CAME

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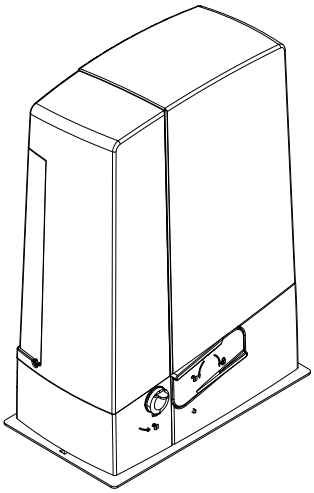
FA01719-EN

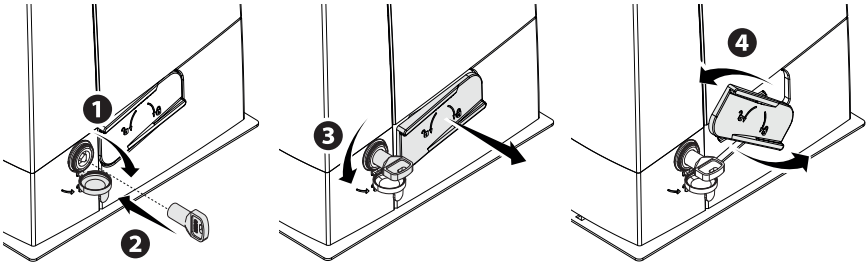
Sliding gate operator
BXV Rapid series



BXV04AGF / BXV06AGF / BXV06RGF / BXV10AGF / BXV10RGF

INSTALLATION MANUAL

EN English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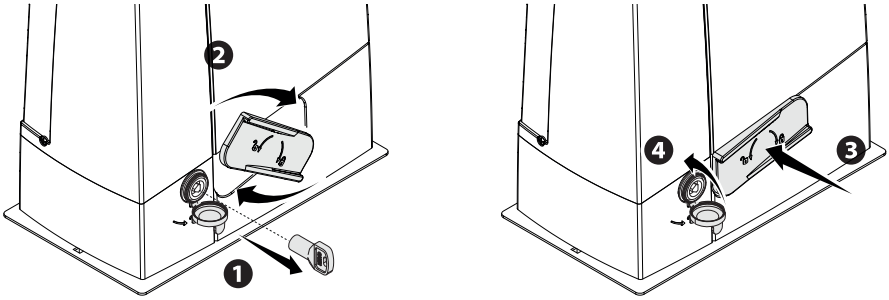
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GENERAL PRECAUTIONS FOR INSTALLERS

⚠ WARNING! Important safety instructions.

Follow all of these instructions. Improper installation can cause serious bodily harm.

Before continuing, also read the general precautions for users.

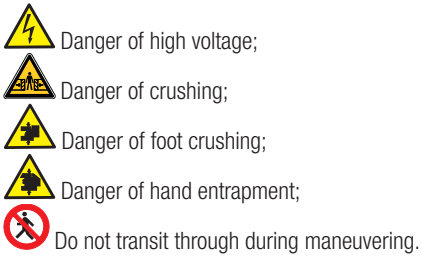
This product must only be used for its specifically intended purpose. Any other use is dangerous. Came S.p.A. is not liable for any damage caused by improper, wrongful and unreasonable use. • This manual's product is defined by machinery directive 2006/42/CE as "partly-completed machinery". Quasi-completed machinery is Partly-completed machinery is a set that almost constitutes a machine, but which, alone, cannot ensure a clearly defined application. Partly-completed machinery is only destined to be incorporated or assembled to other machinery or other partly-completed machinery or apparatuses to build machinery that is regulated by Directive 2006/42/CE. The final installation must be compliant with European directive 2006/42/CE and current European reference standards. Given these considerations, all procedures stated in this manual must be exclusively performed by expert, qualified staff • The manufacturer declines any liability for using non-original products; which would result in warranty loss • Keep this manual inside the technical folder along with the manuals of all the other devices used for your automation system. • Check that the temperature range shown on the operator is suitable to the locations where it will be installed. • Laying the cables, installation and testing must follow state-of-the-art procedures as dictated by regulations • If the power-supply cable is damaged, it must be immediately replaced by the manufacturer or by an authorized technical assistance center, or in any case, by qualified staff, to prevent any risk • During all phases of the installation make sure you have cut off the mains power source. • The operator cannot be used with gates fitted with pedestrian doors, unless its operation can be activated only when the pedestrian door is in safety position. • Make sure that people are not entrapped between the gate's moving and fixed parts due to the gate's movement. Before installing the operator, check that the gate is in proper mechanical condition, that it is properly balanced and that it properly closes: if any of these conditions are not met, do not continue before having met all safety requirements. • Make sure the gate is stable and the castors function properly and are well-greased, and that it opens and closes smoothly. • The guide rail must be well-fastened to the ground, entirely above the surface and free of any impediments to the gate's movement. • The rails of the upper guide must not cause any friction. • Make sure that opening and closing limiters are fitted • Make sure the operator is installed onto a sturdy surface that is protected from any collisions • Make sure that mechanical stops are already installed • If the operator is installed lower than 2.5 from the ground or from any other access level, fit any protections and signs to prevent hazardous situations. • Do not fit the operator upside down or onto elements that could yield to its weight. If necessary, add reinforcements to the fastening points • Do not install door or gate leaves on tilted surfaces • Check that no lawn watering devices spray the operator with water from the bottom up. • Any residual risks must be indicated clearly with proper signage affixed in visible areas. All of which must be explained to end users. • Suitably section off and demarcate the entire installation site to prevent unauthorized persons from entering the area, especially minors and children. • Affix cautionary signs, such as the door plate, the gate plate, wherever needed and in plain sight. • Use proper protections to prevent mechanical hazards when people are loitering around the machinery's range of action, for example to prevent finger crushing between the rack and pinion) • The electrical cables must run through the cable glands and must not touch any heated parts, such as the motor, transformer, and so on). • Make sure

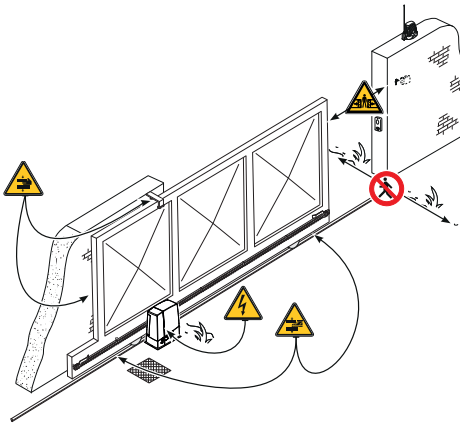
you have set up a suitable dual pole cut off device along the power supply that is compliant with the installation rules. It should completely cut off the power supply according to category III surcharge conditions. • All opening controls must be installed at least 1.85 m from the perimeter of the gate's working area, or where they cannot be reached from outside the gate. • All switches in maintained action mode must be positioned so that the moving gates leaves, the transit areas and vehicle thru-ways are completely visible, and yet the switches must be also away from any moving parts • Unless the action is key operated, the control devices must be fitted at, at least, 1.5 m from the ground and must not be accessible to the public. • To pass the collision force test use a suitable sensitive safety-edge. Install it properly and adjust as needed. • Before handing over to users, check that the system is compliant with the 2006/42/CE uniformed Machinery Directive. Make sure the settings on the operator are all suitable and that any safety and protection devices, and also the manual release, work properly. • Affix a permanent tag, that describes how to use the manual release mechanism, close to the mechanism. • Make sure to hand over to the end user, all operating manuals for 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 an authorised support centre.

📖 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.

- The next figure shows the main hazard points for people -





KEY

🕮 This symbol shows which parts to read carefully.
⚠ This symbol shows which parts describe safety issues
☞ This symbol shows which parts to tell users about.
The measurements, unless otherwise stated, are in millimeters.

DESCRIPTION

Operator featuring a control board, movement-control and obstruction-detecting device, plus, mechanical limit-switches for sliding gates of up to 1000 kg and 20 m in length.

INTENDED USE

The operator is designed to power sliding gates in residential and apartment block settings.
🕮 Do not install of use this device in any way, except as specified in this manual.

LIMITS TO USE

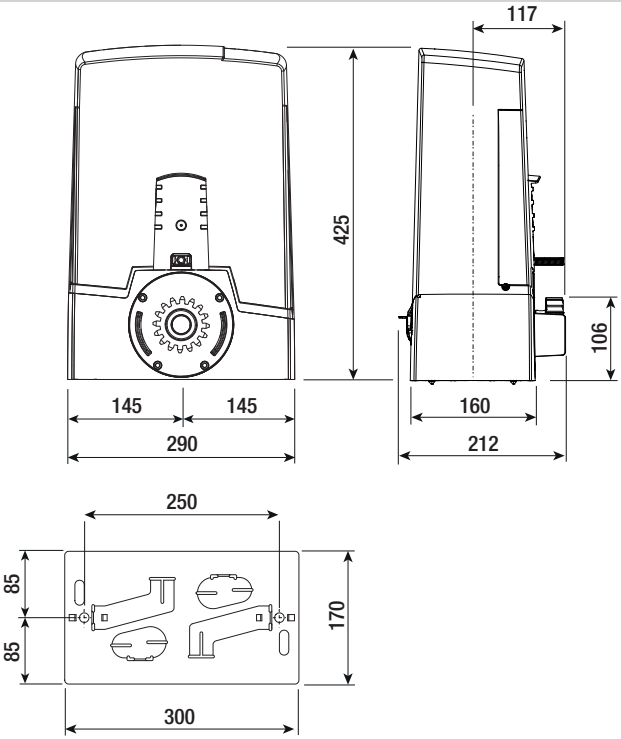
Type	BXV04AGF	BXV06AGF BXV06RGF	BXV010AGF BXV010RGF
Maximum gate-leaf length (m)	14	18	20
Maximum gate-leaf weight (kg)	400	600	1000
Pinion module	4	4	4

TECHNICAL DATA

Type	BXV04AGF	BXV06AGF	BXV010AGF	BXV06RGF	BXV010RGF
Protection rating (IP)	54	54	54	54	54
Power supply (V - 50/60 Hz)	230 AC	230 AC	230 AC	120 AC	120 AC
Input voltage motor (V)	24 DC	24 DC	24 DC	24 DC	24 DC
Stand-by consumption (W)	5.5	5.5	5.5	5.5	5.5
Stand-by consumption with the RGP1 (W) module	0.5	0.5	0.5	0.5	0.5
Maximum power (W)	240	240	360	240	360
Duty cycle	HEAVY-DUTY SERVICE	INTENSIVE SERVICE	INTENSIVE SERVICE	INTENSIVE SERVICE	INTENSIVE SERVICE
Operating temperature (°C)	-20 to +55	-20 to +55	-20 to +55	-20 to +55	-20 to +55
Thrust (N)	250	330	450	330	450
Max. maneuvering speed	22	20	20	20	20
Apparatus class	I	I	I	I	I
Weight (Kg)	10	11,5	12	11,5	12
Storage temperature (°C)*	-20 ÷ +70	-20 ÷ +70	-20 ÷ +70	-20 ÷ +70	-20 ÷ +70
Average life (cycles)**	150000	150000	150000	150000	150000

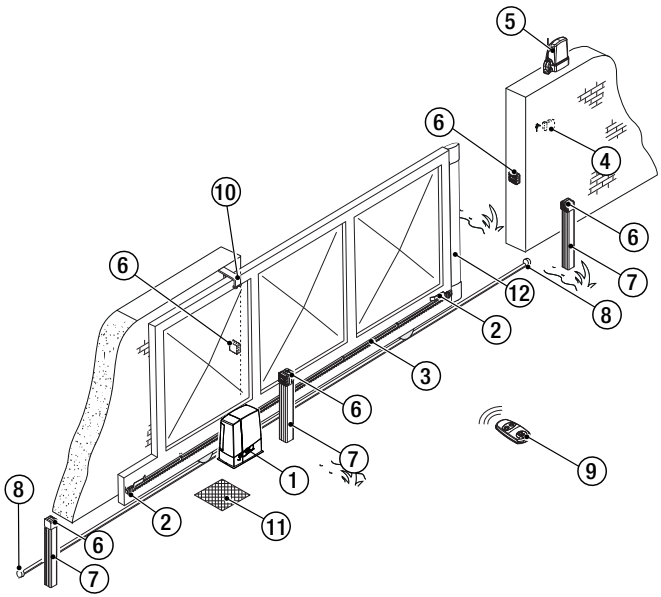
(*) Before installing the product, keep it at room temperature where it has previously been stored or transported at a very high or very low temperature.
(**) The average product life specified should be understood purely as an indicative estimate. It applies to normal usage conditions and where the 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. The average product life should not be confused with the product warranty.

DIMENSIONS



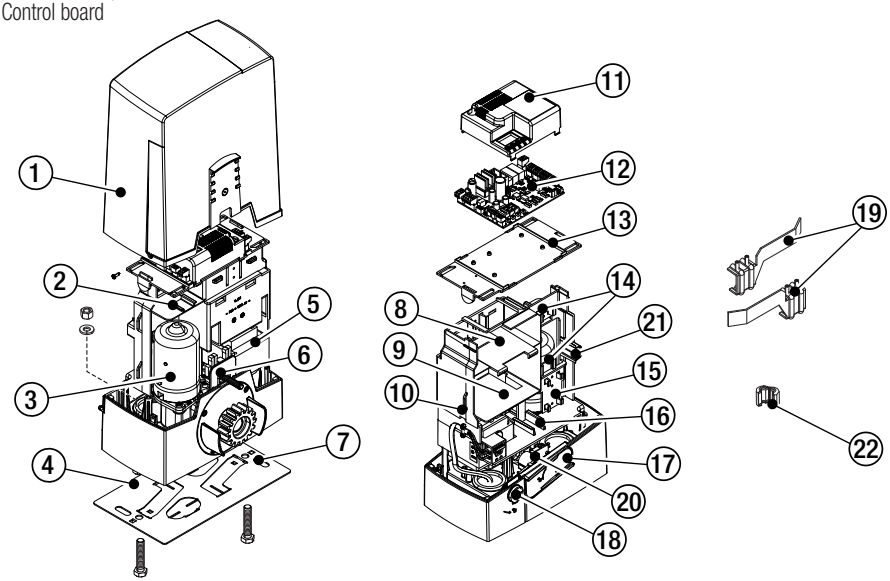
STANDARD INSTALLATION

1. Operator
2. Limit-switch fins
3. Rack
4. Selector
5. Flashing light
6. Photocells
7. Photocell post
8. Mechanical gate stop
9. Transmitter
10. Slide guides
11. Junction pit
12. Sensitive safety-edge



DESCRIPTION OF PARTS

1. Cover
2. Housing for the RLB battery charger
3. Gear motor
4. Anchoring plate
5. Transformer
6. Mechanical limit switch
7. Release cable threading hole
8. Housing for SMA sensors
9. Housing for two emergency batteries
10. Control-board supporting structure
11. Control-board protective cover
12. Control board
13. Control-board supporting plate
14. Housing for UR042 module
15. Housing for the RGP1 module
16. Housing for thermostat with heating rod
17. Release lever
18. Lock
19. Limit-switch fins
20. Safety micro-switch
21. Housing for the RGSM001/S module
22. Ferrite



GENERAL INSTALLATION INDICATIONS

⚠ Only skilled, qualified staff must install this product.

PRELIMINARY CHECKS

⚠ Before beginning the installation, do the following:

- check that the upper slide-guides are friction-free;
- make sure there is are opening and closing mechanical gate stops;
- make sure that the point where the gear motor is fastened is protected from any impacts and that the surface is solid enough;
- set up suitable tubes and conduits for the electric cables to pass through, making sure they are protected from any mechanical damage.

CABLE TYPES AND MINIMUM SECTIONS

Connection	cable length	
	< 20 m	20 < 30 m
Input voltage for 230 V AC control board (1P+N+PE)	3G x 1.5 mm^2	3G x 2.5 mm^2
Signaling devices	2 x 0.5 mm^2	
Command and control devices	2 x 0.5 mm^2	
Safety devices (photocells)	(TX = 2 x 0.5 mm^2) (RX = 2 x 0.5 mm^2)	

📖When operating at 230 V and outdoors, use H05RN-F-type cables that are 60245 IEC 57 (IEC) compliant; whereas indoors, use H05VV-F-type cables that are 60227 IEC 53 (IEC) compliant. For power supplies up to 48 V, you can use FROR 20-22 II-type cables that comply with EN 50267-2-1 (CEI).

📖 To connect the antenna, use the RG58 (we suggest up to 5 m).

📖 For paired connection and CRP, use a UTP CAT5-type cable (up to 1,000 m long).

📖 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 multiple, sequential loads along the same line, the dimensions on the table need to be recalculated according to the actual power draw and distances. For connecting products that are not contemplated in this manual, see the literature accompanying said products

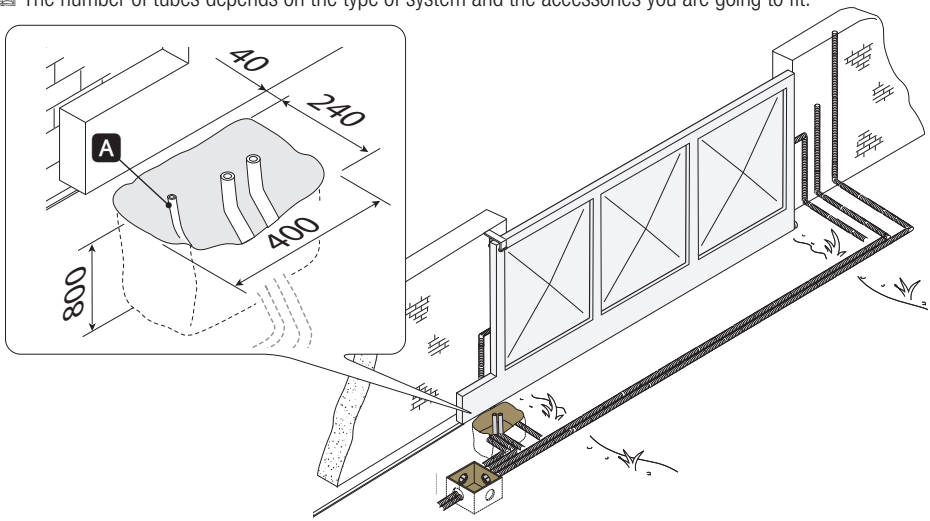
INSTALLING

⚠The following illustrations are mere examples. Consider that the space available where to fit the barrier and accessories will vary depending on the area where it is installed. It is up to the installer to find the most suitable solution.

CORRUGATED TUBE LAYING

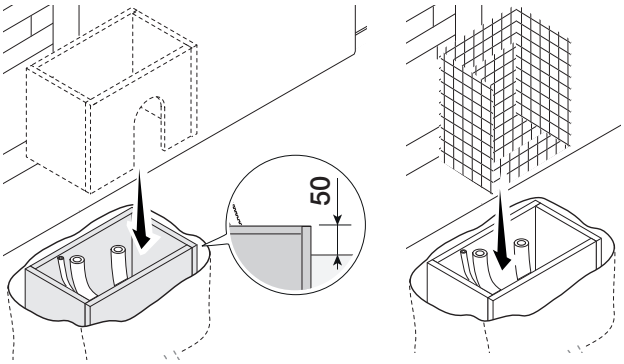
Dig a hole for the foundation frame.
Set up the corrugated tubes needed for the wiring coming out of the junction pit.
For connecting the gearmotor we suggest using a Ø 40 mm corrugated tube, whereas for the accessories we suggest Ø 25 mm tubes.
Set up a Ø 20 mm tube for running through the external release cable **A**.

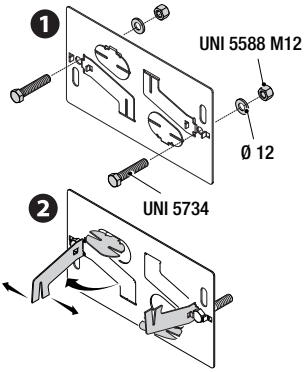
📖 The number of tubes depends on the type of system and the accessories you are going to fit.



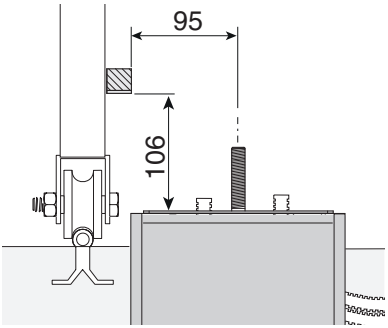
LAYING THE ANCHORING PLATE

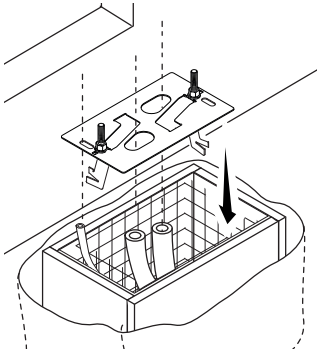
Set up a foundation frame that is larger than the anchoring plate and sink it into the dug hole. The foundation frame must jut out by 50 mm above ground level.
Fit an iron cage into the foundation frame to reinforce the concrete.
Fit the bolts into the anchoring plate and lock them using the washers and nuts. Remove the pre-shaped clamps using a screw driver or pliers.



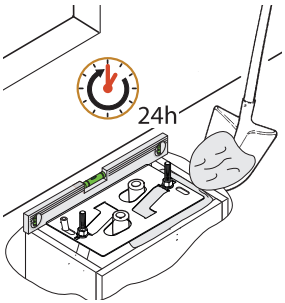


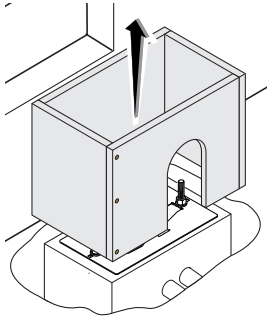
If the rack is already there, place the anchoring plate, being careful to respect the measurements shown in the drawing.
Careful! The tubes must pass through their corresponding holes.

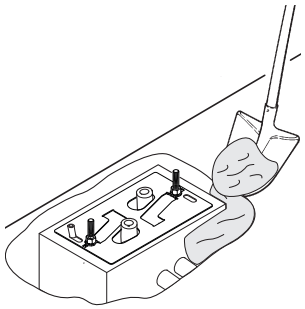




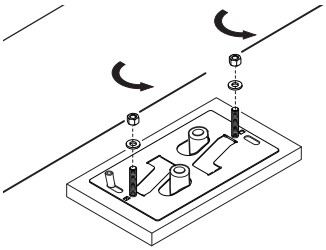
Fill the foundation frame with concrete. The plate must be perfectly level with the bolts which are entirely above surface.
Wait at least 24 hrs for the concrete to solidify.
Remove the foundation frame and fill the hole with earth around the concrete block.

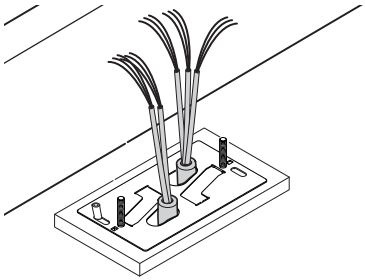






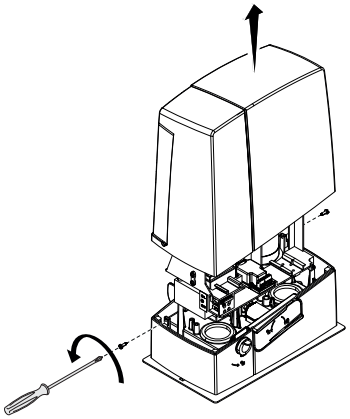
Remove the nut and washer from the bolts
Fit the electric cables into the tubes so that they come out about 600 mm.

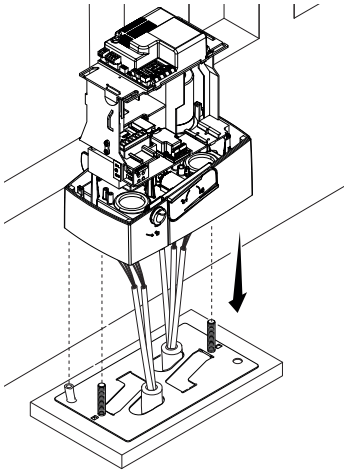




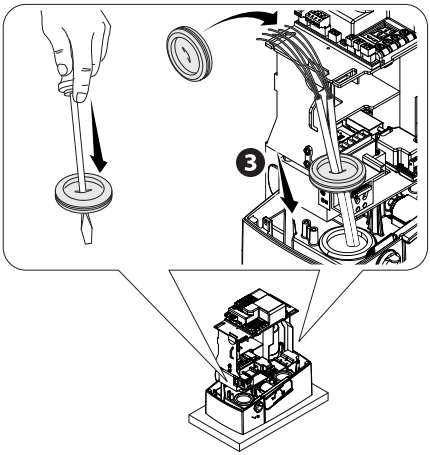
SETTING UP THE GEARMOTOR

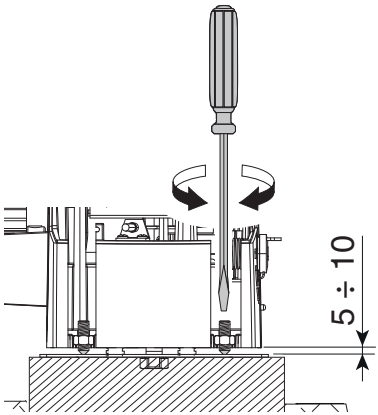
Remove the gearmotor cover by loosening the side screws.
Place the gearmotor above the anchoring plate.
Careful! The electric cables must pass under the gearmotor case.





Perforate the cable gland, pass the cables through and fit it into its corresponding housing.
Raise the gearmotor by 5 to 10 mm from the plate by turning the threaded feet, to make room for further pinion and rack adjustments.

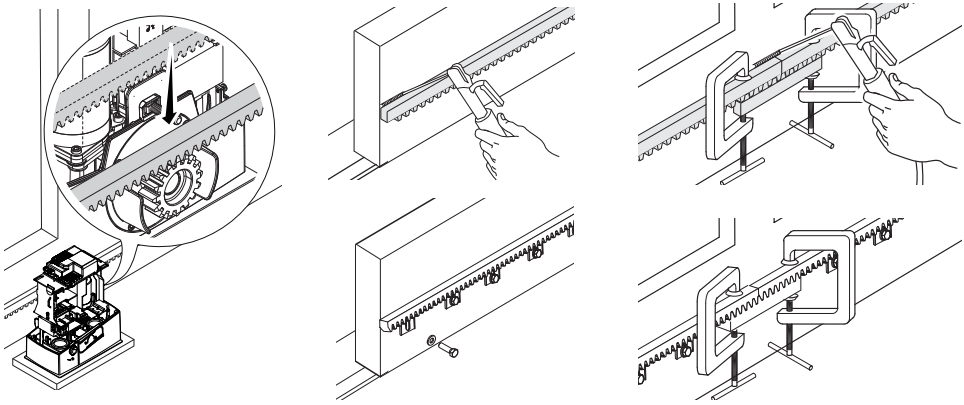




FASTENING THE RACK

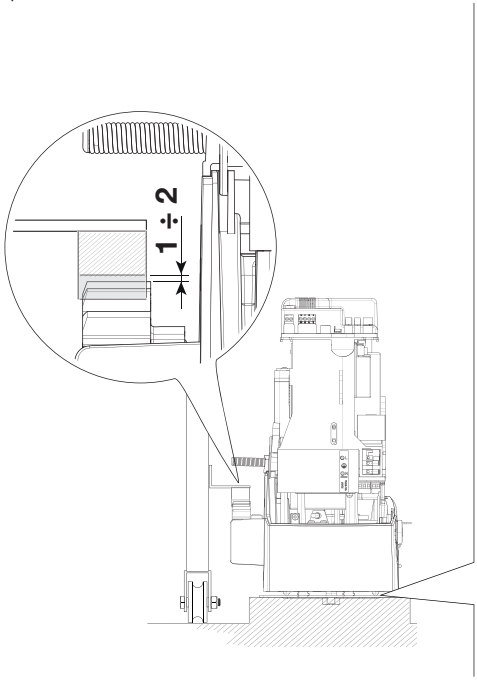
🕮 If the rack is already set up, the next step should be to adjust the rack-and-pinion coupling distance, otherwise, fasten it:
- release the gearmotor (see RELEASING THE GEARMOTOR paragraph);
- rest the rack above the gearmotor pinion;
- weld or fasten the rack to the gate along its entire length.

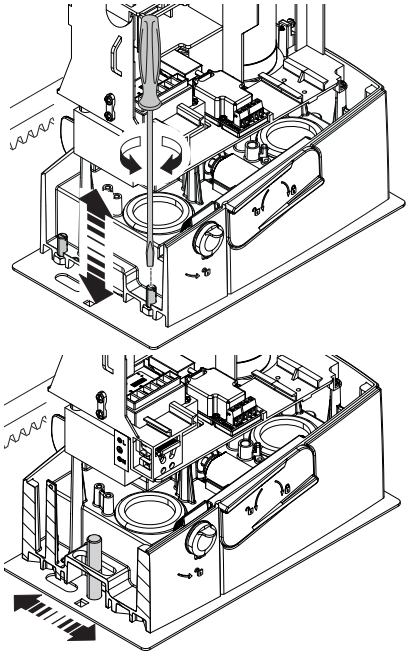
To assemble the rack modules, use an extra piece and rest it under the joint, then fasten it using two clamps.



ADJUSTING THE PINION-RACK COUPLING

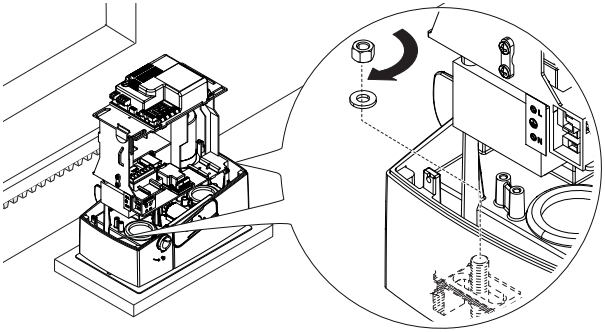
Manually open and close the gate and adjust the pinion-rack coupling distance using the threaded feet (vertical adjustment) and the holes (horizontal adjustment). This prevents the gate's weight from bearing down on the operator.





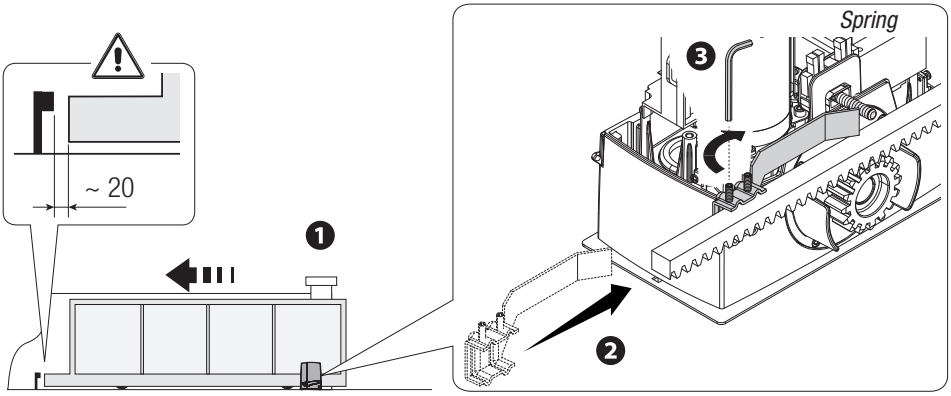
FASTENING THE GEAR MOTOR

Complete the adjusting, fasten the gearmotor to the plate using the washers and nuts.

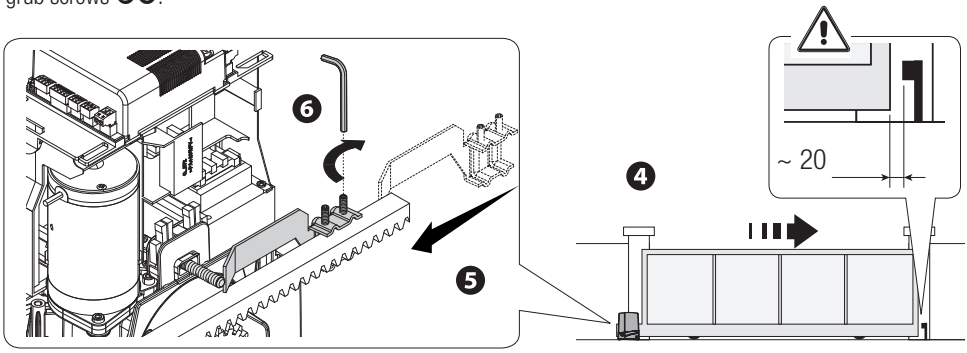


ESTABLISHING THE LIMIT-SWITCH POINTS

For opening:
- open the gate ❶;
- fit the opening limit-switch fin onto the rack until the micro switch activates (spring) and fasten it using the grub screws ❷❸.



For closing:
- close the gate ❹;
- fit the closing limit-switch fin into the rack until the micro-switch is activated (spring) and fasten it using the grub screws ❺❻.



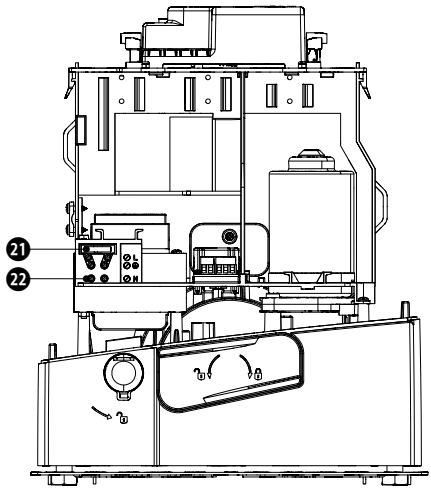
ELECTRICAL CONNECTIONS AND PROGRAMMING

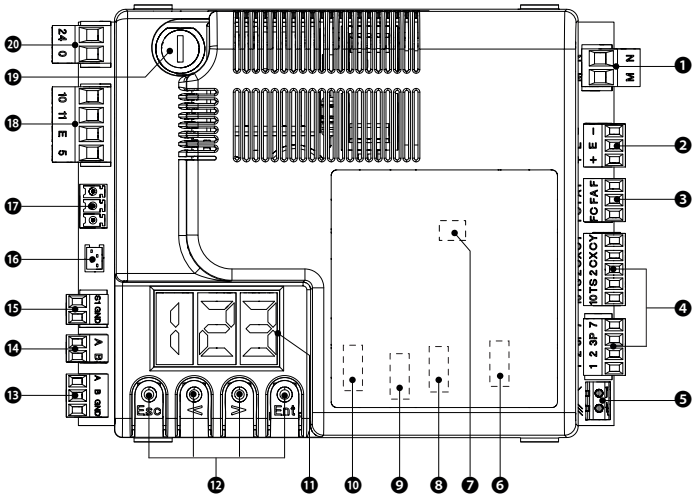
⚠Caution! Before working on the control panel, cut off the mains power supply and remove any batteries.
Power supply to the control board and control devices : 24 V AC/ DC.
Functions on the input and output contacts, time adjustments and user-management settings are set and viewed on the control board's display.
All wiring connections are quick-fuse protected.

Fuses	ZN7V
LINE - Line	1,6 A-F (230V) / 3,15 A-F (120V)
ACCESSORIES - Accessories	2 A-F (230V) / 2 A-F (120V)

DESCRIPTION OF PARTS

1. Terminal for gearmotors
2. Terminals for encoders
3. Terminals for limit-switches
4. Command and safety devices terminals
5. Antenna terminal
6. AF card slot
7. Memory Roll card connector
8. R700/R800 board connector
9. RSE card slot
10. Connector for the RIOCN8WS card
11. Display
12. Programming buttons
13. Terminals for paired of CRP connection
14. Terminal board for keypad devices
15. Terminal board for transponder selector
16. Connector for the GSM module
17. Terminals for the RGP1 module
18. Terminals for signaling devices
19. Accessories fuse
20. Terminals for powering the control board
21. Line fuse
22. Power supply terminal board



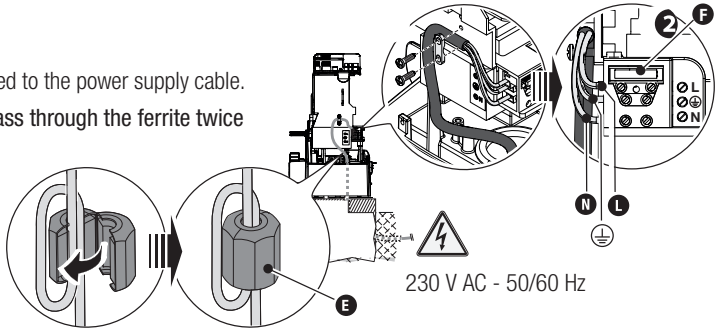


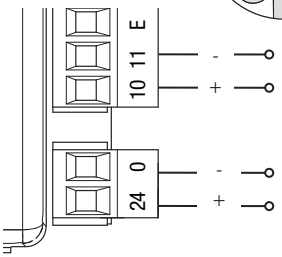
INPUT VOLTAGE

Ⓕ Line fuse
Ⓛ Phase
Ⓝ Neutral
⏚ Earth
Ⓔ Ferrite

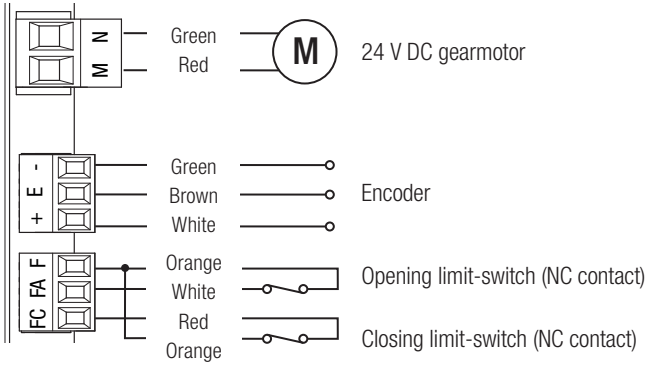
Apply the ferrite supplied to the power supply cable.

📖 The cable must pass through the ferrite twice (2 turns).

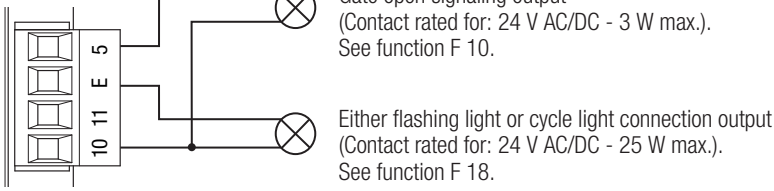




FACTORY WIRING

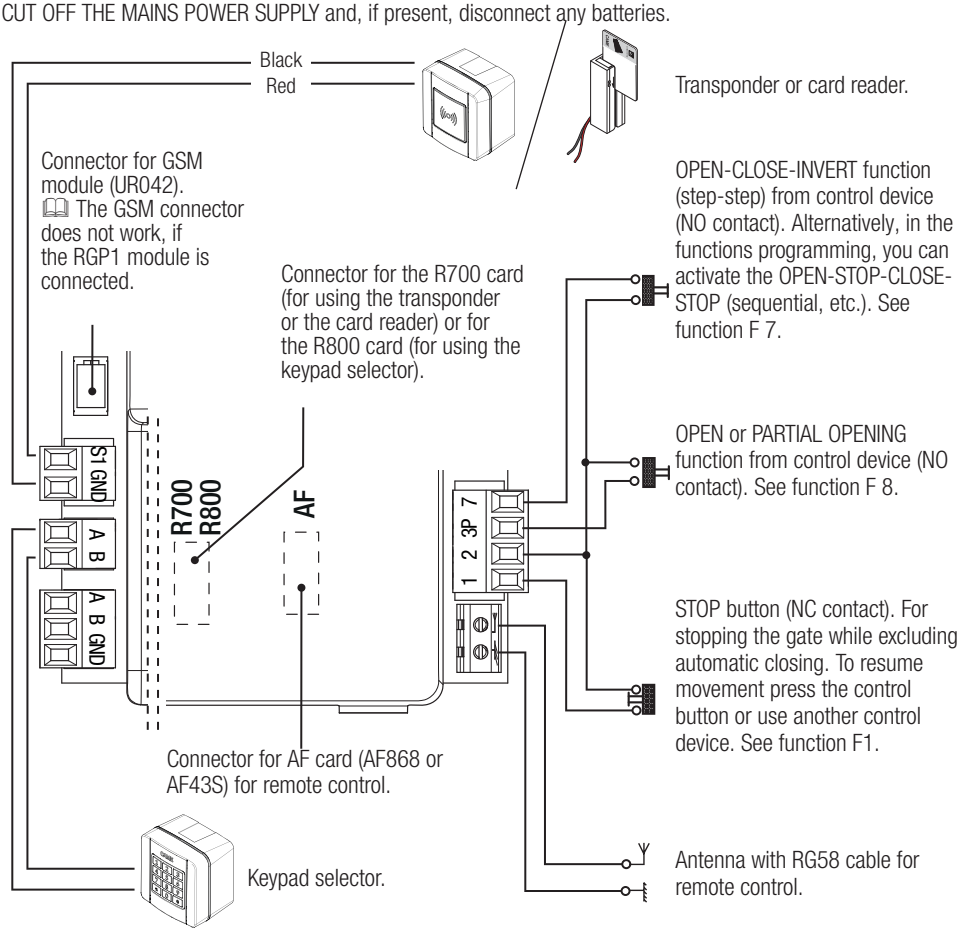


SIGNALING DEVICES

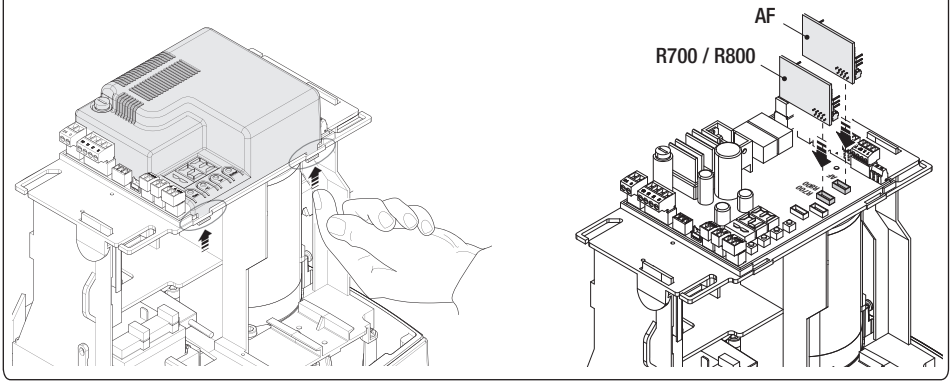


COMMAND AND CONTROL DEVICES

WARNING! For the system to work properly, before fitting any plug-in card, such as the AF or R800 one, you MUST CUT OFF THE MAINS POWER SUPPLY and, if present, disconnect any batteries.



To be able to snap in the cards into the dedicated connectors, remove the card cover.

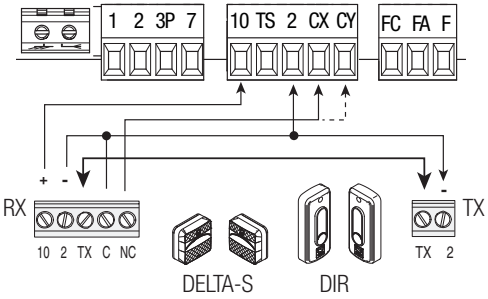


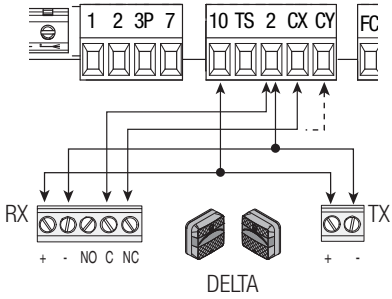
SAFETY DEVICES

Photocells

Configure contact CX or CY (NC), safety input for photocells.
See CX input functions (Function F2) or CY (Function F3) in:
- C1 reopening during closing. When the gate is closing, opening the contact triggers the inversion of movement until the gate is fully open again;
- C2 close back up during opening. When the gate is opening, opening the contact triggers the inversion of movement until the gate is completely closed.
- C3 partial stop. Stopping of the gate, if it is moving, with consequent automatic closing (if the automatic closing function has been entered);
- C4 obstruction wait. Stopping of the gate, if it is moving, which resumes movement once the obstruction is removed.

🕮 If contacts CX and CY are not used they should be deactivated during programming.

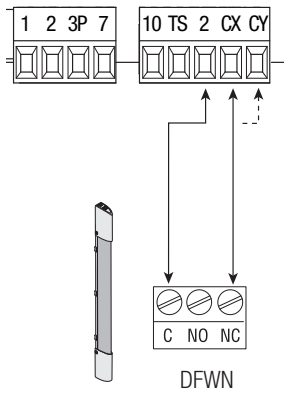


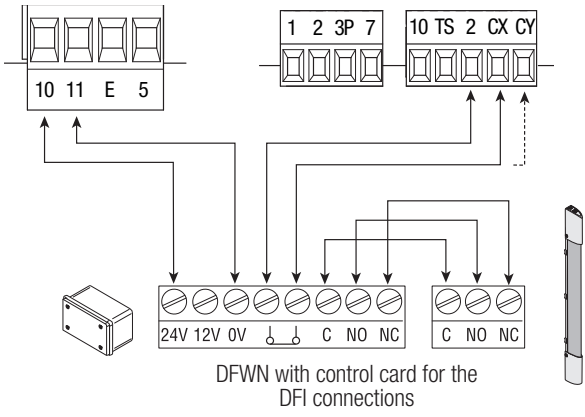


Sensitive Safety Edges

Configure contact CX or CY (NC), safety input for sensitive safety-edges.
See CX input functions (Function F2) or CY (Function F3) in:
- C7 reopening during closing. When the gate is closing, opening the contact triggers the inversion of movement until the gate is fully open again;
- C8 reclosing during opening. When the gate is opening, opening the contact triggers the inversion of movement until the gate is fully closed.

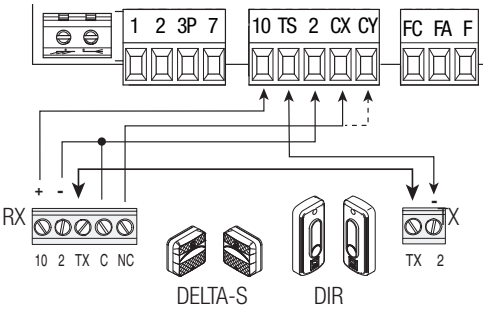
🕮 If contacts CX and CY are not used they should be deactivated during programming.

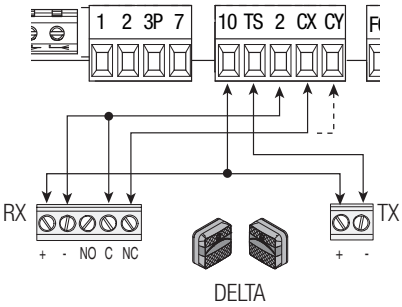




Connecting the safety devices (i.e. the safety test)

At each opening and closing command, the control board checks the efficacy of the safety devices (such as, photocells).
Any malfunction inhibits any command and is signaled on display E4.
Enable function F 5 in programming.



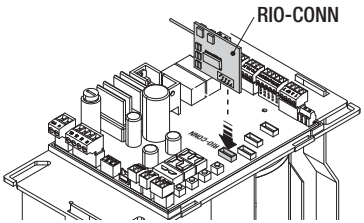


RIO WIRELESS DEVICES

Plug the RIOCN8WS card into its corresponding connector on the control board.
Set the function to be associated to the wireless device (F65, F66, F67 e F68).
Configure the RIOED8WS, RIOPH8WS and RIOLX8WS wireless accessories by following the indications shown in the folder enclosed with each accessory.

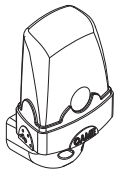
📖 If the devices are not configured with the RIOCN8WS card, the display will read out E18.

⚠ If there are any radio-frequency disturbances to the system, the wireless system will inhibit the normal operation of the operator, and this error will show up on the display as E17.



RIOED8WS

RIOPH8WS

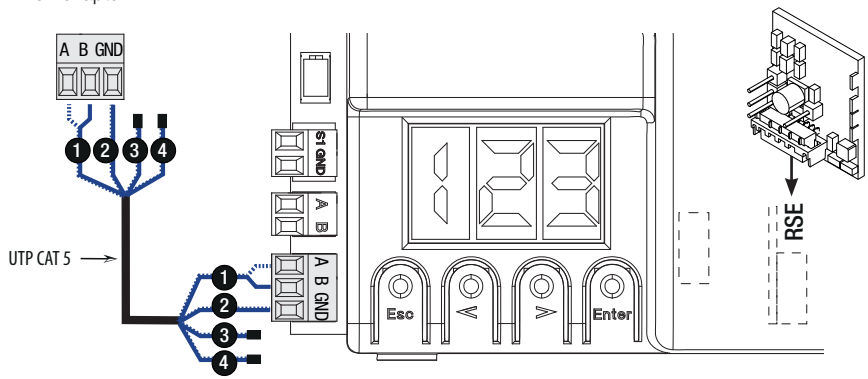


RIOLX8WS

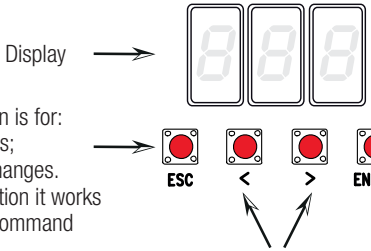
CONNECTION FOR PAIRED OPERATION AND FOR CRP (CAME REMOTE PROTOCOL)

See the PAIRED CONNECTION WITH SINGLE CONTROL chapter.

Fit the RSE card.



DESCRIPTION OF PROGRAMMING COMMANDS



The ESC button is for:
- exiting menus;
- cancelling changes.
- during operation it works from a STOP command

The ENTER key is for:
- entering menus;
- confirming or memorizing set values.

The < > keys are for:
- moving from one item to another;
- increasing or decreasing values.
- after a travel calibration they allow an OPEN or CLOSE command

FUNCTIONS MENU

📖 **IMPORTANT! Start programming by first performing the following: MOTOR-TYPE SETTING (A1), OPENING DIRECTION (F54), TOTAL STOP (F1) and TRAVEL CALIBRATION (A3)**

⚠ **Only program functions when the operator is stopped.**

📖 **You can memorize up to 25 maximum users.**

📖 **When the menu is active, the system cannot be used.**

F1	**Total stop [1-2]**	NC input – Gate stop that excludes any automatic closing; to resume movement, use the control device. The safety device is inserted into [1-2]. ***OFF** = Deactivated (**default**) / **ON** = Activated*
F2	**Input [2-CX]**	NC input – Can associate: C1 = reopening during closing by photocells, C2 = reclosing during opening by photocells, C3 = partial stop, C4 = obstruction wait, C7 = reopening during closing by sensitive safety-edges, C8 = reclosing during opening by sensitive safety-edges. ***OFF** = Deactivated (**default**) / **C1** / **C2** / **C3** / **C4** / **C7** / **C8***
F3	**Input [2-CY]**	NC input – Can associate: C1 = reopening during closing by photocells, C2 = reclosing during opening by photocells, C3 = partial stop, C4 = obstruction wait, C7 = reopening during closing by sensitive safety-edges, C8 = reclosing during opening by sensitive safety-edges. ***OFF** = Deactivated (**default**) / **C1** / **C2** / **C3** / **C4** / **C7** / **C8***
F5	**Safety test**	After every opening or closing command, the board will check whether the photocells are working properly. 📖 The safety test is always active for wireless devices. ***0**= Deactivated (**default**) / **1**=CX / **2**=CY / **4**=CX+CY*
F6	**Maintained action**	The barrier opens and closes by keeping a button pressed. Opening button on contact 2-3 and closing button on contact 2-4. All other control devices, even radio-based ones, are excluded. ***0**= Deactivated (**default**) / **1**= Activated*
F7	**Command [2-7]**	From the control device connected to 2-7, it performs the (open-close-invert) step-step, (open-stop-close-stop), sequential, open or close command. ***0** = Step-step (**default**) / **1** = Sequential / **2** = Open / **3** = Close*

F8	Command [2-3P]	From the control device connected to 2-3P, it performs a partial (1) or total opening (2) of the gate. 📖 The partial opening time is adjusted on function F 71. ***1 = Partial opening / 2 = Open***
F9	Obstruction detection with motor stopped	With the gate closed, opened or totally stopped, the gearmotor stays idle if the safety devices, that is, photocells or sensitive safety-edges detect an obstruction. ***OFF** = Deactivated (**default**) / **ON** = Activated*
F10	Gate open signaling output	It signals the gate status. The signal device is connected to contact 10-5. ***0 = lit when gate is open or moving (default) / 1 = during openings it flashes intermittently each half second, and during closings it flashes intermittently each second.*** *It stays on steadily when the barrier is open, off or when it s closed.*
F11	Encoder	Managing slow-downs, obstruction detections and sensitivity. ***OFF** = Deactivated / **ON** = Activated (**default**)*
F12	Soft Start	With each opening and closing command, the gate starts moving slowly for a few seconds. *OFF = **Deactivated (**default**) / ON = Activated***
F14	Sensor type selection	Setting the type of accessory for controlling the operator. ***0** = command with transponder sensor or magnetic card reader / **1** = command with keypad selector (**default**).*
F18	Additional light	Output on contact 10-E. Flashing light: it flashes during the gate's opening and closing phases. Cycle: outdoor lamp for extra lighting in the driveway. It stays lit from when the gate starts opening to when it closes, including the waiting time prior to automatic closing (only with with TCA activated). ***0** = Flashing light (**default**) / **1** = Cycle*
F19	Automatic Closing Time	The automatic-closing wait starts when the opening limit switch point is reached and can be set to between 1 and 180 seconds. The automatic closing does not work if any of the safety devices trigger when an obstruction is detected, or after a total stop, or during a power outage. ***OFF** = Deactivated (**default**) / **1** = 1 second / ... / **180** = 180 seconds*
F20	Automatic closing time after partial opening	The wait before the automatic closing starts after a partial opening command for an adjustable time of between 1 s and 180 s. The automatic closing does not work if any of the safety devices trigger when an obstruction is detected, or after a total stop, or during a power outage. 📖 The F19 function must not be activated. ***OFF** = Deactivated / **1** = 1 seconds / … / **10** = seconds (**default**) / … / **180** = 180 seconds*
F21	Pre-flashing time	Adjusting the pre-flashing time for the flashing light connected to 10-E before each maneuver. The flashing time is adjustable from one to ten seconds. ***OFF** = Deactivated (**default**) / **1** = 1 seconds / … / **10** = 10 seconds*
F28	Gate travel speed	Setting the gate's opening and closing speeds, calculated as a percentage. ***60** = Minimum speed / … / **100** = Maximum speed (**default**)*
F30	Slow-down speed	Setting the gate's opening and closing slow-down speed, calculated as a percentage. ***10** = Minimum speed / … / **30** = Maximum speed (**default**)*
F34	Travel sensitivity	Adjusting obstruction detection sensitivity during gate-leaf travel. ***10** = maximum sensitivity / … / **100** = minimum sensitivity (**default**)*

F35	Slow-down sensitivity	Adjusting obstruction detection sensitivity during slow-down. ***10** = maximum sensitivity / … / **100** = minimum sensitivity (**default**)*
F36	Adjusting the partial opening	Adjustment as a percentage of total travel, during gate opening. 📖 This function appears only is the Encoder function is activated. ***10** = 10% of the gate travel (**default**) / … / **80** = 80% of the door travel*
F37	Opening slow-down point	Percentage adjustment of the total door travel, of the opening slow-down starting point. 📖 This function appears only is the Encoder function is activated. ⚠ For sliding gate leaves with high inertia and fast speeds, bring the slowdown starting point forward to ensure the limit-switch position is reached at the desired speed during opening and closing. ***10** = 10% of the gate-leaf travel / … / **25** = 25% of the gate-leaf travel (**default**) / … / **60** = 60% of the gate-leaf travel*
F38	Closing slow-down point	Percentage adjustment of the total door travel, from the closing slow-down starting point. 📖 This function appears only is the Encoder function is activated. ⚠ For sliding gate leaves with high inertia and fast speeds, bring the slowdown starting point forward to ensure the limit-switch position is reached at the desired speed during opening and closing. ***10** = 10% of the gate-leaf travel / … / **25** = 25% of the gate-leaf travel (**default**) / … / **60** = 60% of the gate-leaf travel*
F49	Managing the serial connection	To enable the paired operating mode or the CRP (Came Remote Protocol). ***0** = Deactivated (**default**) / **1** = Paired / **3** = CRP*
F50	Saving data	Saving users and settings saved in the Memory Roll. 📖 This function only appears if a Memory Roll has been plugged into the control board. ***0** = Deactivated (**default**) / **1** = Activated*
F51	Reading of data	Uploading data saved in the Memory Roll. 📖 This function only appears if a Memory Roll has been plugged into the control board. ***0** = Deactivated (**default**) / **1** = Activated*
F52	Transferring parameters in paired mode	Uploading settings from Master to Slave. 📖 This appears only if function F49 is set to Paired. ***OFF** = Deactivated (**default**) / **ON** = Activated*
F54	Opening direction	For setting the gate opening direction. ***OFF** = Opening left (**default**) / **ON** = Opening right*
F56	Peripheral number	To set the peripheral's number from 1 to 255 for each control board when you have a system with several operators. ***1 ----> 255***
F63	Changing COM speed	For setting the communication speed used in the CRP (Came Remote Protocol) connection system. ***0** = 1200 Baud / **1** = 2400 Baud / **2** = 4800 Baud / **3** = 9600 Baud / **4** = 14400 Baud / **5** = 19200 Baud / **6** = 38400 Baud (**default**) / **7** = 57600 Baud / **8** = 115200 Baud*
F65	Wireless input RIOED8WS [T1]	Wireless safety device (RIOED8WS) associated to a function of choice among those available: P0 = TOTAL STOP, P7 = reopening during closing, P8 = reclosing during opening. For programming, see the instructions that come with the accessory. 📖 This function only appears if the RIOCN8WS card is plugged into the control board. ***OFF** = Deactivated (**default**) / **P0** / **P7** / **P8***

F66	**Wireless input RIOED8WS [T2]**	Wireless safety device (RIOED8WS) associated to a function of choice among those available: P0 = TOTAL STOP, P7 = reopening during closing, P8 = reclosing during opening. For programming, see the instructions that come with the accessory. 🕮 This function only appears if the RIOCN8WS card is plugged into the control board. ***OFF*** *= Deactivated (**default**) /* ***P0*** */* ***P7*** */* ***P8***
F67	**Wireless input RIOPH8WS [T1]**	RIOPH8WS is associated to any function chosen among those available: P1 = reopening during closing; P2 = reclosing during opening; P3 = partial stop; P4 = obstruction wait. For programming, see the instructions that come with the accessory. 🕮 This function only appears if the RIOCN8WS card is plugged into the control board. ***OFF*** *= Deactivated /* ***P1*** *(**default**) /* ***P2 marked areas*** */* ***P3*** */* ***P4***
F68	**Wireless input RIOPH8WS [T2]**	RIOPH8WS is associated to any function chosen among those available: P1 = reopening during closing; P2 = reclosing during opening; P3 = partial stop; P4 = obstruction wait. For programming, see the instructions that come with the accessory. 🕮 This function only appears if the RIOCN8WS card is plugged into the control board. ***OFF*** *= Deactivated /* ***P1*** *(**default**) /* ***P2 marked areas*** */* ***P3*** */* ***P4***
F71	**Partial opening time**	After an opening command from the button connected to 2-3P, the gate opens for an adjustable time of between five seconds and 40 seconds. 🕮 This function only appears if the Encoder function is deactivated. ***5*** *= 5 seconds /... /* ***40*** *= 40 seconds*
U1	**Entering users**	Entering up to 250 users and associating to each one a function of choice among those included. This must be done via transmitter or other control device (see "ENTERING USERS WITH ASSOCIATED COMMAND paragraph). ***1*** *= Step-step command (open-close) /* ***2*** *= Sequential command (open-stop-close-stop) /* ***3*** *= Open only command /* ***4 = partial command***
U2	**Deleting users**	Deleting a single user ***OFF*** *= Deactivated /* ***ON*** *= Activated*
U3	**Deleting users**	Deleting all users. ***0*** *= Deactivated (**default**) /* ***1*** *= Delete*
U4	**Decoding the radio-frequency code**	Select the type of transmitter radio coding that you wish to save on the control board. ⚠ When you select a radio coding, all saved transmitter are automatically deleted. 🕮 TWIN's coding lets you save multiple users with the same key (Key block). ***1 = all series (default) / 2 = only Rolling Code series /3 = only TWIN series***
U8	**Self-Learning Rolling**	Umożliwia zapisanie nowego nadajnika rolling code poprzez aktywację pozyskiwania z już zapamiętanego nadajnika rolling kod. Procedury zapisywania i pozyskiwania są objaśnione w instrukcji obsługi nadajnika. ***OFF*** *= Deactivated (**default**) /* ***ON*** *= Activated*
A1	**Motor type**	To set the gearmotor depending on the gate's weight. ***1 = 400 kg /2*** *= 600 kg /* ***3*** *= 800 kg /* ***4*** *= 1000 kg*
A3	**Gate-swing calibration**	Automatic calibration of the gate-leaf swing (see the CALIBRATING SWING paragraph). ***OFF*** *= Deactivated /* ***ON*** *= Activated*
A4	**Resetting parameters**	Caution! The default settings are restored and the travel calibration deleted. ***OFF*** *= Deactivated /* ***ON*** *= Activated*
A5	**Maneuver count**	For viewing the number of maneuvers made (001 ***=*** 100 maneuvers; ***010*** = 1,000 maneuvers; ***100*** = 10,000 maneuvers; ***999*** = 99,900 maneuvers; ***CSI*** = maintenance job).

A6	**Adjusting the motor torque**	For adjusting the motor torque from 1 (minimum) to 5 (maximum). *1 / 2 / 3 / 4 / 5*
H1	**Version**	View the firmware version.

COMMISSIONING

Once the electrical connections are done, have only skilled, qualified staff commission the operator into service. Before continuing, make sure the area is free of any obstructions, and that there are mechanical, opening and closing gate stops in place.

Power up and begin configuring the system. **Important!** Start programming by first doing the following functions: F54 (opening direction) and F1 (Total Stop). Once the programming is done, verify that the operator and all the accessories are working properly.Use the < > keys to open and close the gate and ESC to stop it.

⚠After powering up the system, the first maneuver is always the opening. In this phase, the gate cannot be closed. You will need to wait for the gate to completely open.

⚠ Immediately press the STOP button if any suspicious malfunctions, noises or vibrations occur in the system.

MANAGING USERS

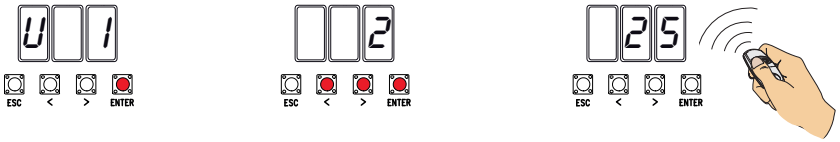
🕮 When adding and deleting users, the flashing numbers appearing are those numbers that are available and usable to assign to a new user (max. 250 users).

🕮 Before registering the users, make sure the AF radio card is plugged into the connector (see the paragraph called CONTROL DEVICES).

ENTERING A USER WITH AN ASSOCIATED COMMAND

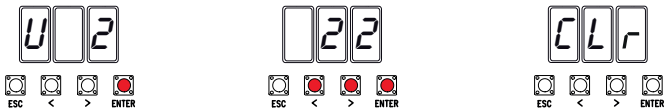
Select U 1. Press ENTER to confirm.
Select a command to associate to the user: The commands are:
- **1** = step-step (open-close);
- **2** = - sequential (open-stop-close-stop);
- **3** = only open;
- **4** = partial opening/pedestrian.

Press ENTER to confirm...
... a number between 1 and 250 will start flashing for a few seconds. Send the code from the transmitter or other control device, such as, a keypad selector or a transponder.
📖 Note down the user entered **into the LIST OF REGISTERED USERS**.



DELETING A SINGLE USER

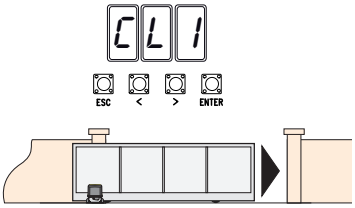
Select U 2. Press ENTER. Activate the function and press ENTER to confirm
Use the arrow keys select the number of the user you wish to delete.
Press ENTER to confirm...
... CLr will appear on the screen to confirm deletion.

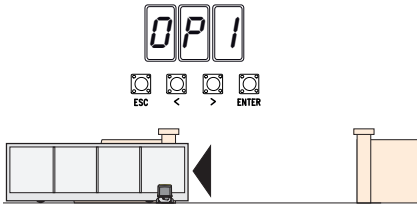


GATE-SWING CALIBRATION

📖 Before calibrating the gate travel, position the gate half-way, check that the maneuvering area is clear of any obstruction and check that there are mechanical opening and closing stops.
⚠ The mechanical gate-stops are obligatory.
Important! When calibrating, all safety devices will be disabled excluding the one for TOTAL STOP which is active on on the ESC button.
Select A 3. Press ENTER to confirm.
Select 1 and press ENTER to confirm the travel calibration operation.

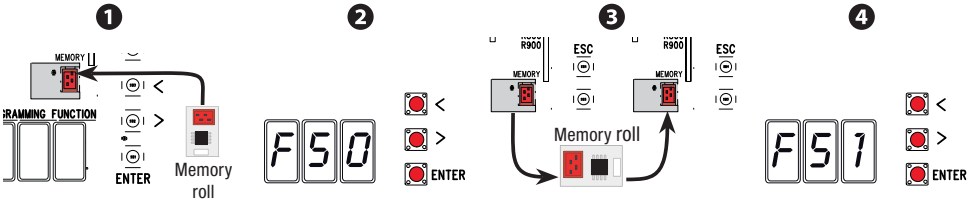
The gate will perform a closing maneuver until it reaches a final stop...
...then the gate will perform an opening maneuver until it reaches a final stop.





SAVING AND UPLOADING ALL DATA (USERS AND CONFIGURATION) WITH THE MEMORY ROLL

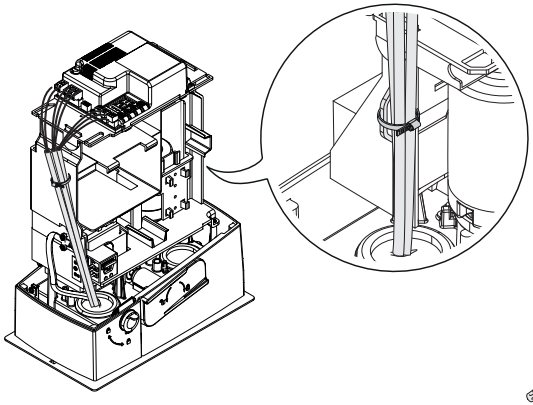
Procedure for memorizing all of the system's user and configuration data by using the Memory Roll, so they can be used with another control board, even on another system.
Caution! Fitting and extracting the Memory Roll must be done with the mains power disconnected.
Fit the Memory Roll into the its corresponding connector on the control board. ❶
Select **F50** and press ENTER to confirm the saving of data in the Memory Roll. ❷
Extract the Memory roll and fit it into the connector of another control board. ❸
Select **F51** and press ENTER to confirm the uploading of data into the Memory Roll. ❹
🕮 After memorizing the data, it is best to remove the Memory roll.

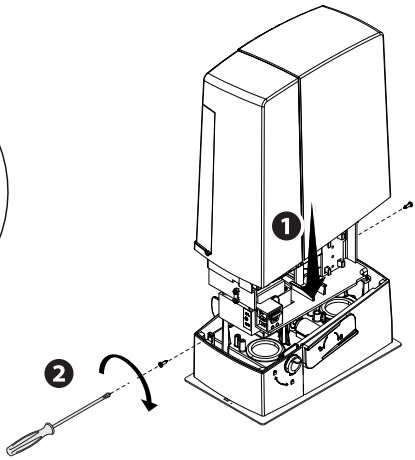


FINAL OPERATIONS

Once the electrical connections are done and the set up is finished, fasten the cables to the gearmotor jumper using a cable tie.

Fit the cover and fasten it to the sides using the screws.





PAIRED OPERATION

Electrical wiring

Important! Start by performing the following procedures on both operators:
- plugthe RSE card into the connector on the control panel of both operators;

Connect the two control panels to a CAT 5-type (max. 1,000 m) cable onto terminals A-A / B-B / GND-GND, see the PAIRED OPERATION paragraph;
- connect all of the control and safety devices on the MASTER operator's control panel.

Saving users

Execute the procedure, to add a user with an associated command, on the MASTER panel.

Programming

Start by performing the following settings only on the MASTER control panel:
- select 1 (paired mode) from the F49 function and press ENTER to confirm;
- select the opening direction from the F54 function and press ENTER to confirm;
- select ON from the F52 function and press ENTER to confirm the transferring of the parameters to paired mode.

Proceed with the next settings and adjustments only on the MASTER control panel.

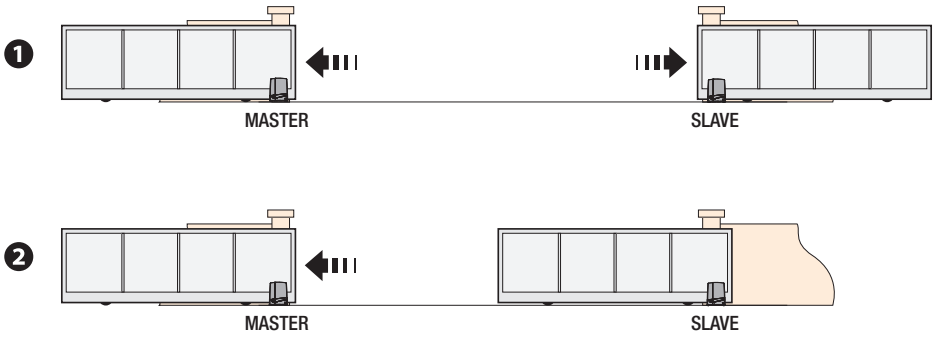
📖 The programming keys on the SLAVE control panel are disabled.

Operating modes

❶ Either STEP-STEP or ONLY OPEN command. Both leaves open.

❷PARTIAL/PEDESTRIAN OPENING command. Only the MASTER operator's leaf opens.

For the types of command that can be selected and paired to users, see the ENTERING USERS WITH ASSOCIATED COMMANDS.



ERROR MESSAGE

🕮 The error messages appear on the display.

E 1	The travel calibration was interrupted when the STOP button was activated
E 2	Gate-leaf travel calibration incomplete
E 3	Motor control error
E 4	Services test error
E 7	Insufficient operating time
E 8	The NC contacts are open (for example, the limit-switches)
E 9	Closing obstruction
E 10	Opening obstruction
E 11	Maximum number of detected obstructions
E 13	The NC contacts are open (for example, the limit-switches)
E 14	Serial communication error
E 15	Incompatible transmitter error
E 17	Wireless system error
E 18	The wireless system configuration is missing
C0	Wired contact 1-2 (NC) is open
C1, C2, C3, C4	The wired photocell contacts (NC) are open
C7, C8	The wired sensitive-edge contacts (NC) are open
P0	The wireless radio stop contact (NC) is open
P1, P2, P3, P4	The wireless radio photocell contacts (NC) are open
P7, P8	The wireless radio sensitive-edge contacts (NC) are open
---	Control board has no travel auto-learning

Troubleshooting

Error shown	Action
E3	Connect cables MN and +E-
	Check the gate is not blocked
	The encoder module is not installed
	Measure the voltage between M and N
	Thermal protection is activated
	Check the position of the limit-switches and speed (gate open and gate closing)
	Check the control board is intact
	Check the motor is intact

MCBF

Models	BXV04AGF	BXV06AGF	BXV10AGF
Length - Weight	14 m - 400 kg	18 m - 600 kg	20 m - 1000 kg
Cycles	150000	150000	150000
Installation in windy area (%)	-15 %	-15 %	-15 %

📖 The percentages indicate how much the number of cycles should be reduced in relation to the type and number of accessories installed.

⚠ 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 10,000 cycles and, in any case, every 6 months of operation, you must perform the maintenance work indicated below.

Perform a general and complete check of the tightness of the nuts and bolts.
Grease all of the moving mechanical parts.
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.
Check and clean the track guide and rack.

DISMANTLING AND DISPOSAL

☞ CAME S.p.A. applies a certified Environmental Management System at its premises, which is compliant with the UNI EN ISO 14001 standard to ensure the environment is 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, and so on) should be disposed of as solid household waste, and simply separated from other waste for recycling.
Always make sure you comply with local laws before dismantling and disposing of the product.
DISPOSE OF RESPONSIBLY!
DISMANTLING AND DISPOSAL
Our products are made of various materials. Most of these (aluminum, plastic, iron, electrical cables) are classified as solid household waste. They can be recycled by separating them before dumping at authorized city plants.
Whereas other components (control boards, batteries, transmitters, and so on) may contain hazardous pollutants.
These must therefore be disposed of by authorized, certified professional services.
Before disposing, it is always advisable to check with the specific laws that apply in your area.
DISPOSE OF RESPONSIBLY!

AFFIX THE PRODUCT LABEL FROM THE BOX HERE

The contents of this manual may change, at any time, and without notice.

CAME

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