




BETA400

USER'S AND INSTALLER'S MANUAL

SAFETY INSTRUCTIONS

	This product is certified in accordance with European Community (EC) safety standards.
RoHS	This product complies with Directive 2011/65/EU of the European Parliament and of the Council, of 8 June 2011, on the restriction of the use of certain hazardous substances in electrical and electronic equipment.
	(Applicable in countries with recycling systems). This marking on the product or literature indicates that the product and electronic accessories (eg. charger, USB cable, electronic material, controls, etc.) should not be disposed of as other household waste at the end of its useful life. To avoid possible harm to the environment or human health resulting from the uncontrolled disposal of waste, separate these items from other types of waste and recycle them responsibly to promote the sustainable reuse of material resources. Home users should contact the dealer where they purchased this product or the National Environment Agency for details on where and how they can take these items for environmentally safe recycling. Business users should contact their vendor and check the terms and conditions of the purchase agreement. This product and its electronic accessories should not be mixed with other commercial waste.
	This marking indicates that the product and electronic accessories (eg. charger, USB cable, electronic material, controls, etc.) are susceptible to electric shock by direct or indirect contact with electricity. Be cautious when handling the product and observe all safety procedures in this manual.

- It is important for your safety that these instructions are followed.
- Keep these instructions in a safe place for future reference.
- The Supplier is not responsible for the improper use of the product, or other use than that for which it was designed.

- The Supplier is not responsible if safety standards were not taken into account when installing the equipment, or for any deformation that may occur.
- The Supplier is not responsible for insecurity and malfunction of the product when used with components that were not sold by the them.
- This product was designed and manufactured strictly for the use indicated in this manual.
- Any other use not expressly indicated may damage the product and/or can cause physical and property damages, and will void the warranty.
- Do not make any changes to the automation components and/or their accessories.
- Keep remote controls away from children, to prevent the automated system from being activated involuntarily.
- The customer shall not, under any circumstances, attempt to repair or tune the operator. Must call qualified technician only.
- The installer must have certified professional knowledge at the level of mechanical assemblies in doors and gates and control board programming. He should also be able to perform electrical connections in compliance with all applicable regulations.
- The installer should inform the customer how to handle the product in an emergency and provide him the manual.
- This device can be used by children 8 year old or older and persons whose physical, sensory or mental capacities are reduced, or by persons without experience or knowledge if they have received supervision or instructions on the use of the device in a safe manner and understood the hazards involved. Children should not play with the device. Cleaning and maintenance by the user must not be carried out by unsupervised children.
- Before installing, the installer must verify that the temperature range indicated on the operator is appropriate to the location of the installation.
- Before installing, the installer must verify that the equipment to be automated is in good mechanical condition, correctly balanced and opens and closes properly.
- If the operator is to be installed at a level higher than 2,5 m above ground level or other level of access, , should be followed the minimum safety and health requirements for the use of work equipment workers at work in Directive 2009/104/EC of the European Parliament and of the Council of 16th September of 2009.
- In the case of the equipment where the automation will be installed, have a pedestrian door, be aware that it must be closed when the operator is activated.
- After installation, make sure that the mechanism is properly adjusted and that the protection system and any manual unlocker works correctly.
- In order to protect the electrical cables against mechanical stress, you should use conduit for the electrical wires, essentially on the power cable.

- When programming the control unit, pay particular attention to touching only the location intended for that purpose. Failure to do so may result in electric shock.

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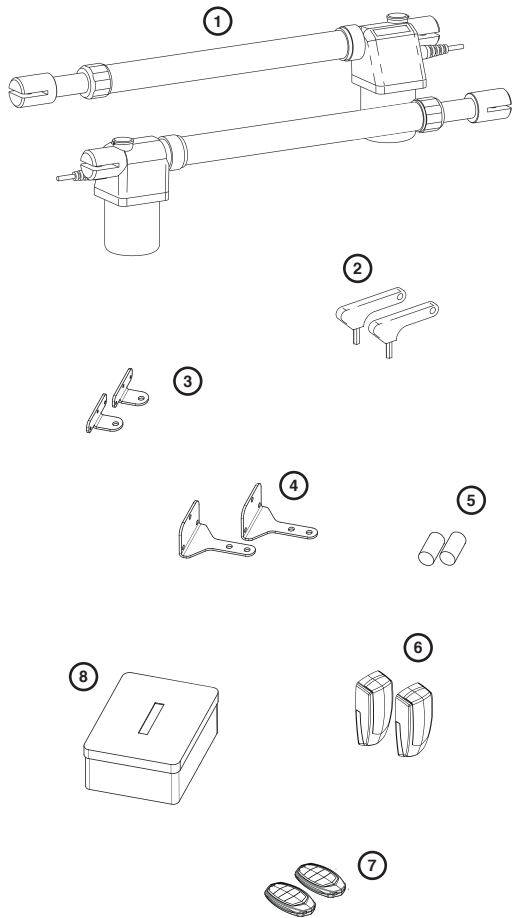
PRÉ-INSTALLATION



The **BETA400** automation is a product exclusively developed for the **automatic opening of swing doors**.

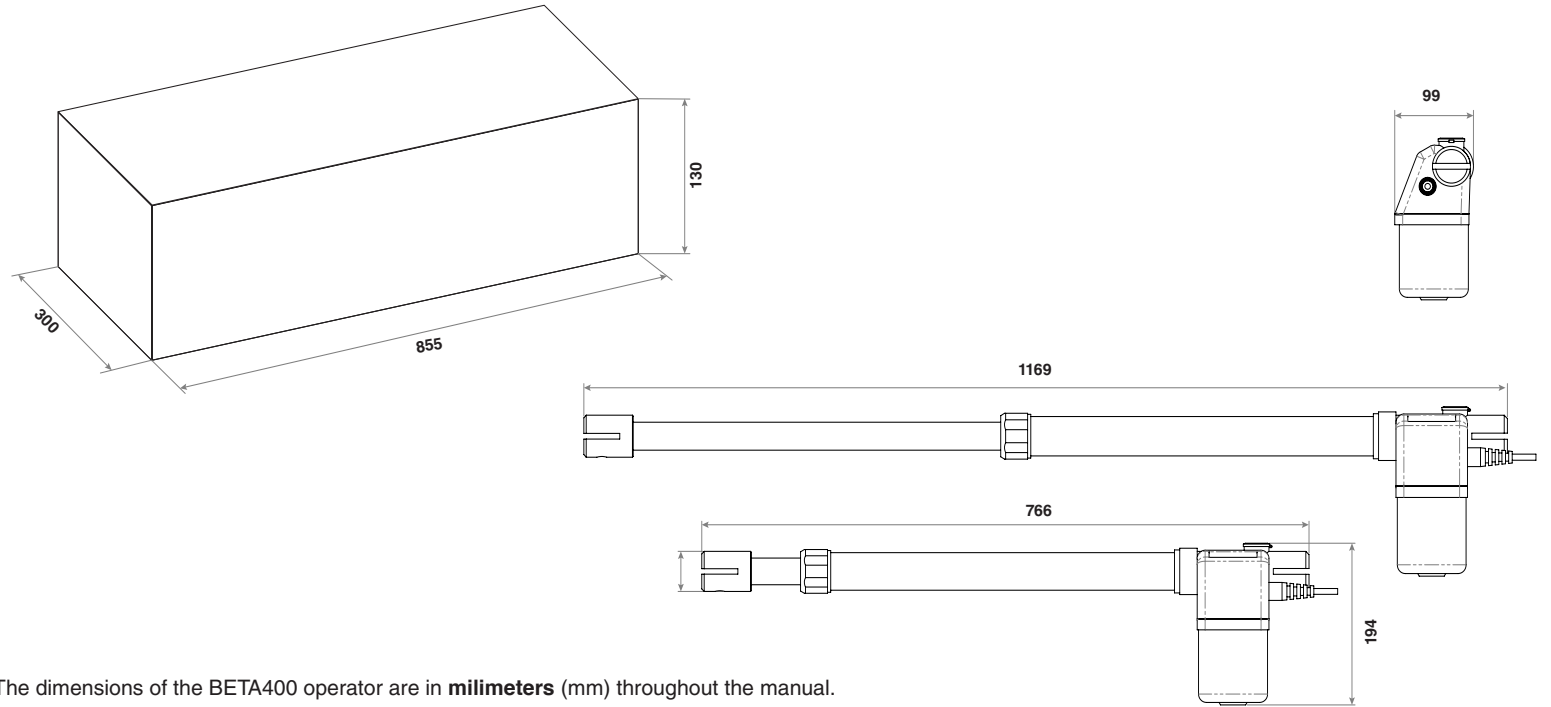
In order to ensure correct installation and operation it is important that the **INSTALLATION** order is adhered to.

PACKAGE



- 1 • Motor BETA400 (2x)
- 2 • Release keys (2x)
- 3 • Front brackets (2x)
- 4 • Rear brackets (2x)
- 5 • Capacitors (2x)
- 6 • Photocells (2x)
- 7 • Remote Controls (2x)
- 8 • Central board MC2 (1x)
- 9 • User's manual(1x)

OPERATOR



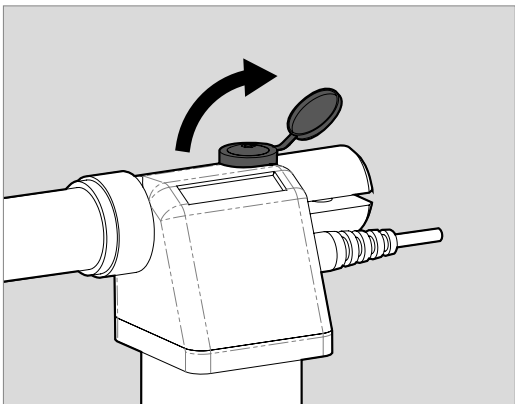
The dimensions of the BETA400 operator are in **millimeters** (mm) throughout the manual.

The specifications of the operator are as follows:

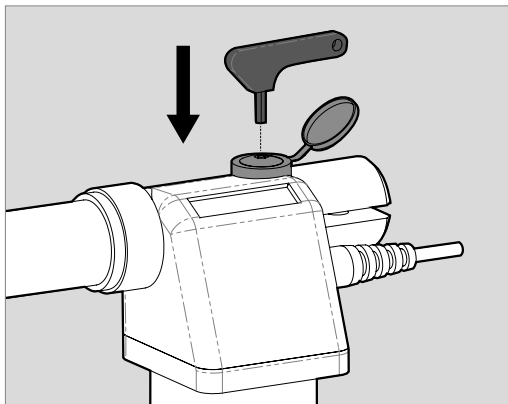
		BETA400
• Power Supply	230V	230Vac 50/60Hz
	110V	AC 110V 50/60Hz
• Power	230/110V	280W
• Current	230V	1,3A
	110V	2,5A
• RPM	230/110V	1400 RPM
• Noise Level		LpA <= 50 dB (A)
• Force		2300N
• Operating temperatures		-25°C ~75°C
• Thermal protection		150°C
• IP		IP54
• Working frequency	230/110V	25%
• Opening time		13 seg. a 18 seg.
• Course		400mm
• Max leaf length		3000mm
• Capacitor	230V	10µF
	110V	25µF

INSTALLATION

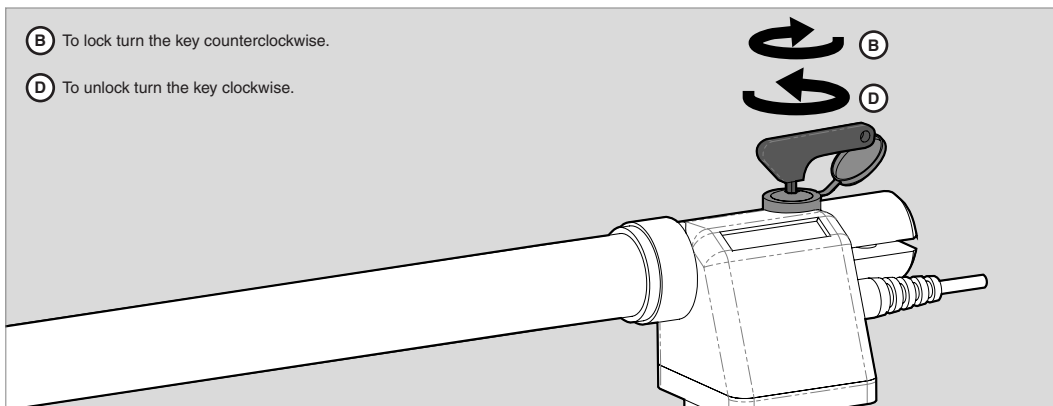
UNLOCK OPERATOR



1 • Open the plastic cover in the back.



2 • Insert the key into the unlocking shaft entrance.



(B) To lock turn the key counterclockwise.

(D) To unlock turn the key clockwise.

3 • Turn the key 180 ° in the direction shown in the figure to unlock.

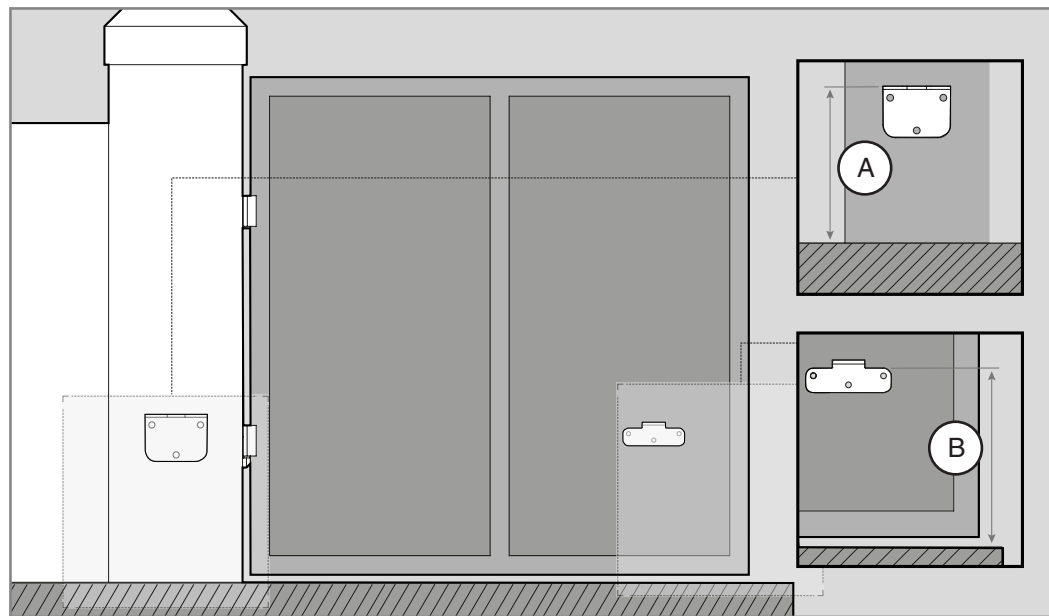
4 • Automatism unlocked.

Note • For automatic operation, it must be locked again by turning the key in the opposite direction.

HEIGHT OF THE SUPPORTS

The operator should be installed with a small declination on the front, to prevent water infiltration by the extension arm.

To this end, the front support plate must be attached to the gate with a height lower than the height of the rear support plate. See the example below:



Quota A • Vertical distance from the floor to the top of the rear support plate.

Quota B • Vertical distance from the floor to the top of the front support plate.

A	? mm
B	A-10mm

1 • Define **Quota A** (this can be any dimension of your choice).

2 • After defining **Quota A**, subtract **10mm** and the result is **Quota B**.

Example:

• If the height of the back support plate (**Quota A**) is set to 600mm, then the height of the front support plate (**Quota B**) will be 590mm (600mm-10mm).

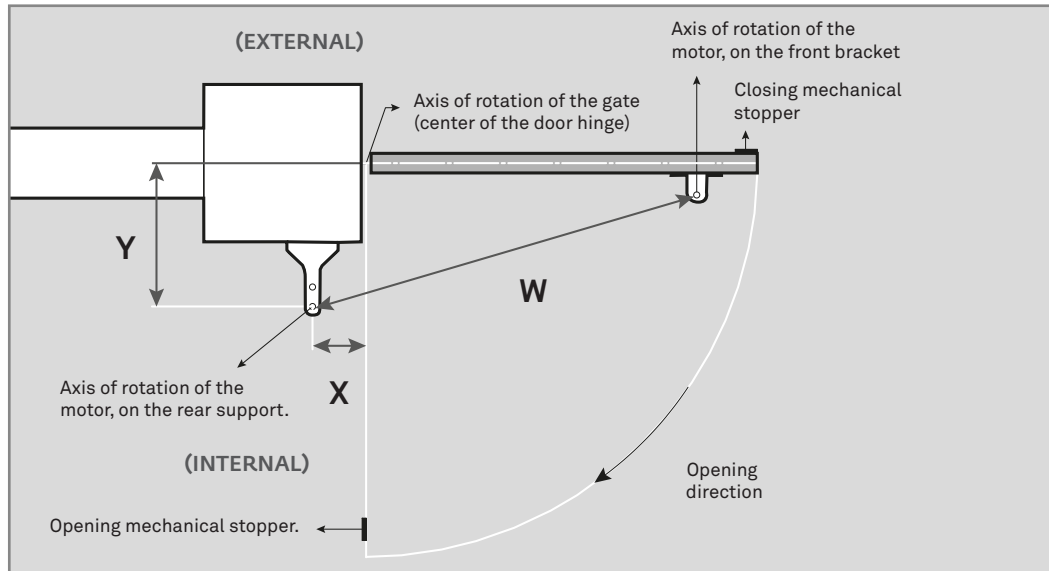


It is very important that these quotas be respected!

Only in this way can the correct operation and durability of the automatic controls be ensured!

It is also very important that the floor is level!

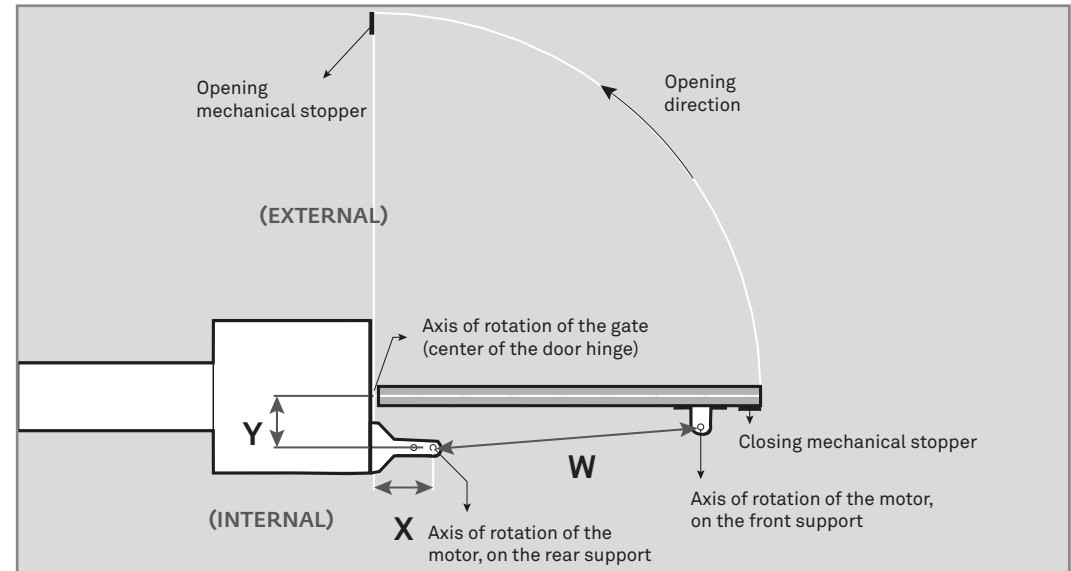
INTERNAL OPENING INSTALLATION QUOTAS



BETA400 MAX. OPENING ANGLE INTERNAL										
Quotas Y	Quotas X									
	140	150	160	170	180	190	200	210	220	230
130	-	-	-	-	-	-	-	-	-	-
140	-	-	-	-	-	-	-	-	-	-
150	98°	102°	105°	109°	112°	109°	105°	102°	99°	97°
160	98°	101°	105°	108°	110°	105°	102°	99°	96°	94°
170	98°	101°	104°	107°	105°	101°	98°	96°	94°	92°
180	98°	101°	104°	106°	101°	98°	95°	93°	91°	-
190	97°	101°	104°	101°	98°	95°	92°	91°	-	-
200	97°	100°	101°	97°	94°	92°	-	-	-	-
210	97°	100°	97°	93°	91°	-	-	-	-	-
220	97°	96°	93°	90°	-	-	-	-	-	-
230	95°	92°	-	-	-	-	-	-	-	-

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EXTERNAL OPENING INSTALLATION QUOTAS



BETA400 MAX. OPENING ANGLE EXTERNAL										
Quotas Y	Quotas X									
	140	150	160	170	180	190	200	210	220	230
130	93°	96°	99°	102°	105°	107°	110°	106°	101°	97°
140	92°	95°	98°	101°	104°	106°	108°	103°	98°	94°
150	92°	95°	98°	100°	103°	105°	105°	100°	95°	92°
160	91°	94°	97°	100°	102°	104°	101°	97°	93°	-
170	91°	94°	96°	99°	101°	104°	98°	94°	90°	-
180	91°	93°	96°	98°	101°	100°	95°	91°	-	-
190	90°	93°	95°	98°	100°	97°	92°	-	-	-
200	90°	93°	95°	97°	99°	94°	-	-	-	-
210	90°	92°	95°	97°	96°	91°	-	-	-	-
220	-	92°	94°	96°	93°	-	-	-	-	-
230	-	92°	94°	95°	-	-	-	-	-	-

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In the diagrams illustrated above, the **quotas for the installation** of the automatism are defined.

- When installing the automation, it is mandatory to respect the quotas x and y, as indicated in the tables. Within this area, it is possible to identify the maximum opening angle that the gate reaches in these quotas.

X, Y and W shown in (mm)



- **It is very important that these quotas be respected!** Only in this way can the correct operation and durability of the automatic controls be ensured!

Subtitle:

Quota X - Horizontal distance between the axis of the door hinge and the rear axle of engine rotation.
Quota Y - Vertical distance between the axis of the door hinge and the rear axle of engine rotation.
Quota W - Distance between the axes of the engine supports.

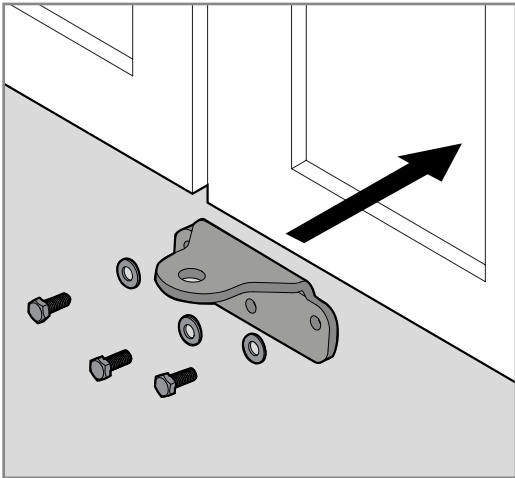
INSTALLATION STEPS



Observe the installation dimensions mentioned on the previous pages.

It is important that this installation order is adhered to!

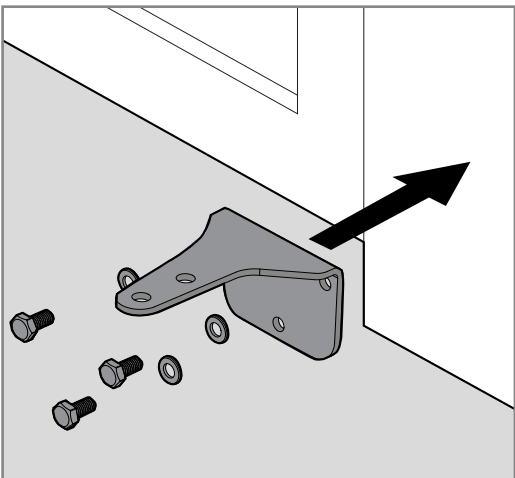
Otherwise, it is not possible to ensure a correct installation and the automatic controls may not work correctly!



1 • Fasten front bracket

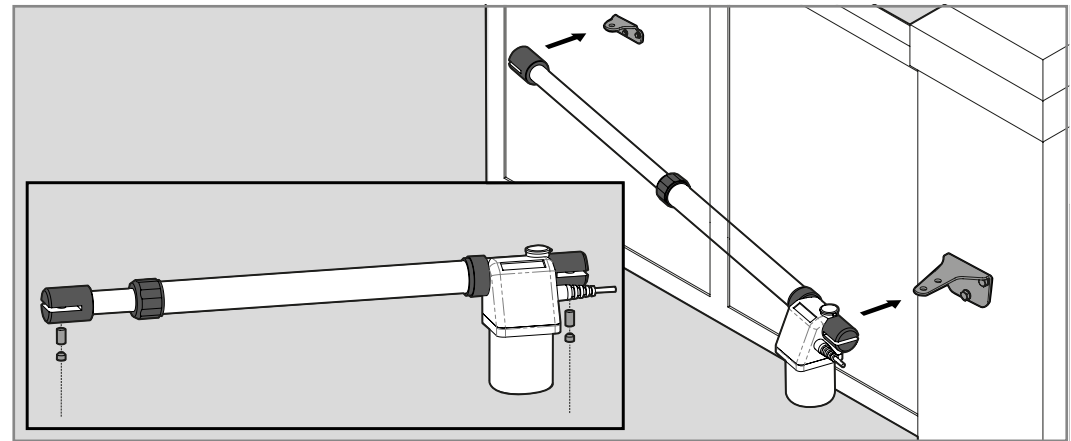
- The **Front Bracket** should be fixed to the gate, respecting the height and distance dimensions for the Rear Bracket.

This can be fixed using screws, welding process, or other of your choice as long as it provides proper attachment of the Holder.



2 • Fasten rear bracket

- The **Rear Support** must be fixed to the pillar or wall, respecting the dimensions given on the previous pages. This can be fixed using screws with mechanical or chemical bushing, welding process, or other of your choice as long as it provides an appropriate fixation of the Support.

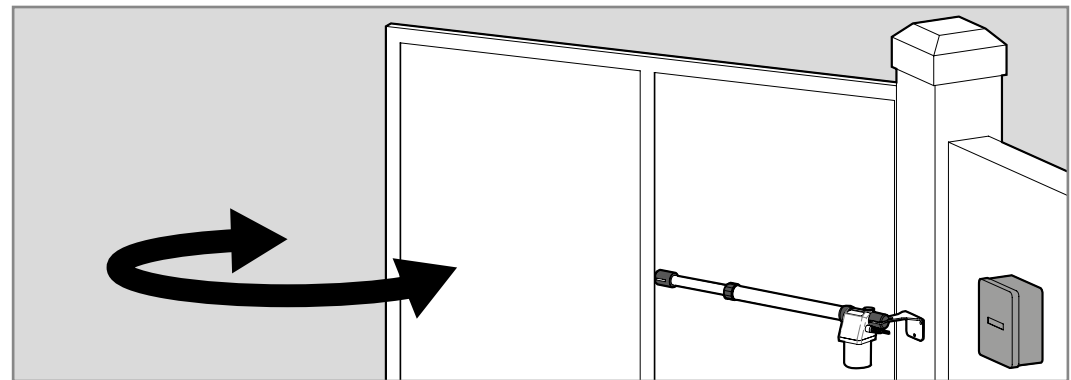


3 • Open the engine covers and remove the engine bolts.

- Before installing the motor, open the covers and remove the dowels from the brackets. At the end of the installation, you should close the plastic covers for a better visual finish of the operator.

4 • Place automation on the brackets.

- You should grease the pins before loading them.



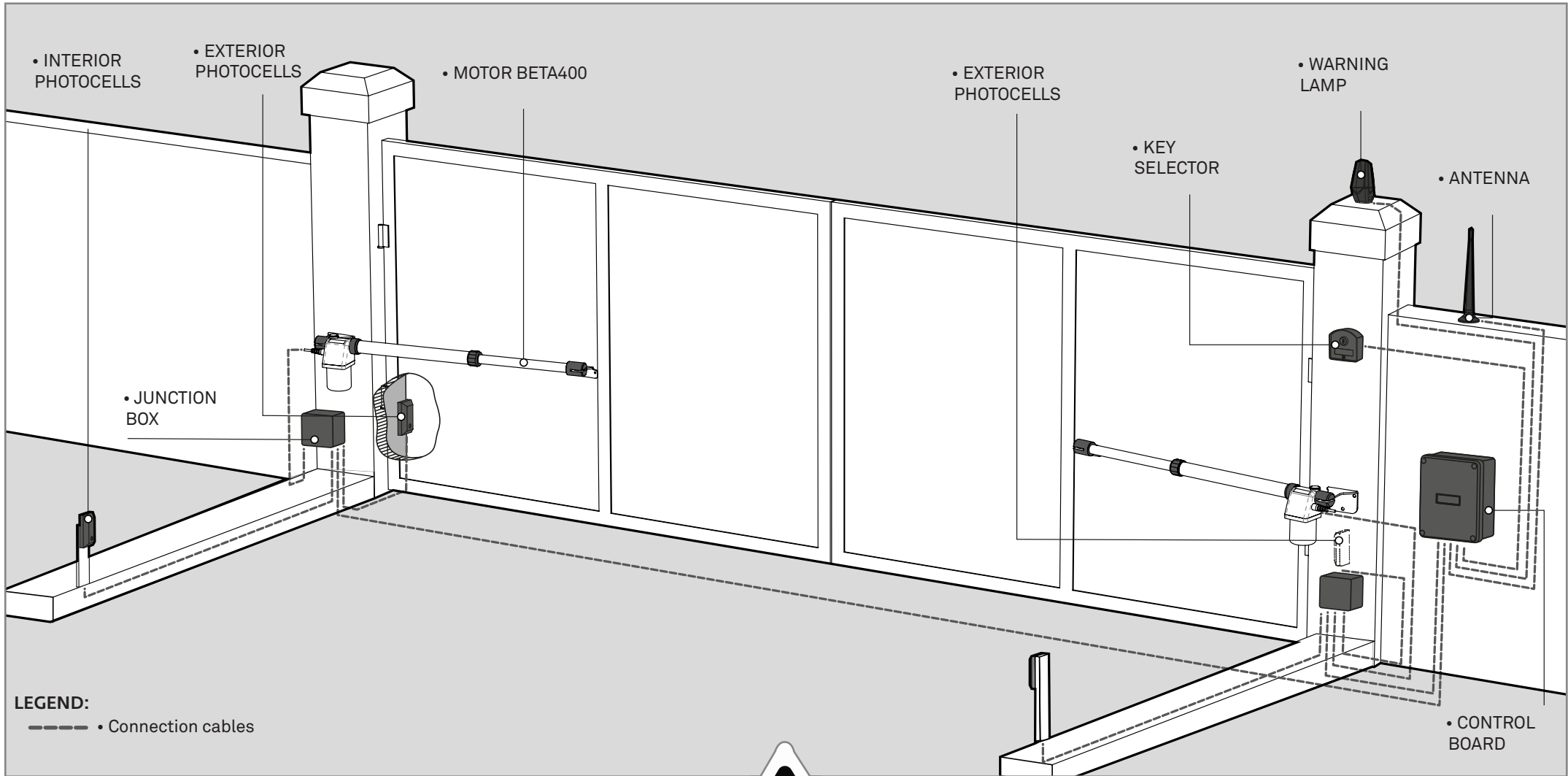
5 • Test motion

- Put the bolts in each holder with a small amount of lubricant so that there is no friction. Move the gate by hand to check that the gate opens and closes without hindrance. This will ensure that the automation is not subject to problems during its operation.

6 • Connect the operator to the control panel and configure the control devices.

- With the automation already installed, connect it to the control unit for configuration (see the control panel manual to be configured). You must also configure the desired control devices (controls, buttons, etc.) and other additional components such as antenna, firefly, key selector, among others.

INSTALLATION MAP



• It is important to use a stop at the opening and closing of the gate.

• If this is not observed, the automation components may be subject to unprepared effort and may be damaged.

• It is important to use junction boxes for connections between motors, components and switchgear. All cables must enter and exit under the junction box and control unit box.

COMPONENTS TEST

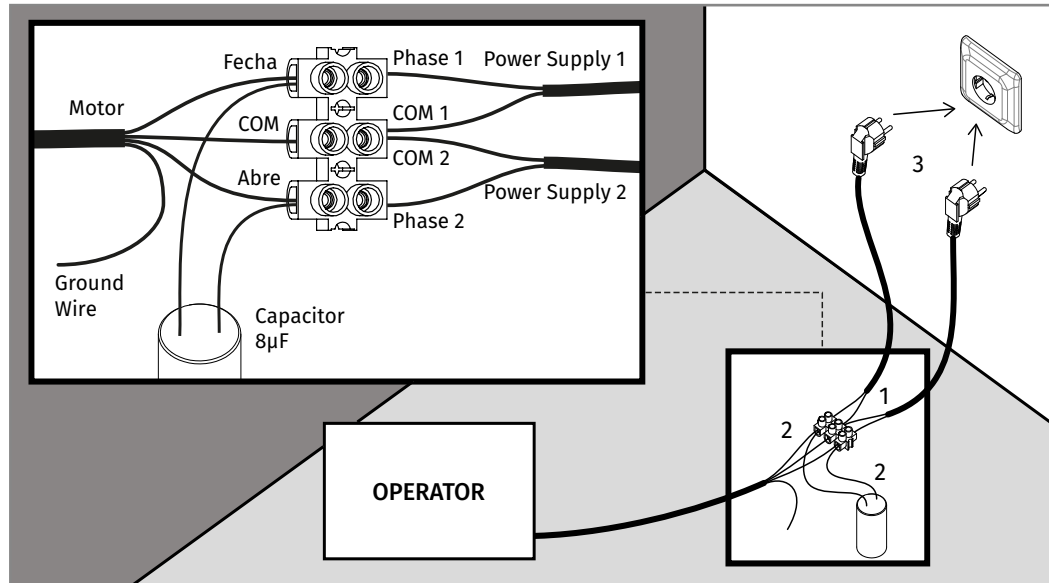
To detect if the fault is in the control panel or the motor, it is sometimes necessary to carry out tests with a direct connection to a 230V / 110V power supply.

For this purpose, it is necessary to insert a capacitor into the connection so that the automation can operate (check the type of condenser to be used in the product manual).

The diagram below shows how this connection should be made and how to interleave the different wires of the



- To perform the tests you do not need to remove the automation from the place where it is installed, because in this way you can see if the automatism connected directly to the chain can function correctly.
- You must use a new capacitor during this test to ensure that the problem is not in the condenser.



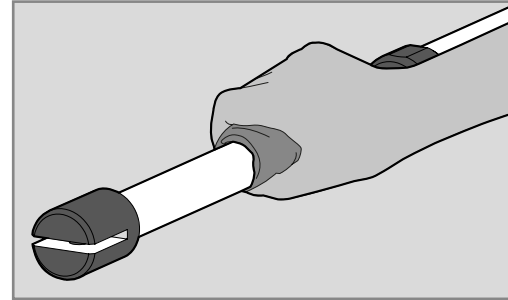
- 1 • Connect the power wires to the terminal, as shown.
- 2 • Connect the automation wires to the terminal, inserting a capacitor into the opening and closing wires.
- 3 • After these connections are completed, plug into a 230V / 110V outlet, depending on the motor / power unit being tested.



All tests must be carried out by specialized technicians due to the serious danger related to the misuse of electrical systems!

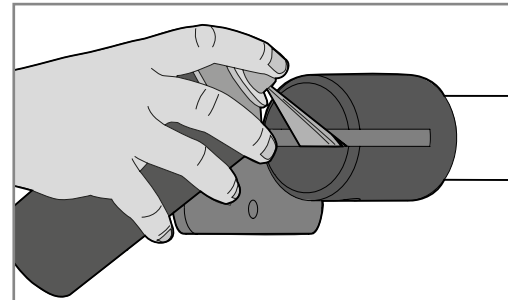
MAINTENANCE

CLEAN STAINLESS STEEL ARM



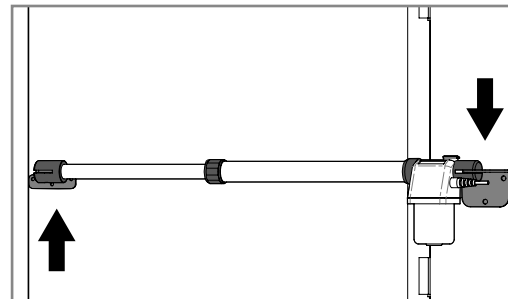
- With a cloth soaked in lubricating spray, clean all debris that accumulates in the stainless steel tube of the automation.
- Apply a small dose of lubricating spray through the tube and wipe dry with a dry cloth to remove excess lubricant leaving a homogenous layer through the tube.

LUBRICATE PINS



- Open the front and rear brackets.
- Place a small amount of lubricant in the holes that contain the support bolts.
- Put the covers back on their respective holders.

CHECK MOTOR SUPPORTS



- Make sure that the supports remain securely attached to the pillars and gate for proper operation of the equipment



These maintenance measures must be carried out within 1 year to maintain the correct functioning of the operator.

TROUBLESHOOTING

Anomaly	Procedure	Behavior	Procedure II	Discovering the origin of the problem			
• Motor doesn't work	• Make sure you have 230V power supply connected to control board and if it is working properly.	• Still not working	• Consult a qualified technician.	1 • Open control board and check if it has 230V power supply; 2 • Check input fuses of the control board;	3 • Disconnect the motor from control board and test them by connecting directly to power supply in order to find out if they have problems (see page 7).	4 • If the motor works, problem is on the control board. Pull it out and send it to our technical services for diagnosis;	5 • If the motor doesn't work, remove them from installation site and send to our technical services for diagnosis.
• Motor doesn't move but makes noise	• Unlock motor and move the gate by hand to check for mechanical problems on the movement.	• Encountered problems?	• Consult a qualified gates technician.	1 • Check all motion axis and associated motion systems related with the gate to find out what is the problem.			
		• The gate moves easily?	• Consult a qualified technician.	1 • Check capacitor, testing operator with a new one;	2 • If capacitors are not the problem, disconnect motor from control board and it them by connecting directly to power supply in order to find out if it has problems (see page 7);	3 • If the motor works, the problem is from control board. Pull it out and send it to our technical services for diagnosis;	4 • If the motor doesn't work, remove them from installation site and send to our technical services for diagnosis.
• Gate doesn't make complete route	• Unlock motor and move the gate by hand to closed position. Lock motor again and turn of power supply for 5 seconds. Reconnect it and send order to open gate using transmitter.	• Gate opened but didn't close again.	1 • Check if there is any obstacle in front of the photocells; 2 • Check if any of the control devices (key selector, push button, video intercom, etc.) of the gate are jammed and sending permanent signal to control unit; 3 • Consult a qualified technician.	All control boards have LEDs that easily allow to conclude which devices are with anomalies. All safety devices LEDs (DS) in normal situations remain On. All "START" circuits LEDs in normal situations remain Off If LEDs devices are not all On, there is some security systems malfunction (photocells, safety edges), etc. If "START" circuits LEDs are turn On, there is a control device sending permanent signal	A) SECURITY SYSTEMS: 1 • Close with a shunt all safety systems on the control board (check manual of the control board in question). If the automated system starts working normally check for the problematic device. 2 • Remove one shunt at a time until you find the malfunction device. 3 • Replace it for a functional device and check if the motor works correctly with all the other devices. If you find another one defective, follow the same steps until you find all the problems.	B) START SYSTEMS: 1 • Disconnect all wires from START terminal input. 2 • If the LED turned Off, try reconnecting one device at a time until you find the defective device. NOTE: In case procedures described in sections A) and B) don't result, remove control board and send to our technical services for diagnosis;	
• Gate doesn't make complete route	• Unlock motor and move gate by hand to check for mechanical problems on the gate.	• Encountered problems?	• Consult a qualified gates technician.	1 • Check all motion axis and associated motion systems related with the gate to find out what is the problem.			
		• The gate moves easily?	• Consult a qualified technician.	1 • Check capacitors, testing with new capacitors. 2 • If capacitors are not the problem, disconnect motor from control board and test it by connecting directly to power supply in order to find out if it is broken; 3 • f the motor doesn't work, remove it from installation site	and send to our technical services for diagnosis. 4 • If motor work well and move gate at full force during the entire course, the problem is from controller. Set force using trimmer on the board. Make a new working time programming, giving sufficient time for opening and closing with appropriate force . 5 • If this doesn't work, remove	control unit and send it to technical services. NOTA: Setting force of the controller should be sufficient to make the gate open and close without stopping, but should stop and invert with a little effort from a person. In case of safety systems failure, the gate shall never cause	physical damaged to obstacles (vehicles, people, etc).

CENTRAL CONNECTIONS

