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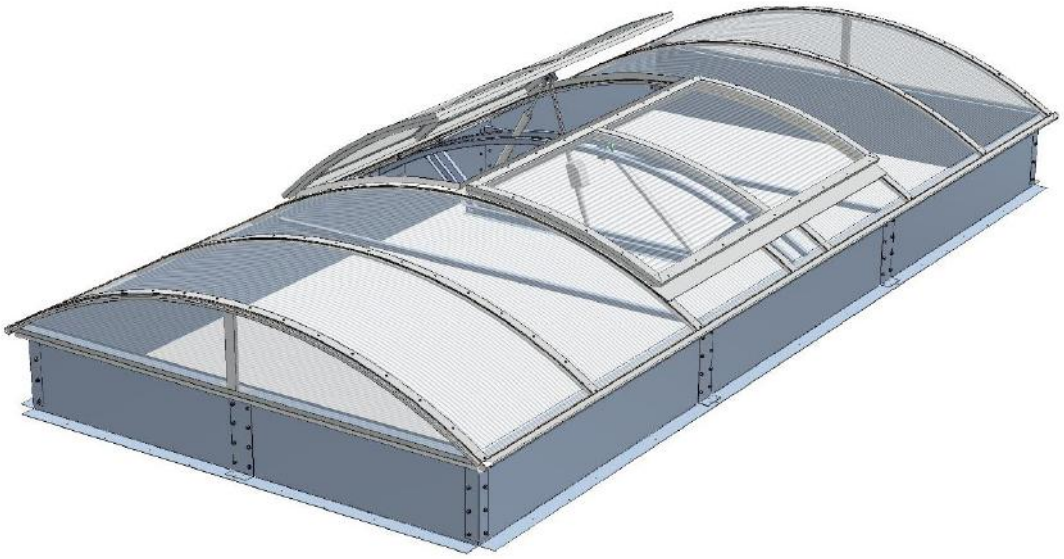
www.mercor.com.pl

Installation manual

MCR PROLIGHT
Continuous
Rooflights



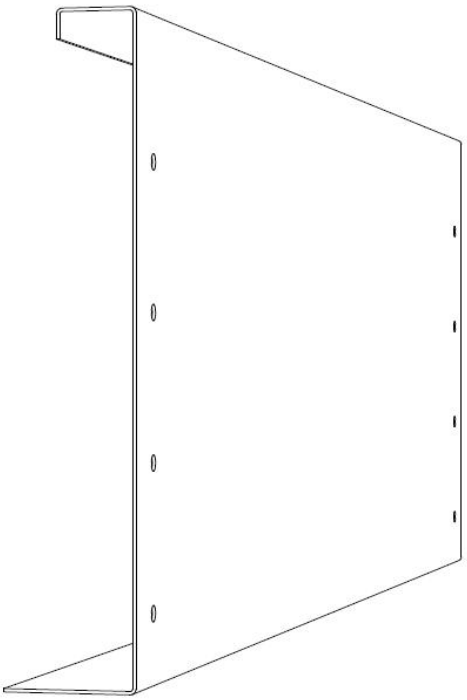
KRS 0000217729, Sąd Rejonowy Gdańsk-Północ, w Gdańsk, VII Wydział Gospodarczy Krajowego Rejestru Sądowego
KRS 0000217729, Local Court Gdańsk-Północ in Gdańsk, VII Commercial Division of National Court Register
Wysokość kapitału zakładowego (i wpłaconego) / Company capital (paid up): 3.892.319,25 zł
NIP: 584-030-22-14, VAT EU: PL 5840302214, Regon (register number): 008047521, BDO: 000069623

Table of Contents

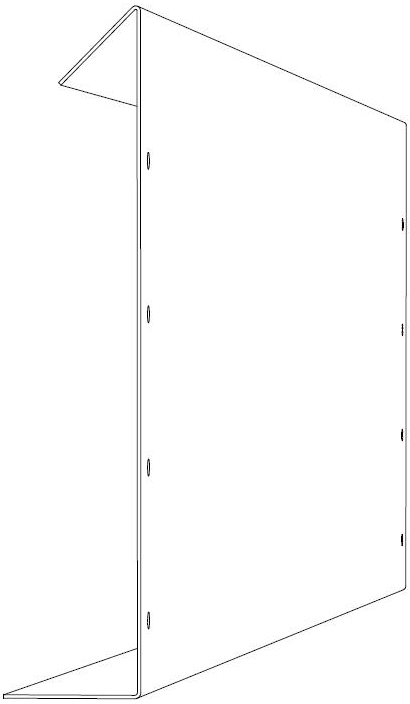
I. Components of continuous rooflight and components of continuous rooflights with sandwich panels

1. Sheet metal base

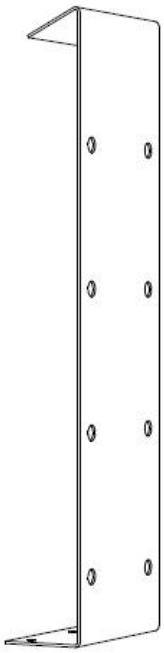
(standard base sheet thickness 1.5 or 2.0 mm and self-supporting base sheet thickness 2.5 mm)



End base module

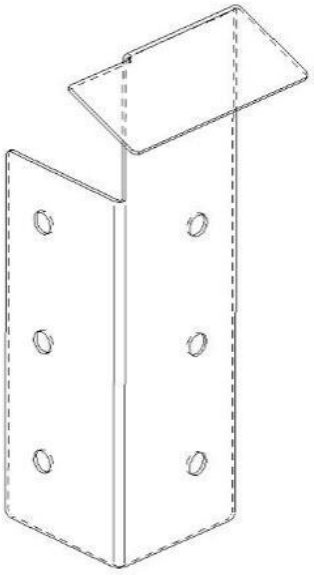


Longitudinal base module

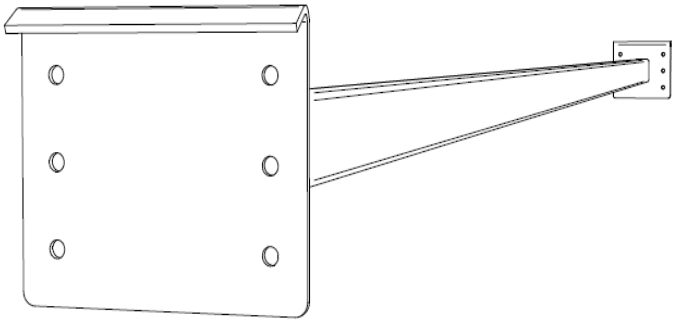


Longitudinal base connector

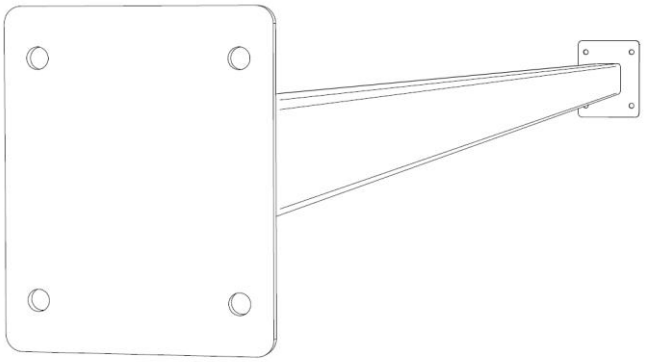
End base connector



Corner connector



Upper bracing of the base



Lower bracing of the base

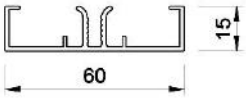
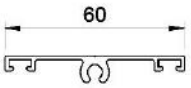
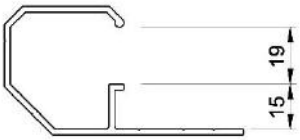
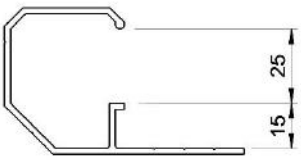
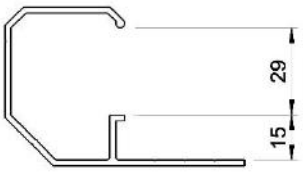
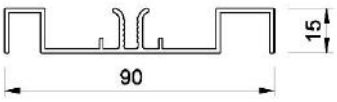
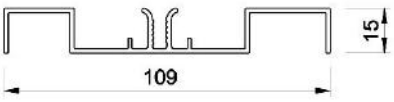
Fasteners:

- M10 x 20 bolts,
- M10 nuts,
- M10 bolt washers,
- ø 6.3x22 mm self-drilling screws (not supplied for overlay bases),
- ø 4.8x12 mm rivets,
- PES 40x3 tape,
- PES 20x5 tape.

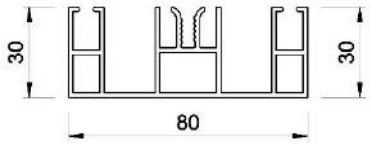
2. Top section of the rooflight

After delivery to the jobsite, the aluminium profiles should be stored in accordance with the instructions placed on the packaging.

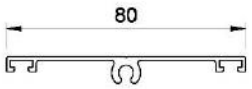
Aluminium profiles of the N60/D60 system:

		
Bearing profile N60	Pressing profile D60	Edge profile Km10
		
Edge profile Km16	Edge profile Km20	
		
End panel profile Tm 60	End panel profile TM 60-II	

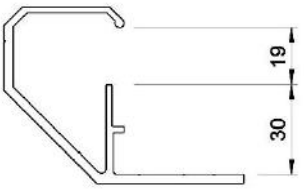
Aluminium profiles of the N80/D80 system:



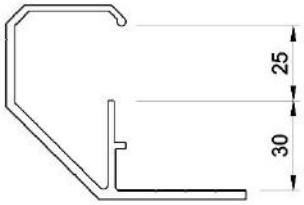
Bearing profile N80



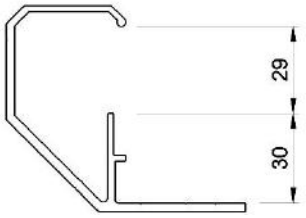
Pressing profile D80



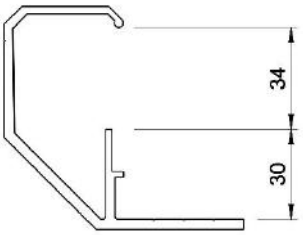
Edge profile Kd10



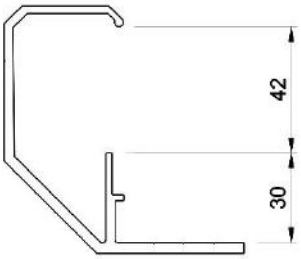
Edge profile Kd16



Edge profile Kd20

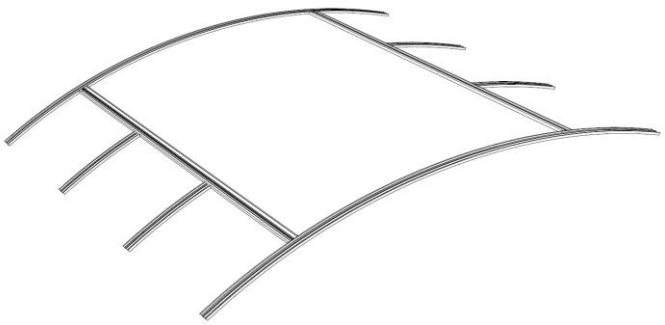


Edge profile Kd25



Edge profile Kd33

Tympanum panel (tympanum wall of the rooflight)

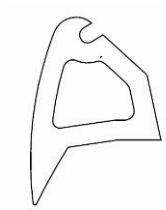
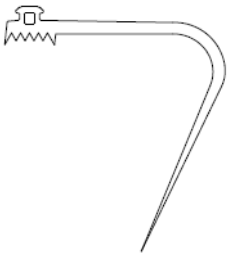


Vent supporting frame – “spider”

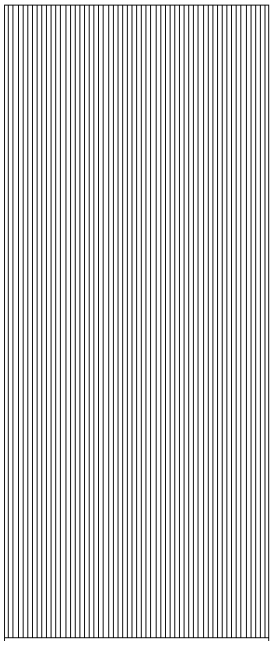
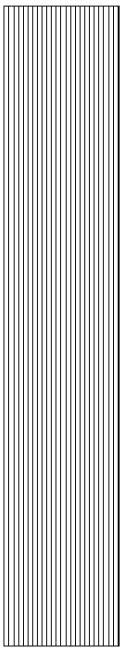
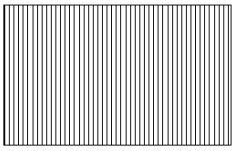
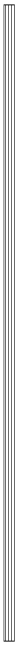
Edge profile end cap (2 pcs RIGHT, 2 pcs LEFT)

Gaskets

(not in scale)

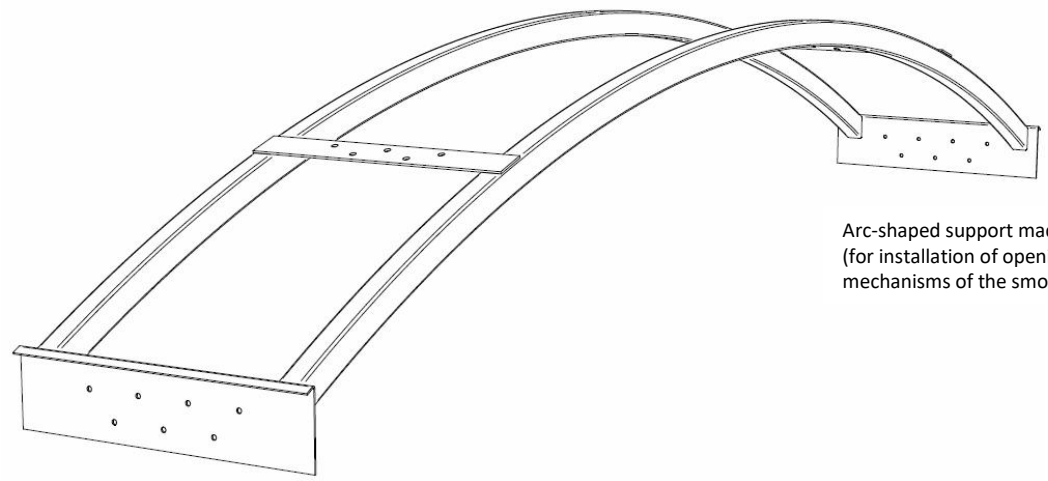
		
SIM gasket pressed into the pressing profile	JP-EPDM gasket (of the edge profile) supplied in sections	Masking gasket of the end panel (tympanum panel)

Polycarbonate panels mounted in the area of the vent base

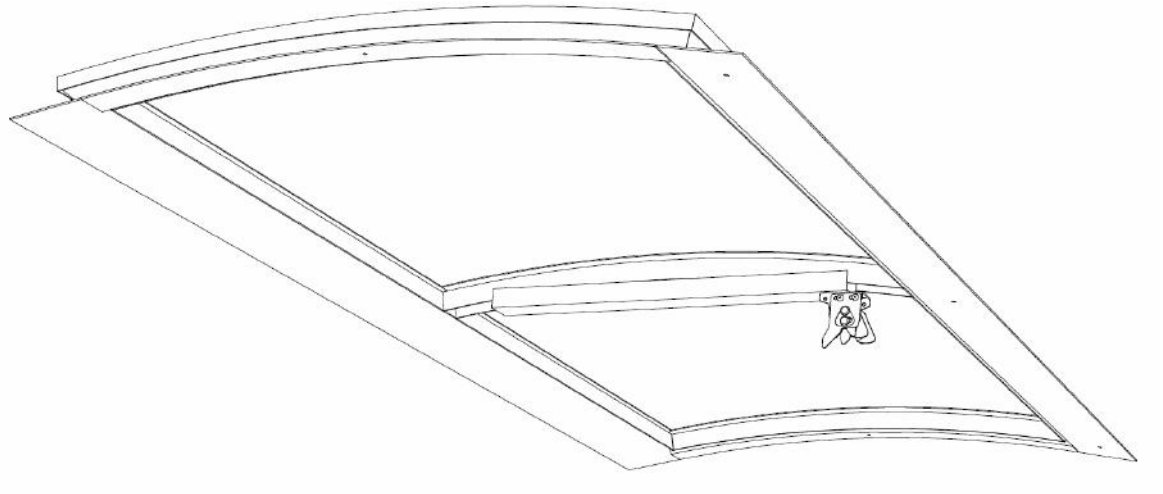
			
700 mm / 1050 mm / 2100 mm wide polycarbonate panels	Polycarbonate panels mounted on both sides of the vent	Polycarbonate panels mounted below the vent	Polycarbonate strips mounted under the vent supporting frame

- polyester panels (rooflights with B_{roof}(t1) class) (dimensions the same as polycarbonate panels),
- ø 6.3x32 mm self-drilling screws,
- ø 6.3x22 mm self-drilling screws,
- ø 5.5x 32 … 50 mm pan head sheet metal screws,
- ø 5.5x 38 … 55 mm countersunk sheet metal screws,
- PES 40x3 tape.

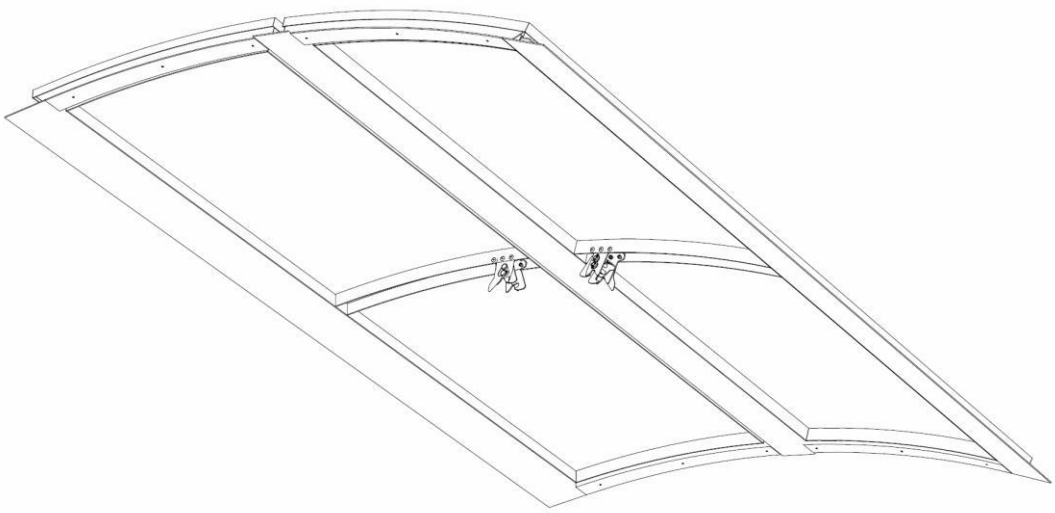
Vents



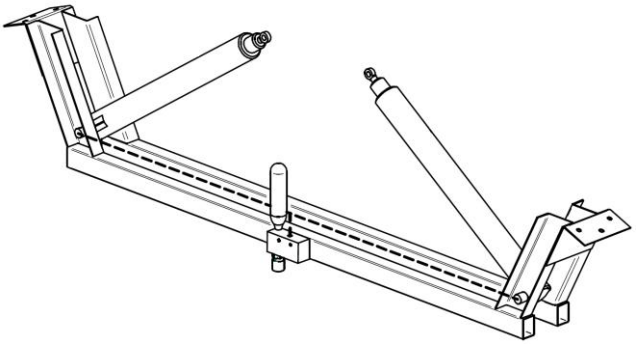
Arc-shaped support made of steel (for installation of opening mechanisms of the smoke vent)



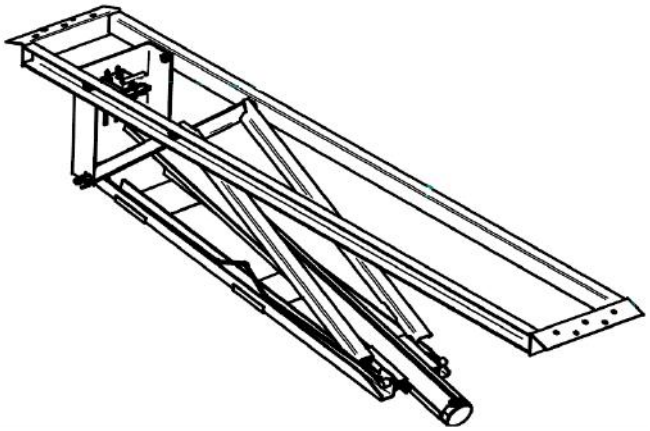
Single-leaf smoke vent



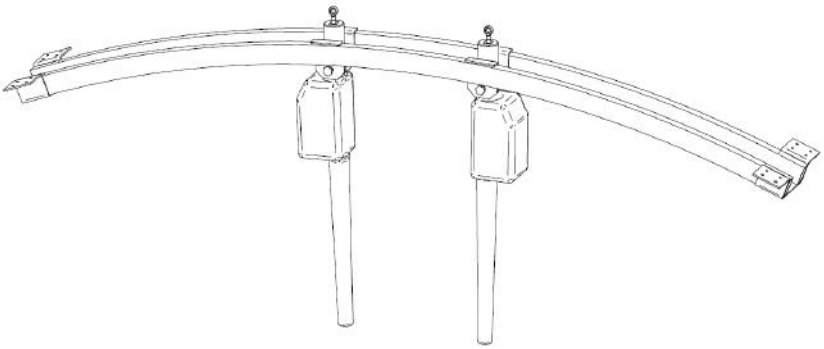
Double-leaf smoke vent



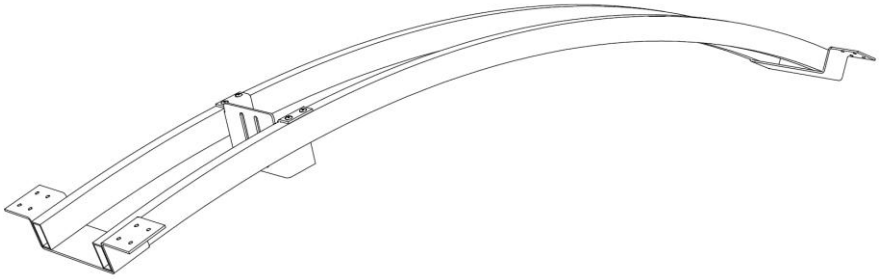
Opening mechanism of
double-leaf smoke vent



Opening mechanism of
single-leaf smoke vent



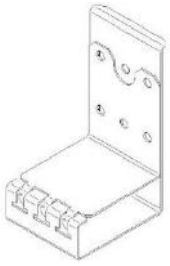
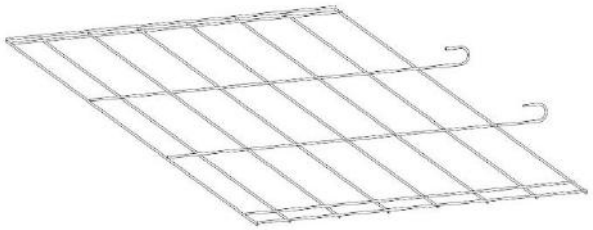
Control system for natural ventilation vent
with type E actuators from K+G
(shown is a double-leaf system)



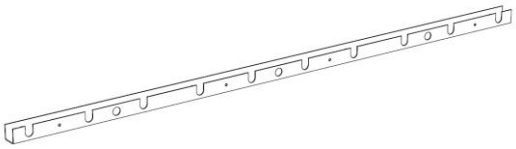
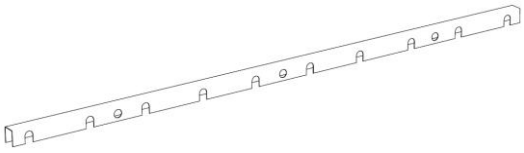
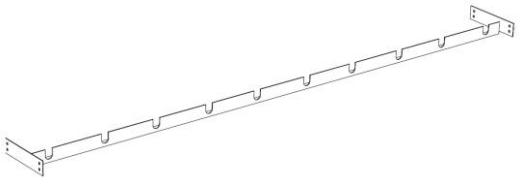
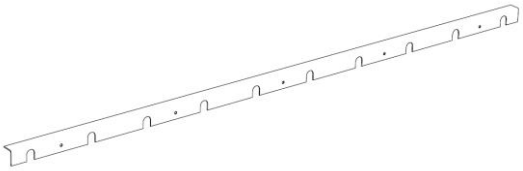
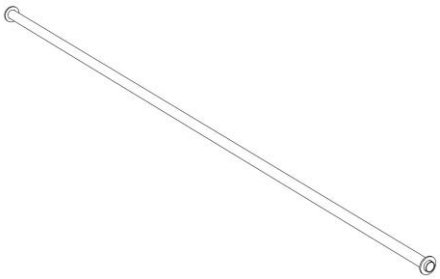
Control system for natural ventilation
vent suitable for JMBx actuators from Jofo
(shown is a single-leaf system)

Protective elements

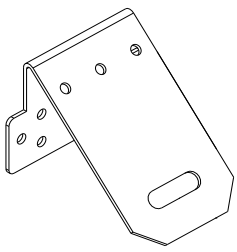
a. Safety net resistant to 1200J impact

	
Safety net bracket	Safety net

b. Pipe-type anti-burglar grid

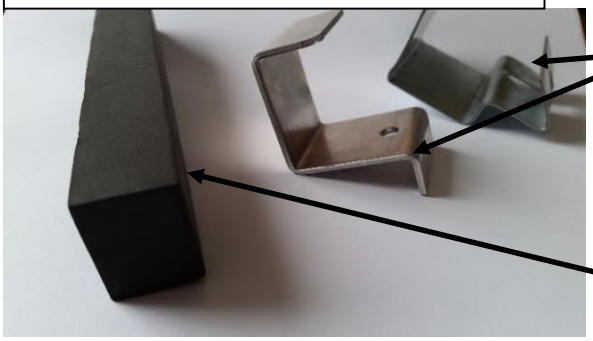
	
Grid supporting profile	Cover for grid supporting profile
	
Grid stiffening profile	Cover for grid stiffening
	
Grid pipe	

c. PAS anchor point


MCR-PP-PAS-1.1 personal anchor point

Components of sandwich panels

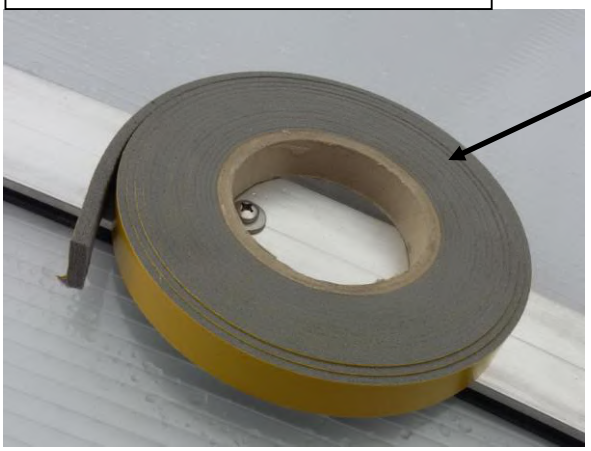
Auxiliary components for vent supporting frame



Two types of brackets
(so-called C-shaped spacers)
mounted on the vent support frame.
An appropriate bracket should be chosen
to suit the bearing profile.

PE (polyethylene foam) strips fitted
in the C-shaped spacers.

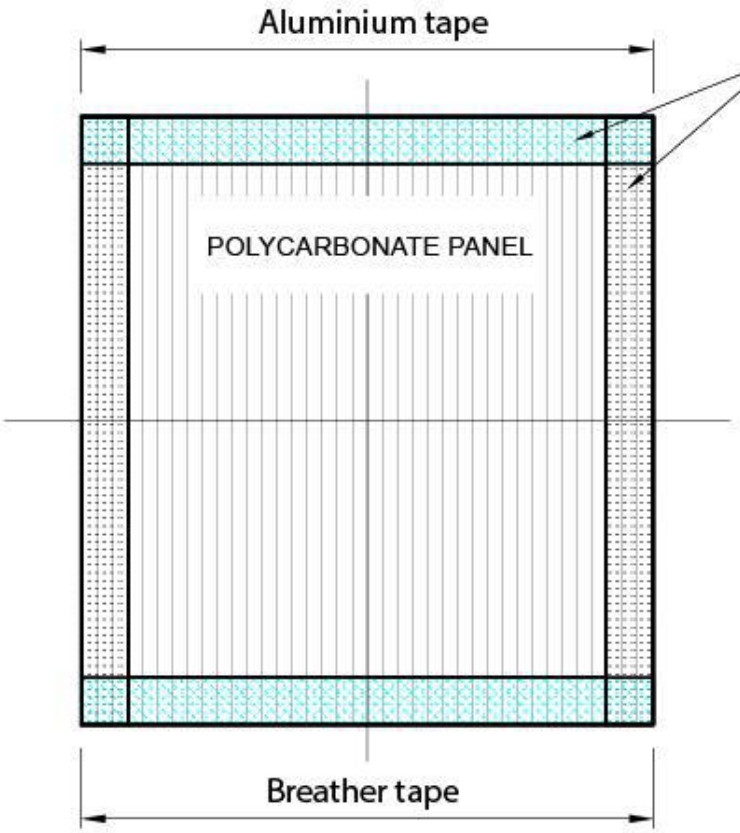
Additional insulation



Expanding sealant tape supplied in a roll, for the N60 profile use the seal 25/25 (6.6 m/roll), for the N80 profile, the seal 15/40 (4.3 m/roll).

Expanding sealant tape after application expands vertically from the initial height of 4÷8 mm to 25 mm - for N60 profiles and from 7÷12 mm to 40 mm for N80 profiles. The time of expansion depends, to a large extent, on the ambient conditions. At high temperatures less time is needed.

PCA panels with separators



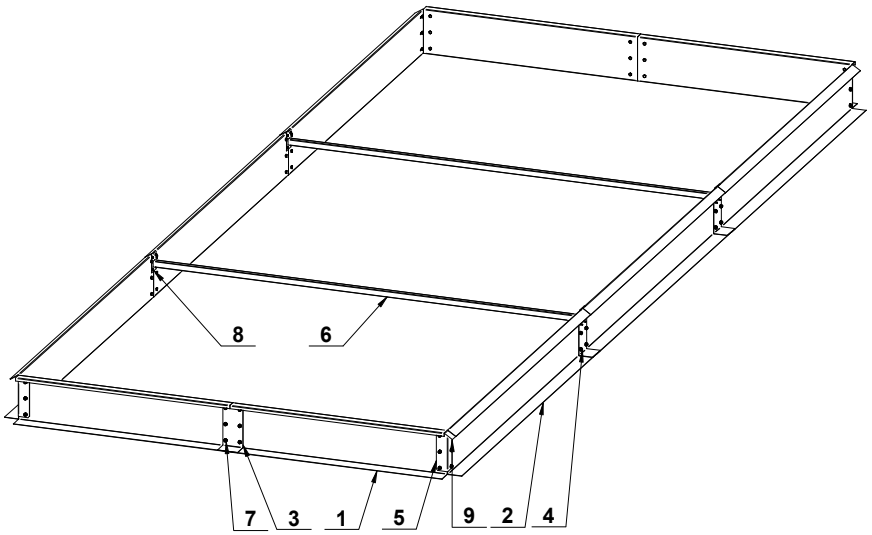
Polycarbonate panels with adhered separators – this applies only to certain configurations with sandwich panels.

Masking gasket for tympanum panel

The masking gasket is pressed under the pressing profile in the SIM gasket groove. The tail of the gasket extends to the vertical surface of the tympanum wall of the rooflight.

II. Installation of the rooflight base

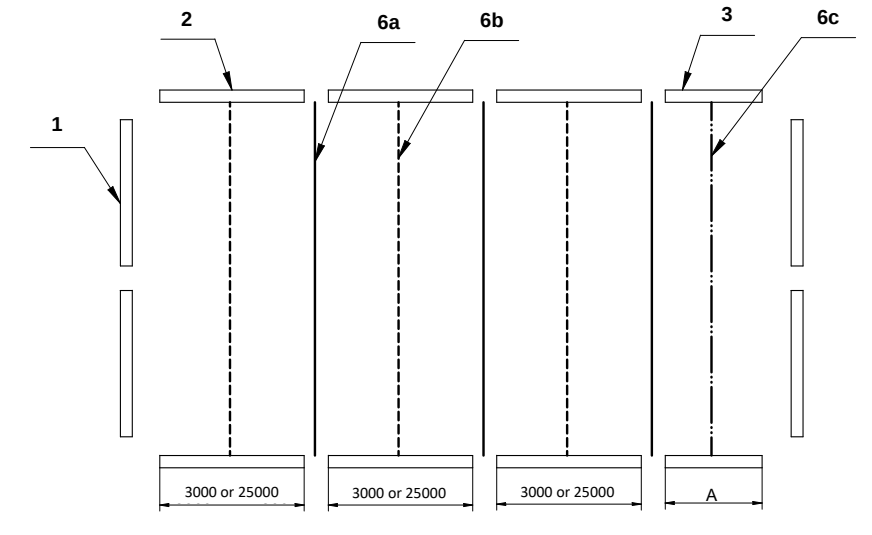
The rooflight base is supplied in pieces.



1. Tympanum wall base,
2. Longitudinal base,
3. Tympanum connector,
4. Longitudinal base connector,
5. Corner connector,
6. Bracing of the base,
7. Fasteners (M10x20 bolts, washer, M10 nylon lock nut), Fasteners (for spans up to 4 m): - self-drilling screws, Ø 6.3x22 mm and Ø 6.3x22 mm (self-supporting base) – 4 pcs per side per bracing, for spans in excess of 4m – self-drilling screws Ø 6.3x22 mm, Ø 6.3x25 mm (self-supporting base) – 6 pcs per side per bracing.

Figure 1 *Rooflight base components*

1. Check the size of the clear opening prepared for rooflight installation.
2. Lay out the base components according to the following drawings.



1. Tympanumbase,
2. Longitudinal base,
3. Longitudinal base – end module (A = to suit the rooflight length),

6a. Bracing to be placed at contact line between two base pieces (if PCA 10 or 16 mm),
6b. Additional bracing (if PCA 20 or 25 mm or skylight width >=5.5 m),
6c. Additional bracing (if A>1.5 m).

Figure 2 *Arrangement of the base components (when the rooflight is built on the roof slope or along the roof ridge)*

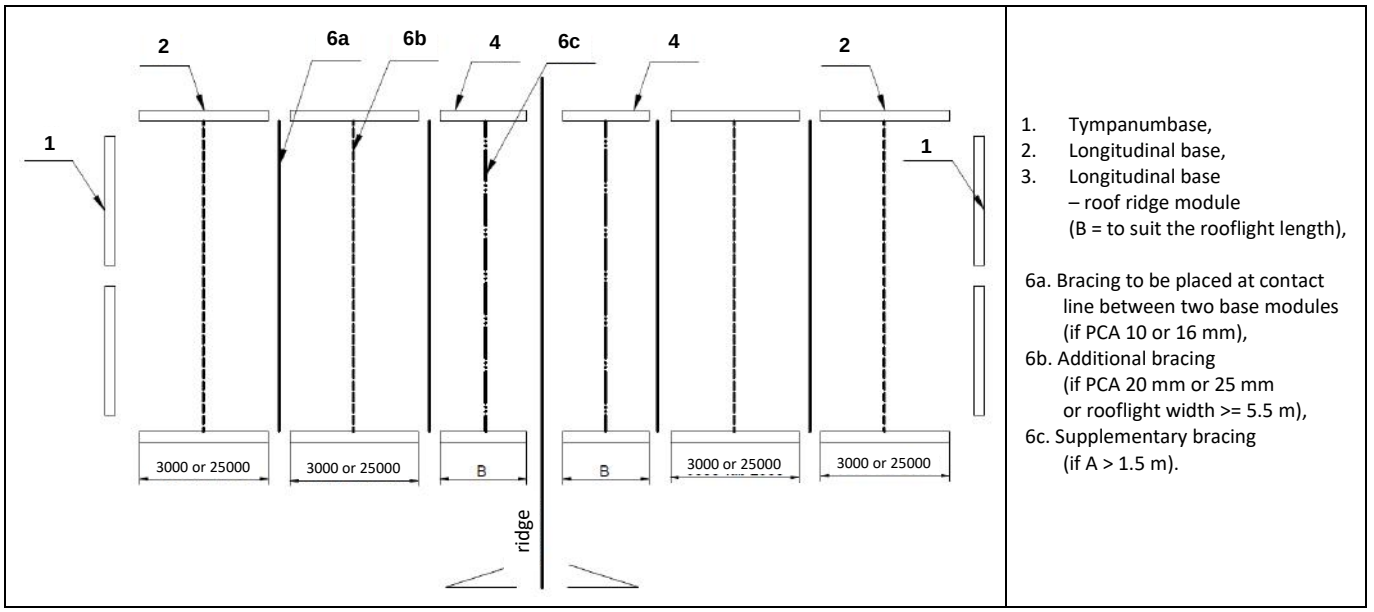


Figure 3 *Arrangement of the base components (when the rooflight is built across the roof ridge)*

3. The rooflight base should be mounted on the prepared roof curb/ framework/ trimmers using fasteners adequate to the frame/ curb material. Adequate fasteners include: Ø 5.5 mm or Ø 6.3 mm self-drilling screws, Ø 6 mm wood or metal screws/ bolts, Ø 8 mm expansion plugs. The intervals between adjacent fasteners should not exceed 50-60 cm.
4. The adjacent base components should be connected with connectors (3 or 4) and M10x20 bolts with a washer and nut. In self-supporting rooflights, the number of connectors is doubled, and they are arranged in two rows.
5. The tympanum bases should be placed with the edges parallel to each other on an even, horizontal surface. Next, connect them together using an adequate end base connector and M10 fastening kit. Now attach/ connect the vertical end panel base, prepared/ assembled as described above, to/with the longitudinal base piece.

Attention! If the elements of the base are not installed exactly in parallel, there is a risk that the tympanum end cannot be installed properly.

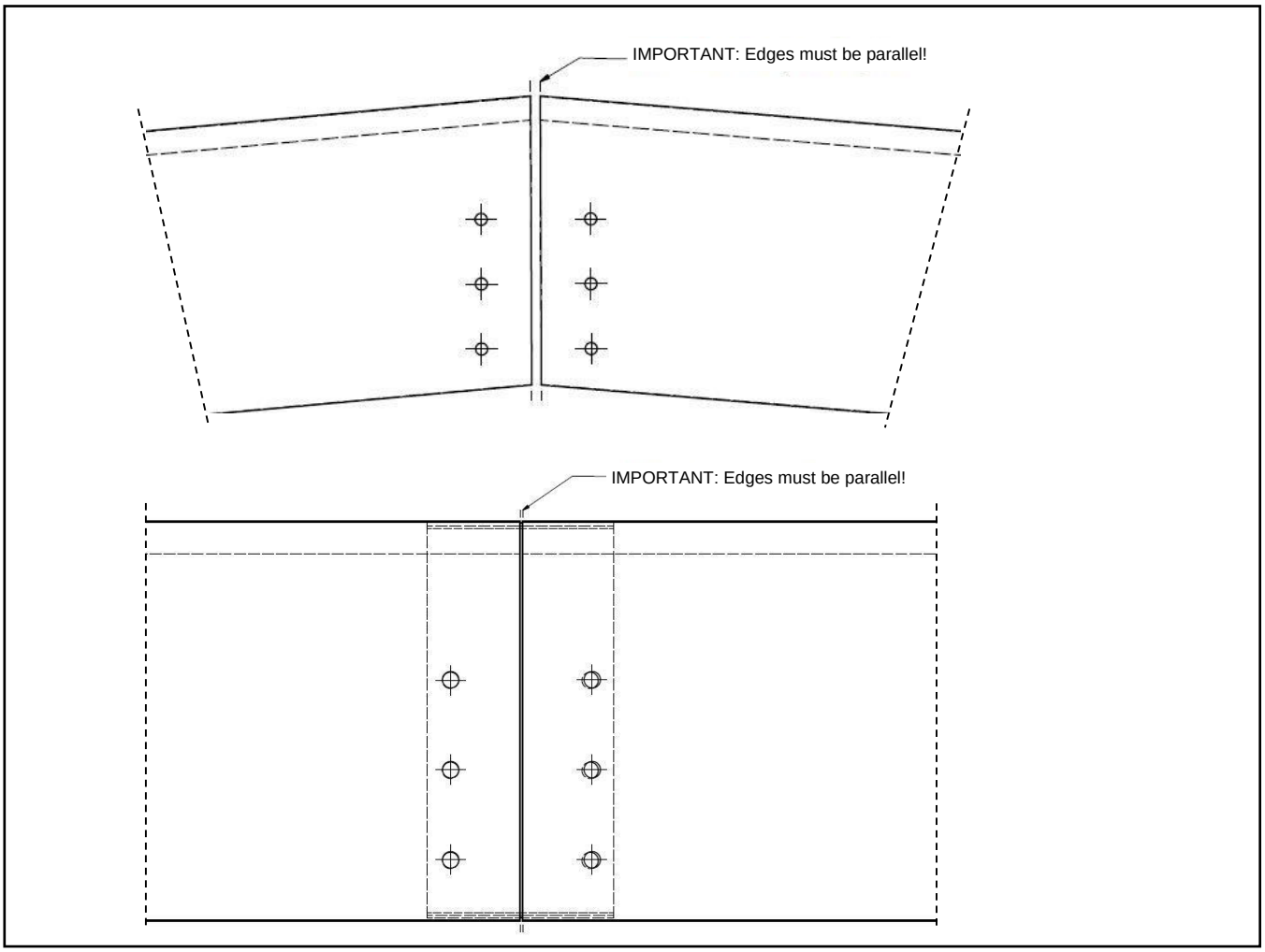
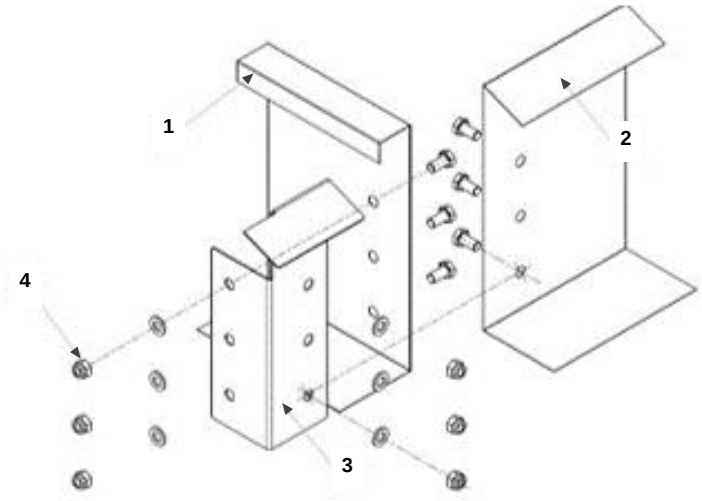


Figure 4 *Assembly of the end panel base*

6. Verify clear the opening dimensions of the rooflight base.
7. Mount the corner connectors at the joint between the longitudinal base and the tympanum base.

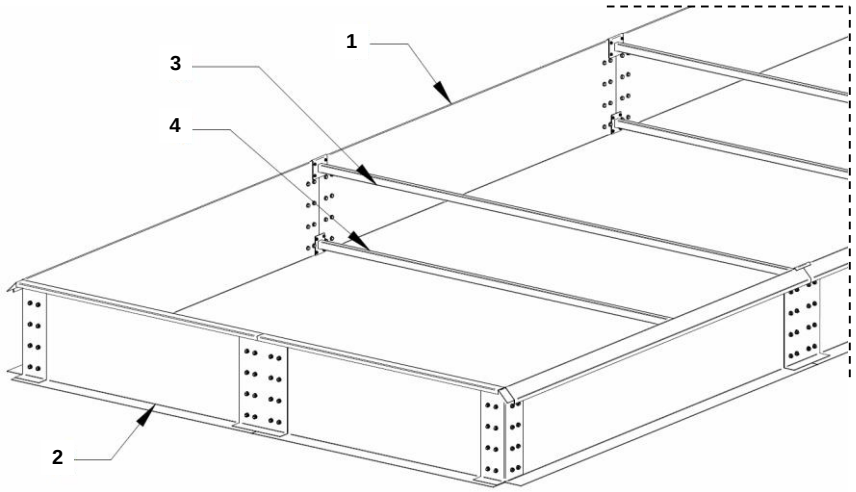


1. Tympanum base piece,
2. Longitudinal base piece,
3. Corner connector,
4. Fasteners (M10x20 bolt, washer, nut).

Figure 5 *Connection of the tympanum base with the longitudinal base pieces (corner)*

8. Install bracings at the contact line between two base modules using the following fasteners:
   - for spans up to 4 m, use fasteners Ø 6.3x19 mm, Ø 6.3x22 mm, and use 4 pcs per side per bracing,
   - for spans over 4 m, use fasteners Ø 6.3x22 mm, Ø 6.3x25 mm, and use 6 pcs per side per bracing.

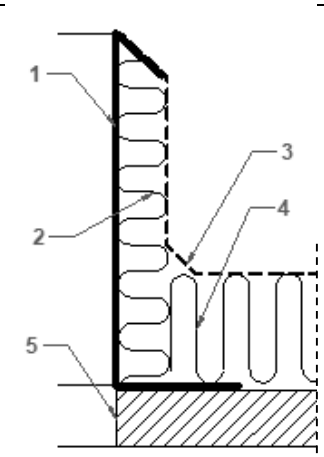
Additional bracing should be installed at the middle of the base module length. Additional braces are used for rooflights with 20 mm and 25 mm thick PCA sheets and any rooflight >= 5.5 m wide.
The connectors should be the same as for the bracings.
Supplementary bracings should accompany the additional bracings if the ridge modules or end modules are longer than 1.5 m. The connectors should be the same as for bracings.
For self-supporting bases, bottom bracings should be used at contact lines between base modules.



1. Longitudinal base module,
2. Tympanum base module,
3. Upper bracing,
4. Lower bracing.

Figure 6 Example of bracing installation in the self-supporting rooflight base

9. Once the base has been assembled, thermal insulation and waterproofing barrier can be installed. The roof design documentation must be taken into account. Most often, thermal insulation and waterproofing barriers are installed by the company responsible for the installation and insulation of the roof structure.

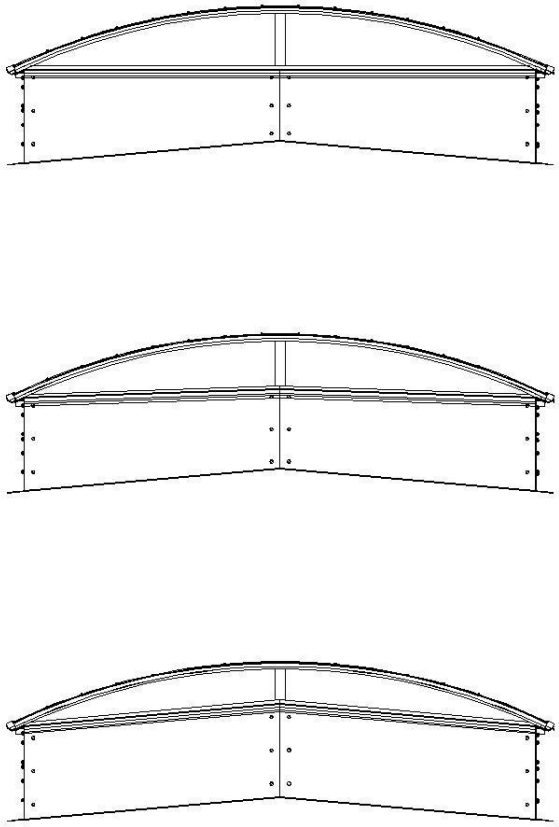


1. Rooflight base,
2. Thermal insulation of the rooflight base,
3. Roof waterproofing system,
4. Thermal insulation of the roof,
5. Roof structure.

Figure 7 Typical thermal insulation and waterproofing method

Important! In the course of works, the waterproofing barrier may be overlain several times at the base corners. During waterproofing work verify that the difference in level on the top of the uppermost layer between the base corners and the centre of the end panel base does not exceed 10 mm.
(See: Figure 25 Installation of edge profiles according to the attachment to the installation manual)
Do not install the top section of the rooflight if the difference in level exceeds 10 mm.

10. After the base has been insulated and waterproofed, you can proceed to further assembly of the continuous rooflight.



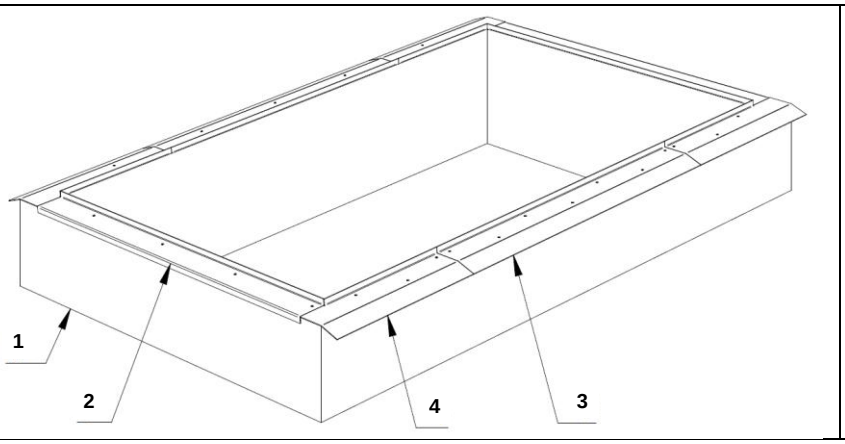
a/ the bottom line of the tympanum wall is horizontal

b/ different angles of the tympanum wall bottom and the roof ridge

c/ the same angles of the tympanum wall bottom and the roof ridge

Figure 8 Shapes of the tympanum wall of the roof ridge rooflight

III. Installation of an overlay base



1. Plinth,
2. Tympanum wall piece,
3. Longitudinal side of the overlay base,
4. Longitudinal side of the overlay base – end piece.

Figure 9 Arrangement of the overlay base on the on-site roof plinth

1. Roof structure and plinth,
2. Thermal insulation,
3. Waterproofing barrier,
4. Overlay base,
5. Expansion plug,
6. Washer,
7. Hexagonal head screw.

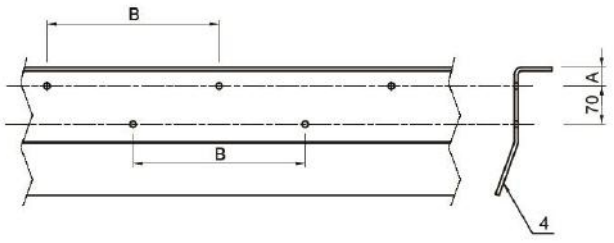


Figure 10 View of overlay base showing spacing of fasteners

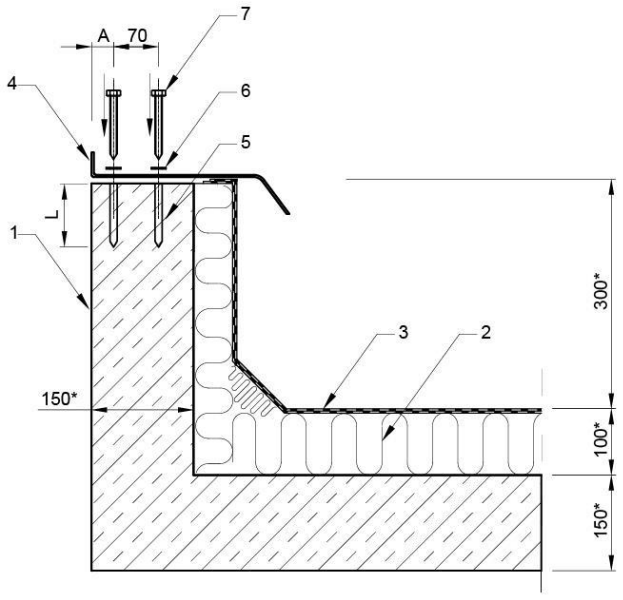


Figure 11 Cross-section of overlay base mounted on concrete plinth

1. Check the clear size of the opening prepared for rooflight installation.
2. Lay out the overlay base components on the plinth sides according to (Figure 9 Arrangement of the overlay base on the on-site roof plinth). Apply PES 40x3 or PES 20x5 tape on the curb.
3. The rooflight base should be mounted on the prepared roof plinth using fasteners appropriate to the plinth material/ structure. (Table 1 Diameters of screws, lengths of expansion plugs and their distances depend on the material of base).
4. Place the fasteners on the base sides as per the prepared diagram. In the absence of such a diagram, place the fasteners at an equal distance in the range of 500 ÷ 600 mm (Figure 10 View of overlay base showing spacing of fasteners).

5. Place the fasteners in two rows as shown in mm (Figure 11 Cross-section of overlay base mounted on concrete plinth).In the case of narrow plinths it is allowed to place the fasteners in one row. Then the intervals between fasteners must be reduced to 300 ÷ 400 mm.
6. Always place washers under the screw heads.

Note! Fasteners are not part of the rooflight kit.

Table 1 Diameters of screws, lengths of expansion plugs and their distances depend on the material of base

Base material	Characteristic dimension			
	Min. screw diameter	L	A	B
	[mm]			
Concrete	6	>80	>40	500 - 600
Wood	6	>60	>20	
Steel	5.5	~15	>15	

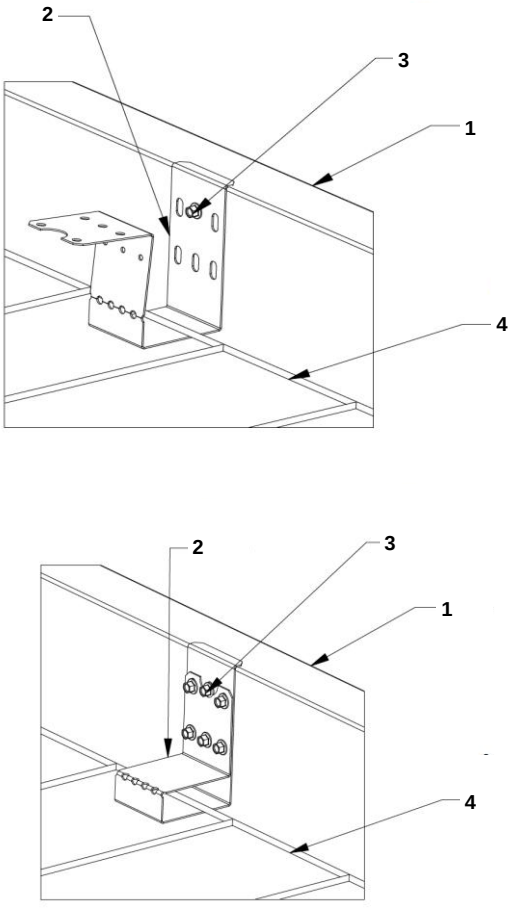
IV. Installation of a safety nets / an anti-burglar grids

Rooflights of up to 3.6 m in width can be equipped with safety nets protecting from fall the of a large soft body, while security bars can be installed in rooflights up to 6 m wide. Depending on the planned protection system, the safety nets and bars can be installed solely under the vents or under the entire top section of the rooflight. Safety nets and bars can be installed only in continuous rooflights with an upright base made of sheet metal with min. 2 mm thickness.

A. Installation of a safety net

1. The safety net can be installed once the base has been installed.

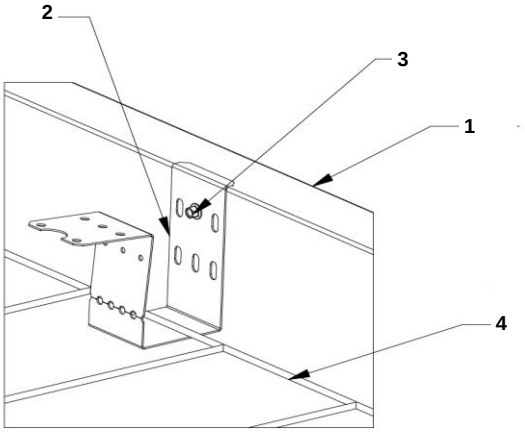
   Fix the brackets at their lower part to the base with a 1 screw first and place the mesh on them: (Figure 13 Method of mounting the safety net brackets on the base).

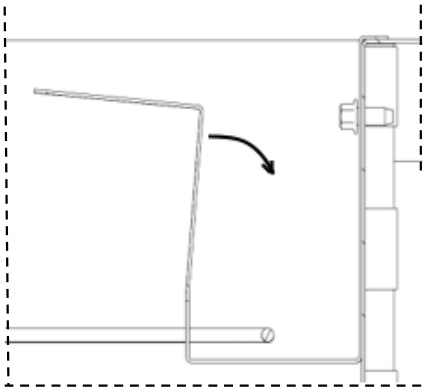


1. Rooflight base or plinth,
2. Safety net bracket,
3. Self-drilling screw Ø 6.3x22 mm,
4. Safety net.

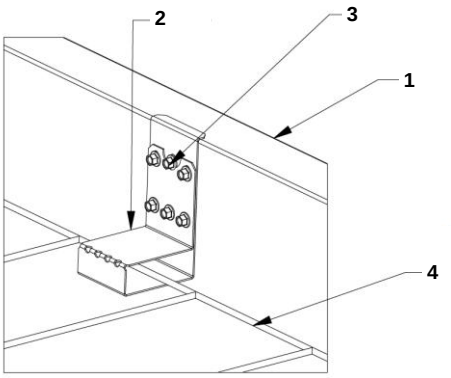
Figure 12 Method of mounting the safety net brackets on the base

The brackets should be spaced at the intervals defined in (Figure 14 Installation of the safety net under the vent (the opening mechanism does not reach to the top edge of the rooflight base))Figure 14 Installation of the safety net under the vent (the opening mechanism does not reach to the top edge of the rooflight base). Then bend and screw the upper parts of the brackets. For fixing brackets to the vertical wall of the base, use Ø 6.3x22 mm self-drilling screws (6 pcs per one bracket: 1 pcs for the lower part and 5 pcs. for the upper part).





Bend the console according to the direction of the arrow



1. Rooflight base or plinth,
2. Safety net bracket,
3. Self-drilling screw Ø 6.3x22 mm,
4. Safety net.

Figure 13 Method of mounting the safety net brackets on the base

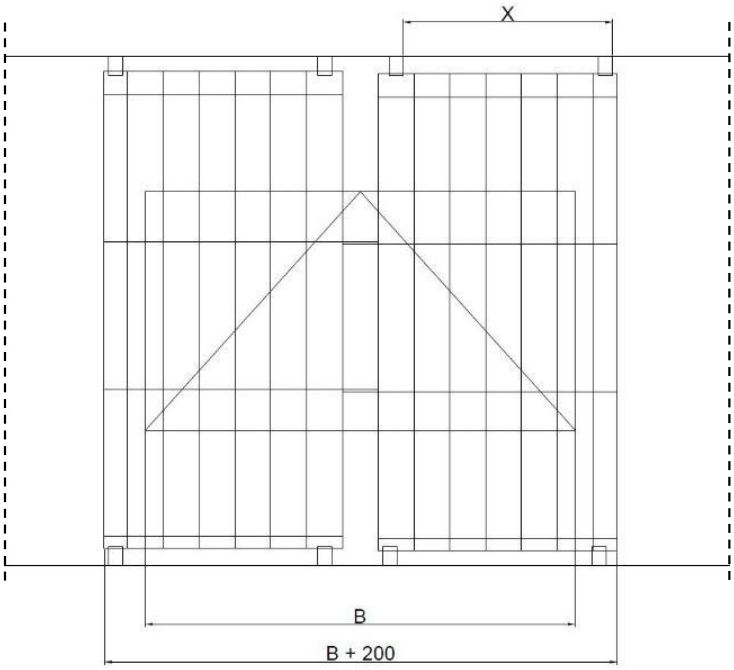


Figure 14 Installation of the safety net under the vent (the opening mechanism does not reach to the top edge of the rooflight base)

X – spacing of mounting brackets = 880 mm (+/- 50 mm)
B – length of smoke vent

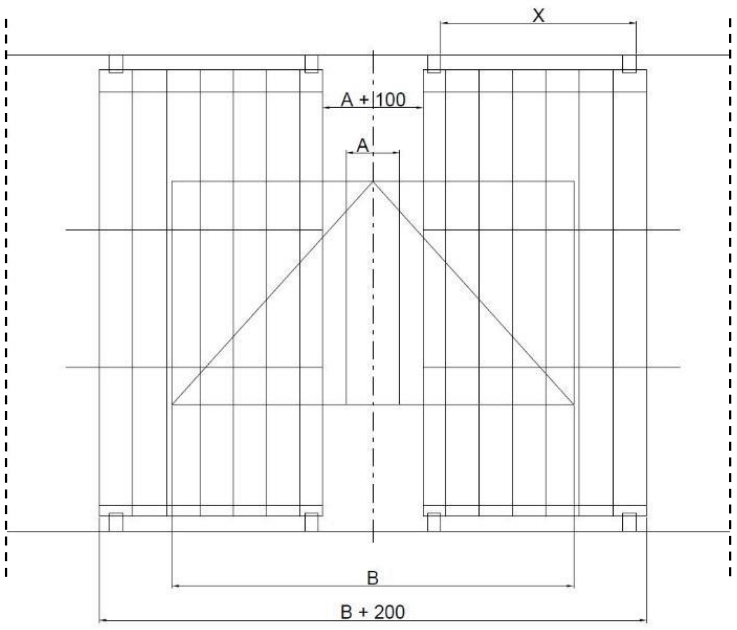
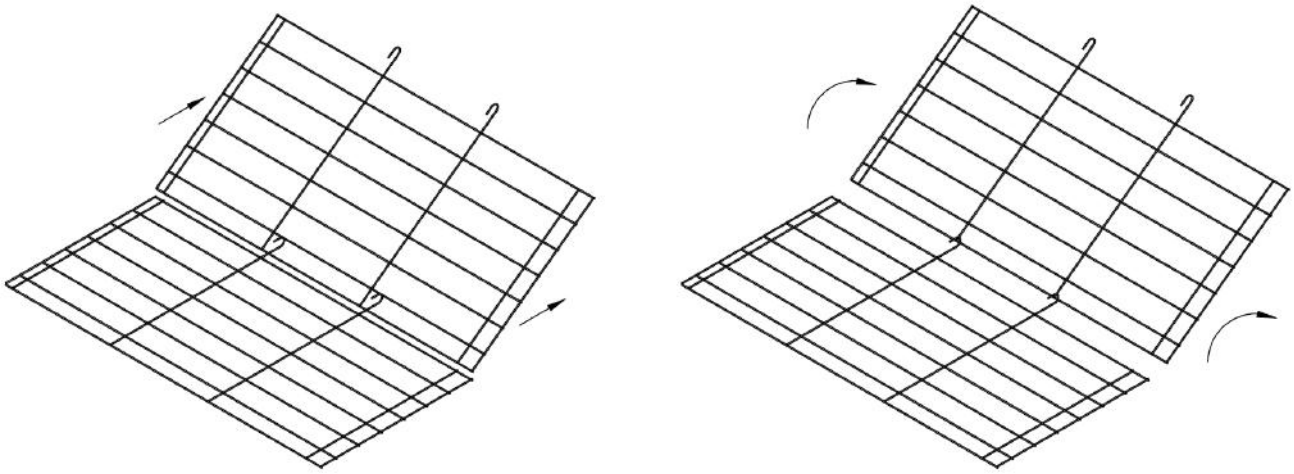


Figure 15 Installation of the safety net under the vent (the opening mechanism reaches below the top edge of the rooflight base)

X – spacing of mounting brackets = 880 mm (+/- 50 mm)
B – length of smoke vent

If the safety net is to be fitted under the entire rooflight, verify the positions of the brackets securing every third net. The meshes should be connected to each other by hooking up the next mesh on the hooks of the previously installed section (Figure 16 Safety net installed under the entire rooflight). It is allowed to cut the mesh to size (as long as the obtained section is at least 400 mm wide) or to overlap the adjacent sections.

a/



b/

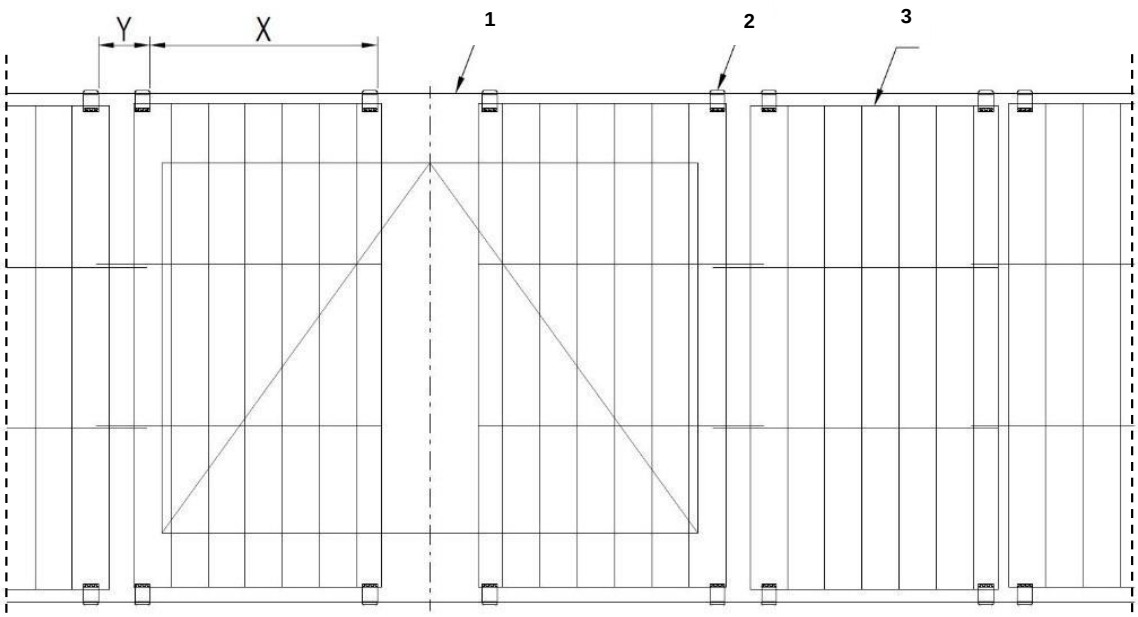


Figure 16 Safety net installed under the entire rooflight

1. Rooflight base,
2. Safety net bracket,
3. Safety net.

X – spacing of mounting brackets in a single screen = 875 mm (+/- 25 mm)
Y – spacing between mounting brackets of adjacent screens = 275 mm (+/- 15 mm)

B. Installation of the anti-burglar grid

The anti-burglar grid can be installed once the base has been installed.

1. At the contact lines of the longitudinal base modules, install lower bracing made of 40x40x2 galvanised rectangular steel profile, fixed with Ø 6.3x25 mm long self-drilling screws. The bottom face of the brace should be flush with the bottom ledge of the longitudinal base piece.

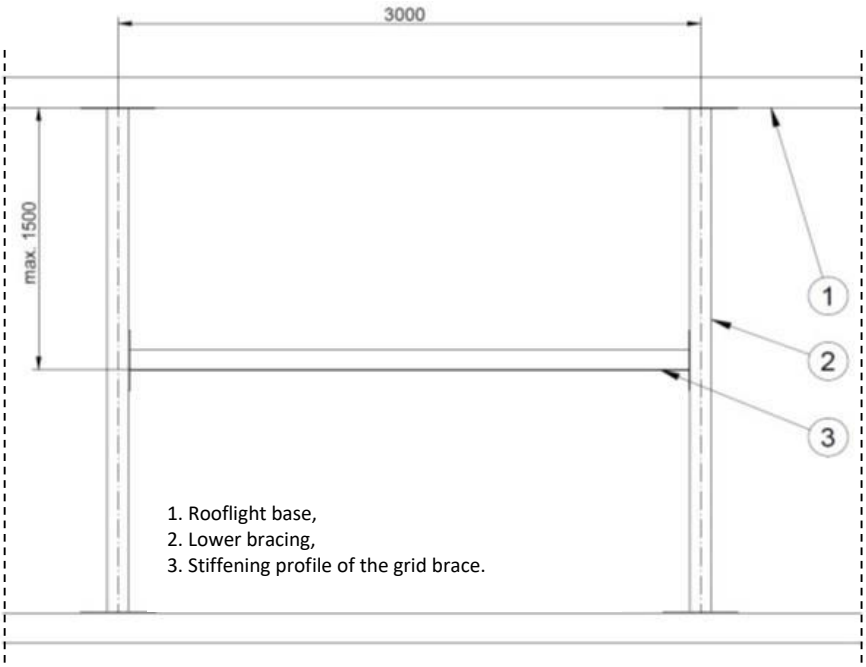
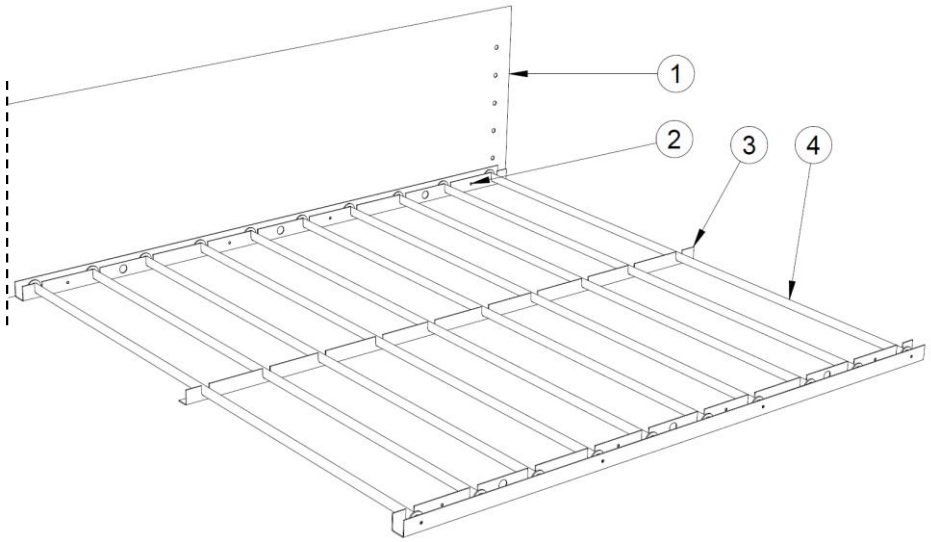


Figure 17 Installation of the base and grid braces

2. The grid stiffening profile should be installed between each lower bracings and between the lower bracing and the tympanum base. For securing the braces use Ø 6.3x25 mm long self-drilling screws. The number of grid stiffening profiles depends on the rooflight width. The spacing between grid stiffening profiles should not exceed 1.5 m.

3. At the walls of the longitudinal base, install the grid supporting profiles using Ø 6.3x25 mm self-drilling screws. The bottom faces of the grid supporting profiles should be flush with the bottom ledge of the longitudinal base section. Make sure that the slots in the grid bearing profile are aligned with the slots in the grid stiffening profiles.

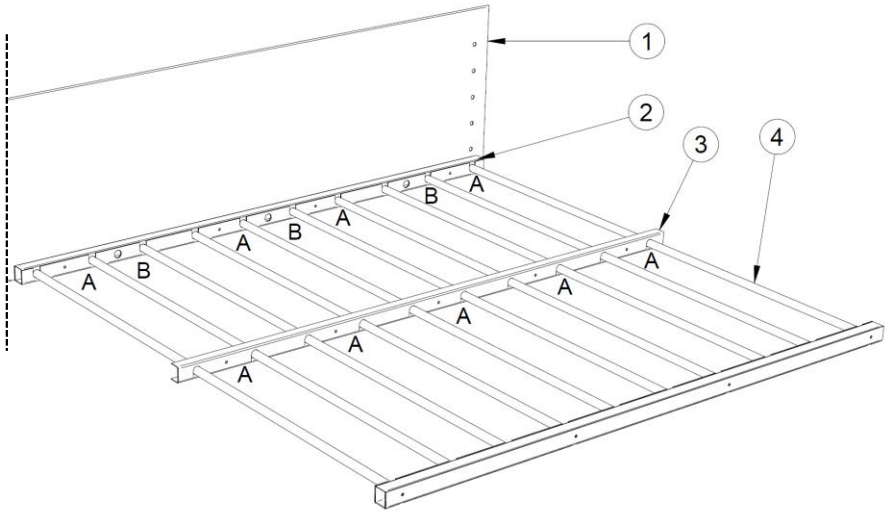
4. Insert steel pipes on the supporting profiles and grid stiffening profiles.



1. Rooflight base,
2. Grid supporting profile,
3. Grid stiffening,
4. Steel pipes.

Figure 18 Arrangement of anti-burglary grid pipes

5. Put on the covers and screw them to the grid supporting profile (B) and to the base (Figure 19) through the supporting profile at positions defined by the holes (A) using Ø 6.3x25 mm self-drilling screws (Figure 19).
6. Put on the cover of the grid stiffening profile and screw it using self-drilling screws Ø 6.3x25 mm.



1. Rooflight base,
2. Cover of grid supporting profile,
3. Cover of grid stiffening profile,
4. Steel pipes.

Figure 19 Arrangement of cover profiles

C. Installation of PAS anchorage points

Personal anchor points type MCR-PP-PAS-1.1 can be installed only in mcr PROLIGHT continuous rooflights manufactured by Mercor S.A. The anchor points MCR-PP-PAS-1.1 are attached to the rooflight base after the installation of thermal insulation made of heat-weldable roofing felt or PVC membrane. The number and layout of anchorage points should be agreed upon by the building architect. The anchorage points should be fixed to the rooflight base with Ø 6.3x32 mm self-drilling screws (according to DIN 7504-K) using a power screwdriver with adjustable screwing torque.

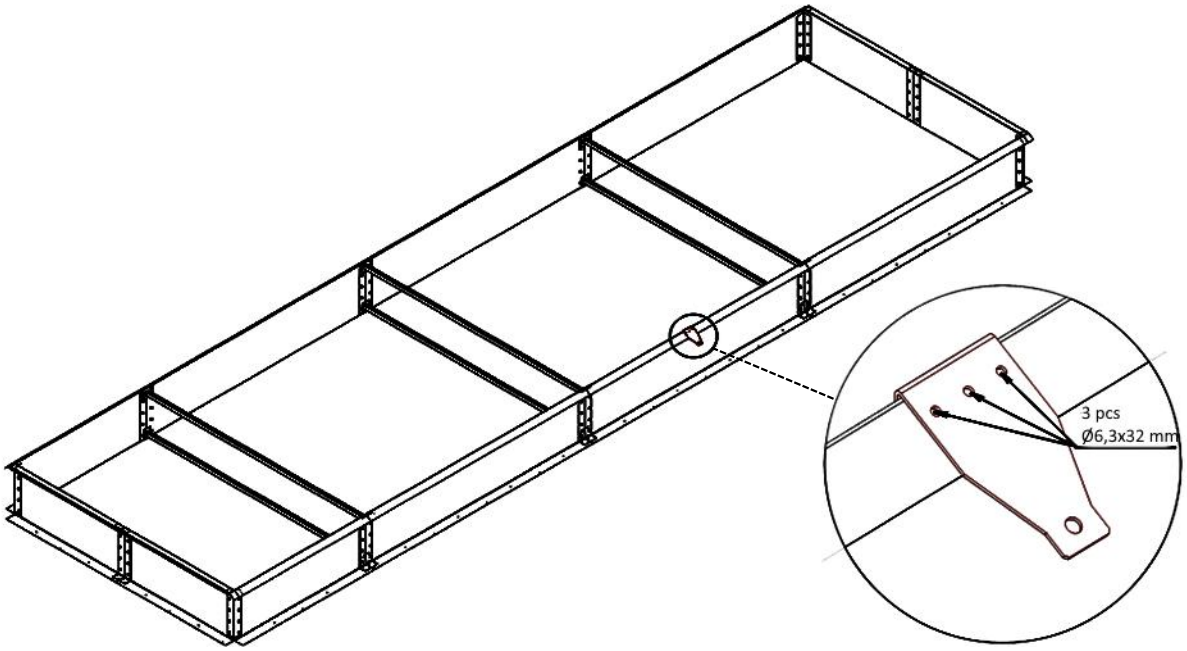


Figure 20 *Details of the PAS anchorage point installation – viewed from outside the rooflight*

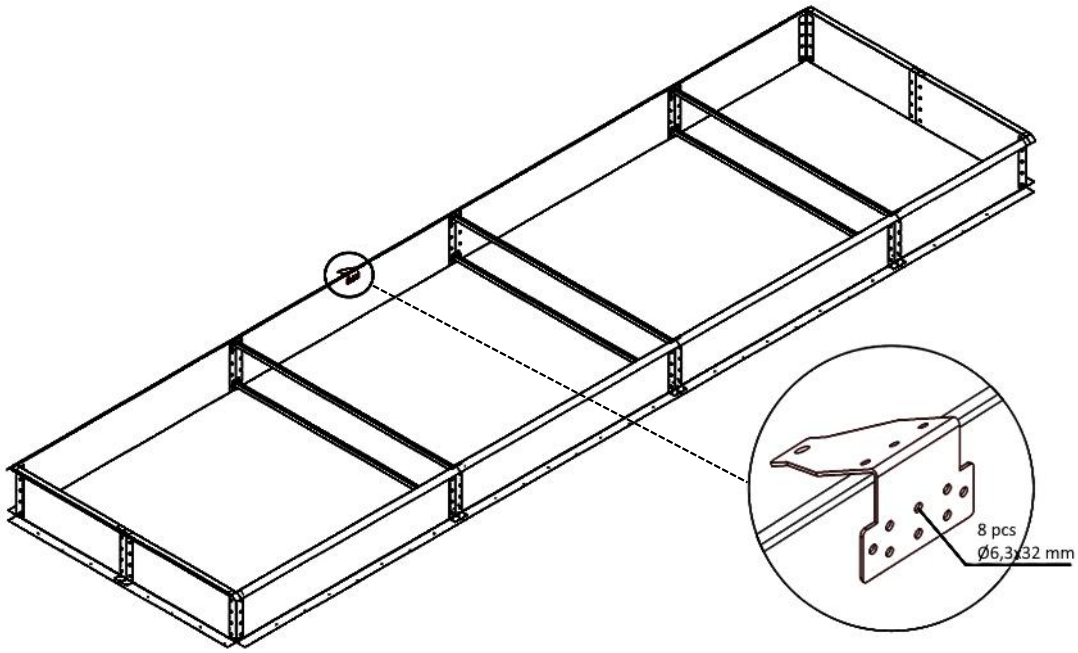


Figure 21 *Detail of the PAS anchorage point installation – viewed from inside the rooflight*

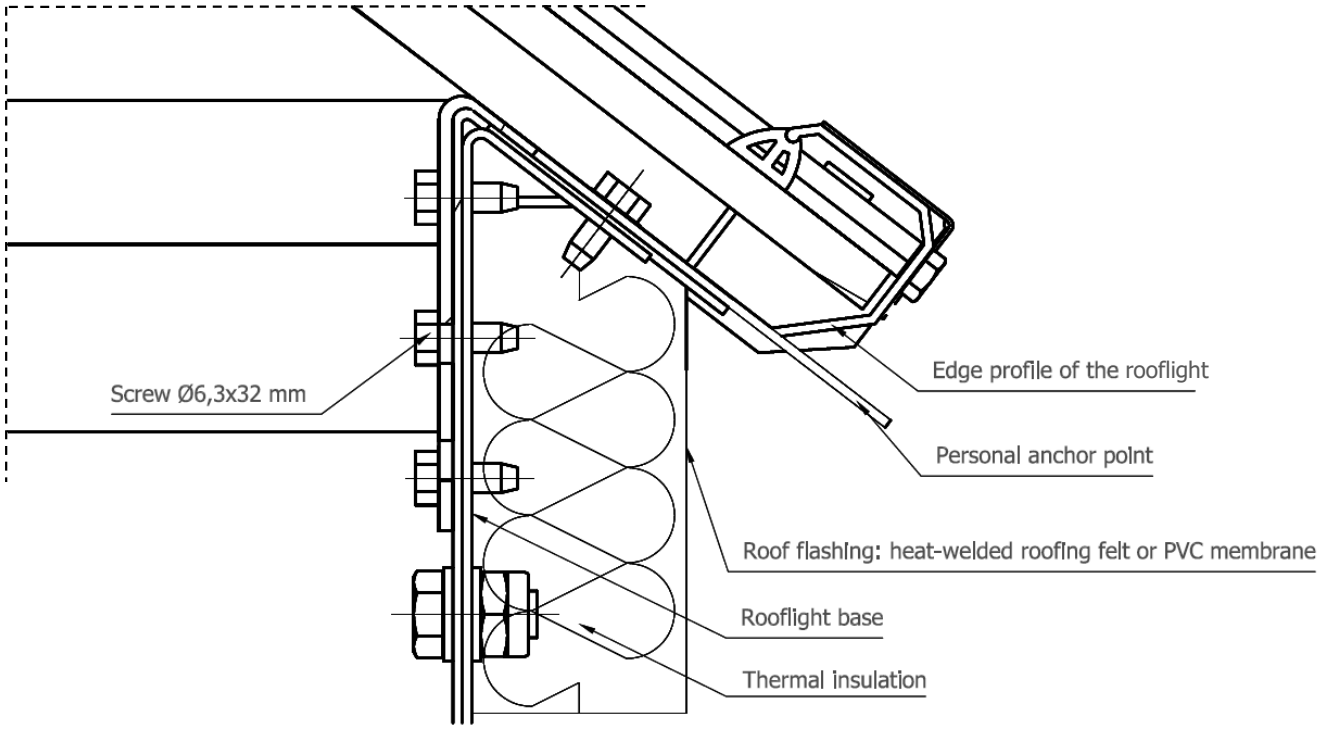


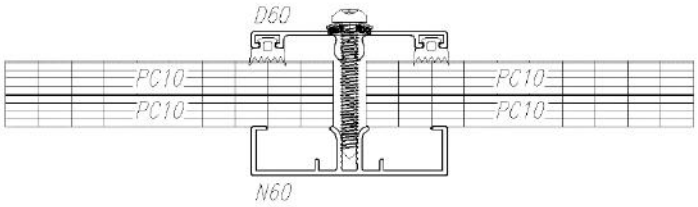
Figure 22 Cross-section through the rooflight with attached PAS anchorage point

The anchorage point can be unscrewed and reinstalled only at a place that is not damaged by self-drilling screws, spaced from the previous installation position by at least 150 mm, using new self-drilling screws.

Important! If welding of roofing membrane or other materials is planned after installing the anchorage points of type MCR-PP-PAS-1.1 on the rooflight bases, it is ABSOLUTELY necessary to use shields protecting the anchorage points against the effects of fire/ hot air.

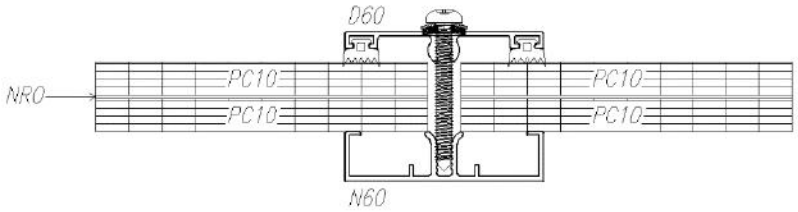
V. Double glazings – possible configurations and installation sequence

1. **Twin polycarbonate panel:**



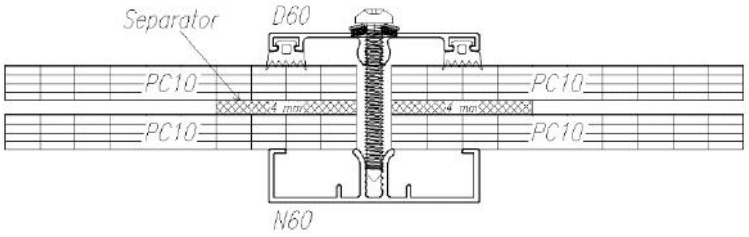
Options of this configuration: items 1, 2, 3, 4 in Table 2 on page 29.

2. **Polycarbonate panel + NRO (Broof(t1)) panel + polycarbonate panel:**



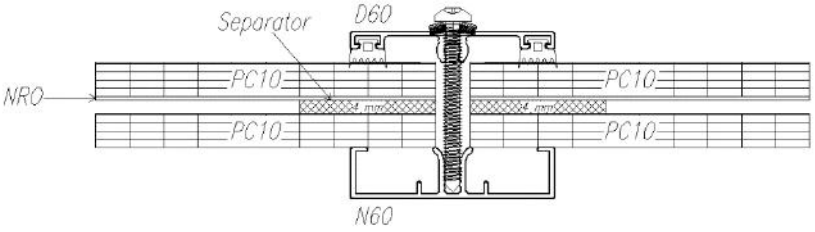
Options of this configuration: item 4 in Table 2 on page 29.

3. **Polycarbonate panel + air gap + polycarbonate panel:**



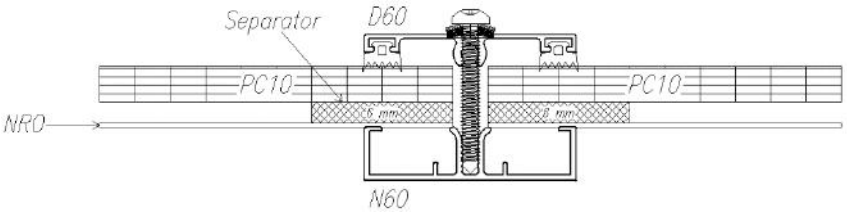
Options of this configuration: items 6, 7, 8, 9 in Table 3 on page 31.

4. **Polycarbonate panel + air gap + NRO (Broof (t1)) panel + polycarbonate panel:**



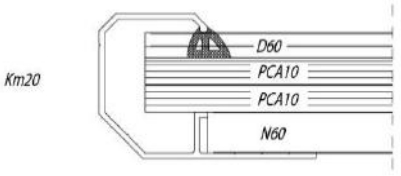
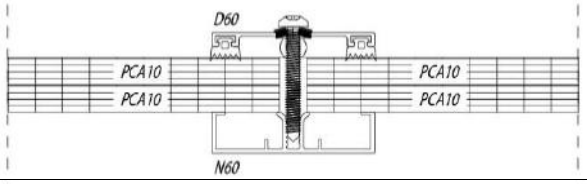
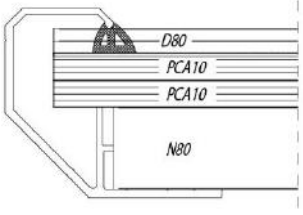
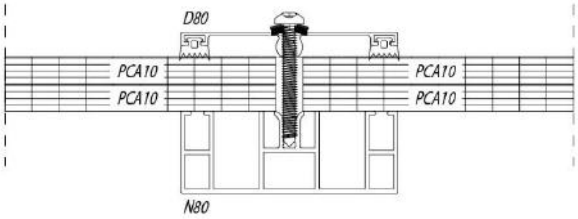
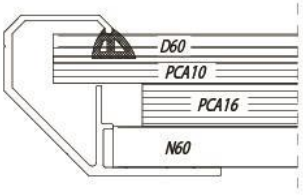
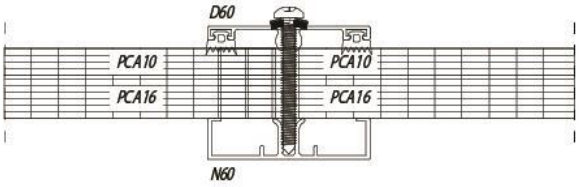
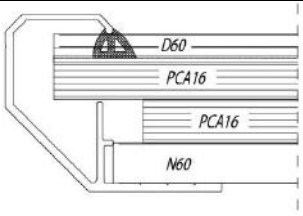
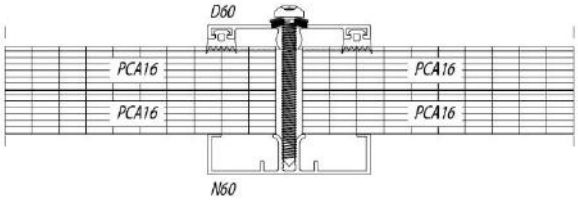
Options of this configuration: items 10, 11, 12 in Table 3 on page 31.

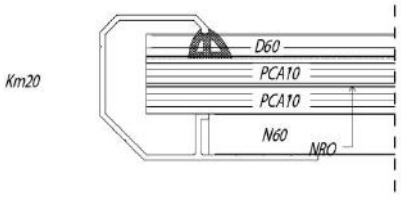
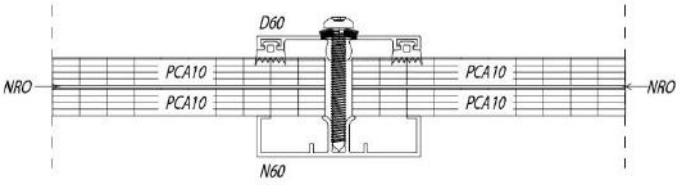
5. **NRO (Broof (t1)) panel + air gap + polycarbonate panel:**



Options of this configuration: items 13, 14, 15, 16, Table 4 on page 34

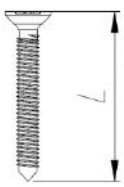
The panels should be installed in favourable weather conditions, without rain or snow. The panels must be dry and clean. The polycarbonate panels should be placed with the UV resistant side facing up.
The sequence of laying the respective pane layers should be as shown in the drawing concerning the particular configuration option – see the drawings in the Tables below. For securing the pressing profiles, use the screws of the length appropriate to the specific configuration option and the type of bearing/ pressing profile used – see the attached table.

	Double polycarbonate panel		
	option	Section throught edge profile	Cross-section throught support and pressure profile
1	PC10 + PC10		
2	PC10 + PC10		
3	PC16 + PC10		
4	PC16 + PC16		

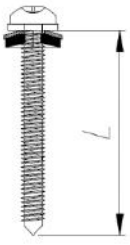
	Polycarbonate panel + NRO (Broof(t1)) panel + polycarbonate panel		
	option	Section throught edge profile	Cross-section throught support and pressure profile
5	PC10 + NRO + PC10		

NOTE: The PC panel to be mounted on top is longer than the bottom panel

L - length of taper screws



L - length of cylindrical screws



Important! The correct tightening torque for the screws holding the pressure profiles is 3-5 Nm!

Table 2 Selection of screw length depending on the glazing option and fixing position

	Glazing PCA10 + PCA10 N60/D60	Screw length
1	**countersunk head**	42
	countersunk head - set back 50 mm from the brace 1200 J	42
	vent fastener	45
	vent fastener - set back 50 mm from the brace 1200 J	45
	top section fastener N60	42
	top section fastener N60 - set back 50 mm from the brace 1200 J	45

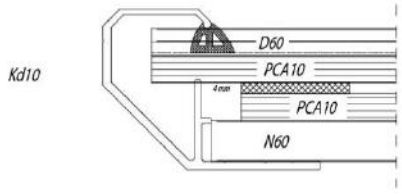
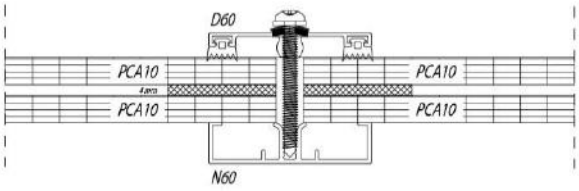
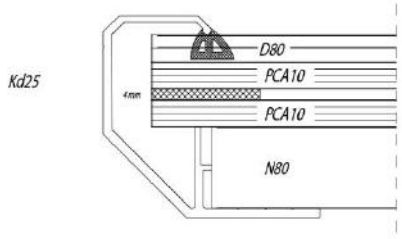
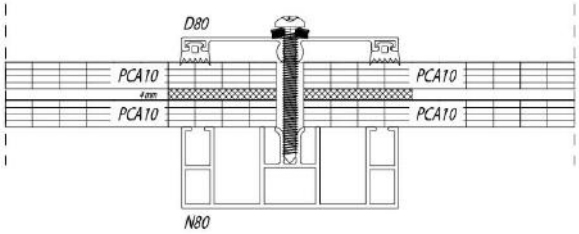
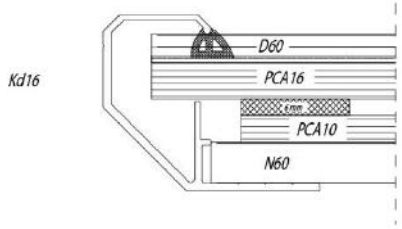
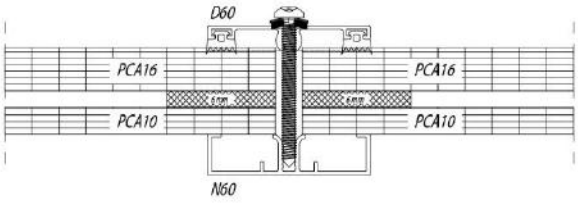
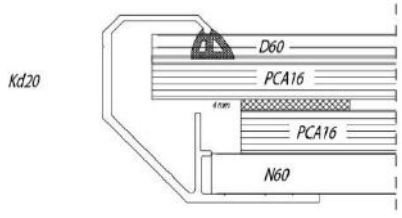
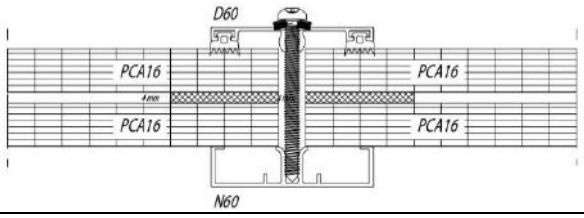
	Glazing PCA10 + PCA10 N80/D80	Screw length
2	**countersunk head**	38
	countersunk head - set back 50 mm from the brace 1200 J	38
	vent fastener	45
	vent fastener - set back 50 mm from the brace 1200 J	45
	top section fastener N80	42
	top section fastener N80 - set back 50 mm from the brace 1200 J	42
	tympanum panel N80, adjustments (if required)	45

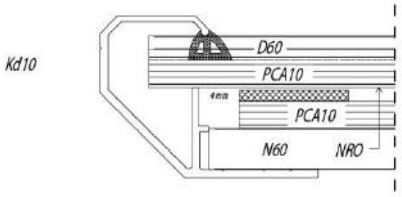
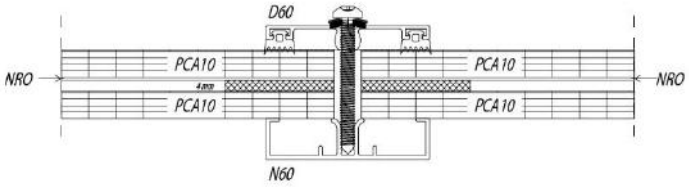
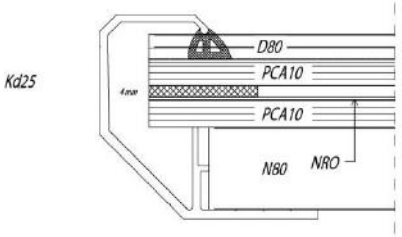
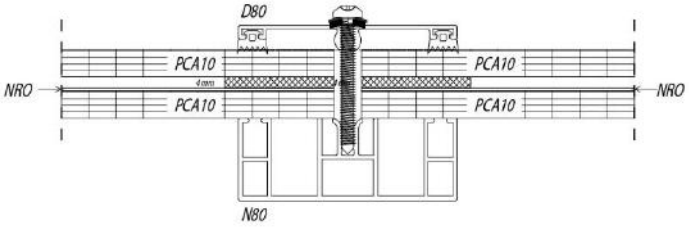
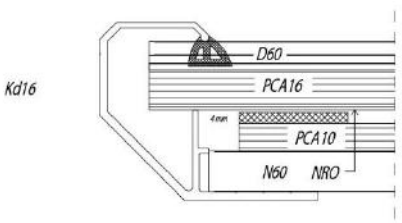
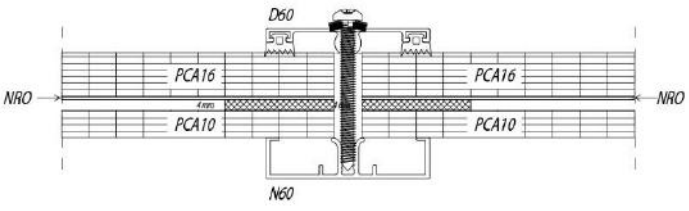
	Glazing PCA10 + PCA16 N60/D60	Screw length
3	**countersunk head**	45
	countersunk head - set back 50 mm from the brace 1200 J	50
	vent fastener	55
	vent fastener - set back 50 mm from the brace 1200 J	55
	top section fastener N60	50
	top section fastener N60 - set back 50 mm from the brace 1200 J	50

	Glazing PCA16 + PCA16 N60/D60	Screw length
4	**countersunk head**	55
	countersunk head - set back 50 mm from the brace 1200 J	55
	vent fastener	60
	vent fastener - set back 50 mm from the brace 1200 J	60
	top section fastener N60	55
	top section fastener N60 - set back 50 mm from the brace 1200 J	55

	Glazing PCA10 + PCA10 + NRO N60/D60	Screw length
5	**countersunk head**	42
	countersunk head - set back 50 mm from the brace 1200 J	42
	vent fastener	45
	vent fastener - set back 50 mm from the brace 1200 J	50
	top section fastener N60	45
	top section fastener N60 - set back 50 mm from the brace 1200 J	45

Note! NRO = non fire spreading, Broof(t1)

	Polycarbonate panel + air gap + polycarbonate panel		
	option	Section throught edge profile	Cross-section throught support and pressure profile
6	PC10 + AG + PC10		
7	PC10 + AG + PC10		
8	PC10 + AG + PC16		
9	PC16 + AG + PC16		

	Polycarbonate panel + air gap + NRO (Broof(t1)) panel + polycarbonate panel		
	option	Section throught edge profile	Cross-section throught support and pressure profile
10	PC10+AG +NRO+ PC10		
11	PC10+AG +NRO+PC10		
12	PC10+AG +NRO+PC16		

NOTE: The PC plate with separator should be installed at the bottom

Note! **NRO = non fire spreading, Broof(t1)**

Table 3 Selection of screw length depending on the glazing option and fixing position

	Glazing PCA10 + AIR GAP + PCA10 N60/D60	Screw length
6	**countersunk head**	45
	countersunk head - set back 50 mm from the bracing 1200 J	45
	vent fastener	50
	vent fastener - set back 50 mm from the bracing 1200 J	50
	top section fastener N60	45
	top section fastener N60 - set back 50 mm from the brace 1200 J	45

	Glazing PCA10 + AIR GAP + PCA10 N80/D80	Screw length
7	**countersunk head**	45
	countersunk head - set back 50 mm from the bracing 1200 J	45
	vent fastener	50
	vent fastener - set back 50 mm from the bracing 1200 J	50
	top section fastener N80	45
	top section fastener N80 - set back 50 mm from the bracing 1200 J	50
	tympanum panel N80, adjustments (if required)	50

	Glazing PCA10 + AIR GAP + PCA16 N60/D60	Screw length
8	**countersunk head**	55
	countersunk head - set back 50 mm from the brace 1200 J	55
	vent fastener	60
	vent fastener - set back 50 mm from the brace 1200 J	60
	top section fastener N60	55
	top section fastener N60 - set back 50 mm from the brace 1200 J	55

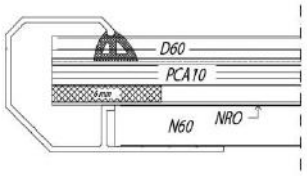
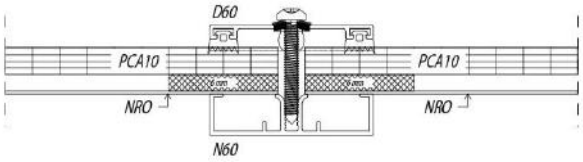
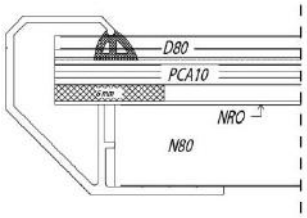
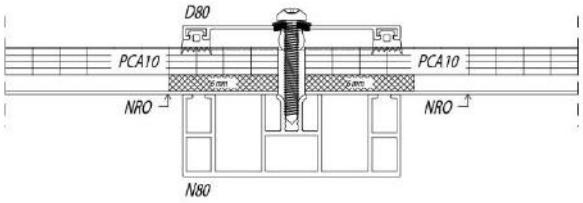
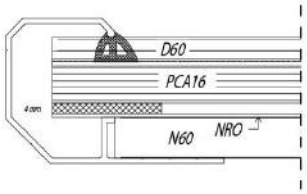
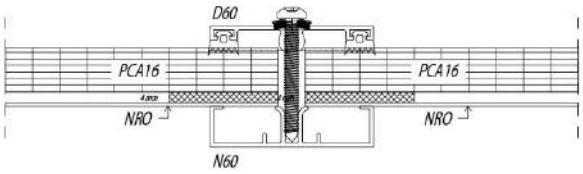
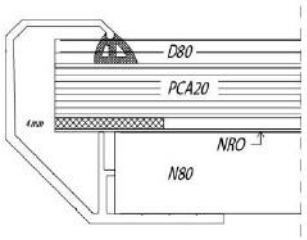
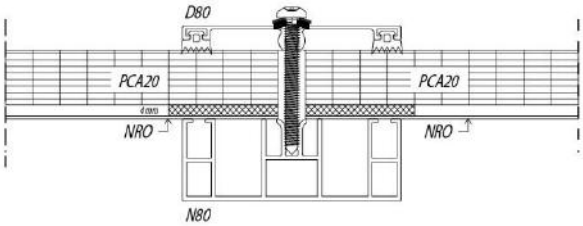
	Glazing PCA16 + AIR GAP + PCA16 N60/D60	Screw length
9	**countersunk head**	55
	countersunk head - set back 50 mm from the brace 1200 J	55
	vent fastener	65
	vent fastener - set back 50 mm from the brace 1200 J	65
	top section fastener N60	60
	top section fastener N80 - set back 50 mm from the brace 1200 J	60

	Glazing PCA10+NRO+AIR GAP+PCA10 N60/D60	Screw length
10	**countersunk head**	45
	countersunk head - set back 50 mm from the brace 1200 J	45
	vent fastener	55
	vent fastener - set back 50 mm from the brace 1200 J	55
	top section fastener N60	50
	top section fastener N60 - set back 50 mm from the brace 1200 J	50

	Glazing PCA10 + NRO + AIR GAP + PCA10 N80/D80	Screw length
11	**countersunk head**	45
	countersunk head - set back 50 mm from the brace 1200J	45
	vent fastener	50
	vent fastener - set back 50 mm from the brace 1200J	50
	top section fastener N80	50
	top section fastener N80 - set back 50 mm from the brace 1200J	50

	Glazing unit PCA10 + NRO + AIR GAP + PCA16 N60/D60	Screw length
12	**countersunk head**	55
	countersunk head - set back 50 mm from the brace 1200 J	55
	vent fastener	60
	vent fastener - set back 50 mm from the brace 1200 J	60
	top section fastener N60	55
	top section fastener N60 - set back 50 mm from the brace 1200 J	55
	adjustments (if required)	60

Note! NRO = non fire spreading, Broof(t1)

	Polycarbonate panel + air gap + NRO (Broof(t1)) panel		
	option	Section throught edge profile	Cross-section throught support and pressure profile
13	PC10 + AG + NRO	Km16 	
14	PC10 + AG + NRO	Kd16 	
15	PC16 + AG + NRO	Km20 	
16	PC20 + AG + NRO	Kd25 	

Note! NRO = non fire spreading, Broof(t1)

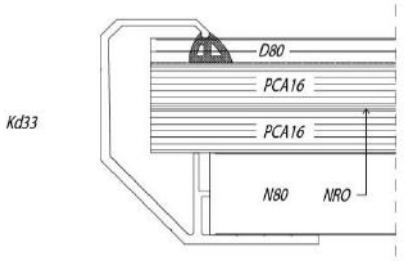
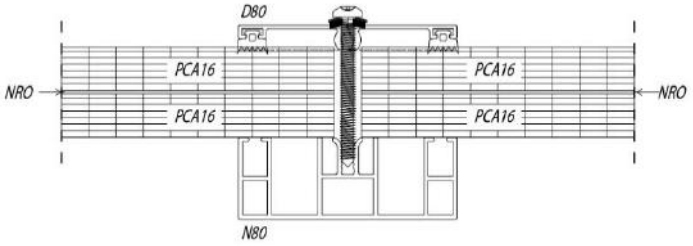
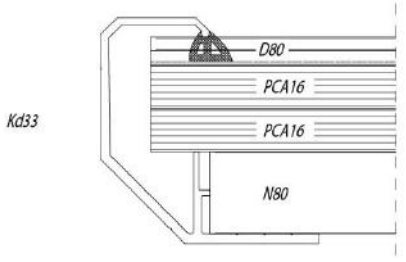
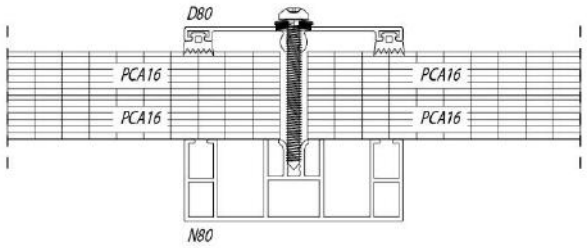
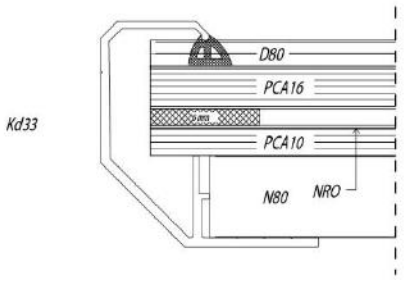
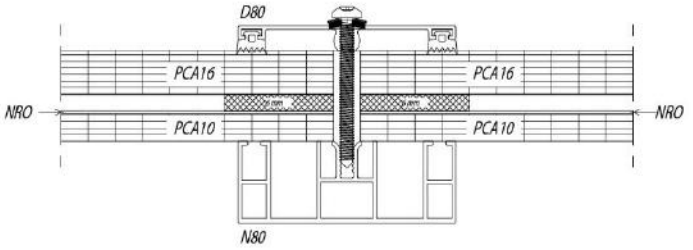
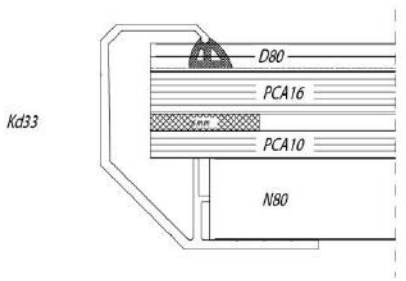
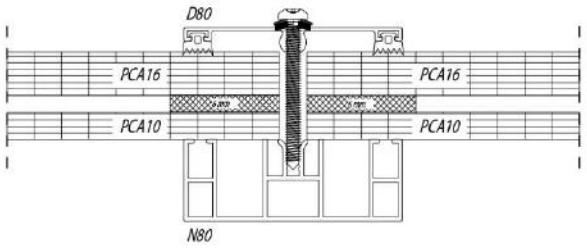
Table 4 Selection of screw length depending on the glazing option and fixing position

	Glazing unit PCA10 + AIR GAP + NRO panel N60/D60	Screw length
13	**countersunk head**	38
	countersunk head - set back 50 mm from the brace 1200 J	38
	vent fastener	45
	vent fastener - set back 50 mm from the brace 1200 J	45
	top section fastener N60	42
	top section fastener N60 - set back 50 mm from the brace 1200 J	42

	Glazing unit PCA10+ AIR GAP + NRO panel N80/D80	Screw length
14	**countersunk head**	38
	countersunk head - set back 50 mm from the brace 1200 J	38
	vent fastener	45
	vent fastener - set back 50 mm from the brace 1200 J	45
	top section fastener N80	42
	top section fastener N60 - set back 50 mm from the brace 1200 J	42
	tympanum panel N80, adjustments (if required)	42

	Glazing unit PCA16 + AIR GAP + NRO panel N60/D60	Screw length
15	**countersunk head**	42
	countersunk head - set back 50 mm from the brace 1200 J	42
	vent fastener	50
	vent fastener - set back 50 mm from the brace 1200 J	50
	top section fastener N60	45
	top section fastener N60 - set back 50 mm from the brace 1200J	45

	Glazing unit PCA20 + AIR GAP + NRO panel N80/D80	Screw length
16	**countersunk head**	45
	countersunk head - set back 50 mm from the brace 1200 J	45
	vent fastener	50
	vent fastener - set back 50 mm from the brace 1200 J	55
	top section fastener N80	55
	top section fastener N80 - set back 50 mm from the brace 1200 J	55

	Edge profile Kd33 on N80/D80, 4÷6 m span		
	option	Section throught edge profile	Cross-section throught support and pressure profile
17	PC16 + NRO + PC16		
18	PC16 + PC16		
19	PC16 + AG + NRO + PC10		
20	PC16 + AG + PC10		

Note! NRO = non fire spreading, Broof(t1)

	Glazing PCA16 + NRO + PCA16 N80/D80 on Kd33	Screw length
17	**countersunk head**	55
	countersunk head - set back 50 mm from the brace 1200 J	55
	vent fastener	60
	vent fastener - set back 50 mm from the brace 1200 J	60
	top section fastener N80	55
	top section fastener N80 - set back 50 mm from the brace 1200 J	55

	Glazing PCA16 + PCA16 N80/D80 on Kd33	Screw length
18	**countersunk head**	55
	countersunk head - set back 50 mm from the brace 1200 J	55
	vent fastener	60
	vent fastener - set back 50 mm from the brace 1200 J	60
	top section fastener N80	55
	top section fastener N80 - set back 50 mm from the brace 1200 J	55

	Glazing PCA10+ NRO + AIR GAP (6) + PCA16 N80/D80 on Kd33	Screw length
19	**countersunk head**	55
	countersunk head - set back 50 mm from the brace 1200 J	55
	vent fastener	60
	vent fastener - set back 50 mm from the brace 1200 J	60
	top section fastener N80	55
	top section fastener N80 - set back 50 mm from the brace 1200 J	55

	Glazing PCA10 + AIR GAP (6) + PCA16 N80/D80 on Kd33	Screw length
20	**countersunk head**	55
	countersunk head - set back 50 mm from the brace 1200 J	55
	vent fastener	60
	vent fastener - set back 50 mm from the brace 1200 J	60
	top section fastener N80	55
	top section fastener N80 - set back 50 mm from the brace 1200 J	55

Note! NRO = non fire spreading, Broof(t1)

VI. Assembly of the top section of the continuous rooflight

1. Start by fixing the edge profiles (Km XX or Kd XX) to the rooflight base. First, lay out the profiles on the roof surface along the rooflight base according to the assembly drawing attached to the delivery. (Figure 23 Example layout of the bearing and edge profiles of a continuous rooflight) shows **an example layout of edge and bearing profiles**.

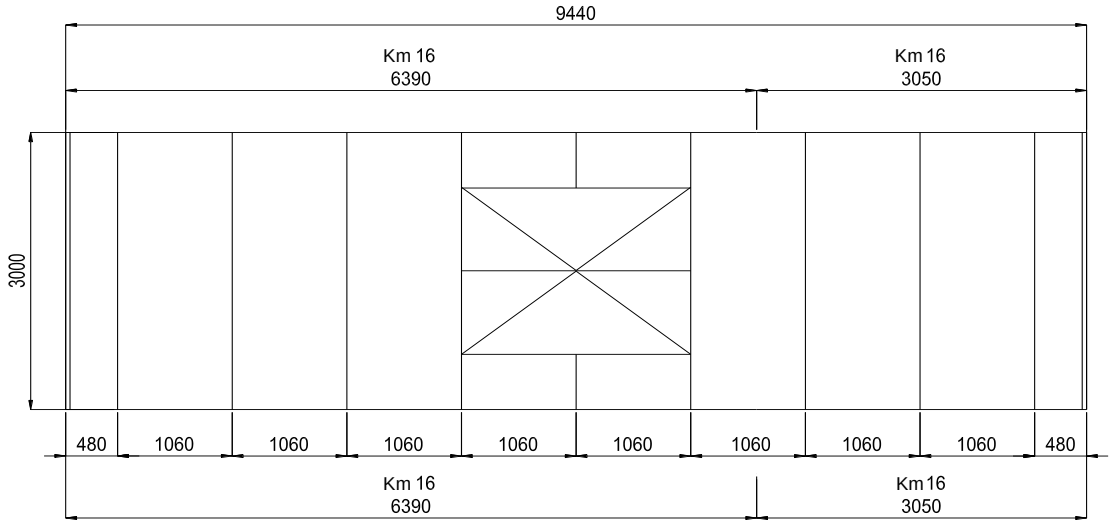


Figure 23 Example layout of the bearing and edge profiles of a continuous rooflight

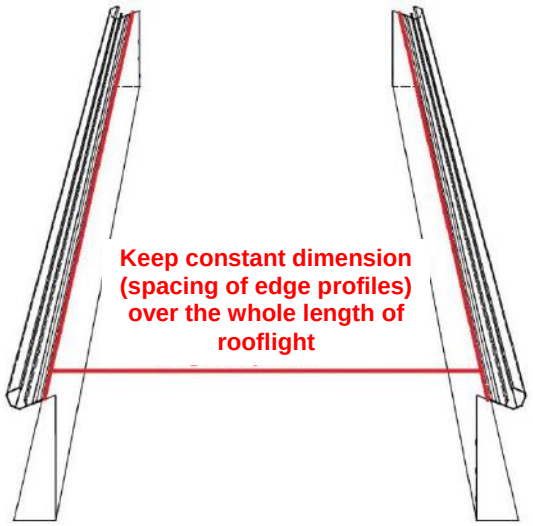
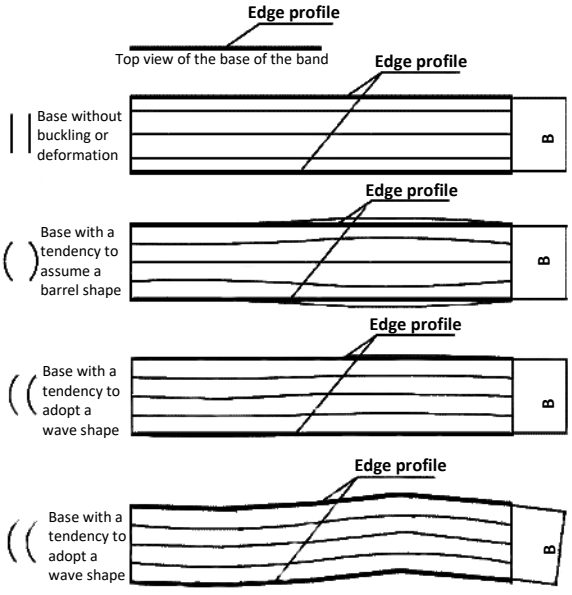


Figure 24 Layout of the edge profiles following the principle of parallel orientation



Base without buckling or deformation

2. Apply self-adhesive tape PES 40x3 to the assembled and insulated base, and then fix the edge profiles using self-drilling screws Ø 6.3x32 mm keeping the distance between the screws 300-350 mm, and positioning them so that at least 2 screws fall out between the holes for the screws tightening the pressure profiles. The position of the edge profile in relation to the base should be as shown in (Figure 25 Installation of edge profiles according to the attachment to the installation manual). The correct B dimension can be obtained by laying the edge profiles parallel to each other along the entire length. The B dimension can be obtained by fixing the position of the edge profiles with the tympanum panel. It is very important that the edge profiles are arranged parallel to each other i.e. the distance between them is constant (Figure 24 Layout of the edge profiles following the principle of parallel orientation).

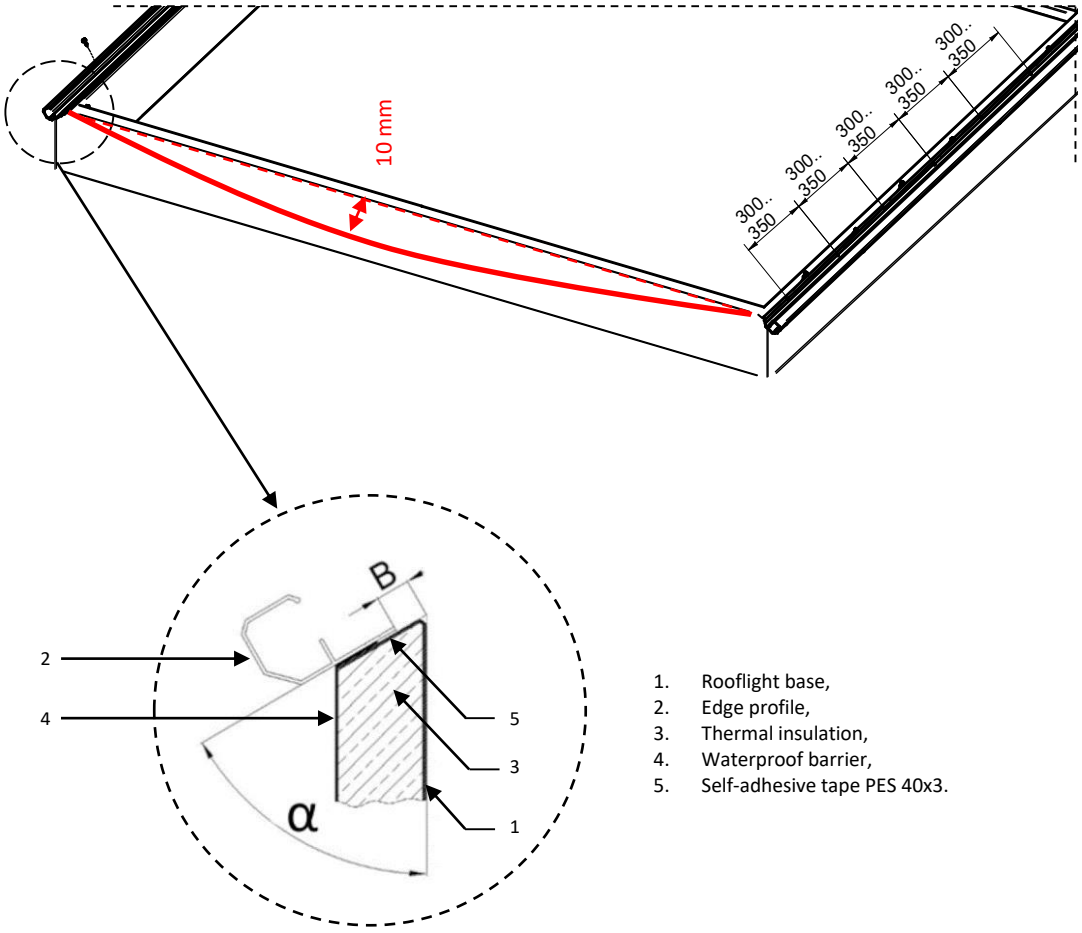


Figure 25 Installation of edge profiles according to the attachment to the installation manual

Product data					Assembly dimensions
Rooflight	Width	Lenght	Number of rooflights	Angle of base (α)	Distance between edge profile and theoretical crown of the upstand [B]
Rooflight 1	2450	10410	2	53°	20 mm
Rooflight 2	2450	10380	3	53°	20 mm
Rooflight 3	2450	31420	5	53°	20 mm
Rooflight 4	2450	15300	2	53°	20 mm

3. Now place the assembled tympanum panel vertically on the tympanum base. Apply a PES gasket to seal a gap between the tympanum panel and the waterproofing layer, if less than 10 mm wide.
   Fix the tympanum panels to the base using self-drilling screws Ø 6.3x32 mm, fixed at 300-350 mm intervals, **so that the deflection of the steel profile after tightening the screws does not exceed 3 mm at the base centre.** Once the tympanum wall has been fixed to the base, the arch-shaped tympanum profile should be fixed to the longitudinal base piece and to the edge profile using self-drilling screws Ø 6.3x32. The tympanums on the opposite sides of the rooflight should be arranged as shown in (Figure 27 Arrangement of tympanum panels in relation to the rooflight base).

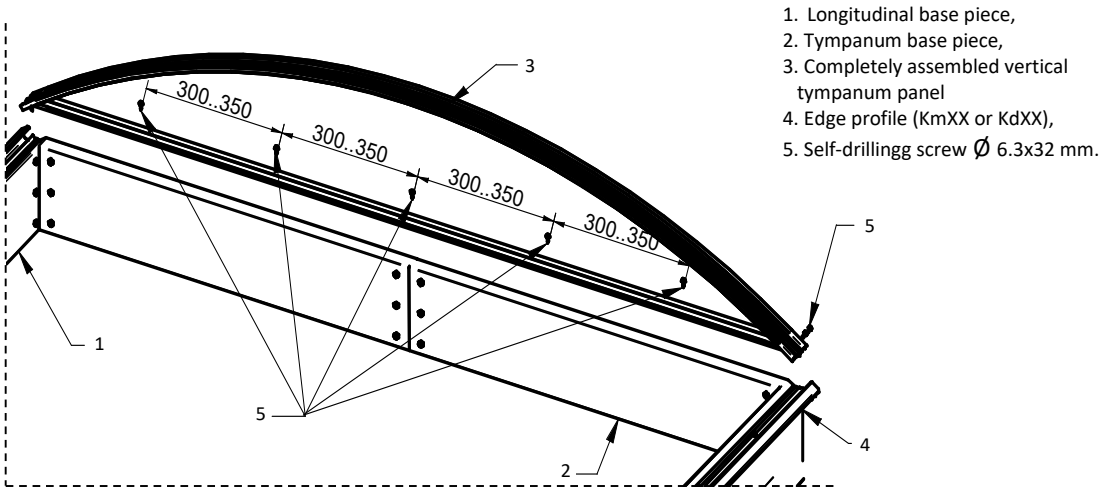


Figure 26 Tympanum panel assembly

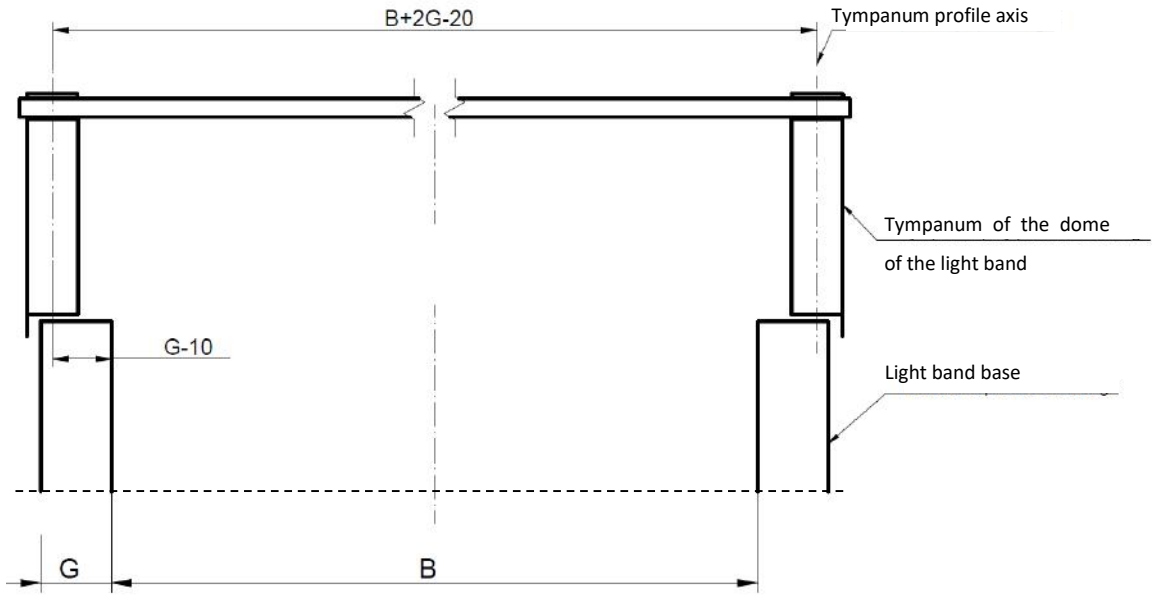
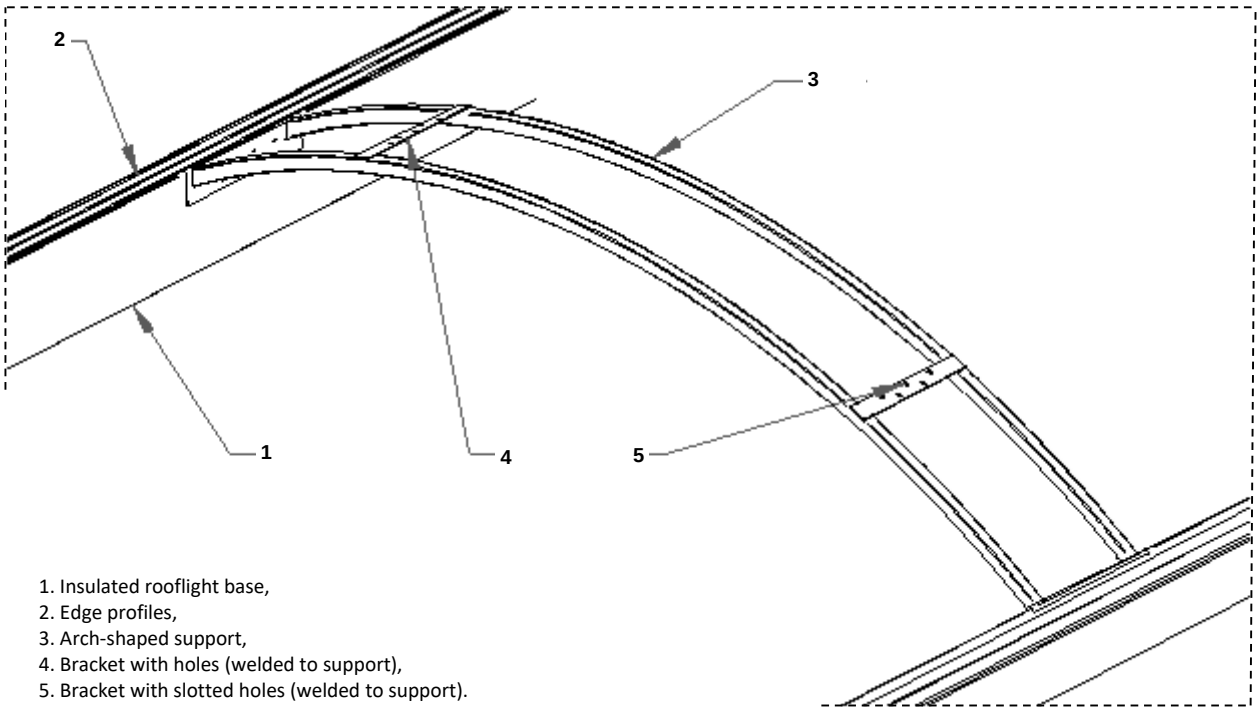


Figure 27 Arrangement of tympanum panels in relation to the rooflight base

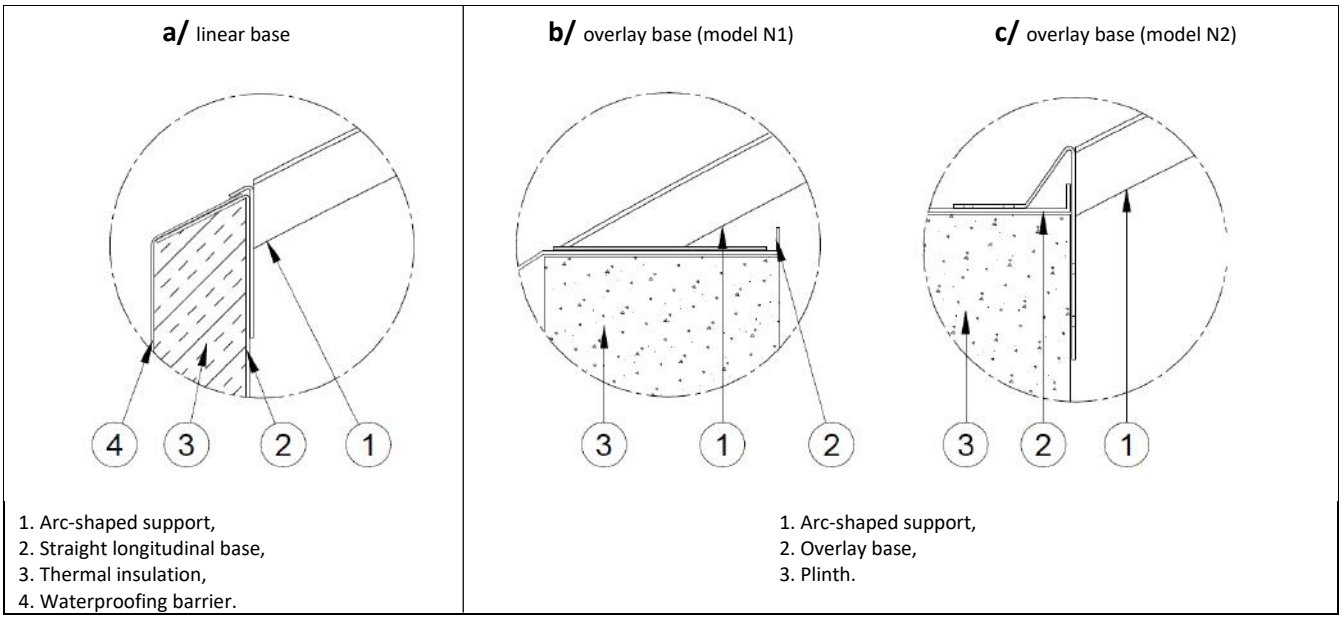
B – roofling length
G – thermal insulation thickness

4. If the rooflight is equipped with integrated smoke vents, steel arch-shaped supports should be mounted to support the opening mechanisms of single- or double-leaf vents. Install the arc-shaped supports in such a way that the brackets with the holes are on the hinge side of the single-leaf vent (in the case of a double-leaf damper it is irrelevant).
   Mount the supports to the smoke vent base (Figure 29 Installation of arc supports, part a) using self-drilling sheet metal screws Ø 6.3x22 mm. For other bases, use fasteners appropriate for the joined materials (e.g. self-drilling screws as before, concrete screws, wood screws).



1. Insulated rooflight base,
2. Edge profiles,
3. Arch-shaped support,
4. Bracket with holes (welded to support),
5. Bracket with slotted holes (welded to support).

Figure 28 *Installation of the arch-shaped support in the rooflight*



1. Arc-shaped support,
2. Straight longitudinal base,
3. Thermal insulation,
4. Waterproofing barrier.

1. Arc-shaped support,
2. Overlay base,
3. Plinth.

Figure 29 *Installation of arc supports*

5. Arrange the bearing profiles according to the documentation attached to the delivery so that the axis of the bearing profile coincides with the axis of tensioning screw holes in the edge profile (not to be confused with drainage holes). Push the bearing profiles towards the vertical ledge of the edge profile.

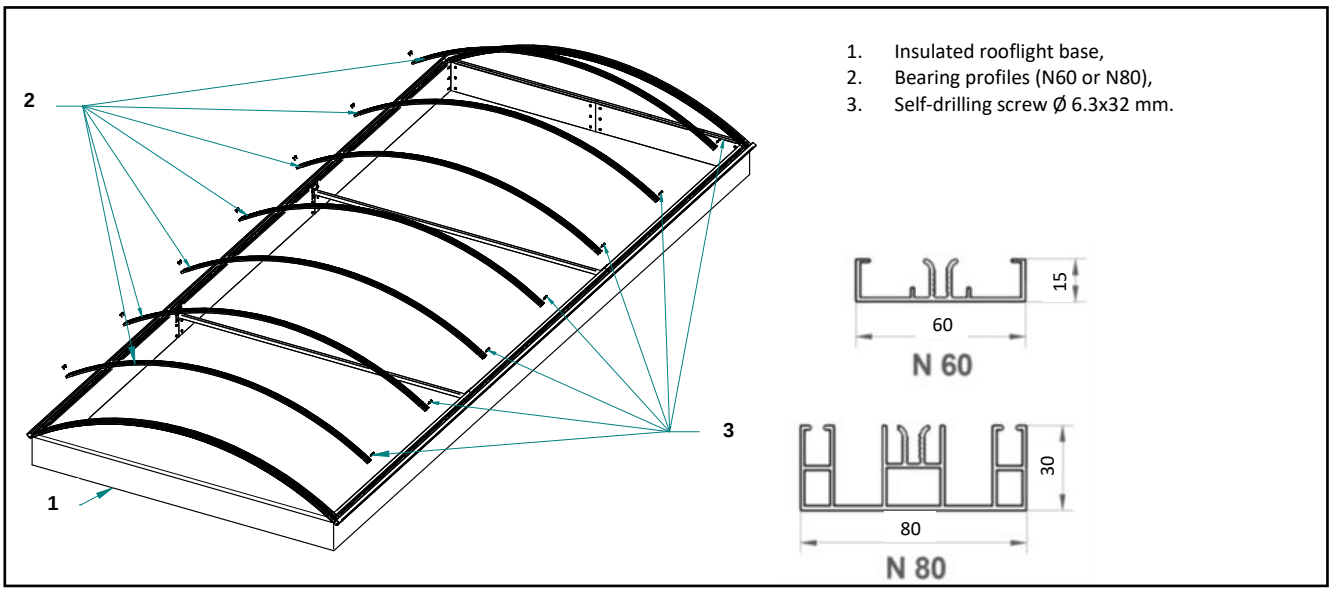


Figure 30 Assembly of bearing profiles. Types of bearing profiles: a/ N60, b/N80

6. Fix the bearing profiles to the edge profile and base using Ø 6.3x32 mm self-drilling screws (2 pcs).

7. If the rooflight is equipped with integrated smoke or daily ventilation vents, a vent support frame should be installed under each unit. The vent support frame is welded to bearing profiles (N60 or N80). The vent support frame position should be determined on the basis of the assembly drawing supplied with the rooflight elements.

8. If the rooflight is equipped with 1200 J reinforcement, follow the procedure described in section V - Assembly of 1200 J reinforcement.

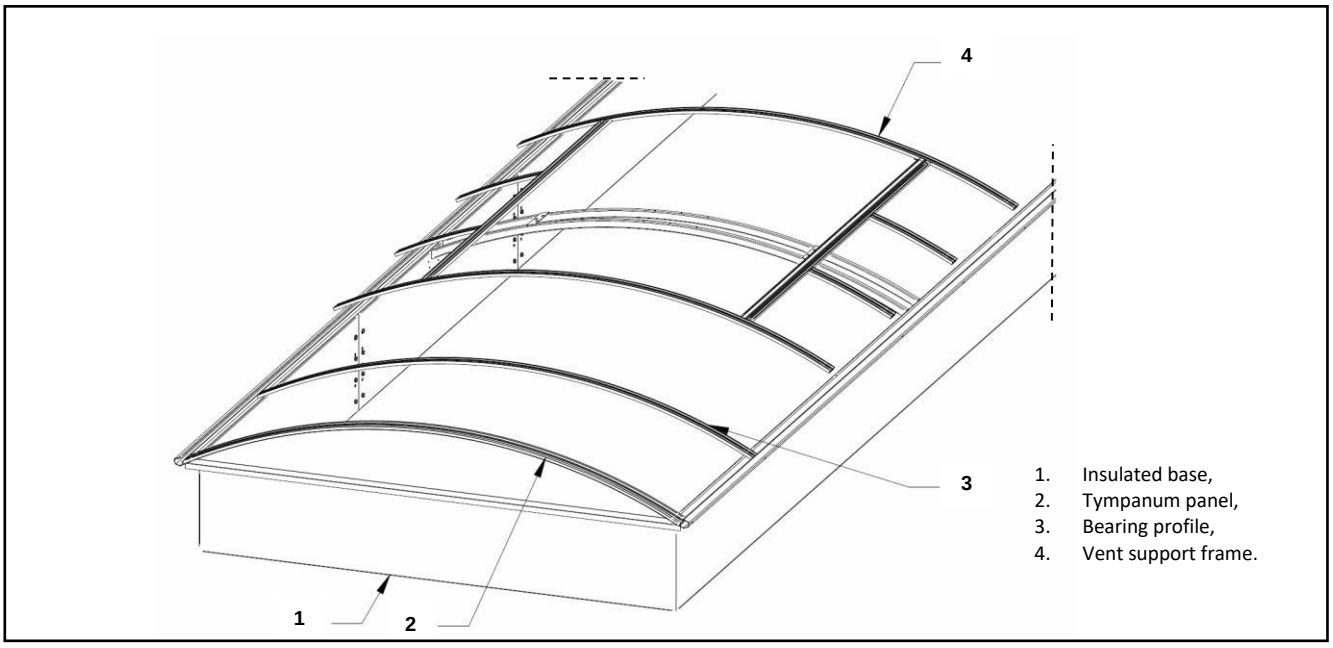


Figure 31 Installation of vent support frame

9. Fix the longitudinal stiffener for bearing profiles using self-drilling screws Ø 4,8x13 mm DIN 7504K.
10. To fix the longitudinal stiffener to the tympanum panel, use the angle brackets (delivered loose) and connectors identical to those used for bearing profiles (Ø 4,8x13 mm DIN 7504K).
    A single longitudinal stiffener is mounted:
    a) in rooflights spanning more than 3 m in width and more than 60 m in length,
    b) in rooflights with frames made of N60 profiles spanning more than 3.8 m in width and more than 20 m in length,
    c) in rooflights with frames made of N60 profiles spanning more than 5.5 m in width and more than 20 m in length.

    The stiffener should be positioned at the highest point of the profiles.
    Double longitudinal stiffeners (dividing the arc into 3 equal sections) are mounted in rooflights with frames made of N80 profiles spanning more than 6 m in width and more than 20 m in length.

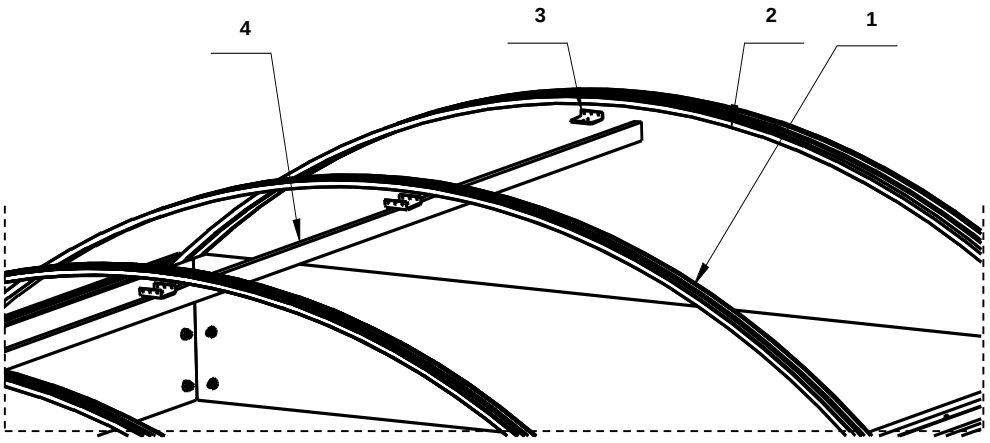


Figure 32 *Longitudinal stiffener assembly (applies to selected rooflight sizes)*

1. Bearing profile (N60 or N80),
2. Tympanum panel,
3. Angle bracket,
4. Longitudinal stiffener.

- **Option with additional insulation of glazing assembly**

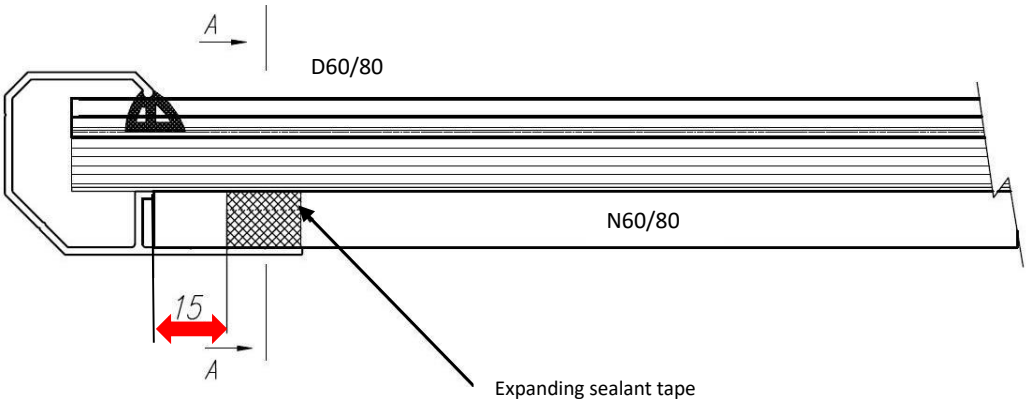


Figure 33 *Figure Expanding sealant tape between N profiles (cross-section)*

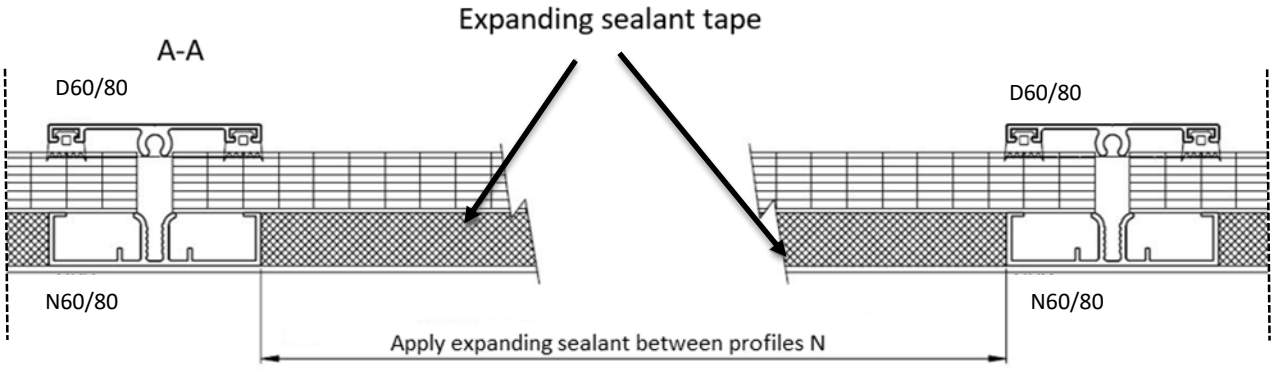


Figure 34 *Expanding sealant tape between N profiles (longitudinal section)*

Figure 35 *Expanding sealant tape right after application*

The expanding sealant tape should be applied to the edge profile, keeping 15 mm of clearance from the edge profile ledge (Figure 15).
The expanding sealant tape is applied along the edge profile between the bearing profiles (Figure 16) just before installation of PCA panels. After application to the edge profile, the sealant tape must not yet be expanded when the PCA panels are mounted in place so as to avoid damaging the tape when inserting the PCA panels.

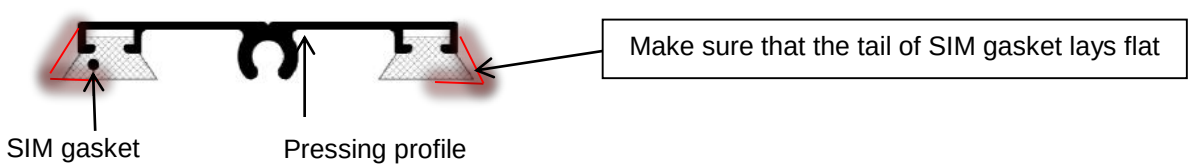
Figure 36 *The same seal when fully expanded*

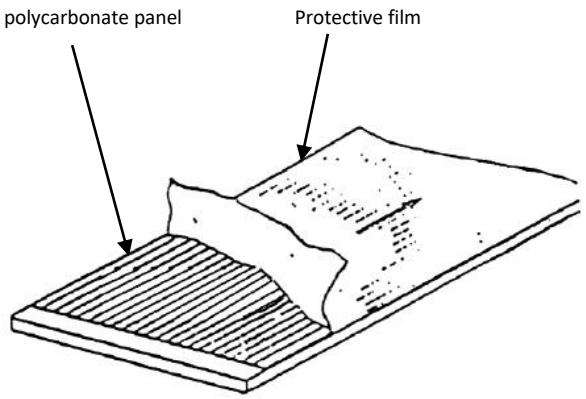
IMPORTANT!!!

The expanding sealant tape after application expands vertically from the initial height of 4÷8 mm to 25 mm - for N60 profiles and from 7÷12 mm to 40 mm for N80 profiles. The time of expansion depends, to a large extent, on the ambient conditions. At high temperatures, less time is needed for full expansion to take place.

- **In the case of Broof(t1) class rooflights:** before laying the polycarbonate panels, prepare and place the polyester panels, one by one, starting from one of the tympanum walls, in accordance with the bearing profile layout and panel dimensions. The polyester panel at the tympanum panel should be flush with the tympanum arc profile. The end of the next panel must fall within a bearing profile. The polyester panels must be set back from the edge profile side, evenly on both sides by ca. 17… 22 mm. After laying the polyester panels, proceed to the next operation – laying polycarbonate panels. Polycarbonate panels should be laid directly on the polyester panels.

  The Broof(t1) class rooflights are fitted with a special EPDM, non-fire spreading edge seal.





Check and adjust, if required, the SIM gaskets fitted in the pressing profiles (D60 or D80). Cut to size if it is too long. Pulled out of the slot - push in.

Figure 37 Preparation of pressing profiles and polycarbonate panels

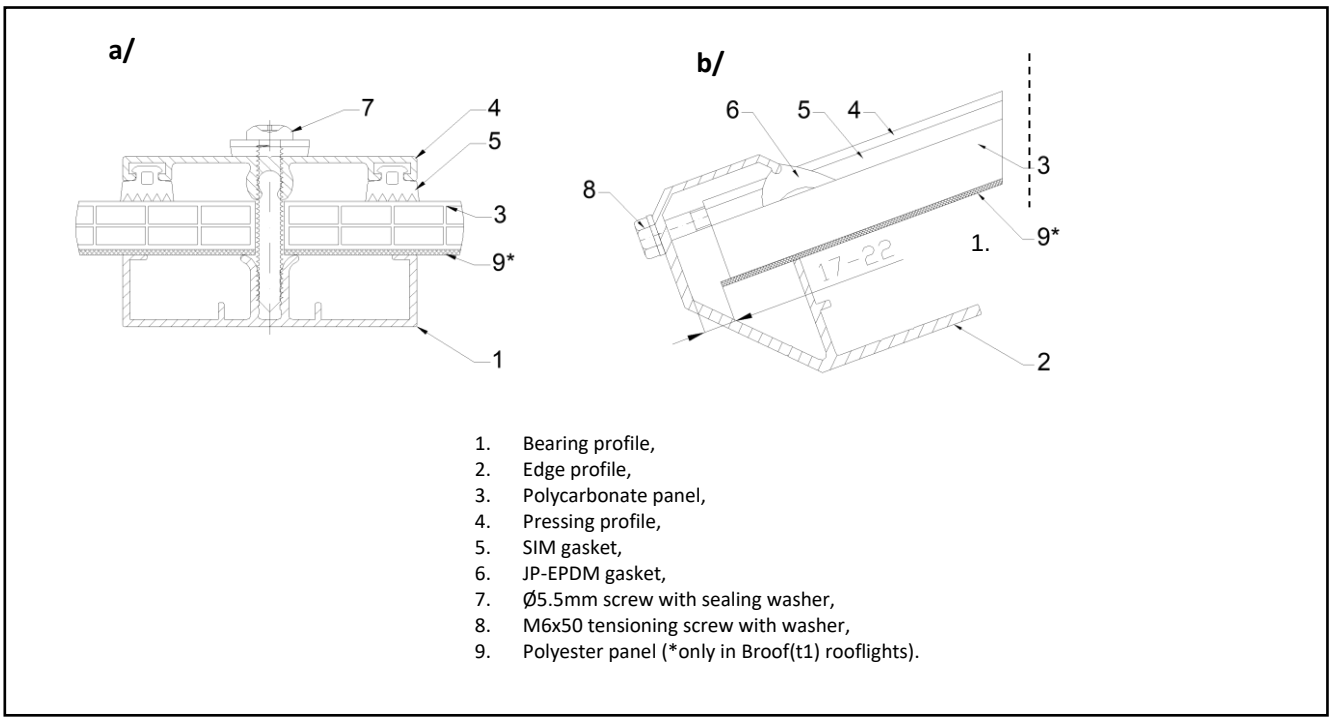
Important! Polyester and polycarbonate panels should be installed in favourable weather conditions without rain or snow. The panels must be dry and clean.

EPDM seals should be fitted right after installation of PCA panels (to keep off dirt).

11. Orient the polycarbonate sheets with the UV-resistant side (marked with "VV" symbols on the plate) upward.

Figure 38 Method of marking the UV-resistant side of polycarbonate sheets.

12. Place the polycarbonate panels one by one, starting from one of the tympanum walls, in accordance with the bearing profile layout and panel dimensions, with the UV-resistant side facing up. The panel at the tympanum panel should be flush with the tympanum profile. The end of the next panel must fall within a bearing profile. The polycarbonate must be moved away a little from the wall of the edge profile, evenly on both sides.



1. Bearing profile,
2. Edge profile,
3. Polycarbonate panel,
4. Pressing profile,
5. SIM gasket,
6. JP-EPDM gasket,
7. Ø5.5mm screw with sealing washer,
8. M6x50 tensioning screw with washer,
9. Polyester panel (*only in Broof(t1) rooflights).

Figure 39 Connection method of: a) pressing profiles with bearing profiles b) edge profiles with pressing profiles

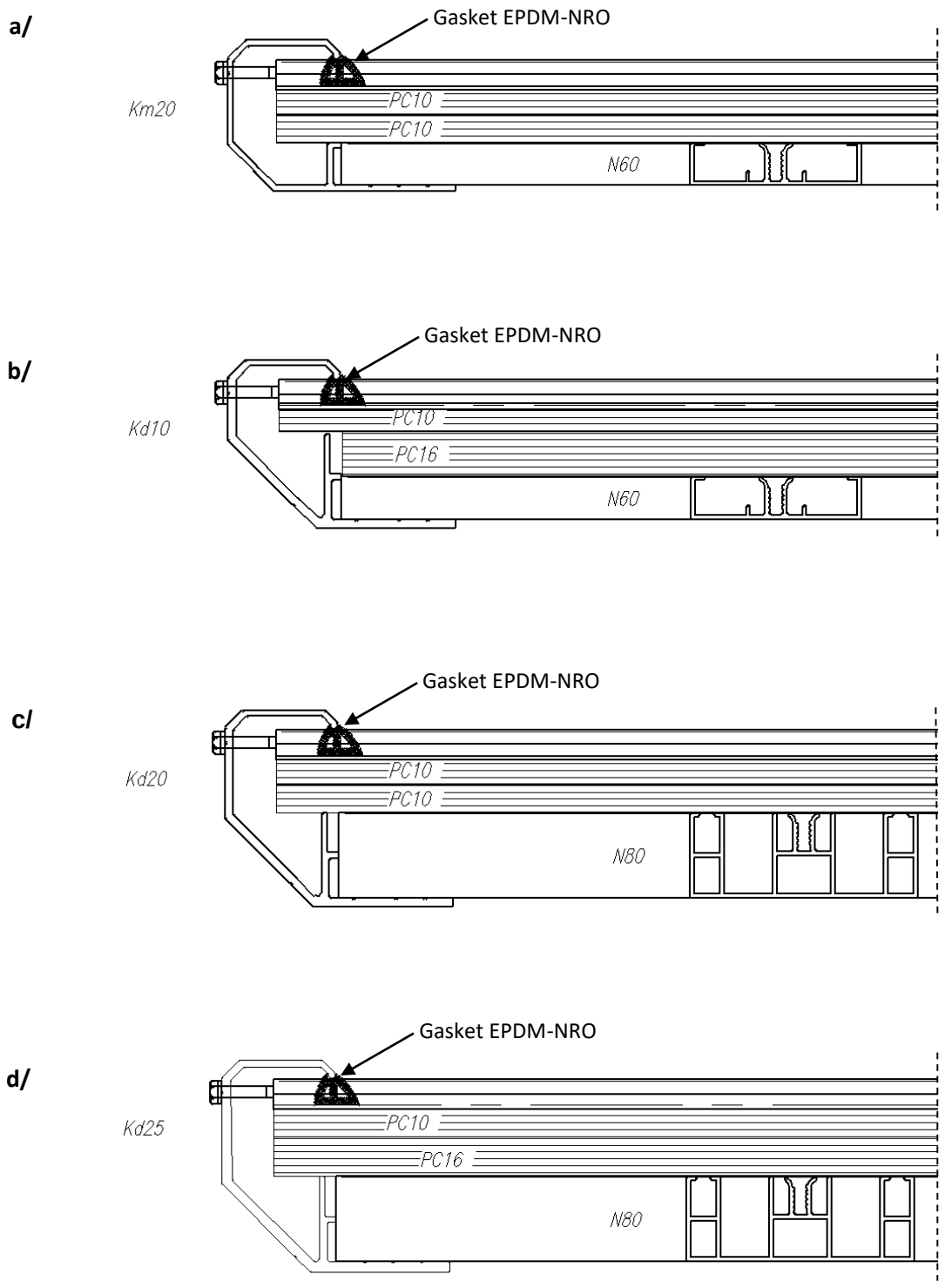


Figure 40 Twin and triple polycarbonate panel glazing

a/ PCA10 + PCA10; (Km20+N60)
b/ PCA10 + PCA16; (Kd10+N60)
c/ PCA10 + PCA16; (Kd20+N80)
d/ PCA10 + PCA16; (Kd25+N80)

13. Remove the protective film from the polycarbonate panels.
14. Place the pressing profiles with seals on joints between two adjacent panels on the bearing profiles and on the terminal panels. The axes of bearing and pressing profiles must coincide. Insert the pressing profile ends into the edge profile.

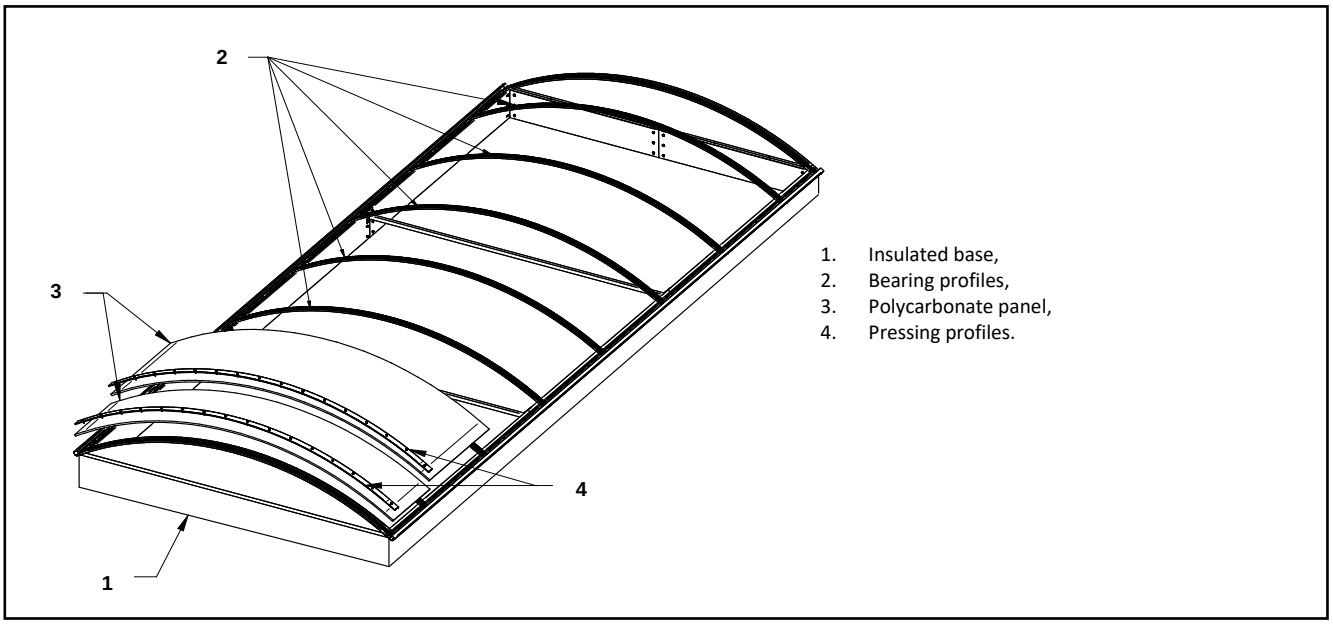


Figure 41 *Assembly of polycarbonate panels and bearing profiles (step 1)*

15. Fix each pressing profile at both ends to the edge profile using M6x50 mm screws with washers, and next tension the screw (Figure 39/b).
    The pressing profiles should be fixed to the bearing profiles with Ø 5.5 mm sheet metal screws with a washer. The screw length depends on the thickness of the polycarbonate panel and the type of bearing profiles of the rooflight framework (Table 5 Lengths of screws for fixing pressing profiles). For best fit of the bearing profiles, fix the screws starting from the centre and proceed towards the edge profiles. The terminal polycarbonate panel (over the tympanum panel) will be penetrated by the fixing screw.

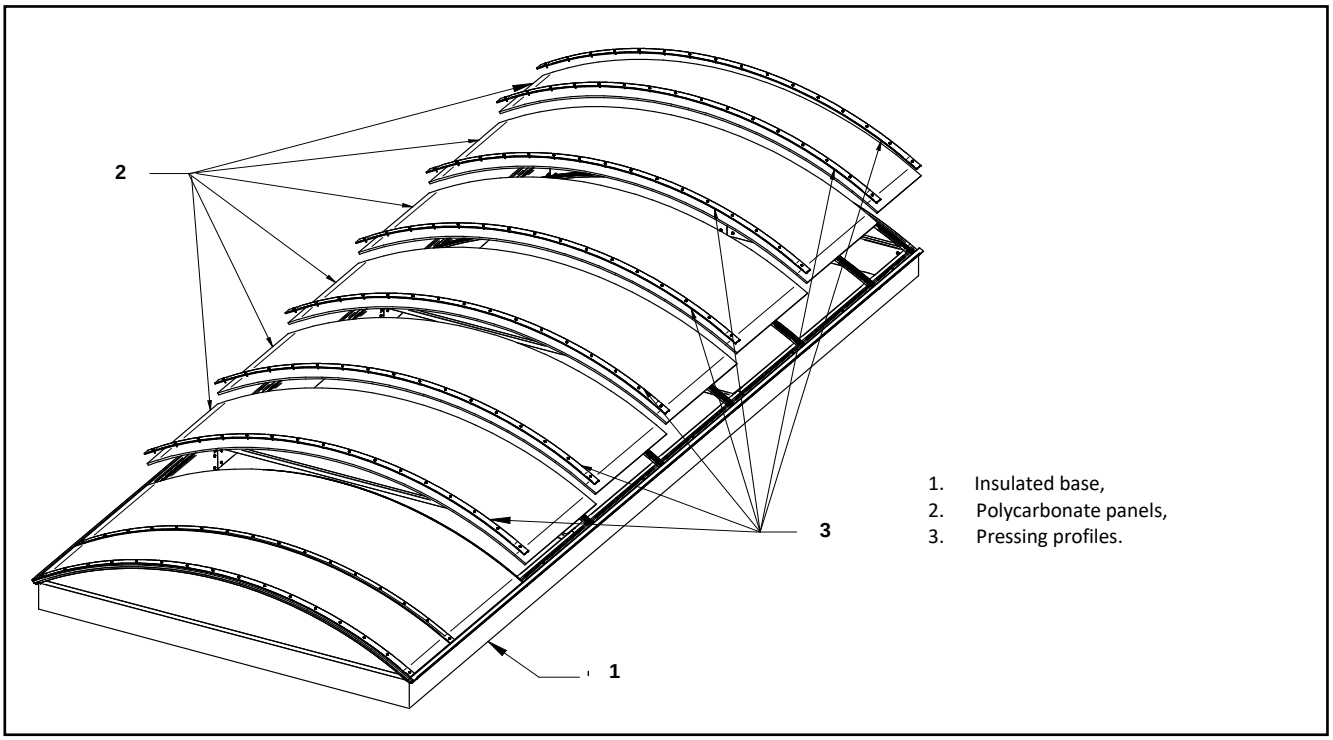


Figure 42 *Installation of polycarbonate panels and bearing profiles (step 2)*

Table 5 Lengths of screws for fixing pressing profiles

Thickness of PC panel	Screw length
[mm]	[mm]
10	32
16	38
20	45
25	50

Attention! The correct tightening torque for the screws holding the pressure profiles is 3-5 Nm!

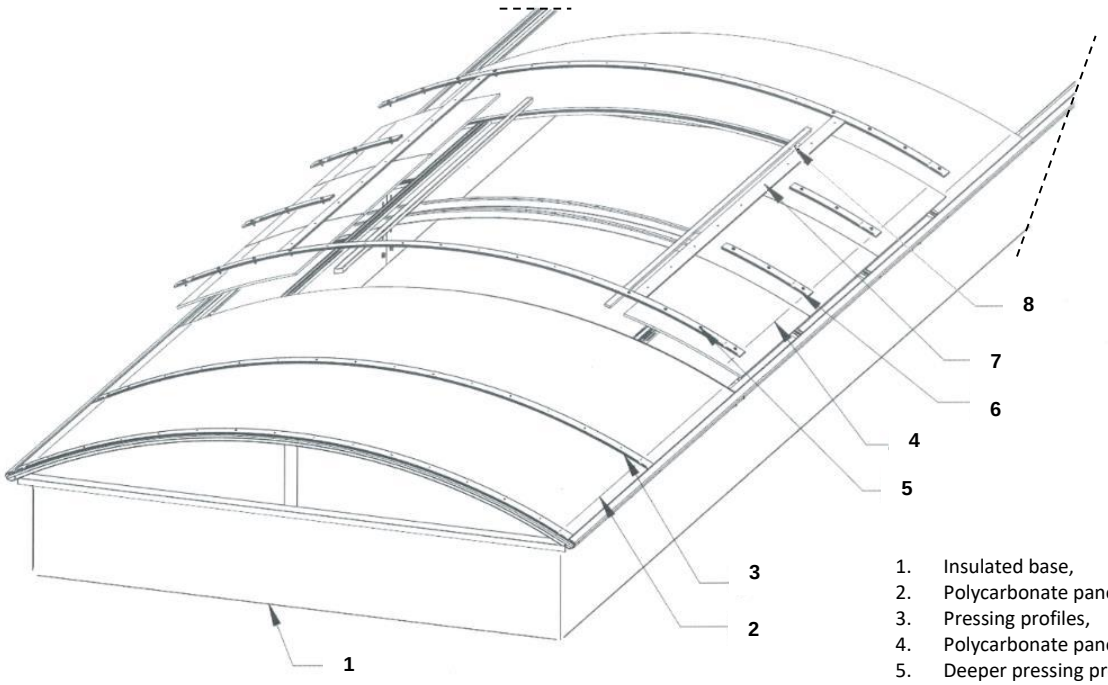
16. Finally tension each pressing profile at either end.

17. If rooflights are fitted with integrated smoke vents or ventilation hatches:

    a) For rooflights with single glazing:

    Install polycarbonate panels on both sides of the vent. The supplied panels should be oriented such that that the impermeable (aluminium) tape faces the top of the top section and the UV resistant side faces up (designated with letter the “VV” on the polycarbonate panel). If so required, polyester panels should be placed under the polycarbonate panels beforehand. The polycarbonate panels (placed on both sides of the vent) will be penetrated by the fixing screws.

    In the rooflights with single polycarbonate glazing, a PCA spacing strip should be placed under the vent base, through which the screws will penetrate. A cut to size small PCA panel will be mounted below the PCA spacing strip beneath the vent.



1. Insulated base,
2. Polycarbonate panel,
3. Pressing profiles,
4. Polycarbonate panel on both sides of the vent,
5. Deeper pressing profile,
6. Arc pressing profile,
7. Straight pressing profile,
8. Polycarbonate panel mounted under the vent base.

Figure 43 Assembly of polycarbonate panels and bearing profiles (step 2)

b) For rooflights with multiple glazing:

Before installation of the vent support frame, it should be fitted with **spacing brackets** and **PE strips**. To protect the roof covering from damage, place the vent support frame on some separating layer, such as OSB, and then fit the **brackets**:

- using Ø 5.5x16 mm screws – in the case of support frames made of N60 profiles,
- by snapping on – in the case of support frames made of N80 profiles.

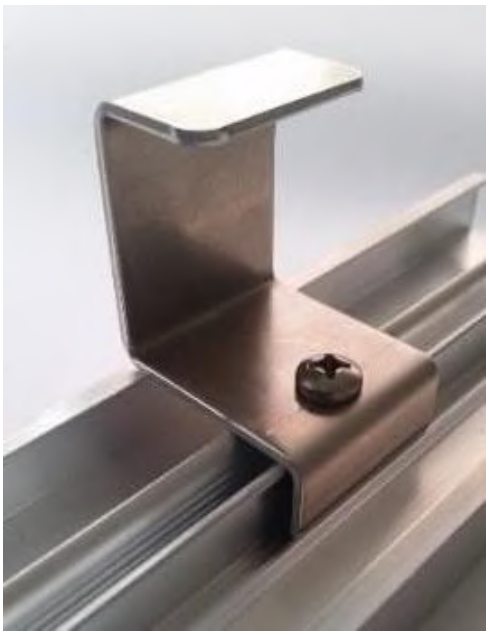


Figure 44 Bracket fitted in N60 profile

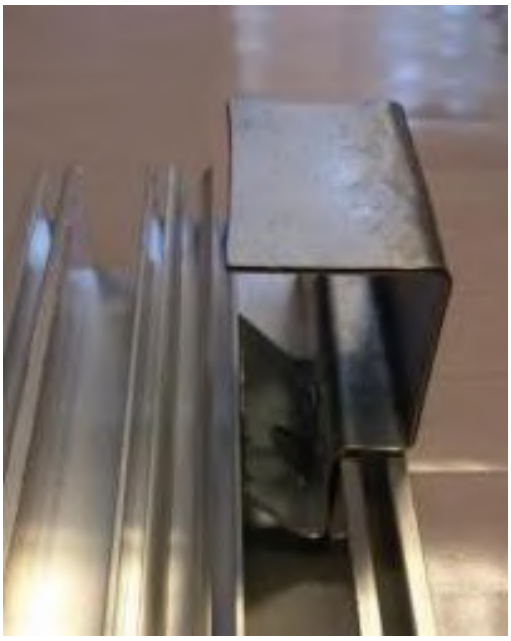


Figure 45 Bracket fitted in N80 profile

When placing the glazing panels near the vents, make sure make sure that the position of the PCA panels allows **collision-free screwing of the pressing profiles**.

The C-shaped spacers should be placed symmetrically, at equal distances defined by the spacing of the pressing profile holes, so that the brackets do not interfere with the pressing profile fixing screws.

The C-spacer should be fixed not further than 2 cm from the fixing screw
(Figure 47 Layout of C-brackets on the vent support frame arc in relation to the fixing screws positions).

This can be achieved by applying the pressing profile to the bearing profile, then mark with a marker on the bearing profile the places where there are holes for screws in the pressing profile.
The estimated distance between the consoles on the arc should be 250-300 mm.

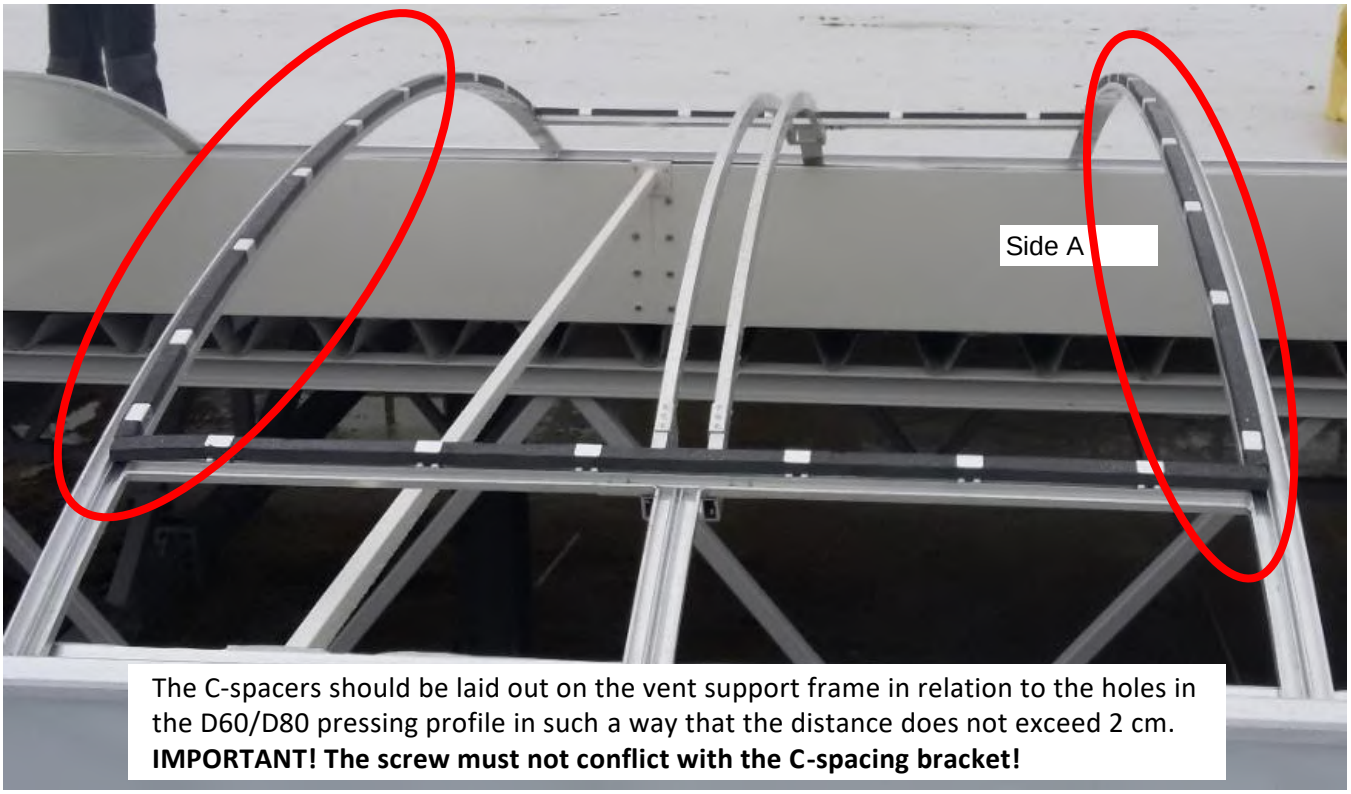


Figure 46 Layout of brackets on the vent support frame arc

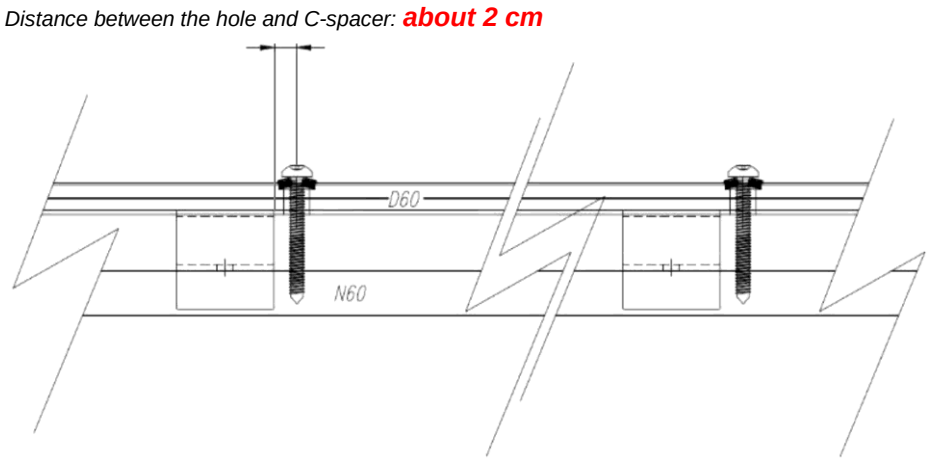


Figure 47 Layout of C-brackets on the vent support frame arc in relation to the fixing screws positions

The C-shaped spacers should be positioned symmetrically, at equal distances defined by the spacing of the pressing profile holes, so that the brackets do not interfere with the fixing screws. Additional spacers should be placed between the already installed spacers.

The C-spacer should be fixed not further than 2 cm from the fixing screw
(Figure 49 Layout of C-brackets on the vent support frame arc in relation to the fixing screws positions).

Figure 48 Layout of brackets on the vent support frame

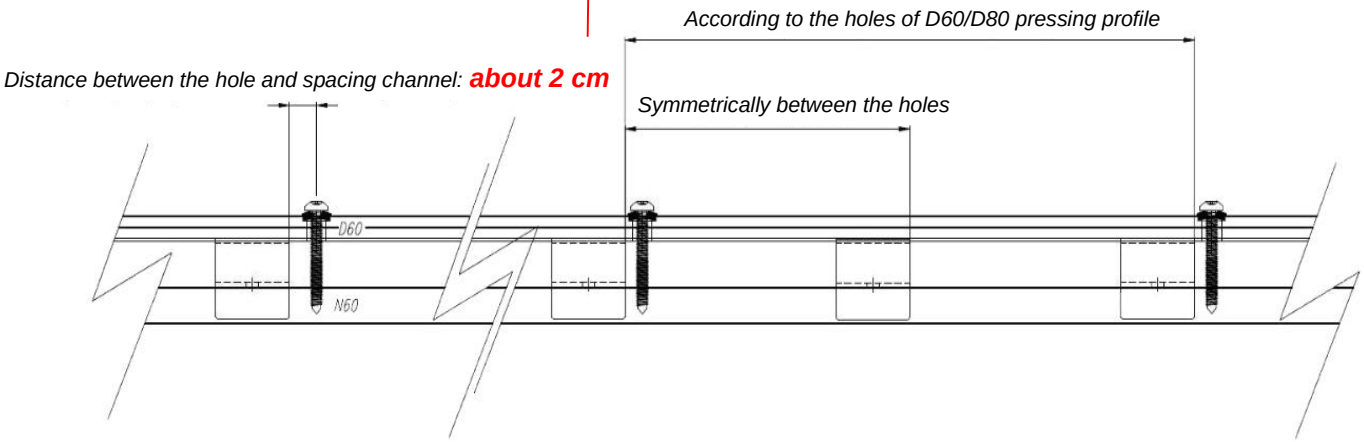


Figure 49 Layout of C-brackets on the vent support frame arc in relation to the fixing screws positions

If needed, use screws for **adjustments** – see: Table 2, Table 3, Table 4.

Insert **PE foam strips** inside the C-spacers so that the strips adhere to each other at the corners. The vent support frame, fitted as described above, is now ready to be installed in the rooflight. Next, follow the standard procedure described in the rooflight installation manual.

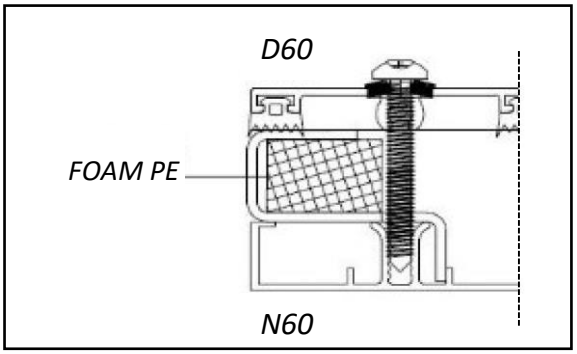


Figure 50 *Cross-section showing foam applied in the C-spacer*

18. Remove the protective film from the polycarbonate panels.
19. For multiple glazing assemblies, use the masking gasket on the pressing profiles of the tympanum wall. The EPDM masking gasket should be mounted in the socket of the last pressing profile in the same way as SIM gaskets.

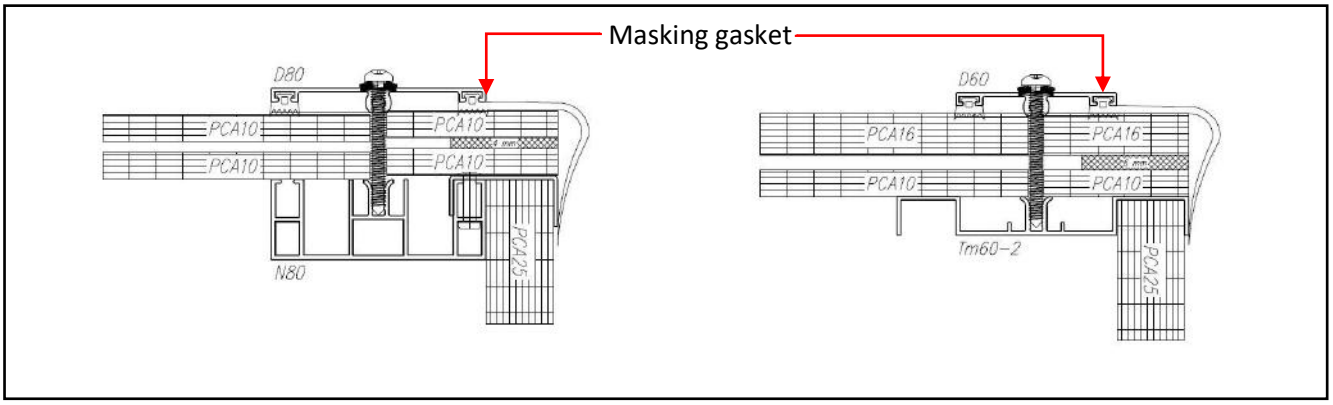


Figure 52 *Fitting the end panel cover strip on 80 profile system*

Figure 51 *Fitting the end panel cover strip on 60 profile system*

Bend the lip of the masking gasket so that it overlaps the PCA panel of the tympanum wall.

Finish the cover strip around the edge profile by cutting as shown in the figure below.

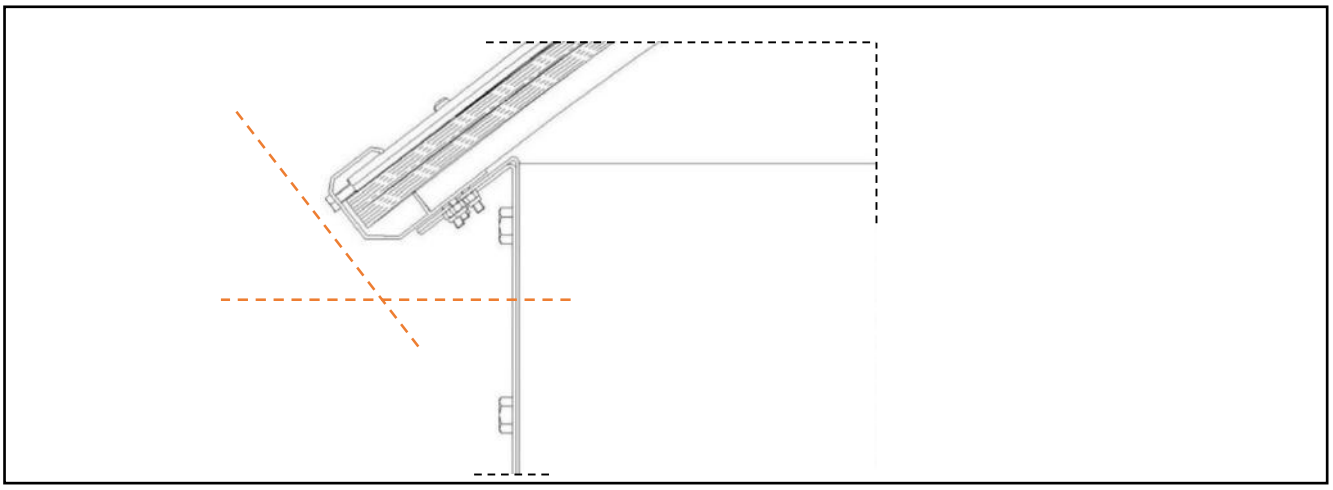


Figure 53 *Determining the cutting lines of the masking gasket*

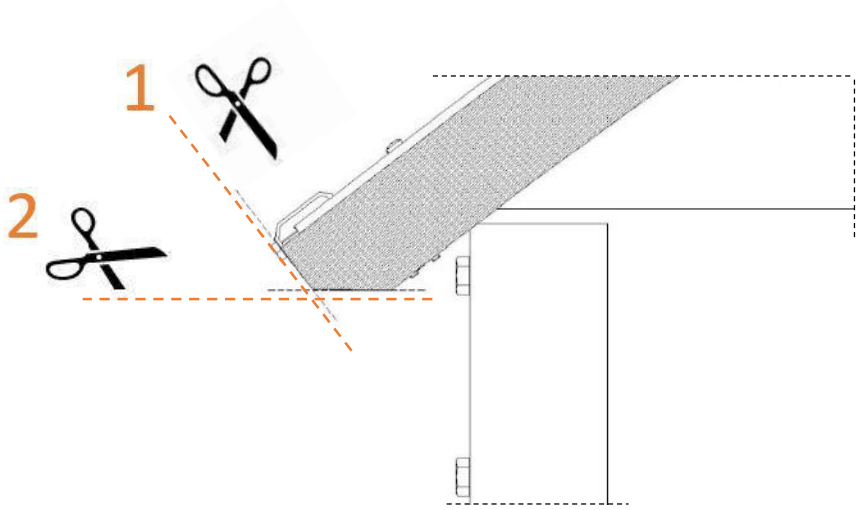


Figure 54 Cutting the masking gasket along the lines

20. Press down the polycarbonate panels with pressing profiles fitted with gaskets.
21. Under deeper pressing profiles lay polycarbonate strips. Each pressing profile perpendicular to the edge profiles should be fixed to the edge profile using M6x50 mm screws with washers and initially tensioned (Figure 39).
22. Fasten the pressing profiles to the bearing profiles with Ø 5.5 mm sheet metal screws with washers. Within the planned location of the vent, use countersunk screws inserted in prepared countersunk holes to fasten the pressing profiles. The screw length depends on the thickness of the polycarbonate panel used, the type of bearing profiles used in the rooflight structure (Table 5 Lengths of screws for fixing pressing profiles), or the type of multiple glazing used (Table 2, Table 3able and Table 4). For the best fit of the bearing profiles, tension the screws starting from the centre and proceeding towards the edge profiles.
    Important! The correct tightening torque for the screws holding the pressure profiles is 3-5 Nm!
23. Finally, tension each pressing profile at either end.
24. Press down the sections of JP-EPDM gasket between the edge profile and PCA panel according to (Figure 55 Method of fitting JP-EPDM gasket. A cross-section of a correctly inserted gasket is shown in Figure 39). JP-EPDM gaskets are supplied in sections. **Important! Do not trim the supplied gasket sections!** Shortening may cause the rooflight to lose its watertightness. Gaskets dedicated to the fields on both sides of the vent and the terminal fields have non-standard lengths. This gasket should be cut to the width of the field where it will be applied plus a 2 cm margin. If the width of the field exceeds the dimension of the gasket, fill the space with two equal sections of the gasket, keeping a margin of 2 cm. Now proceed according to (Figure 52 Fitting the end panel cover strip on 80 profile system). Correctly placed in the gasket approved in as per (Figure 39)

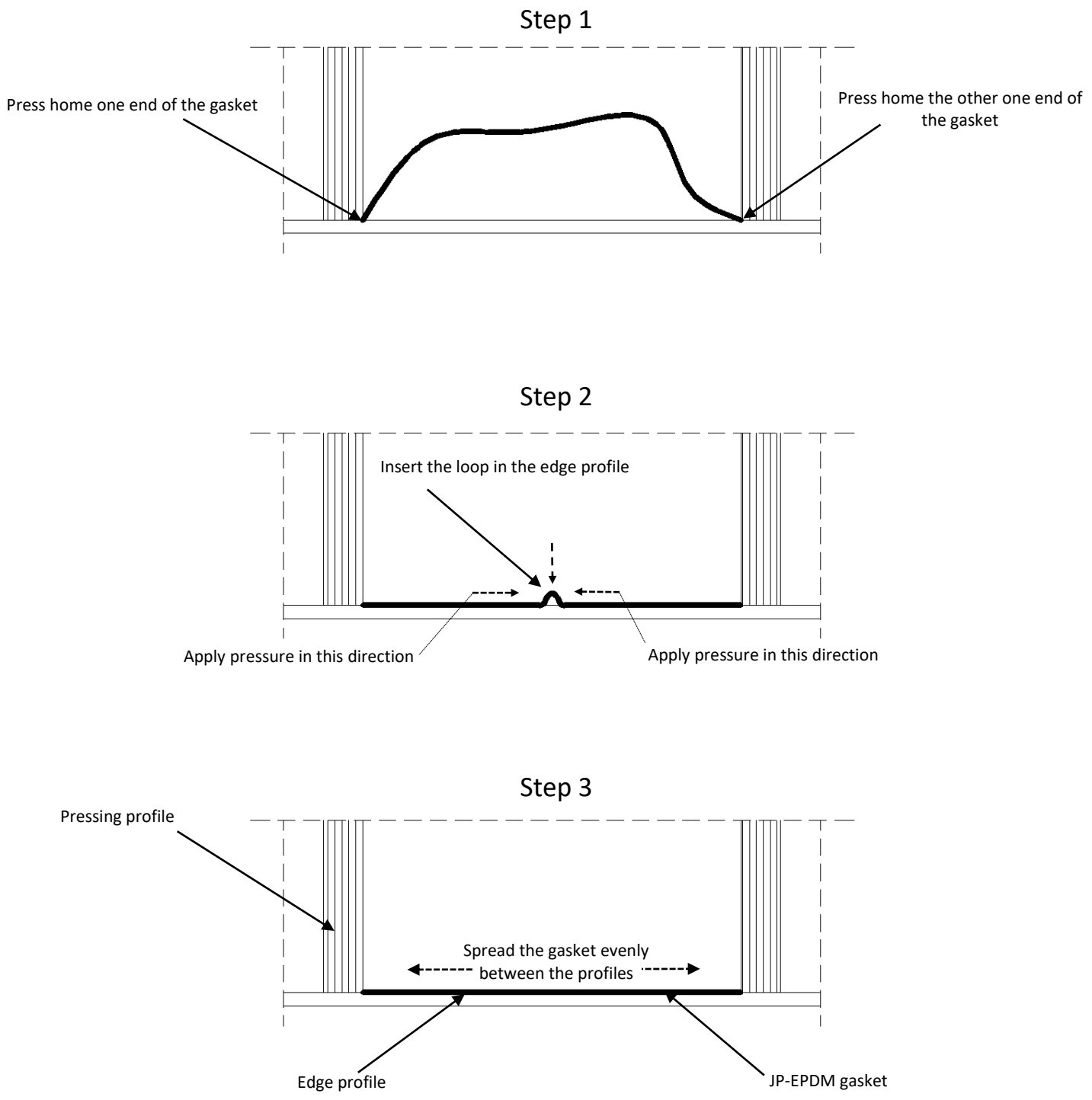


Figure 55 Method of fitting JP-EPDM gasket. A cross-section of a correctly inserted gasket is shown in Figure 39

VII. Additional operations limiting errors in roofing works at the tympanum panel

In the case of the accumulation of roof flashing material in the corners of the base, when there is a risk that the tympanum base will not be in line with the edge profile, it is recommended to undercut the edge profiles, as shown in the pictures below.

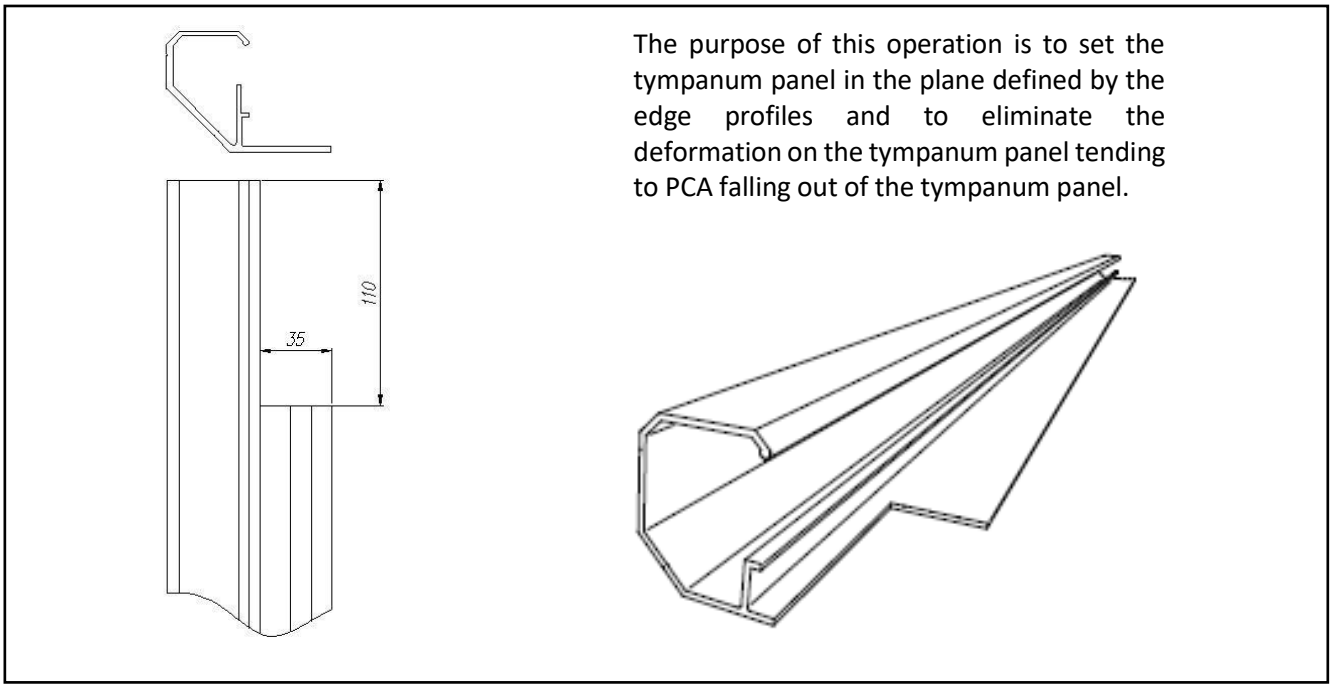


Figure 56 *Edge profile with a cut-out*

When the roof flashing material builds up in the corners, making it hard to evenly mount the tympanum panel, proceed as follows:
After glueing the PES gaskets to the base, start assembling the edge profiles, starting with the **profiles with the undercut**. The cut-out should be located at the base corner, as shown in the picture below.

Figure 57 *Example of how to make the cut-out in the edge profile*

VIII. 1200 J reinforcements to the top section structure

If the rooflight is to meet the SB 1200 class, reinforcements should be additionally fixed between the load-bearing profiles using Ø 5.5x13 mm self-tapping screws.

A. Types of 1200J reinforcements

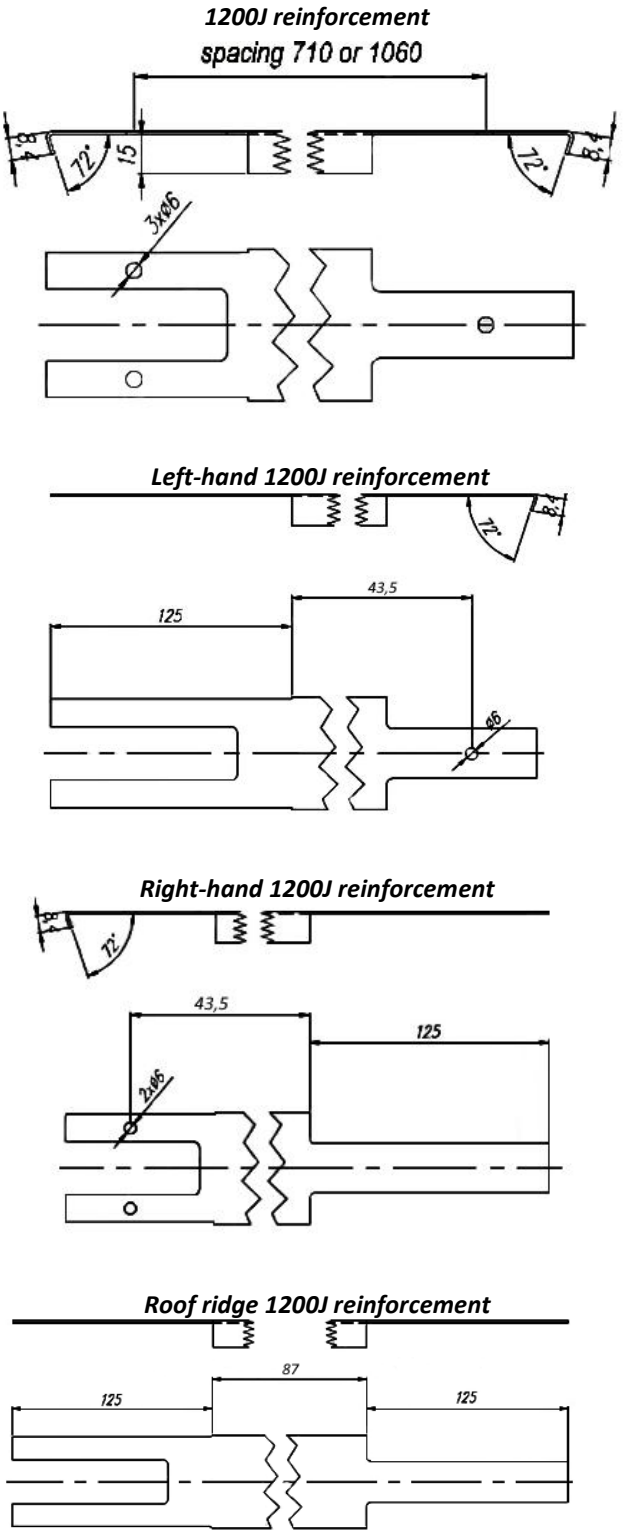
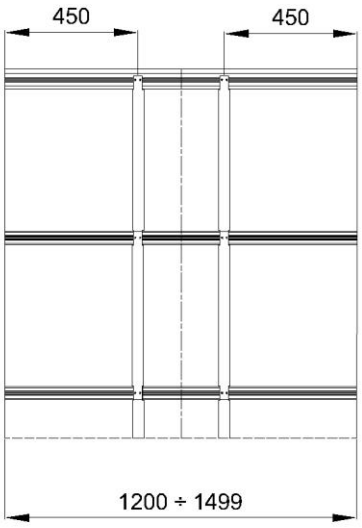


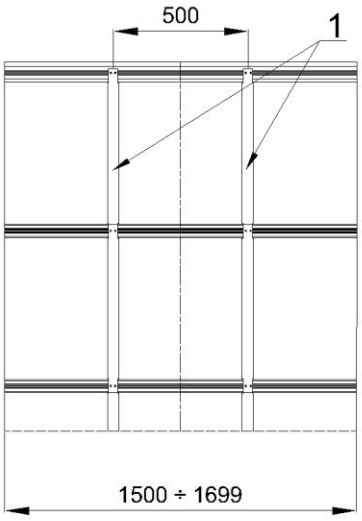
Figure 58 Types of 1200 J reinforcements

B. **Spacing of 1200 J braces**

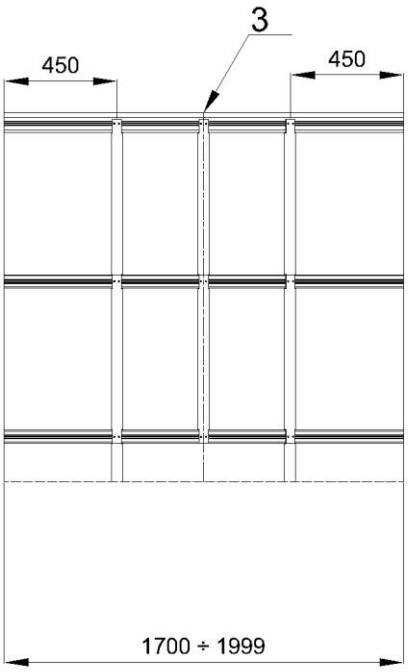
Rooflight with a span of 1200 ÷ 1499



Rooflight with a span of 1500 ÷ 1699



Rooflight with a span of 1700 ÷ 1999



Rooflight with a span of ≥ 2000

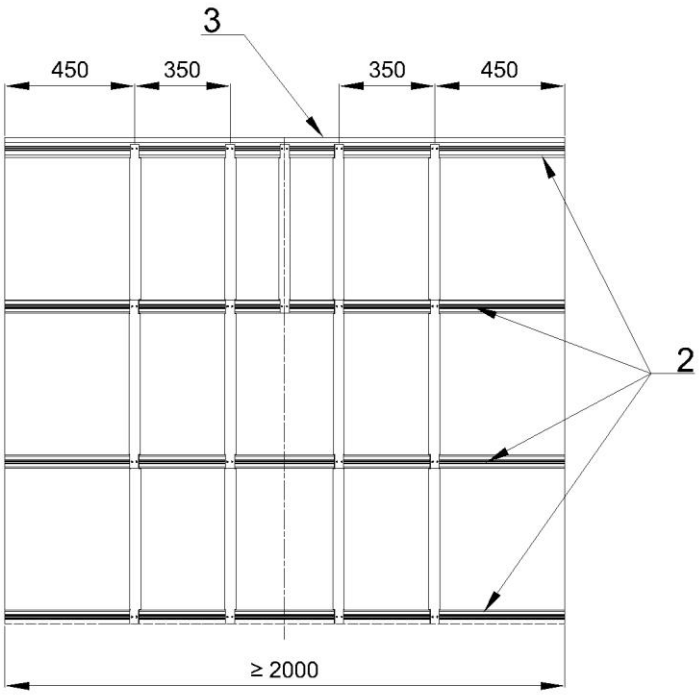


Figure 59 Layout of 1200 J reinforcements in the rooflight structure

1. Reinforcements,
2. Bearing profiles,
3. Tympanum end panel.

Attention! Apply additional reinforcements along the rooflight axis in the first and last two fields.

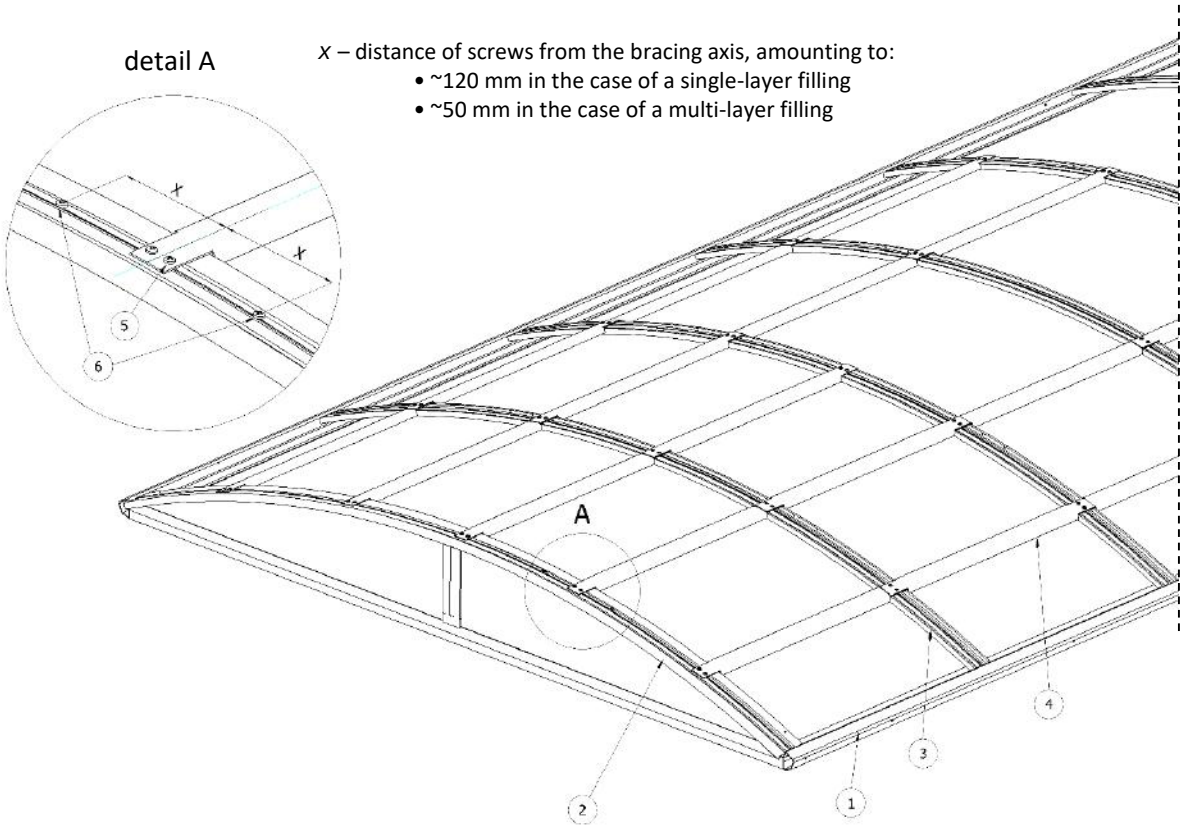


Figure 60 View of the reinforced rooflight structure

1. Edge profile,
2. Tympanum panel,
3. Bearing profile,
4. 1200 J reinforcement,
5. Self-drilling screw Ø 5.5x13 mm,
6. Self-drilling screw Ø 5.5 x *L* mm, where *L* is the length of the screw depending on the type of rooflight glazing (single or multi-layer)

The spacing and number of reinforcements depends on the rooflight width.

For single-layer fillings at a distance of 120 mm from the axis of the 1200 J reinforcements, use screws to fasten the pressing profiles in accordance with (Table 6 Lengths of screws for fixing pressing profiles in rooflights with 1200 J reinforcements) below.

For sandwich fillings, use the screws listed in Table 2, Table 3 or Table 4 on the previous pages.

Table 6 Lengths of screws for fixing pressing profiles in rooflights with 1200 J reinforcements

PC panel thickness	Screw length
[mm]	[mm]
10	38
16	42
20	45
25	50

C. Installation of 1200 J reinforcements

Use Ø 5.5x13 mm sheet metal screws to connect the 1200 J reinforcements with bearing profiles.

Follow the sequence of reinforcement installation.

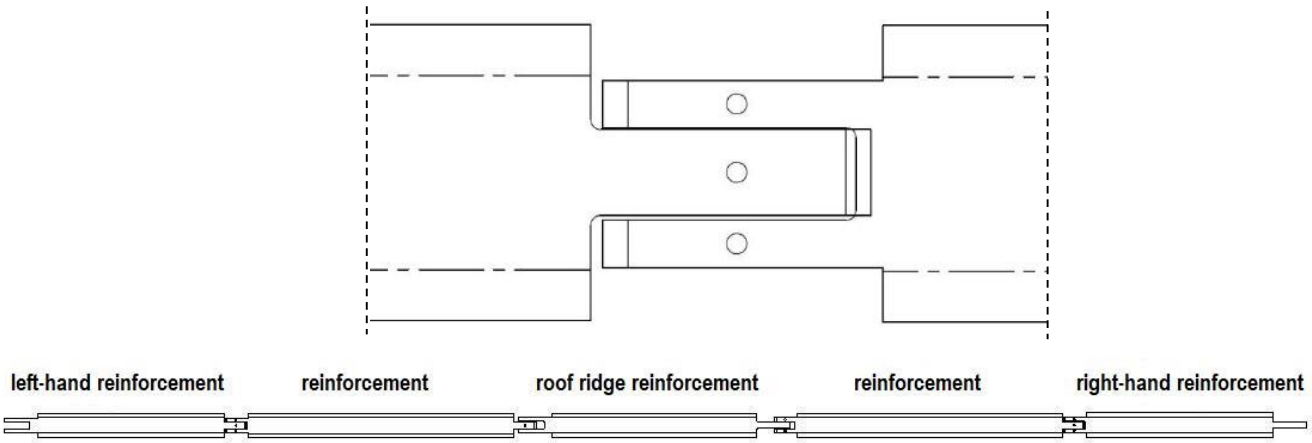


Figure 61 The sequence of installation of 1200 J reinforcements in a rooflight

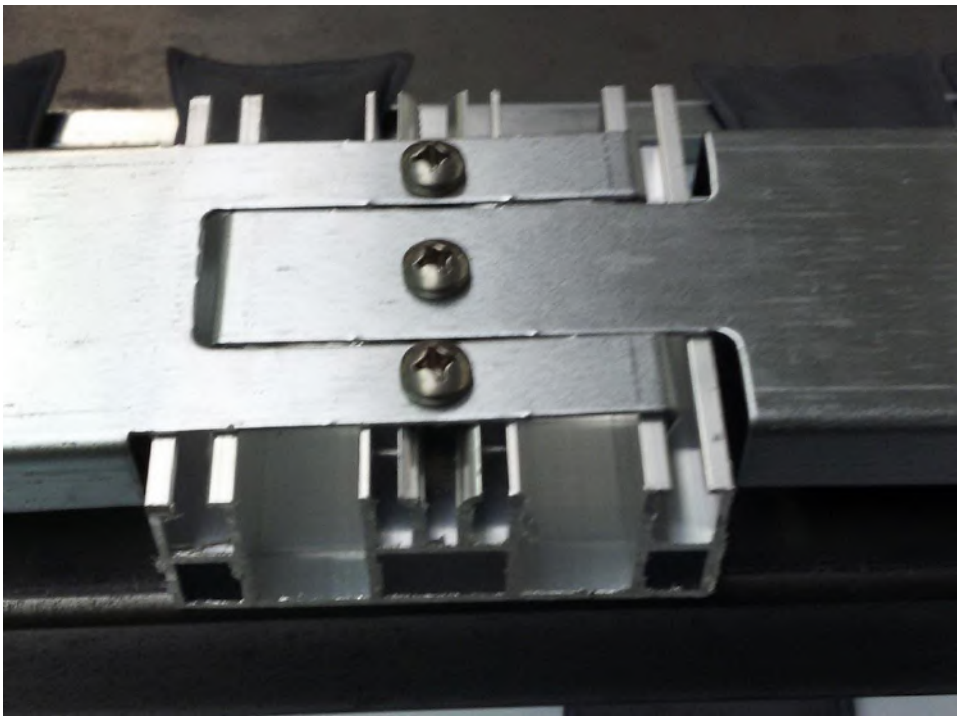


Figure 62 1200 J reinforcements installed on N80 bearing profile

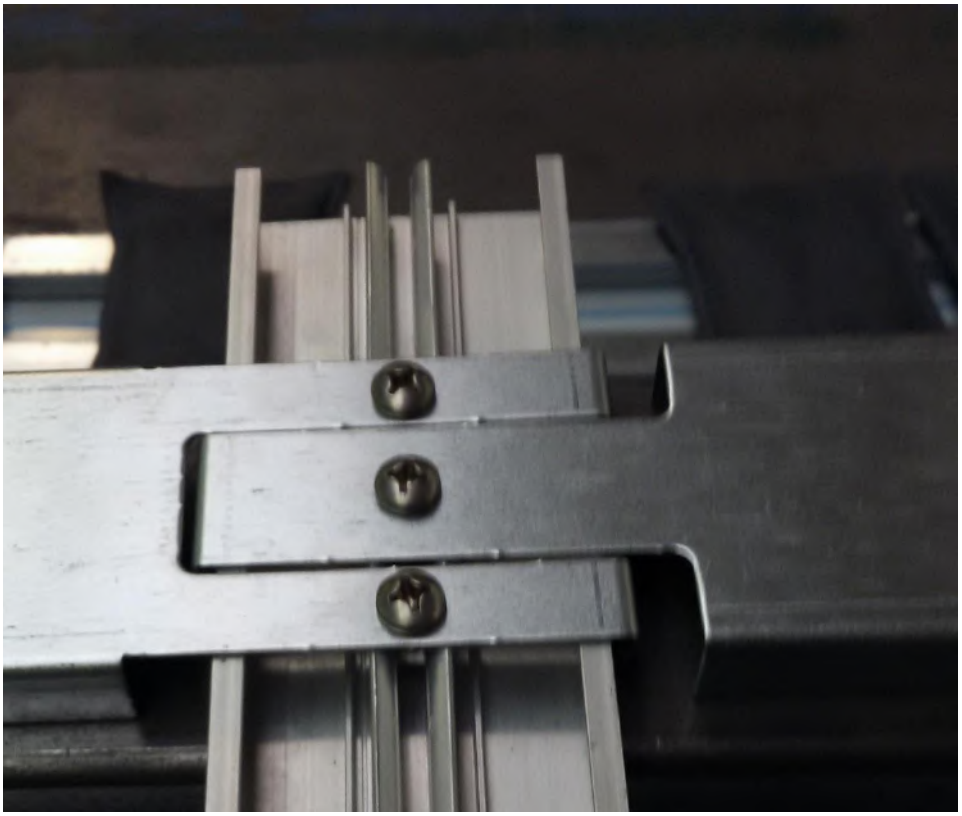


Figure 63 1200 J reinforcements installed on N60 bearing profile

Reinforcements installed in the ridge and at the tympanum panel are delivered in sections that enable adjusting the dimensions to suit the installed rooflight.
Cut the unbent and undrilled handles of the reinforcements accordingly so as to match them to the layout of the load-bearing or tympanum profiles.
Make holes in them for screws Ø 5.5x13 mm according to the spacing between the sockets of the bearing profiles.

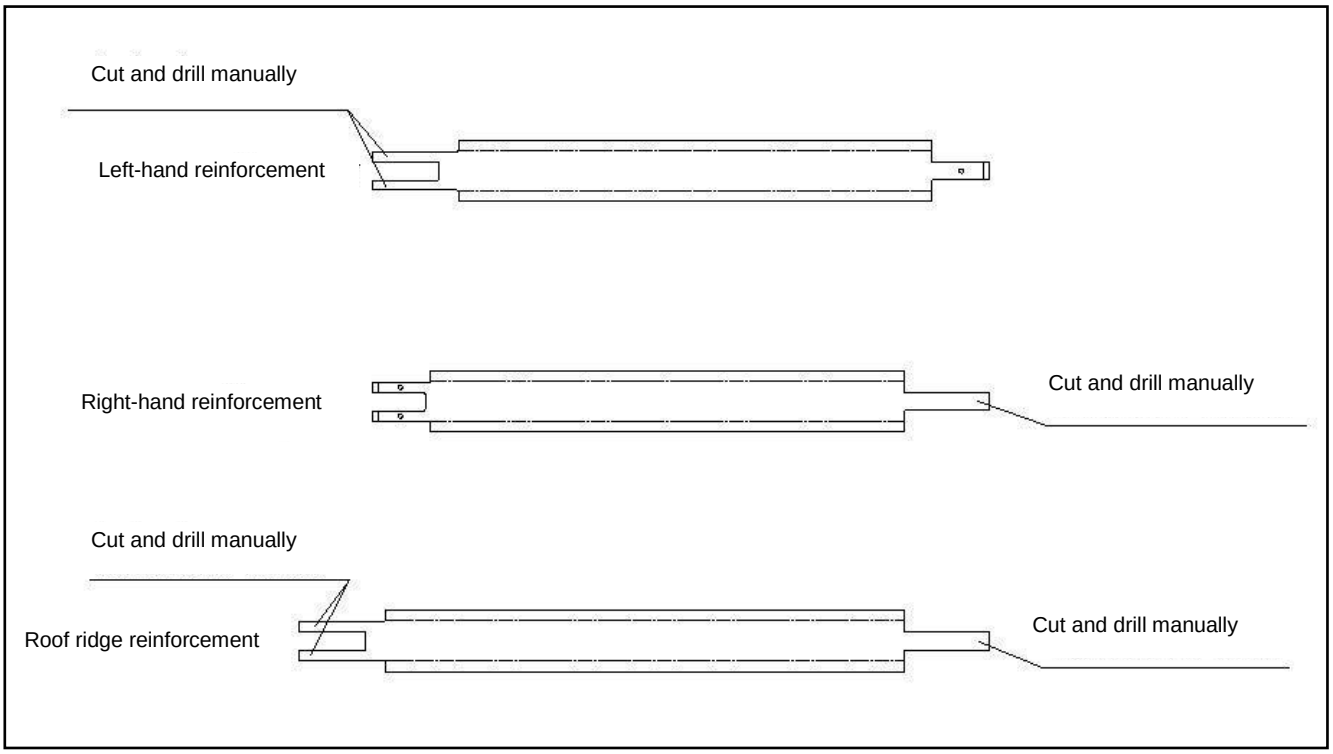


Figure 64 Holders of reinforcement used to suit spacing of bearing profiles

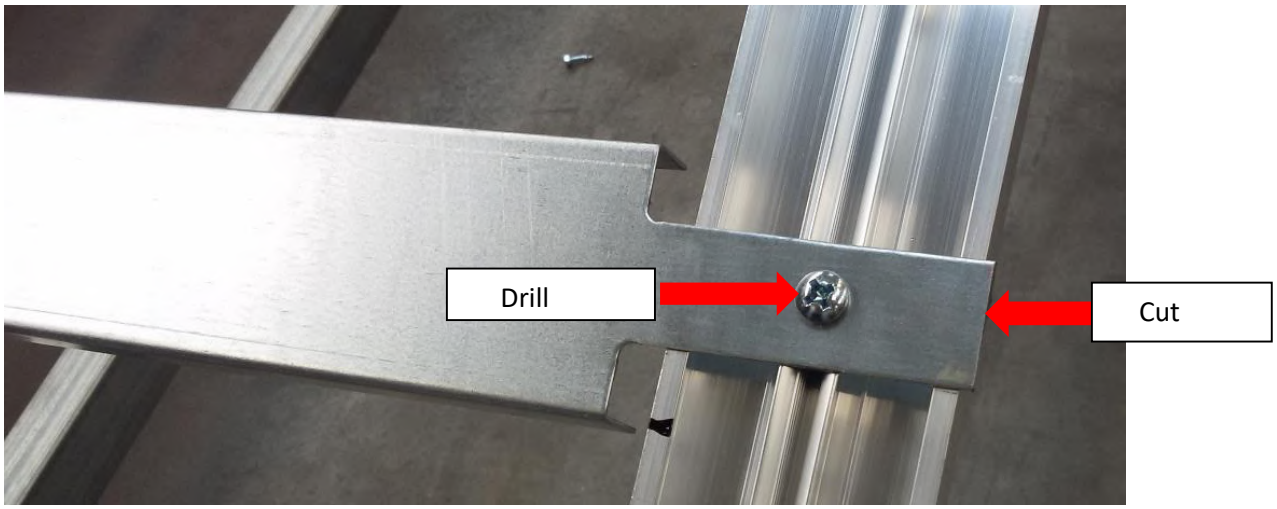


Figure 65 Example brace holder adjusted to suit the N60 bearing profile location

IX. Assembly of triangular rooflight

1. The assembly should start by fixing the edge profiles to the rooflight base. First, lay out the profiles on the roof surface along the rooflight base according to the drawing attached to the delivery.

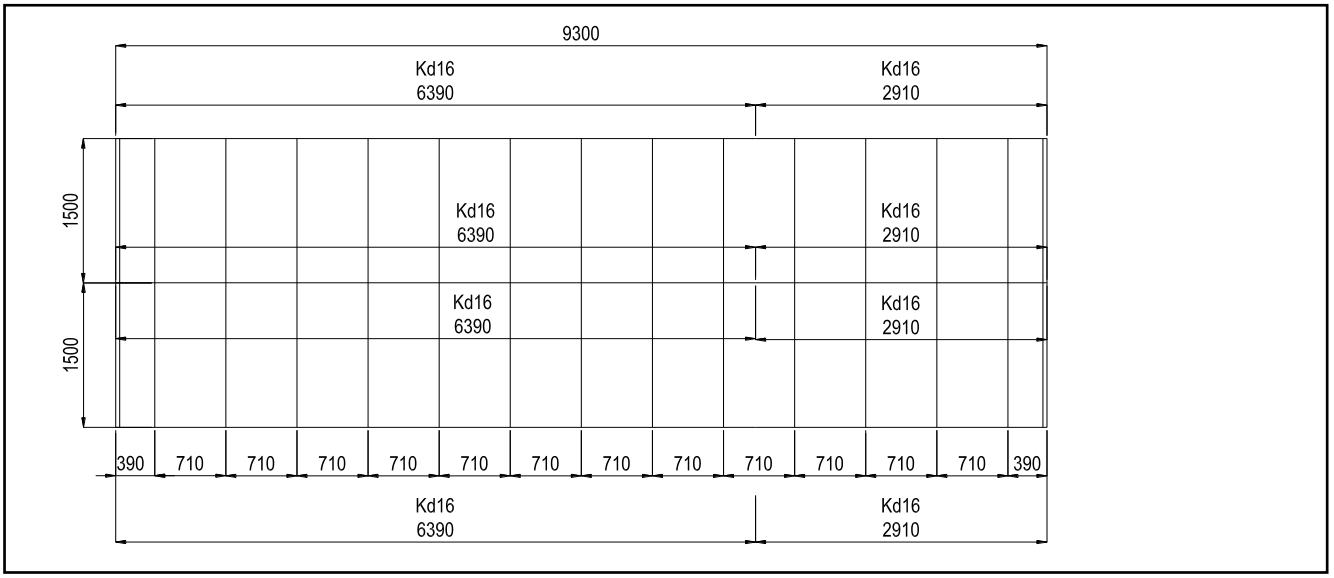
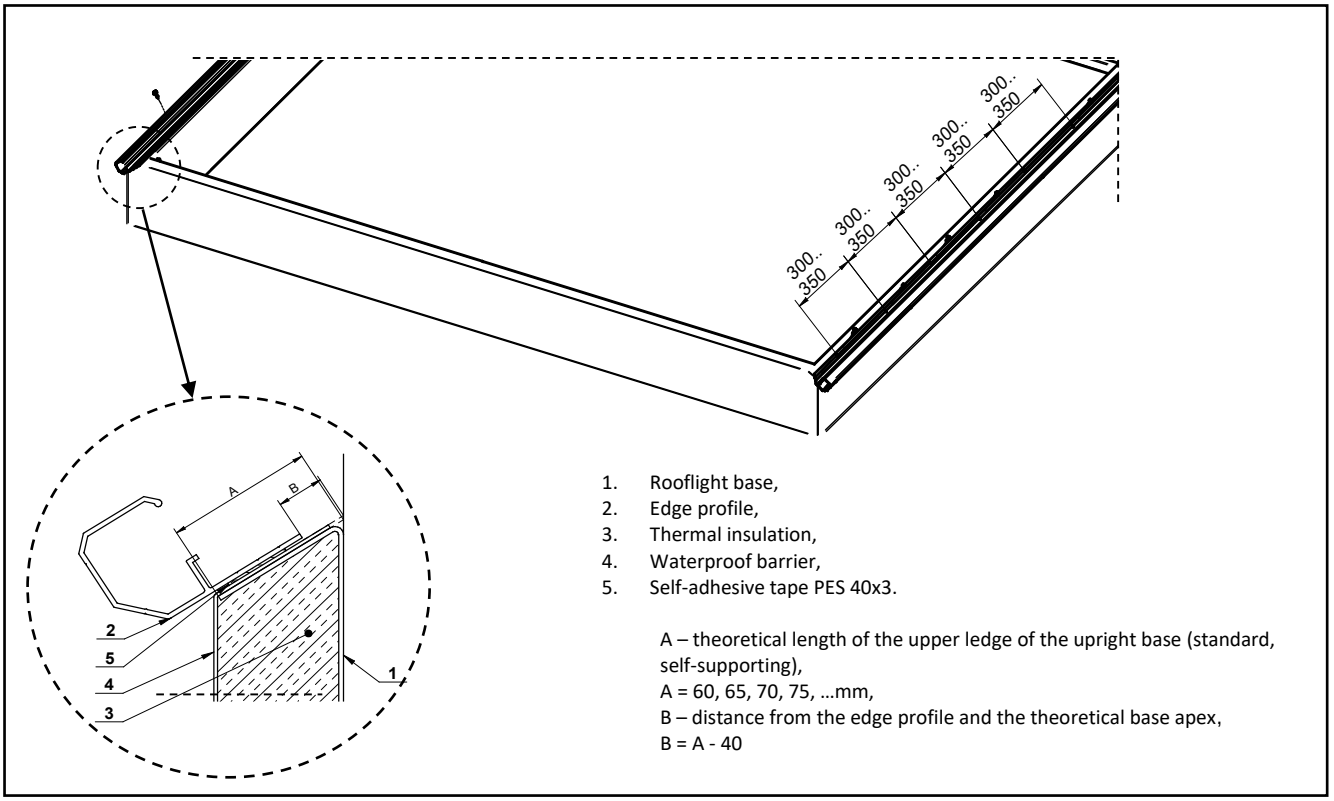


Figure 66 Example layout of the bearing and edge profiles of a dual-pitched rooflight

2. Next, apply PES 40x3 self-adhesive tape along the rooflight base under the edge profiles and the tympanum panel. Once the base has been assembled and insulated, the edge profiles should be fixed to it with Ø 6.3x32 mm self-drilling screws spaced at 300-350 mm intervals. The base should be positioned such that there are at least two screws between the tensioning screw holes. The position of the edge profile in relation to the base should be as shown in (Figure 66 Example layout of the bearing and edge profiles of a dual-pitched rooflight). Assembly of edge profiles.



1. Rooflight base,
2. Edge profile,
3. Thermal insulation,
4. Waterproof barrier,
5. Self-adhesive tape PES 40x3.

A – theoretical length of the upper ledge of the upright base (standard, self-supporting),
A = 60, 65, 70, 75, …mm,
B – distance from the edge profile and the theoretical base apex,
B = A - 40

Figure 67 Assembly of edge profiles

3. Now place the assembled tympanum panel, in upright position, on the tympanum panel base and fasten it to the base with Ø6.3x32 mm self-drilling screws, fixed at 300-350 mm intervals. Once the tympanum panel has been fixed to the base, the tympanum profile should be fixed to the longitudinal base with Ø6.3x32 mm piece and to the edge profile.

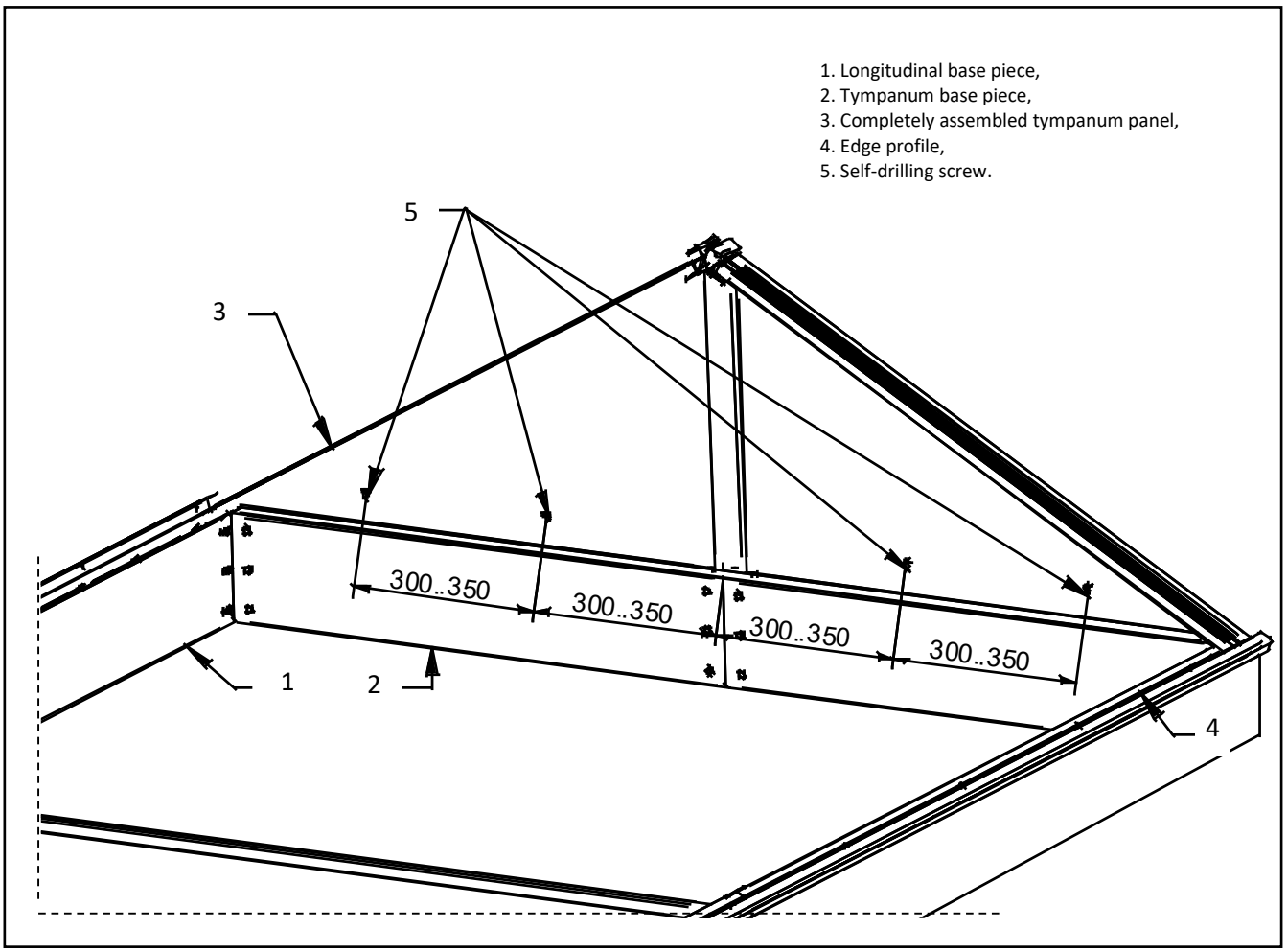


Figure 68 Assembly of the tympanum panel

Assemble together the bearing profiles and the ridge assembly (two edge profiles connected with an angle bar) according to the documentation accompanying the delivery. The bearing profile axis must coincide with the axis of tension screw holes in the edge profile (not to be confused with drainage holes) according to the supplied drawing according to (

Figure 67 Assembly of edge profiles).

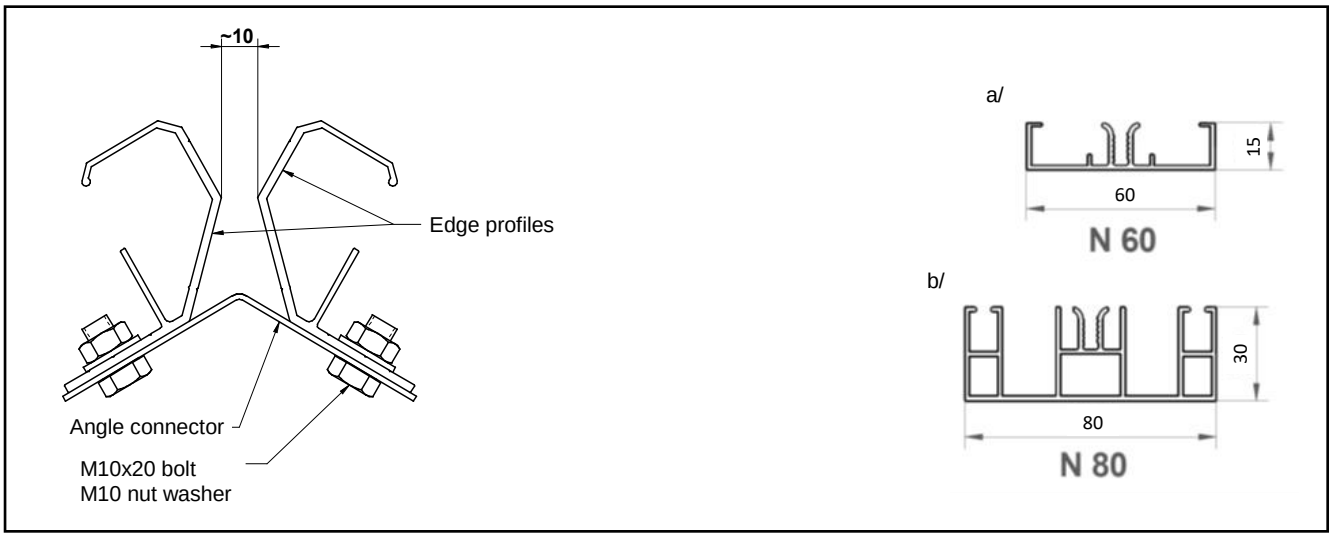


Figure 70 *Cross-section through the assembled set of ridge profiles (ridge assembly)*

Figure 69 *Bearing profiles: a/ N60; b/ N80*

4. The bearing profiles should be supported on the edge profile ledges.

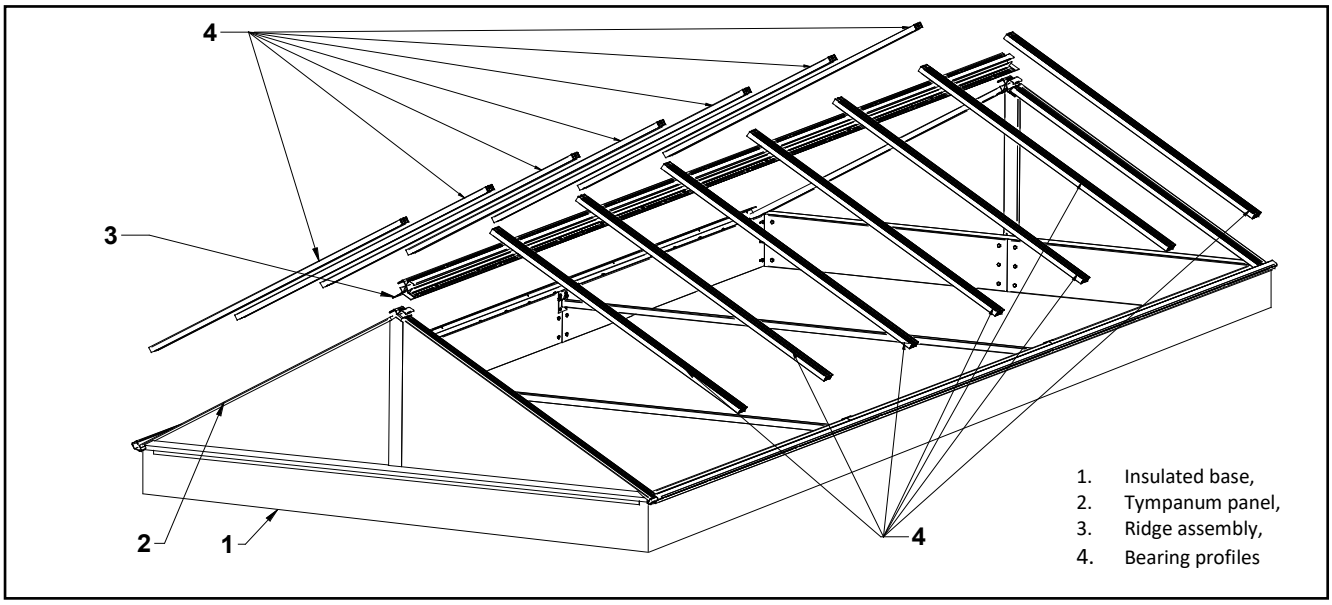
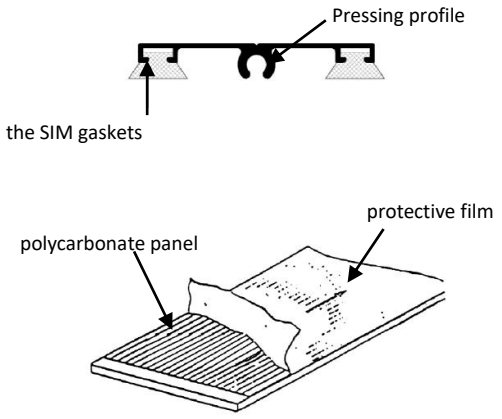


Figure 71 *Installation of bearing profiles and assembled set of ridge profiles (step 1)*

5. Fix the bearing profiles to the edge profile and to the base using Ø 6.3x32 mm self-drilling screws (2 pcs)

6. **For rooflights in the Broof(t1) class:** before laying the polycarbonate panels, prepare and place the polyester panels, one by one, starting from one of the tympanums, in accordance with the bearing profile layout and panel dimensions. The polyester panel at the tympanum panel should be flush with the tympanum profile. The end of the next panel must fall within a bearing profile. The polyester panels must be set back from the edge profile side, evenly on both sides, by ca. 17 … 22 mm. After laying the polyester panels, proceed to the next operation – laying polycarbonate panels. Polycarbonate panels should be put directly on the polyester panels.

   The Broof(t1) class rooflights are fitted with a special EPDM, non-fire spreading (NRO) seal.
   Important! Polyester and polycarbonate panels should be installed in favourable weather conditions without rain or snow. The panels must be dry and clean.



a. Check and adjust, if required, the SIM gaskets fitted in the pressing profiles (D60 or D80). Cut to size if too long. Pulled out of the slot - press in.

Figure 72 Preparation of pressing profiles and polycarbonate panels

7. Polycarbonate panels should be put with the UV-resistant side facing up (designated with the “VV” symbol on the panel).
8. Remove the protective film from the polycarbonate panels.

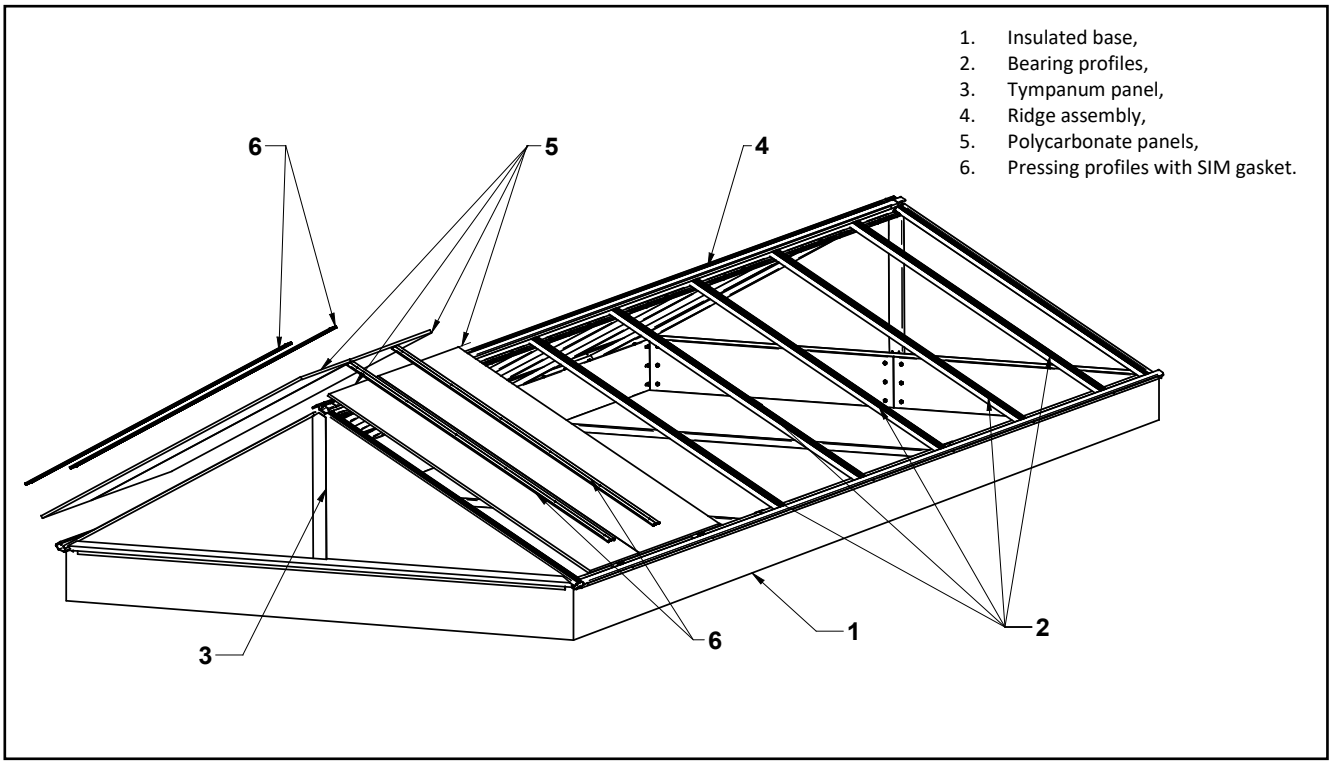


Figure 73 Installation of polycarbonate panels and pressing profiles (step 1)

9. Place the polycarbonate panels one by one, starting from one of the tympanums, in accordance with the bearing profile layout. The supplied panels should be oriented such that the impermeable (aluminium) tape faces the tympanum and the UV resistant side faces up (designated with letter the “VV” on the polycarbonate panel). The panel at the tympanum should be flush with the tympanum profile. The end of the next panel must fall within a bearing profile. The polycarbonate panels must be set back from the edge profile side by 20 … 25 mm, evenly on both sides.

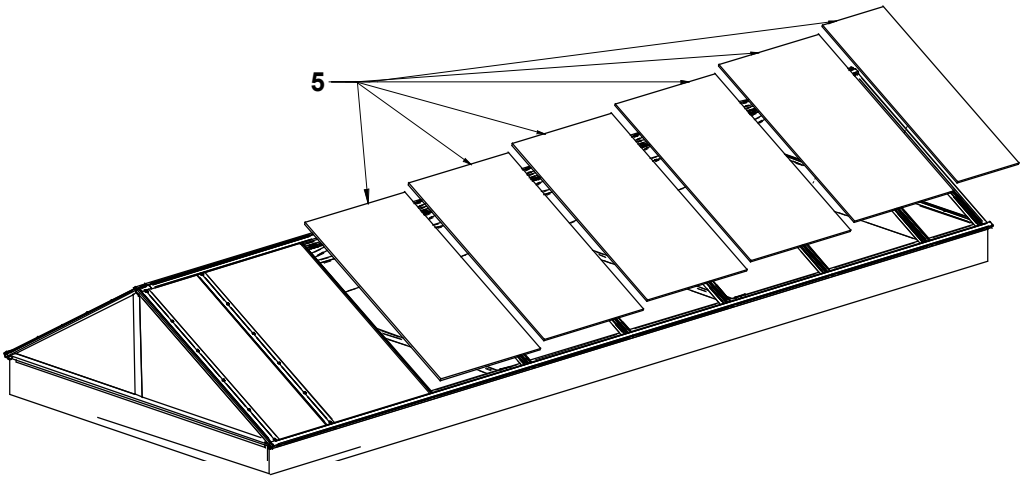


Figure 74 *Assembly of polycarbonate panels and pressing profiles (step 2)*

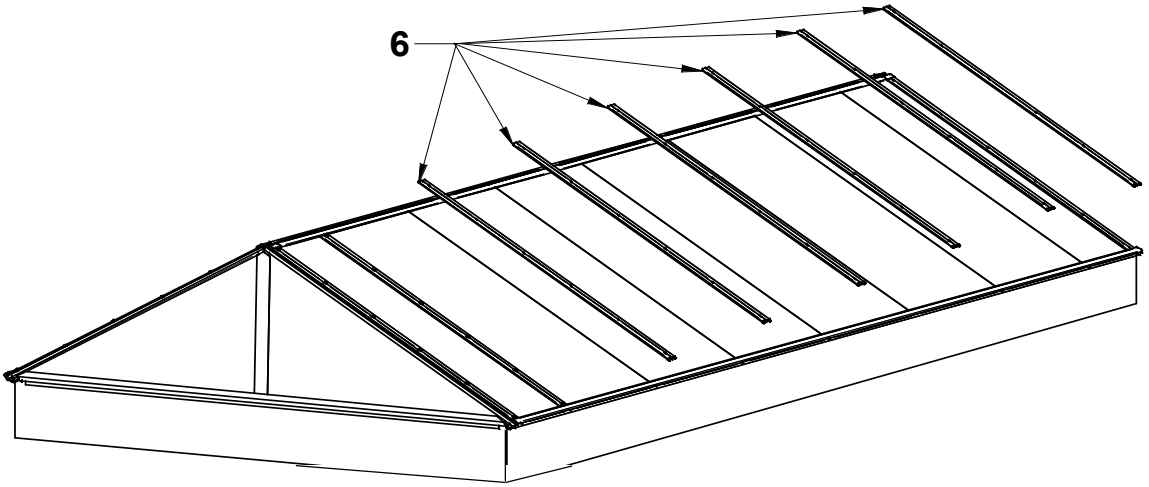
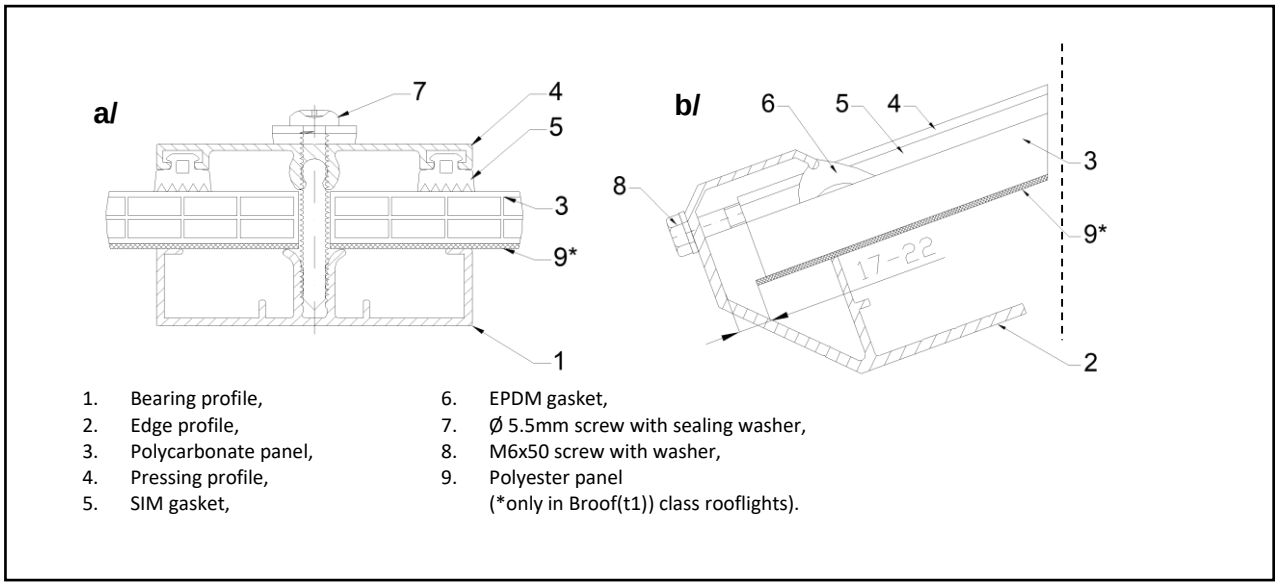


Figure 75 Assembly of polycarbonate panels and pressing profiles (step 3)

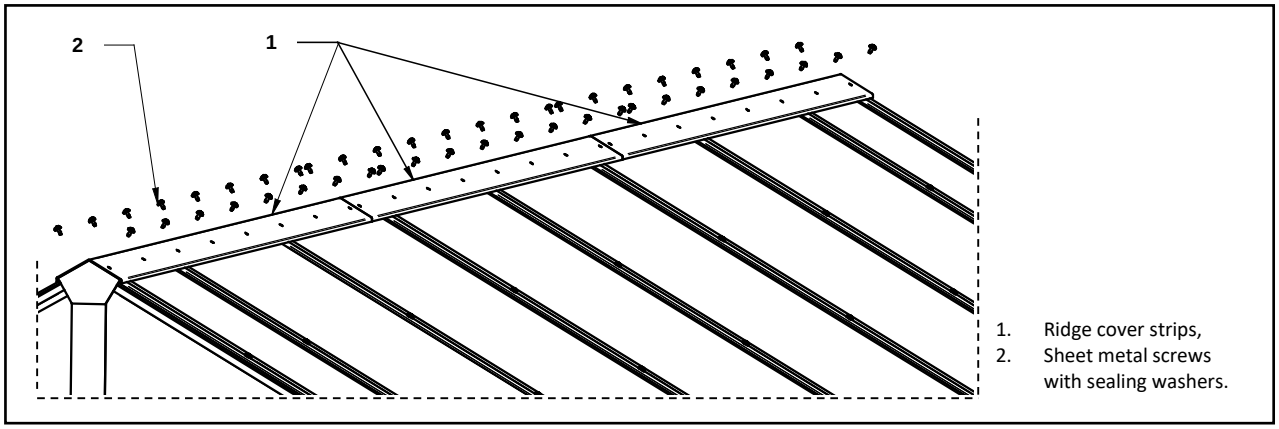
10. Place pressing profiles with seals on joints between two adjacent panels on the bearing profiles and on the terminal panels as the panels are laid. The axes of bearing and pressing profiles must coincide. Insert the pressing profile ends into the edge profile.
11. Fix each pressing profile at both ends to the edge profile using M6x50 mm screws with washers.
12. The pressing profiles should be fixed to the bearing profiles with Ø 5.5 mm sheet metal screws with washers. Under the vents, the pressing profiles should be fixed with countersunk screws. The screw length depends on the thickness of the polycarbonate panel and the type of bearing profiles of the rooflight structure (Table 5 Lengths of screws for fixing pressing profiles).
13. Tension each pressing profile at both ends using M6x50 mm screws with washers.
14. Press down the sections of JP-EPDM between the edge of the edge profile and PCA panel according to (Figure 55 Method of fitting JP-EPDM gasket. A cross-section of a correctly inserted gasket is shown in Figure 39). JP-EPDM gaskets are supplied in sections. **Important! Do not trim the supplied sections! Shortening may cause the rooflight to lose its watertightness**. Gaskets dedicated to the fields on both sides of the vent and the terminal fields have non-standard lengths. This gasket should be cut to the width of the field where it will be applied plus a 2 cm margin. If the width of the field exceeds the dimension of the gasket, fill the space with two equal sections of the gasket, keeping a margin of 2 cm. Now proceed according to (Figure 52 Fitting the end panel cover strip on 80 profile system). A cross-section of a correctly inserted gasket is shown in (Figure 75 Assembly of polycarbonate panels and pressing profiles (step 3)).



1. Bearing profile,
2. Edge profile,
3. Polycarbonate panel,
4. Pressing profile,
5. SIM gasket,
6. EPDM gasket,
7. Ø 5.5mm screw with sealing washer,
8. M6x50 screw with washer,
9. Polyester panel
   (*only in Broof(t1)) class rooflights).

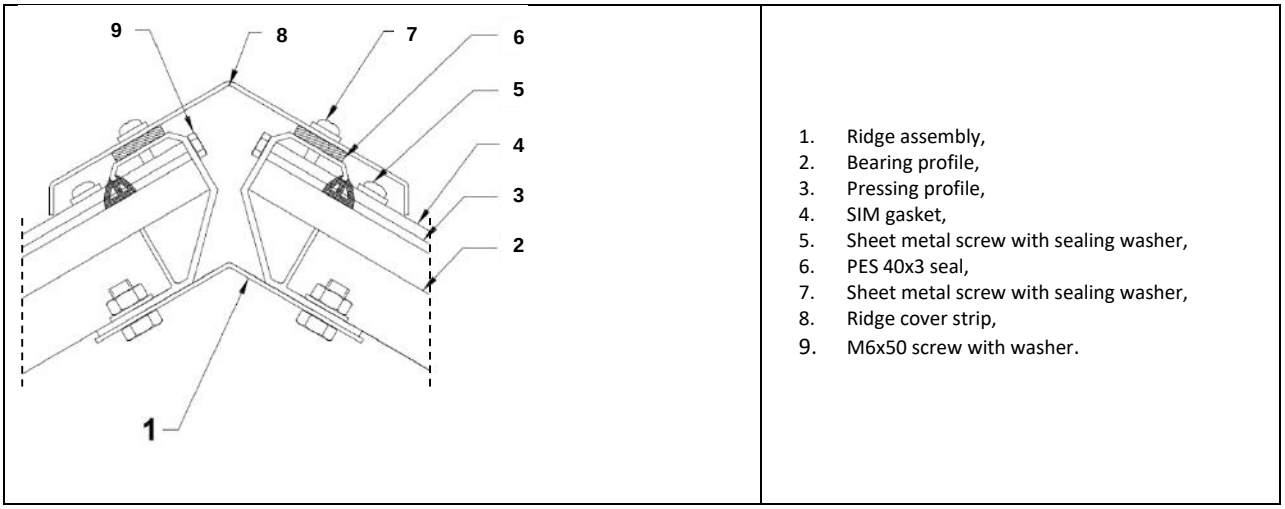
Figure 76 Method of connecting: a/ pressing profiles with bearing profiles; b/ edge profiles with pressing profiles

15. Apply PES 40x3 self-adhesive tapes to the ridge assembly edge profiles.
16. Fit the ridge cover strips using Ø 5.5 mm screws with sealing washers. Intervals between screws: 400 … 500 mm. The screw length depends on the thickness of the polycarbonate panel and the type of bearing profiles of the rooflight structure (Table 5 Lengths of screws for fixing pressing profiles).



1. Ridge cover strips,
2. Sheet metal screws with sealing washers.

Figure 77 Installation of ridge cover strip

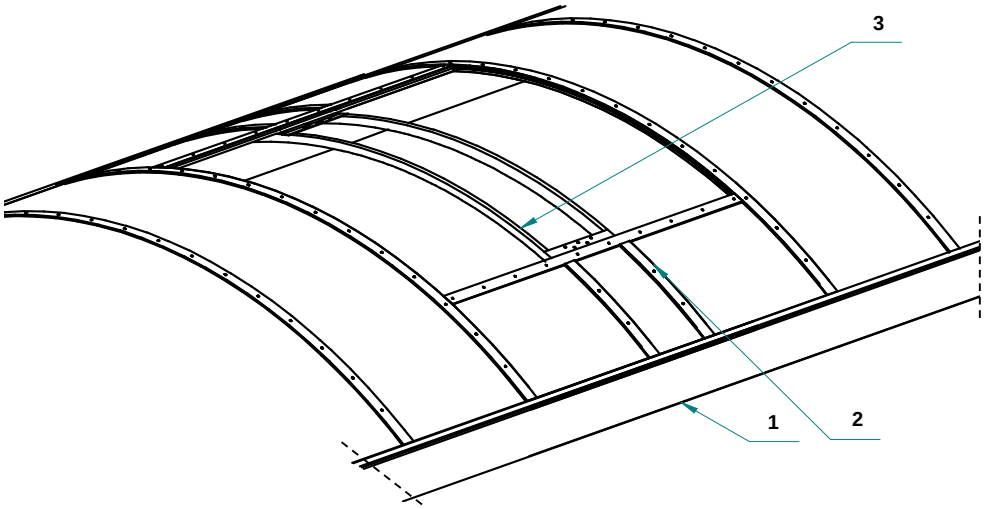


1. Ridge assembly,
2. Bearing profile,
3. Pressing profile,
4. SIM gasket,
5. Sheet metal screw with sealing washer,
6. PES 40x3 seal,
7. Sheet metal screw with sealing washer,
8. Ridge cover strip,
9. M6x50 screw with washer.

Figure 78 Cross section through correctly installed ridge of a triangular rooflight

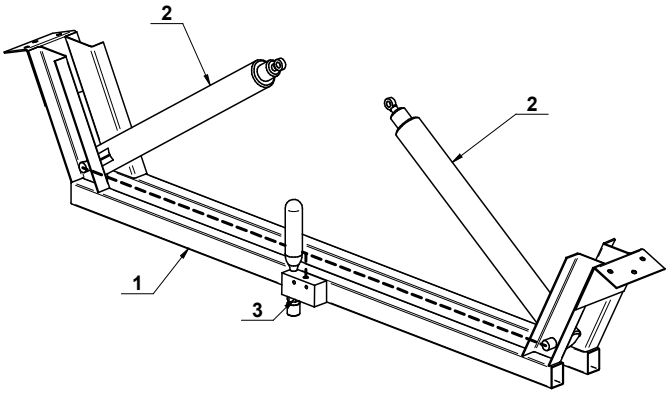
X. Installation of a double-leaf vent integrated into a continuous rooflight

1. Assemble the rooflight base according to Sec. I.
2. Assemble the top section of the rooflight according to Sec. II.



1. Insulated base,
2. Continuous rooflight with vent support frame,
3. Arc-shaped supports.

Figure 79 Example rooflight prepared for vent installation



1. Crossbar,
2. Smoke vent actuators (pneumatic or electric),
3. Thermal valve with CO_2 bottle and thermal fuse (for pneumatic actuator).

Figure 80 Opening mechanism of the smoke vent prepared for assembly (comes factory assembled in one piece)

3. Prepare the operating mechanism for assembly, and set the actuators vertically. Install the opening mechanism in the brackets of the arc-shaped support. Connect the opening mechanism with the brackets by means of M8x20 bolts with nylon lock nuts.

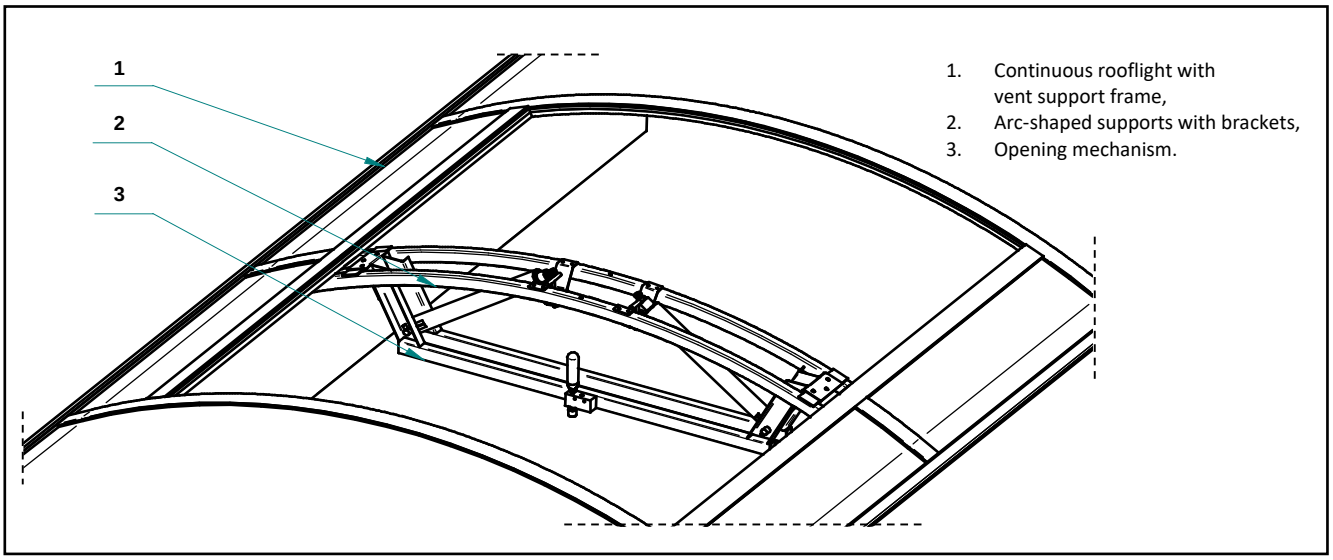


Figure 81 *Assembly of the control system*

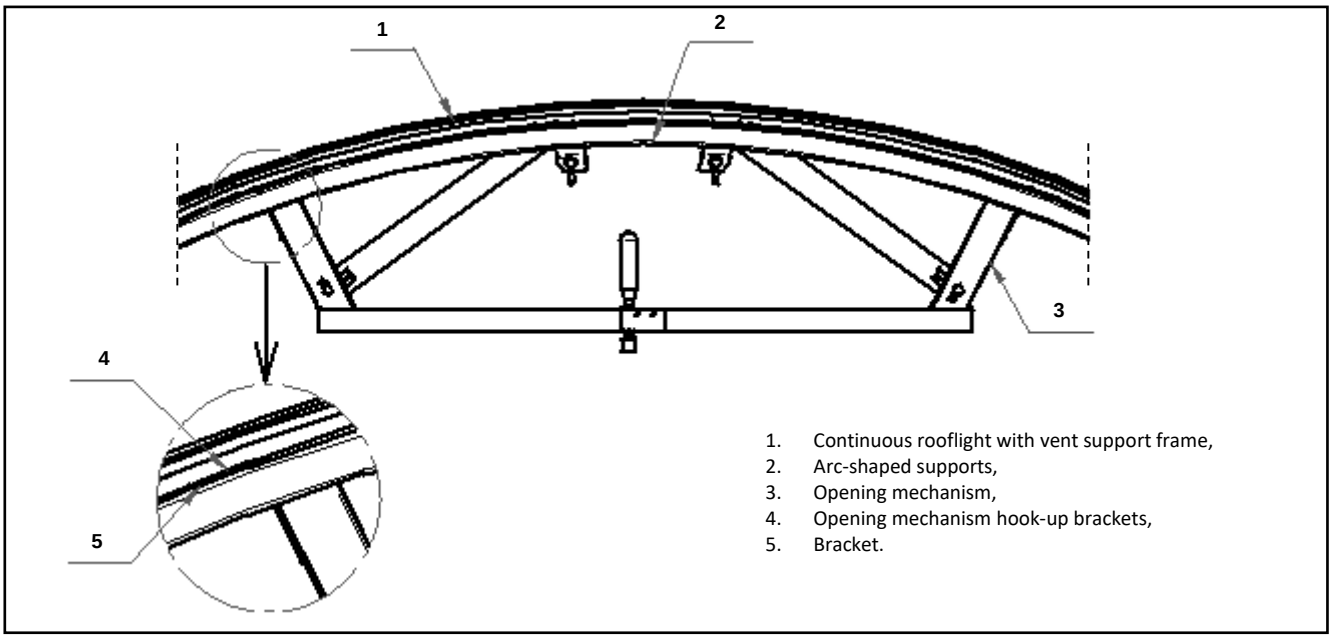


Figure 82 *Assembly of the operating mechanism – side view*

4. If the vents will be used solely for daily ventilation, the crossbar with electric actuators should be fixed to the vent support frame using 4.8x12 pop rivets (16 pcs per vent).

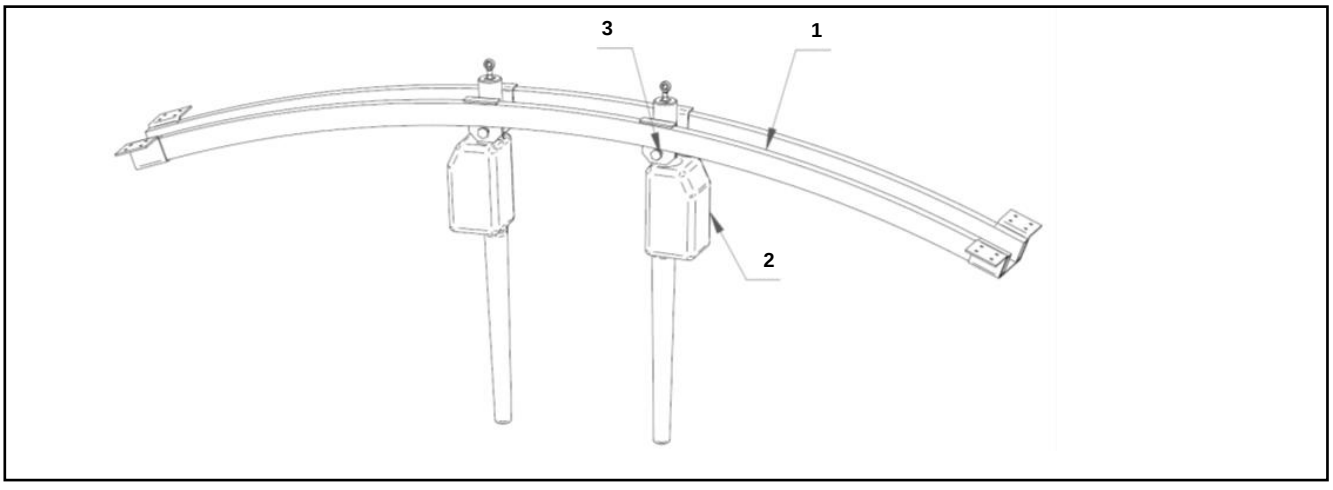


Figure 83 *Crossbar with electric actuators ready for installation*

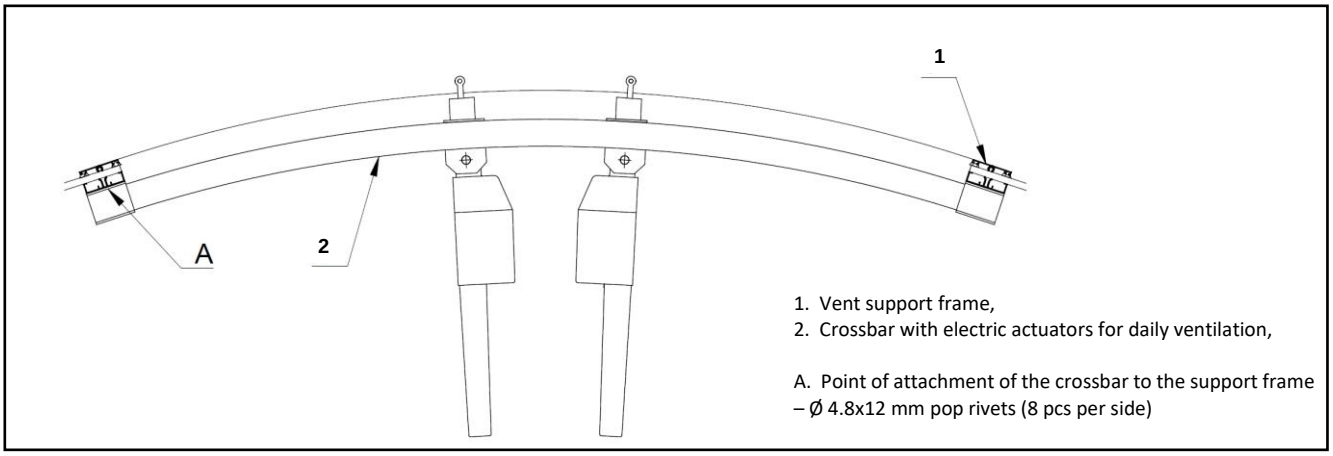


Figure 84 Assembly of crossbar z with electric actuators of ventilation hatch

5. Apply the PES 40x3 self-adhesive tape to the pressing profiles of the vent support frame.
6. Place the vent on the prepared support frame. Secure the vent base using Ø 5.5 mm screws with a sealing washer. The screws should be fixed at 300 … 350 mm intervals over the entire base perimeter. The screw length depends on the thickness of polycarbonate panel and the type of bearing profiles of the rooflight framework – see (Table 5 Lengths of screws for fixing pressing profiles) or, in the case of multiple glazing: (Table 2 Selection of screw length depending on the glazing option and fixing position) and (Table 3 Selection of screw length depending on the glazing option and fixing position). Start assembly at the vent centre and proceed towards the edge profiles.

Table 7 Lengths of screws for fixing the vent base

PC panel thickness	Screw length
[mm]	[mm]
10	38
16	45
20	50
25	55

For the Broof(t1) class rooflights the vent should be supplied with a factory installed polyester panel directly underlying the polycarbonate panel.

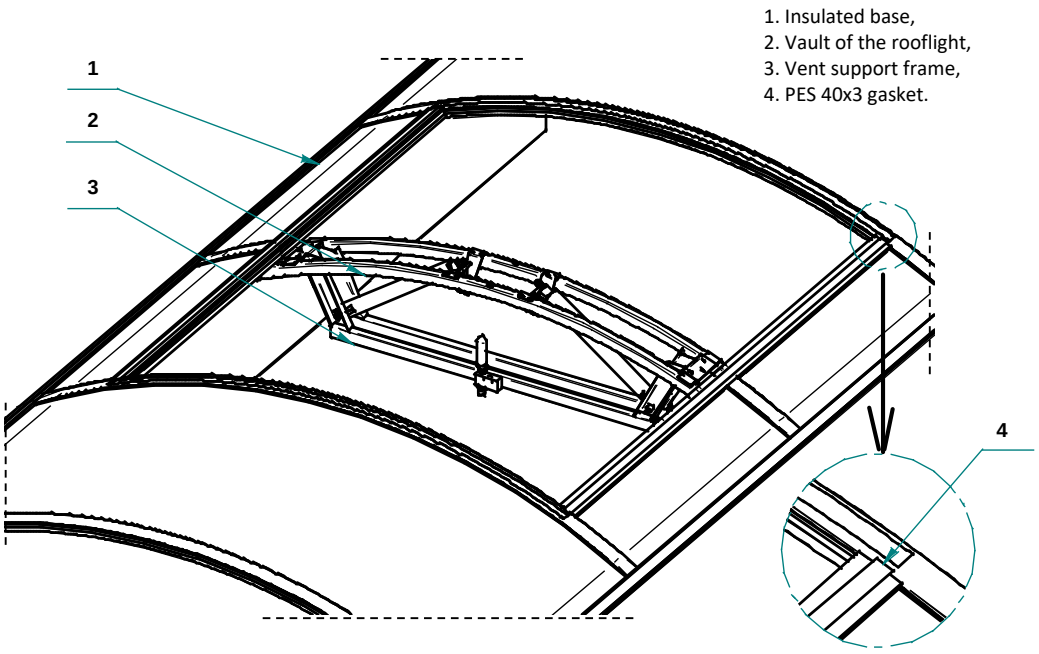


Figure 85 *Preparation of the vent supporting frame for vent installation*

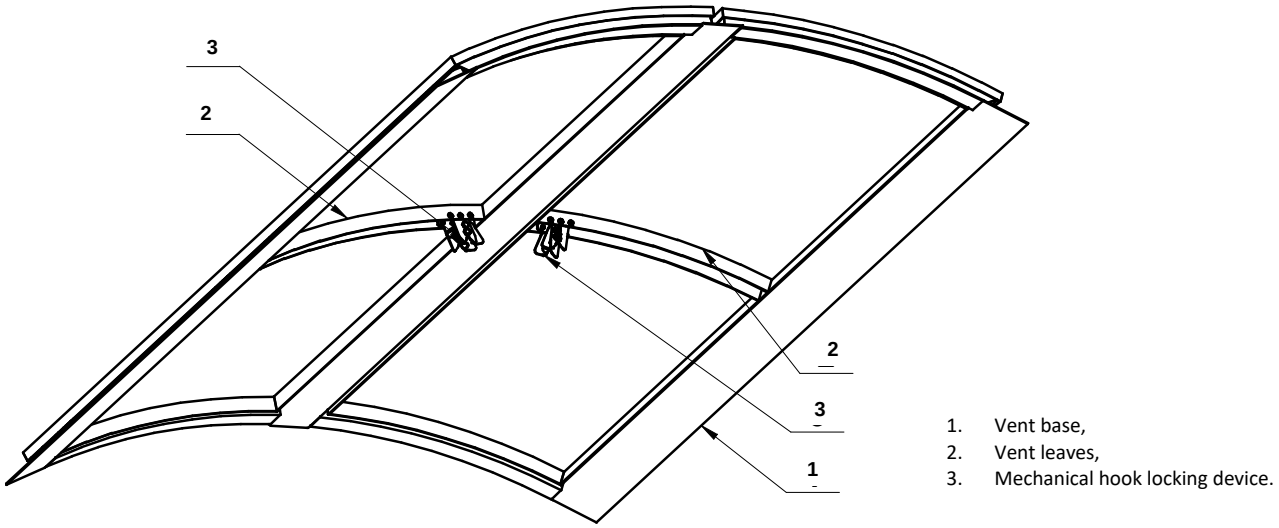


Figure 86 *Double-leaf vent prepared for installation (comes factory assembled in one piece)*

7. **Note! Before shipment, the vent leaves have been secured with transport security brackets, preventing uncontrolled opening during transport.**

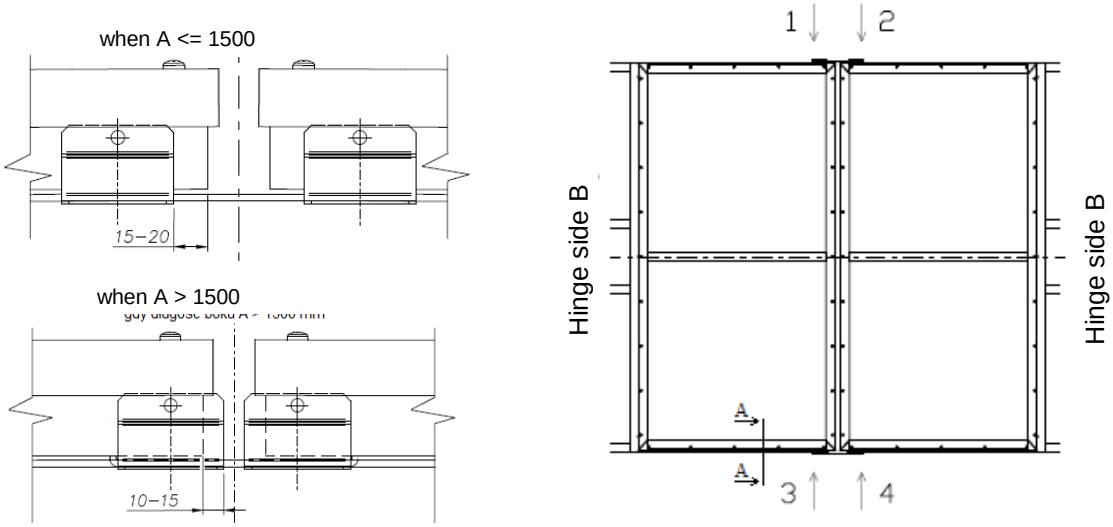


Figure 87 View of the transport security brackets on the vent leaves, on the right – the number land position of the securing brackets on the leaf

Before connecting the actuators remove the security brackets as shown below:

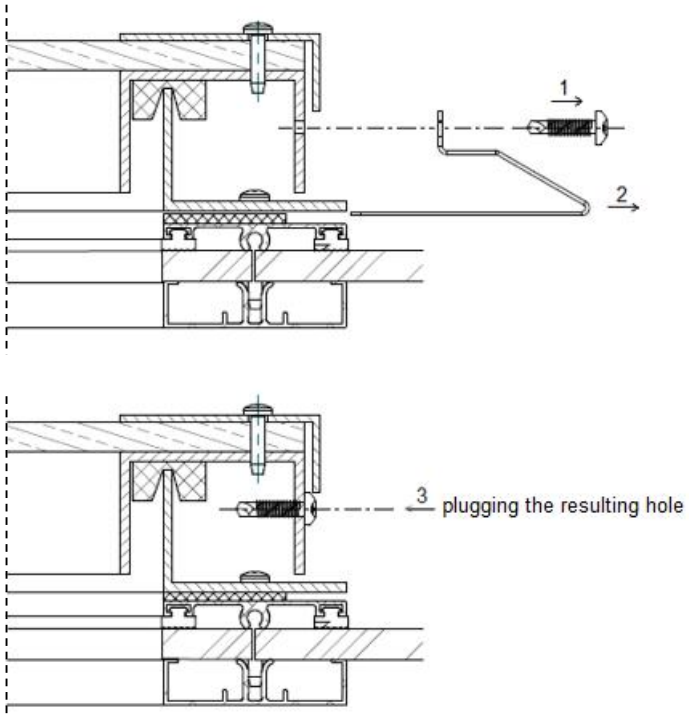


Figure 88 Unlocking the vents and blinding the remaining hole (A-A cross-section of Figure 84 and Figure 96)

8. In the smoke vents, the eye bolt of the actuators should be attached to the movable pin of the mechanical hook lock (to the lower pin). Adjust the system to ensure full and secure closing of the vent leaves by tightening or loosening the actuator eye bolt.
   In the case of daily ventilation ventss the actuator eye bolt should be connected with the vent leaves by an M8x70 screw through the hole made for this purpose in the middle crossbar of the leaf.

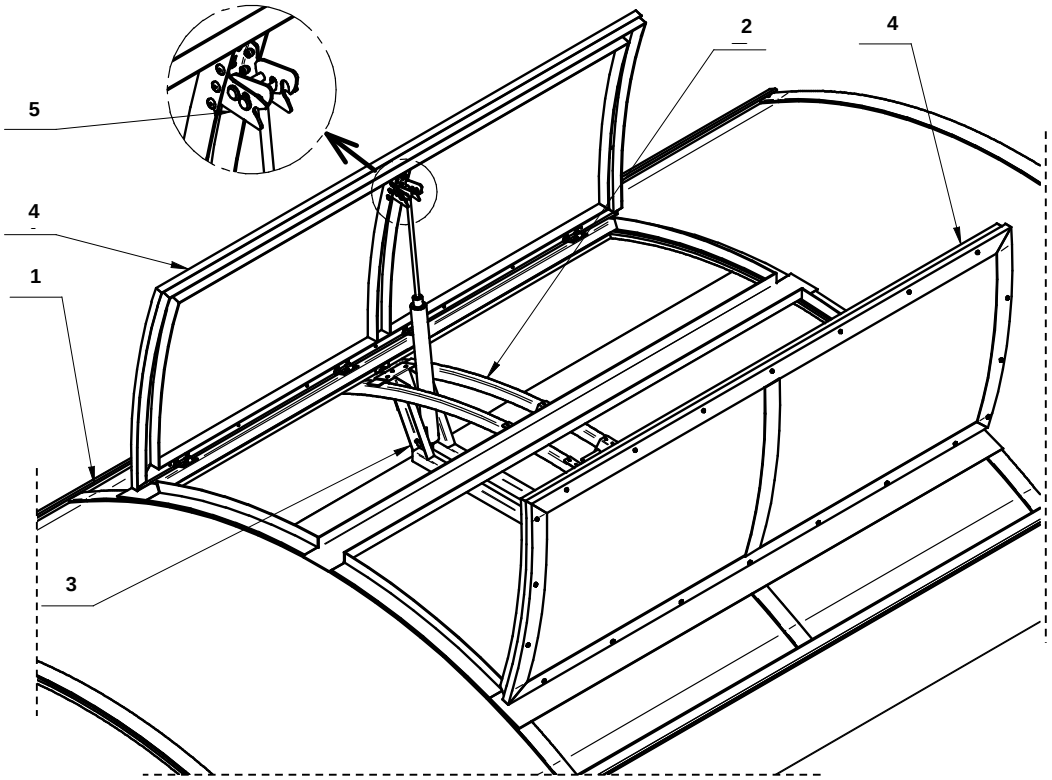
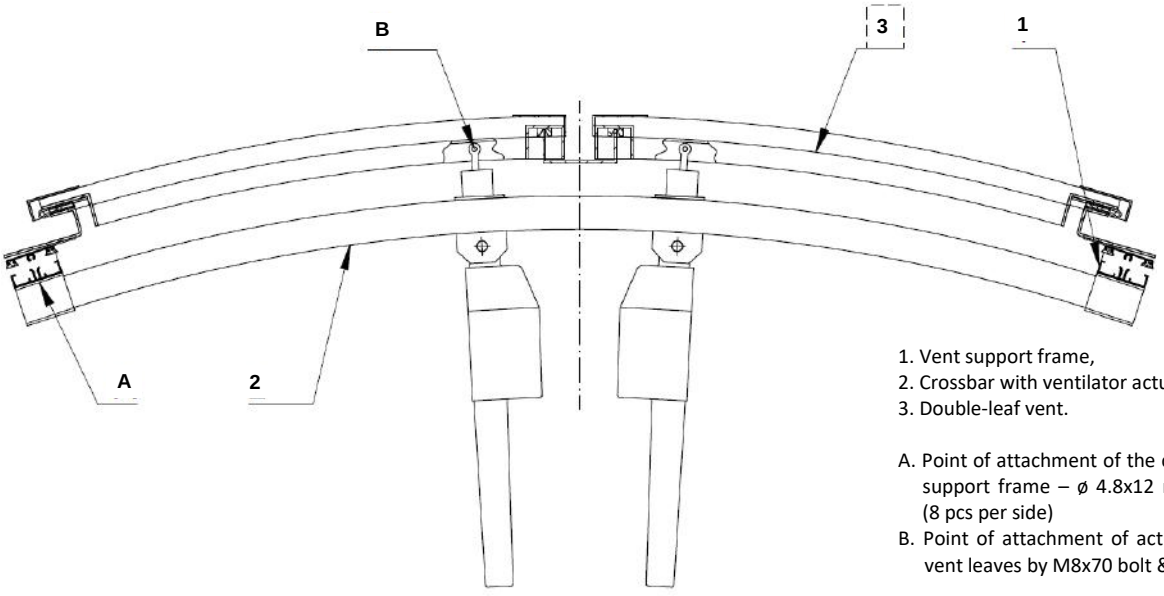


Figure 89 *Double-leaf smoke vent installed in continuous rooflight (the leaves in opened position)*

1. Continuous rooflight with vent support frame,
2. Arc-shaped supports,
3. Vent opening mechanism,
4. Vent leaf,
5. Mechanical hook locking device.



1. Vent support frame,
2. Crossbar with ventilator actuators,
3. Double-leaf vent.

A. Point of attachment of the crossbar to the support frame – ø 4.8x12 mm pop rivets (8 pcs per side)
B. Point of attachment of actuator with the vent leaves by M8x70 bolt & nut

Figure 90 *Double-leaf fresh air vent installed in continuous rooflight (the leaves in closed position)*

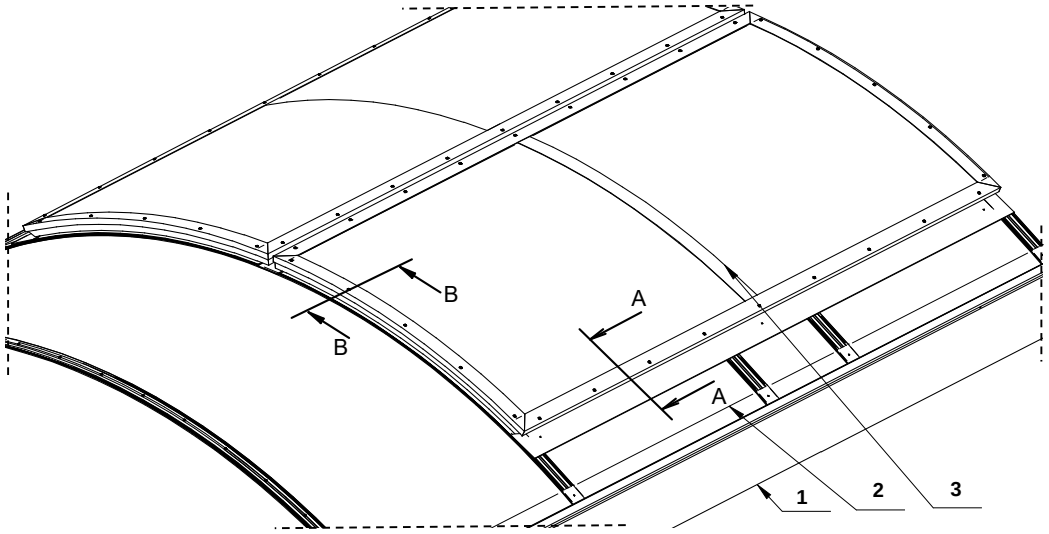
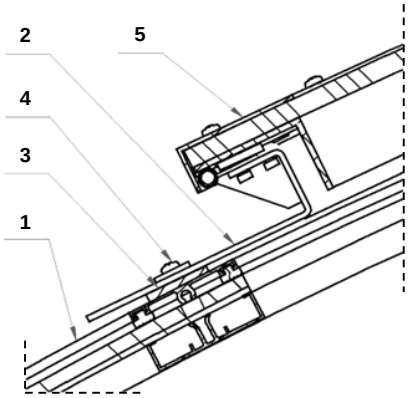


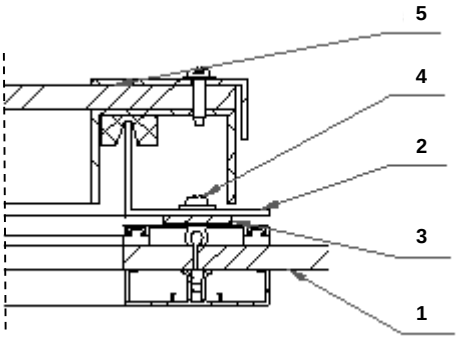
Figure 91 Double-leaf vent installed in a continuous rooflight

1. Insulated base,
2. Vault of the rooflight,
3. Double-leaf vent.



1. Vault of the rooflight,
2. Rooflight base,
3. PES 40x3 tape,
4. Sheet metal screw,
5. Vent leaf.

Figure 92 Connection of the vent with the top section of the rooflight (A-A cross-section from Figure 91 Double-leaf vent installed in a continuous rooflight)



1. Vault of the rooflight,
2. Rooflight base,
3. PES 40x3 tape,
4. Sheet metal screw,
5. Vent leaf.

Figure 93 Connection of the vent with the with the top section of the rooflight (B-B cross-section from Figure Figure 91 Double-leaf vent installed in a continuous rooflight)

9. Adjust the vent leaves in the closed position by adjusting the length of the adjustable locking T-bolt (smoke vents) or eye bolts (ventilation hatches).

XI. Installation of a single-leaf vent in a continuous rooflight

1. Assemble the rooflight base according to Sec. I.
2. Assemble the top section of the continuous rooflight according to Sec. II.

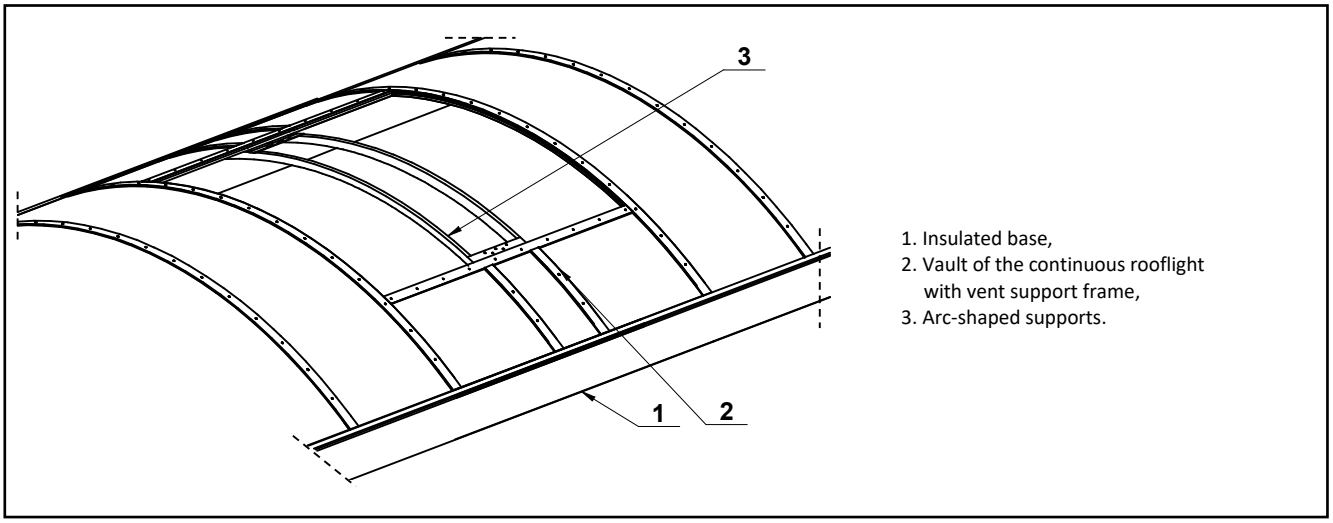


Figure 94 *Example continuous rooflight prepared for vent installation*

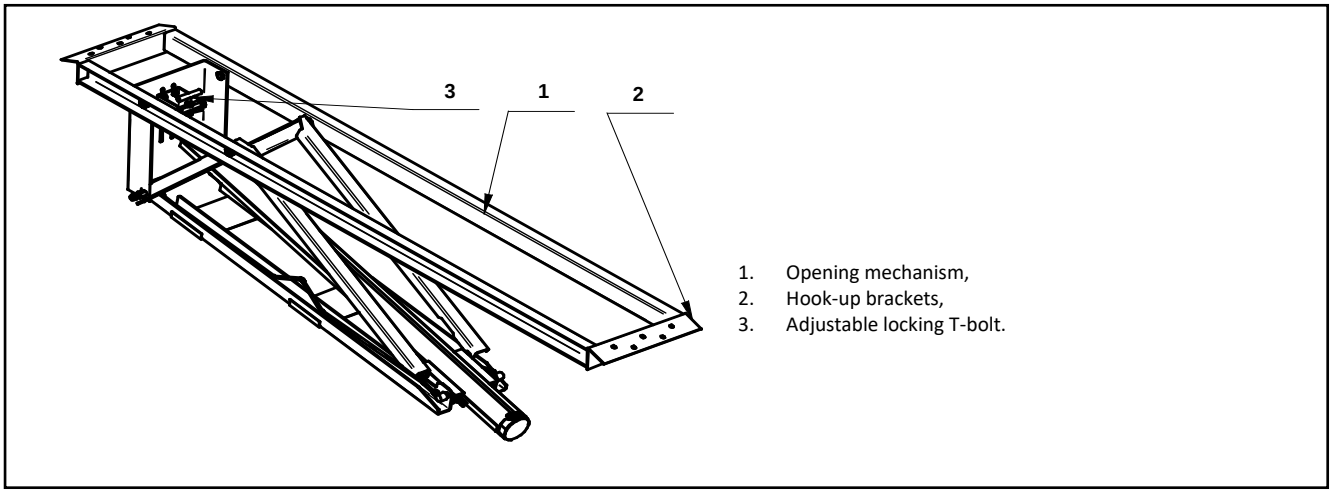
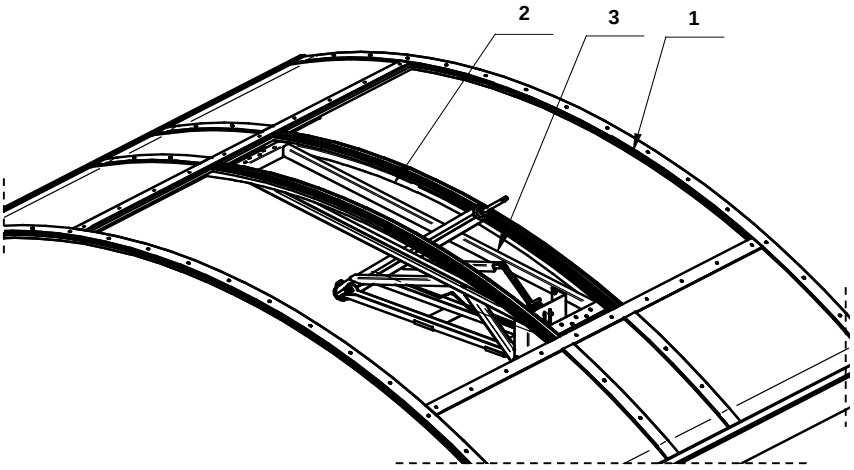


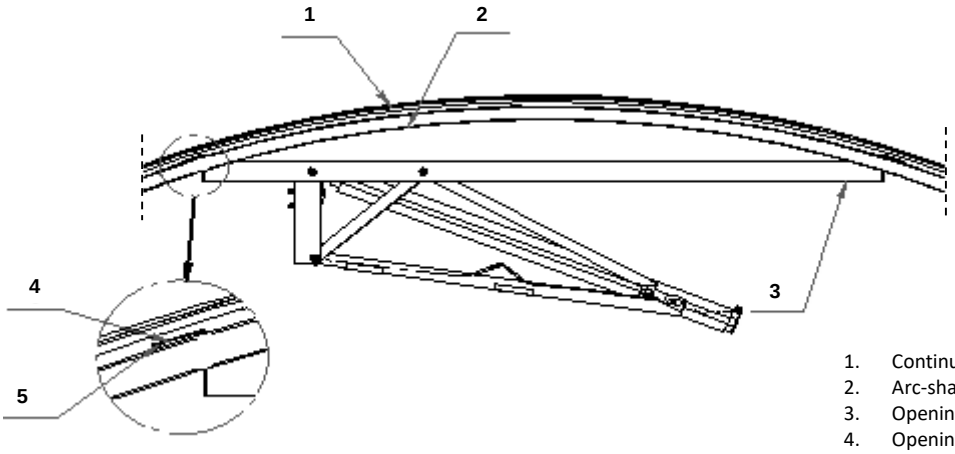
Figure 95 *Opening mechanism prepared for installation (comes factory assembled in one piece)*

3. Install the operating mechanism on the arc-shaped support brackets (the adjustable locking T-bolt located opposite the hinges). Connect the operating mechanism with the brackets by means of M8x20 bolts with nylon lock nuts.
4. If the vents will be used solely for daily ventilation, the crossbar with actuator should be fixed to the vent support frame using Ø 4.8x12 mm pop rivets (16 pcs per vent) – the same as the crossbar for a double-leaf vent.



1. Top section of the continuous rooflight with vent support frame,
2. Arc-shaped supports,
3. Operating mechanism.

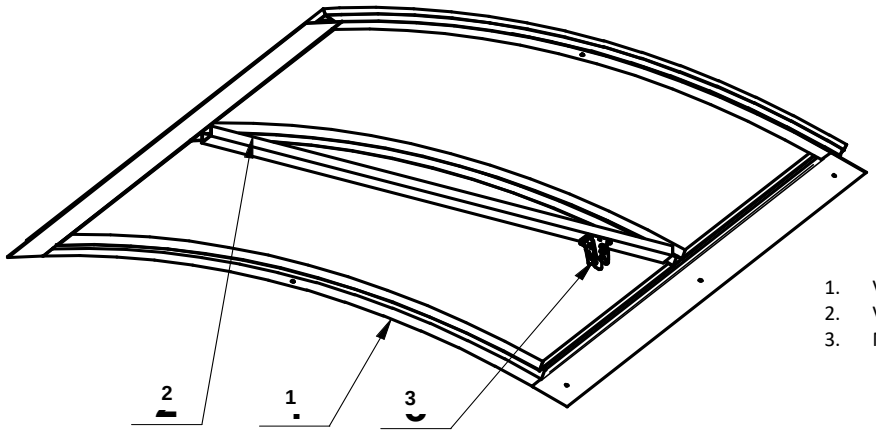
Figure 96 Installation of opening mechanism



1. Continuous rooflight with vent support frame,
2. Arc-shaped supports,
3. Opening mechanism,
4. Opening mechanism hook-up brackets.
5. Bracket

Figure 97 Installation of opening mechanism – side view

5. Apply PES 40x3 self-adhesive tape on the pressing profiles of the vent support frame.



1. Vent base,
2. Vent leaf,
3. Mechanical hook locking device.

Figure 98 Single-leaf vent prepared for assembly (comes factory assembled in one piece)

Note! Before shipment, the vent leaf is locked to prevent an uncontrolled opening during transport

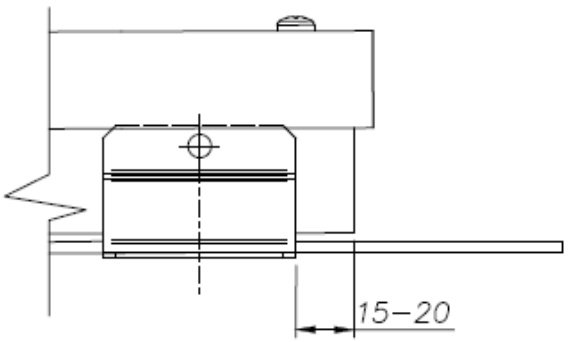
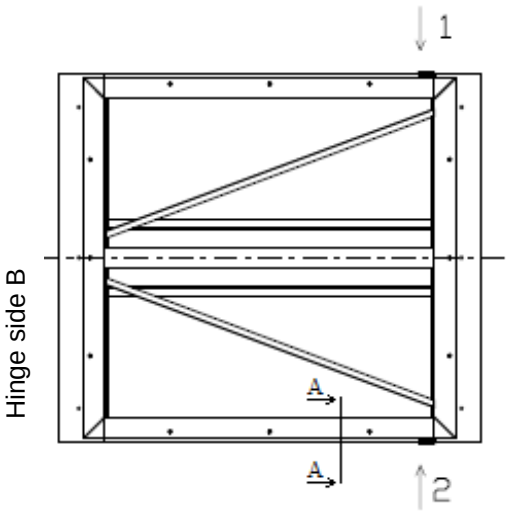


Figure 99 Single-leaf vent prepared for assembly (comes factory assembled in one piece)



Before connecting the actuators, unlock the vents following the instructions given in (Figure 88 Unlocking the vents and blinding the remaining hole (A-A cross-section of Figure 84 and Figure 96)).

6. Place the vent on the prepared support frame. Secure the base using Ø5.5 mm screws with a sealing washer. The screws should be fixed at 300 … 350 mm intervals over the entire base perimeter. The screw length depends on the thickness of the polycarbonate panel and the type of bearing profiles of the rooflight structure – see (Table 5 Lengths of screws for fixing pressing profiles) or, in the case of multiple glazing: (Table 2 Selection of screw length depending on the glazing option and fixing position), (Table 3 Selection of screw length depending on the glazing option and fixing position) and (Table 4 Selection of screw length depending on the glazing option and fixing position). Start assembly from the vent centre and proceed towards the edge profiles.
   For the Broof(t1) class rooflights the vent is supplied with a factory installed polyester panel directly underlying the polycarbonate panel.

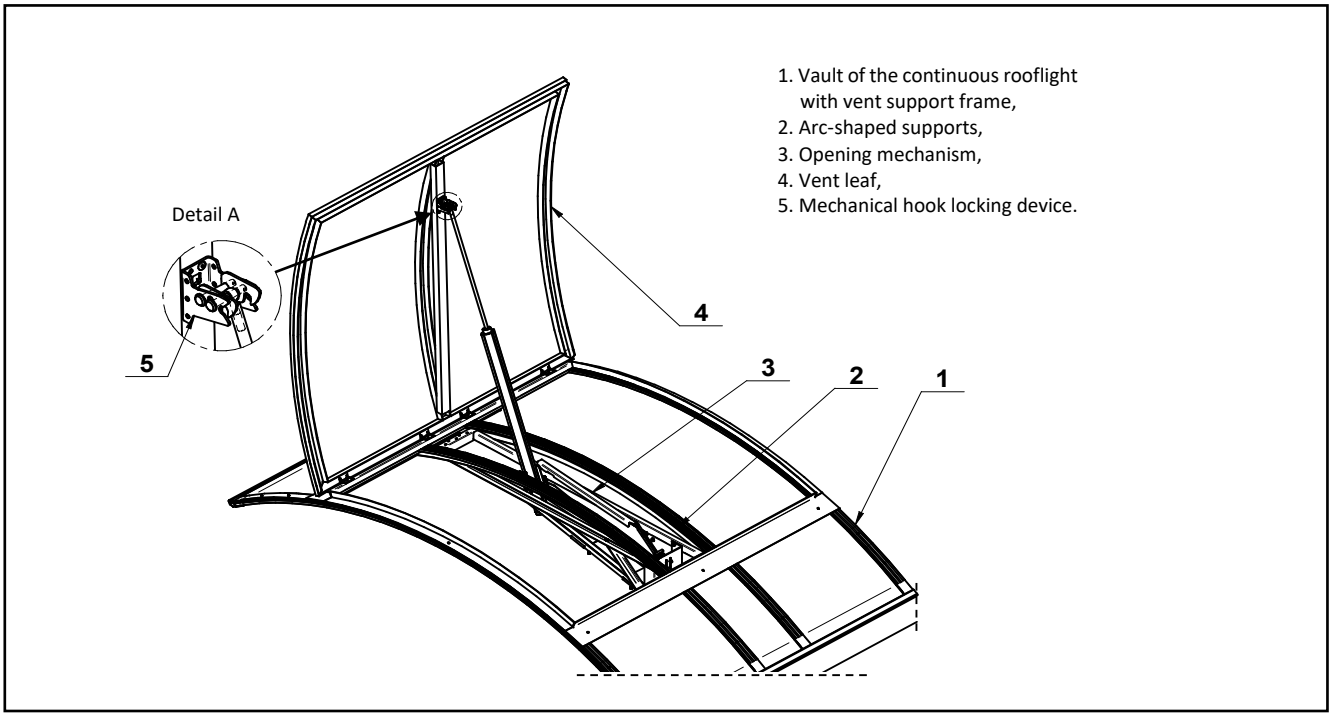


Figure 100 Single-leaf vent installed in continuous rooflight (showing vent in the open position)

7. The actuator eye bolt should be attached to the movable pin of the mechanical hook locking (to the lower pin). Adjust the system to ensure full and secure closing of the vent leaves by tightening or loosening the actuator eye bolt.
8. In the case of fresh-air vents the actuator eye bolt should be connected with the vent leave by M8x70 screw through the hole made for this purpose in the middle crossbar of the leaf (in the same way as in the case of double-leaf vents).

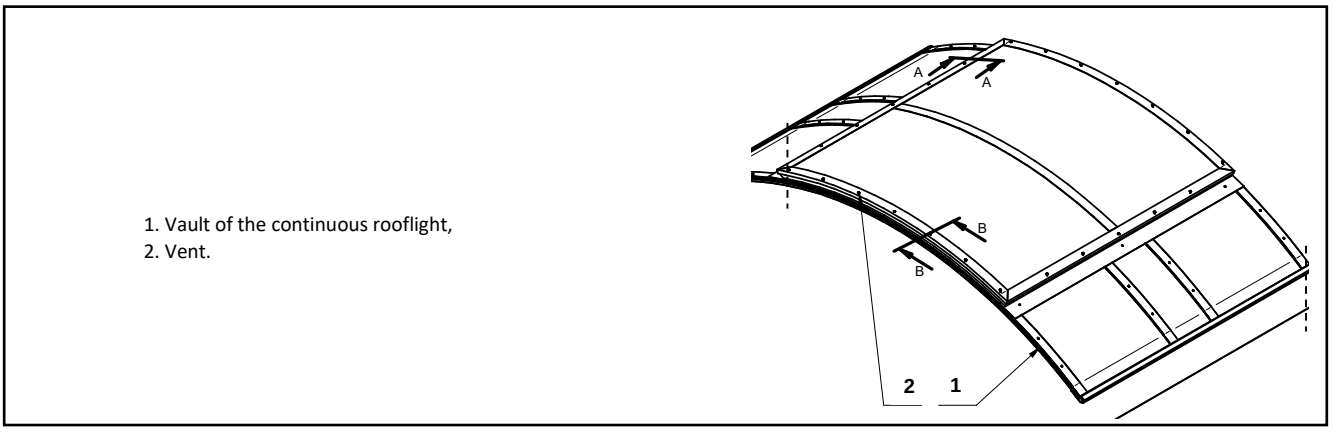


Figure 101 Single-leaf vent installed in the continuous rooflight (showing leaf in closed position)

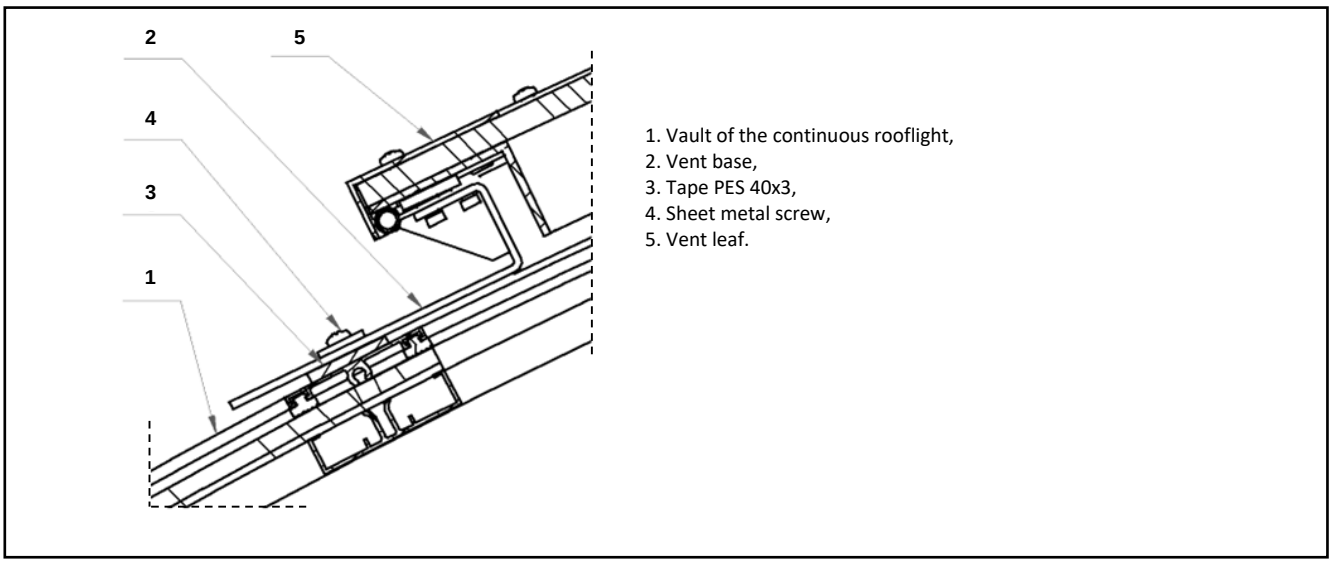


Figure 102 Connection between vent and continuous rooflight - (A-A cross-section from Figure 101 Single-leaf vent installed in the continuous rooflight (showing leaf in closed position))

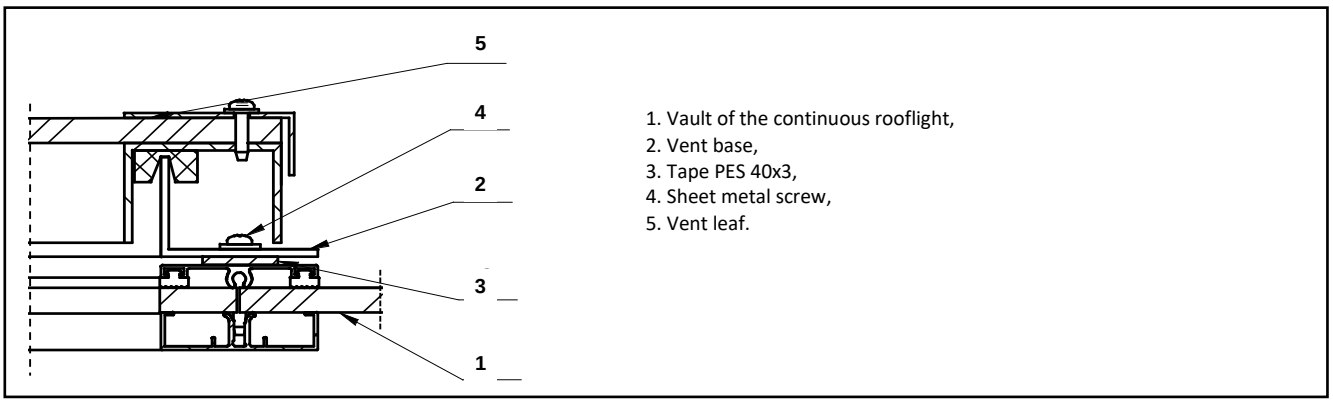


Figure 103 Connection between vent and continuous rooflight - (B-B section from Figure Figure 101 Single-leaf vent installed in the continuous rooflight (showing leaf in closed position))

9. Adjust the vent leaves in closed position by adjusting the length of the adjustable T bolt (smoke vents) or eye bolt (fresh air vents).

XII. Installation of wind deflectors

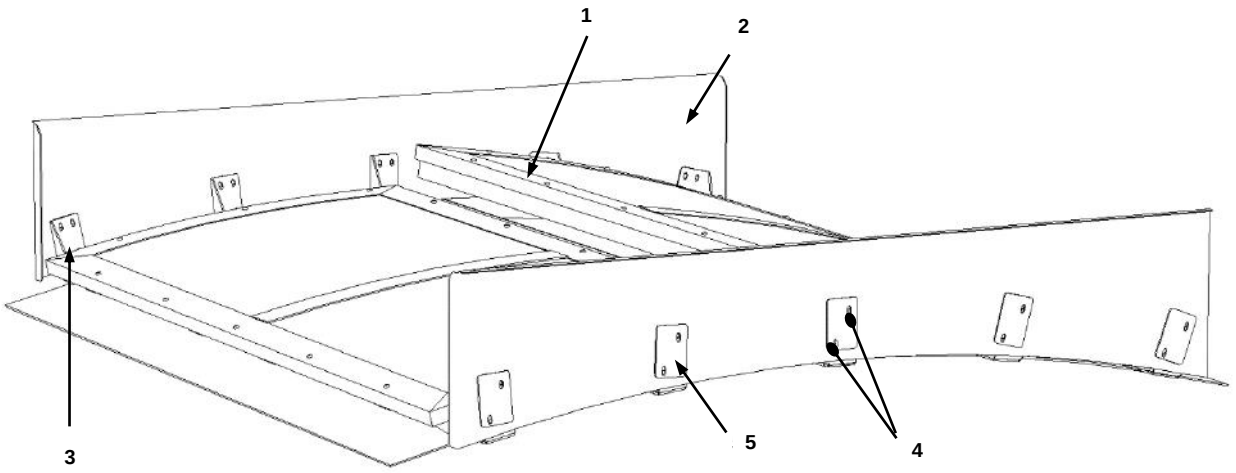
Wind deflectors are installed to increase the aerodynamic active area of smoke vents. The deflectors are made of aluminium sheet. They can be painted in any RAL colour. The deflectors are 100-450 mm depending on the vent model and size. The deflectors come separately. Their length, height and arc radius fit the vents in the corresponding dimensions only.
During installation, pay attention to the appropriate matching of the dimensions!

The following instructions must be followed:

The wind deflectors should be attached to the brackets, which are welded to the vent base.
The brackets should be attached using the following supplied fasteners:
- M6x16 bolts (2 pcs per bracket),
- M6 nylon insert locknut (2 pcs per bracket),
- M6 plain flat washers (2 pcs per bracket),
- special rectangular washers/ stiffening plates.

- double-leaf vent

The wind deflectors shield the outlet opening on both sides of the gutter.
The assembly details are shown in the following picture and in (Figure 106 Connection of wind deflector with bracket (exploded view)):



1. Vent,
2. Wind deflector,
3. Wind deflector bracket,
4. Bolted connection,
5. Rectangular washer/ stiffening plate.

Figure 104 Deflectors in a double-leaf vent

- single-leaf vents

The deflectors shield the outlet opening, each to 1/3 of the overall length and half width of the vent.
The assembly details are shown in the following picture and in (Figure 105 Deflectors in a single-leaf vent).

1. Vent,
2. Wind deflector,
3. Deflector bracket,
4. Front deflector bracket,
5. Bolted connection,
6. Rectangular washer/stiffening plate.

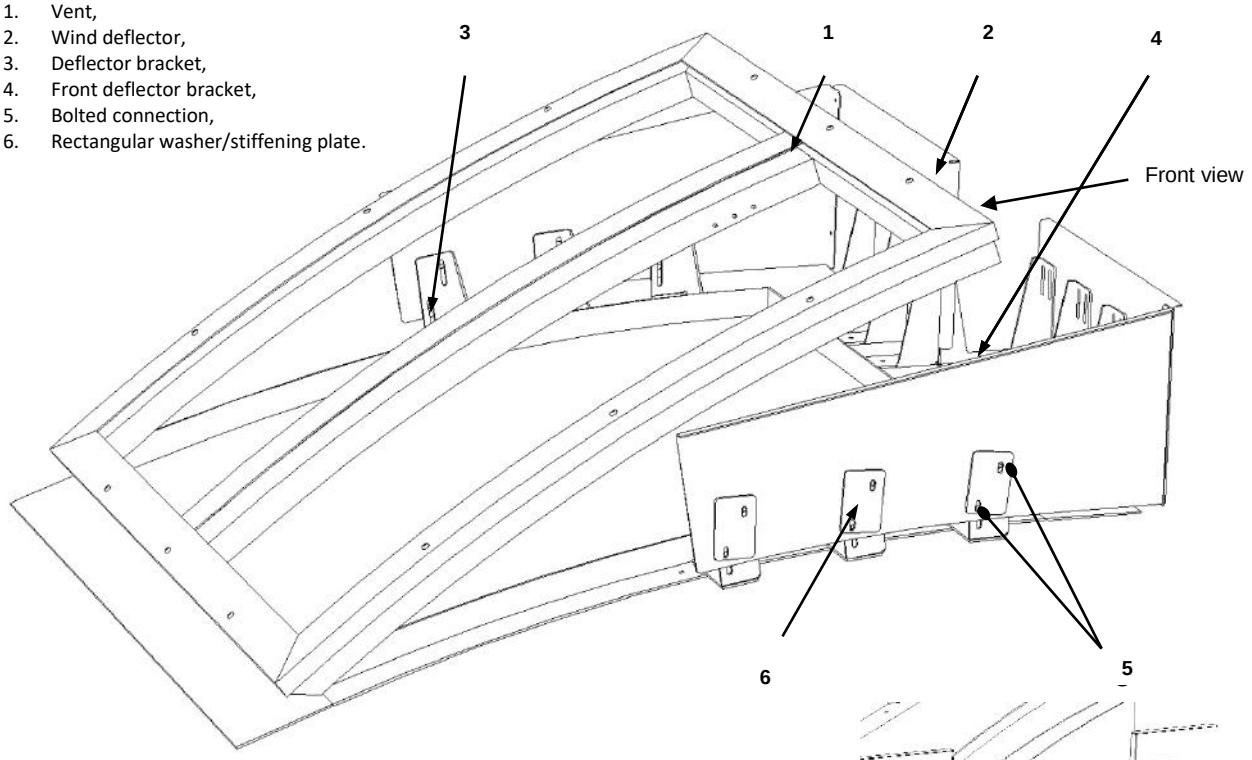
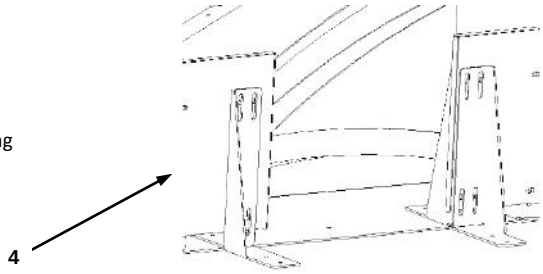


Figure 105 Deflectors in a single-leaf vent

Front view of the vent showing the front deflector brackets



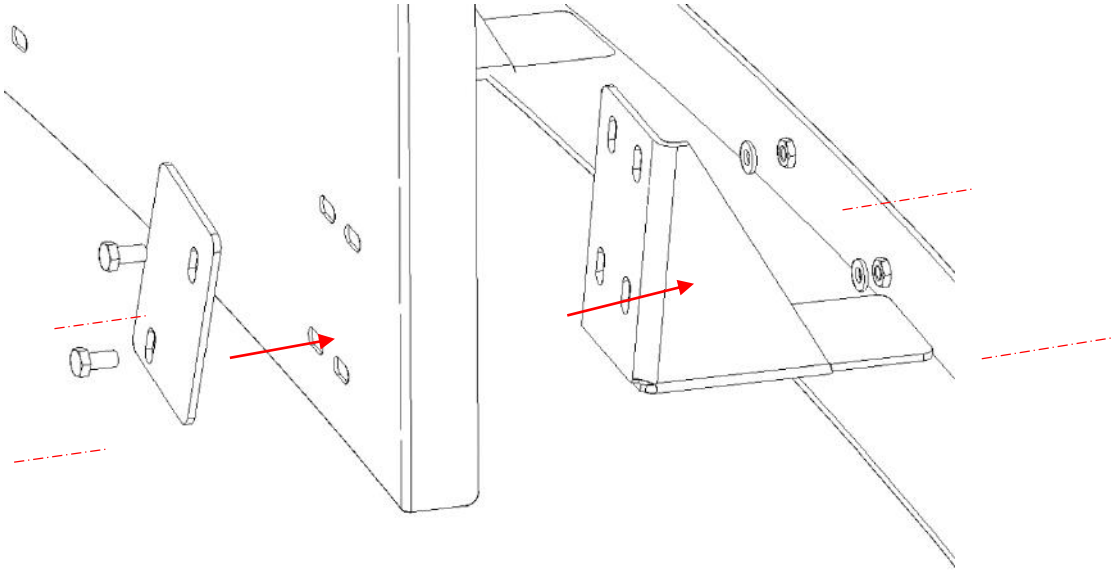


Figure 106 Connection of wind deflector with bracket (exploded view)

Note! The appearance and the design of the brackets and the wind deflectors may vary from the pictures shown, depending on the vent type and size

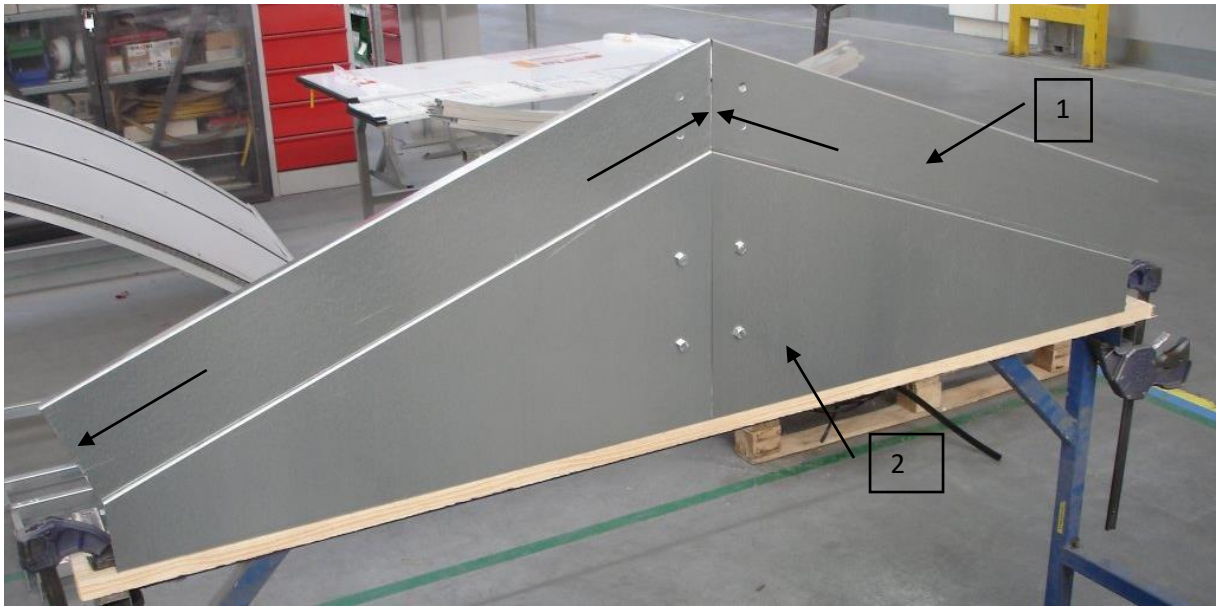
XIII. Instruction for the installation of the continuous rooflight crossing the roof ridge

Before proceeding, read these instructions thoroughly.
These instructions only concerns the passing of mcr-PROLIGHT continuous rooflight across the roof ridge of a double-pitched roof "After familiarizing oneself with the remaining points of this instruction. Before proceeding, with thoroughly read the instruction.

During assembly observe the relevant occupational safety rules and regulations. Use appropriate work clothing, protection against falling from a height. Use tools only free of damage and in good condition.

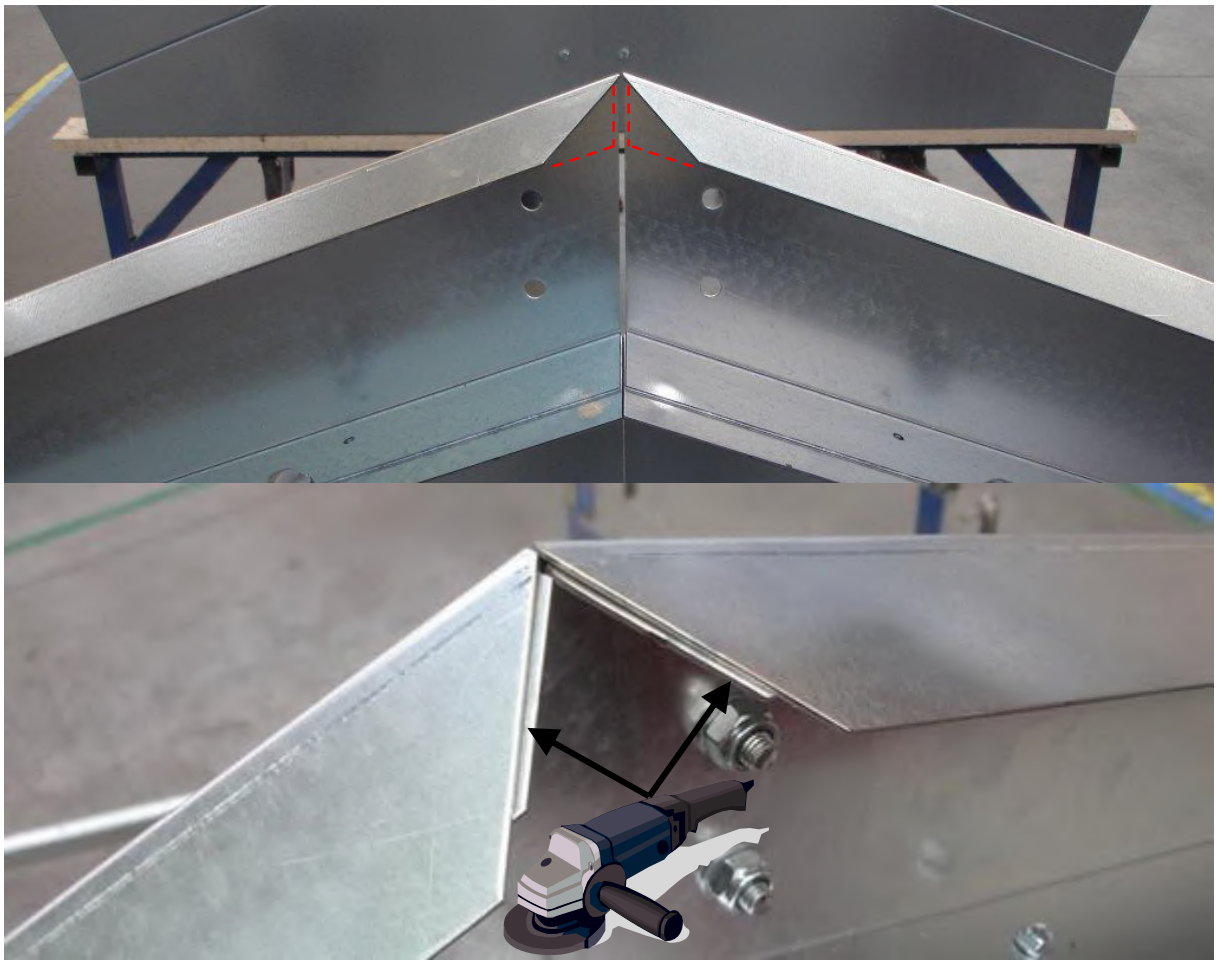
1. Install the rooflight base and bracings, if appropriate.

- Beyond the roof ridge, follow previous chapters of this assembly manual.
- In the roof ridge, use the base modules of prepared shape:

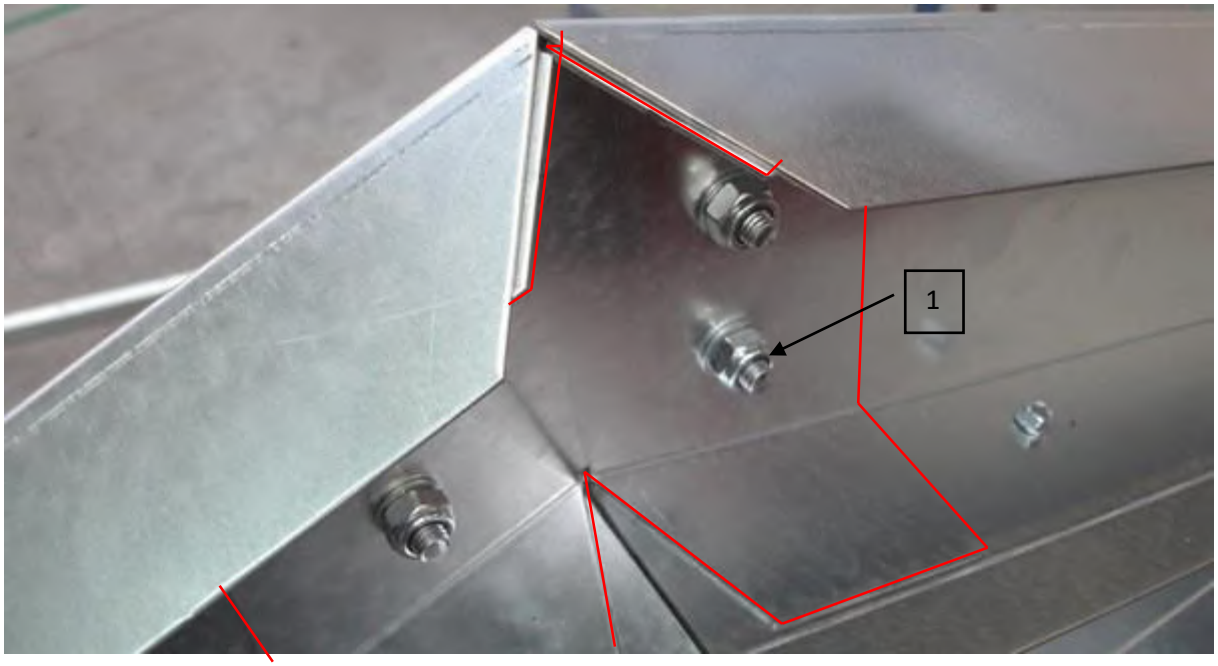


1. rooflight base roof ridge module,
2. supporting structure (fixed component of the building).

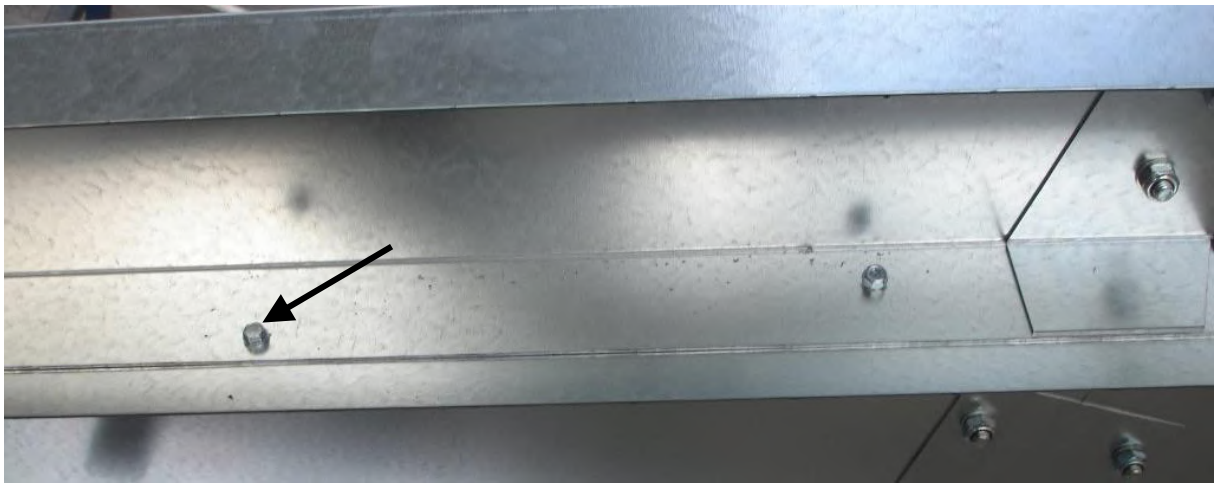
- If the upper ledges of both the roof ridge module bases are in conflict, they should be cut: the picture below shows an example shape after cutting. Depending on the local conditions, the cut ledges can also form a gap (rather than a triangle) at their meeting point.



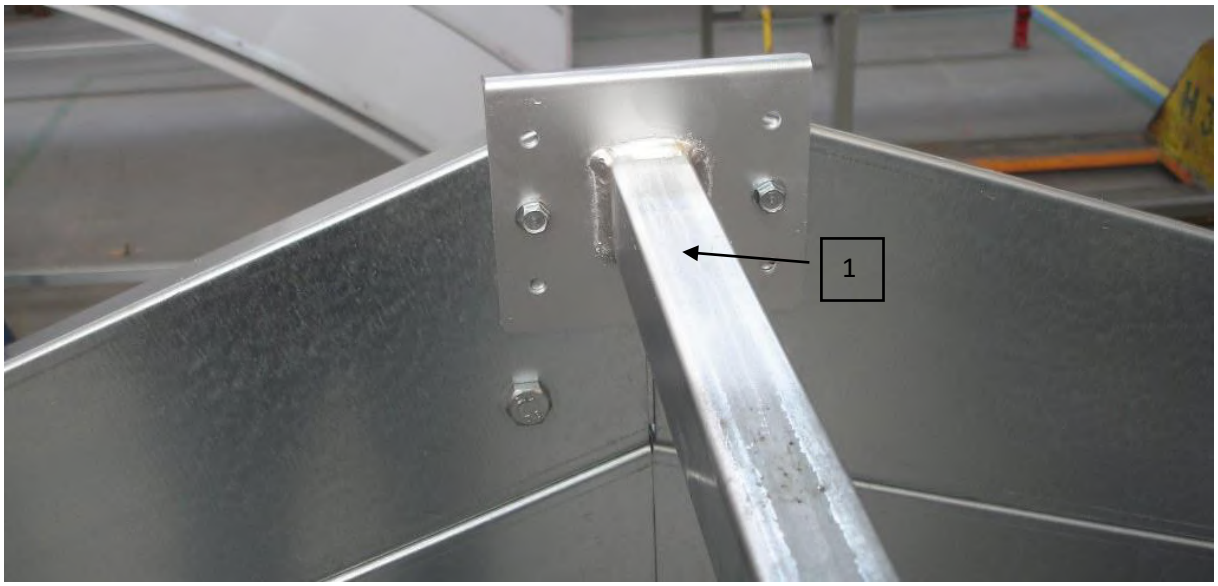
- Install and screw the roof ridge connector (1) of the base modules. Use the supplied fasteners (M10x20 bolts, plain flat washers, nylon locknut)

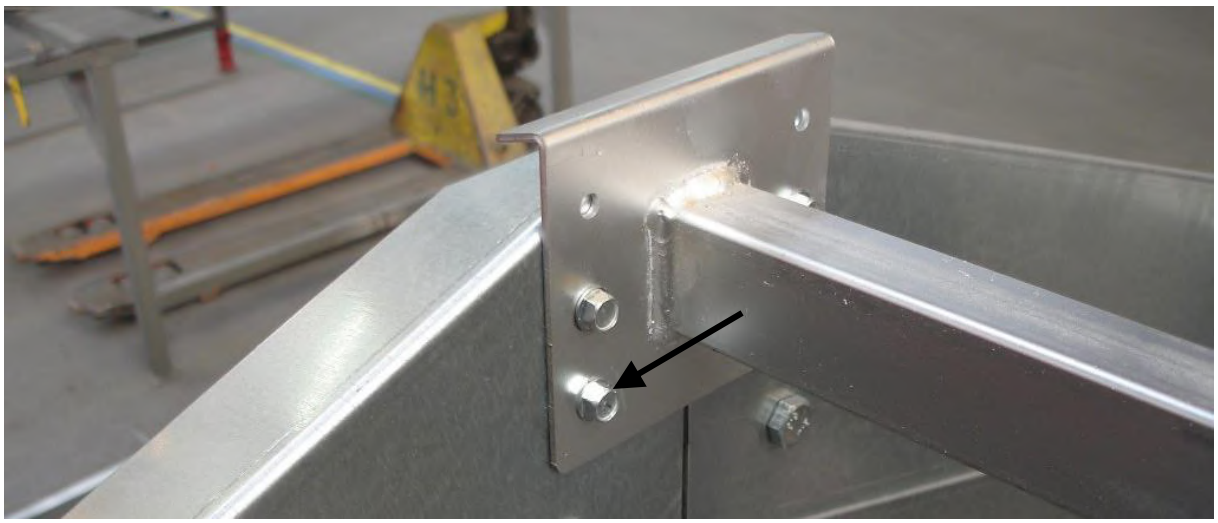


- Screw the roof ridge modules to the supporting structure through the prepared mounting holes using fasteners appropriate to the supporting structure material.



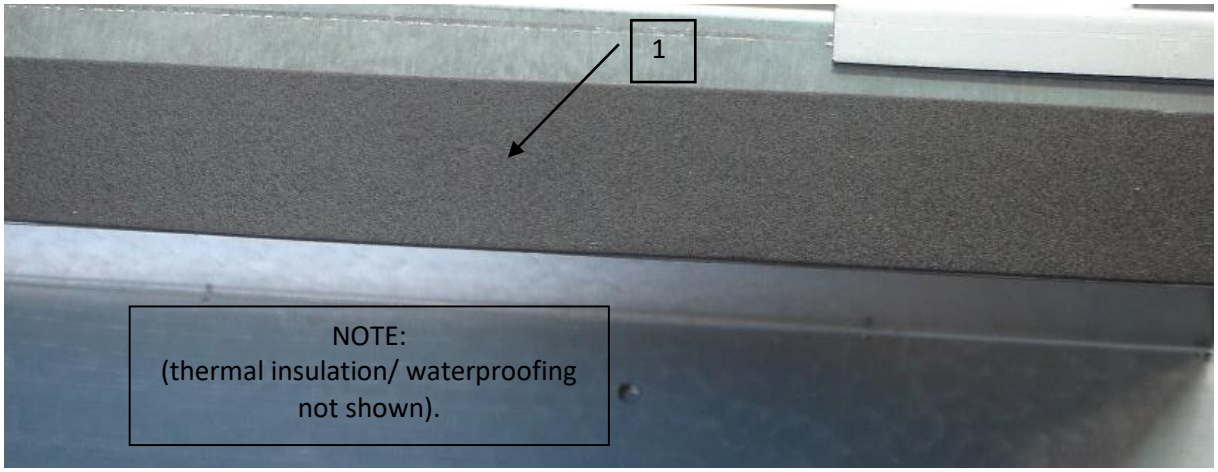
- Place and screw the transverse bracing (1) of the roof ridge base using Ø 6.3x22 mm screws (for a standard, not overlay base).





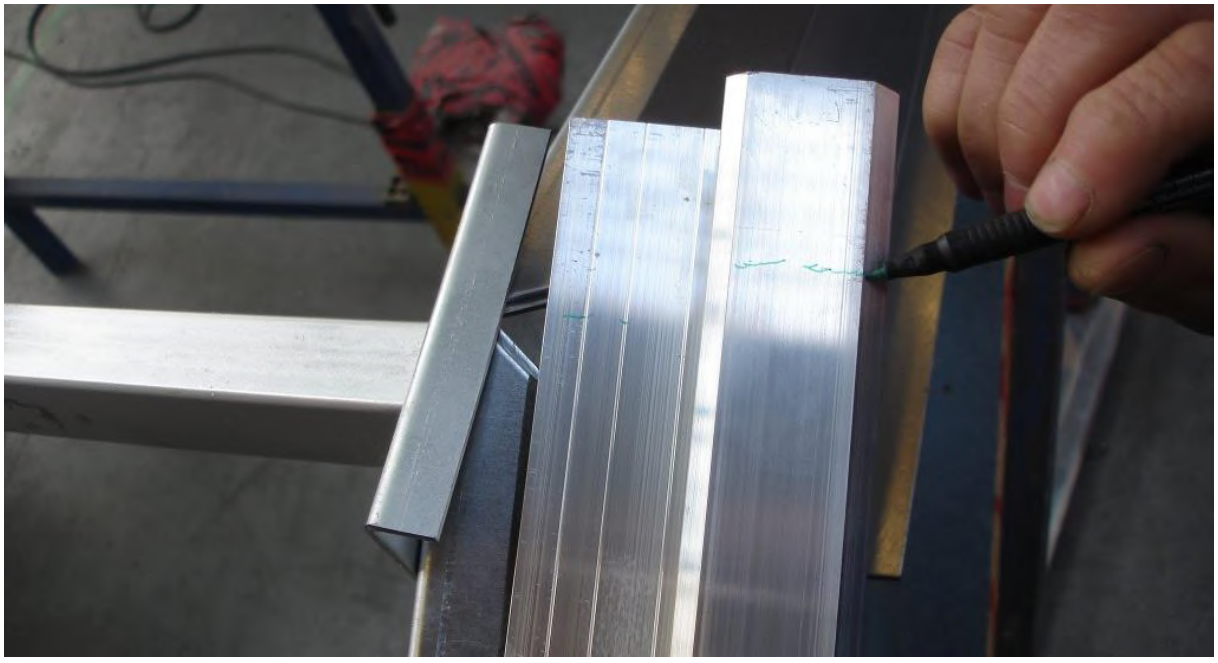
2. Install thermal insulation and a waterproofing barrier (bitumen felt, roofing membrane) to the rooflight base. The thermal insulation/ waterproofing materials are not part of the supplied kit. For guidelines, see the general assembly manual.

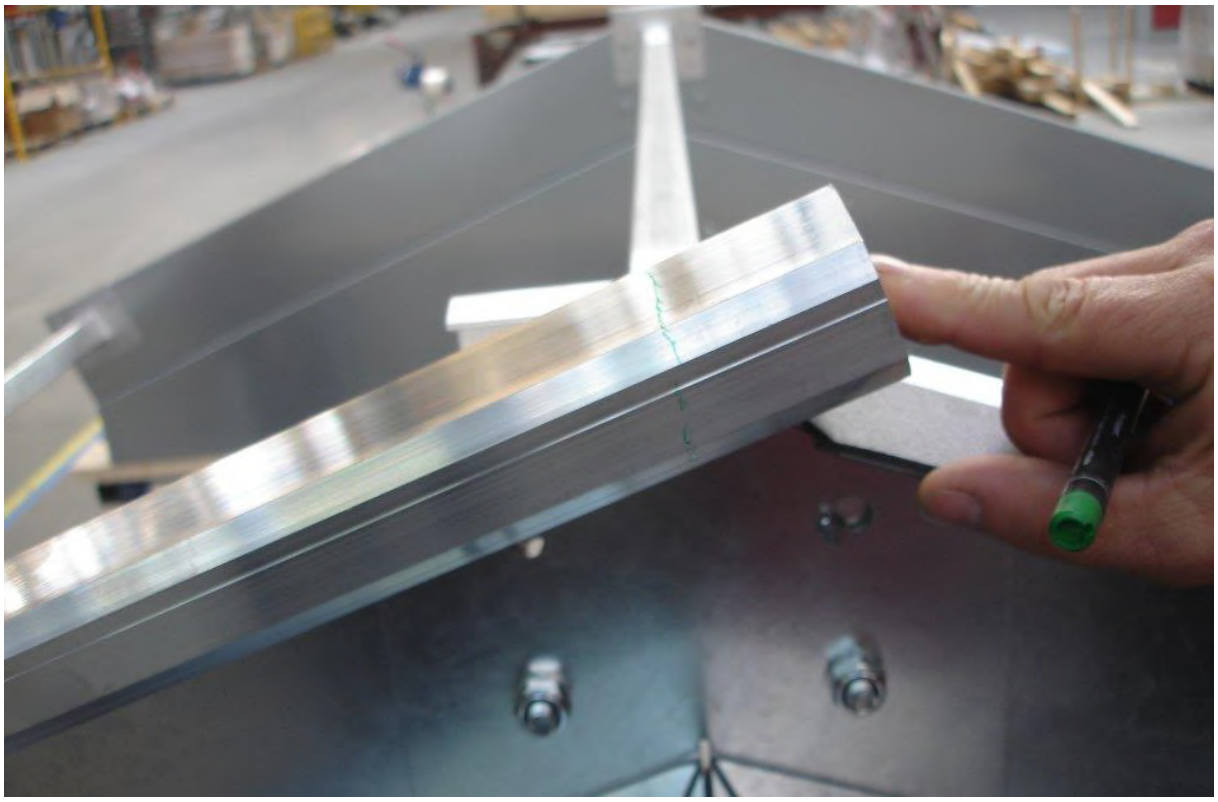
3. **Apply 40x3 (1) weather sealing tape on the waterproofing barrier surface.**



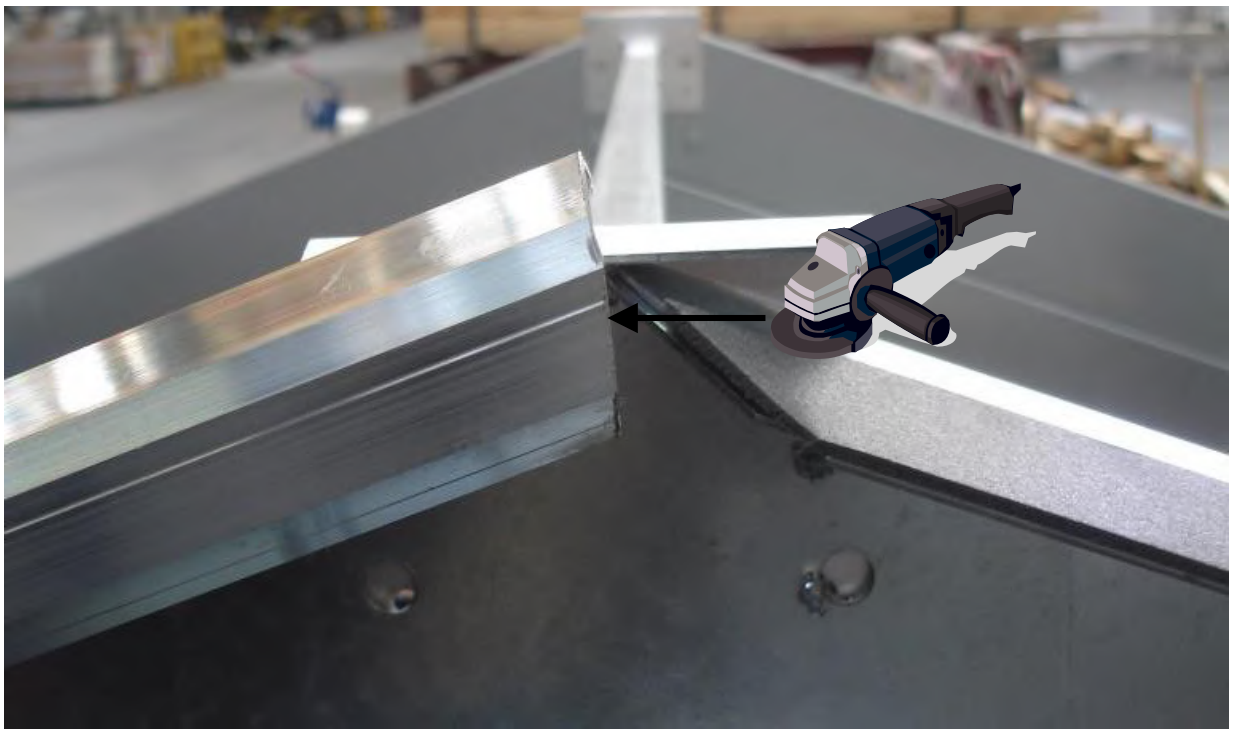
4. **It is recommended to start the installation from one of the tympanums and proceed towards the roof ridge. Important: pay attention to the layout of the edge profiles in accordance with the accompanying drawing (due to the prepared holes for pressing profiles tensioning screws).**

5. **Adjust the rooflight edge profiles at the roof ridge location:**
   - apply the edge profile at the base and scribe the edge. Repeat these steps for the profile on the other side of the roof ridge.





- Cut the edge profile to size using an angle grinder.



- Verify fit and repeat the steps if there is a gap.

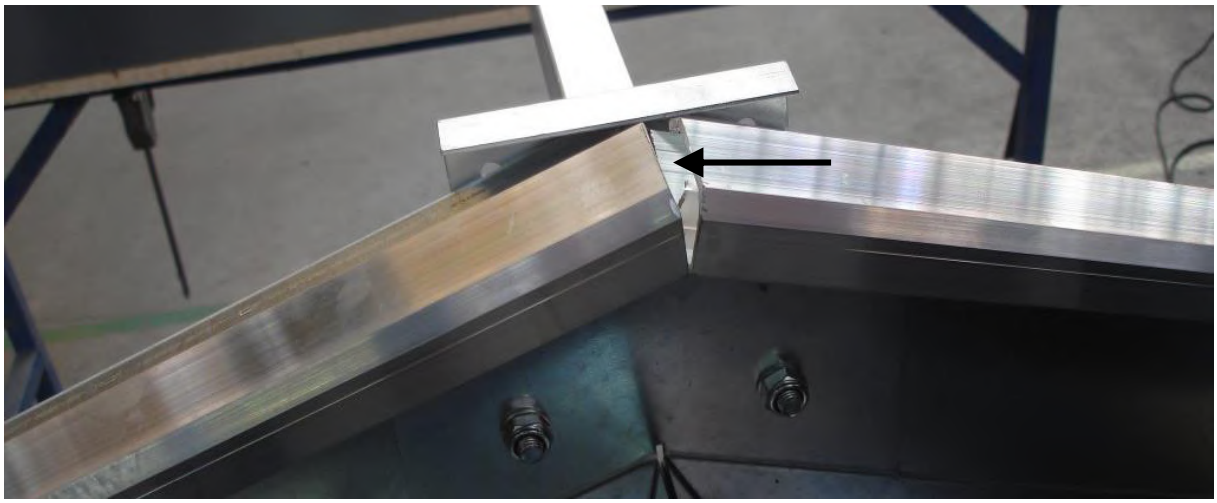
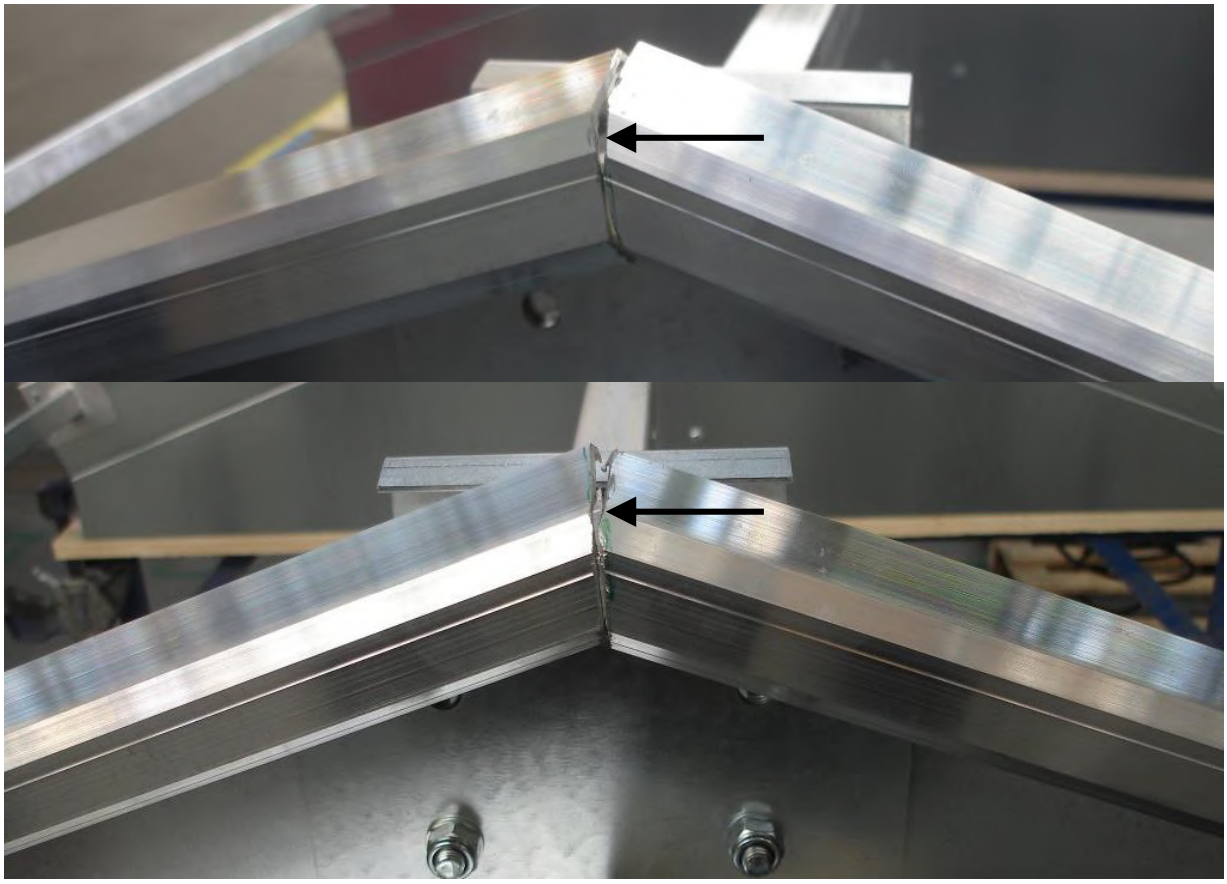
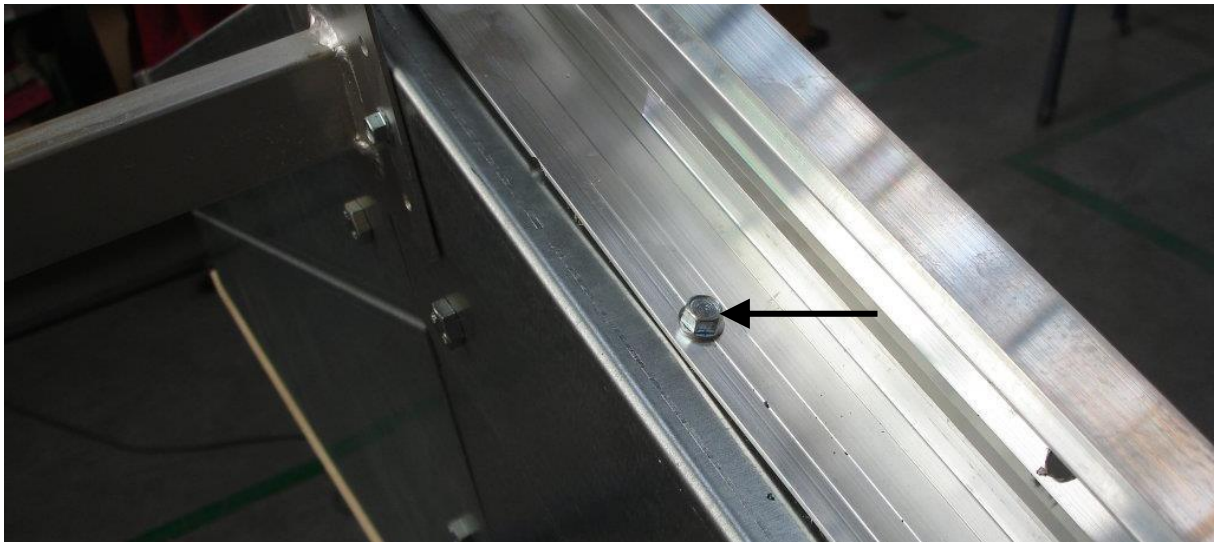


Image above: gap too big.

Image below: adequate gap width (ca. 1-1.5 mm).



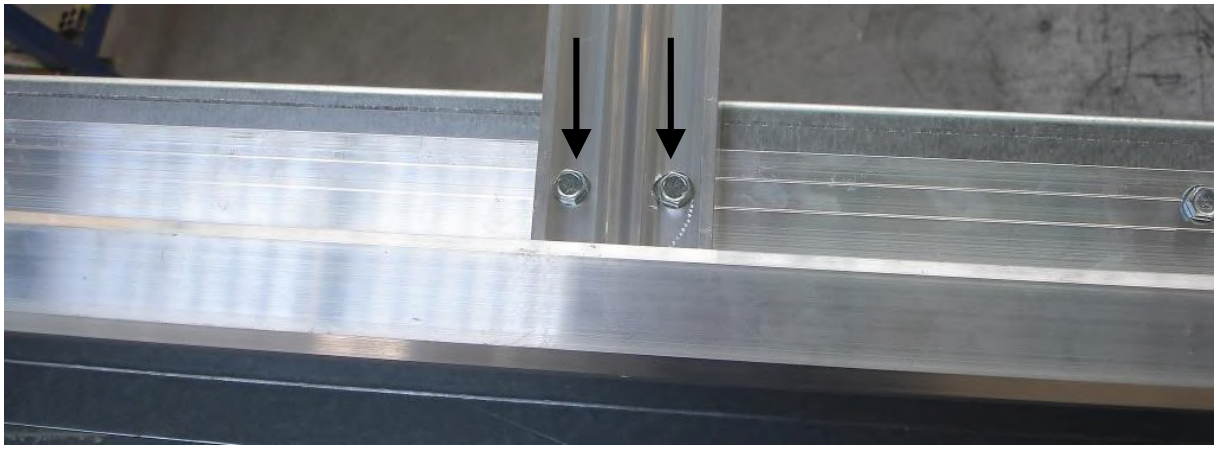
- Install the edge profile on the base using Ø 6.3x32 mm self-drilling screws according to the instructions given in the general rooflight installation manual.



- Depending on the chosen installation strategy (see 4 above), install the edge profiles on the other side of the roof ridge up to the tympanum base.

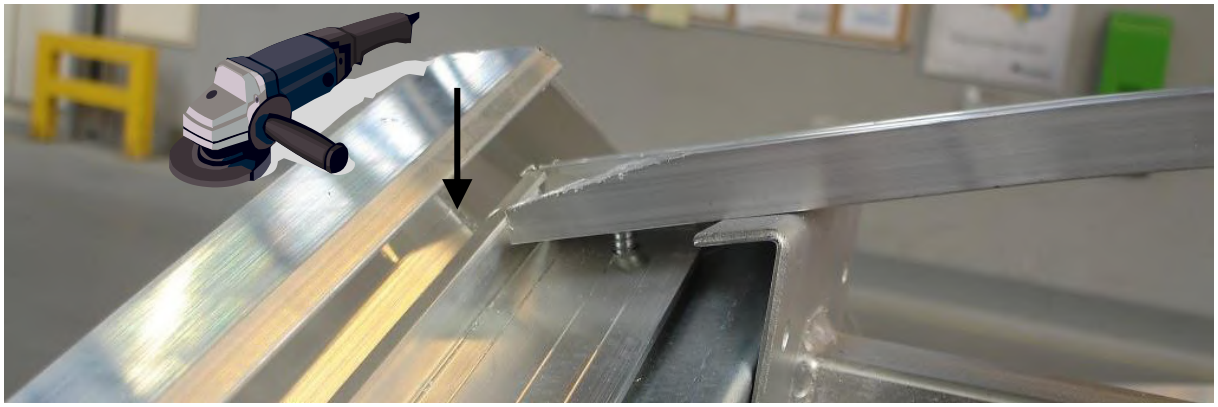
6. Attach the bearing profiles:

- Fix the bearing profiles starting from the tympanum panel base up to the last full segment of the rooflight before (below) the roof ridge using Ø 6.3x32 mm self-drilling screws (2 pcs).



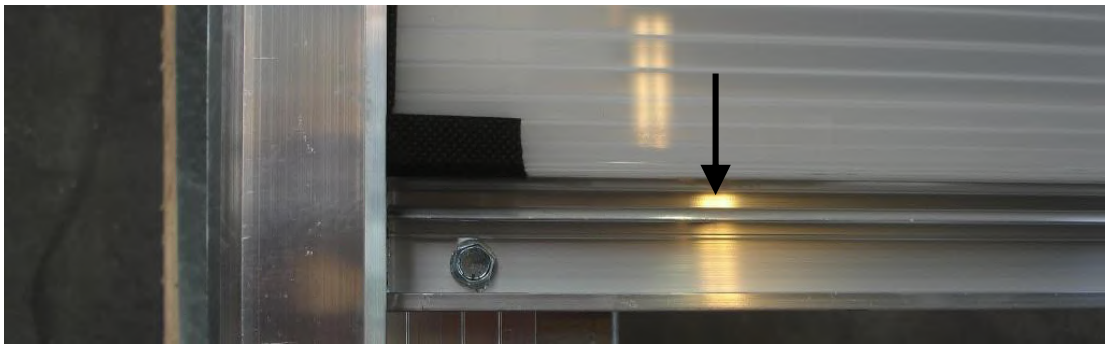
- Install the bearing profile at the roof ridge using Ø 6.3x32 mm self-drilling screws (2 pcs). In the case of standard bases (including bracings), lean the profile on the brace hook-up plate. Make sure that the symmetry plane of the load-bearing profile coincides with the ridge line.

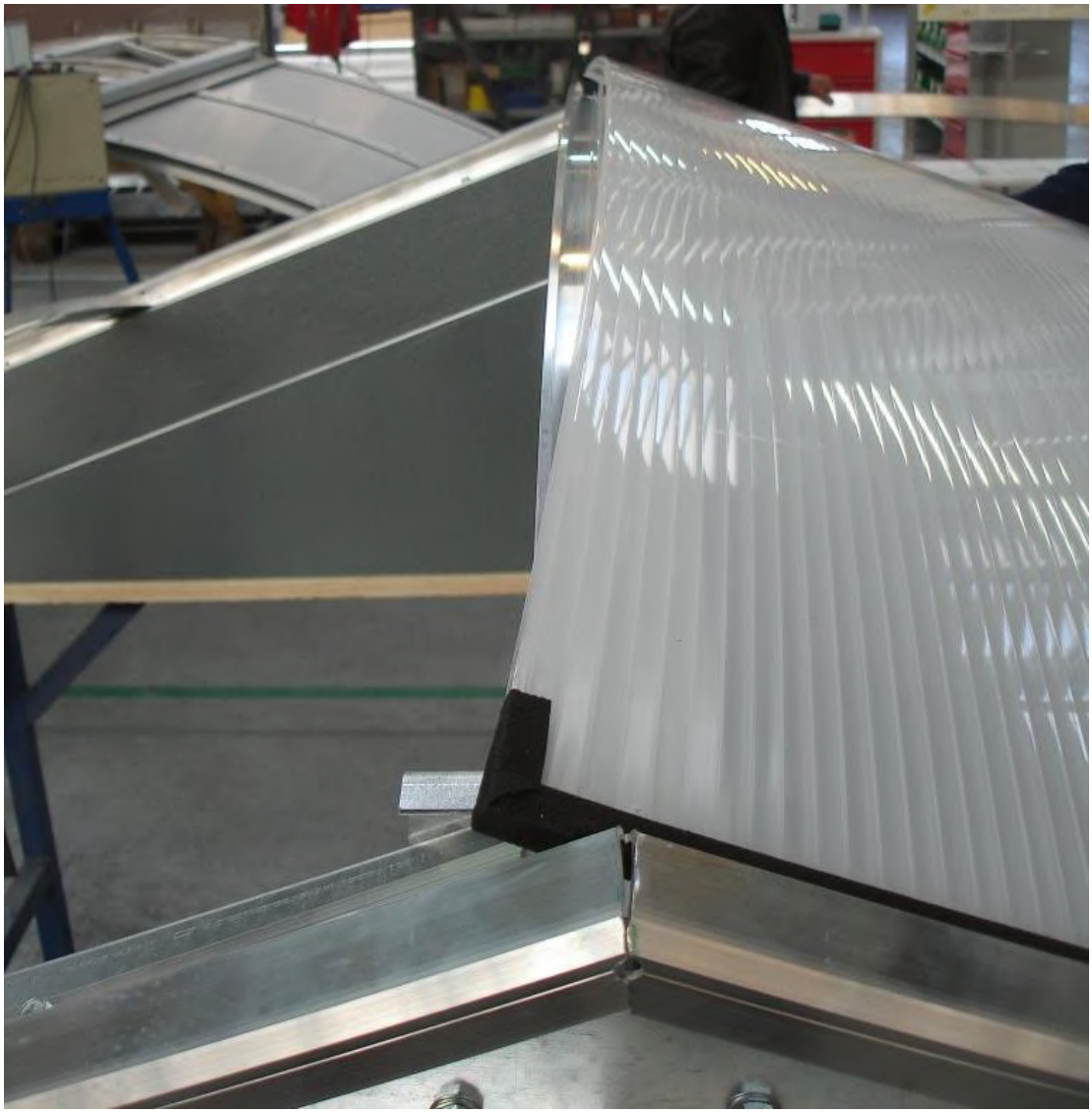
- Cut to size the bearing profile ledges at the roof ridge up to the edge profile ledge height.



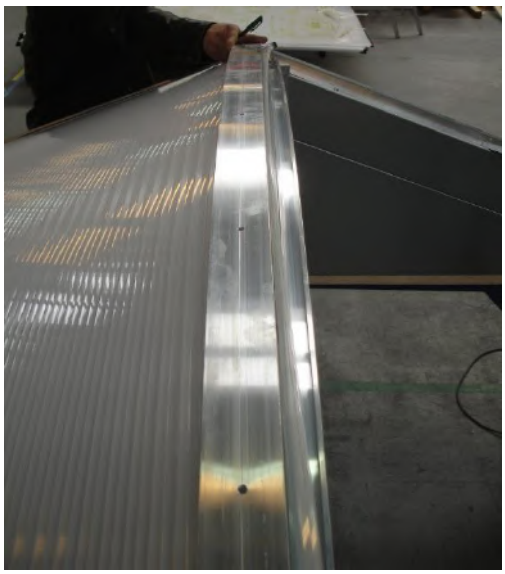
7. Adjust the polycarbonate panels at the roof ridge:

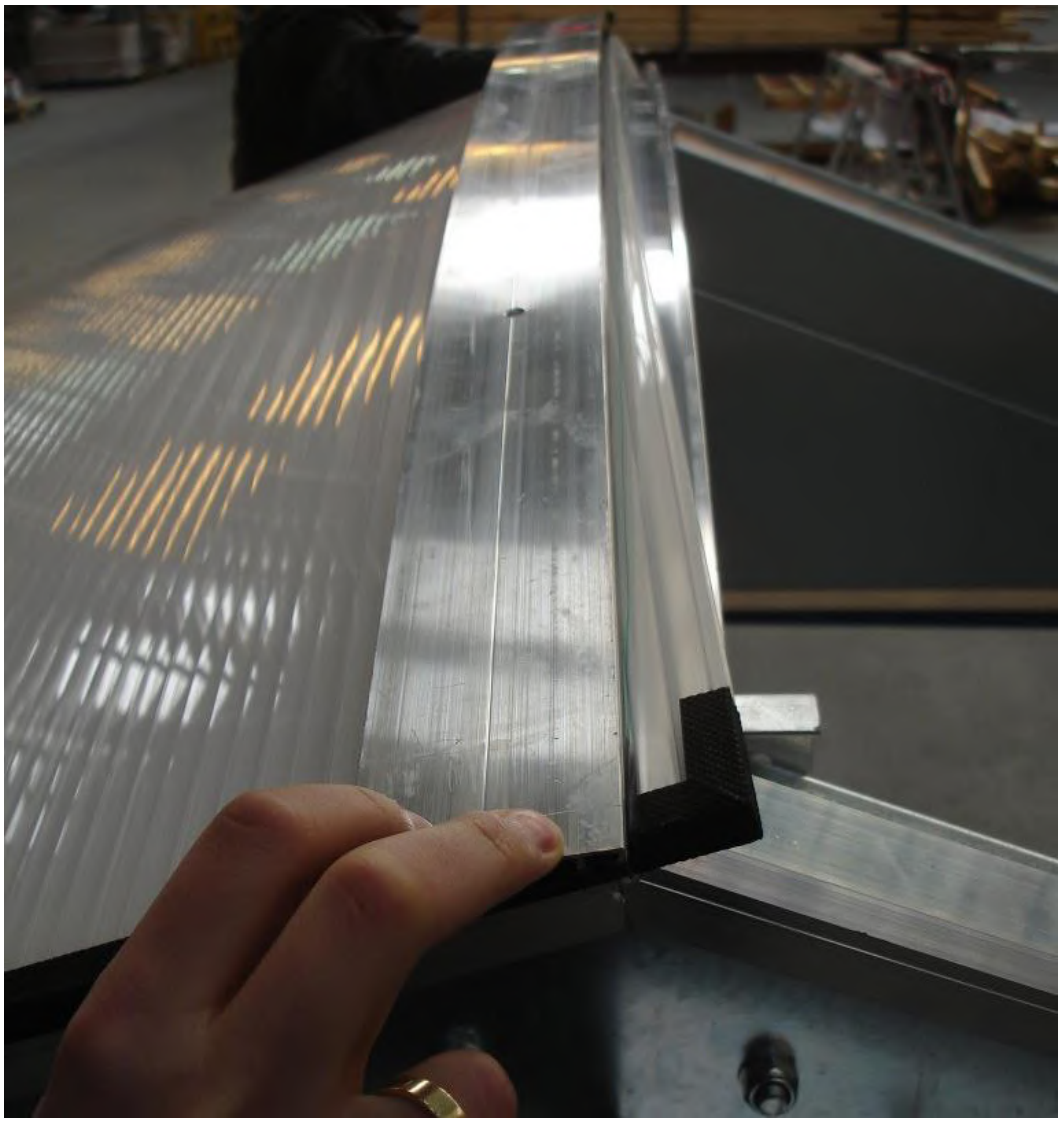
- Place and secure the polycarbonate panels on either side of the roof ridge, starting from the vertical panels and up to the last full unit before the roof ridge. Do not mount the three last pressing profiles. The procedure of the installation of the polycarbonate panels is given in the general installation manual.
- Place the polycarbonate panel running through the roof ridge on the bearing profile of the last full rooflight segment. Adjust in the position the panel edge in relation to the edge of the screw groove.



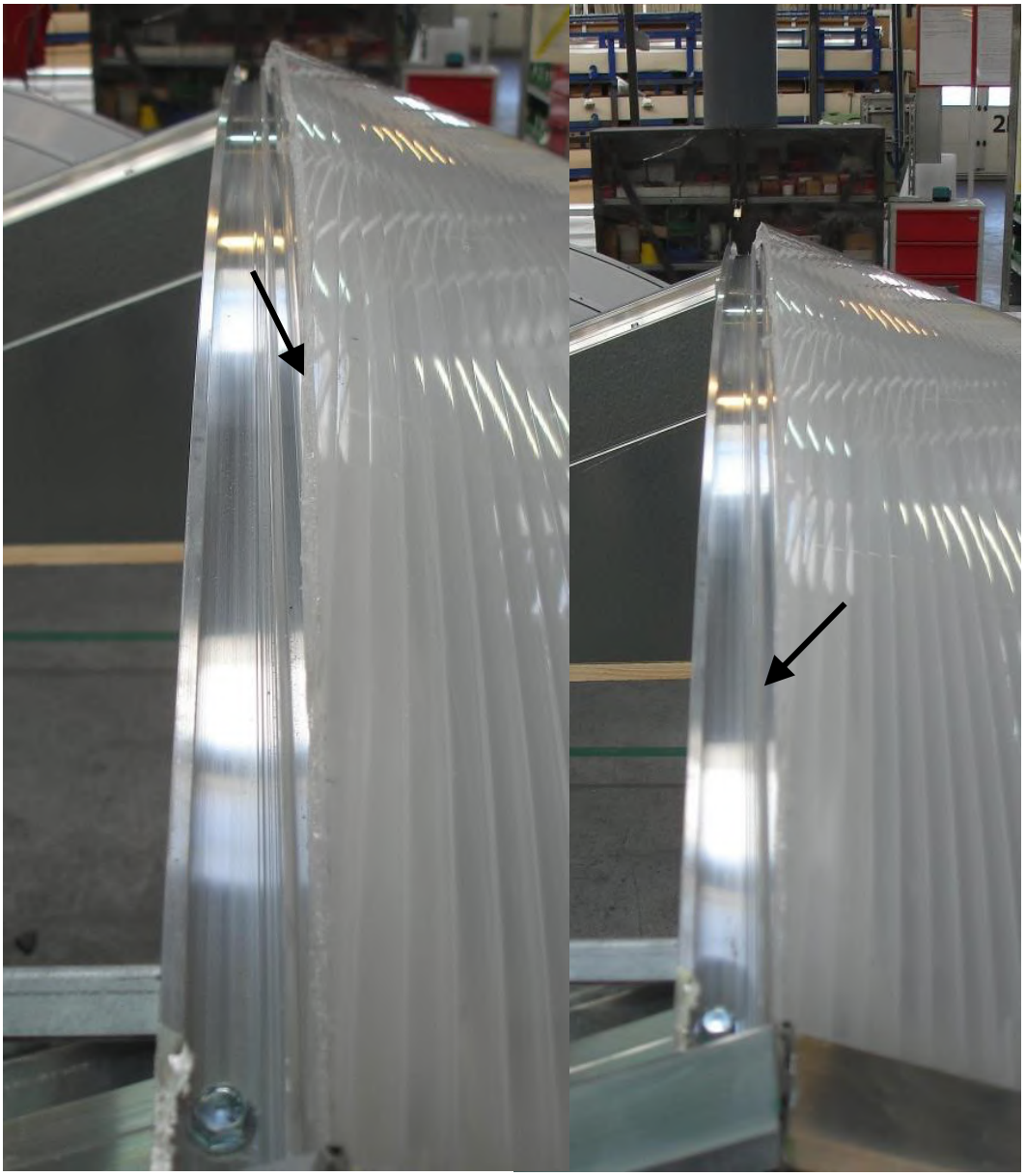


- Using the pressure profile, mark out / draw a cutting line in the ridge so that it runs along the edge of the groove of the bearing profile.



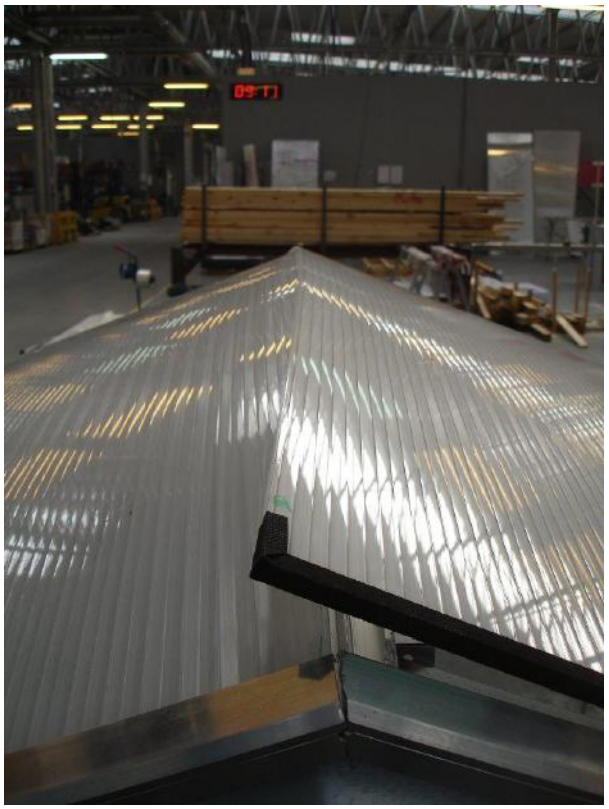


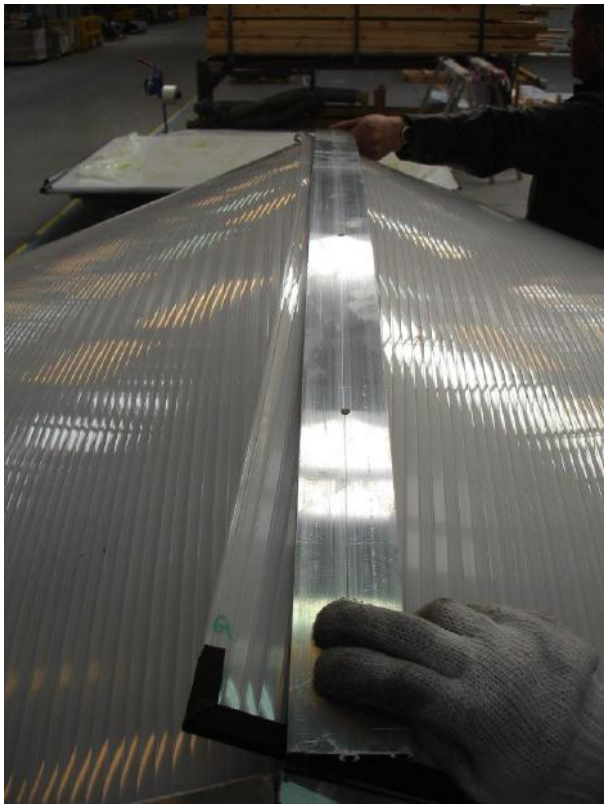
- Cut the polycarbonate panel along the marked line.

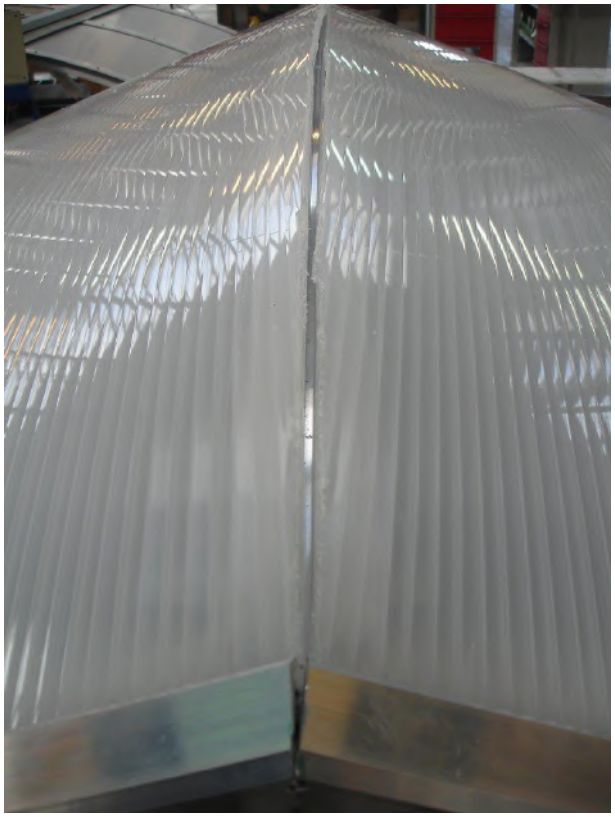


- Verify if the new edge of the PCA panel runs along the bearing profile groove edge. Adjust if required.

- Make good use of the tape applied to the panel if it has been damaged during cutting.
- Repeat the above steps, namely: position, mark the line, cut, verify, adjust, and apply the tape for the polycarbonate panel on the other side of the roof ridge.







For multiple glazing assemblies with separators between glazing panels

The PCA blank for the ridge panel is supplied wider than required (by ca. 40 mm) to enable cutting according to this instruction manual. The side to be cut to size has an 80 mm wide separator.

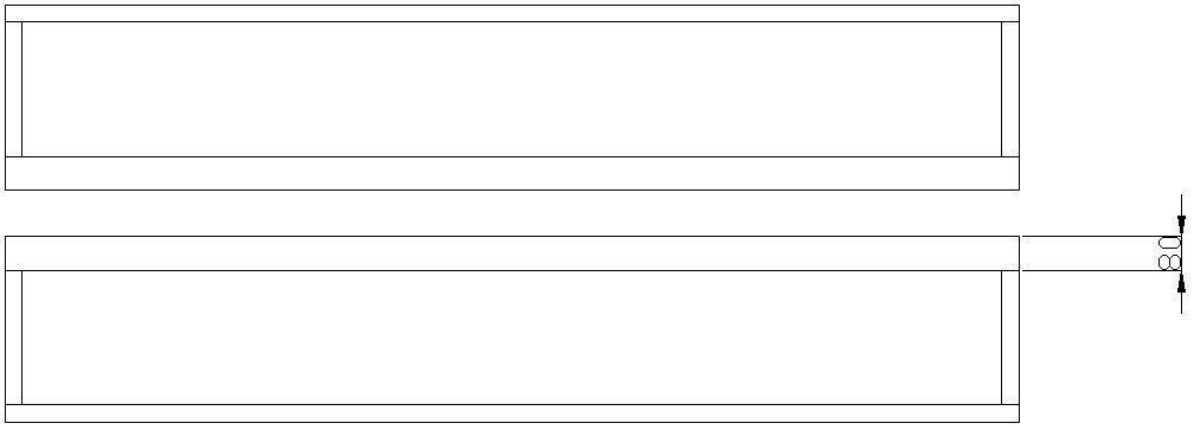
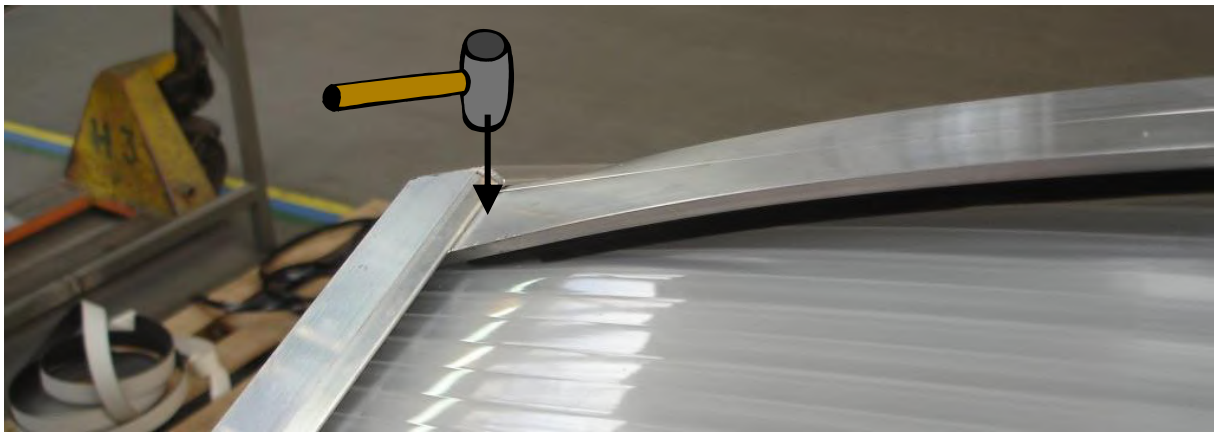


Figure 107 PCA blanks with 80 mm separator applied on one side

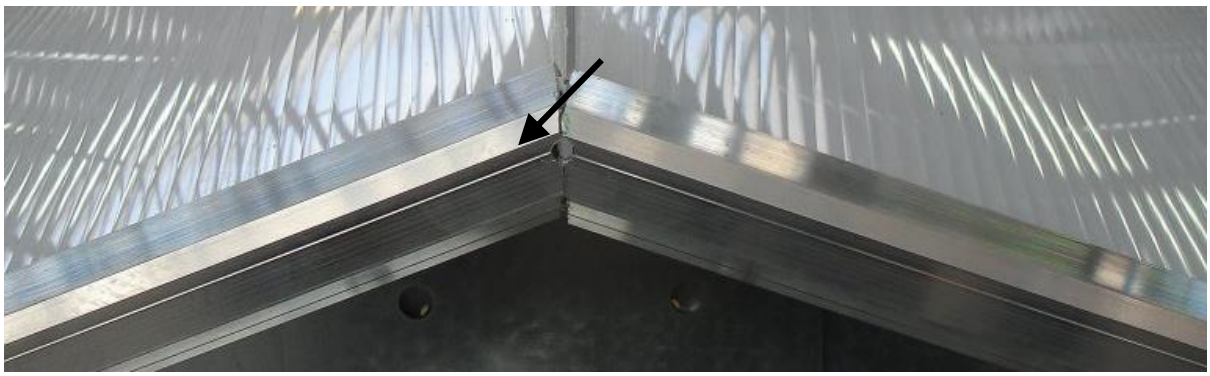
8. Mounting the pressing profiles:

- Mount the pressing profiles on the last bearing profiles below the roof ridge.
- Press down the pressing profile in the gap between the PC panel and the edge profile.

The end of the profile can be bent to fit the gap shape if required to facilitate installation.

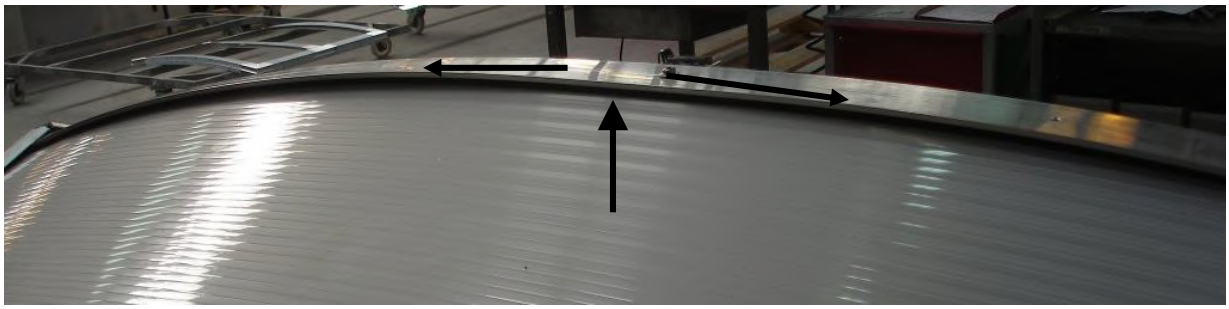


- Drill a Ø 6 mm hole at the edge profile connections at the planned location of the M6 socket axis in the pressing profile.



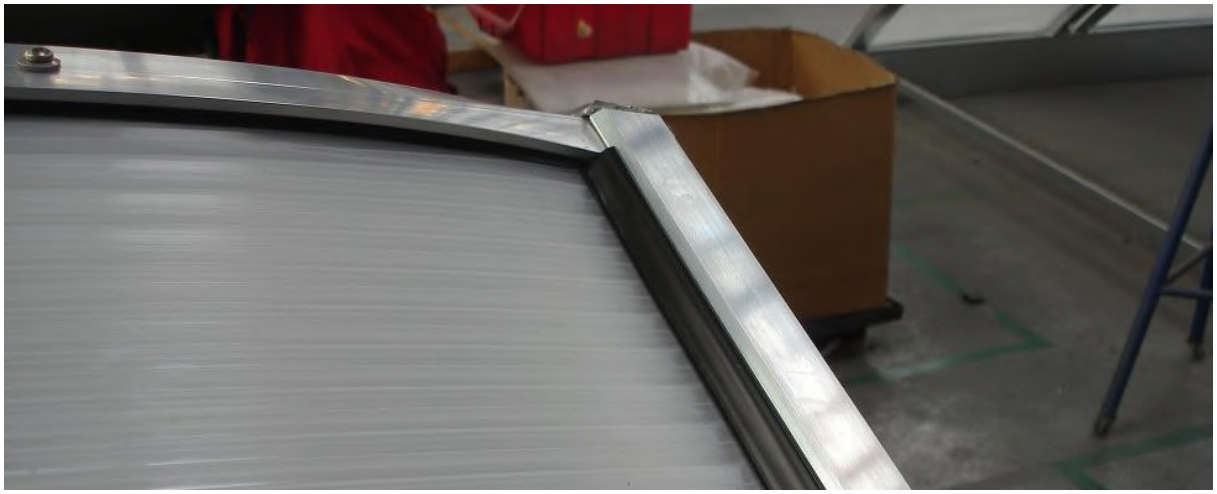
- Screw in 2x M6x50 bolts + large diameter, plain flat washer (steel+EPDM washer can also be used) in the pressing profile and initially tension the profile.

- Starting from the rooflight apex, tension the pressing profile by securing it with Ø 5.5 mm sheet-metal screws with EPDM washers in the pre-drilled holes. Screw length depends on the polycarbonate panel thickness.

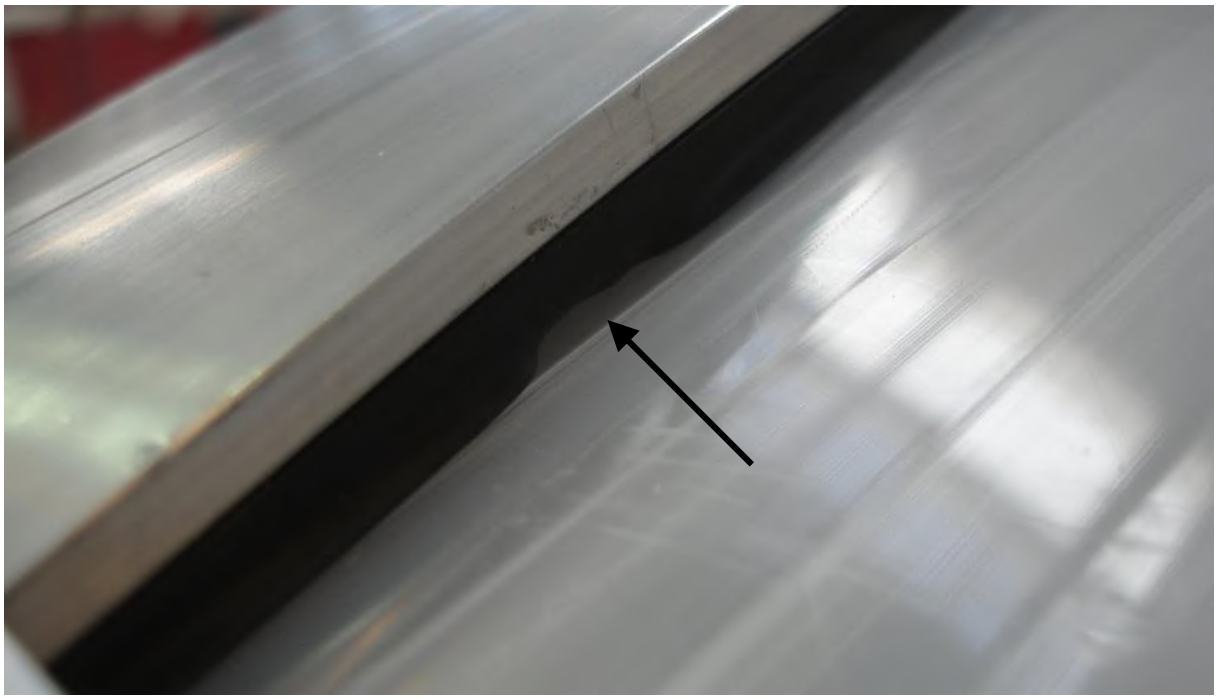


- Once the pressing profile has been fixed with the sheet metal screws, tension the two tensioning screws.

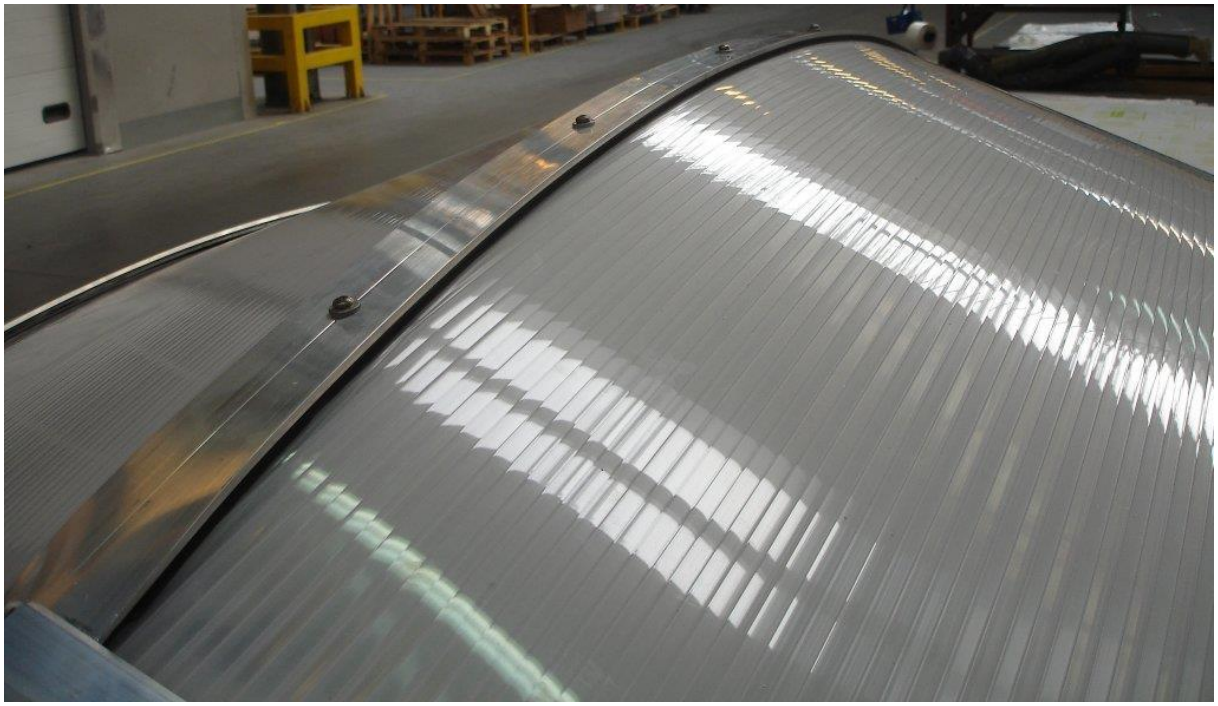
- Fit the JP-EPDM edge profile gaskets.



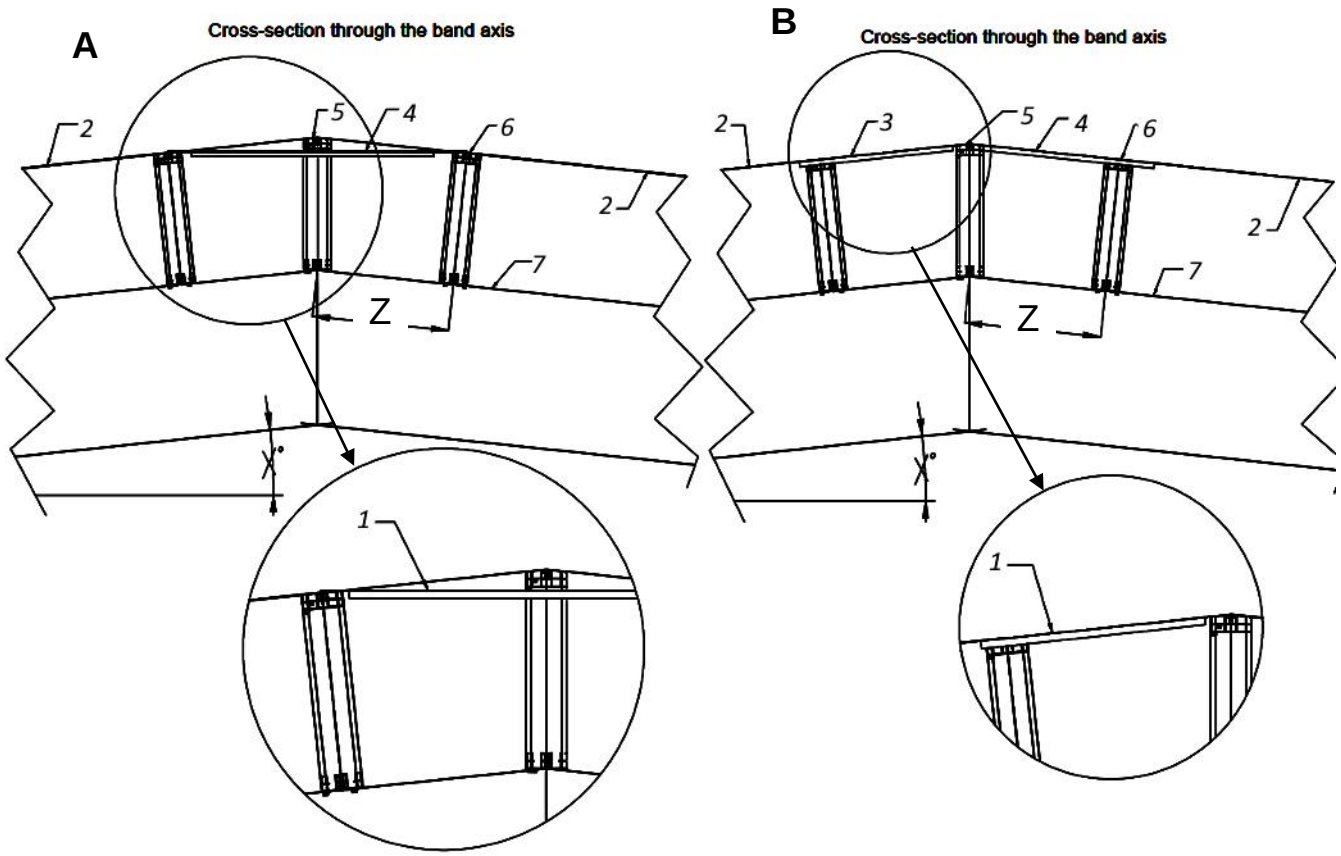
- Fit the joint cover strip at the edge profile of the roof ridge joints (if ordered).
- Make sure that the lips of SIM gaskets for pressing profiles are not folded back, and make good if required.



- At this point, the rooflight is fully assembled.



XIV. Roof ridge crossing: how to install the 1200 J reinforcements



NOTE:

Option A is to be used when:

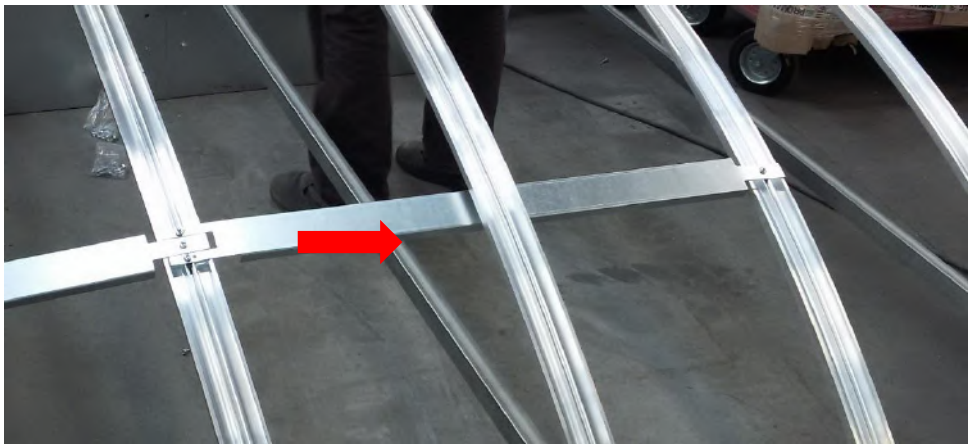
The roof pitch (X) is greater than 6°, and the dimension between the ridge bearing profile 1 and the ridge bearing profile 2 (Z) exceeds 400 mm.

In other configuration use option B

1 - Ridge bracing 1200 J,
2 - Concentration 1200 J,
3 - Ridge concentration 1200 J,
4 - Ridge bracing 1200 J 2,
5 - Ridge bearing profile 1,
6 - Ridge bearing profile 2,
7 - Base.

Figure 108 Methods to equip the roof ridge crossings with 1200 J reinforcements

Example A
The reinforcement is placed under the bearing profile at the top point of the rooflight.



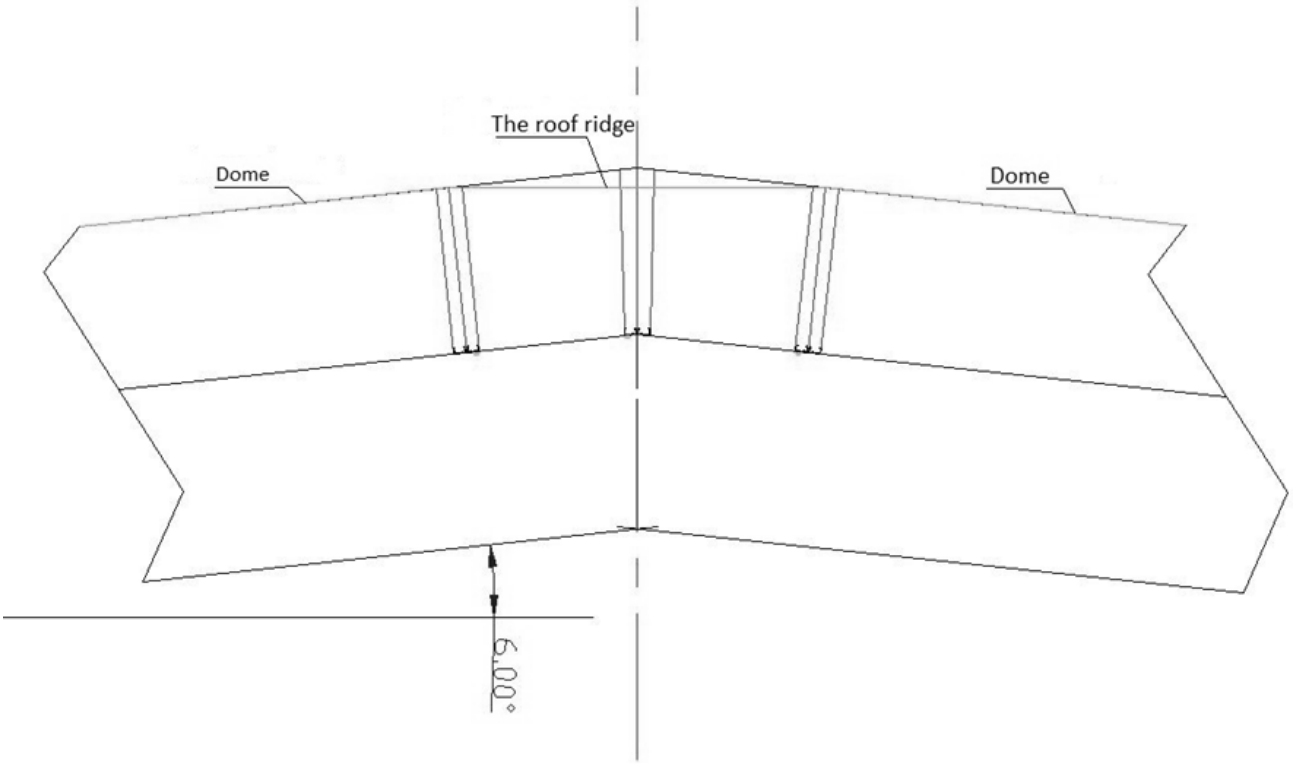


Figure 109 Method of installation of reinforcements in the roof ridge

Covering the connection of the edge profile at the roof ridge

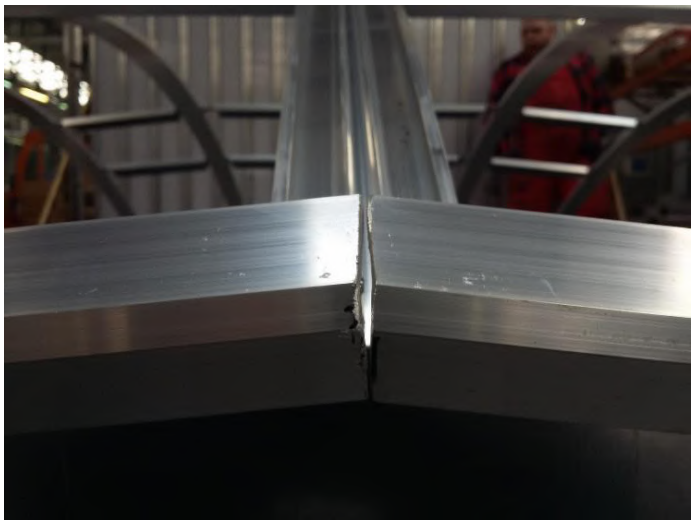
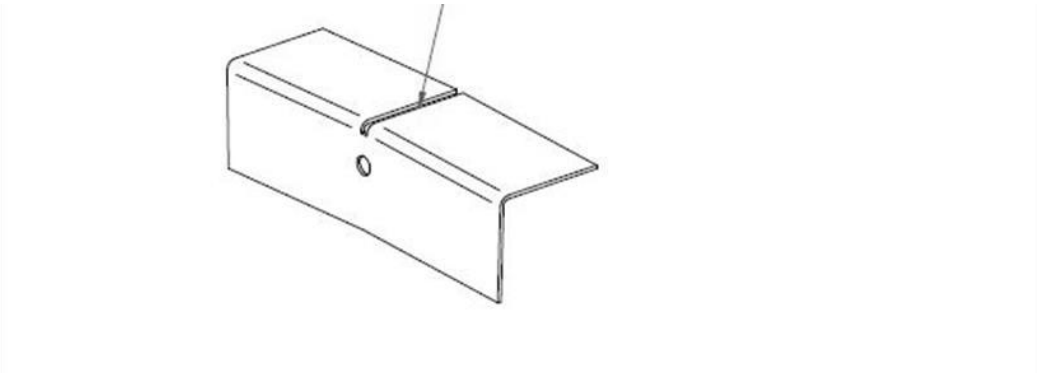


Figure 110 *PCA cover with 80 mm separator applied on one side*



Installation of edge profiles roof ridge joint cover – Kd16

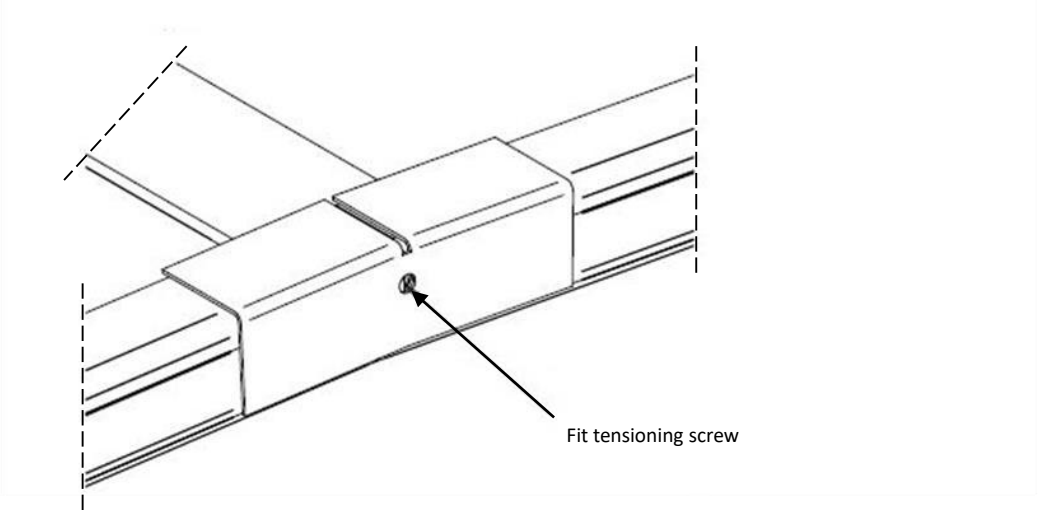


Figure 111 *Installation of edge profiles roof ridge joint cover*

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