



Professional Awning  
Manufacturers Association



Industrial Fabrics Association International  
**Proud Member**



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installation  
manual



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## 1 INTRODUCTION

This manual was prepared by the Manufacturer to provide the necessary information to those authorized to install and perform special maintenance on 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 manuals.

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### 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.**



#### **WARNING**

**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.



#### **WARNING**

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



#### **WARNING**

**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.**



#### **WARNING**

**In the square bar supports with double screw, be sure to evenly screw the two fastening screws of the square bar, distributing the tightening force alternatively on the two screws up to a maximum of 20 Nm. Uneven tightening may cause abnormal tension in the casting, causing it to fail immediately, or lead to subsequent problems caused by external stress on the awning (e.g. gusts of wind).**

## 1.4· Contents of packaging

The awning is delivered complete with extensible arms, fabric, control (manual or motorized) and any requested optional.

### **i** INFORMATION AND PRECAUTIONS

**Never move the arm supports 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 personal protective equipment and clothing as required by current standards on safety in the workplace.

#### **!** WARNING

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

#### **!** WARNING

**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.).**

#### **i** WARNING

**It is prohibited to install or place ladders or other objects near the awning, as this would reduce the space required for installation.**

#### **i** WARNING

**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 arm supports so that it does 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· Table of minimum overall sizes

#### **i** INFORMATION AND PRECAUTIONS

The measurements in the following tables are expressed in cm.

| MINIMUM FOOTPRINTS |                |
|--------------------|----------------|
| PROTRUSION         | WIDTH          |
| ARM                | 1 PAIR OF ARMS |
| 360                | 430            |
| 385                | 455            |
| 410                | 480            |
| 435                | 505            |
| 460                | 530            |

#### **i** INFORMATION AND PRECAUTIONS

It is advisable always to use an even number of extensible arms.

### 3.2· Awning sizes table/no. arm and bracket supports

#### **!** WARNING

THE FOLLOWING TABLES ARE PURELY INDICATIVE. TO THE BEST OF OUR KNOWLEDGE THE INFORMATION IS UP TO DATE. BAT S.p.A. DOES NOT PROVIDE ANY GUARANTEE REGARDING ACCURACY, RELIABILITY, AND COMPLETENESS OF THE INFORMATION CONTAINED HEREIN. INDEED, IT IS THE USER'S RESPONSIBILITY TO ENSURE THE SUITABILITY AND COMPLETENESS OF THIS INFORMATION.

#### **i** INFORMATION AND PRECAUTIONS

All the measurements of the tables are in cm.

**TABLES LEGEND:**  
**A - B - C - D - E - F** square bar bracket  
**X - Y - Z** arm support

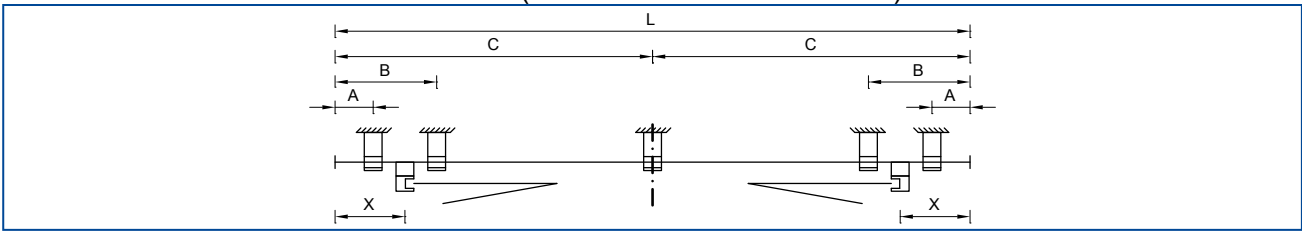
#### **!** WARNING

Distribute the **BALANCE SUPPORTS** and **TOP SUPPORTS** evenly throughout the width of the awning. If the position of the supports coincides with that of the square bar brackets, position them adjacent to the latter. (For the number of supports, see "Table no. arms, square bar brackets, cassette box supports and top supports" on page 10).

#### **!** WARNING

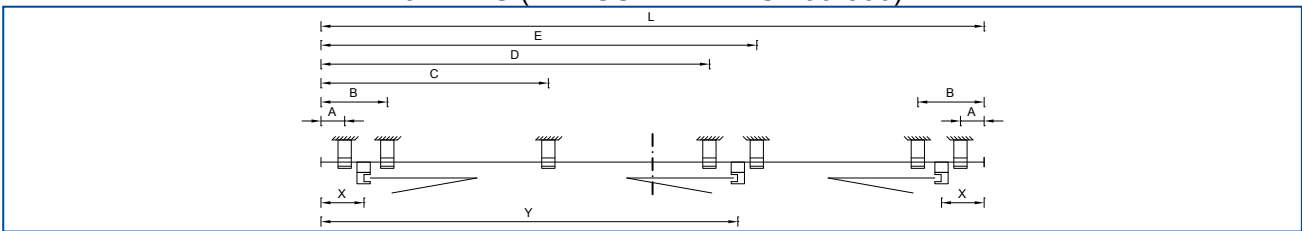
The awning is tested in its maximum size of no more than 6m.

### 2 ARMS (MEASUREMENTS 500-600)

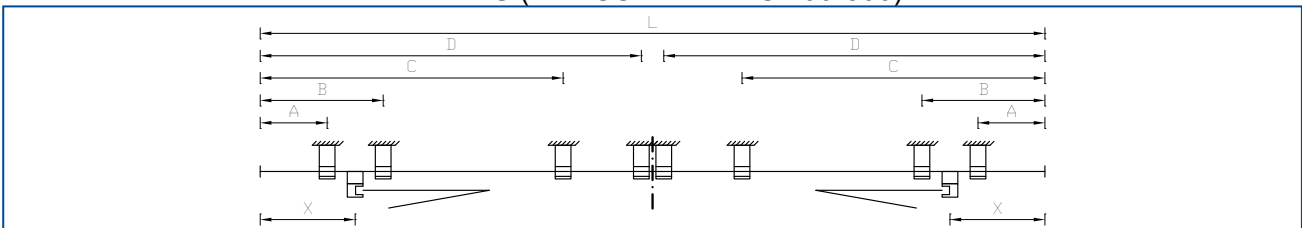


|            |     | 500 |    |     |    | 600 |    |     |    |
|------------|-----|-----|----|-----|----|-----|----|-----|----|
|            |     | A   | B  | C   | X  | A   | B  | C   | X  |
| PROTRUSION | 360 | 30  | 80 | L/2 | 55 | 30  | 80 | 225 | 55 |
|            | 385 | 20  | 50 | L/2 | 35 | 30  | 80 | 225 | 55 |
|            | 410 | 20  | 50 | L/2 | 35 | 30  | 70 | 223 | 50 |
|            | 435 | -   | -  | -   | -  | 30  | 70 | 223 | 50 |
|            | 460 | -   | -  | -   | -  | 30  | 70 | 255 | 45 |

### 3 ARMS (MEASUREMENTS 700-800)



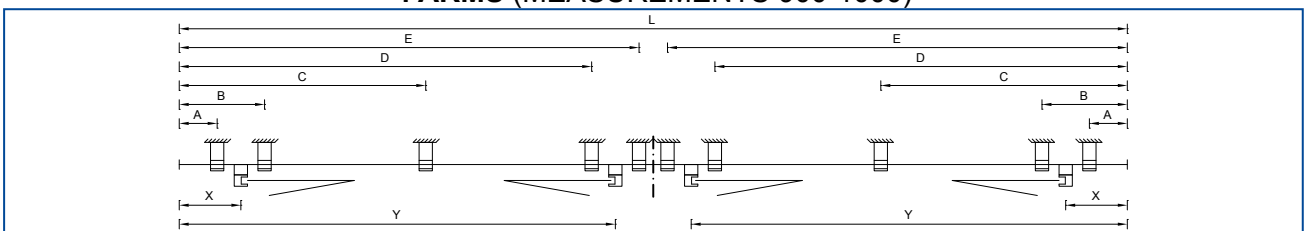
### 2 ARMS (MEASUREMENTS 700-800)



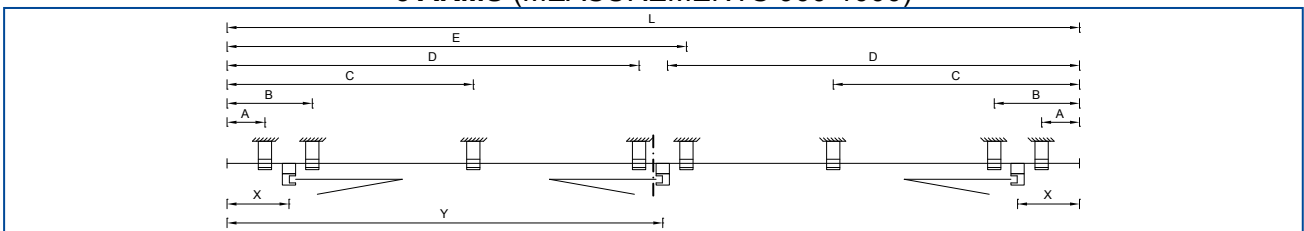
|            |     | "L" WIDTH |     |     |     |     |    |     |        |
|------------|-----|-----------|-----|-----|-----|-----|----|-----|--------|
|            |     | 700       |     |     |     |     |    |     |        |
|            |     | A         | B   | C   | D   | E   | X  | Y   |        |
| PROTRUSION | 360 | 25        | 70  | 240 | 410 | 460 | 45 | 440 | 3 ARMS |
|            | 385 | 60        | 110 | 270 |     |     | 85 |     | 2 ARMS |
|            | 410 | 60        | 110 | 270 |     |     | 85 |     |        |
|            | 435 | 40        | 85  | 230 |     |     | 65 |     |        |
|            | 460 | 40        | 85  | 270 |     |     | 65 |     |        |

|                   |            | "L" WIDTH |     |     |     |     |    |     |               |
|-------------------|------------|-----------|-----|-----|-----|-----|----|-----|---------------|
|                   |            | 800       |     |     |     |     |    |     |               |
|                   |            | A         | B   | C   | D   | E   | X  | Y   |               |
| <b>PROTRUSION</b> | <b>360</b> | 40        | 90  | 265 | 435 | 495 | 65 | 465 | <b>3 ARMS</b> |
|                   | <b>385</b> | 40        | 90  | 275 | 460 | 520 | 65 | 490 |               |
|                   | <b>410</b> | 30        | 80  | 275 | 475 | 525 | 50 | 500 |               |
|                   | <b>435</b> | 25        | 80  | 280 | 485 | 530 | 40 | 510 |               |
|                   | <b>460</b> | 60        | 120 | 260 | 400 |     | 90 |     | <b>2 ARMS</b> |

### 4 ARMS (MEASUREMENTS 900-1000)



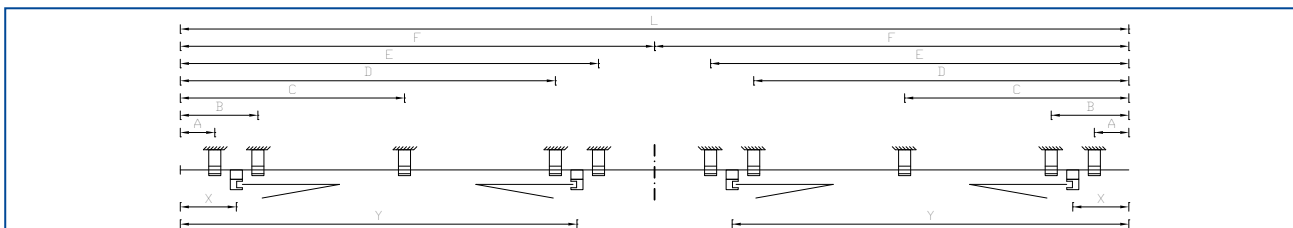
### 3 ARMS (MEASUREMENTS 900-1000)



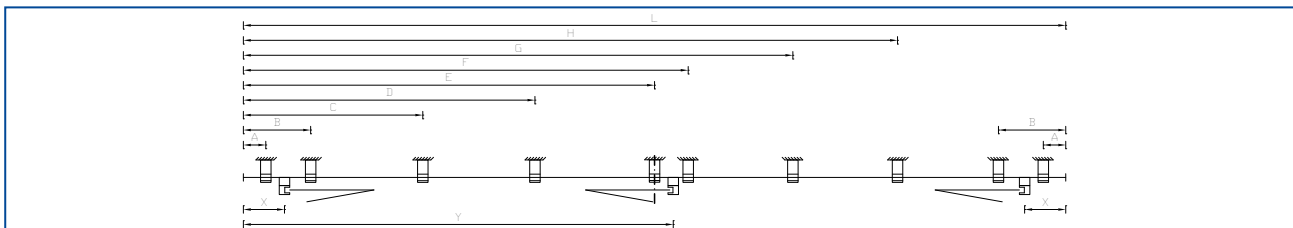
|                   |            | "L" WIDTH |    |     |     |     |     |     |    |     |               |
|-------------------|------------|-----------|----|-----|-----|-----|-----|-----|----|-----|---------------|
|                   |            | 900       |    |     |     |     |     |     |    |     |               |
|                   |            | A         | B  | C   | D   | E   | F   | G   | X  | Y   |               |
| <b>PROTRUSION</b> | <b>360</b> | 40        | 90 | 260 | 435 | 490 | 650 | -   | 65 | 460 | <b>3 ARMS</b> |
|                   | <b>385</b> | 40        | 90 | 275 | 460 | 500 | 660 | -   | 65 | 485 |               |
|                   | <b>410</b> | 40        | 90 | 290 | 490 | 540 | 680 | -   | 65 | 515 |               |
|                   | <b>435</b> | 30        | 90 | 300 | 505 | 555 | 680 | -   | 55 | 530 |               |
|                   | <b>460</b> | 30        | 90 | 235 | 380 | 525 | 575 | 700 | 55 | 550 |               |

|                   |            | "L" WIDTH |    |     |     |     |     |     |    |     |               |
|-------------------|------------|-----------|----|-----|-----|-----|-----|-----|----|-----|---------------|
|                   |            | 1000      |    |     |     |     |     |     |    |     |               |
|                   |            | A         | B  | C   | D   | E   | F   | X   |    | Y   |               |
| <b>PROTRUSION</b> | <b>360</b> | 40        | 90 | 260 | 435 | 485 | -   | -   | 65 | 460 | <b>4 ARMS</b> |
|                   | <b>385</b> | 30        | 90 | 270 | 450 | 490 | -   | -   | 55 | 475 |               |
|                   | <b>410</b> | 20        | 60 | 275 | 460 | 495 | -   | -   | 35 | 485 |               |
|                   | <b>435</b> | 30        | 90 | 230 | 370 | 505 | 555 | 730 | 55 | 530 | <b>3 ARMS</b> |
|                   | <b>460</b> | 30        | 90 | 235 | 370 | 525 | 575 | 740 | 55 | 550 |               |

### 4 ARMS (MEASUREMENTS 1100-1200)



### 3 ARMS (MEASUREMENTS 1100-1200)



|            |     | "L" WIDTH |    |     |     |     |     |   |   |    |     |        |
|------------|-----|-----------|----|-----|-----|-----|-----|---|---|----|-----|--------|
|            |     | 1100      |    |     |     |     |     |   |   |    |     |        |
|            |     | A         | B  | C   | D   | E   | F   | G | H | X  | Y   |        |
| PROTRUSION | 360 | 40        | 90 | 260 | 435 | 485 | -   | - | - | 65 | 460 | 4 ARMS |
|            | 385 | 40        | 90 | 275 | 460 | 510 | -   | - | - | 65 | 485 |        |
|            | 410 | 40        | 90 | 290 | 490 | 535 | -   | - | - | 65 | 515 |        |
|            | 435 | 30        | 80 | 210 | 350 | 490 | 535 | - | - | 45 | 515 |        |
|            | 460 | 25        | 70 | 210 | 350 | 505 | 545 | - | - | 40 | 535 |        |

|            |     | "L" WIDTH |    |     |     |     |     |    |     |        |  |  |
|------------|-----|-----------|----|-----|-----|-----|-----|----|-----|--------|--|--|
|            |     | 1200      |    |     |     |     |     |    |     |        |  |  |
|            |     | A         | B  | C   | D   | E   | F   | X  | Y   |        |  |  |
| PROTRUSION | 360 | 40        | 90 | 260 | 435 | 485 | -   | 65 | 460 | 4 ARMS |  |  |
|            | 385 | 40        | 90 | 275 | 460 | 510 | -   | 65 | 485 |        |  |  |
|            | 410 | 40        | 90 | 290 | 490 | 535 | -   | 65 | 515 |        |  |  |
|            | 435 | 40        | 90 | 230 | 370 | 510 | 560 | 65 | 535 |        |  |  |
|            | 460 | 30        | 90 | 210 | 370 | 515 | 565 | 50 | 545 |        |  |  |



### 3.4 - TABLE NO. ARMS, SQUARE BAR BRACKETS AND CASSETTE BOX SUPPORTS

| Sporgenza (cm)<br>Projection (cm)<br>Avancée (cm)<br>Ausladung (cm)<br>Proyección (cm) | Componenti<br>Components<br>Composants<br>Komponenten<br>Componentes  | LARGHEZZA - WIDTH - LARGEUR - BREITE - ANCHO                      |     |     |     |     |     |      |      |      |
|--|---|---|-----|-----|-----|-----|-----|------|------|------|
|  |   | Centimetri - Centimetres - Centimètres - Zentimeter - Centímetros |     |     |     |     |     |      |      |      |
|  |   | 400   | 500 | 600 | 700 | 800 | 900 | 1000 | 1100 | 1200 |
| <b>360</b>   | Bracci - Arms - Bras - Arme - Brazos  | -   | 2   | 2   | 3   | 3   | 3   | 4    | 4    | 4    |
|  | Staffa barra quadrata - Square bar bracket - Support barre carree - Straggepreste Konsole - Escuadra barra cuadrada | -   | 5   | 6   | 7   | 7   | 9   | 10   | 10   | 10   |
|  | Supporto compensatore - Balance support - Support compensateur - Stützlager - Soporte compensador                   |   | 1   | 1   | 1   | 1   | 2   | 2    | 2    | 2    |
|  | Supporto tettuccio - Hood support - Support pour auvent - Schutzdachkonsole - Soporte cubierta                      | -   | 5   | 5   | 6   | 6   | 7   | 8    | 9    | 9    |
| <b>385</b>   | Bracci - Arms - Bras - Arme - Brazos  | -   | 2   | 2   | 2   | 3   | 3   | 4    | 4    | 4    |
|  | Staffa barra quadrata - Square bar bracket - Support barre carree - Straggepreste Konsole - Escuadra barra cuadrada | -   | 5   | 6   | 7   | 7   | 8   | 10   | 10   | 10   |
|  | Supporto compensatore - Balance support - Support compensateur - Stützlager - Soporte compensador                   |   | 1   | 1   | 1   | 1   | 2   | 2    | 2    | 2    |
|  | Supporto tettuccio - Hood support - Support pour auvent - Schutzdachkonsole - Soporte cubierta                      | -   | 5   | 5   | 6   | 6   | 7   | 8    | 9    | 9    |
| <b>410</b>   | Bracci - Arms - Bras - Arme - Brazos  | -   | 2   | 2   | 2   | 3   | 3   | 4    | 4    | 4    |
|  | Staffa barra quadrata - Square bar bracket - Support barre carree - Straggepreste Konsole - Escuadra barra cuadrada | -   | 5   | 6   | 6   | 7   | 8   | 10   | 10   | 10   |
|  | Supporto compensatore - Balance support - Support compensateur - Stützlager - Soporte compensador                   |   | 1   | 1   | 1   | 1   | 2   | 2    | 2    | 2    |
|  | Supporto tettuccio - Hood support - Support pour auvent - Schutzdachkonsole - Soporte cubierta                      | -   | 5   | 5   | 6   | 6   | 7   | 8    | 9    | 9    |
| <b>435</b>   | Bracci - Arms - Bras - Arme - Brazos  | -   | -   | 2   | 2   | 3   | 3   | 3    | 4    | 4    |
|  | Staffa barra quadrata - Square bar bracket - Support barre carree - Straggepreste Konsole - Escuadra barra cuadrada | -   | -   | 6   | 6   | 7   | 8   | 9    | 12   | 12   |
|  | Supporto compensatore - Balance support - Support compensateur - Stützlager - Soporte compensador                   |   |     | 1   | 1   | 1   | 2   | 2    | 2    | 2    |
|  | Supporto tettuccio - Hood support - Support pour auvent - Schutzdachkonsole - Soporte cubierta                      | -   |     | 5   | 6   | 6   | 7   | 8    | 9    | 9    |
| <b>460</b>   | Bracci - Arms - Bras - Arme - Brazos  | -   | -   | 2   | 2   | 2   | 3   | 3    | 4    | 4    |
|  | Staffa barra quadrata - Square bar bracket - Support barre carree - Straggepreste Konsole - Escuadra barra cuadrada | -   | -   | 6   | 7   | 7   | 9   | 9    | 12   | 12   |
|  | Supporto compensatore - Balance support - Support compensateur - Stützlager - Soporte compensador                   |   |     | 1   | 1   | 1   | 2   | 2    | 2    | 2    |
|  | Supporto tettuccio - Hood support - Support pour auvent - Schutzdachkonsole - Soporte cubierta                      | -   |     | 5   | 6   | 6   | 7   | 8    | 9    | 9    |
| <b>485</b>   | Bracci - Arms - Bras - Arme - Brazos  | -   | -   | 2   | 2   | 2   | 3   | 3    | 3    | 4    |
|  | Staffa barra quadrata - Square bar bracket - Support barre carree - Straggepreste Konsole - Escuadra barra cuadrada | -   | -   | 6   | 7   | 7   | 9   | 9    | 11   | 12   |
|  | Supporto compensatore - Balance support - Support compensateur - Stützlager - Soporte compensador                   |   |     | 1   | 1   | 1   | 2   | 2    | 2    | 2    |
|  | Supporto tettuccio - Hood support - Support pour auvent - Schutzdachkonsole - Soporte cubierta                      | -   |     | 5   | 6   | 6   | 7   | 8    | 9    | 9    |

Le staffe devono essere installate sia a sinistra che a destra del supporto braccio ad una distanza massima di 25 cm dal supporto stesso  
The brackets must be installed either on the left or the right of the arm support at a distance of 25cm of it.

Les supports doivent être montés soit à gauche soit à droite du support bras à une distance maxi de 25cm de ce support.

Die Konsolen müssen jeweils links und rechts der Armkonsole mit einem Höchstabstand von 25 cm von dieser letzten installiert werden.

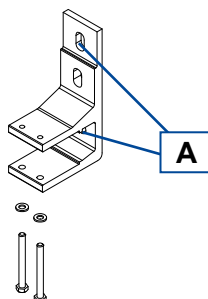
La escuadra puede ser instalada tanto a la izquierda como a la derecha del soporte del brazo y a una distancia máxima de 25 cm. del mismo.

### 3.3 · Table of loads on awning fastening plugs, based on the type of attachment

#### **i** INFORMATION AND PRECAUTIONS

The calculations of the plugs were made taking into account Class 1 wind resistance as per standard EN 13561.

#### WALL INSTALLATION



#### **i** INFORMATION AND PRECAUTIONS

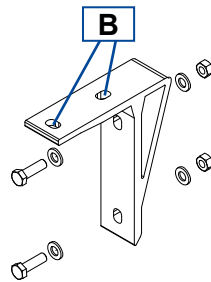
The wall plug calculations for the Roma awning have been performed with the extruded square wall bracket, taking into consideration that the holes (A) are used for wall installation.

#### **i** INFORMATION AND PRECAUTIONS

It is advisable to use all 3 slots available on the bracket. If this is not possible, use the 2 as in the figure (A).

| WALL INSTALLATION - Roma                  |      |           |      |      |      |      |
|---|------|-----------|------|------|------|------|
| Extraction load on anchoring devices (KN) |      | WIDTH (m) |      |      |      |      |
|   |      | 4         | 4.5  | 5    | 5.5  | 6    |
| PROTRUSION (m)                            | 3.60 | -         | 3.23 | 3.53 | 3.83 | 4.14 |
|   | 3.85 | -         | -    | 4.00 | 4.35 | 4.69 |
|   | 4.10 | -         | -    | 4.51 | 4.90 | 5.29 |
|   | 4.35 | -         | -    | -    | 5.43 | 5.86 |
|   | 4.60 | -         | -    | -    | 6.04 | 6.52 |

## CEILING INSTALLATION



### **i** INFORMATION AND PRECAUTIONS

The ceiling plug calculations for the Roma awning have been performed with the square bar ceiling bracket, taking into consideration that the holes (B) are used for ceiling installation.

| CEILING INSTALLATION - ROMA               |      |           |      |      |      |      |
|---|------|-----------|------|------|------|------|
| Extraction load on anchoring devices (KN) |      | WIDTH (m) |      |      |      |      |
|   |      | 4         | 4.5  | 5    | 5.5  | 6    |
| PROTRUSION (m)                            | 3.60 | -         | 2.99 | 3.26 | 3.54 | 3.82 |
|   | 3.85 | -         | -    | 3.69 | 4.00 | 4.32 |
|   | 4.1  | -         | -    | 4.14 | 4.49 | 4.85 |
|   | 4.35 | -         | -    | -    | 4.97 | 5.36 |
|   | 4.6  | -         | -    | -    | 5.51 | 5.95 |

### **!** WARNING

All values were calculated on the basis of using 4 square bar supports (assuming no contribution from the central bracket).

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.

Example: awning with ceiling attachment

- awning dimensions: L 5.5 x SP 4.1 - load on plug: 4.49 kN - base material: non-cracked concrete C25. Suggested plug: Hilti HST M10 (see the plug technical specifications in the Hilti General Catalogue).

### **!** WARNING

The selection of the most suitable fastening element depends on the type of base material and on its physical state. It is the responsibility of the installer to check the state of the base material before installing the awning. The installer is not obliged to use Hilti anchoring devices.

### 3.4- Table of Suggested Anchoring Devices








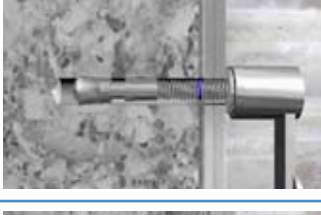



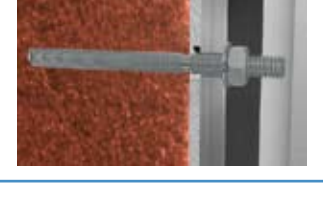
#### 3.4.1 -Types of anchoring devices depending on the base material

| Extraction load on anchoring devices (KN) |   |   |
|---|---|---|
| Hilti HST                                 |    | CONCRETE<br>CRACKED CONCRETE<br>HARD NATURAL STONE    |
| Hilti HSA                                 |    | CONCRETE<br>HARD NATURAL STONE                        |
| Hilti HIT-HY 150 with HAS                 |    | CONCRETE  |
| Hilti HIT-RE 500 with HAS                 |  | CONCRETE<br>HARD NATURAL STONE<br>SOLID BRICK<br>WOOD |
| Hilti HIT-HY 50                           |  | BETON GAS<br>SOLID BRICK<br>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:[tecnicisti@hilti.com](mailto:tecnicisti@hilti.com))**

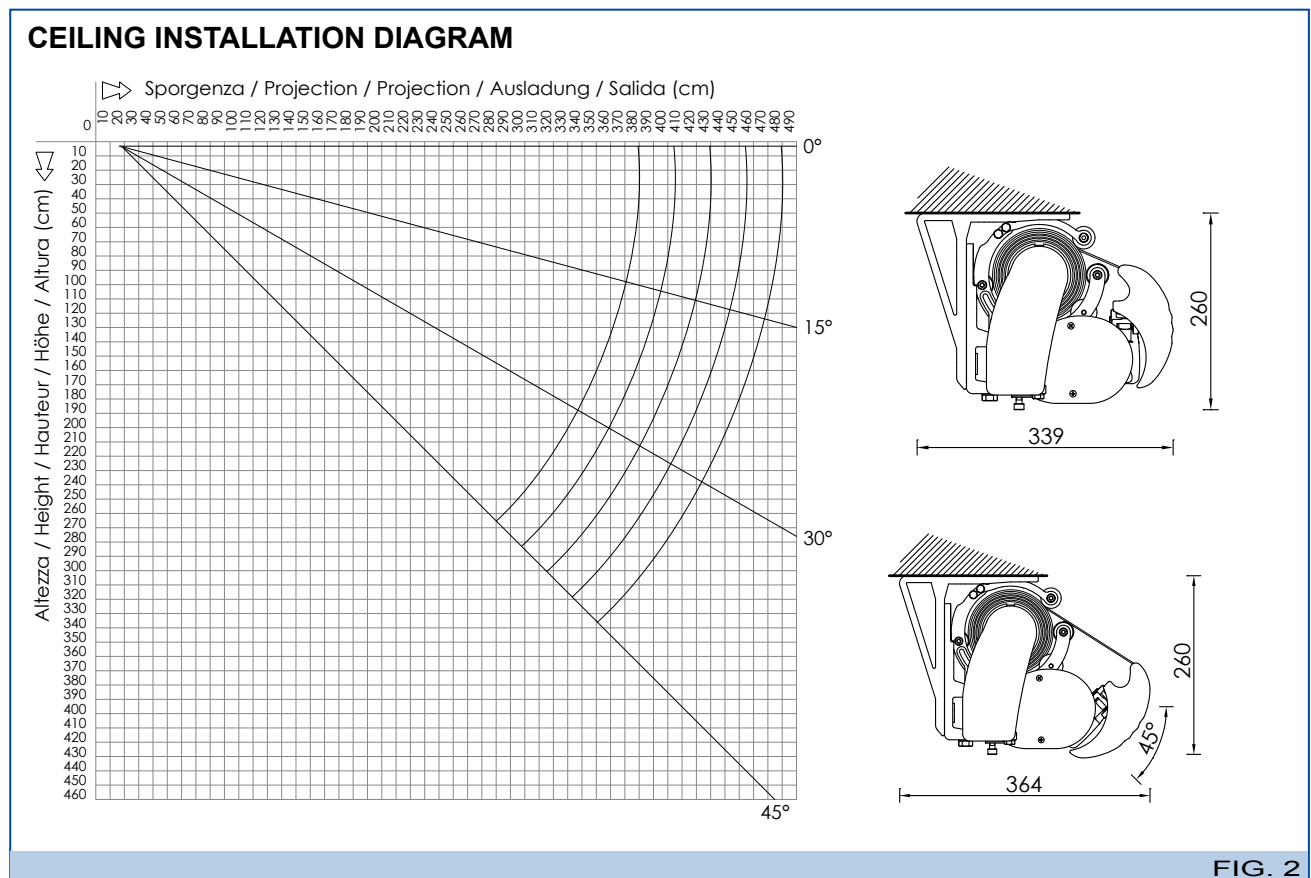
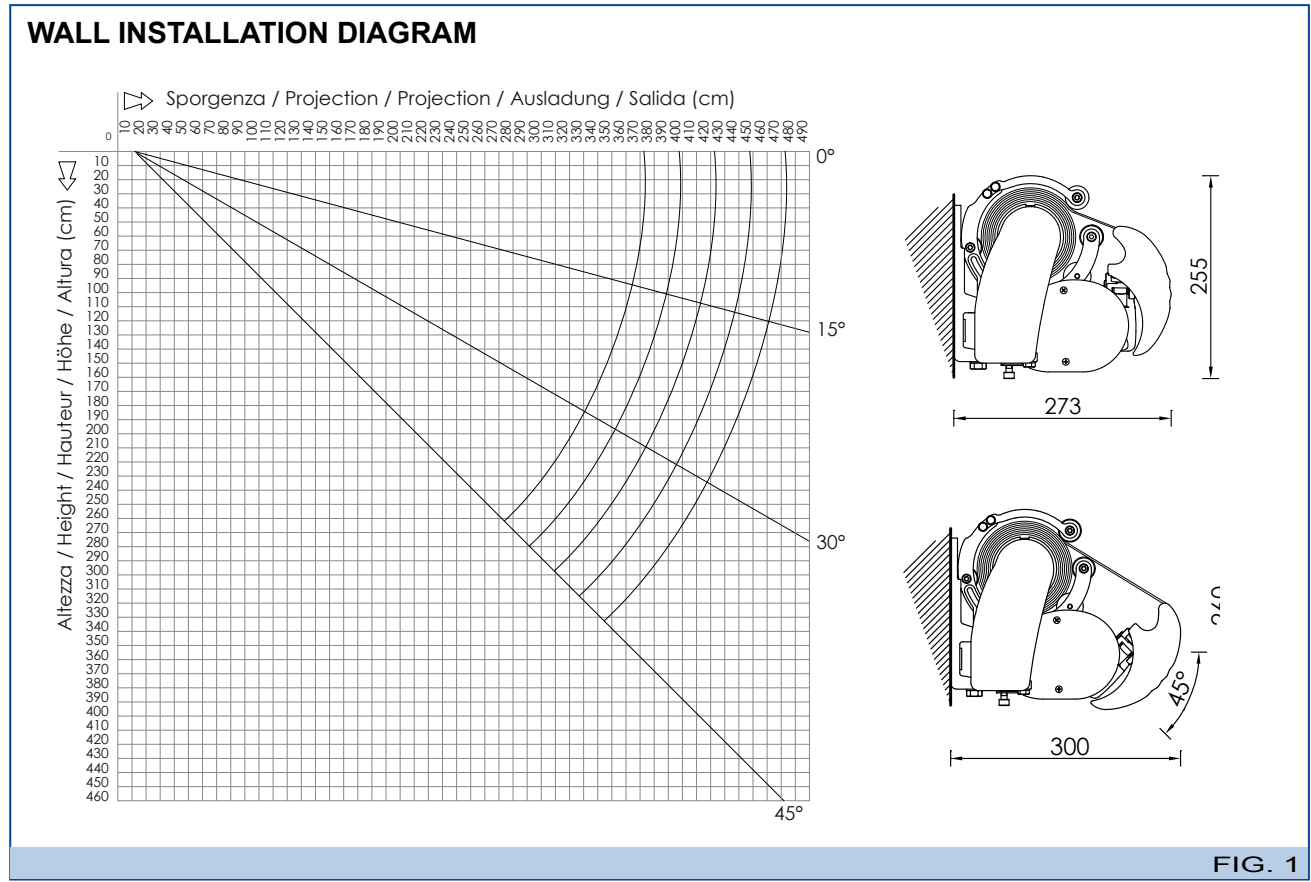
### 3.4.2 • Sequence for fastening of anchoring devices

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

**! WARNING**

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

### 3.5- Diagrams of the covering and footprints



## 3.6· Support brackets

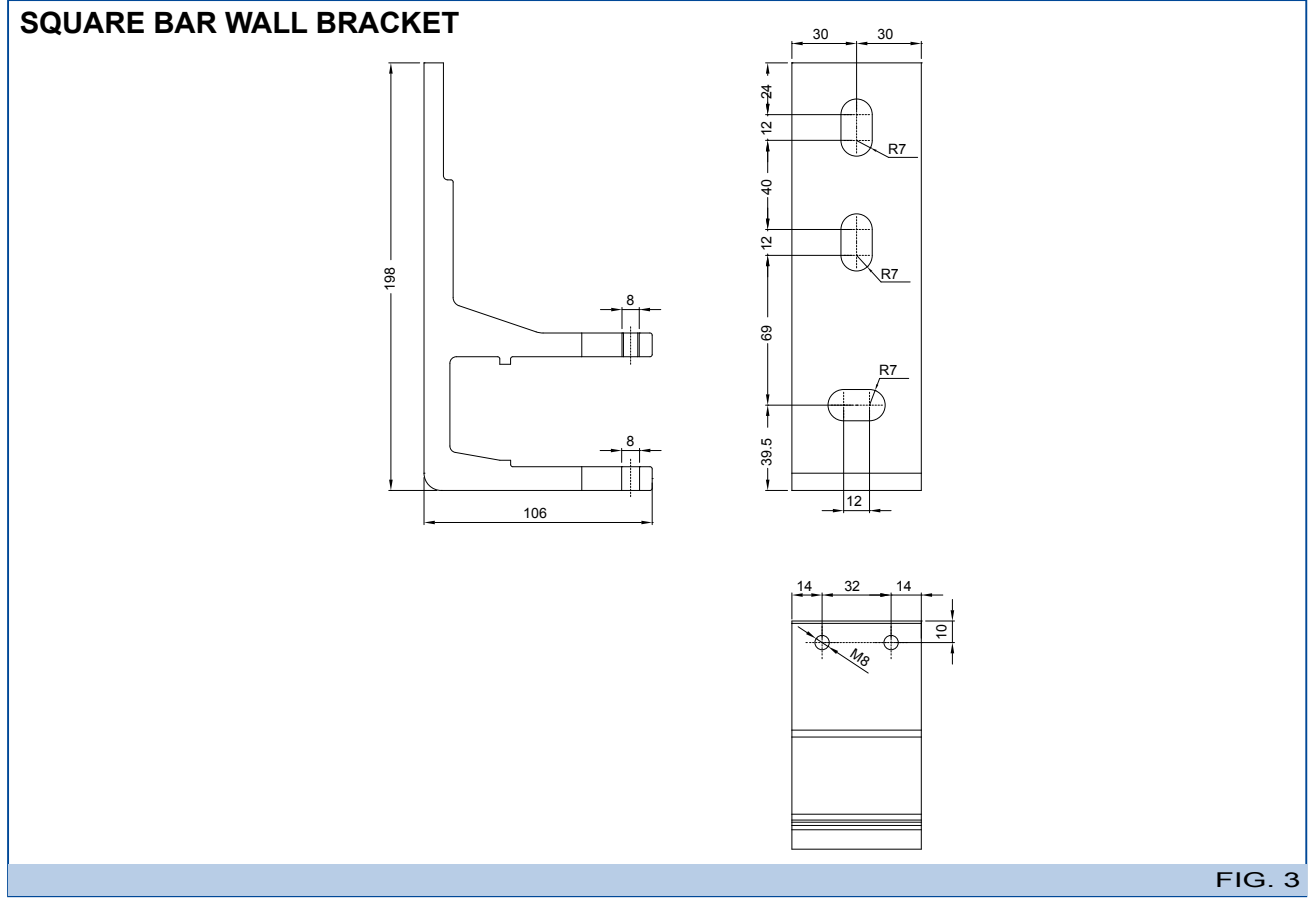


FIG. 3

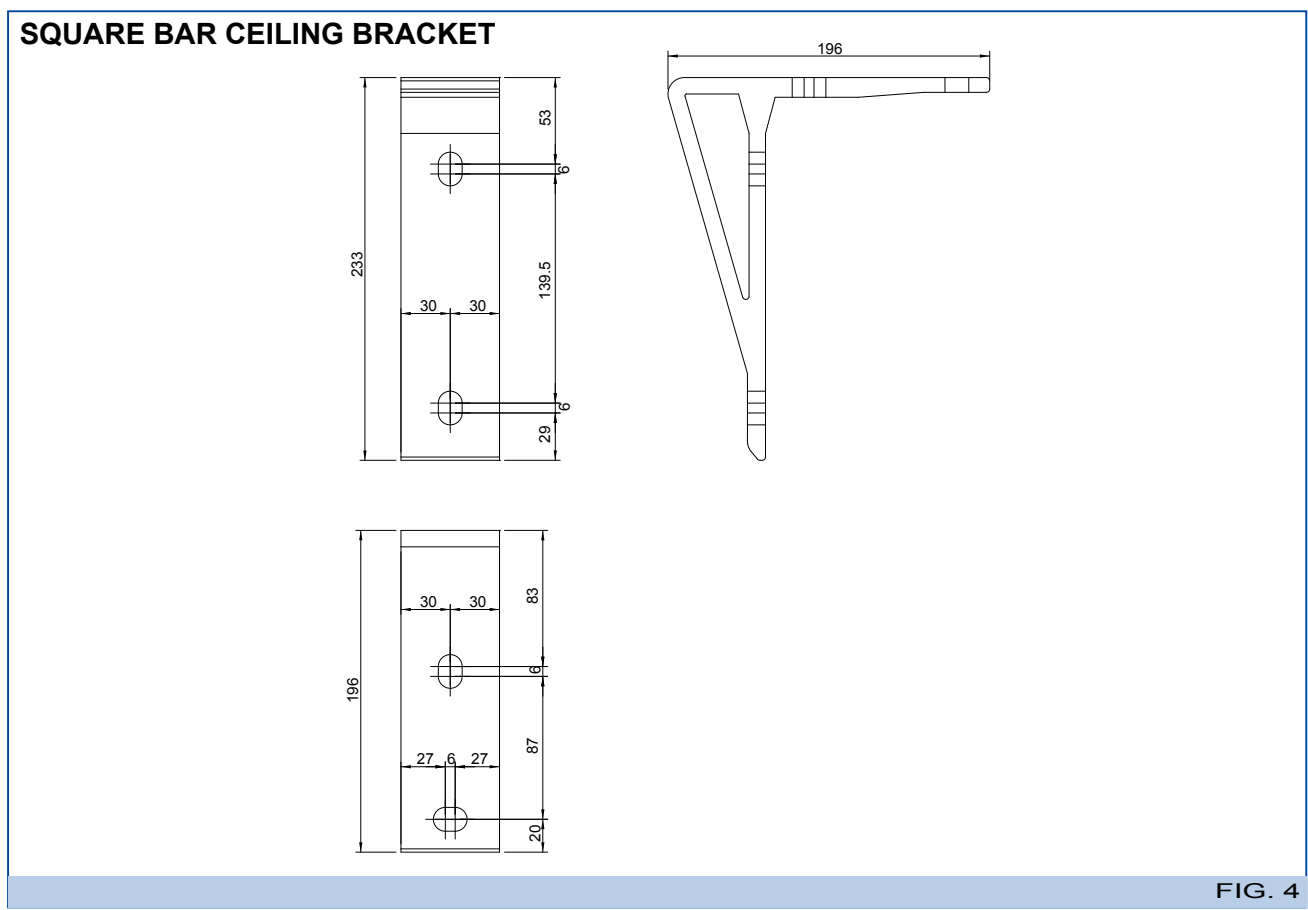


FIG. 4

## 4 INSTALLATION OF MANUAL AWNING

The instructions below refer to **wall-mounting**; ceiling mounting is the same . If any options are in use, **first read** Chapter 6 "Optionals"



### **WARNING**

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.



### **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.



### **INFORMATION AND PRECAUTIONS**

The procedure described below refers to the model of awning with **TWO** extensible arms. The operator must take the necessary measures for the installation of models with more than two arms (see the tables in Chap. 3.2).

### 4.1· Fastening brackets to wall

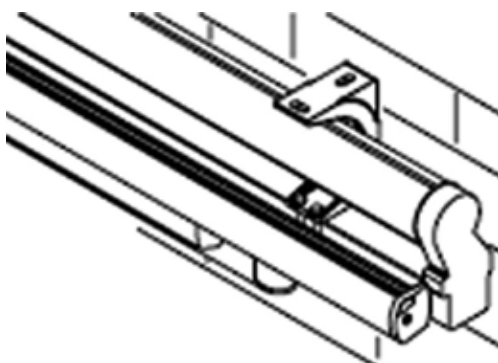


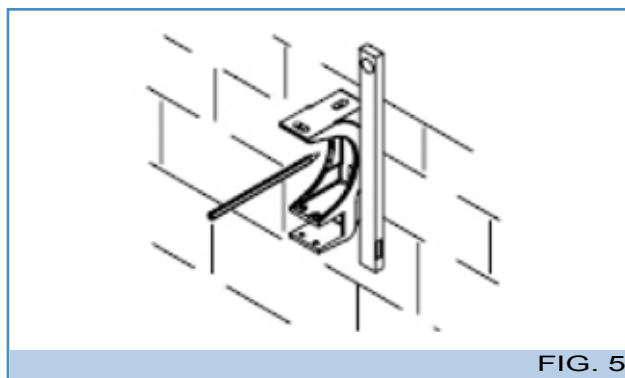
### **INFORMATION AND PRECAUTIONS**

The instructions that follow are of a general nature and must therefore be adapted to the model of awning being assembled.

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 (see Chap 3.1 and Chap.3.5)
- dimensions of the brackets (see Chap. 3.6)
- number of arm supports (see Chap.3.2)
- side of awning where control is located;
- dimensions of the wall/ceiling where the awning is to be installed.





(For the support and bracket positions, see Chapter 3.2).

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

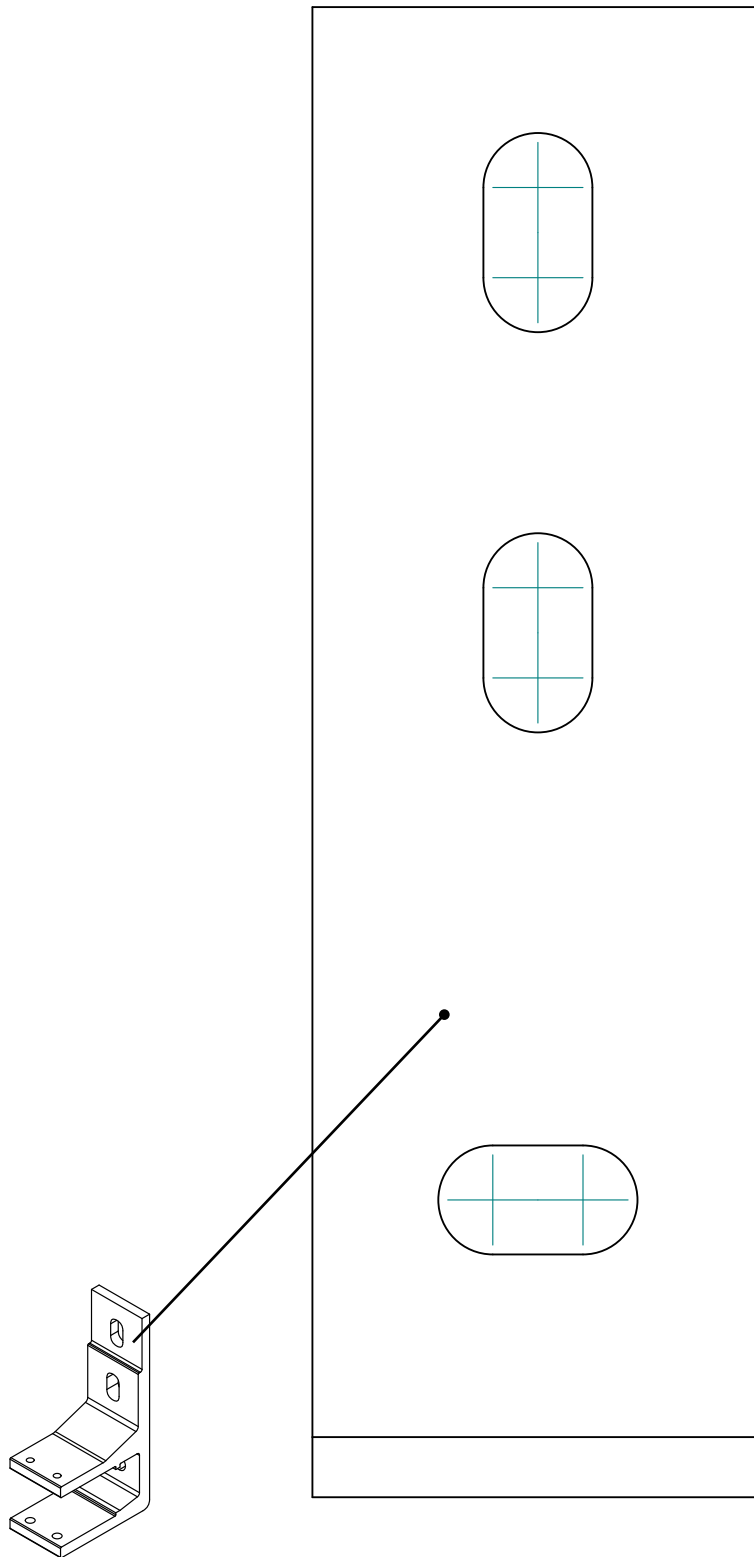
### **i** INFORMATION AND PRECAUTIONS

To facilitate the installation process, pages 19 and 20 may be printed in A4 format for use as templates to find the best positions for the holes.

### **!** WARNING

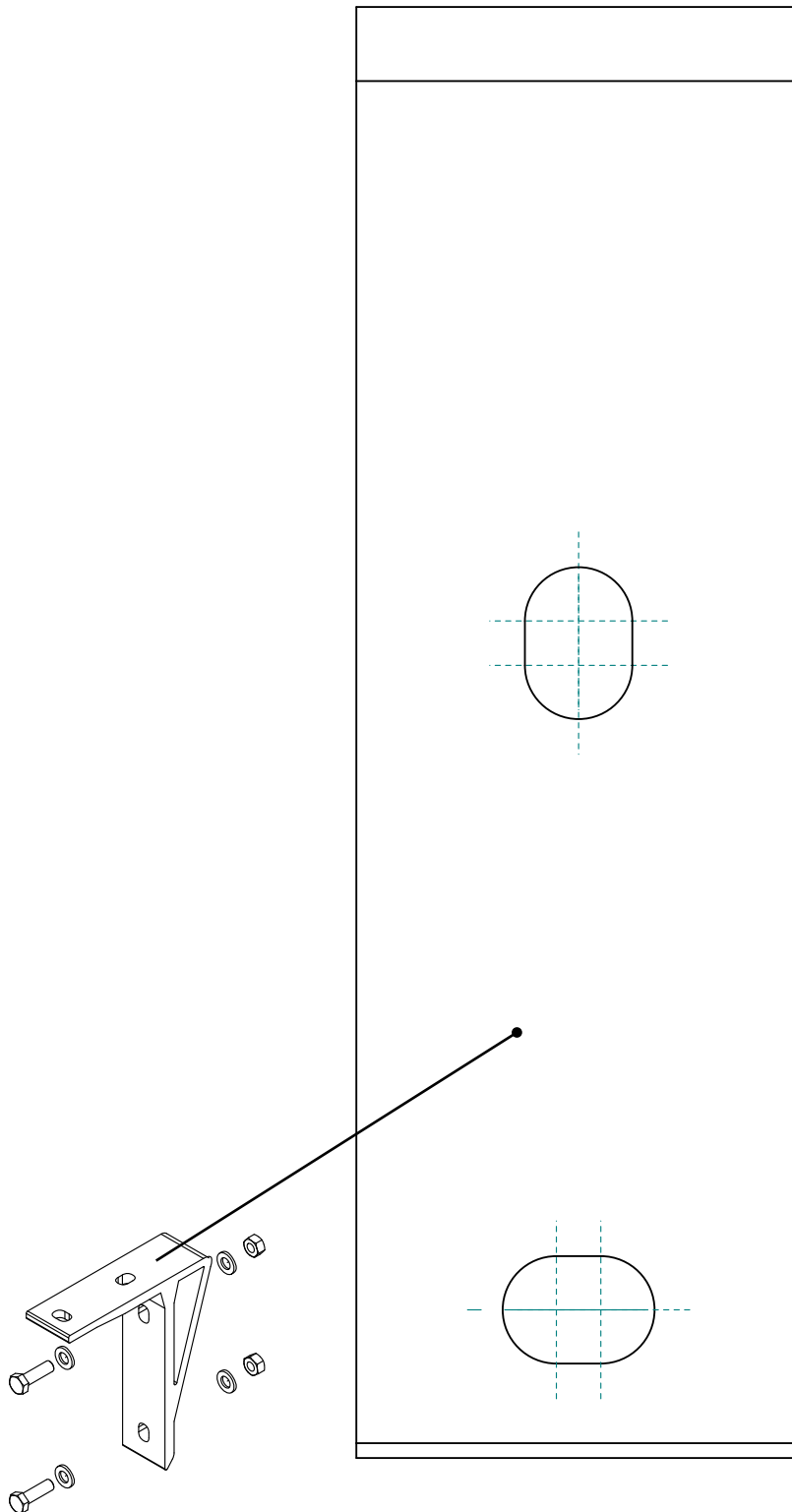
TO AVOID GROSS ERRORS, MAKE SURE THE PRINT OUT SCALE IS 1:1, CHECKING THE MEASURE INDICATED ON THE PAPER WITH A RULER OR CALLIPER IN RELATION TO THE DIMENSIONS INDICATED ON PAGE 16.

# SQUARE BAR WALL BRACKET



Scale 1:1

## SQUARE BAR CEILING BRACKET



**Scale 1:1**



FIG. 6

3° Make the holes in the wall using suitable drill based on the type of wall and type of screw to be used. See the Table of Loads, Chap. 3.3.

## 4.2· Wall installation

**i INFORMATION AND PRECAUTIONS**  
 The instructions that follow are of a general nature and must therefore be adapted to the model of awning being assembled.

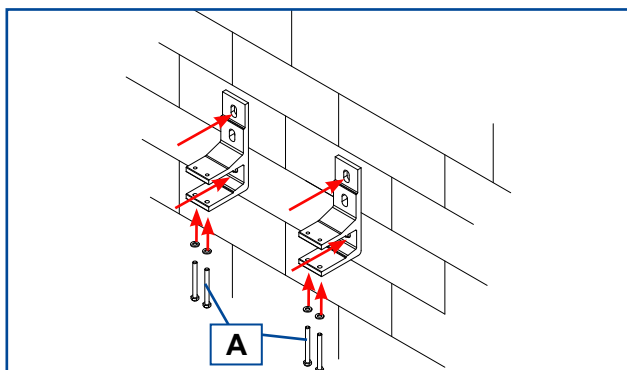


FIG. 7

4° Fix the brackets to the wall and insert the square bar (including the awning) on the square bar supports.

5° Affix the square bar to the brackets using the screws (A).



FIG. 8

6° Centre the awning on the brackets, with reference to the table "Awning Dimensions/no. of arm supports" in Chap. 3.2.

**i INFORMATION AND PRECAUTIONS**  
 If the wall is off-square, it may difficult to install the awning on the support brackets. It is therefore advisable to check the alignment of the brackets and to provide inserts to ensure proper alignment for good installation. Use a string to check alignment.

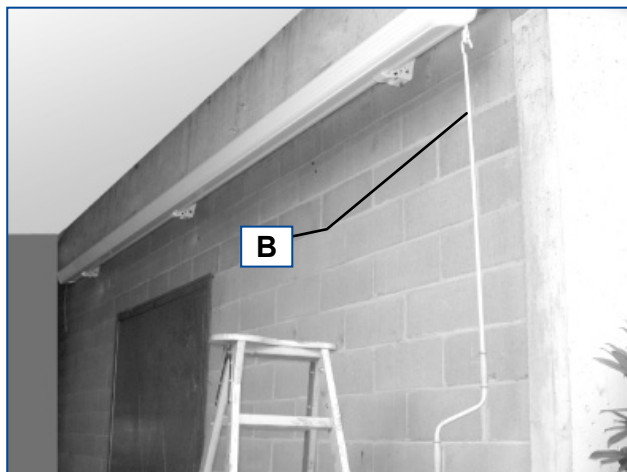


FIG. 9

7° For a manual awning, fasten the manoeuvre rod (B) to the winch.



FIG. 10

For ceiling-mounted awnings, follow the same instructions as for wall installation.

## 4.3 Adjustment of Awning Inclination

### **i** INFORMATION AND PRECAUTIONS

The instructions that follow are of a general nature and must therefore be adapted to the model of awning being assembled.

For this procedure, one worker will need to work on the brackets, and the other, only after opening the awning, will guide the terminal so as to raise or lower the awning easily.

### **!** WARNING

Make sure that when opening/closing the awning, there are no individuals within its range of action who are not involved in the work.

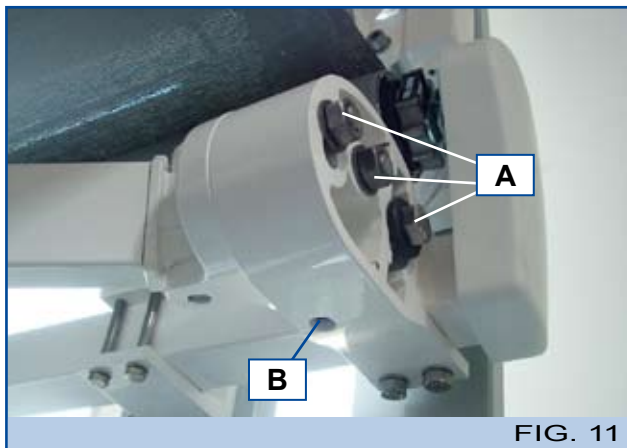


FIG. 11

7 ▫ Remove the arm support covers from both sides of the awning.

8 ▫ Loosen the 3 screws (A).

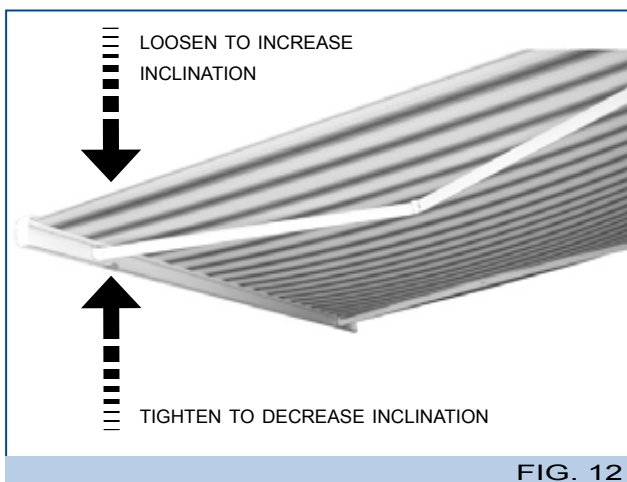


FIG. 12

9 ▫ Adjust the inclination of the awning using the relevant Allen key on the screws (B - Fig.11). Repeat for both arms.

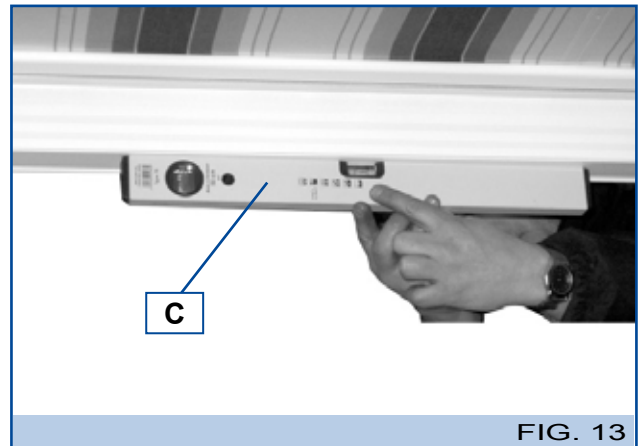


FIG. 13

10 ▫ Using a level (C), check that the terminal is horizontal. If not, adjust the support screw (B, Fig. 11) for the arm that is not level, following the procedure described above. Once the desired inclination has been achieved, tighten the screws (A - Fig. 11).

11 ▫ Refit the arm support covers previously removed.

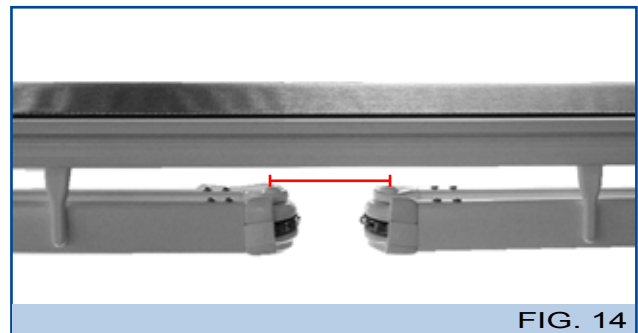


FIG. 14

12 ▫ Check that the elbows of the extensible arms are parallel.

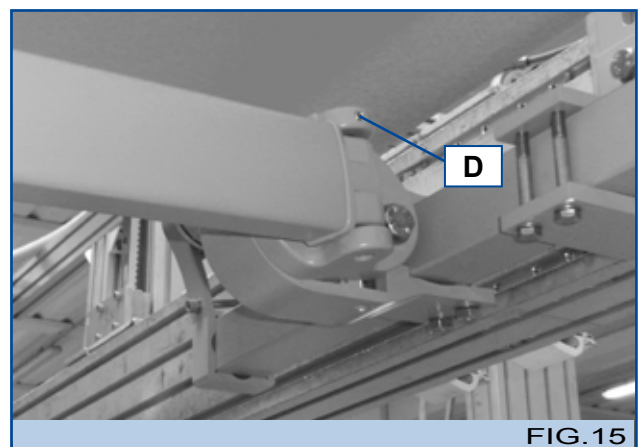


FIG. 15

13 ▫ If not, open the awning slightly and tighten the grub screw (D) to raise the elbow of the arm, and unscrew to lower it.

14 ▫ Repeat the same steps for the other end of the awning.

## 5 INSTALLATION OF MOTORIZED AWNING

### **WARNING**

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

### **WARNING**

Use a locking switch (with key) if the awning is installed in sensitive locations such as schools, colleges, hospitals, retirement homes, etc.

If the awning is equipped with a radio remote control, keep it out of the reach of children.

### **WARNING**

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.

### **WARNING**

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

#### **WARNING**

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 which would result in damage to the motors.

Installation of the motorized awning involves the same procedure as for the manual awning, except for the application of the crank rod (Chap. 4.2, "Wall installation", point 6).

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.

#### **WARNING**

For awnings with automations, the awning must be installed at a minimum height of 2500 mm; if this is not possible, an acoustic warning device must be installed.

## 7 SPECIAL MAINTENANCE

### 7.1 Troubleshooting table

#### MANUAL AWNING

| PROBLEMS                    | CAUSES                     | SOLUTIONS                            |
|-----------------------------|----------------------------|--------------------------------------|
| Conical rewinding of canvas | Incorrect symmetry of arms | See manual for Assembly, Chap. 7     |
|                             | Uneven fabric thickness    | Roll the canvass all the way back up |

#### MOTORIZED AWNING

##### Without electronic control unit

| PROBLEMS   | CAUSES                                | SOLUTIONS                                |
|--|---------------------------------------|--|
| Conical rewinding of canvas                                    | Incorrect symmetry of arms            | See manual for Assembly, Chap. 7         |
|  | 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.                       | Motor crown shifts during movement    | See manual for Assembly, Chap. 8         |
| The motor is very noisy  | Incorrect wiring                      | See manual for motor (attached)          |
|  | Motor failed                          | 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 control, the awning opens or closes by itself. | Battery dead         | Replace battery in radio remote control (see instructions concerning controls) |



Professional Awning  
Manufacturers Association



**Manufacturing Facility:**

Retractableawnings.com  
16255 NW 54 Avenue  
Miami Gardens, Florida 33014-6106  
United States of America  
Telephone (305) 628-2424  
Telephone Toll Free 1 (866) 438-2964  
Fax (305) 623-0099  
Email [sales@retractableawnings.com](mailto:sales@retractableawnings.com)

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