



Technical Manual

MICROBOX-300



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Descriptive specifications

1. GENERAL CHARACTERISTICS

The MICROBOX-300 cassette awning offers the complete self-protection that characterises all of the products in Llaza's BOX range of products.

The entire awning assembly fits inside a compact structure, which ensures excellent resistance to possible damage caused by the elements. This extends the life of all of the system's components and greatly reduces the various phases of maintenance that conventional awnings require.

The MICROBOX-300 cassette awning, as part of Llaza's BOX range of products, features a design based on smooth and rounded lines, which fit in with even the most demanding surroundings.

Its carefully designed form conceals the attachment elements, giving the system a sleek appearance.

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 of the fabric and the system as a whole
- Enhanced strength due to the ART-System tensioning elements
- Ease of installation: the BOX system significantly reduces on-site installation time

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.

Descriptive specifications

3. COMPONENT SPECIFICATIONS

GEOMETRIC PROPERTIES			
	Geometry	Section (mm ²)	Mt (cm ⁴)
Structure			
Brackets and sides	-		
Cassette profile	-	620,8	Ixx = 161.5 Iyy = 279.16
Front drop bar profile	-	418	Ixx = 31.74 Iyy = 14.32
PRT model arms			
Structural components	-		
Aluminium profile	-	141	Ixx = 1.82 Iyy = 1.33

TECHNICAL CHARACTERISTICS						
Structure	Process	Desig. Material	A*	B*	C*	D*
Components	Gravity moulding	Aluminium	170	80	5	55
Wall support	Extrusion	Aluminium	270	225	6	-
Cassette profile	Extrusion	Aluminium	175	130	6	-
Front drop bar profile	Extrusion	Aluminium	175	130	6	-
Extrusion comp.	Extrusion	Aluminium				
PRT model arms						
Components	Pressure moulding	Aluminium	180	90	2,5	55
Aluminium profile	Extrusion	Aluminium	175	130	6	-

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

MICROBOX-300

Descriptive specifications



4. CUTTING, SELECTION, AND CLASSIFICATION TABLES

CUTTING OF PROFILES AND FABRIC (in mm)				
	FRONT / CEILING		BETWEEN WALLS	
	SOMFY MOTOR	GEARBOX	SOMFY MOTOR	GEARBOX
CASSETTE PROFILES	W-80	W-80	W-105	W-105
ROLLING TUBE	W-70	W-83	W-95	W-108
FABRIC	W-100	W-100	W-125	W-125

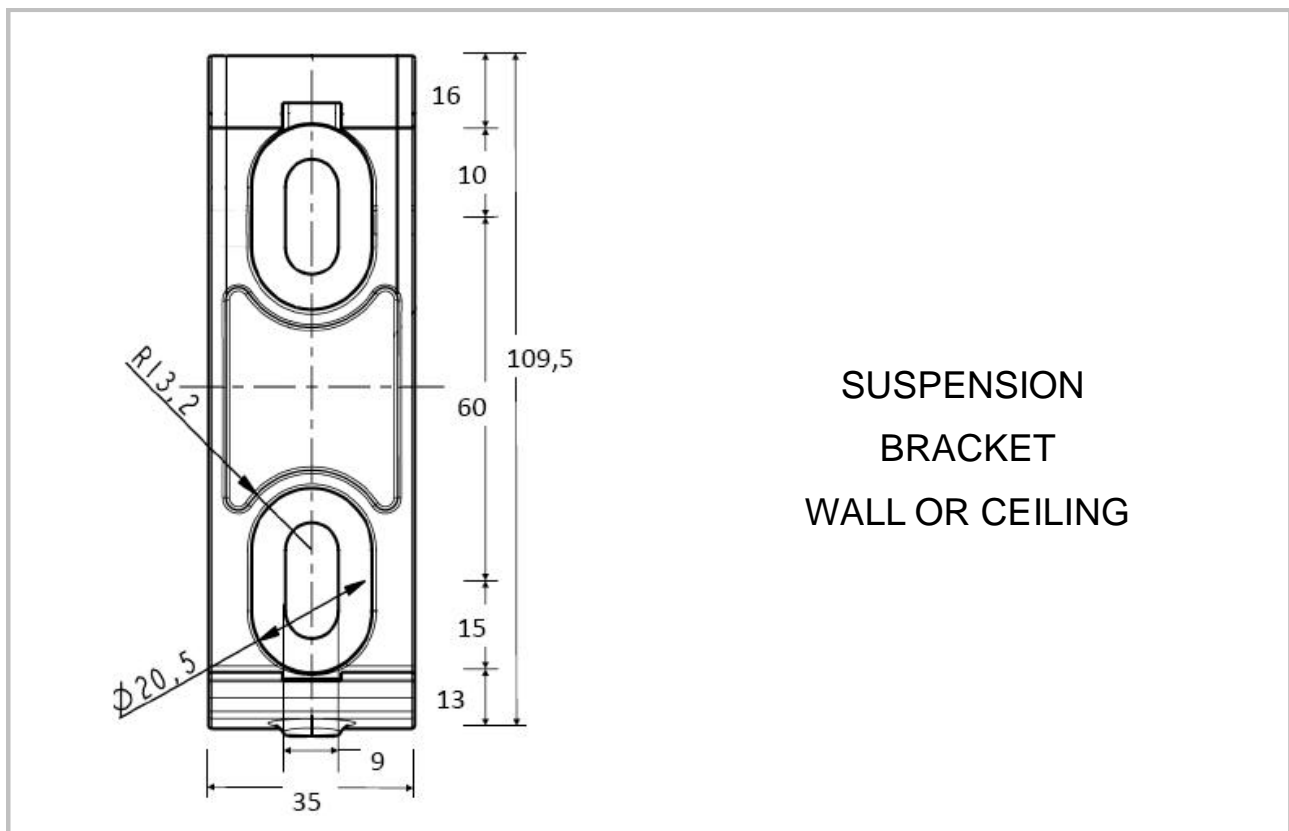
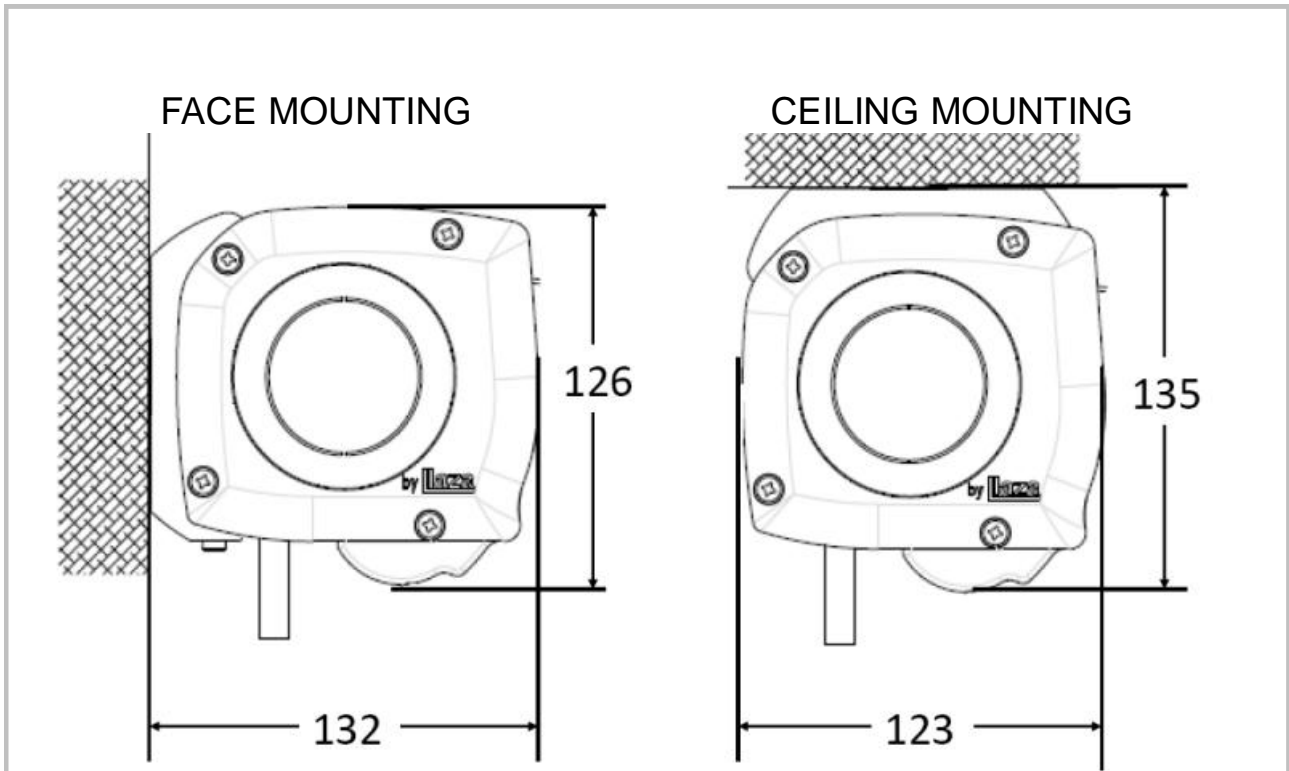
EN 13561 STANDARD – WIND CLASSIFICATION TABLE			
CLASS	RANGE (Km/h)	BEAUFORT	
CLASS 0	0 to 19	1-3 Beaufort	Leaves and small twigs constantly moving.
CLASS 1	20 to 28	4 Beaufort	Dust and loose paper raised. Small branches begin to move.
CLASS 2	29 to 38	5 Beaufort	Branches of a moderate size move. Small trees in leaf begin to sway.
CLASS 3	39 to 49	6 Beaufort	Large branches in motion. Umbrella use becomes difficult.

MICROBOX-300 WIND CLASSIFICATION								
WIDTH	150	200	250	300	350	400	450	500
PROJECTION								
70	3	3	3	3	3	3	3	3
80	3	3	3	3	3	3	3	3
100	3	3	3	3	3	3	3	3
120	3	3	3	3	3	3	3	3
140	3	3	3	3	3	2	2	2
160	3	3	3	3	2	2	2	2

MOTOR SELECTION TABLE (in Nw/m)						
ARM MEASURE- MENT (m)	70	80	100	120	140	160
ROLLING TUBE Ø 70	15 Nw/m					


MAXIMUM WIDTH (in metres)			
No. of ARMS	ROLLING TUBE DIAMETER		
2	50	60	70
	300	400	500

4. ANNOTATED CROSS-SECTIONAL DIAGRAMS

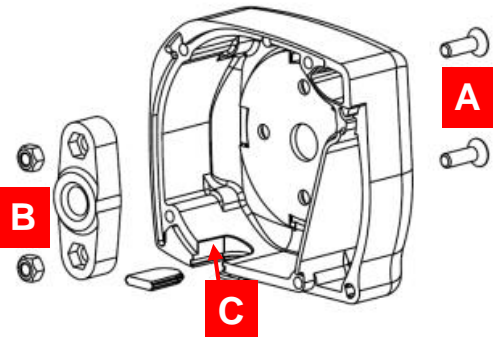


Assembly instructions

5. ASSEMBLY OF THE CASSETTE

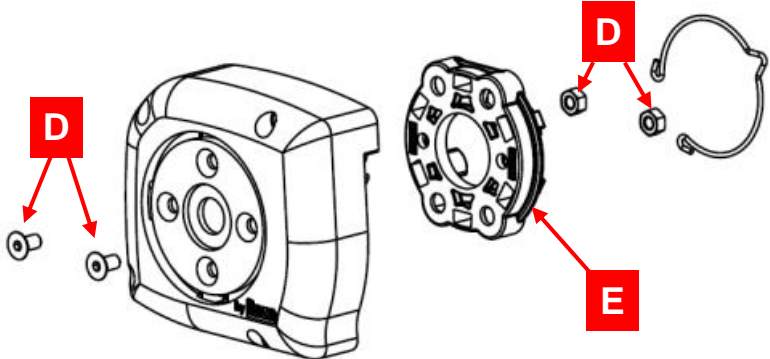


Once the profiles have been cut according to the measurements in the corresponding table, make sure that the cut is completely perpendicular in relation to the profile's length. Clean the ends of the profiles when they are received and remove any burrs produced during cutting, since these could affect proper assembly of the cassette.

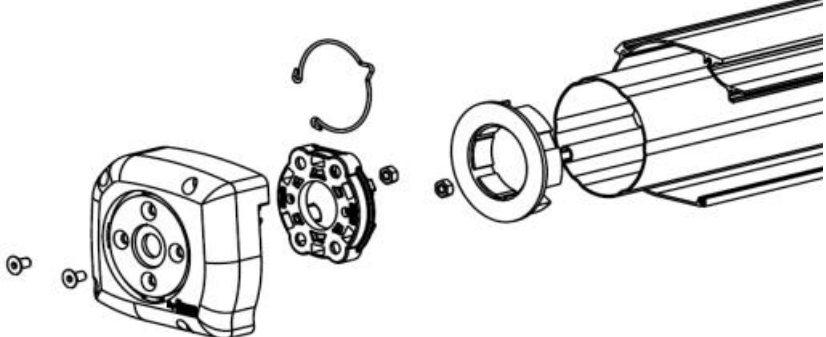


Attach the black piece that supports the end bearing to the side cover of the MICROBOX-300, on the opposite side to the one where the raising mechanism will be inserted. Use the DIN 7991 bolts (A) inserted from the outside of the cover, with the self-locking nuts (B) on the inside.

Use the PVC cover supplied to plug the cut-out (C) that the side cover has for the raising system's gearbox shaft or power cord, since it will not be used on this side.

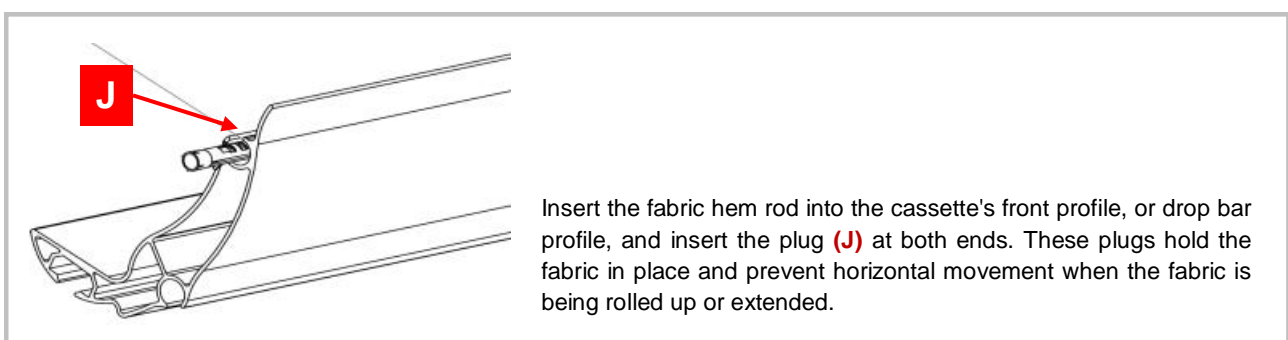
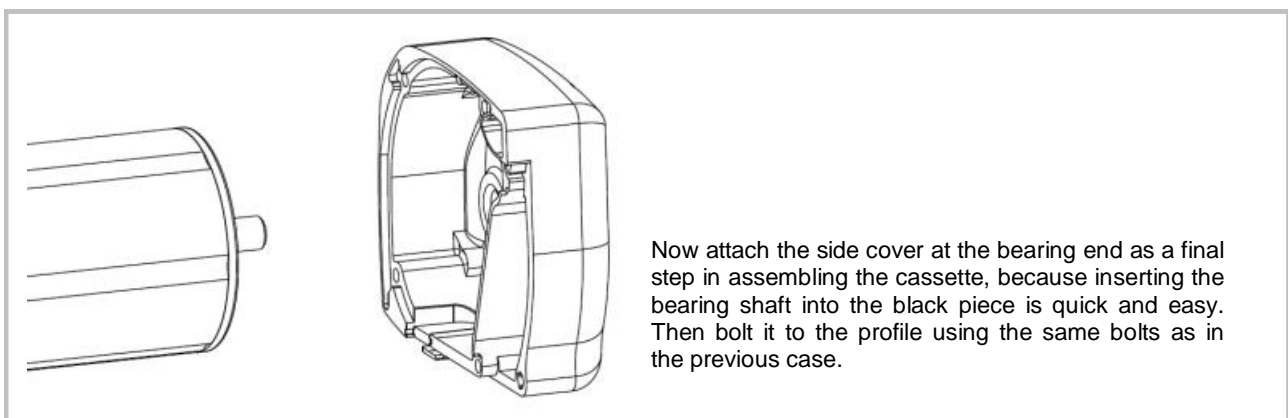
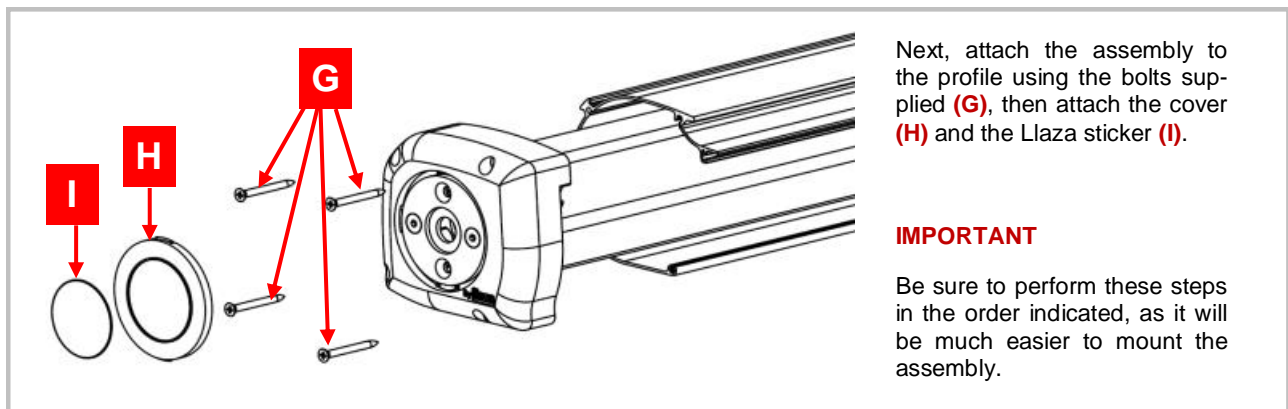
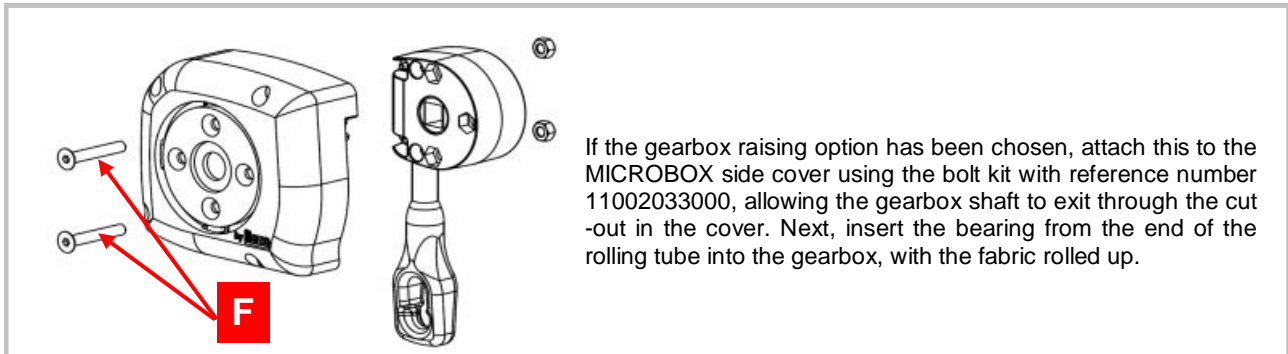


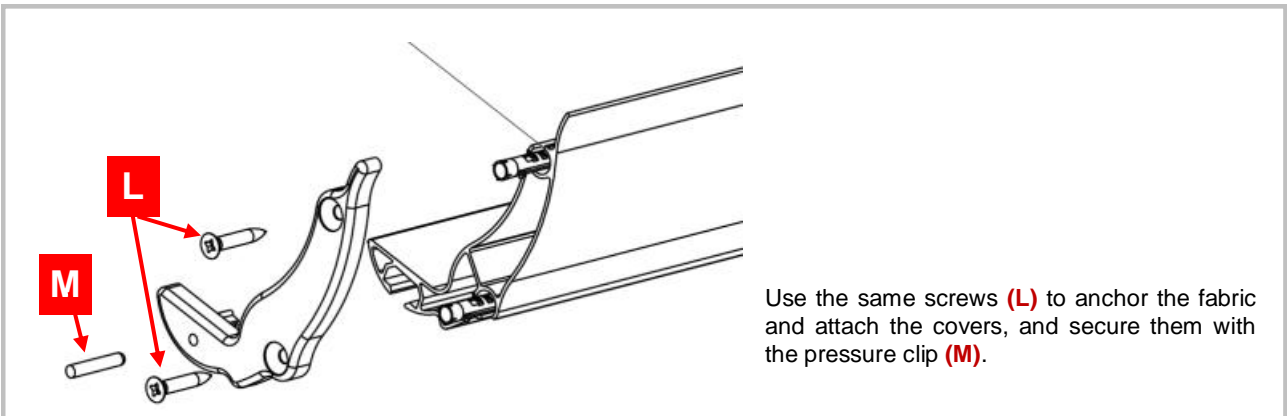
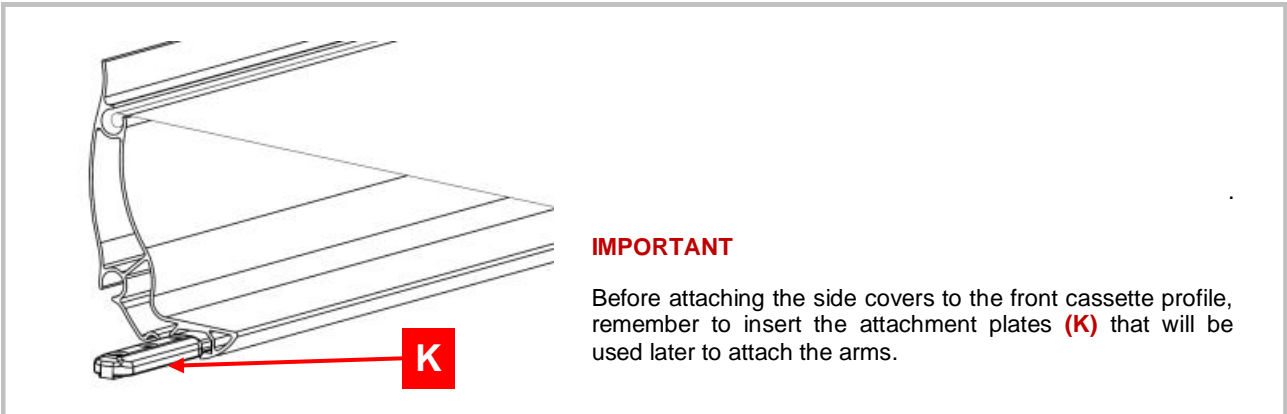
Prepare the side cover where the raising system will be located. If a motor is being used, attach the HiPro bracket (E) to this cover using the bolt kit (D) with reference number 11002035050. In this case, the bolts are inserted from the outside towards the inside, with the nuts being on the HiPro bracket side.



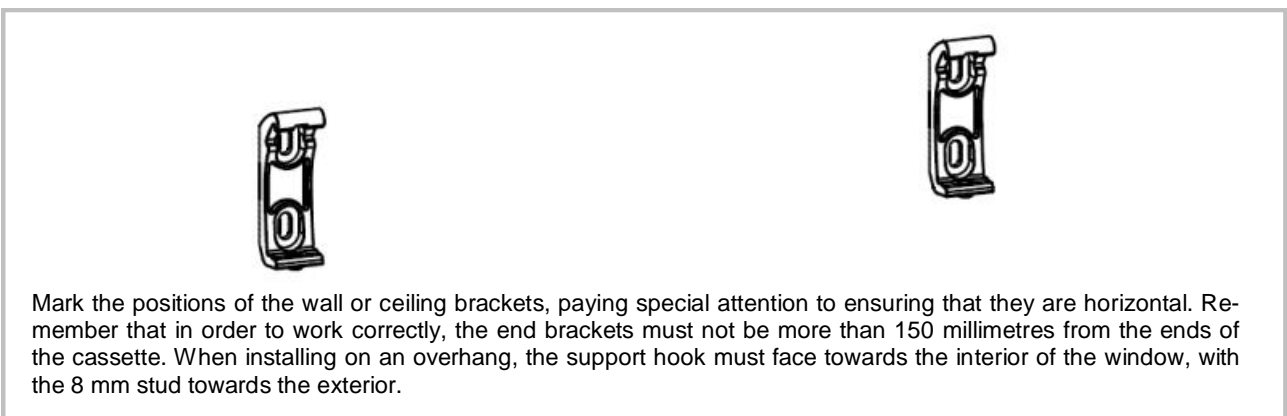
When inserting the motor into the HiPro bracket and attaching it with the attachment clip, first install the motor with the adapter crown and drive wheel as required for the chosen rolling tube, and place the whole assembly into the side cover. This allows some mobility that will make attachment easier.

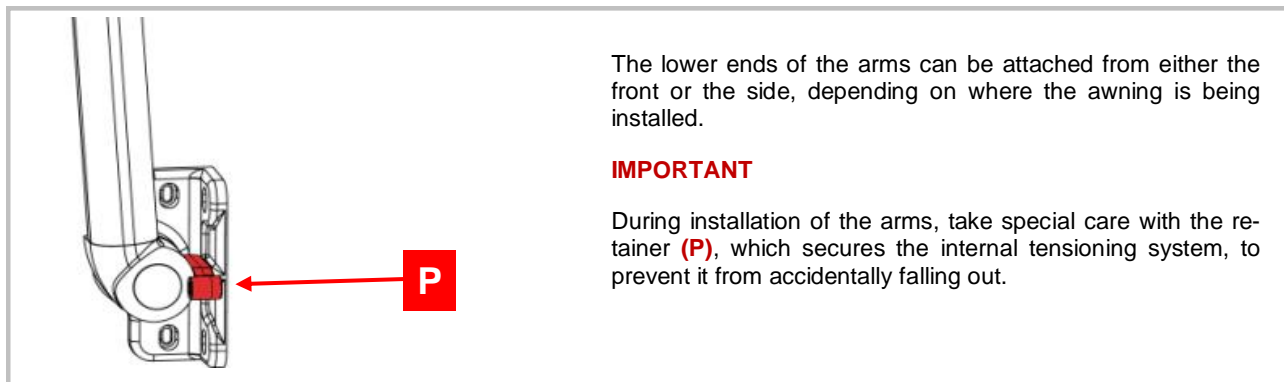
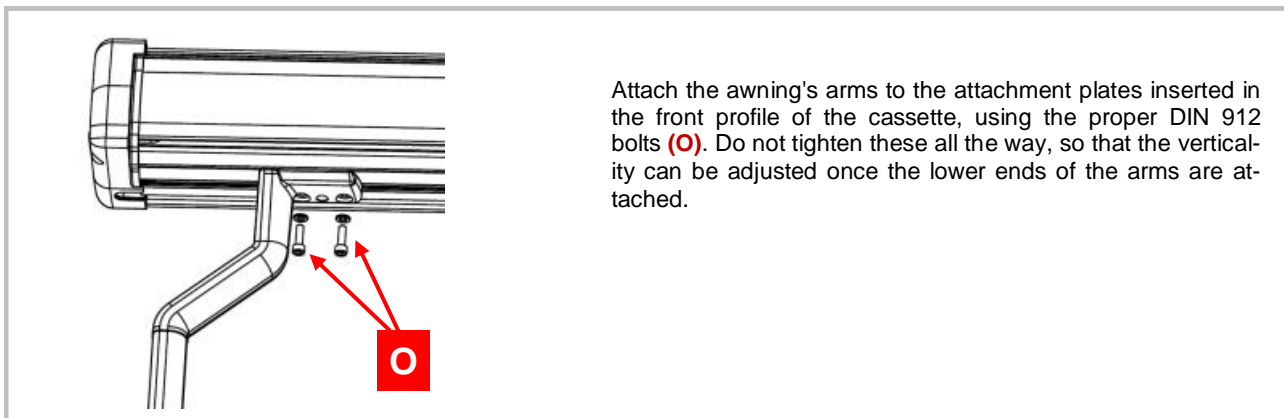
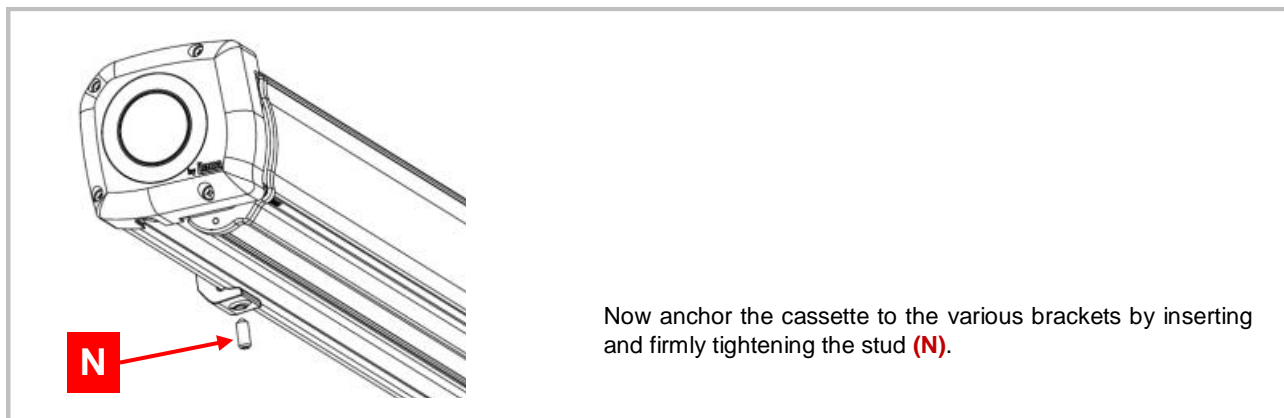
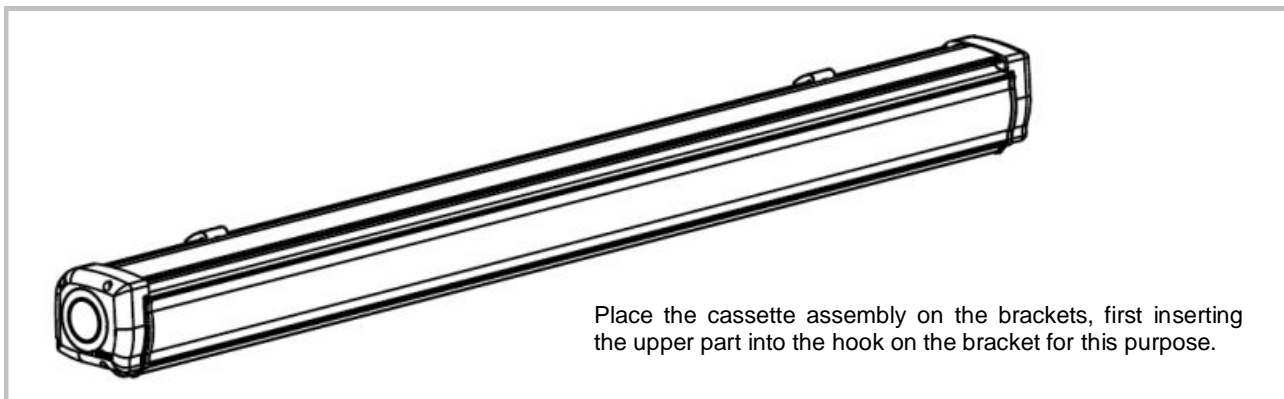
Assembly instructions

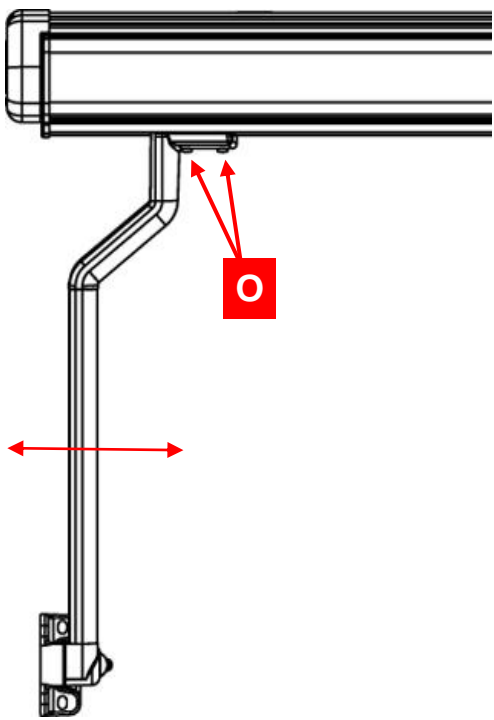




6. INSTALLING THE CASSETTE



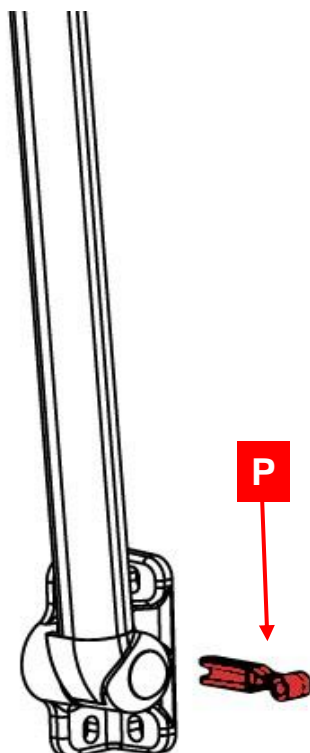




Once the arm is attached at the lower end, move the upper arm attachment to the left or right in order to achieve full verticality prior to tightening the bolts (O) all the way.

Pay special attention during this procedure, since it ensures that the cassette will close correctly.

It is also recommended that you open and close the awning all the way prior to tightening these bolts, to ensure that the fabric is correctly positioned during rolling and to prevent later variations.



To release the internal tension in the arms and allow them to function, the retaining pin (P) must be removed from both arms.

IMPORTANT

Do not remove this retainer before the arm has been attached to the wall and to the awning's front profile.

7. EXAMPLES OF INSTALLATIONS





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