PERGOLA SB 400

PERGOLA SB400 is a functional and aesthetic construction set with fixed roof made of rotating blades, which protect against the sun and rain. System that is used in single module and in multi-module by connecting single modules.

USAGE:

- Sun protection and surface shading. It is also rainproof.

PRODUCT CHARACTERISTICS:

- Extruded aluminium construction with stainless steel elements
- Water drainage system integrated with the construction
- The lack of roof slope
- Rotation of the roof blades: electrically operated
- Possibility of using weather automation
- The movable module (roof) is rainproof. It also provides aesthetic water drainage system through integrated side gutters and posts
- It regulates the access of the sunlight according to users needs
- Protects against weather conditions: rain and wind
- It is not snowproof
- It does not emit toxic substances during the operational term
- The noise pollution due to eletro-mechanical drive is not considered as a significiant threat, but is rather a comfort matter
- The rotation of roof blades may be started by manual switch or remotely controlled
- Easy access to the motor
- Installation holes for wirings in the corners

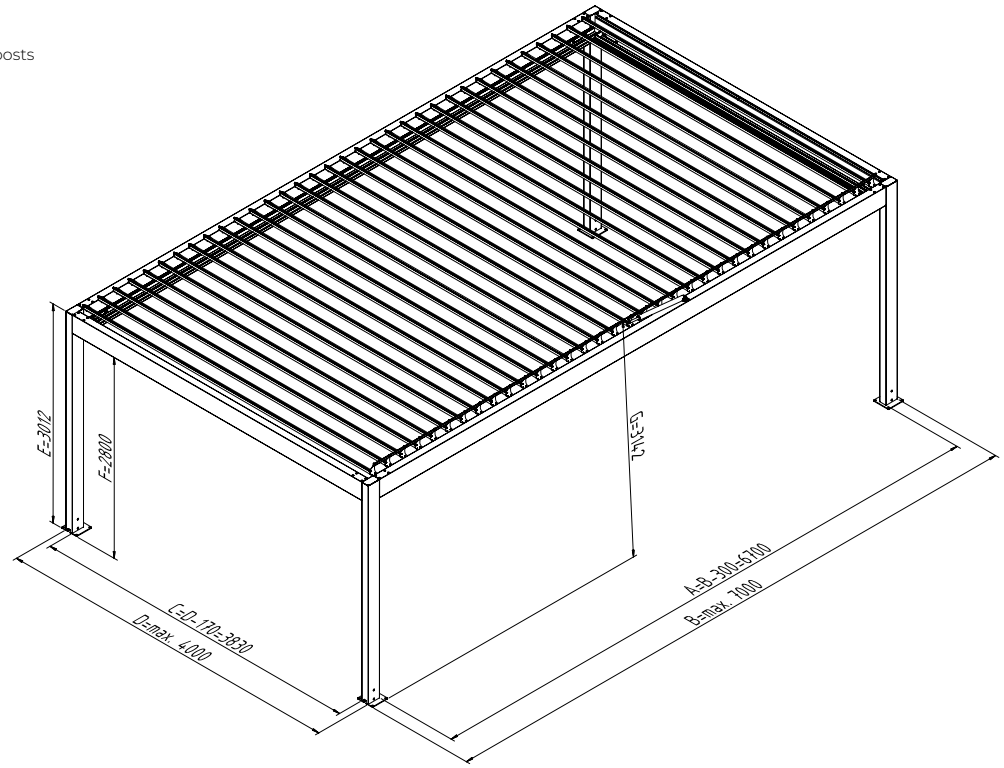
TECHNICAL SPECIFICATION:

- Maximum width of the module 4 m
- Maximum projection 7 m
- Maximum height in the light between floor and the beam 2.8 m
- Maximum height of the construction 3.01 m; mechanism of the blades rotation 3.14 m
- Free-standing or wall-mounted construction, single- or multi-module (constructed from single-modules) is made of extruded aluminium profiles and stainless-steel elements, equipped with water drainage system
- Slope angle 0 degrees
- Transverse slope of the blade ends 20 mm
- Intervals of roof blades 200 mm
- Blade rotation range: 0-90° (for Picolo motor) or 0-130° (for motor 24V)
- Wind load resistance class 6 (400 Pa ~41 kg/m^2)
- Maximum drainage capacity drains the rain at intensivity up to 0.05 l/s/m^2 at maximum time of 5.3 minutes (depending on the configuration of water outflows)
- LED lighting with a neutral colour of 4500 K (in strips on the gutters) or 3300 K (light points in the blades) Drainage through gutters 92 mm wide (with optional angular overflows only in case of 4 gutters) and outflow to beams and posts as well as water outflow at the bottom of the posts
- Electric drive: linear motor ELERO Picolo XL (230V AC), or alternatively motor 24V
- Construction colours: 9016M, FSM71319, 7016M (standard) and RAL palette (optional)
- External usage
- Construction in accordance with PN-EN1090 and PN-EN13659

ACCEPTABLE TECHNOLOGICAL TOLERANCES OF THE EXTERNAL DIMENSIONS OF THE PERGOLA ARE +/- 10 mm

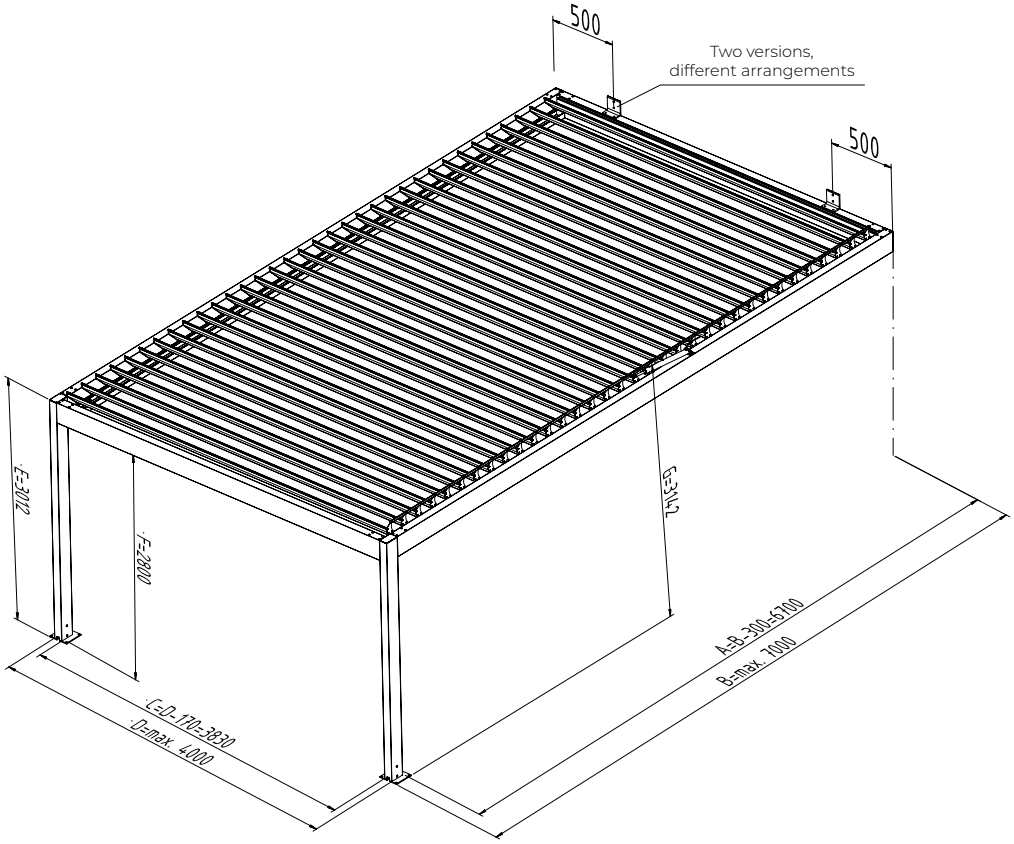
PERGOLA SB400
Single free-standing version

NOTE:
foot outline may protrude beyond the posts
(depending on the type)



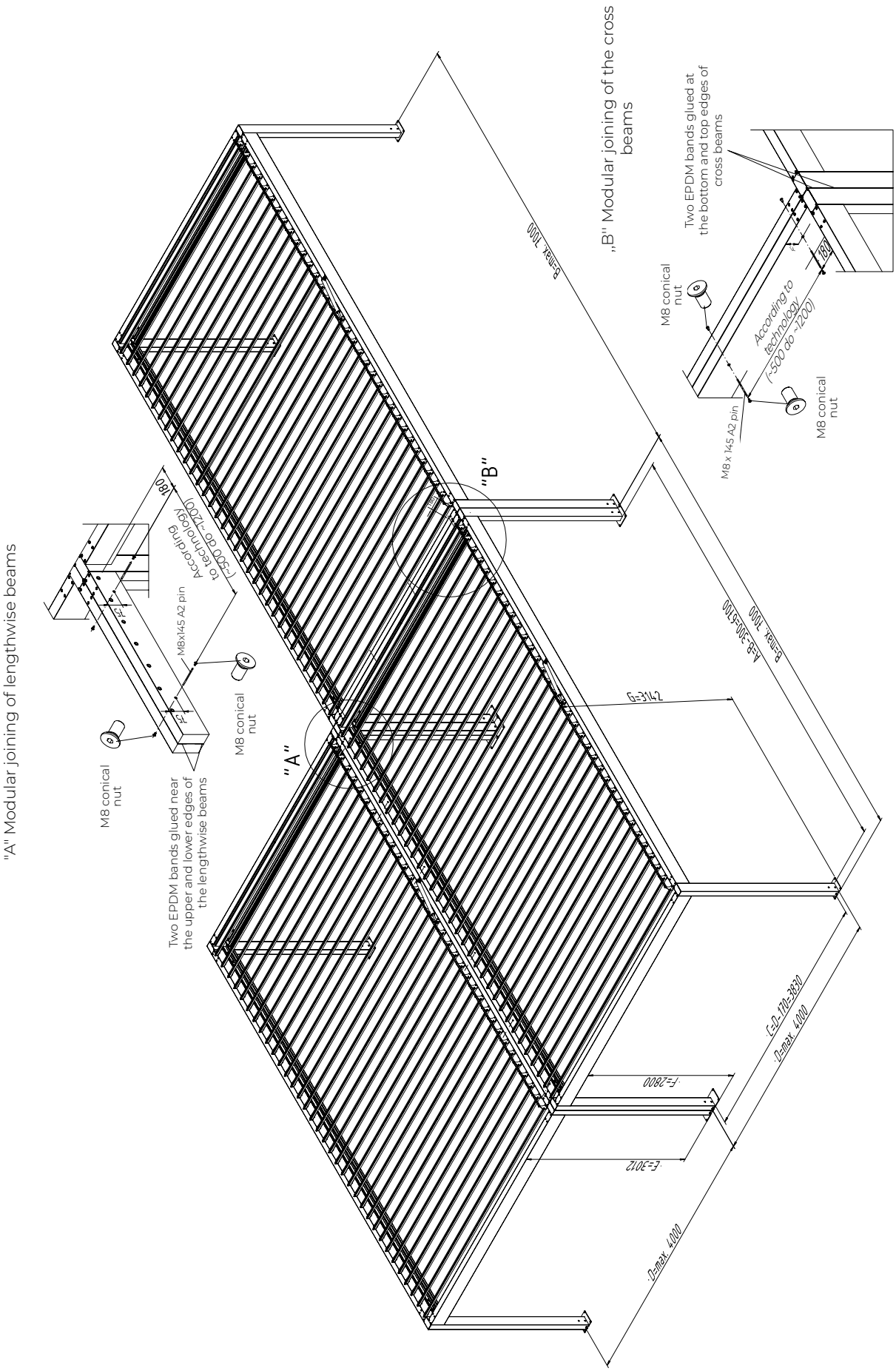
PERGOLA SB400
Single wall-mounted (transverse) version

NOTE:
Foot outline may protrude beyond the posts
(depending on the type)



PERGOLA SB400

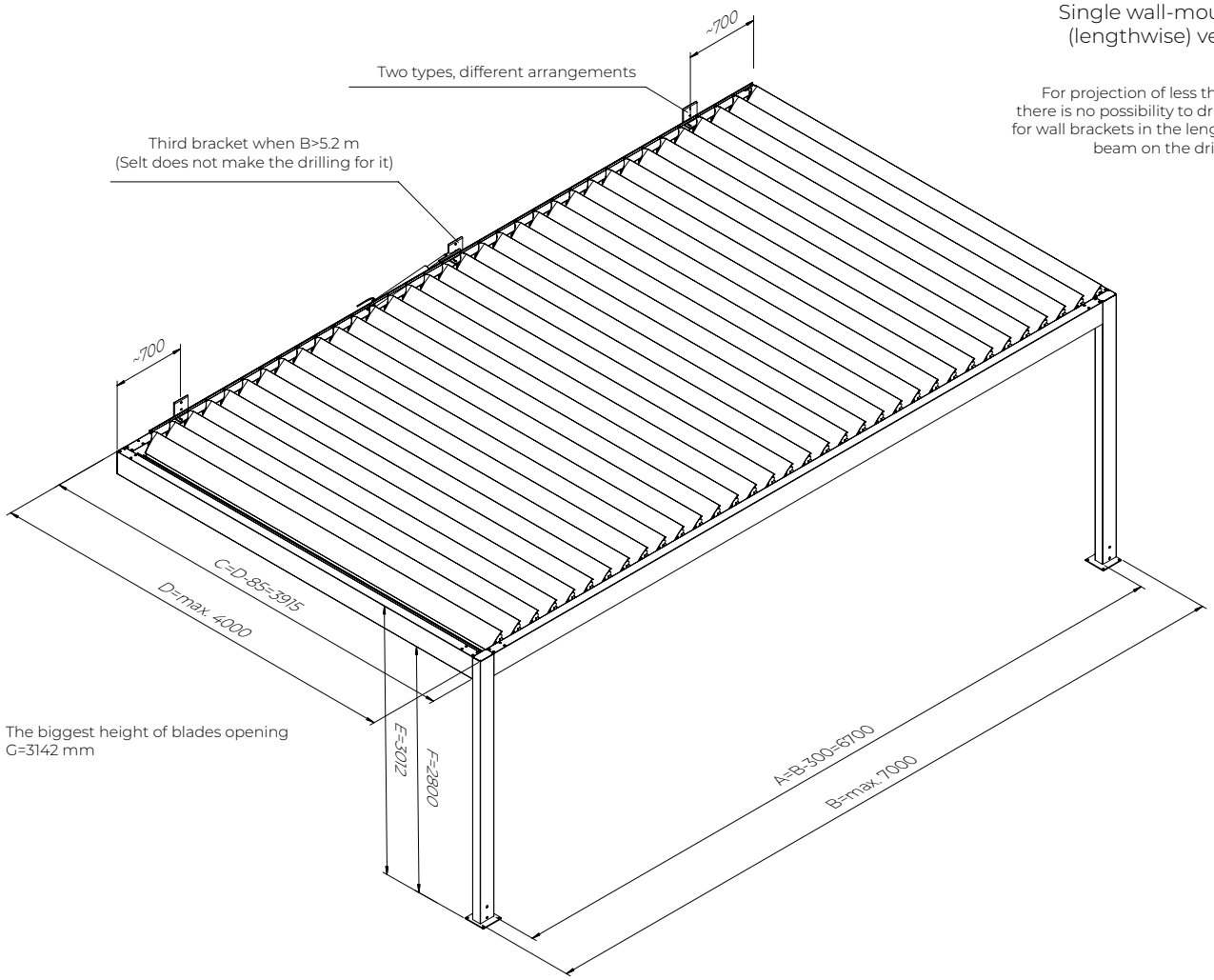
Modular free-standing version



Modular solutions by joining separate pergolas.
Beams bolted with stainless pins M8 with conical nuts. Post are not joined.
Sealing the joints of the posts by 2 strips of adhesive tapeEPDM.

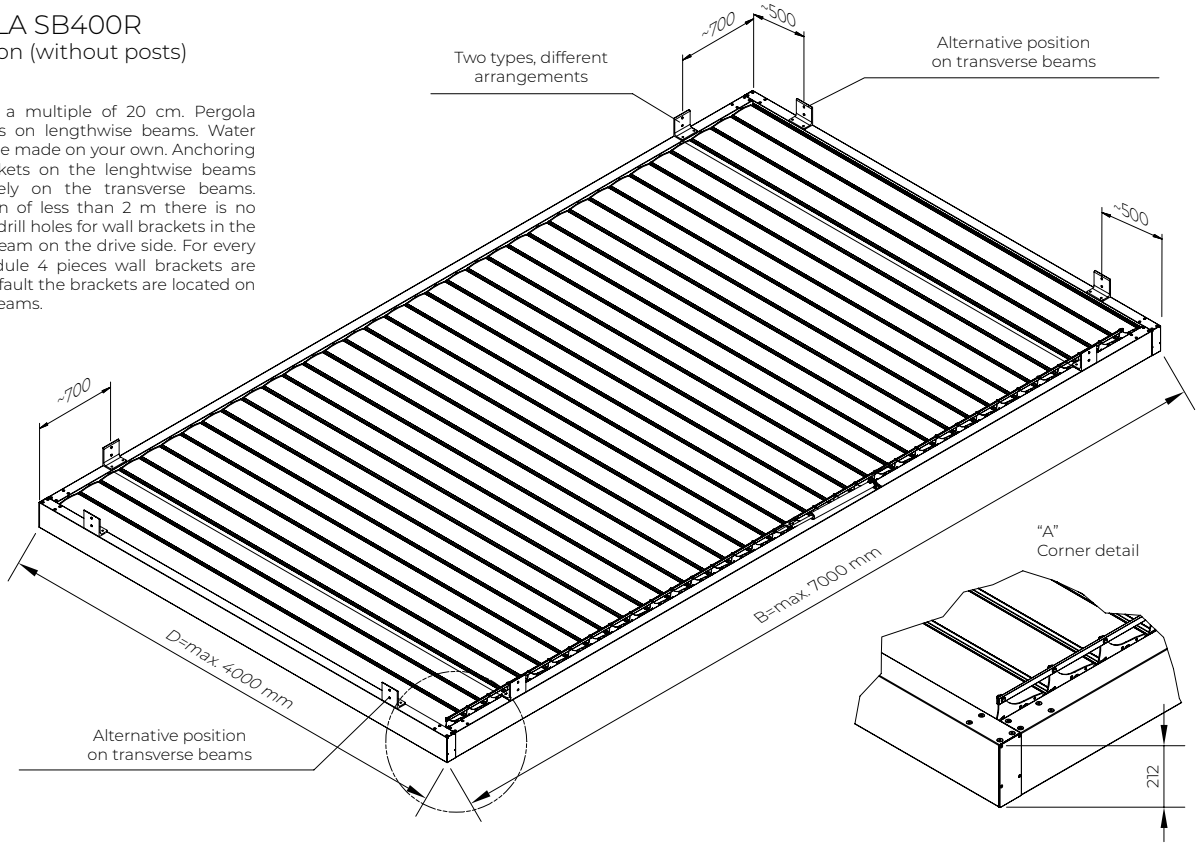
PERGOLA SB400
Single wall-mounted (lengthwise) version

Note:
For projection of less than 2 m there is no possibility to drill holes for wall brackets in the lengthwise beam on the drive side.

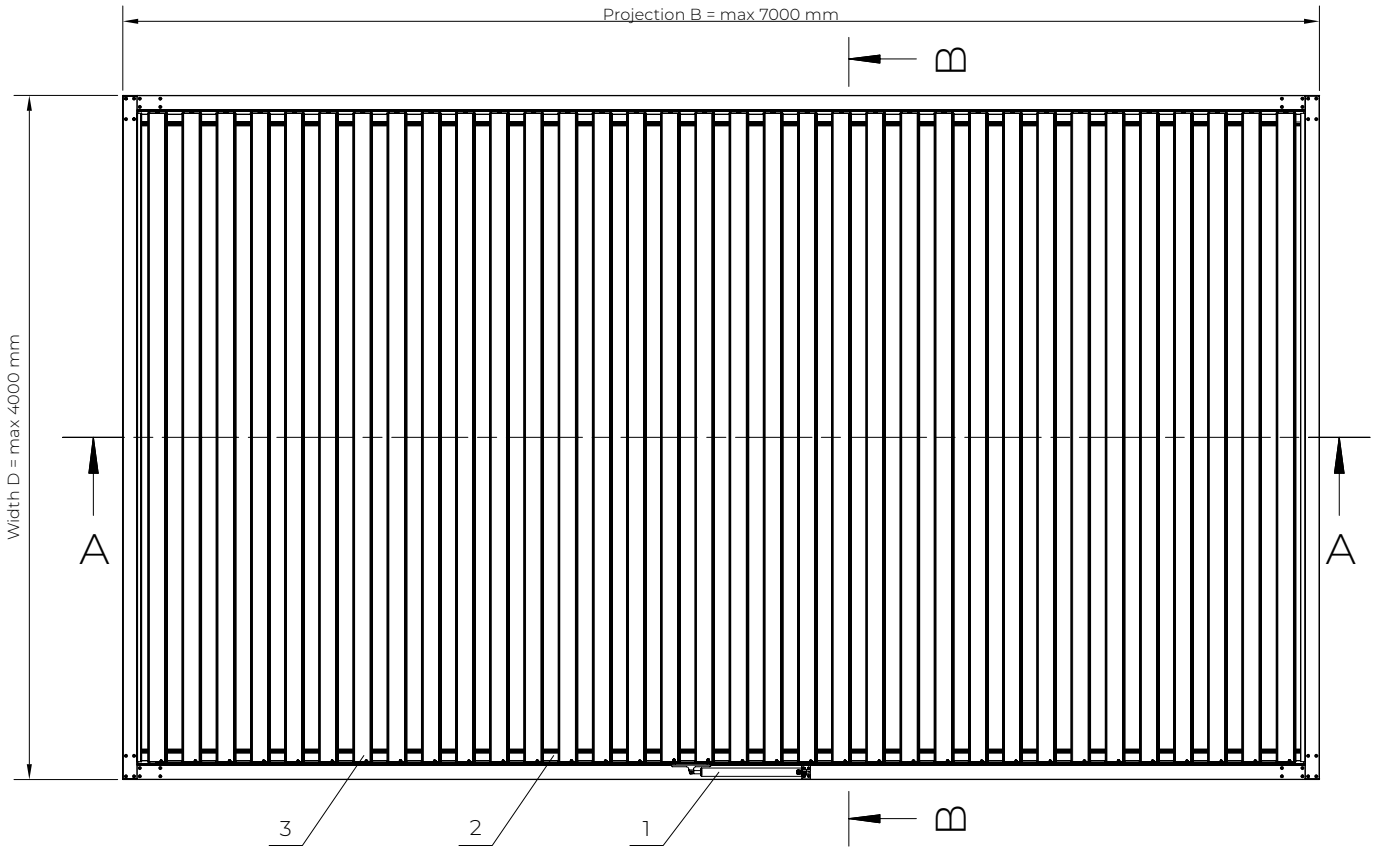


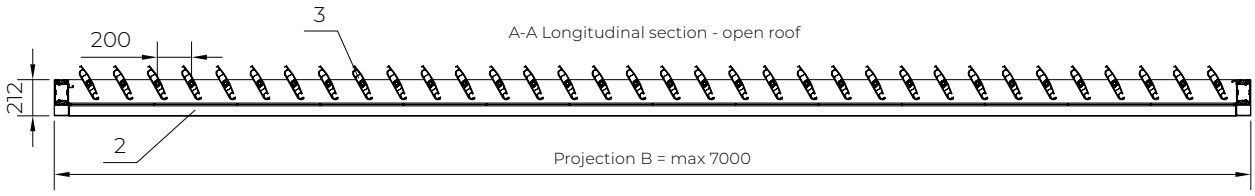
PERGOLA SB400R
Roof version (without posts)

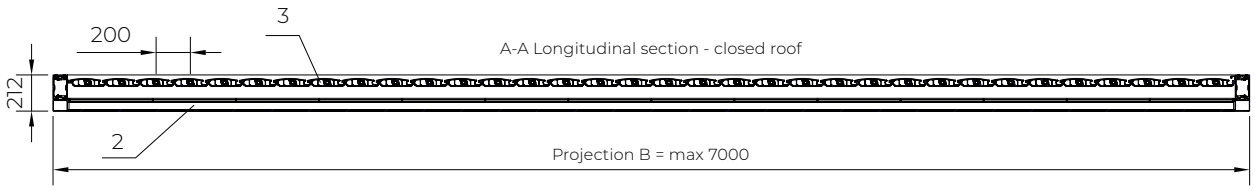
Note:
Projection is a multiple of 20 cm. Pergola has 2 gutters on lengthwise beams. Water drainage to be made on your own. Anchoring by wall brackets on the lenghtwise beams or alternatively on the transverse beams. For projection of less than 2 m there is no possibility to drill holes for wall brackets in the lengthwise beam on the drive side. For every SB400R module 4 pieces wall brackets are added. By default the brackets are located on lengthwise beams.

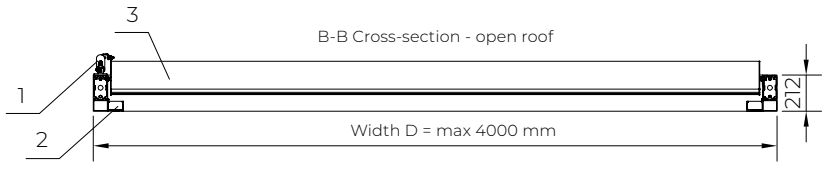


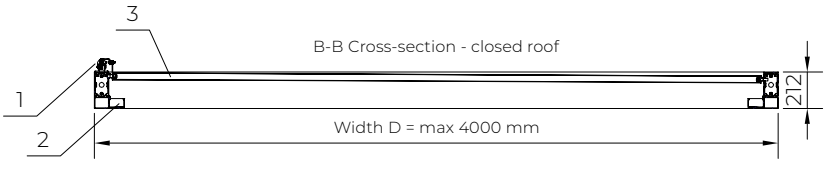
PERGOLA SB400R
Views and sections







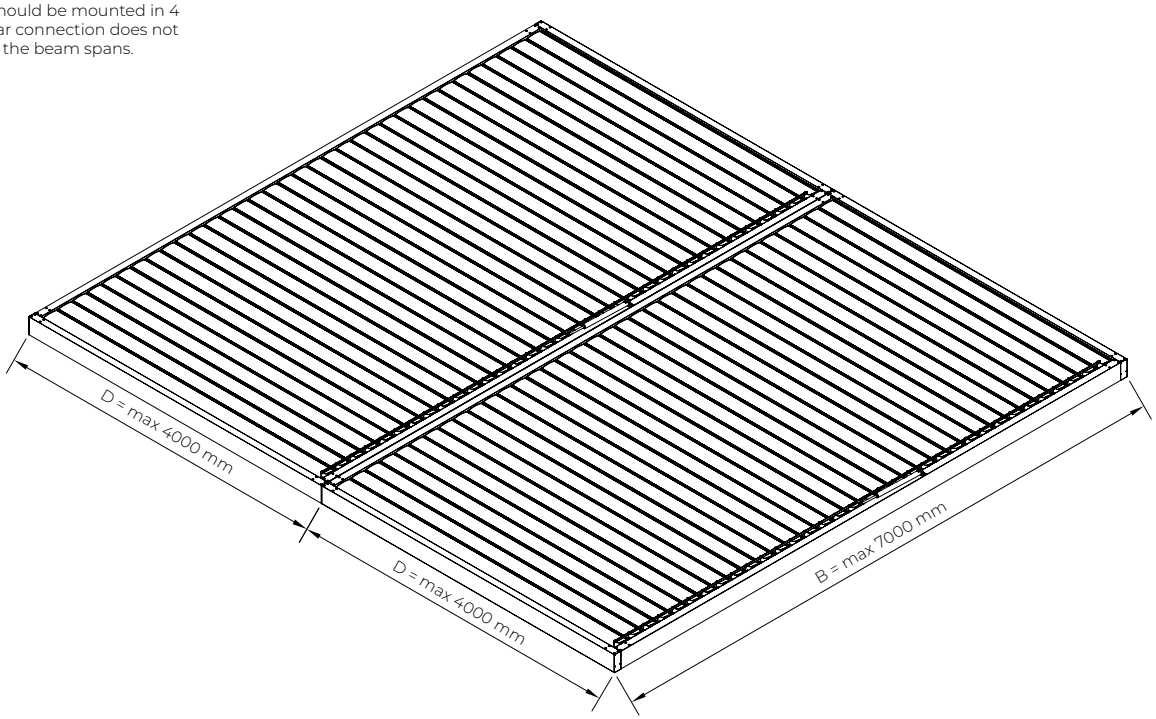


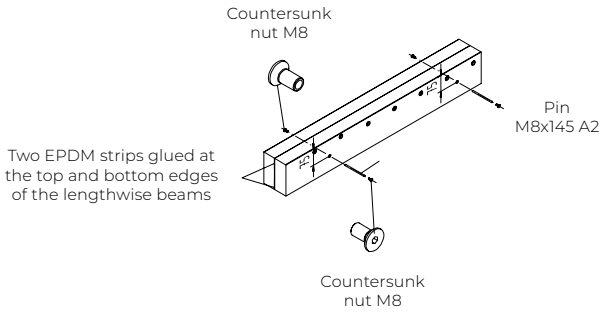


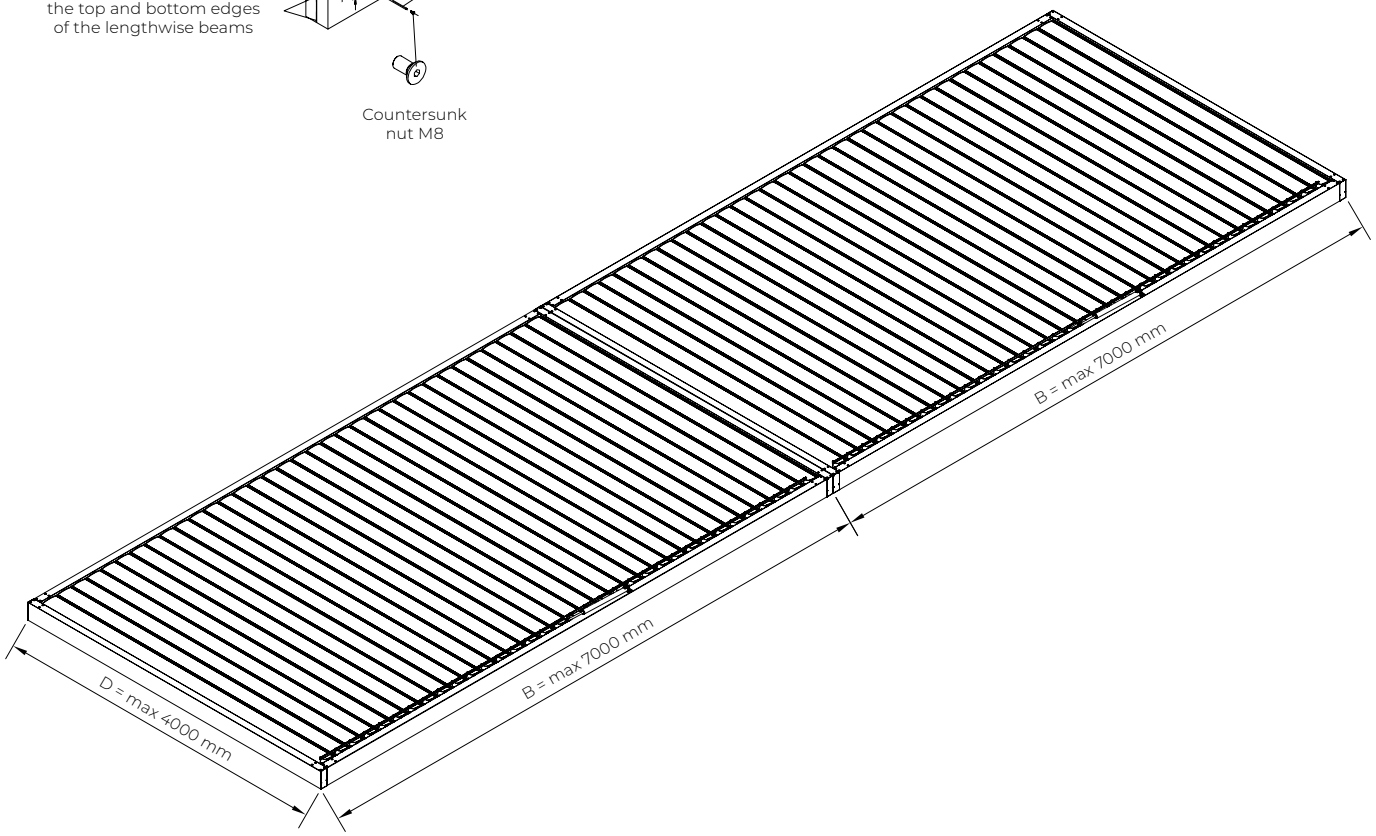
1. Motor
2. Lengthwise gutter
3. Blade

PERGOLA SB400R
Modular connection

NOTE:
Each module should be mounted in 4 corners. Modular connection does not allow to extend the beam spans.

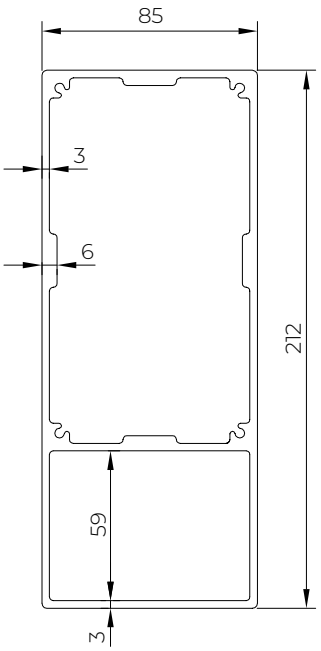






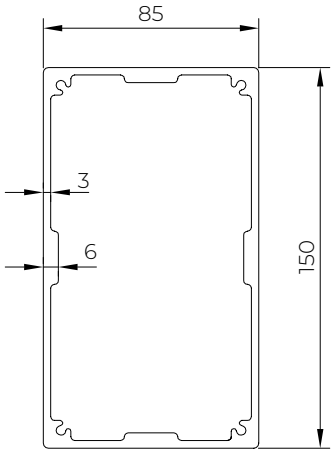
PERGOLA SB400
Cross-section of the profiles

Cross-section of the beam
(85x212)



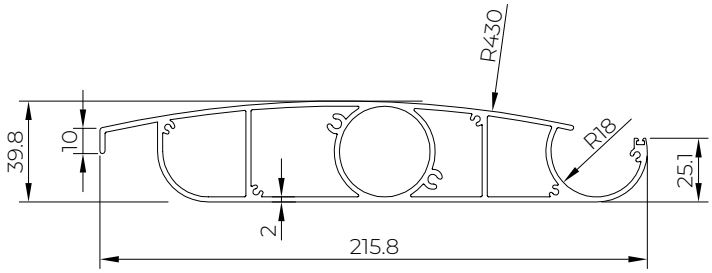
Material: EN AW6060 T66
Characteristics:
Mass 6.48 kg/m
Area 24.01 cm²
J1 291.31 cm⁴
J2 1216.58 cm⁴

Cross-section of the post
(85x150)



Material: EN AW6060 T66
Characteristics:
Mass 4.83 kg/m
Area 17.89 cm²
J1 215.9 cm⁴
J2 564.44 cm⁴

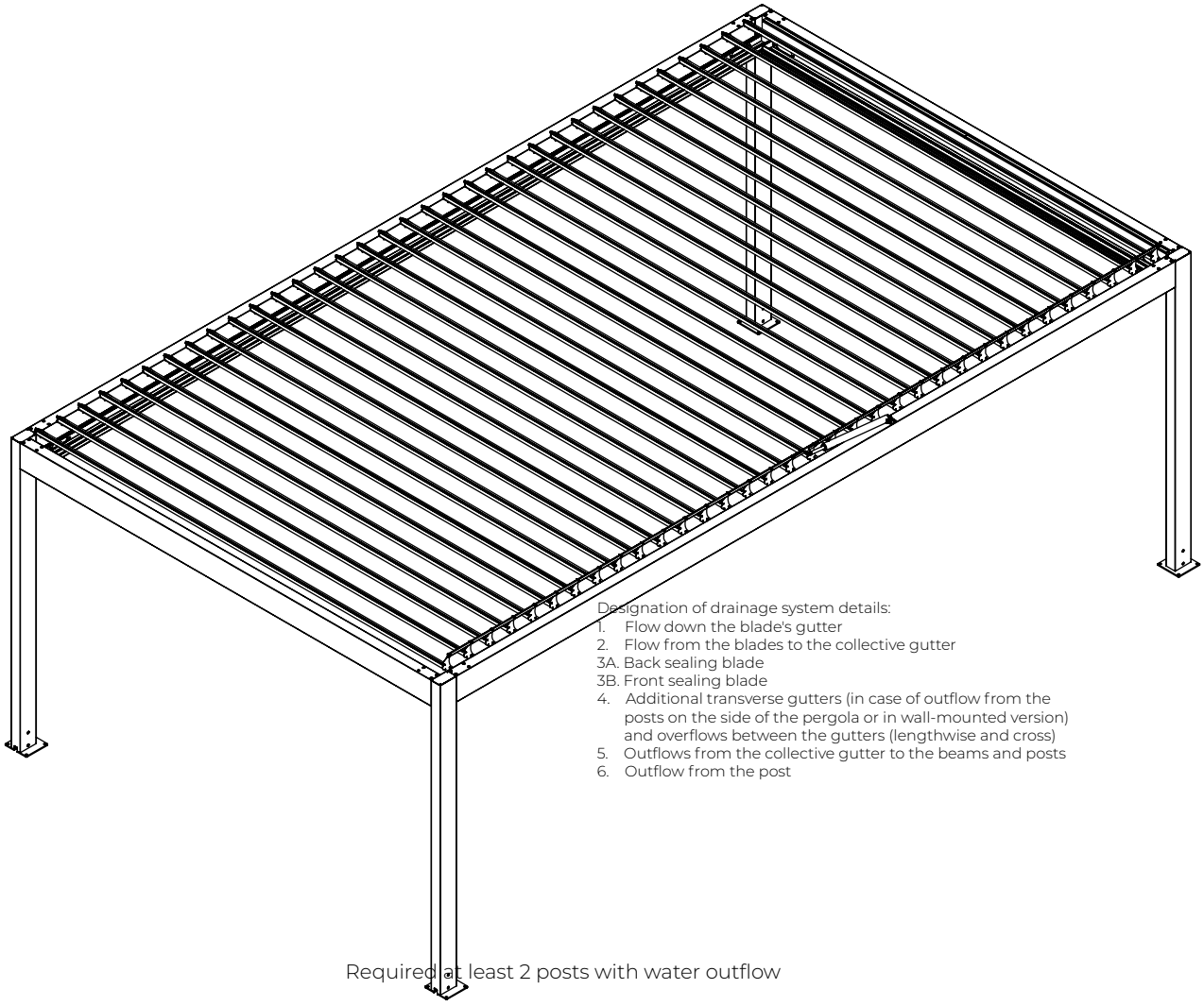
Cross-section of the blade
(216x40)



Material: EN AW6063 T66
Characteristics:
Mass 3.66 kg/m
Area 13.57 cm²
J1 439.1 cm⁴
J2 27.16 cm⁴

PERGOLA SB400

Drainage of the pergola



Designation of drainage system details:

1. Flow down the blade's gutter
2. Flow from the blades to the collective gutter

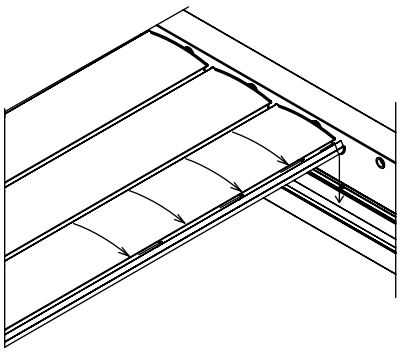
3A. Back sealing blade

3B. Front sealing blade

4. Additional transverse gutters (in case of outflow from the posts on the side of the pergola or in wall-mounted version) and overflows between the gutters (lengthwise and cross)
5. Outflows from the collective gutter to the beams and posts
6. Outflow from the post

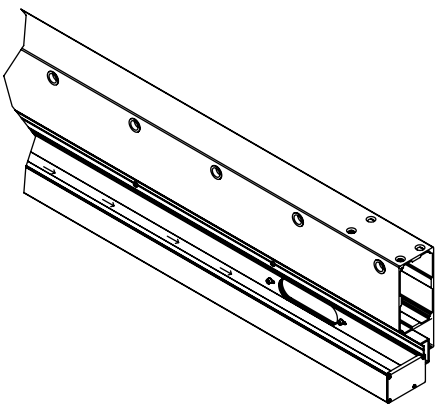
Required at least 2 posts with water outflow

Detail no. 1



Flow down the blade's gutter
(constant longitudinal blade slope 20 mm)
Blade's gutter diameter 36 mm

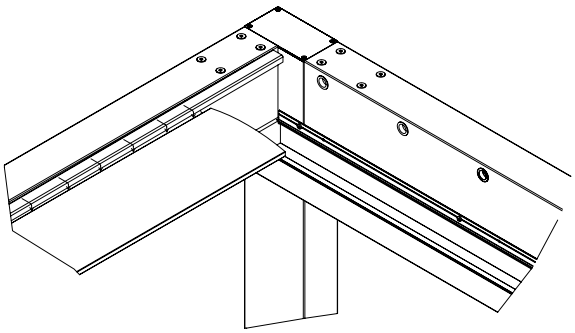
Detail no. 2



Flow down the collective gutter (it has a transverse slope and lack of longitudinal slope). Clear cross-section 87x48 mm

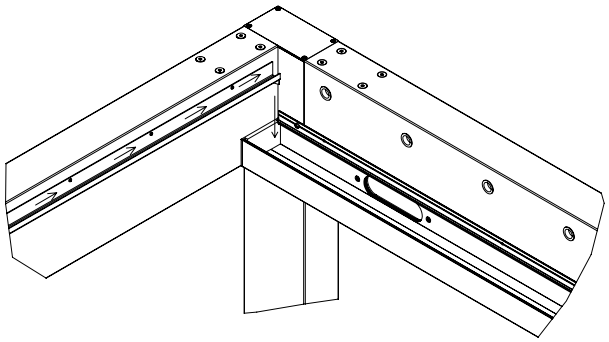
PERGOLA SB400
Drainage of the pergola

Detail no. 3A



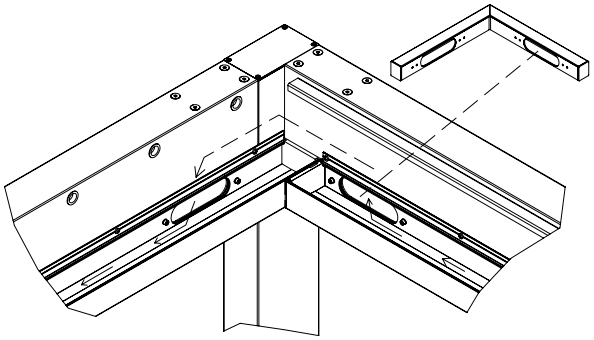
Flow from the back sealing blade to the blade's gutter. Gutter without slope.
NOTE: Extruded gutter as one whole segment.

Detail no. 3B



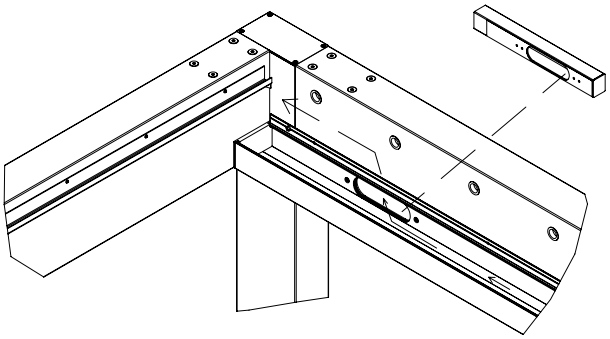
Flow from the front blade to the front sealing blade. Gutter without the slope. Flow from the bent gutter at the ends into the collecting gutter.
NOTE: Extruded gutter as one whole segment.

Detail no. 4



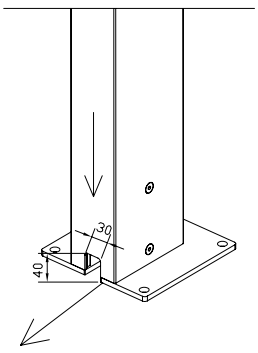
Transverse gutter (has transverse slope, no longitudinal slope). Clear cross-section 87 x 47 mm. It connects to the longitudinal one, with side oval overflows 144 x 83 mm along with angular drainage hidden in the beams with an internal cross-section 34 x 44 mm.

Detail no. 5



Slotted hole: 144x83 mm
Straight outflow (inside the beam) 34x44 mm.

Detail no. 6

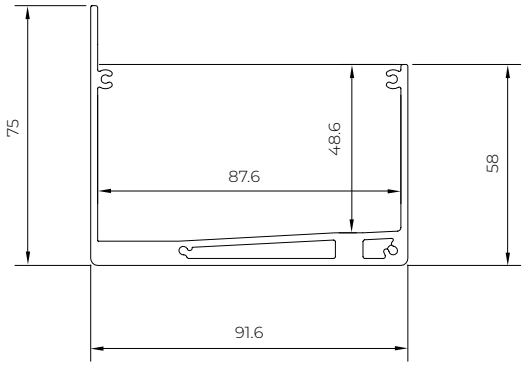


Flow down the beam profile and water outflow at the bottom of the post and foot undercut.

PERGOLA SB400

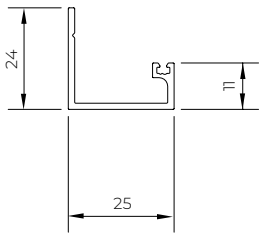
Cross-sections of gutters drainage

Cross-section of the gutter
(91,6x75)



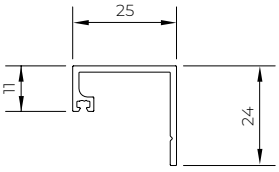
Material: EN AW6060 T66
Mass 7.99 kg/m

Cross-section of the front sealing blade



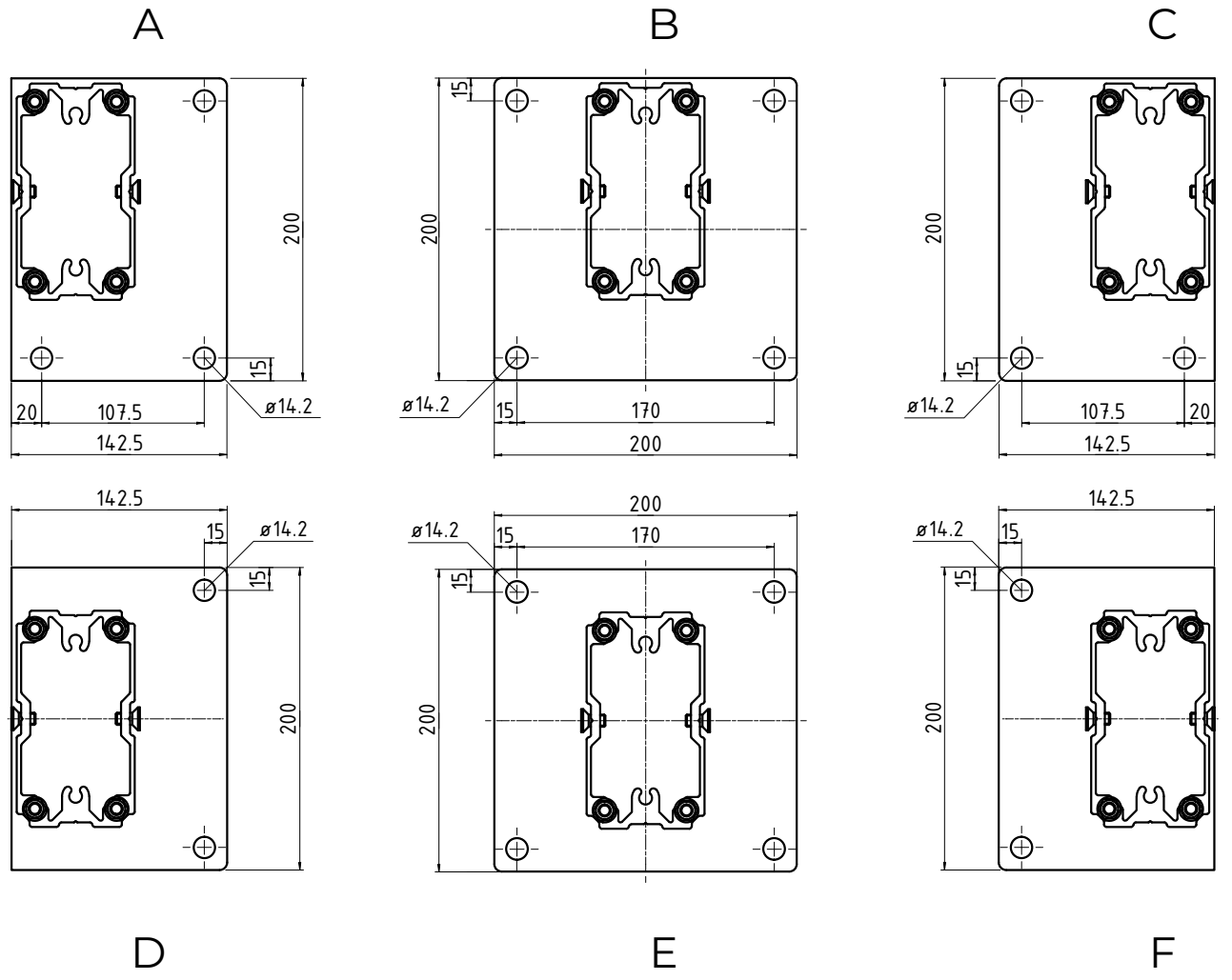
Material: EN AW6060 T66
Mass 0.25 kg/m

Cross-section of the back sealing blade

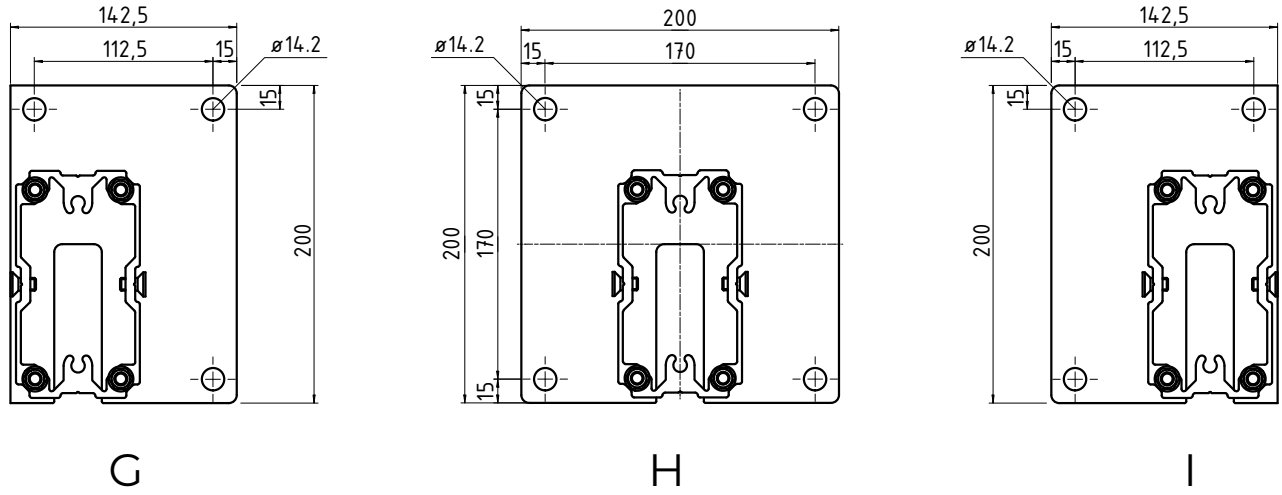


Material: EN AW6060 T66
Mass 0.25 kg/m

PERGOLA SB400
Feet without the water outflow



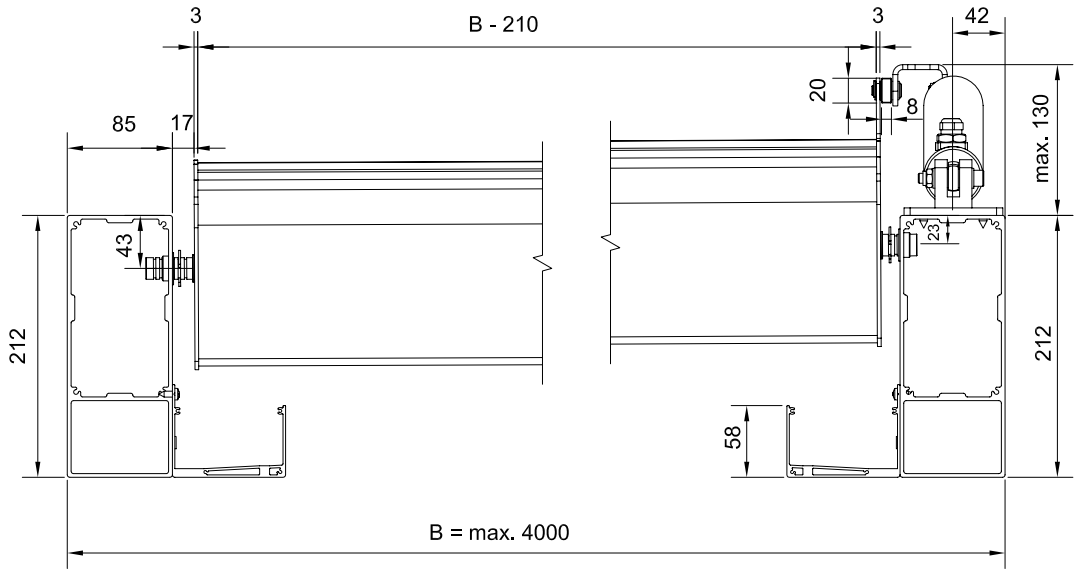
PERGOLA SB400
Feet with water outflow



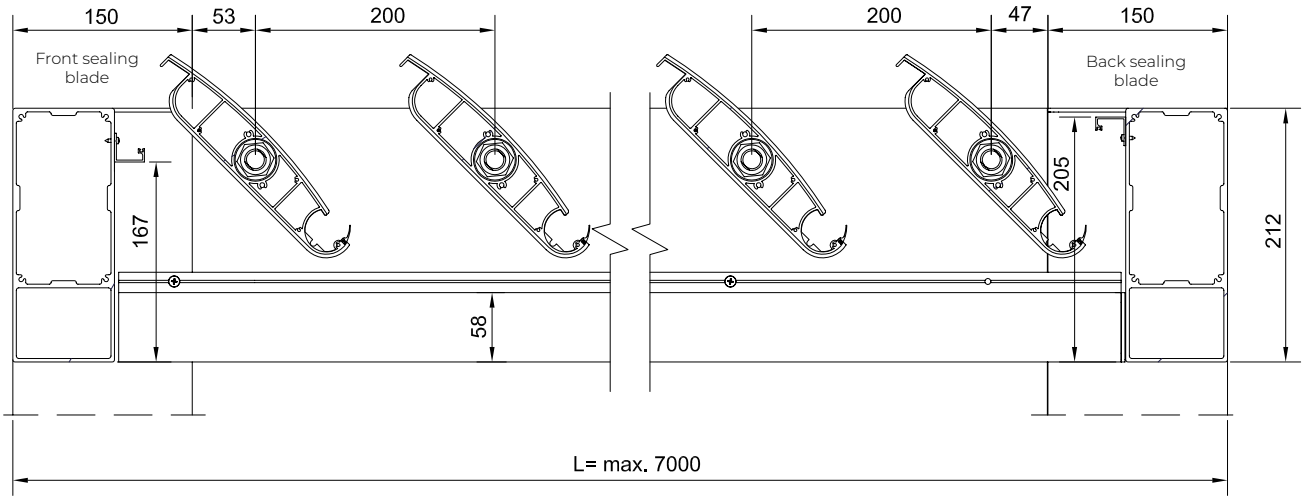
Feet from 8 mm thick aluminium sheet EN AW-5754, galvanized and powder coated

PERGOLA SB400
Cross-section

NOTE:
There are elongated blade mounting shafts on the bearing side.



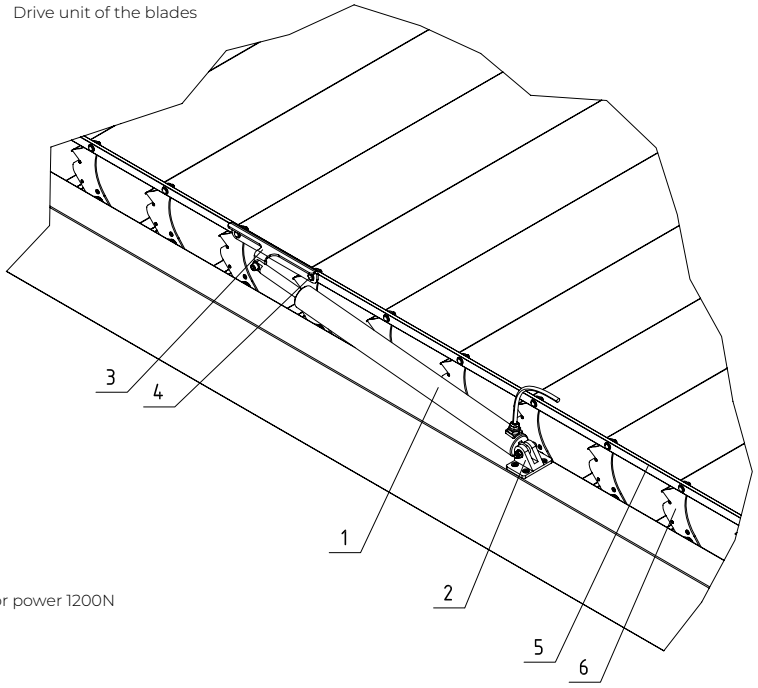
PERGOLA SB400
Longitudinal section (bearing side)



PERGOLA SB400
Power unit of the blades

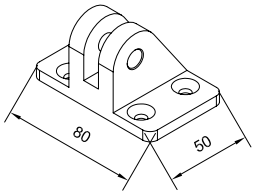
NOTE:
There is a new profile for rod: 20x20x2 and new profile of guiding bracket which is bent in two versions left/right.

Drive unit of the blades

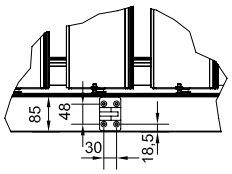


1. ELERO linear motor power 1200N
2. motor bracket
3. guiding bracket
4. M8 screw
5. rod 8x20 mm
6. blade end cap (drive side)

Motor bracket

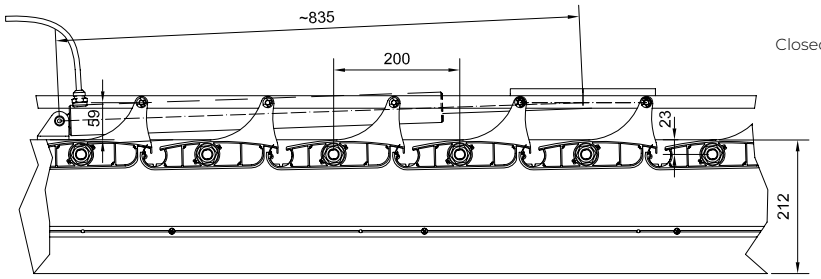


Motor mounting



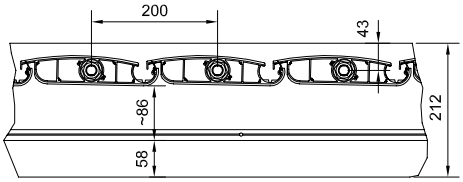
PERGOLA SB400
Mechanism and blade rotation range

Drive side

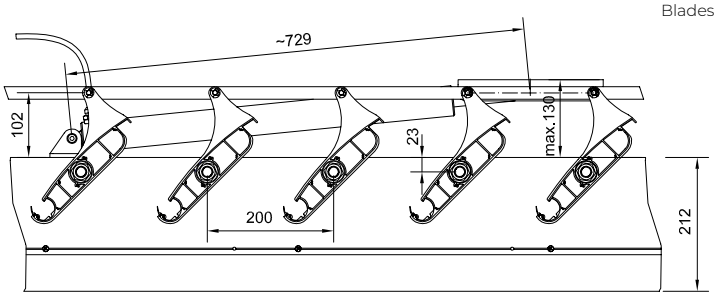


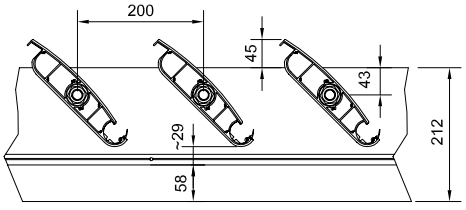
Closed blades

Bearing side

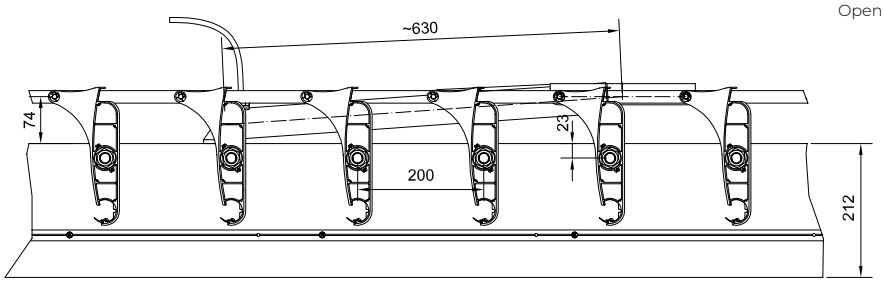


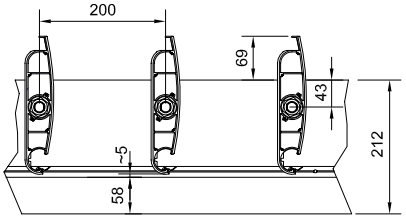
Blades with the maximum height of the motor's drive





Open





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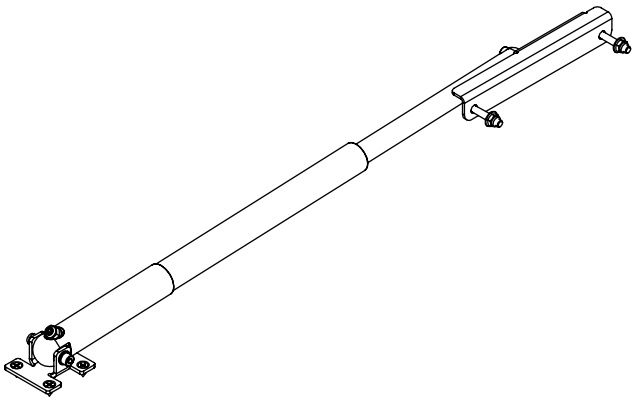
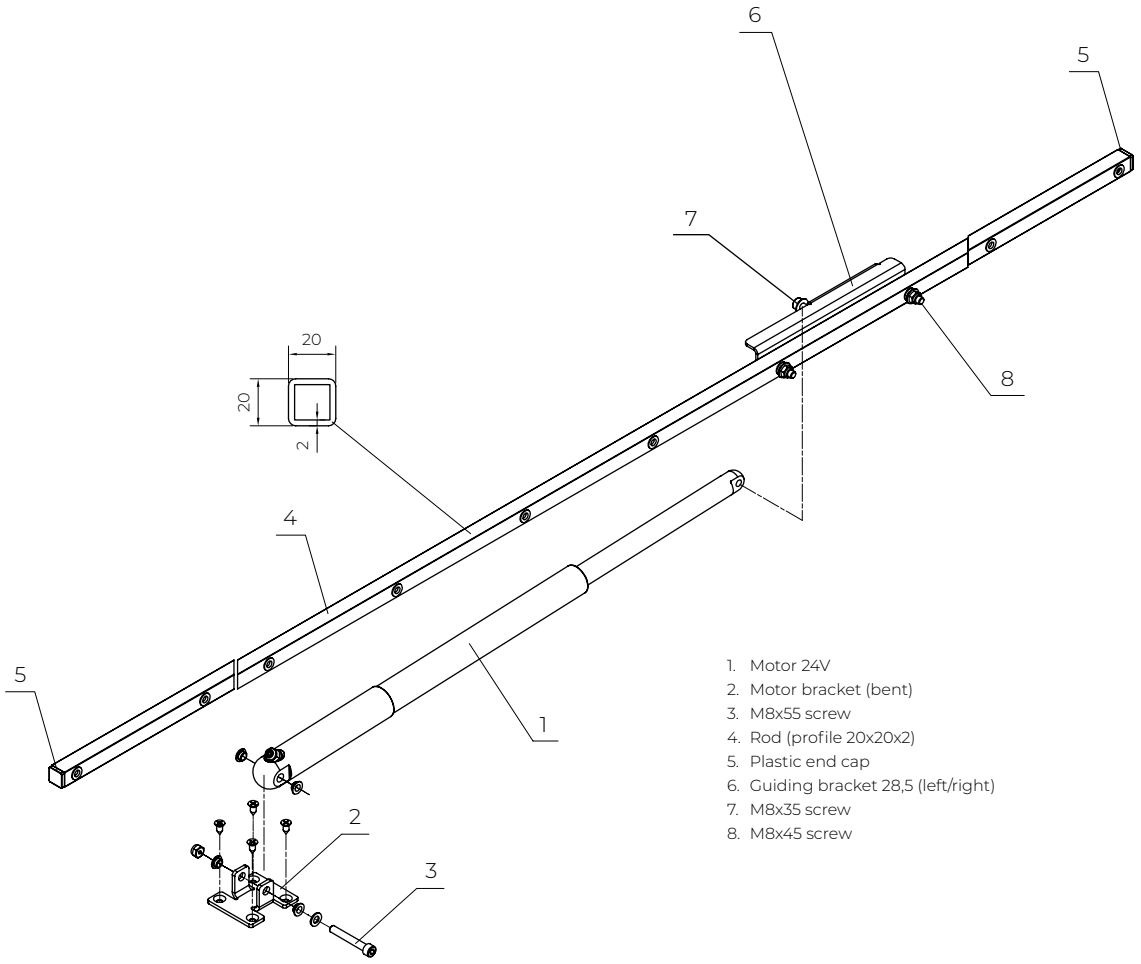
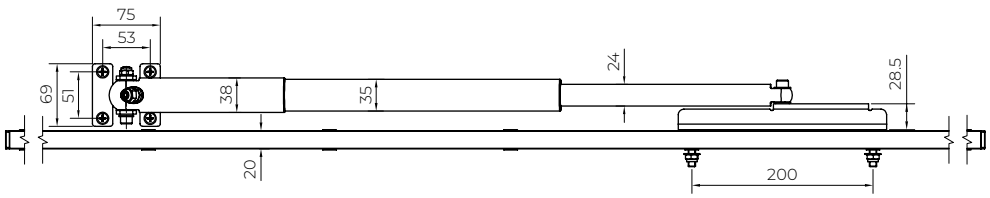
Drive unit - new rod





1. Motor 24V
2. Motor bracket (bent)
3. M8x55 screw
4. Rod (profile 20x20x2)
5. Plastic end cap
6. Guiding bracket 28,5 (left/right)
7. M8x35 screw
8. M8x45 screw

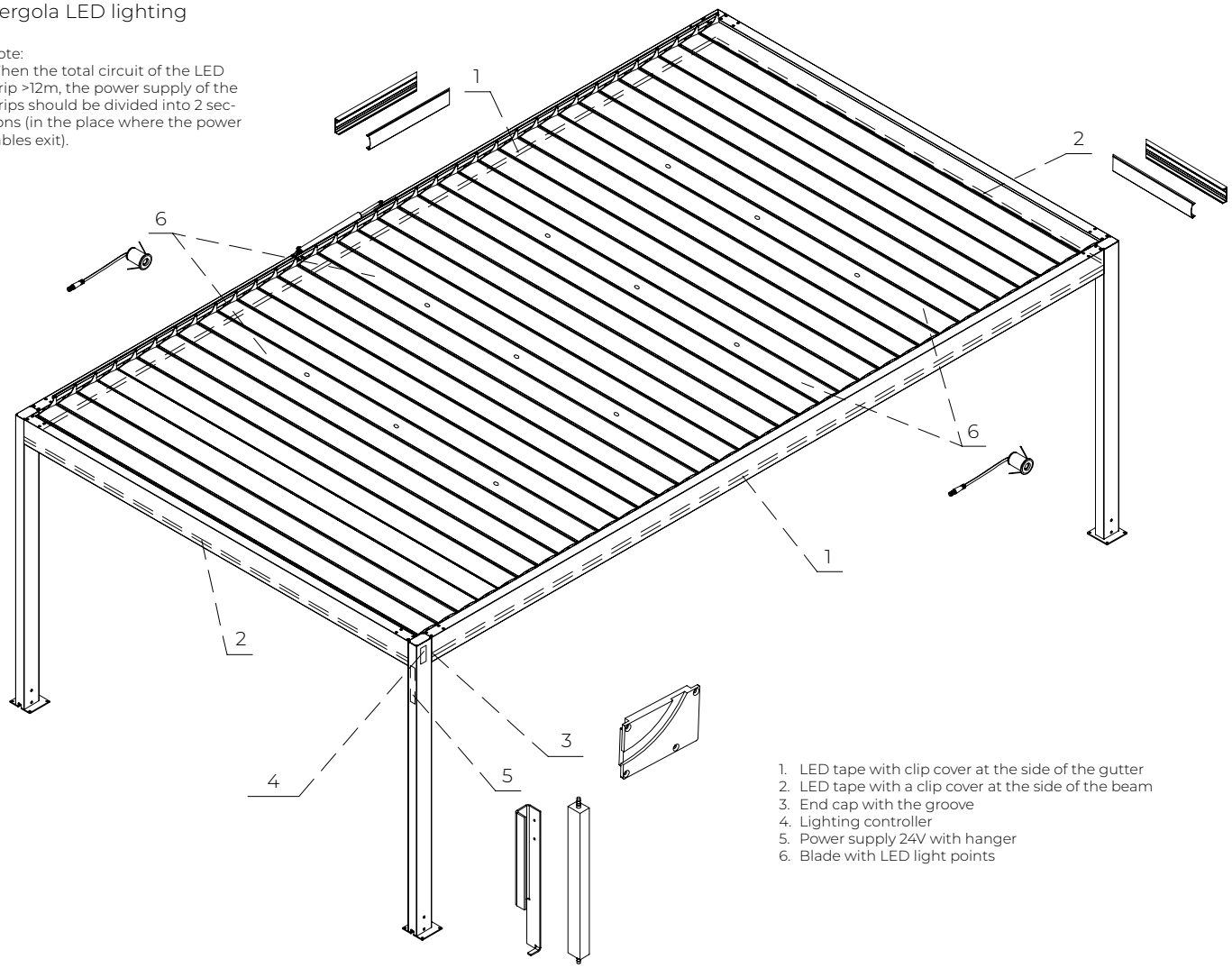
VIEW FROM ABOVE



PERGOLA SB400

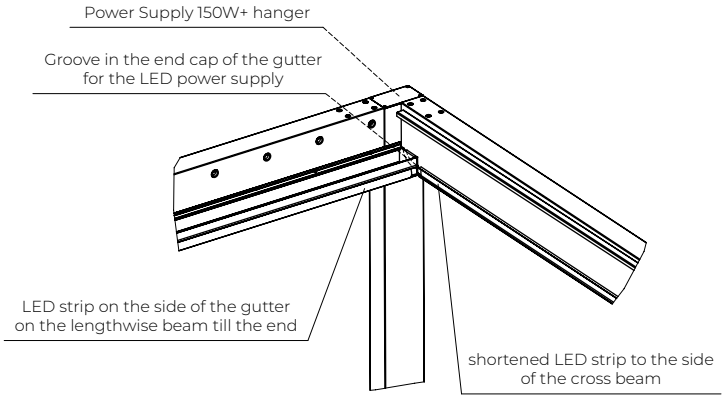
Pergola LED lighting

Note:
When the total circuit of the LED strip >12m, the power supply of the strips should be divided into 2 sections (in the place where the power cables exit).

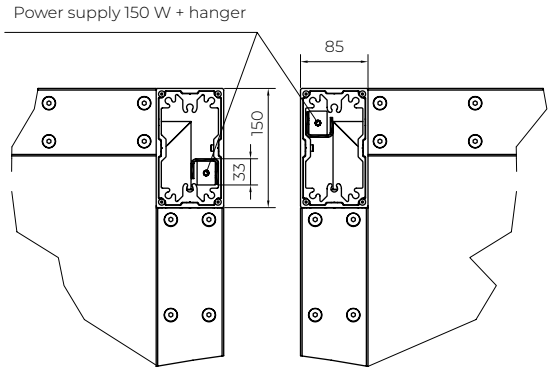


1. LED tape with clip cover at the side of the gutter
2. LED tape with a clip cover at the side of the beam
3. End cap with the groove
4. Lighting controller
5. Power supply 24V with hanger
6. Blade with LED light points

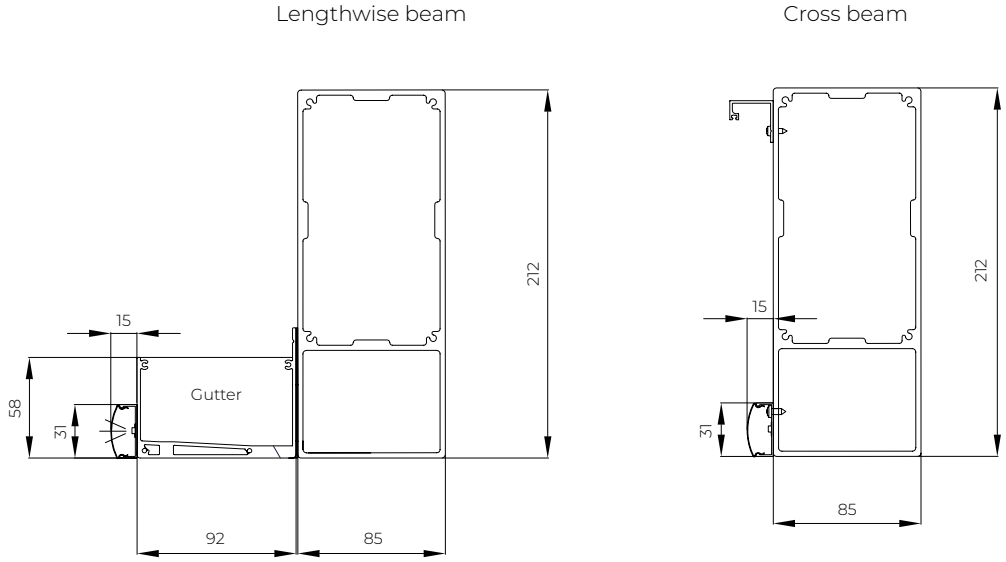
Detail of the LED power supply



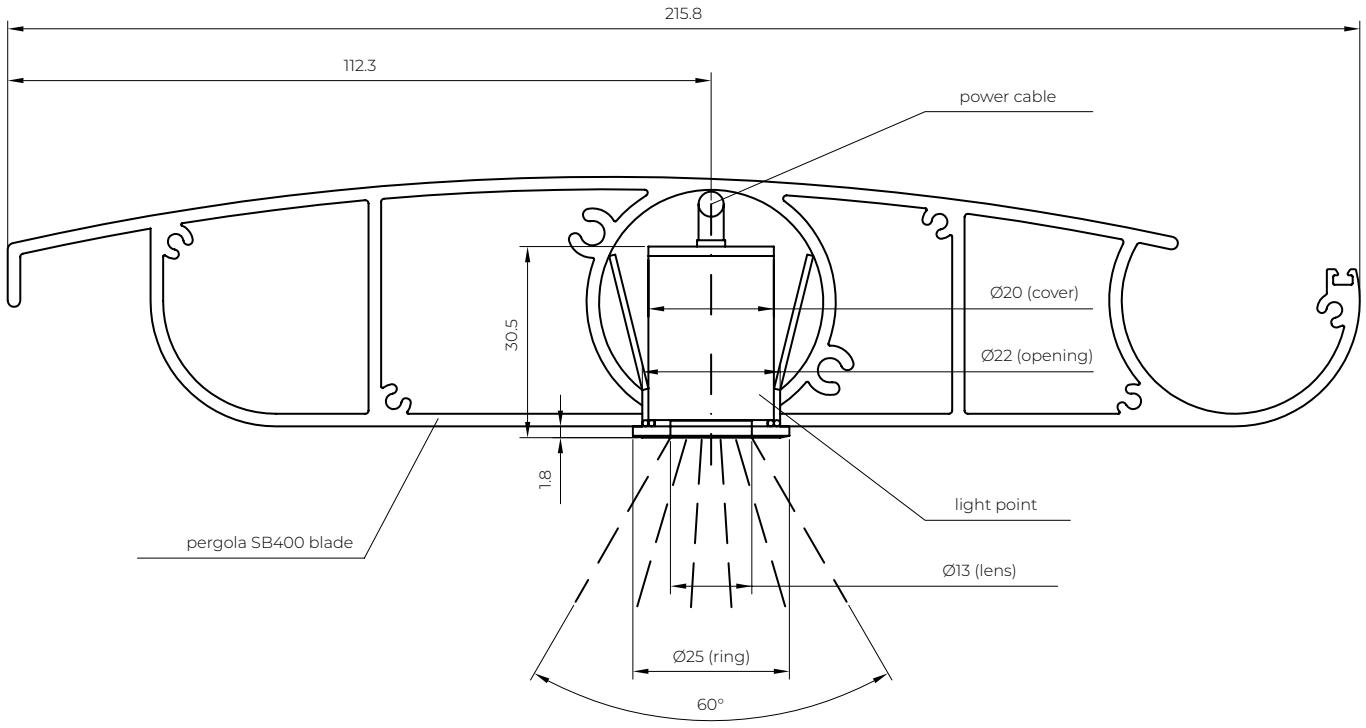
Placement of the LED power supply



PERGOLA SB400
Cross-sections of the LED strip mounting

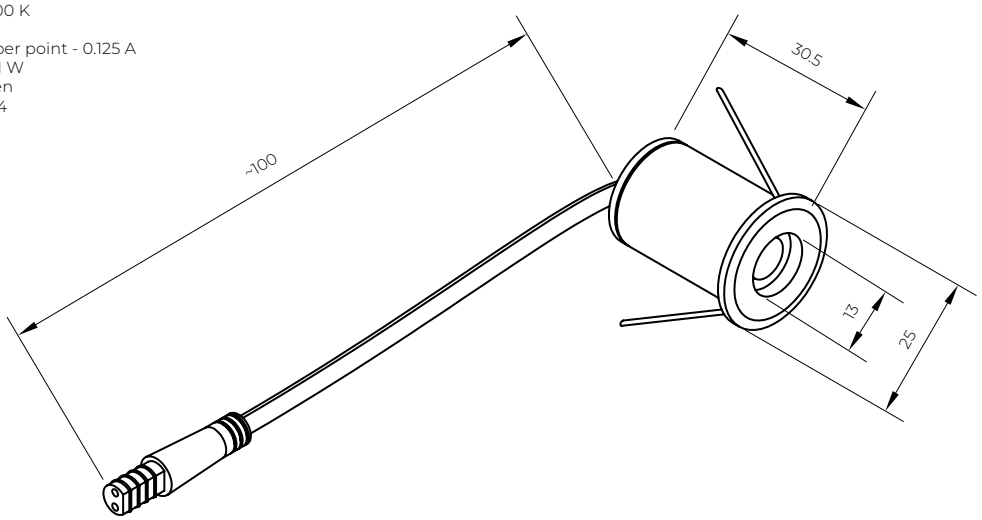


PERGOLA SB400
Detail of the light points



LED light points in Pergola SB400 blades:
- total number of points from 4 to 12 pieces
- number of points in one blade from 2 to 3 pieces
- number and spacing of points selected automatically without the possibility of individual changes
- reflector diameter 13 mm
- outer diameter of the cover 25 mm
- colour of the cover: anodized aluminium
- LED light beam angle - 60 degrees
- colour of the light - 3300 K
- power supply 24V DC
- current consumption per point - 0.125 A
- power of one point - 3.1 W
- light intensity 215 lumen
- protection degree IP 54

PERGOLA SB400
LED light point in blade



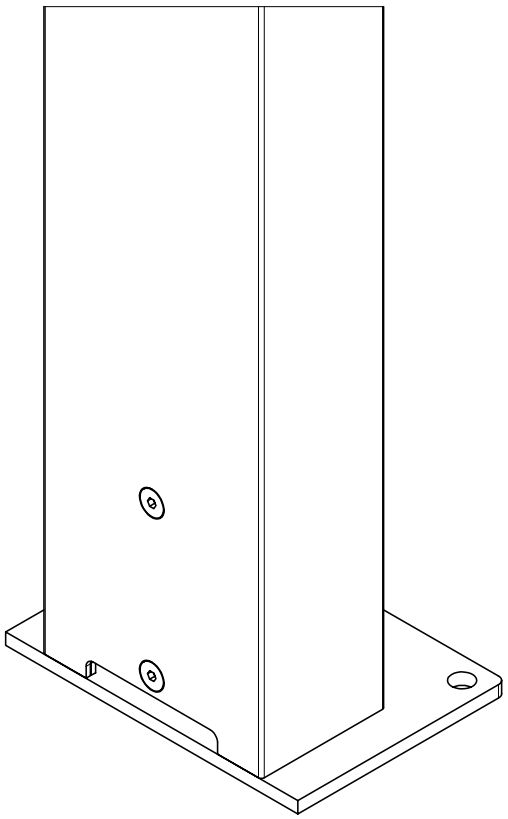
Layout of LED light points in pergola SB400 blades

Pergola projection [mm]	Total number of blades with LED points	Number of the blade with LED points counting from the front of pergola	Number of LED points in a blade	
			Pergola width [mm]	
			up to 2500	2501 to 4000
1400	2	2, 5	2 LED axes are the result of the division of the total width of pergola into 3 equal parts	3 one in the middle, axes of extreme outer LED points are the result of the division of the total width of pergola into 4 equal parts
1600 and 1800		3, 6		
2000 and 2200		3, 7		
2400		4, 8		
2600 and 2800		4, 9		
3000		5, 10		
3200 and 3400		5, 11		
3600	3	4 , 9, 14		
3800		5, 10, 15		
4000 and 4200		4, 10, 16		
4400 and 4600		5, 11, 17		
4800 and 5000		6, 12, 18		
5200		7, 13, 19		
5400	4	5, 10, 16, 22		
5600 and 5800		5, 11, 17, 23		
6000 and 6200		6, 12, 18, 24		
6400 and 6600		7, 13, 19, 25		
6800 and 7000		8, 14, 20, 26		

PERGOLA SB400

Outflow on the wide side of the post

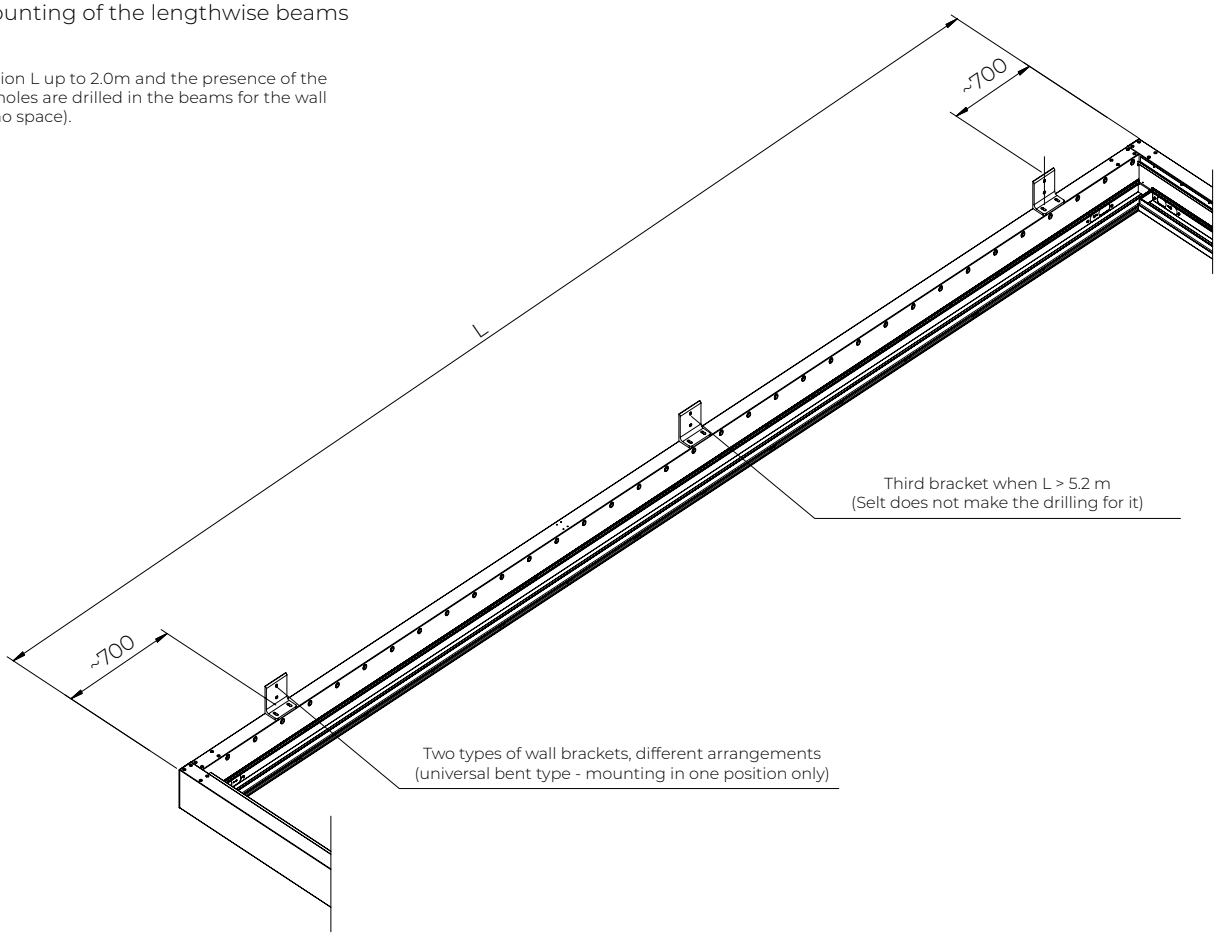
Note:
Presented type of outflow with surcharge



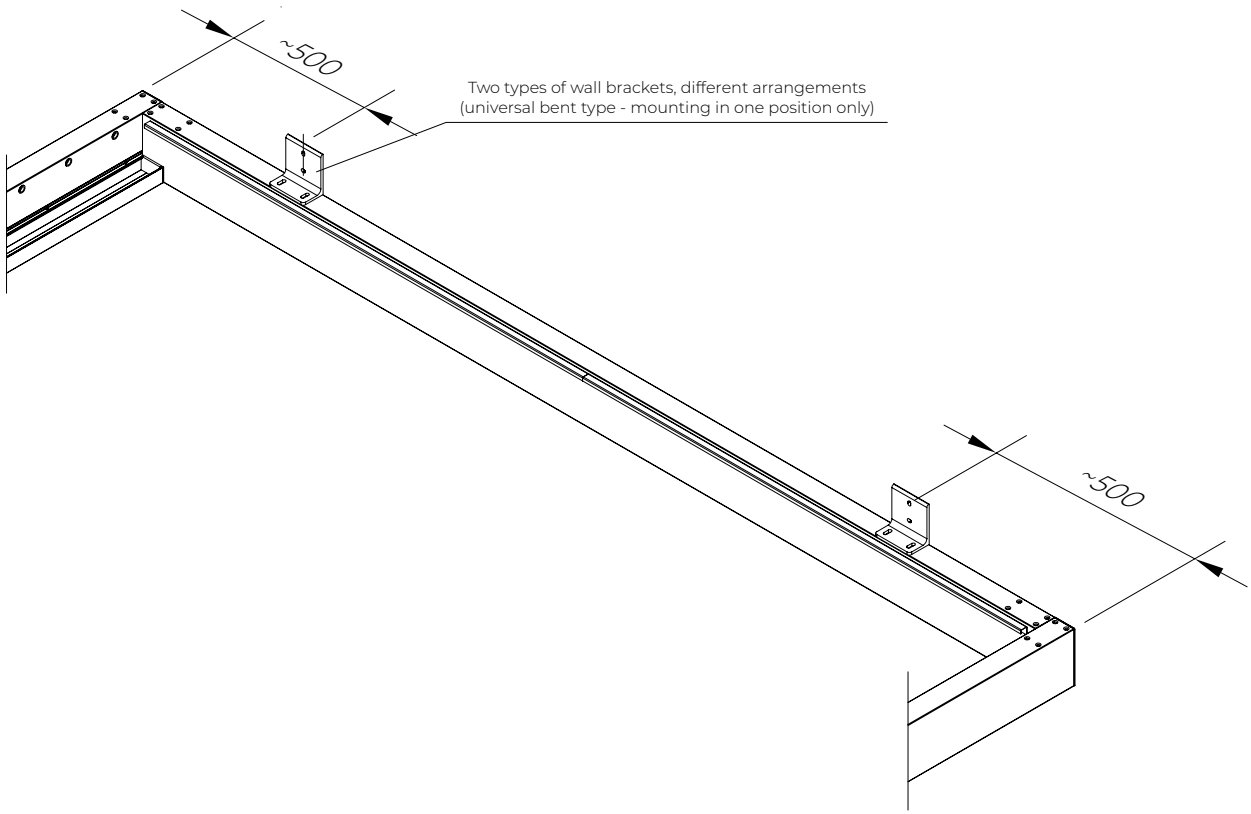
PERGOLA SB400

Wall-mounting of the lengthwise beams

Note:
For projection L up to 2.0m and the presence of the motor, no holes are drilled in the beams for the wall brackets (no space).



PERGOLA SB400
Wall-mounting of the cross beams

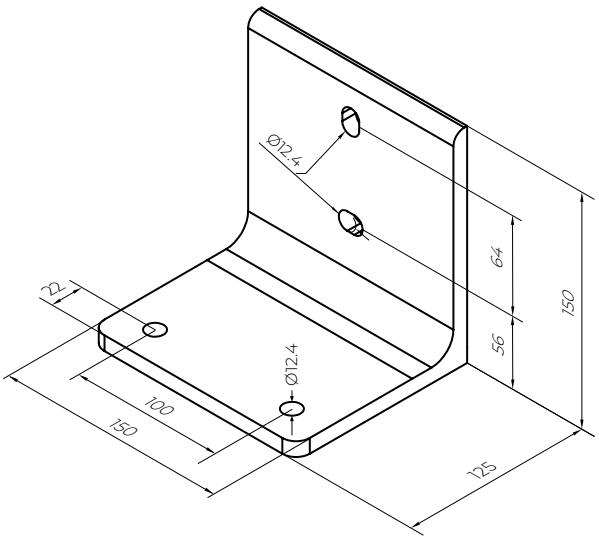


NOTE:
WITHDRAWN VERSION

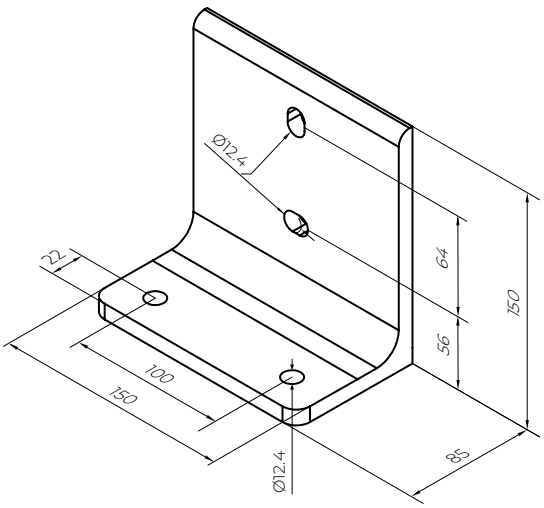
PERGOLA SB400
Wall brackets (hot-rolled version)

Note:
SELT is not responsible for the selection of anchors and fixing the bracket to the substrate.
This can make a decisive impact on the reduction of the load capacity of the bracket
(especially in substrates with a thermal insulation layer and/or perforated ceramic).

Type 1 (long)



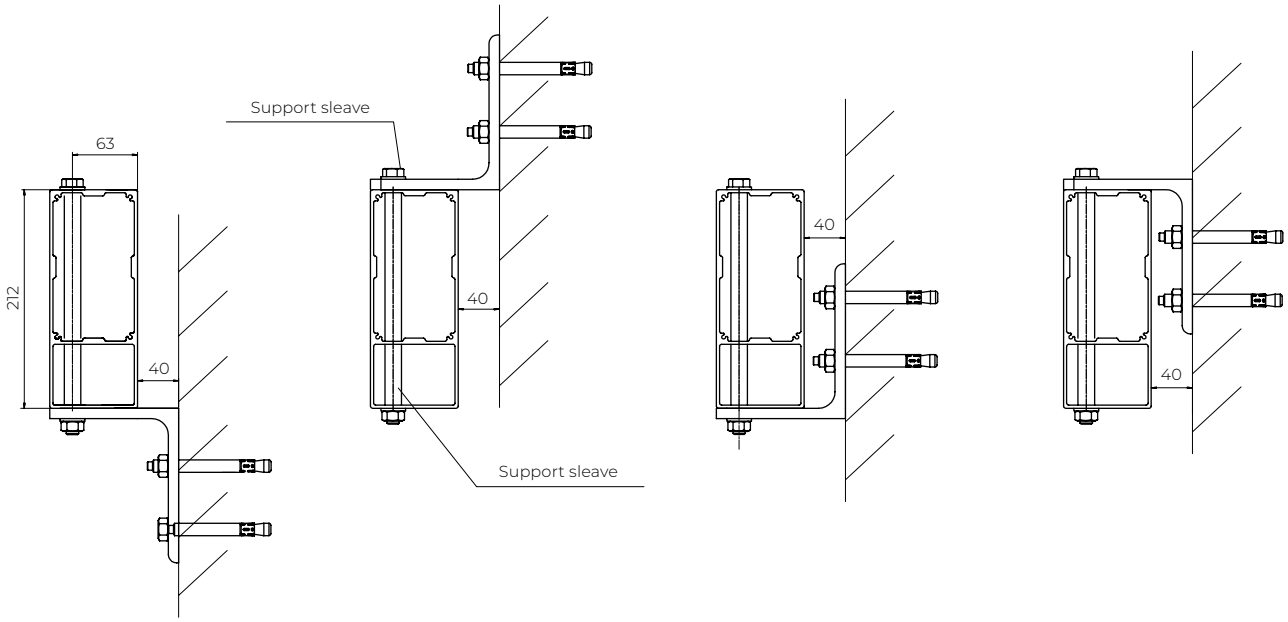
Type 2 (short)



PERGOLA SB400
Types of mounting of type 1 bracket (long)
(hot-rolled version)

NOTE:
WITHDRAWN VERSION

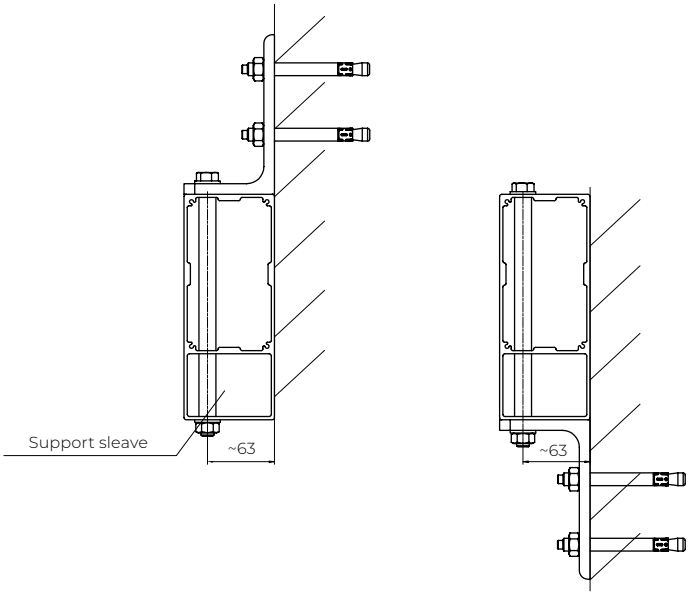
Note:
SELT is not responsible for the selection of anchors and fixing the bracket to the substrate. This can make a decisive impact on the reduction of the load capacity of the bracket (especially in substrates with a thermal insulation layer and/or perforated ceramic).



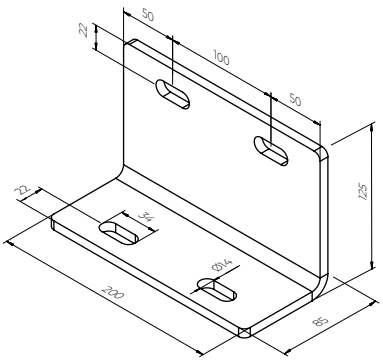
PERGOLA SB400
Types of mounting of type 1 bracket (short)
(hot-rolled version)

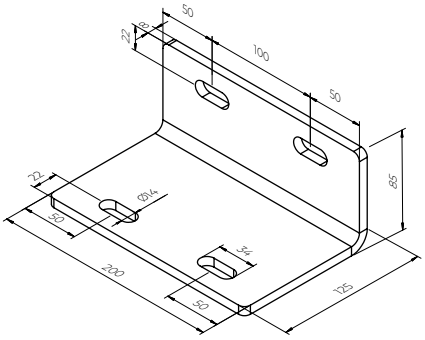
NOTE:
WITHDRAWN VERSION

Note:
SELT is not responsible for the selection of anchors and fixing the bracket to the substrate. This can make a decisive impact on the reduction of the load capacity of the bracket (especially in substrates with a thermal insulation layer and/or perforated ceramic).



PERGOLA SB400
Universal wall brackets

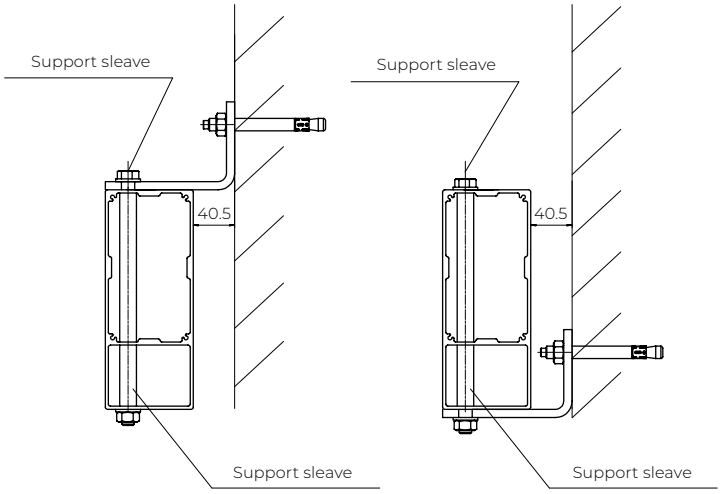




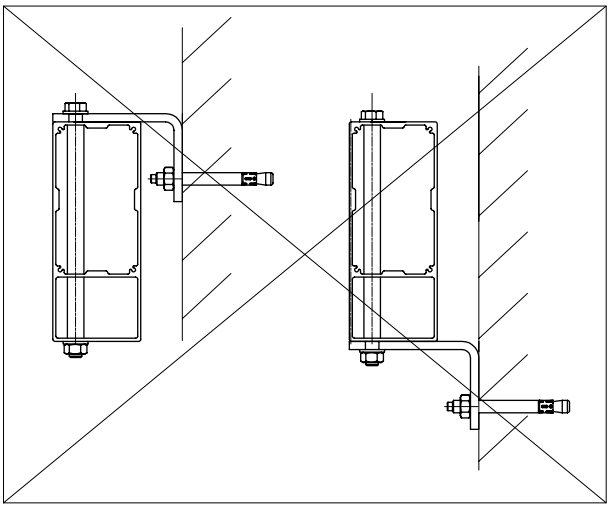
Note:
SELT is not responsible for the selection of anchors and fixing the bracket to the substrate. This can make a decisive impact on the reduction of the load capacity of the bracket (especially in substrates with a thermal insulation layer and/or perforated ceramic).

PERGOLA SB400
Mounting options with a distance

Note:
SELT is not responsible for the selection of anchors and fixing the bracket to the substrate. This can make a decisive impact on the reduction of the load capacity of the bracket (especially in substrates with a thermal insulation layer and/or perforated ceramic).

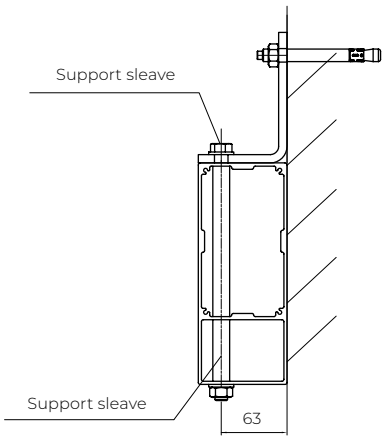


FORBIDDEN

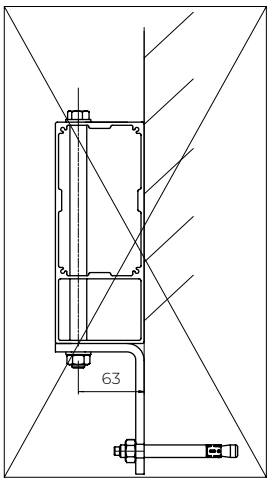


PERGOLA SB400
Mounting option without distance

Note:
SELT is not responsible for the selection of anchors and fixing the bracket to the substrate. This can make a decisive impact on the reduction of the load capacity of the bracket (especially in substrates with a thermal insulation layer and/or perforated ceramic).



FORBIDDEN

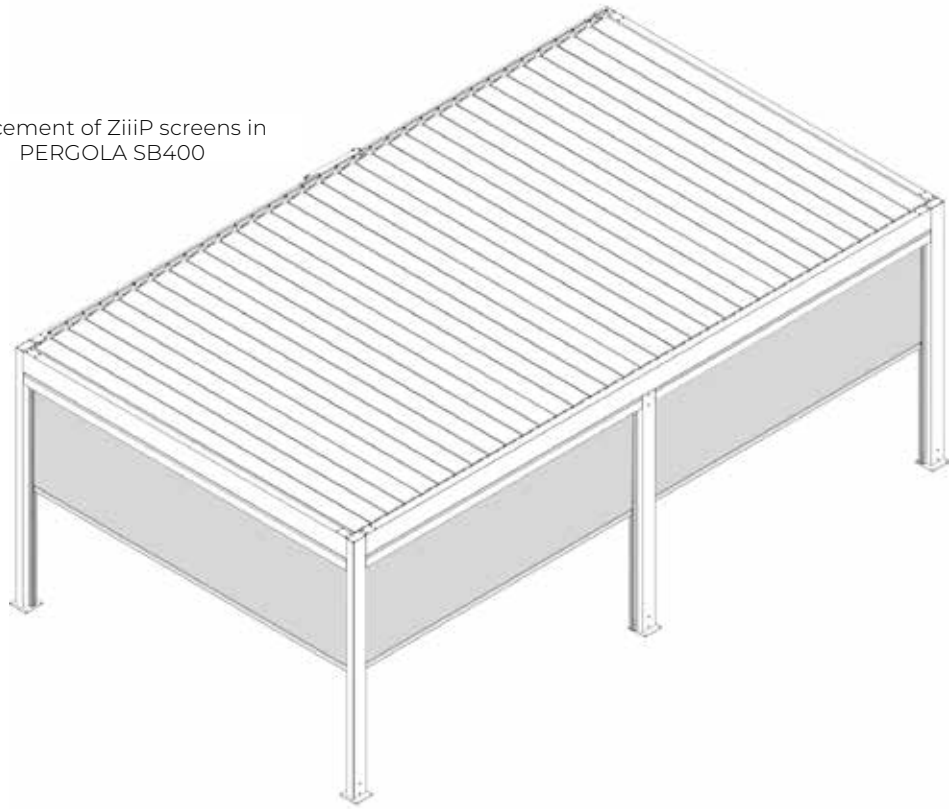


PERGOLA SB400

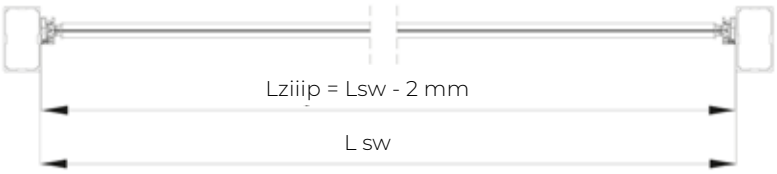
Mounting of the ZiiiP screens

NOTE:
For the ordered side refleksol systems (ZiiiP/refleksols) it is advised to substract 2 mm from the width in the light between the pergola posts (1 mm for each side)

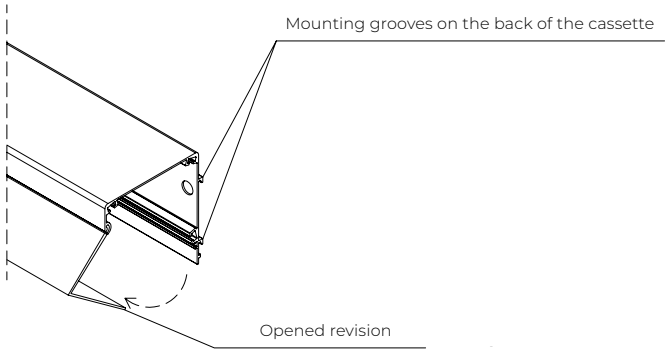
Placement of ZiiiP screens in PERGOLA SB400



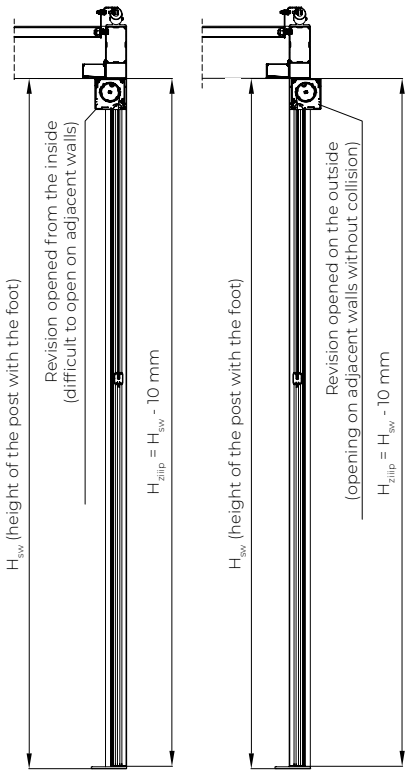
Horizontal cross-section ZiiiP in the PERGOLA SB400



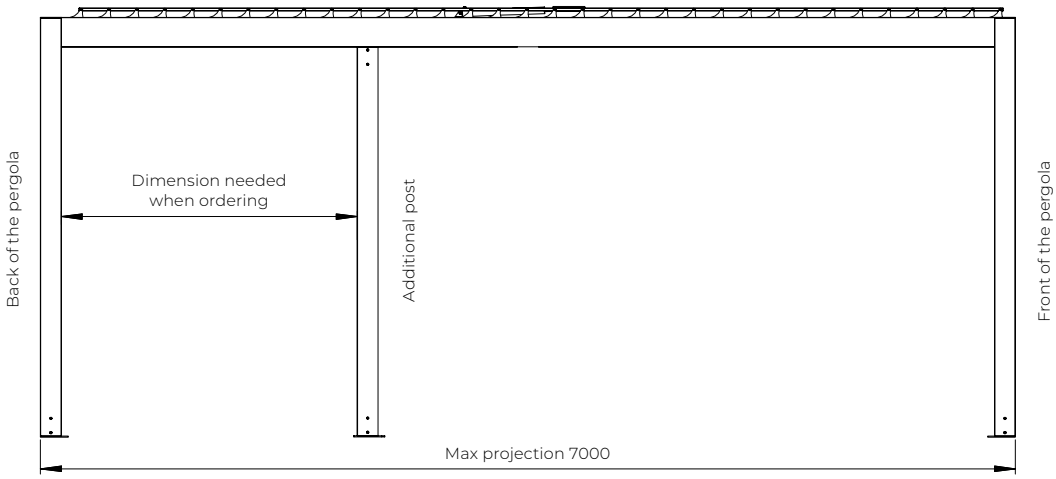
ZIIIP cassette

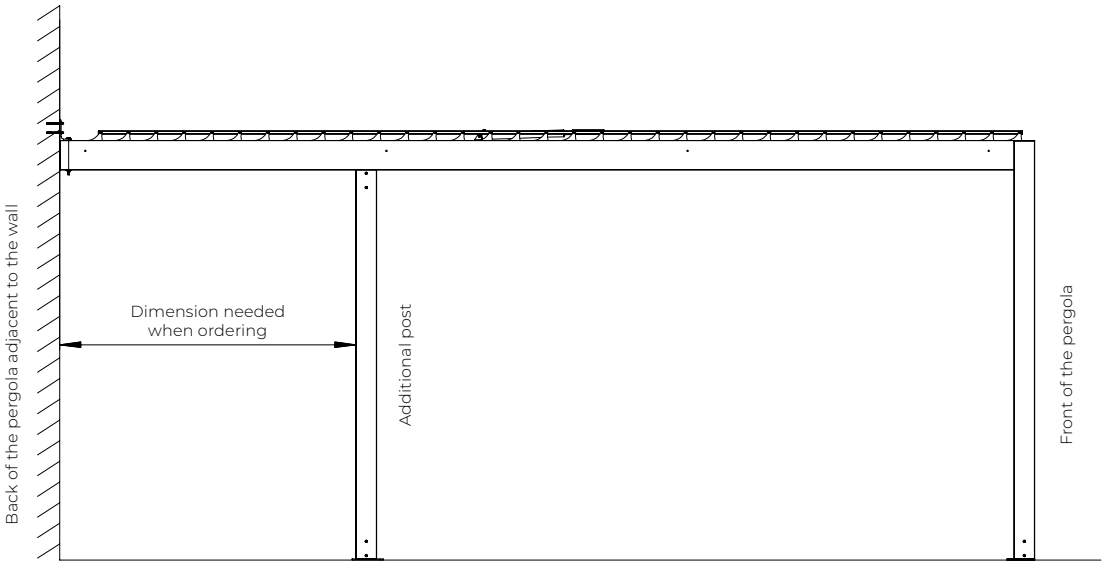


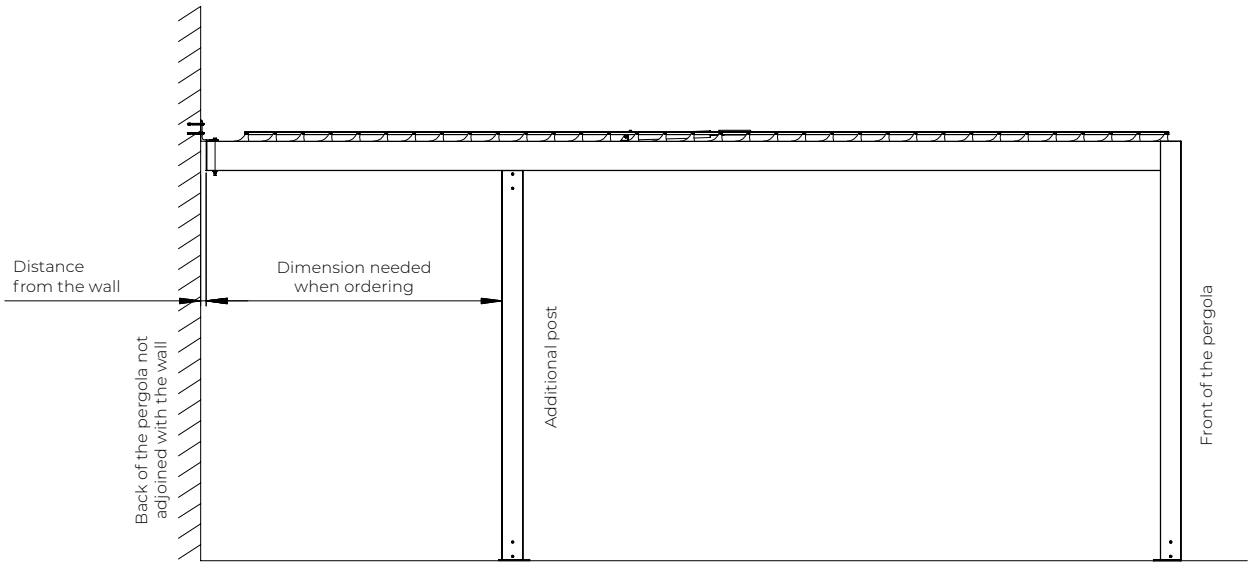
Vertical section of ZIIIP system in pergola SB400



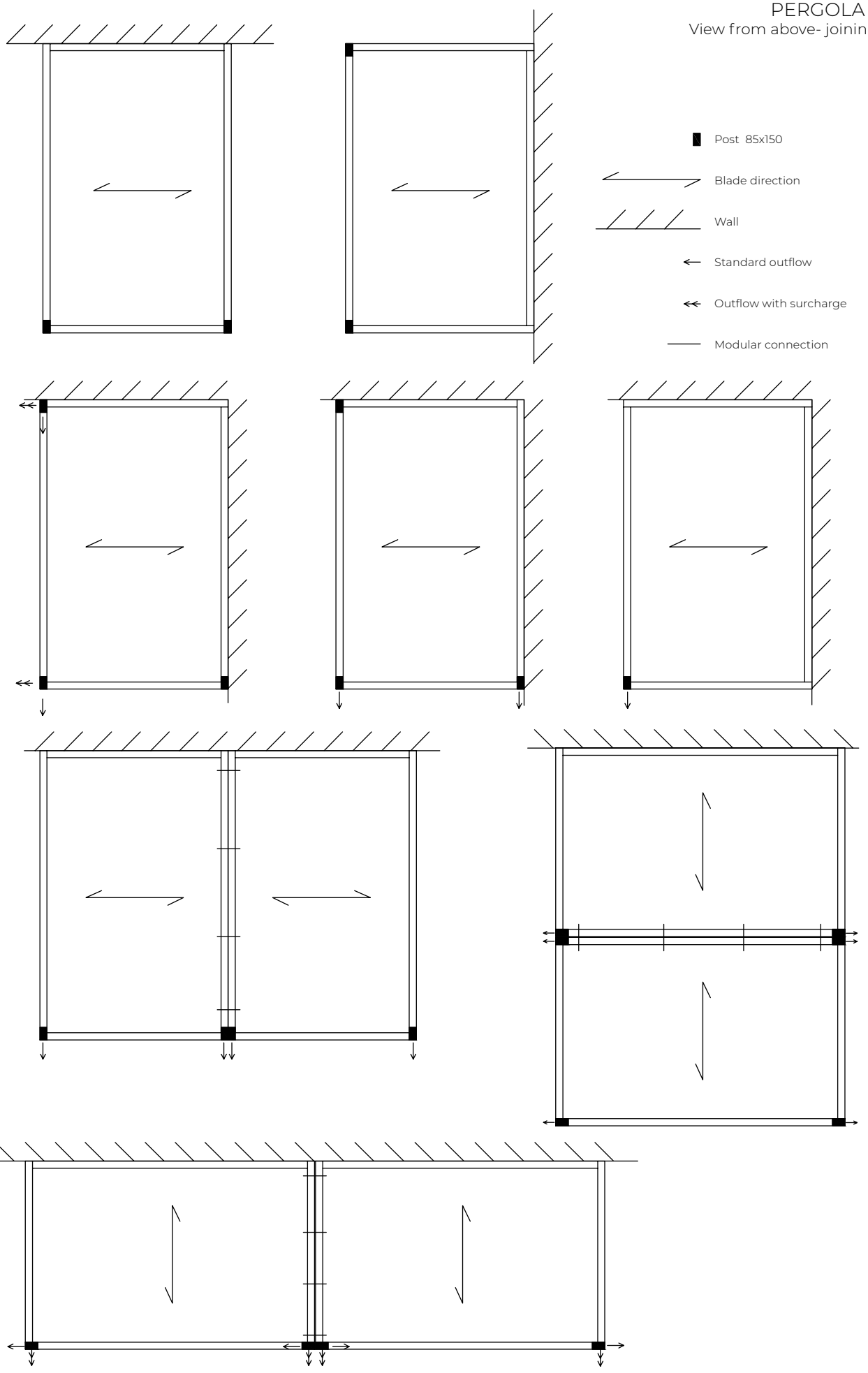
PERGOLA SB400
Measurement for the intermediate post







PERGOLA SB400
View from above- joining beams



SLIDE SYSTEM

SYSTEM SLIDE

External sun protection system composed of segmented sliding walls, suspended on trolleys on the top rail and guided in the bottom rail, filled with blades or fabric. Mounted vertically to the supporting structure or in front of the window or within the opening in the outer surface of the building. The system does not have a drive. Especially designed for the pergola SB500.

USAGE:

- Provides sun protection and surface shading
- Immediate separation of space

PRODUCT CHARACTERISTICS:

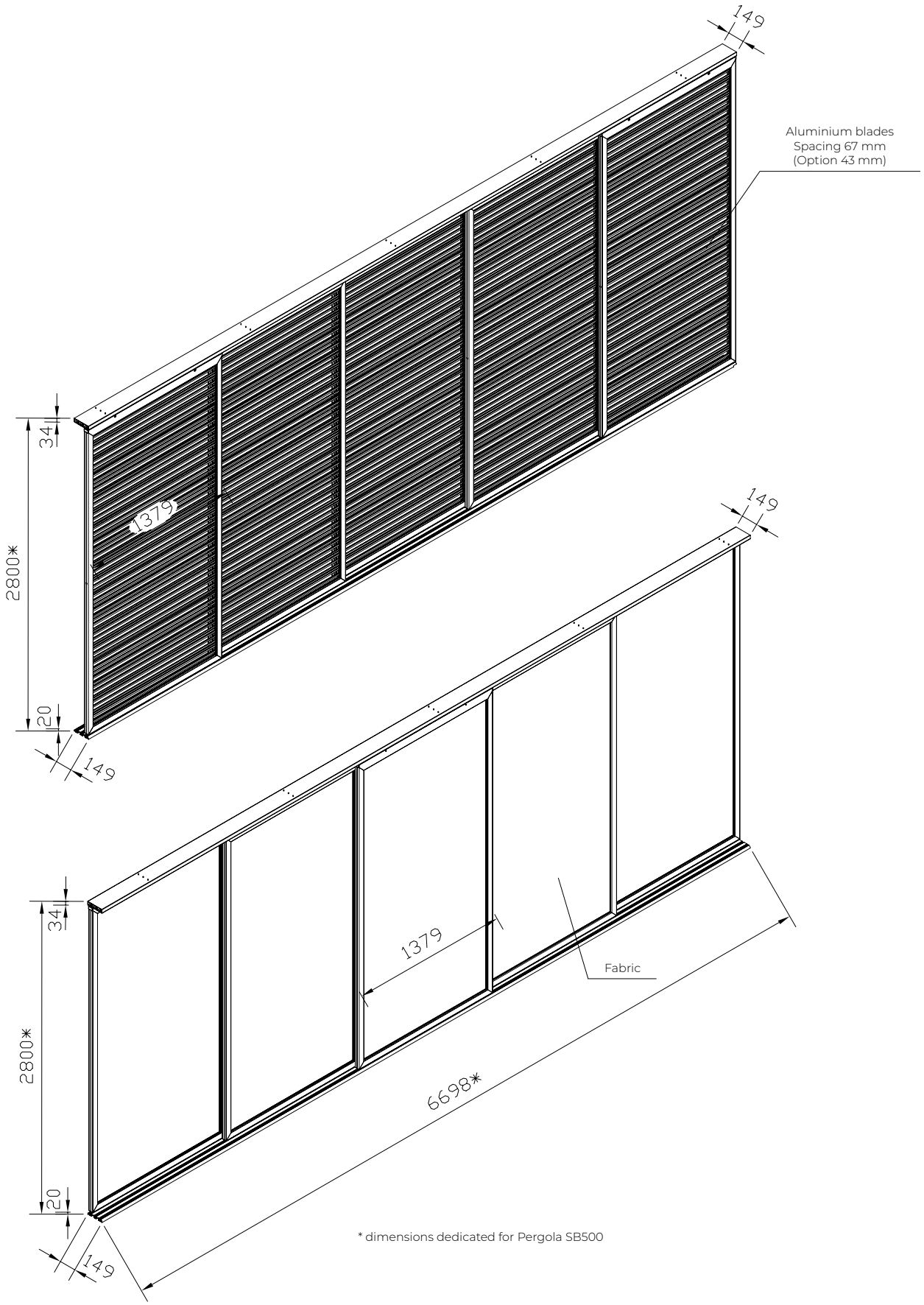
- Light and durable aluminium sliding rails that are suspended on bearing trolleys
- Two frame filling variants available: aluminium blades or fabric (Serge600 or Serge 1%)
- Fixed angle of blades
- Usage of aluminium guiding rails that enables 3 frames in parallel to each other
- Trolley cases made as die-casts each with 4 wheels with bearings
- They regulate access of the sunlight and protect from the view of the bystanders
- Sunbreaker filling has fixed tilt angle of the blades
- Suspension on bearing trolleys enables easy movement and stopping in any position
- It does not emit any toxic substances during the operational term
- The system does not require power supply
- It requires a load-bearing and solid supporting structure for installation (upper suspension)
- Construction colours - 9016M, FSM71319, 7016M (standard) and RAL palette (optional)

TECHNICAL SPECIFICATIONS

- Total height (with the guide rails) - 2800 mm
- Total length (of the guide rails) - 6698 mm
- Maximum width of the frame 1379 mm
- Maximum height of the frame 2725 mm
- Dimensions of the upper guide rail (guiding track) 149x34 mm
- Dimensions of the lower guide rail (leading track) 149x20 mm
- The number of guiding tracks in one guide rail - 3 pieces
- Filling with blades or fabric
- Cross-section of blades 52x10 mm with a tilt of 55 degree from the horizontal level, spacing 67 mm (or 43 mm optionally)
- Wind load resistance class 6 (400 Pa)

TOLERANCE DEVIATION OF THE RECTILINEARITY OF THE VERTICAL POSTS OF THE FRAMES WITH FABRIC FILLING IS UP TO 10 mm.

SLIDE SYSTEM

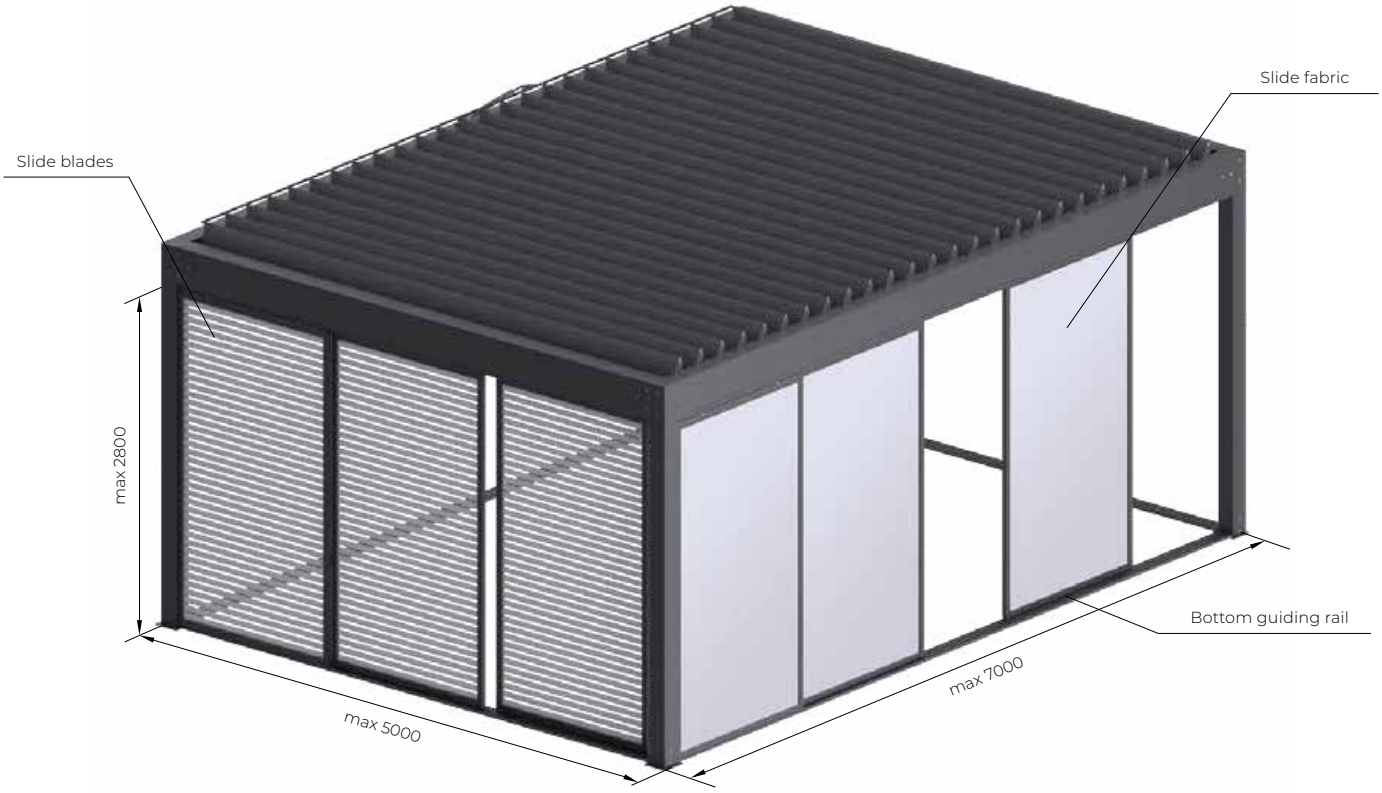


* dimensions dedicated for Pergola SB500

SLIDE SYSTEME

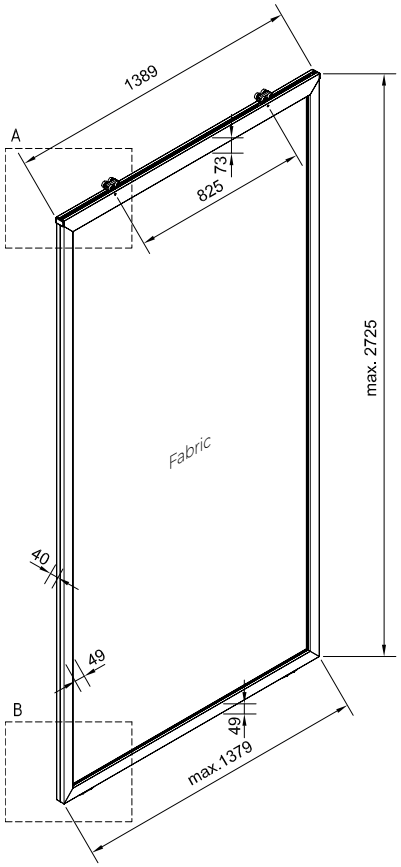
Slide system side panel

Note:
Max. 5 Slide systems on the side of Pergola when the projection is 7 m.

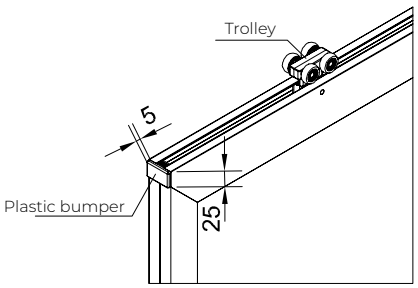


SLIDE SYSTEM

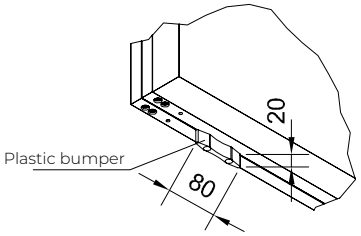
Frame with fabric



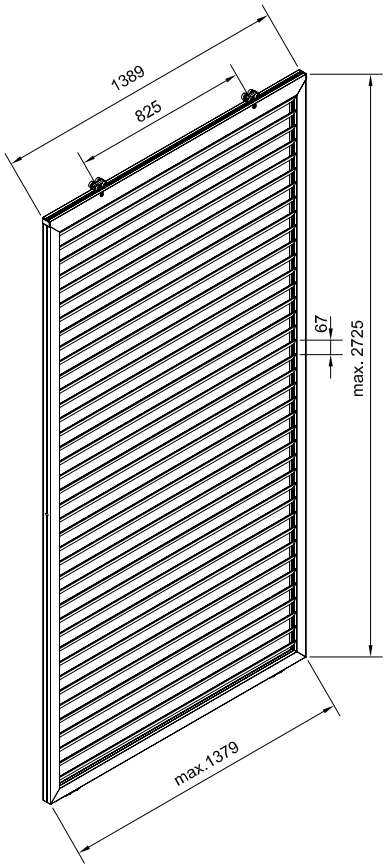
Detail A



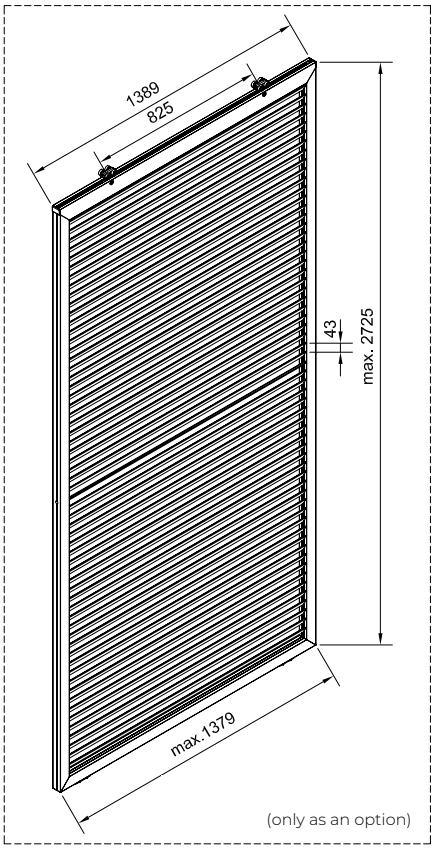
Detail B



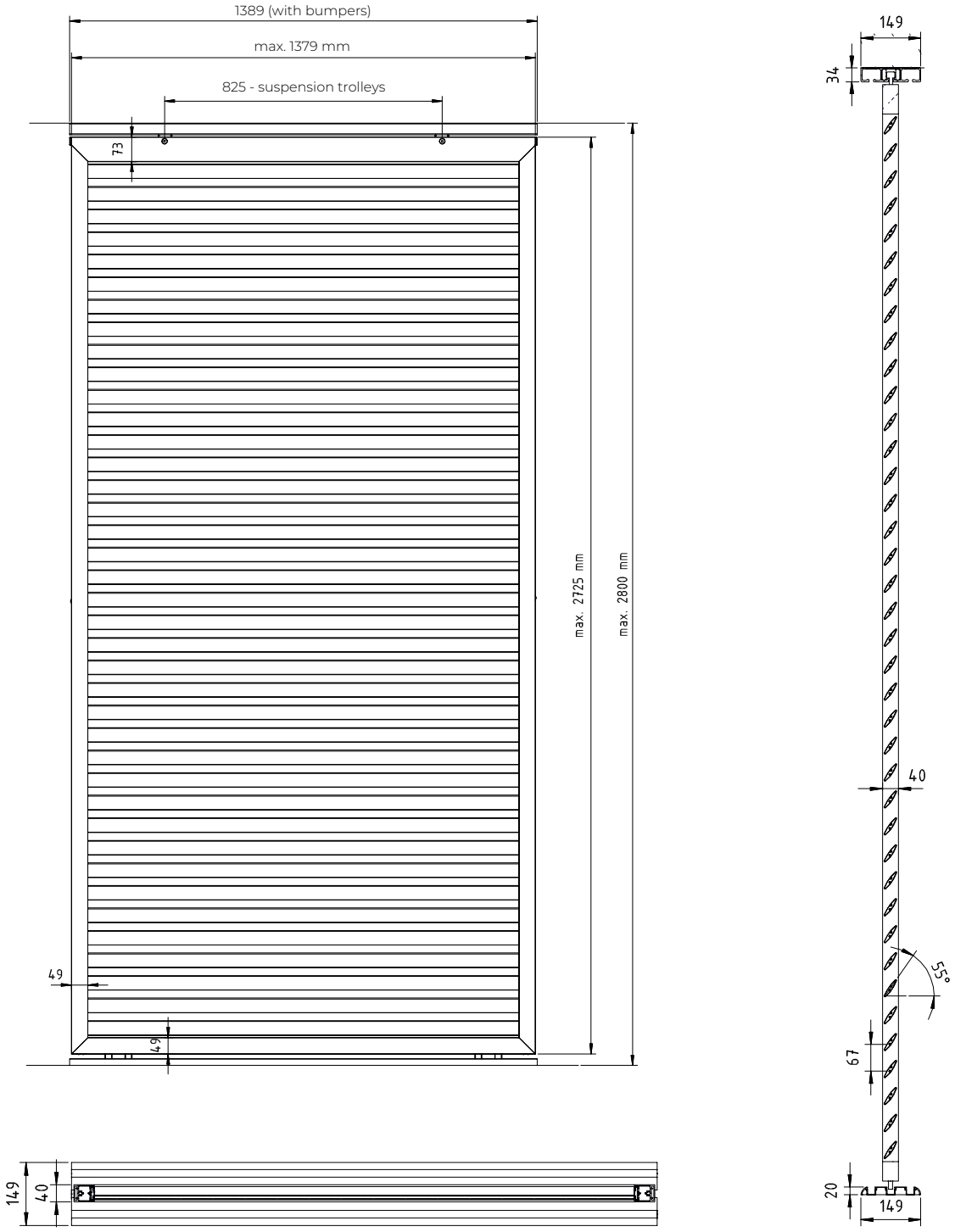
Frame with blades every 67 mm



Option: frame with blades every 43 mm

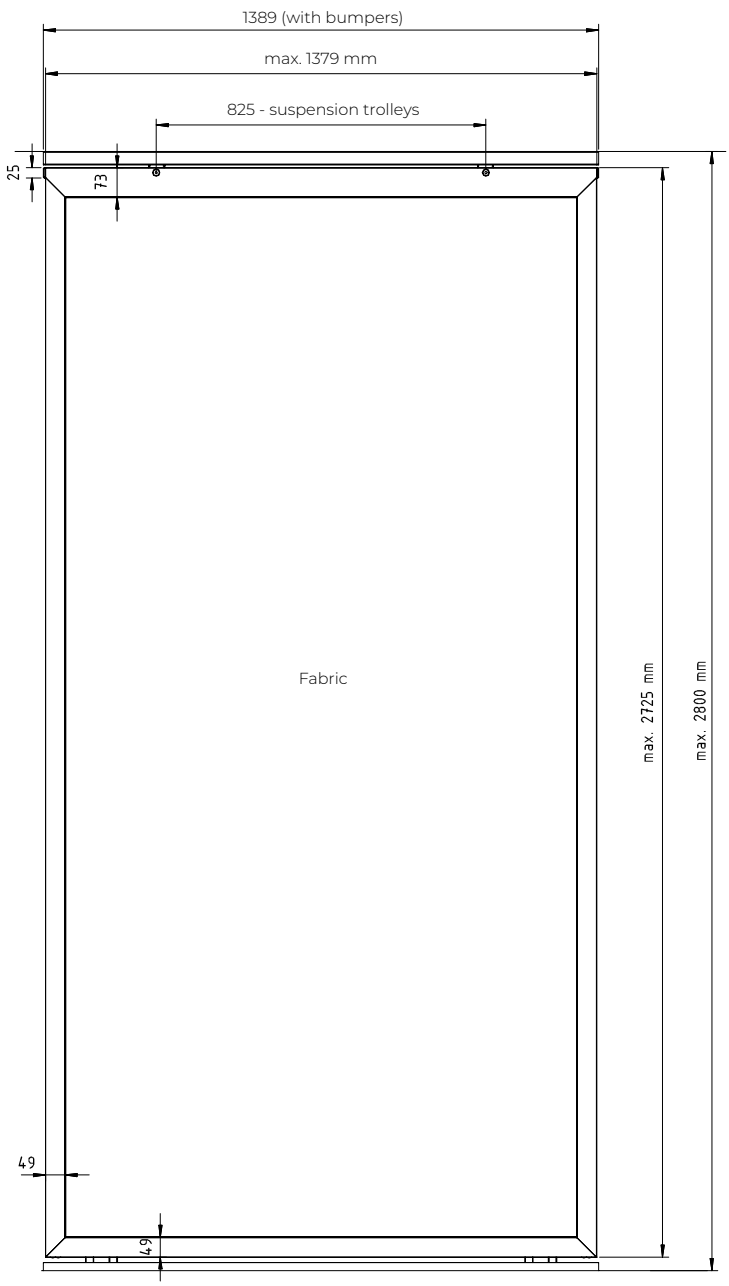


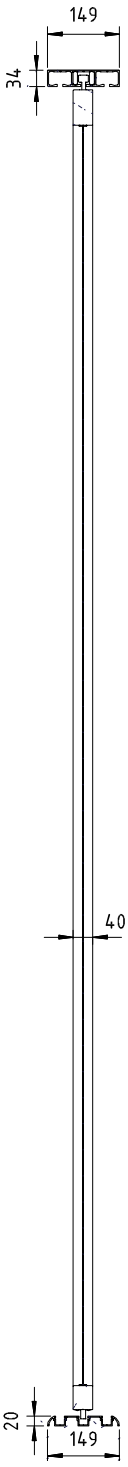
SLIDE SYSTEM
Filling with blades



SLIDE SYSTEM
Filling with fabric

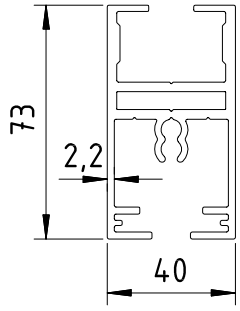
Note:
Fabric may show tension differences
in case of larger frame widths.





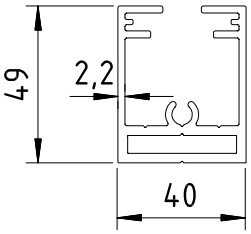
SLIDE SYSTEM
Cross-sections of the profiles

Upper frame cross-section



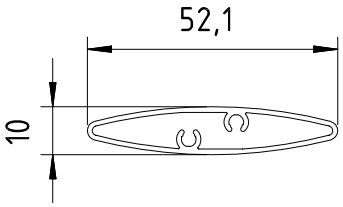
Material: EN AW6060 T66
Mass 2.16 kg/m

Bottom/ side frame cross-section



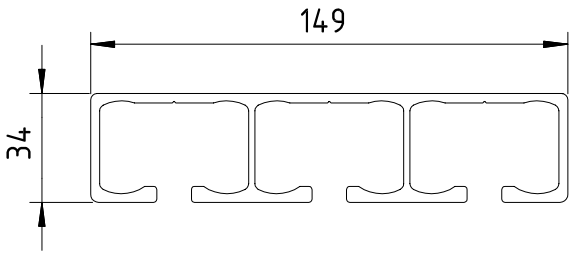
Material: EN AW6060 T66
Mass 1.53 kg/m

Pióro



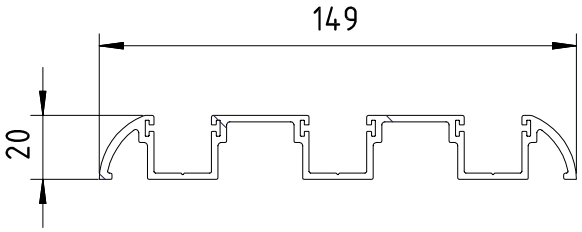
Material: EN AW6060 T66
Mass 0.35 kg/m

Upper guide rail



Material: EN AW6060 T66
Mass 3.03 kg/m

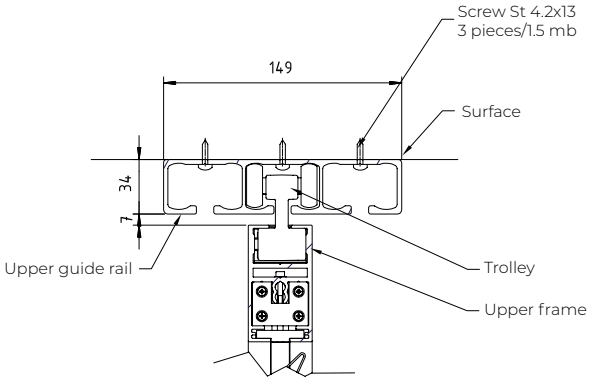
Bottom guide rail



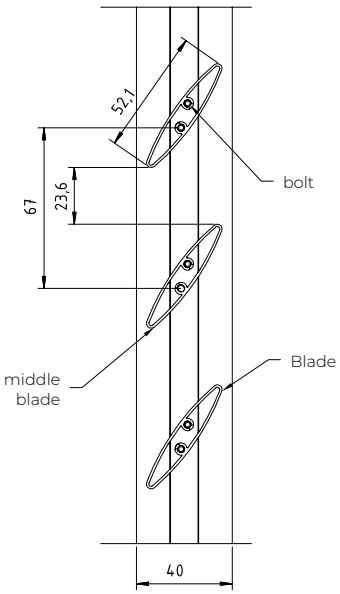
Material: EN AW6060 T66
Mass 1.72 kg/m

SYSTEM SLIDE

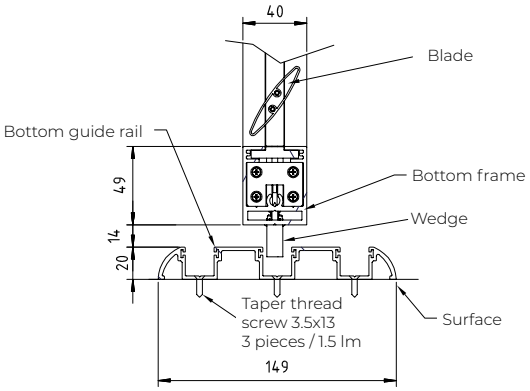
Details of mounting the upper guide rail



Layout of blades



Details of mounting the bottom guide rail



For SLIDE guiding rail choose posts with feet that are aligned with them. Otherwise you must cut the fragments of the bottom guide rail with the tickness of the foot plate on your own - there is also a possible collision with foot anchor.