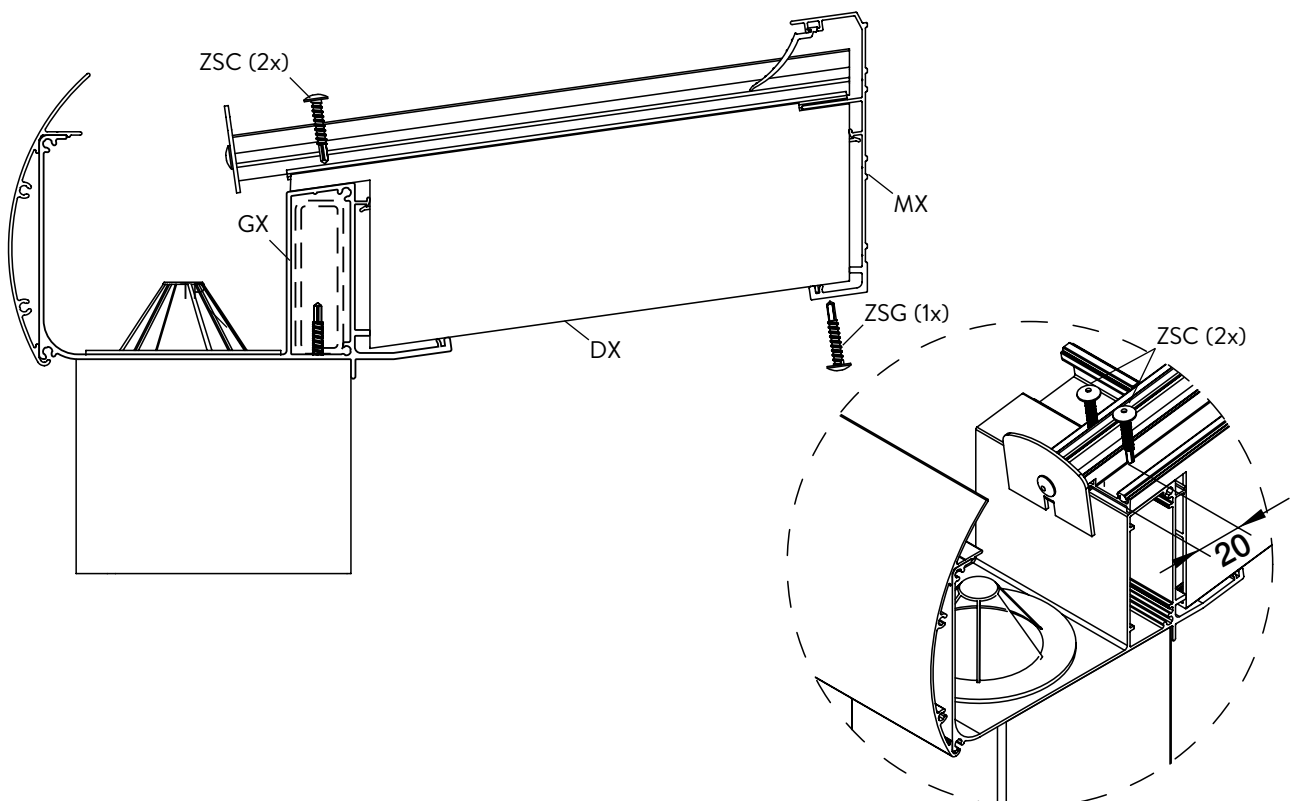
Divide the total width in equal parts of maximum 750 mm for glass. The glazing quantity is determined as follows: $(B - 60 \text{ mm}) / 750$ rounded off upwards. The width of the glazing is determined as follows: $((B - 60 \text{ mm}) / \text{glazing units}) - 22 \text{ mm}$. Please follow the instruction of your glass suppliers.

13.4 Installation of the rafters

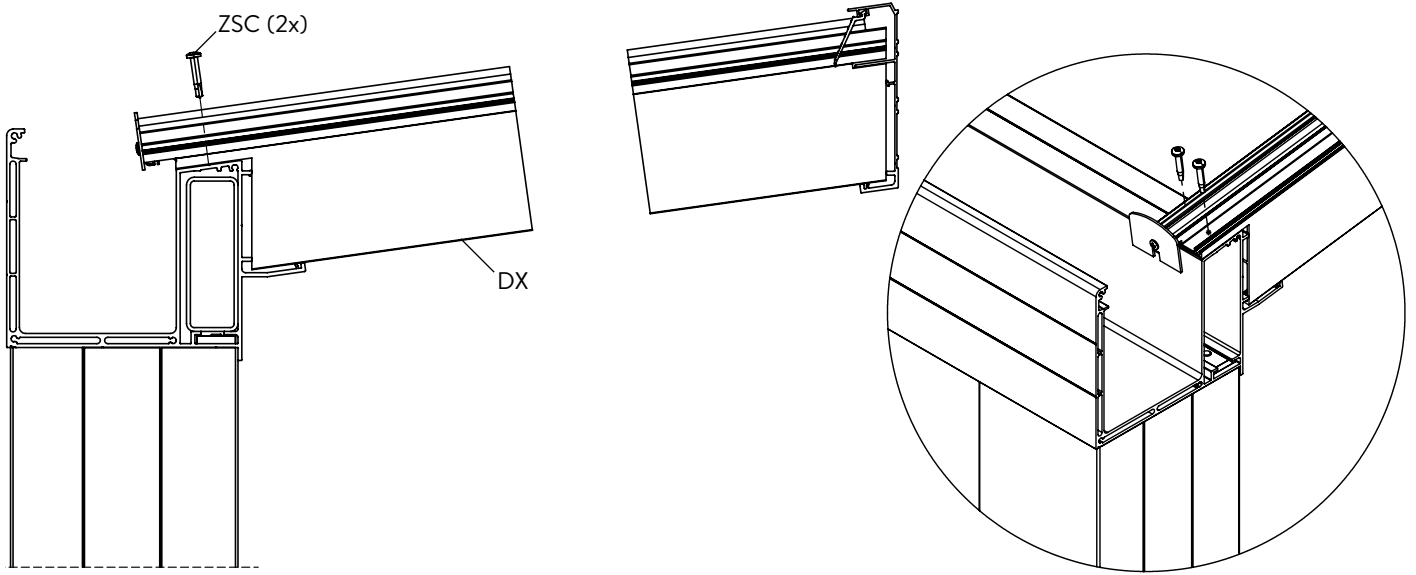
1. Mark the position of the rafters on the wall profile & (gutter) rafter in front.
2. Check the axis-on-axis measurements.
3. Drill pilot holes $\varnothing 4 \text{ mm}$ & fix the screws ZSG & ZSC.
4. Place spacers AX between the rafters on the wall & gutter side.

13.4.1 Version 1: gutter GX

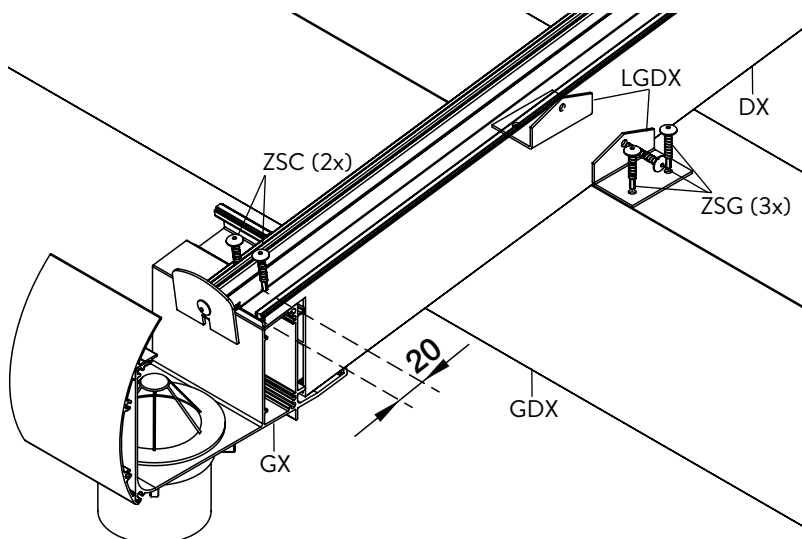
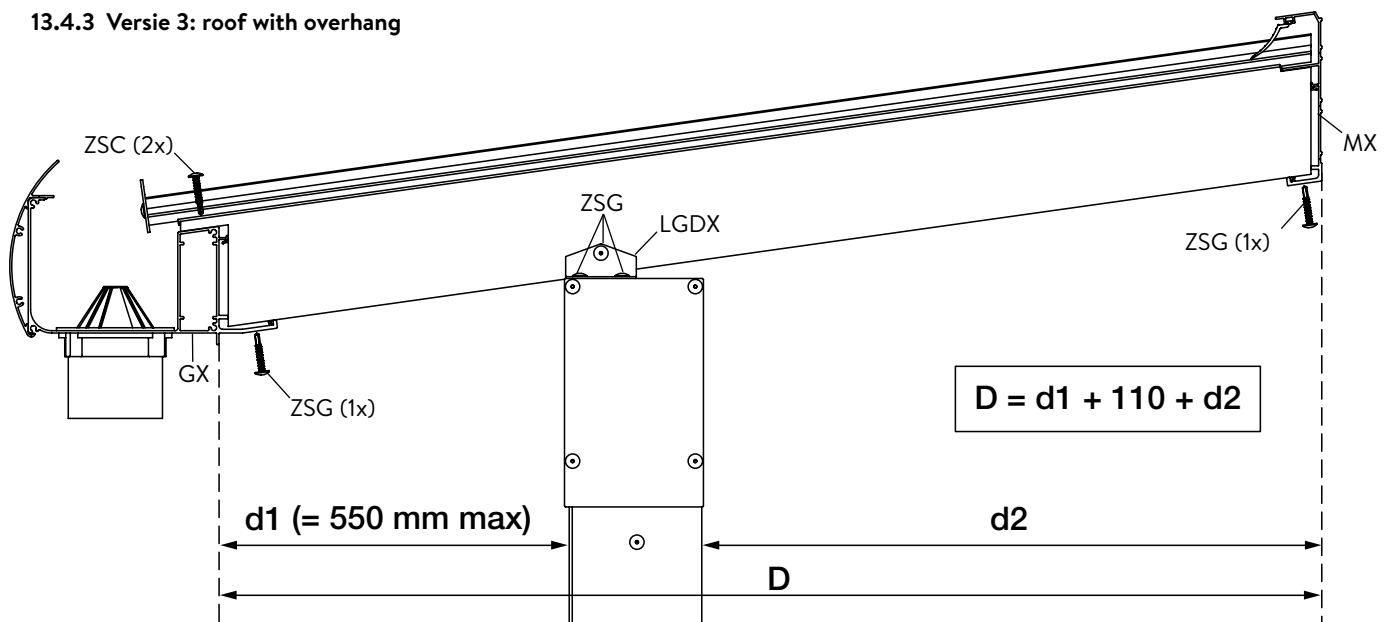
The rafter DX rests on the inclined part of the gutter GX on the gutter side. Every rafter is fastened on to the wall side with 1 lacquered ZSG screw. The rafter is fastened to the gutter with 2 ZSC screws (with seal) at the gutter side. We recommend to always pre-drill with $\varnothing 4 \text{ mm}$ to avoid any paint damage. Provide a spacer AX at the gutter and wall side between the rafters (chapter 13.3).



13.4.2 Version 2: gutter GXLX

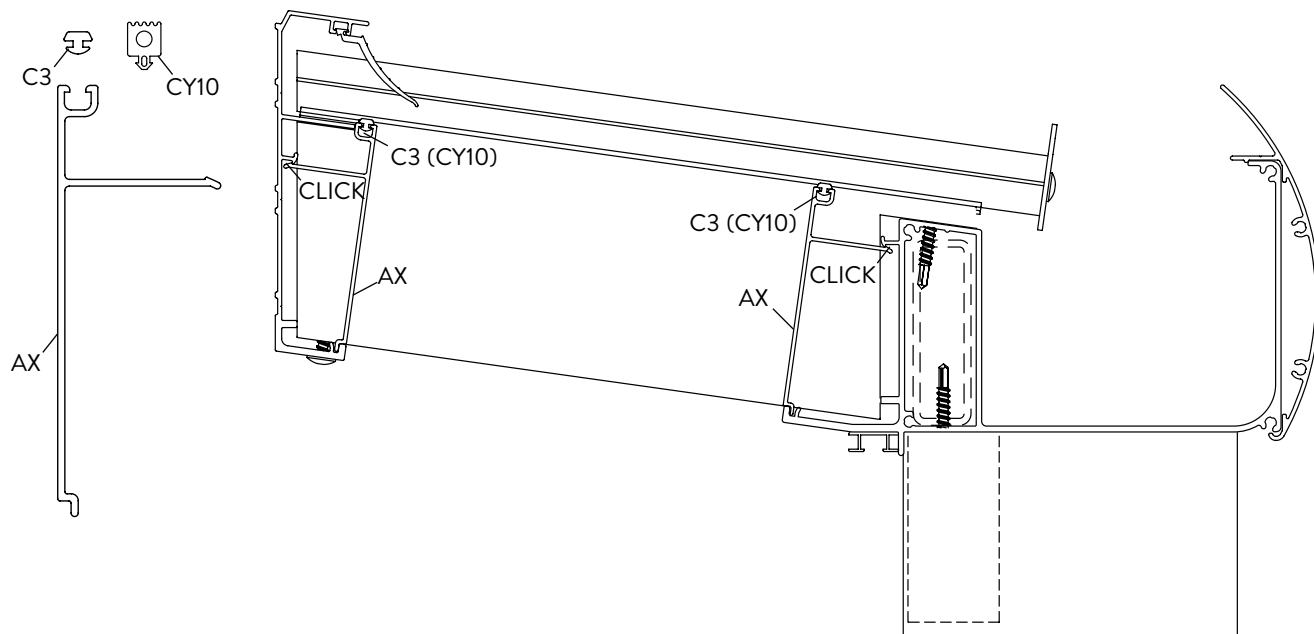


13.4.3 Versie 3: roof with overhang



13.4.4 Spacers

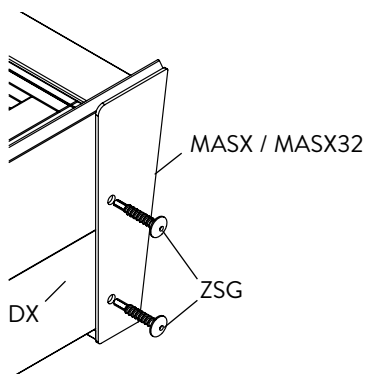
Spacers	
C3	8-11 & 16mm
CY10	8 & 9 mm



13.5 Finish

13.5.1 Wall profile

Use 2 ZSG screws to screw the end plate MSX on the rafter DX on the freestanding sides of the wall profile. Fasten the MSX only after the complete roof installation is finished.



14 OPTIONS

14.1 Lighting

14.1.1 Lighting components in wall profile or gutter

All electrical operations must be performed by a professional and in accordance with the applicable local regulations for electric installations.

ClimaLED spots: see separate mounting instructions

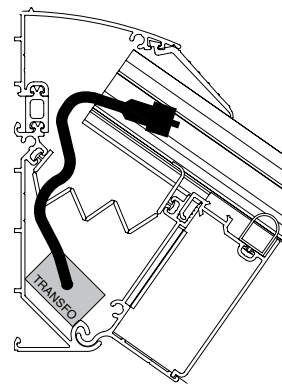
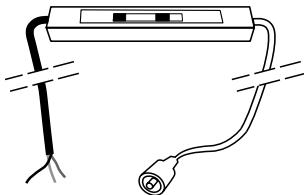
Installation of the ClimaLED strips on the gutter GX:

The installation and electric wiring must be carried out in accordance with the instructions below.

Transformer:

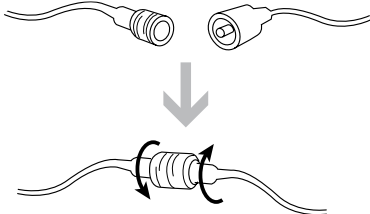
Provide 1 transformer per LED strip of maximum 7 metres.
Pull the extension cord (6 m) through the side rafter from the wall profile to the gutter.

The transformer must be placed in the wall profile in the provided space between the lowest wall profile and the and the hinge profile.



Connect the plugs:

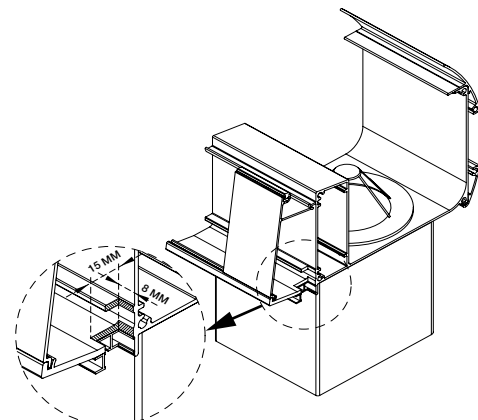
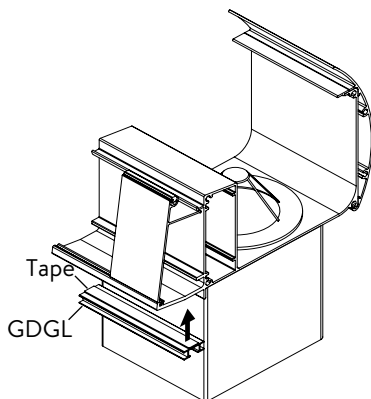
Connect the wires of the transformer to the LED strip with the plugs (IP44).



Installation of profile and LED strips:

The GDGL profile must be stuck to the GX by using the delivered double-sided adhesive tape.

Slide the LED strip in the profile. Provide a cutout as indicated for the cable passage. There is a plug at the end of the LED strip for the connection with the transformer. There is also an extra cable of 6 m so the transformer can be installed in an easy-to-reach place.



15 GLAZING

15.1 Plastic sheets

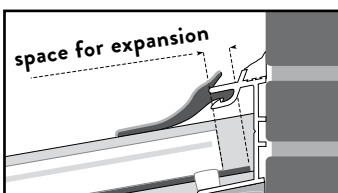
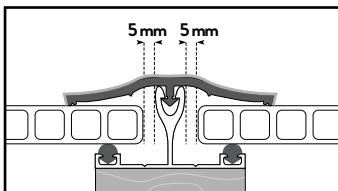
15.1.1 Multi-walled plastic sheets

The qualitative and technological level of the multiple layer plastic sheet is high. We provide a few important tips for problem-free installation. Please pay special attention to the following: Space for expansion/silicone and wooden protection/seals.

1. CLEARANCE

Synthetic sheets can expand or contract when there are temperature fluctuations. The following tips should be taken into account:

- Ensure there is 5 mm clearance lengthwise for each sheet metre and ensure there is 10 mm clearance (5 mm on each side) widthwise. E.g. a 3000 mm sheet must have a length clearance of 1.5 cm.
- Never block the sheet lengthwise or widthwise. Always ensure sufficient clearance.
- Never stick the sheet using silicone (even when it does not damage synthetic materials). It would prevent the expansion and contraction of the sheets.
- The sheet is blocked at the bottom end to prevent it from sliding. The clearance must therefore, be provided at the top.



2. SILICONE, SEALS AND WOOD PROTECTORS

- Nearly all silicone products affect the polymethyl methacrylate or polycarbonate sheets. Purchase silicone types that are safe for acrylic and polycarbonate (guarantee certificate).
- The fumes from these silicones may never evaporate in the slots of the sheet. The ventilation openings as well as the sides of the end profiles may not be closed off. The silicone should always be allowed to release fumes freely.
- Some seals contain softening agents (as used in certain types of rubber, PVC, polyurethane, etc.) that may cause small cracks. Use only approved seals.
- Do not use black or dark-coloured seals to prevent heat accumulation.
- A lead flashing can be placed on the seals but cannot rest against the sheets.
- Some paints, varnishes and wood protectors affect the polymethyl methacrylate or polycarbonate sheets. Never use lubricants to put the seals into the profiles.
- Never spray insecticide directly on to the sheets. Synthetic sheets can be damaged by these products.

3. MAINTENANCE

- Clean the sheets annually using lukewarm rainwater. Dissolve a little household soap (neutral) in the water if required (no detergent!!). Never use solvents or abrasive products.
- Do not rub dry (may cause scratches).
- Simply rinse.

4. INSTALLATION

- Observe the safety instructions that apply to work on roofs.

Polycarbonate sheets: Very IMPORTANT! The side which is protected against UV radiation must always be installed facing the exterior or the sky. The “sun side” is indicated on the protection film.

- The plastic tape or the provisional aluminium tape will only ensure the sheets are free from dust while being shipped. These should be removed! Adjusted aluminium tape or end profiles must be used (see point 6 p. 49).
- The load-bearing structure must be strong and stable (see the regulations that apply to the timber and metal construction industry). Cross supports may be required depending on the type of sheet used. Only specific maximum lengths may be used without a cross support for each type of sheet taking into account the loads of 500 N/m² or 750 N/m², respectively (see the technical plastic sheets information sheet).

- Heat accumulation: the top side of the load-bearing structure that is turned towards the sheets must be WHITE reflective.

- Apply white dispersion paint (diluted in water or paint without solvents) or use preferably aluminium tape. Attention: Let the paint dry after painting the load-bearing structure! Continue with the installation of the sheets after the paint has dried. The synthetic sheets may NEVER be installed directly on to timber structures.

- Do not place roof tiles directly on the sheets! Leave a space of at least 10 mm between the sheets and the roof covering.

- Use a special weather stripping (seal C6) for sealing the opening between the plate and the gutter beam. Do not seal using sealant or fill with PU foam.

- We formally recommend not adding a ceiling under the acrylic sheets (PMMA). Any used sun blinds or other finish under the sheets should be at least 120 mm from the roofing sheet. These may not have insulation properties and should have a reflecting colour. The polycarbonate sheets (PC) do not require any specific precautions.

WIDTH DISTRIBUTION OF THE SHEETS: RECOMMENDED:

- standard sheet width with an adapter for the 2 outer sheets. This is especially important for the SSP heat-stop sheet.

The closed off sides are one of the factors that determine the sheet strength!

NOT RECOMMENDED:

- in equal sections with sized sheet widths. Take the standard sheet width into account. We formally advise against sizing multiple-layer sheets.

5. GLASS

- Follow the installation instructions provided by the glass manufacturer when including the installation of glass!

The guidelines regarding the placement is only of an advisory nature. They are for informational purposes only. The installation is under the sole responsibility of the customer.

THE RESPONSIBILITY OF THE PUBLISHER IS EXPRESSLY DISCLAIMED REGARDING THE PLACEMENT.

PERGOLUX - SKYLUX - CLIMAX - CLIMALITE - REFLEX PEARL - RELAX - PRIMALITE - POLYCLEAR ARE REGISTERED BRANDS OF SKYLUX

6. DRAINAGE & CONDENSATION

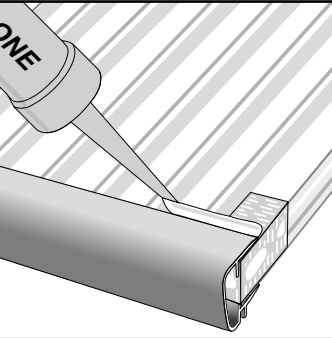
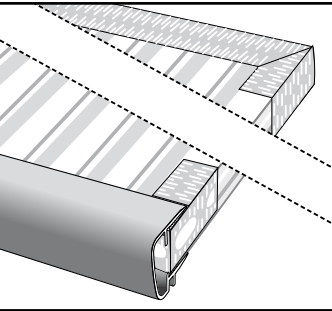
Dust and damp may not enter into the cell structure:

- A combination of BT 16/25/32 at the top and BB 16/25/32 with U16/25/32P at the bottom, stops dust of > 50 µm from entering the cell structure.

- The underside is provided with a perforated aluminium filter tape. To protect the tape, a U-shaped closing profile is installed.

- Seal the profile with synthetic friendly silicone to prevent water infiltration as much as possible.

- In case of sheets with a no-drop layer, the edge needs to be moistened and dried before taping.



- Make sure that the bottom NEVER stands in water (moss and algae).

- Condensation in the hollows channels is not 100% inevitable (physical phenomenon).

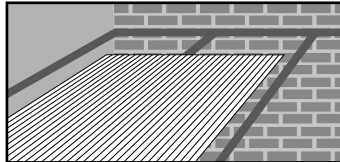
Acrylic and polycarbonate are very less gas- and dampproof. The characteristics of the material and the guarantee are not diminished because of this. An appropriate seal is recommended.

7. SHEET DIRECTION

- Install the sheets with inclination or vertically, never horizontally (unless interior use).

- Minimum inclination: 10° (18 cm per meter) or more. A slope of less than 10° can cause condensation problems

- The direction of the sheet's hollow channels must always go along with the roof inclination.



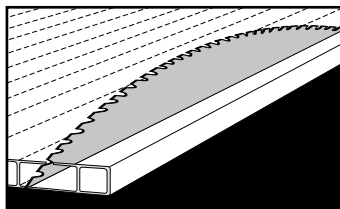
8. REFLECTION

- Multi-walled synthetic sheets may reflect the sunlight to the inside or the outside in case of direct sunlight (following the orientation or the inclination). This is a normal situation which does not affect the sheet guarantee.

9. SAWING & DRILLING

- Always use a grease pencil to make notes on the protection film (felt pen is difficult to remove).

- To ensure a firm clamping when sawing, you should always make sure that a raised rib is as near as possible by a sawn edge.

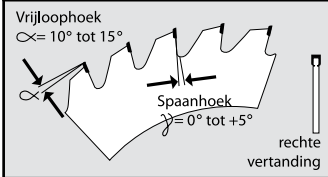


- When sawing, use a hard metal saw (widea) with high rotation speed. Saw slowly and by preference with one move. Use new or sharpened saw blades. Make sure the sides are always smooth.

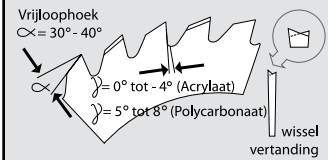
ATTENTION: The basis on which the sheets are sawn, must be stable and vibration-free. The sheets must not move during sawing. The saw blade must slightly protrude from the sheet.

- Type of saw blade:

1. Hard metal (for about 50 m/s)



2. HSS (not more than 40 m/s)



- Remove all dust and sawing residue from the channels with pure compressed air or a powerful vacuum cleaner and seal off the channels immediately afterwards.

- Remove the protection film only after installation to avoid scratches.

- Drilling is strongly advised against.

However, if unavoidable, provide grooves (contraction and expansion).

10. PILING

- Avoid direct sunlight on piled sheets.

- If you pile the sheets outside, cover the sheets with white polyethyl foil. Always keep the synthetic friendly tape as sealing on the front sides of the sheet.

- The sheets must not be piled directly on the ground. Use appropriate pallet boards.

11. SUN PROTECTION

- If you install sun protection, you must do this on the upper side of the sheets: e.g. on the outside.

Attention:

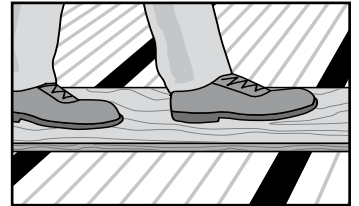
Do not put the sun protection directly on the sheet!

You can also buy sunproof sheets (PC: Primalite Clear, Reflex Pearl, Relax - PMMA: S5P Heatstop) or install a Skylux conservatory skylight.

12. REMEMBER

- Never walk or kneel directly on the sheets. Always use solid timber boards underneath. Make sure these boards are supported by the timber construction.

- Multi-walled synthetic sheets with thin walls and a high insulating structure in the sheet, are sensitive to foot, knee and other impressions at the surface. Please take enough precautions during transport and installation. Impressions in the sheet are **not** covered by the guarantee.



13. SNOW AND SNOW PILE

- The multi-walled synthetic sheets resist normal snow load. You can find the maximum snow load on the technical files per sheet type and size. In case of heavy snow fall, we recommend to regularly clear the snow. The conservatory roof must also be protected against snow falling from a higher situated roof.

14. DILATION NOISES

- As we already mentioned several times, synthetic sheets contract and expand due to temperature fluctuations. When they move with regard to the roof construction, there can be some creak noises. There is no danger for the sheets if they have been installed according to the installation instructions.

- Screwed clips cause more creak noises with synthetic sheets. Do not fasten too tightly.

- If you would like to avoid crack noises, we advise you to always use the TP and TPH profiles. The TP can also contract/expand together with the plastic, aluminium or sandwich sheet.

15. FURTHER INSTRUCTIONS

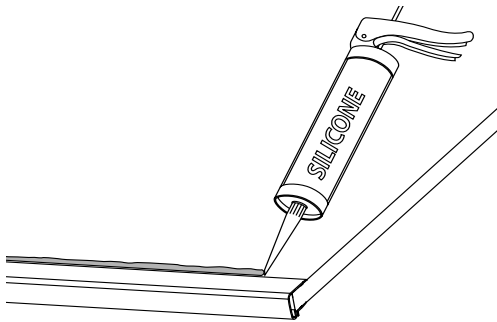
- Only use sheets with identical production number per project to avoid colour differences.

- For glass: see Pergolux Glass series

15.1.2 Finish

The maximum thickness of the plastic sheets is 16 mm or 32 mm. Only the left and/or the right sheet are cut to size in width. Take into account a lateral clearance of 5 mm on each side (p. 48). Provide the appropriate tape for the open ends (whole tape BT on the top side = wall side and perforated tape BB on the bottom = gutter side). Make sure each sheet has an end profile on the gutter side. Check whether the end profile is perforated at the bottom. This is required for proper water drainage. Ensure that the UV protected side of the sheet is always upwards. All useful information for the processing, installation and maintenance of plastic sheets can be found on page 48 & 49.

Apply a silicone sealant that does not affect plastic material at the upper edge of the end profile. Make sure the multiple-walled plastic sheets have sufficient slope to be able to appeal to the guarantee.



15.2 Pergotop

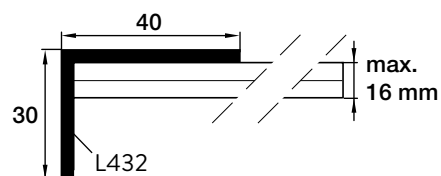
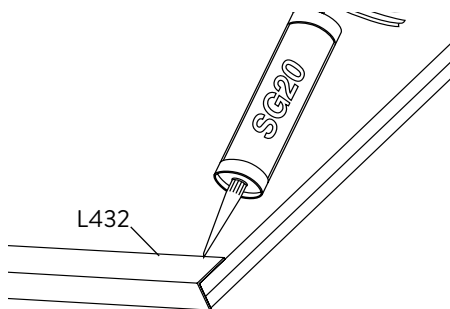
Same method as multi-walled plastic sheets.

15.3 Glass

15.3.1 Finish

The maximum thickness of the glass sheets is 10 mm. Always use laminated glazing (44.2 or 55.2) in your patio roof according to the applicable standards. Consult your glass supplier.

Stick an L-shaped end profile L432 on the crosscut side of the glass. Use silicone SG20.

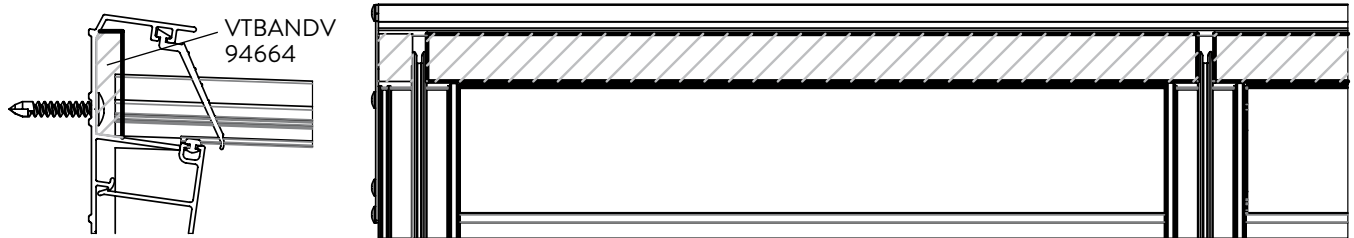


16 SEALS & WATER DRAINAGE

16.1 Extra seals for glass roof with slope of 2° to 5°

16.1.1 Grey foam adhesive tape

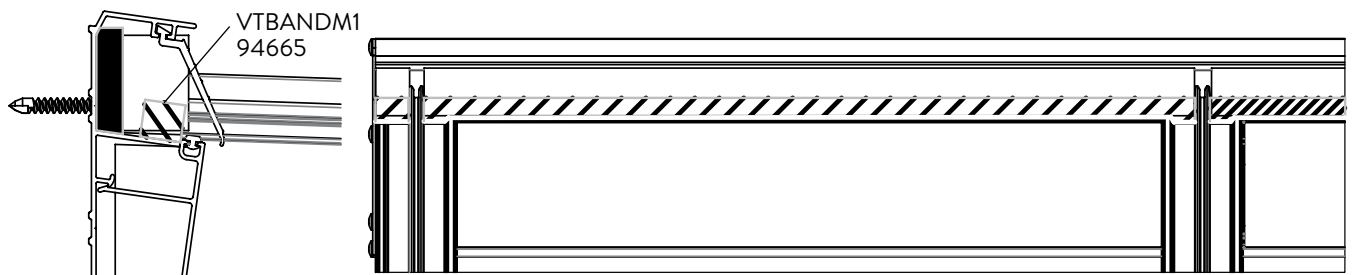
Stick the tape on the back of the back profile.



16.1.2 Black rubber adhesive tape

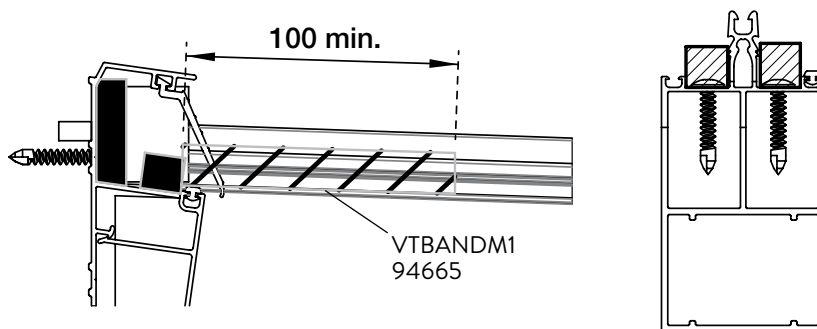
16.1.2.1 Strips on the back profile

Stick the tape on the inclined surface of the back profile, between the straight edges of the glass-bearing DX profiles and neatly next to it.



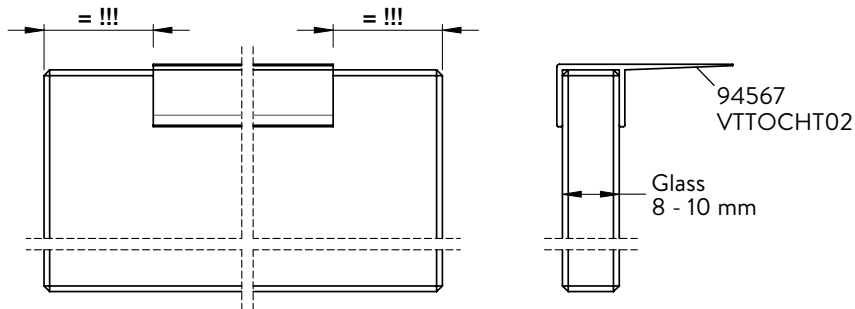
16.1.2.2 Strips on the glass-bearing profiles

Stick a 100 mm strip at the top in the grooves of the glass-bearing profiles. This between the glass sealing rubber strips and the straight fin.



16.1.3 Glass sheet preparation

- Measure & demarcate so the PVC profile is fixed precisely on the centre of the glass sheet.
- Firmly fix the profile on the glass edge:
 - Art. 94567 = black PVC profile for 8 & 10 mm glass (if necessary, use a bit of lubricant for the installation on 10 mm glass if the glass edge is not chamfered).



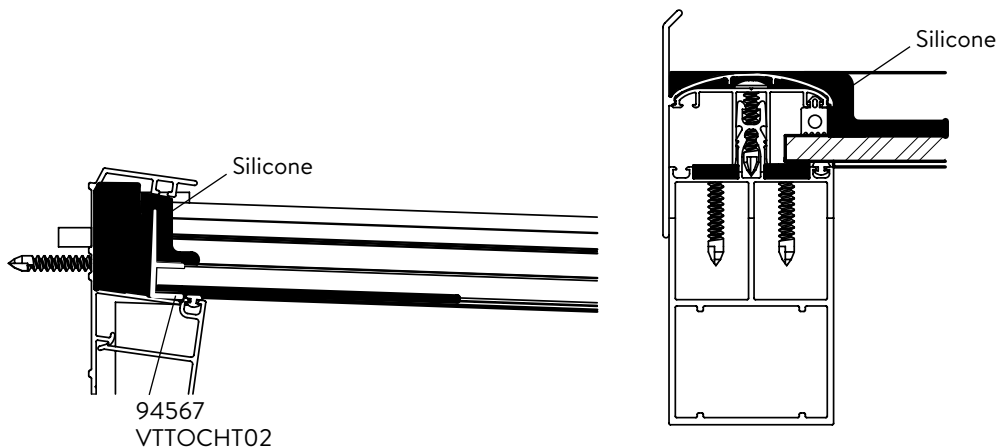
16.1.4 Glass sheet on the roof

- Put the glass with PVC profile carefully on the roof.
- Check of the glass and PVC profile are positioned correctly.
 - The glass itself rests on the C3/CY10 seal of the back profile. The PVC profile rests behind the C3/CY10 seal.
 - The PVC profile rests between the C3/CY10 seal of the glass-bearing DX profiles.



16.1.5 Silicone sealant

- After the installation of the glass cover profiles (CL16 or CLSB+CLST).
- Apply a silicone line along all contact joints of the PVC profile & fill gaps if necessary (glass, glass covers & glass seals). This way, the wind cannot blow water along the barriers.

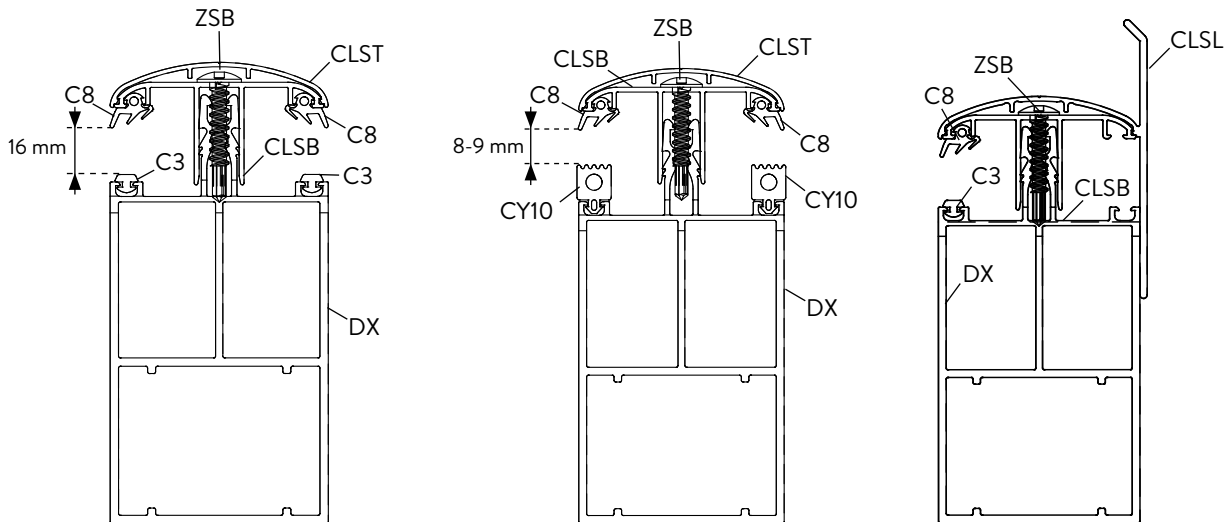


16.1.6 Mounting the C1CX seal

- Pull the C1CX seal in the groove of the back profile.

16.2 Screw-on glass covers

For plastic sheets (Pergotop/Pergotop-Soft sandwich panels only suited for installation with Skylux screw-on clips) or glass: possibilities and glass thicknesses can be found in the table on page 12.



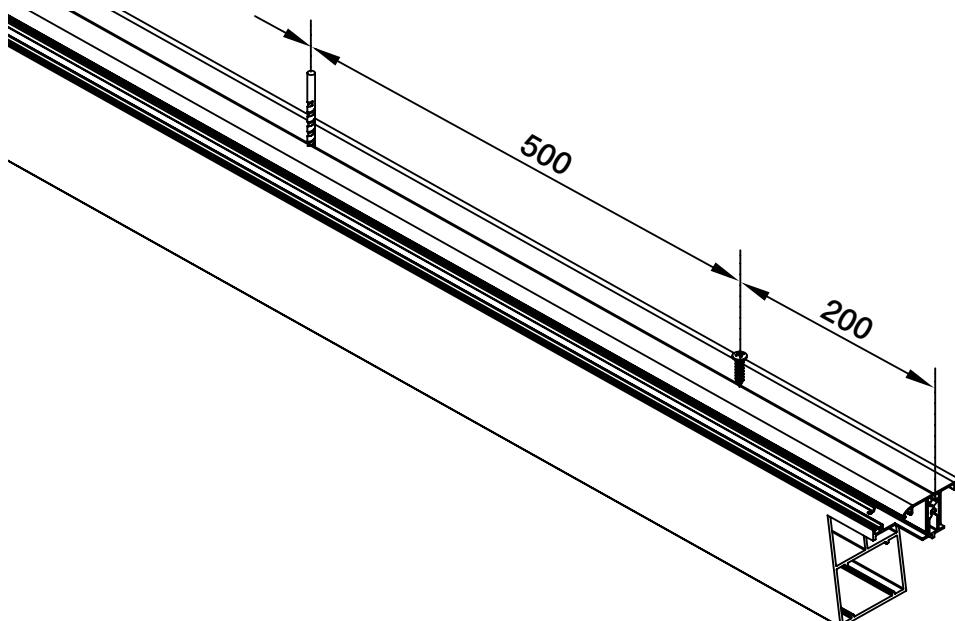
The screw-on clip consist of 2 parts:

- the bottom clip CLSB
- the top clip CLST

Push the C8 seal on both sides into the CLSB clip. Make sure the C8 seal does not continue up to the end of the gutter side, but to the end profile on the glazing.

CLSB + CLSL for plastic sheets or glass of 15 or 16 mm thick with seal C3. Also possible with seal CY10 for glass of 8 or 9 mm. Place the C8 seal on 1 side in the clip.

Drill holes with a \varnothing of 5.5 mm in the CLSB every 500 mm, starting and ending at 200 mm from the ends. Fasten the CLSB to the side rafter DX using ZSB screws. Fasten perpendicularly and use a slight torque to ensure the screw head is pressed flat against the CLSB.



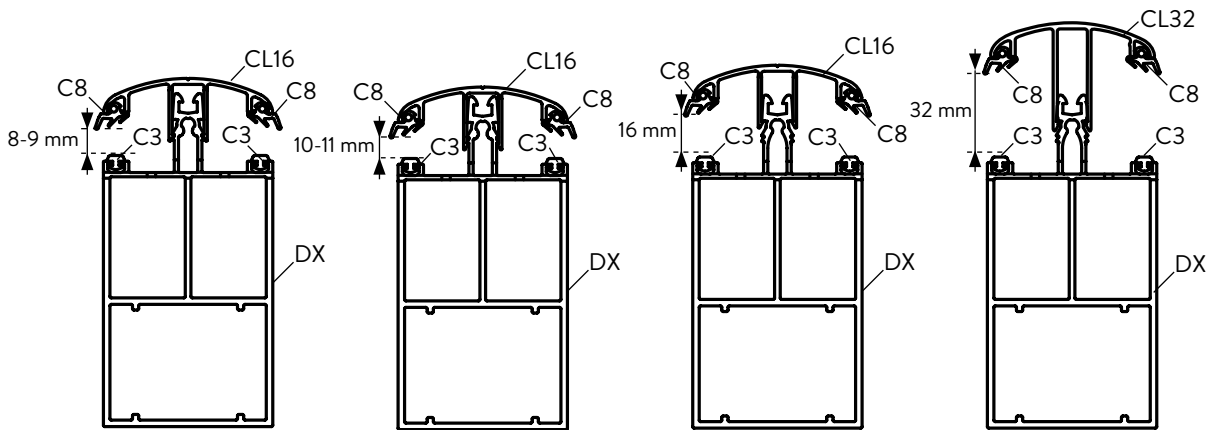
16.3 Clip-on glass covers

Clip fixation

Sheet thickness	Middle rafters (R2)		Side rafters (R1 & Rn)		Seals	
	CL16	CL32	CLLX	XLL	C3	C8
Glass 44.2 (8 - 9 mm)	Fix position 1	X	Fix position 1	X	✓	✓
Glass 55.2 (10 - 11 mm)	Fix position 2	X	Fix position 2	X	✓	✓
Plastic 16 mm	Fix position 3	X	Fix position 3	X	✓	✓
Sheets 32 mm	X	✓	X	✓	✓	✓

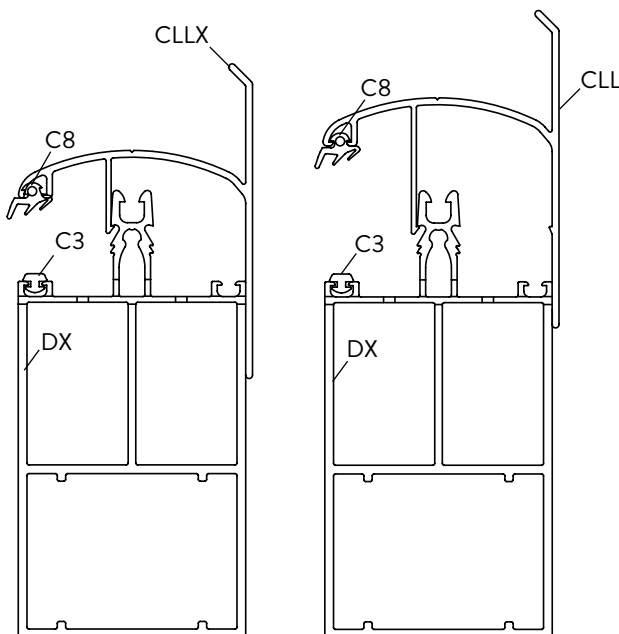
16.3.1 Middle rafters (R2)

1. Push the C8 seal into the clips. Seal C8 stops on the on the gutter side before the end, on the end profile of the glazing.
2. Clip with hand or rubber hammer, be sure not to make any dents.



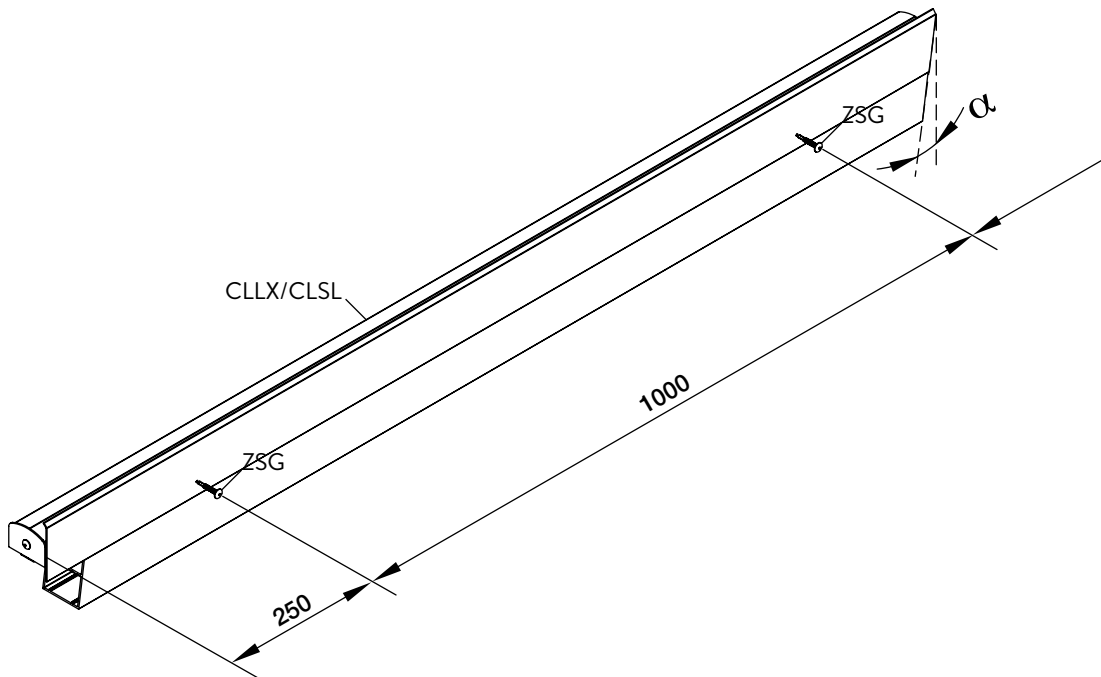
16.3.2 Side rafters (R1 & Rn)

CLLX for plastic sheets or glass with a thickness of 8-11 mm or 16 mm, or CLL for plastic sheets 32 mm: place the C8 seal on one side in the clip.



16.3.3 Side rafters (R1 & Rn): finish

Saw the CLLX/CLSL profile diagonally on the wall side according to the roof slope. Measure the distance to the stop profile to determine the length of the CLLX/CLSL profile. Position the CLLX/CLSL profile on the outside against the rafter profile and push it with your hands or with a rubber hammer and a small wooden board. If the side of your roof is free, fasten the CLLX/CLSL each metre against the side of the rafter with ZSG screws. If you are working on an installation sideways against a wall, then screw it into the wall.



ONLY USE ORIGINAL PARTS SUPPLIED BY SKYLUX. FAILURE TO USE ORIGINAL PARTS VOIDS THE GUARANTEE.

THESE GUIDELINES ONLY SERVE AS ADVICE AND INFORMATION. INSTALLATION IS CONDUCTED UNDER THE SOLE RESPONSIBILITY OF THE CUSTOMER.

CLIMALUX / CLIMALUX HORIZON IS A REGISTERED BRAND OF SKYLUX
SPINNERIJSTRAAT 100 - B-8530 STASEGEM
T +32 (0)56 20 00 00 - F +32 (0)56 21 95 99
INFO@SKYLUX.BE
WWW.SKYLUX.EU

