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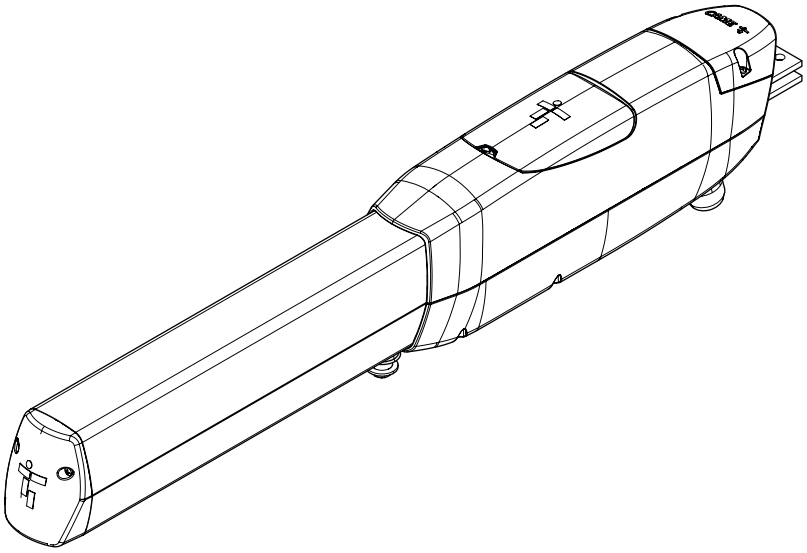
FA02011-EN

Swing-gate gearmotor



ATI30DGF ATI50DGF

INSTALLATION MANUAL

EN English

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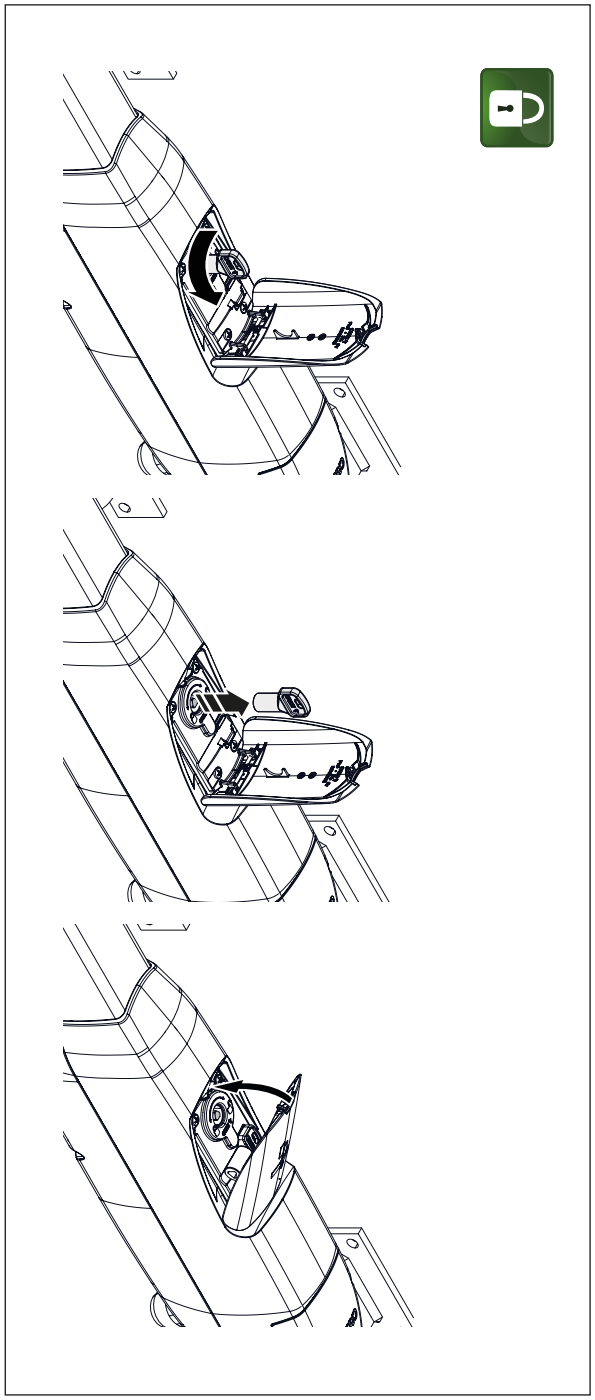

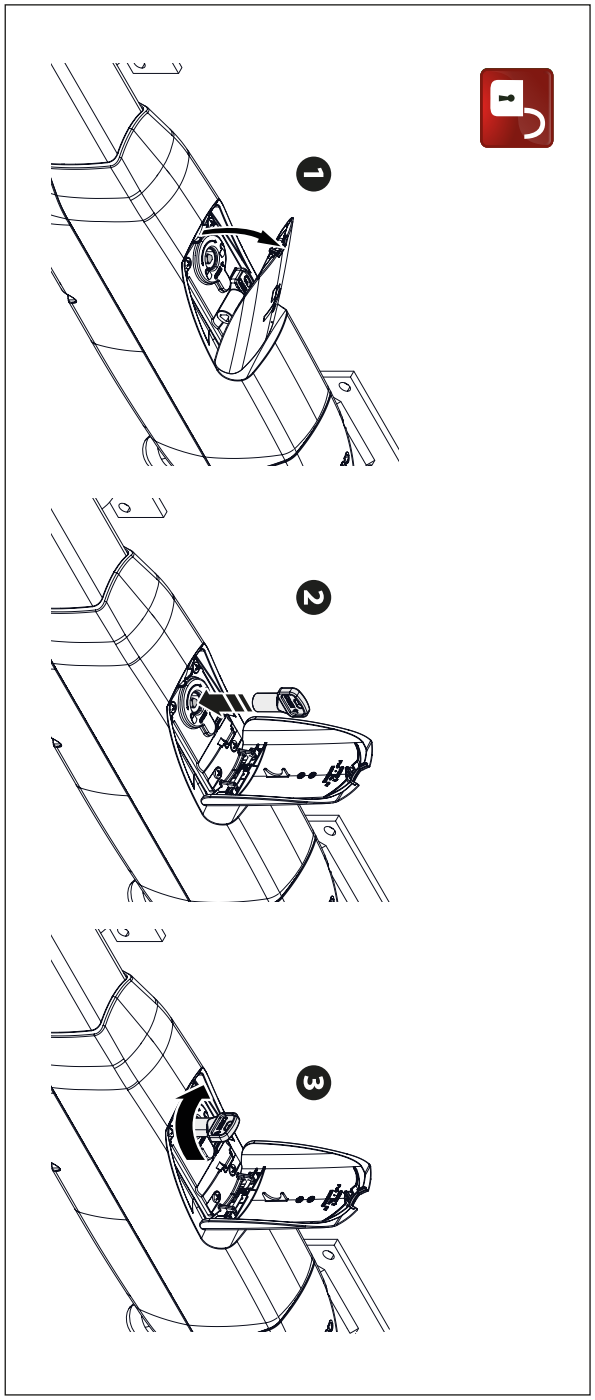
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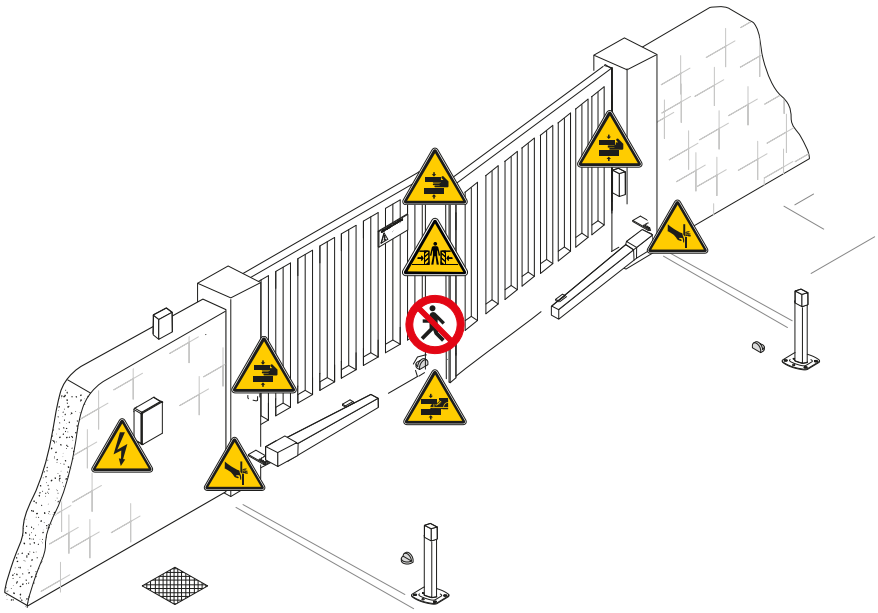
GENERAL PRECAUTIONS FOR INSTALLERS

⚠ Important safety instructions.
⚠ Please follow all of these instructions. Improper installation may cause serious bodily harm.
⚠ Before continuing, please also read the general precautions for users.

Only use this product for its intended purpose. Any other use is hazardous. • The manufacturer cannot be held liable for any damage caused by improper, unreasonable or erroneous use. • This product is defined by the Machinery Directive (2006/42/EC) as partly completed machinery. • Partly completed machinery means an assembly which is almost machinery but which cannot in itself perform a specific application. • Partly completed machinery is only intended to be incorporated into or assembled with other machinery or other partly completed machinery or equipment thereby forming machinery to which the Machinery Directive (2006/42/EC) applies. • The final installation must comply with the Machinery Directive (2006/42/EC) and the European reference standards in force. • The manufacturer declines any liability for using non-original products, which would also void the warranty. • All operations indicated in this manual must be carried out exclusively by skilled and qualified personnel and in full compliance with the regulations in force. • The device must be installed, wired, connected and tested according to good professional practice, in compliance with the standards and laws in force. • All the components (e.g. actuators, photocells and sensitive edges) needed for the final installation to comply with the Machinery Directive (2006/42/EC) and with the reference harmonised technical standards are specified in the general CAME product catalogue or on the website www.came.com. • Make sure the mains power supply is disconnected during all installation procedures. • Check that the temperature ranges given are suitable for the installation site. • The appliance must be powered with a voltage corresponding to the value shown on the rating plate. Power must be supplied through a very low safety voltage system. • Do not install the operator on surfaces that could yield and bend. If necessary, add suitable reinforcements to the anchoring points. • Make sure that no direct jets of water can wet the product at the installation site (sprinklers, water cleaners, etc.). • Make sure you have set up a suitable dual-pole cut-off device along the power supply that is compliant with the installation rules. It should completely cut off the power supply according to category III surcharge conditions. • Demarcate the entire site properly to prevent unauthorised personnel from entering, especially minors. • In case of manual handling, have one person for every 20 kg that needs hoisting; for non-manual handling, use proper hoisting equipment in safe conditions. • Use suitable protection to prevent any mechanical hazards due to persons loitering within the operating range of the operator. • The electrical cables must pass through special pipes, ducts and cable glands in order to guarantee adequate protection against mechanical damage. • The electrical cables must not touch any parts that may overheat during use (such as the motor and transformer). • Before installation, check that the guided part is in good mechanical condition, and that it opens and closes correctly. • The product cannot be used to automate any guided part that includes a pedestrian gate, unless it can only be enabled when the pedestrian gate is secured. • Make sure that nobody can become trapped between the guided and fixed parts, when the guided part is set in motion. • All fixed controls must be clearly visible after installation, in a position that allows the guided part to be directly visible, but far away from moving parts. In the case of a hold-to-run control, this must be installed at a minimum height of 1.5 m from the ground and must not be accessible to the public. • If not already present, apply a permanent tag that describes how to use the manual release mechanism close to it. • Make sure that the operator has been properly adjusted and that the safety and protection devices and the manual release are working properly. • Before handing over to the final user, check that the system complies with the harmonised standards and the essential requirements of the Machinery Directive (2006/42/EC). • Any residual risks must be indicated clearly with proper signage affixed in visible areas, and explained to end users. • Put the machine's ID plate in a visible place when the installation is complete. • If the power-supply cable is damaged, it must be immediately replaced by the manufacturer or by an authorised technical assistance centre, or in any case, by qualified staff, to prevent any risk. • Keep this manual inside the technical folder along with the manuals of all the other devices used for your automation system. • Make sure to hand over to the end user all the operating manuals of the products that make up the final machinery. • The product, in its original packaging supplied by the manufacturer, must only be transported in a closed environment (railway carriage, containers, closed vehicles). • If the product malfunctions, stop using it and contact customer services at https://www.came.com/global/en/contact-us or via the telephone number on the website. • The manufacture date is provided in the production batch printed on the product label. If necessary, contact us at https://www.came.com/global/en/contact-us. • The general conditions of sale are given in the official CAME price lists.

Main points of danger for people



No transiting while the barrier is moving.

Danger of crushing.

Risk of trapping hands.

Risk of trapping feet.

Risk of cutting hands.

Electrical hazard.

DISMANTLING AND DISPOSAL

CAME S.p.A. employs an Environmental Management System at its premises. This system is certified and compliant with the UNI EN ISO 14001 standard to ensure that the environment is respected and safeguarded. Please continue safeguarding the environment. At CAME we consider it one of the fundamentals of our operating and market strategies. Simply follow these brief disposal guidelines:

⚽ DISPOSING OF THE PACKAGING

The packaging materials (cardboard, plastic, etc.) can be disposed of easily as solid urban waste, separated for recycling.

Before dismantling and disposing of the product, please always check the local laws in force.

DISPOSE OF THE PRODUCT RESPONSIBLY

⚽ DISPOSING OF THE PRODUCT

Our products are made of various materials. Most of these materials (aluminium, plastic, iron and electrical cables) are classified as solid urban waste. They can be separated for recycling and disposed of at authorised waste treatment plants.

Other components (electronic boards, transmitter batteries, etc.) may contain pollutants.

These must be removed and disposed of by an authorised waste disposal and recycling firm.

It is always advisable to check the specific laws that apply in your area.

DISPOSE OF THE PRODUCT RESPONSIBLY

PRODUCT DATA AND INFORMATION

Key

📖 This symbol shows which parts to read carefully.

⚠ This symbol shows which parts describe safety issues.

☞ This symbol shows what to tell users.

The measurements, unless otherwise stated, are in millimetres.

Description

801MP-0210
Irreversible gearmotor 24 V with encoder for swing gates with leaf up to 3 m and 400 kg. RAL7024 grey cover. Quick version up to 13 s/90°.

801MP-0220
Irreversible gearmotor 24 V with encoder for swing gates with leaf up to 5 m and 1000 kg. RAL7024 grey cover. Quick version up to 19 s/90°.

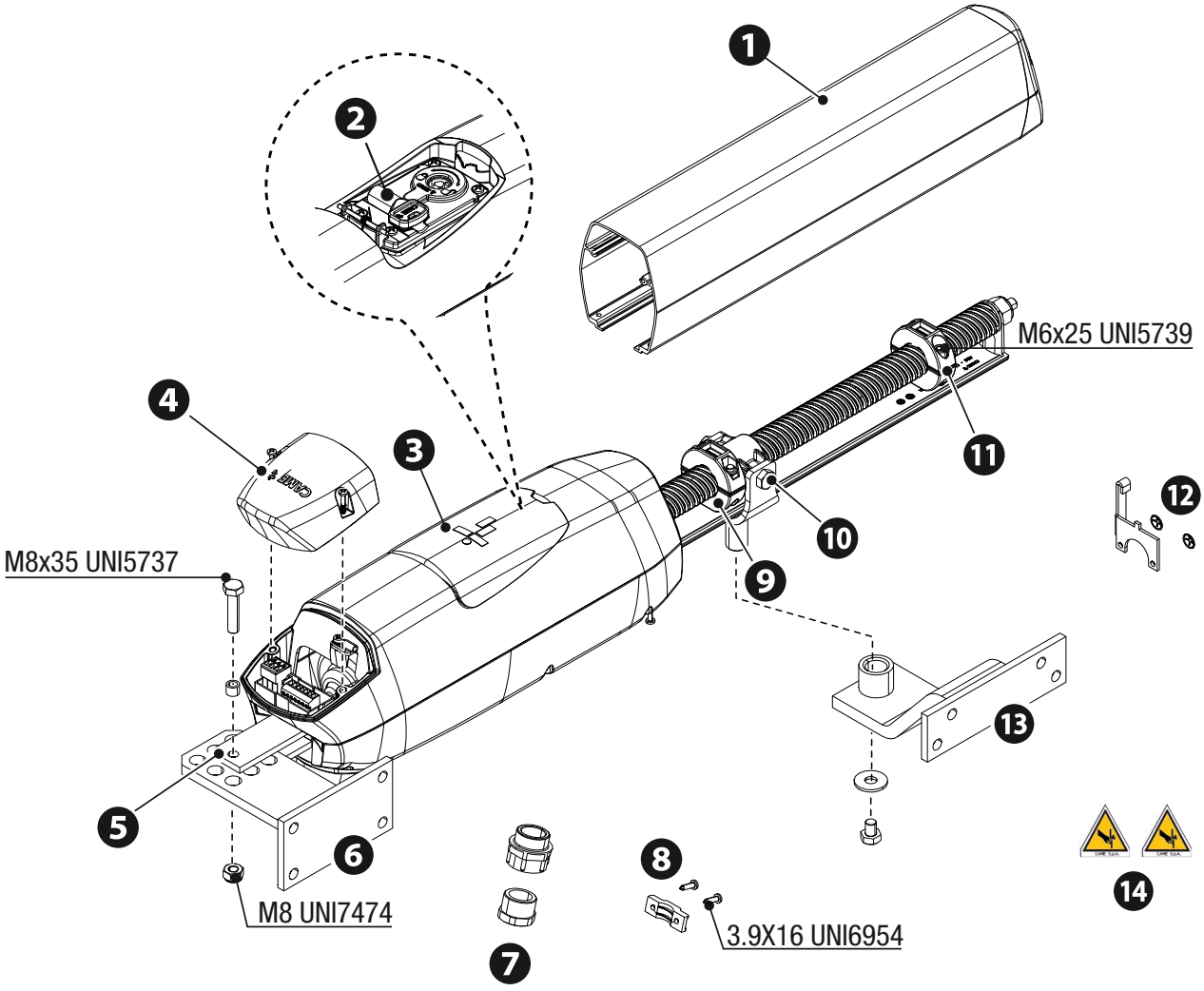
Intended use

Solutions for applications in residential buildings and apartment blocks

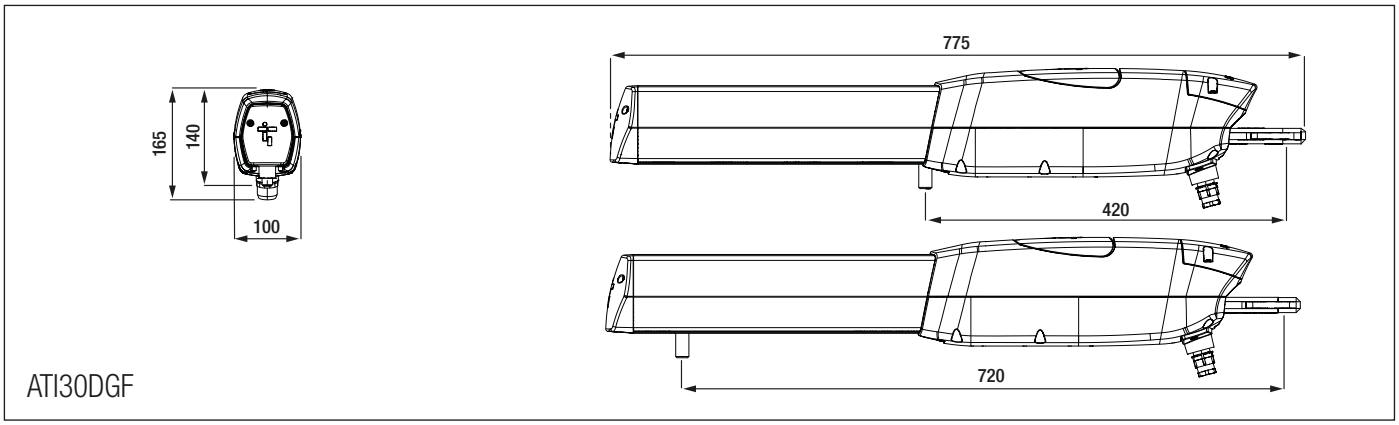
📖 Any installation and/or use other than that specified in this manual is forbidden.

Description of parts

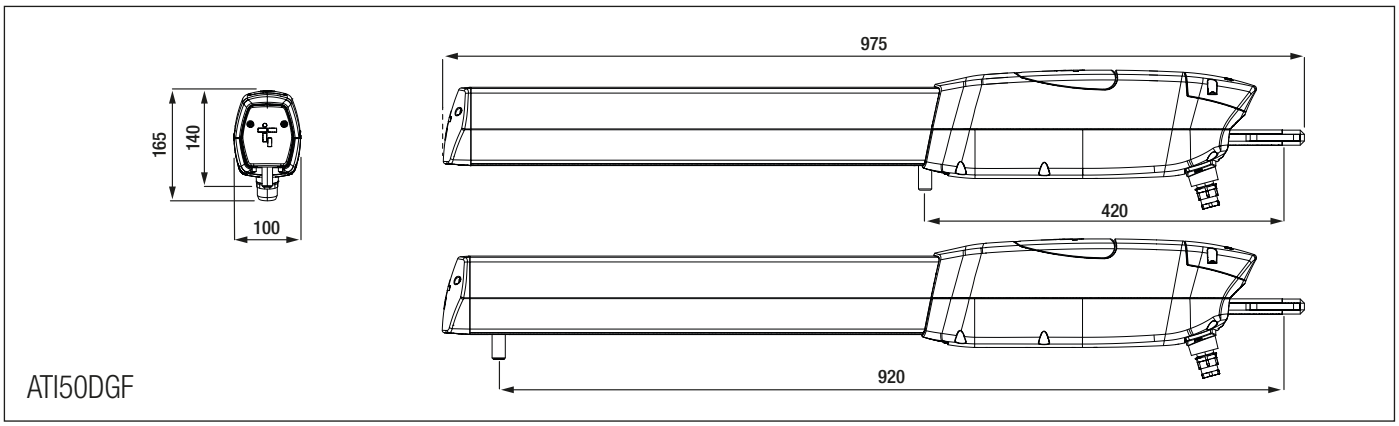
❶ Shaft
❷ Release key
❸ Door to access the release mechanism
❹ Board protection cover
❺ Motor bracket
❻ Tail bracket (attachment to abutment)
❼ Cable gland
❽ Cable clamp with screws
❾ Mechanical stop on opening
❿ Nut slide
⓫ Mechanical locking catch
⓬ Lever and lanyard release plates
⓭ Head bracket (gate attachment)
⓮ Cutting hazard labels



Size



ATI30DGF



ATI50DGF

Usage limitations

MODELS	ATI30DGF			ATI50DGF				
Gate-leaf length (m)	2	2,5	3	2	2,5	3	4	5
Leaf weight (kg)	800	600	400	1000	800	600	500	400

⚠ For swing gates, installing an electric lock is always recommended. This is to ensure the leaves close reliably and to protect the gearmotor parts.

It is also recommended for irreversible gearmotors – and is mandatory where the leaves are more than 2.5 m in length.

For reversible gearmotors, electric locks are required to ensure the leaves close. The installer is responsible for installing an electric lock, taking into account the size and type of leaf (e.g. panelled) and the installation area (e.g. windy location).

Technical data

MODELS	ATI30DGF	ATI50DGF
Motor power supply (V)	24 DC	24 DC
Power (W)	100	100
Current draw (A)	8	8
Colour	7024	7024
Operating temperature (°C)	-20 ÷ +55	-20 ÷ +55
Storage temperature (°C)*	-20 ÷ +70	-20 ÷ +70
Thrust (N)	400 ÷ 4000	400 ÷ 4000
Opening time at 90° (s)	13	19
Pin feed speed (mm/s)	20	20
Cycles/hour at 55°C	65	55
Cycles/hour at 20°C	CONTINUOUS OPERATION	CONTINUOUS OPERATION
NLGI fat grade	2	2
Sound pressure level (dB A)	≤70	≤70
Protection rating (IP)	54	54
Insulation class	III	III
Weight (kg)	8.5	8.5
Average life (years) **	15	15

(*) Before installing the product, keep it at room temperature where it has previously been stored or transported at a very high or very low temperature.

(**) The average product life specified should be understood purely as an indicative estimate. It applies to normal usage conditions and where the product has been installed and maintained in compliance with the instructions provided in the CAME technical manual. The average product life is also affected, including significantly, by other variables such as, but not limited to, climatic and environmental conditions (where present, see the MCBF table). The average product life should not be confused with the product warranty.

📖 the opening time to 90° given in the table is calculated with minimum slowdown and the following installation measurements. ATI 30 with A=130 and B=130, ATI 50 with A=200 and B=200.

Cable types and minimum thicknesses

Cable length (m)	up to 20	from 20 to 30
24 V DC power supply	3G x 1.5 mm²	3G x 2.5 mm²

📖 For multiple, sequential loads along the same line, recalculate the values in the table according to the actual power draw and distances. For information on connecting products not covered in this manual, please see the documentation accompanying the products themselves.

⚠ The choice of cable must be made taking into account the type of installation and the regulations in force at the place of installation of the product

INSTALLATION

🕮 The following illustrations are examples only. The space available for fitting the operator and accessories varies depending on the area where it is installed. It is up to the installer to find the most suitable solution.

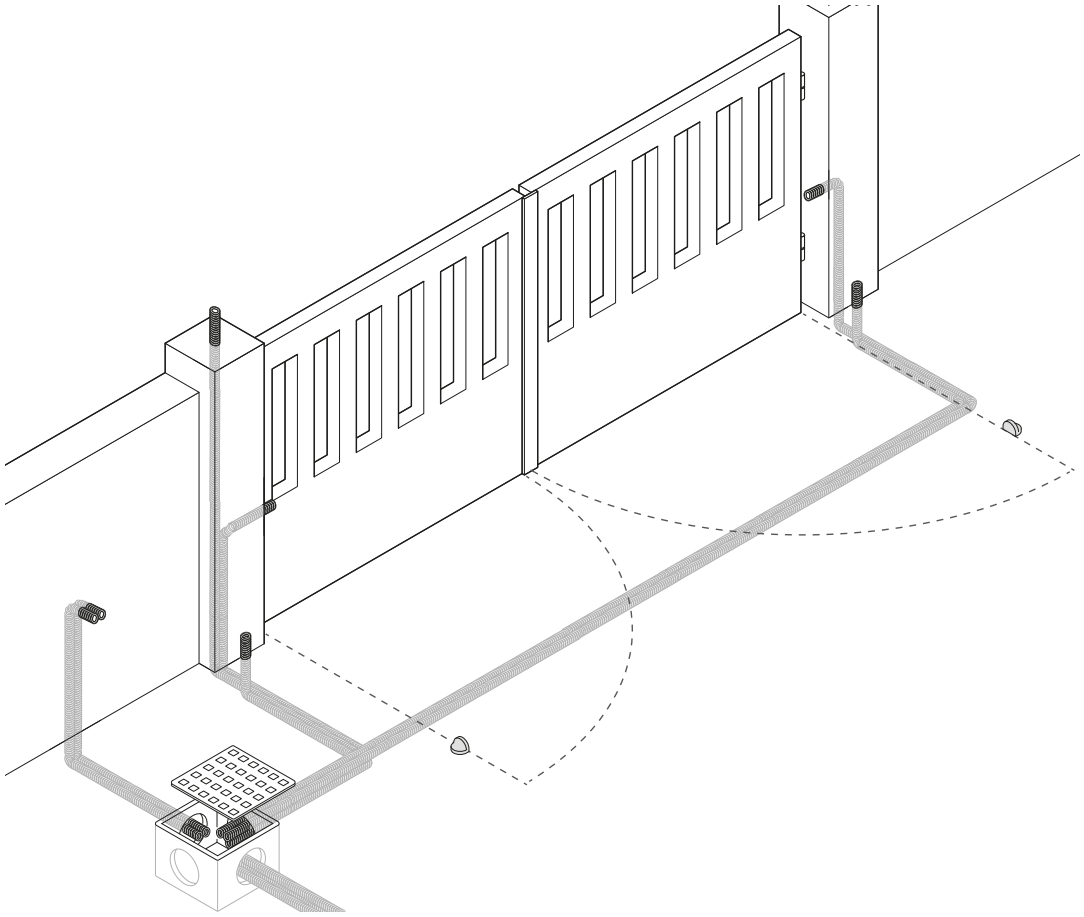
🕮 The drawings refer to a gearmotor installed on the left-hand side.

🕮 Operator assembly and standard connections refer to the leaf opening inwards, unless otherwise stated.

Preliminary operations

Prepare the junction boxes and corrugated tubes you need for the connections from the junction pit.

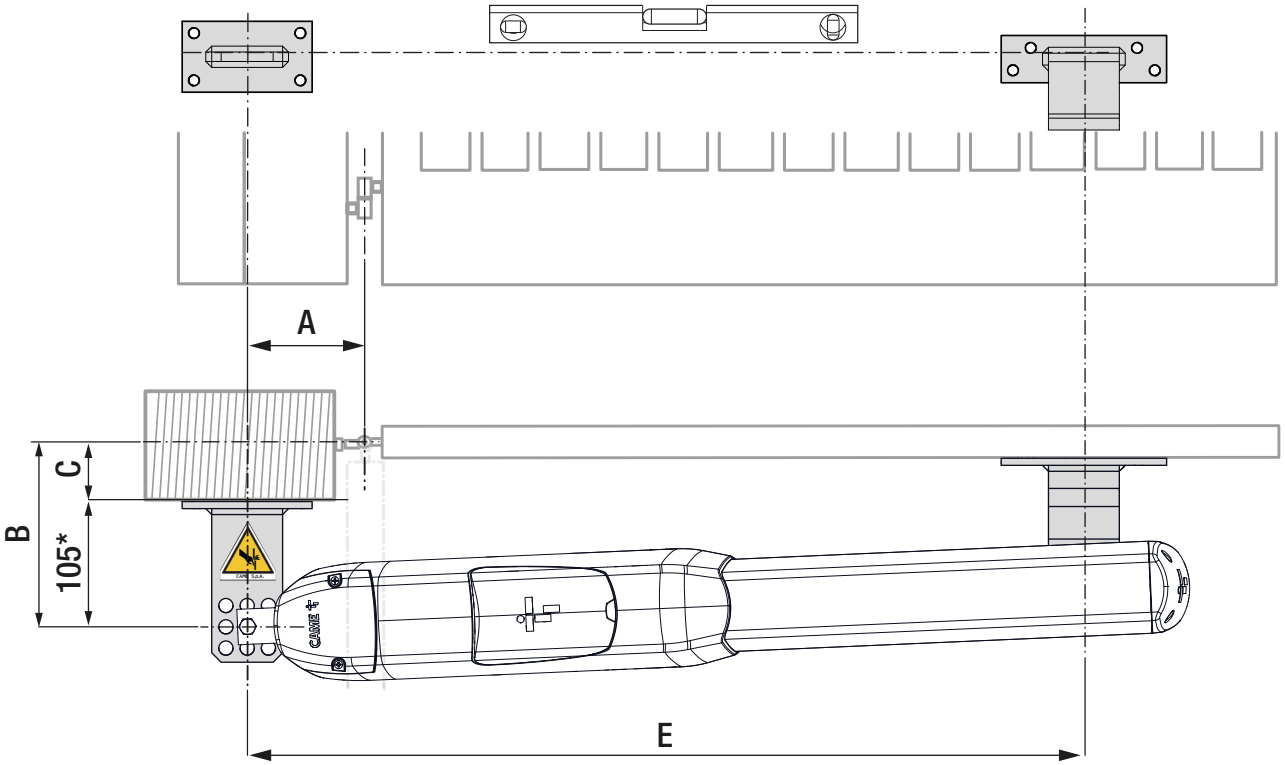
🕮 The number of tubes depends on the type of system and the accessories that are going to be fitted.



Deciding where to fasten the brackets

⚠ Install with the gate closed.

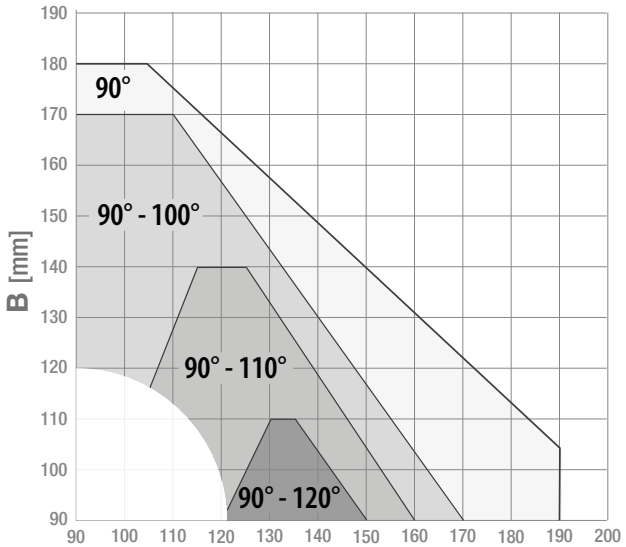
🕮 It is recommended to maintain a minimum distance of 200 mm between the piston and the ground.



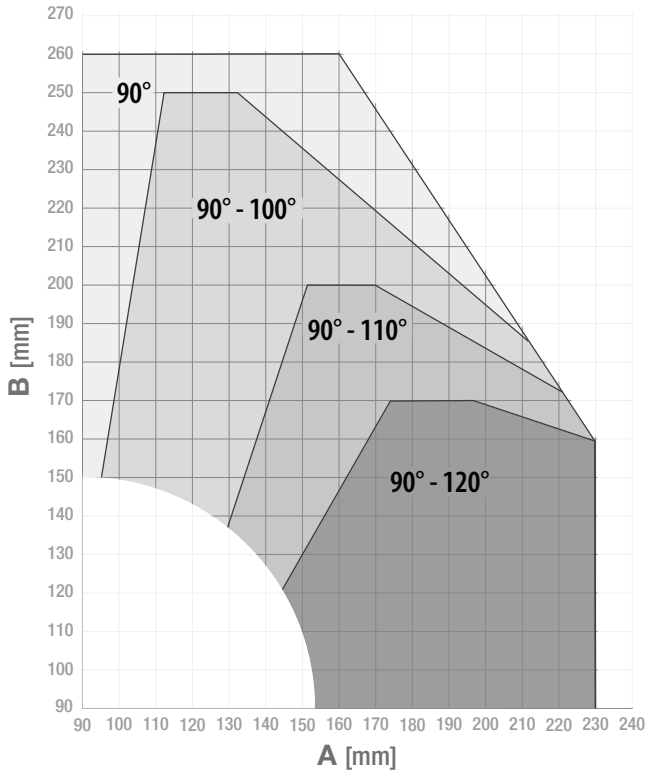
(*) The measurement has been taken from the central bracket hole.

Respect the values indicated in the graphs. The graphs show the maximum opening angles in relation to the installation measurements A and B.

ATI30



ATI50



⚠ The graphs shown are valid where measurement E is respected.

📖 In order to derive dimension B, it is necessary to have previously measured dimension C.

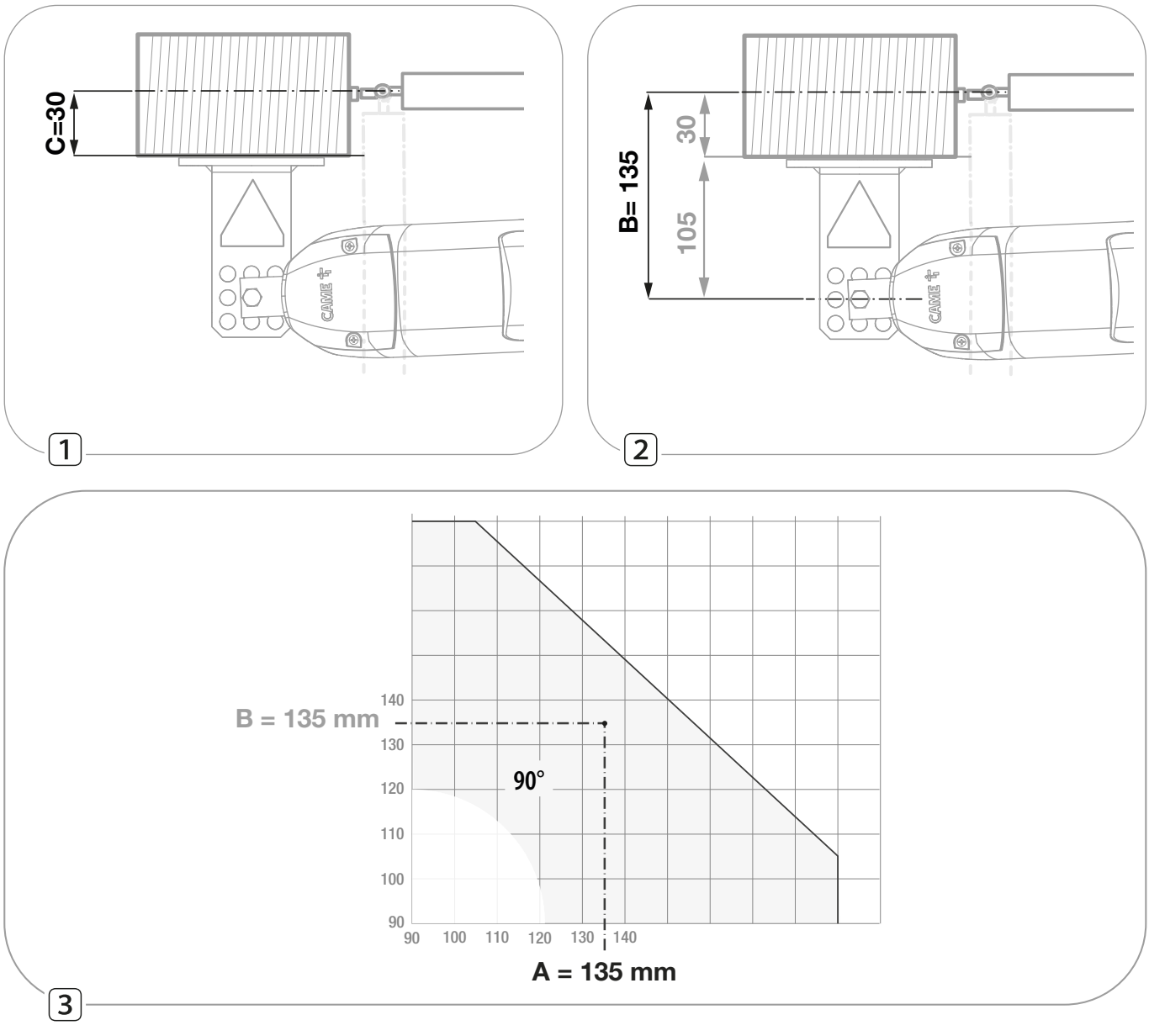
Models	B	E	C (max)
ATI30	B = C + 105*	720	75
ATI50	B = C + 105*	920	155

(*) The measurement has been taken from the central bracket hole.

⚠ The quotas indicated are only valid with the use of the supplied brackets.

📖 When measurements A and B are similar, the operator moves fluidly.

Installation example

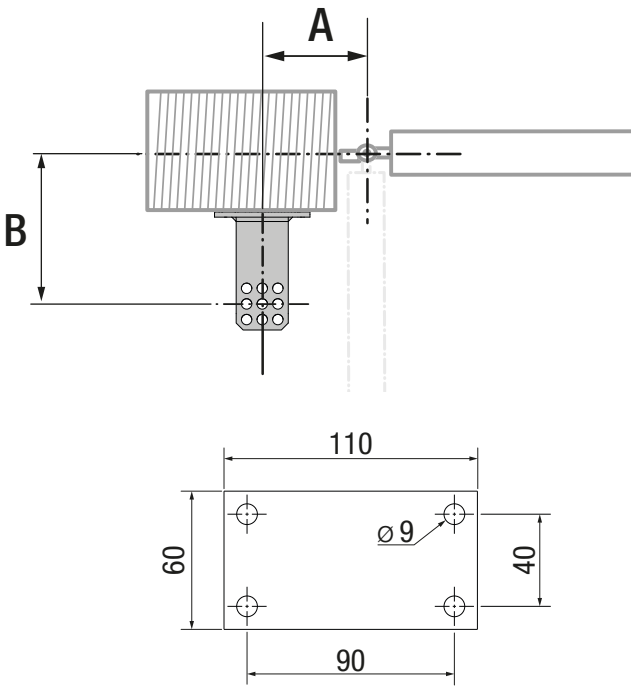


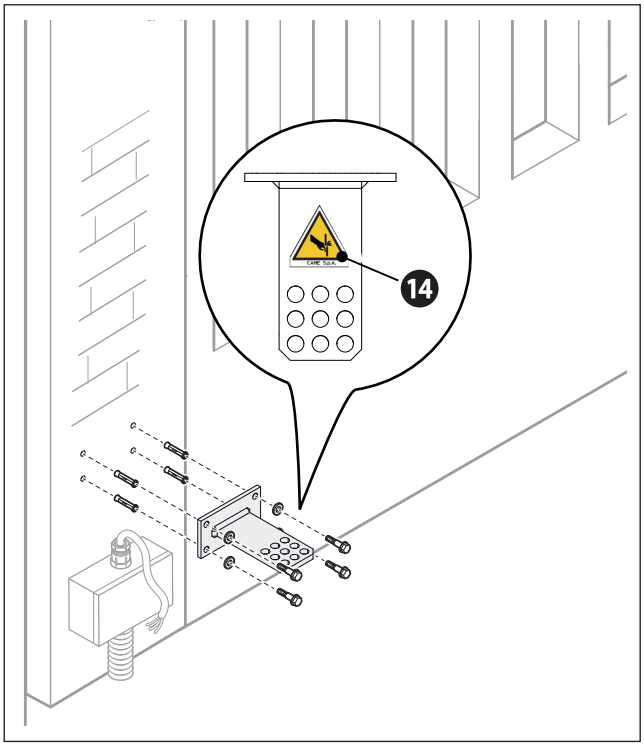
Fixing the tail bracket (attachment to the abutment)

With the gate closed, fix the plate to the pillar, observing the dimensions A and B between the axis of the hinge and the central hole in the bracket.

Fasten using plugs and screws or weld the bracket to the post.

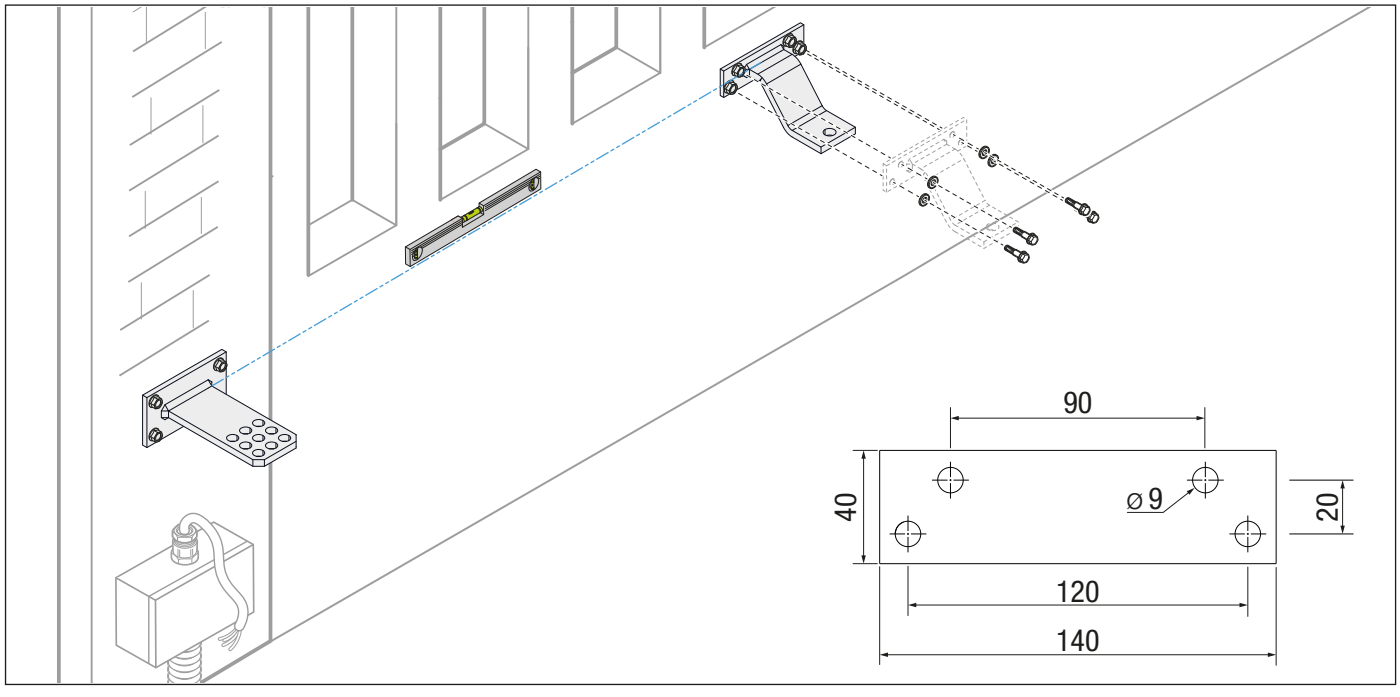
📖 The holes on the bracket fixing plate allow you to vary the opening angle of the gate leaf.



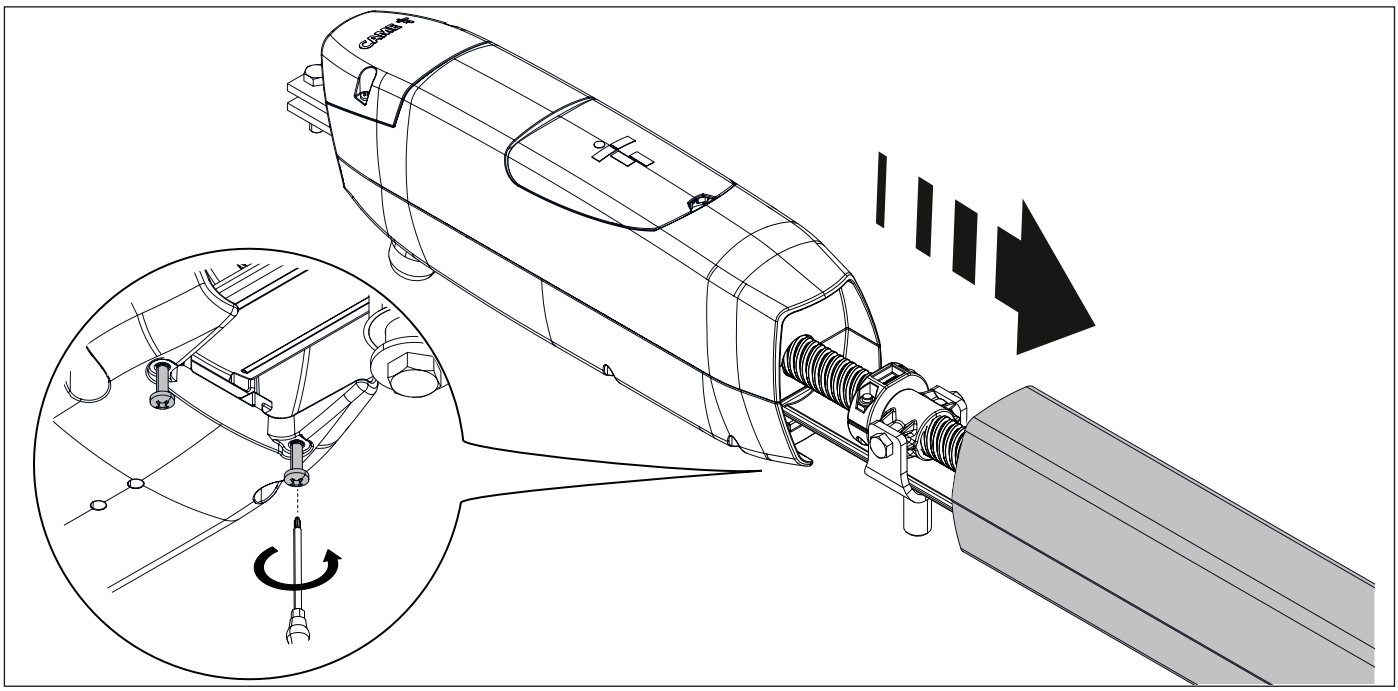


Fixing the head bracket (fixing to the gate)

Attach the head plate to the gate making sure it is in horizontal alignment with the tail bracket and observing dimension E.

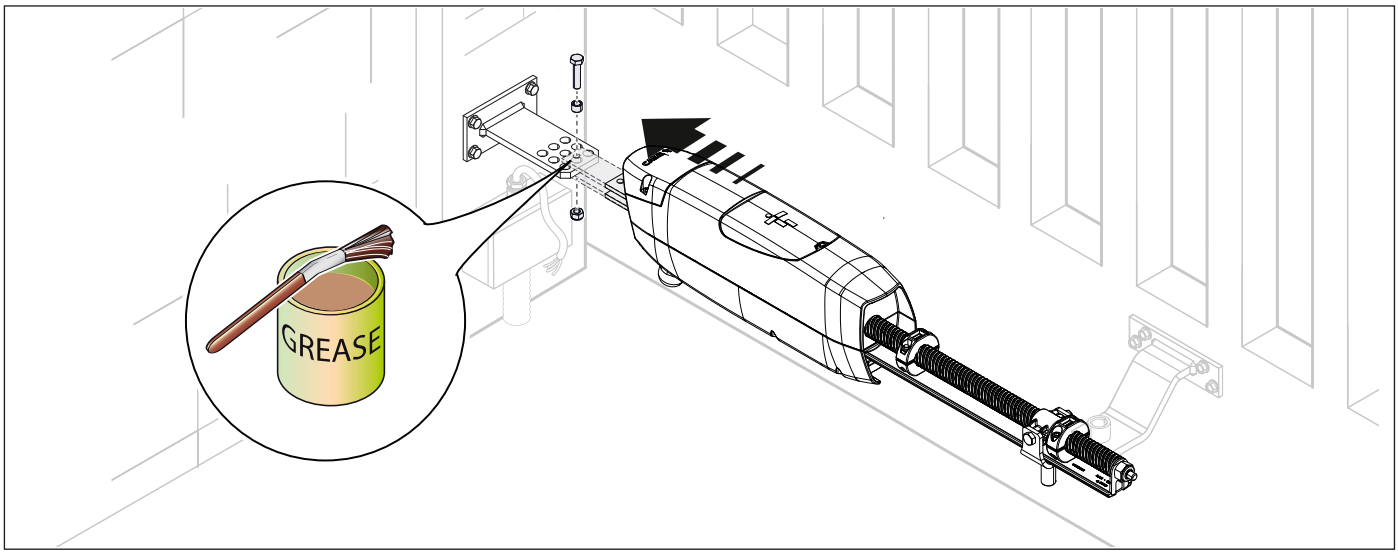


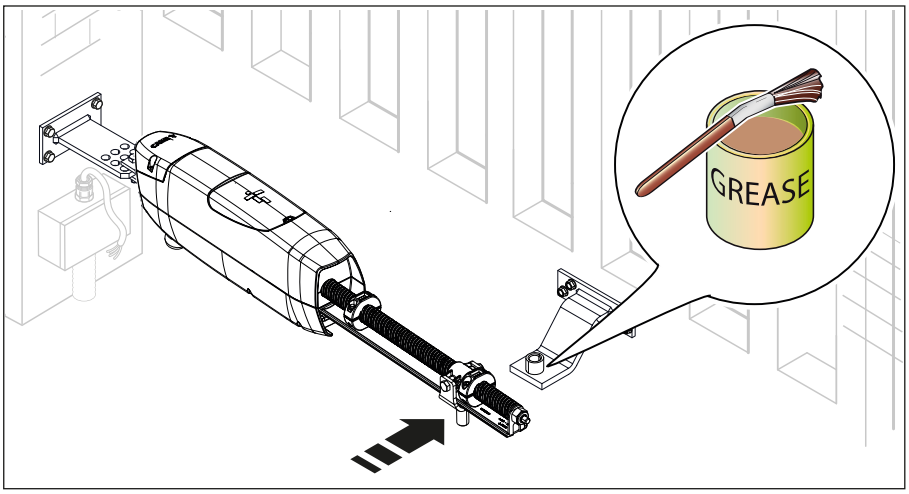
Setting up the operator

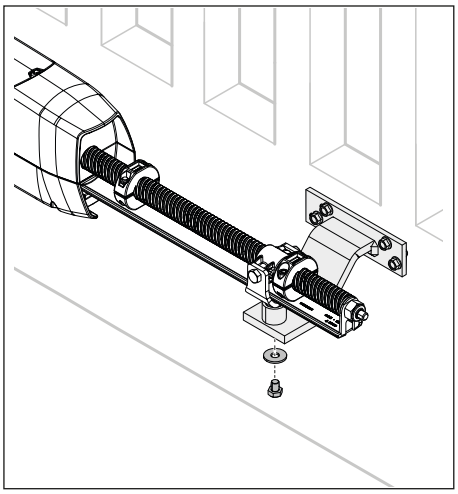


Fastening the gearmotor

📖 Lubricate all moving parts on the operator.







Establishing the limit-switch points

⚠ Tighten the screws on the mechanical stops, even if the travel end points are not defined.

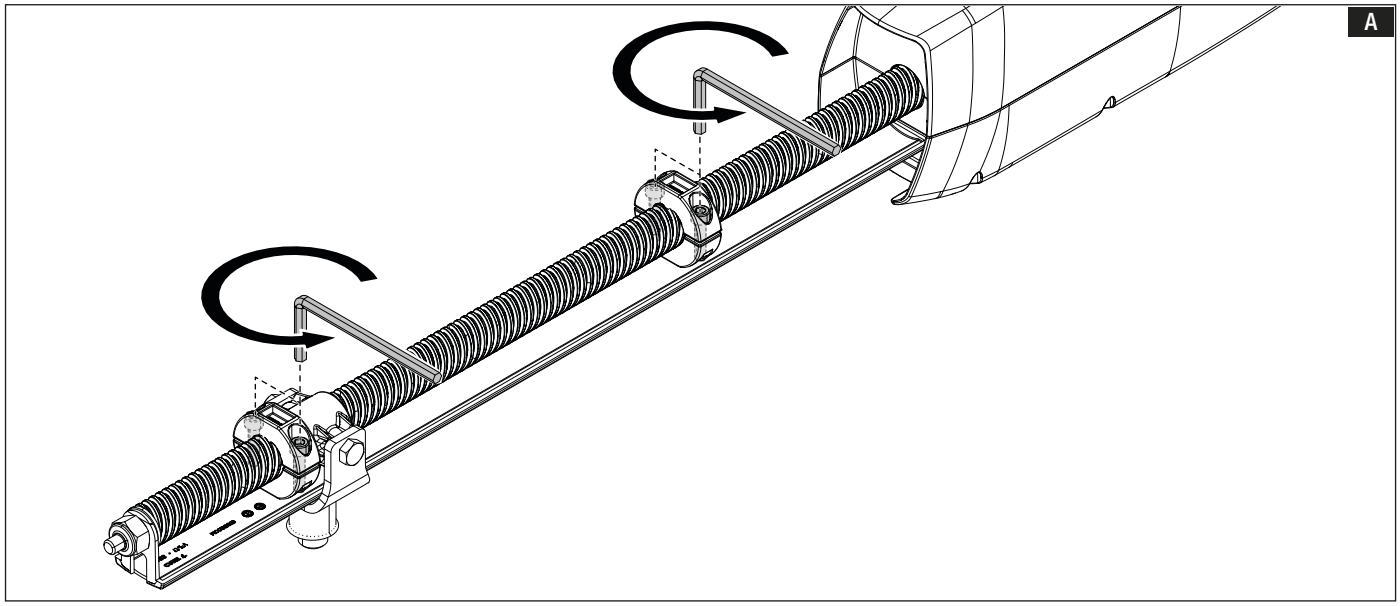
🕮 Perform these operations on both gearmotors.

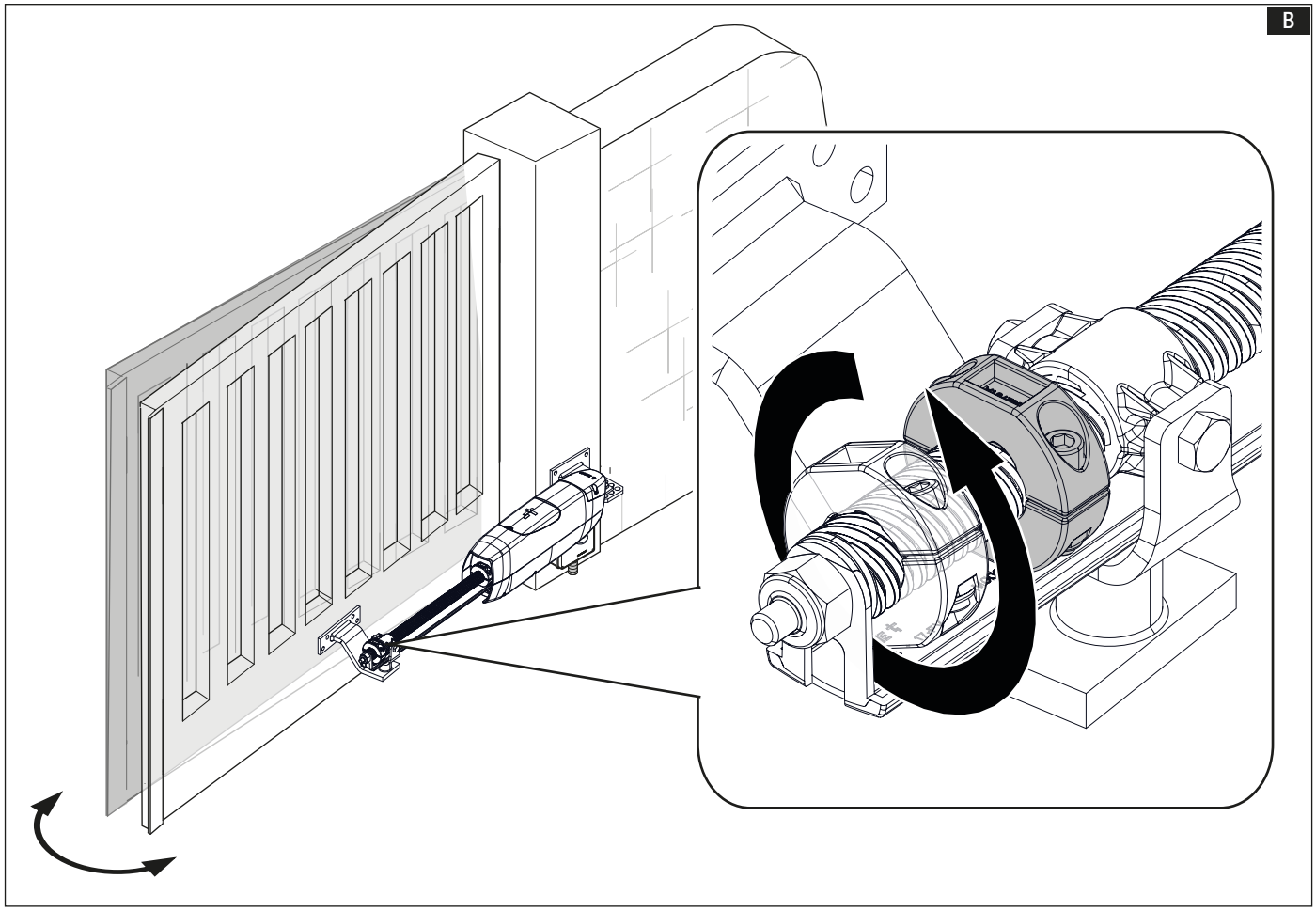
Preliminary operations

Release the gearmotor.

Using a hexagonal key, loosen the screws of both mechanical retainers, taking care not to remove them. **A**

🕮 If it is difficult to reach the screw head with the appropriate spanner, move the gate leaf slightly to turn the mechanical stops to the desired position. **B**





Determining the opening end-of-travel points

⚠ Where there is no mechanical stop on the ground, the mechanical stop on the operator controls the travel of the nut bushing.

⚠ For gates with stops on the ground, leave at least 10 mm between the nut bushing and the mechanical stop.

Release the gearmotor.

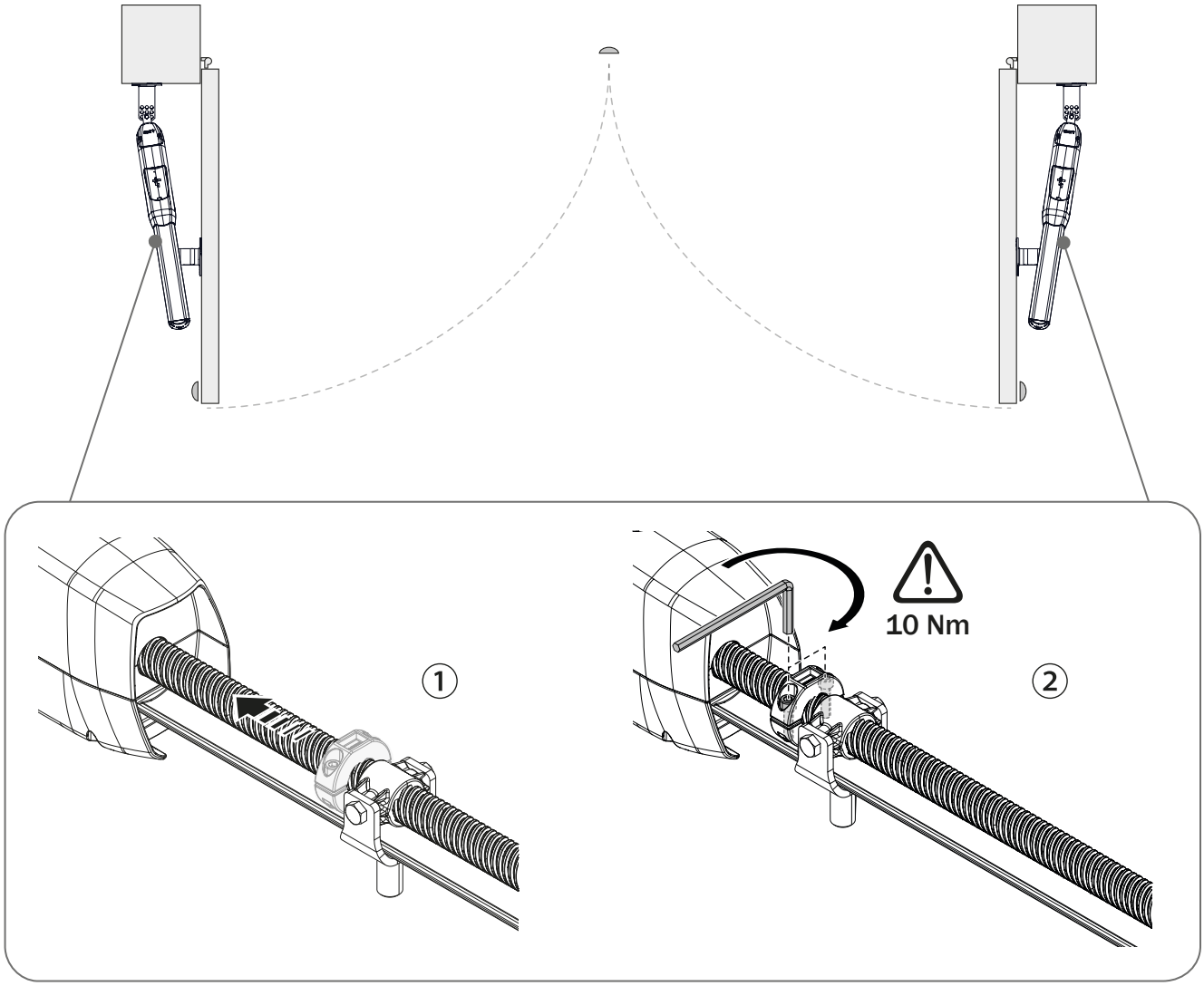
Manually open the sash to the desired point. The mechanical stop will move along the worm gear to the correct position.

Tighten the screws to a torque of 10 Nm.

🕮 Check the mechanical stop position is correct after the operator has been electrically operated.

🕮 If it is difficult to reach the screw head with the appropriate spanner, carry out the operations shown in figure **B**. See paragraph [Preliminary operations].

⚠ Ensure that the latch does not come into contact with the motor body of the drive.



Determining the closing end-of-travel points

⚠ Where there is no mechanical stop on the ground, the mechanical stop on the operator controls the travel of the nut bushing.

⚠ For gates with stops on the ground, leave at least 10 mm between the nut bushing and the mechanical stop.

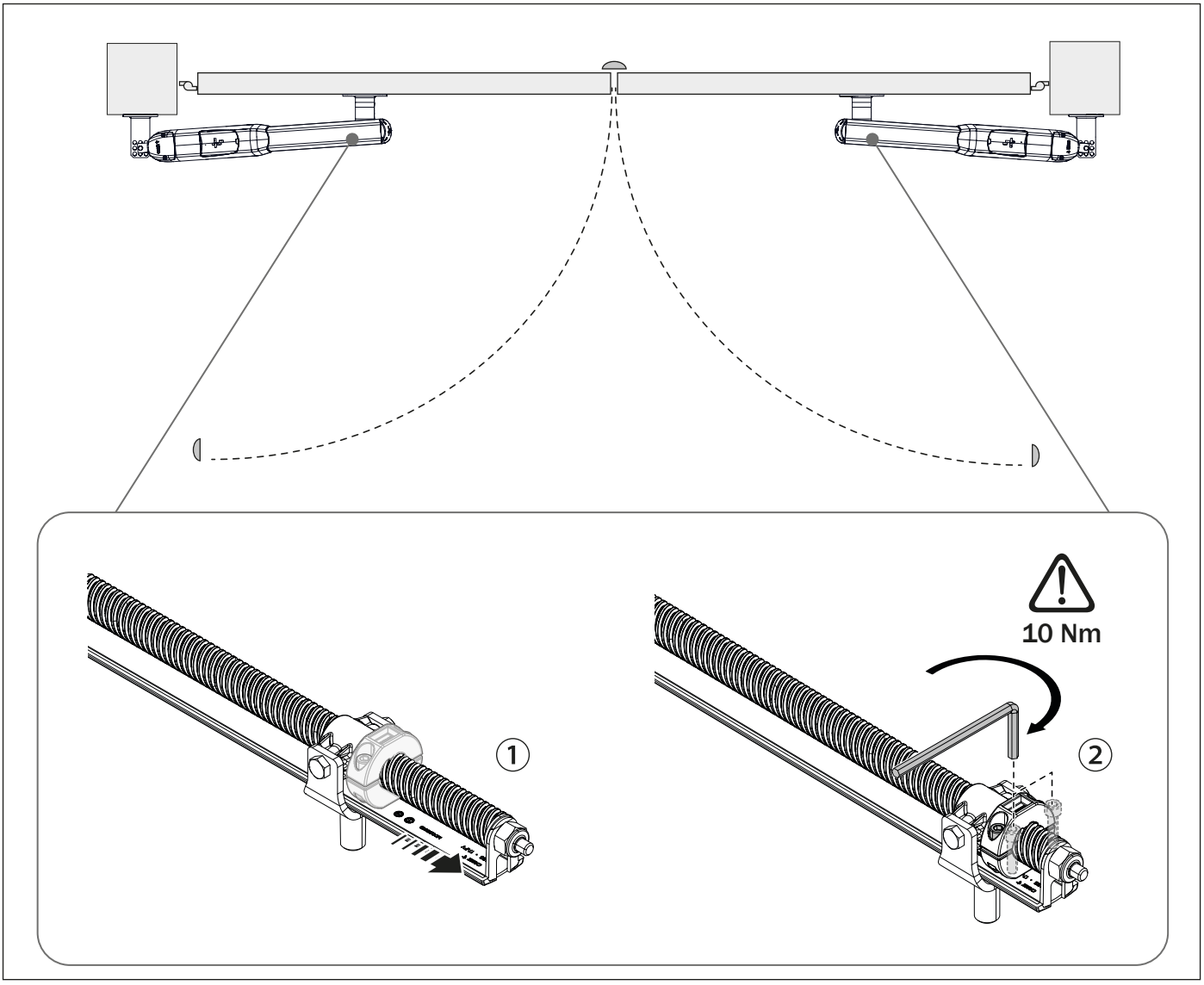
Release the gearmotor.

Manually close the sash to the desired point. The mechanical stop will move along the worm gear to the correct position.

Tighten the screws to a torque of 10 Nm.

🕮 Check the mechanical stop position is correct after the operator has been electrically operated.

🕮 If it is difficult to reach the screw head with the appropriate spanner, carry out the operations shown in figure B. See paragraph [Preliminary operations].



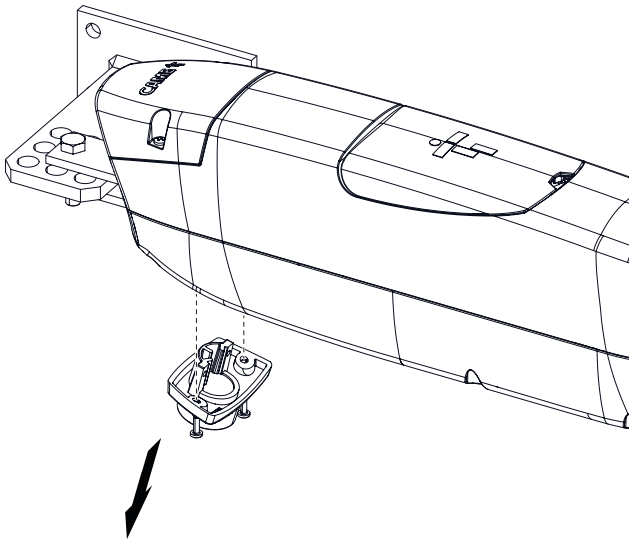
After adjusting the limit switch points, perform the travel teach-in following the instructions in the control panel manual.

ELECTRICAL CONNECTIONS

Preliminary operations

🕮 Use the cable gland provided for passing through the electrical cables

1



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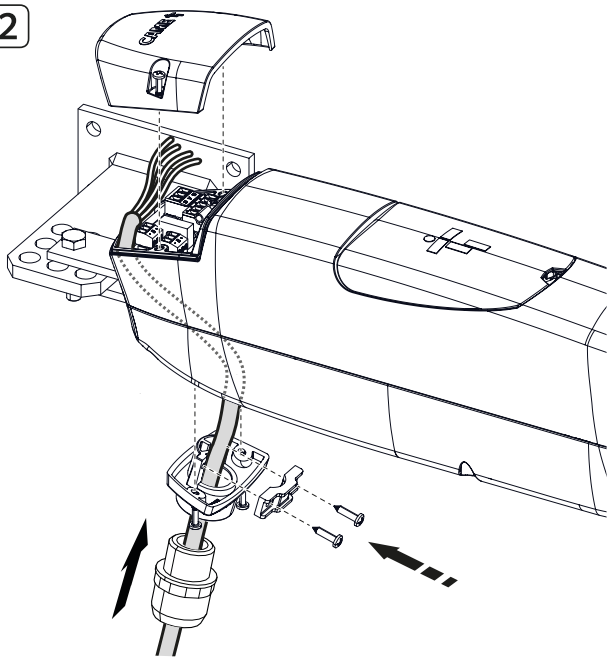
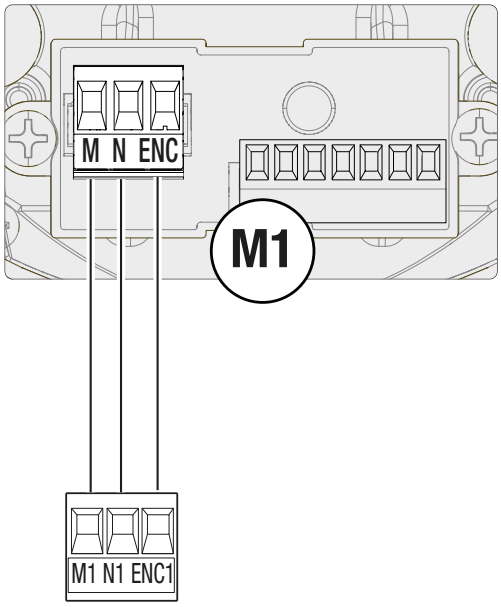
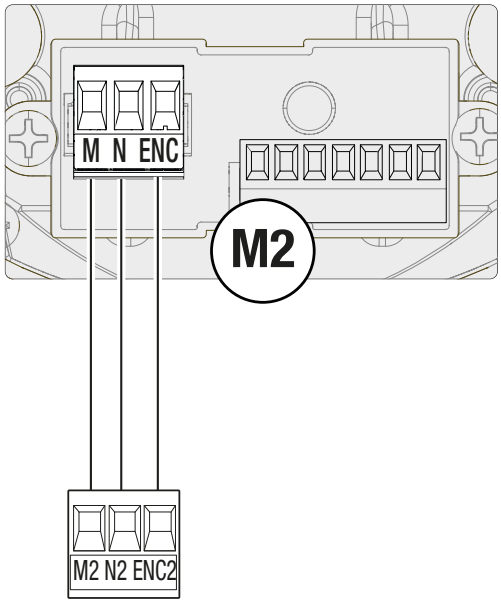


Connection to the control panel

🕮 Where there is only one gearmotor in the system, make the electrical connections on the gearmotor (M2).





Deciding where to fasten the brackets

Manually close the sash and take the measurements of dimensions A and B.

❶ Split the bracket for attachment to the abutment.

❷❸ Extend the fixing bracket by welding it to an additional bracket. Ⓐ

Open the gate a maximum of 90°.

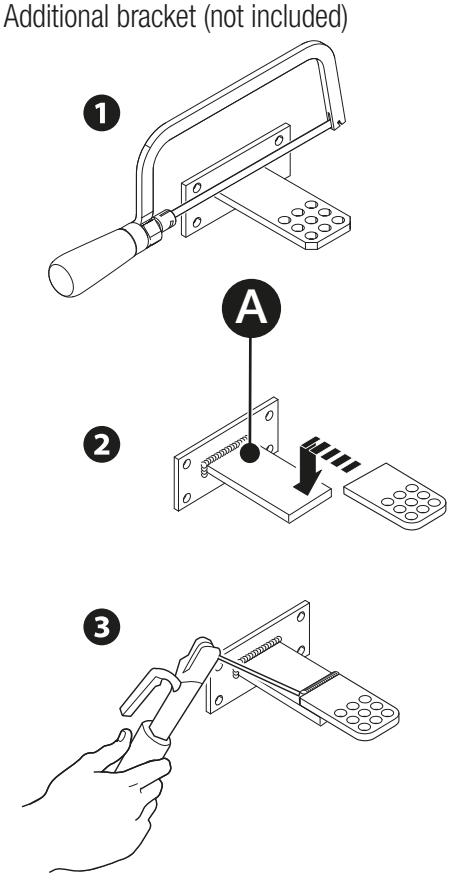
With the gate open, observe measurement E.

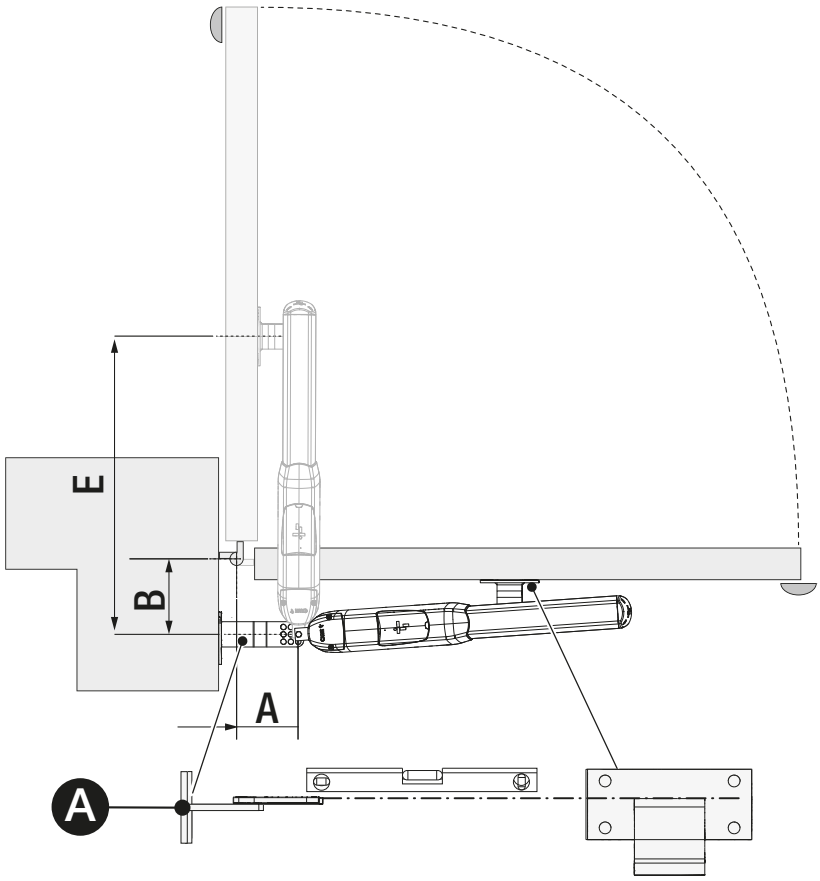
Attach the second head bracket to the gate.

📖 It is recommended to maintain a minimum distance of 200 mm between the piston and the ground.

Models	E
ATI30	720
ATI50	920

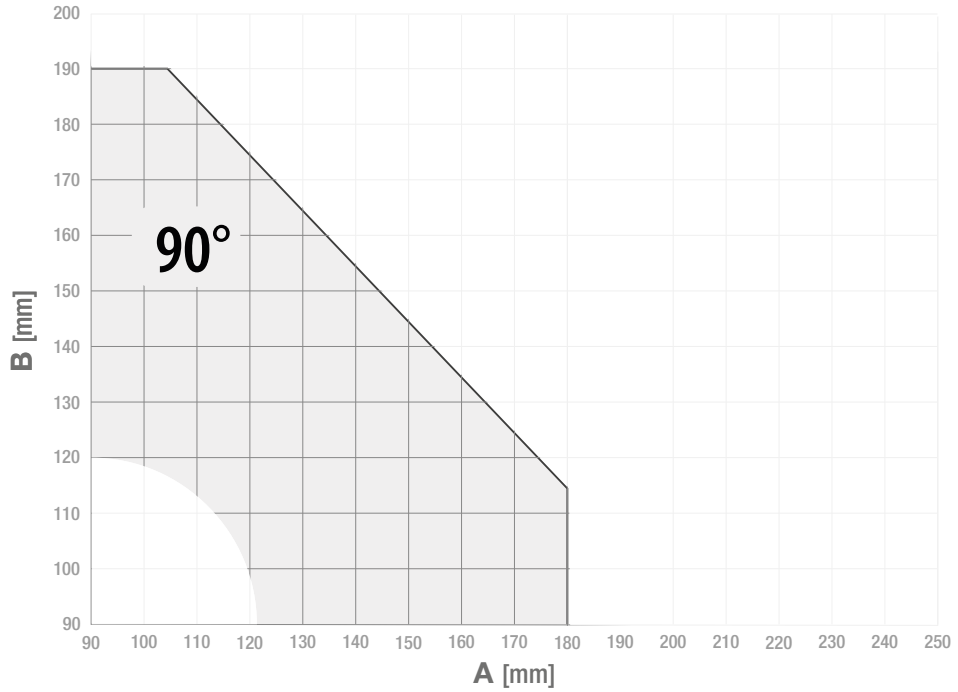
Ⓐ Additional bracket (not included)



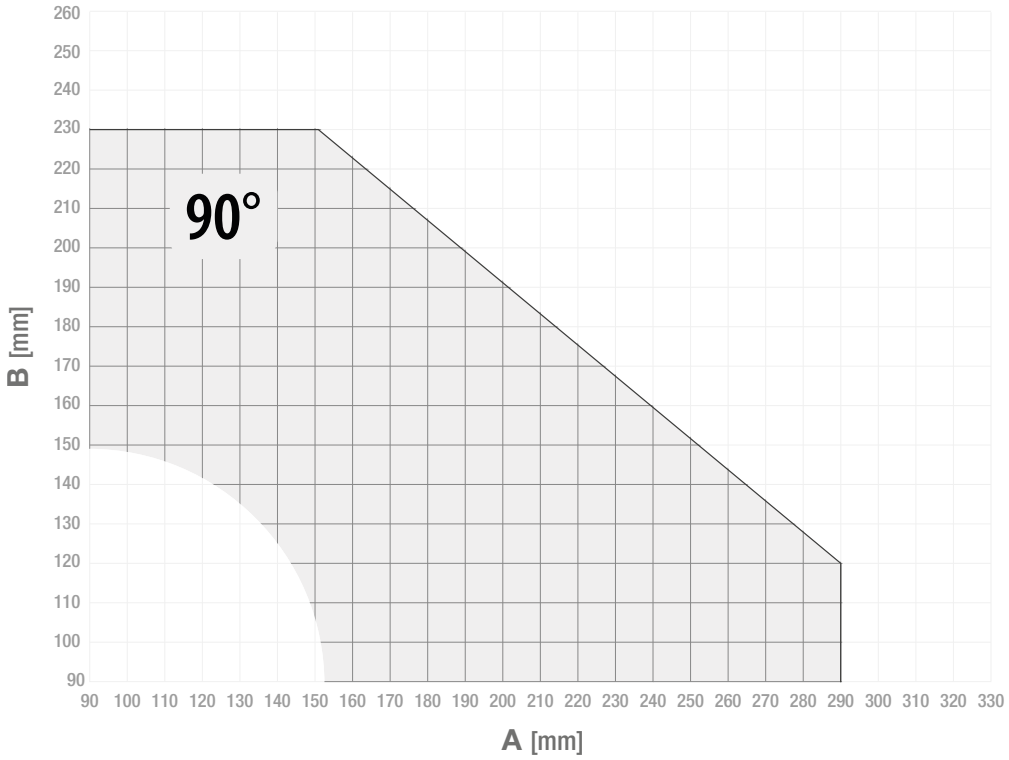


Respect the values indicated in the graphs. The graphs show the maximum opening angles in relation to the installation measurements A and B.

ATI30

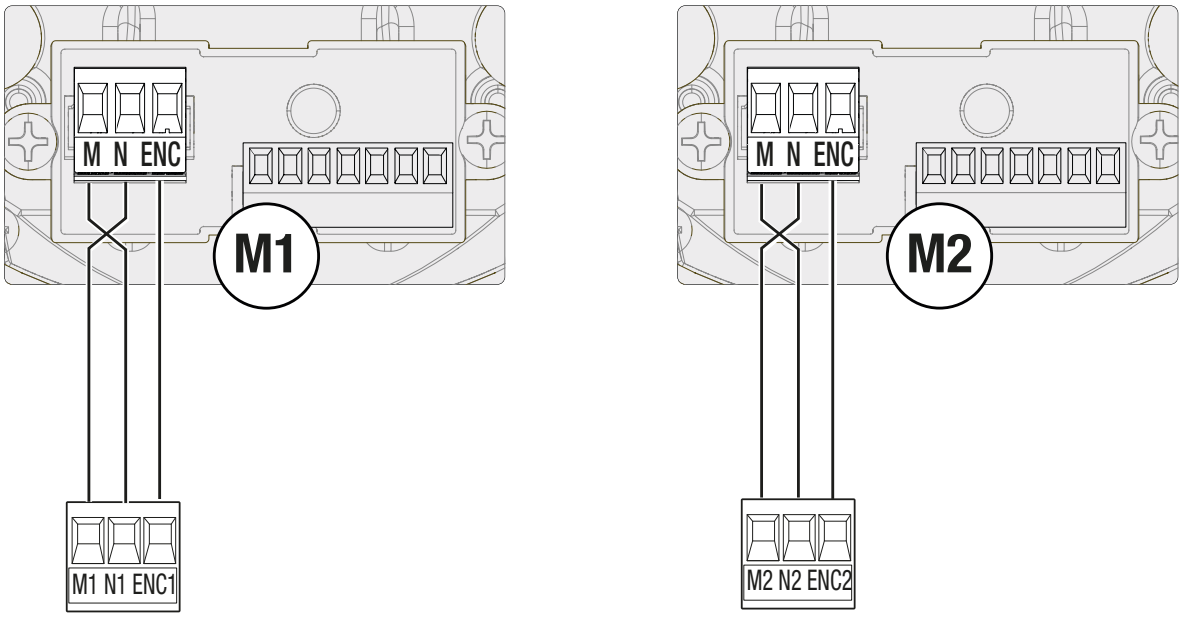


ATI50

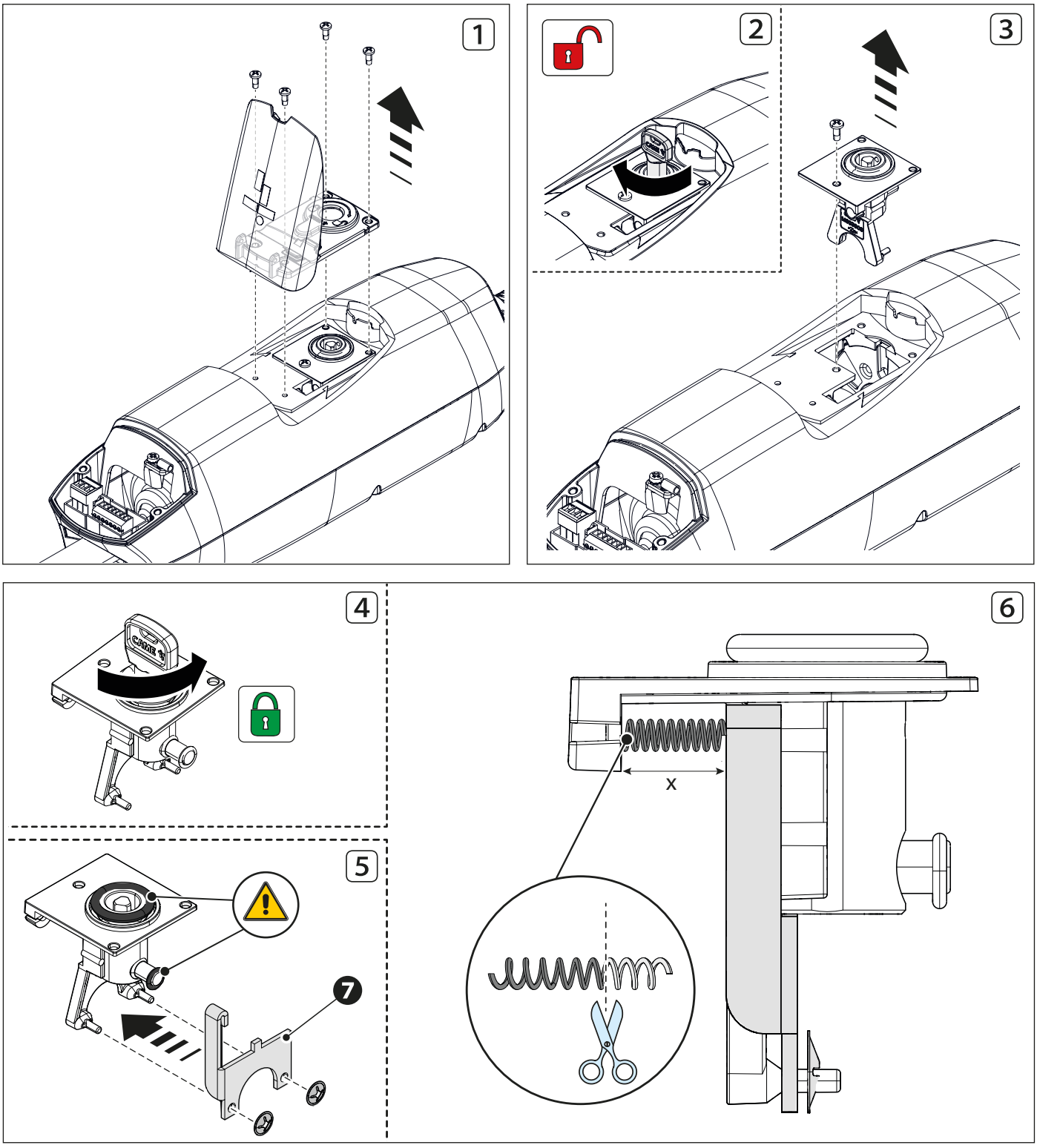


Connection to control panel with door opening outwards

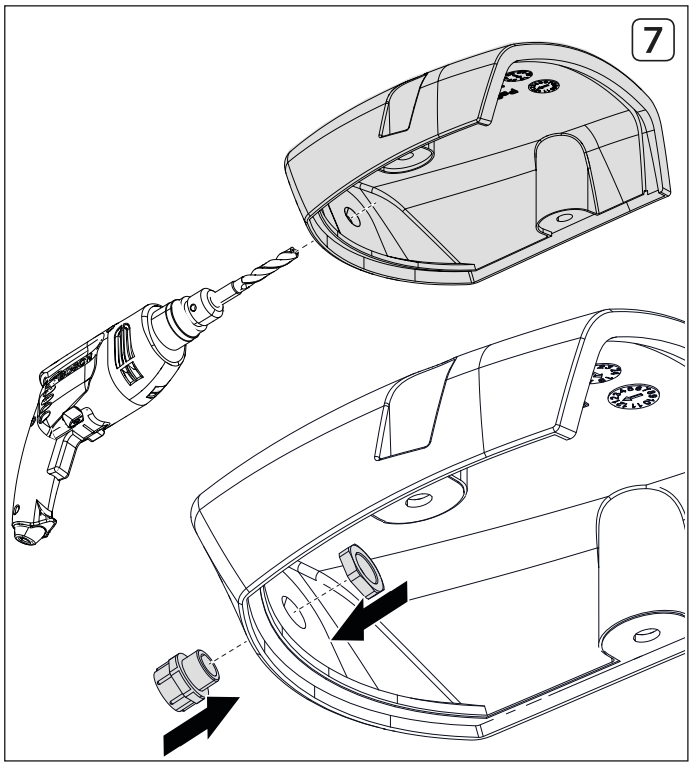
🕮 Where there is only one gearmotor in the system, make the electrical connections on the gearmotor (M2).

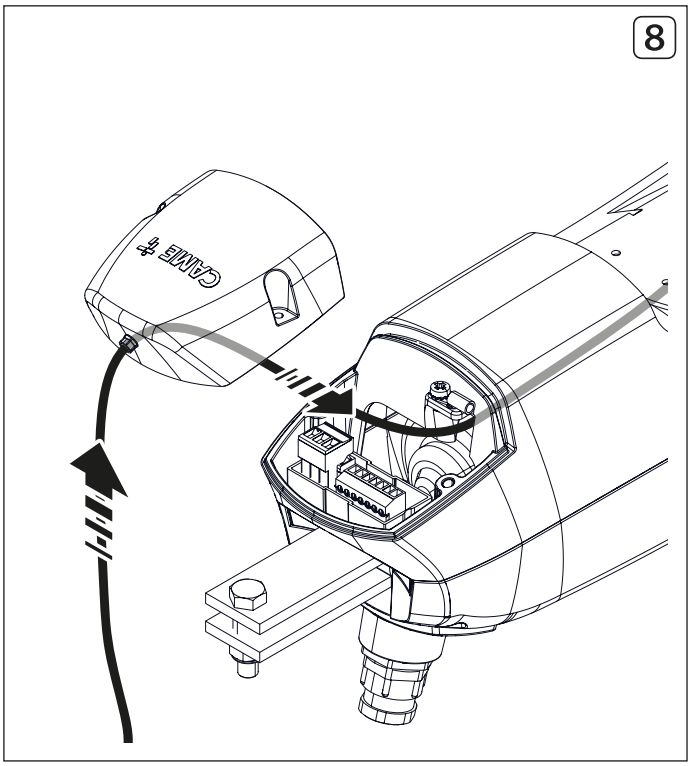


MOUNTING THE RELEASE LANYARD

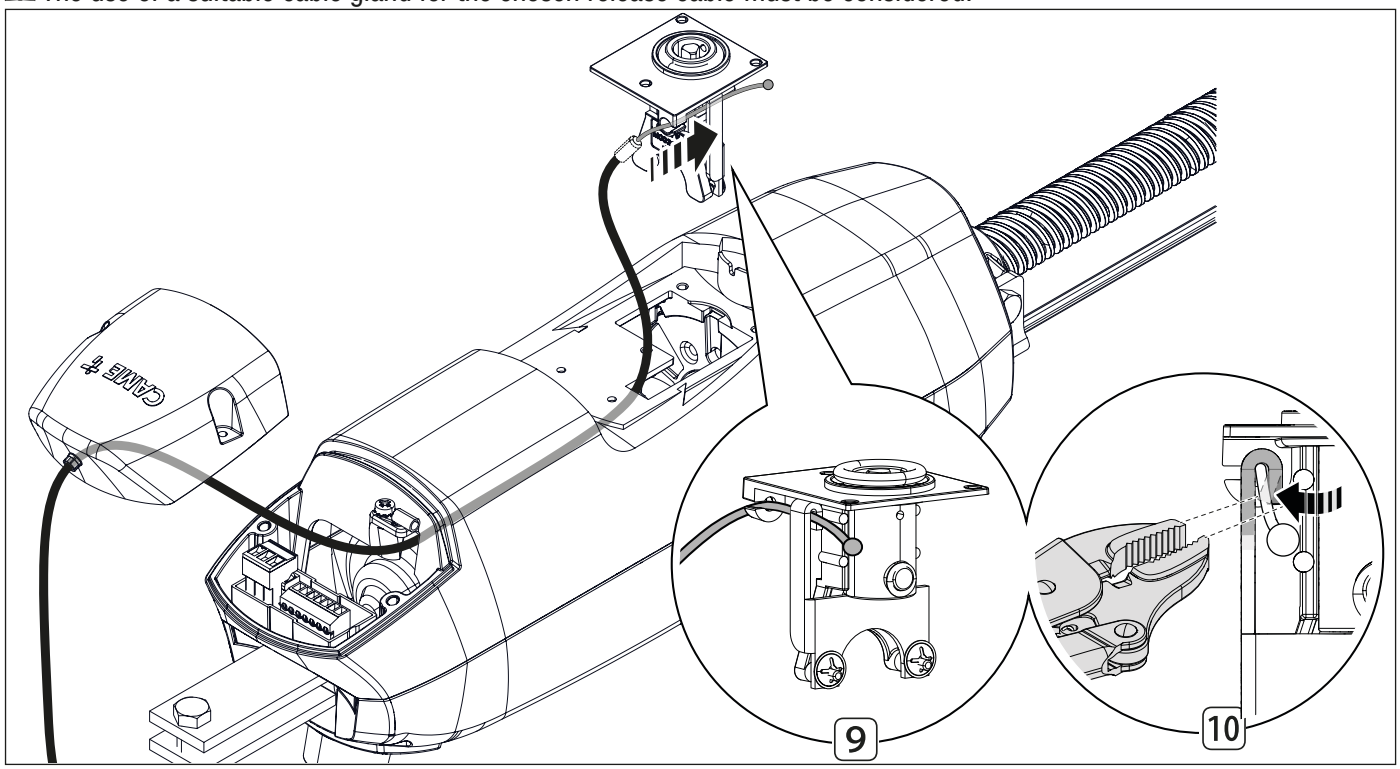


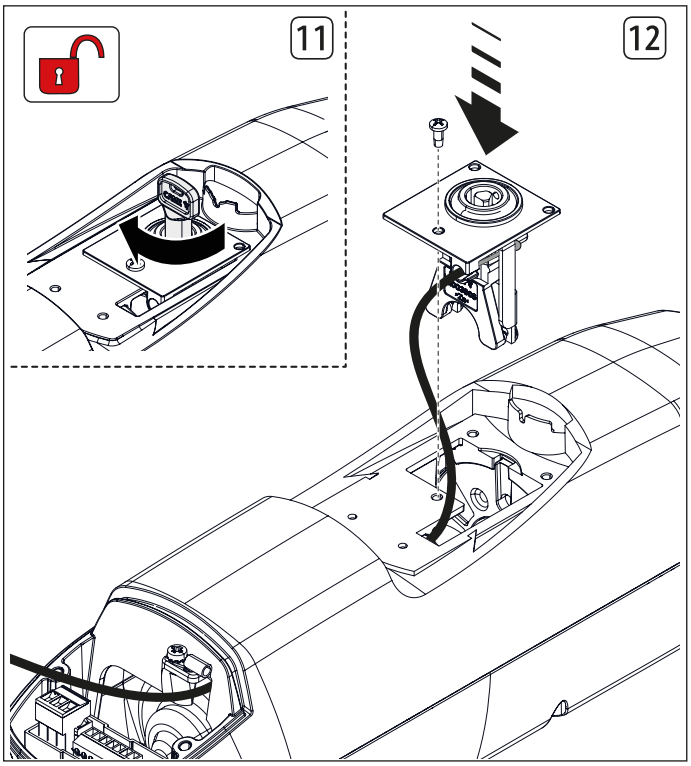
⚠ Do not remove the sealing rings (o-rings) when assembling and disassembling the release lock.

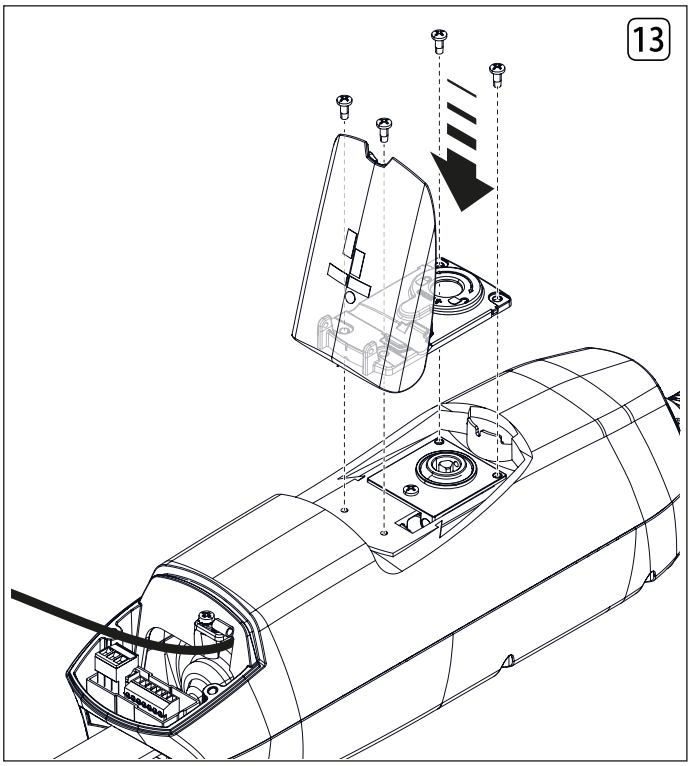




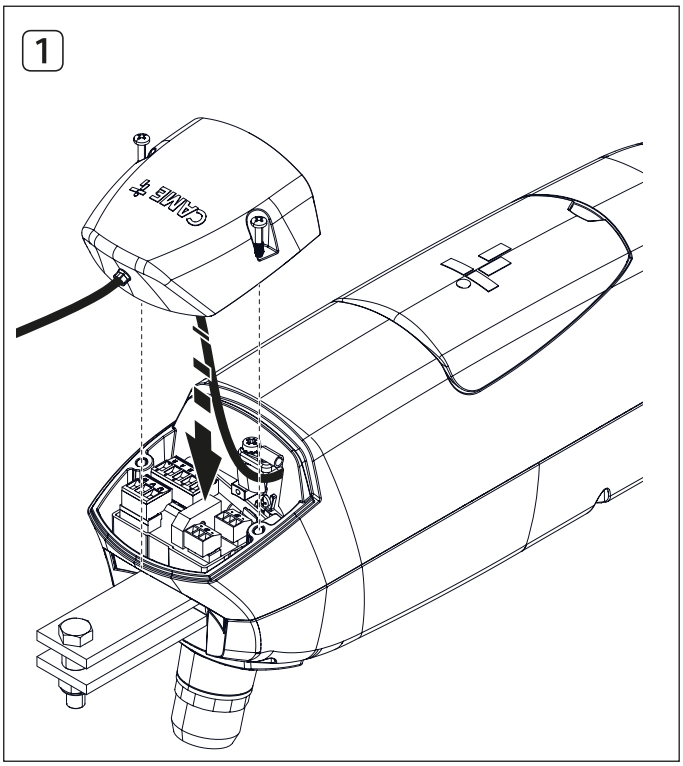
📖 The use of a suitable cable gland for the chosen release cable must be considered.

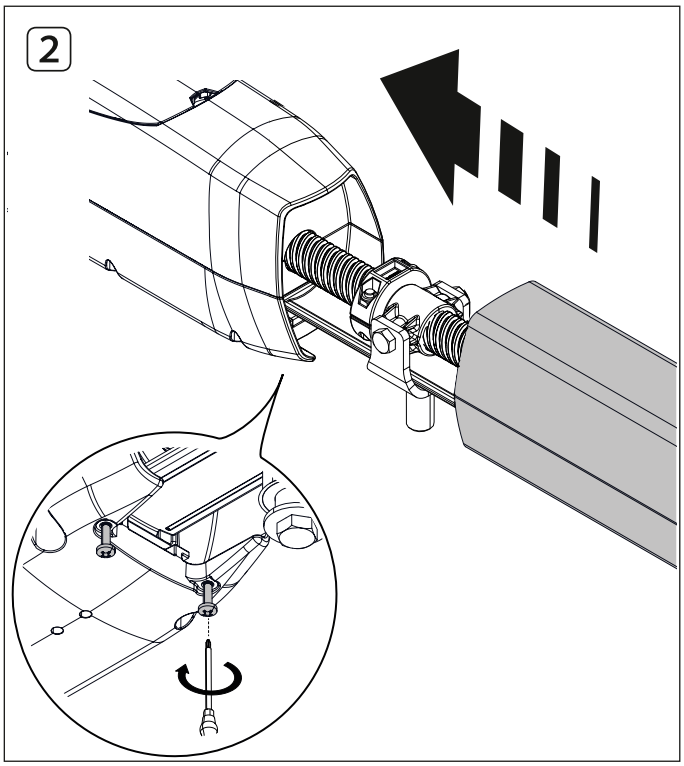






FINAL OPERATIONS





MCBF AND MAINTENANCE

⚠ The reliability and service life indicated in the following table are only guaranteed with the use of CAME control panels and activated slowdowns.

Models	ATI30	ATI50
2 m - 800 kg	120000	-
2.5 m - 600 kg	110000	-
3 m - 400 kg	100000	-
2 m - 1000 kg	-	120000
2.5 m - 800 kg	-	110000
3 m - 600 kg	-	100000
4 m - 500 kg	-	85000
5 m - 400 kg	-	70000
Full leaf	-15%	-15%
Installation in windy area	-15%	-15%
Full leaf installed in windy area	-30%	-30%

⚠ Before carrying out any cleaning or maintenance, or replacing any parts, disconnect the device from the power supply.
⚠ This document informs the installer of the checks that must be carried out during maintenance.
⚠ If the system is not used for long periods of time, e.g. for installations at sites with seasonal closures, disconnect the power supply. When the power supply is reconnected, check the system is working correctly.
🕮 For information on correct installation and adjustments, please see the product installation manual.
🕮 For information on choosing products and accessories, please see our product catalogue.

Every 20,000 cycles – or at least every 6 months of use – the following maintenance must be performed.

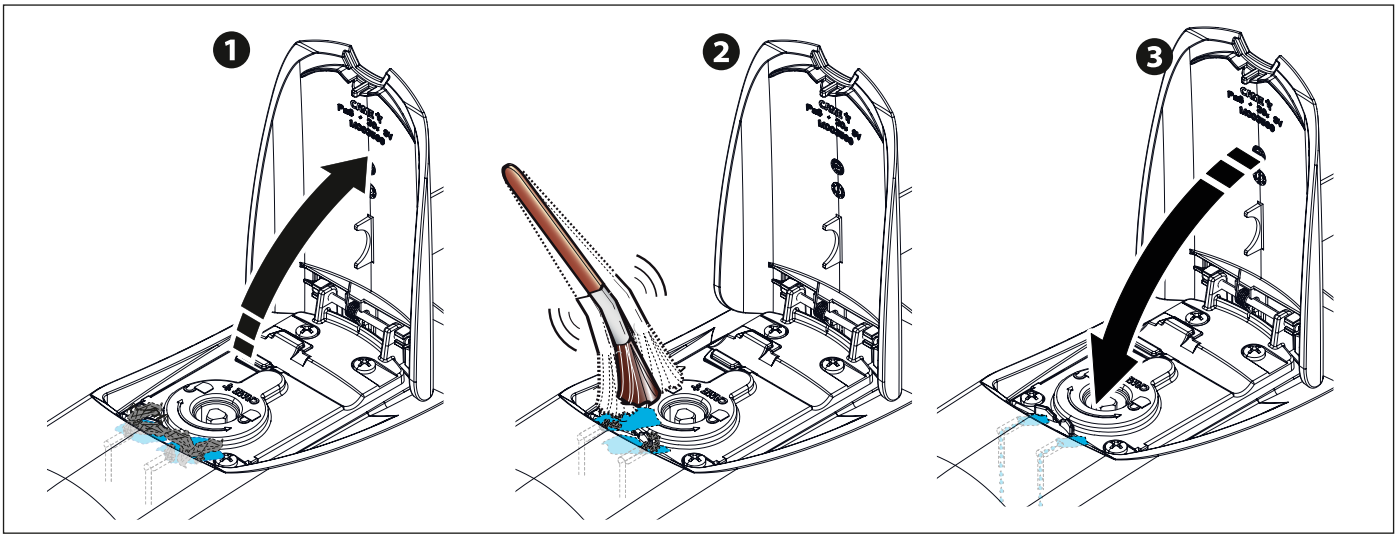
Perform a general and complete check of the tightness of the nuts and bolts.
Grease all of the moving mechanical parts.

🕮 **For the type of grease to be used on the worm gear, please refer to the technical data of the product.**

Check the warning and safety devices are working properly.
Check for any wear on the moving mechanical parts and check that they are working properly.
Check the release mechanism is working efficiently by performing a manoeuvre with the leaf free. The gate leaf must not be obstructed.
Check the cables are intact and connected correctly.

Cleaning the automation

Open the release hatch and clean any dirt.



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