All weather protection systems!

RETRACTABLE AWNINGS.COM

Trieste

Installation manual

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All measurements in this document are metric. To convert from metric (meters, centimeters and millimeters) to imperial (feet and inches) visit this website: http://www.onlineconversion.com/length_common.htm

SUMMARY

1 INTRODUCTION

This manual for the 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.

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.

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.

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.

2.2 · Requirements for Working in Safety

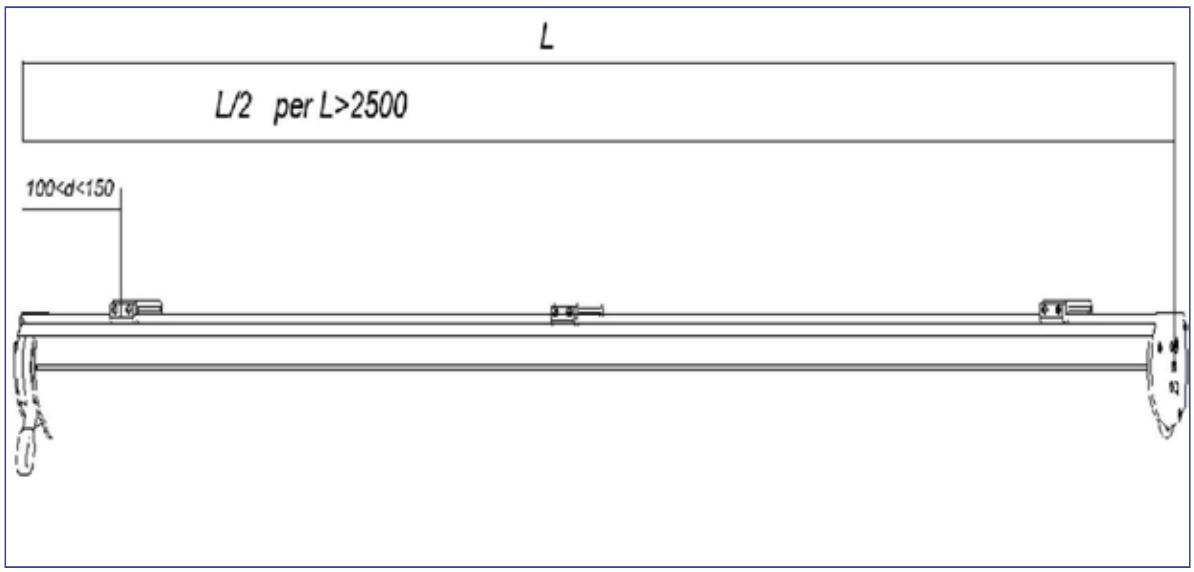
- Installation must be performed in full compliance with standards set forth by Presidential Decree 164/56 and Legislative Decree 494/96 for all that which concerns individual safety.
- Before use, check that all temporary structures (scaffolding, ladders, etc.) and all individual safety gear (harnesses, 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.

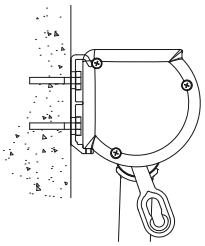
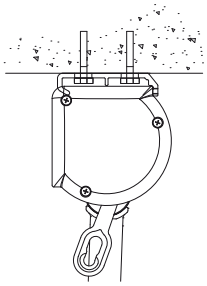
2.3 · Working Environment

- 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



WALL MOUNTING OF BOX	CEILING MOUNTING OF BOX
	

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

WARNING

THE BELOVE LISTED TABLES ARE PURELY INDICATIVE. THE INFORMATION IS UP TO DATE ACCORDING TO THE AVAILABLE KNOWLEDGE. DOES NOT PROVIDE ANY GUARANTEE REGARDING ACCURACY, RELIABILITY, AND COMPLETENESS OF THE INFORMATION CONTAINED HEREIN. IT IS THE USER'S RESPONSIBILITY TO ENSURE THE SUITABILITY AND COMPLETENESS OF THIS INFORMATION.

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.

CEILING/WALL INSTALLATION							
Extraction load on anchoring devices (kN)		WIDTH (m)					
		2,5	3	3,5	4	4,5	5
HEIGHT (m)	1,5	0,61	0,68	0.74	0.80	0.86	0.93
	2	0.67	0.75	0.82	0.90	0.97	1.04
	2,5	0.74	0.82	0.91	1.00	1.09	1.17
	3	0.80	0.91	1.01	1.11	1.21	1.31

CAUTION

All values were calculated considering two box supports (presuming no contribution from centre support), considering the maximum protrusion!

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.

ES ceiling installation:
awning dimensions: 2.5 x 3 with arm of 1.80 m
load on plug: 0.80 KN
base material: non-cracked concrete
Suggested plug: Hilti HST M8
Suggested plug: Hilti HST M10 or HST M8 (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

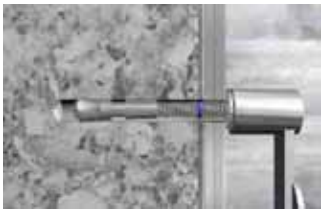
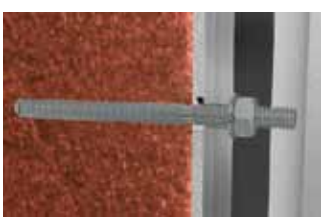
3.3.1 ▪Types of Anchoring Devices Based on Base Material

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

INFORMATION AND PRECAUTIONS

For corrosive environments, we suggest using stainless steel anchoring devices. For additional information, contact Hilti Italia S.p.A. technical service.

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 to the 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· Minimum Dimensions

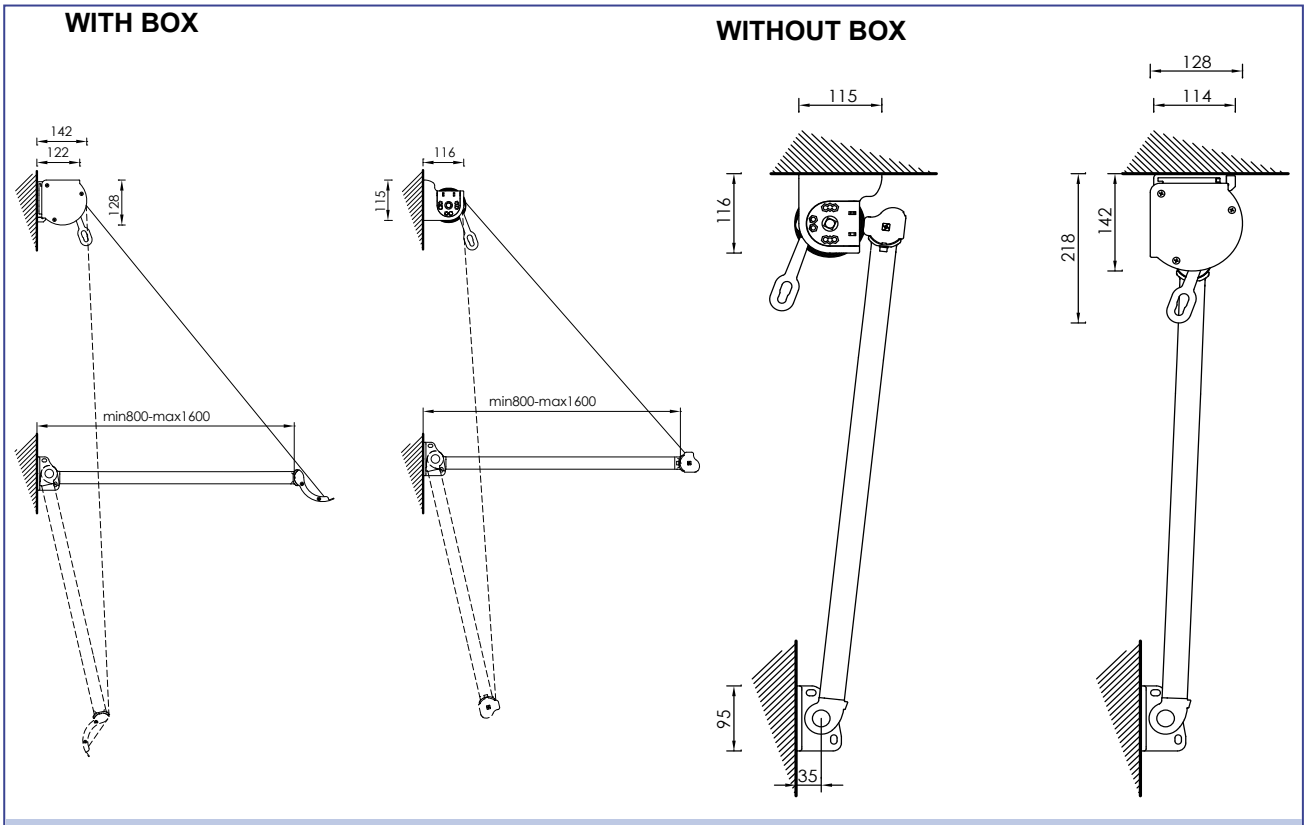


FIG. 1

3.5· Box Support Brackets

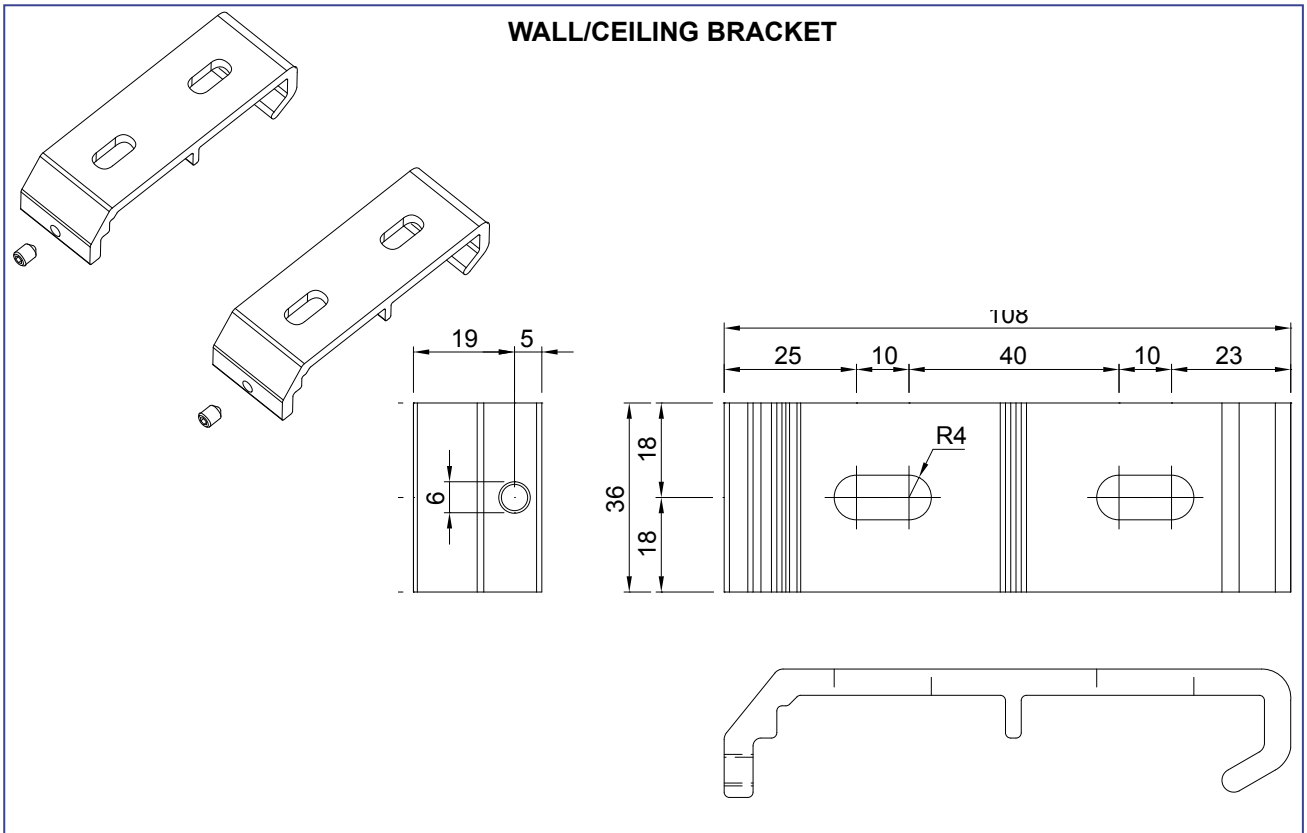


FIG. 1

“L” BRACKET

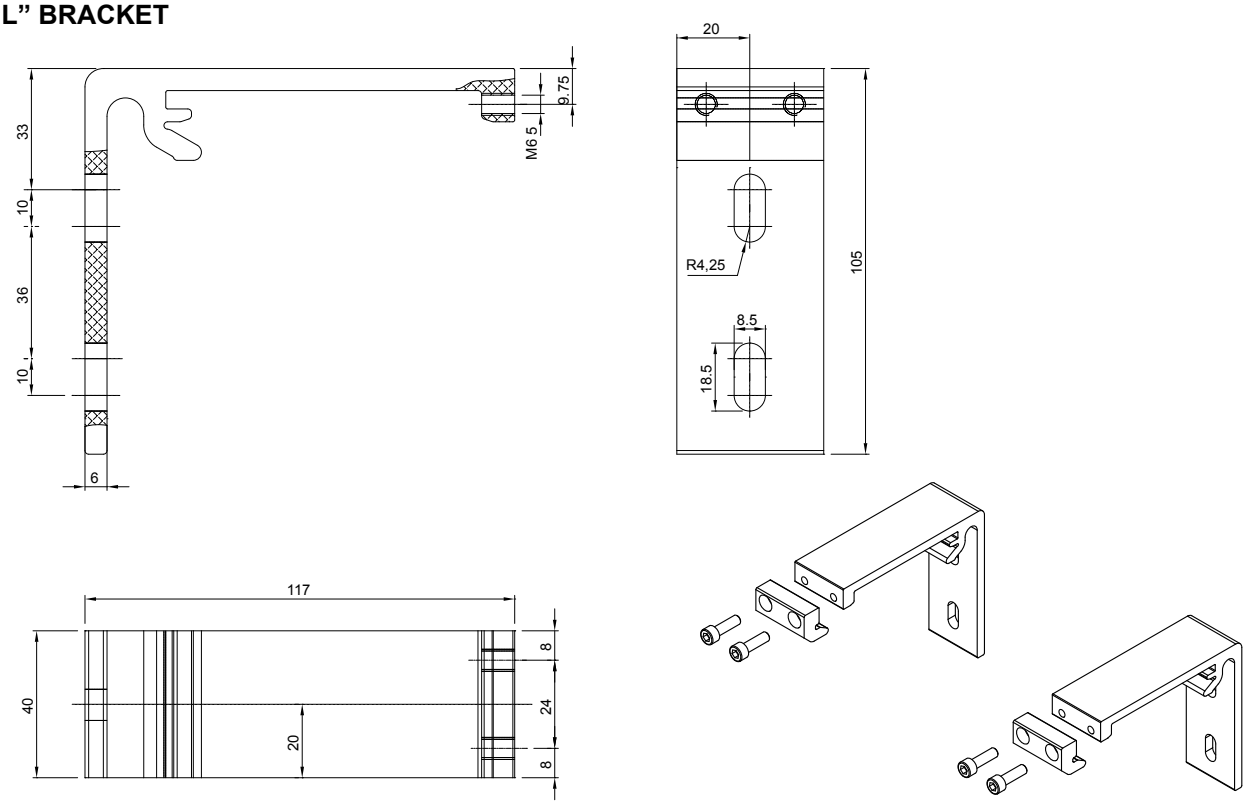


FIG. 2

WALL/CEILING BRACKET WITH INSERTS

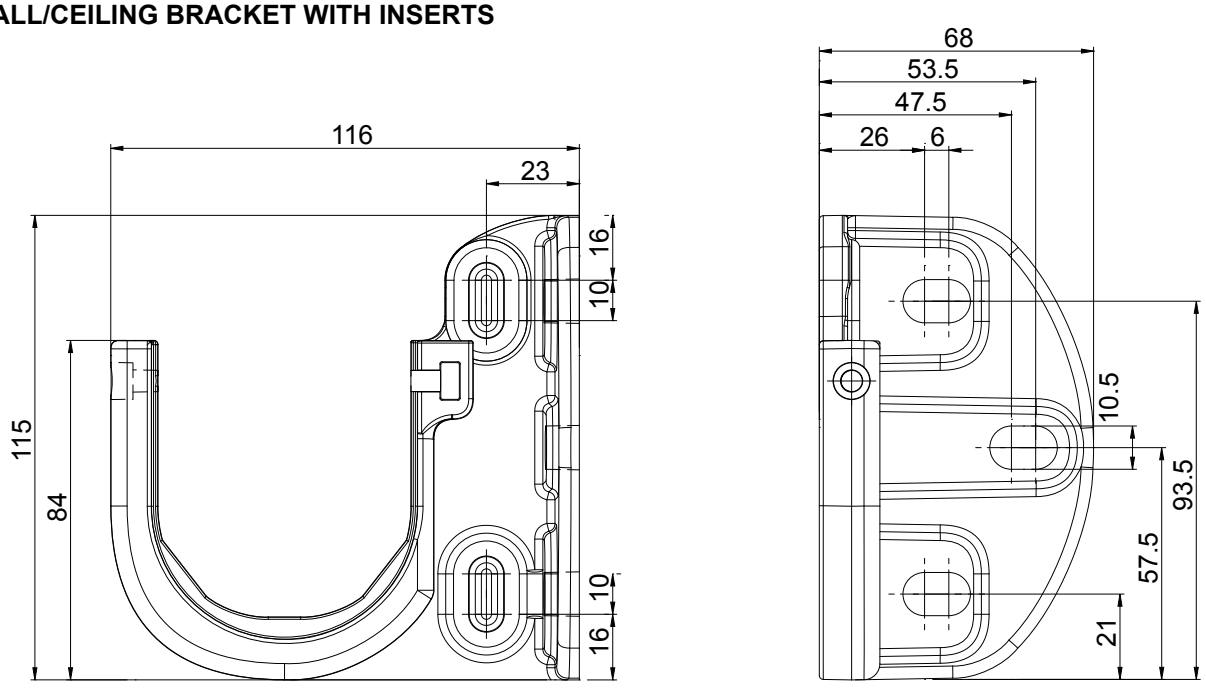


FIG. 3

ARM BRACKET

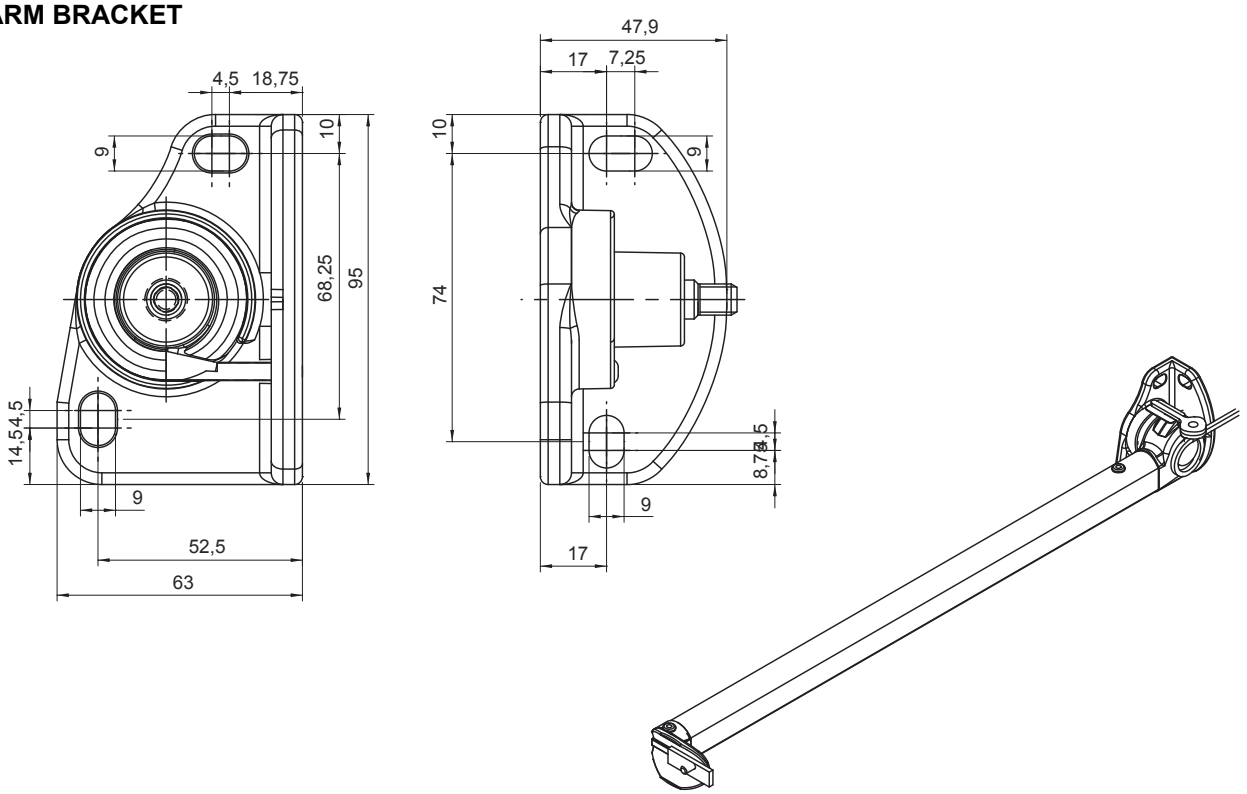


FIG. 4

4 INSTALLATION OF MANUAL AWNING

The awning can be either wall-mounted or ceiling-mounted. The instructions provided below are for **wall mounting**. If the procedure is different for **ceiling installation** explanations will be provided as needed. If any optionals are provided, **first read** Chapter 6 “Optionals”
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.

INFORMATION AND PRECAUTIONS

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

INFORMATION AND PRECAUTIONS

For CEILING INSTALLATION, DO NOT FASTEN THE BRACKETS TO THE BLOCKS. The awning may fall with the risk of serious injury to individuals and damage to the product.

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, protrusion of awning when opened or closed);
- ▫ dimensions of support brackets (see Chapter 3.5)
- ▫ number of guide supports
- ▫ side of awning where control is located
- ▫ dimensions of the wall/ceiling where the awning is to be installed.

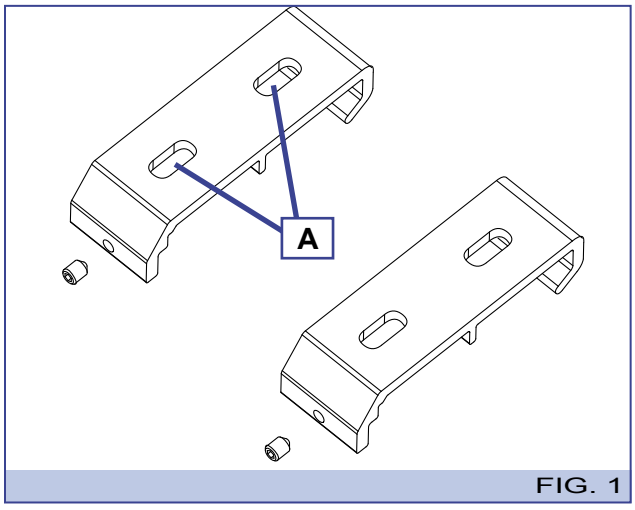


FIG. 1

The support brackets are the same for both wall and ceiling installation (see kit in Fig. 1). These must be fastened using the two holes (A).

2▫ 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.

3▫ Using a string and a level, mark the position of the holes to be made on the wall.

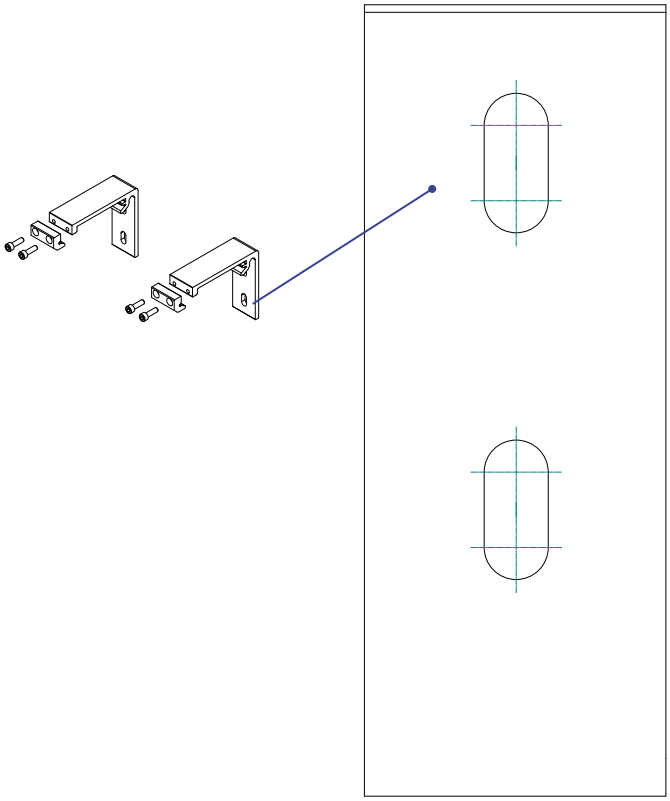
INFORMATION AND PRECAUTIONS

To make installation easier, you can print pages 23-24 and 25 in A4 format and use them as templates to find the best positions for the holes.

CAUTION

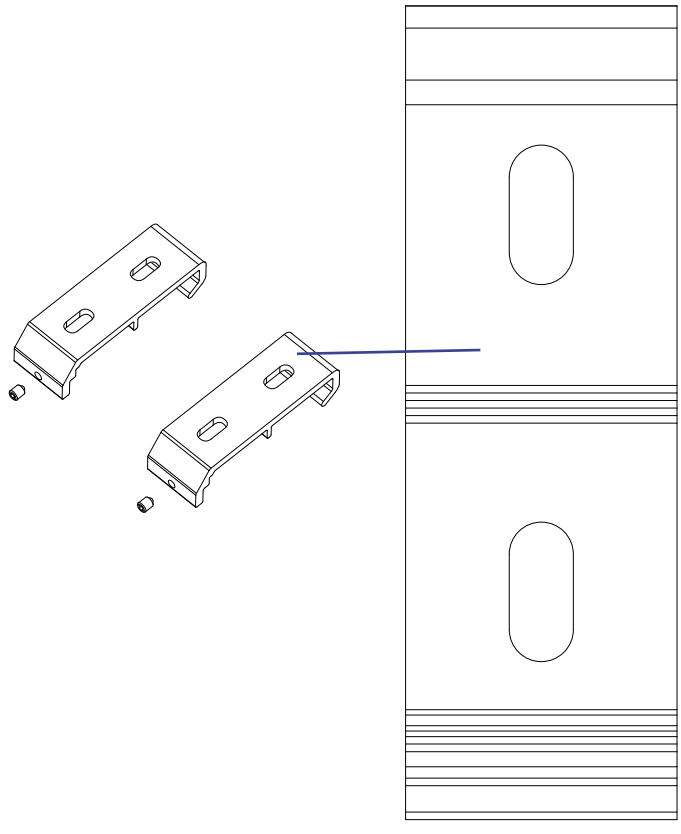
TO AVOID GROSS ERRORS, MAKE SURE THE PRINT OUT SCALE IS 1:1, CHECKING THE MEASURE INDICATED ON THE PAPER WITH A RULER OR CALLIPER IN RELATION TO THE DIMENSIONS INDICATED ON PAGE 12.

“L” BRACKET



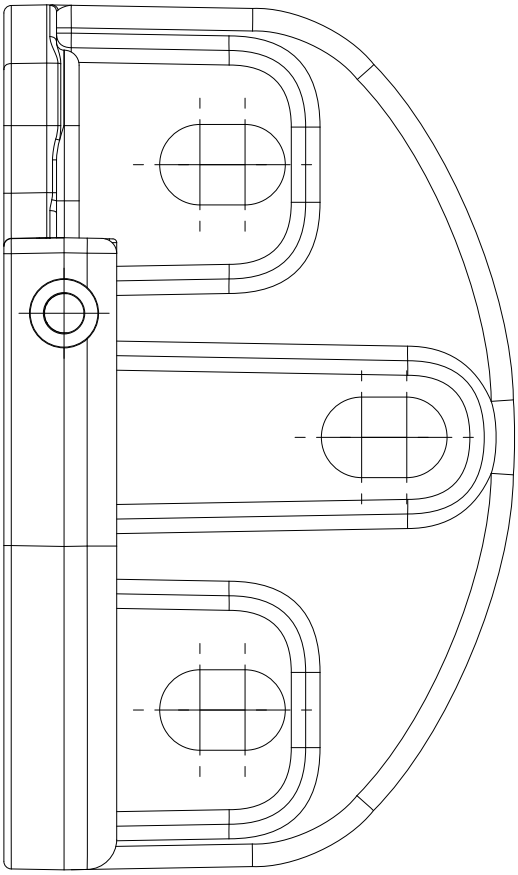
SCALE 1:1

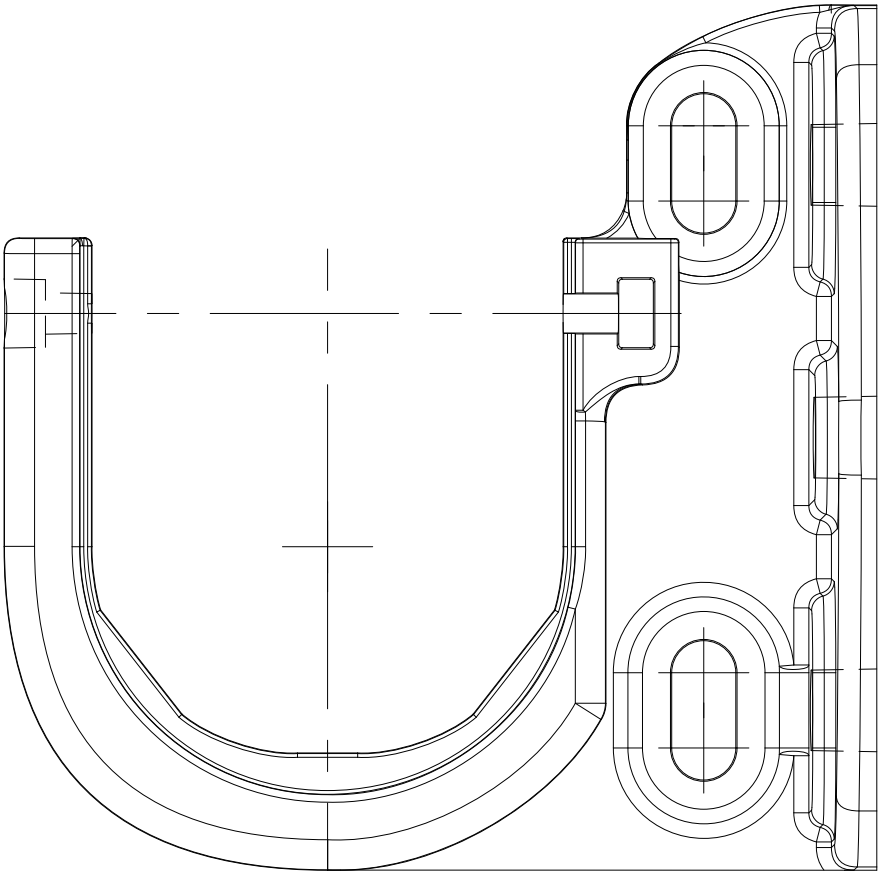
WALL/CEILING BRACKET



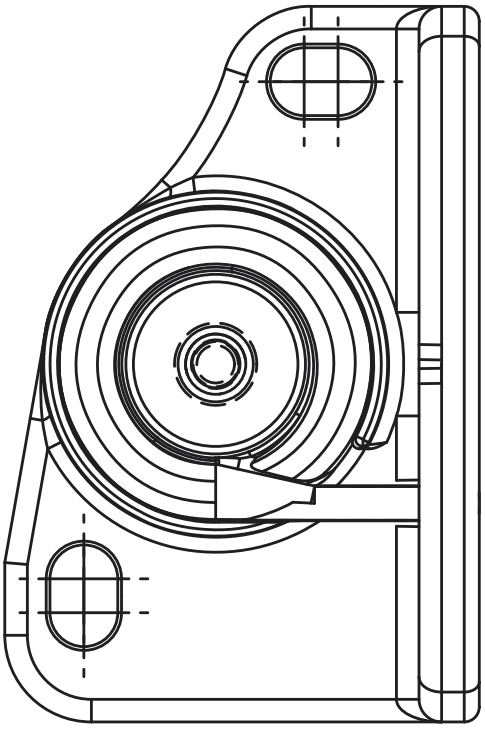
SCALE 1:1

WALL/CEILING BRACKET WITH INSERTS (SCALE 01:01)





ARM BRACKET (SCALA 1:1)



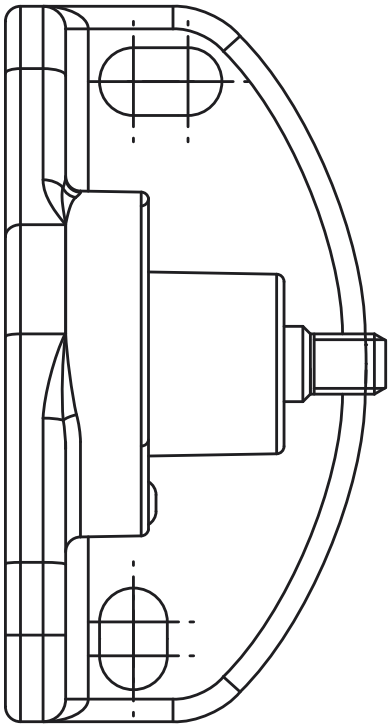


FIG. 2

4▫ Drill a hole in the wall based on the type of screws available and the type of masonry.

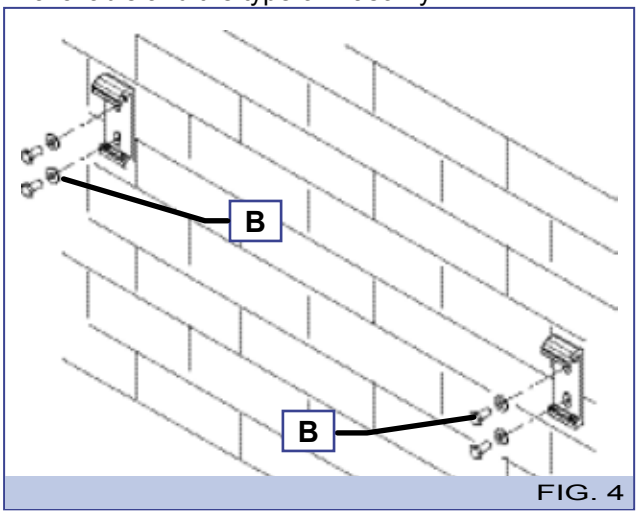


FIG. 4

5▫ Fasten the brackets to the wall: insert the plugs in the holes and secure the brackets with the screws and washers (B).

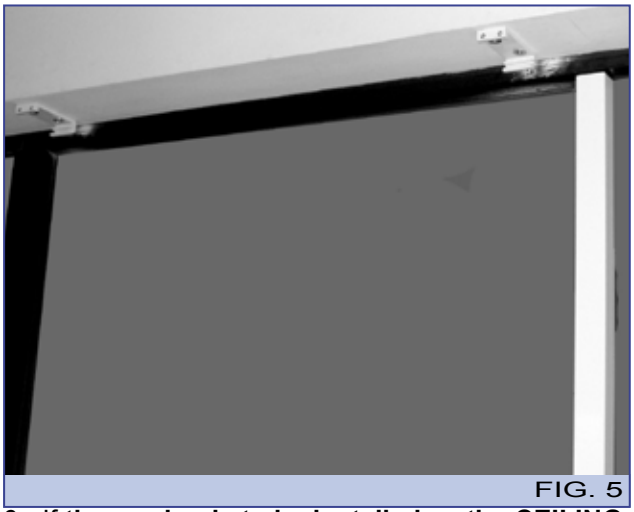


FIG. 5

6 ▫ If **the awning is to be installed** on **the CEILING**, use the same brackets, and position them horizontally instead of vertically.

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

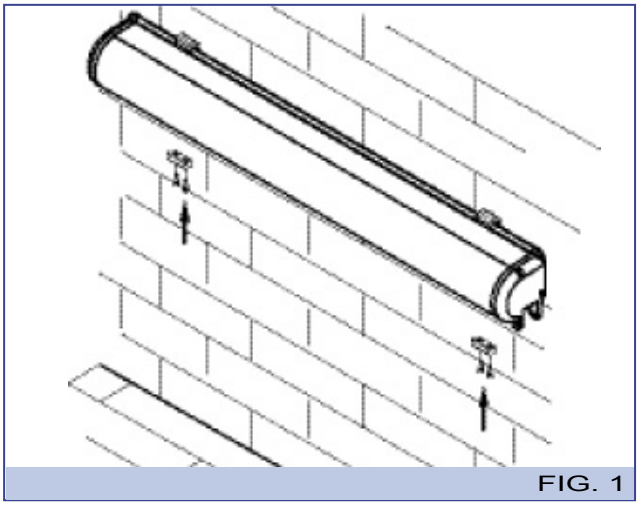


FIG. 1

1▫Place the box on the brackets as shown in the figure, checking that it fits perfectly.

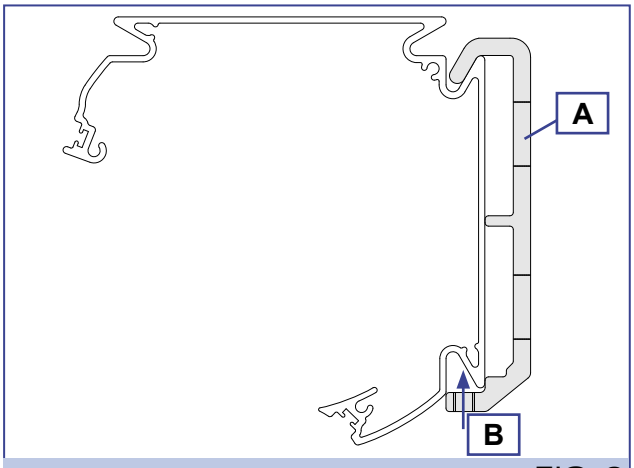


FIG. 2

2 ▫ Fasten the box to the brackets (A) using the grub screw (B).

INFORMATION AND PRECAUTIONS

The bracket (A) can be installed facing in the opposite direction from that shown in the drawing. This does not compromise its operation, provided there is the space required in the upper part to access the grub screws (B).

4.3· Installation Without Box

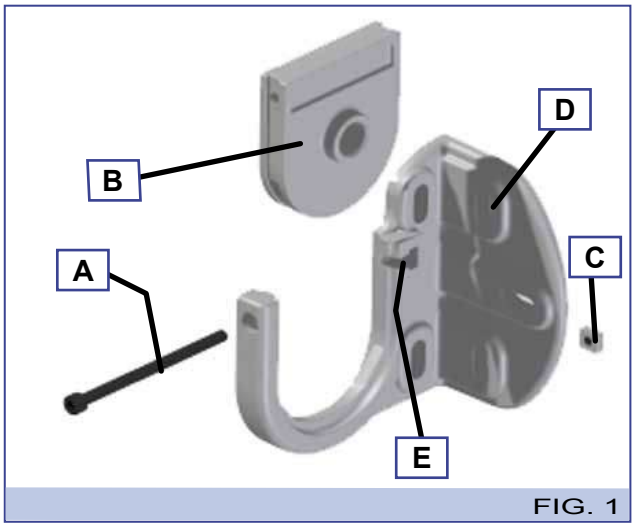


FIG. 1

1 ▫ Fasten the bracket (D) using the slots as described in point 5

2 ▫ Position the roller tube insert (B) in both sides of the roller tube.

3▫ Position the tube with the inserts (B) in the wall/ ceiling support (D), insert the square nut (C) in the groove (E) and tighten the Allen head screw (A).

INFORMATION

The roller tube must be assembled with the square pin on the winch side and the plate with the round pin on the opposite side. See Chapter 5 "Assembly of Canvas on Roller Tube" of the Assembly Manual.


FIG. 2

4▫ If **the awning is ceiling mounted**, follow the same instructions provided in the previous points.

4.4· Installation of Arms

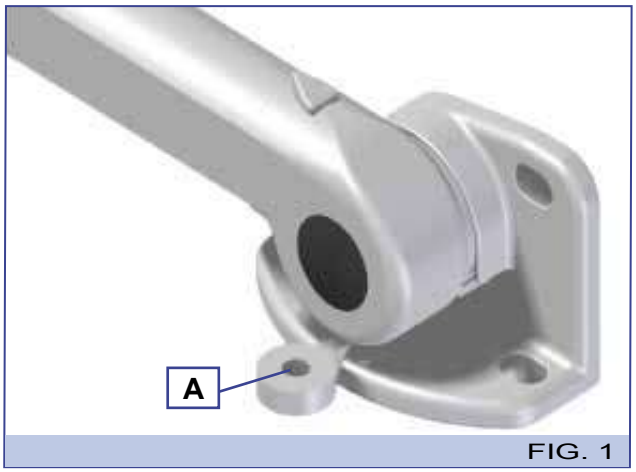


FIG. 1

Insert the locking screw (A).

CAUTION

DANGER TO OPERATOR! THE ARMS ARE SPRING LOADED THANKS TO A SPECIAL KEY. REMOVE IT ONLY WHEN THIS MANUAL SAYS TO DO SO!! HANDLE THE ARMS WITH CARE.

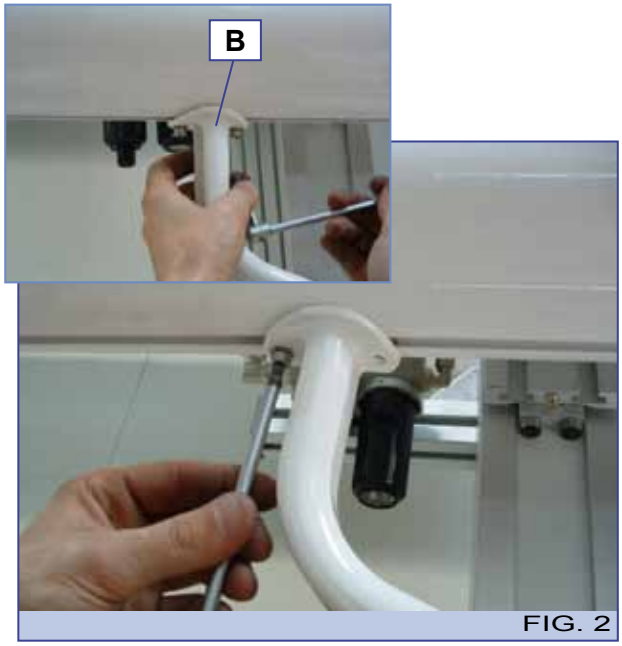


FIG. 2

1▫ Fasten the tip of the arm to terminal (C) using the two screws on the plates inserted previously.

FIG. 3

2 ▫ Fasten the arm bracket to the support surface.

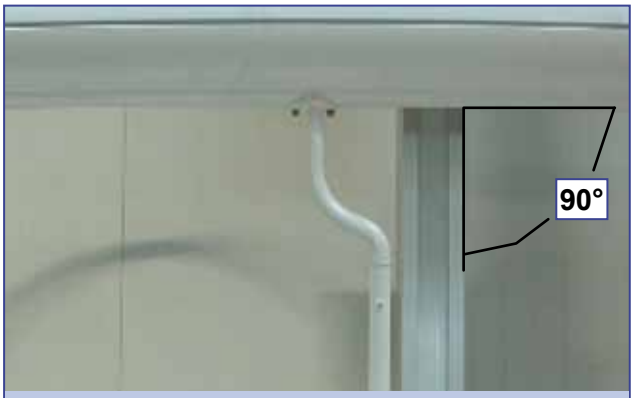


FIG. 4

3▫ After firmly fastening the two ends of each arm, carefully remove the key (A - Fig. 1)

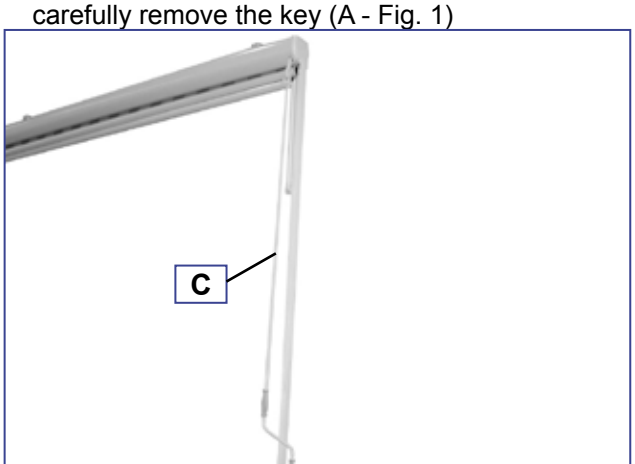


FIG. 5

4▫ Fasten the manoeuvre rod (C) to the winch.

5▫ Open and close the awning. Make sure the box closes properly.

INFORMATION AND PRECAUTIONS

For proper awning operation, the arms must be at right angles to the box (Fig. 4).

5 INSTALLATION OF MOTORIZED AWNING

CAUTION

IT IS PROHIBITED to install the motorized product in an explosive atmosphere.

CAUTION

Use a locking switch (with key) if the awning is installed in sensitive locations such as schools, boarding schools, hospitals, retirement homes, etc. If the awning is equipped with a radio remote control, keep it out of the reach of children.

CAUTION

If there is an opening/closing switch, it must be located in a protected position at a height of at least 1500 mm above ground level and in a safe place.

CAUTION

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.

5.1 · Limit Switch Calibration

INFORMATION AND PRECAUTIONS

Before installation, check that the limit switch is properly calibrated. If it requires adjustment, follow the instructions in the attached "Motor Manual".

5.2 · Electrical Connections and Installation

CAUTION

The electrical connections must be performed by qualified personnel and with the electrical energy disconnected.

INFORMATION AND PRECAUTIONS

IT IS prohibited to connect two or more motors to the same switch due to the risk of induced current that would result in damage to the motors.

Installation of the motorized awning is performed with the same procedure as the manual awning, except for the application of the crank rod and except for the motors with emergency control (Chap. 4.4 "Completion of box installation", point 1).

Instructions for electrical connection and programming the type of operation are described in the "Motor Manual" which is attached.

6 OPTIONALS

6.1 · Automations

(Only for motorized awnings)

Wind gauge, rain gauge, twilight sensor: installation of these optional is described in the manuals for automations and for requested controls.

CAUTION

For awnings with automations, the awning must be installed at a minimum height of 2500 mm. If this is not possible, it is obligatory to install an acoustic warning device.

7 SPECIAL MAINTENANCE

7.1 · 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	See manual for motor (attached)
	Motor defective	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	Replace the fuse as shown in the attached manual
	Incorrect wiring	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	Replace the fuse as shown in the attached manual
	Faulty wind gauge	See instructions on automations (attached)
The awning does not roll up in heavy rain.	Fuse blown	Replace the fuse as shown in the attached manual
	Rain gauge defective	See instructions on automations (attached)
With radio remote control, the awning opens or closes by itself.	Battery dead	Replace battery in radio remote control (see instructions concerning controls)
	Radio remote control damaged	Replacement of radio remote control

All weather protection systems!

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