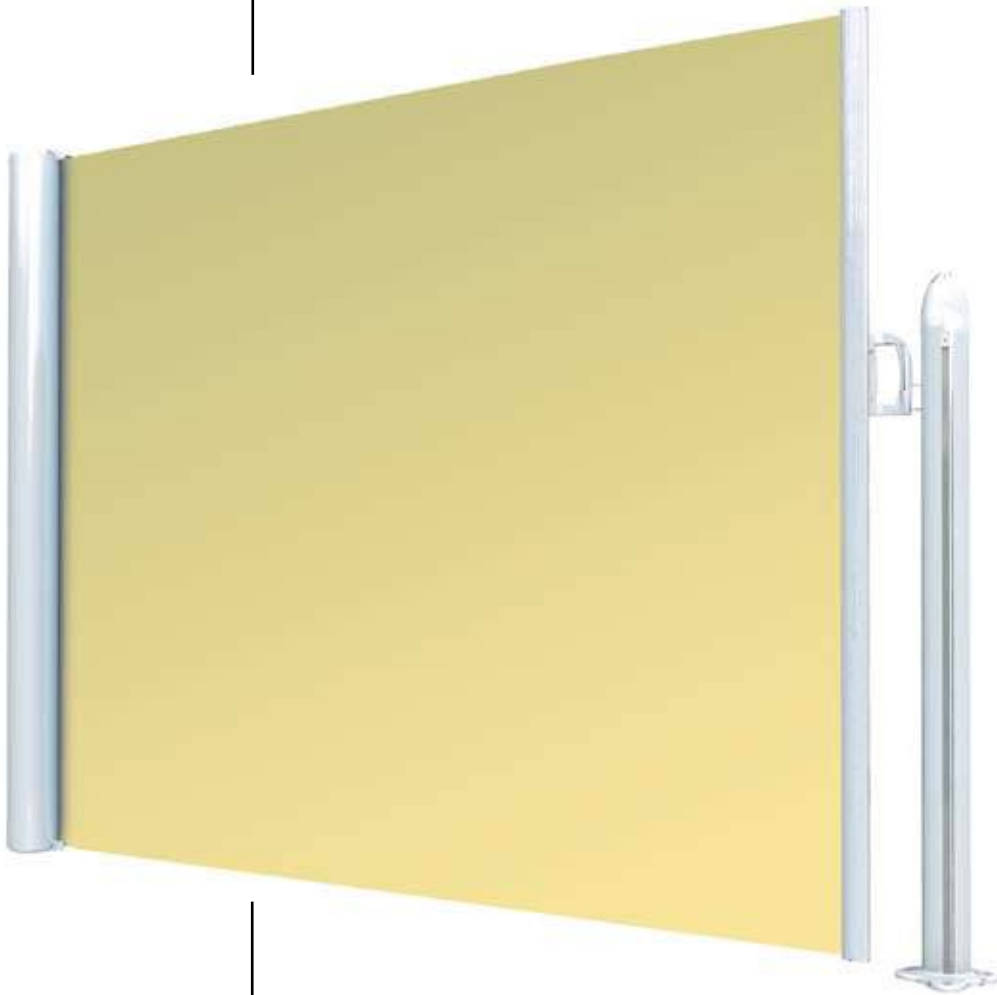




Professional Awning
Manufacturers Association



Cagliari



manual
for installation



All information contained in this document was provided by the manufacturer of the components for this model. As a fabricator, Retractableawnings.com claims no liability with respect to these documents as we are not engineers and did not complete any of the information, engineering or calculations in this document.

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1 INTRODUCTION

This manual for the **Cagliari** awning was prepared by the manufacturer to provide necessary information to those authorized to install and perform special maintenance of the product. It is prohibited to remove, rewrite, or in any way modify the pages of the manual and their content.

Operations must be carried out by personnel with the technical and professional skills required by current applicable national laws or standards.

This manual must be kept complete in all its parts in an easily accessible place.

The manufacturer reserves the right to update products and corresponding manuals without the obligation to update previous products and manuals.

The manufacturer reserves all rights on this manual. It may not be reproduced in any way, wholly or in part, without the manufacturer's written authorization.

1.1 Symbols Used in the Manual

The WARNING symbols used in the manual are shown below.

INFORMATION AND PRECAUTIONS

Useful advice and instructions to be observed to ensure proper installation and/or maintenance of the awning. Failure to observe these messages may compromise the integrity and/or the resistance of the product.

CAUTION

DANGER TO OPERATOR! Instructions to be evaluated and followed carefully. Failure to comply with these messages may compromise individual safety.

1.2 Personnel Requirements

Personnel assigned to this operation must have technical knowledge of the product obtained either through two years' experience or by means of a suitable technical training course.

1.3 Required Equipment

To ensure proper installation of the awning, and consequently best operation of the finished product, the following equipment is required:

- power screwdriver
- a level
- string
- complete tool set
- equipment for working at heights (scaffolding, ladders, aerial platforms, etc.) which are compliant with current standards of individual safety in the workplace.

CAUTION

All of the screws used on aluminium components must be tightened with a maximum force of 20Nm (=2Kgm). Greater tightening force causes the breakage of fusions and damage to the stainless steel screws. It is advisable to use dynamometric power screwdrivers and wrenches.

CAUTION

Use low-speed power screwdrivers. Screwing in the stainless steel screws at high speed may cause the threads to jam, especially in the case of stainless steel/stainless steel and stainless steel/ aluminium screws and threads.

1.4 Contents of Packaging

INFORMATION AND PRECAUTIONS

Never move the accessories from the position in which they are supplied.

2 SAFETY

2.1 General Safety Information

- During all operations described in this manual, make sure that **ONLY** individuals involved in the work are in the work zone (see Chap. 1.2 “Personnel requirements”).
- Do not set objects on the canvas of the awning.
- It is prohibited to stand on or hang from the awning. This would create the risk of severe personal injury, as well as damaging the awning.
- Wear individual safety gear and clothing as required by current standards on workplace safety.
- Any tampering or modification without the authorization of the manufacturer relieves the manufacturer of any liability for damage which may arise.

CAUTION

Installation, adjustment, and special maintenance of the awning must be carried out only by specialized, skilled technical personnel.

CAUTION

It is necessary to ensure a distance of at least 500 mm between the end of the fully-opened awning (outermost part) and any fixed obstacle (wall, terrace, etc.).

CAUTION

It is prohibited to install or place ladders or any fixed object near the awning that may reduce the space required by the awning.

CAUTION

Never loosen the awning more than the tension in the arms as there is the risk that the awning return under the tube and be ruined.

2.2 Requirements for Working in Safety

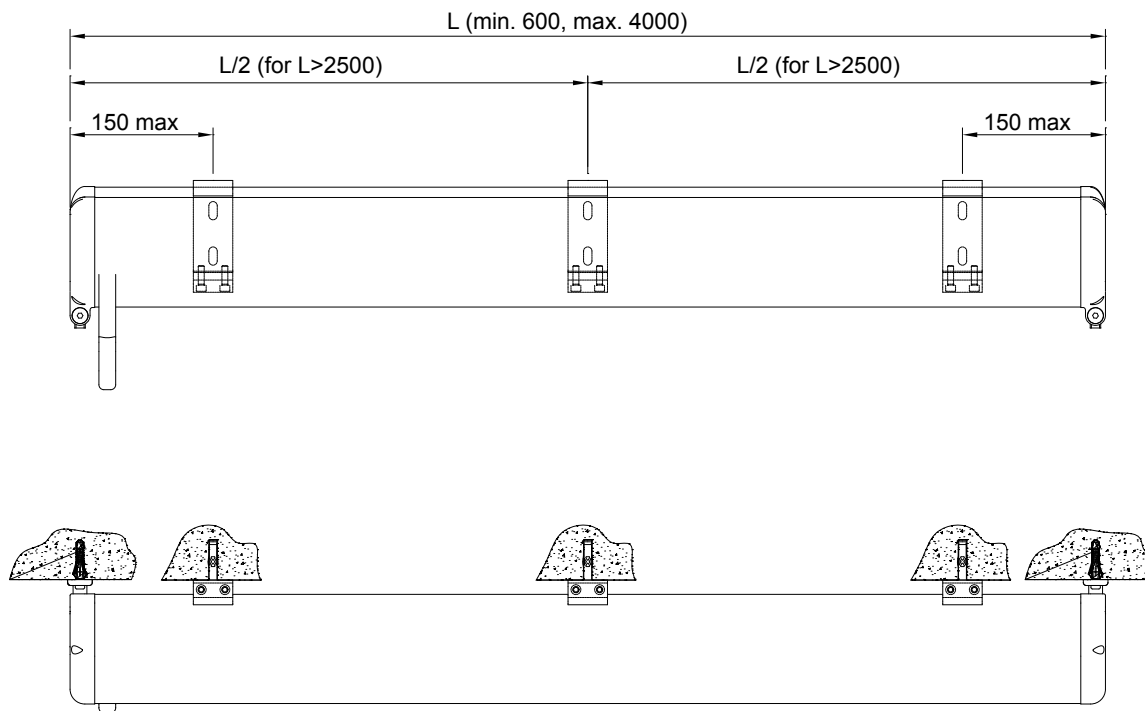
- Installation must be performed in full compliance with standards set forth by Presidential Decree 164/56 and Legislative Decree 494/96 for all that which concerns individual safety.
- Before use, check that all temporary structures (scaffolding, ladders, etc.) and all individual safety gear (harnesses, belts, etc.) are compliant with standards and in good condition.
- Always use suitable individual protection gear.
- If there is more than one installation technician, their work must be coordinated.
- Operators must work in compliance with the safety instructions given to them.
- If the awning is to be installed above ground level, the area underneath the awning must be marked off and guarded so that no one can get underneath the hanging load.
- Firmly tie the ropes or straps around the pre-assembled parts, so that the components do not slip and risk falling.

2.3 Working Environment

- Installation and special maintenance must be carried out in a place that is sufficiently illuminated (based on specific standards) by either natural or artificial lighting. The operator must have a clear view of the work to be performed, and he must also prevent third persons from approaching the work area around the awning.

3 TECHNICAL TABLES FOR INSTALLATION

3.1 Diagram for Distances of Guide Support Brackets and Plugs



3.2 Table of Loads on Awning Fastening Plugs, Based on Type of Attachment

To install the Cagliari awning it is necessary to perform two calculations of plugs: one on the brackets, for the fastening of the box to the wall, and the other on the universal foot for the fastening of the column to the ground.

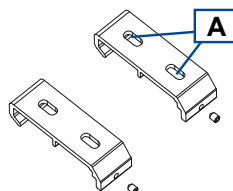
i INFORMATION AND PRECAUTIONS

The calculations of the plugs were made taking into account the class of wind resistance of the awning as per standard EN 13561.

i INFORMATION AND PRECAUTIONS

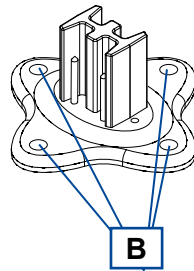
The calculations of the plugs were made on an awning with a roller tube of 60 mm, taking into account an extra turn of canvass on the roller tube of about 380 mm of fabric.

3.2.1 Calculation of plugs made with the wall bracket in the figure, using the holes (A).



WALL INSTALLATION OF BOX								
Extraction load on anchoring devices (KN)		WIDTH (m)						
		1	1,5	2	2,5	3	3,5	4
HEIGHT (m)	1	0,04	0,05	0,06	0,06	0,07	0,08	0,09
	1,5	0,05	0,06	0,07	0,08	0,09	0,10	0,11
	2	0,05	0,06	0,07	0,09	0,10	0,12	0,14
	2,5	0,06	0,07	0,08	0,10	0,12	0,14	0,16

3.2.2 Calculation of plugs performed on universal foot of the column, using the holes (B).



COLUMN FOOT INSTALLATION								
Extraction load on anchoring devices (KN)		WIDTH (m)						
		1	1,5	2	2,5	3	3,5	4
HEIGHT (m)	1	0,69	0,77	0,86	0,96	1,08	1,20	1,33
	1,5	1,12	1,30	1,50	1,74	1,99	2,27	2,56
	2	1,60	1,92	2,29	2,70	3,16	3,65	4,17
	2,5	2,14	2,64	3,22	3,86	4,57	5,34	6,16

For both calculations of plugs, the value in the table is in KN and expresses the extraction load of the plug that is under the greatest stress. These values are required for the selection of the most suitable anchoring, based on the type of material upon which the awning will be installed. Choose the anchoring by referring to the recommended load values in the Hilti General Catalogue.

E.g.: wall installation of box
 awning dimensions: 4x2
 load on plug: 0.14 kN
 base material: non-cracked concrete
 Suggested plug: Hilti HST M10 (see technical characteristics of plugs in Hilti General Catalogue).

Ex.: column foot installation
 awning dimension: 3x1.5
 load on plug: 1.99 kN
 base material: non-cracked concrete
 Suggested plug: Hilti HST M10 (see technical characteristics of plugs in Hilti General Catalogue).

⚠ CAUTION

The selection of the most suitable type of fastening device depends on the base material and its physical condition. It is therefore the responsibility of the installer to check the condition of the base material before attaching the awning. The installer is not obliged to use Hilti plugs.

3.3- TABLE OF SUGGESTED ANCHORING DEVICES













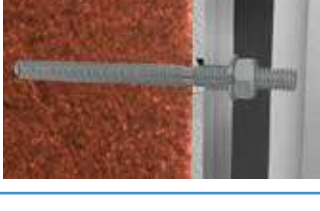
3.3.1 -Types of Anchoring Devices Based on Base Material

Extraction load on anchoring devices (KN)		
Hilti HST		CONCRETE CRACKED CONCRETE HARD NATURAL STONE
Hilti HSA		CONCRETE HARD NATURAL STONE
Hilti HIT-HY 150 with HAS		CONCRETE
Hilti HIT-RE 500 with HAS		CONCRETE HARD NATURAL STONE SOLID BRICK WOOD
Hilti HIT-HY 50		BETON GAS SOLID BRICK WOOD
Hilti HIT-HY 20		PERFORATED BRICK

i INFORMATION AND PRECAUTIONS

For corrosive environments, we suggest using stainless steel anchoring devices. For additional information, contact Hilti Italia S.p.A. technical service. (e-mail:tecnici@hilti.com)

3.3.2 • Sequence for Fastening of Anchoring Devices

MECHANICAL ANCHORING DEVICE		CHEMICAL ANCHORING DEVICE	
	1° Make a hole with a drill bit that is suitable for the anchoring device		1° Make a hole with a drill bit that is suitable for the anchoring device
	2° Pay attention to how deep you make the hole		2° Pay attention to how deep you make the hole
	3° Remove dust and debris from the hole (preferably using compressed air)		3° Remove dust and debris using a brush
	4° Install the anchoring device		4° Remove residual dust with compressed air
	5° Tighten until achieving recommended tightening torque (see Hilti General Catalogue)		5° Inject the chemical adhesive
	6° Final configuration		6° Insert and settle the anchoring device. Comply with the setting time required before placing the plate (see product cartridge)
			7° After the time "T cure" has elapsed, place the plate and tighten until achieving recommended tightening torque (see Hilti General Catalogue)

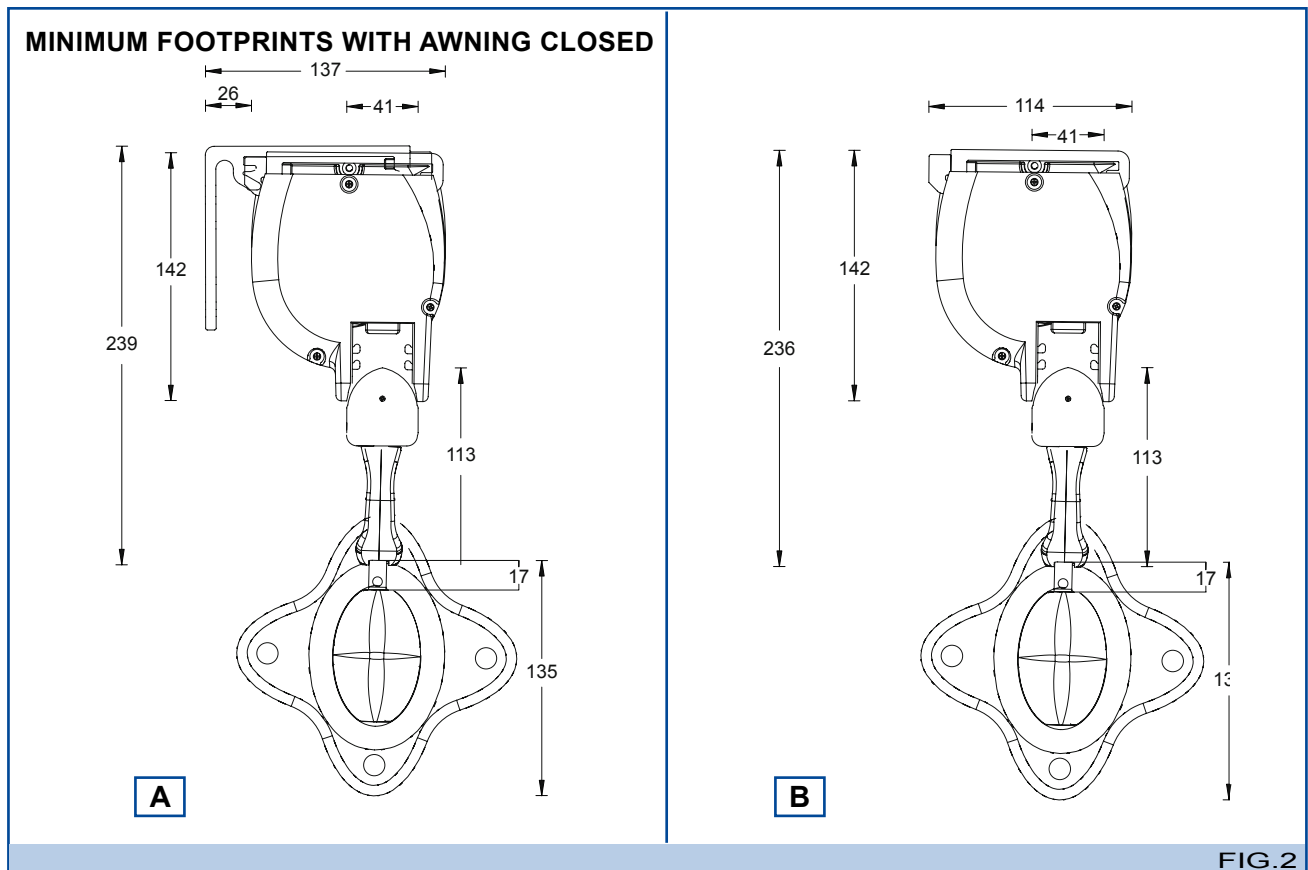
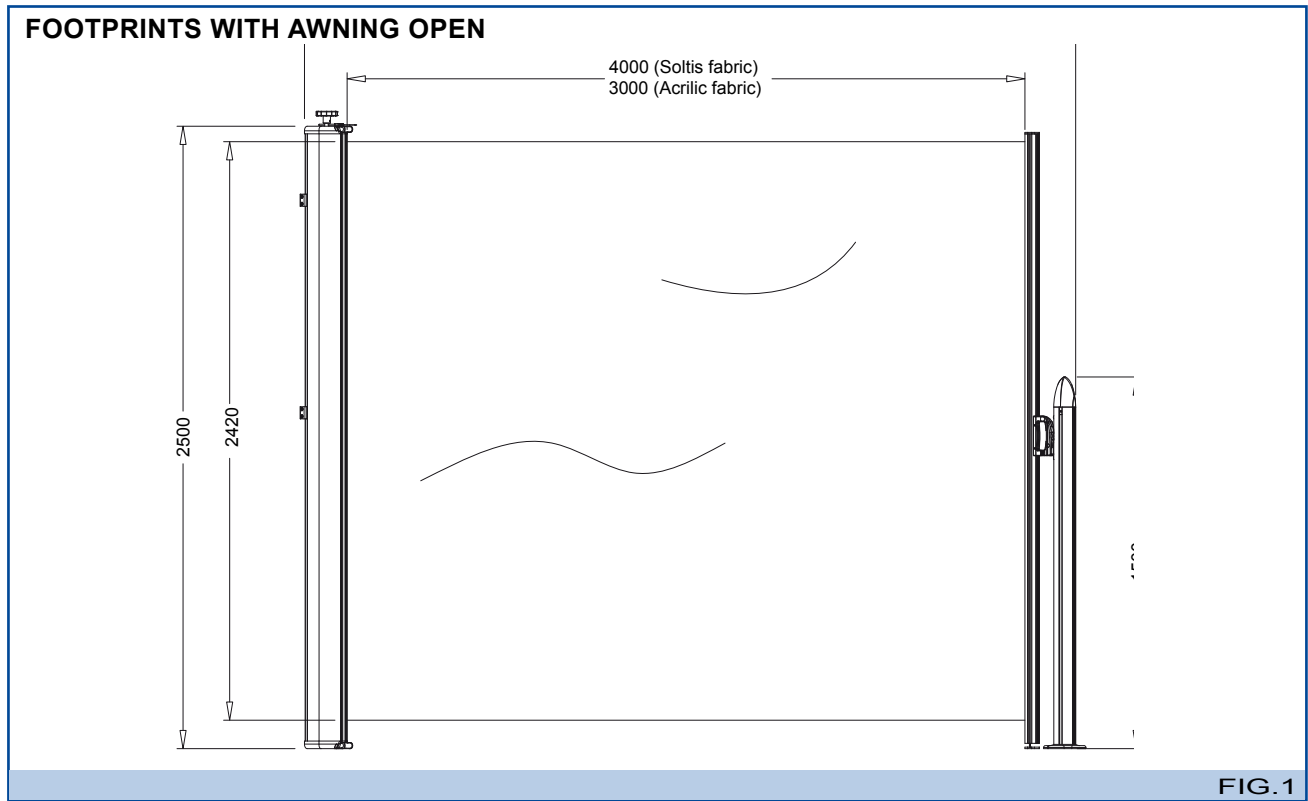
! CAUTION

For proper installation of the anchoring devices, refer to the Hilti General Catalogue

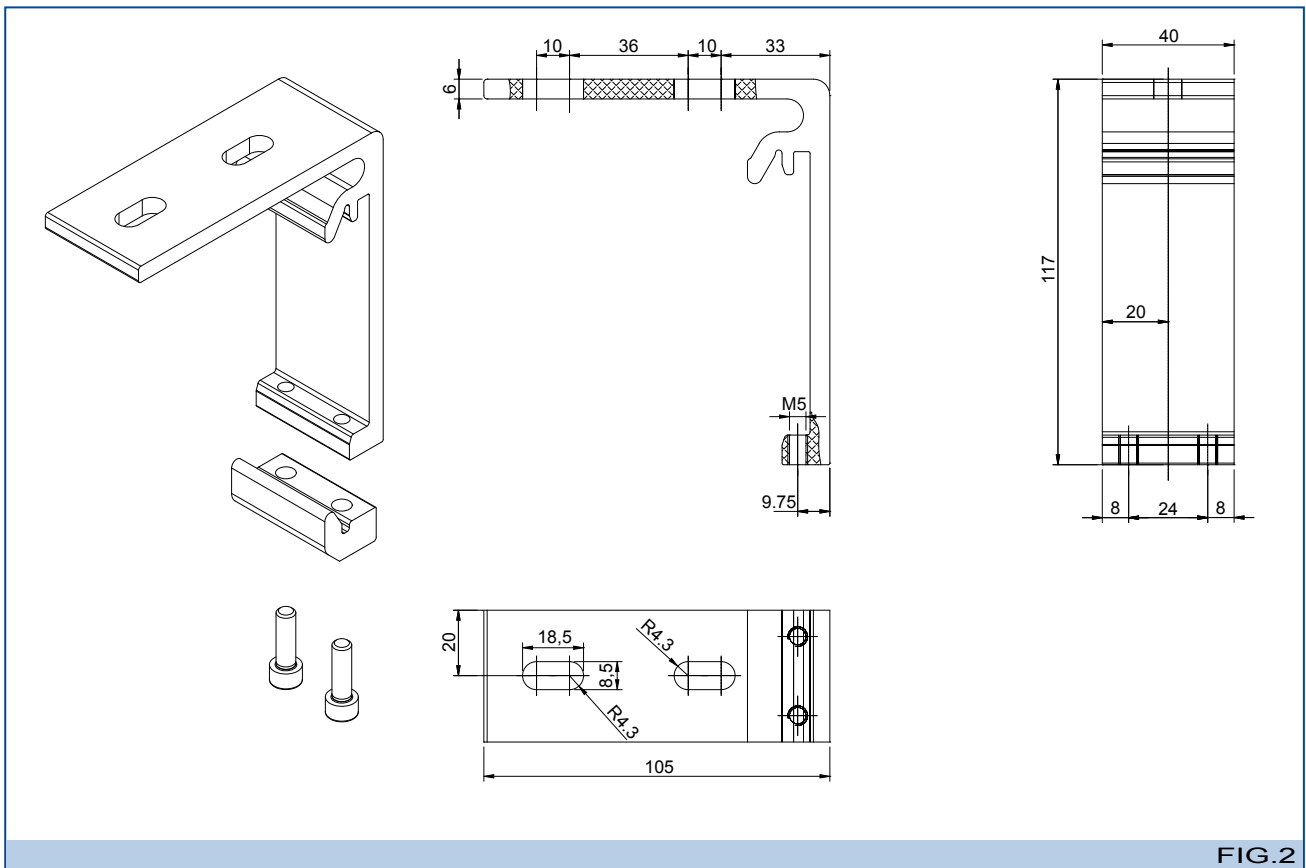
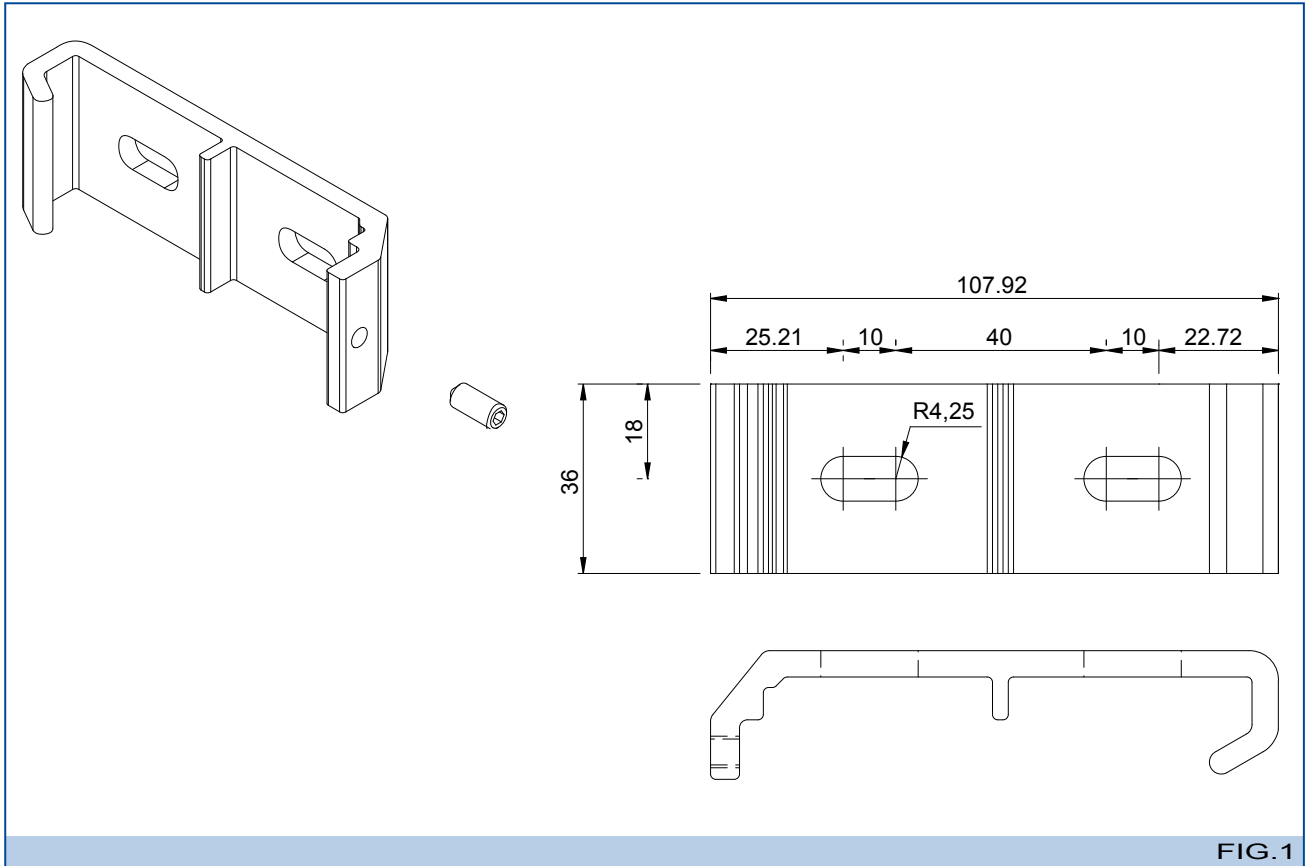
3.4 Dimensions and footprints

i **INFORMATION AND PRECAUTIONS**

Minimum dimensions of the awning: 90 cm with spring of 50 cm and 110 cm with spring of 70 cm.



3.5· Box Support Brackets



3.6· Universal foot for column fastening

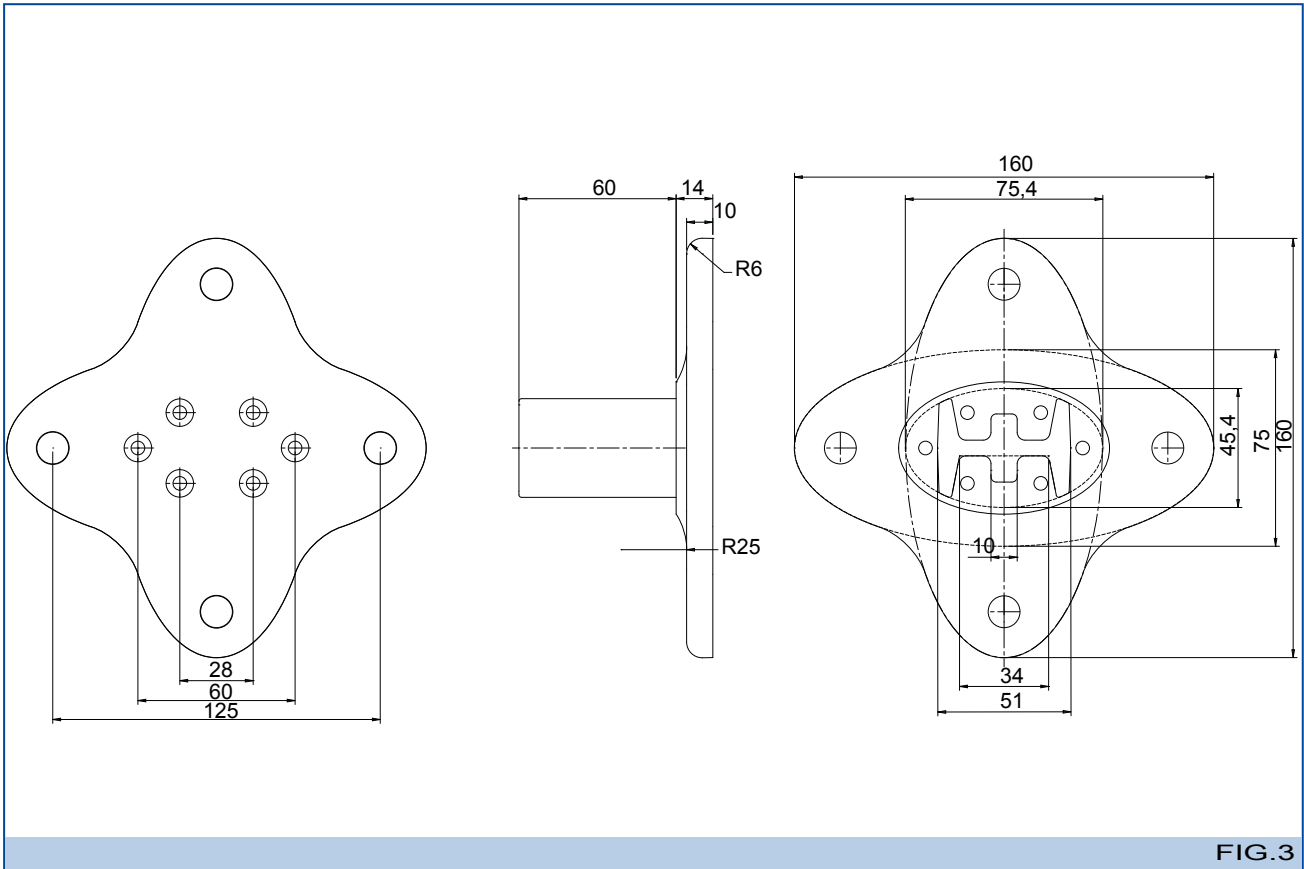


FIG.3

4 INSTALLATION OF AWNING

For installation of the Cagliari awning, first install the wall box and then the floor column. This procedure must be performed by at least two workers.

! CAUTION

All movement and lifting must be done with extreme care. Ensure that individuals not involved in the work are kept at a safe distance, so that no one is standing under hanging loads, whether they are moving or standing still.

! CAUTION

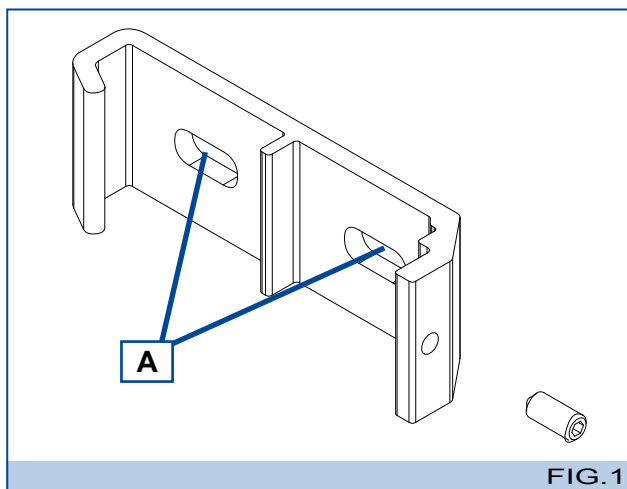
Ensure a minimum space of 500 mm between the open awning and any fixed obstacle. The awning must be installed at a minimum height of 2500 mm. If this is not possible, for awnings equipped with automations it is obligatory to install an acoustic warning device.

i INFORMATION AND PRECAUTIONS

Use the most suitable plugs for the type of wall where the awning is to be installed (see Chap. 3.2)

4.1 Fastening Brackets to Wall

- 1° Before starting installation, take note of the following information, which is indispensable to find the right position for fastening the brackets:
 - dimensions of the awning (height and width of box, protuberance of awning when opened or closed);
 - dimensions of box support brackets (see Chapter 3.2)
 - dimensions of the wall where the awning is to be installed.



- 2° Fasten the bracket to the wall with the two screws (A)



- 3° It is possible to use the universal

L-shaped brackets (Fig. 2). The fastening procedure is the same as for the standard brackets.

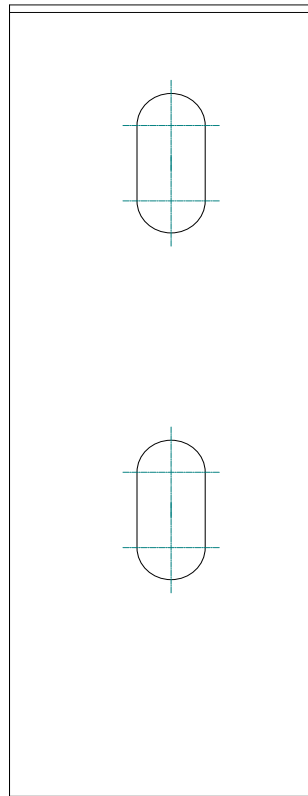
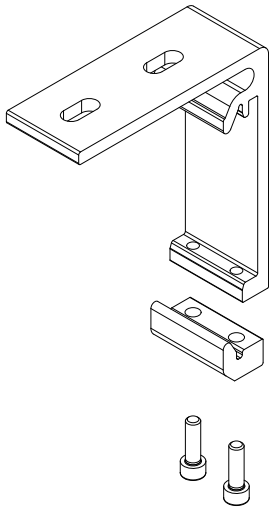
- 4° Position the holes for the brackets: measure the width of the awning and, referring to the data in the diagram of Chap. 3.1 "Diagram of Distance of Brackets - Guide Supports - Plugs", calculate the position of the holes.
- 5° Using a string and a level, mark the position of the holes to be made on the wall.

****i** INFORMATION AND PRECAUTIONS**
To make installation easier, you can print pages 13 and 14 in A4 format and use them as templates to find the best positions for the holes.

! CAUTION

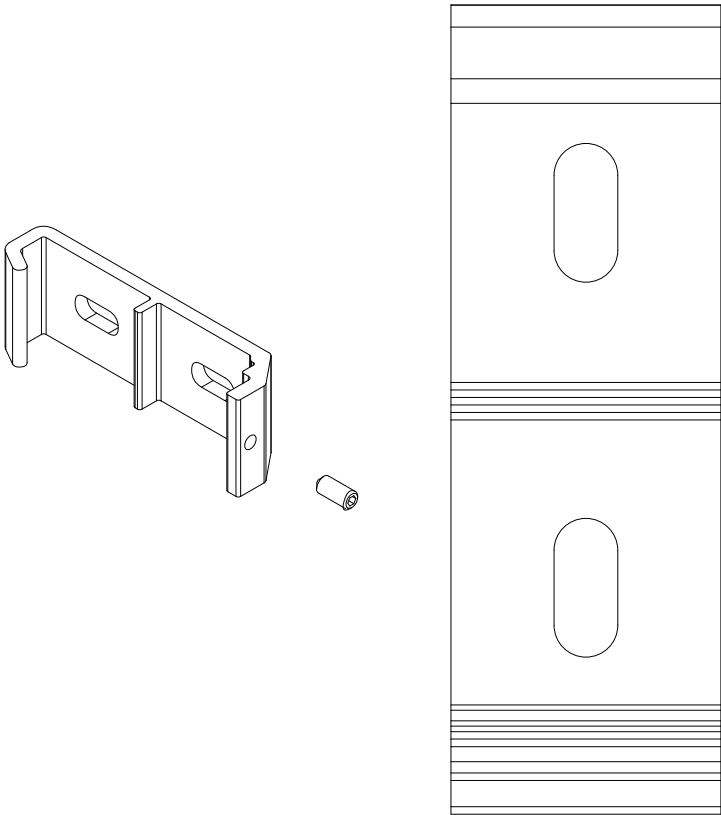
TO AVOID GROSS ERRORS, MAKE SURE THE PRINT OUT SCALE IS 1:1, CHECKING THE MEASURE INDICATED ON THE PAPER WITH A RULER OR CALLIPER IN RELATION TO THE DIMENSIONS INDICATED ON PAGE 10.

“L” BRACKET



SCALE 1:1

WALL BRACKET



SCALE 1:1



FIG.3

6° Drill a hole in the wall based on the type of screws available and the type of masonry.

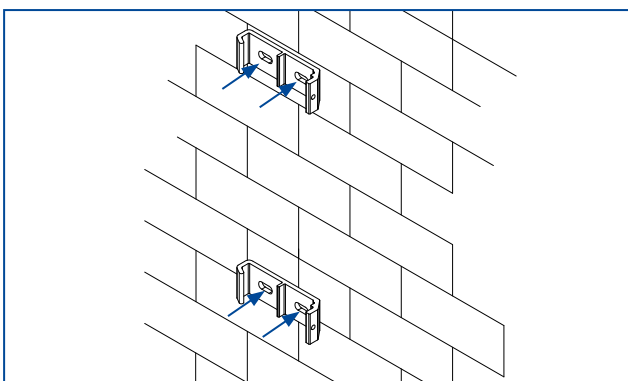


FIG. 4

7° Attach the brackets to the wall. Insert the plugs in the holes and secure the brackets with the screws.

i **INFORMATION AND PRECAUTIONS**
 If the wall is off-square, it may difficult to install the box on the support brackets. It is therefore advisable to check the alignment of the brackets (especially if there are more than two of them) and to provide inserts to ensure proper alignment for good installation. Use a string to check alignment.

4.2· Installation of Box

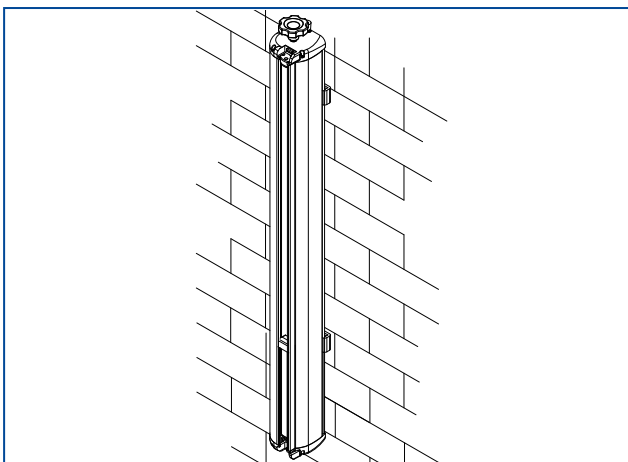


FIG.1

1° Position the box on the brackets, and check for a perfect fit.

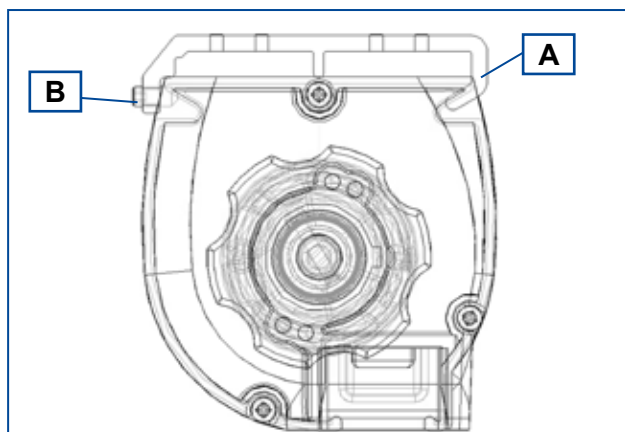


FIG.2

2° Insert the preassembled box in the brackets (A) and fasten it with the grub screw (B).

i **INFORMATION AND PRECAUTIONS**
 The bracket (A) can be installed facing in the opposite direction from that shown in the figure 2. This does not compromise its operation, provided there is the space required in the upper part to access the grub screw (B).

4.3· Fastening foot column

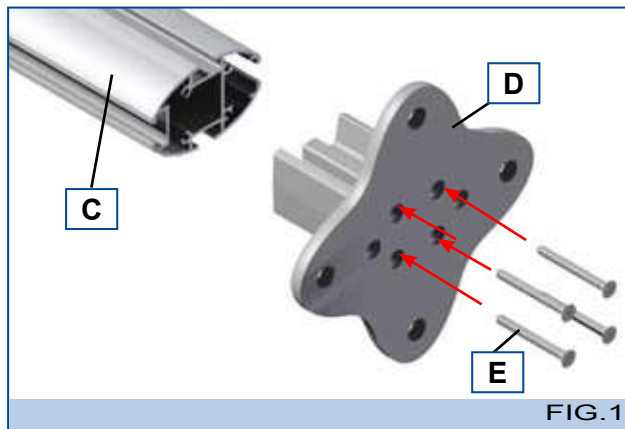


FIG.1

1° Fasten the foot (D) to the column profile (C) with the screws (E).

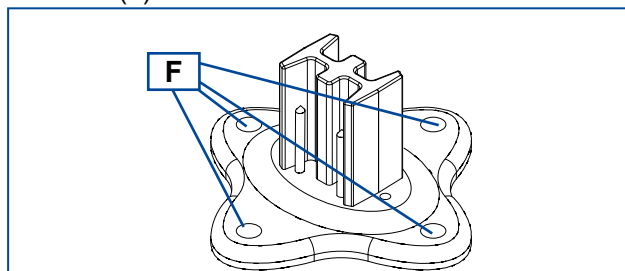


FIG.2

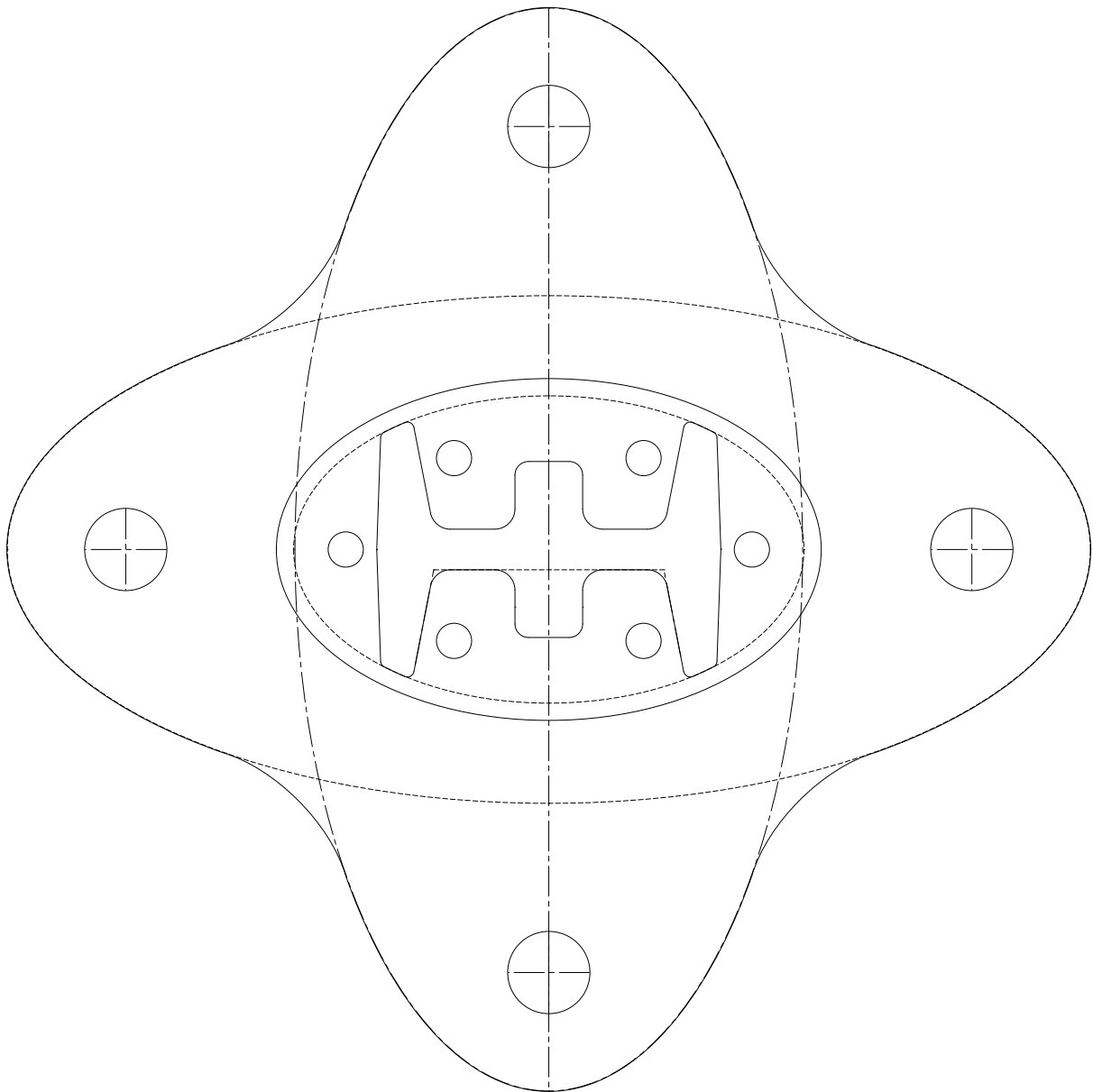
2° Fasten the foot to the floor using the 4 screws (F). For the calculation of the plugs, see Chap. 3.2.2 Calculation of plugs performed on the universal foot of the column).

i INFORMATION AND PRECAUTIONS

To make installation easier, you can print this page in A4 format and use it as a template to find the best position for the holes.

! CAUTION

TO AVOID GROSS ERRORS, MAKE SURE THE PRINT OUT SCALE IS 1:1, CHECKING THE MEASURE INDICATED ON THE PAPER WITH A RULER OR CALLIPER IN RELATION TO THE DIMENSIONS INDICATED ON PAGE 12.



SCALE 1:1

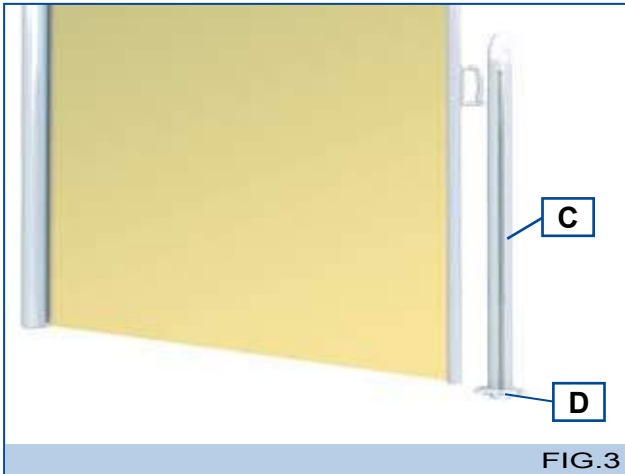


FIG. 3

- 3° Establish the position of the column in relation to the dimensions of the awning (see “Minimum footprints” Chap. 3.4) and the intended use of the awning.
- 4° Fasten the foot of the column (D) to the floor, with the plug suggested on page 7 Chap.3.2.2, following the procedure specified in Chap. 4.1 “Fastening brackets to wall”, points 3 and 4.

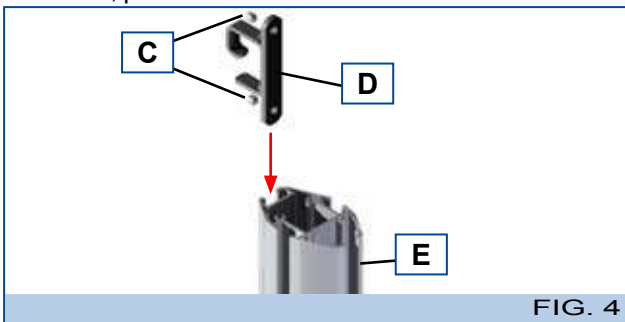


FIG. 4

- 6° Insert the hook (D) in the column profile (E) and fasten it with the grub screws (C) at the same height of the handle previously assembled on the terminal profile (see figure below).

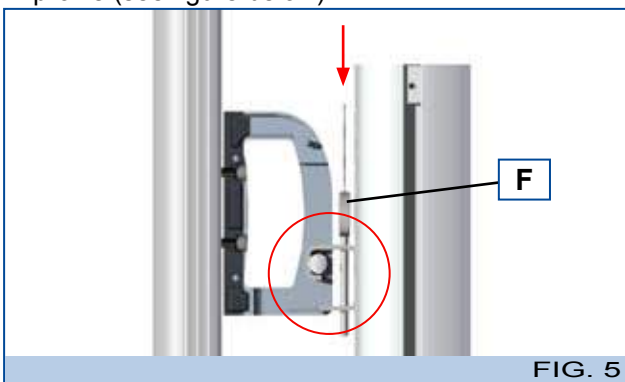


FIG. 5

- 7° The hook of the column must fit into the handle as in the figure.
- 8° To keep the hook from freeing itself from the handle, insert the locking latch (F).

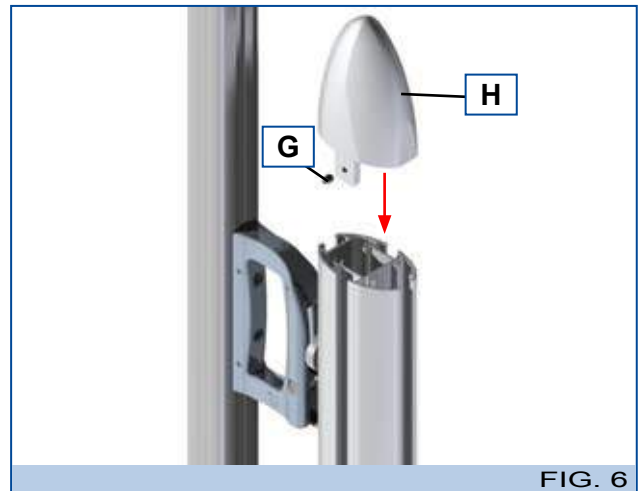


FIG. 6

- 9° Insert the tip (H) in the column profile and fasten it with the grub screw (G).

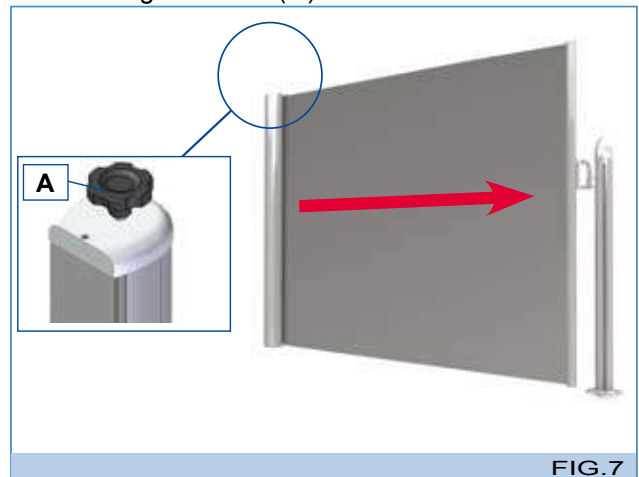


FIG. 7

- 10° Tighten the spring, referring to Chap. 5 “Use of the awning” of the use and maintenance manual of the awning.

5 SPECIAL MAINTENANCE

5.1 Troubleshooting table

MANUAL AWNING

PROBLEMS	CAUSES	SOLUTIONS
Conical rolling of canvas	Uneven fabric thickness	Roll the canvass all the way back up

MOTORIZED AWNING

Without electronic control unit

PROBLEMS	CAUSES	SOLUTIONS
Conical rolling of canvas	Uneven fabric thickness	Roll the canvass all the way back up
The awning does not roll up all the way.	Incorrect adjustment of limit switch	See manual for motor (attached)
The awning does not open up all the way.	Movement of motor crown during operation	See manual for Assembly, Chap. 7
The motor is very noisy	Incorrect wiring Motor defective	See manual for motor (attached) See manual for motor (attached)
The motor shuts down after 4-5 minutes of continuous operation	Thermal protection of motor trips	Let the motor cool off for a few minutes

With electronic control unit

PROBLEMS	CAUSES	SOLUTIONS
The awning does not move	Fuse blown Incorrect wiring	Replace the fuse as shown in the attached manual See manual for motor (attached)
The awning moves in jerks (moves for 50 cm, stops, etc.)	Faulty wind gauge	See instructions on automations (attached)
The awning does not roll up in high winds.	Fuse blown Faulty wind gauge	Replace the fuse as shown in the attached manual See instructions on automations (attached)
The awning does not roll up in heavy rain.	Fuse blown Rain gauge defective	Replace the fuse as shown in the attached manual See instructions on automations (attached)
With radio remote control, the awning opens or closes by itself.	Battery dead Radio remote control damaged	Replace battery in radio remote control (see instructions concerning controls) Replacement of radio remote control



Professional Awning
Manufacturers Association



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