DZ 1500 IND

Technical Manual

ATTENTION:
Do not use this equipment without first reading the User's Manual.

Manufactured by: **Motoppar Indústria e Comércio de Automatizadores Ltda**
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CONTENTS

IMPORTANT SAFETY INSTRUCTIONS

Recommendation:
The specialized PPA installer must follow all the instructions mentioned in this TECHNICAL MANUAL and the USER'S MANUAL to install the operator.

With the USER'S MANUAL in hand, the installer must show the operator's information, applications, and safety items to the user.

Before installing the operator, closely read and follow all the instructions contained in this manual.

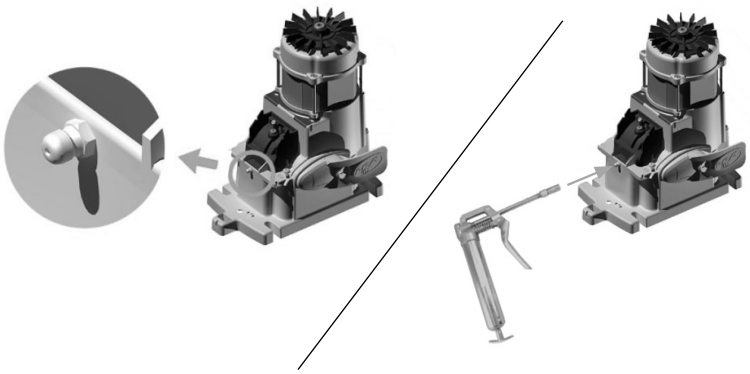
-Before installing the operator, ensure the local electric power supply is compatible with the one required on its identification label.

- Do not turn on the electric power supply until installation or maintenance are completed. Always make the control board electrical connections with the power supply turned off.

- Once installation is complete, ensure the garage door parts do not extend into the path and public sidewalk.

- Using total shutdown devices when installing an operator is mandatory.

NOTE: this product is manufactured with an M6 straight grease nipple that facilitates the greasing of the inner crown, since it is not necessary to disassemble the gearmotor to carry out maintenance, which provides agility and practicality to installers.



TECHNICAL FEATURES

TYPE OF GATE OPERATOR	Sliding	Sliding
MODEL	Jet Flex	Jet Flex
POWER SUPPLY	220 V	127 V
RATED FREQUENCY	60 Hz	60 Hz
RATED POWER	200 W	200 W
MOTOR RPM	5800 RPM	5800 RPM
RATED CURRENT	2,3 A	4,7 A
REDUCTION RATIO	1:40	1:40
LINEAR SPEED	24,7 m/min (Z12) 35 m/min (Z17)	24,7 m/min (Z12) 35 m/min (Z17)
CYCLES	Continuous	Continuous
PROTECTION RATING	IPX4	IPX4
OPERATING TEMPERATURE	-5° C / +50° C	-5° C / +50° C
INSULATION SYSTEM	Class B, 130° C	Class B, 130° C
LIMIT SWITCH SYSTEM	Hybrid	Hybrid
MAX LEAF WEIGHT	1.500 Kg (Z12) 1.200 Kg (Z17)	1.500 Kg (Z12) 1.200 Kg (Z17)
MAX LEAF SIZE	Height: 2,5m Length: 10,0m	Height: 2,5m Length: 10,0m

TOOLS REQUIRED FOR INTALLATION

Below are some of the tools required to install the operator:

ELECTRICAL INSTALLATION

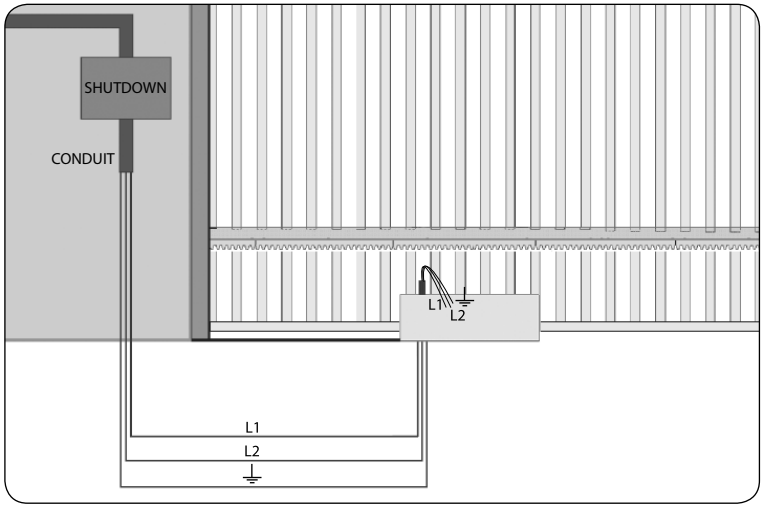
For the electrical installation, the network must have the following characteristics:

- Electrical network of 127 V or 220 V.
- 5-A circuit breakers in the electrical power distribution box.
- 3/4" diameter conduits between the electrical power distribution box and the total shutdown device;
- 3/4" diameter conduits between the total shutdown device and the operator connection point;
- 1/2" diameter conduits for external and optional pushbuttons;
- 1/2" diameter conduits for safety photocells (optional).

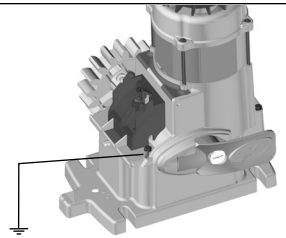
-The cable for fixed wiring must comply with NBR NM 247-3.
-The power supply conductor of a product for internal use must be a 3 x 0.75mm^2 flexible cable, be 500 V and comply with the NBR NM 247-5 standard.
-The power supply conductor of a product for external use must be a 3 x 0.75 mm2 flexible cable, be 500 V and comply with the IEC 60245-57 standard.

PRECAUTIONS WITH THE ELECTRICAL INSTALLATION

To avoid damage to the wiring, it is important that all conduits are correctly attached to the operator. Wiring must be routed through conduits, passing internally through the subfloor, taking care that none of the wiring conduits become trapped and damaged.



The grounding terminal must be connected to the electrical network grounding cable.

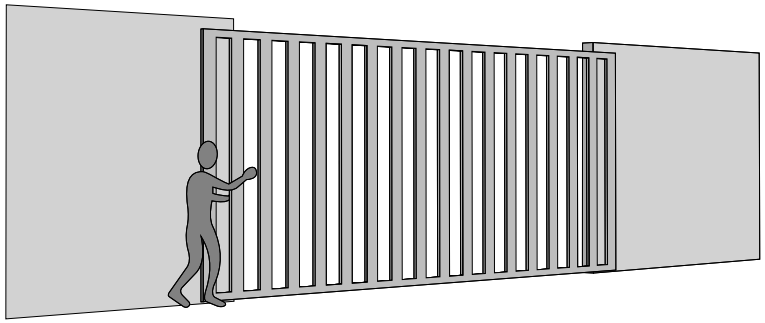


IMPORTANT
The device must be powered via a residual current device (DR) with a rated residual operating current exceeding 30 mA.

PRECAUTIONS WITH THE GATE BEFORE AUTOMATION

Before adapting the operator to the gate, check the sliding, following the instructions below:

1st step: Before installing the operator, check if the gate is in good mechanical condition, that is, opening and closing correctly. Open the gate manually and observe the effort required. This effort must be minimal over the entire path length.



2nd step: Close the gate manually and check if the effort exerted was the same as in the previous operation.
The gate must have a strong structure and, as far as possible, one that does not deform. The pulleys must have a diameter that matches the dimensions of the gate, be in perfect running conditions, and be mounted so that the gate leaf has stability throughout its movement. We recommend pulleys with a minimum diameter of 120 mm.
The figures below represent the two types of rails and pulleys used. The system that uses a straight section (Figure A – angle bracket) has greater friction and, consequently, more significant wear. The circular section (Figure B) allows for better gate movement and less friction for the operator.

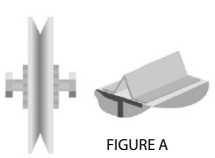


FIGURE A

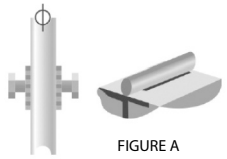
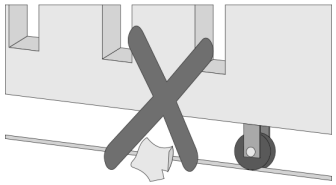


FIGURE A

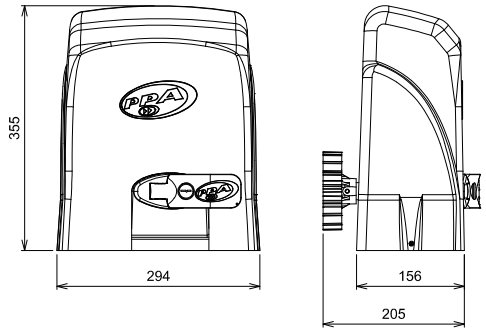
3rd step: Make sure the gate leaf does not get stuck in opening and closing movements. The gate sliding rail must be perfectly straight, level, and periodically clear of any element or dirt that makes it difficult for the pulleys to slide along its entire length, as shown in the figure below.



OPERATOR INSTALLATION AND FASTENING

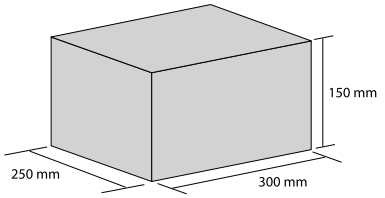
Before installing the operator, remove all unnecessary cables and disable any equipment or systems connected to the electrical network.

EQUIPMENT DIMENSIONS

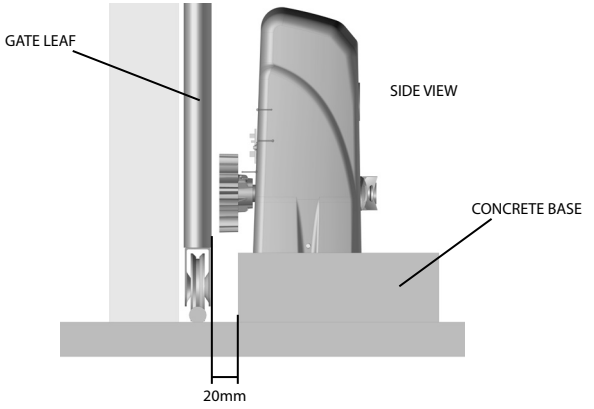


The perfect operation of this equipment depends on the instructions in this manual. To install the equipment, proceed as follows:

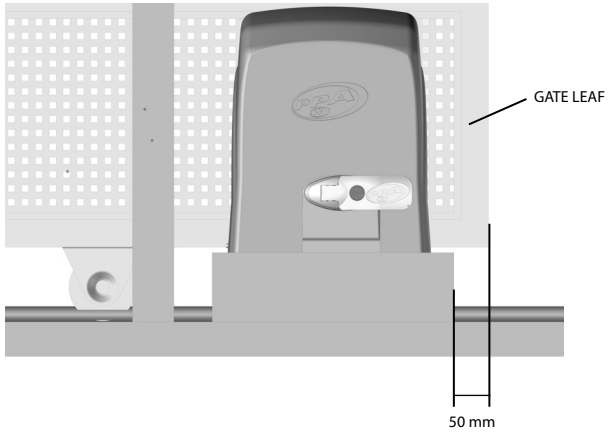
1st step: Check if the floor is firm enough so the equipment can be fastened and leveled; otherwise, provide a concrete base, following the guidelines below:



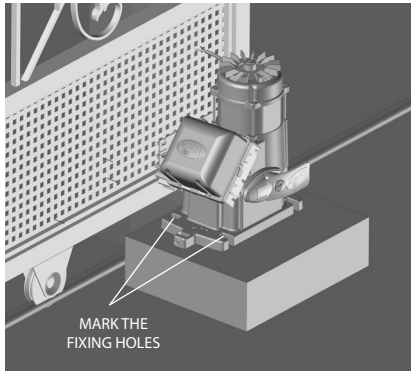
2nd step: The base dimensions must be appropriate for the operator dimensions. The concrete base should be at a distance of approximately 20 mm from the gate leaf face.

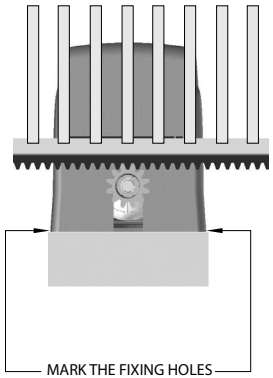


3rd step: Once the concrete base conditions are met, open the gate and position the operator close to the gate leaf. The distance between the gate leaf end and the concrete base must be 50 mm.

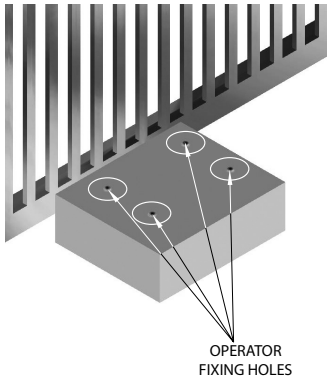


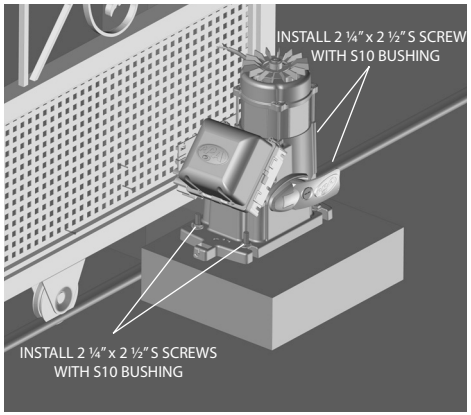
4th step: Pre-align the operator to the gate, position the rack over the gear, and place the assembly against the gate. Then mark the fixing holes in the floor or concrete base.



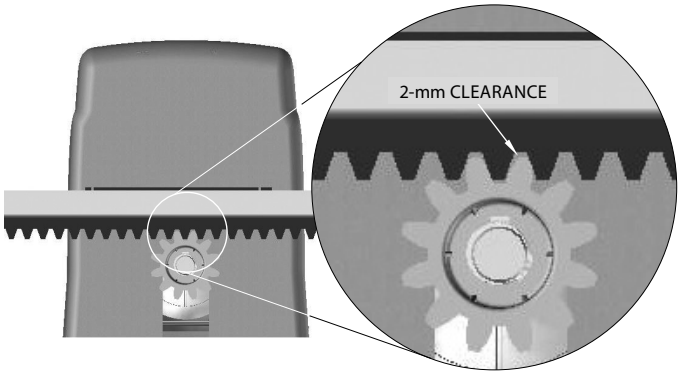


5th step: Drill the holes for fixing, and position the operator aligned with the gate. Before tightening the 1/2" x 4" S screws, move the gate to ensure it does not touch the operator during its path. If this occurs, move back the operator.

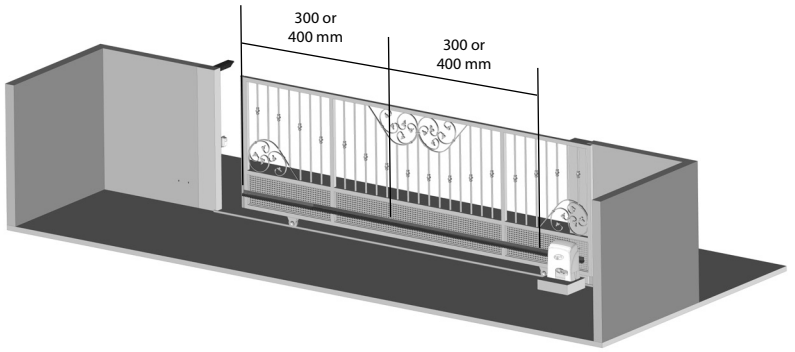




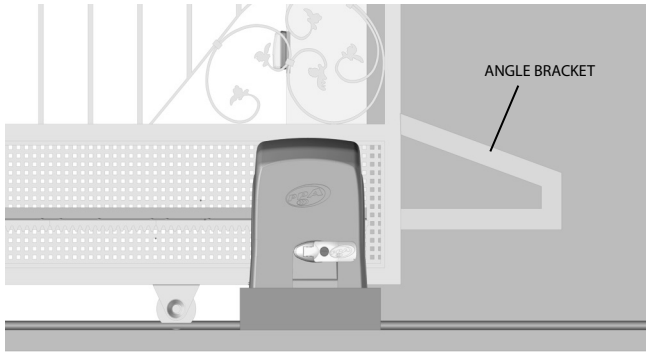
6th step: With the operator unlocked, position the rack over the gear and align it with the gate.
Leave approximately 2 mm clearance between the rack tooth's top and the gear tooth's bottom.



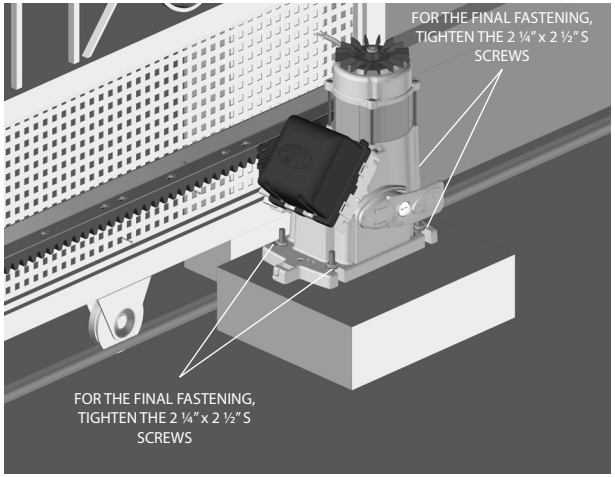
7th step: Fix the rack along the entire length of the gate leaf by welding it or screwing it every 300 or 400 mm.



8th step: Provide shims to ensure the rack alignment if the gate leaf is warped. There are cases where the rack must extend the leaf length. In this case, provide an angle bracket so no tooth is skipped when starting the operator.

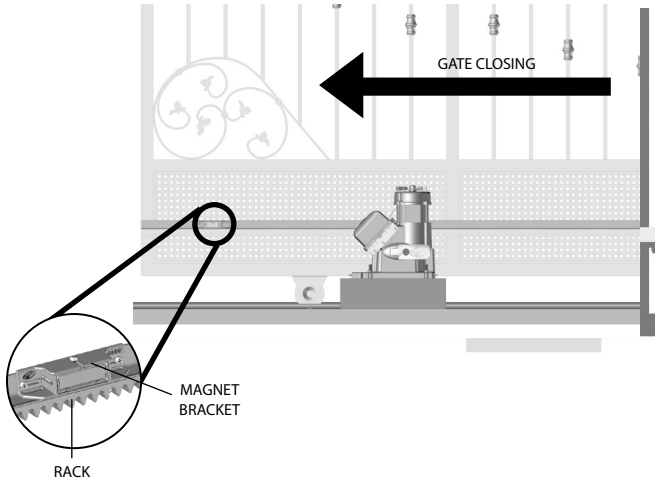


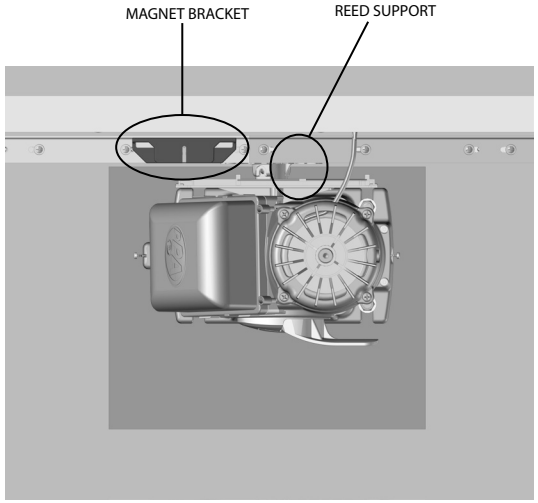
9th step: After fixing the rack, fix the operator on the floor or concrete base, and tighten the screws.



ANALOG LIMIT SWITCH INSTALLATION

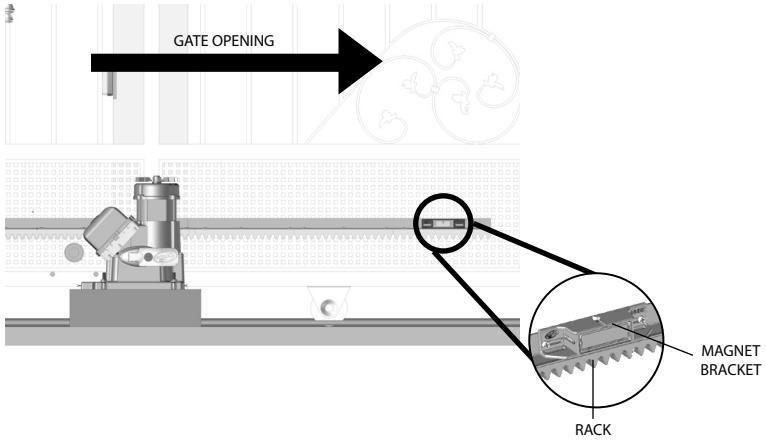
1st step: With the gate closed, place the magnet support on the rack facing the operator's REED. This magnet will act as a closing limit switch.

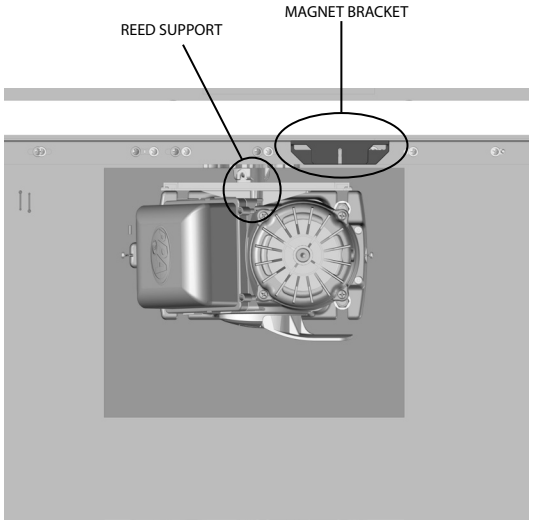




TOP VIEW

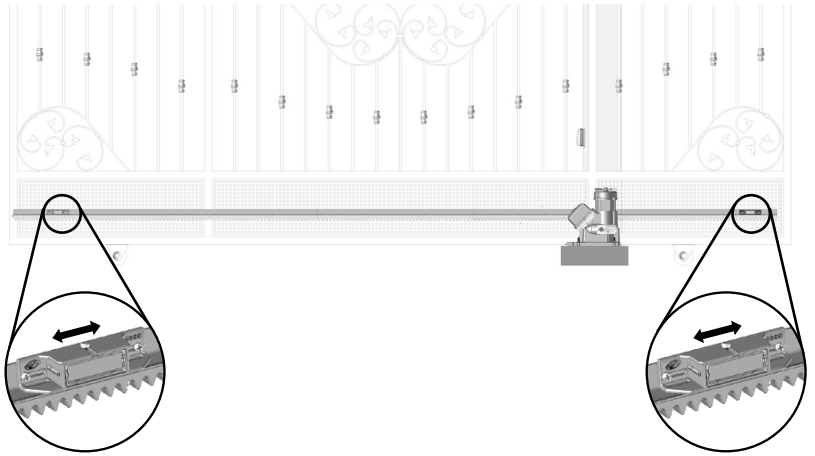
2nd step: Fully open the gate and place the other magnet bracket on the rack, facing the operator's REED. This magnet will act as the opening limit switch.



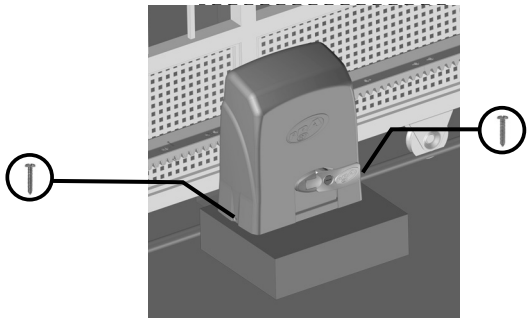


TOP VIEW

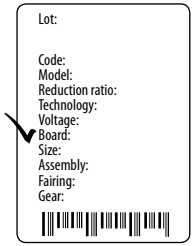
3rd step: Start the motor and check if the REEDs are shutting down correctly. If necessary, reverse the plate connector. After fixing the magnet brackets, make the final adjustments, moving them to the right or left, down or up, according to the desired adjustment.



4th step: To complete installing the operator and before its operation, it is mandatory to screw the cover with 2 3.5 x 16 mm screws (available in the kit).

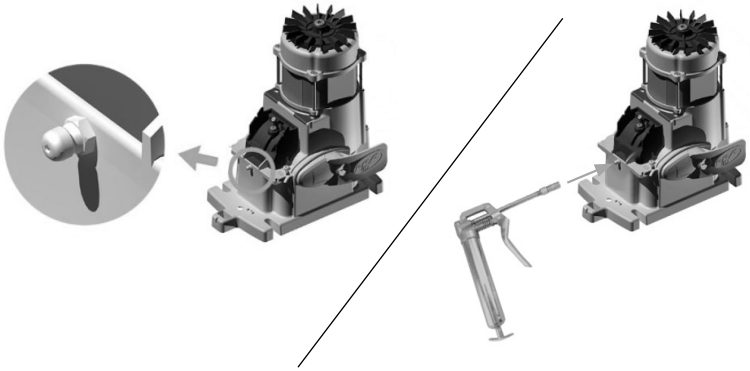


CONTROL BOARD:
Check the operator control board on the product label (according to the model on the side). After that, refer to the control board manual available for download at **www.ppa.com**.br and make all the connections and configurations.



RELUBRICATION

It is recommended to re-lubricate the equipment periodically using the M6 grease nipple present in this product. Consult your installer to assess the frequency of lubrication required by your equipment according to its flow of use.



MAINTENANCE

The table below lists some PROBLEMS — DEFECTS, PROBABLE CAUSES, AND CORRECTIONS — that may occur in your operator. Before any maintenance, turn off the electrical power supply.

DEFECTS	PROBABLE CAUSES	CORRECTIONS
The motor does not turn on / does not move	A) The power supply is off. B) The fuse is open / blown. C) The gate is locked. D) The limit switch is defective.	A) Make sure the electrical power supply is connected correctly. B) Replace the fuse with the same specification. C) Make sure no objects are blocking the garage door operation. D) Replace the limit switch system (analog and/or digital).
The motor is blocked.	A) The motor connection is inverted. B) The gate or the operator are locked.	A) Check the motor wires. B) Put in manual mode and check separately.
The electronic control board does not accept command	A) The fuse is blown. B) The electrical network is disconnected (power supply). C) There is a defect in the discharged remote control. D) Transmitter range (remote control)	A) Troque o fusível B) Ligue a rede (alimentação) C) Verifique e troque bateria D) Verifique a posição da antena do receptor e, se necessário, reposicione-a para garantir o alcance
The motor only moves to one of the sides	A) The motor wires are inverted. B) The limit switch system is inverted. C) There is a defect in the control board.	A) Check the motor connection. B) Invert the limit switch connector (analog and/or digital). C) Replace the control board.