

METAFORM SHADING SYSTEMS



TECHNICAL MANUAL

STAR

WWW.METAFORM.GR



metaform shading systems



Contents

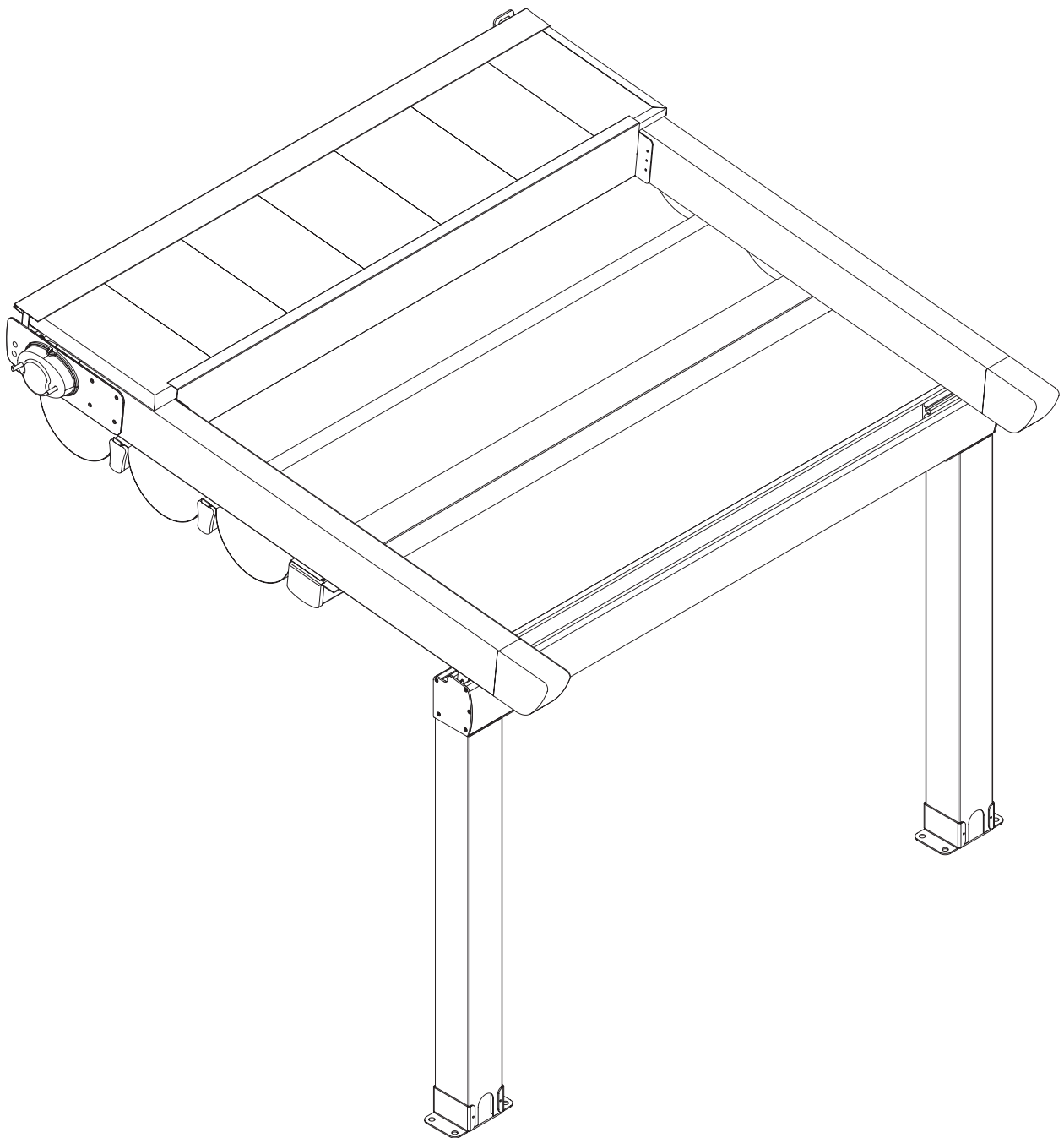
General image of STAR pergola	6
Profile cross-sections	7
Pergola dimensions	8
Support choices (Wall / Roof)	10
Counterweight depth choices	11
Pergola with a 120x100 star parapet	12
Pergola with a 160x140 magna parapet	14
Pergola with a 120x80 parapet	16
Pergola with a 160x120 parapet	18
Star pergola with cover	20
Motion transmission (motor)	21
General information on pergola installation	22
Special applications	23
Lighting system / installation instructions	24

Pergola **Star**

General view of the pergola.

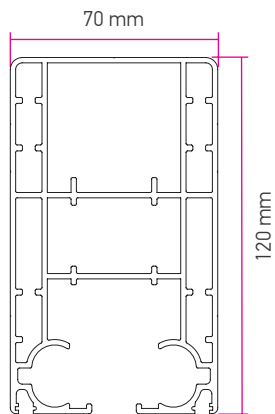
A new, pioneering pergola, exclusively designed by Metaform SA. Reinforced construction and improved aesthetics, when maximum coverage of outdoor spaces is required. Retractable roof for adjustable coverage and shading.

Quality construction for sturdiness, functionality, high aesthetics and safety. Durable protection, with certified resistance to Sun, Rain & Wind.

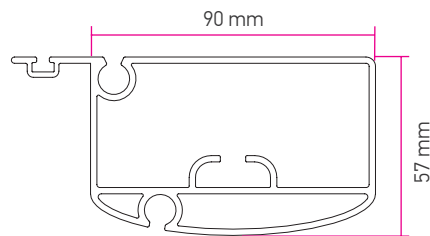


Pergola **Star**

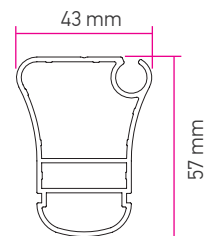
Profile cross-sections.



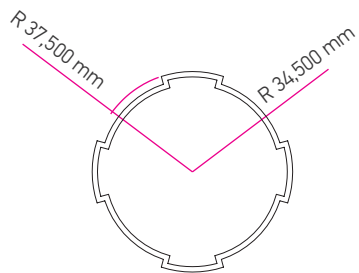
1 rafter 70X120



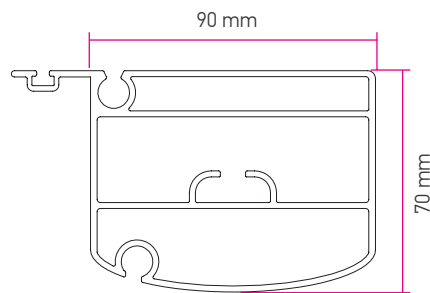
2 wide counterweight 90X57



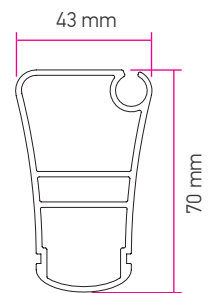
3 narrow counterweight 43X57



4 tube
(not shown in diagram)



5 wide counterweight 90X70

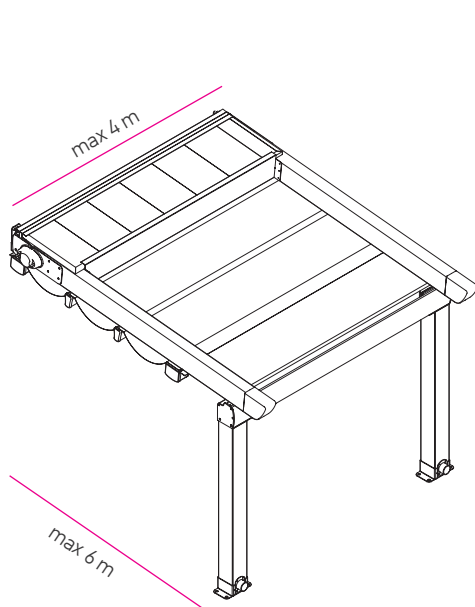


6 narrow counterweight 43x70

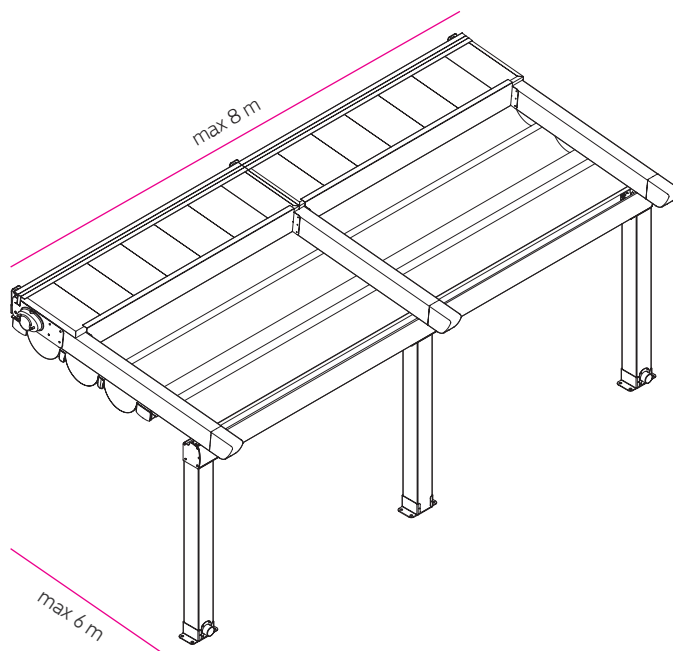
You can choose between counterweights 2-3 and 5-6.

Pergola **Star**

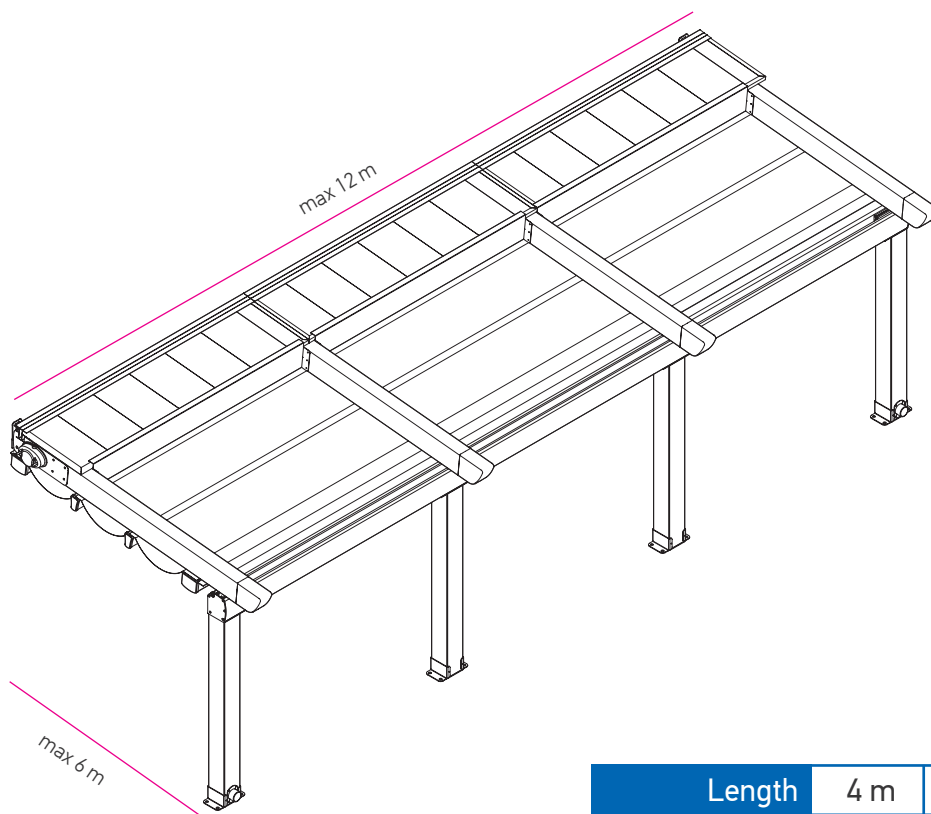
Maximum pergola projection & maximum rafter distance with 43x57 & 90x57 counterweights.



2 rafters



3 rafters

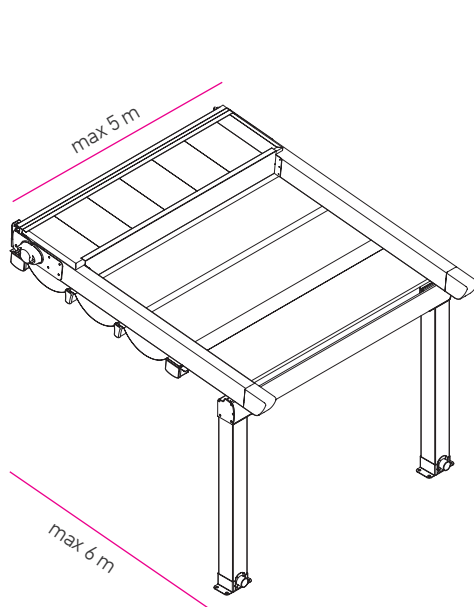


4 rafters

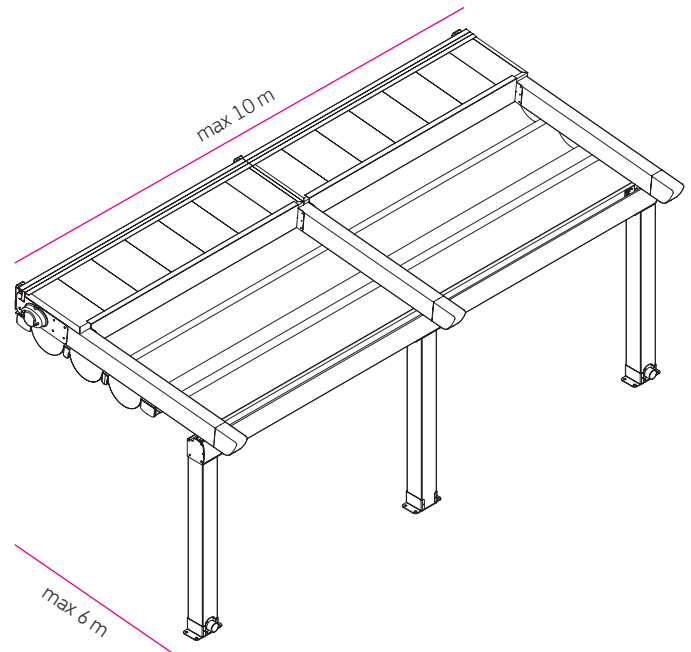
Length	4 m	8 m	12 m	16 m	20 m
Rafters (pc)	2 pcs	3 pcs	4 pcs	5 pcs	6 pcs
Max Projection	6 m	6 m	6 m	6 m	6 m

Pergola **Star**

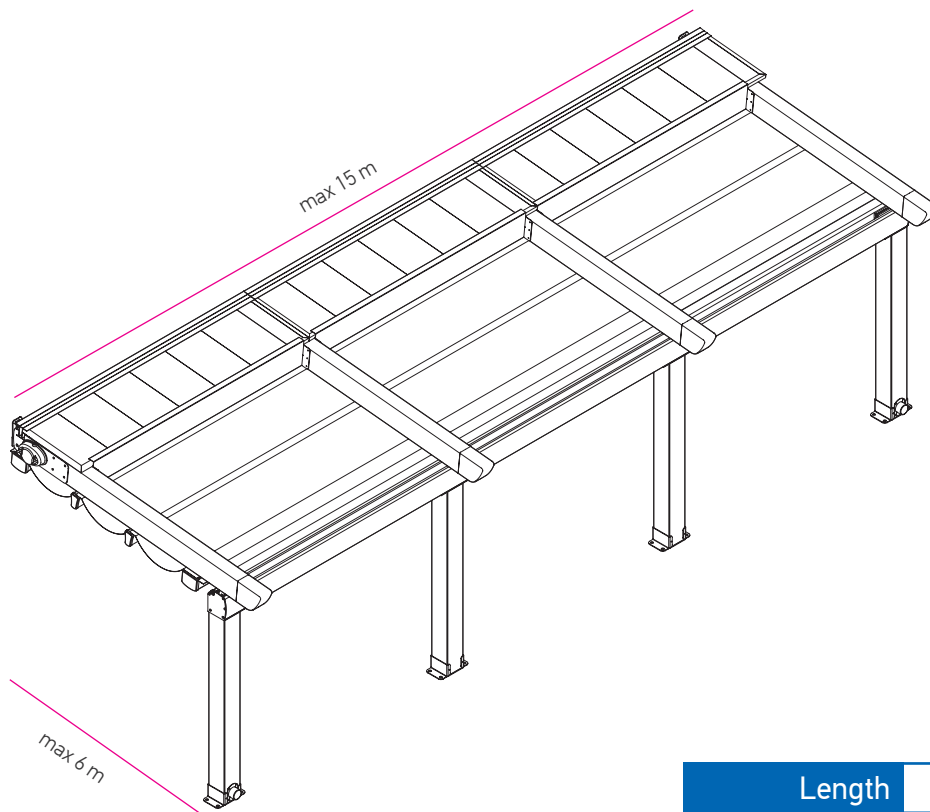
Maximum pergola projection & maximum rafter distance with 43x70 & 90x70 counterweights.



2 rafters



3 rafters

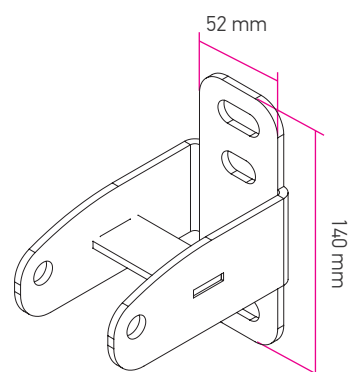
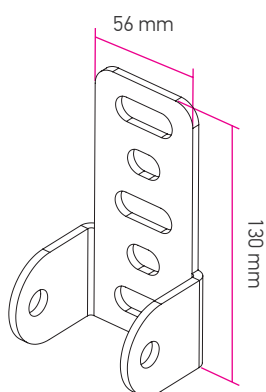
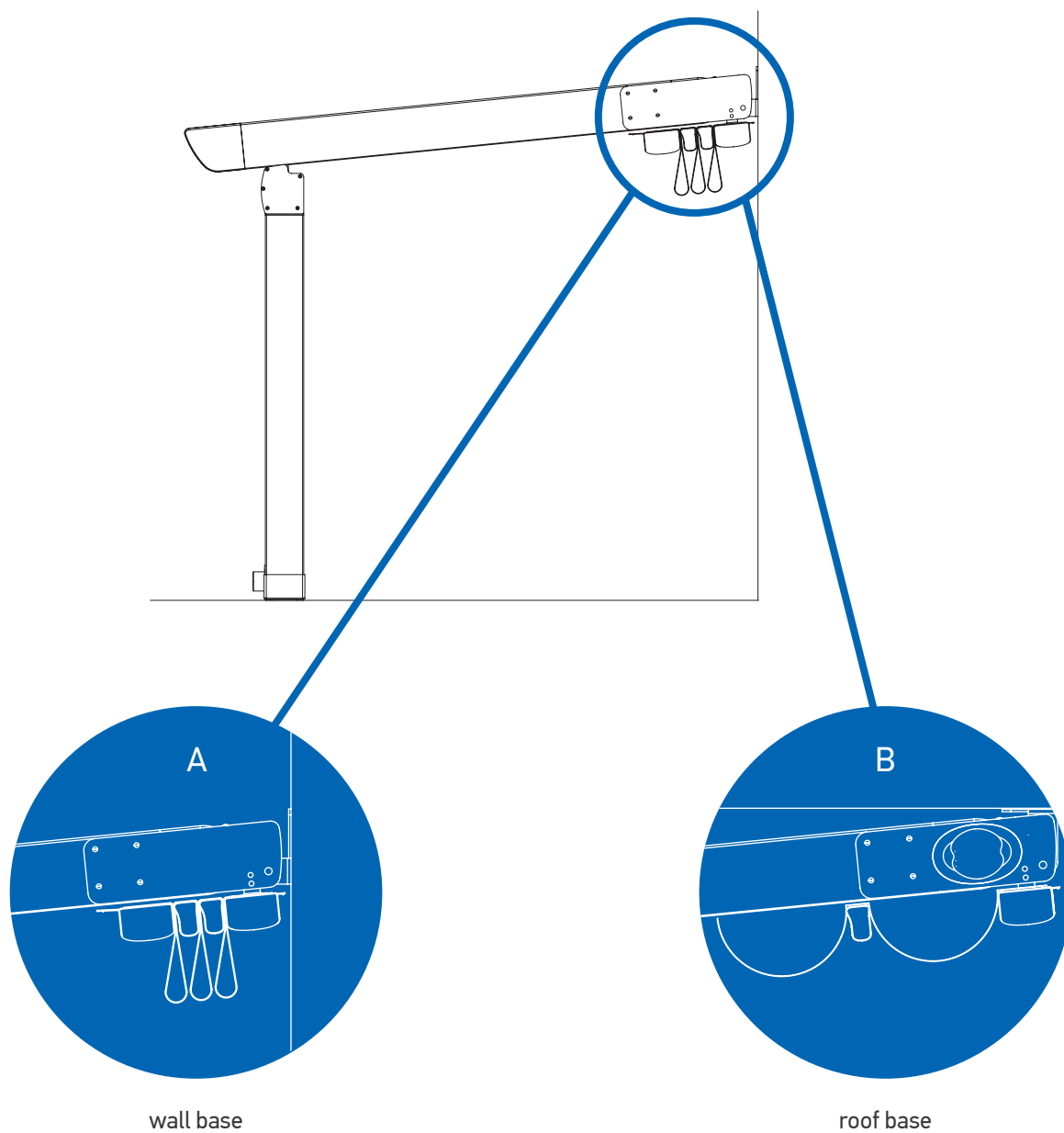


4 rafters

Length	5 m	10 m	15 m	20 m
Rafters (pc)	2 pcs	3 pcs	4 pcs	5 pcs
Max Projection	6 m	6 m	6 m	6 m

Pergola **Star**

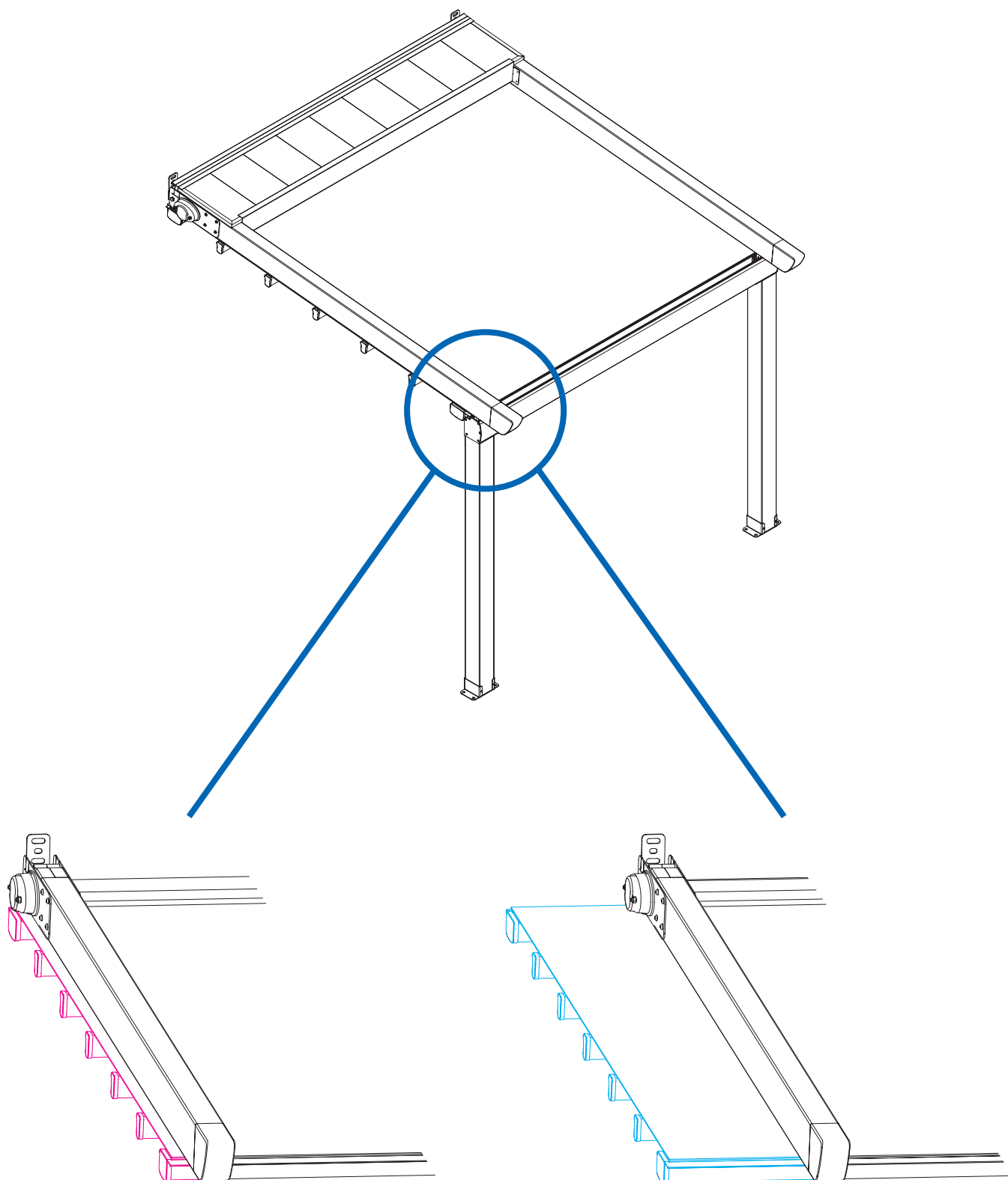
Pergola support options.



Pergola **Star**

Counterweight overhang choice.

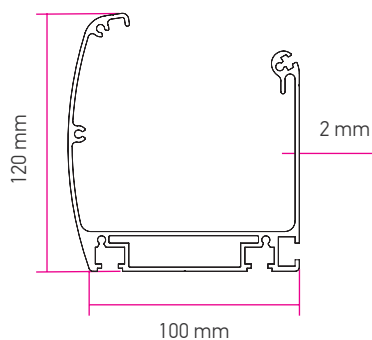
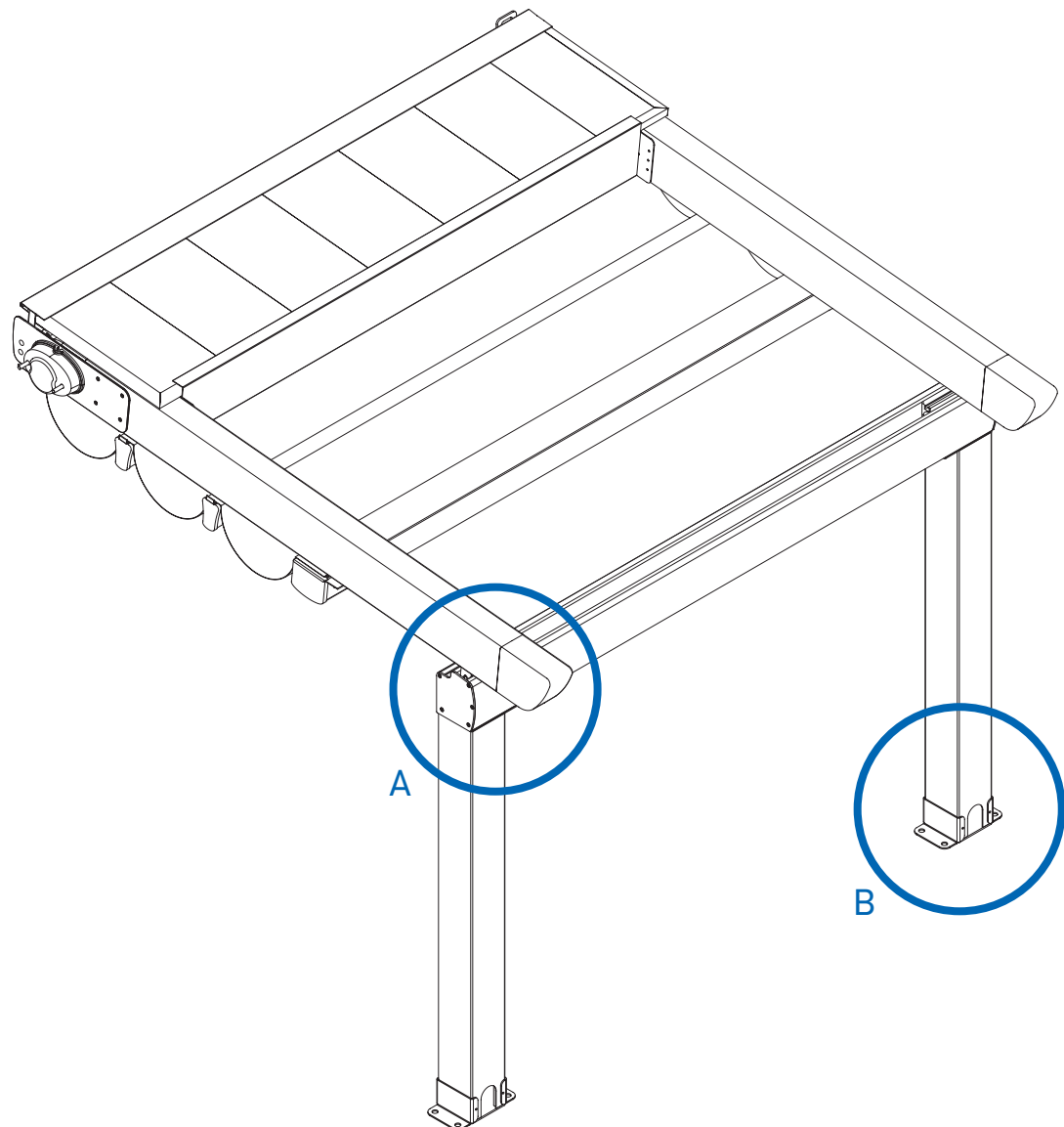
Counterweights can extend a minimum of 1cm from the rafter and a maximum of 80cm.



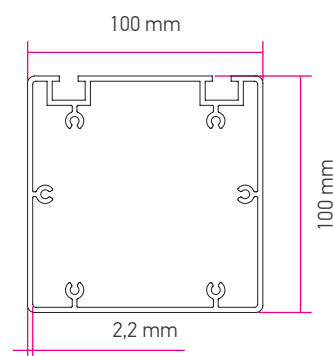
Details of the connection of a pergola with a 120x100 star parapet.

Aluminium 120x100 star parapet with an integrated gutter and 100x100 columns.

Maximum column-to-column distance: 4 metres. Suitable for a Star pergola with 43x57 & 90x57 counterweights.



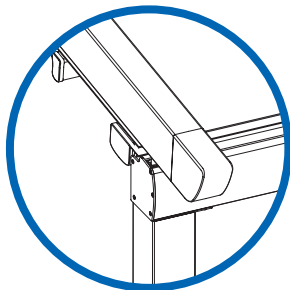
120x100 Parapet-gutter



100x100 Column

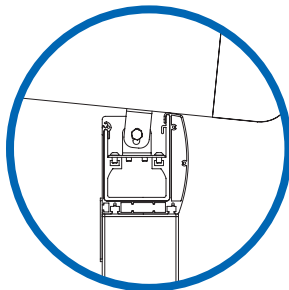
Details of the connection of a pergola with a 120x100 star parapet.

A Details of the rafter-parapet connection



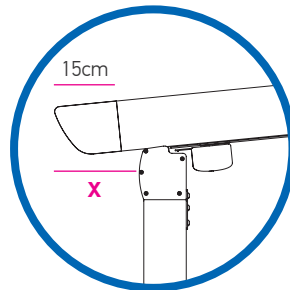
1

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



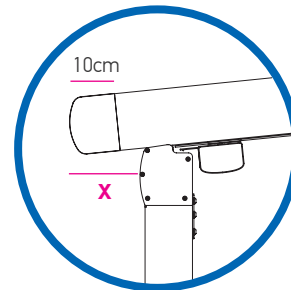
2

Internal Detail of Rafter-to-Parapet connection.



3

Support for a Star pergola with an 15 cm Aluminium Cover (Corbel) on a 120x100 star Parapet.

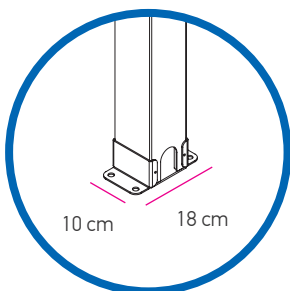


4

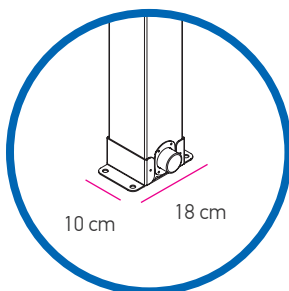
Support for a Star pergola with an 10 cm Aluminium Cover (Corbel) on a 120x100 star Parapet.

The **X** in images 3 & 4 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.

B Details of parapet column and rainwater extraction.



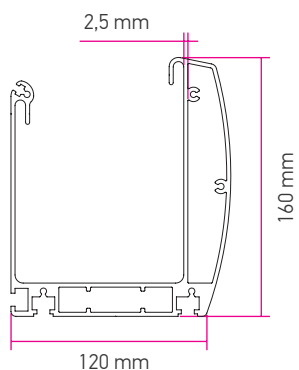
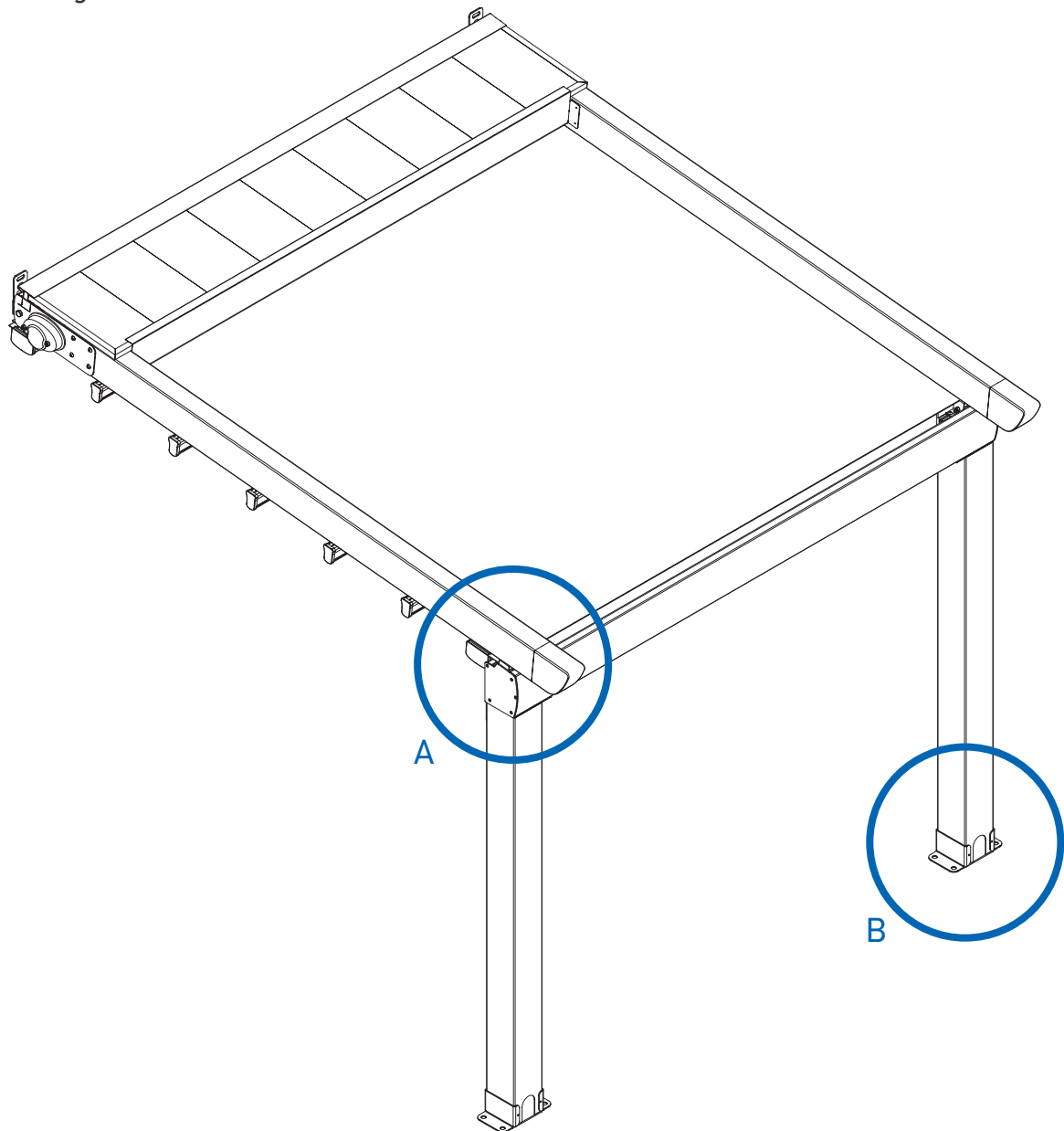
1



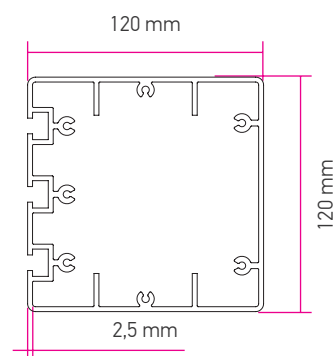
2

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 a Star pergola with 43x70 & 90x70 counterweights.



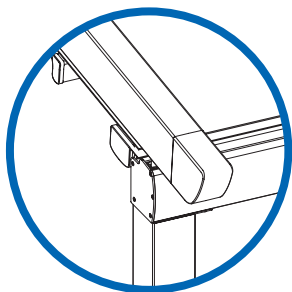
160x140 Parapet-gutter



120x120 Column

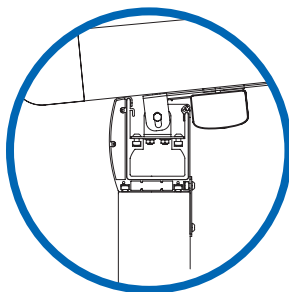
Details of the connection of a pergola with a 160x140 magna parapet.

A Details of the rafter-parapet connection.



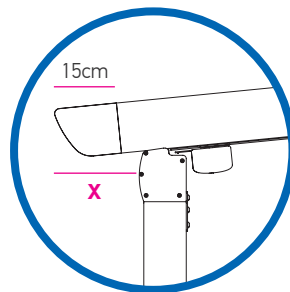
1

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



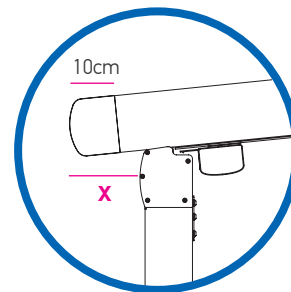
2

Internal Detail of Rafter-to-Parapet connection.



3

Support for a Star pergola with an 15 cm Aluminium Cover (Corbel) on a 160x140 magna Parapet.

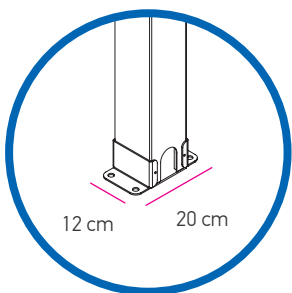


4

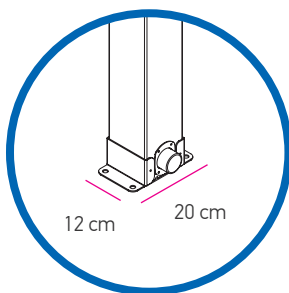
Support for a Star pergola with an 10 cm Aluminium Cover (Corbel) on a 160x140 magna Parapet.

The **X** in images 3 & 4 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.

B Details of parapet column and rainwater extraction.



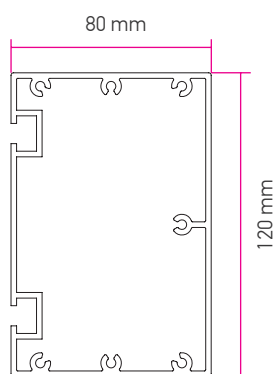
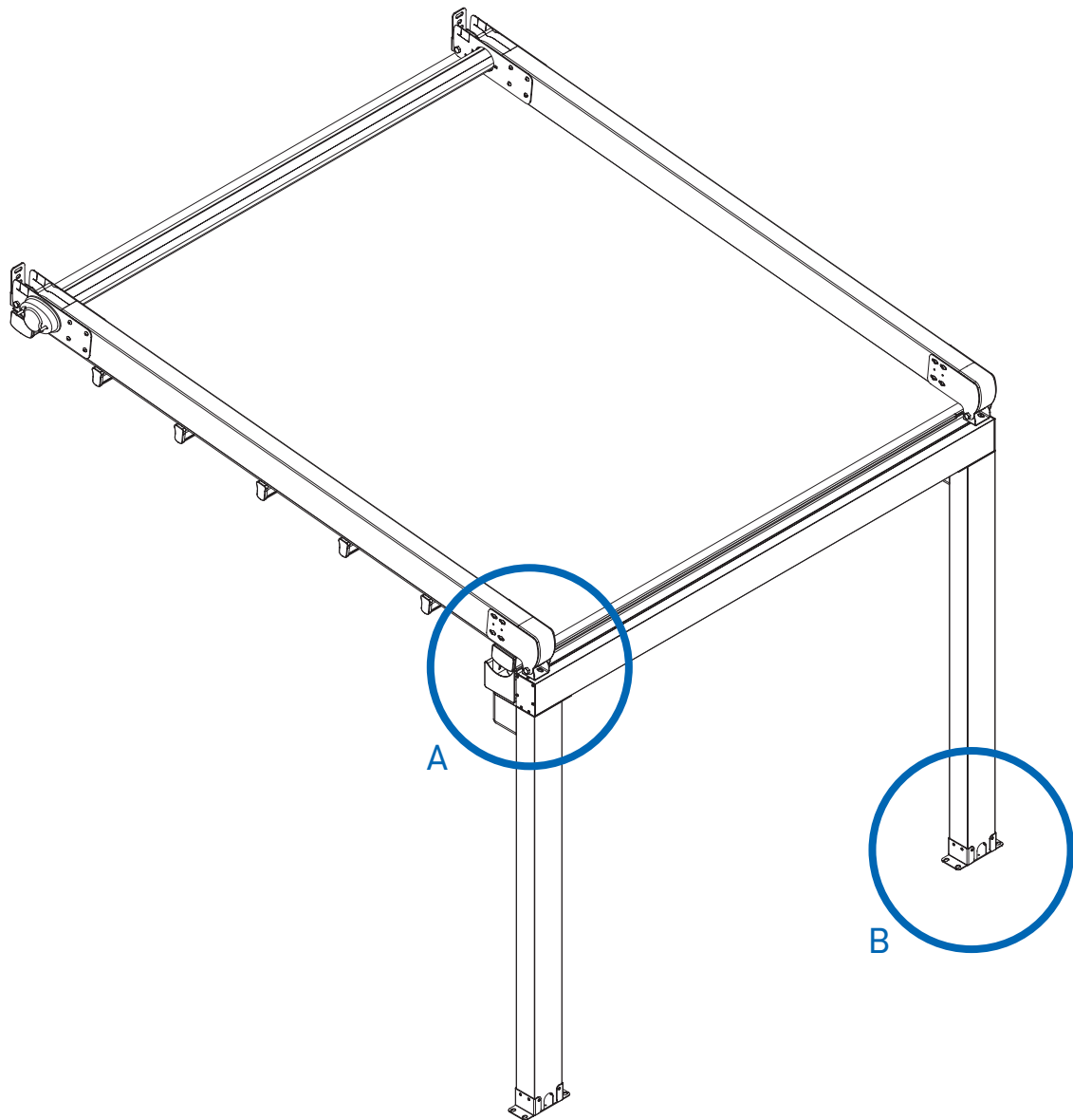
1



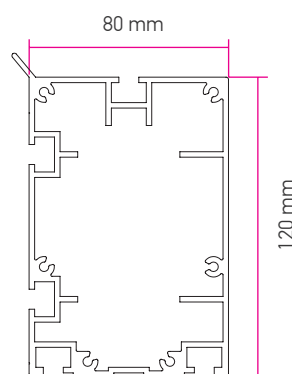
2

Choices for support of a Star pergola with a 120x80 parapet.

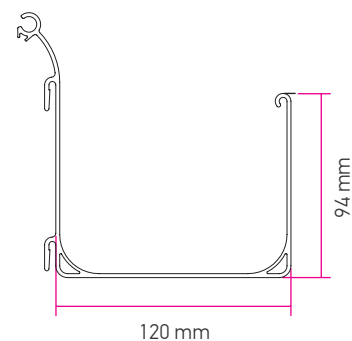
Aluminium 120x80 parapet with an extra gutter and 120x80 columns. Maximum column-to-column distance: 4 metres. Suitable for a Star pergola with 43x57 & 90x57 counterweights.



120x80 Column



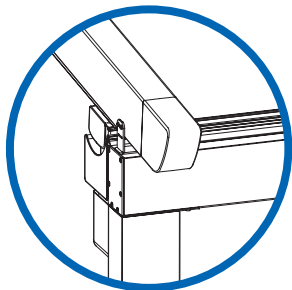
120x80 Parapet



140x120 Gutter

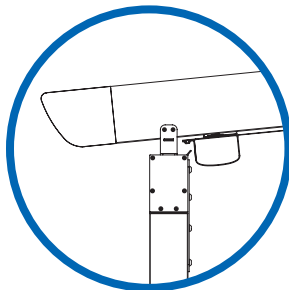
Choices for support of a Star pergola with a 120x80 parapet.

A Details of the rafter-parapet connection.



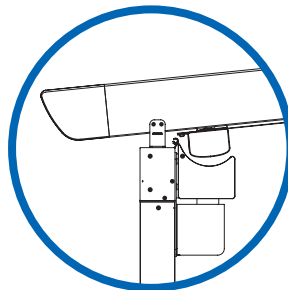
1

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



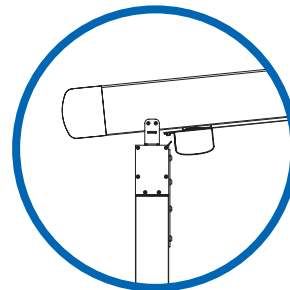
2

Star pergola with a protruding rafter and 15 cm Aluminium Cover (Corbel) on a 120x80 parapet.



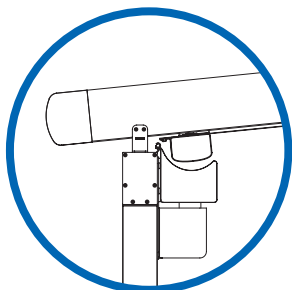
3

Star pergola with a protruding rafter and 15 cm Aluminium Cover (Corbel) on a 120x80 parapet with an extra 140x120 gutter.



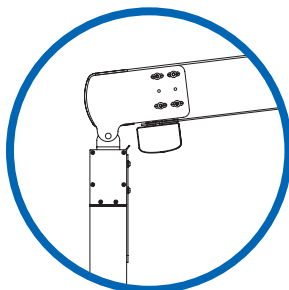
4

Star pergola with a protruding rafter and 10 cm Aluminium Cover (Corbel) on a 120x80 parapet.



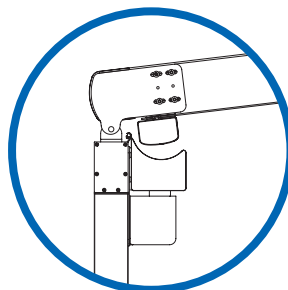
5

Star pergola with a protruding rafter and 10 cm Aluminium Cover (Corbel) on a 120x80 parapet with an extra 140x120 gutter.



6

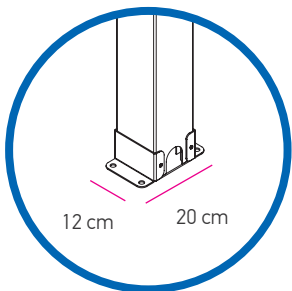
Star pergola with a face rafter on the 120x80 parapet, 10 cm Aluminium Cover (Corbel).



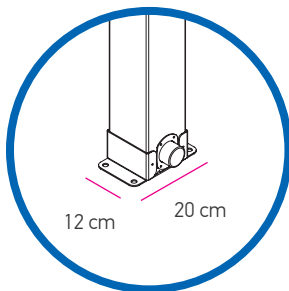
7

Star pergola with a face rafter on the 120x80 parapet, 10 cm Aluminium Cover (Corbel) with an extra 140x120 gutter.

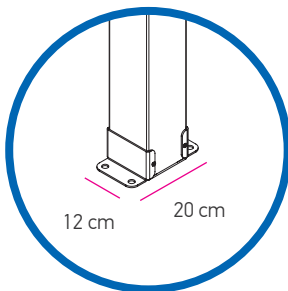
B Details of parapet column and rainwater extraction.



1



2

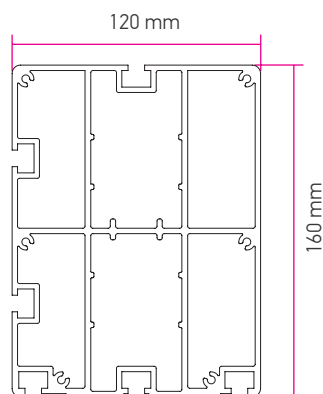
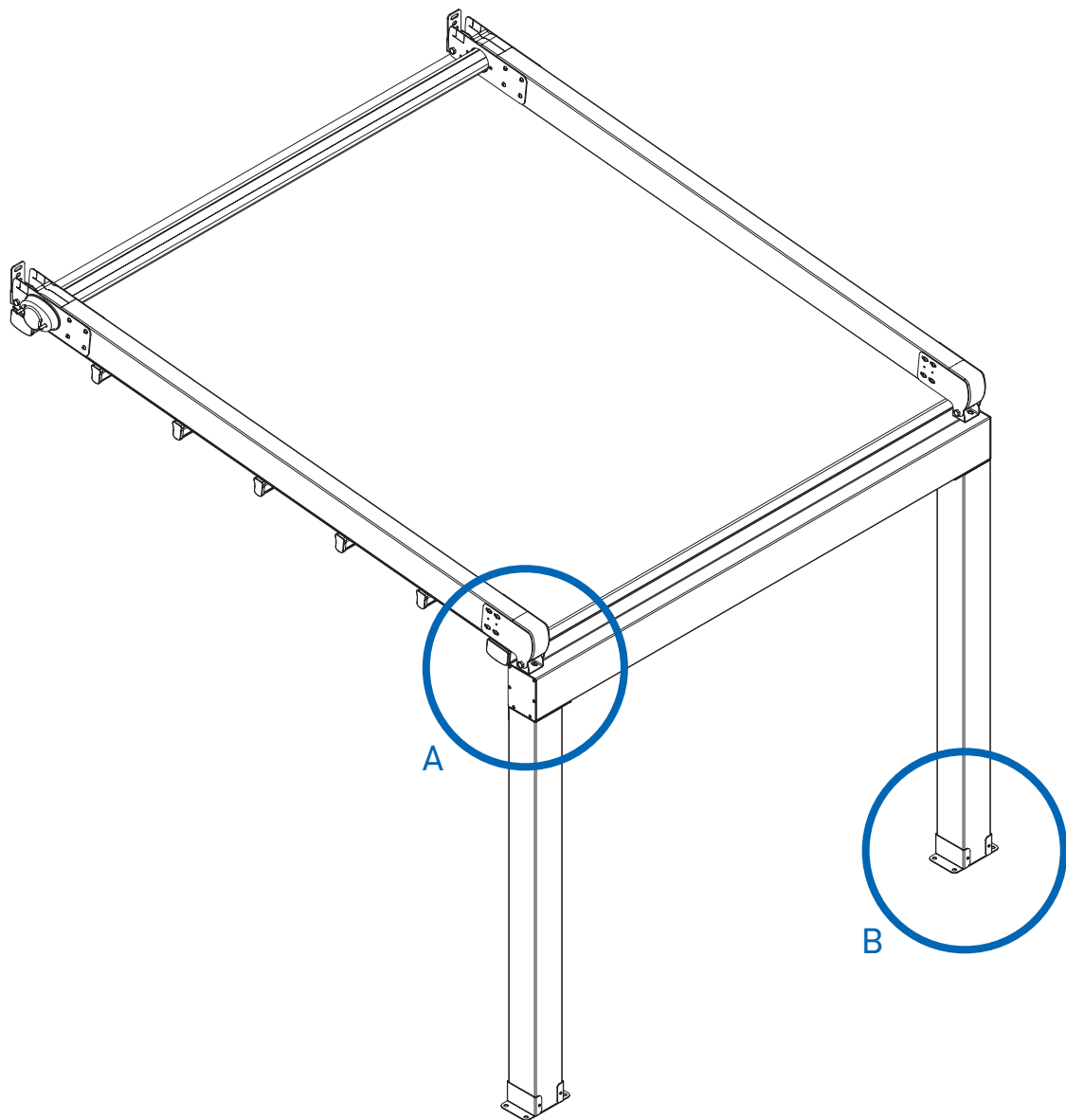


3

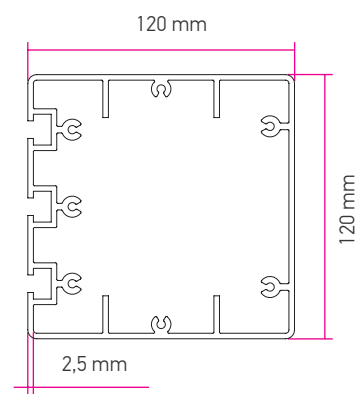
Parapet column without rainwater extraction.

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

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



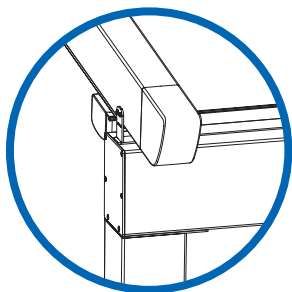
160X120 Parapet



120X120 Column

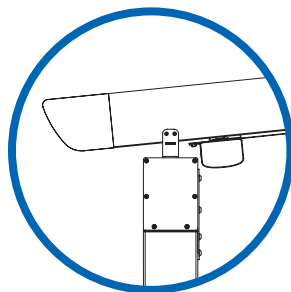
Details of the connection of a pergola with a 160x120 parapet.

A Details of the rafter-parapet connection.



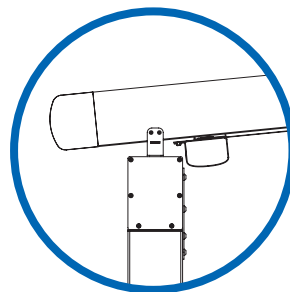
1

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



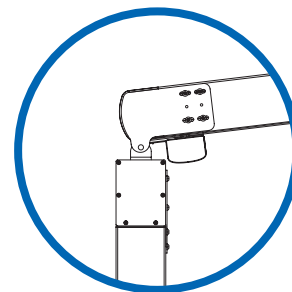
2

Star pergola with a protruding rafter and 15 cm Aluminium Cover (Corbel) on a 160x120 parapet.



3

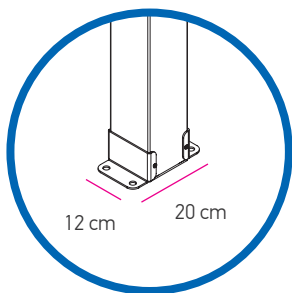
Star pergola with a protruding rafter and 10 cm Aluminium Cover (Corbel) on a 160x120 parapet.



4

Star pergola with a face rafter on the 160x120 parapet, 10 cm Aluminium Cover (Corbel).

B Details of the parapet column.

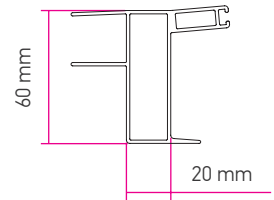
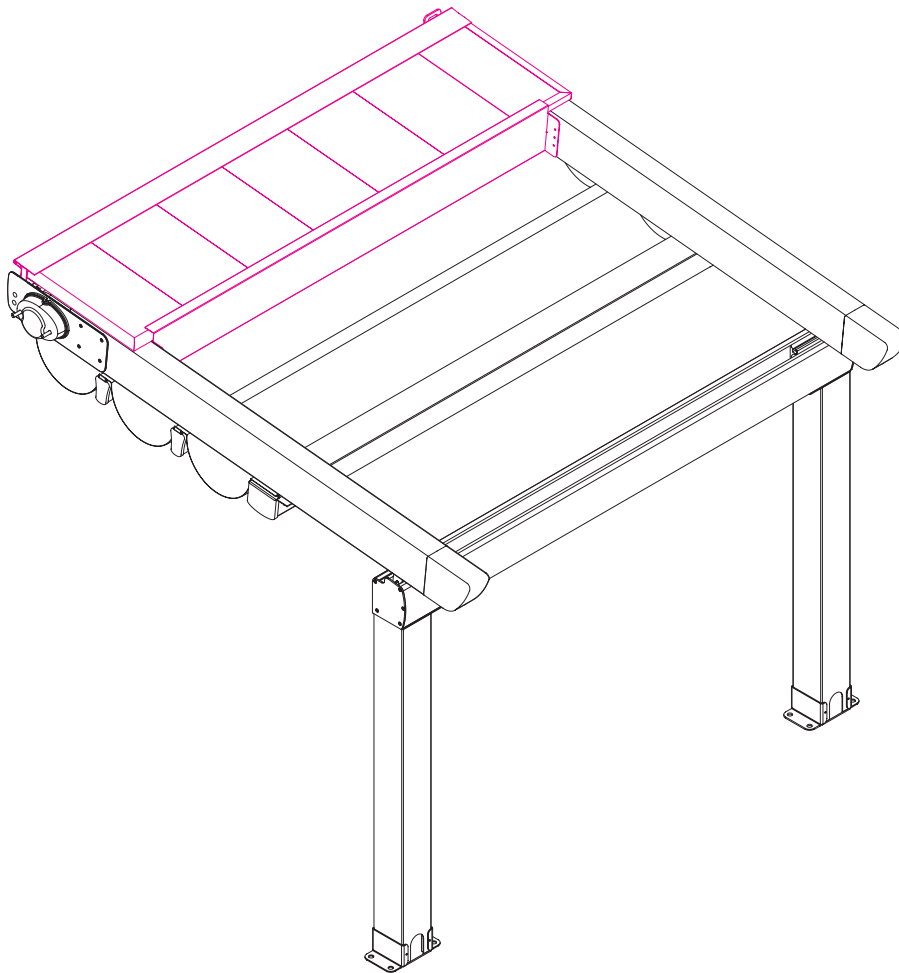


1

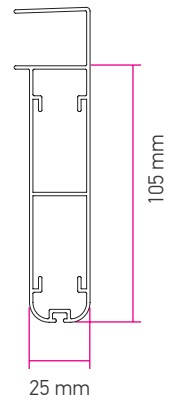
Pergola **Star**

Star pergola with a cover.

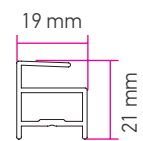
Aluminium cover to protect the pergola coating material.
The cover dimensions depend on the pergola size.



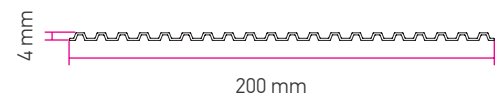
A Cover support profile



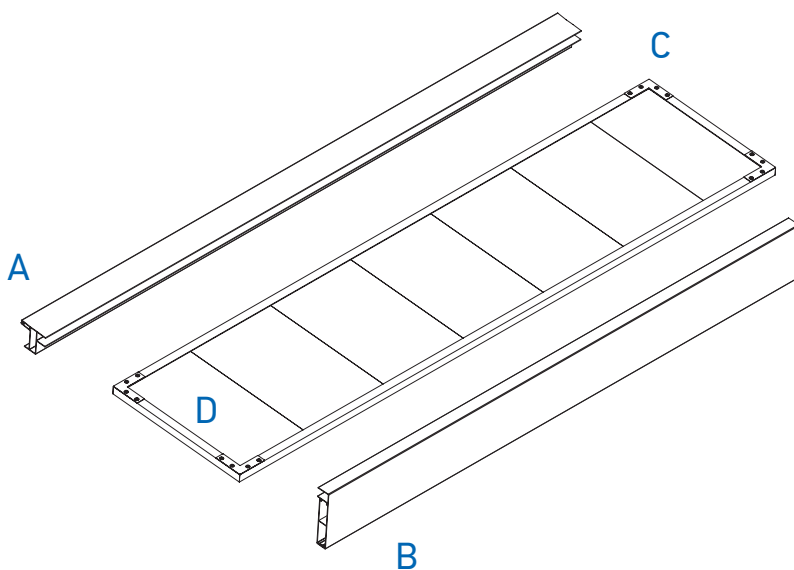
B Cover stabilisation profile



C Cover frame profile



D Aluminum Cover Profile.



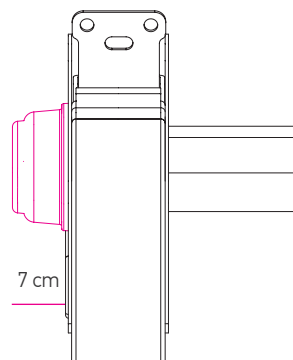
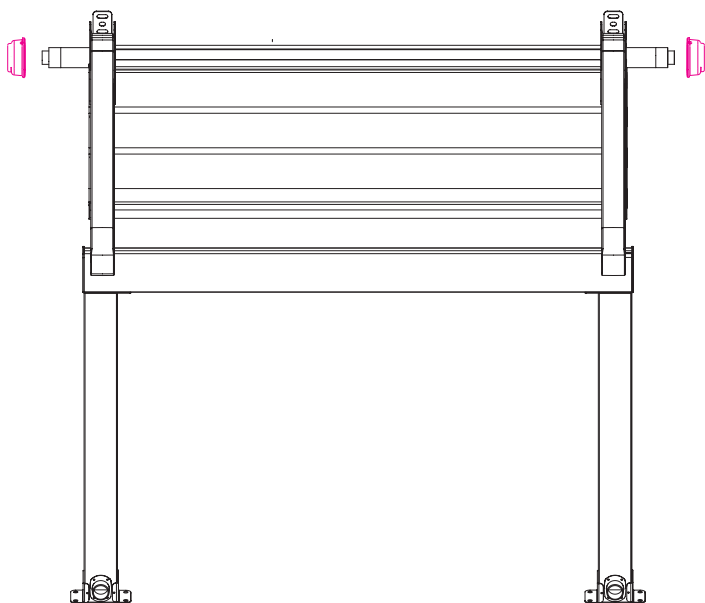
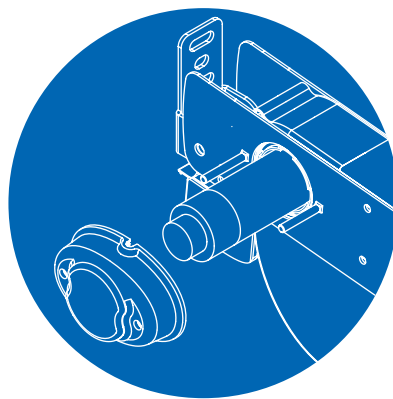
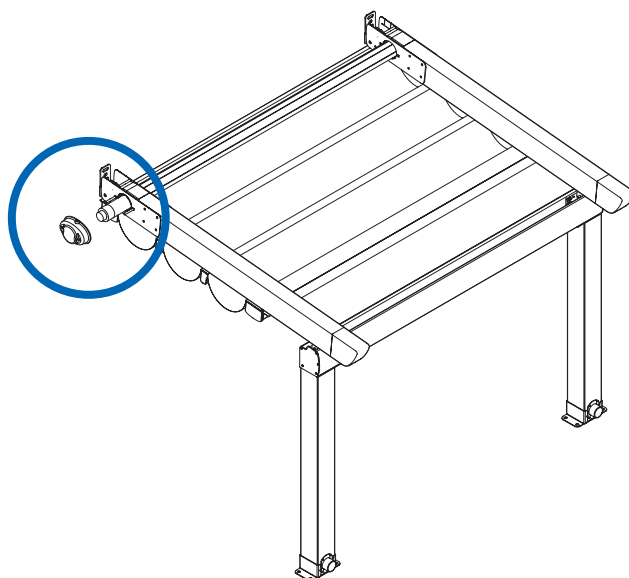
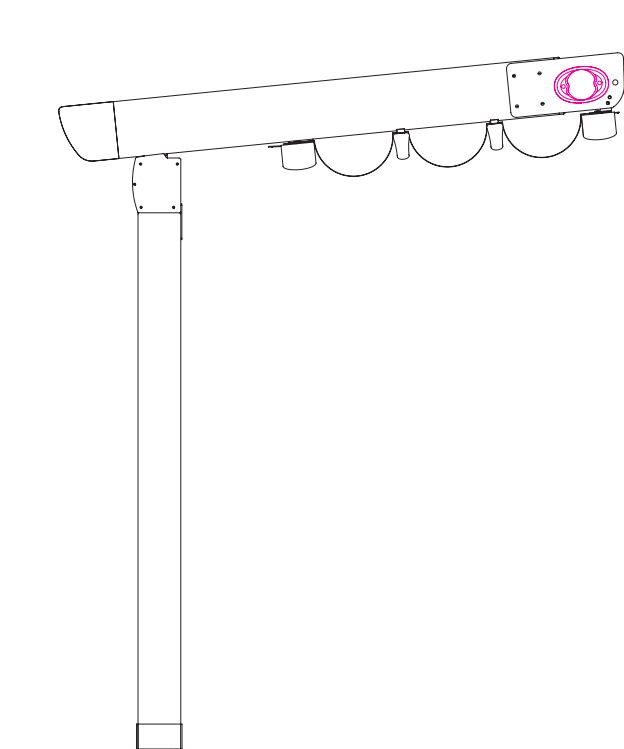
Released cover

Pergola **Star**

Motion transmission motor.

Motion is transmitted in the Star pergola by a tubular motor.

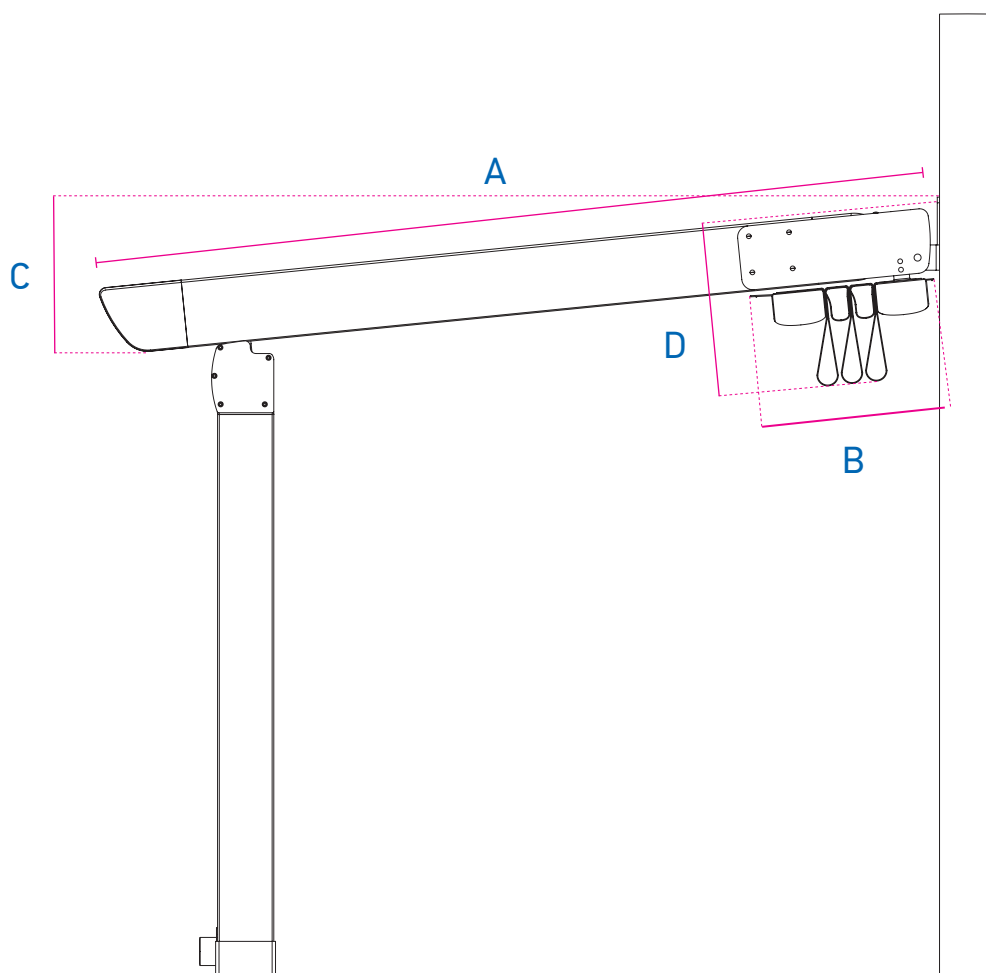
For pergolas with large areas and special requirements, two tubular motors can be installed.



Motor cover detail

Pergola **Star**

General information on pergola installation.

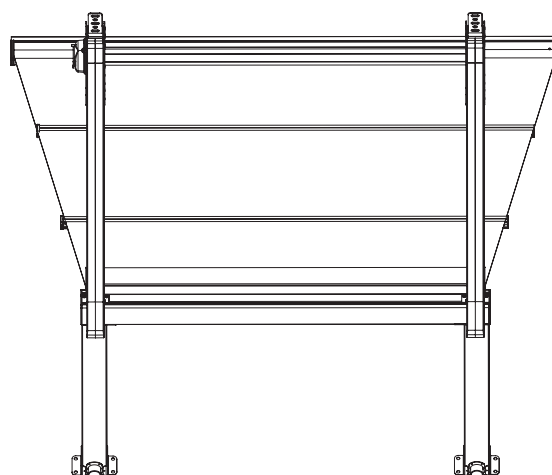
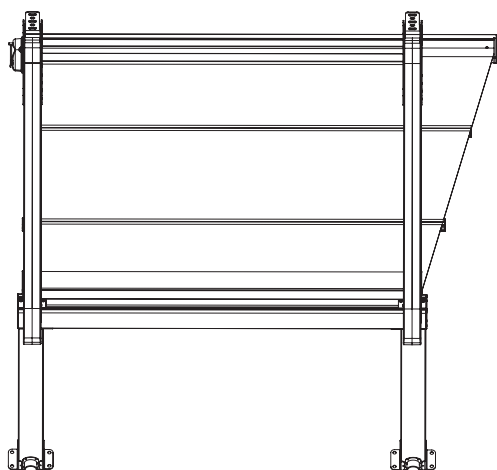
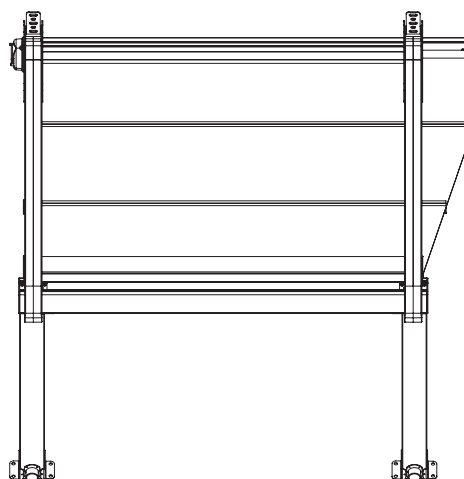
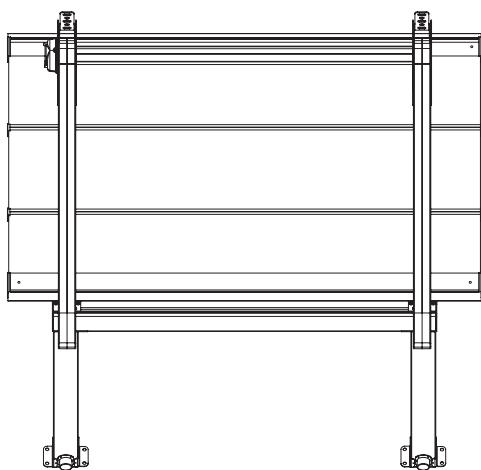
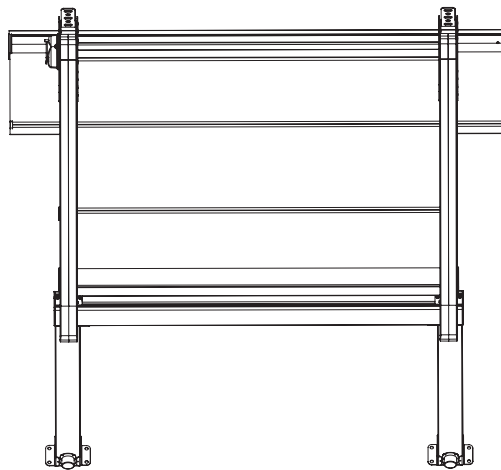
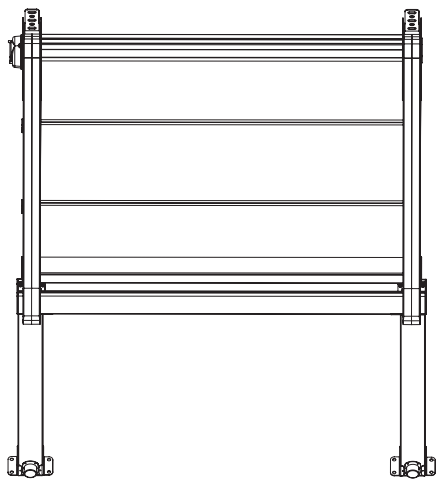


A	B	C	D
Projection	Distance of Retracted Counterweights	Gradient	Depth
250	46	32,5	43,25
300	50	39	42,00
350	54	45,5	41,17
400	54	52	45,33
450	58	58,5	44,14
500	62	65	43,25
550	66	71,5	42,56
600	70	78	42,00

Measurements are in centimeters

Pergola **Star**

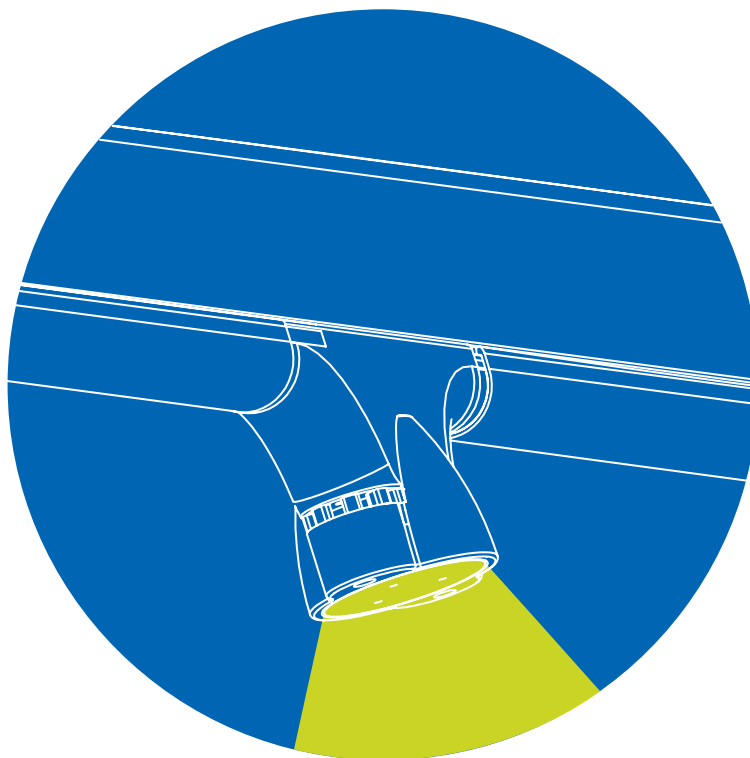
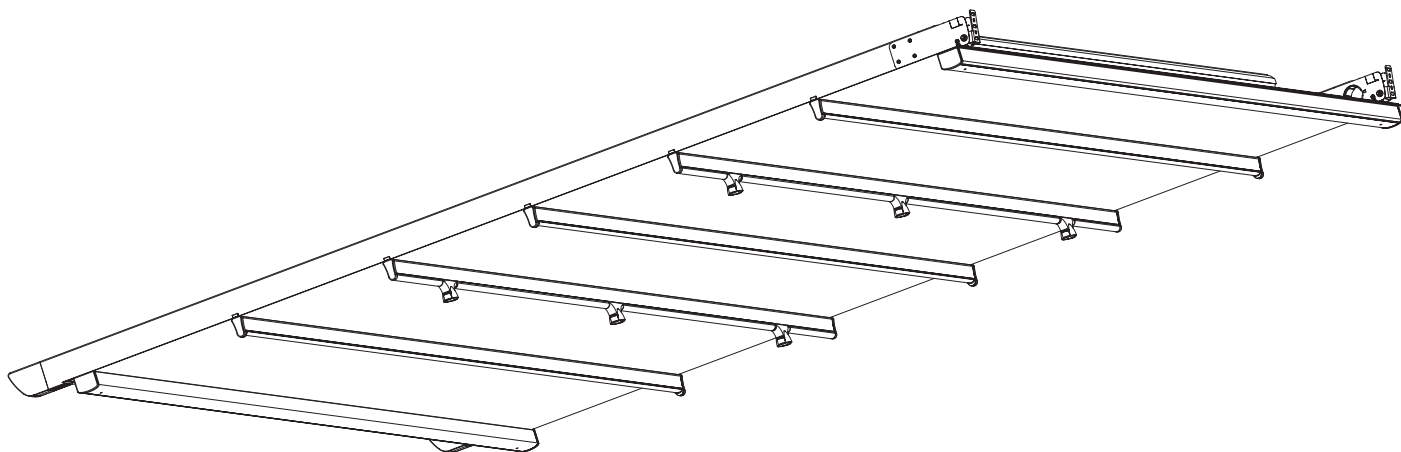
Special pergola applications.



Pergola **Star**

Lighting system.

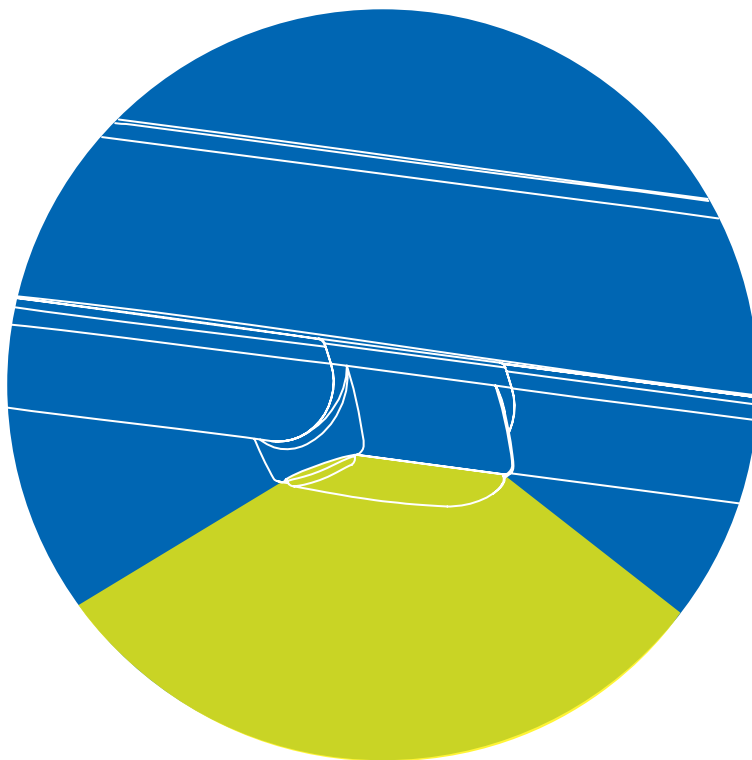
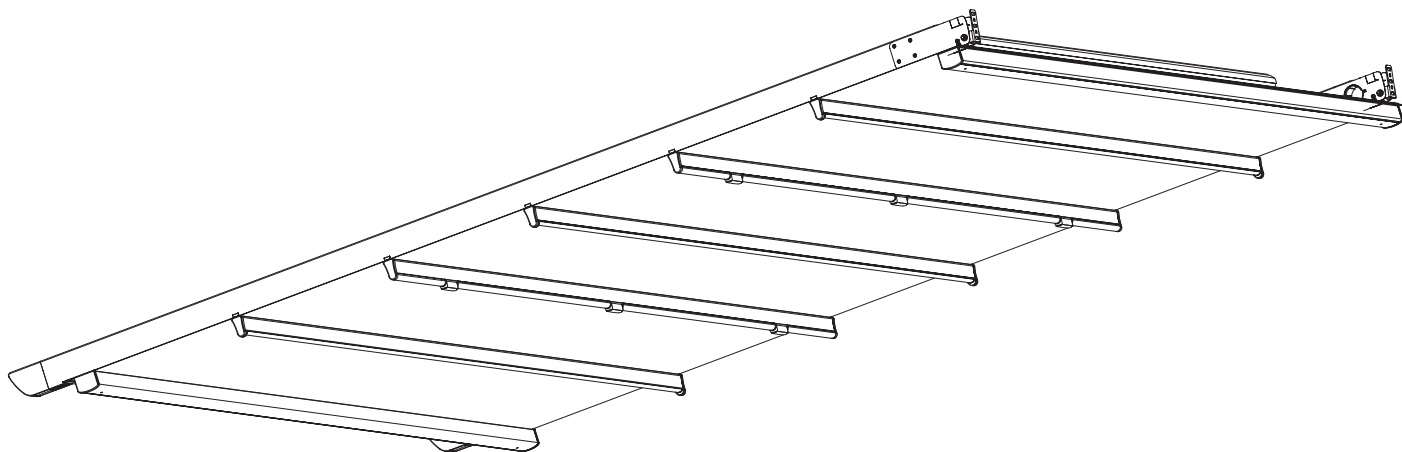
Lighting system with spot-type lighting fixtures. LED 12V lamps with a beam angle of up to 60°. In two lighting colours, Cool White and Warm White.



Pergola **Star**

Lighting system.

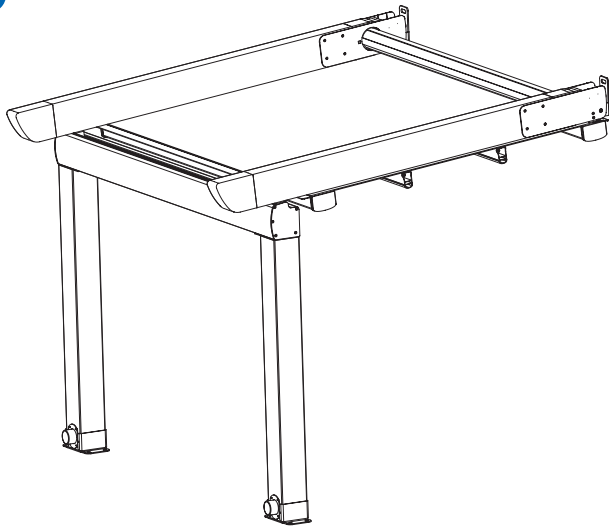
Lighting system with flat lighting fixtures. LED 12V lamps with a beam angle of up to 150°. In two lighting colours, Cool White and Warm White.



Pergola **Star**

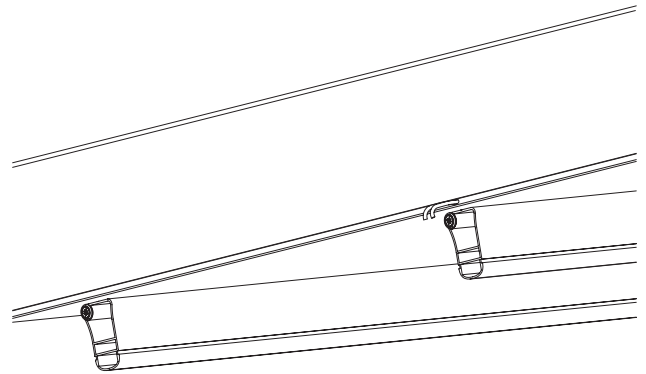
Lighting system. Installation instructions.

1



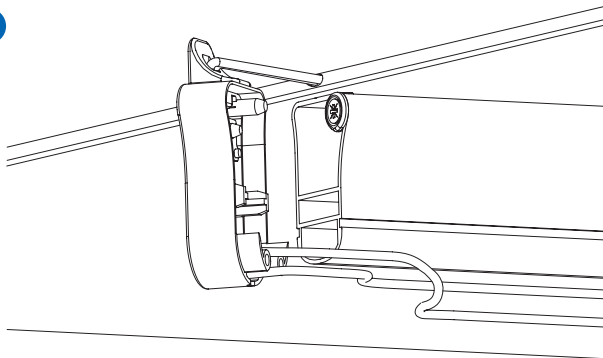
Star Pergola Installation.

2



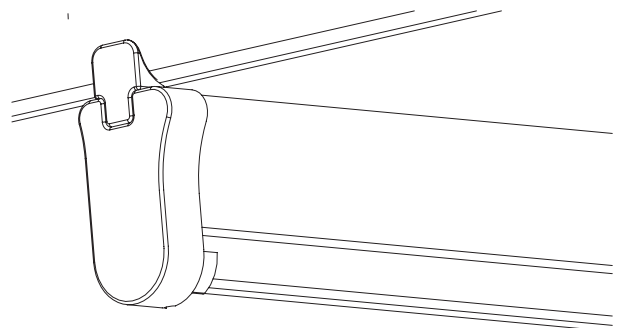
Select the counterweights that will have lighting and open a small hole on the coating material above them - then extract the cable couples.

3

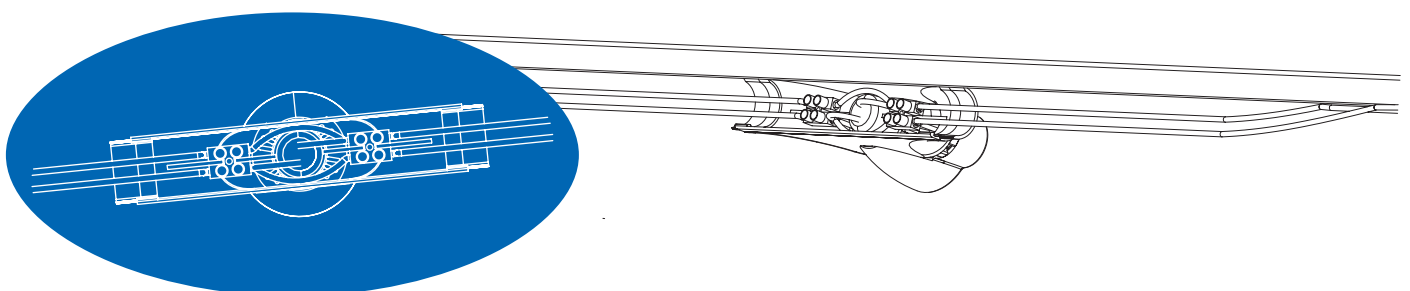


Thread the cables through the plastic counterweight stoppers.

4



5

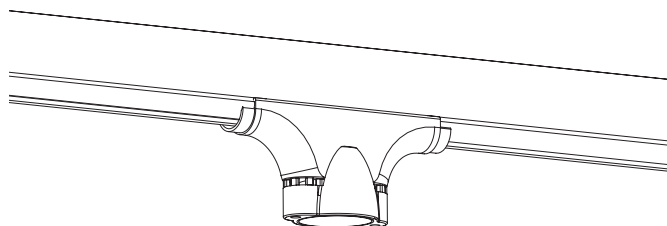
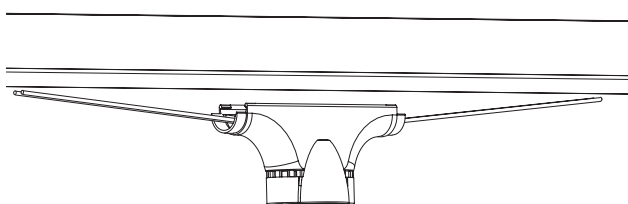


Connect the cables to the lighting fixture. Take one section of the cable found in the packaging and connect it from one lighting fixture to another.

Pergola **Star**

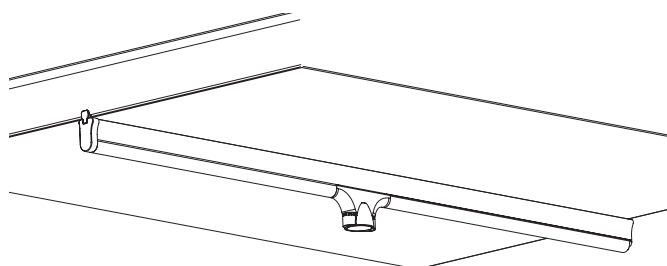
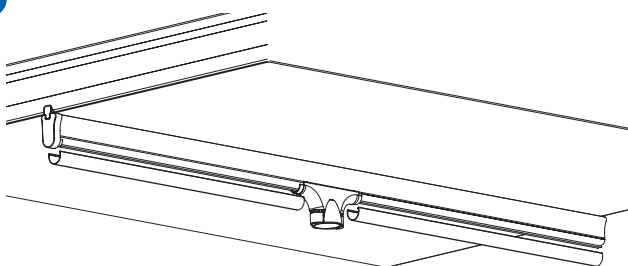
Lighting system. Installation instructions.

6



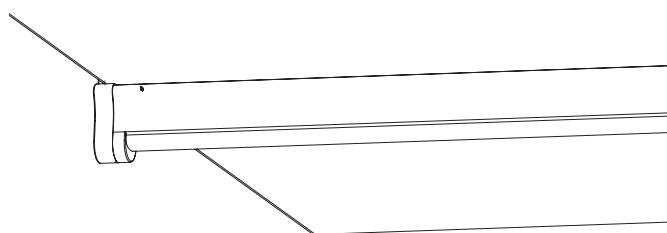
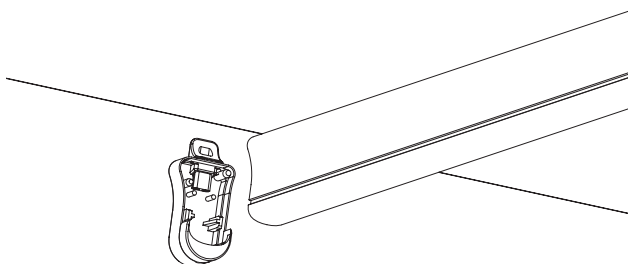
Clamp the lighting fixtures to the counterweights.

7



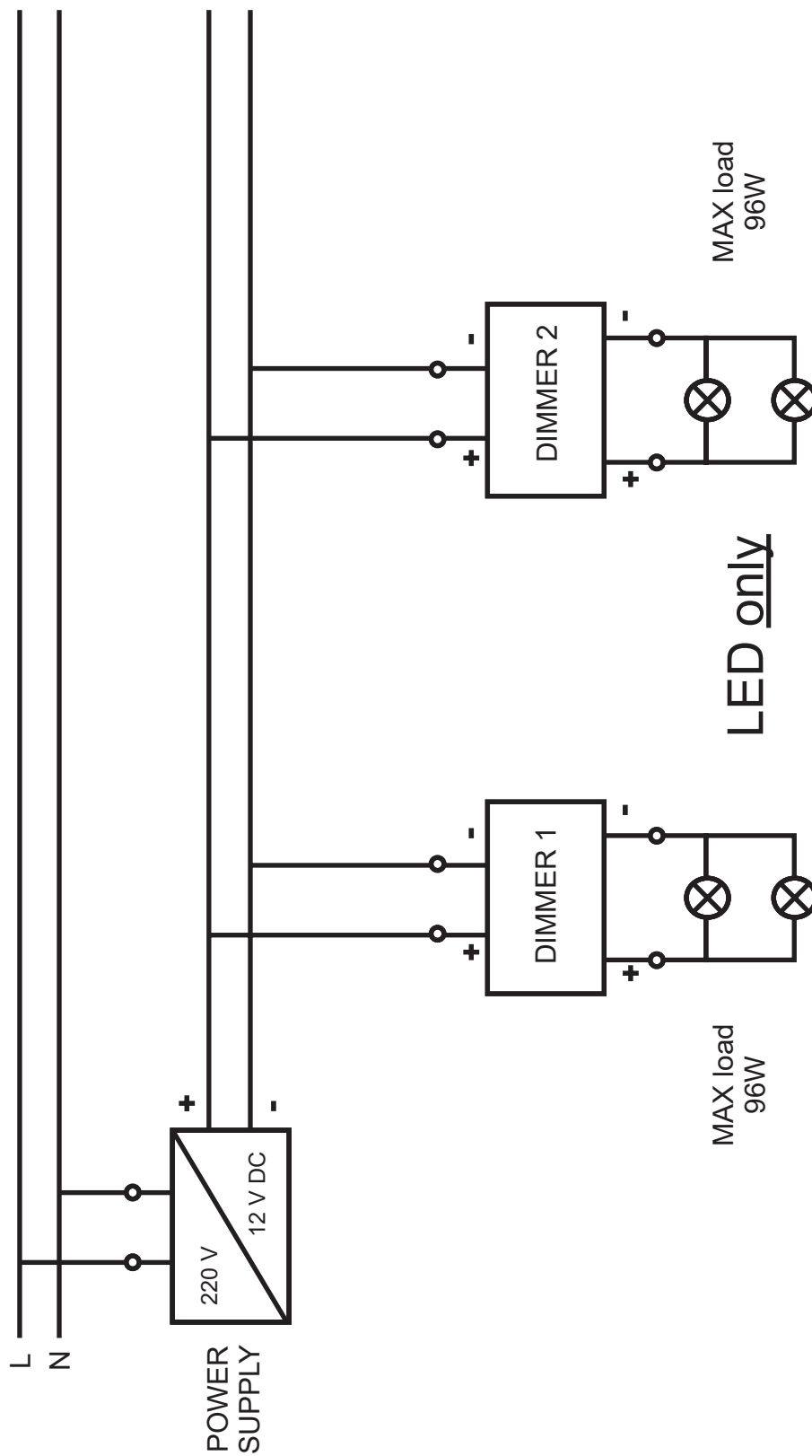
Cover the cables with the special profiles found in the packaging.

8



Finally, install all the plastic parts of the counterweights.

Lighting system. Installation instructions.





Δήλωση Επίδοσης | Declaration of Performance

PEP/CPR/13561/13

1	Προϊόν / Product type	ΤΕΝΤΑ ΠΕΡΓΚΟΛΑ Τύπου Star / CONSERVATORY AWNING Type Star		
2	Κωδικός αναγνώρισης / Product type reference	PE		
3	Προοριζόμενη χρήση / Intended use	Σύστημα σκίασης εξωτερικής χρήσης / Shading system for external use		
4	Κατασκευαστής, διεύθυνση επικοινωνίας / Manufacturer, address	METAFORM Α.Ε 12ο χλμ. Θεσσαλονίκης - Λαγκαδά, 572 00, Θεσσαλονίκη / METAFORM S.A. 12th Km Thessaloniki - Lagadas, 572 00, Thessaloniki		
5	Εξουσιοδοτημένος αντιπρόσωπος, διεύθυνση επικοινωνίας / Authorised representative, address	ΔΕΝ ΕΦΑΡΜΟΖΕΤΑΙ / N.A		
6	Εναρμονισμένο Πρότυπο / Harmonized standard Ref	EN 13561:2004 + A1:2008 "Εξωτερικές περσίδες – Απαιτήσεις επιδόσεων και ασφάλειας" / EN 13561:2004 + A1:2008 "External Blinds – Performance requirements including safety"		
7	Σύστημα αξιολόγησης της απόδοσης / System of assessment and verification of constancy of performance	4		
8	Ουσιώδη χαρακτηριστικά / Essential Characteristic	Δηλωθείσα απόδοση / Declared Performance		Τεχνική προδιαγραφή / Technical specification EN 1932:2001 "Αντοχή σε ανεμονίεση - μέθοδοι δοκιμών" / EN 1932:2001 "Resistance to wild loads - Method of testing"
		Μοντέλο / Model	Κλάση / Class	
	Αντοχή σε ανεμονίεση / Wind resistance	PE1	3	
		PE2	3	
		PE3	3	
		PE4	3	
	PE5	3		
9	Κοινοποιημένος Φορέας / Notified Body	Εξέδωσε το Πιστοποιητικό Συμμόρφωσης / Issued the Certificate of Conformity		
	ΔΕΝ ΕΦΑΡΜΟΖΕΤΑΙ / N.A.	ΔΕΝ ΕΦΑΡΜΟΖΕΤΑΙ / N.A.		
10	Η απόδοση του προϊόντος που ταυτοποιείται στα σημεία 1 και 2 ανταποκρίνεται προς την απόδοση που δηλώθηκε στο σημείο 8. Η παρούσα δήλωση απόδοσης εκδίδεται με αποκλειστική ευθύνη του κατασκευαστή που ταυτοποιείται στο σημείο 4. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 8. This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4. Υπογραφή για λογαριασμό και εξ ονόματος του κατασκευαστή από / Signed for and on behalf of the manufacturer by: Φραγκόπουλος Στυλιανός - Υπεύθυνος Ποιότητας Fragopoulos Stelios – Quality Manager			
Τόπος και ημερομηνία έκδοσης / Place and date of issue		Υπογραφή / Signature		
Θεσσαλονίκη / Thessaloniki ____/____/20____				



