



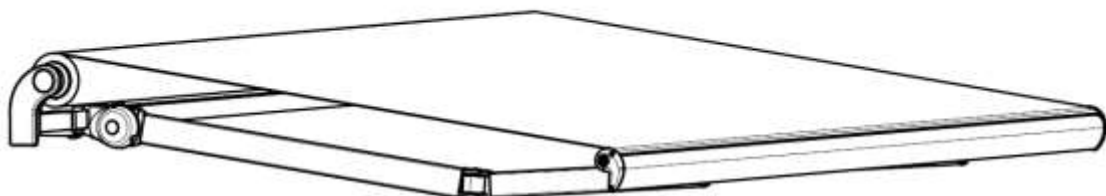
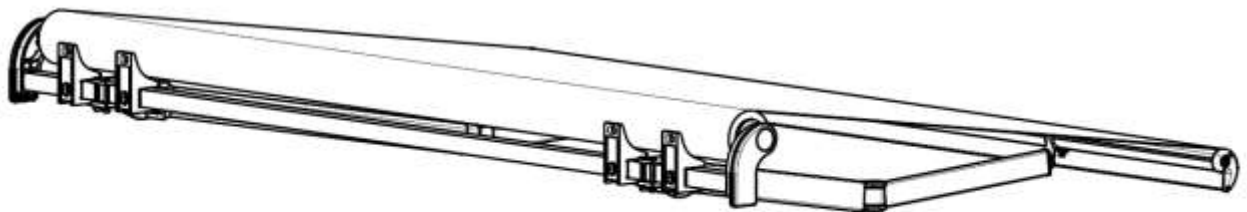
Technical Manual

Monobloc ART-350



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Descriptive specifications

1. GENERAL CHARACTERISTICS

The ART-350 awning with the monobloc system essentially owes its creation to the need to provide a solution for sun protection on large-scale installations.

It allows all its components to be mounted on a square bar, which makes this model an agile, efficient, and simple solution for positioning multiple suspension brackets to anchor the self-bearing system.

With its reduced dimensions, it represents an ideal new model for large installations and requires minimal installation time at the selected location.

2. DESCRIPTION OF THE SYSTEM

The advanced technology applied to the LLAZA-ART system provides a series of advantages, which guarantee maximum performance from the awning:

- Improved durability
- Enhanced strength due to the shape of its arms
- Ease of installation: the monobloc system significantly reduces on-site installation time.

The system is based on the conjunction and adaptation of a set of profiles, assembly pieces, articulated arms with internal elongation springs, and the options available for generating rotational movement (gearbox or motor). All of these components, together with acrylic or high-tech fabric, are required for the installation and operation of the system.

As with any sun protection system, this product also seeks to achieve the greatest suitability in terms of two intrinsic necessities:

- Dimensions
- Exposure to the elements (sun, wind, rain)

To address these factors, the materials chosen in the manufacture of this product have taken on vital importance.

3. DESCRIPTION OF THE PARTS THAT MAKE UP THE AWNING

This main characteristic that sets the monobloc system apart from other classic systems (Compleat, etc.) is rooted in the separation of the bracket for the fabric rolling tube and the support system for suspending the articulated arms.

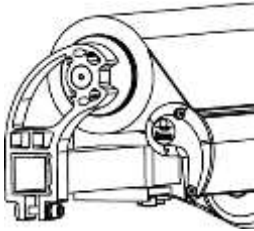


Furthermore, the anchoring brackets for the 40x40 millimetre square bar to which the various components are attached can be strategically placed in terms of distances and total number, based on the characteristics of the installation site. This provides the ideal distribution for the force and strength of the model, allowing it to cover large surfaces.

These brackets can be varied depending upon the location chosen for suspension, since they can be attached either to a wall or to an overhanging ceiling. For ceiling mounting, both anchoring systems can be used, considerably expanding the options for variability.

Descriptive specifications

The acrylic or high-tech fabric offers superior sun protection, and extends and retracts by rolling onto a steel tube.



This tube is held in place by the side brackets, which are in turn attached to the 40x40 millimetre square bar using a clamp system and tightened allen-head bolts.

The rotational motion applied to the rolling tube when extending or retracting the fabric is activated by means of a gearbox with a 1:10 ratio, operated with a crank, or else with an electric motor located inside one end of the rolling tube.

At the other end, a polyamide bearing ensures technically calculated support so the system operates smoothly and perfectly every time.

A structure consisting of articulated ART-System arms and the corresponding drop bar profile is used to extend the fabric.

The ART-System arms themselves consist of profiles with an internal tensioning system that uses an elongation mechanism, with transmission of the longitudinal difference by means of a patented flexible tape system. This ensures that the product performs well above the applicable European EN 13561 standard.

When used properly, the ART-System arms will exceed 60,000 operational cycles. Also, the appropriate angular calculations for their components prevent them from rubbing against the fabric during the entire extension-retraction process.

For installations requiring more than two arms (and providing that the total width allows it), the use of an even number of bars is recommended, so that the forces that these arms exert upon the system are balanced.



In cases where the total width of the awning does not allow installation of three or more arms, a crossed-arm kit can also be used for one of the arms (always the left-hand arm when viewed from the front). This kit allows an arm to be installed at a lower horizontal level than the others, thereby allowing the arms to cross.

The rolling tube can be a single unit, or it can also use a central support bracket and a transmission bearing. In this case, the fabric must be divided, with the option for a one- or two-part front drop bar.

Descriptive memory

IMPORTANT: By changing the cover set of the ART 350 arm bracket, by the covers of the Splendor 300 arm bracket, we can make a Monobloc with SPLENDOR 300 arms (this change is not needed with the Splendor 400 arms).

The SPLENDOR arms are composed by profiles, also by an internal tensioning system with an elongation mechanism.



The tension transmission it is performed by a flexible belt system that guarantees the functionality of the product well above the European requirements, contemplated in the Regulations EN 13561.

The articulation of the arms, is protected by patent of invention. It uses two ball bearings as rotating elements. This characteristic provides a much greater technical response compared to other conventional systems.

The proper angular calculation of its components, prevents friction with the fabric during the entire cycle of opening-closing the arms

The concealment of all the transmission components in the joint, its metal design and the slimness of the profiles gives the SPLENDOR arm a smart, compact, exclusive look.

The final aesthetic result is therefore an important added value for this SPLENDOR system.

4. FINAL CONSIDERATIONS

- Our manufacturing processes and corresponding management controls have allowed us to be granted ISO 9001 certification for design and manufacturing.
- Our compliance with the requirements of the European EN 13561 standard allows us to issue the Statement of Conformity for the CE marking.
- Application of the conditions required by EAA/Qualicoat standards allow us to offer a 3-year guarantee on lacquer finishes.

Descriptive specifications

5. COMPONENT SPECIFICATIONS

GEOMETRIC PROPERTIES			
	Geometry	Section (mm ²)	Mt (cm ⁴)
Structure			
Components	-	-	-
40x40 support profile	-	444	Ixx= 10.19 Iyy=10.19
Front EVO-80 profile	-	476	Ixx= 28.71 Iyy=18.84
ART-350 Arms			
Structural components	-	-	-
Front aluminium profile	-	305	Ixx = 3.85 Iyy = 10.44
Rear aluminium profile	-	514	Ixx = 9.86 Iyy = 27.04
SPLENDOR 300 Arms			
Structural components			
Front aluminium profile	-	243	Ixx=10,52 Iyy=2,32
Rear aluminium profile	-	253	Ixx=11,16 Iyy=3,26

TECHNICAL CHARACTERISTICS							
Structure	Process	Desig. Material	A	B	C	D	
Components	Casting	Aluminium	170	80	5	55	
Brackets	Extrusion	Aluminium					
40x40 support profile	Extrusion	Aluminium					
Front EVO-80 profile	Extrusion	Aluminium					
ART-350 Model Arms							
Components	Pressure moulding	Aluminium	180	90	2.5	55	
Front aluminium profile	Extrusion	Aluminium	175	130	6	-	
Rear aluminium profile	Extrusion	Aluminium	270	225	6	-	

DESCRIPTION		
A	Resistance to traction	Rm (Mpa)
B	Elastic limit	Rp 0,2 (Mpa)
C	Elongation	A50 mm (%)
D	Brinell Hardness	HBS

MONOBLOC ART-350



Cutting, selection, and classification tables

ANGLE OF INCLINATION		WALL		CEILING			
		0° to 90°		0° to 90°			
MAXIMUM WIDTHS BASED ON PROJECTION							
ARM PROJECTION		2 ARMS		3 ARMS		4 ARMS	
300		600		900		1200	
350		550		775		1100	

EN 13561 STANDARD—WIND CLASSIFICATION TABLE FOR MONOBLOC ART 350											
		Width (m)									
		1500	2000	2500	3000	3500	4000	4500	5000	5500	6000
Projection (m)	1500	2ca	2	2	2	2	2	2	2	2	2
	2000	2ca	2ca	2	2	2	2	2	2	2	2
	2500		2ca	2ca	2	2	2	2	2	2	2
	3000		2ca	2ca	2ca	2ca	2	1	1	1	1
	3500			2ca	2ca	1ca	1ca	1	0	0	0

ca= crossed arms

		Max.speed (km/h)	Pressure p(N/m ²)	Beaufort Scale
	CLASS 0	19		3
	CLASS I	28	40	4
	CLASS II	38	70	5

 CLASS I FOR CROSSED ARMS
 CLASS II FOR CROSSED ARMS

Cutting, selection, and classification tables

MOTOR SELECTION TABLE (in Nw/m)										
		PROJECTION (mm)								
		1500	1750	2000	2250	2500	2750	3000	3250	3500
ROLLING TUBE Ø 70										
2 arms	35 Nm			40 Nm			50 Nm			
ROLLING TUBE Ø 80										
2 arms	40 Nm			50 Nm						
3 arms	55 Nm			70 Nm				85 Nm		
4 arms	85 Nm			100 Nm						

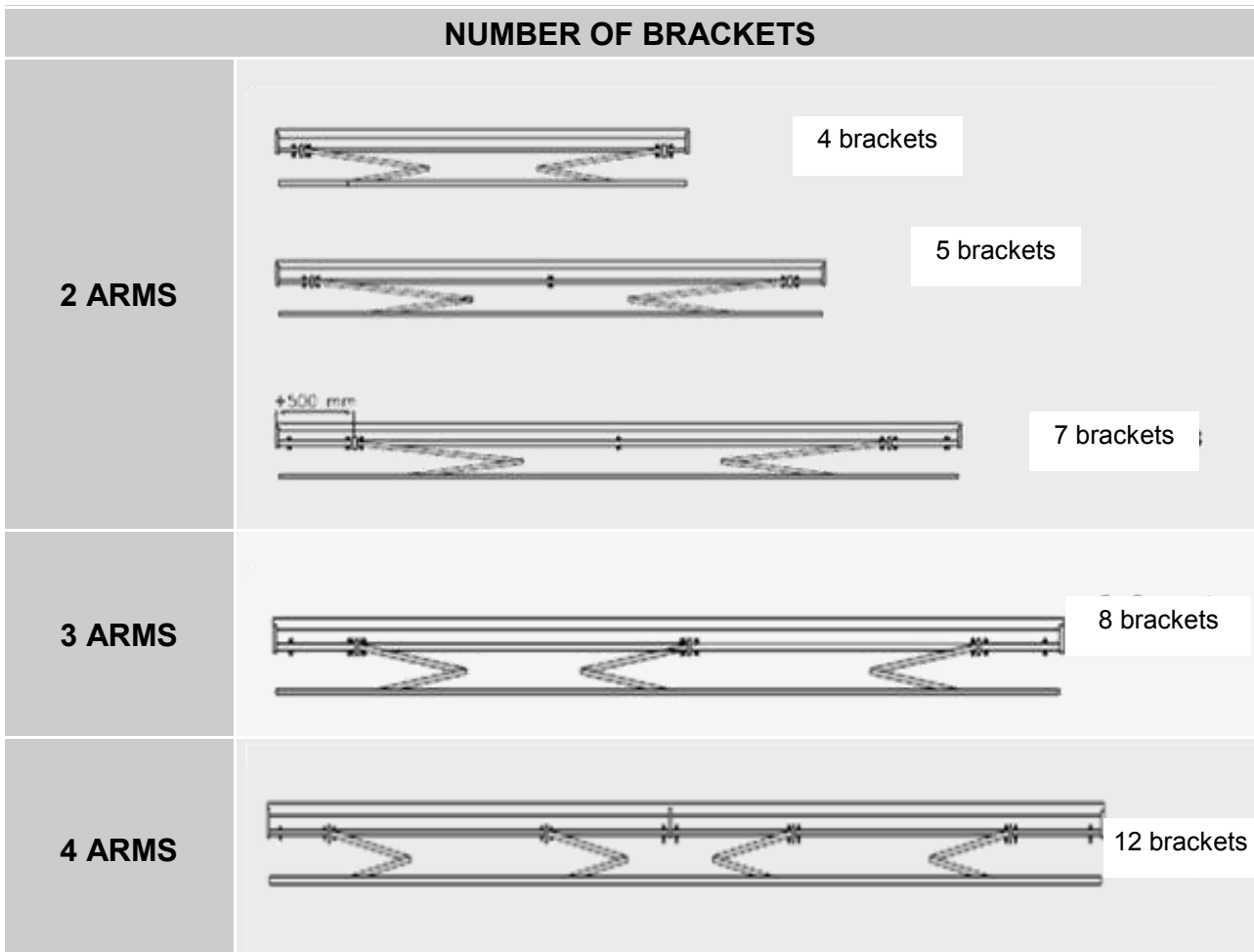
CUTTING OF PROFILES AND FABRIC (mm)				
	INTERNAL GEARBOX	SOMFY MOTOR Ø50 to Ø70 tube	SOMFY MOTOR Ø50 to Ø80 tube	SOMFY MOTOR Ø60 to Ø80 tube
ROLLING TUBE	W-132	W-120	W-124	W-120
FABRIC	W-142	W-130	W-134	W-130
EVO DROP BAR PROFILE	W-122	W-115	W-119	W-115
40x40 BAR	W-10	W-10	W-10	W-10

MONOBLOC ART-350



Cutting, selection, and classification tables

PROJECTION (mm)	MINIMUM WIDTH (mm)			
	NUMBER OF ARMS			CROSSED ARMS
	2	3	4	2
	MINIMUM 4 BRACKETS	MINIMUM 6 BRACKETS	MINIMUM 8 BRACKETS	Maximum inclination 45°
1500	2120	3070	4040	1220
1750	2370	3450	4540	1350
2000	2620	3820	5040	1470
2250	2870	4290	5540	1600
2500	3120	4570	6040	1720
2750	3370	4950	6540	1850
3000	3620	5320	7040	1970
3250	3870	5700	7540	2100
3500	4120	6070	8040	2210



A wall or ceiling bracket must be installed on both sides of the arm bracket.

When the outermost arm brackets are more than 500 millimetres from the end of the awning, an additional wall or ceiling bracket must be placed at each end of the awning to prevent torsion forces on the square bar.

Number of brackets for square bar (when using two arms)

Width	Projection (m)								
	1,50 m.	1,75 m.	2,00 m.	2,25 m.	2,50 m.	2,75 m.	3,00 m.	3,25 m.	3,50 m.
2,25 m.	2								
2,50 m.	2	2							
2,75 m.	2	2	2						
3,00 m.	2	2	2	2					
3,25 m.	2	2	2	2	2				
3,50 m.	2	2	2	2	3	3			
3,75 m.	2	2	2	2	3	3	3		
4,00 m.	2	2	2	3	3	3	4	4	
4,25 m.	2	2	3	3	3	3	4	4	4
4,50 m.	2	3	3	3	3	3	4	4	5
4,75 m.	3	3	3	3	3	4	4	5	5
5,00 m.	3	3	3	3	3	4	4	5	5
5,25 m.	3	3	3	3	3	4	4	5	5
5,50 m.	3	3	3	3	3	4	4	5	5
5,75 m.	3	3	3	3	3	4	4	5	5
6,00 m.	3	3	3	3	4	4	5	5	5

Number of brackets for square bar (when using threearms)

Width	Projection (m)								
	1,50 m.	1,75 m.	2,00 m.	2,25 m.	2,50 m.	2,75 m.	3,00 m.	3,25 m.	3,50 m.
6,50 m.	3	3	3	4	4	4	4	6	6
7,00 m.	3	3	4	4	4	4	5	6	6
7,50 m.	3	4	4	4	4	5	5	6	7
8,00 m.	4	4	4	4	4	5	5	6	7

Number of brackets for square bar (when using four arms)

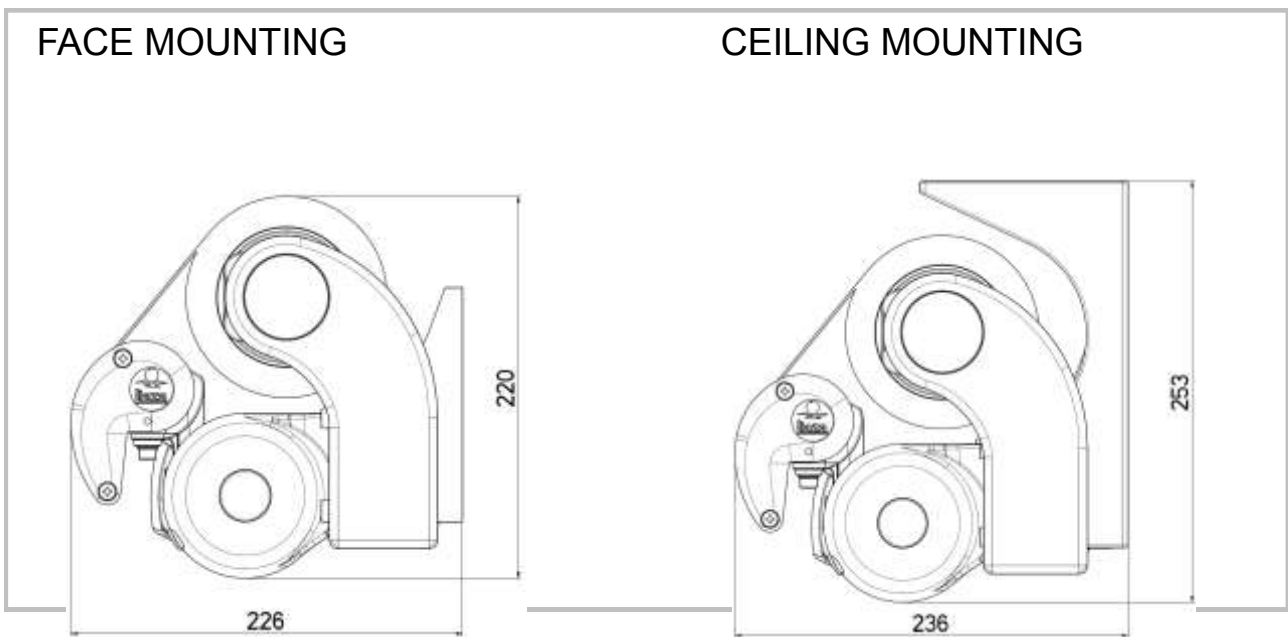
Width	Projection (m)								
	1,50 m.	1,75 m.	2,00 m.	2,25 m.	2,50 m.	2,75 m.	3,00 m.	3,25 m.	3,50 m.
8,50 m.	4	4	4	4	4	5	6	7	7
9,00 m.	4	4	4	4	5	5	6	7	7
9,50 m.	4	4	4	5	5	5	6	7	8
10,00 m.	4	4	5	5	5	6	7	8	9

Number of brackets for square bar (when using six arms)

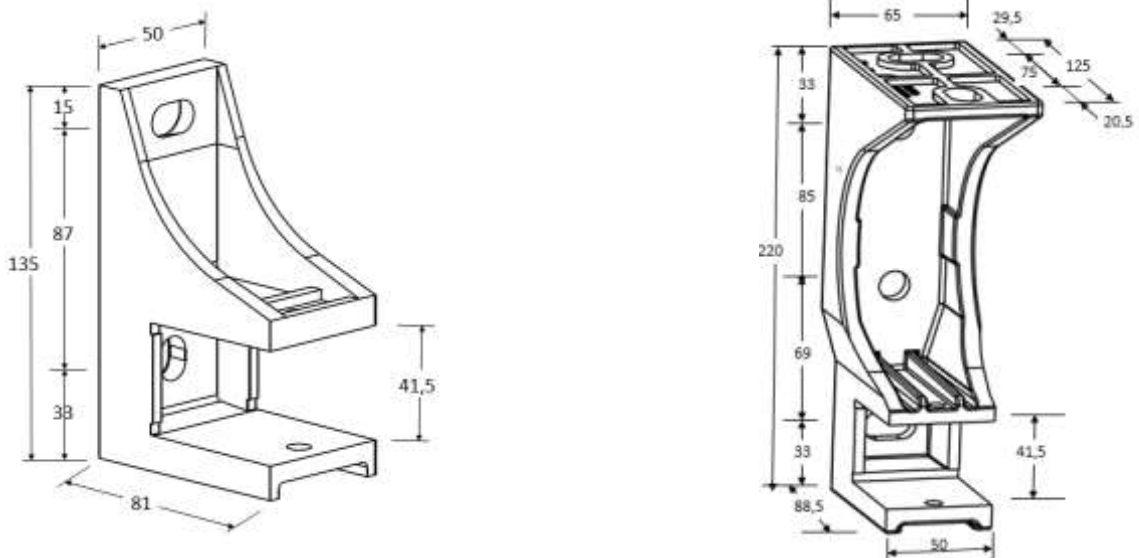
Width	Projection (m)								
	1,50 m.	1,75 m.	2,00 m.	2,25 m.	2,50 m.	2,75 m.	3,00 m.	3,25 m.	3,50 m.
10,50 m.	5	5	5	5	6	6	7	8	9
11,00 m.	5	5	5	6	6	6	7	8	10
11,50 m.	5	5	6	6	6	6	8	9	10
12,00 m.	6	6	6	6	6	7	8	9	10
12,50 m.	6	6	6	6	6	7	8	9	11
13,00 m.	6	6	6	6	6	7	8	10	11
13,50 m.	6	6	6	6	6	7	9	10	12
14,00 m.	6	6	6	6	6	8	9	11	12
14,50 m.	6	6	6	6	7	8	9	11	13
15,00 m.	6	6	6	6	7	8	10	11	13

N° of ROLLER SUPPORTS	
From 5,50 m. to 8,00 m-. width	1 roller
From 8,01 m. to 11,00 m width	2 rollers
From 11,01 m. to 14,00 m. width	3 rollers
From 14,01 m. to 16,00 m. width	4 rollers

Annotated cross-sectional diagrams

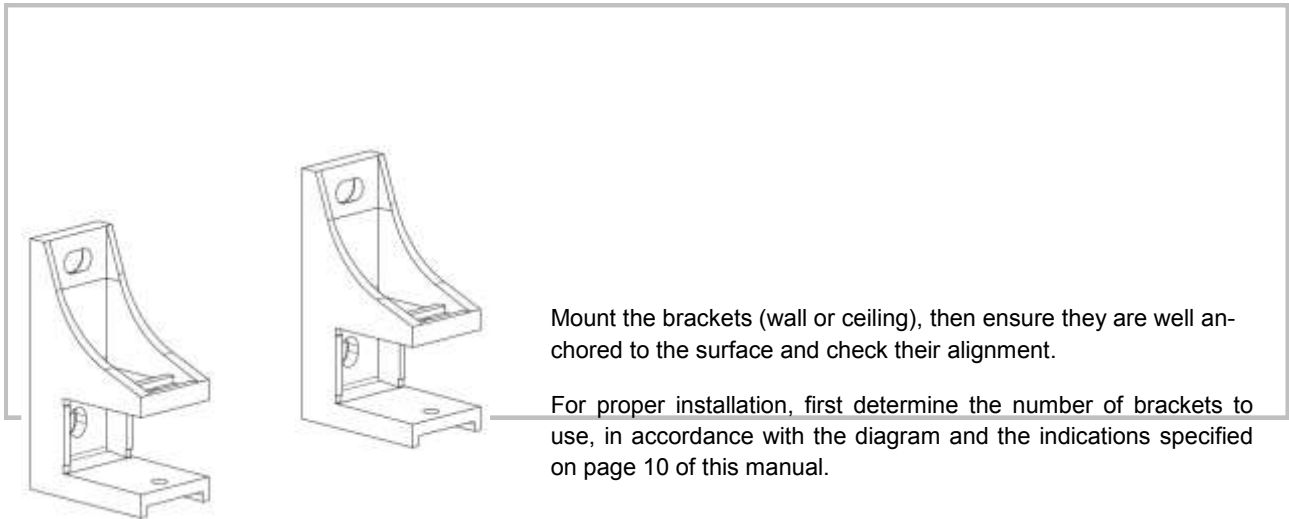


BRACKET DIMENSIONS

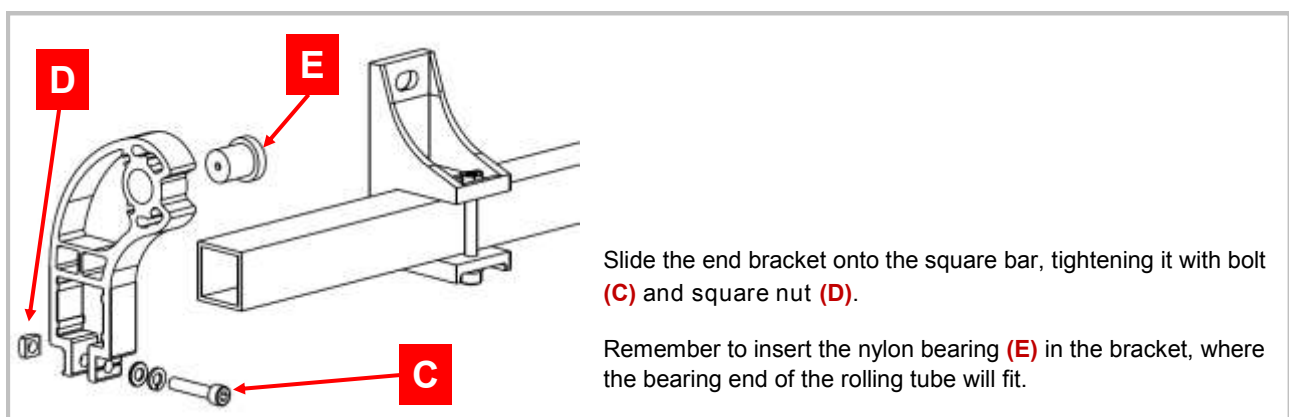
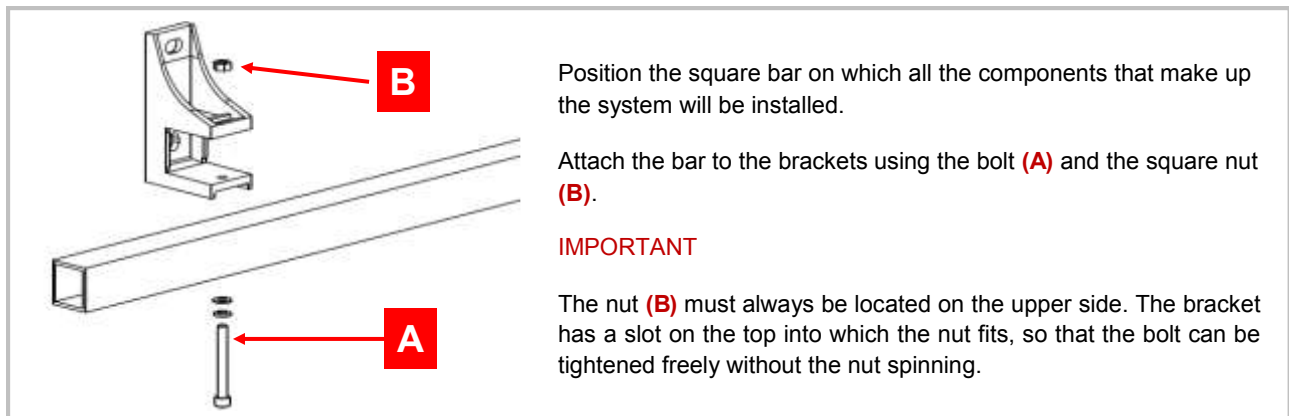


Assembly instructions

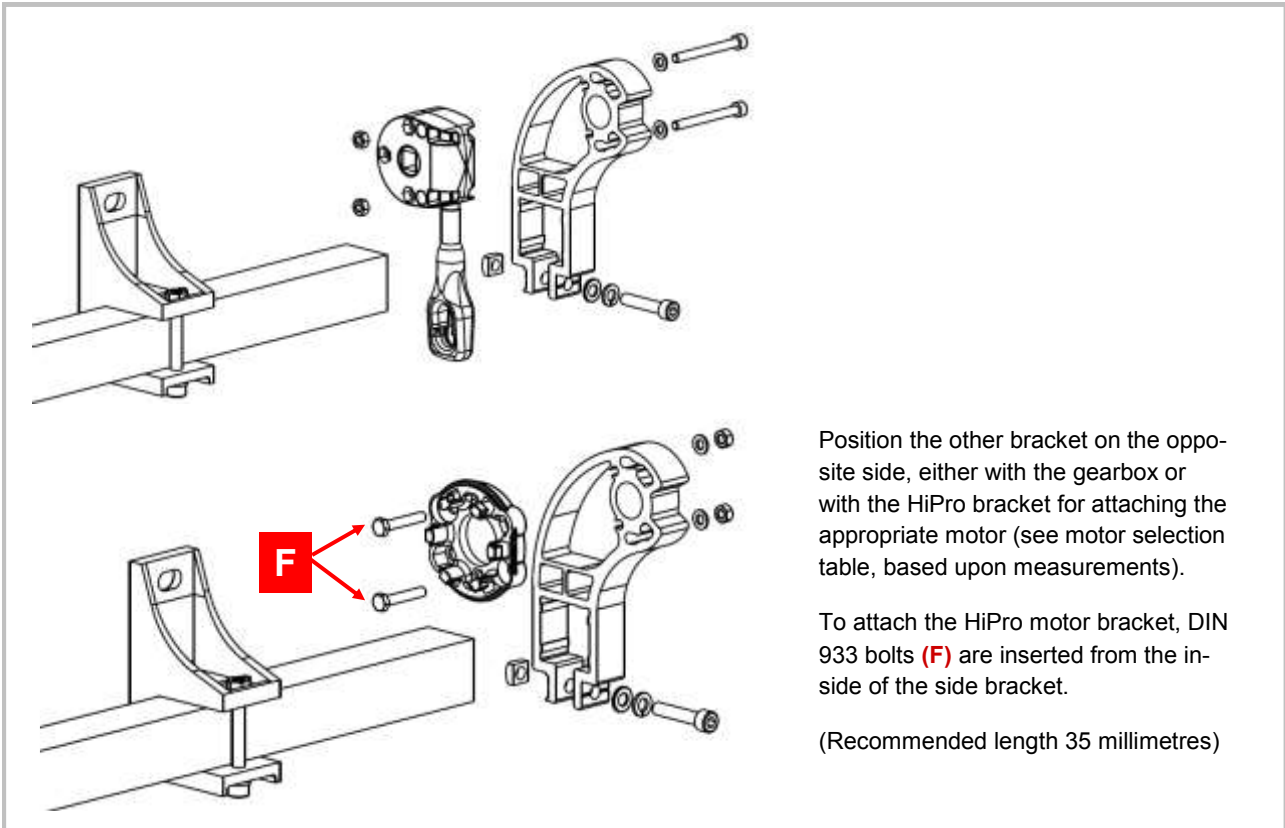
1. MOUNTING THE BRACKETS



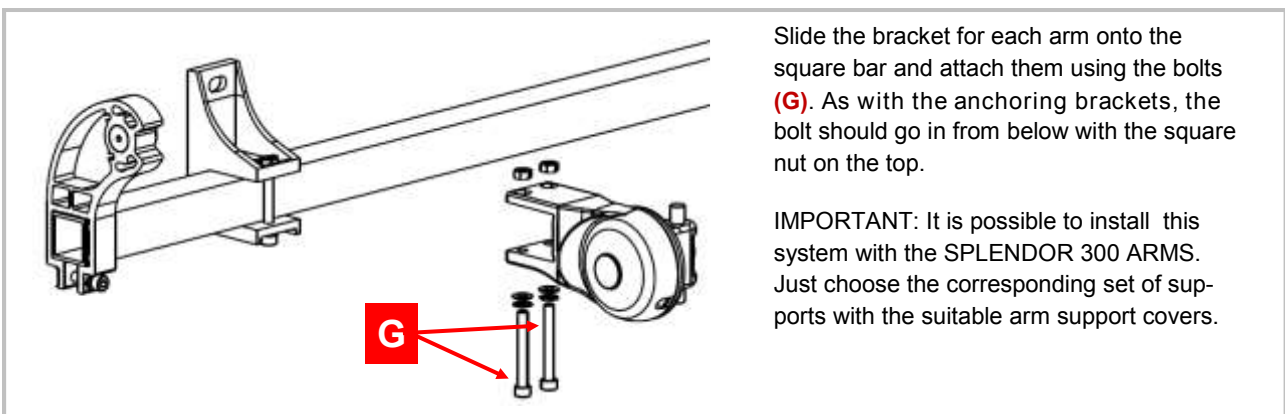
2. MOUNTING THE END AND GEARBOX BRACKETS



Assembly instructions



3. INSTALLING THE ARM BRACKETS

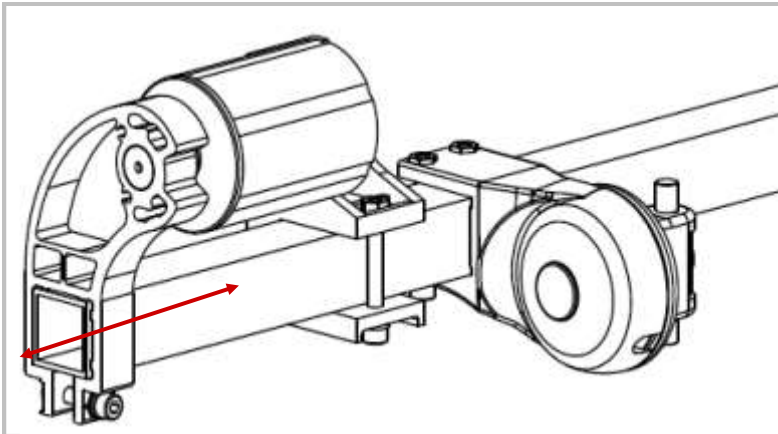


MONOBLOC ART-350



Assembly instructions

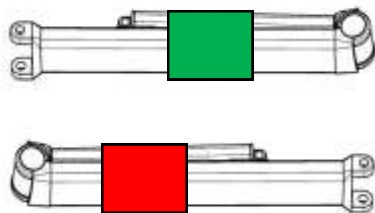
4. INSTALLING THE ROLLING TUBE AND FABRIC



Insert the fabric into the slot on the rolling tube as well as the one on the EVO front profile. Insert the rolling tube into the brackets, loosening the attachment of the end bracket to the square bar so that the shaft of the bearing end can be inserted into the nylon bearing on the bracket.

Pay attention to the distance between the end brackets and the end of the square bar, so that the decorative covers can be attached.

5. INSTALLING THE ARMS

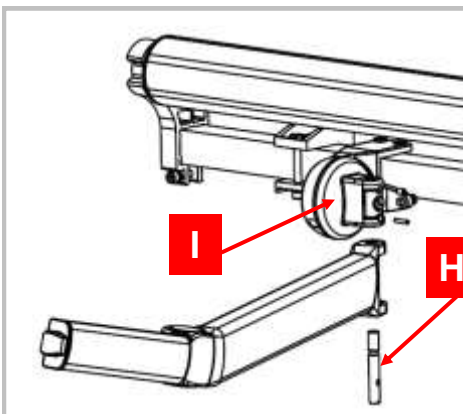


The arms have a protective band for correct identification:

GREEN: Right hand side viewed from outside

RED: Right hand side viewed from outside

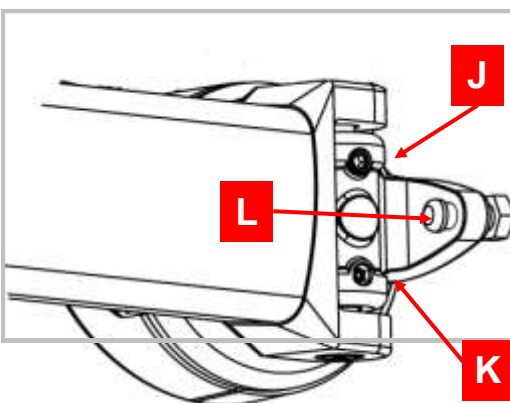
NEVER EXTRACT THE PROTECTIVE BANDS, UNTIL THE ARM HAS BEEN SUBJECTED TO THE FRONT FRONT PROFILE



Remove the two tightening studs that hold the pin (H) to the arm bracket attachment point (I).

Put the arm fork in place, then re-insert the pin and hold it in place by LOOSELY tightening the upper stud (J).

The pin has a slot on the bottom, and it can be turned with a screwdriver until the slot is parallel to the rolling tube. The other stud (K) that threads into the pin can then be screwed in, and by tightening or loosening it, the height of the arm joint can be raised or lowered.



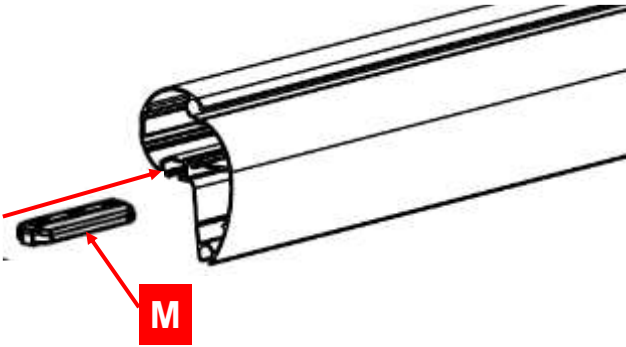
The same allen key can be used to turn both of these studs.

Before attaching the drop bar to the end of the arm, close the arm with the protective coupling in place, and check that it is level in relation to the 40x40 square bar. This allows quick and efficient adjustment of the arms. Once the arms are in their correct positions, firmly tighten the upper stud (J).

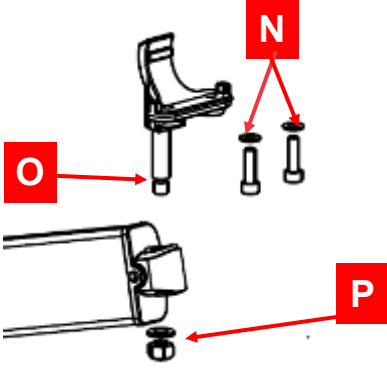
The hex-head bolt (L) helps ensure that the retracted arm does not make contact with the square bar.

Assembly instructions

6. INSTALLING THE END PIECES



In the lower slot on the EVO drop bar profile, insert the attachment plate **(M)**, which will be attached to the arm end. Then attach the decorative covers to the drop bar profile ends. The same bolt that attaches the cover will hold the ends of the fabric in place.

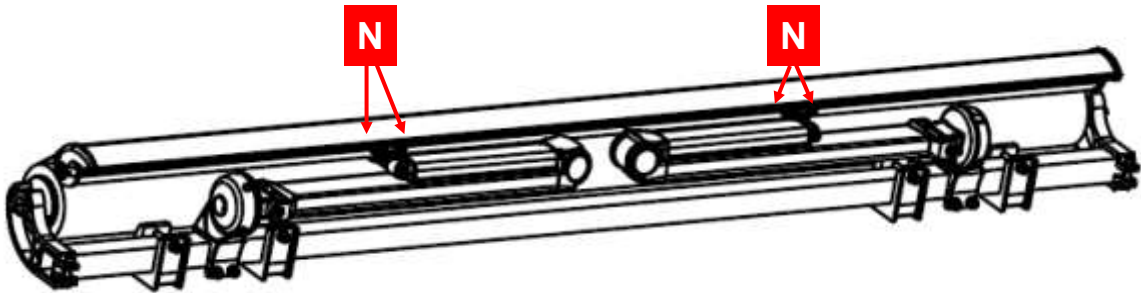


Insert the two allen-head bolts **(N)** through the holes in the arm end piece and thread them loosely into the attachment plate.

Then insert the end piece pin **(O)** and attach it using the washer and self-locking nut **(P)**, making sure to tighten the nut only as far as necessary for the threaded pin to pass all the way through the nut.

Once this has been done, close the awning completely and tighten the allen bolts **(N)** that attach the arm end to the attachment plate.

7. FINAL ADJUSTMENT



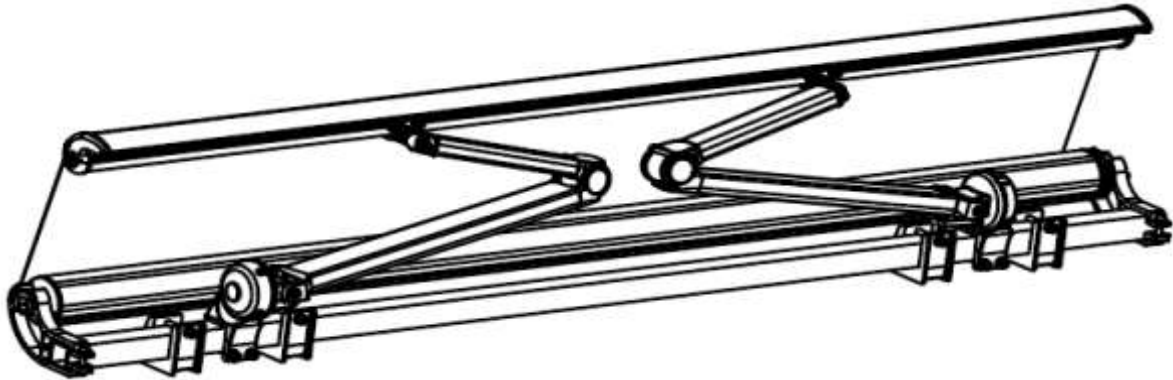
The position of the arm joints in terms of their proximity to the square bar is adjusted using the hex-head bolt **(L)** shown on the previous page. This bolt must not exert too much pressure when the arm closes, since excess force on the arm hinge may cause damage to the bracket.

The ability to adjust the tightness of the allen bolts **(N)** is one of the characteristics of LLAZA's products that makes adjusting the awning considerably easier after it has been installed.

MONOBLOC ART-350



Assembly instructions



Once everything has been tightened, open the awning about 200-300 millimetres and check the alignment of the arm joints. If they are not correctly aligned, loosen the bolts (**N**) again with the awning remaining open and adjust the position of the arm end, so that the two joints are aligned.

Bear in mind that the set of elements are joined by the fabric, so that movement in one of the arms will in turn cause movement in the other.

IMPORTANT: Whenever the position of the arm ends is modified, the awning must be fully extended and then retracted again. This step is absolutely essential since it positions the entire fabric assembly according to the tensions exerted on the arms, which varies depending upon the point of attachment to the front drop bar profile.



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