

Technical Manual
Pergola
ARCH

The logo consists of the letters 'M' and 'F' in a bold, sans-serif font. The 'M' is light green and the 'F' is white. They are positioned inside a dark grey square with a light green border. The bottom-right corner of the square is cut off at a 45-degree angle.

MF



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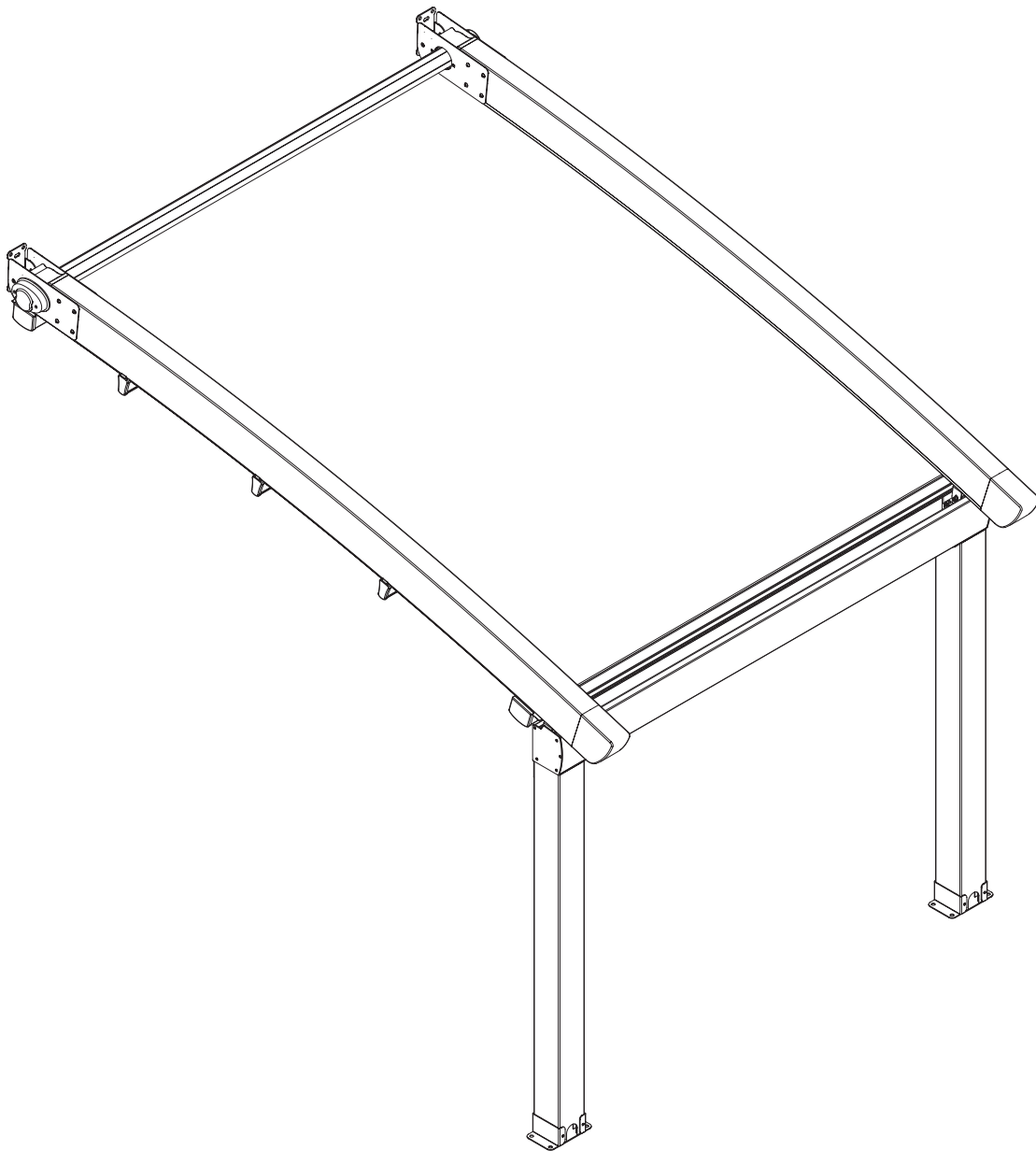
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Arch

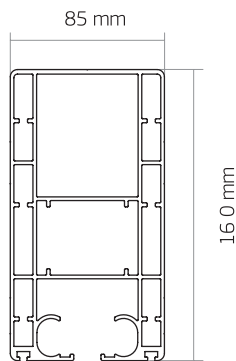
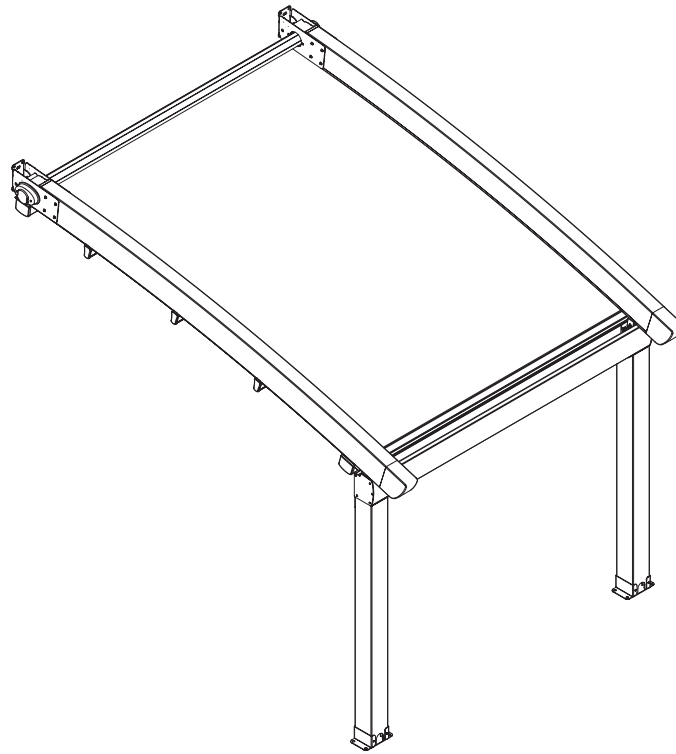
General view of the pergola

Metaform's SA expertise and originality brought up pergola Arch, an excellent solution for covering and shading exterior.

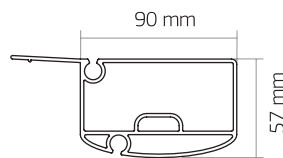
With arched and impeccable design, is the most appropriate pergola for radius applications as well as large projections.



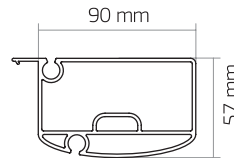
Profile cross-sections



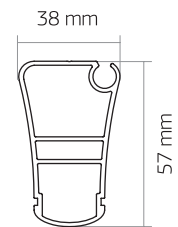
① rafter 85X160



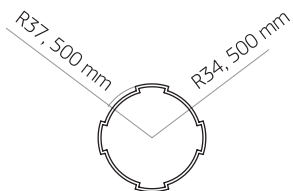
② wide counterweight, bottom 90x57



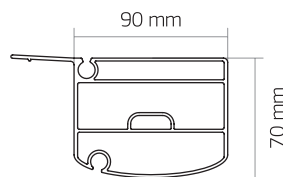
③ wide counterweight, top 90x57



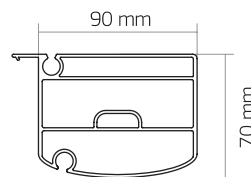
④ narrow counterweight 38x57



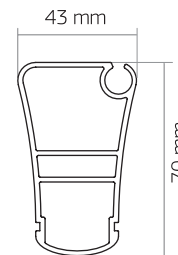
⑤ tube
(not shown in diagram)



⑥ wide counterweight, bottom 90x70



⑦ wide counterweight, top 90x70



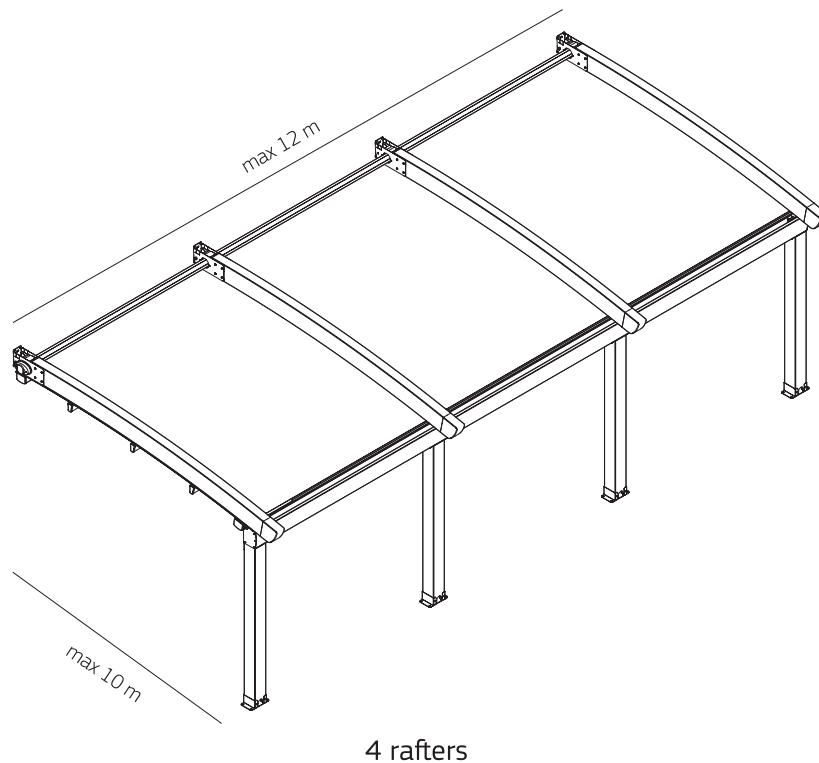
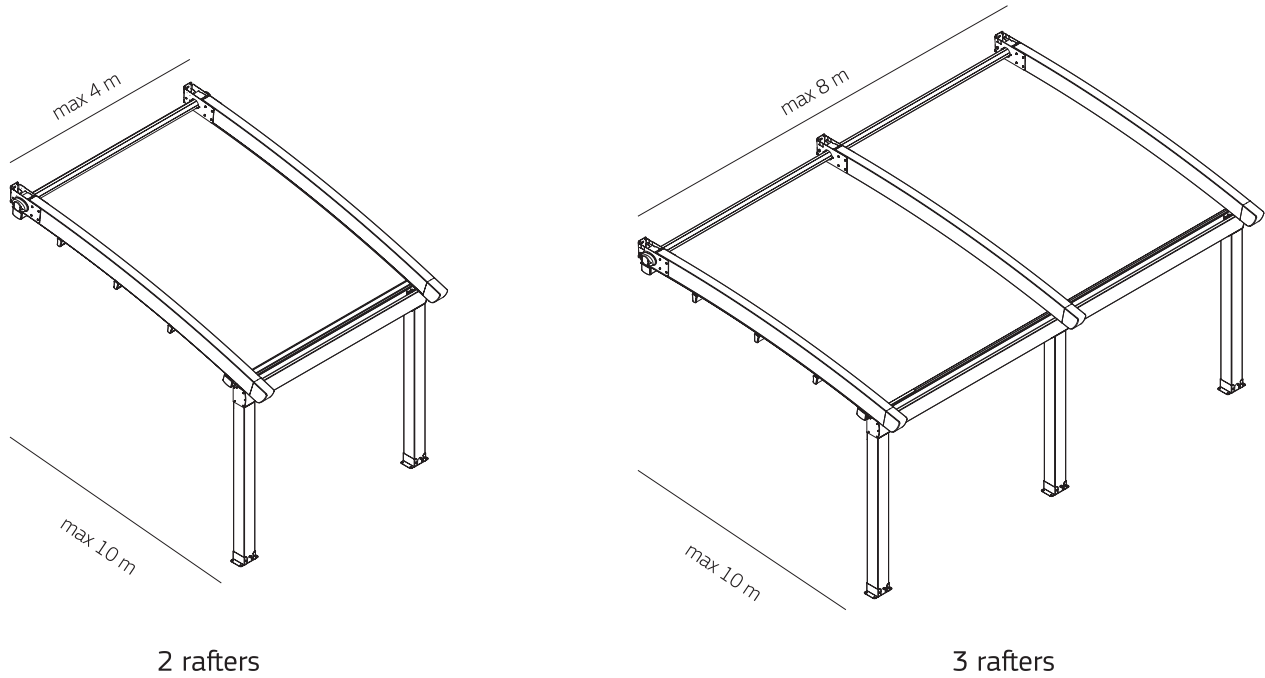
⑧ narrow counterweight 43x70

You can choose between counterweights 2-3-4 and 6-7-8

Arch

Maximum pergola projection & maximum rafter distance with 38x57 and 90x57 counterweights.

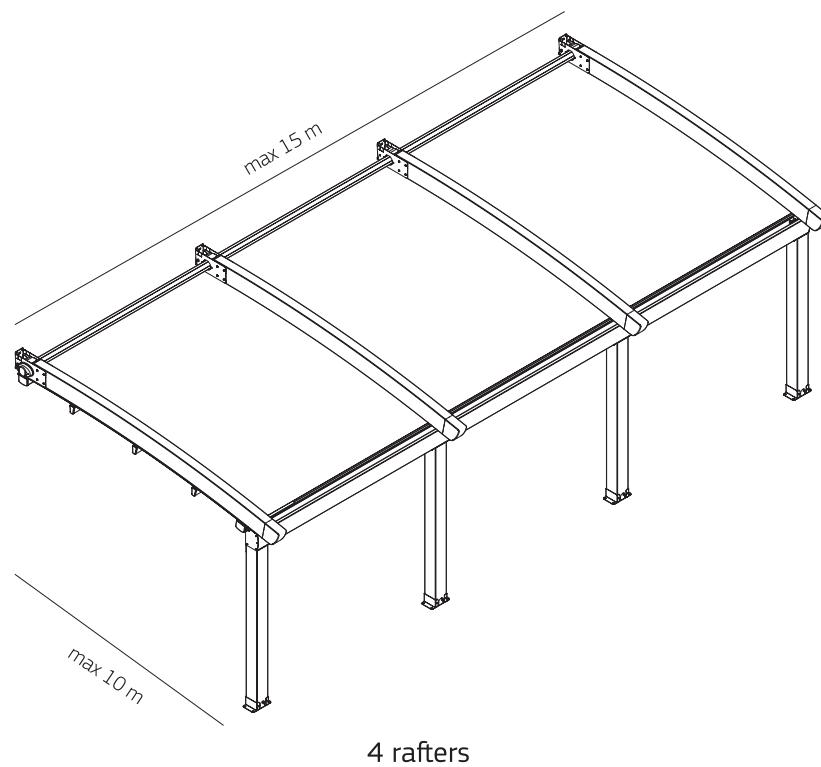
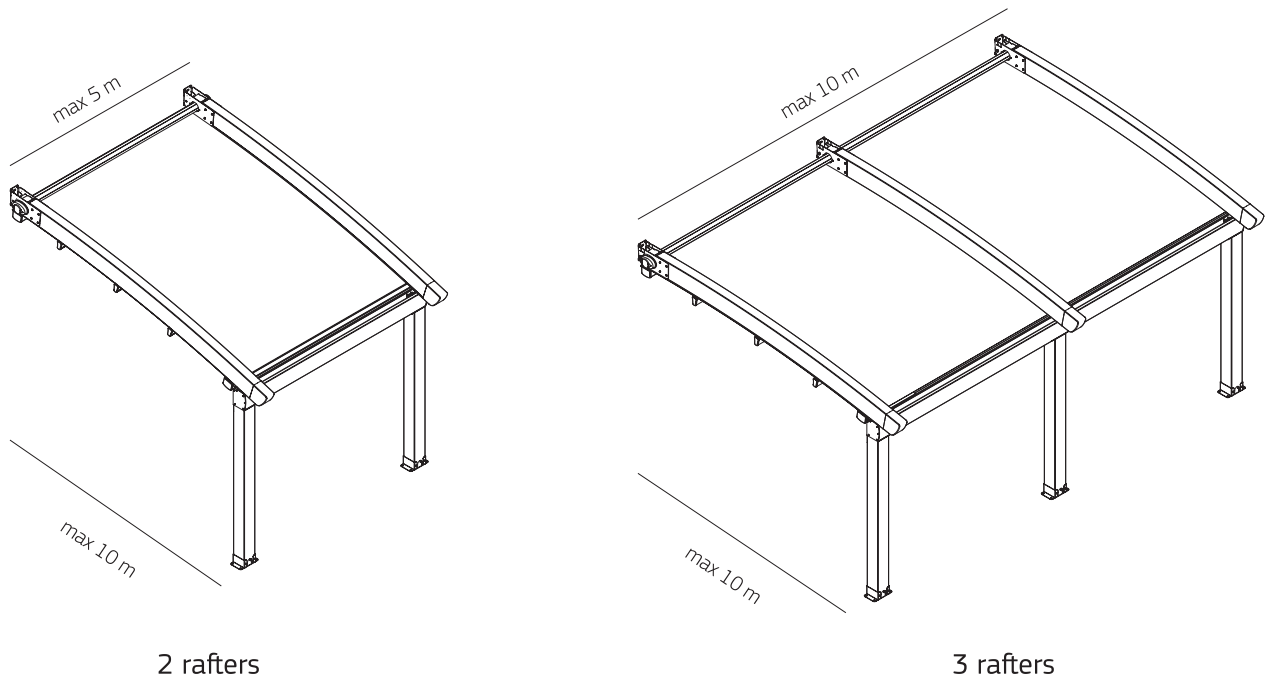
Maximum rafter-to-rafter distance with 38x57 and 90x57 counterweights is 4 metres.



The Arch pergola can reach an projection of up to 10 metres and an axis length of up to 20 metres with six rafters.

Maximum pergola projection & maximum rafter distance with 43x70 and 90x70 counterweights.

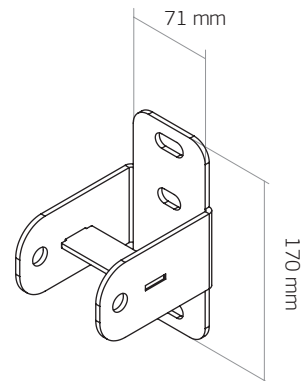
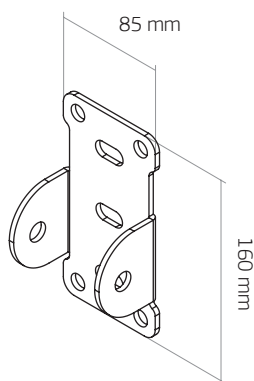
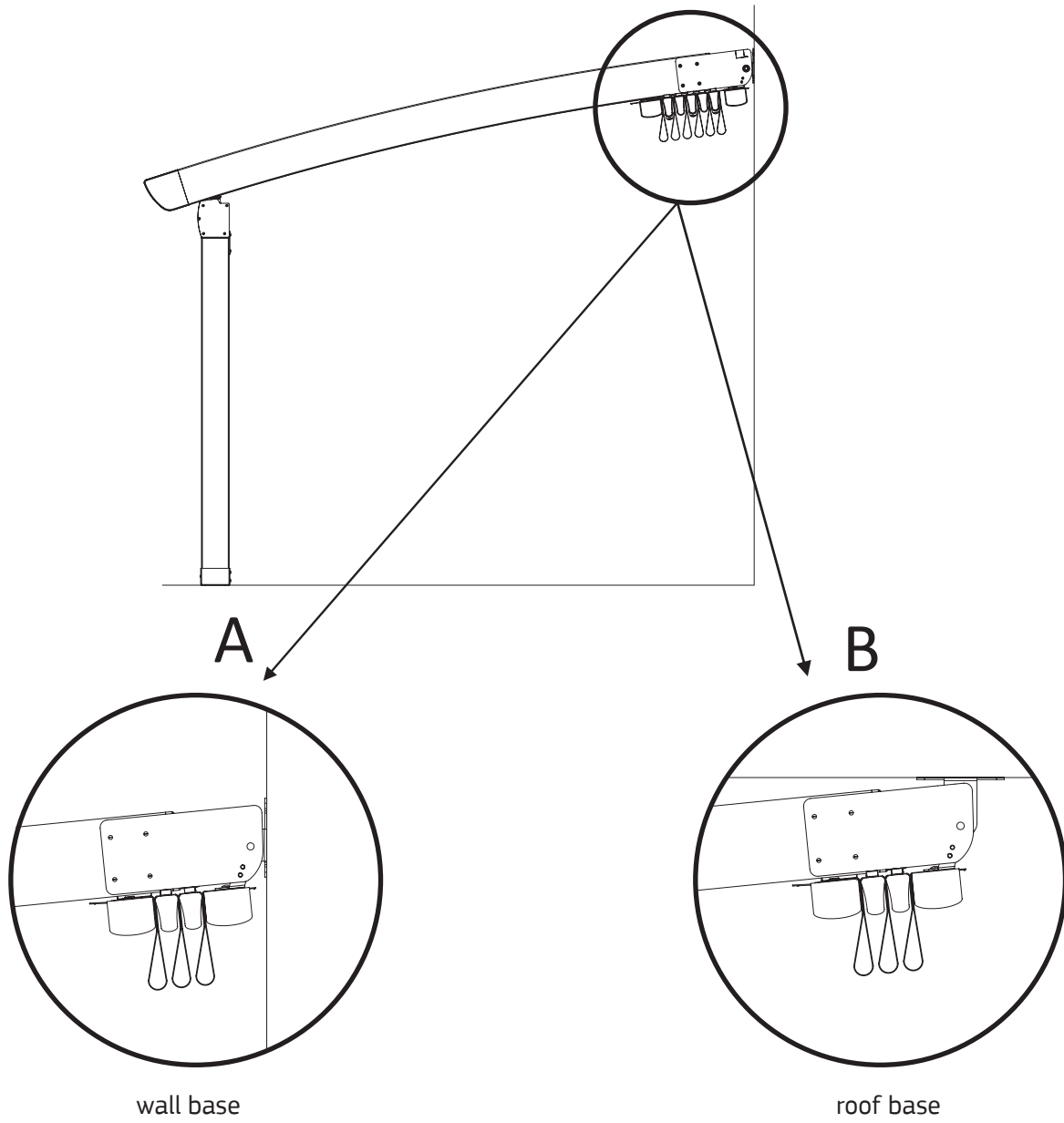
Maximum rafter-to-rafter distance with 43x70 and 90x70 counterweights is 5 metres.



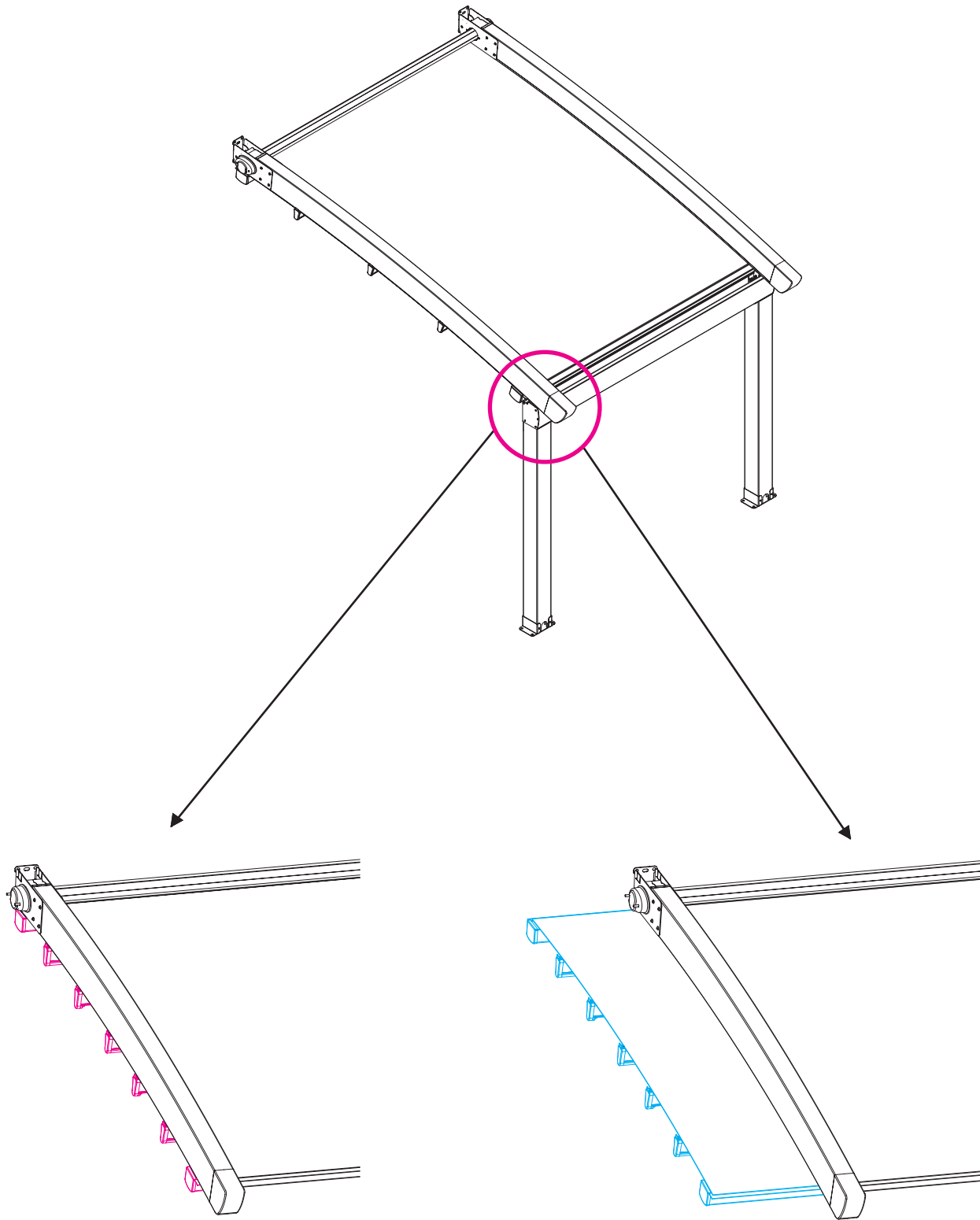
The Arch pergola can reach an projection of up to 10 metres and an axis length of up to 20 metres with five rafters.

Arch

Pergola support options



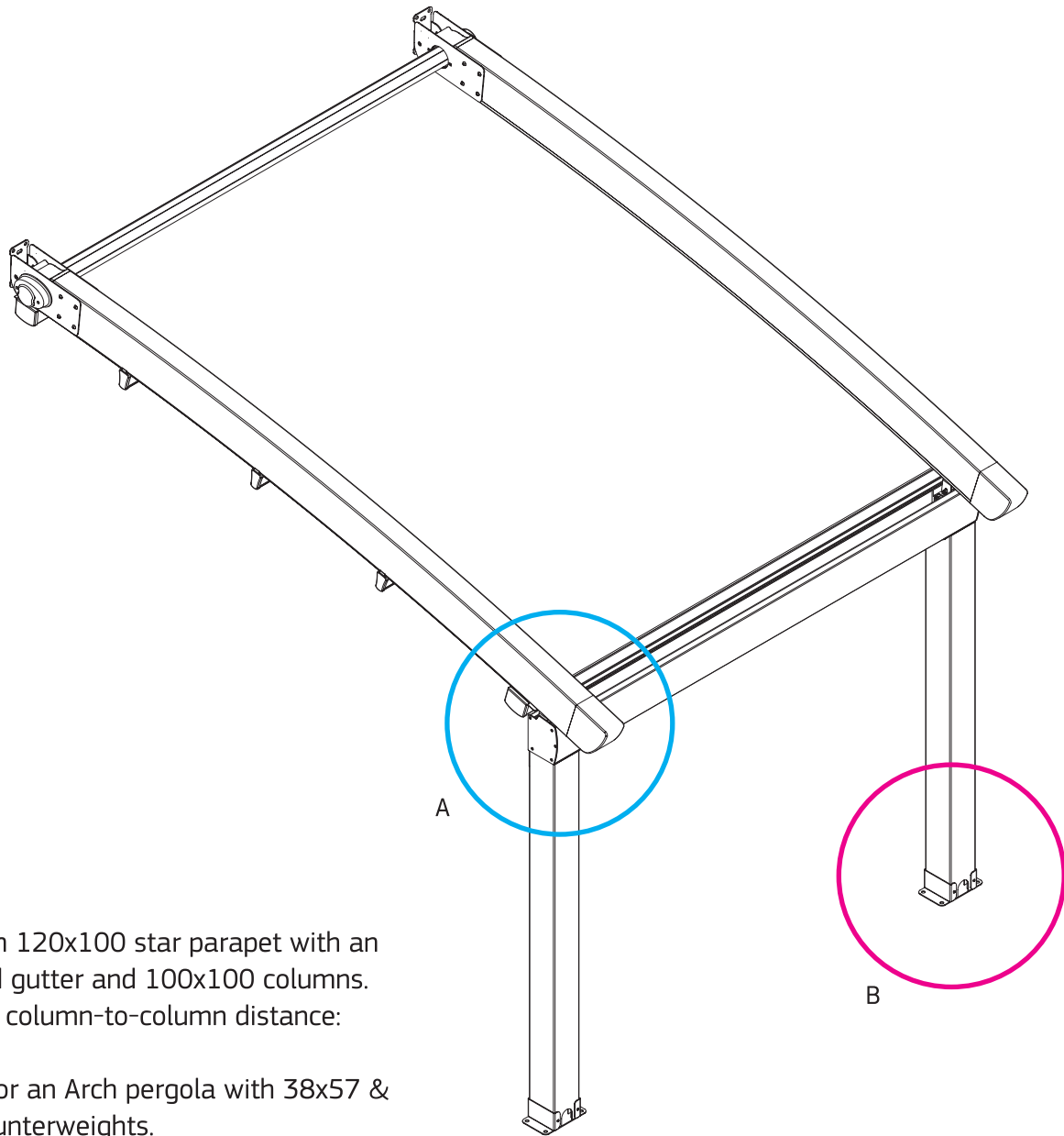
Counterweight overhang choice



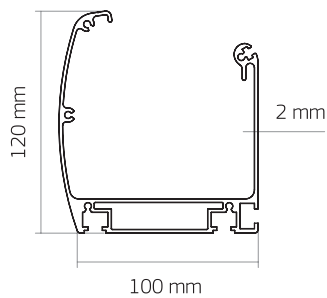
Counterweights can extend a minimum of 1 cm from the rafter and a maximum of 80 cm.

Arch

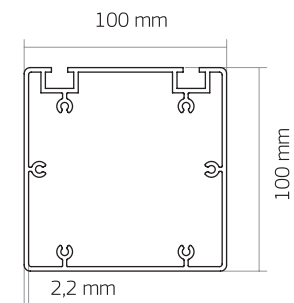
Details of the connection of a pergola with a 120x100 star parapet



Aluminium 120x100 star parapet with an integrated gutter and 100x100 columns.
Maximum column-to-column distance:
4 metres
Suitable for an Arch pergola with 38x57 & 90x57 counterweights.



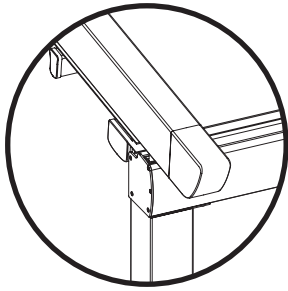
120x100 Parapet-gutter



100x100 Column

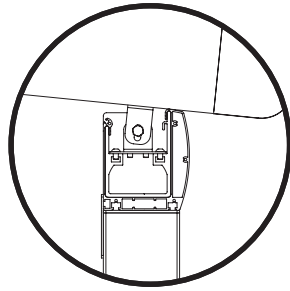
Details of the connection of a pergola with a 120x100 star parapet

Details of the rafter-parapet connection



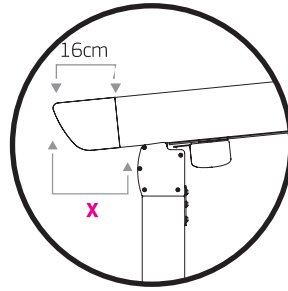
A1

External detail of Rafter-to-Parapet connection. The total parapet length is always 2 cm longer than the total pergola length.



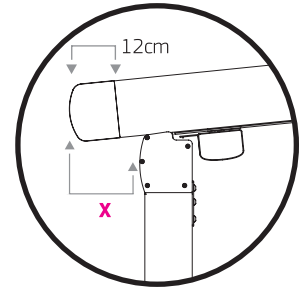
A2

Internal Detail of Rafter-to-Parapet connection.



A3

Support for an Arch pergola with an 16 cm Aluminium Cover (Corbel) on a 160x140 star Parapet.



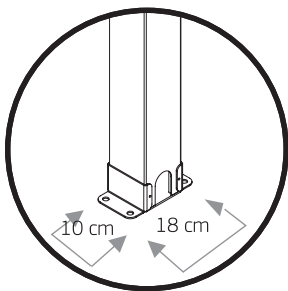
A4

Support for an Arch pergola with an 12 cm Aluminium Cover (Corbel) on a 160x140 star Parapet.

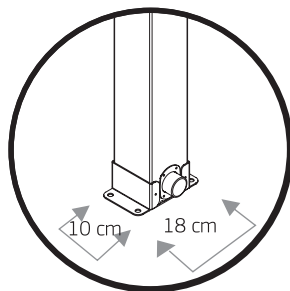
the **X** in images A3, A4 indicates the total overhang of the rafter from the parapet.

The minimum overhang is equal to the aluminium cover. The recommended overhang is equal to the aluminium cover + 5 cm

Details of parapet column and rainwater extraction



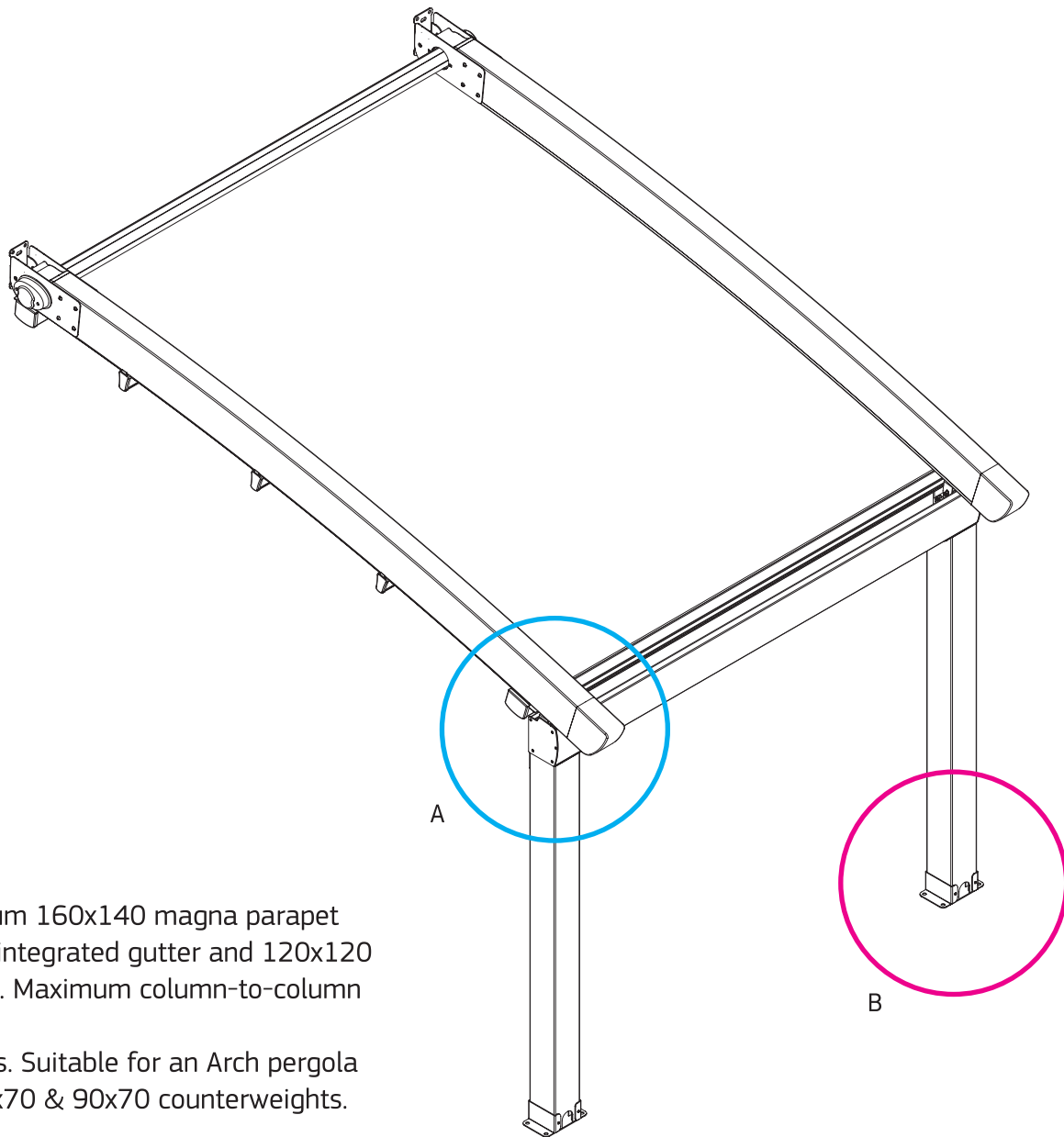
B1



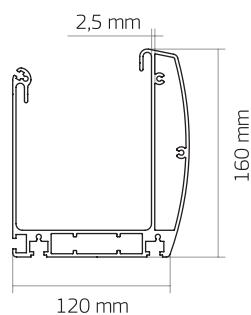
B2

Arch

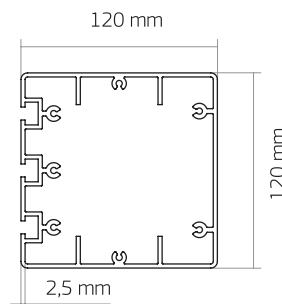
Details of the connection of a pergola with a 160x140 magna parapet



Aluminium 160x140 magna parapet with an integrated gutter and 120x120 columns. Maximum column-to-column distance 5 metres. Suitable for an Arch pergola with 43x70 & 90x70 counterweights.



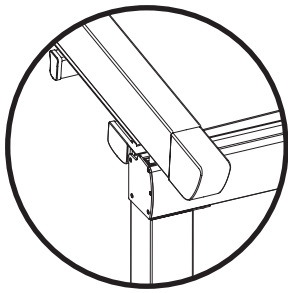
160x140 Column



120x120 Column

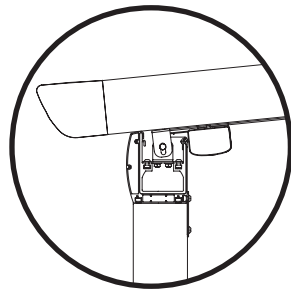
Details of the connection of an Arch pergola with a 160x140 magna parapet

Details of the rafter-parapet connection



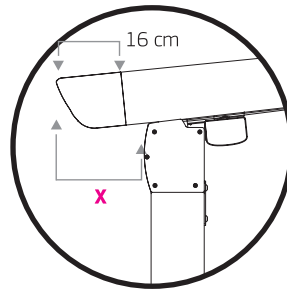
A1

External detail of Rafter-to-Parapet connection. The total parapet length is always 2 cm longer than the total pergola length.



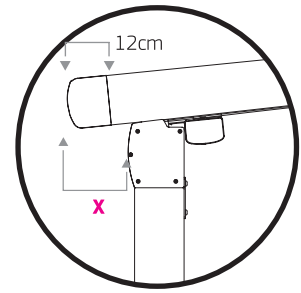
A2

Internal Detail of Rafter-to-Parapet connection.



A3

Support for an Arch pergola with an 16 cm Aluminium Cover (Corbel) on a 160x140 magna Parapet.

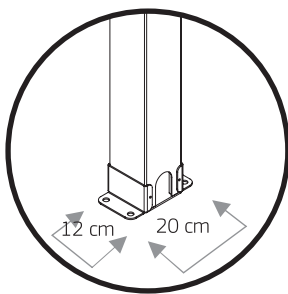


A4

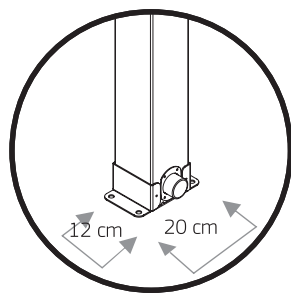
Support for an Arch pergola with an 12 cm Aluminium Cover (Corbel) on a 160x140 magna Parapet

the **X** in images A3, A4 indicates the total overhang of the rafter from the parapet. The minimum overhang is equal to the aluminium cover. The recommended overhang is equal to the aluminium cover + 5 cm

Details of parapet column and rainwater extraction



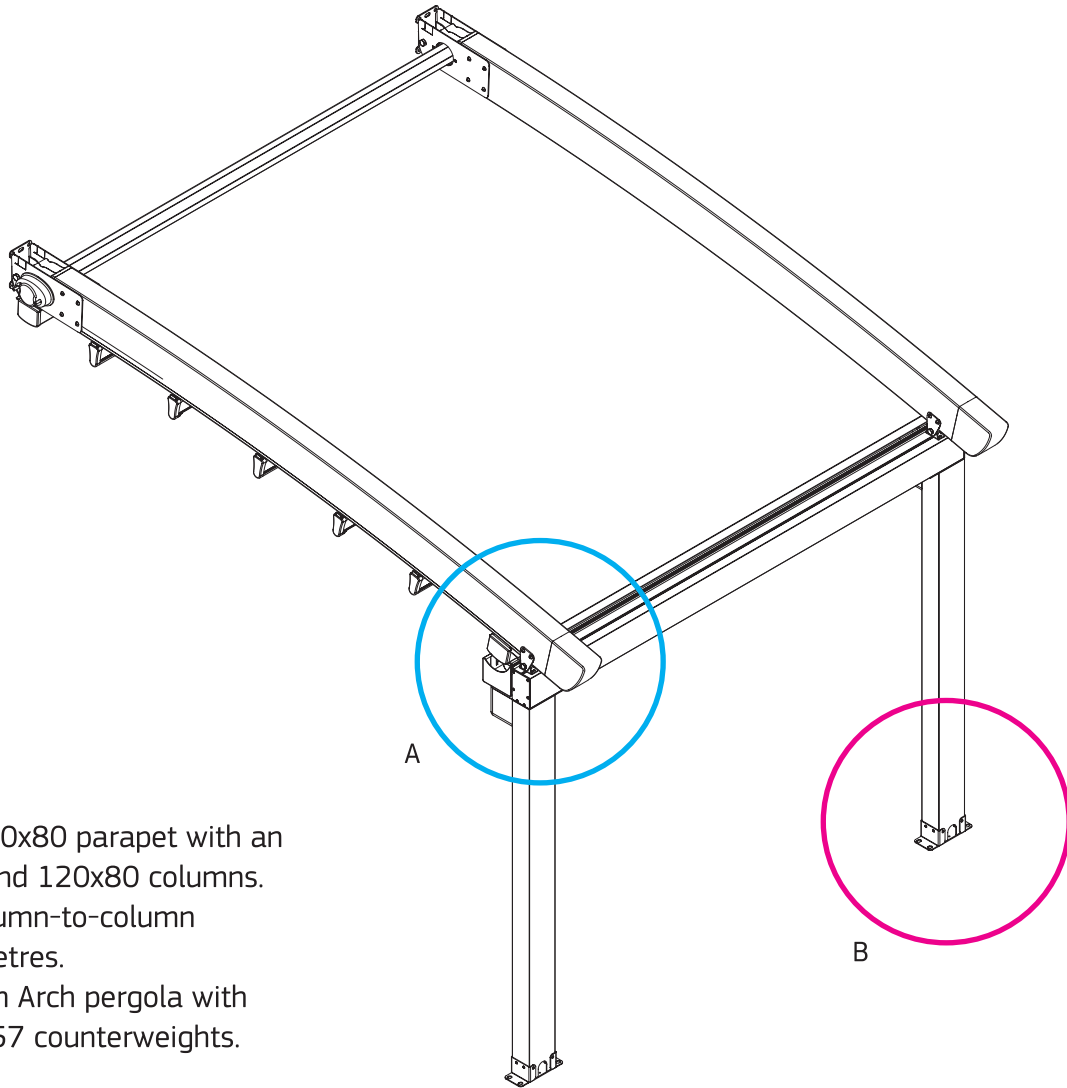
B1



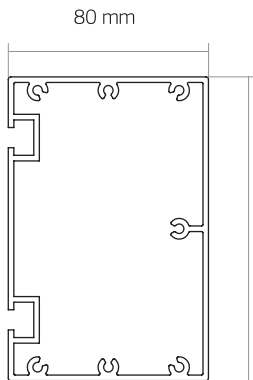
B2

Arch

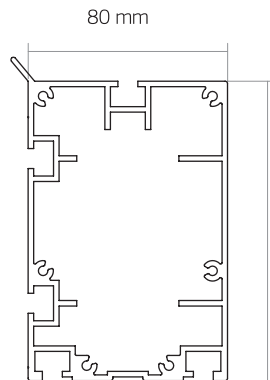
Details of the connection of a pergola with a 160x140 parapet



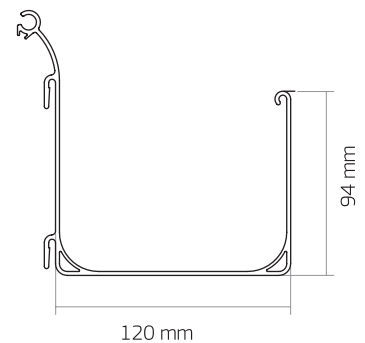
Aluminium 120x80 parapet with an extra gutter and 120x80 columns.
Maximum column-to-column distance: 4 metres.
Suitable for an Arch pergola with 38x57 & 90x57 counterweights.



120x80 Column



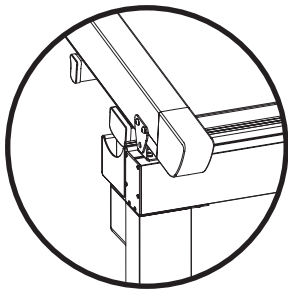
120x80 Parapet



140x120 Gutter

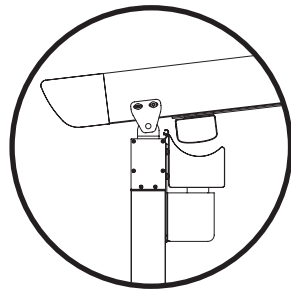
Choices for support of an Arch pergola with a 120x80 parapet

Details of the rafter-parapet connection



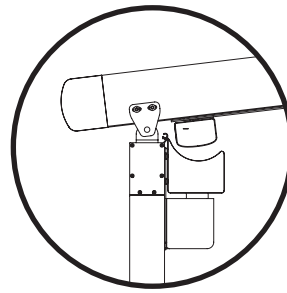
A1

External detail of Rafter-to-Parapet connection. The total parapet length is always 2 cm longer than the total pergola length.



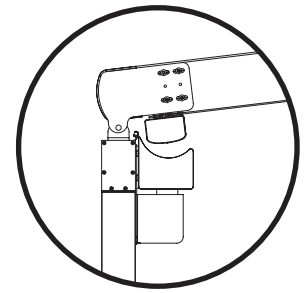
A3

Arch pergola with a protruding rafter and 16 cm Aluminium Cover (Corbel) on a 120x80 parapet with an extra 140x120 gutter.



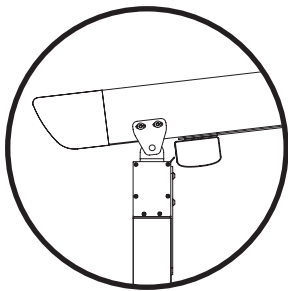
A5

Arch pergola with a protruding rafter and 12 cm Aluminium Cover (Corbel) on a 120x80 parapet with an extra 140x120 gutter.



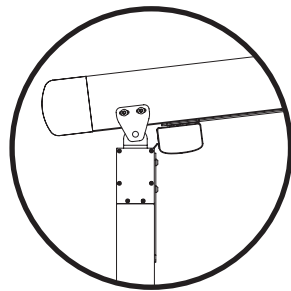
A7

Arch pergola with a face rafter on the 120x80 parapet, 12 cm Aluminium Cover (Corbel) with an extra 140x120 gutter.



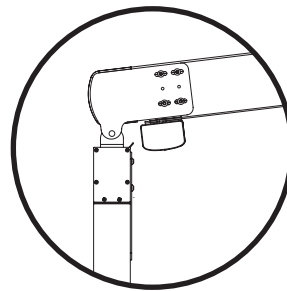
A2

Arch pergola with a protruding rafter and 16 cm Aluminium Cover (Corbel) on a 120x80 parapet



A4

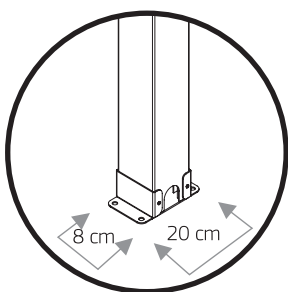
Arch pergola with a protruding rafter and 12 cm Aluminium Cover (Corbel) on a 120x80 parapet



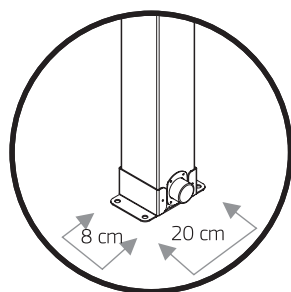
A6

Arch pergola with a face rafter on the 120x80 parapet, 12 cm Aluminium Cover (Corbel).

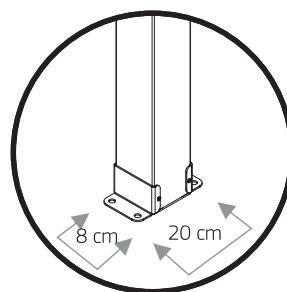
Details of parapet column and rainwater extraction



B1



B2

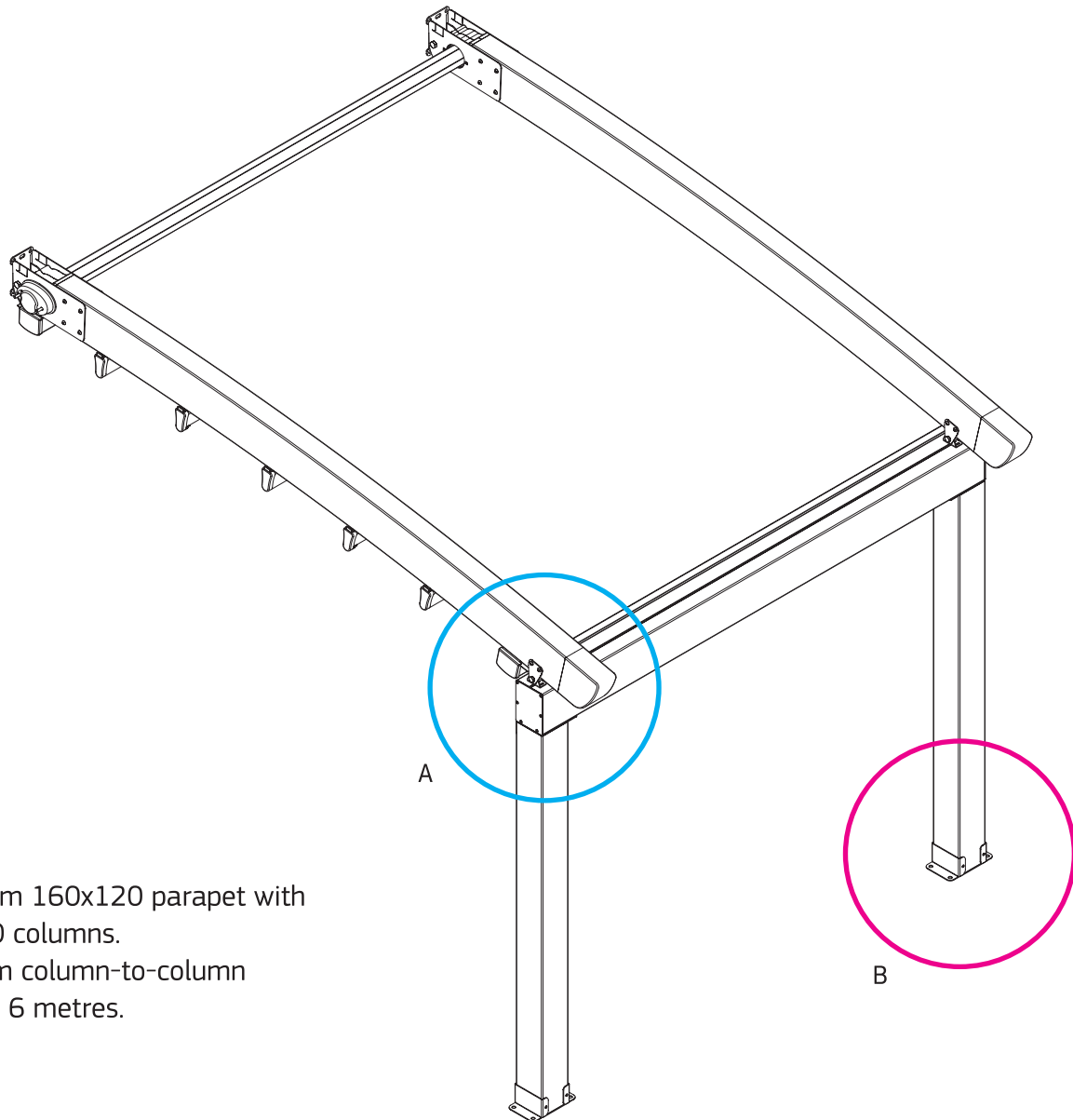


B3

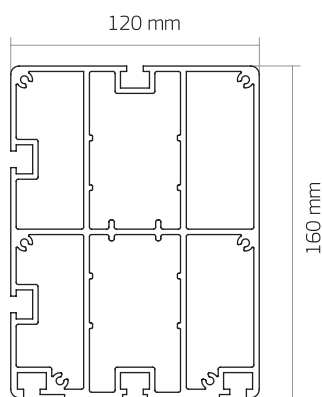
Parapet column without rainwater extraction

Arch

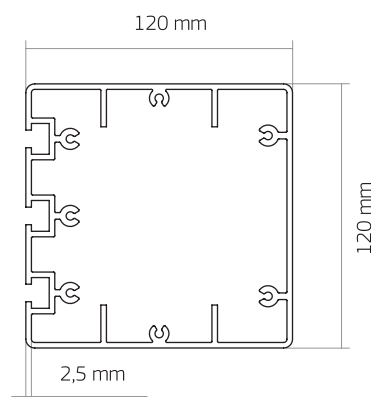
Details of the connection of a pergola with a 160x120 parapet



Aluminium 160x120 parapet with
120x120 columns.
Maximum column-to-column
distance: 6 metres.



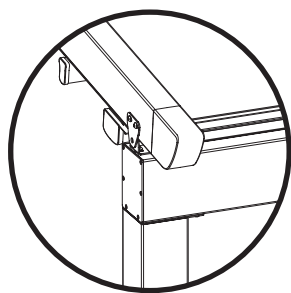
Parapet 160x120



Column 120x120

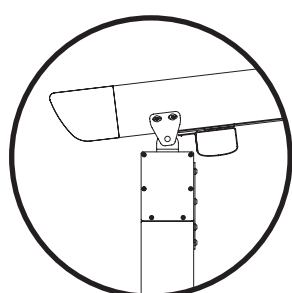
Details of the connection of a pergola with a 160x120 parapet

Details of the rafter-parapet connection



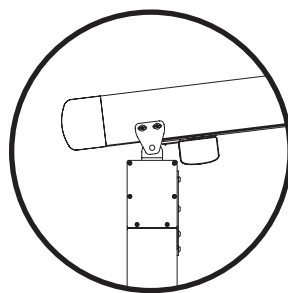
A1

External detail of the Rafter-to-Parapet connection. The total parapet length is always 2 cm longer than the total pergola length.



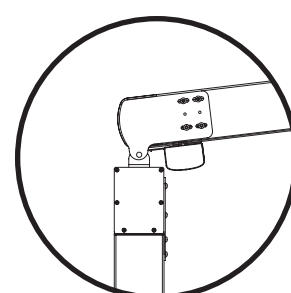
A2

Arch pergola with a protruding rafter and 16 cm Aluminium Cover (Corbel) on a 160x120 parapet.



A3

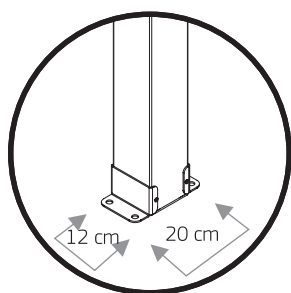
Arch pergola with a protruding rafter and 12 cm Aluminium Cover (Corbel) on a 160x120 parapet.



A4

Arch pergola with a face rafter on the 160x120 parapet, 12 cm Aluminium Cover (Corbel).

Details of parapet column and rainwater extraction

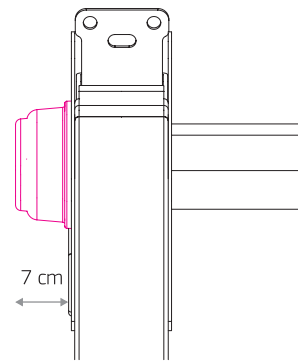
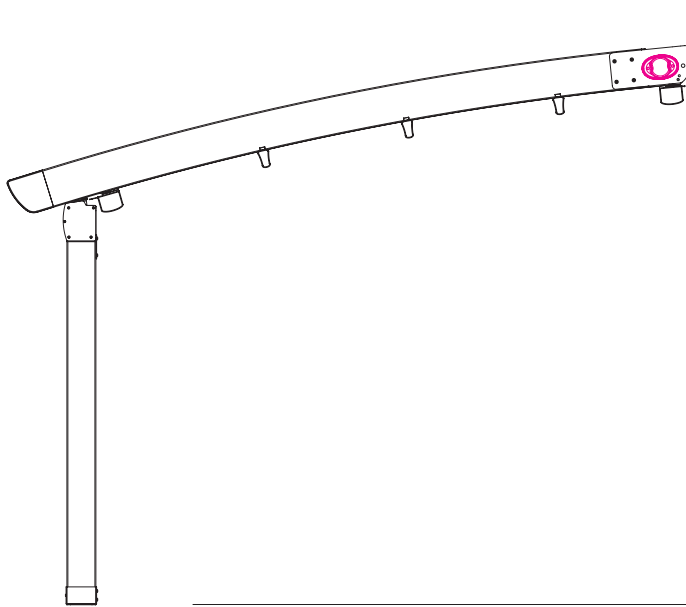


B

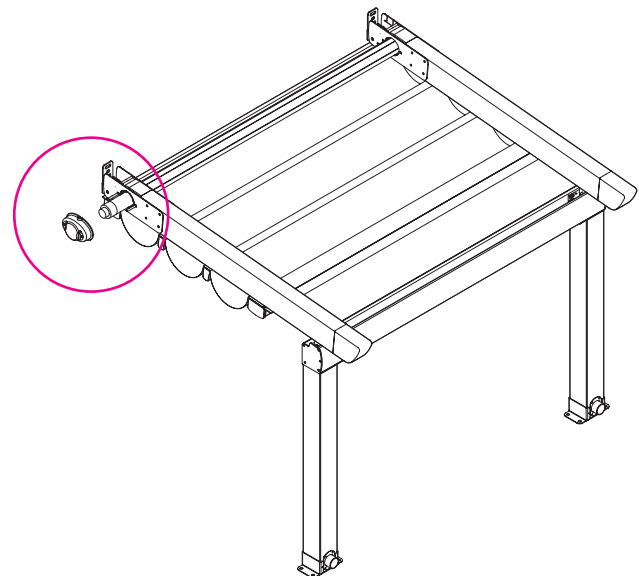
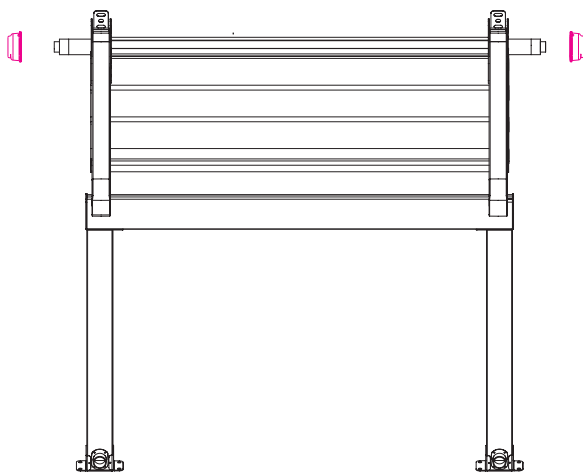
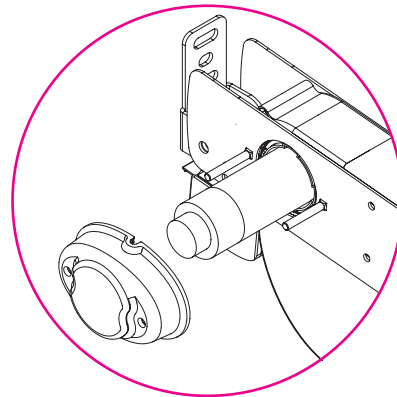
Arch

Motion transmission motor

Motion is transmitted in the Arch pergola by a tubular motor. For pergolas with large areas and special requirements, two tubular motors can be installed.



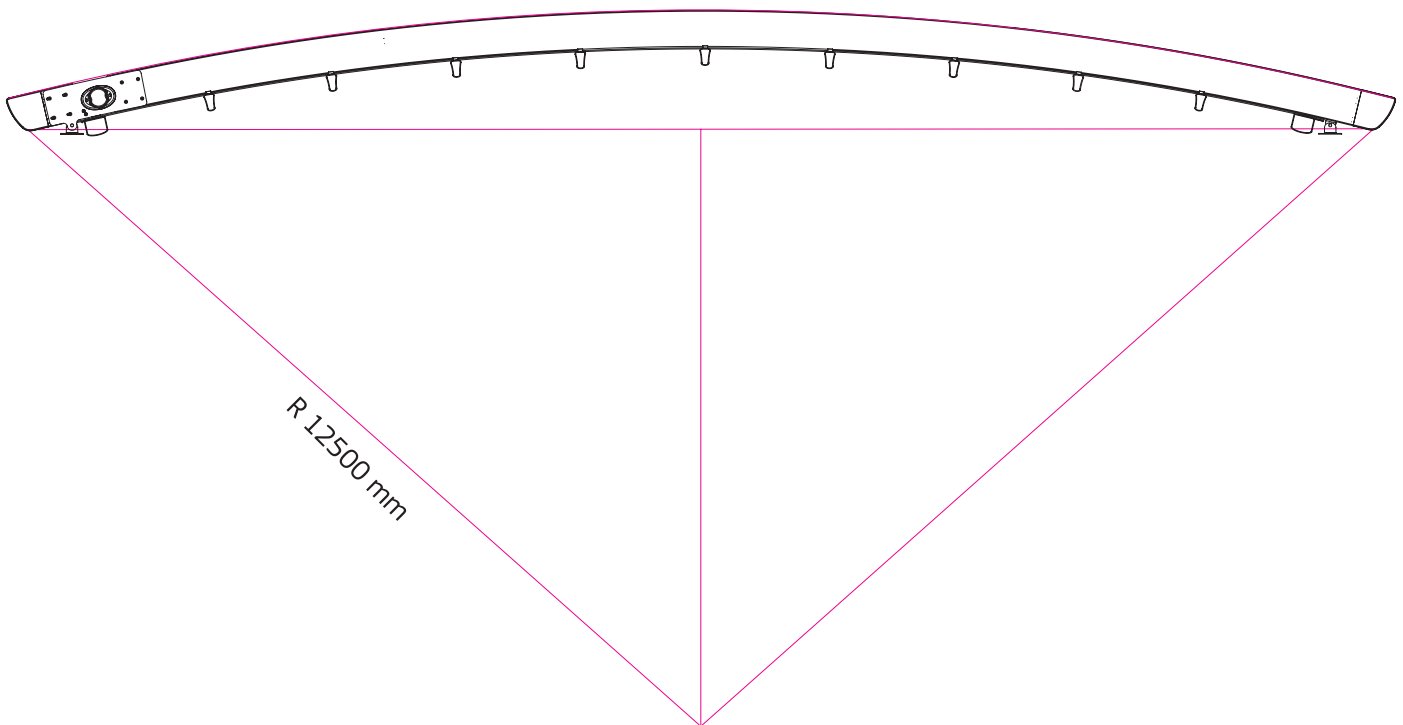
Motor cover detail



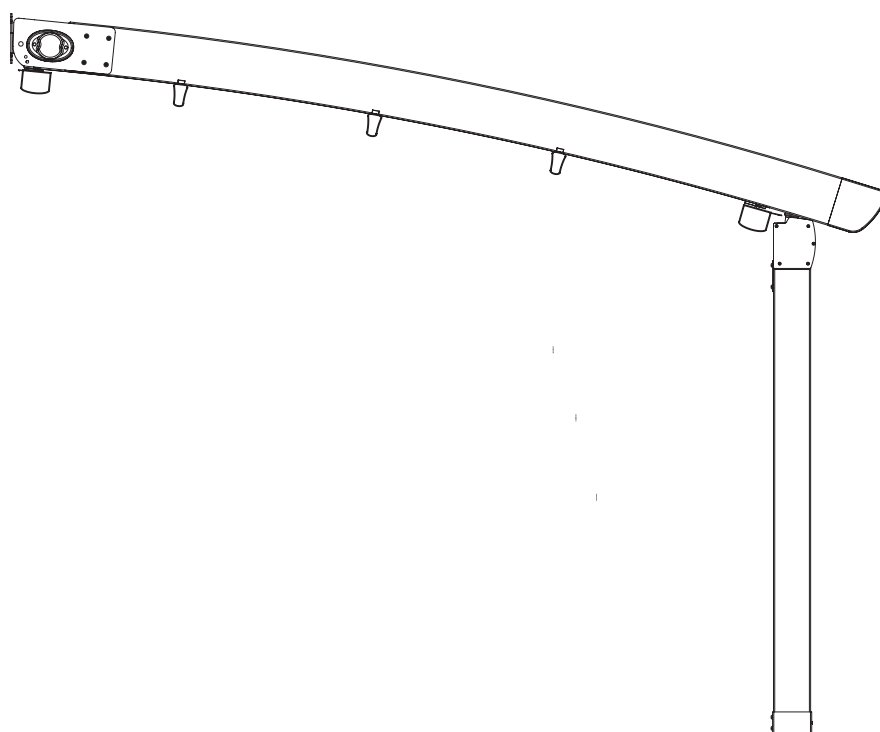
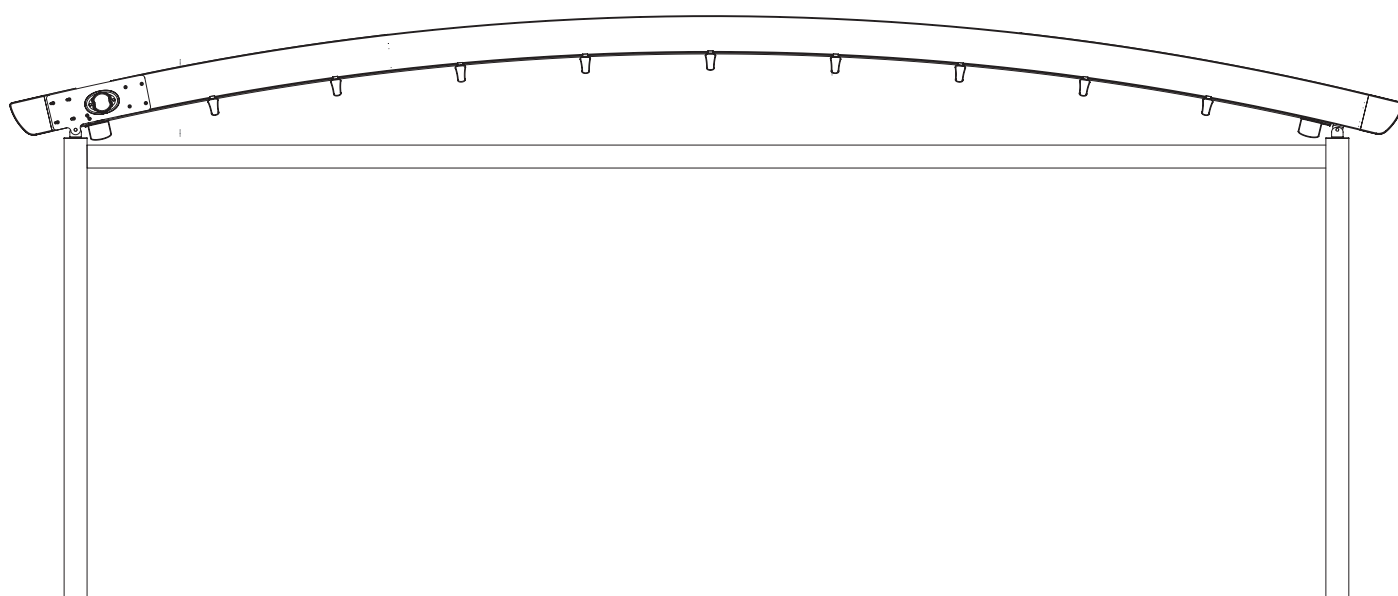
Arch

General information on pergola installation

The curve of pergola Arch is constant and the radius is 12500 mm

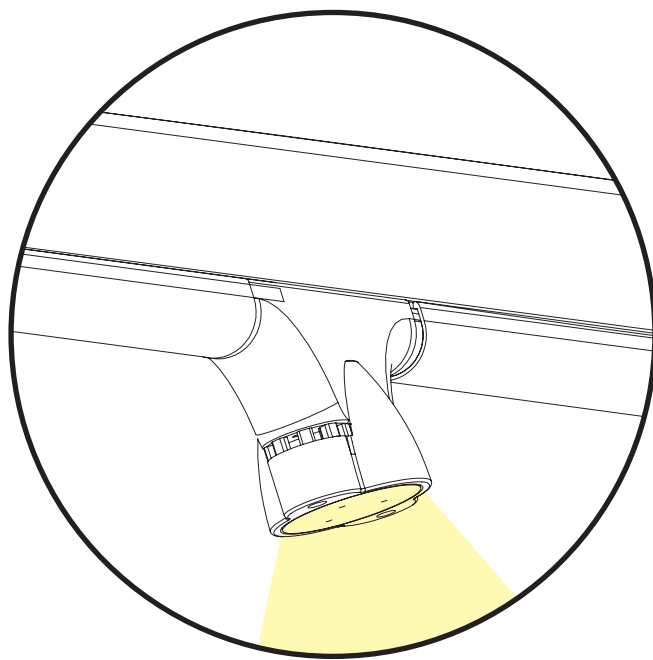
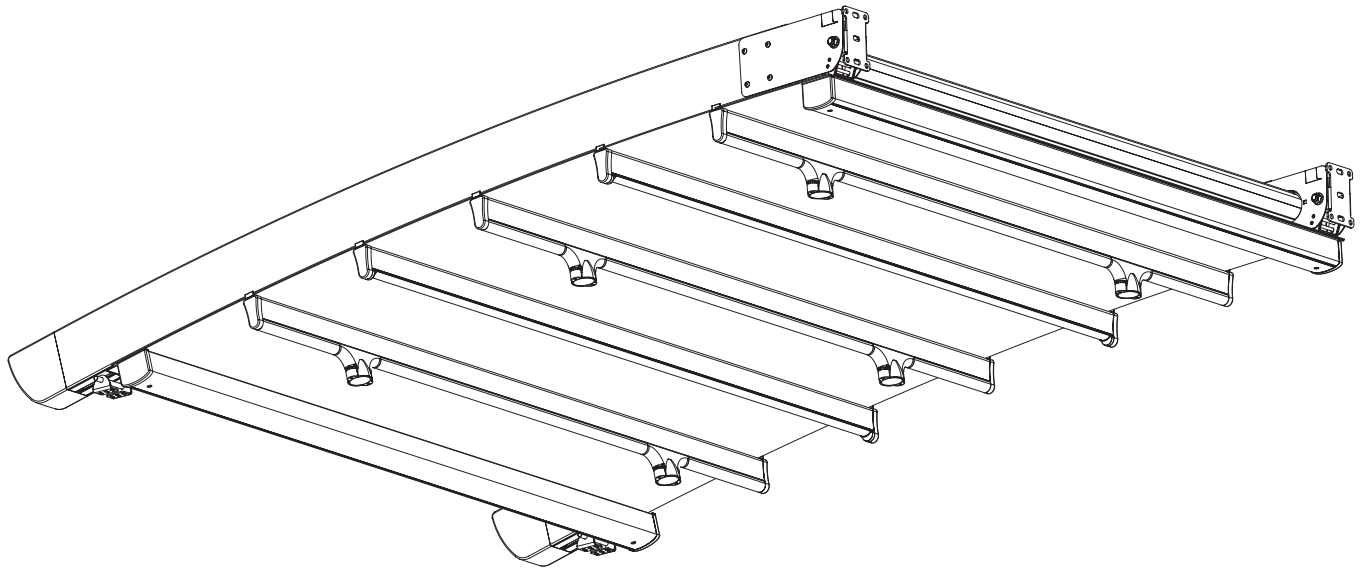


Special pergola applications



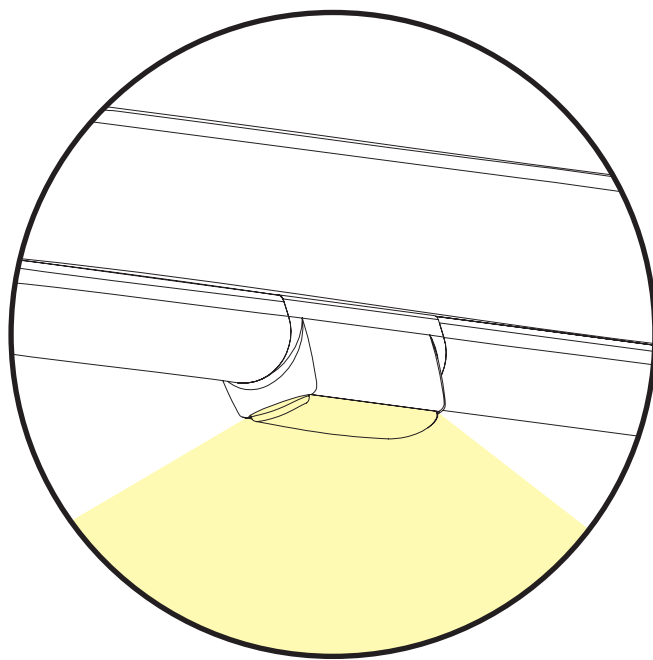
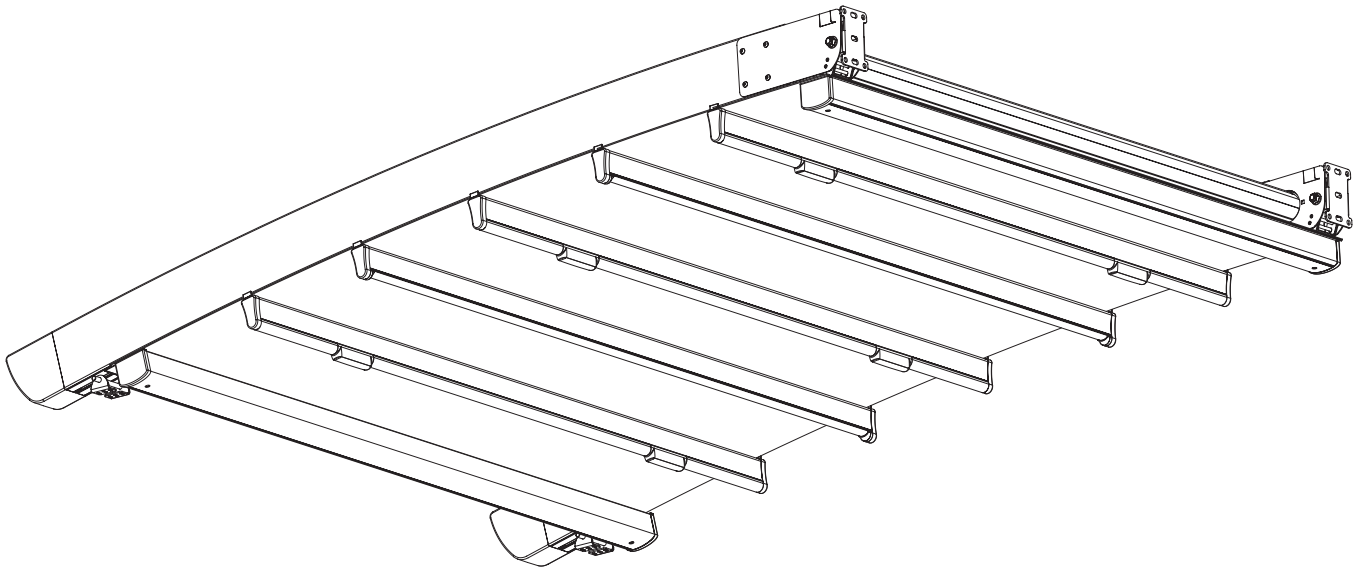
Arch

Lighting system



Lighting system with spot-type lighting fixtures.
LED 12V lamps with a beam angle of up to 60°. In two lighting colours,
Cool White and Warm White.

Lighting system

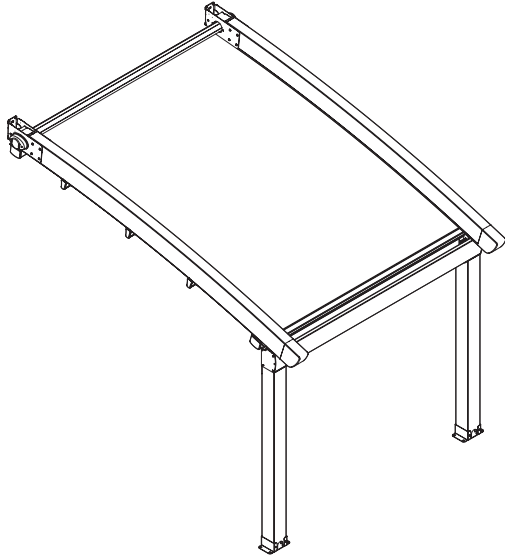


Lighting system with flat lighting fixtures.
LED 12V lamps with a beam angle of up to 150°. In two lighting colours,
Cool White and Warm White.

Arch

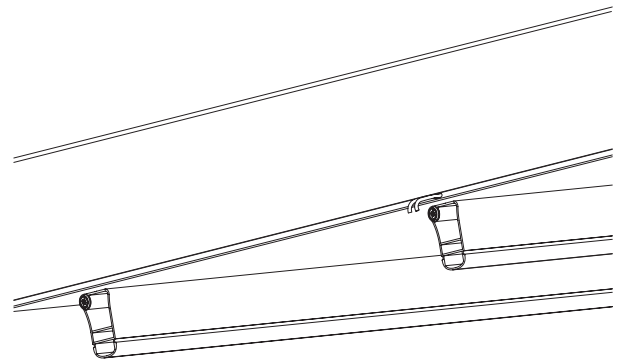
Lighting system
Installation instructions

1



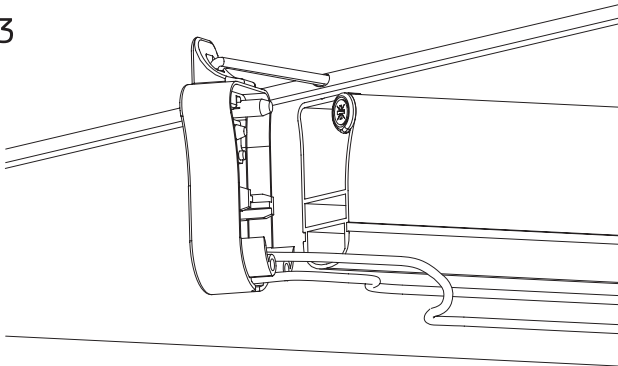
Arch Pergola Installation

2



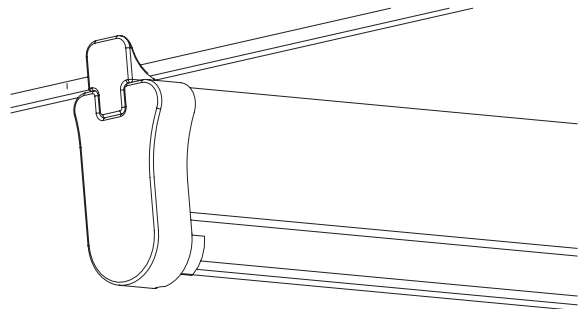
Select the counterweights that will have lighting and open a small hole on the coating material above them - then extract the cable couples.

3

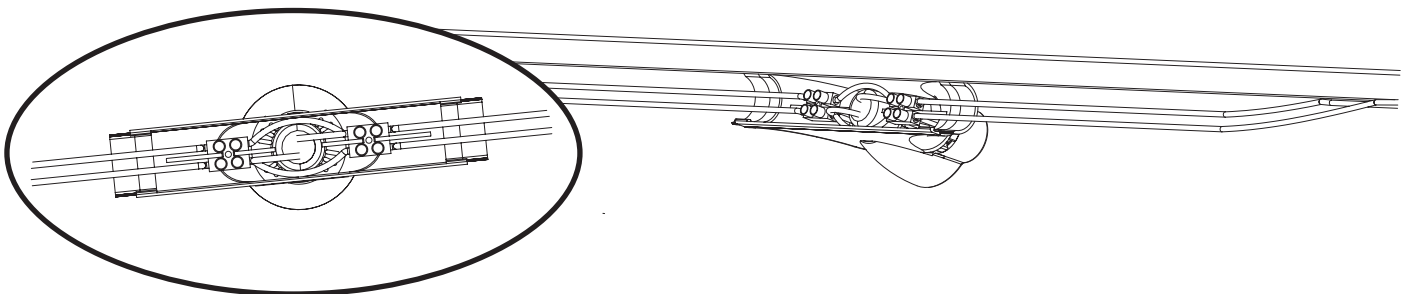


Thread the cables through the plastic counterweight stoppers

4



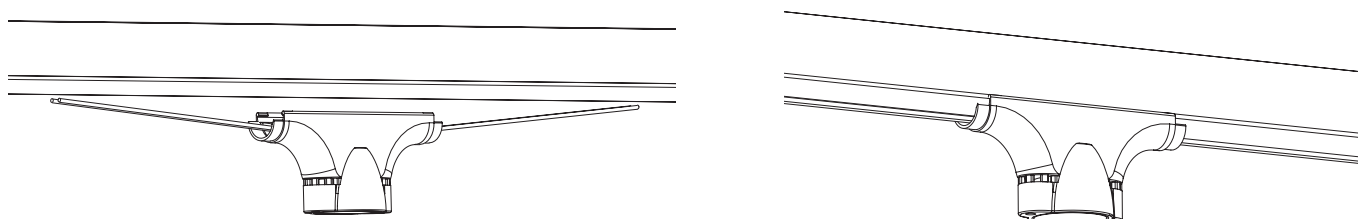
5



Connect the cables to the lighting fixture. Take one section of the cable found in the packaging and connect it from one lighting fixture to another

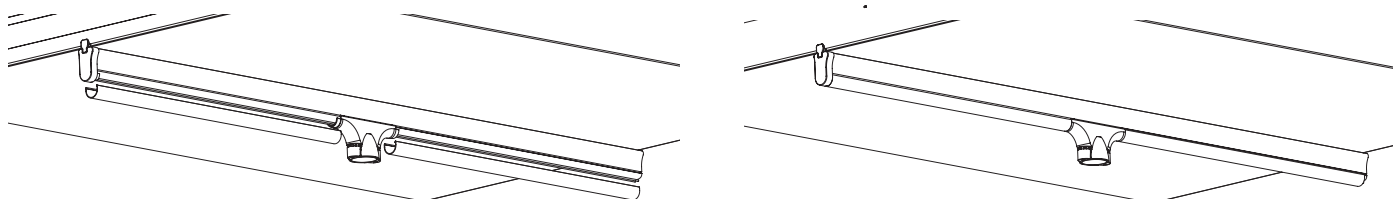
Lighting system
Installation instructions

6



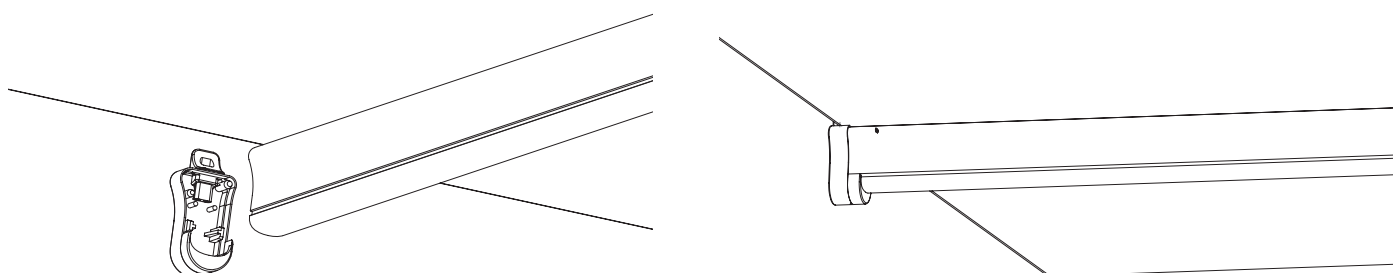
Clamp the lighting fixtures to the counterweights.

7



Cover the cables with the special profiles found in the packaging.

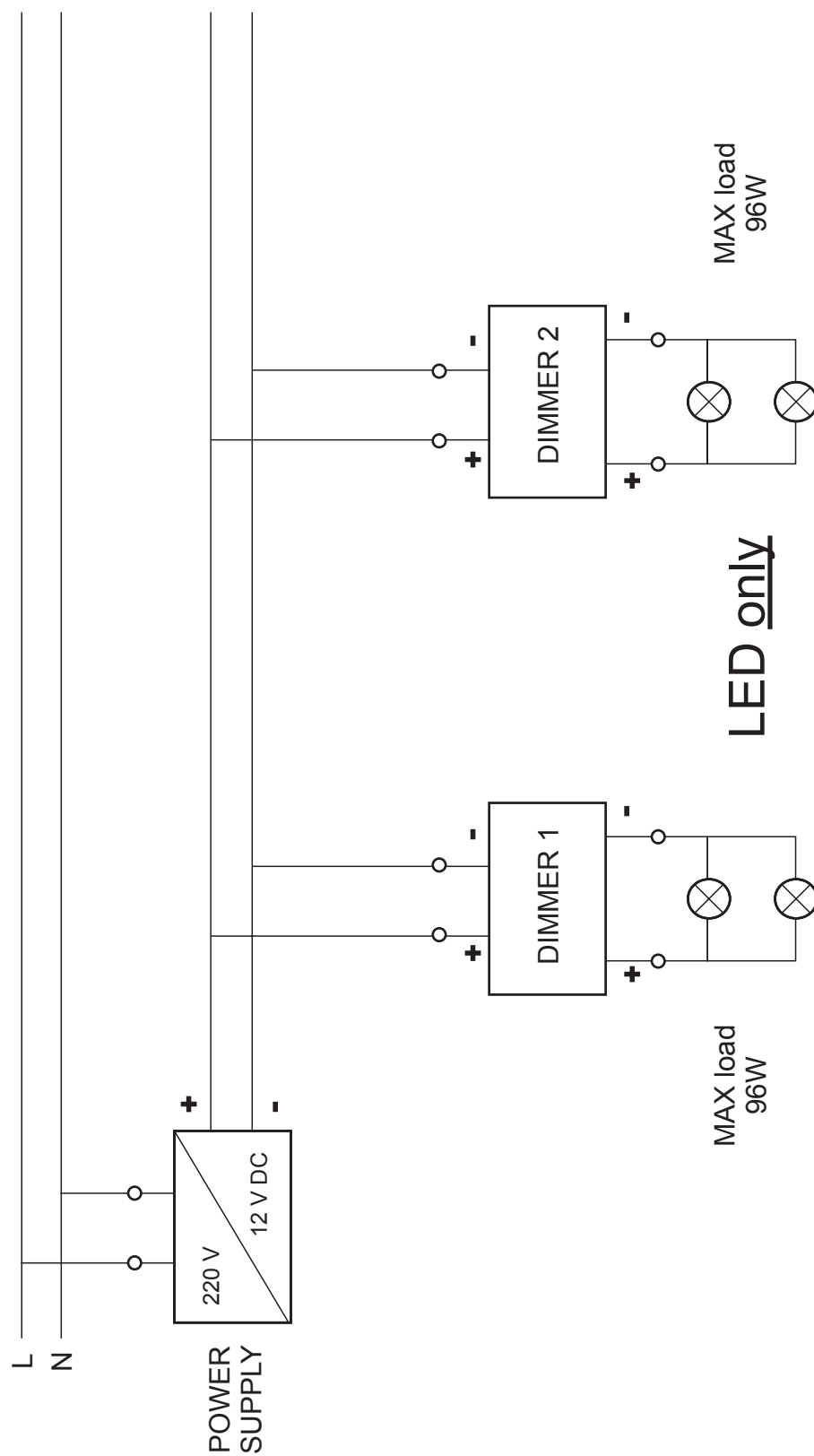
8



Finally, install all the plastic parts of the counterweights.

Arch

Lighting system
Installation instructions





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