



Technical Specifications 2022

# ASHELTA CONTENTS

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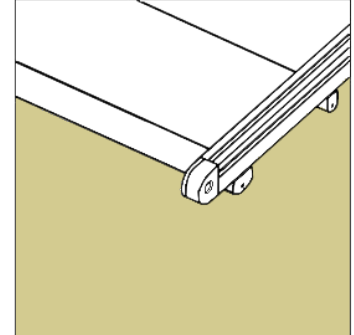
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## ASHELTA FEATURES

ASHELTA is the retractable roof system; custom-made to size for ultimate protection from the sun and rain. It can be installed on suitable pre-existing structures or purpose built frames. It consists of an aluminium structure and a specialised folding fabric.

Its wind resistance is guaranteed up to 8 class on the Beaufort scale for sloped and flat versions (class 5 - UN EN 13651:2015). The system is not suitable for bearing snow.

The fabric is available in a variety of colours, finishes and transparencies. The fabric is supported by aluminium support tubes (4x5cm) and terminals (8x5cm) set parallel to one another every 60cm approximately (pitched version) and every 50cm approximately (flat version).



The fabric moves by sliding on support runners (5x9cm) on 6 asymmetrically arranged wheels with a capacity of over 450kg each. The toothed transmission belt contains stainless steel cables and resists a salt water environment. The tensile strength is of 894kg at break; the transmission belt is inserted in each runner, controlled by the notched pulley and a single drive shaft and guarantees the smooth forward movement of the fabric.

The ASHELTA system is set in motion by an electric motor and is remote controlled. Painted with certified Qualicoat cycle epoxy powders, with the exception of Bronze, obtained through a chemical anodising process. All ASHELTA roofs come with stainless steel accessories.



## ASHELTA FRAME SPECIFICATIONS

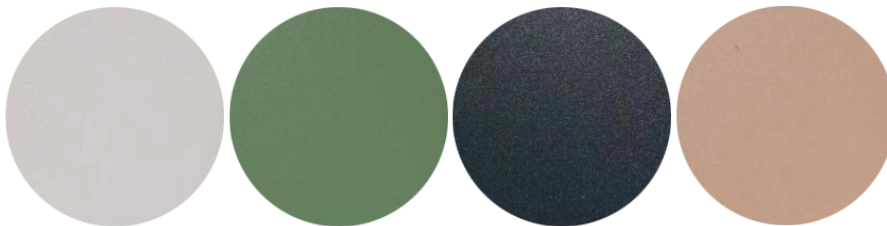
All aluminium is pre-treated for the guaranteed perfect adherence of speciality powder varnish. Creating protection and durability from atmospheric conditions, light, humidity and abrasion (Qualicoat quality standard).



ALUMINIUM GLOSS: WHITE | IVORY | GREY | BROWN



ALUMINIUM GLOSS: WHITE | IVORY | GREY | WHITE PLUS



ALUMINIUM TEXTURE: WHITE | SPRING GREEN | GRAPHITE | DOVE GREY



ALUMINIUM TEXTURE: NIGHT | ANTHRACITE | BROWN | DARK GREY



ALUMINIUM TEXTURE: SALT & PEPPER | COR 10 | BRONZE | TITANIUM

## ASHELTA FABRIC SPECIFICATIONS



**BLOCK: WHITE | IVORY | GREY**

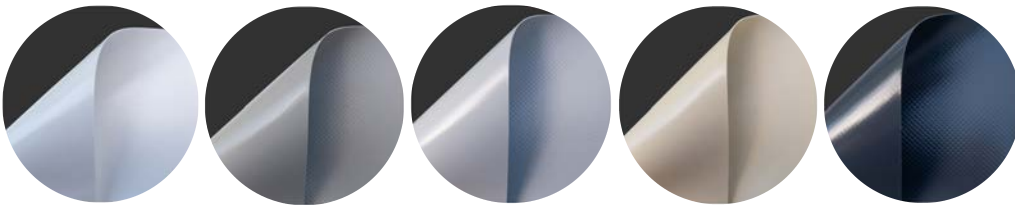
Total block-out high tenacity dual layer polyester base fabric with PVC coating. Lacquered external side with a soft textured finish on the internal side. Included as standard.

**LIGHT TRANSMISSION:** Block Out

**COMPOSITION:** PVC Coated 1100 Dtex Polyester

**WEIGHT:** 850 g/m

**FIRE RATING:** M2/B1



**LAC 650: WHITE | PALE KHAKI | GREY | IVORY | DARK GREY**

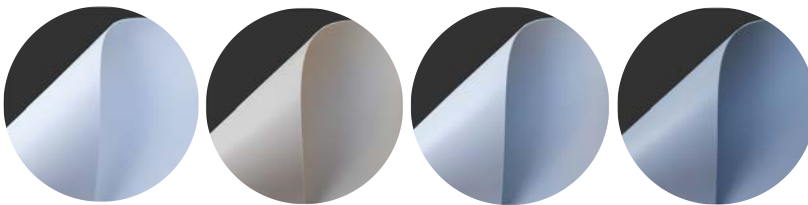
Medium weight single layer tensile PVC with some light transmission manufactured by Dickson. Colours above included as standard. More colours available at surcharge.

**LIGHT TRANSMISSION:** Block Out

**COMPOSITION:** PVC Coated 1100 Dtex HT Polyester

**WEIGHT:** 680 g/m

**FIRE RATING:** M2/B1/BS



**STAM 6002: WHITE | IVORY | GREY | MEDIUM GREY**

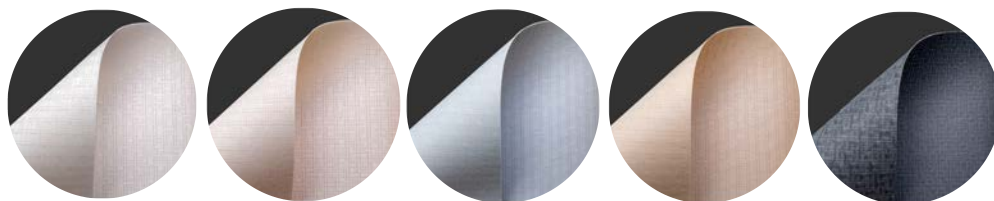
Medium weight single layer tensile PVC with appearance and texture of cotton, manufactured by GioFex.

**LIGHT TRANSMISSION:** Translucent

**COMPOSITION:** PVC Coated Polyester Précontraint Technology

**WEIGHT:** 630 g/m

**FIRE RATING:** M2/B1



**SOLTIS W96: WHITE | SAND | GREY | IVORY | DARK GREY**

Micro-ventilated PVC with the greeated light transmission. Manufactured by Serge Ferrari.

**LIGHT TRANSMISSION:** Translucent Textured Aspect

**COMPOSITION:** 550 / 1100 Dtex HT Polyester

**WEIGHT:** 620 g/m

**FIRE RATING:** M2

# ASHELTA SPECIFICATIONS

## WIND RESISTANCE CLASS (UNI EN 13561:2015)

2 RUNNERS SLOPED WIND CLASS			3 RUNNERS SLOPED WIND CLASS			4 RUNNERS SLOPED WIND CLASS		
Tube Length (cm)			Tube Length (cm)			Tube Length (cm)		
From 200 to 350	400	450/500	From 400 to 700	750	850/900	From 850 to 1050	From 1100 to 1200	1250/1300
5	4	3	5	4	3	5	4	3

Option to add additional runner to improve wind rating at all widths.  
See appendix for details of Wind Class number, on the Beaufort Wind Force Scale.

## MAXIMUM ASHELTA DIMENSIONS

	Width	Projection
2 Runners	500	900
3 Runners	900	900
4 Runners	1300	900

# ASHELTA 2 RUNNERS

Crossbar for Self Supporting Drive (supplement)

Electric Drive

Runner Support (optional)

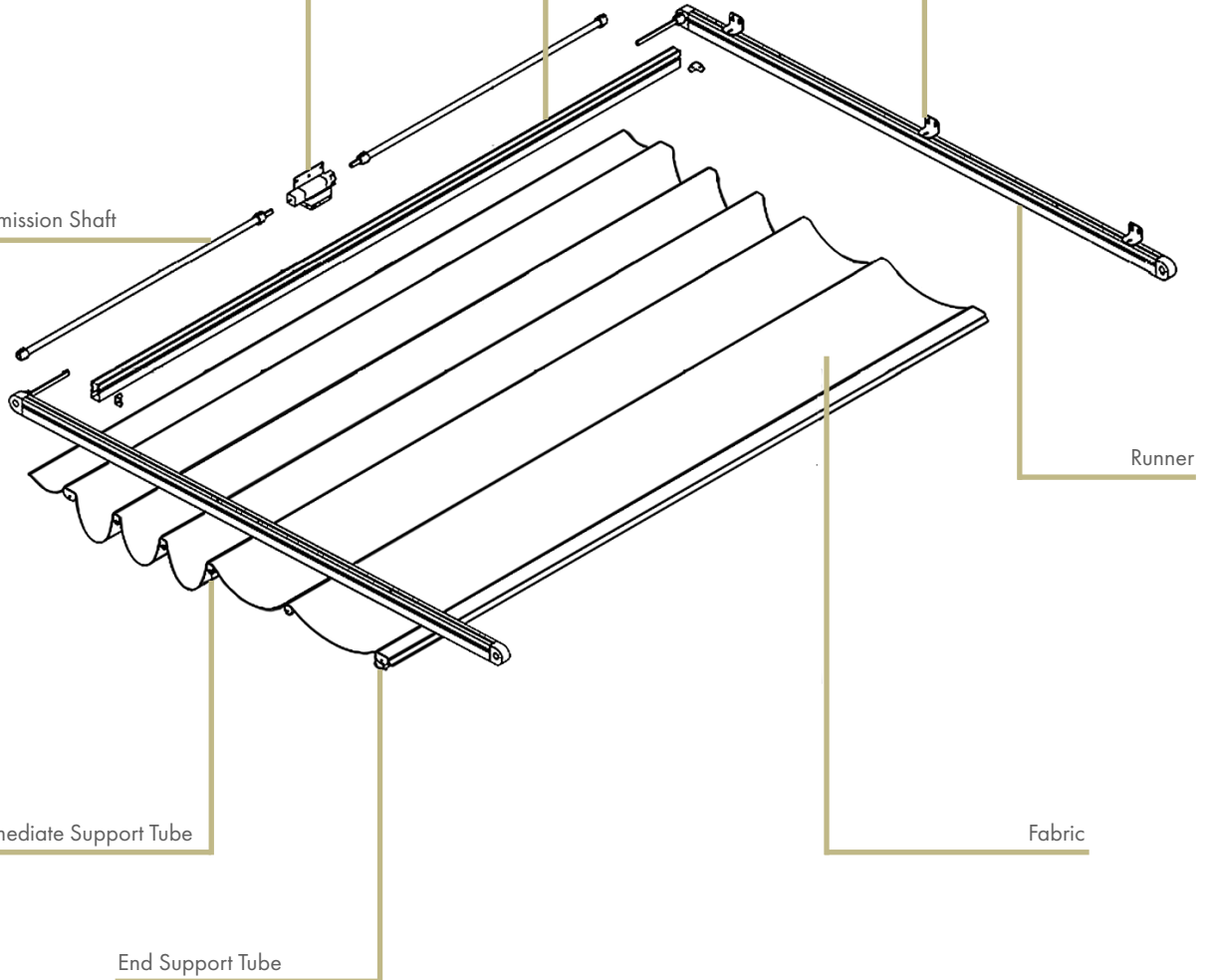
Transmission Shaft

Runner

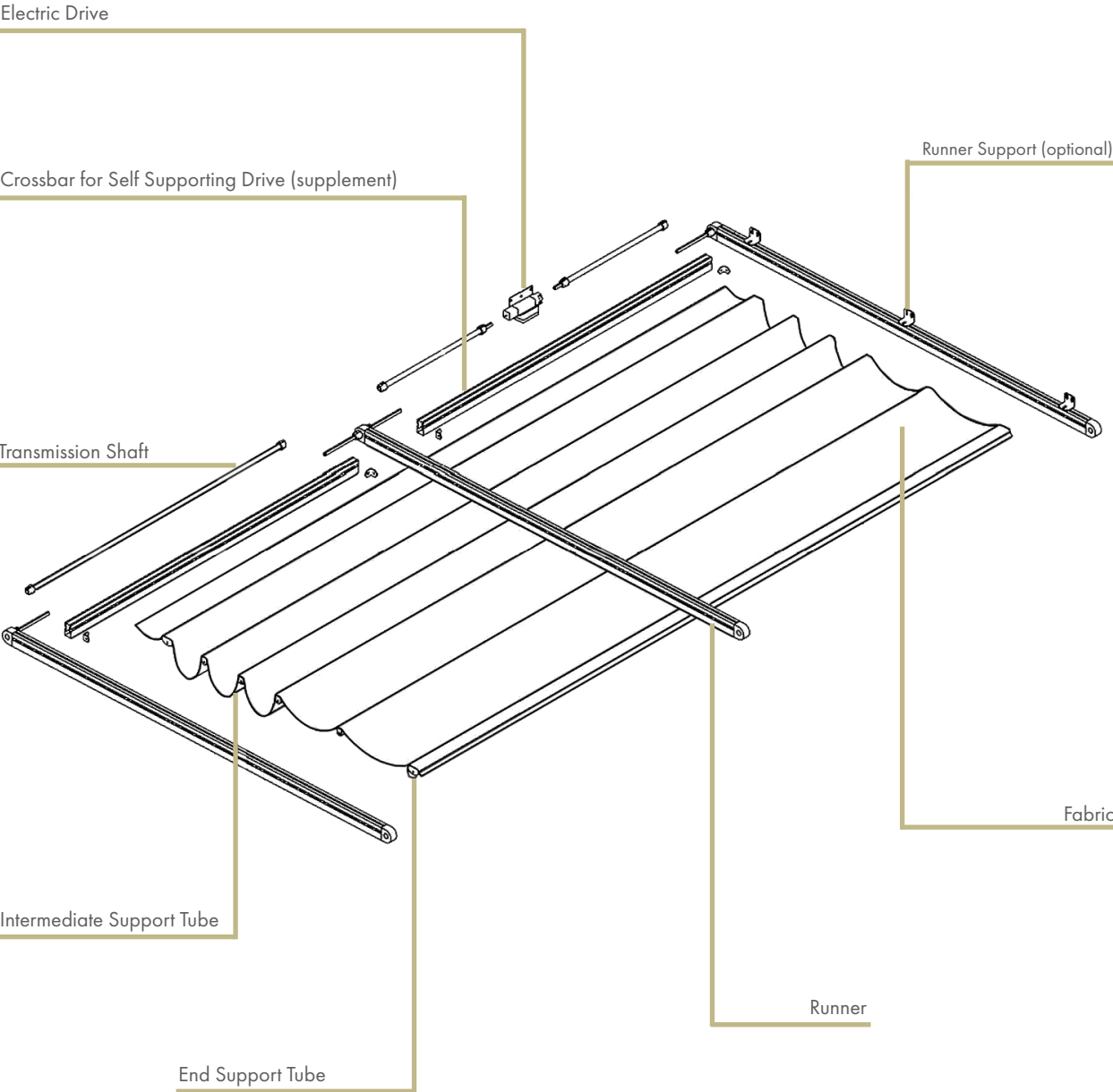
Intermediate Support Tube

Fabric

End Support Tube

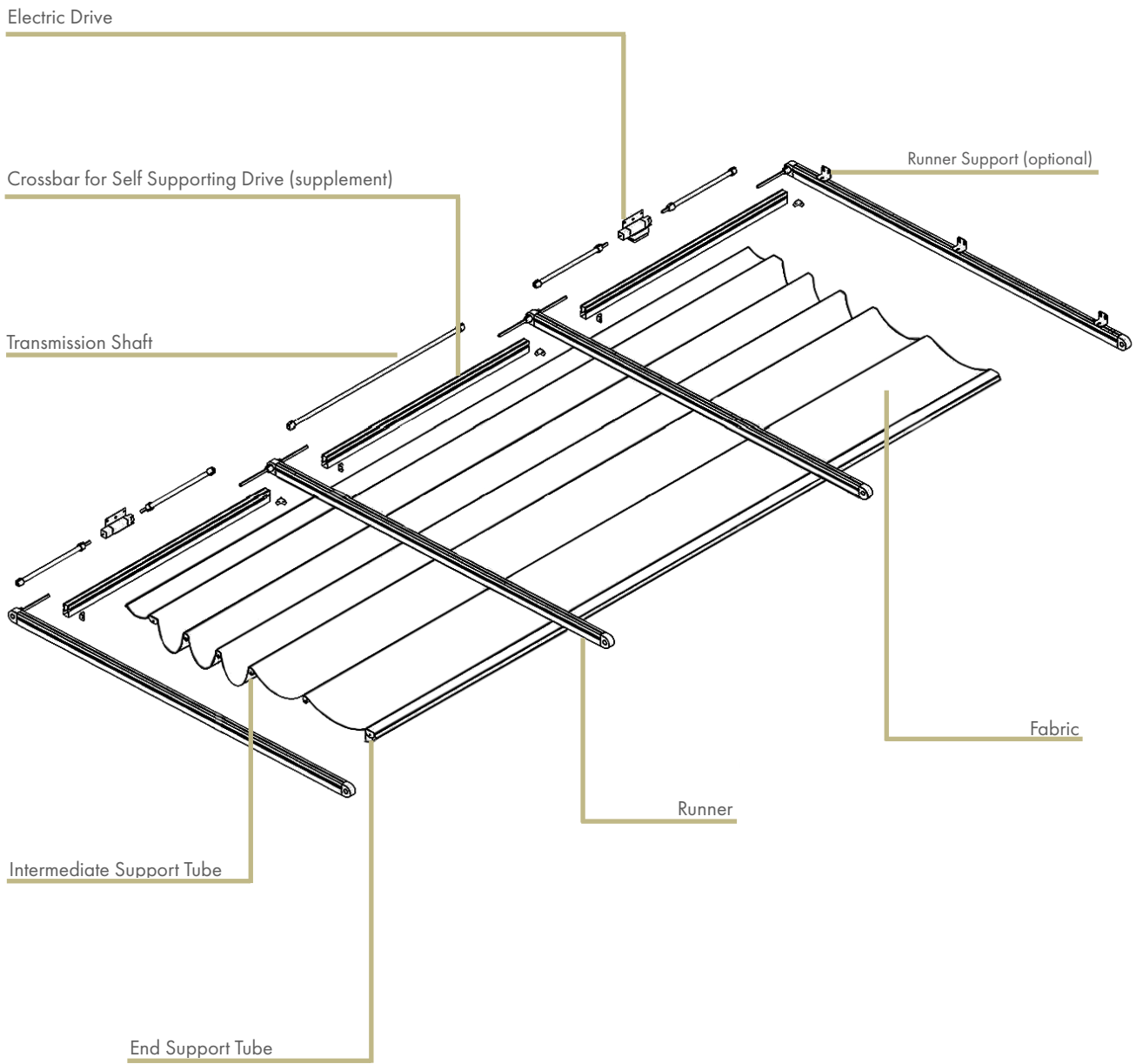


# ASHELTA 3 RUNNERS

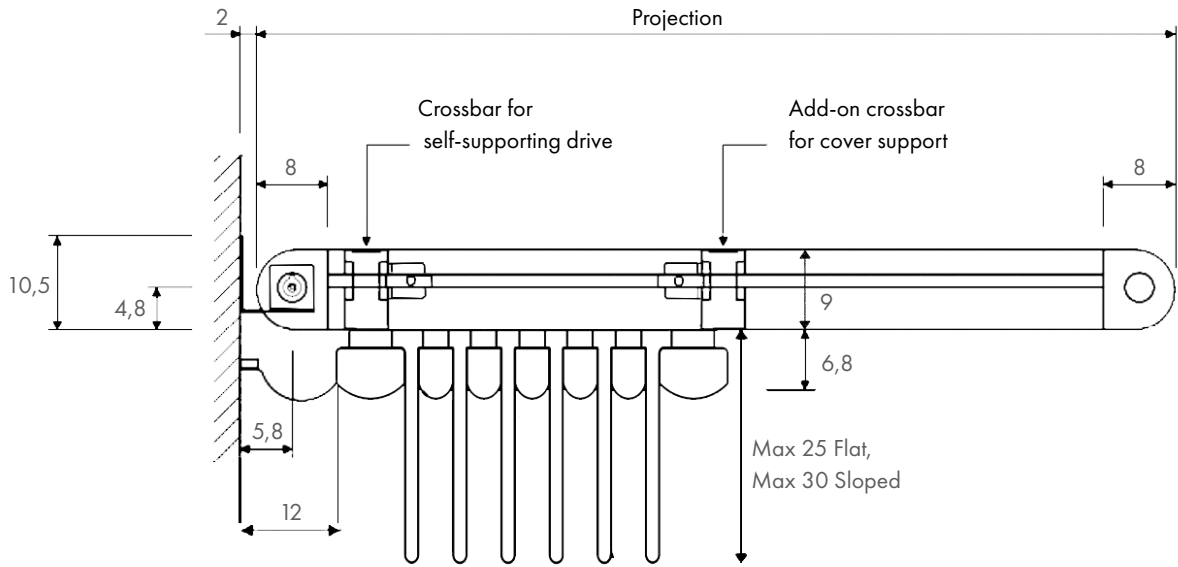




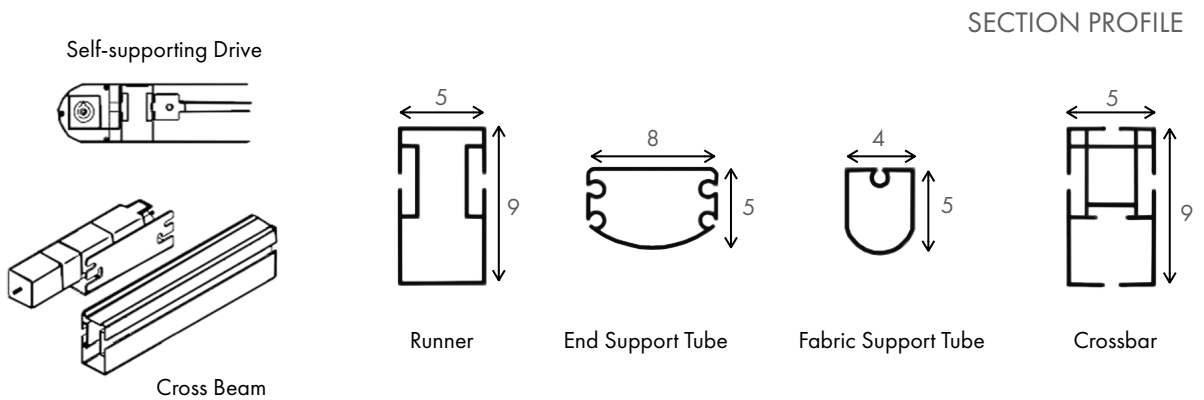
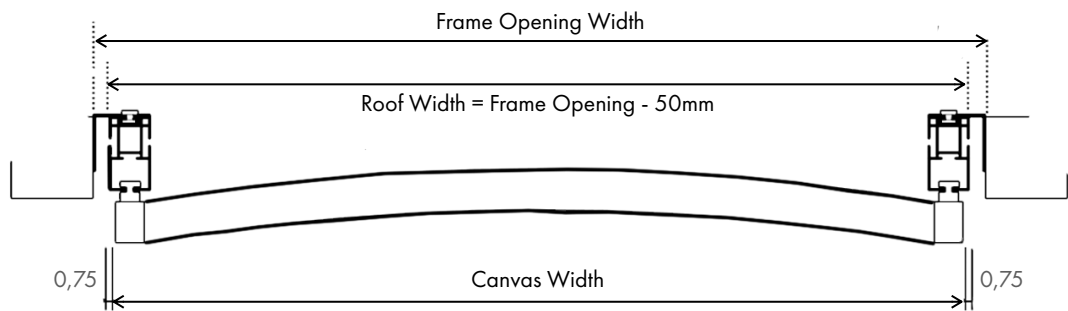
# ASHELTA 4 RUNNERS



# ASHELTA DIMENSIONS



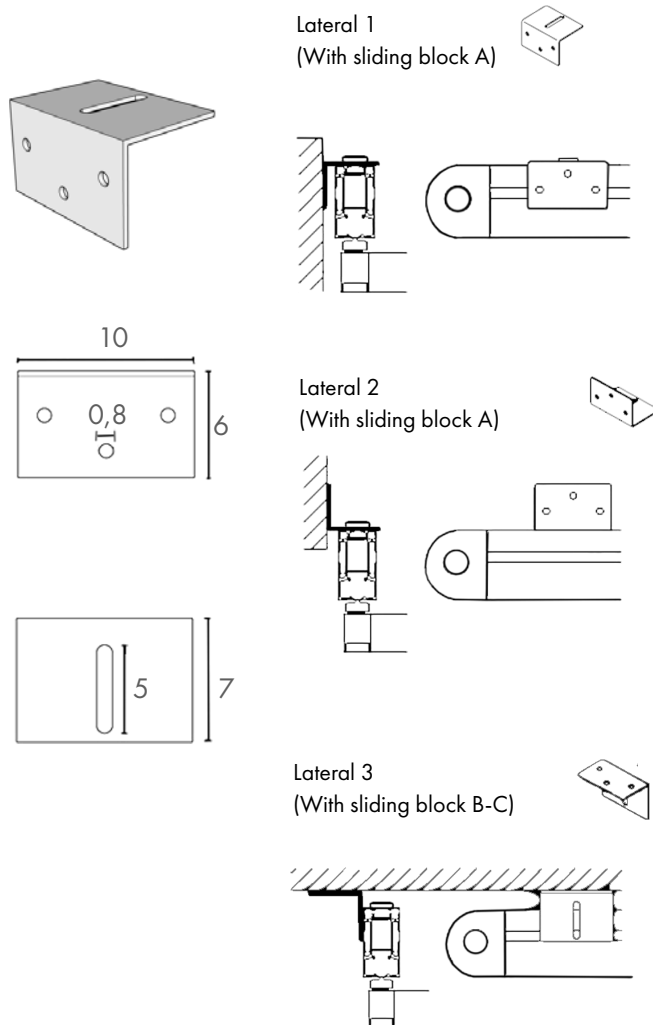
\* This can be adjusted based on number of fabric support tubes ordered



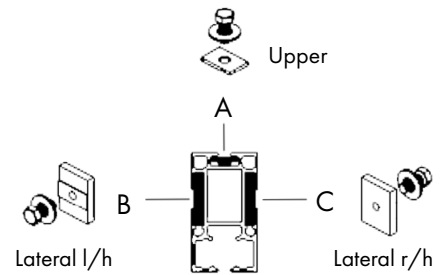
All measurements are given in cm

# ASHELTA ANCHORAGES

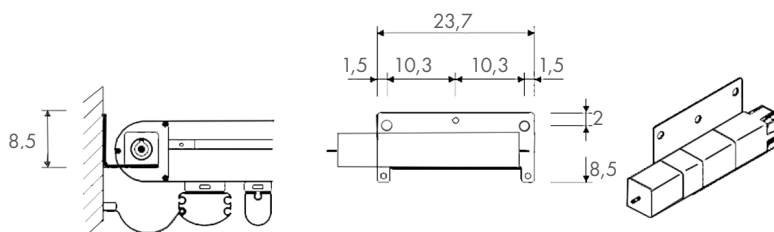
## RUNNER ANCHORAGE - APPLICATION SAMPLES



## SLIDING BLOCK POSITION



## WALL ANCHORAGE ELECTRIC DRIVE



All measurements are given in cm

# ASHELTA SUPPORTS & STRAIN

## SUPPORTS AND CONSEQUENT STRAIN CHART

	RUNNER LENGTH CM							
	200	250	300	350	400	450	500	550
MINIMUM NO. OF SUPPORTS PER RUNNER <b>nr</b>	2	3	3	4	4	4	5	5
MAXIMUM STRAIN DIVIDED BY NO. OF SUPPORTS PER RUNNER <b>daN/nr</b>	197	163	172	230	197	222	197	216
MAXIMUM STRAIN ON EACH RUNNER WITH A FORCE 8 WIND <b>daN (kg)</b>	394	489	516	920	788	888	985	1080

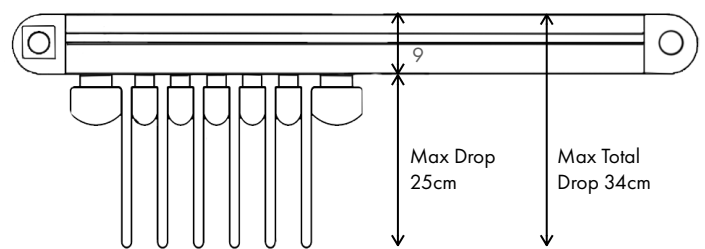
	RUNNER LENGTH CM						
	600	650	700	750	800	850	900
MINIMUM NO. OF SUPPORTS PER RUNNER <b>nr</b>	5	6	6	7	7	8	8
MAXIMUM STRAIN DIVIDED BY NO. OF SUPPORTS PER RUNNER <b>daN/nr</b>	236	213	230	211	225	209	235
MAXIMUM STRAIN ON EACH RUNNER WITH A FORCE 8 WIND <b>daN (kg)</b>	1180	1278	1380	1477	1575	1673	1883

# ASHELTA FABRIC DROP

Understanding the fabric drop is important when designing frames and subsequent gutters. If a smaller distance is required to reduce the drop, extra support tubes can be added when ordering.

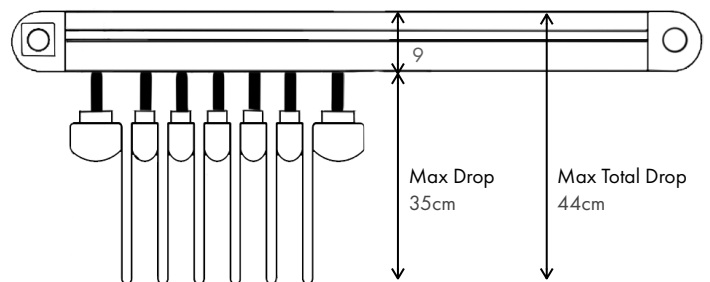
## FLAT WITH CURVED FABRIC SUPPORT PROFILES

The maximum fabric length between support tubes is 50cm giving a maximum drop from the top of supports 25cm.



## FLAT WITH SPACERS

The maximum fabric length between support tubes is also 50cm, however there is an additional 10cm spacer between one runner and the fabric support tubes to enable lateral water run off.

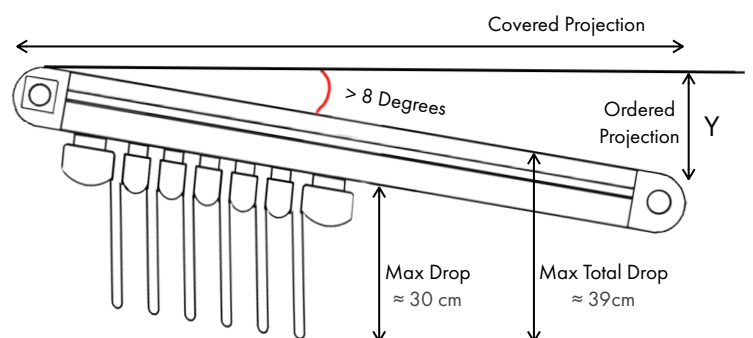


## SLOPED

The maximum fabric length between support tubes is 60cm, however the roof needs to be installed at minimum angle of 8 degrees.

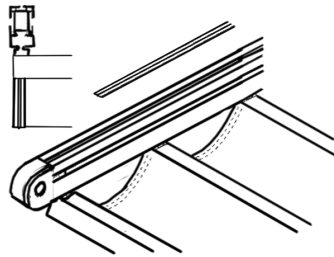
To calculate the maximum drop, including the fabric drop, find value Y based on your installation angle and ordered projection of roof (this will also calculate the actual covered projection dimensions). Then add the max drop (39cm) to the Y value.

$$Y + 39 = \text{MAX DROP CM}$$



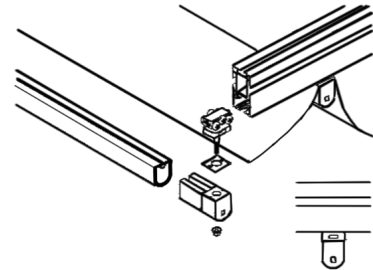
# ASHELTA OPTIONS

## UNDERSIDE DRIP-COLLECTION RIM (FLAT VERSIONS)



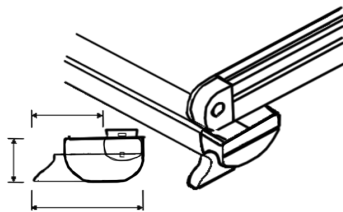
Welded PVC profile on the underside of the fabric. Only for fabrics in the suggested configuration.

## ADD-ON INTERMEDIATE SUPPORT TUBE



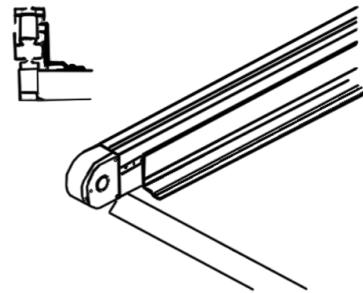
Complete fabric support tube with end-caps, joints (where present) and intermediate sliders.

## RETRACTABLE GUTTER



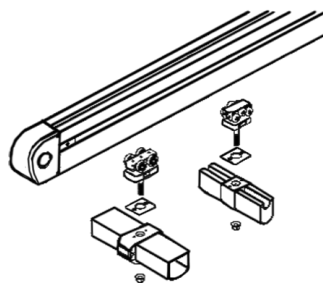
Extruded aluminium profile for rainwater collection, only for sloped versions, fixed to the end support tube. Down pipes not provided.

## ANTI-SPRAY PROFILE



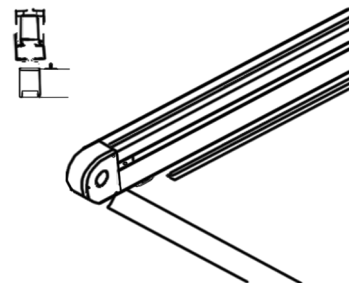
PVC profile pressed on the lateral side of the runner for retention of rainwater spray. Always in addition to the anti-drop system.

## ADD-ON RUNNER



ASHELTA runner complete with sliders, support tube joints, central transmission shaft with bushings.

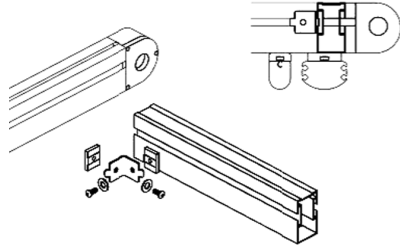
## ANTI-DROP SYSTEM (TILTED VERSIONS)



Weldable PVC profile on the upper part of the fabric for lateral rainwater prevention.

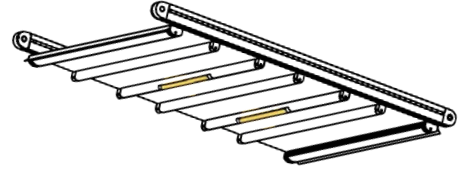
## ASHELTA OPTIONS

### CROSSBAR



Aluminium profile and accessories to be fixed to self-supporting drive or, in addition, to support the protection cover.

### LIGHTS



LED Lights system (White or RGB) integrated into fabric-holding tubes available as kit standard and custom.

# ASHELTA APPENDIX

## BEAUFORT WIND FORCE SCALE

Degree	Wind-Resistance Class UNI EN 13561	Wind Load (N/m <sup>2</sup> )	Km/h	m/s	Environmental Conditions	Effect of Wind
0	<40	0-1	0-1	>0,3	Calm	Smoke rises vertically
1	<40	1-5	1-3	0,3 - 1,5	Light air	Direction of wind shown by smoke drift, but not wind vanes.
2	<40	6-11	4-6	1,6 - 3,3	Light Breeze	Wind felt on face. Leaves rustle. Ordinary vane moved by wind.
3	<40	12-19	7-10	3,4 - 5,4	Gentle Breeze	Leaves and small twigs in constant motion. Wind extends light flat.
4	40	20-28	11-16	5,5 - 7,9	Moderate Breeze	Raises dust and loose paper. Small branches are moved.
5	70	29-38	17-21	8 - 10,7	Fresh Breeze	Small trees with leaves begin to sway. Crested wavelets form on inland waters.
6	110	39-49	22-27	10,8 - 13,8	Strong Breeze	Large branches in motion. Whistling heard in telephone wires. Umbrellas used with difficulty.
7	>110	50-61	28-33	13,9 - 17,1	Near Gale	Whole trees in motion. Inconvenience felt in walking against wind.
8	>110	62-74	34-40	17,2 - 20,7	Gale	Breaks twigs off trees. Generally impedes progress. Walking into the wind is almost impossible.
9	>110	75-88	41-47	20,8 - 24,8	Strong Gale	Slight structural damage occurs, e.g. roofing shingles may become loose or blow off.
10	>110	89-102	48-55	24,8 - 28,4	Storm	Trees uprooted. Considerable structural damage occurs.
11	>110	103-117	56-63	28,5 - 32,6	Violent Storm	Widespread damage.
12	>110	>118	>64	>32,7	Hurricane	Rare. Severe widespread damage to vegetation and significant structural damage possible.



## Let's Talk

Contact us and find out  
how to place the  
Ashelta Retractable Roof  
at the heart of your  
outdoor project.

Tel 0330 175 5533 | Email [sales@ashelta.com](mailto:sales@ashelta.com)

