

**Technical Manual**

# Accessible U-Shaped Column

## Shared column





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We do not provide the screws for fixing-anchoring to the wall and/or foundations. The fitter must choose the adequate rod/screw/plug/nut/washer system for fixing and flushing to the foundations and/or wall based on the nature of these surfaces. In any case, the screws must be in stainless steel.

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## 1. Installation of the columns

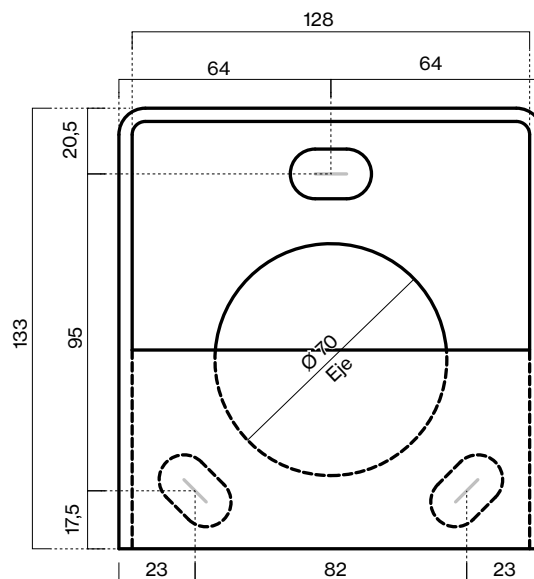
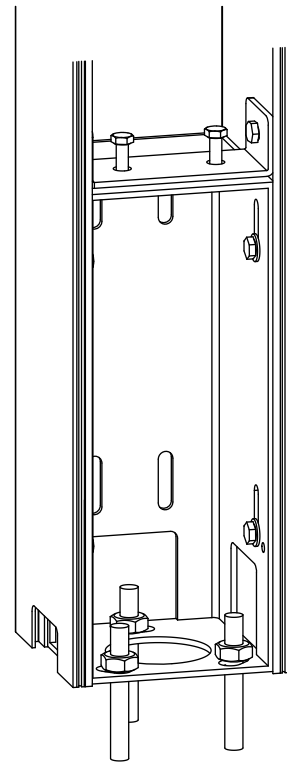
### 1.1 Installing the fixation for the column base

- Measure the foundation in order to make sure that the levelling is correct.
- Mark the position of the column bases, using the base template, and measure the diagonals to ensure that both distances are the same.
- Install the base fasteners using M12 screws (not included), at least AISI 304 quality (stainless steel).

#### Important

Installation is recommended on a reinforced concrete foundation of at least 150 mm thickness or surface of equal resistance using 12 mm metric stainless steel screws, not included.

Leave 100 mm free above the beam for the slats to rotate.



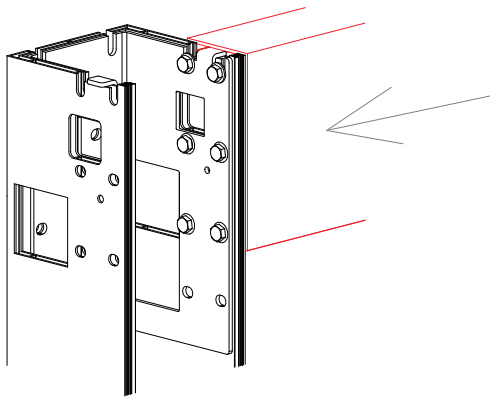
## 2. Installation of the beams

### 2.1 Assembly of P-180 beams to columns

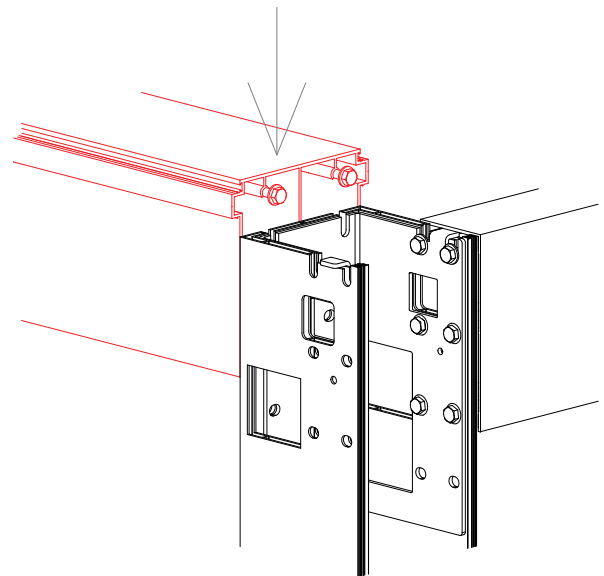
**Before installing the slats, assemble the entire pergola structure.**

Screw 2 DIN (ISO 7978) A2 M8x50 screws with DIN 125 A2 M8 washers to the two upper screw holders at both ends of the beams, leaving a gap of 3 cm between the screw head and the start of the beam.

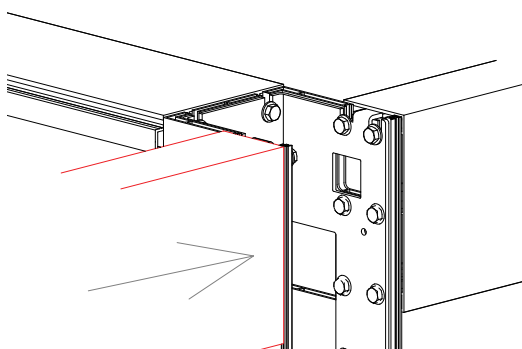
With two columns in position in the assembly, support the beam screws on the columns. Loosely insert the remaining screws to fix the position of the beam and tighten to the specified torque.



1. Position the right beam.



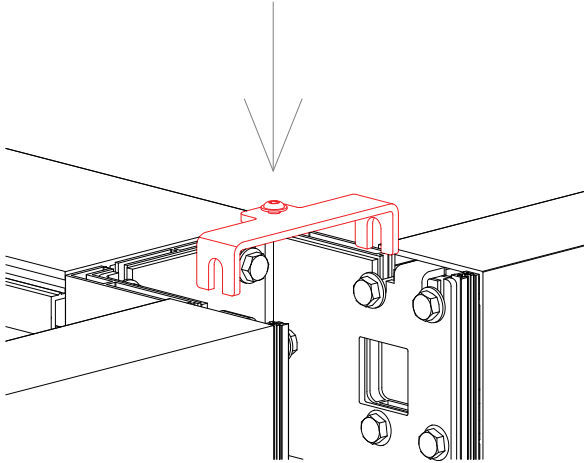
2. Place the central beam and assemble the rest of the beams of the structure on the right side.



3. Position the left beam and assemble the rest of the structure on this same side.

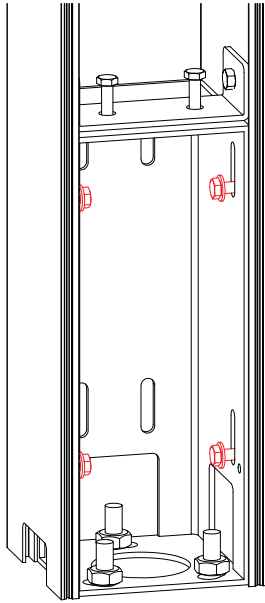
## 2.2 Installation of cover fittings

When the two beams of a column are positioned, install the cover fitting and tighten the end screws to the specified torque.

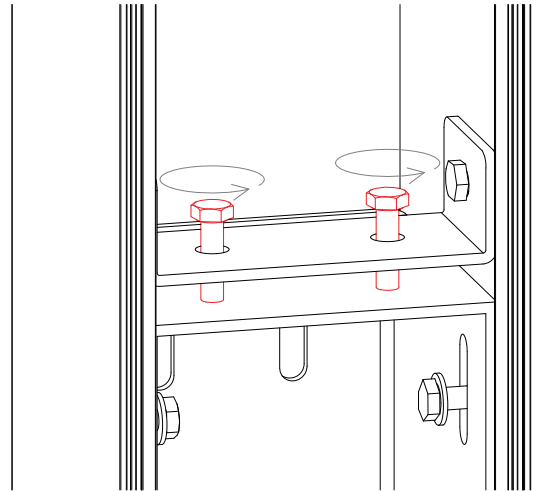


### 2.3 Levelling the structure

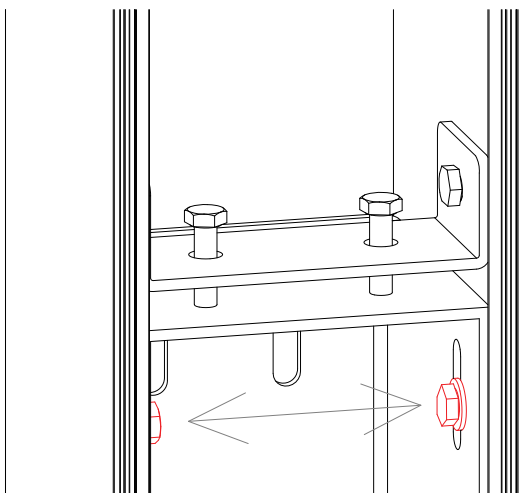
If, once the structure is anchored, the beams are not level,



loosen the 4 screws connecting the base to the column, so that the column slides over the base. It is important not to remove the screws.



Screw in the M12 screws to raise the column until the beam is level and retighten the 4 base screws.



Tighten the 4 base connecting screws to fix the position of the column.

### 3. Channelling

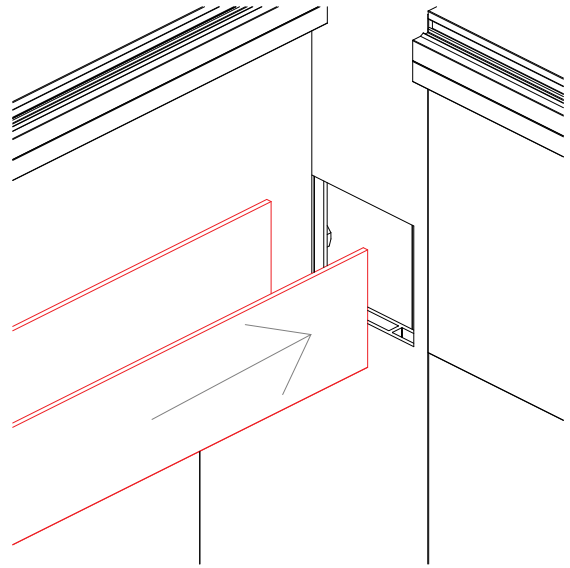
#### 3.1 Installation of U-shaped drainage channels

Install drainage channels on the beams depending on the configuration of the pergola. To do this, insert the end of the channel through the drain hole machined in the columns and level it with the beam. Repeat the process with the rest of the beams that have gutters.

The aluminium profile of the gutter must fit approximately 4 mm into the column on each side. It is important that the gutter is centred on the beam and that the same gutter spacing is used on both columns.

Check that all the holes in the U-shaped profile match the M6 holes in the beams and screw the profiles together using ULS (ISO 7380) A2 M6x16 screws.

Use the supplied sealant to seal the U-shaped channels to the beams and joints where water may leak, as shown in the following image.

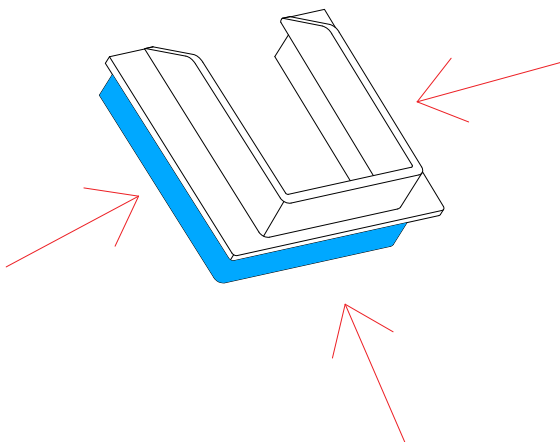


#### 3.2 Installation of drainage parts

Before starting the installation, it is important to clean the drainage parts and gutters so that the silicone adheres perfectly to the surfaces.

#### Important

Be very careful when installing the drainage parts in the open columns, so as not to make any mistakes that could affect the water channelling. Make sure all the joints are well sealed with silicone sealant.



1. Apply a large amount of silicone in the grooves of the 3 outer faces of the part (marked with red arrows), so that when the part is put in place, the silicone will overflow and create a joint between the part and the gutter, preventing the passage of water.

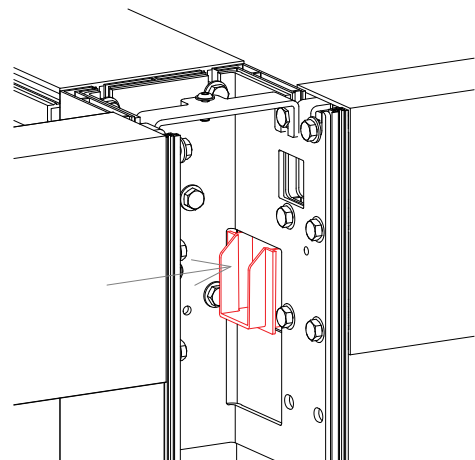
The entire surface marked in blue must be covered in silicone.

#### 1. Gutter extensions

These parts are placed at the ends of the U-shaped channel profiles.

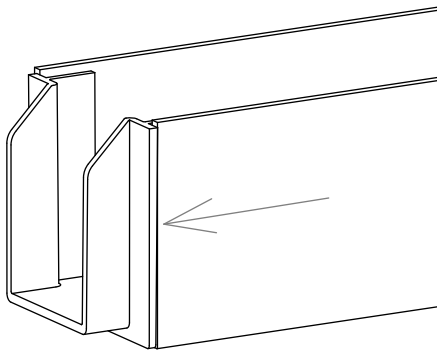
The number of parts used will depend on the number of gutters entering the column: one part for one gutter or two parts for two gutters.

Follow the steps below to install the parts:

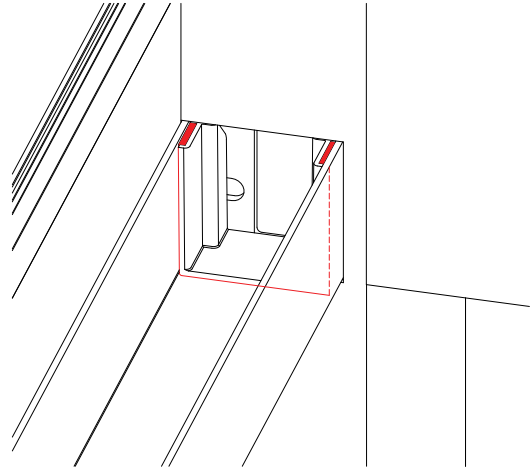


2. Install the part into the gutter from the inside of the column, taking care not to remove the silicone in the process.





3. Once the part has been fitted, it should meet the end of the gutter, as shown in the picture.



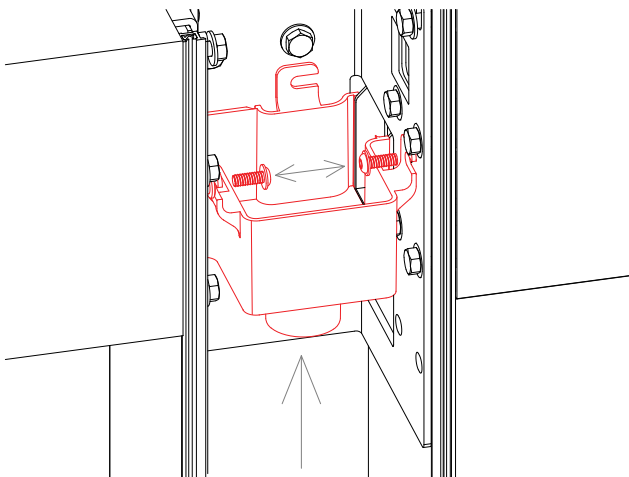
4. Press on the 3 sides of the part: bottom, left and right (marked with red arrows) to seal the part against the gutter. The silicone, applied previously, must overflow through the free spaces between the part and the gutter marked in blue. The corner between the extension part and the gutter must then be sealed. To do this, apply silicone (lines in red) and go over it, making sure that no gaps are left unsealed.

**2. Collecting tray**

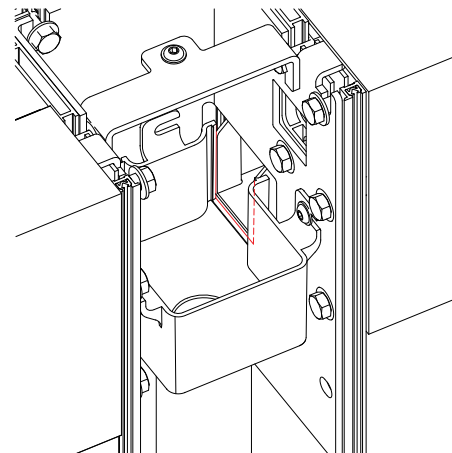
Once the gutter extensions have been installed, the collecting tray should be installed, which will be necessary in the following cases:

- When the gutters of two adjacent beams are required to communicate to allow the passage of water.
- When the system is channelled through the foundations and there is a drain in the accessible column.
- When the drain is free draining, but the automation systems and the drain are located in the same column.

To install the tray:

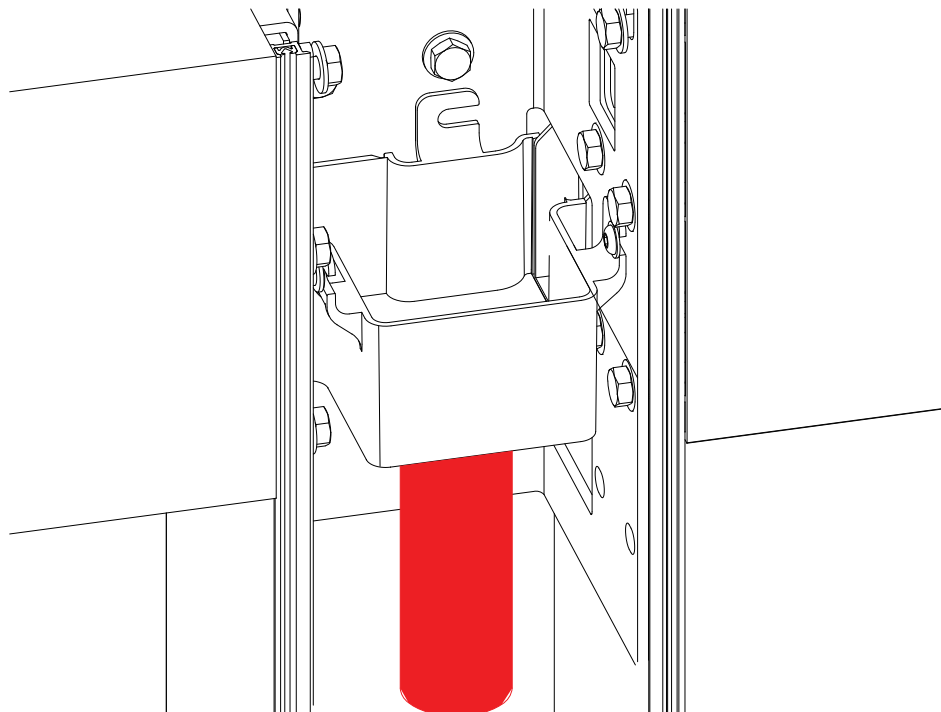


1. Remove the walls of the part that are necessary to make way for the gutter extensions with the help of a cutter. Place the drip tray underneath the gutter extensions and screw it into the reinforcement bracket.



2. Seal all joints between the gutter extensions and the collecting tray with silicone. Look over it to make sure that no gaps are left unsealed.

If the drainage of the pergola is channelled through the foundation or the automation systems are placed in the same column where there is drainage, the lower part of the collecting tray must be drilled in order to place the PVC pipe. This will be sealed using silicone or PVC adhesive.



**!** Important

Before continuing, make sure that all the joints are perfectly sealed with silicone and that there are no gaps that could allow water to enter between the parts and the profiles.

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#### 4. Installation of slats

Install the slats, drive plate and motor as specified in the pergola assembly manual.

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#### 5. Electrical connections

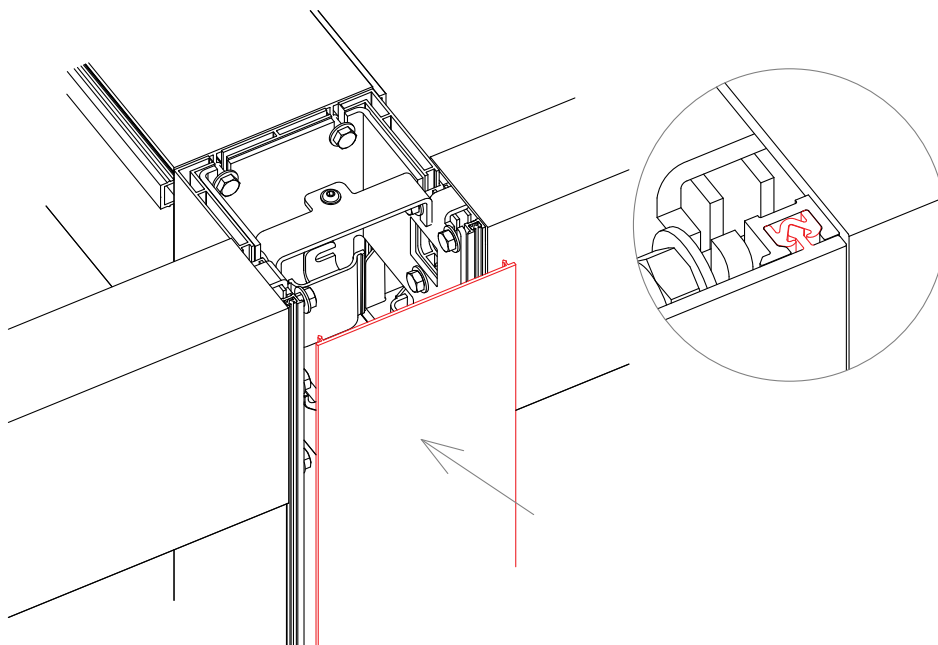
Make the electrical connections and install the perimeter LED, if applicable, as specified in the pergola assembly manual.

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## 6. Installation of covers

### 6.1 Trim Cover

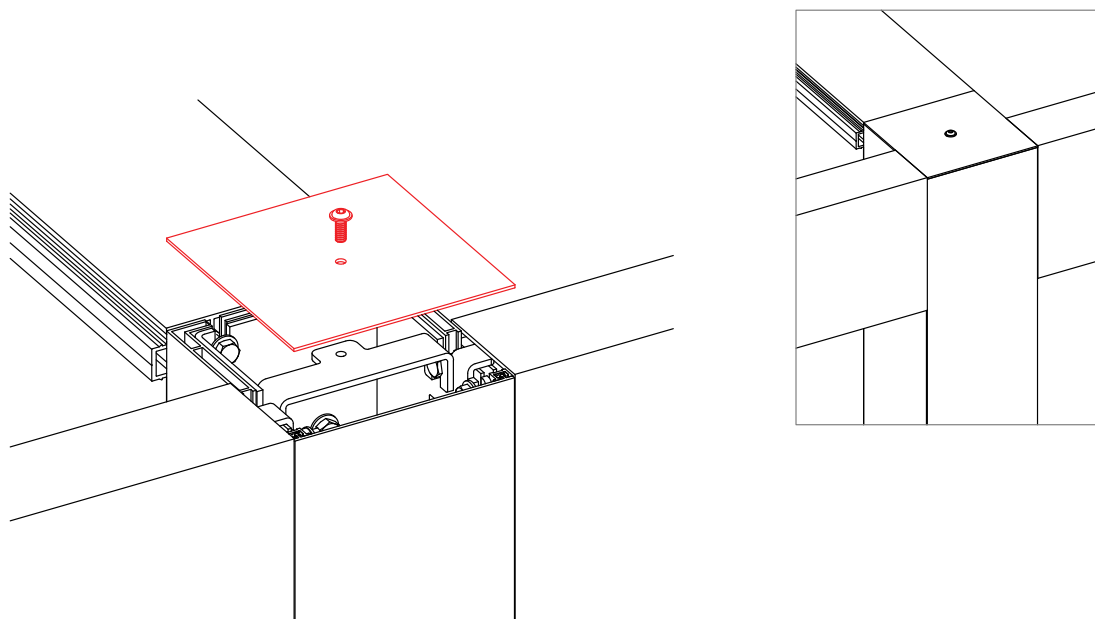
Place the cover in front of the column, align the clips with the rubber clips installed on the column. Press the cover profile from the bottom upwards until the column is completely closed.



### 6.2 Top cover

To fit the top covers of the columns, screw the covers to the fittings using the ULS (ISO 7380) A2 M6x16 mm screws.

Once the column covers have been installed, seal the joints with the sealant supplied. One of the covers, as mentioned above, will have 3 cable glands to take the wiring to the switchboard.



## Annex I

### Disassembly and disposal of the packaging and components of the product at the end of its useful life

## Disposal of packaging

### Important

The packaging must be recycled by the authorised professional who installed the product.

We advise you to recycle the product packaging responsibly:

- Please dispose of this waste in accordance with the current regulations:
  - Directive 94/62/EC on packaging and packaging waste.
  - Spanish Law 11/1997 of April 24th on packaging and packaging waste.
- Please sort the waste by separating each and every one of the various materials, to facilitate effective disposal of the packaging.
- Do not dispose of packaging materials together with other types of waste. Take them to a packaging materials collection point designated by the local authorities.
- In order to minimise the environmental impact of packaging and packaging waste, it is necessary to define the composition and nature of the packaging of our products to recommend their best disposal.

#### **Paper and cardboard:**

In waste management, the recycling of paper and cardboard plays an important role, because up to 70% can be reclaimed. The disposal of paper and cardboard can be done through various channels such as collection by private operators or delivery to waste treatment plants.

#### **Plastic:**

The recycling of plastics has many advantages for the environment and therefore benefits the quality of life of everyone, contributing to a greater saving of raw materials as well as natural, energy producing and economic resources. The disposal of plastic can be done by private operators or delivered to waste treatment plants.

#### **Bubble wrap:**

This is made of low density poly-ethylene, which makes it 100 % recyclable. For optimal disposal, please deliver any waste comprising this material to plastic waste treatment plants.

## Our commitment to the environment

One of **Saxun's** objectives is to maintain socially responsible behaviour. This commitment to the environment implies continuous improvements in the measures that are adopted to combat climate change.

Promoting responsible care of the environment, complying with the legal and regulatory requirements applicable to our products and promoting energy saving in all our projects are measures that are essential for us to achieve our objectives.

## Disassembly and removal of the product

When disassembling this product, a number of precautionary measures must be taken. Observe the following warnings and instructions. Please contact your supplier with any queries.

Disassembly may only be carried out by experienced fitters. This manual is not intended for DIY enthusiasts or installers in training.

For more information on these disassembly instructions, please refer to the chapters regarding installation in this manual that contain diagrams and detailed information.

## Warning

Always act with care. Use appropriate tools which are in perfect condition.

### • Étape 1

Disconnect the electricity. ¡ATTENTION! Shut off the energy supply before disconnecting any cables.

### • Étape 2

Unscrew the screw on the top cover of the column and remove the cover.

### • Étape 3

To remove the side cover, unscrew the right-hand clipping piece and open the left-hand clipping of the rubber bands from the top.

### • Étape 4

Dismantle the motor.

### • Étape 5

Dismantle the transmission plate.

### • Étape 6

Dismantle the slats.

### • Étape 7

Dismantle the drainage channels.

### • Étape 8

Dismantle the rubber parts.

### • Étape 9

Dismantle the pergola structure by disassembling the interior brackets that fasten the beams to the columns, and the wall fixtures, if there are any.

### • Étape 10

Dismantle the columns and their fixtures.

## Attention

Make sure that you dispose of all the product's parts according to the nature of the material.

Components	Galvanised Steel	Stainless Steel	Aluminium	WEEE	Plastic	Textile
Cables and LED lines				•		
Caps					•	
Switchboard				•	•	
Brackets		•				
Upper brackets		•				
Rubber seal					•	
Motor		•		•	•	
Profile			•			
Motor brackets		•				
End plates			•			
Screws		•				

Our products are mainly made of recyclable materials. It is advisable to be informed about the recycling or disposal systems provided for in the current regulations in your country for this product category.

## Important

Always act with care. Please only use suitable tools that are in perfect condition.



This symbol means that the product must not be disposed of together with household waste as it must be collected separately for recovery, reuse or recycling in accordance with local regulations.



In compliance with European Directive 2012/19/EU, waste electrical and electronic equipment (WEEE) can become a serious environmental problem if not managed properly. The Directive provides the general framework valid throughout the European Union for the disposal and re-use of waste electrical and electronic equipment.

At the end of the service life of the electrical or electronic equipment, it must not be thrown away together with other types of waste. They can be delivered to the specific centres regulated for this purpose by the local authorities.

The effective separation of waste will avoid negative consequences for the environment and health that could result from poor waste management or inadequate waste disposal.

**! Important**

By complying with this directive, you will be acting in favour of the environment and will contribute to the conservation of natural resources and the protection of health.

**Local regulations may impose significant penalties for illegal disposal of the product.**

## The materials that our products are made of offer a great variety of environmental advantages



**Galvanised steel**

Galvanised steel is a type of steel which undergoes a certain treatment, at the end of which it is coated with several layers of zinc which protect it, avoiding oxidation. The recycling of zinc helps reduce demand for new materials and as a result generates considerable energy savings, being a metal that constitutes a very valuable and sustainable resource.

**For proper recycling of galvanised steel, it is advisable to visit a metal waste collection centre.**



**Stainless steel**

Stainless steel is an iron alloy containing nickel and chromium to protect against corrosion and rust. Its qualities include resistance to high temperatures and being a particularly strong material. Stainless steel is an infinitely recyclable "green material". Its properties make it ideal for exposure to poor weather conditions.

**Therefore, to ensure proper disposal of stainless steel, it is recommended that this material be left at a specialised waste collection centre.**



**Aluminium**

Aluminium recycling guarantees an endless variety of environmental benefits. The use of recycle aluminium saves 95% of the energy used in its production in its raw state, and it can be recycled as many times as desired and is fully recoverable. Therefore, the recycling of aluminium is both technically and economically profitable.

**Therefore, to ensure proper disposal of aluminium, it is recommended that this material be left at a specialised waste collection centre.**



### Cables

The recycling of electrical cables prevents the contamination that can come from these elements. Its re-cycling allows for the subsequent use of the copper, aluminium and brass from the cables, once they are separated from their plastic insulation.

**Electrical and electronic waste must be taken to clean points for proper recycling**



PET



HDPE



PVC



LDPE



PP



PS



Other

### Plastic

Plastic recycling provides a sustainable source of raw material for the industry. Its reuse also significantly reduces environmental problems, as it is a non-biodegradable material.

Recycling reduces energy consumption and CO2 emissions, thus mitigating pollution and climate change.

**There are several types of plastic, so to achieve optimal recycling it is essential to deposit them in clean points where the separation of the different types and their identification will take place.**



### Textiles

The use of textile waste is essential when we talk about recycling. Reuse of such waste helps to reduce the consumption of water and the gases that are released in the manufacturing process.

**In order to encourage the proper disposal of textiles, it is recommended that they be left at a specialised waste centre where the different textile fibres will be separated.**

### ! Important

Follow the recommendations for effective product recycling. Remember that recycling is more than an action; it is the value of accepting responsibility



## Annex II

**Certificate of guarantee**

The Saxun bioclimatic pergola is composed of a waterproof structure with adjustable aluminium slats, driven by a motor.

Its main structure is made of 6063 T5 alloy aluminium profiles, lacquered or anodised according to the technical specifications of the Qualicoat and Qualanod quality brands. This structure is totally self-supporting and can be dismantled, so that no type of work or construction is required for its installation.

Our pergolas, just like the rest of our products, are subjected to a variety of tests in our labs in order to check their resistance and behaviour in every type of circumstance.

Tests carried out following the requirements of international standards, involving parameters such as wind resistance and loads of rain or snow, demonstrate the excellent performance of our bioclimatic pergolas against the most adverse conditions.

The P-150 and P-190 pergolas were tested in accordance with the following standards, obtaining the following results;

*Wind resistance:*

<b>P-150 et P-190</b>	<b>Norme:</b> EN 13659	<b>Class 6 (Aprox. 112 km/h)</b> Tested up to 190 km/h, without breakage due to limitation of the test bench.
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*Rain load:*

<b>P-150 y P-190</b>	<b>Norme:</b> EN 12056-3	<b>Class: (0.03 l/s max.)</b> torrential rain approx. 108 l.m2/h (structure + slat)
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*Snow load:*

<b>P-150</b>	<b>Norme:</b> EN 1999 Eurocode 9 Aluminium structures projects.	<b>≤65 kg/m<sup>2</sup></b> (Including own weight)
<b>P-190</b>	<b>Norme:</b> EN 1999 Eurocode 9 Aluminium structures projects.	<b>≤100 kg/m<sup>2</sup></b> (Including own weight)

*Maximum dimensions:*

<b>P-150</b>	5.000 mm x 3.600 mm x 3.000 mm*	Approximate weight of <b>310 Kg</b>
<b>P-190</b>	6.200 mm x 4.200 mm x 3.000 mm*	Approximate weight of <b>485 Kg</b>

\* Length (mm) X Width (mm) X Height (mm)

### *Warranty:*

Saxun only guarantees these results in cases where the pergola has been correctly installed and assembled and properly maintained.

It may be possible for leaks to occur between the slats in the event of occasional heavy rainfall, as the sealing between the slats is not watertight.

The values stated in the calculations shall not be applicable if customers and/or installers not authorised by Saxun manipulate the equipment in any way.

The warranty period for Saxun pergolas is 3 calendar years from the date that the product is supplied, with the date being that indicated in the delivery note issued by GIMÉNEZ GANGA, S.L.U.

For more information about the Saxun warranty conditions and possible exclusions from the warranty, the Saxun Warranty Certificate is available in the general price list.



**saxun**  
by Giménez Ganga

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