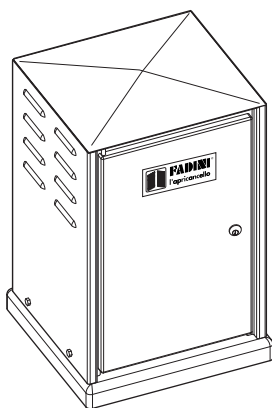
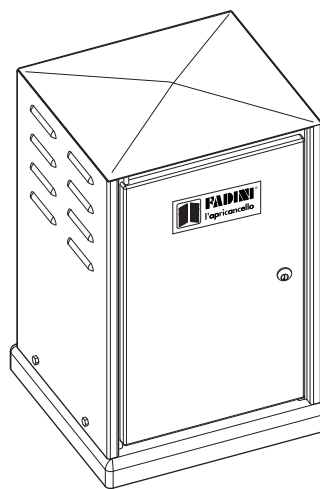


FIBO 300 - FIBO 400



FIBO 300 - 1,5 HP



FIBO 400 - 3,0 HP

Electromechanical operators for heavy industrial sliding gates

- Fibo 300 - 1,5 HP maximum gate weight 2.500 kg
- Fibo 400 - 3,0 HP maximum gate weight 4.000 kg

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: **Fibo 300 - Fibo 400** comply with the 2006/42/CE Machinery Directive, and also that they are 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


INSTRUCTIONS FOR THE INSTALLATION OF THE GEARED MOTORS FIBO 300 - FIBO 400 ON SLIDING GATES.

FOR A PERFECT APPLICATION AND IN ORDER TO ACHIEVE A RELIABLE PERFORMANCE OF FIBO 300 - FIBO 400 IT IS RECOMMENDED THAT THE FOLLOWING STEPS BE CARRIED OUT AND DRAWINGS BE KEPT TO.

FIBO 300 and FIBO 400 are electromechanical operators designed to open and close heavy industrial sliding gates, up to 2.500 kg (Fibo 300 - 1,5 HP) max. and 4.000 kg (Fibo 400 - 3,0 HP) max. gate weights respectively; the motor comes enclosed in a metallic casing (protection cover) and access to it is by a customized key. The worm and crown gear coupling is made of steel and bronze, suitable to withstand high stress conditions and heavy duty applications where significant loads are involved.

They are controlled by an electronic unit Elpro 37 HP with power contactors, to which complementary accessories can be connected such as remote controls, photocells, mechanical safety edges, flashers and other safety devices.

The whole lot of them represents a perfect safety system in support to the installation.

The manual override, disengaging the motor from the gate and allowing manual operations, is by an hexagonal box spanner whose action is directly on the motor shaft, that is located inside the protection cover.

GATE INSPECTION

Make sure that the gate sliding track be firmly set into the ground foundation to prevent it from moving or setting at a later stage, which might eventually lead into the gate going off the rail during its opening/closing travels.

NOTE WELL:

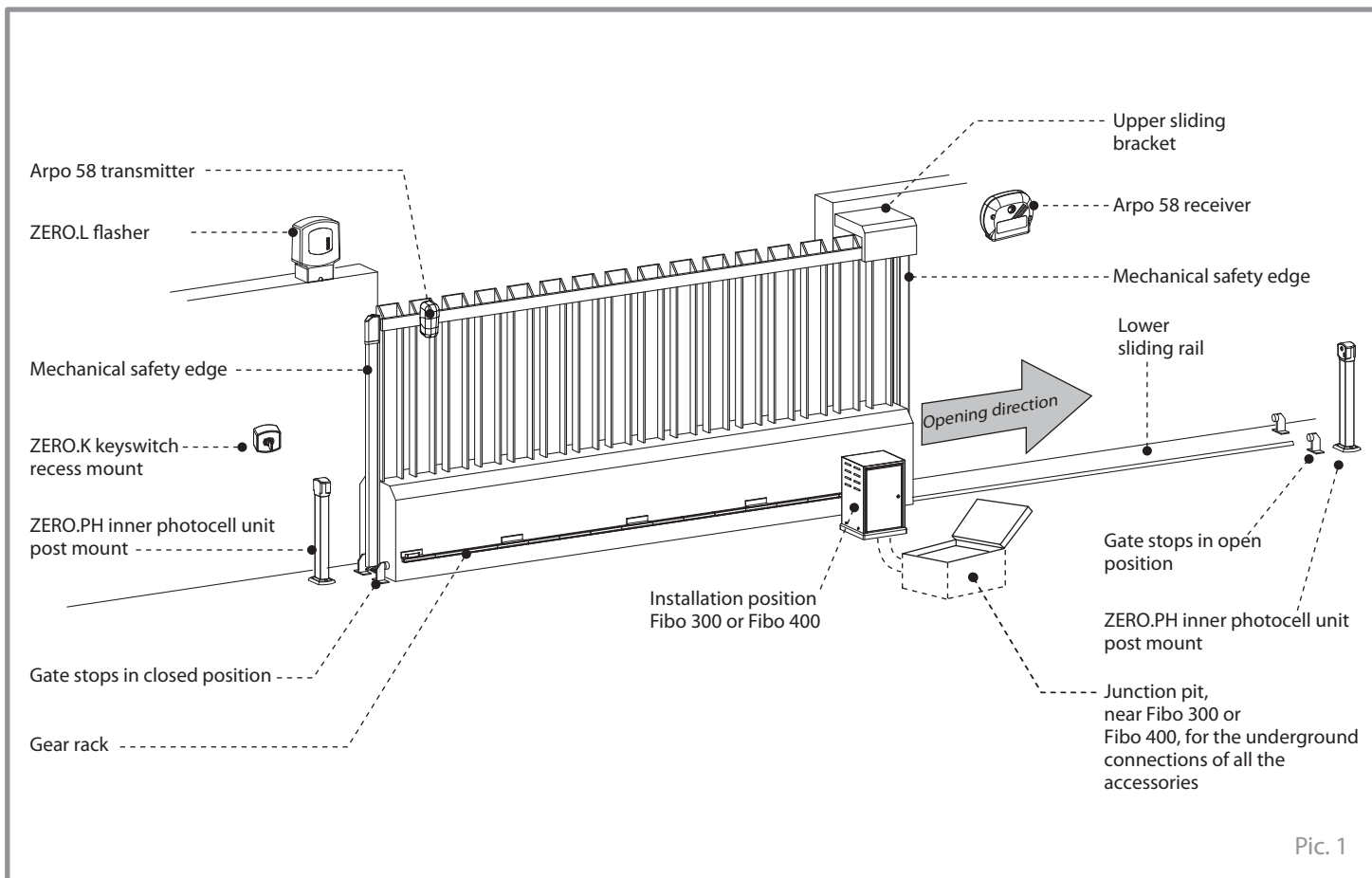


- make sure that proper gate stops be fixed to ground in open and closed gate positions, to prevent the gate from overrunning the upper track;
- make sure the gate be fitted with a safety system to prevent it from falling over;
- prevent the gate from crashing into the gate posts or gate stops.

MAIN COMPONENTS TO AUTOMATE A HEAVY SLIDING GATE

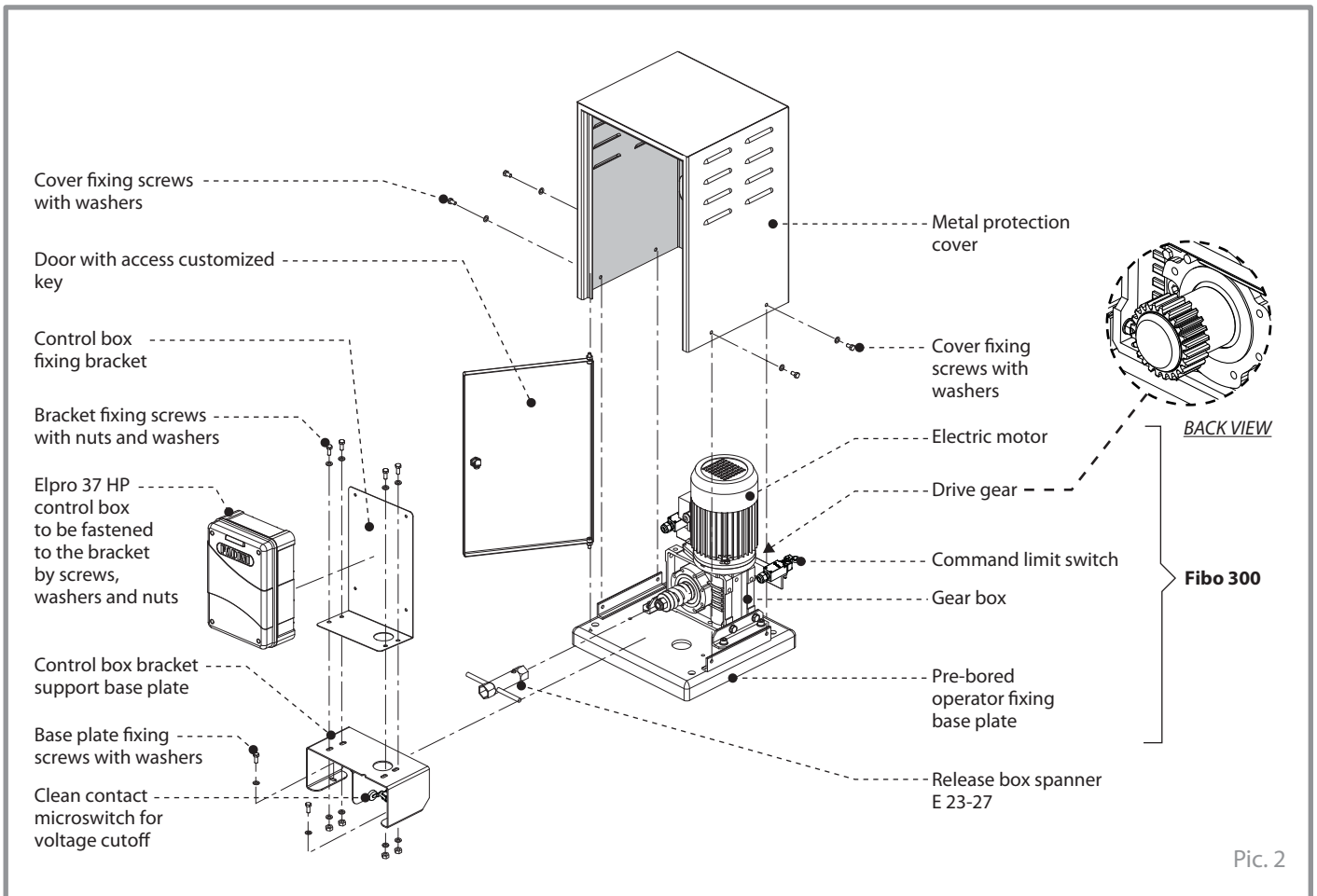
The gate must be fitted with upper and lower rails for it to safely slide along them and be prevented from falling over independently from its travel position. In addition to this and as extra safety, provide one or two gate stops to be fixed to the ground both in opening and closing positions to prevent the gate from overrunning the rails.

Close to the gate, in the position as indicated in Pic. 1, provide an accessible pit for the electrical junctions of the safety and command accessories, whose cables are to be laid underground through suitable conduits to be set up as indicated in Pic. 13.



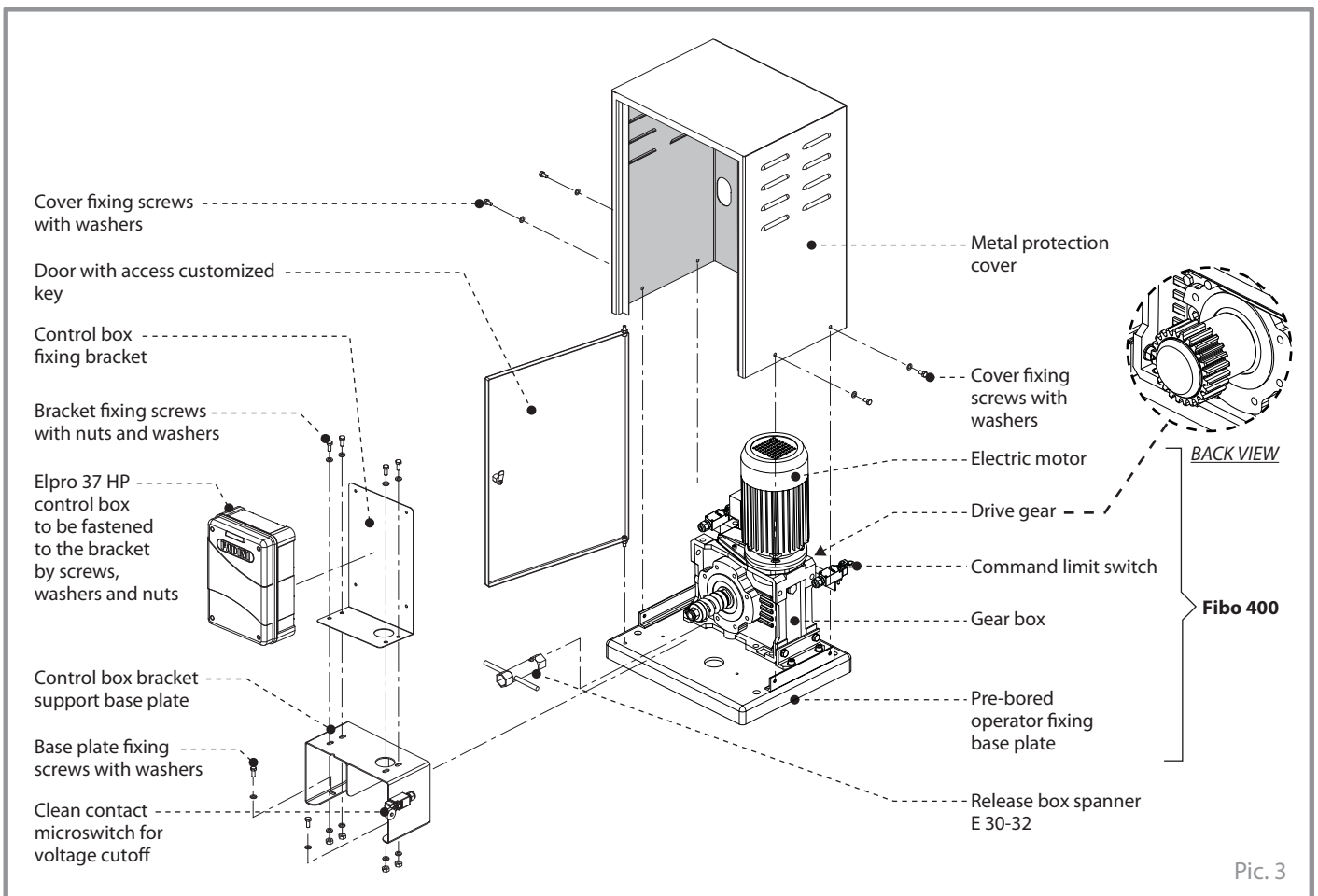
Pic. 1

FIBO 300 MAIN COMPONENTS



Pic. 2

FIBO 400 MAIN COMPONENTS



Pic. 3

INSTALLING FIBO 300 AND FIBO 400

Removing the cover - Fibo 300 and Fibo 400:

The first installation step is to bare the motor operator. To do this, undo the four lateral screws and pull the cover upwards (Pic. 4).



NOTE WELL: in doing this operation the door is no longer supported by the cover and might fall down: remove it from its seat along with the cover.

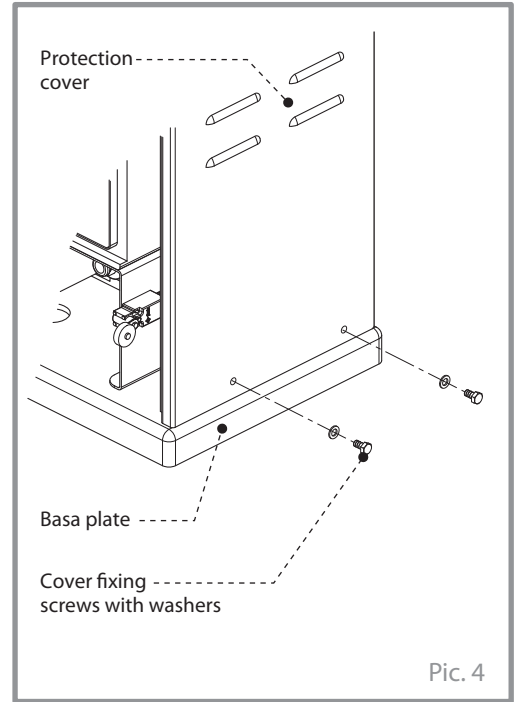
Next step. Undo the fixing screws of all the components indicated in Pic. 2 and in Pic. 3, then proceed with the installation.

Positioning the base plate - Fibo 300 and Fibo 400:

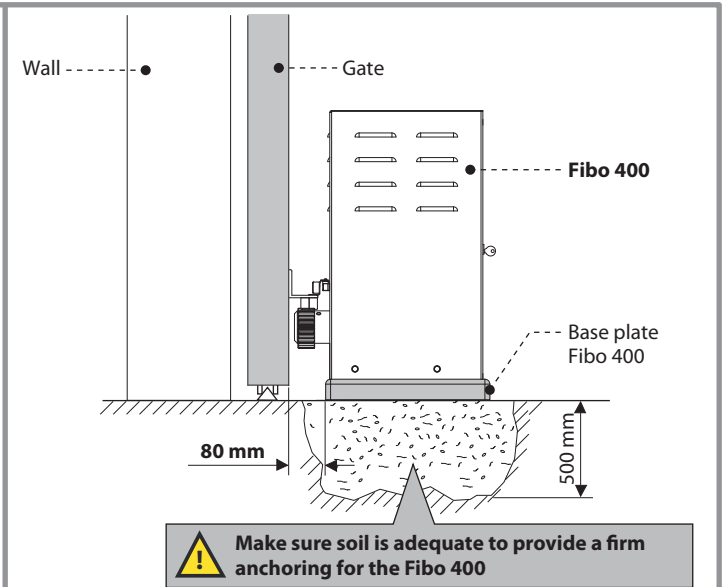
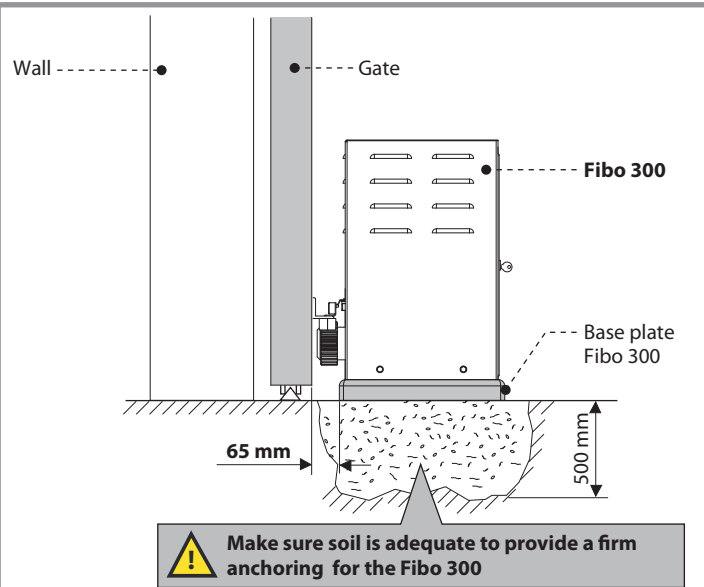
Once satisfied with the correct position where Fibo 300 or Fibo 400 should be installed next to the gate, respect the installation distances as in Pic. 5 and Pic. 6. Mark the paving in correspondence with the four holes in the base plate, remove Fibo 300 or Fibo 400, drill and insert the anchoring expanding bolts.



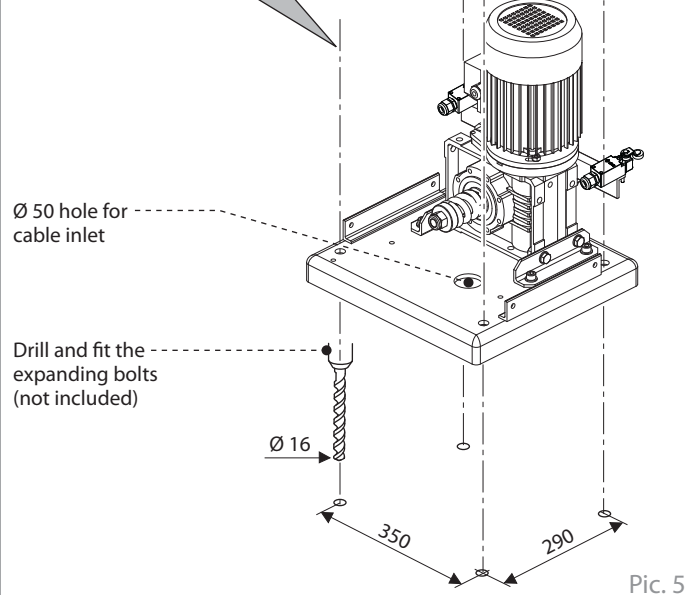
IMPORTANT: to achieve firm anchoring of the Fibo 300 or Fibo 400 assess the ground first and make sure it is adequate to provide a firm anchoring for the motor so it can properly operate a heavy gate.



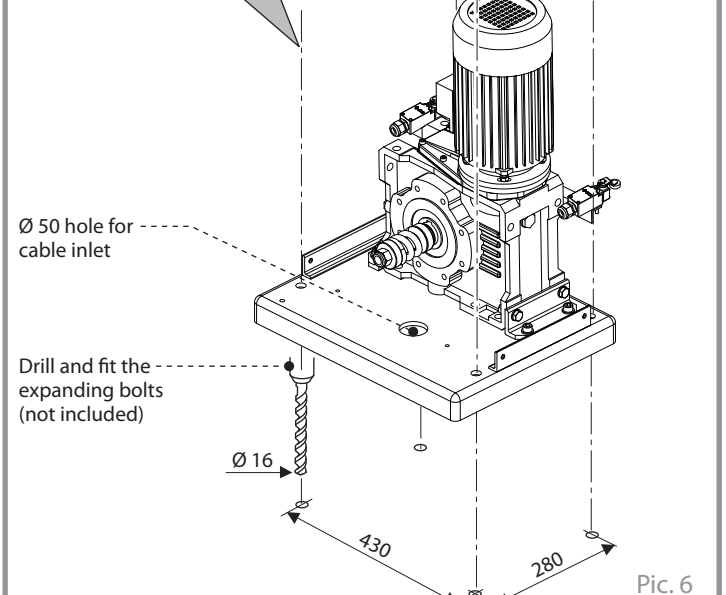
English



NOTE WELL: the holes in the base plate are factory-made



NOTE WELL: the holes in the base plate are factory-made



FIXING THE ANCHORING BASE PLATE OF FIBO 300 AND FIBO 400

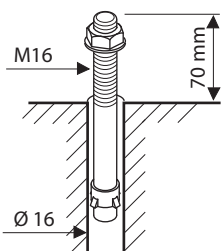
Before fixing the operator base plate, it is advisable that a tube be laid under the ground from an accessible junction pit (to be provided nearby) through the Ø 50 hole into the base plate (Pic. 8). Fit the four expanding bolts (not included with the equipment) into the holes in the foundation as previously drilled, in respect of the distance between the holes in the base plate, while depth is to follow the rules of good installation technique and soil nature (Pic. 7).



IMPORTANT: Make sure Fibo 300 or Fibo 400 be perfectly aligned by means of a spirit level (Pic. 8), then tighten the four nuts and washers to the four bolts.

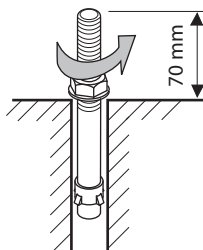
INSERTING AND FASTENING THE BOLTS

1



After drilling the 4 holes, making sure distances are correct, insert the bolts and let them protrude 70 mm

2



Tighten the nut very hard and let the bolt protrude 70 mm

Pic. 7

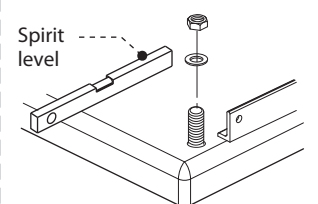
M16 anchoring bolts into the foundation or pavement

Base plate
Spirit level

Junction pit

Corrugated tube to be laid under the ground for cable leading

Fibo 300 - 65 mm
Fibo 400 - 80 mm



Tighten the four nuts and washers very hard

Pic. 8

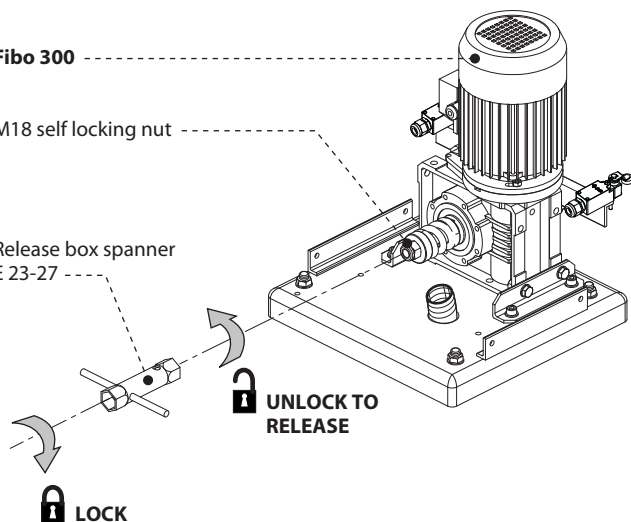
MANUAL RELEASING FIBO 300 AND FIBO 400

In order to properly install the gear rack all along the gate, it is first necessary to disengage the gate from the Fibo 300 or Fibo 400 motors, once these have been installed. Overriding for manual operations is by the spanner supplied with the equipment and the release system is positioned in the front side of Fibo 300 or Fibo 400 on the drive gear shaft: unlock the M18 (for Fibo 300) or M22 (for Fibo 400) nuts by a few turns to release.

Fibo 300

M18 self locking nut

Release box spanner
E 23-27

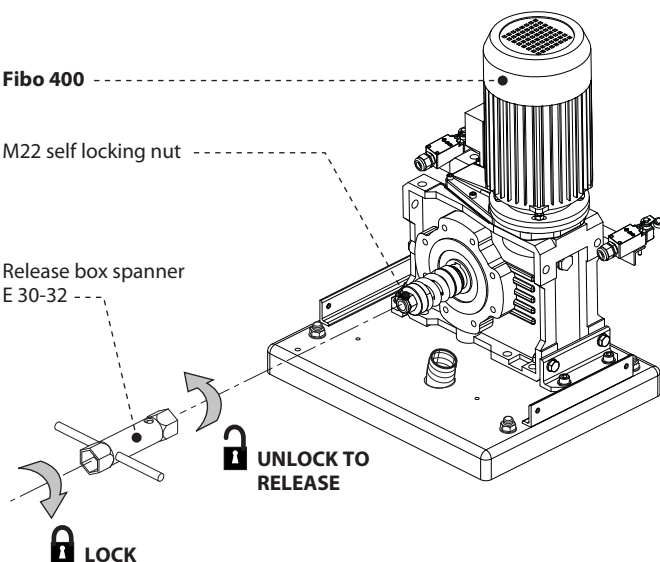


Pic. 9

Fibo 400

M22 self locking nut

Release box spanner
E 30-32

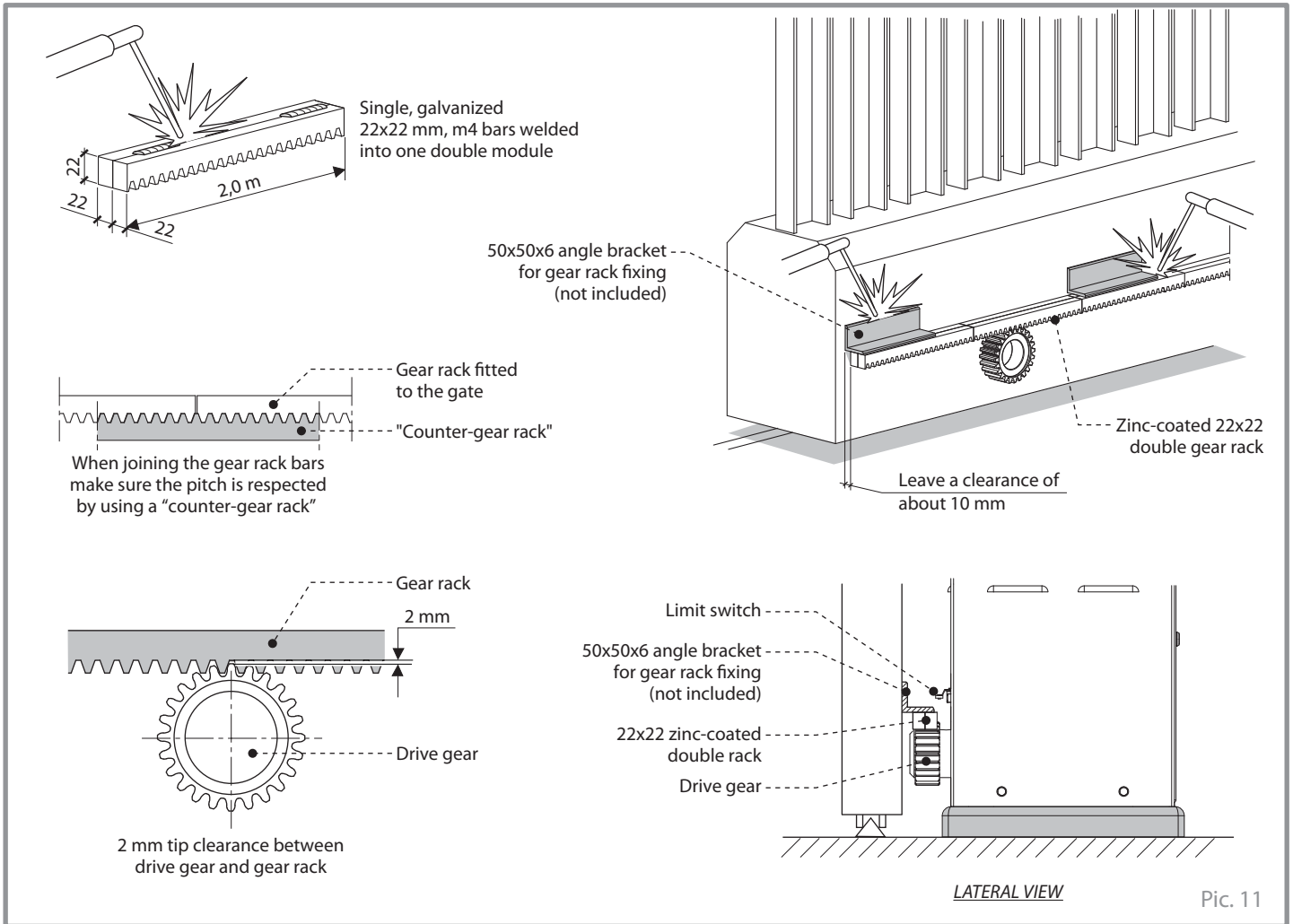


Pic. 10

FITTING THE GEAR RACK TO THE GATE

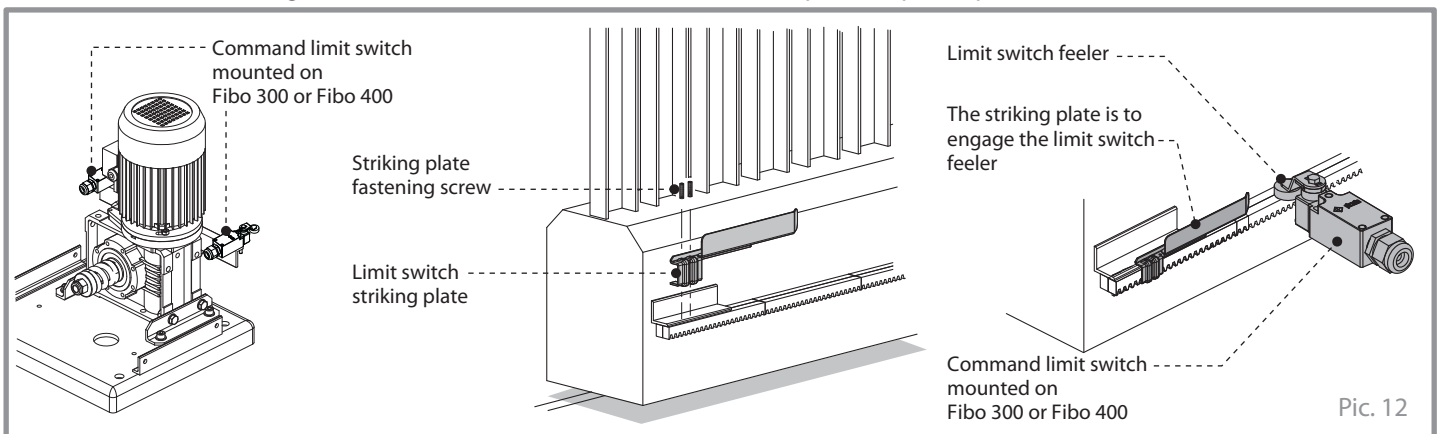
With heavy gates, the standard gear rack is to be double mounted and only the steel version 22x22 mm per bar is recommended. It is to be fitted using support angles (not included) which are to be firmly welded to the gate following these instructions:

- Weld the single bars into compact double modules as indicated in Pic. 11.
- The total length of the gear rack must be equal to the gate travel, including the parts taken by the limit switch striking plates, which are to be fastened on the rack itself.
- Provide a temporary setup for the gear rack on the gate and make sure there is a tip clearance of about 2 mm between the drive gear and the teeth of the bar.
- Make sure the gear rack is perfectly aligned all along the gate travel before welding it firmly: test the correct alignment by manually running the gate full track, Fibo 300 or Fibo 400 in disengaged mode, and make sure the drive gear turns smoothly without any friction or jerking.
- Once satisfied with the outcome of the first running test, firmly weld the gear rack as indicated.



INSTALLING THE LIMIT SWITCH STRIKING PLATES

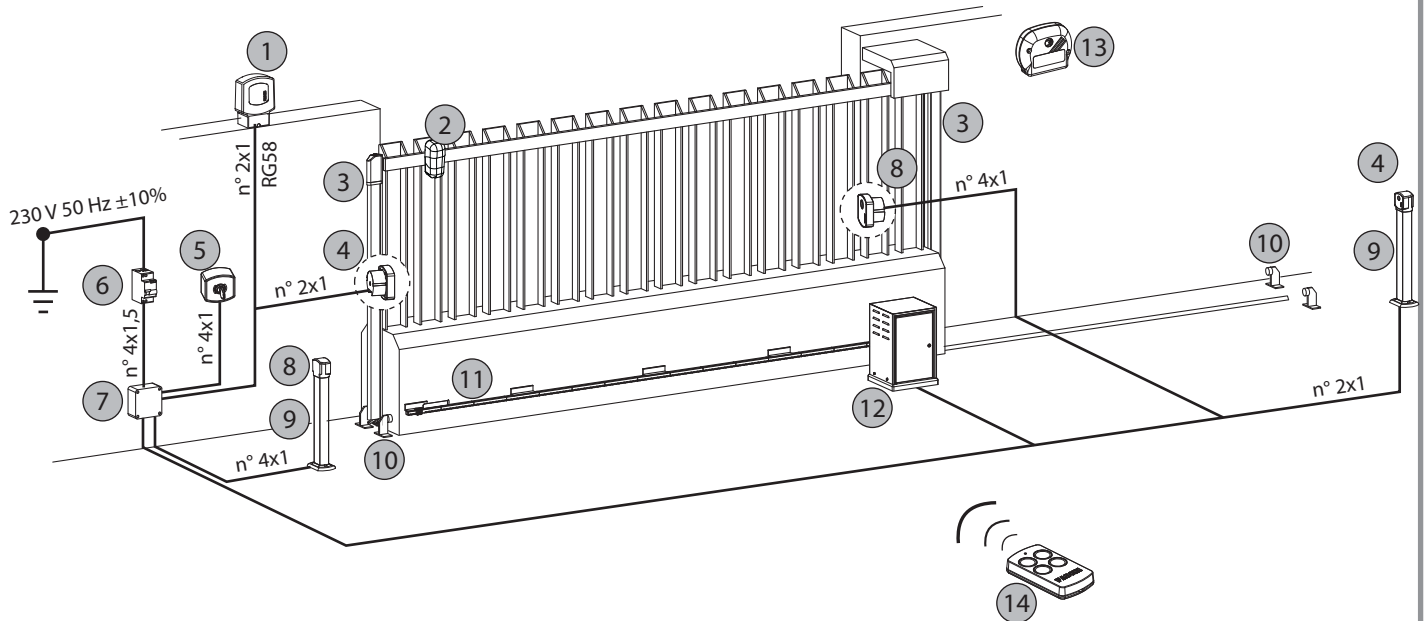
Gate stop, i.e. stop of the drive gear, occurs when either striking plate meets the respective limit switches. Therefore the striking plates are to be installed on the gear rack once the open/closed positions of the gate have been precisely assessed, i.e. when the gate is at the end/limit of the open and close cycles as required: it is recommended that the limit switches be activated a few seconds earlier than the gate reaches the end of the travel where a complete stop is required (Pic.12).



LAYOUT OF THE INSTALLATION - WIRING DIAGRAM AND ACCESSORIES

Before installing Fibo 300 or Fibo 400 prepare all the command and safety accessories as required.

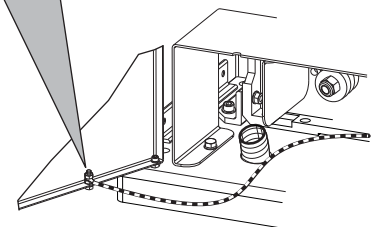
General layout: merely indicative, it is the installer's care and responsibility to properly lay the tubes for the electrical connections.



- | | |
|---|---|
| 1 - Flasher | 9 - 0,5 m post |
| 2 - Transmitter | 10 - Gate stop (mandatory, not supplied with the equipment) |
| 3 - Mechanical cable-operated safety edge | 11 - Gear rack |
| 4 - Recess photocell projector | 12 - Fibo 300 or Fibo 400 with Elpro 37 HP electronic controller and plug-in receiver |
| 5 - Recess key-switch | 13 - Receiver |
| 6 - 230 V - 50 Hz - 0,03 A magneto-thermal differential circuit breaker (not supplied with the equipment) (beyond 100 m increase cable section to 2,5 mm ²) | 14 - Transmitter |
| 7 - Junction box (not supplied with the equipment) | |
| 8 - Recess photocell receiver | |



IMPORTANT: all the electrical equipment must be properly grounded.

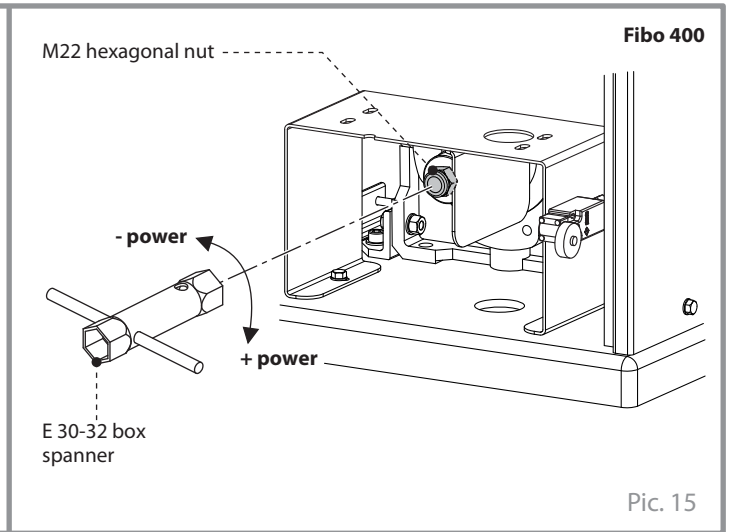
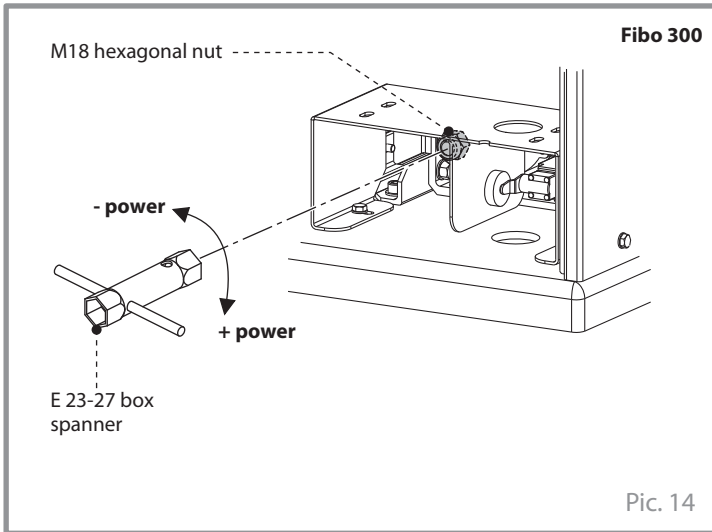


Pic. 13

ADJUSTING THE MECHANICAL CLUTCH

It is possible to adjust power with Fibo 300 and Fibo 400 by a mechanical clutch (factory pre-set).

In order to adjust the mechanical clutch, ie. the operator torque to the gate weight, turn the self-locking nut positioned on the operator base: screw the nut harder to increase torque, unscrew to decrease torque (Pic. 14 and Pic. 15).



FIBO 300 TECHNICAL DATA

ELECTRIC MOTOR

Power output	1,1 kW (1,5 HP)
Absorbed power	1.500 W
Three-phase supply voltage	230/400 Vac
Frequency	50/60 Hz
Absorbed current	5,1/3 A
Motor rotation speed	1.400 rpm (50 Hz) - 1.700 rpm (60 Hz)
Intermittent service	S3 - 75%
Cooling	by fan

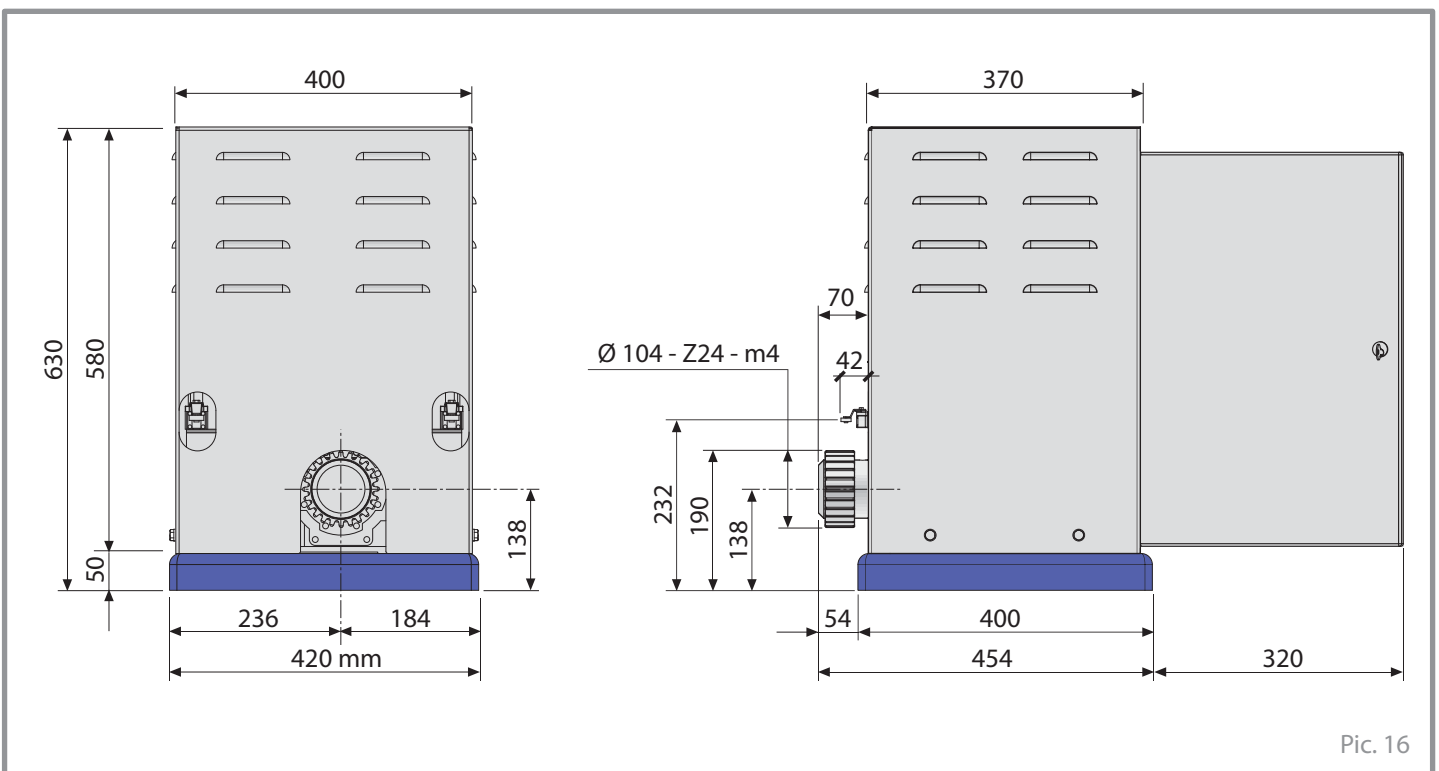
ELECTROMECHANICAL GEARED OPERATOR

Ratio	1:40
Output revolutions	35 rpm (50 Hz) - 42,5 rpm (60 Hz)
Drive gear	Z 24
Module	4,0
Nominal torque	300 Nm (50 Hz) - 247 Nm (60 Hz)
Transfer speed (1.400 rpm - 50 Hz)	10,5 m/1'
Transfer speed (1.700 rpm - 60 Hz)	12,8 m/1'
Hydraulic oil type	Oil Fadini - art. 706L
Working temperature	-25 °C +80 °C
Fibo 300 weight	62 kg
Maximum gate weight	2.500 kg
Protection standard	IP 55 (inside the enclosure)
Limit switch	mechanical

PERFORMANCE

Frequency of use	very intensive
Service cycle	25 s opening - 30 s dwell - 25 s closing - 30 s dwell
Complete cycle time	110 s
Complete opening - dwell - closing - dwell cycles	No. 33/hour
Annual cycles (with 8 hours of use per day)	No. 96.000

FIBO 300 OVERALL DIMENSIONS



Pic. 16

FIBO 400 TECHNICAL DATA**ELECTRIC MOTOR**

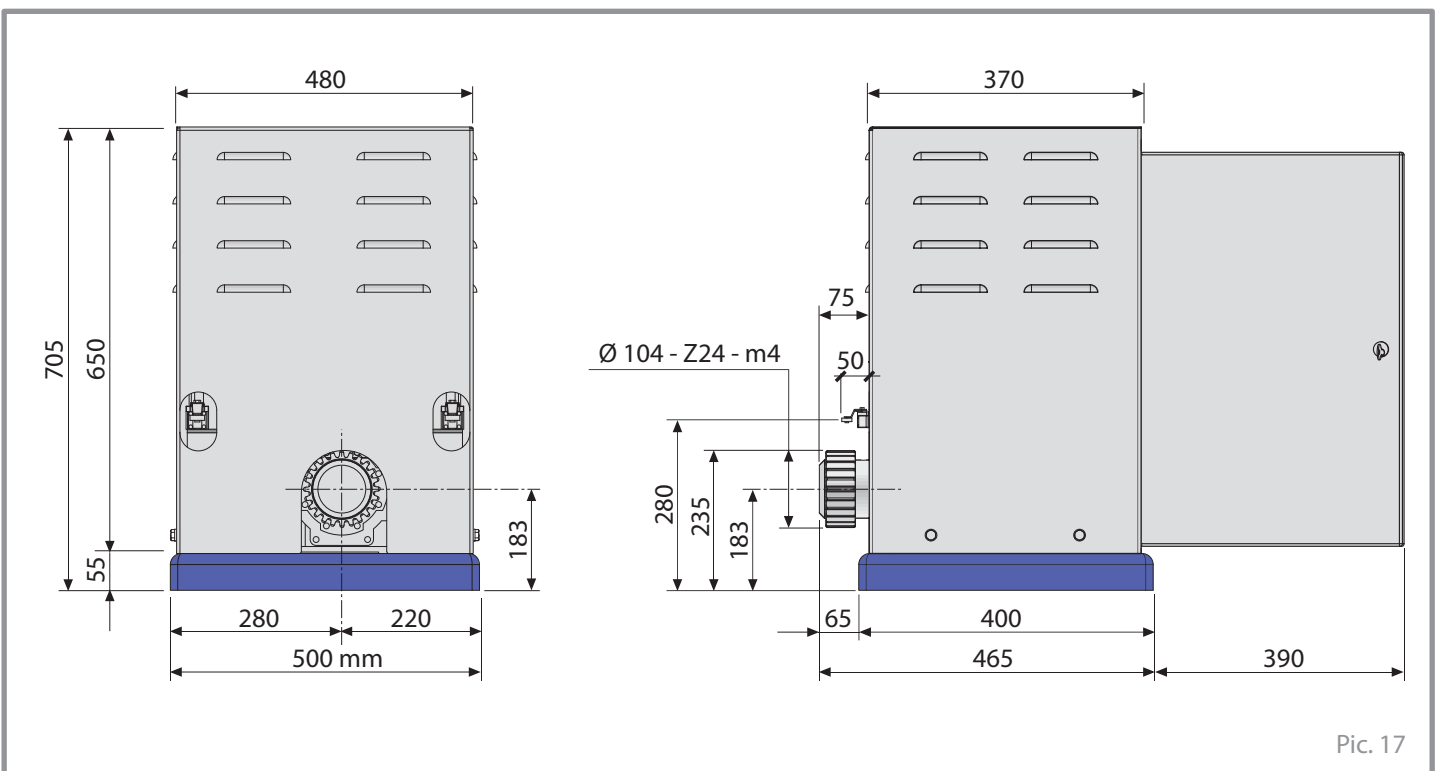
Power output	2,2 kW (3,0 HP)
Absorbed power	2.800 W
Three-phase supply voltage	230/400 Vac
Frequency	50/60 Hz
Absorbed current	9,4/5,4 A
Motor rotation speed	1.400 rpm (50 Hz) - 1.700 rpm (60 Hz)
Intermittent service	S3 - 40%
Cooling	by fan

ELECTRO-MECHANICAL GEARED OPERATOR

Ratio	1:40
Output revolutions	35 rpm (50 Hz) - 42,5 rpm (60 Hz)
Drive gear	Z 24
Module	4,0
Nominal torque	600 Nm (50 Hz) - 490 Nm (60 Hz)
Transfer speed (1.400 rpm - 50 Hz)	10,5 m/1'
Transfer speed (1.700 rpm - 60 Hz)	12,8 m/1'
Hydraulic oil type	Oil Fadini - art. 706L
Working temperature	-25 °C +80 °C
Fibo 400 weight	89 kg
Maximum gate weight	4.000 kg
Protection standard	IP 55 (inside the enclosure)
Limit switch	mechanical

PERFORMANCE

Frequency of use	use intensive
Service cycle	60 s opening - 30 s dwell - 60 s closing - 30 s dwell
Complete cycle time	180 s
Complete opening - dwell - closing - dwell cycles	No. 20/hour
Annual cycles (with 8 hours of use per day)	No. 57.000

FIBO 400 OVERALL DIMENSIONS

Pic. 17

Fibo 300
Fibo 400

**Three-phase electromechanical geared motor
for sliding gates**



English



Via Mantova, 177/A - 37053 Cerea (VR) Italy
Ph. +39 0442 330422 Fax +39 0442 331054
info@fadini.net - www.fadini.net



2012/19/UE Directive
Re. disposal of electric
and electronic waste
DISPOSE PROPERLY OF MATERIALS
ARMFUL TO THE ENVIRONMENT

20230608