

CE

GEARMOTOR
FOR SWING OR FOLDING DOORS



INSTALLATION MANUAL
F40230E - F4024E - F4024EP

FA00034-EN

CE



EAC

EN English



WARNING!

important safety instructions for people: READ CAREFULLY!



Premise

• Employ this product only for the use for which it was expressly made. Any other use is dangerous. CAME S.p.A is not liable for any damage caused by improper, wrongful and unreasonable use • Keep these warnings together with the installation and operation manuals that come with the operator.

Before installing

(checking what's there: if your evaluation is negative, do not proceed before having complied with all safety requirements)

• Check that the automated parts are in good mechanical order, that the operator is level and aligned, and that it opens and closes properly. Make sure you have suitable mechanical stops • If the operator is to be installed at a height of over 2.5 m from the ground or other access level, make sure you have any necessary protections and/or warnings in place • If any pedestrian openings are fitted into the operator, there must also be a system to block their opening while they are moving • Make sure that the opening automated door or gate cannot entrap people against the fixed parts of the operator • Do not install the operator upside down or onto elements that could yield and bend. If necessary, add suitable reinforcements to the anchoring points • Do not install door or gate leaves on tilted surfaces • Make sure any sprinkler systems cannot wet the operator from the ground up • Make sure the temperature range shown on the product literature is suitable to the climate where it will be installed • Follow all instructions as improper installation may result in serious bodily injury • It is important to follow these instructions for the safety of people. Keep these instructions.

Installing

• Suitably section off and demarcate the entire installation site to prevent unauthorized persons from entering the area, especially minors and children • Be careful when handling operators that weigh over 20 kg. If need be, use proper safety hoisting equipment • All opening commands (that is, buttons, key switches, magnetic readers, and so on.) must be installed at least 1.85 m from the perimeter of the gate's working area, or where they cannot be reached from outside the gate. Also, any direct commands (buttons, touch panels, and so on) must be installed at least 1.5 m from the ground and must not be reachable by unauthorized persons • All maintained action commands, must be fitted in places from which the moving gate leaves and transit and driving areas are visible • Apply, if missing, a permanent sign showing the position of the release device • Before delivering to the users, make sure the system is EN 12453 standard compliant (regarding impact forces), and also make sure the system has been properly adjusted and that any safety, protection and manual release devices are working properly • Apply Warning Signs (such as the gate's plate) where necessary and in a visible place

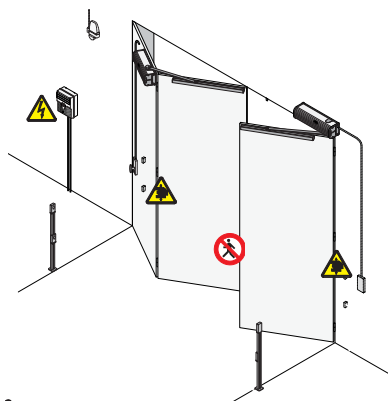
Special user-instructions and recommendations

• Keep gate operation areas clean and free of any obstructions. Make sure that the photocells are free of any overgrown vegetation and that the operator's area of operation is free of any obstructions • Do not allow children to play with fixed commands, or to loiter in the gate's maneuvering area. Keep any remote control transmitters or any other command device away from children, to prevent the operator from being accidentally activated. • The apparatus may be used by children of eight years and above and by physically, mentally and sensorially challenged people, or even ones without any experience, provided this happens under close supervision or once they have been properly instructed to use the apparatus safely and about the potential hazards involved. Children must not play with the apparatus. Cleaning and maintenance by users must not be done by children, unless properly supervised • Frequently check the system for any malfunctions or signs of wear and tear or damage to the moving structures, to the component parts, all anchoring points, including cables and any accessible connections. Keep any hinges, moving joints and slide rails properly lubricated • Perform functional checks on the photocells and sensitive safety edges, every six months. To check whether the photocells are working, wave

an object in front of them while the gate is closing; if the operator inverts its direction of travel or suddenly stops, the photocells are working properly. This is the only maintenance operation to do with the power on. Constantly clean the photocells' glass covers using a slightly water-moistened cloth; do not use any solvents or other chemical products that may ruin the devices • If repairs or modifications are required to the system, release the operator and do not use it until safety conditions have been restored • Cut off the power supply before releasing the operator for manual openings and before any other operation, to prevent potentially hazardous situations. Read the instructions • If the power supply cable is damaged, it must be replaced by the manufacturer or authorized technical assistance service, or in any case, by similarly qualified persons, to prevent any risk • It is FORBIDDEN for users to perform any OPERATIONS THAT ARE NOT EXPRESSLY REQUIRED OF THEM AND WHICH ARE NOT LISTED in the manuals. For any repairs, modifications and adjustments and for extraordinary maintenance, CALL TECHNICAL ASSISTANCE • Log the job and checks into the periodic maintenance log.

Additional special recommendations for everyone

• Keep away from hinges and mechanical moving parts • Do not enter the operator's area of operation when it is moving • Do not counter the operator's movement as this could result in dangerous situations • Always pay special attention to any dangerous points, which have to be labeled with specific pictograms and/or black and yellow stripes • While using a selector switch or a command in maintained actions, keep checking that there are no persons within the operating range of any moving parts, until the command is released • The gate may move at any time and without warning • Always cut off the power supply before performing any maintenance or cleaning.



Danger of hand crushing






Danger! High voltage



No transiting while maneuvering

KEY

-  This symbol indicates parts to read carefully.
-  This symbol indicates parts about safety.
-  This symbol tells you what to say to the end users.

REGULATORY REFERENCES


Came S.p.A. is a company certified for enterprise management systems: quality ISO 9001 and environment ISO 14001. The product in question complies with the regulations referred to in the declaration of conformity.

DESCRIPTION

Irreversible gearmotor with encoder.
Die-cast aluminium cover with lateral ABS caps, worm screw and double gear crown.

Intended use

The gearmotors are designed to power large swing or folding doors with either single or double leaves.

 Any installation and/or use other than that specified in this manual is forbidden.

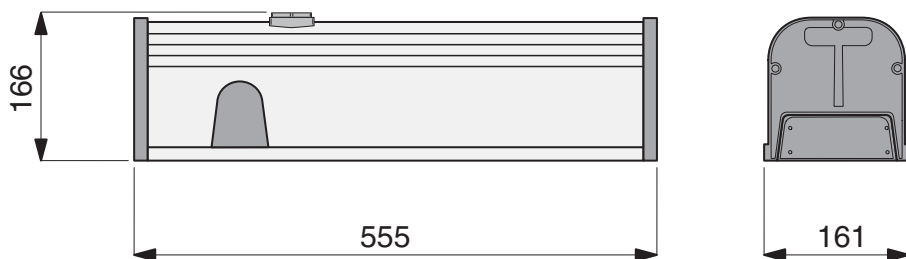
Limits of use

Type	F4024E	F40230E - F4024EP
SWING DOORS		
Max. leaf width (m) / max. leaf weight (kg)	1,5 / 200	2 / 300
FOLDING DOORS		
Max. leaf width (m) / max. leaf weight (kg)	1,2 / 150	1,2 / 200

Technical data

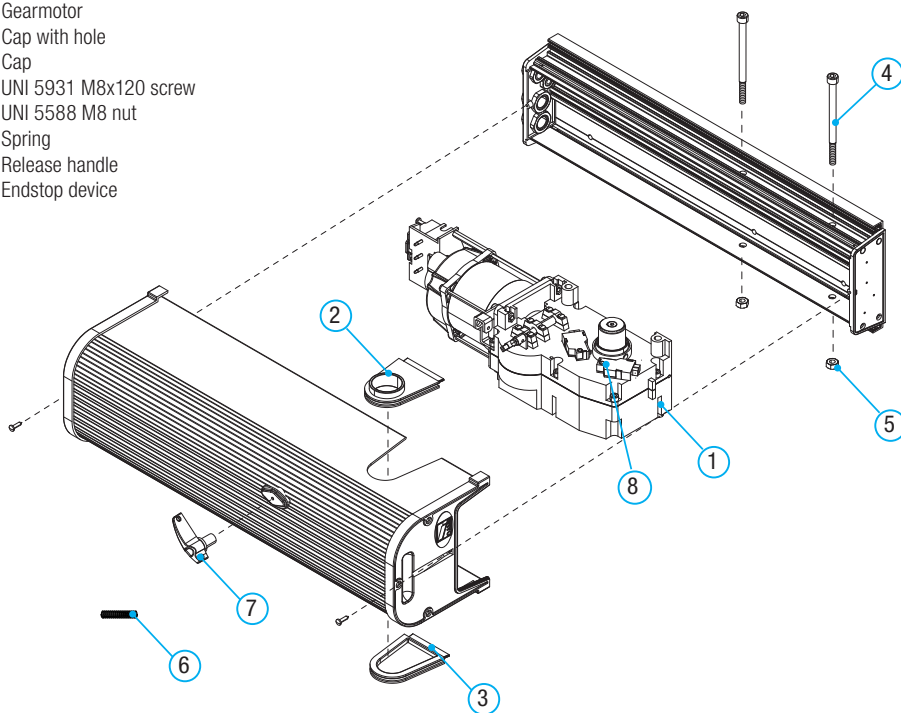
Type	F40230E	F4024E	F4024EP
Protection rating (IP)	54	54	54
Power supply (V - 50/60 Hz)	230 AC	230 AC	230 AC
Motor power supply (V)	230 AC 50/60 Hz	24 DC	24 DC
Power draw (A)	1,2	Max. 5	Max. 10
Power (W)	235	130	180
Torque (Nm)	340	360	470
Crown revolutions (rpm)	1,3	1,3	2,4
Gear ratio (i)	1/150	1/150	1/150
Condenser (µF)	16	-	-
Duty cycle	30%	INTENSIVE USE	INTENSIVE USE
Operating temperature (°C)	-20 ÷ +55	-20 ÷ +55	-20 ÷ +55
Motor's heat protection (°C)	150	-	-
Weight (kg)	11,5	11	11

Dimensions (mm)



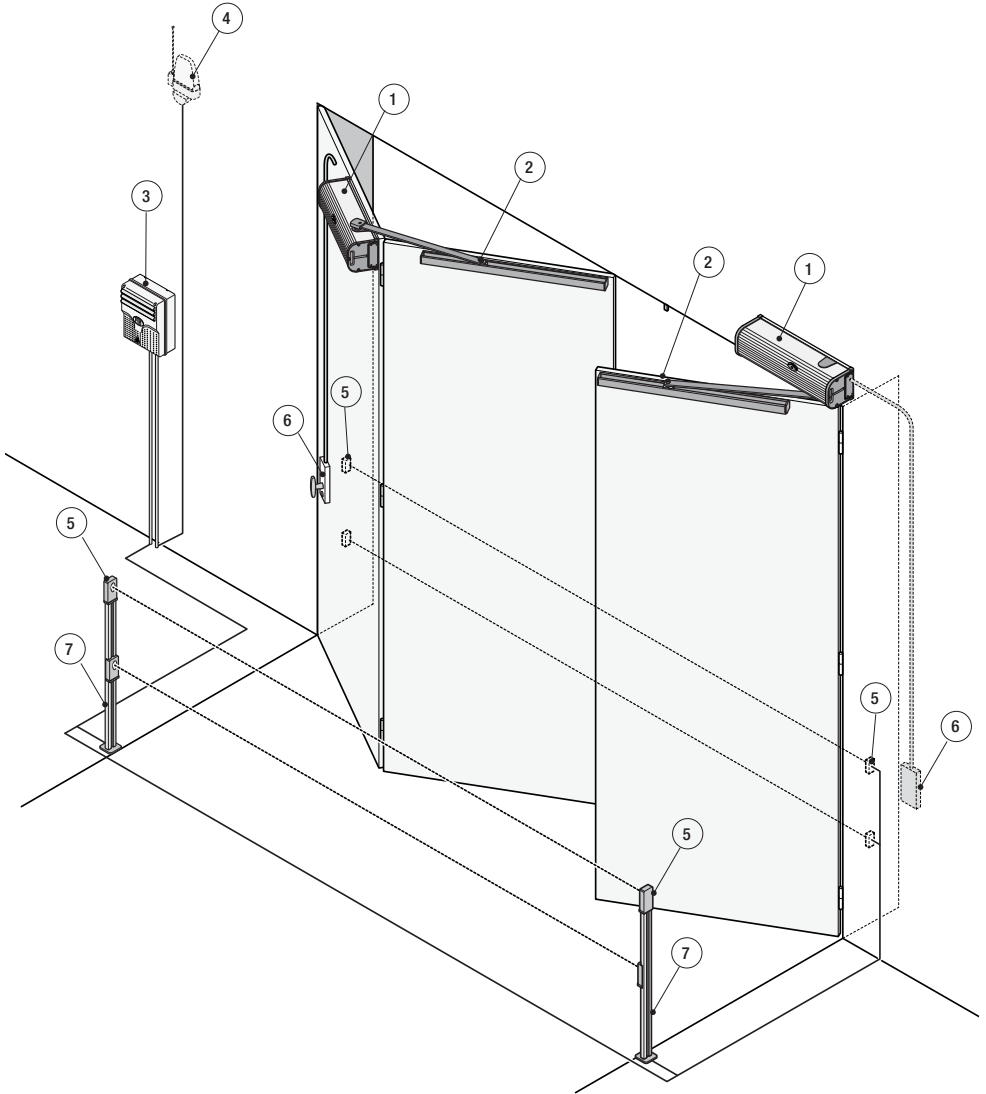
Description of the components

1. Gearmotor
2. Cap with hole
3. Cap
4. UNI 5931 M8x120 screw
5. UNI 5588 M8 nut
6. Spring
7. Release handle
8. Endstop device



Example of a system

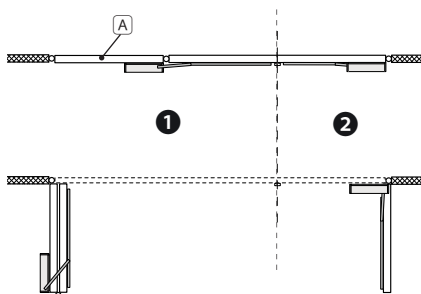
1. Gearmotor
2. Transmission arm with slide guide
3. Control panel with radio receiver
4. Flashing light with antenna
5. Photocells
6. Gearmotor release
7. Photocell post



Examples of use

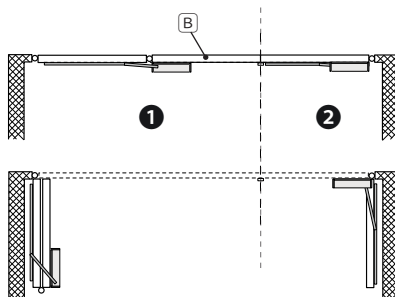
One Door with two leaves

Folding ① leaf consisting of two hinged panels. The gearmotor is fitted onto panel (A)
 Single ② swing leaf

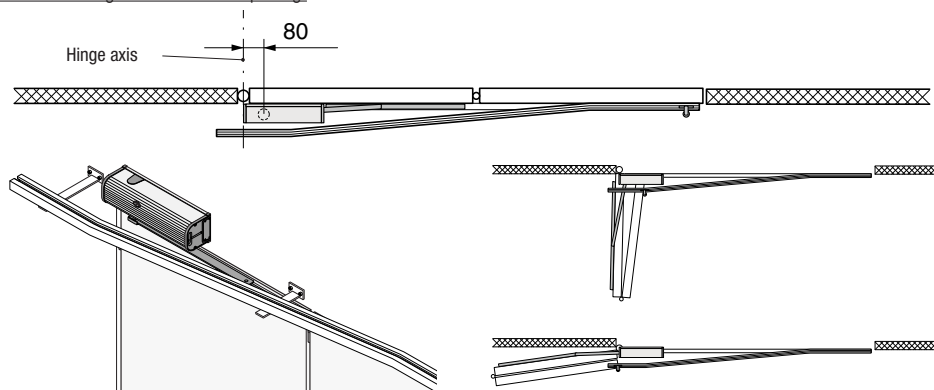


One Door with two leaves

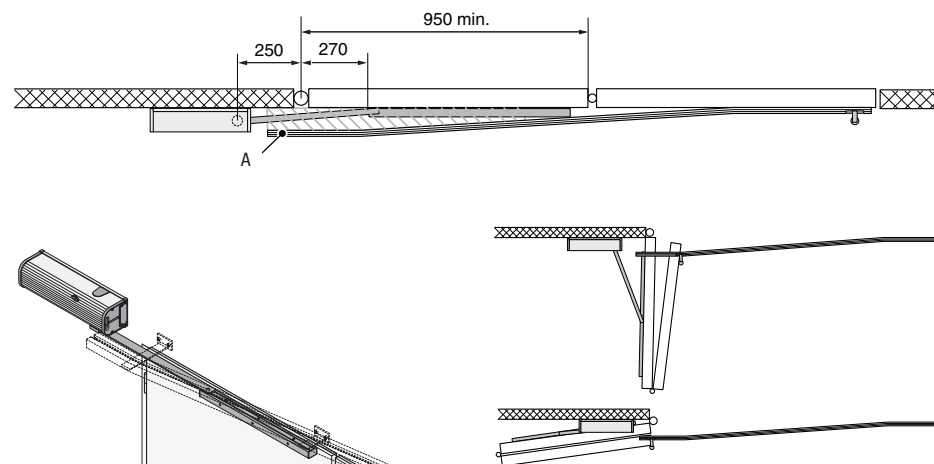
Folding ① leaf consisting of two hinged panels. The gearmotor is fitted onto panel (B)
 Single ② swing leaf



Two-leaf folding door with 180° opening.



Caution! If the distance between the slide guide (A) and the door leaf is insufficient for installing the gearmotor, then fit it as shown in the figure while respecting the quotas shown.



GENERAL INSTALLATION INSTRUCTIONS

△ The installation must be done by qualified expert technicians and in full compliance with applicable laws and regulations.

Preliminary checks

△ Before beginning, do the following:

- Provide a suitable single-pole disconnection device, with a maximum of 3 mm between the contacts, to disconnect the power supply;
- Prepare suitable piping and ducts for routing the electrical cables, ensuring protection against mechanical damage;
- ⚡ Make sure that any connections within the container (made to ensure the continuity of the protection circuit) are fitted with additional insulation compared to the other internal conductor parts;
- Make sure the door frame structure is sturdy enough, that the hinges are suitable and that there is no friction between the moving parts;
- Make sure there are opening and closing mechanical stops.

Types of cables and minimum thicknesses

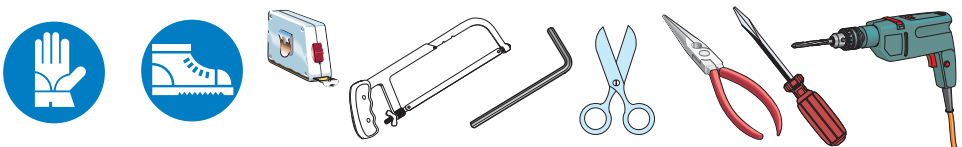
Connection	Cable type	Cable length 1 < 10 m	Cable length 10 < 20 m	Cable length 20 < 30 m
Power supply to board 230 VAC	FROR CEI 20-22 IEC EN 50267-2-1	3G x 1.5 mm ²	3G x 2.5 mm ²	3G x 4 mm ²
Power supply to motor 24 VDC		2 x 1 mm ²	2 x 1.5 mm ²	2 x 2.5 mm ²
Power supply to motor 230 V AC		4 x 1 mm ²	4 x 1.5 mm ²	4 x 2.5 mm ²
Flashing light		2 x 0.5 mm ²	2 x 1 mm ²	2 x 1.5 mm ²
Photocell transmitters		2 x 0.5 mm ²	2 x 0.5 mm ²	2 x 0.5 mm ²
Photocell receivers		4 x 0.5 mm ²	4 x 0.5 mm ²	4 x 0.5 mm ²
Control and safety devices		2 x 0.5 mm ²	2 x 0.5 mm ²	2 x 0.5 mm ²
Antenna	RG58	max. 10 m		
Encoder	TWISTED	max. 30 m		

📖 If cable lengths differ from those specified in the table, establish the cable sections depending on the actual power draw of the connected devices and according to the provisions of regulation CEI EN 60204-1.

For connections that require several, sequential loads, the sizes given on the table must be re-evaluated based on actual power draw and distances. When connecting products that are not specified in this manual, please refer to the documentation provided with said products.

Tools and materials

Make sure you have all the tools and materials you will need for the installation at hand to work in total safety and compliance with current standards and regulations. The figure shows some examples of installer's tools.



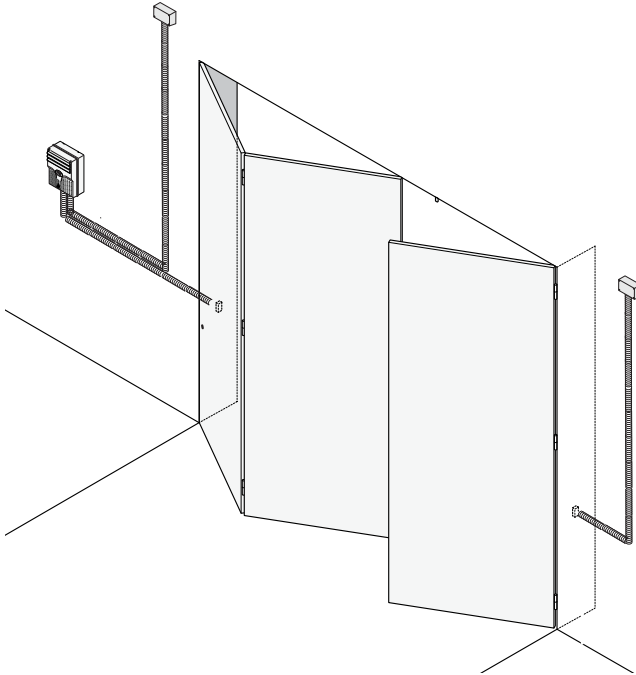
INSTALLATION

△ The following illustrations are mere examples. Consider that the space available where to fit the operator and accessories will vary depending on the overall measurements. The installation technician is responsible for choosing the most suitable solution.

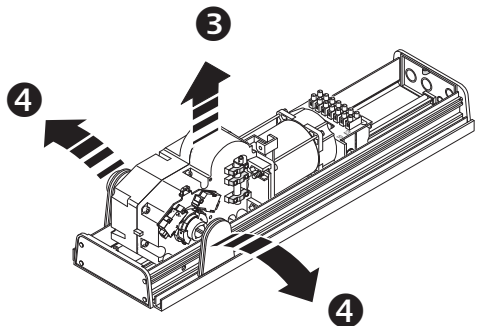
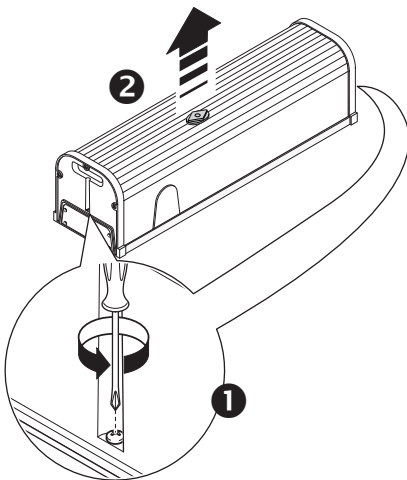
Setting up corrugated tubing

Set up the corrugated (\varnothing 25 mm) tubing you will need to connect the junction boxes.

📖 The number of tubes depends on the type of system and accessories you will install.

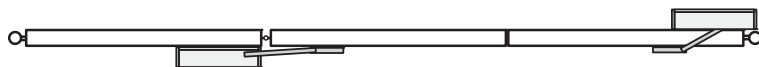


Preparing the gearmotor

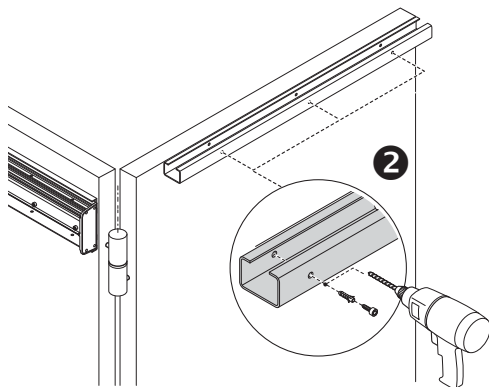
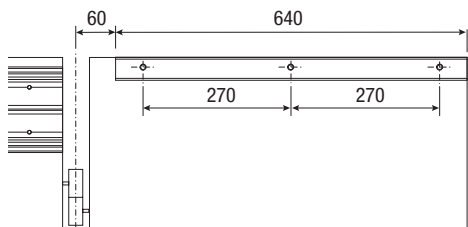
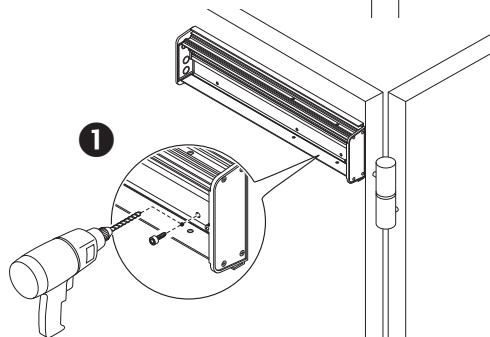
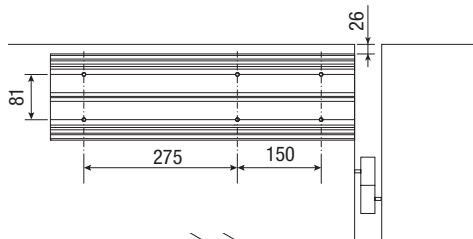


Anchoring the base and the slide guide

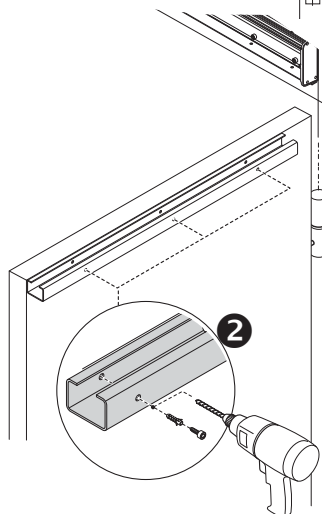
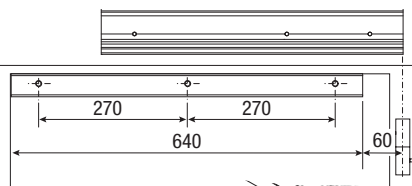
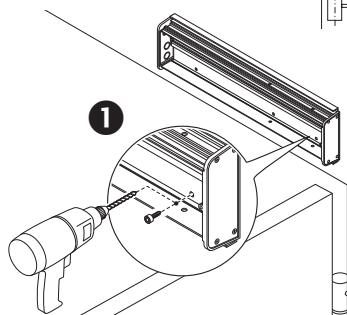
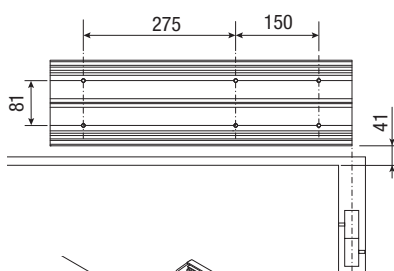
Caution! Respect the quotas shown in the drawing.



APPLICATION ON DOUBLE LEAF DOOR

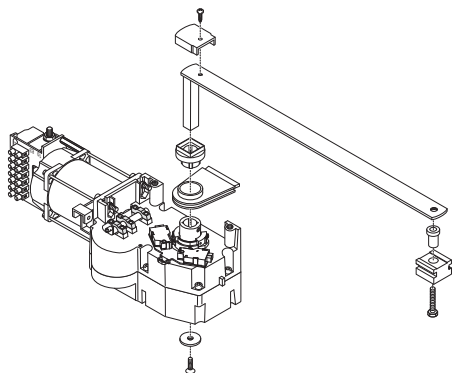


APPLICATION ON SINGLE LEAF DOOR

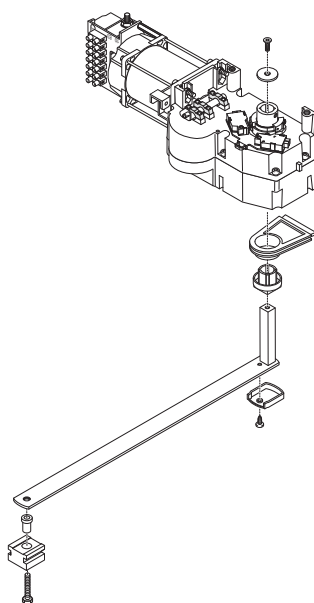


Fixing the transmission arm

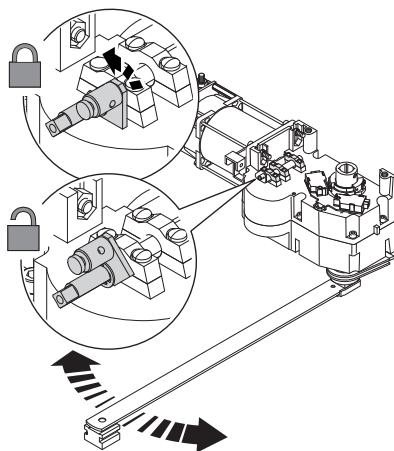
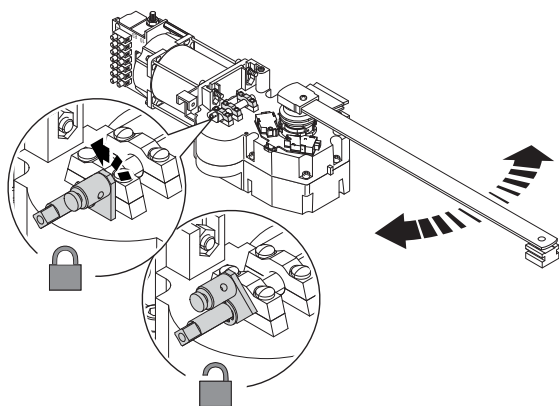
APPLICATION ON FOLDING
DOOR



APPLICATION ON SWING-LEAF
DOOR



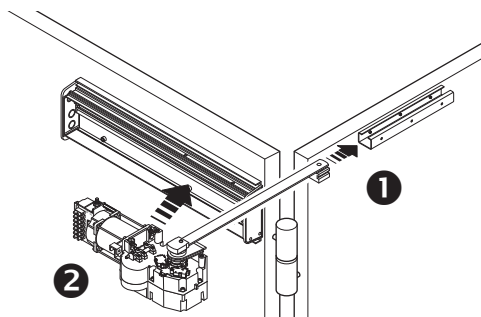
Releasing the gearmotor



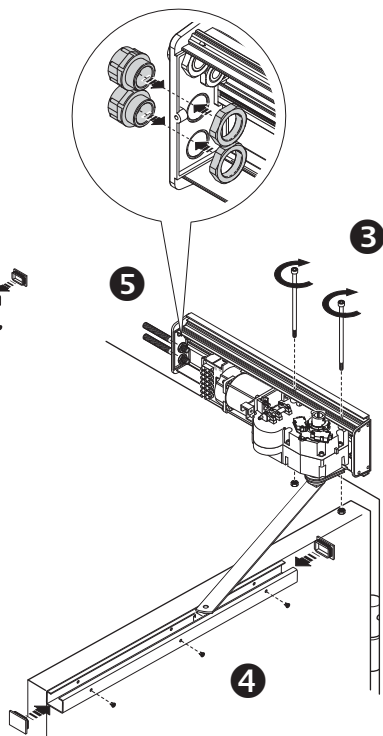
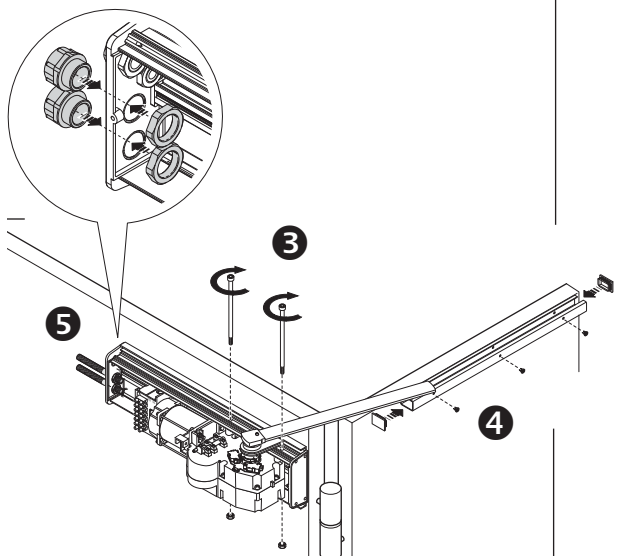
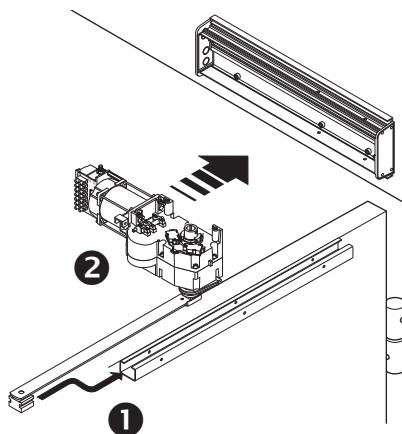
Securing the gearmotor

Fit the arm into the guide **1** and the gearmotor onto the base plate **2**.
Fasten the gearmotor using the two M8 x 110 bolts and their M8 nuts (supplied) **3**. Fit the hole caps and guide caps **4**.
N.B. Use suitable cable glands for threading the cables and the release cable **5**.

APPLICATION ON DOUBLE LEAF DOOR



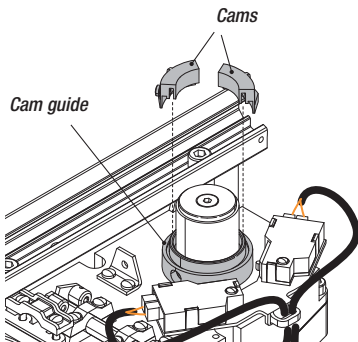
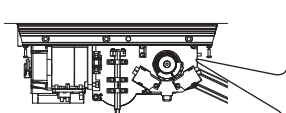
APPLICATION ON SINGLE LEAF DOOR



Warning! If no mechanical door stops are in place, you must adjust the endstops.

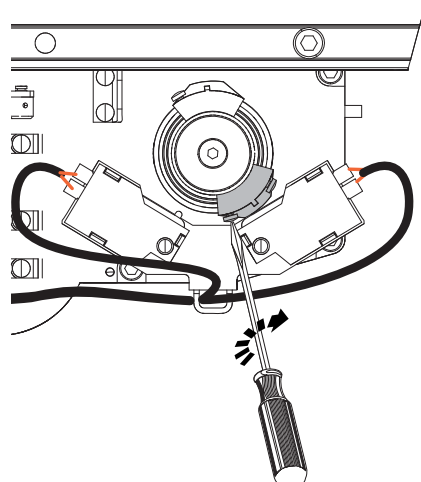
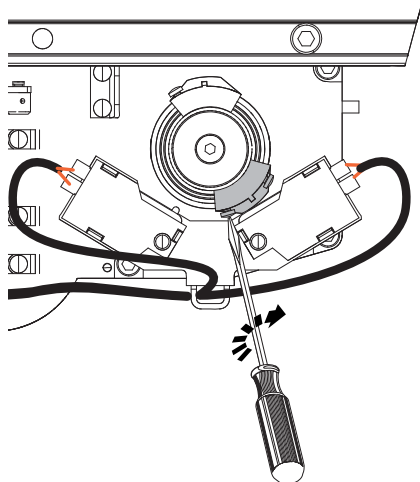
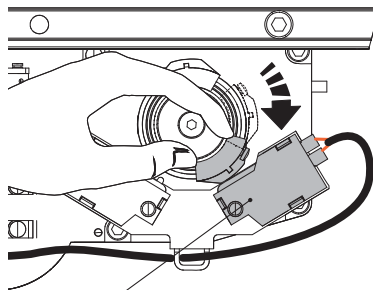
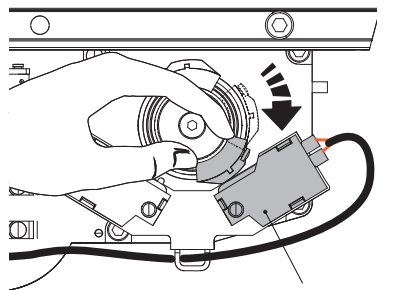
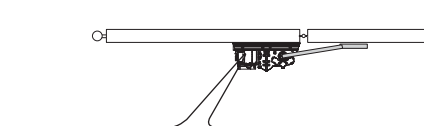
Determining the end run points

Fit the cams onto the guide.



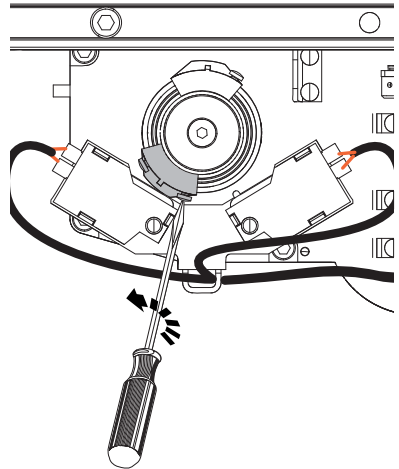
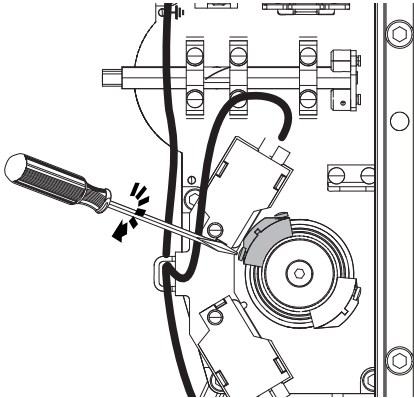
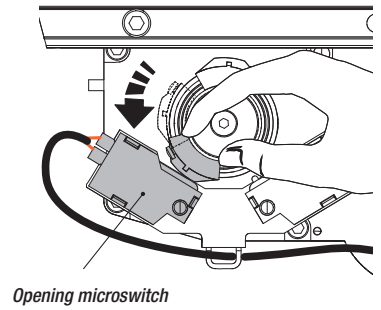
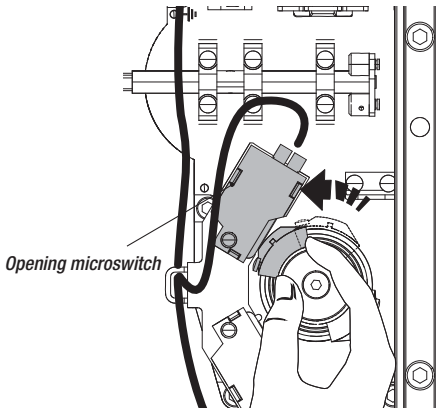
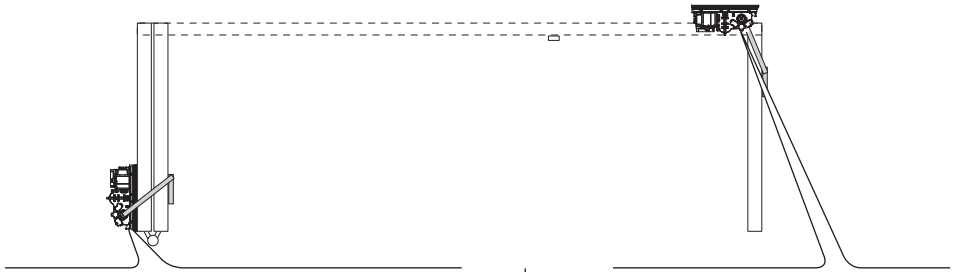
During closing:

- fully close the door leaf;
- turn the cam clockwise until the closing microswitch activates.
- fasten the cam using the screw.

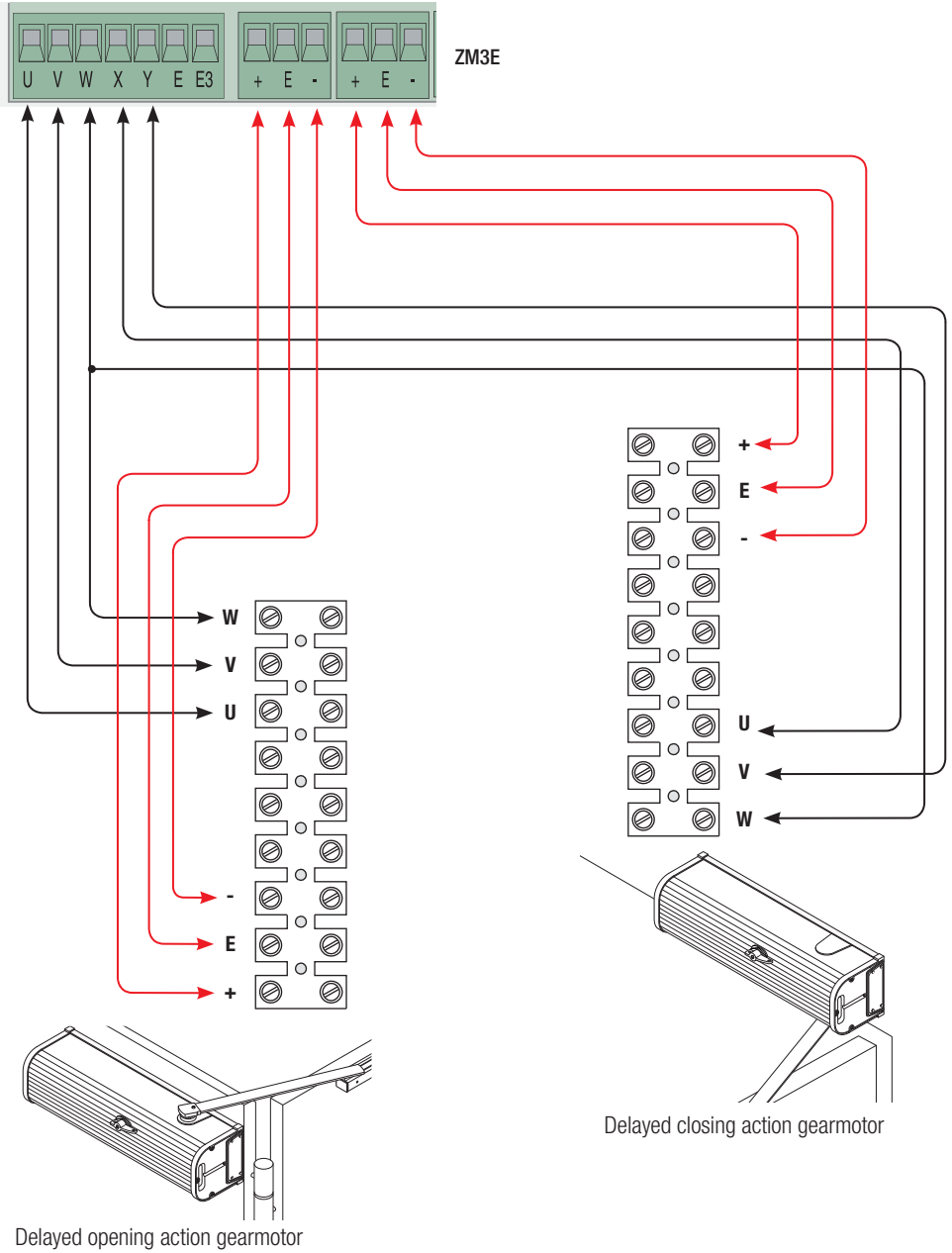


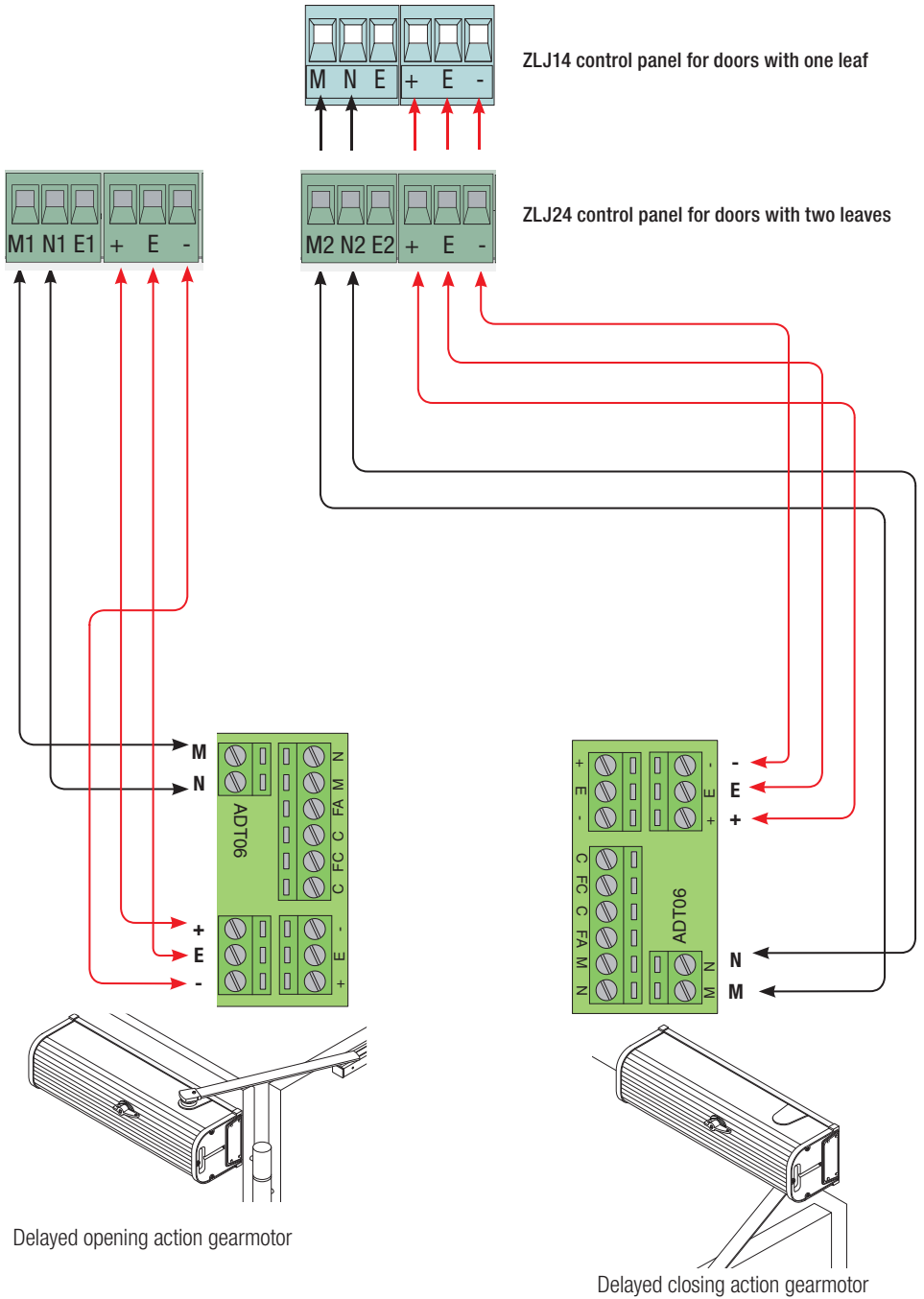
During opening:

- fully open the door leaf;
- turn the cam counter clockwise until the opening microswitch is activated.
- fasten the cam using the screw.



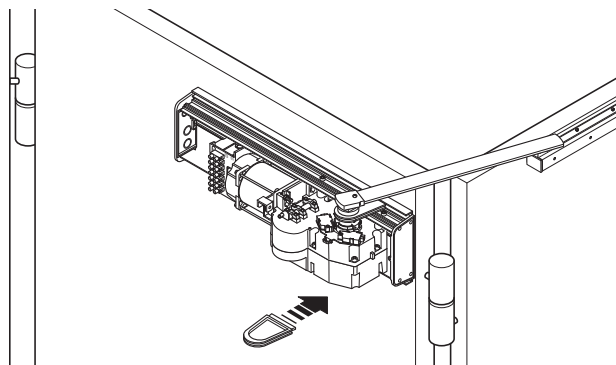
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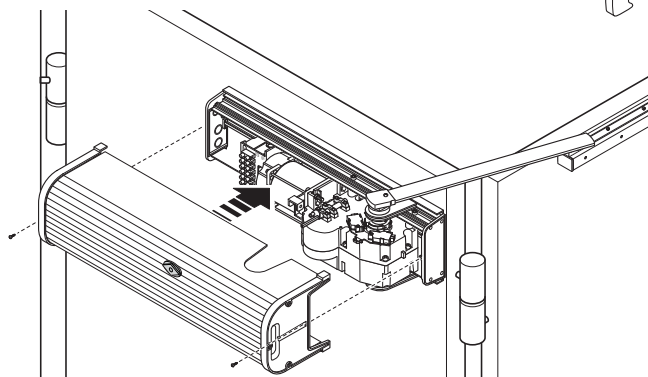
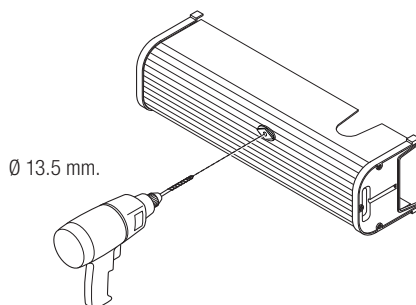


FINAL OPERATIONS

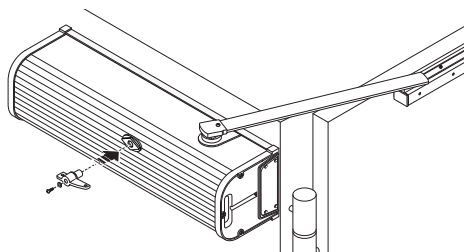
Fasten the cover and the release handle



Fit the frame cover.

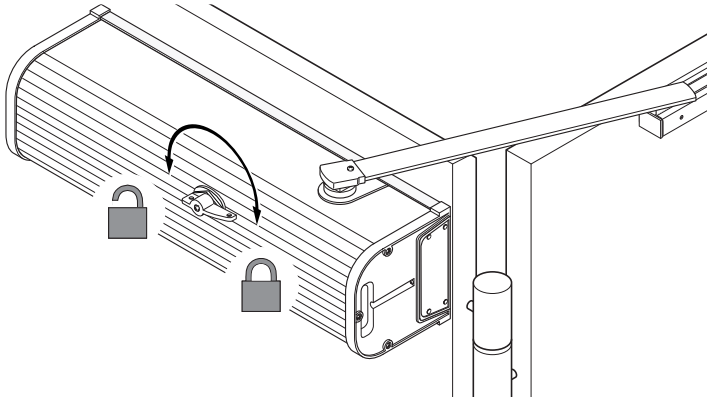


UNI 6954 Ø 3.9x13 washer and screw.



RELEASING THE GEARMOTOR

⚠ Perform this job only after cutting off the power supply.
Emergency release with release handle applied to the automation.



TROUBLESHOOTING

PROBLEMS	POSSIBLE CAUSES	CHECKS AND REMEDIES
<ul style="list-style-type: none"> • The door does not open or close 	<ul style="list-style-type: none"> • No power • The gearmotor is unlocked • The transmitter battery is flat • The transmitter is broken • The stop button is stuck or broken • The open/close button or selector switch are stuck 	<ul style="list-style-type: none"> • Check for mains power • Lock the gearmotor • Replace the batteries • Contact service • Contact service • Contact service
<ul style="list-style-type: none"> • The door opens but will not close 	<ul style="list-style-type: none"> • The photocells need cleaning 	<ul style="list-style-type: none"> • Check that the photocells are clean and work correctly • Contact service

DISMANTLING AND DISPOSAL

☞ CAME CANCELLI AUTOMATICI S.p.A. implements an EN ISO 14001 certified and compliant Environmental Management System at its plants, to ensure environmental protection.

Please continue our efforts to protect the environment, something that CAME considers to be one of the foundations in developing its business and market strategies, simply by observing these brief recommendations regarding disposal:

DISPOSAL OF PACKAGING

Packaging components (cardboard, plastic etc.) can be disposed of together with normal household waste without any difficulty, by simply separating the different types of waste and recycling them.

Before proceeding, it is always advisable to check specific regulations in force in the place of installation.

DISPOSE OF PROPERLY!

DISPOSAL OF THE PRODUCT

Our products are made with different materials. Most of them (aluminium, plastic, iron, electrical cables) can be disposed of together with normal household waste. They can be recycled if collected, sorted and sent to authorised centres.

Other components (circuit boards, transmitter batteries etc.), on the other hand, may contain pollutants.

They should therefore be removed and handed over to companies authorised to recover and recycle them.

Before proceeding, it is always advisable to check specific regulations in force in the place of disposal.

DISPOSE OF PROPERLY!

DECLARATION OF CONFORMITY


Declaration CE - Came Cancelli Automatici S.p.A. declares that this device conforms to the essential, pertinent requirements provided by directives 2006/42/CE, 2006/95/CE, 1999/5/CE and 2014/30/UE.

An original copy of the declaration of conformity is available on request.

Manual code **FA00034-EN** - ver. 2 - 08/2015 - © Came S.p.A. -
The contents of this manual may be revised at any time, and without notice.



CAME
safety & comfort

CAME  
parkare





Came S.p.A.

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