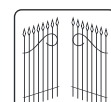


**Electromechanical operator for
sliding gates up to
1.250 kg 0,5 HP version
1.850 kg 1,0 HP version**



EN 13241
EN 12453
EN 12445

Made in Italy



FADINI
the gate opener

GENERAL WARNINGS FOR PEOPLE SAFETY

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 snc 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 snc, 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 snc (Via Mantova, 177/A - 37053 Cerea - VR - Italy) declares under own responsibility that: **Nyota 115 evo** 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.

Tested and certified: CE marking and type testing according to ITT PDC No. 2389-2008.

Meccanica Fadini s.n.c.
Director in charge

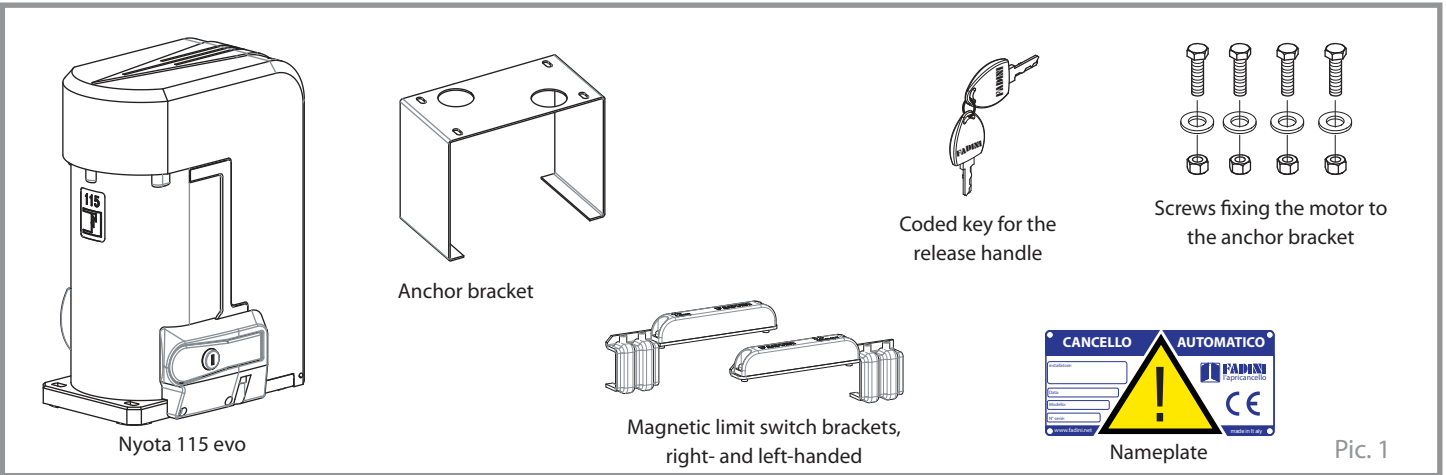


GENERAL DESCRIPTION OF THE PRODUCT

Nyota 115 evo is an electromechanical operator to open and close sliding gates of any design and size up to a maximum weight of 1.850 kg. Two distinct voltage versions are available, single- and three-phase, both include 0,5 HP and 1,0 HP motors. The Nyota 115 evo operators have steel-bronze mechanical coupling ie. worm and crown gear in an oil bath ; all supported by radial bearings and thrust ball bearings to ensure the utmost in product reliability. The entire body and the cover are made of painted pressure cast aluminium. The operator comes either in the version with incorporated control board (Elpro 12 evo) or stand alone control box (Elpro 37/37 DS). Some accessories are required to ensure full safety and control of the system and make this operator suitable to any application, in both public and private installations.

! This symbol means that particular attention is to be paid to installation operations and first running test. Failing to respect such indications may affect the functioning of the Nyota 115 evo gate operator.

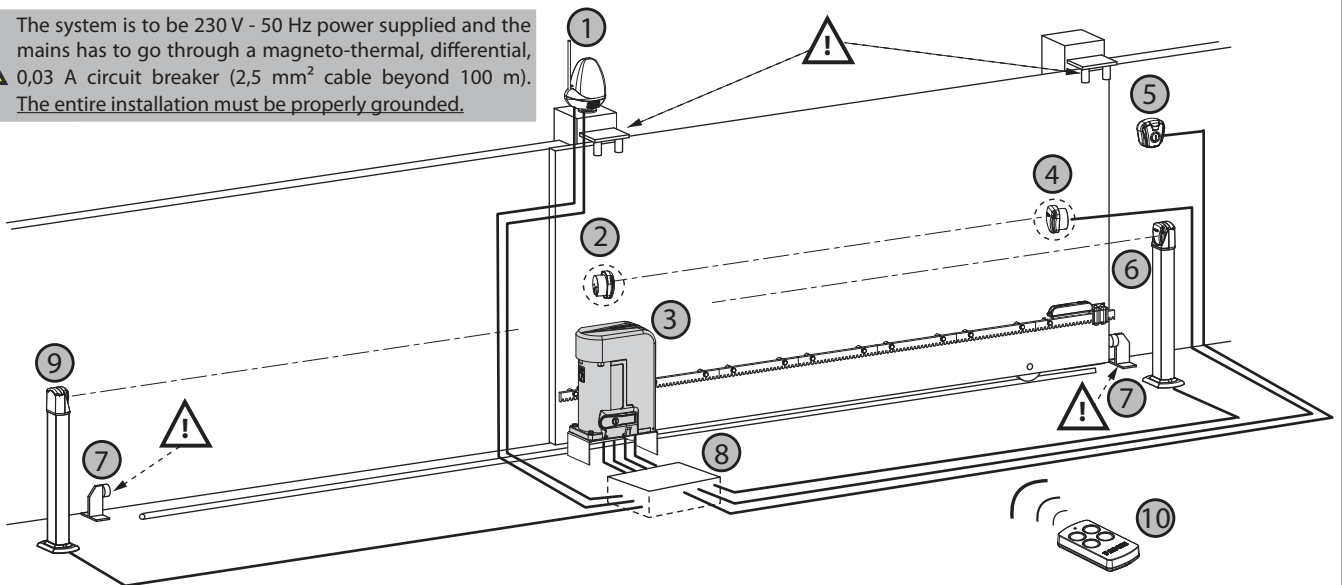
COMPONENTS AND PARTS INCLUDED IN THE EQUIPMENT



ELECTRICAL WIRING PREPARATIONS AND ACCESSORIES

Indicative general layout: Nyota 115 evo with Elpro 12 evo. It is the installer's care laying the piping for the electrical connections in the correct and proper way.

! The system is to be 230 V - 50 Hz power supplied and the mains has to go through a magneto-thermal, differential, 0,03 A circuit breaker (2,5 mm² cable beyond 100 m). The entire installation must be properly grounded.

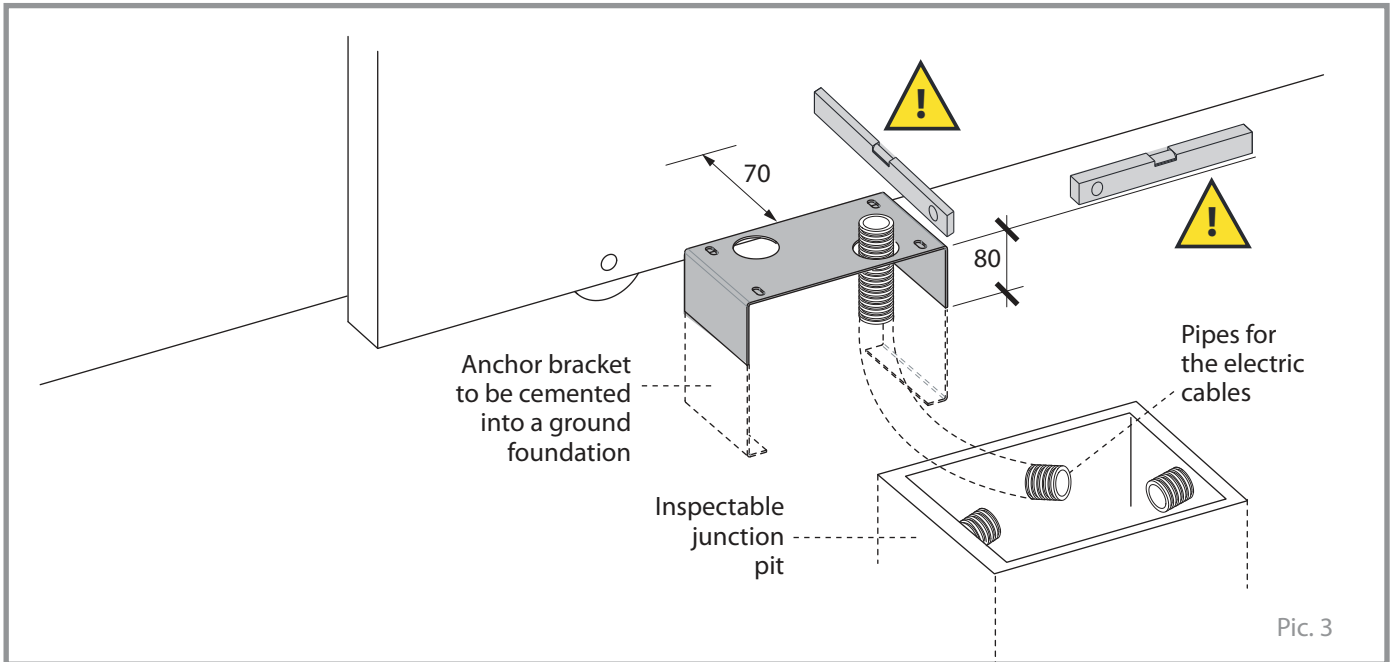


Position	Description	Type of electric cable
1	MIRI 4 flasher with Birio A8 aerial	2 x 0,5 (FROR CEI 20-20-EN 50267-2-1), RG58 for aerial
2	FIT 55 photocell receiver	4 x 0,5 (FROR CEI 20-20-EN 50267-2-1)
3	Nyota 115 evo c/ Elpro 12 evo n. VIX 53 radio plugin card	supply voltage 3 x 1,5 (FROR CEI 20-20-EN 50267-2-1)
4	FIT 55 photocell projector	2 x 0,5 (FROR CEI 20-20-EN 50267-2-1)
5	CHIS 37 keyswitch	4 x 0,5 (FROR CEI 20-20-EN 50267-2-1)
6	Post for Fit 55 photocell receiver	4 x 0,5 (FROR CEI 20-20-EN 50267-2-1)
7	Ground stop in closed and open gate positions	
8	Electric cable junction box	
9	Post for FIT 55 photocell projector	2 x 0,5 (FROR CEI 20-20-EN 50267-2-1)
10	VIX 53 transmitter	

Pic. 2

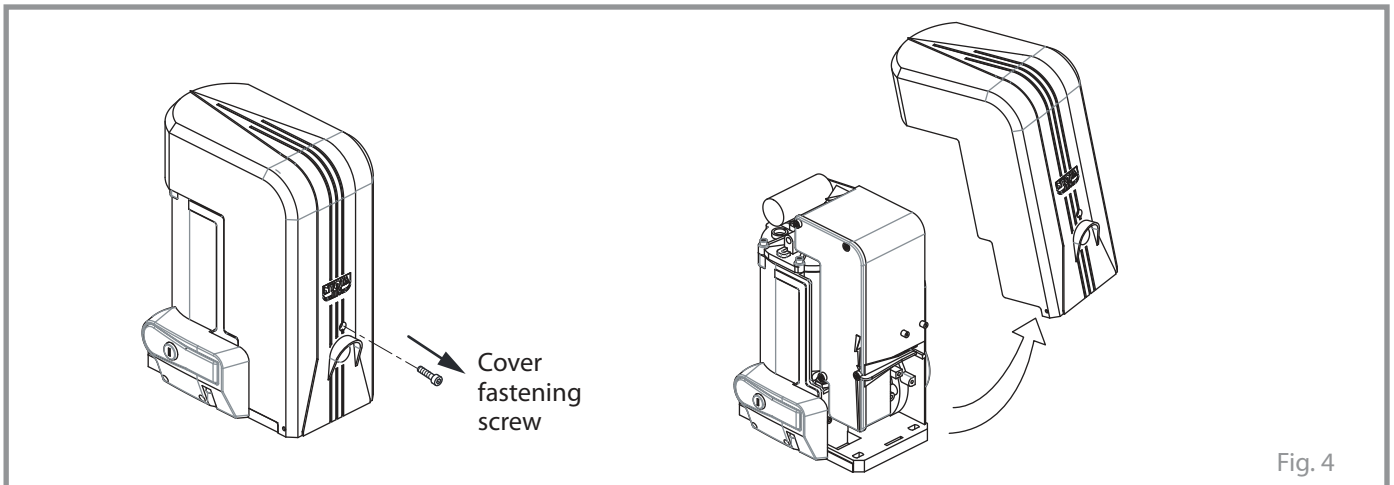
CEMENTING THE ANCHOR BRACKET

Distances in Pic. 3 are to be followed in this step. Once satisfied that concrete has firmly set all around the the bracket, Nyota 115 evo can be mounted onto it.

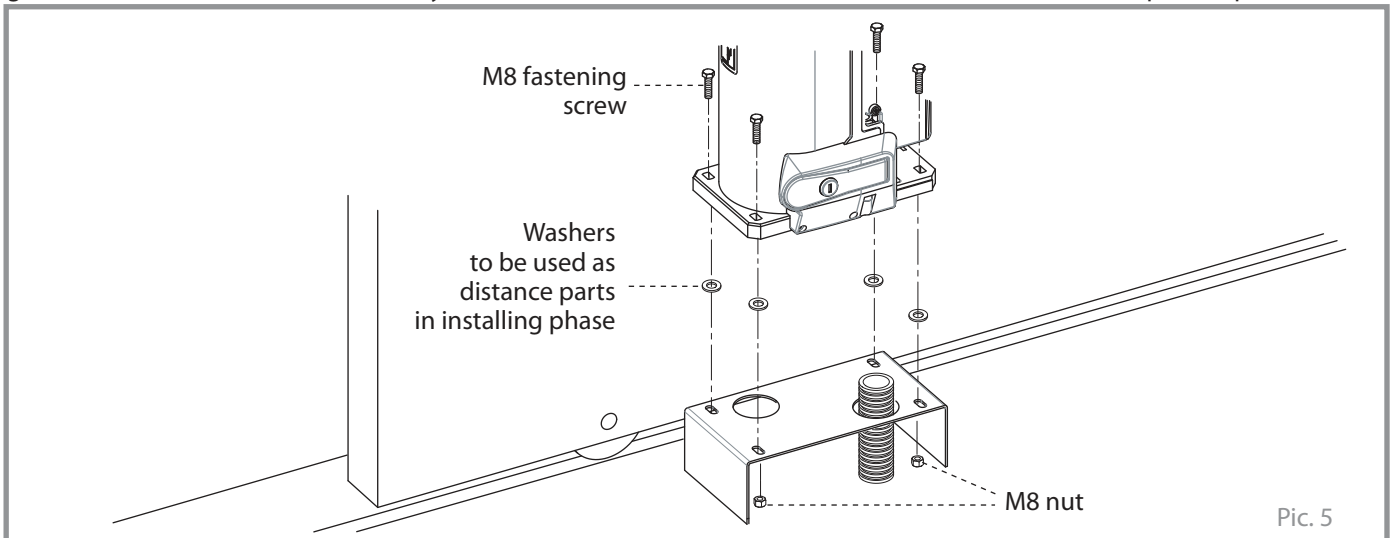


MOUNTING NYOTA 115 EVO ONTO THE ANCHOR BRACKET

Cover removing: unscrew the fastening screw completely (Pic. 4), then pull at the bottom in order to remove the cover.



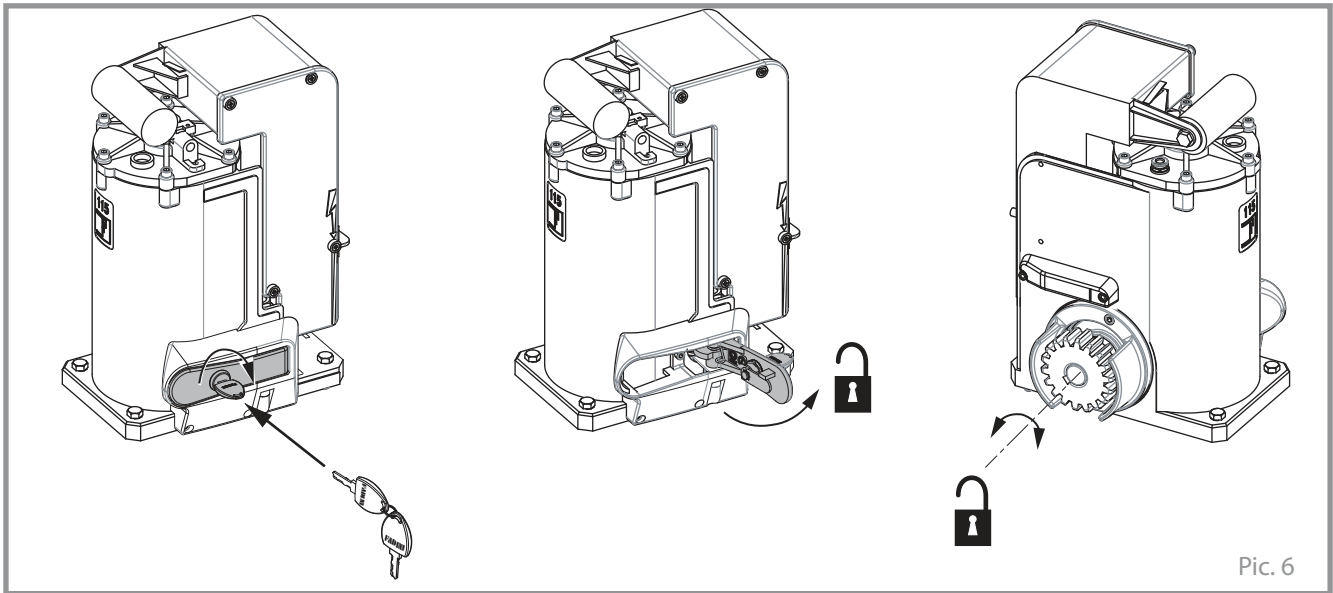
Before fastening Nyota 115 evo by the provided screws, insert the washers under the operator: they will be removed once the gear rack has been installed. In this way a 2 mm clearance is obtained between the rack teeth and the operator pinion (Pic. 5).



English

FIXING THE GEAR RACK TO THE GATE

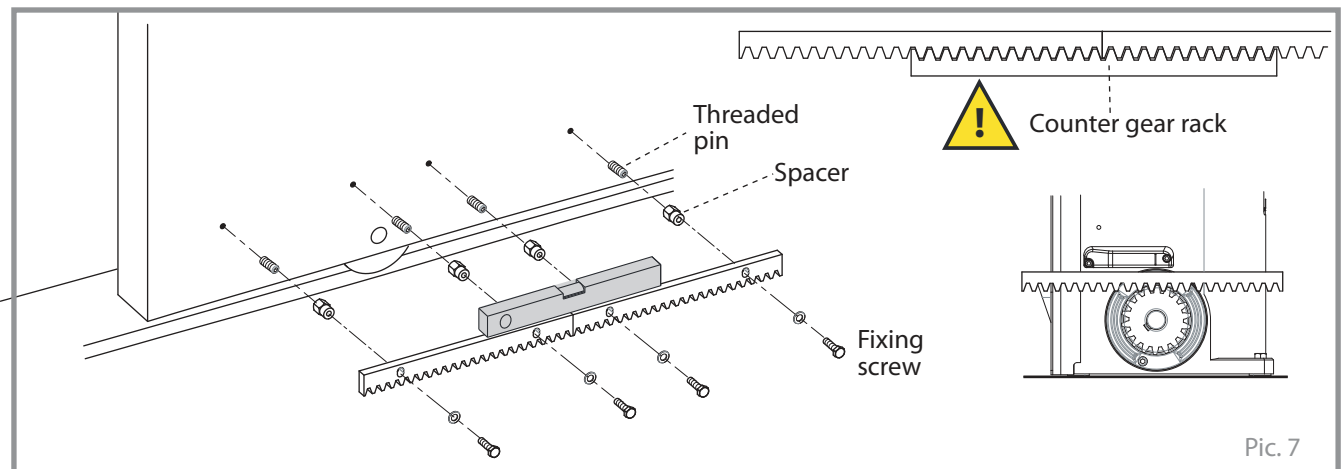
Before moving to the next step, gear rack fixing, it is required that the engaging pinion is released and be able to turn free. This will facilitate the fixing of the gear rack modules. Use the coded key to unlock the flap cover (release handle), then rotate it beyond 90° to disengage the pinion. To lock back the operator, carry out the same steps in reverse order. Then slide the gate, to which the gear rack has been fixed, to mesh the pinion until the locking system is engaged.



Pic. 6

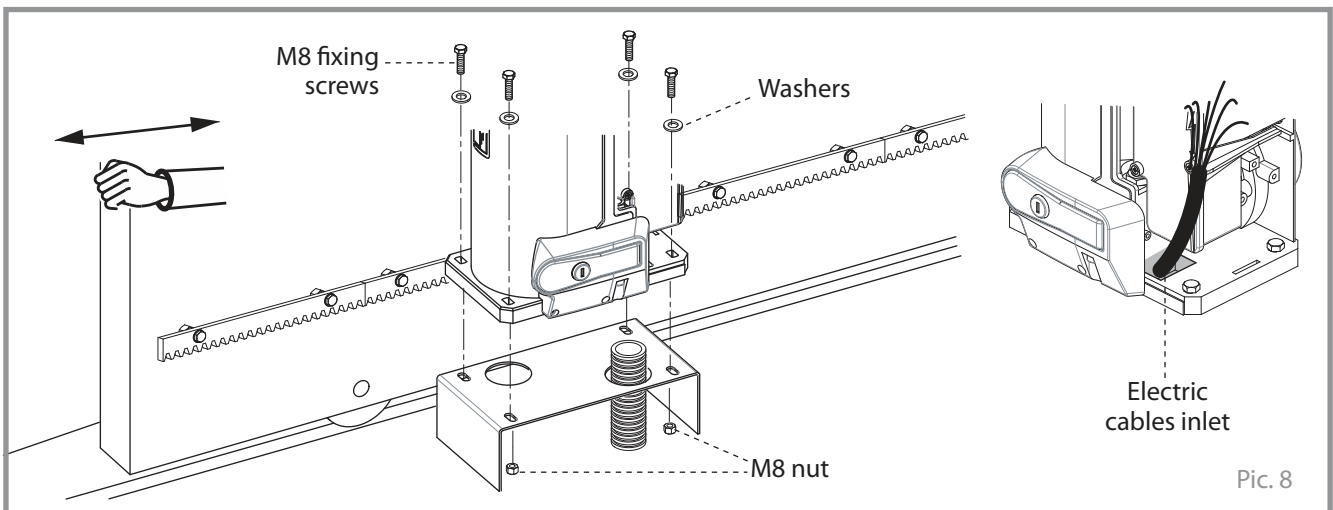
Fix the gear rack modules all along the gate to coincide with the actually required gate travel. By means of a spirit level, make sure they are well aligned, and take also into account the space needed for fixing the limit switch striking plates at both ends of the gear rack.

IMPORTANT: use a module as counter gear rack to make sure that junctions have the same pitch.



Pic. 7

Once satisfied with the gear rack fixing, remove the washers under Nyota 115 evo, in order to get a sufficient clearance between the operator pinion and the gear rack: the gate must be able to slide all its travel free of any friction.



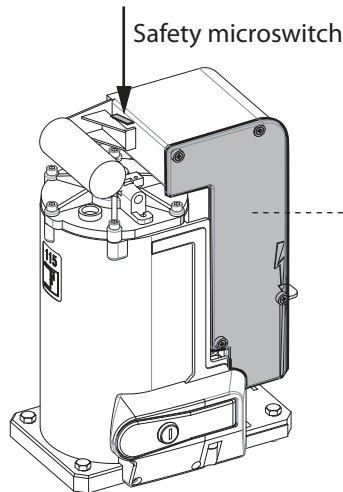
Pic. 8

ELECTRICAL CONNECTIONS TO THE CONTROL BOARD

Nyota 115 evo is available either in the version with Elpro 12 evo control board incorporated or Elpro 37/37 DS stand alone. The electrical connections are to be made following the instructions in the respective controller's manual.



NOTE WELL: Nyota 115 evo is supplied with electric power when the safety micro-switch (positioned on the upper part of the geared motor) is pressed and held down by the aluminium operator cover when this is fitted and firmly fixed.



The version Nyota 115 evo with incorporated Elpro 12 evo control board requires that the lid be removed to access the terminal strips

Pic. 9

TORQUE ADJUSTING

The torque of Nyota 115 evo can be adjusted either by mechanical clutch or by Elpro 12 evo electronic control board, depending on which model has been purchased.



NOTE WELL: the Nyota 115 evo models that are not equipped with either the encoder or the Elpro 12 evo electronic control board require that torque be adjusted by the mechanical clutch system.

- torque control by Elpro 12 evo:

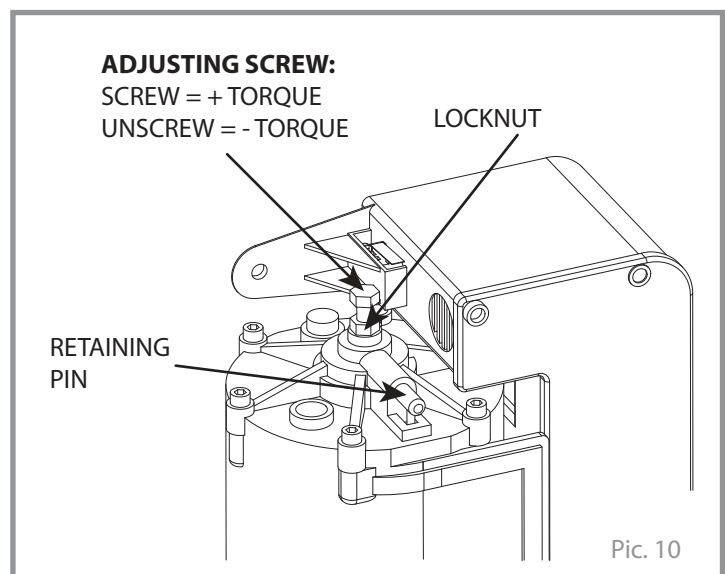
The Elpro 12 evo instructions manual is to be referred to.

- torque control by mechanical clutch:

The clutch that controls torque in Nyota 115 evo is completely in an oil bath and is to be adjusted in accordance with the weight of the gate.

A 13 mm wrench is to be used to adjust (Pic. 10):

- 1) Press and hold the **retaining pin**
- 2) By means of a **13 mm wrench** unscrew the **locknut** (the retaining pin will hold the motor shaft steady)
- 3) Hold the **retaining pin** pressed and screw in the **adjusting screw** (+ torque) or unscrew it (- torque)
- 4) Tighten the **locknut** until the **adjusting screw** is securely locked
- 5) Release the **retaining pin**.

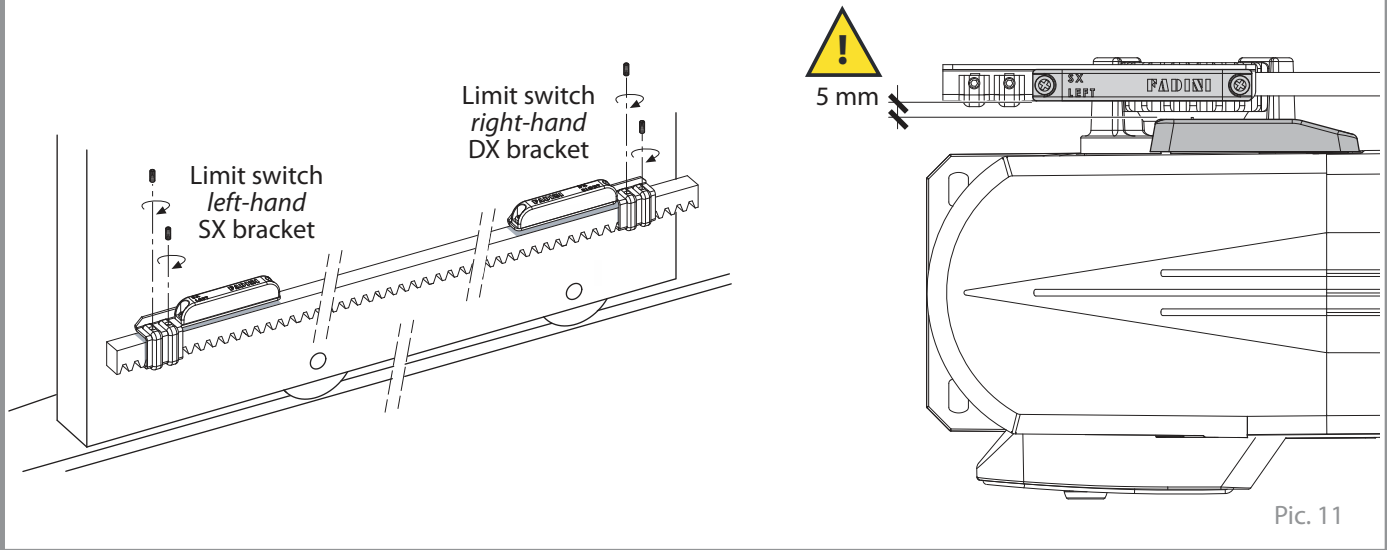


Pic. 10

MOUNTING THE MAGNETIC LIMIT SWITCH BRACKETS



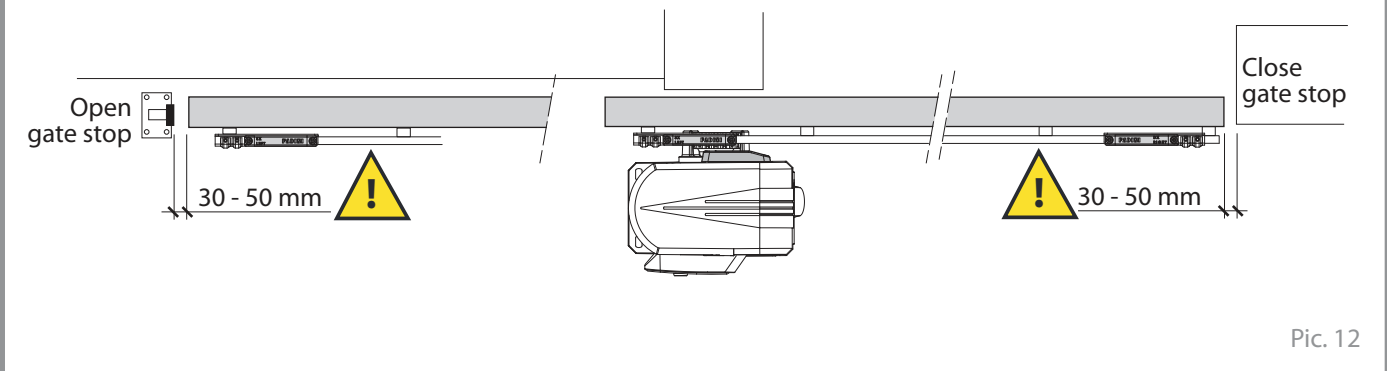
NOTE WELL: DO NOT OPEN THE BRACKETS TO REVERSE THE ARRAY OF THE INNER MAGNETS; THEY ARE PROPERLY PRE-ARRANGED FOR THE LOGIC CONTROL BOARD TO IDENTIFY THEM.



Pic. 11



NOTE WELL: IT IS FUNDAMENTAL THAT THE GATE DOES NOT RUN INTO THE GATE STOPS TOO FAST ON OPENING AND CLOSING CYCLES; A 30-50 mm CLEARANCE SHOULD BE RECOMMENDED BEFORE THE LIMIT SWITCHES ARE ENGAGED.



Pic. 12

ELECTRICAL CONNECTIONS TO THE MAGNETIC LIMIT SWITCH

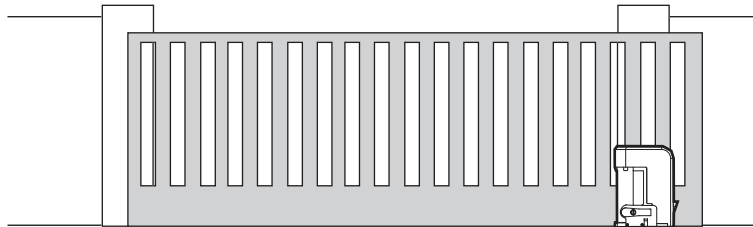
NOTE WELL: first of all identify the position of Nyota Evo in relation to the opening direction of the gate view from inside (on the left or right). Depending on this, properly connect the brown and green wires of the limit switch and the wires of the electric motor.



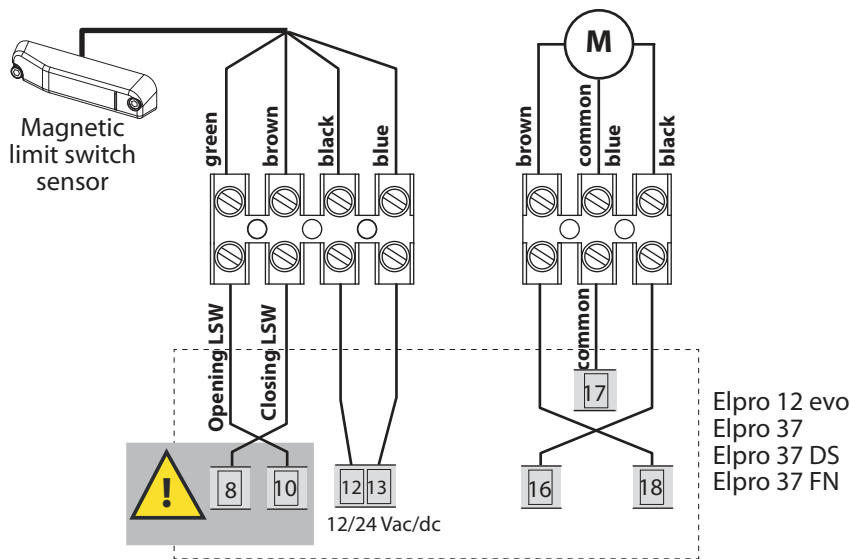
NOTE WELL: Nyota Evo in the version with incorporated Elpro 12 Evo control board comes factory pre-wired as if it were going to be installed on the *left*. In case Nyota Evo is required to be installed on the left, swap the connections to terminals 8 - 10 and 16 - 18.

English

MOUNT ON THE RIGHT



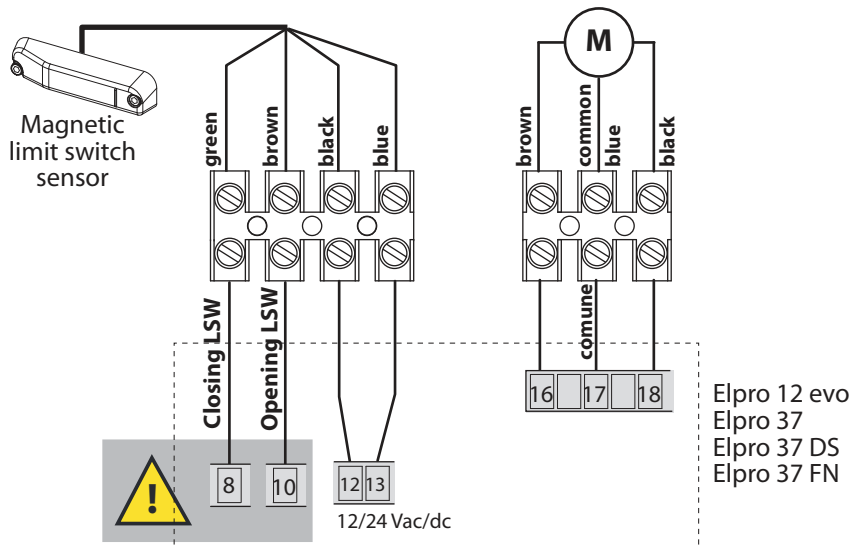
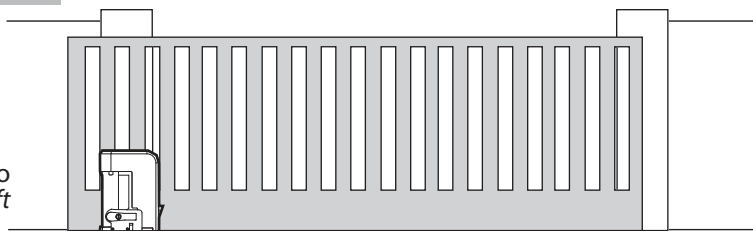
Nyota 115 evo installed on the *right*



Pic. 13

MOUNT ON THE LEFT

Nyota 115 evo mounted on the *left*



Pic. 14

MAINTENANCE RECORD

hand over to the end user of the installation



Installation address:	Maintainer:	Date:
-----------------------	-------------	-------

Installation type: Sliding gate <input checked="" type="checkbox"/> Folding door <input 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:	Quantity of models installed:
Dimensions per gate leaf:		
Weight per gate leaf:	Installation date:	

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



TECHNICAL DATA

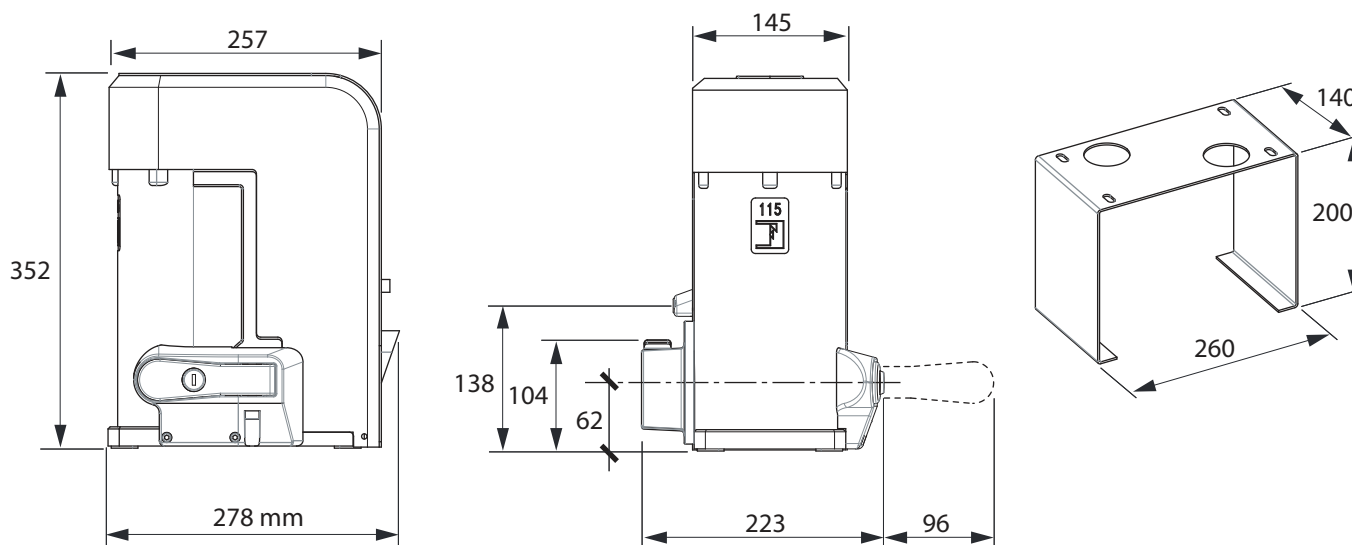
ELECTRIC MOTOR

	1-phase 0,5 HP	3-phase 0,5 HP	1-phase 1,0 HP	3-phase 1,0 HP
Power output	0,37 kW	0,37 kW	0,73 kW	0,73 kW
Absorbed power	600 W	575 W	1.130 W	1.030 W
Supply voltage	230 Vac - 50 Hz	230/400 Vac - 50 Hz	230 Vac - 50 Hz	230/400 Vac - 50 Hz
Absorbed current	3,2 A	2,1/1,2 A	5,7 A	3,7/2,2 A
Motor revolutions	1.380 rpm	1.380 rpm	1.380 rpm	1.380 rpm
Capacitor	30 µF	/	30/40 µF	/
Intermittent service	S5	S5	S5	S5

GEAR BOX

Rated torque	40 Nm	40 Nm	80 Nm	80 Nm
Gear ratio	1:32	1:32	1:32	1:32
Travel speed	10 m/1'	10 m/1'	10 m/1'	10 m/1'
Working temperature	-25 °C +80 °C	-25 °C +80 °C	-25 °C +80 °C	-25 °C +80 °C
Protection standards	IP 55	IP 55	IP 55	IP 55
Nyota 115 evo weight	18,5 kg	18 kg	20 kg	19,5 kg
Gate max. weight (*)	1.200 kg	1.250 kg	1.800 kg	1.850 kg
Frequency of use	very intensive	very intensive	very intensive	very intensive
Oil type	FADINI OIL code 706L	FADINI OIL code 706L	FADINI OIL code 706L	FADINI OIL code 706L

(*) The gate structure, shape and wheels may affect the a.m. values . Always make sure the gate is adequate to be automatically operated and remove any possible friction points.



2012/19/UE Directive
Disposal of electric and
electronic equipment
DISPOSE PROPERLY OF MATERIALS
ARMFUL TO THE ENVIRONMENT