

**PRODUCT TECHNICAL AND OPERATIONAL
DOCUMENTATION**

**INSTALLATION AND OPERATING MANUAL
AND INSTRUCTIONS FOR SAFE USE**

5. Steel and aluminium elements and constructional sets

5.2. Solid Pergola

PRODUCT NAME

ALUMINIUM CONSTRUCTION

SOLID PERGOLA

PRODUCT MANUFACTURER'S MARKING:

Manufacturer's name:

- SELT Sp. z o.o.

Manufacturer's head office:

- 45-449 Opole, ul. Wschodnia 23A

Website

- www.selt.com

Plant address :

Wydział: Pergola – Sunbreaker – Konstrukcje [Pergola, Sinbreaker and Constructions Department]

- 45-272 Opole, ul. Pużaka 43

Contact details:

- Tel: +48 77 553 21 00 (sekretariat)
Fax: +48 77 553 22 00

E-mail:

- selt@selt.com

PRODUCTS SAFETY MARKING:

- Product conforms to CE safety requirements

This Technical and Operational Documentation:

- Is valid from : **01** **MARCH** **2016**
- Is valid for product versions designated above

TABLE OF CONTENTS

1.	Introduction	5
1.1.	Product safety tips.....	5
1.2.	Notes on symbols and marks.....	5
1.3.	Definitions	6
2.	Product technical information	8
2.1.	Technical parameters	8
2.2.	Product characteristics	12
3.	Product transport and storage.....	13
3.1.	Completeness and qualitative state of delivery	13
3.2.	General conditions of product transport and storage.....	13
3.3.	Descriptions that have to be put obligatory on the product packaging.....	13
4.	Product installation.....	13
4.1.	General requirements for safe installation	13
4.2.	Requirements for safe installation at heights	14
4.3.	Preparation to installation.....	14
4.4.	General guidelines for installation.....	14
4.5.	Installation tools	14
4.6.	Installation.....	15
4.6.1.	Installation of free-standing, single module Pergola	16
4.6.1.1.	Installation of supporting structure.....	16
4.6.1.2.	Installation of guiding rails	19
4.6.1.3.	Installation of stabilising rails	21
4.6.1.4.	Installation of motor.....	22
4.6.1.5.	Installation of retractable module.....	24
4.6.1.6.	Installation of PD cover	26
4.6.1.7.	Fabric adjustment.....	27
4.6.2.	Installation of free-standing, multi-modular Pergola.....	27
4.6.2.1.	Installation of supporting structure.....	28
4.6.2.2.	Installation of guiding rails	33
4.6.2.3.	Installation of stabilising rails	33
4.6.2.4.	Installation of motor.....	33
4.6.2.5.	Installation of retractable module.....	33
4.6.2.6.	Installation of PD cover	33
4.6.2.7.	Fabric adjustment.....	33
4.6.3.	Installation of single module, wall-mounted Pergola.	33
4.6.3.1.	Installation of supporting structure.....	33
4.6.3.2.	Installation of guiding rails	35
4.6.3.3.	Installation of stabilising rails	37
4.6.3.4.	Installation of motor.....	37
4.6.3.5.	Installation of retractable module.....	37
4.6.3.6.	Installation of PD cover	37
4.6.3.7.	Fabric adjustment.....	37
4.6.4.	Installation of wall-mounted, multi-modular Pergola.....	37
4.6.4.1.	Installation of supporting structure.....	37
4.6.4.2.	Installation of guiding rails	41
4.6.4.3.	installation of stabilising rails	43
4.6.4.4.	Installation of motor.....	43
4.6.4.5.	Installation of retractable module.....	43
4.6.4.6.	Installation of PD cover	43

4.6.4.7.	Fabric adjustment.....	43
5.	System operation and product safety.....	43
5.1.	General safety requirements.....	43
5.2.	Safety requirements connected with particular conditions and places of product use.....	44
5.3.	Operation safety.....	44
5.4.	Connection to power supply.....	45
5.5.	System operation.....	46
5.6.	Start-up and adjustment.....	46
5.7.	Improper product use.....	46
6.	System use and maintenance.....	47
6.1.	Using the product in accordance with its intended use.....	47
6.2.	Instructions for non-professionals.....	48
6.3.	Technical inspections, maintenance and repairs.....	48
6.4.1.	Basic activities carried out during a periodic inspection.....	48
6.4.2.	Remarks concerning routine maintenance.....	48
6.4.	Maintenance operations.....	50
7.	General warranty conditions.....	53
7.1.	Warranty exclusions.....	53
8.	Complaints/ technical faults.....	54
8.1.	Complaints.....	54
8.2.	Technical faults.....	54
9.	Product disassembly / utilisation / disposal.....	54
10.	Marking and labelling the product with the CE mark.....	56
10.1.	Product compliance with the CE standard.....	56
10.2.	Information accompanying the CE marking.....	56

1. INTRODUCTION

1.1. PRODUCT SAFETY TIPS








The product was manufactured in accordance with the latest know-how in the area of constructing and manufacturing and is delivered in condition allowing for its safe use.

No.	Subject	European legal basis	Polish legal basis
1	Performance of steel and aluminium constructions	EN 1090-1:2009 +A1:2011	PN-EN 1090-1+A1:2012
2	Construction products (CPR)	Regulation 305/2011 of the European Parliament and the Council	Resolution on construction products of 16 April 2004 (Dz. U. [Journal of Laws] 2004 no. 92 pos. 881) as amended on 25 June 2015 Dz. U. [Journal of Laws] 2015 pos 1165
3	Essential requirements for machines	Directive 2006/42/EC of the European Parliament and the Council	Resolution of the Minister of Economy of 28 October 2008 Dz.U. [Journal of Laws] 2008.1228

Linked documents: Declaration of performance and manual of installation and use of motors and control.

1.2. NOTES ON SYMBOLS AND MARKS

The below symbols (icons) denote particularly important information concerning threats and safety.

Icon	Icon meaning	Information
	INFORMATION	Prior to using the product, its operating manual should be read. Following the operating manual guarantees: - failure-free use of the product, - warranty coverage against product defects. Keep the operating manual for safety of people.
	INFORMATION	No harmful or dangerous consequences for people or facilities.
	ATTENTION!	A situation likely to cause product damage or other damage. No threat for people.
	WARNING!	Threat of danger
	DANGER!	This symbol denotes all information concerning danger, failure to observe which brings about threat to human life and health. Risk: threat of serious injury or death. Dangerous operation which may cause injuries or product damage.
	WARNING!	Threat to human life or health due to electric shock.
	ENVIRONMENT	Marking on electric or electronic equipment subject to collection in designated places.

1.3. DEFINITIONS

The terms and definitions used within this documentation shall mean:

Product: SOLID PERGOLA

Pergola Solid System is manufactured from aluminium, powder coated profiles and stainless / galvanised steel elements. The movable roof construction is made from fabric fixed to crosswise beams moving in lateral guide rails. Roof moves in up and down direction (rolling up and rolling down). The construction is offered as standard in RAL colours after confirmation of their availability by the manufacturer.

Fabric:

Part of the product movable roof made from fabric or other material, put into motion with a control mechanism, assuring the product fulfills its function.

Movable roof:

Part of the product consisting of the fabric fixed to crosswise beams containing leading trucks and moving in the guide rails. Movable roof is put into motion with a control mechanism, assuring the product fulfills its function.

MANUFACTURE VERSIONS:

Free-standing singular module – Self-supporting construction with 2 posts in the front and 2 posts in the rear side with singular movable roof module.

Free-standing multi-modular – Self-supporting construction with common front and rear post for the adjoining modules, each module containing singular movable roof module.

Wall-mounted singular module – Self-supporting construction with 2 front posts and fixed permanently to the facade (building), containing singular movable roof module.

Wall-mounted multi-modular – Self-supporting construction with common front post for the adjoining modules and fixed permanently to the facade (building), each module containing singular movable roof module

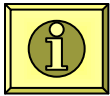
Subject, designation and contents of the documentation

Products manufactured by **SELT Sp. z o.o.** are the subject of this documentation.
The documentation relates to all types of **SOLID PERGOLA**.



Operating manual and instructions for safe use along with the manual for the engine, switches and control shall be submitted to the end user.

IMPORTANT INFORMATION REGARDING SAFETY
WARNING – FOLLOWING THE MANUAL IS ESSENTIAL FOR SAFETY OF PEOPLE
KEEP THIS MANUAL



The documentation is valid jointly with the information concerning a specific product, which is available on the website www.selt.com

The documentation is a component of product delivery and should be constantly stored in its proximity.
The product WARRANTY CARD is an integral part of the documentation.

The documentation includes:

- important recommendations concerning product installation, use and maintenance,
- important recommendations concerning product transport and storage,
- tips following which will assure long-time and fault-free use of the product.

SELT Sp. z o.o. shall not bear responsibility for damage resulting from failure to follow recommendations included in the documentation.

In order to further improve the product, SELT Sp. z o.o. reserves the right to introduce changes which, while maintaining the essential technical parameters, shall be deemed purposeful for improving product operation quality and safety of use.

SELT Sp z o.o. with a head office in Opole shall hold the copyrights to this documentation. The documentation cannot be used without permission, either partially or as a whole, for any concurrent business activity nor can it be made available to third parties.

2. PRODUCT TECHNICAL INFORMATION

Product technical specification is available at:

www.selt.com → PRODUCTS → PERGOLA → **SOLID**

2.1. TECHNICAL PARAMETERS

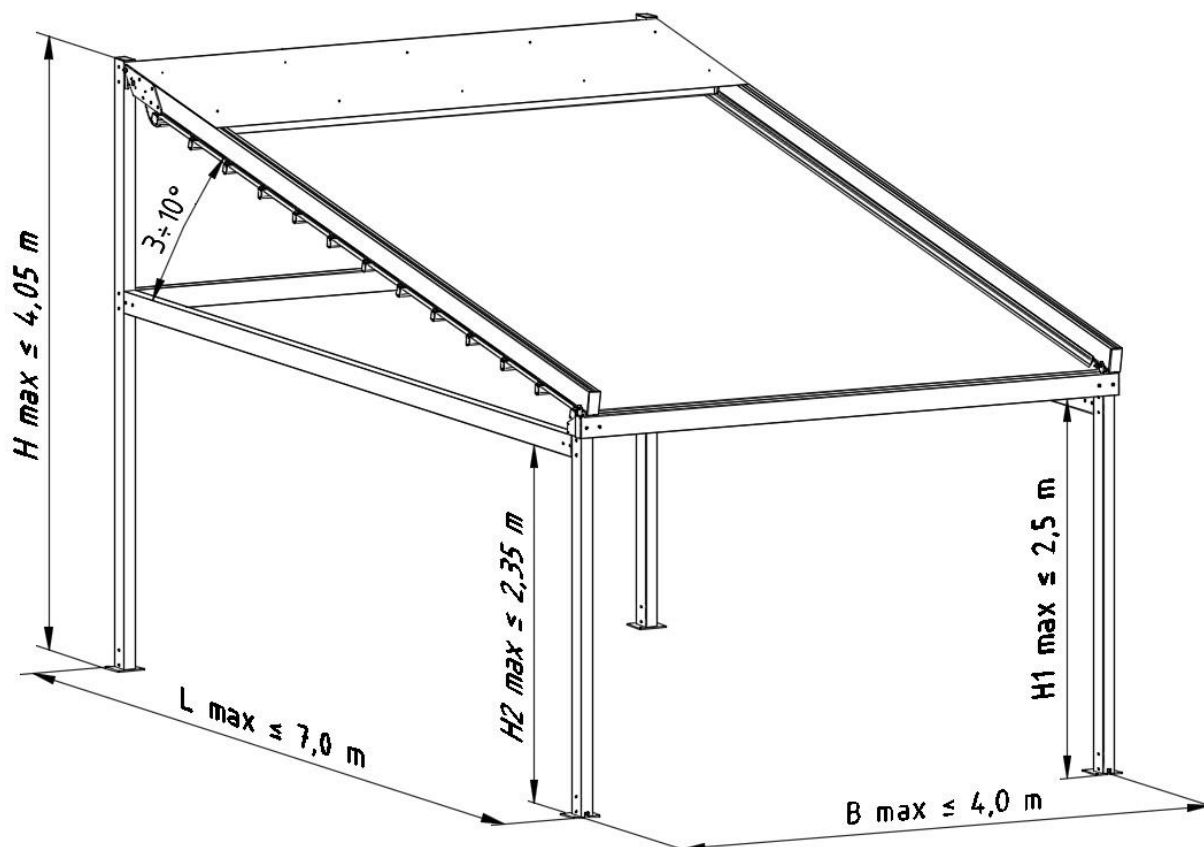
SOLID Pergola – Free-standing one module

Fig. 1. **Free-standing singular module** - Dimensions: **B max** – max. module width, **L max** – max. module projection, **H max** – max. module height (standard 3,85 m), **H1 max** – max. height in the light between floor and front bar (standard 2,30 m), **H2 max** – max. height in the light between floor and rear and side bar (standard 2,15 m).

SOLID Pergola – Free-standing multi-modular

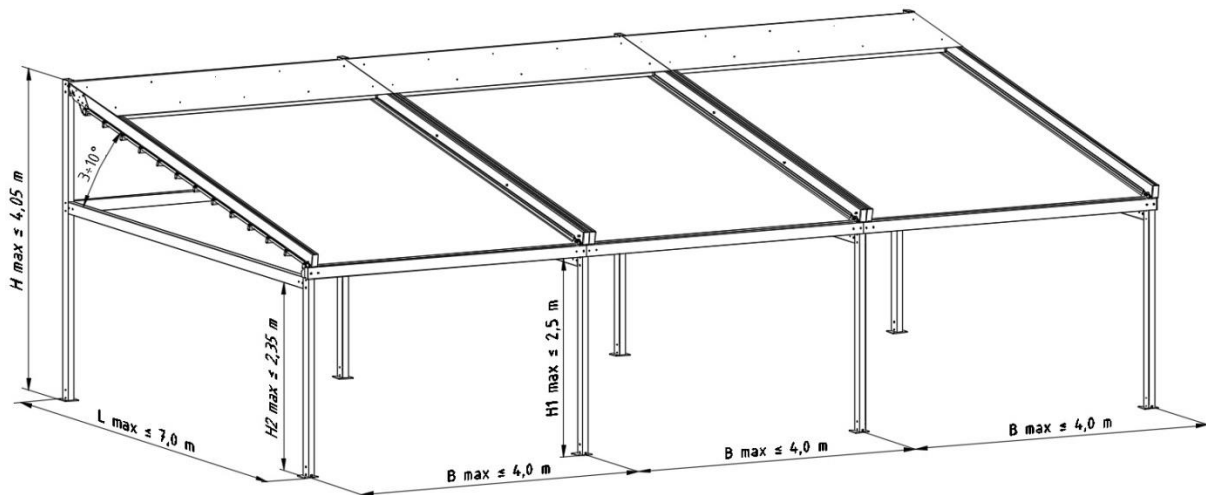


Fig. 2. **Free-standing multi-modular** - Dimensions: **B max** – max. module width, **L max** – max. module projection, **H max** – max. module height (standard 3,85 m), **H1 max** – max. height in the light between floor and front bar (standard 2,30 m), **H2 max** – max. height in the light between floor and rear and side bar (standard 2,15 m).

SOLID Pergola – Wall-mounted one module

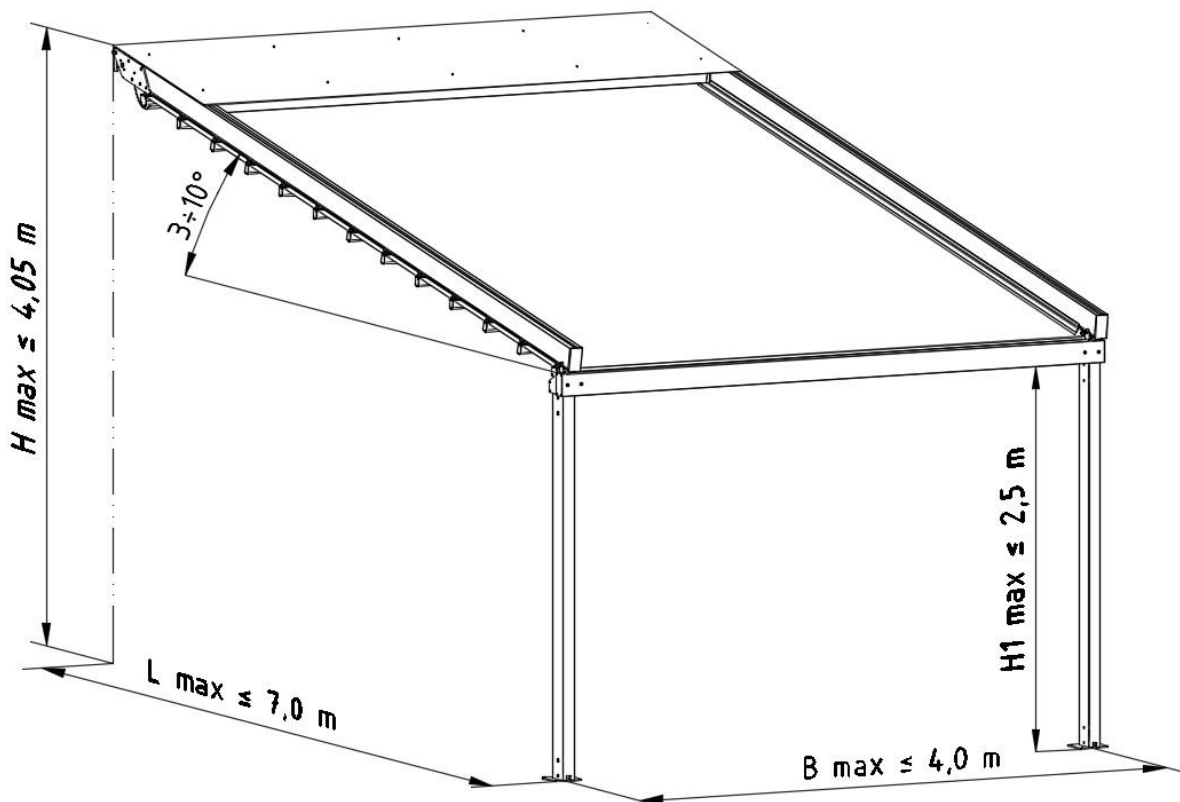


Fig. 3. **Wall-mounted singular module** - Dimensions: **B max** – max. module width, **L max** – max. module projection, **H max** – max. module height (standard 3,85 m), **H1 max** – max. height in the light between floor and front bar (standard 2,30 m).

SOLID Pergola – Wall-mounted multi-modular

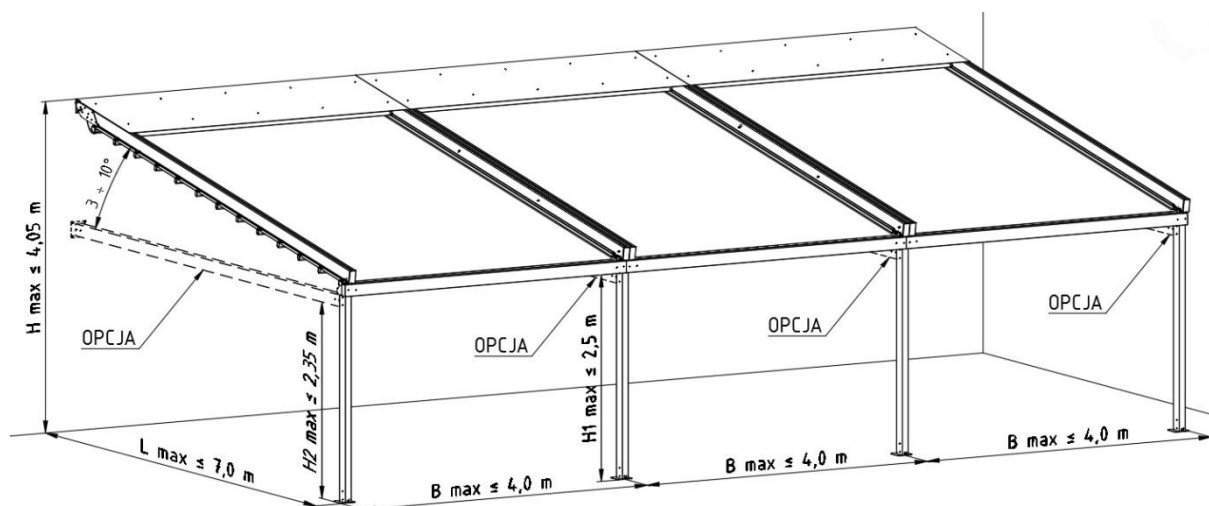


Fig. 4. **Wall-mounted multi-modular** - Dimensions: **B max** – max. module width, **L max** – max. module projection, **H max** – max. module height (standard 3,85 m), **H1 max** – max. height in the light between floor and front bar (standard 2,30 m), **H2 max** – max. height in the light between floor and rear and side bar (standard 2,15 m)).



NOTE: SOLID Pergola in wall-mounted multi-modular can be supplied with side bars installed on each post or on those chosen by the customer. Side bars are supplementary and their ordering is additional option to the set.

Dimensions:	Individual module width	projection	height	H1 max	Inclination angle
Load-bearing construction	Up to 4000 mm	Up to 7000 mm	Up to 4050 mm	Up to 2600 mm	3° to 10°
Scope of usage / operation					
Temperature of surroundings	+10 do +40°C (folding/ unfolding of the movable roof) - 30 do +50°C (bearing construction)				
Air humidity	90% without steam condensation (folding/ unfolding of the movable roof) In full scope (bearing construction)				
Electrical motor with the following parameters:					
- power supply voltage	230V/50Hz				
- power	155 do 230 W				
- power consumption	0,7 do 1,0 A				
- level of protection	IP 44 lub IP 54				
- time of continuous work	In accordance with the S2 cycle of work				
- torque	18-20 Nm (depending of the type of the motor)				
- rotational speed	24/26 rpm (depending of the type of the motor)				
- temperature of work	Somfy -25 do 70°C, Elero -20 do 60°C, Geiger -10 do 60°C				
Technical data of the electrical motors					
Drives (types of drive):	<ul style="list-style-type: none"> - Electromechanical drive run manually by a switch - Electromechanical drive run by a remote control 				
Connection to the electrical installation	Power supply 0,5m with a Hirschman plug STAS				
Installation:					
Application	External				
Installation in the place	<ul style="list-style-type: none"> - One or multi module - To the floor or to the wall (of the construction element) and the floor 				

Detailed data concerning individual motor parameters is available from the website:
www.selt.com → PRODUCTS → AUTOMATION

As well as from manufacturers' websites:
www.somfy.com, www.elero.com, www.niceforyou.com, www.geiger-antriebstechnik.com

2.2. PRODUCT CHARACTERISTICS

The products manufactured by SELT Sp. z o.o. have perfect technical and usage parameters.

List of the types of products:

- Installed outside the building, run by a electromechanical drive connected to the operating system,
- Versions one and multimodule connected along the width
- Wall mounted and free-standing version
- Covered with a hood or covered with walls version (with strengthening posts)

They are characterised with the following features:

- Moveable hood opened electrically. It is possible to cover the walls (after using strengthening profiles, produced and attested by SELT Sp. z o.o.).
- Possible to install the LED lights in the roof beams.
- Protects from sun and rain.
- Waterproof Cover of the moveable roof and esthetic water disposal by an integrated drain and front posts.
- Possible to install modules.
- They restrict the sunlight depending on the needs.
- They protect from the impact of the weather conditions rain and wind (in a level restricted by a wind class according to the norm EN 13561).
- They do not protect from the snowfall (the cover needs to be rolled in for the winter time).
- They protect the area they cover from the excessive sun rays and from overheating. As a result, they contribute to the improvement of the thermal comfort in the area they cover.
- They do not restrict the visibility outside.
- They do not emit toxic substances during usage.
- Emission of noise from electromechanical drive (arising from the movement of the moveable parts, created by the electric drive during the work) is not considered to be a significant danger and is rather a matter of comfort.
- The motors have at least IP54 protection class, not lower than IP44. That means that they are protected from water splash on the cover from any direction.
- The motors have a IP44 protection class, meaning that they are protected from touching the parts under voltage or the moveable parts by the tools and wires with diameter 1mm and bigger and that they are protected from water splash from any direction.
- The construction of the product and the drive enable the safe stop of the roof moveable cover in any moment of rolling down and leaving it in that given place.
- The work of the moveable roof (rolling up and rolling down), can be operated by the switch or remote control.
- The covers of the moveable parts were designed and manufactured in a way to provide a safe operation for the users, provided that the system is properly operated.

Note:



- In products with big dimensions, when there is the need to connect the fabric stripes by welding (horizontal fabric connections), there might appear the “memory effect” of the fabric.
- The rolling of the fabric does not cause improper functioning of the system and is not a defect of the product.

3. PRODUCT TRANSPORT AND STORAGE

3.1. COMPLETENESS AND QUALITATIVE STATE OF DELIVERY

Selt makes every effort to ensure that the goods are produced in accordance with the order. To check the completeness of the product is purchaser's duty and it should be conducted at the time of delivery. Any discrepancies of the product with the order should be reported immediately to the driver/warehouseman/installers and noted in the proof of delivery at the risk of losing warranty. Checking the quality of the apparent defects should be done by the purchaser at the time of delivery. As apparent defects are considered mechanical damages, scratches, cracks, etc. Any discrepancies in quantity or possible replacements of parts being the evident result of Selt Sp. Z o.o. fault, the company agrees to supplement or replace in the shortest possible time.

3.2. GENERAL CONDITIONS OF PRODUCT TRANSPORT AND STORAGE

List:

- The product is factory-packed in a cardboard box to prevent its damage during storage, transport and during its transportation to the place of final assembly,
- For the transport purposes, the products should be set in accordance with the arrows on the packaging,
- Do not store the products in a number of layers greater than 2 due to the possibility of crushing the package which in turn can lead to permanent damage of the product,
- Products placed on the means of transport must be secured against movement and damage during transport (e.g. spacers, safety belts, etc.),
- During transportation the products must be protected from the rain or snow,
- Storage places should be dry, airy and protected from the harmful effects of weather conditions (sun, rain, etc.),
- Where the weight of the product exceeds 25kg and its transportation to the place of final assembly must be carried out by at least two persons.

3.3. DESCRIPTIONS THAT HAVE TO BE PUT OBLIGATORY ON THE PRODUCT PACKAGING



Before the installation and use of the product its Technical and operation documentation, available at www.selt.com/doc-en, should be read carefully.

4. PRODUCT INSTALLATION

The following part covers general requirements of the product installation.

Proper installation is necessary for efficient operation of the product. SELT Sp. z o.o. recommends to use services of skilled installation crews what guarantees the Purchaser proper installation.

4.1. GENERAL REQUIREMENTS FOR SAFE INSTALLATION

- it is necessary to follow general rules of construction art,
- it is necessary to follow health and safety regulations, especially concerning work with electricity and at heights,
- the product must be mounted in mechanical way (foams, glues and similar products are not allowed as fastening materials),
- the base where wall-ceiling brackets are mounted should be durable construction (concrete, brick, etc.),
- in case of constructions made of metal, in which components are welded together according to art of joining metal parts, installation is made to the structures of sufficient wall thickness,
- before starting the installation all redundant electrical cables should be removed from the installation are.

4.2. REQUIREMENTS FOR SAFE INSTALLATION AT HEIGHTS



Installation of the product, because it requires performing work at heights, is particularly dangerous because it poses a high risk of danger to human health and safety and in particular fall from height.

The purchaser is obliged to conduct the installation of the product according to health and safety regulations applicable in a given country. The responsibility of the purchaser is to develop a plan for health and safety protection during installation. Purchaser should determine specific requirements of health and safety when working at height, and especially to ensure:

- direct supervision of work execution by the designated person (e.g. the foreman),
- adequate safeguards measures, in particular protective equipment against falls from height,
- detailed instruction of employees performing work at heights,
- necessity to use ladders with appropriate quality and safety certificates, scaffoldings, safety buckles, platforms with adequate strength for anticipated load.

Work at heights that requires using personal protective equipment against falls from height, must be performed by at least 2 people.

Work at heights should be organized and carried out in a way that does not force employees to lean out of the railings or outline of a device on which they stand.

The buyer is obliged to ensure that areas of work at heights can be accessed only by authorized and informed personnel.

Health and safety professionals should inform employees residing or staying at the conduct of such works or in the vicinity of the site about conducted operations at heights and the necessary safety measures to be applied during this work.

4.3. PREPARATION TO INSTALLATION

- unpack product and check if it contains all necessary elements for installation,
- make sure that the base where product will be mounted provides sufficient bearing capacity for safe installation and operation of the product.



Attention! Pins, screws or bolts to secure the product to the structure depend on the type of substrate, and therefore are not included with the product and its purchase has to be done by the buyer or installer.

4.4. GENERAL GUIDELINES FOR INSTALLATION

- mounting of the brackets and covers should be done with appropriate bolts and pins (they are not included with the product),
- the product should be protected against any stains made by e.g. silicon, mortar or mounting foam, which may cause its malfunction,
- in case it is necessary to use expanded foam, silicon, or others, strictly observe use recommendation on the package



Improper installation may cause hazardous situation for the user.

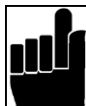
4.5. INSTALLATION TOOLS

List:

- drills for metal and concrete,
- hammer drill,
- ladder/scaffolding, lift, aerial platform, hydraulic cranes,

- screwdriver,
- tape measure,
- hammer,
- Pencil/pen,
- Spirit level,
- wrenches,
- Allen wrenches,
- Rope to secure / lift / remove elements
- Torque wrench

4.6. INSTALLATION



Attention: Before starting installation please check condition of boxes with components, condition of components after unpacking and their completeness. Damages occurred in transportaion are the carrier's responsibility.

Screw / nut	M3	M4	M5	M6	M8	M10	M14
Maximum tightening torque (Nm)	0,9	2	4	7	17	33	57

Installation of Pergola Solid can be divided into six stages:

- Installation of Supporting Structure
- Installation of Guiding Rails
- Installation of Stabilising Rails
- Installation of Motor
- Installation of Retractable module
- Installation of PD cover

4.6.1. INSTALLATION OF FREE-STANDING, SINGLE MODULE PERGOLA

4.6.1.1. INSTALLATION OF SUPPORTING STRUCTURE

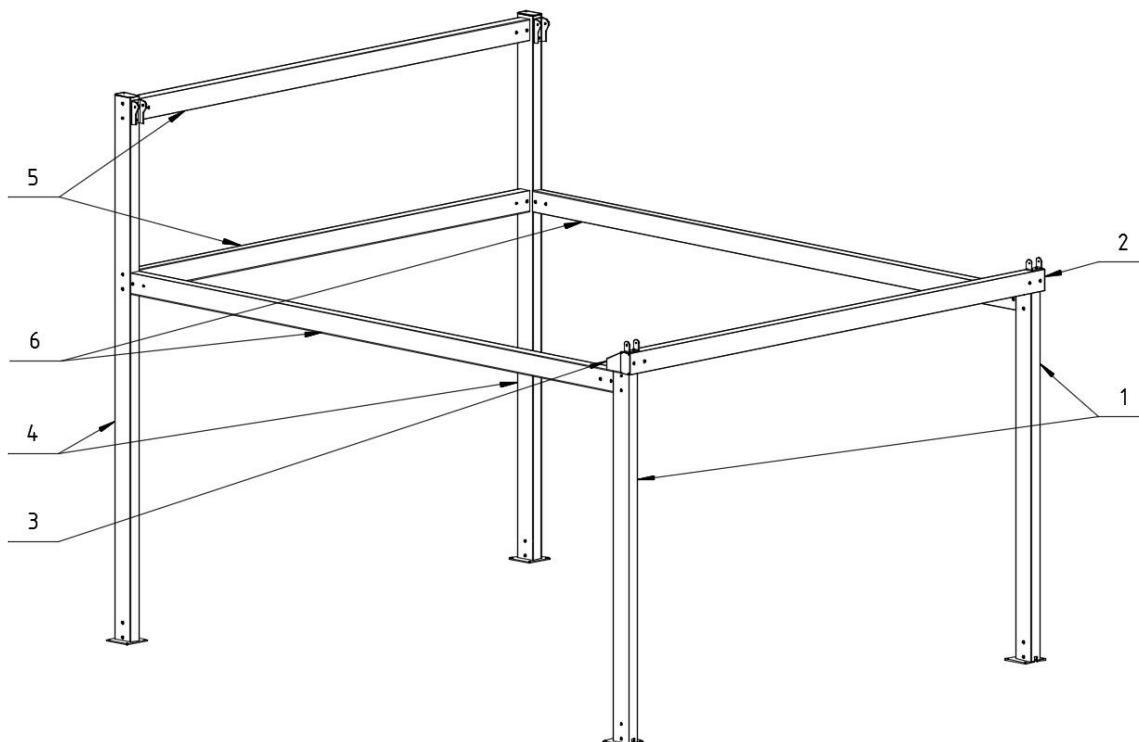
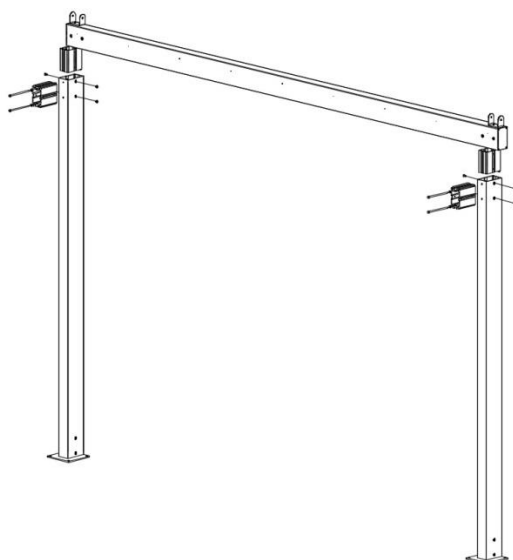


Fig. 5. Supporting structure: 1 – Lower post, 2 – Front beam, 3 - Gutter, 4 – Higher post (right, left), 5 – Rear beam, 6 – Side beam.

Installation of supporting structure starts from assembling front beam with lower posts. Place front beam with linear connector into lower post and fasten together. Then fasten linear connector to lower post according to Fig. 6. Connection of lower post with front beam should be sealed with transparent sealing compound. Assembled section put aside for further installation.



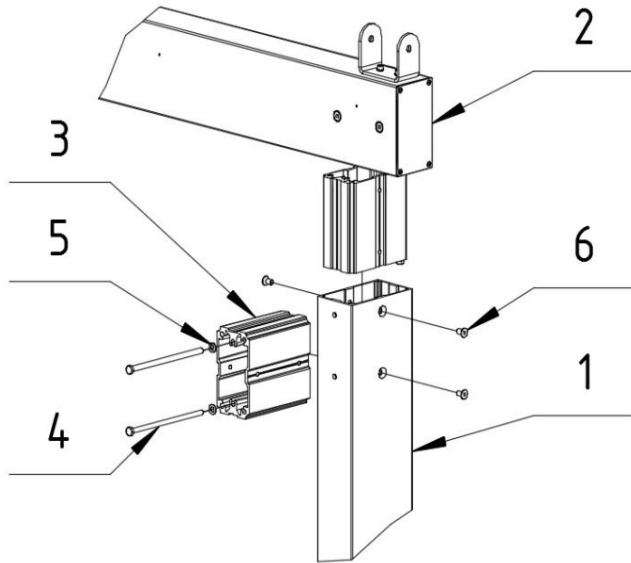


Fig. 6. Installation of Front Beam: 1 - Lower post, 2 – Front beam, 3 – Linear connector, 4 – M8x180 Screw, 5 - $\varnothing 8.4$ Washer, 6 - M8x16 Screw,

Then assemble higher posts with rear beams. Put the rear beam into the linear connector attached to the higher post and fasten together, Fig. 7.

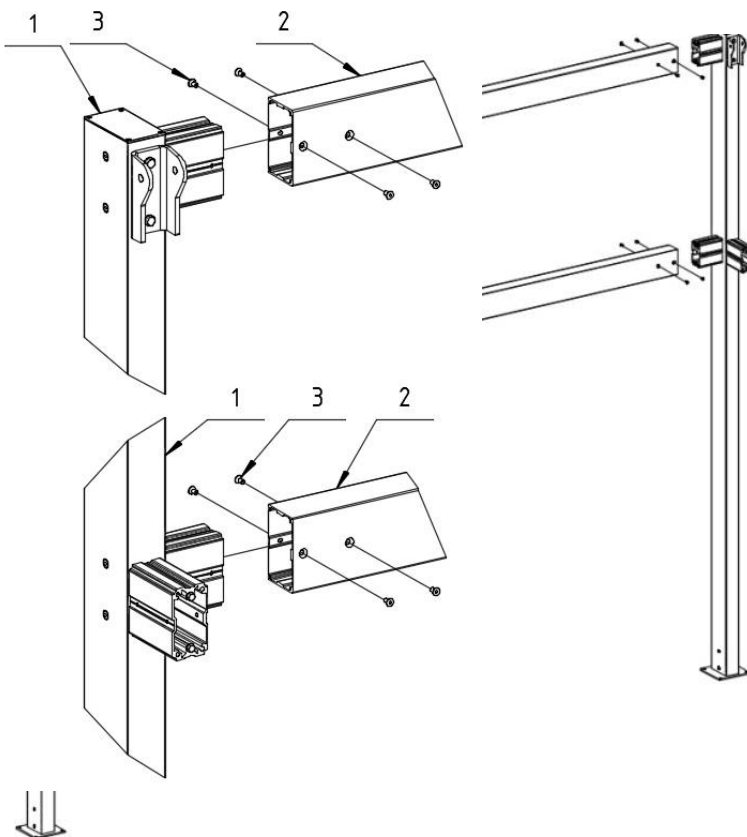


Fig. 7. Assembly of the rear beam: 1 – Higher post, 2 – Rear beam, 3 – M8x16 Screw.

After assembling modules of Lower and Higher posts, put them in vertical position and secure against falling. Then, to such prepared parts of construction, fasten Side beams, placing them onto linear connectors and fastening with bolts, according to Fig 8. Connection of lower post with Side beam should be sealed with transparent sealing compound.

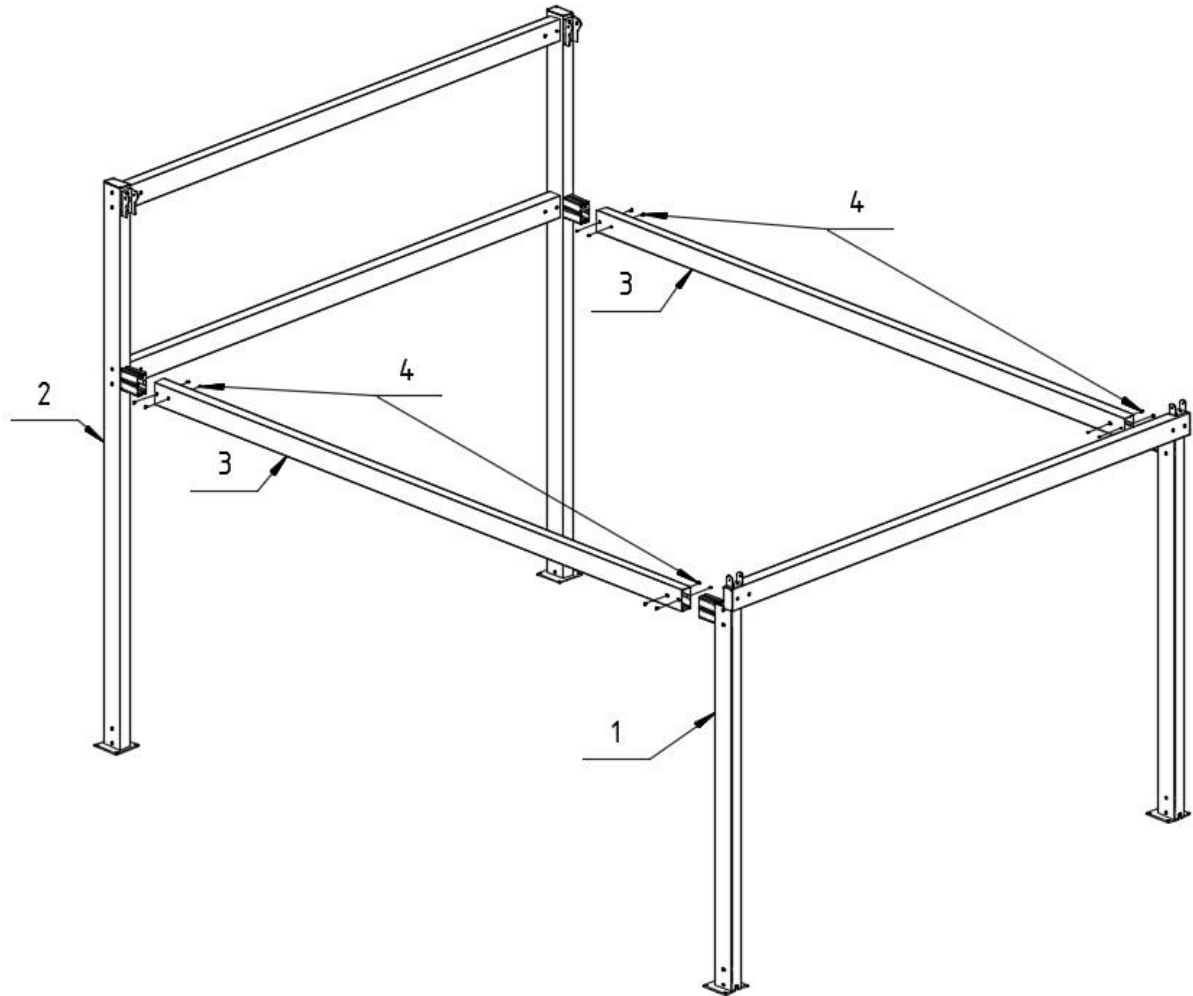


Fig. 8. Assembly of Side beams: 1 – Lower post module, 2 – Higher post module, 3 – Side beam, 4 – M8x16 screw.

After assembling elements of supporting structure, place the Gutter on the Lower post and Side beam, according to Fig. 9., then fasten the Gutter to Front beam with self-tapping screws. Connection of Gutter with Supporting structure should be sealed with transparent sealing compound.

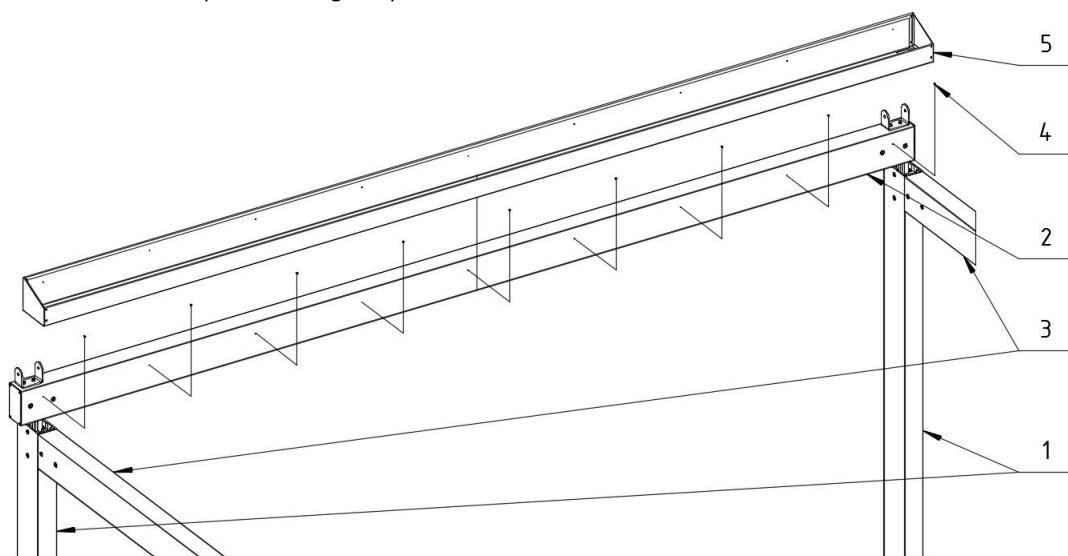


Fig. 9. Installation of Gutter: 1 – Lower post, 2 – Front beam, 3 – Side beam, 4 – Self-tapping screws St 2,9x6,5, 5 – Gutter.

Assembled supporting structure should be permanently fastened to the base in the designated place by anchoring pergola's feet. That should be performed with use of mechanical anchors or equivalent solution, providing fully stable fastening of the construction. Appropriate anchors should be selected by authorized designer. To screw feet to the ground, we recommend bolts / anchors of 12 mm diameter.



Attention: Before anchoring the construction you must verify correct assembly of supporting structure by revisiting diagonals between the posts and if necessary adjusting the construction setting.

4.6.1.2. INSTALLATION OF GUIDING RAILS

Guiding rail is mounted to the brackets placed on the supporting structure (Higher post and Front beam), according to Fig. 10 and 11, with use of M14x120 and M10x20 bolts, screwed through the bracket to the moving pads on the Guidig rail. Repeat the steps for the second Guiding rail. Having Guiding rails installed, attach to them gaskets of the Retractable module, Fig. 12.

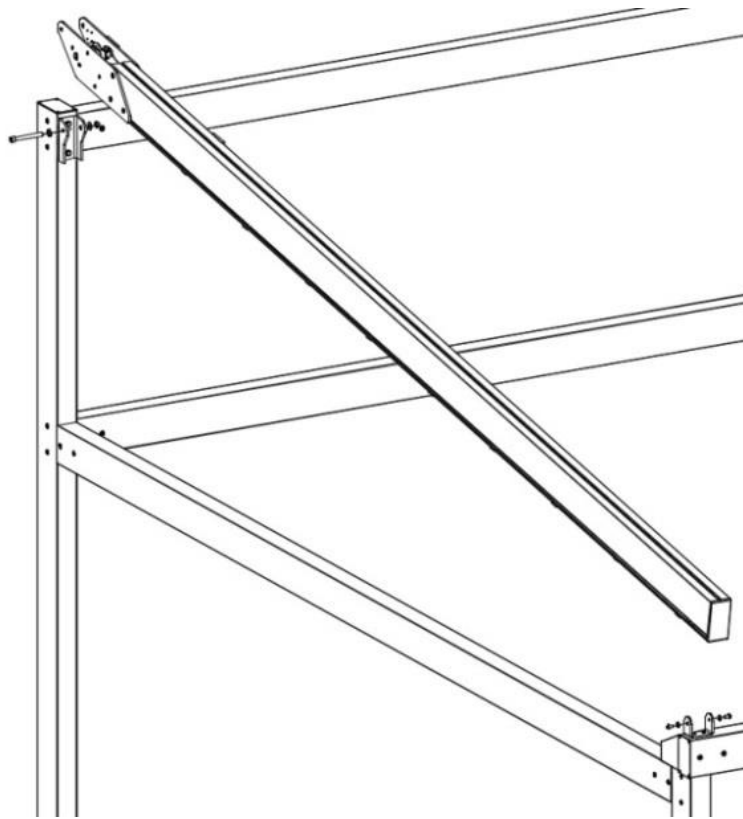


Fig. 10. Installation of Guiding rail.

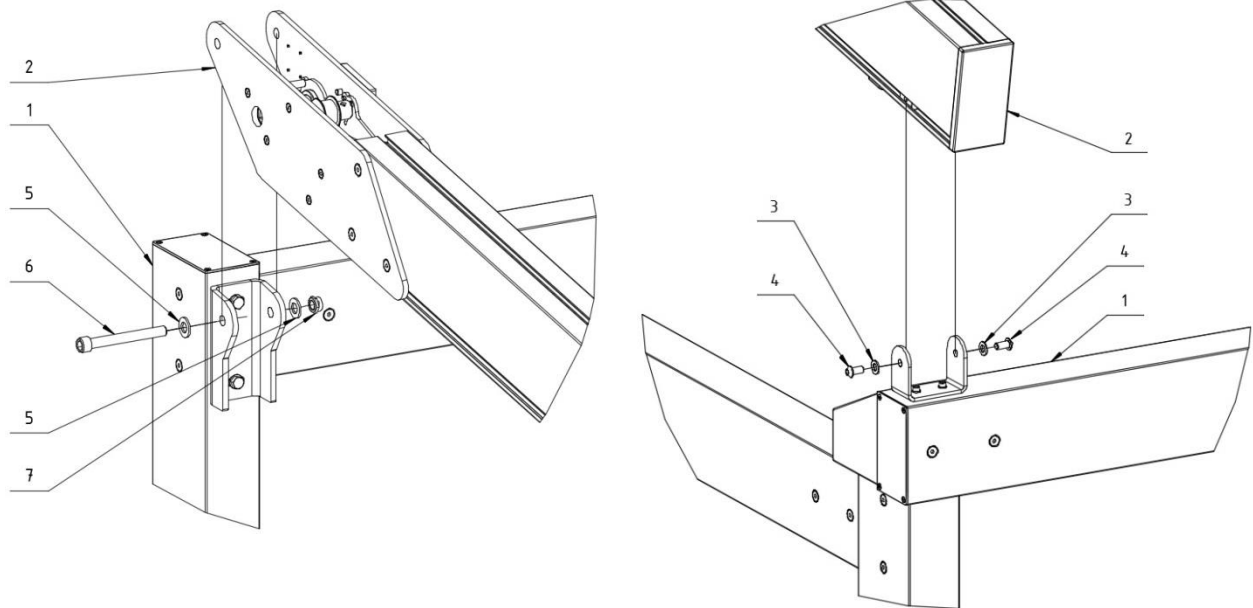
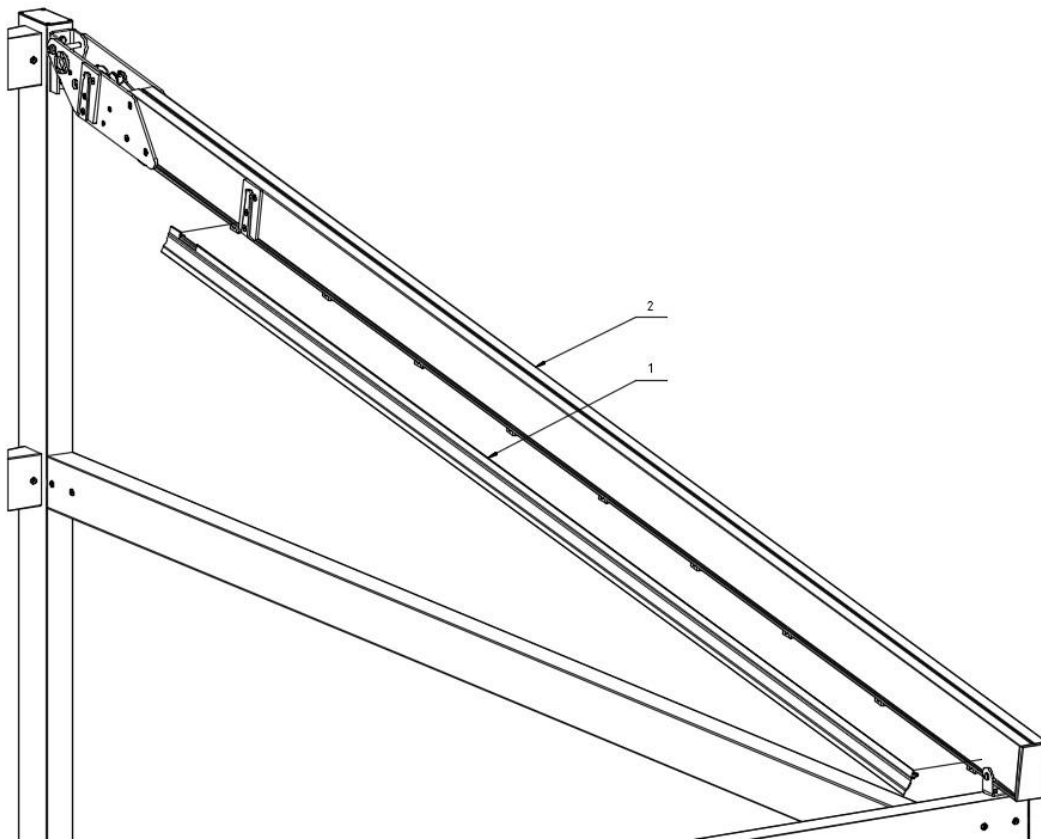


Fig. 11. Detail of installation of Guiding rail: 1 – Supporting structure, 2 – Guiding rail, 3 – $\varnothing 10,5$ Washer, 4 – M10x20,5 Bolt, 5 – $\varnothing 15$ Washer, 6 – M14x120 Bolt, 7 – M14 Nut.



Attention: After installing guiding rails, you must verify their setting against each other and supporting structure. Guiding rails must be parallel to each other. You must also check diagonals and if necessary adjust setting of the guiding rails against supporting structure or even re-adjust the entire supporting structure.



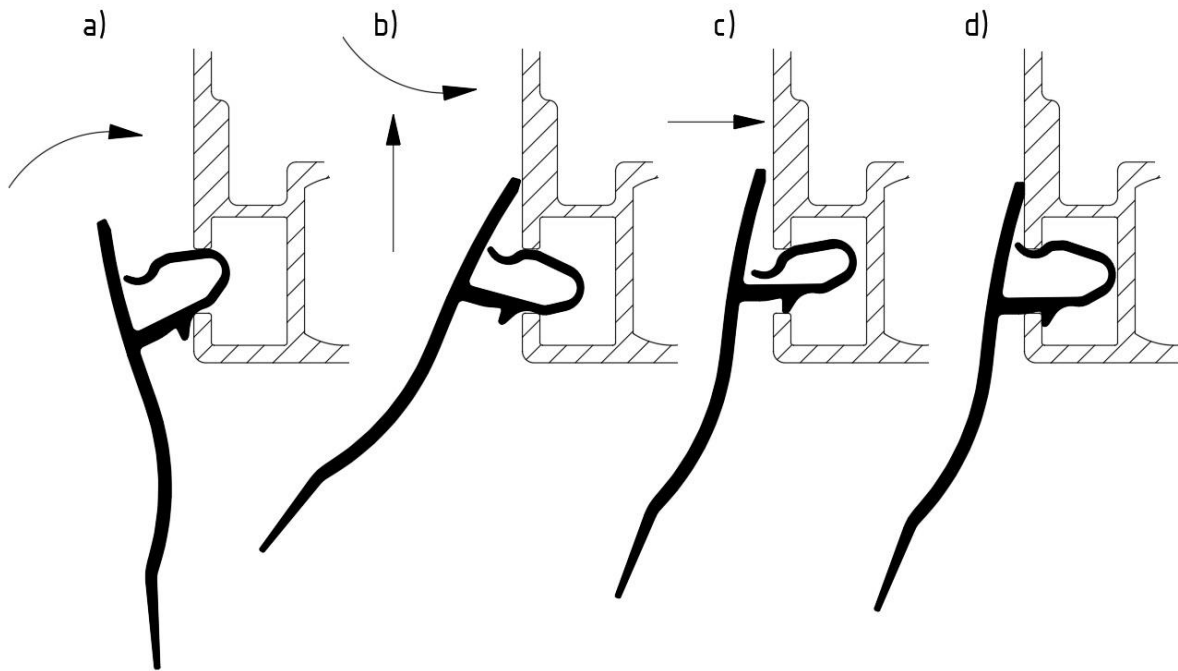
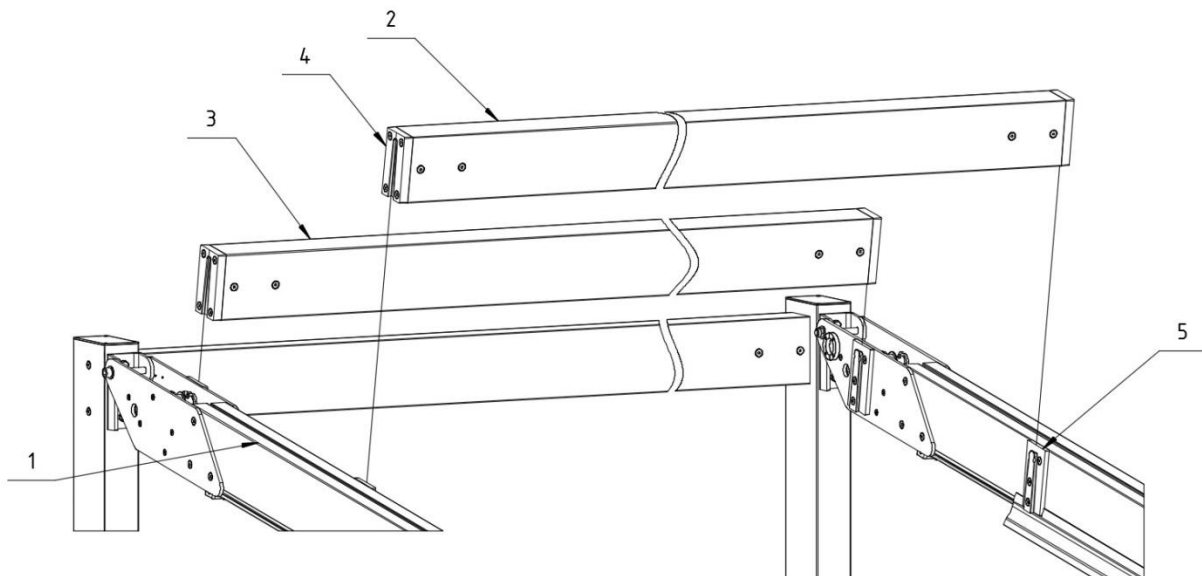


Fig. 12. Installation of Gasket of Retractable module: 1 – Gasket of Retractable module, 2 – Guiding rail

4.6.1.3. INSTALLATION OF STABILISING RAILS

The Front and Back Stabilising Rails are mounted to the Guiding rails, as shown in Fig. 13. Rails are installed on Sherpas that are attached to Guiding rails. In Stabilising Rails there are Sherpa's pockets that are compatible with each other creating shaped connector. Upper surfaces of Guiding rail and Stabilising Rail should flush. If necessary use a hammer with a Teflon tip or wooden pads to avoid damaging the profile or paint coating.



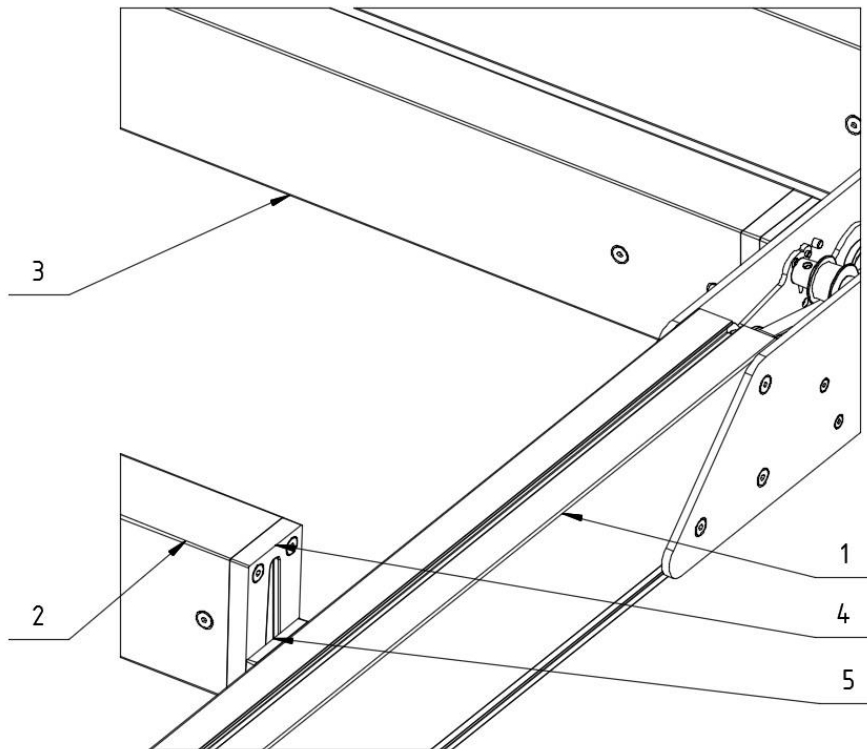


Fig. 13. Installation of Stabilising Rails: 1 – Guiding rail, 2 – Stabilising Rail (front), 3 – Stabilising Rail (back), 4 – Sherpa’s pocket, 5 – Sherpa.

4.6.1.4. INSTALLATION OF MOTOR

Before installing the motor, make sure all the middle carriages and leading carriage are pressed to the first one (locking carriage, carriages in position of closed retractable module), as shown in Fig. 14.

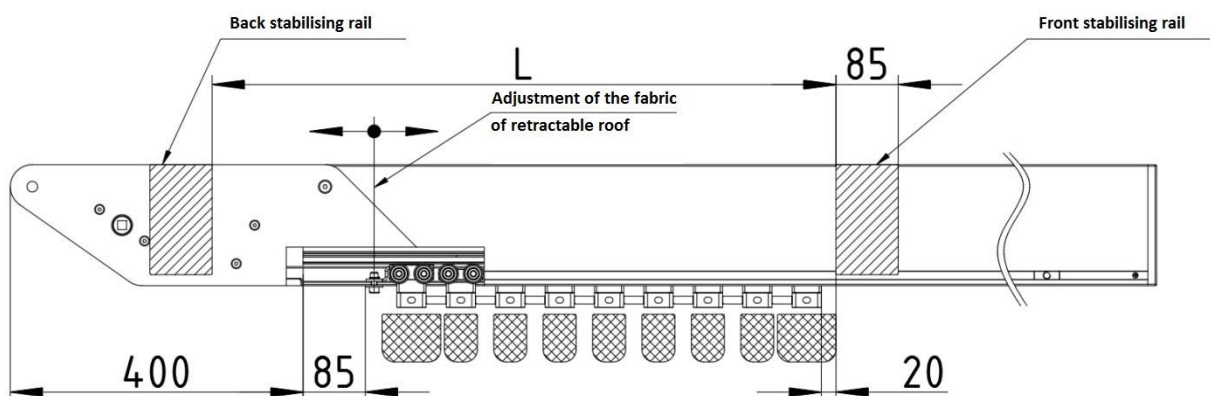


Fig. 14. Setting of carriages in guiding rail.

The locking carriage must be installed initially 85 mm from the beginning of guiding rail. Carriages in the position of closed retractable module should not protrude beyond the outline of Stabilising Rail (front).

The distance L is a variable value and depends on the length of the retractable module (number of beams in retractable module).

Positioning of toothed pulley must be identical in both Fastening plates to ensure proper operation of the motor (mark on the wheel should be in the same place).

Start the installation of the motor from fixing dampening pads in place where Geiger motor is going to be mounted. Then fasten the motor to the motor fastening bracket placed on the Stabilising Rail (back) using M6x12 screws and $\varnothing 6,4$ washers, according to Fig. 16.

Then palce the square rods, as shown in Fig. 15. and 16., first end in toothed pulley and second in motor's coupling and then secure against moving with grub screw. External openings in beams secure with end caps.

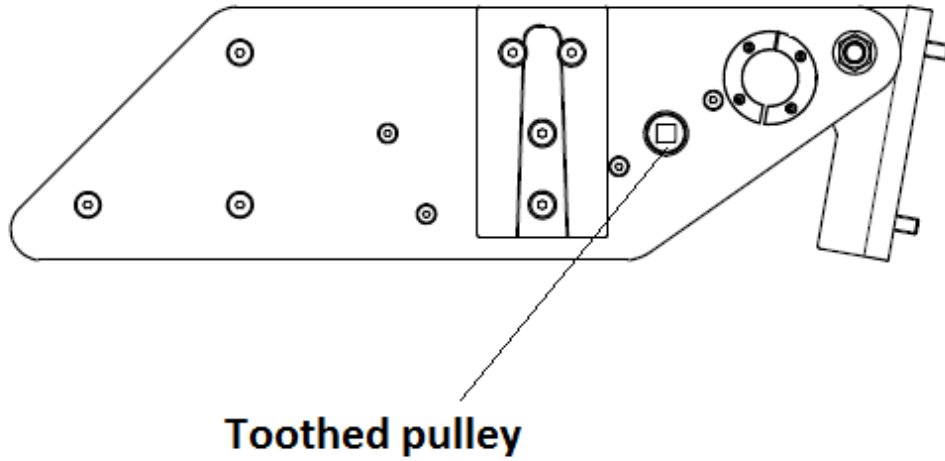


Fig. 15. Fastening plate of guiding rail and drive rods placement.

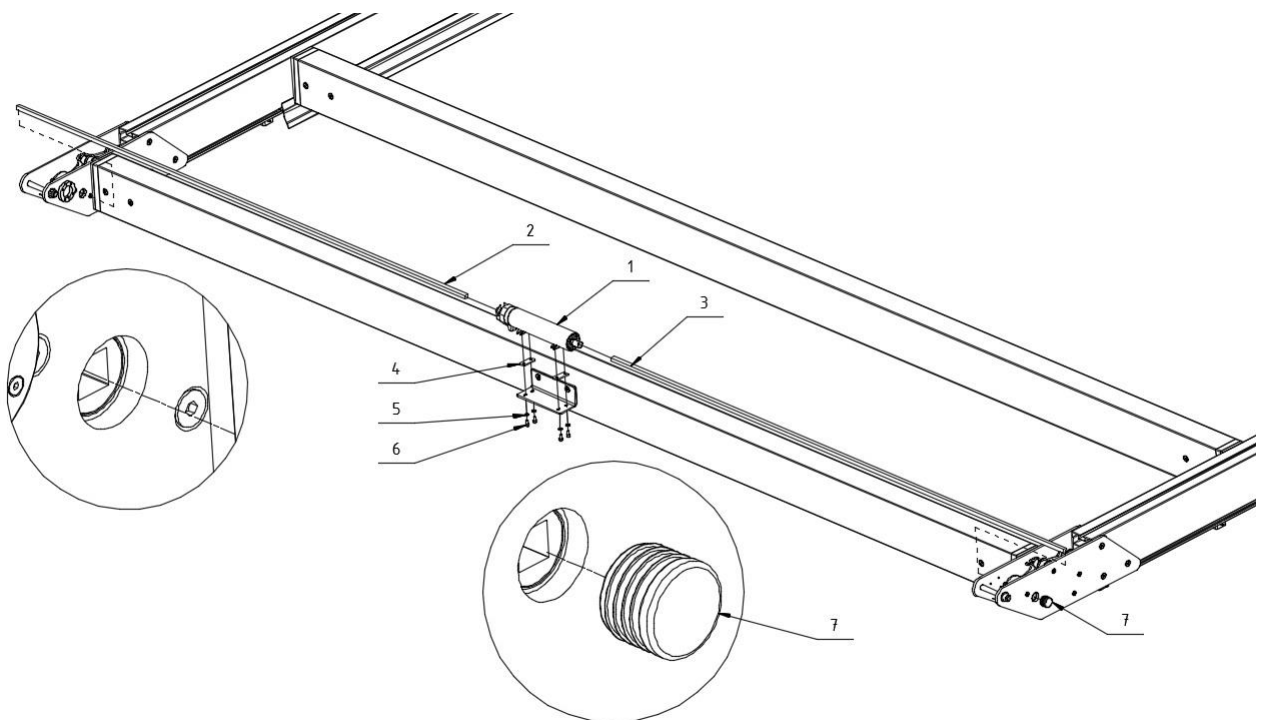


Fig. 16. Installation of Drive: 1 – Geiger motor, 2 – Square rod 12 (right), 3 – Square rod 12 (left), 4 – Dampening pad, 5 - $\varnothing 6,4$ washer, 6 – M6x12 screw, 7 - end cap.

4.6.1.5. INSTALLATION OF RETRACTABLE MODULE

Before installing retractable module, all carriages, leading and middle ones should be withdrawn to $\frac{1}{2} \div \frac{3}{4}$ length of the guiding rail starting from the locking carriage. Please note that limit switches in the motor are not set and must be set according to the instruction supplied with the motor. Then, to facilitate installation, place the retractable module on the side beams, previously protecting the surface of the beams and fabric cover against damage.

To install the Retractable module on Pergola Solid you must raise single bars of the retractable module to the proper height, starting from one end of the retractable module, then slide the bar on corresponding pair of carriages, as shown in Fig. 17. Then lock the bar with M4x45 screws.

Set the Installed retractable module in open position and verify positioning of the leading bar of the retractable module. It must be placed completely within the outline of the Gutter in accordance with Fig. 18.

In justified cases, when adjustment of retractable module or fabric tensioning is necessary, the back of leading bar might extend beyond the the contour of the Gutter, but no more than $\frac{1}{4}$ of the width of the bar. If, after all, the leading bar can not be set in desired position, adjust its position by changing the position of the locking carriage and changing settings of limit switches on the motor.

After attaching bars to the carriages, install the profile FD35 in its fixing bracket. To do this, unscrew the two M3x20 screws and remove one part of fixing bracket in one guiding rail, then insert profile FD35 and re-fasten the fixing bracket. Detaching of fixing bracket in second beam is not necessary. Installation of FD35 Profile is shown in Fig. 18.

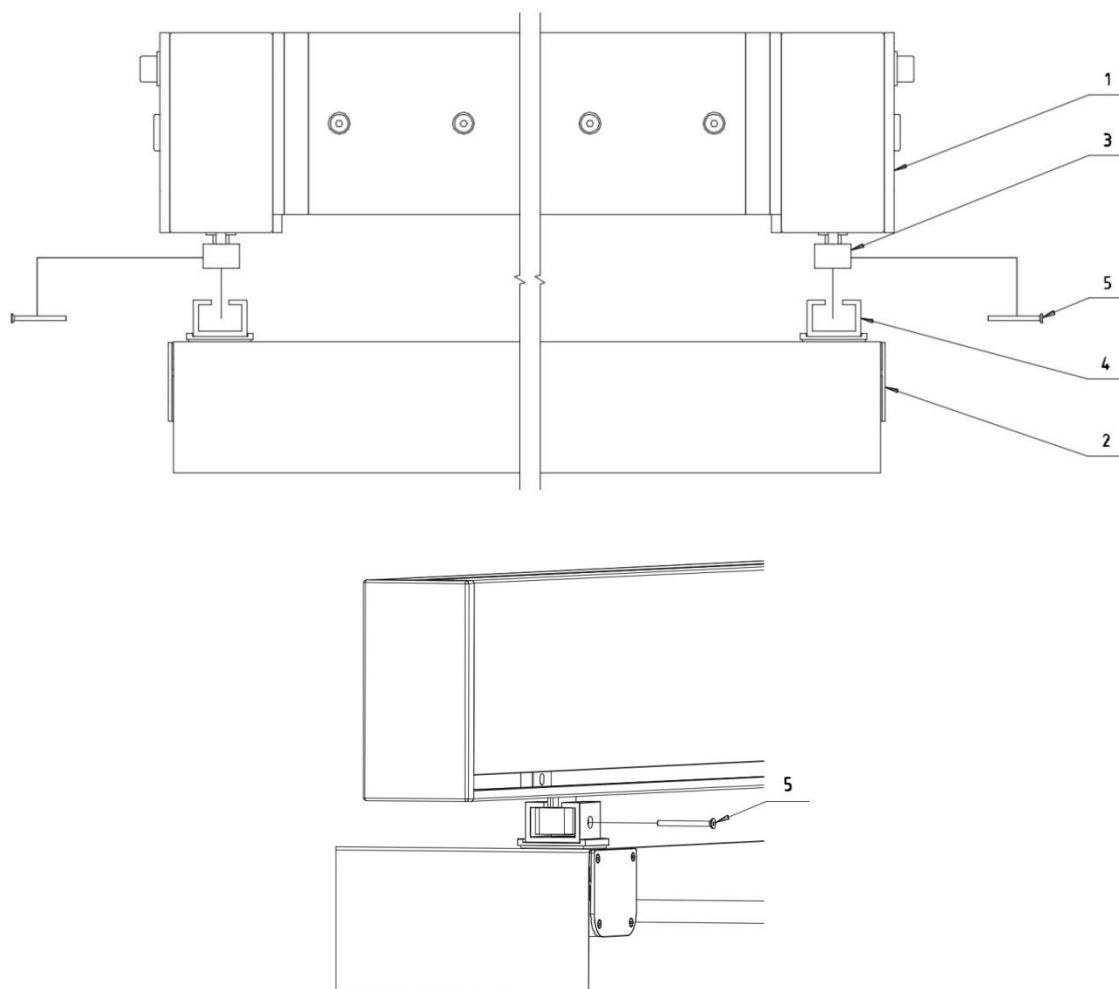


Fig. 17. Fastening of bars in retractable module to the carriages: 1 – Guiding rail, 2 – Bar of retractable module, 3 – Carriage of leading bar, 4 – Bracket of retractable module bar, 5 –M4x45 Screw

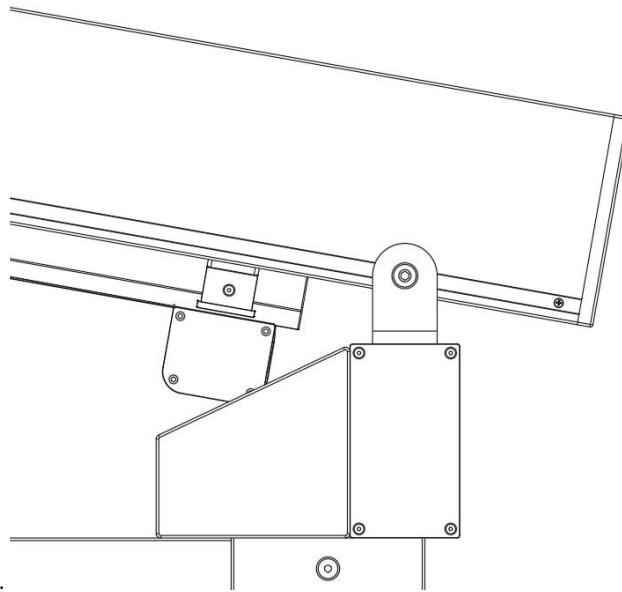
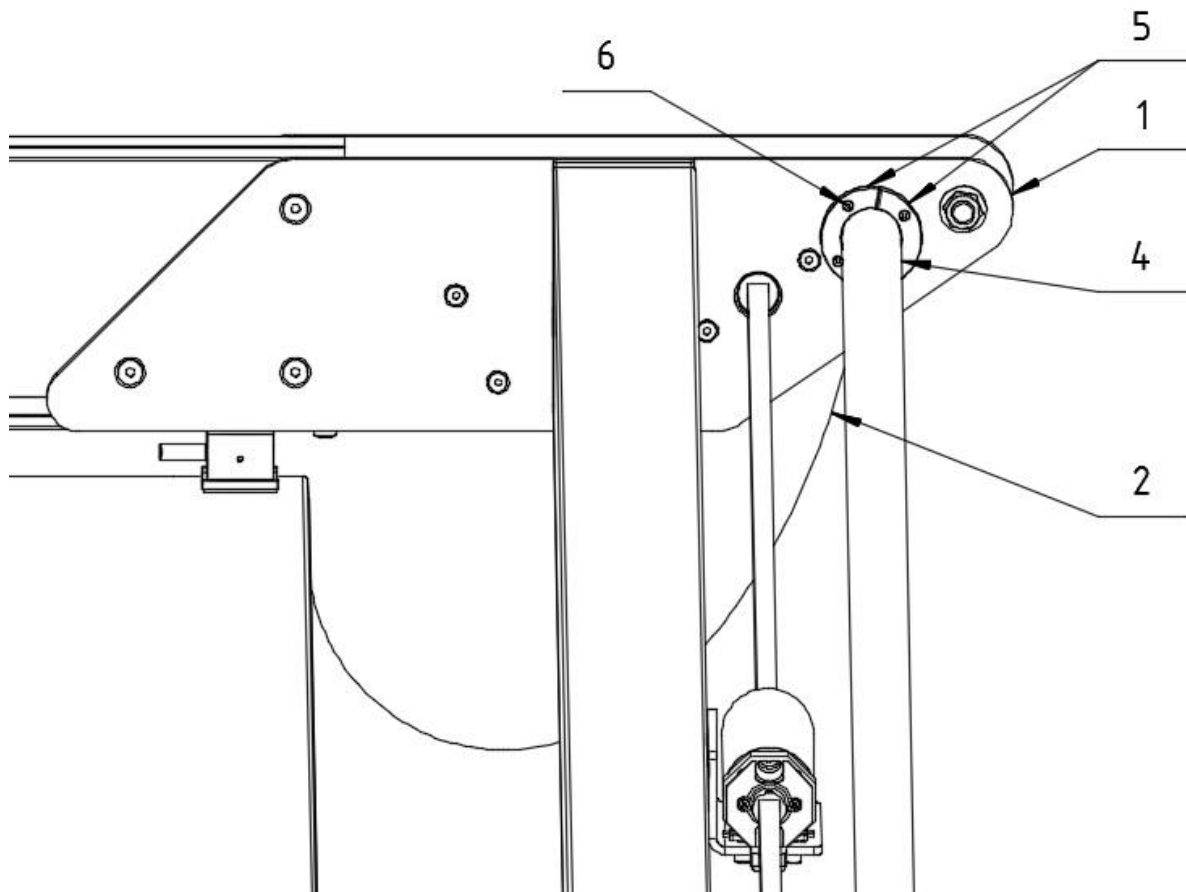


Fig. 18. Correct setting of leading bar in relation to gutter.



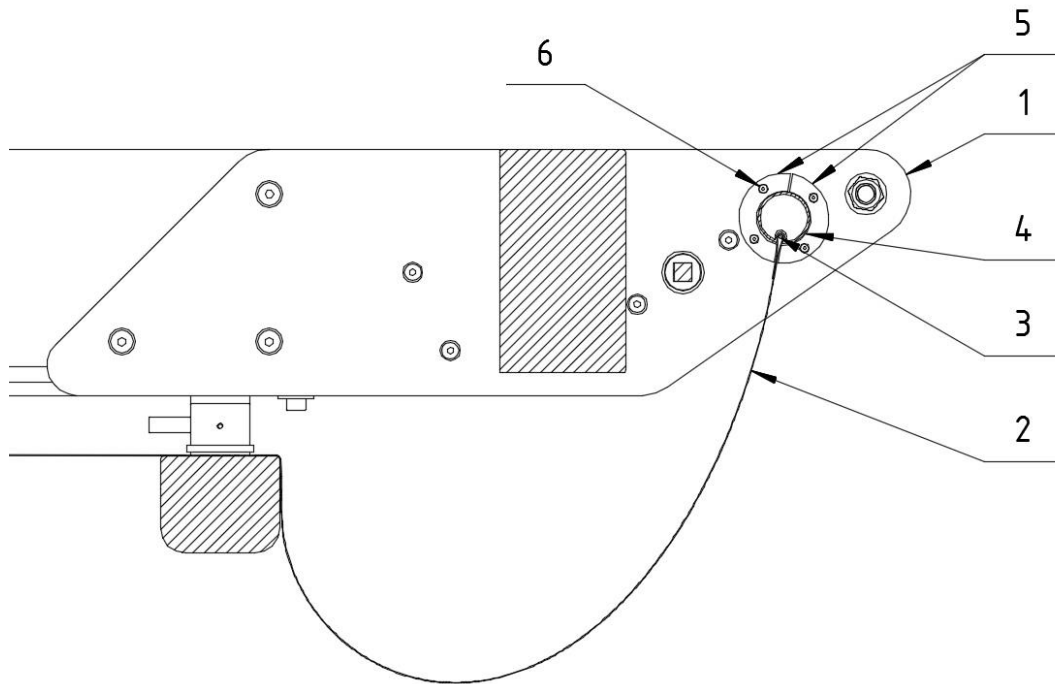


Fig. 19. Installation of FD35 Profile: 1 – Leading bar, 2 – Retractable module (fabric), 3 – PVC rod, 4 – FD35 Profile, 5 – Fixing bracket of FD35 (left and right), 6 – M3x20 screw.

4.6.1.6. INSTALLATION OF PD COVER

Before installing PD cover, apply the EPDM self-adhesive gasket to the top of Stabilising rails (front one and back one). Then place the roof panel on the Guiding rails and Stabilising rails so that their edges are in the same plane, as shown in Fig. 20. Then connect all elements with self-tapping screws. Before applying the screws it is recommended to drill $\Phi 3$ mm holes in spots where the roof is supported by Guiding rails and Stabilising rails.



Attention: There is a possibility to mount a Facade addition to the PD Cover. The Facade addition is not part of the Pergola SOLID. Completion and installation of the Facade addition is to be made by Ordering Party.

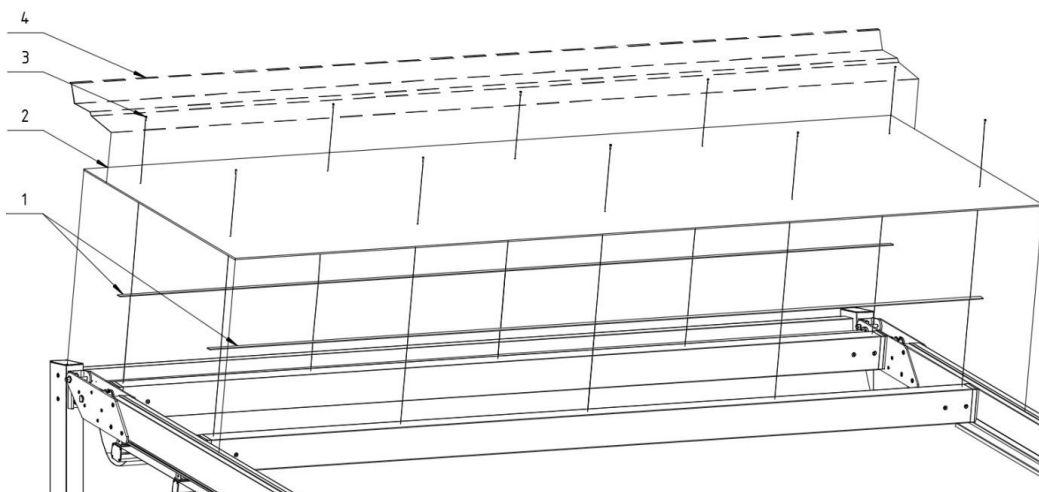


Fig. 20. Installation of PD cover: 1 – Foamed rubber EPDM self-adhesive gasket 30x5, 2 – PD cover, 3 – St 5,5x25 Self-tapping screw, 4 – Facade addition (OPTIONAL! – To be made by Ordering Party)

4.6.1.7. FABRIC ADJUSTMENT

Any misalignment of fabric is adjusted manually by loosening the screw that fastens first carriage to the leading bar, then by setting the carriage in correct position and re-fastening the screw.

4.6.2. INSTALLATION OF FREE-STANDING, MULTI-MODULAR PERGOLA

Example marking of Pergola SOLID components in multi-modular free-standing and wall-mounted option.

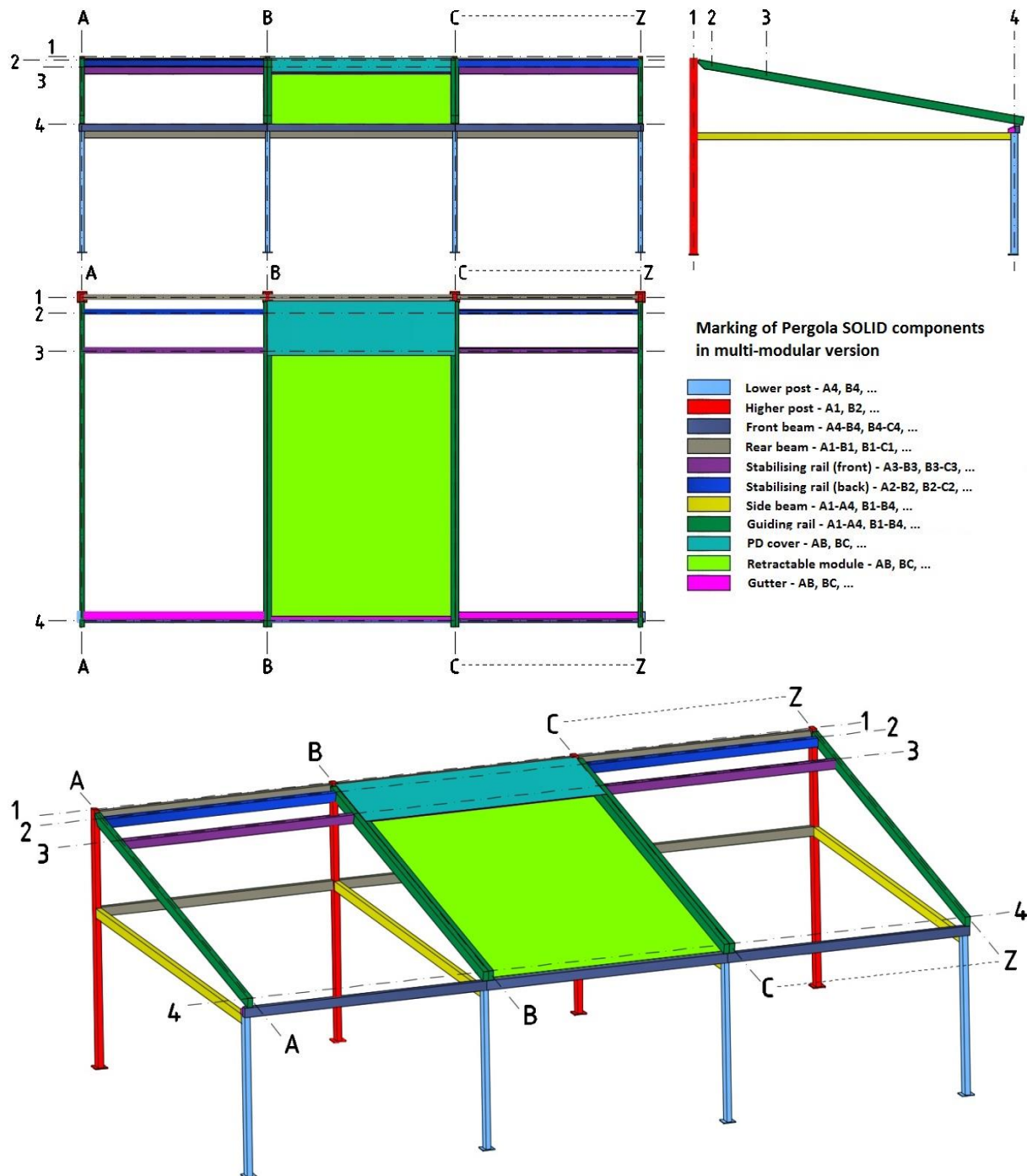


Fig. 21. Marking of Pergola SOLID components in multi-modular version.

Beams and components of multi-modular installation are marked according to diagram shown in Fig. 21.

Planes A, B, ... , mark the divisions between modules.

Planes 1,2, ... , mark the divisions in installation nodes for particular beams.

The posts are marked with single description of the node

- Marking of lower posts – A4, B4, ...
- Markign of higher posts – A1, B1,

The beams are marked with double description of the node

- Marking of the front beams– A4-B4, B4-C4,
- Marking of the rear beams – A1-B1, B1-C1, **Attention!** The rear beam in particular module occurs twice, both have the same description.
- Marking of stabilising rail (front) – A3-B3, B3-C3,
- Marking of stabilising rail (back) – A2-B2, B2-C2,
- Marking of side beams – A1-A4, B1-B4, **Attention!** Side beams have the same lenght in the entire constructional set.
- Marking of guiding rails – A1-A4, B1-B4,

The following elements are marked with single description of the node:

- Marking of PD covers – AB, BC,
- Marking of retractable modules – AB, BC,
- Marking of gutters – AB, BC,

4.6.2.1. INSTALLATION OF SUPPORTING STRUCTURE

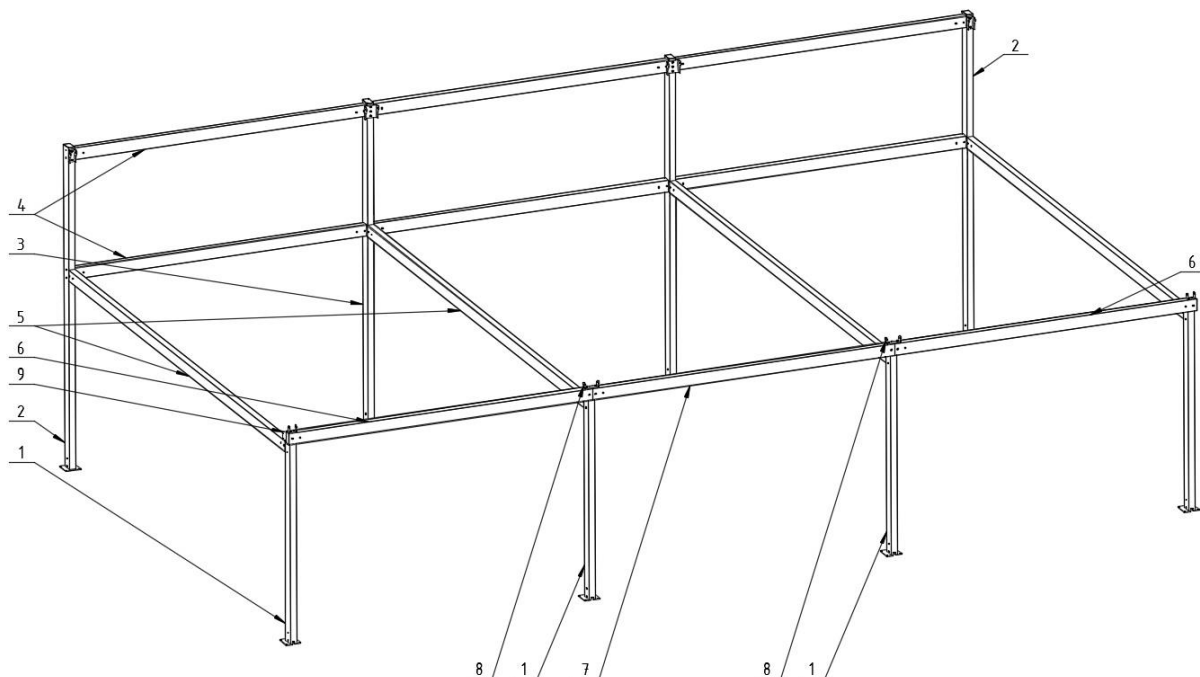


Fig. 22. Supporting structure – modular version: 1 – Lower post, 2 – Higher post (right, left), 3 – Higher post (middle), 4 – Rear beam, 5 – Side beam, 6 – Front beam (right, left), 7 – Front beam (middle), 8 – Bracket of modular guiding rail, 9 – Gutter.

Installation of supporting structure starts from assembling front beam (left/right) with lower posts that form the first module. In the front beam (left or right) place the connector “Modular connection” and fasten it to the front beam, according to Fig. 23. Then put the lower posts on the connectors and fasten. Next, fasten the linear connector to the lower

post, as shown in Fig. 23. Connection of lower post with front beam should be sealed with transparent sealing compound. Assembled section put aside for further installation.

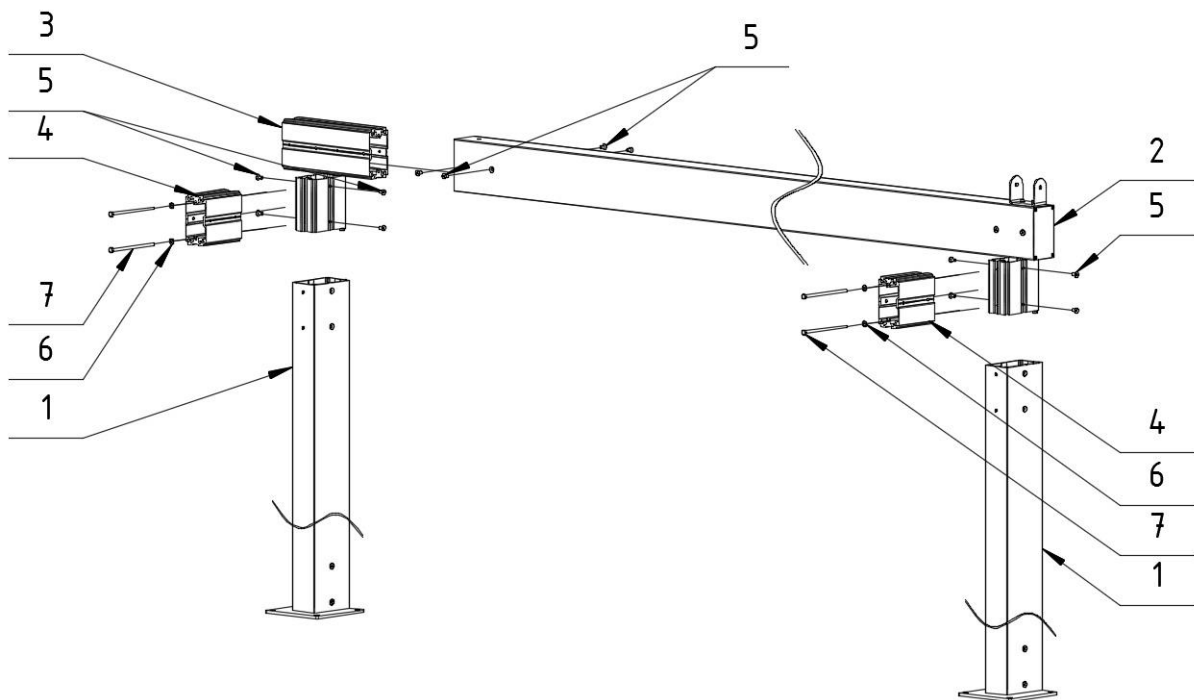


Fig. 23. Installation of Front beam of the first module. 1 – Lower post, 2 – Front beam (left/right), 3 – “Modular connection” Connector, 4 – Linear connector, 5 – M8x16 Screw, 6 – $\varnothing 8.4$ Washer, 7 – M8x180 Screw.

Next step is assembly of higher posts with rear beams of the first module. Put the rear beams into the linear connectors attached to the higher post (left/right) and fasten together, as shown in Fig. 24. Then connect the higher post (middle) with rear beam by sliding linear connector of higher post to the beam, and fasten.

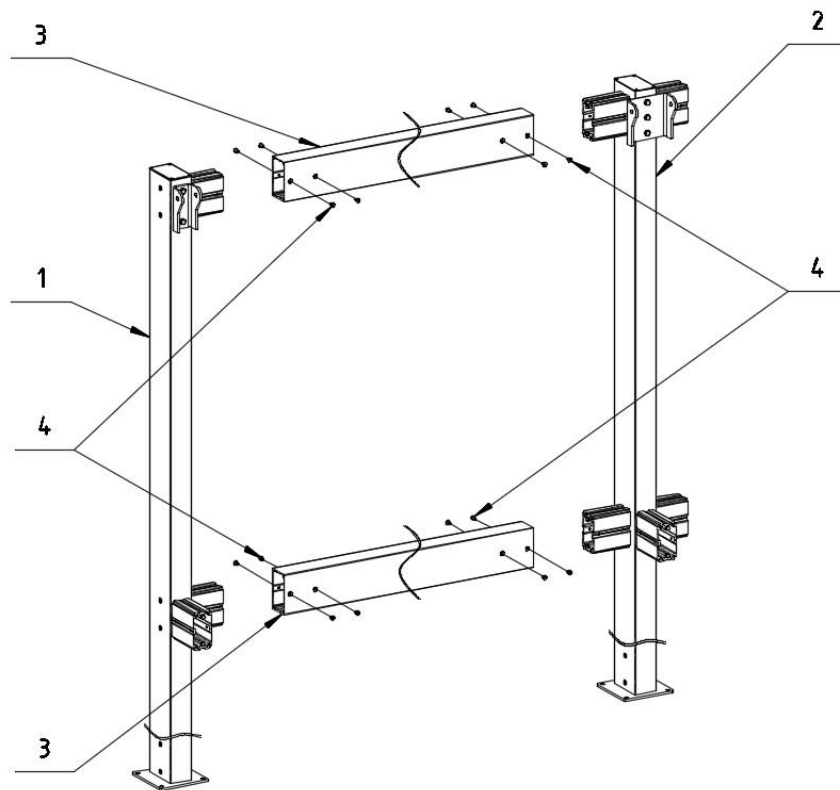


Fig. 24. Installation of Rear beam in the first module. 1 – Higher post (left/right), 2 – Higher post (middle), 3 – Rear beam, 4 – M8x16 Screw.

After assembling modules of Lower and Higher posts, put them in vertical position and secure against falling. Then to such prepared parts of construction fasten Side beams, placing them onto linear connectors and fastening with bolts, according to Fig 25. Connection of Lower post with Side beam should be sealed with transparent sealing compound.

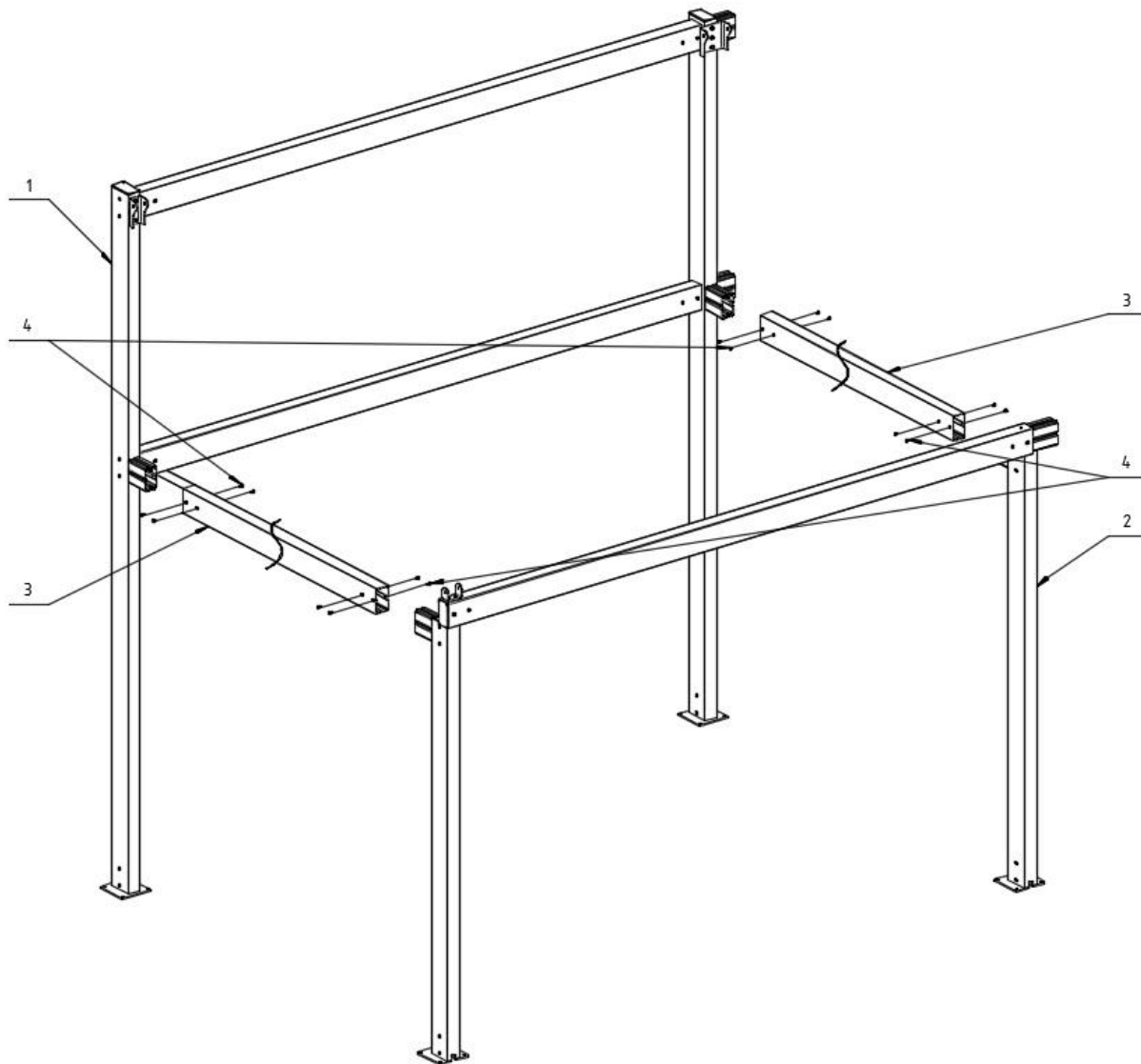


Fig. 25. Installation of Side beams in first module: 1 – Higher post module, 2 – Lower post module, 3 – Side beam, 4 – M8x16 Screw.

In the next step, pre-assemble the second module, which can occur in two types:

1. **Middle module** – module to which next modules or closing module will be added. Middle module consists of following components: Modular connector, Front beam (middle), Higher post (middle). Other components are common for both types of modules.
2. **Closing module** – installation of this module closes supporting structure. In this module there are following components used: Front beam (left/right), Higher post (left/right). Lower post is connected with front beam by linear connector attached to the front beam. Modular connector is not used in this case.

Installation of the module starts from sliding the Modular connector into the Front beam and connecting both components with bolts. Then, slide the the Lower post into Linear connector of the Modular connection and fasten both parts with bolts, as shown in Fig. 26.

ATTENTION In closing module the Front beam is connected with Lower post by Linear connector which is mounted directly to the Front beam, without using Modular connector. To such prepared section fasten linear connector to Lower post and put the section aside. Next, move to installation of rear beams. Put the rear beam into linear connector on the Higher post and fasten together. Connect the prepared section by Linear connector of the Higher post with Side beam and earlier prepared sections and fasten together, according to Fig. 27.

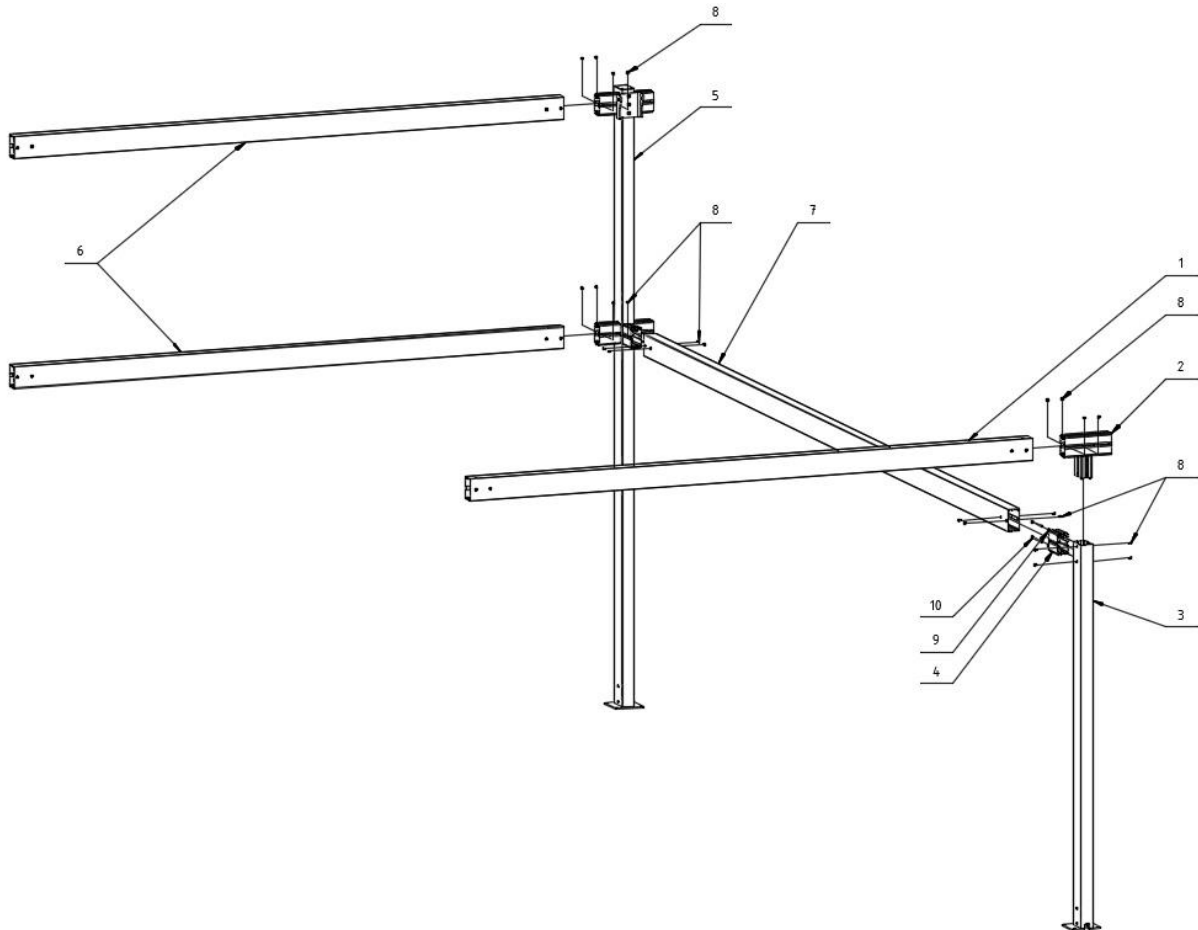


Fig. 26. Installation of next module (middle/closing module): 1 – Front beam (left/right) or Front beam (middle), 2 – “Modular connection” connector, 3 – Lower post, 4 – Linear connector, 5 – Higher post (left/right) or Higher post (middle), 6 – Rear beam, 7 – Side beam, 8 – M8x16 Screw, 9 – ø8.4 Washer, 10 – M8x180 Screw.

Connecting modules is shown in Fig. 27. On the connectors of the base module you should put earlier prepared Middle module or Closing module and fasten with bolts. Connection of Front beams should be sealed with transparent sealing compound. Next, over front beams connection fix the Modular bracket of the Modular guiding rail by the screws.

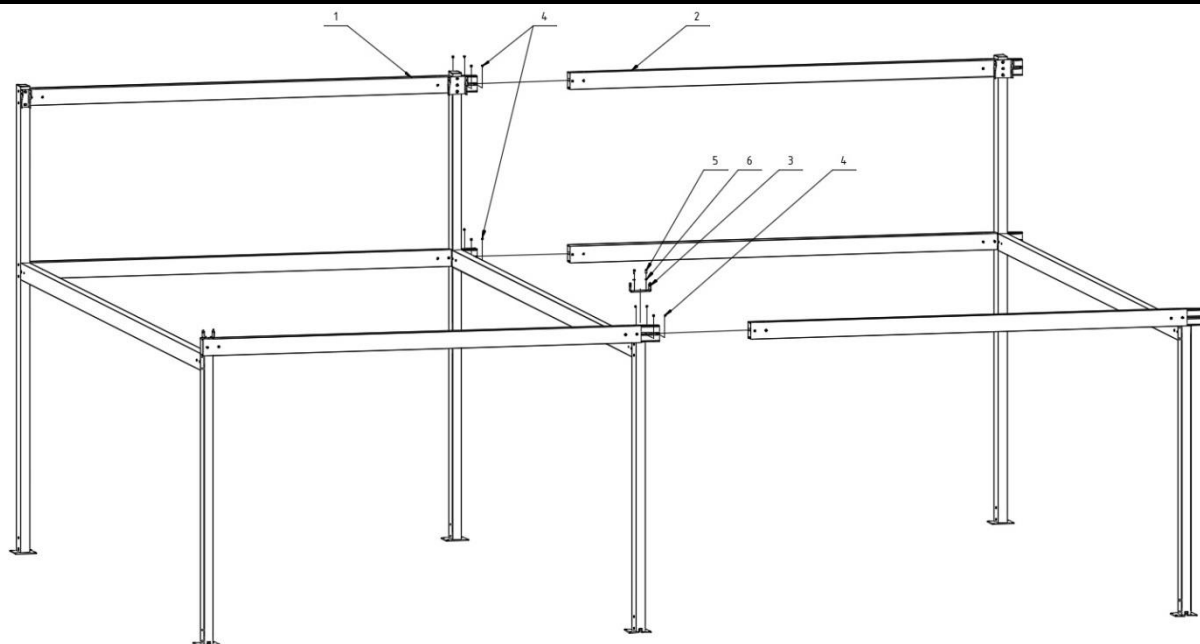


Fig. 27. Connecting modules: 1 – Base module, 2 – Middle module or closing module, 3 – Modular bracket of Modular guiding rail, 4 – M8x16 Screw, 5 – M10x20 Screw, 6 – ø10.5 Washer.

After installing modules of supporting structure, fix the gutters. Place the gutter on the Lower post and Side beam, as shown in Fig. 28. and fasten to the Front beam with self-drilling screws. Connections of gutter and supporting structure should be sealed with transparent sealing compound.

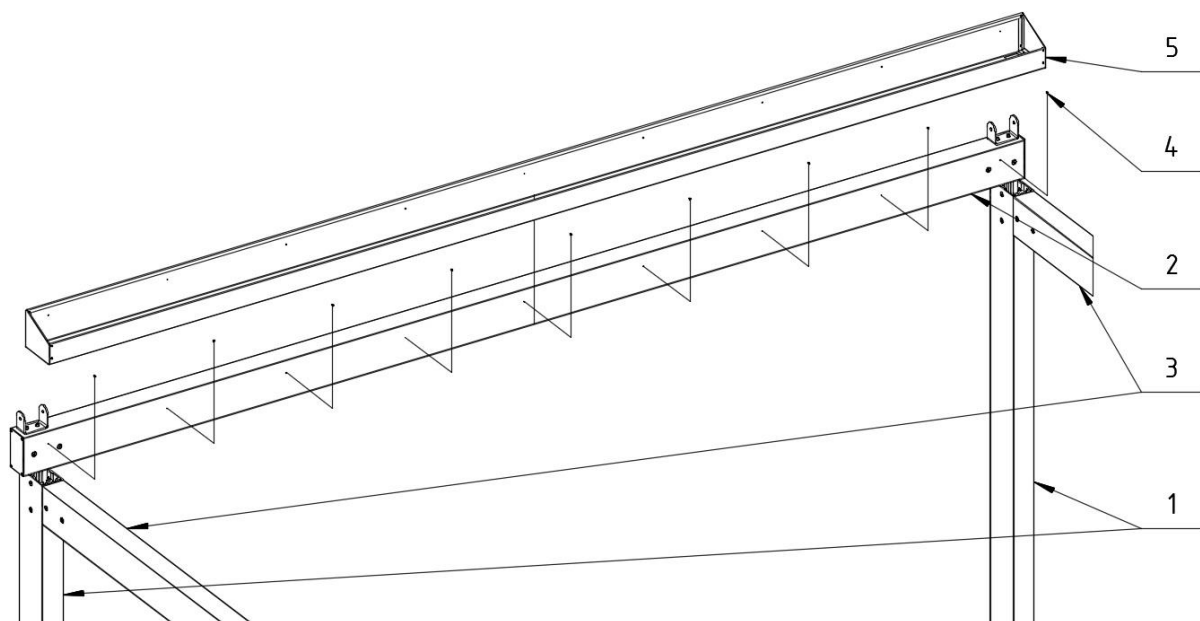
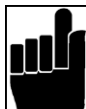


Fig. 28. Installation of Gutter: 1 – Lower post, 2 – Front beam, 3 – Side beam, 4 –St 2,9x6,5 Self-drilling screws, 5 – Gutter.

Assembled supporting structure should be permanently fastened to the base in the designated place by anchoring pergola's feet. That should be performed with use of mechanical anchors or equivalent solution, providing fully stable fastening of the construction. Appropriate anchors should be selected by authorized designer. To screw feet to the ground, we recommend bolts / anchors of 12 mm diameter.



Attention: Before anchoring the construction you must verify correct assembly of supporting structure by revisiting diagonals between the posts in all modules and if necessary adjusting the construction setting.

4.6.2.2. INSTALLATION OF GUIDING RAILS

Installation of single Guiding rail and modular Guiding rail is identical as for the single module, described in paragraph 4.6.1.2.

ATTENTION: For fastening modular Guiding rail use M14x220 screw instead of M14x120.

4.6.2.3. INSTALLATION OF STABILISING RAILS

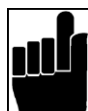
Stabilising rails are installed to the Guiding rails. Installation of Stabilising rails in particular modules is identical as in single module, described in paragraph 4.6.1.3.

4.6.2.4. INSTALLATION OF MOTOR

Before installing the motor, make sure all the middle carriages and leadig carriage are pressed to the first locking carriage (carriages in position of closed retractable module) in all modules.

Positioning of Toothed pulley must be identical in both Fastening plates of Guiding rail for one module, to ensure proper operation of the motor.

Installation of motor in each module should be carried the same way as in single module pergola, according to paragraph 4.6.1.4.



Attention: Make sure the square rod does not start the second toothed pulley in modular guiding rail. Clearance between the rods in Modular guiding rail mechanism should be 5±10 mm.

External openings in guiding rails should be secured with end cap.

4.6.2.5. INSTALLATION OF RETRACTABLE MODULE

Installation of each retractable modules is the same as in single module pergola, described in paragraph 4.6.1.5.

ATTENTION: For the convenience of mounting of each retractable module, set installed modules in closed position, so they don't obstruct installation of next module.

4.6.2.6. INSTALLATION OF PD COVER

Installation of covers for each module is identical as in single module pergola, described in paragraph 4.6.1.6.

4.6.2.7. FABRIC ADJUSTMENT

Any misalignment of fabric in the module is adjusted manually by loosening the screw that fastens first carriage of the module to the leading bar, then by setting the carriage in correct position and re-fastening the screw.

4.6.3. INSTALLATION OF SINGLE MODULE, WALL-MOUNTED PERGOLA.

4.6.3.1. INSTALLATION OF SUPPORTING STRUCTURE

Installation of supporting structure starts from assembling Front beam with Lower posts. Place Front beam with linear connector into Lower post and fasten together, as shown in Fig. 29. Over the prepared module, fix the gutter, as shown in Fig. 30. Connection of Lower post with Front beam and gutter should be sealed with transparent sealing compound.

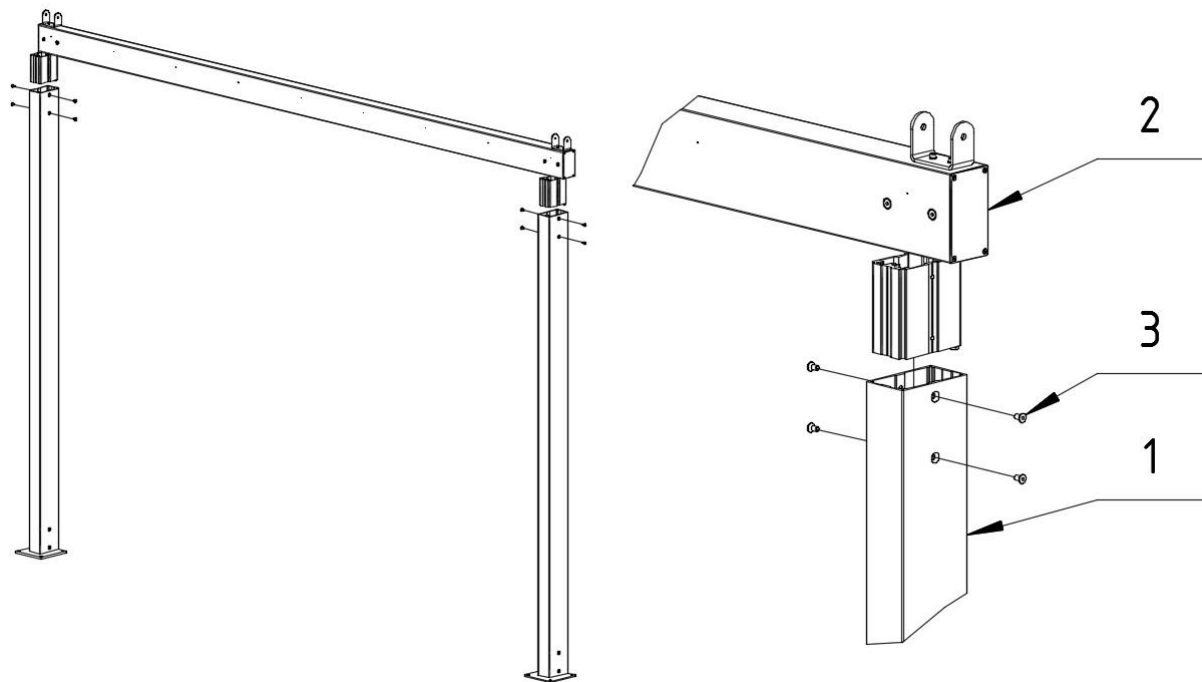


Fig. 29. Installation of Front beam: 1 – Lower post, 2 – Front beam, 3 – M8x16 Screw.

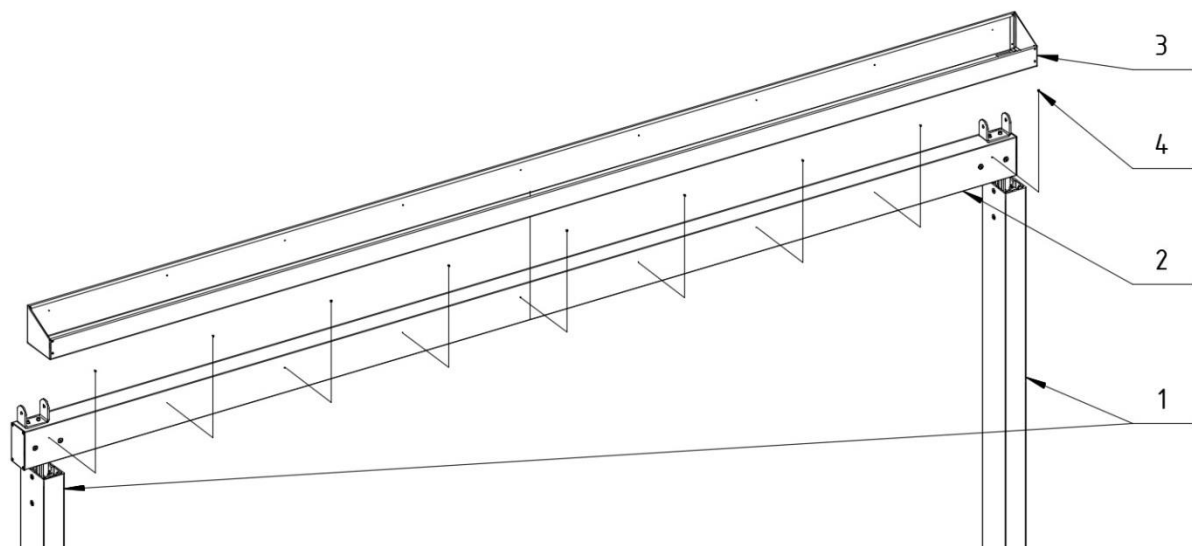


Fig. 30. Installation of Gutter: 1 – Lower post, 2 – Front beam, 3 – Gutter, 4 –St 2,9x6,5 Self-tapping screws.

Assembled supporting structure should be permanently fastened to the base in the designated place by anchoring pergola's feet. That should be performed with use of mechanical anchors or equivalent solution, providing fully stable fastening of the construction. Appropriate anchors should be selected by authorized designer. To screw feet to the ground, we recommend bolts / anchors of 12 mm diameter.



Attention: Before anchoring the construction you must verify correct assembly of supporting structure by revisiting diagonals between the posts and points of installation of guiding rails. If necessary adjust the construction setting.

4.6.3.2. INSTALLATION OF GUIDING RAILS

Installation of guiding rails starts from fastening of the Wall brackets to the façade (wall) on desired height and in the same axis as Lower post, according to Fig. 31.



Attention: Wall brackets must be anchored directly to the supporting structure of the façade (wall). Appropriate anchors should be selected by authorized designer. For fastening of the Wall brackets to the wall we recommend bolts / anchors of 10 mm diameter.

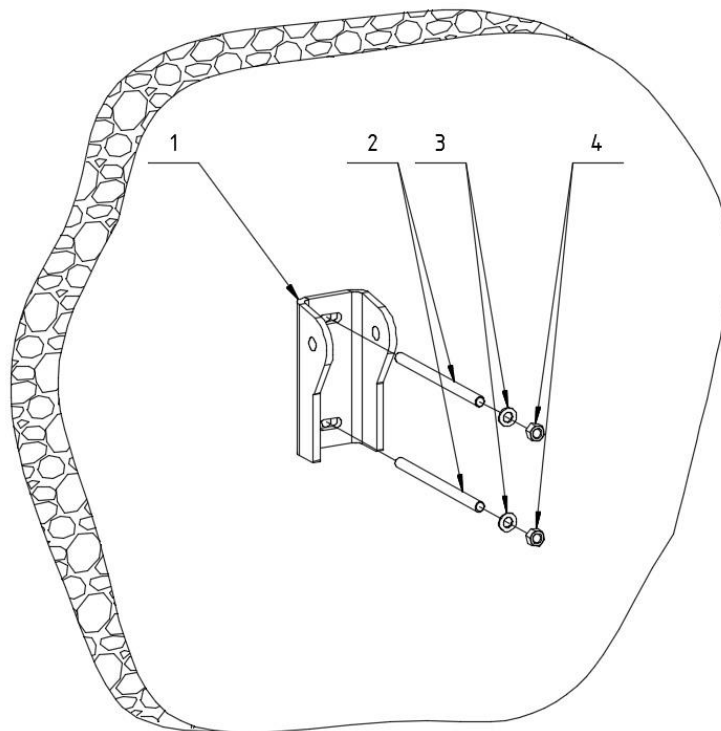


Fig. 31. Installation of wall bracket: 1 – Wall bracket, 2 – Anchor (fastening part), 3 – Washer, 4 – Nut.

Fix the Guiding rail to the bracket placed on the supporting structure and to wall bracket, according to Fig. 32 and 33. Use M14x120 and M10x20 bolts to fasten the guiding rails through its moving pads to the wall brackets. Repeat the installation for second Guiding rail. Having Guiding rails installed, fasten Gaskets of the Retractable module to them, according to Fig. 12 (page 21).

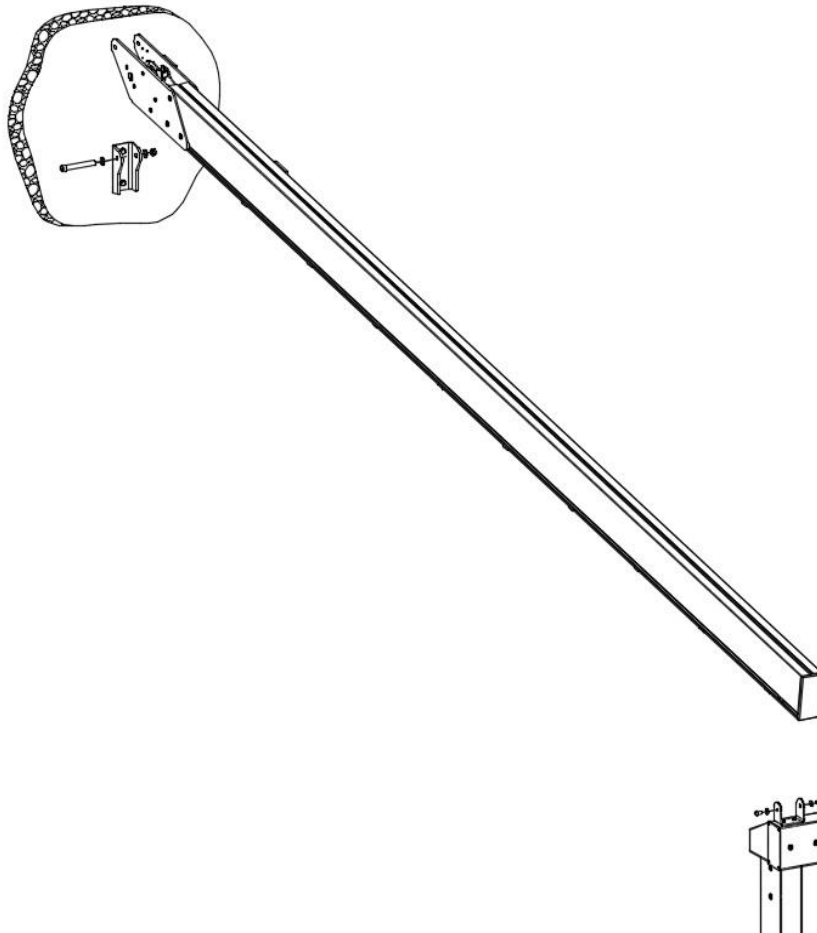


Fig. 32. Installation of Guiding rail.

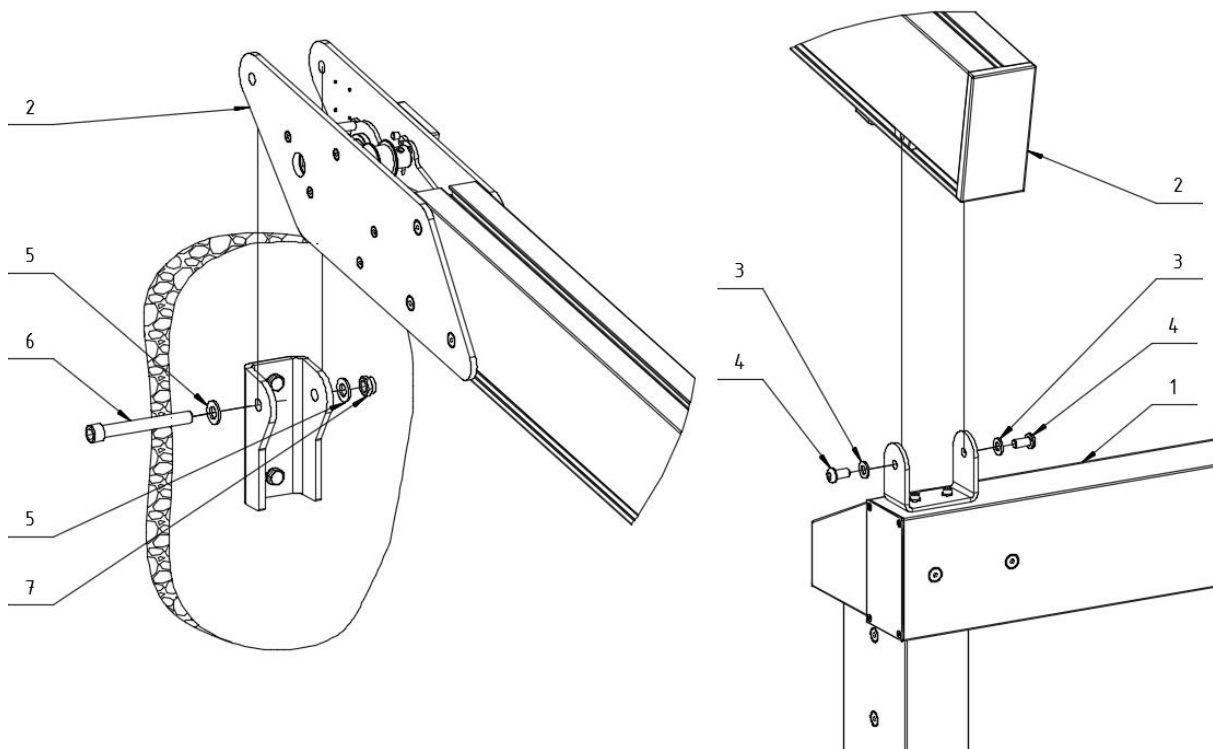


Fig. 33. Installation of Guiding rail: 1 – Supporting structure, 2 – Guiding rail, 3 – $\varnothing 10,5$ Washer, 4 – M10x20 Bolt, 5 – $\varnothing 15$ Washer, 6 – M14x120 Bolt, 7 - M14 Nut.

4.6.3.3. INSTALLATION OF STABILISING RAILS

Install the Stabilising rails according to paragraph 4.6.1.3.

4.6.3.4. INSTALLATION OF MOTOR

Install the motor according to paragraph 4.6.1.4.

4.6.3.5. INSTALLATION OF RETRACTABLE MODULE

Install the retractable module according to paragraph 4.6.1.5.

4.6.3.6. INSTALLATION OF PD COVER

Install the PD Cover according to paragraph 4.6.1.6.

4.6.3.7. FABRIC ADJUSTMENT

Adjust the fabric according to paragraph 4.6.1.7.

4.6.4. INSTALLATION OF WALL-MOUNTED, MULTI-MODULAR PERGOLA

4.6.4.1. INSTALLATION OF SUPPORTING STRUCTURE

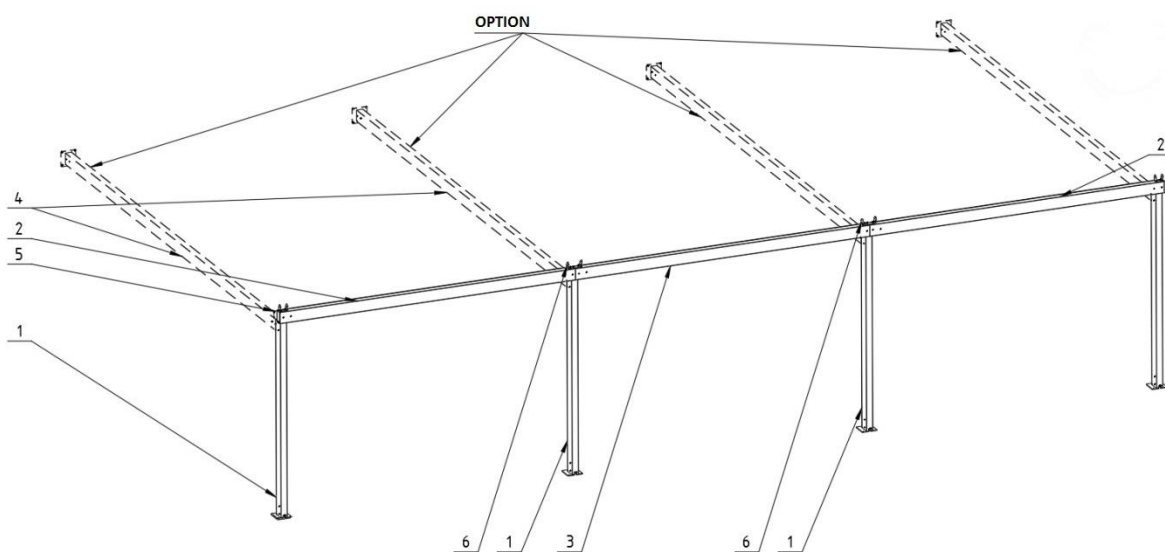


Fig. 34. Supporting structure in wall-mounted, multi-modular pergola: 1 – Lower post, 2 – Front beam (right, left), 3 – Front beam (middle), 4 – Side beam, 5 – Gutter, 6 – Bracket of modular guiding rail.

Installation of supporting structure starts from assembling front beam (left/right) with lower posts that form the first module. In the front beam (left or right) place the connector “Modular connection” and fasten it to the front beam, according to Fig. 35. Then put the lower posts on the connectors and fasten. **Attention:** In case of optional mounting of side beams, fix the linear connector to the lower post as shown in Fig. 35. Connection of lower post with front beam should be sealed with transparent sealing compound. Assembled section put aside for further installation.

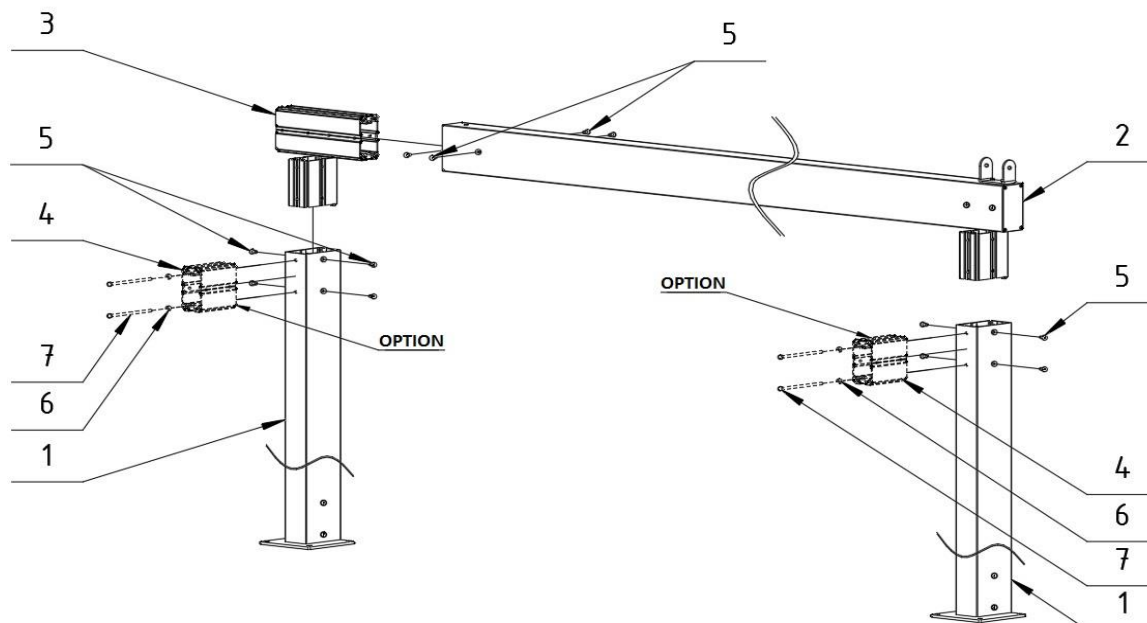


Fig. 35. Installation of Front beam of the first module. 1 – Lower post, 2 – Front beam (left/right), 3 – “Modular connection” Connector, 4 – Linear connector (option), 5 – M8x16 Screw, 6 – ø8.4 Washer (option), 7 – M8x180 Screw (option).

In case of installation without Side beams, module of Higher post should be put in vertical position in the place of anchoring and secured against falling.

In case of installation with the optional Side beams, after assembling modules of Lower and Higher posts, put them in vertical position and secure against falling. Then to such prepared parts of construction fasten Side beams, placing them onto linear connectors and fastening with bolts, according to Fig. 36. Then, install the Rear foot at the end of Side beam by fastening it with bolts. Connection of Lower post with Side beam should be sealed with transparent sealing compound.

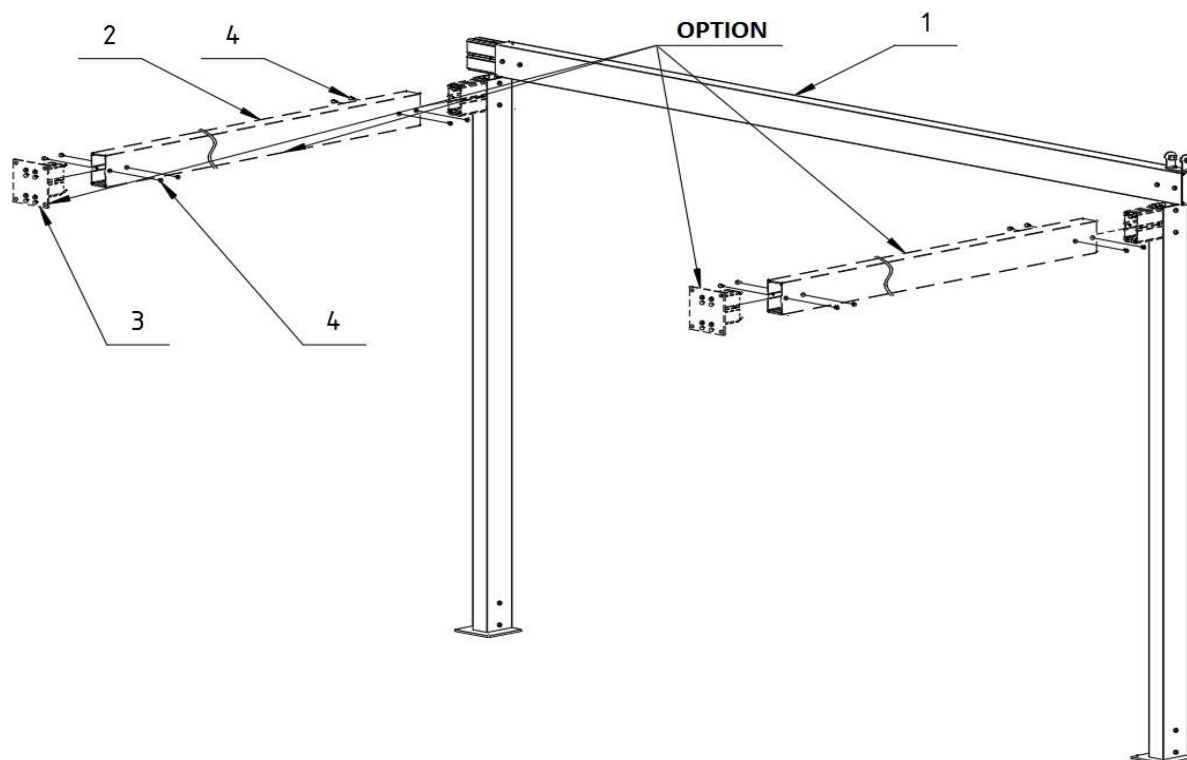
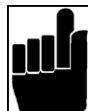


Fig. 36. Installation of Side beams in first module: 1 – Higher post module, 2 – Side beam, 3 – Rear foot (option), 4 – M8x16 Screw (option).

Assembled supporting structure of the first module should be permanently fastened to the base / facade (supporting structure of the wall) in the designated place by anchoring Lower post's and Side beam's feet. That should be performed with use of mechanical anchors or equivalent solution, providing fully stable fastening of the construction. Appropriate anchors should be selected by authorized designer. To screw feet to the ground, we recommend bolts / anchors of 12 mm diameter.



Attention: Before anchoring the construction you must verify correct assembly of supporting structure by revisiting diagonals between the posts and also between the Guiding rail's assembly points and the mounting of Side beams if they occur, and if necessary adjusting the construction setting.

In the next step, pre-assemble the second module, which can occur in two types:

1. **Middle module** – module to which next middle modules or closing module will be added. Middle module consists of following components: Modular connector, Front beam (middle), Lower post. Linear connector, Side beam and Rear foot occur only as an option.
2. **Closing module** – installation of this module closes supporting structure. In this module there are following components used: Front beam (left/right), Lower post. Lower post is connected with front beam by linear connector attached to the front beam. Modular connector is not used in this case. Linear connector, Side beam and Rear foot occur only as an option.

Installation of the module starts from sliding the Modular connector into the Front beam (middle) and connecting both components with bolts. Then, slide the the Lower post into Linear connector of the Modular connection and fasten both parts, as shown in Fig. 37.

ATTENTION In closing module the Front beam is connected with Lower post by Linear connector which is mounted directly to the Front beam, without using Modular connector. **ATTENTION** In case of installation with optional Side beam, fasten linear connector to Lower post, as shown in Fig. 37. Then put the Side beam together with the rear foot on the Lower post's linear connector and fasten with bolts, as shown in Fig. 37.

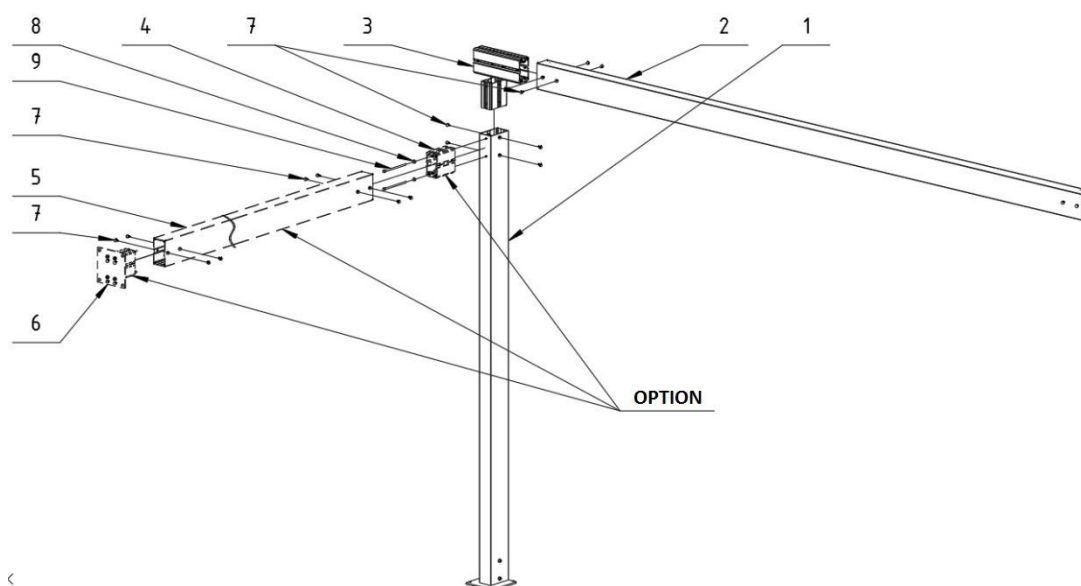


Fig. 37. Installation of next module (middle/closing module): 1 – Lower post, 2 – Front beam (left/right) or Front beam (middle), 3 – “Modular connection” connector, 4 – Linear connector (option), 5 – Side beam (option), 6 – Rear foot (option), 7 – M8x16 Screw, 8 – $\varnothing 8.4$ Washer (option), 9 – M8x180 Screw (option).

Connecting modules is shown in Fig. 38. On the connectors of the base module you should put earlier prepared Middle module or Closing module and fasten with bolts. Connection of Front beams should be sealed with transparent sealing compound. Next, over front beams connection fix the Modular bracket of the Modular guiding rail by the screws.

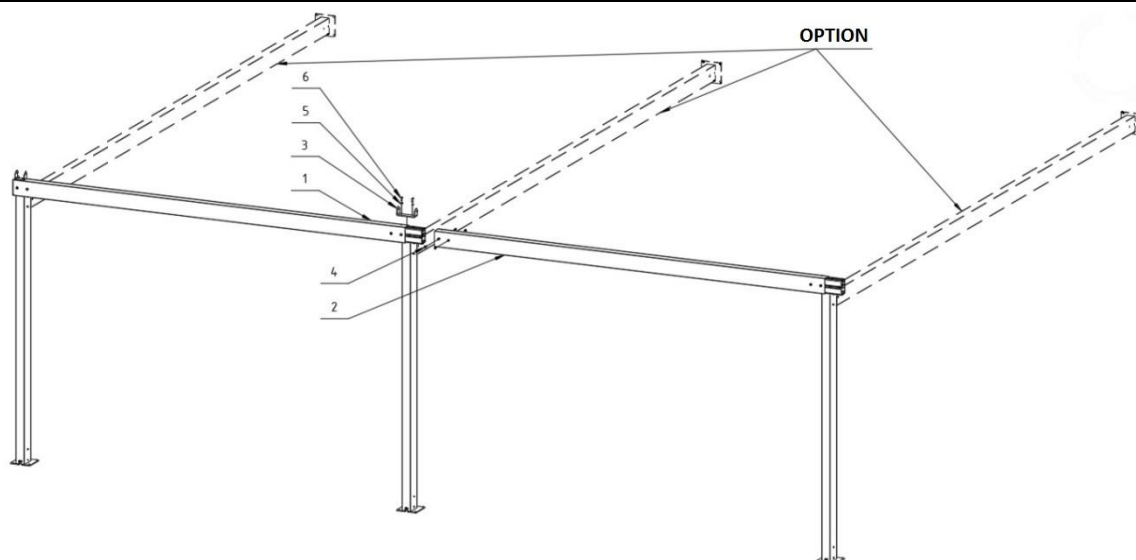


Fig. 38. Connecting modules: 1 – Base module, 2 – Middle module or closing module, 3 – Modular bracket of Modular guiding rail, 4 – M8x16 Screw, 5 – ø10.5 Washer, 6 – M10x20 Screw.

After installing modules of supporting structure, fix the gutters. Place the gutter on the Lower post (and Side beam if it occurs – option) as shown in Fig. 39. and then fasten to the Front beam with self-drilling screws. Connections of gutter and supporting structure should be sealed with transparent sealing compound.

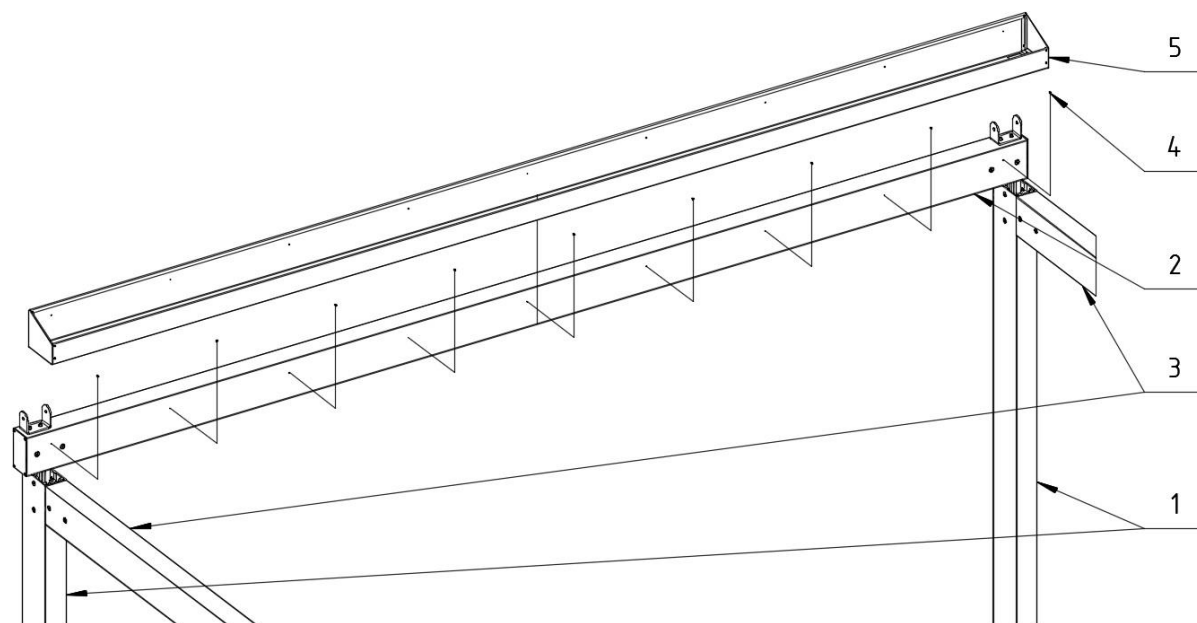
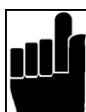


Fig. 39. Installation of Gutter: 1 – Lower post, 2 – Front beam, 3 – Side beam (option), 4 – St 2,9x6,5 Self-drilling screws, 5 – Gutter.

Assembled supporting structure should be permanently fastened to the base in the designated place by anchoring pergola's feet. That should be performed with use of mechanical anchors or equivalent solution, providing fully stable fastening of the construction. ATTENTION In case of installation with optional Side beam, Rear feet should be anchored to the wall's structural element. Appropriate anchors should be selected by authorized designer. To screw feet to the ground, we recommend bolts / anchors of 12 mm diameter.



Attention: Before anchoring the construction you must verify correct assembly of supporting structure by revisiting diagonals between the posts and also between the Guiding rail's assembly points and the mounting of Side beams if they occur, and if necessary adjusting the construction setting.

4.6.4.2. INSTALLATION OF GUIDING RAILS

Installation of Guiding rails starts from fastening of the Wall brackets to the façade (wall) on desired height and in the same axis as Lower post, according to Fig. 40.



Attention: Wall brackets must be anchored directly to the supporting structure of the façade (wall). Appropriate anchors should be always selected by authorized designer. For fastening of the Wall brackets to the wall we recommend bolts / anchors of 10 mm diameter.

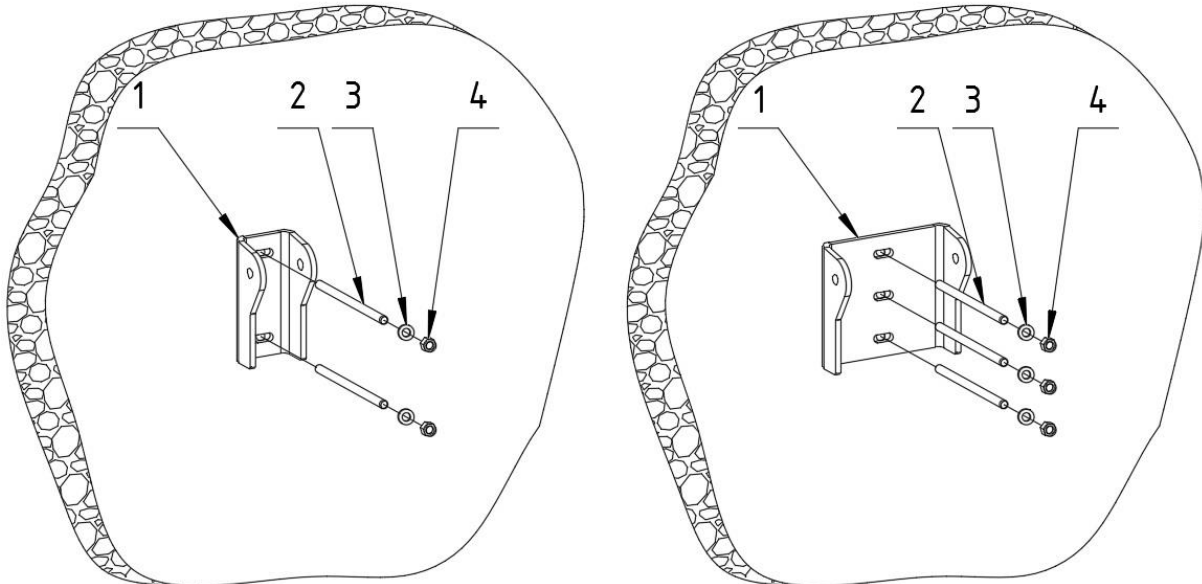


Fig. 40. Installation of wall bracket (left – bracket of single guiding rail, right - bracket of modular guiding rail): 1 – Wall bracket (single/modular), 2 – Anchor (fastening part), 3 – Washer, 4 – Nut.

Fix the Guiding rail to the bracket placed on the supporting structure and to wall bracket, according to Fig. 41 and 42. Use M14x120 bolts to fasten the single guiding rail. Modular guiding rail is fastened by M14x220 bolts. Then use M10x20 screws to fasten the wall brackets to Guiding rail through its moving pads. Repeat the installation for second Guiding rail. Having Guiding rails installed, fasten Gaskets of the Retractable module to them, according to Fig. 12 (page 21).

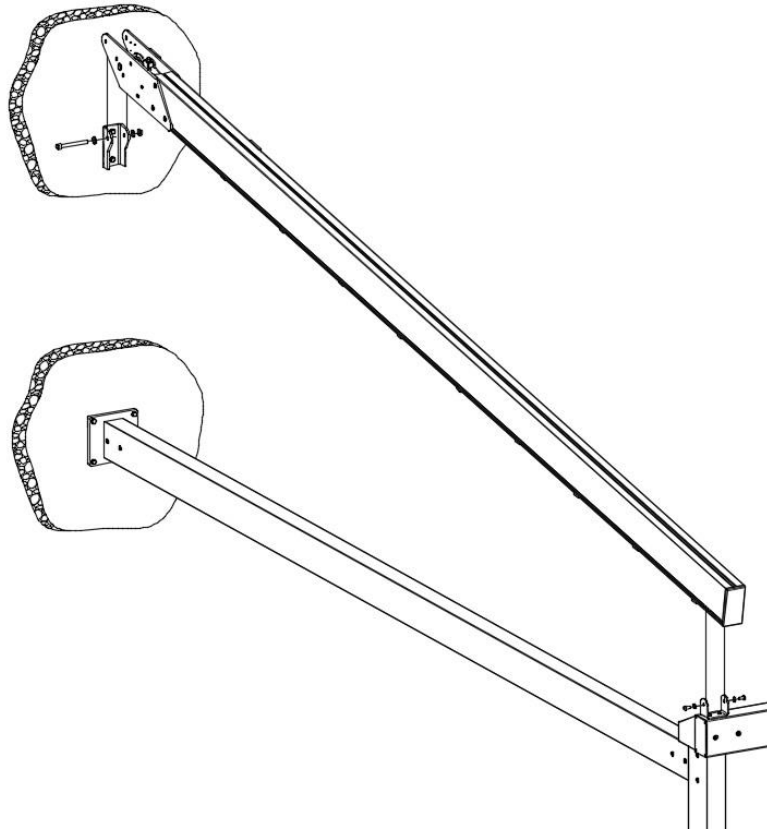


Fig. 41. Installation of Guiding rail.

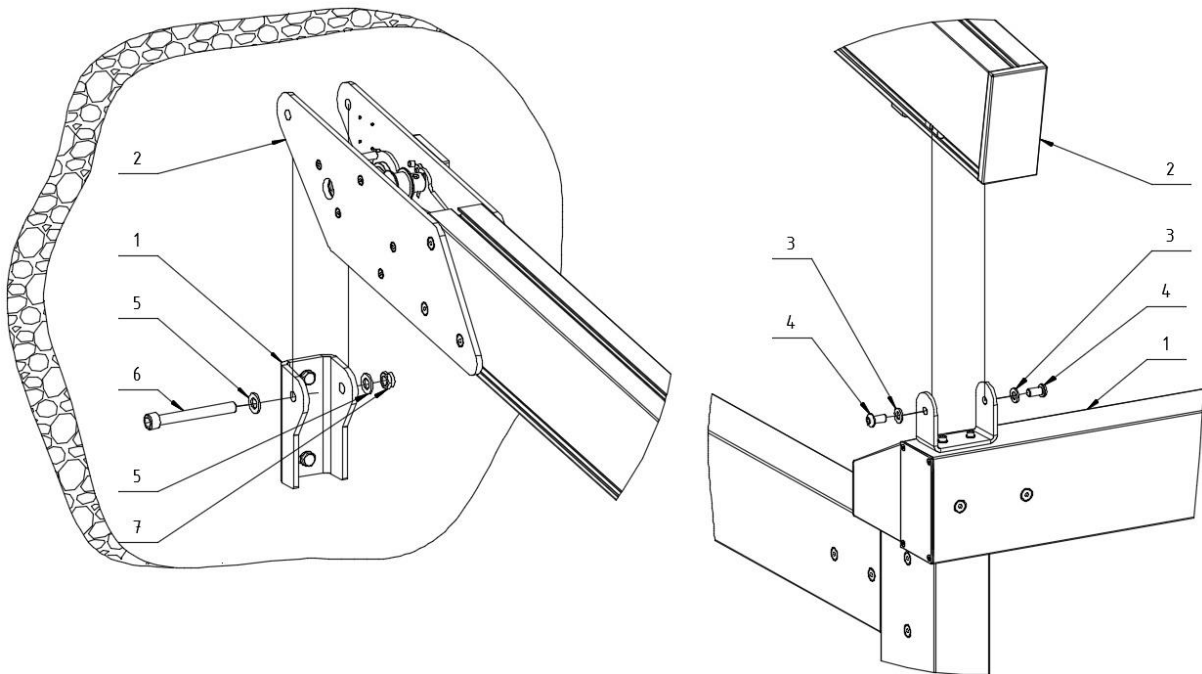


Fig. 42. Installation of Guiding rail: 1 – Supporting structure, 2 – Guiding rail, 3 – $\varnothing 10,5$ Washer, 4 – M10x20 Bolt, 5 – $\varnothing 15$ Washer, 6 – M14x120 /M14x220 Bolt, 7 - M14 Nut.

4.6.4.3. INSTALLATION OF STABILISING RAILS

Install the Stabilising rails according to paragrah 4.6.1.3.

4.6.4.4. INSTALLATION OF MOTOR

Install the motor according to paragraph 4.6.1.4.

4.6.4.5. INSTALLATION OF RETRACTABLE MODULE

Install the retractable module according to paragraph 4.6.1.5.

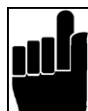
4.6.4.6. INSTALLATION OF PD COVER

Install the PD Cover according to paragraph 4.6.1.6.

4.6.4.7. FABRIC ADJUSTMENT

Adjust the fabric according to paragraph 4.6.1.7.

5. SYSTEM OPERATION AND PRODUCT SAFETY



Product can be used only when it is defect-free.

5.1. GENERAL SAFETY REQUIREMENTS

- In order to assure proper functioning of the product, SELT Sp. z o.o. forbids introducing any structural changes. Failure to observe the above releases the manufacturer from responsibility for the product and the warranty is made void.
- During product transport, assembly and disassembly, operation, care and maintenance, suitable regulations of industrial safety and environmental protection should be observed,
- The product should be maintained and repaired solely by the trained and suitably qualified personnel,
- The Buyer should make sure that people assigned for carrying out activities connected with current use, cleanness and maintenance of the product should be familiar with its operating manual and observe the guidelines in all points of this manual,
- Cleaning the product in a way different from the one described further in this document is forbidden,
- All work must be carried out with due diligence taking into account safety requirements,
- Maintenance work and product repairs should be carried out only when the product is disconnected from the power source,
- Markings on the product should be observed (e.g. icons, arrows denoting the direction of motion),
- Make sure that markings are not covered with a layer of paint or damaged in a way making it impossible to read them,
- It is recommended that the electrical design modification or change of equipment configuration be consulted with SELT Sp. z o.o.
- The switch should be mounted at the height conforming to the national regulations concerning disabled persons, not lower than 130cm at best.

5.2. SAFETY REQUIREMENTS CONNECTED WITH PARTICULAR CONDITIONS AND PLACES OF PRODUCT USE

Particular safety requirements refer to children at the age of up to 42 months. Particular requirements for use apply to all places accessible to little children or places where they spend time such as, e.g. houses, children's homes, hospitals, churches, shops, nurseries, public places and other places whose primary destination has been changed and thus children can stay there. Particular requirements for use apply also to all these places where disabled persons spend time.



Prior to beginning to use the product, the Buyer must carry out individual risk assessment of its use with particular attention paid to the safety of children and disabled persons.

While determining product operational requirements, it is essential to take into consideration rationally predictable conditions of use and potential threats.



Do not allow children to play with the control appliances of the screen.

Keep the remote control out of the reach of children.



Control the installation frequently for signs of wear of damage to electrical cables. Do not use if repair is necessary.

5.3. OPERATION SAFETY

Recommendations and actions:

- the product is safe for use as long as the recommendations included in the documentation are observed,
- It is forbidden to use a product not conforming to the electric shock and fire safety requirements,
- the remote control appliances should be kept out of the reach of children,
- It is forbidden to use the product if it has a technological fault and conduct self-repairs,
- It is forbidden to exceed specific work parameters of the product determined in the technical and operational documentation,
- work time of the motor is specifically defined and cannot exceed 4 or 6 minutes (depending on the motor type, specific information available at manufacturer's website or www.selt.com), exceeding the determined work time may cause its permanent damage,
- it is forbidden to use faulty or incomplete product (e.g. without a switch, etc.), using such product may result in its damage, pose threat to user's health and life and void the warranty,
- it is forbidden to take off the casings of the drive system and electric motor,
- no sharp objects or protruding elements can be kept near casings, which can catch the front bar or fabric and damage them,
- all work connected with inspections and repairs of the product should be carried out by a properly trained person holding adequate qualifications,
- it is forbidden to use the product and the electric system without valid and required technical inspections and measurements,
- no repair or maintenance activities can be carried out before disconnecting the product from the electrical installation,
- disconnect the product from electrical installation before commencing any work on the building facade, not connected with the maintenance of the product,
- in case the product is run from beyond the reach of sight, the user should undertake organizational measures preventing the fabric to be run during conducted in the neighbourhood maintenance work (for e.g. by placing a note on the remote saying "Note maintenance work. Do not run.", removing the battery from remote control or switch),
- pay attention to all signs of wear or damage of the electrical cables,
- in case signs of wear or damage to electrical cables are found, the product must not be used, the fault should be reported to an authorized person or SELT service immediately,
- entering and staying within the working area of the movable roof should take place only when it is completely opened and stopped,
- while folding and unfolding the product, attention should be paid that no objects or people are present within the product work area (in the space between the guides and front bar),
- wet fabric should not be rolled up due to the possibility of water running down on sides,

- avoid contact of the movable roof with warm objects (e.g. heaters, ovens, irons, chimneys etc.) or placing underneath the source of convective heat (e.g. ovens, cookers, grills, etc.), since it can cause damage of the movable roof fabric.



Do not use the product in case of strong winds, during snow falls, freezing rain. The product might be destroyed or damaged and create danger to people nearby. It is recommended to use weather automatics to fulfill safety requirements.

In case any irregularities in product operation are found, SELT Sp. z o.o. service should be informed immediately. Using a damaged product and attempts to repair it on one's own pose threat to health and life and may void the warranty.

5.4. CONNECTION TO POWER SUPPLY

After Solid Pergola is installed one may proceed to connecting the drive and control system to the previously prepared systems: power supply and control systems. Connection to the power supply system should be made in accordance with the previously elaborated individual electric diagram, including fire protection regulations.

Electrical connection has to take into account the environmental conditions in which the system will be used and recommendations contained in the motor manual.

Regular environmental conditions:

- Offices and houses, event and theatre halls, school rooms (with the exception of some laboratories), etc.

Environmental conditions of increased threat:

- bathrooms and showers, kitchens, garages, cellars, saunas, rooms for domestic animals, operating theatres in hospitals, pump rooms, heat exchange rooms, spaces limited by conducting areas, campsites, open spaces, etc. are regarded as environments with increased threat conditions..

In rooms and spaces where there are increased threat conditions, automatic devices for switching off power supply to the damaged product should be used, e.g. residual current devices.

Residual current devices:

- recommended to be used in bathrooms, kitchens, garages and cellars,
- to be used obligatory at swimming and shower pools, saunas, construction sites, while supplying appliances in open spaces, on agricultural and horticultural farms, on campsites and in camper vans, as well as in rooms where there is fire hazard.

Residual current devices are only supplementary protection from direct contact, they cannot be the only means of protection. Their task is to supplement the protection in case of user's imprudence or when other means of protection from direct contact fail.

During connection observe safe use regulations, e.g. minimum height on which electrical accessories can be installed.

General guidelines of safe connection:

- the connection must be done by a qualified and experienced electrician,
- during connection safety regulations should be observed,
- electrical connection and motor setting should be done according to the manufacturer's manual delivered with the product / available on website given below.

Instructions and connection diagrams are available on website:

www.selt.com → PRODUCTS → AUTOMATION

as well as on the websites of manufacturers: www.somfy.com, www.elero.com, www.geiger-antriebstechnik.com



Incorrect connection of the motor can lead to product damage or create a hazardous situation.

5.5. SYSTEM OPERATION

Programming of the electric control devices (assigning remote controls, weather sensors and others) should be conducted according to the electric control manufacturer's manual.

Programming manual, depending on the system applied, are available on the website:

www.selt.com → PRODUCTS → AUTOMATION

As well as on the manufacturer's websites: www.somfy.com, www.elero.com, www.geiger-antriebstechnik.com

5.6. START-UP AND ADJUSTMENT

Recommendations and actions:

- extreme position (up and down movement of the blind) are protected by limit switches that need to be adjusted during the installation,
- the person conducting extreme positions regulation should be a qualified electrician, possess the knowledge and experience,
- adjustment of limit switches must be done in accordance with motor's maintenance manual,
- prior to first start-up of the system, electrical measurements should be performed by a qualified electrician,
- do not start the motor without checking the correctness of system installation,
- after the product is put into motion do not lean on the product nor leave any objects on it,
- after each re-assembly in a new place the product and electrical installation earth circuit should be checked.

When the product starts working attention should be paid to:

- correct and paralel rolling up and down of the fabric and movable roof beams.
- Correct activation of limit switches



Self-regulation of the end positions by an unqualified person may lead to product damage.

5.7. IMPROPER PRODUCT USE

System operation – forbidden activities

- In case a fault appears, it is recommended to stop using the product,
- The product supplier / fitter should be notified about the fault,
- In case signs of wear or damage to electrical cables appear, using the product should be stopped and the direct supplier should be notified immediately,
- Stay clear of the work area of the Solid Pergola while the system is working,
- It is forbidden to use faulty or incomplete product. Using such product may result in its damage, pose threat to user's health and life and void the warranty,
- It is forbidden to use a product not conforming to the electric shock and fire safety requirements,
- It is forbidden to exceed specific work parameters of the product determined in the technical and operational documentation,
- No sharp objects or protruding elements can be kept near the system, which can catch the bars or other elements of the system and scratch them.

System operators

- Do not allow children to play with the elements used for product operation, e.g. the remote control or the switch,
- Keep the remote control out of the reach of children.

Work space of Solid Pergola: risk of crushing, cutting or pulling in

- Do not touch the movable elements while folding or unfolding the movable roof. It may result in crushing, cutting, pulling in, or blocking between, e.g. the roof bar and the other structural elements of the system,
- Within the work space of the movable roof there should be no obstacles that might interrupt its work or damage it,
- In case the roof enters an obstacle, first it should be folded slightly and then the obstacle should be removed,
- Stay clear of the work area of the system while it is working.

Centrally controlled products can activate automatically. Make sure no dangerous situation arises.

6. SYSTEM USE AND MAINTENANCE**6.1. USING THE PRODUCT IN ACCORDANCE WITH ITS INTENDED USE**

The product should be used in accordance with its intended use determined by the manufacturer. If the product is used and modified in a manner different from the one described within this documentation, the product manufacturer has a right to refuse to admit warranty claims.

SOLID Pergolas manufactured by SELT Sp. z o.o. do not require special maintenance treatment. Using the product in accordance with the manufacturer's recommendations assures the user long-term and fault-free operation.

Should the product be used in a manner different from the one described within this documentation or modified without SELT Sp. z o.o. authorization, it is treated as improper product use.

Introducing arbitrary changes that may influence the safety of product use is strictly forbidden.

The following counts as proper product use:

- regular or predictable use which does not include, e.g. risk undertaken deliberately or consciously by the user,
- applying admissible values of work parameters,
- observing recommendations for use,
- carrying out periodic product inspections and maintenance,
- following the requirements determined in the item 'Supervision of Safe Product Use',
- data included in the item 'Technical Specifications'.



In case of improper use:

- the product can pose threat to its operators,
- the product shall be exposed to damage,
- it can be of negative influence on its functionality,
- do not use the product in the course of maintenance work

SELT Sp. z o.o. shall not be responsible for damage due to improper.



Operating the system out of one's sight can result in heavy injuries as well as system damage

6.2. INSTRUCTIONS FOR NON-PROFESSIONALS

Non-professionals shall denote people who are assigned by the Buyer to carry out activities connected with routine use, cleanness and maintenance of the product.

Prior to beginning to use the product this documentation should be carefully read.

Being familiar with this documentation guarantees fault-free operation of the product.

List of activities that can be carried out by non-professionals:

- routine operation:
 - carrying out activities which do not influence work parameters of the product,
 - switching on and off by pressing control buttons,
- product maintenance and cleanness described in the further part of this documentation.

6.3. TECHNICAL INSPECTIONS, MAINTENANCE AND REPAIRS

Due to the user safety and maximum long and proper functioning of all mechanisms, the product should undergo periodic technical inspections at least every 12 months.

- It is recommended that the periodic technical inspections be carried out by SELT Sp. z o.o. service crew.
- The inspections are provided against payment.
- The inspections consist in checking product operation, mechanism adjustment, and exchange of wear parts.

6.4.1. BASIC ACTIVITIES CARRIED OUT DURING A PERIODIC INSPECTION

- checking the product mounting to the structural elements,
- checking the technical condition of the movable elements of the product,
- lubricating drive elements given in the technical and operational documentation,
- checking the condition of electrical cables and inspection of their connection to the electrical system,
- checking the tensioning force of tensioners, transmission tape and their correction if necessary,
- checking screw and rivet connections,
- checking the technical condition of the movable roof, guides and seals,
- checking the mounting of the product drive mechanism (motor),
- possibly adjusting and improving the mounting of the changed sub-assemblies,
- checking the effectiveness of operation of the residual current device,
- checking the patency of drainage elements.

6.4.2. REMARKS CONCERNING ROUTINE MAINTENANCE

Routine maintenance is carried out by the User themselves.

Product maintenance should be performed at least once (1) a year. Check the patency of drainage system once a week and each time after intensive rain.

In case Solid Pergola is installed in a wooded area and increased pollution check the patency of drainage system and cleanness of the movable roof on a daily basis.

Maintenance of the visible (accessible) product elements consists in, first of all, keeping them clean, which significantly prolongs their lifetime. This work is carried out by the User themselves.

Basic product maintenance activities are:

- checking if the movable roof unfolds and folds properly,
- checking if the end switches work properly,
- cleaning visible, accessible product elements (in particular running track of the carriages, front gutter, fixed roof area, rain water outlets in front posts).

Cleaning metal / aluminum elements:

- It is recommended to clean slight dirt of metal / aluminum surfaces with the use of water with delicate cleaning agents.

Movable roof (fabric) cleaning:

- It's recommended to clean dirt with delicate brushing or hoovering the fabric surface,
- Occasional cleaning with clean water or delicate water and soap dilution (max. Water temperature 30°C), after dilution usage rinse with clean water,
- before rolling the fabric up it should be dried completely,
- do not use for fabric cleaning any solvents or strong detergents,
- do not wash fabrics.

During control or maintenance of the electrical devices the fabric should be safely disconnected from the power source.

Damaging the system by improper routine maintenance.

- It is not allowed to use a pressure washer, cleaning agents, sponges or solvents, e.g. alcohol or petrol
- It is forbidden to use cleaning agents with the addition of chlorine, ammonia, kerosene, acetone, and bleachers in order to clean the system, as well as in its proximity as it may cause the risk of corrosion.
- It is forbidden to use sharp tools (e.g. wire brushes), scratching cleaning agents (e.g. scouring powders, polish).
- Do not hold or pull the product or its individual elements tight,
- Do not put additional weight on the hood.
- Do not allow the movable roof to be covered by snow – it should be rolled up during winter time,
- Do not run the system during frost or ice – it can cause damage of the drive mechanism and roof carriages,
- Lack of routine unblocking of the drainage system in front posts may lead to their damage in winter time, due to resting water freezing.
- Do not replace individual elements. Spare parts should be original.
- System test run should be performed. Attention should be paid to the system work and in case of occurrence of irregular behaviour or sound, the direct supplier should be notified about the problem.
- Routine maintenance work should be carried out with the system totally unfolded



6.4. MAINTENANCE OPERATIONS

In order to ensure the correct operation of Pergola Solid system, elements of Moving module (bushings, screws, bearings) should be maintained every 12 months by grease or other preservatives.

During the Return rollers maintenance, the preservative should be inserted by the place marked on the Fig. 43, and than the preservative should be put in places marked on the Fig. 44.

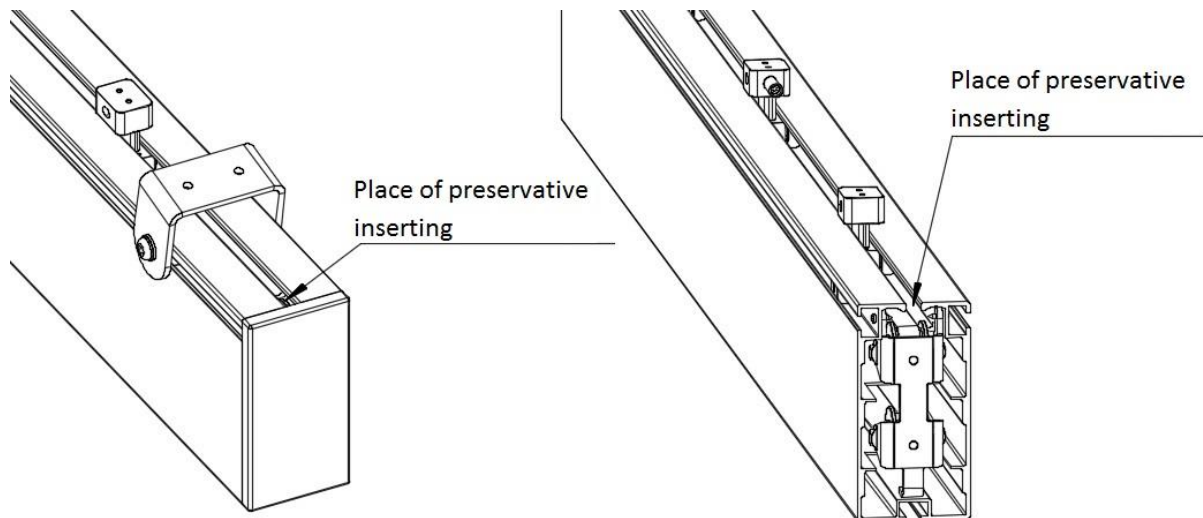


Fig. 43. Place of preservative inserting.

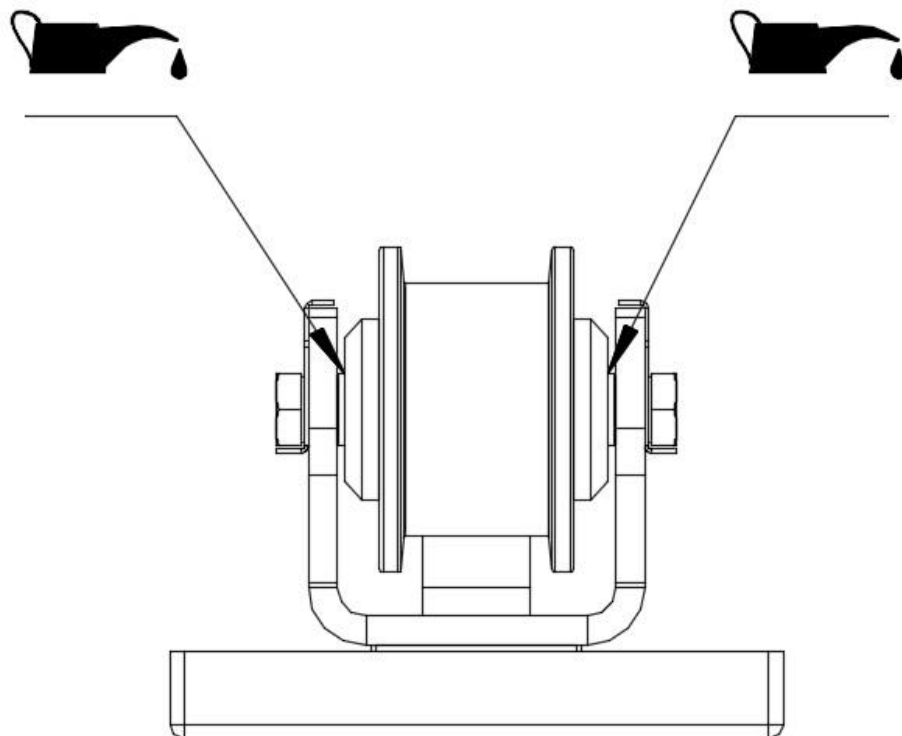


Fig. 44. Place of the maintenance of the Return roller's elements.

In order to preserve the elements of Drive transmission placed on Guiding rail's mounting, the Cover of Drive transmission should be unscrewed, as shown in Fig. 45. Then the preservatives should be used on elements of Drive transmission (bushings, screws, bearings), marked on the Fig. 46.

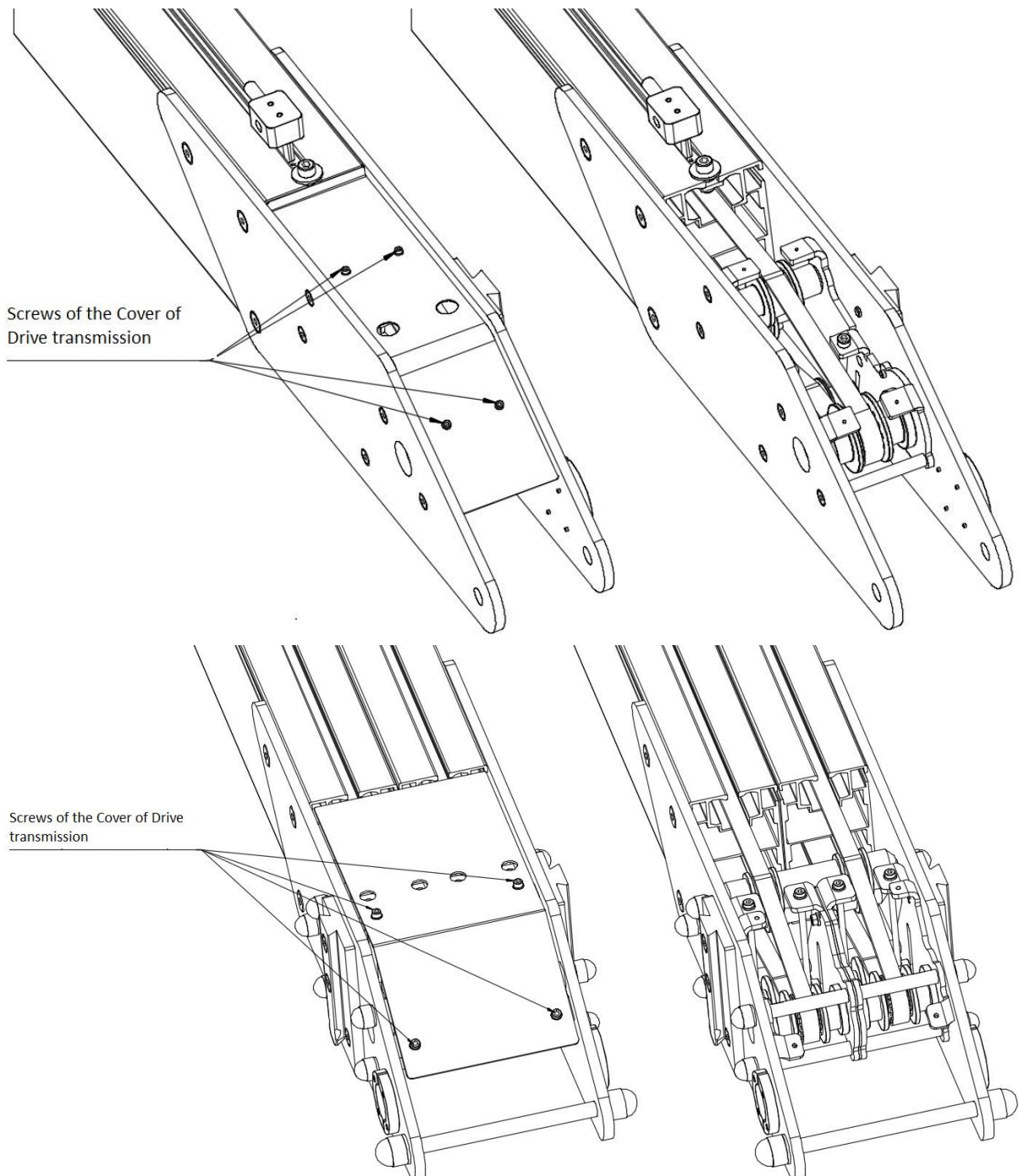


Fig. 45. Disassembly of the Cover of Drive transmission in order to insert the preservative, Guiding rails in single and modular version.

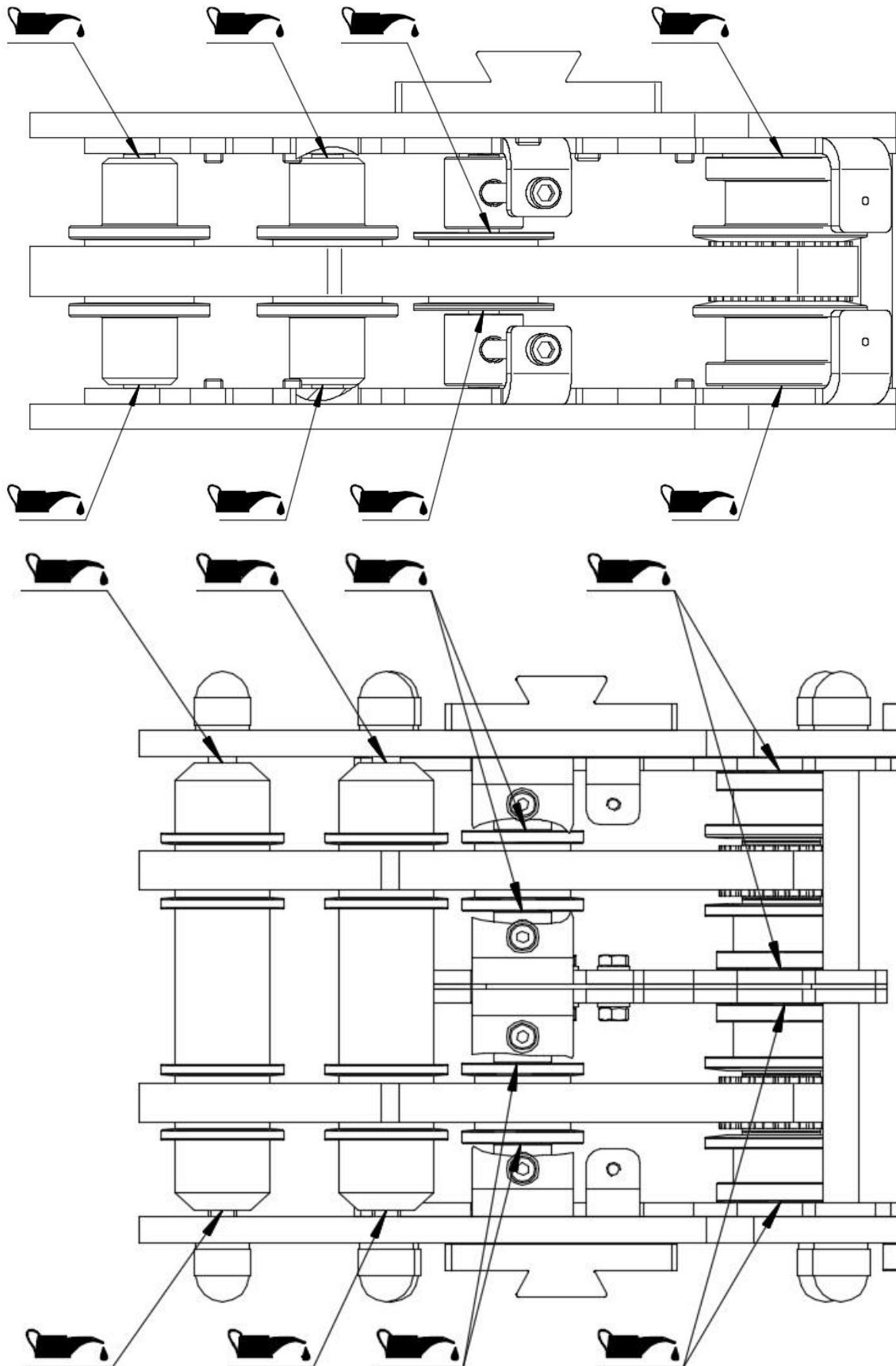


Fig. 46. Places of the maintenance of the elements of Drive transmission, Guiding rail in single and modular version.

7. GENERAL WARRANTY CONDITIONS

General warranty conditions are available on www.selt.com. In case of no access to the SELT website, the warranty conditions can be obtained from the sales representative of SELT.

7.1. WARRANTY EXCLUSIONS

Warranty does not cover:

- Damages resulting from transport other than Selt,
- Damages resulting from storage, installation or maintenance activities other than described in the technical and operational documentation or Supplier recommendations, unless those activities were conducted or advised by the Supplier,
- Damages resulting from failure to observe Supplier recommendations contained in the technical and operational documentation of the product,
- Mechanical damages,
- Damages resulting from self-modifications conducted by the user, unless it was done by the Supplier, or on behalf of the Supplier, or with its written permission,
- Secondary damages resulting from using the product regardless of the noticed faults, unless the Supplier was notified about it and recommended further use. The assessment of damage causes is left to the rational recognition of the Supplier. Repair or change of the product due to the damages described herein can be done by the Supplier against payment.
- Faults resulting from normal wear of product parts, including: seals, lubricants, etc.,
- Electric damages caused by the user,
- Damages resulting from incorrect installation of the product, conducted by a company other than the Manufacturer,
- Damages resulting from self-repairs conducted by the user,
- „Memory effect” of the fabric appearing usually in systems of big dimensions when there is a need to connect the fabric by weldings. Weldings are horizontal connections of the fabric technologically reasonable. They do not cause incorrect functioning of the system and do not constitute a defect,
- Fold on fabric appearing due to the fixing cord inserted into the pocket and fixing fabric in the beams,
- Incorrect tensioning of the tension rope, done by the installer against manufacturer’s guidelines, resulting in the incorrect fabric operation and waves on the fabric,
- End position of the front bar not aligned with the external edge of the guide due to design of the product,
- Asymmetrical position of the front bar towards the gutter which does not have the impact on system functioning,
- Damages resulting from using the product in incorrect weather conditions,
- Characteristics of SOLID Pergola work in module and individual modules installed close to each other. This phenomenon does not influence the correct functioning of the SOLID Pergola.
- Characteristic sound of the system during opening and closing of the movable roof,
- Water flowing from the guiding profile due to its natural properties,
- Water flowing from movable roof during its closure before complete drying,
- Leakages due to incomplete roof opening.

Warranty for fabric does not cover:

- Elastic behaviour of the fabric when working in different temperature scope (connected with thermal expansion of PVC),
- Damages caused by abnormal weather conditions, lightning strikes,
- Damages resulting from accidents and unexpected events,
- Damages resulting from improper cleaning with the use of caustic and abrasive products
- Damages resulting from cleaning the product with improper tools,
- Atmospheric and phytosanitary pollution,
- Pollution caused by animals,
- Effect or influence of other products or objects hanging on the fabric and not being delivered as a system part by Selt,
- Fabric welding: when the width and height of the blind exceeds the width of fabric roll, then it is necessary to connect two fabric pieces by welding (fabrics are welded with heat and the visibility of welding is natural). Weldings repeat horizontally with frequency depending on the width of fabric roll. To keep homogenous pattern of fabrics within one order the weldings are done in all systems from the particular order.

8. COMPLAINTS/ TECHNICAL FAULTS

8.1. COMPLAINTS

Complaint lodging procedure:

- A complaint shall be lodged in a written form in the point of sale where the purchase was made,
- Submitting the contract, order or invoice number, as well as a written complaint notification and warranty card are the conditions for accepting the complaint.
- The notification should include a detailed description of the defect, the name of the company which assembled the product and the date of finding out the defect.

Product with no invoice number, order or contract number will be considered as post-warranty product.

8.2. TECHNICAL FAULTS

In case product defects occur, one should:

- fold the product and put it out of service,
- immediately notify Selt sp. z o.o. about the product fault.
- notifications can be sent to the email address reklamacje@selt.com or directly to the sales representative

Complaints / faults should be made on the 'complaint notification form' which can be found on the website: www.selt.com, or directly at the customer's assistant.

9. PRODUCT DISASSEMBLY / UTILISATION / DISPOSAL



Improper system disassembly can result in severe injuries and system damage.

System disassembly should be commissioned to a properly qualified assembly team or to a person suitably trained within industrial safety and with the knowledge concerning recovery.

a) Disposal of worn electrical and electronic equipment

After the end of product lifetime it must be disassembled and separate material must be segregated according to Regulation of the Minister of Environment of 9 December 2014 on waste catalogue – Dz. U. [Journal of Laws] of 2014 item 1923

Important information concerning utilisation:



Pursuant to the regulations of the Act dated of 29 July 2005 about waste electrical or electronic equipment, it is forbidden to place used appliances marked with a crossed out waste bin symbol jointly with other waste. The User wishing to dispose of electronic or electrical equipment is obliged to take it to the used equipment collection spot.

The above legal obligations were introduced in order to reduce the amount of waste due to used electrical and electronic equipment and to assure a proper level of collection, recovery and recycling. There are dangerous elements in the equipment which are of particularly adverse effect on the environment and human health.

No.	Subject	European legal basis	Polish legal basis
1	Waste electrical and electronic equipment	Directive 2012/19 EU of the European Parliament and of the Council of 4 July 2012 on waste electrical and electronic equipment (WEEE)	Act Dz. U. [Journal of Laws] No. 180 item 1495 of 29 July 2005 on waste electrical and electronic equipment
2	Waste catalogue	Commission Regulation (EC) No. 574/2004 of 23 February 2004 amending Annexes I and III to Regulation (EC) No. 2150/2002 of the European Parliament and of the Council on waste statistics.	Regulation of the Minister of Environment of 9 December 2014 on waste catalogue – Dz. U. [Journal of Laws] of 2014 item 1923.

a) Disposal of waste batteries

Disassemble the used battery by carrying out activities in the reverse order to the assembly. In order to prevent environment pollution and posing possible threat to human and animal health, dispose of the used battery to a proper collection bin in the assigned collection spots.

Do not dispose of the battery with other types of waste.

It is recommended to use local, free of charge systems of battery collection.

10. MARKING AND LABELLING THE PRODUCT WITH THE CE MARK

10.1. PRODUCT COMPLIANCE WITH THE CE STANDARD

SOLID Pergola manufactured by SELT Sp. z o.o. meet the essential requirements of the standard introduced by the Polish Committee for Standardization for steel and aluminium constructions as PN-EN 1090-1 to PN-EN 1090-3, which is confirmed by the manufacturer’s declaration of performance and marking the product with the CE mark. Pergola construction is produced in EXC2 class.

In order to maintain this condition and assure safe use and maintenance of the system, the installation and operating manual and instructions for safe use must be observed.

10.2. INFORMATION ACCOMPANYING THE CE MARKING

Solid Pergola manufactured by SELT Sp. z o.o. meet the essential requirements of the harmonised standard EN 1090-1:2009+A1: 2011, introduced by the Polish Committee for Standardization as PN EN 1090-1+A1:2012, which is confirmed by the manufacturer’s declaration of performance and marking the product with the CE mark.

Common localisation limitations:

- localisation only in 1st and 3rd wind load area up to 300 m asl,
- localisation only in area cat. III or IV (wind),
- maximum wind class resistance for the retractable roof according to EN 13561 – third (110Pa equval 49 km/h),
- lack of possibility to load with snow (only the fixed part of the roof) – necessary to fold the roof in the winter time,

- maximum roof tilt angle 10 degrees,
- necessary to apply steel spandrel beams to cover the walls,
- necessary to fold the roof at wind speed above 49 km/h.

For conditions exceeding the above limitations it is necessary to conduct an individual static-resistance evaluation by a person holding appropriate construction permissions in the design and construction.

a.) Marking on the product:



b.) Marking on the accompanying documents:

