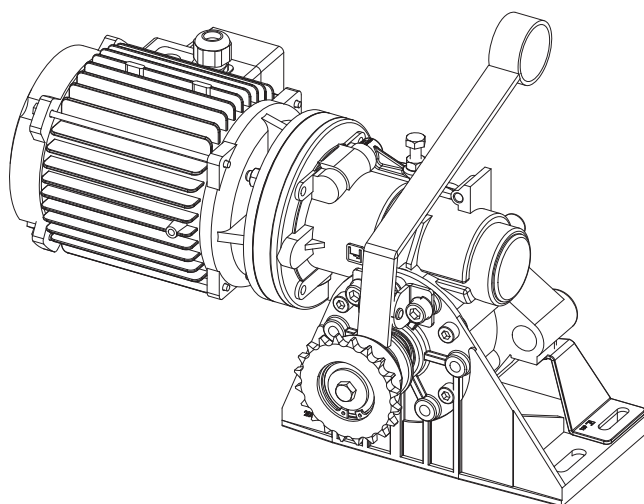
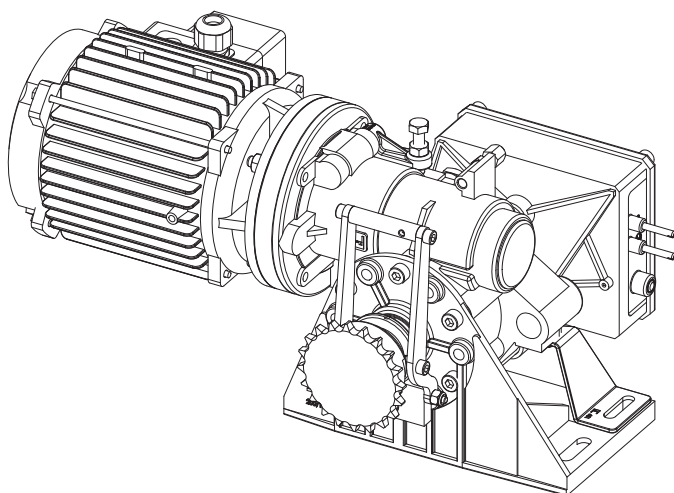




MEC 200 LB

**Chain-drive electromechanical operator
for sectional, folding and industrial doors**



GENERAL WARNINGS FOR PEOPLE SAFETY**THANK YOU**

Thank you for purchasing a Fadini product. Please read these instructions carefully before using this appliance. The instructions contain important information which will help you get the best out of the appliance and ensure safe and proper installation, use and maintenance. Keep this manual in a convenient place so that you can always refer to it for the safe and proper use of the appliance.

INTRODUCTION

This operator is designed for a specific scope of applications as indicated in this manual, including safety, control and signaling accessories as minimum required with Fadini equipment. □ Any applications not explicitly included in this manual may cause operation problems or damages to properties and people. □ Meccanica Fadini S.r.l. is not liable for damages caused by the incorrect use of the equipment, or for applications not included in this manual or for malfunctioning resulting from the use of materials or accessories not recommended by the manufacturer. □ The manufacturer reserves the right to make changes to its products without prior notice. □ All that is not explicitly indicated in this manual is to be considered not allowed.

BEFORE INSTALLATION

Before commencing operator installation assess the suitability of the access, its general condition and the structure. □ Make sure that there is no risk of impact, crushing, shearing, conveying, cutting, entangling and lifting situations, which may prejudice people safety. □ Do not install near any source of heat and avoid contacts with flammable substances. □ Keep all the accessories able to turn on the operator (transmitters, proximity readers, key-switches, etc) out of the reach of the children. □ Transit through the access only with stationary operator. □ Do not allow children and/or people to stand in the proximity of a working operator. □ To ensure safety in the whole movement area of a gate it is advisable to install photocells, sensitive edges, magnetic loops and detectors. □ Use yellow-black strips or proper signals to identify dangerous spots. □ Before cleaning and maintenance operations, disconnect the appliance from the mains by switching off the master switch. □ If removing the actuator, do not cut the electric wires, but disconnect them from the terminal box by loosening the screws inside the junction box.

INSTALLATION

All installation operations must be performed by a qualified technician, in observance of the Machinery Directive 2006/42/CE and safety regulations EN 12453 - EN 12445. □ Verify the presence of a thermal-magnetic circuit breaker 0,03 A - 230 V - 50 Hz upstream the installation. □ Use appropriate objects to test the correct functionality of the safety accessories, such as photocells, sensitive edges, etc. □ Carry out a risk analysis by means of appropriate instruments measuring the crushing and impact force of the main opening and closing edge in compliance with EN 12445. □ Identify the appropriate solution necessary to eliminate and reduce such risks. □ In case where the gate to automate is equipped with a pedestrian entrance, it is appropriate to prepare the system in such a way to prohibit the operation of the engine when the pedestrian entrance is used.

□ Apply safety nameplates with CE marking on the gate warning about the presence of an automated installation. □ The installer must inform and instruct the end user about the proper use of the system by releasing him a technical dossier, including: layout and components of the installation, risk analysis, verification of safety accessories, verification of impact forces and reporting of residual risks.

INFORMATION FOR END-USERS

The end-user is required to read carefully and to receive information concerning only the operation of the installation so that he becomes himself responsible for the correct use of it. □ The end-user shall establish a written maintenance contract with the installer/maintenance technician (on -call). □ Any maintenance operation must be done by qualified technicians. □ Keep these instructions carefully.

WARNINGS FOR THE CORRECT OPERATION OF THE INSTALLATION

For optimum performance of system over time according to safety regulations, it is necessary to perform proper maintenance and monitoring of the entire installation: the automation, the electronic equipment and the cables connected to these. □ The entire installation must be carried out by qualified technical personnel, filling in the Maintenance Manual indicated in the Safety Regulation Book (to be requested or downloaded from the site www.fadini.net/supporto/downloads). □ Operator: maintenance inspection at least every 6 months, while for the electronic equipment and safety systems an inspection at least once every month is required. □ The manufacturer, Meccanica Fadini S.r.l., is not responsible for non-observance of good installation practice and incorrect maintenance of the installation.

DISPOSAL OF MATERIALS

Dispose properly of the packaging materials such as cardboard, nylon, polystyrene etc. through specializing companies (after verification of the regulations in force at the place of installation in the field of waste disposal). Disposal of electrical and electronic materials: to remove and dispose through specializing companies, as per Directive 2012/19/UE. Disposal of substances hazardous for the environment is prohibited.

**CE DECLARATION OF CONFORMITY of the manufacturer:**

Meccanica Fadini S.r.l. (Via Mantova, 177/A - 37053 Cerea - VR - Italy) declares under own responsibility that:

MEC 200 LB complies with the 2006/42/CE Machinery Directive, and also that it is sold to be installed in an "automatic system", along with original accessories and components as indicated by the manufacturing company. An automatic gate operator is, by law, a "machinery" and therefore the installer must fit the equipment with all of the applicable safety norms. The installer is also required to issue the installer's Declaration of Conformity. The manufacturer is not liable for possible incorrect use of the product. The product complies with the following specific norms: analysis of the risks and subsequent action to cure them as per EN 12445 and EN 12453, Low Voltage Directive 2014/35/UE, Electromagnetic Compatibility 2014/30/UE. In order to certify the product, the manufacturer declares under own responsibility the compliance with the EN 13241-1 PRODUCT NORMS.

Meccanica Fadini S.r.l.
Director in charge

PRODUCT GENERAL DESCRIPTION

MEC 200 LB can provide a versatile automatic system for any chain-driven sliding door, such as folding doors (made up of panels hinged together and folding on one side on opening), or industrial doors mounted on a guide system.

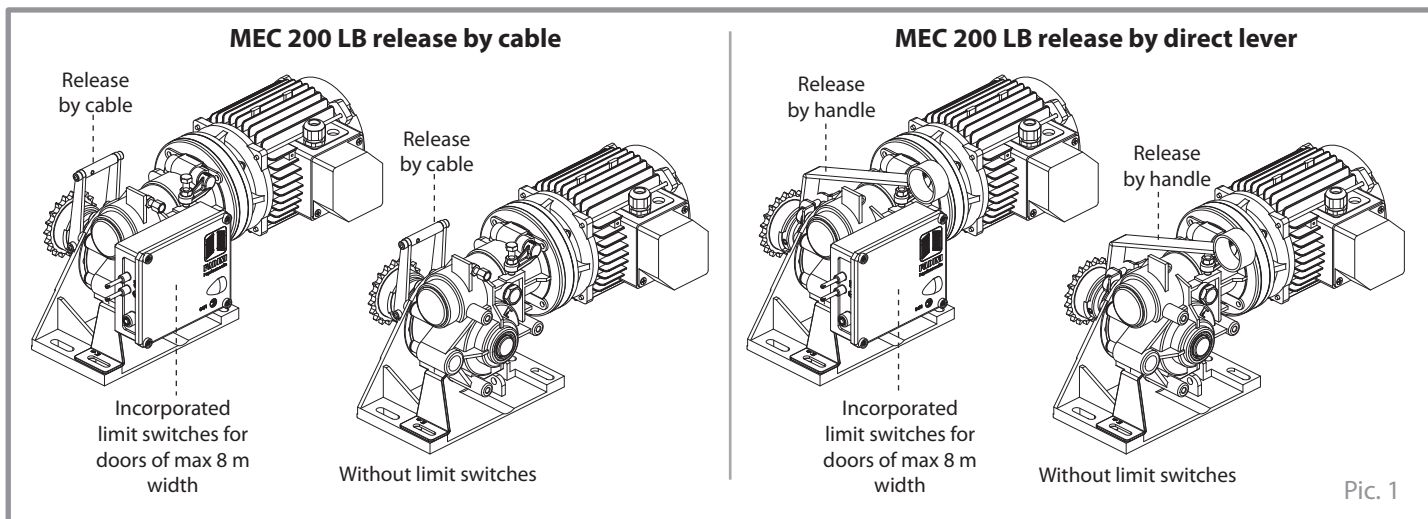
A range of options are available as follows:

- 0,37 kW (0,5 HP single- and three-phase) for doors whose surface is 25 m²;
- 0,73 kW (1,0 HP single- and three-phase) for doors whose surface is 50 m²;
- 1,1 kW (1,5 HP three-phase) for doors whose surface is 50 m².

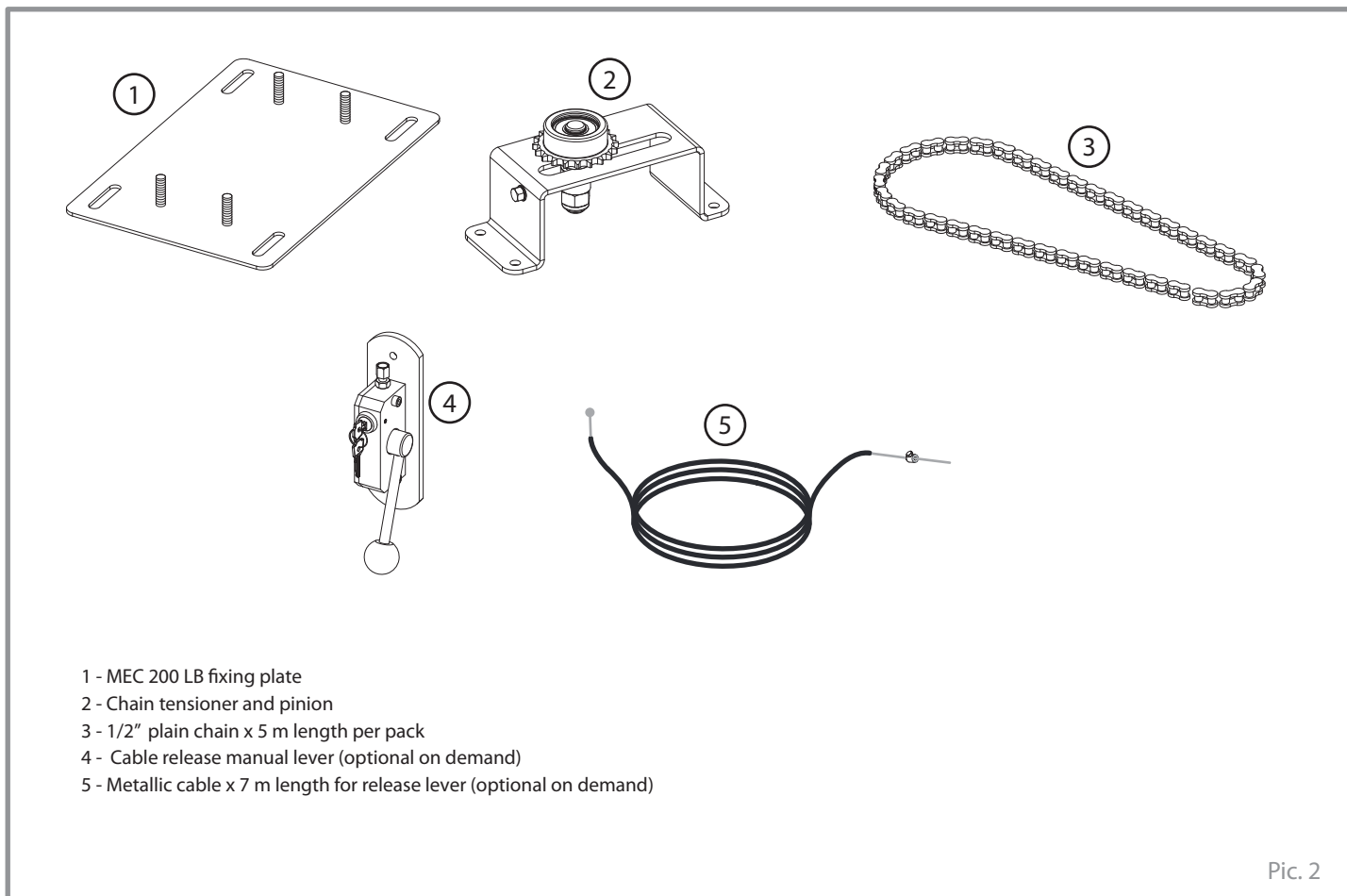
It is strong and reliable. The torque control is by mechanical clutch system, adjustable by hand. Worm and gear coupling made of steel and bronze mounted on bearings, all parts in an oil bath.

The manual release system is available in two options with any operator version (Pic. 1): release by handle or by cable and coded key; both options can come with incorporated limit switches (provided the door width is 8 meters max.), as an alternative external limit switches can be used.

English



COMPONENTS

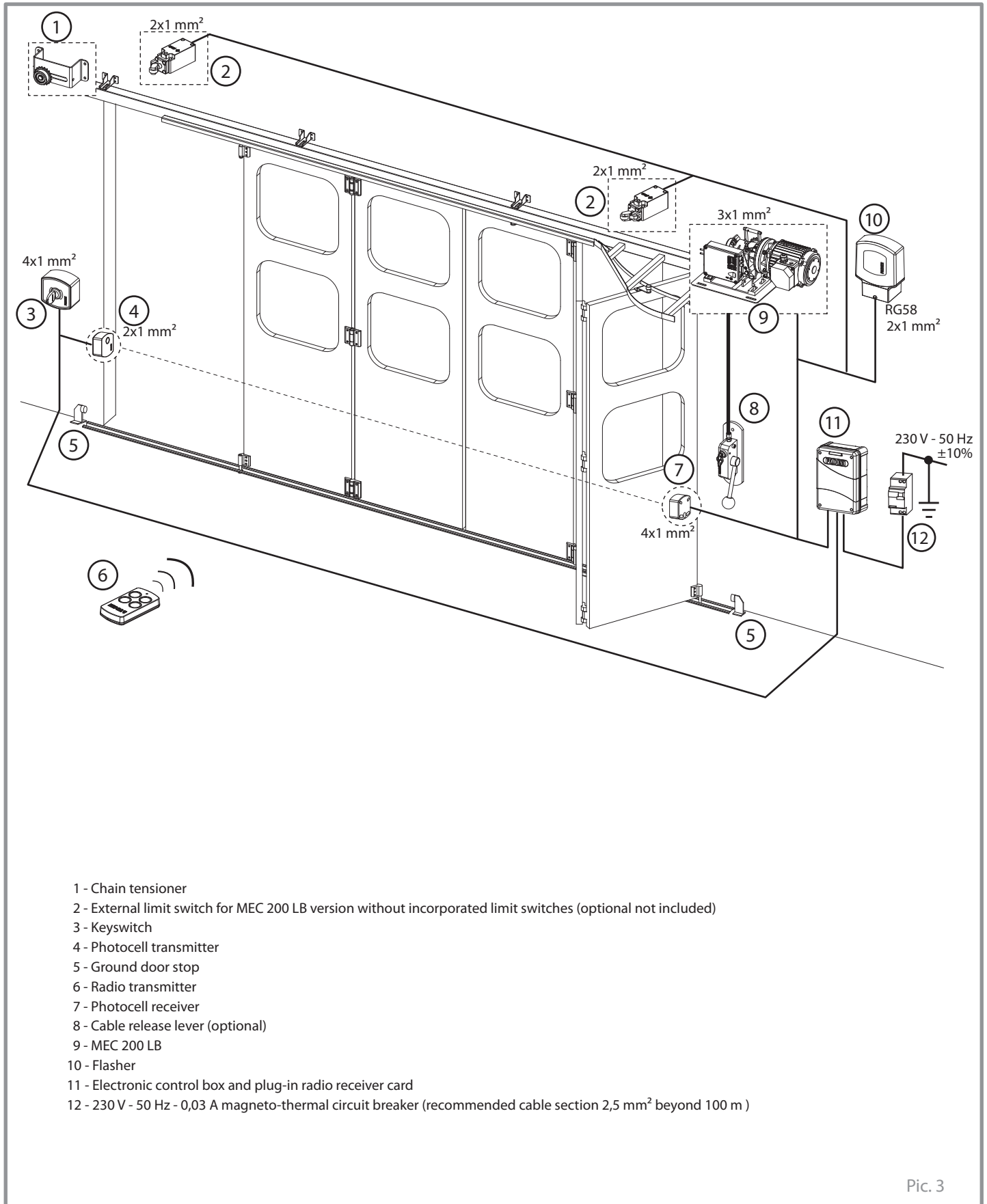


WIRING DIAGRAM AND LAYOUT OF THE ACCESSORIES

Before installing MEC 200 LB it is advisable that the preparatory works be made for all of the accessories required at least to ensure safety and proper control of the system.

General indicative layout: it is the installer's care and responsibility to properly lay the tubes required for the electrical connections.

English

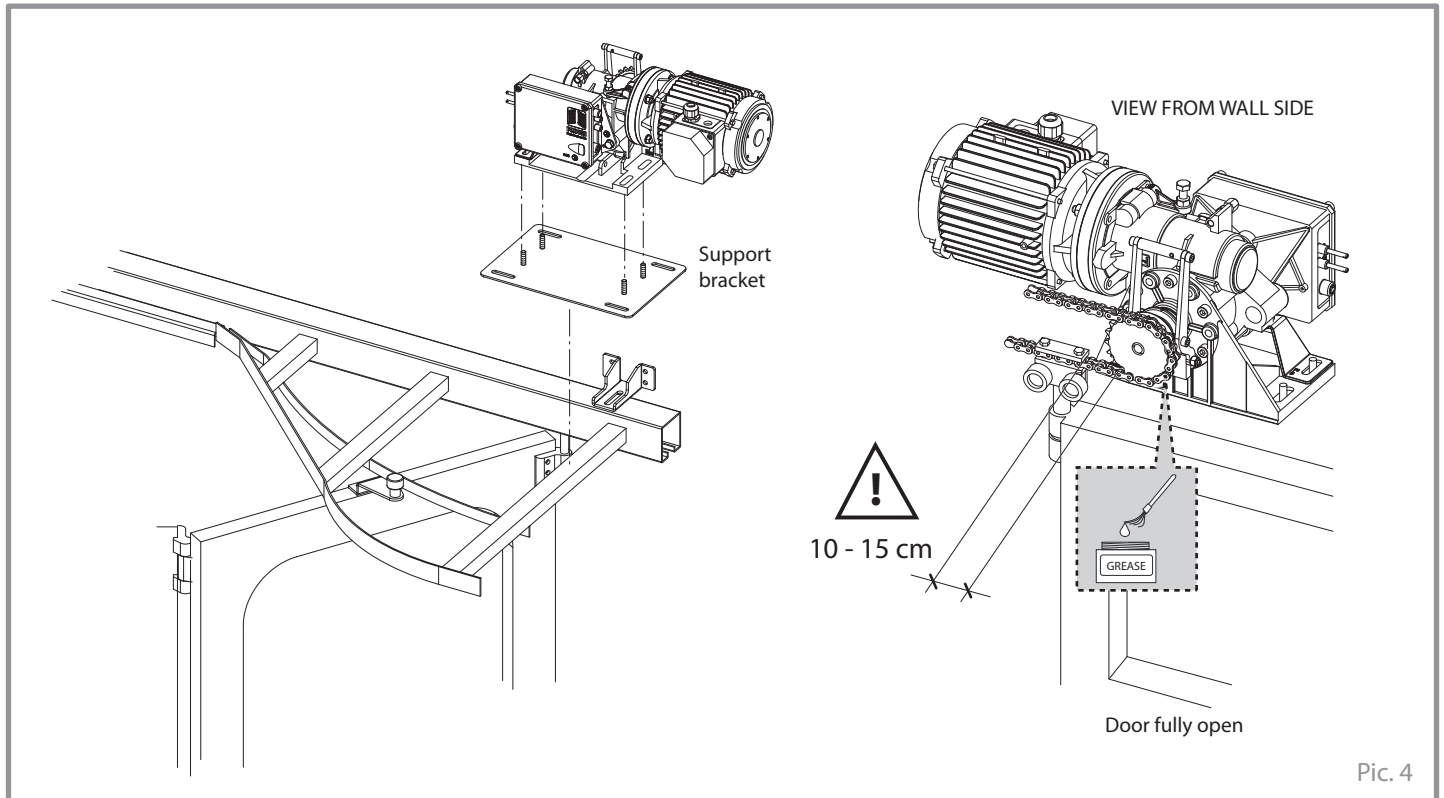


- 1 - Chain tensioner
- 2 - External limit switch for MEC 200 LB version without incorporated limit switches (optional not included)
- 3 - Keyswitch
- 4 - Photocell transmitter
- 5 - Ground door stop
- 6 - Radio transmitter
- 7 - Photocell receiver
- 8 - Cable release lever (optional)
- 9 - MEC 200 LB
- 10 - Flasher
- 11 - Electronic control box and plug-in radio receiver card
- 12 - 230 V - 50 Hz - 0,03 A magneto-thermal circuit breaker (recommended cable section 2,5 mm² beyond 100 m)

Pic. 3

MOUNTING AND FASTENING MEC 200 LB

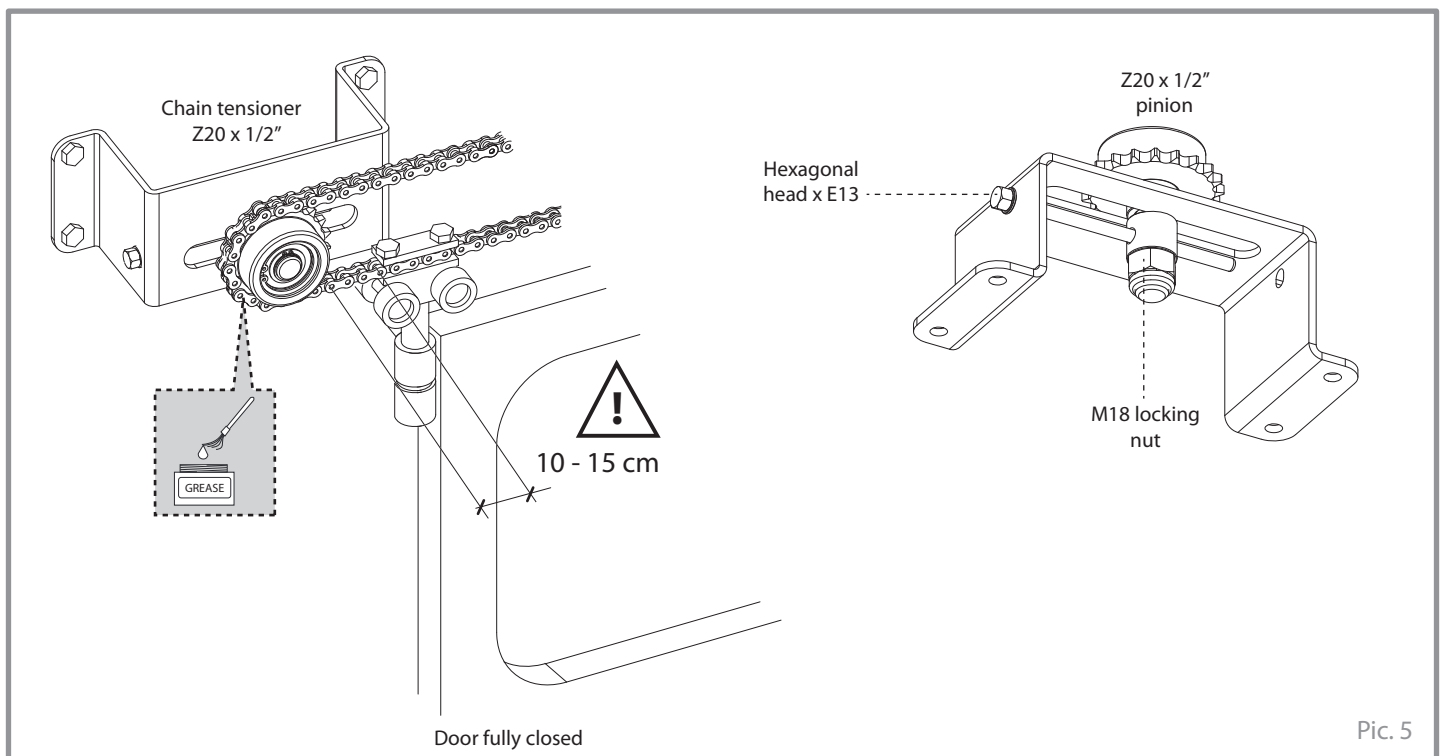
MEC 200 LB is to be mounted by positioning and fastening the motor base plate on to the previously fixed support bracket. With the door in fully open position there must be a clearance of 10-15 cm as indicated in the picture, with reference to the pinion.



CHAIN TENSIONER

The chain tensioner is to be fixed to the wall, or a bracket, by suitable bolts depending on the nature of the wall itself, and the position is to be the most appropriate to allow installation and the subsequent adjustment of chain tension (the hexagonal head to be on the side opposite the one facing MEC 200 LB).

- Loosen M18 nut to unlock the tensioner pinion.
- Adjust the position of the pinion as required by screwing or unscrewing the hexagonal head positioned on the side.
- Once satisfied the pinion is in the correct position for the chain to stay stretched, the M18 nut is to be locked back.

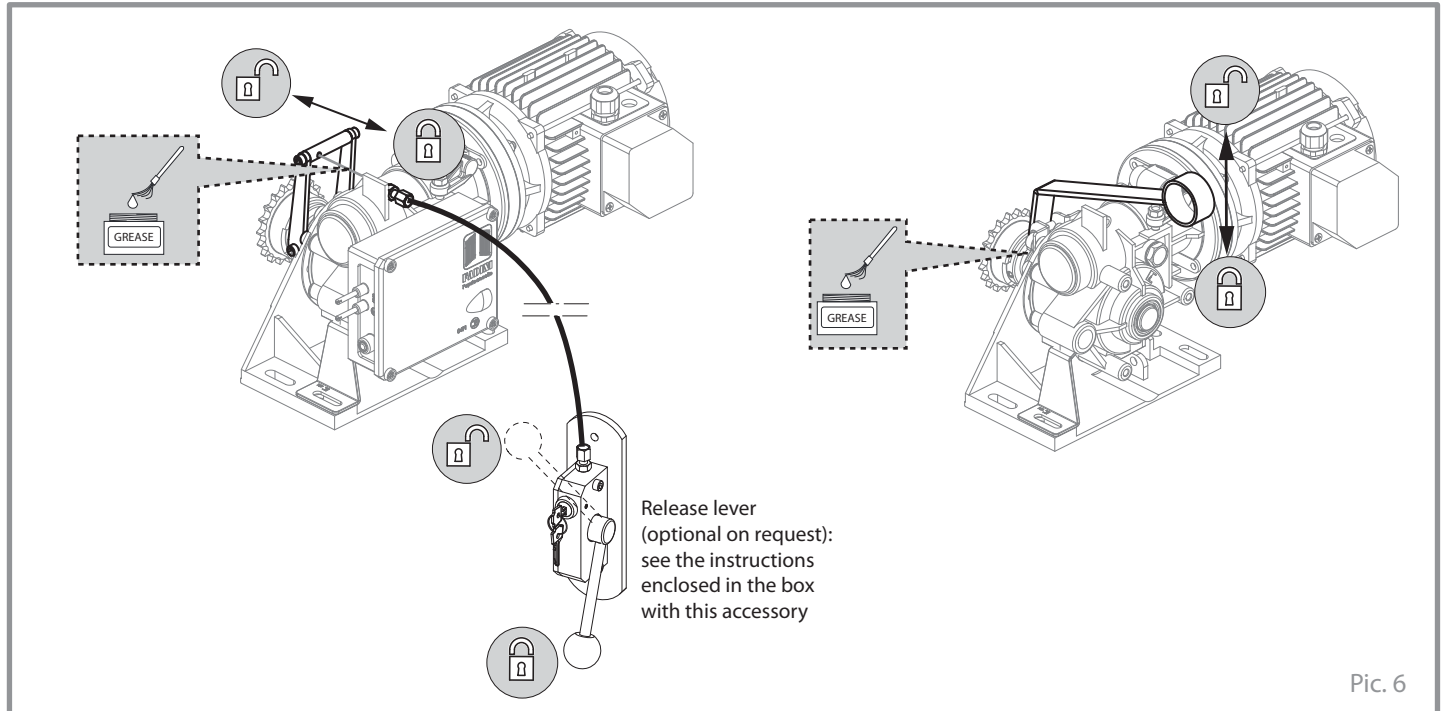


English

RELEASING AND OPENING BY HAND

MEC 200 LB, all versions, can be released for manual operations by means of a lever system disengaging the pinion by the action of a collar.

To override the motor, two options are possible: by metallic cable whose device can be positioned within easy reach on the wall (optional on request), or by a lever with a ring at the end to be pulled by a hook (not included in the equipment).



Pic. 6

ADJUSTING THE INCORPORATED LIMIT SWITCHES

This operation applies only to MEC 200 LB with incorporated limit switches, for doors whose width is 8 meters maximum. First operation. Make sure the chain is well stretched by adjusting the tensioner in order to ensure the entire system will work all right (it is obvious that the door is to be fastened to the chain).

Make also sure that proper ground door stops be provided in open and closed door positions.

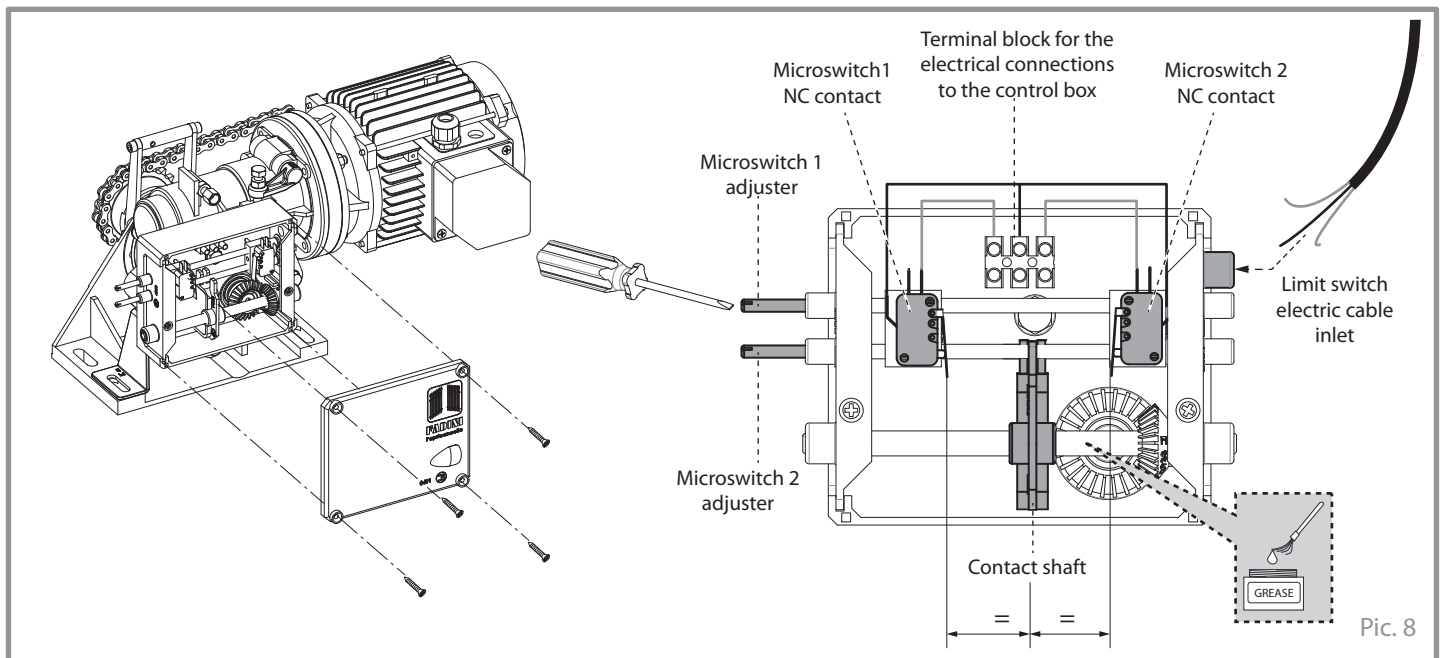
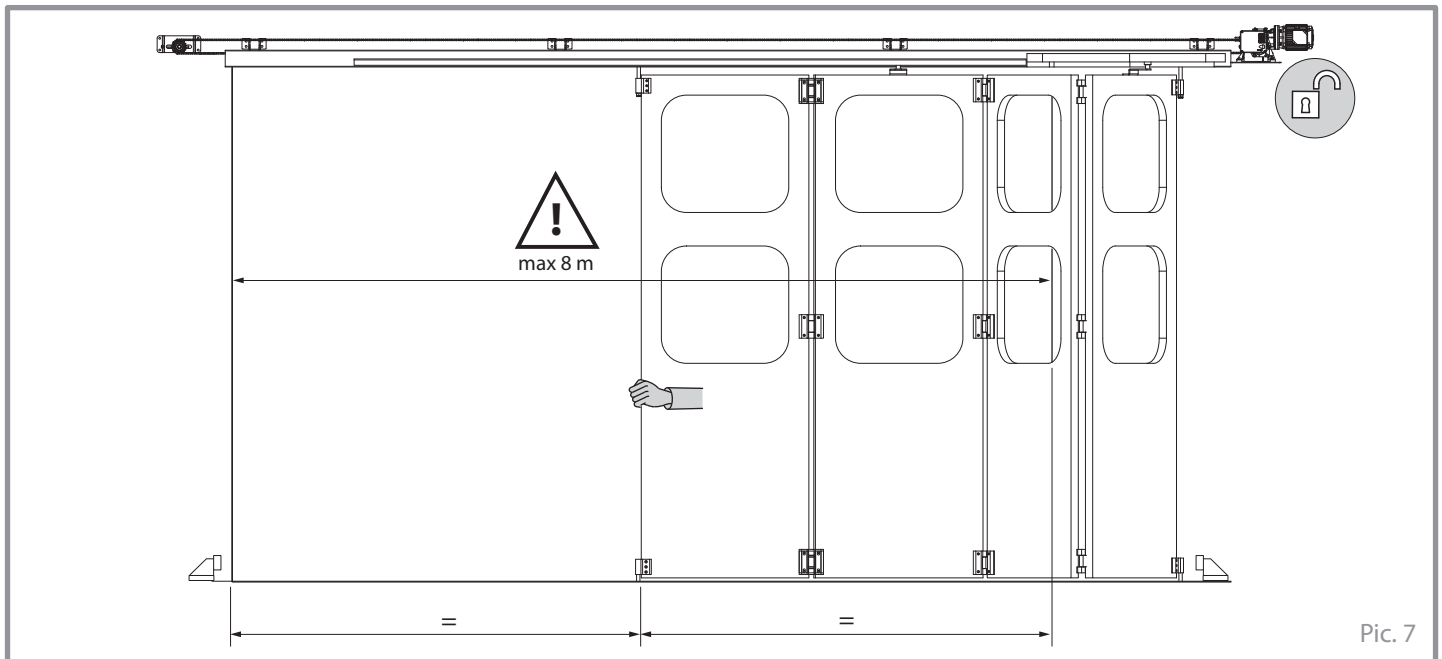
The microswitches inside the limit switch box are factory pre-connected to the dedicated terminals; these are to be further connected to the respectively dedicated terminals in the main control box, following the diagram included in it.

Operations to carry on next:

- by the position adjusting screws, move the two microswitches close to the box inner walls;
- with MEC 200 LB overridden (see operations for manual release) move the door by hand up to the middle of the travel;
- with MEC 200 LB overridden (see operations for manual release) move the contact shaft halfway the travel;
- manually move the door to the closed position on to the door stop or very close to it;
- by a screwdriver onto the dedicated adjusting screw, drive the closing microswitch to touch the contact shaft;
- do the same with the door in the open position on to the open stop or very close to it;
- re-engage MEC 200 LB after having moved the door to the middle of the travel distance (see manual releasing section).



IMPORTANT: after having overridden the motor and manually operated the door to open and close, the position of the limit switch contact shaft does no longer correspond to the actual position of the door. Therefore, it is important that, after the door has been disengaged from the motor, RE-ENGAGING of the door to MEC 200 LB is made in the very same position on which disengaging occurred.

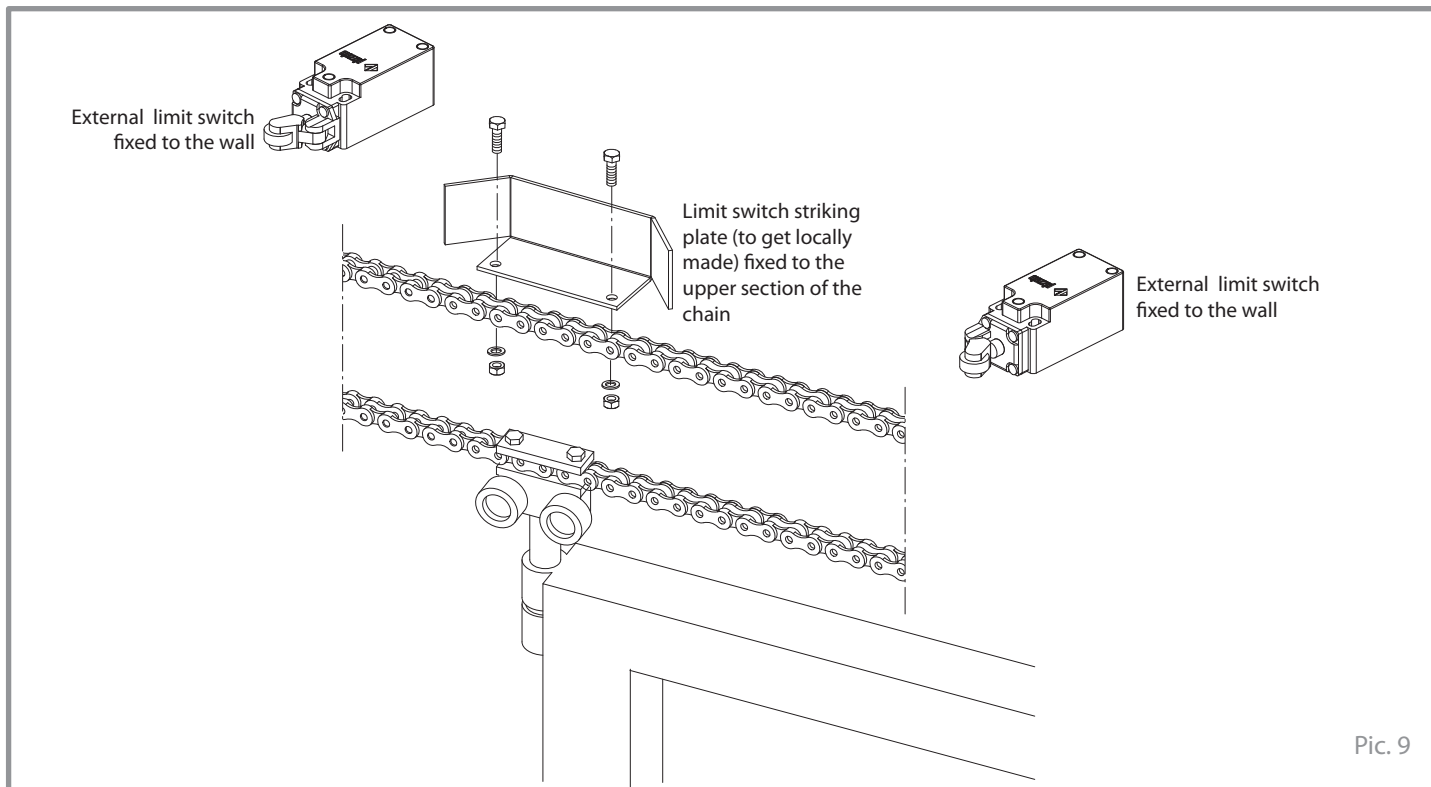


EXTERNAL LIMIT SWITCHES

MEC 200 LB with external limit switches (recommended for doors wider than 8 meters) does not require any adjustment: the open and close limit switches are to be positioned in a way they correspond to the actual open and closed positions of the door. The contact striking bracket in this case is to be fitted on to the upper chain section.



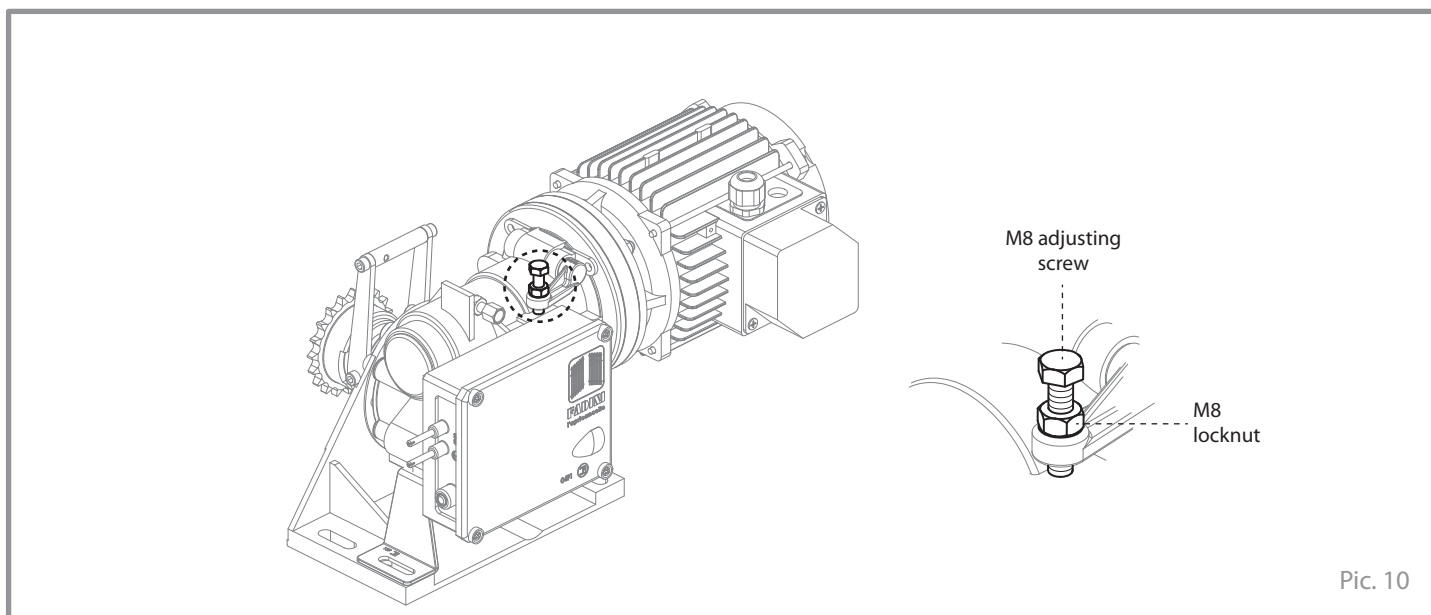
IMPORTANT: with this solution, it is no longer required that the door be brought back to the original position in which it was disengaged from the motor; the action of the external limit switches always occurs in coincidence of the opening and closing positions of the door.



Pic. 9

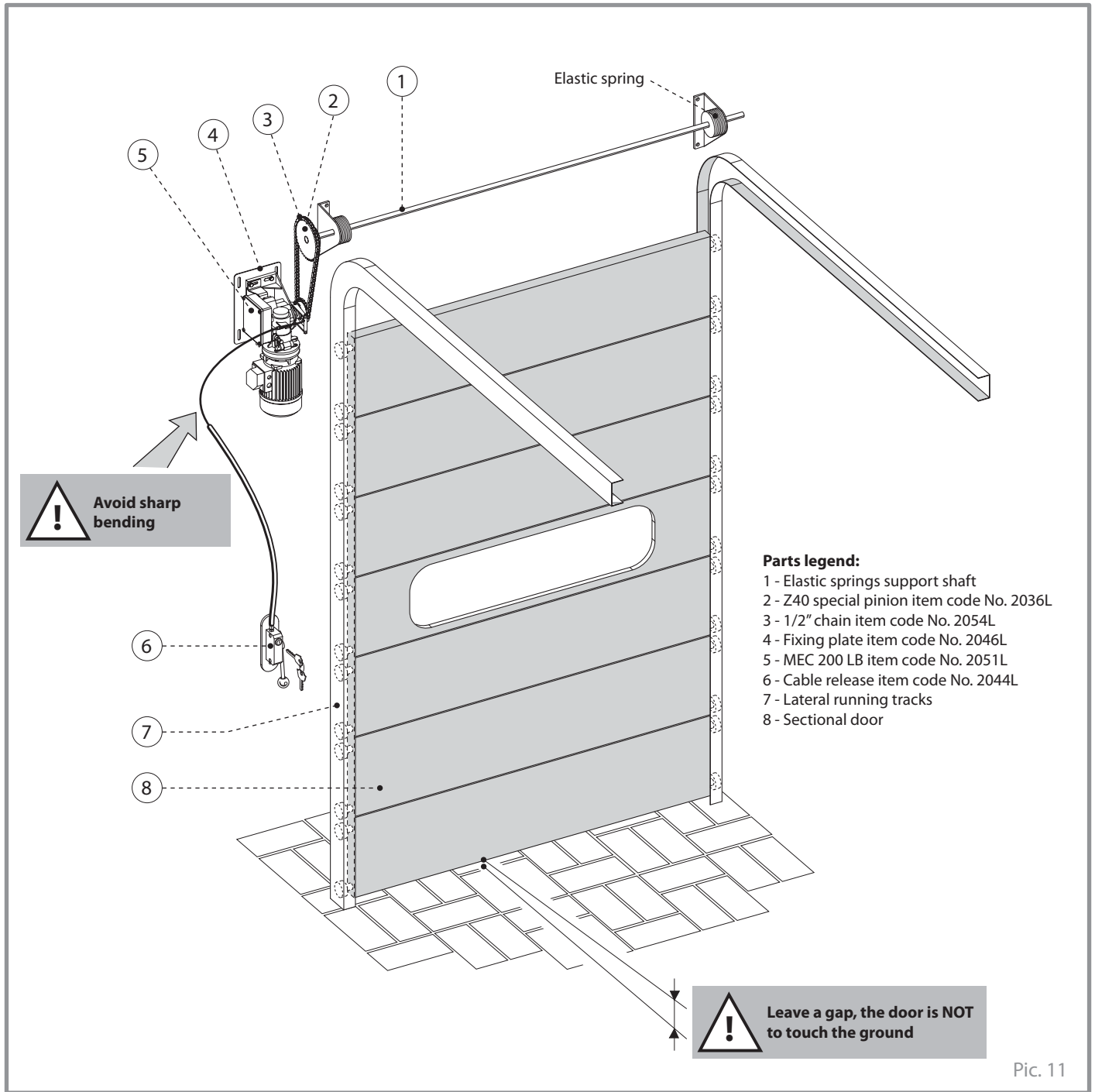
ADJUSTING THE MECHANICAL CLUTCH

With all MEC 200 LB motors, torque ie. the force the motor can develop is controlled by a mechanical clutch. To increase the torque, unlock M8 nut, tighten the dedicated screw and lock M8 back.



Pic. 10

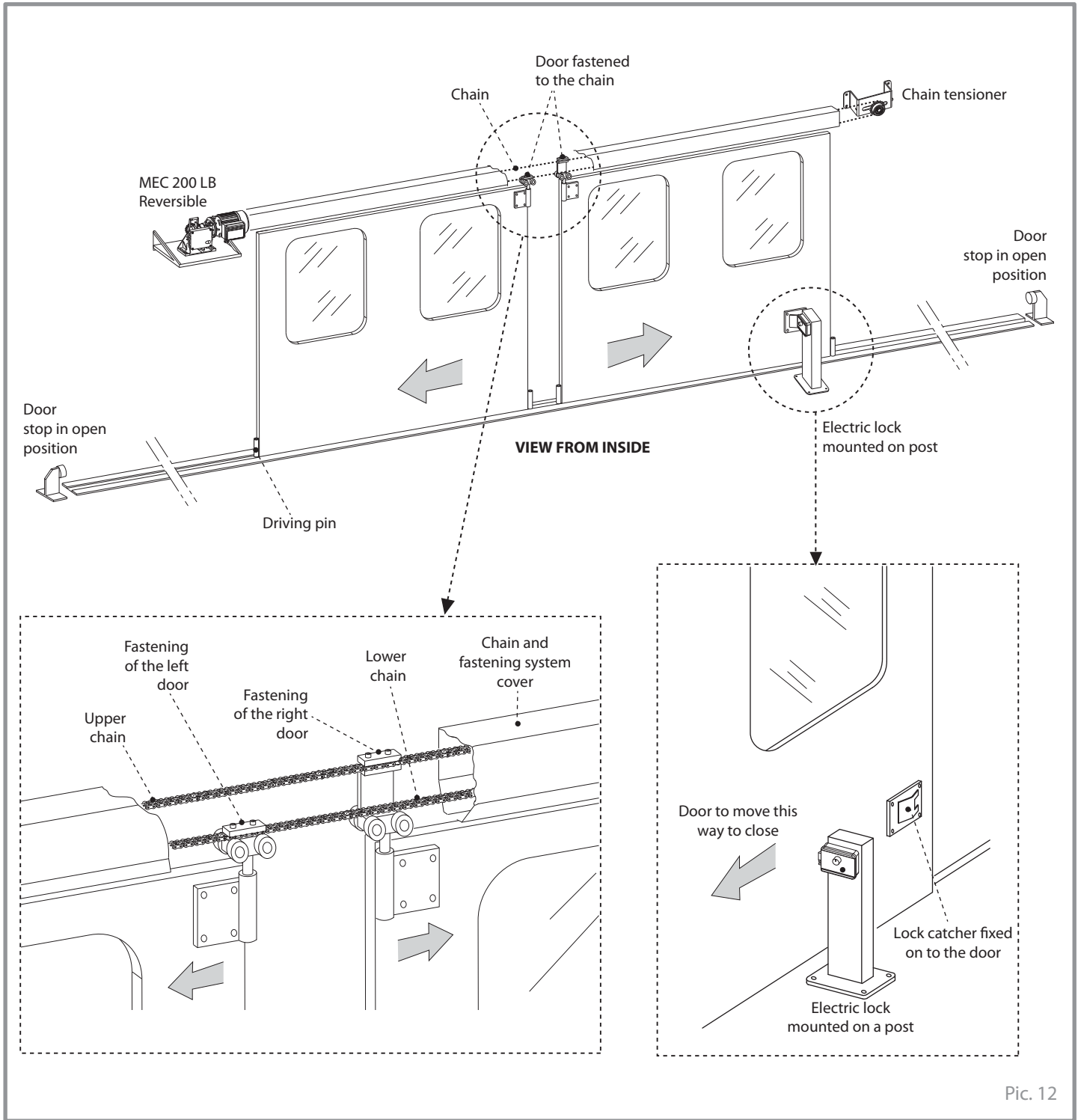
APPLICATION OF MEC 200 LB ON TO SECTIONAL DOORS



English

APPLICATION OF MEC 200 LB REVERSIBLE

English



Pic. 12

MAINTENANCE RECORD

hand over to the end user of the installation



Installation address:	Maintainer:	Date:
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Installation type: Sliding gate <input type="checkbox"/> Folding door <input checked="" type="checkbox"/> Swinging gate <input type="checkbox"/> Road barrier <input type="checkbox"/> Over-head door <input type="checkbox"/> Bollard <input type="checkbox"/> Lateral folding door <input type="checkbox"/> <input type="checkbox"/>	Operator model: Dimensions per gate leaf: Weight per gate leaf:	Quantity of models installed: Installation date:
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NOTE WELL: this document must record any ordinary and extraordinary services including installation, maintenance, repairs and replacements to be made only by using Fadini original spare parts. This document, for the data included in it, must be made available to authorized inspectors/officers, and a copy of it must be handed over the end user/s.

The installer/maintainer are liable for the functionalities and safety features of the installation only if maintenance is carried on by qualified technical people appointed by themselves and agreed upon with the end user/s.

N°	Service date	Service description	Technical maintainer	End user/s
1				
2				
3				
4				
5				
6				

Stamp and signature
installation technician/maintainer

Signed for acceptance
end user
buyer

hand over to the end user of the installation

English



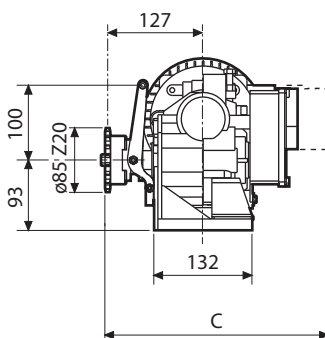
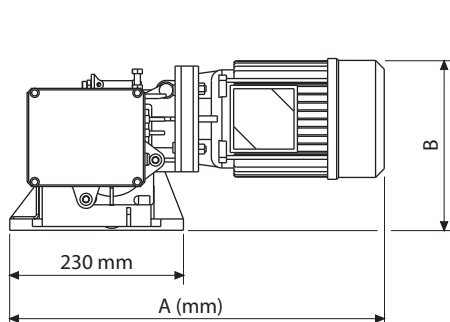
TECHNICAL SPECIFICATIONS

ELECTRIC MOTORS	Single-phase	Three-phase	Single-phase	Three-phase	Three-phase
Power output	0,37 kW (0,5 HP)	0,37 kW (0,5 CV)	0,73 kW (1,0 CV)	0,73 kW (1,0 CV)	1,1 kW (1,5 CV)
Supply voltage	230 Vac	230/400 Vac	230 Vac	230/400 Vac	230/400 Vac
Frequency			50 Hz		
Absorbed power	510 W	575 W	1.130 W	1.030 W	1.500 W
Absorbed current	2,4 A	2,1/1,2 A	5,7 A	3,7/2,2 A	5,1/3 A
Motor rotation speed			1.380 rpm		
Capacitor	20 µF		30 µF		
Intermittent service			S3		

OPERATOR	Single-phase	Three-phase	Single-phase	Three-phase	Three-phase
Rated torque	40 Nm	40 Nm	80 Nm	80 Nm	110 Nm
Gear rating			1/32		
Travel speed			9,6 m/1' - Z20 1/2"		
Working temperature			-20 °C +80 °C		
Oil type			Oil Fadini - Item 706L		
Door surface	25 m ²	25 m ²	50 m ²	50 m ²	50 m ²
Mec 200 LB weight	19 kg	18 kg	23 kg	21 kg	25 kg
Protection standard			IP 55		
Limit switch			mechanical		

PERFORMANCE

Frequency of use	very intensive
Service cycle	25 s opening - 15 s dwell - 25 s closing - 15 s dwell
Complete cycle time	80 s
Complete opening - dwell - closing - dwell cycles	No. 45/hour



ELECTRIC MOTORS		A	B	C
0,5 CV (0,37 kW)	Single-ph.	405	230	225
	Three-ph.	390	220	225
1,0 CV (0,73 kW)	Single-ph.	470	225	290
	Three-ph.	460	225	255
1,5 CV (1,1 kW)	Three-ph.	460	225	255

